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Fortescue Metals Group Ltd

Report for North Star Magnetite Project

Geochemical Assessment

November 2012

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Abbreviations

API	Assessment on Proponent Information
AMD	Acid and Metalliferous Drainage
ANC	Acid Neutralising Capacity
ARD	Acid Rock Drainage
bgl	Below Ground Level
BIF	Banded Iron Formation
Ca	Calcium
Cr	Chromium
Cu	Copper
DEC	Department of Environment and Conservation
DMP	Department of Mines and Petroleum
EC	Electrical Conductivity
EIA	Environmental Impact Assessment
EPA	Environmental Protection Authority
EP Act	Environmental Protection Act
ESAs	Environmentally Sensitive Areas
Fe	Iron
Fortescue	Fortescue Metals Group
ICD, XRF	Bulk Determination
MPA	Maximum Potential Acidity
NAG	Non Acid Forming
NAPP	Net Acid Producing Potential
PAF	Potentially Acid Forming
ROM	Run of Mine

S	Sulfur
SEM	Scanning Electron Microscopy
TSF	Tailings Storage Facility
The Project	North Star Project
WRD	Waste Rock Dump
XRD	X-Ray Diffraction
Zn	Zinc

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1. Introduction

This document has been prepared by GHD at the request of Fortescue Metals Group (Fortescue). Fortescue has requested that GHD complete a waste geochemistry assessment for an area of the proposed mining operation at the North Star Project.

1.1 Project Description

Fortescue is proposing to undertake mine development activities at its North Star Project (the Project). The Site is located within the North Star/Glacier Valley, approximately 95 km from Port Hedland and 25 km east of the existing Fortescue rail line within the Pilbara region of Western Australia. The North Star project area is located with the tenements of E45/2510 and E45/2535.

The North Star Operations will involve mining of mainly magnetite ore using conventional open pit methods (i.e. a combination of free digging and drill and blast techniques will be used for pre-stripping and ore extraction). Ore from the North Star pit will be processed through a magnetic separation process to produce an iron ore concentrate suitable for sale. It is expected that about 315 Mt of concentrate will be produced over the life of the operation.

The North Star deposit will be mined to a maximum depth of approximately 500 m below ground level (bgl). Trucks will transport ore to the Run of Mine (ROM) Pad while waste rock and overburden will be transported to the waste rock dump (WRD) located to the east of the pit.

It is estimated that the project will produce 315 Mt of magnetic concentrate over a production life of 45 years. The project is expected to generate approximately 913 Mt of waste rock, 180 Mt of dry tailings and 560 Mt of wet tailings over the life of the mining operations. Ore is to be accessed from the south-eastern end of the pit and transferred to crushers located to the south-west of the pit. Concentrated ore slurry will be pumped to Port Hedland for shipping.

The majority of the mine waste generated by the project will be stored in a single waste landform located along the eastern perimeter of the proposed pit. Tailings will be deposited within a valley located to the north of the proposed pit and waste dump. Embankments will be constructed across the western perimeter of the valley to enclose the tailings storage facility (TSF). A preliminary tailings storage design has been completed by Golder (Golder, 2011).

Additional support infrastructure will be located to the west of the pit - including roads, processing facility, slurry pipeline, accommodation camp, mess and employee facilities, workshop and temporary buildings, power supply, wastewater treatment facility and water management infrastructure.

Initial water requirement to support the construction of the mine and the slurry pipeline will be sourced from existing licensed bores located within the Fortescue rail corridor.Later water requirement for the mine operation will be sourced from the Canning Basin pipeline. The slurry pipeline will parallel the Fortescue existing rail which runs 25 km to the west of the site.

1.2 Regulatory Context

Fortescue has referred the Project to the Environmental Protection Authority (EPA). This geochemical assessment has been undertaken to meet the requirements of the Department of Mines and Petroleum (DMP)/EPA guidelines.

1.3 Geochemistry Assessment Requirement

Acid and Metalliferous Drainage (AMD) is the generation of acidic and/or metalliferous discharges as a result of the interaction between certain metal sulfide minerals, atmospheric and/or aqueous oxygen, and commensurate with the environmental geochemistry of the deposit; sometimes ferric iron. Saline drainage (SD) can also occur at circumneutral or even alkaline pH values. The resultant metals, salts and acidity from AMD and SD processes may be detrimental to the receiving environment.

Consideration of AMD risk as part of the mine planning process is therefore important in terms of:

- Cost;
- Environmental impacts;
- Long-term mine planning (closure and rehabilitation); and
- Design requirements, and optimal location and design of waste rock dumps and TSFs.

As part of this project, GHD scheduled two phases of detailed static geochemical laboratory analysis. The results of the both phases of testing are presented in Appendix G. Kinetic tests are currently underway and will be provided when they become available.

1.4 Scope of Works

The scope of work for the Project is given as follows:

- Review of selected background information relevant to the site, as provided by Fortescue;
- Review of relevant guidelines;
- Assay database geochemical assessment;
- Geochemical block modelling;
- Design and progression of a detailed geochemical testwork programme (staged approach);
- Detailed geochemistry assessment; and
- Preparation of a mine waste geochemical assessment report (this document).

This mine waste geochemical assessment report has been prepared with reference to the following documents:

- AMIRA 2002. Project P387A Prediction & Kinetic Control of Acid Mine Drainage - ARD Test Handbook. April 2002. AMIRA International Limited, Melbourne.
- ANZECC & ARMCANZ 2000. Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Environment and Conservation Council (ANZECC) and Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ).
- DITR 2007. Managing Acid and Metalliferous Drainage. Manual in the Leading Practice Sustainable Development Program for the Mining Industry series. Department of Industry, Tourism and Resources, (DITR) Canberra. February 2007.
- INAP 2009. Global Acid Rock Drainage Guide (GARD Guide) http://www.inap.com.au/GARDGuide.htm The International Network for Acid Prevention.

1.5 General Assessment Approach

Based on previous project experience, and with reference to the issues identified by the GHD/Fortescue project teams to date, the assessment approach taken by GHD includes the following tasks:

- Identify data requirements;
- Complete geochemical characterisation of waste and ore materials;
- Determine conceptual volume of Potentially Acid Forming (PAF) material;
- Determine spatial distribution of PAF material within the pit shells;
- Determine dewatering risks (related to AMD); and
- Determine long term management risks (e.g. waste storage, management of PAF material, dewatering, pit lake geochemistry).

2. Acid Rock Drainage and Acid and Metalliferous Drainage

2.1 General

As noted earlier, Acid and Metalliferous Drainage (AMD) is the generation of acidic and/or metalliferous discharges as a result of the interaction between certain metal sulfide minerals, atmospheric and/or aqueous oxygen, and commensurate with the environmental geochemistry of the deposit; sometimes ferric iron. Activities such as mining, which involve the excavation of rocks that may contain these sulfide bearing minerals, may increase the risk of AMD. The drainage resulting from metal sulfide mineral reactions as described above is generally acidic with elevated concentrations of dissolved heavy metals and salts. AMD can also be known as Acid Mine Drainage (AMD) and/or Acid Rock Drainage (ARD).

It should also be noted that circumneutral metalliferous and/or saline drainage (metalliferous and saline drainage respectively) can occur depending on a range of geoenvironmental parameters, which can be just as difficult to manage as AMD once the oxidation reactions have commenced.

For the purposes of this report, GHD is using the descriptor Acid and Metalliferous Drainage (AMD) to describe drainage water with acidic pH values, elevated metals concentrations and potentially, elevated salts such as sulfate.

For the purposes of AMD management, it is deemed important to understand that multiple factors interact to affect the oxidation rate of sulfide bearing minerals. These include chemical, physical and biological factors which should all be understood as best as is possible in order to prepare an appropriate AMD management strategy as required.

AMD can pose a significant risk to mine environmental compliance. As it is a self-limiting reaction, once the AMD process has commenced, it is often difficult to stop until either all the oxygen, water or sulfide source has been exhausted, as applicable to each site.

3. Environmental Setting

3.1 Location

The North Star Magnetite Project area (herein referred to as the 'Project area') is situated within the north-central Pilbara region, approximately 100 km south of Port Hedland and 25 km east of the FMG Port Hedland – Newman railway line. The Project area encompasses Fortescue Mining tenements M45/1180, M45/1181, M45/1182, M45/1183, M45/1184, M45/1211, M451212, M45 1213, Miscellaneous Licence tenement L45/276 and Exploration tenements E45/2510 and E45/3084.

The Project area is located within a highly dissected peneplain, characterised by a complex mosaic of geology and landforms. Dominating the site is the north-south strike ridge hosting the North Star and Glacial Valley deposits and the extensive valley units identified as potential TSF sites. Local topographical relief ranges from approximately 220 m to 420 m. The proposed ore transport corridor extends west from the southern extent of the mine area to the Fortescue rail line. The route traverses a series of ephemeral flow lines (including the Turner River), valleys, gentle plains, rises and low hills.

A number of local prospects and potential mining operations surround the project area. No mines are currently operational within the immediate vicinity of the site. The nearest Department of Environment and Conservation estate is Munagaroona Range Nature Reserve (Reserve No 31429) which lies approximately 72 km to the south-west of the Project area.

3.2 Climate

The Pilbara Region of Western Australia experiences an arid-tropical climate with two distinct seasons; a hot summer from October to April and a mild winter from May to September (Gentilli, 1972). Annual evaporation exceeds rainfall by as much as 2,500 mm per year. Seasonally low but unreliable rainfall, together with high temperatures and high diurnal temperature variations, are also characteristic climatic features of the region. This region has in the past experienced no rainfall in any month of the year, which is typical of a desert climate (Beard 1975).

The majority of the Pilbara has a bimodal rainfall distribution, resulting in two rainfall maxima per year. From January to March, rain results from storms penetrating from the north, producing sporadic and intense thunderstorms. Tropical cyclones and depressions moving southwards from northern Australian waters also cause heavy rainfall events. From May to June cold fronts move easterly across Western Australia and may occasionally reach the Pilbara Region. These fronts produce light winter rains that are generally ineffective for extensive plant growth. Surface water can be found in some pools and springs in the Pilbara Region all year round, although watercourses only flow briefly due to the short wet season.

The mean maximum daily temperature recorded at Marble Bar (approximately 90 km to the east) is 35.5 degrees Celsius. The mean annual rainfall is 354.2 mm with high variability, annual totals range from 44.9 to 417.4 mm, and the maximum recorded rainfall is 646.8 mm (Worley Parsons 2012). Mean annual daily evaporation recorded at Marble Bar (BoM Site ID4020) located 73 km to the west of the project site was 8.7 mm (records between 1968-1988). High evaporation rates such as these may limit rainfall recharge to groundwater, with the exception of high intensity rainfall events.

3.3 Geology

3.3.1 Regional

The Project area lies within the Pilbara Craton, a Pre Cambrian tectonic unit comprising granitic, sedimentary and volcanic rocks (Hickman 1983). Geology is dominated by the ancient granite-greenstone terrane, occurring as broad expanses of granitoid rocks interspersed with arcuate and linear belts of greenstone formations (Van Vreeswyk *et al.* 2004).

The North Star deposit is located within the north-western portion of the Pincunah Hill Formation of the George Creek Group, on the western limb of the Pilgangoora Syncline (Van Kranendonk 2000). The folding has curved axial traces and form isolated structures bound by sinistral fault splay. Stratigraphic variation between the fault bounded blocks suggests syndepositional horst-graben structures (Van Kranendonk 2000). Deformation and metamorphism has been observed to increase in intensity to the north west of the George Creek Group (Blewett and Champion, 2005).

3.3.2 Local

Magnetite mineralisation in the North Star area is mainly confined to the Banded Iron Formation (BIF), a member of the Pincunah Formation. The stratigraphic thickness of BIF varies from 350 to over 450 m, forming a flat-topped north-south strike ridge about 500–800 m wide and 80–120 m high. The strata strikes north-south and dips subvertically from approximately 80^{o} west to 70^{o} east, and small scale folding is common (Snowden 2010). The most significant fault in the region of the North Star deposit is a sinistral strike-slip north-northeast to south-southwest structure located 3-5km east of the deposit (Van Kranendonk 2000).Local mine scale faults transect the project area on a north easterly strike (Snowden 2010), which separates the deposit into two main ore domains.

Current knowledge indicates that the Pincunah BIF extends to a minimum depth of 300 m and remains open at depth. It is highly likely that the hematite and magnetite ore body extends below 300 m depth, with additional reserves only constrained by the economics of mining (FMG 2011).

The western sequence (Hanging Wall) of the BIF is a sequence of poorly exposed shales up to 500 m thick. The contact between the shales and BIF forms a prominent cliff which is likely to be sheared and faulted (FMG 2010).

The eastern sequence (Footwall) of the BIF comprises a 400 m thick interbedded sequence of shales, mudstones, cherts, BIF and quartzite beds, each typically 1–20 m thick. Stratigraphically, this unit comprises the upper part of the Pincunah Formation, and forms the eastern half of the ridge (FMG 2010). It is likely to be more competent than the hanging wall given the chert and quartzite component.

The geology of the deposit is shown in plan view in Figure 1 and a generalised cross section is shown in Figure 2.

Iron mineralisation at North Star occurs within the BIF member of the Pincunah Formation. The BIF has been divided into the following units based on physical and geochemical characteristics:

- Oxide: Top 30–50 m of the BIF below ground surface where magnetite (Fe_3O_4) has been oxidised to hematite (Fe_2O_3) and goethite (FeO (OH)) is also a major mineral. The partially oxidised outcrop of the BIF yields magnetic susceptibility measurements of 1000 to 10,000 x 105 SI units with isolated highs up to 30,000 x 105 SI units (Fortescue 2011);

- Grey: Significant magnetite ore at North Star. The unit is dipping sub vertically;
- Green: The sub vertically dipping magnetite unit lies to the east of the central Grey BIF. This Green BIF has variable magnetic susceptibility and high Na_2O than the surrounding units;
- Blue: This sub vertically dipping magnetite unit lies to the east of the central Grey BIF. This Blue BIF unit has variable magnetic susceptibility and shale content; and
- Red: This magnetite unit only occurs in the southern area of the North Star area and it is distinguished by its red colour from abundance of jasper.

The BIF deposit is displaced by a vertical fault which separates the deposit into two main ore domains. Based on the current mineral resource statement produced by Golder (2011), the domains are termed North and South BIF which describes the position of the BIF relative to the fault.

3.4 Preliminary Geochemical Assessment

Waste characterisation investigations were carried out by Worley Parsons (2012) which involved the collection and laboratory analysis of samples of material from the exploration drilling programme. 24 samples were collected from holes drilled in the BIF, the eastern Footwall and the western Hanging Wall. The results indicate that:

- Calculated values of Maximum Potential Acidity (MPA) ranged between 2-113kg H_2SO_4/t. The shale sample from the Hanging Wall had the highest mean and median sulfur values, a BIF sample with high pyrite content recorded the highest sulfur content;
- Acid Neutralising Capacity (ANC) ranged between 15kg H_2SO_4/t (BIF with pyrite) to 40kg H_2SO_4/t (Shale);
- Net Acid Producing Potential (NAPP) results indicate 12 samples are PAF, eight were samples of shale and four of BIF;
- The Acid Neutralising Capacity/Maximum Potential Acidity (ANC/MPA) ratio was less than two in 17 samples indicating these may be PAF;
- Multi element analysis indicated that metal concentrations were generally not significantly elevated; slight enrichments (relative to global abundance index) of cadmium, chromium, cobalt and nickel were noted; and
- The Net Acid Generation (NAG) test indicated the following geochemical classifications:
    - Non Acid Forming (NAF): 10 samples; and
    - PAF: 14 samples.

The study concluded that the shale in the Hanging Wall and pyritic sequences in the BIF unit are likely to be PAF, however due to the limited amount of testing carried out, the relative amount of material within these lithologies that may be PAF was not determined.

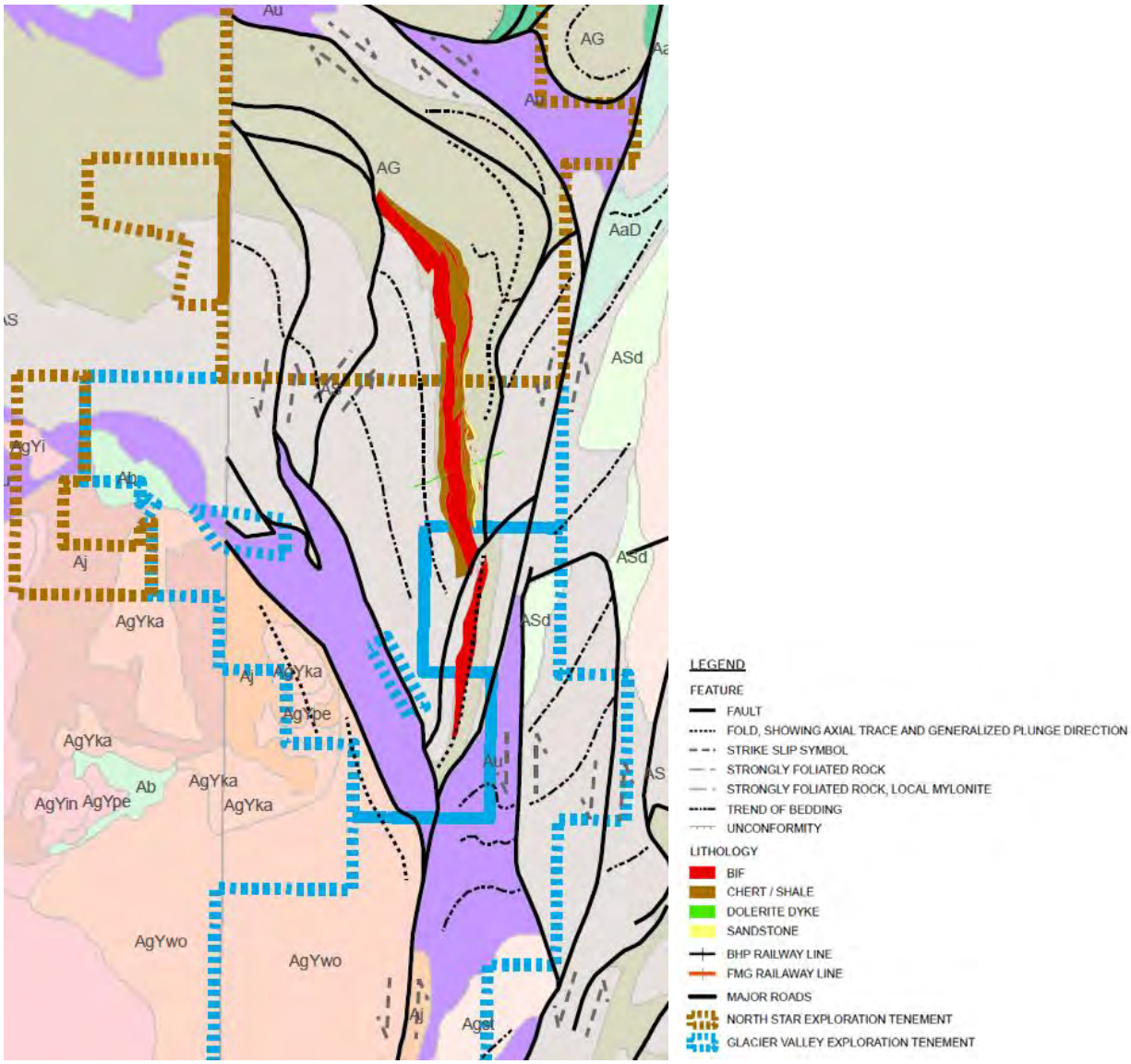


Figure 1 Local Geology (Extract from Worley Parsons, 2012)

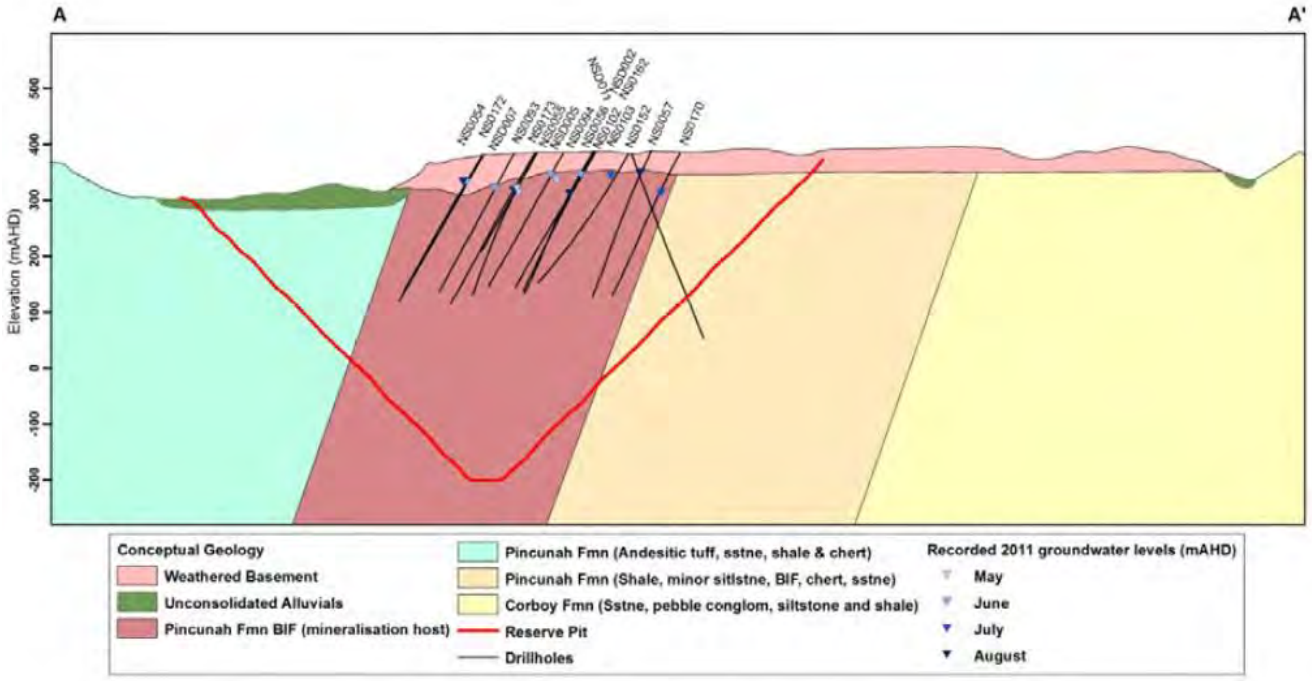


Figure 2 Generalised Geological Cross Section (Extract from Worley Parsons, 2012)

3.5 Surface Hydrology

3.5.1 Regional

Watercourses in the Pilbara Region are ephemeral and flow only occasionally. Major rainfall events, generally as a result of cyclones, can cause major flows in a number of rivers almost every year between December and April. The rivers are generally dry between August and November, with only occasional short-lived flows (Worley Parsons, 2012a and 2102b). Most of the major rivers in the Pilbara Region have extensive floodplains that periodically become inundated. Surface water may be found in some pools and springs in the Pilbara region all year round.

3.5.2 Local

The assessment area straddles the Shaw River, Turner River and Strelley River catchments. The North Star/Glacial Valley plateau acts as the principle drainage divide between the Turner River to the west, Shaw River to the south east and Strelley River to the north east (Worley Parsons, 2012a and 2012b). All three river systems generally drain in a northerly direction towards the coast. Drainage on lower slopes and plains is via a network of tributary flow lines. Drainage on the hills and slopes is variable but tends to be via unidirectional flow lines and sheet flow. Sheet flow is also likely to occur on the plains following heavy rainfall events. A prominent drainage line, known as Lost Boys Creek, flows in a north west direction through the valley of the proposed northern tailings storage facility (TSF), eventually discharging into Turners Creek. Drainage along the proposed infrastructure corridor is largely defined by an unnamed drainage channel which meanders in a westerly direction across the plains of the Rocklea, Talga and Macroy land systems. All drainage lines within the Project area are ephemeral (Worley

Parsons, 2012). The main channel of the Shaw River runs in a northerly direction and is within 20 km of North Star at its closest point.

A permanent spring was observed approximately 6 km north-west of the North Star exploration camp.

3.6 Hydrogeology

3.6.1 Regional

The central Pilbara aquifers fall into three broad groups and include:

- The unconsolidated sedimentary aquifers composed of alluvium and colluvium;
- Chemically deposited aquifers (calcrete and pisolitic limonite); and
- Fractured rock aquifers.

Valley fill sedimentary deposits can be up to 200 m thick and can include clay, sand and gravel sequences sourced from alluvial outwash, river valleys and scree slopes.

Calcrete and pisolitic aquifers, characterised by karstic formations (Johnson and Wright, 2001) are capable of large groundwater yields in the region of 1,500 kL/day to 5,000 kL/day. Groundwater in these calcrete or pisolite valley-fill aquifers is generally fresh or brackish and is the most easily obtainable groundwater source.

The granitic-greenstone area of the Pilbara region generally lacks groundwater resources with the most dominant groundwater feature found in the Hamersley Basin located to the south of the proposed operation.

The Achaean granite-greenstone, characteristic of the proposed mine site, is generally overlain by thin alluvial sediments in the river valleys. Depth to water is generally 5 to 10 m below the surface in the granitic areas. Groundwater from exploration bores at the site varies between 36 m and 280 m confirming expectation of deeper groundwater levels in the greenstone formations. Groundwater occurrences within the granitic and greenstone sequences occur primarily in fractured and weathered zones along fractures and joints. Greenstone aquifers may also be located within brittle (cherty) rocks, and is fresh inland, becoming brackish towards the coast (Haig 2009). Aquifer yields are dependent on intersecting fractures and / or targeting shallow alluvium. The Pilbara and in particular the granitic-greenstone terrane is not considered a major regional groundwater resource.

3.8.2 Local

Two distinct groundwater sources are noted as being present on site by Worley Parsons (2012):

- The first in the 0 to 50 m weathered zone of the ore body; and
- The second being in the deeper part of the fracture zone which drains both the weathered zone of the deposit and the upper alluvial catchment of the adjacent groundwater zone.

Exploration drilling conducted to date has encountered little groundwater. However, available groundwater has been located in the upper weathered zone along the NNE trending fracture zone. In addition, during drilling it has been observed that the BIF, chert, and shale country rock are extremely tight and silicified which suggests low permeability and low storage capabilities (Worley Parsons 2012).

Groundwater in the region surrounding the ore deposit is thought to be predominantly hosted by rocks of primary porosity within overlying shallow unconfined Quaternary sediments, which are hydraulically connected to some secondary porosity within the weathered and fractured Achaean basement (Worley Parsons 2012).

Fortescue drill log data indicates an average standing water level (mAHD) of approximately 80 m based on provisional data from 72 bores; 30 of which intercepted groundwater. However, groundwater surface elevation data during exploration drilling is not considered to be representative of the formations in which they were observed, as water contained in the bore holes is considered to be remnant from drilling (Worley Parsons 2012).

There remains the potential for perched aquifers to be present in the weathered zone due to compartmentalisation of groundwater within the sub-vertical bedding planes. Groundwater springs have been observed in the north-east of the site which may indicate the presence of a perched water table, or alternatively, an aquifer residing above the lower water table (Worley Parsons 2012).

Based on the hydrogeological investigations completed to date, it does not seem likely that a significant groundwater body will be encountered as a result of the proposed mining activities. Some dewatering may be required to enable open pit mining based as a result of the presence of groundwater in fracture/sheer zones however based on the findings of the Worley Parsons (2012) report.

Groundwater quality, tested from two water supply bores and one surface source indicates generally good quality, with the following observations being made:

- Chromium (Cr), copper (Cu), vanadium (V) and zinc (Zn) are above ANZECC guidelines in more than one sample (>50% of samples);
- Nitrate levels are above ANZECC guidelines in both groundwater samples; and
- Only one measured analyte (Cu) is above ANZECC guidelines in the surface water sample.

3.7 Environmentally Sensitive Areas

The Department of Environment and Conservation's (DEC) online Native Vegetation Viewer provides information on the location of Environmentally Sensitive Areas (ESAs), as declared by a Notice under section 51B of the Environmental Protection Act 1986 (EP Act). This database also indicates areas where low impact mineral and petroleum activities cannot occur without a Native Vegetation Clearing Permit, as defined under Schedule One of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004.

The DEC's online Native Vegetation Viewer was searched to determine the location of any ESAs within the vicinity of the Study Area. No ESAs were identified.

4. Deposit Geology/Mineralogy Characterisation

4.1 Deposit Geology

Based on data provided by Fortescue for the deposit, the following geological summary is provided:

- Five main units have been identified in the geological model of the deposit, and are:
    - The BIF which comprises the ore body, separated into two units termed:
        - BIF-North; and
        - BIF-South.
    - The Hanging Wall which comprises shales of the Gorge Creek Group;
    - The Footwall which comprises shales/mudstones/cherts/quartzite and BIF; and
    - An Oxide layer which comprises approximately the top 50 m of the deposit.

GHD understands that to date the hanging wall and footwall material has not been identified as containing significant economic grades of iron ore relative to the BIF, and so are likely to be treated as waste rock during mining. Sub economic grade material will be required to be excavated from the Oxide unit as part of the pit development and so will form waste material. The Oxide layer has iron grades above 30%, and although it has lower magnetic susceptibility than the BIF, has been identified as containing economic grades of iron as this unit contains hematite. Sub economic grade material is also present within the Oxide zone, which will also require excavation for pit development and will therefore become additional waste material. The BIF units termed South and North have been identified as the economic ore materials; therefore some of this material may be processed for iron recovery.

A summary of material classification is provided in Table 1:

Table 1 Material Classification

Model unit	Majority Classification (Waste/Ore)
BIF-South	Ore
BIF-North	Ore
Hanging Wall	Waste
Footwall	Waste
Oxide	Ore

A summary table of the mineralogy of the BIF minerals is provided in Table 2. In general, the BIF contains low levels of aluminium (and therefore clay minerals), and high levels of silica. Given the BIF is magnetite and has an iron content of <40% and a silica content of >30%, processing of the material is required which will produce tailings that will be composed predominantly of silica.

Table 2 Mineralogy of the BIF Materials

Stratigraphic Unit	Fe %	SiO_2 %	Al_2O_3 %	P %	Mag Sus
Oxide	34.2	40.3	1.81	0.072	25,583
Blue BIF	31.2	40.4	1.83	0.084	29,081
Grey BIF	32.6	39.8	1.90	0.100	45,327
Red BIF	34.7	37.8	1.21	0.099	55,952
Green BIF	30.2	41.2	2.68	0.097	27,175
Mean	**32.6**	**39.9**	**1.89**	**0.090**	**36,624**

4.2 Asbestos Minerals

Based on information provided by the Fortescue, the likelihood of asbestos minerals being present in the deposit is low. No asbestos minerals have been observed to date during exploration drilling and laboratory testing.

Fortescue considers that the geochemistry of the deposit is characterised by sedimentary and acid/intermediate volcaniclastics. Such geology, when combined with low grade regional metamorphism, has resulted in a chert/siderite/stilpnomelane assemblage, devoid of amphiboles. The North Star deposit does not contain the mafic and ultramafic greenstones and dolerites that are normally associated with BIF magnetite or hematite mineral deposits. It is these mafic and ultramafic greenstones and dolerites that are generally responsible for many of the serpentinite asbestiform mineral assemblages. The greenstones also generally have a high Mg content which is not seen in the North Star geochemical signature.

Specific testing for asbestos has not been scheduled by GHD as part of this assessment on the basis that asbestos is not considered to be a key risk at this time.

4.3 Waste Streams

Being a magnetite deposit, the BIF will be processed on site as part of run-of-mine (ROM) ore beneficiation process to achieve a saleable product. Processing of the BIF ore on site is understood to comprise crushing, screening, dry magnetic separation and a wet separation processes. At this time the process is anticipated to produce the following waste products:

- Bulk waste rock (sub ecomonic grade material)
- Tailings from dry (3% moisture) magnetic separation (approximately 30% by volume of total tailings). The maximum size of dry tailings produced will be 3mm.
- Fine tailings from wet (30% moisture) separation (approximately 70% by volume).

Due to the nature of the geology, various waste rock streams will be produced throughout the life of mine. Given that economic grades of iron ore are not confined exclusively to strata identified as

"mineralised", and given the thinly bedded nature of mineralised and non-mineralised strata, there remains the possibility that some rock types other than those labelled as mineralised may be processed for mineral extraction, or some mineralised material may be lost to the waste stream. However, a bulk determination of materials which are likely to occur within the waste or ore stream has been made and is presented in Table 3:

Table 3 Waste Stream

Geologic Unit	Waste Streams
BIF-South	**Tailings: 30% dry coarse, 70% wet fine** **Minor waste rock**
BIF-North	**Tailings: 30% dry coarse, 70% wet fine** **Minor waste rock**
Hanging Wall	**Waste rock**
Footwall	**Waste rock**
Oxide	**Tailings: 100% dry coarse** **Waste rock**

4.3.1 Expected Waste Volumes

Based on the initial Mining Proposal study produced Golder (2012), the following volumes of material are expected for life of mine operations as shown in Table 4.

Table 4 Expected Volumes of Materials for Life of Mine Operations

Unit	Volume (Mt)
Waste rock	**913**
Product	**315**
Tailings (coarse dry)	**180**
Tailings (fines wet)	**540**

4.4 Summary of Potential Geochemistry Risk Based on Geology/Mineralisation

The iron minerals identified as part of the mineralisation of the Oxide unit (goethite, hematite) are predominantly secondary iron minerals including oxides and oxyhydroxides. Generally, such minerals do not present a high AMD risk as they are typically stable in oxidising circumneutral environments, similar to those in which they formed.

The fresh BIF materials, and shale bands in the Hanging Wall and Footwall that lie under the oxide ore body may contain pyrite within shale bands (pyrite is indicated in localised areas from logging records supplied by FMG), given the material has not been subject to oxidisation. Significant sulphide

mineralisation (for example hydrothermal primary massive sulphides) is not known to occur within the deposit (based on drilling completed to date) therefore the pyrite is likely to occur in thin and localised bands.

Units of pyritic shale and some fresh BIF have been classified as PAF to date by the initial geochemistry assessment carried out by Worley Parsons, and may therefore pose a potential AMD risk. A summary of the potential geochemical risk by lithology is given in Table 5.

Table 5 Summary Potential Geochemical Risk by Lithology

Lithological unit	Potential acidity risk	Potential metalliferous risk	Potential saline drainage or dispersion risk
Oxide	Low given leached and oxidised nature of materials.	Low (excluding iron) given leached and oxidised nature of materials, iron oxide/hydroxide minerals present which are stable in oxidising conditions.	Low given low clay content of material and leached and oxidised nature of materials.
BIF-south	Low-Medium based on depositional environment (shale bands are potential hosts for pyrite) and un-oxidised nature of material. Pyrite, if present, likely to be found in thin and localised bands. Preliminary geochemical testing confirms some PAF material present as a result of pyrite mineralisation.	Low-Medium (excluding iron) given lithological composition (BIF/chert), potential for enrichment of metals in shale bands. Preliminary geochemical testing indicates base/heavy metals not significantly enriched.	Very low given low clay content of material (competent silica rich host rock).
Footwall	Low-Medium based on depositional environment (shales are potential hosts for pyrite) and un-oxidised nature of material.	Low-Medium (excluding iron) given lack of mineralisation noted, potential for enrichment of metals in shale bands. Preliminary geochemical testing indicates base/heavy metals not significantly enriched.	Low-Medium given general low clay content of material, shale units present have potentially higher dispersive risk.
Hanging Wall	Medium-High based on depositional environment (shales are potential hosts for pyrite) and un-oxidised nature of material. Preliminary geochemical testing indicates that PAF material present as a result of pyrite mineralisation.	Low-Medium (excluding iron) given lack of mineralisation noted, potential for enrichment of metals in shale bands. Preliminary geochemical testing indicates base/heavy metals not significantly enriched.	Medium, potentially large proportion of shale units that may have dispersive risk.

Based on a high level review of geological and mineralogical data for the lithology types identified in the hematite pit shell, sulfide bearing minerals (pyrite) may be present within the Hanging Wall, BIF and Footwall shale.

PAF materials may therefore be present in the following mine streams:

- The tailings streams (both dry and wet);
- Waste rock produced from sub economic grade BIF material;
- Waste rock produce from Hanging Wall and Footwall materials; and
- Ore stockpiles.

With respect to the risk of metalliferous and saline drainage and/or the presence of asbestos; the following preliminary conclusions are drawn:

- The potential for asbestos forming minerals to be present in materials within the deposit is considered to be low at this time;
- The potential for metalliferous drainage is not considered to be high given that the mineralisation observed is not commonly associated with high concentrations of heavy metals (for example primary base metal sulfides), and preliminary geochemical testing indicates base/heavy metal content is not enriched;
- The potential for saline drainage cannot be accurately predicted based on the mineralogical data available; however the silica rich host rocks are not likely to present a high risk of saline drainage.
- The potential dispersivity risk of the waste materials cannot be accurately predicted based on the data available. However, given the low clay content of the oxide and BIF units, the risk is considered to be very low in these geological units. Further detailed testing is required to determine the risks of dispersion in the Hanging Wall and Footwall materials.

5. Geochemical Characterisation Rational

5.1 Introduction

Due to the nature of the geology, various waste rock streams will be produced throughout the mining process. Given that economical grades of iron ore are not confined to strata identified by geological logging as “mineralised”, and given the thin bedding of mineralised and non-mineralised strata, there remains the possibility that some rock types other than those labelled from geological classification as mineralised may be processed for mineral extraction, or some mineralised material may be lost to the waste stream. Based on a preliminary assessment, the following ore and waste will be generated by the project: However, a bulk determination of materials which is likely to occur within the waste or ore stream has been made as follows:

- Ore: North and South BIF bodies, Oxide material;
- Waste rock: Hanging Wall and Footwall shales (and related mudstones, chert, quartzite and BIF), un-economic grade BIF (North and South), Oxide material;
- Waste tailings (dry and wet waste streams): BIF (North and South), Oxide material.

5.2 Geochemical Characterisation Process

The assessment approach taken by GHD based on previous project experience and liaison with the broader Fortescue project team includes the following tasks:

- Task 1: Review existing data. Task 1 included the following sub-tasks:
    - Complete high level geochemical and geophysical characterisation of existing geochemical data;
    - Incorporate existing data into the 3D geochemical model to aid with production of a targeted testing strategy; and
    - Complete a screening level assessment of the suitability of waste materials for reuse as part of planned rehabilitation.
- Task 2: Production of a static and kinetic geochemical test work strategy.
- Task 3: Undertake the static and kinetic geochemical test work strategy, including sample collection from storage and scheduling of laboratory analysis.
- Task 4: Task 4 includes the following sub-tasks:
    - Detailed analysis of the static and kinetic geochemical results ;
    - Detailed geochemical and geophysical characterisation of the waste materials; and
    - Complete a risk assessment.
- Task 5: Reporting: Production of a site wide geochemical, waste classification and acid and metalliferous drainage report.

The process outlined above is an iterative one, with the scope and scale of Tasks 3 to 5 being continually updated through the project duration based on the geochemical data interpretation completed to date and any remaining information gaps with respect to AMD risk.

5.2.1 Summary of Task 1 Works Completed to Date

At the time of writing, GHD had completed the following Task 1 scope:

- Review of existing, relevant data as provided by Fortescue;
- Completion of high level geochemical and geophysical characterisation of existing geochemical data;
- Processing of Fortescue geo assay database in Discover 3D;
- Production of a geochemical model and cross-sections in Discover 3D;
- Completion of conceptual assessment of mine waste material geochemistry and AMD risk from NAPP calculations (using Fortescue XRF assay data for Sulfur (S) and Calcium (Ca));
- Assessment of metallurgical reports to determine the likely waste streams and processing requirements for the ore; and
- Assessment of hydrogeological data to determine dewatering requirements and impacts.

As part of Task 1, analysis assessment of the AMD characteristics of the tested materials is completed by reporting the following:

- **Net Acid Producing Potential (NAPP)**

  This is a theoretical calculation based on the capacity of a sample to generate acid (MPA) and its capacity to neutralise acid (ANC). NAPP is expressed in units of kg H_2SO_4/t.

- **NAPP = MPA-ANC**

  If MPA is less than ANC, then the NAPP is negative, which indicates that the sample may have sufficient ANC to prevent acid generation. If MPA exceeds ANC then NAPP is positive which indicates the material may be acid generating.

- **ANC/MPA ratio**

  The ANC/MPA ratio is another way of analysing the acid base accounting. A positive NAPP is equivalent to an ANC/MPA ratio of less than 1, and a negative NAPP is equivalent to an ANC/MPA ratio greater than 1. The ANC/MPA ratio provides an indication of the relative margin of safety (or factor of safety) with respect to the potential for net acid generation.

5.2.2 Task 2 to 3 Works Completed to date

Tasks 2-3 comprise a detailed static and kinetic geochemical analytical test work program. The following tasks have been completed:

- Production of a detailed AMD (and materials classification) test work programme;
- Selection of analytical laboratories: ALS and SGS laboratories in Perth have been selected for analysis, both are NATA accredited for the testing scheduled;
- Selection and collection of samples from the historic drilling programme (ongoing); and

- Management of the test work programme including ongoing scheduling of testing (as required), data analysis, and data management.

Key considerations that have been taken into account when designing the static and kinetic geochemical test work programme are:

- To ensure an adequate spatial coverage of the resource; and
- To ensure representative coverage of the material types likely to be encountered.

As noted above, all samples identified and recovered to date are samples selected from existing sample material obtained from historic exploration drilling works.

At the time of writing, the sampling and analytical program had the following status:

- Selected samples (approximately 1200) have been completed for NAG testing;
- Selected samples have been scheduled for XRD (60), ICPMS metals screen (140), ABA (150), Australian Standard Leaching Protocol (ASLP) leach testing (125), NAG liquor analysis (125), acid base characterisation curve (ABCC) testing (60), kinetic NAG testing (20); and
- The majority of the results of the detailed testing have been received from the laboratory for the detailed testing at the time of writing.

5.2.3 Task 4-5 Work Completed to Date

Task 4-5 works completed at the time of writing include:

- Provisional assessment of quantitative data produced from existing AMD test work programme;
- Review of static test results received to date;
- Classification of mine waste units into either Non Acid Forming (NAF), potentially acid forming (PAF), net acid consuming (NAC), or Uncertain (UC) commensurate with analytical results;
- Determination of volumes of materials that may be PAF, NAF, UC or NAC for appropriate management of acid forming and consuming wastes, and beneficial reuse in construction and/or rehabilitation;
- Validation check of the geochemical model; and
- Preparation of waste geochemistry assessment report (this document herein).

5.2.4 Ongoing tasks

- GHD will prepare and issue an addendum document to include additional detailed test data that has not been received to date once all the laboratory results have been received and interpreted.
- Based on the results of the static testing, kinetic leach columns have been commenced for a number of samples that will run for a minimum of 6 months. To date GHD has instructed the laboratory to commence 6 leach columns.

6. High Level Geochemistry Review

6.1 Geochemical Data Set

As part of Task 1, a high level review was undertaken on available assay database data provided to GHD by Fortescue. The data was generated during on site exploration drilling (refer Appendix E). A drill hole plan showing the locations of boreholes that data has been gathered from and that lie within the drill hole database is provided as Appendix A.

It should be noted that no assay data was available for much of the Hanging Wall waste material which forms the majority of the western zone of the deposit. As a result, an assessment of the geochemistry of these materials is not possible at this time. Material in this zone comprises approximately 40% of the overall volume in the pit shell, and the majority of this zone comprises waste rock. Therefore volumes of PAF materials that may be generated by mining activities at the site have been determined based on extrapolative modelling methods.

The drill hole assay data set includes classification by geological class which in this case includes:

- Oxide;
- Footwall;
- Hanging Wall; and
- BIF-South.

The dataset also includes a classification based on magnetic susceptibility (magnetite grade) which in this case is defined as:

- Mineralised (based on Magsus >20,000); and
- Non-Mineralised (based on Magsus <20,000)

Mineralised materials are likely to represent ore materials whereas non-mineralised material is more likely to represent waste material.

6.2 Total Sulfur Statistical Distribution

The assay database (n= 21,161 samples) provided by Fortescue was analysed to determine the statistical distribution of sulfur across the site. This task showed that > 90% of sulfur assay values were below 0.3% (total sulfur) which corresponds to a theoretical maximum potential acidity (MPA) of 9 kg H_2SO_4/t (i.e. 0.3*30.6, and rounded to one decimal place).

The results indicated that material within the pit shell generally contained low levels of sulfur (< 0.3% total sulfur). Based on these results, the majority of the materials are likely to have a low risk of being PAF.

Figure 3 is a cumulative histogram for all 21,161 XRF generated (assay data) total Sulfur data points within the Magnetite project assay database.

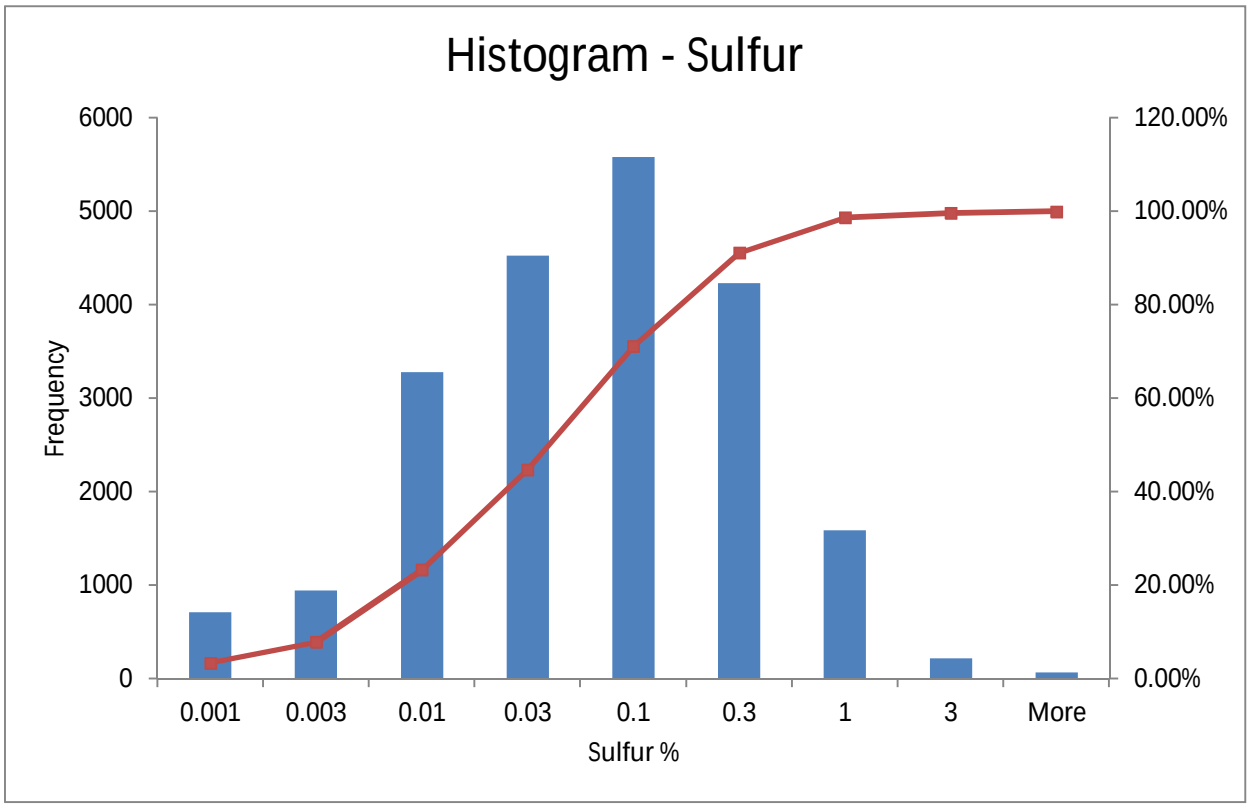


Figure 3 Cumulative histogram of all total sulfur data

Summary statistics for the 21,161 total sulfur readings are provided in Table 6.

Table 6 Sulfur Statistics (All Data)

Total sulfur (%)	
Mean	0.12%
Standard Error	0.003%
Standard Deviation	0.37
Range	19
Minimum	0.00
Maximum	19
Count	21161

Table 6 indicates that the average total sulfur value was 0.12%, with a standard deviation value of 0.37 and a range of 19. These results indicate that the deposit contains mainly low sulfur material (<0.3% total sulfur). It should be noted that the average value may be skewed by the variability in the data set. The occurrence of a small sub group of higher total sulfur material is identified by a maximum value of 19%.

6.3 Net Acid Producing Potential (NAPP)

As part of Task 1 for this Project, NAPP values have been conservatively estimated herein by assuming that all sulfur present is in the form of pyritic (FeS_2) or reactive sulfur. Using this assumption, 100% of the sulfur present is available to form acid via the following reaction:

$FeS_2 + 15/4O_2 + 7/2H_2O = Fe(OH)_3 + 2H_2SO_4$

Based on the balanced reaction stoichiometry provided above, 1% pyrite by weight translates to 30.6kg of H_2SO_4 per tonne of material (kg H_2SO_4/t). Therefore MPA is calculated by multiplying the weight of total sulfur (in %) by 30.6. As calcium carbonate ($CaCO_3$) reacts with H_2SO_4 to neutralise the acid on a 2:1 stoichiometric ratio, then it is also useful to calculate the relative acid neutralising capacity (expressed in terms of kg H_2SO_4/t equivalent) of the materials being tested based on calcium content. It is noted that a conversion factor is required to account for the fact that calcium is heavier than sulfur, and so on a molar ratio more calcium is required to achieve the correct stoichiometric ratio (the conversion factor used by GHD is 0.57). Calcium oxide (molecular weight of 56) has a higher molecular weight than sulfur (molecular weight of 32). Therefore, an appropriate calculation of relative acid neutralising capacity (kg H_2SO_4/t equivalent) requires multiplying the weight of calcium oxide (in %) by 30.6 and by a molecular weight conversion. Although other carbonate minerals may be present (for example magnesium may represent dolomite), calcium carbonates are recognised as the most readily available of the carbonate minerals and so for conservatism only calcium is considered as providing potential ANC.

The NAPP value was calculated for all 21,161 data points within the pit shell database based on relative sulfur and calcium concentrations. Results are shown in Figure 4.

A plan view of the NAPP data is given in Appendix B. On this plan, maximum values for Net Acid Producing Potential (NAPP) in any one location (i.e. the highest results at any depth at each location) are shown using a colour coded key.

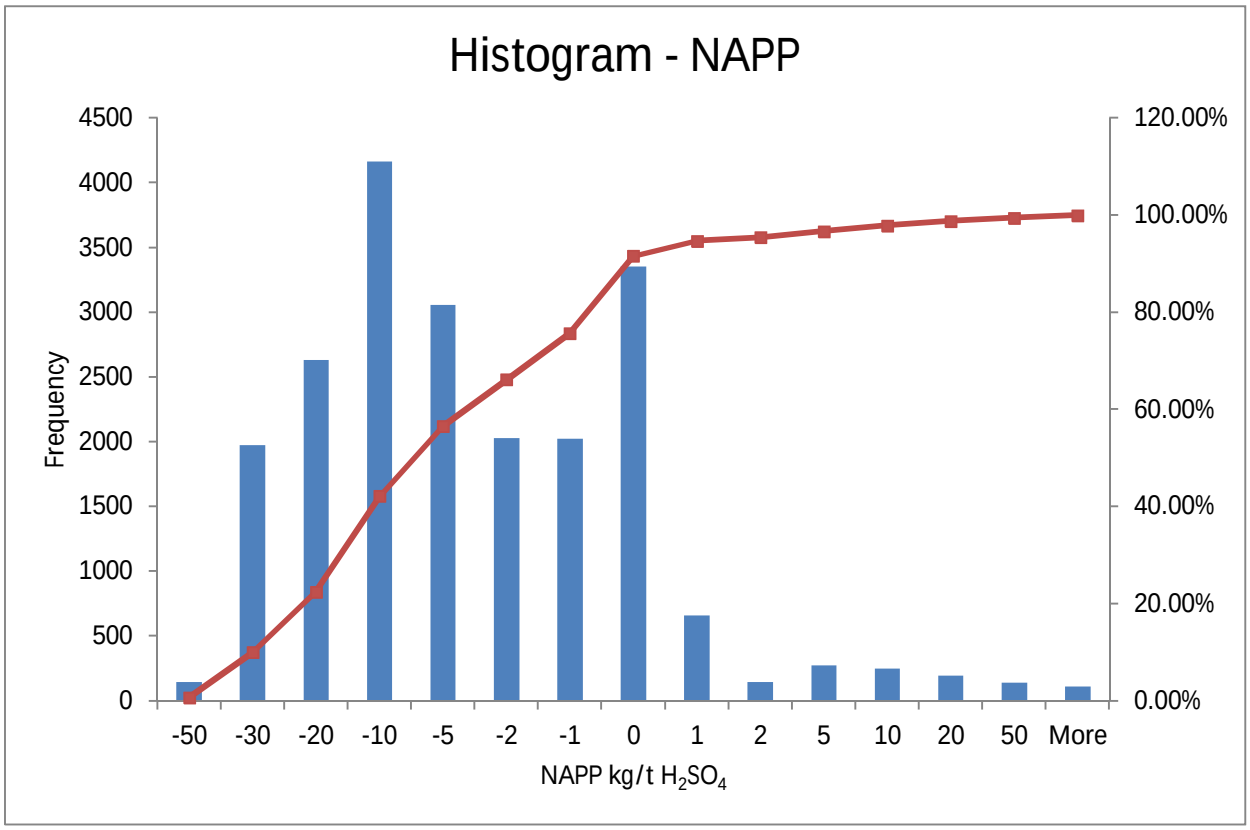


Figure 4 All data NAPP histogram

Figure 4 shows that 92% of material within the pit shell has a NAPP value < 0kg H_2SO_4/t, indicating that this material is potentially NAF (refer to Table 7). 8% of the samples returned a NAPP value > 0kg H_2SO_4/t indicating this material is potentially PAF (refer to Table 7), however of these samples 37% returned a NAPP value <1kg H_2SO_4/t indicating the acidity production potential is low.

Three main groups of material are identified on the basis of the distribution of data shown in Figure 4. These are:

- A large proportion (75%) of the dataset returned a NAPP value between -1 and -30kg H_2SO_4/t. The data appears to show normal distribution. The highest frequency of occurrence for any category was -10kg H_2SO_4/t which implies that the majority of the material has net excess total calcium relative to total sulfur.
- There is a clustering of data (29%) within the -1 to 1kg H_2SO_4/t range, which likely reflects material that is geochemically benign having low total calcium and total sulfur levels, or, that net total calcium and sulfur concentrations result in this NAPP range.
- There is a noticeable tail in the distribution ranging from 2 to > 50kg H_2SO_4/t. This represents a subset of material (5.3%) that has significantly higher total sulfur relative to total calcium levels than the majority of the dataset.

Table 7 presents the summary statistics for the NAPP data within the pit shell. From the data presented in Table 7, it appears likely that with a mean value of -10kg H_2SO_4/t, the materials in the pit are not likely to pose a high risk of producing acid from sulfide oxidation. If the calcium minerals are freely available

(i.e. present in soluble carbonate forms), then the data indicates that the materials may be theoretically slightly net acid consuming.

It is noted that these statistics are based on drill hole data which is biased towards the ore body materials as little drilling was completed into the Hanging Wall or Footwall materials. Therefore, these proportions may not be an accurate representation of the bulk properties of the total volume of material within the pit shell.

Table 7 All Data NAPP Statistics

NAPP (H_2SO_4/t)	
Mean	-10.30 (H_2SO_4/t)
Standard Error	0.11 (H_2SO_4/t)
Standard Deviation	16.73
Range	678.77
Minimum	-99.81
Maximum	578.96
Sum	-218031.84
Count	21161.00

- 91.6% of samples have a NAPP of <0kg H_2SO_4/t indicating they are not likely to be acid forming
- 8.4% of samples have a NAPP of >0kg H_2SO_4/t indicating they are potentially acid forming but at low levels
- 2.2% of samples have a NAPP of >10kg H_2SO_4/t indicating they are potentially highly acid forming

The above classification is based on the NAPP values only, and does not consider non-contributing Ca and S species.

The average NAPP values for each lithological type in the pit is:

- Oxide: -1.2kg H_2SO_4/t;
- Hanging Wall: -2.5kg H_2SO_4/t;
- BIF-North: -9.3kg H_2SO_4/t;
- Footwall: -11.7kg H_2SO_4/t; and
- BIF-South: -17.9kg H_2SO_4.

The average NAPP values calculated are negative for all materials, indicating that (on a bulk scale) are unlikely to be net acid producing.

- The oxide has a NAPP value close to 0kg H_2SO_4 indicating this material is geochemically benign having neither an excess of sulfur or calcium.
- Although the Hanging Wall material has a NAPP value close to 0kg H_2SO_4 it is not likely to be geochemically benign as the near neutral average result relates to the presence of material with an

excess of calcium as well as a significant amount of material with an excess of sulphur (NAPP value >10kg H_2SO_4).

- The BIF South material contains a small proportion of material with elevated sulphur (NAPP value >10kg H_2SO_4), however the majority of material contains an excess of calcium which results in this material having the most negative NAPP vale (-17.9 kg H_2SO_4). The BIF South material may therefore have potentially acid consuming properties on a bulk basis.

6.4 Materials Classification

The NAPP values calculated from geochemical data sourced from Fortescue's geochemical assay data base (n = 21,161 samples) were used to classify the relative AMD risk posed within the five different geological units - Oxide, BIF-South, BIF-North, Hanging Wall and Footwall. The classification system adopted for this assessment is based on the criteria set out below in Table 8:

Table 8 Material classification

Primary Geochemical Material Type	NAPP[1] (kg H_2SO_4/tonne)
Potentially Acid Forming (PAF)	> 10
Uncertain (UC)	0 – 10
Non-Acid Forming (NAF)	< 0
Acid Consuming (AC)	< -50

Material with a NAPP between 0-10 was assigned a provisional classification of UC and not PAF because of the conservative nature of the NAPP calculation. Laboratory testing utilising the NAG method was scheduled to confirm the acid generating potential of this material.

6.5 Calcium to Total Sulfur Ratios

Table 9 presents a statistical summary for the calcium: total sulfur ratio for all 21,161 samples in the assay database. In general, a ratio of < 2 may indicate that the materials do not have sufficient buffering capacity to self-regulate acidity generation, commensurate with reaction kinetics (AMIRA 2002). The results in Table 9 however, show a mean ratio of 13, with 95% of the sample returning a ratio of > 2.9 (not presented). These results may indicate that the material within the pit has significantly higher calcium to total sulfur concentrations, indicating that the units likely possess greater ANC than MPA.

[1] From Miller (1996), AMIRA (2002) and DITR (2007).

Table 9 Statistical Summary of all Ca: Total S Data

Ca:S Ratio	
Mean	**12.97**
Standard Error	**0.14**
Standard Deviation	**20.70**
Range	**532.95**
Minimum	**0.00**
Maximum	**532.95**
Sum	**274508.47**
Count	**21161.00**

The following set of Figures (5-10) show the calcium: sulfur distributions across the five lithology types within the pit area. The interpreted AMD risk from the information plotted on Figures 5 to 10 inclusive was determined as follows:

- The MPA is indicated by the horizontal lines showing total sulfur concentrations for MPA values of 1, 10 and 100kg H_2SO_4/t;
- The ANC is indicated by the vertical lines showing calcium concentrations for ANC values of 1, 10 and 100kg H_2SO_4/t equivalent;
- PAF material is indicated by samples plotting above the 2:1 calcium: total sulfur ratio line (AMIRA, 2002);
- NAF material is indicated by samples plotting below the 2:1 calcium: total sulfur ratio line;
- PAF and NAF materials are further differentiated as follows:
    - Data points plotting above the 2:1 Ca: total S line, and above the 10kg H_2SO_4/t horizontal line are likely to be PAF;
    - Data points plotting close to or above the 100kg H_2SO_4/t horizontal line are likely to be very highly PAF;
    - Data points plotting above the 2:1 Ca: total S line and between the 1 and 10kg H_2SO_4/t horizontal lines may be PAF, but are classified as low acidity generating capacity (PAF-LC);
    - Data points plotting below the 2:1 Ca: total S line and between the 1 and 10kg H_2SO_4/t ANC vertical lines are likely to be NAF; and
    - Data points plotting above the 2:1 Ca: total S line and to the right of the 10kg H_2SO_4/t ANC vertical line are likely to be NAF or net acid consuming

In general calcium concentrations were higher than total sulfur in the majority of the materials present within the pit shell area, potentially indicating that the majority of materials are not likely to be net acid forming.

A summary of the data presented in Figure 5 (and detailed in Figures 6 to 11 inclusive), indicates:

- The majority of the materials within the pit shell are NAF and may be net acid consuming, with ANC values of >10kg H_2SO_4/t ANC;
- Approximately 3% of samples have a NAPP value in excess of 10kg H_2SO_4/t;
- A small number of samples plot close to or above the 100kg H_2SO_4/t horizontal line, and are likely to be very highly PAF.

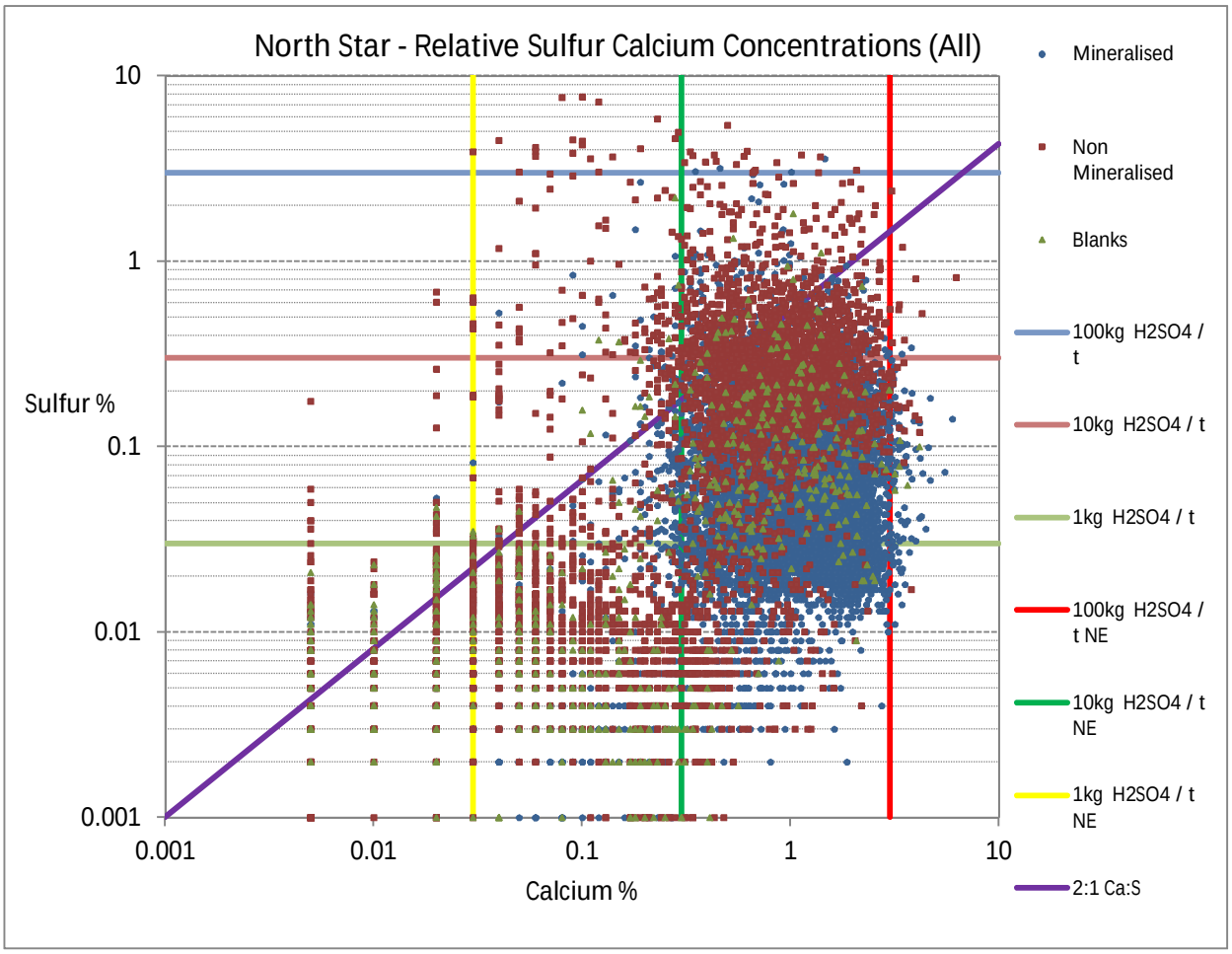


Figure 5 Relative sulfur: calcium concentrations (all data)

The assay database provided for the Footwall material (Figure 6) indicated both mineralised and non-mineralised material to be present. Based on the sulfur: calcium ratio, this material is likely to be NAF and may be NAC. A small proportion of the Footwall material plots above the 2:1 Ca: total S line, and is likely to be classified as PAF.

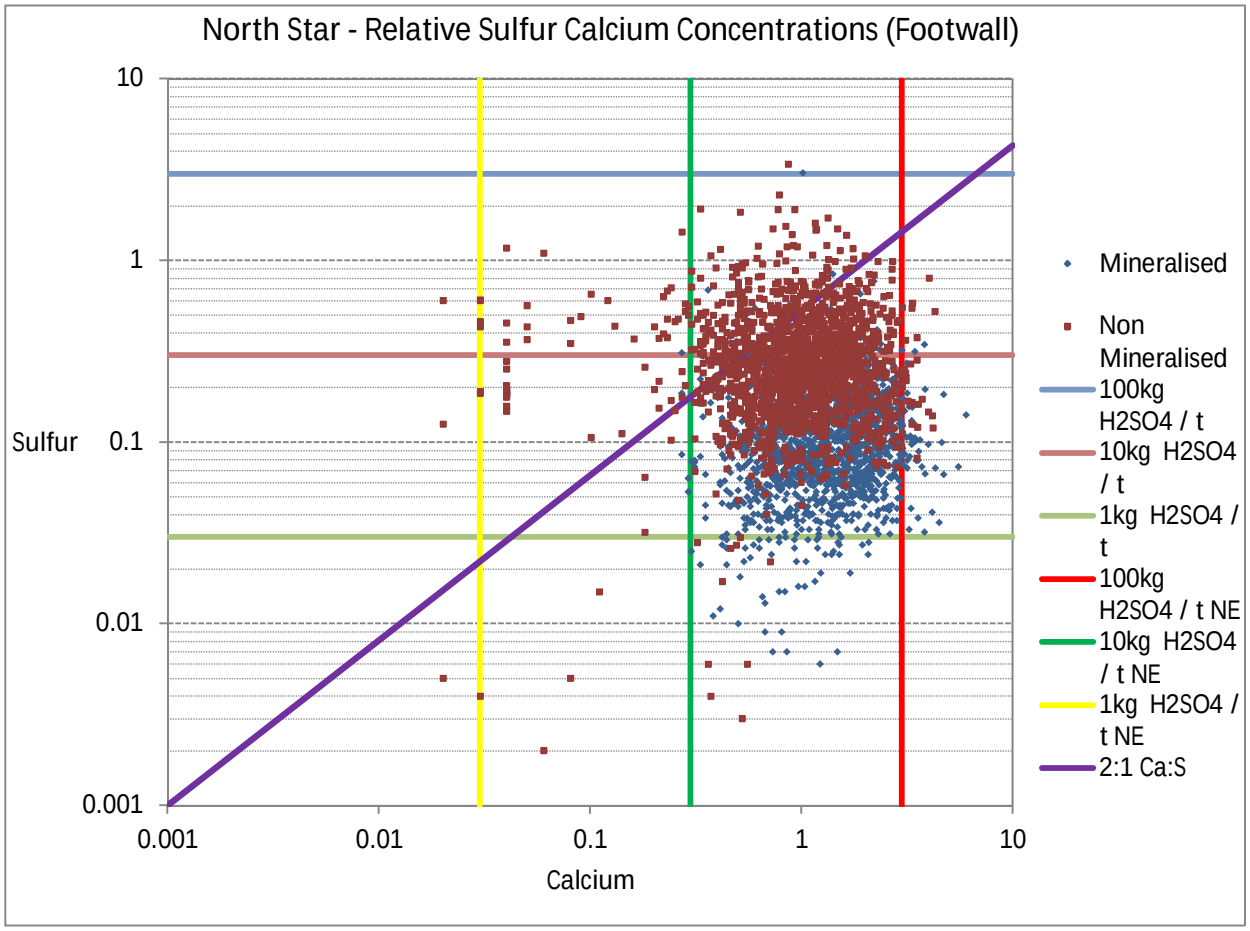


Figure 6 Relative sulfur: calcium concentrations (Footwall)

The assay database provided for the Hanging Wall material (Figure 7) indicated both mineralised and non-mineralised material to be present. Based on the sulfur: calcium ratio, the majority of this material is likely to be NAF, and may be NAC. A small proportion of the Hanging Wall material plots above the 2:1 Ca: total S line, and is therefore likely to be classified as PAF.

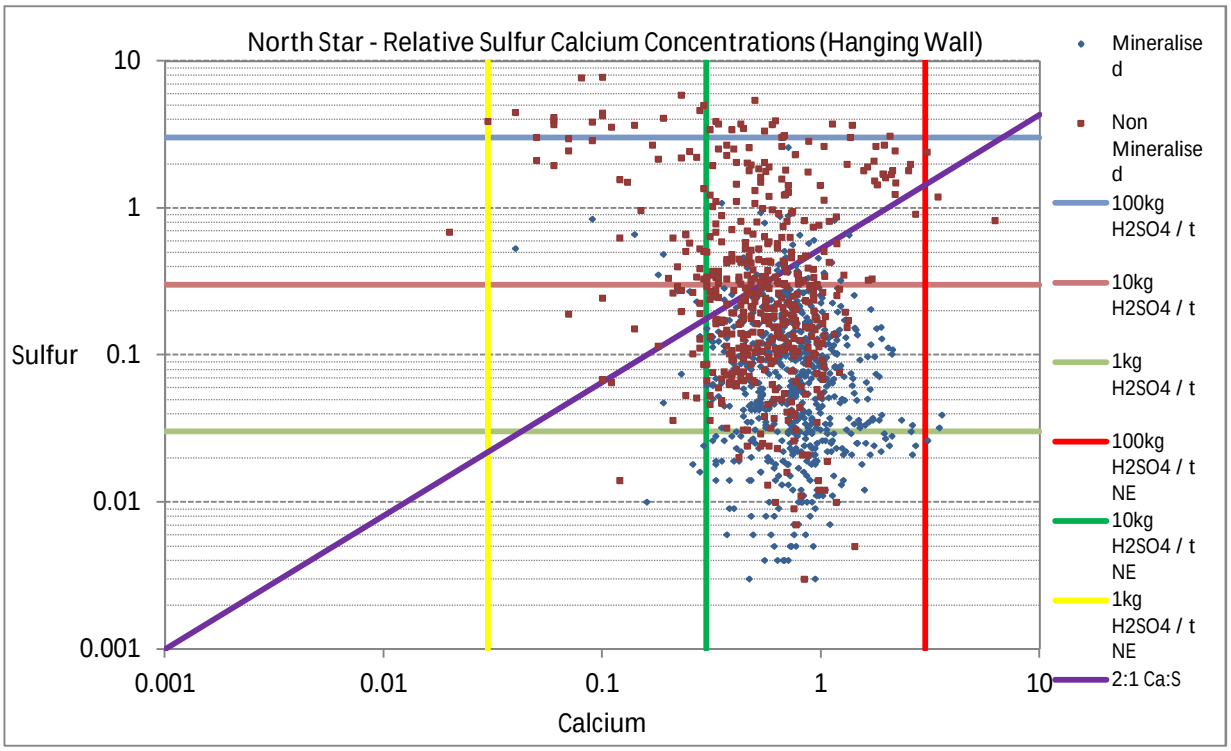


Figure 7 Relative sulfur: calcium concentrations (Hanging Wall)

The assay database provided for the BIF-North, BIF-South and Oxide materials, as well as the material which was unclassified (Figures 8 – 11) indicated both mineralised and non-mineralised material to be present. Based on the sulfur: calcium ratio, the majority of these materials are likely to be NAF, and may be NAC. A small proportion of the BIF-North and Oxide materials plot above the 2:1 Ca: total S line, and are therefore likely to be classified as PAF.

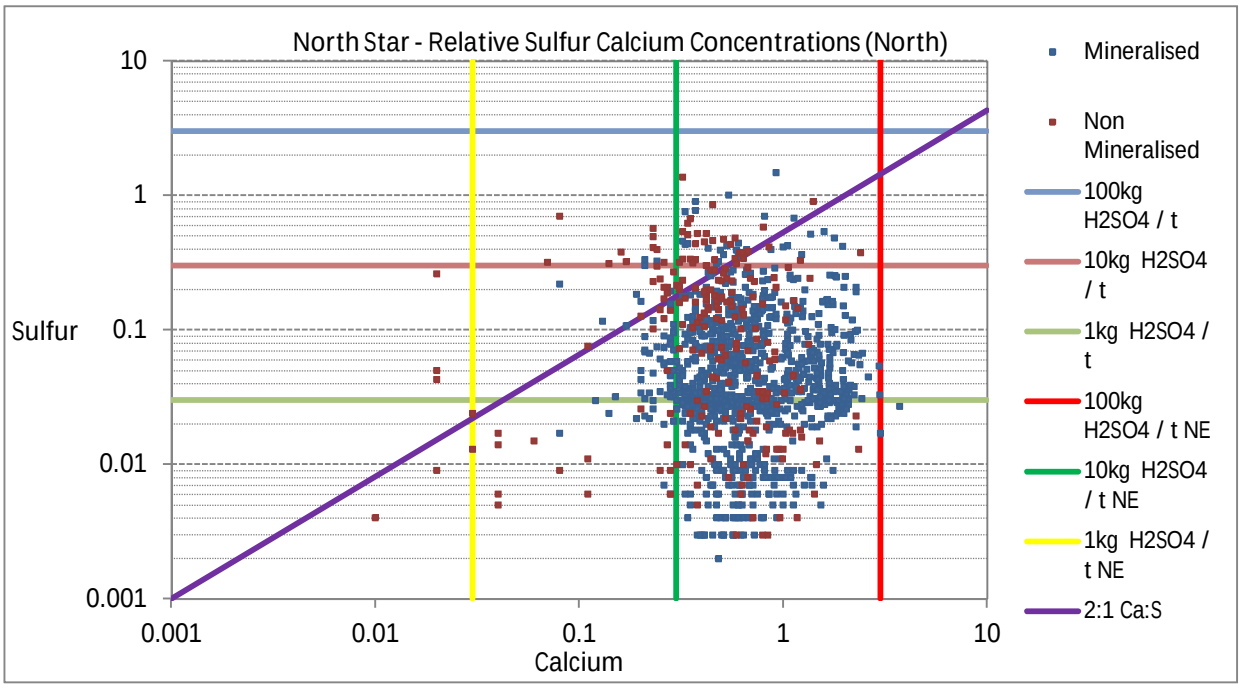


Figure 8 Relative sulfur: calcium concentrations (North)

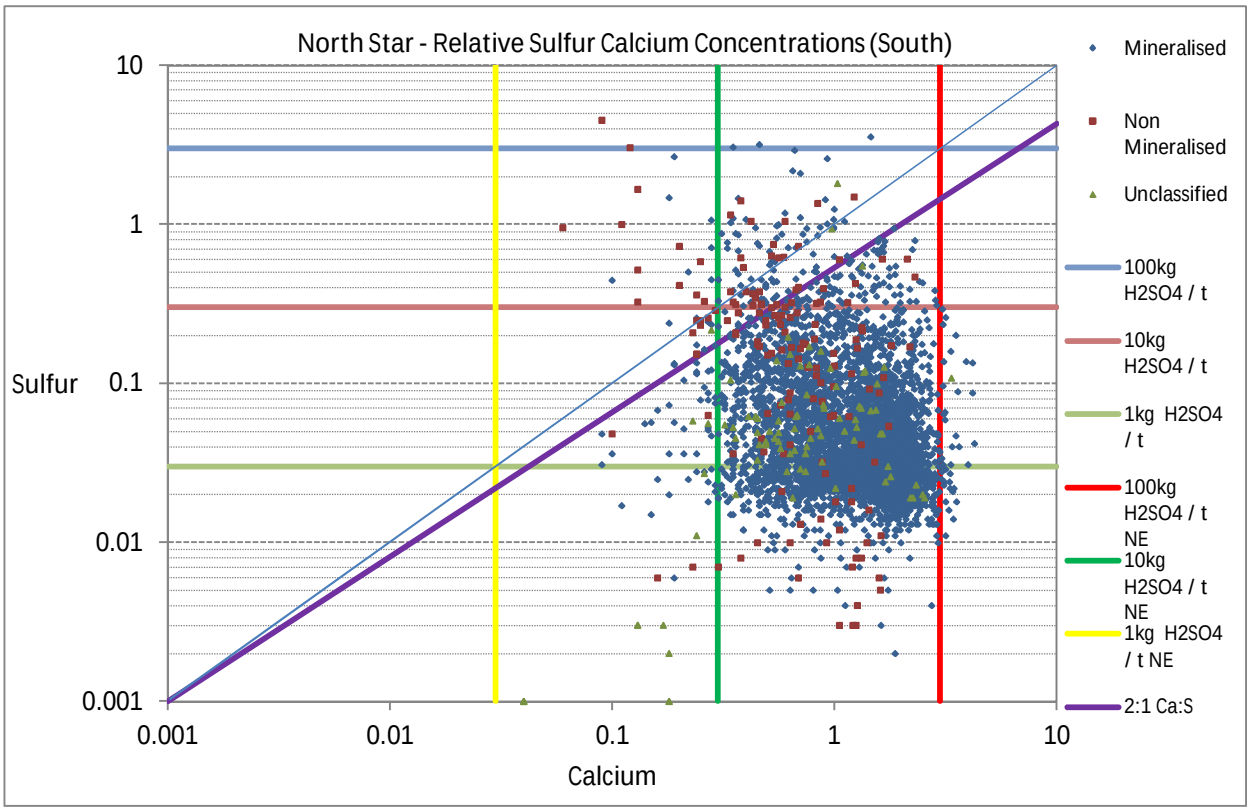


Figure 9 Relative sulfur: calcium concentrations (South)

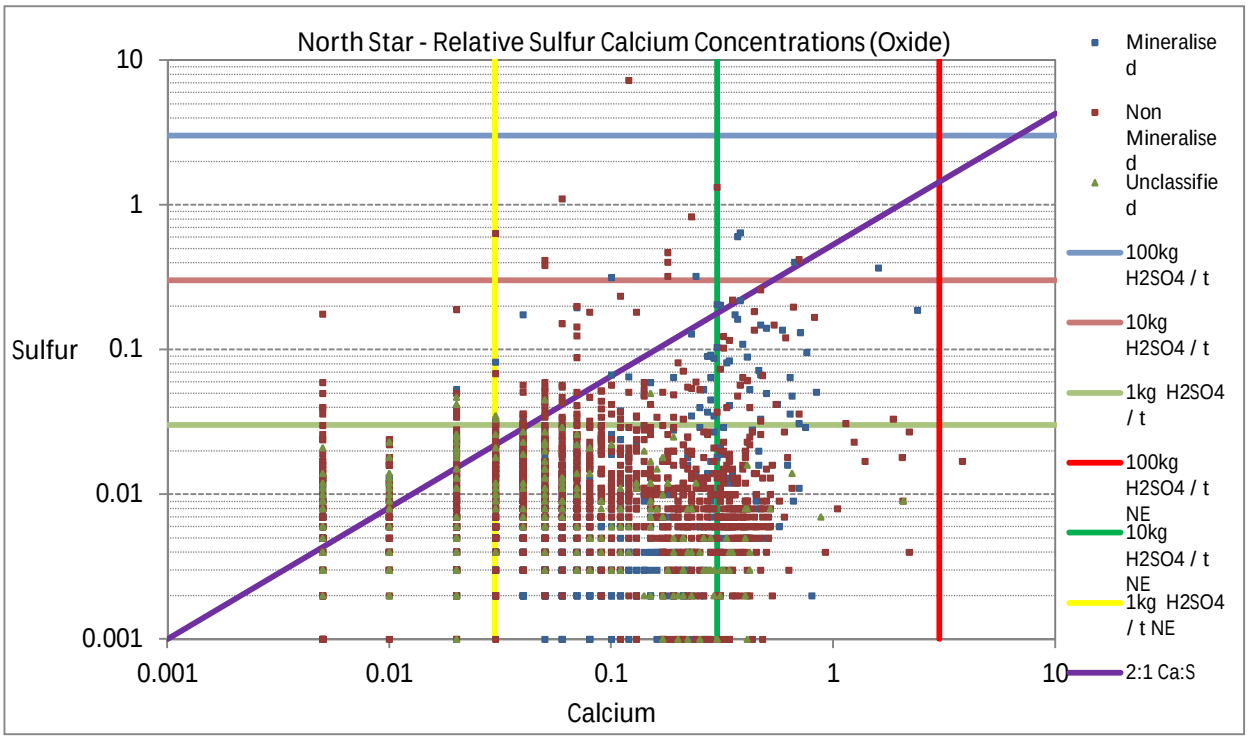


Figure 10 Relative sulfur: calcium concentrations (Oxide)

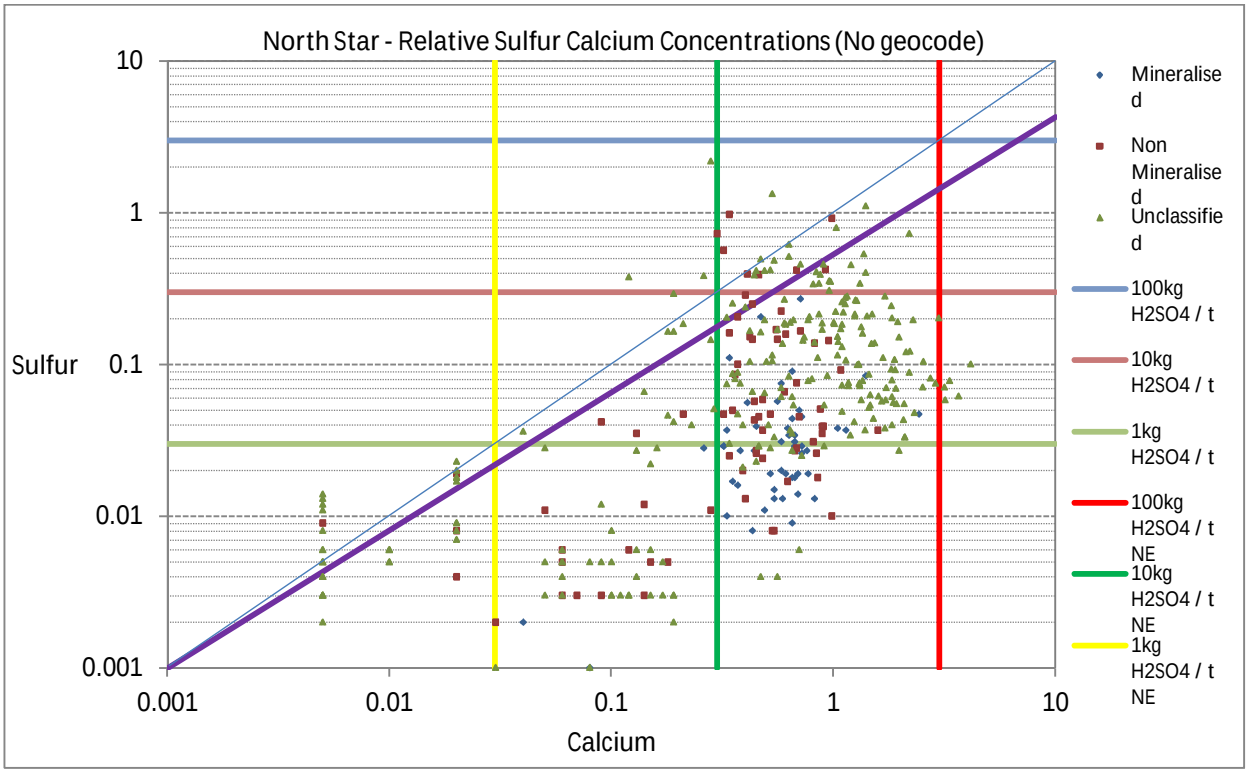


Figure 11 Relative sulfur: calcium concentrations (No geocode)

This data may also be represented by plotting ANC against MPA to determine the relative ratio of potential acid forming capacity to acid consuming capacity. In the results shown in Figure 12, the black

line indicates where ANC equals MPA (i.e. a ratio of 1:1), and the blue line indicates a ratio of ANC to MPA of 2:1. Samples plotting above the black line generally do not have sufficient relative neutralising capacity and therefore have the potential to generate acid drainage. Samples that plot between the 2:1 and 1:1 ratio lines are likely to present a low risk of acid generation (although the relative risk depends on the relative availability of the acid generating and neutralising capacity). Samples plotting below the blue line, with an ANC to MPA ratio of greater than 2:1, are unlikely to generate acidity (even allowing for some neutralising inefficiency due to sulfate coating of carbonate grains) given the excess neutralising capacity present.

The results presented in Figure 12 indicate that the majority of samples have ANC: MPA ratios of greater than two. These results indicate excess potential acid neutralising capacity relative to acid generating capacity is present within the majority of samples. However, a number of samples (mainly Hanging Wall and Footwall materials) plot between the 2:1 and 1:1 ratio lines and above the 1:1 ratio line, indicating the potential to generate acidity.

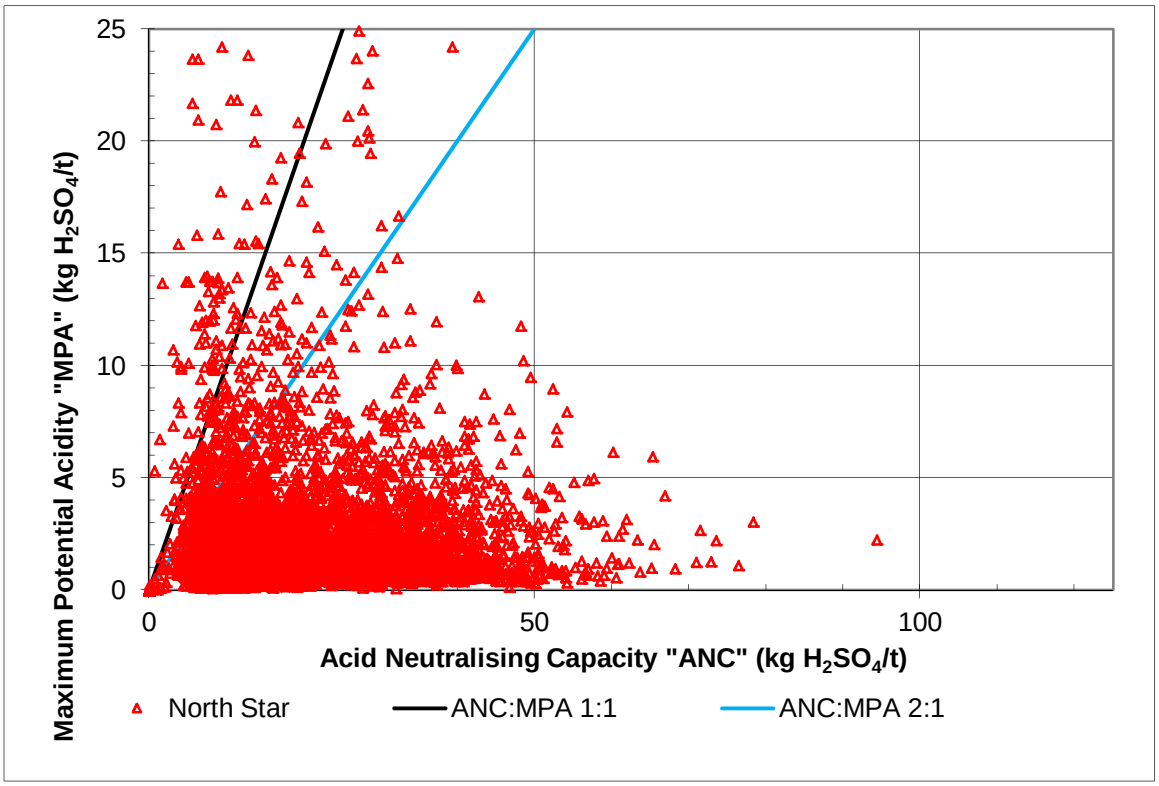


Figure 12 ANC/MPA ratios

6.6 Sulfur: Iron Correlations

The relationship between sulfur concentrations and iron grade, in addition to sulfur concentrations and calcium concentrations was assessed to determine the mineralogical relationship between these parameters. From the relationship the following observations are made:

- In general, sulfur and iron grade are inversely proportional; that is to say, non-mineralised (i.e. waste materials) units have higher sulfur grades than mineralised (ore) units (Figure 13); and
- The inverse relationship is pronounced in the non BIF units (Hanging Wall and Footwall). However, the relationship is less obvious in the BIF units (North and South). No relationship is observed in the Oxide material (Figures 13-14).

The implication of the relationships noted above is that waste rock and ore (and therefore tailings) are not likely to have very similar geochemical characteristics with respect to acid generating potential. In general, the mineralised lithologies (BIF) are more likely to be characterised as NAF, whereas PAF materials are more likely to occur within the non-mineralised materials (Hanging Wall and Footwall).

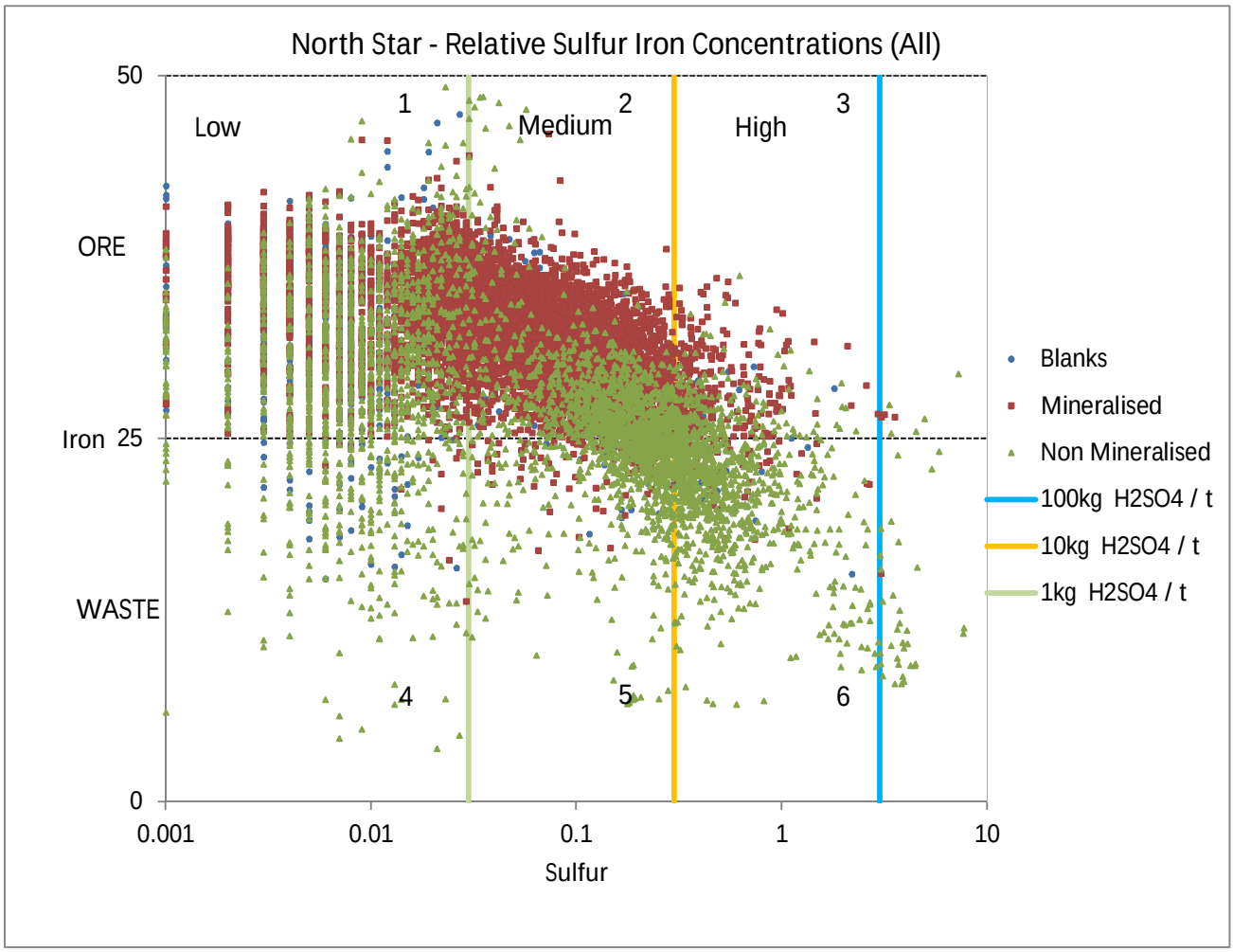


Figure 13 Relative sulfur: iron concentrations (all strata)

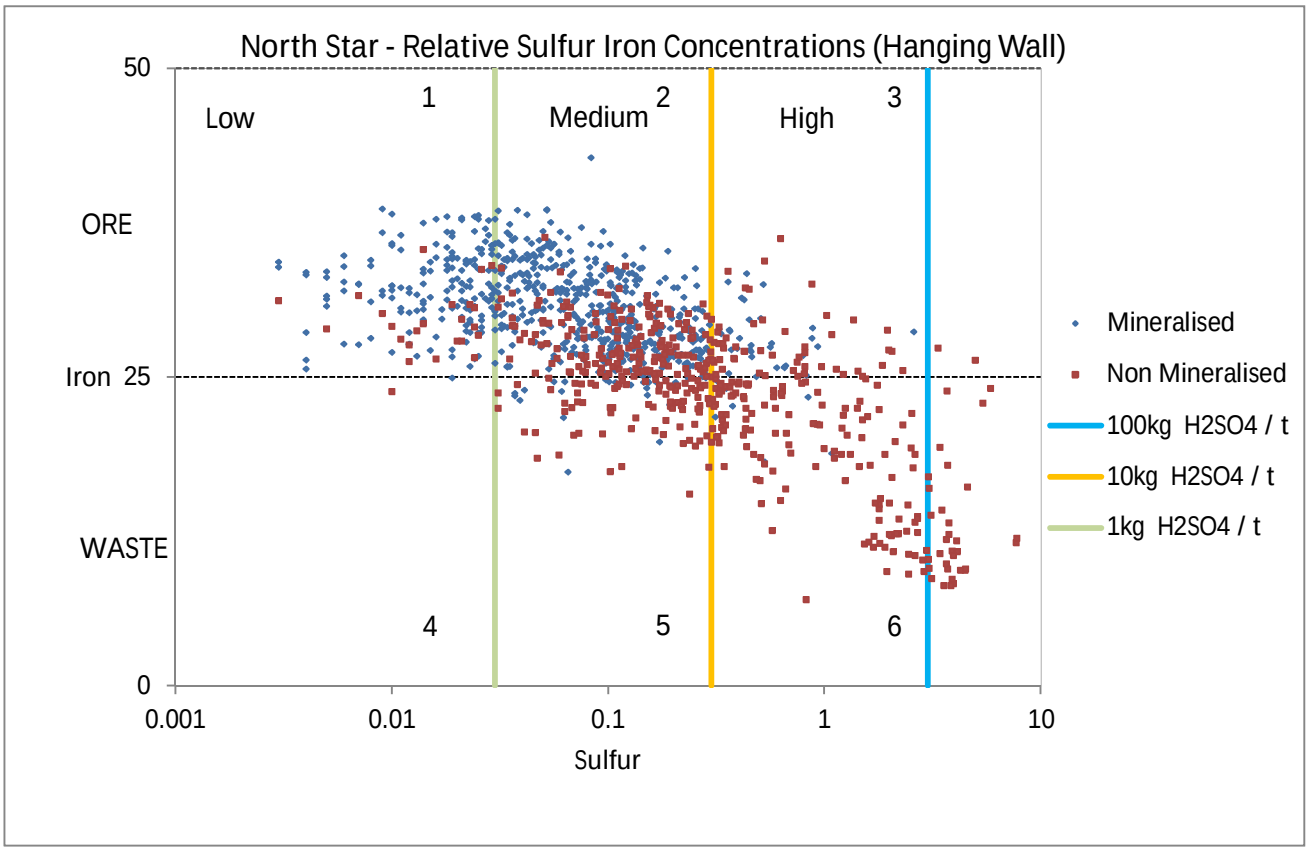


Figure 14 Relative sulfur: calcium concentrations (Hanging Wall)

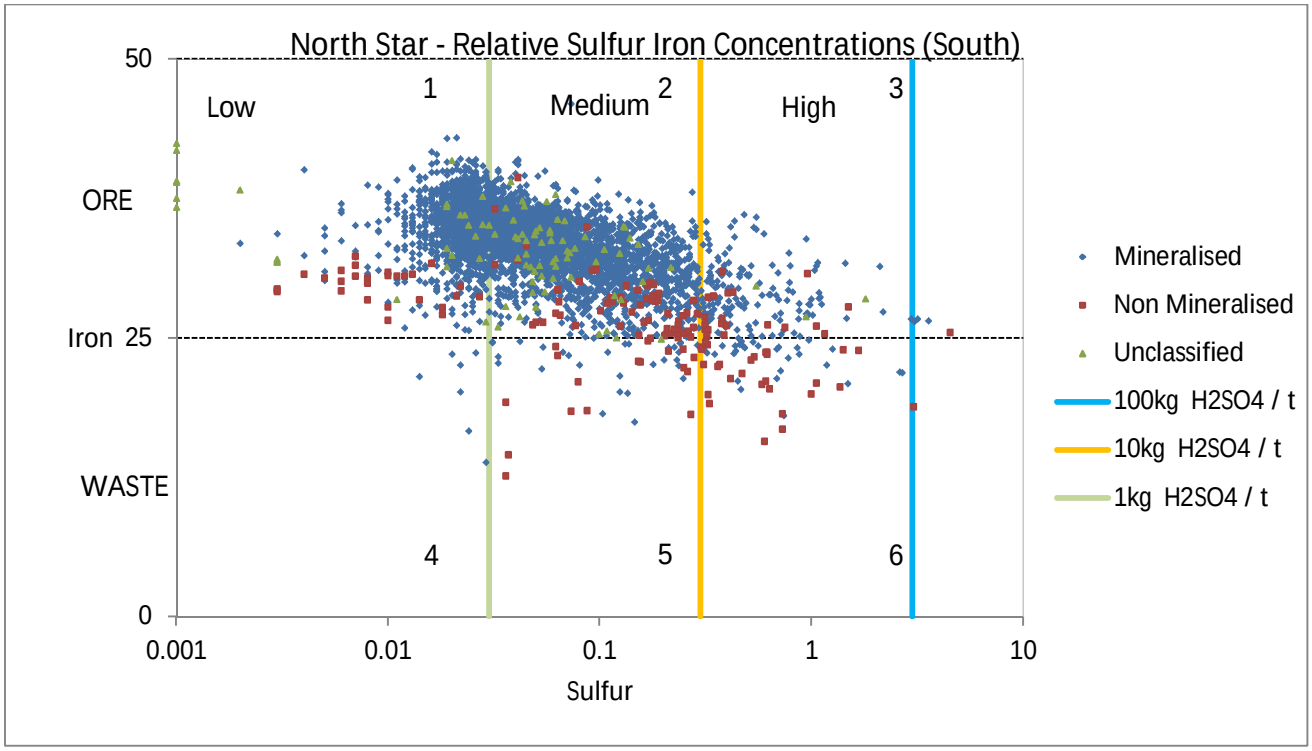


Figure 15 Relative sulfur: iron concentrations (BIF-South)

6.7 Summary high level assessment

A summary of all classification data is given as follows in Table 10:

Table 10 NAPP Classification

Lithological type	AMD classification		
Oxide (assumed ore/waste unit)	PAF:	0.44%	Samples: 10
	UC:	15.10%	Samples: 340
	NAF:	84.41%	Samples: 1900
	NAC:	0.04%	Samples: 1
South (assumed ore unit)	PAF:	1.57%	Samples: 65
	UC:	2.41%	Samples: 100
	NAF:	95.2%	Samples: 3949
	NAC:	0.82%	Samples: 34
North (assumed ore unit)	PAF:	1.19%	Samples: 14
	UC:	7.40%	Samples: 87
	NAF:	91.23%	Samples: 1072
	NAC:	0.17%	Samples: 2

Hanging Wall (assumed waste unit)	PAF:	10.59%	Samples: 100
	UC:	9.22%	Samples: 87
	NAF:	79.77%	Samples: 753
	NAC:	0.42%	Samples: 4
Footwall (assumed waste unit)	PAF:	2.86%	Samples: 82
	UC:	7.8%	Samples: 224
	NAF:	87.63%	Samples: 2515
	NAC:	1.71%	Samples: 49

Based on analysis by geological unit, assay database, and statistical analysis of the geochemical data set, PAF materials were identified predominantly in:

- The Hanging Wall: 12% PAF (HC), 10% UC; and
- The Footwall: 3% PAF (HC), 8% UC.

Although a low percentage of PAF material was identified in the BIF-South, this material comprises a very large component of the overall volume of the deposit and therefore may contain appreciable volumes of PAF materials.

It should be noted that although the Oxide contained a relatively high proportion of UC material of 15%, the majority of this material had a NAPP value of between 0-1kg H_2SO_4/t. The reason for this low level positive NAPP values is primarily due to low calcium values in the unit rather than elevated sulfur values. As a result, the Oxide is not considered to be at a high risk of containing PAF material.

Based on lithological specific analysis, detailed geochemical testing, and statistical analysis of the geochemical data set it appears that:

- The BIF material is considered to be NAF, however a small proportion of high PAF material has been identified in the BIF-South (1.6%) and the BIF-North (1.2%) material, based on a NAPP cut off of >10kg H_2SO_4/t.
- The majority of the Hanging Wall material is NAF. However, there is a significant PAF component with approximately 10% of material classified as PAF based on estimated NAPP values. A significant UC component has been identified with 9% of material classifying as UC based on estimated NAPP values.
- The majority of the Footwall material is NAF, however there is a PAF component with 2.9% of material classified as PAF. A significant UC component of 7.8% has been identified.
- The majority of the Oxide is NAF, however there is a significant UC component with 15% of samples classifying as UC. Laboratory testing indicates this material is likely to be NAF (see Section 8). It is likely that much of the material as fallen into the UC classification because of the low average NAPP value for this material (i.e. low calcium concentrations). It is therefore a lack of buffering capacity rather than elevated sulfur that results in the UC classification.
- With respect to tailings materials, some of the BIF-South material may be acid consuming. Approximately 20% of the material has a NAPP vale of -30kg H_2SO_4/t or lower.

The waste material has been classified based on the above analytical data as presented in Table 11.

Table 11 Preliminary Waste Material Classifications

Lithology type	PAF/NAF classification	Significant Sub classification (minor if any >1%, major if >10%)
BIF-South	NAF	Minor (1.6%) PAF Minor (2.4% UC)
BIF-North	NAF	Minor (3.9%) NAC Minor (1.2%) PAF
Hanging Wall	NAF/PAF	Major (11%) PAF Minor (9%) UC
Footwall	NAF/PAF	Minor (2.8%) PAF Minor (7.8%) UC
Oxide	NAF	Major (15%) UC
Waste stream	PAF/NAF classification	Significant Sub classification (if any)
Tailings (dry)	NAF/NAC	Minor (1.6%) UC Major (19.4%) NAC
Tailings (wet)	NAF/NAC	Minor (1.6%) UC Major (19.4%) NAC
Waste rock	NAF/PAF	Minor (4.2%) PAF Major (13%) UC

7. Drilling Data and 3D Geochemical Model Interrogation

7.1 3D Modelling in Encom Discover

3D modelling is a method for interpreting dispersed values defined in 3 dimensions into an estimate of every value in a defined volume.

The Encom Discover 3D software suite utilises discrete sample data and interpolation methods to derive estimated values for a defined volume of space. The volume is partitioned into a continuous array of smaller cells, each with a set X, Y and Z dimensions and one or more derived values based on geo-statistical methods of assessment of the discrete source data. The interpolation methods are similar to 2 dimensional geo-statistical methods and include deterministic methods (e.g. Inverse Distance Weighting) and probabilistic methods (e.g. Kriging).

7.2 Application of 3D Modelling for Geochemical Assessment

GHD has utilised Encom Discover 3D for this project in the following manner:

- All assay data and drill hole data available from exploration drilling in the project area was imported into the model;
- NAPP values were calculated for all assay data points (based on total sulfur and calcium assay data values);
- Classification criteria for the geochemical block model are provided in Table 8, Section 6.4, that summarise model classes, being: PAF, NAF, NAC and UC;
- Geological classification has been applied in the model directly from the Fortescue drill hole database; and
- The current life of mine pit shell has been imported into the model to allow assessment of data within the pit shell.

The model has been clipped to areas where exploration drilling has been carried out. Some areas within the pit shell have very low densities of drilling and cannot be modelled accurately and have therefore been excluded from modelling. The clipping carried out is shown in Appendix D.

Two separate models have been set up GHD in an effort to rationalise the fact that drilling data is not available for approximately 40% of the pit shell volume:

- Model 1: Clipping the model to the extent of the drill data and not extrapolating into the rest of the pit shell where there is no data; and
- Model 2: Clipping the model to the pit shell, and extrapolating results between holes lying within the pit shell.

It should be noted that modelled volumes/proportions for the geochemical classes may differ slightly to the statistical results given for the analysis in the high level review as the model is effectively generating data in areas where there is little information (i.e. extrapolation between drill hole locations).

The total model volumes were determined as follows:

- Model 1: 501,035,000m^3
- Model 2: 797,206,250m^3

The significantly lower total volume for Model 1 relates to the fact that drilling does not extend into the western area of the pit shell. The “extrapolated” portion of Model 2 is therefore calculated as the difference between the two models which is 296,171,250m^3 (40%).

7.3 Gridding Method Overview

7.3.1 Discretised Gridding

The discretised gridding method uses inverse distance weighting (IDW) rules to interpret and place each cell into one of the possible classes, depending upon:

- The established rules; and
- The net distance of each sample from each cell.

Discretised gridding effectively treats all inputs as classes and not as numbers, so that each cell gets the ‘most likely’ option – and not an average value. This method is utilised for assessment of materials with ‘classes’, such as geological units.

IDW therefore uses measured values (in this case, classes) surrounding the cell to determine the class of the cell where the measured values closest to the cell have a greater influence on the determination than values which are further away (i.e. a weighting is applied which decreases with distance from the cell).

7.3.2 Grid Size

The grid size defines the volume of area that will have the estimated class. The grid size used herein is defined in Section 7.3.5.

7.3.3 Search Parameters

Search parameters define the rules used to determine whether a sample value falls within the zone of influence for any particular cell. Rules include search distance and bearings, as well as the possibility of setting required search sectors and the option for expanding search zones if no samples are found in the initially defined zone. Elliptical (anisotropic) search radii can also be defined. This is used where the feature being modelled has an identifiable non equal relationship in space.

7.3.4 Gridding Parameters

Gridding parameters define the relative weighting given to samples based on their distance away from the calculated cell. The weights applied are proportional to the inverse of the distance between the cell and the measured value (class). The default is a power of 2 (weight = 1/Distance^2). Other weighting options not used herein can include linear, exponential and Gaussian.

Two other options will alter the gridding results in a significant way:

- The exact hit distance defines the distance out from any source sample where a grid cell will be given the source sample value instead of an interpolated result; and the elliptical weighting option

allows elliptical search parameter to influence the weighting. This can make a significant difference in the calculations if selected, as samples on the long axis will get weighted the same as much closer equivalent samples on the short axis.

7.3.5 Specific Model Parameters

The following parameters for 3D modelling were used as part of the assessment:

Mineralised Geology Model

- Method: discretised gridding;
- Grid Size:
    - Cell Width (m) : 25, Cell Length : 25, Cell Height : 5;
    - Model Coordinate (maxX, maxY, maxZ): (713840, 7651780, 500);
    - Model Coordinate (minX, minY, minZ): (709040, 7646880, -200);
    - Model size: 192 columns, 196 rows, 140 planes; and
    - Model size: 4800m Width, 4900m Length, 705m Height.
- Search parameters:
    - Elliptical Search 100m in x/y dimensions; and
    - 50m in z dimension. 3 search expansions (to a max of 600/300m) when insufficient sample points are found in initial search radius.
- A maximum of 16 samples and a minimum of 1 are required for successful calculation of a grid cell;
- Gridding parameters: discretised parameter classes: all lithology classes; and
- Weighting option: Power = 2;
    - The outputted Voxel grid was then clipped to the topographical surface (above) and the pit outline (below).

NAPP Model

- Method: Krig gridding;
- Grid Size:
    - Cell Width (m) : 25, Cell Length : 25, Cell Height : 2;
    - Model Coordinate (maxX, maxY, maxZ): (713840, 7651780, 480);
    - Model Coordinate (minX, minY, minZ): (709040, 7646880, -80);
    - Model size: 192 columns, 196 rows, 280 planes;
    - Model size: 4800 Width, 4900 Length, 560 Height.
- Search parameters:

- Elliptical Search 100m in x/y dimensions; 16m in z dimension. 3 search expansions (to a max of 600/48m) when insufficient sample points are found in initial search radius. Bearing 260 degrees, Inclination 80 degrees.

- A maximum of 16 samples and a minimum of 1 are required for successful calculation of a grid cell;
- Method:
  - Estimation - Point estimation; and
  - Method – Ordinary kriging.
- Variogram parameters; and
  - Isotropic Nugget: 1.4248; and
  - Nest type: Spherical; Nugget = 0; Positive Variance = 74.77; Primary Range = 10.344; Minor Range = 10.344; Depth Range = 10.344; Strike = 100; Plunge = -85, Dip = 0.
- The outputted Voxel grid was then clipped to the topographical surface (above) and the pit outline (below).

Interrogation of the drill hole database has been carried out by modelling using the Discover 3D add on package for MapInfo. The North Star Project borehole data that was analysed as part of this assessment is included in Appendix D.

7.4 Classification of Materials

For any additional geochemical testing to be undertaken, classification of the materials will follow the criteria set out in Table 8, Section 6.4.

When samples are classified as uncertain (UC), additional static and kinetic tests should be used to determine if the material is likely to pose an AMD risk.

A plan view of the 3D model data is provided in Appendix D. On this plan, maximum NAPP values in any one location (i.e. the highest results at any depth at each location) are shown using a colour coded key.

7.4.1 Modelled Waste/Ore Volumes by Classification

The Discover 3D model was used to determine volumes of waste and ore by classification. The classification system used was as outlined in Table 8, Section 6.4.

Units classified as mineralised in the assay database are assumed to be potential ore, while units classified as non-mineralised are assumed to be potential waste materials. Given that the geological model is currently being updated to include a revised resource estimation, unit classification as waste or ore for the purposes of this geochemical assessment will be dynamic over time. The relative model volumes provided herein should therefore be viewed as conceptual in nature.

7.5 Model 1 Results

The results for Model 1 are given in Table 12, and summarised as follows:

- The majority of materials are NAF with 86% (428,873,750 m3) of the model volume falling under this category;

- Total calculated PAF is 26,592,500 m^3 (5.3%), with the majority of this (22,261,250 m^3) being found within the Hanging Wall material;
- The proportion of Hanging Wall material that the model classifies as PAF is 24% (22,261,250 m^3);
- Total calculated UC material is 25,643,125 m^3 (5.1%), with the Hanging Wall containing the largest relative proportion of this material (10,001,250 m^3); and
- Total NAC calculated is 19,925,625 m^3 (4%), with the majority of this (12,608,125 m^3) being found in the mineralised portion of the BIF-South.

Table 12 Model 1 Results (Volumes in m^3)

Geology	Mineralised class	NAC	NAF	PAF	UC	Total
Oxide	non-mineralised	258,750	62,639,375	1,800,000	5,627,500	70,325,625
Oxide	mineralised	120,000	16,421,875	832,500	1,087,500	18,461,875
North	non-mineralised	8,750	5,571,250	8,750	494,375	6,083,125
North	mineralised	325,625	69,360,000	543,750	2,818,125	73,047,500
Footwall	non-mineralised	1,967,500	48,500,000	510,625	3,025,625	54,003,750
Footwall	mineralised	4,051,250	48,141,875	44,375	831,250	53,068,750
Hanging Wall	non-mineralised	141,250	20,132,500	14,052,500	5,970,000	40,296,250
Hanging Wall	mineralised	387,500	38,554,375	8,208,750	4,031,250	51,181,875
South	mineralised	12,608,125	116,911,875	30,625	175,000	129,725,625
South	non-mineralised	56,875	2,640,625	560,625	1,582,500	4,840,625
	Total	19,925,625	428,873,750	26,592,500	25,643,125	501,035,000

7.6 Model 2 Results

Model 2 was run to extrapolate into the area of the pit shell where Model 1 did not assess (40% of total volume). Results are given as follows in Table 13:

Table 13 Model 2 Results (Volumes in m^3)

Geology	Mineralised	NAC	NAF	UC	PAF	Total
Oxide	non-mineralised	2,258,750	125,521,250	7,959,375	2,625,625	138,365,000

Geology	Mineralised	NAC	NAF	UC	PAF	Total
Oxide	mineralised	120,000	16,992,500	1,115,000	281,250	18,508,750
North	non-mineralised	2,500	6,536,875	648,750	8,750	7,196,875
North	mineralised	759,375	97,729,375	3,542,500	1,104,375	103,135,625
Footwall	non-mineralised	2,504,375	78,849,375	3,956,875	833,125	86,143,750
Footwall	mineralised	4,210,000	61,970,000	1,217,500	66,250	67,463,750
Hanging Wall	non-mineralised	179,375	39,943,750	15,030,625	21,864,375	77,018,125
Hanging Wall	mineralised	515,000	72,030,000	15,436,250	19,784,375	107,765,625
South	mineralised	17,008,750	168,047,500	2,521,250	1,033,750	188,611,250
South	non-mineralised	60,625	2,727,500	178,750	30,625	2,997,500
	Total	27,618,750	670,348,125	51,606,875	47,632,500	797,206,250

The following points are relevant when considering the results of Model 2:

- Due to the limited depth of drilling relative to the total depth of the pit shell, the model has extrapolated the classification of BIF as mineralised/non-mineralised to the depth of the pit shell. This has resulted in a large volume of the BIF-North and BIF-South being classified as non-mineralised (as a result of extrapolation of results from the base of the drill holes). GHD understands that a key assumption of the pit shell being extended to depth below the base of the drilling is that the mineralised nature of the BIF extends vertically. As a result it is likely that the material classified as non-mineralised is more likely to be classified as mineralised if the pit shell is to extend to the projected depth;
- As result of the extrapolation of data by the model, some Oxide material has been classified as PAF in the west of the deposit. This is a result of the model extrapolating the occurrence of high sulfur material to surface based on the mineralisation following the sub vertical dip of the geology. Given the low levels of sulfur noted in the Oxide from testing to date, this assumption is not likely to be realistic as the Oxide material represents a zone of oxidised material which has been depleted in reactive sulfides;
- In general, Model 2 results are in agreement with Model 1 results, although the extrapolation of data at depth into the BIF and in the west into the Hanging Wall/Oxide has resulted in significant volumes of PAF being estimated within the Hanging Wall and Oxide. Although potentially conservative, these projections allow consideration of the potential for PAF materials to occur in the areas of the pit for which there is no drilling data;
- The majority of materials are NAF with 84% (670,348,125 m^3) of the model volume falling under this category;
- Total calculated PAF is 47,632,500 m^3 (6%), with the majority of this (41,648,750 m^3) being found within the Hanging Wall material;

- The proportion of Hanging Wall material that the model classifies as PAF is 23% (41,648,750 m^3);
- Total calculated UC material is 51,606,875 m^3 (6.5%), with the Hanging Wall containing the largest relative proportion of this material (30,466,875 m^3); and
- Total calculated NAC is 27,618,750 m^3 (3.5%), with the majority of this (17,069,375 m^3) being found in the mineralised portion of the BIF-South.

7.6.1 General Conclusions from Modelling

The following conclusions are drawn from the modelling:

- The Hanging Wall contains a high proportion of PAF material. With respect to overall volumes of PAF calculated by the model within the model space, the majority of PAF is found within this lithology type;
- The BIF does not appear to contain significant volumes of PAF by overall proportion, although it is noted that PAF material has been modelled to occur within this lithology type. Although PAF has been identified as a significant proportion of the BIF, it has been identified as NAC. The presence of the NAC material on a ratio of approximately 10:1 with respect to PAF material is relevant when considering that the overall classification for the BIF unit is likely to be NAF;
- The Oxide contains appreciable levels of PAF and UC. The presence of this volume of PAF is not expected from the Task 1 review which indicates the Oxide as having low sulfur levels. The modelled PAF volumes are considered to be an artefact of the nature of the model extrapolation of data. The model is extrapolating the presence of sulfidic material based on sub vertical dipping geology. Where there is limited drilling data at the surface (which occurs in the west of the model due to the boreholes being inclined to the west) the model has extrapolated the presence of sulfidic material from depth and projected to surface;
- A significant volume of material (47,632,500 m^3) has been identified as UC. Although low risk with respect to AMD as a result of NAPP values being lower than 10kg H_2SO_4/t, detailed testing is required to confirm if this material is likely to be NAF or PAF; and
- The total volume of PAF estimated by Model 2 is approximately 47,632,500 m^3. The majority of this is found within the Hanging Wall material. The eventual waste stream these materials report to (i.e. tailings or waste rock) will depend on the eventual classification of these materials as waste or ore within the mine model. The volumes of PAF projected to report to the waste rock dump and tailings stream should be revised once the resource model has been completed. Further drilling in the west of the deposit will allow the model to be refined to allow more accurate classifications of PAF materials in the Hanging Wall material.

7.7 Cross Sections

Cross sections through the pit area as produced by the model are provided in Appendix C. The cross-sections show the following data:

- The pit shell outline;
- The down hole logged geology;
- Mineralisation class (i.e. mineralised, non-mineralised);
- Geochemical class (NAPP model class); and

- NAPP provided as bar lines. Where positive results are recorded bars run to the right, where negative values are recorded bars run to the left.

Sections through the 3D geochemical model created by GHD (using Discover 3D) are given in Appendix D. These sections were reviewed to gain an understanding of the general distribution of sulfur containing material relative to the ore and waste materials, and to identify material types that may require further detailed AMD testing. The cross sections show the following:

- The majority of the materials classified as PAF occur within the Hanging Wall and at a depth of greater than 150m. Large blocks of PAF have been generated by the model within the Hanging Wall as a result of the vertical continuity of the occurrence of high sulfur material shown in the down hole NAPP data below this depth. It is important to note that limited drilling data in the western zone of the deposit means that the true extent of the PAF material is unknown. The model has been set up to follow the strike and dip of the prevailing geology, hence the extrapolation of material as PAF has been determined by assumption that the PAF material occurs as continuous blocks of material orientated north south with a sub vertical dip;
- Limited areas of correlated blocks of PAF are noted in the Oxide. The model orientation has also resulted in material being reported as PAF within Oxide material in the west of the pit shell where there is currently no drilling data. Based on geochemical data analysed to date by GHD, it is not expected that PAF material will be found in the Oxide material. As a result, the PAF estimates given by the model for the Oxide are likely to be overestimates;
- Limited drilling data in the western area has resulted in the model generating a significant amount of extrapolated data. Further drilling is required to determine the nature of the geochemistry of the material in this area, however, at this time the model extrapolation is considered as a reasonable conservative assumption of the likely geochemical characteristics of material in this area;
- Due to the thinly bedded nature of the BIF material, the relatively coarse drill spacing of exploration drilling and the variable depth of the oxide, there remains the possibility that additional PAF material may be encountered during mining activities. The source of PAF material in the BIF appears to be thin and discontinuous bands of pyrite which are likely to be highly localised in extent.
- Isolated blocks of PAF material are noted within the BIF, in particular the BIF-South unit. Large blocks of PAF are not generated by the model as a result of the isolated and spatially discontinuous nature of the high sulfur material in the BIF;
- Zones of material classified as NAC are evident in the BIF, however large blocks have not been generated by the model which indicates that the NAC material is spread diffusely and does not have a spatial relationship; and
- Blocks of PAF are evident in the Footwall material, although they not as continuous or as spatially correlated as the blocks in the Hanging Wall. Limited drilling data to the east of the deposit means that the model has extrapolated into these areas, the true nature of the distribution of PAF material requires further drilling to be carried out.
- Drilling data within the deposit comprises drill lines with a 250m north-south spacing, but a denser spacing along the east-west drill lines. This drill spacing was determined to assess the *in situ* geology which has a north-south strike and sub vertical dip to the west. The rationale being that there is likely to be higher mineralogical variability across strike given that the BIF comprises thinly bedded materials than along strike. As a result of the drill spacing, the model has extrapolated data into the

250m block between drill lines. Therefore, additional drilling is required to further determine the detailed nature of the *in situ* geochemistry However, for the purposes of this assessment, the model extrapolation is considered to be an appropriate conservative assumption of the likely geochemical characteristics of units within these areas. Any additional resource definition drilling carried out on site will refine the accuracy of the model.

8. Additional Geochemical Test-Work Programme

8.1 Selection of Archived Samples for Further Testing

A sampling plan consisting of samples selected from Fortescue archived core, drill cutting samples, and pulped samples (that were subject to previous assay) was completed for additional static and kinetic geochemical characterisation tests [2]. Results from the additional testing has been used to:

- Further define the geochemical properties within the different lithological units;
- Define the AMD risk;
- Assess the performance of the 3D model; and
- Allow for calibration of the 3D model.

The sampling plan was designed to provide good coverage according to a number of criteria, including depth and spatial extent.. The sampling plan had to include a representative selection of the different lithological units present and of both non-mineralised and mineralised samples. Material previously identified by assay test results as possessing high total sulfur concentrations was also targeted.

As noted above, geological material available from previous exploration drilling was identified as an appropriate sample source for the sampling programme. As this material was used for the original assay testing as well as being used to populate the 3D model, it was deemed appropriate for model calibration once the more detailed static and kinetic test data became available.

The process of identifying samples suitable for the geochemical characterisation programme started with identifying suitable boreholes. These were selected on an approximate 500m horizontal spacing in addition to using output from the 3D model, specifically targeting boreholes that had a high likelihood of intersecting zones of elevated total sulfur concentrations and lithologies of particular interest. For most boreholes, drill chips or core were only available for limited sections. Therefore, even depth representation was not possible in some instances for the purposes of geochemical characterisation.

Once drill holes were selected, samples were chosen down the profile. Depth intervals of either 10 or 20m were preferred to ensure a representative dataset across all lithological units. However, this was not always possible, as noted above. Finally, samples were targeted based on elevated total sulfur or calcium results relative to the mean value of the dataset to ensure material that was classified as PAF or NAC by the preliminary assessment could be assessed.

8.2 Detailed Testing Programme

The testing programme submitted to the laboratory to date included the following analysis (Table 14):

Table 14 Testing Programme

ANALYSIS	SAMPLES ANALYSED
Multi-elemental analysis by ICPMS	140^

[2] This included NAG, NAPP, paste pH, metals suite, NAG liquor, kinetic NAG, deionised water leach, weak acid leach, XRD, ABCC Curve, and Humidity Chamber.

ANALYSIS	SAMPLES ANALYSED
ABA (lab NAPP, ANC, MPA)	100^
ASLP leach	113^
NAG	1,170^
XRD	47^
NAG liquor	113^
ABCC	48^
Kinetic NAG	11^
Kinetic Leach column	8*
Physical testing (Emerson Class, CEC)	8*

*Samples yet to be analysed at the time of writing

^Analysis complete

Summary tables of results from the detailed geochemical test programme are provided in Appendix F, while the full laboratory results are provided in Appendix G. Results are discussed in the following sections.

8.3 NAPP/NAG Testing

NAG testing provides an indication of the net behaviour of rock when fully oxidised (AMIRA 2002). It is performed by rapidly oxidising the pulped rock sample with a hydrogen peroxide solution. It is a relatively aggressive reaction as this method is required to fully oxidise the sulfides and carbonates in the sample in a short period of time. From the resulting aliquot, the pH is measured, and the aliquot is then titrated to measure the acidity. The titration is to endpoints of pH 4.5, which is indicative of typical pyrite oxidation acidity, and pH 7.0 to assess remaining acidity from other oxidised minerals in addition to metals hydrolysis reactions.

Net Acid Producing Potential (NAPP) is determined by the summation of two acid base accounting parameters. The total sulfur content of the sample, usually measured with a LECO apparatus, is used to derive the maximum potential acidity (MPA), the theoretical maximum amount of sulfuric acid produced if all sulfur in the sample is oxidised. The acid neutralising capacity (ANC) is then calculated by titrating an unoxidised sample with acid to determine its ability to neutralise an acid solution. The NAPP is then derived by adding the negative ANC to the MPA (all expressed in kg H_2SO_4). A net positive value indicates that the sample may produce acid, while a net negative value indicates that the sample is either Non Acid Forming (NAF), or Net Acid Consuming (NAC), commensurate with the final value (Table 8, Section 6.4).

Due to the low risk with respect to PAF materials identified from the Task 1 analysis, the following strategy was adopted for detailed geochemical testing of materials:

- NAPP testing was carried out on only a limited number of samples (n=151 samples) on the assumption that NAPP could be accurately estimated from Task 1 NAPP geochemical data, and

because total sulfur concentrations were generally low for the majority of materials (>90% classified as NAF from Task 1 analysis); and

- NAG testing was carried out on a representative sample population (n=1,170 samples) that included all material types

To classify the acid forming potential of AMD material, the NAG pH is plotted against NAPP (Figure 16), to determine if the two tests confirm the sample is PAF, material is classified on the following basis:

- PAF: Positive NAPP and NAG pH less than 4.5),
- NAF (negative NAPP and NAG pH greater than 4.5),
- Contradictory/uncertain (UC).
- NAC: NAF material with a NAPP value of less than -50 H_2SO_4 is generally further sub-classified as net acid consuming material

The results from the testing are shown on the following figures:

- Figure 16: results for laboratory derived NAPP against NAG pH shown on a standard box plot;
- Figure 17: results for Tasks 2-3 laboratory derived NAPP against laboratory derived NAG pH shown on a standard box plot (Oxide and BIF-South);
- Figure 18: results for Tasks 2-3 laboratory derived NAPP against laboratory derived NAG pH shown on a standard box plot (Blanks, Footwall and Hanging Wall);
- Figure 19: results for Tasks 2-3 estimated NAPP against laboratory derived NAG pH shown on a standard box plot (all data);
- Figure 20: comparison between results between laboratory derived NAPP and NAG (all data);
- Figure 21: results for laboratory derived NAPP results against NAG (Footwall, Hanging Wall, Oxide and BIF-South); and
- Figure 22: results for estimated NAPP results against NAG results.

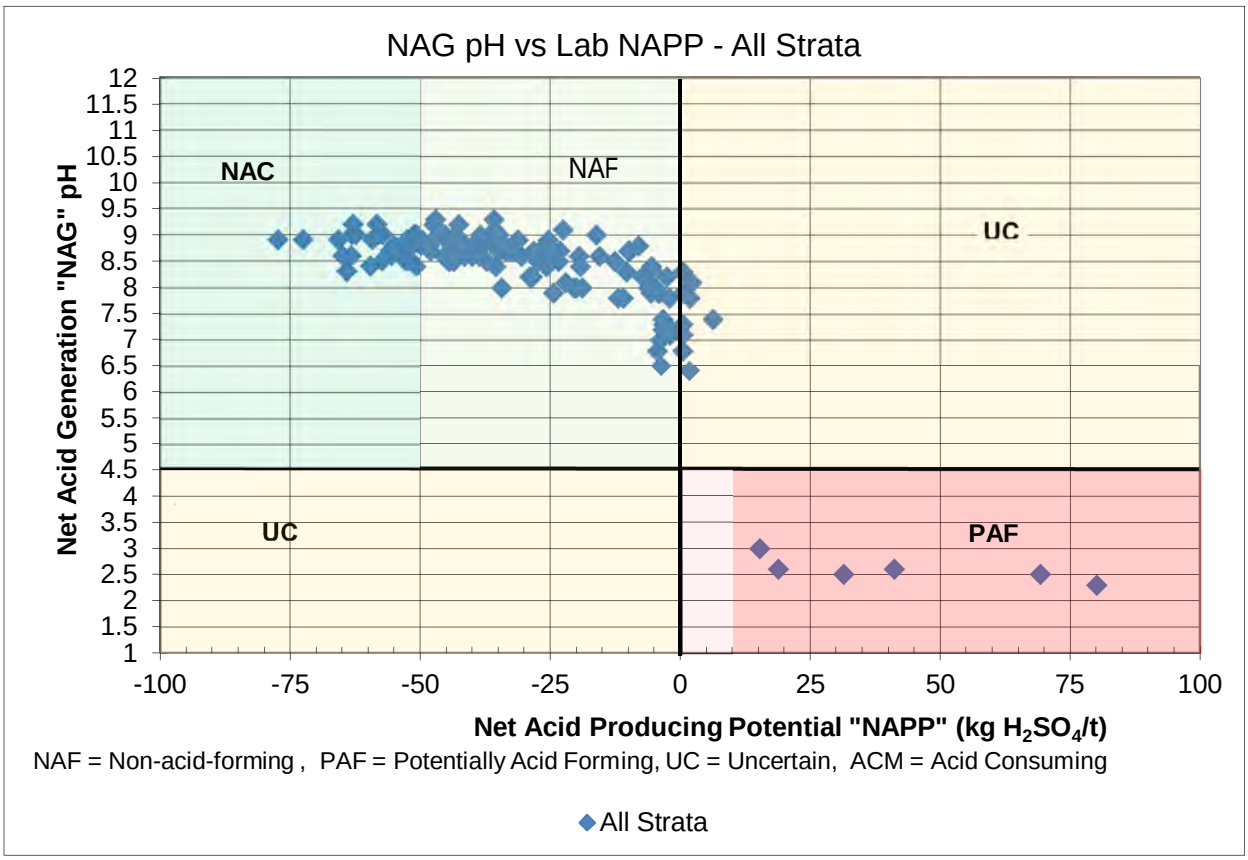


Figure 16 NAG/ Lab NAPP Box Plot (all data)

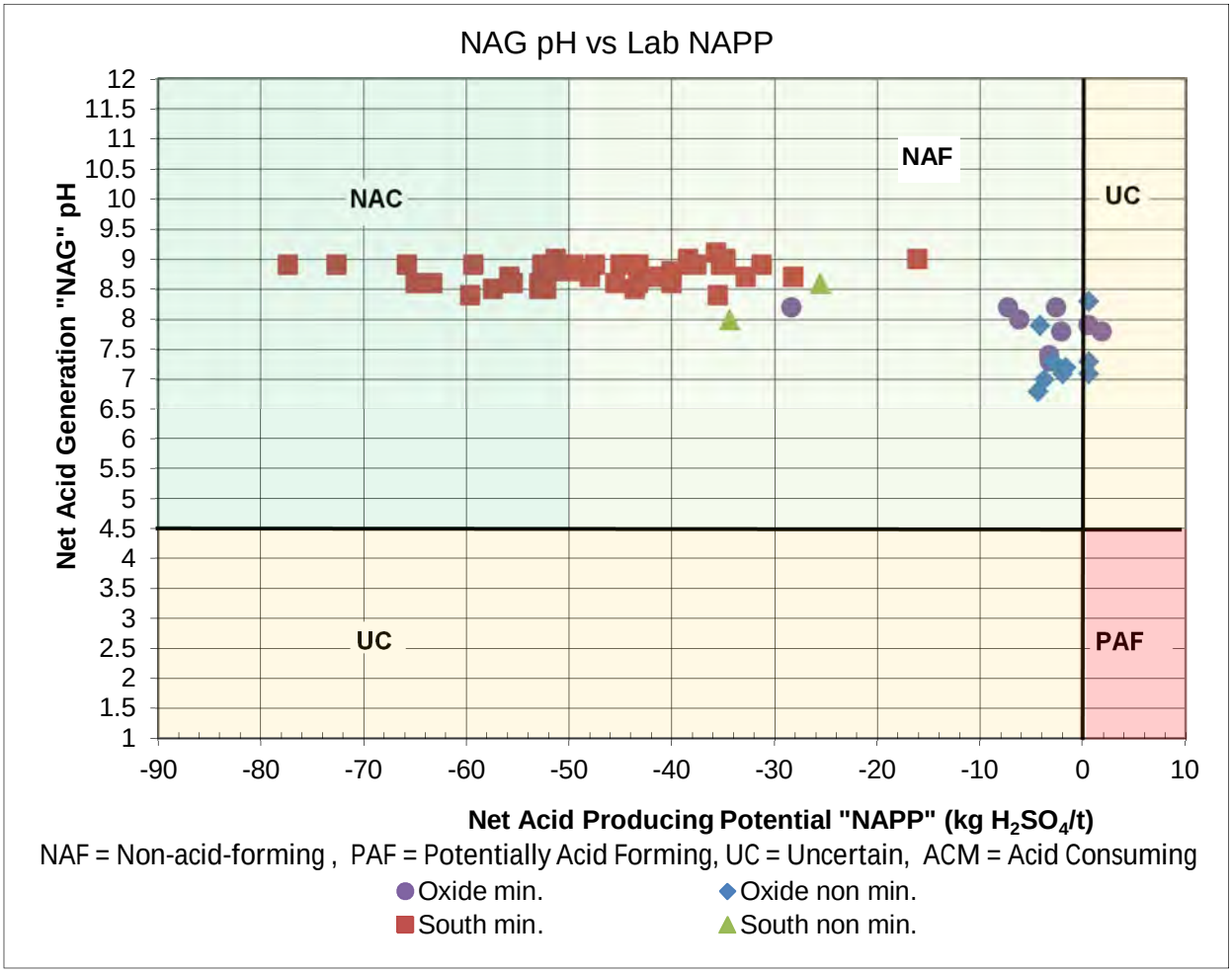
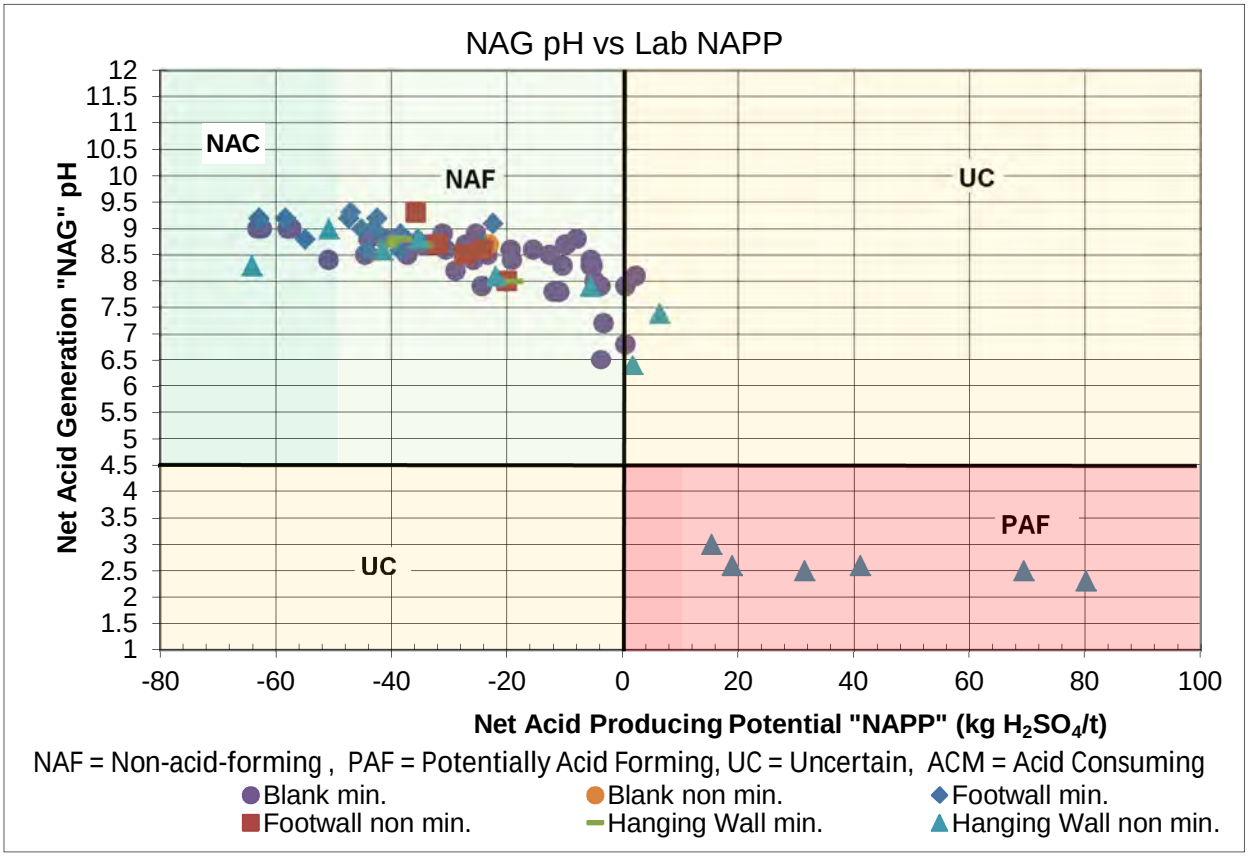


Figure 17 NAG/NAPP Box Plot (Oxide and South)



Blank indicates that the supplied samples did not have geo-codes allowing the lithology to be identified

Figure 18 NAG/NAPP Box Plot (Blanks, Footwall, Hanging Wall)

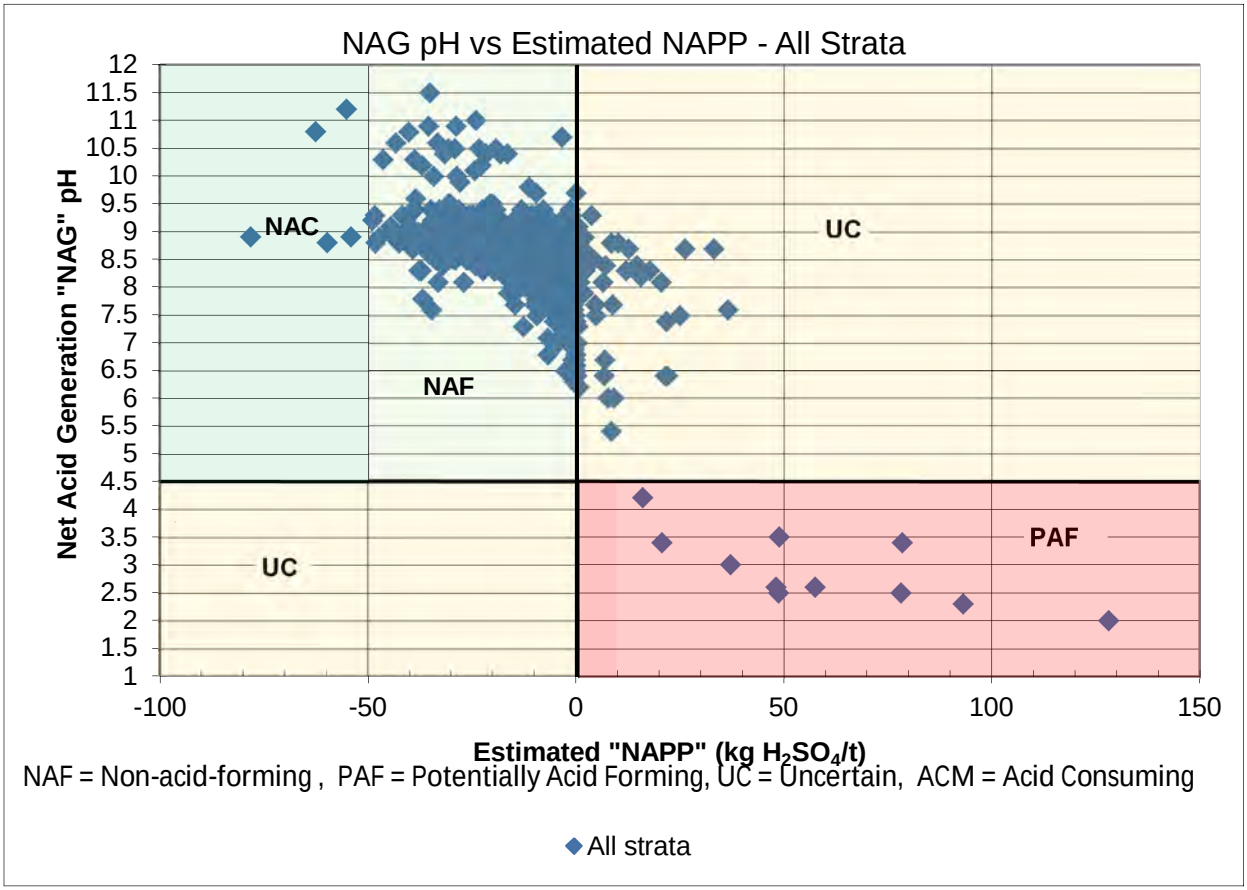


Figure 19 NAG/Estimated NAPP Box Plot (all data)

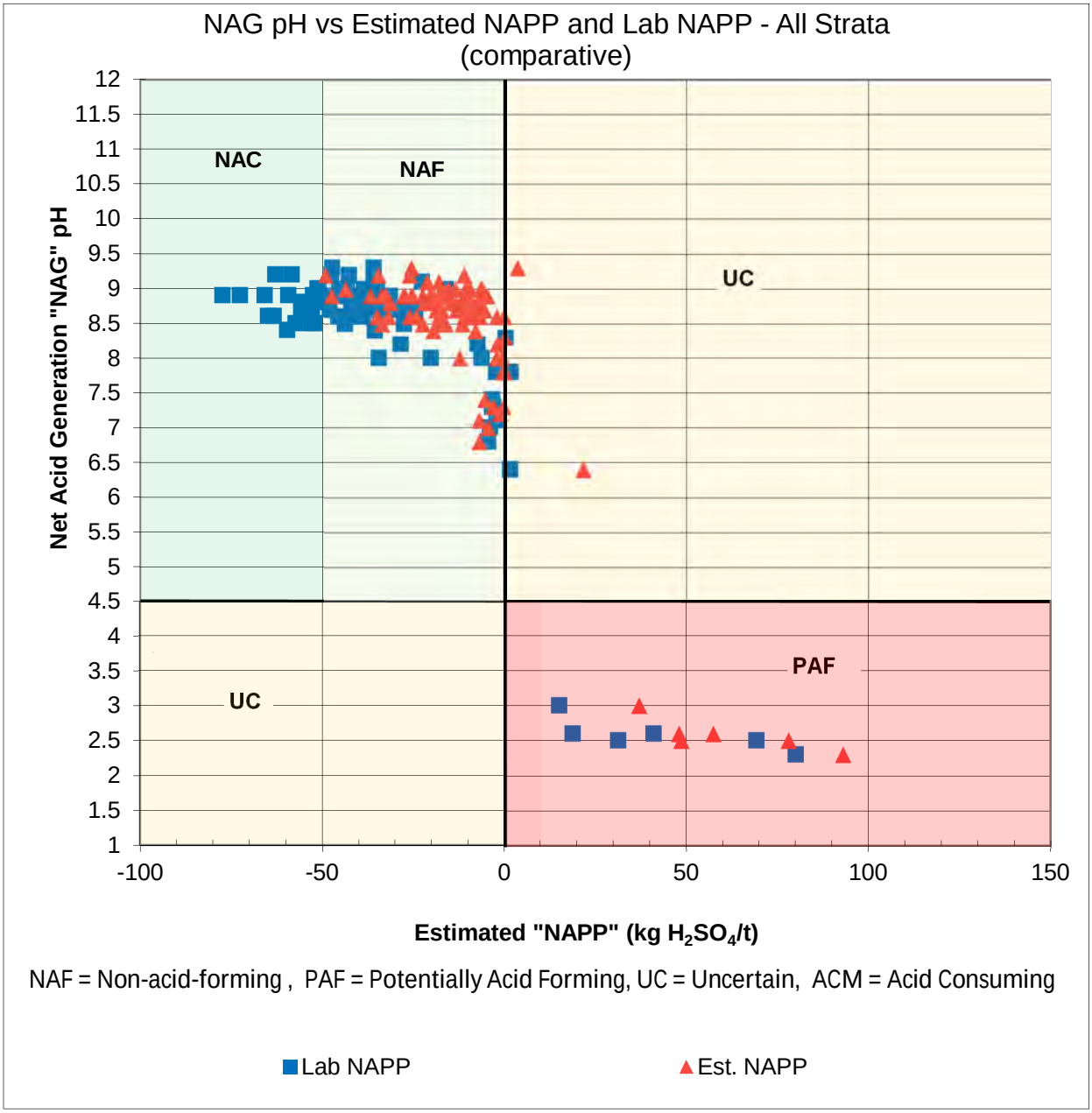


Figure 20 Comparison between Lab NAPP and NAG

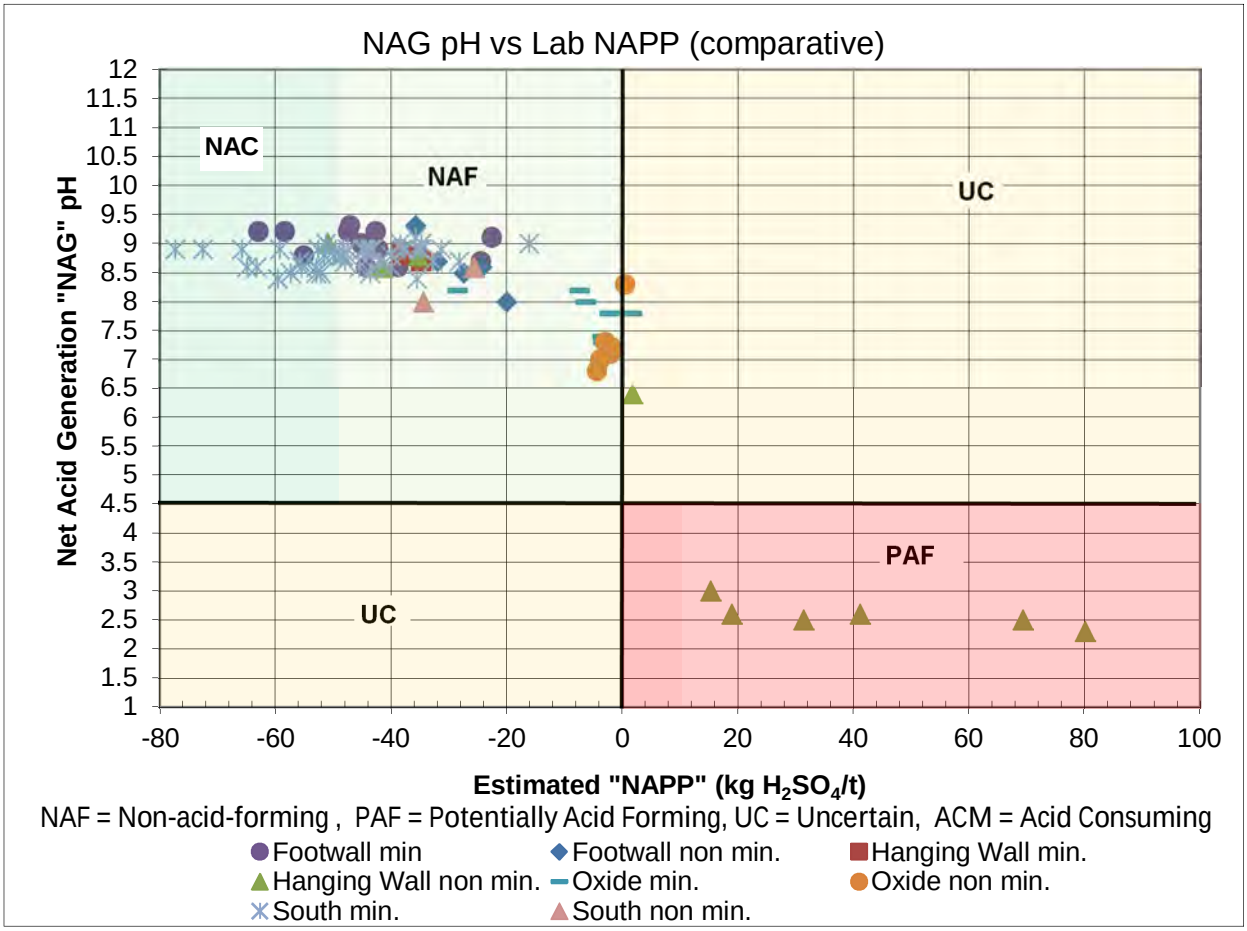


Figure 21 Results for samples with Lab NAPP results and NAG results

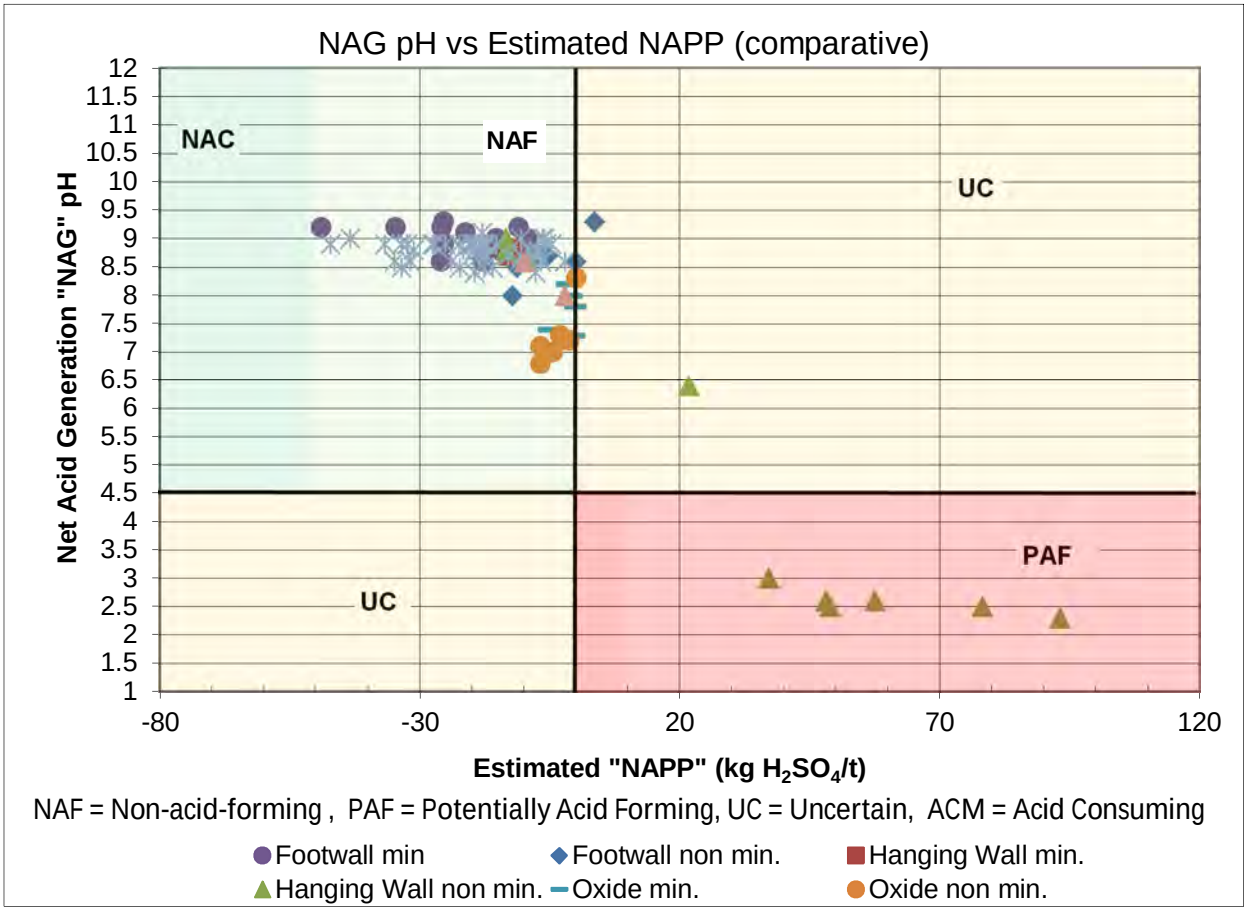


Figure 22 Results for samples with estimated NAPP results and NAG results

8.3.1 Summary of Results

The following conclusions are drawn from Figures 16-22, with laboratory NAG pH results indicating that:

- 4 samples of BIF-South have a NAG pH value of <4.5 and are therefore likely to be PAF;
- 8 samples of Hanging Wall have a NAG pH value of <4.5 are therefore likely to be PAF; and
- All other samples tested had NAG pH values >4.5 indicating these materials are not likely to be PAF.

The results of the laboratory NAG test data has been plotted on a standard box plot against the estimated NAPP value from Test 1 analysis. The box plots indicate that the majority of the materials tested can be classified as NAF, based on the AMD classification of NAF material, as having a NAG pH of >4.5 and a NAPP value <0kg H_2SO_4/t. In summary the results show that:

- 99% of samples (n=1,151 samples) (BIF-North, BIF-South, Footwall, Hanging Wall and Oxide) tested had NAG pH values >4.5 indicating these materials are not likely to be PAF; and
- 1% of samples (n= 13 samples) tested had NAG pH values <4.5 indicating these materials are likely to be PAF.

Where laboratory NAPP testing (150 samples) was carried out, a comparison was made with the estimated NAPP from Task 1. The results have been plotted on a box plot (Figure 20). In general, the laboratory NAPP results are more negative than the estimated model NAPP values. This is perhaps to

be expected, as the laboratory NAPP test includes all calcium species both neutralising (calcite and dolomite), and non-neutralising (siderite). This indicates the estimated NAPP values in Task 1 testing are conservative (although on balance the tests are deemed to be appropriate for the purposes of this report).

For the 733 samples where both NAPP has been calculated within the Task 1 geochemical model and laboratory NAG testing results are available, good correlation generally exists between Task 1 NAPP classification and NAG pH results (Figure 19). The comparison indicates that:

- 26 samples were identified as PAF based on the estimated NAPP value of >10kg H_2SO_4/t, whereas 11 of these samples were confirmed as PAF based on laboratory NAG testing
- All samples identified as PAF from NAG pH values of <4.5 had corresponding estimated NAPP values of >15kg H_2SO_4/t.

The results of the NAG testing received to date provide strong agreement with the Task 1 provisional classifications based on the estimated NAPP values. It is noted that in 14 cases the estimated NAPP value classified material as PAF (based on a cut off for NAPP of >10kg H_2SO_4/t), when the lab NAG pH test data indicated the material to be UC or NAF. On this basis, it is considered that the estimated NAPP values in the geochemical database are likely to be conservative and are more likely to overestimate the volume of materials classified as PAF than underestimate.

The detailed NAG pH test results indicate that 35 samples returned NAG pH 7 values of >0kg H_2SO_4/t, indicating that the test resulted in the net generation of acidity. Related to the NAG pH values the results indicate:

- 13 samples (Hanging Wall and BIF-South) had NAG pH 7 values of >5kg H_2SO_4/t. These samples correlate with those identified as having NAG pH values of <4.5. Based on these results the materials are likely to be PAF; and
- 22 samples (comprising Oxide, Footwall, Hanging Wall and BIF-South materials) had slightly positive NAG pH 7 values of between 0-5kg H_2SO_4/t, with these same samples returning NAG pH values of between 4.5 and 7. These results indicate that although these materials produced acidity as a result of the NAG test, this occurred at very low levels and these materials have a very low potential to generate acidity.

A comparison between the NAG pH 4.5 and NAG pH 7 results has been carried out to determine the potential source of acidity within the samples, a graph of the two sets of data is given in Appendix E. Results indicate that:

- The majority of the total acidity released during testing of the samples that are likely to be PAF (which have NAG pH 7 values of >5kg H_2SO_4/t) (which includes samples of Hanging Wall and BIF-South) is related to oxidation of sulfides (i.e. pyrite).
- For the samples that have NAG pH 7, and values of < 5kg H_2SO_4/t (which includes Footwall and Oxide), no acidity is indicated by the NAG pH 4.5 result. This indicates acidity may not relate to sulfide oxidation (i.e. pyrite), but may be due to metalliferous complexing, or very low buffering inherent capacity (i.e. lack of calcium minerals present which is confirmed by low average NAPP values for the Oxide).

44 samples were identified as UC from NAPP values, none of these samples had a NAGpH value lower than pH 6. As a result it is concluded that all the material identified as UC is not likely to be PAF, and is

likely to be NAF. On the basis of these results there is a case to update the block model based on these results to reclassify material from UC to NAF.

A comparison between the predictions of samples as PAF based on the estimated NAPP results and the laboratory NAG test is given in Table 15.

Table 15 Comparison of PAF classification between estimated NAPP values and laboratory NAGpH data*

Lithology type	Number samples PAF NAGpH <4.5	Number samples PAF Estimated NAPP > 10 kg H_2SO_4/t.	Max result NAG@pH7 kg H_2SO_4/t.	Max result Estimated NAPP kg H_2SO_4/t.
BIF North	0	2	<0.5	36.5
BIF South	3	9	15.3	78.5
Oxide	0	0	4	6.8
Hanging Wall	8	11	99	128
Footwall	0	4	0.8	33

*Note that this data only includes samples for which estimated NAPP is available

The results in Table 15 indicate that the method of classifying material as PAF based on the estimated NAPP is overly conservative for all strata other than the Hanging Wall. The following general observations are made:

- In total 26 samples were classified as PAF by the estimated NAPP however only 11 samples were confirmed to be PAF by the NAG test
- 15 samples of the BIF and Footwall materials were classified as PAF by the estimated NAPP however only 3 samples were confirmed to be PAF by the NAG test. This indicates these materials have a much lower risk of being PAF than the estimated NAPP results indicate
- 11 samples of the Hanging Wall materials were classified as PAF by the estimated NAPP and 8 samples were confirmed to be PAF by the NAG test. The Estimated NAPP method appears to more accurately predict the occurrence of PAF materials in the Hanging Wall materials therefore.
- NAPP values calculated by the estimated NAPP method are significantly higher than the actual acidity given by the NAG@pH7 results from laboratory testing for the BIF and Footwall materials.
- The Hanging Wall and Oxide samples appear to have a closer relationship between estimated NAPP and laboratory NAG test results than the BIF or Footwall samples. This fact likely relates to the lower buffering capacity of these material types relative to the BIF and Footwall materials that have much higher ANC values

Based on the Task 1 NAPP values and correlation with the laboratory NAG results, there is a case to update the block model with a higher cut off value to define materials as PAF (currently the adopted cut off is 10 kg H2SO4/t). This relates to the conservatism of the NAPP method in predicting material as being PAF. The results of the NAG testing indicates that a cut off value of 20 kg H2SO4/t may be appropriate.

To determine if this is appropriate fuurther detailed geochemical testing has been carried out to confirm the following:

- The nature of the geochemistry of the material and the related risk of acidic, metalliferous or saline drainage (if this material is to be mined/exposed) to validate the NAG test results.
- The nature of the geochemistry of the material identified as PAF, and the related risk of acidic, metalliferous or saline drainage (if this material is to be mined/exposed).

Kinetic testing has been scheduled to determine if a revision to the cut off value is appropriate.

8.4 Total Metals (XRF) Results

Trace metals are typically screened by comparing them with crustal averages, or against contaminated soil trigger values for environmental protection. The trace metal concentrations in the samples are compared with the average crustal abundance (Berkman and Ryall 1982), as outlined in DME (1995), to produce a Geochemical Abundance Index (GAI). Samples with a GAI of greater than 3 are considered significantly enriched.

As part of DTR test work that has been completed as part of metallurgical work carried out by Fortescue, samples from the Hematite pit were analysed by the laboratory for a number of heavy and base metals using XRF. The results of the analysis were compared against GAI factors to determine if metals were present at elevated levels. The results of this assessment are given in Appendix F, and summarised in Table 16.

The results from XRF testing of material from DTR test work indicates that mineralised material contains on average, elevated concentrations of chromium (mean value for mineralised samples 485.2 mg/kg, EIL 400 mg/kg) and nickel (mean value for mineralised samples 170.8 mg/kg, EIL 60 mg/kg). Average concentrations of the majority of metals within the tailings samples were below EIL levels with the exception of nickel (mean value for non-mineralised samples 106 mg/kg, EIL 60 mg/kg), and arsenic (mean value for non-mineralised samples 22 mg/kg, EIL 20 mg/kg).

In terms of enrichment with respect to GAI, the tailings material identified arsenic to be enriched (GAI value of 3).

Further testing of materials utilising ICP laboratory analysis has been completed to provide additional information on the concentration of heavy and base metals in the material types identified in the deposit.

Table 16 Summary of DTR testing (metals analysis)

Summary	Cr	Ni	Cu	Zn	As	Pb
EIL (mg/kg)	**400**	**60**	**100**	**200**	**20**	**600**
			Cons			
Average conc. (mg/kg)	485.2	170.8	85.4	96.8	5.2	84.6
Max conc.(mg/kg)	7400	2300	600	800	200	200
Min conc.(mg/kg)	0	0	0	0	0	0

Tailings						
Average tails (mg/kg)	137.2	106.4	70.5	66.0	22.3	5.4
Max tails(mg/kg)	3600	4600	300	1000	100	70
Min tails(mg/kg)	5	5	5	5	5	5
GAI>3 enriched						
Average GAI Cons	1	0	0	0	1	2
Average GAI Tails	0	0	0	0	3	0

8.5 Acid base characterisation curve assessment

Comparison between laboratory NAPP values and estimated NAPP values indicated that some material types (BIF South, BIF North and Footwall) may have higher buffering capacity than indicated by the Estimated NAPP results. A more accurate estimation of the likely field neutralising potential of a material can be gained from the acid base characterisation curve (ABCC).

48 samples were tested using the ABCC method. Two titration end points have been used by GHD to interpret the test results which have been taken from the curves presented by the laboratory):

- Buffering capacity at pH 4.5, this value indicates the amount of acidity that can be buffered by the material to retain a pH above 4.5. This is considered the total available buffering capacity of the material.
- Buffering capacity at pH 6.5, this value indicates the amount of acidity that can be buffered by the material to retain a pH above 6.5. This is considered the total easily liberated buffering capacity of the material that can maintain a near neutral pH.

The results indicate the following:

- Lab ANC values are approximately twice as high as estimated ANC values for all strata types. This is anticipated as laboratory ANC testing will include non calcium based buffering minerals such as siderite. This observation provides evidence to suggest that estimated NAPP values are therefore conservative estimates of potential buffering capacity.
- Buffering capacity values at pH 6.5 are relatively low compared to laboratory derived total ANC, around 6-20% of total ANC is liberated at pH 6.5.
- Buffering capacity values at pH 4.5 are significantly higher than at pH 6.5, with 24-68% of the total ANC liberated.
- The BIF South has the highest proportion of laboratory derived total ANC liberated at pH 4.5 at 68%; the Hanging Wall has the lowest at 24%.
- The estimated ANC values under predict the buffering capacity of the BIF materials (North, South and Oxide). Greater than 100% of the estimated ANC is liberated at pH 4.5, with an average of 150% liberated by at pH 4.5 by the BIF South materials. This indicates that for these materials the estimated ANC values are very conservative.
- In similarity with the lab ANC values, the estimated ANC values appear to over predict the buffering capacity of the Hanging Wall and Footwall materials. However, the estimated ANC values are much

closer to the actual buffering capacity indicated by the pH 4.5 results than the laboratory ANC values. 85% of the estimated ANC is liberated at pH 4.5 for the Footwall materials compared to 51% of laboratory derived ANC, and 52% of the estimated ANC is liberated at pH 4.5 for the Hanging Wall materials compared to 24% of laboratory derived ANC.

- The BIF South materials appear to have moderate to high net acid consuming properties and have minerals that appear to produce easily liberated alkalinity that will likely result in buffering between the pH range 6.5-4.5.

The findings of the laboratory NAG testing are complemented by the results of the ABCC testing as:

- The NAG testing results indicated that the estimated NAPP method tended to overestimate the number of samples being classified as PAF in all materials other than the Hanging Wall.
- The ABCC results indicate that the effective buffering capacity of the materials (as indicated by the buffering to pH 4.5 results) is underestimated for all the BIF materials, but overestimated for the Hanging Wall materials

It is concluded therefore that the estimated NAPP method is a conservative method for identifying and classifying material as PAF for the majority of the material types and will likely overestimate the volume of material that has a high risk of being PAF. The exception to this is the Hanging Wall materials which are likely to be more accurately classified as PAF. The NAG testing results support this observation.

Further, it is concluded that the BIF South materials appear to have moderate to high net acid consuming properties and have a mineralogy that appears to produce easily liberated alkalinity that will likely result in buffering between the pH range 6.5-4.5.

8.6 XRD

47 samples were submitted for XRD analysis to determine the mineralogy of the material types. A summary of the results is given in Table 17:

Table 17 XRD Data

Lithology type	Major components	Minor components	Trace components
BIF North	Quartz	Chamosite, microcline, magnesioferrite, magnetite, siderite, clinochlore	Dolomite, hydroxyl-apatite, stilpnomelane, hematite, kaolinite
BIF South	Quartz, magnetite	Hydroxyl-apatite, stilpnomelane, dolomite, chlorite-serpentine, siderite, microcline	Kaolinite, cryptohalite, pyrophanite
Oxide	Quartz, goethite	Stilbite, iron oxide ($Fe_5.34O_8$), hematite	Clinochlore, magnetite, stilpnomelane
Hanging Wall	Quartz, muscovite	Clinochlore, siderite, chamosite, stilpnomelane,	Hematite, kaolinite, magnetite, goethite, dolomite, cryptohalite,

		magnesioferrite, chlorite-serpentine	ganterite
Footwall	Quartz, ekmanite (Mn-rich stilpnomelane/smectite)	Stilbite, magnetite, stilpnomelane, kaolinite, siderite, magnesioferrite, clinochlore	Hematite, dickite, dolomite, cryptohalite, ankerite

The XRD analysis indicates that the four main material types have a different dominant mineralogy.

- The BIF materials are dominated by quartz and the iron bearing magnetite as would be expected from the geological data. Minerals with potential acid buffering capacity are present including dolomite and siderite. It is these minerals that are the likely source of the high buffering potential of the BIF South material as indicated from ANC and ABCC testing. Low temperature metamorphic group minerals include microcline, stilpnomelane and chlorite group minerals (including clinochlore, chamosite and chlorite-serpentine) which indicate metamorphism of the amphibolite facies.
- The Oxide is dominated by quartz and goethite, relatively minor iron bearing minerals (hematite, magnetite and iron oxides). Relative to the other material types analysed by XRD, the Oxide samples have fewer minor and accessory minerals. This may be due to preferential weathering of the minor and trace minerals. The low acid buffering capacity of the Oxide, as indicated by ANC and ABCC tests, is evidenced by the paucity of buffering minerals such as dolomite and siderite, which are present in the fresh BIF materials.
- The Footwall is dominated by quartz and ekmanite (Mn-rich stilpnomelane), indicating a different major minerals assemblage relative to the BIF and the Hanging Wall. Low temperature metamorphic group minerals include stilpnomelane and chlorite group minerals, including clinochlore, which indicates metamorphism of the amphibole facies. Minor and trace minerals including siderite, dolomite and ankerite are the likely sources of the acid buffering potential indicated to be present in this material by ANC and ABCC testing. Kaolinite and dickite are found as minor components, indicating the Footwall may have an appreciable clay component (shale). Stilbite, which is a zeolite clay, is present indicating the material may have a high cation exchange capacity. Stilbite is often associated with calcite which, if present, offers a high degree of acid buffering potential.
- The Hanging Wall material is dominated by quartz and muscovite. The presence of muscovite along with stilpnomelane and chlorite group minerals (including chamosite and chlorite-serpentine) indicates low to medium grade metamorphism of the amphibole facies. Pyrite was not detected by the XRD, however was observed in the geological logs from visual observations. Samples of Hanging Wall material obtained from hole number NS107 that were subject to XRF analyses had high NAPP values and are classified as PAF. These samples have muscovite present as a major mineral. It is possible that the pyrite present in these samples is related to the medium grade metamorphic assemblage of chlorite-serpentine, chamosite and muscovite. Minor amount of acid buffering minerals are present, including dolomite and siderite. It is noted that from ANC and ABCC testing that the Hanging Wall has generally lower buffering capacity than the Footwall or BIF materials. Kaolinite is present in trace amounts indicating that clay minerals are present (shale). Iron mineralisation is indicated by the presence of hematite, goethite and magnetite.

8.7 Kinetic NAG

11 Kinetic NAG tests were carried out to determine the relative reactivity of the samples that were identified as PAF from the NAG tests. Results are shown in Table 18. In general, the samples with the highest NAPP values were chosen form BIF South and Hanging Wall material types, along with some lower grade PAF material of these material types.

Table 18 Kinetic NAG Data

Lithology type	BH and depth	NAPP kg/t H_2SO_4	Maximum temperature (ºC)	Time to maximum temperature (minutes)
BIF South	NS0077 178-180m	78.4	27	360
Hanging Wall	NS0084 158-160m	20.6	20.8	70
BIF South	NS0096 230-232m	16	22	70
Hanging Wall	NS0107 120-122m	93	64	40
Hanging Wall	NS0107 128-130m	78	61	65
Hanging Wall	NS0107 140-142m	48	63	100
Hanging Wall	NS0107 148-150m	57	51	100
Hanging Wall	NS0107 160-162m	49	52.5	100
Hanging Wall	NS0107 170-172m	37	55	150
BIF South	NS0120 206-208m	28	30.8	315
Hanging Wall	NS0153 200-202m	128	75	30

The following general observations have been made:

- Samples of highly PAF Hanging Wall material (NAPP>50 kg H_2SO_4/t) from boreholes NS107 and NS153 appear to be relatively reactive as the tests returned maximum temperatures of greater than 70ºC, and the time taken to reach the maximum temperature was of a short duration of 40 minutes or less. The lower grade PAF materials appear to be significantly less reactive, as maximum temperatures reached in any of the tests was 20.8 ºC for material with a NAPP of <35 kg H_2SO_4/t.
- The sample of the BIF South material from borehole NS077, although highly PAF (NAPP >50 kg H_2SO_4/t), does not appear to be reactive as the maximum temperature reached was only 27 ºC and the time taken to reach this temperature was 320 minutes. The other BIF South samples tested were also not fast reacting, with the maximum temperature reached in any of these tests being 30.8 ºC.

The results of the testing confirm the findings of the NAG tests and ABCC tests, which indicated that the BIF South has significant buffering capacity. The kinetic test results indicate that with respect to the BIF South material, the easily liberated acid buffering capacity appears to mediate the sulfide oxidation reactions such that they proceed at a slow rate. The Hanging Wall materials were indicated by the NAG tests and ABCC tests to have lower buffering capacity than the BIF South materials. This is supported by the kinetic NAG tests which indicate that for material with high NAPP values (NAPP >50 kg H_2SO_4/t), the sulfides present oxidise relatively quickly, and the reaction is highly exothermic.

8.8 Total Metals

To validate the findings of the XRF metals analysis supplied by Fortescue, 140 samples were submitted for total metals analysis (ICPMS) and are presented in Appendix F. The results indicate that compared to the average crustal abundance (based on the Global Abundance Index where enrichment greater than three times the average crustal abundance is considered significant), no metals analysed has an average concentration that is considered to be enriched. The detection limit for Se is higher than the average crustal abundance index, therefore this metal is reported to be enriched in the table of results, but this is an artefact of the elevated detection limit.

The results of the ICPMS analysis validate the XRF data and confirm that base and heavy metal concentrations are generally low for all material types.

Metal results were also compared to EIL values as a conservative means of assessing environmental risk:

- For mineralised material, only Mn has an average concentration higher than EIL values (Appendix F). Minor exceedances of As, Ni and Cd were noted in a very small number of samples, however these exceedances are not considered to be significant given the majority of samples had levels far lower than EIL values.
- For non-mineralised material, Mn and Ni had average concentrations higher than EIL values (Appendix F). The average value for Ni appears to be skewed by high results in a small number of samples as 29 of the 140 samples analysed had Ni concentrations higher than EIL values, with the highest Ni concentration in samples of the Hanging Wall and Footwall materials. Minor exceedances of As, Cd, Cr, Co, V and Hg were noted in a very small number of samples, however these exceedances are not considered to be significant given the majority of samples had levels far lower than EIL values.

In summary, the results indicate that relative to global crustal abundance indicators, heavy and base metal concentrations are generally low for all material types tested. With respect to EIL levels,

manganese (although this is not generally considered to be an ecologically toxic metal), levels are generally elevated in all material types, and elevated nickel levels are indicated in a number of Footwall and Hanging Wall materials. The risk of significant metalliferous drainage impacted based on these results is therefore considered to be low.

8.9 Leaching Assessment

To determine the potential for metalliferous and saline drainage impacts, an assessment of the potential for leaching of metals was carried out. ASLP leach tests were performed on 113 samples and in addition, analysis of the liquor from NAG tests on these same samples was also carried out. Analysis for ASLP testing included base/heavy metals, cations and anions and acidity and alkalinity. Analysis for NAG liquor testing included base/heavy metals analyses. A summary of the results is given in Table 19:

Table 19 Leaching Assessment (ASLP Testing)

Lithology type	Metalliferous leaching	Saline leaching	Alkalinity/acidity
BIF South	Very low levels of metals in majority of ASLP tests. Elevated Zn, Fe, Cu, Al in one sample.	Low total levels of cations and anions (<100 mg/L total) in majority of ASLP leach tests. Sulfate >100 mg/L in two tests.	Low to moderate levels of alkalinity in ASLP leach tests (<50 mg/L $CaCO_3$). Low levels of acidity (maximum acidity 9 mg/L $CaCO_3$). pH>7 in all tests.
Hanging Wall	Very low levels of metals in majority of ASLP tests.	Low total levels of cations and anions (<100 mg/L) in majority of ASLP leach tests. Sulfate >100mg/L in four tests.	Low to moderate levels of alkalinity in ASLP leach tests (<50 mg/L $CaCO_3$). Low levels of acidity in majority of samples, acidity >10 mg/L $CaCO_3$ in three tests. pH <7 in five samples. pH >5 in all tests.
Footwall	Very low levels of metals in majority of ASLP tests. Three samples elevated in Cu, Ni, Fe, Al, Co, Cd, Mn, Zn.	Low total levels of cations and anions (<100 mg/L) in majority of ASLP leach tests.	Low to moderate levels of alkalinity in ASLP leach tests (<50 mg/L $CaCO_3$). Low levels of acidity (maximum acidity 4 mg/L $CaCO_3$). pH >7 in all tests.
BIF North	Very low levels of	Low total levels of	Low to moderate

	metals in majority of ASLP tests. One sample elevated in Cu, Ni, Co, Mn and Zn.	cations and anions (<100 mg/L) in majority of ASLP leach tests. Sulfate >100 mg/L in one test.	levels of alkalinity in ASLP leach tests (<50 mg/L $CaCO_3$). Low levels of acidity in majority of samples, acidity >10 mg/L $CaCO_3$ in one test. pH >7 in all tests.
Oxide	Very low levels of metals in majority of ASLP tests. One sample elevated in Mn. Three samples elevated in Zn, one sample elevated in Cu, one sample elevated in Co and one sample elevated in Ni.	Very low total levels of cations and anions (<50 mg/L) in majority of ASLP leach tests.	Low levels of alkalinity in ASLP leach tests (<15 mg/L $CaCO_3$). Low levels of acidity in majority of samples, acidity >10 mg/L $CaCO_3$ in two tests. pH <7 in two tests, pH >5.5 in all tests.

The results of the ASLP leach testing indicates the following:

- Concentrations of cations and anions are very low in all tests carried out. As a result it is likely that all materials tested have a very low short to medium term risk of generating saline leachate on contact with water.
- Alkalinity levels are higher than acidity levels in the majority of tests carried out, and the pH of the leachate is greater than 7 in the majority of tests. As a result, it is likely that the majority of materials tested have a very low short to medium term risk of generating acidic leachate on contact with water.
- Concentrations of metals are generally very low (below detection limits) in the majority of tests carried out. As a result, it is likely that the majority of materials tested have a very low short to medium term risk of generating metalliferous leachate on contact with water.
- The results from a small number of samples indicate slightly acidic pH (between pH 5 and pH 7), elevated sulphate levels (>100 mg/L) and elevated metals. These samples generally corresponds with material that has been identified as PAF from NAPP results and laboratory NAG tests. As a result, material identified as PAF may have an increased risk in the short to medium term of generating leachates that are acidic, metalliferous and/or saline.

8.10 NAG Liquor Analysis

Analysis of the liquor from the NAG tests was carried out to determine what metals are liberated from complete sulfide oxidation into the dissolved phase. The test results indicate the total mass of metals that may be liberated as a result of complete oxidation of the material so therefore will significantly overestimate the likely leachate strength that may result from *in situ* weathering in the field.

General observation from the testing are as follows:

- Concentrations of metals were generally elevated in all tests relative to the ASLP test results. Elevated levels of Fe, Al, Mn, Ni, Zn, Cu, Cd and Hg were noted in the majority of tests;
- Concentrations of metals were generally lower in tested completed on the oxide material;
- Concentrations of the majority of metals were generally not significantly higher in samples of material identified as PAF than in samples not identified as PAF. However, concentrations of As and Ni were notably higher in the tests completed on Hanging Wall material (NS0107, NS0153) with high NAPP values; and
- Concentrations of metals were broadly similar between the BIF, Footwall and Hanging Wall materials.

Conclusions made with respect to the observations made above are:

- The Oxide material appear to contain low levels of metals that can be easily liberated by oxidation reactions;
- Other than Fe, Mn and Al, all base and heavy metal concentrations for all samples are below 1 mg/L. Significant metalliferous discharges are therefore not likely to occur from the materials tested;
- PAF material (i.e. high NAPP values) identified in Hanging Wall samples from NS0107 and NS0153 produced liquor with the highest concentrations of Ni and As. These metal species therefore appear to be liberated by oxidation of sulfides present and may be associated with the sulfide mineralisation; and
- With the exception of some samples of the Hanging Wall material identified as PAF< in general, total metal concentrations form the tests were not significantly higher for a particular material type. Therefore, it is concluded that the risk of metalliferous drainage occurring is not significantly higher for any material type other than the Hanging Wall material identified as PAF.

8.11 Tailings Assessment

Two representative samples of tailings materials (one of dry tailings and one of wet tailings) were provided by FMG from the trial processing being undertaken as part of metallurgical testing. The samples were analysed for: NAG, NAPP, total metals, ASLP leach test (deionised water), ASLP leach test (acetic acid leach), NAG liquor, paste pH, ABCC, and XRD.

The results (provided in Appendix E) indicate the following:

- NAG pH and NAPP results indicate the tailings materials are NAF, and have potential buffering capacity (NAPP values of around -50 kg H_2SO_4/t; average NAG pH of 9.1);
- ABCC tests indicate that available buffering capacity is approximately 30% of the laboratory ANC. The estimated ANC based on calcium concentrations that has been used by GHD for modelling is more conservative than laboratory ANC calculations and results in a lower value than laboratory ANC. There is good correlation between ABCC results and estimated ANC. This method appears to be more accurate than the laboratory ANC which tends to overestimate actual ANC;
- XRD analysis indicates that there are carbonate minerals present that are the likely source of the ANC. These include the iron carbonate siderite and ankerite which is a calcium containing carbonate. Siderite is known to be a poor buffering mineral which likely explains the lab ANC value being

elevated relative to the ABCC analysis results. Ankerite is likely to be the main buffering mineral present which explains the close correlation between estimated NAPP values used for modelling that are based on calcium and ABCC values. No sulfides were detected from XRD analysis;

- Total metals analysis indicates low concentrations of all metals (relative to average crustal abundance index and EIL levels), with the exception of arsenic; the risk of metalliferous drainage is therefore considered to be limited;
- ASLP leach testing indicates that when leached with deionised water an alkaline leachate is produced which has moderate alkalinity levels (50 mg/l), low concentrations of metals (relative to ANZECC freshwater criteria), low salinity, and no acidity. The results indicate that the tailings materials are relatively inert and on contact with fresh water are not likely to produce saline or acidic discharges. The moderate alkalinity levels detected in the leachate indicates that soluble carbonate minerals may be present in the material;
- NAG liquor leachate analysis indicates that complete oxidation of the material does not result in the release of high levels of soluble metals; and in general, metal concentrations are low relative to ANZECC freshwater criteria. Salinity levels are also low indicating the potential for saline discharges is low as a result of direct oxidation of these materials; and
- Based on the Task 1 analysis, a NAPP value cut off for classification of tailings material as NAC is < -50 kg H_2SO_4/t. Although the laboratory ANC values are around 300% higher than the estimated NAPP value, ABCC testing indicates that about 30% of the ANC is easily liberated and is likely to contribute to buffering of acidity. On this basis it is recommended that the cut off value is retained for assessment of material as NAC.

9. Geochemical Characterisation of Material

Based on a detailed analysis of the geology, assay data (XRF results for calcium and sulfur), detailed testing and geochemical modelling that have been carried out to date; GHD makes the following conclusions regarding the likely AMD characteristics of the material.

9.1 High Level Review

- A review of geological, mineralogical and assay test data for the lithology types identified in the pit shell indicates that sulfide minerals (pyrite) are likely to be present within some zones of the deposit. The most frequent occurrence of sulfidic materials (i.e. pyritic) is generally found within the Hanging Wall, the Footwall and within the BIF-South units. There appears to be generally lower levels of sulfidic material present within the BIF-North unit, and very little present in the Oxide materials. The Hanging Wall comprising the greatest quantity of sulfidic minerals of all material types.
- GHD has calculated NAPP values for all data points within the existing assay database for the North Star Magnetite pit based on the ratio of sulfur to calcium (corrected for stoichiometric ratios) as determined by laboratory XRF analysis. Statistical analysis of the geochemical database constructed by GHD indicates that the majority of the materials within the pit shell have a NAPP value between -20kg and 0 H_2SO_4/t. The summary statistics for all the calculated NAPP data within the pit shell indicates that with a mean value of -10kg H_2SO_4/t, the majority of materials in the pit are not likely to pose a high risk of producing acidity from sulfide oxidation.
- Calcium to sulfur ratios for data points within the geochemical model were determined by GHD. From these ratios it is apparent that in general the BIF units have a greater number of negative NAPP values than the Hanging Wall or Footwall which is likely the result of higher calcium concentrations and lower sulfur concentrations. The average calcium to sulfur ratio across the whole database is 13, with a median of 6, indicating that in general, the materials in the database are not likely to be PAF.
- If the calcium containing mineral phases present within much of the BIF materials are freely available (i.e. present in soluble carbonate forms) then the data indicates that the majority of these materials may be net acid consuming (albeit at low levels).
- As part of DTR test work, samples were analysed by the laboratory for a number of heavy metals using XRF. The results of the analysis were compared against Global Abundance Index (GAI) factors and EILs (Environmental Investigation levels) to determine the presence of elevated metal concentrations. The results of this assessment are provided in Appendix F. The results indicate that all the material tested has low metals concentrations when compared against the GAI index (with the exception of arsenic in the tailings material) and EIL levels (DEC assessment criteria). Further testing of materials utilising ICP laboratory analysis is planned to provide additional information on the concentration of metals in the material types identified in the deposit.
- No assay data was available for much of the waste material which forms the majority of the western zone of the deposit within the Hanging Wall; as a result, an assessment of the geochemistry of these materials was not possible at this time. Material in this zone comprises approximately 40% of the overall volume in the pit shell, and the majority of this zone comprises waste rock. Therefore, significant uncertainty remains as to the volume of PAF materials that may be generated by mining activities at the site.

- The relationship between sulfur concentrations and iron grade, in addition to sulfur and calcium concentrations was assessed to determine mineralogical relationships between these parameters. The following conclusions have been reached:
    - In general sulfur and iron grades are inversely proportional. That is to say, non-mineralised (i.e. waste materials) units have higher sulfur grades than mineralised (ore) units.
    - In general there is no relationship between calcium and sulfur concentrations; however, sulfur concentrations were higher in non-mineralised (i.e. waste) units which were not associated with a concomitant increase in calcium concentrations. Therefore the sulfur: calcium ratio for non-mineralised units is lower than for mineralised units.
- The implication of the relationships noted above is that waste rock and ore (and therefore tailings) are not likely to have very similar geochemical characteristics with respect to acidity generating potential. In general the mineralised lithologies (BIF) are more likely to be characterised as NAF, whereas PAF materials are more likely to occur within the non-mineralised materials (Hanging Wall and Footwall).
- Average NAPP values for each lithology has been determined as follows:
    - Oxide: -1.2kg H_2SO_4/t
    - Hanging Wall: -2.5kg H_2SO_4/t
    - BIF-North: -9.3kg H_2SO_4/t
    - Footwall: -11.7kg H_2SO_4/t
    - BIF-South: -17.9kg H_2SO_4/t
- The average NAPP value indicate that the Oxide and Hanging Wall materials have the lowest potential buffering capacity (based on calcium content), with the BIF-South having the highest potential buffering capacity (based on calcium content).

9.2 Detailed Testing (Tasks 2-3)

Detailed geochemical testing has been carried out on approximately 1,163 samples collected from core and chips to date representing the range of potential waste material types likely to be encountered within the pit. Detailed testing includes NAG and a limited number of NAPP tests.

In addition to testing of core and chips, two samples of tailings materials from processing trials have been subject to detailed testing including NAG, NAPP, total metals, ASLP leach tests (deionised water and acetic acid leach tests), NAG liquor analysis, paste pH, ABCC and XRD analysis.

Laboratory NAG pH results from the 1,163 core and chip samples indicate that:

- 11 samples were classified as PAF (3 samples of BIF-South, and 8 samples of Hanging Wall);
- 67 samples were classified as uncertain (UC). The majority of samples classified as UC were from the Hanging Wall, Footwall, Oxide and BIF-South units;
- All other samples were classified as NAF; and
- All samples of material with estimated NAPP values of <15kg H_2SO_4/t were not classified as PAF according to laboratory NAG test data.

Where laboratory NAPP testing (151 samples) was undertaken, a comparison of the results against the estimated NAPP from Task 1 was completed by plotting the results on a box plot. In general, the laboratory NAPP values were lower than the estimated NAPP value. This was perhaps to be expected as the laboratory NAPP test assumes all carbon present is present as reactive calcite, and are therefore somewhat conservative. .

The results of the NAG testing received to date correlated well against the Task 1 provisional classifications based on an estimated NAPP value. It is noted that in 14 cases the estimated NAPP value classified material as PAF (based on a cut off for NAPP of >10kg H_2SO_4/t) when laboratory NAG test data indicated the material to be UC or NAF. No samples of material with estimated NAPP values of <15kg H_2SO_4/t were classified as PAF according to laboratory NAG test data. On this basis it is considered that the estimated NAPP values in the geochemical database are likely to be conservative and are more likely to overestimate the volume of materials classified as PAF than underestimate.

Based on the ABCC testing it is concluded that:

- The estimated NAPP method is a conservative method for identifying and classifying material as PAF for the majority of the material types and will likely overestimate the volume of material that has a high risk of being PAF. The exception to this the Hanging Wall materials which are likely to be more accurately classified as PAF. The NAG testing results support this observation.
- Further, it is concluded that the BIF South materials appear to have moderate to high net acid consuming properties and have a mineralogy that appeared to produce easily liberated alkalinity that will likely result in buffering between the pH range 6.5-4.5.

The results of the Kinetic NAG testing appear to confirm the findings of the NAG tests and ABCC tests which indicated that:

- The BIF South has significant buffering capacity. The kinetic test results indicate that with respect to the BIF South material, the easily liberated acid buffering capacity appears to mediate the sulfide oxidation reactions such that they proceed at a slow rate.
- The Hanging Wall materials were indicated by the NAG tests and ABCC tests to have lower buffering capacity than the BIF South materials. This is supported by the Kinetic NAG tests, which indicate that for material with high NAPP values (NAPP >50 kg H_2SO_4/T) the sulfides present oxidise relatively quickly, and the reaction is highly exothermic.

Total metals analysis results (based on XRF and ICP analysis) indicate that relative to global crustal abundance indicators, heavy and base metal concentrations are generally low for all material types tested. With respect to EIL levels, Mn (although this is not generally considered to be an ecologically toxic metal) levels are generally elevated in all material types, and elevated Ni levels are indicated in a number of Footwall and Hanging Wall materials. The risk of significant metalliferous drainage impacts based on these results is therefore considered to be low.

Based on ASLP leach testing, the short term risks of acid, saline or metalliferous drainage appear to be low:

- Concentrations of cations and anions were very low in all tests carried out. As a result, it is likely that all materials tested have a very low short to medium term risk of generating acidic leachate on contact with water.

- Alkalinity levels are higher than acidity levels in the majority of tests carried out, and the pH of the leachate is greater than 7 in the majority of tests. As a result it is likely that the majority of materials tested have a very low short to medium term risk of generating acidic leachate on contact with water.
- Concentrations of metals are generally very low (below detection limits) in the majority of tests carried out. As a result, it is likely that the majority of materials tested have a very low short to medium term risk of generating metalliferous leachate on contact with water.
- The results forma a small number of samples indicate slightly acidic pH (between pH 5 and pH 7), elevated sulphate levels (> 100 mg/L) and elevated metals. These samples generally correspond with material that has been identified as PAF from NAPP results and laboratory NAG tests. AS a result, material identified as PAF may have an increased risk in the short to medium term of generating leachates that are acidic, metalliferous and/or saline.

Based on NAG liquor analysis, the risks of metalliferous drainage as a result of *is situ* oxidation of materials does not appear to be high considering:

- The Oxide material appears to contain low levels of metals that can be easily liberated by oxidation reactions;
- Other than Fe, Mn and Al all base and heavy metal concentrations for all samples are below 1 mg/L. Significant metalliferous discharges are therefore not likely to occur from the materials tested;
- PAF material (i.e. high NAPP values) identified in Hanging Wall samples from NS0107 and NS0153 produced the liquor with the highest concentrations of Ni and As. These metal species therefore appear to be liberated by the oxidation of sulfides present, and may be associated with the sulfide mineralisation; and
- With the exception of some samples of the Hanging Wall material identified as PAF, in general, total metal concentrations from the tests were not significantly higher for a particular material type. There, it is concluded that the risk of metalliferous drainage occurring is not significantly higher for any material type other than the Hanging Wall material identified as PAF.

9.3 Geochemical Classification

Based on the results obtained from the laboratory testing carried out to date the following conclusions are reached regarding classification of material within the geochemical database:

- Material with NAPP values of >15kg H_2SO_4/t is likely to be PAF;
- Material with NAPP values of between 0-15kg H_2SO_4/t is very unlikely to be PAF, and likely to be NAF based on laboratory NAG test data;
- Material with NAPP values of <0kg H_2SO_4/t is likely to be NAF.

With respect to applying geochemical classification criteria within the geochemical database and future geochemical modelling, the following is recommended:

- For conservatism (allowance of factor of safety), it is considered appropriate that a cut off value of 10kg H_2SO_4/t is retained for classifying material as PAF in the geochemical database;
- Material with NAPP values between 0-10kg H_2SO_4/t although likely to be NAF, shall be classified as UC pending the results of additional detailed testing (which has been scheduled by GHD);
- Material with NAPP values <0kg H_2SO_4/t is likely to be NAF; and

- Material with NAPP values < -30kg H_2SO_4/t is likely to be NAC according to ABCC results.

9.4 Tailings Assessment

Two representative samples of tailings materials (one of dry tailings and one of wet tailings) were provided by FMG from the trial processing being undertaken as part of metallurgical testing. The samples were analysed for: NAG, NAPP, total metals, ASLP leach test (deionised water), ASLP leach test (acetic acid leach), NAG liquor, paste pH, ABCC, and XRD.

The results (provided in Appendix E) indicate the following:

- NAG and NAPP results indicate the tailings materials are NAF, and have potential buffering capacity (NAPP values of around -50kg H_2SO_4/t).
- ABCC tests indicate that the available ANC is approximately 30% of total ANC, the low proportion of available ANC is likely to be a result of carbonate minerals being present that are not easily liberated. This being said the tailings materials still process appreciable buffering capacity of around 15kg H_2SO_4/t.
- XRD analysis indicates that there are carbonate minerals present in the samples. These include the iron carbonate siderite, in addition to ankerite; the latter being an iron and manganese containing calcium carbonate. Ankerite is likely to be the main buffering mineral present, which may explain the close correlation between estimated NAPP values(used for modelling and based on calcium) and ABCC values.
- Total metals analysis indicates low concentrations of all metals (relative to EIL levels) with the exception of manganese in the tailings material; the risk of metalliferous drainage is therefore considered to be limited.
- ASLP leach testing indicates that the tailings materials are relatively inert and on contact with fresh water are not likely to produce saline or acidic discharges. The moderate alkalinity levels detected in the leachate indicates that partially soluble carbonate minerals may be present in the material.
- When leached with acetic acid (to simulate interaction with AMD leachate) the tailings materials produced a leachate with low concentrations of most metals (relative to ANZECC freshwater criteria), and moderate levels of salinity (1,500mg/l Na). Sodium levels in the leachate are elevated relative to calcium and magnesium levels indicating that sodic discharges may be produced as a result of interaction (buffering reactions) between the tailings material and AMD discharges.
- NAG liquor leachate analysis indicates that complete oxidation of the material does not result in the release of high levels of soluble metals; in general metal concentrations are low relative to ANZECC freshwater criteria. Salinity levels are also low indicating the potential for saline discharges is low as a result of direct oxidation of these materials.
- Based on detailed testing results a NAPP cut off value for classification of tailings material as NAC is <-30kg H_2SO_4/t.

9.5 Geochemical Block Modelling: Volume Estimates

Although statistical analysis has provided useful indication of the relative fractions of the lithology types that may be classified as PAF, the technique does not translate well to estimating volumes of material within a resource.

Two models have been run as a result of the uncertainty associated with the lack of drill data which comprises approximately 40% of the volume of the pit shell.

Modelling indicates the following:

- The Hanging Wall contains a high proportion of PAF material (41,648,750 m^3). With respect to overall volumes of PAF calculated by the model within the model space, the majority of PAF is found within this lithology type.
- The BIF does not appear to contain significant volumes of PAF by overall proportion, although it is noted that PAF material has been modelled to occur within this lithology type. Although PAF has been identified a more significant proportion of the BIF has been identified to be NAC. The presence of the NAC material on a ratio of approximately 10:1 with respect to PAF material is relevant when considering the overall classification for the BIF is likely to be NAF.
- The Oxide contains appreciable levels of PAF and UC. The presence of this volume of PAF is not expected from the Task 1 review which indicates the Oxide has low sulfur levels. The modelled PAF volumes are considered to be an artefact of the nature of the model extrapolation of data. The model is extrapolating the presence of sulfidic material based on sub vertical dipping geology. Where there is limited drilling data at the surface (which occurs in the west of the model due to the boreholes being inclined to the west) the model has extrapolated the presence of sulfidic material from depth and projected to surface. All other testing has shown there to be no PAF in the Oxide.
- A significant volume of material has been identified as UC; although low risk with respect to AMD as a result of NAPP values being < 10 kg H_2SO_4/t, further detailed testing is required to confirm if this material is likely to be NAF or PAF.

The model results broadly agree with the high level statistical analysis, however, the volume estimates differ when comparing classes of material within each lithological unit. The main reason for this difference is that the model has extrapolated data between boreholes based on the fact that the model has been set up to follow the strike and dip of the prevailing geology. The extrapolation of material as PAF for example has been determined by assumption that the PAF material occurs as continuous blocks of material orientated north south with a sub vertical dip. This is not accounted for in the statistical analysis.

The total volume of PAF estimated by the model is approximately 47,632,500 m^3, with the majority of this is found within the Hanging Wall material. The eventual waste stream this materials reports to (i.e. tailings or waste rock) will depend on the eventual classification of these materials as waste or ore within the mine model. The volumes of PAF projected to report to the waste rock dump and tailings stream should be revised once the resource model has been completed. Further drilling in the west of the deposit will allow the model to be refined to allow more accurate classifications of PAF materials in the Hanging Wall material.

9.6 Summary

A high level and detailed characterisation exercise has been completed by GHD as part of this report. Risks of AMD discharges developing are considered at this stage to be low for the majority of the materials within the pit shell given:

- The mineralogy of the tested material;

- The sulfur content of the tested material (note that elevated concentrations may be present within the BIF, Hanging Wall and Footwall);
- The excess neutralisation capacity of the tested material;
- The low content of metals within the materials (with the exception of iron and aluminium); and
- The low potential for the material to produce metalliferous, acidic or saline discharges.

This being said, a realtively small proportion of the Hanging Wall, Footwall and BIF material has been identified as PAF and is a potential source of AMD.

The long term stability of the material to be stored within the pit can be estimated by geochemical modelling. Model parameters that influence AMD discharge potential are provided in Table 20.

Table 20 Summary of Predictive Geochemical Parameters

Parameter	Assessment
pH of leachate	No acidic leachate likely to be produced by majority of materials. Some Hanging Wall material may produce acidic leachate.
Dissolved metals concentrations	Likely to be low, given low metal concentrations. To be assessed through further testing.
Net alkalinity/acidity of leachate	Likely to be net alkaline for majority of materials. Some Hanging Wall material will likely produce net acidic leachate.
Salinity	To be assessed through further testing. Some Hanging Wall material may produce leachate with elevated sulphate levels as a result of sulphate oxidation.
Sulfide oxidation	Minor elevated sulfur levels in BIF and Footwall, major elvelated levels in Hanging Wall materials. Kinetic testing indicates sulfide reaction rates are slow in the BIF due to buffering reactions, however reaction rates in the Hanging Wall material are rapid.
Carbonate dissolution	Soluble calcium carbonate mineral phases likely to be present in Footwall and in particular the BIF South materials based on ABCC testing.
Formation of secondary mineral phases	Possible as a result of AMD discharges from Hanging Wall materials.

Based on lithological specific analysis, detailed geochemical testing, and statistical analysis of the geochemical data set it appears that:

- The BIF material is considered to be NAF. A small proportion of PAF material has been identified in the BIF-South based on a NAPP cut off of >15 kg H_2SO_4/t. Laboratory testing has confirmed the material is likely to be PAF. However, this material is likely to be slow reacting and has low metal content and therefore is not likely to present a high risk of producing AMD.
- The majority of the Hanging Wall material is NAF; however, there is a significant PAF component based on estimated NAPP values. Laboratory testing has confirmed this material is likely to be PAF. This material is likely to be fast reacting based on kinetic testing and so is at a high risk of producing acid leachates. However, metal content is low, therefore the risk of metalliferous drainage is not high. A UC component has been identified with 9% of material classifying as UC based on estimated NAPP values. Laboratory testing has indicated this material is likely to be NAF and not likely to produce saline or metalliferous drainage.
- The majority of the Footwall material is NAF; however there is a minor PAF component. A significant UC component has been identified, however laboratory testing has indicated this material is likely to be NAF and is not likely to produce saline or metalliferous drainage.
- The majority of the Oxide is NAF; however, there is a significant UC component. Laboratory testing has indicated this UC material is likely to be NAFand is not likely to produce saline or metalliferous drainage.
- With respect to tailings materials, some of the BIF-South material may be acid consuming based on ABCC lab testing results. These results confirm that calcium is likely to be present as a readily liberated carbonate. Approximately 20% of the material has a NAPP value of -30kg H_2SO_4/t or lower.

The total volume of PAF within the Magnetite pit estimated by the model is approximately 47,632,500 m^3. This is found within the Oxide (2,906,875 m^3), BIF-North (1,113,125 m^3), BIF-South (1,064,375 m^3), Footwall (899,375 m^3) and Hanging Wall (41,648,750 m^3) material. However, due to the thinly bedded nature of the BIF material, the relatively coarse drill spacing of exploration drilling and the variable depth of the oxide, there remains uncertainty over the possibility that additional PAF material may be encountered during mining activities that extend beyond the base of the Oxide.

As result of the extrapolation of data by the model, some Oxide material has been classified as PAF in the west of the deposit. This is a result of the model extrapolating the occurrence of high sulfur material to surface based on the mineralisation following the sub vertical dip of the geology. Given the low levels of sulfur noted in the Oxide from testing to date, this assumption is not likely to be realistic as the Oxide material represents a zone of oxidised material which has been depleted in reactive sulfides.

The eventual product/waste stream the PAF materials may report to (i.e. waste rock/ore), and a determination as to whether these materials will be mined will depend on the eventual classification of these materials as waste or ore within the mine model, and final pit levels. The volume of PAF material projected to report to the waste rock dump should therefore be revised once the resource model has been completed. Additional drilling that may be carried out at the site as part of resource definition, and grade control works during mining will enable the volume of PAF material to be more accurately defined in the resource model.

The modelled volume of PAF has been estimated based on current drilling data to be 26,592,500 m^3. The modelling carried out utilised high resolution block size with blocks of 2m in vertical extent and 25m lateral extent. At this time the mining process anticipated to be utilised at the site will involve drill and blast techniques with bench heights of 10m. Due to of the bulk mining process proposed, and the localised nature (and vertical extent) of PAF material identified, it is unlikely that the localised area(s) of PAF material will be able to be practically identified and segregated during mining works, particularly in the BIF material.

A summary geochemical classification of potential waste materials based on the analysis data presented herein is provided in Table 21:

Table 21 Preliminary waste material classifications

Lithology type	**PAF/NAF classification**	**Significant Sub classification (minor if any >1%, major if >10%)**
BIF-South	NAF	Minor PAF
		Major NAC
BIF-North	NAF	Minor NAC
		Minor PAF
Hanging Wall	NAF/PAF	Major PAF
Footwall	NAF/PAF	Minor PAF
Oxide	NAF	
Waste stream	**PAF/NAF classification**	**Significant Sub classification (if any)**
*Tailings (dry)	NAF/NAC	Minor PAF
		Major NAC
*Tailings (wet)	NAF/NAC	Minor PAF
		Major NAC
*Waste rock	NAF/PAF	Major PAF

*It should be noted that the classification of materials in each waste stream is highly dependent upon the designation of materials as waste or ore within the mine model. It is currently assumed that the ore body comprises the BIF units only, and that the Hanging Wall and Footwall are waste units. If the Hanging Wall or Footwall materials are processed as ore they will report to the tailings waste stream which will significantly alter the classifications given in Table 21.

9.7 Further Detailed Testing Planned

To confirm the provisional classification criteria adopted to date on this project a programme of additional geochemical testing has been scheduled to be carried out to include:

- Kinetic column leach testing has been scheduled to be carried out on a number of samples:
    - Samples of PAF material form the Hanging Wall to determine reaction rates with respect to sulfide oxidation;
    - Samples of BIF South that have NAPP values of 15-20 kg H_2SO_4/t to determine if it is appropriate to increase the PAF cut off to 20 kg H_2SO_4/t;
    - Samples of BIF, Hanging Wall and Footwall with NAPP values between 0-10 kg H_2SO_4/t to confirm that this material is NAF;
    - Sample of the dry tailing sto confirm if this material is NAF; and
    - A blend of two parts of dry tailings to one part PAF material, to determine if the tailings are a suitable neutralising agent.

A sampling and analysis plan for the additional testing is provided in Appendix H.

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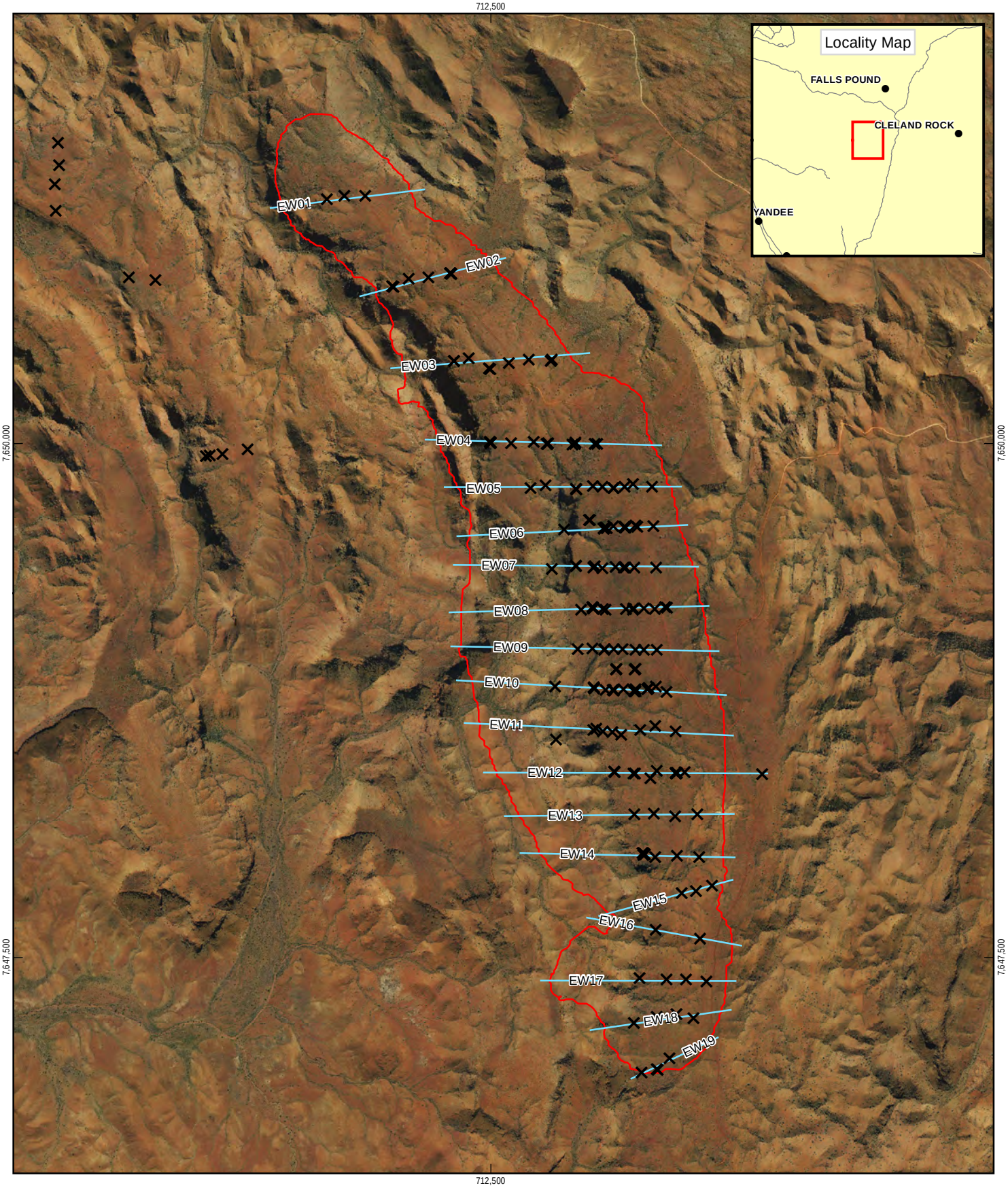
Appendix A

Exploration drill hole location plan



LEGEND

- Borehole
- Section Line
- Pit C Boundary

1: 25,000 (at A4)

0 100 200 400 600 800 1,000

Metres

Map Projection: Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

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Fortescue Metal Group Ltd
Fortescue Mine Closure Plans

Northstar
Pit C Option

Job Number	61-27391
Revision	0
Date	24 Apr 2012

Figure 1

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G:\61\27391\GIS\Maps\MXD\6127391_G064_Rev0.mxd

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Data source: GHD: Section Line - 20120410, Borehole - 20120413, Pit C Boundary - 20120411, FMG: North Star Mosaic Aug 2011 - 20120420. Created by: jrutherford

Appendix B

3D model borehole input data

HOLE ID	EAST	NORTH	RL	DEPTH (m)
NS0001	713095.9	7649597	383.47	100
NS0002	713205	7649600	386.78	58
NS0003	713211.5	7649595	386.89	160
NS0004	712490.4	7650364	399.28	102
NS0005	712686.1	7650405	400.54	102
NS0006	713109.6	7648902	383.95	102
NS0007	713204.7	7648903	387.71	102
NS0008	713400.2	7648396	396.71	102
NS0009	713820.5	7648393	401.72	126
NS0010	713307.1	7646958	404.54	102
NS0011	713369.7	7647010	406.63	138
NS0012	713050.5	7649586	381.61	86
NS0013	713050.6	7649586	381.576	0
NS0020	712306.4	7650827	386.07	204
NS0021	712101.7	7650801	390.6	204
NS0024	711703.9	7651185	372.35	282
NS0025	711789.5	7651201	370.58	280
NS0026	711889.8	7651202	377.84	278
NS0027	712197.2	7650805	392.27	282
NS0028	712020.9	7650763	384.97	282
NS0029	712588.3	7650388	402.77	282
NS0030	712598.1	7649999	392.04	282
NS0031	712709.4	7650007	389.45	282
NS0032	712999.4	7649197	385.42	48
NS0033	712997.2	7649197	385.33	46
NS0034	712777.5	7649997	388.07	282
NS0035	712896.9	7649992	385.4	282

HOLE ID	EAST	NORTH	RL	DEPTH (m)
NS0036	713004.5	7649997	384.83	78
NS0037	713018.4	7649997	385.34	180
NS0038	713099.2	7649783	385.46	282
NS0039	713192.4	7649801	383.68	282
NS0040	712500.9	7650003	388.8	250
NS0041	712997.8	7649793	382.92	282
NS0042	713151.1	7649591	385.45	282
NS0043	713057.5	7649590	381.68	282
NS0044	712999.4	7649397	383.69	280
NS0045	712914.9	7649406	383.26	252
NS0046	713106.2	7649399	382.31	264
NS0047	712913.9	7649780	381.18	252
NS0048	712999.8	7648605	384.26	258
NS0049	713400.2	7648396	396.71	288
NS0050	713512.9	7647989	386.62	282
NS0051	713092.2	7648595	385.83	282
NS0052	713226.5	7648608	381.46	282
NS0053	713300.2	7648624	389.03	280
NS0054	713000.7	7648811	381.78	282
NS0055	713098	7648802	385.62	280
NS0056	713198.1	7648796	386.89	282
NS0057	713303.3	7648817	389.03	282
NS0058	712923.5	7648998	383	262
NS0059	712994.8	7649004	383.29	282
NS0060	713098.6	7648998	384.82	400
NS0061	712322	7650399	388.25	252
NS0062	712393.5	7650412	394.67	400
NS0063	713102.1	7648401	386.05	252

HOLE ID	EAST	NORTH	RL	DEPTH (m)
NS0064	713193.3	7648394	391.71	282
NS0065	713275.4	7648374	394.26	400
NS0066	713241.6	7648007	395.19	250
NS0067	713299.1	7647990	399.86	282
NS0068	713405.3	7647993	405.18	282
NS0069	713204.4	7648997	387.64	282
NS0070	713096.8	7649783	385.45	400
NS0071	713298	7649195	390.52	282
NS0072	713307	7648994	391.83	282
NS0073	712909.8	7649997	385.5	282
NS0074	713005.4	7649400	383.36	282
NS0075	712027.6	7650761	385.24	282
NS0076	713014.6	7648611	384.93	282
NS0077	713043.8	7649393	382.67	282
NS0078	713147	7649395	384.89	282
NS0079	712911.9	7650003	385.72	144
NS0080	713302.5	7649397	383.78	282
NS0081	713290.5	7649598	386.12	282
NS0082	713156.3	7649395	385.25	282
NS0083	713348.5	7649204	390.33	282
NS0084	712940	7649191	384.16	282
NS0085	713046.3	7649195	386.29	282
NS0086	713245	7649199	389.21	282
NS0087	713157.6	7649196	387.4	400
NS0088	712916.2	7649775	381.28	350
NS0089	712497.7	7650362	399.12	402
NS0090	712978.2	7649627	380.27	282
NS0091	712914	7649403	383.01	282

HOLE ID	EAST	NORTH	RL	DEPTH (m)
NS0092	713139.9	7648999	386.17	282
NS0093	713057.6	7648800	384.63	282
NS0094	713145.7	7648803	385.87	282
NS0095	713202.5	7648395	392.03	252
NS0096	713134.4	7648582	386.34	282
NS0097	713110.7	7648904	383.94	282
NS0098	713198.6	7648196	394.73	282
NS0099	713292	7648201	402.4	282
NS0100	713043.4	7649787	384.09	180
NS0101	713198.6	7649396	386.7	282
NS0102	713203.5	7648795	387	48
NS0103	713200.2	7648796	387.01	2
NS0104	713151.5	7649595	385.45	54
NS0105	712303.2	7650826	386.29	54
NS0106	713050.9	7648997	383.15	280
NS0107	713223.1	7647401	393.72	202
NS0108	713354.3	7647393	403.44	282
NS0109	713549.9	7647384	413.77	298
NS0110	713194.6	7647185	392.02	148
NS0111	713307.4	7647210	396.52	298
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NS0113	713485.3	7647205	410.82	300
NS0114	713232.7	7646941	398.21	144
NS0115	713312.2	7646953	405.09	280
NS0116	713450.2	7647393	406.53	280
NS0117	713516.6	7647591	412.67	280
NS0118	713300.9	7647636	397.84	262
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HOLE ID	EAST	NORTH	RL	DEPTH (m)
NS0120	713497.1	7647822	387.5	280
NS0121	713577.3	7647849	389.05	280
NS0122	713397.4	7648187	405.2	280
NS0123	713504.5	7648198	401.47	280
NS0124	713443.5	7648403	394.65	298
NS0125	712998.6	7649200	385.44	244
NS0126	713194.3	7649198	388.17	280
NS0127	712767.2	7649794	381.1	280
NS0128	712694.7	7649783	379.33	280
NS0129	712500.2	7650002	388.68	298
NS0130	712983	7649627	380.33	142
NS0149	713200.9	7648900	387.65	300
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NS0151	712495.1	7650006	388.71	216
NS0152	713261.9	7648806	383.99	282
NS0153	713045.2	7648601	385.04	258
NS0154	713054.4	7649000	383.22	282
NS0155	713244	7648997	388.86	282
NS0156	713285.5	7649788	382.88	168
NS0157	712322.1	7650399	387.97	246
NS0158	712309.6	7650824	385.95	204
NS0159	712778.5	7649999	388.12	318
NS0160	713404.7	7648400	396.62	300
NS0161	713154.5	7649591	385.58	294
NS0162	713203.1	7648804	387.23	282
NS0163	713237.6	7648009	394.98	330
NS0164	713250.1	7648003	395.54	300
NS0165	713100.1	7648404	385.95	300

HOLE ID	EAST	NORTH	RL	DEPTH (m)
NS0166	713307.5	7648408	387.15	282
NS0167	713355.4	7649203	390.09	330
NS0168	713058.9	7649191	386.4	282
NS0169	713064.6	7649588	382.12	204
NS0170	713353.9	7648791	384.4	282
NS0171	713398.6	7648601	392.25	282
NS0172	713000.3	7648815	381.79	330
NS0173	713094.7	7648802	385.6	324
NSD001	712995.5	7649204	385.29	200
NSD002	713200.1	7648798	387.03	280
NSD003	713151.5	7649595	385.42	100.8
NSD004	712303.1	7650826	386.24	199.6
NSD005	713098.9	7648800	385.58	300
NSD006	713191.7	7649192	388.21	263
NSD007	713002.8	7648809	381.8	302
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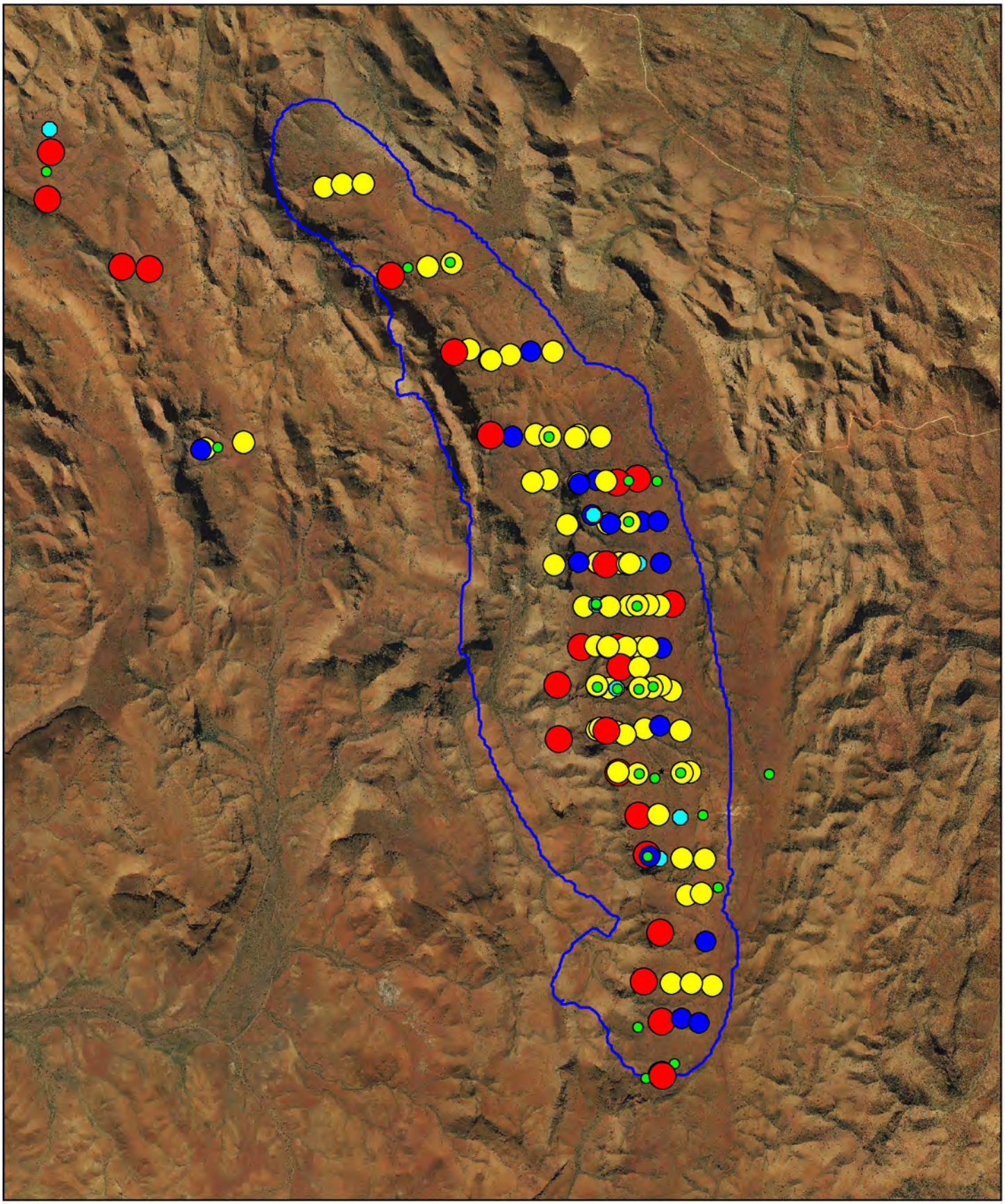
Appendix C

Cross sections through pit



LEGEND

Maximum Drillhole NAPP - kg per tonne H2SO4 (Count in brackets)

- 50 to 430 (25)
- 10 to 50 (75)
- 5 to 10 (25)
- 1 to 5 (9)
- 0 to 1 (39)
- * all others (4)

Pit C

1:25,000 (at A4)

0 175 250 500 750 1000

Meters

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia 1994
Grid: Map Grid of Australia, Zone 50

N

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Fortescue Metal Group Ltd
Fortescue Mine Closure Plans

Job Number | 61-27391
Revision | A
Date | 24 Apr 2012

Thematic Classification of Maximum Recorded NAPP Values Down Drillholes

Figure 2

G:\61\27391\GIS\Data\Geoscientific\DISCOVER_3d_MODELS\NS_EXPORT\Workspaces\6127391_NAPP_Thematic_235_Adelaide Terrace Perth WA 6004 Australia T 61 8 6222 8222 F 61 8 6222 8555 E permail@ghd.com.au W www.ghd.com.au

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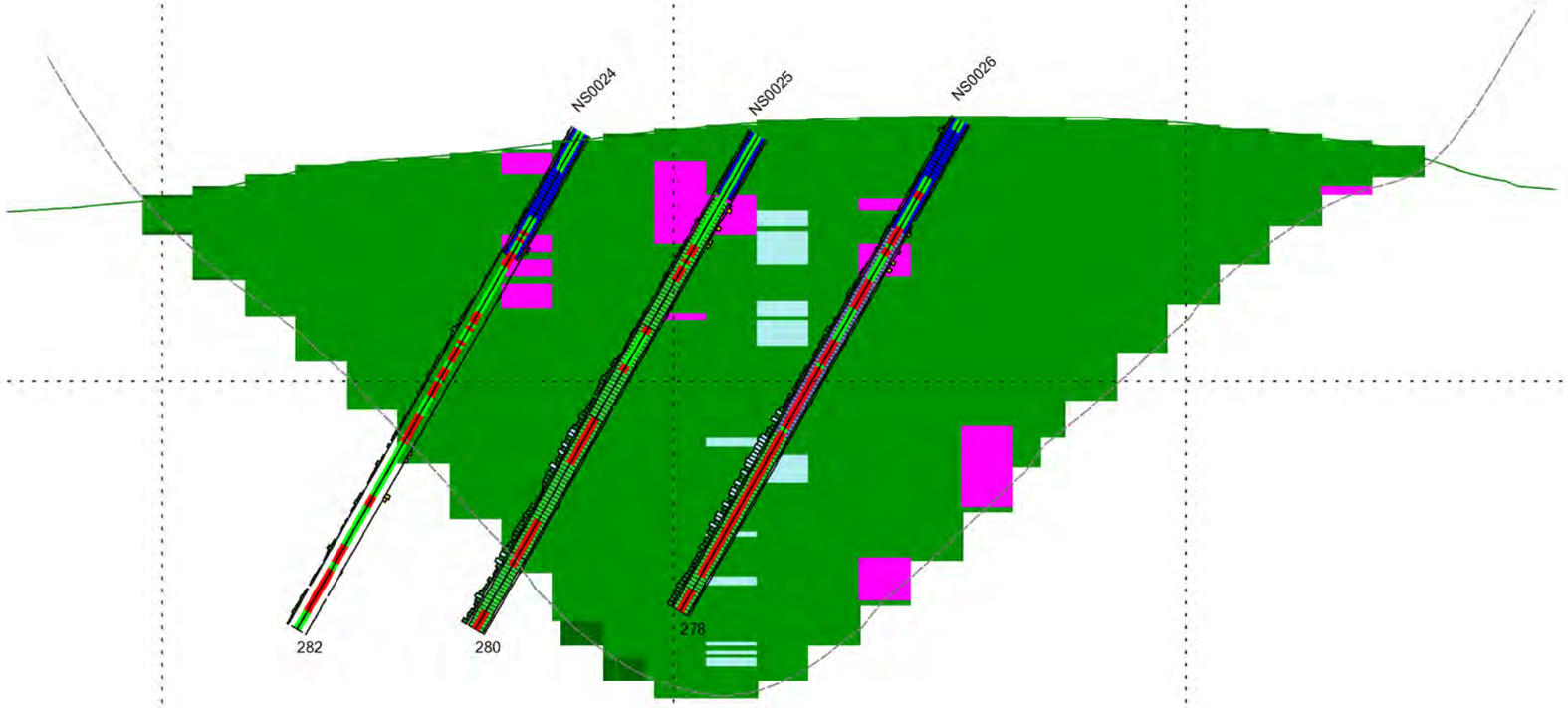
Data source: GHD: Pit C - 20120420, NAFF - kg per tonne H2SO4 - 20120420. Created by: jrutherford

711,250mE
711,500mE
711,750mE
712,000mE
712,250mE
7,651,250mN

500mRL
250mRL
0mRL



Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)

Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised

Topographic Surface
Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Mine Closure Plans

Job Number 61-27391
Revision A
Date 4/05/2012

North Star Pit C - 20120420
EW01

Figure 3

G:\61\27391\GIS\Data\Geoscientific\DISCOVER_3d_MODELS\NS_EXPORT\Drillhole_Projects\North Star Pit C - 20120420

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Data Source: GHD: Geology - 20120410, Geochemical Characterisation - 20120420, Mineralisation - 20120418, Topographic Surface - 20120401, Pit C - 20120401. Created by: jrutherford

239 Adelaide Terrace Perth WA 6004 Australia T 61 8 6222 8222 F 61 8 6222 8555 E permail@ghd.com.au W www.ghd.com.au

7,11,750mE
7,12,000mE
7,12,250mE
7,12,500mE
7,12,750mE
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500mRL
250mRL
0mRL
NS0028
NS0075
NS0021
NS0027
204
282
282
282

Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)

Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised

Topographic Surface
Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Mine Closure Plans

Job Number 61-27391
Revision A
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North Star Pit C
EW02

Figure 4

G:\61\27391\GIS\Data\Geoscientific\DISCOVER_3d_MODELS\NS_EXPORT\Drillhole_Projects\North Star Pit C - 20120420

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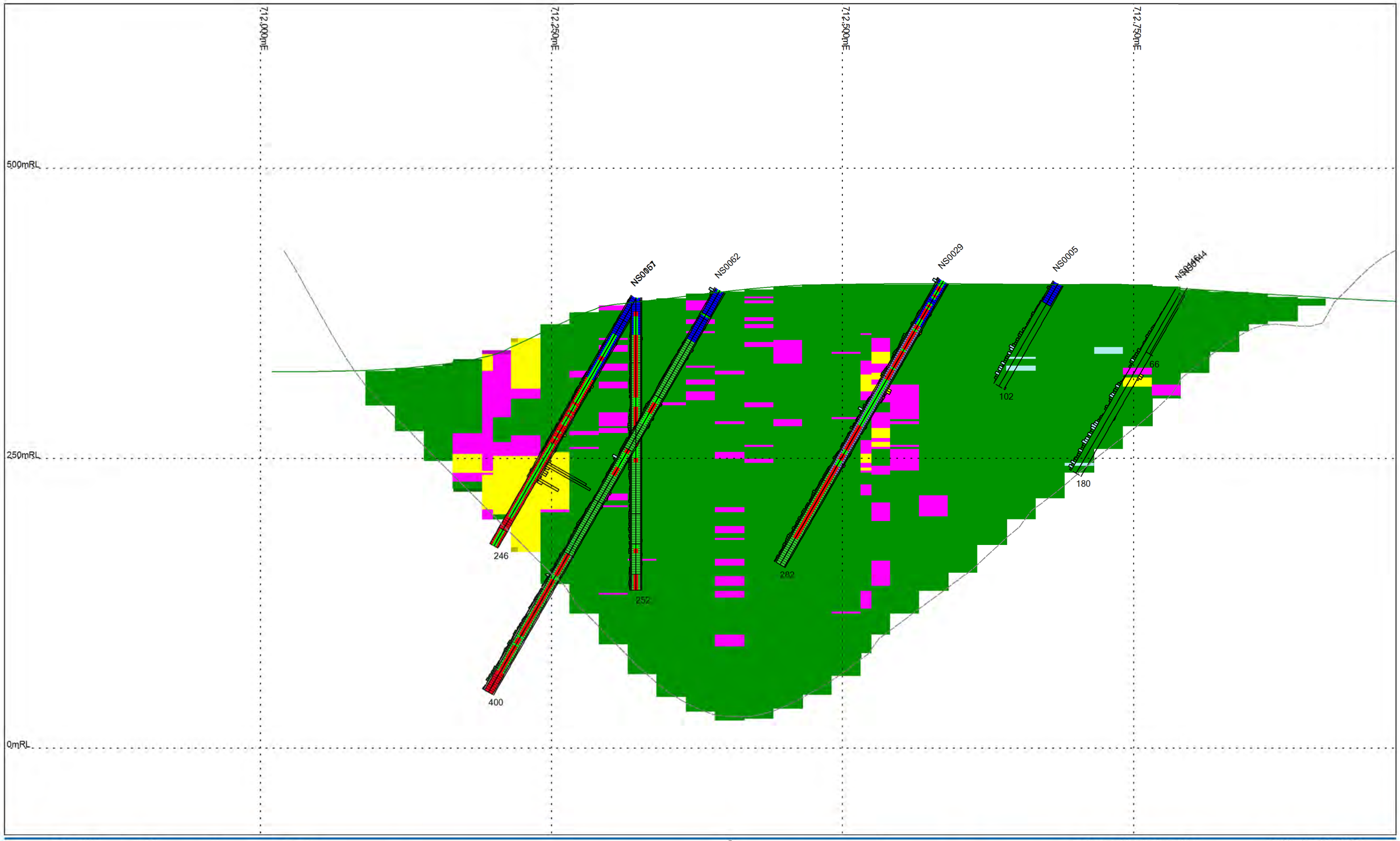

Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)

Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised

Topographic Surface
Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Mine Closure Plans

Job Number 61-27391
Revision A
Date 4/05/2012

North Star Pit C EW03

Figure 5

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712,250mE
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7,650,000mN
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500mRL
250mRL
0mRL
NS0030
NS0031
NS0035
NS0036
NS0037
216
282
250
298
144
180

Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)

Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised
- Topographic Surface
- Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Mine Closure Plans

Job Number 61-27391
Revision A
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North Star Pit C
EW04

Figure 6

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712,500mE
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NS0128
NS0127
NS0041
NS0100
NS0150
NS0039
NS0156
280
280
282
282
282
180
228
168
350
400

Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)

Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised

Topographic Surface
Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Mine Closure Plans

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Revision A
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North Star Pit C - 20120420
EW05

Figure 7

G:\61\27391\GIS\Data\Geoscientific\DISCOVER_3d_MODELS\NS_EXPORT\Drillhole_Projects\North Star Pit C - 20120420

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712,500mE
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NS0143
NS0013
NS0169
NS0001
NS0002
NS0003
NS0081
100
282
294
240

Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)

Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised

Topographic Surface
Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Mine Closure Plans

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North Star Pit C - 20120420
EW06

Figure 8

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Data Source: GHD: Geology - 20120410, Geochemical Characterisation - 20120420, Mineralisation - 20120418, Topographic Surface - 20120401, Pit C - 20120401. Created by: jrutherford

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7,12,500mE
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NS0137
NS0044
NS0074
NS0077
NS0046
NS0078
NS0082
NS0101
NS0080
282
280
252
264
282
282
282 282
282
454

Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)
Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised

- Topographic Surface
- Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Mine Closure Plans

Job Number 61-27391
Revision A
Date 4/05/2012

North Star Pit C
EW07

Figure 9

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Data Source: GHD: Geology - 20120410, Geochemical Characterisation - 20120420, Mineralisation - 20120418, Topographic Surface - 20120401, Pit C - 20120401. Created by: jrutherford

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NS0168
NS0087
NS0086
NS0071
NS0083
NS0167
282
244
300
282
263
280
282
282
282
400
330

Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)

Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised
- Topographic Surface
- Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Mine Closure Plans

North Star Pit C
EW08

Job Number 61-27391
Revision A
Date 4/05/2012

Figure 10

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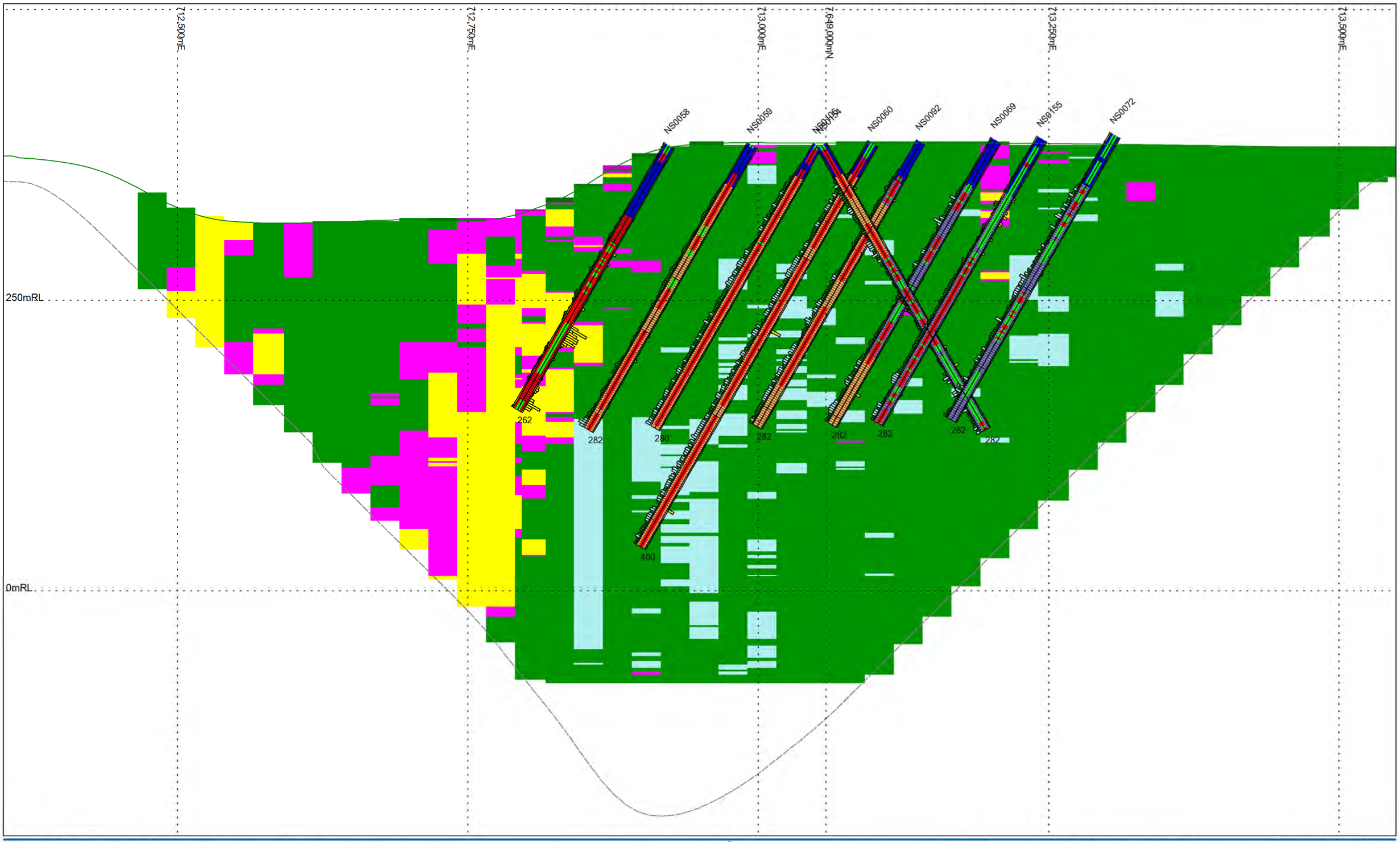

Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)

Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised

Topographic Surface
Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Mine Closure Plans

Job Number 61-27391
Revision A
Date 4/05/2012

North Star Pit C
EW09

Figure 11

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NS0171
NS0057
NS0170
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280
300
302
330
48
355
454

Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)
Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised
- Topographic Surface
- Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Mine Closure Plans

North Star Pit C
EW10

Job Number 61-27391
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Date 4/05/2012

Figure 12

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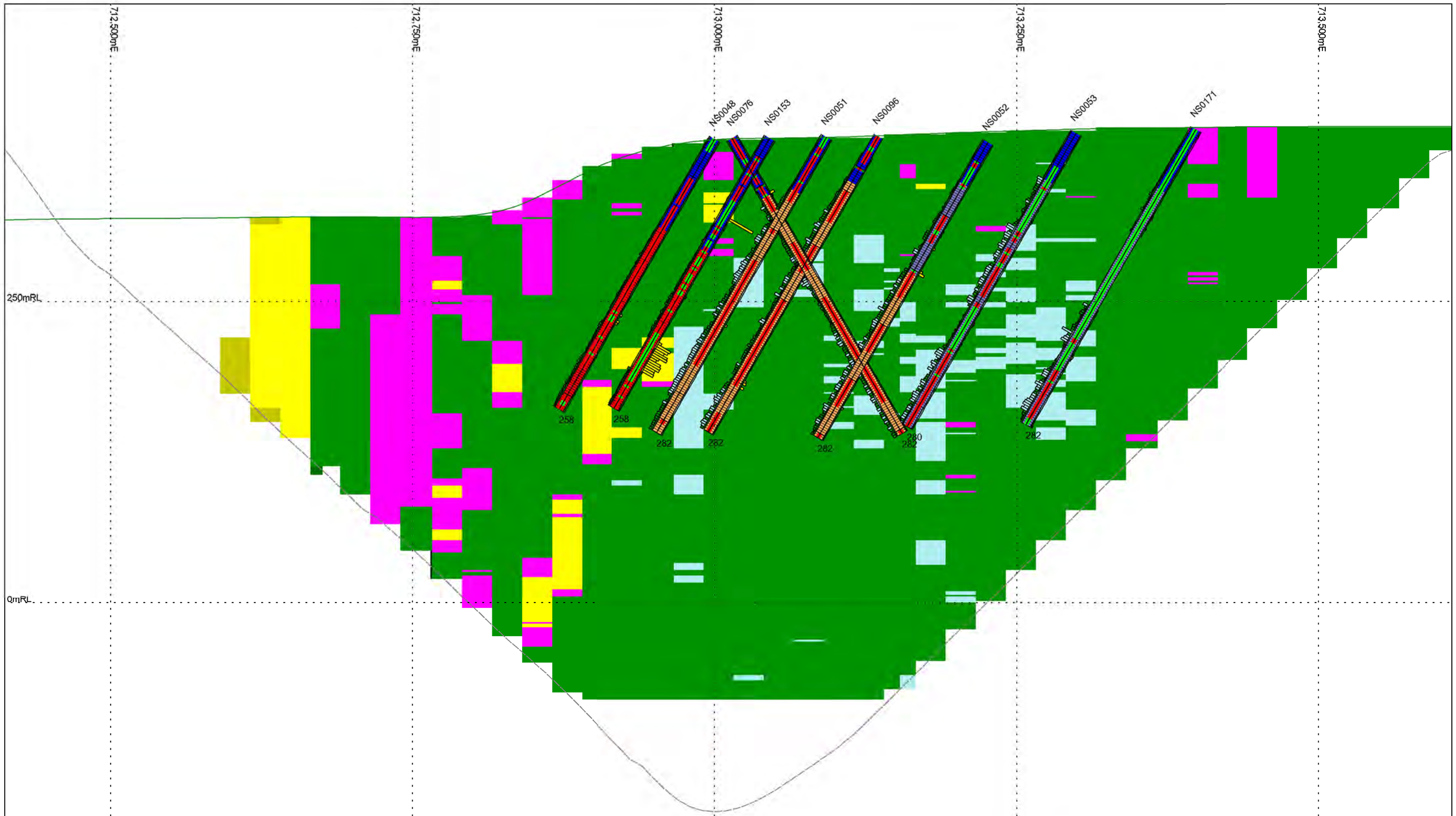

Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)

Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised

Topographic Surface
Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Mine Closure Plans

North Star Pit C
EW11

Job Number 61-27391
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Date 4/05/2012

Figure 13

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NS0095
NS0065
NS0166
NS0124
300
282
252
298
400

Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)

Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised

Topographic Surface
Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Mine Closure Plans

North Star Pit C
EW12

Job Number 61-27391
Revision A
Date 4/05/2012

Figure 14

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NS0098
NS0099
NS0122
NS0123
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282
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280

Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)

Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised

Topographic Surface
Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Mine Closure Plans

Job Number 61-27391
Revision A
Date 4/05/2012

North Star Pit C - 20120420 EW13

Figure 15

G:\61\27391\GIS\Data\Geoscientific\DISCOVER_3d_MODELS\NS_EXPORT\Drillhole_Projects\North Star Pit C - 20120420

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Data Source: GHD: Geology - 20120410, Geochemical Characterisation - 20120420, Mineralisation - 20120418, Topographic Surface - 20120401, Pit C - 20120401. Created by: jrutherford

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712,750mE
713,000mE
7,648,000mN
713,250mE
713,500mE
713,750mE
500mRL
250mRL
0mRL
NS0067
NS0068
NS0050
282
282
250
282
300
330
335

Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)

Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised
- Topographic Surface
- Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Metals Group Ltd
Fortescue Mine Closure Plans

Job Number 61-27391
Revision A
Date 4/05/2012

North Star Pit C - 20120420
EW14

Figure 16

G:\61\27391\GIS\Data\Geoscientific\DISCOVER_3d_MODELS\NS_EXPORT\Drillhole_Projects\North Star Pit C - 20120420

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Data Source: GHD: Geology - 20120410, Geochemical Characterisation - 20120420, Mineralisation - 20120418, Topographic Surface - 20120401, Pit C - 20120401. Created by: jrutherford

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713,000mE
7,647,750mN
713,250mE
713,500mE
713,750mE
500mRL
250mRL
QmRL
NS0119
NS0120
NS0121
94
280
280

Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)

Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised
- Topographic Surface
- Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Metals Group Ltd
Fortescue Mine Closure Plans

Job Number 61-27391
Revision A
Date 4/05/2012

North Star Pit C - 20120420 EW15

Figure 17

G:\61\27391\GIS\Data\Geoscientific\DISCOVER_3d_MODELS\NS_EXPORT\Drillhole_Projects\North Star Pit C - 20120420

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Data Source: GHD: Geology - 20120410, Geochemical Characterisation - 20120420, Mineralisation - 20120418, Topographic Surface - 20120401, Pit C - 20120401. Created by: jrutherford

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713,000mE
713,250mE
713,500mE
713,750mE
500mRL
250mRL
0mRL
NS0118
NS0117
262
280

Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)

Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised

Topographic Surface
Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Mine Closure Plans

North Star Pit C
EW16

Job Number 61-27391
Revision A
Date 4/05/2012

Figure 18

G:\61\27391\GIS\Data\Geoscientific\DISCOVER_3d_MODELS\NS_EXPORT\Drillhole_Projects\North Star Pit C - 20120420

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Data Source: GHD: Geology - 20120410, Geochemical Characterisation - 20120420, Mineralisation - 20120418, Topographic Surface - 20120401, Pit C - 20120401. Created by: jrutherford

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712,750mE
713,000mE
713,250mE
713,500mE
713,750mE
500mRL
250mRL
0mRL
NS0107
NS0108
NS0116
NS0109
202
282
280
298

Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)

Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised
- Topographic Surface
- Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Metals Group Ltd
Fortescue Mine Closure Plans

Job Number 61-27391
Revision A
Date 4/05/2012

North Star Pit C - 20120420 EW17

Figure 19

G:\61\27391\GIS\Data\Geoscientific\DISCOVER_3d_MODELS\NS_EXPORT\Drillhole_Projects\North Star Pit C - 20120420

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Data Source: GHD: Geology - 20120410, Geochemical Characterisation - 20120420, Mineralisation - 20120418, Topographic Surface - 20120401, Pit C - 20120401. Created by: jrutherford

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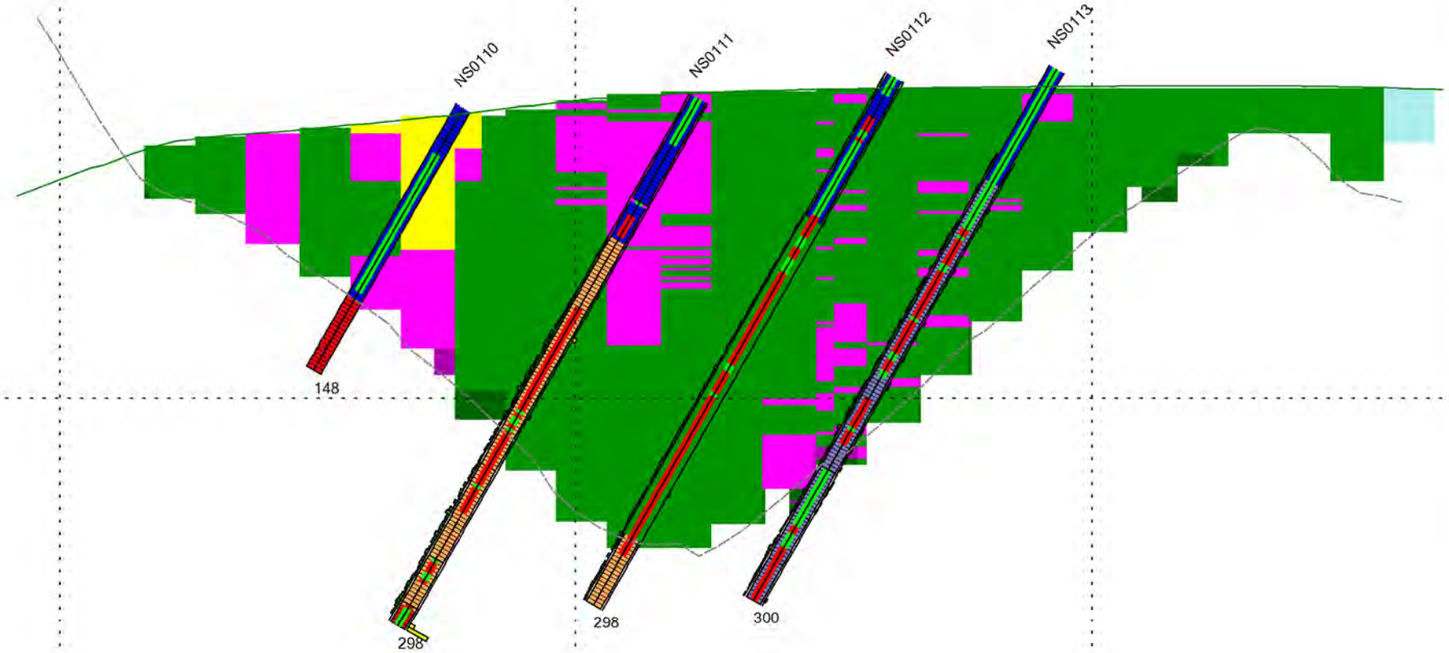
712,750mE
713,000mE
713,250mE
713,500mE
7,647,250mN
713,750mE

500mRL
250mRL
0mRL



Scale: 1:3000 (at A3)

0 25 50 100 m

Coordinate System: Non-Earth (meters)

Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised

Topographic Surface
Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Mine Closure Plans

North Star Pit C
EW18

Job Number 61-27391
Revision A
Date 4/05/2012

Figure 20

G:\61\27391\GIS\Data\Geoscientific\DISCOVER_3d_MODELS\NS_EXPORT\Drillhole_Projects\North Star Pit C - 20120420
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Data Source: GHD: Geology - 20120410, Geochemical Characterisation - 20120420, Mineralisation - 20120418, Topographic Surface - 20120401, Pit C - 20120401. Created by: jrutherford

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713,000mE
713,250mE
7,647,000mN
713,500mE
713,750mE
7,647,250mN
500mRL
250mRL
0mRL
NS0114
NS0115
NS0011
144
102
138
280

Scale: 1:3000 (at A3)
0 25 50 100 m
Coordinate System: Non-Earth (meters)
Map Projection : Transverse Mercator
Horizontal Datum: Geographic Datum of Australia
Grid: Map Grid of Australia 1994, Zone 50

N

LEGEND

Geology - down borehole
- oxide
- south
- north
- footwall
- hangingwall

Geochemical Characterisation histogram and voxel background
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Mineralisation - down borehole
- non_mineralised
- mineralised

- Topographic Surface
- Pit C Interpreted Boundary

HoleID
NAPP Histogram
mineralisation TraceShade
model geology TraceShade
EOH (m)
mm given at scale of 1:1000

Note: No geochemical classification interpretation by model where white between topographic and pit surfaces. Unmodelled volume 4% of pit C.

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Fortescue Mine Closure Plans

North Star Pit C
EW19

Job Number 61-27391
Revision A
Date 4/05/2012

Figure 21

G:\61\27391\GIS\Data\Geoscientific\DISCOVER_3d_MODELS\NS_EXPORT\Drillhole_Projects\North Star Pit C - 20120420
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Data Source: GHD: Geology - 20120410, Geochemical Characterisation - 20120420, Mineralisation - 20120418, Topographic Surface - 20120401, Pit C - 20120401. Created by: jrutherford

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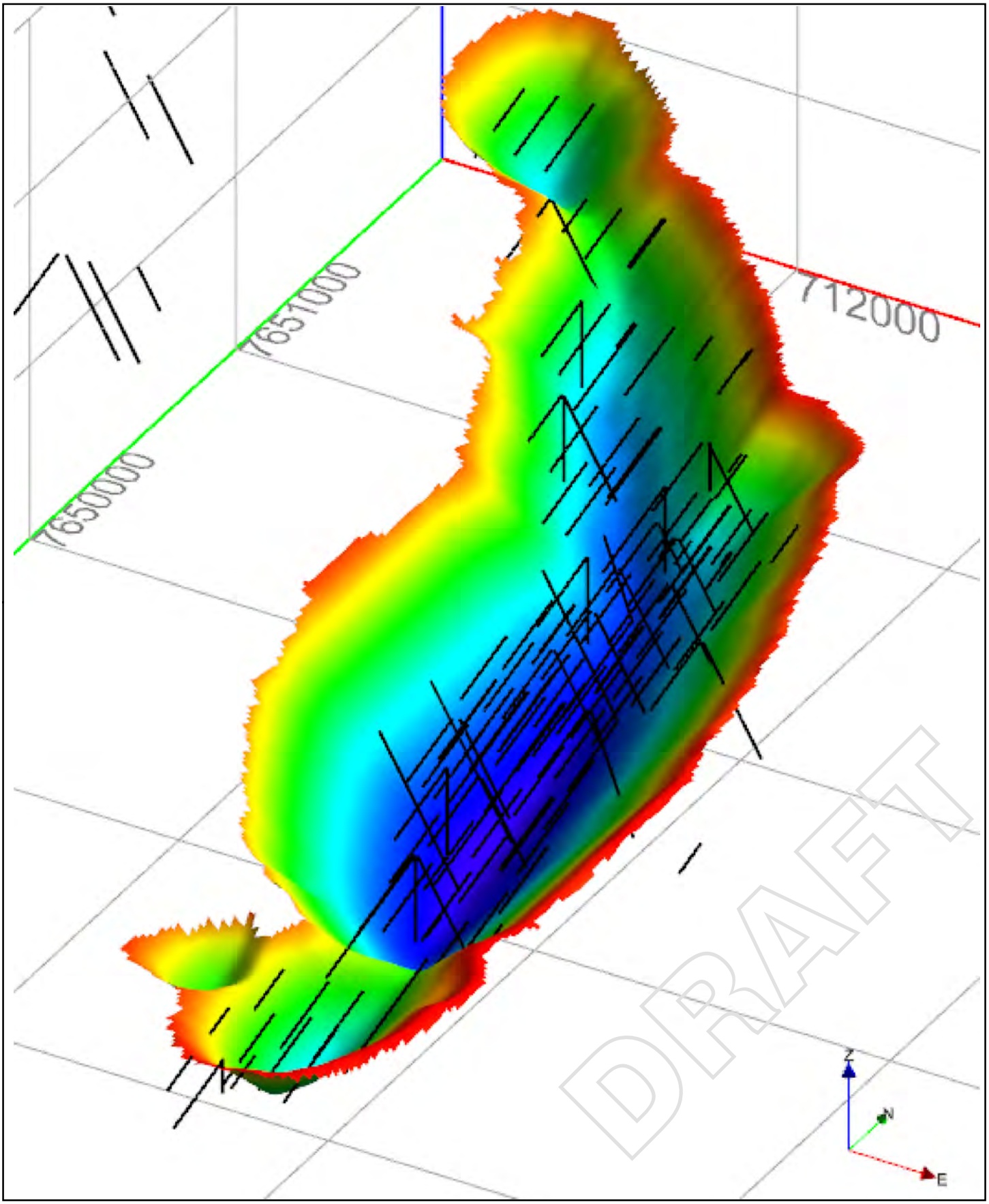
Appendix D

Output from 3D model



LEGEND

Pit C Elevation (m)

-100 0 100 200 300

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Fortescue Mine Closure Plans

Job Number 61-27391
Revision A
Date 24 Apr 2012

North Star Pit Shell C and Drillholes used for AMD Modelling

Figure 22

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G:\61\27391\GIS\Maps\MXD\6127391_G070_RevA.mxd

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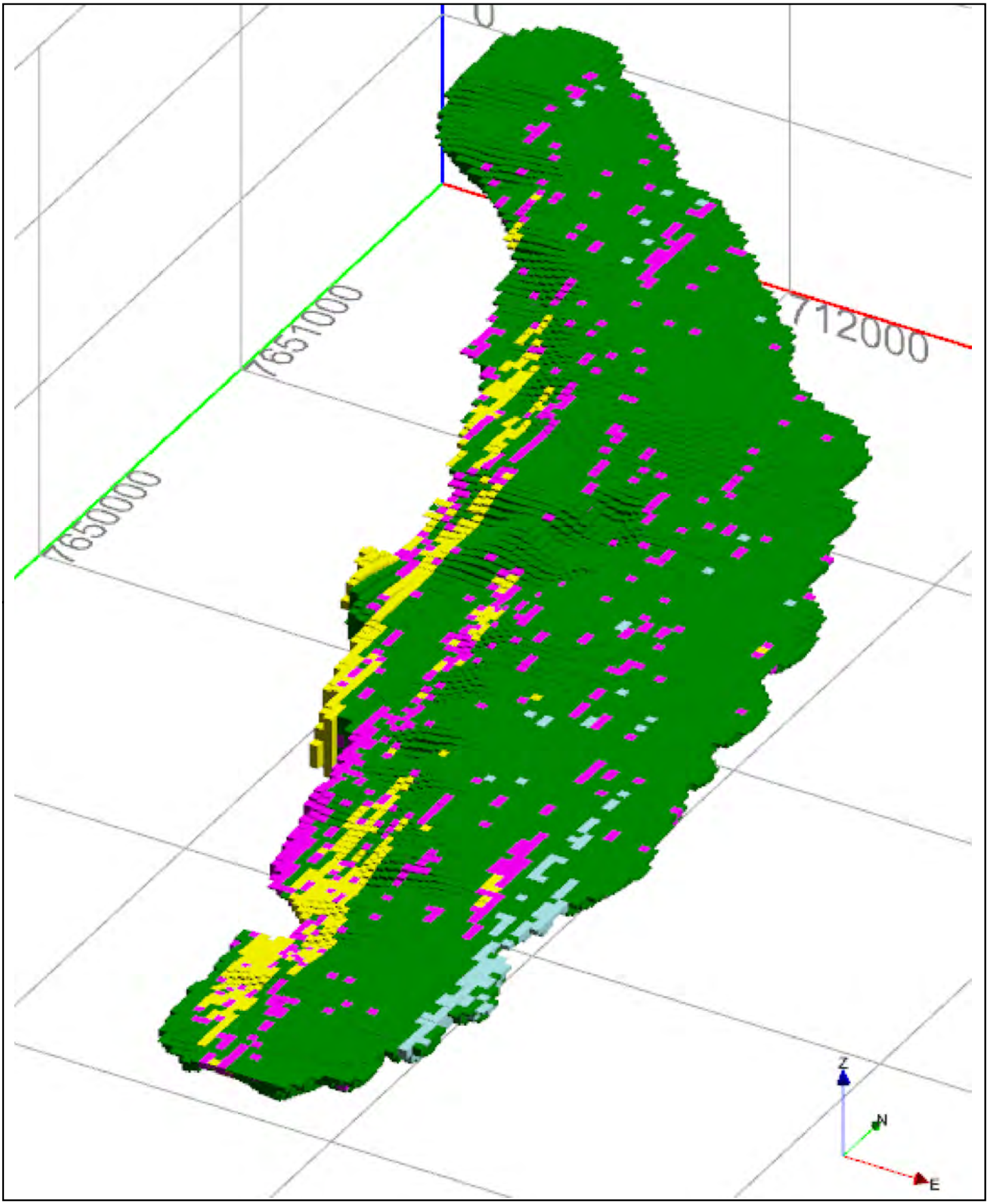
Data source: GHD: Northstar Pit Shell C - 20120412, Drillholes - 20120402. Created by: jrutherford



LEGEND

Geochemical Characterisation

- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

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Fortescue Mine Closure Plans

Job Number	61-27391
Revision	A
Date	04 May 2012

AMD Voxel Modelling Clipped to Pit C and Topographic Surface

Figure 23

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G:\61\27391\GIS\Maps\MXD\6127391_G072_RevA.mxd

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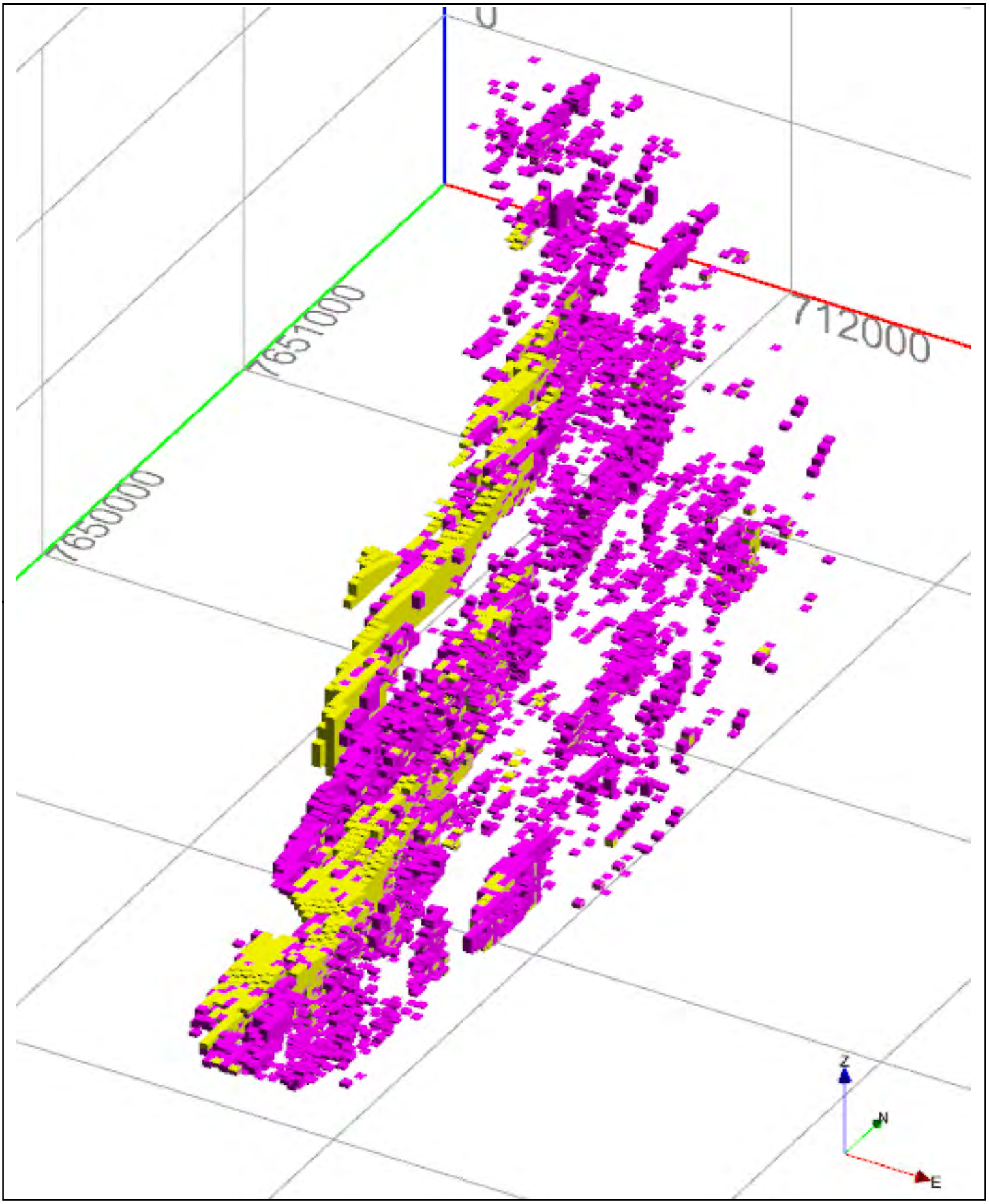
Data source: GHD: Geochemical Characterisation - 20120420. Created by: jrutherford



LEGEND

Geochemical Characterisation

- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

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Fortescue Mine Closure Plans

AMD Voxel Modelling
Showing PAF & UC Distribution

Job Number	61-27391
Revision	A
Date	08 May 2012

Figure 24

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G:\61\27391\GIS\Data\Geoscientific\DISCOVER_3d_MODELS\NS_EXPORT\Export_Data\Pit C Report Figures\61127391_G074_RevA.mxd

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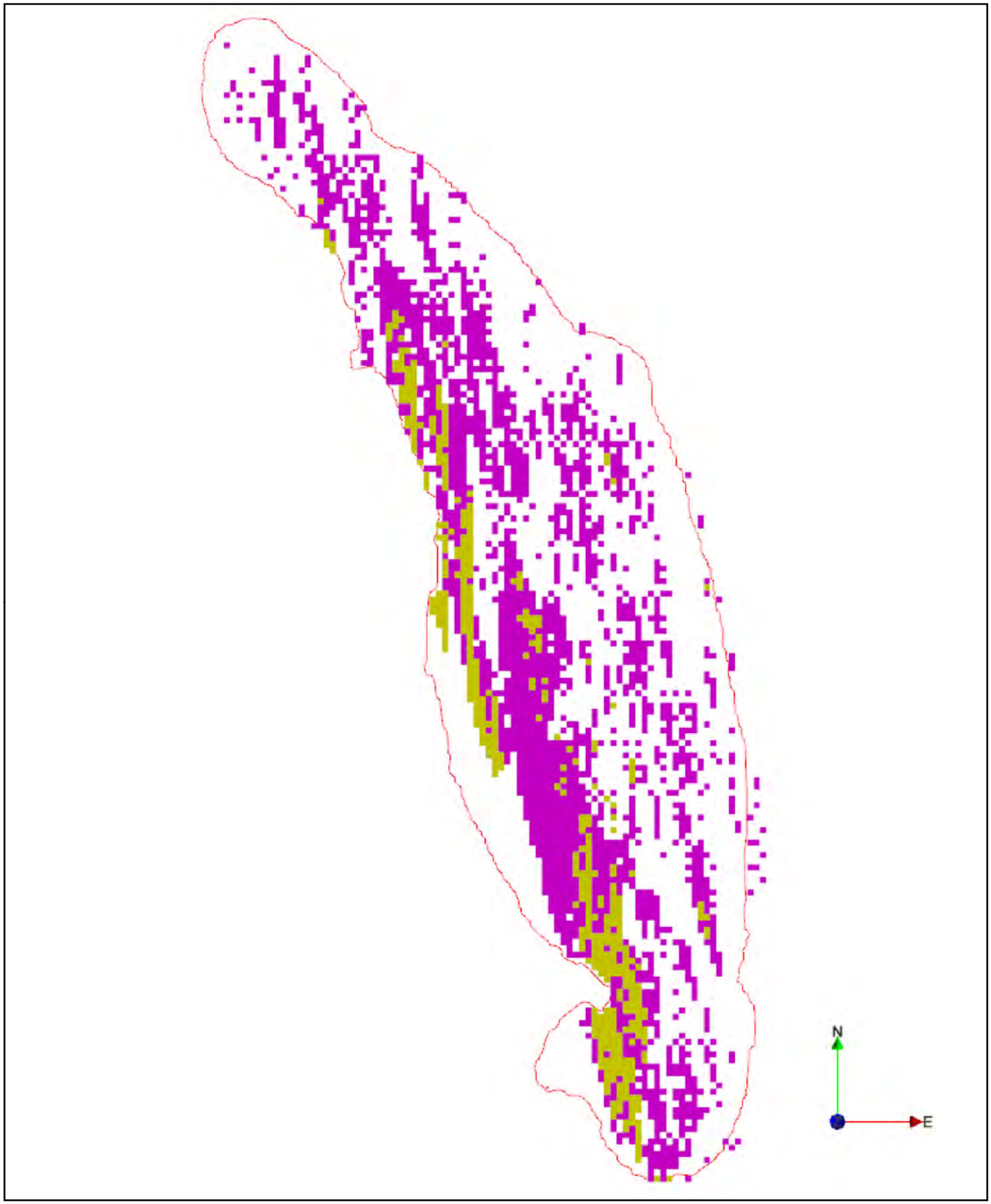
Data source: GHD: Geochemical Characterisation - 20120420. Created by: jrutherford



LEGEND

Geochemical Characterisation

- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

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Fortescue Mine Closure Plans

AMD Voxel Modelling Showing
Plan of PAF & UC Distribution

Job Number	61-27391
Revision	A
Date	08 May 2012

Figure 25

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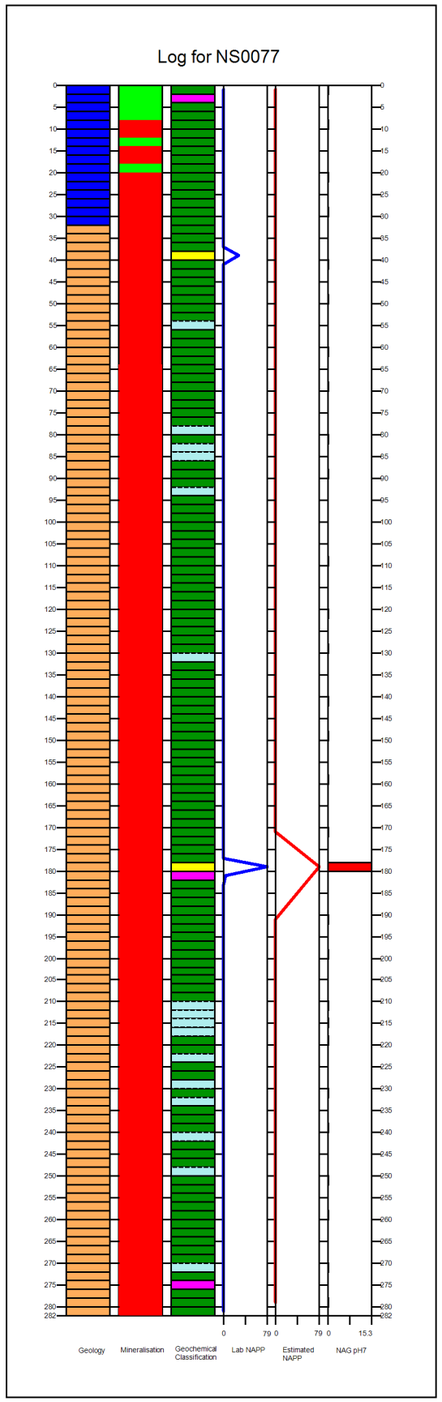
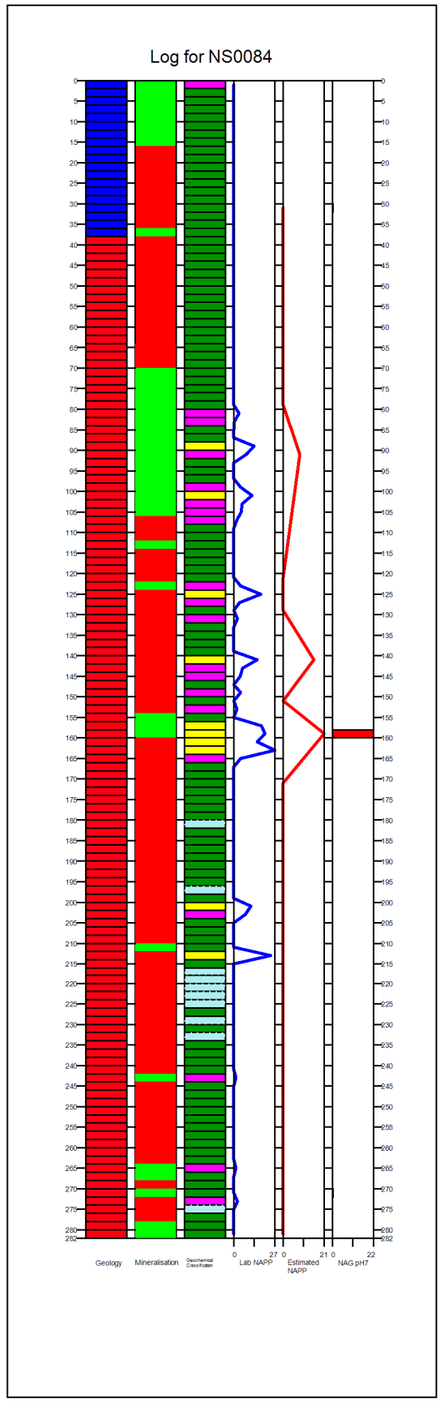
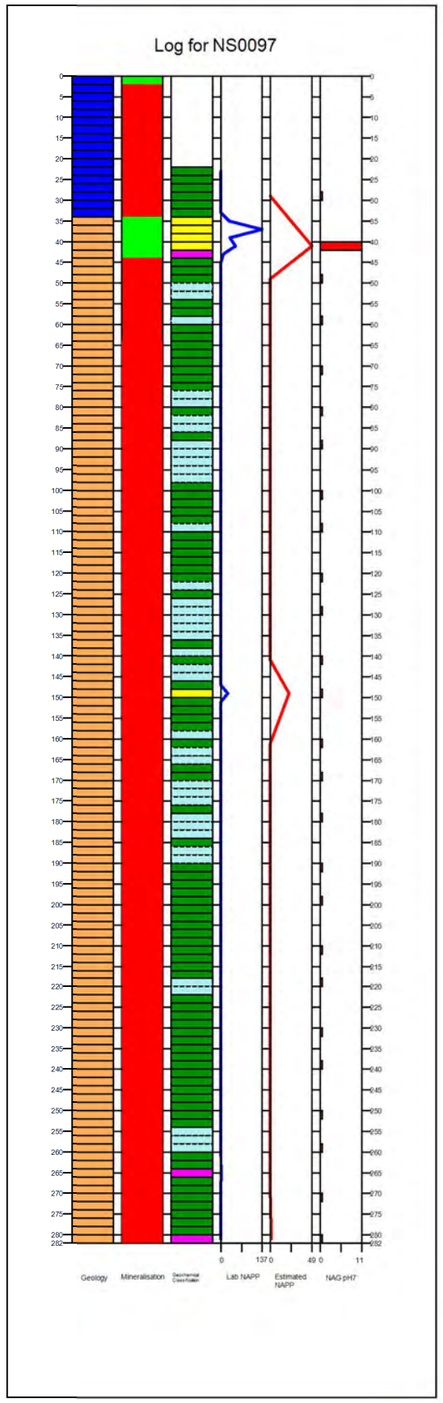
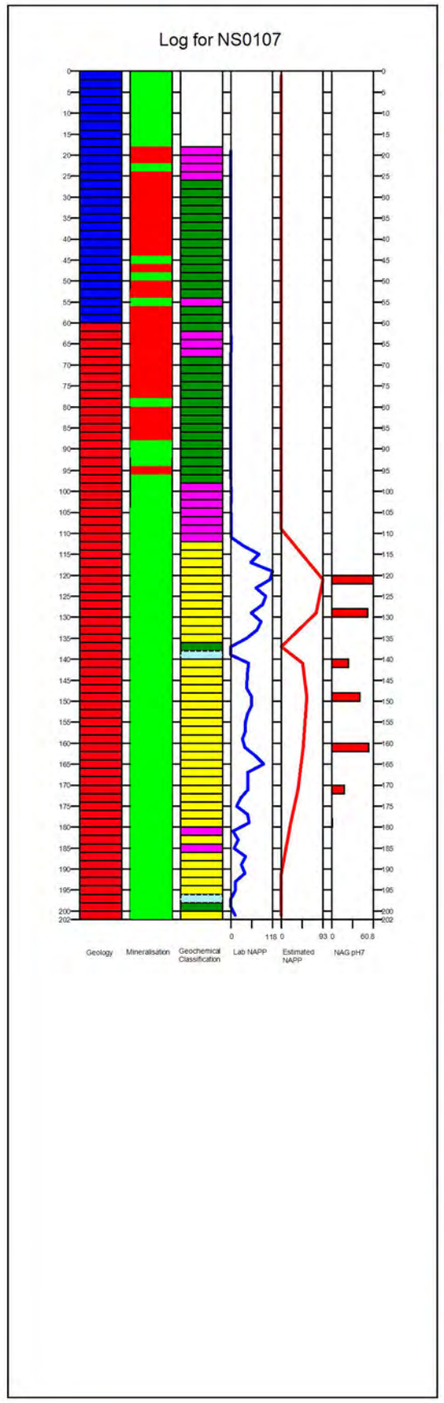
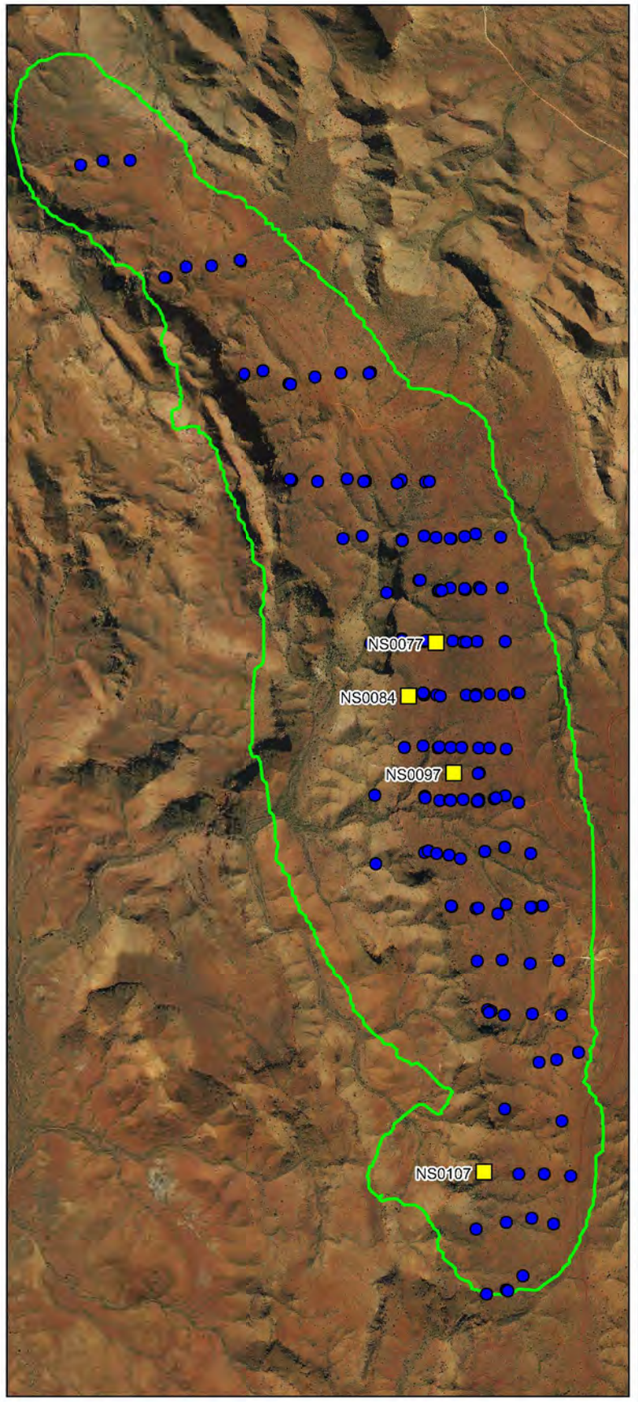
Data source: GHD: Geochemical Characterisation - 20120420. Created by: jrutherford











LEGEND

- Drillholes
- Targetted Drillholes
- Pit C Boundary

Geology
- oxide
- south
- north
- footwall
- hangingwall

Mineralisation
- non mineralised
- mineralised

Geochemical Characterisation
- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

Lab NAPP (kg of H2SO4 per tonne) | Estimated NAPP (kg of H2SO4 per tonne) | NAG pH7

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Fortescue Metal Group Ltd
Fortescue Mine Closure Plans

Job Number	61-27391
Revision	A
Date	27 Apr 2012

North Star Bore Logs

Figure 26

G:\61\27391\GIS\Data\Geoscientific\DISCOVER_3d_MODELS\NS_EXPORT\Workspaces\SelectedBoreLogs_20120429.WOR

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Data Source: FMG: North Star Mosaic Aug 2011 - 20120420; GHD: Bore logs - 20120427, Boreholes - 20120402. Created by: jrutherford

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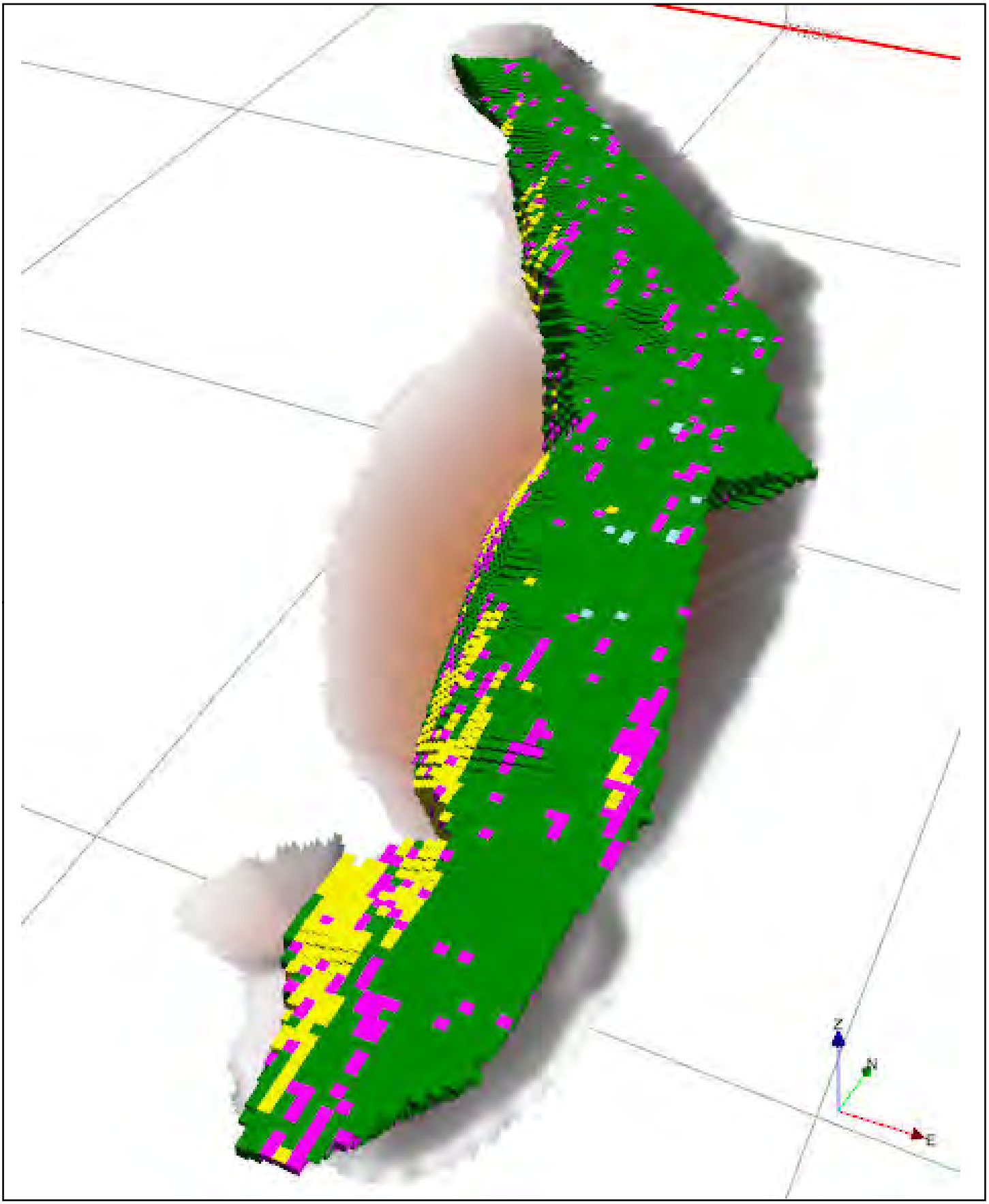

LEGEND

Geochemical Characterisation

- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

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FMG

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Fortescue Mine Closure Plans

Job Number	61-27391
Revision	A
Date	15 May 2012

AMD Voxel Modelling Clipped to Extent of Drillholes and Topography

Figure 27

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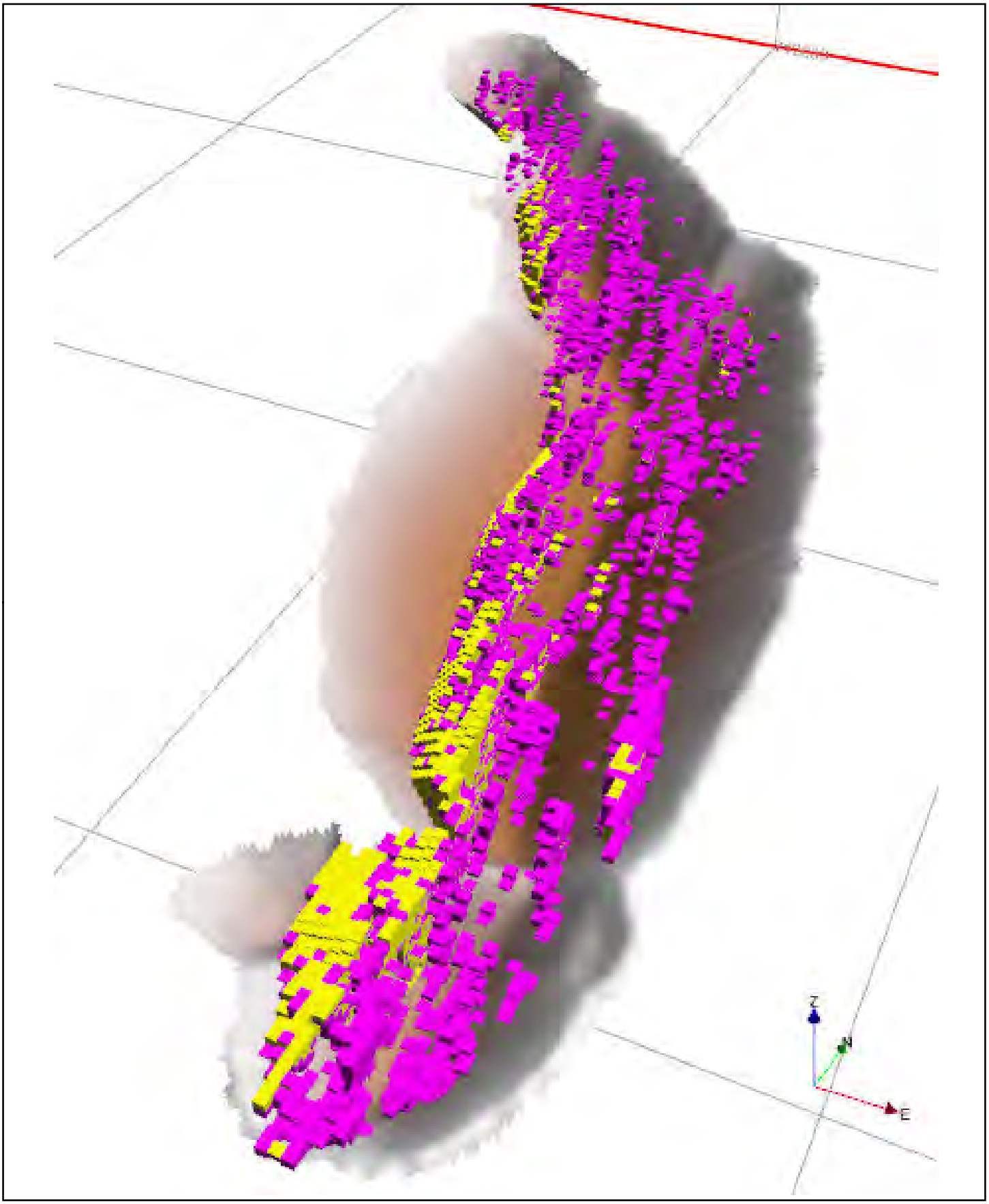
Data source: GHD: Geochemical Characterisation - 20120420. Created by: jrutherford



LEGEND

Geochemical Characterisation

- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
- UC (0 - 10 kg/t H2SO4)
- PAF (>10 kg/t H2SO4)

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Fortescue Metal Group Ltd
Fortescue Mine Closure Plans

Job Number	61-27391
Revision	A
Date	15 May 2012

AMD Voxel Modelling Clipped to Extent of Drillholes Showing PAF & UC Distribution

Figure 28

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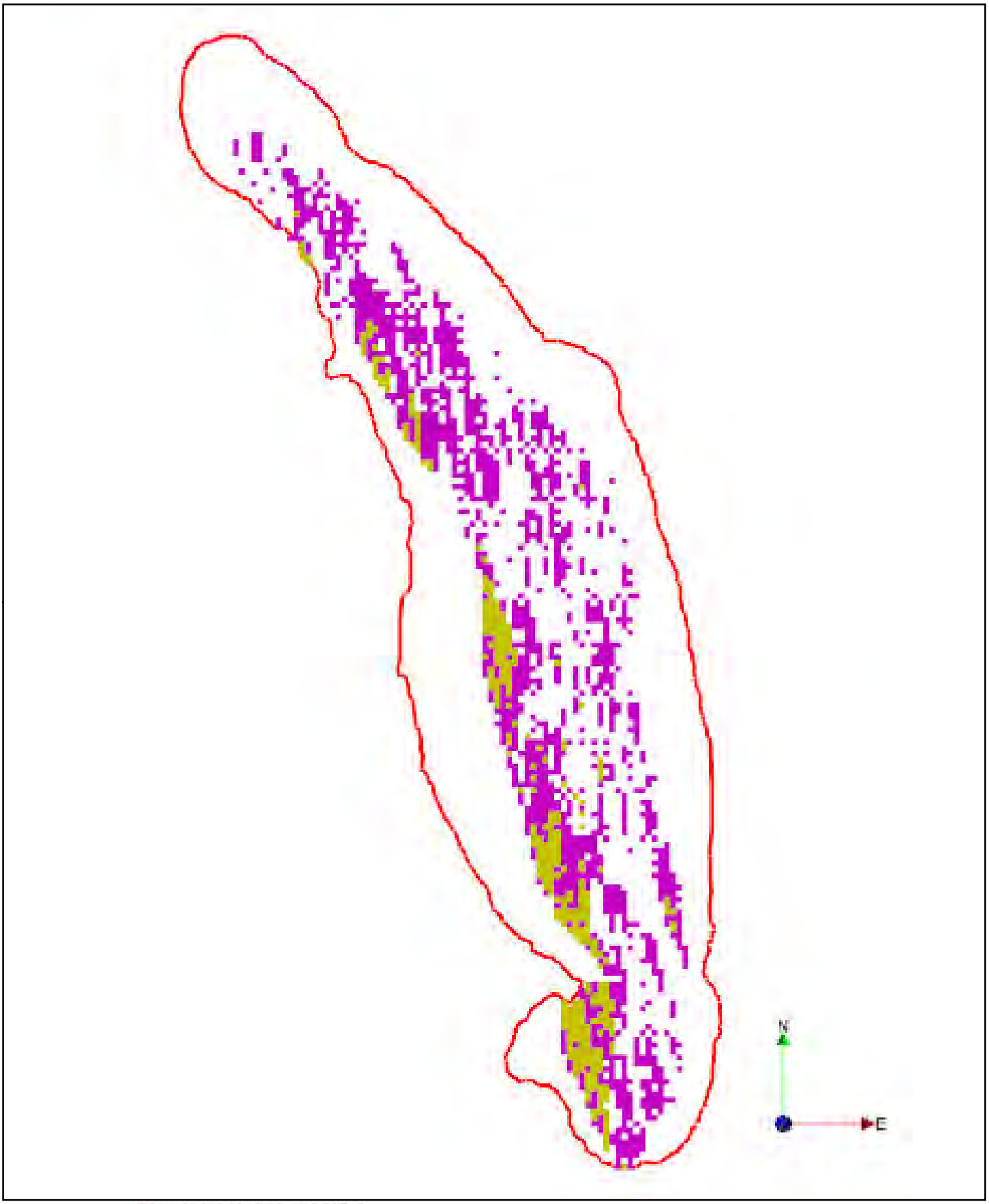

LEGEND

Geochemical Characterisation

- NAC (<-30 kg/t H2SO4)
- NAF (-30 - 0 kg/t H2SO4)
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Fortescue Metal Group Ltd
Fortescue Mine Closure Plans

Job Number	61-27391
Revision	A
Date	15 May 2012

AMD Voxel Modelling Clipped to Extent of Drillholes Showing Plan of PAF & UC Distribution

Figure 29

239 Adelaide Terrace Perth WA 6004 Australia **T** 61 8 6222 8222 **F** 61 8 6222 8555 **E** permail@ghd.com.au **W** www.ghd.com.au

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Appendix E

Project area assay database

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0001	6	8	NS	E252704	252704	1	G	D	39.12	28.72	5.62	0.026	0.02	0.206	0.02	0.02	0.012	0.02	0.011	0.015	7.43	1.62	0.15	9.2	3647	0.612	0.34884	0.26316	PAF(LC)
NS0001	4	6	NS	E252703	252703	1	G	D	33.32	35.96	7.39	-0.0129	-0.01	0.316	0.06	0.02	0.011	0.019	0.014	0.013	6.23	2.03	0.16	8.42	3646	0.5814	0.34884	0.23256	PAF(LC)
NS0001	2	4	NS	E252702	252702	1	G	D	28.84	47.53	4.78	-0.0129	-0.01	0.638	0.03	0.02	0.012	0.018	0.033	0.022	4.67	1.11	0.11	5.89	3645	0.5508	0.34884	0.20196	PAF(LC)
NS0001	0	2	NS	E252701	252701	1	G	D	36.11	30.78	7.59	-0.0129	-0.01	0.74	0.17	0.04	0.014	0.023	0.178	0.029	6.5	1.79	0.17	8.46	3644	0.7038	0.69768	0.00612	PAF(LC)
NS0001	8	10	NS	E252705	252705	1	G	D	30.19	44.36	4.95	-0.0129	-0.01	0.306	0.03	0.02	0.01	0.011	0.016	0.022	5.45	1.4	0.11	6.96	3648	0.3366	0.34884	-0.01224	NAF
NS0001	10	12	NS	E252706	252706	1	G	D	23.27	56.91	4.31	0.026	0.02	0.326	0.06	0.04	0.015	0.008	0.01	0.028	3.35	1.39	0.1	4.84	3649	0.2448	0.69768	-0.45288	NAF
NS0001	12	14	NS	E252707	252707	1	G	D	30.08	46.27	4.16	0.026	0.02	0.203	0.08	0.05	0.051	0.007	0.013	0.021	4.37	1.38	0.11	5.86	3650	0.2142	0.8721	-0.6579	NAF
NS0001	16	18	NS	E252709	252709	1	G	D	35.51	42.63	2.1	0.026	0.02	0.097	0.19	0.07	0.062	0.004	0.015	0.026	3	0.76	0.06	3.82	3652	0.1224	1.22094	-1.09854	NAF
NS0001	18	20	NS	E252710	252710	1	G	D	28.63	53.83	1.74	0.026	0.02	0.074	0.15	0.07	0.074	0.003	0.02	0.026	2.44	0.69	0.04	3.17	3653	0.0918	1.22094	-1.12914	NAF
NS0001	14	16	NS	E252708	252708	1	G	D	33.39	43.32	2.82	0.026	0.02	0.131	0.18	0.08	0.043	0.005	0.008	0.026	4.25	1.06	0.09	5.4	3651	0.153	1.39536	-1.24236	NAF
NS0001	20	22	NS	E252711	252711	1	G	D	30.4	50.02	2.14	0.039	0.03	0.105	0.45	0.14	0.063	0.002	0.112	0.028	2.66	0.91	0.06	3.63	3654	0.0612	2.44188	-2.38068	NAF
NS0001	26	28	NS	E252715	252715	1	G	D	36.23	41.7	1.85	0.245	0.19	0.088	0.59	0.15	0.031	0.002	0.139	0.03	2.52	0.79	0.02	3.33	3657	0.0612	2.6163	-2.5551	NAF
NS0001	22	24	NS	E252712	252712	1	G	D	34.9	42.33	2.47	0.052	0.04	0.113	0.64	0.17	0.044	0.002	0.125	0.03	2.64	1.04	0.05	3.73	3655	0.0612	2.96514	-2.90394	NAF
NS0001	32	34	NS	E252718	252718	1	G	D	35.36	42.23	1.81	0.633	0.49	0.083	0.68	0.17	0.033	0.002	0.152	0.036	2.77	0.93	0.05	3.75	3660	0.0612	2.96514	-2.90394	NAF
NS0001	24	26	NS	E252714	252714	1	G	D	33.56	44.94	2.5	0.065	0.05	0.116	0.71	0.17	0.044	0.001	0.191	0.032	2.35	1.02	0.03	3.4	3656	0.0306	2.96514	-2.93454	NAF
NS0001	28	30	NS	E252716	252716	1	G	D	37.54	39.13	1.73	0.633	0.49	0.082	0.56	0.17	0.05	0.001	0.109	0.039	2.52	0.87	0.06	3.45	3658	0.0306	2.96514	-2.93454	NAF
NS0001	36	38	NS	E252720	252720	1	G	D	38.24	38.23	1.6	0.684	0.53	0.08	0.72	0.18	0.037	0.002	0.135	0.04	2.78	0.9	0.05	3.73	3662	0.0612	3.13956	-3.07836	NAF
NS0001	38	40	NS	E252721	252721	1	G	D	41.79	34.72	1.53	0.4	0.31	0.079	0.63	0.18	0.025	0.001	0.136	0.021	1.96	0.82	0.05	2.83	3663	0.0306	3.13956	-3.10896	NAF
NS0001	40	42	NS	E252722	252722	1	G	D	42.42	33.79	1.57	0.4	0.31	0.08	0.53	0.18	0.038	0.001	0.098	0.027	1.95	0.83	0.07	2.85	3664	0.0306	3.13956	-3.10896	NAF
NS0001	34	36	NS	E252719	252719	1	G	D	37.62	39.32	1.78	0.349	0.27	0.091	0.67	0.19	0.035	0.002	0.144	0.03	2.52	0.93	0.06	3.51	3661	0.0612	3.31398	-3.25278	NAF
NS0001	30	32	NS	E252717	252717	1	G	D	35.45	41.16	2.21	0.633	0.49	0.103	0.74	0.2	0.042	0.001	0.171	0.034	2.63	1.05	0.08	3.76	3659	0.0306	3.4884	-3.4578	NAF
NS0001	62	64	NS	E252733	252733	1	G	D	33.89	39.12	2.61	0.361	0.28	0.132	3.28	0.55	0.044	0.139	0.909	0.212	0.69	3.24	0.13	4.06	3675	4.2534	9.5931	-5.3397	NAF
NS0001	42	44	NS	E252723	252723	1	G	D	40.88	35	1.61	0.478	0.37	0.079	0.79	0.36	0.107	0.02	0.143	0.043	1.82	0.89	0.07	2.78	3665	0.612	6.27912	-5.66712	NAF
NS0001	48	50	NS	E252726	252726	1	G	D	29.6	43.1	3.41	0.374	0.29	0.169	3.69	1.34	0.077	0.548	0.954	0.165	0.66	2.78	0.67	4.11	3668	16.7688	23.37228	-6.60348	NAF
NS0001	58	60	NS	E252731	252731	1	G	D	34.53	39.16	1.75	0.426	0.33	0.087	2.23	0.51	0.089	0.05	0.57	0.122	0.67	5.08	-0.1	5.65	3673	1.53	8.89542	-7.36542	NAF
NS0001	84	86	NS	E252744	252744	1	G	D	34.35	37.37	1.67	0.529	0.41	0.083	2.87	0.56	0.084	0.058	0.709	0.226	0.75	6.17	-0.08	6.84	3686	1.7748	9.76752	-7.99272	NAF
NS0001	90	92	NS	E252747	252747	1	G	D	33.66	39.76	1.57	0.413	0.32	0.071	2.66	0.54	0.088	0.045	0.686	0.189	0.66	5.45	-0.09	6.02	3689	1.377	9.41868	-8.04168	NAF
NS0001	50	52	NS	E252727	252727	1	G	D	31.24	43.27	3.15	0.258	0.2	0.158	3.28	0.77	0.046	0.17	0.904	0.17	0.62	2.14	0.33	3.09	3669	5.202	13.43034	-8.22834	NAF
NS0001	76	78	NS	E252740	252740	1	G	D	34.92	38.41	1.9	0.426	0.33	0.088	2.71	0.7	0.115	0.129	0.757	0.192	0.68	3.95	0.01	4.64	3682	3.9474	12.2094	-8.262	NAF
NS0001	72	74	NS	E252738	252738	1	G	D	34.2	38.86	1.65	0.555	0.43	0.081	2.33	0.56	0.073	0.049	0.522	0.164	1.02	5.03	0.01	6.06	3680	1.4994	9.76752	-8.26812	NAF
NS0001	96	98	NS	E252750	252750	1	G	D	35.52	38.05	1.38	0.336	0.26	0.068	2.28	0.57	0.141	0.039	0.611	0.184	0.6	4.75	-0.18	5.17	3692	1.1934	9.94194	-8.74854	NAF
NS0001	98	100	NS	E252751	252751	1	G	D	27.75	47.23	1.31	0.452	0.35	0.062	2.55	0.63	0.096	0.036	0.566	0.166	0.56	6.64	0	7.2	3693	1.1016	10.98846	-9.88686	NAF
NS0001	78	80	NS	E252741	252741	1	G	D	35.58	36.06	1.78	0.516	0.4	0.087	2.84	0.68	0.091	0.063	0.714	0.183	0.69	5.12	0.01	5.82	3683	1.9278	11.86056	-9.93276	NAF
NS0001	92	94	NS	E252748	252748	1	G	D	38.98	34.25	1.28	0.361	0.28	0.061	2.16	0.66	0.11	0.038	0.518	0.144	0.46	4.51	-0.11	4.86	3690	1.1628	11.51172	-10.34892	NAF
NS0001	74	76	NS	E252739	252739	1	G	D	34	36.48	1.75	0.633	0.49	0.083	2.94	0.75	0.117	0.085	0.668	0.195	0.73	6.73	0.01	7.47	3681	2.601	13.0815	-10.4805	NAF
NS0001	94	96	NS	E252749	252749	1	G	D	26.42	54.57	0.95	0.258	0.2	0.048	1.56	0.7	0.117	0.029	0.404	0.124	0.4	3.09	0	3.49	3691	0.8874	12.2094	-11.322	NAF
NS0001	54	56	NS	E252729	252729	1	G	D	32.51	41.67	2.55	0.323	0.25	0.123	2.98	0.96	0.086	0.124	0.823	0.164	0.62	2.62	0.33	3.57	3671	3.7944	16.74432	-12.94992	NAF
NS0001	86	88	NS	E252745	252745	1	G	D	30.41	41.68	1.34	0.581	0.45	0.065	2.67	0.89	0.126	0.073	0.561	0.173	0.67	7.48	0.11	8.26	3687	2.2338	15.52338	-13.28958	NAF
NS0001	70	72	NS	E252737	252737	1	G	D	32.76	40.81	2.01	0.491	0.38	0.098	2.96	0.9	0.142	0.07	0.764	0.244	0.69	3.89	0.13	4.71	3679	2.142	15.6978	-13.5558	NAF
NS0001	80	82	NS	E252742	252742	1	G	D	31.34	40.99	1.37	0.646	0.5	0.067	2.75	0.87	0.073	0.047	0.575	0.156	0.65	6.91	0.27	7.83	3684	1.4382	15.17454	-13.73634	NAF
NS0001	82	84	NS	E252743	252743	1	G	D	34.24	38.15	1.28	0.581	0.45	0.064	2.54	0.88	0.069	0.032	0.531	0.155	0.55	6.16	0.27	6.98	3685	0.9792	15.34896	-14.36976	NAF
NS0001	68	70	NS	E252736	252736	1	G	D	31.79	40.68	2.27	0.491	0.38	0.109	3.22	1.02	0.124	0.096	0.828	0.242	0.72	4.07	0.27	5.06	3678	2.9376	17.79084	-14.85324	NAF
NS0001	88	90	NS	E252746	252746	1	G	D	27.73	48	1.37	0.413	0.32	0.064	2.38	1.11	0.103	0.05	0.59	0.146	0.54	5.14	0.43	6.11	3688	1.53	19.36062	-17.83062	NAF
NS0001	66	68	NS	E252735	252735	1	G	D	32.59	40.03	2.11	0.465	0.36	0.104	3.04	1.29	0.225	0.072	0.793	0.223	0.71	3.85	0.28	4.84	3677	2.2032	22.50018	-20.29698	NAF
NS0001	52	54	NS	E252728	252728	1	G	D	33.51	40.32	1.69	0.426	0.33	0.081	2.49	1.26	0.081	0.053	0.615	0.118	0.52	3.75	0.58	4.85	3670	1.6218	21.97692	-20.35512	NAF
NS0001	64	66	NS	E252734	252734	1	G	D	32.11	41.78	1.87	0.4	0.31	0.089	2.88	1.32	0.126	0.07	0.728	0.194	0.54	3.54	0.6	4.68	3676	2.142	23.02344	-20.88144	NAF
NS0001	56	58	NS	E252730	252730	1	G	D	35.46	38.36	1.69	0.336	0.26	0.084	2.41	1.54	0.132	0.068	0.603	0.117	0.42	2.77	0.71	3.9	3672	2.0808	26.86068	-24.77988	NAF
NS0001	46	48	NS	E252725	252725	1	G	D	30.02	45.87	1.64	0.4	0.31	0.081	2.3	1.61	0.088	0.048	0.513	0.095	0.43	3.13	0.93	4.49	3667	1.4688	28.08162	-26.61282	NAF
NS0001	44	46	NS	E252724	252724	1	G	D	32.57	41.08	2.01	0.439	0.34	0.1	2.58	1.65	0.07	0.057	0.538	0.096	0.49	3.36	1.03	4.88	3666	1.7442	28.7793	-27.0351	NAF
NS0001	60	62	NS	E252732	252732	1	G	D	25.6	46.97	2.31	0.361	0.28	0.113	3.27	3.36	0.198	0.108	0.761	0.172	0.64	2.74	2.35	5.73	3674	3.3048	58.60512	-55.30032	NAC
NS0003	70	72	NS	E252791	252791	1	G	D	22.74	48.92	4.08	0.4	0.31	0.2	2.89	1.03	0.276	0.798	0.817	0.146	1.02	6.94	0.09	8.05	3729	24.4188	17.96526	6.45354	PAF(LC)
NS0003	76	78	NS	E252794	252794	1	G	D	20.1	51.84	8.7	0.194	0.15	0.435	4.26	0.21	0.047	0.185	0.626	0.139	0.91	3.21	0.21	4.33	3732	5.661	3.66282	1.99818	PAF(LC)
NS0003	78	80	NS	E252795	252795	1	G	D	20.1	51.79	9.03	0.181	0.14	0.455	4.38	0.18	0.037	0.165	0.609	0.134	0.78	3.3	0.22	4.3	3733	5.049	3.13956	1.90944	PAF(LC)
NS0003	72	74	NS	E252792	252792	1	G	D	19.54	53.51	8.17	0.219	0.17	0.409	3.95	0.19	0.041	0.165	0.603	0.117	0.77	3.61	0.16	4.54	3730	5.049	3.31398	1.73502	PAF(LC)
NS0003	80	82	NS	E252796	252796	1	G	D	19.85	51.93	9	0.194	0.15	0.451	4.46	0.35	0.035	0.252	0.586	0.14	0.76	3.16	0.27	4.19	3734	7.7112	6.1047	1.6065	PAF(LC)
NS0003	2	4	NS	E252753	252753	1	G	D	33.2	33.17	9.43	0.026	0.02	0.416	0.04	0.02	0.018	0.042	0.035	0.028	6.28	2.51	0.18	8.97	3695	1.2852	0.34884	0.93636	PAF(LC)
NS0003	0	2	NS	E252752	252752	1	G	D	36.15	28.73	9.14	0.026	0.02	0.423	0.1	0.05	0.02	0.045	0.052	0.028	6.75	2.51	0.18	9.44	3694	1.377	0.8721	0.5049	PAF(LC)
NS0003	74	76	NS	E252793	252793	1	G	D	18.79	54.78	6.17	0.426	0.33	0.302	3.4	0.4	0.09	0.237	0.536	0.107	0.8	5.56	0.12	6.48	3731	7.2522	6.9768	0.2754	PAF(LC)
NS0003	10	12	NS	E252757	252757	1	G	D	31.14	43.14	3.88	0.077	0.06	0.177	0.13	0.03	0.021	0.026	0.016	0.043	5.91	1.43	0.18	7.52	3699	0.7956	0.52326	0.27234	PAF(LC)
NS0003	12	14	NS	E252758	252758	1	G	D	27.21	53.35	1.58	0.103	0.08	0.066	0.12	0.03	0.029	0.021	0.009	0.033	4.77	0.72	0.11	5.6	3700	0.6426	0.52326	0.11934	PAF(LC)
NS0003	4	6	NS	E252754	252754	1	G	D	33.59	37.36	5.96	0.026	0.02	0.256	0.06	0.02	0.017	0.015	0.025	0.018	6.19	1.67	0.12	7.98	3696	0.459	0.34884	0.11016	PAF(LC)
NS0003	14	16	NS	E252759	252759	1	G	D	30.24	47.31	2.01	0.09	0.07	0.097	0.16	0.05	0.054	0.023	0.009	0.036	5.46	0.94	0.14	6.54	3701	0.7038	0.8721	-0.1683	NAF
NS0003	8	10	NS	E252756	252756	1	G	D	26.83	52.53	2.46	0.09	0.07	0.098	0.2	0.05	0.014	0.02	0.014	0.038	4.82	1.07	0.12	6.01	3698	0.612	0.8721	-0.2601	NAF
NS0003	6	8	NS	E252755	252755	1	G	D	23.7	57.09	2.93	0.065	0.05	0.102	0.18	0.05	0.015	0.017	0.016	0.041	4.32	1.12	0.09	5.53	3697	0.5202	0.8721	-0.3519	NAF
NS0003	20	22	NS	E252762	252762	1	G	D	33.17	43.75	1.66	0.052	0.04	0.082	0.25	0.13	0.074	0.011	0.023	0.039	5.04	0.9	0.08	6.02	3704	0.3366	2.26746	-1.93086	NAF
NS0003	16	18	NS	E252760	252760	1	G	D	31.52	42.84	3.06	0.077	0.06	0.158	0.48	0.17	0.057	0.018	0.025	0.075	5.98	1.42	0.16	7.56	3702	0.5508	2.96514	-2.41434	NAF
NS0003	26	28	NS	E252765	252765	1	G	D	31.16	46.27	1.63	0.065	0.05	0.078	0.36	0.15	0.072	0.006	0.03	0.031	5.29	0.91	0.09	6.29	3707	0.1836	2.6163	-2.4327	NAF
NS0003	24	26	NS	E252764	252764	1	G	D	29.18	48.92	1.87	0.103	0.08	0.089	0.42	0.17	0.062	0.007	0.044	0.034	5.04	0.99	0.08	6.11	3706	0.2142	2.96514	-2.75094	NAF
NS0003	18	20	NS	E252761	252761	1	G	D	31.73	43.95	2.41	0.103	0.08	0.118	0.46	0.18	0.07	0.012	0.028	0.048	5.71	1.25	0.11	7.07	3703	0.3672	3.13956	-2.77236	NAF
NS0003	62	64	NS	E252787	252787	1	G	D	31.22	44.43	1.83	0.297	0.23	0.09	0.83	0.18	0.095	0.003	0.239	0.05	5.67	1.08	0.12	6.87	3725	0.0918	3.13956	-3.04776	NAF
NS0003	64	66	NS	E252788	252788	1	G	D	29.76	46.48	2.26	0.245	0.19	0.113	0.92	0.19	0.069	0.004	0.388	0.077	5.18	1.23	0.11	6.52	3726	0.1224	3.31398	-3.19158	NAF
NS0003	66	68	NS	E252789	252789	1	G	D	33.67	41.97	1.89	0.323	0.25	0.094	0.62	0.19	0.063	0.003	0.162	0.043	5.49	1.08	0.11	6.68	3727	0.0918	3.31398	-3.22218	NAF
NS0003	42	44	NS	E252773	252773	1	G	D	30.37	47.4	1.73	0.31	0.24	0.083	0.61	0.19	0.058	0.002	0.105	0.023	4.73	0.92	0.09	5.74	3715	0.0612	3.31398	-3.25278	NAF
NS0003	44	46	NS	E252774	252774	1	G	D	32.27	43.26	1.92	0.336	0.26	0.094	0.72	0.2	0.079	0.002	0.131	0.027	5.46	1.1	0.12	6.68	3716	0.0612	3.4884	-3.4272	NAF
NS0003	68	70	NS	E252790	252790	1	G	D	28.49	45.54	1.81	0.194	0.15	0.088	1.13	0.33	0.09	0.074	0.275	0.068	3.32	5.84	0.06	9.22	3728	2.2644	5.75586	-3.49146	NAF
NS0003	60	62	NS	E252786	252786	1	G	D	30.1	46.02	1.94	0.323	0.25	0.095	0.88	0.21	0.098	0.003	0.201	0.038	5.6	1.15	0.11	6.86	3724	0.0918	3.66282	-3.57102	NAF
NS0003	22	24	NS	E252763	252763	1	G	D	31.35	44.35	2.64	0.052	0.04	0.128	0.47	0.23	0.057	0.008	0.054	0.05	5.29	1.3	0.1	6.69	3705	0.2448	4.01166	-3.76686	NAF
NS0003	150	152	NS	E252831	252831	1	G	D	25.89	41.85	5.91	0.297	0.23	0.287	4.48	0.81	0.097	0.338	1.15	0.296	1.18	5.97	0.39	7.54	3769	10.3428	14.12802	-3.78522	NAF
NS0003	32	34	NS	E252768	252768	1	G	D	31.4	44.33	2.16	0.336	0.26	0.105	0.59	0.23	0.093	0.004	0.058	0.028	5.59	1.16	0.12	6.87	3710	0.1224	4.01166	-3.88926	NAF
NS0003	46	48	NS	E252775	252775	1	G	D	28.53	47.36	2.42	0.439	0.34	0.121	0.98	0.23	0.081	0.002	0.332	0.07	5.18	1.35	0.13	6.66	3717	0.0612	4.01166	-3.95046	NAF
NS0003	52	54	NS	E252778	252778	1	G	D	29.73	46.11	2.25	0.387	0.3	0.112	0.97	0.25	0.097	0.004	0.236	0.051	5.39	1.29	0.13	6.81	3720	0.1224	4.3605	-4.2381	NAF
NS0003	30	32	NS	E252767	252767	1	G	D	32.97	39.98	2.67	0.516	0.4	0.127	0.76	0.28	0.074	0.003	0.075	0.039	6.17	1.45	0.15	7.77	3709	0.0918	4.88376	-4.79196	NAF
NS0003	48	50	NS	E252776	252776	1	G	D	30.37	43.46	2.77	0.503	0.39	0.133	1.16	0.29	0.092	0.003	0.363	0.074	5.6	1.52	0.14	7.26	3718	0.0918	5.05818	-4.96638	NAF
NS0003	40	42	NS	E252772	252772	1	G	D	26.95	50.09	2.56	0.336	0.26	0.124	0.97	0.3	0.067	0.001	0.179	0.049	4.85	1.34	0.12	6.31	3714	0.0306	5.2326	-5.202	NAF
NS0003	50	52	NS	E252777	252777	1	G	D	32.03	39.35	3.09	0.749	0.58	0.151	1.34	0.31	0.096	0.003	0.466	0.097	6.08	1.78	0.16	8.02	3719	0.0918	5.40702	-5.31522	NAF
NS0003	34	36	NS	E252769	252769	1	G	D	33.73	38.65	2.94	0.349	0.27	0.141	0.88	0.32	0.091	0.003	0.091	0.042	6.28	1.53	0.14	7.95	3711	0.0918	5.58144	-5.48964	NAF
NS0003	82	84	NS	E252797	252797	1	G	D	18.43	53.62	9.3	0.194	0.15	0.459	4.43	0.53	0.022	0.115	0.336	0.084	0.64	3.46	0.46	4.56	3735	3.519	9.24426	-5.72526	NAF
NS0003	58	60	NS	E252785	252785	1	G	D	29.26	43.6	3.63	0.413	0.32	0.178	1.47	0.34	0.082	0.004	0.604	0.111	5.3	1.78	0.15	7.23	3723	0.1224	5.93028	-5.80788	NAF
NS0003	54	56	NS	E252779	252779	1	G	D	25.82	47.25	4.48	0.297	0.23	0.208	1.85	0.34	0.07	0.003	0.952	0.187	4.64	2.17	0.14	6.95	3721	0.0918	5.93028	-5.83848	NAF
NS0003	28	30	NS	E252766	252766	1	G	D	28.99	46.33	3.05	0.336	0.26	0.151	0.83	0.35	0.064	0.004	0.073	0.046	5.24	1.54	0.13	6.91	3708	0.1224	6.1047	-5.9823	NAF
NS0003	38	40	NS	E252771	252771	1	G	D	32.59	38.19	3.61	0.503	0.39	0.174	1.3	0.41	0.088	0.001	0.283	0.071	6.13	1.88	0.16	8.17	3713	0.0306	7.15122	-7.12062	NAF
NS0003	136	138	NS	E252824	252824	1	G	D	24.11	45.08	5.01	0.361	0.28	0.243	3.91	1.2	0.088	0.451	1	0.266	1.06	6.23	0.54	7.83	3762	13.8006	20.9304	-7.1298	NAF
NS0003	36	38	NS	E252770	252770	1	G	D	30.65	40.94	4.01	0.4	0.31	0.195	1.31	0.42	0.072	0.004	0.296	0.086	5.77	1.98	0.14	7.89	3712	0.1224	7.32564	-7.20324	NAF
NS0003	56	58	NS	E252780	252780	1	G	D	24.72	48.31	4.97	0.219	0.17	0.24	1.98	0.42	0.088	0.003	0.973	0.175	4.37	2.3	0.15	6.82	3722	0.0918	7.32564	-7.23384	NAF
NS0003	138	140	NS	E252825	252825	1	G	D	26.98	39.86	2.37	0.245	0.19	0.115	2.55	0.77	0.124	0.197	0.568	0.162	1.05	12.81	0.5	14.36	3763	6.0282	13.43034	-7.40214	NAF
NS0003	88	90	NS	E252800	252800	1	G	D	26.72	45.11	2	0.245	0.19	0.098	2.24	0.58	0.045	0.07	0.734	0.142	0.89	9.74	0.13	10.76	3738	2.142	10.11636	-7.97436	NAF
NS0003	128	130	NS	E252820	252820	1	G	D	26.43	41.81	3.47	0.297	0.23	0.165	3.26	0.73	0.11	0.143	1.06	0.281	1.22	9.33	0.1	10.65	3758	4.3758	12.73266	-8.35686	NAF
NS0003	90	92	NS	E252801	252801	1	G	D	29.25	40.32	2.19	0.245	0.19	0.108	2.57	0.63	0.052	0.083	0.861	0.16	1.04	9.73	0.19	10.96	3739	2.5398	10.98846	-8.44866	NAF
NS0003	132	134	NS	E252822	252822	1	G	D	24.22	45.59	4.87	0.361	0.28	0.241	3.89	1.09	0.106	0.257	1.2	0.317	1.18	5.61	0.52	7.31	3760	7.8642	19.01178	-11.14758	NAF
NS0003	156	158	NS	E252834	252834	1	G	D	27.76	36.87	3.05	0.387	0.3	0.148	3.43	1.13	0.163	0.275	0.77	0.218	1.13	12.53	0.08	13.74	3772	8.415	19.70946	-11.29446	NAF
NS0003	86	88	NS	E252799	252799	1	G	D	23.46	47.52	2.41	0.361	0.28	0.119	2.62	1	0.071	0.189	0.806	0.171	1	9.92	0.32	11.24	3737	5.7834	17.442	-11.6586	NAF
NS0003	130	132	NS	E252821	252821	1	G	D	24.18	45.85	4.16	0.31	0.24	0.199	3.55	1.01	0.118	0.185	1.13	0.289	1.18	6.76	0.36	8.3	3759	5.661	17.61642	-11.95542	NAF
NS0003	152	154	NS	E252832	252832	1	G	D	22.71	47.71	4.96	0.31	0.24	0.242	3.88	1.13	0.087	0.249	0.871	0.224	1.04	6.31	0.54	7.89	3770	7.6194	19.70946	-12.09006	NAF
NS0003	134	136	NS	E252823	252823	1	G	D	21.93	50.2	5.5	0.245	0.19	0.264	3.87	1.11	0.076	0.221	1.16	0.303	1.09	3.71	0.62	5.42	3761	6.7626	19.36062	-12.59802	NAF
NS0003	146	148	NS	E252829	252829	1	G	D	23.74	46.18	3.46	0.31	0.24	0.168	3.27	1.09	0.086	0.184	0.923	0.231	1.05	8.54	0.35	9.94	3767	5.6304	19.01178	-13.38138	NAF
NS0003	154	156	NS	E252833	252833	1	G	D	24.4	44.5	2.71	0.323	0.25	0.129	2.94	1.04	0.102	0.153	0.709	0.202	1.03	10.79	0.21	12.03	3771	4.6818	18.13968	-13.45788	NAF
NS0003	120	122	NS	E252816	252816	1	G	D	28.51	39.61	2.47	0.207	0.16	0.121	2.72	0.94	0.06	0.084	0.633	0.151	0.94	10.81	0.07	11.82	3754	2.5704	16.39548	-13.82508	NAF
NS0003	84	86	NS	E252798	252798	1	G	D	23.61	45.08	4.86	0.555	0.43	0.243	3.67	1.26	0.101	0.266	0.994	0.198	1.05	7.4	0.48	8.93	3736	8.1396	21.97692	-13.83732	NAF
NS0003	126	128	NS	E252819	252819	1	G	D	26.35	41.59	2.19	0.31	0.24	0.106	2.5	1.09	0.123	0.131	0.607	0.156	0.86	12.08	0.31	13.25	3757	4.0086	19.01178	-15.00318	NAF
NS0003	148	150	NS	E252830	252830	1	G	D	24.3	44.89	4.94	0.284	0.22	0.238	3.94	1.25	0.149	0.214	1.2	0.308	1.15	5.94	0.53	7.62	3768	6.5484	21.8025	-15.2541	NAF
NS0003	144	146	NS	E252828	252828	1	G	D	25.32	41.89	3.43	0.361	0.28	0.165	3.4	1.33	0.061	0.176	0.895	0.244	1.07	9.99	0.48	11.54	3766	5.3856	23.19786	-17.81226	NAF
NS0003	124	126	NS	E252818	252818	1	G	D	28.16	38.43	2.53	0.284	0.22	0.122	3	1.17	0.128	0.076	0.669	0.167	0.93	11.84	0.1	12.87	3756	2.3256	20.40714	-18.08154	NAF
NS0003	116	118	NS	E252814	252814	1	G	D	30.02	38.6	2.08	0.258	0.2	0.103	2.65	1.17	0.051	0.072	0.57	0.133	0.75	10.44	0.19	11.38	3752	2.2032	20.40714	-18.20394	NAF
NS0003	140	142	NS	E252826	252826	1	G	D	24.81	43.07	3.7	0.31	0.24	0.182	3.43	1.49	0.103	0.215	0.959	0.253	1.05	8.96	0.51	10.52	3764	6.579	25.98858	-19.40958	NAF
NS0003	94	96	NS	E252803	252803	1	G	D	29.77	37.95	2.6	0.245	0.19	0.127	2.98	1.3	0.106	0.1	1.07	0.201	1.06	9.1	0.31	10.47	3741	3.06	22.6746	-19.6146	NAF
NS0003	98	100	NS	E252805	252805	1	G	D	27.81	40.55	2.45	0.232	0.18	0.12	2.77	1.31	0.05	0.074	0.971	0.233	1.02	9.66	0.39	11.07	3743	2.2644	22.84902	-20.58462	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0003	96	98	NS	E252804	252804	1	G	D	28.4	40.09	2.59	0.232	0.18	0.126	2.79	1.35	0.045	0.078	0.979	0.201	1.17	9.01	0.49	10.67	3742	2.3868	23.5467	-21.1599	NAF
NS0003	142	144	NS	E252827	252827	1	G	D	23.18	46.39	3.65	0.297	0.23	0.181	3.27	1.48	0.076	0.137	0.897	0.238	1	8.17	0.69	9.86	3765	4.1922	25.81416	-21.62196	NAF
NS0003	158	160	NS	E252835	252835	1	G	D	23.96	44.67	2.51	0.219	0.17	0.123	2.85	1.53	0.044	0.138	0.657	0.195	0.89	11.11	0.78	12.78	3773	4.2228	26.68626	-22.46346	NAF
NS0003	92	94	NS	E252802	252802	1	G	D	30.06	37.8	2.22	0.258	0.2	0.111	2.69	1.44	0.084	0.086	0.913	0.182	1	10.03	0.27	11.3	3740	2.6316	25.11648	-22.48488	NAF
NS0003	102	104	NS	E252807	252807	1	G	D	28.38	39.57	1.83	0.258	0.2	0.092	2.36	1.46	0.047	0.063	0.563	0.132	0.76	11.72	0.48	12.96	3745	1.9278	25.46532	-23.53752	NAF
NS0003	122	124	NS	E252817	252817	1	G	D	27.91	40.95	1.38	0.284	0.22	0.068	2.03	1.51	0.069	0.044	0.369	0.091	0.68	12.26	0.36	13.3	3755	1.3464	26.33742	-24.99102	NAF
NS0003	100	102	NS	E252806	252806	1	G	D	25.91	44.93	1.78	0.245	0.19	0.088	2.24	1.6	0.082	0.062	0.66	0.154	0.76	9.98	0.5	11.24	3744	1.8972	27.9072	-26.01	NAF
NS0003	114	116	NS	E252813	252813	1	G	D	27.51	40.89	2.64	0.232	0.18	0.129	3.06	1.83	0.089	0.079	0.907	0.207	1	9.06	0.64	10.7	3751	2.4174	31.91886	-29.50146	NAF
NS0003	108	110	NS	E252810	252810	1	G	D	27.44	42.29	1.66	0.245	0.19	0.08	2.02	1.86	0.068	0.056	0.507	0.117	1.05	10.27	0.62	11.94	3748	1.7136	32.44212	-30.72852	NAC
NS0003	104	106	NS	E252808	252808	1	G	D	25.23	43.1	1.65	0.258	0.2	0.079	2.12	2.73	0.118	0.081	0.519	0.122	0.7	11.12	1.09	12.91	3746	2.4786	47.61666	-45.13806	NAC
NS0003	118	120	NS	E252815	252815	1	G	D	24.65	44.6	1.43	0.258	0.2	0.071	1.91	3.16	0.058	0.071	0.379	0.098	0.59	10.75	1.57	12.91	3753	2.1726	55.11672	-52.94412	NAC
NS0003	110	112	NS	E252811	252811	1	G	D	27.53	39.99	1.58	0.284	0.22	0.078	2.04	3.18	0.158	0.058	0.525	0.126	0.87	10.38	1.37	12.62	3749	1.7748	55.46556	-53.69076	NAC
NS0003	112	114	NS	E252812	252812	1	G	D	27.24	39.01	1.99	0.284	0.22	0.094	2.51	3.33	0.292	0.078	0.703	0.174	0.87	10.18	1.21	12.26	3750	2.3868	58.08186	-55.69506	NAC
NS0003	106	108	NS	E252809	252809	1	G	D	26.54	37.64	2.04	0.323	0.25	0.097	2.56	4.15	0.462	0.1	0.654	0.173	0.81	11.41	1.19	13.41	3747	3.06	72.3843	-69.3243	NAC
NS0004	68	70	NS	E252870	252870	1	G	D	19.34	52.99	6.12	0.284	0.22	0.291	2.61	0.29	0.069	0.743	0.581	0.035	0.79	6.81	0.03	7.63	3808	22.7358	5.05818	17.67762	PAF(HC)
NS0004	66	68	NS	E252869	252869	1	G	D	22.72	55.83	3.49	0.336	0.26	0.171	0.88	0.12	0.1	0.375	0.143	0.032	2.95	2.1	0.34	5.39	3807	11.475	2.09304	9.38196	PAF(LC)
NS0004	70	72	NS	E252871	252871	1	G	D	28.78	43.35	4.48	0.207	0.16	0.219	1.71	0.15	0.125	0.366	0.308	0.019	3.42	4.07	0.1	7.59	3809	11.1996	2.6163	8.5833	PAF(LC)
NS0004	60	62	NS	E252866	252866	1	G	D	28.8	45.56	4.92	0.387	0.3	0.237	0.76	0.1	0.158	0.157	0.765	0.032	3.69	1.28	0.24	5.21	3804	4.8042	1.7442	3.06	PAF(LC)
NS0004	76	78	NS	E252875	252875	1	G	D	24.14	44.66	3.46	0.426	0.33	0.164	2.64	0.4	0.071	0.319	0.405	0.059	0.65	12.02	0.02	12.69	3812	9.7614	6.9768	2.7846	PAF(LC)
NS0004	84	86	NS	E252879	252879	1	G	D	24.78	45.14	5.05	0.374	0.29	0.242	2.57	0.37	0.094	0.285	1.3	0.055	1.44	7.33	0.09	8.86	3816	8.721	6.45354	2.26746	PAF(LC)
NS0004	64	66	NS	E252868	252868	1	G	D	27.44	50.12	3.45	0.207	0.16	0.17	0.58	0.11	0.166	0.118	0.435	0.029	3.73	0.98	0.23	4.94	3806	3.6108	1.91862	1.69218	PAF(LC)
NS0004	72	74	NS	E252872	252872	1	G	D	29.17	44.26	3.42	0.323	0.25	0.165	1.29	0.2	0.146	0.146	0.189	0.02	3.78	4.01	0.11	7.9	3810	4.4676	3.4884	0.9792	PAF(LC)
NS0004	62	64	NS	E252867	252867	1	G	D	30.91	44.56	3.37	0.646	0.5	0.167	0.46	0.07	0.143	0.017	0.836	0.033	3.84	1.08	0.13	5.05	3805	0.5202	1.22094	-0.70074	NAF
NS0004	40	42	NS	E252856	252856	1	G	D	31.91	45.98	3.2	0.594	0.46	0.158	0.37	0.07	0.063	0.003	0.335	0.037	2.09	1.13	0.08	3.3	3794	0.0918	1.22094	-1.12914	NAF
NS0004	42	44	NS	E252857	252857	1	G	D	27.55	52.17	3.54	0.555	0.43	0.176	0.31	0.07	0.033	0.003	0.443	0.033	1.78	1.17	0.07	3.02	3795	0.0918	1.22094	-1.12914	NAF
NS0004	36	38	NS	E252854	252854	1	G	D	27.38	50.86	4.75	0.245	0.19	0.228	0.25	0.08	0.114	0.008	0.222	0.029	1.97	1.64	0.1	3.71	3792	0.2448	1.39536	-1.15056	NAF
NS0004	38	40	NS	E252855	252855	1	G	D	30.21	46.57	3.75	0.942	0.73	0.182	0.44	0.08	0.077	0.003	0.65	0.039	2.47	1.22	0.1	3.79	3793	0.0918	1.39536	-1.30356	NAF
NS0004	44	46	NS	E252858	252858	1	G	D	26.85	51.36	4.01	0.891	0.69	0.19	0.38	0.08	0.05	0.002	0.342	0.042	2.45	1.44	0.14	4.03	3796	0.0612	1.39536	-1.33416	NAF
NS0004	26	28	NS	E252849	252849	1	G	D	24.71	55.97	2.76	0.181	0.14	0.134	0.31	0.09	0.079	0.004	0.427	0.041	3.41	0.95	0.09	4.45	3787	0.1224	1.56978	-1.44738	NAF
NS0004	34	36	NS	E252853	252853	1	G	D	30.39	46.91	3.63	0.426	0.33	0.177	0.45	0.09	0.124	0.004	0.488	0.029	2.74	1.16	0.08	3.98	3791	0.1224	1.56978	-1.44738	NAF
NS0004	48	50	NS	E252860	252860	1	G	D	30.79	44.84	2.67	0.826	0.64	0.134	0.33	0.09	0.123	0.003	0.484	0.038	4.8	1.09	0.11	6	3798	0.0918	1.56978	-1.47798	NAF
NS0004	30	32	NS	E252851	252851	1	G	D	27.68	51.68	3.44	0.465	0.36	0.172	0.35	0.1	0.086	0.008	0.323	0.039	1.99	1.24	0.1	3.33	3789	0.2448	1.7442	-1.4994	NAF
NS0004	22	24	NS	E252847	252847	1	G	D	28.41	49.6	3.94	0.116	0.09	0.186	0.35	0.1	0.098	0.006	0.16	0.048	3.35	1.38	0.1	4.83	3785	0.1836	1.7442	-1.5606	NAF
NS0004	32	34	NS	E252852	252852	1	G	D	29.61	48.5	3.59	0.284	0.22	0.175	0.42	0.1	0.132	0.004	0.536	0.032	2.56	1.16	0.06	3.78	3790	0.1224	1.7442	-1.6218	NAF
NS0004	52	54	NS	E252862	252862	1	G	D	26.26	52.05	2.33	1.007	0.78	0.107	0.24	0.1	0.238	0.003	0.177	0.036	4.54	0.96	0.15	5.65	3800	0.0918	1.7442	-1.6524	NAF
NS0004	18	20	NS	E252845	252845	1	G	D	29.95	49.38	2.84	0.142	0.11	0.147	0.3	0.11	0.075	0.006	0.144	0.047	2.56	1.04	0.07	3.67	3783	0.1836	1.91862	-1.73502	NAF
NS0004	24	26	NS	E252848	252848	1	G	D	28.27	51.22	3.49	0.155	0.12	0.175	0.27	0.11	0.046	0.004	0.255	0.044	2.31	1.19	0.08	3.58	3786	0.1224	1.91862	-1.79622	NAF
NS0004	46	48	NS	E252859	252859	1	G	D	25.43	49.38	5.71	1.084	0.84	0.289	0.42	0.11	0.073	0.004	0.972	0.054	3.28	1.78	0.16	5.22	3797	0.1224	1.91862	-1.79622	NAF
NS0004	2	4	NS	E252837	252837	1	G	D	32.51	43.95	3.74	0.077	0.06	0.165	0.22	0.14	0.114	0.02	0.024	0.039	3.52	1.21	0.09	4.82	3775	0.612	2.44188	-1.82988	NAF
NS0004	6	8	NS	E252839	252839	1	G	D	31.6	46.47	3.11	0.155	0.12	0.144	0.35	0.13	0.08	0.012	0.082	0.047	2.84	1.18	0.06	4.08	3777	0.3672	2.26746	-1.90026	NAF
NS0004	16	18	NS	E252844	252844	1	G	D	27.33	51.55	3.6	0.116	0.09	0.163	0.36	0.12	0.091	0.006	0.161	0.059	3.05	1.3	0.08	4.43	3782	0.1836	2.09304	-1.90944	NAF
NS0004	28	30	NS	E252850	252850	1	G	D	26.26	51.95	3.37	0.568	0.44	0.152	0.39	0.12	0.175	0.004	0.345	0.046	3.56	1.29	0.12	4.97	3788	0.1224	2.09304	-1.97064	NAF
NS0004	4	6	NS	E252838	252838	1	G	D	28.67	48.12	4.76	0.065	0.05	0.201	0.17	0.15	0.133	0.017	0.019	0.037	3.34	1.53	0.09	4.96	3776	0.5202	2.6163	-2.0961	NAF
NS0004	54	56	NS	E252863	252863	1	G	D	29.99	42.78	3.56	1.924	1.49	0.171	0.41	0.13	0.135	0.004	0.383	0.045	5.33	1.45	0.26	7.04	3801	0.1224	2.26746	-2.14506	NAF
NS0004	58	60	NS	E252865	252865	1	G	D	27.93	48.78	3.61	0.594	0.46	0.17	0.57	0.13	0.112	0.004	0.689	0.039	3.69	1.23	0.13	5.05	3803	0.1224	2.26746	-2.14506	NAF
NS0004	56	58	NS	E252864	252864	1	G	D	27.58	46.75	3.96	1.614	1.25	0.19	0.37	0.13	0.141	0.002	0.343	0.044	4.72	1.53	0.23	6.48	3802	0.0612	2.26746	-2.20626	NAF
NS0004	20	22	NS	E252846	252846	1	G	D	28.21	49.12	4.06	0.155	0.12	0.197	0.38	0.15	0.109	0.007	0.217	0.058	3.54	1.42	0.1	5.06	3784	0.2142	2.6163	-2.4021	NAF
NS0004	0	2	NS	E252836	252836	1	G	D	24.88	49.96	7.21	0.026	0.02	0.324	0.24	0.19	0.095	0.025	0.078	0.061	3.59	2.21	0.13	5.93	3774	0.765	3.31398	-2.54898	NAF
NS0004	10	12	NS	E252841	252841	1	G	D	27.94	47.83	5.22	0.142	0.11	0.244	0.54	0.17	0.073	0.01	0.183	0.075	3.66	1.79	0.11	5.56	3779	0.306	2.96514	-2.65914	NAF
NS0004	8	10	NS	E252840	252840	1	G	D	23.32	51.63	7.32	0.142	0.11	0.318	0.52	0.24	0.086	0.012	0.1	0.082	3.29	2.43	0.13	5.85	3778	0.3672	4.18608	-3.81888	NAF
NS0004	50	52	NS	E252861	252861	1	G	D	27.76	48.02	2.77	1.304	1.01	0.133	0.39	0.25	0.214	0.003	0.166	0.046	5.03	1.3	0.19	6.52	3799	0.0918	4.3605	-4.2687	NAF
NS0004	88	90	NS	E252881	252881	1	G	D	27.84	45.47	2.62	0.336	0.26	0.127	1.83	0.48	0.083	0.133	0.669	0.034	0.41	7.95	-0.1	8.26	3818	4.0698	8.37216	-4.30236	NAF
NS0004	96	98	NS	E252885	252885	1	G	D	27.11	46.07	3.78	0.374	0.29	0.185	2.13	0.55	0.14	0.17	0.339	0.044	1.14	6.06	0.03	7.23	3822	5.202	9.5931	-4.3911	NAF
NS0004	74	76	NS	E252874	252874	1	G	D	23.71	45.24	3.23	0.4	0.31	0.156	2.55	0.71	0.183	0.242	0.37	0.077	0.96	11.56	0.05	12.57	3811	7.4052	12.38382	-4.97862	NAF
NS0004	86	88	NS	E252880	252880	1	G	D	28.73	42.49	2.92	0.336	0.26	0.142	2.08	0.74	0.127	0.213	0.849	0.04	0.56	8.26	-0.01	8.81	3817	6.5178	12.90708	-6.38928	NAF
NS0004	12	14	NS	E252842	252842	1	G	D	29.23	48.95	3.71	0.052	0.04	0.185	0.23	0.4	0.089	0.008	0.179	0.061	2.76	1.45	0.05	4.26	3780	0.2448	6.9768	-6.732	NAF
NS0004	14	16	NS	E252843	252843	1	G	D	24.66	51.79	5.44	0.103	0.08	0.259	0.47	0.41	0.059	0.008	0.271	0.099	3.47	2.06	0.12	5.65	3781	0.2448	7.15122	-6.90642	NAF
NS0004	82	84	NS	E252878	252878	1	G	D	26.82	48.76	2.51	0.194	0.15	0.123	1.63	0.59	0.088	0.102	0.774	0.029	0.39	6.28	-0.06	6.61	3815	3.1212	10.29078	-7.16958	NAF
NS0004	98	100	NS	E252886	252886	1	G	D	28.19	45.34	2.55	0.349	0.27	0.126	2.15	0.62	0.147	0.099	0.193	0.053	0.42	7.4	-0.04	7.78	3823	3.0294	10.81404	-7.78464	NAF
NS0004	78	80	NS	E252876	252876	1	G	D	28.51	42.24	2.64	0.271	0.21	0.128	1.9	0.72	0.133	0.117	0.9	0.033	0.58	9.43	-0.07	9.94	3813	3.5802	12.55824	-8.97804	NAF
NS0004	80	82	NS	E252877	252877	1	G	D	26.87	43.52	2.7	0.349	0.27	0.127	2.21	0.87	0.15	0.099	0.793	0.047	0.64	9.8	-0.07	10.37	3814	3.0294	15.17454	-12.14514	NAF
NS0004	92	94	NS	E252883	252883	1	G	D	29.03	43.03	1.58	0.387	0.3	0.076	1.87	0.81	0.203	0.056	0.078	0.025	0.68	9.43	-0.12	9.99	3820	1.7136	14.12802	-12.41442	NAF
NS0004	90	92	NS	E252882	252882	1	G	D	27.15	43.22	2.41	0.413	0.32	0.117	2.12	0.95	0.246	0.124	0.236	0.028	0.84	10.23	-0.04	11.03	3819	3.7944	16.5699	-12.7755	NAF
NS0004	100	102	NS	E252887	252887	1	G	D	26.41	45.69	2.84	0.349	0.27	0.135	2.27	1.14	0.282	0.148	0.385	0.048	0.52	7.94	-0.03	8.43	3824	4.5288	19.88388	-15.35508	NAF
NS0004	94	96	NS	E252884	252884	1	G	D	27.06	42.2	2.09	0.374	0.29	0.103	2.46	1.15	0.315	0.085	0.097	0.035	0.65	11.34	-0.09	11.9	3821	2.601	20.0583	-17.4573	NAF
NS0005	100	102	NS	E252939	252939	1	G	D	25.02	46.53	4.8	0.361	0.28	0.227	3.26	1.4	0.012	1.11	1.51	0.049	0.3	3.24	0.54	4.08	3875	33.966	24.4188	9.5472	PAF(LC)
NS0005	4	6	NS	E252890	252890	1	G	D	35.78	42.17	3.67	0.026	0.02	0.155	0.04	0.04	0.028	0.006	0.024	0.019	1.4	1.12	0.07	2.59	3827	0.1836	0.69768	-0.51408	NAF
NS0005	10	12	NS	E252893	252893	1	G	D	33.31	46.33	2.99	0.103	0.08	0.127	0.1	0.05	0.055	0.006	0.024	0.032	1.46	0.98	0.03	2.47	3830	0.1836	0.8721	-0.6885	NAF
NS0005	2	4	NS	E252889	252889	1	G	D	36.61	40.62	3.63	0.039	0.03	0.158	0.06	0.05	0.043	0.004	0.031	0.02	1.56	1.11	0.06	2.73	3826	0.1224	0.8721	-0.7497	NAF
NS0005	0	2	NS	E252888	252888	1	G	D	39.69	34.55	3.89	0.116	0.09	0.168	0.14	0.06	0.087	0.008	0.061	0.022	2.6	1.23	0.08	3.91	3825	0.2448	1.04652	-0.80172	NAF
NS0005	8	10	NS	E252892	252892	1	G	D	34.83	44.55	2.8	0.065	0.05	0.127	0.1	0.07	0.046	0.006	0.02	0.018	1.25	0.95	0.02	2.22	3829	0.1836	1.22094	-1.03734	NAF
NS0005	18	20	NS	E252897	252897	1	G	D	27.89	48.66	5.02	0.194	0.15	0.221	1.6	0.15	0.026	0.05	1.49	0.057	1.33	1.11	0.13	2.57	3834	1.53	2.6163	-1.0863	NAF
NS0005	12	14	NS	E252894	252894	1	G	D	35.42	43.06	2.35	0.439	0.34	0.117	0.3	0.07	0.039	0.003	0.32	0.037	1.74	0.73	0.06	2.53	3831	0.0918	1.22094	-1.12914	NAF
NS0005	14	16	NS	E252895	252895	1	G	D	32.93	43.69	3.16	1.33	1.03	0.13	0.39	0.1	0.07	0.003	0.832	0.044	1.85	0.87	0.15	2.87	3832	0.0918	1.7442	-1.6524	NAF
NS0005	98	100	NS	E252938	252938	1	G	D	26.87	46.72	3.57	0.465	0.36	0.171	3.1	0.9	0.038	0.456	0.897	0.054	0.23	4.63	0.33	5.19	3874	13.9536	15.6978	-1.7442	NAF
NS0005	44	46	NS	E252910	252910	1	G	D	35.5	41.58	2.52	0.555	0.43	0.121	0.78	0.12	0.068	0.003	0.72	0.025	1.76	0.7	0.08	2.54	3847	0.0918	2.09304	-2.00124	NAF
NS0005	36	38	NS	E252906	252906	1	G	D	29.02	44.28	3.76	0.439	0.34	0.173	2.66	0.47	0.028	0.163	1.28	0.049	0.42	4.69	0.05	5.16	3843	4.9878	8.19774	-3.20994	NAF
NS0005	16	18	NS	E252896	252896	1	G	D	30.92	46.19	3.52	0.968	0.75	0.155	0.74	0.21	0.07	0.003	1.03	0.06	1.7	0.86	0.13	2.69	3833	0.0918	3.66282	-3.57102	NAF
NS0005	22	24	NS	E252899	252899	1	G	D	29.55	45.41	4.05	0.465	0.36	0.187	1.58	0.5	0.106	0.104	1.36	0.05	1.44	1.86	0.14	3.44	3836	3.1824	8.721	-5.5386	NAF
NS0005	50	52	NS	E252913	252913	1	G	D	28.67	40.79	4.96	0.465	0.36	0.226	3.23	0.97	0.073	0.35	1.94	0.054	0.4	4.62	0.33	5.35	3850	10.71	16.91874	-6.20874	NAF
NS0005	30	32	NS	E252903	252903	1	G	D	22.78	49.8	5.11	0.349	0.27	0.228	2.39	1.37	0.129	0.535	2.84	0.062	0.35	3.39	0.52	4.26	3840	16.371	23.89554	-7.52454	NAF
NS0005	46	48	NS	E252911	252911	1	G	D	33.12	42.47	2.85	0.491	0.38	0.135	1.85	0.51	0.075	0.04	0.828	0.025	0.27	2.95	-0.05	3.17	3848	1.224	8.89542	-7.67142	NAF
NS0005	20	22	NS	E252898	252898	1	G	D	30.85	43.1	4.81	0.555	0.43	0.223	0.98	0.47	0.129	0.004	2.23	0.065	1.96	0.93	0.12	3.01	3835	0.1224	8.19774	-8.07534	NAF
NS0005	28	30	NS	E252902	252902	1	G	D	31.26	41.07	2.91	0.555	0.43	0.134	2.58	0.65	0.061	0.061	0.821	0.041	0.37	5.83	0.01	6.21	3839	1.8666	11.3373	-9.4707	NAF
NS0005	84	86	NS	E252931	252931	1	G	D	34.41	39.6	2.39	0.529	0.41	0.109	1.69	0.66	0.134	0.054	0.7	0.022	0.72	3.88	0.08	4.68	3867	1.6524	11.51172	-9.85932	NAF
NS0005	24	26	NS	E252900	252900	1	G	D	31.64	42.35	3.04	0.478	0.37	0.143	2.37	0.64	0.063	0.037	0.654	0.027	0.42	4.31	0.09	4.82	3837	1.1322	11.16288	-10.03068	NAF
NS0005	26	28	NS	E252901	252901	1	G	D	29.53	40.23	4.47	0.542	0.42	0.206	2.9	0.82	0.099	0.139	1.74	0.063	0.41	5.61	0.14	6.16	3838	4.2534	14.30244	-10.04904	NAF
NS0005	40	42	NS	E252908	252908	1	G	D	30.88	44.6	2.97	0.633	0.49	0.131	1.8	0.77	0.065	0.078	0.526	0.04	1.17	2.63	0.26	4.06	3845	2.3868	13.43034	-11.04354	NAF
NS0005	38	40	NS	E252907	252907	1	G	D	28.99	41.92	4.26	0.503	0.39	0.196	2.89	1.15	0.046	0.28	1.51	0.06	0.42	4.78	0.48	5.68	3844	8.568	20.0583	-11.4903	NAF
NS0005	42	44	NS	E252909	252909	1	G	D	31.55	43.67	3.75	0.245	0.19	0.172	1.45	0.7	0.27	0.006	0.806	0.02	1.89	1.2	0.09	3.18	3846	0.1836	12.2094	-12.0258	NAF
NS0005	34	36	NS	E252905	252905	1	G	D	20.86	45.46	7.61	0.478	0.37	0.337	3.53	1.32	0.241	0.342	4.04	0.086	0.34	5.75	0.4	6.49	3842	10.4652	23.02344	-12.55824	NAF
NS0005	90	92	NS	E252934	252934	1	G	D	34.62	37.84	2.29	0.607	0.47	0.109	2.25	0.91	0.095	0.029	0.93	0.032	0.13	4.89	0.17	5.19	3870	0.8874	15.87222	-14.98482	NAF
NS0005	6	8	NS	E252891	252891	1	G	D	33.67	43.82	3.7	0.026	0.02	0.153	0.09	0.88	0.043	0.007	0.026	0.022	1.46	1.52	0.22	3.2	3828	0.2142	15.34896	-15.13476	NAF
NS0005	56	58	NS	E252916	252916	1	G	D	29.96	40.52	3.67	0.426	0.33	0.162	2.67	2.2	0.165	0.73	1.37	0.048	0.35	3.45	0.85	4.65	3853	22.338	38.3724	-16.0344	NAF
NS0005	70	72	NS	E252924	252924	1	G	D	28.22	44.06	3.63	0.426	0.33	0.165	2.93	1.09	0.066	0.073	1.3	0.062	0.37	4.77	0.51	5.65	3860	2.2338	19.01178	-16.77798	NAF
NS0005	60	62	NS	E252919	252919	1	G	D	31.21	42.22	3.46	0.4	0.31	0.156	2.12	1.09	0.069	0.049	0.98	0.046	0.68	3.44	0.54	4.66	3855	1.4994	19.01178	-17.51238	NAF
NS0005	32	34	NS	E252904	252904	1	G	D	26.15	46.32	3.39	0.491	0.38	0.152	2.71	1.42	0.192	0.208	1.38	0.062	0.41	5.42	0.36	6.19	3841	6.3648	24.76764	-18.40284	NAF
NS0005	48	50	NS	E252912	252912	1	G	D	30.8	40.1	4.19	0.387	0.3	0.191	2.86	1.28	0.218	0.099	1.36	0.047	0.43	3.93	0.26	4.62	3849	3.0294	22.32576	-19.29636	NAF
NS0005	62	64	NS	E252920	252920	1	G	D	29.29	42.47	4.14	0.426	0.33	0.182	2.61	1.3	0.09	0.099	1.4	0.059	0.53	3.85	0.7	5.08	3856	3.0294	22.6746	-19.6452	NAF
NS0005	94	96	NS	E252936	252936	1	G	D	32.44	39.52	2.82	0.555	0.43	0.13	2.6	1.19	0.091	0.034	0.887	0.045	0.2	4.84	0.46	5.5	3872	1.0404	20.75598	-19.71558	NAF
NS0005	80	82	NS	E252929	252929	1	G	D	31.98	39.78	2.67	0.516	0.4	0.124	2.67	1.24	0.093	0.042	0.877	0.034	0.19	5.33	0.49	6.01	3865	1.2852	21.62808	-20.34288	NAF
NS0005	96	98	NS	E252937	252937	1	G	D	30.44	41.9	3.01	0.503	0.39	0.141	2.85	1.33	0.119	0.058	0.744	0.051	0.17	4.75	0.57	5.49	3873	1.7748	23.19786	-21.42306	NAF
NS0005	74	76	NS	E252926	252926	1	G	D	29.92	42.75	3.13	0.439	0.34	0.139	2.75	1.39	0.057	0.037	1.08	0.05	0.18	4.39	0.81	5.38	3862	1.1322	24.24438	-23.11218	NAF
NS0005	58	60	NS	E252917	252917	1	G	D	29.62	43.88	2.5	0.465	0.36	0.116	2.43	1.44	0.038	0.052	0.79	0.046	0.3	4.5	0.99	5.79	3854	1.5912	25.11648	-23.52528	NAF
NS0005	78	80	NS	E252928	252928	1	G	D	29.47	41.72	3.27	0.478	0.37	0.149	3.05	1.46	0.075	0.054	1.05	0.059	0.28	5.12	0.88	6.28	3864	1.6524	25.46532	-23.81292	NAF
NS0005	76	78	NS	E252927	252927	1	G	D	27.92	41.65	4.45	0.439	0.34	0.202	3.32	1.67	0.126	0.111	1.63	0.052	0.33	5.01	0.8	6.14	3863	3.3966	29.12814	-25.73154	NAF
NS0005	52	54	NS	E252914	252914	1	G	D	31.17	38.44	3.66	0.516	0.4	0.166	2.9	1.73	0.163	0.07	1.21	0.055	0.34	4.94	0.85	6.13	3851	2.142	30.17466	-28.03266	NAF
NS0005	54	56	NS	E252915	252915	1	G	D	32.4	40.99	2.39	0.426	0.33	0.105	2.12	1.7	0.082	0.038	0.815	0.037	0.32	3.7	0.85	4.87	3852	1.1628	29.6514	-28.4886	NAF
NS0005	64	66	NS	E252921	252921	1	G	D	28.79	41.38	4.03	0.426	0.33	0.186	3.02	1.89	0.169	0.107	1.52	0.067	0.34	4.57	0.92	5.83	3857	3.2742	32.96538	-29.69118	NAF
NS0005	72	74	NS	E252925	252925	1	G	D	27.4	44.13	3.64	0.387	0.3	0.159	2.98	1.84	0.092	0.061	1.32	0.053	0.35	4.38	1.07	5.8	3861	1.8666	32.09328	-30.22668	NAC
NS0005	88	90	NS	E252933	252933	1	G	D	29.99	42.42	2.66	0.503	0.39	0.123	2.53	1.84	0.049	0.04	0.912	0.041	0.24	4.41	1.23	5.88	3869	1.224	32.09328	-30.86928	NAC
NS0005	68	70	NS	E252923	252923	1	G	D	29.29	40.94	3.98	0.413	0.32	0.183	2.96	1.91	0.17	0.069	1.54	0.06	0.25	4.25	1.04	5.54	3859	2.1114	33.31422	-31.20282	NAC
NS0005	86	88	NS	E252932	252932	1	G	D	26.61	43.13	4.73	0.426	0.33	0.212	3.2	2.13	0.06	0.121	1.72	0.051	0.28	4.26	1.62	6.16	3868	3.7026	37.15146	-33.44886	NAC
NS0005	92	94	NS	E252935	252935	1	G	D	30.42	42.59	1.99	0.594	0.46	0.091	2.2	1.98	0.104	0.027	0.816	0.042	0.2	4.46	1.17	5.83	3871	0.8262	34.53516	-33.70896	NAC
NS0005	82	84	NS	E252930	252930	1	G	D	30.03	43.05	1.92	0.581	0.45	0.09	2.17	2.09	0.158	0.033	0.708	0.036	0.25	4.63	1.09	5.97	3866	1.0098	36.45378	-35.44398	NAC
NS0005	66	68	NS	E252922	252922	1	G	D	24.16	41.44	5.93	0.465	0.36	0.266	3.75	2.98	0.32	0.202	2.62	0.089	0.34	4.97	1.63	6.94	3858	6.1812	51.97716	-45.79596	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0006	10	12	NS	E252945	252945	1	G	D	39.65	39.42	1.23	0.155	0.12	0.05	0.06	0.02	0.081	0.006	0.069	0.009	1.95	0.46	0.04	2.45	3881	0.1836	0.34884	-0.16524	NAF
NS0006	4	6	NS	E252942	252942	1	G	D	40.96	36.49	1.78	0.129	0.1	0.06	0.07	0.02	0.026	0.005	0.01	0.009	2.28	0.52	-0.08	2.72	3878	0.153	0.34884	-0.19584	NAF
NS0006	6	8	NS	E252943	252943	1	G	D	40.84	36.4	1.71	0.413	0.32	0.08	0.06	0.02	0.038	0.005	0.026	0.015	1.94	0.53	0	2.47	3879	0.153	0.34884	-0.19584	NAF
NS0006	2	4	NS	E252941	252941	1	G	D	37.34	39.78	2.29	0.065	0.05	0.162	0.06	0.03	0.031	0.01	0.019	0.016	3.57	0.6	-0.01	4.16	3877	0.306	0.52326	-0.21726	NAF
NS0006	8	10	NS	E252944	252944	1	G	D	38.63	39.14	1.03	2.014	1.56	0.044	0.06	0.02	0.056	0.002	0.093	0.014	1.48	0.44	0.14	2.06	3880	0.0612	0.34884	-0.28764	NAF
NS0006	14	16	NS	E252948	252948	1	G	D	40.65	37.54	1.01	0.826	0.64	0.047	0.08	0.02	0.057	0.002	0.395	0.013	1.34	0.23	0.01	1.58	3883	0.0612	0.34884	-0.28764	NAF
NS0006	18	20	NS	E252950	252950	1	G	D	38.69	40.17	1.12	0.839	0.65	0.051	0.08	0.02	0.061	0.002	0.255	0.022	1.51	0.37	0.01	1.89	3885	0.0612	0.34884	-0.28764	NAF
NS0006	20	22	NS	E252951	252951	1	G	D	37.41	42.56	0.87	0.775	0.6	0.037	0.11	0.02	0.038	0.002	0.307	0.015	1.19	0.27	0.01	1.47	3886	0.0612	0.34884	-0.28764	NAF
NS0006	16	18	NS	E252949	252949	1	G	D	41.52	35.87	1.18	0.749	0.58	0.052	0.07	0.02	0.084	0.0005	0.528	0.017	1.56	0.29	0.02	1.87	3884	0.0153	0.34884	-0.33354	NAF
NS0006	12	14	NS	E252947	252947	1	G	D	28.11	52.98	2.63	0.284	0.22	0.107	0.13	0.03	0.044	0.004	0.237	0.035	2.25	0.84	0.07	3.16	3882	0.1224	0.52326	-0.40086	NAF
NS0006	0	2	NS	E252940	252940	1	G	D	32.01	41.36	4.58	0.052	0.04	0.421	0.14	0.07	0.025	0.026	0.068	0.014	5.78	1.31	0.21	7.3	3876	0.7956	1.22094	-0.42534	NAF
NS0006	22	24	NS	E252952	252952	1	G	D	36.95	42.88	1.08	0.775	0.6	0.039	0.09	0.03	0.045	0.001	0.482	0.025	1.19	0.24	-0.02	1.41	3887	0.0306	0.52326	-0.49266	NAF
NS0006	24	26	NS	E252953	252953	1	G	D	36.69	41.39	1.82	0.942	0.73	0.084	0.21	0.04	0.032	0.001	0.732	0.017	1.47	0.49	0.1	2.06	3888	0.0306	0.69768	-0.66708	NAF
NS0006	26	28	NS	E252954	252954	1	G	D	38.91	40.35	0.91	0.878	0.68	0.045	0.1	0.04	0.029	0.001	0.535	0.022	1.13	0.23	0.06	1.42	3889	0.0306	0.69768	-0.66708	NAF
NS0006	28	30	NS	E252955	252955	1	G	D	39.02	39.13	1.22	1.059	0.82	0.061	0.15	0.04	0.037	0.001	0.554	0.018	1.37	0.36	0.09	1.82	3890	0.0306	0.69768	-0.66708	NAF
NS0006	30	32	NS	E252956	252956	1	G	D	37.46	39.9	1.81	0.839	0.65	0.084	0.31	0.04	0.039	0.001	0.844	0.018	1.77	0.47	0.07	2.31	3891	0.0306	0.69768	-0.66708	NAF
NS0006	32	34	NS	E252957	252957	1	G	D	31.23	45.7	3.25	0.942	0.73	0.147	0.64	0.08	0.06	0.001	1.43	0.037	2.17	0.74	0.16	3.07	3892	0.0306	1.39536	-1.36476	NAF
NS0006	34	36	NS	E252958	252958	1	G	D	31.76	48.29	1.68	0.723	0.56	0.076	0.36	0.13	0.061	0.003	0.656	0.024	1.62	0.5	0.11	2.23	3893	0.0918	2.26746	-2.17566	NAF
NS0006	38	40	NS	E252960	252960	1	G	D	34.58	39.99	3.49	0.968	0.75	0.16	0.95	0.23	0.078	0.058	0.967	0.034	2.17	0.93	0.35	3.45	3895	1.7748	4.01166	-2.23686	NAF
NS0006	40	42	NS	E252961	252961	1	G	D	37.21	37.21	2.62	0.374	0.29	0.123	1.27	0.27	0.088	0.056	0.668	0.02	1.66	2.19	0.11	3.96	3896	1.7136	4.70934	-2.99574	NAF
NS0006	86	88	NS	E252984	252984	1	G	D	37.81	30.88	1.79	0.775	0.6	0.085	3.22	0.41	0.096	0.062	0.625	0.09	0.37	7.65	-0.26	7.76	3918	1.8972	7.15122	-5.25402	NAF
NS0006	48	50	NS	E252965	252965	1	G	D	33.36	36.57	3.11	0.607	0.47	0.144	3.6	0.63	0.114	0.152	1.04	0.06	0.35	5.6	0.17	6.12	3900	4.6512	10.98846	-6.33726	NAF
NS0006	36	38	NS	E252959	252959	1	G	D	30.95	48.64	2.25	0.31	0.24	0.1	0.58	0.45	0.172	0.049	0.545	0.023	1.54	0.58	0.19	2.31	3894	1.4994	7.8489	-6.3495	NAF
NS0006	78	80	NS	E252980	252980	1	G	D	25.94	55.77	0.86	0.452	0.35	0.041	1.54	0.45	0.123	0.033	0.397	0.048	0.06	3.33	-0.17	3.22	3915	1.0098	7.8489	-6.8391	NAF
NS0006	80	82	NS	E252981	252981	1	G	D	26.88	52.33	1.32	0.491	0.38	0.063	2.04	0.49	0.134	0.042	0.55	0.067	0.2	3.89	-0.06	4.03	3916	1.2852	8.54658	-7.26138	NAF
NS0006	68	70	NS	E252975	252975	1	G	D	32.99	39.7	2.09	0.581	0.45	0.096	2.76	0.58	0.086	0.076	0.85	0.09	0.36	5.2	-0.1	5.46	3910	2.3256	10.11636	-7.79076	NAF
NS0006	84	86	NS	E252983	252983	1	G	D	37.24	32.33	1.4	0.775	0.6	0.071	3	0.56	0.141	0.043	0.505	0.086	0.34	7.58	-0.3	7.62	3917	1.3158	9.76752	-8.45172	NAF
NS0006	76	78	NS	E252979	252979	1	G	D	34.89	39.41	1.03	0.646	0.5	0.045	2.18	0.77	0.104	0.131	0.33	0.042	0.16	5.14	0.02	5.32	3914	4.0086	13.43034	-9.42174	NAF
NS0006	72	74	NS	E252977	252977	1	G	D	35.09	40.61	1.23	0.646	0.5	0.06	1.66	0.61	0.09	0.028	0.478	0.043	0.47	3.72	-0.04	4.15	3912	0.8568	10.63962	-9.78282	NAF
NS0006	42	44	NS	E252962	252962	1	G	D	29.99	41.24	3.96	0.736	0.57	0.175	2.97	0.87	0.227	0.16	1.32	0.069	0.58	4.31	0.24	5.13	3897	4.896	15.17454	-10.27854	NAF
NS0006	74	76	NS	E252978	252978	1	G	D	36.97	36.5	1.01	0.658	0.51	0.046	2.07	0.65	0.108	0.019	0.437	0.049	0.25	5.14	-0.32	5.07	3913	0.5814	11.3373	-10.7559	NAF
NS0006	66	68	NS	E252974	252974	1	G	D	36.59	34.97	1.26	0.71	0.55	0.061	2.51	0.74	0.174	0.036	0.548	0.077	0.25	6.07	-0.36	5.96	3909	1.1016	12.90708	-11.80548	NAF
NS0006	64	66	NS	E252973	252973	1	G	D	37.64	33.72	1.14	0.749	0.58	0.057	2.4	0.74	0.167	0.028	0.522	0.065	0.29	6.13	-0.35	6.07	3908	0.8568	12.90708	-12.05028	NAF
NS0006	70	72	NS	E252976	252976	1	G	D	35.98	38.19	0.83	0.633	0.49	0.039	2.13	1.01	0.097	0.022	0.171	0.033	0.17	5.01	0.02	5.2	3911	0.6732	17.61642	-16.94322	NAF
NS0006	60	62	NS	E252971	252971	1	G	D	33.67	38.54	2.02	0.594	0.46	0.089	2.55	1.24	0.097	0.059	0.961	0.077	0.26	4.33	0.56	5.15	3906	1.8054	21.62808	-19.82268	NAF
NS0006	44	46	NS	E252963	252963	1	G	D	28.72	46.3	2.61	0.439	0.34	0.116	2.69	1.35	0.189	0.117	0.903	0.06	0.33	3.25	0.43	4.01	3898	3.5802	23.5467	-19.9665	NAF
NS0006	58	60	NS	E252970	252970	1	G	D	36.8	35.5	1.34	0.723	0.56	0.063	2.23	1.23	0.15	0.044	0.627	0.061	0.35	4.69	0.19	5.23	3905	1.3464	21.45366	-20.10726	NAF
NS0006	46	48	NS	E252964	252964	1	G	D	28.43	47.51	2.22	0.349	0.27	0.097	2.41	1.67	0.135	0.126	0.813	0.05	0.26	2.58	0.83	3.67	3899	3.8556	29.12814	-25.27254	NAF
NS0006	62	64	NS	E252972	252972	1	G	D	29.03	45.8	1.79	0.503	0.39	0.084	2.4	1.64	0.118	0.048	0.805	0.084	0.27	3.68	0.86	4.81	3907	1.4688	28.60488	-27.13608	NAF
NS0006	56	58	NS	E252969	252969	1	G	D	35.06	39.34	1.02	0.633	0.49	0.049	1.79	1.7	0.09	0.024	0.393	0.045	0.29	3.47	0.88	4.64	3904	0.7344	29.6514	-28.917	NAF
NS0006	50	52	NS	E252966	252966	1	G	D	35.07	37.54	1.12	0.646	0.5	0.054	2.18	1.74	0.262	0.03	0.495	0.044	0.28	4.69	0.29	5.26	3901	0.918	30.34908	-29.43108	NAF
NS0006	52	54	NS	E252967	252967	1	G	D	34.06	40.57	1.07	0.607	0.47	0.05	1.8	1.79	0.089	0.026	0.482	0.033	0.28	3.49	0.81	4.58	3902	0.7956	31.22118	-30.42558	NAC
NS0006	96	98	NS	E252989	252989	1	G	D	36.72	36.72	0.9	0.62	0.48	0.041	2.04	2.2	0.095	0.019	0.194	0.038	0	3.26	1.3	4.56	3920	0.5814	38.3724	-37.791	NAC
NS0006	94	96	NS	E252988	252988	1	G	D	32.97	42.34	0.76	0.555	0.43	0.037	1.88	2.25	0.076	0.019	0.189	0.041	0.06	3.04	1.48	4.58	3919	0.5814	39.2445	-38.6631	NAC
NS0006	98	100	NS	E252990	252990	1	G	D	36	36.98	0.91	0.633	0.49	0.045	2.1	2.34	0.098	0.023	0.218	0.034	0	3.28	1.46	4.74	3921	0.7038	40.81428	-40.11048	NAC
NS0006	54	56	NS	E252968	252968	1	G	D	32.36	42.22	0.91	0.581	0.45	0.043	1.82	2.49	0.077	0.02	0.376	0.036	0.15	2.82	1.93	4.9	3903	0.612	43.43058	-42.81858	NAC
NS0006	100	102	NS	E252991	252991	1	G	D	31.31	44.48	0.72	0.568	0.44	0.036	1.91	2.54	0.073	0.019	0.263	0.039	0.05	2.74	1.88	4.67	3922	0.5814	44.30268	-43.72128	NAC
NS0007	96	98	NS	E253041	253041	1	G	D	28.36	39.92	3.28	0.516	0.4	0.152	3.01	0.63	0.095	0.619	1	0.286	1.11	8.24	1.2	10.55	3971	18.9414	10.98846	7.95294	PAF(LC)
NS0007	62	64	NS	E253024	253024	1	G	D	22.97	48.32	7.14	0.245	0.19	0.343	3.54	0.63	0.068	0.514	0.959	0.281	1.05	3.42	1.01	5.48	3954	15.7284	10.98846	4.73994	PAF(LC)
NS0007	64	66	NS	E253025	253025	1	G	D	26.18	42.95	5.89	0.336	0.26	0.282	3.65	0.52	0.087	0.418	1.43	0.419	1.43	4.4	1.04	6.87	3955	12.7908	9.06984	3.72096	PAF(LC)
NS0007	100	102	NS	E253043	253043	1	G	D	26.88	43.24	4.88	0.349	0.27	0.222	3.55	0.71	0.126	0.455	1.45	0.398	1.38	4.09	1.13	6.6	3973	13.923	12.38382	1.53918	PAF(LC)
NS0007	2	4	NS	E252993	252993	1	G	D	44.72	16.71	9.24	0.039	0.03	0.864	0.04	0.04	0.023	0.019	0.039	0.024	6.24	2.24	0.27	8.75	3924	0.5814	0.69768	-0.11628	NAF
NS0007	6	8	NS	E252995	252995	1	G	D	31.91	42.8	4.11	0.026	0.02	0.187	0.05	0.07	0.014	0.022	0.016	0.035	5.37	1.27	0.22	6.86	3926	0.6732	1.22094	-0.54774	NAF
NS0007	14	16	NS	E252999	252999	1	G	D	40.35	35.62	1.45	0.065	0.05	0.068	0.07	0.06	0.052	0.013	0.005	0.034	3.95	0.49	0.11	4.55	3930	0.3978	1.04652	-0.64872	NAF
NS0007	4	6	NS	E252994	252994	1	G	D	18.21	63.12	5.05	0.026	0.02	1.142	0.04	0.05	0.014	0.007	0.025	0.026	3.21	1.4	0.15	4.76	3925	0.2142	0.8721	-0.6579	NAF
NS0007	8	10	NS	E252996	252996	1	G	D	43.68	28.34	2.13	0.039	0.03	0.088	0.04	0.06	0.038	0.012	0.007	0.014	5.69	0.74	0.16	6.59	3927	0.3672	1.04652	-0.67932	NAF
NS0007	0	2	NS	E252992	252992	1	G	D	40.5	22.04	9.13	0.039	0.03	0.768	0.07	0.08	0.02	0.021	0.054	0.023	6.93	2.4	0.28	9.61	3923	0.6426	1.39536	-0.75276	NAF
NS0007	16	18	NS	E253000	253000	1	G	D	41.62	33.73	1.63	0.052	0.04	0.069	0.06	0.07	0.065	0.014	0.004	0.024	4.11	0.54	0.11	4.76	3931	0.4284	1.22094	-0.79254	NAF
NS0007	18	20	NS	E253001	253001	1	G	D	38.95	38.04	1.55	0.052	0.04	0.065	0.06	0.07	0.077	0.01	0.005	0.029	3.69	0.57	0.09	4.35	3932	0.306	1.22094	-0.91494	NAF
NS0007	10	12	NS	E252997	252997	1	G	D	39.31	32.8	3.8	0.039	0.03	0.255	0.09	0.08	0.043	0.014	0.016	0.032	5.22	1.18	0.15	6.55	3928	0.4284	1.39536	-0.96696	NAF
NS0007	50	52	NS	E253018	253018	1	G	D	22.32	50.2	6.32	0.284	0.22	0.313	3.32	0.84	0.078	0.406	0.809	0.164	1.12	3.58	0.4	5.1	3948	12.4236	14.65128	-2.22768	NAF
NS0007	12	14	NS	E252998	252998	1	G	D	35.6	38.99	3.93	0.026	0.02	0.173	0.08	0.15	0.038	0.012	0.009	0.044	4.21	1.22	0.14	5.57	3929	0.3672	2.6163	-2.2491	NAF
NS0007	52	54	NS	E253019	253019	1	G	D	27.91	41.37	3.69	0.426	0.33	0.177	2.89	0.6	0.085	0.267	1.01	0.282	1.53	7.16	0.79	9.48	3949	8.1702	10.4652	-2.295	NAF
NS0007	66	68	NS	E253026	253026	1	G	D	29.25	40.16	3.71	0.336	0.26	0.177	3.08	0.49	0.088	0.196	1.06	0.307	1.2	6.98	0.54	8.72	3956	5.9976	8.54658	-2.54898	NAF
NS0007	60	62	NS	E253023	253023	1	G	D	29	37.78	3.74	0.503	0.39	0.186	2.92	0.87	0.112	0.39	0.874	0.236	1.18	9.08	0.12	10.38	3953	11.934	15.17454	-3.24054	NAF
NS0007	20	22	NS	E253002	253002	1	G	D	36.9	39.58	2.13	0.065	0.05	0.101	0.3	0.22	0.06	0.008	0.009	0.069	3.49	0.82	0.05	4.36	3933	0.2448	3.83724	-3.59244	NAF
NS0007	36	38	NS	E253010	253010	1	G	D	38.77	37.86	1.25	0.813	0.63	0.061	0.44	0.21	0.048	0.002	0.059	0.042	2.73	0.74	0.06	3.53	3941	0.0612	3.66282	-3.60162	NAF
NS0007	30	32	NS	E253007	253007	1	G	D	36.32	40.94	1.59	0.09	0.07	0.078	0.41	0.22	0.063	0.004	0.02	0.054	3.37	0.84	0.04	4.25	3938	0.1224	3.83724	-3.71484	NAF
NS0007	38	40	NS	E253011	253011	1	G	D	30.42	50.28	1.24	0.374	0.29	0.058	0.43	0.22	0.051	0.0005	0.042	0.034	2.52	0.71	0.03	3.26	3942	0.0153	3.83724	-3.82194	NAF
NS0007	40	42	NS	E253012	253012	1	G	D	32.68	47.12	1.45	0.31	0.24	0.07	0.56	0.25	0.047	0.0005	0.044	0.034	2.74	0.84	0.03	3.61	3943	0.0153	4.3605	-4.3452	NAF
NS0007	26	28	NS	E253005	253005	1	G	D	39.07	36.94	1.66	0.065	0.05	0.075	0.39	0.26	0.07	0.003	0.007	0.066	3.35	0.84	0.04	4.23	3936	0.0918	4.53492	-4.44312	NAF
NS0007	48	50	NS	E253017	253017	1	G	D	24.48	46.74	4.11	0.413	0.32	0.192	2.87	0.86	0.138	0.342	1.07	0.18	1.18	5.47	1	7.65	3947	10.4652	15.00012	-4.53492	NAF
NS0007	42	44	NS	E253014	253014	1	G	D	32.44	43.61	2.49	0.349	0.27	0.121	0.95	0.29	0.056	0.002	0.317	0.074	3.91	1.32	0.03	5.26	3944	0.0612	5.05818	-4.99698	NAF
NS0007	56	58	NS	E253021	253021	1	G	D	29.86	37.38	3.25	0.336	0.26	0.201	2.86	0.61	0.051	0.183	0.98	0.255	1.34	9.17	0.54	11.05	3951	5.5998	10.63962	-5.03982	NAF
NS0007	44	46	NS	E253015	253015	1	G	D	33.26	42.93	2.21	0.323	0.25	0.108	0.78	0.3	0.046	0.0005	0.246	0.073	3.92	1.28	0.05	5.25	3945	0.0153	5.2326	-5.2173	NAF
NS0007	34	36	NS	E253009	253009	1	G	D	38.31	36.67	1.91	0.71	0.55	0.083	0.67	0.31	0.051	0.002	0.052	0.055	3.26	1.12	0.08	4.46	3940	0.0612	5.40702	-5.34582	NAF
NS0007	80	82	NS	E253033	253033	1	G	D	28.33	41.15	3.01	0.465	0.36	0.144	2.7	0.66	0.08	0.196	0.966	0.247	1.16	8.19	0.54	9.89	3963	5.9976	11.51172	-5.51412	NAF
NS0007	28	30	NS	E253006	253006	1	G	D	34.39	42.32	2.09	0.065	0.05	0.098	0.57	0.33	0.054	0.005	0.009	0.073	3.82	1.11	0.02	4.95	3937	0.153	5.75586	-5.60286	NAF
NS0007	46	48	NS	E253016	253016	1	G	D	34.24	40.65	2.31	0.323	0.25	0.107	0.66	0.41	0.111	0.016	0.137	0.044	4.2	1.47	0.21	5.88	3946	0.4896	7.15122	-6.66162	NAF
NS0007	24	26	NS	E253004	253004	1	G	D	36.55	38.32	2.45	0.09	0.07	0.127	0.7	0.4	0.046	0.005	0.022	0.102	3.94	1.26	0.04	5.24	3935	0.153	6.9768	-6.8238	NAF
NS0007	32	34	NS	E253008	253008	1	G	D	37.45	36.91	2.62	0.181	0.14	0.12	0.72	0.4	0.061	0.002	0.036	0.074	3.53	1.37	0.06	4.96	3939	0.0612	6.9768	-6.9156	NAF
NS0007	82	84	NS	E253034	253034	1	G	D	28.49	41.28	3.02	0.374	0.29	0.148	2.83	0.74	0.087	0.151	1.19	0.317	1.27	7.39	0.49	9.15	3964	4.6206	12.90708	-8.28648	NAF
NS0007	22	24	NS	E253003	253003	1	G	D	34.63	39.71	3.18	0.077	0.06	0.167	0.85	0.52	0.05	0.008	0.02	0.138	3.81	1.55	0.02	5.38	3934	0.2448	9.06984	-8.82504	NAF
NS0007	74	76	NS	E253030	253030	1	G	D	30.22	39.42	3.37	0.374	0.29	0.16	2.97	1.02	0.077	0.222	1.19	0.321	1.17	5.65	0.74	7.56	3960	6.7932	17.79084	-10.99764	NAF
NS0007	98	100	NS	E253042	253042	1	G	D	31.79	38.47	2.28	0.413	0.32	0.106	2.34	0.85	0.085	0.111	0.896	0.245	1.01	7.62	0.26	8.89	3972	3.3966	14.8257	-11.4291	NAF
NS0007	58	60	NS	E253022	253022	1	G	D	30.93	37.07	1.72	0.4	0.31	0.081	2.06	0.8	0.062	0.08	0.662	0.156	1.06	11.13	0.17	12.36	3952	2.448	13.9536	-11.5056	NAF
NS0007	54	56	NS	E253020	253020	1	G	D	28.16	41.15	2.77	0.4	0.31	0.168	2.56	1.08	0.085	0.171	0.867	0.241	1.11	8.5	0.53	10.14	3950	5.2326	18.83736	-13.60476	NAF
NS0007	92	94	NS	E253039	253039	1	G	D	30.07	39.91	2.71	0.426	0.33	0.126	2.62	1.27	0.165	0.262	0.985	0.277	1.16	6	0.72	7.88	3969	8.0172	22.15134	-14.13414	NAF
NS0007	68	70	NS	E253027	253027	1	G	D	31.55	37.65	2.24	0.465	0.36	0.105	2.37	1.04	0.098	0.115	0.796	0.227	0.98	8.6	0.17	9.75	3957	3.519	18.13968	-14.62068	NAF
NS0007	94	96	NS	E253040	253040	1	G	D	30.47	38.13	2.22	0.516	0.4	0.103	2.63	1.25	0.078	0.208	0.892	0.248	1.07	8.29	0.69	10.05	3970	6.3648	21.8025	-15.4377	NAF
NS0007	84	86	NS	E253035	253035	1	G	D	28.67	39.65	2.54	0.465	0.36	0.121	2.74	1.35	0.075	0.16	1.01	0.273	1.09	8.61	0.71	10.41	3965	4.896	23.5467	-18.6507	NAF
NS0007	76	78	NS	E253031	253031	1	G	D	32.49	36.06	2.13	0.426	0.33	0.101	2.35	1.31	0.116	0.075	0.866	0.238	1.02	8.34	0.33	9.69	3961	2.295	22.84902	-20.55402	NAF
NS0007	70	72	NS	E253028	253028	1	G	D	32.03	36.17	1.62	0.555	0.43	0.076	2.23	1.32	0.067	0.072	0.651	0.204	0.94	9.88	0.29	11.11	3958	2.2032	23.02344	-20.82024	NAF
NS0007	78	80	NS	E253032	253032	1	G	D	28.7	38.67	3.69	0.387	0.3	0.177	3.09	1.71	0.226	0.281	1.39	0.36	1.32	6.19	0.97	8.48	3962	8.5986	29.82582	-21.22722	NAF
NS0007	88	90	NS	E253037	253037	1	G	D	31.15	37.73	2.57	0.465	0.36	0.12	2.72	1.83	0.094	0.201	0.766	0.213	0.89	6.64	0.94	8.47	3967	6.1506	31.91886	-25.76826	NAF
NS0007	90	92	NS	E253038	253038	1	G	D	31.4	37.59	2.44	0.465	0.36	0.118	2.54	1.82	0.101	0.093	0.903	0.255	1.17	6.47	0.98	8.62	3968	2.8458	31.74444	-28.89864	NAF
NS0007	86	88	NS	E253036	253036	1	G	D	30.96	34.94	2.38	0.542	0.42	0.11	2.85	1.98	0.114	0.151	0.915	0.253	1.04	9.24	0.98	11.26	3966	4.6206	34.53516	-29.91456	NAF
NS0007	72	74	NS	E253029	253029	1	G	D	30.33	36.51	2.92	0.503	0.39	0.141	3	2.29	0.215	0.197	1.06	0.286	1.14	6.94	1.19	9.27	3959	6.0282	39.94218	-33.91398	NAC
NS0008	92	94	NS	E253091	253091	1	G	D	23.79	46.2	7.99	0.155	0.12	0.378	4.38	0.26	0.049	0.382	1.23	0.352	1.13	2.59	0.8	4.52	4020	11.6892	4.53492	7.15428	PAF(LC)
NS0008	88	90	NS	E253089	253089	1	G	D	22.69	49.65	6.89	0.168	0.13	0.322	3.9	0.47	0.092	0.494	1.31	0.377	1.28	1.98	0.99	4.25	4018	15.1164	8.19774	6.91866	PAF(LC)
NS0008	100	102	NS	E253095	253095	1	G	D	21.79	48.73	9.1	0.065	0.05	0.432	4.67	0.19	0.021	0.292	0.782	0.24	0.93	2.86	0.7	4.49	4024	8.9352	3.31398	5.62122	PAF(LC)
NS0008	94	96	NS	E253092	253092	1	G	D	21.38	52.55	6.38	0.142	0.11	0.299	3.68	0.54	0.109	0.486	1.3	0.368	1.17	1.77	0.9	3.84	4021	14.8716	9.41868	5.45292	PAF(LC)
NS0008	90	92	NS	E253090	253090	1	G	D	20.83	52.34	7.23	0.129	0.1	0.34	3.79	0.45	0.095	0.414	1.05	0.299	1.08	2	0.84	3.92	4019	12.6684	7.8489	4.8195	PAF(LC)
NS0008	62	64	NS	E253075	253075	1	G	D	24.51	46.47	6	0.245	0.19	0.287	3.59	0.44	0.109	0.388	1.34	0.338	1.32	3.69	0.97	5.98	4005	11.8728	7.67448	4.19832	PAF(LC)
NS0008	86	88	NS	E253088	253088	1	G	D	26.54	41.8	4.99	0.349	0.27	0.237	3.34	0.49	0.08	0.414	1.06	0.305	1.38	6.84	1.07	9.29	4017	12.6684	8.54658	4.12182	PAF(LC)
NS0008	0	2	NS	E253044	253044	1	G	D	34.04	28.1	12.45	0.026	0.02	0.852	0.06	0.03	0.027	0.035	0.051	0.026	5.92	3.14	0.35	9.41	3974	1.071	0.52326	0.54774	PAF(LC)
NS0008	4	6	NS	E253046	253046	1	G	D	25.5	46.32	8.96	-0.0129	-0.01	0.406	0.03	0.01	0.023	0.023	0.017	0.022	5.02	2.46	0.26	7.74	3976	0.7038	0.17442	0.52938	PAF(LC)
NS0008	2	4	NS	E253045	253045	1	G	D	27.36	44.62	8.04	-0.0129	-0.01	0.432	0.04	0.02	0.051	0.025	0.035	0.028	5.28	2.12	0.25	7.65	3975	0.765	0.34884	0.41616	PAF(LC)
NS0008	6	8	NS	E253047	253047	1	G	D	34.79	33.74	6.85	0.026	0.02	0.37	0.04	0.01	0.036	0.018	0.013	0.012	6.78	1.69	0.27	8.74	3977	0.5508	0.17442	0.37638	PAF(LC)
NS0008	8	10	NS	E253048	253048	1	G	D	28.13	40.81	9.59	0.026	0.02	0.498	0.09	0.03	0.016	0.012	0.033	0.029	5.36	2.56	0.25	8.17	3978	0.3672	0.52326	-0.15606	NAF
NS0008	18	20	NS	E253053	253053	1	G	D	25.07	47.82	8.19	0.026	0.02	0.372	0.12	0.05	0.01	0.022	0.009	0.028	4.77	2.59	0.32	7.68	3983	0.6732	0.8721	-0.1989	NAF
NS0008	14	16	NS	E253051	253051	1	G	D	19.01	59.03	7.13	0.026	0.02	0.322	0.08	0.05	0.015	0.015	0.01	0.029	3.77	2.16	0.25	6.18	3981	0.459	0.8721	-0.4131	NAF
NS0008	16	18	NS	E253052	253052	1	G	D	21.84	53.79	7.33	0.026	0.02	0.316	0.08	0.05	0.016	0.015	0.011	0.027	4.2	2.23	0.24	6.67	3982	0.459	0.8721	-0.4131	NAF
NS0008	12	14	NS	E253050	253050	1	G	D	21.52	51.7	9.4	0.026	0.02	0.432	0.11	0.05	0.01	0.013	0.012	0.039	4.23	2.78	0.27	7.28	3980	0.3978	0.8721	-0.4743	NAF
NS0008	20	22	NS	E253054	253054	1	G	D	21	54.1	8.12	0.026	0.02	0.375	0.12	0.05	0.014	0.013	0.01	0.03	4.18	2.46	0.26	6.9	3984	0.3978	0.8721	-0.4743	NAF
NS0008	10	12	NS	E253049	253049	1	G	D	23.62	48.08	9.6	0.026	0.02	0.414	0.17	0.06	0.011	0.011	0.015	0.043	4.64	2.96	0.27	7.87	3979	0.3366	1.04652	-0.70992	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0008	22	24	NS	E253055	253055	1	G	D	20.3	56.01	7.46	0.026	0.02	0.389	0.2	0.06	0.015	0.009	0.046	0.036	4.1	2.23	0.24	6.57	3985	0.2754	1.04652	-0.77112	NAF
NS0008	38	40	NS	E253063	253063	1	G	D	15.32	67.03	5.1	0.258	0.2	0.231	0.53	0.1	0.03	0.006	0.218	0.031	2.88	1.68	0.18	4.74	3993	0.1836	1.7442	-1.5606	NAF
NS0008	54	56	NS	E253071	253071	1	G	D	35.31	38.84	1.9	0.387	0.3	0.091	0.35	0.1	0.113	0.003	0.093	0.018	6.19	1.07	0.19	7.45	4001	0.0918	1.7442	-1.6524	NAF
NS0008	24	26	NS	E253056	253056	1	G	D	18.68	57.88	7.71	0.052	0.04	0.365	0.5	0.11	0.022	0.008	0.191	0.05	3.69	2.44	0.2	6.33	3986	0.2448	1.91862	-1.67382	NAF
NS0008	60	62	NS	E253074	253074	1	G	D	30.05	37.72	2.68	0.323	0.25	0.125	2.33	0.42	0.072	0.167	0.653	0.145	1.3	10.63	0.4	12.33	4004	5.1102	7.32564	-2.21544	NAF
NS0008	30	32	NS	E253059	253059	1	G	D	25.15	49.48	5.75	0.103	0.08	0.275	0.71	0.16	0.047	0.015	0.196	0.05	4.79	2.14	0.23	7.16	3989	0.459	2.79072	-2.33172	NAF
NS0008	34	36	NS	E253061	253061	1	G	D	20.71	53.3	8.41	0.065	0.05	0.402	0.75	0.15	0.032	0.009	0.289	0.056	3.85	2.77	0.26	6.88	3991	0.2754	2.6163	-2.3409	NAF
NS0008	32	34	NS	E253060	253060	1	G	D	22.28	50.12	8.86	0.052	0.04	0.413	0.85	0.15	0.028	0.008	0.329	0.055	4.29	2.81	0.27	7.37	3990	0.2448	2.6163	-2.3715	NAF
NS0008	26	28	NS	E253057	253057	1	G	D	20.11	54.84	8.11	0.065	0.05	0.382	0.75	0.15	0.022	0.007	0.271	0.057	3.84	2.59	0.23	6.66	3987	0.2142	2.6163	-2.4021	NAF
NS0008	36	38	NS	E253062	253062	1	G	D	21.86	53.31	6.68	0.065	0.05	0.327	0.88	0.15	0.04	0.007	0.438	0.044	4.01	2.35	0.26	6.62	3992	0.2142	2.6163	-2.4021	NAF
NS0008	28	30	NS	E253058	253058	1	G	D	23.54	48.63	8.2	0.077	0.06	0.4	0.87	0.16	0.033	0.008	0.33	0.058	4.47	2.7	0.26	7.43	3988	0.2448	2.79072	-2.54592	NAF
NS0008	56	58	NS	E253072	253072	1	G	D	28.49	43.59	3.71	0.271	0.21	0.165	1.45	0.23	0.101	0.04	0.277	0.06	3.76	5.24	0.26	9.26	4002	1.224	4.01166	-2.78766	NAF
NS0008	40	42	NS	E253064	253064	1	G	D	19.4	55.95	7.48	0.336	0.26	0.357	0.99	0.19	0.041	0.005	0.366	0.049	3.54	2.6	0.26	6.4	3994	0.153	3.31398	-3.16098	NAF
NS0008	42	44	NS	E253065	253065	1	G	D	19.39	55.57	7.28	0.336	0.26	0.344	1.11	0.21	0.056	0.005	0.346	0.05	3.62	2.55	0.28	6.45	3995	0.153	3.66282	-3.50982	NAF
NS0008	50	52	NS	E253069	253069	1	G	D	18.08	54.91	9.55	0.065	0.05	0.456	1.99	0.21	0.046	0.005	1.28	0.053	2.62	2.88	0.31	5.81	3999	0.153	3.66282	-3.50982	NAF
NS0008	46	48	NS	E253067	253067	1	G	D	19.96	53.1	8.58	0.129	0.1	0.404	1.63	0.26	0.049	0.005	0.722	0.069	3.52	2.81	0.31	6.64	3997	0.153	4.53492	-4.38192	NAF
NS0008	44	46	NS	E253066	253066	1	G	D	26.24	44.48	7.23	0.374	0.29	0.339	1.28	0.27	0.092	0.003	0.324	0.052	4.89	2.57	0.32	7.78	3996	0.0918	4.70934	-4.61754	NAF
NS0008	48	50	NS	E253068	253068	1	G	D	20.41	50.26	9.56	0.09	0.07	0.453	2.03	0.28	0.054	0.005	0.776	0.058	3.4	3.05	0.34	6.79	3998	0.153	4.88376	-4.73076	NAF
NS0008	52	54	NS	E253070	253070	1	G	D	23.73	48.3	6.91	0.349	0.27	0.325	1.73	0.28	0.056	0.003	0.55	0.043	4.4	2.43	0.31	7.14	4000	0.0918	4.88376	-4.79196	NAF
NS0008	98	100	NS	E253094	253094	1	G	D	30.04	38.43	2.79	0.31	0.24	0.131	2.64	0.64	0.091	0.189	0.816	0.23	1.07	8.91	0.45	10.43	4023	5.7834	11.16288	-5.37948	NAF
NS0008	66	68	NS	E253077	253077	1	G	D	21.36	50.14	6.81	0.194	0.15	0.322	3.48	0.96	0.087	0.355	0.868	0.237	0.95	3.9	0.95	5.8	4007	10.863	16.74432	-5.88132	NAF
NS0008	96	98	NS	E253093	253093	1	G	D	30.29	34.23	2.14	0.465	0.36	0.1	2.67	0.59	0.081	0.137	0.735	0.21	1.27	13.6	0.35	15.22	4022	4.1922	10.29078	-6.09858	NAF
NS0008	70	72	NS	E253079	253079	1	G	D	30.68	35.66	2.83	0.374	0.29	0.133	2.67	0.78	0.066	0.206	0.979	0.261	1.38	10.26	0.53	12.17	4009	6.3036	13.60476	-7.30116	NAF
NS0008	64	66	NS	E253076	253076	1	G	D	26.19	41.84	5.02	0.284	0.22	0.238	3.07	0.96	0.086	0.306	0.935	0.244	1.21	7.32	0.97	9.5	4006	9.3636	16.74432	-7.38072	NAF
NS0008	58	60	NS	E253073	253073	1	G	D	31.37	34.68	1.33	0.426	0.33	0.062	1.95	0.58	0.085	0.061	0.336	0.061	1.27	13.88	0.05	15.2	4003	1.8666	10.11636	-8.24976	NAF
NS0008	84	86	NS	E253087	253087	1	G	D	31.38	36.79	1.45	0.374	0.29	0.072	1.91	0.89	0.093	0.186	0.537	0.153	0.82	11.59	0.2	12.61	4016	5.6916	15.52338	-9.83178	NAF
NS0008	68	70	NS	E253078	253078	1	G	D	21.92	49.99	5.05	0.245	0.19	0.236	3	1.4	0.082	0.401	0.986	0.27	1.09	4.56	1.21	6.86	4008	12.2706	24.4188	-12.1482	NAF
NS0008	82	84	NS	E253086	253086	1	G	D	26.37	42.35	4.69	0.258	0.2	0.226	3.09	1.82	0.064	0.243	0.851	0.24	1.04	6.38	1.07	8.49	4015	7.4358	31.74444	-24.30864	NAF
NS0008	76	78	NS	E253083	253083	1	G	D	30.02	40.34	3.32	0.232	0.18	0.162	2.57	1.95	0.124	0.191	0.997	0.265	1.09	4.84	0.97	6.9	4012	5.8446	34.0119	-28.1673	NAF
NS0008	72	74	NS	E253081	253081	1	G	D	32.67	38.82	1.41	0.31	0.24	0.07	1.66	1.72	0.074	0.058	0.512	0.141	0.65	7.61	0.41	8.67	4010	1.7748	30.00024	-28.22544	NAF
NS0008	74	76	NS	E253082	253082	1	G	D	35.64	34.89	1.45	0.336	0.26	0.069	1.59	1.92	0.117	0.055	0.507	0.141	0.59	6.83	0.47	7.89	4011	1.683	33.48864	-31.80564	NAC
NS0008	80	82	NS	E253085	253085	1	G	D	31.61	38.57	1.33	0.336	0.26	0.063	1.62	2.32	0.081	0.048	0.443	0.129	0.78	8.21	0.7	9.69	4014	1.4688	40.46544	-38.99664	NAC
NS0008	78	80	NS	E253084	253084	1	G	D	29.79	40.92	1.92	0.284	0.22	0.094	1.9	2.54	0.087	0.104	0.624	0.168	0.79	6.41	1.14	8.34	4013	3.1824	44.30268	-41.12028	NAC
NS0009	10	12	NS	E253101	253101	1	G	D	16.19	68.62	4.84	0.026	0.02	0.213	0.07	0.02	0.041	0.013	0.053	0.035	1.54	1.52	0.14	3.2	4030	0.3978	0.34884	0.04896	PAF(LC)
NS0009	0	2	NS	E253096	253096	1	G	D	29.09	45.51	6.2	0.077	0.06	0.35	0.15	0.05	0.031	0.027	0.074	0.029	4.07	1.75	0.19	6.01	4025	0.8262	0.8721	-0.0459	NAF
NS0009	12	14	NS	E253102	253102	1	G	D	38.5	37.09	1.95	0.155	0.12	0.082	0.19	0.02	0.11	0.007	0.06	0.021	3.95	0.82	0.15	4.92	4031	0.2142	0.34884	-0.13464	NAF
NS0009	2	4	NS	E253097	253097	1	G	D	32.1	41.53	5	0.065	0.05	0.273	0.13	0.06	0.046	0.029	0.038	0.023	4.93	1.37	0.22	6.52	4026	0.8874	1.04652	-0.15912	NAF
NS0009	18	20	NS	E253105	253105	1	G	D	33.99	46.2	1.4	0.065	0.05	0.06	0.11	0.03	0.113	0.011	0.039	0.03	2.16	0.56	0.11	2.83	4034	0.3366	0.52326	-0.18666	NAF
NS0009	16	18	NS	E253104	253104	1	G	D	23.04	61.2	1.86	0.065	0.05	0.069	0.07	0.03	0.123	0.01	0.033	0.051	2.6	0.67	0.15	3.42	4033	0.306	0.52326	-0.21726	NAF
NS0009	14	16	NS	E253103	253103	1	G	D	35.47	44.83	0.87	0.116	0.09	0.037	0.12	0.03	0.096	0.009	0.045	0.027	2.35	0.41	0.13	2.89	4032	0.2754	0.52326	-0.24786	NAF
NS0009	26	28	NS	E253109	253109	1	G	D	34.08	44.97	1.91	0.155	0.12	0.083	0.22	0.04	0.124	0.012	0.087	0.031	2.47	0.76	0.1	3.33	4038	0.3672	0.69768	-0.33048	NAF
NS0009	8	10	NS	E253100	253100	1	G	D	22.85	58.19	4.24	0.077	0.06	0.18	0.14	0.04	0.088	0.011	0.029	0.044	2.97	1.36	0.17	4.5	4029	0.3366	0.69768	-0.36108	NAF
NS0009	36	38	NS	E253114	253114	1	G	D	36.65	41.39	1.19	0.219	0.17	0.052	0.16	0.04	0.1	0.007	0.039	0.027	3.12	1.26	0.19	4.57	4043	0.2142	0.69768	-0.48348	NAF
NS0009	20	22	NS	E253106	253106	1	G	D	30.42	45.7	4.69	0.155	0.12	0.196	0.25	0.05	0.108	0.011	0.106	0.055	2.86	1.66	0.15	4.67	4035	0.3366	0.8721	-0.5355	NAF
NS0009	28	30	NS	E253110	253110	1	G	D	28.47	51.87	2.61	0.168	0.13	0.104	0.28	0.05	0.115	0.01	0.101	0.03	2.99	0.99	0.14	4.12	4039	0.306	0.8721	-0.5661	NAF
NS0009	24	26	NS	E253108	253108	1	G	D	27.81	52.41	2.52	0.168	0.13	0.111	0.31	0.05	0.098	0.009	0.152	0.031	2.88	0.93	0.12	3.93	4037	0.2754	0.8721	-0.5967	NAF
NS0009	6	8	NS	E253099	253099	1	G	D	30.5	40.99	7.81	0.052	0.04	0.45	0.13	0.06	0.043	0.013	0.049	0.057	3.94	2.19	0.26	6.39	4028	0.3978	1.04652	-0.64872	NAF
NS0009	40	42	NS	E253116	253116	1	G	D	31.75	49.59	1.14	0.349	0.27	0.05	0.24	0.05	0.104	0.006	0.049	0.022	2.33	0.56	0.13	3.02	4045	0.1836	0.8721	-0.6885	NAF
NS0009	44	46	NS	E253118	253118	1	G	D	35.02	44.82	1.03	0.361	0.28	0.046	0.22	0.05	0.135	0.006	0.054	0.02	2.29	0.52	0.1	2.91	4047	0.1836	0.8721	-0.6885	NAF
NS0009	4	6	NS	E253098	253098	1	G	D	28.38	51.56	2.64	0.103	0.08	0.114	0.18	0.06	0.071	0.011	0.03	0.026	3.74	0.93	0.16	4.83	4027	0.3366	1.04652	-0.70992	NAF
NS0009	22	24	NS	E253107	253107	1	G	D	29.68	46.89	4.19	0.207	0.16	0.171	0.3	0.06	0.086	0.011	0.118	0.044	3.43	1.53	0.19	5.15	4036	0.3366	1.04652	-0.70992	NAF
NS0009	68	70	NS	E253131	253131	1	G	D	36.13	42.26	1.68	0.658	0.51	0.075	0.58	0.05	0.075	0.005	0.262	0.023	2.09	0.52	-0.1	2.51	4059	0.153	0.8721	-0.7191	NAF
NS0009	32	34	NS	E253112	253112	1	G	D	36.03	40.59	2.16	0.491	0.38	0.092	0.24	0.06	0.147	0.009	0.074	0.03	3.15	0.89	0.14	4.18	4041	0.2754	1.04652	-0.77112	NAF
NS0009	72	74	NS	E253133	253133	1	G	D	36.78	42.7	1.24	0.633	0.49	0.057	0.32	0.05	0.084	0.003	0.145	0.02	1.55	0.47	-0.01	2.01	4061	0.0918	0.8721	-0.7803	NAF
NS0009	54	56	NS	E253123	253123	1	G	D	36.88	40.09	1.46	0.942	0.73	0.064	0.29	0.06	0.102	0.006	0.14	0.026	2.87	0.67	0.05	3.59	4052	0.1836	1.04652	-0.86292	NAF
NS0009	30	32	NS	E253111	253111	1	G	D	26.97	50.99	4.51	0.413	0.32	0.192	0.25	0.07	0.074	0.011	0.047	0.038	2.52	1.61	0.18	4.31	4040	0.3366	1.22094	-0.88434	NAF
NS0009	50	52	NS	E253121	253121	1	G	D	37.94	37.41	1.39	0.826	0.64	0.055	0.33	0.06	0.14	0.005	0.089	0.024	4.03	0.78	0.15	4.96	4050	0.153	1.04652	-0.89352	NAF
NS0009	56	58	NS	E253125	253125	1	G	D	37.9	38.69	2.09	0.684	0.53	0.092	0.32	0.06	0.091	0.005	0.235	0.024	2.36	0.8	0.04	3.2	4053	0.153	1.04652	-0.89352	NAF
NS0009	64	66	NS	E253129	253129	1	G	D	33.92	45.15	1.92	0.503	0.39	0.09	0.37	0.06	0.082	0.004	0.196	0.024	1.91	0.68	0.04	2.63	4057	0.1224	1.04652	-0.92412	NAF
NS0009	70	72	NS	E253132	253132	1	G	D	38.2	39.68	1.4	0.775	0.6	0.063	0.46	0.06	0.068	0.003	0.275	0.019	1.7	0.47	-0.09	2.08	4060	0.0918	1.04652	-0.95472	NAF
NS0009	90	92	NS	E253142	253142	1	G	D	37.71	39.68	2.28	0.207	0.16	0.107	0.8	0.09	0.123	0.012	0.436	0.015	1.31	0.69	0.12	2.12	4070	0.3672	1.56978	-1.20258	NAF
NS0009	48	50	NS	E253120	253120	1	G	D	22.74	59.5	2.38	0.542	0.42	0.098	0.33	0.08	0.103	0.005	0.128	0.031	3.36	0.88	0.17	4.41	4049	0.153	1.39536	-1.24236	NAF
NS0009	52	54	NS	E253122	253122	1	G	D	37.63	38.78	1.97	0.736	0.57	0.088	0.33	0.08	0.101	0.005	0.175	0.029	2.57	0.84	0.09	3.5	4051	0.153	1.39536	-1.24236	NAF
NS0009	38	40	NS	E253115	253115	1	G	D	35.05	42.09	2.42	0.491	0.38	0.112	0.33	0.09	0.144	0.009	0.082	0.034	2.52	1.02	0.1	3.64	4044	0.2754	1.56978	-1.29438	NAF
NS0009	42	44	NS	E253117	253117	1	G	D	33.18	45.33	1.98	0.439	0.34	0.084	0.35	0.09	0.138	0.008	0.113	0.028	2.8	0.85	0.1	3.75	4046	0.2448	1.56978	-1.32498	NAF
NS0009	46	48	NS	E253119	253119	1	G	D	34.42	42.9	2	0.387	0.3	0.086	0.4	0.09	0.136	0.005	0.107	0.031	3.31	0.86	0.1	4.27	4048	0.153	1.56978	-1.41678	NAF
NS0009	58	60	NS	E253126	253126	1	G	D	37.74	38.31	2.23	0.555	0.43	0.096	0.39	0.09	0.095	0.005	0.115	0.022	2.8	0.91	0.12	3.83	4054	0.153	1.56978	-1.41678	NAF
NS0009	34	36	NS	E253113	253113	1	G	D	35.67	41.7	3.08	0.555	0.43	0.132	0.41	0.11	0.146	0.011	0.09	0.043	1.64	0.46	0.1	2.2	4042	0.3366	1.91862	-1.58202	NAF
NS0009	66	68	NS	E253130	253130	1	G	D	34.79	40.22	2.72	0.865	0.67	0.124	0.66	0.1	0.11	0.005	0.206	0.028	3.78	1.13	0.2	5.11	4058	0.153	1.7442	-1.5912	NAF
NS0009	78	80	NS	E253136	253136	1	G	D	36.91	42.37	1.39	0.71	0.55	0.068	0.36	0.1	0.072	0.003	0.332	0.012	1.49	0.34	-0.22	1.61	4064	0.0918	1.7442	-1.6524	NAF
NS0009	80	82	NS	E253137	253137	1	G	D	38.56	39.18	1.65	0.8	0.62	0.075	0.48	0.1	0.076	0.003	0.36	0.013	1.57	0.45	-0.19	1.83	4065	0.0918	1.7442	-1.6524	NAF
NS0009	74	76	NS	E253134	253134	1	G	D	36.15	43.25	1.3	0.684	0.53	0.063	0.3	0.11	0.095	0.003	0.285	0.018	1.41	0.42	-0.03	1.8	4062	0.0918	1.91862	-1.82682	NAF
NS0009	86	88	NS	E253140	253140	1	G	D	38.4	39.25	1.66	0.865	0.67	0.086	0.56	0.13	0.07	0.006	0.289	0.018	1.5	0.58	-0.1	1.98	4068	0.1836	2.26746	-2.08386	NAF
NS0009	62	64	NS	E253128	253128	1	G	D	32.94	43.02	3.56	0.581	0.45	0.171	0.63	0.13	0.089	0.004	0.166	0.024	2.6	1.34	0.17	4.11	4056	0.1224	2.26746	-2.14506	NAF
NS0009	60	62	NS	E253127	253127	1	G	D	33.28	40.93	4.15	0.62	0.48	0.197	0.72	0.15	0.13	0.006	0.214	0.03	3.52	1.53	0.21	5.26	4055	0.1836	2.6163	-2.4327	NAF
NS0009	82	84	NS	E253138	253138	1	G	D	36.86	41.44	1.52	0.775	0.6	0.068	0.38	0.15	0.088	0.003	0.455	0.021	1.68	0.37	-0.15	1.9	4066	0.0918	2.6163	-2.5245	NAF
NS0009	88	90	NS	E253141	253141	1	G	D	34.78	41.13	3.12	0.736	0.57	0.144	1.21	0.17	0.078	0.005	0.247	0.013	2.1	1.09	0.08	3.27	4069	0.153	2.96514	-2.81214	NAF
NS0009	76	78	NS	E253135	253135	1	G	D	36.9	42.36	1.15	0.839	0.65	0.057	0.31	0.19	0.106	0.003	0.378	0.011	1.53	0.34	-0.17	1.7	4063	0.0918	3.31398	-3.22218	NAF
NS0009	92	94	NS	E253143	253143	1	G	D	32.46	41.48	2.54	0.684	0.53	0.115	1.85	0.37	0.081	0.088	0.511	0.018	0.35	5.42	-0.03	5.74	4071	2.6928	6.45354	-3.76074	NAF
NS0009	108	110	NS	E253151	253151	1	G	D	36.77	37.14	1.97	0.684	0.53	0.093	1.64	0.43	0.102	0.066	0.597	0.029	0.36	4.77	-0.3	4.83	4079	2.0196	7.50006	-5.48046	NAF
NS0009	106	108	NS	E253150	253150	1	G	D	33.16	41.15	2.16	0.684	0.53	0.099	1.6	0.49	0.119	0.065	0.609	0.017	0.28	5.29	-0.23	5.34	4078	1.989	8.54658	-6.55758	NAF
NS0009	84	86	NS	E253139	253139	1	G	D	34.77	42.77	2.11	0.775	0.6	0.096	0.48	0.56	0.223	0.004	0.662	0.024	1.63	0.56	-0.04	2.15	4067	0.1224	9.76752	-9.64512	NAF
NS0009	110	112	NS	E253152	253152	1	G	D	35.06	39.6	1.77	0.697	0.54	0.086	1.7	0.65	0.138	0.035	0.531	0.027	0.44	4.53	-0.29	4.68	4080	1.071	11.3373	-10.2663	NAF
NS0009	104	106	NS	E253149	253149	1	G	D	30.01	41.45	3.96	0.555	0.43	0.186	2.29	0.89	0.243	0.17	1.34	0.043	0.34	5	0.11	5.45	4077	5.202	15.52338	-10.32138	NAF
NS0009	112	114	NS	E253153	253153	1	G	D	26.37	45.73	4.74	0.465	0.36	0.218	2.76	1.05	0.157	0.141	2.21	0.09	0.83	3.28	0.53	4.64	4081	4.3146	18.3141	-13.9995	NAF
NS0009	102	104	NS	E253148	253148	1	G	D	33.14	40.76	2.39	0.607	0.47	0.116	1.88	0.91	0.108	0.054	0.697	0.036	0.79	3.89	0.07	4.75	4076	1.6524	15.87222	-14.21982	NAF
NS0009	114	116	NS	E253154	253154	1	G	D	30.43	39.45	3.65	0.646	0.5	0.173	3.11	1.14	0.131	0.106	1.51	0.072	0.42	5.3	0.34	6.06	4082	3.2436	19.88388	-16.64028	NAF
NS0009	120	122	NS	E253157	253157	1	G	D	31.97	39.19	2.77	0.671	0.52	0.129	2.54	1.9	0.101	0.092	1.36	0.065	0.32	4.35	0.94	5.61	4085	2.8152	33.1398	-30.3246	NAC
NS0009	122	124	NS	E253158	253158	1	G	D	32.06	40.19	2.2	0.607	0.47	0.1	2.26	2.08	0.074	0.055	1.14	0.064	0.17	3.64	1.28	5.09	4086	1.683	36.27936	-34.59636	NAC
NS0009	100	102	NS	E253147	253147	1	G	D	34.33	37.97	1.72	0.646	0.5	0.083	2.13	2.07	0.115	0.043	0.418	0.032	0.41	4	0.99	5.4	4075	1.3158	36.10494	-34.78914	NAC
NS0009	116	118	NS	E253155	253155	1	G	D	29.09	41.68	3.52	0.516	0.4	0.162	2.66	2.21	0.179	0.122	1.8	0.076	0.24	3.54	1.19	4.97	4083	3.7332	38.54682	-34.81362	NAC
NS0009	98	100	NS	E253146	253146	1	G	D	34.65	37.37	1.66	0.633	0.49	0.078	2.09	2.09	0.107	0.033	0.505	0.032	0.25	3.97	1.06	5.28	4074	1.0098	36.45378	-35.44398	NAC
NS0009	124	126	NS	E253159	253159	1	G	D	31.53	40.37	2.64	0.542	0.42	0.126	2.54	2.2	0.149	0.088	1.22	0.08	0.19	3.46	1.21	4.86	4087	2.6928	38.3724	-35.6796	NAC
NS0009	118	120	NS	E253156	253156	1	G	D	28.94	44	2.22	0.594	0.46	0.102	2.09	2.53	0.121	0.071	0.944	0.059	0.39	3.55	1.56	5.5	4084	2.1726	44.12826	-41.95566	NAC
NS0009	94	96	NS	E253144	253144	1	G	D	31.21	38.92	2.43	0.697	0.54	0.114	2.73	2.88	0.131	0.075	0.469	0.021	0.36	4.43	1.85	6.64	4072	2.295	50.23296	-47.93796	NAC
NS0009	96	98	NS	E253145	253145	1	G	D	29.88	40.48	1.95	0.607	0.47	0.089	2.63	3.65	0.108	0.062	0.496	0.034	0.28	3.39	3.22	6.89	4073	1.8972	63.6633	-61.7661	NAC
NS0010	86	88	NS	E253204	253204	1	G	D	15.65	52.02	9.49	0.207	0.16	0.391	2.79	0.28	0.073	2.19	2.11	0.024	0.25	5.59	3.22	9.06	4130	67.014	4.88376	62.13024	PAF(HC)
NS0010	84	86	NS	E253203	253203	1	G	D	24.4	40.1	4.21	0.736	0.57	0.175	2.67	0.53	0.11	1.33	0.723	0.008	0.5	11.73	2.76	14.99	4129	40.698	9.24426	31.45374	PAF(HC)
NS0010	12	14	NS	E253166	253166	1	G	D	50.69	10.84	6.33	-0.0129	-0.01	0.225	0.03	0.02	0.034	0.047	0.044	0.004	7.9	1.57	0.41	9.88	4093	1.4382	0.34884	1.08936	PAF(LC)
NS0010	6	8	NS	E253163	253163	1	G	D	50.86	12.67	4.45	-0.0129	-0.01	0.123	0.03	0.03	0.048	0.033	0.044	0.01	7.79	1.31	0.34	9.44	4091	1.0098	0.52326	0.48654	PAF(LC)
NS0010	4	6	NS	E253162	253162	1	G	D	50.93	14.08	3.54	0.065	0.05	0.111	0.01	0.02	0.103	0.023	0.028	0.0005	7.18	1.33	0.26	8.77	4090	0.7038	0.34884	0.35496	PAF(LC)
NS0010	48	50	NS	E253185	253185	1	G	D	16.99	66.76	5.37	0.039	0.03	0.217	0.05	0.005	0.026	0.014	0.294	0.024	0.92	1.47	0.16	2.55	4111	0.4284	0.08721	0.34119	PAF(LC)
NS0010	54	56	NS	E253188	253188	1	G	D	37.15	42.8	1.33	0.31	0.24	0.051	0.04	0.005	0.078	0.014	0.134	0.004	1.12	0.45	0.13	1.7	4114	0.4284	0.08721	0.34119	PAF(LC)
NS0010	56	58	NS	E253189	253189	1	G	D	35.01	45.66	1.13	0.426	0.33	0.045	0.04	0.005	0.093	0.013	0.122	0.008	1.54	0.48	0.13	2.15	4115	0.3978	0.08721	0.31059	PAF(LC)
NS0010	2	4	NS	E253161	253161	1	G	D	55.74	8.24	3.83	0.039	0.03	0.105	0.02	0.02	0.099	0.021	0.052	0.0005	5.72	1.36	0.26	7.34	4089	0.6426	0.34884	0.29376	PAF(LC)
NS0010	14	16	NS	E253167	253167	1	G	D	38.66	38.23	2.32	-0.0129	-0.01	0.094	0.03	0.005	0.067	0.012	0.233	0.003	2.56	0.65	0.16	3.37	4094	0.3672	0.08721	0.27999	PAF(LC)
NS0010	58	60	NS	E253190	253190	1	G	D	34.62	45.87	1.21	1.136	0.88	0.049	0.04	0.005	0.06	0.012	0.132	0.014	1	0.49	0.16	1.65	4116	0.3672	0.08721	0.27999	PAF(LC)
NS0010	52	54	NS	E253187	253187	1	G	D	27.6	56.92	1.25	0.168	0.13	0.042	0.04	0.005	0.058	0.011	0.062	0.005	1.32	0.42	0.08	1.82	4113	0.3366	0.08721	0.24939	PAF(LC)
NS0010	46	48	NS	E253184	253184	1	G	D	16.34	66.58	6.13	0.026	0.02	0.239	0.06	0.005	0.049	0.01	0.392	0.015	1.1	1.57	0.15	2.82	4110	0.306	0.08721	0.21879	PAF(LC)
NS0010	60	62	NS	E253191	253191	1	G	D	36.58	45.06	0.87	0.142	0.11	0.037	0.02	0.005	0.015	0.008	0.083	0.003	1.01	0.33	0.12	1.46	4117	0.2448	0.08721	0.15759	PAF(LC)
NS0010	8	10	NS	E253164	253164	1	G	D	47.34	16.65	6.39	-0.0129	-0.01	0.273	0.08	0.04	0.034	0.027	0.029	0.024	6.79	1.62	0.35	8.76	4092	0.8262	0.69768	0.12852	PAF(LC)
NS0010	16	18	NS	E253168	253168	1	G	D	38.19	38.99	2.42	0.026	0.02	0.102	0.06	0.005	0.055	0.006	0.428	0.001	2.28	0.61	0.16	3.05	4095	0.1836	0.08721	0.09639	PAF(LC)
NS0010	20	22	NS	E253170	253170	1	G	D	36.92	40.86	1.76	0.052	0.04	0.05	0.01	0.005	0.054	0.006	0.106	0.0005	3.21	0.68	0.13	4.02	4097	0.1836	0.08721	0.09639	PAF(LC)
NS0010	22	24	NS	E253171	253171	1	G	D	36.38	41.54	2.25	0.026	0.02	0.064	0.02	0.005	0.064	0.006	0.172	0.003	2.64	0.7	0.14	3.48	4098	0.1836	0.08721	0.09639	PAF(LC)
NS0010	50	52	NS	E253186	253186	1	G	D	25.79	57.36	3.43	0.039	0.03	0.131	0.05	0.005	0.019	0.006	0.317	0.014	0.56	0.86	0.15	1.57	4112	0.1836	0.08721	0.09639	PAF(LC)
NS0010	68	70	NS	E253195	253195	1	G	D	39.43	40.06	1.07	0.129	0.1	0.043	0.05	0.005	0.04	0.006	0.175	0.002	1.31	0.38	0.12	1.81	4121	0.1836	0.08721	0.09639	PAF(LC)

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0010	24	26	NS	E253172	253172	1	G	D	39.34	39.85	1.24	0.026	0.02	0.04	0.03	0.005	0.041	0.005	0.237	0.007	1.63	0.37	0.1	2.1	4099	0.153	0.08721	0.06579	PAF(LC)
NS0010	62	64	NS	E253192	253192	1	G	D	35.2	46.58	0.96	0.065	0.05	0.037	0.02	0.005	0.021	0.005	0.112	0.007	1	0.34	0.09	1.43	4118	0.153	0.08721	0.06579	PAF(LC)
NS0010	64	66	NS	E253193	253193	1	G	D	36.37	44.56	0.87	0.245	0.19	0.036	0.06	0.005	0.029	0.005	0.117	0.0005	1.4	0.4	0.07	1.87	4119	0.153	0.08721	0.06579	PAF(LC)
NS0010	28	30	NS	E253174	253174	1	G	D	38.54	40.49	1.34	0.039	0.03	0.052	0.04	0.005	0.057	0.004	0.358	0.0005	1.7	0.32	0.11	2.13	4101	0.1224	0.08721	0.03519	PAF(LC)
NS0010	38	40	NS	E253180	253180	1	G	D	30.01	48	3.5	0.039	0.03	0.153	0.11	0.005	0.116	0.004	0.839	0.008	2.75	0.72	0.28	3.75	4106	0.1224	0.08721	0.03519	PAF(LC)
NS0010	40	42	NS	E253181	253181	1	G	D	29.91	48.38	3.72	0.026	0.02	0.154	0.12	0.005	0.089	0.004	0.84	0.01	2.46	0.79	0.2	3.45	4107	0.1224	0.08721	0.03519	PAF(LC)
NS0010	44	46	NS	E253183	253183	1	G	D	21.49	60.33	5.08	-0.0129	-0.01	0.22	0.08	0.005	0.055	0.004	0.538	0.014	1.05	1.26	0.17	2.48	4109	0.1224	0.08721	0.03519	PAF(LC)
NS0010	66	68	NS	E253194	253194	1	G	D	37.48	41.82	0.88	0.865	0.67	0.035	0.08	0.01	0.036	0.006	0.15	0.006	1.56	0.45	0.11	2.12	4120	0.1836	0.17442	0.00918	PAF(LC)
NS0010	18	20	NS	E253169	253169	1	G	D	38.55	41.4	1.17	0.026	0.02	0.049	0.02	0.005	0.036	0.003	0.216	0.004	1.46	0.33	0.07	1.86	4096	0.0918	0.08721	0.00459	PAF(LC)
NS0010	26	28	NS	E253173	253173	1	G	D	41.03	36.47	1.48	0.026	0.02	0.058	0.05	0.005	0.07	0.003	0.354	0.0005	1.95	0.36	0.1	2.41	4100	0.0918	0.08721	0.00459	PAF(LC)
NS0010	30	32	NS	E253175	253175	1	G	D	38.15	41.17	1.21	0.039	0.03	0.05	0.04	0.005	0.071	0.003	0.326	0.003	1.85	0.26	0.08	2.19	4102	0.0918	0.08721	0.00459	PAF(LC)
NS0010	34	36	NS	E253177	253177	1	G	D	35.75	43.62	1.66	0.026	0.02	0.064	0.03	0.005	0.094	0.003	0.259	0.003	2.08	0.45	0.1	2.63	4104	0.0918	0.08721	0.00459	PAF(LC)
NS0010	36	38	NS	E253178	253178	1	G	D	32.07	46.45	3.34	0.026	0.02	0.144	0.08	0.005	0.093	0.003	0.619	0.0005	2.2	0.8	0.17	3.17	4105	0.0918	0.08721	0.00459	PAF(LC)
NS0010	42	44	NS	E253182	253182	1	G	D	35.72	44.47	1.67	0.026	0.02	0.069	0.04	0.005	0.078	0.003	0.328	0.005	1.65	0.41	0.07	2.13	4108	0.0918	0.08721	0.00459	PAF(LC)
NS0010	32	34	NS	E253176	253176	1	G	D	37.98	41.39	1.38	0.026	0.02	0.062	0.05	0.005	0.098	0.002	0.36	0.003	1.94	0.35	0.18	2.47	4103	0.0612	0.08721	-0.02601	NAF
NS0010	76	78	NS	E253199	253199	1	G	D	30.65	39.07	2.83	0.8	0.62	0.118	2.54	0.28	0.051	0.145	0.162	0.002	0.42	9.41	0.27	10.1	4125	4.437	4.88376	-0.44676	NAF
NS0010	0	2	NS	E253160	253160	1	G	D	57.06	7.83	3.35	0.052	0.04	0.117	0.11	0.1	0.066	0.022	0.103	0.005	4.68	1.32	0.26	6.26	4088	0.6732	1.7442	-1.071	NAF
NS0010	70	72	NS	E253196	253196	1	G	D	34.67	38.47	1.21	0.697	0.54	0.049	1.27	0.13	0.02	0.027	0.175	0.0005	0.93	7.28	0.01	8.22	4122	0.8262	2.26746	-1.44126	NAF
NS0010	78	80	NS	E253200	253200	1	G	D	33.55	42.53	1.09	0.607	0.47	0.047	1.34	0.18	0.036	0.046	0.084	0.001	0.38	5.64	-0.03	5.99	4126	1.4076	3.13956	-1.73196	NAF
NS0010	74	76	NS	E253198	253198	1	G	D	35.13	39	1.3	0.658	0.51	0.053	1.44	0.16	0.035	0.028	0.107	0.0005	0.45	6.4	-0.14	6.71	4124	0.8568	2.79072	-1.93392	NAF
NS0010	72	74	NS	E253197	253197	1	G	D	35.93	39.24	0.9	0.736	0.57	0.037	1.09	0.15	0.023	0.022	0.148	0.002	0.48	6.07	-0.04	6.51	4123	0.6732	2.6163	-1.9431	NAF
NS0010	94	96	NS	E253208	253208	1	G	D	34.89	38.56	1.54	0.594	0.46	0.065	1.48	0.35	0.078	0.087	0.154	0.014	0.75	6.34	0.11	7.2	4134	2.6622	6.1047	-3.4425	NAF
NS0010	80	82	NS	E253201	253201	1	G	D	31.65	43.26	1.76	0.62	0.48	0.072	1.61	0.29	0.075	0.051	0.124	0.0005	0.4	5.98	0.01	6.39	4127	1.5606	5.05818	-3.49758	NAF
NS0010	90	92	NS	E253206	253206	1	G	D	23.55	49.65	1.77	0.568	0.44	0.073	2.12	0.42	0.085	0.104	0.098	0.0005	0.64	9.91	0.21	10.76	4132	3.1824	7.32564	-4.14324	NAF
NS0010	88	90	NS	E253205	253205	1	G	D	26.76	36.7	1.26	0.852	0.66	0.048	2.64	0.6	0.094	0.186	0.085	0.0005	0.87	17.26	0.54	18.67	4131	5.6916	10.4652	-4.7736	NAF
NS0010	98	100	NS	E253210	253210	1	G	D	34.76	41.42	0.79	0.555	0.43	0.033	1.14	0.34	0.084	0.03	0.078	0.006	0.38	5.43	-0.04	5.77	4136	0.918	5.93028	-5.01228	NAF
NS0010	92	94	NS	E253207	253207	1	G	D	34.8	39.83	0.93	0.671	0.52	0.037	1.3	0.39	0.097	0.04	0.142	0.002	0.25	6.18	-0.14	6.29	4133	1.224	6.80238	-5.57838	NAF
NS0010	100	102	NS	E253211	253211	1	G	D	30.51	43.06	1.12	0.684	0.53	0.049	1.77	0.53	0.136	0.105	0.101	0.002	0.44	8.03	0.15	8.62	4137	3.213	9.24426	-6.03126	NAF
NS0010	96	98	NS	E253209	253209	1	G	D	34.07	42.8	0.62	0.555	0.43	0.025	1.07	0.39	0.098	0.021	0.065	0.005	0.22	5.33	-0.1	5.45	4135	0.6426	6.80238	-6.15978	NAF
NS0010	82	84	NS	E253202	253202	1	G	D	34.97	39.01	1.24	0.658	0.51	0.053	1.3	0.46	0.124	0.029	0.19	0.0005	0.54	6.52	-0.18	6.88	4128	0.8874	8.02332	-7.13592	NAF
NS0011	96	98	NS	E253261	253261	1	G	D	33.17	35.83	2.62	0.723	0.56	0.111	2.31	0.33	0.102	0.203	0.351	0.008	0.89	8.52	0.42	9.83	4186	6.2118	5.75586	0.45594	PAF(LC)
NS0011	24	26	NS	E253224	253224	1	G	D	16.08	60.85	9.55	-0.0129	-0.01	0.495	0.24	0.02	0.051	0.026	1.53	0.046	0.89	2.09	0.57	3.55	4150	0.7956	0.34884	0.44676	PAF(LC)
NS0011	116	118	NS	E253271	253271	1	G	D	37.14	43.27	1.2	0.065	0.05	0.051	0.19	0.04	0.089	0.036	0.122	0.002	1.12	0.33	0.14	1.59	4195	1.1016	0.69768	0.40392	PAF(LC)
NS0011	88	90	NS	E253257	253257	1	G	D	40.3	36.84	2.09	0.426	0.33	0.087	0.12	0.02	0.107	0.023	0.612	0.011	0.91	0.45	0.29	1.65	4182	0.7038	0.34884	0.35496	PAF(LC)
NS0011	114	116	NS	E253270	253270	1	G	D	36.91	43	1.82	0.065	0.05	0.08	0.16	0.02	0.093	0.02	0.226	0.007	1.06	0.5	0.15	1.71	4194	0.612	0.34884	0.26316	PAF(LC)
NS0011	26	28	NS	E253225	253225	1	G	D	23.79	55.45	5.15	0.026	0.02	0.285	0.13	0.01	0.083	0.014	0.899	0.03	1.95	1.23	0.27	3.45	4151	0.4284	0.17442	0.25398	PAF(LC)
NS0011	32	34	NS	E253228	253228	1	G	D	36.93	43	1.76	0.039	0.03	0.07	0.08	0.005	0.037	0.01	0.41	0.014	0.81	0.39	0.16	1.36	4154	0.306	0.08721	0.21879	PAF(LC)
NS0011	86	88	NS	E253256	253256	1	G	D	38.64	40.02	1.08	0.891	0.69	0.047	0.09	0.02	0.101	0.018	0.311	0.007	1.05	0.33	0.21	1.59	4181	0.5508	0.34884	0.20196	PAF(LC)
NS0011	120	122	NS	E253273	253273	1	G	D	41.5	37.68	1.19	0.039	0.03	0.058	0.11	0.02	0.119	0.018	0.305	0.01	0.76	0.39	0.13	1.28	4197	0.5508	0.34884	0.20196	PAF(LC)
NS0011	28	30	NS	E253226	253226	1	G	D	37.07	43.28	1.37	0.026	0.02	0.059	0.07	0.01	0.043	0.012	0.34	0.01	0.84	0.35	0.2	1.39	4152	0.3672	0.17442	0.19278	PAF(LC)
NS0011	34	36	NS	E253229	253229	1	G	D	39.11	41.07	1.18	0.116	0.09	0.051	0.06	0.005	0.01	0.009	0.309	0.005	1	0.25	0.15	1.4	4155	0.2754	0.08721	0.18819	PAF(LC)
NS0011	84	86	NS	E253255	253255	1	G	D	38.09	40.98	1.01	0.839	0.65	0.046	0.1	0.02	0.097	0.017	0.315	0.008	1.61	0.34	0.19	2.14	4180	0.5202	0.34884	0.17136	PAF(LC)
NS0011	22	24	NS	E253223	253223	1	G	D	25.9	54.07	3.76	0.026	0.02	0.191	0.17	0.01	0.091	0.011	1.04	0.018	2.2	0.71	0.26	3.17	4149	0.3366	0.17442	0.16218	PAF(LC)
NS0011	30	32	NS	E253227	253227	1	G	D	38.91	41.51	1.14	0.039	0.03	0.049	0.05	0.005	0.024	0.008	0.277	0.011	0.72	0.3	0.16	1.18	4153	0.2448	0.08721	0.15759	PAF(LC)
NS0011	36	38	NS	E253230	253230	1	G	D	33.11	49.11	1.7	0.026	0.02	0.057	0.06	0.005	0.019	0.008	0.308	0.014	0.75	0.42	0.15	1.32	4156	0.2448	0.08721	0.15759	PAF(LC)
NS0011	14	16	NS	E253219	253219	1	G	D	37.32	42.61	1.83	0.065	0.05	0.077	0.09	0.01	0.01	0.01	0.506	0.017	0.85	0.33	0.22	1.4	4145	0.306	0.17442	0.13158	PAF(LC)
NS0011	16	18	NS	E253220	253220	1	G	D	36.87	43.18	1.62	0.207	0.16	0.071	0.08	0.01	0.012	0.008	0.37	0.01	0.74	0.36	0.17	1.27	4146	0.2448	0.17442	0.07038	PAF(LC)
NS0011	82	84	NS	E253254	253254	1	G	D	37.28	43.59	1	0.077	0.06	0.044	0.04	0.005	0.05	0.005	0.287	0.013	0.82	0.2	0.14	1.16	4179	0.153	0.08721	0.06579	PAF(LC)
NS0011	68	70	NS	E253247	253247	1	G	D	38.76	39.91	1.44	0.039	0.03	0.044	0.02	0.005	0.094	0.004	0.126	0.01	2.03	0.48	0.12	2.63	4172	0.1224	0.08721	0.03519	PAF(LC)
NS0011	70	72	NS	E253248	253248	1	G	D	38.83	40.09	0.91	0.039	0.03	0.034	0.01	0.005	0.088	0.004	0.129	0.007	2.4	0.37	0.12	2.89	4173	0.1224	0.08721	0.03519	PAF(LC)
NS0011	72	74	NS	E253249	253249	1	G	D	41.35	35.38	0.97	0.09	0.07	0.035	0.02	0.005	0.119	0.004	0.199	0.0005	3.15	0.44	0.1	3.69	4174	0.1224	0.08721	0.03519	PAF(LC)
NS0011	38	40	NS	E253231	253231	1	G	D	24.96	58.52	3.08	0.026	0.02	0.117	0.13	0.01	0.021	0.006	0.718	0.021	0.61	0.53	0.14	1.28	4157	0.1836	0.17442	0.00918	PAF(LC)
NS0011	64	66	NS	E253245	253245	1	G	D	39.78	37.31	1.83	0.052	0.04	0.042	0.02	0.01	0.041	0.006	0.122	0.014	2.47	0.67	0.12	3.26	4170	0.1836	0.17442	0.00918	PAF(LC)
NS0011	90	92	NS	E253258	253258	1	G	D	32.65	48.08	1.34	1.562	1.21	0.054	0.06	0.01	0.041	0.006	0.314	0.015	0.78	0.42	0.26	1.46	4183	0.1836	0.17442	0.00918	PAF(LC)
NS0011	74	76	NS	E253250	253250	1	G	D	37.7	42.54	0.96	0.039	0.03	0.038	0.03	0.005	0.078	0.003	0.257	0.009	1.48	0.28	0.09	1.85	4175	0.0918	0.08721	0.00459	PAF(LC)
NS0011	76	78	NS	E253251	253251	1	G	D	38.22	41.96	1.06	0.026	0.02	0.044	0.05	0.005	0.09	0.003	0.317	0.01	1.06	0.26	0.12	1.44	4176	0.0918	0.08721	0.00459	PAF(LC)
NS0011	78	80	NS	E253252	253252	1	G	D	32.51	50.74	1.19	0.026	0.02	0.05	0.05	0.005	0.044	0.003	0.297	0.005	0.6	0.22	0.07	0.89	4177	0.0918	0.08721	0.00459	PAF(LC)
NS0011	108	110	NS	E253267	253267	1	G	D	31.8	50.98	1.21	0.503	0.39	0.054	0.05	0.005	0.035	0.003	0.214	0.013	0.57	0.28	0.1	0.95	4191	0.0918	0.08721	0.00459	PAF(LC)
NS0011	18	20	NS	E253221	253221	1	G	D	36.62	43.02	1.63	0.581	0.45	0.071	0.12	0.02	0.037	0.011	0.361	0.02	0.9	0.42	0.19	1.51	4147	0.3366	0.34884	-0.01224	NAF
NS0011	92	94	NS	E253259	253259	1	G	D	38.23	37.75	1.7	0.361	0.28	0.07	0.81	0.05	0.062	0.028	0.23	0.007	0.79	2.88	0.2	3.87	4184	0.8568	0.8721	-0.0153	NAF
NS0011	62	64	NS	E253243	253243	1	G	D	37.68	42.65	1.29	0.026	0.02	0.046	0.02	0.01	0.037	0.005	0.131	0.008	1.27	0.42	0.11	1.8	4169	0.153	0.17442	-0.02142	NAF
NS0011	110	112	NS	E253268	253268	1	G	D	36.4	44.46	1.09	0.503	0.39	0.047	0.06	0.01	0.089	0.005	0.235	0.01	0.99	0.25	0.08	1.32	4192	0.153	0.17442	-0.02142	NAF
NS0011	80	82	NS	E253253	253253	1	G	D	34.98	47.02	1.05	-0.0129	-0.01	0.044	0.04	0.005	0.09	0.002	0.273	0.009	1.18	0.23	0.12	1.53	4178	0.0612	0.08721	-0.02601	NAF
NS0011	42	44	NS	E253233	253233	1	G	D	22.15	62.74	3.28	-0.0129	-0.01	0.114	0.09	0.01	0.027	0.004	0.545	0.023	0.57	0.69	0.18	1.44	4159	0.1224	0.17442	-0.05202	NAF
NS0011	60	62	NS	E253242	253242	1	G	D	37.75	41.57	1.35	0.026	0.02	0.044	0.02	0.01	0.07	0.004	0.118	0.01	1.75	0.45	0.13	2.33	4168	0.1224	0.17442	-0.05202	NAF
NS0011	66	68	NS	E253246	253246	1	G	D	51.85	15.68	1.5	0.155	0.12	0.023	0.005	0.02	0.128	0.009	0.055	0.009	7.18	0.88	0.16	8.22	4171	0.2754	0.34884	-0.07344	NAF
NS0011	106	108	NS	E253266	253266	1	G	D	32.5	46.11	2.92	1.059	0.82	0.124	0.1	0.02	0.066	0.009	0.225	0.018	1.73	1.01	0.21	2.95	4190	0.2754	0.34884	-0.07344	NAF
NS0011	10	12	NS	E253217	253217	1	G	D	34.65	46.71	1.6	-0.0129	-0.01	0.068	0.07	0.01	0.05	0.003	0.384	0.021	0.84	0.33	0.1	1.27	4143	0.0918	0.17442	-0.08262	NAF
NS0011	40	42	NS	E253232	253232	1	G	D	26.43	57.9	2.4	-0.0129	-0.01	0.074	0.08	0.01	0.012	0.003	0.428	0.017	0.36	0.51	0.13	1	4158	0.0918	0.17442	-0.08262	NAF
NS0011	46	48	NS	E253235	253235	1	G	D	26.39	54.64	3.3	0.026	0.02	0.127	0.09	0.01	0.141	0.003	0.579	0.015	1.87	0.81	0.12	2.8	4161	0.0918	0.17442	-0.08262	NAF
NS0011	48	50	NS	E253236	253236	1	G	D	33.4	45.7	1.47	0.039	0.03	0.045	0.03	0.01	0.136	0.003	0.188	0.006	3.34	0.58	0.11	4.03	4162	0.0918	0.17442	-0.08262	NAF
NS0011	54	56	NS	E253239	253239	1	G	D	37.32	42.31	1.51	0.026	0.02	0.065	0.05	0.01	0.088	0.003	0.369	0.011	1.46	0.36	0.13	1.95	4165	0.0918	0.17442	-0.08262	NAF
NS0011	104	106	NS	E253265	253265	1	G	D	36.15	42.37	2.09	0.826	0.64	0.096	0.09	0.02	0.105	0.008	0.097	0.005	1.37	0.82	0.13	2.32	4189	0.2448	0.34884	-0.10404	NAF
NS0011	50	52	NS	E253237	253237	1	G	D	39.82	36.59	1.57	0.039	0.03	0.058	0.04	0.01	0.158	0.002	0.27	0.01	3.18	0.53	0.1	3.81	4163	0.0612	0.17442	-0.11322	NAF
NS0011	52	54	NS	E253238	253238	1	G	D	34.87	45.46	1.2	0.026	0.02	0.045	0.04	0.01	0.105	0.002	0.217	0.008	2.1	0.38	0.08	2.56	4164	0.0612	0.17442	-0.11322	NAF
NS0011	112	114	NS	E253269	253269	1	G	D	35.95	42.77	1.75	1.007	0.78	0.077	0.08	0.02	0.1	0.007	0.229	0.009	1.32	0.57	0.18	2.07	4193	0.2142	0.34884	-0.13464	NAF
NS0011	12	14	NS	E253218	253218	1	G	D	34.78	47.03	1.5	-0.0129	-0.01	0.068	0.08	0.02	0.019	0.005	0.393	0.021	0.67	0.3	0.16	1.13	4144	0.153	0.34884	-0.19584	NAF
NS0011	56	58	NS	E253240	253240	1	G	D	34.96	44.04	1.37	0.065	0.05	0.044	0.03	0.02	0.124	0.004	0.181	0.013	3.42	0.53	0.09	4.04	4166	0.1224	0.34884	-0.22644	NAF
NS0011	58	60	NS	E253241	253241	1	G	D	39	37.98	1.98	0.026	0.02	0.086	0.03	0.02	0.049	0.004	0.166	0.018	2.61	0.75	0.13	3.49	4167	0.1224	0.34884	-0.22644	NAF
NS0011	44	46	NS	E253234	253234	1	G	D	21.65	63.42	3.15	0.026	0.02	0.104	0.08	0.02	0.042	0.003	0.482	0.024	0.56	0.7	0.16	1.42	4160	0.0918	0.34884	-0.25704	NAF
NS0011	8	10	NS	E253216	253216	1	G	D	41.58	32.83	1.88	0.039	0.03	0.073	0.09	0.03	0.175	0.008	0.415	0.008	3.9	0.6	0.14	4.64	4142	0.2448	0.52326	-0.27846	NAF
NS0011	118	120	NS	E253272	253272	1	G	D	37.85	40.37	2.11	0.026	0.02	0.09	0.65	0.14	0.131	0.066	0.143	0.006	1.19	0.56	0.21	1.96	4196	2.0196	2.44188	-0.42228	NAF
NS0011	20	22	NS	E253222	253222	1	G	D	33.05	48.46	2.11	0.026	0.02	0.088	0.09	0.05	0.032	0.008	0.385	0.024	0.78	0.48	0.16	1.42	4148	0.2448	0.8721	-0.6273	NAF
NS0011	0	2	NS	E253212	253212	1	G	D	29.59	49.96	3.63	0.026	0.02	0.164	0.15	0.06	0.026	0.007	0.385	0.024	1.91	0.93	0.11	2.95	4138	0.2142	1.04652	-0.83232	NAF
NS0011	94	96	NS	E253260	253260	1	G	D	37.43	35.35	1.35	0.8	0.62	0.054	1.42	0.19	0.078	0.042	0.249	0.0005	0.45	6.03	0.02	6.5	4185	1.2852	3.31398	-2.02878	NAF
NS0011	6	8	NS	E253215	253215	1	G	D	44.78	27.3	2.31	0.026	0.02	0.075	0.12	0.15	0.111	0.012	0.291	0.01	4.36	0.87	0.2	5.43	4141	0.3672	2.6163	-2.2491	NAF
NS0011	102	104	NS	E253264	253264	1	G	D	31.83	40.9	1.85	0.646	0.5	0.083	1.57	0.36	0.122	0.08	0.125	0.007	1.08	7.26	0.1	8.44	4188	2.448	6.27912	-3.83112	NAF
NS0011	98	100	NS	E253262	253262	1	G	D	34.36	37.66	1.7	0.581	0.45	0.071	1.79	0.38	0.102	0.075	0.163	0.005	0.54	7.26	-0.05	7.75	4187	2.295	6.62796	-4.33296	NAF
NS0011	126	128	NS	E253276	253276	1	G	D	34.95	36.82	1.8	0.646	0.5	0.084	1.76	0.56	0.165	0.169	0.362	0.027	0.51	6.27	0.32	7.1	4200	5.1714	9.76752	-4.59612	NAF
NS0011	122	124	NS	E253274	253274	1	G	D	38.71	30.03	1.21	0.826	0.64	0.047	1.84	0.37	0.096	0.047	0.332	0.003	0.52	8.99	-0.03	9.48	4198	1.4382	6.45354	-5.01534	NAF
NS0011	124	126	NS	E253275	253275	1	G	D	36.1	35.02	0.98	0.826	0.64	0.044	1.73	0.46	0.116	0.029	0.242	0.006	0.37	8.7	-0.13	8.94	4199	0.8874	8.02332	-7.13592	NAF
NS0011	136	138	NS	E253281	253281	1	G	D	35.19	38.85	0.81	0.891	0.69	0.038	1.57	0.45	0.119	0.023	0.247	0.004	0.21	6.24	-0.25	6.2	4205	0.7038	7.8489	-7.1451	NAF
NS0011	134	136	NS	E253280	253280	1	G	D	34.49	33.76	0.9	1.007	0.78	0.039	2.59	0.52	0.114	0.028	0.275	0.002	0.29	11.12	-0.11	11.3	4204	0.8568	9.06984	-8.21304	NAF
NS0011	128	130	NS	E253277	253277	1	G	D	35.46	39.28	0.93	0.684	0.53	0.046	1.42	0.54	0.12	0.033	0.248	0.004	0.27	5.61	-0.22	5.66	4201	1.0098	9.41868	-8.40888	NAF
NS0011	132	134	NS	E253279	253279	1	G	D	34.68	34.32	0.86	1.097	0.85	0.037	2.33	0.65	0.104	0.027	0.259	0.002	0.34	10.18	-0.09	10.43	4203	0.8262	11.3373	-10.5111	NAF
NS0011	4	6	NS	E253214	253214	1	G	D	32.55	35.08	8.42	0.026	0.02	0.153	0.19	0.65	0.045	0.014	0.315	0.052	5.12	2.78	0.39	8.29	4140	0.4284	11.3373	-10.9089	NAF
NS0011	130	132	NS	E253278	253278	1	G	D	38.14	34.15	0.92	0.904	0.7	0.04	1.74	0.72	0.091	0.025	0.282	0.003	0.16	6.71	-0.13	6.74	4202	0.765	12.55824	-11.79324	NAF
NS0011	2	4	NS	E253213	253213	1	G	D	29.99	46.12	2.98	0.026	0.02	0.116	0.18	2.07	0.06	0.009	0.433	0.022	2.43	1.31	1.09	4.83	4139	0.2754	36.10494	-35.82954	NAC
NS0012	78	80	NS	E253321	253321	1	G	D	28.45	38.5	2.77	0.684	0.53	0.123	3.57	1.03	0.248	1.8	0.494	0.141	0.51	7.39	2.76	10.66	4245	55.08	17.96526	37.11474	PAF(HC)
NS0012	80	82	NS	E253322	253322	1	G	D	26.86	41.04	2.92	0.658	0.51	0.134	3.61	0.97	0.202	0.939	0.452	0.118	0.5	8.57	1.45	10.52	4246	28.7334	16.91874	11.81466	PAF(HC)
NS0012	52	54	NS	E253308	253308	1	G	D	31.3	39.79	3.73	0.284	0.22	0.172	3.52	0.28	0.064	0.217	0.892	0.169	0.97	4.53	0.41	5.91	4232	6.6402	4.88376	1.75644	PAF(LC)
NS0012	2	4	NS	E253283	253283	1	G	D	46.76	17.25	7.18	-0.0129	-0.01	0.719	0.02	0.005	0.022	0.021	0.025	0.002	5.99	1.47	0.24	7.7	4207	0.6426	0.08721	0.55539	PAF(LC)
NS0012	6	8	NS	E253285	253285	1	G	D	31.95	41.23	5.72	-0.0129	-0.01	0.394	0.03	0.005	0.011	0.011	0.009	0.004	5.06	1.57	0.19	6.82	4209	0.3366	0.08721	0.24939	PAF(LC)
NS0012	4	6	NS	E253284	253284	1	G	D	33.97	37.21	6.59	-0.0129	-0.01	0.572	0.03	0.01	0.012	0.013	0.017	0.003	5.23	1.63	0.2	7.06	4208	0.3978	0.17442	0.22338	PAF(LC)
NS0012	14	16	NS	E253289	253289	1	G	D	24.61	54.24	4.53	0.026	0.02	0.187	0.07	0.005	0.028	0.009	0.008	0.016	3.62	1.6	0.14	5.36	4213	0.2754	0.08721	0.18819	PAF(LC)
NS0012	12	14	NS	E253288	253288	1	G	D	32.61	43.17	3.81	0.026	0.02	0.181	0.06	0.01	0.011	0.009	0.008	0.004	4.63	1.32	0.14	6.09	4212	0.2754	0.17442	0.10098	PAF(LC)
NS0012	8	10	NS	E253286	253286	1	G	D	33.49	41.54	4.13	0.026	0.02	0.324	0.05	0.02	0.015	0.013	0.009	0.005	4.4	1.17	0.15	5.72	4210	0.3978	0.34884	0.04896	PAF(LC)
NS0012	0	2	NS	E253282	253282	1	G	D	42.28	24.07	6.03	0.026	0.02	0.535	0.06	0.03	0.021	0.018	0.035	0.003	6.66	1.41	0.24	8.31	4206	0.5508	0.52326	0.02754	PAF(LC)
NS0012	10	12	NS	E253287	253287	1	G	D	28.48	49.12	4.1	0.026	0.02	0.224	0.05	0.02	0.012	0.011	0.009	0.0005	4.22	1.29	0.14	5.65	4211	0.3366	0.34884	-0.01224	NAF
NS0012	16	18	NS	E253290	253290	1	G	D	30.49	48.27	2.78	0.026	0.02	0.109	0.17	0.02	0.066	0.005	0.025	0.015	3.51	1.08	0.1	4.69	4214	0.153	0.34884	-0.19584	NAF
NS0012	18	20	NS	E253291	253291	1	G	D	35.5	41.58	2.07	0.052	0.04	0.114	0.25	0.02	0.034	0.003	0.03	0.021	3.9	0.91	0.07	4.88	4215	0.0918	0.34884	-0.25704	NAF
NS0012	20	22	NS	E253292	253292	1	G	D	32.37	44.28	3	0.077	0.06	0.136	0.53	0.05	0.044	0.003	0.125	0.024	3.74	1.19	0.09	5.02	4216	0.0918	0.8721	-0.7803	NAF
NS0012	24	26	NS	E253294	253294	1	G	D	25.63	52.87	2.86	0.775	0.6	0.113	0.72	0.09	0.061	0.009	0.273	0.035	3.65	1.32	0.15	5.12	4218	0.2754	1.56978	-1.29438	NAF
NS0012	22	24	NS	E253293	253293	1	G	D	32.55	43.65	2.8	0.646	0.5	0.125	0.83	0.08	0.047	0.003	0.295	0.036	3.33	1.26	0.02	4.61	4217	0.0918	1.39536	-1.30356	NAF
NS0012	26	28	NS	E253295	253295	1	G	D	33.54	42.33	2.53	0.671	0.52	0.114	0.82	0.11	0.07	0.003	0.257	0.034	3.57	1.22	0.02	4.81	4219	0.0918	1.91862	-1.82682	NAF
NS0012	28	30	NS	E253296	253296	1	G	D	30.4	46.46	2.56	0.646	0.5	0.118	0.93	0.12	0.088	0.003	0.302	0.035	3.82	1.29	0.07	5.18	4220	0.0918	2.09304	-2.00124	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0012	30	32	NS	E253297	253297	1	G	D	32	44.85	1.99	0.736	0.57	0.091	0.85	0.13	0.072	0.003	0.232	0.028	3.66	1.12	0.03	4.81	4221	0.0918	2.26746	-2.17566	NAF
NS0012	48	50	NS	E253306	253306	1	G	D	32.86	39.52	2.63	0.336	0.26	0.126	2.86	0.34	0.076	0.105	0.647	0.124	0.86	5.28	0.05	6.19	4230	3.213	5.93028	-2.71728	NAF
NS0012	32	34	NS	E253298	253298	1	G	D	31.83	43.67	2.41	0.904	0.7	0.112	0.95	0.17	0.073	0.003	0.236	0.031	4.01	1.32	0.16	5.49	4222	0.0918	2.96514	-2.87334	NAF
NS0012	34	36	NS	E253299	253299	1	G	D	30.45	46.23	2.81	0.413	0.32	0.131	0.94	0.17	0.055	0.003	0.314	0.044	3.6	1.36	0.1	5.06	4223	0.0918	2.96514	-2.87334	NAF
NS0012	44	46	NS	E253304	253304	1	G	D	32.05	43.01	2.19	0.658	0.51	0.101	1.34	0.26	0.084	0.027	0.315	0.061	2.74	2.96	0.12	5.82	4228	0.8262	4.53492	-3.70872	NAF
NS0012	36	38	NS	E253300	253300	1	G	D	28.41	49.67	2.39	0.452	0.35	0.108	0.98	0.24	0.056	0.011	0.22	0.031	2.8	1.89	0.08	4.77	4224	0.3366	4.18608	-3.84948	NAF
NS0012	38	40	NS	E253301	253301	1	G	D	29.08	46.13	1.92	0.465	0.36	0.089	2.26	0.32	0.061	0.055	0.437	0.107	0.61	6.08	-0.11	6.58	4225	1.683	5.58144	-3.89844	NAF
NS0012	40	42	NS	E253302	253302	1	G	D	30.5	42.16	2.33	0.503	0.39	0.106	2.76	0.35	0.082	0.053	0.652	0.118	0.7	6.11	-0.09	6.72	4226	1.6218	6.1047	-4.4829	NAF
NS0012	82	84	NS	E253323	253323	1	G	D	24.87	45.05	3.33	0.607	0.47	0.148	3.69	0.62	0.108	0.195	0.559	0.159	0.79	8.55	0.46	9.8	4247	5.967	10.81404	-4.84704	NAF
NS0012	50	52	NS	E253307	253307	1	G	D	32.47	40.81	1.61	0.426	0.33	0.072	2.37	0.36	0.063	0.045	0.468	0.09	0.66	6.59	-0.17	7.08	4231	1.377	6.27912	-4.90212	NAF
NS0012	46	48	NS	E253305	253305	1	G	D	32.09	41.16	1.88	0.478	0.37	0.083	2.28	0.44	0.098	0.062	0.426	0.079	0.85	6.14	-0.08	6.91	4229	1.8972	7.67448	-5.77728	NAF
NS0012	42	44	NS	E253303	253303	1	G	D	31.79	38.8	2.22	0.594	0.46	0.099	2.91	0.45	0.108	0.06	0.624	0.112	0.74	7.64	-0.06	8.32	4227	1.836	7.8489	-6.0129	NAF
NS0012	76	78	NS	E253320	253320	1	G	D	32.14	40.28	2.11	0.503	0.39	0.095	2.94	0.46	0.049	0.041	0.517	0.136	0.64	6.54	-0.13	7.05	4244	1.2546	8.02332	-6.76872	NAF
NS0012	74	76	NS	E253319	253319	1	G	D	34.23	39.4	2.08	0.4	0.31	0.096	2.72	0.49	0.037	0.043	0.596	0.148	0.67	4.65	-0.07	5.25	4243	1.3158	8.54658	-7.23078	NAF
NS0012	72	74	NS	E253318	253318	1	G	D	33.85	38.72	1.98	0.503	0.39	0.089	2.84	0.49	0.065	0.041	0.556	0.145	0.64	5.81	-0.12	6.33	4242	1.2546	8.54658	-7.29198	NAF
NS0012	58	60	NS	E253311	253311	1	G	D	31.39	41.09	1.91	0.465	0.36	0.088	2.51	0.67	0.1	0.062	0.524	0.124	0.96	6.27	0.03	7.26	4235	1.8972	11.68614	-9.78894	NAF
NS0012	62	64	NS	E253313	253313	1	G	D	34.83	35.34	1.83	0.503	0.39	0.086	2.87	0.66	0.11	0.052	0.586	0.127	0.76	6.97	-0.12	7.61	4237	1.5912	11.51172	-9.92052	NAF
NS0012	66	68	NS	E253315	253315	1	G	D	34	38.45	2.27	0.387	0.3	0.12	2.4	0.75	0.103	0.04	0.488	0.116	1.07	4.81	-0.02	5.86	4239	1.224	13.0815	-11.8575	NAF
NS0012	60	62	NS	E253312	253312	1	G	D	31.51	41.72	1.95	0.439	0.34	0.093	2.24	0.78	0.08	0.045	0.434	0.103	1.14	5.6	0.12	6.86	4236	1.377	13.60476	-12.22776	NAF
NS0012	70	72	NS	E253317	253317	1	G	D	31.42	42.3	2.23	0.413	0.32	0.101	2.74	0.84	0.1	0.052	0.502	0.132	0.6	4.86	0.08	5.54	4241	1.5912	14.65128	-13.06008	NAF
NS0012	68	70	NS	E253316	253316	1	G	D	30.27	41.98	2.3	0.465	0.36	0.106	2.97	1.05	0.061	0.06	0.554	0.131	0.7	5.7	0.45	6.85	4240	1.836	18.3141	-16.4781	NAF
NS0012	56	58	NS	E253310	253310	1	G	D	24.93	50.71	2.23	0.297	0.23	0.104	2.59	1.37	0.201	0.12	0.569	0.131	0.7	4.39	0.53	5.62	4234	3.672	23.89554	-20.22354	NAF
NS0012	64	66	NS	E253314	253314	1	G	D	33.71	35.94	1.89	0.478	0.37	0.104	2.95	1.46	0.371	0.067	0.585	0.139	0.72	6.83	-0.08	7.47	4238	2.0502	25.46532	-23.41512	NAF
NS0012	54	56	NS	E253309	253309	1	G	D	25.33	50.41	2.32	0.245	0.19	0.103	2.42	1.56	0.361	0.099	0.549	0.113	0.76	3.79	0.29	4.84	4233	3.0294	27.20952	-24.18012	NAF
NS0024	202	204	NS	E391103	391103	1	G	D	19.13	54.31	2.82	0.478	0.37	0.13	1.82	0.34	0.039	0.97	0.358	0.026	0.32	9.48	2.02	11.82	4349	29.682	5.93028	23.75172	PAF(HC)
NS0024	204	206	NS	E391104	391104	1	G	D	21.18	49.63	4.44	0.349	0.27	0.207	1.98	0.3	0.023	0.725	0.708	0.048	0.59	9.57	1.56	11.72	4350	22.185	5.2326	16.9524	PAF(HC)
NS0024	178	180	NS	E391090	391090	1	G	D	22.52	45.5	4.34	0.465	0.36	0.191	2.42	0.32	0.046	0.563	0.557	0.042	0.86	11.19	1.35	13.4	4337	17.2278	5.58144	11.64636	PAF(HC)
NS0024	64	66	NS	E391033	391033	1	G	D	20.72	53.57	3.51	0.4	0.31	0.155	1.79	0.18	0.059	0.466	0.165	0.029	1.36	7.6	1.08	10.04	4280	14.2596	3.13956	11.12004	PAF(HC)
NS0024	182	184	NS	E391092	391092	1	G	D	25.53	41.01	3.65	0.503	0.39	0.165	2.17	0.98	0.269	0.917	0.219	0.03	0.39	11.79	1.75	13.93	4339	28.0602	17.09316	10.96704	PAF(HC)
NS0024	62	64	NS	E391032	391032	1	G	D	13.8	67.71	2.43	0.297	0.23	0.111	1.37	0.18	0.036	0.4	0.182	0.023	0.7	6.21	0.94	7.85	4279	12.24	3.13956	9.10044	PAF(LC)
NS0024	90	92	NS	E391046	391046	1	G	D	21.62	47.24	4.86	0.297	0.23	0.225	2.1	0.41	0.097	0.393	1.12	0.031	1.11	10.2	0.94	12.25	4293	12.0258	7.15122	4.87458	PAF(LC)
NS0024	246	248	NS	E391125	391125	1	G	D	24.18	48.06	3.31	0.426	0.33	0.153	2.04	0.46	0.108	0.391	0.282	0.024	1.23	7.87	0.95	10.05	4371	11.9646	8.02332	3.94128	PAF(LC)
NS0024	92	94	NS	E391047	391047	1	G	D	20.61	47.58	5.34	0.336	0.26	0.247	2.02	0.4	0.094	0.286	1.72	0.044	0.88	10.57	0.75	12.2	4294	8.7516	6.9768	1.7748	PAF(LC)
NS0024	40	42	NS	E391021	391021	1	G	D	24.22	51.44	7.09	0.413	0.32	0.342	0.29	0.04	0.054	0.057	1.42	0.036	1.63	1.86	0.33	3.82	4268	1.7442	0.69768	1.04652	PAF(LC)
NS0024	184	186	NS	E391093	391093	1	G	D	24.11	42.53	4.1	0.516	0.4	0.182	2.35	0.68	0.096	0.418	0.318	0.031	0.66	12.62	0.94	14.22	4340	12.7908	11.86056	0.93024	PAF(LC)
NS0024	156	158	NS	E391079	391079	1	G	D	19.63	51.42	3.92	0.31	0.24	0.181	2.25	0.43	0.061	0.25	1.19	0.028	0.61	10.55	0.72	11.88	4326	7.65	7.50006	0.14994	PAF(LC)
NS0024	66	68	NS	E391034	391034	1	G	D	30.65	48.23	2.44	0.103	0.08	0.115	0.37	0.04	0.128	0.025	0.506	0.019	2.57	1.04	0.21	3.82	4281	0.765	0.69768	0.06732	PAF(LC)
NS0024	42	44	NS	E391022	391022	1	G	D	25.41	49.78	7.08	0.245	0.19	0.344	0.48	0.06	0.086	0.034	0.834	0.038	1.96	2.04	0.28	4.28	4269	1.0404	1.04652	-0.00612	NAF
NS0024	94	96	NS	E391048	391048	1	G	D	21.85	44.02	5.12	0.336	0.26	0.261	2.23	0.37	0.071	0.205	1.86	0.043	0.85	12.62	0.68	14.15	4295	6.273	6.45354	-0.18054	NAF
NS0024	0	2	NS	E391001	391001	1	G	D	42.3	20.24	9.71	0.026	0.02	0.498	0.12	0.07	0.031	0.03	0.103	0.042	5.35	2.59	0.37	8.31	4248	0.918	1.22094	-0.30294	NAF
NS0024	14	16	NS	E391008	391008	1	G	D	22.43	58.16	4.59	0.065	0.05	0.207	0.12	0.04	0.081	0.011	0.04	0.055	2.68	1.47	0.22	4.37	4255	0.3366	0.69768	-0.36108	NAF
NS0024	12	14	NS	E391007	391007	1	G	D	17.7	59.5	8.38	0.052	0.04	0.365	0.15	0.05	0.068	0.016	0.066	0.061	2.83	2.5	0.29	5.62	4254	0.4896	0.8721	-0.3825	NAF
NS0024	230	232	NS	E391117	391117	1	G	D	30.54	47.44	2.02	0.142	0.11	0.09	0.7	0.05	0.019	0.011	0.089	0.015	2.7	2.69	0.17	5.56	4363	0.3366	0.8721	-0.5355	NAF
NS0024	16	18	NS	E391009	391009	1	G	D	30.73	47.19	3.36	0.129	0.1	0.162	0.17	0.05	0.094	0.009	0.153	0.043	3.16	1.18	0.2	4.54	4256	0.2754	0.8721	-0.5967	NAF
NS0024	24	26	NS	E391013	391013	1	G	D	28.31	48.7	3.76	0.413	0.32	0.174	0.27	0.05	0.055	0.006	2.12	0.048	2.83	0.7	0.21	3.74	4260	0.1836	0.8721	-0.6885	NAF
NS0024	38	40	NS	E391020	391020	1	G	D	29.69	48.5	2.66	0.607	0.47	0.127	0.26	0.05	0.067	0.004	1.22	0.034	2.81	0.68	0.2	3.69	4267	0.1224	0.8721	-0.7497	NAF
NS0024	44	46	NS	E391023	391023	1	G	D	26.16	50.2	5.86	0.478	0.37	0.277	0.54	0.09	0.08	0.026	0.511	0.037	2.22	1.8	0.27	4.29	4270	0.7956	1.56978	-0.77418	NAF
NS0024	34	36	NS	E391018	391018	1	G	D	31.45	46.38	2.59	0.478	0.37	0.122	0.23	0.05	0.072	0.003	1.29	0.041	2.69	0.61	0.2	3.5	4265	0.0918	0.8721	-0.7803	NAF
NS0024	36	38	NS	E391019	391019	1	G	D	31.9	45.82	2.41	0.245	0.19	0.112	0.23	0.05	0.104	0.003	1.08	0.027	3.2	0.62	0.15	3.97	4266	0.0918	0.8721	-0.7803	NAF
NS0024	58	60	NS	E391030	391030	1	G	D	32.09	45.61	3.41	0.155	0.12	0.162	0.18	0.05	0.124	0.002	0.553	0.022	2.22	1.05	0.22	3.49	4277	0.0612	0.8721	-0.8109	NAF
NS0024	10	12	NS	E391006	391006	1	G	D	28.38	49.75	4.31	0.116	0.09	0.199	0.16	0.07	0.055	0.01	0.036	0.056	2.89	1.45	0.22	4.56	4253	0.306	1.22094	-0.91494	NAF
NS0024	6	8	NS	E391004	391004	1	G	D	25.38	51.09	6.47	0.09	0.07	0.294	0.21	0.07	0.067	0.008	0.251	0.06	2.46	2.13	0.23	4.82	4251	0.2448	1.22094	-0.97614	NAF
NS0024	152	154	NS	E391077	391077	1	G	D	20.3	49.49	4.18	0.336	0.26	0.192	2.13	0.34	0.028	0.161	1.62	0.034	0.65	11.16	0.51	12.32	4324	4.9266	5.93028	-1.00368	NAF
NS0024	22	24	NS	E391012	391012	1	G	D	28.87	46.35	4.75	0.555	0.43	0.212	0.34	0.07	0.097	0.007	1.1	0.063	3.31	1.3	0.26	4.87	4259	0.2142	1.22094	-1.00674	NAF
NS0024	32	34	NS	E391017	391017	1	G	D	29.77	48.9	2.93	0.258	0.2	0.14	0.29	0.07	0.089	0.004	1.11	0.037	2.46	0.75	0.17	3.38	4264	0.1224	1.22094	-1.09854	NAF
NS0024	220	222	NS	E391112	391112	1	G	D	27.39	48.54	3.38	0.155	0.12	0.158	1.22	0.13	0.036	0.035	0.071	0.016	1.89	4.93	0.17	6.99	4358	1.071	2.26746	-1.19646	NAF
NS0024	20	22	NS	E391011	391011	1	G	D	27.49	48.93	4.81	0.258	0.2	0.226	0.33	0.08	0.083	0.006	1.39	0.059	2.92	1.22	0.2	4.34	4258	0.1836	1.39536	-1.21176	NAF
NS0024	4	6	NS	E391003	391003	1	G	D	26.59	49.09	7.1	0.052	0.04	0.291	0.15	0.09	0.01	0.01	0.047	0.049	2.39	2.26	0.21	4.86	4250	0.306	1.56978	-1.26378	NAF
NS0024	54	56	NS	E391028	391028	1	G	D	30.03	48.51	2.66	0.4	0.31	0.125	0.31	0.08	0.137	0.004	0.73	0.024	2.66	0.86	0.14	3.66	4275	0.1224	1.39536	-1.27296	NAF
NS0024	18	20	NS	E391010	391010	1	G	D	29.84	45.26	4.55	0.284	0.22	0.215	0.39	0.09	0.107	0.009	1.09	0.057	3.53	1.29	0.23	5.05	4257	0.2754	1.56978	-1.29438	NAF
NS0024	26	28	NS	E391014	391014	1	G	D	26.72	49.01	5.16	0.542	0.42	0.244	0.34	0.09	0.057	0.007	2.49	0.065	2.25	0.95	0.27	3.47	4261	0.2142	1.56978	-1.35558	NAF
NS0024	48	50	NS	E391025	391025	1	G	D	27.57	51.81	2.98	0.361	0.28	0.142	0.37	0.09	0.061	0.004	0.728	0.02	2.54	0.91	0.19	3.64	4272	0.1224	1.56978	-1.44738	NAF
NS0024	28	30	NS	E391015	391015	1	G	D	26.13	51.67	4.21	0.478	0.37	0.201	0.46	0.1	0.062	0.007	1.62	0.054	2.32	1	0.22	3.54	4262	0.2142	1.7442	-1.53	NAF
NS0024	30	32	NS	E391016	391016	1	G	D	27.53	49.2	4.68	0.232	0.18	0.221	0.53	0.11	0.068	0.007	0.611	0.051	2.92	1.46	0.23	4.61	4263	0.2142	1.91862	-1.70442	NAF
NS0024	8	10	NS	E391005	391005	1	G	D	27.56	50.69	4.48	0.155	0.12	0.203	0.17	0.12	0.051	0.01	0.058	0.053	2.63	1.56	0.22	4.41	4252	0.306	2.09304	-1.78704	NAF
NS0024	228	230	NS	E391116	391116	1	G	D	29.41	45.8	2.28	0.232	0.18	0.102	1	0.14	0.046	0.012	0.144	0.015	3.52	4.31	0.15	7.98	4362	0.3672	2.44188	-2.07468	NAF
NS0024	232	234	NS	E391118	391118	1	G	D	27.72	39.09	2.6	0.349	0.27	0.112	2.58	0.21	0.016	0.047	0.029	0.018	2.71	12.43	0.17	15.31	4364	1.4382	3.66282	-2.22462	NAF
NS0024	52	54	NS	E391027	391027	1	G	D	22.69	53.46	6.45	0.555	0.43	0.305	0.72	0.15	0.084	0.01	1.08	0.053	2.27	1.77	0.26	4.3	4274	0.306	2.6163	-2.3103	NAF
NS0024	170	172	NS	E391086	391086	1	G	D	26.01	42.87	3.54	0.31	0.24	0.183	1.99	0.34	0.044	0.111	1.38	0.03	0.77	10.42	0.78	11.97	4333	3.3966	5.93028	-2.53368	NAF
NS0024	80	82	NS	E391041	391041	1	G	D	23.17	44.86	3.44	0.284	0.22	0.16	2.4	0.42	0.101	0.152	0.846	0.031	1.8	11.77	0.41	13.98	4288	4.6512	7.32564	-2.67444	NAF
NS0024	50	52	NS	E391026	391026	1	G	D	26.57	48.89	5.14	0.207	0.16	0.244	0.53	0.17	0.118	0.005	1.98	0.049	2.92	1.09	0.23	4.24	4273	0.153	2.96514	-2.81214	NAF
NS0024	60	62	NS	E391031	391031	1	G	D	27.35	39.76	2.53	0.271	0.21	0.117	1.99	0.26	0.028	0.053	1.16	0.033	1.64	12.78	0.1	14.52	4278	1.6218	4.53492	-2.91312	NAF
NS0024	68	70	NS	E391035	391035	1	G	D	29.42	43.83	3.32	0.155	0.12	0.157	1.07	0.28	0.177	0.064	1.16	0.027	2.29	4.94	0.23	7.46	4282	1.9584	4.88376	-2.92536	NAF
NS0024	248	250	NS	E391126	391126	1	G	D	34.27	37.65	3.05	0.258	0.2	0.153	1.61	0.43	0.113	0.147	0.436	0.02	1.1	5.54	0.13	6.77	4372	4.4982	7.50006	-3.00186	NAF
NS0024	78	80	NS	E391040	391040	1	G	D	24.37	42.14	3.93	0.374	0.29	0.182	2.27	0.43	0.11	0.146	1.27	0.036	1.47	12.11	0.44	14.02	4287	4.4676	7.50006	-3.03246	NAF
NS0024	88	90	NS	E391045	391045	1	G	D	24.06	42.51	3.59	0.465	0.36	0.166	2.42	0.58	0.131	0.224	0.428	0.025	1.01	13.26	0.56	14.83	4292	6.8544	10.11636	-3.26196	NAF
NS0024	218	220	NS	E391111	391111	1	G	D	25.78	40.44	3.34	0.452	0.35	0.149	2.33	0.37	0.057	0.1	0.024	0.023	1.64	13.73	0.23	15.6	4357	3.06	6.45354	-3.39354	NAF
NS0024	56	58	NS	E391029	391029	1	G	D	31.58	43.39	2.76	0.232	0.18	0.128	0.73	0.22	0.221	0.008	0.617	0.024	2.62	3.34	0.12	6.08	4276	0.2448	3.83724	-3.59244	NAF
NS0024	224	226	NS	E391114	391114	1	G	D	23.89	44.77	2.46	0.336	0.26	0.115	2.26	0.36	0.064	0.086	0.018	0.016	2.6	12.17	0.29	15.06	4360	2.6316	6.27912	-3.64752	NAF
NS0024	70	72	NS	E391036	391036	1	G	D	29.1	40.17	2.5	0.245	0.19	0.117	1.9	0.26	0.051	0.028	1.2	0.036	1.61	10.25	-0.03	11.83	4283	0.8568	4.53492	-3.67812	NAF
NS0024	206	208	NS	E391105	391105	1	G	D	25.94	41.2	4.11	0.374	0.29	0.187	2.05	0.71	0.069	0.27	1.48	0.028	0.73	11.14	0.64	12.51	4351	8.262	12.38382	-4.12182	NAF
NS0024	76	78	NS	E391039	391039	1	G	D	25.52	44.14	2.32	0.271	0.21	0.108	1.99	0.32	0.065	0.047	1.11	0.027	1.21	11.72	0.08	13.01	4286	1.4382	5.58144	-4.14324	NAF
NS0024	82	84	NS	E391042	391042	1	G	D	22.97	45.19	3.55	0.271	0.21	0.164	2.47	0.55	0.148	0.17	0.562	0.026	1.48	11.93	0.43	13.84	4289	5.202	9.5931	-4.3911	NAF
NS0024	188	190	NS	E391095	391095	1	G	D	22.63	44.21	4.97	0.258	0.2	0.229	2.25	0.28	0.01	0.011	2.32	0.039	0.82	11.88	0.05	12.75	4342	0.3366	4.88376	-4.54716	NAF
NS0024	214	216	NS	E391109	391109	1	G	D	27.12	39.29	3.09	0.31	0.24	0.144	2.04	0.35	0.047	0.05	0.036	0.019	1.55	13.97	0.1	15.62	4355	1.53	6.1047	-4.5747	NAF
NS0024	160	162	NS	E391081	391081	1	G	D	24.87	44.83	3.48	0.336	0.26	0.158	1.87	0.33	0.039	0.037	1.62	0.031	0.82	10.5	0.06	11.38	4328	1.1322	5.75586	-4.62366	NAF
NS0024	74	76	NS	E391038	391038	1	G	D	27.99	41.84	2.32	0.245	0.19	0.106	1.74	0.32	0.063	0.029	1.28	0.026	0.94	10.89	-0.1	11.73	4285	0.8874	5.58144	-4.69404	NAF
NS0024	124	126	NS	E391063	391063	1	G	D	28.31	42.28	2.33	0.374	0.29	0.105	1.62	0.32	0.064	0.029	1.18	0.028	0.71	10.28	0.02	11.01	4310	0.8874	5.58144	-4.69404	NAF
NS0024	2	4	NS	E391002	391002	1	G	D	33.7	32.75	10.27	0.026	0.02	0.359	0.2	0.32	0.014	0.023	0.07	0.07	4.19	3.12	0.31	7.62	4249	0.7038	5.58144	-4.87764	NAF
NS0024	280	282	NS	E391142	391142	1	G	D	33.44	39.65	1.51	0.516	0.4	0.076	1.55	0.34	0.067	0.025	0.253	0.062	0.75	7.23	0	7.98	4387	0.765	5.93028	-5.16528	NAF
NS0024	154	156	NS	E391078	391078	1	G	D	19.1	53.29	3.16	0.336	0.26	0.142	2.13	0.56	0.104	0.147	0.813	0.026	0.61	10.75	0.42	11.78	4325	4.4982	9.76752	-5.26932	NAF
NS0024	250	252	NS	E391127	391127	1	G	D	32.35	39.43	2.46	0.439	0.34	0.115	1.74	0.41	0.078	0.056	0.474	0.023	0.84	7.36	0	8.2	4373	1.7136	7.15122	-5.43762	NAF
NS0024	144	146	NS	E391073	391073	1	G	D	28.21	43.38	2.59	0.245	0.19	0.119	1.56	0.33	0.027	0.01	1.52	0.034	0.4	9.44	-0.06	9.78	4320	0.306	5.75586	-5.44986	NAF
NS0024	162	164	NS	E391082	391082	1	G	D	29.76	44	2.14	0.297	0.23	0.097	1.38	0.35	0.045	0.017	1.14	0.022	0.42	7.61	-0.22	7.81	4329	0.5202	6.1047	-5.5845	NAF
NS0024	252	254	NS	E391128	391128	1	G	D	34.79	37.89	1.4	0.581	0.45	0.065	1.63	0.38	0.063	0.027	0.305	0.025	0.5	7.19	-0.03	7.66	4374	0.8262	6.62796	-5.80176	NAF
NS0024	86	88	NS	E391044	391044	1	G	D	22.71	45.6	3.73	0.336	0.26	0.173	2.5	0.61	0.145	0.158	0.496	0.037	0.7	12.4	0.37	13.47	4291	4.8348	10.63962	-5.80482	NAF
NS0024	96	98	NS	E391049	391049	1	G	D	27.1	37.82	2.73	0.271	0.21	0.127	1.88	0.44	0.077	0.057	1.67	0.042	3.06	12.87	0.09	16.02	4296	1.7442	7.67448	-5.93028	NAF
NS0024	110	112	NS	E391056	391056	1	G	D	30.22	36.47	2.54	0.245	0.19	0.118	2.07	0.37	0.028	0.016	1.63	0.03	0.79	12.28	-0.08	12.99	4303	0.4896	6.45354	-5.96394	NAF
NS0024	46	48	NS	E391024	391024	1	G	D	28.35	50.7	2.55	0.297	0.23	0.12	0.28	0.35	0.177	0.003	0.917	0.025	2.68	0.72	0.18	3.58	4271	0.0918	6.1047	-6.0129	NAF
NS0024	278	280	NS	E391141	391141	1	G	D	33.01	40.99	1.03	0.646	0.5	0.045	1.62	0.39	0.075	0.02	0.321	0.068	0.32	7.08	0.08	7.48	4386	0.612	6.80238	-6.19038	NAF
NS0024	186	188	NS	E391094	391094	1	G	D	23	44.03	5.01	0.374	0.29	0.231	2.38	0.44	0.04	0.043	1.16	0.028	0.77	12.09	0.13	12.99	4341	1.3158	7.67448	-6.35868	NAF
NS0024	72	74	NS	E391037	391037	1	G	D	28.67	39.03	2.16	0.232	0.18	0.1	2.28	0.45	0.054	0.044	0.815	0.026	1.49	12.31	-0.03	13.77	4284	1.3464	7.8489	-6.5025	NAF
NS0024	244	246	NS	E391124	391124	1	G	D	24.72	48.18	2.45	0.387	0.3	0.109	2.27	0.48	0.075	0.059	0.102	0.02	1.33	8.82	0.08	10.23	4370	1.8054	8.37216	-6.56676	NAF
NS0024	200	202	NS	E391102	391102	1	G	D	22.44	44.59	5.38	0.31	0.24	0.251	2.55	0.4	0.023	0.013	1.29	0.033	0.83	11.86	0.08	12.77	4348	0.3978	6.9768	-6.579	NAF
NS0024	158	160	NS	E391080	391080	1	G	D	23.29	44.6	3.89	0.336	0.26	0.175	2.23	0.46	0.09	0.045	1.36	0.032	0.9	12.17	0.22	13.29	4327	1.377	8.02332	-6.64632	NAF
NS0024	148	150	NS	E391075	391075	1	G	D	26.35	43.5	3.2	0.284	0.22	0.147	1.83	0.45	0.098	0.039	1.23	0.028	0.63	10.37	0.12	11.12	4322	1.1934	7.8489	-6.6555	NAF
NS0024	258	260	NS	E391131	391131	1	G	D	36.75	34.49	2.21	0.568	0.44	0.101	1.54	0.44	0.064	0.027	0.382	0.038	0.89	6.33	0.15	7.37	4377	0.8262	7.67448	-6.84828	NAF
NS0024	276	278	NS	E391140	391140	1	G	D	36.72	33.96	3.22	0.4	0.31	0.166	1.26	0.45	0.074	0.027	0.34	0.046	1.64	5.46	0.14	7.24	4385	0.8262	7.8489	-7.0227	NAF
NS0024	226	228	NS	E391115	391115	1	G	D	27.49	36.89	1.85	0.426	0.33	0.079	2.4	0.45	0.076	0.026	0.016	0.01	1.96	16.24	0.11	18.31	4361	0.7956	7.8489	-7.0533	NAF
NS0024	192	194	NS	E391097	391097	1	G	D	24.01	41.62	3.91	0.361	0.28	0.175	2.77	0.48	0.046	0.037	1.07	0.033	0.55	14.17	0.16	14.88	4344	1.1322	8.37216	-7.23996	NAF
NS0024	142	144	NS	E391072	391072	1	G	D	27.76	40.8	2.83	0.245	0.19	0.131	2.23	0.43	0.038	0.008	1.07	0.029	0.61	11.69	0.12	12.42	4319	0.2448	7.50006	-7.25526	NAF
NS0024	84	86	NS	E391043	391043	1	G	D	24.68	41.34	3.51	0.465	0.36	0.162	2.28	0.71	0.174	0.166	0.654	0.035	1.4	13.12	0.4	14.92	4290	5.0796	12.38382	-7.30422	NAF
NS0024	198	200	NS	E391100	391100	1	G	D	21.95	47.13	4.26	0.361	0.28	0.196	2.19	0.52	0.047	0.047	0.989	0.03	1	11.39	0.21	12.6	4347	1.4382	9.06984	-7.63164	NAF
NS0024	222	224	NS	E391113	391113	1	G	D	24.37	45.17	2.16	0.361	0.28	0.098	2.12	0.48	0.11	0.024	0.022	0.015	1.73	12.46	0.09	14.28	4359	0.7344	8.37216	-7.63776	NAF
NS0024	242	244	NS	E391123	391123	1	G	D	30.49	39.7	2.16	0.452	0.35	0.098	2.46	0.58	0.067	0.075	0.082	0.01	1.04	9.43	0	10.47	4369	2.295	10.11636	-7.82136	NAF
NS0024	126	128	NS	E391064	391064	1	G	D	28	41.87	2.9	0.31	0.24	0.135	1.63	0.56	0.13	0.057	1.44	0.066	0.75	9.9	0.04	10.69	4311	1.7442	9.76752	-8.02332	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0024	166	168	NS	E391084	391084	1	G	D	29.81	41.19	2.62	0.361	0.28	0.12	1.56	0.49	0.079	0.011	1.34	0.032	0.51	8.79	-0.06	9.24	4331	0.3366	8.54658	-8.20998	NAF
NS0024	120	122	NS	E391061	391061	1	G	D	24.79	40.03	2.81	0.555	0.43	0.124	2.2	0.6	0.136	0.066	1.15	0.039	1.2	14.92	0.32	16.44	4308	2.0196	10.4652	-8.4456	NAF
NS0024	262	264	NS	E391133	391133	1	G	D	35.32	37.69	1.79	0.529	0.41	0.087	1.42	0.52	0.071	0.019	0.317	0.033	0.76	5.8	0.21	6.77	4378	0.5814	9.06984	-8.48844	NAF
NS0024	256	258	NS	E391130	391130	1	G	D	34.7	34.56	3.48	0.387	0.3	0.161	1.94	0.65	0.087	0.09	0.569	0.042	1.23	6.54	0.38	8.15	4376	2.754	11.3373	-8.5833	NAF
NS0024	122	124	NS	E391062	391062	1	G	D	29.81	38.44	2.51	0.31	0.24	0.114	1.91	0.54	0.099	0.015	1.27	0.055	0.82	11.15	-0.03	11.94	4309	0.459	9.41868	-8.95968	NAF
NS0024	194	196	NS	E391098	391098	1	G	D	24.26	42.31	3.49	0.284	0.22	0.157	2.7	0.53	0.045	0.008	1.24	0.029	0.74	13.35	0.09	14.18	4345	0.2448	9.24426	-8.99946	NAF
NS0024	168	170	NS	E391085	391085	1	G	D	27.09	40.88	3.04	0.374	0.29	0.139	2.02	0.54	0.11	0.013	1.12	0.023	0.88	11.62	0.12	12.62	4332	0.3978	9.41868	-9.02088	NAF
NS0024	104	106	NS	E391053	391053	1	G	D	27.92	37.41	2.51	0.31	0.24	0.115	2.16	0.58	0.125	0.031	1.37	0.03	1.21	13.8	0	15.01	4300	0.9486	10.11636	-9.16776	NAF
NS0024	196	198	NS	E391099	391099	1	G	D	23.79	43.33	3.72	0.284	0.22	0.172	2.55	0.54	0.051	0.008	1.18	0.026	0.83	13.01	0.09	13.93	4346	0.2448	9.41868	-9.17388	NAF
NS0024	254	256	NS	E391129	391129	1	G	D	33.43	40.25	1.09	0.555	0.43	0.048	1.71	0.58	0.08	0.02	0.332	0.031	0.35	6.81	0.08	7.24	4375	0.612	10.11636	-9.50436	NAF
NS0024	216	218	NS	E391110	391110	1	G	D	26.84	38.03	3.2	0.426	0.33	0.147	2.3	0.68	0.146	0.076	0.06	0.023	1.58	14.6	0.17	16.35	4356	2.3256	11.86056	-9.53496	NAF
NS0024	102	104	NS	E391052	391052	1	G	D	27.32	39.79	2.72	0.284	0.22	0.125	1.9	0.62	0.11	0.038	1.67	0.035	1.04	12.49	-0.03	13.5	4299	1.1628	10.81404	-9.65124	NAF
NS0024	136	138	NS	E391069	391069	1	G	D	29.52	41.05	2.04	0.258	0.2	0.095	1.7	0.59	0.087	0.013	1.04	0.068	0.69	9.99	-0.05	10.63	4316	0.3978	10.29078	-9.89298	NAF
NS0024	164	166	NS	E391083	391083	1	G	D	27.19	45.89	2.18	0.336	0.26	0.099	1.44	0.63	0.1	0.034	1.17	0.028	0.42	8.45	-0.01	8.86	4330	1.0404	10.98846	-9.94806	NAF
NS0024	234	236	NS	E391119	391119	1	G	D	31.54	35.54	1.62	0.491	0.38	0.069	2.46	0.65	0.076	0.044	0.161	0.017	1.22	12.16	0.05	13.43	4365	1.3464	11.3373	-9.9909	NAF
NS0024	268	270	NS	E391136	391136	1	G	D	34.28	37.9	1.03	0.607	0.47	0.046	1.91	0.61	0.078	0.019	0.341	0.031	0.33	7.6	0.24	8.17	4381	0.5814	10.63962	-10.05822	NAF
NS0024	176	178	NS	E391089	391089	1	G	D	27.25	38.09	2.64	0.516	0.4	0.115	2.27	0.82	0.181	0.138	0.66	0.024	1.02	13.87	0.37	15.26	4336	4.2228	14.30244	-10.07964	NAF
NS0024	272	274	NS	E391138	391138	1	G	D	37.15	33.56	1.61	0.581	0.45	0.073	1.71	0.62	0.086	0.017	0.404	0.048	0.52	7.05	0.24	7.81	4383	0.5202	10.81404	-10.29384	NAF
NS0024	240	242	NS	E391122	391122	1	G	D	31.75	39.36	1.26	0.465	0.36	0.059	1.95	0.67	0.09	0.034	0.153	0.013	1.03	9.17	0.06	10.26	4368	1.0404	11.68614	-10.64574	NAF
NS0024	210	212	NS	E391107	391107	1	G	D	27.08	43.74	2.66	0.387	0.3	0.119	1.65	0.7	0.068	0.05	0.605	0.022	0.47	10.47	0.08	11.02	4353	1.53	12.2094	-10.6794	NAF
NS0024	174	176	NS	E391088	391088	1	G	D	28.43	40.58	2.63	0.374	0.29	0.121	1.89	0.67	0.088	0.031	1.3	0.024	0.43	10.77	0.05	11.25	4335	0.9486	11.68614	-10.73754	NAF
NS0024	264	266	NS	E391134	391134	1	G	D	35.09	36.6	1.47	0.568	0.44	0.068	1.8	0.65	0.075	0.018	0.357	0.04	0.56	7.21	0.24	8.01	4379	0.5508	11.3373	-10.7865	NAF
NS0024	138	140	NS	E391070	391070	1	G	D	27.64	37.87	2.89	0.297	0.23	0.138	2.23	0.67	0.131	0.029	1.23	0.038	3.63	11.13	0.03	14.79	4317	0.8874	11.68614	-10.79874	NAF
NS0024	98	100	NS	E391050	391050	1	G	D	25.66	40	3.19	0.232	0.18	0.145	2.12	0.7	0.093	0.045	1.87	0.048	0.9	13.61	-0.01	14.5	4297	1.377	12.2094	-10.8324	NAF
NS0024	180	182	NS	E391091	391091	1	G	D	17.61	57.98	2.06	0.426	0.33	0.091	1.84	0.67	0.156	0.027	0.094	0.02	0.66	10.39	0.05	11.1	4338	0.8262	11.68614	-10.85994	NAF
NS0024	100	102	NS	E391051	391051	1	G	D	26.1	41.42	2.22	0.271	0.21	0.101	2.04	0.68	0.108	0.028	1.25	0.029	0.99	13.29	0.12	14.4	4298	0.8568	11.86056	-11.00376	NAF
NS0024	236	238	NS	E391120	391120	1	G	D	32.54	39.73	0.93	0.478	0.37	0.045	1.76	0.65	0.092	0.009	0.2	0.011	0.57	8.8	-0.04	9.33	4366	0.2754	11.3373	-11.0619	NAF
NS0024	270	272	NS	E391137	391137	1	G	D	34.79	36.18	1.45	0.62	0.48	0.065	1.89	0.67	0.095	0.018	0.374	0.049	0.45	7.83	0.29	8.57	4382	0.5508	11.68614	-11.13534	NAF
NS0024	208	210	NS	E391106	391106	1	G	D	28.87	40.72	3.04	0.374	0.29	0.139	1.6	0.72	0.045	0.045	1.2	0.025	0.64	9.82	0.05	10.51	4352	1.377	12.55824	-11.18124	NAF
NS0024	146	148	NS	E391074	391074	1	G	D	28.82	37.56	3.35	0.387	0.3	0.155	1.97	0.69	0.171	0.019	1.74	0.032	0.56	11.86	0.06	12.48	4321	0.5814	12.03498	-11.45358	NAF
NS0024	118	120	NS	E391060	391060	1	G	D	28.98	37.44	2.8	0.323	0.25	0.127	2.04	0.69	0.12	0.014	1.43	0.035	0.78	12.4	0.01	13.19	4307	0.4284	12.03498	-11.60658	NAF
NS0024	134	136	NS	E391068	391068	1	G	D	26.53	37.88	3.48	0.284	0.22	0.157	2.53	0.72	0.148	0.029	1.54	0.049	0.85	13.88	0.24	14.97	4315	0.8874	12.55824	-11.67084	NAF
NS0024	172	174	NS	E391087	391087	1	G	D	26.63	43.06	2.77	0.336	0.26	0.127	1.92	0.72	0.095	0.026	1.28	0.024	0.58	10.49	0.18	11.25	4334	0.7956	12.55824	-11.76264	NAF
NS0024	150	152	NS	E391076	391076	1	G	D	22.82	44.88	2.7	0.503	0.39	0.121	2.04	0.95	0.248	0.143	0.973	0.021	0.9	12.98	0.5	14.38	4323	4.3758	16.5699	-12.1941	NAF
NS0024	106	108	NS	E391054	391054	1	G	D	25.65	40.46	2.63	0.413	0.32	0.118	2.37	0.76	0.174	0.027	1.22	0.032	0.69	14.12	0.03	14.84	4301	0.8262	13.25592	-12.42972	NAF
NS0024	266	268	NS	E391135	391135	1	G	D	33.17	38.4	1.06	0.594	0.46	0.048	2.08	0.77	0.078	0.019	0.335	0.038	0.4	8.12	0.37	8.89	4380	0.5814	13.43034	-12.84894	NAF
NS0024	108	110	NS	E391055	391055	1	G	D	25.84	37.78	2.56	0.503	0.39	0.114	2.63	0.81	0.195	0.031	0.959	0.036	1.06	15.74	0.15	16.95	4302	0.9486	14.12802	-13.17942	NAF
NS0024	212	214	NS	E391108	391108	1	G	D	28.64	36.68	2.98	0.374	0.29	0.136	2.04	0.87	0.147	0.051	0.288	0.023	1.27	13.73	0.03	15.03	4354	1.5606	15.17454	-13.61394	NAF
NS0024	274	276	NS	E391139	391139	1	G	D	31.45	40.98	1.99	0.542	0.42	0.094	1.69	0.84	0.112	0.026	0.302	0.055	1.03	6.69	0.37	8.09	4384	0.7956	14.65128	-13.85568	NAF
NS0024	128	130	NS	E391065	391065	1	G	D	31.13	39	2.17	0.336	0.26	0.102	1.48	0.82	0.2	0.013	1.04	0.077	0.91	9.11	-0.15	9.87	4312	0.3978	14.30244	-13.90464	NAF
NS0024	116	118	NS	E391059	391059	1	G	D	26.44	38.5	2.47	0.387	0.3	0.109	2.2	0.85	0.205	0.018	1.09	0.035	1.17	14.76	0.1	16.03	4306	0.5508	14.8257	-14.2749	NAF
NS0024	132	134	NS	E391067	391067	1	G	D	25.22	37.59	4.34	0.284	0.22	0.197	2.46	0.89	0.222	0.039	2.16	0.064	0.87	13.89	0.35	15.11	4314	1.1934	15.52338	-14.32998	NAF
NS0024	112	114	NS	E391057	391057	1	G	D	26.83	36.93	2.76	0.426	0.33	0.128	2.39	0.89	0.197	0.035	1.2	0.026	1.13	15.1	0.16	16.39	4304	1.071	15.52338	-14.45238	NAF
NS0024	130	132	NS	E391066	391066	1	G	D	24.69	40.75	2.77	0.413	0.32	0.125	2.22	0.9	0.233	0.039	1.29	0.042	1.02	14.19	0.24	15.45	4313	1.1934	15.6978	-14.5044	NAF
NS0024	190	192	NS	E391096	391096	1	G	D	23.72	41.51	4.15	0.413	0.32	0.191	2.33	1.08	0.241	0.092	1.26	0.026	0.69	13.36	0.26	14.31	4343	2.8152	18.83736	-16.02216	NAF
NS0024	140	142	NS	E391071	391071	1	G	D	27.23	36.58	3.25	0.361	0.28	0.151	2.63	0.98	0.239	0.01	1.14	0.035	1.01	13.97	0.13	15.11	4318	0.306	17.09316	-16.78716	NAF
NS0024	238	240	NS	E391121	391121	1	G	D	30.34	32.23	1.89	0.542	0.42	0.083	3.16	1.4	0.1	0.084	0.265	0.021	0.98	14.96	0.68	16.62	4367	2.5704	24.4188	-21.8484	NAF
NS0024	114	116	NS	E391058	391058	1	G	D	23.48	43.22	2.33	0.426	0.33	0.106	2.02	1.59	0.418	0.037	0.689	0.026	3.61	11.23	0.1	14.94	4305	1.1322	27.73278	-26.60058	NAF
NS0025	38	40	NS	E391162	391162	1	G	D	13.65	55.83	10.21	0.194	0.15	0.475	2.39	0.08	0.013	0.699	4.95	0.056	0.5	4.39	1.13	6.02	4407	21.3894	1.39536	19.99404	PAF(HC)
NS0025	48	50	NS	E391167	391167	1	G	D	22.65	44.89	6.06	0.361	0.28	0.289	2.38	0.45	0.108	0.851	1.75	0.08	1.58	7.48	1.73	10.79	4412	26.0406	7.8489	18.1917	PAF(HC)
NS0025	56	58	NS	E391171	391171	1	G	D	18.46	48.28	7.97	0.349	0.27	0.372	2.78	0.35	0.081	0.671	3.17	0.054	0.49	7.57	1.49	9.55	4416	20.5326	6.1047	14.4279	PAF(HC)
NS0025	58	60	NS	E391172	391172	1	G	D	17.12	52.33	7.49	0.245	0.19	0.35	2.38	0.23	0.047	0.571	3.19	0.047	0.61	7.03	1.22	8.86	4417	17.4726	4.01166	13.46094	PAF(HC)
NS0025	206	208	NS	E391247	391247	1	G	D	22.23	44.43	6.79	0.542	0.42	0.286	4.18	0.34	0.087	0.439	2.81	0.068	0.23	7.16	0.86	8.25	4490	13.4334	5.93028	7.50312	PAF(LC)
NS0025	36	38	NS	E391161	391161	1	G	D	18.52	52.23	8.23	0.297	0.23	0.382	1.93	0.14	0.064	0.313	3.55	0.072	1.85	3.27	0.88	6	4406	9.5778	2.44188	7.13592	PAF(LC)
NS0025	40	42	NS	E391163	391163	1	G	D	25.67	43.32	4.62	0.516	0.4	0.227	2.35	0.31	0.084	0.318	1.19	0.041	1.79	7.86	0.87	10.52	4408	9.7308	5.40702	4.32378	PAF(LC)
NS0025	42	44	NS	E391164	391164	1	G	D	17.24	52.02	6.33	0.374	0.29	0.299	2.24	0.35	0.078	0.337	3.1	0.069	0.95	8.23	0.88	10.06	4409	10.3122	6.1047	4.2075	PAF(LC)
NS0025	94	96	NS	E391190	391190	1	G	D	22.86	44.04	5.48	0.452	0.35	0.268	2.82	0.53	0.131	0.426	2.09	0.036	0.75	9.45	0.91	11.11	4435	13.0356	9.24426	3.79134	PAF(LC)
NS0025	98	100	NS	E391192	391192	1	G	D	25.63	43.44	4.42	0.336	0.26	0.211	2.48	0.36	0.083	0.325	0.615	0.035	1.06	9.22	0.66	10.94	4437	9.945	6.27912	3.66588	PAF(LC)
NS0025	88	90	NS	E391187	391187	1	G	D	28.87	43.97	4.01	0.323	0.25	0.191	1.94	0.13	0.035	0.116	1.36	0.035	1.43	4.99	0.09	6.51	4432	3.5496	2.26746	1.28214	PAF(LC)
NS0025	90	92	NS	E391188	391188	1	G	D	25.43	45.25	3.67	0.426	0.33	0.175	2.42	0.43	0.105	0.268	1.27	0.037	0.73	8.38	0.47	9.58	4433	8.2008	7.50006	0.70074	PAF(LC)
NS0025	92	94	NS	E391189	391189	1	G	D	28.2	43.58	3.41	0.349	0.27	0.161	2.08	0.17	0.025	0.108	1.5	0.028	0.73	7.73	-0.04	8.42	4434	3.3048	2.96514	0.33966	PAF(LC)
NS0025	8	10	NS	E391147	391147	1	G	D	26.78	50.76	6.58	0.103	0.08	0.264	0.07	0.02	0.021	0.007	0.015	0.02	1.47	2.04	0.21	3.72	4392	0.2142	0.34884	-0.13464	NAF
NS0025	96	98	NS	E391191	391191	1	G	D	27.89	41.55	3.74	0.349	0.27	0.182	2.13	0.32	0.066	0.178	1.66	0.038	1.02	8.5	0.19	9.71	4436	5.4468	5.58144	-0.13464	NAF
NS0025	6	8	NS	E391146	391146	1	G	D	29.11	49.25	5.26	0.155	0.12	0.219	0.1	0.03	0.016	0.009	0.022	0.032	1.67	1.54	0.18	3.39	4391	0.2754	0.52326	-0.24786	NAF
NS0025	2	4	NS	E391144	391144	1	G	D	33.84	43.16	4.29	0.103	0.08	0.171	0.13	0.04	0.02	0.012	0.028	0.04	1.84	1.34	0.16	3.34	4389	0.3672	0.69768	-0.33048	NAF
NS0025	124	126	NS	E391206	391206	1	G	D	32.12	48.56	2.5	0.026	0.02	0.118	0.13	0.04	0.041	0.006	0.079	0.014	1.43	0.93	0.14	2.5	4450	0.1836	0.69768	-0.51408	NAF
NS0025	126	128	NS	E391207	391207	1	G	D	27.85	51.71	3.2	0.323	0.25	0.153	0.36	0.04	0.054	0.005	0.102	0.03	2.68	1.28	0.14	4.1	4451	0.153	0.69768	-0.54468	NAF
NS0025	10	12	NS	E391148	391148	1	G	D	27.63	48.95	6.01	0.465	0.36	0.26	0.27	0.05	0.048	0.01	0.258	0.06	2.06	1.76	0.17	3.99	4393	0.306	0.8721	-0.5661	NAF
NS0025	4	6	NS	E391145	391145	1	G	D	29.86	47.57	5.6	0.116	0.09	0.223	0.13	0.06	0.01	0.012	0.022	0.047	1.54	1.76	0.19	3.49	4390	0.3672	1.04652	-0.67932	NAF
NS0025	100	102	NS	E391193	391193	1	G	D	24.48	39.96	4.9	0.4	0.31	0.234	2.72	0.59	0.14	0.313	2.34	0.044	1.37	11.02	0.73	13.12	4438	9.5778	10.29078	-0.71298	NAF
NS0025	0	2	NS	E391143	391143	1	G	D	34.15	41.47	5.26	0.142	0.11	0.201	0.15	0.07	0.019	0.013	0.031	0.046	2.02	1.71	0.18	3.91	4388	0.3978	1.22094	-0.82314	NAF
NS0025	34	36	NS	E391160	391160	1	G	D	29.18	47.24	5.15	0.465	0.36	0.241	0.84	0.06	0.079	0.005	0.591	0.026	1.86	1.55	0.25	3.66	4405	0.153	1.04652	-0.89352	NAF
NS0025	76	78	NS	E391181	391181	1	G	D	26.05	41.97	4.87	0.349	0.27	0.235	2.89	0.42	0.1	0.209	0.993	0.036	0.83	9.45	0.32	10.6	4426	6.3954	7.32564	-0.93024	NAF
NS0025	46	48	NS	E391166	391166	1	G	D	31.63	43.2	2.99	0.723	0.56	0.143	0.51	0.08	0.133	0.009	0.555	0.047	4.59	1.07	0.24	5.9	4411	0.2754	1.39536	-1.11996	NAF
NS0025	12	14	NS	E391149	391149	1	G	D	30.14	44.28	4.65	1.033	0.8	0.2	0.56	0.1	0.079	0.008	0.795	0.087	2.92	1.39	0.24	4.55	4394	0.2448	1.7442	-1.4994	NAF
NS0025	72	74	NS	E391179	391179	1	G	D	23.86	46.43	2.91	0.439	0.34	0.137	2.37	0.37	0.07	0.161	0.304	0.031	1.99	10.33	0.37	12.69	4424	4.9266	6.45354	-1.52694	NAF
NS0025	16	18	NS	E391151	391151	1	G	D	29.77	44.61	5.46	0.039	0.03	0.262	0.23	0.13	0.144	0.024	0.912	0.066	3.31	1.55	0.23	5.09	4396	0.7344	2.26746	-1.53306	NAF
NS0025	44	46	NS	E391165	391165	1	G	D	26.45	51.65	3.42	0.387	0.3	0.163	0.68	0.11	0.101	0.011	0.488	0.045	3.38	1.21	0.17	4.76	4410	0.3366	1.91862	-1.58202	NAF
NS0025	14	16	NS	E391150	391150	1	G	D	24.93	50.82	5.37	0.723	0.56	0.239	0.6	0.11	0.059	0.009	1.11	0.092	3.34	1.46	0.26	5.06	4395	0.2754	1.91862	-1.64322	NAF
NS0025	110	112	NS	E391198	391198	1	G	D	26.68	39.45	3	0.374	0.29	0.145	2.07	0.29	0.041	0.11	1.44	0.022	1.19	13.28	0.19	14.66	4443	3.366	5.05818	-1.69218	NAF
NS0025	122	124	NS	E391205	391205	1	G	D	28.54	46.94	3.54	0.284	0.22	0.176	0.94	0.11	0.059	0.006	0.557	0.025	2.04	4.1	0.11	6.25	4449	0.1836	1.91862	-1.73502	NAF
NS0025	104	106	NS	E391195	391195	1	G	D	28.11	39.99	2.92	0.323	0.25	0.139	2.01	0.24	0.033	0.075	1.56	0.036	1.31	11.01	-0.01	12.31	4440	2.295	4.18608	-1.89108	NAF
NS0025	32	34	NS	E391159	391159	1	G	D	25.9	51.58	5.54	0.168	0.13	0.257	1.1	0.12	0.088	0.005	0.843	0.038	1.4	1.51	0.19	3.1	4404	0.153	2.09304	-1.94004	NAF
NS0025	22	24	NS	E391154	391154	1	G	D	21.67	52.33	7.71	0.658	0.51	0.358	0.45	0.14	0.072	0.014	3.45	0.069	1.77	1.46	0.3	3.53	4399	0.4284	2.44188	-2.01348	NAF
NS0025	20	22	NS	E391153	391153	1	G	D	25.93	48.87	5.56	1.291	1	0.236	0.54	0.14	0.078	0.006	1.08	0.079	2.44	1.66	0.36	4.46	4398	0.1836	2.44188	-2.25828	NAF
NS0025	18	20	NS	E391152	391152	1	G	D	27.07	47.77	5.76	0.646	0.5	0.248	0.63	0.15	0.069	0.008	1.25	0.076	2.42	1.69	0.26	4.37	4397	0.2448	2.6163	-2.3715	NAF
NS0025	26	28	NS	E391156	391156	1	G	D	25.2	49.41	6.66	0.439	0.34	0.309	0.64	0.16	0.057	0.005	2.05	0.066	1.82	1.56	0.25	3.63	4401	0.153	2.79072	-2.63772	NAF
NS0025	64	66	NS	E391175	391175	1	G	D	25.66	47.9	3.19	0.336	0.26	0.148	2.24	0.36	0.085	0.117	0.371	0.028	0.83	7.62	0.08	8.53	4420	3.5802	6.27912	-2.69892	NAF
NS0025	68	70	NS	E391177	391177	1	G	D	22.8	45.63	4.56	0.426	0.33	0.215	3.06	0.67	0.176	0.291	0.548	0.036	1.07	10.12	0.68	11.87	4422	8.9046	11.68614	-2.78154	NAF
NS0025	24	26	NS	E391155	391155	1	G	D	25.94	50	5.95	0.529	0.41	0.275	0.64	0.17	0.038	0.004	1.22	0.065	1.82	1.66	0.27	3.75	4400	0.1224	2.96514	-2.84274	NAF
NS0025	28	30	NS	E391157	391157	1	G	D	27.09	48.77	5.53	0.439	0.34	0.257	0.8	0.17	0.073	0.004	1.33	0.062	1.55	1.51	0.25	3.31	4402	0.1224	2.96514	-2.84274	NAF
NS0025	84	86	NS	E391185	391185	1	G	D	26.63	43.48	4.32	0.349	0.27	0.207	2.45	0.48	0.128	0.18	1.47	0.03	0.97	7.84	0.23	9.04	4430	5.508	8.37216	-2.86416	NAF
NS0025	78	80	NS	E391182	391182	1	G	D	29.8	41.55	3.31	0.297	0.23	0.16	2.35	0.34	0.077	0.086	0.565	0.019	0.97	7.74	-0.08	8.63	4427	2.6316	5.93028	-3.29868	NAF
NS0025	60	62	NS	E391173	391173	1	G	D	23.97	43.16	4.75	0.271	0.21	0.214	2.82	0.5	0.125	0.176	1.1	0.035	2.12	9.82	0.49	12.43	4418	5.3856	8.721	-3.3354	NAF
NS0025	106	108	NS	E391196	391196	1	G	D	27.44	41.05	3.07	0.297	0.23	0.151	2.07	0.36	0.054	0.084	1.55	0.036	0.83	11.35	0.02	12.2	4441	2.5704	6.27912	-3.70872	NAF
NS0025	30	32	NS	E391158	391158	1	G	D	29.34	46.03	4.5	0.594	0.46	0.21	0.9	0.22	0.126	0.004	1.29	0.032	2.37	1.18	0.21	3.76	4403	0.1224	3.83724	-3.71484	NAF
NS0025	52	54	NS	E391169	391169	1	G	D	23.71	41.85	4.55	0.361	0.28	0.216	2.9	0.56	0.126	0.191	1.45	0.065	1.27	11.85	0.56	13.68	4414	5.8446	9.76752	-3.92292	NAF
NS0025	208	210	NS	E391248	391248	1	G	D	31.62	43.86	2.11	0.555	0.43	0.095	2.23	0.31	0.067	0.042	0.426	0.038	0.3	4.66	-0.16	4.8	4491	1.2852	5.40702	-4.12182	NAF
NS0025	120	122	NS	E391204	391204	1	G	D	27.86	37.87	2.91	0.465	0.36	0.141	2.11	0.27	0.04	0.014	0.733	0.023	1.68	13.77	-0.02	15.43	4448	0.4284	4.70934	-4.28094	NAF
NS0025	116	118	NS	E391202	391202	1	G	D	25.88	37.06	3.96	0.349	0.27	0.192	2.69	0.28	0.024	0.009	1.97	0.038	0.89	15.49	-0.01	16.37	4446	0.2754	4.88376	-4.60836	NAF
NS0025	86	88	NS	E391186	391186	1	G	D	28.25	43.21	4.05	0.336	0.26	0.191	2.33	0.47	0.127	0.117	1.16	0.033	0.63	6.95	-0.02	7.56	4431	3.5802	8.19774	-4.61754	NAF
NS0025	128	130	NS	E391208	391208	1	G	D	32.63	42.33	2.02	0.349	0.27	0.092	0.92	0.28	0.102	0.006	0.765	0.027	1.31	4.91	0.01	6.23	4452	0.1836	4.88376	-4.70016	NAF
NS0025	118	120	NS	E391203	391203	1	G	D	26.33	35.41	3.94	0.452	0.35	0.192	2.76	0.3	0.028	0.01	1.46	0.038	1.34	16.16	0.03	17.53	4447	0.306	5.2326	-4.9266	NAF
NS0025	108	110	NS	E391197	391197	1	G	D	25.93	42.16	3.18	0.323	0.25	0.151	2.05	0.41	0.083	0.071	1.44	0.041	1.02	11.92	0.06	13	4442	2.1726	7.15122	-4.97862	NAF
NS0025	252	254	NS	E391270	391270	1	G	D	27.08	44.74	3.91	0.503	0.39	0.184	2.82	1.05	0.066	0.426	1.51	0.037	0.22	4.86	0.8	5.88	4513	13.0356	18.3141	-5.2785	NAF
NS0025	70	72	NS	E391178	391178	1	G	D	28.01	40.56	3.43	0.426	0.33	0.166	2.64	0.5	0.114	0.111	0.378	0.01	1.17	9.99	0.07	11.23	4423	3.3966	8.721	-5.3244	NAF
NS0025	210	212	NS	E391249	391249	1	G	D	31.11	44.13	2.77	0.426	0.33	0.133	2.56	0.47	0.082	0.082	0.553	0.025	0.24	4.11	0.02	4.37	4492	2.5092	8.19774	-5.68854	NAF
NS0025	74	76	NS	E391180	391180	1	G	D	26.81	44.04	3.29	0.336	0.26	0.162	2.29	0.49	0.121	0.077	0.628	0.017	1.2	8.7	0.01	9.91	4425	2.3562	8.54658	-6.19038	NAF
NS0025	62	64	NS	E391174	391174	1	G	D	27.24	43.41	2.69	0.439	0.34	0.125	2.32	0.54	0.128	0.102	0.385	0.023	1.03	9.9	0.08	11.01	4419	3.1212	9.41868	-6.29748	NAF
NS0025	134	136	NS	E391211	391211	1	G	D	38.54	29.43	1.98	0.607	0.47	0.092	1.99	0.4	0.054	0.017	1.54	0.071	0.44	8.86	-0.42	8.88	4455	0.5202	6.9768	-6.4566	NAF
NS0025	54	56	NS	E391170	391170	1	G	D	25.52	39.21	3.55	0.426	0.33	0.172	2.88	0.63	0.141	0.143	0.758	0.054	1.24	13.91	0.4	15.55	4415	4.3758	10.98846	-6.61266	NAF
NS0025	102	104	NS	E391194	391194	1	G	D	26.47	42.41	2.22	0.426	0.33	0.109	1.94	0.49	0.092	0.062	1.22	0.032	2.15	10.47	0.03	12.65	4439	1.8972	8.54658	-6.64938	NAF
NS0025	66	68	NS	E391176	391176	1	G	D	27.7	43.91	3.27	0.374	0.29	0.155	2.25	0.6	0.164	0.116	0.308	0.019	0.71	7.96	0.03	8.7	4421	3.5496	10.4652	-6.9156	NAF
NS0025	80	82	NS	E391183	391183	1	G	D	26.72	44.4	4.18	0.284	0.22	0.207	2.56	0.61	0.168	0.121	0.605	0.024	0.97	7.1	0.08	8.15	4428	3.7026	10.63962	-6.93702	NAF
NS0025	270	272	NS	E391279	391279	1	G	D	30.76	41.28	3.35	0.503	0.39	0.157	2.4	1.36	0.147	0.514	1.39	0.039	0.17	3.89	0.85	4.91	4522	15.7284	23.72112	-7.99272	NAF
NS0025	112	114	NS	E391199	391199	1	G	D	25.98	38.93	3.1	0.452	0.35	0.148	2.3	0.59	0.116	0.073	1.2	0.04	1.18	14.32	0.12	15.62	4444	2.2338	10.29078	-8.05698	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0025	202	204	NS	E391245	391245	1	G	D	32.96	42.4	2.26	0.439	0.34	0.101	2.56	0.6	0.049	0.065	0.216	0.096	0.18	3.6	0.11	3.89	4488	1.989	10.4652	-8.4762	NAF
NS0025	204	206	NS	E391246	391246	1	G	D	30.04	44.75	2.69	0.452	0.35	0.123	2.55	0.61	0.114	0.064	0.557	0.025	0.23	4.46	-0.07	4.62	4489	1.9584	10.63962	-8.68122	NAF
NS0025	82	84	NS	E391184	391184	1	G	D	26.77	42.82	3.93	0.387	0.3	0.187	2.44	0.78	0.217	0.138	1.14	0.029	1	7.92	0.15	9.07	4429	4.2228	13.60476	-9.38196	NAF
NS0025	50	52	NS	E391168	391168	1	G	D	26.16	39.73	3.2	0.374	0.29	0.152	2.36	0.73	0.167	0.103	1.36	0.063	0.99	13.1	0.23	14.32	4413	3.1518	12.73266	-9.58086	NAF
NS0025	114	116	NS	E391200	391200	1	G	D	25.53	37.17	3.68	0.465	0.36	0.172	2.58	0.62	0.115	0.022	2	0.038	0.94	15.54	0.02	16.5	4445	0.6732	10.81404	-10.14084	NAF
NS0025	250	252	NS	E391269	391269	1	G	D	30.49	41.21	3.26	0.555	0.43	0.154	2.68	1.23	0.102	0.365	1.19	0.032	0.16	4.89	0.66	5.71	4512	11.169	21.45366	-10.28466	NAF
NS0025	232	234	NS	E391260	391260	1	G	D	30.09	41.31	5.33	0.31	0.24	0.251	2.56	0.88	0.045	0.147	2.43	0.253	0.08	2.69	0.51	3.28	4503	4.4982	15.34896	-10.85076	NAF
NS0025	248	250	NS	E391268	391268	1	G	D	32.2	39.88	2.81	0.555	0.43	0.134	2.5	1.58	0.055	0.539	0.913	0.032	0.2	3.86	0.95	5.01	4511	16.4934	27.55836	-11.06496	NAF
NS0025	256	258	NS	E391272	391272	1	G	D	32.1	40.18	2.97	0.465	0.36	0.132	2.53	0.98	0.083	0.161	1.09	0.037	0.34	4.63	0.28	5.25	4515	4.9266	17.09316	-12.16656	NAF
NS0025	154	156	NS	E391221	391221	1	G	D	35.22	37.91	1.95	0.646	0.5	0.091	2.06	0.77	0.078	0.032	0.717	0.172	0.12	4.98	0.09	5.19	4464	0.9792	13.43034	-12.45114	NAF
NS0025	152	154	NS	E391220	391220	1	G	D	34.53	38.43	1.76	0.684	0.53	0.083	1.99	0.77	0.099	0.027	0.614	0.156	0.19	5.3	-0.03	5.46	4463	0.8262	13.43034	-12.60414	NAF
NS0025	136	138	NS	E391212	391212	1	G	D	33.85	34.73	1.51	0.658	0.51	0.078	2.14	0.85	0.047	0.02	1.12	0.079	0.4	9.53	0.11	10.04	4456	0.612	14.8257	-14.2137	NAF
NS0025	156	158	NS	E391222	391222	1	G	D	34.68	38.36	1.95	0.633	0.49	0.095	2.06	0.89	0.097	0.037	0.66	0.164	0.16	4.74	0.21	5.11	4465	1.1322	15.52338	-14.39118	NAF
NS0025	188	190	NS	E391238	391238	1	G	D	36.94	37.24	1.81	0.594	0.46	0.087	2.1	0.86	0.057	0.019	0.644	0.117	0.07	3.59	0.2	3.86	4481	0.5814	15.00012	-14.41872	NAF
NS0025	276	278	NS	E391282	391282	1	G	D	33.48	39.38	2.4	0.594	0.46	0.115	2.33	0.9	0.098	0.04	0.782	0.026	0.24	4.79	0.05	5.08	4525	1.224	15.6978	-14.4738	NAF
NS0025	132	134	NS	E391210	391210	1	G	D	29.8	39.18	1.91	0.503	0.39	0.094	2.07	0.93	0.062	0.024	1.45	0.023	0.48	10.03	0.27	10.78	4454	0.7344	16.22106	-15.48666	NAF
NS0025	130	132	NS	E391209	391209	1	G	D	30.98	36.77	1.72	0.503	0.39	0.079	2.13	0.96	0.108	0.026	1.27	0.021	0.8	11.04	0.11	11.95	4453	0.7956	16.74432	-15.94872	NAF
NS0025	268	270	NS	E391278	391278	1	G	D	29.86	42.56	3.19	0.542	0.42	0.156	2.65	1.09	0.093	0.1	1.07	0.03	0.28	4.8	0.28	5.36	4521	3.06	19.01178	-15.95178	NAF
NS0025	158	160	NS	E391223	391223	1	G	D	34.52	39.18	2.1	0.555	0.43	0.102	2.12	0.98	0.085	0.036	0.701	0.135	0.12	4.21	0.34	4.67	4466	1.1016	17.09316	-15.99156	NAF
NS0025	258	260	NS	E391273	391273	1	G	D	30.65	42.25	3.21	0.4	0.31	0.148	2.35	1.15	0.076	0.132	1.49	0.032	0.22	4.17	0.32	4.71	4516	4.0392	20.0583	-16.0191	NAF
NS0025	146	148	NS	E391217	391217	1	G	D	34.39	38.47	1.71	0.62	0.48	0.082	2.12	1.01	0.08	0.037	0.4	0.162	0.14	5.5	0.22	5.86	4461	1.1322	17.61642	-16.48422	NAF
NS0025	166	168	NS	E391227	391227	1	G	D	30.3	41.41	3.94	0.426	0.33	0.17	2.32	1.25	0.104	0.164	2.07	0.139	0.15	3.64	0.55	4.34	4470	5.0184	21.8025	-16.7841	NAF
NS0025	220	222	NS	E391254	391254	1	G	D	33.98	39.53	2.81	0.465	0.36	0.137	2.26	1.06	0.046	0.05	0.886	0.175	0.23	3.2	0.39	3.82	4497	1.53	18.48852	-16.95852	NAF
NS0025	148	150	NS	E391218	391218	1	G	D	34.58	39.35	1.63	0.594	0.46	0.075	1.91	1.02	0.092	0.025	0.534	0.11	0.09	4.78	0.23	5.1	4462	0.765	17.79084	-17.02584	NAF
NS0025	138	140	NS	E391213	391213	1	G	D	31.2	38.8	1.81	0.581	0.45	0.086	2.45	1.05	0.093	0.04	0.869	0.134	0.32	8.48	0.34	9.14	4457	1.224	18.3141	-17.0901	NAF
NS0025	260	262	NS	E391274	391274	1	G	D	31.74	40.04	3.18	0.478	0.37	0.143	2.47	1.1	0.096	0.058	1.6	0.033	0.37	4.77	0.25	5.39	4517	1.7748	19.1862	-17.4114	NAF
NS0025	272	274	NS	E391280	391280	1	G	D	33.46	41.16	1.79	0.478	0.37	0.087	1.99	1.07	0.131	0.034	0.463	0.03	0.17	4.15	0.08	4.4	4523	1.0404	18.66294	-17.62254	NAF
NS0025	164	166	NS	E391226	391226	1	G	D	32.65	38.69	3.04	0.516	0.4	0.14	2.75	1.24	0.108	0.126	1.05	0.128	0.12	4.55	0.49	5.16	4469	3.8556	21.62808	-17.77248	NAF
NS0025	214	216	NS	E391251	391251	1	G	D	32.62	42.41	1.68	0.555	0.43	0.084	1.96	1.08	0.061	0.03	0.496	0.041	0.22	3.97	0.35	4.54	4494	0.918	18.83736	-17.91936	NAF
NS0025	144	146	NS	E391216	391216	1	G	D	34.4	37.46	1.89	0.594	0.46	0.09	2.23	1.15	0.1	0.038	0.555	0.185	0.22	5.86	0.29	6.37	4460	1.1628	20.0583	-18.8955	NAF
NS0025	246	248	NS	E391267	391267	1	G	D	29.93	44.01	2.99	0.503	0.39	0.147	2.48	1.16	0.06	0.043	0.853	0.018	0.28	4.04	0.45	4.77	4510	1.3158	20.23272	-18.91692	NAF
NS0025	200	202	NS	E391244	391244	1	G	D	30	43.59	2.46	0.529	0.41	0.114	2.77	1.2	0.137	0.052	0.643	0.101	0.18	4.46	0.34	4.98	4487	1.5912	20.9304	-19.3392	NAF
NS0025	212	214	NS	E391250	391250	1	G	D	31.38	41.86	2.28	0.555	0.43	0.108	2.51	1.32	0.104	0.089	0.527	0.074	0.22	4.63	0.52	5.37	4493	2.7234	23.02344	-20.30004	NAF
NS0025	234	236	NS	E391261	391261	1	G	D	31.78	39.95	2.7	0.671	0.52	0.125	2.5	1.27	0.157	0.058	1.11	0.181	0.14	4.91	0.31	5.36	4504	1.7748	22.15134	-20.37654	NAF
NS0025	216	218	NS	E391252	391252	1	G	D	31.96	43.18	1.66	0.594	0.46	0.083	1.95	1.26	0.071	0.047	0.539	0.049	0.1	3.94	0.57	4.61	4495	1.4382	21.97692	-20.53872	NAF
NS0025	184	186	NS	E391236	391236	1	G	D	35.65	37.78	1.95	0.555	0.43	0.09	2.09	1.23	0.086	0.028	0.744	0.129	0.09	3.43	0.5	4.02	4479	0.8568	21.45366	-20.59686	NAF
NS0025	180	182	NS	E391234	391234	1	G	D	36.03	37.35	1.9	0.594	0.46	0.089	1.99	1.23	0.066	0.027	0.783	0.129	0.1	3.48	0.56	4.14	4477	0.8262	21.45366	-20.62746	NAF
NS0025	274	276	NS	E391281	391281	1	G	D	31.36	41.73	3.04	0.503	0.39	0.147	2.2	1.3	0.182	0.051	1.22	0.028	0.42	3.99	0.16	4.57	4524	1.5606	22.6746	-21.114	NAF
NS0025	254	256	NS	E391271	391271	1	G	D	27.69	42.04	4.48	0.465	0.36	0.206	2.81	1.96	0.215	0.418	2.05	0.042	0.17	4.34	0.98	5.49	4514	12.7908	34.18632	-21.39552	NAF
NS0025	192	194	NS	E391240	391240	1	G	D	34.6	39.25	1.72	0.607	0.47	0.083	1.99	1.27	0.072	0.02	0.734	0.113	0.1	3.49	0.7	4.29	4483	0.612	22.15134	-21.53934	NAF
NS0025	230	232	NS	E391259	391259	1	G	D	30.39	41.77	3.73	0.503	0.39	0.167	2.49	1.38	0.076	0.073	1.63	0.201	0.24	3.49	0.66	4.39	4502	2.2338	24.06996	-21.83616	NAF
NS0025	186	188	NS	E391237	391237	1	G	D	34.69	38.67	1.81	0.594	0.46	0.093	2.22	1.32	0.079	0.03	0.579	0.121	0.07	3.74	0.68	4.49	4480	0.918	23.02344	-22.10544	NAF
NS0025	266	268	NS	E391277	391277	1	G	D	31.76	40.36	2.93	0.503	0.39	0.134	2.35	1.4	0.031	0.036	1.22	0.034	0.21	4.09	0.82	5.12	4520	1.1016	24.4188	-23.3172	NAF
NS0025	140	142	NS	E391214	391214	1	G	D	31.82	37.33	2.03	0.594	0.46	0.097	2.73	1.45	0.076	0.044	0.641	0.204	0.32	7.85	0.72	8.89	4458	1.3464	25.2909	-23.9445	NAF
NS0025	222	224	NS	E391255	391255	1	G	D	33.32	39.88	2.71	0.491	0.38	0.14	2.2	1.46	0.118	0.048	1	0.196	0.07	3.26	0.67	4	4498	1.4688	25.46532	-23.99652	NAF
NS0025	236	238	NS	E391262	391262	1	G	D	33.83	39.22	2.27	0.568	0.44	0.106	2.25	1.47	0.082	0.027	0.891	0.118	0.16	3.77	0.64	4.57	4505	0.8262	25.63974	-24.81354	NAF
NS0025	198	200	NS	E391243	391243	1	G	D	33.2	41.43	1.62	0.568	0.44	0.083	2.21	1.46	0.083	0.019	0.485	0.085	0.15	3.7	0.7	4.55	4486	0.5814	25.46532	-24.88392	NAF
NS0025	142	144	NS	E391215	391215	1	G	D	33.67	35.26	1.93	0.646	0.5	0.091	2.75	1.5	0.09	0.041	0.549	0.233	0.19	7.74	0.71	8.64	4459	1.2546	26.163	-24.9084	NAF
NS0025	262	264	NS	E391275	391275	1	G	D	32.32	40.33	2.43	0.516	0.4	0.122	2.19	1.52	0.092	0.051	1.05	0.02	0.14	4.23	0.7	5.07	4518	1.5606	26.51184	-24.95124	NAF
NS0025	224	226	NS	E391256	391256	1	G	D	32.92	40.53	2.4	0.516	0.4	0.113	2.24	1.51	0.09	0.037	0.8	0.168	0.18	3.32	0.71	4.21	4499	1.1322	26.33742	-25.20522	NAF
NS0025	160	162	NS	E391224	391224	1	G	D	33.82	38.41	1.95	0.62	0.48	0.091	2.26	1.51	0.088	0.031	0.674	0.163	0.19	4.48	0.88	5.55	4467	0.9486	26.33742	-25.38882	NAF
NS0025	176	178	NS	E391232	391232	1	G	D	33.93	39.03	2.07	0.555	0.43	0.099	2.14	1.52	0.108	0.029	0.786	0.137	0.08	3.63	0.89	4.6	4475	0.8874	26.51184	-25.62444	NAF
NS0025	196	198	NS	E391242	391242	1	G	D	33.01	39.81	2.17	0.607	0.47	0.097	2.46	1.65	0.103	0.078	0.809	0.119	0.08	3.83	0.92	4.83	4485	2.3868	28.7793	-26.3925	NAF
NS0025	228	230	NS	E391258	391258	1	G	D	33.27	39.27	2.48	0.568	0.44	0.114	2.33	1.59	0.103	0.035	0.743	0.175	0.19	3.64	0.78	4.61	4501	1.071	27.73278	-26.66178	NAF
NS0025	242	244	NS	E391265	391265	1	G	D	32.39	40.38	2.36	0.555	0.43	0.11	2.27	1.59	0.079	0.034	0.91	0.035	0.24	3.93	0.69	4.86	4508	1.0404	27.73278	-26.69238	NAF
NS0025	278	280	NS	E391283	391283	1	G	D	30.18	41.71	3.61	0.426	0.33	0.165	2.36	1.68	0.217	0.072	1.42	0.033	0.32	3.95	0.44	4.71	4526	2.2032	29.30256	-27.09936	NAF
NS0025	226	228	NS	E391257	391257	1	G	D	33.27	39.43	2.29	0.568	0.44	0.116	2.29	1.64	0.205	0.031	0.722	0.173	0.1	3.75	0.55	4.4	4500	0.9486	28.60488	-27.65628	NAF
NS0025	162	164	NS	E391225	391225	1	G	D	32.08	40.68	2.25	0.555	0.43	0.107	2.19	1.69	0.046	0.052	0.933	0.159	0.15	3.98	1.13	5.26	4468	1.5912	29.47698	-27.88578	NAF
NS0025	218	220	NS	E391253	391253	1	G	D	32.67	41.17	2.19	0.516	0.4	0.106	2.3	1.68	0.071	0.037	0.624	0.11	0.13	3.43	1.05	4.61	4496	1.1322	29.30256	-28.17036	NAF
NS0025	174	176	NS	E391231	391231	1	G	D	34.49	38.94	1.82	0.568	0.44	0.088	2.12	1.68	0.104	0.029	0.645	0.142	0.09	3.57	1.02	4.68	4474	0.8874	29.30256	-28.41516	NAF
NS0025	168	170	NS	E391228	391228	1	G	D	32.85	40.24	2	0.555	0.43	0.097	1.95	1.71	0.129	0.033	0.92	0.155	0.05	3.72	0.93	4.7	4471	1.0098	29.82582	-28.81602	NAF
NS0025	194	196	NS	E391241	391241	1	G	D	32.01	40.16	2.4	0.594	0.46	0.107	2.49	1.73	0.165	0.037	0.943	0.135	0.18	3.84	0.79	4.81	4484	1.1322	30.17466	-29.04246	NAF
NS0025	238	240	NS	E391263	391263	1	G	D	32.89	39.32	2.31	0.594	0.46	0.114	2.44	1.78	0.076	0.035	0.824	0.114	0.18	3.91	1.07	5.16	4506	1.071	31.04676	-29.97576	NAF
NS0025	240	242	NS	E391264	391264	1	G	D	32.26	40.75	2.13	0.555	0.43	0.101	2.24	1.83	0.085	0.029	0.779	0.086	0.09	3.62	1.21	4.92	4507	0.8874	31.91886	-31.03146	NAC
NS0025	170	172	NS	E391229	391229	1	G	D	34.61	38.03	1.7	0.62	0.48	0.084	2.09	1.84	0.078	0.024	0.683	0.182	0.1	3.87	1.18	5.15	4472	0.7344	32.09328	-31.35888	NAC
NS0025	172	174	NS	E391230	391230	1	G	D	35.23	37.11	1.82	0.594	0.46	0.09	2.07	1.86	0.153	0.03	0.716	0.169	0.11	3.77	0.97	4.85	4473	0.918	32.44212	-31.52412	NAC
NS0025	178	180	NS	E391233	391233	1	G	D	32.73	40.49	1.62	0.671	0.52	0.073	2.03	1.87	0.084	0.026	0.679	0.139	0.09	3.72	1.21	5.02	4476	0.7956	32.61654	-31.82094	NAC
NS0025	182	184	NS	E391235	391235	1	G	D	33.31	39.44	1.87	0.607	0.47	0.087	2.19	1.93	0.052	0.028	0.752	0.163	0.06	3.39	1.56	5.01	4478	0.8568	33.66306	-32.80626	NAC
NS0025	264	266	NS	E391276	391276	1	G	D	30.95	40.64	3.28	0.439	0.34	0.146	2.47	1.97	0.046	0.043	1.43	0.048	0.28	3.68	1.27	5.23	4519	1.3158	34.36074	-33.04494	NAC
NS0025	190	192	NS	E391239	391239	1	G	D	31.97	42.21	1.38	0.594	0.46	0.069	2.12	2.08	0.073	0.031	0.495	0.117	0.09	3.35	1.52	4.96	4482	0.9486	36.27936	-35.33076	NAC
NS0025	244	246	NS	E391266	391266	1	G	D	31.58	40.64	2.45	0.555	0.43	0.116	2.46	2.1	0.15	0.036	0.687	0.042	0.16	3.96	1.16	5.28	4509	1.1016	36.6282	-35.5266	NAC
NS0026	80	82	NS	E391325	391325	1	G	D	26.41	41.26	6.79	0.426	0.33	0.298	3.58	0.1	0.02	0.654	0.106	0.016	0.76	7.25	1.17	9.18	4566	20.0124	1.7442	18.2682	PAF(HC)
NS0026	76	78	NS	E391323	391323	1	G	D	26.42	48.41	2.38	0.503	0.39	0.113	1.75	0.12	0.043	0.601	0.101	0.017	1.42	5.44	1.29	8.15	4564	18.3906	2.09304	16.29756	PAF(HC)
NS0026	60	62	NS	E391315	391315	1	G	D	26.86	47.26	4.54	0.245	0.19	0.188	2.14	0.37	0.095	0.606	0.544	0.021	0.92	3.6	1.18	5.7	4556	18.5436	6.45354	12.09006	PAF(HC)
NS0026	70	72	NS	E391320	391320	1	G	D	24.71	46.79	4.64	0.374	0.29	0.201	3.43	0.26	0.069	0.476	0.239	0.017	0.63	6.54	1	8.17	4561	14.5656	4.53492	10.03068	PAF(HC)
NS0026	58	60	NS	E391314	391314	1	G	D	27.51	52.51	4.01	0.168	0.13	0.166	0.76	0.07	0.038	0.144	0.059	0.017	1.09	1.21	0.44	2.74	4555	4.4064	1.22094	3.18546	PAF(LC)
NS0026	156	158	NS	E391363	391363	1	G	D	26.29	45.51	4.34	0.349	0.27	0.181	3.19	0.53	0.1	0.4	0.81	0.048	0.35	5.9	0.63	6.88	4604	12.24	9.24426	2.99574	PAF(LC)
NS0026	122	124	NS	E391346	391346	1	G	D	25.33	40.85	3.77	0.374	0.29	0.156	4.01	0.76	0.1	0.516	0.172	0.054	0.75	11.12	1.06	12.93	4587	15.7896	13.25592	2.53368	PAF(LC)
NS0026	116	118	NS	E391343	391343	1	G	D	28.74	45.37	3.16	0.62	0.48	0.136	1.26	0.1	0.038	0.106	0.036	0.012	2.68	4.72	0.35	7.75	4584	3.2436	1.7442	1.4994	PAF(LC)
NS0026	72	74	NS	E391321	391321	1	G	D	28.15	41.68	3.73	0.503	0.39	0.159	3.12	0.27	0.069	0.186	0.386	0.016	0.92	8	0.35	9.27	4562	5.6916	4.70934	0.98226	PAF(LC)
NS0026	78	80	NS	E391324	391324	1	G	D	28.77	40.3	3.7	0.529	0.41	0.157	2.62	0.14	0.035	0.111	0.034	0.016	1.94	8.85	0.25	11.04	4565	3.3966	2.44188	0.95472	PAF(LC)
NS0026	174	176	NS	E391372	391372	1	G	D	18.61	47.14	7.63	0.284	0.22	0.32	3.95	1.76	0.111	1.02	3.01	0.059	0.43	5.4	2.1	7.93	4613	31.212	30.69792	0.51408	PAF(LC)
NS0026	106	108	NS	E391338	391338	1	G	D	30.04	49.76	2.82	0.671	0.52	0.125	0.23	0.02	0.052	0.005	0.104	0.032	1.38	1.24	0.2	2.82	4579	0.153	0.34884	-0.19584	NAF
NS0026	108	110	NS	E391339	391339	1	G	D	28.65	50.33	2.49	0.387	0.3	0.107	0.32	0.03	0.14	0.004	0.062	0.02	3.59	1.02	0.16	4.77	4580	0.1224	0.52326	-0.40086	NAF
NS0026	90	92	NS	E391330	391330	1	G	D	31.8	41.25	2.37	0.336	0.26	0.111	2.13	0.46	0.127	0.245	0.507	0.019	0.71	5.6	0.52	6.83	4571	7.497	8.02332	-0.52632	NAF
NS0026	22	24	NS	E391295	391295	1	G	D	32.86	46.27	3.54	0.039	0.03	0.141	0.08	0.05	0.025	0.007	0.011	0.03	1.42	1.1	0.2	2.72	4538	0.2142	0.8721	-0.6579	NAF
NS0026	136	138	NS	E391353	391353	1	G	D	25.62	43.87	5.41	0.284	0.22	0.224	3.92	0.74	0.137	0.396	0.346	0.048	0.36	6.95	0.59	7.9	4594	12.1176	12.90708	-0.78948	NAF
NS0026	24	26	NS	E391296	391296	1	G	D	34.16	44.81	3.25	0.09	0.07	0.123	0.1	0.06	0.022	0.008	0.014	0.021	1.34	1.07	0.09	2.5	4539	0.2448	1.04652	-0.80172	NAF
NS0026	20	22	NS	E391294	391294	1	G	D	28.83	52.45	2.99	0.065	0.05	0.115	0.13	0.07	0.022	0.011	0.022	0.028	1.46	1.08	0.14	2.68	4537	0.3366	1.22094	-0.88434	NAF
NS0026	36	38	NS	E391303	391303	1	G	D	32.14	47.65	3.06	0.271	0.21	0.103	0.12	0.07	0.02	0.009	0.016	0.02	1.45	1.13	0.02	2.6	4545	0.2754	1.22094	-0.94554	NAF
NS0026	26	28	NS	E391297	391297	1	G	D	32.21	48.16	2.93	0.103	0.08	0.116	0.15	0.07	0.016	0.008	0.021	0.026	1.34	0.99	0.02	2.35	4540	0.2448	1.22094	-0.97614	NAF
NS0026	32	34	NS	E391300	391300	1	G	D	26	52.77	5.86	0.129	0.1	0.226	0.11	0.07	0.013	0.008	0.014	0.036	1.4	1.84	0.16	3.4	4543	0.2448	1.22094	-0.97614	NAF
NS0026	110	112	NS	E391340	391340	1	G	D	18.58	63.6	4.56	0.142	0.11	0.191	0.48	0.06	0.077	0.002	0.059	0.03	2.36	1.44	0.14	3.94	4581	0.0612	1.04652	-0.98532	NAF
NS0026	28	30	NS	E391298	391298	1	G	D	28.12	49.42	6.18	0.065	0.05	0.25	0.11	0.07	0.009	0.007	0.015	0.03	1.35	1.88	0.13	3.36	4541	0.2142	1.22094	-1.00674	NAF
NS0026	34	36	NS	E391302	391302	1	G	D	29.16	47.04	6.62	0.374	0.29	0.257	0.11	0.07	0.01	0.005	0.019	0.03	1.38	2.14	0.17	3.69	4544	0.153	1.22094	-1.06794	NAF
NS0026	52	54	NS	E391311	391311	1	G	D	28.18	50.18	4.94	0.503	0.39	0.202	0.23	0.08	0.036	0.008	0.087	0.02	1.34	1.59	0.19	3.12	4553	0.2448	1.39536	-1.15056	NAF
NS0026	112	114	NS	E391341	391341	1	G	D	26.45	52.85	3.44	0.4	0.31	0.139	0.56	0.08	0.128	0.005	0.249	0.029	2.59	1.27	0.18	4.04	4582	0.153	1.39536	-1.24236	NAF
NS0026	38	40	NS	E391304	391304	1	G	D	28.17	52.98	2.84	0.826	0.64	0.099	0.15	0.09	0.038	0.007	0.03	0.02	1.39	1.1	0.07	2.56	4546	0.2142	1.56978	-1.35558	NAF
NS0026	14	16	NS	E391291	391291	1	G	D	22.7	56.3	5.95	0.09	0.07	0.248	0.19	0.1	0.02	0.012	0.025	0.051	2.17	2.02	0.18	4.37	4534	0.3672	1.7442	-1.377	NAF
NS0026	18	20	NS	E391293	391293	1	G	D	21.44	57.77	6.23	0.065	0.05	0.249	0.16	0.1	0.024	0.011	0.034	0.034	2.25	1.95	0.21	4.41	4536	0.3366	1.7442	-1.4076	NAF
NS0026	30	32	NS	E391299	391299	1	G	D	29.84	50.97	3.15	0.142	0.11	0.115	0.18	0.1	0.019	0.011	0.031	0.026	1.36	1.2	0.04	2.6	4542	0.3366	1.7442	-1.4076	NAF
NS0026	56	58	NS	E391313	391313	1	G	D	28.22	52.69	2.1	0.917	0.71	0.088	0.44	0.09	0.073	0.005	0.211	0.022	1.68	0.9	0.16	2.74	4554	0.153	1.56978	-1.41678	NAF
NS0026	84	86	NS	E391327	391327	1	G	D	29.22	49.52	2.5	1.226	0.95	0.105	0.74	0.11	0.037	0.015	0.225	0.025	1.88	1.18	0.24	3.3	4568	0.459	1.91862	-1.45962	NAF
NS0026	4	6	NS	E391286	391286	1	G	D	13.6	66.21	8.08	0.026	0.02	0.32	0.17	0.13	0.016	0.021	0.052	0.038	2.57	2.5	0.25	5.32	4529	0.6426	2.26746	-1.62486	NAF
NS0026	48	50	NS	E391309	391309	1	G	D	32.37	46.37	2.46	0.736	0.57	0.099	0.36	0.11	0.1	0.006	0.158	0.021	1.98	1.02	0.11	3.11	4551	0.1836	1.91862	-1.73502	NAF
NS0026	50	52	NS	E391310	391310	1	G	D	28.17	50.96	4.1	0.516	0.4	0.163	0.42	0.11	0.035	0.006	0.197	0.029	1.51	1.43	0.12	3.06	4552	0.1836	1.91862	-1.73502	NAF
NS0026	2	4	NS	E391285	391285	1	G	D	13.68	66.47	7.83	0.026	0.02	0.348	0.2	0.15	0.016	0.026	0.077	0.038	2.28	2.56	0.25	5.09	4528	0.7956	2.6163	-1.8207	NAF
NS0026	12	14	NS	E391290	391290	1	G	D	25.69	51.57	6.2	0.103	0.08	0.267	0.22	0.13	0.021	0.014	0.037	0.061	1.93	2.17	0.22	4.32	4533	0.4284	2.26746	-1.83906	NAF
NS0026	46	48	NS	E391308	391308	1	G	D	25.45	52.58	5.96	0.439	0.34	0.244	0.24	0.12	0.059	0.008	0.074	0.021	1.38	2.1	0.18	3.66	4550	0.2448	2.09304	-1.84824	NAF
NS0026	140	142	NS	E391355	391355	1	G	D	22.69	49.81	4.03	0.297	0.23	0.159	3.42	0.82	0.1	0.404	0.219	0.052	0.42	6.61	0.82	7.85	4596	12.3624	14.30244	-1.94004	NAF
NS0026	40	42	NS	E391305	391305	1	G	D	34.7	45.64	1.9	0.452	0.35	0.075	0.26	0.14	0.04	0.01	0.069	0.017	1.06	0.84	-0.07	1.83	4547	0.306	2.44188	-2.13588	NAF
NS0026	82	84	NS	E391326	391326	1	G	D	31.64	46.24	2.58	0.955	0.74	0.108	0.59	0.18	0.039	0.032	0.087	0.02	1.95	1.31	0.27	3.53	4567	0.9792	3.13956	-2.16036	NAF
NS0026	44	46	NS	E391307	391307	1	G	D	32.3	44.31	3.85	0.646	0.5	0.159	0.59	0.15	0.087	0.009	0.162	0.02	1.84	1.49	0.13	3.46	4549	0.2754	2.6163	-2.3409	NAF
NS0026	16	18	NS	E391292	391292	1	G	D	15.84	67.23	5.42	0.077	0.06	0.231	0.31	0.16	0.03	0.013	0.057	0.04	1.57	2.02	0.11	3.7	4535	0.3978	2.79072	-2.39292	NAF
NS0026	74	76	NS	E391322	391322	1	G	D	27.59	43.14	1.4	0.633	0.49	0.062	2.45	0.3	0.057	0.078	0.138	0.009	1.33	10.45	0.09	11.87	4563	2.3868	5.2326	-2.8458	NAF
NS0026	138	140	NS	E391354	391354	1	G	D	24.44	44.03	4.01	0.439	0.34	0.163	3.94	0.59	0.102	0.235	0.236	0.057	0.82	9.71	0.53	11.06	4595	7.191	10.29078	-3.09978	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0026	0	2	NS	E391284	391284	1	G	D	11.38	65.28	11.21	0.052	0.04	0.439	0.28	0.22	0.018	0.02	0.108	0.049	1.65	3.87	0.28	5.8	4527	0.612	3.83724	-3.22524	NAF
NS0026	42	44	NS	E391306	391306	1	G	D	33.56	44.45	2.7	0.633	0.49	0.115	0.51	0.24	0.079	0.014	0.152	0.033	1.53	1.34	0.03	2.9	4548	0.4284	4.18608	-3.75768	NAF
NS0026	148	150	NS	E391359	391359	1	G	D	25.01	47.27	3.66	0.31	0.24	0.158	3.28	0.86	0.08	0.357	0.268	0.047	0.44	6.23	0.75	7.42	4600	10.9242	15.00012	-4.07592	NAF
NS0026	130	132	NS	E391350	391350	1	G	D	27.55	40.57	4.78	0.31	0.24	0.2	3.98	0.91	0.143	0.374	0.285	0.061	0.62	7.31	0.76	8.69	4591	11.4444	15.87222	-4.42782	NAF
NS0026	104	106	NS	E391337	391337	1	G	D	32.85	43.07	1.76	0.336	0.26	0.078	1.53	0.3	0.118	0.025	0.37	0.02	0.54	4.55	-0.12	4.97	4578	0.765	5.2326	-4.4676	NAF
NS0026	10	12	NS	E391289	391289	1	G	D	25.11	52.29	5.9	0.077	0.06	0.242	0.17	0.29	0.014	0.014	0.016	0.059	2.7	2	0.24	4.94	4532	0.4284	5.05818	-4.62978	NAF
NS0026	66	68	NS	E391318	391318	1	G	D	30.02	46.24	1.94	0.284	0.22	0.096	1.93	0.35	0.09	0.045	0.259	0.023	0.54	4.94	-0.05	5.43	4559	1.377	6.1047	-4.7277	NAF
NS0026	68	70	NS	E391319	391319	1	G	D	26.76	44.2	3.5	0.439	0.34	0.145	3.06	0.7	0.204	0.243	0.237	0.022	0.51	7.58	0.48	8.57	4560	7.4358	12.2094	-4.7736	NAF
NS0026	118	120	NS	E391344	391344	1	G	D	25.47	38.04	3.33	0.555	0.43	0.138	3.25	0.61	0.095	0.191	0.268	0.022	1.69	14.46	0.52	16.67	4585	5.8446	10.63962	-4.79502	NAF
NS0026	62	64	NS	E391316	391316	1	G	D	31.21	43.11	2.26	0.361	0.28	0.099	2.04	0.43	0.095	0.061	0.365	0.018	0.73	5.75	-0.1	6.38	4557	1.8666	7.50006	-5.63346	NAF
NS0026	96	98	NS	E391333	391333	1	G	D	31.5	42.55	1.83	0.4	0.31	0.088	1.97	0.45	0.12	0.072	0.155	0.01	0.83	6	0.06	6.89	4574	2.2032	7.8489	-5.6457	NAF
NS0026	92	94	NS	E391331	391331	1	G	D	32.29	42.01	1.66	0.361	0.28	0.078	1.95	0.42	0.113	0.027	0.208	0.011	0.67	6.18	-0.07	6.78	4572	0.8262	7.32564	-6.49944	NAF
NS0026	114	116	NS	E391342	391342	1	G	D	26.6	39.65	2.82	0.555	0.43	0.119	2.49	0.42	0.077	0.017	0.384	0.018	1.75	13.25	0	15	4583	0.5202	7.32564	-6.80544	NAF
NS0026	144	146	NS	E391357	391357	1	G	D	28.21	41.66	2.57	0.491	0.38	0.105	3.23	0.65	0.144	0.146	0.281	0.064	0.41	9.39	0.08	9.88	4598	4.4676	11.3373	-6.8697	NAF
NS0026	102	104	NS	E391336	391336	1	G	D	30.17	44.77	2.05	0.413	0.32	0.099	2.08	0.48	0.124	0.046	0.374	0.161	0.43	5.74	-0.12	6.05	4577	1.4076	8.37216	-6.96456	NAF
NS0026	132	134	NS	E391351	391351	1	G	D	25.47	43.19	3.75	0.452	0.35	0.153	3.76	0.9	0.135	0.266	0.27	0.058	0.71	8.98	0.63	10.32	4592	8.1396	15.6978	-7.5582	NAF
NS0026	64	66	NS	E391317	391317	1	G	D	31.28	43	2.36	0.297	0.23	0.11	2.14	0.56	0.162	0.056	0.376	0.023	0.51	5.24	-0.02	5.73	4558	1.7136	9.76752	-8.05392	NAF
NS0026	86	88	NS	E391328	391328	1	G	D	29.65	44.04	2.22	0.349	0.27	0.099	1.96	0.58	0.173	0.065	0.291	0.018	1.04	6.34	0.12	7.5	4569	1.989	10.11636	-8.12736	NAF
NS0026	164	166	NS	E391367	391367	1	G	D	29.88	40.9	3.29	0.503	0.39	0.16	3.11	0.94	0.068	0.226	0.573	0.03	0.36	6.41	0.43	7.2	4608	6.9156	16.39548	-9.47988	NAF
NS0026	88	90	NS	E391329	391329	1	G	D	29.02	42.48	2.44	0.426	0.33	0.107	2.29	0.73	0.214	0.105	0.415	0.019	0.97	7.36	0.36	8.69	4570	3.213	12.73266	-9.51966	NAF
NS0026	160	162	NS	E391365	391365	1	G	D	29.36	40.85	3.41	0.426	0.33	0.153	3.3	1.02	0.171	0.268	0.563	0.046	0.49	6.47	0.48	7.44	4606	8.2008	17.79084	-9.59004	NAF
NS0026	94	96	NS	E391332	391332	1	G	D	31.97	40.95	2.06	0.387	0.3	0.099	2.08	0.7	0.202	0.075	0.203	0.016	0.96	5.92	0.14	7.02	4573	2.295	12.2094	-9.9144	NAF
NS0026	126	128	NS	E391348	391348	1	G	D	26.17	43.98	2.94	0.349	0.27	0.122	3.38	0.96	0.121	0.221	0.207	0.069	0.74	8.65	0.52	9.91	4589	6.7626	16.74432	-9.98172	NAF
NS0026	6	8	NS	E391287	391287	1	G	D	17.59	60.27	6.97	0.065	0.05	0.272	0.18	0.62	0.017	0.018	0.032	0.057	3.37	2.53	0.29	6.19	4530	0.5508	10.81404	-10.26324	NAF
NS0026	154	156	NS	E391362	391362	1	G	D	30.16	40.9	2.97	0.465	0.36	0.124	3.03	0.72	0.085	0.074	0.205	0.039	0.57	7.38	-0.04	7.91	4603	2.2644	12.55824	-10.29384	NAF
NS0026	218	220	NS	E391393	391393	1	G	D	30.33	43.04	3.36	0.387	0.3	0.15	2.74	0.73	0.05	0.076	0.803	0.032	0.23	4.45	0.14	4.82	4635	2.3256	12.73266	-10.40706	NAF
NS0026	142	144	NS	E391356	391356	1	G	D	28.55	42.76	3.12	0.361	0.28	0.126	3.18	0.84	0.155	0.135	0.178	0.059	0.52	7.3	0.15	7.97	4597	4.131	14.65128	-10.52028	NAF
NS0026	134	136	NS	E391352	391352	1	G	D	28.58	38.96	4.88	0.336	0.26	0.203	3.84	1.15	0.264	0.308	0.324	0.059	0.56	7.38	0.56	8.5	4593	9.4248	20.0583	-10.6335	NAF
NS0026	152	154	NS	E391361	391361	1	G	D	28.62	43.12	3	0.426	0.33	0.126	2.94	0.87	0.111	0.146	0.235	0.05	0.54	6.79	0.19	7.52	4602	4.4676	15.17454	-10.70694	NAF
NS0026	150	152	NS	E391360	391360	1	G	D	27.98	44.15	2.97	0.374	0.29	0.13	2.92	0.88	0.141	0.139	0.242	0.053	0.66	6.56	0.22	7.44	4601	4.2534	15.34896	-11.09556	NAF
NS0026	124	126	NS	E391347	391347	1	G	D	27.93	41.87	2.76	0.361	0.28	0.112	3.23	0.88	0.122	0.134	0.268	0.054	0.75	8.87	0.19	9.81	4588	4.1004	15.34896	-11.24856	NAF
NS0026	162	164	NS	E391366	391366	1	G	D	26.22	46.14	3.94	0.349	0.27	0.174	3.09	1.11	0.084	0.216	0.72	0.034	0.59	5.3	0.53	6.42	4607	6.6096	19.36062	-12.75102	NAF
NS0026	246	248	NS	E391410	391410	1	G	D	32.18	42.88	2.36	0.491	0.38	0.126	2.33	0.81	0.07	0.044	0.654	0.089	0.17	3.79	0.19	4.15	4649	1.3464	14.12802	-12.78162	NAF
NS0026	146	148	NS	E391358	391358	1	G	D	28.44	41.91	3.47	0.374	0.29	0.145	3.26	1	0.175	0.142	0.353	0.055	0.54	7.09	0.21	7.84	4599	4.3452	17.442	-13.0968	NAF
NS0026	128	130	NS	E391349	391349	1	G	D	26.58	47.85	2.34	0.258	0.2	0.1	2.65	0.98	0.082	0.125	0.135	0.051	0.45	6.37	0.21	7.03	4590	3.825	17.09316	-13.26816	NAF
NS0026	258	260	NS	E391416	391416	1	G	D	33.05	41.65	2.36	0.503	0.39	0.113	2.29	0.87	0.103	0.051	0.695	0.078	0.13	3.5	0.12	3.75	4655	1.5606	15.17454	-13.61394	NAF
NS0026	100	102	NS	E391335	391335	1	G	D	27.02	42.33	3.69	0.491	0.38	0.164	2.97	1.14	0.342	0.204	0.539	0.056	0.66	7.35	0.43	8.44	4576	6.2424	19.88388	-13.64148	NAF
NS0026	158	160	NS	E391364	391364	1	G	D	30.33	42.24	3.13	0.336	0.26	0.141	2.89	0.92	0.171	0.077	0.369	0.034	0.25	5.62	-0.11	5.76	4605	2.3562	16.04664	-13.69044	NAF
NS0026	98	100	NS	E391334	391334	1	G	D	31.73	37.13	2.8	0.633	0.49	0.127	2.62	0.94	0.276	0.064	0.401	0.019	0.8	8.35	0.07	9.22	4575	1.9584	16.39548	-14.43708	NAF
NS0026	254	256	NS	E391414	391414	1	G	D	34.81	40.02	1.98	0.516	0.4	0.092	2.15	0.9	0.077	0.03	0.529	0.089	0.1	3.33	-0.02	3.41	4653	0.918	15.6978	-14.7798	NAF
NS0026	238	240	NS	E391406	391406	1	G	D	28.4	44.7	3.67	0.465	0.36	0.171	2.91	1.07	0.11	0.115	1.17	0.107	0.22	3.92	0.42	4.56	4645	3.519	18.66294	-15.14394	NAF
NS0026	250	252	NS	E391412	391412	1	G	D	32.83	40.9	2.21	0.581	0.45	0.104	2.32	1.03	0.125	0.072	0.717	0.114	0.17	4.06	0.25	4.48	4651	2.2032	17.96526	-15.76206	NAF
NS0026	224	226	NS	E391396	391396	1	G	D	30.03	44.44	3.2	0.361	0.28	0.147	2.6	1.08	0.083	0.077	0.862	0.067	0.11	3.52	0.33	3.96	4638	2.3562	18.83736	-16.48116	NAF
NS0026	270	272	NS	E391422	391422	1	G	D	30.27	42.75	3.31	0.503	0.39	0.154	2.4	1.21	0.059	0.146	1.52	0.093	0.14	3.51	0.61	4.26	4661	4.4676	21.10482	-16.63722	NAF
NS0026	248	250	NS	E391411	391411	1	G	D	33.38	39.89	2.43	0.555	0.43	0.124	2.41	1.04	0.1	0.038	0.82	0.1	0.1	3.94	0.35	4.39	4650	1.1628	18.13968	-16.97688	NAF
NS0026	176	178	NS	E391373	391373	1	G	D	23.87	43.19	4.98	0.516	0.4	0.216	3.71	1.42	0.114	0.246	1.34	0.052	0.49	8.08	0.84	9.41	4614	7.5276	24.76764	-17.24004	NAF
NS0026	256	258	NS	E391415	391415	1	G	D	32.13	41.04	2.79	0.491	0.38	0.125	2.65	1.1	0.085	0.059	0.81	0.078	0.16	3.83	0.47	4.46	4654	1.8054	19.1862	-17.3808	NAF
NS0026	120	122	NS	E391345	391345	1	G	D	26.49	35.32	2.93	0.465	0.36	0.116	4.08	1.25	0.139	0.126	0.286	0.061	0.73	15.74	0.4	16.87	4586	3.8556	21.8025	-17.9469	NAF
NS0026	252	254	NS	E391413	391413	1	G	D	33.14	41.81	1.89	0.516	0.4	0.099	1.98	1.16	0.088	0.037	0.625	0.11	0.13	3.25	0.52	3.9	4652	1.1322	20.23272	-19.10052	NAF
NS0026	242	244	NS	E391408	391408	1	G	D	32.48	42.19	1.82	0.581	0.45	0.094	2.17	1.14	0.069	0.023	0.594	0.066	0.12	4.02	0.48	4.62	4647	0.7038	19.88388	-19.18008	NAF
NS0026	260	262	NS	E391417	391417	1	G	D	32	41.78	2.35	0.568	0.44	0.112	2.31	1.23	0.11	0.062	0.839	0.095	0.09	3.77	0.49	4.35	4656	1.8972	21.45366	-19.55646	NAF
NS0026	274	276	NS	E391424	391424	1	G	D	32.35	41.75	2.23	0.568	0.44	0.108	2.14	1.27	0.103	0.037	0.854	0.085	0.14	3.68	0.53	4.35	4663	1.1322	22.15134	-21.01914	NAF
NS0026	166	168	NS	E391368	391368	1	G	D	28.42	42.7	3.81	0.4	0.31	0.188	3.24	1.48	0.128	0.138	0.56	0.032	0.17	5.52	0.67	6.36	4609	4.2228	25.81416	-21.59136	NAF
NS0026	268	270	NS	E391421	391421	1	G	D	32.89	40.76	2.13	0.581	0.45	0.1	2.34	1.36	0.124	0.062	0.618	0.091	0.08	3.73	0.55	4.36	4660	1.8972	23.72112	-21.82392	NAF
NS0026	272	274	NS	E391423	391423	1	G	D	31.91	42.81	2.34	0.478	0.37	0.113	2.12	1.33	0.117	0.041	0.842	0.077	0.08	3.16	0.55	3.79	4662	1.2546	23.19786	-21.94326	NAF
NS0026	216	218	NS	E391392	391392	1	G	D	30.21	42.4	3.16	0.4	0.31	0.139	2.59	1.5	0.217	0.133	0.971	0.064	0.26	4.28	0.31	4.85	4634	4.0698	26.163	-22.0932	NAF
NS0026	200	202	NS	E391384	391384	1	G	D	29.43	41.89	2.89	0.594	0.46	0.128	2.88	1.56	0.069	0.163	0.594	0.017	0.31	5.8	0.74	6.85	4626	4.9878	27.20952	-22.22172	NAF
NS0026	240	242	NS	E391407	391407	1	G	D	27.53	42.68	3.91	0.568	0.44	0.187	3.42	1.56	0.206	0.161	1.12	0.157	0.21	5.12	0.63	5.96	4646	4.9266	27.20952	-22.28292	NAF
NS0026	262	264	NS	E391418	391418	1	G	D	32.85	41.95	2.07	0.503	0.39	0.1	2.07	1.35	0.099	0.032	0.741	0.095	0.1	3.17	0.59	3.86	4657	0.9792	23.5467	-22.5675	NAF
NS0026	180	182	NS	E391375	391375	1	G	D	29.54	42.71	2.86	0.374	0.29	0.124	2.79	1.49	0.12	0.11	0.583	0.075	0.28	5.41	0.58	6.27	4616	3.366	25.98858	-22.62258	NAF
NS0026	210	212	NS	E391389	391389	1	G	D	32.01	39.37	2.88	0.465	0.36	0.124	2.57	1.46	0.147	0.086	0.99	0.172	0.21	4.77	0.46	5.44	4631	2.6316	25.46532	-22.83372	NAF
NS0026	276	278	NS	E391425	391425	1	G	D	32.73	41.73	1.84	0.555	0.43	0.095	2.09	1.41	0.084	0.036	0.582	0.088	0.08	3.43	0.78	4.29	4664	1.1016	24.59322	-23.49162	NAF
NS0026	8	10	NS	E391288	391288	1	G	D	16.96	61.17	6.43	0.052	0.04	0.237	0.23	1.39	0.016	0.017	0.037	0.07	2.87	2.45	0.72	6.04	4531	0.5202	24.24438	-23.72418	NAF
NS0026	222	224	NS	E391395	391395	1	G	D	29.34	44.75	2.84	0.439	0.34	0.133	2.5	1.5	0.082	0.065	0.782	0.093	0.43	3.8	0.49	4.72	4637	1.989	26.163	-24.174	NAF
NS0026	178	180	NS	E391374	391374	1	G	D	26.14	44.88	4.21	0.349	0.27	0.185	3.27	1.66	0.124	0.155	0.921	0.077	0.29	5.5	0.83	6.62	4615	4.743	28.95372	-24.21072	NAF
NS0026	264	266	NS	E391419	391419	1	G	D	31.56	42.76	2.37	0.465	0.36	0.109	1.93	1.53	0.101	0.046	1.12	0.085	0.09	2.89	0.86	3.84	4658	1.4076	26.68626	-25.27866	NAF
NS0026	230	232	NS	E391402	391402	1	G	D	32.09	43.03	1.75	0.503	0.39	0.089	2.09	1.5	0.092	0.027	0.547	0.113	0.14	3.35	0.83	4.32	4641	0.8262	26.163	-25.3368	NAF
NS0026	244	246	NS	E391409	391409	1	G	D	32.26	41.83	1.88	0.542	0.42	0.099	2.24	1.52	0.116	0.027	0.571	0.067	0.07	3.7	0.8	4.57	4648	0.8262	26.51184	-25.68564	NAF
NS0026	204	206	NS	E391386	391386	1	G	D	27.18	42.96	3.52	0.555	0.43	0.151	3.17	1.75	0.126	0.154	0.719	0.041	0.3	6.21	0.92	7.43	4628	4.7124	30.5235	-25.8111	NAF
NS0026	206	208	NS	E391387	391387	1	G	D	31.62	39.67	2.61	0.465	0.36	0.116	2.82	1.73	0.126	0.095	0.527	0.042	0.32	5.31	0.63	6.26	4629	2.907	30.17466	-27.26766	NAF
NS0026	236	238	NS	E391405	391405	1	G	D	31.98	41.8	2.05	0.503	0.39	0.105	2.29	1.65	0.109	0.022	0.657	0.111	0.07	3.4	1.08	4.55	4644	0.6732	28.7793	-28.1061	NAF
NS0026	266	268	NS	E391420	391420	1	G	D	33.9	40	1.65	0.581	0.45	0.085	2.15	1.68	0.1	0.029	0.452	0.099	0.12	3.41	0.96	4.49	4659	0.8874	29.30256	-28.41516	NAF
NS0026	170	172	NS	E391370	391370	1	G	D	26.65	42.79	5.15	0.31	0.24	0.314	3.67	1.89	0.155	0.14	0.688	0.036	0.33	4.88	1.04	6.25	4611	4.284	32.96538	-28.68138	NAF
NS0026	234	236	NS	E391404	391404	1	G	D	32.25	43.39	1.82	0.361	0.28	0.1	1.83	1.7	0.133	0.023	0.539	0.127	0.13	2.34	0.96	3.43	4643	0.7038	29.6514	-28.9476	NAF
NS0026	214	216	NS	E391391	391391	1	G	D	31.78	42.24	2.11	0.361	0.28	0.098	2.45	1.81	0.104	0.039	0.397	0.051	0.19	3.75	0.94	4.88	4633	1.1934	31.57002	-30.37662	NAC
NS0026	190	192	NS	E391379A	391379A	1	G	D	33.18	40.66	2.09	0.349	0.27	0.091	2.29	1.81	0.09	0.03	0.508	0.027	0.18	3.23	0.92	4.33	4621	0.918	31.57002	-30.65202	NAC
NS0026	168	170	NS	E391369	391369	1	G	D	23.94	48.19	4.32	0.284	0.22	0.206	3.24	2.12	0.162	0.202	0.653	0.037	0.37	4.05	1.24	5.66	4610	6.1812	36.97704	-30.79584	NAC
NS0026	228	230	NS	E391398	391398	1	G	D	28.68	42.38	3.67	0.465	0.36	0.173	2.74	1.98	0.147	0.091	1.51	0.199	0.17	3.76	1.2	5.13	4640	2.7846	34.53516	-31.75056	NAC
NS0026	186	188	NS	E391378	391378	1	G	D	29.09	46.68	1.91	0.284	0.22	0.088	2.1	1.96	0.104	0.05	0.61	0.098	0.17	3.08	1.18	4.43	4619	1.53	34.18632	-32.65632	NAC
NS0026	192	194	NS	E391380	391380	1	G	D	33.4	40.83	1.72	0.361	0.28	0.084	2.07	1.98	0.092	0.031	0.488	0.022	0.11	3	1.14	4.25	4622	0.9486	34.53516	-33.58656	NAC
NS0026	172	174	NS	E391371	391371	1	G	D	26.75	47.71	2.4	0.336	0.26	0.115	2.34	1.99	0.092	0.033	0.412	0.037	0.25	4.31	1.28	5.84	4612	1.0098	34.70958	-33.69978	NAC
NS0026	220	222	NS	E391394	391394	1	G	D	24.58	47.36	3.45	0.478	0.37	0.153	2.86	2.27	0.177	0.192	1.08	0.111	0.17	4.52	1.35	6.04	4636	5.8752	39.59334	-33.71814	NAC
NS0026	194	196	NS	E391381	391381	1	G	D	31.77	41.27	2.27	0.387	0.3	0.1	2.4	1.99	0.059	0.024	0.748	0.028	0.15	3.44	1.27	4.86	4623	0.7344	34.70958	-33.97518	NAC
NS0026	202	204	NS	E391385	391385	1	G	D	27.16	43.7	2.64	0.646	0.5	0.114	2.73	2.18	0.137	0.119	0.605	0.021	0.33	6.13	1.21	7.67	4627	3.6414	38.02356	-34.38216	NAC
NS0026	212	214	NS	E391390	391390	1	G	D	31.28	43.37	1.77	0.4	0.31	0.08	1.97	2.05	0.069	0.035	0.656	0.038	0.07	3.17	1.37	4.61	4632	1.071	35.7561	-34.6851	NAC
NS0026	182	184	NS	E391376	391376	1	G	D	27.64	43.81	2.92	0.426	0.33	0.128	2.86	2.15	0.158	0.085	0.774	0.128	0.17	5.17	1.32	6.66	4617	2.601	37.5003	-34.8993	NAC
NS0026	198	200	NS	E391383	391383	1	G	D	32.99	40.65	1.77	0.426	0.33	0.083	2.04	2.08	0.114	0.028	0.581	0.016	0.17	3.19	1.17	4.53	4625	0.8568	36.27936	-35.42256	NAC
NS0026	208	210	NS	E391388	391388	1	G	D	30.91	41.94	2.11	0.426	0.33	0.093	2.45	2.14	0.109	0.039	0.441	0.036	0.26	4.21	1.17	5.64	4630	1.1934	37.32588	-36.13248	NAC
NS0026	226	228	NS	E391397	391397	1	G	D	30.39	41.29	2.59	0.516	0.4	0.121	2.56	2.26	0.104	0.098	0.951	0.163	0.14	3.8	1.56	5.5	4639	2.9988	39.41892	-36.42012	NAC
NS0026	188	190	NS	E391379	391379	1	G	D	30.23	43.01	1.98	0.349	0.27	0.092	2.48	2.31	0.094	0.1	0.537	0.096	0.09	3.58	1.67	5.34	4620	3.06	40.29102	-37.23102	NAC
NS0026	232	234	NS	E391403	391403	1	G	D	30.53	43.5	1.74	0.478	0.37	0.094	2.24	2.28	0.106	0.019	0.495	0.112	0.09	3.02	1.71	4.82	4642	0.5814	39.76776	-39.18636	NAC
NS0026	184	186	NS	E391377	391377	1	G	D	29.73	41.95	2.43	0.374	0.29	0.107	2.75	2.37	0.117	0.055	0.602	0.062	0.22	4.64	1.62	6.48	4618	1.683	41.33754	-39.65454	NAC
NS0026	196	198	NS	E391382	391382	1	G	D	30.66	41.63	2.58	0.374	0.29	0.117	2.61	2.43	0.139	0.031	0.767	0.023	0.14	3.31	1.62	5.07	4624	0.9486	42.38406	-41.43546	NAC
NS0027	108	110	NS	E391480	391480	1	G	D	19	54.48	4.83	0.374	0.29	0.221	2.71	0.33	0.064	1.11	1.73	0.121	0.59	5.21	1.86	7.66	4719	33.966	5.75586	28.21014	PAF(HC)
NS0027	78	80	NS	E391465	391465	1	G	D	33.64	38.39	2.5	0.71	0.55	0.118	2.04	0.54	0.157	1.01	0.928	0.008	0.08	4.49	1.46	6.03	4704	30.906	9.41868	21.48732	PAF(HC)
NS0027	76	78	NS	E391464	391464	1	G	D	32.39	39.2	3.02	0.697	0.54	0.14	2.45	0.37	0.101	0.774	1.01	0.016	0.11	5.3	1.12	6.53	4703	23.6844	6.45354	17.23086	PAF(HC)
NS0027	164	166	NS	E391509	391509	1	G	D	18.83	50.91	6.46	0.284	0.22	0.309	2.77	0.46	0.111	0.696	1.85	0.037	0.77	7.74	1.31	9.82	4746	21.2976	8.02332	13.27428	PAF(HC)
NS0027	158	160	NS	E391506	391506	1	G	D	16.64	51.44	9.35	0.284	0.22	0.441	3.24	0.3	0.063	0.502	3.45	0.051	0.64	5.86	0.93	7.43	4743	15.3612	5.2326	10.1286	PAF(HC)
NS0027	224	226	NS	E391539	391539	1	G	D	23.9	42.57	4.04	0.594	0.46	0.194	3.56	0.55	0.108	0.64	0.323	0.125	1.13	11.07	1.27	13.47	4776	19.584	9.5931	9.9909	PAF(LC)
NS0027	200	202	NS	E391527	391527	1	G	D	20.44	52.04	5.34	0.297	0.23	0.262	3.6	0.58	0.06	0.59	0.785	0.258	0.91	5.29	1.23	7.43	4764	18.054	10.11636	7.93764	PAF(LC)
NS0027	228	230	NS	E391541	391541	1	G	D	24.43	40.88	7.51	0.336	0.26	0.355	4.35	0.37	0.085	0.445	0.342	0.117	1	8.08	1.1	10.18	4778	13.617	6.45354	7.16346	PAF(LC)
NS0027	226	228	NS	E391540	391540	1	G	D	23.39	45.39	5.7	0.349	0.27	0.267	3.95	0.46	0.108	0.421	0.693	0.252	1.14	7.02	0.99	9.15	4777	12.8826	8.02332	4.85928	PAF(LC)
NS0027	156	158	NS	E391505	391505	1	G	D	20.32	46.55	6.43	0.413	0.32	0.302	3.19	0.48	0.111	0.422	2.08	0.049	0.71	9.41	0.91	11.03	4742	12.9132	8.37216	4.54104	PAF(LC)
NS0027	162	164	NS	E391508	391508	1	G	D	21.94	46.03	5.87	0.284	0.22	0.278	3	0.33	0.058	0.335	0.988	0.025	1.27	9.43	0.8	11.5	4745	10.251	5.75586	4.49514	PAF(LC)
NS0027	198	200	NS	E391526	391526	1	G	D	24.37	43.59	3.88	0.568	0.44	0.188	3.52	0.52	0.071	0.443	0.513	0.19	1.13	9.97	1.04	12.14	4763	13.5558	9.06984	4.48596	PAF(LC)
NS0027	242	244	NS	E391548	391548	1	G	D	24.34	46.62	5.35	0.258	0.2	0.257	3.5	0.37	0.063	0.33	0.296	0.098	0.93	6.16	0.66	7.75	4785	10.098	6.45354	3.64446	PAF(LC)
NS0027	272	274	NS	E391563	391563	1	G	D	26.61	41.77	6.09	0.349	0.27	0.289	3.98	0.69	0.153	0.459	0.255	0.078	0.63	6.16	0.76	7.55	4800	14.0454	12.03498	2.01042	PAF(LC)
NS0027	222	224	NS	E391538	391538	1	G	D	23.56	44.03	3.39	0.542	0.42	0.164	3.34	0.57	0.105	0.377	0.283	0.097	1.39	11.35	0.89	13.63	4775	11.5362	9.94194	1.59426	PAF(LC)
NS0027	238	240	NS	E391546	391546	1	G	D	23.63	46.04	5.95	0.31	0.24	0.281	3.93	0.48	0.07	0.325	0.331	0.11	0.82	6.67	0.75	8.24	4783	9.945	8.37216	1.57284	PAF(LC)
NS0027	86	88	NS	E391469	391469	1	G	D	28.61	45.13	4.05	0.478	0.37	0.186	2.26	0.2	0.054	0.164	1.32	0.021	0.67	4.13	0.36	5.16	4708	5.0184	3.4884	1.53	PAF(LC)
NS0027	110	112	NS	E391481	391481	1	G	D	20.84	47.47	5.14	0.516	0.4	0.238	3.02	0.48	0.11	0.303	1.71	0.05	0.75	9.84	0.69	11.28	4720	9.2718	8.37216	0.89964	PAF(LC)
NS0027	2	4	NS	E391427	391427	1	G	D	47.66	14.45	8.3	-0.0129	-0.01	0.514	0.06	0.06	0.023	0.057	0.037	0.019	5.23	2.28	0.45	7.96	4666	1.7442	1.04652	0.69768	PAF(LC)
NS0027	106	108	NS	E391479	391479	1	G	D	27.28	43.5	2.49	0.697	0.54	0.117	2.55	0.66	0.145	0.395	0.803	0.05	0.52	8.4	0.75	9.67	4718	12.087	11.51172	0.57528	PAF(LC)
NS0027	166	168	NS	E391510	391510	1	G	D	24.61	41.1	4.95	0.426	0.33	0.231	3.16	0.68	0.167	0.401	0.724	0.052	0.9	11.19	0.88	12.97	4747	12.2706	11.86056	0.41004	PAF(LC)
NS0027	4	6	NS	E391428	391428	1	G	D	46.52	19.48	7.47	-0.0129	-0.01	0.355	0.05	0.06	0.015	0.047	0.019	0.05	2.88	2.29	0.39	5.56	4667	1.4382	1.04652	0.39168	PAF(LC)
NS0027	0	2	NS	E391426	391426	1	G	D	48.5	12.26	10.27	0.026	0.02	0.618	0.09	0.05	0.021	0.034	0.063	0.021	3.69	2.85	0.37	6.91	4665	1.0404	0.8721	0.1683	PAF(LC)

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0027	160	162	NS	E391507	391507	1	G	D	20.16	47.53	6.2	0.465	0.36	0.295	3.64	0.55	0.113	0.316	1.29	0.055	0.71	9.28	0.79	10.78	4744	9.6696	9.5931	0.0765	PAF(LC)
NS0027	32	34	NS	E391442	391442	1	G	D	13.4	71.98	6.04	-0.0129	-0.01	0.262	0.03	0.02	0.018	0.009	0.028	0.027	0.24	1.94	0.14	2.32	4681	0.2754	0.34884	-0.07344	NAF
NS0027	34	36	NS	E391443	391443	1	G	D	21.59	62.15	4.56	-0.0129	-0.01	0.184	0.03	0.02	0.022	0.007	0.016	0.027	0.41	1.4	0.14	1.95	4682	0.2142	0.34884	-0.13464	NAF
NS0027	30	32	NS	E391441	391441	1	G	D	20.7	61.92	5.78	-0.0129	-0.01	0.24	0.04	0.02	0.01	0.006	0.027	0.027	0.23	1.98	0.14	2.35	4680	0.1836	0.34884	-0.16524	NAF
NS0027	118	120	NS	E391485	391485	1	G	D	20.73	50.38	4.19	0.478	0.37	0.192	3.11	0.81	0.072	0.455	1.14	0.08	0.48	8.33	0.86	9.67	4724	13.923	14.12802	-0.20502	NAF
NS0027	38	40	NS	E391445	391445	1	G	D	26.55	57.02	3.26	0.026	0.02	0.14	0.02	0.02	0.028	0.004	0.011	0.021	0.36	1.06	0.11	1.53	4684	0.1224	0.34884	-0.22644	NAF
NS0027	46	48	NS	E391449	391449	1	G	D	33.53	47.04	2.84	0.026	0.02	0.122	0.02	0.02	0.043	0.004	0.009	0.009	0.8	0.86	0.11	1.77	4688	0.1224	0.34884	-0.22644	NAF
NS0027	24	26	NS	E391438	391438	1	G	D	18.65	66.69	4.32	-0.0129	-0.01	0.162	0.05	0.03	0.009	0.009	0.02	0.048	0.68	1.5	0.15	2.33	4677	0.2754	0.52326	-0.24786	NAF
NS0027	36	38	NS	E391444	391444	1	G	D	25.19	58.81	3.27	-0.0129	-0.01	0.146	0.02	0.02	0.014	0.003	0.013	0.011	0.29	1	0.1	1.39	4683	0.0918	0.34884	-0.25704	NAF
NS0027	40	42	NS	E391446	391446	1	G	D	28.95	54.06	2.9	0.026	0.02	0.122	0.02	0.02	0.024	0.003	0.008	0.01	0.38	0.87	0.14	1.39	4685	0.0918	0.34884	-0.25704	NAF
NS0027	42	44	NS	E391447	391447	1	G	D	28.44	54.94	2.76	0.026	0.02	0.12	0.02	0.02	0.027	0.003	0.01	0.009	0.43	0.89	0.14	1.46	4686	0.0918	0.34884	-0.25704	NAF
NS0027	44	46	NS	E391448	391448	1	G	D	28.94	54.02	2.74	0.026	0.02	0.119	0.02	0.02	0.042	0.003	0.011	0.018	0.67	0.8	0.13	1.6	4687	0.0918	0.34884	-0.25704	NAF
NS0027	48	50	NS	E391450	391450	1	G	D	32.1	49.27	2.98	0.052	0.04	0.147	0.02	0.02	0.013	0.002	0.01	0.007	0.52	0.92	0.06	1.5	4689	0.0612	0.34884	-0.28764	NAF
NS0027	50	52	NS	E391451	391451	1	G	D	33.91	47.73	2.34	0.065	0.05	0.112	0.04	0.02	0.012	0.002	0.014	0.005	0.46	0.66	-0.1	1.02	4690	0.0612	0.34884	-0.28764	NAF
NS0027	54	56	NS	E391453	391453	1	G	D	33.55	47.7	2.19	0.503	0.39	0.095	0.07	0.03	0.02	0.006	0.013	0.016	0.76	0.66	-0.03	1.39	4692	0.1836	0.52326	-0.33966	NAF
NS0027	72	74	NS	E391462	391462	1	G	D	37.09	40.98	2.36	0.594	0.46	0.11	0.43	0.04	0.041	0.011	0.44	0.007	1.11	0.72	0.23	2.06	4701	0.3366	0.69768	-0.36108	NAF
NS0027	16	18	NS	E391434	391434	1	G	D	29.67	53.15	2.32	-0.0129	-0.01	0.091	0.03	0.03	0.017	0.005	0.01	0.027	0.68	0.75	0.13	1.56	4673	0.153	0.52326	-0.37026	NAF
NS0027	28	30	NS	E391440	391440	1	G	D	20.01	64.29	4.58	-0.0129	-0.01	0.186	0.03	0.03	0.008	0.005	0.021	0.03	0.22	1.53	0.15	1.9	4679	0.153	0.52326	-0.37026	NAF
NS0027	52	54	NS	E391452	391452	1	G	D	37.18	42.02	2.47	0.374	0.29	0.109	0.07	0.03	0.01	0.004	0.01	0.01	0.89	0.69	-0.15	1.43	4691	0.1224	0.52326	-0.40086	NAF
NS0027	56	58	NS	E391454	391454	1	G	D	36.73	42.22	2.19	0.684	0.53	0.1	0.16	0.03	0.014	0.004	0.197	0.012	1.2	0.66	-0.06	1.8	4693	0.1224	0.52326	-0.40086	NAF
NS0027	26	28	NS	E391439	391439	1	G	D	20.91	62.85	4.74	-0.0129	-0.01	0.184	0.03	0.03	0.01	0.003	0.021	0.039	0.35	1.57	0.2	2.12	4678	0.0918	0.52326	-0.43146	NAF
NS0027	10	12	NS	E391431	391431	1	G	D	29.79	43.34	7.73	-0.0129	-0.01	0.324	0.07	0.07	0.021	0.024	0.018	0.08	2.78	2.41	0.34	5.53	4670	0.7344	1.22094	-0.48654	NAF
NS0027	12	14	NS	E391432	391432	1	G	D	29.21	55.28	1.67	0.026	0.02	0.071	0.03	0.04	0.016	0.005	0.009	0.014	0.57	0.53	0.04	1.14	4671	0.153	0.69768	-0.54468	NAF
NS0027	20	22	NS	E391436	391436	1	G	D	11.12	72.92	7.38	-0.0129	-0.01	0.281	0.05	0.04	0.006	0.003	0.023	0.087	0.63	2.37	0.21	3.21	4675	0.0918	0.69768	-0.60588	NAF
NS0027	66	68	NS	E391459	391459	1	G	D	35.01	44.64	2.47	0.478	0.37	0.112	0.25	0.04	0.018	0.003	0.048	0.015	0.86	0.78	-0.06	1.58	4698	0.0918	0.69768	-0.60588	NAF
NS0027	8	10	NS	E391430	391430	1	G	D	36.83	26.03	9.97	-0.0129	-0.01	0.501	0.15	0.14	0.03	0.059	0.021	0.126	7.23	2.37	0.51	10.11	4669	1.8054	2.44188	-0.63648	NAF
NS0027	22	24	NS	E391437	391437	1	G	D	5.89	78.78	8.28	-0.0129	-0.01	0.277	0.09	0.05	0.011	0.007	0.022	0.086	0.7	2.69	0.22	3.61	4676	0.2142	0.8721	-0.6579	NAF
NS0027	262	264	NS	E391558	391558	1	G	D	26.74	45.93	4.64	0.31	0.24	0.227	3.21	0.41	0.055	0.21	0.178	0.06	0.63	5.78	0.29	6.7	4795	6.426	7.15122	-0.72522	NAF
NS0027	18	20	NS	E391435	391435	1	G	D	10.64	73.44	7.84	-0.0129	-0.01	0.258	0.06	0.05	0.006	0.003	0.021	0.081	0.51	2.54	0.21	3.26	4674	0.0918	0.8721	-0.7803	NAF
NS0027	58	60	NS	E391455	391455	1	G	D	36.39	42.2	2.09	0.697	0.54	0.094	0.31	0.05	0.03	0.003	0.58	0.012	1.26	0.53	0.06	1.85	4694	0.0918	0.8721	-0.7803	NAF
NS0027	60	62	NS	E391456	391456	1	G	D	37.08	41.29	2.58	0.568	0.44	0.111	0.33	0.05	0.012	0.003	0.227	0.014	1	0.79	-0.04	1.75	4695	0.0918	0.8721	-0.7803	NAF
NS0027	64	66	NS	E391458	391458	1	G	D	36.86	41.18	2.91	0.62	0.48	0.124	0.34	0.05	0.018	0.003	0.086	0.013	0.87	0.91	-0.08	1.7	4697	0.0918	0.8721	-0.7803	NAF
NS0027	62	64	NS	E391457	391457	1	G	D	38.81	39.34	2.44	0.555	0.43	0.107	0.24	0.05	0.011	0.002	0.214	0.01	0.88	0.7	-0.13	1.45	4696	0.0612	0.8721	-0.8109	NAF
NS0027	68	70	NS	E391460	391460	1	G	D	38.14	39.63	2.56	0.568	0.44	0.112	0.35	0.05	0.018	0.002	0.05	0.015	0.97	0.82	-0.14	1.65	4699	0.0612	0.8721	-0.8109	NAF
NS0027	6	8	NS	E391429	391429	1	G	D	45.56	17.16	7.51	-0.0129	-0.01	0.56	0.18	0.14	0.03	0.053	0.07	0.072	6.45	1.94	0.45	8.84	4668	1.6218	2.44188	-0.82008	NAF
NS0027	170	172	NS	E391512	391512	1	G	D	22.67	47.2	5.23	0.31	0.24	0.244	3.18	0.43	0.063	0.218	1.05	0.154	1.01	7.82	0.51	9.34	4749	6.6708	7.50006	-0.82926	NAF
NS0027	14	16	NS	E391433	391433	1	G	D	30.65	50.06	3.33	-0.0129	-0.01	0.121	0.03	0.06	0.035	0.006	0.01	0.026	0.94	1.07	0.13	2.14	4672	0.1836	1.04652	-0.86292	NAF
NS0027	70	72	NS	E391461	391461	1	G	D	36.94	41.6	2.28	0.633	0.49	0.1	0.63	0.06	0.018	0.003	0.241	0.014	1.01	0.7	-0.04	1.67	4700	0.0918	1.04652	-0.95472	NAF
NS0027	174	176	NS	E391514	391514	1	G	D	24.19	45.04	4.95	0.336	0.26	0.233	2.96	0.7	0.113	0.366	1.14	0.096	0.88	7.83	0.72	9.43	4751	11.1996	12.2094	-1.0098	NAF
NS0027	234	236	NS	E391544	391544	1	G	D	24.11	42.89	5.85	0.426	0.33	0.274	4.14	0.63	0.151	0.315	0.288	0.104	1	8.48	0.71	10.19	4781	9.639	10.98846	-1.34946	NAF
NS0027	264	266	NS	E391559	391559	1	G	D	26.62	46.21	3.95	0.336	0.26	0.196	3.02	0.44	0.056	0.192	0.182	0.071	0.63	6.22	0.25	7.1	4796	5.8752	7.67448	-1.79928	NAF
NS0027	258	260	NS	E391556	391556	1	G	D	29.75	44.95	3.6	0.258	0.2	0.173	2.61	0.34	0.037	0.123	0.255	0.085	0.59	4.39	-0.01	4.97	4793	3.7638	5.93028	-2.16648	NAF
NS0027	232	234	NS	E391543	391543	1	G	D	25.03	43.72	4.6	0.439	0.34	0.221	3.44	0.68	0.168	0.301	0.344	0.115	1.14	8.2	0.67	10.01	4780	9.2106	11.86056	-2.64996	NAF
NS0027	190	192	NS	E391522	391522	1	G	D	26.25	44.79	4.79	0.336	0.26	0.226	3.23	0.54	0.095	0.212	0.474	0.141	0.79	6.74	0.39	7.92	4759	6.4872	9.41868	-2.93148	NAF
NS0027	74	76	NS	E391463	391463	1	G	D	32.44	44.17	2.27	0.465	0.36	0.107	1.51	0.23	0.094	0.035	0.267	0.014	0.69	3.48	0.16	4.33	4702	1.071	4.01166	-2.94066	NAF
NS0027	80	82	NS	E391466	391466	1	G	D	33.99	40.19	2.48	0.555	0.43	0.12	1.94	0.39	0.112	0.114	0.807	0.036	0.26	4.23	0.03	4.52	4705	3.4884	6.80238	-3.31398	NAF
NS0027	82	84	NS	E391467	391467	1	G	D	33.68	40.63	2.61	0.581	0.45	0.119	2.17	0.27	0.067	0.033	0.773	0.104	0.12	4.77	-0.33	4.56	4706	1.0098	4.70934	-3.69954	NAF
NS0027	230	232	NS	E391542	391542	1	G	D	25.3	44.73	2.93	0.478	0.37	0.138	2.89	0.51	0.091	0.163	0.166	0.092	1.33	10.01	0.29	11.63	4779	4.9878	8.89542	-3.90762	NAF
NS0027	202	204	NS	E391528	391528	1	G	D	23.6	47.51	2.72	0.465	0.36	0.123	2.9	0.55	0.074	0.185	0.44	0.166	1.2	9.58	0.48	11.26	4765	5.661	9.5931	-3.9321	NAF
NS0027	130	132	NS	E391491	391491	1	G	D	25.36	43.68	4.42	0.529	0.41	0.205	2.98	0.72	0.08	0.278	1.33	0.05	0.56	7.5	0.6	8.66	4729	8.5068	12.55824	-4.05144	NAF
NS0027	120	122	NS	E391486	391486	1	G	D	24.89	41.66	3.77	0.646	0.5	0.17	3.41	0.81	0.118	0.314	0.965	0.099	0.88	10.46	0.71	12.05	4725	9.6084	14.12802	-4.51962	NAF
NS0027	154	156	NS	E391504	391504	1	G	D	24.71	42.13	5.07	0.503	0.39	0.237	3.44	0.61	0.123	0.184	0.67	0.054	0.9	10.1	0.39	11.39	4741	5.6304	10.63962	-5.00922	NAF
NS0027	252	254	NS	E391553	391553	1	G	D	29.03	46.04	3.01	0.297	0.23	0.146	2.51	0.45	0.051	0.089	0.297	0.108	0.73	4.87	-0.01	5.59	4790	2.7234	7.8489	-5.1255	NAF
NS0027	116	118	NS	E391484	391484	1	G	D	25.45	43.38	4.95	0.387	0.3	0.228	3.31	0.49	0.072	0.095	0.883	0.05	0.73	8.62	0.14	9.49	4723	2.907	8.54658	-5.63958	NAF
NS0027	196	198	NS	E391525	391525	1	G	D	22.77	48.47	2.04	0.529	0.41	0.095	2.64	0.61	0.065	0.154	0.332	0.114	0.86	10.78	0.3	11.94	4762	4.7124	10.63962	-5.92722	NAF
NS0027	84	86	NS	E391468	391468	1	G	D	31.56	41.19	2.8	0.646	0.5	0.13	2.38	0.45	0.121	0.059	0.7	0.092	0.33	6.01	-0.19	6.15	4707	1.8054	7.8489	-6.0435	NAF
NS0027	218	220	NS	E391536	391536	1	G	D	26.42	45.31	3.79	0.284	0.22	0.181	3.08	0.58	0.097	0.127	0.273	0.112	0.99	7.26	0.2	8.45	4773	3.8862	10.11636	-6.23016	NAF
NS0027	206	208	NS	E391530	391530	1	G	D	27.2	43.8	3.16	0.323	0.25	0.149	2.91	0.56	0.085	0.102	0.217	0.085	0.78	8.91	0.01	9.7	4767	3.1212	9.76752	-6.64632	NAF
NS0027	204	206	NS	E391529	391529	1	G	D	26.82	41.65	3.3	0.413	0.32	0.155	3.25	0.63	0.136	0.14	0.367	0.136	1.07	10.23	0.27	11.57	4766	4.284	10.98846	-6.70446	NAF
NS0027	280	282	NS	E391567	391567	1	G	D	25.06	47.85	4.11	0.361	0.28	0.2	3.03	0.66	0.093	0.144	0.193	0.055	0.75	6.31	0.22	7.28	4804	4.4064	11.51172	-7.10532	NAF
NS0027	132	134	NS	E391492	391492	1	G	D	27.46	42.36	4.48	0.478	0.37	0.213	2.99	0.56	0.054	0.078	1.12	0.064	0.76	6.98	0.03	7.77	4730	2.3868	9.76752	-7.38072	NAF
NS0027	270	272	NS	E391562	391562	1	G	D	25.76	45.73	4.87	0.297	0.23	0.238	3.48	0.84	0.128	0.234	0.166	0.057	0.66	6.02	0.44	7.12	4799	7.1604	14.65128	-7.49088	NAF
NS0027	182	184	NS	E391518	391518	1	G	D	29.8	40.62	3.26	0.349	0.27	0.151	2.62	0.62	0.085	0.106	0.413	0.124	1.33	7.24	0.13	8.7	4755	3.2436	10.81404	-7.57044	NAF
NS0027	178	180	NS	E391516	391516	1	G	D	28.65	40.68	4.11	0.349	0.27	0.193	2.98	0.74	0.157	0.163	0.464	0.132	0.97	7.68	0.23	8.88	4753	4.9878	12.90708	-7.91928	NAF
NS0027	172	174	NS	E391513	391513	1	G	D	26.12	44.61	2.95	0.374	0.29	0.139	2.49	0.66	0.159	0.113	0.505	0.122	0.94	8.78	0.14	9.86	4750	3.4578	11.51172	-8.05392	NAF
NS0027	208	210	NS	E391531	391531	1	G	D	26.82	43.99	3.47	0.323	0.25	0.165	3.05	0.66	0.127	0.112	0.307	0.122	0.96	8.11	0.13	9.2	4768	3.4272	11.51172	-8.08452	NAF
NS0027	240	242	NS	E391547	391547	1	G	D	27.71	41.33	3.21	0.426	0.33	0.158	3.02	0.71	0.186	0.136	0.296	0.111	1.12	8.98	0.16	10.26	4784	4.1616	12.38382	-8.22222	NAF
NS0027	90	92	NS	E391471	391471	1	G	D	33.1	39.74	1.75	0.671	0.52	0.08	2.26	0.55	0.078	0.04	0.379	0.025	0.59	6.86	-0.28	7.17	4710	1.224	9.5931	-8.3691	NAF
NS0027	92	94	NS	E391472	391472	1	G	D	32.88	40.41	2.19	0.594	0.46	0.098	2.2	0.58	0.102	0.039	0.674	0.016	0.18	5.97	-0.31	5.84	4711	1.1934	10.11636	-8.92296	NAF
NS0027	96	98	NS	E391474	391474	1	G	D	33.4	38.15	2.51	0.594	0.46	0.121	2.66	0.61	0.082	0.055	0.725	0.036	0.32	6.46	-0.16	6.62	4713	1.683	10.63962	-8.95662	NAF
NS0027	216	218	NS	E391535	391535	1	G	D	28.56	45.55	3.02	0.232	0.18	0.147	2.56	0.64	0.059	0.071	0.3	0.119	0.77	5.53	0.04	6.34	4772	2.1726	11.16288	-8.99028	NAF
NS0027	168	170	NS	E391511	391511	1	G	D	25.67	42.82	3.19	0.349	0.27	0.145	2.57	0.73	0.167	0.112	0.418	0.048	1.71	10.84	0.17	12.72	4748	3.4272	12.73266	-9.30546	NAF
NS0027	88	90	NS	E391470	391470	1	G	D	30.53	41	3.15	0.529	0.41	0.14	2.69	0.77	0.126	0.132	0.799	0.092	0.2	6.12	0.06	6.38	4709	4.0392	13.43034	-9.39114	NAF
NS0027	146	148	NS	E391499	391499	1	G	D	24.55	43.73	5.41	0.465	0.36	0.252	3.27	0.8	0.144	0.145	1.67	0.094	0.77	7.73	0.31	8.81	4737	4.437	13.9536	-9.5166	NAF
NS0027	254	256	NS	E391554	391554	1	G	D	26.95	44.5	4.55	0.349	0.27	0.216	3.26	0.81	0.188	0.143	0.274	0.088	0.69	5.66	0.19	6.54	4791	4.3758	14.12802	-9.75222	NAF
NS0027	194	196	NS	E391524	391524	1	G	D	25.56	44.43	3.6	0.413	0.32	0.177	2.94	0.85	0.112	0.156	0.321	0.108	0.91	8.66	0.29	9.86	4761	4.7736	14.8257	-10.0521	NAF
NS0027	100	102	NS	E391476	391476	1	G	D	33.07	39.38	2.27	0.62	0.48	0.108	2.42	0.68	0.09	0.058	0.565	0.022	0.3	6.28	-0.22	6.36	4715	1.7748	11.86056	-10.08576	NAF
NS0027	94	96	NS	E391473	391473	1	G	D	32.45	39.94	2.42	0.607	0.47	0.106	2.39	0.68	0.122	0.057	0.82	0.017	0.23	6.22	-0.24	6.21	4712	1.7442	11.86056	-10.11636	NAF
NS0027	276	278	NS	E391565	391565	1	G	D	28.11	44.29	4.54	0.258	0.2	0.217	3.05	0.8	0.119	0.122	0.211	0.07	0.66	4.77	0.16	5.59	4802	3.7332	13.9536	-10.2204	NAF
NS0027	176	178	NS	E391515	391515	1	G	D	27.73	42.93	3.69	0.349	0.27	0.17	2.69	0.87	0.199	0.158	0.378	0.095	0.68	7.7	0.16	8.54	4752	4.8348	15.17454	-10.33974	NAF
NS0027	248	250	NS	E391551	391551	1	G	D	30.24	44.02	3.45	0.219	0.17	0.165	2.61	0.76	0.071	0.091	0.245	0.091	0.57	4.37	0.04	4.98	4788	2.7846	13.25592	-10.47132	NAF
NS0027	114	116	NS	E391483	391483	1	G	D	26.82	41.48	4.64	0.374	0.29	0.214	3.06	0.77	0.172	0.093	0.848	0.043	1.18	8.32	0.03	9.53	4722	2.8458	13.43034	-10.58454	NAF
NS0027	278	280	NS	E391566	391566	1	G	D	29.06	44.28	3.39	0.297	0.23	0.165	2.66	0.83	0.098	0.126	0.122	0.045	0.68	5.61	0.12	6.41	4803	3.8556	14.47686	-10.62126	NAF
NS0027	188	190	NS	E391521	391521	1	G	D	28.92	40.71	3.44	0.413	0.32	0.161	3.01	0.83	0.116	0.123	0.341	0.125	0.98	8.19	0.09	9.26	4758	3.7638	14.47686	-10.71306	NAF
NS0027	148	150	NS	E391500	391500	1	G	D	26.54	44.03	4.55	0.426	0.33	0.213	3	0.76	0.108	0.077	1.04	0.076	0.55	7.11	0.03	7.69	4738	2.3562	13.25592	-10.89972	NAF
NS0027	144	146	NS	E391498	391498	1	G	D	24.76	44.06	6.04	0.336	0.26	0.281	2.95	0.95	0.122	0.184	2.48	0.065	0.6	5.96	0.39	6.95	4736	5.6304	16.5699	-10.9395	NAF
NS0027	150	152	NS	E391502	391502	1	G	D	24.07	45.87	5.38	0.426	0.33	0.246	3.25	0.9	0.094	0.15	1.26	0.08	0.61	6.7	0.3	7.61	4739	4.59	15.6978	-11.1078	NAF
NS0027	256	258	NS	E391555	391555	1	G	D	27.78	47.3	3.59	0.245	0.19	0.175	2.58	0.86	0.189	0.121	0.27	0.096	0.54	4.02	0.03	4.59	4792	3.7026	15.00012	-11.29752	NAF
NS0027	192	194	NS	E391523	391523	1	G	D	28.66	41.49	3.03	0.413	0.32	0.145	2.72	0.85	0.099	0.104	0.264	0.101	0.9	8.71	0.06	9.67	4760	3.1824	14.8257	-11.6433	NAF
NS0027	142	144	NS	E391497	391497	1	G	D	28.37	42.3	4.39	0.374	0.29	0.207	2.89	0.83	0.079	0.088	1.06	0.067	0.48	6.19	0.08	6.75	4735	2.6928	14.47686	-11.78406	NAF
NS0027	210	212	NS	E391532	391532	1	G	D	27.72	44.29	3.15	0.31	0.24	0.156	2.81	0.85	0.117	0.095	0.301	0.123	0.96	7.05	0.16	8.17	4769	2.907	14.8257	-11.9187	NAF
NS0027	266	268	NS	E391560	391560	1	G	D	25.32	47.91	3.77	0.323	0.25	0.187	2.97	0.98	0.136	0.157	0.161	0.055	0.63	5.94	0.34	6.91	4797	4.8042	17.09316	-12.28896	NAF
NS0027	236	238	NS	E391545	391545	1	G	D	24.36	42.74	5.25	0.452	0.35	0.247	3.97	1.21	0.349	0.28	0.285	0.114	0.87	8.76	0.6	10.23	4782	8.568	21.10482	-12.53682	NAF
NS0027	180	182	NS	E391517	391517	1	G	D	26.29	40.91	4.18	0.452	0.35	0.198	3.38	1.02	0.176	0.163	0.313	0.078	0.86	10.34	0.25	11.45	4754	4.9878	17.79084	-12.80304	NAF
NS0027	138	140	NS	E391495	391495	1	G	D	26.39	45.45	4.22	0.426	0.33	0.195	2.85	0.87	0.102	0.077	1.03	0.064	0.39	6.32	0.15	6.86	4733	2.3562	15.17454	-12.81834	NAF
NS0027	136	138	NS	E391494	391494	1	G	D	26.34	44.07	4.67	0.465	0.36	0.225	2.89	0.94	0.103	0.094	1.47	0.057	0.55	6.44	0.27	7.26	4732	2.8764	16.39548	-13.51908	NAF
NS0027	220	222	NS	E391537	391537	1	G	D	26.95	40.42	3.34	0.4	0.31	0.159	3.22	0.98	0.122	0.114	0.163	0.07	1.22	10.55	0.26	12.03	4774	3.4884	17.09316	-13.60476	NAF
NS0027	244	246	NS	E391549	391549	1	G	D	25.28	44.95	3.81	0.387	0.3	0.185	3.29	1.02	0.172	0.135	0.279	0.102	0.86	7.68	0.26	8.8	4786	4.131	17.79084	-13.65984	NAF
NS0027	246	248	NS	E391550	391550	1	G	D	28.34	45.12	2.79	0.284	0.22	0.134	2.45	0.99	0.083	0.085	0.158	0.062	0.74	5.86	0.19	6.79	4787	2.601	17.26758	-14.66658	NAF
NS0027	274	276	NS	E391564	391564	1	G	D	29.5	43.39	3.33	0.323	0.25	0.161	2.63	1.05	0.124	0.117	0.218	0.067	0.67	4.96	0.21	5.84	4801	3.5802	18.3141	-14.7339	NAF
NS0027	98	100	NS	E391475	391475	1	G	D	32.34	38.69	2.91	0.568	0.44	0.132	2.77	0.99	0.089	0.063	0.848	0.024	0.21	6.06	0.18	6.45	4714	1.9278	17.26758	-15.33978	NAF
NS0027	112	114	NS	E391482	391482	1	G	D	24.52	42.87	4.61	0.478	0.37	0.208	3.07	1.03	0.264	0.083	1.25	0.049	0.64	9.89	0.09	10.62	4721	2.5398	17.96526	-15.42546	NAF
NS0027	214	216	NS	E391534	391534	1	G	D	28.04	44.26	3.37	0.284	0.22	0.171	2.75	1.06	0.159	0.096	0.273	0.102	0.76	6.24	0.18	7.18	4771	2.9376	18.48852	-15.55092	NAF
NS0027	184	186	NS	E391519	391519	1	G	D	25.58	45.55	3.25	0.374	0.29	0.149	2.77	1.15	0.12	0.141	0.245	0.082	0.82	8.11	0.32	9.25	4756	4.3146	20.0583	-15.7437	NAF
NS0027	268	270	NS	E391561	391561	1	G	D	28.46	44.41	3.2	0.336	0.26	0.154	2.71	1.11	0.085	0.109	0.116	0.047	0.79	5.74	0.31	6.84	4798	3.3354	19.36062	-16.02522	NAF
NS0027	186	188	NS	E391520	391520	1	G	D	26.53	47.08	2.76	0.336	0.26	0.127	2.2	1.2	0.152	0.137	0.267	0.082	1.15	6.03	0.12	7.3	4757	4.1922	20.9304	-16.7382	NAF
NS0027	104	106	NS	E391478	391478	1	G	D	33.2	39.02	2.22	0.594	0.46	0.103	2.37	1.05	0.131	0.047	0.47	0.026	0.27	6	0.02	6.29	4717	1.4382	18.3141	-16.8759	NAF
NS0027	122	124	NS	E391487	391487	1	G	D	29.28	40.74	3.37	0.516	0.4	0.154	2.83	1.15	0.09	0.052	0.611	0.039	0.41	7.63	0.42	8.46	4726	1.5912	20.0583	-18.4671	NAF
NS0027	134	136	NS	E391493	391493	1	G	D	27.14	44.08	4.16	0.452	0.35	0.203	2.73	1.22	0.166	0.079	1.16	0.052	0.5	6.06	0.28	6.84	4731	2.4174	21.27924	-18.86184	NAF
NS0027	102	104	NS	E391477	391477	1	G	D	33.95	38.72	2.05	0.555	0.43	0.099	2.25	1.19	0.128	0.042	0.467	0.014	0.23	5.22	0.18	5.63	4716	1.2852	20.75598	-19.47078	NAF
NS0027	152	154	NS	E391503	391503	1	G	D	26.41	43.11	4.64	0.426	0.33	0.22	3.04	1.32	0.109	0.116	0.932	0.086	0.63	6.86	0.46	7.95	4740	3.5496	23.02344	-19.47384	NAF
NS0027	128	130	NS	E391490	391490	1	G	D	30.52	41.07	3.01	0.503	0.39	0.139	2.49	1.25	0.121	0.05	0.533	0.038	0.52	6.18	0.31	7.01	4728	1.53	21.8025	-20.2725	NAF
NS0027	212	214	NS	E391533	391533	1	G	D	28.85	41.91	2.75	0.349	0.27	0.133	2.71	1.37	0.206	0.075	0.245	0.099	0.87	7.44	0.24	8.55	4770	2.295	23.89554	-21.60054	NAF
NS0027	260	262	NS	E391557	391557	1	G	D	24.57	47.35	3.84	0.413	0.32	0.188	3.05	1.69	0.256	0.204	0.241	0.079	0.67	5.62	0.64	6.93	4794	6.2424	29.47698	-23.23458	NAF
NS0027	124	126	NS	E391488	391488	1	G	D	29.56	40.38	3.3	0.542	0.42	0.153	2.82	1.46	0.161	0.049	0.564	0.043	0.49	6.92	0.48	7.89	4727	1.4994	25.46532	-23.96592	NAF
NS0027	250	252	NS	E391552	391552	1	G	D	26.13	46.38	3	0.349	0.27	0.146	2.72	1.63	0.181	0.097	0.2	0.076	0.64	6.02	0.64	7.3	4789	2.9682	28.43046	-25.46226	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0027	140	142	NS	E391496	391496	1	G	D	24.74	45.52	4.27	0.413	0.32	0.2	2.83	1.76	0.255	0.097	1.11	0.065	0.43	6.27	0.5	7.2	4734	2.9682	30.69792	-27.72972	NAF
NS0028	120	122	NS	E391629	391629	1	G	D	26.37	39.92	3.55	0.503	0.39	0.15	1.89	0.29	0.047	4.96	0.004	0.005	0.55	12.06	3.22	15.83	4865	151.776	5.05818	146.71782	PAF(HC)
NS0028	266	268	NS	E391703	391703	1	G	D	27.33	36.94	0.98	0.413	0.32	0.044	2.48	0.55	0.102	3.33	0.052	0.019	0.38	13.84	4.89	19.11	4938	101.898	9.5931	92.3049	PAF(HC)
NS0028	154	156	NS	E391646	391646	1	G	D	19.77	53.67	9.02	0.116	0.09	0.383	2.14	0.05	0.013	2.11	0.021	0.011	0.62	4.88	0.62	6.12	4882	64.566	0.8721	63.6939	PAF(HC)
NS0028	136	138	NS	E391637	391637	1	G	D	27.12	36.92	2.77	0.4	0.31	0.116	2.27	0.41	0.083	2.05	0.006	0.005	0.82	13.2	3.72	17.74	4873	62.73	7.15122	55.57878	PAF(HC)
NS0028	148	150	NS	E391643	391643	1	G	D	28.83	32.74	2.25	0.465	0.36	0.098	2.67	0.32	0.023	1.95	0.005	0.012	0.79	14.74	4.2	19.73	4879	59.67	5.58144	54.08856	PAF(HC)
NS0028	138	140	NS	E391638	391638	1	G	D	27.21	36.38	3.54	0.439	0.34	0.139	2.34	0.48	0.101	1.97	0.004	0.009	0.95	12.72	3.42	17.09	4874	60.282	8.37216	51.90984	PAF(HC)
NS0028	122	124	NS	E391630	391630	1	G	D	24.88	43.48	7.36	0.323	0.25	0.329	2.03	0.12	0.023	1.55	0.007	0.01	1.42	7.04	1.83	10.29	4866	47.43	2.09304	45.33696	PAF(HC)
NS0028	156	158	NS	E391647	391647	1	G	D	21.53	45.55	9.44	0.232	0.18	0.411	2.94	0.13	0.013	1.5	0.354	0.021	0.44	7.46	1.86	9.76	4883	45.9	2.26746	43.63254	PAF(HC)
NS0028	134	136	NS	E391636	391636	1	G	D	29.66	32.85	1.13	0.516	0.4	0.045	2.06	0.29	0.036	1.36	0.003	0.003	3.96	13.56	3.02	20.54	4872	41.616	5.05818	36.55782	PAF(HC)
NS0028	152	154	NS	E391645	391645	1	G	D	25.24	40.45	4.38	0.426	0.33	0.172	2.57	0.31	0.036	1.22	0.006	0.006	0.79	11.79	2.67	15.25	4881	37.332	5.40702	31.92498	PAF(HC)
NS0028	118	120	NS	E391628	391628	1	G	D	25.87	42.97	5.4	0.336	0.26	0.242	1.95	0.15	0.038	0.965	0.006	0.007	2.35	7.65	1.54	11.54	4864	29.529	2.6163	26.9127	PAF(HC)
NS0028	158	160	NS	E391648	391648	1	G	D	29.98	33.14	1.48	0.607	0.47	0.057	2.5	0.32	0.033	1.02	0.009	0.004	3.14	13.36	2.36	18.86	4884	31.212	5.58144	25.63056	PAF(HC)
NS0028	150	152	NS	E391644	391644	1	G	D	28.72	38.89	1.28	0.465	0.36	0.056	1.93	0.24	0.027	0.655	0.008	0.006	3.07	11.2	1.59	15.86	4880	20.043	4.18608	15.85692	PAF(HC)
NS0028	176	178	NS	E391657	391657	1	G	D	25.52	40.89	4.85	0.491	0.38	0.206	2.73	0.39	0.079	0.714	0.008	0.012	2.02	9.59	1.66	13.27	4893	21.8484	6.80238	15.04602	PAF(HC)
NS0028	178	180	NS	E391658	391658	1	G	D	23.96	43.79	2.32	0.465	0.36	0.097	2.38	0.45	0.065	0.581	0.008	0.006	2.02	12.1	1.55	15.67	4894	17.7786	7.8489	9.9297	PAF(LC)
NS0028	174	176	NS	E391656	391656	1	G	D	34.4	31.47	2.36	1.239	0.96	0.108	1.77	0.52	0.175	0.528	0.016	0.013	3.46	7.77	1.39	12.62	4892	16.1568	9.06984	7.08696	PAF(LC)
NS0028	140	142	NS	E391639	391639	1	G	D	27.12	36.24	1.66	0.491	0.38	0.064	2.63	0.43	0.047	0.427	0.005	0.012	2.3	15.69	1.17	19.16	4875	13.0662	7.50006	5.56614	PAF(LC)
NS0028	102	104	NS	E391620	391620	1	G	D	23.86	45	6.38	0.503	0.39	0.29	2.35	0.34	0.069	0.335	0.026	0.01	1.67	8.11	0.92	10.7	4856	10.251	5.93028	4.32072	PAF(LC)
NS0028	198	200	NS	E391668	391668	1	G	D	27.84	35.22	5.58	0.465	0.36	0.253	2.37	0.34	0.041	0.308	0.01	0.01	3.42	11.17	0.84	15.43	4904	9.4248	5.93028	3.49452	PAF(LC)
NS0028	180	182	NS	E391659	391659	1	G	D	24.32	44	2.58	0.503	0.39	0.111	2.33	0.31	0.031	0.269	0.011	0.008	2.49	11.9	0.72	15.11	4895	8.2314	5.40702	2.82438	PAF(LC)
NS0028	90	92	NS	E391614	391614	1	G	D	25.77	39.77	4.86	0.516	0.4	0.219	2.45	0.33	0.055	0.279	0.056	0.007	1.69	12	0.68	14.37	4850	8.5374	5.75586	2.78154	PAF(LC)
NS0028	160	162	NS	E391649	391649	1	G	D	27.73	36	0.4	0.594	0.46	0.018	2.37	0.42	0.024	0.323	0.004	0.008	3.72	15.55	0.78	20.05	4885	9.8838	7.32564	2.55816	PAF(LC)
NS0028	132	134	NS	E391635	391635	1	G	D	28.23	35.1	5.27	0.426	0.33	0.232	2.01	0.34	0.067	0.246	0.005	0.005	3.89	11.19	0.7	15.78	4871	7.5276	5.93028	1.59732	PAF(LC)
NS0028	270	272	NS	E391705	391705	1	G	D	27.35	34.23	3.63	0.594	0.46	0.16	3.45	0.54	0.085	0.342	0.008	0.007	1.98	15.08	0.89	17.95	4940	10.4652	9.41868	1.04652	PAF(LC)
NS0028	88	90	NS	E391613	391613	1	G	D	27.62	43.37	3.57	0.387	0.3	0.16	1.84	0.28	0.05	0.191	0.287	0.014	1.95	7.88	0.3	10.13	4849	5.8446	4.88376	0.96084	PAF(LC)
NS0028	246	248	NS	E391692	391692	1	G	D	26.11	40.41	0.67	0.478	0.37	0.029	2.18	0.47	0.074	0.284	0.118	0.048	2.08	14.97	0.73	17.78	4928	8.6904	8.19774	0.49266	PAF(LC)
NS0028	106	108	NS	E391622	391622	1	G	D	22.67	46.24	6.5	0.426	0.33	0.282	2.32	0.46	0.097	0.264	0.009	0.011	1.05	9.33	0.71	11.09	4858	8.0784	8.02332	0.05508	PAF(LC)
NS0028	98	100	NS	E391618	391618	1	G	D	24.73	41.85	5.02	0.594	0.46	0.221	2.49	0.46	0.087	0.259	0.017	0.007	2.04	10.93	0.62	13.59	4854	7.9254	8.02332	-0.09792	NAF
NS0028	196	198	NS	E391667	391667	1	G	D	28.12	35.24	3.69	0.529	0.41	0.161	2.24	0.44	0.074	0.241	0.005	0.007	3.93	12.43	0.69	17.05	4903	7.3746	7.67448	-0.29988	NAF
NS0028	108	110	NS	E391623	391623	1	G	D	27.45	36.39	2.92	0.646	0.5	0.126	2.24	0.33	0.032	0.176	0.007	0.002	2.37	14.92	0.52	17.81	4859	5.3856	5.75586	-0.37026	NAF
NS0028	18	20	NS	E391577	391577	1	G	D	30.18	49.31	2.34	0.168	0.13	0.098	0.16	0.06	0.089	0.02	0.363	0.035	3	0.76	0.08	3.84	4814	0.612	1.04652	-0.43452	NAF
NS0028	60	62	NS	E391598	391598	1	G	D	30.85	50.78	1.25	0.374	0.29	0.058	0.18	0.04	0.042	0.008	0.613	0.011	1.91	0.33	0.06	2.3	4835	0.2448	0.69768	-0.45288	NAF
NS0028	40	42	NS	E391588	391588	1	G	D	39	40.61	0.91	0.349	0.27	0.041	0.13	0.04	0.075	0.007	0.41	0.021	1.29	0.22	0.05	1.56	4825	0.2142	0.69768	-0.48348	NAF
NS0028	42	44	NS	E391589	391589	1	G	D	27.17	56.89	0.65	0.775	0.6	0.027	0.1	0.04	0.045	0.007	0.151	0.014	1.63	0.27	0.08	1.98	4826	0.2142	0.69768	-0.48348	NAF
NS0028	36	38	NS	E391586	391586	1	G	D	34.91	43.62	1.54	0.8	0.62	0.067	0.14	0.05	0.048	0.009	0.663	0.022	2.22	0.45	0.11	2.78	4823	0.2754	0.8721	-0.5967	NAF
NS0028	74	76	NS	E391606	391606	1	G	D	35.52	44.79	1.05	0.439	0.34	0.046	0.16	0.04	0.059	0.003	0.411	0.014	1.6	0.26	0.01	1.87	4842	0.0918	0.69768	-0.60588	NAF
NS0028	78	80	NS	E391608	391608	1	G	D	34.87	42.05	1.93	1.678	1.3	0.087	0.22	0.06	0.078	0.014	0.3	0.017	2.28	0.73	0.27	3.28	4844	0.4284	1.04652	-0.61812	NAF
NS0028	262	264	NS	E391700	391700	1	G	D	26.79	37.03	3.62	0.413	0.32	0.161	3.21	0.45	0.075	0.235	0.131	0.063	1.99	13.63	0.62	16.24	4936	7.191	7.8489	-0.6579	NAF
NS0028	274	276	NS	E391707	391707	1	G	D	26.48	36.91	3.73	0.452	0.35	0.166	3.11	0.56	0.084	0.297	0.012	0.014	1.94	14.12	0.76	16.82	4942	9.0882	9.76752	-0.67932	NAF
NS0028	54	56	NS	E391595	391595	1	G	D	27.4	56.09	1.29	0.336	0.26	0.061	0.19	0.05	0.058	0.005	0.548	0.018	1.67	0.33	0.03	2.03	4832	0.153	0.8721	-0.7191	NAF
NS0028	68	70	NS	E391603	391603	1	G	D	27.87	55.59	0.94	0.323	0.25	0.043	0.19	0.05	0.057	0.005	0.209	0.019	1.93	0.27	0.13	2.33	4839	0.153	0.8721	-0.7191	NAF
NS0028	48	50	NS	E391592	391592	1	G	D	34.38	45.45	1.13	0.452	0.35	0.052	0.23	0.05	0.065	0.004	0.655	0.02	2.47	0.31	0	2.78	4829	0.1224	0.8721	-0.7497	NAF
NS0028	34	36	NS	E391585	391585	1	G	D	36.84	41.23	1.26	0.62	0.48	0.059	0.23	0.06	0.075	0.008	0.627	0.022	2.46	0.33	0.09	2.88	4822	0.2448	1.04652	-0.80172	NAF
NS0028	30	32	NS	E391583	391583	1	G	D	35.61	42.17	2.04	0.503	0.39	0.088	0.21	0.06	0.038	0.007	0.774	0.033	2.47	0.49	0.05	3.01	4820	0.2142	1.04652	-0.83232	NAF
NS0028	16	18	NS	E391576	391576	1	G	D	32.31	49.53	1.28	0.09	0.07	0.051	0.11	0.06	0.02	0.006	0.105	0.026	1.7	0.47	0.13	2.3	4813	0.1836	1.04652	-0.86292	NAF
NS0028	24	26	NS	E391580	391580	1	G	D	30.13	50.57	1.94	0.555	0.43	0.087	0.21	0.06	0.04	0.006	0.895	0.042	1.87	0.41	0.09	2.37	4817	0.1836	1.04652	-0.86292	NAF
NS0028	6	8	NS	E391571	391571	1	G	D	22.77	63.42	1.78	0.026	0.02	0.062	0.06	0.07	0.017	0.011	0.035	0.031	1.28	0.57	0.08	1.93	4808	0.3366	1.22094	-0.88434	NAF
NS0028	22	24	NS	E391579	391579	1	G	D	28.28	54.65	1.35	0.245	0.19	0.058	0.16	0.06	0.046	0.005	0.655	0.035	1.65	0.28	0.06	1.99	4816	0.153	1.04652	-0.89352	NAF
NS0028	38	40	NS	E391587	391587	1	G	D	26.38	58.97	0.64	0.336	0.26	0.029	0.14	0.06	0.073	0.005	0.219	0.011	1.33	0.11	0	1.44	4824	0.153	1.04652	-0.89352	NAF
NS0028	46	48	NS	E391591	391591	1	G	D	41.23	32.7	2.13	0.581	0.45	0.098	0.24	0.06	0.059	0.005	1.45	0.029	3.04	0.41	0.08	3.53	4828	0.153	1.04652	-0.89352	NAF
NS0028	50	52	NS	E391593	391593	1	G	D	33.71	46.22	1	0.516	0.4	0.045	0.24	0.06	0.075	0.004	0.367	0.018	2.85	0.41	0.03	3.29	4830	0.1224	1.04652	-0.92412	NAF
NS0028	52	54	NS	E391594	391594	1	G	D	33.92	46.17	1.16	0.413	0.32	0.053	0.23	0.06	0.071	0.004	0.448	0.022	2.25	0.38	0.04	2.67	4831	0.1224	1.04652	-0.92412	NAF
NS0028	26	28	NS	E391581	391581	1	G	D	36.04	40.96	2.39	0.568	0.44	0.107	0.26	0.07	0.047	0.009	1.13	0.038	1.99	0.47	0.06	2.52	4818	0.2754	1.22094	-0.94554	NAF
NS0028	32	34	NS	E391584	391584	1	G	D	35.06	41.31	2.53	0.529	0.41	0.11	0.35	0.07	0.044	0.008	1.18	0.046	2.76	0.55	0.07	3.38	4821	0.2448	1.22094	-0.97614	NAF
NS0028	142	144	NS	E391640	391640	1	G	D	29.34	32.88	1.13	0.516	0.4	0.048	2.64	0.35	0.022	0.167	0.005	0.007	3.41	16.29	0.44	20.14	4876	5.1102	6.1047	-0.9945	NAF
NS0028	76	78	NS	E391607	391607	1	G	D	36.08	39.87	2.94	1.265	0.98	0.133	0.28	0.07	0.091	0.007	0.624	0.025	2.13	0.82	0.18	3.13	4843	0.2142	1.22094	-1.00674	NAF
NS0028	100	102	NS	E391619	391619	1	G	D	30.99	30.33	3.14	0.736	0.57	0.148	2.05	0.36	0.038	0.172	0.007	0.0005	3.41	14.54	0.55	18.5	4855	5.2632	6.27912	-1.01592	NAF
NS0028	70	72	NS	E391604	391604	1	G	D	36.38	41.95	1.48	0.633	0.49	0.068	0.28	0.07	0.078	0.006	0.19	0.01	2.25	0.55	0.15	2.95	4840	0.1836	1.22094	-1.03734	NAF
NS0028	80	82	NS	E391609	391609	1	G	D	36.31	43.6	1.22	0.142	0.11	0.052	0.39	0.07	0.094	0.004	0.214	0.009	1.04	1.26	0.08	2.38	4845	0.1224	1.22094	-1.09854	NAF
NS0028	64	66	NS	E391600	391600	1	G	D	33.84	40.42	3.5	0.646	0.5	0.158	0.4	0.08	0.07	0.008	1.42	0.022	3.49	0.86	0.18	4.53	4837	0.2448	1.39536	-1.15056	NAF
NS0028	28	30	NS	E391582	391582	1	G	D	31.87	43.7	3.92	0.413	0.32	0.171	0.48	0.08	0.036	0.007	1.76	0.053	2.61	0.77	0.11	3.49	4819	0.2142	1.39536	-1.18116	NAF
NS0028	44	46	NS	E391590	391590	1	G	D	42.18	28.09	3.15	0.788	0.61	0.138	0.46	0.08	0.083	0.006	2.09	0.042	3.6	0.57	0.13	4.3	4827	0.1836	1.39536	-1.21176	NAF
NS0028	58	60	NS	E391597	391597	1	G	D	31.21	44.3	4.13	0.491	0.38	0.185	0.45	0.08	0.05	0.006	2.08	0.035	2.43	0.75	0.13	3.31	4834	0.1836	1.39536	-1.21176	NAF
NS0028	56	58	NS	E391596	391596	1	G	D	36.58	34.96	4.31	0.594	0.46	0.192	0.56	0.09	0.101	0.007	2.35	0.038	3.43	0.78	0.13	4.34	4833	0.2142	1.56978	-1.35558	NAF
NS0028	66	68	NS	E391602	391602	1	G	D	28.95	47.74	4.03	0.426	0.33	0.179	0.7	0.1	0.064	0.009	0.687	0.03	2.89	1.19	0.15	4.23	4838	0.2754	1.7442	-1.4688	NAF
NS0028	224	226	NS	E391681	391681	1	G	D	28.43	35.25	1.54	0.491	0.38	0.067	2	0.58	0.108	0.282	0.014	0.007	3	15.27	0.74	19.01	4917	8.6292	10.11636	-1.48716	NAF
NS0028	62	64	NS	E391599	391599	1	G	D	32.33	42.16	4.93	0.568	0.44	0.225	0.43	0.1	0.04	0.005	0.981	0.028	2.53	1.41	0.17	4.11	4836	0.153	1.7442	-1.5912	NAF
NS0028	72	74	NS	E391605	391605	1	G	D	38.57	39.26	1.44	0.413	0.32	0.063	0.3	0.1	0.081	0.004	0.385	0.02	2.29	0.4	0.07	2.76	4841	0.1224	1.7442	-1.6218	NAF
NS0028	20	22	NS	E391578	391578	1	G	D	34.9	38.45	4.7	0.284	0.22	0.205	0.33	0.11	0.113	0.009	1.92	0.054	3.08	0.92	0.08	4.08	4815	0.2754	1.91862	-1.64322	NAF
NS0028	94	96	NS	E391616	391616	1	G	D	35.36	42.73	1.22	0.219	0.17	0.053	0.58	0.12	0.07	0.014	0.017	0.009	1.42	2.7	-0.03	4.09	4852	0.4284	2.09304	-1.66464	NAF
NS0028	128	130	NS	E391633	391633	1	G	D	28.28	36.54	1.23	0.503	0.39	0.055	1.76	0.37	0.05	0.142	0.004	0.003	3.95	14.15	0.44	18.54	4869	4.3452	6.45354	-2.10834	NAF
NS0028	194	196	NS	E391666	391666	1	G	D	26.49	39.09	2.71	0.465	0.36	0.113	2.23	0.44	0.075	0.179	0.007	0.002	3.56	12.74	0.52	16.82	4902	5.4774	7.67448	-2.19708	NAF
NS0028	206	208	NS	E391672	391672	1	G	D	30.62	30.08	2.39	0.478	0.37	0.1	2.24	0.42	0.047	0.161	0.007	0.004	5.05	14.46	0.55	20.06	4908	4.9266	7.32564	-2.39904	NAF
NS0028	276	278	NS	E391708	391708	1	G	D	26.19	38.17	1.9	0.529	0.41	0.084	2.68	0.68	0.123	0.307	0.02	0.017	2.65	14.56	0.81	18.02	4943	9.3942	11.86056	-2.46636	NAF
NS0028	200	202	NS	E391669	391669	1	G	D	29.06	33.5	1.65	0.568	0.44	0.077	2.17	0.39	0.023	0.139	0.026	0.015	3.75	15.53	0.4	19.68	4905	4.2534	6.80238	-2.54898	NAF
NS0028	210	212	NS	E391674	391674	1	G	D	24.9	44.7	1.02	0.361	0.28	0.045	1.25	0.24	0.038	0.053	0.008	0.008	5.38	10.79	0.2	16.37	4910	1.6218	4.18608	-2.56428	NAF
NS0028	168	170	NS	E391653	391653	1	G	D	24.34	45.3	0.35	0.387	0.3	0.014	1.75	0.3	0.015	0.087	0.014	0.002	3.97	12.5	0.22	16.69	4889	2.6622	5.2326	-2.5704	NAF
NS0028	86	88	NS	E391612	391612	1	G	D	31.38	41.42	1.48	0.594	0.46	0.068	1.19	0.25	0.057	0.053	0.56	0.01	2.26	6.92	0.01	9.19	4848	1.6218	4.3605	-2.7387	NAF
NS0028	238	240	NS	E391688	391688	1	G	D	28.88	34.16	3.48	0.374	0.29	0.163	2.59	0.56	0.07	0.225	0.239	0.109	3.41	12.72	0.55	16.68	4924	6.885	9.76752	-2.88252	NAF
NS0028	0	2	NS	E391568	391568	1	G	D	23.19	57.89	4.07	-0.0129	-0.01	0.113	0.1	0.21	0.04	0.017	0.085	0.032	2.64	1.22	0.16	4.02	4805	0.5202	3.66282	-3.14262	NAF
NS0028	182	184	NS	E391660	391660	1	G	D	26.99	36.41	2.32	0.555	0.43	0.099	2.73	0.43	0.046	0.14	0.007	0.01	2.76	15.22	0.42	18.4	4896	4.284	7.50006	-3.21606	NAF
NS0028	280	282	NS	E391710	391710	1	G	D	27.48	35.55	0.55	0.542	0.42	0.026	2.63	0.87	0.168	0.389	0.023	0.012	2.99	15.99	1.01	19.99	4945	11.9034	15.17454	-3.27114	NAF
NS0028	116	118	NS	E391627	391627	1	G	D	30.09	32.15	1.29	0.684	0.53	0.055	2.03	0.53	0.095	0.194	0.008	0.003	3.52	15.72	0.56	19.8	4863	5.9364	9.24426	-3.30786	NAF
NS0028	248	250	NS	E391693	391693	1	G	D	22.52	48.91	0.49	0.245	0.19	0.023	2	0.38	0.063	0.102	0.083	0.043	1.81	13.27	0.26	15.34	4929	3.1212	6.62796	-3.50676	NAF
NS0028	208	210	NS	E391673	391673	1	G	D	29.42	34.31	2.23	0.465	0.36	0.098	1.6	0.39	0.069	0.107	0.004	0.002	5.74	12.38	0.41	18.53	4909	3.2742	6.80238	-3.52818	NAF
NS0028	216	218	NS	E391677	391677	1	G	D	22.95	47.12	1.3	0.297	0.23	0.058	1.93	0.57	0.099	0.208	0.006	0.002	2.91	12.17	0.54	15.62	4913	6.3648	9.94194	-3.57714	NAF
NS0028	2	4	NS	E391569	391569	1	G	D	20.01	66.29	2.1	-0.0129	-0.01	0.061	0.05	0.23	0.051	0.014	0.048	0.027	1.72	0.76	0.11	2.59	4806	0.4284	4.01166	-3.58326	NAF
NS0028	82	84	NS	E391610	391610	1	G	D	35.8	38.42	0.96	0.426	0.33	0.043	1.17	0.23	0.068	0.013	0.417	0.01	1.76	5.44	-0.14	7.06	4846	0.3978	4.01166	-3.61386	NAF
NS0028	162	164	NS	E391650	391650	1	G	D	29.88	31.96	0.57	0.594	0.46	0.024	2.25	0.39	0.023	0.103	0.015	0.004	3.99	16.8	0.27	21.06	4886	3.1518	6.80238	-3.65058	NAF
NS0028	264	266	NS	E391702	391702	1	G	D	26.62	38.11	2.55	0.491	0.38	0.113	2.85	0.44	0.06	0.13	0.159	0.073	2.12	14.32	0.36	16.8	4937	3.978	7.67448	-3.69648	NAF
NS0028	130	132	NS	E391634	391634	1	G	D	29.39	36.59	1.36	0.426	0.33	0.057	1.52	0.31	0.053	0.053	0.004	0.003	5.09	11.98	0.2	17.27	4870	1.6218	5.40702	-3.78522	NAF
NS0028	172	174	NS	E391655	391655	1	G	D	25.38	41.04	1.14	0.465	0.36	0.047	2.32	0.46	0.066	0.137	0.004	0.002	3.51	13.8	0.37	17.68	4891	4.1922	8.02332	-3.83112	NAF
NS0028	170	172	NS	E391654	391654	1	G	D	26.51	44.89	0.34	0.336	0.26	0.015	1.38	0.36	0.075	0.077	0.003	0.007	4.75	9.3	0.22	14.27	4890	2.3562	6.27912	-3.92292	NAF
NS0028	236	238	NS	E391687	391687	1	G	D	28.79	34.19	2.1	0.452	0.35	0.092	2.5	0.42	0.06	0.111	0.095	0.034	3.56	14.73	0.28	18.57	4923	3.3966	7.32564	-3.92904	NAF
NS0028	126	128	NS	E391632	391632	1	G	D	26.55	40.74	0.87	0.568	0.44	0.038	1.37	0.4	0.059	0.094	0.005	0.0005	4.2	13.29	0.31	17.8	4868	2.8764	6.9768	-4.1004	NAF
NS0028	112	114	NS	E391625	391625	1	G	D	29.71	36.91	2.28	0.581	0.45	0.101	1.69	0.44	0.08	0.115	0.08	0.017	3.04	11.79	0.21	15.04	4861	3.519	7.67448	-4.15548	NAF
NS0028	84	86	NS	E391611	391611	1	G	D	32.98	43.29	0.99	0.465	0.36	0.049	0.91	0.26	0.078	0.012	0.306	0.016	1.46	4.85	-0.14	6.17	4847	0.3672	4.53492	-4.16772	NAF
NS0028	146	148	NS	E391642	391642	1	G	D	29.77	34.38	0.75	0.465	0.36	0.032	2.42	0.31	0.019	0.036	0.004	0.007	4.54	14.05	0.13	18.72	4878	1.1016	5.40702	-4.30542	NAF
NS0028	254	256	NS	E391696	391696	1	G	D	26.56	38.32	2.26	0.387	0.3	0.1	2.95	0.55	0.091	0.171	0.243	0.113	1.97	14.06	0.43	16.46	4932	5.2326	9.5931	-4.3605	NAF
NS0028	164	166	NS	E391651	391651	1	G	D	26.81	39.12	0.35	0.581	0.45	0.015	2.18	0.39	0.02	0.075	0.031	0.009	2.91	15.73	0.18	18.82	4887	2.295	6.80238	-4.50738	NAF
NS0028	144	146	NS	E391641	391641	1	G	D	33.76	21.79	1.01	0.581	0.45	0.041	3.24	0.44	0.024	0.102	0.007	0.0005	3.53	20.6	0.25	24.38	4877	3.1212	7.67448	-4.55328	NAF
NS0028	244	246	NS	E391691	391691	1	G	D	23.74	46.21	0.47	0.516	0.4	0.02	1.79	0.39	0.055	0.072	0.102	0.05	3.31	12.54	0.17	16.02	4927	2.2032	6.80238	-4.59918	NAF
NS0028	166	168	NS	E391652	391652	1	G	D	27.62	42.11	0.39	0.439	0.34	0.016	1.53	0.35	0.023	0.049	0.076	0.013	3.4	11.71	0.02	15.13	4888	1.4994	6.1047	-4.6053	NAF
NS0028	242	244	NS	E391690	391690	1	G	D	29.86	33.46	0.72	0.607	0.47	0.031	1.66	0.38	0.038	0.065	0.107	0.044	5.26	14.38	0.15	19.79	4926	1.989	6.62796	-4.63896	NAF
NS0028	104	106	NS	E391621	391621	1	G	D	26.02	38.87	2.5	0.826	0.64	0.103	2.52	0.41	0.049	0.08	0.005	0.002	2.49	14.34	0.37	17.2	4857	2.448	7.15122	-4.70322	NAF
NS0028	4	6	NS	E391570	391570	1	G	D	17.22	72.34	1.06	-0.0129	-0.01	0.038	0.06	0.29	0.031	0.008	0.035	0.045	1.04	0.5	0.09	1.63	4807	0.2448	5.05818	-4.81338	NAF
NS0028	192	194	NS	E391665	391665	1	G	D	26.63	38.74	2.1	0.568	0.44	0.093	1.87	0.53	0.069	0.142	0.006	0.004	4.35	12.67	0.41	17.43	4901	4.3452	9.24426	-4.89906	NAF
NS0028	96	98	NS	E391617	391617	1	G	D	28.8	43.54	1.14	0.478	0.37	0.052	1.47	0.44	0.085	0.077	0.088	0.016	1.85	9.38	-0.03	11.2	4853	2.3562	7.67448	-5.31828	NAF
NS0028	124	126	NS	E391631	391631	1	G	D	27.36	37.39	0.83	0.723	0.56	0.035	1.87	0.51	0.079	0.112	0.003	0.006	3.21	15.55	0.37	19.13	4867	3.4272	8.89542	-5.46822	NAF
NS0028	92	94	NS	E391615	391615	1	G	D	33.85	33.15	1.16	0.826	0.64	0.053	1.6	0.37	0.058	0.032	0.013	0.003	2.63	11.63	-0.12	14.14	4851	0.9792	6.45354	-5.47434	NAF
NS0028	256	258	NS	E391697	391697	1	G	D	25.39	41.98	0.55	0.413	0.32	0.026	2.1	0.44	0.076	0.067	0.087	0.043	2.62	14.74	0.16	17.52	4933	2.0502	7.67448	-5.62428	NAF
NS0028	260	262	NS	E391699	391699	1	G	D	26.12	39.25	0.68	0.581	0.45	0.031	2.78	0.48	0.059	0.087	0.161	0.061	1.74	16.39	0.22	18.35	4935	2.6622	8.37216	-5.70996	NAF
NS0028	186	188	NS	E391662	391662	1	G	D	30.84	28.23	2.19	0.633	0.49	0.1	2.73	0.62	0.057	0.156	0.007	0.003	3.37	17.24	0.36	20.97	4898	4.7736	10.81404	-6.04044	NAF
NS0028	268	270	NS	E391704	391704	1	G	D	26.93	36.4	1.07	0.516	0.4	0.045	2.9	0.54	0.083	0.106	0.019	0.016	2.74	16.36	0.32	19.42	4939	3.2436	9.41868	-6.17508	NAF
NS0028	8	10	NS	E391572	391572	1	G	D	32.12	44.66	3.92	0.245	0.19	0.163	0.18	0.39	0.012	0.015	0.093	0.037	2.28	1.52	0.14	3.94	4809	0.459	6.80238	-6.34338	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0028	14	16	NS	E391575	391575	1	G	D	29.68	44.33	6.44	0.103	0.08	0.267	0.15	0.42	0.016	0.025	0.065	0.106	3.01	2.21	0.25	5.47	4812	0.765	7.32564	-6.56064	NAF
NS0028	10	12	NS	E391573	391573	1	G	D	33.89	42	2.85	0.374	0.29	0.131	0.29	0.42	0.034	0.022	0.072	0.06	3.57	1.26	0.21	5.04	4810	0.6732	7.32564	-6.65244	NAF
NS0028	234	236	NS	E391686	391686	1	G	D	27.95	36.95	0.65	0.491	0.38	0.03	1.92	0.42	0.055	0.02	0.064	0.03	4.49	14.44	0.06	18.99	4922	0.612	7.32564	-6.71364	NAF
NS0028	110	112	NS	E391624	391624	1	G	D	29.99	33.72	1.75	0.62	0.48	0.079	1.87	0.5	0.085	0.065	0.06	0.009	2.84	15.05	0.15	18.04	4860	1.989	8.721	-6.732	NAF
NS0028	184	186	NS	E391661	391661	1	G	D	30.5	28.12	2.92	0.594	0.46	0.128	2.85	0.73	0.119	0.188	0.006	0.011	3.1	16.71	0.54	20.35	4897	5.7528	12.73266	-6.97986	NAF
NS0028	114	116	NS	E391626	391626	1	G	D	30.68	36.25	0.92	0.568	0.44	0.042	1.51	0.46	0.075	0.031	0.156	0.027	3.27	12.74	-0.04	15.97	4862	0.9486	8.02332	-7.07472	NAF
NS0028	258	260	NS	E391698	391698	1	G	D	26.7	38.64	0.95	0.478	0.37	0.044	2.41	0.55	0.076	0.079	0.145	0.063	2.38	15.59	0.19	18.16	4934	2.4174	9.5931	-7.1757	NAF
NS0028	230	232	NS	E391684	391684	1	G	D	29.07	33.71	0.75	0.542	0.42	0.033	2.15	0.46	0.056	0.024	0.023	0.009	4.16	16.03	0.09	20.28	4920	0.7344	8.02332	-7.28892	NAF
NS0028	12	14	NS	E391574	391574	1	G	D	29.43	42.54	7.73	0.116	0.09	0.318	0.22	0.47	0.012	0.026	0.124	0.107	2.81	2.73	0.32	5.86	4811	0.7956	8.19774	-7.40214	NAF
NS0028	240	242	NS	E391689	391689	1	G	D	26.09	40.92	0.83	0.4	0.31	0.039	1.94	0.62	0.092	0.11	0.141	0.055	3.77	13.31	0.27	17.35	4925	3.366	10.81404	-7.44804	NAF
NS0028	228	230	NS	E391683	391683	1	G	D	29.47	32.14	1.42	0.581	0.45	0.061	2.31	0.59	0.102	0.088	0.006	0.003	3.36	16.57	0.25	20.18	4919	2.6928	10.29078	-7.59798	NAF
NS0028	188	190	NS	E391663	391663	1	G	D	30.14	29.11	4.68	0.516	0.4	0.198	2.5	0.85	0.108	0.234	0.006	0.0005	3.57	14.18	0.63	18.38	4899	7.1604	14.8257	-7.6653	NAF
NS0028	252	254	NS	E391695	391695	1	G	D	24.4	43.32	0.51	0.413	0.32	0.024	2.42	0.55	0.074	0.038	0.13	0.056	2.03	14.99	0.1	17.12	4931	1.1628	9.5931	-8.4303	NAF
NS0028	204	206	NS	E391671	391671	1	G	D	28.98	33.01	1.58	0.465	0.36	0.069	2.25	0.77	0.149	0.163	0.006	0.003	4.64	14.58	0.5	19.72	4907	4.9878	13.43034	-8.44254	NAF
NS0028	222	224	NS	E391680	391680	1	G	D	24.4	43.05	0.76	0.349	0.27	0.034	2.22	0.71	0.122	0.121	0.007	0.005	2.53	14.61	0.3	17.44	4916	3.7026	12.38382	-8.68122	NAF
NS0028	190	192	NS	E391664	391664	1	G	D	30.4	29.71	2.24	0.684	0.53	0.097	2.26	0.71	0.083	0.113	0.004	0.0005	3.81	16.35	0.32	20.48	4900	3.4578	12.38382	-8.92602	NAF
NS0028	226	228	NS	E391682	391682	1	G	D	29.61	34.44	0.7	0.555	0.43	0.032	1.77	0.61	0.113	0.05	0.06	0.025	3.75	15.28	0.11	19.14	4918	1.53	10.63962	-9.10962	NAF
NS0028	250	252	NS	E391694	391694	1	G	D	26.59	38.1	0.54	0.258	0.2	0.025	2.82	0.58	0.077	0.024	0.121	0.059	2.07	16.84	0.06	18.97	4930	0.7344	10.11636	-9.38196	NAF
NS0028	220	222	NS	E391679	391679	1	G	D	25.87	38.98	0.64	0.387	0.3	0.029	2.47	0.78	0.12	0.105	0.003	0.007	2.1	16.66	0.26	19.02	4915	3.213	13.60476	-10.39176	NAF
NS0028	212	214	NS	E391675	391675	1	G	D	27.82	33.81	2.37	0.465	0.36	0.105	2.85	0.9	0.139	0.133	0.007	0.004	2.5	16.13	0.38	19.01	4911	4.0698	15.6978	-11.628	NAF
NS0028	272	274	NS	E391706	391706	1	G	D	26.67	35.74	1.57	0.646	0.5	0.068	3.04	0.87	0.17	0.113	0.018	0.014	2.54	16.34	0.32	19.2	4941	3.4578	15.17454	-11.71674	NAF
NS0028	214	216	NS	E391676	391676	1	G	D	27.4	34.25	2.61	0.426	0.33	0.112	2.93	1.05	0.094	0.183	0.005	0.003	2.06	16.32	0.43	18.81	4912	5.5998	18.3141	-12.7143	NAF
NS0028	278	280	NS	E391709	391709	1	G	D	22.12	46.75	1	0.452	0.35	0.043	2.44	0.93	0.22	0.103	0.025	0.018	2.39	13.14	0.29	15.82	4944	3.1518	16.22106	-13.06926	NAF
NS0028	202	204	NS	E391670	391670	1	G	D	33.99	21.82	1.23	0.555	0.43	0.056	2.34	1.01	0.219	0.12	0.009	0.008	5.38	17.67	0.38	23.43	4906	3.672	17.61642	-13.94442	NAF
NS0028	232	234	NS	E391685	391685	1	G	D	31.88	24.96	1.37	0.671	0.52	0.06	2.9	1.01	0.177	0.092	0.032	0.015	3.04	19.36	0.25	22.65	4921	2.8152	17.61642	-14.80122	NAF
NS0028	218	220	NS	E391678	391678	1	G	D	27.64	34.88	0.85	0.4	0.31	0.04	2.48	1.15	0.249	0.137	0.004	0.007	2.67	16.74	0.38	19.79	4914	4.1922	20.0583	-15.8661	NAF
NS0029	106	108	NS	E391764	391764	1	G	W	9.98	58.51	13.41	0.039	0.03	0.636	2.78	0.04	0.015	1.17	6.76	0.04	0.21	2.18	0.73	3.12	4999	35.802	0.69768	35.10432	PAF(HC)
NS0029	104	106	NS	E391763	391763	1	G	W	9.92	64.55	10.37	0.052	0.04	0.494	2.6	0.06	0.018	1.1	4.44	0.031	0.24	2.08	0.74	3.06	4998	33.66	1.04652	32.61348	PAF(HC)
NS0029	112	114	NS	E391767	391767	1	G	W	17.66	51.72	8.72	0.258	0.2	0.411	3.48	0.32	0.081	0.593	1.62	0.017	0.44	6.25	0.93	7.62	5002	18.1458	5.58144	12.56436	PAF(HC)
NS0029	48	50	NS	E391735	391735	1	G	W	21.05	49.82	6.84	0.271	0.21	0.306	2.75	0.29	0.081	0.558	2.95	0.044	0.85	4.73	0.89	6.47	4970	17.0748	5.05818	12.01662	PAF(HC)
NS0029	116	118	NS	E391769	391769	1	G	W	20.57	48.19	7.68	0.271	0.21	0.377	3.77	0.33	0.062	0.511	0.508	0.03	0.47	7.54	1.09	9.1	5004	15.6366	5.75586	9.88074	PAF(LC)
NS0029	180	182	NS	E391802	391802	1	G	W	17.44	57.83	4.06	0.361	0.28	0.19	2.63	0.35	0.079	0.52	1.23	0.16	0.79	6.02	1.04	7.85	5035	15.912	6.1047	9.8073	PAF(LC)
NS0029	108	110	NS	E391765	391765	1	G	W	18.42	48.42	8.95	0.336	0.26	0.411	3.77	0.33	0.08	0.508	2.16	0.029	0.48	7.48	0.97	8.93	5000	15.5448	5.75586	9.78894	PAF(LC)
NS0029	114	116	NS	E391768	391768	1	G	W	18.28	52.2	8.24	0.284	0.22	0.39	3.54	0.25	0.059	0.461	1.04	0.024	0.44	6.63	0.79	7.86	5003	14.1066	4.3605	9.7461	PAF(LC)
NS0029	142	144	NS	E391782	391782	1	G	W	22.09	44.82	6.51	0.387	0.3	0.304	3.15	0.58	0.107	0.588	1.88	0.069	0.83	8.21	1.07	10.11	5017	17.9928	10.11636	7.87644	PAF(LC)
NS0029	110	112	NS	E391766	391766	1	G	W	19.76	47.05	8.01	0.336	0.26	0.385	3.39	0.43	0.104	0.486	2	0.022	0.52	8.49	1.02	10.03	5001	14.8716	7.50006	7.37154	PAF(LC)
NS0029	30	32	NS	E391726	391726	1	G	W	25.92	47.85	5.58	0.4	0.31	0.265	2.51	0.24	0.033	0.322	2.05	0.032	0.63	2.56	0.49	3.68	4961	9.8532	4.18608	5.66712	PAF(LC)
NS0029	46	48	NS	E391734	391734	1	G	W	30.72	41.65	2.65	0.658	0.51	0.125	2.18	0.48	0.117	0.45	0.664	0.025	0.48	6.52	0.64	7.64	4969	13.77	8.37216	5.39784	PAF(LC)
NS0029	170	172	NS	E391796	391796	1	G	W	22.43	47.58	5.19	0.361	0.28	0.261	3.43	0.33	0.053	0.357	1.17	0.177	1.06	7.34	0.81	9.21	5030	10.9242	5.75586	5.16834	PAF(LC)
NS0029	50	52	NS	E391736	391736	1	G	W	22.04	47.63	6.59	0.4	0.31	0.294	2.98	0.27	0.051	0.309	3.27	0.045	0.65	5.79	0.62	7.06	4971	9.4554	4.70934	4.74606	PAF(LC)
NS0029	168	170	NS	E391795	391795	1	G	W	20.08	53.27	3.95	0.413	0.32	0.196	2.91	0.3	0.04	0.323	0.838	0.147	0.97	7.41	0.77	9.15	5029	9.8838	5.2326	4.6512	PAF(LC)
NS0029	102	104	NS	E391762	391762	1	G	W	19.77	47.97	7.75	0.516	0.4	0.345	3.83	0.34	0.075	0.313	1.06	0.017	0.63	8.09	0.76	9.48	4997	9.5778	5.93028	3.64752	PAF(LC)
NS0029	134	136	NS	E391778	391778	1	G	W	21.81	47.16	6.39	0.271	0.21	0.294	3.58	0.44	0.093	0.318	1.31	0.161	1.09	6.81	0.92	8.82	5013	9.7308	7.67448	2.05632	PAF(LC)
NS0029	182	184	NS	E391803	391803	1	G	W	19.95	52.87	4.65	0.374	0.29	0.22	2.89	0.55	0.148	0.38	1.34	0.166	0.89	6.22	0.85	7.96	5036	11.628	9.5931	2.0349	PAF(LC)
NS0029	222	224	NS	E391823	391823	1	G	W	27.8	42.25	3.23	0.503	0.39	0.156	3.01	1.13	0.212	0.681	0.364	0.113	0.6	6.89	1.08	8.57	5056	20.8386	19.70946	1.12914	PAF(LC)
NS0029	80	82	NS	E391751	391751	1	G	W	21.2	46.16	7.71	0.336	0.26	0.352	3.34	0.33	0.067	0.221	3.58	0.081	0.64	6.49	0.52	7.65	4986	6.7626	5.75586	1.00674	PAF(LC)
NS0029	10	12	NS	E391716	391716	1	G	W	27.48	49.11	6.13	0.142	0.11	0.273	0.36	0.07	0.045	0.051	2.18	0.06	1.04	1.28	0.25	2.57	4951	1.5606	1.22094	0.33966	PAF(LC)
NS0029	162	164	NS	E391792	391792	1	G	W	24.29	46.03	4.23	0.387	0.3	0.211	3.24	0.55	0.109	0.323	1.15	0.183	0.99	7.11	0.71	8.81	5026	9.8838	9.5931	0.2907	PAF(LC)
NS0029	16	18	NS	E391719	391719	1	G	W	27.99	52.67	4.1	0.181	0.14	0.176	0.12	0.04	0.026	0.005	0.124	0.034	1.19	1.21	0.14	2.54	4954	0.153	0.69768	-0.54468	NAF
NS0029	28	30	NS	E391725	391725	1	G	W	31.42	47.12	4.08	0.181	0.14	0.182	0.6	0.05	0.025	0.008	0.769	0.032	0.97	1.2	0.18	2.35	4960	0.2448	0.8721	-0.6273	NAF
NS0029	52	54	NS	E391737	391737	1	G	W	25.54	44.4	4.92	0.503	0.39	0.222	2.92	0.57	0.143	0.302	1.85	0.05	0.47	6.78	0.51	7.76	4972	9.2412	9.94194	-0.70074	NAF
NS0029	98	100	NS	E391760	391760	1	G	W	25.74	43.57	4.51	0.387	0.3	0.215	2.79	0.33	0.06	0.164	0.554	0.056	0.96	9.46	0.26	10.68	4995	5.0184	5.75586	-0.73746	NAF
NS0029	18	20	NS	E391720	391720	1	G	W	29.49	47.87	5	0.194	0.15	0.225	0.57	0.07	0.101	0.009	1.19	0.038	1.35	1.25	0.16	2.76	4955	0.2754	1.22094	-0.94554	NAF
NS0029	24	26	NS	E391723	391723	1	G	W	31.87	46.08	3.6	0.426	0.33	0.161	0.58	0.07	0.053	0.009	0.708	0.029	1.42	1.05	0.1	2.57	4958	0.2754	1.22094	-0.94554	NAF
NS0029	26	28	NS	E391724	391724	1	G	W	24.58	49.58	7.39	0.219	0.17	0.322	0.75	0.07	0.119	0.007	3.24	0.047	1.72	1.23	0.22	3.17	4959	0.2142	1.22094	-1.00674	NAF
NS0029	20	22	NS	E391721	391721	1	G	W	29.4	46.43	5.22	0.387	0.3	0.237	0.85	0.08	0.118	0.009	1.66	0.047	1.63	1.17	0.15	2.95	4956	0.2754	1.39536	-1.11996	NAF
NS0029	42	44	NS	E391732	391732	1	G	W	35.5	41.07	2.98	0.555	0.43	0.137	0.57	0.08	0.12	0.006	0.608	0.026	1.85	0.84	0.19	2.88	4967	0.1836	1.39536	-1.21176	NAF
NS0029	124	126	NS	E391773	391773	1	G	W	19.91	49.79	6.44	0.336	0.26	0.294	3.21	0.54	0.135	0.268	1.16	0.079	0.85	7.64	0.66	9.15	5008	8.2008	9.41868	-1.21788	NAF
NS0029	14	16	NS	E391718	391718	1	G	W	34.08	45.05	2.49	0.413	0.32	0.117	0.52	0.08	0.033	0.004	0.397	0.039	1.25	0.7	0.02	1.97	4953	0.1224	1.39536	-1.27296	NAF
NS0029	8	10	NS	E391715	391715	1	G	W	33.78	43.68	3.65	0.478	0.37	0.167	0.65	0.09	0.032	0.007	0.713	0.043	1.28	0.97	-0.01	2.24	4950	0.2142	1.56978	-1.35558	NAF
NS0029	86	88	NS	E391754	391754	1	G	W	20.33	46.51	7.92	0.336	0.26	0.364	3.16	0.55	0.052	0.264	3.79	0.058	0.57	6.61	0.64	7.82	4989	8.0784	9.5931	-1.5147	NAF
NS0029	22	24	NS	E391722	391722	1	G	W	30.33	45.91	5.02	0.271	0.21	0.219	0.63	0.12	0.106	0.012	1.68	0.03	1.12	1.09	0.18	2.39	4957	0.3672	2.09304	-1.72584	NAF
NS0029	40	42	NS	E391731	391731	1	G	W	32.57	44.43	3.62	0.426	0.33	0.167	0.81	0.12	0.105	0.006	0.784	0.035	1.77	0.98	0.14	2.89	4966	0.1836	2.09304	-1.90944	NAF
NS0029	184	186	NS	E391804	391804	1	G	W	24.62	43.65	5.34	0.413	0.32	0.257	3.48	0.46	0.112	0.198	0.857	0.122	0.96	8.79	0.44	10.19	5037	6.0588	8.02332	-1.96452	NAF
NS0029	38	40	NS	E391730	391730	1	G	W	31.74	43.95	3.95	0.594	0.46	0.181	1.15	0.13	0.142	0.008	0.825	0.04	2.05	1.14	0.18	3.37	4965	0.2448	2.26746	-2.02266	NAF
NS0029	6	8	NS	E391714	391714	1	G	W	35.28	42.64	3.16	0.374	0.29	0.14	0.28	0.13	0.056	0.006	0.299	0.023	1.5	0.94	-0.04	2.4	4949	0.1836	2.26746	-2.08386	NAF
NS0029	12	14	NS	E391717	391717	1	G	W	30.9	45.86	4.09	0.516	0.4	0.181	0.84	0.16	0.054	0.007	1.27	0.061	1.48	1	0.13	2.61	4952	0.2142	2.79072	-2.57652	NAF
NS0029	274	276	NS	E391849	391849	1	G	W	29.15	46.01	3.47	0.271	0.21	0.168	2.47	0.36	0.058	0.116	0.441	0.105	0.6	4.4	0.04	5.04	5082	3.5496	6.27912	-2.72952	NAF
NS0029	100	102	NS	E391761	391761	1	G	W	24.58	40.55	4.89	0.568	0.44	0.234	3.26	0.52	0.109	0.207	0.187	0.011	1.41	12.31	0.52	14.24	4996	6.3342	9.06984	-2.73564	NAF
NS0029	158	160	NS	E391790	391790	1	G	W	26.28	46.26	3.3	0.387	0.3	0.157	2.84	0.46	0.078	0.161	0.564	0.143	0.76	7.2	0.21	8.17	5024	4.9266	8.02332	-3.09672	NAF
NS0029	186	188	NS	E391805	391805	1	G	W	24.28	47.58	3.97	0.361	0.28	0.189	2.86	0.54	0.123	0.204	0.788	0.097	0.71	7.21	0.41	8.33	5038	6.2424	9.41868	-3.17628	NAF
NS0029	54	56	NS	E391738	391738	1	G	W	30.86	40.76	3.64	0.465	0.36	0.166	2.62	0.42	0.098	0.135	1.07	0.042	0.57	5.77	0.06	6.4	4973	4.131	7.32564	-3.19464	NAF
NS0029	156	158	NS	E391789	391789	1	G	W	27.16	40.95	4.94	0.361	0.28	0.239	3.55	0.76	0.171	0.327	0.731	0.142	0.84	7.41	0.58	8.83	5023	10.0062	13.25592	-3.24972	NAF
NS0029	152	154	NS	E391787	391787	1	G	W	26.4	42.76	3.68	0.426	0.33	0.169	3.2	0.66	0.134	0.27	0.551	0.117	0.93	8.84	0.52	10.29	5021	8.262	11.51172	-3.24972	NAF
NS0029	36	38	NS	E391729	391729	1	G	W	34.85	42.85	2.42	0.426	0.33	0.11	0.79	0.23	0.153	0.013	0.374	0.018	1.7	0.9	0.11	2.71	4964	0.3978	4.01166	-3.61386	NAF
NS0029	84	86	NS	E391753	391753	1	G	W	25.4	44.91	5.19	0.387	0.3	0.238	2.97	0.45	0.064	0.125	1.85	0.068	0.6	6.93	0.18	7.71	4988	3.825	7.8489	-4.0239	NAF
NS0029	228	230	NS	E391826	391826	1	G	W	27.37	45.02	3.25	0.413	0.32	0.155	2.82	1	0.095	0.416	0.35	0.107	0.7	5.87	0.73	7.3	5059	12.7296	17.442	-4.7124	NAF
NS0029	160	162	NS	E391791	391791	1	G	W	29.34	43.16	2.45	0.426	0.33	0.112	2.27	0.46	0.076	0.108	0.591	0.111	0.75	7.4	0.01	8.16	5025	3.3048	8.02332	-4.71852	NAF
NS0029	82	84	NS	E391752	391752	1	G	W	29.23	41.65	4.27	0.374	0.29	0.197	2.73	0.42	0.087	0.085	1.16	0.056	0.6	6.77	-0.05	7.32	4987	2.601	7.32564	-4.72464	NAF
NS0029	268	270	NS	E391846	391846	1	G	W	26.99	49.64	2.95	0.284	0.22	0.142	2.25	0.46	0.053	0.1	0.434	0.126	0.63	4.41	0.07	5.11	5079	3.06	8.02332	-4.96332	NAF
NS0029	128	130	NS	E391775	391775	1	G	W	25.49	42.98	3.82	0.336	0.26	0.176	2.49	0.6	0.142	0.178	0.442	0.051	1.16	10.79	0.39	12.34	5010	5.4468	10.4652	-5.0184	NAF
NS0029	32	34	NS	E391727	391727	1	G	W	34.51	43.1	2.84	0.529	0.41	0.132	0.96	0.31	0.16	0.011	0.498	0.029	0.88	0.72	0.12	1.72	4962	0.3366	5.40702	-5.07042	NAF
NS0029	68	70	NS	E391745	391745	1	G	W	18.6	48.92	8.02	0.413	0.32	0.357	3.31	0.79	0.081	0.28	4.32	0.101	0.55	5.61	0.78	6.94	4980	8.568	13.77918	-5.21118	NAF
NS0029	172	174	NS	E391797	391797	1	G	W	23.52	47.1	5.23	0.245	0.19	0.25	3.6	0.68	0.137	0.216	0.645	0.15	0.92	6.66	0.54	8.12	5031	6.6096	11.86056	-5.25096	NAF
NS0029	136	138	NS	E391779	391779	1	G	W	27.18	41.46	2.89	0.374	0.29	0.137	2.38	0.48	0.09	0.097	0.676	0.077	0.96	11.61	0.15	12.72	5014	2.9682	8.37216	-5.40396	NAF
NS0029	236	238	NS	E391830	391830	1	G	W	28.9	45.87	3	0.336	0.26	0.148	2.48	0.51	0.084	0.107	0.198	0.055	0.42	5.84	-0.14	6.12	5063	3.2742	8.89542	-5.62122	NAF
NS0029	4	6	NS	E391713	391713	1	G	D	33.2	46.89	2.81	0.039	0.03	0.112	0.06	0.35	0.028	0.01	0.007	0.015	1.23	1.05	0.1	2.38	4948	0.306	6.1047	-5.7987	NAF
NS0029	198	200	NS	E391811	391811	1	G	W	27.29	46.12	3.74	0.374	0.29	0.177	2.98	0.68	0.108	0.19	0.386	0.105	0.64	5.39	0.33	6.36	5044	5.814	11.86056	-6.04656	NAF
NS0029	118	120	NS	E391770	391770	1	G	W	26.36	40.87	2.84	0.336	0.26	0.13	2.41	0.59	0.115	0.138	0.403	0.066	1.22	12.77	0.31	14.3	5005	4.2228	10.29078	-6.06798	NAF
NS0029	146	148	NS	E391784	391784	1	G	W	26.76	43.14	3.99	0.31	0.24	0.185	3.07	0.72	0.149	0.212	0.65	0.104	0.76	7.85	0.41	9.02	5019	6.4872	12.55824	-6.07104	NAF
NS0029	166	168	NS	E391794	391794	1	G	W	25.05	46.86	3.74	0.374	0.29	0.186	2.74	0.73	0.052	0.206	0.751	0.118	0.76	7.2	0.45	8.41	5028	6.3036	12.73266	-6.42906	NAF
NS0029	78	80	NS	E391750	391750	1	G	W	26.06	43.58	5.47	0.413	0.32	0.255	2.67	0.67	0.154	0.17	2.37	0.067	0.45	6.27	0.22	6.94	4985	5.202	11.68614	-6.48414	NAF
NS0029	252	254	NS	E391838	391838	1	G	W	30.39	42.74	2.56	0.452	0.35	0.125	2.41	0.53	0.061	0.089	0.151	0.048	0.61	7.14	-0.09	7.66	5071	2.7234	9.24426	-6.52086	NAF
NS0029	234	236	NS	E391829	391829	1	G	W	29.23	43.55	3.45	0.336	0.26	0.163	2.76	0.61	0.131	0.133	0.293	0.08	0.63	5.55	0.09	6.27	5062	4.0698	10.63962	-6.56982	NAF
NS0029	88	90	NS	E391755	391755	1	G	W	25.86	42.24	5.17	0.478	0.37	0.24	3.03	0.59	0.135	0.119	1.71	0.078	0.67	8.2	0.14	9.01	4990	3.6414	10.29078	-6.64938	NAF
NS0029	206	208	NS	E391815	391815	1	G	W	30.74	42.76	2.53	0.426	0.33	0.12	2.45	0.51	0.075	0.07	0.285	0.09	0.52	5.96	-0.14	6.34	5048	2.142	8.89542	-6.75342	NAF
NS0029	140	142	NS	E391781	391781	1	G	W	26.61	37.66	3.21	0.568	0.44	0.149	2.96	0.72	0.169	0.187	0.379	0.03	1.11	14.29	0.43	15.83	5016	5.7222	12.55824	-6.83604	NAF
NS0029	270	272	NS	E391847	391847	1	G	W	29.3	44.06	3.64	0.31	0.24	0.174	2.6	0.57	0.091	0.101	0.394	0.102	0.63	5.24	0.02	5.89	5080	3.0906	9.94194	-6.85134	NAF
NS0029	250	252	NS	E391837	391837	1	G	W	30.88	43.97	2	0.4	0.31	0.096	2.12	0.52	0.081	0.067	0.244	0.073	0.53	6.11	-0.17	6.47	5070	2.0502	9.06984	-7.01964	NAF
NS0029	218	220	NS	E391821	391821	1	G	W	28.55	44.14	3.09	0.439	0.34	0.149	2.74	0.84	0.151	0.236	0.295	0.08	0.63	6.14	0.41	7.18	5054	7.2216	14.65128	-7.42968	NAF
NS0029	154	156	NS	E391788	391788	1	G	W	27.03	42.14	3.68	0.4	0.31	0.171	3.3	0.8	0.161	0.204	0.616	0.141	0.96	8.23	0.41	9.6	5022	6.2424	13.9536	-7.7112	NAF
NS0029	138	140	NS	E391780	391780	1	G	W	27.27	39.11	3.03	0.465	0.36	0.141	2.63	0.71	0.164	0.151	0.758	0.085	1.44	12.02	0.31	13.77	5015	4.6206	12.38382	-7.76322	NAF
NS0029	244	246	NS	E391834	391834	1	G	W	29.69	43.63	2.7	0.413	0.32	0.134	2.49	0.6	0.127	0.088	0.272	0.085	0.52	6.53	-0.07	6.98	5067	2.6928	10.4652	-7.7724	NAF
NS0029	34	36	NS	E391728	391728	1	G	W	33.27	43.2	2.95	0.465	0.36	0.137	1.15	0.46	0.224	0.008	0.667	0.023	1.58	0.91	0.14	2.63	4963	0.2448	8.02332	-7.77852	NAF
NS0029	208	210	NS	E391816	391816	1	G	W	30.12	42.95	2.82	0.4	0.31	0.135	2.56	0.72	0.106	0.149	0.302	0.08	0.65	5.61	0.19	6.45	5049	4.5594	12.55824	-7.99884	NAF
NS0029	246	248	NS	E391835	391835	1	G	W	26.5	48.9	2.68	0.374	0.29	0.13	2.31	0.81	0.146	0.197	0.298	0.067	0.58	5.65	0.31	6.54	5068	6.0282	14.12802	-8.09982	NAF
NS0029	66	68	NS	E391744	391744	1	G	W	30.24	41.13	3.55	0.491	0.38	0.159	2.67	0.57	0.107	0.059	1.09	0.048	0.47	6.49	-0.16	6.8	4979	1.8054	9.94194	-8.13654	NAF
NS0029	174	176	NS	E391798	391798	1	G	W	26.66	44.7	4.24	0.258	0.2	0.206	3.12	0.75	0.087	0.155	0.448	0.117	0.84	6.7	0.29	7.83	5032	4.743	13.0815	-8.3385	NAF
NS0029	220	222	NS	E391822	391822	1	G	W	23.55	54.49	1.27	0.478	0.37	0.059	1.87	0.58	0.046	0.055	0.155	0.048	0.57	6.7	0.07	7.34	5055	1.683	10.11636	-8.43336	NAF
NS0029	122	124	NS	E391772	391772	1	G	W	22.23	47.11	3.03	0.503	0.39	0.128	2.83	0.8	0.199	0.176	0.48	0.114	1.21	10.58	0.55	12.34	5007	5.3856	13.9536	-8.568	NAF
NS0029	280	282	NS	E391852	391852	1	G	W	28.27	44.43	3.52	0.374	0.29	0.174	2.82	0.79	0.167	0.17	0.331	0.102	0.66	6.09	0.2	6.95	5085	5.202	13.77918	-8.57718	NAF
NS0029	120	122	NS	E391771	391771	1	G	W	26.95	36.66	3.36	0.465	0.36	0.16	2.96	0.74	0.156	0.132	0.273	0.054	1.19	14.78	0.36	16.33	5006	4.0392	12.90708	-8.86788	NAF
NS0029	144	146	NS	E391783	391783	1	G	W	25.78	43.51	3.48	0.336	0.26	0.162	2.96	0.8	0.188	0.164	0.644	0.1	0.99	9.31	0.33	10.63	5018	5.0184	13.9536	-8.9352	NAF
NS0029	278	280	NS	E391851	391851	1	G	W	27.4	45.41	3.45	0.374	0.29	0.169	2.73	0.82	0.188	0.175	0.303	0.095	0.64	6.12	0.23	6.99	5084	5.355	14.30244	-8.94744	NAF
NS0029	70	72	NS	E391746	391746	1	G	W	28.09	42.62	4.54	0.426	0.33	0.213	2.72	0.67	0.1	0.087	1.64	0.08	0.54	5.81	0.02	6.37	4981	2.6622	11.68614	-9.02394	NAF
NS0029	164	166	NS	E391793	391793	1	G	W	26.66	42.39	4.23	0.374	0.29	0.202	3.21	0.86	0.127	0.193	0.774	0.126	0.93	7.99	0.44	9.36	5027	5.9058	15.00012	-9.09432	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0029	176	178	NS	E391799	391799	1	G	W	27.63	43.68	4.35	0.219	0.17	0.214	3.02	0.73	0.037	0.114	0.332	0.091	0.75	6.38	0.27	7.4	5033	3.4884	12.73266	-9.24426	NAF
NS0029	204	206	NS	E391814	391814	1	G	W	28.56	42.58	3.39	0.491	0.38	0.158	3.11	0.75	0.169	0.121	0.317	0.101	0.68	7.36	0.14	8.18	5047	3.7026	13.0815	-9.3789	NAF
NS0029	210	212	NS	E391817	391817	1	G	W	30.84	41.92	2.79	0.426	0.33	0.134	2.62	0.79	0.126	0.142	0.321	0.092	0.64	5.96	0.13	6.73	5050	4.3452	13.77918	-9.43398	NAF
NS0029	190	192	NS	E391807	391807	1	G	W	28.58	43.43	3.78	0.336	0.26	0.179	3.07	0.79	0.178	0.136	0.44	0.111	0.72	5.83	0.16	6.71	5040	4.1616	13.77918	-9.61758	NAF
NS0029	0	2	NS	E391711	391711	1	G	D	25.46	50.96	7.26	-0.0129	-0.01	0.256	0.11	0.6	0.014	0.027	0.101	0.079	1.13	2.66	0.27	4.06	4946	0.8262	10.4652	-9.639	NAF
NS0029	132	134	NS	E391777	391777	1	G	W	24.25	42.49	4.72	0.387	0.3	0.218	3.13	0.9	0.237	0.196	0.691	0.112	1.3	10.36	0.56	12.22	5012	5.9976	15.6978	-9.7002	NAF
NS0029	76	78	NS	E391749	391749	1	G	W	26.02	45.13	5.42	0.336	0.26	0.261	2.96	0.73	0.086	0.095	1.84	0.073	0.53	5.29	0.18	6	4984	2.907	12.73266	-9.82566	NAF
NS0029	266	268	NS	E391845	391845	1	G	W	27.74	45.15	4.06	0.297	0.23	0.2	2.93	0.87	0.168	0.174	0.343	0.101	0.66	5.27	0.27	6.2	5078	5.3244	15.17454	-9.85014	NAF
NS0029	192	194	NS	E391808	391808	1	G	W	25.75	48.48	3.82	0.271	0.21	0.18	2.83	0.88	0.181	0.177	0.385	0.1	0.58	4.63	0.3	5.51	5041	5.4162	15.34896	-9.93276	NAF
NS0029	44	46	NS	E391733	391733	1	G	W	34.21	39.45	2.04	0.633	0.49	0.092	1.72	0.66	0.19	0.05	0.664	0.014	0.5	5.16	-0.19	5.47	4968	1.53	11.51172	-9.98172	NAF
NS0029	272	274	NS	E391848	391848	1	G	W	27.07	44.21	3.86	0.426	0.33	0.184	2.97	0.91	0.173	0.19	0.477	0.123	0.77	6.34	0.39	7.5	5081	5.814	15.87222	-10.05822	NAF
NS0029	64	66	NS	E391743	391743	1	G	W	31.41	40.63	3.39	0.516	0.4	0.151	2.44	0.68	0.107	0.058	1.14	0.058	0.43	5.6	-0.16	5.87	4978	1.7748	11.86056	-10.08576	NAF
NS0029	90	92	NS	E391756	391756	1	G	W	26.56	43.03	4.69	0.426	0.33	0.215	2.84	0.73	0.127	0.086	1.34	0.093	0.71	7.29	0.03	8.03	4991	2.6316	12.73266	-10.10106	NAF
NS0029	188	190	NS	E391806	391806	1	G	W	30.56	44.01	3	0.245	0.19	0.14	2.4	0.72	0.099	0.08	0.42	0.09	0.61	4.33	-0.01	4.93	5039	2.448	12.55824	-10.11024	NAF
NS0029	262	264	NS	E391843	391843	1	G	W	29.26	45.53	2.46	0.361	0.28	0.115	2.31	0.71	0.091	0.07	0.343	0.106	0.57	5.27	0	5.84	5076	2.142	12.38382	-10.24182	NAF
NS0029	202	204	NS	E391813	391813	1	G	W	30.23	43.69	3.21	0.31	0.24	0.155	2.6	0.8	0.109	0.091	0.282	0.077	0.49	4.61	0.06	5.16	5046	2.7846	13.9536	-11.169	NAF
NS0029	224	226	NS	E391824	391824	1	G	W	28.32	46.87	2.49	0.349	0.27	0.118	2.24	0.81	0.121	0.093	0.245	0.073	0.52	5.13	0.03	5.68	5057	2.8458	14.12802	-11.28222	NAF
NS0029	276	278	NS	E391850	391850	1	G	W	26.5	46.1	3.38	0.387	0.3	0.166	2.83	0.87	0.185	0.125	0.445	0.131	0.84	6.2	0.22	7.26	5083	3.825	15.17454	-11.34954	NAF
NS0029	200	202	NS	E391812	391812	1	G	W	31.39	43.52	2.65	0.323	0.25	0.125	2.34	0.79	0.098	0.079	0.29	0.089	0.49	4.48	-0.03	4.94	5045	2.4174	13.77918	-11.36178	NAF
NS0029	240	242	NS	E391832	391832	1	G	W	29.3	43.43	3.41	0.361	0.28	0.166	2.68	1.08	0.172	0.242	0.442	0.09	0.65	5.21	0.41	6.27	5065	7.4052	18.83736	-11.43216	NAF
NS0029	96	98	NS	E391759	391759	1	G	W	24.66	44.51	5.37	0.387	0.3	0.249	3.12	0.99	0.21	0.188	0.992	0.072	0.9	7.5	0.32	8.72	4994	5.7528	17.26758	-11.51478	NAF
NS0029	216	218	NS	E391820	391820	1	G	W	30.2	43.75	2.69	0.387	0.3	0.129	2.42	0.81	0.148	0.083	0.297	0.077	0.53	5.72	-0.02	6.23	5053	2.5398	14.12802	-11.58822	NAF
NS0029	194	196	NS	E391809	391809	1	G	W	27.91	47.66	2.71	0.297	0.23	0.133	2.36	0.85	0.133	0.094	0.346	0.089	0.55	4.58	0.05	5.18	5042	2.8764	14.8257	-11.9493	NAF
NS0029	62	64	NS	E391742	391742	1	G	W	26.81	44.21	4.97	0.465	0.36	0.234	2.95	0.83	0.082	0.082	1.87	0.074	0.35	5.62	0.17	6.14	4977	2.5092	14.47686	-11.96766	NAF
NS0029	196	198	NS	E391810	391810	1	G	W	28.57	43.61	3.95	0.349	0.27	0.188	3	0.92	0.222	0.131	0.348	0.092	0.58	5.41	0.12	6.11	5043	4.0086	16.04664	-12.03804	NAF
NS0029	226	228	NS	E391825	391825	1	G	W	29.42	40.85	3.52	0.491	0.38	0.165	3.15	0.92	0.202	0.122	0.474	0.131	0.73	7.11	0.12	7.96	5058	3.7332	16.04664	-12.31344	NAF
NS0029	92	94	NS	E391757	391757	1	G	W	25.45	45.5	4.81	0.374	0.29	0.23	2.83	0.92	0.078	0.103	1.21	0.088	0.63	6.28	0.33	7.24	4992	3.1518	16.04664	-12.89484	NAF
NS0029	126	128	NS	E391774	391774	1	G	W	25.6	41.54	2.87	0.374	0.29	0.129	2.36	1.03	0.267	0.155	0.346	0.049	1.09	12.57	0.34	14	5009	4.743	17.96526	-13.22226	NAF
NS0029	72	74	NS	E391747	391747	1	G	W	27.41	42.83	4.99	0.387	0.3	0.247	2.91	0.92	0.123	0.088	1.66	0.079	0.48	5.46	0.16	6.1	4982	2.6928	16.04664	-13.35384	NAF
NS0029	60	62	NS	E391741	391741	1	G	W	28.98	42.32	3.87	0.516	0.4	0.173	2.69	0.91	0.116	0.071	1.32	0.059	0.5	5.95	0.09	6.54	4976	2.1726	15.87222	-13.69962	NAF
NS0029	254	256	NS	E391839	391839	1	G	W	30.16	40.76	2.62	0.503	0.39	0.124	2.77	1.04	0.19	0.131	0.416	0.132	0.7	7.16	0.18	8.04	5072	4.0086	18.13968	-14.13108	NAF
NS0029	230	232	NS	E391827	391827	1	G	W	30.33	41.52	3.05	0.426	0.33	0.148	2.79	1.04	0.153	0.124	0.299	0.087	0.66	6.3	0.18	7.14	5060	3.7944	18.13968	-14.34528	NAF
NS0029	260	262	NS	E391842	391842	1	G	W	25.38	49.71	1.83	0.503	0.39	0.087	2.16	1.12	0.143	0.165	0.276	0.094	0.58	6.43	0.36	7.37	5075	5.049	19.53504	-14.48604	NAF
NS0029	242	244	NS	E391833	391833	1	G	W	28.35	42.74	3.22	0.465	0.36	0.159	2.95	1.05	0.165	0.112	0.288	0.083	0.69	7.42	0.18	8.29	5066	3.4272	18.3141	-14.8869	NAF
NS0029	178	180	NS	E391800	391800	1	G	W	20.82	51.46	3.29	0.387	0.3	0.163	2.74	1.08	0.207	0.123	0.319	0.099	0.96	8.52	0.32	9.8	5034	3.7638	18.83736	-15.07356	NAF
NS0029	238	240	NS	E391831	391831	1	G	W	31.5	43.34	2.21	0.336	0.26	0.105	2.15	0.98	0.084	0.061	0.245	0.072	0.46	4.95	0.14	5.55	5064	1.8666	17.09316	-15.22656	NAF
NS0029	264	266	NS	E391844	391844	1	G	W	27.76	44.95	2.94	0.426	0.33	0.143	2.62	1.14	0.18	0.149	0.28	0.094	0.64	6.26	0.25	7.15	5077	4.5594	19.88388	-15.32448	NAF
NS0029	214	216	NS	E391819	391819	1	G	W	29.07	44.3	2.51	0.426	0.33	0.118	2.4	1.03	0.149	0.079	0.269	0.071	0.53	6.06	0.14	6.73	5052	2.4174	17.96526	-15.54786	NAF
NS0029	74	76	NS	E391748	391748	1	G	W	27.65	43.12	4.48	0.413	0.32	0.226	2.85	1.08	0.202	0.088	1.37	0.067	0.48	5.96	0.09	6.53	4983	2.6928	18.83736	-16.14456	NAF
NS0029	232	234	NS	E391828	391828	1	G	W	27.03	42.75	4.79	0.387	0.3	0.228	3.45	1.28	0.274	0.198	0.28	0.075	0.64	6.23	0.41	7.28	5061	6.0588	22.32576	-16.26696	NAF
NS0029	248	250	NS	E391836	391836	1	G	W	20.12	54.36	3.02	0.426	0.33	0.137	2.7	1.78	0.306	0.483	0.418	0.103	0.55	5.76	1.14	7.45	5069	14.7798	31.04676	-16.26696	NAF
NS0029	148	150	NS	E391785	391785	1	G	W	27.84	43.32	3.09	0.336	0.26	0.143	2.66	1.29	0.222	0.196	0.449	0.109	0.77	6.96	0.4	8.13	5020	5.9976	22.50018	-16.50258	NAF
NS0029	94	96	NS	E391758	391758	1	G	W	27.1	43.37	4.23	0.387	0.3	0.203	2.69	1.15	0.116	0.092	0.882	0.072	0.73	6.49	0.3	7.52	4993	2.8152	20.0583	-17.2431	NAF
NS0029	58	60	NS	E391740	391740	1	G	W	26.71	44.51	3.83	0.516	0.4	0.173	2.73	1.11	0.128	0.064	1.26	0.05	0.43	6.23	0.28	6.94	4975	1.9584	19.36062	-17.40222	NAF
NS0029	258	260	NS	E391841	391841	1	G	W	27.19	48.92	2.16	0.336	0.26	0.103	2.11	1.17	0.119	0.086	0.289	0.093	0.51	4.73	0.32	5.56	5074	2.6316	20.40714	-17.77554	NAF
NS0029	56	58	NS	E391739	391739	1	G	W	24.26	45.97	4.98	0.516	0.4	0.228	2.73	1.38	0.371	0.144	2.06	0.047	0.49	6.07	0.25	6.81	4974	4.4064	24.06996	-19.66356	NAF
NS0029	256	258	NS	E391840	391840	1	G	W	26.63	45.93	2.65	0.426	0.33	0.126	2.6	1.69	0.253	0.256	0.372	0.12	0.65	5.88	0.63	7.16	5073	7.8336	29.47698	-21.64338	NAF
NS0029	212	214	NS	E391818	391818	1	G	W	27.71	45.81	2.4	0.426	0.33	0.11	2.39	1.4	0.202	0.07	0.25	0.058	0.49	6.03	0.27	6.79	5051	2.142	24.4188	-22.2768	NAF
NS0029	2	4	NS	E391712	391712	1	G	D	25.5	50.7	6.19	-0.0129	-0.01	0.229	0.14	2.05	0.008	0.009	0.052	0.041	0.88	2.38	1.15	4.41	4947	0.2754	35.7561	-35.4807	NAC
NS0029	130	132	NS	E391776	391776	1	G	W	24.2	39.67	4.41	0.374	0.29	0.205	3.04	2.73	0.826	0.25	0.641	0.105	1.28	10.47	0.67	12.42	5011	7.65	47.61666	-39.96666	NAC
NS0030	222	224	NS	E391965	391965	1	G	W	31.24	42.03	3.6	0.413	0.32	0.178	2.5	0.21	0.048	0.333	0.155	0.019	0.31	5.13	0.29	5.73	5197	10.1898	3.66282	6.52698	PAF(LC)
NS0030	144	146	NS	E391926	391926	1	G	W	25.12	39.52	4.64	0.439	0.34	0.226	3.42	0.45	0.083	0.461	0.081	0.024	0.81	12.82	1	14.63	5158	14.1066	7.8489	6.2577	PAF(LC)
NS0030	236	238	NS	E391972	391972	1	G	W	24.6	42.13	5.19	0.465	0.36	0.238	3.8	0.34	0.079	0.373	0.101	0.028	0.56	10.77	0.66	11.99	5204	11.4138	5.93028	5.48352	PAF(LC)
NS0030	266	268	NS	E391987	391987	1	G	W	17.71	55.43	6.05	0.232	0.18	0.258	3.34	0.22	0.046	0.291	0.006	0.021	0.63	7.3	0.65	8.58	5219	8.9046	3.83724	5.06736	PAF(LC)
NS0030	146	148	NS	E391927	391927	1	G	W	25.66	38.66	4.25	0.465	0.36	0.19	3.3	0.25	0.011	0.239	0.025	0.017	0.97	14.34	0.57	15.88	5159	7.3134	4.3605	2.9529	PAF(LC)
NS0030	268	270	NS	E391988	391988	1	G	W	15.55	60.02	5.97	0.155	0.12	0.265	3.3	0.31	0.084	0.238	0.009	0.028	0.55	6.09	0.56	7.2	5220	7.2828	5.40702	1.87578	PAF(LC)
NS0030	224	226	NS	E391966	391966	1	G	W	32.38	40.84	3.03	0.465	0.36	0.147	2.38	0.28	0.048	0.194	0.02	0.013	0.35	5.73	0.09	6.17	5198	5.9364	4.88376	1.05264	PAF(LC)
NS0030	194	196	NS	E391951	391951	1	G	W	27.73	39.61	3.19	0.581	0.45	0.166	2.62	0.26	0.025	0.171	0.208	0.028	0.9	12.07	0.33	13.3	5183	5.2326	4.53492	0.69768	PAF(LC)
NS0030	154	156	NS	E391931	391931	1	G	W	25.23	38.76	4.55	0.568	0.44	0.201	2.52	0.45	0.071	0.277	0.357	0.02	1.17	14.07	0.65	15.89	5163	8.4762	7.8489	0.6273	PAF(LC)
NS0030	100	102	NS	E391904	391904	1	G	W	36.8	43.99	1.11	0.155	0.12	0.052	0.14	0.02	0.067	0.009	0.019	0.004	1	0.52	0.09	1.61	5136	0.2754	0.34884	-0.07344	NAF
NS0030	12	14	NS	E391859	391859	1	G	W	27.55	56.92	1.99	0.026	0.02	0.099	0.06	0.02	0.01	0.008	0.014	0.018	0.59	0.7	0.14	1.43	5092	0.2448	0.34884	-0.10404	NAF
NS0030	96	98	NS	E391902	391902	1	G	W	33.13	36.35	3.68	0.594	0.46	0.142	2.89	0.28	0.089	0.156	0.878	0.018	0.88	6.4	0.14	7.42	5134	4.7736	4.88376	-0.11016	NAF
NS0030	16	18	NS	E391861	391861	1	G	W	26.45	56.64	3.15	-0.0129	-0.01	0.133	0.05	0.02	0.025	0.007	0.008	0.018	0.77	1	0.15	1.92	5094	0.2142	0.34884	-0.13464	NAF
NS0030	14	16	NS	E391860	391860	1	G	W	20.43	67.11	2.03	0.026	0.02	0.099	0.04	0.02	0.02	0.006	0.008	0.01	0.56	0.68	0.08	1.32	5093	0.1836	0.34884	-0.16524	NAF
NS0030	24	26	NS	E391865	391865	1	G	W	29.3	53.93	2.32	0.026	0.02	0.097	0.05	0.02	0.02	0.006	0.008	0.016	0.74	0.78	0.08	1.6	5098	0.1836	0.34884	-0.16524	NAF
NS0030	234	236	NS	E391971	391971	1	G	W	28.02	38.52	4.04	0.658	0.51	0.186	3.38	0.48	0.12	0.267	0.007	0.021	0.65	10.9	0.46	12.01	5203	8.1702	8.37216	-0.20196	NAF
NS0030	26	28	NS	E391866	391866	1	G	W	31.6	50.58	1.71	0.129	0.1	0.074	0.08	0.03	0.015	0.01	0.006	0.01	1.5	0.58	0.08	2.16	5099	0.306	0.52326	-0.21726	NAF
NS0030	28	30	NS	E391867	391867	1	G	W	33.02	48.87	1.34	0.142	0.11	0.057	0.06	0.03	0.012	0.01	0.006	0.008	1.68	0.47	0.05	2.2	5100	0.306	0.52326	-0.21726	NAF
NS0030	0	2	NS	E391853	391853	1	G	W	32.76	38.1	8.06	0.026	0.02	0.206	0.13	0.05	0.013	0.021	0.041	0.034	3.55	2.42	0.23	6.2	5086	0.6426	0.8721	-0.2295	NAF
NS0030	10	12	NS	E391858	391858	1	G	W	24.95	59.6	2.61	-0.0129	-0.01	0.112	0.05	0.03	0.009	0.009	0.008	0.014	1.03	0.74	0.11	1.88	5091	0.2754	0.52326	-0.24786	NAF
NS0030	30	32	NS	E391868	391868	1	G	W	36.55	43.86	1.19	0.116	0.09	0.053	0.09	0.03	0.012	0.009	0.004	0.007	1.66	0.48	0.08	2.22	5101	0.2754	0.52326	-0.24786	NAF
NS0030	38	40	NS	E391872	391872	1	G	W	38.78	40.33	1.61	0.232	0.18	0.06	0.11	0.03	0.016	0.008	0.006	0.01	1.34	0.57	0.02	1.93	5105	0.2448	0.52326	-0.27846	NAF
NS0030	42	44	NS	E391874	391874	1	G	W	38.75	39.81	1.21	0.684	0.53	0.049	0.11	0.03	0.027	0.008	0.009	0.014	1.79	0.53	0.1	2.42	5107	0.2448	0.52326	-0.27846	NAF
NS0030	70	72	NS	E391888	391888	1	G	W	23.29	51.87	7.55	0.336	0.26	0.334	1.65	0.09	0.015	0.042	0.047	0.036	1.62	2.53	0.25	4.4	5121	1.2852	1.56978	-0.28458	NAF
NS0030	32	34	NS	E391869	391869	1	G	W	35.24	46.19	1.09	0.09	0.07	0.049	0.08	0.03	0.021	0.007	0.004	0.008	1.55	0.45	0.05	2.05	5102	0.2142	0.52326	-0.30906	NAF
NS0030	40	42	NS	E391873	391873	1	G	W	37.97	41.94	1.24	0.336	0.26	0.051	0.09	0.03	0.024	0.007	0.01	0.015	1.39	0.44	0.04	1.87	5106	0.2142	0.52326	-0.30906	NAF
NS0030	18	20	NS	E391862	391862	1	G	W	29.88	51.72	2.93	0.026	0.02	0.114	0.06	0.03	0.064	0.006	0.008	0.018	1.3	0.79	0.1	2.19	5095	0.1836	0.52326	-0.33966	NAF
NS0030	22	24	NS	E391864	391864	1	G	W	31.93	49.19	2.46	0.039	0.03	0.099	0.05	0.03	0.085	0.006	0.007	0.023	1.23	0.8	0.12	2.15	5097	0.1836	0.52326	-0.33966	NAF
NS0030	34	36	NS	E391870	391870	1	G	W	34.24	47.38	1.19	0.103	0.08	0.051	0.08	0.03	0.025	0.006	0.005	0.01	1.62	0.46	0.03	2.11	5103	0.1836	0.52326	-0.33966	NAF
NS0030	48	50	NS	E391877	391877	1	G	W	37.43	41.08	1.22	0.839	0.65	0.055	0.18	0.04	0.016	0.011	0.016	0.011	2.22	0.54	0.04	2.8	5110	0.3366	0.69768	-0.36108	NAF
NS0030	20	22	NS	E391863	391863	1	G	W	33.97	46.4	2.37	0.039	0.03	0.089	0.05	0.03	0.073	0.005	0.006	0.024	1.36	0.74	0.09	2.19	5096	0.153	0.52326	-0.37026	NAF
NS0030	6	8	NS	E391856	391856	1	G	W	32.07	48.88	3.11	-0.0129	-0.01	0.114	0.06	0.04	0.005	0.009	0.008	0.015	0.81	0.91	0.1	1.82	5089	0.2754	0.69768	-0.42228	NAF
NS0030	8	10	NS	E391857	391857	1	G	W	26.25	57.3	3.12	-0.0129	-0.01	0.111	0.06	0.04	0.005	0.008	0.007	0.017	0.72	0.95	0.1	1.77	5090	0.2448	0.69768	-0.45288	NAF
NS0030	36	38	NS	E391871	391871	1	G	W	36.6	42.78	2.28	0.155	0.12	0.092	0.1	0.04	0.013	0.008	0.005	0.019	1.45	0.62	0	2.07	5104	0.2448	0.69768	-0.45288	NAF
NS0030	44	46	NS	E391875	391875	1	G	W	38.75	39.6	1.34	0.684	0.53	0.055	0.14	0.04	0.016	0.008	0.015	0.01	1.72	0.5	0.11	2.33	5108	0.2448	0.69768	-0.45288	NAF
NS0030	46	48	NS	E391876	391876	1	G	W	39.36	39.77	1.06	0.581	0.45	0.05	0.13	0.04	0.01	0.008	0.013	0.007	1.43	0.46	0.07	1.96	5109	0.2448	0.69768	-0.45288	NAF
NS0030	50	52	NS	E391878	391878	1	G	W	38.76	40.08	0.98	0.852	0.66	0.045	0.14	0.04	0.014	0.007	0.021	0.007	1.66	0.48	0.05	2.19	5111	0.2142	0.69768	-0.48348	NAF
NS0030	52	54	NS	E391879	391879	1	G	W	41.33	36.28	1.07	0.775	0.6	0.05	0.19	0.04	0.018	0.006	0.032	0.015	1.71	0.49	0	2.2	5112	0.1836	0.69768	-0.51408	NAF
NS0030	62	64	NS	E391884	391884	1	G	W	35.94	44.23	1.04	0.465	0.36	0.048	0.15	0.04	0.074	0.005	0.033	0.016	1.59	0.49	0.05	2.13	5117	0.153	0.69768	-0.54468	NAF
NS0030	4	6	NS	E391855	391855	1	G	W	25.29	57.3	4.01	-0.0129	-0.01	0.108	0.09	0.05	0.006	0.01	0.014	0.015	0.84	1.26	0.08	2.18	5088	0.306	0.8721	-0.5661	NAF
NS0030	60	62	NS	E391883	391883	1	G	W	36.5	43.09	0.91	0.891	0.69	0.04	0.14	0.04	0.03	0.004	0.028	0.013	1.83	0.53	0.08	2.44	5116	0.1224	0.69768	-0.57528	NAF
NS0030	66	68	NS	E391886	391886	1	G	W	33.15	48.61	0.94	0.697	0.54	0.043	0.15	0.04	0.012	0.004	0.033	0.016	1.45	0.47	0.07	1.99	5119	0.1224	0.69768	-0.57528	NAF
NS0030	260	262	NS	E391984	391984	1	G	W	19.85	50.9	4.52	0.361	0.28	0.199	3.13	0.5	0.11	0.265	0.014	0.025	0.81	10.13	0.68	11.62	5216	8.109	8.721	-0.612	NAF
NS0030	82	84	NS	E391894	391894	1	G	W	30.47	41.35	3.8	0.452	0.35	0.183	2.31	0.1	0.076	0.036	0.015	0.022	1.8	5.92	0.06	7.78	5127	1.1016	1.7442	-0.6426	NAF
NS0030	54	56	NS	E391880	391880	1	G	W	33.24	47.71	1.14	0.684	0.53	0.053	0.2	0.05	0.02	0.005	0.037	0.018	1.86	0.55	0.03	2.44	5113	0.153	0.8721	-0.7191	NAF
NS0030	280	282	NS	E391994	391994	1	G	W	20.69	49.16	3.74	0.232	0.18	0.159	3.4	0.33	0.056	0.164	0.01	0.025	1.34	11.26	0.44	13.04	5226	5.0184	5.75586	-0.73746	NAF
NS0030	76	78	NS	E391891	391891	1	G	W	33.59	46.77	1.39	0.452	0.35	0.062	0.44	0.05	0.04	0.004	0.08	0.013	1.99	0.53	0.02	2.54	5124	0.1224	0.8721	-0.7497	NAF
NS0030	2	4	NS	E391854	391854	1	G	W	24.17	54.8	6.43	-0.0129	-0.01	0.146	0.11	0.07	0.007	0.012	0.027	0.035	1.5	1.9	0.16	3.56	5087	0.3672	1.22094	-0.85374	NAF
NS0030	102	104	NS	E391905	391905	1	G	W	34.78	42.63	1.3	0.387	0.3	0.058	0.86	0.08	0.07	0.017	0.056	0.01	1.1	3.41	-0.01	4.5	5137	0.5202	1.39536	-0.87516	NAF
NS0030	64	66	NS	E391885	391885	1	G	W	36.68	42.3	1.79	0.607	0.47	0.086	0.31	0.06	0.012	0.004	0.067	0.019	1.43	0.71	0.04	2.18	5118	0.1224	1.04652	-0.92412	NAF
NS0030	68	70	NS	E391887	391887	1	G	W	37.51	40.12	2.18	0.813	0.63	0.096	0.21	0.06	0.018	0.004	0.032	0.02	1.51	0.84	0.09	2.44	5120	0.1224	1.04652	-0.92412	NAF
NS0030	74	76	NS	E391890	391890	1	G	W	37.55	40.69	1.79	0.684	0.53	0.077	0.29	0.06	0.019	0.004	0.046	0.016	1.53	0.68	0.09	2.3	5123	0.1224	1.04652	-0.92412	NAF
NS0030	254	256	NS	E391981	391981	1	G	W	20.81	48.77	4.23	0.465	0.36	0.194	3.15	0.28	0.048	0.128	0.033	0.026	0.97	11.39	0.28	12.64	5213	3.9168	4.88376	-0.96696	NAF
NS0030	238	240	NS	E391973	391973	1	G	W	28.04	41.2	4.83	0.374	0.29	0.22	3.15	0.5	0.129	0.252	0.598	0.026	0.44	7.57	0.32	8.33	5205	7.7112	8.721	-1.0098	NAF
NS0030	248	250	NS	E391978	391978	1	G	W	25.33	40.81	2.76	0.465	0.36	0.118	2.9	0.36	0.055	0.17	0.022	0.023	1.03	14.54	0.4	15.97	5210	5.202	6.27912	-1.07712	NAF
NS0030	240	242	NS	E391974	391974	1	G	W	29.24	36.44	4.59	0.736	0.57	0.202	3.84	0.58	0.142	0.293	0.021	0.024	0.76	9.98	0.45	11.19	5206	8.9658	10.11636	-1.15056	NAF
NS0030	124	126	NS	E391916	391916	1	G	W	34.61	39.2	1.2	0.684	0.53	0.056	1.93	0.12	0.018	0.03	0.031	0.006	0.68	6.68	-0.37	6.99	5148	0.918	2.09304	-1.17504	NAF
NS0030	58	60	NS	E391882	391882	1	G	W	35.07	43.31	2.03	0.788	0.61	0.091	0.31	0.08	0.015	0.005	0.086	0.018	1.92	0.86	0.09	2.87	5115	0.153	1.39536	-1.24236	NAF
NS0030	276	278	NS	E391992	391992	1	G	W	17.35	56.93	3.61	0.297	0.23	0.167	3	0.26	0.035	0.102	0.007	0.025	1.12	9.28	0.27	10.67	5224	3.1212	4.53492	-1.41372	NAF
NS0030	56	58	NS	E391881	391881	1	G	W	37.79	38.51	2.25	0.981	0.76	0.106	0.38	0.09	0.02	0.004	0.099	0.023	2.22	0.94	0.05	3.21	5114	0.1224	1.56978	-1.44738	NAF
NS0030	230	232	NS	E391969	391969	1	G	W	32.15	39.77	3.56	0.452	0.35	0.173	2.75	0.42	0.086	0.192	0.018	0.02	0.34	6.07	0.1	6.51	5201	5.8752	7.32564	-1.45044	NAF
NS0030	220	222	NS	E391964	391964	1	G	W	30.67	45.23	2.13	0.465	0.36	0.115	2.02	0.21	0.032	0.071	0.043	0.014	0.35	5.57	-0.15	5.77	5196	2.1726	3.66282	-1.49022	NAF
NS0030	256	258	NS	E391982	391982	1	G	W	20.97	47.96	5.82	0.426	0.33	0.264	3.18	0.48	0.106	0.214	0.026	0.027	0.69	10.15	0.49	11.33	5214	6.5484	8.37216	-1.82376	NAF
NS0030	78	80	NS	E391892	391892	1	G	W	29.89	48.5	2.96	0.697	0.54	0.127	0.58	0.12	0.068	0.005	0.108	0.027	2.54	1.1	0.11	3.75	5125	0.153	2.09304	-1.94004	NAF
NS0030	232	234	NS	E391970	391970	1	G	W	35.41	39.74	1.4	0.491	0.38	0.07	1.62	0.2	0.041	0.05	0.004	0.019	0.46	5.51	-0.38	5.59	5202	1.53	3.4884	-1.9584	NAF
NS0030	72	74	NS	E391889	391889	1	G	W	26.62	48.31	6.03	0.775	0.6	0.267	1.29	0.13	0.031	0.009	0.064	0.035	2.24	2.13	0.25	4.62	5122	0.2754	2.26746	-1.99206	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0030	162	164	NS	E391935	391935	1	G	W	27.16	36.53	3.08	0.568	0.44	0.14	2.24	0.46	0.052	0.18	0.543	0.018	1.06	15.64	0.46	17.16	5167	5.508	8.02332	-2.51532	NAF
NS0030	172	174	NS	E391940	391940	1	G	W	23.64	39.85	4.88	0.491	0.38	0.22	2.61	0.56	0.076	0.231	0.909	0.03	1.07	14.39	0.65	16.11	5172	7.0686	9.76752	-2.69892	NAF
NS0030	126	128	NS	E391917	391917	1	G	W	34.29	39.16	1.36	0.646	0.5	0.058	1.92	0.21	0.045	0.031	0.082	0.006	0.87	6.8	-0.34	7.33	5149	0.9486	3.66282	-2.71422	NAF
NS0030	104	106	NS	E391906	391906	1	G	W	35.2	39.63	1.1	0.594	0.46	0.049	1.64	0.21	0.054	0.023	0.096	0.013	1.2	5.05	-0.23	6.02	5138	0.7038	3.66282	-2.95902	NAF
NS0030	94	96	NS	E391900	391900	1	G	W	36.14	38.82	1.14	0.684	0.53	0.053	1.49	0.22	0.062	0.022	0.053	0.009	1.37	4.44	-0.18	5.63	5133	0.6732	3.83724	-3.16404	NAF
NS0030	148	150	NS	E391928	391928	1	G	W	26.19	37.75	4	0.491	0.38	0.182	2.93	0.47	0.085	0.163	0.048	0.023	1.03	14.85	0.4	16.28	5160	4.9878	8.19774	-3.20994	NAF
NS0030	98	100	NS	E391903	391903	1	G	W	33.83	39.86	1.05	0.749	0.58	0.049	1.85	0.23	0.071	0.026	0.155	0.002	0.85	6.69	-0.23	7.31	5135	0.7956	4.01166	-3.21606	NAF
NS0030	80	82	NS	E391893	391893	1	G	W	32.36	42.84	3.69	1.523	1.18	0.166	0.88	0.22	0.079	0.006	0.138	0.037	2.07	1.4	0.25	3.72	5126	0.1836	3.83724	-3.65364	NAF
NS0030	228	230	NS	E391968	391968	1	G	W	36.54	37.28	1.91	0.503	0.39	0.097	1.89	0.31	0.06	0.052	0.007	0.016	0.4	5.51	-0.37	5.54	5200	1.5912	5.40702	-3.81582	NAF
NS0030	108	110	NS	E391908	391908	1	G	W	34.62	39.81	1.23	0.594	0.46	0.056	1.85	0.28	0.07	0.032	0.027	0.009	0.84	6.02	-0.4	6.46	5140	0.9792	4.88376	-3.90456	NAF
NS0030	138	140	NS	E391923	391923	1	G	W	32.38	36.86	2.49	0.555	0.43	0.11	2.53	0.42	0.077	0.111	0.097	0.012	1.01	9.26	-0.03	10.24	5155	3.3966	7.32564	-3.92904	NAF
NS0030	272	274	NS	E391990	391990	1	G	W	20.5	50.76	2.08	0.336	0.26	0.094	2.74	0.31	0.031	0.046	0.009	0.021	1.45	12.57	0.09	14.11	5222	1.4076	5.40702	-3.99942	NAF
NS0030	118	120	NS	E391913	391913	1	G	W	31.15	43.44	1.55	0.336	0.26	0.07	2.4	0.31	0.059	0.044	0.099	0.006	0.62	6.6	-0.31	6.91	5145	1.3464	5.40702	-4.06062	NAF
NS0030	106	108	NS	E391907	391907	1	G	W	32.66	42.29	1.1	0.62	0.48	0.051	2.02	0.29	0.067	0.032	0.099	0.021	0.46	6.51	-0.37	6.6	5139	0.9792	5.05818	-4.07898	NAF
NS0030	274	276	NS	E391991	391991	1	G	W	20.46	50.02	2.77	0.374	0.29	0.122	3.11	0.37	0.052	0.073	0.016	0.019	1.39	12.02	0.18	13.59	5223	2.2338	6.45354	-4.21974	NAF
NS0030	84	86	NS	E391895	391895	1	G	W	34.23	38.63	1.49	0.646	0.5	0.072	2.11	0.29	0.07	0.027	0.007	0.01	1.22	6.57	-0.25	7.54	5128	0.8262	5.05818	-4.23198	NAF
NS0030	134	136	NS	E391921	391921	1	G	W	31.11	39.95	2.64	0.529	0.41	0.122	2.53	0.44	0.039	0.11	0.207	0.013	0.9	7.91	-0.02	8.79	5153	3.366	7.67448	-4.30848	NAF
NS0030	86	88	NS	E391896	391896	1	G	W	33.19	42.24	1.05	0.594	0.46	0.049	1.84	0.3	0.071	0.026	0.007	0.005	0.55	5.74	-0.29	6	5129	0.7956	5.2326	-4.437	NAF
NS0030	132	134	NS	E391920	391920	1	G	W	33.45	39.52	1.54	0.568	0.44	0.071	2.07	0.33	0.072	0.038	0.191	0.008	0.8	7.07	-0.35	7.52	5152	1.1628	5.75586	-4.59306	NAF
NS0030	278	280	NS	E391993	391993	1	G	W	18.45	55.19	2.06	0.374	0.29	0.092	2.56	0.35	0.052	0.047	0.009	0.026	1.18	11.27	0.11	12.56	5225	1.4382	6.1047	-4.6665	NAF
NS0030	252	254	NS	E391980	391980	1	G	W	22.9	44.75	2.83	0.671	0.52	0.12	3.07	0.38	0.063	0.063	0.027	0.024	1.26	13.69	0.18	15.13	5212	1.9278	6.62796	-4.70016	NAF
NS0030	120	122	NS	E391914	391914	1	G	W	34.14	39.8	1.35	0.516	0.4	0.058	2.05	0.33	0.061	0.033	0.3	0.008	0.37	6.52	-0.43	6.46	5146	1.0098	5.75586	-4.74606	NAF
NS0030	88	90	NS	E391897	391897	1	G	W	34.45	39.52	1.31	0.646	0.5	0.058	2.1	0.33	0.078	0.03	0.061	0.003	0.52	6.34	-0.38	6.48	5130	0.918	5.75586	-4.83786	NAF
NS0030	90	92	NS	E391898	391898	1	G	W	36.51	37.69	1.12	0.568	0.44	0.05	1.96	0.34	0.086	0.027	0.005	0.002	0.4	5.6	-0.45	5.55	5131	0.8262	5.93028	-5.10408	NAF
NS0030	196	198	NS	E391952	391952	1	G	W	33.16	38.42	1.84	0.62	0.48	0.097	1.76	0.47	0.076	0.1	0.307	0.03	0.62	8.09	-0.07	8.64	5184	3.06	8.19774	-5.13774	NAF
NS0030	116	118	NS	E391912	391912	1	G	W	33.44	32.7	1.05	1.02	0.79	0.046	2.68	0.36	0.064	0.035	0.192	0.015	0.86	12.99	-0.22	13.63	5144	1.071	6.27912	-5.20812	NAF
NS0030	92	94	NS	E391899	391899	1	G	W	33.75	40.47	1.1	0.646	0.5	0.049	2.07	0.35	0.084	0.028	0.042	0.003	0.47	6.46	-0.36	6.57	5132	0.8568	6.1047	-5.2479	NAF
NS0030	226	228	NS	E391967	391967	1	G	W	38.87	36.18	1.55	0.452	0.35	0.087	1.51	0.38	0.053	0.044	0.007	0.011	0.27	3.98	-0.42	3.83	5199	1.3464	6.62796	-5.28156	NAF
NS0030	112	114	NS	E391910	391910	1	G	W	32.28	35.92	0.92	1.046	0.81	0.043	2.48	0.35	0.069	0.026	0.231	0.017	0.97	11.82	-0.17	12.62	5142	0.7956	6.1047	-5.3091	NAF
NS0030	218	220	NS	E391963	391963	1	G	W	31.32	43.3	2.09	0.516	0.4	0.107	2.03	0.48	0.097	0.1	0.122	0.014	0.35	5.78	-0.12	6.01	5195	3.06	8.37216	-5.31216	NAF
NS0030	110	112	NS	E391909	391909	1	G	W	34.26	37.13	1.17	0.736	0.57	0.049	2.25	0.36	0.08	0.03	0.186	0.011	0.59	8.67	-0.38	8.88	5141	0.918	6.27912	-5.36112	NAF
NS0030	164	166	NS	E391936	391936	1	G	W	29.21	32.88	1.47	0.607	0.47	0.065	1.98	0.44	0.036	0.075	0.501	0.022	1.47	18.26	0.15	19.88	5168	2.295	7.67448	-5.37948	NAF
NS0030	156	158	NS	E391932	391932	1	G	W	25.05	41.01	1.95	0.607	0.47	0.084	2.37	0.44	0.055	0.072	0.11	0.011	1.27	15.73	0.13	17.13	5164	2.2032	7.67448	-5.47128	NAF
NS0030	130	132	NS	E391919	391919	1	G	W	35.18	37.91	1.72	0.542	0.42	0.07	1.71	0.37	0.085	0.029	0.162	0.012	0.7	6.39	-0.31	6.78	5151	0.8874	6.45354	-5.56614	NAF
NS0030	186	188	NS	E391947	391947	1	G	W	31.11	35.08	2.03	0.646	0.5	0.093	2.36	0.62	0.102	0.17	0.292	0.031	1.02	12.5	0.37	13.89	5179	5.202	10.81404	-5.61204	NAF
NS0030	128	130	NS	E391918	391918	1	G	W	34.65	39.07	1.34	0.594	0.46	0.06	1.78	0.38	0.08	0.03	0.234	0.005	0.73	6.44	-0.45	6.72	5150	0.918	6.62796	-5.70996	NAF
NS0030	198	200	NS	E391953	391953	1	G	W	35.59	38.36	1.54	0.594	0.46	0.073	1.55	0.41	0.071	0.047	0.174	0.028	0.48	6.02	-0.39	6.11	5185	1.4382	7.15122	-5.71302	NAF
NS0030	142	144	NS	E391925	391925	1	G	W	29.62	36.6	2.64	0.503	0.39	0.115	2.97	0.58	0.06	0.138	0.011	0.013	0.89	12.76	0.19	13.84	5157	4.2228	10.11636	-5.89356	NAF
NS0030	206	208	NS	E391957	391957	1	G	W	37.02	37.94	1.41	0.581	0.45	0.07	1.39	0.39	0.059	0.021	0.509	0.05	0.2	4.5	-0.28	4.42	5189	0.6426	6.80238	-6.15978	NAF
NS0030	114	116	NS	E391911	391911	1	G	W	35.01	29.87	1.13	0.994	0.77	0.047	2.68	0.42	0.079	0.035	0.413	0.019	1.81	12.62	-0.35	14.08	5143	1.071	7.32564	-6.25464	NAF
NS0030	204	206	NS	E391956	391956	1	G	W	36.55	36.85	1.29	0.684	0.53	0.068	1.56	0.41	0.053	0.027	0.352	0.045	0.4	6.15	-0.28	6.27	5188	0.8262	7.15122	-6.32502	NAF
NS0030	202	204	NS	E391955	391955	1	G	W	35.04	37.97	1.34	0.749	0.58	0.063	1.49	0.42	0.084	0.03	0.289	0.054	0.6	6.95	-0.31	7.24	5187	0.918	7.32564	-6.40764	NAF
NS0030	192	194	NS	E391950	391950	1	G	W	28.76	35.86	1.57	0.62	0.48	0.089	2.2	0.5	0.1	0.074	0.083	0.023	2.15	15.21	0.15	17.51	5182	2.2644	8.721	-6.4566	NAF
NS0030	166	168	NS	E391937	391937	1	G	W	27.16	36.25	1.19	0.387	0.3	0.049	2.47	0.48	0.055	0.061	0.249	0.02	1.36	18.15	0.12	19.63	5169	1.8666	8.37216	-6.50556	NAF
NS0030	242	244	NS	E391975	391975	1	G	W	36.25	37.72	1.76	0.555	0.43	0.088	1.75	0.49	0.089	0.065	0.28	0.018	0.42	4.87	-0.26	5.03	5207	1.989	8.54658	-6.55758	NAF
NS0030	190	192	NS	E391949	391949	1	G	W	32.74	30.45	1.35	0.71	0.55	0.06	2.29	0.41	0.04	0.016	0.274	0.031	1.6	15.86	-0.01	17.45	5181	0.4896	7.15122	-6.66162	NAF
NS0030	210	212	NS	E391959	391959	1	G	W	35.9	38.74	1.28	0.658	0.51	0.066	1.43	0.44	0.086	0.031	0.539	0.037	0.34	5.14	-0.24	5.24	5191	0.9486	7.67448	-6.72588	NAF
NS0030	270	272	NS	E391989	391989	1	G	W	22.46	46.89	1.48	0.271	0.21	0.061	2.55	0.44	0.042	0.031	0.016	0.021	1.76	14.04	0.01	15.81	5221	0.9486	7.67448	-6.72588	NAF
NS0030	250	252	NS	E391979	391979	1	G	W	22.58	42.92	5.17	0.478	0.37	0.24	3.94	0.67	0.159	0.161	0.044	0.032	0.9	12.38	0.4	13.68	5211	4.9266	11.68614	-6.75954	NAF
NS0030	174	176	NS	E391941	391941	1	G	W	23.1	46.13	1.71	0.465	0.36	0.075	2.17	0.5	0.058	0.06	0.132	0.017	1.17	14.09	0.14	15.4	5173	1.836	8.721	-6.885	NAF
NS0030	208	210	NS	E391958	391958	1	G	W	37.02	38.21	1.27	0.594	0.46	0.066	1.3	0.44	0.073	0.023	0.486	0.053	0.09	4.35	-0.2	4.24	5190	0.7038	7.67448	-6.97068	NAF
NS0030	158	160	NS	E391933	391933	1	G	W	27.82	36.27	2	0.491	0.38	0.086	1.89	0.52	0.031	0.065	0.315	0.018	1.49	16.63	0.13	18.25	5165	1.989	9.06984	-7.08084	NAF
NS0030	150	152	NS	E391929	391929	1	G	W	26.72	36.84	3.68	0.529	0.41	0.167	2.61	0.64	0.126	0.13	0.185	0.017	1.09	15.18	0.28	16.55	5161	3.978	11.16288	-7.18488	NAF
NS0030	188	190	NS	E391948	391948	1	G	W	32.88	36.68	1.43	0.594	0.46	0.069	1.92	0.51	0.085	0.048	0.174	0.024	1.03	10.26	-0.15	11.14	5180	1.4688	8.89542	-7.42662	NAF
NS0030	122	124	NS	E391915	391915	1	G	W	35.18	37.21	1.15	0.736	0.57	0.051	2.02	0.49	0.128	0.036	0.181	0.009	0.64	7.02	-0.36	7.3	5147	1.1016	8.54658	-7.44498	NAF
NS0030	136	138	NS	E391922	391922	1	G	W	34.54	39.73	1.33	0.555	0.43	0.058	1.55	0.48	0.085	0.026	0.244	0.003	0.62	6.26	-0.44	6.44	5154	0.7956	8.37216	-7.57656	NAF
NS0030	168	170	NS	E391938	391938	1	G	W	27.08	37.5	0.93	0.426	0.33	0.041	2.3	0.52	0.055	0.022	0.138	0.02	1.21	18.02	0.02	19.25	5170	0.6732	9.06984	-8.39664	NAF
NS0030	160	162	NS	E391934	391934	1	G	W	30.77	32.93	1.73	0.529	0.41	0.074	1.84	0.58	0.074	0.05	0.983	0.016	1.21	15.75	0.01	16.97	5166	1.53	10.11636	-8.58636	NAF
NS0030	258	260	NS	E391983	391983	1	G	W	18.69	55.54	1.18	0.491	0.38	0.051	2.01	0.62	0.134	0.059	0.011	0.021	1.14	11.53	0.15	12.82	5215	1.8054	10.81404	-9.00864	NAF
NS0030	170	172	NS	E391939	391939	1	G	W	27.36	34.97	2.2	0.555	0.43	0.104	2.85	0.65	0.091	0.057	0.206	0.021	1.48	17.46	0.07	19.01	5171	1.7442	11.3373	-9.5931	NAF
NS0030	212	214	NS	E391960	391960	1	G	W	37.06	36.01	1.22	0.594	0.46	0.057	1.52	0.6	0.077	0.028	0.495	0.031	0.47	5.85	-0.16	6.16	5192	0.8568	10.4652	-9.6084	NAF
NS0030	214	216	NS	E391961	391961	1	G	W	36.49	38.81	1.15	0.555	0.43	0.057	1.34	0.6	0.071	0.025	0.406	0.01	0.25	4.61	-0.31	4.55	5193	0.765	10.4652	-9.7002	NAF
NS0030	184	186	NS	E391946	391946	1	G	W	31.2	34.51	1.23	0.736	0.57	0.054	2.44	0.59	0.083	0.014	0.313	0.031	1	14.18	-0.02	15.16	5178	0.4284	10.29078	-9.86238	NAF
NS0030	140	142	NS	E391924	391924	1	G	W	31.55	38.07	2.85	0.452	0.35	0.125	2.83	0.76	0.074	0.107	0.022	0.015	0.58	8.82	0.05	9.45	5156	3.2742	13.25592	-9.98172	NAF
NS0030	200	202	NS	E391954	391954	1	G	W	34.87	39.58	1.19	0.684	0.53	0.056	1.36	0.67	0.114	0.027	0.228	0.033	0.33	5.86	-0.33	5.86	5186	0.8262	11.68614	-10.85994	NAF
NS0030	176	178	NS	E391942	391942	1	G	W	29.92	31.88	1.05	0.633	0.49	0.044	2.72	0.67	0.03	0.015	0.275	0.019	0.99	18.38	0.23	19.6	5174	0.459	11.68614	-11.22714	NAF
NS0030	180	182	NS	E391944	391944	1	G	W	31.49	31.49	1.1	0.646	0.5	0.05	2.86	0.68	0.043	0.018	0.217	0.022	0.98	16.43	0.14	17.55	5176	0.5508	11.86056	-11.30976	NAF
NS0030	178	180	NS	E391943	391943	1	G	W	30.73	31.18	1.01	0.594	0.46	0.043	3.04	0.67	0.03	0.008	0.168	0.021	0.96	17.91	0.17	19.04	5175	0.2448	11.68614	-11.44134	NAF
NS0030	216	218	NS	E391962	391962	1	G	W	33.46	40.36	1.55	0.62	0.48	0.07	1.77	0.73	0.114	0.042	0.273	0.019	0.5	6	-0.24	6.26	5194	1.2852	12.73266	-11.44746	NAF
NS0030	244	246	NS	E391976	391976	1	G	W	34.93	39.55	1.66	0.465	0.36	0.084	1.76	0.73	0.067	0.042	0.226	0.021	0.44	4.97	-0.14	5.27	5208	1.2852	12.73266	-11.44746	NAF
NS0030	182	184	NS	E391945	391945	1	G	W	31.48	32.24	0.99	0.775	0.6	0.041	2.73	0.69	0.061	0.01	0.199	0.028	1.1	15.88	0.07	17.05	5177	0.306	12.03498	-11.72898	NAF
NS0030	264	266	NS	E391986	391986	1	G	W	24.61	53.03	1.02	0.284	0.22	0.046	1.31	0.82	0.051	0.063	0.199	0.023	0.72	6.95	0.06	7.73	5218	1.9278	14.30244	-12.37464	NAF
NS0030	152	154	NS	E391930	391930	1	G	W	27.04	34.83	3.18	0.684	0.53	0.139	2.66	0.91	0.194	0.069	0.263	0.02	1.29	16.39	0.21	17.89	5162	2.1114	15.87222	-13.76082	NAF
NS0030	246	248	NS	E391977	391977	1	G	W	29.24	38.37	2.12	0.529	0.41	0.098	2.77	0.98	0.094	0.083	0.257	0.017	0.83	11.78	0.18	12.79	5209	2.5398	17.09316	-14.55336	NAF
NS0030	262	264	NS	E391985	391985	1	G	W	22.54	51.6	1.36	0.336	0.26	0.06	1.45	1.02	0.124	0.068	0.159	0.019	1.26	10.01	0.11	11.38	5217	2.0808	17.79084	-15.71004	NAF
NS0031	104	106	NS	E392048	392048	1	G	D	24.66	42.52	4.32	0.62	0.48	0.202	3.02	0.92	0.209	1.48	2.01	0.048	0.38	7.52	2.62	10.52	5279	45.288	16.04664	29.24136	PAF(HC)
NS0031	84	86	NS	E392038	392038	1	G	D	23.2	45.05	6.04	0.374	0.29	0.305	3.42	0.38	0.091	0.643	2.35	0.056	0.53	6.76	1.2	8.49	5269	19.6758	6.62796	13.04784	PAF(HC)
NS0031	274	276	NS	E392134	392134	1	G	D	25.78	41.07	1.58	0.775	0.6	0.075	3.18	0.34	0.028	0.513	0.203	0.044	0.85	13.25	1.19	15.29	5364	15.6978	5.93028	9.76752	PAF(LC)
NS0031	86	88	NS	E392039	392039	1	G	D	28.5	44.53	4.41	0.245	0.19	0.208	1.73	0.1	0.116	0.314	0.774	0.018	1.93	3.68	0.8	6.41	5270	9.6084	1.7442	7.8642	PAF(LC)
NS0031	100	102	NS	E392046	392046	1	G	D	27.65	43.01	3.58	0.478	0.37	0.17	2.54	0.21	0.041	0.302	0.979	0.021	1.1	6.72	0.65	8.47	5277	9.2412	3.66282	5.57838	PAF(LC)
NS0031	280	282	NS	E392137	392137	1	G	D	25.53	43.37	1.75	0.671	0.52	0.082	3.02	0.37	0.043	0.334	0.178	0.032	0.71	12.24	0.75	13.7	5367	10.2204	6.45354	3.76686	PAF(LC)
NS0031	88	90	NS	E392040	392040	1	G	D	32.47	38.97	5.31	1.046	0.81	0.248	0.82	0.07	0.158	0.124	0.779	0.034	3.24	1.53	0.58	5.35	5271	3.7944	1.22094	2.57346	PAF(LC)
NS0031	136	138	NS	E392064	392064	1	G	D	30.22	39.81	3.85	0.387	0.3	0.18	2.47	0.19	0.024	0.184	1.24	0.018	0.57	7.16	0.15	7.88	5295	5.6304	3.31398	2.31642	PAF(LC)
NS0031	276	278	NS	E392135	392135	1	G	D	27.44	39.62	2.07	0.723	0.56	0.095	3.14	0.47	0.075	0.311	0.158	0.056	0.8	12.54	0.67	14.01	5365	9.5166	8.19774	1.31886	PAF(LC)
NS0031	142	144	NS	E392067	392067	1	G	D	25.71	42.4	3.06	0.581	0.45	0.141	2.62	0.31	0.055	0.21	0.772	0.032	1.58	10.75	0.46	12.79	5298	6.426	5.40702	1.01898	PAF(LC)
NS0031	268	270	NS	E392131	392131	1	G	D	26.99	37.88	3.07	0.62	0.48	0.138	3.62	0.44	0.064	0.281	0.311	0.074	0.9	13.19	0.65	14.74	5361	8.5986	7.67448	0.92412	PAF(LC)
NS0031	144	146	NS	E392068	392068	1	G	D	29.07	47.16	3.47	0.284	0.22	0.158	1.12	0.11	0.056	0.076	0.173	0.036	2.63	2.33	0.3	5.26	5299	2.3256	1.91862	0.40698	PAF(LC)
NS0031	80	82	NS	E392036	392036	1	G	D	33.15	45.5	3.18	0.155	0.12	0.142	0.51	0.04	0.055	0.036	0.264	0.03	1.21	0.94	0.23	2.38	5267	1.1016	0.69768	0.40392	PAF(LC)
NS0031	18	20	NS	E392005	392005	1	G	D	36.04	43.23	2.39	0.103	0.08	0.107	0.09	0.005	0.011	0.008	0.003	0.003	1.39	0.86	0.18	2.43	5236	0.2448	0.08721	0.15759	PAF(LC)
NS0031	20	22	NS	E392006	392006	1	G	D	34.72	44.82	3	0.052	0.04	0.119	0.04	0.005	0.008	0.008	0.004	0.009	1.17	0.86	0.11	2.14	5237	0.2448	0.08721	0.15759	PAF(LC)
NS0031	22	24	NS	E392007	392007	1	G	D	34.42	44.67	3.08	0.077	0.06	0.109	0.07	0.01	0.011	0.008	0.006	0.005	1.52	0.99	0.17	2.68	5238	0.2448	0.17442	0.07038	PAF(LC)
NS0031	30	32	NS	E392011	392011	1	G	D	31.64	50.38	2.18	0.168	0.13	0.077	0.05	0.01	0.01	0.008	0.008	0.017	1.01	0.67	0	1.68	5242	0.2448	0.17442	0.07038	PAF(LC)
NS0031	24	26	NS	E392008	392008	1	G	D	36.57	42.86	2.6	0.026	0.02	0.114	0.04	0.005	0.014	0.005	0.006	0.014	0.93	0.84	0.15	1.92	5239	0.153	0.08721	0.06579	PAF(LC)
NS0031	148	150	NS	E392070	392070	1	G	D	22.78	43	6.02	0.71	0.55	0.267	2.73	0.67	0.041	0.384	1.19	0.042	1.35	9.89	0.92	12.16	5301	11.7504	11.68614	0.06426	PAF(LC)
NS0031	14	16	NS	E392003	392003	1	G	D	29.11	52.78	3.31	-0.0129	-0.01	0.124	0.05	0.01	0.01	0.007	0.006	0.015	0.72	1.02	0.1	1.84	5234	0.2142	0.17442	0.03978	PAF(LC)
NS0031	28	30	NS	E392010	392010	1	G	D	38.81	40.32	2.3	0.155	0.12	0.096	0.04	0.01	0.012	0.007	0.008	0.004	0.8	0.77	0.01	1.58	5241	0.2142	0.17442	0.03978	PAF(LC)
NS0031	36	38	NS	E392014	392014	1	G	D	34.89	44.31	2.65	0.284	0.22	0.113	0.11	0.01	0.013	0.007	0.02	0.018	1.56	0.94	-0.03	2.47	5245	0.2142	0.17442	0.03978	PAF(LC)
NS0031	32	34	NS	E392012	392012	1	G	D	32.13	49.23	2.12	0.168	0.13	0.079	0.08	0.02	0.011	0.012	0.009	0.019	1.47	0.69	0.04	2.2	5243	0.3672	0.34884	0.01836	PAF(LC)
NS0031	16	18	NS	E392004	392004	1	G	D	32	49.35	2.77	-0.0129	-0.01	0.113	0.03	0.01	0.01	0.006	0.005	0.007	0.84	0.8	0.08	1.72	5235	0.1836	0.17442	0.00918	PAF(LC)
NS0031	26	28	NS	E392009	392009	1	G	D	36.17	44.16	2.09	0.026	0.02	0.088	0.04	0.01	0.009	0.006	0.006	0.025	0.78	0.73	0.15	1.66	5240	0.1836	0.17442	0.00918	PAF(LC)
NS0031	12	14	NS	E392002	392002	1	G	D	27.97	52.97	4.11	-0.0129	-0.01	0.169	0.06	0.02	0.008	0.01	0.003	0.019	1.03	1.25	0.12	2.4	5233	0.306	0.34884	-0.04284	NAF
NS0031	34	36	NS	E392013	392013	1	G	D	34.65	45.14	2.64	0.194	0.15	0.11	0.09	0.02	0.012	0.009	0.008	0.017	1.22	0.82	-0.01	2.03	5244	0.2754	0.34884	-0.07344	NAF
NS0031	76	78	NS	E392034	392034	1	G	D	32.65	47.05	3.23	0.077	0.06	0.193	0.13	0.02	0.101	0.009	0.055	0.011	0.92	1.06	0.2	2.18	5265	0.2754	0.34884	-0.07344	NAF
NS0031	10	12	NS	E392000	392000	1	G	D	26.5	55.73	3.78	0.026	0.02	0.144	0.07	0.02	0.007	0.008	0.005	0.026	0.64	1.24	0.12	2	5232	0.2448	0.34884	-0.10404	NAF
NS0031	8	10	NS	E391999	391999	1	G	D	22.67	58.08	5.79	0.026	0.02	0.147	0.13	0.04	0.008	0.014	0.008	0.024	0.64	2.18	0.18	3	5231	0.4284	0.69768	-0.26928	NAF
NS0031	78	80	NS	E392035	392035	1	G	D	31.96	47.96	2.94	0.31	0.24	0.148	0.23	0.03	0.06	0.006	0.237	0.023	1	0.94	0.2	2.14	5266	0.1836	0.52326	-0.33966	NAF
NS0031	74	76	NS	E392033	392033	1	G	D	35.51	42.41	2.54	0.658	0.51	0.123	0.43	0.03	0.019	0.004	0.391	0.019	1.32	0.78	0.22	2.32	5264	0.1224	0.52326	-0.40086	NAF
NS0031	90	92	NS	E392041	392041	1	G	D	29.7	42.86	2.99	0.426	0.33	0.142	2.31	0.23	0.051	0.118	0.725	0.021	0.7	6.41	0.03	7.14	5272	3.6108	4.01166	-0.40086	NAF
NS0031	68	70	NS	E392030	392030	1	G	D	33.14	43.53	4.97	0.026	0.02	0.285	0.1	0.04	0.087	0.008	0.118	0.027	1.15	1.6	0.25	3	5261	0.2448	0.69768	-0.45288	NAF
NS0031	6	8	NS	E391998	391998	1	G	D	23.26	60.34	3.91	-0.0129	-0.01	0.105	0.08	0.04	0.004	0.007	0.011	0.017	0.49	1.35	0.12	1.96	5230	0.2142	0.69768	-0.48348	NAF
NS0031	72	74	NS	E392032	392032	1	G	D	35.54	42.19	2.88	0.103	0.08	0.136	0.41	0.04	0.093	0.007	0.483	0.034	1.25	0.88	0.19	2.32	5263	0.2142	0.69768	-0.48348	NAF
NS0031	38	40	NS	E392015	392015	1	G	D	32.47	45.68	3.04	0.555	0.43	0.136	0.26	0.04	0.025	0.006	0.127	0.02	2.3	1.09	0.1	3.49	5246	0.1836	0.69768	-0.51408	NAF
NS0031	52	54	NS	E392022	392022	1	G	D	30.82	51.18	2.03	0.181	0.14	0.091	0.42	0.04	0.014	0.004	0.435	0.023	0.93	0.55	0.03	1.51	5253	0.1224	0.69768	-0.57528	NAF
NS0031	4	6	NS	E391997	391997	1	G	D	23.26	57.56	6.08	-0.0129	-0.01	0.137	0.05	0.05	0.004	0.008	0.02	0.031	0.73	1.89	0.14	2.76	5229	0.2448	0.8721	-0.6273	NAF
NS0031	70	72	NS	E392031	392031	1	G	D	31.15	47.92	3.48	0.155	0.12	0.171	0.32	0.05	0.107	0.007	0.398	0.024	1.34	1.07	0.18	2.59	5262	0.2142	0.8721	-0.6579	NAF
NS0031	66	68	NS	E392029	392029	1	G	D	33.71	42.72	4.14	0.31	0.24	0.191	0.65	0.05	0.024	0.006	1.01	0.039	1.34	1.03	0.2	2.57	5260	0.1836	0.8721	-0.6885	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0031	272	274	NS	E392133	392133	1	G	D	22.66	44.22	6.13	0.426	0.33	0.27	4.5	0.64	0.164	0.342	0.183	0.058	0.55	9.16	0.74	10.45	5363	10.4652	11.16288	-0.69768	NAF
NS0031	60	62	NS	E392026	392026	1	G	D	26.2	58.51	1.62	0.168	0.13	0.074	0.31	0.05	0.012	0.005	0.196	0.026	0.9	0.51	0.03	1.44	5257	0.153	0.8721	-0.7191	NAF
NS0031	64	66	NS	E392028	392028	1	G	D	26.31	57.8	1.86	0.245	0.19	0.087	0.38	0.05	0.013	0.005	0.187	0.016	0.88	0.58	0.06	1.52	5259	0.153	0.8721	-0.7191	NAF
NS0031	42	44	NS	E392017	392017	1	G	D	31.05	48.96	1.83	0.568	0.44	0.088	0.31	0.05	0.046	0.004	0.36	0.026	2.46	0.58	0.05	3.09	5248	0.1224	0.8721	-0.7497	NAF
NS0031	56	58	NS	E392024	392024	1	G	D	23.75	62.34	1.43	0.155	0.12	0.07	0.22	0.05	0.012	0.004	0.131	0.014	0.83	0.47	0.05	1.35	5255	0.1224	0.8721	-0.7497	NAF
NS0031	44	46	NS	E392018	392018	1	G	D	32.9	45.83	2.74	0.374	0.29	0.124	0.43	0.05	0.025	0.003	0.265	0.015	1.85	0.97	0.08	2.9	5249	0.0918	0.8721	-0.7803	NAF
NS0031	58	60	NS	E392025	392025	1	G	D	25.56	59.82	1.27	0.219	0.17	0.056	0.29	0.05	0.013	0.003	0.182	0.005	0.83	0.39	0	1.22	5256	0.0918	0.8721	-0.7803	NAF
NS0031	48	50	NS	E392020	392020	1	G	D	28.94	51.94	2.77	0.271	0.21	0.126	0.58	0.06	0.013	0.007	0.336	0.013	1.37	0.8	0.07	2.24	5251	0.2142	1.04652	-0.83232	NAF
NS0031	50	52	NS	E392021	392021	1	G	D	27.07	56.39	1.85	0.349	0.27	0.081	0.43	0.06	0.013	0.006	0.322	0.029	1.09	0.52	0.01	1.62	5252	0.1836	1.04652	-0.86292	NAF
NS0031	62	64	NS	E392027	392027	1	G	D	31.35	50.28	1.8	0.413	0.32	0.081	0.51	0.06	0.016	0.006	0.219	0.016	1.02	0.59	0.07	1.68	5258	0.1836	1.04652	-0.86292	NAF
NS0031	146	148	NS	E392069	392069	1	G	D	24.81	43.19	5.42	0.516	0.4	0.239	2	0.23	0.063	0.102	0.685	0.031	2.42	8.84	0.32	11.58	5300	3.1212	4.01166	-0.89046	NAF
NS0031	46	48	NS	E392019	392019	1	G	D	28.65	51.58	3.06	0.374	0.29	0.137	0.61	0.06	0.016	0.003	0.336	0.023	1.48	1.01	0.13	2.62	5250	0.0918	1.04652	-0.95472	NAF
NS0031	54	56	NS	E392023	392023	1	G	D	25.48	59.45	1.64	0.219	0.17	0.074	0.43	0.06	0.009	0.003	0.334	0.034	0.77	0.46	-0.01	1.22	5254	0.0918	1.04652	-0.95472	NAF
NS0031	40	42	NS	E392016	392016	1	G	D	34.93	41.73	2.4	0.633	0.49	0.124	0.39	0.07	0.066	0.003	0.356	0.009	2.98	0.77	0.12	3.87	5247	0.0918	1.22094	-1.12914	NAF
NS0031	138	140	NS	E392065	392065	1	G	D	28.94	44.62	2.72	0.4	0.31	0.126	2	0.22	0.046	0.067	0.552	0.012	1.01	6.56	0.04	7.61	5296	2.0502	3.83724	-1.78704	NAF
NS0031	130	132	NS	E392061	392061	1	G	D	27.13	45.86	2.9	0.413	0.32	0.14	2.44	0.29	0.031	0.096	0.544	0.0005	0.71	7.44	0.05	8.2	5292	2.9376	5.05818	-2.12058	NAF
NS0031	110	112	NS	E392051	392051	1	G	D	26.48	49.81	3.83	0.245	0.19	0.179	1.56	0.2	0.077	0.043	0.899	0.007	1.57	3.43	0.14	5.14	5282	1.3158	3.4884	-2.1726	NAF
NS0031	118	120	NS	E392055	392055	1	G	D	31.16	41.32	2.59	0.452	0.35	0.12	2.31	0.28	0.013	0.078	0.789	0.025	0.38	7.27	-0.2	7.45	5286	2.3868	4.88376	-2.49696	NAF
NS0031	112	114	NS	E392052	392052	1	G	D	29.12	46.52	2.75	0.31	0.24	0.129	1.82	0.29	0.025	0.071	0.685	0.026	0.68	4.66	0.02	5.36	5283	2.1726	5.05818	-2.88558	NAF
NS0031	124	126	NS	E392058	392058	1	G	D	26.36	49.42	3.52	0.258	0.2	0.161	2.23	0.35	0.025	0.104	1.04	0.04	0.45	4.57	0.06	5.08	5289	3.1824	6.1047	-2.9223	NAF
NS0031	154	156	NS	E392073	392073	1	G	D	28.96	36.55	2.13	0.555	0.43	0.106	2.84	0.4	0.026	0.115	0.342	0.012	1.16	13.74	0.14	15.04	5304	3.519	6.9768	-3.4578	NAF
NS0031	82	84	NS	E392037	392037	1	G	D	26.59	47.69	2.96	0.374	0.29	0.139	2.29	0.44	0.117	0.136	0.425	0.038	0.91	5.86	0.27	7.04	5268	4.1616	7.67448	-3.51288	NAF
NS0031	92	94	NS	E392042	392042	1	G	D	25.39	51.61	1.93	0.4	0.31	0.091	1.94	0.29	0.041	0.05	0.366	0.026	0.18	6.71	-0.27	6.62	5273	1.53	5.05818	-3.52818	NAF
NS0031	140	142	NS	E392066	392066	1	G	D	28.42	41.13	2.53	0.529	0.41	0.119	2.64	0.42	0.078	0.122	0.615	0.019	0.8	9.88	0.07	10.75	5297	3.7332	7.32564	-3.59244	NAF
NS0031	98	100	NS	E392045	392045	1	G	D	28.14	42.95	3.39	0.452	0.35	0.156	2.73	0.56	0.148	0.19	0.966	0.008	0.47	7.24	0.22	7.93	5276	5.814	9.76752	-3.95352	NAF
NS0031	266	268	NS	E392130	392130	1	G	D	29.24	34.94	2.75	0.646	0.5	0.116	3.37	0.48	0.087	0.123	0.598	0.082	0.89	13.77	0.24	14.9	5360	3.7638	8.37216	-4.60836	NAF
NS0031	278	280	NS	E392136	392136	1	G	D	28.29	35.42	1.78	0.775	0.6	0.078	3.41	0.69	0.128	0.242	0.252	0.051	1.19	14.61	0.57	16.37	5366	7.4052	12.03498	-4.62978	NAF
NS0031	96	98	NS	E392044	392044	1	G	D	26.39	48.36	2.86	0.374	0.29	0.132	2.22	0.48	0.106	0.114	0.707	0.04	0.6	5.81	0.08	6.49	5275	3.4884	8.37216	-4.88376	NAF
NS0031	128	130	NS	E392060	392060	1	G	D	27.69	44.5	2.99	0.426	0.33	0.138	2.49	0.45	0.069	0.094	0.586	0.031	0.49	7.88	-0.02	8.35	5291	2.8764	7.8489	-4.9725	NAF
NS0031	106	108	NS	E392049	392049	1	G	D	21.11	51.29	4.27	0.426	0.33	0.199	2.81	0.6	0.058	0.174	1.42	0.041	0.58	7.18	0.4	8.16	5280	5.3244	10.4652	-5.1408	NAF
NS0031	122	124	NS	E392057	392057	1	G	D	28.34	43.48	2.89	0.465	0.36	0.132	2.59	0.45	0.06	0.071	0.845	0.037	0.56	7.68	-0.09	8.15	5288	2.1726	7.8489	-5.6763	NAF
NS0031	116	118	NS	E392054	392054	1	G	D	27.39	45.04	3.29	0.465	0.36	0.154	2.5	0.49	0.113	0.091	0.993	0.012	0.61	6.89	0.02	7.52	5285	2.7846	8.54658	-5.76198	NAF
NS0031	114	116	NS	E392053	392053	1	G	D	26.99	47.17	2.93	0.413	0.32	0.136	2.22	0.55	0.091	0.102	0.829	0.037	0.58	5.93	0.02	6.53	5284	3.1212	9.5931	-6.4719	NAF
NS0031	132	134	NS	E392062	392062	1	G	D	27.33	45.75	2.86	0.387	0.3	0.134	2.4	0.56	0.036	0.106	0.675	0.033	0.71	6.91	0.05	7.67	5293	3.2436	9.76752	-6.52392	NAF
NS0031	94	96	NS	E392043	392043	1	G	D	28.32	44.38	3.05	0.413	0.32	0.145	2.38	0.62	0.164	0.129	0.758	0.037	0.64	6.23	0.09	6.96	5274	3.9474	10.81404	-6.86664	NAF
NS0031	134	136	NS	E392063	392063	1	G	D	27.26	45.22	2.97	0.374	0.29	0.141	2.36	0.66	0.08	0.116	0.877	0.02	0.63	6.96	0.05	7.64	5294	3.5496	11.51172	-7.96212	NAF
NS0031	260	262	NS	E392127	392127	1	G	D	26.53	41.61	1.54	0.555	0.43	0.067	2.73	0.48	0.053	0.006	0.428	0.076	0.86	13.31	-0.01	14.16	5357	0.1836	8.37216	-8.18856	NAF
NS0031	2	4	NS	E391996	391996	1	G	D	24.47	55.73	5.18	0.026	0.02	0.119	0.17	0.49	0.004	0.008	0.015	0.019	0.34	2.31	0.29	2.94	5228	0.2448	8.54658	-8.30178	NAF
NS0031	102	104	NS	E392047	392047	1	G	D	27.39	38.93	4.01	0.658	0.51	0.185	3.18	0.8	0.217	0.18	1.3	0.037	0.85	9.27	0.4	10.52	5278	5.508	13.9536	-8.4456	NAF
NS0031	264	266	NS	E392129	392129	1	G	D	28.18	40.71	0.91	0.581	0.45	0.039	2.45	0.51	0.073	0.013	0.267	0.046	0.67	13.1	-0.12	13.65	5359	0.3978	8.89542	-8.49762	NAF
NS0031	258	260	NS	E392126	392126	1	G	D	30.72	37.26	1.17	0.581	0.45	0.057	2.46	0.52	0.069	0.008	0.341	0.047	0.77	12.78	-0.15	13.4	5356	0.2448	9.06984	-8.82504	NAF
NS0031	108	110	NS	E392050	392050	1	G	D	26.77	45.42	4.11	0.374	0.29	0.197	2.68	0.75	0.019	0.133	1.12	0.03	0.39	6.29	0.22	6.9	5281	4.0698	13.0815	-9.0117	NAF
NS0031	126	128	NS	E392059	392059	1	G	D	28.67	44.34	2.89	0.387	0.3	0.135	2.31	0.68	0.095	0.092	0.811	0.024	0.44	6.38	-0.04	6.78	5290	2.8152	11.86056	-9.04536	NAF
NS0031	262	264	NS	E392128	392128	1	G	D	29.04	38.35	0.81	0.633	0.49	0.036	2.5	0.57	0.071	0.009	0.329	0.02	0.79	13.96	-0.08	14.67	5358	0.2754	9.94194	-9.66654	NAF
NS0031	246	248	NS	E392120	392120	1	G	D	31.89	40.55	0.83	0.542	0.42	0.039	1.66	0.58	0.061	0.009	0.5	0.013	0.48	9.02	-0.09	9.41	5350	0.2754	10.11636	-9.84096	NAF
NS0031	238	240	NS	E392116	392116	1	G	D	31.13	33.23	1.4	0.594	0.46	0.062	2.97	0.63	0.072	0.006	0.625	0.054	0.77	14.97	-0.07	15.67	5346	0.1836	10.98846	-10.80486	NAF
NS0031	256	258	NS	E392125	392125	1	G	D	34.45	32.4	1.1	0.594	0.46	0.053	2.36	0.63	0.082	0.006	0.366	0.041	0.71	12.42	-0.21	12.92	5355	0.1836	10.98846	-10.80486	NAF
NS0031	254	256	NS	E392124	392124	1	G	D	29.35	36.91	1.78	0.491	0.38	0.087	2.88	0.63	0.092	0.005	0.586	0.066	0.72	13.41	-0.04	14.09	5354	0.153	10.98846	-10.83546	NAF
NS0031	270	272	NS	E392132	392132	1	G	D	23.52	39.31	7.54	0.413	0.32	0.321	4.89	1.21	0.347	0.331	0.19	0.04	0.6	9.95	0.8	11.35	5362	10.1286	21.10482	-10.97622	NAF
NS0031	0	2	NS	E391995	391995	1	G	D	23.11	57.57	5.01	-0.0129	-0.01	0.113	0.18	0.65	0.005	0.011	0.03	0.022	0.58	2.07	0.39	3.04	5227	0.3366	11.3373	-11.0007	NAF
NS0031	230	232	NS	E392112	392112	1	G	D	33.06	36.24	1.58	0.491	0.38	0.071	2.15	0.64	0.1	0.004	0.978	0.025	0.29	10.2	-0.28	10.21	5342	0.1224	11.16288	-11.04048	NAF
NS0031	222	224	NS	E392108	392108	1	G	D	30.53	37.02	1.92	0.516	0.4	0.083	2.56	0.65	0.064	0.009	0.882	0.044	0.62	11.66	-0.04	12.24	5338	0.2754	11.3373	-11.0619	NAF
NS0031	234	236	NS	E392114	392114	1	G	D	26.84	40.85	2.87	0.439	0.34	0.128	2.76	0.66	0.087	0.01	1.08	0.053	0.96	11.41	0.06	12.43	5344	0.306	11.51172	-11.20572	NAF
NS0031	244	246	NS	E392119	392119	1	G	D	29.98	42.08	0.85	0.555	0.43	0.039	1.87	0.68	0.055	0.008	0.478	0.016	0.46	9.94	-0.02	10.38	5349	0.2448	11.86056	-11.61576	NAF
NS0031	252	254	NS	E392123	392123	1	G	D	28.87	37.47	1.89	0.555	0.43	0.084	2.86	0.7	0.083	0.011	0.632	0.065	0.82	13.28	0.06	14.16	5353	0.3366	12.2094	-11.8728	NAF
NS0031	218	220	NS	E392106	392106	1	G	D	27.4	40.11	1.38	0.516	0.4	0.067	2.65	0.7	0.097	0.006	0.621	0.033	0.78	13.65	-0.01	14.42	5336	0.1836	12.2094	-12.0258	NAF
NS0031	216	218	NS	E392105	392105	1	G	D	29.63	35.39	1.75	0.542	0.42	0.082	2.95	0.71	0.103	0.008	0.656	0.047	0.97	14	-0.04	14.93	5335	0.2448	12.38382	-12.13902	NAF
NS0031	220	222	NS	E392107	392107	1	G	D	29.31	37.6	2.58	0.452	0.35	0.111	2.74	0.71	0.108	0.007	1.21	0.053	0.57	11.53	-0.06	12.04	5337	0.2142	12.38382	-12.16962	NAF
NS0031	242	244	NS	E392118	392118	1	G	D	29.88	39.3	0.97	0.581	0.45	0.043	2.21	0.75	0.059	0.006	0.537	0.039	0.61	11.9	0.07	12.58	5348	0.1836	13.0815	-12.8979	NAF
NS0031	152	154	NS	E392072	392072	1	G	D	22.65	45.49	3.67	0.426	0.33	0.166	3.02	1.03	0.031	0.152	0.818	0.045	1.02	10.95	0.64	12.61	5303	4.6512	17.96526	-13.31406	NAF
NS0031	160	162	NS	E392076	392076	1	G	D	28.37	36.09	2.04	0.516	0.4	0.096	2.58	0.83	0.116	0.031	0.979	0.023	1	14.76	0.06	15.82	5307	0.9486	14.47686	-13.52826	NAF
NS0031	192	194	NS	E392092	392092	1	G	D	31.81	34.19	1.9	0.478	0.37	0.085	2.53	0.8	0.084	0.008	0.969	0.035	0.68	12.3	-0.01	12.97	5323	0.2448	13.9536	-13.7088	NAF
NS0031	188	190	NS	E392090	392090	1	G	D	28.79	40.41	1.62	0.439	0.34	0.075	2.23	0.81	0.061	0.01	1.05	0.009	0.79	10.8	0.08	11.67	5321	0.306	14.12802	-13.82202	NAF
NS0031	190	192	NS	E392091	392091	1	G	D	28.03	40.84	1.5	0.516	0.4	0.074	2.32	0.81	0.074	0.009	0.693	0.011	0.78	12.01	0.07	12.86	5322	0.2754	14.12802	-13.85262	NAF
NS0031	168	170	NS	E392080	392080	1	G	D	28.69	37.27	2.34	0.581	0.45	0.108	2.41	0.85	0.089	0.018	1.26	0.021	1.1	12.44	0.08	13.62	5311	0.5508	14.8257	-14.2749	NAF
NS0031	150	152	NS	E392071	392071	1	G	D	23.31	45.49	4.1	0.723	0.56	0.18	2.76	1.03	0.097	0.119	0.909	0.058	1.16	9.21	0.53	10.9	5302	3.6414	17.96526	-14.32386	NAF
NS0031	156	158	NS	E392074	392074	1	G	D	26.58	37.75	2.83	0.684	0.53	0.135	2.97	1.13	0.247	0.165	0.649	0.032	1.07	13.41	0.34	14.82	5305	5.049	19.70946	-14.66046	NAF
NS0031	182	184	NS	E392087	392087	1	G	D	29.02	39.25	2.34	0.426	0.33	0.107	2.25	0.86	0.102	0.008	1.79	0.025	0.73	10.32	0.03	11.08	5318	0.2448	15.00012	-14.75532	NAF
NS0031	226	228	NS	E392110	392110	1	G	D	30.97	35.67	3.21	0.413	0.32	0.135	2.67	0.9	0.063	0.02	1.63	0.019	0.57	9.81	0.19	10.57	5340	0.612	15.6978	-15.0858	NAF
NS0031	236	238	NS	E392115	392115	1	G	D	25.6	44.29	0.92	0.503	0.39	0.04	2.4	0.89	0.079	0.005	0.476	0.043	0.63	12.43	0.29	13.35	5345	0.153	15.52338	-15.37038	NAF
NS0031	240	242	NS	E392117	392117	1	G	D	25.35	45	1.54	0.516	0.4	0.063	2.43	0.9	0.083	0.007	0.682	0.062	0.7	11.18	0.29	12.17	5347	0.2142	15.6978	-15.4836	NAF
NS0031	120	122	NS	E392056	392056	1	G	D	25.62	46.92	2.91	0.491	0.38	0.139	2.55	1.05	0.141	0.084	0.96	0.031	0.46	7.3	0.11	7.87	5287	2.5704	18.3141	-15.7437	NAF
NS0031	194	196	NS	E392093	392093	1	G	D	30.01	37.06	1.65	0.465	0.36	0.078	2.53	0.93	0.097	0.006	0.904	0.036	0.79	11.97	0.1	12.86	5324	0.1836	16.22106	-16.03746	NAF
NS0031	224	226	NS	E392109	392109	1	G	D	33.21	34.37	2.46	0.426	0.33	0.104	2.48	1.01	0.051	0.043	1.22	0.029	0.51	9.15	0.26	9.92	5339	1.3158	17.61642	-16.30062	NAF
NS0031	170	172	NS	E392081	392081	1	G	D	26.45	38.1	3.28	0.478	0.37	0.152	2.73	0.97	0.118	0.008	1.89	0.026	1.15	12.82	0.18	14.15	5312	0.2448	16.91874	-16.67394	NAF
NS0031	196	198	NS	E392094	392094	1	G	D	29.52	37.32	1.38	0.516	0.4	0.062	2.59	1	0.096	0.005	0.732	0.034	0.78	12.78	0.15	13.71	5325	0.153	17.442	-17.289	NAF
NS0031	158	160	NS	E392075	392075	1	G	D	28.8	35.14	2.05	0.555	0.43	0.099	2.75	1.25	0.264	0.138	0.697	0.035	1.3	13.93	0.18	15.41	5306	4.2228	21.8025	-17.5797	NAF
NS0031	232	234	NS	E392113	392113	1	G	D	28.64	39.49	2.19	0.491	0.38	0.09	2.52	1.05	0.128	0.009	1.09	0.063	1.09	10.43	0.15	11.67	5343	0.2754	18.3141	-18.0387	NAF
NS0031	210	212	NS	E392102	392102	1	G	D	29.86	36.87	1.24	0.581	0.45	0.057	2.64	1.09	0.094	0.008	0.494	0.045	0.68	12.77	0.31	13.76	5332	0.2448	19.01178	-18.76698	NAF
NS0031	186	188	NS	E392089	392089	1	G	D	28.89	39.31	2.02	0.426	0.33	0.092	2.32	1.12	0.063	0.009	1.53	0.037	0.46	10.59	0.46	11.51	5320	0.2754	19.53504	-19.25964	NAF
NS0031	248	250	NS	E392121	392121	1	G	D	31.33	37.85	1.26	0.529	0.41	0.057	2.32	1.12	0.055	0.007	0.506	0.047	0.48	10.39	0.46	11.33	5351	0.2142	19.53504	-19.32084	NAF
NS0031	212	214	NS	E392103	392103	1	G	D	28.72	39.5	1.4	0.516	0.4	0.058	2.42	1.12	0.115	0.005	0.785	0.04	0.37	11.95	0.33	12.65	5333	0.153	19.53504	-19.38204	NAF
NS0031	184	186	NS	E392088	392088	1	G	D	28.23	40.41	1.81	0.439	0.34	0.084	2.36	1.15	0.064	0.006	1.41	0.026	0.58	10.54	0.47	11.59	5319	0.1836	20.0583	-19.8747	NAF
NS0031	206	208	NS	E392099	392099	1	G	D	22.48	49.35	1.53	0.426	0.33	0.068	2.25	1.17	0.04	0.004	0.591	0.045	0.57	10.78	0.7	12.05	5330	0.1224	20.40714	-20.28474	NAF
NS0031	172	174	NS	E392082	392082	1	G	D	28.9	37.43	2.5	0.413	0.32	0.119	2.55	1.23	0.067	0.009	1.31	0.039	0.95	11.23	0.5	12.68	5313	0.2754	21.45366	-21.17826	NAF
NS0031	162	164	NS	E392077	392077	1	G	D	28.23	34.45	2.71	0.658	0.51	0.123	2.75	1.37	0.144	0.065	1.6	0.043	1.11	13.84	0.38	15.33	5308	1.989	23.89554	-21.90654	NAF
NS0031	250	252	NS	E392122	392122	1	G	D	30.26	34.68	2.55	0.529	0.41	0.108	2.99	1.27	0.11	0.007	0.786	0.081	0.71	11.9	0.53	13.14	5352	0.2142	22.15134	-21.93714	NAF
NS0031	164	166	NS	E392078	392078	1	G	D	27.78	37.33	2.19	0.503	0.39	0.099	2.5	1.5	0.188	0.091	1.14	0.03	1.02	12.94	0.32	14.28	5309	2.7846	26.163	-23.3784	NAF
NS0031	208	210	NS	E392100	392100	1	G	D	28.04	37.71	1.06	0.62	0.48	0.046	2.7	1.36	0.088	0.008	0.511	0.042	0.7	14.34	0.59	15.63	5331	0.2448	23.72112	-23.47632	NAF
NS0031	180	182	NS	E392086	392086	1	G	D	24.38	50.86	1.64	0.349	0.27	0.065	1.72	1.38	0.073	0.008	0.93	0.031	0.66	6.91	0.53	8.1	5317	0.2448	24.06996	-23.82516	NAF
NS0031	176	178	NS	E392084	392084	1	G	D	29.94	39.25	1.8	0.439	0.34	0.086	2.16	1.38	0.1	0.007	1.22	0.018	0.4	9.49	0.6	10.49	5315	0.2142	24.06996	-23.85576	NAF
NS0031	204	206	NS	E392098	392098	1	G	D	23.53	46.6	1.31	0.452	0.35	0.06	2.42	1.42	0.096	0.006	0.6	0.048	1.07	11.29	0.54	12.9	5329	0.1836	24.76764	-24.58404	NAF
NS0031	202	204	NS	E392097	392097	1	G	D	24.92	42.56	1.46	0.465	0.36	0.066	2.64	1.45	0.115	0.01	0.614	0.045	0.61	13.38	0.68	14.67	5328	0.306	25.2909	-24.9849	NAF
NS0031	166	168	NS	E392079	392079	1	G	D	23.93	42.13	2.47	0.491	0.38	0.115	2.48	1.51	0.23	0.015	1.28	0.05	0.73	13.19	0.44	14.36	5310	0.459	26.33742	-25.87842	NAF
NS0031	214	216	NS	E392104	392104	1	G	D	25.42	46.57	1.1	0.452	0.35	0.045	2.08	1.53	0.075	0.005	0.609	0.036	0.41	9.72	0.93	11.06	5334	0.153	26.68626	-26.53326	NAF
NS0031	198	200	NS	E392095	392095	1	G	D	28.32	34.49	1.9	0.503	0.39	0.085	3.12	1.57	0.08	0.007	0.814	0.05	0.8	14.93	0.76	16.49	5326	0.2142	27.38394	-27.16974	NAF
NS0031	174	176	NS	E392083	392083	1	G	D	27.15	40.95	2.23	0.439	0.34	0.106	2.32	1.63	0.09	0.011	1.32	0.03	0.69	10.05	0.91	11.65	5314	0.3366	28.43046	-28.09386	NAF
NS0031	228	230	NS	E392111	392111	1	G	D	28.14	36.65	3.79	0.387	0.3	0.162	3.05	1.97	0.227	0.151	1.83	0.061	0.51	9.76	0.79	11.06	5341	4.6206	34.36074	-29.74014	NAF
NS0031	178	180	NS	E392085	392085	1	G	D	30.2	37.23	2.25	0.426	0.33	0.104	2.32	1.76	0.105	0.009	1.62	0.022	0.53	9.3	0.93	10.76	5316	0.2754	30.69792	-30.42252	NAC
NS0031	200	202	NS	E392096	392096	1	G	D	25.77	36.99	2.72	0.452	0.35	0.12	3.22	2.28	0.228	0.023	1.09	0.073	0.85	13.56	1.16	15.57	5327	0.7038	39.76776	-39.06396	NAC
NS0034	124	126	NS	E392200	392200	1	G	D	22.88	48.95	5.11	0.207	0.16	0.214	5.17	0.24	0.012	0.399	0.952	0.279	1.12	3.69	0.97	5.78	5430	12.2094	4.18608	8.02332	PAF(LC)
NS0034	194	196	NS	E392236	392236	1	G	D	25.96	43.82	5.6	0.168	0.13	0.27	5.64	0.33	0.096	0.431	1.39	0.42	1.48	2.12	0.97	4.57	5465	13.1886	5.75586	7.43274	PAF(LC)
NS0034	196	198	NS	E392237	392237	1	G	D	25.91	46.47	2.91	0.426	0.33	0.13	4.01	0.51	0.143	0.363	0.899	0.277	1.16	4.68	0.84	6.68	5466	11.1078	8.89542	2.21238	PAF(LC)
NS0034	16	18	NS	E392146	392146	1	G	D	36.56	37.18	3.75	0.065	0.05	0.138	0.06	0.03	0.015	0.031	0.007	0.045	5.06	1	0.25	6.31	5376	0.9486	0.52326	0.42534	PAF(LC)
NS0034	10	12	NS	E392143	392143	1	G	D	35	42.04	3.07	0.116	0.09	0.131	0.07	0.02	0.01	0.019	0.011	0.044	2.95	1.01	0.16	4.12	5373	0.5814	0.34884	0.23256	PAF(LC)
NS0034	14	16	NS	E392145	392145	1	G	D	31.29	46.09	3.2	0.09	0.07	0.158	0.1	0.03	0.017	0.024	0.01	0.041	4.08	0.98	0.21	5.27	5375	0.7344	0.52326	0.21114	PAF(LC)
NS0034	18	20	NS	E392147	392147	1	G	D	38.52	35.06	3.57	0.155	0.12	0.14	0.08	0.03	0.015	0.022	0.009	0.044	4.29	1.15	0.25	5.69	5377	0.6732	0.52326	0.14994	PAF(LC)
NS0034	12	14	NS	E392144	392144	1	G	D	26.55	54.37	3.42	0.09	0.07	0.225	0.07	0.02	0.011	0.015	0.019	0.043	2.32	1.1	0.13	3.55	5374	0.459	0.34884	0.11016	PAF(LC)
NS0034	8	10	NS	E392142	392142	1	G	D	32.99	44.65	3.51	0.09	0.07	0.141	0.07	0.02	0.011	0.013	0.015	0.042	2.82	1.17	0.13	4.12	5372	0.3978	0.34884	0.04896	PAF(LC)
NS0034	6	8	NS	E392141	392141	1	G	D	27.19	51.54	4.41	0.026	0.02	0.161	0.06	0.02	0.016	0.012	0.018	0.031	3.23	1.25	0.16	4.64	5371	0.3672	0.34884	0.01836	PAF(LC)
NS0034	126	128	NS	E392202	392202	1	G	D	33.31	38.87	1.54	0.516	0.4	0.067	2.93	0.63	0.152	0.359	0.622	0.19	0.83	4.91	0.57	6.31	5431	10.9854	10.98846	-0.00306	NAF
NS0034	4	6	NS	E392140	392140	1	G	D	33.44	36.77	7.33	0.026	0.02	0.272	0.09	0.03	0.023	0.017	0.042	0.041	5.09	1.91	0.26	7.26	5370	0.5202	0.52326	-0.00306	NAF
NS0034	0	2	NS	E392138	392138	1	G	D	40.05	20.88	10.79	0.026	0.02	0.473	0.11	0.04	0.028	0.022	0.102	0.049	6.98	2.56	0.34	9.88	5368	0.6732	0.69768	-0.02448	NAF
NS0034	20	22	NS	E392148	392148	1	G	D	38.08	38.65	2.38	0.065	0.05	0.103	0.04	0.03	0.009	0.016	0.01	0.041	3.14	0.81	0.19	4.14	5378	0.4896	0.52326	-0.03366	NAF
NS0034	2	4	NS	E392139	392139	1	G	D	34.75	33.75	7.67	0.026	0.02	0.297	0.11	0.04	0.02	0.021	0.079	0.041	5.82	2.06	0.28	8.16	5369	0.6426	0.69768	-0.05508	NAF
NS0034	22	24	NS	E392149	392149	1	G	D	35.71	43.67	1.56	0.09	0.07	0.069	0.04	0.03	0.015	0.011	0.011	0.024	2.54	0.62	0.17	3.33	5379	0.3366	0.52326	-0.18666	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0034	24	26	NS	E392150	392150	1	G	D	33.86	45.34	2.29	0.258	0.2	0.104	0.12	0.04	0.01	0.013	0.01	0.032	2.28	0.79	0.15	3.22	5380	0.3978	0.69768	-0.29988	NAF
NS0034	26	28	NS	E392151	392151	1	G	D	35.73	41.27	2.8	0.181	0.14	0.119	0.19	0.04	0.014	0.013	0.014	0.03	2.86	1.08	0.18	4.12	5381	0.3978	0.69768	-0.29988	NAF
NS0034	28	30	NS	E392152	392152	1	G	D	35.87	40.66	2.9	0.387	0.3	0.125	0.2	0.05	0.011	0.01	0.012	0.034	2.92	1.04	0.17	4.13	5382	0.306	0.8721	-0.5661	NAF
NS0034	104	106	NS	E392190	392190	1	G	D	24.31	47.89	3.75	0.426	0.33	0.148	4.26	0.28	0.023	0.14	0.698	0.196	1.13	5.69	0.48	7.3	5420	4.284	4.88376	-0.59976	NAF
NS0034	30	32	NS	E392153	392153	1	G	D	35.15	41.93	2.2	0.8	0.62	0.097	0.21	0.05	0.012	0.008	0.034	0.034	3.12	0.88	0.19	4.19	5383	0.2448	0.8721	-0.6273	NAF
NS0034	62	64	NS	E392169	392169	1	G	D	40.01	36.15	1.44	0.336	0.26	0.064	0.27	0.05	0.029	0.003	0.042	0.018	3.35	0.65	0.13	4.13	5399	0.0918	0.8721	-0.7803	NAF
NS0034	66	68	NS	E392171	392171	1	G	D	32.57	46.61	1.92	0.465	0.36	0.082	0.2	0.07	0.051	0.003	0.059	0.018	2.98	0.74	0.13	3.85	5401	0.0918	1.22094	-1.12914	NAF
NS0034	32	34	NS	E392154	392154	1	G	D	37.54	36.53	2.39	0.942	0.73	0.102	0.3	0.08	0.015	0.007	0.077	0.043	4.32	0.94	0.24	5.5	5384	0.2142	1.39536	-1.18116	NAF
NS0034	68	70	NS	E392172	392172	1	G	D	34.88	42.44	1.89	0.568	0.44	0.079	0.21	0.08	0.073	0.002	0.05	0.02	3.51	0.75	0.17	4.43	5402	0.0612	1.39536	-1.33416	NAF
NS0034	48	50	NS	E392162	392162	1	G	D	33.08	46.81	0.86	0.697	0.54	0.038	0.24	0.11	0.054	0.002	0.062	0.027	2.91	0.48	0.08	3.47	5392	0.0612	1.91862	-1.85742	NAF
NS0034	190	192	NS	E392234	392234	1	G	D	28.3	45.05	2.55	0.439	0.34	0.116	3.67	0.37	0.091	0.145	0.814	0.247	1.02	4.5	0.33	5.85	5463	4.437	6.45354	-2.01654	NAF
NS0034	38	40	NS	E392157	392157	1	G	D	35.39	39.66	2.78	0.465	0.36	0.124	0.48	0.13	0.031	0.004	0.12	0.044	4.01	1.12	0.17	5.3	5387	0.1224	2.26746	-2.14506	NAF
NS0034	40	42	NS	E392158	392158	1	G	D	37.85	37.21	2.14	0.697	0.54	0.097	0.43	0.13	0.034	0.004	0.096	0.038	3.72	0.88	0.16	4.76	5388	0.1224	2.26746	-2.14506	NAF
NS0034	64	66	NS	E392170	392170	1	G	D	36.54	40.48	1.96	0.503	0.39	0.088	0.39	0.13	0.031	0.003	0.127	0.032	2.87	0.79	0.14	3.8	5400	0.0918	2.26746	-2.17566	NAF
NS0034	192	194	NS	E392235	392235	1	G	D	30.06	44.65	2.1	0.374	0.29	0.092	3.18	0.26	0.042	0.074	0.706	0.21	0.87	4.16	0.06	5.09	5464	2.2644	4.53492	-2.27052	NAF
NS0034	46	48	NS	E392161	392161	1	G	D	37.6	38.99	1.2	0.981	0.76	0.054	0.34	0.14	0.056	0.003	0.093	0.033	3.39	0.61	0.12	4.12	5391	0.0918	2.44188	-2.35008	NAF
NS0034	42	44	NS	E392159	392159	1	G	D	33.29	45.07	1.31	0.775	0.6	0.059	0.4	0.15	0.062	0.003	0.083	0.028	3.42	0.62	0.09	4.13	5389	0.0918	2.6163	-2.5245	NAF
NS0034	58	60	NS	E392167	392167	1	G	D	37.04	39.87	1.47	0.465	0.36	0.066	0.31	0.15	0.067	0.002	0.07	0.023	3.57	0.66	0.15	4.38	5397	0.0612	2.6163	-2.5551	NAF
NS0034	70	72	NS	E392173	392173	1	G	D	35.13	41.77	1.79	0.478	0.37	0.081	0.56	0.15	0.069	0.002	0.09	0.025	3.52	0.8	0.13	4.45	5403	0.0612	2.6163	-2.5551	NAF
NS0034	182	184	NS	E392230	392230	1	G	D	31.06	42.72	1.78	0.529	0.41	0.08	3.16	0.26	0.055	0.055	0.687	0.208	0.95	4.97	-0.03	5.89	5459	1.683	4.53492	-2.85192	NAF
NS0034	44	46	NS	E392160	392160	1	G	D	27.48	53.48	1.42	0.646	0.5	0.063	0.5	0.17	0.054	0.002	0.098	0.035	3.27	0.68	0.11	4.06	5390	0.0612	2.96514	-2.90394	NAF
NS0034	132	134	NS	E392205	392205	1	G	D	30.02	40.97	2.23	0.465	0.36	0.098	3.3	0.33	0.079	0.093	0.649	0.194	1.14	7.12	0.1	8.36	5434	2.8458	5.75586	-2.91006	NAF
NS0034	54	56	NS	E392165	392165	1	G	D	36.78	40.17	1.48	0.503	0.39	0.065	0.38	0.18	0.08	0.003	0.059	0.028	3.32	0.73	0.12	4.17	5395	0.0918	3.13956	-3.04776	NAF
NS0034	74	76	NS	E392175	392175	1	G	D	32.7	42.06	1.97	0.503	0.39	0.087	2.04	0.31	0.081	0.077	0.376	0.093	1.59	3.82	0.06	5.47	5405	2.3562	5.40702	-3.05082	NAF
NS0034	56	58	NS	E392166	392166	1	G	D	35.42	42.04	1.52	0.594	0.46	0.068	0.4	0.18	0.075	0.002	0.072	0.031	3.18	0.73	0.15	4.06	5396	0.0612	3.13956	-3.07836	NAF
NS0034	80	82	NS	E392178	392178	1	G	D	32.96	39.33	2.22	0.542	0.42	0.099	3.08	0.31	0.074	0.073	0.646	0.168	0.9	5.29	-0.06	6.13	5408	2.2338	5.40702	-3.17322	NAF
NS0034	90	92	NS	E392183	392183	1	G	D	34.77	36.75	3.01	0.336	0.26	0.129	3.49	0.33	0.073	0.083	0.954	0.258	1.06	3.34	0.09	4.49	5413	2.5398	5.75586	-3.21606	NAF
NS0034	60	62	NS	E392168	392168	1	G	D	37.22	38.98	1.86	0.516	0.4	0.082	0.46	0.19	0.068	0.002	0.104	0.025	3.38	0.74	0.15	4.27	5398	0.0612	3.31398	-3.25278	NAF
NS0034	134	136	NS	E392206	392206	1	G	D	25.9	44.55	2.14	0.594	0.46	0.098	3.46	0.38	0.085	0.108	0.716	0.208	1.32	8.74	0.32	10.38	5435	3.3048	6.62796	-3.32316	NAF
NS0034	72	74	NS	E392174	392174	1	G	D	33.33	42.8	2.27	0.723	0.56	0.101	0.82	0.2	0.065	0.005	0.186	0.029	3.49	1.1	0.19	4.78	5404	0.153	3.4884	-3.3354	NAF
NS0034	34	36	NS	E392155	392155	1	G	D	34.61	39.62	3.13	0.62	0.48	0.14	0.62	0.22	0.023	0.006	0.129	0.065	4.16	1.21	0.22	5.59	5385	0.1836	3.83724	-3.65364	NAF
NS0034	36	38	NS	E392156	392156	1	G	D	33.29	42.45	2.48	0.594	0.46	0.112	0.62	0.23	0.028	0.005	0.109	0.061	4.16	1.03	0.17	5.36	5386	0.153	4.01166	-3.85866	NAF
NS0034	128	130	NS	E392203	392203	1	G	D	32.54	40.25	1.71	0.439	0.34	0.076	3.02	0.32	0.077	0.046	0.702	0.205	0.98	5.36	-0.07	6.27	5432	1.4076	5.58144	-4.17384	NAF
NS0034	188	190	NS	E392233	392233	1	G	D	30.42	41.77	1.2	0.775	0.6	0.049	3.12	0.41	0.072	0.09	0.496	0.155	0.8	7.32	0.06	8.18	5462	2.754	7.15122	-4.39722	NAF
NS0034	138	140	NS	E392208	392208	1	G	D	34.69	39.79	1.48	0.516	0.4	0.063	2.03	0.29	0.072	0.021	0.38	0.117	1.03	4.61	-0.26	5.38	5437	0.6426	5.05818	-4.41558	NAF
NS0034	156	158	NS	E392217	392217	1	G	D	33.3	37.97	2.52	0.503	0.39	0.107	3.62	0.47	0.083	0.122	0.728	0.21	0.87	4.96	0.13	5.96	5446	3.7332	8.19774	-4.46454	NAF
NS0034	88	90	NS	E392182	392182	1	G	D	31.9	38.62	2.78	0.555	0.43	0.125	3.56	0.63	0.167	0.211	0.831	0.22	1.17	4.83	0.44	6.44	5412	6.4566	10.98846	-4.53186	NAF
NS0034	186	188	NS	E392232	392232	1	G	D	36.3	36.48	1.33	0.555	0.43	0.057	2.73	0.33	0.078	0.037	0.554	0.171	0.81	4.83	-0.24	5.4	5461	1.1322	5.75586	-4.62366	NAF
NS0034	228	230	NS	E392253	392253	1	G	D	38.24	34.26	1.39	0.555	0.43	0.059	2.55	0.32	0.065	0.029	0.568	0.168	0.87	4.52	-0.35	5.04	5482	0.8874	5.58144	-4.69404	NAF
NS0034	142	144	NS	E392210	392210	1	G	D	34.18	39.31	1.47	0.646	0.5	0.063	2.32	0.32	0.08	0.028	0.402	0.125	0.99	5.32	-0.19	6.12	5439	0.8568	5.58144	-4.72464	NAF
NS0034	180	182	NS	E392229	392229	1	G	D	34.01	38.3	1.08	0.826	0.64	0.044	2.86	0.32	0.071	0.028	0.459	0.144	0.85	6.42	-0.25	7.02	5458	0.8568	5.58144	-4.72464	NAF
NS0034	210	212	NS	E392244	392244	1	G	D	35.17	34.89	1.42	0.594	0.46	0.065	2.62	0.34	0.08	0.035	0.565	0.161	4.03	5.07	-0.4	8.7	5473	1.071	5.93028	-4.85928	NAF
NS0034	198	200	NS	E392238	392238	1	G	D	35.18	36.04	1.32	0.658	0.51	0.056	2.99	0.34	0.076	0.033	0.557	0.174	0.87	6.68	-0.23	7.32	5467	1.0098	5.93028	-4.92048	NAF
NS0034	82	84	NS	E392179	392179	1	G	D	32.17	40.39	1.7	0.62	0.48	0.072	2.85	0.35	0.076	0.038	0.545	0.135	0.88	6.32	-0.1	7.1	5409	1.1628	6.1047	-4.9419	NAF
NS0034	224	226	NS	E392251	392251	1	G	D	38.58	34.55	1.39	0.503	0.39	0.059	2.44	0.34	0.088	0.027	0.57	0.166	0.75	3.99	-0.35	4.39	5480	0.8262	5.93028	-5.10408	NAF
NS0034	200	202	NS	E392239	392239	1	G	D	37.2	35.89	1.31	0.516	0.4	0.059	2.56	0.35	0.085	0.028	0.552	0.167	0.75	4.65	-0.35	5.05	5468	0.8568	6.1047	-5.2479	NAF
NS0034	50	52	NS	E392163	392163	1	G	D	35.78	40.47	2.15	0.374	0.29	0.097	0.67	0.31	0.054	0.002	0.059	0.053	3.33	0.98	0.14	4.45	5393	0.0612	5.40702	-5.34582	NAF
NS0034	116	118	NS	E392196	392196	1	G	D	35.9	33.41	1.6	0.749	0.58	0.067	3.23	0.37	0.078	0.034	0.552	0.167	0.93	7.36	-0.25	8.04	5426	1.0404	6.45354	-5.41314	NAF
NS0034	146	148	NS	E392212	392212	1	G	D	36.26	37.05	1.36	0.568	0.44	0.06	2.67	0.37	0.086	0.034	0.535	0.168	0.73	4.7	-0.29	5.14	5441	1.0404	6.45354	-5.41314	NAF
NS0034	52	54	NS	E392164	392164	1	G	D	36.92	38.16	2.44	0.387	0.3	0.108	0.72	0.32	0.062	0.003	0.072	0.051	3.41	1.1	0.17	4.68	5394	0.0918	5.58144	-5.48964	NAF
NS0034	226	228	NS	E392252	392252	1	G	D	37.71	35.19	1.41	0.529	0.41	0.058	2.53	0.37	0.06	0.03	0.591	0.167	0.77	4.44	-0.28	4.93	5481	0.918	6.45354	-5.53554	NAF
NS0034	130	132	NS	E392204	392204	1	G	D	31.66	42.2	0.92	0.555	0.43	0.041	2.52	0.36	0.088	0.024	0.376	0.112	0.82	6.83	-0.22	7.43	5433	0.7344	6.27912	-5.54472	NAF
NS0034	102	104	NS	E392189	392189	1	G	D	30.95	42.2	1.12	0.594	0.46	0.05	2.54	0.44	0.075	0.065	0.403	0.114	1.65	6.49	-0.14	8	5419	1.989	7.67448	-5.68548	NAF
NS0034	140	142	NS	E392209	392209	1	G	D	35.47	36.3	2.23	0.439	0.34	0.095	3.16	0.5	0.145	0.099	0.729	0.217	1	3.93	0	4.93	5438	3.0294	8.721	-5.6916	NAF
NS0034	222	224	NS	E392250	392250	1	G	D	38.83	33.02	1.41	0.568	0.44	0.061	2.61	0.38	0.098	0.029	0.588	0.176	0.9	4.95	-0.43	5.42	5479	0.8874	6.62796	-5.74056	NAF
NS0034	122	124	NS	E392199	392199	1	G	D	30.67	44.85	1.82	0.323	0.25	0.078	2.81	0.41	0.061	0.045	0.687	0.212	0.88	3.67	-0.01	4.54	5429	1.377	7.15122	-5.77422	NAF
NS0034	242	244	NS	E392260	392260	1	G	D	39.22	34.86	1.21	0.503	0.39	0.057	2.21	0.38	0.071	0.026	0.509	0.13	0.65	3.46	-0.34	3.77	5489	0.7956	6.62796	-5.83236	NAF
NS0034	136	138	NS	E392207	392207	1	G	D	32	39.25	2.37	0.452	0.35	0.124	3.25	0.46	0.126	0.068	0.726	0.206	1.11	5.75	0.03	6.89	5436	2.0808	8.02332	-5.94252	NAF
NS0034	184	186	NS	E392231	392231	1	G	D	34.25	37.2	1.25	0.71	0.55	0.056	3.02	0.44	0.08	0.052	0.526	0.165	0.87	6.68	-0.16	7.39	5460	1.5912	7.67448	-6.08328	NAF
NS0034	96	98	NS	E392186	392186	1	G	D	32.44	40.43	2.16	0.452	0.35	0.099	3.1	0.5	0.094	0.08	0.689	0.178	0.91	4.61	0.09	5.61	5416	2.448	8.721	-6.273	NAF
NS0034	144	146	NS	E392211	392211	1	G	D	32.3	41.78	1.18	0.658	0.51	0.048	2.53	0.42	0.09	0.031	0.428	0.133	0.75	5.64	-0.21	6.18	5440	0.9486	7.32564	-6.37704	NAF
NS0034	220	222	NS	E392249	392249	1	G	D	34.58	36.39	1.42	0.736	0.57	0.059	3.01	0.42	0.075	0.029	0.593	0.182	1.01	6.6	-0.25	7.36	5478	0.8874	7.32564	-6.43824	NAF
NS0034	160	162	NS	E392219	392219	1	G	D	33.63	38.62	1.1	0.826	0.64	0.047	2.97	0.42	0.076	0.028	0.461	0.138	0.71	6.61	-0.24	7.08	5448	0.8568	7.32564	-6.46884	NAF
NS0034	78	80	NS	E392177	392177	1	G	D	32.67	39.54	2.1	0.555	0.43	0.093	2.95	0.45	0.121	0.045	0.574	0.145	0.95	5.54	-0.09	6.4	5407	1.377	7.8489	-6.4719	NAF
NS0034	112	114	NS	E392194	392194	1	G	D	31.38	36.57	3.43	0.568	0.44	0.159	4.29	0.62	0.171	0.132	0.719	0.223	1.14	6.39	0.3	7.83	5424	4.0392	10.81404	-6.77484	NAF
NS0034	148	150	NS	E392213	392213	1	G	D	36.93	35.18	1.4	0.594	0.46	0.06	2.78	0.45	0.109	0.032	0.534	0.165	0.74	5.1	-0.3	5.54	5442	0.9792	7.8489	-6.8697	NAF
NS0034	118	120	NS	E392197	392197	1	G	D	35.55	36.52	1.74	0.594	0.46	0.078	2.57	0.49	0.092	0.052	0.472	0.141	1.06	5.26	-0.13	6.19	5427	1.5912	8.54658	-6.95538	NAF
NS0034	178	180	NS	E392228	392228	1	G	D	35.21	38.88	1.21	0.555	0.43	0.052	2.53	0.47	0.097	0.031	0.51	0.151	0.68	4.49	-0.25	4.92	5457	0.9486	8.19774	-7.24914	NAF
NS0034	120	122	NS	E392198	392198	1	G	D	29.33	43.3	1.07	0.749	0.58	0.045	2.77	0.48	0.087	0.027	0.419	0.135	1.02	7.64	-0.09	8.57	5428	0.8262	8.37216	-7.54596	NAF
NS0034	76	78	NS	E392176	392176	1	G	D	29.03	39.16	3.87	0.555	0.43	0.168	4.07	0.84	0.245	0.232	0.725	0.18	1.18	6.3	0.56	8.04	5406	7.0992	14.65128	-7.55208	NAF
NS0034	154	156	NS	E392216	392216	1	G	D	36.99	35.86	1.28	0.555	0.43	0.054	2.65	0.49	0.091	0.031	0.477	0.146	0.62	4.97	-0.33	5.26	5445	0.9486	8.54658	-7.59798	NAF
NS0034	162	164	NS	E392220	392220	1	G	D	35.24	36.77	1.22	0.736	0.57	0.055	2.94	0.49	0.11	0.031	0.507	0.156	0.71	5.69	-0.2	6.2	5449	0.9486	8.54658	-7.59798	NAF
NS0034	158	160	NS	E392218	392218	1	G	D	37.73	35.21	1.14	0.581	0.45	0.048	2.57	0.49	0.099	0.026	0.476	0.14	0.6	4.76	-0.33	5.03	5447	0.7956	8.54658	-7.75098	NAF
NS0034	172	174	NS	E392225	392225	1	G	D	36.5	34.46	1.6	0.658	0.51	0.067	3.26	0.52	0.12	0.04	0.601	0.186	0.8	5.5	-0.23	6.07	5454	1.224	9.06984	-7.84584	NAF
NS0034	150	152	NS	E392214	392214	1	G	D	35.02	38.91	1.28	0.529	0.41	0.055	2.57	0.51	0.106	0.03	0.494	0.154	0.72	4.42	-0.22	4.92	5443	0.918	8.89542	-7.97742	NAF
NS0034	202	204	NS	E392240	392240	1	G	D	37.5	33.72	1.33	0.633	0.49	0.055	2.74	0.52	0.095	0.026	0.55	0.184	0.94	5.71	-0.33	6.32	5469	0.7956	9.06984	-8.27424	NAF
NS0034	84	86	NS	E392180	392180	1	G	D	27.26	45.61	1.72	0.697	0.54	0.073	3.21	0.62	0.059	0.047	0.599	0.146	0.85	7	0.2	8.05	5410	1.4382	10.81404	-9.37584	NAF
NS0034	176	178	NS	E392227	392227	1	G	D	34.8	39.3	1.12	0.594	0.46	0.047	2.56	0.59	0.065	0.027	0.471	0.147	0.63	4.51	-0.11	5.03	5456	0.8262	10.29078	-9.46458	NAF
NS0034	208	210	NS	E392243	392243	1	G	D	32.47	40.75	1.16	0.646	0.5	0.048	2.65	0.6	0.087	0.026	0.481	0.143	0.8	6.01	-0.15	6.66	5472	0.7956	10.4652	-9.6696	NAF
NS0034	114	116	NS	E392195	392195	1	G	D	32.5	41.37	0.97	0.684	0.53	0.043	2.38	0.61	0.08	0.026	0.371	0.108	0.64	6.13	-0.16	6.61	5425	0.7956	10.63962	-9.84402	NAF
NS0034	212	214	NS	E392245	392245	1	G	D	31.82	40.55	1.22	0.697	0.54	0.054	2.8	0.61	0.092	0.026	0.505	0.155	1.19	6.5	-0.12	7.57	5474	0.7956	10.63962	-9.84402	NAF
NS0034	86	88	NS	E392181	392181	1	G	D	30.85	38.14	2.19	0.762	0.59	0.095	3.68	0.83	0.225	0.141	0.717	0.196	1.06	7.22	0.26	8.54	5411	4.3146	14.47686	-10.16226	NAF
NS0034	206	208	NS	E392242	392242	1	G	D	33.91	40.74	1.04	0.542	0.42	0.043	2.29	0.63	0.065	0.026	0.429	0.114	0.58	4.97	-0.14	5.41	5471	0.7956	10.98846	-10.19286	NAF
NS0034	164	166	NS	E392221	392221	1	G	D	34.79	37.7	1.19	0.71	0.55	0.051	2.88	0.64	0.115	0.028	0.485	0.153	0.65	5.5	-0.14	6.01	5450	0.8568	11.16288	-10.30608	NAF
NS0034	234	236	NS	E392256	392256	1	G	D	33.18	40.6	1.2	0.646	0.5	0.051	2.59	0.68	0.057	0.034	0.498	0.147	0.76	5.1	0	5.86	5485	1.0404	11.86056	-10.82016	NAF
NS0034	170	172	NS	E392224	392224	1	G	D	36.16	34.4	1.48	0.697	0.54	0.063	3.28	0.69	0.085	0.037	0.58	0.173	0.78	5.69	-0.01	6.46	5453	1.1322	12.03498	-10.90278	NAF
NS0034	244	246	NS	E392261	392261	1	G	D	34.62	39.36	1.03	0.684	0.53	0.045	2.38	0.69	0.065	0.024	0.432	0.119	0.7	4.85	-0.11	5.44	5490	0.7344	12.03498	-11.30058	NAF
NS0034	218	220	NS	E392248	392248	1	G	D	31.48	42.42	1.18	0.607	0.47	0.052	2.63	0.7	0.066	0.028	0.485	0.142	0.72	5.58	0.07	6.37	5477	0.8568	12.2094	-11.3526	NAF
NS0034	230	232	NS	E392254	392254	1	G	D	32.65	43.88	1.11	0.465	0.36	0.048	2.19	0.72	0.074	0.032	0.453	0.13	0.57	3.52	-0.02	4.07	5483	0.9792	12.55824	-11.57904	NAF
NS0034	152	154	NS	E392215	392215	1	G	D	34.22	39.77	0.93	0.646	0.5	0.039	2.45	0.72	0.108	0.027	0.387	0.126	0.56	5.07	-0.12	5.51	5444	0.8262	12.55824	-11.73204	NAF
NS0034	174	176	NS	E392226	392226	1	G	D	33.93	39.42	1.13	0.658	0.51	0.048	2.77	0.73	0.065	0.028	0.461	0.143	0.64	5.11	0.02	5.77	5455	0.8568	12.73266	-11.87586	NAF
NS0034	238	240	NS	E392258	392258	1	G	D	32.63	41.82	0.95	0.684	0.53	0.039	2.36	0.74	0.081	0.029	0.404	0.114	0.67	5.29	-0.04	5.92	5487	0.8874	12.90708	-12.01968	NAF
NS0034	100	102	NS	E392188	392188	1	G	D	32.5	38.77	1.22	0.671	0.52	0.053	2.87	0.75	0.099	0.032	0.462	0.128	0.82	7.37	-0.04	8.15	5418	0.9792	13.0815	-12.1023	NAF
NS0034	232	234	NS	E392255	392255	1	G	D	36.92	36.72	1.32	0.503	0.39	0.056	2.42	0.76	0.157	0.029	0.545	0.162	0.67	3.85	-0.28	4.24	5484	0.8874	13.25592	-12.36852	NAF
NS0034	92	94	NS	E392184	392184	1	G	D	31.28	39.51	2.17	0.594	0.46	0.094	3.4	0.92	0.078	0.088	0.668	0.185	0.92	6.02	0.39	7.33	5414	2.6928	16.04664	-13.35384	NAF
NS0034	216	218	NS	E392247	392247	1	G	D	30.39	43.74	1.1	0.607	0.47	0.051	2.55	0.81	0.067	0.025	0.455	0.13	0.81	5.73	0.23	6.77	5476	0.765	14.12802	-13.36302	NAF
NS0034	166	168	NS	E392222	392222	1	G	D	34.45	37.91	1.17	0.697	0.54	0.049	2.89	0.83	0.108	0.029	0.48	0.151	0.66	5.42	0.01	6.09	5451	0.8874	14.47686	-13.58946	NAF
NS0034	204	206	NS	E392241	392241	1	G	D	30.06	44.51	0.9	0.633	0.49	0.035	2.37	0.83	0.082	0.024	0.365	0.192	0.64	6.11	0.1	6.85	5470	0.7344	14.47686	-13.74246	NAF
NS0034	246	248	NS	E392262	392262	1	G	D	34.23	38.9	1.1	0.749	0.58	0.045	2.65	0.84	0.096	0.027	0.465	0.133	0.63	5.04	0.04	5.71	5491	0.8262	14.65128	-13.82508	NAF
NS0034	94	96	NS	E392185	392185	1	G	D	33.27	38.76	1.01	0.684	0.53	0.043	2.57	0.85	0.091	0.025	0.382	0.108	0.7	6.8	0.02	7.52	5415	0.765	14.8257	-14.0607	NAF
NS0034	236	238	NS	E392257	392257	1	G	D	34.24	39.12	1.07	0.658	0.51	0.046	2.47	0.87	0.081	0.031	0.45	0.131	0.64	5.11	0.06	5.81	5486	0.9486	15.17454	-14.22594	NAF
NS0034	168	170	NS	E392223	392223	1	G	D	36.26	38.02	1.06	0.516	0.4	0.047	2.44	0.88	0.085	0.025	0.446	0.13	0.51	3.7	0.11	4.32	5452	0.765	15.34896	-14.58396	NAF
NS0034	240	242	NS	E392259	392259	1	G	D	32.31	41.45	0.96	0.762	0.59	0.039	2.45	0.88	0.091	0.024	0.406	0.122	0.62	5.54	0.12	6.28	5488	0.7344	15.34896	-14.61456	NAF
NS0034	248	250	NS	E392263	392263	1	G	D	35.56	37.14	1.26	0.71	0.55	0.054	2.8	0.92	0.115	0.034	0.508	0.135	0.61	4.52	0.1	5.23	5492	1.0404	16.04664	-15.00624	NAF
NS0034	250	252	NS	E392264	392264	1	G	D	34.25	39.35	1.43	0.555	0.43	0.06	2.97	0.93	0.067	0.037	0.556	0.167	0.64	3.67	0.36	4.67	5493	1.1322	16.22106	-15.08886	NAF
NS0034	214	216	NS	E392246	392246	1	G	D	27.45	46.94	0.96	0.697	0.54	0.042	2.67	0.95	0.05	0.021	0.393	0.118	0.71	6.52	0.46	7.69	5475	0.6426	16.5699	-15.9273	NAF
NS0034	278	280	NS	E392278	392278	1	G	D	39.28	33.35	1.39	0.542	0.42	0.058	2.91	0.98	0.056	0.03	0.585	0.17	0.59	2.67	0.33	3.59	5507	0.918	17.09316	-16.17516	NAF
NS0034	110	112	NS	E392193	392193	1	G	D	32.54	37.35	1.7	0.684	0.53	0.075	3.23	1.11	0.266	0.1	0.611	0.187	0.97	6.64	0.09	7.7	5423	3.06	19.36062	-16.30062	NAF
NS0034	108	110	NS	E392192	392192	1	G	D	34.65	38.22	0.92	0.594	0.46	0.04	2.36	0.97	0.092	0.02	0.362	0.106	0.66	5.74	0.05	6.45	5422	0.612	16.91874	-16.30674	NAF
NS0034	98	100	NS	E392187	392187	1	G	D	34.24	36.17	1.64	0.594	0.46	0.071	3.03	1.06	0.208	0.065	0.572	0.161	0.82	6.28	0.01	7.11	5417	1.989	18.48852	-16.49952	NAF
NS0034	106	108	NS	E392191	392191	1	G	D	33.77	40.37	0.94	0.503	0.39	0.043	2.25	1.08	0.096	0.047	0.364	0.107	0.56	4.85	0.22	5.63	5421	1.4382	18.83736	-17.39916	NAF
NS0034	256	258	NS	E392267	392267	1	G	D	32.25	41.25	1.72	0.503	0.39	0.075	3.37	1.14	0.058	0.047	0.692	0.207	0.77	3.04	0.72	4.53	5496	1.4382	19.88388	-18.44568	NAF
NS0034	252	254	NS	E392265	392265	1	G	D	32.06	40.33	1.65	0.62	0.48	0.069	3.39	1.19	0.166	0.056	0.667	0.203	0.75	4.37	0.45	5.57	5494	1.7136	20.75598	-19.04238	NAF
NS0034	258	260	NS	E392268	392268	1	G	D	31.92	42.66	1.67	0.452	0.35	0.073	3.19	1.19	0.033	0.045	0.647	0.177	0.69	2.5	0.8	3.99	5497	1.377	20.75598	-19.37898	NAF
NS0034	254	256	NS	E392266	392266	1	G	D	32.15	41.06	1.57	0.555	0.43	0.068	3.27	1.21	0.099	0.044	0.637	0.188	0.74	3.57	0.63	4.94	5495	1.3464	21.10482	-19.75842	NAF
NS0034	260	262	NS	E392269	392269	1	G	D	27.9	45.23	2.45	0.439	0.34	0.11	4.02	1.64	0.133	0.168	0.74	0.215	0.82	2.69	1.12	4.63	5498	5.1408	28.60488	-23.46408	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0034	280	282	NS	E392279	392279	1	G	D	35.06	37.98	1.23	0.594	0.46	0.051	2.89	1.42	0.117	0.038	0.513	0.153	0.6	3.3	0.65	4.55	5508	1.1628	24.76764	-23.60484	NAF
NS0034	276	278	NS	E392277	392277	1	G	D	36.36	36.17	1.37	0.594	0.46	0.058	2.99	1.45	0.072	0.031	0.573	0.165	0.65	2.94	0.8	4.39	5506	0.9486	25.2909	-24.3423	NAF
NS0034	274	276	NS	E392276	392276	1	G	D	34.05	39.43	1.06	0.658	0.51	0.044	2.68	1.6	0.091	0.028	0.445	0.133	0.54	3.5	0.85	4.89	5505	0.8568	27.9072	-27.0504	NAF
NS0034	270	272	NS	E392274	392274	1	G	D	34.35	38.7	1.28	0.555	0.43	0.053	2.88	1.68	0.105	0.04	0.527	0.155	0.58	3	0.99	4.57	5503	1.224	29.30256	-28.07856	NAF
NS0034	262	264	NS	E392270	392270	1	G	D	24.93	47.55	2.91	0.413	0.32	0.134	4.66	1.99	0.144	0.207	0.833	0.241	0.91	2.59	1.59	5.09	5499	6.3342	34.70958	-28.37538	NAF
NS0034	268	270	NS	E392273	392273	1	G	D	31.79	39.91	1.74	0.516	0.4	0.076	3.51	1.75	0.076	0.068	0.615	0.174	0.74	3.78	1.28	5.8	5502	2.0808	30.5235	-28.4427	NAF
NS0034	264	266	NS	E392271	392271	1	G	D	27.27	46	1.96	0.452	0.35	0.09	3.91	1.97	0.015	0.068	0.681	0.195	0.79	2.82	1.91	5.52	5500	2.0808	34.36074	-32.27994	NAC
NS0034	272	274	NS	E392275	392275	1	G	D	35	37.31	1.18	0.607	0.47	0.052	2.81	1.95	0.096	0.033	0.492	0.14	0.59	3.19	1.24	5.02	5504	1.0098	34.0119	-33.0021	NAC
NS0034	266	268	NS	E392272	392272	1	G	D	28.79	43.88	1.81	0.439	0.34	0.08	3.7	2.17	0.027	0.057	0.649	0.192	0.71	2.69	2.07	5.47	5501	1.7442	37.84914	-36.10494	NAC
NS0035	82	84	NS	E392322	392322	1	G	W	26.2	39.09	4.58	0.336	0.26	0.222	4.19	0.39	0.064	0.912	0.534	0.157	1.11	9.88	1.73	12.72	5550	27.9072	6.80238	21.10482	PAF(HC)
NS0035	238	240	NS	E392400	392400	1	G	W	21.95	48.32	8.95	0.116	0.09	0.494	4.07	0.47	0.059	0.81	1.13	0.247	0.99	2.5	0.97	4.46	5628	24.786	8.19774	16.58826	PAF(HC)
NS0035	236	238	NS	E392399	392399	1	G	W	20.17	53.2	7.86	0.116	0.09	0.408	3.62	0.4	0.036	0.569	1.08	0.248	0.96	2.1	0.91	3.97	5627	17.4114	6.9768	10.4346	PAF(HC)
NS0035	114	116	NS	E392338	392338	1	G	W	22.29	49.05	5.03	0.349	0.27	0.25	3.99	0.35	0.045	0.422	0.985	0.267	1.29	5.26	1.08	7.63	5566	12.9132	6.1047	6.8085	PAF(LC)
NS0035	112	114	NS	E392337	392337	1	G	W	24.81	43.92	4.51	0.452	0.35	0.222	4.06	0.31	0.042	0.326	1.18	0.305	1.67	6.73	1.04	9.44	5565	9.9756	5.40702	4.56858	PAF(LC)
NS0035	74	76	NS	E392318	392318	1	G	W	22.82	46.48	7.43	0.09	0.07	0.362	5.13	0.58	0.091	0.458	0.831	0.256	1.27	3.29	1.15	5.71	5546	14.0148	10.11636	3.89844	PAF(LC)
NS0035	148	150	NS	E392355	392355	1	G	W	21.36	49.36	8.22	0.09	0.07	0.401	4.54	0.42	0.064	0.366	0.62	0.176	0.98	3.19	0.96	5.13	5583	11.1996	7.32564	3.87396	PAF(LC)
NS0035	144	146	NS	E392353	392353	1	G	W	23.28	46.29	7.5	0.103	0.08	0.371	5.2	0.4	0.056	0.343	0.893	0.249	1.23	3.41	0.99	5.63	5581	10.4958	6.9768	3.519	PAF(LC)
NS0035	92	94	NS	E392327	392327	1	G	W	22.65	46.17	8.22	0.155	0.12	0.398	5.24	0.43	0.067	0.36	0.807	0.241	1.18	3.45	1	5.63	5555	11.016	7.50006	3.51594	PAF(LC)
NS0035	240	242	NS	E392402	392402	1	G	W	24.41	42.91	5.07	0.62	0.48	0.252	3.69	1.19	0.026	0.764	0.717	0.216	1.1	7.26	1.53	9.89	5629	23.3784	20.75598	2.62242	PAF(LC)
NS0035	102	104	NS	E392332	392332	1	G	W	19.5	54.94	4.38	0.284	0.22	0.217	3.54	0.47	0.027	0.315	0.835	0.239	1.22	4.67	1.01	6.9	5560	9.639	8.19774	1.44126	PAF(LC)
NS0035	206	208	NS	E392384	392384	1	G	W	20.31	52.12	6.79	0.194	0.15	0.324	3.7	0.7	0.083	0.434	0.892	0.237	0.99	3.59	1.07	5.65	5612	13.2804	12.2094	1.071	PAF(LC)
NS0035	84	86	NS	E392323	392323	1	G	W	22.62	48.09	5.49	0.219	0.17	0.264	4.29	0.56	0.085	0.334	0.985	0.3	1.46	4.61	1.07	7.14	5551	10.2204	9.76752	0.45288	PAF(LC)
NS0035	104	106	NS	E392333	392333	1	G	W	22.48	48.09	4.94	0.349	0.27	0.25	3.99	0.48	0.053	0.285	0.926	0.264	1.36	5.9	0.97	8.23	5561	8.721	8.37216	0.34884	PAF(LC)
NS0035	98	100	NS	E392330	392330	1	G	W	23.03	48.07	5.23	0.297	0.23	0.257	4.19	0.25	0.043	0.149	1.28	0.356	2.04	3.98	0.69	6.71	5558	4.5594	4.3605	0.1989	PAF(LC)
NS0035	118	120	NS	E392340	392340	1	G	W	21.73	47.89	8.53	0.155	0.12	0.399	4.83	0.39	0.064	0.227	0.63	0.175	0.93	3.93	0.83	5.69	5568	6.9462	6.80238	0.14382	PAF(LC)
NS0035	16	18	NS	E392288	392288	1	G	W	31.6	46.69	2.2	0.052	0.04	0.113	0.07	0.02	0.065	0.016	0.012	0.008	4.51	0.73	0.16	5.4	5517	0.4896	0.34884	0.14076	PAF(LC)
NS0035	8	10	NS	E392284	392284	1	G	W	37.98	33.51	3.67	0.065	0.05	0.156	0.08	0.03	0.019	0.018	0.013	0.02	7.22	0.95	0.25	8.42	5513	0.5508	0.52326	0.02754	PAF(LC)
NS0035	10	12	NS	E392285	392285	1	G	W	34.63	40	3.27	0.039	0.03	0.138	0.07	0.03	0.016	0.016	0.012	0.015	5.91	0.98	0.18	7.07	5514	0.4896	0.52326	-0.03366	NAF
NS0035	6	8	NS	E392283	392283	1	G	W	30.18	44.15	5.37	0.039	0.03	0.285	0.05	0.04	0.021	0.019	0.018	0.025	5.47	1.16	0.24	6.87	5512	0.5814	0.69768	-0.11628	NAF
NS0035	2	4	NS	E392281	392281	1	G	D	37	30.47	8.08	0.026	0.02	0.51	0.06	0.04	0.017	0.015	0.047	0.022	5.72	1.91	0.28	7.91	5510	0.459	0.69768	-0.23868	NAF
NS0035	86	88	NS	E392324	392324	1	G	W	25.15	42.64	4.93	0.31	0.24	0.239	4.26	0.35	0.062	0.19	0.941	0.283	1.92	7.11	0.74	9.77	5552	5.814	6.1047	-0.2907	NAF
NS0035	4	6	NS	E392282	392282	1	G	D	35.22	36.92	4.38	0.039	0.03	0.216	0.06	0.05	0.014	0.017	0.014	0.031	6.56	1.16	0.23	7.95	5511	0.5202	0.8721	-0.3519	NAF
NS0035	94	96	NS	E392328	392328	1	G	W	24.2	42.4	8.42	0.207	0.16	0.42	5.53	0.33	0.065	0.176	0.791	0.252	1.27	4.59	0.82	6.68	5556	5.3856	5.75586	-0.37026	NAF
NS0035	12	14	NS	E392286	392286	1	G	W	35.94	34.1	5.33	0.026	0.02	0.24	0.11	0.06	0.033	0.021	0.027	0.02	6.82	1.42	0.26	8.5	5515	0.6426	1.04652	-0.40392	NAF
NS0035	108	110	NS	E392335	392335	1	G	W	22.14	48.78	4.86	0.323	0.25	0.234	4.01	0.37	0.057	0.195	0.851	0.256	1.53	6.16	0.76	8.45	5563	5.967	6.45354	-0.48654	NAF
NS0035	18	20	NS	E392289	392289	1	G	W	30.78	45.2	3.6	0.065	0.05	0.18	0.19	0.05	0.06	0.009	0.034	0.022	5.01	1.18	0.17	6.36	5518	0.2754	0.8721	-0.5967	NAF
NS0035	20	22	NS	E392290	392290	1	G	W	30.46	45.68	3.85	0.052	0.04	0.197	0.22	0.06	0.058	0.011	0.028	0.019	4.93	1.08	0.17	6.18	5519	0.3366	1.04652	-0.70992	NAF
NS0035	0	2	NS	E392280	392280	1	G	D	30.11	43.77	6.15	0.039	0.03	0.344	0.1	0.08	0.017	0.016	0.082	0.028	4.83	1.6	0.25	6.68	5509	0.4896	1.39536	-0.90576	NAF
NS0035	110	112	NS	E392336	392336	1	G	W	24.02	44.86	4.05	0.465	0.36	0.194	3.96	0.34	0.043	0.164	0.805	0.229	1.5	8.77	0.62	10.89	5564	5.0184	5.93028	-0.91188	NAF
NS0035	106	108	NS	E392334	392334	1	G	W	21.66	49.59	5.01	0.31	0.24	0.246	3.99	0.54	0.112	0.275	0.838	0.257	1.48	5.53	0.95	7.96	5562	8.415	9.41868	-1.00368	NAF
NS0035	22	24	NS	E392291	392291	1	G	W	30.16	45.51	4.17	0.065	0.05	0.206	0.32	0.08	0.05	0.009	0.037	0.021	4.9	1.34	0.19	6.43	5520	0.2754	1.39536	-1.11996	NAF
NS0035	76	78	NS	E392319	392319	1	G	W	20.45	52.63	4.89	0.207	0.16	0.239	3.81	0.72	0.052	0.372	0.823	0.239	1.34	4.33	1.11	6.78	5547	11.3832	12.55824	-1.17504	NAF
NS0035	100	102	NS	E392331	392331	1	G	W	23.25	47.26	4.54	0.387	0.3	0.223	4.05	0.36	0.056	0.147	1.21	0.344	1.73	5.7	0.68	8.11	5559	4.4982	6.27912	-1.78092	NAF
NS0035	278	280	NS	E392421	392421	1	G	W	28.13	42.66	4.03	0.297	0.23	0.195	3.88	0.58	0.097	0.252	0.705	0.2	0.91	5.58	0.54	7.03	5648	7.7112	10.11636	-2.40516	NAF
NS0035	28	30	NS	E392294	392294	1	G	W	29.35	46.88	3.7	0.077	0.06	0.178	0.59	0.15	0.066	0.005	0.147	0.04	4.42	1.28	0.17	5.87	5523	0.153	2.6163	-2.4633	NAF
NS0035	26	28	NS	E392293	392293	1	G	W	28.35	47.09	4.64	0.065	0.05	0.236	0.66	0.17	0.061	0.007	0.1	0.039	4.74	1.58	0.21	6.53	5522	0.2142	2.96514	-2.75094	NAF
NS0035	192	194	NS	E392377	392377	1	G	W	25.99	44.75	4.3	0.31	0.24	0.209	3.24	0.87	0.082	0.405	0.74	0.213	1.23	5.59	0.99	7.81	5605	12.393	15.17454	-2.78154	NAF
NS0035	30	32	NS	E392295	392295	1	G	W	29.36	46.82	3.62	0.31	0.24	0.176	0.61	0.17	0.068	0.006	0.134	0.053	4.47	1.39	0.21	6.07	5524	0.1836	2.96514	-2.78154	NAF
NS0035	24	26	NS	E392292	392292	1	G	W	29.33	45.35	4.49	0.052	0.04	0.222	0.54	0.18	0.066	0.006	0.039	0.029	4.93	1.63	0.21	6.77	5521	0.1836	3.13956	-2.95596	NAF
NS0035	96	98	NS	E392329	392329	1	G	W	21.92	48.47	3.23	0.594	0.46	0.161	3.42	0.73	0.075	0.318	0.714	0.22	1.44	8.14	0.98	10.56	5557	9.7308	12.73266	-3.00186	NAF
NS0035	36	38	NS	E392298	392298	1	G	W	21.26	61.61	2.48	0.31	0.24	0.121	0.66	0.18	0.043	0.004	0.127	0.055	3.15	0.97	0.11	4.23	5527	0.1224	3.13956	-3.01716	NAF
NS0035	32	34	NS	E392296	392296	1	G	W	29.14	47.89	2.9	0.426	0.33	0.141	0.61	0.19	0.068	0.003	0.136	0.037	4.13	1.13	0.18	5.44	5525	0.0918	3.31398	-3.22218	NAF
NS0035	14	16	NS	E392287	392287	1	G	W	34.64	37.4	4.12	0.116	0.09	0.196	0.55	0.23	0.031	0.02	0.118	0.044	5.76	1.79	0.16	7.71	5516	0.612	4.01166	-3.39966	NAF
NS0035	150	152	NS	E392356	392356	1	G	W	27.14	40.63	3.5	0.349	0.27	0.17	3.29	0.42	0.08	0.127	0.725	0.205	1.35	9.87	0.42	11.64	5584	3.8862	7.32564	-3.43944	NAF
NS0035	34	36	NS	E392297	392297	1	G	W	28.45	47.57	3.65	0.426	0.33	0.18	0.81	0.21	0.066	0.005	0.164	0.043	4.38	1.39	0.21	5.98	5526	0.153	3.66282	-3.50982	NAF
NS0035	38	40	NS	E392299	392299	1	G	W	29.34	46.65	3.46	0.465	0.36	0.167	0.73	0.21	0.07	0.004	0.149	0.044	4.45	1.34	0.2	5.99	5528	0.1224	3.66282	-3.54042	NAF
NS0035	154	156	NS	E392358	392358	1	G	W	25.25	43.75	4.53	0.31	0.24	0.218	3.66	0.71	0.116	0.288	0.773	0.225	1.36	6.91	0.83	9.1	5586	8.8128	12.38382	-3.57102	NAF
NS0035	244	246	NS	E392404	392404	1	G	W	20.94	51.56	6.35	0.219	0.17	0.325	3.47	1.12	0.053	0.521	1.08	0.254	1	2.96	1.25	5.21	5631	15.9426	19.53504	-3.59244	NAF
NS0035	204	206	NS	E392383	392383	1	G	W	22.86	51.5	4.1	0.258	0.2	0.197	2.91	0.72	0.079	0.289	0.587	0.179	0.97	4.7	0.75	6.42	5611	8.8434	12.55824	-3.71484	NAF
NS0035	44	46	NS	E392303	392303	1	G	W	30.46	45.38	3.23	0.4	0.31	0.158	0.86	0.23	0.055	0.009	0.197	0.027	4.25	1.26	0.25	5.76	5531	0.2754	4.01166	-3.73626	NAF
NS0035	46	48	NS	E392304	392304	1	G	W	28.8	47.77	3.21	0.426	0.33	0.156	0.86	0.23	0.07	0.009	0.292	0.036	4.16	1.3	0.22	5.68	5532	0.2754	4.01166	-3.73626	NAF
NS0035	90	92	NS	E392326	392326	1	G	W	22.68	47.34	4.93	0.336	0.26	0.234	4.08	0.81	0.136	0.337	0.908	0.271	1.32	5.95	1.11	8.38	5554	10.3122	14.12802	-3.81582	NAF
NS0035	130	132	NS	E392346	392346	1	G	W	25.78	40.5	3.52	0.426	0.33	0.168	3.74	0.5	0.099	0.15	0.657	0.187	1.8	10.82	0.51	13.13	5574	4.59	8.721	-4.131	NAF
NS0035	40	42	NS	E392300	392300	1	G	W	30.84	45.11	3.56	0.349	0.27	0.171	0.82	0.26	0.052	0.013	0.145	0.049	3.66	1.42	0.2	5.28	5529	0.3978	4.53492	-4.13712	NAF
NS0035	120	122	NS	E392341	392341	1	G	W	22.91	47.59	2.53	0.336	0.26	0.118	2.95	0.42	0.076	0.104	0.527	0.153	1.58	10.24	0.36	12.18	5569	3.1824	7.32564	-4.14324	NAF
NS0035	140	142	NS	E392351	392351	1	G	W	28.52	38.26	2.37	0.297	0.23	0.114	2.93	0.41	0.066	0.097	0.537	0.156	1.92	11.83	0.21	13.96	5579	2.9682	7.15122	-4.18302	NAF
NS0035	80	82	NS	E392321	392321	1	G	W	24.39	44.33	3.12	0.31	0.24	0.152	3.37	0.5	0.066	0.146	0.572	0.164	1.61	10.29	0.5	12.4	5549	4.4676	8.721	-4.2534	NAF
NS0035	132	134	NS	E392347	392347	1	G	W	23.75	45.49	3.67	0.465	0.36	0.178	3.61	0.51	0.097	0.151	0.796	0.228	1.42	8.79	0.56	10.77	5575	4.6206	8.89542	-4.27482	NAF
NS0035	136	138	NS	E392349	392349	1	G	W	27.42	39.78	2.85	0.271	0.21	0.136	3.05	0.42	0.075	0.099	0.618	0.164	1.87	11.32	0.31	13.5	5577	3.0294	7.32564	-4.29624	NAF
NS0035	260	262	NS	E392412	392412	1	G	W	24.98	46.91	4.97	0.207	0.16	0.237	3.76	1.08	0.087	0.475	0.654	0.176	0.8	4.05	1.04	5.89	5639	14.535	18.83736	-4.30236	NAF
NS0035	128	130	NS	E392345	392345	1	G	W	26.41	38.97	2.57	0.465	0.36	0.123	3.33	0.71	0.146	0.259	0.548	0.154	0.99	13.22	0.67	14.88	5573	7.9254	12.38382	-4.45842	NAF
NS0035	142	144	NS	E392352	392352	1	G	W	25.23	42.69	4.08	0.297	0.23	0.2	3.79	0.46	0.103	0.11	0.688	0.199	1.55	9.19	0.47	11.21	5580	3.366	8.02332	-4.65732	NAF
NS0035	42	44	NS	E392302	392302	1	G	W	28.24	47.74	4	0.323	0.25	0.195	1.06	0.38	0.08	0.057	0.164	0.06	3.79	1.48	0.28	5.55	5530	1.7442	6.62796	-4.88376	NAF
NS0035	246	248	NS	E392405	392405	1	G	W	24.23	46.04	5.57	0.349	0.27	0.261	3.53	0.88	0.028	0.338	0.763	0.198	0.96	5.51	0.95	7.42	5632	10.3428	15.34896	-5.00616	NAF
NS0035	126	128	NS	E392344	392344	1	G	W	27.38	37.09	2.32	0.555	0.43	0.108	3.48	0.55	0.091	0.134	0.686	0.199	1.36	13.69	0.42	15.47	5572	4.1004	9.5931	-5.4927	NAF
NS0035	138	140	NS	E392350	392350	1	G	W	26.38	43.08	2.49	0.271	0.21	0.119	2.81	0.44	0.081	0.071	0.612	0.168	1.65	10.3	0.18	12.13	5578	2.1726	7.67448	-5.50188	NAF
NS0035	194	196	NS	E392378	392378	1	G	W	26.79	42.55	3.21	0.478	0.37	0.156	3	1.02	0.093	0.394	0.516	0.173	1.1	8.15	0.97	10.22	5606	12.0564	17.79084	-5.73444	NAF
NS0035	152	154	NS	E392357	392357	1	G	W	26.05	41.85	2.26	0.491	0.38	0.107	2.92	0.58	0.129	0.133	0.751	0.214	1.66	10.85	0.42	12.93	5585	4.0698	10.11636	-6.04656	NAF
NS0035	122	124	NS	E392342	392342	1	G	W	24.52	43.82	3.42	0.336	0.26	0.165	3.49	0.67	0.156	0.164	0.746	0.194	1.63	9.39	0.58	11.6	5570	5.0184	11.68614	-6.66774	NAF
NS0035	198	200	NS	E392380	392380	1	G	W	27.03	44.68	3.99	0.245	0.19	0.192	3.3	0.74	0.074	0.202	0.733	0.196	1.05	5.14	0.59	6.78	5608	6.1812	12.90708	-6.72588	NAF
NS0035	124	126	NS	E392343	392343	1	G	W	26.37	40.17	3.52	0.361	0.28	0.168	3.71	0.56	0.114	0.099	0.866	0.254	1.58	10.49	0.45	12.52	5571	3.0294	9.76752	-6.73812	NAF
NS0035	66	68	NS	E392314	392314	1	G	W	28.06	36.61	3.81	0.465	0.36	0.187	3.65	0.63	0.082	0.131	0.787	0.243	1.88	10.88	0.42	13.18	5542	4.0086	10.98846	-6.97986	NAF
NS0035	88	90	NS	E392325	392325	1	G	W	25.55	41.28	3.16	0.426	0.33	0.15	3.63	0.69	0.14	0.163	0.797	0.22	2.04	9.96	0.6	12.6	5553	4.9878	12.03498	-7.04718	NAF
NS0035	64	66	NS	E392313	392313	1	G	W	26.02	40.86	3.56	0.465	0.36	0.173	3.38	0.67	0.065	0.148	0.709	0.21	1.62	10.47	0.48	12.57	5541	4.5288	11.68614	-7.15734	NAF
NS0035	210	212	NS	E392386	392386	1	G	W	26.44	42.13	3.68	0.361	0.28	0.175	3.58	1.03	0.119	0.345	0.634	0.186	1.1	8.14	0.82	10.06	5614	10.557	17.96526	-7.40826	NAF
NS0035	250	252	NS	E392407	392407	1	G	W	23.63	46.86	6.39	0.207	0.16	0.326	4.01	1.22	0.028	0.444	0.842	0.243	0.96	3.29	1.27	5.52	5634	13.5864	21.27924	-7.69284	NAF
NS0035	146	148	NS	E392354	392354	1	G	W	21.9	49.83	4.19	0.349	0.27	0.201	3.63	0.73	0.12	0.152	0.937	0.267	1.38	6.13	0.65	8.16	5582	4.6512	12.73266	-8.08146	NAF
NS0035	276	278	NS	E392420	392420	1	G	W	29.54	42.68	2.47	0.336	0.26	0.122	3.11	0.59	0.085	0.071	0.638	0.186	0.8	6.21	0.04	7.05	5647	2.1726	10.29078	-8.11818	NAF
NS0035	162	164	NS	E392362	392362	1	G	W	23.14	47.02	6.99	0.194	0.15	0.338	3.87	1.35	0.104	0.504	0.84	0.239	1.01	3.3	1.24	5.55	5590	15.4224	23.5467	-8.1243	NAF
NS0035	208	210	NS	E392385	392385	1	G	W	25.91	44.91	2.79	0.374	0.29	0.137	3.12	0.8	0.084	0.178	0.758	0.218	1.46	7.4	0.54	9.4	5613	5.4468	13.9536	-8.5068	NAF
NS0035	234	236	NS	E392398	392398	1	G	W	23.16	47.55	4.05	0.555	0.43	0.195	3.17	0.93	0.089	0.25	0.764	0.216	1.28	6.96	0.84	9.08	5626	7.65	16.22106	-8.57106	NAF
NS0035	60	62	NS	E392311	392311	1	G	W	24.91	42.46	3.48	0.478	0.37	0.169	3.21	0.86	0.127	0.207	0.562	0.171	1.99	9.97	0.65	12.61	5539	6.3342	15.00012	-8.66592	NAF
NS0035	272	274	NS	E392418	392418	1	G	W	30.13	41.14	2.78	0.336	0.26	0.136	3.34	0.69	0.072	0.11	0.655	0.179	0.88	6.02	0.26	7.16	5645	3.366	12.03498	-8.66898	NAF
NS0035	116	118	NS	E392339	392339	1	G	W	16.65	58	6.11	0.168	0.13	0.284	3.76	1.63	0.087	0.642	0.496	0.145	0.78	2.85	1.52	5.15	5567	19.6452	28.43046	-8.78526	NAF
NS0035	48	50	NS	E392305	392305	1	G	W	27.1	44.12	3.4	0.387	0.3	0.164	2.45	0.68	0.127	0.098	0.463	0.118	2.3	6.44	0.33	9.07	5533	2.9988	11.86056	-8.86176	NAF
NS0035	274	276	NS	E392419	392419	1	G	W	29.89	41.85	2.4	0.336	0.26	0.116	3.2	0.68	0.106	0.098	0.643	0.178	0.9	6.24	0.21	7.35	5646	2.9988	11.86056	-8.86176	NAF
NS0035	62	64	NS	E392312	392312	1	G	W	22.72	46.25	4.75	0.374	0.29	0.229	3.71	1.43	0.098	0.523	0.916	0.272	1.56	5.82	1.47	8.85	5540	16.0038	24.94206	-8.93826	NAF
NS0035	78	80	NS	E392320	392320	1	G	W	24.24	43.75	2.94	0.413	0.32	0.142	3.4	0.76	0.11	0.139	0.651	0.198	1.59	10.44	0.49	12.52	5548	4.2534	13.25592	-9.00252	NAF
NS0035	232	234	NS	E392397	392397	1	G	W	30.15	36.53	2.41	0.62	0.48	0.115	2.95	0.72	0.111	0.116	0.341	0.108	1.12	11.42	0.04	12.58	5625	3.5496	12.55824	-9.00864	NAF
NS0035	134	136	NS	E392348	392348	1	G	W	23.74	45.04	4.69	0.374	0.29	0.226	3.92	0.77	0.199	0.142	0.877	0.261	1.41	7.41	0.59	9.41	5576	4.3452	13.43034	-9.08514	NAF
NS0035	280	282	NS	E392422	392422	1	G	W	26.37	50.85	1.24	0.323	0.25	0.06	2.24	0.59	0.084	0.036	0.431	0.119	0.69	5.67	0	6.36	5649	1.1016	10.29078	-9.18918	NAF
NS0035	164	166	NS	E392363	392363	1	G	W	26.01	41.71	5.53	0.387	0.3	0.27	3.93	1.39	0.147	0.461	0.812	0.251	1.23	5.67	1.3	8.2	5591	14.1066	24.24438	-10.13778	NAF
NS0035	72	74	NS	E392317	392317	1	G	W	25.62	43.16	3.84	0.361	0.28	0.185	3.26	0.88	0.113	0.139	0.694	0.204	1.96	7.9	0.55	10.41	5545	4.2534	15.34896	-11.09556	NAF
NS0035	70	72	NS	E392316	392316	1	G	W	27.33	37.39	3.03	0.465	0.36	0.145	3.48	0.87	0.161	0.122	0.685	0.206	1.4	12.56	0.26	14.22	5544	3.7332	15.17454	-11.44134	NAF
NS0035	230	232	NS	E392396	392396	1	G	W	24.48	45.47	2.87	0.4	0.31	0.136	2.93	1.13	0.07	0.247	0.24	0.077	0.96	9.46	0.69	11.11	5624	7.5582	19.70946	-12.15126	NAF
NS0035	160	162	NS	E392361	392361	1	G	W	25.2	45.58	4.7	0.31	0.24	0.228	3.25	1.3	0.12	0.335	0.963	0.281	1.3	4.47	1.04	6.81	5589	10.251	22.6746	-12.4236	NAF
NS0035	156	158	NS	E392359	392359	1	G	W	29.85	42.09	2.24	0.297	0.23	0.109	2.34	0.87	0.072	0.081	0.759	0.238	1.38	6.51	0.27	8.16	5587	2.4786	15.17454	-12.69594	NAF
NS0035	258	260	NS	E392411	392411	1	G	W	25.26	45.59	4.7	0.258	0.2	0.22	3.72	1.39	0.155	0.316	0.726	0.2	0.93	4.72	0.99	6.64	5638	9.6696	24.24438	-14.57478	NAF
NS0035	58	60	NS	E392310	392310	1	G	W	25.73	41.51	4.33	0.374	0.29	0.209	3.41	1.16	0.08	0.179	0.728	0.173	1.78	8.43	0.74	10.95	5538	5.4774	20.23272	-14.75532	NAF
NS0035	168	170	NS	E392365	392365	1	G	W	26.28	43.6	5.01	0.284	0.22	0.242	3.37	1.4	0.086	0.301	0.894	0.269	1.27	4.29	1.11	6.67	5593	9.2106	24.4188	-15.2082	NAF
NS0035	200	202	NS	E392381	392381	1	G	W	24.64	45.42	4.13	0.284	0.22	0.197	3.65	1.25	0.12	0.195	0.711	0.228	1.23	6.3	0.81	8.34	5609	5.967	21.8025	-15.8355	NAF
NS0035	248	250	NS	E392406	392406	1	G	W	27.63	41.34	2.9	0.529	0.41	0.13	3.15	1.11	0.169	0.083	0.539	0.151	0.93	8.64	0.23	9.8	5633	2.5398	19.36062	-16.82082	NAF
NS0035	186	188	NS	E392374	392374	1	G	W	21.77	49.47	6.2	0.271	0.21	0.295	3.21	1.76	0.089	0.451	1.04	0.135	0.66	4.07	1.29	6.02	5602	13.8006	30.69792	-16.89732	NAF
NS0035	68	70	NS	E392315	392315	1	G	W	24.93	42.31	3.66	0.503	0.39	0.175	3.55	1.41	0.141	0.244	0.99	0.281	1.65	8.18	1	10.83	5543	7.4664	24.59322	-17.12682	NAF
NS0035	226	228	NS	E392394	392394	1	G	W	26.43	40.68	3.19	0.465	0.36	0.151	3.4	1.29	0.09	0.172	0.529	0.167	1.17	9.77	0.77	11.71	5622	5.2632	22.50018	-17.23698	NAF
NS0035	214	216	NS	E392388	392388	1	G	W	26.61	42.47	2.45	0.349	0.27	0.119	3.3	1.24	0.105	0.142	0.463	0.139	1.01	9.5	0.61	11.12	5616	4.3452	21.62808	-17.28288	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0035	224	226	NS	E392393	392393	1	G	W	26.58	42.71	3.63	0.323	0.25	0.176	3.45	1.43	0.094	0.216	0.808	0.234	1.18	6.58	1.02	8.78	5621	6.6096	24.94206	-18.33246	NAF
NS0035	50	52	NS	E392306	392306	1	G	W	27.96	40.78	3.4	0.387	0.3	0.164	3.05	1.3	0.138	0.133	0.572	0.142	1.59	7.45	0.57	9.61	5534	4.0698	22.6746	-18.6048	NAF
NS0035	264	266	NS	E392414	392414	1	G	W	27.14	47.14	2	0.284	0.22	0.096	2.62	1.21	0.061	0.077	0.55	0.155	0.72	5.29	0.66	6.67	5641	2.3562	21.10482	-18.74862	NAF
NS0035	262	264	NS	E392413	392413	1	G	W	27.92	45.7	1.74	0.336	0.26	0.082	2.54	1.17	0.098	0.053	0.529	0.147	0.83	6.09	0.46	7.38	5640	1.6218	20.40714	-18.78534	NAF
NS0035	202	204	NS	E392382	392382	1	G	W	29.6	40.01	3.17	0.271	0.21	0.156	3.08	1.51	0.131	0.246	0.442	0.129	0.99	6.74	0.79	8.52	5610	7.5276	26.33742	-18.80982	NAF
NS0035	196	198	NS	E392379	392379	1	G	W	26.69	43.31	3.62	0.31	0.24	0.176	3.21	1.49	0.151	0.215	0.568	0.152	0.99	6.64	0.82	8.45	5607	6.579	25.98858	-19.40958	NAF
NS0035	174	176	NS	E392368	392368	1	G	W	25.27	45.32	4.85	0.258	0.2	0.233	3.37	1.63	0.09	0.243	0.869	0.257	1.15	4.03	1.25	6.43	5596	7.4358	28.43046	-20.99466	NAF
NS0035	166	168	NS	E392364	392364	1	G	W	21.6	49.16	6.34	0.232	0.18	0.3	3.61	1.93	0.181	0.401	0.722	0.215	0.96	3.72	1.29	5.97	5592	12.2706	33.66306	-21.39246	NAF
NS0035	256	258	NS	E392410	392410	1	G	W	26.79	44.71	3.45	0.323	0.25	0.167	3.31	1.46	0.122	0.112	0.697	0.195	0.89	5.09	0.81	6.79	5637	3.4272	25.46532	-22.03812	NAF
NS0035	170	172	NS	E392366	392366	1	G	W	26.69	43.74	4.2	0.31	0.24	0.205	3	1.65	0.109	0.204	0.778	0.225	1.17	4.77	1.1	7.04	5594	6.2424	28.7793	-22.5369	NAF
NS0035	266	268	NS	E392415	392415	1	G	W	31.07	40.92	1.86	0.323	0.25	0.089	2.78	1.42	0.096	0.057	0.554	0.159	0.71	5.82	0.68	7.21	5642	1.7442	24.76764	-23.02344	NAF
NS0035	270	272	NS	E392417	392417	1	G	W	26.78	46.75	2.04	0.31	0.24	0.098	2.81	1.57	0.146	0.099	0.569	0.167	0.77	5.33	0.75	6.85	5644	3.0294	27.38394	-24.35454	NAF
NS0035	268	270	NS	E392416	392416	1	G	W	31.53	39.17	1.77	0.336	0.26	0.084	2.83	1.56	0.14	0.051	0.513	0.149	0.77	6.31	0.67	7.75	5643	1.5606	27.20952	-25.64892	NAF
NS0035	54	56	NS	E392308	392308	1	G	W	26.4	41.16	3.24	0.426	0.33	0.156	2.94	1.78	0.1	0.158	0.606	0.155	1.4	8.75	0.94	11.09	5536	4.8348	31.04676	-26.21196	NAF
NS0035	184	186	NS	E392373	392373	1	G	W	28.49	42.74	3.04	0.374	0.29	0.148	2.7	1.82	0.088	0.109	0.764	0.207	0.97	5.07	1.11	7.15	5601	3.3354	31.74444	-28.40904	NAF
NS0035	158	160	NS	E392360	392360	1	G	W	28.57	40.54	2.54	0.387	0.3	0.122	2.64	1.84	0.14	0.112	0.738	0.22	1.04	7.23	1.09	9.36	5588	3.4272	32.09328	-28.66608	NAF
NS0035	212	214	NS	E392387	392387	1	G	W	25.41	47.33	1.37	0.349	0.27	0.066	2.3	1.79	0.065	0.061	0.339	0.11	0.79	7.61	1.11	9.51	5615	1.8666	31.22118	-29.35458	NAF
NS0035	56	58	NS	E392309	392309	1	G	W	26.18	40.3	3.38	0.439	0.34	0.17	3.04	2.09	0.117	0.142	0.624	0.182	1.46	9.19	1.04	11.69	5537	4.3452	36.45378	-32.10858	NAC
NS0035	52	54	NS	E392307	392307	1	G	W	24.83	42.6	3.56	0.439	0.34	0.174	3.29	2.12	0.142	0.142	0.72	0.173	1.4	8.21	1.24	10.85	5535	4.3452	36.97704	-32.63184	NAC
NS0035	178	180	NS	E392370	392370	1	G	W	26.37	43.92	3.89	0.31	0.24	0.189	3.19	2.28	0.132	0.224	0.793	0.226	1.06	4.3	1.53	6.89	5598	6.8544	39.76776	-32.91336	NAC
NS0035	190	192	NS	E392376	392376	1	G	W	23.31	45.75	3.6	0.4	0.31	0.178	3.36	2.4	0.114	0.259	0.855	0.255	1.24	6.46	1.82	9.52	5604	7.9254	41.8608	-33.9354	NAC
NS0035	254	256	NS	E392409	392409	1	G	W	27.51	44.33	2.56	0.374	0.29	0.12	2.84	2.24	0.09	0.126	0.4	0.121	0.62	5.14	1.56	7.32	5636	3.8556	39.07008	-35.21448	NAC
NS0035	242	244	NS	E392403	392403	1	G	W	20.26	51.83	4.29	0.336	0.26	0.198	3.1	2.99	0.212	0.55	0.77	0.214	0.85	3.58	1.94	6.37	5630	16.83	52.15158	-35.32158	NAC
NS0035	180	182	NS	E392371	392371	1	G	W	27.02	42.54	3.13	0.426	0.33	0.152	2.93	2.27	0.105	0.121	0.917	0.261	1.14	5.1	1.78	8.02	5599	3.7026	39.59334	-35.89074	NAC
NS0035	252	254	NS	E392408	392408	1	G	W	27.43	42.66	3.16	0.387	0.3	0.153	3.11	2.41	0.061	0.114	0.534	0.15	0.79	5.2	1.98	7.97	5635	3.4884	42.03522	-38.54682	NAC
NS0035	182	184	NS	E392372	392372	1	G	W	24.13	47.5	4.01	0.271	0.21	0.192	3.06	2.55	0.123	0.17	0.774	0.233	0.99	3.43	1.87	6.29	5600	5.202	44.4771	-39.2751	NAC
NS0035	218	220	NS	E392390	392390	1	G	W	31.87	37.64	3.03	0.245	0.19	0.156	2.89	2.53	0.048	0.142	0.731	0.185	0.86	3.7	2.04	6.6	5618	4.3452	44.12826	-39.78306	NAC
NS0035	228	230	NS	E392395	392395	1	G	W	26.02	39.78	2.76	0.439	0.34	0.134	3.18	2.66	0.141	0.124	0.321	0.103	0.93	9.89	1.86	12.68	5623	3.7944	46.39572	-42.60132	NAC
NS0035	188	190	NS	E392375	392375	1	G	W	30.35	40.19	2.15	0.361	0.28	0.104	2.28	2.62	0.149	0.083	0.617	0.167	0.82	5.01	1.69	7.52	5603	2.5398	45.69804	-43.15824	NAC
NS0035	220	222	NS	E392391	392391	1	G	W	24.82	49.05	2.33	0.219	0.17	0.113	2.5	2.76	0.051	0.119	0.659	0.181	0.76	3.07	2.4	6.23	5619	3.6414	48.13992	-44.49852	NAC
NS0035	172	174	NS	E392367	392367	1	G	W	21.42	46.54	6	0.258	0.2	0.306	3.91	3.08	0.061	0.24	0.775	0.218	1.17	4.14	2.76	8.07	5595	7.344	53.72136	-46.37736	NAC
NS0035	176	178	NS	E392369	392369	1	G	W	28.6	41.8	2.85	0.323	0.25	0.138	2.49	2.84	0.104	0.094	0.672	0.179	0.84	4.3	2.16	7.3	5597	2.8764	49.53528	-46.65888	NAC
NS0035	222	224	NS	E392392	392392	1	G	W	24.79	48.33	2.37	0.232	0.18	0.113	2.59	2.93	0.101	0.134	0.663	0.197	0.75	3.31	2.6	6.66	5620	4.1004	51.10506	-47.00466	NAC
NS0035	216	218	NS	E392389	392389	1	G	W	25.65	46.34	2.41	0.245	0.19	0.117	2.57	2.97	0.113	0.121	0.506	0.149	0.78	4.4	2.31	7.49	5617	3.7026	51.80274	-48.10014	NAC
NS0037	122	124	NS	E392524	392524	1	G	W	20.89	49.05	6.46	0.323	0.25	0.297	2.68	0.18	0.031	1.48	2.08	0.093	0.5	5.71	2.19	8.4	5711	45.288	3.13956	42.14844	PAF(HC)
NS0037	106	108	NS	E392516	392516	1	G	W	20.8	50.72	6.06	0.284	0.22	0.28	3.16	0.25	0.044	0.582	1.1	0.202	0.98	5.58	1.16	7.72	5703	17.8092	4.3605	13.4487	PAF(HC)
NS0037	50	52	NS	E392487	392487	1	G	W	22.91	44.98	6.98	0.219	0.17	0.332	3.15	0.56	0.138	0.693	0.593	0.068	0.97	7.19	1.23	9.39	5675	21.2058	9.76752	11.43828	PAF(HC)
NS0037	118	120	NS	E392522	392522	1	G	W	19.91	52.45	6.1	0.245	0.19	0.288	2.94	0.13	0.017	0.325	1.19	0.093	0.94	6.39	0.69	8.02	5709	9.945	2.26746	7.67754	PAF(LC)
NS0037	114	116	NS	E392520	392520	1	G	W	22.46	47.5	4.5	0.387	0.3	0.214	2.74	0.24	0.027	0.36	0.647	0.046	0.93	9.58	0.77	11.28	5707	11.016	4.18608	6.82992	PAF(LC)
NS0037	56	58	NS	E392490	392490	1	G	W	23.51	40.1	8.9	0.181	0.14	0.414	4.1	0.79	0.122	0.657	0.781	0.075	0.71	7.87	1.14	9.72	5678	20.1042	13.77918	6.32502	PAF(LC)
NS0037	116	118	NS	E392521	392521	1	G	W	19.08	53.26	5.45	0.323	0.25	0.259	2.85	0.26	0.048	0.329	0.925	0.102	1.01	6.91	0.78	8.7	5708	10.0674	4.53492	5.53248	PAF(LC)
NS0037	110	112	NS	E392518	392518	1	G	W	23.97	45.05	4.6	0.297	0.23	0.215	2.85	0.25	0.029	0.248	0.529	0.057	1.04	9.8	0.49	11.33	5705	7.5888	4.3605	3.2283	PAF(LC)
NS0037	112	114	NS	E392519	392519	1	G	W	25.38	43.67	4.35	0.349	0.27	0.2	2.7	0.25	0.034	0.233	0.807	0.066	0.99	9.39	0.44	10.82	5706	7.1298	4.3605	2.7693	PAF(LC)
NS0037	124	126	NS	E392525	392525	1	G	W	22.49	53.6	3.4	0.349	0.27	0.156	2.25	0.28	0.03	0.235	0.481	0.045	0.71	5.96	0.4	7.07	5712	7.191	4.88376	2.30724	PAF(LC)
NS0037	102	104	NS	E392514	392514	1	G	W	22.58	46.31	4.01	0.413	0.32	0.186	2.72	0.43	0.078	0.31	0.426	0.114	1.33	9.94	0.81	12.08	5701	9.486	7.50006	1.98594	PAF(LC)
NS0037	46	48	NS	E392485	392485	1	G	W	28.51	35.48	4.12	0.31	0.24	0.191	2.69	0.37	0.035	0.273	0.62	0.046	2.36	11.52	0.57	14.45	5673	8.3538	6.45354	1.90026	PAF(LC)
NS0037	48	50	NS	E392486	392486	1	G	W	23.63	44.83	5.61	0.245	0.19	0.265	2.85	0.69	0.163	0.43	0.648	0.082	1.63	7.61	0.95	10.19	5674	13.158	12.03498	1.12302	PAF(LC)
NS0037	120	122	NS	E392523	392523	1	G	W	25.24	44.62	3.76	0.439	0.34	0.175	2.48	0.24	0.032	0.153	0.563	0.046	1.28	9.66	0.3	11.24	5710	4.6818	4.18608	0.49572	PAF(LC)
NS0037	108	110	NS	E392517	392517	1	G	W	23.22	45.66	3.82	0.4	0.31	0.177	2.78	0.46	0.088	0.278	0.322	0.077	1.14	10.58	0.67	12.39	5704	8.5068	8.02332	0.48348	PAF(LC)
NS0037	8	10	NS	E392466	392466	1	G	D	34.93	32.15	8.42	-0.0129	-0.01	0.917	0.05	0.005	0.024	0.016	0.008	0.025	6.22	1.81	0.28	8.31	5654	0.4896	0.08721	0.40239	PAF(LC)
NS0037	0	2	NS	E392462	392462	1	G	D	33.36	25.71	15	0.013	0.01	1.497	0.08	0.03	0.022	0.029	0.045	0.042	5.37	3.88	0.42	9.67	5650	0.8874	0.52326	0.36414	PAF(LC)
NS0037	6	8	NS	E392465	392465	1	G	D	23.51	51.82	7.22	-0.0129	-0.01	1.331	0.04	0.005	0.018	0.014	0.012	0.022	3.8	1.71	0.22	5.73	5653	0.4284	0.08721	0.34119	PAF(LC)
NS0037	100	102	NS	E392513	392513	1	G	W	25.23	42.43	2.63	0.503	0.39	0.118	2.24	0.67	0.143	0.387	0.481	0.11	1.94	11.26	0.94	14.14	5700	11.8422	11.68614	0.15606	PAF(LC)
NS0037	104	106	NS	E392515	392515	1	G	W	24.16	42.01	3.26	0.594	0.46	0.147	2.77	0.52	0.084	0.3	0.196	0.048	1.32	12.88	0.81	15.01	5702	9.18	9.06984	0.11016	PAF(LC)
NS0037	4	6	NS	E392464	392464	1	G	D	26.23	47.14	8.25	-0.0129	-0.01	1.357	0.05	0.02	0.019	0.013	0.021	0.015	3.53	1.87	0.25	5.65	5652	0.3978	0.34884	0.04896	PAF(LC)
NS0037	2	4	NS	E392463	392463	1	G	D	27.08	43.5	9.31	0.026	0.02	1.46	0.07	0.04	0.019	0.013	0.035	0.034	3.79	2.2	0.29	6.28	5651	0.3978	0.69768	-0.29988	NAF
NS0037	10	12	NS	E392467	392467	1	G	D	37.34	30.24	5.86	0.065	0.05	0.444	0.08	0.03	0.01	0.006	0.007	0.028	7.27	1.85	0.23	9.35	5655	0.1836	0.52326	-0.33966	NAF
NS0037	16	18	NS	E392470	392470	1	G	D	27.32	44.31	7.61	0.026	0.02	0.383	0.12	0.04	0.04	0.01	0.022	0.054	5.42	2.23	0.24	7.89	5658	0.306	0.69768	-0.39168	NAF
NS0037	12	14	NS	E392468	392468	1	G	D	29.61	42.01	7.25	0.026	0.02	0.557	0.1	0.04	0.01	0.006	0.009	0.035	4.96	2.02	0.2	7.18	5656	0.1836	0.69768	-0.51408	NAF
NS0037	14	16	NS	E392469	392469	1	G	D	33.32	36.37	6.65	0.013	0.01	0.437	0.11	0.04	0.01	0.005	0.009	0.041	6.44	1.68	0.21	8.33	5657	0.153	0.69768	-0.54468	NAF
NS0037	18	20	NS	E392471	392471	1	G	D	30.17	43.62	4.85	0.142	0.11	0.238	0.39	0.06	0.032	0.007	0.275	0.061	5.41	1.5	0.2	7.11	5659	0.2142	1.04652	-0.83232	NAF
NS0037	20	22	NS	E392472	392472	1	G	D	25.58	49	5.61	0.103	0.08	0.241	0.51	0.07	0.041	0.006	0.381	0.075	4.84	1.92	0.23	6.99	5660	0.1836	1.22094	-1.03734	NAF
NS0037	126	128	NS	E392526	392526	1	G	W	23.03	49.6	2.92	0.503	0.39	0.136	2.77	0.42	0.026	0.2	0.232	0.065	0.82	8.79	0.43	10.04	5713	6.12	7.32564	-1.20564	NAF
NS0037	98	100	NS	E392512	392512	1	G	W	26.14	42.37	3.19	0.349	0.27	0.145	2.52	0.49	0.096	0.234	0.596	0.143	1.5	10.3	0.49	12.29	5699	7.1604	8.54658	-1.38618	NAF
NS0037	28	30	NS	E392476	392476	1	G	D	25.48	49.04	4.91	0.749	0.58	0.236	0.71	0.09	0.04	0.004	0.69	0.058	4.83	1.63	0.3	6.76	5664	0.1224	1.56978	-1.44738	NAF
NS0037	54	56	NS	E392489	392489	1	G	W	22.67	47.51	4	0.297	0.23	0.183	2.72	0.74	0.084	0.371	0.697	0.092	1.4	8.68	0.9	10.98	5677	11.3526	12.90708	-1.55448	NAF
NS0037	26	28	NS	E392475	392475	1	G	D	24.11	49.39	6.25	0.568	0.44	0.308	0.62	0.1	0.035	0.005	0.656	0.076	4.71	2.06	0.28	7.05	5663	0.153	1.7442	-1.5912	NAF
NS0037	32	34	NS	E392478	392478	1	G	D	26.21	47.64	5.18	0.788	0.61	0.254	0.73	0.1	0.067	0.004	0.967	0.062	4.46	1.57	0.29	6.32	5666	0.1224	1.7442	-1.6218	NAF
NS0037	24	26	NS	E392474	392474	1	G	D	26.08	46.8	6.34	0.232	0.18	0.351	0.45	0.12	0.045	0.007	0.55	0.075	5.01	2	0.24	7.25	5662	0.2142	2.09304	-1.87884	NAF
NS0037	176	178	NS	E392551	392551	1	G	W	28.54	40.02	4.04	0.232	0.18	0.201	2.69	0.31	0.04	0.111	1.07	0.062	2.4	7.14	0.22	9.76	5738	3.3966	5.40702	-2.01042	NAF
NS0037	30	32	NS	E392477	392477	1	G	D	25.17	49.47	5.01	0.697	0.54	0.237	0.78	0.13	0.052	0.004	0.747	0.069	4.69	1.62	0.28	6.59	5665	0.1224	2.26746	-2.14506	NAF
NS0037	92	94	NS	E392509	392509	1	G	W	29.97	35.9	3.37	0.361	0.28	0.154	2.79	0.36	0.041	0.121	0.501	0.098	1.35	11.3	0.15	12.8	5696	3.7026	6.27912	-2.57652	NAF
NS0037	42	44	NS	E392483	392483	1	G	W	23.31	55.04	3.05	0.245	0.19	0.146	0.78	0.19	0.068	0.016	0.514	0.031	3.34	2.75	0.13	6.22	5671	0.4896	3.31398	-2.82438	NAF
NS0037	22	24	NS	E392473	392473	1	G	D	23.24	51.3	6.24	0.168	0.13	0.296	0.84	0.2	0.043	0.005	0.37	0.13	4.6	2.22	0.25	7.07	5661	0.153	3.4884	-3.3354	NAF
NS0037	34	36	NS	E392479	392479	1	G	D	20.59	52.2	7.77	0.387	0.3	0.368	0.97	0.2	0.042	0.004	1.91	0.094	3.88	2.03	0.28	6.19	5667	0.1224	3.4884	-3.366	NAF
NS0037	36	38	NS	E392480	392480	1	G	W	23.08	48.34	7.84	0.245	0.19	0.394	0.98	0.22	0.042	0.004	1.95	0.088	4.3	2.11	0.25	6.66	5668	0.1224	3.83724	-3.71484	NAF
NS0037	40	42	NS	E392482	392482	1	G	W	23.13	50.51	6.4	0.349	0.27	0.3	1.11	0.22	0.048	0.002	0.918	0.068	4.41	2.05	0.27	6.73	5670	0.0612	3.83724	-3.77604	NAF
NS0037	38	40	NS	E392481	392481	1	G	W	23.37	49.69	6.59	0.374	0.29	0.316	1.11	0.24	0.05	0.002	1.21	0.083	4.44	2.03	0.27	6.74	5669	0.0612	4.18608	-4.12488	NAF
NS0037	78	80	NS	E392502	392502	1	G	W	27.6	45.06	2.05	0.258	0.2	0.105	1.62	0.39	0.07	0.079	0.504	0.073	1.85	8.48	0.03	10.36	5689	2.4174	6.80238	-4.38498	NAF
NS0037	128	130	NS	E392527	392527	1	G	W	28.96	45.84	2.8	0.349	0.27	0.128	2.31	0.46	0.047	0.094	0.149	0.038	0.67	5.41	-0.09	5.99	5714	2.8764	8.02332	-5.14692	NAF
NS0037	136	138	NS	E392531	392531	1	G	W	27.7	46.9	3.09	0.284	0.22	0.145	2.77	1.01	0.133	0.387	0.518	0.042	0.42	3.78	0.76	4.96	5718	11.8422	17.61642	-5.77422	NAF
NS0037	178	180	NS	E392552	392552	1	G	W	30.65	40.88	3.43	0.219	0.17	0.168	2.2	0.44	0.052	0.053	0.351	0.036	1.95	6.15	-0.12	7.98	5739	1.6218	7.67448	-6.05268	NAF
NS0037	130	132	NS	E392528	392528	1	G	W	31.59	41.08	3.05	0.426	0.33	0.139	2.68	0.65	0.103	0.152	0.327	0.043	0.57	5.58	0.02	6.17	5715	4.6512	11.3373	-6.6861	NAF
NS0037	86	88	NS	E392506	392506	1	G	W	29.68	39.4	2.75	0.284	0.22	0.127	2.26	0.62	0.087	0.133	0.332	0.043	1.21	9.94	0.07	11.22	5693	4.0698	10.81404	-6.74424	NAF
NS0037	44	46	NS	E392484	392484	1	G	W	30.43	38.4	2.13	0.297	0.23	0.102	1.64	0.41	0.033	0.012	0.875	0.033	2.25	10.05	-0.19	12.11	5672	0.3672	7.15122	-6.78402	NAF
NS0037	88	90	NS	E392507	392507	1	G	W	29.78	35.34	4.08	0.349	0.27	0.192	3.17	0.61	0.094	0.125	0.644	0.118	1.28	10.99	0.2	12.47	5694	3.825	10.63962	-6.81462	NAF
NS0037	74	76	NS	E392499	392499	1	G	W	28.54	35.73	3.09	0.465	0.36	0.14	2.09	0.7	0.151	0.166	0.896	0.115	1.94	12.5	0.39	14.83	5687	5.0796	12.2094	-7.1298	NAF
NS0037	134	136	NS	E392530	392530	1	G	W	29.94	45.72	2.39	0.361	0.28	0.107	2.29	0.64	0.11	0.13	0.563	0.05	0.45	3.92	0.11	4.48	5717	3.978	11.16288	-7.18488	NAF
NS0037	150	152	NS	E392538	392538	1	G	W	32.99	33.68	1.82	0.387	0.3	0.081	2.61	0.51	0.082	0.055	1.21	0.058	0.78	11.43	-0.23	11.98	5725	1.683	8.89542	-7.21242	NAF
NS0037	142	144	NS	E392534	392534	1	G	W	34.39	37.56	1.45	0.529	0.41	0.064	2.14	0.47	0.098	0.028	1.1	0.033	0.39	6.95	-0.38	6.96	5721	0.8568	8.19774	-7.34094	NAF
NS0037	76	78	NS	E392500	392500	1	G	W	28.34	36.96	2.31	0.413	0.32	0.104	2.16	0.74	0.155	0.176	0.703	0.088	1.68	13	0.41	15.09	5688	5.3856	12.90708	-7.52148	NAF
NS0037	146	148	NS	E392536	392536	1	G	W	35.23	35.09	1.7	0.387	0.3	0.097	2.35	0.51	0.109	0.033	1.05	0.045	0.43	7.59	-0.4	7.62	5723	1.0098	8.89542	-7.88562	NAF
NS0037	152	154	NS	E392539	392539	1	G	W	27.65	37.32	3.01	0.4	0.31	0.145	3.14	0.88	0.172	0.216	1.29	0.087	0.91	12.03	0.42	13.36	5726	6.6096	15.34896	-8.73936	NAF
NS0037	58	60	NS	E392491	392491	1	G	W	23.69	44.7	3.11	0.31	0.24	0.14	2.56	0.81	0.153	0.172	0.536	0.087	1.81	10.88	0.37	13.06	5679	5.2632	14.12802	-8.86482	NAF
NS0037	90	92	NS	E392508	392508	1	G	W	28.64	34.99	3.15	0.439	0.34	0.147	2.93	0.76	0.146	0.126	0.56	0.102	1.82	13.34	0.27	15.43	5695	3.8556	13.25592	-9.40032	NAF
NS0037	140	142	NS	E392533	392533	1	G	W	33.15	39.53	2.06	0.374	0.29	0.093	2.38	0.65	0.141	0.063	0.962	0.044	0.35	6.04	-0.26	6.13	5720	1.9278	11.3373	-9.4095	NAF
NS0037	132	134	NS	E392529	392529	1	G	W	31.54	42.68	2.28	0.426	0.33	0.107	2.31	0.71	0.113	0.073	0.614	0.049	0.4	4.96	-0.17	5.19	5716	2.2338	12.38382	-10.15002	NAF
NS0037	138	140	NS	E392532	392532	1	G	W	29.74	45.62	2.19	0.297	0.23	0.101	2.37	0.77	0.059	0.098	0.626	0.054	0.45	4.52	0.11	5.08	5719	2.9988	13.43034	-10.43154	NAF
NS0037	156	158	NS	E392541	392541	1	G	W	27.14	42.67	2.04	0.426	0.33	0.106	2.34	0.73	0.084	0.074	0.532	0.04	1.22	10.38	0.09	11.69	5728	2.2644	12.73266	-10.46826	NAF
NS0037	84	86	NS	E392505	392505	1	G	W	26.07	46.69	2.12	0.258	0.2	0.099	1.86	0.83	0.161	0.125	0.384	0.062	1.26	8.05	0.15	9.46	5692	3.825	14.47686	-10.65186	NAF
NS0037	66	68	NS	E392495	392495	1	G	W	28.43	44.29	1.92	0.284	0.22	0.091	1.62	0.73	0.089	0.061	0.686	0.066	1.45	7.78	-0.06	9.17	5683	1.8666	12.73266	-10.86606	NAF
NS0037	94	96	NS	E392510	392510	1	G	W	28.56	34.27	4.92	0.336	0.26	0.23	3.36	0.83	0.207	0.112	1.11	0.153	1.55	11.24	0.24	13.03	5697	3.4272	14.47686	-11.04966	NAF
NS0037	62	64	NS	E392493	392493	1	G	W	30.37	40.96	1.52	0.31	0.24	0.069	1.6	0.72	0.1	0.032	0.706	0.067	1.53	8.65	-0.21	9.97	5681	0.9792	12.55824	-11.57904	NAF
NS0037	68	70	NS	E392496	392496	1	G	W	29.12	42.88	1.88	0.284	0.22	0.087	1.59	0.8	0.168	0.06	0.706	0.051	1.85	7.47	-0.09	9.23	5684	1.836	13.9536	-12.1176	NAF
NS0037	174	176	NS	E392550	392550	1	G	W	31.9	39.18	2.92	0.207	0.16	0.171	1.79	0.85	0.06	0.088	0.302	0.027	2.9	5.31	0.22	8.43	5737	2.6928	14.8257	-12.1329	NAF
NS0037	166	168	NS	E392546	392546	1	G	W	32.66	33.24	1.38	0.387	0.3	0.06	2.74	0.73	0.092	0.016	0.87	0.029	1.12	12.3	-0.12	13.3	5733	0.4896	12.73266	-12.24306	NAF
NS0037	172	174	NS	E392549	392549	1	G	W	25.95	45.57	1.53	0.323	0.25	0.066	2.46	0.86	0.055	0.074	0.433	0.044	0.38	10.51	0.24	11.13	5736	2.2644	15.00012	-12.73572	NAF
NS0037	144	146	NS	E392535	392535	1	G	W	33.54	37.33	1.69	0.452	0.35	0.079	2.33	0.85	0.178	0.067	0.948	0.035	0.41	7.67	-0.25	7.83	5722	2.0502	14.8257	-12.7755	NAF
NS0037	170	172	NS	E392548	392548	1	G	W	32.87	35.23	1.63	0.361	0.28	0.073	2.39	0.8	0.078	0.033	1.18	0.032	0.7	10.13	-0.05	10.78	5735	1.0098	13.9536	-12.9438	NAF
NS0037	164	166	NS	E392545	392545	1	G	W	29.81	35.4	1.46	0.4	0.31	0.06	2.94	0.78	0.076	0.019	0.67	0.046	1.03	14.27	0.02	15.32	5732	0.5814	13.60476	-13.02336	NAF
NS0037	96	98	NS	E392511	392511	1	G	W	28.14	33.29	5.06	0.387	0.3	0.239	3.51	1	0.242	0.129	0.852	0.132	1.34	12.47	0.28	14.09	5698	3.9474	17.442	-13.4946	NAF
NS0037	160	162	NS	E392543	392543	1	G	W	28.99	38.21	1.84	0.439	0.34	0.08	2.75	0.93	0.166	0.084	0.85	0.044	0.84	11.75	-0.03	12.56	5730	2.5704	16.22106	-13.65066	NAF
NS0037	72	74	NS	E392498	392498	1	G	W	28.68	37.62	2.76	0.336	0.26	0.131	1.87	0.97	0.222	0.095	0.97	0.108	2.25	11.06	0.14	13.45	5686	2.907	16.91874	-14.01174	NAF
NS0037	168	170	NS	E392547	392547	1	G	W	32.4	34.98	1.45	0.4	0.31	0.072	2.41	0.85	0.102	0.022	1.04	0.028	1.1	10.81	-0.09	11.82	5734	0.6732	14.8257	-14.1525	NAF
NS0037	162	164	NS	E392544	392544	1	G	W	32.69	32.57	1.49	0.426	0.33	0.069	2.87	0.9	0.115	0.04	0.584	0.044	1.08	12.82	-0.03	13.87	5731	1.224	15.6978	-14.4738	NAF
NS0037	52	54	NS	E392488	392488	1	G	W	21.03	49	4.27	0.271	0.21	0.195	2.92	1.38	0.136	0.301	0.59	0.105	1.29	7.86	0.95	10.1	5676	9.2106	24.06996	-14.85936	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0037	64	66	NS	E392494	392494	1	G	W	28.76	42.53	1.57	0.31	0.24	0.07	1.61	0.95	0.105	0.038	0.767	0.074	1.45	8.93	-0.03	10.35	5682	1.1628	16.5699	-15.4071	NAF
NS0037	82	84	NS	E392504	392504	1	G	W	28.36	40.53	2.77	0.284	0.22	0.125	2.3	1.25	0.255	0.188	0.547	0.086	1.28	8.76	0.38	10.42	5691	5.7528	21.8025	-16.0497	NAF
NS0037	158	160	NS	E392542	392542	1	G	W	25.74	38.23	2.82	0.465	0.36	0.125	3.34	1.33	0.217	0.224	0.68	0.059	1.11	13.23	0.52	14.86	5729	6.8544	23.19786	-16.34346	NAF
NS0037	60	62	NS	E392492	392492	1	G	W	30.14	37.31	1.65	0.323	0.25	0.073	1.98	1	0.158	0.033	0.637	0.093	1.93	11.43	-0.12	13.24	5680	1.0098	17.442	-16.4322	NAF
NS0037	148	150	NS	E392537	392537	1	G	W	31.74	35.5	1.8	0.452	0.35	0.084	2.49	1.02	0.261	0.044	1.09	0.064	0.66	10.77	-0.24	11.19	5724	1.3464	17.79084	-16.44444	NAF
NS0037	80	82	NS	E392503	392503	1	G	W	29.7	34.84	3.48	0.323	0.25	0.162	2.66	1.27	0.256	0.167	0.606	0.077	1.63	10.78	0.27	12.68	5690	5.1102	22.15134	-17.04114	NAF
NS0037	70	72	NS	E392497	392497	1	G	W	29.41	35.03	3.09	0.323	0.25	0.141	2.25	1.28	0.278	0.11	1.26	0.066	1.52	11.91	0.06	13.49	5685	3.366	22.32576	-18.95976	NAF
NS0037	154	156	NS	E392540	392540	1	G	W	29.28	35.3	2.25	0.478	0.37	0.102	2.81	1.43	0.145	0.097	0.917	0.052	0.98	12.62	0.37	13.97	5727	2.9682	24.94206	-21.97386	NAF
NS0038	224	226	NS	E392666	392666	1	G	D	31.68	36.26	2.3	0.478	0.37	0.107	3.57	0.91	0.206	1.44	0.876	0.24	0.74	5.85	2.15	8.74	5852	44.064	15.87222	28.19178	PAF(HC)
NS0038	222	224	NS	E392665	392665	1	G	D	25.92	43.99	4.09	0.4	0.31	0.187	4.35	0.53	0.107	0.75	0.848	0.242	0.86	6.04	1.36	8.26	5851	22.95	9.24426	13.70574	PAF(HC)
NS0038	68	70	NS	E392587	392587	1	G	D	17.69	57.65	7.61	0.129	0.1	0.358	3.39	0.42	0.112	0.587	0.355	0.085	0.78	2.63	1.01	4.42	5774	17.9622	7.32564	10.63656	PAF(HC)
NS0038	66	68	NS	E392586	392586	1	G	D	19.78	53.01	6.63	0.219	0.17	0.316	3.77	0.35	0.056	0.383	0.748	0.144	1.05	4.3	0.91	6.26	5773	11.7198	6.1047	5.6151	PAF(LC)
NS0038	56	58	NS	E392581	392581	1	G	D	22.47	51.53	4.88	0.387	0.3	0.232	2.4	0.34	0.047	0.303	0.75	0.126	2.41	3.63	0.83	6.87	5768	9.2718	5.93028	3.34152	PAF(LC)
NS0038	250	252	NS	E392679	392679	1	G	D	28.66	41.86	3.74	0.426	0.33	0.186	3.8	0.42	0.051	0.325	0.753	0.208	0.87	5.84	0.63	7.34	5865	9.945	7.32564	2.61936	PAF(LC)
NS0038	64	66	NS	E392585	392585	1	G	D	26.02	40.66	5.47	0.491	0.38	0.259	4.2	0.44	0.066	0.295	1.15	0.228	1.45	7.17	0.97	9.59	5772	9.027	7.67448	1.35252	PAF(LC)
NS0038	8	10	NS	E392557	392557	1	G	D	42.27	25.92	4.84	0.194	0.15	0.468	0.06	0.04	0.019	0.022	0.007	0.015	6.37	1.26	0.22	7.85	5744	0.6732	0.69768	-0.02448	NAF
NS0038	2	4	NS	E392554	392554	1	G	D	39.43	26.88	6.58	-0.0129	-0.01	0.387	0.05	0.05	0.016	0.024	0.025	0.018	7.51	1.53	0.22	9.26	5741	0.7344	0.8721	-0.1377	NAF
NS0038	4	6	NS	E392555	392555	1	G	D	36.98	33.22	4.69	-0.0129	-0.01	0.224	0.03	0.05	0.015	0.024	0.01	0.01	7.31	1.24	0.21	8.76	5742	0.7344	0.8721	-0.1377	NAF
NS0038	62	64	NS	E392584	392584	1	G	D	22.79	50.39	4.78	0.284	0.22	0.229	3.42	0.4	0.079	0.221	1.51	0.287	1.44	3.86	0.74	6.04	5771	6.7626	6.9768	-0.2142	NAF
NS0038	0	2	NS	E392553	392553	1	G	D	41.98	21.03	7.96	0.026	0.02	0.341	0.08	0.06	0.015	0.025	0.029	0.018	8.14	1.9	0.26	10.3	5740	0.765	1.04652	-0.28152	NAF
NS0038	212	214	NS	E392660	392660	1	G	D	30.44	39.73	2.55	0.465	0.36	0.122	3.81	0.39	0.051	0.209	0.79	0.221	0.95	6.66	0.44	8.05	5846	6.3954	6.80238	-0.40698	NAF
NS0038	6	8	NS	E392556	392556	1	G	D	37.56	30.93	6.88	0.026	0.02	0.46	0.04	0.07	0.015	0.026	0.015	0.017	5.71	1.58	0.19	7.48	5743	0.7956	1.22094	-0.42534	NAF
NS0038	232	234	NS	E392670	392670	1	G	D	31.41	39.13	2.86	0.374	0.29	0.144	3.37	0.4	0.077	0.211	0.811	0.225	0.97	5.89	0.33	7.19	5856	6.4566	6.9768	-0.5202	NAF
NS0038	228	230	NS	E392668	392668	1	G	D	29.4	39.07	4.9	0.31	0.24	0.304	4.69	0.57	0.159	0.283	1.32	0.381	1.32	4.28	0.69	6.29	5854	8.6598	9.94194	-1.28214	NAF
NS0038	10	12	NS	E392558	392558	1	G	D	30.4	44.19	3.89	0.026	0.02	0.195	0.16	0.11	0.012	0.014	0.01	0.071	6	1.35	0.21	7.56	5745	0.4284	1.91862	-1.49022	NAF
NS0038	12	14	NS	E392559	392559	1	G	D	32.19	40.41	4.99	0.039	0.03	0.308	0.16	0.12	0.015	0.019	0.019	0.057	5.75	1.59	0.23	7.57	5746	0.5814	2.09304	-1.51164	NAF
NS0038	18	20	NS	E392562	392562	1	G	D	28.14	47.65	4.46	0.039	0.03	0.193	0.16	0.12	0.065	0.013	0.016	0.042	5.39	1.38	0.12	6.89	5749	0.3978	2.09304	-1.69524	NAF
NS0038	240	242	NS	E392674	392674	1	G	D	28.93	41.88	4.16	0.284	0.22	0.196	4.03	0.6	0.098	0.286	0.857	0.25	0.96	4.47	0.66	6.09	5860	8.7516	10.4652	-1.7136	NAF
NS0038	276	278	NS	E392692	392692	1	G	D	28.84	42.77	3.03	0.516	0.4	0.149	3.43	0.33	0.045	0.13	0.705	0.192	0.89	6.06	0.27	7.22	5878	3.978	5.75586	-1.77786	NAF
NS0038	96	98	NS	E392602	392602	1	G	D	24.78	46.08	4.23	0.503	0.39	0.201	2.92	0.8	0.037	0.382	0.841	0.229	1.2	6.37	0.95	8.52	5788	11.6892	13.9536	-2.2644	NAF
NS0038	14	16	NS	E392560	392560	1	G	D	20.97	57.09	5.97	0.026	0.02	0.325	0.25	0.2	0.008	0.011	0.018	0.083	3.73	2.01	0.2	5.94	5747	0.3366	3.4884	-3.1518	NAF
NS0038	16	18	NS	E392561	392561	1	G	D	25.9	49.96	5.21	0.026	0.02	0.237	0.23	0.2	0.013	0.009	0.017	0.081	4.83	1.82	0.2	6.85	5748	0.2754	3.4884	-3.213	NAF
NS0038	30	32	NS	E392568	392568	1	G	D	29.17	49.69	1.8	0.323	0.25	0.077	0.39	0.2	0.07	0.005	0.037	0.025	4.47	0.93	0.02	5.42	5755	0.153	3.4884	-3.3354	NAF
NS0038	28	30	NS	E392567	392567	1	G	D	29.95	46.22	3.07	0.465	0.36	0.153	0.42	0.22	0.048	0.008	0.048	0.046	5.21	1.28	0.12	6.61	5754	0.2448	3.83724	-3.59244	NAF
NS0038	58	60	NS	E392582	392582	1	G	D	23.74	50.31	5.06	0.323	0.25	0.239	2.13	0.47	0.07	0.141	0.607	0.085	3.26	2.78	0.53	6.57	5769	4.3146	8.19774	-3.88314	NAF
NS0038	230	232	NS	E392669	392669	1	G	D	28.12	40.95	2.74	0.503	0.39	0.125	3.71	0.58	0.087	0.201	0.764	0.214	0.96	8.24	0.44	9.64	5855	6.1506	10.11636	-3.96576	NAF
NS0038	22	24	NS	E392564	392564	1	G	D	31.57	44.11	2.98	0.065	0.05	0.128	0.36	0.27	0.091	0.009	0.031	0.045	4.93	1.31	0.05	6.29	5751	0.2754	4.70934	-4.43394	NAF
NS0038	74	76	NS	E392590	392590	1	G	D	26.98	39.04	3.09	0.465	0.36	0.144	3.3	0.55	0.084	0.166	0.734	0.181	1.35	11.96	0.46	13.77	5777	5.0796	9.5931	-4.5135	NAF
NS0038	20	22	NS	E392563	392563	1	G	D	31.62	42.77	3.78	0.052	0.04	0.176	0.41	0.28	0.084	0.011	0.043	0.049	5.59	1.4	0.1	7.09	5750	0.3366	4.88376	-4.54716	NAF
NS0038	26	28	NS	E392566	392566	1	G	D	22.9	57.67	2.71	0.065	0.05	0.126	0.44	0.29	0.039	0.006	0.037	0.045	4.36	1.17	0.05	5.58	5753	0.1836	5.05818	-4.87458	NAF
NS0038	216	218	NS	E392662	392662	1	G	D	33.53	36.72	1.53	0.465	0.36	0.07	3.23	0.4	0.073	0.06	0.617	0.177	0.93	7.76	-0.11	8.58	5848	1.836	6.9768	-5.1408	NAF
NS0038	54	56	NS	E392580	392580	1	G	D	22.84	51.69	5.69	0.349	0.27	0.274	1.52	0.41	0.066	0.061	0.354	0.062	3.87	2.73	0.28	6.88	5767	1.8666	7.15122	-5.28462	NAF
NS0038	60	62	NS	E392583	392583	1	G	D	22.4	50.52	4.39	0.336	0.26	0.207	3.08	0.74	0.148	0.245	1.31	0.214	1.64	4.45	0.78	6.87	5770	7.497	12.90708	-5.41008	NAF
NS0038	50	52	NS	E392578	392578	1	G	D	17.66	58.17	7.38	0.116	0.09	0.349	1.75	0.33	0.029	0.006	0.657	0.075	2.98	2.49	0.2	5.67	5765	0.1836	5.75586	-5.57226	NAF
NS0038	268	270	NS	E392688	392688	1	G	D	28.77	44.24	2.59	0.465	0.36	0.121	3.15	0.59	0.054	0.139	0.71	0.181	0.95	5.41	0.38	6.74	5874	4.2534	10.29078	-6.03738	NAF
NS0038	248	250	NS	E392678	392678	1	G	D	30.49	38.52	3.28	0.516	0.4	0.15	3.76	0.63	0.121	0.161	0.819	0.224	0.99	6.72	0.34	8.05	5864	4.9266	10.98846	-6.06186	NAF
NS0038	200	202	NS	E392654	392654	1	G	D	35.83	38.76	2.29	0.207	0.16	0.104	2.9	0.45	0.054	0.058	0.643	0.183	0.59	2.19	-0.06	2.72	5840	1.7748	7.8489	-6.0741	NAF
NS0038	164	166	NS	E392636	392636	1	G	D	21.37	51.02	4.09	0.387	0.3	0.188	3.84	1.56	0.044	0.682	0.609	0.162	0.68	4.47	1.57	6.72	5822	20.8692	27.20952	-6.34032	NAF
NS0038	32	34	NS	E392569	392569	1	G	D	32.13	42.63	2.83	0.374	0.29	0.131	0.71	0.38	0.077	0.006	0.092	0.021	4.85	1.34	0.04	6.23	5756	0.1836	6.62796	-6.44436	NAF
NS0038	38	40	NS	E392572	392572	1	G	D	26.96	49.57	3.37	0.271	0.21	0.157	1.01	0.39	0.05	0.006	0.107	0.024	4.9	1.42	0.21	6.53	5759	0.1836	6.80238	-6.61878	NAF
NS0038	24	26	NS	E392565	392565	1	G	D	27.95	46.42	4.57	0.065	0.05	0.202	0.6	0.4	0.056	0.006	0.039	0.071	5.23	1.79	0.13	7.15	5752	0.1836	6.9768	-6.7932	NAF
NS0038	46	48	NS	E392576	392576	1	G	D	27.65	45.77	4.65	0.349	0.27	0.235	1.17	0.41	0.049	0.008	0.205	0.044	5.17	1.83	0.25	7.25	5763	0.2448	7.15122	-6.90642	NAF
NS0038	214	216	NS	E392661	392661	1	G	D	33.22	38.43	1.44	0.452	0.35	0.064	2.99	0.49	0.105	0.053	0.585	0.166	0.75	6.96	-0.1	7.61	5847	1.6218	8.54658	-6.92478	NAF
NS0038	52	54	NS	E392579	392579	1	G	D	19.7	54.87	6.63	0.426	0.33	0.321	1.79	0.41	0.033	0.006	0.524	0.062	3.69	2.44	0.23	6.36	5766	0.1836	7.15122	-6.96762	NAF
NS0038	218	220	NS	E392663	392663	1	G	D	36.22	36.61	1.37	0.349	0.27	0.065	2.61	0.47	0.102	0.035	0.543	0.157	0.7	5.24	-0.21	5.73	5849	1.071	8.19774	-7.12674	NAF
NS0038	242	244	NS	E392675	392675	1	G	D	34.81	38.19	1.51	0.452	0.35	0.071	2.49	0.51	0.068	0.053	0.601	0.163	0.71	5.23	-0.17	5.77	5861	1.6218	8.89542	-7.27362	NAF
NS0038	48	50	NS	E392577	392577	1	G	D	22.23	52.5	5.62	0.323	0.25	0.278	1.59	0.46	0.042	0.006	0.501	0.069	4.33	2.15	0.24	6.72	5764	0.1836	8.02332	-7.83972	NAF
NS0038	78	80	NS	E392592	392592	1	G	D	27.43	40.78	3.71	0.297	0.23	0.173	3.4	0.84	0.19	0.217	0.978	0.252	1.5	7.82	0.62	9.94	5779	6.6402	14.65128	-8.01108	NAF
NS0038	36	38	NS	E392571	392571	1	G	D	26.91	49.58	3.38	0.194	0.15	0.16	1.02	0.47	0.044	0.005	0.129	0.037	4.6	1.49	0.18	6.27	5758	0.153	8.19774	-8.04474	NAF
NS0038	272	274	NS	E392690	392690	1	G	D	34.41	37.79	2.13	0.452	0.35	0.098	2.81	0.57	0.071	0.059	0.637	0.164	0.73	5.14	-0.04	5.83	5876	1.8054	9.94194	-8.13654	NAF
NS0038	42	44	NS	E392574	392574	1	G	D	27.2	46.01	4.69	0.374	0.29	0.229	1.35	0.48	0.05	0.007	0.197	0.047	5.22	1.87	0.26	7.35	5761	0.2142	8.37216	-8.15796	NAF
NS0038	44	46	NS	E392575	392575	1	G	D	26.22	46.67	5.08	0.478	0.37	0.241	1.51	0.49	0.05	0.006	0.275	0.039	5.22	2	0.27	7.49	5762	0.1836	8.54658	-8.36298	NAF
NS0038	206	208	NS	E392657	392657	1	G	D	28.08	49.13	1.82	0.245	0.19	0.083	2.68	0.77	0.056	0.161	0.574	0.16	0.55	2.62	0.49	3.66	5843	4.9266	13.43034	-8.50374	NAF
NS0038	210	212	NS	E392659	392659	1	G	D	32.94	43.57	2.01	0.194	0.15	0.094	2.76	0.58	0.044	0.049	0.792	0.216	0.67	1.75	0.13	2.55	5845	1.4994	10.11636	-8.61696	NAF
NS0038	80	82	NS	E392593	392593	1	G	D	26.47	42.92	3.63	0.284	0.22	0.169	3.43	0.99	0.089	0.282	0.849	0.231	1.28	7.29	0.82	9.39	5780	8.6292	17.26758	-8.63838	NAF
NS0038	34	36	NS	E392570	392570	1	G	D	27.4	47.57	3.9	0.336	0.26	0.183	1.07	0.51	0.054	0.005	0.17	0.038	4.83	1.71	0.1	6.64	5757	0.153	8.89542	-8.74242	NAF
NS0038	236	238	NS	E392672	392672	1	G	D	27.34	45.37	3.82	0.258	0.2	0.457	3.66	0.56	0.056	0.03	0.811	0.225	0.9	4.44	0.27	5.61	5858	0.918	9.76752	-8.84952	NAF
NS0038	280	282	NS	E392694	392694	1	G	D	31.39	40.33	2.13	0.555	0.43	0.099	2.97	0.61	0.08	0.054	0.616	0.158	0.77	6.41	0.09	7.27	5880	1.6524	10.63962	-8.98722	NAF
NS0038	226	228	NS	E392667	392667	1	G	D	32.69	38.69	1.49	0.503	0.39	0.067	2.85	0.59	0.055	0.042	0.556	0.152	0.71	7.24	-0.04	7.91	5853	1.2852	10.29078	-9.00558	NAF
NS0038	220	222	NS	E392664	392664	1	G	D	33.02	38.46	1.87	0.387	0.3	0.085	3.03	0.64	0.142	0.07	0.67	0.189	0.77	6.49	-0.05	7.21	5850	2.142	11.16288	-9.02088	NAF
NS0038	266	268	NS	E392687	392687	1	G	D	32.29	40.5	2.21	0.452	0.35	0.103	2.93	0.65	0.063	0.061	0.694	0.177	0.87	5.22	0.15	6.24	5873	1.8666	11.3373	-9.4707	NAF
NS0038	70	72	NS	E392588	392588	1	G	D	19.49	51.46	5.42	0.284	0.22	0.248	3.43	2.29	0.206	0.986	0.934	0.183	0.92	2.94	2.15	6.01	5775	30.1716	39.94218	-9.77058	NAF
NS0038	262	264	NS	E392685	392685	1	G	D	30.9	41.57	2.55	0.426	0.33	0.121	3.23	0.68	0.066	0.064	0.845	0.238	0.87	4.94	0.24	6.05	5871	1.9584	11.86056	-9.90216	NAF
NS0038	246	248	NS	E392677	392677	1	G	D	33.38	37.52	2.19	0.465	0.36	0.101	3.1	0.69	0.096	0.068	0.771	0.214	0.84	5.79	0.08	6.71	5863	2.0808	12.03498	-9.95418	NAF
NS0038	94	96	NS	E392600	392600	1	G	D	26.6	44.04	4.27	0.349	0.27	0.207	3.22	1.05	0.052	0.264	1.19	0.314	1.3	4.91	0.87	7.08	5787	8.0784	18.3141	-10.2357	NAF
NS0038	40	42	NS	E392573	392573	1	G	D	21.96	52.41	6.17	0.142	0.11	0.301	1.75	0.6	0.041	0.007	0.141	0.048	4.47	2.11	0.31	6.89	5760	0.2142	10.4652	-10.251	NAF
NS0038	234	236	NS	E392671	392671	1	G	D	26.26	49.96	1.72	0.336	0.26	0.128	2.49	0.65	0.041	0.034	0.592	0.154	0.71	5.13	0.19	6.03	5857	1.0404	11.3373	-10.2969	NAF
NS0038	208	210	NS	E392658	392658	1	G	D	31.66	44.67	1.82	0.245	0.19	0.082	2.84	0.73	0.051	0.074	0.689	0.192	0.59	2.59	0.22	3.4	5844	2.2644	12.73266	-10.46826	NAF
NS0038	82	84	NS	E392594	392594	1	G	D	27.19	45.3	1.68	0.297	0.23	0.078	2.4	0.71	0.062	0.057	0.503	0.134	0.97	8.9	0.09	9.96	5781	1.7442	12.38382	-10.63962	NAF
NS0038	100	102	NS	E392604	392604	1	G	D	18.51	53.7	7.66	0.155	0.12	0.38	3.15	2.08	0.046	0.837	0.438	0.123	0.69	2.69	1.52	4.9	5790	25.6122	36.27936	-10.66716	NAF
NS0038	256	258	NS	E392682	392682	1	G	D	32.54	38.29	2.59	0.452	0.35	0.118	3.24	0.83	0.08	0.122	0.747	0.203	0.86	5.24	0.38	6.48	5868	3.7332	14.47686	-10.74366	NAF
NS0038	152	154	NS	E392630	392630	1	G	D	27.13	48.28	3.27	0.297	0.23	0.154	3.31	0.82	0.03	0.083	0.443	0.126	0.61	3.49	0.35	4.45	5816	2.5398	14.30244	-11.76264	NAF
NS0038	274	276	NS	E392691	392691	1	G	D	25.92	45.8	3.03	0.503	0.39	0.14	3.48	0.92	0.066	0.127	0.704	0.192	0.87	6.04	0.63	7.54	5877	3.8862	16.04664	-12.16044	NAF
NS0038	244	246	NS	E392676	392676	1	G	D	32.06	39.07	2.42	0.439	0.34	0.117	3.24	0.89	0.122	0.078	0.846	0.237	0.97	5.47	0.21	6.65	5862	2.3868	15.52338	-13.13658	NAF
NS0038	252	254	NS	E392680	392680	1	G	D	32.34	40.3	2.25	0.426	0.33	0.105	2.73	0.85	0.095	0.055	0.672	0.17	0.92	4.6	0.35	5.87	5866	1.683	14.8257	-13.1427	NAF
NS0038	260	262	NS	E392684	392684	1	G	D	34.28	35.78	1.96	0.503	0.39	0.089	3.08	0.88	0.111	0.057	0.724	0.195	0.86	6.22	0.11	7.19	5870	1.7442	15.34896	-13.60476	NAF
NS0038	254	256	NS	E392681	392681	1	G	D	30.71	41.16	2.17	0.478	0.37	0.099	3.03	0.92	0.068	0.062	0.681	0.179	0.81	5.63	0.39	6.83	5867	1.8972	16.04664	-14.14944	NAF
NS0038	270	272	NS	E392689	392689	1	G	D	25.33	50.97	1.53	0.478	0.37	0.068	2.44	1.08	0.049	0.145	0.487	0.126	0.61	5.18	0.62	6.41	5875	4.437	18.83736	-14.40036	NAF
NS0038	84	86	NS	E392595	392595	1	G	D	29.55	41.15	2.4	0.245	0.19	0.112	2.74	1.06	0.086	0.12	0.792	0.214	1.12	7.05	0.4	8.57	5782	3.672	18.48852	-14.81652	NAF
NS0038	278	280	NS	E392693	392693	1	G	D	24.97	46.57	3.11	0.542	0.42	0.141	3.48	1.02	0.066	0.093	0.644	0.174	0.82	6.82	0.63	8.27	5879	2.8458	17.79084	-14.94504	NAF
NS0038	238	240	NS	E392673	392673	1	G	D	32.34	35.51	2.67	0.439	0.34	0.249	3.63	0.97	0.277	0.043	0.781	0.211	0.94	7.49	-0.03	8.4	5859	1.3158	16.91874	-15.60294	NAF
NS0038	204	206	NS	E392656	392656	1	G	D	28.92	47.73	2.02	0.219	0.17	0.094	2.67	0.99	0.05	0.053	0.637	0.178	0.71	2.32	0.49	3.52	5842	1.6218	17.26758	-15.64578	NAF
NS0038	196	198	NS	E392652	392652	1	G	D	33.01	40.82	1.74	0.374	0.29	0.082	2.67	1.29	0.065	0.219	0.502	0.129	0.48	3.39	0.71	4.58	5838	6.7014	22.50018	-15.79878	NAF
NS0038	72	74	NS	E392589	392589	1	G	D	25.32	40.34	3.56	0.658	0.51	0.17	3.57	1.48	0.131	0.314	0.909	0.193	1.32	9.8	1.17	12.29	5776	9.6084	25.81416	-16.20576	NAF
NS0038	76	78	NS	E392591	392591	1	G	D	25.26	45.39	1.96	0.336	0.26	0.088	2.38	1.07	0.071	0.075	0.53	0.141	1.07	10.22	0.32	11.61	5778	2.295	18.66294	-16.36794	NAF
NS0038	150	152	NS	E392629	392629	1	G	D	28.09	47.5	2.95	0.284	0.22	0.141	2.99	1.15	0.033	0.081	0.398	0.102	0.56	2.82	0.63	4.01	5815	2.4786	20.0583	-17.5797	NAF
NS0038	264	266	NS	E392686	392686	1	G	D	30.27	41.88	2.37	0.452	0.35	0.108	3.07	1.13	0.132	0.058	0.722	0.194	0.9	5.11	0.38	6.39	5872	1.7748	19.70946	-17.93466	NAF
NS0038	162	164	NS	E392635	392635	1	G	D	26.04	47.25	3.25	0.374	0.29	0.151	3.36	1.18	0.115	0.074	0.754	0.197	0.91	4.38	0.46	5.75	5821	2.2644	20.58156	-18.31716	NAF
NS0038	102	104	NS	E392605	392605	1	G	D	21.15	49.84	4.5	0.478	0.37	0.215	2.56	1.57	0.017	0.279	0.255	0.071	0.83	8.34	0.95	10.12	5791	8.5374	27.38394	-18.84654	NAF
NS0038	98	100	NS	E392603	392603	1	G	D	21.3	49.79	4.4	0.529	0.41	0.209	2.78	1.68	0.022	0.335	0.728	0.198	1.07	6.55	1.23	8.85	5789	10.251	29.30256	-19.05156	NAF
NS0038	202	204	NS	E392655	392655	1	G	D	31.42	45.63	1.68	0.207	0.16	0.077	2.53	1.19	0.066	0.043	0.57	0.168	0.52	2.06	0.53	3.11	5841	1.3158	20.75598	-19.44018	NAF
NS0038	198	200	NS	E392653	392653	1	G	D	28.09	47.44	1.65	0.336	0.26	0.078	2.78	1.39	0.055	0.15	0.522	0.143	0.6	3.65	0.88	5.13	5839	4.59	24.24438	-19.65438	NAF
NS0038	258	260	NS	E392683	392683	1	G	D	28.44	45.26	2.17	0.387	0.3	0.099	2.86	1.26	0.08	0.073	0.731	0.187	0.83	4.68	0.69	6.2	5869	2.2338	21.97692	-19.74312	NAF
NS0038	190	192	NS	E392649	392649	1	G	D	32.86	40.7	2.32	0.4	0.31	0.11	2.76	1.32	0.126	0.084	0.59	0.158	0.57	2.93	0.54	4.04	5835	2.5704	23.02344	-20.45304	NAF
NS0038	106	108	NS	E392607	392607	1	G	D	24.32	47.6	3.79	0.361	0.28	0.176	2.4	1.58	0.115	0.226	0.707	0.191	0.93	6.23	0.83	7.99	5793	6.9156	27.55836	-20.64276	NAF
NS0038	86	88	NS	E392596	392596	1	G	D	26.74	43.07	2.87	0.284	0.22	0.137	3.05	1.34	0.075	0.083	0.708	0.195	1.04	7.82	0.67	9.53	5783	2.5398	23.37228	-20.83248	NAF
NS0038	136	138	NS	E392622	392622	1	G	D	36.22	37.43	1.97	0.452	0.35	0.091	2.23	1.36	0.067	0.052	0.524	0.088	0.33	2.75	0.52	3.6	5808	1.5912	23.72112	-22.12992	NAF
NS0038	194	196	NS	E392651	392651	1	G	D	31.6	42.42	2.25	0.349	0.27	0.108	2.89	1.57	0.06	0.086	0.571	0.163	0.54	2.58	0.95	4.07	5837	2.6316	27.38394	-24.75234	NAF
NS0038	192	194	NS	E392650	392650	1	G	D	31.39	42.75	2.04	0.387	0.3	0.097	2.77	1.58	0.06	0.066	0.542	0.152	0.53	2.86	1.05	4.44	5836	2.0196	27.55836	-25.53876	NAF
NS0038	128	130	NS	E392618	392618	1	G	D	29.97	46.73	1.88	0.349	0.27	0.089	2.13	1.59	0.05	0.063	0.471	0.112	0.43	2.29	0.86	3.58	5804	1.9278	27.73278	-25.80498	NAF
NS0038	92	94	NS	E392599	392599	1	G	D	25.22	44.64	3.93	0.245	0.19	0.189	3.22	1.79	0.061	0.176	0.828	0.227	1.11	6.11	1.22	8.44	5786	5.3856	31.22118	-25.83558	NAF
NS0038	154	156	NS	E392631	392631	1	G	D	25.69	47.85	3.25	0.336	0.26	0.153	3.44	1.76	0.055	0.142	0.399	0.108	0.51	3.68	1.19	5.38	5817	4.3452	30.69792	-26.35272	NAF
NS0038	116	118	NS	E392612	392612	1	G	D	23.11	49.94	4.07	0.336	0.26	0.192	3.32	1.99	0.017	0.229	0.697	0.183	0.82	3.64	1.63	6.09	5798	7.0074	34.70958	-27.70218	NAF
NS0038	108	110	NS	E392608	392608	1	G	D	21.95	48.83	4.75	0.426	0.33	0.225	2.76	2.67	0.039	0.529	0.711	0.187	0.88	4.31	1.94	7.13	5794	16.1874	46.57014	-30.38274	NAC
NS0038	158	160	NS	E392633	392633	1	G	D	23.57	47.68	4.33	0.31	0.24	0.207	3.9	2.5	0.106	0.428	0.486	0.138	0.64	3.23	1.92	5.79	5819	13.0968	43.605	-30.5082	NAC
NS0038	186	188	NS	E392647	392647	1	G	D	32.15	41.46	2.21	0.413	0.32	0.107	2.69	1.9	0.111	0.065	0.57	0.148	0.68	2.67	1.1	4.45	5833	1.989	33.1398	-31.1508	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0038	104	106	NS	E392606	392606	1	G	D	18.36	52.96	7.16	0.207	0.16	0.337	2.86	2.67	0.016	0.5	0.313	0.085	0.68	3.54	1.76	5.98	5792	15.3	46.57014	-31.27014	NAC
NS0038	172	174	NS	E392640	392640	1	G	D	31.27	41.96	2.26	0.413	0.32	0.106	2.72	1.91	0.079	0.061	0.512	0.137	0.55	3.27	1.15	4.97	5826	1.8666	33.31422	-31.44762	NAC
NS0038	144	146	NS	E392626	392626	1	G	D	30.92	42.3	2.42	0.439	0.34	0.117	2.83	1.94	0.097	0.076	0.488	0.123	0.49	3.1	1.26	4.85	5812	2.3256	33.83748	-31.51188	NAC
NS0038	112	114	NS	E392610	392610	1	G	D	28.78	40.79	3.42	0.503	0.39	0.16	2.97	2.05	0.055	0.127	0.92	0.246	1.01	4.93	1.49	7.43	5796	3.8862	35.7561	-31.8699	NAC
NS0038	126	128	NS	E392617	392617	1	G	D	32.07	41.47	2.44	0.349	0.27	0.114	2.53	1.95	0.09	0.068	0.48	0.126	0.45	2.35	1.17	3.97	5803	2.0808	34.0119	-31.9311	NAC
NS0038	88	90	NS	E392597	392597	1	G	D	26.73	43.67	2.42	0.349	0.27	0.116	2.68	1.98	0.14	0.077	0.791	0.209	1.04	6.8	1.08	8.92	5784	2.3562	34.53516	-32.17896	NAC
NS0038	90	92	NS	E392598	392598	1	G	D	26.08	43.34	2.94	0.31	0.24	0.135	2.87	2.21	0.085	0.189	0.803	0.206	1.09	6.52	1.3	8.91	5785	5.7834	38.54682	-32.76342	NAC
NS0038	176	178	NS	E392642	392642	1	G	D	32.45	39.68	1.92	0.465	0.36	0.09	2.51	2.04	0.116	0.057	0.409	0.107	0.53	3.9	1.22	5.65	5828	1.7442	35.58168	-33.83748	NAC
NS0038	160	162	NS	E392634	392634	1	G	D	25.75	46.48	2.52	0.426	0.33	0.118	3.13	2.39	0.087	0.246	0.549	0.144	0.64	4.8	1.68	7.12	5820	7.5276	41.68638	-34.15878	NAC
NS0038	130	132	NS	E392619	392619	1	G	D	31.89	41.81	2.09	0.426	0.33	0.099	2.48	2.13	0.08	0.067	0.474	0.104	0.42	2.75	1.34	4.51	5805	2.0502	37.15146	-35.10126	NAC
NS0038	146	148	NS	E392627	392627	1	G	D	31.71	39	2.14	0.594	0.46	0.103	2.96	2.39	0.094	0.211	0.365	0.099	0.43	4.35	1.56	6.34	5813	6.4566	41.68638	-35.22978	NAC
NS0038	110	112	NS	E392609	392609	1	G	D	22.91	44.51	5.56	0.465	0.36	0.263	3.59	2.59	0.053	0.32	0.851	0.222	1.02	4.68	2.27	7.97	5795	9.792	45.17478	-35.38278	NAC
NS0038	148	150	NS	E392628	392628	1	G	D	31.69	40.52	1.96	0.465	0.36	0.093	2.62	2.42	0.109	0.221	0.339	0.093	0.4	3.33	1.46	5.19	5814	6.7626	42.20964	-35.44704	NAC
NS0038	188	190	NS	E392648	392648	1	G	D	31.63	41.58	2.11	0.4	0.31	0.103	2.67	2.19	0.116	0.078	0.545	0.153	0.55	2.56	1.3	4.41	5834	2.3868	38.19798	-35.81118	NAC
NS0038	142	144	NS	E392625	392625	1	G	D	32.32	41.08	1.95	0.426	0.33	0.094	2.38	2.16	0.061	0.05	0.555	0.088	0.37	2.64	1.42	4.43	5811	1.53	37.67472	-36.14472	NAC
NS0038	170	172	NS	E392639	392639	1	G	D	31.06	42.71	1.61	0.465	0.36	0.076	2.24	2.2	0.121	0.055	0.38	0.106	0.42	3.62	1.23	5.27	5825	1.683	38.3724	-36.6894	NAC
NS0038	120	122	NS	E392614	392614	1	G	D	28.84	43.38	2.93	0.374	0.29	0.139	2.45	2.32	0.058	0.098	0.591	0.157	0.94	3.01	1.69	5.64	5800	2.9988	40.46544	-37.46664	NAC
NS0038	156	158	NS	E392632	392632	1	G	D	27.15	45.72	2.49	0.4	0.31	0.122	3.04	2.36	0.076	0.107	0.434	0.127	0.58	3.69	1.78	6.05	5818	3.2742	41.16312	-37.88892	NAC
NS0038	114	116	NS	E392611	392611	1	G	D	25.53	48.49	3.18	0.297	0.23	0.149	2.59	2.5	0.04	0.111	0.68	0.186	0.74	2.4	1.94	5.08	5797	3.3966	43.605	-40.2084	NAC
NS0038	138	140	NS	E392623	392623	1	G	D	31.6	40	2.31	0.516	0.4	0.112	2.76	2.45	0.068	0.064	0.659	0.12	0.5	3.26	1.92	5.68	5809	1.9584	42.7329	-40.7745	NAC
NS0038	178	180	NS	E392643	392643	1	G	D	23.97	48.29	2.72	0.465	0.36	0.127	3.15	2.89	0.06	0.31	0.446	0.119	0.69	3.82	2.38	6.89	5829	9.486	50.40738	-40.92138	NAC
NS0038	124	126	NS	E392616	392616	1	G	D	31.5	41.58	2.11	0.413	0.32	0.101	2.37	2.49	0.085	0.079	0.456	0.122	0.48	2.73	1.75	4.96	5802	2.4174	43.43058	-41.01318	NAC
NS0038	166	168	NS	E392637	392637	1	G	D	22.63	47.72	3.29	0.542	0.42	0.155	3.61	2.79	0.119	0.178	0.54	0.142	0.78	5.64	2.07	8.49	5823	5.4468	48.66318	-43.21638	NAC
NS0038	174	176	NS	E392641	392641	1	G	D	32.58	38.9	1.87	0.439	0.34	0.088	2.56	2.62	0.096	0.067	0.503	0.137	0.71	3.2	1.85	5.76	5827	2.0502	45.69804	-43.64784	NAC
NS0038	134	136	NS	E392621	392621	1	G	D	32.19	40.64	1.83	0.478	0.37	0.086	2.38	2.63	0.103	0.05	0.568	0.114	0.36	2.71	1.82	4.89	5807	1.53	45.87246	-44.34246	NAC
NS0038	132	134	NS	E392620	392620	1	G	D	32.01	40.27	1.82	0.503	0.39	0.083	2.48	2.69	0.162	0.05	0.445	0.104	0.44	3.23	1.66	5.33	5806	1.53	46.91898	-45.38898	NAC
NS0038	140	142	NS	E392624	392624	1	G	D	31.62	41.62	1.52	0.465	0.36	0.075	2.26	2.86	0.054	0.048	0.383	0.08	0.31	2.7	2.22	5.23	5810	1.4688	49.88412	-48.41532	NAC
NS0038	118	120	NS	E392613	392613	1	G	D	28.3	41.56	2.96	0.491	0.38	0.135	2.95	2.95	0.051	0.098	0.666	0.189	0.76	3.92	2.58	7.26	5799	2.9988	51.4539	-48.4551	NAC
NS0038	184	186	NS	E392646	392646	1	G	D	31.39	41.18	1.77	0.452	0.35	0.084	2.45	2.92	0.104	0.048	0.529	0.126	0.4	2.4	2.31	5.11	5832	1.4688	50.93064	-49.46184	NAC
NS0038	168	170	NS	E392638	392638	1	G	D	32.54	38.14	1.33	0.529	0.41	0.066	2.29	3.51	0.074	0.047	0.367	0.103	0.44	3.45	2.72	6.61	5824	1.4382	61.22142	-59.78322	NAC
NS0038	180	182	NS	E392644	392644	1	G	D	20.02	50.6	2.11	0.658	0.51	0.104	3.18	4.17	0.075	0.135	0.529	0.143	0.72	4.47	4.21	9.4	5830	4.131	72.73314	-68.60214	NAC
NS0038	182	184	NS	E392645	392645	1	G	D	31.89	37.1	1.37	0.594	0.46	0.064	2.53	4.18	0.108	0.087	0.463	0.118	0.47	3.22	3.43	7.12	5831	2.6622	72.90756	-70.24536	NAC
NS0038	122	124	NS	E392615	392615	1	G	D	32.22	38.78	1.59	0.465	0.36	0.077	2.01	4.26	0.081	0.042	0.431	0.098	0.37	1.81	3.64	5.82	5801	1.2852	74.30292	-73.01772	NAC
NS0039	198	200	NS	E392796	392796	1	G	W	25.34	40.99	2.96	1.084	0.84	0.144	2.84	0.86	0.042	3.4	0.697	0.169	0.74	7.33	5.07	13.14	5980	104.04	15.00012	89.03988	PAF(HC)
NS0039	106	108	NS	E392750	392750	1	G	W	15.73	52.19	9.64	0.116	0.09	0.466	3.08	1.01	0.014	3.03	4.67	0.168	0.55	1.95	2.54	5.04	5934	92.718	17.61642	75.10158	PAF(HC)
NS0039	110	112	NS	E392752	392752	1	G	W	14.74	54.59	9.96	0.116	0.09	0.481	3.15	0.78	0.013	2.29	4.58	0.152	0.63	1.57	2.29	4.49	5936	70.074	13.60476	56.46924	PAF(HC)
NS0039	104	106	NS	E392749	392749	1	G	W	25.98	43.41	4.31	0.271	0.21	0.209	2.56	0.73	0.078	1.49	1.8	0.187	0.73	5.61	1.87	8.21	5933	45.594	12.73266	32.86134	PAF(HC)
NS0039	112	114	NS	E392753	392753	1	G	W	22.34	45.3	5.56	0.542	0.42	0.267	3.71	1.15	0.153	1.61	1.89	0.309	1.03	4.83	2.57	8.43	5937	49.266	20.0583	29.2077	PAF(HC)
NS0039	186	188	NS	E392790	392790	1	G	W	22.58	47.23	5.22	0.426	0.33	0.252	3.16	0.9	0.059	1.39	0.856	0.225	1.02	5.19	1.98	8.19	5974	42.534	15.6978	26.8362	PAF(HC)
NS0039	166	168	NS	E392780	392780	1	G	W	22.08	49.41	4.18	0.426	0.33	0.203	2.65	0.85	0.108	1.19	0.935	0.257	1.13	5.11	1.91	8.15	5964	36.414	14.8257	21.5883	PAF(HC)
NS0039	114	116	NS	E392754	392754	1	G	W	20.25	49.02	6.43	0.374	0.29	0.309	3.42	0.91	0.084	1.21	2.32	0.309	1.1	4.3	1.89	7.29	5938	37.026	15.87222	21.15378	PAF(HC)
NS0039	178	180	NS	E392786	392786	1	G	W	23.27	47.95	3.19	0.465	0.36	0.152	2.39	0.61	0.068	1.03	0.725	0.195	1.52	7.42	1.91	10.85	5970	31.518	10.63962	20.87838	PAF(HC)
NS0039	174	176	NS	E392784	392784	1	G	W	23.27	48.09	4.04	0.413	0.32	0.19	2.64	0.54	0.053	0.974	0.931	0.236	1.46	6.18	1.52	9.16	5968	29.8044	9.41868	20.38572	PAF(HC)
NS0039	182	184	NS	E392788	392788	1	G	W	24.02	45.42	3.32	0.478	0.37	0.156	2.57	0.52	0.049	0.953	0.625	0.216	1.56	8.69	1.67	11.92	5972	29.1618	9.06984	20.09196	PAF(HC)
NS0039	180	182	NS	E392787	392787	1	G	W	22.98	48.41	3.76	0.374	0.29	0.183	2.52	0.47	0.053	0.918	0.702	0.181	1.42	6.99	1.7	10.11	5971	28.0908	8.19774	19.89306	PAF(HC)
NS0039	108	110	NS	E392751	392751	1	G	W	15.99	53.01	9.17	0.142	0.11	0.442	3.01	0.95	0.026	1.19	4.22	0.147	0.92	2.54	1.63	5.09	5935	36.414	16.5699	19.8441	PAF(HC)
NS0039	170	172	NS	E392782	392782	1	G	W	21.97	51.09	4.01	0.426	0.33	0.197	2.59	0.5	0.048	0.924	1.02	0.272	1.42	4.81	1.66	7.89	5966	28.2744	8.721	19.5534	PAF(HC)
NS0039	172	174	NS	E392783	392783	1	G	W	21.75	50.71	4.3	0.387	0.3	0.208	2.67	0.76	0.061	0.966	1	0.259	1.2	5.13	1.5	7.83	5967	29.5596	13.25592	16.30368	PAF(HC)
NS0039	126	128	NS	E392760	392760	1	G	W	22	44.79	8.31	0.323	0.25	0.399	4.46	0.38	0.068	0.726	2.12	0.269	1.08	4.13	1.52	6.73	5944	22.2156	6.62796	15.58764	PAF(HC)
NS0039	128	130	NS	E392761	392761	1	G	W	22.13	45.09	7.53	0.361	0.28	0.36	4.38	0.56	0.085	0.777	1.89	0.277	1.15	4.33	1.7	7.18	5945	23.7762	9.76752	14.00868	PAF(HC)
NS0039	184	186	NS	E392789	392789	1	G	W	21.43	50.66	4.67	0.361	0.28	0.222	2.82	0.77	0.054	0.765	0.832	0.226	1.15	5.41	1.48	8.04	5973	23.409	13.43034	9.97866	PAF(LC)
NS0039	164	166	NS	E392779	392779	1	G	W	23.39	46.49	3.61	0.465	0.36	0.169	2.53	0.8	0.053	0.696	0.756	0.237	1.7	7.54	1.43	10.67	5963	21.2976	13.9536	7.344	PAF(LC)
NS0039	168	170	NS	E392781	392781	1	G	W	24.54	44.82	3.95	0.491	0.38	0.192	2.8	0.77	0.105	0.672	0.995	0.266	1.78	6.47	1.46	9.71	5965	20.5632	13.43034	7.13286	PAF(LC)
NS0039	204	206	NS	E392799	392799	1	G	W	23.06	45.31	7.41	0.323	0.25	0.356	3.95	0.76	0.103	0.652	0.723	0.194	1.11	4.77	1.41	7.29	5983	19.9512	13.25592	6.69528	PAF(LC)
NS0039	176	178	NS	E392785	392785	1	G	W	22.63	47.19	3.09	0.452	0.35	0.153	2.29	1.31	0.042	0.916	0.456	0.113	1.33	9.02	1.8	12.15	5969	28.0296	22.84902	5.18058	PAF(LC)
NS0039	118	120	NS	E392756	392756	1	G	W	22.45	46.29	5.57	0.361	0.28	0.264	3.76	1	0.111	0.67	1.21	0.275	1.18	5.72	1.42	8.32	5940	20.502	17.442	3.06	PAF(LC)
NS0039	4	6	NS	E392697	392697	1	G	W	40.63	26.2	6.43	-0.0129	-0.01	0.528	0.03	0.01	0.016	0.022	0.01	0.006	6.68	1.43	0.27	8.38	5883	0.6732	0.17442	0.49878	PAF(LC)
NS0039	2	4	NS	E392696	392696	1	G	W	36.29	30.93	7.2	0.026	0.02	0.549	0.09	0.05	0.025	0.026	0.031	0.016	7.03	1.65	0.28	8.96	5882	0.7956	0.8721	-0.0765	NAF
NS0039	6	8	NS	E392698	392698	1	G	W	38.75	28.51	7.75	0.026	0.02	0.693	0.19	0.1	0.035	0.026	0.046	0.019	4.88	1.83	0.26	6.97	5884	0.7956	1.7442	-0.9486	NAF
NS0039	0	2	NS	E392695	392695	1	G	W	41.7	16.92	11.15	0.026	0.02	0.544	0.21	0.15	0.035	0.029	0.073	0.027	7.72	2.77	0.35	10.84	5881	0.8874	2.6163	-1.7289	NAF
NS0039	272	274	NS	E392834	392834	1	G	W	27.74	38.81	2.7	0.323	0.25	0.123	3.1	0.45	0.057	0.198	0.918	0.23	1.75	10.97	0.63	13.35	6017	6.0588	7.8489	-1.7901	NAF
NS0039	132	134	NS	E392763	392763	1	G	W	22.72	47.53	4.96	0.426	0.33	0.235	3.41	0.58	0.118	0.248	1.31	0.295	1.39	5.99	0.84	8.22	5947	7.5888	10.11636	-2.52756	NAF
NS0039	10	12	NS	E392702	392702	1	G	W	24.8	54.72	3.02	0.026	0.02	0.109	0.25	0.17	0.028	0.006	0.01	0.065	4.65	1.18	0.23	6.06	5886	0.1836	2.96514	-2.78154	NAF
NS0039	26	28	NS	E392710	392710	1	G	W	32.75	42.73	2.82	0.077	0.06	0.132	0.61	0.2	0.053	0.008	0.04	0.034	4.98	1.2	0.17	6.35	5894	0.2448	3.4884	-3.2436	NAF
NS0039	28	30	NS	E392711	392711	1	G	W	32.46	42.28	3.2	0.103	0.08	0.142	0.74	0.22	0.065	0.007	0.063	0.029	5.08	1.32	0.19	6.59	5895	0.2142	3.83724	-3.62304	NAF
NS0039	82	84	NS	E392738	392738	1	G	W	18.64	49.54	8.38	0.142	0.11	0.392	3.96	1.4	0.21	0.666	3.44	0.262	1.02	2.09	1.52	4.63	5922	20.3796	24.4188	-4.0392	NAF
NS0039	12	14	NS	E392703	392703	1	G	W	27.05	49.89	3.7	0.026	0.02	0.152	0.39	0.25	0.031	0.009	0.016	0.074	4.9	1.44	0.26	6.6	5887	0.2754	4.3605	-4.0851	NAF
NS0039	208	210	NS	E392802	392802	1	G	W	26.36	41.45	2.86	0.374	0.29	0.133	2.75	0.55	0.069	0.177	0.924	0.24	2.35	9.67	0.54	12.56	5985	5.4162	9.5931	-4.1769	NAF
NS0039	20	22	NS	E392707	392707	1	G	W	29.23	46.67	3.14	0.065	0.05	0.154	0.59	0.26	0.07	0.011	0.037	0.051	5.34	1.38	0.21	6.93	5891	0.3366	4.53492	-4.19832	NAF
NS0039	22	24	NS	E392708	392708	1	G	W	31.01	43.08	3.46	0.065	0.05	0.162	0.67	0.26	0.082	0.011	0.051	0.045	5.78	1.54	0.23	7.55	5892	0.3366	4.53492	-4.19832	NAF
NS0039	250	252	NS	E392823	392823	1	G	W	23.18	46.7	6.97	0.271	0.21	0.331	3.97	1.12	0.039	0.493	1.27	0.332	1.45	2.38	1.44	5.27	6006	15.0858	19.53504	-4.44924	NAF
NS0039	24	26	NS	E392709	392709	1	G	W	26.72	49.09	4.14	0.065	0.05	0.196	0.86	0.28	0.058	0.011	0.116	0.049	4.76	1.77	0.24	6.77	5893	0.3366	4.88376	-4.54716	NAF
NS0039	80	82	NS	E392737	392737	1	G	W	26.17	43.74	3.85	0.374	0.29	0.18	3.09	1.16	0.119	0.507	1.42	0.256	1.32	5.11	1.44	7.87	5921	15.5142	20.23272	-4.71852	NAF
NS0039	280	282	NS	E392838	392838	1	G	W	27.33	37.23	3.54	0.426	0.33	0.166	3.73	0.94	0.181	0.369	0.832	0.219	1.78	10.25	1.01	13.04	6021	11.2914	16.39548	-5.10408	NAF
NS0039	18	20	NS	E392706	392706	1	G	W	28.29	46.94	3.88	0.065	0.05	0.192	0.59	0.31	0.058	0.009	0.033	0.067	5.34	1.66	0.25	7.25	5890	0.2754	5.40702	-5.13162	NAF
NS0039	44	46	NS	E392719	392719	1	G	W	30.45	42.68	4.35	0.349	0.27	0.208	1.4	0.31	0.059	0.007	0.742	0.09	4.2	1.65	0.1	5.95	5903	0.2142	5.40702	-5.19282	NAF
NS0039	278	280	NS	E392837	392837	1	G	W	24.92	43.31	4.21	0.336	0.26	0.2	3.81	0.88	0.09	0.329	1.01	0.259	1.55	7.19	1.12	9.86	6020	10.0674	15.34896	-5.28156	NAF
NS0039	252	254	NS	E392824	392824	1	G	W	28.03	38.7	3.47	0.374	0.29	0.163	2.96	0.75	0.087	0.254	1.13	0.276	2.01	8.89	0.72	11.62	6007	7.7724	13.0815	-5.3091	NAF
NS0039	42	44	NS	E392718	392718	1	G	W	29.79	44.86	3.81	0.349	0.27	0.18	1.26	0.32	0.065	0.006	0.526	0.052	4.19	1.45	0.09	5.73	5902	0.1836	5.58144	-5.39784	NAF
NS0039	270	272	NS	E392833	392833	1	G	W	24.49	44.98	4.8	0.245	0.19	0.223	3.76	0.66	0.092	0.193	1.26	0.313	2.25	5.3	0.84	8.39	6016	5.9058	11.51172	-5.60592	NAF
NS0039	14	16	NS	E392704	392704	1	G	W	25.4	51.33	4.24	0.026	0.02	0.165	0.54	0.34	0.025	0.006	0.015	0.091	4.84	1.69	0.28	6.81	5888	0.1836	5.93028	-5.74668	NAF
NS0039	96	98	NS	E392745	392745	1	G	W	21.41	47.21	6.89	0.336	0.26	0.326	3.36	1.07	0.072	0.421	3.1	0.319	1.26	3.65	1.31	6.22	5929	12.8826	18.66294	-5.78034	NAF
NS0039	116	118	NS	E392755	392755	1	G	W	22.39	48.92	3.44	0.387	0.3	0.161	2.89	0.89	0.147	0.318	1.07	0.276	1.41	6.93	0.96	9.3	5939	9.7308	15.52338	-5.79258	NAF
NS0039	266	268	NS	E392831	392831	1	G	W	25.95	41.36	5.05	0.336	0.26	0.242	4.1	0.83	0.071	0.279	1.16	0.298	1.57	6.34	1.04	8.95	6014	8.5374	14.47686	-5.93946	NAF
NS0039	16	18	NS	E392705	392705	1	G	W	24.5	52.56	4.18	0.039	0.03	0.204	0.59	0.36	0.022	0.008	0.037	0.091	4.7	1.74	0.26	6.7	5889	0.2448	6.27912	-6.03432	NAF
NS0039	32	34	NS	E392713	392713	1	G	W	19.96	52.36	8.11	0.077	0.06	0.377	1.38	0.36	0.043	0.008	1.8	0.041	4.03	2.3	0.28	6.61	5897	0.2448	6.27912	-6.03432	NAF
NS0039	46	48	NS	E392720	392720	1	G	W	28.4	46.34	4.16	0.387	0.3	0.193	1.02	0.36	0.082	0.006	0.621	0.04	4.13	1.58	0.18	5.89	5904	0.1836	6.27912	-6.09552	NAF
NS0039	38	40	NS	E392716	392716	1	G	W	15.43	59.37	7.74	0.297	0.23	0.357	1.75	0.37	0.037	0.007	2.27	0.046	3.08	2.02	0.31	5.41	5900	0.2142	6.45354	-6.23934	NAF
NS0039	34	36	NS	E392714	392714	1	G	W	25.87	47.21	5.49	0.271	0.21	0.262	1.38	0.37	0.067	0.005	0.359	0.039	4.87	2.05	0.3	7.22	5898	0.153	6.45354	-6.30054	NAF
NS0039	30	32	NS	E392712	392712	1	G	W	21.55	50.18	8.09	0.116	0.09	0.373	1.44	0.39	0.048	0.008	0.932	0.047	4.19	2.67	0.32	7.18	5896	0.2448	6.80238	-6.55758	NAF
NS0039	56	58	NS	E392725	392725	1	G	W	24.06	49.05	5.72	0.232	0.18	0.274	2.28	0.65	0.106	0.152	1.83	0.117	2.16	2.29	0.52	4.97	5909	4.6512	11.3373	-6.6861	NAF
NS0039	98	100	NS	E392746	392746	1	G	W	26.16	39.67	2.47	0.697	0.54	0.116	2.73	1.01	0.179	0.35	0.906	0.187	1.55	11.59	0.94	14.08	5930	10.71	17.61642	-6.90642	NAF
NS0039	276	278	NS	E392836	392836	1	G	W	25.58	41.92	2.75	0.374	0.29	0.13	3.24	0.85	0.067	0.246	0.864	0.227	1.8	10.06	0.79	12.65	6019	7.5276	14.8257	-7.2981	NAF
NS0039	36	38	NS	E392715	392715	1	G	W	22.18	49.87	6.91	0.465	0.36	0.32	1.61	0.44	0.049	0.007	1.52	0.037	4.29	2.02	0.33	6.64	5899	0.2142	7.67448	-7.46028	NAF
NS0039	8	10	NS	E392699	392699	1	G	W	18.85	60.46	4.55	0.026	0.02	0.147	0.59	0.44	0.012	0.006	0.012	0.106	4.28	1.79	0.35	6.42	5885	0.1836	7.67448	-7.49088	NAF
NS0039	40	42	NS	E392717	392717	1	G	W	25.35	45.1	6.79	0.336	0.26	0.327	1.8	0.45	0.055	0.006	1.52	0.051	4.67	2.12	0.29	7.08	5901	0.1836	7.8489	-7.6653	NAF
NS0039	54	56	NS	E392724	392724	1	G	W	25.58	49.25	4.47	0.194	0.15	0.215	2.02	0.67	0.106	0.112	1.16	0.117	1.64	2.95	0.29	4.88	5908	3.4272	11.68614	-8.25894	NAF
NS0039	244	246	NS	E392820	392820	1	G	W	26.51	40.63	2.75	0.439	0.34	0.129	2.72	0.93	0.163	0.249	0.903	0.246	2.13	9.83	0.72	12.68	6003	7.6194	16.22106	-8.60166	NAF
NS0039	274	276	NS	E392835	392835	1	G	W	26.69	40.32	4.02	0.284	0.22	0.19	3.71	0.82	0.145	0.183	1.18	0.299	1.95	7.8	0.71	10.46	6018	5.5998	14.30244	-8.70264	NAF
NS0039	268	270	NS	E392832	392832	1	G	W	24.42	44.9	4.3	0.349	0.27	0.206	3.69	0.85	0.095	0.186	1.1	0.273	1.65	6.52	0.79	8.96	6015	5.6916	14.8257	-9.1341	NAF
NS0039	130	132	NS	E392762	392762	1	G	W	21.01	50.62	3.66	0.491	0.38	0.171	3.01	0.98	0.122	0.242	1.09	0.247	1.32	6.88	0.93	9.13	5946	7.4052	17.09316	-9.68796	NAF
NS0039	246	248	NS	E392821	392821	1	G	W	23	47.4	5.04	0.413	0.32	0.242	3.42	1.18	0.06	0.348	1.27	0.328	1.91	4.06	1.29	7.26	6004	10.6488	20.58156	-9.93276	NAF
NS0039	258	260	NS	E392827	392827	1	G	W	27.41	39.4	1.8	0.336	0.26	0.082	2.41	0.93	0.107	0.147	0.65	0.166	2	12.25	0.33	14.58	6010	4.4982	16.22106	-11.72286	NAF
NS0039	194	196	NS	E392794	392794	1	G	W	21.88	49.85	2.44	0.529	0.41	0.116	2.43	0.97	0.101	0.169	0.705	0.186	1.35	9.1	0.59	11.04	5978	5.1714	16.91874	-11.74734	NAF
NS0039	102	104	NS	E392748	392748	1	G	W	28.28	41.95	3.16	0.245	0.19	0.15	2.43	0.92	0.094	0.136	1.06	0.181	1.22	7.29	0.39	8.9	5932	4.1616	16.04664	-11.88504	NAF
NS0039	48	50	NS	E392721	392721	1	G	W	20.56	51.7	6.47	0.181	0.14	0.303	3.4	1.11	0.068	0.241	1.92	0.175	1.2	2.71	0.97	4.88	5905	7.3746	19.36062	-11.98602	NAF
NS0039	262	264	NS	E392829	392829	1	G	W	25.55	43.49	3.15	0.258	0.2	0.145	3.04	0.92	0.087	0.114	1.06	0.255	1.84	8.42	0.55	10.81	6012	3.4884	16.04664	-12.55824	NAF
NS0039	226	228	NS	E392811	392811	1	G	W	30.18	38.85	3.16	0.284	0.22	0.147	2.54	0.94	0.05	0.112	1.06	0.252	1.71	7.15	0.39	9.25	5994	3.4272	16.39548	-12.96828	NAF
NS0039	84	86	NS	E392739	392739	1	G	W	17.32	51.01	8.65	0.155	0.12	0.407	3.62	1.6	0.118	0.484	3.98	0.218	0.95	2.27	1.54	4.76	5923	14.8104	27.9072	-13.0968	NAF
NS0039	188	190	NS	E392791	392791	1	G	W	22.93	46.23	2.88	0.581	0.45	0.138	2.62	1.13	0.101	0.216	0.624	0.166	1.46	9.94	0.62	12.02	5975	6.6096	19.70946	-13.09986	NAF
NS0039	100	102	NS	E392747	392747	1	G	W	26.49	42.61	2.69	0.336	0.26	0.127	2.43	1.02	0.103	0.147	0.751	0.174	1.46	9.61	0.46	11.53	5931	4.4982	17.79084	-13.29264	NAF
NS0039	134	136	NS	E392764	392764	1	G	W	21.47	48.07	5.14	0.426	0.33	0.244	3.55	1.37	0.114	0.344	1.39	0.274	1.26	5.59	1.31	8.16	5948	10.5264	23.89554	-13.36914	NAF
NS0039	192	194	NS	E392793	392793	1	G	W	21.9	49.85	2.68	0.478	0.37	0.129	2.44	1.16	0.103	0.199	0.807	0.201	1.44	8.3	0.72	10.46	5977	6.0894	20.23272	-14.14332	NAF
NS0039	242	244	NS	E392819	392819	1	G	W	28.6	35.8	2.95	0.465	0.36	0.138	3.11	1.06	0.074	0.128	0.989	0.264	2.1	11.45	0.55	14.1	6002	3.9168	18.48852	-14.57172	NAF
NS0039	248	250	NS	E392822	392822	1	G	W	20.84	51.89	5.39	0.361	0.28	0.257	3.38	1.49	0.037	0.351	1.24	0.32	1.36	2.6	1.41	5.37	6005	10.7406	25.98858	-15.24798	NAF
NS0039	264	266	NS	E392830	392830	1	G	W	24.15	45.88	4.06	0.284	0.22	0.191	3.4	1.21	0.123	0.186	1.21	0.295	1.71	5.9	0.89	8.5	6013	5.6916	21.10482	-15.41322	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0039	228	230	NS	E392812	392812	1	G	W	32.04	34.8	2.77	0.374	0.29	0.128	2.49	1.09	0.104	0.112	0.969	0.229	1.68	8.8	0.33	10.81	5995	3.4272	19.01178	-15.58458	NAF
NS0039	260	262	NS	E392828	392828	1	G	W	25.75	42.33	2.26	0.271	0.21	0.107	2.6	1.15	0.076	0.132	0.777	0.194	1.78	10.8	0.55	13.13	6011	4.0392	20.0583	-16.0191	NAF
NS0039	254	256	NS	E392825	392825	1	G	W	25.29	43.8	2.34	0.336	0.26	0.108	2.48	1.21	0.068	0.162	0.841	0.206	1.67	9.86	0.64	12.17	6008	4.9572	21.10482	-16.14762	NAF
NS0039	238	240	NS	E392817	392817	1	G	W	27.23	39.1	2.58	0.413	0.32	0.12	2.71	1.17	0.071	0.138	0.886	0.223	1.92	10.94	0.5	13.36	6000	4.2228	20.40714	-16.18434	NAF
NS0039	236	238	NS	E392816	392816	1	G	W	24.13	44.97	3.18	0.336	0.26	0.149	2.91	1.39	0.087	0.239	0.975	0.247	1.9	8.04	0.93	10.87	5999	7.3134	24.24438	-16.93098	NAF
NS0039	210	212	NS	E392803	392803	1	G	W	25.97	41.67	3.21	0.258	0.2	0.154	2.71	1.22	0.121	0.141	0.923	0.249	1.86	9.52	0.58	11.96	5986	4.3146	21.27924	-16.96464	NAF
NS0039	144	146	NS	E392769	392769	1	G	W	31.46	37.85	2.46	0.387	0.3	0.128	2.04	1.13	0.055	0.088	0.826	0.194	1.52	7.73	0.35	9.6	5953	2.6928	19.70946	-17.01666	NAF
NS0039	212	214	NS	E392804	392804	1	G	W	25.48	43.06	2.67	0.258	0.2	0.13	2.43	1.26	0.071	0.159	0.736	0.193	1.99	9.91	0.63	12.53	5987	4.8654	21.97692	-17.11152	NAF
NS0039	256	258	NS	E392826	392826	1	G	W	24.47	44.49	3.46	0.336	0.26	0.164	3.16	1.4	0.092	0.234	1.06	0.286	1.64	7.66	0.93	10.23	6009	7.1604	24.4188	-17.2584	NAF
NS0039	60	62	NS	E392727	392727	1	G	W	25.46	47.33	4.61	0.232	0.18	0.22	2.65	1.23	0.116	0.132	1.58	0.222	1.43	2.94	0.62	4.99	5911	4.0392	21.45366	-17.41446	NAF
NS0039	136	138	NS	E392765	392765	1	G	W	24.24	46.91	3.74	0.374	0.29	0.177	2.72	1.43	0.074	0.23	1.11	0.228	1.18	6.14	0.9	8.22	5949	7.038	24.94206	-17.90406	NAF
NS0039	140	142	NS	E392767	392767	1	G	W	30.03	43.09	2.05	0.258	0.2	0.097	1.73	1.2	0.048	0.077	0.86	0.189	0.91	6.09	0.2	7.2	5951	2.3562	20.9304	-18.5742	NAF
NS0039	58	60	NS	E392726	392726	1	G	W	25.29	47.32	4.64	0.258	0.2	0.22	2.26	1.3	0.088	0.116	1.55	0.119	1.93	3.31	0.51	5.75	5910	3.5496	22.6746	-19.125	NAF
NS0039	72	74	NS	E392733	392733	1	G	W	28.19	44.65	2.84	0.323	0.25	0.134	2.3	1.27	0.119	0.088	1.02	0.203	1.09	5	0.54	6.63	5917	2.6928	22.15134	-19.45854	NAF
NS0039	70	72	NS	E392732	392732	1	G	W	28.86	46.88	1.94	0.232	0.18	0.091	1.8	1.26	0.074	0.07	0.794	0.177	0.84	4.06	0.45	5.35	5916	2.142	21.97692	-19.83492	NAF
NS0039	232	234	NS	E392814	392814	1	G	W	24.36	43.67	4.27	0.374	0.29	0.202	3.51	1.6	0.109	0.254	1.11	0.279	1.61	6.86	1.17	9.64	5997	7.7724	27.9072	-20.1348	NAF
NS0039	88	90	NS	E392741	392741	1	G	W	26.94	42.72	3.9	0.232	0.18	0.185	2.88	1.53	0.072	0.197	1.49	0.279	1.33	5.57	1.02	7.92	5925	6.0282	26.68626	-20.65806	NAF
NS0039	138	140	NS	E392766	392766	1	G	W	27.58	42.89	3.29	0.336	0.26	0.156	2.47	1.5	0.095	0.174	1.05	0.226	1.23	6.26	0.69	8.18	5950	5.3244	26.163	-20.8386	NAF
NS0039	206	208	NS	E392800	392800	1	G	W	18.66	55.3	3.51	0.465	0.36	0.162	2.77	1.76	0.123	0.261	0.846	0.216	1.24	5.32	1.23	7.79	5984	7.9866	30.69792	-22.71132	NAF
NS0039	196	198	NS	E392795	392795	1	G	W	14.65	62.25	1.74	0.646	0.5	0.079	1.97	2.67	0.029	0.779	0.46	0.119	0.73	5.32	2.25	8.3	5979	23.8374	46.57014	-22.73274	NAF
NS0039	78	80	NS	E392736	392736	1	G	W	27.39	43.47	3.58	0.349	0.27	0.169	2.68	1.58	0.131	0.127	1.24	0.219	1.3	4.77	0.88	6.95	5920	3.8862	27.55836	-23.67216	NAF
NS0039	86	88	NS	E392740	392740	1	G	W	20.86	49.46	5.82	0.194	0.15	0.282	3.46	2.01	0.228	0.369	1.96	0.264	1.04	3.29	1.46	5.79	5924	11.2914	35.05842	-23.76702	NAF
NS0039	220	222	NS	E392808	392808	1	G	W	27.57	42.43	2.9	0.271	0.21	0.135	2.39	1.7	0.093	0.174	0.922	0.234	1.71	6.76	0.84	9.31	5991	5.3244	29.6514	-24.327	NAF
NS0039	94	96	NS	E392744	392744	1	G	W	23.68	43.09	4.38	0.491	0.38	0.207	3.18	2.03	0.278	0.324	1.53	0.296	1.44	7.34	1.19	9.97	5928	9.9144	35.40726	-25.49286	NAF
NS0039	142	144	NS	E392768	392768	1	G	W	29.74	40.2	2.24	0.361	0.28	0.106	2.16	1.72	0.1	0.118	0.873	0.2	1.01	7.47	0.62	9.1	5952	3.6108	30.00024	-26.38944	NAF
NS0039	162	164	NS	E392778	392778	1	G	W	29.06	37.06	2.66	0.465	0.36	0.128	2.33	1.82	0.074	0.15	0.761	0.201	2.02	9.81	0.76	12.59	5962	4.59	31.74444	-27.15444	NAF
NS0039	52	54	NS	E392723	392723	1	G	W	26.04	45.16	4.37	0.245	0.19	0.215	2.69	1.85	0.304	0.139	1.44	0.145	1.34	3.71	0.64	5.69	5907	4.2534	32.2677	-28.0143	NAF
NS0039	76	78	NS	E392735	392735	1	G	W	24.88	48.96	2.96	0.323	0.25	0.139	2.35	1.82	0.099	0.119	1.11	0.2	1.01	4.05	1.12	6.18	5919	3.6414	31.74444	-28.10304	NAF
NS0039	214	216	NS	E392805	392805	1	G	W	24.81	42.98	3.73	0.31	0.24	0.183	3.06	2.21	0.134	0.333	0.995	0.25	1.48	7.33	1.38	10.19	5988	10.1898	38.54682	-28.35702	NAF
NS0039	202	204	NS	E392798	392798	1	G	W	23.75	44.47	1.94	0.478	0.37	0.09	2.33	1.95	0.072	0.132	0.654	0.171	1.25	11.49	0.93	13.67	5982	4.0392	34.0119	-29.9727	NAF
NS0039	234	236	NS	E392815	392815	1	G	W	23.96	43.52	2.8	0.387	0.3	0.133	2.77	2.16	0.091	0.242	0.895	0.228	2.07	9.05	1.24	12.36	5998	7.4052	37.67472	-30.26952	NAC
NS0039	156	158	NS	E392775	392775	1	G	W	27.68	41.73	2.35	0.413	0.32	0.113	2.1	2.01	0.109	0.142	0.769	0.182	1.25	8.25	0.79	10.29	5959	4.3452	35.05842	-30.71322	NAC
NS0039	190	192	NS	E392792	392792	1	G	W	23.93	43.87	2.9	0.491	0.38	0.137	2.66	2.08	0.102	0.133	0.854	0.232	1.5	9.7	0.97	12.17	5976	4.0698	36.27936	-32.20956	NAC
NS0039	50	52	NS	E392722	392722	1	G	W	28.32	42.56	3.32	0.323	0.25	0.157	2.34	2.04	0.032	0.104	1.27	0.127	1.02	4.97	1.12	7.11	5906	3.1824	35.58168	-32.39928	NAC
NS0039	152	154	NS	E392773	392773	1	G	W	26.64	41.51	2.3	0.503	0.39	0.11	2.33	2.1	0.1	0.113	0.79	0.186	1.31	9.6	0.87	11.78	5957	3.4578	36.6282	-33.1704	NAC
NS0039	200	202	NS	E392797	392797	1	G	W	22.08	47.76	2.43	0.503	0.39	0.116	2.47	2.22	0.076	0.158	0.832	0.211	1.38	8.98	1.19	11.55	5981	4.8348	38.72124	-33.88644	NAC
NS0039	148	150	NS	E392771	392771	1	G	W	26.88	41.29	2.38	0.503	0.39	0.114	2.4	2.16	0.109	0.101	0.9	0.217	1.23	9.11	0.92	11.26	5955	3.0906	37.67472	-34.58412	NAC
NS0039	124	126	NS	E392759	392759	1	G	W	25.47	44.07	2.44	0.439	0.34	0.113	2.32	2.33	0.105	0.18	0.782	0.187	1.08	8.16	1.1	10.34	5943	5.508	40.63986	-35.13186	NAC
NS0039	74	76	NS	E392734	392734	1	G	W	26.7	42.88	3.36	0.4	0.31	0.158	2.73	2.27	0.243	0.134	1.16	0.228	1.26	5.42	1.17	7.85	5918	4.1004	39.59334	-35.49294	NAC
NS0039	216	218	NS	E392806	392806	1	G	W	21.79	48.92	3.41	0.232	0.18	0.164	2.57	2.38	0.088	0.168	0.884	0.248	2.42	5.86	1.28	9.56	5989	5.1408	41.51196	-36.37116	NAC
NS0039	158	160	NS	E392776	392776	1	G	W	27.19	40.38	2.38	0.465	0.36	0.114	2.17	2.3	0.121	0.112	0.777	0.195	1.29	9.77	0.89	11.95	5960	3.4272	40.1166	-36.6894	NAC
NS0039	62	64	NS	E392728	392728	1	G	W	27.93	42.75	3.71	0.271	0.21	0.174	2.61	2.33	0.125	0.111	1.3	0.247	1.22	3.43	1.43	6.08	5912	3.3966	40.63986	-37.24326	NAC
NS0039	146	148	NS	E392770	392770	1	G	W	25.61	48.98	1.52	0.271	0.21	0.07	1.49	2.32	0.063	0.058	0.611	0.14	0.81	5.9	0.94	7.65	5954	1.7748	40.46544	-38.69064	NAC
NS0039	150	152	NS	E392772	392772	1	G	W	27.64	39.81	2.65	0.465	0.36	0.135	2.17	2.42	0.083	0.103	0.826	0.187	1.67	8.68	1.07	11.42	5956	3.1518	42.20964	-39.05784	NAC
NS0039	160	162	NS	E392777	392777	1	G	W	28.83	38.7	2.44	0.387	0.3	0.124	1.84	2.47	0.086	0.126	0.617	0.162	2.22	8.38	1.06	11.66	5961	3.8556	43.08174	-39.22614	NAC
NS0039	218	220	NS	E392807	392807	1	G	W	24.31	43.86	3.61	0.271	0.21	0.173	2.91	2.64	0.091	0.185	0.978	0.252	1.9	6.67	1.49	10.06	5990	5.661	46.04688	-40.38588	NAC
NS0039	230	232	NS	E392813	392813	1	G	W	23.03	45.15	2.32	0.465	0.36	0.105	2.4	2.75	0.157	0.212	0.756	0.186	1.37	9.73	1.22	12.32	5996	6.4872	47.9655	-41.4783	NAC
NS0039	222	224	NS	E392809	392809	1	G	W	23.82	45.59	2.98	0.336	0.26	0.145	2.43	2.78	0.143	0.167	0.871	0.216	1.46	7.27	1.36	10.09	5992	5.1102	48.48876	-43.37856	NAC
NS0039	224	226	NS	E392810	392810	1	G	W	24.65	44.11	3.06	0.336	0.26	0.146	2.43	2.78	0.085	0.136	0.99	0.239	1.39	7.48	1.34	10.21	5993	4.1616	48.48876	-44.32716	NAC
NS0039	122	124	NS	E392758	392758	1	G	W	19.98	58.41	1.16	0.194	0.15	0.051	1.03	2.73	0.057	0.074	0.437	0.209	0.62	5.03	1.3	6.95	5942	2.2644	47.61666	-45.35226	NAC
NS0039	120	122	NS	E392757	392757	1	G	W	28.15	42.86	1.81	0.258	0.2	0.085	1.54	2.79	0.083	0.094	0.692	0.169	1.02	6.97	1.13	9.12	5941	2.8764	48.66318	-45.78678	NAC
NS0039	240	242	NS	E392818	392818	1	G	W	25.19	39.59	2.79	0.452	0.35	0.132	2.84	2.82	0.067	0.073	0.964	0.243	1.99	10.24	1.48	13.71	6001	2.2338	49.18644	-46.95264	NAC
NS0039	64	66	NS	E392729	392729	1	G	W	28.19	43.51	2.59	0.31	0.24	0.127	2.03	2.97	0.097	0.094	0.959	0.189	0.96	3.95	1.6	6.51	5913	2.8764	51.80274	-48.92634	NAC
NS0039	68	70	NS	E392731	392731	1	G	W	27.58	43.45	2.76	0.271	0.21	0.131	2.24	2.98	0.077	0.088	1.04	0.214	0.99	4.44	1.78	7.21	5915	2.6928	51.97716	-49.28436	NAC
NS0039	90	92	NS	E392742	392742	1	G	W	26.97	39.84	3.16	0.31	0.24	0.149	2.7	3.04	0.238	0.108	1.09	0.281	1.26	7.59	1.29	10.14	5926	3.3048	53.02368	-49.71888	NAC
NS0039	66	68	NS	E392730	392730	1	G	W	25.02	45.58	3.04	0.323	0.25	0.147	2.46	3.44	0.235	0.101	1.17	0.245	1.01	3.91	2.16	7.08	5914	3.0906	60.00048	-56.90988	NAC
NS0039	92	94	NS	E392743	392743	1	G	W	26.22	37.47	3.33	0.4	0.31	0.158	2.88	4.17	0.386	0.12	1.01	0.281	1.28	8.85	1.63	11.76	5927	3.672	72.73314	-69.06114	NAC
NS0039	154	156	NS	E392774	392774	1	G	W	25.85	41.14	2.15	0.387	0.3	0.102	1.88	4.58	0.084	0.099	0.734	0.173	0.98	8.21	2.27	11.46	5958	3.0294	79.88436	-76.85496	NAC
NS0040	198	200	NS	E392939	392939	1	G	W	21.76	45.48	6.94	0.336	0.26	0.312	3.92	0.34	0.089	0.62	0.15	0.031	0.59	9.1	1.14	10.83	6121	18.972	5.93028	13.04172	PAF(HC)
NS0040	144	146	NS	E392912	392912	1	G	W	33.01	39.67	3.25	0.581	0.45	0.147	2.16	0.24	0.055	0.326	0.444	0.094	0.27	5.25	0.48	6	6094	9.9756	4.18608	5.78952	PAF(LC)
NS0040	114	116	NS	E392896	392896	1	G	W	27.48	40.85	5.61	0.581	0.45	0.252	2.8	0.49	0.087	0.394	1.45	0.039	0.3	6.98	0.81	8.09	6079	12.0564	8.54658	3.50982	PAF(LC)
NS0040	200	202	NS	E392940	392940	1	G	W	24.2	42.11	5.51	0.503	0.39	0.245	3.28	0.42	0.097	0.303	0.577	0.027	0.73	10.59	0.69	12.01	6122	9.2718	7.32564	1.94616	PAF(LC)
NS0040	204	206	NS	E392942	392942	1	G	W	25.55	38.9	3.16	0.697	0.54	0.144	3.17	0.26	0.034	0.209	0.428	0.036	0.81	15	0.53	16.34	6124	6.3954	4.53492	1.86048	PAF(LC)
NS0040	202	204	NS	E392941	392941	1	G	W	24.29	38.89	6.2	0.439	0.34	0.275	3.65	0.61	0.128	0.374	1.09	0.044	0.57	12.03	0.84	13.44	6123	11.4444	10.63962	0.80478	PAF(LC)
NS0040	78	80	NS	E392878	392878	1	G	W	36.61	43.62	1.09	0.684	0.53	0.052	0.07	0.005	0.063	0.015	0.123	0.005	1.16	0.45	0.11	1.72	6061	0.459	0.08721	0.37179	PAF(LC)
NS0040	0	2	NS	E392839	392839	1	G	W	48.55	10.27	9.04	-0.0129	-0.01	1.023	0.14	0.05	0.03	0.035	0.144	0.035	7.21	1.98	0.37	9.56	6022	1.071	0.8721	0.1989	PAF(LC)
NS0040	148	150	NS	E392914	392914	1	G	W	29.4	39.33	4.42	0.607	0.47	0.2	2.62	0.61	0.177	0.353	0.515	0.103	0.52	7.49	0.75	8.76	6096	10.8018	10.63962	0.16218	PAF(LC)
NS0040	28	30	NS	E392853	392853	1	G	W	31.16	50	2.83	0.052	0.04	0.12	0.11	0.005	0.029	0.003	0.774	0.009	0.81	0.54	0.09	1.44	6036	0.0918	0.08721	0.00459	PAF(LC)
NS0040	54	56	NS	E392866	392866	1	G	W	17.17	65.64	5.75	0.052	0.04	0.261	0.18	0.005	0.017	0.003	1.61	0.037	0.47	0.86	0.23	1.56	6049	0.0918	0.08721	0.00459	PAF(LC)
NS0040	20	22	NS	E392849	392849	1	G	W	29.75	53.15	2.19	-0.0129	-0.01	0.095	0.09	0.005	0.032	0.002	0.635	0.038	0.63	0.4	0.09	1.12	6032	0.0612	0.08721	-0.02601	NAF
NS0040	32	34	NS	E392855	392855	1	G	W	32.04	49.63	2.24	0.168	0.13	0.089	0.09	0.005	0.021	0.002	0.539	0.019	0.45	0.46	0.05	0.96	6038	0.0612	0.08721	-0.02601	NAF
NS0040	34	36	NS	E392856	392856	1	G	W	32.81	49	2.28	0.09	0.07	0.096	0.09	0.005	0.014	0.002	0.575	0.021	0.31	0.44	0.03	0.78	6039	0.0612	0.08721	-0.02601	NAF
NS0040	52	54	NS	E392865	392865	1	G	W	19.15	62.9	5.63	0.065	0.05	0.261	0.19	0.005	0.031	0.002	1.65	0.041	0.53	0.79	0.24	1.56	6048	0.0612	0.08721	-0.02601	NAF
NS0040	56	58	NS	E392867	392867	1	G	W	29.1	53.47	2.63	0.065	0.05	0.111	0.11	0.005	0.019	0.002	0.833	0.023	0.27	0.27	0.3	0.84	6050	0.0612	0.08721	-0.02601	NAF
NS0040	72	74	NS	E392875	392875	1	G	W	29.5	54.12	1.92	0.116	0.09	0.091	0.06	0.005	0.017	0.002	0.299	0.047	0.49	0.41	0.05	0.95	6058	0.0612	0.08721	-0.02601	NAF
NS0040	44	46	NS	E392861	392861	1	G	W	28.14	55.51	2.27	0.168	0.13	0.089	0.05	0.005	0.034	0.001	0.398	0.008	0.69	0.45	0.08	1.22	6044	0.0306	0.08721	-0.05661	NAF
NS0040	74	76	NS	E392876	392876	1	G	W	34.07	47.33	1.78	0.116	0.09	0.081	0.06	0.005	0.047	0.001	0.202	0.017	0.72	0.44	0.04	1.2	6059	0.0306	0.08721	-0.05661	NAF
NS0040	38	40	NS	E392858	392858	1	G	W	31.44	50.07	2.61	0.155	0.12	0.089	0.07	0.005	0.021	0.0005	0.416	0.037	0.56	0.51	0.1	1.17	6041	0.0153	0.08721	-0.07191	NAF
NS0040	40	42	NS	E392859	392859	1	G	W	31.74	50.47	2.45	0.116	0.09	0.09	0.08	0.005	0.013	0.0005	0.53	0.016	0.33	0.43	0.12	0.88	6042	0.0153	0.08721	-0.07191	NAF
NS0040	42	44	NS	E392860	392860	1	G	W	32.48	48.98	2.41	0.103	0.08	0.102	0.08	0.005	0.014	0.0005	0.548	0.017	0.43	0.41	0.09	0.93	6043	0.0153	0.08721	-0.07191	NAF
NS0040	50	52	NS	E392864	392864	1	G	W	28.23	55.69	2.17	0.065	0.05	0.093	0.1	0.005	0.021	0.0005	0.602	0.014	0.34	0.35	0.08	0.77	6047	0.0153	0.08721	-0.07191	NAF
NS0040	58	60	NS	E392868	392868	1	G	W	30	52.75	2.22	0.065	0.05	0.091	0.1	0.005	0.023	0.0005	0.683	0.006	0.24	0.35	0.12	0.71	6051	0.0153	0.08721	-0.07191	NAF
NS0040	60	62	NS	E392869	392869	1	G	W	26.62	58.49	1.85	0.065	0.05	0.078	0.08	0.005	0.02	0.0005	0.55	0.008	0.33	0.29	0.06	0.68	6052	0.0153	0.08721	-0.07191	NAF
NS0040	62	64	NS	E392870	392870	1	G	W	31	52.18	1.49	0.09	0.07	0.068	0.08	0.005	0.033	0.0005	0.468	0.023	0.54	0.27	0.1	0.91	6053	0.0153	0.08721	-0.07191	NAF
NS0040	64	66	NS	E392871	392871	1	G	W	28.57	54.77	1.77	0.129	0.1	0.078	0.08	0.005	0.067	0.0005	0.566	0.009	1.05	0.33	0.1	1.48	6054	0.0153	0.08721	-0.07191	NAF
NS0040	66	68	NS	E392872	392872	1	G	W	24.3	61.66	2.09	0.052	0.04	0.088	0.1	0.005	0.02	0.0005	0.698	0.018	0.44	0.3	0.14	0.88	6055	0.0153	0.08721	-0.07191	NAF
NS0040	68	70	NS	E392873	392873	1	G	W	22.85	64.3	1.55	0.065	0.05	0.066	0.08	0.005	0.018	0.0005	0.524	0.021	0.37	0.21	0.07	0.65	6056	0.0153	0.08721	-0.07191	NAF
NS0040	70	72	NS	E392874	392874	1	G	W	24.67	61.57	1.41	0.077	0.06	0.06	0.07	0.005	0.013	0.0005	0.471	0.009	0.32	0.2	0.09	0.61	6057	0.0153	0.08721	-0.07191	NAF
NS0040	80	82	NS	E392879	392879	1	G	W	35.58	45.82	1.37	0.065	0.05	0.066	0.12	0.02	0.042	0.008	0.224	0.017	0.7	0.37	0.07	1.14	6062	0.2448	0.34884	-0.10404	NAF
NS0040	76	78	NS	E392877	392877	1	G	W	37.33	42.39	1.15	0.581	0.45	0.059	0.11	0.02	0.092	0.006	0.162	0.016	1.27	0.4	0.04	1.71	6060	0.1836	0.34884	-0.16524	NAF
NS0040	14	16	NS	E392846	392846	1	G	W	31.43	49.13	2.61	-0.0129	-0.01	0.111	0.13	0.02	0.041	0.004	0.77	0.02	1.22	0.46	0.09	1.77	6029	0.1224	0.34884	-0.22644	NAF
NS0040	24	26	NS	E392851	392851	1	G	W	17.82	63.87	6.52	-0.0129	-0.01	0.28	0.21	0.02	0.026	0.004	1.49	0.056	0.89	1.2	0.21	2.3	6034	0.1224	0.34884	-0.22644	NAF
NS0040	26	28	NS	E392852	392852	1	G	W	23.1	56.83	5.97	0.026	0.02	0.263	0.18	0.02	0.027	0.004	1.53	0.035	0.66	0.95	0.29	1.9	6035	0.1224	0.34884	-0.22644	NAF
NS0040	18	20	NS	E392848	392848	1	G	W	29.33	52.98	2.67	-0.0129	-0.01	0.112	0.13	0.02	0.023	0.003	0.763	0.031	0.73	0.45	0.09	1.27	6031	0.0918	0.34884	-0.25704	NAF
NS0040	48	50	NS	E392863	392863	1	G	W	27.07	55.61	3.06	0.026	0.02	0.134	0.11	0.02	0.043	0.003	0.526	0.009	0.84	0.62	0.09	1.55	6046	0.0918	0.34884	-0.25704	NAF
NS0040	2	4	NS	E392840	392840	1	G	W	51.75	7.98	7.42	-0.0129	-0.01	0.909	0.14	0.07	0.026	0.031	0.104	0.04	7.05	1.64	0.32	9.01	6023	0.9486	1.22094	-0.27234	NAF
NS0040	12	14	NS	E392845	392845	1	G	W	30.34	52.21	2.39	-0.0129	-0.01	0.108	0.1	0.02	0.012	0.002	0.666	0.041	0.54	0.38	0.04	0.96	6028	0.0612	0.34884	-0.28764	NAF
NS0040	22	24	NS	E392850	392850	1	G	W	29.56	53.49	1.75	0.026	0.02	0.064	0.08	0.02	0.057	0.002	0.416	0.021	1.15	0.43	0.04	1.62	6033	0.0612	0.34884	-0.28764	NAF
NS0040	30	32	NS	E392854	392854	1	G	W	25.8	58.8	2.26	0.09	0.07	0.092	0.09	0.02	0.019	0.002	0.564	0.026	0.46	0.44	0.01	0.91	6037	0.0612	0.34884	-0.28764	NAF
NS0040	46	48	NS	E392862	392862	1	G	W	27.9	55.71	2.5	0.194	0.15	0.094	0.05	0.02	0.029	0.002	0.419	0.032	0.52	0.49	0.14	1.15	6045	0.0612	0.34884	-0.28764	NAF
NS0040	36	38	NS	E392857	392857	1	G	W	33.82	46.87	2.42	0.194	0.15	0.094	0.08	0.02	0.019	0.001	0.49	0.016	0.48	0.58	0.08	1.14	6040	0.0306	0.34884	-0.31824	NAF
NS0040	90	92	NS	E392884	392884	1	G	W	33.49	46.61	1.26	0.413	0.32	0.061	0.09	0.02	0.14	0.001	0.169	0.0005	2.24	0.54	0.01	2.79	6067	0.0306	0.34884	-0.31824	NAF
NS0040	10	12	NS	E392844	392844	1	G	W	30.83	50.8	2.72	-0.0129	-0.01	0.124	0.14	0.03	0.014	0.004	0.663	0.044	0.81	0.48	0.07	1.36	6027	0.1224	0.52326	-0.40086	NAF
NS0040	16	18	NS	E392847	392847	1	G	W	27.53	53.35	3.7	-0.0129	-0.01	0.155	0.17	0.03	0.026	0.004	0.972	0.014	1.06	0.65	0.1	1.81	6030	0.1224	0.52326	-0.40086	NAF
NS0040	88	90	NS	E392883	392883	1	G	W	31.21	49.05	1.67	0.349	0.27	0.076	0.21	0.03	0.177	0.002	0.156	0.024	2.93	0.69	0.05	3.67	6066	0.0612	0.52326	-0.46206	NAF
NS0040	192	194	NS	E392936	392936	1	G	W	29.83	42.57	3.31	0.529	0.41	0.151	2.7	0.35	0.058	0.183	0.273	0.025	0.55	6.27	0.14	6.96	6118	5.5998	6.1047	-0.5049	NAF
NS0040	86	88	NS	E392882	392882	1	G	W	30.02	53.16	1.86	0.271	0.21	0.084	0.25	0.03	0.03	0.0005	0.303	0.002	0.44	0.46	0.07	0.97	6065	0.0153	0.52326	-0.50796	NAF
NS0040	206	208	NS	E392943	392943	1	G	W	26.91	40.2	3.56	0.542	0.42	0.159	2.78	0.31	0.058	0.16	0.063	0.034	1.13	12.29	0.3	13.72	6125	4.896	5.40702	-0.51102	NAF
NS0040	84	86	NS	E392881	392881	1	G	W	28.31	54.86	2.44	0.103	0.08	0.11	0.3	0.04	0.018	0.005	0.289	0.063	0.5	0.58	0.1	1.18	6064	0.153	0.69768	-0.54468	NAF
NS0040	6	8	NS	E392842	392842	1	G	W	51.96	8.1	6.5	-0.0129	-0.01	0.849	0.21	0.09	0.029	0.03	0.067	0.033	7.8	1.49	0.31	9.6	6025	0.918	1.56978	-0.65178	NAF
NS0040	226	228	NS	E392953	392953	1	G	W	26.11	39.44	3.27	0.374	0.29	0.138	2.62	0.26	0.029	0.122	0.138	0.025	1.17	14.58	0.26	16.01	6135	3.7332	4.53492	-0.80172	NAF
NS0040	4	6	NS	E392841	392841	1	G	W	50.3	11.49	6.47	-0.0129	-0.01	0.661	0.21	0.09	0.021	0.024	0.142	0.041	6.86	1.53	0.28	8.67	6024	0.7344	1.56978	-0.83538	NAF
NS0040	82	84	NS	E392880	392880	1	G	W	25.25	51.64	5.92	0.065	0.05	0.265	0.82	0.07	0.123	0.007	0.924	0.028	2.02	1.39	0.27	3.68	6063	0.2142	1.22094	-1.00674	NAF
NS0040	140	142	NS	E392910	392910	1	G	W	28.25	39.41	4.49	0.749	0.58	0.206	3.26	0.55	0.145	0.27	0.42	0.102	0.51	8.6	0.62	9.73	6092	8.262	9.5931	-1.3311	NAF
NS0040	92	94	NS	E392885	392885	1	G	W	34.55	43.61	1.49	0.646	0.5	0.069	0.83	0.12	0.062	0.018	0.239	0.012	0.64	3.02	0.02	3.68	6068	0.5508	2.09304	-1.54224	NAF
NS0040	228	230	NS	E392954	392954	1	G	W	27.48	35.38	5.64	0.426	0.33	0.235	3.51	0.44	0.068	0.198	0.106	0.025	1.09	13.04	0.37	14.5	6136	6.0588	7.67448	-1.61568	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0040	8	10	NS	E392843	392843	1	G	W	32.8	45.09	3.73	-0.0129	-0.01	0.212	0.38	0.13	0.008	0.011	0.444	0.07	1.79	0.93	0.16	2.88	6026	0.3366	2.26746	-1.93086	NAF
NS0040	218	220	NS	E392949	392949	1	G	W	26.33	40.11	2.85	0.555	0.43	0.126	2.44	0.42	0.082	0.169	0.082	0.002	0.86	14.24	0.35	15.45	6131	5.1714	7.32564	-2.15424	NAF
NS0040	176	178	NS	E392928	392928	1	G	W	30.69	41.56	3.02	0.516	0.4	0.132	2.57	0.37	0.071	0.138	0.336	0.018	0.44	6.59	0.11	7.14	6110	4.2228	6.45354	-2.23074	NAF
NS0040	194	196	NS	E392937	392937	1	G	W	29.31	40.16	3.51	0.775	0.6	0.161	2.71	0.52	0.093	0.223	0.596	0.011	0.41	8.2	0.33	8.94	6119	6.8238	9.06984	-2.24604	NAF
NS0040	136	138	NS	E392908	392908	1	G	W	32.66	36.64	2.99	0.813	0.63	0.14	2.39	0.47	0.116	0.194	0.511	0.026	0.59	8.11	0.25	8.95	6090	5.9364	8.19774	-2.26134	NAF
NS0040	208	210	NS	E392944	392944	1	G	W	30.32	40.84	2.81	0.529	0.41	0.125	1.63	0.36	0.082	0.125	0.278	0.022	1.76	8.09	0.1	9.95	6126	3.825	6.27912	-2.45412	NAF
NS0040	180	182	NS	E392930	392930	1	G	W	26.97	47.72	3.18	0.426	0.33	0.151	2.52	0.42	0.041	0.157	0.221	0.033	0.38	5.92	0.21	6.51	6112	4.8042	7.32564	-2.52144	NAF
NS0040	160	162	NS	E392920	392920	1	G	W	37.4	36.95	1.89	0.581	0.45	0.083	1.36	0.23	0.051	0.048	0.442	0.034	0.21	4.41	-0.14	4.48	6102	1.4688	4.01166	-2.54286	NAF
NS0040	106	108	NS	E392892	392892	1	G	W	35.42	40.67	1.42	0.503	0.39	0.062	1	0.19	0.096	0.022	0.258	0.0005	0.89	3.93	-0.07	4.75	6075	0.6732	3.31398	-2.64078	NAF
NS0040	116	118	NS	E392897	392897	1	G	W	35.05	38.62	1.47	0.697	0.54	0.067	1.6	0.26	0.059	0.057	0.263	0.034	0.45	6.38	-0.19	6.64	6080	1.7442	4.53492	-2.79072	NAF
NS0040	196	198	NS	E392938	392938	1	G	W	28.15	39.6	4.12	0.594	0.46	0.184	3.17	0.57	0.149	0.228	0.302	0.013	0.59	9.53	0.35	10.47	6120	6.9768	9.94194	-2.96514	NAF
NS0040	100	102	NS	E392889	392889	1	G	W	28.72	40.04	4.73	0.684	0.53	0.213	2.95	0.87	0.259	0.398	0.665	0.038	0.38	6.64	0.72	7.74	6072	12.1788	15.17454	-2.99574	NAF
NS0040	224	226	NS	E392952	392952	1	G	W	24.63	39.66	4.16	0.529	0.41	0.181	3.41	0.41	0.077	0.133	0.012	0.04	1.27	14.26	0.31	15.84	6134	4.0698	7.15122	-3.08142	NAF
NS0040	102	104	NS	E392890	392890	1	G	W	35.14	40.89	1.29	0.646	0.5	0.058	1.25	0.23	0.055	0.03	0.233	0.01	0.25	4.68	-0.28	4.65	6073	0.918	4.01166	-3.09366	NAF
NS0040	220	222	NS	E392950	392950	1	G	W	27.11	39.38	2.89	0.439	0.34	0.127	2.34	0.36	0.051	0.104	0.11	0.016	1.08	13.97	0.13	15.18	6132	3.1824	6.27912	-3.09672	NAF
NS0040	216	218	NS	E392948	392948	1	G	W	28.28	34.35	2.44	0.736	0.57	0.099	2.4	0.43	0.083	0.142	0.015	0.011	2.35	15.99	0.4	18.74	6130	4.3452	7.50006	-3.15486	NAF
NS0040	126	128	NS	E392903	392903	1	G	W	34.9	38.93	1.87	0.581	0.45	0.086	1.33	0.35	0.092	0.095	0.409	0.04	0.64	5.64	-0.12	6.16	6085	2.907	6.1047	-3.1977	NAF
NS0040	130	132	NS	E392905	392905	1	G	W	36.48	36.97	1.77	0.542	0.42	0.078	1.56	0.3	0.079	0.058	0.284	0.062	0.51	5.82	-0.26	6.07	6087	1.7748	5.2326	-3.4578	NAF
NS0040	182	184	NS	E392931	392931	1	G	W	32.79	40.57	2.53	0.491	0.38	0.116	2.27	0.46	0.111	0.148	0.202	0.012	0.38	5.63	0.05	6.06	6113	4.5288	8.02332	-3.49452	NAF
NS0040	98	100	NS	E392888	392888	1	G	W	33.19	40.54	1.99	0.736	0.57	0.093	1.77	0.39	0.094	0.098	0.312	0.038	0.36	6.04	-0.05	6.35	6071	2.9988	6.80238	-3.80358	NAF
NS0040	104	106	NS	E392891	392891	1	G	W	37	36.08	1.57	0.775	0.6	0.073	1.53	0.32	0.077	0.046	0.29	0.025	0.23	6	-0.3	5.93	6074	1.4076	5.58144	-4.17384	NAF
NS0040	184	186	NS	E392932	392932	1	G	W	36.2	37.13	1.8	0.581	0.45	0.082	1.98	0.31	0.071	0.039	0.141	0.006	0.31	6.01	-0.4	5.92	6114	1.1934	5.40702	-4.21362	NAF
NS0040	96	98	NS	E392887	392887	1	G	W	36.75	39.08	1.34	0.555	0.43	0.062	1.24	0.29	0.075	0.021	0.22	0.02	0.24	4.25	-0.25	4.24	6070	0.6426	5.05818	-4.41558	NAF
NS0040	164	166	NS	E392922	392922	1	G	W	31.63	45.45	1.09	0.646	0.5	0.05	1.27	0.3	0.059	0.026	0.186	0.03	0.31	5.5	-0.3	5.51	6104	0.7956	5.2326	-4.437	NAF
NS0040	142	144	NS	E392911	392911	1	G	W	35.57	37.48	1.7	0.723	0.56	0.078	1.54	0.37	0.094	0.063	0.246	0.037	0.67	5.8	-0.08	6.39	6093	1.9278	6.45354	-4.52574	NAF
NS0040	170	172	NS	E392925	392925	1	G	W	33.05	36.45	1.96	0.62	0.48	0.088	2.36	0.39	0.074	0.074	0.282	0.033	0.55	9.54	-0.1	9.99	6107	2.2644	6.80238	-4.53798	NAF
NS0040	120	122	NS	E392899	392899	1	G	W	34.99	38.84	1.48	0.658	0.51	0.073	1.36	0.34	0.09	0.037	0.264	0.06	0.72	5.99	-0.17	6.54	6082	1.1322	5.93028	-4.79808	NAF
NS0040	172	174	NS	E392926	392926	1	G	W	32.7	39.77	2.13	0.555	0.43	0.096	2.29	0.43	0.076	0.076	0.261	0.006	0.39	7.03	-0.14	7.28	6108	2.3256	7.50006	-5.17446	NAF
NS0040	128	130	NS	E392904	392904	1	G	W	35.6	37.26	1.32	0.646	0.5	0.06	1.15	0.35	0.092	0.028	0.245	0.047	1.11	6.65	-0.23	7.53	6086	0.8568	6.1047	-5.2479	NAF
NS0040	112	114	NS	E392895	392895	1	G	W	31.53	40.23	2.6	0.788	0.61	0.118	1.91	0.56	0.146	0.141	0.617	0.041	0.43	6.83	0.15	7.41	6078	4.3146	9.76752	-5.45292	NAF
NS0040	94	96	NS	E392886	392886	1	G	W	35.4	40.32	1.23	0.684	0.53	0.059	1.18	0.35	0.102	0.02	0.265	0.01	0.34	4.79	-0.24	4.89	6069	0.612	6.1047	-5.4927	NAF
NS0040	212	214	NS	E392946	392946	1	G	W	32.91	38.48	1.83	0.62	0.48	0.083	1.43	0.4	0.093	0.046	0.454	0.017	1.28	8.21	-0.16	9.33	6128	1.4076	6.9768	-5.5692	NAF
NS0040	132	134	NS	E392906	392906	1	G	W	31.59	40.17	1.11	0.736	0.57	0.049	1.79	0.36	0.076	0.022	0.111	0.042	1.21	9.08	-0.15	10.14	6088	0.6732	6.27912	-5.60592	NAF
NS0040	108	110	NS	E392893	392893	1	G	W	37.27	37.47	1.45	0.646	0.5	0.067	1.32	0.37	0.102	0.024	0.251	0.018	0.26	4.72	-0.33	4.65	6076	0.7344	6.45354	-5.71914	NAF
NS0040	110	112	NS	E392894	392894	1	G	W	36.68	38.54	1.2	0.684	0.53	0.054	1.25	0.37	0.093	0.022	0.203	0.027	0.34	5.01	-0.24	5.11	6077	0.6732	6.45354	-5.78034	NAF
NS0040	162	164	NS	E392921	392921	1	G	W	37.3	35.88	2.02	0.607	0.47	0.095	1.53	0.47	0.133	0.074	0.465	0.036	0.27	5.11	-0.2	5.18	6103	2.2644	8.19774	-5.93334	NAF
NS0040	118	120	NS	E392898	392898	1	G	W	31.86	41.31	1.23	0.8	0.62	0.063	1.62	0.43	0.105	0.047	0.213	0.034	0.57	7.9	-0.13	8.34	6081	1.4382	7.50006	-6.06186	NAF
NS0040	188	190	NS	E392934	392934	1	G	W	32.46	42.64	2.05	0.529	0.41	0.094	2.16	0.49	0.085	0.081	0.085	0.025	0.37	5.41	-0.13	5.65	6116	2.4786	8.54658	-6.06798	NAF
NS0040	174	176	NS	E392927	392927	1	G	W	31.44	43.82	1.93	0.503	0.39	0.093	1.9	0.48	0.061	0.075	0.278	0.017	0.24	5.69	-0.14	5.79	6109	2.295	8.37216	-6.07716	NAF
NS0040	122	124	NS	E392900	392900	1	G	W	35.38	37.15	1.54	0.71	0.55	0.069	1.45	0.41	0.101	0.033	0.205	0.071	0.74	6.87	-0.21	7.4	6083	1.0098	7.15122	-6.14142	NAF
NS0040	214	216	NS	E392947	392947	1	G	W	30.87	40.23	1.78	0.684	0.53	0.078	1.48	0.45	0.086	0.052	0.377	0.013	1.2	9.18	-0.08	10.3	6129	1.5912	7.8489	-6.2577	NAF
NS0040	146	148	NS	E392913	392913	1	G	W	36.23	39.28	1.4	0.607	0.47	0.062	1.34	0.42	0.098	0.029	0.209	0.118	0.18	4.39	-0.27	4.3	6095	0.8874	7.32564	-6.43824	NAF
NS0040	134	136	NS	E392907	392907	1	G	W	34.71	36.56	1.48	0.762	0.59	0.071	1.64	0.43	0.102	0.03	0.229	0.049	0.9	8.03	-0.23	8.7	6089	0.918	7.50006	-6.58206	NAF
NS0040	178	180	NS	E392929	392929	1	G	W	30.34	45.68	1.88	0.491	0.38	0.084	1.92	0.47	0.066	0.049	0.23	0.022	0.39	5.26	-0.21	5.44	6111	1.4994	8.19774	-6.69834	NAF
NS0040	152	154	NS	E392916	392916	1	G	W	34.99	35.26	1.21	0.813	0.63	0.055	1.94	0.44	0.085	0.031	0.139	0.165	0.66	8.85	-0.15	9.36	6098	0.9486	7.67448	-6.72588	NAF
NS0040	158	160	NS	E392919	392919	1	G	W	34.81	39.03	1.23	0.762	0.59	0.054	1.31	0.44	0.086	0.029	0.278	0.115	0.54	6.08	-0.16	6.46	6101	0.8874	7.67448	-6.78708	NAF
NS0040	154	156	NS	E392917	392917	1	G	W	37.93	35.53	1.32	0.762	0.59	0.061	1.37	0.43	0.075	0.022	0.294	0.229	0.25	5.39	-0.23	5.41	6099	0.6732	7.50006	-6.82686	NAF
NS0040	186	188	NS	E392933	392933	1	G	W	31.32	42.5	2.26	0.542	0.42	0.106	2.28	0.52	0.117	0.07	0.234	0.011	0.27	6.29	-0.12	6.44	6115	2.142	9.06984	-6.92784	NAF
NS0040	150	152	NS	E392915	392915	1	G	W	34.08	40.73	1.18	0.723	0.56	0.053	1.33	0.45	0.11	0.025	0.186	0.132	0.39	5.74	-0.17	5.96	6097	0.765	7.8489	-7.0839	NAF
NS0040	222	224	NS	E392951	392951	1	G	W	24.19	40.1	5.07	0.478	0.37	0.221	3.32	0.64	0.159	0.13	0.045	0.024	1.23	13.23	0.32	14.78	6133	3.978	11.16288	-7.18488	NAF
NS0040	168	170	NS	E392924	392924	1	G	W	34.75	36.76	1.3	0.594	0.46	0.062	1.94	0.47	0.103	0.013	0.246	0.026	0.62	8.05	-0.31	8.36	6106	0.3978	8.19774	-7.79994	NAF
NS0040	166	168	NS	E392923	392923	1	G	W	32.09	35.59	1.98	0.736	0.57	0.095	2.48	0.64	0.164	0.103	0.256	0.032	1.11	10.84	0.06	12.01	6105	3.1518	11.16288	-8.01108	NAF
NS0040	248	250	NS	E392964	392964	1	G	W	29.81	40.46	1.11	0.581	0.45	0.059	1.83	0.5	0.061	0.003	0.557	0.032	0.82	11.24	-0.15	11.91	6146	0.0918	8.721	-8.6292	NAF
NS0040	210	212	NS	E392945	392945	1	G	W	32.96	36.75	2.3	0.658	0.51	0.103	1.77	0.6	0.101	0.056	0.45	0.023	0.91	8.87	-0.24	9.54	6127	1.7136	10.4652	-8.7516	NAF
NS0040	156	158	NS	E392918	392918	1	G	W	32.45	44.42	0.99	0.71	0.55	0.045	1.07	0.57	0.127	0.021	0.257	0.084	0.27	4.7	-0.22	4.75	6100	0.6426	9.94194	-9.29934	NAF
NS0040	236	238	NS	E392958	392958	1	G	W	27.79	36.43	3.41	0.568	0.44	0.156	3.06	0.83	0.09	0.147	0.653	0.016	0.86	13.57	0.23	14.66	6140	4.4982	14.47686	-9.97866	NAF
NS0040	124	126	NS	E392902	392902	1	G	W	36.56	36.55	1.37	0.646	0.5	0.064	1.3	0.66	0.188	0.029	0.2	0.047	0.54	5.9	-0.33	6.11	6084	0.8874	11.51172	-10.62432	NAF
NS0040	246	248	NS	E392963	392963	1	G	W	28.05	36.63	1.84	0.607	0.47	0.085	2.22	0.63	0.071	0.007	0.768	0.024	1.15	15.43	0.02	16.6	6145	0.2142	10.98846	-10.77426	NAF
NS0040	234	236	NS	E392957	392957	1	G	W	33.03	40.1	1.57	0.542	0.42	0.072	1.51	0.73	0.065	0.052	0.312	0.023	0.58	6.98	-0.24	7.32	6139	1.5912	12.73266	-11.14146	NAF
NS0040	230	232	NS	E392955	392955	1	G	W	30.67	43.2	1.43	0.568	0.44	0.062	1.49	0.74	0.049	0.046	0.26	0.045	0.53	8.18	-0.22	8.49	6137	1.4076	12.90708	-11.49948	NAF
NS0040	190	192	NS	E392935	392935	1	G	W	35.73	38.15	1.77	0.555	0.43	0.08	1.81	0.75	0.112	0.047	0.068	0.021	0.27	5.15	-0.31	5.11	6117	1.4382	13.0815	-11.6433	NAF
NS0040	238	240	NS	E392959	392959	1	G	W	29.29	33.03	1.67	0.633	0.49	0.076	2.72	0.86	0.063	0.059	0.465	0.03	1.3	16.69	0.11	18.1	6141	1.8054	15.00012	-13.19472	NAF
NS0040	244	246	NS	E392962	392962	1	G	W	26.26	36.96	1.76	0.568	0.44	0.079	2.64	0.84	0.045	0.034	0.595	0.016	0.97	17.57	0.19	18.73	6144	1.0404	14.65128	-13.61088	NAF
NS0040	138	140	NS	E392909	392909	1	G	W	29.37	36.22	3.28	0.968	0.75	0.143	3	1.09	0.315	0.123	0.476	0.11	0.72	10.61	0.31	11.64	6091	3.7638	19.01178	-15.24798	NAF
NS0040	242	244	NS	E392961	392961	1	G	W	27.61	32.58	1.54	0.646	0.5	0.072	3.25	1.01	0.076	0.034	0.45	0.036	1.12	19.13	0.24	20.49	6143	1.0404	17.61642	-16.57602	NAF
NS0040	240	242	NS	E392960	392960	1	G	W	27.52	33.3	1.52	0.671	0.52	0.069	3.12	1.12	0.098	0.046	0.439	0.012	0.83	18.65	0.35	19.83	6142	1.4076	19.53504	-18.12744	NAF
NS0040	232	234	NS	E392956	392956	1	G	W	30.67	38.22	3.31	0.529	0.41	0.148	2.35	1.33	0.07	0.078	0.57	0.035	0.63	8.41	0.3	9.34	6138	2.3868	23.19786	-20.81106	NAF
NS0041	94	96	NS	E400013	400013	1	G	W	24.97	50.36	1.58	0.503	0.39	0.071	2.93	0.47	0.114	0.449	0.551	0.153	0.7	5.59	0.78	7.07	8171	13.7394	8.19774	5.54166	PAF(LC)
NS0041	242	244	NS	E400087	400087	1	G	W	32.55	35.57	3.8	0.633	0.49	0.17	3.2	0.4	0.076	0.39	2.02	0.048	0.4	6.04	0.6	7.04	8245	11.934	6.9768	4.9572	PAF(LC)
NS0041	84	86	NS	E400008	400008	1	G	W	26.24	45.53	3.61	0.374	0.29	0.164	3.82	0.49	0.128	0.41	0.899	0.243	1.06	4.75	0.94	6.75	8166	12.546	8.54658	3.99942	PAF(LC)
NS0041	166	168	NS	E400049	400049	1	G	W	27.16	41.18	4.9	0.465	0.36	0.215	3.93	0.29	0.068	0.288	0.791	0.226	1.26	6.76	0.67	8.69	8207	8.8128	5.05818	3.75462	PAF(LC)
NS0041	160	162	NS	E400046	400046	1	G	W	22.6	48.4	5.71	0.271	0.21	0.252	3.75	0.43	0.124	0.367	1.08	0.296	1.22	4.6	0.98	6.8	8204	11.2302	7.50006	3.73014	PAF(LC)
NS0041	92	94	NS	E400012	400012	1	G	W	27.11	43.73	3.08	0.491	0.38	0.137	4.23	0.42	0.101	0.322	1.02	0.283	1.13	5.37	0.75	7.25	8170	9.8532	7.32564	2.52756	PAF(LC)
NS0041	158	160	NS	E400045	400045	1	G	W	25.41	41.43	4.37	0.658	0.51	0.19	3.72	0.33	0.063	0.249	0.895	0.247	1.6	9.04	0.71	11.35	8203	7.6194	5.75586	1.86354	PAF(LC)
NS0041	216	218	NS	E400074	400074	1	G	W	33.3	37.05	2.35	0.736	0.57	0.103	3.2	0.3	0.056	0.229	1.36	0.097	1.01	5.57	0.22	6.8	8232	7.0074	5.2326	1.7748	PAF(LC)
NS0041	176	178	NS	E400054	400054	1	G	W	30.08	38.94	3.51	0.594	0.46	0.151	4.22	0.49	0.1	0.32	0.589	0.172	0.84	6.47	0.48	7.79	8212	9.792	8.54658	1.24542	PAF(LC)
NS0041	50	52	NS	E392990	392990	1	G	W	30.07	42.08	3.4	0.503	0.39	0.151	3.71	0.26	0.046	0.164	0.422	0.101	0.84	5.08	0.19	6.11	6172	5.0184	4.53492	0.48348	PAF(LC)
NS0041	144	146	NS	E400038	400038	1	G	W	30.38	39.02	2.78	0.542	0.42	0.123	3.43	0.34	0.072	0.204	0.71	0.21	1.13	7.48	0.33	8.94	8196	6.2424	5.93028	0.31212	PAF(LC)
NS0041	154	156	NS	E400043	400043	1	G	W	27.17	37.23	3.7	0.646	0.5	0.162	3.54	0.36	0.065	0.209	0.595	0.185	1.45	12.29	0.54	14.28	8201	6.3954	6.27912	0.11628	PAF(LC)
NS0041	90	92	NS	E400011	400011	1	G	W	22.99	53.89	1.36	0.503	0.39	0.062	2.71	0.41	0.091	0.231	0.496	0.134	0.77	5.73	0.53	7.03	8169	7.0686	7.15122	-0.08262	NAF
NS0041	6	8	NS	E392968	392968	1	G	W	34.31	41.03	2.96	0.065	0.05	0.102	0.06	0.04	0.019	0.018	0.012	0.02	5.28	0.9	0.17	6.35	6150	0.5508	0.69768	-0.14688	NAF
NS0041	4	6	NS	E392967	392967	1	G	W	39.53	32.81	2.92	0.052	0.04	0.102	0.06	0.05	0.018	0.021	0.013	0.021	6.13	0.82	0.19	7.14	6149	0.6426	0.8721	-0.2295	NAF
NS0041	8	10	NS	E392969	392969	1	G	W	31.14	42.81	5.35	0.065	0.05	0.213	0.08	0.05	0.014	0.021	0.015	0.022	4.94	1.48	0.19	6.61	6151	0.6426	0.8721	-0.2295	NAF
NS0041	2	4	NS	E392966	392966	1	G	W	37.51	35	3.77	0.065	0.05	0.186	0.08	0.05	0.026	0.02	0.029	0.027	5.87	0.94	0.21	7.02	6148	0.612	0.8721	-0.2601	NAF
NS0041	12	14	NS	E392971	392971	1	G	W	32.44	47.79	1.78	0.09	0.07	0.064	0.05	0.04	0.049	0.013	0.006	0.016	2.87	0.57	0.08	3.52	6153	0.3978	0.69768	-0.29988	NAF
NS0041	0	2	NS	E392965	392965	1	G	W	29.98	45.23	5.37	0.065	0.05	0.324	0.12	0.07	0.015	0.014	0.083	0.031	4.04	1.41	0.18	5.63	6147	0.4284	1.22094	-0.79254	NAF
NS0041	148	150	NS	E400040	400040	1	G	W	28.3	38.4	4.09	0.491	0.38	0.18	4.16	0.52	0.137	0.267	1.04	0.304	1.62	7.45	0.69	9.76	8198	8.1702	9.06984	-0.89964	NAF
NS0041	10	12	NS	E392970	392970	1	G	W	25.1	56.4	2.78	0.116	0.09	0.128	0.1	0.08	0.014	0.015	0.012	0.019	3.31	0.88	0.1	4.29	6152	0.459	1.39536	-0.93636	NAF
NS0041	162	164	NS	E400047	400047	1	G	W	18.15	57.71	4.04	0.336	0.26	0.177	2.88	0.54	0.16	0.268	0.744	0.205	1.2	4.76	0.72	6.68	8205	8.2008	9.41868	-1.21788	NAF
NS0041	14	16	NS	E392972	392972	1	G	W	36.21	40.64	2.16	0.065	0.05	0.083	0.11	0.09	0.078	0.007	0.006	0.018	3.93	0.7	0.08	4.71	6154	0.2142	1.56978	-1.35558	NAF
NS0041	16	18	NS	E392973	392973	1	G	W	36.07	42.79	1.56	0.039	0.03	0.058	0.08	0.09	0.07	0.006	0.005	0.014	2.95	0.58	0.06	3.59	6155	0.1836	1.56978	-1.38618	NAF
NS0041	40	42	NS	E392985	392985	1	G	W	36.19	39.3	2.25	0.852	0.66	0.099	0.81	0.27	0.073	0.09	0.205	0.035	2.89	0.85	0.3	4.04	6167	2.754	4.70934	-1.95534	NAF
NS0041	134	136	NS	E400033	400033	1	G	W	32.32	39.09	2.27	0.646	0.5	0.098	3.53	0.32	0.066	0.118	0.587	0.182	0.83	5.89	-0.05	6.67	8191	3.6108	5.58144	-1.97064	NAF
NS0041	186	188	NS	E400059	400059	1	G	W	29.06	43.89	2.29	0.594	0.46	0.105	3.42	0.49	0.102	0.214	0.672	0.144	0.68	5.35	0.31	6.34	8217	6.5484	8.54658	-1.99818	NAF
NS0041	36	38	NS	E392983	392983	1	G	W	37.7	38.18	1.85	0.942	0.73	0.08	0.47	0.12	0.054	0.003	0.164	0.028	3.17	0.73	0.1	4	6165	0.0918	2.09304	-2.00124	NAF
NS0041	20	22	NS	E392975	392975	1	G	W	34.51	44.06	1.78	0.194	0.15	0.075	0.34	0.15	0.07	0.005	0.086	0.032	2.89	0.61	0.01	3.51	6157	0.153	2.6163	-2.4633	NAF
NS0041	30	32	NS	E392980	392980	1	G	W	33.16	45.73	1.23	0.865	0.67	0.054	0.4	0.15	0.05	0.005	0.115	0.037	2.99	0.59	0.05	3.63	6162	0.153	2.6163	-2.4633	NAF
NS0041	22	24	NS	E392976	392976	1	G	W	36.75	40.5	1.45	0.633	0.49	0.059	0.37	0.16	0.094	0.004	0.092	0.035	3.04	0.58	0.04	3.66	6158	0.1224	2.79072	-2.66832	NAF
NS0041	38	40	NS	E392984	392984	1	G	W	34.59	42.34	1.93	0.865	0.67	0.084	0.66	0.16	0.063	0.004	0.22	0.034	3.1	0.8	0.05	3.95	6166	0.1224	2.79072	-2.66832	NAF
NS0041	34	36	NS	E392982	392982	1	G	W	35.09	41.2	2.29	0.736	0.57	0.094	0.57	0.17	0.056	0.004	0.16	0.035	3.18	0.9	0.12	4.2	6164	0.1224	2.96514	-2.84274	NAF
NS0041	86	88	NS	E400009	400009	1	G	W	31.1	39.56	2.84	0.426	0.33	0.127	3.78	0.42	0.102	0.144	0.978	0.279	1.11	5.18	0.26	6.55	8167	4.4064	7.32564	-2.91924	NAF
NS0041	140	142	NS	E400036	400036	1	G	W	32.66	41.85	1.1	0.568	0.44	0.048	2.19	0.24	0.047	0.036	0.444	0.125	0.84	5.87	-0.29	6.42	8194	1.1016	4.18608	-3.08448	NAF
NS0041	26	28	NS	E392978	392978	1	G	W	37.85	38.73	1.26	1.446	1.12	0.055	0.42	0.19	0.055	0.004	0.116	0.044	2.51	0.61	0.1	3.22	6160	0.1224	3.31398	-3.19158	NAF
NS0041	32	34	NS	E392981	392981	1	G	W	33.83	44.36	1.68	0.723	0.56	0.069	0.55	0.2	0.052	0.004	0.144	0.035	2.84	0.7	0.06	3.6	6163	0.1224	3.4884	-3.366	NAF
NS0041	142	144	NS	E400037	400037	1	G	W	26.09	40.07	5.03	0.465	0.36	0.222	4.9	0.89	0.264	0.397	1.04	0.299	1.37	6.44	0.96	8.77	8195	12.1482	15.52338	-3.37518	NAF
NS0041	42	44	NS	E392986	392986	1	G	W	34.37	41	2.46	0.633	0.49	0.103	1	0.39	0.113	0.109	0.187	0.045	2.91	1.32	0.36	4.59	6168	3.3354	6.80238	-3.46698	NAF
NS0041	230	232	NS	E400081	400081	1	G	W	33.81	37.19	2.86	0.594	0.46	0.129	3.36	0.49	0.076	0.162	1.27	0.066	0.35	4.75	0.19	5.29	8239	4.9572	8.54658	-3.58938	NAF
NS0041	138	140	NS	E400035	400035	1	G	W	33.58	38.48	2.32	0.503	0.39	0.101	3.08	0.42	0.106	0.111	0.773	0.225	1.03	4.58	0.05	5.66	8193	3.3966	7.32564	-3.92904	NAF
NS0041	164	166	NS	E400048	400048	1	G	W	23.8	44.63	3.4	0.775	0.6	0.146	3.26	0.6	0.141	0.21	0.745	0.206	1.34	9.78	0.55	11.67	8206	6.426	10.4652	-4.0392	NAF
NS0041	152	154	NS	E400042	400042	1	G	W	29.27	33.63	2.63	0.736	0.57	0.117	3.3	0.5	0.103	0.151	0.391	0.124	1.3	14.62	0.33	16.25	8200	4.6206	8.721	-4.1004	NAF
NS0041	182	184	NS	E400057	400057	1	G	W	28.83	43.51	2.21	0.581	0.45	0.098	3.43	0.47	0.12	0.129	0.495	0.146	0.83	6.32	0.15	7.3	8215	3.9474	8.19774	-4.25034	NAF
NS0041	136	138	NS	E400034	400034	1	G	W	34.03	37.6	2	0.581	0.45	0.089	3.11	0.4	0.097	0.089	0.626	0.172	0.86	5.48	-0.15	6.19	8192	2.7234	6.9768	-4.2534	NAF
NS0041	70	72	NS	E393000	393000	1	G	W	29.71	41.15	3.29	0.529	0.41	0.147	3.74	0.66	0.137	0.237	0.551	0.145	0.97	5.26	0.45	6.68	8182	7.2522	11.51172	-4.25952	NAF
NS0041	146	148	NS	E400039	400039	1	G	W	28.94	40.48	1.41	0.723	0.56	0.06	2.89	0.35	0.056	0.059	0.534	0.147	1.2	10.46	-0.01	11.65	8197	1.8054	6.1047	-4.2993	NAF
NS0041	28	30	NS	E392979	392979	1	G	W	35.89	39.39	2.58	0.8	0.62	0.11	0.78	0.26	0.067	0.003	0.237	0.057	2.92	0.97	0.14	4.03	6161	0.0918	4.53492	-4.44312	NAF
NS0041	156	158	NS	E400044	400044	1	G	W	25.14	41.1	6.2	0.374	0.29	0.283	4.19	0.83	0.245	0.319	0.998	0.296	1.47	6.61	0.75	8.83	8202	9.7614	14.47686	-4.71546	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0041	24	26	NS	E392977	392977	1	G	W	33.83	41.41	2.7	1.046	0.81	0.118	0.81	0.28	0.062	0.004	0.232	0.067	3.47	1.03	0.13	4.63	6159	0.1224	4.88376	-4.76136	NAF
NS0041	100	102	NS	E400016	400016	1	G	W	34.06	37.33	2.28	0.542	0.42	0.102	3.67	0.5	0.112	0.122	0.793	0.223	0.87	4.36	0.13	5.36	8174	3.7332	8.721	-4.9878	NAF
NS0041	82	84	NS	E400007	400007	1	G	W	32.64	39.07	1.71	0.671	0.52	0.074	2.88	0.5	0.086	0.116	0.512	0.153	0.88	6.58	-0.04	7.42	8165	3.5496	8.721	-5.1714	NAF
NS0041	236	238	NS	E400084	400084	1	G	W	35.4	38.92	1.54	0.646	0.5	0.071	2.09	0.44	0.087	0.079	0.708	0.037	0.29	4.39	-0.22	4.46	8242	2.4174	7.67448	-5.25708	NAF
NS0041	96	98	NS	E400014	400014	1	G	W	33.23	39	2.03	0.491	0.38	0.103	3.15	0.47	0.125	0.095	0.626	0.174	0.86	5.08	-0.04	5.9	8172	2.907	8.19774	-5.29074	NAF
NS0041	178	180	NS	E400055	400055	1	G	W	29.56	39.67	3.89	0.555	0.43	0.168	4.24	0.67	0.17	0.207	0.458	0.144	0.81	6.18	0.33	7.32	8213	6.3342	11.68614	-5.35194	NAF
NS0041	44	46	NS	E392987	392987	1	G	W	35.96	41.13	1.42	0.568	0.44	0.061	1	0.35	0.113	0.014	0.192	0.044	2.11	1.38	-0.07	3.42	6169	0.4284	6.1047	-5.6763	NAF
NS0041	188	190	NS	E400060	400060	1	G	W	32.07	41.73	1.37	0.71	0.55	0.061	2.71	0.59	0.083	0.147	0.461	0.095	0.5	5.38	0.09	5.97	8218	4.4982	10.29078	-5.79258	NAF
NS0041	150	152	NS	E400041	400041	1	G	W	29.58	38.46	1.77	0.594	0.46	0.075	2.87	0.47	0.101	0.073	0.644	0.191	1.4	10.63	0.03	12.06	8199	2.2338	8.19774	-5.96394	NAF
NS0041	240	242	NS	E400086	400086	1	G	W	38.12	29.73	1.87	0.904	0.7	0.088	2.69	0.48	0.109	0.077	1.33	0.041	0.46	7.6	-0.24	7.82	8244	2.3562	8.37216	-6.01596	NAF
NS0041	66	68	NS	E392998	392998	1	G	W	33.68	38.84	1.76	0.581	0.45	0.077	2.94	0.58	0.111	0.123	0.568	0.161	0.86	5.06	-0.03	5.89	6180	3.7638	10.11636	-6.35256	NAF
NS0041	190	192	NS	E400061	400061	1	G	W	34.67	38.3	1.22	0.839	0.65	0.055	2.68	0.45	0.077	0.043	0.44	0.088	0.56	5.66	-0.2	6.02	8219	1.3158	7.8489	-6.5331	NAF
NS0041	252	254	NS	E400092	400092	1	G	W	38.85	33.05	1.72	0.671	0.52	0.111	1.66	0.44	0.077	0.03	0.921	0.099	0.52	5.19	-0.32	5.39	8250	0.918	7.67448	-6.75648	NAF
NS0041	88	90	NS	E400010	400010	1	G	W	26.4	48.13	1.3	0.555	0.43	0.057	2.9	0.47	0.098	0.044	0.525	0.138	0.83	7.03	-0.02	7.84	8168	1.3464	8.19774	-6.85134	NAF
NS0041	238	240	NS	E400085	400085	1	G	W	36.2	35.82	1.38	0.826	0.64	0.063	2.25	0.47	0.074	0.044	0.897	0.027	0.29	6.18	-0.31	6.16	8243	1.3464	8.19774	-6.85134	NAF
NS0041	168	170	NS	E400050	400050	1	G	W	32.35	41.11	1.28	0.594	0.46	0.057	2.4	0.49	0.068	0.054	0.487	0.136	0.79	6.11	-0.17	6.73	8208	1.6524	8.54658	-6.89418	NAF
NS0041	234	236	NS	E400083	400083	1	G	W	34.64	36.36	2.86	0.62	0.48	0.131	2.42	0.66	0.159	0.146	1.36	0.048	0.67	4.73	0.05	5.45	8241	4.4676	11.51172	-7.04412	NAF
NS0041	46	48	NS	E392988	392988	1	G	W	29.67	47.82	1.13	0.555	0.43	0.05	1.99	0.5	0.082	0.05	0.284	0.06	0.72	4.23	-0.11	4.84	6170	1.53	8.721	-7.191	NAF
NS0041	102	104	NS	E400017	400017	1	G	W	36.71	33.59	1.54	0.775	0.6	0.064	3.28	0.52	0.088	0.059	0.578	0.166	0.83	5.9	-0.14	6.59	8175	1.8054	9.06984	-7.26444	NAF
NS0041	184	186	NS	E400058	400058	1	G	W	32.96	38.72	1.85	0.607	0.47	0.081	3.16	0.6	0.129	0.104	0.296	0.088	0.61	6.52	-0.06	7.07	8216	3.1824	10.4652	-7.2828	NAF
NS0041	48	50	NS	E392989	392989	1	G	W	35.63	37.85	1.97	0.503	0.39	0.087	2.59	0.54	0.102	0.069	0.467	0.102	1.04	3.73	-0.13	4.64	6171	2.1114	9.41868	-7.30728	NAF
NS0041	218	220	NS	E400075	400075	1	G	W	32.23	43.2	1.14	0.749	0.58	0.049	2.24	0.47	0.085	0.028	0.578	0.039	0.26	4.98	-0.33	4.91	8233	0.8568	8.19774	-7.34094	NAF
NS0041	222	224	NS	E400077	400077	1	G	W	36.27	35.48	1.72	0.865	0.67	0.075	2.64	0.55	0.12	0.069	0.961	0.05	0.27	5.36	-0.23	5.4	8235	2.1114	9.5931	-7.4817	NAF
NS0041	98	100	NS	E400015	400015	1	G	W	32.9	41.01	0.97	0.684	0.53	0.043	2.6	0.48	0.079	0.027	0.382	0.107	0.66	6	-0.23	6.43	8173	0.8262	8.37216	-7.54596	NAF
NS0041	214	216	NS	E400073	400073	1	G	W	36.66	38.03	1.07	0.723	0.56	0.049	2.14	0.48	0.083	0.023	0.542	0.038	0.14	4.39	-0.38	4.15	8231	0.7038	8.37216	-7.66836	NAF
NS0041	274	276	NS	E400104	400104	1	G	W	28.65	42.02	1.88	0.284	0.22	0.086	2.02	0.5	0.045	0.01	1.42	0.027	0.74	9.85	-0.13	10.46	8261	0.306	8.721	-8.415	NAF
NS0041	280	282	NS	E400107	400107	1	G	W	30.49	39.91	1.88	0.336	0.26	0.086	1.96	0.77	0.076	0.157	1.4	0.041	0.77	8.78	0.1	9.65	8264	4.8042	13.43034	-8.62614	NAF
NS0041	244	246	NS	E400088	400088	1	G	W	34.81	38.74	1.2	0.71	0.55	0.055	2.06	0.57	0.098	0.04	0.612	0.013	0.27	5.97	-0.33	5.91	8246	1.224	9.94194	-8.71794	NAF
NS0041	258	260	NS	E400095	400095	1	G	W	34.83	37.23	1.22	0.658	0.51	0.062	1.45	0.51	0.073	0.005	1.01	0.011	0.57	7.27	-0.21	7.63	8253	0.153	8.89542	-8.74242	NAF
NS0041	132	134	NS	E400032	400032	1	G	W	34.54	37.69	1.5	0.658	0.51	0.067	2.93	0.6	0.086	0.05	0.517	0.153	0.84	5.43	-0.16	6.11	8190	1.53	10.4652	-8.9352	NAF
NS0041	180	182	NS	E400056	400056	1	G	W	32	39.49	1.84	0.607	0.47	0.077	3.12	0.73	0.153	0.116	0.329	0.1	0.63	6.59	0.03	7.25	8214	3.5496	12.73266	-9.18306	NAF
NS0041	210	212	NS	E400071	400071	1	G	W	38.52	35.56	1.34	0.568	0.44	0.055	2.38	0.58	0.097	0.03	0.543	0.067	0.21	3.56	-0.29	3.48	8229	0.918	10.11636	-9.19836	NAF
NS0041	194	196	NS	E400063	400063	1	G	W	37.48	36.36	1.4	0.646	0.5	0.06	2.41	0.6	0.064	0.041	0.335	0.064	0.32	4.11	-0.2	4.23	8221	1.2546	10.4652	-9.2106	NAF
NS0041	72	74	NS	E400002	400002	1	G	W	31.38	41.21	1.15	0.736	0.57	0.049	2.69	0.61	0.076	0.042	0.379	0.093	0.72	7.17	-0.1	7.79	8160	1.2852	10.63962	-9.35442	NAF
NS0041	208	210	NS	E400070	400070	1	G	W	35.6	37.5	1.06	0.865	0.67	0.045	2.63	0.59	0.082	0.024	0.521	0.062	0.28	5.32	-0.28	5.32	8228	0.7344	10.29078	-9.55638	NAF
NS0041	232	234	NS	E400082	400082	1	G	W	34.81	39.39	1.7	0.594	0.46	0.076	2.29	0.67	0.084	0.066	0.87	0.032	0.23	4.09	-0.12	4.2	8240	2.0196	11.68614	-9.66654	NAF
NS0041	192	194	NS	E400062	400062	1	G	W	29.27	49.29	0.84	0.646	0.5	0.037	1.9	0.67	0.073	0.036	0.215	0.057	0.37	3.85	0	4.22	8220	1.1016	11.68614	-10.58454	NAF
NS0041	250	252	NS	E400091	400091	1	G	W	36.98	34.78	1.23	0.826	0.64	0.055	1.96	0.68	0.091	0.037	1.02	0.034	0.23	6.17	-0.22	6.18	8249	1.1322	11.86056	-10.72836	NAF
NS0041	254	256	NS	E400093	400093	1	G	W	37.15	33.15	1.2	0.8	0.62	0.054	2.07	0.7	0.102	0.043	0.915	0.089	0.45	7.11	-0.15	7.41	8251	1.3158	12.2094	-10.8936	NAF
NS0041	56	58	NS	E392993	392993	1	G	W	33.67	38	1.96	0.555	0.43	0.087	3.18	0.78	0.119	0.087	0.57	0.15	1.15	4.9	0.01	6.06	6175	2.6622	13.60476	-10.94256	NAF
NS0041	18	20	NS	E392974	392974	1	G	W	33.72	44.46	2.04	0.065	0.05	0.077	0.12	0.66	0.07	0.009	0.006	0.019	2.93	1.06	0.12	4.11	6156	0.2754	11.51172	-11.23632	NAF
NS0041	118	120	NS	E400025	400025	1	G	W	35.68	36.59	1.14	0.723	0.56	0.047	2.91	0.7	0.085	0.029	0.462	0.14	0.7	5.1	-0.02	5.78	8183	0.8874	12.2094	-11.322	NAF
NS0041	78	80	NS	E400005	400005	1	G	W	34.64	37.04	1.46	0.594	0.46	0.064	2.77	0.74	0.096	0.05	0.512	0.138	0.95	5.7	-0.09	6.56	8163	1.53	12.90708	-11.37708	NAF
NS0041	64	66	NS	E392997	392997	1	G	W	33.44	40.75	1.06	0.646	0.5	0.046	2.12	0.7	0.085	0.027	0.29	0.077	1.05	5.12	-0.12	6.05	6179	0.8262	12.2094	-11.3832	NAF
NS0041	276	278	NS	E400105	400105	1	G	W	30.85	37.81	1.78	0.374	0.29	0.097	2.09	0.67	0.093	0.009	0.954	0.024	1.03	10.91	-0.09	11.85	8262	0.2754	11.68614	-11.41074	NAF
NS0041	200	202	NS	E400066	400066	1	G	W	37.18	36.58	1.26	0.684	0.53	0.053	2.42	0.71	0.096	0.031	0.396	0.065	0.33	4.29	-0.22	4.4	8224	0.9486	12.38382	-11.43522	NAF
NS0041	246	248	NS	E400089	400089	1	G	W	35.45	38.84	1.13	0.671	0.52	0.05	1.79	0.7	0.096	0.024	0.612	0.009	0.13	5.33	-0.38	5.08	8247	0.7344	12.2094	-11.475	NAF
NS0041	130	132	NS	E400031	400031	1	G	W	37.26	35.71	1.29	0.555	0.43	0.055	2.68	0.71	0.106	0.029	0.465	0.137	0.6	4.44	-0.27	4.77	8189	0.8874	12.38382	-11.49642	NAF
NS0041	120	122	NS	E400026	400026	1	G	W	35.5	36.3	1.25	0.723	0.56	0.051	3.05	0.73	0.08	0.035	0.534	0.15	0.76	5.18	0	5.94	8184	1.071	12.73266	-11.66166	NAF
NS0041	58	60	NS	E392994	392994	1	G	W	33.18	38.74	1.45	0.671	0.52	0.062	2.93	0.74	0.092	0.037	0.471	0.127	1.01	5.94	-0.04	6.91	6176	1.1322	12.90708	-11.77488	NAF
NS0041	256	258	NS	E400094	400094	1	G	W	35.77	35.63	1.12	0.71	0.55	0.05	1.75	0.72	0.091	0.013	0.973	0.014	0.56	7.11	-0.18	7.49	8252	0.3978	12.55824	-12.16044	NAF
NS0041	260	262	NS	E400096	400096	1	G	W	36.57	34.82	1.11	0.723	0.56	0.053	1.36	0.73	0.151	0.011	0.961	0.012	0.54	7.36	-0.35	7.55	8254	0.3366	12.73266	-12.39606	NAF
NS0041	278	280	NS	E400106	400106	1	G	W	31.99	34.62	1.78	0.439	0.34	0.081	2.41	0.73	0.093	0.007	1.2	0.026	0.95	11.6	-0.04	12.51	8263	0.2142	12.73266	-12.51846	NAF
NS0041	60	62	NS	E392995	392995	1	G	W	32.41	40.05	1.47	0.633	0.49	0.064	2.92	0.87	0.098	0.086	0.462	0.119	0.99	5.59	0.08	6.66	6177	2.6316	15.17454	-12.54294	NAF
NS0041	170	172	NS	E400051	400051	1	G	W	34.05	38.37	1.32	0.671	0.52	0.054	2.48	0.79	0.092	0.037	0.544	0.156	0.71	5.7	-0.05	6.36	8209	1.1322	13.77918	-12.64698	NAF
NS0041	172	174	NS	E400052	400052	1	G	W	35.5	37.49	1.3	0.607	0.47	0.057	2.35	0.8	0.113	0.04	0.494	0.139	0.68	4.94	-0.15	5.47	8210	1.224	13.9536	-12.7296	NAF
NS0041	206	208	NS	E400069	400069	1	G	W	35.03	38.38	1.13	0.839	0.65	0.05	2.59	0.79	0.084	0.032	0.489	0.061	0.27	5.07	-0.06	5.28	8227	0.9792	13.77918	-12.79998	NAF
NS0041	112	114	NS	E400022	400022	1	G	W	35.19	36.74	1.74	0.658	0.51	0.077	3.34	0.88	0.082	0.081	0.567	0.166	0.75	4.11	0.2	5.06	8180	2.4786	15.34896	-12.87036	NAF
NS0041	116	118	NS	E400024	400024	1	G	W	36.19	37.29	0.99	0.684	0.53	0.044	2.72	0.79	0.094	0.023	0.42	0.122	0.51	4.46	-0.04	4.93	8182	0.7038	13.77918	-13.07538	NAF
NS0041	108	110	NS	E400020	400020	1	G	W	36.14	36.52	1.15	0.658	0.51	0.051	2.9	0.81	0.086	0.033	0.47	0.139	0.61	4.46	0.12	5.19	8178	1.0098	14.12802	-13.11822	NAF
NS0041	272	274	NS	E400103	400103	1	G	W	32.37	35.19	1.34	0.413	0.32	0.061	2.22	0.78	0.089	0.015	0.946	0.017	0.66	11.91	-0.04	12.53	8260	0.459	13.60476	-13.14576	NAF
NS0041	80	82	NS	E400006	400006	1	G	W	33.6	39.32	1.3	0.594	0.46	0.055	2.57	0.82	0.104	0.034	0.466	0.13	0.66	5.6	-0.04	6.22	8164	1.0404	14.30244	-13.26204	NAF
NS0041	128	130	NS	E400030	400030	1	G	W	36.64	33.96	1.18	0.749	0.58	0.051	3.07	0.82	0.099	0.031	0.49	0.142	0.69	5.93	-0.07	6.55	8188	0.9486	14.30244	-13.35384	NAF
NS0041	54	56	NS	E392992	392992	1	G	W	35.54	37.22	1.42	0.529	0.41	0.062	2.63	0.84	0.078	0.039	0.414	0.1	0.73	4.73	0.03	5.49	6174	1.1934	14.65128	-13.45788	NAF
NS0041	224	226	NS	E400078	400078	1	G	W	35.57	39.6	1.09	0.736	0.57	0.045	1.88	0.81	0.087	0.019	0.699	0.02	0.06	3.89	-0.05	3.9	8236	0.5814	14.12802	-13.54662	NAF
NS0041	212	214	NS	E400072	400072	1	G	W	37.31	38.04	0.99	0.594	0.46	0.045	2.01	0.83	0.09	0.029	0.395	0.049	0.19	3.35	-0.17	3.37	8230	0.8874	14.47686	-13.58946	NAF
NS0041	202	204	NS	E400067	400067	1	G	W	35.3	38.25	1.09	0.788	0.61	0.047	2.46	0.83	0.084	0.028	0.415	0.06	0.35	4.76	-0.07	5.04	8225	0.8568	14.47686	-13.62006	NAF
NS0041	52	54	NS	E392991	392991	1	G	W	34.25	38.57	1.53	0.594	0.46	0.064	2.65	0.85	0.101	0.038	0.377	0.089	0.76	5.22	-0.02	5.96	6173	1.1628	14.8257	-13.6629	NAF
NS0041	270	272	NS	E400102	400102	1	G	W	32.11	35.47	1.84	0.336	0.26	0.098	2.16	0.8	0.071	0.009	0.766	0.026	1.18	10.97	0	12.15	8259	0.2754	13.9536	-13.6782	NAF
NS0041	76	78	NS	E400004	400004	1	G	W	29.8	44.17	1.07	0.671	0.52	0.045	2.59	0.87	0.082	0.046	0.391	0.106	0.55	6.26	0.19	7	8162	1.4076	15.17454	-13.76694	NAF
NS0041	220	222	NS	E400076	400076	1	G	W	34.82	39.73	0.97	0.8	0.62	0.042	2.09	0.85	0.092	0.026	0.509	0.02	0.2	4.62	-0.05	4.77	8234	0.7956	14.8257	-14.0301	NAF
NS0041	204	206	NS	E400068	400068	1	G	W	33.07	41.51	1.24	0.736	0.57	0.052	2.47	0.87	0.081	0.034	0.526	0.053	0.22	4.56	0.02	4.8	8226	1.0404	15.17454	-14.13414	NAF
NS0041	114	116	NS	E400023	400023	1	G	W	35.5	37.93	1.05	0.71	0.55	0.045	2.65	0.86	0.115	0.028	0.411	0.121	0.62	4.35	-0.02	4.95	8181	0.8568	15.00012	-14.14332	NAF
NS0041	268	270	NS	E400100	400100	1	G	W	31.56	37.28	1.5	0.336	0.26	0.066	2.1	0.85	0.085	0.007	0.97	0.026	0.71	10.53	0.01	11.25	8258	0.2142	14.8257	-14.6115	NAF
NS0041	196	198	NS	E400064	400064	1	G	W	37.27	35.46	1.36	0.684	0.53	0.059	2.57	0.93	0.094	0.036	0.394	0.077	0.4	4.26	0.02	4.68	8222	1.1016	16.22106	-15.11946	NAF
NS0041	104	106	NS	E400018	400018	1	G	W	35.89	36.63	1.03	0.736	0.57	0.045	2.78	0.92	0.087	0.025	0.427	0.124	0.53	5.01	0.12	5.66	8176	0.765	16.04664	-15.28164	NAF
NS0041	106	108	NS	E400019	400019	1	G	W	35.98	36.86	0.94	0.697	0.54	0.04	2.66	0.93	0.08	0.023	0.377	0.108	0.51	4.88	0.16	5.55	8177	0.7038	16.22106	-15.51726	NAF
NS0041	248	250	NS	E400090	400090	1	G	W	33.94	42.43	0.93	0.684	0.53	0.044	1.4	0.94	0.092	0.025	0.74	0.009	0.1	3.8	0	3.9	8248	0.765	16.39548	-15.63048	NAF
NS0041	122	124	NS	E400027	400027	1	G	W	35.6	36.36	1.01	0.684	0.53	0.043	2.74	0.95	0.105	0.025	0.455	0.123	0.61	5.65	0.03	6.29	8185	0.765	16.5699	-15.8049	NAF
NS0041	198	200	NS	E400065	400065	1	G	W	34.59	39.19	0.94	0.826	0.64	0.042	2.34	0.99	0.096	0.029	0.359	0.056	0.25	4.97	0.11	5.33	8223	0.8874	17.26758	-16.38018	NAF
NS0041	228	230	NS	E400080	400080	1	G	W	37.53	36.73	1.31	0.633	0.49	0.062	1.94	0.98	0.09	0.022	0.861	0.011	-0.01	3.37	0.09	3.45	8238	0.6732	17.09316	-16.41996	NAF
NS0041	174	176	NS	E400053	400053	1	G	W	29.78	42.07	1.06	0.723	0.56	0.046	2.68	1.02	0.107	0.043	0.346	0.11	0.69	7.9	0.23	8.82	8211	1.3158	17.79084	-16.47504	NAF
NS0041	74	76	NS	E400003	400003	1	G	W	32.95	39.05	1.39	0.594	0.46	0.059	2.87	1.06	0.148	0.032	0.555	0.143	0.78	5.62	0.11	6.51	8161	0.9792	18.48852	-17.50932	NAF
NS0041	68	70	NS	E392999	392999	1	G	W	30.36	40.89	1.71	0.736	0.57	0.075	3.19	1.17	0.101	0.094	0.526	0.143	0.93	6.31	0.45	7.69	6181	2.8764	20.40714	-17.53074	NAF
NS0041	124	126	NS	E400028	400028	1	G	W	34.21	38.69	1.11	0.594	0.46	0.05	2.88	1.08	0.087	0.03	0.492	0.138	0.6	4.67	0.32	5.59	8186	0.918	18.83736	-17.91936	NAF
NS0041	62	64	NS	E392996	392996	1	G	W	33.12	38.8	1.22	0.697	0.54	0.053	2.82	1.11	0.096	0.04	0.432	0.115	0.84	6.04	0.21	7.09	6178	1.224	19.36062	-18.13662	NAF
NS0041	126	128	NS	E400029	400029	1	G	W	35.63	36.78	1.27	0.581	0.45	0.053	2.89	1.14	0.085	0.039	0.521	0.145	0.65	4.27	0.35	5.27	8187	1.1934	19.88388	-18.69048	NAF
NS0041	226	228	NS	E400079	400079	1	G	W	35.76	38.63	1.14	0.736	0.57	0.048	1.94	1.14	0.095	0.021	0.826	0.016	0.01	3.78	0.22	4.01	8237	0.6426	19.88388	-19.24128	NAF
NS0041	262	264	NS	E400097	400097	1	G	W	32.45	37.02	1	0.736	0.57	0.043	1.61	1.25	0.188	0.063	0.852	0.015	0.77	9.57	0.04	10.38	8255	1.9278	21.8025	-19.8747	NAF
NS0041	110	112	NS	E400021	400021	1	G	W	35.36	37.39	0.93	0.813	0.63	0.041	2.7	1.21	0.089	0.024	0.401	0.119	0.51	4.56	0.38	5.45	8179	0.7344	21.10482	-20.37042	NAF
NS0041	266	268	NS	E400099	400099	1	G	W	23.13	49.22	1.07	0.413	0.32	0.047	2.1	1.22	0.177	0.006	0.378	0.011	0.89	10.68	0.26	11.83	8257	0.1836	21.27924	-21.09564	NAF
NS0041	264	266	NS	E400098	400098	1	G	W	31.01	32.41	1.95	0.684	0.53	0.086	2.16	1.47	0.198	0.007	1.18	0.023	1.2	13.39	0.36	14.95	8256	0.2142	25.63974	-25.42554	NAF
NS0043	152	154	NS	E400327	400327	1	G	W	26.32	41.56	3.33	0.749	0.58	0.151	3.97	0.83	0.176	0.542	0.495	0.151	0.69	8.68	1.07	10.44	8341	16.5852	14.47686	2.10834	PAF(LC)
NS0043	260	262	NS	E400381	400381	1	G	W	28.32	38.55	4.88	0.503	0.39	0.215	4.34	0.37	0.069	0.277	0.5	0.148	0.73	8.29	0.44	9.46	8395	8.4762	6.45354	2.02266	PAF(LC)
NS0043	258	260	NS	E400380	400380	1	G	W	26.17	38.82	4.76	0.62	0.48	0.212	4.36	0.47	0.104	0.314	0.512	0.156	0.82	10.53	0.62	11.97	8394	9.6084	8.19774	1.41066	PAF(LC)
NS0043	6	8	NS	E400253	400253	1	G	W	38.61	30.21	6.13	0.026	0.02	0.321	0.03	0.02	0.015	0.036	0.017	0.0005	6.03	1.53	0.25	7.81	8268	1.1016	0.34884	0.75276	PAF(LC)
NS0043	4	6	NS	E400252	400252	1	G	W	38.59	30.24	5.63	-0.0129	-0.01	0.347	0.02	0.01	0.015	0.024	0.011	0.004	6.59	1.44	0.22	8.25	8267	0.7344	0.17442	0.55998	PAF(LC)
NS0043	150	152	NS	E400326	400326	1	G	W	25.08	43.86	4.24	0.516	0.4	0.186	4.31	0.42	0.094	0.256	0.464	0.135	0.67	8.46	0.5	9.63	8340	7.8336	7.32564	0.50796	PAF(LC)
NS0043	2	4	NS	E400251	400251	1	G	W	45.35	18.4	6.41	-0.0129	-0.01	0.37	0.03	0.02	0.018	0.028	0.029	0.008	7.85	1.48	0.27	9.6	8266	0.8568	0.34884	0.50796	PAF(LC)
NS0043	10	12	NS	E400255	400255	1	G	W	33.33	40.76	4.85	0.026	0.02	0.319	0.05	0.01	0.011	0.016	0.01	0.018	4.52	1.52	0.17	6.21	8270	0.4896	0.17442	0.31518	PAF(LC)
NS0043	8	10	NS	E400254	400254	1	G	W	37.87	35.19	3.8	0.026	0.02	0.213	0.05	0.02	0.014	0.021	0.015	0.005	4.95	1.17	0.15	6.27	8269	0.6426	0.34884	0.29376	PAF(LC)
NS0043	14	16	NS	E400257	400257	1	G	W	37.01	41.12	2.32	0.026	0.02	0.101	0.06	0.01	0.011	0.013	0.006	0.024	2.64	0.74	0.08	3.46	8272	0.3978	0.17442	0.22338	PAF(LC)
NS0043	16	18	NS	E400258	400258	1	G	W	34.38	43.3	2.76	0.026	0.02	0.103	0.05	0.01	0.05	0.012	0.006	0.008	3.32	0.85	0.1	4.27	8273	0.3672	0.17442	0.19278	PAF(LC)
NS0043	12	14	NS	E400256	400256	1	G	W	33.62	42.11	3.53	0.052	0.04	0.186	0.12	0.02	0.01	0.014	0.007	0.022	4.32	1.17	0.18	5.67	8271	0.4284	0.34884	0.07956	PAF(LC)
NS0043	130	132	NS	E400316	400316	1	G	W	29.72	38.81	3.83	0.555	0.43	0.177	4.05	0.68	0.137	0.382	0.539	0.159	0.74	6.84	0.62	8.2	8330	11.6892	11.86056	-0.17136	NAF
NS0043	0	2	NS	E400250	400250	1	G	W	38.88	27.74	6.65	-0.0129	-0.01	0.387	0.05	0.06	0.016	0.027	0.043	0.01	7.3	1.6	0.3	9.2	8265	0.8262	1.04652	-0.22032	NAF
NS0043	252	254	NS	E400377	400377	1	G	W	27.96	44.66	3.74	0.374	0.29	0.166	3.57	0.47	0.073	0.258	0.532	0.158	0.7	4.81	0.31	5.82	8391	7.8948	8.19774	-0.30294	NAF
NS0043	18	20	NS	E400259	400259	1	G	W	33.7	43.75	2.64	0.039	0.03	0.13	0.33	0.05	0.046	0.011	0.063	0.024	3.2	1.07	0.11	4.38	8274	0.3366	0.8721	-0.5355	NAF
NS0043	20	22	NS	E400260	400260	1	G	W	32.5	45.44	2.68	0.039	0.03	0.133	0.32	0.05	0.044	0.01	0.059	0.024	3.45	1.02	0.1	4.57	8275	0.306	0.8721	-0.5661	NAF
NS0043	22	24	NS	E400261	400261	1	G	W	31.53	46.94	2.47	0.052	0.04	0.121	0.42	0.07	0.047	0.009	0.083	0.034	3.36	1.04	0.07	4.47	8276	0.2754	1.22094	-0.94554	NAF
NS0043	256	258	NS	E400379	400379	1	G	W	26.97	38.78	3.7	0.684	0.53	0.169	4.17	0.49	0.11	0.248	0.511	0.152	0.79	11.2	0.48	12.47	8393	7.5888	8.54658	-0.95778	NAF
NS0043	30	32	NS	E400265	400265	1	G	W	36.36	40.11	2.26	0.323	0.25	0.118	0.55	0.08	0.063	0.007	0.125	0.023	3.26	0.97	-0.06	4.17	8280	0.2142	1.39536	-1.18116	NAF
NS0043	24	26	NS	E400262	400262	1	G	W	33.38	44.43	2.35	0.194	0.15	0.182	0.73	0.1	0.043	0.007	0.217	0.039	2.81	1.05	-0.01	3.85	8277	0.2142	1.7442	-1.53	NAF
NS0043	28	30	NS	E400264	400264	1	G	W	31.09	45.88	2.73	0.465	0.36	0.126	0.82	0.11	0.075	0.009	0.253	0.041	3.41	1.26	0.1	4.77	8279	0.2754	1.91862	-1.64322	NAF
NS0043	198	200	NS	E400350	400350	1	G	W	32.59	38.5	3.01	0.671	0.52	0.138	4.04	0.33	0.053	0.129	0.474	0.148	0.61	5.23	0.03	5.87	8364	3.9474	5.75586	-1.80846	NAF
NS0043	26	28	NS	E400263	400263	1	G	W	32.35	42.9	3.25	0.336	0.26	0.152	0.89	0.13	0.115	0.013	0.228	0.04	3.74	1.5	0.12	5.36	8278	0.3978	2.26746	-1.86966	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0043	58	60	NS	E400279	400279	1	G	W	33.49	36.8	2.55	0.374	0.29	0.125	3.18	0.31	0.068	0.11	0.657	0.153	0.88	6.5	0.01	7.39	8294	3.366	5.40702	-2.04102	NAF
NS0043	146	148	NS	E400324	400324	1	G	W	32.62	37.79	2.68	0.568	0.44	0.126	3.4	0.21	0.026	0.052	0.438	0.135	0.59	7.63	-0.17	8.05	8338	1.5912	3.66282	-2.07162	NAF
NS0043	56	58	NS	E400278	400278	1	G	W	32.21	39.61	2.49	0.374	0.29	0.116	3.03	0.34	0.066	0.117	0.697	0.135	0.93	5.72	0.08	6.73	8293	3.5802	5.93028	-2.35008	NAF
NS0043	36	38	NS	E400268	400268	1	G	W	31.05	48.17	1.82	0.361	0.28	0.104	0.61	0.16	0.04	0.006	0.182	0.032	3.02	0.91	0.06	3.99	8283	0.1836	2.79072	-2.60712	NAF
NS0043	144	146	NS	E400323	400323	1	G	W	28.44	43.21	2.89	0.555	0.43	0.127	3.51	0.32	0.058	0.069	0.519	0.147	0.67	7.27	0.02	7.96	8337	2.1114	5.58144	-3.47004	NAF
NS0043	32	34	NS	E400266	400266	1	G	W	32.28	41.76	3.62	0.349	0.27	0.25	1.39	0.23	0.072	0.007	0.444	0.079	3.64	1.68	0.11	5.43	8281	0.2142	4.01166	-3.79746	NAF
NS0043	142	144	NS	E400322	400322	1	G	W	28.56	43.4	2.87	0.516	0.4	0.13	3.46	0.38	0.059	0.087	0.541	0.153	0.71	6.53	0	7.24	8336	2.6622	6.62796	-3.96576	NAF
NS0043	266	268	NS	E400384	400384	1	G	W	30.59	40.73	1.95	0.529	0.41	0.089	3.32	0.45	0.095	0.113	0.376	0.111	0.57	7.82	-0.04	8.35	8398	3.4578	7.8489	-4.3911	NAF
NS0043	196	198	NS	E400349	400349	1	G	W	32.62	36.9	3.16	0.762	0.59	0.145	4.19	0.58	0.109	0.185	0.327	0.112	0.51	6.11	0.17	6.79	8363	5.661	10.11636	-4.45536	NAF
NS0043	268	270	NS	E400385	400385	1	G	W	29.77	39.75	3.08	0.426	0.33	0.139	3.89	0.75	0.125	0.273	0.454	0.133	0.63	7.17	0.35	8.15	8399	8.3538	13.0815	-4.7277	NAF
NS0043	138	140	NS	E400320	400320	1	G	W	28.48	43.87	2.88	0.516	0.4	0.132	3.42	0.53	0.078	0.142	0.548	0.158	0.66	5.86	0.21	6.73	8334	4.3452	9.24426	-4.89906	NAF
NS0043	34	36	NS	E400267	400267	1	G	W	31.52	41.03	4.41	0.297	0.23	0.298	1.51	0.3	0.111	0.007	0.511	0.064	3.71	2.02	0.1	5.83	8282	0.2142	5.2326	-5.0184	NAF
NS0043	50	52	NS	E400275	400275	1	G	W	31.85	41.54	2.37	0.4	0.31	0.12	2.15	0.48	0.128	0.096	0.513	0.1	1.65	4.5	0.09	6.24	8290	2.9376	8.37216	-5.43456	NAF
NS0043	140	142	NS	E400321	400321	1	G	W	30.51	40.79	2.36	0.633	0.49	0.109	3.25	0.44	0.084	0.062	0.447	0.126	0.61	7.29	-0.09	7.81	8335	1.8972	7.67448	-5.77728	NAF
NS0043	254	256	NS	E400378	400378	1	G	W	32.06	39.41	1.97	0.542	0.42	0.087	2.87	0.47	0.117	0.075	0.509	0.15	0.64	7.03	-0.11	7.56	8392	2.295	8.19774	-5.90274	NAF
NS0043	128	130	NS	E400315	400315	1	G	W	29.7	42.2	2.56	0.542	0.42	0.117	3.27	0.47	0.076	0.066	0.509	0.156	0.65	6.87	-0.05	7.47	8329	2.0196	8.19774	-6.17814	NAF
NS0043	244	246	NS	E400373	400373	1	G	W	31.75	39.12	2.89	0.581	0.45	0.141	3.54	0.67	0.103	0.178	0.563	0.165	0.69	5.61	0.1	6.4	8387	5.4468	11.68614	-6.23934	NAF
NS0043	52	54	NS	E400276	400276	1	G	W	29.24	44.76	2.74	0.336	0.26	0.131	2.84	0.62	0.109	0.143	0.706	0.134	0.95	4.17	0.23	5.35	8291	4.3758	10.81404	-6.43824	NAF
NS0043	44	46	NS	E400272	400272	1	G	W	33.76	38.1	1.71	0.503	0.39	0.078	2.58	0.48	0.114	0.062	0.583	0.103	0.94	6.61	-0.11	7.44	8287	1.8972	8.37216	-6.47496	NAF
NS0043	46	48	NS	E400273	400273	1	G	W	30.97	44.41	1.66	0.529	0.41	0.079	1.74	0.44	0.118	0.039	0.391	0.067	1.67	4.19	-0.01	5.85	8288	1.1934	7.67448	-6.48108	NAF
NS0043	102	104	NS	E400302	400302	1	G	W	34.34	38.02	2.18	0.465	0.36	0.103	2.68	0.51	0.087	0.077	0.451	0.132	0.56	5.66	-0.18	6.04	8316	2.3562	8.89542	-6.53922	NAF
NS0043	54	56	NS	E400277	400277	1	G	W	30.13	40.34	3.07	0.426	0.33	0.143	3.46	0.72	0.139	0.193	0.82	0.154	1	5.82	0.37	7.19	8292	5.9058	12.55824	-6.65244	NAF
NS0043	200	202	NS	E400351	400351	1	G	W	34.29	39.5	1.15	0.684	0.53	0.055	2.5	0.94	0.142	0.318	0.252	0.073	0.26	4.56	0.25	5.07	8365	9.7308	16.39548	-6.66468	NAF
NS0043	270	272	NS	E400386	400386	1	G	W	27.01	41.39	1.73	0.529	0.41	0.074	3.06	0.5	0.083	0.065	0.546	0.151	0.87	12.06	0.11	13.04	8400	1.989	8.721	-6.732	NAF
NS0043	64	66	NS	E400282	400282	1	G	W	34.67	38.48	1.9	0.374	0.29	0.087	2.58	0.51	0.076	0.059	0.636	0.146	0.72	4.84	-0.17	5.39	8297	1.8054	8.89542	-7.09002	NAF
NS0043	60	62	NS	E400280	400280	1	G	W	32.36	38.26	2.44	0.4	0.31	0.131	3.14	0.6	0.092	0.108	0.616	0.161	0.84	6.6	0.03	7.47	8295	3.3048	10.4652	-7.1604	NAF
NS0043	126	128	NS	E400314	400314	1	G	W	30.51	41.72	2.56	0.529	0.41	0.115	3.15	0.54	0.043	0.063	0.509	0.145	0.65	6.1	0	6.75	8328	1.9278	9.41868	-7.49088	NAF
NS0043	62	64	NS	E400281	400281	1	G	W	28.67	47.34	1.43	0.374	0.29	0.067	2.24	0.55	0.047	0.04	0.467	0.109	0.62	5.61	-0.08	6.15	8296	1.224	9.5931	-8.3691	NAF
NS0043	40	42	NS	E400270	400270	1	G	W	29.07	42.19	3.54	0.336	0.26	0.166	2.96	1.24	0.379	0.427	0.752	0.168	1.36	3.6	0.83	5.79	8285	13.0662	21.62808	-8.56188	NAF
NS0043	202	204	NS	E400352	400352	1	G	W	32.94	34.67	3.07	0.865	0.67	0.138	4.37	0.77	0.197	0.158	0.488	0.143	0.64	7.08	0.14	7.86	8366	4.8348	13.43034	-8.59554	NAF
NS0043	246	248	NS	E400374	400374	1	G	W	31.1	41.03	2.36	0.555	0.43	0.105	3.13	0.73	0.096	0.123	0.503	0.148	0.65	5.94	-0.03	6.56	8388	3.7638	12.73266	-8.96886	NAF
NS0043	98	100	NS	E400299	400299	1	G	W	31.57	40.54	2.3	0.516	0.4	0.105	2.94	0.78	0.136	0.131	0.517	0.155	0.59	6.03	0.06	6.68	8314	4.0086	13.60476	-9.59616	NAF
NS0043	48	50	NS	E400274	400274	1	G	W	33.34	39.52	2.1	0.4	0.31	0.107	2.18	0.67	0.181	0.062	0.514	0.105	1.41	4.76	0.03	6.2	8289	1.8972	11.68614	-9.78894	NAF
NS0043	148	150	NS	E400325	400325	1	G	W	27.74	42.26	3.09	0.581	0.45	0.14	3.65	0.76	0.207	0.113	0.553	0.155	0.7	7.61	0.16	8.47	8339	3.4578	13.25592	-9.79812	NAF
NS0043	42	44	NS	E400271	400271	1	G	W	28.99	42.11	2.9	0.426	0.33	0.137	3.24	0.87	0.245	0.164	0.847	0.15	1.06	5.61	0.34	7.01	8286	5.0184	15.17454	-10.15614	NAF
NS0043	84	86	NS	E400292	400292	1	G	W	32.9	40.85	1.87	0.374	0.29	0.085	2.64	0.71	0.086	0.065	0.662	0.195	0.74	4.37	0.03	5.14	8307	1.989	12.38382	-10.39482	NAF
NS0043	104	106	NS	E400303	400303	1	G	W	31.6	40.59	2.43	0.503	0.39	0.112	2.92	0.73	0.06	0.06	0.426	0.129	0.51	6.02	0.03	6.56	8317	1.836	12.73266	-10.89666	NAF
NS0043	160	162	NS	E400331	400331	1	G	W	31.48	41.2	2.28	0.529	0.41	0.107	3.31	0.83	0.076	0.097	0.467	0.135	0.52	4.85	0.17	5.54	8345	2.9682	14.47686	-11.50866	NAF
NS0043	82	84	NS	E400291	400291	1	G	W	32.14	41.23	2.17	0.374	0.29	0.097	2.8	0.77	0.053	0.062	0.639	0.178	0.65	4.51	0.13	5.29	8306	1.8972	13.43034	-11.53314	NAF
NS0043	248	250	NS	E400375	400375	1	G	W	32.54	37.87	2.65	0.646	0.5	0.12	3.31	0.95	0.13	0.154	0.506	0.154	0.64	6.04	0.08	6.76	8389	4.7124	16.5699	-11.8575	NAF
NS0043	276	278	NS	E400389	400389	1	G	W	36.56	36.28	1.3	0.646	0.5	0.055	2.5	0.75	0.108	0.037	0.23	0.063	0.28	5.23	-0.26	5.25	8403	1.1322	13.0815	-11.9493	NAF
NS0043	158	160	NS	E400330	400330	1	G	W	34.02	39.49	1.65	0.516	0.4	0.075	2.74	0.78	0.097	0.052	0.37	0.108	0.41	4.76	-0.07	5.1	8344	1.5912	13.60476	-12.01356	NAF
NS0043	100	102	NS	E400300	400300	1	G	W	22.84	49.87	2.38	0.607	0.47	0.107	3.11	0.99	0.165	0.155	0.482	0.143	0.7	7.85	0.36	8.91	8315	4.743	17.26758	-12.52458	NAF
NS0043	204	206	NS	E400353	400353	1	G	W	33.28	40.23	1.36	0.684	0.53	0.059	2.48	0.8	0.091	0.046	0.273	0.079	0.78	5.18	0.01	5.97	8367	1.4076	13.9536	-12.546	NAF
NS0043	188	190	NS	E400345	400345	1	G	W	36.52	36.15	1.76	0.671	0.52	0.082	3.07	0.93	0.117	0.108	0.416	0.115	0.36	4	0.02	4.38	8359	3.3048	16.22106	-12.91626	NAF
NS0043	242	244	NS	E400372	400372	1	G	W	32.6	40.82	1.51	0.671	0.52	0.07	2.62	0.87	0.083	0.066	0.318	0.088	0.48	5.59	-0.1	5.97	8386	2.0196	15.17454	-13.15494	NAF
NS0043	194	196	NS	E400348	400348	1	G	W	36.63	35.81	1.19	0.8	0.62	0.052	2.71	0.81	0.121	0.031	0.304	0.088	0.36	5.12	-0.11	5.37	8362	0.9486	14.12802	-13.17942	NAF
NS0043	156	158	NS	E400329	400329	1	G	W	31.49	42.38	1.9	0.529	0.41	0.089	2.84	0.87	0.124	0.064	0.44	0.135	0.47	4.97	0.04	5.48	8343	1.9584	15.17454	-13.21614	NAF
NS0043	70	72	NS	E400285	400285	1	G	W	35.22	36.95	1.73	0.4	0.31	0.083	2.62	0.85	0.102	0.051	0.579	0.151	0.68	5.09	-0.01	5.76	8300	1.5606	14.8257	-13.2651	NAF
NS0043	278	280	NS	E400390	400390	1	G	W	36.16	37.23	1.28	0.646	0.5	0.057	2.49	0.83	0.085	0.038	0.223	0.051	0.28	4.81	-0.14	4.95	8404	1.1628	14.47686	-13.31406	NAF
NS0043	272	274	NS	E400387	400387	1	G	W	34.39	32.55	1.58	0.684	0.53	0.068	2.96	0.91	0.194	0.075	0.417	0.114	0.69	10.26	-0.23	10.72	8401	2.295	15.87222	-13.57722	NAF
NS0043	154	156	NS	E400328	400328	1	G	W	31.49	40.97	1.64	0.516	0.4	0.076	2.61	1.49	0.304	0.385	0.369	0.119	0.46	5.05	0.58	6.09	8342	11.781	25.98858	-14.20758	NAF
NS0043	208	210	NS	E400355	400355	1	G	W	39.48	32.7	1.47	0.633	0.49	0.066	2.69	0.92	0.141	0.051	0.296	0.091	0.34	4.29	-0.22	4.41	8369	1.5606	16.04664	-14.48604	NAF
NS0043	262	264	NS	E400382	400382	1	G	W	32.21	38.52	1.74	0.646	0.5	0.074	3.15	1.01	0.089	0.102	0.498	0.154	0.63	7.07	0.12	7.82	8396	3.1212	17.61642	-14.49522	NAF
NS0043	192	194	NS	E400347	400347	1	G	W	33.31	40.34	1.64	0.646	0.5	0.073	3.04	0.94	0.105	0.059	0.372	0.104	0.39	4.33	0.14	4.86	8361	1.8054	16.39548	-14.59008	NAF
NS0043	88	90	NS	E400294	400294	1	G	W	33.14	40.8	1.82	0.374	0.29	0.083	2.6	0.93	0.065	0.052	0.617	0.183	0.59	4.02	0.22	4.83	8309	1.5912	16.22106	-14.62986	NAF
NS0043	280	282	NS	E400391	400391	1	G	W	34.51	38.81	1.13	0.826	0.64	0.052	2.57	0.9	0.096	0.034	0.194	0.054	0.26	5.59	-0.02	5.83	8405	1.0404	15.6978	-14.6574	NAF
NS0043	66	68	NS	E400283	400283	1	G	W	32.35	39.98	1.55	0.478	0.37	0.073	2.62	0.93	0.076	0.045	0.583	0.143	0.75	5.9	0.13	6.78	8298	1.377	16.22106	-14.84406	NAF
NS0043	108	110	NS	E400305	400305	1	G	W	31.06	41.22	2.27	0.555	0.43	0.109	2.86	0.96	0.08	0.062	0.441	0.132	0.58	5.9	0.22	6.7	8319	1.8972	16.74432	-14.84712	NAF
NS0043	76	78	NS	E400288	400288	1	G	W	27.56	47.93	1.73	0.361	0.28	0.079	2.62	1.01	0.041	0.087	0.56	0.158	0.65	4.81	0.49	5.95	8303	2.6622	17.61642	-14.95422	NAF
NS0043	168	170	NS	E400335	400335	1	G	W	33.49	39.46	1.93	0.633	0.49	0.09	3.16	1.01	0.086	0.077	0.324	0.108	0.37	4.68	0.15	5.2	8349	2.3562	17.61642	-15.26022	NAF
NS0043	264	266	NS	E400383	400383	1	G	W	31.55	39.96	1.23	0.658	0.51	0.053	2.87	0.96	0.098	0.047	0.305	0.092	0.53	7.75	0.1	8.38	8397	1.4382	16.74432	-15.30612	NAF
NS0043	86	88	NS	E400293	400293	1	G	W	30.18	44.79	2.03	0.336	0.26	0.095	2.7	1.03	0.057	0.077	0.651	0.186	0.67	3.69	0.39	4.75	8308	2.3562	17.96526	-15.60906	NAF
NS0043	166	168	NS	E400334	400334	1	G	W	36.51	35.08	1.36	0.8	0.62	0.062	2.71	1.02	0.115	0.053	0.258	0.072	0.29	5.56	0.01	5.86	8348	1.6218	17.79084	-16.16904	NAF
NS0043	132	134	NS	E400317	400317	1	G	W	30.78	43.24	2.02	0.503	0.39	0.092	2.64	1.09	0.1	0.087	0.421	0.126	0.52	4.62	0.22	5.36	8331	2.6622	19.01178	-16.34958	NAF
NS0043	240	242	NS	E400371	400371	1	G	W	29.88	41.24	3.25	0.607	0.47	0.145	3.79	1.28	0.21	0.195	0.447	0.132	0.58	4.89	0.33	5.8	8385	5.967	22.32576	-16.35876	NAF
NS0043	90	92	NS	E400295	400295	1	G	W	27.85	46.91	1.99	0.413	0.32	0.094	2.73	1.06	0.063	0.069	0.564	0.172	0.64	4.8	0.43	5.87	8310	2.1114	18.48852	-16.37712	NAF
NS0043	222	224	NS	E400362	400362	1	G	W	35.3	38.33	2.17	0.465	0.36	0.123	1.72	1.01	0.073	0.038	0.203	0.041	1.9	2.92	0.16	4.98	8376	1.1628	17.61642	-16.45362	NAF
NS0043	68	70	NS	E400284	400284	1	G	W	33.05	39.79	1.78	0.413	0.32	0.083	2.67	1.07	0.188	0.056	0.644	0.179	0.67	5.03	-0.02	5.68	8299	1.7136	18.66294	-16.94934	NAF
NS0043	136	138	NS	E400319	400319	1	G	W	33.29	39.49	1.8	0.542	0.42	0.081	2.64	1.06	0.104	0.048	0.394	0.116	0.39	5.03	0.2	5.62	8333	1.4688	18.48852	-17.01972	NAF
NS0043	110	112	NS	E400306	400306	1	G	W	32.54	39.92	1.83	0.568	0.44	0.085	2.61	1.09	0.065	0.047	0.44	0.124	0.52	5.58	0.36	6.46	8320	1.4382	19.01178	-17.57358	NAF
NS0043	106	108	NS	E400304	400304	1	G	W	32.63	37.45	2.24	0.62	0.48	0.104	3.02	1.16	0.188	0.057	0.487	0.145	0.58	6.98	0.02	7.58	8318	1.7442	20.23272	-18.48852	NAF
NS0043	114	116	NS	E400308	400308	1	G	W	31.4	41.49	2.17	0.503	0.39	0.102	2.72	1.19	0.048	0.054	0.431	0.126	0.55	4.94	0.49	5.98	8322	1.6524	20.75598	-19.10358	NAF
NS0043	72	74	NS	E400286	400286	1	G	W	31.58	40.14	1.81	0.465	0.36	0.081	2.9	1.21	0.084	0.065	0.645	0.173	0.77	5.81	0.53	7.11	8301	1.989	21.10482	-19.11582	NAF
NS0043	206	208	NS	E400354	400354	1	G	W	33.22	41.11	0.95	0.684	0.53	0.043	2.42	1.15	0.134	0.027	0.24	0.071	0.3	4.88	0.17	5.35	8368	0.8262	20.0583	-19.2321	NAF
NS0043	78	80	NS	E400289	400289	1	G	W	33.18	38.34	1.22	0.529	0.41	0.055	2.55	1.19	0.074	0.029	0.45	0.114	0.52	6.74	0.47	7.73	8304	0.8874	20.75598	-19.86858	NAF
NS0043	274	276	NS	E400388	400388	1	G	W	30.76	38.28	0.89	0.955	0.74	0.04	2.8	1.23	0.086	0.025	0.142	0.043	0.49	10.34	0.37	11.2	8402	0.765	21.45366	-20.68866	NAF
NS0043	74	76	NS	E400287	400287	1	G	W	31.54	41.78	1.22	0.465	0.36	0.055	2.4	1.25	0.086	0.032	0.44	0.124	0.55	5.71	0.54	6.8	8302	0.9792	21.8025	-20.8233	NAF
NS0043	210	212	NS	E400356	400356	1	G	W	34.18	38.6	1.06	0.865	0.67	0.048	2.6	1.27	0.111	0.031	0.238	0.077	0.29	5.28	0.32	5.89	8370	0.9486	22.15134	-21.20274	NAF
NS0043	122	124	NS	E400312	400312	1	G	W	32.45	40.07	2.23	0.503	0.39	0.104	2.75	1.33	0.108	0.065	0.449	0.131	0.49	4.62	0.43	5.54	8326	1.989	23.19786	-21.20886	NAF
NS0043	162	164	NS	E400332	400332	1	G	W	33.01	39.24	1.23	0.788	0.61	0.054	2.65	1.31	0.107	0.053	0.261	0.084	0.37	5.9	0.35	6.62	8346	1.6218	22.84902	-21.22722	NAF
NS0043	134	136	NS	E400318	400318	1	G	W	34.66	37.45	1.6	0.607	0.47	0.073	2.57	1.29	0.081	0.041	0.342	0.109	0.41	5.28	0.43	6.12	8332	1.2546	22.50018	-21.24558	NAF
NS0043	38	40	NS	E400269	400269	1	G	W	31.03	42.86	3.2	0.232	0.18	0.164	1.64	1.44	0.432	0.092	0.414	0.112	2.33	1.58	0.25	4.16	8284	2.8152	25.11648	-22.30128	NAF
NS0043	92	94	NS	E400296	400296	1	G	W	29	42.73	2.44	0.452	0.35	0.115	3.1	1.44	0.268	0.083	0.662	0.194	0.69	5.49	0.28	6.46	8311	2.5398	25.11648	-22.57668	NAF
NS0043	94	96	NS	E400297	400297	1	G	W	28.16	44.93	1.97	0.465	0.36	0.09	2.85	1.45	0.076	0.087	0.505	0.145	0.57	5.44	0.76	6.77	8312	2.6622	25.2909	-22.6287	NAF
NS0043	96	98	NS	E400298	400298	1	G	W	28.23	42.22	3.77	0.387	0.3	0.177	3.66	1.62	0.325	0.177	0.539	0.166	0.62	5	0.4	6.02	8313	5.4162	28.25604	-22.83984	NAF
NS0043	178	180	NS	E400340	400340	1	G	W	34.51	38.64	1.95	0.568	0.44	0.092	3.06	1.44	0.154	0.072	0.359	0.097	0.34	3.3	0.36	4	8354	2.2032	25.11648	-22.91328	NAF
NS0043	186	188	NS	E400344	400344	1	G	W	34.29	39.41	1	0.71	0.55	0.042	2.55	1.37	0.126	0.028	0.284	0.086	0.26	4.21	0.51	4.98	8358	0.8568	23.89554	-23.03874	NAF
NS0043	220	222	NS	E400361	400361	1	G	W	36.84	36.85	1.29	0.697	0.54	0.057	2.36	1.4	0.097	0.036	0.306	0.066	0.17	3.2	0.55	3.92	8375	1.1016	24.4188	-23.3172	NAF
NS0043	250	252	NS	E400376	400376	1	G	W	31.35	39.61	2.77	0.465	0.36	0.127	3.2	1.61	0.394	0.149	0.548	0.161	0.63	4.93	0.02	5.58	8390	4.5594	28.08162	-23.52222	NAF
NS0043	176	178	NS	E400339	400339	1	G	W	34.38	39.2	1.79	0.581	0.45	0.078	2.96	1.52	0.119	0.078	0.354	0.098	0.29	3.37	0.49	4.15	8353	2.3868	26.51184	-24.12504	NAF
NS0043	120	122	NS	E400311	400311	1	G	W	31.73	40.99	2.23	0.491	0.38	0.102	2.68	1.55	0.127	0.068	0.441	0.123	0.48	4.38	0.65	5.51	8325	2.0808	27.0351	-24.9543	NAF
NS0043	184	186	NS	E400343	400343	1	G	W	31.88	42.57	0.89	0.775	0.6	0.039	2.53	1.5	0.096	0.026	0.25	0.078	0.28	4.49	0.81	5.58	8357	0.7956	26.163	-25.3674	NAF
NS0043	170	172	NS	E400336	400336	1	G	W	33.16	38.5	2.05	0.633	0.49	0.092	3.28	1.61	0.118	0.088	0.371	0.12	0.38	4.16	0.73	5.27	8350	2.6928	28.08162	-25.38882	NAF
NS0043	112	114	NS	E400307	400307	1	G	W	30.54	42.39	2.25	0.465	0.36	0.104	2.71	1.6	0.064	0.074	0.44	0.122	0.5	4.31	0.85	5.66	8321	2.2644	27.9072	-25.6428	NAF
NS0043	124	126	NS	E400313	400313	1	G	W	30.37	41.39	2.29	0.516	0.4	0.108	2.98	1.59	0.116	0.064	0.473	0.138	0.56	5.41	0.71	6.68	8327	1.9584	27.73278	-25.77438	NAF
NS0043	164	166	NS	E400333	400333	1	G	W	35.39	35.86	1.12	0.826	0.64	0.051	2.56	1.59	0.122	0.054	0.224	0.065	0.3	5.83	0.5	6.63	8347	1.6524	27.73278	-26.08038	NAF
NS0043	80	82	NS	E400290	400290	1	G	W	30.98	42.41	1.14	0.465	0.36	0.052	2.35	1.56	0.077	0.032	0.423	0.114	0.52	5.42	0.84	6.78	8305	0.9792	27.20952	-26.23032	NAF
NS0043	116	118	NS	E400309	400309	1	G	W	31.59	40.36	2.33	0.503	0.39	0.109	2.82	1.75	0.067	0.093	0.412	0.121	0.45	4.43	0.99	5.87	8323	2.8458	30.5235	-27.6777	NAF
NS0043	182	184	NS	E400342	400342	1	G	W	33.5	40.11	0.88	0.762	0.59	0.042	2.47	1.71	0.091	0.022	0.187	0.066	0.23	4.38	0.98	5.59	8356	0.6732	29.82582	-29.15262	NAF
NS0043	190	192	NS	E400346	400346	1	G	W	29.94	45.26	0.79	0.736	0.57	0.036	2.32	1.72	0.095	0.022	0.203	0.067	0.21	4.23	0.99	5.43	8360	0.6732	30.00024	-29.32704	NAF
NS0043	232	234	NS	E400367	400367	1	G	W	33.76	40.66	1.06	0.723	0.56	0.05	2.21	1.75	0.094	0.03	0.227	0.06	0.24	3.38	0.84	4.46	8381	0.918	30.5235	-29.6055	NAF
NS0043	238	240	NS	E400370	400370	1	G	W	34.13	38.98	1.1	0.788	0.61	0.052	2.35	1.76	0.092	0.031	0.203	0.059	0.29	4.23	0.83	5.35	8384	0.9486	30.69792	-29.74932	NAF
NS0043	212	214	NS	E400357	400357	1	G	W	37.12	35.91	1.1	0.671	0.52	0.049	2.38	1.79	0.1	0.029	0.257	0.074	0.25	3.29	0.78	4.32	8371	0.8874	31.22118	-30.33378	NAC
NS0043	180	182	NS	E400341	400341	1	G	W	34.6	38.36	1.08	0.697	0.54	0.05	2.63	1.84	0.103	0.024	0.221	0.055	0.19	4	0.98	5.17	8355	0.7344	32.09328	-31.35888	NAC
NS0043	236	238	NS	E400369	400369	1	G	W	32.5	41.55	1.2	0.697	0.54	0.055	2.4	1.86	0.089	0.031	0.221	0.06	0.21	3.62	1.07	4.9	8383	0.9486	32.44212	-31.49352	NAC
NS0043	214	216	NS	E400358	400358	1	G	W	35.88	36.82	1.05	0.775	0.6	0.051	2.4	1.89	0.082	0.027	0.23	0.063	0.25	3.67	1	4.92	8372	0.8262	32.96538	-32.13918	NAC
NS0043	234	236	NS	E400368	400368	1	G	W	37.2	33.75	1.31	0.775	0.6	0.054	2.7	2.13	0.113	0.037	0.239	0.068	0.3	3.97	1.12	5.39	8382	1.1322	37.15146	-36.01926	NAC
NS0043	118	120	NS	E400310	400310	1	G	W	28.89	43.14	2.7	0.439	0.34	0.126	3.01	2.32	0.159	0.141	0.438	0.128	0.49	3.76	1.36	5.61	8324	4.3146	40.46544	-36.15084	NAC
NS0043	218	220	NS	E400360	400360	1	G	W	37.37	34.74	1.22	0.71	0.55	0.052	2.39	2.13	0.085	0.028	0.364	0.061	0.18	2.76	1.33	4.27	8374	0.8568	37.15146	-36.29466	NAC
NS0043	216	218	NS	E400359	400359	1	G	W	35.23	37.17	1.22	0.762	0.59	0.052	2.47	2.17	0.081	0.047	0.361	0.064	0.17	3.09	1.5	4.76	8373	1.4382	37.84914	-36.41094	NAC
NS0043	230	232	NS	E400366	400366	1	G	W	33.88	40.1	1.01	0.671	0.52	0.044	2.14	2.25	0.086	0.029	0.332	0.059	0.16	2.76	1.57	4.49	8380	0.8874	39.2445	-38.3571	NAC
NS0043	172	174	NS	E400337	400337	1	G	W	32.32	40.41	1.12	0.736	0.57	0.052	2.56	2.32	0.11	0.036	0.227	0.069	0.28	3.98	1.41	5.67	8351	1.1016	40.46544	-39.36384	NAC
NS0043	224	226	NS	E400363	400363	1	G	W	32.35	40.5	1.39	0.684	0.53	0.068	2.38	2.49	0.109	0.041	0.267	0.067	0.64	3.12	1.71	5.47	8377	1.2546	43.43058	-42.17598	NAC
NS0043	174	176	NS	E400338	400338	1	G	W	32.21	40.56	0.92	0.749	0.58	0.045	2.53	2.48	0.097	0.031	0.217	0.068	0.22	3.83	1.82	5.87	8352	0.9486	43.25616	-42.30756	NAC
NS0043	226	228	NS	E400364	400364	1	G	W	30.18	44.14	1	0.762	0.59	0.043	2.28	2.58	0.079	0.028	0.254	0.062	0.23	3.09	2.07	5.39	8378	0.8568	45.00036	-44.14356	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0043	228	230	NS	E400365	400365	1	G	W	33.12	37.82	1.18	0.775	0.6	0.049	2.5	3.33	0.103	0.031	0.345	0.075	0.36	2.96	2.71	6.03	8379	0.9486	58.08186	-57.13326	NAC
NS0044	242	244	NS	E400515	400515	1	G	D	25.15	45.09	2.64	0.542	0.42	0.12	3.78	0.52	0.117	0.581	0.24	0.097	0.51	8.92	1.02	10.45	8527	17.7786	9.06984	8.70876	PAF(LC)
NS0044	260	262	NS	E400524	400524	1	G	D	25.48	41.68	7.21	0.258	0.2	0.306	6.52	0.38	0.066	0.359	0.21	0.093	0.55	5.24	0.69	6.48	8536	10.9854	6.62796	4.35744	PAF(LC)
NS0044	228	230	NS	E400508	400508	1	G	D	26.31	42.64	4.1	0.607	0.47	0.179	4.13	0.27	0.054	0.244	0.394	0.155	0.67	8.38	0.5	9.55	8520	7.4664	4.70934	2.75706	PAF(LC)
NS0044	182	184	NS	E400484	400484	1	G	D	33.36	38.44	2.72	0.594	0.46	0.126	3.72	0.39	0.074	0.307	0.234	0.078	0.42	4.68	0.37	5.47	8497	9.3942	6.80238	2.59182	PAF(LC)
NS0044	114	116	NS	E400450	400450	1	G	D	29.82	40.44	3.66	0.542	0.42	0.169	3.81	0.48	0.062	0.337	0.362	0.103	0.58	6.78	0.51	7.87	8463	10.3122	8.37216	1.94004	PAF(LC)
NS0044	4	6	NS	E400394	400394	1	G	D	25.92	53.26	3.46	0.026	0.02	0.31	0.04	0.02	0.014	0.024	0.014	0.008	4.48	0.92	0.18	5.58	8408	0.7344	0.34884	0.38556	PAF(LC)
NS0044	6	8	NS	E400395	400395	1	G	D	34.94	38.19	3.94	0.026	0.02	0.238	0.06	0.03	0.011	0.026	0.011	0.006	6.01	1.12	0.23	7.36	8409	0.7956	0.52326	0.27234	PAF(LC)
NS0044	2	4	NS	E400393	400393	1	G	D	26.89	48.46	5.53	0.026	0.02	0.788	0.08	0.04	0.019	0.024	0.057	0.022	4.73	1.36	0.21	6.3	8407	0.7344	0.69768	0.03672	PAF(LC)
NS0044	8	10	NS	E400396	400396	1	G	D	30.83	47.17	3.03	0.026	0.02	0.22	0.05	0.03	0.016	0.017	0.006	0.015	4.13	0.89	0.14	5.16	8410	0.5202	0.52326	-0.00306	NAF
NS0044	10	12	NS	E400397	400397	1	G	D	37.76	38.65	2.43	0.052	0.04	0.131	0.07	0.04	0.041	0.015	0.008	0.012	3.53	0.75	0.12	4.4	8411	0.459	0.69768	-0.23868	NAF
NS0044	12	14	NS	E400398	400398	1	G	D	34.36	45.22	1.61	0.065	0.05	0.091	0.08	0.03	0.056	0.009	0.009	0.008	2.7	0.54	0.07	3.31	8412	0.2754	0.52326	-0.24786	NAF
NS0044	14	16	NS	E400399	400399	1	G	D	39.3	38.78	1.3	0.194	0.15	0.062	0.06	0.03	0.079	0.006	0.01	0.007	2.3	0.48	0.08	2.86	8413	0.1836	0.52326	-0.33966	NAF
NS0044	16	18	NS	E400400	400400	1	G	D	37.22	41.72	1.37	0.155	0.12	0.065	0.07	0.04	0.084	0.005	0.01	0.008	2.31	0.49	0.04	2.84	8414	0.153	0.69768	-0.54468	NAF
NS0044	18	20	NS	E400402	400402	1	G	D	37.93	41.4	1.1	0.103	0.08	0.062	0.12	0.06	0.065	0.006	0.009	0.012	2.16	0.45	0.01	2.62	8415	0.1836	1.04652	-0.86292	NAF
NS0044	224	226	NS	E400506	400506	1	G	D	25.47	44.19	4.34	0.646	0.5	0.186	4.39	0.41	0.092	0.203	0.301	0.107	0.56	7.46	0.42	8.44	8518	6.2118	7.15122	-0.93942	NAF
NS0044	28	30	NS	E400407	400407	1	G	D	37.86	41.19	0.95	0.8	0.62	0.042	0.16	0.07	0.071	0.003	0.275	0.024	1.56	0.31	0.06	1.93	8420	0.0918	1.22094	-1.12914	NAF
NS0044	20	22	NS	E400403	400403	1	G	D	38.38	40.81	1.01	0.181	0.14	0.067	0.19	0.08	0.062	0.005	0.018	0.006	2.1	0.43	-0.04	2.49	8416	0.153	1.39536	-1.24236	NAF
NS0044	30	32	NS	E400408	400408	1	G	D	38.95	39.81	0.96	0.878	0.68	0.044	0.21	0.09	0.047	0.003	0.348	0.024	1.45	0.34	0.06	1.85	8421	0.0918	1.56978	-1.47798	NAF
NS0044	0	2	NS	E400392	400392	1	G	D	38.81	25.96	8.22	0.116	0.09	1.016	0.36	0.14	0.035	0.029	0.192	0.047	5.7	2.38	0.23	8.31	8406	0.8874	2.44188	-1.55448	NAF
NS0044	236	238	NS	E400512	400512	1	G	D	30.16	42.16	2.5	0.413	0.32	0.111	3.25	0.19	0.028	0.057	0.406	0.149	0.69	6.81	-0.06	7.44	8524	1.7442	3.31398	-1.56978	NAF
NS0044	226	228	NS	E400507	400507	1	G	D	24.35	43.16	4.87	0.607	0.47	0.217	4.57	0.6	0.154	0.289	0.376	0.144	0.7	8.78	0.62	10.1	8519	8.8434	10.4652	-1.6218	NAF
NS0044	32	34	NS	E400409	400409	1	G	D	38.52	40.69	0.95	0.736	0.57	0.043	0.23	0.1	0.024	0.003	0.344	0.015	1.27	0.35	0.04	1.66	8422	0.0918	1.7442	-1.6524	NAF
NS0044	132	134	NS	E400459	400459	1	G	D	30.58	31.93	2.64	0.529	0.41	0.112	4.25	0.46	0.052	0.2	0.074	0.033	0.66	14.79	0.35	15.8	8472	6.12	8.02332	-1.90332	NAF
NS0044	34	36	NS	E400410	400410	1	G	D	35.87	44.18	1.08	0.658	0.51	0.046	0.3	0.12	0.024	0.003	0.38	0.037	1.22	0.36	0	1.58	8423	0.0918	2.09304	-2.00124	NAF
NS0044	36	38	NS	E400411	400411	1	G	D	36.47	43.18	1.18	0.813	0.63	0.05	0.29	0.14	0.024	0.003	0.482	0.025	1.37	0.41	0.04	1.82	8424	0.0918	2.44188	-2.35008	NAF
NS0044	24	26	NS	E400405	400405	1	G	D	33.63	46.1	1.35	0.981	0.76	0.057	0.35	0.15	0.053	0.004	0.172	0.02	1.81	0.53	0.06	2.4	8418	0.1224	2.6163	-2.4939	NAF
NS0044	240	242	NS	E400514	400514	1	G	D	32.41	42.29	1.34	0.413	0.32	0.059	2.34	0.21	0.039	0.036	0.318	0.118	0.48	6	-0.33	6.15	8526	1.1016	3.66282	-2.56122	NAF
NS0044	26	28	NS	E400406	400406	1	G	D	37.19	41.05	1.63	0.503	0.39	0.072	0.41	0.16	0.056	0.003	0.252	0.018	1.72	0.6	0.1	2.42	8419	0.0918	2.79072	-2.69892	NAF
NS0044	234	236	NS	E400511	400511	1	G	D	26.54	45.3	3.56	0.426	0.33	0.158	3.79	0.32	0.074	0.075	0.397	0.154	0.61	6.97	0.1	7.68	8523	2.295	5.58144	-3.28644	NAF
NS0044	230	232	NS	E400509	400509	1	G	D	32.18	40.61	2.29	0.465	0.36	0.097	2.9	0.28	0.066	0.047	0.376	0.149	0.62	5.98	-0.21	6.39	8521	1.4382	4.88376	-3.44556	NAF
NS0044	22	24	NS	E400404	400404	1	G	D	34.45	42.1	2.58	0.775	0.6	0.114	0.57	0.22	0.08	0.006	0.111	0.024	2.48	1.08	0.13	3.69	8417	0.1836	3.83724	-3.65364	NAF
NS0044	116	118	NS	E400451	400451	1	G	D	28.95	40.03	3.05	0.633	0.49	0.136	3.64	0.57	0.107	0.2	0.337	0.099	0.53	8.82	0.22	9.57	8464	6.12	9.94194	-3.82194	NAF
NS0044	238	240	NS	E400513	400513	1	G	D	16.65	69.66	0.76	0.245	0.19	0.036	1.33	0.27	0.067	0.024	0.147	0.062	0.25	3.33	-0.09	3.49	8525	0.7344	4.70934	-3.97494	NAF
NS0044	232	234	NS	E400510	400510	1	G	D	22.21	55.43	1.7	0.452	0.35	0.073	2.53	0.33	0.073	0.053	0.27	0.099	0.52	6.43	0.04	6.99	8522	1.6218	5.75586	-4.13406	NAF
NS0044	38	40	NS	E400412	400412	1	G	D	32.47	49.86	0.73	0.607	0.47	0.035	0.16	0.25	0.059	0.003	0.408	0.016	1.04	0.38	0.05	1.47	8425	0.0918	4.3605	-4.2687	NAF
NS0044	198	200	NS	E400492	400492	1	G	D	29.51	42.55	3.78	0.568	0.44	0.184	3.96	0.89	0.056	0.35	0.464	0.075	0.36	3.73	0.75	4.84	8505	10.71	15.52338	-4.81338	NAF
NS0044	118	120	NS	E400452	400452	1	G	D	27.03	39.17	2.88	0.697	0.54	0.131	3.76	0.6	0.124	0.17	0.346	0.092	0.81	12.27	0.33	13.41	8465	5.202	10.4652	-5.2632	NAF
NS0044	184	186	NS	E400485	400485	1	G	D	36.11	36.5	1.76	0.775	0.6	0.078	2.91	0.47	0.096	0.091	0.205	0.049	0.28	5.37	-0.21	5.44	8498	2.7846	8.19774	-5.41314	NAF
NS0044	222	224	NS	E400505	400505	1	G	D	31.59	40.74	2.43	0.684	0.53	0.105	3.3	0.51	0.094	0.054	0.301	0.117	0.41	5.89	-0.11	6.19	8517	1.6524	8.89542	-7.24302	NAF
NS0044	40	42	NS	E400413	400413	1	G	D	35.08	43.98	0.94	0.775	0.6	0.044	0.81	0.45	0.073	0.01	0.566	0.016	0.68	1.63	-0.15	2.16	8426	0.306	7.8489	-7.5429	NAF
NS0044	144	146	NS	E400465	400465	1	G	D	21.07	50.85	0.95	0.465	0.36	0.042	2.05	0.62	0.089	0.079	0.031	0.001	0.62	13.74	0.22	14.58	8478	2.4174	10.81404	-8.39664	NAF
NS0044	150	152	NS	E400468	400468	1	G	D	29.92	33.41	0.91	0.684	0.53	0.041	2.89	0.52	0.051	0.011	0.321	0.02	0.79	17.33	0.02	18.14	8481	0.3366	9.06984	-8.73324	NAF
NS0044	162	164	NS	E400474	400474	1	G	D	33.18	42.33	0.95	0.684	0.53	0.042	1.69	0.55	0.079	0.022	0.632	0.036	0.13	5.66	-0.25	5.54	8487	0.6732	9.5931	-8.9199	NAF
NS0044	142	144	NS	E400464	400464	1	G	D	28.22	33.92	1.46	0.568	0.44	0.062	2.97	0.63	0.067	0.064	0.085	0.02	0.79	18.76	0.15	19.7	8477	1.9584	10.98846	-9.03006	NAF
NS0044	120	122	NS	E400453	400453	1	G	D	31.6	37.62	1.33	0.646	0.5	0.059	2.72	0.63	0.101	0.04	0.336	0.088	0.55	10.75	-0.17	11.13	8466	1.224	10.98846	-9.76446	NAF
NS0044	168	170	NS	E400477	400477	1	G	D	33.31	35.93	0.97	0.775	0.6	0.045	2.91	0.62	0.08	0.027	0.332	0.014	0.36	10.35	-0.23	10.48	8490	0.8262	10.81404	-9.98784	NAF
NS0044	110	112	NS	E400448	400448	1	G	D	32.17	39.41	2.16	0.633	0.49	0.098	3.06	0.96	0.15	0.207	0.276	0.088	0.34	6.24	0.28	6.86	8461	6.3342	16.74432	-10.41012	NAF
NS0044	122	124	NS	E400454	400454	1	G	D	28.14	38.15	1.44	0.62	0.48	0.063	3.16	0.68	0.11	0.033	0.404	0.093	0.79	13.81	0.04	14.64	8467	1.0098	11.86056	-10.85076	NAF
NS0044	278	280	NS	E400533	400533	1	G	D	26.93	44.69	2.71	0.529	0.41	0.123	3.4	0.78	0.056	0.089	0.369	0.131	0.67	7.46	0.27	8.4	8545	2.7234	13.60476	-10.88136	NAF
NS0044	170	172	NS	E400478	400478	1	G	D	31.72	37	1.93	0.736	0.57	0.09	3.57	0.91	0.198	0.157	0.342	0.037	0.35	8.99	0.14	9.48	8491	4.8042	15.87222	-11.06802	NAF
NS0044	176	178	NS	E400481	400481	1	G	D	35.52	38	1.39	0.697	0.54	0.06	2.65	0.75	0.096	0.056	0.117	0.032	0.09	5.29	-0.18	5.2	8494	1.7136	13.0815	-11.3679	NAF
NS0044	146	148	NS	E400466	400466	1	G	D	30.7	28.09	1.14	0.697	0.54	0.05	2.94	0.7	0.099	0.013	0.04	0.0005	1.08	20.87	0.04	21.99	8479	0.3978	12.2094	-11.8116	NAF
NS0044	126	128	NS	E400456	400456	1	G	D	30.68	36.48	1.84	0.658	0.51	0.083	3.62	0.93	0.097	0.126	0.106	0.034	0.41	11.22	0.19	11.82	8469	3.8556	16.22106	-12.36546	NAF
NS0044	134	136	NS	E400460	400460	1	G	D	32.35	33.07	2.41	0.594	0.46	0.105	3.08	0.89	0.117	0.103	0.662	0.026	0.41	11.9	-0.02	12.29	8473	3.1518	15.52338	-12.37158	NAF
NS0044	140	142	NS	E400463	400463	1	G	D	26.11	38.56	1.5	0.491	0.38	0.068	2.6	0.88	0.106	0.077	0.055	0.0005	0.61	17.19	0.18	17.98	8476	2.3562	15.34896	-12.99276	NAF
NS0044	220	222	NS	E400504	400504	1	G	D	33.32	39.84	2.07	0.671	0.52	0.09	2.9	0.86	0.063	0.064	0.254	0.092	0.48	4.59	0.13	5.2	8516	1.9584	15.00012	-13.04172	NAF
NS0044	172	174	NS	E400479	400479	1	G	D	36.91	35.77	1.31	0.671	0.52	0.06	2.7	0.8	0.084	0.029	0.078	0.027	0.12	5.67	-0.15	5.64	8492	0.8874	13.9536	-13.0662	NAF
NS0044	160	162	NS	E400473	400473	1	G	D	35.01	34.63	1.05	0.658	0.51	0.053	2.24	0.83	0.088	0.032	0.566	0.203	0.28	9.13	0.03	9.44	8486	0.9792	14.47686	-13.49766	NAF
NS0044	124	126	NS	E400455	400455	1	G	D	29.07	35.47	1.21	0.646	0.5	0.053	3.54	0.86	0.111	0.04	0.341	0.083	0.67	14.84	0.12	15.63	8468	1.224	15.00012	-13.77612	NAF
NS0044	178	180	NS	E400482	400482	1	G	D	36.8	36.82	1.23	0.671	0.52	0.053	2.49	0.86	0.096	0.03	0.134	0.034	0.1	4.64	-0.1	4.64	8495	0.918	15.00012	-14.08212	NAF
NS0044	164	166	NS	E400475	400475	1	G	D	36.45	35.52	1.24	0.646	0.5	0.056	2.21	0.87	0.085	0.028	0.598	0.002	0.09	6.17	-0.06	6.2	8488	0.8568	15.17454	-14.31774	NAF
NS0044	244	246	NS	E400516	400516	1	G	D	28.76	45.31	2	0.413	0.32	0.092	2.93	0.95	0.056	0.065	0.348	0.126	0.63	5.32	0.37	6.32	8528	1.989	16.5699	-14.5809	NAF
NS0044	156	158	NS	E400471	400471	1	G	D	28.19	37.37	0.74	0.749	0.58	0.033	2.77	0.86	0.068	0.01	0.324	0.004	0.39	15.82	0.3	16.51	8484	0.306	15.00012	-14.69412	NAF
NS0044	276	278	NS	E400532	400532	1	G	D	28.71	40.06	2.75	0.62	0.48	0.122	3.78	1.07	0.1	0.11	0.351	0.127	0.61	8.47	0.42	9.5	8544	3.366	18.66294	-15.29694	NAF
NS0044	180	182	NS	E400483	400483	1	G	D	33.79	39.73	1.84	0.594	0.46	0.085	2.81	1.08	0.238	0.111	0.143	0.037	0.19	4.52	-0.1	4.61	8496	3.3966	18.83736	-15.44076	NAF
NS0044	148	150	NS	E400467	400467	1	G	D	26.59	37.14	0.67	0.594	0.46	0.031	2.77	0.92	0.079	0.01	0.111	0.0005	0.77	18.4	0.29	19.46	8480	0.306	16.04664	-15.74064	NAF
NS0044	192	194	NS	E400489	400489	1	G	D	35.48	39.49	1.24	0.723	0.56	0.057	2.27	0.98	0.077	0.034	0.172	0.034	0.11	3.72	0.1	3.93	8502	1.0404	17.09316	-16.05276	NAF
NS0044	152	154	NS	E400469	400469	1	G	D	32	30.95	1.06	0.646	0.5	0.047	2.94	0.94	0.092	0.011	0.411	0.119	0.7	16.07	0.2	16.97	8482	0.3366	16.39548	-16.05888	NAF
NS0044	186	188	NS	E400486	400486	1	G	D	34.42	40.69	0.98	0.788	0.61	0.046	2.2	1	0.095	0.03	0.146	0.03	0.16	4.22	0.12	4.5	8499	0.918	17.442	-16.524	NAF
NS0044	136	138	NS	E400461	400461	1	G	D	31.27	38.37	1.3	0.529	0.41	0.056	2.12	1.03	0.091	0.046	0.501	0.016	0.28	10.39	0.19	10.86	8474	1.4076	17.96526	-16.55766	NAF
NS0044	174	176	NS	E400480	400480	1	G	D	34.43	38.27	1.02	0.775	0.6	0.048	2.58	1.02	0.088	0.029	0.077	0.016	0.14	6.17	0.12	6.43	8493	0.8874	17.79084	-16.90344	NAF
NS0044	194	196	NS	E400490	400490	1	G	D	30.44	44.35	1.71	0.775	0.6	0.078	2.6	1.17	0.064	0.114	0.402	0.061	0.19	4.24	0.49	4.92	8503	3.4884	20.40714	-16.91874	NAF
NS0044	188	190	NS	E400487	400487	1	G	D	34.6	39.24	1.08	0.839	0.65	0.049	2.49	1.05	0.082	0.029	0.203	0.026	0.14	4.61	0.26	5.01	8500	0.8874	18.3141	-17.4267	NAF
NS0044	196	198	NS	E400491	400491	1	G	D	36.2	37.86	1.44	0.697	0.54	0.065	2.35	1.11	0.109	0.047	0.199	0.035	0.06	3.73	0.13	3.92	8504	1.4382	19.36062	-17.92242	NAF
NS0044	210	212	NS	E400498	400498	1	G	D	34.4	37.85	2.13	0.749	0.58	0.116	2.55	1.28	0.095	0.142	0.33	0.043	0.84	4.15	0.4	5.39	8511	4.3452	22.32576	-17.98056	NAF
NS0044	258	260	NS	E400523	400523	1	G	D	33.58	39.19	1.9	0.568	0.44	0.087	2.97	1.14	0.096	0.054	0.225	0.083	0.33	4.83	0.26	5.42	8535	1.6524	19.88388	-18.23148	NAF
NS0044	154	156	NS	E400470	400470	1	G	D	30.74	32.29	1	0.607	0.47	0.044	3.03	1.07	0.063	0.01	0.364	0.016	0.66	16.21	0.44	17.31	8483	0.306	18.66294	-18.35694	NAF
NS0044	42	44	NS	E400414	400414	1	G	D	34.6	41.78	1.16	0.826	0.64	0.054	1.38	1.11	0.074	0.023	0.567	0.038	0.74	2.23	0.54	3.51	8427	0.7038	19.36062	-18.65682	NAF
NS0044	208	210	NS	E400497	400497	1	G	D	32.77	39.85	2.33	0.671	0.52	0.107	2.95	1.37	0.197	0.153	0.344	0.083	0.26	4.05	0.38	4.69	8510	4.6818	23.89554	-19.21374	NAF
NS0044	158	160	NS	E400472	400472	1	G	D	29.3	35.59	0.9	0.723	0.56	0.041	2.98	1.19	0.082	0.026	0.484	0.071	0.48	15.12	0.52	16.12	8485	0.7956	20.75598	-19.96038	NAF
NS0044	58	60	NS	E400422	400422	1	G	D	37.93	35.38	1.32	0.788	0.61	0.058	2.38	1.21	0.086	0.02	0.973	0.02	0.08	2.96	0.45	3.49	8435	0.612	21.10482	-20.49282	NAF
NS0044	166	168	NS	E400476	400476	1	G	D	35.33	35.78	1.16	0.775	0.6	0.052	2.34	1.24	0.126	0.035	0.387	0.008	0.13	6.9	0.2	7.23	8489	1.071	21.62808	-20.55708	NAF
NS0044	112	114	NS	E400449	400449	1	G	D	32.05	39.36	1.64	0.671	0.52	0.077	2.8	1.35	0.059	0.061	0.244	0.065	0.45	6.55	0.54	7.54	8462	1.8666	23.5467	-21.6801	NAF
NS0044	254	256	NS	E400521	400521	1	G	D	32.95	37.96	2.33	0.594	0.46	0.102	3.39	1.41	0.076	0.077	0.231	0.096	0.4	5.22	0.6	6.22	8533	2.3562	24.59322	-22.23702	NAF
NS0044	190	192	NS	E400488	400488	1	G	D	35.46	38.04	1.1	0.839	0.65	0.05	2.44	1.37	0.11	0.031	0.22	0.047	0.09	4.19	0.47	4.75	8501	0.9486	23.89554	-22.94694	NAF
NS0044	130	132	NS	E400458	400458	1	G	D	33.07	37.55	1.31	0.697	0.54	0.057	2.86	1.42	0.107	0.043	0.047	0.033	0.27	7.75	0.5	8.52	8471	1.3158	24.76764	-23.45184	NAF
NS0044	270	272	NS	E400529	400529	1	G	D	29.21	39.91	3.52	0.503	0.39	0.158	4.14	1.91	0.074	0.3	0.351	0.144	0.54	5.19	1.32	7.05	8541	9.18	33.31422	-24.13422	NAF
NS0044	68	70	NS	E400427	400427	1	G	D	40.41	33.13	1.26	0.581	0.45	0.054	2.1	1.45	0.111	0.028	0.883	0.043	-0.02	1.82	0.44	2.24	8440	0.8568	25.2909	-24.4341	NAF
NS0044	106	108	NS	E400446	400446	1	G	D	33.66	40.42	1.44	0.646	0.5	0.068	2.46	1.52	0.097	0.045	0.147	0.032	0.18	4.28	0.69	5.15	8459	1.377	26.51184	-25.13484	NAF
NS0044	212	214	NS	E400499	400499	1	G	D	36.45	36.45	1.71	0.71	0.55	0.076	2.4	1.54	0.084	0.038	0.249	0.038	0.29	3.36	0.53	4.18	8512	1.1628	26.86068	-25.69788	NAF
NS0044	80	82	NS	E400433	400433	1	G	D	33.39	42.54	1.51	0.452	0.35	0.07	2.43	1.59	0.059	0.065	0.779	0.034	0.04	1.6	1.14	2.78	8446	1.989	27.73278	-25.74378	NAF
NS0044	200	202	NS	E400493	400493	1	G	D	34.01	39.16	1.79	0.775	0.6	0.078	2.57	1.61	0.091	0.073	0.246	0.035	0.21	3.8	0.6	4.61	8506	2.2338	28.08162	-25.84782	NAF
NS0044	274	276	NS	E400531	400531	1	G	D	30.75	41.89	2.81	0.349	0.27	0.126	3.26	1.69	0.028	0.107	0.316	0.127	0.41	3.7	1.14	5.25	8543	3.2742	29.47698	-26.20278	NAF
NS0044	108	110	NS	E400447	400447	1	G	D	33.66	40	1.09	0.684	0.53	0.05	2.17	1.58	0.081	0.031	0.14	0.036	0.31	4.57	0.72	5.6	8460	0.9486	27.55836	-26.60976	NAF
NS0044	264	266	NS	E400526	400526	1	G	D	30.54	47.18	1.85	0.232	0.18	0.086	2.15	1.6	0.059	0.039	0.138	0.061	0.17	1.64	0.86	2.67	8538	1.1934	27.9072	-26.7138	NAF
NS0044	204	206	NS	E400495	400495	1	G	D	34.48	39.46	1.64	0.697	0.54	0.078	2.3	1.67	0.094	0.068	0.132	0.025	0.2	3.2	0.72	4.12	8508	2.0808	29.12814	-27.04734	NAF
NS0044	250	252	NS	E400519	400519	1	G	D	29.65	44.95	1.76	0.426	0.33	0.076	2.75	1.68	0.044	0.069	0.213	0.082	0.33	3.94	1.04	5.31	8531	2.1114	29.30256	-27.19116	NAF
NS0044	76	78	NS	E400431	400431	1	G	D	39.47	32.48	1.07	0.981	0.76	0.048	2.19	1.63	0.103	0.026	0.831	0.032	-0.01	3.2	0.79	3.98	8444	0.7956	28.43046	-27.63486	NAF
NS0044	44	46	NS	E400415	400415	1	G	D	36.51	37.45	1.14	0.775	0.6	0.053	1.82	1.65	0.106	0.02	0.741	0.047	0.16	2.67	0.92	3.75	8428	0.612	28.7793	-28.1673	NAF
NS0044	56	58	NS	E400421	400421	1	G	D	37.13	35.53	1.27	0.826	0.64	0.055	2.5	1.66	0.082	0.021	0.938	0.019	0.08	2.97	1.03	4.08	8434	0.6426	28.95372	-28.31112	NAF
NS0044	252	254	NS	E400520	400520	1	G	D	32.67	41.6	1.26	0.503	0.39	0.058	2.37	1.73	0.083	0.035	0.2	0.068	0.28	3.92	0.85	5.05	8532	1.071	30.17466	-29.10366	NAF
NS0044	206	208	NS	E400496	400496	1	G	D	35.61	39.05	1.31	0.646	0.5	0.064	2.04	1.74	0.085	0.037	0.12	0.031	0.05	2.73	0.87	3.65	8509	1.1322	30.34908	-29.21688	NAF
NS0044	84	86	NS	E400435	400435	1	G	D	32.28	42.45	1.42	0.633	0.49	0.057	2.46	1.88	0.133	0.09	0.811	0.061	0.15	2.47	1.12	3.74	8448	2.754	32.79096	-30.03696	NAC
NS0044	216	218	NS	E400502	400502	1	G	D	36.21	36.41	1.6	0.736	0.57	0.074	2.32	1.79	0.058	0.036	0.207	0.068	0.32	3.4	0.86	4.58	8514	1.1016	31.22118	-30.11958	NAC
NS0044	86	88	NS	E400436	400436	1	G	D	33.95	41.23	0.97	0.684	0.53	0.044	2.23	1.78	0.115	0.025	0.517	0.039	0.02	2.66	1.08	3.76	8449	0.765	31.04676	-30.28176	NAC
NS0044	74	76	NS	E400430	400430	1	G	D	33.84	41.66	0.96	0.723	0.56	0.043	2.01	1.8	0.07	0.024	0.704	0.027	0	2.21	1.23	3.44	8443	0.7344	31.3956	-30.6612	NAC
NS0044	92	94	NS	E400439	400439	1	G	D	36.85	37.37	1.03	0.684	0.53	0.051	2.12	1.81	0.1	0.027	0.434	0.04	0.1	2.73	0.88	3.71	8452	0.8262	31.57002	-30.74382	NAC
NS0044	100	102	NS	E400443	400443	1	G	D	39.8	32.14	1.38	0.646	0.5	0.06	2.39	1.83	0.109	0.029	0.213	0.037	0.13	3.01	0.8	3.94	8456	0.8874	31.91886	-31.03146	NAC
NS0044	98	100	NS	E400442	400442	1	G	D	36.99	36.13	1.22	0.697	0.54	0.055	2.31	1.84	0.087	0.027	0.164	0.04	0.12	3.43	0.83	4.38	8455	0.8262	32.09328	-31.26708	NAC
NS0044	104	106	NS	E400445	400445	1	G	D	34.26	39.26	1.09	0.762	0.59	0.05	2.29	1.88	0.08	0.029	0.143	0.042	0.15	4.13	1	5.28	8458	0.8874	32.79096	-31.90356	NAC
NS0044	54	56	NS	E400420	400420	1	G	D	36.46	36.82	1.01	0.852	0.66	0.049	2.08	1.9	0.1	0.019	0.738	0.017	0.08	2.87	1.03	3.98	8433	0.5814	33.1398	-32.5584	NAC
NS0044	48	50	NS	E400417	400417	1	G	D	37.49	36.45	1	0.723	0.56	0.048	1.8	1.91	0.097	0.018	0.641	0.018	0.15	2.34	1.03	3.52	8430	0.5508	33.31422	-32.76342	NAC
NS0044	138	140	NS	E400462	400462	1	G	D	26.59	36.53	2.6	0.426	0.33	0.113	3.01	2.18	0.139	0.17	0.203	0.009	0.76	14.42	1.17	16.35	8475	5.202	38.02356	-32.82156	NAC
NS0044	246	248	NS	E400517	400517	1	G	D	23.64	57.07	0.97	0.245	0.19	0.045	1.85	1.93	0.035	0.026	0.226	0.091	0.23	2.13	1.43	3.79	8529	0.7956	33.66306	-32.86746	NAC
NS0044	214	216	NS	E400500	400500	1	G	D	33.48	40.48	1.2	0.8	0.62	0.054	2.14	1.95	0.066	0.032	0.21	0.052	0.16	3.4	1.2	4.76	8513	0.9792	34.0119	-33.0327	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0044	128	130	NS	E400457	400457	1	G	D	31.64	37.7	1.48	0.697	0.54	0.067	2.99	2.05	0.083	0.081	0.045	0.013	0.3	7.76	1.18	9.24	8470	2.4786	35.7561	-33.2775	NAC
NS0044	202	204	NS	E400494	400494	1	G	D	34.23	38.93	1.5	0.826	0.64	0.068	2.37	2.02	0.095	0.058	0.163	0.026	0.19	3.55	1.05	4.79	8507	1.7748	35.23284	-33.45804	NAC
NS0044	60	62	NS	E400423	400423	1	G	D	34.7	39.54	1.02	0.788	0.61	0.048	2.16	2	0.094	0.02	0.743	0.017	0.07	2.66	1.23	3.96	8436	0.612	34.884	-34.272	NAC
NS0044	78	80	NS	E400432	400432	1	G	D	35.05	39.24	1.32	0.491	0.38	0.06	2.38	2.03	0.061	0.034	0.748	0.046	0.07	1.61	1.54	3.22	8445	1.0404	35.40726	-34.36686	NAC
NS0044	72	74	NS	E400429	400429	1	G	D	33.72	41.17	1.11	0.697	0.54	0.05	2.16	2.03	0.087	0.021	0.849	0.031	0.05	2.28	1.28	3.61	8442	0.6426	35.40726	-34.76466	NAC
NS0044	262	264	NS	E400525	400525	1	G	D	26.46	52.86	0.92	0.297	0.23	0.044	1.75	2.09	0.056	0.027	0.161	0.061	0.16	1.97	1.51	3.64	8537	0.8262	36.45378	-35.62758	NAC
NS0044	66	68	NS	E400426	400426	1	G	D	34.4	39.76	1.16	0.646	0.5	0.048	2.16	2.23	0.094	0.025	0.787	0.03	0.04	1.84	1.58	3.46	8439	0.765	38.89566	-38.13066	NAC
NS0044	52	54	NS	E400419	400419	1	G	D	34.66	38.48	1.03	0.839	0.65	0.049	2.24	2.29	0.081	0.021	0.73	0.018	0.05	2.72	1.74	4.51	8432	0.6426	39.94218	-39.29958	NAC
NS0044	64	66	NS	E400425	400425	1	G	D	35.91	37.08	1.08	0.826	0.64	0.048	2.21	2.34	0.075	0.026	0.762	0.028	0.04	2.35	1.71	4.1	8438	0.7956	40.81428	-40.01868	NAC
NS0044	218	220	NS	E400503	400503	1	G	D	33.97	38.85	1.45	0.684	0.53	0.063	2.41	2.4	0.085	0.034	0.17	0.061	0.26	3.34	1.45	5.05	8515	1.0404	41.8608	-40.8204	NAC
NS0044	96	98	NS	E400441	400441	1	G	D	33.49	40.11	1.05	0.736	0.57	0.048	2.26	2.4	0.1	0.029	0.308	0.025	0.1	2.92	1.7	4.72	8454	0.8874	41.8608	-40.9734	NAC
NS0044	50	52	NS	E400418	400418	1	G	D	33.74	40.54	0.97	0.736	0.57	0.046	2.03	2.4	0.076	0.027	0.657	0.02	0.06	2.39	1.68	4.13	8431	0.8262	41.8608	-41.0346	NAC
NS0044	248	250	NS	E400518	400518	1	G	D	28.03	48.02	1.36	0.31	0.24	0.064	2.43	2.43	0.066	0.04	0.307	0.115	0.31	2.44	1.69	4.44	8530	1.224	42.38406	-41.16006	NAC
NS0044	46	48	NS	E400416	400416	1	G	D	36.07	37.04	0.95	0.788	0.61	0.043	1.84	2.4	0.118	0.017	0.617	0.03	0.1	2.31	1.74	4.15	8429	0.5202	41.8608	-41.3406	NAC
NS0044	88	90	NS	E400437	400437	1	G	D	29.35	45.81	0.86	0.749	0.58	0.039	2.25	2.48	0.068	0.026	0.413	0.036	0.03	2.78	2.19	5	8450	0.7956	43.25616	-42.46056	NAC
NS0044	256	258	NS	E400522	400522	1	G	D	30.25	41.62	1.67	0.555	0.43	0.072	2.96	2.61	0.068	0.099	0.203	0.072	0.34	4.2	1.96	6.5	8534	3.0294	45.52362	-42.49422	NAC
NS0044	102	104	NS	E400444	400444	1	G	D	25.64	50.98	0.79	0.736	0.57	0.038	2.08	2.51	0.045	0.024	0.11	0.028	0.14	3.38	2.17	5.69	8457	0.7344	43.77942	-43.04502	NAC
NS0044	82	84	NS	E400434	400434	1	G	D	32.84	40.4	1.46	0.581	0.45	0.062	2.72	2.55	0.058	0.045	0.824	0.046	0.07	2.17	2.15	4.39	8447	1.377	44.4771	-43.1001	NAC
NS0044	90	92	NS	E400438	400438	1	G	D	32.01	41.88	0.95	0.775	0.6	0.042	2.3	2.52	0.08	0.027	0.495	0.041	0.11	2.78	2.17	5.06	8451	0.8262	43.95384	-43.12764	NAC
NS0044	94	96	NS	E400440	400440	1	G	D	31.31	42.84	0.92	0.775	0.6	0.045	2.28	2.62	0.064	0.029	0.333	0.035	0.08	2.91	2.24	5.23	8453	0.8874	45.69804	-44.81064	NAC
NS0044	268	270	NS	E400528	400528	1	G	D	27.14	48.48	1.04	0.516	0.4	0.046	2.13	2.63	0.062	0.032	0.144	0.052	0.27	3.41	2.21	5.89	8540	0.9792	45.87246	-44.89326	NAC
NS0044	70	72	NS	E400428	400428	1	G	D	35.25	36.61	1.09	0.839	0.65	0.048	2.42	2.66	0.07	0.027	0.823	0.029	-0.01	2.44	2.24	4.67	8441	0.8262	46.39572	-45.56952	NAC
NS0044	62	64	NS	E400424	400424	1	G	D	32.23	42.12	0.85	0.788	0.61	0.04	2.04	2.83	0.075	0.02	0.608	0.022	0.02	2	2.37	4.39	8437	0.612	49.36086	-48.74886	NAC
NS0044	272	274	NS	E400530	400530	1	G	D	26.93	48.06	1.21	0.374	0.29	0.057	2.36	3.05	0.021	0.034	0.203	0.076	0.24	2.99	2.67	5.9	8542	1.0404	53.1981	-52.1577	NAC
NS0044	266	268	NS	E400527	400527	1	G	D	27.9	48.87	0.9	0.387	0.3	0.042	1.81	3.1	0.061	0.023	0.139	0.049	0.16	1.99	2.37	4.52	8539	0.7038	54.0702	-53.3664	NAC
NS0045	246	248	NS	E400658	400658	1	G	W	24.59	42.63	4.15	0.594	0.46	0.187	3.66	0.47	0.102	0.315	0.435	0.118	0.82	10.66	0.68	12.16	8669	9.639	8.19774	1.44126	PAF(LC)
NS0045	214	216	NS	E400642	400642	1	G	W	30.09	39.18	2.4	0.594	0.46	0.106	3.11	0.55	0.101	0.357	0.127	0.037	0.54	9.4	0.6	10.54	8653	10.9242	9.5931	1.3311	PAF(LC)
NS0045	48	50	NS	E400558	400558	1	G	W	23.56	48.19	3.31	0.542	0.42	0.143	3.22	0.24	0.048	0.17	0.472	0.124	1.4	7.59	0.54	9.53	8570	5.202	4.18608	1.01592	PAF(LC)
NS0045	12	14	NS	E400540	400540	1	G	W	28.11	51.64	2.89	0.077	0.06	0.1	0.07	0.02	0.042	0.017	0.007	0.009	3.73	1.01	0.18	4.92	8552	0.5202	0.34884	0.17136	PAF(LC)
NS0045	10	12	NS	E400539	400539	1	G	W	31.81	48.8	1.99	0.077	0.06	0.081	0.05	0.02	0.042	0.013	0.007	0.007	2.53	0.75	0.15	3.43	8551	0.3978	0.34884	0.04896	PAF(LC)
NS0045	14	16	NS	E400541	400541	1	G	W	20.66	64.5	1.92	0.103	0.08	0.072	0.11	0.02	0.01	0.013	0.007	0.012	2.67	0.78	0.14	3.59	8553	0.3978	0.34884	0.04896	PAF(LC)
NS0045	54	56	NS	E400561	400561	1	G	W	30.94	40.91	3.03	0.594	0.46	0.134	3.59	0.24	0.029	0.135	0.392	0.091	0.94	5.39	0.08	6.41	8573	4.131	4.18608	-0.05508	NAF
NS0045	8	10	NS	E400538	400538	1	G	W	25.08	56.33	2.9	0.039	0.03	0.098	0.06	0.02	0.019	0.009	0.008	0.011	3.28	0.99	0.12	4.39	8550	0.2754	0.34884	-0.07344	NAF
NS0045	16	18	NS	E400542	400542	1	G	W	15.69	73.6	1.49	0.077	0.06	0.054	0.08	0.02	0.012	0.009	0.006	0.018	1.76	0.61	0.11	2.48	8554	0.2754	0.34884	-0.07344	NAF
NS0045	18	20	NS	E400543	400543	1	G	W	20.85	66.66	0.94	0.077	0.06	0.04	0.07	0.02	0.014	0.008	0.005	0.01	1.76	0.42	0.11	2.29	8555	0.2448	0.34884	-0.10404	NAF
NS0045	250	252	NS	E400660	400660	1	G	W	29.97	38.72	3.48	0.503	0.39	0.159	3.62	0.35	0.082	0.196	0.388	0.106	0.7	8.23	0.22	9.15	8671	5.9976	6.1047	-0.1071	NAF
NS0045	6	8	NS	E400537	400537	1	G	W	27.59	49.29	4.19	0.026	0.02	0.2	0.06	0.03	0.011	0.013	0.012	0.006	4.81	1.34	0.17	6.32	8549	0.3978	0.52326	-0.12546	NAF
NS0045	20	22	NS	E400544	400544	1	G	W	29.96	50.11	2.42	0.155	0.12	0.101	0.12	0.03	0.018	0.013	0.007	0.007	3.09	0.89	0.18	4.16	8556	0.3978	0.52326	-0.12546	NAF
NS0045	22	24	NS	E400545	400545	1	G	W	25.19	59.7	1	0.103	0.08	0.042	0.04	0.02	0.067	0.006	0.008	0.008	2.4	0.43	0.1	2.93	8557	0.1836	0.34884	-0.16524	NAF
NS0045	26	28	NS	E400547	400547	1	G	W	30.32	51.68	1.3	0.349	0.27	0.055	0.08	0.02	0.087	0.006	0.018	0.007	2.4	0.56	0.11	3.07	8559	0.1836	0.34884	-0.16524	NAF
NS0045	4	6	NS	E400536	400536	1	G	W	27.07	52.41	3.23	0.026	0.02	0.149	0.07	0.03	0.012	0.009	0.015	0.01	4.19	1.03	0.13	5.35	8548	0.2754	0.52326	-0.24786	NAF
NS0045	50	52	NS	E400559	400559	1	G	W	26.18	42.18	4.75	0.542	0.42	0.206	4.83	0.46	0.123	0.254	0.393	0.109	0.75	7.14	0.56	8.45	8571	7.7724	8.02332	-0.25092	NAF
NS0045	44	46	NS	E400556	400556	1	G	W	25.82	44.36	3.64	0.555	0.43	0.161	3.03	0.47	0.108	0.259	0.123	0.044	1.68	7.7	0.67	10.05	8568	7.9254	8.19774	-0.27234	NAF
NS0045	24	26	NS	E400546	400546	1	G	W	26.9	56.73	0.89	0.168	0.13	0.038	0.07	0.03	0.084	0.007	0.009	0.011	2.81	0.48	0.1	3.39	8558	0.2142	0.52326	-0.30906	NAF
NS0045	28	30	NS	E400548	400548	1	G	W	24.62	60.83	1.1	0.129	0.1	0.044	0.08	0.03	0.03	0.007	0.011	0.007	1.77	0.39	0.04	2.2	8560	0.2142	0.52326	-0.30906	NAF
NS0045	30	32	NS	E400549	400549	1	G	W	31.53	49.45	1.35	0.736	0.57	0.054	0.14	0.04	0.017	0.011	0.014	0.024	2.57	0.62	0.12	3.31	8561	0.3366	0.69768	-0.36108	NAF
NS0045	2	4	NS	E400535	400535	1	G	W	31.24	44.56	3.83	-0.0129	-0.01	0.218	0.05	0.04	0.016	0.009	0.022	0.012	4.78	1.26	0.16	6.2	8547	0.2754	0.69768	-0.42228	NAF
NS0045	32	34	NS	E400550	400550	1	G	W	32.01	44.91	2.3	1.446	1.12	0.101	0.19	0.04	0.06	0.009	0.076	0.013	3.45	0.91	0.23	4.59	8562	0.2754	0.69768	-0.42228	NAF
NS0045	42	44	NS	E400555	400555	1	G	W	21.79	63.71	0.81	0.361	0.28	0.033	0.21	0.06	0.049	0.002	0.05	0.008	2.57	0.5	0.07	3.14	8567	0.0612	1.04652	-0.98532	NAF
NS0045	0	2	NS	E400534	400534	1	G	W	31.5	40.89	5.67	0.026	0.02	0.206	0.16	0.1	0.015	0.021	0.036	0.021	5.55	1.86	0.22	7.63	8546	0.6426	1.7442	-1.1016	NAF
NS0045	100	102	NS	E400584	400584	1	G	W	32.15	40.16	2.28	0.646	0.5	0.106	3.36	0.37	0.069	0.169	0.433	0.061	0.26	5.88	0.04	6.18	8596	5.1714	6.45354	-1.28214	NAF
NS0045	34	36	NS	E400551	400551	1	G	W	31.12	44.05	3.36	1.588	1.23	0.138	0.47	0.1	0.082	0.004	0.211	0.024	3.57	1.32	0.28	5.17	8563	0.1224	1.7442	-1.6218	NAF
NS0045	38	40	NS	E400553	400553	1	G	W	25.36	59.03	1.18	0.271	0.21	0.054	0.32	0.1	0.034	0.002	0.029	0.015	2.24	0.55	0.06	2.85	8565	0.0612	1.7442	-1.683	NAF
NS0045	40	42	NS	E400554	400554	1	G	W	26.8	54.91	1.45	0.426	0.33	0.061	0.43	0.1	0.05	0.002	0.076	0.016	2.96	0.69	0.1	3.75	8566	0.0612	1.7442	-1.683	NAF
NS0045	36	38	NS	E400552	400552	1	G	W	31.54	47	1.88	0.594	0.46	0.084	0.46	0.13	0.049	0.002	0.075	0.014	3.1	0.86	0.12	4.08	8564	0.0612	2.26746	-2.20626	NAF
NS0045	120	122	NS	E400594	400594	1	G	W	31.84	39.56	2.78	0.646	0.5	0.133	3.7	0.46	0.086	0.175	0.391	0.08	0.37	6	0.11	6.48	8606	5.355	8.02332	-2.66832	NAF
NS0045	144	146	NS	E400607	400607	1	G	W	31.36	32.13	2.62	0.762	0.59	0.117	4.41	0.77	0.157	0.336	0.526	0.033	0.62	11.87	0.51	13	8618	10.2816	13.43034	-3.14874	NAF
NS0045	46	48	NS	E400557	400557	1	G	W	28.97	43.37	2.66	0.439	0.34	0.117	2.91	0.29	0.073	0.053	0.4	0.113	1.23	6.73	0.07	8.03	8569	1.6218	5.05818	-3.43638	NAF
NS0045	248	250	NS	E400659	400659	1	G	W	31.45	32.52	1.8	0.839	0.65	0.079	2.97	0.4	0.065	0.112	0.173	0.042	0.85	14.92	0.09	15.86	8670	3.4272	6.9768	-3.5496	NAF
NS0045	132	134	NS	E400600	400600	1	G	W	35.1	37.08	1.97	0.71	0.55	0.087	3.14	0.39	0.068	0.073	0.224	0.05	0.26	5.89	-0.28	5.87	8612	2.2338	6.80238	-4.56858	NAF
NS0045	52	54	NS	E400560	400560	1	G	W	33.68	39.49	1.83	0.646	0.5	0.08	2.75	0.36	0.082	0.04	0.34	0.089	0.5	5.45	-0.27	5.68	8572	1.224	6.27912	-5.05512	NAF
NS0045	160	162	NS	E400615	400615	1	G	W	34.9	35.58	1.38	0.607	0.47	0.061	2.41	0.35	0.039	0.032	0.631	0.013	0.29	8.87	-0.36	8.8	8626	0.9792	6.1047	-5.1255	NAF
NS0045	74	76	NS	E400571	400571	1	G	W	33.67	40.85	1.99	0.555	0.43	0.09	2.55	0.53	0.099	0.12	0.249	0.083	0.33	4.21	-0.1	4.44	8583	3.672	9.24426	-5.57226	NAF
NS0045	116	118	NS	E400592	400592	1	G	W	33.88	37.01	1.34	0.749	0.58	0.065	2.99	0.45	0.06	0.071	0.3	0.044	0.38	8.15	-0.16	8.37	8604	2.1726	7.8489	-5.6763	NAF
NS0045	242	244	NS	E400656	400656	1	G	W	29.05	44.13	0.92	0.671	0.52	0.04	2.23	0.37	0.062	0.022	0.247	0.069	0.48	9.07	-0.29	9.26	8667	0.6732	6.45354	-5.78034	NAF
NS0045	222	224	NS	E400646	400646	1	G	W	35.77	34.24	2.01	0.594	0.46	0.091	3.1	0.51	0.129	0.101	0.346	0.095	0.54	7.08	-0.22	7.4	8657	3.0906	8.89542	-5.80482	NAF
NS0045	86	88	NS	E400577	400577	1	G	W	31.59	41.95	2.64	0.646	0.5	0.123	3.36	0.62	0.118	0.162	0.209	0.066	0.24	4.3	0.06	4.6	8589	4.9572	10.81404	-5.85684	NAF
NS0045	240	242	NS	E400655	400655	1	G	W	25.2	43.87	2.85	0.646	0.5	0.124	3.28	0.54	0.116	0.107	0.15	0.046	0.6	11.16	0.17	11.93	8666	3.2742	9.41868	-6.14448	NAF
NS0045	210	212	NS	E400640	400640	1	G	W	27.58	38.32	3.13	0.349	0.27	0.14	3.46	0.77	0.058	0.233	0.371	0.086	0.86	11.93	0.61	13.4	8651	7.1298	13.43034	-6.30054	NAF
NS0045	66	68	NS	E400567	400567	1	G	W	32.28	38.37	3.11	0.762	0.59	0.146	3.68	0.73	0.066	0.196	0.26	0.082	0.57	5.41	0.36	6.34	8579	5.9976	12.73266	-6.73506	NAF
NS0045	194	196	NS	E400632	400632	1	G	W	34.23	39.01	0.96	0.671	0.52	0.044	1.51	0.46	0.077	0.018	0.638	0.016	0.3	7.16	-0.33	7.13	8643	0.5508	8.02332	-7.47252	NAF
NS0045	234	236	NS	E400652	400652	1	G	W	34.23	35.73	1.83	0.723	0.56	0.08	3.2	0.59	0.078	0.089	0.279	0.079	0.53	7.71	-0.16	8.08	8663	2.7234	10.29078	-7.56738	NAF
NS0045	142	144	NS	E400606	400606	1	G	W	34.74	37.56	1.28	0.71	0.55	0.057	2.85	0.51	0.12	0.043	0.161	0.021	0.18	7.18	-0.4	6.96	8617	1.3158	8.89542	-7.57962	NAF
NS0045	192	194	NS	E400631	400631	1	G	W	35.51	36.2	0.94	0.775	0.6	0.043	1.81	0.48	0.094	0.018	0.715	0.077	0.25	7.79	-0.37	7.67	8642	0.5508	8.37216	-7.82136	NAF
NS0045	188	190	NS	E400629	400629	1	G	W	35.82	35.85	0.96	0.775	0.6	0.045	1.82	0.54	0.095	0.017	0.596	0.154	0.49	7.46	-0.16	7.79	8640	0.5202	9.41868	-8.89848	NAF
NS0045	180	182	NS	E400625	400625	1	G	W	37.93	35.92	1.08	0.697	0.54	0.049	1.69	0.53	0.079	0.01	0.904	0.018	0.08	5.09	-0.3	4.87	8636	0.306	9.24426	-8.93826	NAF
NS0045	108	110	NS	E400588	400588	1	G	W	37.02	32.14	1.07	0.775	0.6	0.048	2.6	0.55	0.095	0.019	0.393	0.034	0.34	9.02	-0.39	8.97	8600	0.5814	9.5931	-9.0117	NAF
NS0045	178	180	NS	E400624	400624	1	G	W	35.03	35.62	1.46	0.658	0.51	0.065	2.59	0.66	0.081	0.081	0.814	0.011	0.15	7.57	-0.2	7.52	8635	2.4786	11.51172	-9.03312	NAF
NS0045	170	172	NS	E400620	400620	1	G	W	36.13	34.18	1.26	0.684	0.53	0.055	2.64	0.58	0.077	0.035	0.402	0.006	0.23	8.35	-0.33	8.25	8631	1.071	10.11636	-9.04536	NAF
NS0045	134	136	NS	E400602	400602	1	G	W	34.03	35.76	2.33	0.788	0.61	0.105	3.72	0.76	0.166	0.136	0.252	0.064	0.32	6.87	-0.02	7.17	8613	4.1616	13.25592	-9.09432	NAF
NS0045	114	116	NS	E400591	400591	1	G	W	31	41.52	0.92	0.697	0.54	0.042	2.52	0.59	0.107	0.039	0.275	0.039	0.4	8.49	-0.24	8.65	8603	1.1934	10.29078	-9.09738	NAF
NS0045	176	178	NS	E400623	400623	1	G	W	35.36	35.79	1.38	0.646	0.5	0.062	2.48	0.66	0.091	0.078	0.786	0.01	0.18	7.25	-0.21	7.22	8634	2.3868	11.51172	-9.12492	NAF
NS0045	166	168	NS	E400618	400618	1	G	W	33.55	38.18	1.19	0.568	0.44	0.054	2.45	0.61	0.116	0.049	0.291	0.011	0.26	8.08	-0.29	8.05	8629	1.4994	10.63962	-9.14022	NAF
NS0045	110	112	NS	E400589	400589	1	G	W	36.16	35.77	1.13	0.646	0.5	0.05	2.37	0.57	0.096	0.026	0.191	0.026	0.32	7.22	-0.36	7.18	8601	0.7956	9.94194	-9.14634	NAF
NS0045	202	204	NS	E400636	400636	1	G	W	19.23	55.19	0.64	0.542	0.42	0.026	1.92	0.59	0.061	0.036	0.049	0.018	0.57	12.51	0.16	13.24	8647	1.1016	10.29078	-9.18918	NAF
NS0045	190	192	NS	E400630	400630	1	G	W	34.34	32.3	1.12	0.736	0.57	0.053	2.89	0.58	0.086	0.029	0.755	0.145	0.36	11.61	-0.13	11.84	8641	0.8874	10.11636	-9.22896	NAF
NS0045	224	226	NS	E400647	400647	1	G	W	34.98	35.49	1.62	0.646	0.5	0.075	2.95	0.69	0.14	0.09	0.179	0.055	0.34	7.46	-0.21	7.59	8658	2.754	12.03498	-9.28098	NAF
NS0045	118	120	NS	E400593	400593	1	G	W	36.73	34.94	1.36	0.684	0.53	0.064	2.7	0.63	0.113	0.054	0.267	0.042	0.29	6.14	-0.28	6.15	8605	1.6524	10.98846	-9.33606	NAF
NS0045	186	188	NS	E400628	400628	1	G	W	34.19	36.39	1.03	0.736	0.57	0.046	2.23	0.58	0.07	0.025	0.551	0.208	0.3	8.87	-0.08	9.09	8639	0.765	10.11636	-9.35136	NAF
NS0045	212	214	NS	E400641	400641	1	G	W	29.86	39.55	2.18	0.465	0.36	0.096	2.87	0.74	0.11	0.109	0.12	0.027	0.67	9.91	0.09	10.67	8652	3.3354	12.90708	-9.57168	NAF
NS0045	182	184	NS	E400626	400626	1	G	W	37.63	33.23	1.12	0.775	0.6	0.053	2.2	0.59	0.096	0.018	0.838	0.088	0.3	7.27	-0.31	7.26	8637	0.5508	10.29078	-9.73998	NAF
NS0045	140	142	NS	E400605	400605	1	G	W	34.67	37.4	1.21	0.775	0.6	0.053	2.93	0.61	0.101	0.026	0.183	0.028	0.2	7.11	-0.34	6.97	8616	0.7956	10.63962	-9.84402	NAF
NS0045	184	186	NS	E400627	400627	1	G	W	34.63	33.99	1.05	0.697	0.54	0.047	2.42	0.6	0.08	0.009	0.691	0.122	0.38	10.08	-0.08	10.38	8638	0.2754	10.4652	-10.1898	NAF
NS0045	154	156	NS	E400612	400612	1	G	W	31.25	30.57	1.07	0.723	0.56	0.048	3.34	0.68	0.087	0.039	0.651	0.004	0.94	16.73	0	17.67	8623	1.1934	11.86056	-10.66716	NAF
NS0045	106	108	NS	E400587	400587	1	G	W	32.77	36.24	0.96	0.826	0.64	0.041	2.93	0.63	0.079	0.005	0.57	0.049	0.46	10.43	-0.17	10.72	8599	0.153	10.98846	-10.83546	NAF
NS0045	158	160	NS	E400614	400614	1	G	W	33.82	32.27	1.1	0.684	0.53	0.047	3.04	0.68	0.09	0.031	0.558	0.012	0.45	12.53	-0.15	12.83	8625	0.9486	11.86056	-10.91196	NAF
NS0045	128	130	NS	E400598	400598	1	G	W	37.77	34.92	1.08	0.775	0.6	0.049	2.52	0.69	0.1	0.02	0.153	0.038	0.18	5.42	-0.32	5.28	8610	0.612	12.03498	-11.42298	NAF
NS0045	138	140	NS	E400604	400604	1	G	W	35.53	37.78	1.06	0.736	0.57	0.045	2.59	0.71	0.095	0.026	0.116	0.028	0.21	5.86	-0.26	5.81	8615	0.7956	12.38382	-11.58822	NAF
NS0045	226	228	NS	E400648	400648	1	G	W	34.25	37.39	1.2	0.775	0.6	0.053	2.67	0.73	0.129	0.035	0.222	0.065	0.38	7.59	-0.29	7.68	8659	1.071	12.73266	-11.66166	NAF
NS0045	196	198	NS	E400633	400633	1	G	W	34.21	34.27	1.27	0.646	0.5	0.057	2.01	0.72	0.111	0.026	0.621	0.018	0.62	10.4	-0.23	10.79	8644	0.7956	12.55824	-11.76264	NAF
NS0045	164	166	NS	E400617	400617	1	G	W	31.79	31.83	2.31	0.71	0.55	0.113	3.54	1.09	0.259	0.234	0.895	0.015	0.45	12.12	0.29	12.86	8628	7.1604	19.01178	-11.85138	NAF
NS0045	112	114	NS	E400590	400590	1	G	W	33.66	33.12	1.64	0.646	0.5	0.072	3.14	0.69	0.14	0.006	0.705	0.06	0.45	11.1	-0.27	11.28	8602	0.1836	12.03498	-11.85138	NAF
NS0045	126	128	NS	E400597	400597	1	G	W	36.02	33.29	1.26	0.852	0.66	0.054	3.31	0.76	0.086	0.029	0.188	0.048	0.35	7.93	-0.08	8.2	8609	0.8874	13.25592	-12.36852	NAF
NS0045	92	94	NS	E400580	400580	1	G	W	34.88	36.14	1.15	0.891	0.69	0.052	2.74	0.77	0.107	0.032	0.186	0.043	0.4	7.65	-0.12	7.93	8592	0.9792	13.43034	-12.45114	NAF
NS0045	162	164	NS	E400616	400616	1	G	W	33.15	32.65	0.95	0.71	0.55	0.04	3	0.76	0.087	0.026	0.512	0.006	1.09	13.01	-0.1	14	8627	0.7956	13.25592	-12.46032	NAF
NS0045	244	246	NS	E400657	400657	1	G	W	32.29	39.56	1.12	0.775	0.6	0.048	2.31	0.77	0.101	0.026	0.265	0.073	0.51	8.18	-0.16	8.53	8668	0.7956	13.43034	-12.63474	NAF
NS0045	102	104	NS	E400585	400585	1	G	W	34.98	32.05	1.18	0.955	0.74	0.052	3.61	0.78	0.114	0.024	0.381	0.066	0.4	10.3	-0.1	10.6	8597	0.7344	13.60476	-12.87036	NAF
NS0045	96	98	NS	E400582	400582	1	G	W	35.32	38.4	1.11	0.788	0.61	0.049	2.46	0.84	0.115	0.054	0.161	0.035	0.4	4.97	-0.17	5.2	8594	1.6524	14.65128	-12.99888	NAF
NS0045	168	170	NS	E400619	400619	1	G	W	33.17	33.11	1.2	0.762	0.59	0.049	3.35	0.8	0.093	0.029	0.605	0.013	0.54	12.1	0	12.64	8630	0.8874	13.9536	-13.0662	NAF
NS0045	216	218	NS	E400643	400643	1	G	W	32.93	38.27	1.3	0.684	0.53	0.059	2.75	0.84	0.094	0.04	0.129	0.033	0.34	7.87	-0.01	8.2	8654	1.224	14.65128	-13.42728	NAF
NS0045	220	222	NS	E400645	400645	1	G	W	29.83	41.73	1.2	0.71	0.55	0.053	2.91	0.86	0.082	0.039	0.184	0.052	0.37	8.83	0.08	9.28	8656	1.1934	15.00012	-13.80672	NAF
NS0045	68	70	NS	E400568	400568	1	G	W	28.18	41.72	4.02	0.633	0.49	0.184	4.2	1.21	0.269	0.232	0.303	0.104	0.47	5.08	0.48	6.03	8580	7.0992	21.10482	-14.00562	NAF
NS0045	122	124	NS	E400595	400595	1	G	W	35.96	38.21	0.96	0.684	0.53	0.047	2.38	0.85	0.103	0.025	0.077	0.023	0.13	5.12	-0.16	5.09	8607	0.765	14.8257	-14.0607	NAF
NS0045	98	100	NS	E400583	400583	1	G	W	37.19	33.83	1.61	0.826	0.64	0.074	2.92	0.89	0.212	0.046	0.429	0.055	0.25	5.88	-0.26	5.87	8595	1.4076	15.52338	-14.11578	NAF
NS0045	218	220	NS	E400644	400644	1	G	W	36.22	34.62	1.41	0.671	0.52	0.063	2.74	0.87	0.1	0.032	0.117	0.036	0.23	6.98	-0.15	7.06	8655	0.9792	15.17454	-14.19534	NAF
NS0045	230	232	NS	E400650	400650	1	G	W	32.3	39.67	1.03	0.762	0.59	0.045	2.5	0.87	0.068	0.027	0.072	0.02	0.28	8.04	0.03	8.35	8661	0.8262	15.17454	-14.34834	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0045	72	74	NS	E400570	400570	1	G	W	27.61	47.22	1.76	0.723	0.56	0.083	2.69	1.01	0.098	0.099	0.269	0.079	0.49	5.41	0.34	6.24	8582	3.0294	17.61642	-14.58702	NAF
NS0045	136	138	NS	E400603	400603	1	G	W	33.94	40.42	0.9	0.736	0.57	0.042	2.41	0.88	0.086	0.024	0.128	0.03	0.15	5.23	0.05	5.43	8614	0.7344	15.34896	-14.61456	NAF
NS0045	228	230	NS	E400649	400649	1	G	W	32.42	40.12	1.38	0.671	0.52	0.06	2.66	0.94	0.089	0.057	0.175	0.051	0.33	6.79	0.06	7.18	8660	1.7442	16.39548	-14.65128	NAF
NS0045	200	202	NS	E400635	400635	1	G	W	24.2	42.45	1.04	0.503	0.39	0.043	2.63	0.96	0.086	0.062	0.366	0.013	1	15.48	0.35	16.83	8646	1.8972	16.74432	-14.84712	NAF
NS0045	56	58	NS	E400562	400562	1	G	W	35.57	37.83	1.4	0.749	0.58	0.064	2.4	0.91	0.074	0.033	0.264	0.059	0.4	4.89	-0.02	5.27	8574	1.0098	15.87222	-14.86242	NAF
NS0045	156	158	NS	E400613	400613	1	G	W	31.35	32.19	0.91	0.633	0.49	0.038	3.39	0.87	0.066	0.008	0.617	0.005	0.58	15.29	0.2	16.07	8624	0.2448	15.17454	-14.92974	NAF
NS0045	130	132	NS	E400599	400599	1	G	W	34.49	39.59	0.93	0.826	0.64	0.04	2.34	0.89	0.094	0.019	0.14	0.022	0.11	5.19	-0.03	5.27	8611	0.5814	15.52338	-14.94198	NAF
NS0045	172	174	NS	E400621	400621	1	G	W	37.62	34.99	1.26	0.633	0.49	0.055	2.19	0.94	0.091	0.024	0.274	0.009	0.11	5.28	-0.09	5.3	8632	0.7344	16.39548	-15.66108	NAF
NS0045	90	92	NS	E400579	400579	1	G	W	32.62	40.4	1.27	0.826	0.64	0.057	2.4	1.05	0.13	0.074	0.219	0.04	1.5	4.9	0.01	6.41	8591	2.2644	18.3141	-16.0497	NAF
NS0045	124	126	NS	E400596	400596	1	G	W	36.93	35.95	1.24	0.671	0.52	0.056	2.71	0.97	0.09	0.026	0.094	0.04	0.13	5.11	0.04	5.28	8608	0.7956	16.91874	-16.12314	NAF
NS0045	236	238	NS	E400653	400653	1	G	W	30.19	42.46	1.24	0.646	0.5	0.054	2.6	1.02	0.063	0.039	0.143	0.042	0.36	7.42	0.24	8.02	8664	1.1934	17.79084	-16.59744	NAF
NS0045	232	234	NS	E400651	400651	1	G	W	31.04	41.66	0.92	0.749	0.58	0.042	2.53	1.01	0.127	0.029	0.145	0.044	0.3	7.69	0.06	8.05	8662	0.8874	17.61642	-16.72902	NAF
NS0045	146	148	NS	E400608	400608	1	G	W	34.92	38.38	0.96	0.684	0.53	0.041	2.4	1.01	0.077	0.025	0.1	0.01	0.16	5.93	0.09	6.18	8619	0.765	17.61642	-16.85142	NAF
NS0045	206	208	NS	E400638	400638	1	G	W	28.31	32.77	2.98	0.478	0.37	0.141	3.28	1.19	0.196	0.115	0.177	0.047	0.93	16.7	0.28	17.91	8649	3.519	20.75598	-17.23698	NAF
NS0045	64	66	NS	E400566	400566	1	G	W	35.84	37.99	1.32	0.775	0.6	0.057	2.21	1.07	0.072	0.029	0.162	0.042	0.31	4.35	0.11	4.77	8578	0.8874	18.66294	-17.77554	NAF
NS0045	60	62	NS	E400564	400564	1	G	W	35.83	35.94	1.97	0.762	0.59	0.087	2.82	1.11	0.072	0.043	0.207	0.045	0.46	4.7	0.29	5.45	8576	1.3158	19.36062	-18.04482	NAF
NS0045	70	72	NS	E400569	400569	1	G	W	33.2	39.28	2.21	0.658	0.51	0.102	2.92	1.24	0.092	0.076	0.235	0.08	0.36	4.42	0.4	5.18	8581	2.3256	21.62808	-19.30248	NAF
NS0045	198	200	NS	E400634	400634	1	G	W	32.78	25.53	1.02	0.775	0.6	0.042	3.06	1.13	0.098	0.007	0.67	0.011	0.92	19.19	0.35	20.46	8645	0.2142	19.70946	-19.49526	NAF
NS0045	208	210	NS	E400639	400639	1	G	W	32.72	32.44	0.98	0.568	0.44	0.042	2.38	1.16	0.154	0.023	0.422	0.024	0.48	13.8	0.11	14.39	8650	0.7038	20.23272	-19.52892	NAF
NS0045	62	64	NS	E400565	400565	1	G	W	35.37	37.41	2.02	0.723	0.56	0.09	2.8	1.19	0.053	0.038	0.184	0.039	0.29	4.22	0.43	4.94	8577	1.1628	20.75598	-19.59318	NAF
NS0045	94	96	NS	E400581	400581	1	G	W	33.04	41.69	0.92	0.826	0.64	0.039	2.29	1.19	0.094	0.023	0.248	0.043	0.14	4.36	0.36	4.86	8593	0.7038	20.75598	-20.05218	NAF
NS0045	88	90	NS	E400578	400578	1	G	W	34.85	39.95	1.35	0.697	0.54	0.064	2.35	1.3	0.076	0.032	0.084	0.032	0.14	3.44	0.48	4.06	8590	0.9792	22.6746	-21.6954	NAF
NS0045	104	106	NS	E400586	400586	1	G	W	34.78	37.2	1	0.775	0.6	0.045	2.48	1.29	0.095	0.026	0.212	0.027	0.2	6.47	0.34	7.01	8598	0.7956	22.50018	-21.70458	NAF
NS0045	148	150	NS	E400609	400609	1	G	W	34.36	38.92	0.94	0.646	0.5	0.042	2.19	1.3	0.06	0.023	0.188	0.007	0.16	5.83	0.52	6.51	8620	0.7038	22.6746	-21.9708	NAF
NS0045	58	60	NS	E400563	400563	1	G	W	35.71	36.99	1.39	0.826	0.64	0.063	2.34	1.38	0.067	0.034	0.203	0.045	0.29	4.91	0.43	5.63	8575	1.0404	24.06996	-23.02956	NAF
NS0045	174	176	NS	E400622	400622	1	G	W	37.27	33.7	1.27	0.633	0.49	0.056	2.45	1.4	0.108	0.033	0.309	0.01	0.42	5.94	0.33	6.69	8633	1.0098	24.4188	-23.409	NAF
NS0045	238	240	NS	E400654	400654	1	G	W	35.04	36.56	1.08	0.646	0.5	0.047	2.29	1.41	0.132	0.021	0.232	0.06	0.29	6.29	0.38	6.96	8665	0.6426	24.59322	-23.95062	NAF
NS0045	76	78	NS	E400572	400572	1	G	W	30.36	42.8	1.87	0.736	0.57	0.087	2.8	1.68	0.097	0.127	0.208	0.073	0.35	4.32	0.91	5.58	8584	3.8862	29.30256	-25.41636	NAF
NS0045	152	154	NS	E400611	400611	1	G	W	32.15	29.86	1.12	0.516	0.4	0.046	3.71	1.53	0.064	0.03	0.442	0.0005	0.61	14.93	0.83	16.37	8622	0.918	26.68626	-25.76826	NAF
NS0045	84	86	NS	E400576	400576	1	G	W	33.49	40.1	1.46	0.813	0.63	0.066	2.48	1.58	0.086	0.055	0.162	0.036	0.21	3.74	0.83	4.78	8588	1.683	27.55836	-25.87536	NAF
NS0045	204	206	NS	E400637	400637	1	G	W	26.37	35.64	1.97	0.465	0.36	0.087	3.29	1.75	0.142	0.054	0.163	0.036	0.95	16.53	0.75	18.23	8648	1.6524	30.5235	-28.8711	NAF
NS0045	150	152	NS	E400610	400610	1	G	W	33.53	28.74	1.26	0.8	0.62	0.055	3.66	1.84	0.151	0.033	0.36	0.005	0.66	13.19	0.84	14.69	8621	1.0098	32.09328	-31.08348	NAC
NS0045	80	82	NS	E400574	400574	1	G	W	33.13	39.43	2.16	0.736	0.57	0.101	2.93	1.99	0.11	0.1	0.121	0.042	0.17	3.53	1.15	4.85	8586	3.06	34.70958	-31.64958	NAC
NS0045	82	84	NS	E400575	400575	1	G	W	33.04	39.72	1.18	0.878	0.68	0.057	2.36	2.75	0.105	0.036	0.064	0.025	0.12	3.26	2.16	5.54	8587	1.1016	47.9655	-46.8639	NAC
NS0045	78	80	NS	E400573	400573	1	G	W	31.63	39.77	1.74	0.775	0.6	0.083	2.62	2.92	0.081	0.047	0.116	0.039	0.63	3.4	2.31	6.34	8585	1.4382	50.93064	-49.49244	NAC
NS0046	228	230	NS	E400776	400776	1	G	W	25.33	44.41	6.37	0.387	0.3	0.285	5.03	0.28	0.036	0.715	0.575	0.151	0.61	4.21	1.19	6.01	8786	21.879	4.88376	16.99524	PAF(HC)
NS0046	122	124	NS	E400723	400723	1	G	W	28.36	43.86	3.66	0.439	0.34	0.17	3.65	0.45	0.087	0.765	0.96	0.247	0.91	3.71	1.19	5.81	8733	23.409	7.8489	15.5601	PAF(HC)
NS0046	234	236	NS	E400779	400779	1	G	W	26.07	44.92	5.31	0.439	0.34	0.256	4.58	0.72	0.185	0.504	0.345	0.1	0.58	4.18	0.81	5.57	8789	15.4224	12.55824	2.86416	PAF(LC)
NS0046	64	66	NS	E400693	400693	1	G	W	31.27	41.29	1.91	0.374	0.29	0.088	2.41	0.46	0.072	0.352	0.773	0.151	1	5.83	0.64	7.47	8704	10.7712	8.02332	2.74788	PAF(LC)
NS0046	4	6	NS	E400663	400663	1	G	W	46.86	18.81	5.03	0.026	0.02	0.494	0.08	0.02	0.021	0.009	0.023	0.016	6.98	1.21	0.24	8.43	8674	0.2754	0.34884	-0.07344	NAF
NS0046	2	4	NS	E400662	400662	1	G	W	45.54	19.04	6.86	0.039	0.03	0.992	0.08	0.03	0.02	0.012	0.048	0.02	5.73	1.39	0.25	7.37	8673	0.3672	0.52326	-0.15606	NAF
NS0046	20	22	NS	E400671	400671	1	G	W	37.29	39.49	1.51	0.065	0.05	0.063	0.2	0.02	0.076	0.003	0.005	0.022	4.14	0.71	0.13	4.98	8682	0.0918	0.34884	-0.25704	NAF
NS0046	0	2	NS	E400661	400661	1	G	D	38.68	30.1	4.5	0.039	0.03	0.923	0.14	0.04	0.024	0.014	0.088	0.018	6.96	1.36	0.24	8.56	8672	0.4284	0.69768	-0.26928	NAF
NS0046	6	8	NS	E400664	400664	1	G	W	45.61	23.63	2.97	0.039	0.03	0.211	0.09	0.03	0.037	0.008	0.013	0.007	6.53	0.95	0.19	7.67	8675	0.2448	0.52326	-0.27846	NAF
NS0046	14	16	NS	E400668	400668	1	G	W	31.64	46.1	2.28	0.065	0.05	0.17	0.17	0.04	0.037	0.007	0.01	0.016	4.84	0.91	0.18	5.93	8679	0.2142	0.69768	-0.48348	NAF
NS0046	16	18	NS	E400669	400669	1	G	W	38.96	35.29	2.22	0.052	0.04	0.107	0.17	0.04	0.077	0.005	0.007	0.014	5.1	0.86	0.15	6.11	8680	0.153	0.69768	-0.54468	NAF
NS0046	22	24	NS	E400672	400672	1	G	W	35.59	42.79	1.13	0.194	0.15	0.05	0.3	0.04	0.059	0.003	0.01	0.015	3.57	0.65	0.09	4.31	8683	0.0918	0.69768	-0.60588	NAF
NS0046	18	20	NS	E400670	400670	1	G	W	38.58	36.63	1.94	0.077	0.06	0.091	0.43	0.05	0.073	0.005	0.009	0.02	4.16	0.95	0.1	5.21	8681	0.153	0.8721	-0.7191	NAF
NS0046	24	26	NS	E400673	400673	1	G	W	38.37	37.24	1.35	0.529	0.41	0.062	0.46	0.05	0.067	0.003	0.025	0.022	4.12	0.85	0.1	5.07	8684	0.0918	0.8721	-0.7803	NAF
NS0046	12	14	NS	E400667	400667	1	G	W	31.52	45.21	2.8	0.026	0.02	0.237	0.17	0.06	0.043	0.007	0.012	0.016	4.86	1.1	0.19	6.15	8678	0.2142	1.04652	-0.83232	NAF
NS0046	8	10	NS	E400665	400665	1	G	W	41.64	26.91	4.9	0.026	0.02	0.401	0.24	0.07	0.024	0.008	0.009	0.02	5.93	1.44	0.21	7.58	8676	0.2448	1.22094	-0.97614	NAF
NS0046	28	30	NS	E400675	400675	1	G	W	37.76	37.86	1.41	0.723	0.56	0.056	0.52	0.08	0.068	0.003	0.035	0.019	3.94	0.9	0.04	4.88	8686	0.0918	1.39536	-1.30356	NAF
NS0046	26	28	NS	E400674	400674	1	G	W	39.05	36.97	1.39	0.4	0.31	0.059	0.55	0.09	0.07	0.002	0.02	0.021	3.42	0.88	-0.04	4.26	8685	0.0612	1.56978	-1.50858	NAF
NS0046	32	34	NS	E400677	400677	1	G	W	31.89	47.81	1.41	0.4	0.31	0.05	0.42	0.09	0.057	0.002	0.034	0.007	3.29	0.82	0.11	4.22	8688	0.0612	1.56978	-1.50858	NAF
NS0046	10	12	NS	E400666	400666	1	G	W	30.25	45.15	3.91	0.026	0.02	0.25	0.33	0.11	0.016	0.007	0.014	0.023	5.24	1.45	0.25	6.94	8677	0.2142	1.91862	-1.70442	NAF
NS0046	34	36	NS	E400678	400678	1	G	W	39.47	35.1	1.31	0.594	0.46	0.053	0.65	0.11	0.084	0.003	0.043	0.012	4.36	0.93	-0.03	5.26	8689	0.0918	1.91862	-1.82682	NAF
NS0046	244	246	NS	E400784	400784	1	G	W	26.45	42.4	5.88	0.426	0.33	0.259	5.76	0.68	0.104	0.322	0.362	0.098	0.51	4.48	0.79	5.78	8794	9.8532	11.86056	-2.00736	NAF
NS0046	40	42	NS	E400681	400681	1	G	W	27.8	54.73	0.91	0.426	0.33	0.039	0.33	0.12	0.044	0.001	0.044	0.002	3.06	0.67	0.09	3.82	8692	0.0306	2.09304	-2.06244	NAF
NS0046	36	38	NS	E400679	400679	1	G	W	36.67	38.09	1.44	0.633	0.49	0.061	0.83	0.15	0.097	0.002	0.054	0.023	4.72	1.03	0.05	5.8	8690	0.0612	2.6163	-2.5551	NAF
NS0046	226	228	NS	E400775	400775	1	G	W	25.69	45.46	2.92	0.942	0.73	0.129	3.59	0.93	0.101	0.445	0.591	0.108	0.56	6.6	1.04	8.2	8785	13.617	16.22106	-2.60406	NAF
NS0046	30	32	NS	E400676	400676	1	G	W	35.79	39.78	1.88	0.465	0.36	0.086	0.82	0.19	0.065	0.008	0.065	0.024	3.68	1.7	0.03	5.41	8687	0.2448	3.31398	-3.06918	NAF
NS0046	254	256	NS	E400789	400789	1	G	W	27.76	43.27	3.9	0.62	0.48	0.175	4.73	0.61	0.098	0.24	0.276	0.081	0.45	5.49	0.51	6.45	8799	7.344	10.63962	-3.29562	NAF
NS0046	74	76	NS	E400698	400698	1	G	W	22.33	57.05	2.06	0.245	0.19	0.1	2.21	0.39	0.045	0.108	0.849	0.211	0.9	3.69	0.35	4.94	8709	3.3048	6.80238	-3.49758	NAF
NS0046	68	70	NS	E400695	400695	1	G	W	29.14	40.37	5.99	0.142	0.11	0.362	4.4	0.48	0.065	0.159	1.56	0.392	1.52	2.2	0.7	4.42	8706	4.8654	8.37216	-3.50676	NAF
NS0046	38	40	NS	E400680	400680	1	G	W	37.51	37	1.61	0.503	0.39	0.073	0.87	0.21	0.075	0.002	0.079	0.024	4.33	1.19	0.02	5.54	8691	0.0612	3.66282	-3.60162	NAF
NS0046	66	68	NS	E400694	400694	1	G	W	30.74	39.81	4.66	0.245	0.19	0.307	3.43	0.55	0.148	0.175	1.1	0.278	1.79	2.89	0.63	5.31	8705	5.355	9.5931	-4.2381	NAF
NS0046	76	78	NS	E400699	400699	1	G	W	28.2	44.69	3.49	0.245	0.19	0.163	3.33	0.69	0.138	0.254	1.36	0.361	1.27	2.86	0.72	4.85	8710	7.7724	12.03498	-4.26258	NAF
NS0046	246	248	NS	E400785	400785	1	G	W	33.02	41.09	2.35	0.555	0.43	0.11	3.14	0.34	0.038	0.052	0.293	0.07	0.39	4.47	-0.11	4.75	8795	1.5912	5.93028	-4.33908	NAF
NS0046	60	62	NS	E400691	400691	1	G	W	31.58	42.04	2.42	0.284	0.22	0.11	2.55	0.51	0.092	0.148	0.976	0.209	1.18	3.77	0.42	5.37	8702	4.5288	8.89542	-4.36662	NAF
NS0046	232	234	NS	E400778	400778	1	G	W	25.28	46.06	3.6	0.71	0.55	0.159	4.1	0.91	0.135	0.374	0.459	0.122	0.5	5.68	0.85	7.03	8788	11.4444	15.87222	-4.42782	NAF
NS0046	120	122	NS	E400722	400722	1	G	W	32.79	41.14	1.58	0.465	0.36	0.067	2.37	0.35	0.058	0.051	0.678	0.18	0.72	5.61	-0.11	6.22	8732	1.5606	6.1047	-4.5441	NAF
NS0046	80	82	NS	E400702	400702	1	G	W	33.89	36.92	2.35	0.4	0.31	0.107	2.94	0.47	0.101	0.119	1.05	0.286	1.13	5.51	0.21	6.85	8712	3.6414	8.19774	-4.55634	NAF
NS0046	56	58	NS	E400689	400689	1	G	W	31.45	39.47	2.01	0.387	0.3	0.094	2.7	0.52	0.101	0.144	0.849	0.196	1.18	6.87	0.34	8.39	8700	4.4064	9.06984	-4.66344	NAF
NS0046	108	110	NS	E400716	400716	1	G	W	32.81	40.69	2.55	0.271	0.21	0.121	2.8	0.56	0.118	0.151	1.12	0.293	1.07	2.86	0.3	4.23	8726	4.6206	9.76752	-5.14692	NAF
NS0046	54	56	NS	E400688	400688	1	G	W	28.98	43.73	1.49	0.452	0.35	0.069	2.37	0.6	0.094	0.159	0.627	0.134	1.02	7.38	0.34	8.74	8699	4.8654	10.4652	-5.5998	NAF
NS0046	78	80	NS	E400700	400700	1	G	W	34.45	36.2	1.96	0.491	0.38	0.088	2.74	0.46	0.082	0.068	0.842	0.224	0.93	6.83	-0.04	7.72	8711	2.0808	8.02332	-5.94252	NAF
NS0046	110	112	NS	E400717	400717	1	G	W	36.62	29.84	1.72	0.607	0.47	0.076	3.17	0.45	0.076	0.059	0.77	0.203	0.97	9.41	-0.07	10.31	8727	1.8054	7.8489	-6.0435	NAF
NS0046	154	156	NS	E400739	400739	1	G	W	27.68	47.55	2.01	0.762	0.59	0.095	2.91	1.19	0.141	0.478	0.407	0.113	0.34	3.98	0.88	5.2	8749	14.6268	20.75598	-6.12918	NAF
NS0046	46	48	NS	E400684	400684	1	G	W	35.36	36.9	1.26	0.426	0.33	0.054	1.95	0.42	0.087	0.03	0.452	0.074	0.96	6.76	-0.21	7.51	8695	0.918	7.32564	-6.40764	NAF
NS0046	88	90	NS	E400706	400706	1	G	W	35.66	35.02	1.64	0.465	0.36	0.075	2.56	0.46	0.081	0.052	0.722	0.189	0.85	6.74	-0.17	7.42	8716	1.5912	8.02332	-6.43212	NAF
NS0046	94	96	NS	E400709	400709	1	G	W	34.03	35.82	2.31	0.413	0.32	0.107	3.06	0.55	0.114	0.099	1.04	0.274	1.04	6.18	0.2	7.42	8719	3.0294	9.5931	-6.5637	NAF
NS0046	42	44	NS	E400682	400682	1	G	W	35.25	39.77	1.45	0.297	0.23	0.067	1.42	0.43	0.101	0.027	0.327	0.069	1.41	4.18	-0.19	5.4	8693	0.8262	7.50006	-6.67386	NAF
NS0046	44	46	NS	E400683	400683	1	G	W	34.04	40.09	1.33	0.374	0.29	0.058	1.82	0.44	0.093	0.031	0.466	0.078	0.87	5.79	-0.2	6.46	8694	0.9486	7.67448	-6.72588	NAF
NS0046	124	126	NS	E400724	400724	1	G	W	34.26	38.42	2.04	0.542	0.42	0.092	2.73	0.5	0.097	0.064	0.8	0.216	0.78	4.37	-0.01	5.14	8734	1.9584	8.721	-6.7626	NAF
NS0046	84	86	NS	E400704	400704	1	G	W	36.21	32.96	1.61	0.503	0.39	0.073	2.51	0.44	0.08	0.029	0.731	0.191	0.85	8.06	-0.21	8.7	8714	0.8874	7.67448	-6.78708	NAF
NS0046	118	120	NS	E400721	400721	1	G	W	33.07	40.59	1.73	0.491	0.38	0.078	2.61	0.46	0.062	0.038	0.768	0.2	0.77	5.03	-0.09	5.71	8731	1.1628	8.02332	-6.86052	NAF
NS0046	86	88	NS	E400705	400705	1	G	W	37.06	33.25	1.47	0.465	0.36	0.065	2.44	0.44	0.084	0.026	0.68	0.175	0.73	7.13	-0.28	7.58	8715	0.7956	7.67448	-6.87888	NAF
NS0046	72	74	NS	E400697	400697	1	G	W	34.05	36.35	1.92	0.374	0.29	0.091	2.42	0.51	0.096	0.063	0.765	0.19	1.21	6.9	0.04	8.15	8708	1.9278	8.89542	-6.96762	NAF
NS0046	112	114	NS	E400718	400718	1	G	W	29.12	45.39	1.81	0.387	0.3	0.082	2.59	0.59	0.089	0.105	0.806	0.214	0.88	5.06	0.23	6.17	8728	3.213	10.29078	-7.07778	NAF
NS0046	104	106	NS	E400714	400714	1	G	W	34.88	32.65	1.69	0.555	0.43	0.074	3.04	0.49	0.067	0.048	0.746	0.196	0.9	9.43	-0.11	10.22	8724	1.4688	8.54658	-7.07778	NAF
NS0046	128	130	NS	E400726	400726	1	G	W	33.06	40.23	2.3	0.516	0.4	0.103	2.98	0.53	0.076	0.068	0.794	0.205	0.76	4.24	0.07	5.07	8736	2.0808	9.24426	-7.16346	NAF
NS0046	258	260	NS	E400791	400791	1	G	W	45.99	22.07	4.22	0.194	0.15	0.587	0.99	0.54	0.094	0.073	0.096	0.041	3.14	1.73	0.27	5.14	8801	2.2338	9.41868	-7.18488	NAF
NS0046	70	72	NS	E400696	400696	1	G	W	31.05	38.18	4.31	0.219	0.17	0.29	3.65	0.73	0.207	0.181	1.43	0.354	1.46	3.76	0.63	5.85	8707	5.5386	12.73266	-7.19406	NAF
NS0046	130	132	NS	E400727	400727	1	G	W	33.18	38.43	2.16	0.633	0.49	0.096	3.11	0.53	0.073	0.067	0.789	0.209	0.82	5.3	0.08	6.2	8737	2.0502	9.24426	-7.19406	NAF
NS0046	90	92	NS	E400707	400707	1	G	W	35.24	38.28	1.5	0.336	0.26	0.071	2.19	0.5	0.097	0.044	0.666	0.168	0.74	4.95	-0.14	5.55	8717	1.3464	8.721	-7.3746	NAF
NS0046	96	98	NS	E400710	400710	1	G	W	35.46	34.01	1.58	0.503	0.39	0.071	2.54	0.52	0.1	0.047	0.655	0.181	0.92	7.94	-0.12	8.74	8720	1.4382	9.06984	-7.63164	NAF
NS0046	216	218	NS	E400770	400770	1	G	W	34.8	36.75	2.43	0.594	0.46	0.11	3.4	0.67	0.117	0.124	0.296	0.082	0.45	5.13	0	5.58	8780	3.7944	11.68614	-7.89174	NAF
NS0046	58	60	NS	E400690	400690	1	G	W	33.21	38.38	1.48	0.374	0.29	0.066	2.22	0.51	0.105	0.03	0.577	0.132	1.12	7.19	-0.07	8.24	8701	0.918	8.89542	-7.97742	NAF
NS0046	102	104	NS	E400713	400713	1	G	W	35.17	36.06	1.65	0.452	0.35	0.076	2.56	0.55	0.074	0.05	0.724	0.19	0.89	6.61	-0.11	7.39	8723	1.53	9.5931	-8.0631	NAF
NS0046	98	100	NS	E400711	400711	1	G	W	37.36	33.68	1.53	0.465	0.36	0.068	2.36	0.53	0.091	0.038	0.692	0.176	0.7	6.13	-0.24	6.59	8721	1.1628	9.24426	-8.08146	NAF
NS0046	52	54	NS	E400687	400687	1	G	W	35.31	33.39	1.24	0.439	0.34	0.055	2.56	0.54	0.093	0.033	0.525	0.097	1	9.69	-0.18	10.51	8698	1.0098	9.41868	-8.40888	NAF
NS0046	48	50	NS	E400685	400685	1	G	W	31.82	42.58	1.23	0.374	0.29	0.053	1.9	0.55	0.113	0.038	0.463	0.073	0.86	6.56	-0.2	7.22	8696	1.1628	9.5931	-8.4303	NAF
NS0046	106	108	NS	E400715	400715	1	G	W	36.5	35.04	1.98	0.361	0.28	0.096	2.56	0.64	0.143	0.078	0.886	0.238	0.82	4.94	-0.03	5.73	8725	2.3868	11.16288	-8.77608	NAF
NS0046	62	64	NS	E400692	400692	1	G	W	21.96	51.89	3.28	0.336	0.26	0.147	3.12	1.17	0.289	0.38	1.23	0.245	1.24	3.85	1.05	6.14	8703	11.628	20.40714	-8.77914	NAF
NS0046	176	178	NS	E400750	400750	1	G	W	35.48	40.06	1.6	0.555	0.43	0.074	2.34	1.01	0.076	0.272	0.442	0.063	0.17	2.17	0.32	2.66	8760	8.3232	17.61642	-9.29322	NAF
NS0046	114	116	NS	E400719	400719	1	G	W	33.22	38.12	1.83	0.478	0.37	0.083	2.76	0.67	0.119	0.058	0.798	0.207	0.94	6.25	0	7.19	8729	1.7748	11.68614	-9.91134	NAF
NS0046	116	118	NS	E400720	400720	1	G	W	33.01	39.9	1.75	0.478	0.37	0.08	2.66	0.7	0.068	0.065	0.744	0.201	0.76	5.3	0.06	6.12	8730	1.989	12.2094	-10.2204	NAF
NS0046	206	208	NS	E400765	400765	1	G	W	31.84	43.14	1.06	0.93	0.72	0.041	2.33	0.64	0.09	0.02	0.423	0.066	0.29	5.53	-0.12	5.7	8775	0.612	11.16288	-10.55088	NAF
NS0046	132	134	NS	E400728	400728	1	G	W	30.52	43.78	2.08	0.594	0.46	0.091	2.79	0.71	0.056	0.058	0.643	0.162	0.68	4.7	0.2	5.58	8738	1.7748	12.38382	-10.60902	NAF
NS0046	50	52	NS	E400686	400686	1	G	W	33.53	39.18	1.43	0.336	0.26	0.065	2.15	0.79	0.195	0.087	0.597	0.102	0.76	6.26	-0.02	7	8697	2.6622	13.77918	-11.11698	NAF
NS0046	100	102	NS	E400712	400712	1	G	W	31.09	43.6	1.2	0.439	0.34	0.052	2.11	0.7	0.076	0.029	0.533	0.135	0.61	6.18	-0.04	6.75	8722	0.8874	12.2094	-11.322	NAF
NS0046	242	244	NS	E400783	400783	1	G	W	29.88	40.28	2.83	0.788	0.61	0.125	3.91	1.16	0.144	0.29	0.284	0.075	0.42	6.13	0.75	7.3	8793	8.874	20.23272	-11.35872	NAF
NS0046	82	84	NS	E400703	400703	1	G	W	34.46	35.13	1.38	0.555	0.43	0.059	2.48	0.72	0.086	0.024	0.6	0.169	0.8	8.4	-0.06	9.14	8713	0.7344	12.55824	-11.82384	NAF
NS0046	248	250	NS	E400786	400786	1	G	W	33.1	42.26	1.68	0.542	0.42	0.075	2.67	0.76	0.02	0.042	0.227	0.065	0.29	4.05	0.15	4.49	8796	1.2852	13.25592	-11.97072	NAF
NS0046	212	214	NS	E400768	400768	1	G	W	33.12	41.51	1.36	0.646	0.5	0.06	2.53	1.21	0.13	0.263	0.281	0.049	0.17	4.06	0.37	4.6	8778	8.0478	21.10482	-13.05702	NAF
NS0046	158	160	NS	E400741	400741	1	G	W	35.41	39.96	1.38	0.736	0.57	0.063	2.23	0.85	0.091	0.048	0.313	0.086	0.28	3.35	0	3.63	8751	1.4688	14.8257	-13.3569	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0046	204	206	NS	E400764	400764	1	G	W	37.01	34.9	1.32	0.904	0.7	0.061	2.34	0.81	0.085	0.02	0.482	0.075	0.97	4.94	0.07	5.98	8774	0.612	14.12802	-13.51602	NAF
NS0046	250	252	NS	E400787	400787	1	G	W	33.2	41.2	2.15	0.503	0.39	0.096	3.07	0.86	0.06	0.044	0.23	0.063	0.24	3.97	0.14	4.35	8797	1.3464	15.00012	-13.65372	NAF
NS0046	178	180	NS	E400751	400751	1	G	W	36.3	38.21	1.66	0.671	0.52	0.074	2.41	0.95	0.121	0.064	0.539	0.067	0.19	2.73	0.04	2.96	8761	1.9584	16.5699	-14.6115	NAF
NS0046	170	172	NS	E400747	400747	1	G	W	39.92	32.96	1.16	0.839	0.65	0.054	2.16	0.93	0.109	0.023	0.398	0.071	0.22	3.71	-0.08	3.85	8757	0.7038	16.22106	-15.51726	NAF
NS0046	148	150	NS	E400736	400736	1	G	W	35.45	38.26	1.56	0.607	0.47	0.07	2.38	1.66	0.117	0.431	0.376	0.1	0.29	2.5	0.9	3.69	8746	13.1886	28.95372	-15.76512	NAF
NS0046	256	258	NS	E400790	400790	1	G	W	34.55	36.72	1.75	0.775	0.6	0.077	3.32	1.05	0.061	0.073	0.278	0.064	0.39	5.54	0.32	6.25	8800	2.2338	18.3141	-16.0803	NAF
NS0046	208	210	NS	E400766	400766	1	G	W	31.5	45.94	1.43	0.426	0.33	0.063	2.42	0.99	0.071	0.032	0.341	0.079	0.25	2.75	0.3	3.3	8776	0.9792	17.26758	-16.28838	NAF
NS0046	156	158	NS	E400740	400740	1	G	W	35.02	39.82	1.03	0.826	0.64	0.046	2.1	1	0.099	0.032	0.312	0.079	0.33	4.06	0.1	4.49	8750	0.9792	17.442	-16.4628	NAF
NS0046	168	170	NS	E400746	400746	1	G	W	38	35.61	1.38	0.749	0.58	0.058	2.07	0.99	0.09	0.026	0.523	0.068	0.29	3.37	0.06	3.72	8756	0.7956	17.26758	-16.47198	NAF
NS0046	230	232	NS	E400777	400777	1	G	W	28.76	43.08	2.13	0.8	0.62	0.097	3.2	1.29	0.116	0.15	0.407	0.08	0.45	6.46	0.53	7.44	8787	4.59	22.50018	-17.91018	NAF
NS0046	172	174	NS	E400748	400748	1	G	W	39.6	32.73	0.94	0.968	0.75	0.041	2.14	1.07	0.119	0.019	0.349	0.054	0.25	4.36	-0.03	4.58	8758	0.5814	18.66294	-18.08154	NAF
NS0046	164	166	NS	E400744	400744	1	G	W	38.6	34.8	1.6	0.71	0.55	0.071	2.33	1.18	0.125	0.06	0.414	0.072	0.2	2.98	0.09	3.27	8754	1.836	20.58156	-18.74556	NAF
NS0046	174	176	NS	E400749	400749	1	G	W	36.94	36.22	1.53	0.775	0.6	0.072	2.46	1.17	0.091	0.051	0.477	0.069	0.29	3.5	0.29	4.08	8759	1.5606	20.40714	-18.84654	NAF
NS0046	92	94	NS	E400708	400708	1	G	W	31.52	41.03	1.24	0.426	0.33	0.057	2.35	1.17	0.12	0.045	0.562	0.137	0.64	6.69	0.29	7.62	8718	1.377	20.40714	-19.03014	NAF
NS0046	252	254	NS	E400788	400788	1	G	W	30.15	38.6	3.83	0.62	0.48	0.284	3.78	1.5	0.315	0.229	0.264	0.082	0.87	5.21	0.71	6.79	8798	7.0074	26.163	-19.1556	NAF
NS0046	184	186	NS	E400754	400754	1	G	W	36.88	37.61	1.57	0.646	0.5	0.069	2.21	1.19	0.114	0.029	0.669	0.045	0.11	2.37	0.27	2.75	8764	0.8874	20.75598	-19.86858	NAF
NS0046	166	168	NS	E400745	400745	1	G	W	39.08	33.85	1.19	0.8	0.62	0.054	2.09	1.32	0.108	0.022	0.433	0.066	0.19	3.33	0.3	3.82	8755	0.6732	23.02344	-22.35024	NAF
NS0046	198	200	NS	E400761	400761	1	G	W	37.23	34.21	2.06	0.426	0.33	0.11	1.53	1.35	0.082	0.039	0.316	0.042	3.25	2.1	0.82	6.17	8771	1.1934	23.5467	-22.3533	NAF
NS0046	180	182	NS	E400752	400752	1	G	W	37.24	36.84	1.27	0.71	0.55	0.063	2.06	1.35	0.106	0.036	0.448	0.044	0.32	2.78	0.41	3.51	8762	1.1016	23.5467	-22.4451	NAF
NS0046	126	128	NS	E400725	400725	1	G	W	32.19	40.03	2.51	0.452	0.35	0.117	2.92	1.44	0.39	0.081	0.836	0.226	0.84	3.52	0.13	4.49	8735	2.4786	25.11648	-22.63788	NAF
NS0046	214	216	NS	E400769	400769	1	G	W	33.31	41.13	1.36	0.594	0.46	0.059	2.62	1.37	0.11	0.032	0.27	0.05	0.19	4.15	0.5	4.84	8779	0.9792	23.89554	-22.91634	NAF
NS0046	152	154	NS	E400738	400738	1	G	W	31.93	42.42	1.19	0.826	0.64	0.053	2.32	1.4	0.085	0.041	0.331	0.079	0.34	4.29	0.6	5.23	8748	1.2546	24.4188	-23.1642	NAF
NS0046	202	204	NS	E400763	400763	1	G	W	35.53	37.99	1.22	0.813	0.63	0.05	2.34	1.38	0.114	0.027	0.397	0.048	0.16	3.76	0.44	4.36	8773	0.8262	24.06996	-23.24376	NAF
NS0046	190	192	NS	E400757	400757	1	G	W	36.27	36.97	1.93	0.646	0.5	0.086	2.56	1.51	0.18	0.068	0.82	0.063	0.17	2.4	0.4	2.97	8767	2.0808	26.33742	-24.25662	NAF
NS0046	218	220	NS	E400771	400771	1	G	W	32.73	41.56	1.1	0.62	0.48	0.047	2.44	1.45	0.184	0.027	0.187	0.05	0.22	4.95	0.3	5.47	8781	0.8262	25.2909	-24.4647	NAF
NS0046	160	162	NS	E400742	400742	1	G	W	34.17	40.27	1.41	0.723	0.56	0.065	2.38	1.55	0.089	0.073	0.331	0.071	0.27	3.16	0.65	4.08	8752	2.2338	27.0351	-24.8013	NAF
NS0046	162	164	NS	E400743	400743	1	G	W	33.74	41.3	1.51	0.658	0.51	0.072	2.32	1.53	0.102	0.055	0.373	0.068	0.28	2.82	0.68	3.78	8753	1.683	26.68626	-25.00326	NAF
NS0046	220	222	NS	E400772	400772	1	G	W	36.28	36.26	1.33	0.594	0.46	0.057	2.57	1.53	0.143	0.026	0.143	0.035	0.17	4.57	0.42	5.16	8782	0.7956	26.68626	-25.89066	NAF
NS0046	260	262	NS	E400792	400792	1	G	W	35.66	37.68	2.05	0.426	0.33	0.205	2.05	1.59	0.095	0.059	0.149	0.04	0.85	2.85	0.82	4.52	8802	1.8054	27.73278	-25.92738	NAF
NS0046	182	184	NS	E400753	400753	1	G	W	38.43	35.84	1.32	0.594	0.46	0.061	2.04	1.63	0.134	0.035	0.517	0.043	0.11	1.99	0.53	2.63	8763	1.071	28.43046	-27.35946	NAF
NS0046	262	264	NS	E400793	400793	1	G	W	35.2	38.35	2.09	0.4	0.31	0.207	2.16	1.68	0.067	0.047	0.152	0.042	0.72	2.74	1.02	4.48	8803	1.4382	29.30256	-27.86436	NAF
NS0046	210	212	NS	E400767	400767	1	G	W	30.91	44.57	1	0.646	0.5	0.046	2.19	1.65	0.1	0.022	0.285	0.05	0.23	3.91	0.86	5	8777	0.6732	28.7793	-28.1061	NAF
NS0046	238	240	NS	E400781	400781	1	G	W	34.19	39.12	1.2	0.736	0.57	0.051	2.39	1.74	0.052	0.027	0.228	0.046	0.21	4.39	0.98	5.58	8791	0.8262	30.34908	-29.52288	NAF
NS0046	194	196	NS	E400759	400759	1	G	W	32.77	40.94	2.01	0.646	0.5	0.094	2.8	1.85	0.079	0.071	0.676	0.052	0.2	2.47	1.14	3.81	8769	2.1726	32.2677	-30.0951	NAC
NS0046	222	224	NS	E400773	400773	1	G	W	33.15	41.75	0.83	0.542	0.42	0.035	2.07	1.85	0.091	0.022	0.107	0.021	0.14	3.9	1.09	5.13	8783	0.6732	32.2677	-31.5945	NAC
NS0046	134	136	NS	E400729	400729	1	G	W	35.26	37.4	1.79	0.542	0.42	0.081	2.44	1.96	0.1	0.08	0.522	0.133	0.45	2.83	1.07	4.35	8739	2.448	34.18632	-31.73832	NAC
NS0046	236	238	NS	E400780	400780	1	G	W	33.68	39.15	1.22	0.749	0.58	0.052	2.32	1.87	0.149	0.028	0.221	0.043	0.24	4.5	0.83	5.57	8790	0.8568	32.61654	-31.75974	NAC
NS0046	192	194	NS	E400758	400758	1	G	W	33.45	41.5	1.07	0.775	0.6	0.047	2.05	1.92	0.091	0.03	0.504	0.028	0.21	2.76	1.22	4.19	8768	0.918	33.48864	-32.57064	NAC
NS0046	196	198	NS	E400760	400760	1	G	W	35.11	40.07	0.97	0.671	0.52	0.045	1.93	2.17	0.116	0.156	0.369	0.023	0.06	2.32	1.09	3.47	8770	4.7736	37.84914	-33.07554	NAC
NS0046	186	188	NS	E400755	400755	1	G	W	36.91	36.4	1.19	0.8	0.62	0.059	2.01	1.95	0.122	0.024	0.605	0.036	0.29	2.62	1.1	4.01	8765	0.7344	34.0119	-33.2775	NAC
NS0046	138	140	NS	E400731	400731	1	G	W	37.95	34.33	1.46	0.581	0.45	0.068	2.25	1.97	0.145	0.035	0.432	0.107	0.32	2.85	0.89	4.06	8741	1.071	34.36074	-33.28974	NAC
NS0046	224	226	NS	E400774	400774	1	G	W	33.61	42.21	0.76	0.529	0.41	0.036	1.84	1.96	0.1	0.018	0.081	0.012	0.01	3.18	1.22	4.41	8784	0.5508	34.18632	-33.63552	NAC
NS0046	146	148	NS	E400735	400735	1	G	W	34.81	37.89	1.47	0.684	0.53	0.066	2.38	2.24	0.105	0.055	0.343	0.083	0.31	2.85	1.42	4.58	8745	1.683	39.07008	-37.38708	NAC
NS0046	200	202	NS	E400762	400762	1	G	W	31.73	42.56	0.89	0.904	0.7	0.035	2.19	2.19	0.105	0.016	0.327	0.029	0.17	3.87	1.4	5.44	8772	0.4896	38.19798	-37.70838	NAC
NS0046	142	144	NS	E400733	400733	1	G	W	36.91	36.05	1.3	0.62	0.48	0.058	2.14	2.39	0.102	0.1	0.324	0.075	0.19	2.37	1.32	3.88	8743	3.06	41.68638	-38.62638	NAC
NS0046	150	152	NS	E400737	400737	1	G	W	29.36	45.64	0.84	0.839	0.65	0.037	2.09	2.26	0.083	0.024	0.265	0.062	0.28	3.77	1.79	5.84	8747	0.7344	39.41892	-38.68452	NAC
NS0046	136	138	NS	E400730	400730	1	G	W	34.89	37.5	1.69	0.568	0.44	0.075	2.39	2.34	0.122	0.042	0.451	0.111	0.37	2.74	1.42	4.53	8740	1.2852	40.81428	-39.52908	NAC
NS0046	140	142	NS	E400732	400732	1	G	W	35.08	37.57	1.24	0.684	0.53	0.055	2.17	2.4	0.101	0.025	0.35	0.085	0.29	2.85	1.6	4.74	8742	0.765	41.8608	-41.0958	NAC
NS0046	188	190	NS	E400756	400756	1	G	W	34.32	39.61	0.96	0.8	0.62	0.042	1.97	2.43	0.096	0.019	0.559	0.024	0.04	2.43	1.56	4.03	8766	0.5814	42.38406	-41.80266	NAC
NS0046	144	146	NS	E400734	400734	1	G	W	33.27	39.44	1.64	0.671	0.52	0.074	2.51	2.65	0.115	0.077	0.364	0.09	0.33	2.51	1.96	4.8	8744	2.3562	46.2213	-43.8651	NAC
NS0046	240	242	NS	E400782	400782	1	G	W	32.62	39.4	1.29	0.71	0.55	0.087	2.45	2.62	0.071	0.024	0.238	0.053	0.41	4.01	2.11	6.53	8792	0.7344	45.69804	-44.96364	NAC
NS0047	190	192	NS	E400890	400890	1	G	W	20.92	51.3	4.37	0.465	0.36	0.18	3.42	0.6	0.174	1.05	0.729	0.216	0.92	5.82	1.45	8.19	8899	32.13	10.4652	21.6648	PAF(HC)
NS0047	230	232	NS	E400911	400911	1	G	W	18.03	55.7	8.03	0.116	0.09	0.363	4.11	0.46	0.144	0.737	0.417	0.134	0.7	2.83	0.95	4.48	8919	22.5522	8.02332	14.52888	PAF(HC)
NS0047	192	194	NS	E400891	400891	1	G	W	23.29	45.1	4.16	0.684	0.53	0.185	3.8	0.39	0.089	0.536	0.695	0.21	1.02	8.74	1.14	10.9	8900	16.4016	6.80238	9.59922	PAF(LC)
NS0047	194	196	NS	E400892	400892	1	G	W	26.72	37.7	4.84	0.671	0.52	0.214	4.19	0.46	0.106	0.377	0.994	0.269	1.3	9.69	0.96	11.95	8901	11.5362	8.02332	3.51288	PAF(LC)
NS0047	222	224	NS	E400907	400907	1	G	W	25.78	39.92	5.56	0.465	0.36	0.249	4.2	0.36	0.087	0.313	0.789	0.228	1.35	8.76	0.77	10.88	8915	9.5778	6.27912	3.29868	PAF(LC)
NS0047	34	36	NS	E400812	400812	1	G	W	26.7	46.99	6.11	0.413	0.32	0.283	1.04	0.13	0.144	0.181	0.762	0.022	2.09	2.31	0.7	5.1	8821	5.5386	2.26746	3.27114	PAF(LC)
NS0047	228	230	NS	E400910	400910	1	G	W	28.72	39.57	3.81	0.658	0.51	0.172	3.47	0.44	0.104	0.343	0.806	0.237	1.16	7.42	0.7	9.28	8918	10.4958	7.67448	2.82132	PAF(LC)
NS0047	218	220	NS	E400905	400905	1	G	W	25.8	41.07	4.15	0.594	0.46	0.184	3.77	0.23	0.035	0.208	0.667	0.196	1	10.3	0.53	11.83	8913	6.3648	4.01166	2.35314	PAF(LC)
NS0047	28	30	NS	E400809	400809	1	G	W	34.84	42.37	3.13	0.361	0.28	0.141	0.36	0.03	0.106	0.031	0.751	0.007	1.33	0.76	0.33	2.42	8818	0.9486	0.52326	0.42534	PAF(LC)
NS0047	12	14	NS	E400800	400800	1	G	W	19.15	57.98	7.73	-0.0129	-0.01	0.33	0.13	0.005	0.029	0.014	0.409	0.032	3.48	1.98	0.29	5.75	8810	0.4284	0.08721	0.34119	PAF(LC)
NS0047	14	16	NS	E400802	400802	1	G	W	19.87	58.97	6.38	0.026	0.02	0.277	0.11	0.005	0.054	0.013	0.18	0.024	3.41	1.71	0.23	5.35	8811	0.3978	0.08721	0.31059	PAF(LC)
NS0047	214	216	NS	E400903	400903	1	G	W	29.01	35.13	3.16	0.71	0.55	0.141	3.35	0.69	0.171	0.402	0.679	0.194	1.15	11.62	0.95	13.72	8911	12.3012	12.03498	0.26622	PAF(LC)
NS0047	8	10	NS	E400798	400798	1	G	W	32.49	39.54	8.42	-0.0129	-0.01	0.814	0.06	0.005	0.014	0.007	0.065	0.018	2.12	1.98	0.24	4.34	8808	0.2142	0.08721	0.12699	PAF(LC)
NS0047	10	12	NS	E400799	400799	1	G	W	24.91	52.27	6.62	0.026	0.02	0.32	0.11	0.005	0.013	0.006	0.17	0.019	2.55	1.91	0.23	4.69	8809	0.1836	0.08721	0.09639	PAF(LC)
NS0047	22	24	NS	E400806	400806	1	G	W	35.78	42.78	2.23	0.465	0.36	0.1	0.2	0.03	0.074	0.016	0.704	0.007	1.02	0.49	0.31	1.82	8815	0.4896	0.52326	-0.03366	NAF
NS0047	26	28	NS	E400808	400808	1	G	W	37.64	41.36	1.94	0.426	0.33	0.1	0.17	0.03	0.069	0.015	0.462	0.002	1.08	0.49	0.19	1.76	8817	0.459	0.52326	-0.06426	NAF
NS0047	6	8	NS	E400797	400797	1	G	W	28.69	48.65	5	0.039	0.03	0.252	0.07	0.02	0.013	0.009	0.085	0.007	3.37	1.17	0.18	4.72	8807	0.2754	0.34884	-0.07344	NAF
NS0047	20	22	NS	E400805	400805	1	G	W	34.82	43.57	2.66	0.387	0.3	0.114	0.26	0.03	0.086	0.014	0.69	0.011	1.23	0.57	0.27	2.07	8814	0.4284	0.52326	-0.09486	NAF
NS0047	196	198	NS	E400893	400893	1	G	W	25.2	41.92	2.77	0.775	0.6	0.122	3.37	0.36	0.061	0.202	0.784	0.215	1.13	11.55	0.61	13.29	8902	6.1812	6.27912	-0.09792	NAF
NS0047	4	6	NS	E400796	400796	1	G	W	26.65	51.69	4.4	-0.0129	-0.01	0.303	0.04	0.02	0.012	0.007	0.033	0.017	3.74	1.04	0.18	4.96	8806	0.2142	0.34884	-0.13464	NAF
NS0047	24	26	NS	E400807	400807	1	G	W	35.84	40.93	3.06	0.658	0.51	0.166	0.22	0.04	0.065	0.014	0.697	0.017	1.45	0.65	0.33	2.43	8816	0.4284	0.69768	-0.26928	NAF
NS0047	2	4	NS	E400795	400795	1	G	W	20.01	62.42	4.21	0.026	0.02	0.279	0.06	0.03	0.013	0.007	0.051	0.014	3.02	1.04	0.15	4.21	8805	0.2142	0.52326	-0.30906	NAF
NS0047	16	18	NS	E400803	400803	1	G	W	24.52	53.38	5.48	0.594	0.46	0.238	0.41	0.04	0.038	0.004	0.343	0.033	2.14	1.66	0.25	4.05	8812	0.1224	0.69768	-0.57528	NAF
NS0047	18	20	NS	E400804	400804	1	G	W	30.2	45.76	4.14	0.981	0.76	0.176	0.6	0.06	0.082	0.006	0.357	0.035	2.62	1.35	0.27	4.24	8813	0.1836	1.04652	-0.86292	NAF
NS0047	232	234	NS	E400912	400912	1	G	W	25.92	43.74	4.96	0.465	0.36	0.223	3.59	0.62	0.171	0.321	0.699	0.201	1.02	5.96	0.7	7.68	8920	9.8226	10.81404	-0.99144	NAF
NS0047	0	2	NS	E400794	400794	1	G	W	30.97	43.77	5.75	0.026	0.02	0.451	0.12	0.09	0.022	0.014	0.097	0.022	3.82	1.25	0.18	5.25	8804	0.4284	1.56978	-1.14138	NAF
NS0047	170	172	NS	E400880	400880	1	G	W	36.92	31.38	2.25	0.658	0.51	0.094	3.84	0.25	0.051	0.079	0.698	0.199	0.88	6.74	-0.1	7.52	8889	2.4174	4.3605	-1.9431	NAF
NS0047	206	208	NS	E400898	400898	1	G	W	34.56	36.33	1.65	0.555	0.43	0.072	2.5	0.18	0.022	0.036	0.637	0.176	0.89	7.65	-0.23	8.31	8907	1.1016	3.13956	-2.03796	NAF
NS0047	30	32	NS	E400810	400810	1	G	W	31.32	40.43	3.26	0.503	0.39	0.152	1.49	0.3	0.079	0.104	0.69	0.007	1.14	6.52	0.25	7.91	8819	3.1824	5.2326	-2.0502	NAF
NS0047	244	246	NS	E400918	400918	1	G	W	30.41	40.36	3.7	0.581	0.45	0.163	4.04	0.45	0.093	0.189	0.667	0.185	0.88	4.93	0.33	6.14	8926	5.7834	7.8489	-2.0655	NAF
NS0047	32	34	NS	E400811	400811	1	G	W	31.91	38.9	3.05	0.503	0.39	0.14	1.62	0.28	0.103	0.092	0.321	0.015	1.55	7.37	0.16	9.08	8820	2.8152	4.88376	-2.06856	NAF
NS0047	140	142	NS	E400865	400865	1	G	W	32.88	35.98	2.05	0.788	0.61	0.091	3.49	0.54	0.095	0.237	0.352	0.085	0.55	7.97	0.32	8.84	8874	7.2522	9.41868	-2.16648	NAF
NS0047	182	184	NS	E400886	400886	1	G	W	27.06	39.65	4.99	0.491	0.38	0.216	5.35	0.72	0.21	0.336	0.721	0.213	0.98	6.38	0.83	8.19	8895	10.2816	12.55824	-2.27664	NAF
NS0047	224	226	NS	E400908	400908	1	G	W	28.77	36.66	3.15	0.594	0.46	0.138	3.69	0.45	0.107	0.177	0.615	0.177	1.19	11.11	0.37	12.67	8916	5.4162	7.8489	-2.4327	NAF
NS0047	210	212	NS	E400900	400900	1	G	W	31.38	37.73	2.32	0.581	0.45	0.104	2.72	0.29	0.05	0.082	0.799	0.235	1.21	8.6	0.07	9.88	8909	2.5092	5.05818	-2.54898	NAF
NS0047	242	244	NS	E400917	400917	1	G	W	30.19	39.58	3.27	0.633	0.49	0.143	3.79	0.41	0.101	0.136	0.706	0.191	0.79	6.41	0.19	7.39	8925	4.1616	7.15122	-2.98962	NAF
NS0047	180	182	NS	E400885	400885	1	G	W	29.22	45.19	1.37	0.581	0.45	0.06	2.96	0.31	0.068	0.076	0.444	0.137	0.74	6.33	0	7.07	8894	2.3256	5.40702	-3.08142	NAF
NS0047	208	210	NS	E400899	400899	1	G	W	31.37	39.9	1.86	0.555	0.43	0.082	2.5	0.27	0.052	0.051	0.702	0.192	0.93	8.05	-0.04	8.94	8908	1.5606	4.70934	-3.14874	NAF
NS0047	36	38	NS	E400813	400813	1	G	W	32.26	39.29	2.74	0.503	0.39	0.13	1.22	0.34	0.108	0.084	0.538	0.009	1.74	6.7	0.23	8.67	8822	2.5704	5.93028	-3.35988	NAF
NS0047	50	52	NS	E400820	400820	1	G	W	32.56	38.15	2.37	0.658	0.51	0.105	1.93	0.38	0.069	0.106	0.758	0.017	0.53	8.07	0.16	8.76	8829	3.2436	6.62796	-3.38436	NAF
NS0047	168	170	NS	E400879	400879	1	G	W	25.4	50.34	1.64	0.607	0.47	0.073	2.97	0.41	0.088	0.116	0.476	0.134	0.72	5.29	0.23	6.24	8888	3.5496	7.15122	-3.60162	NAF
NS0047	188	190	NS	E400889	400889	1	G	W	26.68	42.08	1.08	1.033	0.8	0.044	2.91	0.41	0.07	0.112	0.448	0.132	0.87	12.12	0.19	13.18	8898	3.4272	7.15122	-3.72402	NAF
NS0047	220	222	NS	E400906	400906	1	G	W	27.95	35.87	2.62	0.788	0.61	0.115	3.36	0.52	0.111	0.155	0.479	0.144	1.16	14.08	0.37	15.61	8914	4.743	9.06984	-4.32684	NAF
NS0047	156	158	NS	E400873	400873	1	G	W	36.14	35.52	2.17	0.646	0.5	0.097	3.44	0.5	0.111	0.141	0.535	0.145	0.62	3.96	0.16	4.74	8882	4.3146	8.721	-4.4064	NAF
NS0047	226	228	NS	E400909	400909	1	G	W	30.23	39.82	2.36	0.568	0.44	0.102	2.97	0.49	0.122	0.123	0.724	0.205	1.02	7.7	0.14	8.86	8917	3.7638	8.54658	-4.78278	NAF
NS0047	234	236	NS	E400913	400913	1	G	W	34.68	37.64	1.94	0.491	0.38	0.085	2.37	0.35	0.08	0.042	0.677	0.176	0.85	5.52	-0.23	6.14	8921	1.2852	6.1047	-4.8195	NAF
NS0047	238	240	NS	E400915	400915	1	G	W	31.43	40.32	2.1	0.555	0.43	0.09	2.72	0.43	0.105	0.082	0.721	0.193	0.94	6.42	0.03	7.39	8923	2.5092	7.50006	-4.99086	NAF
NS0047	186	188	NS	E400888	400888	1	G	W	30.76	39.37	1.88	0.684	0.53	0.076	3.28	0.35	0.072	0.036	0.714	0.207	0.99	8.01	-0.06	8.94	8897	1.1016	6.1047	-5.0031	NAF
NS0047	216	218	NS	E400904	400904	1	G	W	32.82	36.07	1.95	0.555	0.43	0.085	2.59	0.45	0.103	0.076	0.699	0.196	1.16	8.78	-0.02	9.92	8912	2.3256	7.8489	-5.5233	NAF
NS0047	236	238	NS	E400914	400914	1	G	W	34.1	38.55	2.14	0.465	0.36	0.097	2.45	0.51	0.136	0.104	0.649	0.171	0.72	5.17	-0.05	5.84	8922	3.1824	8.89542	-5.71302	NAF
NS0047	240	242	NS	E400916	400916	1	G	W	31.01	38.95	3.11	0.542	0.42	0.143	3.37	0.67	0.185	0.19	0.741	0.201	0.93	5.99	0.35	7.27	8924	5.814	11.68614	-5.87214	NAF
NS0047	142	144	NS	E400866	400866	1	G	W	30.87	44.2	1.27	0.671	0.52	0.055	2.5	0.48	0.088	0.081	0.329	0.082	0.38	5.42	-0.13	5.67	8875	2.4786	8.37216	-5.89356	NAF
NS0047	52	54	NS	E400821	400821	1	G	W	33.36	39.53	1.57	0.62	0.48	0.073	1.41	0.4	0.097	0.035	0.498	0.011	0.98	6.57	0	7.55	8830	1.071	6.9768	-5.9058	NAF
NS0047	178	180	NS	E400884	400884	1	G	W	29.34	45.87	1	0.594	0.46	0.045	2.65	0.39	0.079	0.029	0.331	0.086	0.46	6.52	-0.24	6.74	8893	0.8874	6.80238	-5.91498	NAF
NS0047	38	40	NS	E400814	400814	1	G	W	33.52	38.97	1.84	0.503	0.39	0.089	1.28	0.47	0.079	0.067	0.479	0.007	0.69	7.5	-0.05	8.14	8823	2.0502	8.19774	-6.14754	NAF
NS0047	172	174	NS	E400881	400881	1	G	W	30.07	40.97	2.42	0.542	0.42	0.109	3.77	0.68	0.191	0.174	0.565	0.182	0.73	5.99	0.26	6.98	8890	5.3244	11.86056	-6.53616	NAF
NS0047	200	202	NS	E400895	400895	1	G	W	26.03	40.18	4.22	0.491	0.38	0.197	3.48	0.82	0.23	0.235	0.399	0.129	1.02	10.6	0.58	12.2	8904	7.191	14.30244	-7.11144	NAF
NS0047	82	84	NS	E400836	400836	1	G	W	36.38	32.07	1.25	0.594	0.46	0.056	2.26	0.49	0.066	0.03	0.939	0.012	0.34	9.84	-0.33	9.85	8845	0.918	8.54658	-7.62858	NAF
NS0047	86	88	NS	E400838	400838	1	G	W	32.94	34.36	1.19	0.697	0.54	0.051	2.57	0.49	0.079	0.027	0.796	0.008	0.53	12.23	-0.22	12.54	8847	0.8262	8.54658	-7.72038	NAF
NS0047	76	78	NS	E400833	400833	1	G	W	38.38	33.74	1.35	0.684	0.53	0.062	1.5	0.49	0.116	0.019	0.872	0.087	0.19	6.14	-0.38	5.95	8842	0.5814	8.54658	-7.96518	NAF
NS0047	74	76	NS	E400832	400832	1	G	W	37.79	33.89	1.34	0.646	0.5	0.061	1.61	0.5	0.115	0.024	0.807	0.042	0.15	6.77	-0.39	6.53	8841	0.7344	8.721	-7.9866	NAF
NS0047	48	50	NS	E400819	400819	1	G	W	26.72	38.38	5.91	0.516	0.4	0.266	2.55	1.05	0.122	0.336	2.16	0.132	0.35	8.93	1.13	10.41	8828	10.2816	18.3141	-8.0325	NAF
NS0047	96	98	NS	E400843	400843	1	G	W	37.79	34.84	1.38	0.723	0.56	0.063	2.03	0.51	0.084	0.026	1.19	0.013	0.08	4.98	-0.2	4.86	8852	0.7956	8.89542	-8.09982	NAF
NS0047	176	178	NS	E400883	400883	1	G	W	31.52	43.05	1.01	0.581	0.45	0.043	2.62	0.51	0.098	0.025	0.271	0.082	0.4	6.47	-0.29	6.58	8892	0.765	8.89542	-8.13042	NAF
NS0047	84	86	NS	E400837	400837	1	G	W	33.98	32.94	1.14	0.71	0.55	0.052	2.58	0.53	0.078	0.032	0.643	0.014	0.48	12.19	-0.25	12.42	8846	0.9792	9.24426	-8.26506	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0047	202	204	NS	E400896	400896	1	G	W	28.98	36.01	3.56	0.594	0.46	0.163	3.59	0.81	0.219	0.19	0.807	0.238	1.16	10.15	0.49	11.8	8905	5.814	14.12802	-8.31402	NAF
NS0047	94	96	NS	E400842	400842	1	G	W	36.39	37.01	1.25	0.684	0.53	0.057	1.96	0.53	0.076	0.028	1.08	0.002	0.02	5.23	-0.23	5.02	8851	0.8568	9.24426	-8.38746	NAF
NS0047	44	46	NS	E400817	400817	1	G	W	34.96	36.41	1.47	0.736	0.57	0.071	1.7	0.55	0.093	0.034	0.444	0.004	0.38	7.97	-0.21	8.14	8826	1.0404	9.5931	-8.5527	NAF
NS0047	90	92	NS	E400840	400840	1	G	W	37.09	33.95	1.16	0.775	0.6	0.054	2	0.54	0.106	0.026	0.979	0.008	0.35	6.74	-0.27	6.82	8849	0.7956	9.41868	-8.62308	NAF
NS0047	92	94	NS	E400841	400841	1	G	W	37.85	34.97	1.12	0.723	0.56	0.053	1.86	0.54	0.097	0.022	0.961	0.009	0.23	5.62	-0.22	5.63	8850	0.6732	9.41868	-8.74548	NAF
NS0047	88	90	NS	E400839	400839	1	G	W	34.64	36.49	1.05	0.723	0.56	0.047	2.07	0.56	0.085	0.031	0.772	0.01	0.3	8.2	-0.26	8.24	8848	0.9486	9.76752	-8.81892	NAF
NS0047	80	82	NS	E400835	400835	1	G	W	33.37	35.42	1.29	0.671	0.52	0.055	2.01	0.6	0.105	0.045	0.981	0.018	0.59	10.24	-0.16	10.67	8844	1.377	10.4652	-9.0882	NAF
NS0047	184	186	NS	E400887	400887	1	G	W	30.95	41.89	1.24	0.633	0.49	0.053	2.79	0.6	0.078	0.037	0.494	0.135	0.67	7.02	-0.07	7.62	8896	1.1322	10.4652	-9.333	NAF
NS0047	98	100	NS	E400844	400844	1	G	W	36.01	38.6	1.07	0.775	0.6	0.048	1.91	0.58	0.074	0.019	0.924	0.0005	0.02	4.74	-0.14	4.62	8853	0.5814	10.11636	-9.53496	NAF
NS0047	124	126	NS	E400857	400857	1	G	W	29.43	47.14	0.83	0.878	0.68	0.034	2.09	0.62	0.089	0.035	0.442	0.034	0.17	5.42	-0.17	5.42	8866	1.071	10.81404	-9.74304	NAF
NS0047	78	80	NS	E400834	400834	1	G	W	34.38	39.31	1.06	0.671	0.52	0.05	1.46	0.59	0.109	0.017	0.686	0.049	0.23	6.74	-0.26	6.71	8843	0.5202	10.29078	-9.77058	NAF
NS0047	42	44	NS	E400816	400816	1	G	W	33.19	37.34	1.95	0.594	0.46	0.097	1.88	0.66	0.066	0.053	0.412	0.005	0.56	8.71	-0.03	9.24	8825	1.6218	11.51172	-9.88992	NAF
NS0047	128	130	NS	E400859	400859	1	G	W	39.11	34.53	1.2	0.671	0.52	0.053	2.02	0.61	0.064	0.022	0.585	0.041	0.19	3.76	-0.14	3.81	8868	0.6732	10.63962	-9.96642	NAF
NS0047	72	74	NS	E400831	400831	1	G	W	35.76	32.99	1.23	0.697	0.54	0.054	1.88	0.67	0.1	0.056	0.72	0.01	0.46	9.81	-0.16	10.11	8840	1.7136	11.68614	-9.97254	NAF
NS0047	246	248	NS	E400919	400919	1	G	W	31.91	39.32	2.47	0.684	0.53	0.108	3.47	0.84	0.072	0.145	0.501	0.138	0.72	5.32	0.32	6.36	8927	4.437	14.65128	-10.21428	NAF
NS0047	62	64	NS	E400826	400826	1	G	W	29.47	36.79	1.51	0.684	0.53	0.063	2.56	0.63	0.103	0.024	0.424	0.013	1.08	13.78	-0.01	14.85	8835	0.7344	10.98846	-10.25406	NAF
NS0047	46	48	NS	E400818	400818	1	G	W	31.09	37.17	2.99	0.646	0.5	0.134	2.37	0.86	0.111	0.132	0.992	0.044	0.4	9.19	0.34	9.93	8827	4.0392	15.00012	-10.96092	NAF
NS0047	70	72	NS	E400830	400830	1	G	W	34.03	32.96	1.41	0.71	0.55	0.06	1.98	0.78	0.13	0.085	0.802	0.023	1.05	10.85	-0.01	11.89	8839	2.601	13.60476	-11.00376	NAF
NS0047	164	166	NS	E400877	400877	1	G	W	38.68	33.78	1.43	0.646	0.5	0.061	2.79	0.71	0.122	0.045	0.454	0.108	0.47	3.76	-0.13	4.1	8886	1.377	12.38382	-11.00682	NAF
NS0047	56	58	NS	E400823	400823	1	G	W	34.49	31.89	1.96	0.736	0.57	0.092	2.35	0.87	0.132	0.126	0.848	0.02	0.53	10.84	0.18	11.55	8832	3.8556	15.17454	-11.31894	NAF
NS0047	54	56	NS	E400822	400822	1	G	W	36.05	33.72	1.15	0.736	0.57	0.055	1.88	0.69	0.145	0.018	0.483	0.009	0.43	8.96	-0.17	9.22	8831	0.5508	12.03498	-11.48418	NAF
NS0047	100	102	NS	E400845	400845	1	G	W	37.02	36.64	1.16	0.8	0.62	0.053	2.03	0.72	0.105	0.027	0.968	0.007	0.07	4.46	-0.16	4.37	8854	0.8262	12.55824	-11.73204	NAF
NS0047	122	124	NS	E400856	400856	1	G	W	37.06	36.1	1.23	0.723	0.56	0.055	2.45	0.76	0.084	0.033	0.452	0.043	0.24	4.95	-0.12	5.07	8865	1.0098	13.25592	-12.24612	NAF
NS0047	174	176	NS	E400882	400882	1	G	W	33.31	39.38	1.07	0.607	0.47	0.045	2.76	0.76	0.128	0.032	0.245	0.072	0.77	6.41	-0.2	6.98	8891	0.9792	13.25592	-12.27672	NAF
NS0047	102	104	NS	E400846	400846	1	G	W	37.46	36.97	1.28	0.658	0.51	0.056	2.06	0.76	0.074	0.028	1.01	0.02	0.08	3.55	-0.05	3.58	8855	0.8568	13.25592	-12.39912	NAF
NS0047	136	138	NS	E400863	400863	1	G	W	38.08	36.06	1.19	0.71	0.55	0.054	2.16	0.76	0.072	0.025	0.361	0.042	0.15	3.77	-0.14	3.78	8872	0.765	13.25592	-12.49092	NAF
NS0047	66	68	NS	E400828	400828	1	G	W	32.88	38.16	1.08	0.671	0.52	0.05	1.63	0.75	0.103	0.012	0.69	0.013	0.52	9.1	-0.09	9.53	8837	0.3672	13.0815	-12.7143	NAF
NS0047	116	118	NS	E400853	400853	1	G	W	38.34	34.2	1.15	0.775	0.6	0.052	2.3	0.79	0.103	0.027	0.48	0.035	0.17	4.82	-0.21	4.78	8862	0.8262	13.77918	-12.95298	NAF
NS0047	130	132	NS	E400860	400860	1	G	W	31.19	45.9	1.99	0.529	0.41	0.103	1.44	0.78	0.071	0.021	0.401	0.018	0.64	3.07	0.17	3.88	8869	0.6426	13.60476	-12.96216	NAF
NS0047	118	120	NS	E400854	400854	1	G	W	35.28	39.77	1.02	0.736	0.57	0.045	2.04	0.81	0.082	0.025	0.473	0.03	0.14	4.39	-0.06	4.47	8863	0.765	14.12802	-13.36302	NAF
NS0047	58	60	NS	E400824	400824	1	G	W	34.03	32.88	1.08	0.852	0.66	0.05	2.16	0.8	0.173	0.015	0.534	0.011	0.71	11.63	-0.05	12.29	8833	0.459	13.9536	-13.4946	NAF
NS0047	112	114	NS	E400851	400851	1	G	W	34.94	39.46	1.2	0.775	0.6	0.051	2.25	0.83	0.076	0.032	0.588	0.032	0.15	4.48	0	4.63	8860	0.9792	14.47686	-13.49766	NAF
NS0047	146	148	NS	E400868	400868	1	G	W	36.79	36.12	1.4	0.71	0.55	0.061	2.76	0.85	0.09	0.038	0.299	0.079	0.35	4.21	0	4.56	8877	1.1628	14.8257	-13.6629	NAF
NS0047	68	70	NS	E400829	400829	1	G	W	32.93	37.1	1.2	0.671	0.52	0.053	1.87	0.82	0.113	0.02	0.635	0.039	0.45	9.57	-0.02	10	8838	0.612	14.30244	-13.69044	NAF
NS0047	166	168	NS	E400878	400878	1	G	W	34.99	38.95	1.2	0.633	0.49	0.053	2.59	0.98	0.094	0.111	0.332	0.082	0.43	4.19	0.22	4.84	8887	3.3966	17.09316	-13.69656	NAF
NS0047	60	62	NS	E400825	400825	1	G	W	30.93	36.56	1.2	0.736	0.57	0.051	2.3	0.8	0.155	0.005	0.496	0.013	0.78	12.19	-0.06	12.91	8834	0.153	13.9536	-13.8006	NAF
NS0047	126	128	NS	E400858	400858	1	G	W	32.32	42.91	0.98	0.813	0.63	0.043	2.12	0.84	0.099	0.027	0.532	0.041	0.34	4.8	0	5.14	8867	0.8262	14.65128	-13.82508	NAF
NS0047	144	146	NS	E400867	400867	1	G	W	35.92	38.98	1.09	0.697	0.54	0.048	2.32	0.84	0.078	0.027	0.212	0.061	0.36	4.08	-0.02	4.42	8876	0.8262	14.65128	-13.82508	NAF
NS0047	120	122	NS	E400855	400855	1	G	W	33.27	41.35	0.97	0.749	0.58	0.041	2.17	0.86	0.082	0.024	0.427	0.039	0.25	5.23	0.08	5.56	8864	0.7344	15.00012	-14.26572	NAF
NS0047	154	156	NS	E400872	400872	1	G	W	36.23	38.09	1.29	0.646	0.5	0.056	2.61	0.87	0.097	0.026	0.403	0.092	0.37	3.58	0.07	4.02	8881	0.7956	15.17454	-14.37894	NAF
NS0047	108	110	NS	E400849	400849	1	G	W	35.95	39.25	1.02	0.723	0.56	0.044	1.86	0.87	0.08	0.022	0.565	0.022	0.01	3.84	-0.03	3.82	8858	0.6732	15.17454	-14.50134	NAF
NS0047	204	206	NS	E400897	400897	1	G	W	30.87	37.65	2.42	0.594	0.46	0.108	2.94	1.04	0.291	0.111	0.778	0.236	1.11	7.97	0.15	9.23	8906	3.3966	18.13968	-14.74308	NAF
NS0047	110	112	NS	E400850	400850	1	G	W	36.97	36.28	1.16	0.826	0.64	0.05	2.22	0.9	0.095	0.025	0.624	0.029	0.14	4.61	-0.07	4.68	8859	0.765	15.6978	-14.9328	NAF
NS0047	148	150	NS	E400869	400869	1	G	W	36	36.16	1.4	0.749	0.58	0.06	2.92	0.93	0.101	0.03	0.377	0.075	0.34	4.91	0.06	5.31	8878	0.918	16.22106	-15.30306	NAF
NS0047	158	160	NS	E400874	400874	1	G	W	33.57	41.32	1.14	0.671	0.52	0.052	2.56	0.97	0.105	0.052	0.31	0.084	0.39	3.85	0.19	4.43	8883	1.5912	16.91874	-15.32754	NAF
NS0047	134	136	NS	E400862	400862	1	G	W	36.72	37.57	1.2	0.775	0.6	0.054	2.22	0.93	0.092	0.029	0.394	0.038	0.17	4.13	-0.02	4.28	8871	0.8874	16.22106	-15.33366	NAF
NS0047	114	116	NS	E400852	400852	1	G	W	35	39.17	1.21	0.736	0.57	0.052	2.23	0.94	0.093	0.033	0.679	0.027	0.1	4.32	0.09	4.51	8861	1.0098	16.39548	-15.38568	NAF
NS0047	106	108	NS	E400848	400848	1	G	W	38.45	34.53	1.11	0.788	0.61	0.047	2.08	0.95	0.105	0.021	0.709	0.019	0.04	4.23	0	4.27	8857	0.6426	16.5699	-15.9273	NAF
NS0047	150	152	NS	E400870	400870	1	G	W	36.42	37.75	1.23	0.684	0.53	0.054	2.51	1	0.097	0.024	0.297	0.072	0.36	3.82	0.04	4.22	8879	0.7344	17.442	-16.7076	NAF
NS0047	40	42	NS	E400815	400815	1	G	W	24.52	40.43	6.17	0.426	0.33	0.279	2.9	1.6	0.203	0.365	0.87	0.024	0.56	10.03	1.05	11.64	8824	11.169	27.9072	-16.7382	NAF
NS0047	198	200	NS	E400894	400894	1	G	W	25.41	39.65	4.4	0.529	0.41	0.217	3.33	1.34	0.39	0.215	0.311	0.101	0.94	11.08	0.55	12.57	8903	6.579	23.37228	-16.79328	NAF
NS0047	64	66	NS	E400827	400827	1	G	W	30.13	37.36	0.95	0.594	0.46	0.039	2.02	1.03	0.227	0.005	0.339	0.014	0.87	13.07	-0.11	13.83	8836	0.153	17.96526	-17.81226	NAF
NS0047	104	106	NS	E400847	400847	1	G	W	37.22	36.4	1.14	0.723	0.56	0.049	2.03	1.08	0.09	0.022	0.764	0.016	0.04	3.85	0.09	3.98	8856	0.6732	18.83736	-18.16416	NAF
NS0047	162	164	NS	E400876	400876	1	G	W	34.3	41.32	1.15	0.607	0.47	0.052	2.35	1.12	0.091	0.03	0.312	0.086	0.41	3.22	0.25	3.88	8885	0.918	19.53504	-18.61704	NAF
NS0047	138	140	NS	E400864	400864	1	G	W	34.98	39.85	1	0.697	0.54	0.048	2.01	1.11	0.096	0.021	0.32	0.044	0.28	4.04	0.07	4.39	8873	0.6426	19.36062	-18.71802	NAF
NS0047	212	214	NS	E400902	400902	1	G	W	30.59	33.54	1.8	0.788	0.61	0.08	2.85	1.24	0.336	0.057	0.538	0.167	1	13.16	0.04	14.2	8910	1.7442	21.62808	-19.88388	NAF
NS0047	248	250	NS	E400920	400920	1	G	W	33.57	38.78	1.86	0.62	0.48	0.085	2.99	1.38	0.1	0.058	0.41	0.117	0.51	4.36	0.46	5.33	8928	1.7748	24.06996	-22.29516	NAF
NS0047	132	134	NS	E400861	400861	1	G	W	33.97	41.41	0.99	0.736	0.57	0.049	1.89	1.36	0.167	0.025	0.419	0.035	0.25	3.65	0.12	4.02	8870	0.765	23.72112	-22.95612	NAF
NS0047	152	154	NS	E400871	400871	1	G	W	33.27	41.36	1.06	0.658	0.51	0.048	2.43	1.36	0.088	0.022	0.29	0.071	0.29	3.72	0.53	4.54	8880	0.6732	23.72112	-23.04792	NAF
NS0047	160	162	NS	E400875	400875	1	G	W	34.94	39.69	0.86	0.775	0.6	0.038	2.3	1.48	0.096	0.021	0.201	0.044	0.16	3.69	0.6	4.45	8884	0.6426	25.81416	-25.17156	NAF
NS0047	250	252	NS	E400921	400921	1	G	W	34.5	37.85	1.31	0.762	0.59	0.056	2.74	1.59	0.106	0.035	0.346	0.088	0.37	4.57	0.63	5.57	8929	1.071	27.73278	-26.66178	NAF
NS0048	170	172	NS	E395324	395324	1	G	D	21.23	44.73	8.8	0.116	0.09	0.385	5.21	0.35	0.015	0.886	0.049	0.037	0.49	7.55	1.49	9.53	6502	27.1116	6.1047	21.0069	PAF(HC)
NS0048	164	166	NS	E395321	395321	1	G	D	25.29	36.2	6.31	0.491	0.38	0.276	4.48	0.51	0.107	0.803	0.022	0.035	0.53	12.81	1.52	14.86	6499	24.5718	8.89542	15.67638	PAF(HC)
NS0048	172	174	NS	E395325	395325	1	G	D	21.94	43.63	8.76	0.194	0.15	0.376	5.14	0.33	0.076	0.683	0.088	0.044	0.53	8.18	1.05	9.76	6503	20.8998	5.75586	15.14394	PAF(HC)
NS0048	204	206	NS	E395341	395341	1	G	D	22.47	43.64	7.08	0.297	0.23	0.311	4.4	0.55	0.138	0.433	0.079	0.052	0.56	8.76	0.77	10.09	6519	13.2498	9.5931	3.6567	PAF(LC)
NS0048	114	116	NS	E395295	395295	1	G	D	28.65	43.08	3.95	0.426	0.33	0.17	3.03	0.36	0.074	0.237	0.322	0.024	0.55	6.34	0.27	7.16	6474	7.2522	6.27912	0.97308	PAF(LC)
NS0048	0	2	NS	E395238	395238	1	G	D	33.61	38.18	5.35	0.026	0.02	0.413	0.08	0.04	0.023	0.025	0.046	0.025	6.05	1.24	0.25	7.54	6417	0.765	0.69768	0.06732	PAF(LC)
NS0048	4	6	NS	E395240	395240	1	G	D	33.59	37.28	6.42	-0.0129	-0.01	0.611	0.07	0.05	0.028	0.024	0.026	0.031	5.93	1.41	0.28	7.62	6419	0.7344	0.8721	-0.1377	NAF
NS0048	18	20	NS	E395247	395247	1	G	D	33.96	45.52	3.06	0.026	0.02	0.176	0.04	0.02	0.031	0.004	0.004	0.013	1.25	0.91	0.18	2.34	6426	0.1224	0.34884	-0.22644	NAF
NS0048	42	44	NS	E395259	395259	1	G	D	37.43	43.54	1.47	0.052	0.04	0.065	0.03	0.02	0.028	0.004	0.003	0.004	0.87	0.45	0.04	1.36	6438	0.1224	0.34884	-0.22644	NAF
NS0048	78	80	NS	E395277	395277	1	G	D	34.9	44.28	1.8	0.749	0.58	0.077	0.16	0.02	0.065	0.004	0.033	0.012	1.83	0.65	0.17	2.65	6456	0.1224	0.34884	-0.22644	NAF
NS0048	20	22	NS	E395248	395248	1	G	D	34.77	46.93	1.63	0.026	0.02	0.08	0.02	0.02	0.029	0.003	0.003	0.012	0.76	0.47	0.18	1.41	6427	0.0918	0.34884	-0.25704	NAF
NS0048	22	24	NS	E395249	395249	1	G	D	34.25	47.78	1.45	0.039	0.03	0.068	0.03	0.02	0.046	0.003	0.0005	0.009	1.17	0.46	0.12	1.75	6428	0.0918	0.34884	-0.25704	NAF
NS0048	28	30	NS	E395252	395252	1	G	D	34.63	46.49	2.08	0.026	0.02	0.095	0.03	0.02	0.041	0.003	0.002	0.009	1.1	0.66	0.18	1.94	6431	0.0918	0.34884	-0.25704	NAF
NS0048	30	32	NS	E395253	395253	1	G	D	38.57	40.49	1.76	0.039	0.03	0.071	0.03	0.02	0.093	0.003	0.0005	0.011	1.45	0.66	0.18	2.29	6432	0.0918	0.34884	-0.25704	NAF
NS0048	34	36	NS	E395255	395255	1	G	D	37.34	42.67	1.67	0.026	0.02	0.07	0.02	0.02	0.075	0.003	0.002	0.001	1.27	0.56	0.17	2	6434	0.0918	0.34884	-0.25704	NAF
NS0048	36	38	NS	E395256	395256	1	G	D	36.34	44.58	1.55	0.026	0.02	0.071	0.03	0.02	0.046	0.003	0.003	0.004	0.83	0.51	0.16	1.5	6435	0.0918	0.34884	-0.25704	NAF
NS0048	44	46	NS	E395260	395260	1	G	D	34.2	46.2	2.26	0.542	0.42	0.095	0.07	0.02	0.025	0.003	0.013	0.014	1.22	0.72	0.05	1.99	6439	0.0918	0.34884	-0.25704	NAF
NS0048	46	48	NS	E395261	395261	1	G	D	35.66	43.99	1.88	0.736	0.57	0.083	0.08	0.02	0.019	0.003	0.02	0.018	1.23	0.63	0.04	1.9	6440	0.0918	0.34884	-0.25704	NAF
NS0048	32	34	NS	E395254	395254	1	G	D	36.84	43.63	1.63	0.026	0.02	0.07	0.02	0.02	0.078	0.002	0.0005	0.007	1.12	0.55	0.18	1.85	6433	0.0612	0.34884	-0.28764	NAF
NS0048	38	40	NS	E395257	395257	1	G	D	36.37	44.72	1.53	0.026	0.02	0.064	0.02	0.02	0.048	0.002	0.002	0.01	0.88	0.51	0.13	1.52	6436	0.0612	0.34884	-0.28764	NAF
NS0048	40	42	NS	E395258	395258	1	G	D	36.03	45.13	1.49	0.039	0.03	0.063	0.03	0.02	0.036	0.002	0.003	0.01	0.77	0.46	0.06	1.29	6437	0.0612	0.34884	-0.28764	NAF
NS0048	48	50	NS	E395262	395262	1	G	D	38.99	40.31	1.46	0.646	0.5	0.067	0.08	0.02	0.038	0.002	0.028	0.009	1.09	0.51	0.04	1.64	6441	0.0612	0.34884	-0.28764	NAF
NS0048	76	78	NS	E395276	395276	1	G	D	37.43	40.34	2.42	0.568	0.44	0.106	0.27	0.03	0.09	0.007	0.076	0.016	1.55	0.88	0.23	2.66	6455	0.2142	0.52326	-0.30906	NAF
NS0048	80	82	NS	E395278	395278	1	G	D	35.7	43.23	1.54	1.136	0.88	0.065	0.2	0.03	0.069	0.006	0.071	0.013	1.54	0.63	0.19	2.36	6457	0.1836	0.52326	-0.33966	NAF
NS0048	16	18	NS	E395246	395246	1	G	D	26.1	53.1	4.85	-0.0129	-0.01	0.238	0.06	0.03	0.013	0.005	0.005	0.026	2.39	1.47	0.21	4.07	6425	0.153	0.52326	-0.37026	NAF
NS0048	66	68	NS	E395271	395271	1	G	D	40.22	38.5	1.29	0.749	0.58	0.06	0.15	0.03	0.068	0.005	0.08	0.006	0.93	0.48	0.14	1.55	6450	0.153	0.52326	-0.37026	NAF
NS0048	14	16	NS	E395245	395245	1	G	D	22	52.49	8.52	-0.0129	-0.01	0.437	0.11	0.04	0.014	0.009	0.01	0.038	3.77	2.5	0.25	6.52	6424	0.2754	0.69768	-0.42228	NAF
NS0048	24	26	NS	E395250	395250	1	G	D	35.39	46.04	1.36	0.039	0.03	0.069	0.03	0.03	0.062	0.003	0.002	0.004	1.04	0.42	0.06	1.52	6429	0.0918	0.52326	-0.43146	NAF
NS0048	84	86	NS	E395280	395280	1	G	D	40.46	37.35	1.14	1.059	0.82	0.052	0.17	0.03	0.083	0.003	0.04	0.009	1.53	0.52	0.17	2.22	6459	0.0918	0.52326	-0.43146	NAF
NS0048	26	28	NS	E395251	395251	1	G	D	35.69	45.77	1.42	0.026	0.02	0.063	0.02	0.03	0.045	0.002	0.0005	0.009	0.95	0.45	0.15	1.55	6430	0.0612	0.52326	-0.46206	NAF
NS0048	2	4	NS	E395239	395239	1	G	D	35.44	41.44	2.99	0.039	0.03	0.219	0.04	0.05	0.012	0.011	0.019	0.015	3.27	0.79	0.14	4.2	6418	0.3366	0.8721	-0.5355	NAF
NS0048	10	12	NS	E395243	395243	1	G	D	28.4	41.07	10.1	0.026	0.02	0.695	0.12	0.06	0.016	0.016	0.018	0.062	3.76	2.78	0.29	6.83	6422	0.4896	1.04652	-0.55692	NAF
NS0048	56	58	NS	E395266	395266	1	G	D	38.22	40.11	1.83	0.594	0.46	0.095	0.2	0.04	0.046	0.004	0.2	0.018	1.23	0.57	0.08	1.88	6445	0.1224	0.69768	-0.57528	NAF
NS0048	60	62	NS	E395268	395268	1	G	D	38.5	40.04	1.19	1.084	0.84	0.051	0.22	0.04	0.068	0.004	0.218	0.018	1.22	0.46	0.11	1.79	6447	0.1224	0.69768	-0.57528	NAF
NS0048	64	66	NS	E395270	395270	1	G	D	38.39	40.51	1.11	0.813	0.63	0.048	0.2	0.04	0.094	0.004	0.148	0.01	1.4	0.43	0.1	1.93	6449	0.1224	0.69768	-0.57528	NAF
NS0048	50	52	NS	E395263	395263	1	G	D	37.88	41.28	1.58	0.736	0.57	0.073	0.19	0.04	0.047	0.003	0.143	0.018	1.26	0.55	0.02	1.83	6442	0.0918	0.69768	-0.60588	NAF
NS0048	68	70	NS	E395272	395272	1	G	D	38.6	40.76	1.34	0.633	0.49	0.062	0.24	0.04	0.059	0.003	0.096	0.006	1.11	0.45	0.05	1.61	6451	0.0918	0.69768	-0.60588	NAF
NS0048	82	84	NS	E395279	395279	1	G	D	32.74	47.34	1	0.839	0.65	0.041	0.21	0.05	0.084	0.006	0.049	0.013	2.45	0.52	0.13	3.1	6458	0.1836	0.8721	-0.6885	NAF
NS0048	12	14	NS	E395244	395244	1	G	D	21.81	51.87	9.3	-0.0129	-0.01	0.521	0.1	0.06	0.015	0.011	0.011	0.058	3.65	2.58	0.26	6.49	6423	0.3366	1.04652	-0.70992	NAF
NS0048	74	76	NS	E395275	395275	1	G	D	35.31	42.08	2.65	0.955	0.74	0.116	0.33	0.05	0.088	0.005	0.119	0.02	1.81	0.92	0.22	2.95	6454	0.153	0.8721	-0.7191	NAF
NS0048	54	56	NS	E395265	395265	1	G	D	39.79	37.47	1.52	0.93	0.72	0.065	0.28	0.06	0.059	0.009	0.401	0.02	1.73	0.51	0.1	2.34	6444	0.2754	1.04652	-0.77112	NAF
NS0048	52	54	NS	E395264	395264	1	G	D	37.9	40.56	1.73	0.788	0.61	0.076	0.28	0.05	0.054	0.003	0.339	0.027	1.4	0.53	0.04	1.97	6443	0.0918	0.8721	-0.7803	NAF
NS0048	70	72	NS	E395273	395273	1	G	D	37.8	41.26	1.31	0.891	0.69	0.058	0.3	0.05	0.065	0.003	0.18	0.01	1.38	0.46	0.08	1.92	6452	0.0918	0.8721	-0.7803	NAF
NS0048	72	74	NS	E395274	395274	1	G	D	36.82	41.68	1.78	0.968	0.75	0.078	0.39	0.05	0.067	0.003	0.201	0.02	1.44	0.6	0.09	2.13	6453	0.0918	0.8721	-0.7803	NAF
NS0048	62	64	NS	E395269	395269	1	G	D	41.12	36.44	1.52	0.8	0.62	0.071	0.29	0.05	0.062	0.002	0.307	0.017	1.27	0.45	0.05	1.77	6448	0.0612	0.8721	-0.8109	NAF
NS0048	58	60	NS	E395267	395267	1	G	D	40.58	36.66	1.64	0.878	0.68	0.079	0.33	0.06	0.059	0.002	0.326	0.018	1.28	0.54	0.08	1.9	6446	0.0612	1.04652	-0.98532	NAF
NS0048	166	168	NS	E395322	395322	1	G	D	24.37	50.94	1.79	0.426	0.33	0.075	1.99	0.31	0.05	0.127	0.065	0.019	0.8	8.21	0.12	9.13	6500	3.8862	5.40702	-1.52082	NAF
NS0048	174	176	NS	E395326	395326	1	G	D	28.99	47.01	1.34	0.542	0.42	0.064	1.71	0.32	0.046	0.132	0.181	0.042	0.57	6.85	-0.01	7.41	6504	4.0392	5.58144	-1.54224	NAF
NS0048	168	170	NS	E395323	395323	1	G	D	22.65	46.51	4.16	0.491	0.38	0.18	3.55	0.64	0.106	0.308	0.177	0.044	0.8	9.83	0.75	11.38	6501	9.4248	11.16288	-1.73808	NAF
NS0048	136	138	NS	E395307	395307	1	G	D	26.78	48.77	2.01	0.361	0.28	0.087	2.29	0.32	0.039	0.113	0.153	0.03	0.66	7.06	0.04	7.76	6485	3.4578	5.58144	-2.12364	NAF
NS0048	86	88	NS	E395281	395281	1	G	D	38.18	37.81	0.95	0.452	0.35	0.042	0.9	0.16	0.076	0.01	0.029	0.016	0.7	4.29	-0.08	4.91	6460	0.306	2.79072	-2.48472	NAF
NS0048	122	124	NS	E395299	395299	1	G	D	29.08	42.67	2.12	0.62	0.48	0.104	1.99	0.44	0.085	0.168	0.171	0.02	0.93	8.75	0.16	9.84	6478	5.1408	7.67448	-2.53368	NAF
NS0048	6	8	NS	E395241	395241	1	G	D	37.47	32.32	5.69	0.026	0.02	0.488	0.17	0.21	0.028	0.033	0.054	0.033	5.41	1.6	0.3	7.31	6420	1.0098	3.66282	-2.65302	NAF
NS0048	8	10	NS	E395242	395242	1	G	D	35.39	37.04	5.26	0.026	0.02	0.419	0.13	0.22	0.022	0.025	0.058	0.041	4.33	1.59	0.26	6.18	6421	0.765	3.83724	-3.07224	NAF
NS0048	124	126	NS	E395300	395300	1	G	D	27.23	48.46	1.67	0.503	0.39	0.085	1.66	0.32	0.05	0.063	0.113	0.014	0.97	7.07	-0.08	7.96	6479	1.9278	5.58144	-3.65364	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0048	96	98	NS	E395286	395286	1	G	D	34.53	40.04	0.73	0.62	0.48	0.034	1.24	0.26	0.073	0.018	0.018	0.001	1.62	5.56	-0.01	7.17	6465	0.5508	4.53492	-3.98412	NAF
NS0048	200	202	NS	E395339	395339	1	G	D	26.92	39.8	3.99	0.581	0.45	0.172	3.47	0.7	0.161	0.268	0.131	0.067	0.83	10.5	0.56	11.89	6517	8.2008	12.2094	-4.0086	NAF
NS0048	132	134	NS	E395305	395305	1	G	D	33.37	38.91	1.81	0.568	0.44	0.083	2.16	0.45	0.094	0.124	0.111	0.023	0.65	7.31	-0.11	7.85	6483	3.7944	7.8489	-4.0545	NAF
NS0048	116	118	NS	E395296	395296	1	G	D	31.8	43.98	1.48	0.529	0.41	0.064	1.69	0.34	0.064	0.06	0.321	0.01	0.45	6.04	-0.27	6.22	6475	1.836	5.93028	-4.09428	NAF
NS0048	206	208	NS	E395342	395342	1	G	D	32.37	39.8	1.92	0.658	0.51	0.084	2.18	0.44	0.083	0.112	0.184	0.034	0.23	8.33	-0.22	8.34	6520	3.4272	7.67448	-4.24728	NAF
NS0048	154	156	NS	E395316	395316	1	G	D	34.24	37.03	1.31	0.62	0.48	0.056	2.02	0.4	0.061	0.087	0.165	0.026	0.61	8.62	-0.19	9.04	6494	2.6622	6.9768	-4.3146	NAF
NS0048	118	120	NS	E395297	395297	1	G	D	34.53	41.46	1.09	0.503	0.39	0.046	1.34	0.29	0.051	0.024	0.269	0.01	0.21	5.86	-0.67	5.4	6476	0.7344	5.05818	-4.32378	NAF
NS0048	228	230	NS	E395353	395353	1	G	D	38.51	31.2	1.4	0.555	0.43	0.061	2.47	0.34	0.042	0.052	0.16	0.183	0.53	8.28	-0.42	8.39	6531	1.5912	5.93028	-4.33908	NAF
NS0048	88	90	NS	E395282	395282	1	G	D	37.77	35.89	0.87	0.594	0.46	0.036	1.38	0.28	0.066	0.016	0.082	0.013	0.79	6.13	-0.17	6.75	6461	0.4896	4.88376	-4.39416	NAF
NS0048	142	144	NS	E395310	395310	1	G	D	32.54	40.02	1.62	0.568	0.44	0.071	2.27	0.4	0.062	0.08	0.209	0.039	0.29	7.81	-0.32	7.78	6488	2.448	6.9768	-4.5288	NAF
NS0048	130	132	NS	E395304	395304	1	G	D	32.79	39.07	2.1	0.607	0.47	0.091	2.24	0.49	0.11	0.12	0.184	0.022	0.68	7.21	-0.08	7.81	6482	3.672	8.54658	-4.87458	NAF
NS0048	100	102	NS	E395288	395288	1	G	D	37.66	35.03	1.03	0.633	0.49	0.047	1.74	0.33	0.061	0.028	0.089	0.014	0.66	7.04	-0.44	7.26	6467	0.8568	5.75586	-4.89906	NAF
NS0048	102	104	NS	E395289	395289	1	G	D	29.23	44.89	0.88	0.581	0.45	0.038	1.74	0.35	0.061	0.032	0.108	0.019	0.92	8.39	-0.18	9.13	6468	0.9792	6.1047	-5.1255	NAF
NS0048	90	92	NS	E395283	395283	1	G	D	32.27	46.06	0.63	0.503	0.39	0.029	1.07	0.33	0.077	0.019	0.084	0.006	0.56	4.62	-0.15	5.03	6462	0.5814	5.75586	-5.17446	NAF
NS0048	92	94	NS	E395284	395284	1	G	D	33.63	42.03	0.7	0.555	0.43	0.031	1.33	0.33	0.064	0.018	0.053	0.007	0.28	6.66	-0.34	6.6	6463	0.5508	5.75586	-5.20506	NAF
NS0048	94	96	NS	E395285	395285	1	G	D	34.9	38.13	1.1	0.646	0.5	0.046	1.45	0.38	0.104	0.045	0.043	0.012	1.59	6.16	-0.01	7.74	6464	1.377	6.62796	-5.25096	NAF
NS0048	254	256	NS	E395366	395366	1	G	D	31.16	37.02	4.44	0.387	0.3	0.404	1.31	0.33	0.044	0.014	0.035	0.079	1.9	9.33	0.03	11.26	6544	0.4284	5.75586	-5.32746	NAF
NS0048	104	106	NS	E395290	395290	1	G	D	29	46.27	0.82	0.581	0.45	0.033	1.65	0.36	0.061	0.026	0.187	0.016	0.73	7.64	-0.2	8.17	6469	0.7956	6.27912	-5.48352	NAF
NS0048	194	196	NS	E395336	395336	1	G	D	33.77	35.25	2.22	0.62	0.48	0.101	2.94	0.56	0.032	0.14	0.071	0.064	0.21	9.49	-0.1	9.6	6514	4.284	9.76752	-5.48352	NAF
NS0048	106	108	NS	E395291	395291	1	G	D	32.85	36.19	1.42	0.736	0.57	0.06	2.4	0.46	0.085	0.083	0.157	0.023	0.67	10.62	-0.15	11.14	6470	2.5398	8.02332	-5.48352	NAF
NS0048	126	128	NS	E395302	395302	1	G	D	26.65	51.64	1.68	0.4	0.31	0.094	1.06	0.35	0.062	0.019	0.153	0.015	0.63	5.66	-0.23	6.06	6480	0.5814	6.1047	-5.5233	NAF
NS0048	198	200	NS	E395338	395338	1	G	D	35.19	31.35	2.41	0.646	0.5	0.101	2.79	0.66	0.13	0.189	0.246	0.146	0.75	10.27	0.13	11.15	6516	5.7834	11.51172	-5.72832	NAF
NS0048	212	214	NS	E395345	395345	1	G	D	32.71	38.89	1.79	0.633	0.49	0.077	2.42	0.49	0.053	0.088	0.26	0.415	0.38	7.67	-0.11	7.94	6523	2.6928	8.54658	-5.85378	NAF
NS0048	110	112	NS	E395293	395293	1	G	D	32.54	43.52	0.84	0.594	0.46	0.036	1.34	0.39	0.084	0.028	0.133	0.012	0.72	6.13	-0.29	6.56	6472	0.8568	6.80238	-5.94558	NAF
NS0048	108	110	NS	E395292	395292	1	G	D	32.21	41.39	1.27	0.581	0.45	0.054	1.9	0.48	0.098	0.079	0.217	0.024	0.56	7.44	-0.11	7.89	6471	2.4174	8.37216	-5.95476	NAF
NS0048	128	130	NS	E395303	395303	1	G	D	33.19	39.13	1.94	0.568	0.44	0.089	1.97	0.47	0.106	0.067	0.156	0.022	0.28	7.75	-0.42	7.61	6481	2.0502	8.19774	-6.14754	NAF
NS0048	256	258	NS	E395367	395367	1	G	D	30.46	35.95	3.69	0.503	0.39	0.283	1.72	0.38	0.038	0.014	0.073	0.086	1.78	11.54	0.01	13.33	6545	0.4284	6.62796	-6.19956	NAF
NS0048	98	100	NS	E395287	395287	1	G	D	34.56	40.73	0.69	0.62	0.48	0.03	1.39	0.4	0.088	0.019	0.042	0.007	0.86	5.69	-0.3	6.25	6466	0.5814	6.9768	-6.3954	NAF
NS0048	146	148	NS	E395312	395312	1	G	D	29.66	46.14	0.81	0.529	0.41	0.034	1.68	0.41	0.062	0.023	0.142	0.023	0.52	7.16	-0.29	7.39	6490	0.7038	7.15122	-6.44742	NAF
NS0048	152	154	NS	E395315	395315	1	G	D	29.68	43.13	0.88	0.62	0.48	0.038	1.95	0.44	0.069	0.038	0.095	0.032	0.71	9.61	-0.2	10.12	6493	1.1628	7.67448	-6.51168	NAF
NS0048	156	158	NS	E395317	395317	1	G	D	31.58	38.1	3.3	0.452	0.35	0.146	2.91	0.64	0.155	0.15	0.089	0.031	0.63	8.42	0.03	9.08	6495	4.59	11.16288	-6.57288	NAF
NS0048	144	146	NS	E395311	395311	1	G	D	31.14	41.92	1.02	0.555	0.43	0.046	1.97	0.43	0.061	0.028	0.14	0.031	0.55	8.65	-0.29	8.91	6489	0.8568	7.50006	-6.64326	NAF
NS0048	148	150	NS	E395313	395313	1	G	D	29.45	41.78	0.85	0.62	0.48	0.035	2.09	0.48	0.077	0.042	0.083	0.03	0.77	11.09	-0.14	11.72	6491	1.2852	8.37216	-7.08696	NAF
NS0048	202	204	NS	E395340	395340	1	G	D	34.58	33.4	1.41	0.788	0.61	0.06	2.4	0.56	0.105	0.08	0.133	0.077	0.72	11.18	-0.18	11.72	6518	2.448	9.76752	-7.31952	NAF
NS0048	190	192	NS	E395334	395334	1	G	D	35.75	33.04	1.37	0.633	0.49	0.058	2.56	0.52	0.053	0.056	0.083	0.035	0.55	10.3	-0.31	10.54	6512	1.7136	9.06984	-7.35624	NAF
NS0048	120	122	NS	E395298	395298	1	G	D	34.7	38.02	1.74	0.594	0.46	0.086	1.61	0.51	0.118	0.046	0.305	0.023	0.62	6.7	-0.37	6.95	6477	1.4076	8.89542	-7.48782	NAF
NS0048	226	228	NS	E395352	395352	1	G	D	28.2	34.98	1.23	0.684	0.53	0.05	3.21	0.91	0.169	0.272	0.19	0.254	0.95	16.11	0.6	17.66	6530	8.3232	15.87222	-7.54902	NAF
NS0048	160	162	NS	E395319	395319	1	G	D	33.69	38.36	0.86	0.684	0.53	0.037	1.81	0.48	0.08	0.026	0.098	0.021	0.71	8.81	-0.39	9.13	6497	0.7956	8.37216	-7.57656	NAF
NS0048	158	160	NS	E395318	395318	1	G	D	33.76	37.44	0.86	0.736	0.57	0.036	1.87	0.53	0.094	0.052	0.107	0.032	0.59	9.52	-0.31	9.8	6496	1.5912	9.24426	-7.65306	NAF
NS0048	138	140	NS	E395308	395308	1	G	D	30.43	36.5	2.87	0.646	0.5	0.172	2.4	0.53	0.09	0.05	0.149	0.051	1.26	11.73	-0.06	12.93	6486	1.53	9.24426	-7.71426	NAF
NS0048	232	234	NS	E395355	395355	1	G	D	37.48	37.19	0.85	0.62	0.48	0.038	1.52	0.47	0.073	0.014	0.29	0.094	0.14	5.49	-0.49	5.14	6533	0.4284	8.19774	-7.76934	NAF
NS0048	192	194	NS	E395335	395335	1	G	D	35.98	35.26	1.5	0.607	0.47	0.071	2.22	0.54	0.055	0.053	0.058	0.054	0.53	8.06	-0.29	8.3	6513	1.6218	9.41868	-7.79688	NAF
NS0048	216	218	NS	E395347	395347	1	G	D	30.53	39.65	2.69	0.62	0.48	0.117	2.95	0.92	0.168	0.259	0.321	0.356	0.38	7.25	0.4	8.03	6525	7.9254	16.04664	-8.12124	NAF
NS0048	134	136	NS	E395306	395306	1	G	D	33.58	35.67	1.96	0.658	0.51	0.085	2.52	0.68	0.158	0.116	0.155	0.034	0.73	8.89	-0.1	9.52	6484	3.5496	11.86056	-8.31096	NAF
NS0048	162	164	NS	E395320	395320	1	G	D	32.19	32.09	1.24	0.865	0.67	0.05	2.52	0.68	0.121	0.109	0.028	0.015	0.98	14.82	0.05	15.85	6498	3.3354	11.86056	-8.52516	NAF
NS0048	186	188	NS	E395332	395332	1	G	D	33.01	31.58	1.57	0.658	0.51	0.07	2.83	0.56	0.056	0.035	0.202	0.044	0.78	14.23	-0.15	14.86	6510	1.071	9.76752	-8.69652	NAF
NS0048	236	238	NS	E395357	395357	1	G	D	35.66	36.82	1.16	0.594	0.46	0.05	1.98	0.56	0.059	0.032	0.164	0.397	0.17	7.17	-0.41	6.93	6535	0.9792	9.76752	-8.78832	NAF
NS0048	140	142	NS	E395309	395309	1	G	D	33.88	36.99	1.16	0.671	0.52	0.053	2.13	0.6	0.121	0.049	0.183	0.038	0.34	9.32	-0.4	9.26	6487	1.4994	10.4652	-8.9658	NAF
NS0048	250	252	NS	E395364	395364	1	G	D	31.64	27.12	0.89	0.684	0.53	0.036	3.36	0.75	0.086	0.099	0.193	0.101	1.15	19.74	0.2	21.09	6542	3.0294	13.0815	-10.0521	NAF
NS0048	182	184	NS	E395330	395330	1	G	D	37.78	35.64	1.11	0.607	0.47	0.049	1.68	0.63	0.095	0.03	0.172	0.04	0.41	5.97	-0.41	5.97	6508	0.918	10.98846	-10.07046	NAF
NS0048	188	190	NS	E395333	395333	1	G	D	28.18	37.15	2.04	0.568	0.44	0.089	2.98	0.93	0.19	0.199	0.255	0.088	1.01	13.77	0.43	15.21	6511	6.0894	16.22106	-10.13166	NAF
NS0048	208	210	NS	E395343	395343	1	G	D	32.65	42.6	1.08	0.516	0.4	0.045	1.8	0.73	0.063	0.066	0.194	0.117	0.33	5.72	-0.11	5.94	6521	2.0196	12.73266	-10.71306	NAF
NS0048	150	152	NS	E395314	395314	1	G	D	33.67	27.26	1.18	0.852	0.66	0.052	2.93	0.79	0.142	0.098	0.181	0.044	1.05	16.84	0.08	17.97	6492	2.9988	13.77918	-10.78038	NAF
NS0048	242	244	NS	E395360	395360	1	G	D	37.52	32.98	0.81	0.555	0.43	0.038	2.12	0.72	0.079	0.054	0.118	0.153	0.57	8.61	-0.23	8.95	6538	1.6524	12.55824	-10.90584	NAF
NS0048	252	254	NS	E395365	395365	1	G	D	29.16	36.33	1.94	0.568	0.44	0.209	2.3	0.71	0.123	0.036	0.104	0.06	1.6	13.88	0.13	15.61	6543	1.1016	12.38382	-11.28222	NAF
NS0048	240	242	NS	E395359	395359	1	G	D	32.92	32.19	1.58	0.684	0.53	0.103	2.72	0.91	0.13	0.14	0.178	0.242	0.88	13.08	0.08	14.04	6537	4.284	15.87222	-11.58822	NAF
NS0048	196	198	NS	E395337	395337	1	G	D	36.74	36.79	0.98	0.684	0.53	0.043	1.76	0.7	0.082	0.018	0.11	0.11	0.12	6.62	-0.41	6.33	6515	0.5508	12.2094	-11.6586	NAF
NS0048	222	224	NS	E395350	395350	1	G	D	34.5	37.61	0.97	0.633	0.49	0.045	1.91	0.73	0.084	0.033	0.151	0.302	0.34	7.72	-0.21	7.85	6528	1.0098	12.73266	-11.72286	NAF
NS0048	248	250	NS	E395363	395363	1	G	D	36.73	22.33	1.19	0.697	0.54	0.051	3.4	0.81	0.064	0.06	0.208	0.224	0.93	17.29	-0.03	18.19	6541	1.836	14.12802	-12.29202	NAF
NS0048	230	232	NS	E395354	395354	1	G	D	35.88	37.69	1.22	0.568	0.44	0.054	1.88	0.76	0.061	0.031	0.189	0.207	0.4	5.79	-0.15	6.04	6532	0.9486	13.25592	-12.30732	NAF
NS0048	112	114	NS	E395294	395294	1	G	D	34.82	38.39	1.05	0.646	0.5	0.048	1.51	0.77	0.206	0.031	0.259	0.014	0.26	7.4	-0.53	7.13	6473	0.9486	13.43034	-12.48174	NAF
NS0048	176	178	NS	E395327	395327	1	G	D	31.87	37.97	3.61	0.465	0.36	0.324	2.03	0.82	0.105	0.057	0.149	0.045	1.09	7.41	0.03	8.53	6505	1.7442	14.30244	-12.55824	NAF
NS0048	224	226	NS	E395351	395351	1	G	D	32.32	34.78	1.03	0.555	0.43	0.044	2.66	0.8	0.107	0.045	0.176	0.29	0.81	12.35	-0.08	13.08	6529	1.377	13.9536	-12.5766	NAF
NS0048	184	186	NS	E395331	395331	1	G	D	31.96	39.75	0.81	0.633	0.49	0.036	1.93	0.81	0.147	0.038	0.185	0.045	0.48	9.41	-0.23	9.66	6509	1.1628	14.12802	-12.96522	NAF
NS0048	246	248	NS	E395362	395362	1	G	D	37.1	24.51	1.1	0.646	0.5	0.049	3.21	0.93	0.145	0.075	0.22	0.257	0.79	14.74	-0.13	15.4	6540	2.295	16.22106	-13.92606	NAF
NS0048	218	220	NS	E395348	395348	1	G	D	34.75	39.42	0.91	0.684	0.53	0.04	1.76	0.86	0.082	0.019	0.247	0.296	0.17	5.94	-0.01	6.1	6526	0.5814	15.00012	-14.41872	NAF
NS0048	238	240	NS	E395358	395358	1	G	D	37.88	35.24	0.97	0.646	0.5	0.043	1.76	0.87	0.07	0.021	0.204	0.176	0.31	5.76	-0.16	5.91	6536	0.6426	15.17454	-14.53194	NAF
NS0048	220	222	NS	E395349	395349	1	G	D	34.03	38.82	1	0.646	0.5	0.042	1.97	0.89	0.084	0.024	0.262	0.31	0.3	6.62	-0.01	6.91	6527	0.7344	15.52338	-14.78898	NAF
NS0048	210	212	NS	E395344	395344	1	G	D	33.41	42.97	0.66	0.594	0.46	0.029	1.5	0.89	0.075	0.014	0.255	0.075	0.16	5.09	0.07	5.32	6522	0.4284	15.52338	-15.09498	NAF
NS0048	244	246	NS	E395361	395361	1	G	D	35.06	35.55	0.6	0.646	0.5	0.026	2.15	0.94	0.091	0.019	0.147	0.139	0.26	9.05	-0.05	9.26	6539	0.5814	16.39548	-15.81408	NAF
NS0048	178	180	NS	E395328	395328	1	G	D	32.2	33.95	3.76	0.516	0.4	0.274	2.73	1.06	0.165	0.061	0.126	0.051	0.91	9.8	0.06	10.77	6506	1.8666	18.48852	-16.62192	NAF
NS0048	180	182	NS	E395329	395329	1	G	D	28.6	48.67	1.26	0.555	0.43	0.07	1.32	1.01	0.081	0.026	0.13	0.034	0.39	5.07	0.15	5.61	6507	0.7956	17.61642	-16.82082	NAF
NS0048	234	236	NS	E395356	395356	1	G	D	34.37	38.63	0.79	0.581	0.45	0.036	1.88	1.25	0.151	0.023	0.207	0.227	0.24	6.53	0.09	6.86	6534	0.7038	21.8025	-21.0987	NAF
NS0048	214	216	NS	E395346	395346	1	G	D	29.63	48.87	0.64	0.568	0.44	0.027	1.36	1.26	0.066	0.014	0.183	0.133	0.05	3.89	0.68	4.62	6524	0.4284	21.97692	-21.54852	NAF
NS0049	268	270	NS	E395228	395228	1	G	W	23.27	47.16	7.91	0.194	0.15	0.369	4.45	0.16	0.034	0.369	1.48	0.409	1.4	1.83	0.84	4.07	6407	11.2914	2.79072	8.50068	PAF(LC)
NS0049	104	106	NS	E395145	395145	1	G	W	22.66	46.64	9.42	0.077	0.06	0.443	4.88	0.22	0.023	0.396	0.783	0.237	1.16	2.54	0.89	4.59	6325	12.1176	3.83724	8.28036	PAF(LC)
NS0049	286	288	NS	E395237	395237	1	G	W	24.15	45.2	8.61	0.219	0.17	0.403	4.5	0.21	0.04	0.373	1.28	0.375	1.34	2.27	0.8	4.41	6416	11.4138	3.66282	7.75098	PAF(LC)
NS0049	266	268	NS	E395227	395227	1	G	W	21.99	51.65	5.59	0.297	0.23	0.256	3.63	0.36	0.03	0.457	1.41	0.374	1.36	2.66	0.65	4.67	6406	13.9842	6.27912	7.70508	PAF(LC)
NS0049	284	286	NS	E395236	395236	1	G	W	24.1	46.87	4.57	0.491	0.38	0.2	3.37	0.77	0.111	0.566	1.59	0.424	1.73	3.67	1.24	6.64	6415	17.3196	13.43034	3.88926	PAF(LC)
NS0049	222	224	NS	E395205	395205	1	G	W	27.85	41.55	5.85	0.168	0.13	0.283	3.8	0.46	0.06	0.387	1.84	0.479	1.78	2.76	0.96	5.5	6384	11.8422	8.02332	3.81888	PAF(LC)
NS0049	198	200	NS	E395192	395192	1	G	W	26.94	42.58	5.3	0.297	0.23	0.242	3.6	0.58	0.097	0.429	1.39	0.362	1.75	3.75	1.08	6.58	6372	13.1274	10.11636	3.01104	PAF(LC)
NS0049	220	222	NS	E395204	395204	1	G	W	28.48	40.7	5.76	0.168	0.13	0.274	3.8	0.5	0.107	0.355	1.9	0.509	1.81	2.3	0.94	5.05	6383	10.863	8.721	2.142	PAF(LC)
NS0049	270	272	NS	E395229	395229	1	G	W	26.93	43.92	4.1	0.336	0.26	0.19	3.15	0.46	0.066	0.235	1.1	0.288	1.54	5.39	0.71	7.64	6408	7.191	8.02332	-0.83232	NAF
NS0049	180	182	NS	E395183	395183	1	G	W	27.91	43.64	4.53	0.271	0.21	0.206	3.6	0.73	0.072	0.382	1.49	0.389	1.41	2.26	0.97	4.64	6363	11.6892	12.73266	-1.04346	NAF
NS0049	224	226	NS	E395206	395206	1	G	W	26.82	42.97	3.45	0.387	0.3	0.157	3.03	0.5	0.029	0.191	1.2	0.314	1.87	6.97	0.63	9.47	6385	5.8446	8.721	-2.8764	NAF
NS0049	264	266	NS	E395226	395226	1	G	W	27.77	41.9	4.78	0.387	0.3	0.223	3.49	0.61	0.064	0.242	1.19	0.312	1.52	4.84	0.75	7.11	6405	7.4052	10.63962	-3.23442	NAF
NS0049	140	142	NS	E395163	395163	1	G	W	23.03	47.44	7.08	0.219	0.17	0.324	3.95	0.91	0.053	0.396	0.962	0.288	1.14	3.44	1.02	5.6	6343	12.1176	15.87222	-3.75462	NAF
NS0049	216	218	NS	E395202	395202	1	G	W	32.91	36.67	2.26	0.336	0.26	0.106	2.44	0.46	0.085	0.111	0.971	0.281	1.49	7.2	0.17	8.86	6381	3.3966	8.02332	-4.62672	NAF
NS0049	226	228	NS	E395207	395207	1	G	W	27.68	41.8	1.76	0.542	0.42	0.077	2.2	0.45	0.048	0.09	0.678	0.181	1.54	10.66	0.2	12.4	6386	2.754	7.8489	-5.0949	NAF
NS0049	238	240	NS	E395213	395213	1	G	W	31.16	37.86	2.86	0.4	0.31	0.133	2.95	0.57	0.08	0.152	1.07	0.269	1.52	6.81	0.36	8.69	6392	4.6512	9.94194	-5.29074	NAF
NS0049	182	184	NS	E395184	395184	1	G	W	25.59	45.27	4.5	0.349	0.27	0.221	3.71	0.97	0.115	0.373	1.46	0.396	1.61	3.44	1.11	6.16	6364	11.4138	16.91874	-5.50494	NAF
NS0049	272	274	NS	E395230	395230	1	G	W	30.66	37.82	2.45	0.4	0.31	0.109	2.84	0.62	0.101	0.158	1.02	0.259	1.66	8.33	0.35	10.34	6409	4.8348	10.81404	-5.97924	NAF
NS0049	246	248	NS	E395217	395217	1	G	W	27.19	42.33	3.97	0.413	0.32	0.188	3.61	0.64	0.048	0.163	1.36	0.343	1.68	5.5	0.67	7.85	6396	4.9878	11.16288	-6.17508	NAF
NS0049	274	276	NS	E395231	395231	1	G	W	30.19	37.4	2.36	0.336	0.26	0.105	2.78	0.55	0.087	0.107	0.962	0.245	1.89	9.65	0.27	11.81	6410	3.2742	9.5931	-6.3189	NAF
NS0049	194	196	NS	E395190	395190	1	G	W	23.64	48.73	3.41	0.387	0.3	0.154	2.95	0.8	0.053	0.24	1.03	0.264	1.56	5.75	0.81	8.12	6370	7.344	13.9536	-6.6096	NAF
NS0049	244	246	NS	E395216	395216	1	G	W	28.21	39.84	5.1	0.323	0.25	0.237	4.09	0.87	0.147	0.269	1.62	0.417	1.75	3.87	0.94	6.56	6395	8.2314	15.17454	-6.94314	NAF
NS0049	192	194	NS	E395189	395189	1	G	W	29.65	39.06	2.68	0.4	0.31	0.122	2.96	0.7	0.063	0.152	1.07	0.282	1.62	7.88	0.5	10	6369	4.6512	12.2094	-7.5582	NAF
NS0049	102	104	NS	E395144	395144	1	G	W	20.41	51.62	6.83	0.155	0.12	0.316	3.85	1.06	0.096	0.357	0.769	0.227	1.26	3.03	1.21	5.5	6324	10.9242	18.48852	-7.56432	NAF
NS0049	138	140	NS	E395162	395162	1	G	W	29.58	40.34	4.46	0.271	0.21	0.208	3.28	0.94	0.072	0.278	1.36	0.367	1.56	3.54	0.91	6.01	6342	8.5068	16.39548	-7.88868	NAF
NS0049	228	230	NS	E395208	395208	1	G	W	29.84	36.25	1.54	0.646	0.5	0.067	2.43	0.63	0.105	0.093	0.616	0.174	1.66	12.47	0.19	14.32	6387	2.8458	10.98846	-8.14266	NAF
NS0049	214	216	NS	E395200	395200	1	G	W	32.76	37.99	1.28	0.465	0.36	0.058	2.01	0.56	0.07	0.037	0.563	0.155	1	8.75	-0.13	9.62	6380	1.1322	9.76752	-8.63532	NAF
NS0049	200	202	NS	E395193	395193	1	G	W	28.14	41.81	3.41	0.374	0.29	0.155	2.97	0.91	0.085	0.235	1.19	0.317	1.8	5.78	0.76	8.34	6373	7.191	15.87222	-8.68122	NAF
NS0049	212	214	NS	E395199	395199	1	G	W	33.29	34.91	1.82	0.555	0.43	0.08	2.49	0.66	0.078	0.083	0.787	0.217	1.42	9.1	0.09	10.61	6379	2.5398	11.51172	-8.97192	NAF
NS0049	108	110	NS	E395147	395147	1	G	W	20.7	49.83	8.34	0.103	0.08	0.39	4.36	1.13	0.046	0.336	0.751	0.218	1.05	2.74	1.08	4.87	6327	10.2816	19.70946	-9.42786	NAF
NS0049	206	208	NS	E395196	395196	1	G	W	31.27	39.76	3.84	0.245	0.19	0.179	3.11	0.88	0.088	0.193	1.35	0.363	1.44	2.81	0.68	4.93	6376	5.9058	15.34896	-9.44316	NAF
NS0049	280	282	NS	E395234	395234	1	G	W	26.8	42.72	2.21	0.4	0.31	0.1	2.56	0.8	0.092	0.145	0.736	0.204	1.53	9.45	0.37	11.35	6413	4.437	13.9536	-9.5166	NAF
NS0049	164	166	NS	E395175	395175	1	G	W	28.92	38.97	3.97	0.361	0.28	0.185	3.56	1.25	0.098	0.392	1.47	0.394	1.79	4.95	1.16	7.9	6355	11.9952	21.8025	-9.8073	NAF
NS0049	196	198	NS	E395191	395191	1	G	W	30.22	39.64	2.14	0.426	0.33	0.097	2.42	0.78	0.089	0.108	0.805	0.206	1.43	8.07	0.22	9.72	6371	3.3048	13.60476	-10.29996	NAF
NS0049	106	108	NS	E395146	395146	1	G	W	21.33	48.44	7.34	0.194	0.15	0.342	4.15	1.55	0.126	0.535	0.806	0.226	1.15	3.41	1.52	6.08	6326	16.371	27.0351	-10.6641	NAF
NS0049	236	238	NS	E395212	395212	1	G	W	30.11	36.16	3.76	0.374	0.29	0.175	3.46	1.09	0.14	0.26	1.41	0.378	1.92	6.72	0.94	9.58	6391	7.956	19.01178	-11.05578	NAF
NS0049	186	188	NS	E395186	395186	1	G	W	28.5	42.85	3.31	0.361	0.28	0.153	3.06	1.15	0.082	0.267	1.17	0.311	1.4	4.09	0.9	6.39	6366	8.1702	20.0583	-11.8881	NAF
NS0049	282	284	NS	E395235	395235	1	G	W	19.84	54.52	2.29	0.542	0.42	0.1	2.45	1.28	0.157	0.324	0.821	0.22	1.29	6.71	0.95	8.95	6414	9.9144	22.32576	-12.41136	NAF
NS0049	242	244	NS	E395215	395215	1	G	W	27.75	42.25	2.88	0.465	0.36	0.131	2.94	0.97	0.067	0.133	1	0.258	1.47	6.82	0.59	8.88	6394	4.0698	16.91874	-12.84894	NAF
NS0049	248	250	NS	E395218	395218	1	G	W	27.42	41.96	3.16	0.491	0.38	0.146	3.18	0.96	0.05	0.125	1.12	0.289	1.63	6.97	0.62	9.22	6397	3.825	16.74432	-12.91932	NAF
NS0049	132	134	NS	E395159	395159	1	G	W	25.44	43.54	5.54	0.349	0.27	0.263	3.71	1.44	0.042	0.369	1.4	0.368	1.61	3.55	1.34	6.5	6339	11.2914	25.11648	-13.82508	NAF
NS0049	230	232	NS	E395209	395209	1	G	W	26.2	43.56	2.59	0.465	0.36	0.122	2.74	1.09	0.063	0.168	0.823	0.221	1.45	8.46	0.62	10.53	6388	5.1408	19.01178	-13.87098	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0049	178	180	NS	E395182	395182	1	G	W	30.75	39.55	3.76	0.349	0.27	0.173	3.32	1.32	0.097	0.293	1.28	0.345	1.37	3.14	1.07	5.58	6362	8.9658	23.02344	-14.05764	NAF
NS0049	276	278	NS	E395232	395232	1	G	W	31.38	35.65	2.38	0.336	0.26	0.11	2.8	0.96	0.102	0.07	0.96	0.242	1.71	9.32	0.26	11.29	6411	2.142	16.74432	-14.60232	NAF
NS0049	240	242	NS	E395214	395214	1	G	W	29.84	39.95	3.33	0.426	0.33	0.155	2.98	1.23	0.178	0.206	1.11	0.285	1.44	5.05	0.68	7.17	6393	6.3036	21.45366	-15.15006	NAF
NS0049	208	210	NS	E395197	395197	1	G	W	31.77	39.72	2.97	0.31	0.24	0.137	2.72	1.12	0.098	0.136	1.19	0.31	1.25	3.61	0.63	5.49	6377	4.1616	19.53504	-15.37344	NAF
NS0049	232	234	NS	E395210	395210	1	G	W	26.4	44.47	1.84	0.478	0.37	0.085	2.39	1.14	0.063	0.117	0.624	0.162	1.26	8.91	0.51	10.68	6389	3.5802	19.88388	-16.30368	NAF
NS0049	218	220	NS	E395203	395203	1	G	W	30.01	39.25	1.44	0.478	0.37	0.062	2.3	1.17	0.088	0.089	0.61	0.171	1.26	9.53	0.37	11.16	6382	2.7234	20.40714	-17.68374	NAF
NS0049	122	124	NS	E395154	395154	1	G	W	28.24	41.96	3.66	0.284	0.22	0.17	3.26	1.4	0.073	0.204	1.13	0.294	1.5	4.73	0.98	7.21	6334	6.2424	24.4188	-18.1764	NAF
NS0049	120	122	NS	E395153	395153	1	G	W	26.04	43.19	4.29	0.271	0.21	0.203	3.58	1.47	0.066	0.243	1.21	0.313	1.72	4.94	1.16	7.82	6333	7.4358	25.63974	-18.20394	NAF
NS0049	174	176	NS	E395180	395180	1	G	W	35.48	34.54	1.95	0.439	0.34	0.089	2.11	1.17	0.056	0.07	0.709	0.188	1.09	6.06	0.41	7.56	6360	2.142	20.40714	-18.26514	NAF
NS0049	278	280	NS	E395233	395233	1	G	W	30.53	35.79	2.38	0.361	0.28	0.105	2.93	1.25	0.185	0.093	0.966	0.256	1.57	9.56	0.34	11.47	6412	2.8458	21.8025	-18.9567	NAF
NS0049	184	186	NS	E395185	395185	1	G	W	29.77	41.1	2.55	0.413	0.32	0.118	2.7	1.47	0.086	0.211	0.929	0.246	1.26	5.13	0.92	7.31	6365	6.4566	25.63974	-19.18314	NAF
NS0049	234	236	NS	E395211	395211	1	G	W	27.38	45.13	1.17	0.452	0.35	0.051	1.9	1.3	0.066	0.078	0.44	0.11	1.37	7.99	0.51	9.87	6390	2.3868	22.6746	-20.2878	NAF
NS0049	124	126	NS	E395155	395155	1	G	W	27.89	41.93	4.27	0.258	0.2	0.202	3.4	1.52	0.093	0.195	1.27	0.325	1.59	3.83	1.04	6.46	6335	5.967	26.51184	-20.54484	NAF
NS0049	114	116	NS	E395150	395150	1	G	W	30.48	39.94	2.56	0.284	0.22	0.118	2.63	1.42	0.068	0.135	0.895	0.22	1.22	5.91	0.71	7.84	6330	4.131	24.76764	-20.63664	NAF
NS0049	204	206	NS	E395195	395195	1	G	W	32.03	38.53	2.7	0.336	0.26	0.124	2.56	1.46	0.114	0.145	1.11	0.294	1.4	4.32	0.77	6.49	6375	4.437	25.46532	-21.02832	NAF
NS0049	116	118	NS	E395151	395151	1	G	W	27.5	42.67	4.4	0.155	0.12	0.206	3.6	1.7	0.159	0.27	1.36	0.331	1.52	3.08	1.19	5.79	6331	8.262	29.6514	-21.3894	NAF
NS0049	166	168	NS	E395176	395176	1	G	W	31.18	38.82	2.73	0.361	0.28	0.125	2.75	1.6	0.103	0.179	0.976	0.258	1.32	5.25	0.81	7.38	6356	5.4774	27.9072	-22.4298	NAF
NS0049	250	252	NS	E395219	395219	1	G	W	27.17	42.68	2.96	0.452	0.35	0.136	3.11	1.59	0.053	0.154	1.08	0.274	1.48	6.1	1.08	8.66	6398	4.7124	27.73278	-23.02038	NAF
NS0049	154	156	NS	E395170	395170	1	G	W	28.64	40.09	4.27	0.271	0.21	0.198	3.31	1.86	0.12	0.3	1.44	0.376	1.54	3.66	1.33	6.53	6350	9.18	32.44212	-23.26212	NAF
NS0049	118	120	NS	E395152	395152	1	G	W	28.57	41.44	3.68	0.245	0.19	0.171	3.23	1.67	0.096	0.185	1.21	0.308	1.53	4.32	1.02	6.87	6332	5.661	29.12814	-23.46714	NAF
NS0049	158	160	NS	E395172	395172	1	G	W	30.89	40.25	2.83	0.284	0.22	0.128	2.4	1.93	0.095	0.307	0.856	0.231	1.13	4.15	1.06	6.34	6352	9.3942	33.66306	-24.26886	NAF
NS0049	188	190	NS	E395187	395187	1	G	W	31.84	41.01	1.6	0.336	0.26	0.073	2.04	1.55	0.076	0.08	0.673	0.177	0.9	5.12	0.72	6.74	6367	2.448	27.0351	-24.5871	NAF
NS0049	190	192	NS	E395188	395188	1	G	W	31.61	38.05	2.83	0.297	0.23	0.133	2.85	1.73	0.138	0.176	1.13	0.306	1.39	4.65	0.97	7.01	6368	5.3856	30.17466	-24.78906	NAF
NS0049	210	212	NS	E395198	395198	1	G	W	31.65	39.13	1.67	0.503	0.39	0.069	2.32	1.54	0.103	0.06	0.712	0.184	0.93	6.62	0.7	8.25	6378	1.836	26.86068	-25.02468	NAF
NS0049	260	262	NS	E395224	395224	1	G	W	35.69	33.95	1.03	0.452	0.35	0.045	2.12	1.5	0.083	0.027	0.45	0.118	0.73	7.52	0.58	8.83	6403	0.8262	26.163	-25.3368	NAF
NS0049	130	132	NS	E395158	395158	1	G	W	27.07	44.07	3.43	0.31	0.24	0.16	2.75	1.75	0.073	0.169	1.08	0.276	1.49	4.69	0.95	7.13	6338	5.1714	30.5235	-25.3521	NAF
NS0049	202	204	NS	E395194	395194	1	G	W	30.5	40.94	1.03	0.478	0.37	0.043	1.7	1.53	0.071	0.043	0.433	0.112	0.89	8.32	0.33	9.54	6374	1.3158	26.68626	-25.37046	NAF
NS0049	168	170	NS	E395177	395177	1	G	W	30.3	40.47	3.11	0.271	0.21	0.141	2.88	1.86	0.107	0.231	1.21	0.323	1.32	3.46	1.27	6.05	6357	7.0686	32.44212	-25.37352	NAF
NS0049	252	254	NS	E395220	395220	1	G	W	31	37.04	2.99	0.439	0.34	0.135	3.26	1.72	0.12	0.131	1.24	0.332	1.53	5.58	1.04	8.15	6399	4.0086	30.00024	-25.99164	NAF
NS0049	110	112	NS	E395148	395148	1	G	W	21.12	49.15	7.1	0.116	0.09	0.331	3.97	2.05	0.069	0.271	0.786	0.227	1.05	3.19	1.38	5.62	6328	8.2926	35.7561	-27.4635	NAF
NS0049	162	164	NS	E395174	395174	1	G	W	28.76	41.6	3.07	0.284	0.22	0.14	2.9	2.07	0.114	0.243	1.17	0.309	1.37	3.95	1.37	6.69	6354	7.4358	36.10494	-28.66914	NAF
NS0049	256	258	NS	E395222	395222	1	G	W	31.34	37.6	1.65	0.516	0.4	0.089	2.52	1.77	0.104	0.07	0.691	0.176	0.99	7.7	0.86	9.55	6401	2.142	30.87234	-28.73034	NAF
NS0049	112	114	NS	E395149	395149	1	G	W	32.12	37.62	1.87	0.284	0.22	0.083	2.25	1.88	0.121	0.077	0.715	0.189	1.19	6.9	0.68	8.77	6329	2.3562	32.79096	-30.43476	NAC
NS0049	258	260	NS	E395223	395223	1	G	W	30.32	42.17	1.57	0.374	0.29	0.075	2.2	1.88	0.087	0.074	0.677	0.183	0.86	5.29	1.09	7.24	6402	2.2644	32.79096	-30.52656	NAC
NS0049	152	154	NS	E395169	395169	1	G	W	27.49	41.38	3.9	0.31	0.24	0.179	3.27	2.19	0.062	0.229	1.34	0.348	1.68	4.24	1.64	7.56	6349	7.0074	38.19798	-31.19058	NAC
NS0049	136	138	NS	E395161	395161	1	G	W	32.26	38.09	1.42	0.426	0.33	0.064	2.03	1.99	0.073	0.06	0.61	0.162	0.97	6.72	0.96	8.65	6341	1.836	34.70958	-32.87358	NAC
NS0049	172	174	NS	E395179	395179	1	G	W	27.8	41.26	3.55	0.349	0.27	0.165	3.31	2.26	0.055	0.188	1.41	0.369	1.49	3.77	1.89	7.15	6359	5.7528	39.41892	-33.66612	NAC
NS0049	134	136	NS	E395160	395160	1	G	W	31.68	36.93	2.05	0.426	0.33	0.096	2.57	2.14	0.064	0.074	0.85	0.229	1.21	6.42	1.29	8.92	6340	2.2644	37.32588	-35.06148	NAC
NS0049	262	264	NS	E395225	395225	1	G	W	34.18	35.95	1.14	0.4	0.31	0.049	2.02	2.08	0.086	0.028	0.488	0.129	0.69	6.41	1.2	8.3	6404	0.8568	36.27936	-35.42256	NAC
NS0049	142	144	NS	E395164	395164	1	G	W	32.49	37	1.56	0.465	0.36	0.07	1.86	2.36	0.069	0.18	0.523	0.143	0.85	7.5	0.92	9.27	6344	5.508	41.16312	-35.65512	NAC
NS0049	170	172	NS	E395178	395178	1	G	W	28.63	42.52	3.14	0.284	0.22	0.143	2.9	2.48	0.136	0.246	1.08	0.288	1.14	2.99	1.62	5.75	6358	7.5276	43.25616	-35.72856	NAC
NS0049	160	162	NS	E395173	395173	1	G	W	29.12	43.59	2.46	0.232	0.18	0.117	2.32	2.6	0.089	0.16	0.954	0.248	1.02	2.64	1.8	5.46	6353	4.896	45.3492	-40.4532	NAC
NS0049	148	150	NS	E395167	395167	1	G	W	27.96	40.55	3.86	0.271	0.21	0.175	3.21	2.65	0.187	0.182	1.35	0.356	1.46	3.71	1.57	6.74	6347	5.5692	46.2213	-40.6521	NAC
NS0049	128	130	NS	E395157	395157	1	G	W	28.88	39.96	2.9	0.31	0.24	0.133	2.9	2.61	0.093	0.15	1.07	0.278	1.39	5.27	1.58	8.24	6337	4.59	45.52362	-40.93362	NAC
NS0049	176	178	NS	E395181	395181	1	G	W	32.49	39.9	0.87	0.491	0.38	0.038	1.54	2.44	0.085	0.036	0.381	0.107	0.56	5.74	1.26	7.56	6361	1.1016	42.55848	-41.45688	NAC
NS0049	156	158	NS	E395171	395171	1	G	W	26.77	44.71	2.87	0.284	0.22	0.132	2.41	2.98	0.129	0.321	0.921	0.253	1.1	3.8	1.69	6.59	6351	9.8226	51.97716	-42.15456	NAC
NS0049	150	152	NS	E395168	395168	1	G	W	28.01	40.43	2.54	0.361	0.28	0.115	2.56	2.68	0.061	0.111	1.04	0.266	2.45	5.09	1.85	9.39	6348	3.3966	46.74456	-43.34796	NAC
NS0049	126	128	NS	E395156	395156	1	G	W	27.88	41.04	2.61	0.284	0.22	0.12	2.56	3.17	0.06	0.168	0.849	0.214	1.71	5.45	1.77	8.93	6336	5.1408	55.29114	-50.15034	NAC
NS0049	144	146	NS	E395165	395165	1	G	W	32.19	38.2	1.25	0.387	0.3	0.057	1.56	3.16	0.084	0.072	0.495	0.127	0.74	6.34	1.29	8.37	6345	2.2032	55.11672	-52.91352	NAC
NS0049	254	256	NS	E395221	395221	1	G	W	25.86	45.59	2.08	0.374	0.29	0.096	2.51	3.24	0.064	0.083	0.88	0.214	0.92	3.92	2.66	7.5	6400	2.5398	56.51208	-53.97228	NAC
NS0049	146	148	NS	E395166	395166	1	G	W	31.26	38.21	1.75	0.323	0.25	0.079	1.98	3.37	0.2	0.099	0.734	0.192	0.91	5.28	1.73	7.92	6346	3.0294	58.77954	-55.75014	NAC
NS0050	82	84	NS	E395043	395043	1	G	D	17.71	50.93	7.35	0.465	0.36	0.334	4.55	0.41	0.095	1.15	0.416	0.012	0.39	7.36	2.11	9.86	6224	35.19	7.15122	28.03878	PAF(HC)
NS0050	68	70	NS	E395036	395036	1	G	D	14.98	53.27	12.45	0.077	0.06	0.603	4.98	0.03	0.015	0.609	1.84	0.02	0.48	3.84	0.53	4.85	6217	18.6354	0.52326	18.11214	PAF(HC)
NS0050	54	56	NS	E395029	395029	1	G	D	20.12	53	8.62	0.065	0.05	0.419	3.77	0.02	0.073	0.6	0.071	0.011	1.08	3.08	0.61	4.77	6210	18.36	0.34884	18.01116	PAF(HC)
NS0050	96	98	NS	E395050	395050	1	G	D	6.68	66.49	11.54	0.052	0.04	0.496	3.67	0.03	0.012	0.602	4.08	0.029	0.23	2.49	0.75	3.47	6231	18.4212	0.52326	17.89794	PAF(HC)
NS0050	76	78	NS	E395040	395040	1	G	D	21.57	45.75	4.05	0.581	0.45	0.198	3.56	0.49	0.094	0.856	0.036	0.009	0.64	11.74	1.7	14.08	6221	26.1936	8.54658	17.64702	PAF(HC)
NS0050	78	80	NS	E395041	395041	1	G	D	16.51	53.9	9.36	0.207	0.16	0.449	4.59	0.3	0.081	0.715	0.398	0.014	0.7	5.2	1	6.9	6222	21.879	5.2326	16.6464	PAF(HC)
NS0050	66	68	NS	E395035	395035	1	G	D	14.46	54.38	12.18	0.077	0.06	0.589	4.87	0.05	0.017	0.564	2.03	0.014	0.71	3.5	0.63	4.84	6216	17.2584	0.8721	16.3863	PAF(HC)
NS0050	236	238	NS	E395121	395121	1	G	W	21.48	49.08	6.08	0.194	0.15	0.295	3.29	0.62	0.079	0.813	2.21	0.303	1.16	4.29	1.36	6.81	6301	24.8778	10.81404	14.06376	PAF(HC)
NS0050	94	96	NS	E395049	395049	1	G	D	6.71	67.06	11.36	0.052	0.04	0.486	3.7	0.03	0.012	0.462	3.88	0.028	0.26	2.54	0.66	3.46	6230	14.1372	0.52326	13.61394	PAF(HC)
NS0050	56	58	NS	E395030	395030	1	G	D	17.65	56.11	9.09	0.065	0.05	0.436	4.06	0.09	0.075	0.491	0.074	0.023	0.82	3.26	0.49	4.57	6211	15.0246	1.56978	13.45482	PAF(HC)
NS0050	64	66	NS	E395034	395034	1	G	D	15.01	53.46	12.45	0.077	0.06	0.598	5.08	0.04	0.016	0.455	1.75	0.017	0.59	3.81	0.5	4.9	6215	13.923	0.69768	13.22532	PAF(HC)
NS0050	80	82	NS	E395042	395042	1	G	D	15.85	52.13	12.13	0.116	0.09	0.593	5.47	0.08	0.025	0.468	1.24	0.012	0.55	4.22	0.68	5.45	6223	14.3208	1.39536	12.92544	PAF(HC)
NS0050	72	74	NS	E395038	395038	1	G	D	17.16	53.72	8.53	0.245	0.19	0.415	4.25	0.28	0.066	0.579	0.187	0.013	0.47	6.2	0.9	7.57	6219	17.7174	4.88376	12.83364	PAF(HC)
NS0050	58	60	NS	E395031	395031	1	G	D	14.02	54.62	12.5	0.077	0.06	0.601	4.8	0.03	0.017	0.432	2.34	0.019	0.49	3.69	0.45	4.63	6212	13.2192	0.52326	12.69594	PAF(HC)
NS0050	92	94	NS	E395048	395048	1	G	D	6.97	63.73	12.88	0.052	0.04	0.553	3.98	0.05	0.017	0.432	4.45	0.035	0.22	2.74	0.71	3.67	6229	13.2192	0.8721	12.3471	PAF(HC)
NS0050	74	76	NS	E395039	395039	1	G	D	21.44	44.54	5.83	0.503	0.39	0.279	4.08	0.5	0.109	0.681	0.061	0.004	0.68	10.98	1.23	12.89	6220	20.8386	8.721	12.1176	PAF(HC)
NS0050	52	54	NS	E395028	395028	1	G	D	16.26	64.79	5.26	0.065	0.05	0.233	2.06	0.05	0.094	0.367	0.356	0.02	1.09	1.56	0.66	3.31	6209	11.2302	0.8721	10.3581	PAF(HC)
NS0050	62	64	NS	E395033	395033	1	G	D	15.26	52.33	12.87	0.077	0.06	0.632	5.19	0.04	0.017	0.354	1.87	0.015	0.39	4.17	0.35	4.91	6214	10.8324	0.69768	10.13472	PAF(HC)
NS0050	70	72	NS	E395037	395037	1	G	D	18.16	53.15	3.75	0.594	0.46	0.165	3.15	0.75	0.163	0.744	0.112	0.003	0.6	9.64	1.6	11.84	6218	22.7664	13.0815	9.6849	PAF(LC)
NS0050	84	86	NS	E395044	395044	1	G	D	7.63	61.7	13.56	0.065	0.05	0.617	4.08	0.04	0.014	0.279	4.69	0.041	0.34	2.78	0.69	3.81	6225	8.5374	0.69768	7.83972	PAF(LC)
NS0050	60	62	NS	E395032	395032	1	G	D	15.37	55.6	10.73	0.116	0.09	0.506	4.58	0.23	0.082	0.377	0.716	0.017	0.57	3.94	0.44	4.95	6213	11.5362	4.01166	7.52454	PAF(LC)
NS0050	118	120	NS	E395061	395061	1	G	W	20.6	47.09	6.28	0.465	0.36	0.287	3.73	0.66	0.139	0.612	0.051	0.0005	0.62	9.5	1.05	11.17	6242	18.7272	11.51172	7.21548	PAF(LC)
NS0050	86	88	NS	E395045	395045	1	G	D	7.06	61.96	13.9	0.052	0.04	0.607	4.08	0.04	0.013	0.253	5.1	0.036	0.25	2.69	0.7	3.64	6226	7.7418	0.69768	7.04412	PAF(LC)
NS0050	134	136	NS	E395069	395069	1	G	W	21.17	48.02	6.52	0.271	0.21	0.326	3.88	0.37	0.061	0.415	0.498	0.088	1.27	7.1	0.88	9.25	6250	12.699	6.45354	6.24546	PAF(LC)
NS0050	90	92	NS	E395047	395047	1	G	D	7.18	60.76	14.41	0.052	0.04	0.647	4.34	0.04	0.014	0.205	4.99	0.032	0.36	2.77	0.69	3.82	6228	6.273	0.69768	5.57532	PAF(LC)
NS0050	106	108	NS	E395055	395055	1	G	W	7.3	62.85	13.49	0.052	0.04	0.617	4.12	0.03	0.011	0.19	4.62	0.036	0.28	2.66	0.62	3.56	6236	5.814	0.52326	5.29074	PAF(LC)
NS0050	88	90	NS	E395046	395046	1	G	D	7.1	60.76	14.82	0.052	0.04	0.681	4.32	0.04	0.016	0.193	5.07	0.037	0.37	2.8	0.74	3.91	6227	5.9058	0.69768	5.20812	PAF(LC)
NS0050	108	110	NS	E395056	395056	1	G	W	9.34	58.85	13.68	0.065	0.05	0.622	4.89	0.03	0.013	0.186	4.27	0.03	0.36	3.02	0.58	3.96	6237	5.6916	0.52326	5.16834	PAF(LC)
NS0050	110	112	NS	E395057	395057	1	G	W	9.42	58.87	13.33	0.065	0.05	0.612	5.01	0.04	0.015	0.19	4	0.024	0.36	3.06	0.55	3.97	6238	5.814	0.69768	5.11632	PAF(LC)
NS0050	98	100	NS	E395051	395051	1	G	D	7.01	59.78	15.17	0.052	0.04	0.652	4.43	0.04	0.014	0.188	5.44	0.034	0.33	2.83	0.72	3.88	6232	5.7528	0.69768	5.05512	PAF(LC)
NS0050	138	140	NS	E395071	395071	1	G	W	19	51.47	7.6	0.207	0.16	0.391	4.23	0.35	0.068	0.36	0.551	0.087	0.99	5.49	0.73	7.21	6252	11.016	6.1047	4.9113	PAF(LC)
NS0050	102	104	NS	E395053	395053	1	G	D	7.04	60.99	14.36	0.065	0.05	0.653	4.27	0.04	0.013	0.183	5.09	0.036	0.27	2.77	0.71	3.75	6234	5.5998	0.69768	4.90212	PAF(LC)
NS0050	104	106	NS	E395054	395054	1	G	W	6.82	62.2	14.07	0.039	0.03	0.634	4.16	0.04	0.012	0.181	4.94	0.037	0.31	2.72	0.67	3.7	6235	5.5386	0.69768	4.84092	PAF(LC)
NS0050	100	102	NS	E395052	395052	1	G	D	6.73	61.38	14.52	0.052	0.04	0.66	4.32	0.04	0.013	0.177	4.95	0.032	0.29	2.77	0.71	3.77	6233	5.4162	0.69768	4.71852	PAF(LC)
NS0050	132	134	NS	E395068	395068	1	G	W	21.48	48.64	5.48	0.297	0.23	0.273	3.6	0.34	0.064	0.347	0.554	0.109	1.42	7.42	0.78	9.62	6249	10.6182	5.93028	4.68792	PAF(LC)
NS0050	30	32	NS	E395017	395017	1	G	D	6.94	69.07	11.99	0.219	0.17	0.565	0.86	0.08	0.034	0.181	2.02	0.04	1.08	3.03	0.64	4.75	6198	5.5386	1.39536	4.14324	PAF(LC)
NS0050	112	114	NS	E395058	395058	1	G	W	10.3	58.13	13.09	0.065	0.05	0.599	5.34	0.04	0.015	0.158	3.53	0.023	0.43	3.2	0.52	4.15	6239	4.8348	0.69768	4.13712	PAF(LC)
NS0050	114	116	NS	E395059	395059	1	G	W	12.54	55.42	12.53	0.065	0.05	0.588	5.88	0.04	0.013	0.148	2.2	0.011	0.8	3.85	0.46	5.11	6240	4.5288	0.69768	3.83112	PAF(LC)
NS0050	50	52	NS	E395027	395027	1	G	D	13.93	55.15	12.7	0.077	0.06	0.604	4.43	0.02	0.015	0.126	1.77	0.017	0.82	3.69	0.43	4.94	6208	3.8556	0.34884	3.50676	PAF(LC)
NS0050	128	130	NS	E395066	395066	1	G	W	22.07	47.59	5.42	0.323	0.25	0.27	3.71	0.27	0.045	0.245	0.723	0.166	1.46	7.32	0.71	9.49	6247	7.497	4.70934	2.78766	PAF(LC)
NS0050	194	196	NS	E395099	395099	1	G	W	22.26	47.29	5.87	0.258	0.2	0.286	3.48	0.48	0.068	0.333	0.469	0.127	1.47	6.99	0.88	9.34	6280	10.1898	8.37216	1.81764	PAF(LC)
NS0050	120	122	NS	E395062	395062	1	G	W	19.92	48.88	5.13	0.387	0.3	0.236	3.38	0.69	0.125	0.433	0.127	0.01	1.03	10.04	0.9	11.97	6243	13.2498	12.03498	1.21482	PAF(LC)
NS0050	252	254	NS	E395129	395129	1	G	W	18.92	51.66	7.4	0.155	0.12	0.38	3.1	1.1	0.075	0.66	3.6	0.268	1.04	2.52	1.27	4.83	6309	20.196	19.1862	1.0098	PAF(LC)
NS0050	12	14	NS	E395008	395008	1	G	D	26.06	53.39	3.46	1.201	0.93	0.165	0.16	0.05	0.084	0.059	0.108	0.029	1.86	1.18	0.37	3.41	6189	1.8054	0.8721	0.9333	PAF(LC)
NS0050	14	16	NS	E395009	395009	1	G	D	23.31	55.42	5.25	0.852	0.66	0.233	0.23	0.04	0.087	0.051	0.141	0.025	1.68	1.79	0.36	3.83	6190	1.5606	0.69768	0.86292	PAF(LC)
NS0050	4	6	NS	E395004	395004	1	G	D	21.49	54.23	8.94	0.155	0.12	0.411	0.12	0.06	0.062	0.055	0.026	0.053	1.64	2.85	0.32	4.81	6185	1.683	1.04652	0.63648	PAF(LC)
NS0050	16	18	NS	E395010	395010	1	G	D	18.07	54.02	12.8	0.258	0.2	0.542	0.15	0.04	0.016	0.031	0.82	0.018	1.12	3.66	0.38	5.16	6191	0.9486	0.69768	0.25092	PAF(LC)
NS0050	130	132	NS	E395067	395067	1	G	W	23.92	43.11	3.98	0.361	0.28	0.2	3.32	0.32	0.05	0.189	0.245	0.056	1.4	12.08	0.47	13.95	6248	5.7834	5.58144	0.20196	PAF(LC)
NS0050	196	198	NS	E395100	395100	1	G	W	27.64	39.33	1.78	0.284	0.22	0.08	2.19	0.54	0.077	0.311	0.415	0.11	1.93	12.83	0.75	15.51	6281	9.5166	9.41868	0.09792	PAF(LC)
NS0050	32	34	NS	E395018	395018	1	G	D	22.02	53.16	7.37	0.555	0.43	0.356	1.49	0.09	0.113	0.052	0.349	0.028	1.86	2.37	0.38	4.61	6199	1.5912	1.56978	0.02142	PAF(LC)
NS0050	38	40	NS	E395021	395021	1	G	D	17.59	58.47	8.73	0.181	0.14	0.418	1.65	0.09	0.081	0.052	0.447	0.021	1.43	2.63	0.35	4.41	6202	1.5912	1.56978	0.02142	PAF(LC)
NS0050	8	10	NS	E395006	395006	1	G	D	13.09	63.35	11.19	0.155	0.12	0.544	0.46	0.06	0.018	0.033	0.322	0.063	1.14	3.37	0.32	4.83	6187	1.0098	1.04652	-0.03672	NAF
NS0050	48	50	NS	E395026	395026	1	G	D	16.59	57.75	9.74	0.077	0.06	0.445	2.79	0.09	0.056	0.044	0.234	0.014	1.35	3.25	0.31	4.91	6207	1.3464	1.56978	-0.22338	NAF
NS0050	116	118	NS	E395060	395060	1	G	W	15.48	55.16	10.57	0.116	0.09	0.491	4.76	0.31	0.037	0.166	0.808	0.013	0.53	4.25	0.55	5.33	6241	5.0796	5.40702	-0.32742	NAF
NS0050	20	22	NS	E395012	395012	1	G	D	16.23	57.74	10.84	0.465	0.36	0.517	1.12	0.06	0.027	0.022	0.475	0.027	1.71	3.28	0.34	5.33	6193	0.6732	1.04652	-0.37332	NAF
NS0050	24	26	NS	E395014	395014	1	G	D	15.42	58.83	10.82	0.194	0.15	0.491	1.11	0.08	0.052	0.032	1.61	0.033	1.33	2.79	0.36	4.48	6195	0.9792	1.39536	-0.41616	NAF
NS0050	18	20	NS	E395011	395011	1	G	D	18.56	54.5	11.2	0.361	0.28	0.503	0.91	0.07	0.02	0.025	0.393	0.029	1.36	3.44	0.35	5.15	6192	0.765	1.22094	-0.45594	NAF
NS0050	140	142	NS	E395072	395072	1	G	W	18.12	52.68	7.63	0.245	0.19	0.394	4.34	0.79	0.047	0.435	0.562	0.073	0.7	5.27	1.18	7.15	6253	13.311	13.77918	-0.46818	NAF
NS0050	22	24	NS	E395013	395013	1	G	D	15.02	61.68	9.87	0.387	0.3	0.508	0.67	0.08	0.036	0.03	0.318	0.024	1.38	2.99	0.32	4.69	6194	0.918	1.39536	-0.47736	NAF
NS0050	28	30	NS	E395016	395016	1	G	D	3.66	70.58	14.24	0.052	0.04	0.634	0.86	0.07	0.019	0.021	4.17	0.043	0.62	2.63	0.45	3.7	6197	0.6426	1.22094	-0.57834	NAF
NS0050	34	36	NS	E395019	395019	1	G	D	11.6	59.02	14.03	0.065	0.05	0.676	0.85	0.09	0.023	0.029	3.66	0.032	1.15	3.03	0.35	4.53	6200	0.8874	1.56978	-0.68238	NAF
NS0050	6	8	NS	E395005	395005	1	G	D	14.59	60.01	11.36	0.219	0.17	0.519	0.65	0.11	0.038	0.033	0.282	0.108	1.73	3.46	0.36	5.55	6186	1.0098	1.91862	-0.90882	NAF
NS0050	44	46	NS	E395024	395024	1	G	D	13.95	59.96	10.56	0.142	0.11	0.506	2.25	0.09	0.054	0.02	1.67	0.021	1.19	2.94	0.32	4.45	6205	0.612	1.56978	-0.95778	NAF
NS0050	46	48	NS	E395025	395025	1	G	D	21.22	55.75	6.83	0.207	0.16	0.346	1.81	0.11	0.11	0.029	0.072	0.013	1.38	2.37	0.31	4.06	6206	0.8874	1.91862	-1.03122	NAF
NS0050	26	28	NS	E395015	395015	1	G	D	7.01	67.52	12.97	0.129	0.1	0.554	0.97	0.09	0.021	0.014	3.32	0.037	0.89	2.73	0.39	4.01	6196	0.4284	1.56978	-1.14138	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0050	42	44	NS	E395023	395023	1	G	D	14.07	58.61	12.03	0.09	0.07	0.555	1.65	0.11	0.046	0.021	1.2	0.027	1.39	3.41	0.34	5.14	6204	0.6426	1.91862	-1.27602	NAF
NS0050	192	194	NS	E395098	395098	1	G	W	22.94	45.37	5.64	0.374	0.29	0.282	3.65	0.63	0.083	0.314	0.52	0.135	1.37	7.87	0.91	10.15	6279	9.6084	10.98846	-1.38006	NAF
NS0050	36	38	NS	E395020	395020	1	G	D	17.66	55.62	9.77	0.207	0.16	0.467	2.02	0.13	0.081	0.028	0.852	0.031	1.81	2.84	0.37	5.02	6201	0.8568	2.26746	-1.41066	NAF
NS0050	126	128	NS	E395065	395065	1	G	W	22.67	45.88	3.35	0.284	0.22	0.163	3.02	0.41	0.063	0.178	0.162	0.025	1.64	11.84	0.47	13.95	6246	5.4468	7.15122	-1.70442	NAF
NS0050	136	138	NS	E395070	395070	1	G	W	19.76	49.99	6.77	0.361	0.28	0.341	4.11	0.7	0.067	0.328	0.498	0.084	0.92	6.81	0.91	8.64	6251	10.0368	12.2094	-2.1726	NAF
NS0050	142	144	NS	E395073	395073	1	G	W	15.66	55.71	8.49	0.194	0.15	0.422	4.14	0.6	0.065	0.271	1.23	0.038	0.61	4.9	0.82	6.33	6254	8.2926	10.4652	-2.1726	NAF
NS0050	122	124	NS	E395063	395063	1	G	W	21.96	45.01	5.4	0.439	0.34	0.266	3.6	0.62	0.072	0.282	0.42	0.026	1	10.79	0.71	12.5	6244	8.6292	10.81404	-2.18484	NAF
NS0050	10	12	NS	E395007	395007	1	G	D	17.97	60.58	7.23	0.245	0.19	0.332	0.61	0.19	0.06	0.034	0.173	0.028	1.89	2.29	0.28	4.46	6188	1.0404	3.31398	-2.27358	NAF
NS0050	152	154	NS	E395078	395078	1	G	W	19.91	49.35	7.61	0.258	0.2	0.375	3.99	1	0.137	0.494	0.754	0.11	0.96	5.21	1.16	7.33	6259	15.1164	17.442	-2.3256	NAF
NS0050	238	240	NS	E395122	395122	1	G	W	22.9	47.09	4.93	0.258	0.2	0.236	3.2	0.98	0.104	0.477	1.44	0.262	1.51	6.01	1.03	8.55	6302	14.5962	17.09316	-2.49696	NAF
NS0050	40	42	NS	E395022	395022	1	G	D	17	53.46	11.83	0.181	0.14	0.574	2.38	0.19	0.06	0.02	0.826	0.023	2.05	3.54	0.43	6.02	6203	0.612	3.31398	-2.70198	NAF
NS0050	124	126	NS	E395064	395064	1	G	W	22.49	46.13	2.91	0.323	0.25	0.133	2.99	0.48	0.079	0.167	0.209	0.05	1.59	12.03	0.45	14.07	6245	5.1102	8.37216	-3.26196	NAF
NS0050	212	214	NS	E395109	395109	1	G	W	22.86	47.6	4.52	0.245	0.19	0.222	2.97	0.69	0.065	0.273	0.679	0.186	1.46	7.72	0.77	9.95	6289	8.3538	12.03498	-3.68118	NAF
NS0050	154	156	NS	E395079	395079	1	G	W	22.05	45.94	6.2	0.297	0.23	0.304	3.71	0.82	0.096	0.329	0.556	0.086	1.12	7.95	0.98	10.05	6260	10.0674	14.30244	-4.23504	NAF
NS0050	186	188	NS	E395095	395095	1	G	W	14.43	57.93	10.53	0.103	0.08	0.537	4.24	0.39	0.032	0.052	0.941	0.016	0.47	3.22	0.48	4.17	6276	1.5912	6.80238	-5.21118	NAF
NS0050	144	146	NS	E395074	395074	1	G	W	14.61	56.32	9.95	0.129	0.1	0.505	4.62	0.81	0.026	0.28	1.16	0.027	0.53	3.73	0.97	5.23	6255	8.568	14.12802	-5.56002	NAF
NS0050	156	158	NS	E395080	395080	1	G	W	21.53	46.87	6.37	0.284	0.22	0.32	3.78	0.98	0.083	0.372	0.695	0.094	1.12	7.09	1.12	9.33	6261	11.3832	17.09316	-5.70996	NAF
NS0050	190	192	NS	E395097	395097	1	G	W	20.62	50.15	6.31	0.297	0.23	0.309	3.66	1.03	0.083	0.398	0.644	0.163	1.15	5.03	1.24	7.42	6278	12.1788	17.96526	-5.78646	NAF
NS0050	158	160	NS	E395081	395081	1	G	W	21	48.6	6.23	0.194	0.15	0.316	3.59	0.98	0.076	0.332	0.856	0.095	1.4	6.21	1.04	8.65	6262	10.1592	17.09316	-6.93396	NAF
NS0050	230	232	NS	E395118	395118	1	G	W	22.98	47.57	4.75	0.258	0.2	0.232	3.2	0.94	0.078	0.278	1.31	0.323	1.76	5.34	0.97	8.07	6298	8.5068	16.39548	-7.88868	NAF
NS0050	228	230	NS	E395117	395117	1	G	W	22.27	47.64	5.51	0.271	0.21	0.266	3.49	1.15	0.098	0.367	1.26	0.298	1.4	5.26	1.11	7.77	6297	11.2302	20.0583	-8.8281	NAF
NS0050	160	162	NS	E395082	395082	1	G	W	20.68	49.54	6.25	0.194	0.15	0.31	3.58	1.12	0.069	0.344	0.835	0.101	1.12	5.91	1.15	8.18	6263	10.5264	19.53504	-9.00864	NAF
NS0050	184	186	NS	E395094	395094	1	G	W	15.84	55.98	10.23	0.129	0.1	0.518	4.38	0.71	0.041	0.103	0.447	0.017	0.49	3.44	0.76	4.69	6275	3.1518	12.38382	-9.23202	NAF
NS0050	150	152	NS	E395077	395077	1	G	W	19.6	49.02	6.69	0.336	0.26	0.341	4.05	1.4	0.067	0.496	0.618	0.063	0.78	7.17	1.24	9.19	6258	15.1776	24.4188	-9.2412	NAF
NS0050	216	218	NS	E395111	395111	1	G	W	23.02	45.7	5.65	0.284	0.22	0.27	3.28	1.34	0.088	0.419	1.06	0.235	1.39	6.1	1.21	8.7	6291	12.8214	23.37228	-10.55088	NAF
NS0050	2	4	NS	E395003	395003	1	G	D	16.66	59.38	9.95	0.026	0.02	0.48	0.24	0.7	0.037	0.036	0.025	0.057	1.33	3.47	0.37	5.17	6184	1.1016	12.2094	-11.1078	NAF
NS0050	278	280	NS	E395142	395142	1	G	W	28.05	38.34	3.44	0.503	0.39	0.159	2.88	1.13	0.079	0.243	1.57	0.21	1.68	8.61	0.74	11.03	6322	7.4358	19.70946	-12.27366	NAF
NS0050	210	212	NS	E395108	395108	1	G	W	23.48	44.88	4.86	0.374	0.29	0.248	3.5	1.32	0.067	0.333	1.2	0.3	1.41	6.48	1.28	9.17	6288	10.1898	23.02344	-12.83364	NAF
NS0050	188	190	NS	E395096	395096	1	G	W	16.68	55.78	8.86	0.142	0.11	0.438	3.95	1.42	0.057	0.382	0.246	0.063	0.58	2.89	1.32	4.79	6277	11.6892	24.76764	-13.07844	NAF
NS0050	262	264	NS	E395134	395134	1	G	W	27.07	42.06	4.66	0.284	0.22	0.223	3.08	1.3	0.082	0.31	1.93	0.243	1.23	5.11	0.92	7.26	6314	9.486	22.6746	-13.1886	NAF
NS0050	280	282	NS	E395143	395143	1	G	W	25.91	42.58	3.11	0.491	0.38	0.14	2.79	1.23	0.078	0.251	1.45	0.213	1.41	8.17	0.83	10.41	6323	7.6806	21.45366	-13.77306	NAF
NS0050	180	182	NS	E395092	395092	1	G	W	18.78	50.63	8.94	0.207	0.16	0.456	4.15	1.34	0.045	0.238	0.456	0.057	0.75	4.52	1.25	6.52	6273	7.2828	23.37228	-16.08948	NAF
NS0050	162	164	NS	E395083	395083	1	G	W	21.51	44.7	5.62	0.387	0.3	0.286	3.75	1.77	0.07	0.469	0.577	0.049	1.04	9.01	1.54	11.59	6264	14.3514	30.87234	-16.52094	NAF
NS0050	226	228	NS	E395116	395116	1	G	W	23.2	46.19	4.46	0.258	0.2	0.212	3.03	1.45	0.152	0.279	0.774	0.203	1.49	7.29	1.01	9.79	6296	8.5374	25.2909	-16.7535	NAF
NS0050	182	184	NS	E395093	395093	1	G	W	19.23	50.32	7.66	0.284	0.22	0.384	3.96	1.81	0.05	0.479	0.419	0.089	0.86	4.75	1.6	7.21	6274	14.6574	31.57002	-16.91262	NAF
NS0050	178	180	NS	E395091	395091	1	G	W	19.94	49.39	7.64	0.258	0.2	0.388	3.98	1.69	0.074	0.391	0.562	0.118	0.84	4.63	1.54	7.01	6272	11.9646	29.47698	-17.51238	NAF
NS0050	268	270	NS	E395137	395137	1	G	W	25.96	41.64	5.31	0.336	0.26	0.251	3.53	1.67	0.132	0.317	2.17	0.315	1.31	4.65	1.22	7.18	6317	9.7002	29.12814	-19.42794	NAF
NS0050	204	206	NS	E395105	395105	1	G	W	29.55	41.86	3.18	0.284	0.22	0.155	2.63	1.47	0.077	0.189	0.875	0.241	1.14	4.89	0.8	6.83	6285	5.7834	25.63974	-19.85634	NAF
NS0050	176	178	NS	E395090	395090	1	G	W	20.98	46.49	7.2	0.361	0.28	0.364	4.01	1.85	0.051	0.395	0.505	0.1	1.02	6.23	1.53	8.78	6271	12.087	32.2677	-20.1807	NAF
NS0050	0	2	NS	E395002	395002	1	G	D	7.08	74.37	8.12	0.026	0.02	0.356	0.26	1.24	0.029	0.023	0.05	0.066	1.46	2.9	0.53	4.89	6183	0.7038	21.62808	-20.92428	NAF
NS0050	254	256	NS	E395130	395130	1	G	W	28.03	41.44	2.99	0.336	0.26	0.143	2.55	1.54	0.093	0.185	1.04	0.193	1.29	7.19	0.88	9.36	6310	5.661	26.86068	-21.19968	NAF
NS0050	164	166	NS	E395084	395084	1	G	W	12.81	56.58	10.74	0.142	0.11	0.551	4.07	1.64	0.022	0.237	2.63	0.018	0.46	3.03	1.65	5.14	6265	7.2522	28.60488	-21.35268	NAF
NS0050	250	252	NS	E395128	395128	1	G	W	29.8	35.37	2.99	0.555	0.43	0.135	2.73	1.64	0.156	0.204	1.08	0.166	1.25	10.22	0.69	12.16	6308	6.2424	28.60488	-22.36248	NAF
NS0050	258	260	NS	E395132	395132	1	G	W	33.35	36.21	2.14	0.387	0.3	0.134	2.21	1.41	0.098	0.067	0.894	0.156	0.9	6.98	0.51	8.39	6312	2.0502	24.59322	-22.54302	NAF
NS0050	264	266	NS	E395135	395135	1	G	W	29.84	43.26	2.25	0.297	0.23	0.11	1.99	1.48	0.07	0.106	0.841	0.161	0.84	4.91	0.7	6.45	6315	3.2436	25.81416	-22.57056	NAF
NS0050	240	242	NS	E395123	395123	1	G	W	26.1	43.06	3.82	0.284	0.22	0.184	2.79	1.85	0.058	0.298	0.895	0.183	1.34	6.61	1.17	9.12	6303	9.1188	32.2677	-23.1489	NAF
NS0050	248	250	NS	E395127	395127	1	G	W	26.31	41.6	3.77	0.374	0.29	0.181	2.89	1.84	0.13	0.25	1.43	0.232	1.32	7.2	1	9.52	6307	7.65	32.09328	-24.44328	NAF
NS0050	272	274	NS	E395139	395139	1	G	W	28.61	43.67	2.3	0.387	0.3	0.105	2.01	1.62	0.068	0.118	0.846	0.152	0.93	5.71	0.83	7.47	6319	3.6108	28.25604	-24.64524	NAF
NS0050	246	248	NS	E395126	395126	1	G	W	27.52	42.37	3.35	0.323	0.25	0.16	2.54	1.88	0.123	0.226	1.3	0.219	1.26	5.53	1.13	7.92	6306	6.9156	32.79096	-25.87536	NAF
NS0050	224	226	NS	E395115	395115	1	G	W	24.6	45.58	3.7	0.232	0.18	0.18	2.66	1.88	0.121	0.222	0.741	0.197	1.27	6.72	1.13	9.12	6295	6.7932	32.79096	-25.99776	NAF
NS0050	276	278	NS	E395141	395141	1	G	W	31.34	38.25	1.7	0.555	0.43	0.08	1.92	1.63	0.054	0.075	0.623	0.136	0.98	8.24	0.58	9.8	6321	2.295	28.43046	-26.13546	NAF
NS0050	174	176	NS	E395089	395089	1	G	W	20.68	46.2	7.35	0.349	0.27	0.38	3.98	2.2	0.123	0.386	0.517	0.09	0.9	6.17	1.71	8.78	6270	11.8116	38.3724	-26.5608	NAF
NS0050	220	222	NS	E395113	395113	1	G	W	24.88	43.65	4.94	0.245	0.19	0.237	3.08	2.11	0.101	0.318	0.943	0.213	1.33	5.79	1.42	8.54	6293	9.7308	36.80262	-27.07182	NAF
NS0050	172	174	NS	E395088	395088	1	G	W	17.65	50.7	10.16	0.155	0.12	0.527	4.43	1.91	0.043	0.172	0.547	0.037	0.59	3.6	1.84	6.03	6269	5.2632	33.31422	-28.05102	NAF
NS0050	198	200	NS	E395102	395102	1	G	W	28.9	40.82	1.77	0.258	0.2	0.083	1.99	1.81	0.098	0.109	0.538	0.136	1.19	9.02	0.67	10.88	6282	3.3354	31.57002	-28.23462	NAF
NS0050	256	258	NS	E395131	395131	1	G	W	27.01	42.48	2.68	0.374	0.29	0.121	2.38	2.09	0.119	0.234	1.18	0.167	1	7.23	1.13	9.36	6311	7.1604	36.45378	-29.29338	NAF
NS0050	222	224	NS	E395114	395114	1	G	W	27.4	43.29	2.11	0.219	0.17	0.099	1.89	1.96	0.071	0.123	0.506	0.141	1.07	8.15	0.78	10	6294	3.7638	34.18632	-30.42252	NAC
NS0050	244	246	NS	E395125	395125	1	G	W	29.62	41.3	2.8	0.323	0.25	0.136	2.4	2.03	0.088	0.148	0.971	0.225	0.97	4.98	1.21	7.16	6305	4.5288	35.40726	-30.87846	NAC
NS0050	234	236	NS	E395120	395120	1	G	W	26.8	42.17	3.1	0.271	0.21	0.144	2.68	2.23	0.182	0.207	0.86	0.23	1.41	6.53	1.22	9.16	6300	6.3342	38.89566	-32.56146	NAC
NS0050	208	210	NS	E395107	395107	1	G	W	24.06	44.77	4.66	0.258	0.2	0.227	3.1	2.4	0.097	0.26	1.16	0.259	1.35	5.48	1.51	8.34	6287	7.956	41.8608	-33.9048	NAC
NS0050	166	168	NS	E395085	395085	1	G	W	13.93	53.25	9.58	0.258	0.2	0.488	3.76	2.87	0.067	0.469	2.82	0.046	0.52	3.51	2.55	6.58	6266	14.3514	50.05854	-35.70714	NAC
NS0050	266	268	NS	E395136	395136	1	G	W	27.96	42.91	2.17	0.387	0.3	0.096	2.08	2.26	0.085	0.109	0.864	0.161	0.93	6.05	1.52	8.5	6316	3.3354	39.41892	-36.08352	NAC
NS0050	206	208	NS	E395106	395106	1	G	W	26.14	44.68	3.02	0.284	0.22	0.151	2.47	2.42	0.105	0.187	0.843	0.227	1.23	5.29	1.34	7.86	6286	5.7222	42.20964	-36.48744	NAC
NS0050	242	244	NS	E395124	395124	1	G	W	30.27	39.43	2.2	0.323	0.25	0.1	2.09	2.41	0.106	0.151	0.719	0.163	0.93	6.53	1.18	8.64	6304	4.6206	42.03522	-37.41462	NAC
NS0050	274	276	NS	E395140	395140	1	G	W	27.97	40.21	3.61	0.374	0.29	0.169	2.8	2.57	0.102	0.197	1.32	0.246	1.33	5.25	1.84	8.42	6320	6.0282	44.82594	-38.79774	NAC
NS0050	214	216	NS	E395110	395110	1	G	W	25.29	41.95	3.46	0.284	0.22	0.162	2.48	2.56	0.075	0.184	0.568	0.132	1.16	9.49	1.3	11.95	6290	5.6304	44.65152	-39.02112	NAC
NS0050	270	272	NS	E395138	395138	1	G	W	26.91	41.63	3.34	0.413	0.32	0.158	2.39	2.65	0.064	0.219	1.44	0.243	1.31	5.84	1.57	8.72	6318	6.7014	46.2213	-39.5199	NAC
NS0050	148	150	NS	E395076	395076	1	G	W	16.25	51.29	7.6	0.323	0.25	0.382	4.51	3.3	0.072	0.546	0.591	0.056	0.67	4.54	2.88	8.09	6257	16.7076	57.5586	-40.851	NAC
NS0050	232	234	NS	E395119	395119	1	G	W	25.2	45.29	2.71	0.284	0.22	0.129	2.3	2.61	0.132	0.149	0.738	0.195	1.18	6.62	1.34	9.14	6299	4.5594	45.52362	-40.96422	NAC
NS0050	168	170	NS	E395086	395086	1	G	W	15.13	53.68	8.91	0.219	0.17	0.457	4.12	2.84	0.037	0.238	1.07	0.049	0.58	3.26	2.81	6.65	6267	7.2828	49.53528	-42.25248	NAC
NS0050	200	202	NS	E395103	395103	1	G	W	26.96	44.94	2.34	0.232	0.18	0.112	2.3	2.77	0.108	0.119	0.727	0.198	0.92	4.77	1.8	7.49	6283	3.6414	48.31434	-44.67294	NAC
NS0050	146	148	NS	E395075	395075	1	G	W	15.98	49.9	6.9	0.374	0.29	0.35	4.48	4	0.112	0.802	0.521	0.058	0.63	4.29	3.35	8.27	6256	24.5412	69.768	-45.2268	NAC
NS0050	260	262	NS	E395133	395133	1	G	W	29.8	39.81	1.84	0.336	0.26	0.088	2.04	2.79	0.07	0.064	0.652	0.134	0.77	6.97	1.73	9.47	6313	1.9584	48.66318	-46.70478	NAC
NS0050	202	204	NS	E395104	395104	1	G	W	30.1	42.39	1.66	0.245	0.19	0.077	1.92	3.03	0.081	0.075	0.612	0.183	0.69	3.88	2.04	6.61	6284	2.295	52.84926	-50.55426	NAC
NS0050	218	220	NS	E395112	395112	1	G	W	24.95	41.7	3.24	0.31	0.24	0.155	2.6	3.5	0.141	0.283	0.723	0.196	1.24	8.02	2.02	11.28	6292	8.6598	61.047	-52.3872	NAC
NS0050	170	172	NS	E395087	395087	1	G	W	15.4	50.99	9.26	0.258	0.2	0.477	4.27	3.53	0.014	0.121	0.846	0.027	0.46	3.46	3.95	7.87	6268	3.7026	61.57026	-57.86766	NAC
NS0051	176	178	NS	E395457	395457	1	G	W	27.44	43.24	3.71	0.555	0.43	0.16	3.79	0.72	0.115	0.873	0.477	0.157	0.51	5.5	1.47	7.48	6634	26.7138	12.55824	14.15556	PAF(HC)
NS0051	84	86	NS	E395411	395411	1	G	W	28.86	40.09	4.22	0.594	0.46	0.181	4.4	1	0.278	0.63	1.15	0.176	0.6	4.13	1.07	5.8	6588	19.278	17.442	1.836	PAF(LC)
NS0051	6	8	NS	E395371	395371	1	G	W	38.37	33.3	4.2	0.039	0.03	0.452	0.08	0.07	0.022	0.026	0.022	0.023	5.51	0.88	0.24	6.63	6549	0.7956	1.22094	-0.42534	NAF
NS0051	10	12	NS	E395373	395373	1	G	W	30.56	47.76	3.33	0.026	0.02	0.158	0.06	0.05	0.034	0.014	0.01	0.023	3.56	1	0.11	4.67	6551	0.4284	0.8721	-0.4437	NAF
NS0051	20	22	NS	E395378	395378	1	G	W	37	42	1.44	0.181	0.14	0.06	0.1	0.04	0.065	0.007	0.013	0.019	2.4	0.49	0.04	2.93	6556	0.2142	0.69768	-0.48348	NAF
NS0051	0	2	NS	E395368	395368	1	G	W	31.99	42.16	4.99	0.039	0.03	0.429	0.1	0.07	0.025	0.017	0.075	0.032	4.56	1.19	0.19	5.94	6546	0.5202	1.22094	-0.70074	NAF
NS0051	14	16	NS	E395375	395375	1	G	W	38.13	38.3	2.12	0.09	0.07	0.101	0.14	0.06	0.051	0.011	0.008	0.023	3.51	0.72	0.13	4.36	6553	0.3366	1.04652	-0.70992	NAF
NS0051	36	38	NS	E395386	395386	1	G	W	39.53	37.24	1.6	0.71	0.55	0.07	0.2	0.05	0.042	0.005	0.427	0.021	1.99	0.47	0.12	2.58	6564	0.153	0.8721	-0.7191	NAF
NS0051	4	6	NS	E395370	395370	1	G	W	29.23	49.81	2.17	0.026	0.02	0.209	0.07	0.08	0.014	0.019	0.018	0.027	4.78	0.71	0.18	5.67	6548	0.5814	1.39536	-0.81396	NAF
NS0051	8	10	NS	E395372	395372	1	G	W	25.28	52.79	4.09	0.026	0.02	0.334	0.08	0.08	0.011	0.018	0.016	0.03	4.96	1.17	0.19	6.32	6550	0.5508	1.39536	-0.84456	NAF
NS0051	12	14	NS	E395374	395374	1	G	W	35.71	40.61	3.18	0.039	0.03	0.165	0.14	0.07	0.063	0.011	0.011	0.028	3.42	0.99	0.1	4.51	6552	0.3366	1.22094	-0.88434	NAF
NS0051	28	30	NS	E395382	395382	1	G	W	39.69	37.75	1.27	0.865	0.67	0.054	0.21	0.06	0.051	0.005	0.286	0.024	1.9	0.39	0.05	2.34	6560	0.153	1.04652	-0.89352	NAF
NS0051	40	42	NS	E395388	395388	1	G	W	38.52	38.98	1.47	0.813	0.63	0.06	0.23	0.06	0.069	0.005	0.425	0.022	1.97	0.42	0.09	2.48	6566	0.153	1.04652	-0.89352	NAF
NS0051	152	154	NS	E395445	395445	1	G	W	30.76	36.83	5.1	0.581	0.45	0.226	4.64	0.52	0.066	0.264	0.407	0.13	0.5	5.94	0.39	6.83	6622	8.0784	9.06984	-0.99144	NAF
NS0051	22	24	NS	E395379	395379	1	G	W	38.59	39.62	1.25	0.439	0.34	0.055	0.14	0.07	0.064	0.006	0.024	0.024	2.37	0.47	-0.05	2.79	6557	0.1836	1.22094	-1.03734	NAF
NS0051	30	32	NS	E395383	395383	1	G	W	40.25	37.14	1.25	0.684	0.53	0.056	0.21	0.07	0.057	0.005	0.363	0.018	1.98	0.36	-0.01	2.33	6561	0.153	1.22094	-1.06794	NAF
NS0051	26	28	NS	E395381	395381	1	G	W	39.39	38.22	1.49	0.465	0.36	0.063	0.18	0.08	0.065	0.006	0.112	0.03	2.04	0.51	0.08	2.63	6559	0.1836	1.39536	-1.21176	NAF
NS0051	32	34	NS	E395384	395384	1	G	W	38.22	39.12	1.35	1.188	0.92	0.055	0.23	0.08	0.041	0.005	0.482	0.034	1.81	0.4	0.1	2.31	6562	0.153	1.39536	-1.24236	NAF
NS0051	42	44	NS	E395389	395389	1	G	W	36.06	40.19	2.15	0.904	0.7	0.102	0.48	0.08	0.085	0.005	0.469	0.033	2.67	0.71	0.16	3.54	6567	0.153	1.39536	-1.24236	NAF
NS0051	38	40	NS	E395387	395387	1	G	W	39.69	37.15	1.3	0.788	0.61	0.062	0.23	0.08	0.09	0.004	0.348	0.026	2.18	0.43	0.11	2.72	6565	0.1224	1.39536	-1.27296	NAF
NS0051	44	46	NS	E395390	395390	1	G	W	35.15	42.44	1.86	0.994	0.77	0.082	0.39	0.08	0.068	0.004	0.479	0.027	2.43	0.61	0.13	3.17	6568	0.1224	1.39536	-1.27296	NAF
NS0051	18	20	NS	E395377	395377	1	G	W	34.97	43.55	1.81	0.077	0.06	0.081	0.16	0.09	0.074	0.007	0.012	0.022	3.16	0.68	0.12	3.96	6555	0.2142	1.56978	-1.35558	NAF
NS0051	24	26	NS	E395380	395380	1	G	W	38.76	38.48	1.88	0.491	0.38	0.079	0.2	0.09	0.056	0.006	0.069	0.029	2.28	0.66	0.07	3.01	6558	0.1836	1.56978	-1.38618	NAF
NS0051	34	36	NS	E395385	395385	1	G	W	38.55	38.32	1.59	0.904	0.7	0.069	0.24	0.09	0.066	0.005	0.497	0.034	2.07	0.44	0.16	2.67	6563	0.153	1.56978	-1.41678	NAF
NS0051	16	18	NS	E395376	395376	1	G	W	33.61	44.86	1.92	0.116	0.09	0.09	0.2	0.1	0.064	0.008	0.014	0.038	3.56	0.75	0.1	4.41	6554	0.2448	1.7442	-1.4994	NAF
NS0051	46	48	NS	E395391	395391	1	G	W	37.54	38.39	1.86	1.072	0.83	0.08	0.43	0.13	0.077	0.005	0.533	0.027	2.37	0.64	0.13	3.14	6569	0.153	2.26746	-2.11446	NAF
NS0051	252	254	NS	E395495	395495	1	G	W	24.29	43.42	5.68	0.594	0.46	0.238	4.78	1	0.13	0.472	0.837	0.101	0.5	5.85	1.03	7.38	6672	14.4432	17.442	-2.9988	NAF
NS0051	178	180	NS	E395458	395458	1	G	W	24.69	46.02	2.5	0.852	0.66	0.105	3.51	1.03	0.104	0.466	0.425	0.134	0.57	8.03	1.09	9.69	6635	14.2596	17.96526	-3.70566	NAF
NS0051	48	50	NS	E395392	395392	1	G	W	36.66	41.58	1.24	0.529	0.41	0.055	0.47	0.28	0.078	0.017	0.388	0.022	1.46	1.33	-0.03	2.76	6570	0.5202	4.88376	-4.36356	NAF
NS0051	2	4	NS	E395369	395369	1	G	W	26.45	53.16	2.71	0.026	0.02	0.343	0.1	0.32	0.016	0.02	0.055	0.032	4.11	0.93	0.14	5.18	6547	0.612	5.58144	-4.96944	NAF
NS0051	250	252	NS	E395494	395494	1	G	W	25.27	44.76	3.04	0.968	0.75	0.131	3.87	0.65	0.091	0.186	0.596	0.133	0.56	8.09	0.53	9.18	6671	5.6916	11.3373	-5.6457	NAF
NS0051	106	108	NS	E395422	395422	1	G	W	28.56	40.83	5.21	0.529	0.41	0.23	4.46	0.98	0.096	0.367	1.92	0.172	0.43	3.17	0.85	4.45	6599	11.2302	17.09316	-5.86296	NAF
NS0051	50	52	NS	E395393	395393	1	G	W	35.19	40.27	1.13	0.917	0.71	0.049	1.34	0.43	0.084	0.028	0.362	0.026	0.52	4.34	-0.34	4.52	6571	0.8568	7.50006	-6.64326	NAF
NS0051	150	152	NS	E395444	395444	1	G	W	27.7	39.6	4.37	0.749	0.58	0.184	4.6	0.74	0.204	0.203	0.326	0.123	0.61	7.78	0.42	8.81	6621	6.2118	12.90708	-6.69528	NAF
NS0051	108	110	NS	E395423	395423	1	G	W	27.86	42.28	4.61	0.529	0.41	0.212	4.2	1.21	0.105	0.463	1.72	0.168	0.41	2.95	1.19	4.55	6600	14.1678	21.10482	-6.93702	NAF
NS0051	144	146	NS	E395441	395441	1	G	W	30.83	41.05	3.66	0.542	0.42	0.16	3.56	0.61	0.057	0.113	0.726	0.14	0.5	4.31	0.23	5.04	6618	3.4578	10.63962	-7.18182	NAF
NS0051	58	60	NS	E395397	395397	1	G	W	36.88	39.12	1.06	0.736	0.57	0.044	1.53	0.46	0.082	0.025	0.515	0.032	0.16	3.89	-0.66	3.39	6575	0.765	8.02332	-7.25832	NAF
NS0051	82	84	NS	E395410	395410	1	G	W	35.63	37.65	1.57	0.762	0.59	0.071	2.56	0.77	0.139	0.143	0.591	0.091	0.31	4.43	0.17	4.91	6587	4.3758	13.43034	-9.05454	NAF
NS0051	52	54	NS	E395394	395394	1	G	W	35.22	37.46	2.08	0.826	0.64	0.088	2.46	0.72	0.1	0.09	0.763	0.061	0.41	4.6	-0.07	4.94	6572	2.754	12.55824	-9.80424	NAF
NS0051	56	58	NS	E395396	395396	1	G	W	36.3	37.86	1.19	0.904	0.7	0.054	1.87	0.64	0.121	0.038	0.514	0.04	0.3	4.84	-0.31	4.83	6574	1.1628	11.16288	-10.00008	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0051	54	56	NS	E395395	395395	1	G	W	38.09	36.03	1.42	0.697	0.54	0.065	1.99	0.67	0.068	0.033	0.517	0.048	0.35	3.71	-0.24	3.82	6573	1.0098	11.68614	-10.67634	NAF
NS0051	74	76	NS	E395406	395406	1	G	W	38.85	35.15	1.28	0.723	0.56	0.055	2.03	0.76	0.096	0.03	0.577	0.056	0.21	3.43	-0.14	3.5	6583	0.918	13.25592	-12.33792	NAF
NS0051	182	184	NS	E395460	395460	1	G	W	29.46	43.1	3.04	0.542	0.42	0.134	3.3	0.89	0.046	0.05	0.443	0.128	0.48	5.21	0.39	6.08	6637	1.53	15.52338	-13.99338	NAF
NS0051	146	148	NS	E395442	395442	1	G	W	25.2	44.24	4.5	0.684	0.53	0.179	4.42	1.05	0.153	0.135	0.682	0.158	0.57	6.06	0.56	7.19	6619	4.131	18.3141	-14.1831	NAF
NS0051	148	150	NS	E395443	395443	1	G	W	32.99	41.22	1.96	0.581	0.45	0.078	2.4	0.98	0.091	0.048	0.685	0.108	0.37	4.06	0.19	4.62	6620	1.4688	17.09316	-15.62436	NAF
NS0051	66	68	NS	E395402	395402	1	G	W	37.06	35.22	1.11	0.891	0.69	0.046	2.29	0.97	0.089	0.031	0.477	0.037	0.24	5.56	-0.05	5.75	6579	0.9486	16.91874	-15.97014	NAF
NS0051	278	280	NS	E395509	395509	1	G	W	29.46	40.61	3.14	0.723	0.56	0.134	3.37	1.15	0.128	0.128	0.635	0.104	0.46	6.35	0.39	7.2	6685	3.9168	20.0583	-16.1415	NAF
NS0051	186	188	NS	E395462	395462	1	G	W	36.02	36.03	1.89	0.697	0.54	0.082	2.41	1.08	0.075	0.071	0.435	0.103	0.45	4.93	0.22	5.6	6639	2.1726	18.83736	-16.66476	NAF
NS0051	86	88	NS	E395412	395412	1	G	W	39.26	33.76	1.05	0.788	0.61	0.049	2.16	1.01	0.095	0.028	0.395	0.069	0.2	3.95	0.09	4.24	6589	0.8568	17.61642	-16.75962	NAF
NS0051	254	256	NS	E395496	395496	1	G	W	28.69	42	3.57	0.646	0.5	0.148	3.36	1.33	0.157	0.208	0.912	0.099	0.46	5.16	0.63	6.25	6673	6.3648	23.19786	-16.83306	NAF
NS0051	78	80	NS	E395408	395408	1	G	W	34.14	37.8	2.3	0.684	0.53	0.1	2.89	1.22	0.194	0.136	0.919	0.1	0.34	3.86	0.3	4.5	6585	4.1616	21.27924	-17.11764	NAF
NS0051	96	98	NS	E395417	395417	1	G	W	37.89	35.8	1.4	0.8	0.62	0.057	1.93	1.03	0.07	0.026	0.82	0.059	0.14	3.4	0.18	3.72	6594	0.7956	17.96526	-17.16966	NAF
NS0051	180	182	NS	E395459	395459	1	G	W	26.56	44.55	2.82	0.684	0.53	0.123	3.57	1.08	0.115	0.052	0.482	0.156	0.62	6.99	0.42	8.03	6636	1.5912	18.83736	-17.24616	NAF
NS0051	272	274	NS	E395506	395506	1	G	W	37.34	37.13	1.36	0.697	0.54	0.058	1.89	1.08	0.028	0.034	0.409	0.027	0.15	3.73	0.26	4.14	6682	1.0404	18.83736	-17.79696	NAF
NS0051	174	176	NS	E395456	395456	1	G	W	33.8	40.28	1.57	0.542	0.42	0.07	2.14	1.07	0.102	0.027	0.478	0.096	0.35	4.61	0.12	5.08	6633	0.8262	18.66294	-17.83674	NAF
NS0051	70	72	NS	E395404	395404	1	G	W	37.63	36.52	1.08	0.736	0.57	0.044	1.86	1.11	0.068	0.023	0.396	0.024	0.09	3.51	0.24	3.84	6581	0.7038	19.36062	-18.65682	NAF
NS0051	60	62	NS	E395398	395398	1	G	W	36.26	37.88	1.03	0.826	0.64	0.047	1.91	1.18	0.088	0.056	0.428	0.025	0.18	4.29	0.24	4.71	6576	1.7136	20.58156	-18.86796	NAF
NS0051	112	114	NS	E395425	395425	1	G	W	37.98	36.79	1.3	0.62	0.48	0.054	1.61	1.19	0.083	0.029	0.85	0.033	0.01	2.46	0.24	2.71	6602	0.8874	20.75598	-19.86858	NAF
NS0051	156	158	NS	E395447	395447	1	G	W	35.53	36.69	1.5	0.788	0.61	0.061	2.25	1.19	0.09	0.029	0.515	0.093	0.34	4.96	0.31	5.61	6624	0.8874	20.75598	-19.86858	NAF
NS0051	64	66	NS	E395400	395400	1	G	W	34.53	39.93	0.94	0.813	0.63	0.04	1.95	1.2	0.088	0.026	0.363	0.026	0.18	4.68	0.3	5.16	6578	0.7956	20.9304	-20.1348	NAF
NS0051	114	116	NS	E395426	395426	1	G	W	32.86	39.64	2.3	0.671	0.52	0.098	2.67	1.39	0.128	0.115	1.17	0.093	0.22	3.5	0.56	4.28	6603	3.519	24.24438	-20.72538	NAF
NS0051	280	282	NS	E395510	395510	1	G	W	28.12	43.44	2.51	0.671	0.52	0.108	3.04	1.35	0.07	0.085	0.612	0.11	0.42	6.16	0.7	7.28	6686	2.601	23.5467	-20.9457	NAF
NS0051	62	64	NS	E395399	395399	1	G	W	36.16	37.77	1.06	0.826	0.64	0.045	2.03	1.26	0.089	0.029	0.368	0.03	0.2	4.54	0.28	5.02	6577	0.8874	21.97692	-21.08952	NAF
NS0051	264	266	NS	E395502	395502	1	G	W	36.06	36	1.5	0.826	0.64	0.063	2.25	1.29	0.066	0.032	0.527	0.04	0.2	4.81	0.48	5.49	6678	0.9792	22.50018	-21.52098	NAF
NS0051	276	278	NS	E395508	395508	1	G	W	35.34	37.69	1.5	0.788	0.61	0.064	2.22	1.38	0.053	0.049	0.463	0.043	0.18	4.68	0.56	5.42	6684	1.4994	24.06996	-22.57056	NAF
NS0051	80	82	NS	E395409	395409	1	G	W	32.33	38.56	2.57	0.684	0.53	0.109	3	1.64	0.17	0.188	1.19	0.113	0.34	3.98	0.72	5.04	6586	5.7528	28.60488	-22.85208	NAF
NS0051	184	186	NS	E395461	395461	1	G	W	34.52	38.51	1.93	0.555	0.43	0.081	2.44	1.39	0.051	0.038	0.399	0.096	0.33	4.08	0.66	5.07	6638	1.1628	24.24438	-23.08158	NAF
NS0051	274	276	NS	E395507	395507	1	G	W	35.87	37.36	1.4	0.775	0.6	0.058	2.02	1.38	0.052	0.032	0.466	0.034	0.14	4.21	0.54	4.89	6683	0.9792	24.06996	-23.09076	NAF
NS0051	164	166	NS	E395451	395451	1	G	W	31.69	41.34	2.26	0.503	0.39	0.102	2.77	1.43	0.114	0.057	0.464	0.101	0.41	4.25	0.53	5.19	6628	1.7442	24.94206	-23.19786	NAF
NS0051	258	260	NS	E395498	395498	1	G	W	36.91	35.48	1.38	0.788	0.61	0.059	2.14	1.43	0.063	0.035	0.422	0.031	0.22	4.31	0.48	5.01	6675	1.071	24.94206	-23.87106	NAF
NS0051	72	74	NS	E395405	395405	1	G	W	37.03	36.88	1.03	0.788	0.61	0.045	1.99	1.44	0.08	0.029	0.422	0.034	0.22	3.75	0.54	4.51	6582	0.8874	25.11648	-24.22908	NAF
NS0051	262	264	NS	E395500	395500	1	G	W	37.04	35	1.49	0.826	0.64	0.063	2.23	1.49	0.065	0.032	0.497	0.031	0.21	4.55	0.56	5.32	6677	0.9792	25.98858	-25.00938	NAF
NS0051	170	172	NS	E395454	395454	1	G	W	32.6	40.54	1.91	0.516	0.4	0.085	2.44	1.5	0.029	0.037	0.536	0.095	0.35	4.19	0.89	5.43	6631	1.1322	26.163	-25.0308	NAF
NS0051	154	156	NS	E395446	395446	1	G	W	34.15	38.83	1.49	0.736	0.57	0.061	2.21	1.5	0.074	0.032	0.497	0.087	0.29	4.4	0.68	5.37	6623	0.9792	26.163	-25.1838	NAF
NS0051	222	224	NS	E395480	395480	1	G	W	35.37	37.54	1.45	0.8	0.62	0.062	2.2	1.53	0.076	0.032	0.416	0.044	0.18	4.24	0.75	5.17	6657	0.9792	26.68626	-25.70706	NAF
NS0051	110	112	NS	E395424	395424	1	G	W	36.54	38.14	1.24	0.723	0.56	0.051	1.76	1.54	0.098	0.033	0.77	0.049	0.03	2.84	0.57	3.44	6601	1.0098	26.86068	-25.85088	NAF
NS0051	260	262	NS	E395499	395499	1	G	W	37.51	34.22	1.36	0.8	0.62	0.057	2.33	1.54	0.067	0.032	0.373	0.036	0.23	4.57	0.62	5.42	6676	0.9792	26.86068	-25.88148	NAF
NS0051	94	96	NS	E395416	395416	1	G	W	36.47	36.69	1.27	0.8	0.62	0.053	1.99	1.54	0.083	0.028	0.727	0.059	0.1	3.35	0.64	4.09	6593	0.8568	26.86068	-26.00388	NAF
NS0051	200	202	NS	E395469	395469	1	G	W	35.39	37.06	1.65	0.736	0.57	0.07	2.23	1.56	0.07	0.035	0.377	0.05	0.27	4.37	0.64	5.28	6646	1.071	27.20952	-26.13852	NAF
NS0051	270	272	NS	E395505	395505	1	G	W	34.99	38.19	1.03	0.865	0.67	0.044	2.05	1.62	0.057	0.032	0.294	0.033	0.18	4.57	0.77	5.52	6681	0.9792	28.25604	-27.27684	NAF
NS0051	160	162	NS	E395449	395449	1	G	W	30.57	41.9	2.45	0.568	0.44	0.107	2.94	1.66	0.071	0.054	0.472	0.098	0.36	4.35	0.99	5.7	6626	1.6524	28.95372	-27.30132	NAF
NS0051	248	250	NS	E395493	395493	1	G	W	33.07	39.53	1.97	0.71	0.55	0.084	2.52	1.64	0.089	0.042	0.507	0.057	0.27	4.52	0.85	5.64	6670	1.2852	28.60488	-27.31968	NAF
NS0051	218	220	NS	E395478	395478	1	G	W	35.99	36.87	1.32	0.8	0.62	0.056	2.23	1.64	0.055	0.032	0.456	0.043	0.19	4.17	0.93	5.29	6655	0.9792	28.60488	-27.62568	NAF
NS0051	120	122	NS	E395429	395429	1	G	W	33.75	39.46	1.33	0.904	0.7	0.051	2.02	1.78	0.078	0.109	0.953	0.056	0.1	3.8	0.93	4.83	6606	3.3354	31.04676	-27.71136	NAF
NS0051	88	90	NS	E395413	395413	1	G	W	37.56	36.24	1	0.775	0.6	0.043	1.91	1.66	0.084	0.028	0.488	0.053	0.14	3.13	0.73	4	6590	0.8568	28.95372	-28.09692	NAF
NS0051	104	106	NS	E395421	395421	1	G	W	37.07	35.67	1.42	0.8	0.62	0.056	1.92	1.67	0.123	0.031	0.933	0.049	0.1	3.27	0.63	4	6598	0.9486	29.12814	-28.17954	NAF
NS0051	190	192	NS	E395464	395464	1	G	W	27.73	41.6	2.9	0.775	0.6	0.121	3.57	1.82	0.102	0.113	0.533	0.146	0.56	6.52	1.12	8.2	6641	3.4578	31.74444	-28.28664	NAF
NS0051	142	144	NS	E395440	395440	1	G	W	33.81	38.91	1.53	0.697	0.54	0.064	2.37	1.7	0.073	0.035	0.507	0.084	0.18	4.04	1.12	5.34	6617	1.071	29.6514	-28.5804	NAF
NS0051	268	270	NS	E395504	395504	1	G	W	34.51	37.07	1.77	0.826	0.64	0.074	2.49	1.73	0.151	0.051	0.602	0.056	0.23	4.94	0.64	5.81	6680	1.5606	30.17466	-28.61406	NAF
NS0051	266	268	NS	E395503	395503	1	G	W	33.46	37.23	1.95	0.891	0.69	0.087	2.8	1.72	0.098	0.044	0.581	0.074	0.29	5.39	0.86	6.54	6679	1.3464	30.00024	-28.65384	NAF
NS0051	116	118	NS	E395427	395427	1	G	W	34.99	38.22	1.45	0.71	0.55	0.057	2.08	1.73	0.082	0.048	0.926	0.051	0.1	3.18	0.95	4.23	6604	1.4688	30.17466	-28.70586	NAF
NS0051	68	70	NS	E395403	395403	1	G	W	35.06	39.34	0.92	0.8	0.62	0.038	1.87	1.71	0.127	0.028	0.351	0.024	0.09	3.68	0.79	4.56	6580	0.8568	29.82582	-28.96902	NAF
NS0051	158	160	NS	E395448	395448	1	G	W	32.42	40.27	1.94	0.594	0.46	0.082	2.39	1.75	0.071	0.047	0.673	0.094	0.32	3.92	1.02	5.26	6625	1.4382	30.5235	-29.0853	NAF
NS0051	76	78	NS	E395407	395407	1	G	W	37.98	34.5	0.94	0.775	0.6	0.047	2.17	1.74	0.092	0.024	0.409	0.053	0.21	3.56	0.89	4.66	6584	0.7344	30.34908	-29.61468	NAF
NS0051	194	196	NS	E395466	395466	1	G	W	33.01	40.3	1.77	0.555	0.43	0.076	2.29	1.78	0.067	0.046	0.449	0.079	0.28	3.75	1	5.03	6643	1.4076	31.04676	-29.63916	NAF
NS0051	168	170	NS	E395453	395453	1	G	W	30.81	40.49	2.49	0.555	0.43	0.113	3.12	1.86	0.131	0.084	0.415	0.121	0.38	4.86	1.04	6.28	6630	2.5704	32.44212	-29.87172	NAF
NS0051	188	190	NS	E395463	395463	1	G	W	28.19	41.79	2.74	0.723	0.56	0.119	3.32	2.04	0.094	0.183	0.612	0.13	0.46	5.73	1.39	7.58	6640	5.5998	35.58168	-29.98188	NAF
NS0051	126	128	NS	E395432	395432	1	G	W	34.81	39.57	1.08	0.839	0.65	0.044	1.73	1.79	0.087	0.035	0.736	0.034	0.06	3.18	0.94	4.18	6609	1.071	31.22118	-30.15018	NAC
NS0051	216	218	NS	E395477	395477	1	G	W	34.03	39.82	1.14	0.775	0.6	0.048	1.99	1.81	0.08	0.026	0.407	0.042	0.13	3.7	1.07	4.9	6654	0.7956	31.57002	-30.77442	NAC
NS0051	90	92	NS	E395414	395414	1	G	W	35.86	37.03	1.18	0.8	0.62	0.05	2.02	1.82	0.094	0.027	0.662	0.059	0.13	3.37	0.96	4.46	6591	0.8262	31.74444	-30.91824	NAC
NS0051	202	204	NS	E395470	395470	1	G	W	34.32	38.4	1.37	0.788	0.61	0.055	2.13	1.84	0.077	0.033	0.378	0.059	0.26	4.27	0.87	5.4	6647	1.0098	32.09328	-31.08348	NAC
NS0051	140	142	NS	E395439	395439	1	G	W	36.14	36.37	1.43	0.71	0.55	0.059	2.14	1.86	0.093	0.04	0.515	0.064	0.15	3.45	1.06	4.66	6616	1.224	32.44212	-31.21812	NAC
NS0051	138	140	NS	E395438	395438	1	G	W	35.69	36.63	1.26	0.865	0.67	0.053	2.08	1.92	0.092	0.074	0.528	0.043	0.17	4.27	0.92	5.36	6615	2.2644	33.48864	-31.22424	NAC
NS0051	118	120	NS	E395428	395428	1	G	W	31.71	42.45	1.18	0.904	0.7	0.045	1.98	1.97	0.062	0.098	0.822	0.052	0.11	3.66	1.21	4.98	6605	2.9988	34.36074	-31.36194	NAC
NS0051	242	244	NS	E395490	395490	1	G	W	35.75	36.5	1.39	0.736	0.57	0.057	2.1	1.88	0.094	0.044	0.516	0.039	0.18	3.92	0.88	4.98	6667	1.3464	32.79096	-31.44456	NAC
NS0051	244	246	NS	E395491	395491	1	G	W	35.92	36.52	1.36	0.762	0.59	0.053	1.92	1.87	0.077	0.035	0.625	0.031	0.13	3.78	0.97	4.88	6668	1.071	32.61654	-31.54554	NAC
NS0051	92	94	NS	E395415	395415	1	G	W	34.69	37.64	1.58	0.788	0.61	0.067	2.29	1.92	0.091	0.042	0.923	0.078	0.18	3.37	1.17	4.72	6592	1.2852	33.48864	-32.20344	NAC
NS0051	220	222	NS	E395479	395479	1	G	W	34.2	38.18	1.49	0.813	0.63	0.062	2.22	1.94	0.088	0.036	0.531	0.047	0.21	4.1	1.15	5.46	6656	1.1016	33.83748	-32.73588	NAC
NS0051	210	212	NS	E395474	395474	1	G	W	35.73	36.74	1.32	0.813	0.63	0.057	2.21	1.94	0.067	0.028	0.415	0.043	0.23	3.89	1.12	5.24	6651	0.8568	33.83748	-32.98068	NAC
NS0051	214	216	NS	E395476	395476	1	G	W	35.58	36.46	1.23	0.865	0.67	0.052	2.17	1.95	0.073	0.031	0.474	0.034	0.16	3.98	1.19	5.33	6653	0.9486	34.0119	-33.0633	NAC
NS0051	256	258	NS	E395497	395497	1	G	W	35.15	37	1.44	0.813	0.63	0.061	2.12	1.97	0.08	0.038	0.563	0.049	0.17	4.23	1.08	5.48	6674	1.1628	34.36074	-33.19794	NAC
NS0051	130	132	NS	E395434	395434	1	G	W	34.71	39.35	1.51	0.594	0.46	0.063	2.03	1.98	0.114	0.036	0.703	0.065	0.11	2.46	1.12	3.69	6611	1.1016	34.53516	-33.43356	NAC
NS0051	192	194	NS	E395465	395465	1	G	W	31.51	40.84	1.72	0.646	0.5	0.071	2.54	2.05	0.081	0.047	0.314	0.096	0.4	4.52	1.28	6.2	6642	1.4382	35.7561	-34.3179	NAC
NS0051	208	210	NS	E395473	395473	1	G	W	35.36	37.29	1.21	0.8	0.62	0.053	2.06	2.04	0.112	0.041	0.389	0.046	0.2	3.77	1.01	4.98	6650	1.2546	35.58168	-34.32708	NAC
NS0051	132	134	NS	E395435	395435	1	G	W	33.3	40.62	1.14	0.826	0.64	0.047	1.98	2.03	0.077	0.035	0.549	0.04	0.13	3.57	1.19	4.89	6612	1.071	35.40726	-34.33626	NAC
NS0051	162	164	NS	E395450	395450	1	G	W	29.03	45.28	2.07	0.426	0.33	0.09	2.4	2.08	0.071	0.052	0.603	0.094	0.34	3.22	1.41	4.97	6627	1.5912	36.27936	-34.68816	NAC
NS0051	196	198	NS	E395467	395467	1	G	W	29.36	41.58	2.09	0.736	0.57	0.087	2.94	2.14	0.086	0.086	0.438	0.107	0.42	5.54	1.44	7.4	6644	2.6316	37.32588	-34.69428	NAC
NS0051	122	124	NS	E395430	395430	1	G	W	34.92	38.66	1.12	0.8	0.62	0.046	1.8	2.03	0.089	0.021	0.806	0.039	0.04	3.01	1.25	4.3	6607	0.6426	35.40726	-34.76466	NAC
NS0051	224	226	NS	E395481	395481	1	G	W	34.3	37.88	1.38	0.813	0.63	0.058	2.23	2.08	0.072	0.035	0.37	0.044	0.2	4.03	1.38	5.61	6658	1.071	36.27936	-35.20836	NAC
NS0051	166	168	NS	E395452	395452	1	G	W	26.71	46.01	2.82	0.478	0.37	0.127	3.3	2.15	0.026	0.07	0.459	0.11	0.43	3.93	1.86	6.22	6629	2.142	37.5003	-35.3583	NAC
NS0051	204	206	NS	E395471	395471	1	G	W	34.84	37.19	1.44	0.8	0.62	0.061	2.18	2.11	0.073	0.032	0.485	0.058	0.2	3.98	1.35	5.53	6648	0.9792	36.80262	-35.82342	NAC
NS0051	238	240	NS	E395488	395488	1	G	W	33.62	39.47	1.37	0.749	0.58	0.057	2.01	2.12	0.091	0.034	0.569	0.054	0.14	3.62	1.33	5.09	6665	1.0404	36.97704	-35.93664	NAC
NS0051	240	242	NS	E395489	395489	1	G	W	34.66	37.23	1.35	0.813	0.63	0.059	2.12	2.14	0.097	0.034	0.527	0.043	0.2	3.92	1.32	5.44	6666	1.0404	37.32588	-36.28548	NAC
NS0051	212	214	NS	E395475	395475	1	G	W	35.36	36.27	1.41	0.839	0.65	0.057	2.35	2.15	0.074	0.036	0.472	0.052	0.2	3.98	1.39	5.57	6652	1.1016	37.5003	-36.3987	NAC
NS0051	172	174	NS	E395455	395455	1	G	W	31.26	40.73	1.95	0.555	0.43	0.083	2.48	2.16	0.077	0.038	0.718	0.099	0.35	4.24	1.45	6.04	6632	1.1628	37.67472	-36.51192	NAC
NS0051	234	236	NS	E395486	395486	1	G	W	33.43	38.98	1.49	0.736	0.57	0.062	2.21	2.2	0.082	0.035	0.489	0.053	0.17	3.74	1.5	5.41	6663	1.071	38.3724	-37.3014	NAC
NS0051	232	234	NS	E395485	395485	1	G	W	35.54	36.83	1.26	0.826	0.64	0.053	2.1	2.21	0.077	0.038	0.449	0.051	0.19	3.88	1.37	5.44	6662	1.1628	38.54682	-37.38402	NAC
NS0051	228	230	NS	E395483	395483	1	G	W	37.44	34.38	1.19	0.852	0.66	0.051	2.05	2.23	0.08	0.043	0.335	0.037	0.15	3.75	1.39	5.29	6660	1.3158	38.89566	-37.57986	NAC
NS0051	128	130	NS	E395433	395433	1	G	W	35.5	37.21	1.16	0.865	0.67	0.046	1.98	2.23	0.094	0.025	0.719	0.042	0.1	3.3	1.36	4.76	6610	0.765	38.89566	-38.13066	NAC
NS0051	230	232	NS	E395484	395484	1	G	W	33.75	38.31	1.17	0.955	0.74	0.049	2.17	2.28	0.067	0.043	0.44	0.045	0.22	4.46	1.5	6.18	6661	1.3158	39.76776	-38.45196	NAC
NS0051	246	248	NS	E395492	395492	1	G	W	33.22	39.15	1.5	0.775	0.6	0.062	2.05	2.31	0.088	0.045	0.71	0.047	0.15	3.81	1.58	5.54	6669	1.377	40.29102	-38.91402	NAC
NS0051	206	208	NS	E395472	395472	1	G	W	33.51	39.54	1.24	0.826	0.64	0.051	2.12	2.34	0.063	0.036	0.407	0.043	0.19	3.84	1.55	5.58	6649	1.1016	40.81428	-39.71268	NAC
NS0051	98	100	NS	E395418	395418	1	G	W	33.84	38.5	1.13	0.865	0.67	0.045	2.12	2.41	0.078	0.024	0.711	0.049	0.09	3.42	1.78	5.29	6595	0.7344	42.03522	-41.30082	NAC
NS0051	198	200	NS	E395468	395468	1	G	W	29.96	39.65	2.62	0.671	0.52	0.112	3.19	2.59	0.148	0.103	0.606	0.143	0.47	4.79	1.73	6.99	6645	3.1518	45.17478	-42.02298	NAC
NS0051	134	136	NS	E395436	395436	1	G	W	30.55	42.91	1.1	0.878	0.68	0.044	2.09	2.54	0.107	0.067	0.507	0.046	0.17	3.8	1.69	5.66	6613	2.0502	44.30268	-42.25248	NAC
NS0051	236	238	NS	E395487	395487	1	G	W	33.37	38.81	1.46	0.788	0.61	0.063	2.19	2.52	0.115	0.035	0.542	0.045	0.21	3.83	1.65	5.69	6664	1.071	43.95384	-42.88284	NAC
NS0051	100	102	NS	E395419	395419	1	G	W	33.53	38.82	1.28	0.826	0.64	0.054	2.11	2.55	0.083	0.044	0.832	0.053	0.09	3.18	1.84	5.11	6596	1.3464	44.4771	-43.1307	NAC
NS0051	226	228	NS	E395482	395482	1	G	W	35.36	36.7	1.11	0.852	0.66	0.049	2.04	2.54	0.081	0.032	0.281	0.04	0.1	3.56	1.93	5.59	6659	0.9792	44.30268	-43.32348	NAC
NS0051	102	104	NS	E395420	395420	1	G	W	33.3	39.86	1.1	0.852	0.66	0.047	1.95	2.55	0.084	0.026	0.736	0.039	0.06	3.07	1.9	5.03	6597	0.7956	44.4771	-43.6815	NAC
NS0051	124	126	NS	E395431	395431	1	G	W	29.19	46.91	0.81	0.788	0.61	0.034	1.65	2.71	0.087	0.017	0.57	0.03	0.02	2.25	2.45	4.72	6608	0.5202	47.26782	-46.74762	NAC
NS0051	136	138	NS	E395437	395437	1	G	W	28.7	46.12	0.89	0.839	0.65	0.036	1.87	2.81	0.065	0.025	0.428	0.044	0.1	3.21	2.24	5.55	6614	0.765	49.01202	-48.24702	NAC
NS0052	122	124	NS	E395572	395572	1	G	W	25.71	42.28	5.11	0.478	0.37	0.234	2.64	0.77	0.099	1.91	0.672	0.125	0.64	6.63	2.5	9.77	6748	58.446	13.43034	45.01566	PAF(HC)
NS0052	120	122	NS	E395571	395571	1	G	W	18.4	54.05	9.28	0.168	0.13	0.42	3.05	0.33	0.045	0.803	0.781	0.043	0.61	3.57	0.82	5	6747	24.5718	5.75586	18.81594	PAF(HC)
NS0052	98	100	NS	E395560	395560	1	G	W	23.2	47.23	6.96	0.297	0.23	0.308	3.27	0.56	0.042	0.759	1.01	0.291	1.21	3.48	1.41	6.1	6736	23.2254	9.76752	13.45788	PAF(HC)
NS0052	250	252	NS	E395637	395637	1	G	W	24.09	46.66	2.47	0.349	0.27	0.115	3.36	0.84	0.088	0.853	0.653	0.145	0.78	7.43	1.77	9.98	6812	26.1018	14.65128	11.45052	PAF(HC)
NS0052	82	84	NS	E395552	395552	1	G	W	27.82	42.88	3.98	0.349	0.27	0.18	2.73	0.6	0.075	0.545	1	0.263	1.25	5.31	1.01	7.57	6728	16.677	10.4652	6.2118	PAF(LC)
NS0052	86	88	NS	E395554	395554	1	G	W	26.35	43.22	5.34	0.349	0.27	0.246	3.1	0.66	0.111	0.501	1.26	0.324	1.57	4.59	1.04	7.2	6730	15.3306	11.51172	3.81888	PAF(LC)
NS0052	116	118	NS	E395569	395569	1	G	W	26.11	42.21	4.69	0.336	0.26	0.211	3.16	0.57	0.111	0.338	0.985	0.26	1.54	7.03	0.87	9.44	6745	10.3428	9.94194	0.40086	PAF(LC)
NS0052	56	58	NS	E395539	395539	1	G	W	25.97	43.94	4.02	0.361	0.28	0.189	2.88	0.37	0.059	0.217	0.953	0.255	1.72	7.03	0.65	9.4	6715	6.6402	6.45354	0.18666	PAF(LC)
NS0052	62	64	NS	E395542	395542	1	G	W	28.06	42.61	3.77	0.31	0.24	0.177	2.8	0.4	0.079	0.232	1.24	0.328	1.67	5.34	0.64	7.65	6718	7.0992	6.9768	0.1224	PAF(LC)
NS0052	2	4	NS	E395512	395512	1	G	W	40.12	30.95	3.6	0.026	0.02	0.195	0.07	0.02	0.048	0.014	0.023	0.02	6.1	1.04	0.19	7.33	6688	0.4284	0.34884	0.07956	PAF(LC)
NS0052	4	6	NS	E395513	395513	1	G	W	32.97	44.04	2.84	0.026	0.02	0.109	0.06	0.03	0.036	0.018	0.015	0.01	4.29	0.87	0.15	5.31	6689	0.5508	0.52326	0.02754	PAF(LC)
NS0052	66	68	NS	E395544	395544	1	G	W	26.67	43.62	4.39	0.297	0.23	0.209	3.07	0.42	0.073	0.229	1.24	0.352	1.68	5.33	0.71	7.72	6720	7.0074	7.32564	-0.31824	NAF
NS0052	96	98	NS	E395559	395559	1	G	W	22.49	47.95	4.19	0.374	0.29	0.193	2.83	1.61	0.091	0.897	0.965	0.24	1.18	5.86	1.63	8.67	6735	27.4482	28.08162	-0.63342	NAF
NS0052	6	8	NS	E395514	395514	1	G	W	41.07	29.46	3.6	0.026	0.02	0.195	0.17	0.06	0.04	0.012	0.037	0.011	5.92	1.2	0.17	7.29	6690	0.3672	1.04652	-0.67932	NAF
NS0052	20	22	NS	E395521	395521	1	G	W	38.09	37.77	1.82	0.374	0.29	0.085	0.42	0.07	0.068	0.008	0.031	0.021	4.03	0.89	0.01	4.93	6697	0.2448	1.22094	-0.97614	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0052	22	24	NS	E395522	395522	1	G	W	37.17	38.49	2.01	0.207	0.16	0.112	0.47	0.07	0.072	0.008	0.028	0.018	4.12	0.96	0.01	5.09	6698	0.2448	1.22094	-0.97614	NAF
NS0052	30	32	NS	E395526	395526	1	G	W	34.15	41.65	2.37	0.142	0.11	0.104	0.58	0.07	0.048	0.008	0.055	0.03	4.78	1.14	0.08	6	6702	0.2448	1.22094	-0.97614	NAF
NS0052	44	46	NS	E395533	395533	1	G	W	27.83	41.9	3.99	0.413	0.32	0.187	3.05	0.41	0.068	0.198	1.17	0.263	1.63	6.03	0.62	8.28	6709	6.0588	7.15122	-1.09242	NAF
NS0052	24	26	NS	E395523	395523	1	G	W	37.08	38.74	1.96	0.194	0.15	0.104	0.45	0.08	0.07	0.009	0.027	0.037	4.12	0.91	0.01	5.04	6699	0.2754	1.39536	-1.11996	NAF
NS0052	0	2	NS	E395511	395511	1	G	W	38.39	33.22	3.94	0.065	0.05	0.174	0.26	0.1	0.039	0.019	0.1	0.024	5.56	1.37	0.16	7.09	6687	0.5814	1.7442	-1.1628	NAF
NS0052	8	10	NS	E395515	395515	1	G	W	34.59	42.19	2.28	0.052	0.04	0.098	0.29	0.08	0.043	0.007	0.029	0.015	4.4	0.89	0.09	5.38	6691	0.2142	1.39536	-1.18116	NAF
NS0052	16	18	NS	E395519	395519	1	G	W	35.26	40.17	2.46	0.077	0.06	0.122	0.51	0.09	0.044	0.011	0.029	0.024	4.53	1.13	0.08	5.74	6695	0.3366	1.56978	-1.23318	NAF
NS0052	26	28	NS	E395524	395524	1	G	W	33.16	40.24	3.54	0.323	0.25	0.169	0.9	0.09	0.055	0.007	0.11	0.039	5	1.6	0.19	6.79	6700	0.2142	1.56978	-1.35558	NAF
NS0052	28	30	NS	E395525	395525	1	G	W	33.23	41.42	2.97	0.194	0.15	0.141	0.73	0.09	0.055	0.007	0.086	0.036	4.9	1.38	0.14	6.42	6701	0.2142	1.56978	-1.35558	NAF
NS0052	32	34	NS	E395527	395527	1	G	W	33.86	40.8	2.57	0.387	0.3	0.119	0.69	0.09	0.054	0.007	0.078	0.033	5.04	1.27	0.14	6.45	6703	0.2142	1.56978	-1.35558	NAF
NS0052	18	20	NS	E395520	395520	1	G	W	36	38.59	2.68	0.09	0.07	0.138	0.61	0.1	0.047	0.011	0.031	0.025	4.66	1.23	0.07	5.96	6696	0.3366	1.7442	-1.4076	NAF
NS0052	104	106	NS	E395563	395563	1	G	W	27.95	40.4	4.18	0.297	0.23	0.19	2.86	1.11	0.074	0.585	0.903	0.23	1.32	6.69	1.27	9.28	6739	17.901	19.36062	-1.45962	NAF
NS0052	10	12	NS	E395516	395516	1	G	W	35.47	40.91	2.2	0.065	0.05	0.101	0.39	0.1	0.043	0.008	0.031	0.018	4.19	0.91	0.05	5.15	6692	0.2448	1.7442	-1.4994	NAF
NS0052	12	14	NS	E395517	395517	1	G	W	35.48	40.83	2.08	0.065	0.05	0.093	0.47	0.11	0.038	0.012	0.023	0.009	4.31	1.06	0.04	5.41	6693	0.3672	1.91862	-1.55142	NAF
NS0052	34	36	NS	E395528	395528	1	G	W	33.04	40.01	3.29	0.323	0.25	0.145	0.98	0.13	0.055	0.008	0.178	0.046	5.38	1.6	0.2	7.18	6704	0.2448	2.26746	-2.02266	NAF
NS0052	38	40	NS	E395530	395530	1	G	W	31.5	42.35	3.18	0.503	0.39	0.137	0.99	0.13	0.055	0.008	0.181	0.048	5.2	1.55	0.21	6.96	6706	0.2448	2.26746	-2.02266	NAF
NS0052	14	16	NS	E395518	395518	1	G	W	35.5	38.78	2.74	0.103	0.08	0.141	0.71	0.14	0.04	0.011	0.028	0.03	4.78	1.35	0.1	6.23	6694	0.3366	2.44188	-2.10528	NAF
NS0052	36	38	NS	E395529	395529	1	G	W	29.05	45.3	3.53	0.646	0.5	0.155	1.11	0.17	0.053	0.007	0.221	0.052	4.96	1.73	0.25	6.94	6705	0.2142	2.96514	-2.75094	NAF
NS0052	68	70	NS	E395545	395545	1	G	W	26.57	44.19	3.45	0.336	0.26	0.159	2.58	0.5	0.084	0.181	1.01	0.283	1.65	6.9	0.52	9.07	6721	5.5386	8.721	-3.1824	NAF
NS0052	52	54	NS	E395537	395537	1	G	W	28.67	40.41	3.5	0.374	0.29	0.163	2.83	0.52	0.094	0.18	1.13	0.299	1.67	7.04	0.53	9.24	6713	5.508	9.06984	-3.56184	NAF
NS0052	54	56	NS	E395538	395538	1	G	W	29	40.74	3.19	0.349	0.27	0.149	2.74	0.47	0.07	0.148	1.13	0.294	1.64	6.73	0.46	8.83	6714	4.5288	8.19774	-3.66894	NAF
NS0052	100	102	NS	E395561	395561	1	G	W	27.67	42.36	3.52	0.284	0.22	0.16	2.58	0.65	0.095	0.213	0.865	0.243	1.58	7.41	0.52	9.51	6737	6.5178	11.3373	-4.8195	NAF
NS0052	58	60	NS	E395540	395540	1	G	W	30.71	38.76	2.73	0.465	0.36	0.13	2.18	0.48	0.09	0.113	0.795	0.214	2.09	7.41	0.35	9.85	6716	3.4578	8.37216	-4.91436	NAF
NS0052	42	44	NS	E395532	395532	1	G	W	31.57	38.55	2.52	0.633	0.49	0.12	1.67	0.47	0.082	0.098	0.484	0.099	2.86	6.41	0.3	9.57	6708	2.9988	8.19774	-5.19894	NAF
NS0052	240	242	NS	E395632	395632	1	G	W	24.63	44.66	2.76	0.594	0.46	0.127	3.03	1.28	0.149	0.529	1.35	0.168	0.94	8.03	1.07	10.04	6807	16.1874	22.32576	-6.13836	NAF
NS0052	40	42	NS	E395531	395531	1	G	W	32.79	36.42	2.38	0.426	0.33	0.115	2.17	0.5	0.104	0.074	0.726	0.099	1.82	8.08	0.11	10.01	6707	2.2644	8.721	-6.4566	NAF
NS0052	84	86	NS	E395553	395553	1	G	W	29.43	39.15	3.88	0.336	0.26	0.177	2.78	0.97	0.168	0.333	1.15	0.306	1.83	5.83	0.8	8.46	6729	10.1898	16.91874	-6.72894	NAF
NS0052	118	120	NS	E395570	395570	1	G	W	23.88	48.16	1.53	0.465	0.36	0.071	1.83	0.59	0.084	0.09	0.437	0.127	1.08	10.77	0.18	12.03	6746	2.754	10.29078	-7.53678	NAF
NS0052	80	82	NS	E395551	395551	1	G	W	30.3	39.49	2.95	0.4	0.31	0.135	2.55	0.79	0.116	0.204	1.08	0.293	1.51	6.21	0.57	8.29	6727	6.2424	13.77918	-7.53678	NAF
NS0052	70	72	NS	E395546	395546	1	G	W	31.48	37.77	2.02	0.529	0.41	0.091	2.06	0.66	0.107	0.112	0.678	0.202	1.34	9.08	0.11	10.53	6722	3.4272	11.51172	-8.08452	NAF
NS0052	64	66	NS	E395543	395543	1	G	W	30.1	37.63	1.48	0.503	0.39	0.067	2.06	0.57	0.087	0.06	0.57	0.157	1.36	11.97	0.05	13.38	6719	1.836	9.94194	-8.10594	NAF
NS0052	60	62	NS	E395541	395541	1	G	W	30.91	36.35	1.7	0.555	0.43	0.078	2.1	0.61	0.088	0.077	0.637	0.173	1.38	11.65	0.06	13.09	6717	2.3562	10.63962	-8.28342	NAF
NS0052	46	48	NS	E395534	395534	1	G	W	32.01	35.05	1.81	0.529	0.41	0.083	2.17	0.67	0.075	0.076	0.633	0.154	1.29	11.44	0.05	12.78	6710	2.3256	11.68614	-9.36054	NAF
NS0052	72	74	NS	E395547	395547	1	G	W	30.06	40.52	1.97	0.452	0.35	0.092	2.06	0.73	0.064	0.092	0.662	0.183	1.34	8.41	0.09	9.84	6723	2.8152	12.73266	-9.91746	NAF
NS0052	48	50	NS	E395535	395535	1	G	W	30.31	37.57	2.52	0.426	0.33	0.117	2.58	0.82	0.074	0.135	0.912	0.221	1.49	9.17	0.4	11.06	6711	4.131	14.30244	-10.17144	NAF
NS0052	278	280	NS	E395651	395651	1	G	W	30.92	40.87	2.59	0.568	0.44	0.116	2.54	1.06	0.124	0.253	1.91	0.088	0.28	4.44	0.57	5.29	6826	7.7418	18.48852	-10.74672	NAF
NS0052	74	76	NS	E395548	395548	1	G	W	31.22	38.52	2.22	0.465	0.36	0.104	2.26	0.83	0.074	0.121	0.819	0.231	1.38	7.9	0.25	9.53	6724	3.7026	14.47686	-10.77426	NAF
NS0052	110	112	NS	E395566	395566	1	G	W	26.93	43.13	2.74	0.349	0.27	0.125	2.35	0.96	0.105	0.186	0.714	0.203	1.2	8.48	0.43	10.11	6742	5.6916	16.74432	-11.05272	NAF
NS0052	50	52	NS	E395536	395536	1	G	W	30.5	37.48	2.64	0.4	0.31	0.121	2.57	0.86	0.143	0.125	0.907	0.242	1.44	8.83	0.34	10.61	6712	3.825	15.00012	-11.17512	NAF
NS0052	114	116	NS	E395568	395568	1	G	W	26.31	42.48	2.77	0.439	0.34	0.125	2.54	1.09	0.168	0.204	0.684	0.193	1.27	9.7	0.55	11.52	6744	6.2424	19.01178	-12.76938	NAF
NS0052	112	114	NS	E395567	395567	1	G	W	27.85	40.38	3.11	0.374	0.29	0.141	2.68	1.02	0.147	0.161	0.809	0.23	1.29	8.69	0.45	10.43	6743	4.9266	17.79084	-12.86424	NAF
NS0052	184	186	NS	E395604	395604	1	G	W	34.73	38.94	1.46	0.607	0.47	0.065	1.81	0.83	0.059	0.034	0.978	0.069	0.29	4.8	0.01	5.1	6779	1.0404	14.47686	-13.43646	NAF
NS0052	102	104	NS	E395562	395562	1	G	W	27.7	38.98	3.69	0.361	0.28	0.168	2.78	1.5	0.133	0.387	0.924	0.252	1.63	8.02	1.07	10.72	6738	11.8422	26.163	-14.3208	NAF
NS0052	76	78	NS	E395549	395549	1	G	W	31.22	39.07	2.1	0.478	0.37	0.096	2.09	0.99	0.108	0.095	0.778	0.214	1.27	7.38	0.21	8.86	6725	2.907	17.26758	-14.36058	NAF
NS0052	262	264	NS	E395643	395643	1	G	W	32.22	43.24	1.5	0.491	0.38	0.068	1.92	0.94	0.142	0.049	1.06	0.055	0.2	4.01	0.01	4.22	6818	1.4994	16.39548	-14.89608	NAF
NS0052	126	128	NS	E395574	395574	1	G	W	27.79	42.43	3.86	0.439	0.34	0.182	2.84	1.4	0.094	0.291	1.5	0.235	0.96	4.56	1.05	6.57	6750	8.9046	24.4188	-15.5142	NAF
NS0052	280	282	NS	E395652	395652	1	G	W	30.01	42.92	2.06	0.607	0.47	0.092	2.2	1.34	0.248	0.235	1.58	0.067	0.21	4.59	0.38	5.18	6827	7.191	23.37228	-16.18128	NAF
NS0052	242	244	NS	E395633	395633	1	G	W	26.86	49.51	1.15	0.374	0.29	0.051	1.85	1.05	0.09	0.037	0.464	0.081	0.41	5.82	0.26	6.49	6808	1.1322	18.3141	-17.1819	NAF
NS0052	78	80	NS	E395550	395550	1	G	W	32.21	37.85	2.27	0.413	0.32	0.103	2.16	1.19	0.147	0.116	0.878	0.249	1.5	6.25	0.3	8.05	6726	3.5496	20.75598	-17.20638	NAF
NS0052	192	194	NS	E395608	395608	1	G	W	34.56	38.09	1.62	0.568	0.44	0.077	1.94	1.1	0.085	0.052	1.03	0.07	0.27	4.9	0.21	5.38	6783	1.5912	19.1862	-17.595	NAF
NS0052	260	262	NS	E395642	395642	1	G	W	30.11	42.23	2.2	0.503	0.39	0.098	2.45	1.46	0.075	0.218	1.53	0.082	0.29	4.4	0.8	5.49	6817	6.6708	25.46532	-18.79452	NAF
NS0052	276	278	NS	E395650	395650	1	G	W	32.01	43.32	1.64	0.465	0.36	0.072	1.94	1.23	0.163	0.069	1.23	0.056	0.09	3.47	0.26	3.82	6825	2.1114	21.45366	-19.34226	NAF
NS0052	272	274	NS	E395648	395648	1	G	W	34.7	40.11	1.39	0.478	0.37	0.063	1.8	1.18	0.131	0.036	1.02	0.048	0.14	3.37	0.23	3.74	6823	1.1016	20.58156	-19.47996	NAF
NS0052	230	232	NS	E395627	395627	1	G	W	32.65	40.26	1.84	0.465	0.36	0.085	2.21	1.26	0.056	0.045	0.94	0.083	0.38	4.72	0.57	5.67	6802	1.377	21.97692	-20.59992	NAF
NS0052	252	254	NS	E395638	395638	1	G	W	27.16	44.17	2.16	0.465	0.36	0.104	3.03	1.61	0.124	0.209	0.762	0.143	0.63	6.33	0.91	7.87	6813	6.3954	28.08162	-21.68622	NAF
NS0052	220	222	NS	E395622	395622	1	G	W	27.05	41.72	3.76	0.478	0.37	0.177	2.97	1.98	0.076	0.41	2.08	0.151	0.67	4.77	1.5	6.94	6797	12.546	34.53516	-21.98916	NAF
NS0052	182	184	NS	E395603	395603	1	G	W	33.37	40.46	1.57	0.529	0.41	0.07	1.92	1.42	0.065	0.064	0.989	0.08	0.27	3.84	0.58	4.69	6778	1.9584	24.76764	-22.80924	NAF
NS0052	92	94	NS	E395557	395557	1	G	W	33.82	36.46	1.87	0.503	0.39	0.086	2.29	1.42	0.061	0.057	0.74	0.21	0.99	5.79	0.77	7.55	6733	1.7442	24.76764	-23.02344	NAF
NS0052	94	96	NS	E395558	395558	1	G	W	30.53	37.21	2.56	0.465	0.36	0.125	2.52	1.78	0.077	0.251	0.953	0.245	1.41	7.67	1.13	10.21	6734	7.6806	31.04676	-23.36616	NAF
NS0052	166	168	NS	E395594	395594	1	G	W	32.47	42.57	1.43	0.503	0.39	0.063	1.75	1.43	0.114	0.049	0.903	0.083	0.26	3.68	0.47	4.41	6770	1.4994	24.94206	-23.44266	NAF
NS0052	170	172	NS	E395596	395596	1	G	W	31.72	42.07	1.68	0.594	0.46	0.073	1.88	1.44	0.081	0.053	1.14	0.087	0.32	4.45	0.59	5.36	6772	1.6218	25.11648	-23.49468	NAF
NS0052	124	126	NS	E395573	395573	1	G	W	33.28	37.95	1.98	0.478	0.37	0.088	2.03	1.5	0.094	0.082	0.586	0.158	0.75	5.81	0.55	7.11	6749	2.5092	26.163	-23.6538	NAF
NS0052	142	144	NS	E395582	395582	1	G	W	32.57	41.94	1.39	0.62	0.48	0.062	1.73	1.46	0.123	0.055	0.848	0.085	0.32	4.09	0.53	4.94	6758	1.683	25.46532	-23.78232	NAF
NS0052	186	188	NS	E395605	395605	1	G	W	32.9	40.7	1.72	0.516	0.4	0.076	1.95	1.49	0.101	0.072	1.08	0.086	0.26	4.08	0.63	4.97	6780	2.2032	25.98858	-23.78538	NAF
NS0052	144	146	NS	E395583	395583	1	G	W	32.71	40.61	1.65	0.542	0.42	0.076	1.97	1.53	0.114	0.063	0.969	0.112	0.42	4.2	0.63	5.25	6759	1.9278	26.68626	-24.75846	NAF
NS0052	164	166	NS	E395593	395593	1	G	W	33.93	39.02	1.57	0.594	0.46	0.071	1.85	1.5	0.075	0.039	1.04	0.075	0.26	4.27	0.67	5.2	6769	1.1934	26.163	-24.9696	NAF
NS0052	148	150	NS	E395585	395585	1	G	W	32.94	40.23	1.82	0.465	0.36	0.086	2.09	1.61	0.133	0.095	1.03	0.103	0.41	3.91	0.67	4.99	6761	2.907	28.08162	-25.17462	NAF
NS0052	180	182	NS	E395602	395602	1	G	W	33.73	38.78	1.69	0.646	0.5	0.074	1.97	1.52	0.081	0.043	1.14	0.083	0.28	4.48	0.61	5.37	6777	1.3158	26.51184	-25.19604	NAF
NS0052	88	90	NS	E395555	395555	1	G	W	32.27	38.77	1.85	0.374	0.29	0.085	1.96	1.6	0.105	0.088	0.677	0.181	1.02	6.21	0.49	7.72	6731	2.6928	27.9072	-25.2144	NAF
NS0052	90	92	NS	E395556	395556	1	G	W	33.41	37.72	1.49	0.503	0.39	0.067	1.91	1.55	0.083	0.057	0.6	0.163	2.14	4.93	0.64	7.71	6732	1.7442	27.0351	-25.2909	NAF
NS0052	194	196	NS	E395609	395609	1	G	W	32.45	40.78	1.71	0.555	0.43	0.075	1.99	1.55	0.062	0.054	1.16	0.086	0.29	4.4	0.77	5.46	6784	1.6524	27.0351	-25.3827	NAF
NS0052	274	276	NS	E395649	395649	1	G	W	35.26	40.02	1.23	0.426	0.33	0.057	1.7	1.52	0.095	0.033	0.904	0.049	0.07	2.77	0.62	3.46	6824	1.0098	26.51184	-25.50204	NAF
NS0052	202	204	NS	E395613	395613	1	G	W	36.07	35.84	1.57	0.607	0.47	0.067	1.95	1.52	0.077	0.032	1.03	0.075	0.25	4.55	0.6	5.4	6788	0.9792	26.51184	-25.53264	NAF
NS0052	160	162	NS	E395591	395591	1	G	W	34.02	39.84	1.38	0.62	0.48	0.064	1.77	1.56	0.113	0.036	0.883	0.074	0.35	3.92	0.62	4.89	6767	1.1016	27.20952	-26.10792	NAF
NS0052	216	218	NS	E395620	395620	1	G	W	30.6	40.77	2.06	0.465	0.36	0.094	2.15	1.71	0.109	0.12	1.24	0.098	1.58	4.64	0.82	7.04	6795	3.672	29.82582	-26.15382	NAF
NS0052	214	216	NS	E395619	395619	1	G	W	31.91	41.11	1.79	0.465	0.36	0.081	2.03	1.62	0.087	0.065	1.05	0.087	0.41	4.22	0.85	5.48	6794	1.989	28.25604	-26.26704	NAF
NS0052	264	266	NS	E395644	395644	1	G	W	34.02	39.39	1.35	0.568	0.44	0.058	1.97	1.56	0.089	0.03	0.988	0.057	0.17	4.13	0.7	5	6819	0.918	27.20952	-26.29152	NAF
NS0052	188	190	NS	E395606	395606	1	G	W	33.18	37.33	2.32	0.516	0.4	0.111	2.33	1.89	0.073	0.214	1.4	0.11	0.38	4.35	1.07	5.8	6781	6.5484	32.96538	-26.41698	NAF
NS0052	168	170	NS	E395595	395595	1	G	W	33.88	38.76	1.68	0.555	0.43	0.079	1.98	1.62	0.159	0.047	1.05	0.084	0.28	4.29	0.66	5.23	6771	1.4382	28.25604	-26.81784	NAF
NS0052	150	152	NS	E395586	395586	1	G	W	36.36	37.05	1.44	0.529	0.41	0.065	1.58	1.66	0.091	0.035	0.941	0.069	0.22	3.25	0.85	4.32	6762	1.071	28.95372	-27.88272	NAF
NS0052	212	214	NS	E395618	395618	1	G	W	35.12	36.83	1.52	0.658	0.51	0.068	1.88	1.66	0.068	0.033	0.99	0.076	0.27	4.61	0.78	5.66	6793	1.0098	28.95372	-27.94392	NAF
NS0052	130	132	NS	E395576	395576	1	G	W	34.53	37.28	1.81	0.516	0.4	0.083	2.06	1.7	0.077	0.053	0.744	0.126	0.46	4.37	0.93	5.76	6752	1.6218	29.6514	-28.0296	NAF
NS0052	128	130	NS	E395575	395575	1	G	W	32.33	40.27	2.22	0.374	0.29	0.103	2.23	1.77	0.07	0.092	0.872	0.151	0.61	3.85	1.02	5.48	6751	2.8152	30.87234	-28.05714	NAF
NS0052	132	134	NS	E395577	395577	1	G	W	32.21	39.33	1.9	0.555	0.43	0.088	2.21	1.73	0.156	0.066	0.96	0.13	0.57	5.17	0.72	6.46	6753	2.0196	30.17466	-28.15506	NAF
NS0052	152	154	NS	E395587	395587	1	G	W	36.6	36.07	1.52	0.542	0.42	0.068	1.68	1.69	0.091	0.041	1.01	0.088	0.29	3.61	0.72	4.62	6763	1.2546	29.47698	-28.22238	NAF
NS0052	204	206	NS	E395614	395614	1	G	W	33.07	40.12	1.47	0.594	0.46	0.064	1.91	1.7	0.088	0.045	0.976	0.079	0.28	4.3	0.87	5.45	6789	1.377	29.6514	-28.2744	NAF
NS0052	266	268	NS	E395645	395645	1	G	W	33.78	39.69	1.26	0.581	0.45	0.055	2	1.68	0.081	0.027	0.922	0.056	0.14	3.92	1	5.06	6820	0.8262	29.30256	-28.47636	NAF
NS0052	158	160	NS	E395590	395590	1	G	W	37.15	35.35	1.46	0.491	0.38	0.069	1.76	1.72	0.084	0.044	0.93	0.063	0.22	3.5	0.76	4.48	6766	1.3464	30.00024	-28.65384	NAF
NS0052	138	140	NS	E395580	395580	1	G	W	32.55	40.68	1.32	0.62	0.48	0.058	1.87	1.75	0.096	0.061	0.748	0.096	0.38	4.49	0.79	5.66	6756	1.8666	30.5235	-28.6569	NAF
NS0052	232	234	NS	E395628	395628	1	G	W	30.88	41.21	2.26	0.387	0.3	0.102	2.59	1.78	0.076	0.073	0.948	0.106	0.46	4.64	1.08	6.18	6803	2.2338	31.04676	-28.81296	NAF
NS0052	248	250	NS	E395636	395636	1	G	W	24.55	55.94	0.94	0.194	0.15	0.046	1.55	1.72	0.051	0.031	0.225	0.066	0.19	2.46	1.15	3.8	6811	0.9486	30.00024	-29.05164	NAF
NS0052	226	228	NS	E395625	395625	1	G	W	32.68	40.08	1.84	0.439	0.34	0.084	2.26	1.76	0.077	0.045	0.918	0.088	0.38	4.12	0.99	5.49	6800	1.377	30.69792	-29.32092	NAF
NS0052	154	156	NS	E395588	395588	1	G	W	34.33	38.06	2.02	0.439	0.34	0.093	1.93	1.92	0.11	0.135	1.27	0.091	0.33	3.02	0.98	4.33	6764	4.131	33.48864	-29.35764	NAF
NS0052	200	202	NS	E395612	395612	1	G	W	33.9	38.58	1.47	0.607	0.47	0.067	1.95	1.75	0.104	0.035	0.952	0.071	0.27	4.36	0.83	5.46	6787	1.071	30.5235	-29.4525	NAF
NS0052	234	236	NS	E395629	395629	1	G	W	30.07	44.32	1.58	0.426	0.33	0.069	2.08	1.82	0.09	0.056	0.712	0.082	0.35	4.24	1.05	5.64	6804	1.7136	31.74444	-30.03084	NAC
NS0052	156	158	NS	E395589	395589	1	G	W	35.17	37.28	1.78	0.491	0.38	0.082	1.94	1.84	0.11	0.049	1.1	0.086	0.31	3.41	0.95	4.67	6765	1.4994	32.09328	-30.59388	NAC
NS0052	246	248	NS	E395635	395635	1	G	W	30.56	45.02	1.41	0.245	0.19	0.071	2.13	1.84	0.069	0.044	0.296	0.083	0.25	3.26	1.25	4.76	6810	1.3464	32.09328	-30.74688	NAC
NS0052	172	174	NS	E395597	395597	1	G	W	33.78	37.97	1.69	0.607	0.47	0.077	2.07	1.88	0.086	0.045	1.07	0.093	0.33	4.48	1.01	5.82	6773	1.377	32.79096	-31.41396	NAC
NS0052	178	180	NS	E395600	395600	1	G	W	34.3	37.97	1.61	0.62	0.48	0.075	1.91	1.89	0.093	0.047	1.05	0.082	0.23	3.89	1.12	5.24	6776	1.4382	32.96538	-31.52718	NAC
NS0052	244	246	NS	E395634	395634	1	G	W	28.37	44.25	2.68	0.219	0.17	0.13	2.92	2.01	0.115	0.091	0.496	0.118	0.56	4.1	1.3	5.96	6809	2.7846	35.05842	-32.27382	NAC
NS0052	206	208	NS	E395615	395615	1	G	W	34.35	39.02	1.24	0.646	0.5	0.056	1.71	1.92	0.111	0.029	0.844	0.065	0.18	3.99	0.89	5.06	6790	0.8874	33.48864	-32.60124	NAC
NS0052	134	136	NS	E395578	395578	1	G	W	32.83	40	1.48	0.568	0.44	0.069	1.95	1.95	0.091	0.036	0.773	0.102	0.4	4.08	1.07	5.55	6754	1.1016	34.0119	-32.9103	NAC
NS0052	136	138	NS	E395579	395579	1	G	W	32.19	41.04	1.65	0.581	0.45	0.077	1.86	2.11	0.108	0.115	0.905	0.098	0.38	3.66	1.13	5.17	6755	3.519	36.80262	-33.28362	NAC
NS0052	208	210	NS	E395616	395616	1	G	W	33.83	38.76	1.51	0.555	0.43	0.068	1.84	1.99	0.075	0.029	1	0.075	0.19	3.76	1.31	5.26	6791	0.8874	34.70958	-33.82218	NAC
NS0052	238	240	NS	E395631	395631	1	G	W	30.4	41.41	1.87	0.426	0.33	0.085	2.21	2.03	0.062	0.051	0.893	0.101	0.44	5.17	1.35	6.96	6806	1.5606	35.40726	-33.84666	NAC
NS0052	146	148	NS	E395584	395584	1	G	W	31.84	40.36	2.16	0.439	0.34	0.101	2.16	2.18	0.186	0.126	1.21	0.103	0.41	3.56	1.09	5.06	6760	3.8556	38.02356	-34.16796	NAC
NS0052	228	230	NS	E395626	395626	1	G	W	28.95	41.94	2.65	0.426	0.33	0.115	2.57	2.25	0.213	0.162	1.54	0.136	0.51	4.33	1.26	6.1	6801	4.9572	39.2445	-34.2873	NAC
NS0052	218	220	NS	E395621	395621	1	G	W	30.43	38.93	2.72	0.555	0.43	0.125	2.45	2.21	0.351	0.139	1.63	0.13	0.58	4.99	0.74	6.31	6796	4.2534	38.54682	-34.29342	NAC
NS0052	190	192	NS	E395607	395607	1	G	W	32.99	38.08	1.84	0.594	0.46	0.087	2.13	2.06	0.145	0.053	1.3	0.079	0.3	4.78	1	6.08	6782	1.6218	35.93052	-34.30872	NAC
NS0052	176	178	NS	E395599	395599	1	G	W	33.58	39.68	1.37	0.646	0.5	0.061	1.79	2.04	0.13	0.032	0.929	0.079	0.24	3.95	1	5.19	6775	0.9792	35.58168	-34.60248	NAC
NS0052	258	260	NS	E395641	395641	1	G	W	34.28	35.65	2	0.503	0.39	0.092	2.49	2.29	0.217	0.173	1.34	0.09	0.26	4.13	1.05	5.44	6816	5.2938	39.94218	-34.64838	NAC
NS0052	270	272	NS	E395647	395647	1	G	W	26.15	49.76	1.97	0.323	0.25	0.086	2.03	2.14	0.042	0.082	1.39	0.075	0.19	2.49	1.65	4.33	6822	2.5092	37.32588	-34.81668	NAC
NS0052	108	110	NS	E395565	395565	1	G	W	24.17	43.01	3.72	0.387	0.3	0.17	2.82	2.7	0.072	0.393	0.969	0.258	1.3	7.35	1.74	10.39	6741	12.0258	47.0934	-35.0676	NAC
NS0052	256	258	NS	E395640	395640	1	G	W	37.3	33.67	1.22	0.555	0.43	0.057	2.04	2.1	0.145	0.03	0.845	0.053	0.13	4.18	1.16	5.47	6815	0.918	36.6282	-35.7102	NAC
NS0052	236	238	NS	E395630	395630	1	G	W	31.25	39.92	1.84	0.529	0.41	0.084	2.29	2.18	0.114	0.051	0.92	0.096	0.44	5.26	1.3	7	6805	1.5606	38.02356	-36.46296	NAC
NS0052	106	108	NS	E395564	395564	1	G	W	28.87	38.01	1.81	0.516	0.4	0.084	1.92	2.36	0.06	0.14	0.495	0.147	0.9	11.13	0.94	12.97	6740	4.284	41.16312	-36.87912	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0052	140	142	NS	E395581	395581	1	G	W	31.7	42.26	1.46	0.542	0.42	0.064	1.77	2.2	0.1	0.046	0.822	0.082	0.24	3.4	1.38	5.02	6757	1.4076	38.3724	-36.9648	NAC
NS0052	224	226	NS	E395624	395624	1	G	W	33.16	38.42	1.38	0.646	0.5	0.063	1.91	2.24	0.084	0.038	0.857	0.072	0.31	4.62	1.4	6.33	6799	1.1628	39.07008	-37.90728	NAC
NS0052	222	224	NS	E395623	395623	1	G	W	30.15	41.3	2.06	0.465	0.36	0.092	2.26	2.3	0.221	0.068	1.15	0.101	0.47	4.59	1.18	6.24	6798	2.0808	40.1166	-38.0358	NAC
NS0052	198	200	NS	E395611	395611	1	G	W	33.07	39.68	1.25	0.671	0.52	0.054	1.82	2.28	0.111	0.032	0.837	0.07	0.19	4.07	1.49	5.75	6786	0.9792	39.76776	-38.78856	NAC
NS0052	268	270	NS	E395646	395646	1	G	W	30.16	42.5	1.87	0.439	0.34	0.085	2.16	2.55	0.3	0.156	1.36	0.082	0.23	3.45	1.14	4.82	6821	4.7736	44.4771	-39.7035	NAC
NS0052	174	176	NS	E395598	395598	1	G	W	32.37	39.9	1.77	0.529	0.41	0.079	2.02	2.47	0.086	0.048	1.16	0.09	0.28	3.31	1.73	5.32	6774	1.4688	43.08174	-41.61294	NAC
NS0052	196	198	NS	E395610	395610	1	G	W	32.99	36.38	2.11	0.568	0.44	0.098	2.34	2.68	0.255	0.093	1.39	0.104	0.38	4.73	1.36	6.47	6785	2.8458	46.74456	-43.89876	NAC
NS0052	254	256	NS	E395639	395639	1	G	W	30.13	39.04	2.02	0.542	0.42	0.091	2.69	3.17	0.247	0.26	1.25	0.098	0.4	4.72	1.86	6.98	6814	7.956	55.29114	-47.33514	NAC
NS0052	162	164	NS	E395592	395592	1	G	W	30.97	37.17	2.45	0.529	0.41	0.116	2.43	3.52	0.301	0.201	1.6	0.116	0.4	3.88	2.09	6.37	6768	6.1506	61.39584	-55.24524	NAC
NS0052	210	212	NS	E395617	395617	1	G	W	29.61	38.32	2.07	0.555	0.43	0.092	2.56	3.91	0.415	0.138	1.29	0.119	0.43	4.64	2.27	7.34	6792	4.2228	68.19822	-63.97542	NAC
NS0053	178	180	NS	E395743	395743	1	G	W	17.48	55.87	9.25	0.116	0.09	0.451	3.59	0.46	0.034	0.585	0.175	0.053	0.56	3.44	0.8	4.8	6916	17.901	8.02332	9.87768	PAF(LC)
NS0053	180	182	NS	E395744	395744	1	G	W	23.35	44.01	4.89	0.336	0.26	0.224	3.64	0.92	0.08	0.713	0.429	0.113	1.07	9.13	1.44	11.64	6917	21.8178	16.04664	5.77116	PAF(LC)
NS0053	82	84	NS	E395694	395694	1	G	W	22.75	47.94	6.83	0.284	0.22	0.318	3.43	0.63	0.065	0.523	0.897	0.267	1.42	3.96	1.2	6.58	6869	16.0038	10.98846	5.01534	PAF(LC)
NS0053	80	82	NS	E395693	395693	1	G	W	25.55	41.09	7.09	0.426	0.33	0.322	3.81	0.5	0.043	0.424	0.882	0.278	1.57	5.84	1.25	8.66	6868	12.9744	8.721	4.2534	PAF(LC)
NS0053	198	200	NS	E395753	395753	1	G	W	21.22	48.1	6.5	0.271	0.21	0.303	3.64	0.76	0.081	0.547	0.304	0.101	0.93	7.07	1.27	9.27	6926	16.7382	13.25592	3.48228	PAF(LC)
NS0053	202	204	NS	E395755	395755	1	G	W	23.74	44.55	4.66	0.374	0.29	0.208	3.34	0.65	0.133	0.457	0.588	0.173	1.51	8.11	1.14	10.76	6928	13.9842	11.3373	2.6469	PAF(LC)
NS0053	188	190	NS	E395748	395748	1	G	W	20.44	48.98	6.91	0.361	0.28	0.317	3.48	1.16	0.076	0.737	0.2	0.065	0.65	6.67	1.57	8.89	6921	22.5522	20.23272	2.31948	PAF(LC)
NS0053	168	170	NS	E395738	395738	1	G	W	23.26	46.71	5.81	0.245	0.19	0.266	3.47	0.4	0.069	0.283	0.79	0.236	1.64	5.88	0.91	8.43	6911	8.6598	6.9768	1.683	PAF(LC)
NS0053	170	172	NS	E395739	395739	1	G	W	21.71	49.43	5.99	0.232	0.18	0.273	3.4	0.48	0.106	0.312	0.73	0.216	1.35	5.25	0.95	7.55	6912	9.5472	8.37216	1.17504	PAF(LC)
NS0053	0	2	NS	E395653	395653	1	G	D	40.35	25.37	7.31	0.026	0.02	0.418	0.06	0.03	0.05	0.02	0.033	0.027	6.86	1.65	0.27	8.78	6828	0.612	0.52326	0.08874	PAF(LC)
NS0053	4	6	NS	E395655	395655	1	G	D	33.98	40.69	4.29	0.026	0.02	0.176	0.05	0.03	0.024	0.014	0.041	0.017	4.81	1.01	0.17	5.99	6830	0.4284	0.52326	-0.09486	NAF
NS0053	12	14	NS	E395659	395659	1	G	W	35.83	40.69	2.31	0.039	0.03	0.094	0.09	0.04	0.062	0.017	0.017	0.018	4.41	0.71	0.15	5.27	6834	0.5202	0.69768	-0.17748	NAF
NS0053	6	8	NS	E395656	395656	1	G	W	32.16	42.3	4.09	0.039	0.03	0.169	0.07	0.04	0.013	0.012	0.031	0.022	5.78	1.01	0.21	7	6831	0.3672	0.69768	-0.33048	NAF
NS0053	10	12	NS	E395658	395658	1	G	W	34.78	42.79	1.97	0.039	0.03	0.084	0.07	0.05	0.051	0.015	0.013	0.025	4.16	0.58	0.15	4.89	6833	0.459	0.8721	-0.4131	NAF
NS0053	2	4	NS	E395654	395654	1	G	D	34.39	37.19	5.39	-0.0129	-0.01	0.308	0.06	0.06	0.039	0.016	0.023	0.027	6.03	1.24	0.22	7.49	6829	0.4896	1.04652	-0.55692	NAF
NS0053	8	10	NS	E395657	395657	1	G	W	32.44	45.46	2.4	0.065	0.05	0.096	0.09	0.06	0.033	0.009	0.014	0.026	4.34	0.68	0.14	5.16	6832	0.2754	1.04652	-0.77112	NAF
NS0053	184	186	NS	E395746	395746	1	G	W	17.3	54.97	8.8	0.155	0.12	0.414	3.79	1.06	0.038	0.564	0.113	0.055	0.57	3.75	1.14	5.46	6919	17.2584	18.48852	-1.23012	NAF
NS0053	14	16	NS	E395660	395660	1	G	W	36.97	38.18	2.93	0.039	0.03	0.138	0.42	0.1	0.052	0.01	0.023	0.042	3.99	0.99	0.09	5.07	6835	0.306	1.7442	-1.4382	NAF
NS0053	174	176	NS	E395741	395741	1	G	W	23.38	44.3	6.19	0.297	0.23	0.287	3.9	0.83	0.117	0.421	0.67	0.196	1.24	6.91	1.21	9.36	6914	12.8826	14.47686	-1.59426	NAF
NS0053	16	18	NS	E395661	395661	1	G	W	33.82	43.88	2.17	0.052	0.04	0.099	0.47	0.11	0.041	0.008	0.014	0.046	3.75	0.81	0.06	4.62	6836	0.2448	1.91862	-1.67382	NAF
NS0053	186	188	NS	E395747	395747	1	G	W	18.93	51.67	7.26	0.31	0.24	0.336	3.54	1.35	0.057	0.712	0.165	0.061	0.53	5.76	1.39	7.68	6920	21.7872	23.5467	-1.7595	NAF
NS0053	172	174	NS	E395740	395740	1	G	W	23.29	46.41	4.59	0.336	0.26	0.209	3.33	0.6	0.103	0.284	0.837	0.248	1.52	7.17	0.92	9.61	6913	8.6904	10.4652	-1.7748	NAF
NS0053	18	20	NS	E395662	395662	1	G	W	32.5	46.42	1.89	0.039	0.03	0.087	0.5	0.12	0.032	0.007	0.016	0.033	3.17	0.8	0.02	3.99	6837	0.2142	2.09304	-1.87884	NAF
NS0053	192	194	NS	E395750	395750	1	G	W	18.72	51.05	9.78	0.232	0.18	0.438	3.74	1.71	0.039	0.913	0.122	0.053	0.41	3.76	1.45	5.62	6923	27.9378	29.82582	-1.88802	NAF
NS0053	44	46	NS	E395675	395675	1	G	W	26.85	46.92	4.15	0.271	0.21	0.19	2.11	0.44	0.096	0.183	0.774	0.15	2.55	3.07	0.59	6.21	6850	5.5998	7.67448	-2.07468	NAF
NS0053	20	22	NS	E395663	395663	1	G	W	31.83	47.32	1.96	0.039	0.03	0.094	0.53	0.13	0.042	0.006	0.012	0.047	3.52	0.82	0.04	4.38	6838	0.1836	2.26746	-2.08386	NAF
NS0053	36	38	NS	E395671	395671	1	G	W	31.68	44.38	2.62	0.245	0.19	0.119	0.86	0.18	0.033	0.008	0.221	0.071	4.22	1.33	0.11	5.66	6846	0.2448	3.13956	-2.89476	NAF
NS0053	22	24	NS	E395664	395664	1	G	W	31.5	40.22	5.13	0.065	0.05	0.249	1.08	0.21	0.04	0.022	0.096	0.092	5.29	1.98	0.25	7.52	6839	0.6732	3.66282	-2.98962	NAF
NS0053	24	26	NS	E395665	395665	1	G	W	29.15	45.05	4.34	0.116	0.09	0.222	0.88	0.19	0.042	0.01	0.082	0.085	5.2	1.73	0.24	7.17	6840	0.306	3.31398	-3.00798	NAF
NS0053	84	86	NS	E395695	395695	1	G	W	25.06	42.58	5.25	0.426	0.33	0.317	3.23	0.74	0.151	0.322	0.888	0.266	1.72	7.08	0.96	9.76	6870	9.8532	12.90708	-3.05388	NAF
NS0053	38	40	NS	E395672	395672	1	G	W	30.09	46.85	2.39	0.284	0.22	0.108	0.77	0.2	0.042	0.007	0.16	0.051	4.38	1.24	0.12	5.74	6847	0.2142	3.4884	-3.2742	NAF
NS0053	158	160	NS	E395733	395733	1	G	W	27.56	41.29	3.37	0.349	0.27	0.152	2.82	1.5	0.11	0.746	0.973	0.266	1.29	5.67	1.47	8.43	6906	22.8276	26.163	-3.3354	NAF
NS0053	32	34	NS	E395669	395669	1	G	W	26.77	48.68	3.85	0.439	0.34	0.172	1.07	0.21	0.051	0.01	0.373	0.121	4.42	1.67	0.21	6.3	6844	0.306	3.66282	-3.35682	NAF
NS0053	34	36	NS	E395670	395670	1	G	W	24.35	50.81	4.48	0.452	0.35	0.198	1.3	0.23	0.045	0.008	0.472	0.122	4.61	1.91	0.25	6.77	6845	0.2448	4.01166	-3.76686	NAF
NS0053	26	28	NS	E395666	395666	1	G	W	25.28	46.97	6.42	0.09	0.07	0.306	1.23	0.24	0.042	0.013	0.198	0.109	5.05	2.48	0.34	7.87	6841	0.3978	4.18608	-3.78828	NAF
NS0053	30	32	NS	E395668	395668	1	G	W	25.69	49.17	4.56	0.271	0.21	0.208	1.08	0.24	0.043	0.011	0.336	0.098	4.61	1.89	0.25	6.75	6843	0.3366	4.18608	-3.84948	NAF
NS0053	28	30	NS	E395667	395667	1	G	W	24.32	48.96	5.95	0.245	0.19	0.266	1.23	0.25	0.061	0.009	0.431	0.1	4.93	2.28	0.31	7.52	6842	0.2754	4.3605	-4.0851	NAF
NS0053	196	198	NS	E395752	395752	1	G	W	21.92	45.78	5.81	0.413	0.32	0.265	3.42	1.37	0.12	0.647	0.23	0.09	0.73	8.44	1.63	10.8	6925	19.7982	23.89554	-4.09734	NAF
NS0053	40	42	NS	E395673	395673	1	G	W	28.14	46.41	3.99	0.323	0.25	0.181	1.15	0.25	0.05	0.005	0.321	0.069	4.79	1.76	0.22	6.77	6848	0.153	4.3605	-4.2075	NAF
NS0053	42	44	NS	E395674	395674	1	G	W	23.58	52.95	4.12	0.426	0.33	0.186	1.2	0.25	0.048	0.005	0.361	0.081	4.44	1.77	0.22	6.43	6849	0.153	4.3605	-4.2075	NAF
NS0053	124	126	NS	E395716	395716	1	G	W	24.66	46.43	4.07	0.323	0.25	0.181	3.1	0.68	0.115	0.197	1.5	0.366	1.49	5.34	0.72	7.55	6890	6.0282	11.86056	-5.83236	NAF
NS0053	200	202	NS	E395754	395754	1	G	W	27.7	37.06	2.44	0.374	0.29	0.106	2.56	0.9	0.106	0.303	0.337	0.118	1.89	13.35	0.74	15.98	6927	9.2718	15.6978	-6.426	NAF
NS0053	182	184	NS	E395745	395745	1	G	W	22.74	44.06	5.89	0.336	0.26	0.268	3.76	1.13	0.095	0.42	0.282	0.104	0.92	9	1.26	11.18	6918	12.852	19.70946	-6.85746	NAF
NS0053	194	196	NS	E395751	395751	1	G	W	19.18	49.65	9.85	0.245	0.19	0.471	3.85	1.52	0.034	0.624	0.117	0.047	0.88	3.87	1.66	6.41	6924	19.0944	26.51184	-7.41744	NAF
NS0053	72	74	NS	E395689	395689	1	G	W	25.52	41.16	4.11	0.323	0.25	0.193	3.1	0.9	0.14	0.25	0.679	0.207	1.76	9.69	0.8	12.25	6864	7.65	15.6978	-8.0478	NAF
NS0053	176	178	NS	E395742	395742	1	G	W	22.25	45.92	6.34	0.31	0.24	0.296	3.68	1.24	0.098	0.438	0.455	0.134	1.05	7.11	1.24	9.4	6915	13.4028	21.62808	-8.22528	NAF
NS0053	208	210	NS	E395758	395758	1	G	W	24.73	44.93	5.52	0.245	0.19	0.25	3.5	1.16	0.059	0.392	1.23	0.301	1.49	4.36	1.19	7.04	6931	11.9952	20.23272	-8.23752	NAF
NS0053	232	234	NS	E395770	395770	1	G	W	29.11	40.17	3.06	0.439	0.34	0.134	2.71	0.82	0.05	0.191	0.892	0.246	1.44	7.41	0.57	9.42	6943	5.8446	14.30244	-8.45784	NAF
NS0053	190	192	NS	E395749	395749	1	G	W	19.26	50.46	8.53	0.297	0.23	0.388	3.63	1.68	0.062	0.673	0.212	0.095	0.66	4.39	1.63	6.68	6922	20.5938	29.30256	-8.70876	NAF
NS0053	78	80	NS	E395692	395692	1	G	W	18.03	56.51	6.49	0.194	0.15	0.297	3.09	1.37	0.134	0.469	0.632	0.193	0.91	2.77	1.25	4.93	6867	14.3514	23.89554	-9.54414	NAF
NS0053	74	76	NS	E395690	395690	1	G	W	25.13	40.96	4.88	0.413	0.32	0.224	3.34	1.2	0.224	0.365	0.637	0.205	1.37	9.06	1.05	11.48	6865	11.169	20.9304	-9.7614	NAF
NS0053	204	206	NS	E395756	395756	1	G	W	29.35	35.9	2.8	0.374	0.29	0.124	2.74	1	0.097	0.217	0.59	0.17	1.97	11.33	0.57	13.87	6929	6.6402	17.442	-10.8018	NAF
NS0053	114	116	NS	E395711	395711	1	G	W	25.73	42.4	4.63	0.439	0.34	0.212	3.55	1.39	0.127	0.434	1.67	0.357	1.46	5.14	1.35	7.95	6885	13.2804	24.24438	-10.96398	NAF
NS0053	86	88	NS	E395696	395696	1	G	W	24.98	42.31	3.62	0.413	0.32	0.169	2.79	1.28	0.146	0.357	0.699	0.205	1.82	9.44	0.99	12.25	6871	10.9242	22.32576	-11.40156	NAF
NS0053	218	220	NS	E395763	395763	1	G	W	39.92	32.58	1.05	0.349	0.27	0.043	1.54	0.8	0.094	0.082	0.428	0.14	0.64	5	-0.14	5.5	6936	2.5092	13.9536	-11.4444	NAF
NS0053	230	232	NS	E395769	395769	1	G	W	27.85	40.37	5.31	0.284	0.22	0.241	3.43	1.29	0.095	0.361	1.74	0.375	1.42	3.94	1.2	6.56	6942	11.0466	22.50018	-11.45358	NAF
NS0053	64	66	NS	E395685	395685	1	G	W	23.65	45.99	3.54	0.284	0.22	0.163	2.89	0.93	0.122	0.134	0.851	0.246	1.71	8.49	0.52	10.72	6860	4.1004	16.22106	-12.12066	NAF
NS0053	226	228	NS	E395767	395767	1	G	W	32.81	39.4	1.54	0.452	0.35	0.069	1.9	0.8	0.045	0.055	0.617	0.176	1.08	6.45	0.12	7.65	6940	1.683	13.9536	-12.2706	NAF
NS0053	62	64	NS	E395684	395684	1	G	W	22.85	46.6	4.63	0.323	0.25	0.215	3.29	1.29	0.089	0.316	0.838	0.245	1.53	6.55	1.17	9.25	6859	9.6696	22.50018	-12.83058	NAF
NS0053	58	60	NS	E395682	395682	1	G	W	26.68	42.14	2.6	0.245	0.19	0.12	2.18	1.03	0.128	0.164	0.661	0.186	1.77	10.1	0.45	12.32	6857	5.0184	17.96526	-12.94686	NAF
NS0053	166	168	NS	E395737	395737	1	G	W	30.56	35.54	2.17	0.426	0.33	0.096	2.44	1.11	0.112	0.069	0.704	0.209	1.81	10.88	0.21	12.9	6910	2.1114	19.36062	-17.24922	NAF
NS0053	70	72	NS	E395688	395688	1	G	W	20.19	49.67	7.73	0.258	0.2	0.353	3.55	1.92	0.071	0.51	0.482	0.157	0.86	4.31	1.45	6.62	6863	15.606	33.48864	-17.88264	NAF
NS0053	88	90	NS	E395697	395697	1	G	W	27.23	39.41	3.03	0.194	0.15	0.142	2.41	1.27	0.047	0.128	0.58	0.171	1.64	11.27	0.58	13.49	6872	3.9168	22.15134	-18.23454	NAF
NS0053	60	62	NS	E395683	395683	1	G	W	23.34	46.15	4.62	0.271	0.21	0.214	3.15	1.29	0.139	0.139	0.874	0.253	1.55	7.18	0.66	9.39	6858	4.2534	22.50018	-18.24678	NAF
NS0053	260	262	NS	E395784	395784	1	G	W	33.78	38.79	1.11	0.555	0.43	0.048	1.66	1.23	0.092	0.036	0.575	0.098	0.53	6.28	0.27	7.08	6957	1.1016	21.45366	-20.35206	NAF
NS0053	150	152	NS	E395729	395729	1	G	W	26.45	46.36	2.58	0.336	0.26	0.115	2.48	1.47	0.146	0.169	0.985	0.277	1.32	4.88	0.81	7.01	6902	5.1714	25.63974	-20.46834	NAF
NS0053	244	246	NS	E395776	395776	1	G	W	33.6	38.27	2.19	0.413	0.32	0.1	2.2	1.45	0.066	0.127	0.861	0.189	0.83	4.25	0.72	5.8	6949	3.8862	25.2909	-21.4047	NAF
NS0053	248	250	NS	E395778	395778	1	G	W	28.18	40.72	4.23	0.349	0.27	0.192	3.03	2.05	0.082	0.463	1.91	0.264	0.99	3.91	1.64	6.54	6951	14.1678	35.7561	-21.5883	NAF
NS0053	76	78	NS	E395691	395691	1	G	W	22.04	47.59	3.15	0.465	0.36	0.139	2.66	1.74	0.091	0.271	0.632	0.186	1.48	8.71	1.12	11.31	6866	8.2926	30.34908	-22.05648	NAF
NS0053	148	150	NS	E395728	395728	1	G	W	27.7	43.87	3.08	0.31	0.24	0.139	2.81	1.89	0.13	0.337	1.14	0.31	1.28	3.46	1.37	6.11	6901	10.3122	32.96538	-22.65318	NAF
NS0053	234	236	NS	E395771	395771	1	G	W	30.73	40.28	3.33	0.258	0.2	0.159	2.61	1.67	0.077	0.193	1.05	0.268	1.15	3.83	1.08	6.06	6944	5.9058	29.12814	-23.22234	NAF
NS0053	122	124	NS	E395715	395715	1	G	W	30.44	40.8	2.96	0.194	0.15	0.137	2.76	1.52	0.089	0.102	1.13	0.295	1.17	4.01	0.88	6.06	6889	3.1212	26.51184	-23.39064	NAF
NS0053	236	238	NS	E395772	395772	1	G	W	32.31	40.56	2.09	0.297	0.23	0.094	2.04	1.58	0.103	0.119	0.742	0.204	0.87	4.29	0.74	5.9	6945	3.6414	27.55836	-23.91696	NAF
NS0053	262	264	NS	E395785	395785	1	G	W	30.04	40.23	2.97	0.374	0.29	0.136	2.55	1.71	0.113	0.193	1.48	0.228	0.96	4.99	1.02	6.97	6958	5.9058	29.82582	-23.92002	NAF
NS0053	154	156	NS	E395731	395731	1	G	W	30.36	40.88	1.61	0.336	0.26	0.072	2.18	1.49	0.111	0.059	0.638	0.178	0.91	6.87	0.76	8.54	6904	1.8054	25.98858	-24.18318	NAF
NS0053	206	208	NS	E395757	395757	1	G	W	28.65	40.21	2.78	0.284	0.22	0.123	2.44	1.75	0.127	0.205	0.708	0.2	1.33	8.01	0.72	10.06	6930	6.273	30.5235	-24.2505	NAF
NS0053	52	54	NS	E395679	395679	1	G	W	29.63	42.12	2.13	0.194	0.15	0.094	1.94	1.54	0.06	0.069	0.748	0.19	1.14	6.69	0.48	8.31	6854	2.1114	26.86068	-24.74928	NAF
NS0053	128	130	NS	E395718	395718	1	G	W	29.93	39.78	2.4	0.336	0.26	0.11	2.46	1.63	0.189	0.106	0.94	0.256	1.24	6.74	0.61	8.59	6891	3.2436	28.43046	-25.18686	NAF
NS0053	156	158	NS	E395732	395732	1	G	W	29.94	41.62	1.45	0.349	0.27	0.061	1.96	1.57	0.082	0.066	0.585	0.166	1.02	7.33	0.74	9.09	6905	2.0196	27.38394	-25.36434	NAF
NS0053	66	68	NS	E395686	395686	1	G	W	20.66	49.35	5.94	0.31	0.24	0.269	3.28	1.94	0.11	0.244	0.647	0.196	1.14	5.49	1.31	7.94	6861	7.4664	33.83748	-26.37108	NAF
NS0053	90	92	NS	E395698	395698	1	G	W	27.33	41.76	2.74	0.194	0.15	0.129	2.19	1.77	0.056	0.127	0.675	0.183	1.33	8.9	0.77	11	6873	3.8862	30.87234	-26.98614	NAF
NS0053	276	278	NS	E395792	395792	1	G	W	31.21	41.08	2.51	0.426	0.33	0.114	2.27	1.78	0.098	0.122	1.2	0.194	0.71	3.54	1	5.25	6965	3.7332	31.04676	-27.31356	NAF
NS0053	54	56	NS	E395680	395680	1	G	W	26.13	41.54	4.17	0.207	0.16	0.196	3.21	1.85	0.176	0.157	1.06	0.282	1.49	7.04	0.91	9.44	6855	4.8042	32.2677	-27.4635	NAF
NS0053	104	106	NS	E395706	395706	1	G	W	27.66	45.34	2.71	0.284	0.22	0.127	2.66	1.84	0.133	0.15	0.998	0.276	1.08	3.34	1.14	5.56	6880	4.59	32.09328	-27.50328	NAF
NS0053	238	240	NS	E395773	395773	1	G	W	32.4	39.07	2.12	0.349	0.27	0.094	2.2	1.79	0.135	0.115	0.75	0.206	0.95	4.78	0.83	6.56	6946	3.519	31.22118	-27.70218	NAF
NS0053	220	222	NS	E395764	395764	1	G	W	32.91	40.57	1.64	0.284	0.22	0.074	1.99	1.8	0.115	0.102	0.645	0.184	0.73	3.79	0.92	5.44	6937	3.1212	31.3956	-28.2744	NAF
NS0053	96	98	NS	E395702	395702	1	G	W	23.98	48.42	3.5	0.271	0.21	0.16	2.59	1.96	0.096	0.188	0.961	0.262	1.27	4.66	1.09	7.02	6876	5.7528	34.18632	-28.43352	NAF
NS0053	56	58	NS	E395681	395681	1	G	W	25.38	40.38	4.53	0.361	0.28	0.212	3.49	1.84	0.174	0.114	0.966	0.265	1.53	8.53	0.84	10.9	6856	3.4884	32.09328	-28.60488	NAF
NS0053	268	270	NS	E395788	395788	1	G	W	30.19	42.56	2.18	0.413	0.32	0.098	2.16	1.86	0.105	0.124	0.97	0.179	0.68	4.02	1.07	5.77	6961	3.7944	32.44212	-28.64772	NAF
NS0053	140	142	NS	E395724	395724	1	G	W	29.26	45.2	1.88	0.271	0.21	0.085	2.3	1.76	0.119	0.059	0.774	0.22	0.81	3.25	1.13	5.19	6897	1.8054	30.69792	-28.89252	NAF
NS0053	108	110	NS	E395708	395708	1	G	W	31.62	42.63	1.72	0.284	0.22	0.08	2.08	1.82	0.098	0.057	0.703	0.222	0.76	3.13	1.08	4.97	6882	1.7442	31.74444	-30.00024	NAC
NS0053	278	280	NS	E395793	395793	1	G	W	31.89	42.01	1.65	0.452	0.35	0.075	2.11	1.86	0.099	0.067	0.866	0.154	0.5	3.16	1.09	4.75	6966	2.0502	32.44212	-30.39192	NAC
NS0053	270	272	NS	E395789	395789	1	G	W	32.25	38.86	2.47	0.387	0.3	0.112	2.32	2.03	0.173	0.132	1.09	0.211	0.77	3.82	1.02	5.61	6962	4.0392	35.40726	-31.36806	NAC
NS0053	136	138	NS	E395722	395722	1	G	W	26.31	47.26	2.55	0.31	0.24	0.115	2.63	2.05	0.124	0.141	0.954	0.249	0.98	3.26	1.42	5.66	6895	4.3146	35.7561	-31.4415	NAC
NS0053	264	266	NS	E395786	395786	1	G	W	29.37	42.8	2.48	0.336	0.26	0.11	2.3	2.01	0.103	0.112	1.22	0.207	0.81	4.06	1.26	6.13	6959	3.4272	35.05842	-31.63122	NAC
NS0053	50	52	NS	E395678	395678	1	G	W	26.54	43.29	3.36	0.194	0.15	0.16	2.77	2.1	0.039	0.159	1.06	0.24	1.34	6.14	1.11	8.59	6853	4.8654	36.6282	-31.7628	NAC
NS0053	250	252	NS	E395779	395779	1	G	W	32.42	37.99	2.14	0.452	0.35	0.097	2.2	2.17	0.082	0.195	0.92	0.179	0.85	4.89	1.29	7.03	6952	5.967	37.84914	-31.88214	NAC
NS0053	164	166	NS	E395736	395736	1	G	W	28.59	42.17	1.72	0.336	0.26	0.075	1.89	1.97	0.115	0.08	0.652	0.18	1.2	7.61	0.72	9.53	6909	2.448	34.36074	-31.91274	NAC
NS0053	216	218	NS	E395762	395762	1	G	W	30.58	40.44	2.4	0.284	0.22	0.107	2.36	2.07	0.102	0.126	0.829	0.203	0.96	5.01	1.2	7.17	6935	3.8556	36.10494	-32.24934	NAC
NS0053	138	140	NS	E395723	395723	1	G	W	30.64	42.89	1.89	0.271	0.21	0.084	2.31	1.97	0.079	0.067	0.763	0.21	0.79	3.05	1.41	5.25	6896	2.0502	34.36074	-32.31054	NAC
NS0053	266	268	NS	E395787	395787	1	G	W	31.49	40.59	2.16	0.387	0.3	0.094	2.16	2.03	0.105	0.097	1.08	0.175	0.64	3.73	1.4	5.77	6960	2.9682	35.40726	-32.43906	NAC
NS0053	130	132	NS	E395719	395719	1	G	W	29.1	42.76	2.95	0.297	0.23	0.131	2.71	2.22	0.123	0.202	0.963	0.266	1.02	3.16	1.46	5.64	6892	6.1812	38.72124	-32.54004	NAC
NS0053	68	70	NS	E395687	395687	1	G	W	19.86	49.37	4.59	0.594	0.46	0.209	3.07	2.54	0.102	0.378	0.523	0.165	1.16	7	1.83	9.99	6862	11.5668	44.30268	-32.73588	NAC
NS0053	224	226	NS	E395766	395766	1	G	W	28.36	43.83	1.99	0.374	0.29	0.087	2.17	2.07	0.075	0.106	0.724	0.193	0.93	5.32	1.41	7.66	6939	3.2436	36.10494	-32.86134	NAC
NS0053	272	274	NS	E395790	395790	1	G	W	32.84	38.39	2.12	0.439	0.34	0.095	2.18	2.1	0.169	0.122	0.985	0.177	0.66	4.15	1.03	5.84	6963	3.7332	36.6282	-32.895	NAC
NS0053	152	154	NS	E395730	395730	1	G	W	31.19	38.72	2	0.361	0.28	0.09	2.47	2	0.131	0.062	0.781	0.201	1.28	6.13	0.98	8.39	6903	1.8972	34.884	-32.9868	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0053	118	120	NS	E395713	395713	1	G	W	29.91	43.7	2.06	0.297	0.23	0.09	2.12	2.09	0.141	0.079	0.839	0.244	0.84	3.04	1.24	5.12	6887	2.4174	36.45378	-34.03638	NAC
NS0053	246	248	NS	E395777	395777	1	G	W	31.23	38.23	3.28	0.336	0.26	0.149	2.73	2.39	0.111	0.224	1.07	0.24	0.98	3.71	1.67	6.36	6950	6.8544	41.68638	-34.83198	NAC
NS0053	242	244	NS	E395775	395775	1	G	W	33	38.9	2.48	0.284	0.22	0.112	2.3	2.31	0.113	0.176	0.95	0.213	0.8	2.71	1.42	4.93	6948	5.3856	40.29102	-34.90542	NAC
NS0053	256	258	NS	E395782	395782	1	G	W	31.93	43.69	1.26	0.323	0.25	0.054	1.47	2.11	0.114	0.049	0.561	0.117	0.42	2.86	1.08	4.36	6955	1.4994	36.80262	-35.30322	NAC
NS0053	274	276	NS	E395791	395791	1	G	W	31.78	39.62	2.24	0.478	0.37	0.099	2.23	2.24	0.142	0.122	1	0.193	0.68	3.77	1.32	5.77	6964	3.7332	39.07008	-35.33688	NAC
NS0053	98	100	NS	E395703	395703	1	G	W	26.37	41.96	4.62	0.297	0.23	0.215	3.32	2.63	0.116	0.343	1.33	0.355	1.42	3.68	1.88	6.98	6877	10.4958	45.87246	-35.37666	NAC
NS0053	48	50	NS	E395677	395677	1	G	W	26.74	42.16	2.74	0.245	0.19	0.124	2.41	2.27	0.089	0.113	0.829	0.204	1.37	8.05	0.98	10.4	6852	3.4578	39.59334	-36.13554	NAC
NS0053	116	118	NS	E395712	395712	1	G	W	30.69	40.19	2.57	0.336	0.26	0.114	2.52	2.31	0.104	0.118	0.991	0.28	1.09	3.79	1.52	6.4	6886	3.6108	40.29102	-36.68022	NAC
NS0053	146	148	NS	E395727	395727	1	G	W	28.45	42.54	2.68	0.349	0.27	0.118	2.76	2.44	0.105	0.182	0.938	0.256	1.09	3.93	1.79	6.81	6900	5.5692	42.55848	-36.98928	NAC
NS0053	134	136	NS	E395721	395721	1	G	W	31.45	42.66	1.59	0.297	0.23	0.07	1.97	2.24	0.083	0.054	0.671	0.194	0.66	2.78	1.45	4.89	6894	1.6524	39.07008	-37.41768	NAC
NS0053	142	144	NS	E395725	395725	1	G	W	29.97	42.06	2.05	0.271	0.21	0.091	2.54	2.32	0.157	0.077	0.833	0.245	0.95	3.57	1.57	6.09	6898	2.3562	40.46544	-38.10924	NAC
NS0053	112	114	NS	E395710	395710	1	G	W	28.59	43.03	2.47	0.336	0.26	0.113	2.6	2.35	0.113	0.087	0.934	0.267	1.06	3.7	1.7	6.46	6884	2.6622	40.9887	-38.3265	NAC
NS0053	144	146	NS	E395726	395726	1	G	W	29.75	42.12	2.04	0.336	0.26	0.092	2.5	2.34	0.146	0.069	0.818	0.227	1	3.78	1.6	6.38	6899	2.1114	40.81428	-38.70288	NAC
NS0053	120	122	NS	E395714	395714	1	G	W	30.6	41.72	2.12	0.284	0.22	0.096	2.25	2.39	0.133	0.096	0.836	0.236	0.87	3.17	1.58	5.62	6888	2.9376	41.68638	-38.74878	NAC
NS0053	106	108	NS	E395707	395707	1	G	W	29.78	43.31	2.14	0.258	0.2	0.099	2.32	2.42	0.102	0.075	0.836	0.217	0.83	2.92	1.74	5.49	6881	2.295	42.20964	-39.91464	NAC
NS0053	132	134	NS	E395720	395720	1	G	W	31.17	40.58	1.52	0.426	0.33	0.065	2.18	2.44	0.074	0.049	0.642	0.184	0.75	4.62	1.74	7.11	6893	1.4994	42.55848	-41.05908	NAC
NS0053	240	242	NS	E395774	395774	1	G	W	32.5	40.99	1.54	0.284	0.22	0.069	1.8	2.5	0.104	0.059	0.601	0.159	0.58	3.06	1.6	5.24	6947	1.8054	43.605	-41.7996	NAC
NS0053	258	260	NS	E395783	395783	1	G	W	28.35	40.73	3.09	0.374	0.29	0.136	2.6	2.81	0.143	0.229	1.5	0.235	0.96	4.68	1.9	7.54	6956	7.0074	49.01202	-42.00462	NAC
NS0053	228	230	NS	E395768	395768	1	G	W	34.9	36.51	1.16	0.4	0.31	0.053	1.61	2.6	0.093	0.042	0.468	0.125	0.53	4.71	1.49	6.73	6941	1.2852	45.3492	-44.064	NAC
NS0053	102	104	NS	E395705	395705	1	G	W	28.37	43.73	2.42	0.284	0.22	0.112	2.57	2.74	0.122	0.096	0.89	0.25	0.94	3.11	2.02	6.07	6879	2.9376	47.79108	-44.85348	NAC
NS0053	210	212	NS	E395759	395759	1	G	W	28.69	43.64	1.04	0.284	0.22	0.045	1.35	2.71	0.088	0.066	0.362	0.101	0.65	7.5	0.99	9.14	6932	2.0196	47.26782	-45.24822	NAC
NS0053	254	256	NS	E395781	395781	1	G	W	31.05	38.49	2.56	0.387	0.3	0.115	2.45	2.88	0.106	0.14	1.16	0.21	0.79	3.84	2.14	6.77	6954	4.284	50.23296	-45.94896	NAC
NS0053	46	48	NS	E395676	395676	1	G	W	21.66	47.7	4.01	0.387	0.3	0.187	2.79	2.99	0.137	0.201	0.916	0.189	1.24	6.6	1.51	9.35	6851	6.1506	52.15158	-46.00098	NAC
NS0053	222	224	NS	E395765	395765	1	G	W	30.97	40.49	2	0.31	0.24	0.09	2.22	2.82	0.097	0.101	0.751	0.203	0.82	3.42	2.1	6.34	6938	3.0906	49.18644	-46.09584	NAC
NS0053	162	164	NS	E395735	395735	1	G	W	24.7	49.14	1.15	0.323	0.25	0.05	1.41	2.87	0.065	0.056	0.429	0.109	0.98	6.41	1.36	8.75	6908	1.7136	50.05854	-48.34494	NAC
NS0053	160	162	NS	E395734	395734	1	G	W	26.1	43.37	1.25	0.439	0.34	0.053	1.59	2.95	0.22	0.082	0.472	0.144	4.97	5.68	1.04	11.69	6907	2.5092	51.4539	-48.9447	NAC
NS0053	252	254	NS	E395780	395780	1	G	W	31.91	39.04	2.19	0.349	0.27	0.097	2.11	3.07	0.077	0.086	0.985	0.165	0.65	2.84	2.27	5.76	6953	2.6316	53.54694	-50.91534	NAC
NS0053	212	214	NS	E395760	395760	1	G	W	29.33	41.09	1.74	0.245	0.19	0.079	1.74	3.13	0.11	0.106	0.6	0.161	0.83	6.56	1.36	8.75	6933	3.2436	54.59346	-51.34986	NAC
NS0053	110	112	NS	E395709	395709	1	G	W	29.71	38.79	2.53	0.4	0.31	0.113	2.83	3.22	0.215	0.157	0.947	0.283	1.01	4.14	2.29	7.44	6883	4.8042	56.16324	-51.35904	NAC
NS0053	100	102	NS	E395704	395704	1	G	W	28.34	42.92	1.93	0.31	0.24	0.087	2.25	3.16	0.096	0.079	0.756	0.22	0.89	4.09	2.31	7.29	6878	2.4174	55.11672	-52.69932	NAC
NS0053	214	216	NS	E395761	395761	1	G	W	29.07	38.67	2.39	0.31	0.24	0.114	2.4	3.37	0.247	0.163	0.898	0.253	1.06	5.65	2.48	9.19	6934	4.9878	58.77954	-53.79174	NAC
NS0053	92	94	NS	E395699	395699	1	G	W	25.68	41.48	3.1	0.258	0.2	0.142	2.52	3.97	0.147	0.147	0.87	0.231	1.25	7	2.06	10.31	6874	4.4982	69.24474	-64.74654	NAC
NS0053	94	96	NS	E395700	395700	1	G	W	23.93	46.28	2.32	0.245	0.19	0.106	2.03	3.98	0.154	0.097	0.691	0.189	0.95	6.27	2.02	9.24	6875	2.9682	69.41916	-66.45096	NAC
NS0054	216	218	NS	E395904	395904	1	G	W	26.72	38.49	6.39	0.646	0.5	0.286	5.75	0.37	0.09	1.46	0.832	0.397	0.38	5.29	2.29	7.96	7075	44.676	6.45354	38.22246	PAF(HC)
NS0054	234	236	NS	E395913	395913	1	G	W	25.15	42.28	6.78	0.503	0.39	0.298	5.83	0.36	0.081	0.877	0.383	0.285	0.42	4.95	1.42	6.79	7084	26.8362	6.27912	20.55708	PAF(HC)
NS0054	224	226	NS	E395908	395908	1	G	W	28.5	31.07	5.67	1.136	0.88	0.247	5.8	0.99	0.22	1.08	0.794	0.453	0.22	8.34	2.04	10.6	7079	33.048	17.26758	15.78042	PAF(HC)
NS0054	218	220	NS	E395905	395905	1	G	W	27.01	37.89	5.08	0.852	0.66	0.232	5.14	0.93	0.179	1.01	0.756	0.381	0.46	6.87	1.87	9.2	7076	30.906	16.22106	14.68494	PAF(HC)
NS0054	222	224	NS	E395907	395907	1	G	W	27.16	37.45	5.71	0.826	0.64	0.25	5.36	0.99	0.171	0.944	0.943	0.397	0.42	6.1	1.87	8.39	7078	28.8864	17.26758	11.61882	PAF(HC)
NS0054	170	172	NS	E395880	395880	1	G	W	31.46	38.07	4.27	0.594	0.46	0.183	4.14	0.36	0.091	0.517	0.838	0.226	0.43	4.64	0.83	5.9	7052	15.8202	6.27912	9.54108	PAF(LC)
NS0054	12	14	NS	E395800	395800	1	G	M	32.19	45.47	2.27	0.181	0.14	0.1	0.16	0.02	0.067	0.024	0.009	0.02	4.4	0.9	0.23	5.53	6973	0.7344	0.34884	0.38556	PAF(LC)
NS0054	14	16	NS	E395802	395802	1	G	M	37.67	38.52	1.52	0.232	0.18	0.069	0.21	0.02	0.037	0.023	0.005	0.018	4.36	0.82	0.24	5.42	6974	0.7038	0.34884	0.35496	PAF(LC)
NS0054	96	98	NS	E395843	395843	1	G	W	34.27	39.25	1.9	0.684	0.53	0.083	2.63	0.29	0.07	0.173	0.461	0.062	0.36	4.88	0	5.24	7015	5.2938	5.05818	0.23562	PAF(LC)
NS0054	10	12	NS	E395799	395799	1	G	M	25.16	54.35	3.3	0.116	0.09	0.114	0.13	0.03	0.078	0.017	0.009	0.027	4.27	1.17	0.2	5.64	6972	0.5202	0.52326	-0.00306	NAF
NS0054	24	26	NS	E395807	395807	1	G	M	38.27	36.39	1.34	0.942	0.73	0.059	0.37	0.02	0.086	0.011	0.078	0.046	4.71	0.77	0.22	5.7	6979	0.3366	0.34884	-0.01224	NAF
NS0054	0	2	NS	E395794	395794	1	G	M	43.73	20.06	7.51	-0.0129	-0.01	0.491	0.07	0.04	0.03	0.022	0.064	0.033	6.9	1.57	0.31	8.78	6967	0.6732	0.69768	-0.02448	NAF
NS0054	20	22	NS	E395805	395805	1	G	M	37.35	39.1	1.49	0.529	0.41	0.063	0.22	0.02	0.081	0.01	0.029	0.016	3.91	0.73	0.18	4.82	6977	0.306	0.34884	-0.04284	NAF
NS0054	16	18	NS	E395803	395803	1	G	M	24.91	59.02	1.33	0.116	0.09	0.057	0.1	0.03	0.026	0.015	0.009	0.031	2.36	0.8	0.23	3.39	6975	0.459	0.52326	-0.06426	NAF
NS0054	30	32	NS	E395810	395810	1	G	M	38.64	36.13	1.34	0.736	0.57	0.059	0.35	0.02	0.104	0.009	0.119	0.028	4.4	0.74	0.17	5.31	6982	0.2754	0.34884	-0.07344	NAF
NS0054	22	24	NS	E395806	395806	1	G	M	36.35	40.43	1.09	0.555	0.43	0.048	0.22	0.02	0.105	0.008	0.052	0.022	4.18	0.64	0.17	4.99	6978	0.2448	0.34884	-0.10404	NAF
NS0054	28	30	NS	E395809	395809	1	G	M	34.77	41.09	1.85	0.297	0.23	0.072	0.19	0.02	0.185	0.008	0.029	0.026	5.27	0.8	0.17	6.24	6981	0.2448	0.34884	-0.10404	NAF
NS0054	18	20	NS	E395804	395804	1	G	M	24.88	57.92	1.76	0.116	0.09	0.076	0.09	0.03	0.071	0.013	0.008	0.016	2.76	0.86	0.25	3.87	6976	0.3978	0.52326	-0.12546	NAF
NS0054	26	28	NS	E395808	395808	1	G	M	28.71	51.51	1.47	0.168	0.13	0.049	0.1	0.02	0.187	0.007	0.016	0.018	4.1	0.65	0.13	4.88	6980	0.2142	0.34884	-0.13464	NAF
NS0054	36	38	NS	E395813	395813	1	G	M	37.87	36.85	1.22	0.865	0.67	0.05	0.34	0.02	0.11	0.007	0.097	0.02	4.8	0.73	0.21	5.74	6985	0.2142	0.34884	-0.13464	NAF
NS0054	32	34	NS	E395811	395811	1	G	M	36.81	40.29	1.13	0.555	0.43	0.049	0.22	0.02	0.094	0.006	0.161	0.015	3.75	0.62	0.13	4.5	6983	0.1836	0.34884	-0.16524	NAF
NS0054	34	36	NS	E395812	395812	1	G	M	30.22	49.56	1.18	0.413	0.32	0.045	0.16	0.02	0.141	0.006	0.073	0.009	4.1	0.58	0.13	4.81	6984	0.1836	0.34884	-0.16524	NAF
NS0054	38	40	NS	E395814	395814	1	G	M	37.18	38.36	0.98	1.059	0.82	0.044	0.3	0.02	0.112	0.006	0.236	0.015	4.34	0.61	0.19	5.14	6986	0.1836	0.34884	-0.16524	NAF
NS0054	40	42	NS	E395815	395815	1	G	M	37.98	37.32	1.28	0.555	0.43	0.053	0.19	0.02	0.151	0.006	0.175	0.013	4.63	0.66	0.15	5.44	6987	0.1836	0.34884	-0.16524	NAF
NS0054	42	44	NS	E395816	395816	1	G	M	35.29	41.13	1.03	0.775	0.6	0.045	0.27	0.02	0.131	0.006	0.193	0.012	4.7	0.63	0.17	5.5	6988	0.1836	0.34884	-0.16524	NAF
NS0054	44	46	NS	E395817	395817	1	G	M	39.8	33.6	1.38	1.046	0.81	0.06	0.28	0.02	0.131	0.006	0.255	0.015	5.02	0.78	0.21	6.01	6989	0.1836	0.34884	-0.16524	NAF
NS0054	46	48	NS	E395818	395818	1	G	M	39.53	34.85	1.33	0.671	0.52	0.061	0.16	0.02	0.14	0.005	0.726	0.015	4.29	0.5	0.14	4.93	6990	0.153	0.34884	-0.19584	NAF
NS0054	48	50	NS	E395819	395819	1	G	M	41.53	32.81	1.51	0.491	0.38	0.063	0.2	0.02	0.123	0.005	0.43	0.009	3.96	0.56	0.13	4.65	6991	0.153	0.34884	-0.19584	NAF
NS0054	50	52	NS	E395820	395820	1	G	M	38.28	38.85	1.19	0.646	0.5	0.051	0.15	0.02	0.1	0.005	0.418	0.011	2.87	0.41	0.03	3.31	6992	0.153	0.34884	-0.19584	NAF
NS0054	54	56	NS	E395822	395822	1	G	M	36.23	41.05	1.59	0.904	0.7	0.068	0.19	0.03	0.108	0.006	0.412	0.011	2.79	0.55	0.12	3.46	6994	0.1836	0.52326	-0.33966	NAF
NS0054	56	58	NS	E395823	395823	1	G	M	37.13	41.85	0.96	0.904	0.7	0.045	0.16	0.03	0.072	0.006	0.314	0.005	1.88	0.28	-0.09	2.07	6995	0.1836	0.52326	-0.33966	NAF
NS0054	52	54	NS	E395821	395821	1	G	M	38.82	37.97	1.43	0.723	0.56	0.061	0.11	0.03	0.104	0.005	0.568	0.007	2.39	0.44	0.08	2.91	6993	0.153	0.52326	-0.37026	NAF
NS0054	58	60	NS	E395824	395824	1	G	M	40.07	37.5	1.09	0.852	0.66	0.05	0.21	0.03	0.074	0.005	0.436	0.004	1.81	0.26	-0.15	1.92	6996	0.153	0.52326	-0.37026	NAF
NS0054	60	62	NS	E395825	395825	1	G	M	40.87	34.74	1.13	1.046	0.81	0.049	0.26	0.03	0.088	0.005	0.307	0.005	2.84	0.49	0	3.33	6997	0.153	0.52326	-0.37026	NAF
NS0054	62	64	NS	E395826	395826	1	G	M	37.58	37.99	1.18	1.394	1.08	0.049	0.25	0.03	0.103	0.005	0.397	0.007	3.48	0.58	0.19	4.25	6998	0.153	0.52326	-0.37026	NAF
NS0054	64	66	NS	E395827	395827	1	G	M	41.51	34.7	1.65	0.684	0.53	0.063	0.28	0.03	0.064	0.005	0.684	0.012	1.69	0.39	-0.01	2.07	6999	0.153	0.52326	-0.37026	NAF
NS0054	2	4	NS	E395795	395795	1	G	M	34.56	34.17	8.25	0.026	0.02	0.606	0.08	0.05	0.022	0.016	0.079	0.032	5.2	1.68	0.26	7.14	6968	0.4896	0.8721	-0.3825	NAF
NS0054	4	6	NS	E395796	395796	1	G	M	33.73	38.88	4.81	0.026	0.02	0.373	0.08	0.05	0.023	0.016	0.026	0.042	5.9	1.09	0.21	7.2	6969	0.4896	0.8721	-0.3825	NAF
NS0054	66	68	NS	E395828	395828	1	G	M	40.42	36.45	1.52	0.542	0.42	0.06	0.36	0.05	0.085	0.013	0.437	0.001	1.57	0.6	0.05	2.22	7000	0.3978	0.8721	-0.4743	NAF
NS0054	100	102	NS	E395845	395845	1	G	W	31.31	38.57	3.32	0.646	0.5	0.149	3.86	0.51	0.132	0.272	1.03	0.17	0.31	5.76	0.34	6.41	7017	8.3232	8.89542	-0.57222	NAF
NS0054	8	10	NS	E395798	395798	1	G	M	15.6	67.81	4.63	0.026	0.02	0.147	0.06	0.06	0.051	0.013	0.01	0.041	3.1	1.43	0.18	4.71	6971	0.3978	1.04652	-0.64872	NAF
NS0054	6	8	NS	E395797	395797	1	G	M	14.03	68.98	5.62	0.026	0.02	0.423	0.07	0.08	0.014	0.011	0.017	0.055	2.6	1.56	0.18	4.34	6970	0.3366	1.39536	-1.05876	NAF
NS0054	98	100	NS	E395844	395844	1	G	W	31.43	41.52	1.96	0.736	0.57	0.084	3.09	0.39	0.093	0.174	0.566	0.106	0.23	5.84	0.11	6.18	7016	5.3244	6.80238	-1.47798	NAF
NS0054	74	76	NS	E395832	395832	1	G	W	40.68	34.15	1.38	0.8	0.62	0.06	1.05	0.16	0.101	0.025	0.197	0.008	1.07	2.45	-0.03	3.49	7004	0.765	2.79072	-2.02572	NAF
NS0054	80	82	NS	E395835	395835	1	G	W	29.91	50.56	0.91	0.465	0.36	0.041	0.94	0.15	0.076	0.015	0.2	0.01	1.07	2.6	0.04	3.71	7007	0.459	2.6163	-2.1573	NAF
NS0054	104	106	NS	E395847	395847	1	G	W	33.73	39.14	1.43	0.865	0.67	0.059	2.54	0.45	0.113	0.125	0.594	0.148	0.28	5.87	0	6.15	7019	3.825	7.8489	-4.0239	NAF
NS0054	82	84	NS	E395836	395836	1	G	W	34.47	40.81	0.95	0.775	0.6	0.042	1.63	0.27	0.087	0.018	0.249	0.013	0.65	4.75	-0.03	5.37	7008	0.5508	4.70934	-4.15854	NAF
NS0054	84	86	NS	E395837	395837	1	G	W	35.04	40.18	0.89	0.8	0.62	0.042	1.67	0.29	0.102	0.023	0.164	0.004	0.73	4.88	-0.07	5.54	7009	0.7038	5.05818	-4.35438	NAF
NS0054	94	96	NS	E395842	395842	1	G	W	36.14	37.47	1.61	0.646	0.5	0.076	2.6	0.39	0.112	0.066	0.334	0.06	0.3	4.74	-0.25	4.79	7014	2.0196	6.80238	-4.78278	NAF
NS0054	68	70	NS	E395829	395829	1	G	M	37.25	32.96	1.41	0.891	0.69	0.61	2.32	0.35	0.086	0.032	0.346	0.009	0.44	7.88	-0.37	7.95	7001	0.9792	6.1047	-5.1255	NAF
NS0054	72	74	NS	E395831	395831	1	G	W	38.63	35.02	1.4	0.697	0.54	0.059	1.77	0.35	0.068	0.029	0.236	0.009	0.81	4.36	-0.26	4.91	7003	0.8874	6.1047	-5.2173	NAF
NS0054	76	78	NS	E395833	395833	1	G	W	37.86	33.88	1.16	0.852	0.66	0.05	2.08	0.38	0.103	0.027	0.316	0.008	0.62	6.2	-0.2	6.62	7005	0.8262	6.62796	-5.80176	NAF
NS0054	102	104	NS	E395846	395846	1	G	W	33.24	41.41	0.86	0.865	0.67	0.038	2.1	0.38	0.085	0.021	0.365	0.096	0.23	5.84	-0.36	5.71	7018	0.6426	6.62796	-5.98536	NAF
NS0054	226	228	NS	E395909	395909	1	G	W	36.08	38.22	2.34	0.516	0.4	0.104	2.66	0.53	0.08	0.094	0.355	0.109	0.23	3.13	-0.15	3.21	7080	2.8764	9.24426	-6.36786	NAF
NS0054	106	108	NS	E395848	395848	1	G	W	35.97	38.6	1.13	0.749	0.58	0.05	2.32	0.44	0.08	0.04	0.331	0.081	0.1	4.85	-0.36	4.59	7020	1.224	7.67448	-6.45048	NAF
NS0054	78	80	NS	E395834	395834	1	G	W	32.39	39.81	1.04	0.852	0.66	0.045	2.06	0.42	0.113	0.024	0.366	0.02	1.27	7.16	-0.04	8.39	7006	0.7344	7.32564	-6.59124	NAF
NS0054	86	88	NS	E395838	395838	1	G	W	35.29	38.9	0.95	0.852	0.66	0.045	1.89	0.43	0.12	0.026	0.33	0.006	0.53	5.14	-0.22	5.45	7010	0.7956	7.50006	-6.70446	NAF
NS0054	276	278	NS	E395934	395934	1	G	W	32.3	38.77	2.75	0.646	0.5	0.119	3.24	0.6	0.088	0.12	0.267	0.134	0.72	6.09	0.09	6.9	7105	3.672	10.4652	-6.7932	NAF
NS0054	70	72	NS	E395830	395830	1	G	M	38.63	35.16	1.34	0.633	0.49	0.057	2	0.46	0.059	0.035	0.137	0.007	0.27	4.65	-0.39	4.53	7002	1.071	8.02332	-6.95232	NAF
NS0054	88	90	NS	E395839	395839	1	G	W	37.59	35.7	1.29	0.762	0.59	0.054	2.08	0.45	0.087	0.027	0.474	0.016	0.24	5.03	-0.34	4.93	7011	0.8262	7.8489	-7.0227	NAF
NS0054	178	180	NS	E395884	395884	1	G	W	40.43	33.19	1.24	0.749	0.58	0.059	1.97	0.45	0.051	0.026	0.33	0.154	0.11	3.89	-0.37	3.63	7056	0.7956	7.8489	-7.0533	NAF
NS0054	142	144	NS	E395866	395866	1	G	W	31.61	42.77	1.77	0.697	0.54	0.086	2.89	0.64	0.033	0.125	0.417	0.134	0.12	4.71	0.12	4.95	7038	3.825	11.16288	-7.33788	NAF
NS0054	168	170	NS	E395879	395879	1	G	W	30.01	42.72	1.82	0.775	0.6	0.079	2.91	0.61	0.127	0.105	0.623	0.27	0.37	6.44	0.06	6.87	7051	3.213	10.63962	-7.42662	NAF
NS0054	108	110	NS	E395849	395849	1	G	W	38.49	35.49	1.06	0.775	0.6	0.046	2.2	0.5	0.091	0.025	0.313	0.092	0.11	4.46	-0.4	4.17	7021	0.765	8.721	-7.956	NAF
NS0054	112	114	NS	E395851	395851	1	G	W	37.52	33.42	1.11	0.904	0.7	0.046	2.64	0.55	0.093	0.025	0.497	0.182	0.24	6.42	-0.27	6.39	7023	0.765	9.5931	-8.8281	NAF
NS0054	174	176	NS	E395882	395882	1	G	W	39.91	33.53	1.2	0.8	0.62	0.053	1.95	0.58	0.075	0.026	0.398	0.148	0.07	4.19	-0.32	3.94	7054	0.7956	10.11636	-9.32076	NAF
NS0054	240	242	NS	E395916	395916	1	G	W	33.77	36.42	3.13	0.839	0.65	0.137	3.5	0.99	0.117	0.253	0.42	0.29	0.29	4.81	0.47	5.57	7087	7.7418	17.26758	-9.52578	NAF
NS0054	138	140	NS	E395864	395864	1	G	W	39.26	33.47	1.51	0.697	0.54	0.064	2.42	0.6	0.075	0.029	0.4	0.104	0.05	4.27	-0.31	4.01	7036	0.8874	10.4652	-9.5778	NAF
NS0054	136	138	NS	E395863	395863	1	G	W	37.2	36.7	1.25	0.736	0.57	0.054	2.36	0.61	0.069	0.029	0.319	0.113	0.1	4.43	-0.21	4.32	7035	0.8874	10.63962	-9.75222	NAF
NS0054	140	142	NS	E395865	395865	1	G	W	37.2	36.43	1.22	0.749	0.58	0.056	2.37	0.62	0.077	0.027	0.322	0.077	0.15	4.45	-0.19	4.41	7037	0.8262	10.81404	-9.98784	NAF
NS0054	90	92	NS	E395840	395840	1	G	W	34.11	39.26	1.03	0.865	0.67	0.049	2.29	0.63	0.087	0.024	0.36	0.052	0.33	5.84	-0.09	6.08	7012	0.7344	10.98846	-10.25406	NAF
NS0054	220	222	NS	E395906	395906	1	G	W	28.28	37.02	3.78	1.046	0.81	0.169	4.56	1.31	0.223	0.405	0.75	0.413	0.53	8.12	1.04	9.69	7077	12.393	22.84902	-10.45602	NAF
NS0054	92	94	NS	E395841	395841	1	G	W	32.3	43.52	0.64	0.813	0.63	0.033	2.03	0.64	0.11	0.019	0.197	0.027	0.23	5.35	-0.22	5.36	7013	0.5814	11.16288	-10.58148	NAF
NS0054	148	150	NS	E395869	395869	1	G	W	37.71	34.88	1.41	0.788	0.61	0.061	2.51	0.67	0.106	0.03	0.36	0.171	0.05	4.77	-0.24	4.58	7041	0.918	11.68614	-10.76814	NAF
NS0054	278	280	NS	E395935	395935	1	G	W	34.18	37.92	2.08	0.62	0.48	0.094	2.92	0.7	0.103	0.046	0.206	0.114	0.57	5.67	-0.12	6.12	7106	1.4076	12.2094	-10.8018	NAF
NS0054	162	164	NS	E395876	395876	1	G	W	29.66	36.9	4.25	0.697	0.54	0.168	4.49	1.1	0.273	0.254	0.998	0.677	0.36	6.29	0.54	7.19	7048	7.7724	19.1862	-11.4138	NAF
NS0054	172	174	NS	E395881	395881	1	G	W	34.06	41.17	1.16	0.775	0.6	0.051	1.97	0.72	0.066	0.027	0.469	0.121	0.09	4.31	0	4.4	7053	0.8262	12.55824	-11.73204	NAF
NS0054	116	118	NS	E395853	395853	1	G	W	37.77	36.3	1.08	0.736	0.57	0.046	2.24	0.72	0.095	0.026	0.323	0.076	0.06	4.26	-0.18	4.14	7025	0.7956	12.55824	-11.76264	NAF
NS0054	114	116	NS	E395852	395852	1	G	W	35.26	39.18	0.89	0.8	0.62	0.043	2.23	0.73	0.091	0.023	0.332	0.078	0.05	4.76	-0.08	4.73	7024	0.7038	12.73266	-12.02886	NAF
NS0054	146	148	NS	E395868	395868	1	G	W	37.4	35.07	1.37	0.749	0.58	0.062	2.64	0.75	0.07	0.032	0.332	0.161	0.14	4.79	-0.06	4.87	7040	0.9792	13.0815	-12.1023	NAF
NS0054	110	112	NS	E395850	395850	1	G	W	36.57	36.91	0.92	0.865	0.67	0.042	2.32	0.74	0.096	0.024	0.293	0.1	0.09	5.24	-0.15	5.18	7022	0.7344	12.90708	-12.17268	NAF
NS0054	176	178	NS	E395883	395883	1	G	W	38.78	34.92	1.13	0.813	0.63	0.049	1.83	0.78	0.089	0.024	0.441	0.109	0.11	3.9	-0.19	3.82	7055	0.7344	13.60476	-12.87036	NAF
NS0054	132	134	NS	E395861	395861	1	G	W	37.01	36.51	1	0.839	0.65	0.048	2.21	0.81	0.108	0.028	0.329	0.106	0.23	4.61	-0.13	4.71	7033	0.8568	14.12802	-13.27122	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0054	118	120	NS	E395854	395854	1	G	W	37.65	35.71	1.16	0.775	0.6	0.049	2.34	0.81	0.073	0.026	0.341	0.071	0.09	4.51	-0.08	4.52	7026	0.7956	14.12802	-13.33242	NAF
NS0054	126	128	NS	E395858	395858	1	G	W	32.11	43.99	0.83	0.788	0.61	0.037	2.1	0.84	0.077	0.024	0.303	0.062	0.08	4.58	0.1	4.76	7030	0.7344	14.65128	-13.91688	NAF
NS0054	124	126	NS	E395857	395857	1	G	W	36.72	36.32	0.96	0.891	0.69	0.042	2.27	0.86	0.128	0.032	0.421	0.1	0.08	5.09	-0.12	5.05	7029	0.9792	15.00012	-14.02092	NAF
NS0054	274	276	NS	E395933	395933	1	G	W	31.82	38.89	2.06	0.775	0.6	0.089	3.03	1.04	0.101	0.129	0.387	0.105	0.53	6.92	0.27	7.72	7104	3.9474	18.13968	-14.19228	NAF
NS0054	120	122	NS	E395855	395855	1	G	W	37.04	36.57	1.05	0.788	0.61	0.046	2.27	0.86	0.08	0.025	0.352	0.065	0.06	4.42	0	4.48	7027	0.765	15.00012	-14.23512	NAF
NS0054	164	166	NS	E395877	395877	1	G	W	33.84	41.34	0.86	0.749	0.58	0.04	2.08	0.87	0.074	0.025	0.234	0.092	0.14	4.74	0.07	4.95	7049	0.765	15.17454	-14.40954	NAF
NS0054	134	136	NS	E395862	395862	1	G	W	35.54	35.09	1.49	0.968	0.75	0.063	2.72	1.03	0.166	0.095	0.533	0.271	0.14	5.98	0.02	6.14	7034	2.907	17.96526	-15.05826	NAF
NS0054	144	146	NS	E395867	395867	1	G	W	34.89	36.94	1.52	0.775	0.6	0.073	2.81	0.99	0.127	0.066	0.488	0.18	0.13	5.27	0.21	5.61	7039	2.0196	17.26758	-15.24798	NAF
NS0054	154	156	NS	E395872	395872	1	G	W	36.78	35.87	1.34	0.865	0.67	0.06	2.46	0.93	0.072	0.028	0.273	0.129	0.14	4.79	0.1	5.03	7044	0.8568	16.22106	-15.36426	NAF
NS0054	202	204	NS	E395896	395896	1	G	W	36.07	37.42	1.38	0.775	0.6	0.065	2.34	0.99	0.081	0.051	0.394	0.125	0.11	4.11	0.17	4.39	7068	1.5606	17.26758	-15.70698	NAF
NS0054	188	190	NS	E395889	395889	1	G	W	38.04	36.31	1.11	0.8	0.62	0.048	1.86	0.96	0.068	0.022	0.35	0.107	0.03	3.57	0.08	3.68	7061	0.6732	16.74432	-16.07112	NAF
NS0054	122	124	NS	E395856	395856	1	G	W	35.08	39.26	0.98	0.826	0.64	0.044	2.26	0.99	0.09	0.026	0.297	0.069	0.15	4.48	0.09	4.72	7028	0.7956	17.26758	-16.47198	NAF
NS0054	206	208	NS	E395898	395898	1	G	W	37.45	36.5	1.21	0.775	0.6	0.055	2.1	1.02	0.069	0.03	0.333	0.065	0.04	3.71	0.15	3.9	7070	0.918	17.79084	-16.87284	NAF
NS0054	210	212	NS	E395900	395900	1	G	W	38.77	33.98	1.18	0.775	0.6	0.057	2.21	1.02	0.084	0.03	0.358	0.122	0.11	4	0.12	4.23	7072	0.918	17.79084	-16.87284	NAF
NS0054	236	238	NS	E395914	395914	1	G	W	37.54	36.66	1.3	0.736	0.57	0.059	1.93	1.04	0.08	0.038	0.263	0.076	0.14	3.47	0.08	3.69	7085	1.1628	18.13968	-16.97688	NAF
NS0054	190	192	NS	E395890	395890	1	G	W	37.89	36.29	1.21	0.71	0.55	0.053	1.79	1.05	0.071	0.022	0.397	0.109	0.08	3.36	0.29	3.73	7062	0.6732	18.3141	-17.6409	NAF
NS0054	130	132	NS	E395860	395860	1	G	W	35.66	37.8	1.1	0.839	0.65	0.05	2.34	1.06	0.083	0.027	0.349	0.096	0.13	4.72	0.19	5.04	7032	0.8262	18.48852	-17.66232	NAF
NS0054	244	246	NS	E395918	395918	1	G	W	36.68	36.17	1.82	0.762	0.59	0.078	2.4	1.1	0.059	0.034	0.398	0.121	0.2	3.65	0.25	4.1	7089	1.0404	19.1862	-18.1458	NAF
NS0054	182	184	NS	E395886	395886	1	G	W	36.35	38.53	0.96	0.826	0.64	0.042	1.76	1.08	0.084	0.021	0.379	0.069	0.04	3.65	0.19	3.88	7058	0.6426	18.83736	-18.19476	NAF
NS0054	128	130	NS	E395859	395859	1	G	W	35.19	39.07	1.18	0.71	0.55	0.051	2.3	1.15	0.077	0.035	0.269	0.099	0.13	4.05	0.29	4.47	7031	1.071	20.0583	-18.9873	NAF
NS0054	150	152	NS	E395870	395870	1	G	W	33.14	40.51	1.08	0.904	0.7	0.049	2.45	1.15	0.065	0.026	0.22	0.185	0.19	5.11	0.34	5.64	7042	0.7956	20.0583	-19.2627	NAF
NS0054	232	234	NS	E395912	395912	1	G	W	33.45	39.71	2.09	0.607	0.47	0.099	2.74	1.41	0.09	0.166	0.339	0.117	0.23	3.72	0.6	4.55	7083	5.0796	24.59322	-19.51362	NAF
NS0054	230	232	NS	E395911	395911	1	G	W	33.83	37.78	2.57	0.671	0.52	0.117	3.04	1.41	0.147	0.157	0.49	0.181	0.26	3.87	0.52	4.65	7082	4.8042	24.59322	-19.78902	NAF
NS0054	184	186	NS	E395887	395887	1	G	W	35.2	39.11	1.15	0.813	0.63	0.052	2.07	1.2	0.068	0.027	0.298	0.111	0.07	3.96	0.51	4.54	7059	0.8262	20.9304	-20.1042	NAF
NS0054	200	202	NS	E395895	395895	1	G	W	35.79	37.48	1.7	0.749	0.58	0.074	2.37	1.27	0.088	0.046	0.392	0.197	0.1	3.73	0.47	4.3	7067	1.4076	22.15134	-20.74374	NAF
NS0054	186	188	NS	E395888	395888	1	G	W	37.79	36	1.16	0.736	0.57	0.051	1.99	1.26	0.058	0.024	0.32	0.12	0.07	3.44	0.43	3.94	7060	0.7344	21.97692	-21.24252	NAF
NS0054	196	198	NS	E395893	395893	1	G	W	36.49	37.63	1.04	0.826	0.64	0.047	1.96	1.27	0.086	0.023	0.357	0.101	0.06	3.62	0.37	4.05	7065	0.7038	22.15134	-21.44754	NAF
NS0054	254	256	NS	E395923	395923	1	G	W	38.43	34.27	1.43	0.8	0.62	0.062	2.19	1.31	0.058	0.031	0.315	0.093	0.19	3.75	0.34	4.28	7094	0.9486	22.84902	-21.90042	NAF
NS0054	152	154	NS	E395871	395871	1	G	W	33.58	40.52	1.16	0.813	0.63	0.051	2.28	1.32	0.084	0.027	0.236	0.12	0.08	4.31	0.55	4.94	7043	0.8262	23.02344	-22.19724	NAF
NS0054	272	274	NS	E395932	395932	1	G	W	32.07	39.05	2.22	0.736	0.57	0.095	3	1.39	0.085	0.062	0.341	0.096	0.28	5.86	0.66	6.8	7103	1.8972	24.24438	-22.34718	NAF
NS0054	158	160	NS	E395874	395874	1	G	W	36.57	36.59	1.09	0.826	0.64	0.049	2.26	1.34	0.17	0.028	0.207	0.064	0.12	4.51	0.18	4.81	7046	0.8568	23.37228	-22.51548	NAF
NS0054	214	216	NS	E395903	395903	1	G	W	34.33	40.72	0.94	0.684	0.53	0.049	2.03	1.45	0.069	0.026	0.2	0.075	0.16	3.43	0.65	4.24	7074	0.7956	25.2909	-24.4953	NAF
NS0054	248	250	NS	E395920	395920	1	G	W	37.79	34.86	1.19	0.878	0.68	0.055	2.09	1.46	0.101	0.025	0.267	0.129	0.22	3.88	0.35	4.45	7091	0.765	25.46532	-24.70032	NAF
NS0054	260	262	NS	E395926	395926	1	G	W	38.11	34.73	1.13	0.865	0.67	0.051	1.91	1.47	0.081	0.025	0.248	0.048	0.08	3.89	0.52	4.49	7097	0.765	25.63974	-24.87474	NAF
NS0054	156	158	NS	E395873	395873	1	G	W	34.14	38.83	0.96	0.904	0.7	0.044	2.26	1.56	0.102	0.034	0.258	0.073	0.15	4.72	0.73	5.6	7045	1.0404	27.20952	-26.16912	NAF
NS0054	252	254	NS	E395922	395922	1	G	W	37.99	35.47	1.13	0.826	0.64	0.053	1.86	1.54	0.086	0.018	0.308	0.111	0.08	3.31	0.6	3.99	7093	0.5508	26.86068	-26.30988	NAF
NS0054	238	240	NS	E395915	395915	1	G	W	36.77	36.5	1.21	0.8	0.62	0.056	2.03	1.63	0.078	0.05	0.273	0.108	0.19	3.61	0.6	4.4	7086	1.53	28.43046	-26.90046	NAF
NS0054	166	168	NS	E395878	395878	1	G	W	29.49	41.58	1.81	0.762	0.59	0.078	2.88	1.76	0.279	0.112	0.754	0.255	0.3	6.26	0.49	7.05	7050	3.4272	30.69792	-27.27072	NAF
NS0054	212	214	NS	E395902	395902	1	G	W	35.94	37.8	1.02	0.775	0.6	0.049	2.15	1.62	0.085	0.029	0.231	0.099	0.13	3.69	0.75	4.57	7073	0.8874	28.25604	-27.36864	NAF
NS0054	198	200	NS	E395894	395894	1	G	W	35.9	37.45	1.19	0.813	0.63	0.052	2.11	1.64	0.085	0.028	0.309	0.139	0.1	3.64	0.78	4.52	7066	0.8568	28.60488	-27.74808	NAF
NS0054	208	210	NS	E395899	395899	1	G	W	37.32	35.73	1.14	0.775	0.6	0.051	2.12	1.67	0.12	0.028	0.365	0.081	0.13	3.65	0.49	4.27	7071	0.8568	29.12814	-28.27134	NAF
NS0054	204	206	NS	E395897	395897	1	G	W	35.71	37.52	1.12	0.813	0.63	0.051	2.23	1.68	0.092	0.03	0.332	0.092	0.12	3.78	0.81	4.71	7069	0.918	29.30256	-28.38456	NAF
NS0054	228	230	NS	E395910	395910	1	G	W	34.1	40.88	1.16	0.684	0.53	0.054	2.03	1.7	0.066	0.035	0.197	0.06	0.2	3.22	0.77	4.19	7081	1.071	29.6514	-28.5804	NAF
NS0054	250	252	NS	E395921	395921	1	G	W	37.74	35.08	1.15	0.813	0.63	0.052	2.04	1.68	0.068	0.021	0.297	0.111	0.08	3.41	0.85	4.34	7092	0.6426	29.30256	-28.65996	NAF
NS0054	270	272	NS	E395931	395931	1	G	W	34.76	37.73	1.74	0.697	0.54	0.074	2.45	1.72	0.065	0.037	0.232	0.051	0.28	4.2	0.8	5.28	7102	1.1322	30.00024	-28.86804	NAF
NS0054	246	248	NS	E395919	395919	1	G	W	36.07	35.64	1.95	0.749	0.58	0.083	2.5	1.72	0.099	0.036	0.505	0.152	0.16	3.51	0.8	4.47	7090	1.1016	30.00024	-28.89864	NAF
NS0054	242	244	NS	E395917	395917	1	G	W	37.97	34.86	1.22	0.826	0.64	0.058	2.01	1.75	0.106	0.024	0.319	0.09	0.16	3.42	0.63	4.21	7088	0.7344	30.5235	-29.7891	NAF
NS0054	194	196	NS	E395892	395892	1	G	W	35.4	37.84	0.98	0.904	0.7	0.045	2.06	1.86	0.118	0.022	0.401	0.121	0.09	3.8	0.92	4.81	7064	0.6732	32.44212	-31.76892	NAC
NS0054	280	282	NS	E395936	395936	1	G	W	33.44	38.58	1.33	0.62	0.48	0.057	2.54	1.89	0.086	0.039	0.117	0.064	0.37	5.28	0.93	6.58	7107	1.1934	32.96538	-31.77198	NAC
NS0054	160	162	NS	E395875	395875	1	G	W	31.89	39.49	1.28	0.852	0.66	0.061	2.8	1.91	0.11	0.034	0.38	0.19	0.22	5.79	1.06	7.07	7047	1.0404	33.31422	-32.27382	NAC
NS0054	180	182	NS	E395885	395885	1	G	W	31.84	43.71	0.8	0.826	0.64	0.035	1.82	1.89	0.076	0.021	0.243	0.091	0.14	3.6	1.05	4.79	7057	0.6426	32.96538	-32.32278	NAC
NS0054	256	258	NS	E395924	395924	1	G	W	35.65	37.64	1.08	0.839	0.65	0.049	1.9	1.95	0.066	0.029	0.38	0.067	0.08	3.38	1.18	4.64	7095	0.8874	34.0119	-33.1245	NAC
NS0054	264	266	NS	E395928	395928	1	G	W	36.99	35.51	1.19	0.8	0.62	0.053	1.99	1.97	0.085	0.027	0.209	0.051	0.17	3.76	0.96	4.89	7099	0.8262	34.36074	-33.53454	NAC
NS0054	192	194	NS	E395891	395891	1	G	W	31.97	42.63	0.85	0.865	0.67	0.039	1.9	2.05	0.1	0.024	0.344	0.105	0.04	3.4	1.38	4.82	7063	0.7344	35.7561	-35.0217	NAC
NS0054	258	260	NS	E395925	395925	1	G	W	36.81	35.65	1.11	0.891	0.69	0.049	1.92	2.05	0.088	0.024	0.342	0.051	0.18	3.71	1.08	4.97	7096	0.7344	35.7561	-35.0217	NAC
NS0054	262	264	NS	E395927	395927	1	G	W	36.46	35.83	1.05	0.878	0.68	0.047	1.98	2.11	0.071	0.028	0.248	0.051	0.16	3.81	1.22	5.19	7098	0.8568	36.80262	-35.94582	NAC
NS0054	268	270	NS	E395930	395930	1	G	W	35.14	36.87	1.43	0.736	0.57	0.062	2.24	2.33	0.067	0.036	0.281	0.039	0.32	3.88	1.32	5.52	7101	1.1016	40.63986	-39.53826	NAC
NS0054	266	268	NS	E395929	395929	1	G	W	35.82	34.9	1.34	0.813	0.63	0.06	2.31	2.59	0.081	0.03	0.208	0.041	0.24	3.99	1.67	5.9	7100	0.918	45.17478	-44.25678	NAC
NS0055	24	26	NS	E395949	395949	1	G	W	36.11	39.12	1.47	1.007	0.78	0.06	0.13	0.02	0.114	0.022	0.038	0.021	4.98	0.67	0.22	5.87	7120	0.6732	0.34884	0.32436	PAF(LC)
NS0055	22	24	NS	E395948	395948	1	G	W	34.49	42.07	1.44	0.852	0.66	0.059	0.12	0.02	0.099	0.02	0.035	0.021	4.65	0.64	0.2	5.49	7119	0.612	0.34884	0.26316	PAF(LC)
NS0055	26	28	NS	E395950	395950	1	G	W	36.15	41.29	1.07	1.097	0.85	0.043	0.04	0.005	0.099	0.006	0.065	0.01	3.48	0.46	0.14	4.08	7121	0.1836	0.08721	0.09639	PAF(LC)
NS0055	20	22	NS	E395947	395947	1	G	W	32.73	44.88	1.39	0.749	0.58	0.053	0.12	0.03	0.095	0.019	0.031	0.025	4.49	0.63	0.2	5.32	7118	0.5814	0.52326	0.05814	PAF(LC)
NS0055	12	14	NS	E395943	395943	1	G	W	34.99	44.16	1.32	0.284	0.22	0.052	0.08	0.02	0.051	0.012	0.013	0.02	2.98	0.48	0.09	3.55	7114	0.3672	0.34884	0.01836	PAF(LC)
NS0055	18	20	NS	E395946	395946	1	G	W	31.28	48.3	1.33	0.387	0.3	0.054	0.12	0.03	0.065	0.017	0.019	0.024	4.28	0.55	0.15	4.98	7117	0.5202	0.52326	-0.00306	NAF
NS0055	2	4	NS	E395938	395938	1	G	M	38.42	36.81	2.99	0.052	0.04	0.161	0.06	0.04	0.044	0.02	0.015	0.018	3.78	0.69	0.07	4.54	7109	0.612	0.69768	-0.08568	NAF
NS0055	10	12	NS	E395942	395942	1	G	W	35.93	42.66	1.53	0.323	0.25	0.061	0.07	0.03	0.076	0.014	0.016	0.027	3.2	0.49	0.11	3.8	7113	0.4284	0.52326	-0.09486	NAF
NS0055	16	18	NS	E395945	395945	1	G	W	35.25	42.93	1.49	0.284	0.22	0.065	0.1	0.03	0.075	0.013	0.012	0.017	3.85	0.56	0.12	4.53	7116	0.3978	0.52326	-0.12546	NAF
NS0055	30	32	NS	E395952	395952	1	G	W	39.72	34.87	1.16	1.317	1.02	0.049	0.11	0.02	0.131	0.006	0.111	0.018	4.12	0.55	0.15	4.82	7123	0.1836	0.34884	-0.16524	NAF
NS0055	14	16	NS	E395944	395944	1	G	W	33.82	46.31	1.36	0.232	0.18	0.058	0.1	0.03	0.032	0.01	0.011	0.015	2.87	0.51	0.08	3.46	7115	0.306	0.52326	-0.21726	NAF
NS0055	6	8	NS	E395940	395940	1	G	M	39.93	34.5	2.84	0.142	0.11	0.136	0.08	0.04	0.058	0.015	0.013	0.028	4.18	0.71	0.11	5	7111	0.459	0.69768	-0.23868	NAF
NS0055	28	30	NS	E395951	395951	1	G	W	39.7	35.47	1.18	1.407	1.09	0.046	0.12	0.03	0.096	0.004	0.141	0.013	3.6	0.5	0.14	4.24	7122	0.1224	0.52326	-0.40086	NAF
NS0055	8	10	NS	E395941	395941	1	G	W	36.29	40.55	1.89	0.465	0.36	0.08	0.07	0.05	0.068	0.014	0.022	0.033	4.09	0.53	0.1	4.72	7112	0.4284	0.8721	-0.4437	NAF
NS0055	0	2	NS	E395937	395937	1	G	M	40.38	22.02	9.56	0.026	0.02	0.457	0.11	0.07	0.036	0.025	0.041	0.047	6.96	2.42	0.3	9.68	7108	0.765	1.22094	-0.45594	NAF
NS0055	4	6	NS	E395939	395939	1	G	M	41.03	32.47	2.79	0.065	0.05	0.137	0.09	0.07	0.041	0.013	0.016	0.02	4.85	0.61	0.11	5.57	7110	0.3978	1.22094	-0.82314	NAF
NS0055	32	34	NS	E395953	395953	1	G	W	33.07	44.47	0.96	1.304	1.01	0.037	0.2	0.06	0.109	0.006	0.099	0.018	4.67	0.6	0.16	5.43	7124	0.1836	1.04652	-0.86292	NAF
NS0055	34	36	NS	E395954	395954	1	G	W	37.92	40.94	0.88	0.684	0.53	0.038	0.25	0.06	0.048	0.005	0.13	0.015	2.2	0.39	0.01	2.6	7125	0.153	1.04652	-0.89352	NAF
NS0055	46	48	NS	E395960	395960	1	G	W	38.86	37.84	1.1	0.723	0.56	0.046	0.16	0.06	0.1	0.005	0.074	0.021	3.33	0.5	0.17	4	7131	0.153	1.04652	-0.89352	NAF
NS0055	48	50	NS	E395961	395961	1	G	W	40.88	35.81	0.97	0.684	0.53	0.042	0.2	0.06	0.106	0.004	0.121	0.009	2.81	0.4	0.13	3.34	7132	0.1224	1.04652	-0.92412	NAF
NS0055	36	38	NS	E395955	395955	1	G	W	39.27	38.04	1.03	0.736	0.57	0.046	0.26	0.08	0.068	0.004	0.112	0.012	2.7	0.46	0.06	3.22	7126	0.1224	1.39536	-1.27296	NAF
NS0055	38	40	NS	E395956	395956	1	G	W	41.77	32.21	1.44	0.994	0.77	0.058	0.41	0.11	0.103	0.005	0.19	0.021	3.8	0.67	0.15	4.62	7127	0.153	1.91862	-1.76562	NAF
NS0055	40	42	NS	E395957	395957	1	G	W	39.84	37.48	1.01	0.671	0.52	0.046	0.22	0.11	0.089	0.004	0.093	0.012	2.53	0.51	0.13	3.17	7128	0.1224	1.91862	-1.79622	NAF
NS0055	44	46	NS	E395959	395959	1	G	W	37.77	40.15	1.28	0.878	0.68	0.055	0.23	0.11	0.076	0.003	0.097	0.015	2.34	0.52	0.19	3.05	7130	0.0918	1.91862	-1.82682	NAF
NS0055	42	44	NS	E395958	395958	1	G	W	41.03	34.87	1.36	0.529	0.41	0.057	0.31	0.12	0.106	0.003	0.118	0.016	2.82	0.58	0.16	3.56	7129	0.0918	2.09304	-2.00124	NAF
NS0055	244	246	NS	E396060	396060	1	G	W	35.23	35.94	3.15	0.568	0.44	0.144	3.41	0.51	0.069	0.191	0.436	0.143	0.59	4.22	0.1	4.91	7230	5.8446	8.89542	-3.05082	NAF
NS0055	124	126	NS	E395999	395999	1	G	W	21.58	56.34	1.06	0.555	0.43	0.046	2.23	0.43	0.081	0.124	0.285	0.091	0.86	6.74	0.2	7.8	7170	3.7944	7.50006	-3.70566	NAF
NS0055	238	240	NS	E396057	396057	1	G	W	35.41	38.21	1.4	0.697	0.54	0.074	2.52	0.33	0.042	0.054	0.391	0.129	0.6	4.98	-0.24	5.34	7227	1.6524	5.75586	-4.10346	NAF
NS0055	122	124	NS	E395998	395998	1	G	W	29.67	39.86	1.95	0.684	0.53	0.087	3.38	0.51	0.109	0.083	0.437	0.144	0.94	9.3	0.05	10.29	7169	2.5398	8.89542	-6.35562	NAF
NS0055	60	62	NS	E395967	395967	1	G	W	31.74	40.33	1.37	0.658	0.51	0.058	2.57	0.58	0.119	0.1	0.318	0.066	1.05	7.39	-0.07	8.37	7138	3.06	10.11636	-7.05636	NAF
NS0055	190	192	NS	E396033	396033	1	G	W	35.3	37.57	1.85	0.658	0.51	0.068	2.51	0.68	0.133	0.15	0.776	0.111	0.36	4.34	0.01	4.71	7203	4.59	11.86056	-7.27056	NAF
NS0055	180	182	NS	E396028	396028	1	G	W	38.5	35.62	1.1	0.684	0.53	0.045	2.34	0.47	0.078	0.021	0.3	0.086	0.32	4.15	-0.42	4.05	7198	0.6426	8.19774	-7.55514	NAF
NS0055	178	180	NS	E396027	396027	1	G	W	38.31	34.64	1.29	0.736	0.57	0.056	2.73	0.51	0.073	0.03	0.299	0.105	0.39	4.72	-0.3	4.81	7197	0.918	8.89542	-7.97742	NAF
NS0055	52	54	NS	E395963	395963	1	G	W	38.64	30.14	1.17	0.93	0.72	0.051	2.59	0.5	0.118	0.024	0.214	0.051	0.96	8.54	-0.48	9.02	7134	0.7344	8.721	-7.9866	NAF
NS0055	54	56	NS	E395964	395964	1	G	W	37.54	33.97	1.38	0.749	0.58	0.057	2.08	0.53	0.117	0.022	0.165	0.041	1.33	5.97	-0.41	6.89	7135	0.6732	9.24426	-8.57106	NAF
NS0055	188	190	NS	E396032	396032	1	G	W	35.47	38.34	0.96	0.865	0.67	0.041	2.34	0.53	0.069	0.022	0.386	0.073	0.39	5.47	-0.28	5.58	7202	0.6732	9.24426	-8.57106	NAF
NS0055	128	130	NS	E396002	396002	1	G	W	37.11	35.25	1.31	0.697	0.54	0.054	2.59	0.54	0.079	0.027	0.228	0.075	0.46	5.76	-0.37	5.85	7172	0.8262	9.41868	-8.59248	NAF
NS0055	58	60	NS	E395966	395966	1	G	W	37.27	33.23	1.08	0.852	0.66	0.048	2.45	0.56	0.111	0.022	0.209	0.042	0.86	7.6	-0.46	8	7137	0.6732	9.76752	-9.09432	NAF
NS0055	130	132	NS	E396003	396003	1	G	W	37.39	34.71	1.39	0.684	0.53	0.058	2.64	0.59	0.09	0.026	0.249	0.092	0.46	5.35	-0.28	5.53	7173	0.7956	10.29078	-9.49518	NAF
NS0055	268	270	NS	E396072	396072	1	G	W	34.27	36.78	2.39	0.646	0.5	0.104	3.14	0.79	0.085	0.125	0.391	0.145	0.74	5.35	0.15	6.24	7242	3.825	13.77918	-9.95418	NAF
NS0055	246	248	NS	E396061	396061	1	G	W	38.03	36.13	1.31	0.633	0.49	0.062	2.08	0.67	0.089	0.044	0.285	0.102	0.38	3.99	-0.29	4.08	7231	1.3464	11.68614	-10.33974	NAF
NS0055	120	122	NS	E395997	395997	1	G	W	34.68	31.83	1.55	0.826	0.64	0.07	3.35	0.68	0.158	0.046	0.335	0.095	0.81	10.3	-0.28	10.83	7168	1.4076	11.86056	-10.45296	NAF
NS0055	182	184	NS	E396029	396029	1	G	W	36.49	38.05	0.99	0.736	0.57	0.04	2.25	0.65	0.095	0.02	0.309	0.087	0.3	4.36	-0.3	4.36	7199	0.612	11.3373	-10.7253	NAF
NS0055	50	52	NS	E395962	395962	1	G	W	38.14	29.28	1.16	0.955	0.74	0.046	2.41	0.66	0.18	0.022	0.256	0.058	1.61	8.49	-0.21	9.89	7133	0.6732	11.51172	-10.83852	NAF
NS0055	184	186	NS	E396030	396030	1	G	W	34.75	39.89	0.9	0.788	0.61	0.035	2.21	0.66	0.107	0.019	0.402	0.076	0.45	4.94	-0.24	5.15	7200	0.5814	11.51172	-10.93032	NAF
NS0055	210	212	NS	E396043	396043	1	G	W	34.43	37.62	2.18	0.646	0.5	0.095	3.06	1.02	0.077	0.223	0.477	0.114	0.44	4.09	0.42	4.95	7213	6.8238	17.79084	-10.96704	NAF
NS0055	64	66	NS	E395969	395969	1	G	W	34.61	36.8	1.13	0.658	0.51	0.047	2.61	0.7	0.111	0.035	0.205	0.07	0.9	7.12	-0.3	7.72	7140	1.071	12.2094	-11.1384	NAF
NS0055	126	128	NS	E396000	396000	1	G	W	37.59	32.07	1.18	0.839	0.65	0.053	2.76	0.7	0.121	0.031	0.281	0.078	0.54	7.41	-0.39	7.56	7171	0.9486	12.2094	-11.2608	NAF
NS0055	170	172	NS	E396023	396023	1	G	W	38.3	33.51	1.1	0.865	0.67	0.049	2.75	0.72	0.103	0.033	0.395	0.112	0.46	5.09	-0.24	5.31	7193	1.0098	12.55824	-11.54844	NAF
NS0055	208	210	NS	E396042	396042	1	G	W	34.14	34.8	2.01	0.852	0.66	0.091	3.46	1.03	0.187	0.208	0.479	0.137	0.56	6.31	0.24	7.11	7212	6.3648	17.96526	-11.60046	NAF
NS0055	186	188	NS	E396031	396031	1	G	W	34.92	37.77	0.95	0.891	0.69	0.038	2.48	0.71	0.095	0.021	0.436	0.08	0.41	6.37	-0.19	6.59	7201	0.6426	12.38382	-11.74122	NAF
NS0055	168	170	NS	E396022	396022	1	G	W	38.22	32.94	1.12	0.917	0.71	0.051	2.86	0.77	0.137	0.042	0.402	0.123	0.41	5.34	-0.22	5.53	7192	1.2852	13.43034	-12.14514	NAF
NS0055	66	68	NS	E395970	395970	1	G	W	33.66	37.27	1.31	0.684	0.53	0.055	2.67	0.79	0.147	0.048	0.208	0.082	1.27	7.06	-0.17	8.16	7141	1.4688	13.77918	-12.31038	NAF
NS0055	62	64	NS	E395968	395968	1	G	W	33.65	36.98	1.22	0.736	0.57	0.053	2.84	0.8	0.104	0.038	0.238	0.061	0.93	7.53	-0.15	8.31	7139	1.1628	13.9536	-12.7908	NAF
NS0055	264	266	NS	E396070	396070	1	G	W	33.98	38.78	2.1	0.62	0.48	0.096	2.71	0.89	0.066	0.076	0.448	0.145	0.57	4.37	0.08	5.02	7240	2.3256	15.52338	-13.19778	NAF
NS0055	88	90	NS	E395981	395981	1	G	W	37.31	34.13	1.58	0.633	0.49	0.066	2.7	0.82	0.093	0.031	0.264	0.094	0.39	5.54	-0.05	5.88	7152	0.9486	14.30244	-13.35384	NAF
NS0055	202	204	NS	E396039	396039	1	G	W	37.61	35.19	1.24	0.775	0.6	0.053	2.51	0.82	0.087	0.031	0.259	0.073	0.4	4.5	-0.2	4.7	7209	0.9486	14.30244	-13.35384	NAF
NS0055	112	114	NS	E395993	395993	1	G	W	35.34	37.43	1	0.62	0.48	0.042	2.49	0.82	0.103	0.027	0.169	0.061	0.44	6.02	-0.18	6.28	7164	0.8262	14.30244	-13.47624	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0055	176	178	NS	E396026	396026	1	G	W	37.15	35.82	0.97	0.813	0.63	0.042	2.55	0.82	0.089	0.024	0.338	0.099	0.36	4.71	-0.05	5.02	7196	0.7344	14.30244	-13.56804	NAF
NS0055	192	194	NS	E396034	396034	1	G	W	34.04	36.23	1.44	0.93	0.72	0.058	2.95	0.91	0.152	0.059	0.582	0.108	0.6	6.87	-0.01	7.46	7204	1.8054	15.87222	-14.06682	NAF
NS0055	118	120	NS	E395996	395996	1	G	W	32.91	36.33	1.94	0.568	0.44	0.089	3.3	0.96	0.216	0.082	0.419	0.134	0.86	7.38	-0.04	8.2	7167	2.5092	16.74432	-14.23512	NAF
NS0055	212	214	NS	E396044	396044	1	G	W	33.2	37.52	2.55	0.633	0.49	0.115	3.55	1.23	0.07	0.221	0.535	0.143	0.65	4.37	0.64	5.66	7214	6.7626	21.45366	-14.69106	NAF
NS0055	132	134	NS	E396004	396004	1	G	W	36.1	36.46	1.21	0.749	0.58	0.053	2.64	0.9	0.092	0.024	0.223	0.075	0.44	5.59	-0.08	5.95	7174	0.7344	15.6978	-14.9634	NAF
NS0055	134	136	NS	E396005	396005	1	G	W	36.44	35.89	1.28	0.723	0.56	0.054	2.61	0.93	0.087	0.031	0.225	0.076	0.5	5.23	0	5.73	7175	0.9486	16.22106	-15.27246	NAF
NS0055	56	58	NS	E395965	395965	1	G	W	37.08	34.05	1.26	0.736	0.57	0.052	2.35	0.93	0.175	0.025	0.173	0.046	0.88	6.39	-0.41	6.86	7136	0.765	16.22106	-15.45606	NAF
NS0055	200	202	NS	E396038	396038	1	G	W	37.39	35.67	1.14	0.775	0.6	0.048	2.46	0.95	0.09	0.036	0.287	0.099	0.38	4.33	-0.05	4.66	7208	1.1016	16.5699	-15.4683	NAF
NS0055	256	258	NS	E396066	396066	1	G	W	37.73	35.21	1.45	0.671	0.52	0.061	2.08	0.94	0.16	0.026	0.353	0.102	0.47	4.16	-0.25	4.38	7236	0.7956	16.39548	-15.59988	NAF
NS0055	80	82	NS	E395977	395977	1	G	W	32.75	38.64	1.43	0.684	0.53	0.059	2.99	1.05	0.104	0.087	0.313	0.113	0.64	6.71	0.21	7.56	7148	2.6622	18.3141	-15.6519	NAF
NS0055	204	206	NS	E396040	396040	1	G	W	36.94	36.49	1.12	0.775	0.6	0.048	2.42	0.95	0.085	0.028	0.272	0.078	0.3	4.37	0	4.67	7210	0.8568	16.5699	-15.7131	NAF
NS0055	116	118	NS	E395995	395995	1	G	W	33.37	38.15	1.02	0.62	0.48	0.042	2.78	0.97	0.132	0.032	0.155	0.068	0.49	7.58	-0.06	8.01	7166	0.9792	16.91874	-15.93954	NAF
NS0055	106	108	NS	E395990	395990	1	G	W	33.26	35.44	1.97	0.736	0.57	0.082	3.55	1.02	0.193	0.056	0.402	0.153	0.8	7.3	0.03	8.13	7161	1.7136	17.79084	-16.07724	NAF
NS0055	78	80	NS	E395976	395976	1	G	W	32.53	39.02	1.23	0.736	0.57	0.052	2.87	1.01	0.096	0.043	0.27	0.096	0.71	7.11	0.22	8.04	7147	1.3158	17.61642	-16.30062	NAF
NS0055	98	100	NS	E395986	395986	1	G	W	35.34	36.31	1.28	0.71	0.55	0.055	2.63	0.99	0.086	0.027	0.243	0.088	0.49	6.12	0.07	6.68	7157	0.8262	17.26758	-16.44138	NAF
NS0055	96	98	NS	E395985	395985	1	G	W	35.7	36.32	1.36	0.697	0.54	0.057	2.6	1.01	0.091	0.03	0.252	0.097	0.54	5.79	0.03	6.36	7156	0.918	17.61642	-16.69842	NAF
NS0055	68	70	NS	E395971	395971	1	G	W	32.64	38.55	0.93	0.671	0.52	0.041	2.76	1.02	0.112	0.028	0.159	0.049	0.68	7.81	0.1	8.59	7142	0.8568	17.79084	-16.93404	NAF
NS0055	240	242	NS	E396058	396058	1	G	W	35.58	37.8	1.12	0.736	0.57	0.052	2.32	1.06	0.075	0.049	0.327	0.104	0.43	4.72	0.17	5.32	7228	1.4994	18.48852	-16.98912	NAF
NS0055	274	276	NS	E396075	396075	1	G	W	35.95	35.36	1.77	0.542	0.42	0.068	2.88	1.08	0.123	0.052	0.167	0.07	0.54	5.6	0.02	6.16	7245	1.5912	18.83736	-17.24616	NAF
NS0055	266	268	NS	E396071	396071	1	G	W	34.04	40.37	1.48	0.594	0.46	0.068	2.18	1.19	0.135	0.1	0.278	0.092	0.41	4.02	0.09	4.52	7241	3.06	20.75598	-17.69598	NAF
NS0055	160	162	NS	E396018	396018	1	G	W	37.74	34.96	1.09	0.775	0.6	0.043	2.44	1.08	0.106	0.028	0.313	0.087	0.28	4.29	0.15	4.72	7188	0.8568	18.83736	-17.98056	NAF
NS0055	72	74	NS	E395973	395973	1	G	W	33.34	37.28	1.39	0.736	0.57	0.059	3	1.27	0.089	0.136	0.312	0.097	0.68	6.7	0.5	7.88	7144	4.1616	22.15134	-17.98974	NAF
NS0055	136	138	NS	E396006	396006	1	G	W	36.24	36.54	1.16	0.723	0.56	0.049	2.49	1.07	0.096	0.022	0.191	0.067	0.37	5.04	0.11	5.52	7176	0.6732	18.66294	-17.98974	NAF
NS0055	166	168	NS	E396021	396021	1	G	W	36.12	36.02	1.15	0.904	0.7	0.044	2.83	1.12	0.106	0.034	0.473	0.13	0.43	4.93	0.24	5.6	7191	1.0404	19.53504	-18.49464	NAF
NS0055	162	164	NS	E396019	396019	1	G	W	36.81	35.92	1.04	0.865	0.67	0.045	2.49	1.12	0.088	0.026	0.385	0.098	0.31	4.42	0.25	4.98	7189	0.7956	19.53504	-18.73944	NAF
NS0055	108	110	NS	E395991	395991	1	G	W	33.05	39.32	1.02	0.697	0.54	0.04	2.65	1.13	0.112	0.03	0.173	0.065	0.42	6.67	0.21	7.3	7162	0.918	19.70946	-18.79146	NAF
NS0055	236	238	NS	E396056	396056	1	G	W	29.98	43.6	2.79	0.516	0.4	0.108	2.86	1.26	0.039	0.098	0.965	0.149	0.54	3.45	0.71	4.7	7226	2.9988	21.97692	-18.97812	NAF
NS0055	158	160	NS	E396017	396017	1	G	W	36.99	35.66	1.14	0.775	0.6	0.049	2.58	1.14	0.093	0.027	0.312	0.094	0.3	4.23	0.26	4.79	7187	0.8262	19.88388	-19.05768	NAF
NS0055	164	166	NS	E396020	396020	1	G	W	35.12	39.24	0.86	0.826	0.64	0.037	2.27	1.14	0.086	0.026	0.353	0.093	0.3	4.08	0.26	4.64	7190	0.7956	19.88388	-19.08828	NAF
NS0055	110	112	NS	E395992	395992	1	G	W	33.83	36.94	1.04	0.723	0.56	0.04	2.88	1.16	0.118	0.03	0.179	0.068	0.5	7.31	0.18	7.99	7163	0.918	20.23272	-19.31472	NAF
NS0055	74	76	NS	E395974	395974	1	G	W	33.6	37.19	1.14	0.788	0.61	0.05	2.86	1.18	0.098	0.037	0.269	0.079	0.63	7.23	0.33	8.19	7145	1.1322	20.58156	-19.44936	NAF
NS0055	250	252	NS	E396063	396063	1	G	W	39.67	33.82	1.21	0.607	0.47	0.058	1.79	1.17	0.111	0.026	0.356	0.082	0.36	3.25	-0.01	3.6	7233	0.7956	20.40714	-19.61154	NAF
NS0055	174	176	NS	E396025	396025	1	G	W	36.86	34.78	0.97	0.904	0.7	0.04	2.63	1.19	0.153	0.023	0.368	0.088	0.37	5.11	0.07	5.55	7195	0.7038	20.75598	-20.05218	NAF
NS0055	82	84	NS	E395978	395978	1	G	W	33.96	38.31	1.19	0.684	0.53	0.052	2.58	1.27	0.122	0.063	0.254	0.095	0.65	5.86	0.32	6.83	7149	1.9278	22.15134	-20.22354	NAF
NS0055	156	158	NS	E396016	396016	1	G	W	37.24	35.63	1.11	0.775	0.6	0.049	2.52	1.21	0.088	0.024	0.303	0.091	0.3	4.03	0.37	4.7	7186	0.7344	21.10482	-20.37042	NAF
NS0055	258	260	NS	E396067	396067	1	G	W	37.39	36.41	1.37	0.646	0.5	0.062	2.03	1.23	0.15	0.026	0.357	0.096	0.37	3.83	0	4.2	7237	0.7956	21.45366	-20.65806	NAF
NS0055	172	174	NS	E396024	396024	1	G	W	38.41	34.3	0.95	0.736	0.57	0.041	2.39	1.24	0.074	0.022	0.353	0.093	0.28	3.89	0.42	4.59	7194	0.6732	21.62808	-20.95488	NAF
NS0055	226	228	NS	E396051	396051	1	G	W	30.65	42.83	1.88	0.594	0.46	0.085	2.78	1.46	0.042	0.146	0.65	0.132	0.51	4.19	0.85	5.55	7221	4.4676	25.46532	-20.99772	NAF
NS0055	148	150	NS	E396012	396012	1	G	W	37.65	35.74	0.99	0.723	0.56	0.043	2.32	1.25	0.083	0.019	0.317	0.078	0.26	3.68	0.35	4.29	7182	0.5814	21.8025	-21.2211	NAF
NS0055	70	72	NS	E395972	395972	1	G	W	33.3	38.06	1.24	0.723	0.56	0.054	2.56	1.36	0.141	0.081	0.25	0.076	1.02	6.16	0.45	7.63	7143	2.4786	23.72112	-21.24252	NAF
NS0055	234	236	NS	E396055	396055	1	G	W	31.95	39.28	2.98	0.555	0.43	0.128	3.16	1.52	0.084	0.168	0.912	0.148	0.53	3.71	0.85	5.09	7225	5.1408	26.51184	-21.37104	NAF
NS0055	114	116	NS	E395994	395994	1	G	W	33.84	36.94	1.56	0.568	0.44	0.066	3.06	1.34	0.284	0.054	0.275	0.104	0.63	6.37	-0.06	6.94	7165	1.6524	23.37228	-21.71988	NAF
NS0055	76	78	NS	E395975	395975	1	G	W	32.92	37.28	1.52	0.71	0.55	0.061	3.13	1.35	0.108	0.059	0.323	0.102	0.67	6.99	0.42	8.08	7146	1.8054	23.5467	-21.7413	NAF
NS0055	214	216	NS	E396045	396045	1	G	W	34.53	35.15	1.71	1.059	0.82	0.069	2.94	1.37	0.266	0.068	0.567	0.101	0.47	6.45	0	6.92	7215	2.0808	23.89554	-21.81474	NAF
NS0055	100	102	NS	E395987	395987	1	G	W	34.28	36.78	1.14	0.762	0.59	0.049	2.65	1.33	0.118	0.026	0.229	0.077	0.56	6.4	0.36	7.32	7158	0.7956	23.19786	-22.40226	NAF
NS0055	104	106	NS	E395989	395989	1	G	W	33.68	37.94	1.3	0.671	0.52	0.054	2.77	1.43	0.144	0.078	0.264	0.097	0.45	5.91	0.37	6.73	7160	2.3868	24.94206	-22.55526	NAF
NS0055	102	104	NS	E395988	395988	1	G	W	35.12	35.8	1.18	0.723	0.56	0.051	2.74	1.34	0.154	0.024	0.256	0.093	0.49	6.26	0.21	6.96	7159	0.7344	23.37228	-22.63788	NAF
NS0055	228	230	NS	E396052	396052	1	G	W	33.42	38.17	2.14	0.646	0.5	0.092	2.82	1.53	0.171	0.129	0.75	0.142	0.52	4.26	0.5	5.28	7222	3.9474	26.68626	-22.73886	NAF
NS0055	154	156	NS	E396015	396015	1	G	W	37.47	35.78	0.91	0.762	0.59	0.039	2.26	1.35	0.093	0.019	0.297	0.072	0.27	3.84	0.39	4.5	7185	0.5814	23.5467	-22.9653	NAF
NS0055	150	152	NS	E396013	396013	1	G	W	36.48	36.9	0.88	0.788	0.61	0.037	2.25	1.36	0.081	0.017	0.285	0.071	0.31	4.03	0.41	4.75	7183	0.5202	23.72112	-23.20092	NAF
NS0055	94	96	NS	E395984	395984	1	G	W	34.34	37.73	1.13	0.697	0.54	0.047	2.52	1.37	0.101	0.021	0.22	0.081	0.43	5.9	0.44	6.77	7155	0.6426	23.89554	-23.25294	NAF
NS0055	216	218	NS	E396046	396046	1	G	W	34.57	35.75	1.5	0.904	0.7	0.064	2.86	1.52	0.2	0.093	0.53	0.109	0.44	5.71	0.32	6.47	7216	2.8458	26.51184	-23.66604	NAF
NS0055	86	88	NS	E395980	395980	1	G	W	34.05	38.01	1.16	0.697	0.54	0.047	2.57	1.42	0.102	0.025	0.202	0.077	0.6	5.89	0.38	6.87	7151	0.765	24.76764	-24.00264	NAF
NS0055	92	94	NS	E395983	395983	1	G	W	33.75	38.63	1.06	0.684	0.53	0.045	2.5	1.42	0.088	0.022	0.215	0.086	0.44	5.87	0.5	6.81	7154	0.6732	24.76764	-24.09444	NAF
NS0055	152	154	NS	E396014	396014	1	G	W	36.61	36.71	0.9	0.788	0.61	0.039	2.31	1.45	0.077	0.018	0.281	0.075	0.27	3.98	0.56	4.81	7184	0.5508	25.2909	-24.7401	NAF
NS0055	142	144	NS	E396009	396009	1	G	W	37.92	34.11	1.09	0.762	0.59	0.045	2.5	1.47	0.096	0.025	0.272	0.073	0.36	4.19	0.61	5.16	7179	0.765	25.63974	-24.87474	NAF
NS0055	260	262	NS	E396068	396068	1	G	W	32.93	39.13	2.14	0.684	0.53	0.088	2.7	1.57	0.087	0.079	0.653	0.146	0.6	4.34	0.67	5.61	7238	2.4174	27.38394	-24.96654	NAF
NS0055	90	92	NS	E395982	395982	1	G	W	33.98	36.87	1.22	0.71	0.55	0.05	2.73	1.48	0.104	0.027	0.254	0.086	0.47	6.32	0.61	7.4	7153	0.8262	25.81416	-24.98796	NAF
NS0055	84	86	NS	E395979	395979	1	G	W	33.16	38.83	0.99	0.736	0.57	0.039	2.53	1.49	0.108	0.023	0.192	0.076	0.44	6.16	0.66	7.26	7150	0.7038	25.98858	-25.28478	NAF
NS0055	242	244	NS	E396059	396059	1	G	W	34.14	40.61	0.97	0.684	0.53	0.044	1.97	1.54	0.066	0.028	0.229	0.062	0.41	3.91	0.49	4.81	7229	0.8568	26.86068	-26.00388	NAF
NS0055	254	256	NS	E396065	396065	1	G	W	35.75	36.22	1.4	0.736	0.57	0.059	2.28	1.57	0.189	0.036	0.424	0.114	0.47	4.61	0.31	5.39	7235	1.1016	27.38394	-26.28234	NAF
NS0055	272	274	NS	E396074	396074	1	G	W	32.89	38.17	0.78	0.723	0.56	0.036	2.73	1.56	0.1	0.027	0.196	0.081	0.49	7.06	0.66	8.21	7244	0.8262	27.20952	-26.38332	NAF
NS0055	224	226	NS	E396050	396050	1	G	W	33.8	39.01	1.15	0.736	0.57	0.048	2.38	1.64	0.093	0.037	0.461	0.086	0.31	4.61	0.86	5.78	7220	1.1322	28.60488	-27.47268	NAF
NS0055	252	254	NS	E396064	396064	1	G	W	34.12	38.06	1.7	0.658	0.51	0.073	2.43	1.81	0.079	0.107	0.56	0.113	0.42	4.12	0.96	5.5	7234	3.2742	31.57002	-28.29582	NAF
NS0055	194	196	NS	E396035	396035	1	G	W	31.53	35.83	1.09	1.239	0.96	0.042	3.38	1.72	0.081	0.026	0.49	0.09	0.54	8.92	1.04	10.5	7205	0.7956	30.00024	-29.20464	NAF
NS0055	144	146	NS	E396010	396010	1	G	W	36.91	34.57	1.19	0.749	0.58	0.053	2.78	1.73	0.067	0.026	0.267	0.084	0.46	4.28	0.85	5.59	7180	0.7956	30.17466	-29.37906	NAF
NS0055	146	148	NS	E396011	396011	1	G	W	36.67	35.27	1.12	0.723	0.56	0.048	2.62	1.76	0.081	0.022	0.298	0.087	0.31	3.83	0.98	5.12	7181	0.6732	30.69792	-30.02472	NAC
NS0055	196	198	NS	E396036	396036	1	G	W	35.05	35.73	1.44	0.8	0.62	0.059	2.77	1.85	0.114	0.046	0.565	0.111	0.4	4.56	1.02	5.98	7206	1.4076	32.2677	-30.8601	NAC
NS0055	232	234	NS	E396054	396054	1	G	W	37.57	35.1	1	0.697	0.54	0.049	2.05	1.87	0.129	0.037	0.303	0.077	0.39	3.86	0.59	4.84	7224	1.1322	32.61654	-31.48434	NAC
NS0055	220	222	NS	E396048	396048	1	G	W	35.54	36.92	1.02	0.788	0.61	0.04	2.33	1.92	0.079	0.048	0.376	0.095	0.32	3.98	1.1	5.4	7218	1.4688	33.48864	-32.01984	NAC
NS0055	276	278	NS	E396076	396076	1	G	W	32.9	39.08	0.83	0.671	0.52	0.038	2.63	1.89	0.124	0.025	0.134	0.052	0.43	6.13	0.9	7.46	7246	0.765	32.96538	-32.20038	NAC
NS0055	206	208	NS	E396041	396041	1	G	W	34.14	38.92	0.83	0.826	0.64	0.036	2.35	1.88	0.094	0.019	0.312	0.077	0.33	4.32	1.05	5.7	7211	0.5814	32.79096	-32.20956	NAC
NS0055	198	200	NS	E396037	396037	1	G	W	33.72	38.38	0.93	0.878	0.68	0.043	2.59	1.98	0.145	0.043	0.355	0.107	0.42	4.81	0.99	6.22	7207	1.3158	34.53516	-33.21936	NAC
NS0055	138	140	NS	E396007	396007	1	G	W	34.56	38.35	0.87	0.749	0.58	0.037	2.37	1.95	0.09	0.02	0.191	0.062	0.26	4.32	1.17	5.75	7177	0.612	34.0119	-33.3999	NAC
NS0055	140	142	NS	E396008	396008	1	G	W	35.9	36.48	0.85	0.775	0.6	0.037	2.37	2.16	0.084	0.019	0.214	0.058	0.26	3.96	1.34	5.56	7178	0.5814	37.67472	-37.09332	NAC
NS0055	230	232	NS	E396053	396053	1	G	W	30.54	41.59	1.62	0.697	0.54	0.07	2.6	2.26	0.139	0.075	0.612	0.113	0.44	4.31	1.39	6.14	7223	2.295	39.41892	-37.12392	NAC
NS0055	278	280	NS	E396077	396077	1	G	W	31.03	39.28	1.04	0.646	0.5	0.045	3.06	2.25	0.106	0.054	0.197	0.084	0.51	6.56	1.41	8.48	7247	1.6524	39.2445	-37.5921	NAC
NS0055	270	272	NS	E396073	396073	1	G	W	32.01	39.48	1.03	0.697	0.54	0.049	2.67	2.44	0.13	0.036	0.266	0.102	0.55	5.37	1.43	7.35	7243	1.1016	42.55848	-41.45688	NAC
NS0055	222	224	NS	E396049	396049	1	G	W	35.06	35.84	1.08	0.852	0.66	0.044	2.46	2.45	0.105	0.036	0.381	0.088	0.41	4.4	1.46	6.27	7219	1.1016	42.7329	-41.6313	NAC
NS0055	248	250	NS	E396062	396062	1	G	W	29.7	43.49	1.58	0.658	0.51	0.071	2.37	2.68	0.1	0.101	0.477	0.094	0.39	3.43	1.92	5.74	7232	3.0906	46.74456	-43.65396	NAC
NS0055	218	220	NS	E396047	396047	1	G	W	35.64	35.58	0.87	0.813	0.63	0.054	2.39	2.57	0.14	0.027	0.307	0.087	0.3	3.86	1.72	5.88	7217	0.8262	44.82594	-43.99974	NAC
NS0055	262	264	NS	E396069	396069	1	G	W	33.72	37.95	1.13	0.749	0.58	0.051	2.29	2.74	0.122	0.023	0.291	0.082	0.35	3.97	1.98	6.3	7239	0.7038	47.79108	-47.08728	NAC
NS0056	8	10	NS	E396082	396082	1	G	W	40.85	29.55	2.88	-0.0129	-0.01	0.116	0.08	0.06	0.014	0.016	0.008	0.028	7.68	0.82	0.23	8.73	7252	0.4896	1.04652	-0.55692	NAF
NS0056	6	8	NS	E396081	396081	1	G	W	38.76	33.07	3.14	0.026	0.02	0.168	0.07	0.06	0.017	0.013	0.017	0.028	6.85	0.85	0.19	7.89	7251	0.3978	1.04652	-0.64872	NAF
NS0056	10	12	NS	E396083	396083	1	G	W	38.52	32.9	3.75	0.026	0.02	0.257	0.09	0.07	0.023	0.016	0.01	0.038	6.69	1	0.19	7.88	7253	0.4896	1.22094	-0.73134	NAF
NS0056	4	6	NS	E396080	396080	1	G	W	37.36	34.96	2.67	-0.0129	-0.01	0.131	0.09	0.08	0.013	0.015	0.016	0.047	7.12	0.87	0.23	8.22	7250	0.459	1.39536	-0.93636	NAF
NS0056	0	2	NS	E396078	396078	1	G	W	35.77	33.82	6.88	0.026	0.02	0.447	0.1	0.11	0.024	0.019	0.069	0.026	5.6	1.7	0.21	7.51	7248	0.5814	1.91862	-1.33722	NAF
NS0056	12	14	NS	E396084	396084	1	G	W	37.73	30.59	5.65	0.026	0.02	0.31	0.16	0.15	0.036	0.014	0.019	0.059	7.03	1.51	0.23	8.77	7254	0.4284	2.6163	-2.1879	NAF
NS0056	18	20	NS	E396087	396087	1	G	W	35.36	40.07	2.72	0.065	0.05	0.15	0.34	0.16	0.05	0.013	0.119	0.088	4.78	0.99	0.13	5.9	7257	0.3978	2.79072	-2.39292	NAF
NS0056	16	18	NS	E396086	396086	1	G	W	30.63	42.3	5.3	0.039	0.03	0.276	0.26	0.21	0.052	0.016	0.03	0.117	5.49	1.71	0.21	7.41	7256	0.4896	3.66282	-3.17322	NAF
NS0056	38	40	NS	E396097	396097	1	G	W	37.58	38.15	2.07	0.452	0.35	0.092	0.4	0.21	0.094	0.004	0.223	0.023	3.55	0.9	0.08	4.53	7267	0.1224	3.66282	-3.54042	NAF
NS0056	36	38	NS	E396096	396096	1	G	W	35.27	41.45	1.99	0.568	0.44	0.094	0.45	0.22	0.058	0.004	0.299	0.022	3.49	0.86	0.02	4.37	7266	0.1224	3.83724	-3.71484	NAF
NS0056	24	26	NS	E396090	396090	1	G	W	33.05	41.25	2.82	0.194	0.15	0.138	0.6	0.24	0.061	0.015	0.157	0.057	5.83	1.25	0.19	7.27	7260	0.459	4.18608	-3.72708	NAF
NS0056	32	34	NS	E396094	396094	1	G	W	35.28	41.21	1.91	0.646	0.5	0.086	0.58	0.22	0.032	0.003	0.153	0.026	3.53	0.89	0.04	4.46	7264	0.0918	3.83724	-3.74544	NAF
NS0056	28	30	NS	E396092	396092	1	G	W	32.96	40.88	3.43	0.581	0.45	0.154	0.69	0.23	0.066	0.006	0.561	0.049	4.51	1.27	0.19	5.97	7262	0.1836	4.01166	-3.82806	NAF
NS0056	20	22	NS	E396088	396088	1	G	W	32.26	46.24	1.58	0.09	0.07	0.088	0.26	0.25	0.055	0.012	0.065	0.045	4.32	0.78	0.11	5.21	7258	0.3672	4.3605	-3.9933	NAF
NS0056	22	24	NS	E396089	396089	1	G	W	25.45	51.06	4.28	0.103	0.08	0.192	0.67	0.26	0.064	0.013	0.22	0.072	4.55	1.56	0.17	6.28	7259	0.3978	4.53492	-4.13712	NAF
NS0056	34	36	NS	E396095	396095	1	G	W	35.78	39.62	2.42	0.465	0.36	0.11	0.57	0.25	0.043	0.003	0.34	0.033	3.69	1.02	0.03	4.74	7265	0.0918	4.3605	-4.2687	NAF
NS0056	14	16	NS	E396085	396085	1	G	W	18.32	57.83	7.88	0.026	0.02	0.489	0.25	0.27	0.03	0.013	0.024	0.122	3.69	2.54	0.23	6.46	7255	0.3978	4.70934	-4.31154	NAF
NS0056	2	4	NS	E396079	396079	1	G	W	33.01	41.79	3.78	0.026	0.02	0.228	0.11	0.33	0.018	0.019	0.037	0.045	5.26	1.21	0.18	6.65	7249	0.5814	5.75586	-5.17446	NAF
NS0056	30	32	NS	E396093	396093	1	G	W	31.93	40.93	4.54	0.349	0.27	0.21	0.84	0.31	0.05	0.007	0.523	0.06	4.66	1.6	0.22	6.48	7263	0.2142	5.40702	-5.19282	NAF
NS0056	26	28	NS	E396091	396091	1	G	W	28.09	43.83	5.64	0.219	0.17	0.248	1.21	0.38	0.065	0.008	0.435	0.081	5.15	2.16	0.25	7.56	7261	0.2448	6.62796	-6.38316	NAF
NS0056	58	60	NS	E396108	396108	1	G	W	29.75	42.11	2.57	0.439	0.34	0.118	2.22	0.69	0.069	0.104	1.06	0.17	1.2	6.09	0.13	7.42	7277	3.1824	12.03498	-8.85258	NAF
NS0056	118	120	NS	E396138	396138	1	G	W	33.23	40.48	1.26	0.465	0.36	0.056	1.75	0.58	0.053	0.037	0.489	0.123	0.78	6.54	-0.17	7.15	7307	1.1322	10.11636	-8.98416	NAF
NS0056	158	160	NS	E396158	396158	1	G	W	23.68	44.44	5.1	0.465	0.36	0.232	3.04	1.64	0.094	0.605	2.32	0.282	1.32	4.96	1.65	7.93	7327	18.513	28.60488	-10.09188	NAF
NS0056	264	266	NS	E396212	396212	1	G	W	31.11	38.48	2.94	0.529	0.41	0.15	3.18	1.42	0.159	0.474	0.981	0.171	0.81	5.07	0.96	6.84	7380	14.5044	24.76764	-10.26324	NAF
NS0056	190	192	NS	E396174	396174	1	G	W	29.22	43.25	2.14	0.336	0.26	0.093	2.06	1.05	0.082	0.242	0.893	0.18	1.23	5.67	0.59	7.49	7343	7.4052	18.3141	-10.9089	NAF
NS0056	224	226	NS	E396191	396191	1	G	W	33.66	41.5	1.48	0.503	0.39	0.066	1.72	0.73	0.053	0.033	0.779	0.086	0.49	4.47	-0.07	4.89	7360	1.0098	12.73266	-11.72286	NAF
NS0056	56	58	NS	E396107	396107	1	G	W	28.41	41.77	3.86	0.413	0.32	0.178	2.77	1.04	0.082	0.177	1.57	0.204	1.5	5.08	0.65	7.23	7276	5.4162	18.13968	-12.72348	NAF
NS0056	116	118	NS	E396137	396137	1	G	W	25.96	50.37	1.36	0.426	0.33	0.06	1.58	0.87	0.036	0.074	0.613	0.12	0.74	6.15	0.23	7.12	7306	2.2644	15.17454	-12.91014	NAF
NS0056	222	224	NS	E396190	396190	1	G	W	29.98	40.76	3.43	0.478	0.37	0.158	2.8	1.11	0.019	0.205	1.33	0.153	0.86	4.64	0.73	6.23	7359	6.273	19.36062	-13.08762	NAF
NS0056	186	188	NS	E396172	396172	1	G	W	27.89	41.84	3.92	0.413	0.32	0.175	2.6	1.26	0.112	0.255	1.79	0.233	1.11	5.26	0.76	7.13	7341	7.803	21.97692	-14.17392	NAF
NS0056	54	56	NS	E396106	396106	1	G	W	26.48	42.39	5.07	0.361	0.28	0.238	3.14	1.52	0.106	0.3	1.54	0.21	1.27	4.55	1.09	6.91	7275	9.18	26.51184	-17.33184	NAF
NS0056	208	210	NS	E396183	396183	1	G	W	28.39	39.68	2.95	0.581	0.45	0.132	2.59	2.24	0.159	0.697	0.898	0.202	1.26	6.12	1.7	9.08	7352	21.3282	39.07008	-17.74188	NAF
NS0056	152	154	NS	E396155	396155	1	G	W	21.11	48.28	5.85	0.31	0.24	0.27	2.71	2.12	0.097	0.607	3.35	0.241	0.99	2.96	1.85	5.8	7324	18.5742	36.97704	-18.40284	NAF
NS0056	66	68	NS	E396112	396112	1	G	W	29.85	40.57	2.52	0.465	0.36	0.117	2.36	1.25	0.096	0.1	0.983	0.182	1.32	6.75	0.46	8.53	7281	3.06	21.8025	-18.7425	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0056	160	162	NS	E396159	396159	1	G	W	27.87	42.46	3.38	0.452	0.35	0.152	2.52	1.7	0.12	0.326	1.33	0.215	1.11	5.18	1.12	7.41	7328	9.9756	29.6514	-19.6758	NAF
NS0056	122	124	NS	E396140	396140	1	G	W	34.74	36.33	2.36	0.374	0.29	0.107	2.37	1.35	0.072	0.107	0.766	0.165	0.85	4.51	0.56	5.92	7309	3.2742	23.5467	-20.2725	NAF
NS0056	188	190	NS	E396173	396173	1	G	W	29.39	41.22	3.19	0.413	0.32	0.145	2.41	1.53	0.123	0.207	1.37	0.203	1.08	5.21	0.8	7.09	7342	6.3342	26.68626	-20.35206	NAF
NS0056	262	264	NS	E396211	396211	1	G	W	33.95	39.4	1.4	0.607	0.47	0.063	2.05	1.22	0.066	0.029	0.698	0.116	0.5	4.73	0.36	5.59	7379	0.8874	21.27924	-20.39184	NAF
NS0056	64	66	NS	E396111	396111	1	G	W	26.95	44.79	2.09	0.491	0.38	0.096	2.25	1.32	0.054	0.075	0.837	0.173	1.41	7.52	0.55	9.48	7280	2.295	23.02344	-20.72844	NAF
NS0056	194	196	NS	E396176	396176	1	G	W	31.65	41	1.03	0.516	0.4	0.044	1.65	1.24	0.081	0.025	0.383	0.112	0.67	7.73	0.3	8.7	7345	0.765	21.62808	-20.86308	NAF
NS0056	240	242	NS	E396199	396199	1	G	W	35.75	38.34	1.46	0.555	0.43	0.066	1.78	1.28	0.07	0.031	0.886	0.075	0.32	3.67	0.34	4.33	7368	0.9486	22.32576	-21.37716	NAF
NS0056	124	126	NS	E396141	396141	1	G	W	30.94	40.74	2.82	0.374	0.29	0.128	2.49	1.53	0.108	0.161	1.02	0.172	0.89	4.38	0.75	6.02	7310	4.9266	26.68626	-21.75966	NAF
NS0056	170	172	NS	E396164	396164	1	G	W	39.51	31.06	1.69	0.426	0.33	0.075	1.75	1.34	0.133	0.044	0.75	0.106	0.57	5.23	0.05	5.85	7333	1.3464	23.37228	-22.02588	NAF
NS0056	220	222	NS	E396189	396189	1	G	W	34.37	38.9	1.55	0.516	0.4	0.072	1.85	1.33	0.065	0.036	0.805	0.088	0.43	4.56	0.43	5.42	7358	1.1016	23.19786	-22.09626	NAF
NS0056	236	238	NS	E396197	396197	1	G	W	34.58	38.67	1.54	0.594	0.46	0.071	1.93	1.34	0.107	0.036	0.863	0.089	0.47	4.49	0.27	5.23	7366	1.1016	23.37228	-22.27068	NAF
NS0056	280	282	NS	E396220	396220	1	G	W	32.68	39.74	1.71	0.503	0.39	0.074	2.38	1.37	0.073	0.046	0.652	0.134	0.67	5.17	0.5	6.34	7388	1.4076	23.89554	-22.48794	NAF
NS0056	242	244	NS	E396200	396200	1	G	W	37.04	36.03	1.53	0.529	0.41	0.069	1.87	1.38	0.089	0.036	0.895	0.084	0.32	3.62	0.37	4.31	7369	1.1016	24.06996	-22.96836	NAF
NS0056	216	218	NS	E396187	396187	1	G	W	33.05	39.94	1.41	0.555	0.43	0.067	1.87	1.4	0.072	0.035	0.728	0.104	0.5	5.69	0.5	6.69	7356	1.071	24.4188	-23.3478	NAF
NS0056	48	50	NS	E396103	396103	1	G	W	27.7	44.35	2.87	0.491	0.38	0.131	1.78	1.57	0.099	0.131	0.608	0.11	2.15	5.01	0.66	7.82	7272	4.0086	27.38394	-23.37534	NAF
NS0056	44	46	NS	E396100	396100	1	G	W	25.46	42.39	4.54	0.478	0.37	0.213	3.16	2.01	0.066	0.368	1.43	0.191	1.09	6.08	1.47	8.64	7270	11.2608	35.05842	-23.79762	NAF
NS0056	162	164	NS	E396160	396160	1	G	W	30.46	40.65	2.9	0.426	0.33	0.132	2.42	1.7	0.116	0.186	1.27	0.168	0.9	4.62	0.87	6.39	7329	5.6916	29.6514	-23.9598	NAF
NS0056	278	280	NS	E396219	396219	1	G	W	32.15	38.93	1.86	0.607	0.47	0.084	2.51	1.5	0.072	0.054	0.745	0.141	0.78	5.88	0.56	7.22	7387	1.6524	26.163	-24.5106	NAF
NS0056	206	208	NS	E396182	396182	1	G	W	23.71	46.9	3.14	0.439	0.34	0.142	2.59	1.82	0.092	0.236	1.17	0.193	1.21	6.72	1.1	9.03	7351	7.2216	31.74444	-24.52284	NAF
NS0056	146	148	NS	E396152	396152	1	G	W	31.19	41.73	1.6	0.529	0.41	0.07	1.92	1.49	0.072	0.045	0.684	0.115	0.57	5.45	0.75	6.77	7321	1.377	25.98858	-24.61158	NAF
NS0056	156	158	NS	E396157	396157	1	G	W	23.65	46.6	4.51	0.426	0.33	0.202	2.75	1.98	0.121	0.321	2.2	0.258	1.07	4.28	1.38	6.73	7326	9.8226	34.53516	-24.71256	NAF
NS0056	112	114	NS	E396135	396135	1	G	W	32.5	36.85	2.34	0.426	0.33	0.108	2.2	1.65	0.085	0.124	1.05	0.167	0.96	6.62	0.64	8.22	7304	3.7944	28.7793	-24.9849	NAF
NS0056	204	206	NS	E396181	396181	1	G	W	27.82	40.67	3.11	0.452	0.35	0.137	2.68	1.64	0.156	0.115	1.25	0.226	1.17	7.54	0.58	9.29	7350	3.519	28.60488	-25.08588	NAF
NS0056	46	48	NS	E396102	396102	1	G	W	25.8	43.04	5.4	0.323	0.25	0.255	3.25	2.04	0.147	0.341	1.44	0.187	1.07	4.11	1.31	6.49	7271	10.4346	35.58168	-25.14708	NAF
NS0056	150	152	NS	E396154	396154	1	G	W	28.7	42.11	3.34	0.4	0.31	0.151	2.29	1.91	0.107	0.253	1.66	0.186	0.87	4.24	1.16	6.27	7323	7.7418	33.31422	-25.57242	NAF
NS0056	154	156	NS	E396156	396156	1	G	W	21.8	47.82	5.07	0.387	0.3	0.229	2.77	2.3	0.115	0.469	2.74	0.259	1.02	3.78	1.83	6.63	7325	14.3514	40.1166	-25.7652	NAF
NS0056	106	108	NS	E396132	396132	1	G	W	29.92	35.43	3.95	0.465	0.36	0.181	3.05	1.96	0.119	0.271	1.57	0.259	1.23	6.58	1.26	9.07	7301	8.2926	34.18632	-25.89372	NAF
NS0056	200	202	NS	E396179	396179	1	G	W	29.67	38.58	2.09	0.503	0.39	0.09	2.16	2	0.055	0.281	0.839	0.152	1.22	8.15	1.08	10.45	7348	8.5986	34.884	-26.2854	NAF
NS0056	140	142	NS	E396149	396149	1	G	W	37.26	34.63	1.82	0.426	0.33	0.082	2.03	1.63	0.093	0.063	0.57	0.123	0.54	4.01	0.65	5.2	7318	1.9278	28.43046	-26.50266	NAF
NS0056	114	116	NS	E396136	396136	1	G	W	28.04	37.83	3.31	0.581	0.45	0.156	2.8	1.91	0.113	0.219	1.57	0.229	1.3	8.08	1.07	10.45	7305	6.7014	33.31422	-26.61282	NAF
NS0056	184	186	NS	E396171	396171	1	G	W	33.65	37.12	2.03	0.465	0.36	0.092	2.1	1.68	0.115	0.081	0.909	0.142	0.75	5.49	0.61	6.85	7340	2.4786	29.30256	-26.82396	NAF
NS0056	218	220	NS	E396188	396188	1	G	W	32.31	40.02	1.92	0.503	0.39	0.085	2.1	1.65	0.081	0.046	0.967	0.099	0.5	4.98	0.85	6.33	7357	1.4076	28.7793	-27.3717	NAF
NS0056	196	198	NS	E396177	396177	1	G	W	32.15	36.99	1.69	0.465	0.36	0.073	2.05	1.67	0.072	0.055	0.66	0.143	1.01	8.33	0.58	9.92	7346	1.683	29.12814	-27.44514	NAF
NS0056	214	216	NS	E396186	396186	1	G	W	30.27	43.47	1.37	0.529	0.41	0.062	1.79	1.69	0.068	0.038	0.669	0.095	0.5	5.29	0.88	6.67	7355	1.1628	29.47698	-28.31418	NAF
NS0056	266	268	NS	E396213	396213	1	G	W	31.09	40.73	2.11	0.465	0.36	0.095	2.58	1.79	0.092	0.095	0.787	0.132	0.66	4.62	0.82	6.1	7381	2.907	31.22118	-28.31418	NAF
NS0056	202	204	NS	E396180	396180	1	G	W	23.8	45.48	3.33	0.452	0.35	0.151	2.75	2.41	0.129	0.437	1.11	0.196	1.17	6.8	1.44	9.41	7349	13.3722	42.03522	-28.66302	NAF
NS0056	256	258	NS	E396208	396208	1	G	W	34.21	37.51	1.38	0.671	0.52	0.063	2.19	1.71	0.098	0.034	0.76	0.097	0.49	4.96	0.73	6.18	7376	1.0404	29.82582	-28.78542	NAF
NS0056	164	166	NS	E396161	396161	1	G	W	32.73	38.5	2.17	0.426	0.33	0.096	1.98	1.87	0.119	0.124	0.912	0.142	0.81	4.92	0.76	6.49	7330	3.7944	32.61654	-28.82214	NAF
NS0056	168	170	NS	E396163	396163	1	G	W	34.14	36.87	1.87	0.478	0.37	0.087	1.87	1.83	0.132	0.088	0.841	0.126	0.67	5.52	0.6	6.79	7332	2.6928	31.91886	-29.22606	NAF
NS0056	84	86	NS	E396121	396121	1	G	W	31.77	41.48	1.44	0.516	0.4	0.065	1.7	1.78	0.049	0.051	0.571	0.102	0.56	5.1	0.95	6.61	7290	1.5606	31.04676	-29.48616	NAF
NS0056	178	180	NS	E396168	396168	1	G	W	33.08	39.63	1.73	0.503	0.39	0.076	2.03	1.79	0.083	0.051	0.748	0.11	0.54	4.53	0.83	5.9	7337	1.5606	31.22118	-29.66058	NAF
NS0056	40	42	NS	E396098	396098	1	G	W	34.17	36.26	1.92	0.491	0.38	0.088	1.81	1.83	0.091	0.072	0.471	0.093	1.17	5.61	0.93	7.71	7268	2.2032	31.91886	-29.71566	NAF
NS0056	70	72	NS	E396114	396114	1	G	W	30.17	39.9	2.27	0.503	0.39	0.107	2.23	1.86	0.099	0.089	0.893	0.161	1.07	6.61	1.04	8.72	7283	2.7234	32.44212	-29.71872	NAF
NS0056	234	236	NS	E396196	396196	1	G	W	31.4	39.53	3.17	0.4	0.31	0.144	2.57	1.89	0.033	0.103	1.73	0.154	0.57	3.48	1.26	5.31	7365	3.1518	32.96538	-29.81358	NAF
NS0056	276	278	NS	E396218	396218	1	G	W	33.66	36.1	1.75	0.684	0.53	0.08	2.57	1.79	0.083	0.041	0.807	0.138	0.71	6.08	0.9	7.69	7386	1.2546	31.22118	-29.96658	NAF
NS0056	92	94	NS	E396125	396125	1	G	W	31.53	38.06	3.13	0.336	0.26	0.152	2.49	2.08	0.114	0.199	1.05	0.167	0.81	4.43	1.2	6.44	7294	6.0894	36.27936	-30.18996	NAC
NS0056	272	274	NS	E396216	396216	1	G	W	32.22	39.15	1.69	0.581	0.45	0.074	2.48	1.83	0.057	0.041	0.757	0.124	0.55	5.03	1.14	6.72	7384	1.2546	31.91886	-30.66426	NAC
NS0056	120	122	NS	E396139	396139	1	G	W	30.65	37.29	3.87	0.374	0.29	0.178	3.23	2.14	0.139	0.211	1	0.248	1.09	4.41	1.33	6.83	7308	6.4566	37.32588	-30.86928	NAC
NS0056	248	250	NS	E396204	396204	1	G	W	30.93	43.72	1.41	0.503	0.39	0.064	1.9	1.86	0.12	0.048	0.833	0.096	0.4	3.64	0.94	4.98	7372	1.4688	32.44212	-30.97332	NAC
NS0056	172	174	NS	E396165	396165	1	G	W	36.59	36.11	1.69	0.374	0.29	0.079	1.69	1.88	0.09	0.057	0.661	0.103	0.51	3.69	0.77	4.97	7334	1.7442	32.79096	-31.04676	NAC
NS0056	250	252	NS	E396205	396205	1	G	W	32.65	40.07	1.76	0.503	0.39	0.078	2.11	1.89	0.157	0.06	0.941	0.104	0.44	3.97	0.81	5.22	7373	1.836	32.96538	-31.12938	NAC
NS0056	82	84	NS	E396120	396120	1	G	W	29.76	42.45	2.03	0.491	0.38	0.092	1.95	1.96	0.054	0.096	0.912	0.129	0.71	5.01	1.24	6.96	7289	2.9376	34.18632	-31.24872	NAC
NS0056	210	212	NS	E396184	396184	1	G	W	34.46	37.24	1.57	0.491	0.38	0.071	1.93	1.91	0.079	0.062	0.609	0.112	0.59	4.98	0.75	6.32	7353	1.8972	33.31422	-31.41702	NAC
NS0056	246	248	NS	E396203	396203	1	G	W	33.06	39.05	1.73	0.581	0.45	0.077	2.1	1.88	0.122	0.043	1.01	0.106	0.44	4.17	0.97	5.58	7371	1.3158	32.79096	-31.47516	NAC
NS0056	72	74	NS	E396115	396115	1	G	W	30.94	39.14	1.9	0.529	0.41	0.086	2.04	1.91	0.095	0.06	0.758	0.144	1.03	6.6	1.04	8.67	7284	1.836	33.31422	-31.47822	NAC
NS0056	260	262	NS	E396210	396210	1	G	W	33.39	39.11	1.43	0.633	0.49	0.065	2.14	1.91	0.093	0.035	0.731	0.103	0.46	4.48	1	5.94	7378	1.071	33.31422	-32.24322	NAC
NS0056	78	80	NS	E396118	396118	1	G	W	30.89	38.45	3.12	0.374	0.29	0.146	2.38	2.17	0.064	0.182	1.38	0.171	0.86	4.61	1.48	6.95	7287	5.5692	37.84914	-32.27994	NAC
NS0056	274	276	NS	E396217	396217	1	G	W	31.19	38.95	2.22	0.503	0.39	0.099	2.78	2.05	0.149	0.112	0.939	0.157	0.72	5.29	1.01	7.02	7385	3.4272	35.7561	-32.3289	NAC
NS0056	166	168	NS	E396162	396162	1	G	W	32.33	40.38	1.35	0.503	0.39	0.06	1.6	1.96	0.067	0.041	0.617	0.106	0.58	5.61	0.85	7.04	7331	1.2546	34.18632	-32.93172	NAC
NS0056	212	214	NS	E396185	396185	1	G	W	32.31	37.76	2.44	0.452	0.35	0.111	2.38	2.07	0.087	0.103	0.941	0.142	0.68	4.86	1.2	6.74	7354	3.1518	36.10494	-32.95314	NAC
NS0056	182	184	NS	E396170	396170	1	G	W	31.87	40.54	1.41	0.581	0.45	0.064	1.86	1.99	0.069	0.047	0.729	0.102	0.54	5.25	1.01	6.8	7339	1.4382	34.70958	-33.27138	NAC
NS0056	252	254	NS	E396206	396206	1	G	W	33.78	38	1.52	0.607	0.47	0.066	2.1	2.04	0.118	0.049	0.841	0.1	0.56	4.2	1.11	5.87	7374	1.4994	35.58168	-34.08228	NAC
NS0056	180	182	NS	E396169	396169	1	G	W	32.51	38.29	2.41	0.452	0.35	0.109	2.5	2.11	0.139	0.086	0.829	0.141	0.75	4.51	1.04	6.3	7338	2.6316	36.80262	-34.17102	NAC
NS0056	198	200	NS	E396178	396178	1	G	W	27.46	40.09	3.41	0.387	0.3	0.154	2.56	2.3	0.079	0.185	1.5	0.195	1.2	7	1.37	9.57	7347	5.661	40.1166	-34.4556	NAC
NS0056	148	150	NS	E396153	396153	1	G	W	29.26	42.51	2.29	0.465	0.36	0.106	2.1	2.2	0.087	0.119	1.06	0.138	0.72	4.9	1.25	6.87	7322	3.6414	38.3724	-34.731	NAC
NS0056	90	92	NS	E396124	396124	1	G	W	32.92	37.62	1.94	0.555	0.43	0.091	2.09	2.08	0.088	0.048	0.856	0.133	0.71	5.48	1.24	7.43	7293	1.4688	36.27936	-34.81056	NAC
NS0056	228	230	NS	E396193	396193	1	G	W	27.91	39.5	4.02	0.478	0.37	0.186	3.24	2.54	0.279	0.286	1.72	0.191	0.85	4.4	1.43	6.68	7362	8.7516	44.30268	-35.55108	NAC
NS0056	192	194	NS	E396175	396175	1	G	W	28.21	43.51	1.84	0.361	0.28	0.079	1.85	2.2	0.065	0.084	0.698	0.149	1.86	5.58	1.06	8.5	7344	2.5704	38.3724	-35.802	NAC
NS0056	60	62	NS	E396109	396109	1	G	W	30.7	37.01	3.55	0.374	0.29	0.166	2.65	2.32	0.172	0.15	1.53	0.209	1.28	4.65	1.35	7.28	7278	4.59	40.46544	-35.87544	NAC
NS0056	142	144	NS	E396150	396150	1	G	W	33.59	39.09	1.84	0.4	0.31	0.083	1.97	2.17	0.089	0.058	0.611	0.112	0.55	3.63	1.2	5.38	7319	1.7748	37.84914	-36.07434	NAC
NS0056	258	260	NS	E396209	396209	1	G	W	33.72	38.36	1.42	0.555	0.43	0.065	2.14	2.17	0.111	0.048	0.695	0.1	0.42	4.02	1.28	5.72	7377	1.4688	37.84914	-36.38034	NAC
NS0056	126	128	NS	E396142	396142	1	G	W	32.08	38.68	2.35	0.465	0.36	0.11	2.02	2.26	0.076	0.094	0.87	0.128	1.07	3.89	1.59	6.55	7311	2.8764	39.41892	-36.54252	NAC
NS0056	52	54	NS	E396105	396105	1	G	W	25.23	44.89	2.71	0.516	0.4	0.126	2.24	2.4	0.15	0.154	0.706	0.136	1.44	6.74	1.21	9.39	7274	4.7124	41.8608	-37.1484	NAC
NS0056	104	106	NS	E396131	396131	1	G	W	29.33	38.71	3.41	0.439	0.34	0.161	2.66	2.42	0.055	0.163	0.913	0.221	1.1	5.61	1.78	8.49	7300	4.9878	42.20964	-37.22184	NAC
NS0056	226	228	NS	E396192	396192	1	G	W	26.37	41.03	4.65	0.4	0.31	0.211	3.37	2.82	0.132	0.385	2.15	0.221	0.81	3.32	2.04	6.17	7361	11.781	49.18644	-37.40544	NAC
NS0056	268	270	NS	E396214	396214	1	G	W	31.77	39.33	1.97	0.503	0.39	0.092	2.52	2.29	0.127	0.079	0.804	0.136	0.57	4.27	1.27	6.11	7382	2.4174	39.94218	-37.52478	NAC
NS0056	176	178	NS	E396167	396167	1	G	W	31.3	41.53	2.11	0.387	0.3	0.096	2.16	2.29	0.079	0.078	0.792	0.12	0.53	3.57	1.46	5.56	7336	2.3868	39.94218	-37.55538	NAC
NS0056	270	272	NS	E396215	396215	1	G	W	30.8	39.55	2.06	0.542	0.42	0.093	2.79	2.3	0.14	0.075	0.729	0.143	0.69	5.01	1.25	6.95	7383	2.295	40.1166	-37.8216	NAC
NS0056	174	176	NS	E396166	396166	1	G	W	29.28	41.27	3.25	0.374	0.29	0.148	2.58	2.44	0.141	0.154	1.3	0.18	0.83	3.96	1.37	6.16	7335	4.7124	42.55848	-37.84608	NAC
NS0056	244	246	NS	E396202	396202	1	G	W	31.75	37.89	2.71	0.491	0.38	0.124	2.48	2.48	0.129	0.176	1.63	0.138	0.56	3.28	1.69	5.53	7370	5.3856	43.25616	-37.87056	NAC
NS0056	238	240	NS	E396198	396198	1	G	W	34.19	38.44	1.71	0.465	0.36	0.079	1.9	2.28	0.083	0.052	0.976	0.084	0.37	3.17	1.18	4.72	7367	1.5912	39.76776	-38.17656	NAC
NS0056	232	234	NS	E396195	396195	1	G	W	30.49	41.98	2.04	0.452	0.35	0.092	2.25	2.31	0.205	0.055	1.07	0.132	0.53	3.69	1.15	5.37	7364	1.683	40.29102	-38.60802	NAC
NS0056	50	52	NS	E396104	396104	1	G	W	23.2	48.05	2.15	0.568	0.44	0.097	1.99	2.51	0.167	0.165	0.541	0.121	1.45	6.78	1.36	9.59	7273	5.049	43.77942	-38.73042	NAC
NS0056	62	64	NS	E396110	396110	1	G	W	32.18	35.37	3.32	0.361	0.28	0.155	2.55	2.46	0.163	0.136	1.43	0.204	1.19	4.55	1.44	7.18	7279	4.1616	42.90732	-38.74572	NAC
NS0056	138	140	NS	E396148	396148	1	G	W	33.41	39.01	1.71	0.465	0.36	0.075	1.97	2.36	0.122	0.074	0.714	0.109	0.46	3.39	1.46	5.31	7317	2.2644	41.16312	-38.89872	NAC
NS0056	86	88	NS	E396122	396122	1	G	W	31.72	41.48	1.28	0.542	0.42	0.057	1.64	2.31	0.042	0.042	0.495	0.113	0.51	4.78	1.5	6.79	7291	1.2852	40.29102	-39.00582	NAC
NS0056	134	136	NS	E396146	396146	1	G	W	33.65	38.81	1.25	0.581	0.45	0.057	1.78	2.29	0.068	0.028	0.711	0.086	0.34	4.08	1.46	5.88	7315	0.8568	39.94218	-39.08538	NAC
NS0056	100	102	NS	E396129	396129	1	G	W	25.6	41.49	3.77	0.478	0.37	0.176	2.96	2.7	0.117	0.254	1.53	0.235	1.17	6.11	1.76	9.04	7298	7.7724	47.0934	-39.321	NAC
NS0056	80	82	NS	E396119	396119	1	G	W	30.68	39.73	2.55	0.4	0.31	0.117	2.15	2.48	0.079	0.117	1.21	0.138	0.72	4.22	1.77	6.71	7288	3.5802	43.25616	-39.67596	NAC
NS0056	76	78	NS	E396117	396117	1	G	W	31.93	38.41	2.01	0.413	0.32	0.091	1.83	2.44	0.049	0.078	0.924	0.128	0.66	4.95	1.84	7.45	7286	2.3868	42.55848	-40.17168	NAC
NS0056	68	70	NS	E396113	396113	1	G	W	31.73	36.98	2.05	0.491	0.38	0.093	2.1	2.48	0.084	0.086	0.828	0.141	0.85	6.46	1.66	8.97	7282	2.6316	43.25616	-40.62456	NAC
NS0056	136	138	NS	E396147	396147	1	G	W	35.4	35.75	1.92	0.465	0.36	0.088	2.04	2.5	0.165	0.095	0.797	0.106	0.42	3.14	1.42	4.98	7316	2.907	43.605	-40.698	NAC
NS0056	144	146	NS	E396151	396151	1	G	W	33.73	37.11	2.24	0.439	0.34	0.107	2.24	2.46	0.081	0.07	0.692	0.136	0.64	3.96	1.59	6.19	7320	2.142	42.90732	-40.76532	NAC
NS0056	88	90	NS	E396123	396123	1	G	W	32.6	38.75	1.5	0.594	0.46	0.067	1.83	2.44	0.083	0.043	0.655	0.123	0.49	4.86	1.76	7.11	7292	1.3158	42.55848	-41.24268	NAC
NS0056	254	256	NS	E396207	396207	1	G	W	32.49	38.96	1.76	0.503	0.39	0.087	2.4	2.64	0.131	0.13	0.774	0.115	0.49	3.54	1.55	5.58	7375	3.978	46.04688	-42.06888	NAC
NS0056	132	134	NS	E396145	396145	1	G	W	33.12	39.65	1.22	0.594	0.46	0.054	1.73	2.56	0.077	0.026	0.73	0.085	0.37	3.85	1.72	5.94	7314	0.7956	44.65152	-43.85592	NAC
NS0056	102	104	NS	E396130	396130	1	G	W	27.57	43.02	2.15	0.426	0.33	0.097	1.94	2.73	0.058	0.108	0.912	0.172	0.88	5.93	1.56	8.37	7299	3.3048	47.61666	-44.31186	NAC
NS0056	94	96	NS	E396126	396126	1	G	W	31.18	35.03	2.48	0.529	0.41	0.113	2.57	2.87	0.122	0.141	0.817	0.183	0.97	7.02	1.88	9.87	7295	4.3146	50.05854	-45.74394	NAC
NS0056	230	232	NS	E396194	396194	1	G	W	26.62	40.24	4.5	0.413	0.32	0.209	3.44	3.09	0.298	0.236	2.1	0.21	0.91	3.66	1.85	6.42	7363	7.2216	53.89578	-46.67418	NAC
NS0056	42	44	NS	E396099	396099	1	G	W	22.87	47.41	1.75	0.581	0.45	0.076	2.1	2.97	0.184	0.149	0.52	0.108	1.18	8.41	1.48	11.07	7269	4.5594	51.80274	-47.24334	NAC
NS0056	108	110	NS	E396133	396133	1	G	W	27.61	42.04	2.37	0.413	0.32	0.109	2.04	2.98	0.061	0.126	0.989	0.172	0.91	6.19	1.85	8.95	7302	3.8556	51.97716	-48.12156	NAC
NS0056	74	76	NS	E396116	396116	1	G	W	30.38	37.83	2.94	0.4	0.31	0.137	2.19	3.06	0.076	0.148	1.41	0.15	0.9	4.72	2.39	8.01	7285	4.5288	53.37252	-48.84372	NAC
NS0056	128	130	NS	E396143	396143	1	G	W	33.18	38.21	1.27	0.607	0.47	0.057	1.81	3.05	0.073	0.028	0.746	0.073	0.34	3.68	2.38	6.4	7312	0.8568	53.1981	-52.3413	NAC
NS0056	110	112	NS	E396134	396134	1	G	W	26.82	40.95	3.06	0.426	0.33	0.143	2.4	3.34	0.078	0.155	1.34	0.199	1.02	6.17	2.22	9.41	7303	4.743	58.25628	-53.51328	NAC
NS0056	130	132	NS	E396144	396144	1	G	W	30.99	41.8	1.14	0.581	0.45	0.051	1.7	3.12	0.082	0.024	0.695	0.078	0.35	3.54	2.3	6.19	7313	0.7344	54.41904	-53.68464	NAC
NS0056	96	98	NS	E396127	396127	1	G	W	26.61	38.79	2.05	0.62	0.48	0.097	2.42	4.7	0.198	0.183	0.684	0.159	0.93	7.16	3.48	11.57	7296	5.5998	81.9774	-76.3776	NAC
NS0056	98	100	NS	E396128	396128	1	G	W	22.02	44.77	1.47	0.568	0.44	0.067	1.95	5.97	0.167	0.141	0.516	0.134	0.7	7.43	4.32	12.45	7297	4.3146	104.1287	-99.81414	NAC
NS0057	88	90	NS	E396265	396265	1	G	W	23.91	43.48	7.08	0.245	0.19	0.349	3.85	0.78	0.092	1.09	2.57	0.344	1.26	3.67	1.73	6.66	7432	33.354	13.60476	19.74924	PAF(HC)
NS0057	220	222	NS	E396332	396332	1	G	W	27.67	39.68	4.06	0.465	0.36	0.191	3.41	0.71	0.097	0.563	1.88	0.306	1.39	6.65	1.18	9.22	7498	17.2278	12.38382	4.84398	PAF(LC)
NS0057	90	92	NS	E396266	396266	1	G	W	23.01	46.54	5.97	0.258	0.2	0.286	3.41	1.02	0.068	0.737	2.25	0.369	1.29	3.72	1.49	6.5	7433	22.5522	17.79084	4.76136	PAF(LC)
NS0057	86	88	NS	E396264	396264	1	G	W	23.5	44.77	5.93	0.323	0.25	0.288	3.57	1.02	0.097	0.714	2.45	0.355	1.36	4.04	1.66	7.06	7431	21.8484	17.79084	4.05756	PAF(LC)
NS0057	0	2	NS	E396221	396221	1	G	W	35.75	24.39	12.05	-0.0129	-0.01	1.606	0.04	0.02	0.028	0.039	0.035	0.012	6.97	2.94	0.41	10.32	7389	1.1934	0.34884	0.84456	PAF(LC)
NS0057	236	238	NS	E396340	396340	1	G	W	27.36	40.49	3.19	0.503	0.39	0.147	3.09	0.66	0.132	0.386	1.5	0.248	1.63	7.97	0.86	10.46	7506	11.8116	11.51172	0.29988	PAF(LC)
NS0057	2	4	NS	E396222	396222	1	G	W	36.54	26.83	10.69	0.026	0.02	1.101	0.04	0.02	0.034	0.02	0.035	0.019	5.47	2.74	0.33	8.54	7390	0.612	0.34884	0.26316	PAF(LC)
NS0057	4	6	NS	E396223	396223	1	G	W	41.63	15.98	12	-0.0129	-0.01	0.673	0.04	0.03	0.027	0.022	0.017	0.03	8.03	2.9	0.4	11.33	7391	0.6732	0.52326	0.14994	PAF(LC)
NS0057	6	8	NS	E396224	396224	1	G	W	42.78	16.84	9.94	-0.0129	-0.01	0.402	0.07	0.03	0.026	0.019	0.012	0.015	8.3	2.61	0.35	11.26	7392	0.5814	0.52326	0.05814	PAF(LC)

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0057	12	14	NS	E396227	396227	1	G	W	35.7	34.02	5.92	-0.0129	-0.01	0.222	0.04	0.02	0.071	0.013	0.013	0.025	6.44	1.64	0.23	8.31	7394	0.3978	0.34884	0.04896	PAF(LC)
NS0057	16	18	NS	E396229	396229	1	G	W	26.48	48.68	5.87	0.026	0.02	0.333	0.14	0.03	0.038	0.016	0.017	0.05	4.54	1.92	0.24	6.7	7396	0.4896	0.52326	-0.03366	NAF
NS0057	8	10	NS	E396225	396225	1	G	W	35.14	28.31	10.34	-0.0129	-0.01	0.323	0.06	0.03	0.018	0.015	0.013	0.022	7.12	2.8	0.32	10.24	7393	0.459	0.52326	-0.06426	NAF
NS0057	14	16	NS	E396228	396228	1	G	W	27.1	47.61	5.82	0.026	0.02	0.346	0.11	0.05	0.043	0.015	0.033	0.035	4.78	1.88	0.23	6.89	7395	0.459	0.8721	-0.4131	NAF
NS0057	18	20	NS	E396230	396230	1	G	W	31.12	43.25	4.6	0.026	0.02	0.225	0.33	0.06	0.033	0.016	0.023	0.061	4.88	1.66	0.2	6.74	7397	0.4896	1.04652	-0.55692	NAF
NS0057	20	22	NS	E396231	396231	1	G	W	32.34	44.44	3.25	0.026	0.02	0.18	0.42	0.07	0.04	0.01	0.035	0.061	3.88	1.17	0.07	5.12	7398	0.306	1.22094	-0.91494	NAF
NS0057	22	24	NS	E396232	396232	1	G	W	32.25	44.9	2.99	0.026	0.02	0.161	0.44	0.08	0.04	0.009	0.038	0.064	3.87	1.09	0.05	5.01	7399	0.2754	1.39536	-1.11996	NAF
NS0057	228	230	NS	E396336	396336	1	G	W	27.09	40.34	4.72	0.361	0.28	0.234	3.66	0.61	0.085	0.303	2.06	0.358	1.55	5.97	0.79	8.31	7502	9.2718	10.63962	-1.36782	NAF
NS0057	24	26	NS	E396233	396233	1	G	W	32.86	44.98	2.43	0.039	0.03	0.12	0.47	0.1	0.043	0.009	0.058	0.059	3.42	1.11	0	4.53	7400	0.2754	1.7442	-1.4688	NAF
NS0057	240	242	NS	E396342	396342	1	G	W	26.73	43.31	3.91	0.336	0.26	0.187	3.27	0.63	0.096	0.3	1.73	0.329	1.55	5.31	0.81	7.67	7508	9.18	10.98846	-1.80846	NAF
NS0057	26	28	NS	E396234	396234	1	G	W	32.73	43.41	2.96	0.142	0.11	0.154	0.58	0.13	0.031	0.011	0.248	0.074	3.81	1.31	0.04	5.16	7401	0.3366	2.26746	-1.93086	NAF
NS0057	226	228	NS	E396335	396335	1	G	W	25.82	42.57	3.78	0.452	0.35	0.176	3.34	0.83	0.137	0.406	1.66	0.3	1.53	6.98	0.98	9.49	7501	12.4236	14.47686	-2.05326	NAF
NS0057	28	30	NS	E396235	396235	1	G	W	31.77	44.12	3.34	0.207	0.16	0.164	0.67	0.14	0.028	0.011	0.285	0.072	3.78	1.52	0.07	5.37	7402	0.3366	2.44188	-2.10528	NAF
NS0057	30	32	NS	E396236	396236	1	G	W	33.29	41.78	2.85	0.413	0.32	0.151	0.63	0.16	0.031	0.007	0.29	0.055	4.29	1.24	0.07	5.6	7403	0.2142	2.79072	-2.57652	NAF
NS0057	34	36	NS	E396238	396238	1	G	W	29.22	47.14	3.46	0.284	0.22	0.171	0.9	0.17	0.03	0.005	0.84	0.088	3.61	1.32	0.05	4.98	7405	0.153	2.96514	-2.81214	NAF
NS0057	32	34	NS	E396237	396237	1	G	W	31.29	44.72	3.07	0.336	0.26	0.152	0.72	0.18	0.025	0.005	0.553	0.075	3.87	1.25	0.05	5.17	7404	0.153	3.13956	-2.98656	NAF
NS0057	36	38	NS	E396239	396239	1	G	W	27.39	47.04	4.35	0.323	0.25	0.231	1.23	0.21	0.042	0.006	1.31	0.106	3.83	1.58	0.13	5.54	7406	0.1836	3.66282	-3.47922	NAF
NS0057	238	240	NS	E396341	396341	1	G	W	27.76	38.55	3.98	0.465	0.36	0.189	3.52	0.77	0.178	0.28	1.79	0.33	1.72	7.56	0.76	10.04	7507	8.568	13.43034	-4.86234	NAF
NS0057	272	274	NS	E396358	396358	1	G	W	34.51	36.58	1.44	0.426	0.33	0.067	1.76	0.44	0.076	0.054	0.628	0.176	1.06	7.85	-0.18	8.73	7524	1.6524	7.67448	-6.02208	NAF
NS0057	274	276	NS	E396359	396359	1	G	W	28.5	44.43	1.41	0.361	0.28	0.067	1.71	0.53	0.055	0.092	0.621	0.164	1.49	8.02	0.09	9.6	7525	2.8152	9.24426	-6.42906	NAF
NS0057	98	100	NS	E396270	396270	1	G	W	25.3	44.1	4.49	0.349	0.27	0.22	2.86	0.98	0.101	0.345	1.85	0.287	1.4	5.75	0.93	8.08	7437	10.557	17.09316	-6.53616	NAF
NS0057	250	252	NS	E396347	396347	1	G	W	29.63	43.99	2.56	0.284	0.22	0.119	2.42	0.7	0.052	0.176	1.17	0.247	1.16	4.1	0.48	5.74	7513	5.3856	12.2094	-6.8238	NAF
NS0057	38	40	NS	E396240	396240	1	G	W	26.61	43.86	5.42	0.426	0.33	0.27	2.13	0.61	0.104	0.121	2.06	0.169	3.34	2.61	0.52	6.47	7407	3.7026	10.63962	-6.93702	NAF
NS0057	276	278	NS	E396360	396360	1	G	W	31.16	38.05	1.92	0.426	0.33	0.089	2.19	0.53	0.091	0.073	0.833	0.212	1.81	8.68	0.07	10.56	7526	2.2338	9.24426	-7.01046	NAF
NS0057	266	268	NS	E396355	396355	1	G	W	31.42	37.73	1.84	0.465	0.36	0.091	2.28	0.55	0.107	0.076	0.803	0.211	1.42	9.15	0.09	10.66	7521	2.3256	9.5931	-7.2675	NAF
NS0057	84	86	NS	E396263	396263	1	G	W	24.75	44.92	3.6	0.465	0.36	0.174	2.77	1.37	0.087	0.542	1.66	0.279	1.43	6.14	1.38	8.95	7430	16.5852	23.89554	-7.31034	NAF
NS0057	96	98	NS	E396269	396269	1	G	W	22.61	45.54	5.14	0.439	0.34	0.241	3.11	1.4	0.082	0.5	2.1	0.29	1.41	6.27	1.41	9.09	7436	15.3	24.4188	-9.1188	NAF
NS0057	218	220	NS	E396331	396331	1	G	W	26.72	42.22	3.07	0.503	0.39	0.142	2.95	1.42	0.144	0.511	1.35	0.269	1.32	6.67	1.26	9.25	7497	15.6366	24.76764	-9.13104	NAF
NS0057	242	244	NS	E396343	396343	1	G	W	29.61	39.1	3.48	0.361	0.28	0.163	3.18	0.96	0.119	0.227	1.56	0.302	1.53	5.62	0.7	7.85	7509	6.9462	16.74432	-9.79812	NAF
NS0057	92	94	NS	E396267	396267	1	G	W	24.8	43.07	4.78	0.349	0.27	0.228	3.11	1.5	0.124	0.515	1.75	0.327	1.55	5.81	1.33	8.69	7434	15.759	26.163	-10.404	NAF
NS0057	280	282	NS	E396362	396362	1	G	W	28.25	42.09	2.13	0.349	0.27	0.105	2.33	0.99	0.201	0.178	0.9	0.241	1.81	7.6	0.42	9.83	7528	5.4468	17.26758	-11.82078	NAF
NS0057	248	250	NS	E396346	396346	1	G	W	32.82	40.76	1.92	0.297	0.23	0.091	2.02	0.8	0.029	0.064	0.874	0.192	1.08	4.63	0.23	5.94	7512	1.9584	13.9536	-11.9952	NAF
NS0057	268	270	NS	E396356	396356	1	G	W	31.07	36.85	2.23	0.452	0.35	0.103	2.46	0.99	0.212	0.153	0.985	0.268	1.82	8.4	0.37	10.59	7522	4.6818	17.26758	-12.58578	NAF
NS0057	246	248	NS	E396345	396345	1	G	W	31.56	39.38	2.93	0.31	0.24	0.141	2.67	1.3	0.11	0.325	1.28	0.293	1.24	4	0.87	6.11	7511	9.945	22.6746	-12.7296	NAF
NS0057	260	262	NS	E396352	396352	1	G	W	32.76	41.86	1.68	0.336	0.26	0.078	1.84	0.92	0.075	0.078	0.72	0.193	0.84	4.2	0.19	5.23	7518	2.3868	16.04664	-13.65984	NAF
NS0057	94	96	NS	E396268	396268	1	G	W	25.05	43.91	3.29	0.323	0.25	0.158	2.41	1.25	0.076	0.264	1.22	0.222	1.67	8.39	0.81	10.87	7435	8.0784	21.8025	-13.7241	NAF
NS0057	278	280	NS	E396361	396361	1	G	W	28.87	41.71	1.46	0.336	0.26	0.072	1.92	0.88	0.09	0.043	0.647	0.157	1.36	9.54	0.11	11.01	7527	1.3158	15.34896	-14.03316	NAF
NS0057	124	126	NS	E396283	396283	1	G	W	27.16	43.85	2.75	0.4	0.31	0.134	2.65	1.06	0.108	0.122	1.06	0.251	1.28	6.71	0.51	8.5	7450	3.7332	18.48852	-14.75532	NAF
NS0057	270	272	NS	E396357	396357	1	G	W	31.12	41.72	2.1	0.297	0.23	0.103	2.01	1.03	0.101	0.104	0.906	0.234	1.23	5.03	0.37	6.63	7523	3.1824	17.96526	-14.78286	NAF
NS0057	264	266	NS	E396354	396354	1	G	W	31.02	41.72	1.7	0.4	0.31	0.082	2.03	0.99	0.119	0.081	0.737	0.205	1.05	5.88	0.2	7.13	7520	2.4786	17.26758	-14.78898	NAF
NS0057	234	236	NS	E396339	396339	1	G	W	23.56	49.03	2.63	0.413	0.32	0.131	2.51	1.36	0.104	0.279	1.08	0.219	1.36	6.07	1	8.43	7505	8.5374	23.72112	-15.18372	NAF
NS0057	262	264	NS	E396353	396353	1	G	W	33.02	38.84	2.21	0.387	0.3	0.106	2.36	1.06	0.109	0.082	0.928	0.238	1.11	4.88	0.33	6.32	7519	2.5092	18.48852	-15.97932	NAF
NS0057	256	258	NS	E396350	396350	1	G	W	33.6	40.05	1.6	0.361	0.28	0.08	1.91	1.01	0.086	0.048	0.697	0.191	0.78	4.82	0.21	5.81	7516	1.4688	17.61642	-16.14762	NAF
NS0057	254	256	NS	E396349	396349	1	G	W	31.55	44.02	1.41	0.297	0.23	0.07	1.66	1.05	0.066	0.041	0.621	0.165	0.7	4	0.31	5.01	7515	1.2546	18.3141	-17.0595	NAF
NS0057	222	224	NS	E396333	396333	1	G	W	27.68	39.64	2.94	0.607	0.47	0.139	3.04	1.61	0.125	0.359	1.34	0.24	1.39	8	1.1	10.49	7499	10.9854	28.08162	-17.09622	NAF
NS0057	244	246	NS	E396344	396344	1	G	W	32.9	40.97	2.05	0.271	0.21	0.1	2.04	1.07	0.058	0.044	0.922	0.199	0.88	3.83	0.4	5.11	7510	1.3464	18.66294	-17.31654	NAF
NS0057	82	84	NS	E396262	396262	1	G	W	27.85	44.68	2.97	0.297	0.23	0.142	2.41	1.49	0.094	0.244	1.35	0.259	1.16	4.04	0.99	6.19	7429	7.4664	25.98858	-18.52218	NAF
NS0057	158	160	NS	E396300	396300	1	G	W	28.85	43.06	2.64	0.297	0.23	0.128	2.47	1.36	0.089	0.152	1.19	0.23	1.08	5.22	0.76	7.06	7467	4.6512	23.72112	-19.06992	NAF
NS0057	258	260	NS	E396351	396351	1	G	W	33.83	40.68	1.56	0.323	0.25	0.075	1.79	1.19	0.068	0.047	0.688	0.176	0.71	3.84	0.41	4.96	7517	1.4382	20.75598	-19.31778	NAF
NS0057	100	102	NS	E396271	396271	1	G	W	27.69	42.15	2.67	0.336	0.26	0.13	2.31	1.46	0.125	0.193	1.11	0.224	1.43	7.43	0.68	9.54	7438	5.9058	25.46532	-19.55952	NAF
NS0057	78	80	NS	E396260	396260	1	G	W	31.78	40.97	2.26	0.336	0.26	0.107	2.14	1.23	0.051	0.06	1.03	0.205	0.96	4.34	0.62	5.92	7427	1.836	21.45366	-19.61766	NAF
NS0057	126	128	NS	E396284	396284	1	G	W	27.95	41.29	3.16	0.374	0.29	0.151	2.79	1.46	0.146	0.162	1.18	0.289	1.9	5.98	0.81	8.69	7451	4.9572	25.46532	-20.50812	NAF
NS0057	102	104	NS	E396272	396272	1	G	W	32.58	40.21	1.66	0.336	0.26	0.082	1.8	1.33	0.095	0.083	0.682	0.176	1.04	5.2	0.39	6.63	7439	2.5398	23.19786	-20.65806	NAF
NS0057	186	188	NS	E396315	396315	1	G	W	28.54	48.28	1.54	0.232	0.18	0.075	1.88	1.32	0.054	0.075	0.665	0.162	0.72	3.48	0.7	4.9	7481	2.295	23.02344	-20.72844	NAF
NS0057	232	234	NS	E396338	396338	1	G	W	27.59	44.08	1.68	0.426	0.33	0.083	2.1	1.29	0.129	0.048	0.732	0.153	0.98	7.86	0.48	9.32	7504	1.4688	22.50018	-21.03138	NAF
NS0057	206	208	NS	E396325	396325	1	G	W	32.68	40.9	1.82	0.284	0.22	0.088	2.07	1.31	0.062	0.054	0.806	0.192	0.79	4.03	0.65	5.47	7491	1.6524	22.84902	-21.19662	NAF
NS0057	170	172	NS	E396307	396307	1	G	W	28.53	43.93	2.57	0.31	0.24	0.126	2.42	1.41	0.105	0.105	1.14	0.245	1.11	4.9	0.75	6.76	7473	3.213	24.59322	-21.38022	NAF
NS0057	214	216	NS	E396329	396329	1	G	W	29.79	38.52	3.62	0.387	0.3	0.183	3.01	1.63	0.084	0.23	1.69	0.279	1.23	5.45	1.12	7.8	7495	7.038	28.43046	-21.39246	NAF
NS0057	106	108	NS	E396274	396274	1	G	W	29.42	43.74	2.38	0.336	0.26	0.115	2.17	1.59	0.078	0.187	0.987	0.21	0.98	3.95	0.9	5.83	7441	5.7222	27.73278	-22.01058	NAF
NS0057	122	124	NS	E396282	396282	1	G	W	28.01	40.07	3.74	0.374	0.29	0.179	3.17	1.62	0.189	0.186	1.38	0.353	1.59	5.71	0.97	8.27	7449	5.6916	28.25604	-22.56444	NAF
NS0057	252	254	NS	E396348	396348	1	G	W	30.75	40.75	2.11	0.4	0.31	0.101	2.3	1.54	0.156	0.131	0.961	0.225	1.06	5.32	0.61	6.99	7514	4.0086	26.86068	-22.85208	NAF
NS0057	148	150	NS	E396295	396295	1	G	W	26.37	47.82	2.19	0.31	0.24	0.108	2.31	1.45	0.041	0.069	0.967	0.198	0.91	4.78	0.96	6.65	7462	2.1114	25.2909	-23.1795	NAF
NS0057	204	206	NS	E396324	396324	1	G	W	31.05	42.19	1.99	0.271	0.21	0.095	2.16	1.52	0.062	0.102	0.871	0.198	0.87	4.06	0.84	5.77	7490	3.1212	26.51184	-23.39064	NAF
NS0057	76	78	NS	E396259	396259	1	G	W	30.65	43.25	2.03	0.323	0.25	0.103	2	1.49	0.072	0.062	0.898	0.216	0.88	3.65	0.85	5.38	7426	1.8972	25.98858	-24.09138	NAF
NS0057	184	186	NS	E396314	396314	1	G	W	28.83	40.1	3.64	0.284	0.22	0.176	3.18	1.81	0.037	0.239	1.63	0.286	1.17	4.58	1.44	7.19	7480	7.3134	31.57002	-24.25662	NAF
NS0057	162	164	NS	E396303	396303	1	G	W	25.86	50.39	1.82	0.245	0.19	0.087	2.01	1.57	0.052	0.075	0.811	0.168	0.75	3.7	0.94	5.39	7469	2.295	27.38394	-25.08894	NAF
NS0057	80	82	NS	E396261	396261	1	G	W	31.55	40.26	2.36	0.336	0.26	0.109	2.19	1.56	0.083	0.064	1.14	0.219	0.97	4.52	0.87	6.36	7428	1.9584	27.20952	-25.25112	NAF
NS0057	180	182	NS	E396312	396312	1	G	W	29.09	42.18	2.73	0.323	0.25	0.131	2.54	1.76	0.092	0.174	1.25	0.226	1	4.45	1.16	6.61	7478	5.3244	30.69792	-25.37352	NAF
NS0057	230	232	NS	E396337	396337	1	G	W	25.79	46.89	1.89	0.374	0.29	0.091	2.25	1.6	0.107	0.074	0.776	0.194	1.17	6.53	0.86	8.56	7503	2.2644	27.9072	-25.6428	NAF
NS0057	196	198	NS	E396320	396320	1	G	W	33.22	39.93	1.82	0.284	0.22	0.09	2.18	1.6	0.101	0.064	0.818	0.203	0.8	3.59	0.77	5.16	7486	1.9584	27.9072	-25.9488	NAF
NS0057	188	190	NS	E396316	396316	1	G	W	28.47	48.74	1.52	0.219	0.17	0.073	1.71	1.64	0.057	0.083	0.676	0.152	0.57	2.79	0.97	4.33	7482	2.5398	28.60488	-26.06508	NAF
NS0057	120	122	NS	E396281	396281	1	G	W	28.69	40.33	3.69	0.284	0.22	0.177	3.11	1.91	0.261	0.224	1.39	0.351	1.41	4.32	1.02	6.75	7448	6.8544	33.31422	-26.45982	NAF
NS0057	166	168	NS	E396305	396305	1	G	W	27.68	42.51	3.26	0.323	0.25	0.156	2.83	1.83	0.096	0.172	1.49	0.272	1.16	4.72	1.26	7.14	7471	5.2632	31.91886	-26.65566	NAF
NS0057	142	144	NS	E396292	396292	1	G	W	31.57	42.14	1.98	0.245	0.19	0.093	2.13	1.68	0.062	0.072	0.829	0.193	0.86	3.52	0.88	5.26	7459	2.2032	29.30256	-27.09936	NAF
NS0057	116	118	NS	E396279	396279	1	G	W	25.35	47.04	3.03	0.284	0.22	0.147	2.71	1.84	0.089	0.157	1.19	0.283	1.2	4.28	1.35	6.83	7446	4.8042	32.09328	-27.28908	NAF
NS0057	128	130	NS	E396285	396285	1	G	W	29.16	41.94	2.38	0.361	0.28	0.117	2.29	1.73	0.196	0.092	0.968	0.235	1.26	5.61	0.66	7.53	7452	2.8152	30.17466	-27.35946	NAF
NS0057	178	180	NS	E396311	396311	1	G	W	28.38	43.06	2.61	0.336	0.26	0.126	2.56	1.86	0.077	0.166	1.14	0.217	0.99	4.99	1.25	7.23	7477	5.0796	32.44212	-27.36252	NAF
NS0057	208	210	NS	E396326	396326	1	G	W	27.15	48.81	1.56	0.284	0.22	0.078	1.87	1.69	0.066	0.046	0.719	0.153	0.66	4.05	1.05	5.76	7492	1.4076	29.47698	-28.06938	NAF
NS0057	108	110	NS	E396275	396275	1	G	W	31.39	41.74	1.67	0.349	0.27	0.082	1.94	1.73	0.091	0.06	0.728	0.177	0.84	4.39	0.88	6.11	7442	1.836	30.17466	-28.33866	NAF
NS0057	104	106	NS	E396273	396273	1	G	W	28.38	42.71	2.95	0.336	0.26	0.139	2.54	1.97	0.121	0.196	1.19	0.241	1.11	4.32	1.2	6.63	7440	5.9976	34.36074	-28.36314	NAF
NS0057	190	192	NS	E396317	396317	1	G	W	28.52	41.67	2.94	0.297	0.23	0.147	2.76	2.01	0.04	0.215	1.35	0.251	1.07	4.74	1.5	7.31	7483	6.579	35.05842	-28.47942	NAF
NS0057	182	184	NS	E396313	396313	1	G	W	27.11	49.85	1.62	0.232	0.18	0.08	1.84	1.81	0.074	0.089	0.714	0.143	0.58	3.15	1.17	4.9	7479	2.7234	31.57002	-28.84662	NAF
NS0057	150	152	NS	E396296	396296	1	G	W	26.55	44.78	3.06	0.297	0.23	0.151	2.77	1.97	0.081	0.123	1.35	0.26	1.08	4.34	1.46	6.88	7463	3.7638	34.36074	-30.59694	NAC
NS0057	112	114	NS	E396277	396277	1	G	W	29.38	40.13	2.78	0.374	0.29	0.137	2.72	2.01	0.158	0.141	1.09	0.28	1.14	5.34	1.43	7.91	7444	4.3146	35.05842	-30.74382	NAC
NS0057	42	44	NS	E396242	396242	1	G	W	27.92	43.83	3.04	0.323	0.25	0.148	2.32	1.98	0.084	0.113	1.46	0.175	1.1	3.82	1.26	6.18	7409	3.4578	34.53516	-31.07736	NAC
NS0057	44	46	NS	E396243	396243	1	G	W	30.32	43.01	2.25	0.284	0.22	0.115	2.04	1.91	0.066	0.068	1.17	0.137	0.77	3.71	1.24	5.72	7410	2.0808	33.31422	-31.23342	NAC
NS0057	118	120	NS	E396280	396280	1	G	W	27.66	41.68	3.56	0.297	0.23	0.169	3.09	2.07	0.249	0.159	1.36	0.332	1.38	4.44	1.06	6.88	7447	4.8654	36.10494	-31.23954	NAC
NS0057	144	146	NS	E396293	396293	1	G	W	28	49.52	1.36	0.207	0.16	0.067	1.65	1.86	0.052	0.039	0.598	0.149	0.53	2.46	1.38	4.37	7460	1.1934	32.44212	-31.24872	NAC
NS0057	146	148	NS	E396294	396294	1	G	W	23.01	55.13	1.54	0.258	0.2	0.072	1.77	1.93	0.042	0.054	0.671	0.155	0.59	3.25	1.47	5.31	7461	1.6524	33.66306	-32.01066	NAC
NS0057	172	174	NS	E396308	396308	1	G	W	27.69	43.86	2.66	0.31	0.24	0.126	2.51	2.06	0.161	0.122	1.17	0.241	1.06	4.54	1.23	6.83	7474	3.7332	35.93052	-32.19732	NAC
NS0057	74	76	NS	E396258	396258	1	G	W	29.62	45.79	1.58	0.284	0.22	0.081	1.65	1.97	0.081	0.053	0.734	0.164	0.71	3.07	1.13	4.91	7425	1.6218	34.36074	-32.73894	NAC
NS0057	176	178	NS	E396310	396310	1	G	W	26.74	43.11	3.17	0.361	0.28	0.156	2.74	2.18	0.113	0.17	1.45	0.254	1.16	4.94	1.54	7.64	7476	5.202	38.02356	-32.82156	NAC
NS0057	130	132	NS	E396286	396286	1	G	W	27.76	42.12	2.75	0.374	0.29	0.134	2.61	2.13	0.216	0.137	1.08	0.254	1.28	5.56	1.08	7.92	7453	4.1922	37.15146	-32.95926	NAC
NS0057	168	170	NS	E396306	396306	1	G	W	24.58	48.38	2.7	0.31	0.24	0.131	2.46	2.19	0.142	0.135	1.19	0.232	1.03	4.14	1.49	6.66	7472	4.131	38.19798	-34.06698	NAC
NS0057	56	58	NS	E396249	396249	1	G	W	30.36	42.33	1.91	0.297	0.23	0.095	2.07	2.1	0.11	0.065	0.913	0.176	0.82	4	1.3	6.12	7416	1.989	36.6282	-34.6392	NAC
NS0057	58	60	NS	E396250	396250	1	G	W	29.72	43.16	1.99	0.284	0.22	0.095	2.1	2.15	0.118	0.067	0.955	0.166	0.78	3.83	1.42	6.03	7417	2.0502	37.5003	-35.4501	NAC
NS0057	212	214	NS	E396328	396328	1	G	W	28.61	40.36	2.72	0.387	0.3	0.133	2.67	2.46	0.175	0.224	1.29	0.245	1.12	5.45	1.44	8.01	7494	6.8544	42.90732	-36.05292	NAC
NS0057	40	42	NS	E396241	396241	1	G	W	23.31	46.7	4.39	0.361	0.28	0.215	2.81	2.4	0.12	0.188	2.1	0.189	1.37	3.56	1.93	6.86	7408	5.7528	41.8608	-36.108	NAC
NS0057	224	226	NS	E396334	396334	1	G	W	26.89	39.51	2.9	0.542	0.42	0.136	3.12	2.5	0.223	0.241	1.24	0.246	1.44	7.77	1.44	10.65	7500	7.3746	43.605	-36.2304	NAC
NS0057	198	200	NS	E396321	396321	1	G	W	31.47	40.63	2.08	0.271	0.21	0.101	2.37	2.25	0.09	0.075	0.95	0.2	0.83	3.49	1.53	5.85	7487	2.295	39.2445	-36.9495	NAC
NS0057	132	134	NS	E396287	396287	1	G	W	26.6	44.97	2.26	0.374	0.29	0.11	2.37	2.46	0.147	0.177	0.905	0.237	1.13	5.14	1.53	7.8	7454	5.4162	42.90732	-37.49112	NAC
NS0057	194	196	NS	E396319	396319	1	G	W	30.38	42.43	2.05	0.245	0.19	0.106	2.27	2.29	0.084	0.075	0.976	0.199	0.75	3	1.79	5.54	7485	2.295	39.94218	-37.64718	NAC
NS0057	66	68	NS	E396254	396254	1	G	W	30.51	40.7	2.24	0.361	0.28	0.112	2.18	2.31	0.097	0.086	1.05	0.209	0.95	4.39	1.49	6.83	7421	2.6316	40.29102	-37.65942	NAC
NS0057	46	48	NS	E396244	396244	1	G	W	28.91	43.9	2.16	0.31	0.24	0.103	2.06	2.31	0.177	0.076	1.07	0.182	0.89	3.91	1.2	6	7411	2.3256	40.29102	-37.96542	NAC
NS0057	140	142	NS	E396291	396291	1	G	W	27.56	48.71	1.46	0.219	0.17	0.071	1.73	2.27	0.08	0.039	0.612	0.14	0.58	2.83	1.45	4.86	7458	1.1934	39.59334	-38.39994	NAC
NS0057	48	50	NS	E396245	396245	1	G	W	28.54	42.47	2.84	0.297	0.23	0.143	2.47	2.42	0.177	0.117	1.38	0.229	0.98	3.9	1.58	6.46	7412	3.5802	42.20964	-38.62944	NAC
NS0057	200	202	NS	E396322	396322	1	G	W	29.64	39.76	2.9	0.297	0.23	0.144	2.77	2.51	0.096	0.168	1.35	0.24	1.1	4.42	1.82	7.34	7488	5.1408	43.77942	-38.63862	NAC
NS0057	52	54	NS	E396247	396247	1	G	W	28.37	41.46	3.33	0.297	0.23	0.165	2.69	2.48	0.218	0.146	1.62	0.275	1.07	3.99	1.48	6.54	7414	4.4676	43.25616	-38.78856	NAC
NS0057	70	72	NS	E396256	396256	1	G	W	31.1	39.92	2.11	0.374	0.29	0.11	2.17	2.37	0.087	0.066	0.982	0.176	0.87	4.5	1.54	6.91	7423	2.0196	41.33754	-39.31794	NAC
NS0057	134	136	NS	E396288	396288	1	G	W	29.34	41.79	1.79	0.374	0.29	0.084	2.21	2.38	0.099	0.069	0.749	0.192	0.91	5.38	1.54	7.83	7455	2.1114	41.51196	-39.40056	NAC
NS0057	72	74	NS	E396257	396257	1	G	W	27.61	44.15	2.19	0.4	0.31	0.105	2.24	2.47	0.15	0.118	1	0.19	0.88	4.88	1.62	7.38	7424	3.6108	43.08174	-39.47094	NAC
NS0057	160	162	NS	E396302	396302	1	G	W	27.5	41.07	3.27	0.336	0.26	0.159	2.98	2.58	0.142	0.18	1.48	0.276	1.19	4.9	1.73	7.82	7468	5.508	45.00036	-39.49236	NAC
NS0057	216	218	NS	E396330	396330	1	G	W	25.31	44.5	2.52	0.439	0.34	0.119	2.58	2.71	0.189	0.221	1.12	0.24	1.18	5.94	1.73	8.85	7496	6.7626	47.26782	-40.50522	NAC
NS0057	174	176	NS	E396309	396309	1	G	W	26.19	43.46	2.8	0.374	0.29	0.135	2.88	2.71	0.12	0.217	1.22	0.263	1.17	4.86	2.08	8.11	7475	6.6402	47.26782	-40.62762	NAC
NS0057	164	166	NS	E396304	396304	1	G	W	27.26	42.96	2.83	0.31	0.24	0.139	2.71	2.67	0.131	0.184	1.3	0.241	0.99	4.15	2.06	7.2	7470	5.6304	46.57014	-40.93974	NAC
NS0057	54	56	NS	E396248	396248	1	G	W	27.89	43.66	2.33	0.297	0.23	0.12	2.28	2.52	0.128	0.088	1.18	0.198	0.93	4.16	1.84	6.93	7415	2.6928	43.95384	-41.26104	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0057	110	112	NS	E396276	396276	1	G	W	28.24	41.56	2.71	0.349	0.27	0.137	2.63	2.67	0.138	0.153	1.07	0.272	1.12	4.47	1.88	7.47	7443	4.6818	46.57014	-41.88834	NAC
NS0057	210	212	NS	E396327	396327	1	G	W	25.68	46.94	2.35	0.297	0.23	0.114	2.37	2.63	0.093	0.101	1.08	0.197	0.88	4.09	1.99	6.96	7493	3.0906	45.87246	-42.78186	NAC
NS0057	50	52	NS	E396246	396246	1	G	W	28.22	42.5	2.7	0.31	0.24	0.131	2.51	2.71	0.199	0.132	1.29	0.233	0.95	4.04	1.67	6.66	7413	4.0392	47.26782	-43.22862	NAC
NS0057	138	140	NS	E396290	396290	1	G	W	27.7	41.92	3.17	0.284	0.22	0.152	2.84	2.8	0.194	0.153	1.28	0.257	1.11	3.9	1.9	6.91	7457	4.6818	48.8376	-44.1558	NAC
NS0057	64	66	NS	E396253	396253	1	G	W	27.25	41.54	2.93	0.426	0.33	0.144	2.69	2.87	0.147	0.173	1.34	0.214	1.09	5.2	1.99	8.28	7420	5.2938	50.05854	-44.76474	NAC
NS0057	114	116	NS	E396278	396278	1	G	W	26.83	43.3	2.32	0.374	0.29	0.116	2.52	2.83	0.156	0.142	0.93	0.253	1.4	5.14	1.99	8.53	7445	4.3452	49.36086	-45.01566	NAC
NS0057	156	158	NS	E396299	396299	1	G	W	27.42	40.19	3.31	0.336	0.26	0.158	3.05	2.97	0.188	0.21	1.45	0.292	1.23	4.96	2.14	8.33	7466	6.426	51.80274	-45.37674	NAC
NS0057	62	64	NS	E396252	396252	1	G	W	28.04	42.86	2.21	0.361	0.28	0.113	2.31	2.76	0.1	0.07	0.985	0.197	0.87	4.47	2.2	7.54	7419	2.142	48.13992	-45.99792	NAC
NS0057	202	204	NS	E396323	396323	1	G	W	27.37	38.45	3.68	0.361	0.28	0.182	3.44	3.14	0.24	0.271	1.64	0.322	1.37	5.27	2.06	8.7	7489	8.2926	54.76788	-46.47528	NAC
NS0057	136	138	NS	E396289	396289	1	G	W	27.15	42.83	2.48	0.387	0.3	0.121	2.59	2.9	0.149	0.127	1.01	0.238	1	5.06	2.04	8.1	7456	3.8862	50.5818	-46.6956	NAC
NS0057	154	156	NS	E396298	396298	1	G	W	27.32	40.3	3.53	0.349	0.27	0.177	3.05	3.13	0.218	0.231	1.63	0.274	1.13	4.4	2.25	7.78	7465	7.0686	54.59346	-47.52486	NAC
NS0057	192	194	NS	E396318	396318	1	G	W	26.18	41.47	3.19	0.336	0.26	0.159	2.97	3.16	0.184	0.186	1.52	0.253	1.16	5.17	2.38	8.71	7484	5.6916	55.11672	-49.42512	NAC
NS0057	152	154	NS	E396297	396297	1	G	W	27.29	40.21	3.34	0.361	0.28	0.167	2.99	3.43	0.252	0.315	1.54	0.275	1.11	4.4	2.28	7.79	7464	9.639	59.82606	-50.18706	NAC
NS0057	60	62	NS	E396251	396251	1	G	W	26.28	43.13	2.86	0.336	0.26	0.142	2.65	3.28	0.15	0.104	1.27	0.237	1.29	3.89	2.75	7.93	7418	3.1824	57.20976	-54.02736	NAC
NS0057	68	70	NS	E396255	396255	1	G	W	26.59	42.72	2.9	0.349	0.27	0.146	2.54	3.31	0.067	0.097	1.4	0.225	0.97	4.03	2.93	7.93	7422	2.9682	57.73302	-54.76482	NAC
NS0058	178	180	NS	E396454	396454	1	G	W	22.88	41.32	2.98	0.4	0.31	0.133	3.25	0.5	0.081	5.39	0.494	0.006	0.26	10.99	6.32	17.57	7618	164.934	8.721	156.213	PAF(HC)
NS0058	252	254	NS	E396491	396491	1	G	W	11.77	55.45	10.89	0.181	0.14	0.462	1.62	0.19	0.021	4.06	3.26	0.032	0.4	7.25	3.24	10.89	7655	124.236	3.31398	120.92202	PAF(HC)
NS0058	186	188	NS	E396458	396458	1	G	W	8.27	57.24	16.36	0.026	0.02	0.704	1.74	0.62	0.01	3.93	4.54	0.039	0.24	4.41	2.16	6.81	7622	120.258	10.81404	109.44396	PAF(HC)
NS0058	190	192	NS	E396460	396460	1	G	W	17.88	47.26	8.59	0.374	0.29	0.375	2.59	0.34	0.028	3.71	1.78	0.029	0.32	8.67	3.76	12.75	7624	113.526	5.93028	107.59572	PAF(HC)
NS0058	184	186	NS	E396457	396457	1	G	W	12.28	52.93	13.54	0.116	0.09	0.593	2.27	0.43	0.037	3.74	3.39	0.034	0.26	5.68	2.72	8.66	7621	114.444	7.50006	106.94394	PAF(HC)
NS0058	188	190	NS	E396459	396459	1	G	W	8.67	60.06	13.82	0.065	0.05	0.582	1.83	0.68	0.013	3.11	3.7	0.033	0.25	4.14	2.24	6.63	7623	95.166	11.86056	83.30544	PAF(HC)
NS0058	182	184	NS	E396456	396456	1	G	W	16	51.37	8.91	0.219	0.17	0.388	2.82	0.67	0.11	3.04	1.64	0.024	0.3	6.81	3.67	10.78	7620	93.024	11.68614	81.33786	PAF(HC)
NS0058	176	178	NS	E396453	396453	1	G	W	21.14	46.79	6.57	0.284	0.22	0.295	3.12	0.37	0.049	2.29	0.27	0.018	0.43	7.77	3.33	11.53	7617	70.074	6.45354	63.62046	PAF(HC)
NS0058	254	256	NS	E396492	396492	1	G	W	16.9	51.31	5.01	0.361	0.28	0.205	2.55	0.55	0.071	2.05	1.39	0.029	0.29	9.68	4.07	14.04	7656	62.73	9.5931	53.1369	PAF(HC)
NS0058	256	258	NS	E396493	396493	1	G	W	18.77	47.23	5.66	0.374	0.29	0.233	2.8	0.58	0.062	1.9	1.32	0.021	0.21	10.74	3.8	14.75	7657	58.14	10.11636	48.02364	PAF(HC)
NS0058	192	194	NS	E396461	396461	1	G	W	15.15	57.41	4.15	0.374	0.29	0.181	2.44	0.69	0.054	1.81	1.07	0.022	0.2	8.2	3.77	12.17	7625	55.386	12.03498	43.35102	PAF(HC)
NS0058	250	252	NS	E396490	396490	1	G	W	17.86	49.36	3.83	0.439	0.34	0.155	3.24	0.53	0.07	1.62	1.07	0.013	0.27	11.63	3.45	15.35	7654	49.572	9.24426	40.32774	PAF(HC)
NS0058	248	250	NS	E396489	396489	1	G	W	21.81	39.74	4.39	0.465	0.36	0.183	3.59	0.66	0.075	1.58	1.16	0.019	0.4	14.32	3.55	18.27	7653	48.348	11.51172	36.83628	PAF(HC)
NS0058	180	182	NS	E396455	396455	1	G	W	22.48	40.81	4.05	0.465	0.36	0.174	3.89	0.71	0.086	1.42	0.372	0.01	0.38	13.35	3.02	16.75	7619	43.452	12.38382	31.06818	PAF(HC)
NS0058	238	240	NS	E396484	396484	1	G	W	25.48	33.48	3.9	0.594	0.46	0.18	3.78	0.99	0.152	1.43	0.718	0.012	0.25	16.34	2.94	19.53	7648	43.758	17.26758	26.49042	PAF(HC)
NS0058	104	106	NS	E396417	396417	1	G	W	28.42	39.2	3.2	0.361	0.28	0.138	3.52	0.5	0.086	1.08	0.371	0.116	0.98	9.69	0.97	11.64	7581	33.048	8.721	24.327	PAF(HC)
NS0058	194	196	NS	E396462	396462	1	G	W	19.22	48.36	2.81	0.413	0.32	0.125	3.35	0.54	0.064	0.993	0.673	0.016	0.49	13.06	2.46	16.01	7626	30.3858	9.41868	20.96712	PAF(HC)
NS0058	236	238	NS	E396483	396483	1	G	W	22.73	40.71	2.94	0.465	0.36	0.127	3.11	0.6	0.052	0.974	0.746	0.006	0.61	15.31	2.38	18.3	7647	29.8044	10.4652	19.3392	PAF(HC)
NS0058	158	160	NS	E396444	396444	1	G	W	27.44	44.15	2.52	0.336	0.26	0.112	3.74	0.53	0.109	0.925	0.712	0.385	0.97	5.15	1.7	7.82	7608	28.305	9.24426	19.06074	PAF(HC)
NS0058	240	242	NS	E396485	396485	1	G	W	25.65	34.25	2.94	0.607	0.47	0.128	3.27	1.03	0.133	1.13	0.618	0.008	0.59	16.87	2.52	19.98	7649	34.578	17.96526	16.61274	PAF(HC)
NS0058	114	116	NS	E396422	396422	1	G	W	26.72	43.2	3.4	0.284	0.22	0.149	3.41	0.55	0.093	0.791	0.395	0.122	0.86	7.63	1.38	9.87	7586	24.2046	9.5931	14.6115	PAF(HC)
NS0058	208	210	NS	E396469	396469	1	G	W	25.07	35.42	2.43	0.374	0.29	0.104	3.53	0.67	0.062	0.751	0.666	0.013	1.47	16.93	2.1	20.5	7633	22.9806	11.68614	11.29446	PAF(HC)
NS0058	196	198	NS	E396463	396463	1	G	W	17.41	53.67	2.1	0.465	0.36	0.088	2.82	0.57	0.078	0.574	0.563	0.016	0.79	12.04	1.66	14.49	7627	17.5644	9.94194	7.62246	PAF(LC)
NS0058	128	130	NS	E396429	396429	1	G	W	29.64	32.35	3.67	0.503	0.39	0.162	4.13	0.48	0.073	0.516	0.634	0.265	1.94	11.8	1.38	15.12	7593	15.7896	8.37216	7.41744	PAF(LC)
NS0058	228	230	NS	E396479	396479	1	G	W	23.51	40.21	2.14	0.4	0.31	0.091	3.36	0.72	0.072	0.635	0.386	0.006	1.31	15.9	1.57	18.78	7643	19.431	12.55824	6.87276	PAF(LC)
NS0058	70	72	NS	E396399	396399	1	G	W	20.93	48.37	9.28	0.194	0.15	0.414	4.99	0.2	0.033	0.333	0.06	0.024	0.79	4.66	0.76	6.21	7564	10.1898	3.4884	6.7014	PAF(LC)
NS0058	116	118	NS	E396423	396423	1	G	W	26.79	39.93	3.68	0.374	0.29	0.161	3.81	0.63	0.115	0.571	0.427	0.161	1.05	9.58	1.28	11.91	7587	17.4726	10.98846	6.48414	PAF(LC)
NS0058	244	246	NS	E396487	396487	1	G	W	26.63	32.21	2.09	0.71	0.55	0.091	3.4	0.98	0.132	0.762	0.518	0.003	0.89	18.45	1.9	21.24	7651	23.3172	17.09316	6.22404	PAF(LC)
NS0058	242	244	NS	E396486	396486	1	G	W	25.86	33.44	2.44	0.658	0.51	0.099	3.57	1.09	0.134	0.808	0.471	0.005	1.01	17.7	1.92	20.63	7650	24.7248	19.01178	5.71302	PAF(LC)
NS0058	160	162	NS	E396445	396445	1	G	W	27.32	46.81	1.21	0.439	0.34	0.05	2.66	0.46	0.092	0.392	0.37	0.19	0.78	6.48	1.01	8.27	7609	11.9952	8.02332	3.97188	PAF(LC)
NS0058	72	74	NS	E396400	396400	1	G	W	22.86	46.48	7.22	0.284	0.22	0.32	4.81	0.3	0.046	0.293	0.288	0.076	0.93	5.65	0.76	7.34	7565	8.9658	5.2326	3.7332	PAF(LC)
NS0058	164	166	NS	E396447	396447	1	G	W	29.72	38.89	1.49	0.503	0.39	0.069	2.94	0.68	0.109	0.505	0.373	0.181	1.02	9.71	1.23	11.96	7611	15.453	11.86056	3.59244	PAF(LC)
NS0058	76	78	NS	E396403	396403	1	G	W	24.53	46.07	5.74	0.284	0.22	0.26	4.16	0.28	0.05	0.226	0.206	0.061	0.87	5.98	0.57	7.42	7567	6.9156	4.88376	2.03184	PAF(LC)
NS0058	258	260	NS	E396494	396494	1	G	W	23.28	40.91	2.44	0.594	0.46	0.09	3.78	0.68	0.078	0.424	0.218	0.01	0.23	16.7	0.96	17.89	7658	12.9744	11.86056	1.11384	PAF(LC)
NS0058	106	108	NS	E396418	396418	1	G	W	32.39	38.29	2.16	0.4	0.31	0.091	2.72	0.39	0.06	0.256	0.34	0.104	1.11	7.32	0.44	8.87	7582	7.8336	6.80238	1.03122	PAF(LC)
NS0058	10	12	NS	E396368	396368	1	G	W	35.83	44.49	1.13	0.065	0.05	0.047	0.05	0.02	0.029	0.013	0.007	0.016	1.99	0.43	0.11	2.53	7534	0.3978	0.34884	0.04896	PAF(LC)
NS0058	246	248	NS	E396488	396488	1	G	W	20.19	47.89	1.46	0.516	0.4	0.061	3.21	0.57	0.073	0.321	0.275	0.008	0.81	14.84	0.91	16.56	7652	9.8226	9.94194	-0.11934	NAF
NS0058	8	10	NS	E396367	396367	1	G	W	32.57	49.75	1.07	0.065	0.05	0.043	0.07	0.03	0.021	0.011	0.007	0.013	2.06	0.39	0.08	2.53	7533	0.3366	0.52326	-0.18666	NAF
NS0058	56	58	NS	E396391	396391	1	G	W	35.18	44.08	1.76	0.646	0.5	0.064	0.13	0.04	0.043	0.016	0.031	0.016	1.88	0.82	0.13	2.83	7557	0.4896	0.69768	-0.20808	NAF
NS0058	30	32	NS	E396378	396378	1	G	W	25.33	59.19	1.24	0.581	0.45	0.043	0.09	0.03	0.026	0.01	0.024	0.028	1.65	0.47	0.1	2.22	7544	0.306	0.52326	-0.21726	NAF
NS0058	18	20	NS	E396372	396372	1	G	W	33.58	48.09	1.37	0.284	0.22	0.04	0.09	0.04	0.008	0.015	0.009	0.028	1.7	0.5	0.1	2.3	7538	0.459	0.69768	-0.23868	NAF
NS0058	54	56	NS	E396390	396390	1	G	W	32.73	46.03	2.22	0.749	0.58	0.077	0.15	0.04	0.036	0.013	0.037	0.023	2.2	0.98	0.18	3.36	7556	0.3978	0.69768	-0.29988	NAF
NS0058	52	54	NS	E396389	396389	1	G	W	33.98	46.77	1.34	0.374	0.29	0.054	0.15	0.05	0.054	0.016	0.045	0.02	1.5	0.7	0.13	2.33	7555	0.4896	0.8721	-0.3825	NAF
NS0058	4	6	NS	E396365	396365	1	G	W	23.27	56.95	4.24	0.039	0.03	0.159	0.06	0.06	0.016	0.021	0.014	0.025	3.37	1.3	0.17	4.84	7531	0.6426	1.04652	-0.40392	NAF
NS0058	100	102	NS	E396415	396415	1	G	W	25.85	40.91	3.59	0.439	0.34	0.159	3.83	0.48	0.095	0.26	0.351	0.105	1.18	10.65	0.74	12.57	7579	7.956	8.37216	-0.41616	NAF
NS0058	14	16	NS	E396370	396370	1	G	W	36.25	43.4	2.03	0.194	0.15	0.072	0.08	0.05	0.028	0.014	0.014	0.027	1.85	0.69	0.06	2.6	7536	0.4284	0.8721	-0.4437	NAF
NS0058	38	40	NS	E396382	396382	1	G	W	29	53.6	1.47	0.4	0.31	0.057	0.1	0.05	0.05	0.014	0.042	0.025	1.81	0.65	0.02	2.48	7548	0.4284	0.8721	-0.4437	NAF
NS0058	6	8	NS	E396366	396366	1	G	W	29.6	48.89	3.59	0.116	0.09	0.146	0.11	0.06	0.017	0.018	0.011	0.012	3.03	1.2	0.17	4.4	7532	0.5508	1.04652	-0.49572	NAF
NS0058	12	14	NS	E396369	396369	1	G	W	32.69	48.94	1.45	0.065	0.05	0.057	0.06	0.05	0.038	0.011	0.014	0.02	2	0.47	0	2.47	7535	0.3366	0.8721	-0.5355	NAF
NS0058	28	30	NS	E396377	396377	1	G	W	22.02	56.63	4.33	1.846	1.43	0.172	0.1	0.06	0.116	0.016	0.06	0.064	2.94	1.42	0.33	4.69	7543	0.4896	1.04652	-0.55692	NAF
NS0058	20	22	NS	E396373	396373	1	G	W	35.12	41.64	3.28	1.097	0.85	0.121	0.13	0.06	0.015	0.015	0.03	0.047	2.14	1.17	0.22	3.53	7539	0.459	1.04652	-0.58752	NAF
NS0058	32	34	NS	E396379	396379	1	G	W	30.91	47.93	2.54	0.594	0.46	0.108	0.13	0.06	0.038	0.014	0.03	0.035	2.87	0.85	0.17	3.89	7545	0.4284	1.04652	-0.61812	NAF
NS0058	24	26	NS	E396375	396375	1	G	W	33.77	42.14	3.57	0.865	0.67	0.148	0.15	0.07	0.02	0.019	0.025	0.054	2.86	1.29	0.27	4.42	7541	0.5814	1.22094	-0.63954	NAF
NS0058	26	28	NS	E396376	396376	1	G	W	32.17	44.17	3.83	0.955	0.74	0.166	0.17	0.07	0.019	0.019	0.021	0.065	2.76	1.36	0.28	4.4	7542	0.5814	1.22094	-0.63954	NAF
NS0058	36	38	NS	E396381	396381	1	G	W	29.64	51.33	1.65	0.736	0.57	0.064	0.19	0.06	0.072	0.013	0.093	0.029	2.62	0.78	0.1	3.5	7547	0.3978	1.04652	-0.64872	NAF
NS0058	40	42	NS	E396383	396383	1	G	W	30.31	43.91	6.31	0.284	0.22	0.202	0.16	0.07	0.06	0.017	0.033	0.028	3.1	2.19	0.21	5.5	7549	0.5202	1.22094	-0.70074	NAF
NS0058	34	36	NS	E396380	396380	1	G	W	31.52	47.05	2.11	0.865	0.67	0.087	0.17	0.06	0.071	0.011	0.069	0.033	3.15	0.72	0.18	4.05	7546	0.3366	1.04652	-0.70992	NAF
NS0058	98	100	NS	E396414	396414	1	G	W	26.23	40.79	3.73	0.465	0.36	0.167	3.89	0.54	0.112	0.281	0.349	0.108	1.21	10.54	0.73	12.48	7578	8.5986	9.41868	-0.82008	NAF
NS0058	22	24	NS	E396374	396374	1	G	W	33.42	43	3.91	0.775	0.6	0.171	0.15	0.08	0.018	0.016	0.022	0.06	2.44	1.37	0.25	4.06	7540	0.4896	1.39536	-0.90576	NAF
NS0058	42	44	NS	E396384	396384	1	G	W	33.26	45.28	2.25	0.529	0.41	0.08	0.14	0.07	0.076	0.01	0.047	0.026	2.44	0.96	0.15	3.55	7550	0.306	1.22094	-0.91494	NAF
NS0058	102	104	NS	E396416	396416	1	G	W	25.93	41.92	2.94	0.452	0.35	0.129	3.48	0.52	0.103	0.261	0.325	0.088	1.26	10.73	0.66	12.65	7580	7.9866	9.06984	-1.08324	NAF
NS0058	46	48	NS	E396386	396386	1	G	W	36.28	41.73	1.63	0.439	0.34	0.061	0.2	0.08	0.055	0.008	0.059	0.021	2.56	0.77	0.11	3.44	7552	0.2448	1.39536	-1.15056	NAF
NS0058	50	52	NS	E396388	396388	1	G	W	28.7	50.66	2.71	0.697	0.54	0.112	0.33	0.09	0.07	0.009	0.104	0.025	2.42	1.12	0.16	3.7	7554	0.2754	1.56978	-1.29438	NAF
NS0058	68	70	NS	E396398	396398	1	G	W	28.03	48.28	3.1	0.516	0.4	0.131	1.51	0.37	0.112	0.163	0.122	0.029	1.94	2.88	0.44	5.26	7563	4.9878	6.45354	-1.46574	NAF
NS0058	44	46	NS	E396385	396385	1	G	W	37.47	39.59	2.09	0.646	0.5	0.078	0.26	0.1	0.065	0.008	0.076	0.025	2.71	0.9	0.12	3.73	7551	0.2448	1.7442	-1.4994	NAF
NS0058	48	50	NS	E396387	396387	1	G	W	34.57	41.66	2.66	0.646	0.5	0.11	0.41	0.1	0.067	0.008	0.148	0.028	3.12	1.03	0.17	4.32	7553	0.2448	1.7442	-1.4994	NAF
NS0058	58	60	NS	E396392	396392	1	G	W	34.29	44.7	2.01	0.529	0.41	0.086	0.36	0.1	0.05	0.008	0.105	0.023	2.09	0.89	0.12	3.1	7558	0.2448	1.7442	-1.4994	NAF
NS0058	60	62	NS	E396393	396393	1	G	W	34.39	44.16	1.98	0.478	0.37	0.084	0.37	0.1	0.053	0.008	0.11	0.033	2.07	0.87	0.09	3.03	7559	0.2448	1.7442	-1.4994	NAF
NS0058	64	66	NS	E396396	396396	1	G	W	29.47	44.62	4.01	0.955	0.74	0.17	1.25	0.14	0.1	0.03	0.233	0.028	3.88	1.57	0.32	5.77	7561	0.918	2.44188	-1.52388	NAF
NS0058	2	4	NS	E396364	396364	1	G	W	24.12	55.74	3.6	0.065	0.05	0.094	0.07	0.14	0.022	0.028	0.028	0.016	4.19	1.12	0.18	5.49	7530	0.8568	2.44188	-1.58508	NAF
NS0058	62	64	NS	E396395	396395	1	G	W	32.11	43.91	3.1	0.723	0.56	0.138	0.66	0.15	0.069	0.007	0.196	0.03	3.13	1.3	0.18	4.61	7560	0.2142	2.6163	-2.4021	NAF
NS0058	16	18	NS	E396371	396371	1	G	W	34.76	43.72	2.82	0.336	0.26	0.09	0.13	0.18	0.012	0.017	0.012	0.047	1.99	1.03	0.15	3.17	7537	0.5202	3.13956	-2.61936	NAF
NS0058	166	168	NS	E396448	396448	1	G	W	28.72	40.99	1.08	0.503	0.39	0.045	2.76	0.79	0.099	0.364	0.279	0.155	1.22	9.56	1.02	11.8	7612	11.1384	13.77918	-2.64078	NAF
NS0058	78	80	NS	E396404	396404	1	G	W	23.74	47.31	5.08	0.349	0.27	0.229	3.94	0.56	0.075	0.231	0.225	0.073	0.71	6.42	0.61	7.74	7568	7.0686	9.76752	-2.69892	NAF
NS0058	120	122	NS	E396425	396425	1	G	W	29.01	38.68	2.41	0.478	0.37	0.111	3.05	0.59	0.128	0.236	0.444	0.191	1.76	9.56	0.54	11.86	7589	7.2216	10.29078	-3.06918	NAF
NS0058	66	68	NS	E396397	396397	1	G	W	32.75	46.59	1.99	0.374	0.29	0.085	0.61	0.2	0.086	0.011	0.1	0.021	2.24	0.96	-0.06	3.14	7562	0.3366	3.4884	-3.1518	NAF
NS0058	206	208	NS	E396468	396468	1	G	W	26.38	33.03	1.82	0.426	0.33	0.073	3.84	0.7	0.071	0.292	0.465	0.009	2.36	18.15	0.96	21.47	7632	8.9352	12.2094	-3.2742	NAF
NS0058	152	154	NS	E396441	396441	1	G	W	25.74	51.47	1.04	0.194	0.15	0.046	2.44	1.34	0.074	0.651	0.34	0.153	0.41	4.23	1.32	5.96	7605	19.9206	23.37228	-3.45168	NAF
NS0058	174	176	NS	E396452	396452	1	G	W	28.36	43.7	0.43	0.426	0.33	0.017	2.35	0.47	0.077	0.141	0.088	0.036	0.94	10.34	0.47	11.75	7616	4.3146	8.19774	-3.88314	NAF
NS0058	0	2	NS	E396363	396363	1	G	W	24.9	52.15	5.12	0.116	0.09	0.16	0.31	0.27	0.019	0.026	0.162	0.041	3.55	2.22	0.2	5.97	7529	0.7956	4.70934	-3.91374	NAF
NS0058	134	136	NS	E396432	396432	1	G	W	29.84	34.96	2.97	0.529	0.41	0.136	3.73	0.61	0.127	0.213	0.522	0.253	1.55	11.07	0.59	13.21	7596	6.5178	10.63962	-4.12182	NAF
NS0058	86	88	NS	E396408	396408	1	G	W	30.53	37.65	3.15	0.516	0.4	0.138	3.47	0.52	0.105	0.161	0.19	0.055	0.91	9.17	0.25	10.33	7572	4.9266	9.06984	-4.14324	NAF
NS0058	144	146	NS	E396437	396437	1	G	W	23.04	50.3	1.8	0.374	0.29	0.079	2.93	0.63	0.101	0.222	0.397	0.185	0.98	8.04	0.73	9.75	7601	6.7932	10.98846	-4.19526	NAF
NS0058	110	112	NS	E396420	396420	1	G	W	30.33	39.73	1.21	0.439	0.34	0.051	2.34	0.42	0.063	0.098	0.257	0.099	1	10.67	0.01	11.68	7584	2.9988	7.32564	-4.32684	NAF
NS0058	122	124	NS	E396426	396426	1	G	W	27.45	41.83	2.64	0.426	0.33	0.118	3	0.61	0.106	0.206	0.381	0.166	1.34	9.36	0.5	11.2	7590	6.3036	10.63962	-4.33602	NAF
NS0058	112	114	NS	E396421	396421	1	G	W	26.65	40.14	2.17	0.503	0.39	0.095	3.35	0.58	0.111	0.164	0.33	0.134	1.42	12.7	0.41	14.53	7585	5.0184	10.11636	-5.09796	NAF
NS0058	156	158	NS	E396443	396443	1	G	W	34.81	36.05	0.9	0.555	0.43	0.037	2.73	0.51	0.042	0.119	0.313	0.156	0.68	8.32	0.17	9.17	7607	3.6414	8.89542	-5.25402	NAF
NS0058	210	212	NS	E396470	396470	1	G	W	25.21	37.57	1.42	0.387	0.3	0.052	3.41	0.67	0.066	0.209	0.283	0.008	1.08	18.04	0.64	19.76	7634	6.3954	11.68614	-5.29074	NAF
NS0058	230	232	NS	E396480	396480	1	G	W	24.16	38.93	1.37	0.465	0.36	0.059	3.57	0.93	0.135	0.337	0.23	0.009	1.15	17.38	0.89	19.42	7644	10.3122	16.22106	-5.90886	NAF
NS0058	80	82	NS	E396405	396405	1	G	W	29.47	42.81	3.14	0.439	0.34	0.138	2.93	0.59	0.074	0.133	0.164	0.056	0.84	6.5	0.2	7.54	7569	4.0698	10.29078	-6.22098	NAF
NS0058	132	134	NS	E396431	396431	1	G	W	33.42	34.8	0.9	0.503	0.39	0.043	2.54	0.44	0.078	0.042	0.302	0.131	0.92	11.77	-0.06	12.63	7595	1.2852	7.67448	-6.38928	NAF
NS0058	200	202	NS	E396465	396465	1	G	W	25.27	35.79	1.67	0.426	0.33	0.07	4.27	0.67	0.121	0.173	0.129	0.005	1.5	18.1	0.66	20.26	7629	5.2938	11.68614	-6.39234	NAF
NS0058	130	132	NS	E396430	396430	1	G	W	23.81	53.42	1.03	0.219	0.17	0.048	1.82	0.48	0.094	0.061	0.306	0.136	0.91	7.13	0.06	8.1	7594	1.8666	8.37216	-6.50556	NAF
NS0058	74	76	NS	E396402	396402	1	G	W	27.78	40.8	2.87	0.607	0.47	0.122	3.51	0.57	0.103	0.111	0.176	0.048	1	10.02	0.2	11.22	7566	3.3966	9.94194	-6.54534	NAF
NS0058	172	174	NS	E396451	396451	1	G	W	29.16	43.97	0.25	0.426	0.33	0.008	2.52	0.43	0.073	0.022	0.088	0.043	1	9.59	0.21	10.8	7615	0.6732	7.50006	-6.82686	NAF
NS0058	136	138	NS	E396433	396433	1	G	W	25.1	49.69	0.99	0.31	0.24	0.044	1.98	0.58	0.1	0.097	0.211	0.098	0.85	8.79	0.07	9.71	7597	2.9682	10.11636	-7.14816	NAF
NS0058	218	220	NS	E396474	396474	1	G	W	21.72	45.59	0.97	0.323	0.25	0.04	3.5	0.65	0.081	0.134	0.061	0.004	1.08	15.96	0.37	17.41	7638	4.1004	11.3373	-7.2369	NAF
NS0058	220	222	NS	E396475	396475	1	G	W	20.38	48.95	0.85	0.284	0.22	0.036	3.06	0.74	0.074	0.18	0.112	0.008	1.17	14.58	0.49	16.24	7639	5.508	12.90708	-7.39908	NAF
NS0058	162	164	NS	E396446	396446	1	G	W	28.23	43.57	0.89	0.555	0.43	0.037	2.65	0.8	0.158	0.214	0.309	0.15	1.23	8.21	0.67	10.11	7610	6.5484	13.9536	-7.4052	NAF
NS0058	82	84	NS	E396406	396406	1	G	W	27.29	50.24	1.64	0.374	0.29	0.072	1.93	0.54	0.075	0.059	0.123	0.037	0.75	5.21	-0.01	5.95	7570	1.8054	9.41868	-7.61328	NAF
NS0058	204	206	NS	E396467	396467	1	G	W	25.08	36.48	1.4	0.361	0.28	0.05	3.83	0.67	0.071	0.131	0.306	0.006	2.24	17.73	0.55	20.52	7631	4.0086	11.68614	-7.67754	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0058	126	128	NS	E396428	396428	1	G	W	29.15	34.19	2.23	0.529	0.41	0.101	3.37	0.75	0.149	0.175	0.516	0.219	1.59	13.6	0.53	15.72	7592	5.355	13.0815	-7.7265	NAF
NS0058	88	90	NS	E396409	396409	1	G	W	31.83	43.62	1.09	0.465	0.36	0.049	1.92	0.5	0.059	0.031	0.141	0.043	0.55	6.1	-0.13	6.52	7573	0.9486	8.721	-7.7724	NAF
NS0058	84	86	NS	E396407	396407	1	G	W	31.77	40.62	1.92	0.516	0.4	0.089	2.45	0.58	0.095	0.074	0.148	0.047	0.75	7.18	-0.07	7.86	7571	2.2644	10.11636	-7.85196	NAF
NS0058	96	98	NS	E396413	396413	1	G	W	25.28	46.37	1.37	0.413	0.32	0.055	2.3	0.63	0.137	0.101	0.25	0.062	1.89	9.6	0.18	11.67	7577	3.0906	10.98846	-7.89786	NAF
NS0058	216	218	NS	E396473	396473	1	G	W	23.9	40.66	1.12	0.374	0.29	0.045	3.34	0.76	0.093	0.171	0.231	0.009	1.54	17	0.5	19.04	7637	5.2326	13.25592	-8.02332	NAF
NS0058	138	140	NS	E396434	396434	1	G	W	29.42	34.44	2.73	0.542	0.42	0.123	3.96	0.87	0.203	0.23	0.624	0.279	1.47	11.3	0.71	13.48	7598	7.038	15.17454	-8.13654	NAF
NS0058	260	262	NS	E396495	396495	1	G	W	24.11	40.42	0.75	0.749	0.58	0.028	3.46	0.68	0.095	0.107	0.045	0.002	1.17	17.68	0.31	19.16	7659	3.2742	11.86056	-8.58636	NAF
NS0058	226	228	NS	E396478	396478	1	G	W	25.41	38.61	0.94	0.374	0.29	0.037	3.24	0.74	0.103	0.138	0.109	0.006	1.77	17.44	0.38	19.59	7642	4.2228	12.90708	-8.68428	NAF
NS0058	118	120	NS	E396424	396424	1	G	W	28.69	44.12	1.59	0.297	0.23	0.068	2.41	0.74	0.097	0.106	0.289	0.124	0.79	7.95	0.09	8.83	7588	3.2436	12.90708	-9.66348	NAF
NS0058	212	214	NS	E396471	396471	1	G	W	24.22	39.53	1.23	0.374	0.29	0.048	3.34	0.75	0.099	0.11	0.275	0.0005	1.58	17.35	0.36	19.29	7635	3.366	13.0815	-9.7155	NAF
NS0058	94	96	NS	E396412	396412	1	G	W	30.72	34.93	1.84	0.555	0.43	0.082	3.07	0.78	0.129	0.126	0.268	0.074	1.28	12.51	0.16	13.95	7576	3.8556	13.60476	-9.74916	NAF
NS0058	198	200	NS	E396464	396464	1	G	W	22.52	41.08	0.92	0.646	0.5	0.038	4.1	0.76	0.147	0.105	0.248	0.01	1.07	17.92	0.49	19.48	7628	3.213	13.25592	-10.04292	NAF
NS0058	224	226	NS	E396477	396477	1	G	W	26.11	35.26	1.06	0.361	0.28	0.04	3.94	0.68	0.06	0.055	0.084	0.008	1.64	19	0.19	20.83	7641	1.683	11.86056	-10.17756	NAF
NS0058	214	216	NS	E396472	396472	1	G	W	25.46	36.88	1.21	0.374	0.29	0.049	3.68	0.88	0.117	0.152	0.223	0.016	1.57	18.28	0.46	20.31	7636	4.6512	15.34896	-10.69776	NAF
NS0058	234	236	NS	E396482	396482	1	G	W	28.2	28.2	1.54	0.529	0.41	0.06	4.55	1.27	0.149	0.351	0.236	0.001	1.03	21.06	0.65	22.74	7646	10.7406	22.15134	-11.41074	NAF
NS0058	142	144	NS	E396436	396436	1	G	W	27.69	48.77	1.09	0.271	0.21	0.048	2.16	0.78	0.052	0.062	0.327	0.152	0.66	5.73	0.35	6.74	7600	1.8972	13.60476	-11.70756	NAF
NS0058	170	172	NS	E396450	396450	1	G	W	31.97	41.48	0.3	0.426	0.33	0.011	2.18	0.78	0.089	0.056	0.108	0.056	0.49	7.7	0.15	8.34	7614	1.7136	13.60476	-11.89116	NAF
NS0058	90	92	NS	E396410	396410	1	G	W	33.65	42.9	0.85	0.529	0.41	0.036	1.53	0.78	0.067	0.028	0.106	0.034	0.45	4.67	0.01	5.13	7574	0.8568	13.60476	-12.74796	NAF
NS0058	140	142	NS	E396435	396435	1	G	W	26.47	52.34	1.05	0.194	0.15	0.045	1.83	0.83	0.084	0.056	0.309	0.154	0.59	4	0.34	4.93	7599	1.7136	14.47686	-12.76326	NAF
NS0058	232	234	NS	E396481	396481	1	G	W	27.37	31.73	0.87	0.516	0.4	0.036	4.14	0.96	0.077	0.124	0.125	0.009	1.59	20.31	0.35	22.25	7645	3.7944	16.74432	-12.94992	NAF
NS0058	222	224	NS	E396476	396476	1	G	W	26.22	34.13	1.12	0.4	0.31	0.043	3.92	0.94	0.085	0.1	0.185	0.0005	1.65	19.29	0.29	21.23	7640	3.06	16.39548	-13.33548	NAF
NS0058	202	204	NS	E396466	396466	1	G	W	24.45	37.64	0.96	0.426	0.33	0.037	4.11	0.96	0.158	0.075	0.081	0.006	1.77	17.95	0.36	20.08	7630	2.295	16.74432	-14.44932	NAF
NS0058	92	94	NS	E396411	396411	1	G	W	32.32	42.18	1.11	0.503	0.39	0.047	1.94	0.98	0.067	0.043	0.174	0.054	0.69	5.75	0.15	6.59	7575	1.3158	17.09316	-15.77736	NAF
NS0058	154	156	NS	E396442	396442	1	G	W	28.37	48.57	0.66	0.271	0.21	0.03	2.14	1.14	0.102	0.116	0.223	0.125	0.53	5.44	0.44	6.41	7606	3.5496	19.88388	-16.33428	NAF
NS0058	108	110	NS	E396419	396419	1	G	W	30.09	35.59	1.1	0.646	0.5	0.047	2.57	1.06	0.244	0.069	0.28	0.107	1.2	13.6	0.07	14.87	7583	2.1114	18.48852	-16.37712	NAF
NS0058	150	152	NS	E396440	396440	1	G	W	27.22	48.98	0.75	0.194	0.15	0.033	2.19	1.42	0.108	0.255	0.253	0.125	0.5	5.11	0.89	6.5	7604	7.803	24.76764	-16.96464	NAF
NS0058	168	170	NS	E396449	396449	1	G	W	31.34	43.85	0.26	0.374	0.29	0.011	1.99	1.14	0.094	0.029	0.093	0.051	0.5	6.44	0.41	7.35	7613	0.8874	19.88388	-18.99648	NAF
NS0058	124	126	NS	E396427	396427	1	G	W	32.62	38.57	0.91	0.413	0.32	0.038	1.91	1.22	0.079	0.047	0.247	0.107	0.7	8.4	0.3	9.4	7591	1.4382	21.27924	-19.84104	NAF
NS0058	146	148	NS	E396438	396438	1	G	W	23.66	56.99	0.78	0.168	0.13	0.038	1.65	1.34	0.1	0.037	0.26	0.119	0.47	3.24	0.68	4.39	7602	1.1322	23.37228	-22.24008	NAF
NS0058	148	150	NS	E396439	396439	1	G	W	29.11	46.84	0.88	0.194	0.15	0.042	2.16	1.59	0.088	0.033	0.298	0.138	0.46	4.23	0.93	5.62	7603	1.0098	27.73278	-26.72298	NAF
NS0059	210	212	NS	E396603	396603	1	G	W	25.42	40.08	7.77	0.323	0.25	0.353	6.31	0.55	0.16	0.822	0.373	0.063	0.44	5.55	1.03	7.02	7765	25.1532	9.5931	15.5601	PAF(HC)
NS0059	186	188	NS	E396590	396590	1	G	W	28.05	42.42	5.11	0.426	0.33	0.232	5.05	0.28	0.048	0.449	0.333	0.074	0.43	4.37	0.65	5.45	7753	13.7394	4.88376	8.85564	PAF(LC)
NS0059	256	258	NS	E396626	396626	1	G	W	25.2	38.93	7.22	0.465	0.36	0.335	6.11	0.53	0.14	0.516	0.636	0.104	0.5	6.52	0.89	7.91	7788	15.7896	9.24426	6.54534	PAF(LC)
NS0059	202	204	NS	E396598	396598	1	G	W	26.8	41.92	4.91	0.581	0.45	0.227	4.82	0.42	0.117	0.374	0.498	0.106	0.55	6.34	0.76	7.65	7761	11.4444	7.32564	4.11876	PAF(LC)
NS0059	208	210	NS	E396602	396602	1	G	W	30.06	41.21	3.21	0.62	0.48	0.15	3.51	0.24	0.057	0.259	0.583	0.123	0.57	5.78	0.44	6.79	7764	7.9254	4.18608	3.73932	PAF(LC)
NS0059	0	2	NS	E396496	396496	1	G	W	36.76	35.37	4.08	0.374	0.29	0.343	0.11	0.07	0.029	0.088	0.066	0.01	4.99	1.05	0.35	6.39	7660	2.6928	1.22094	1.47186	PAF(LC)
NS0059	252	254	NS	E396624	396624	1	G	W	27.99	43.09	3.63	0.633	0.49	0.174	3.84	0.53	0.096	0.341	0.448	0.071	0.48	5.77	0.7	6.95	7786	10.4346	9.24426	1.19034	PAF(LC)
NS0059	6	8	NS	E396499	396499	1	G	W	39.14	37.53	1.73	0.116	0.09	0.126	0.04	0.005	0.06	0.01	0.015	0.003	3.59	0.49	0.07	4.15	7663	0.306	0.08721	0.21879	PAF(LC)
NS0059	2	4	NS	E396497	396497	1	G	W	36	41.56	2.07	0.052	0.04	0.133	0.04	0.01	0.045	0.012	0.01	0.002	3.84	0.5	0.08	4.42	7661	0.3672	0.17442	0.19278	PAF(LC)
NS0059	4	6	NS	E396498	396498	1	G	W	38.29	38.29	2.02	0.168	0.13	0.15	0.04	0.005	0.059	0.009	0.016	0.005	3.49	0.51	0.05	4.05	7662	0.2754	0.08721	0.18819	PAF(LC)
NS0059	8	10	NS	E396500	396500	1	G	W	38.88	37.89	1.56	0.516	0.4	0.079	0.06	0.005	0.061	0.006	0.025	0.006	3.24	0.5	0.07	3.81	7664	0.1836	0.08721	0.09639	PAF(LC)
NS0059	10	12	NS	E396502	396502	1	G	W	36.59	41.04	1.7	0.503	0.39	0.073	0.05	0.01	0.055	0.008	0.024	0.01	3.44	0.55	0.09	4.08	7665	0.2448	0.17442	0.07038	PAF(LC)
NS0059	12	14	NS	E396503	396503	1	G	W	37.33	40.33	1.55	0.349	0.27	0.065	0.06	0.005	0.068	0.005	0.018	0.004	3.28	0.54	0.08	3.9	7666	0.153	0.08721	0.06579	PAF(LC)
NS0059	14	16	NS	E396504	396504	1	G	W	37.31	40.75	1.34	0.646	0.5	0.053	0.07	0.005	0.065	0.005	0.029	0.009	2.86	0.49	0.07	3.42	7667	0.153	0.08721	0.06579	PAF(LC)
NS0059	18	20	NS	E396506	396506	1	G	W	38	39.67	1.33	0.594	0.46	0.064	0.12	0.02	0.058	0.005	0.034	0.007	2.81	0.49	0.03	3.33	7669	0.153	0.34884	-0.19584	NAF
NS0059	16	18	NS	E396505	396505	1	G	W	38.99	38.48	1.14	0.762	0.59	0.048	0.14	0.02	0.06	0.004	0.038	0.008	2.7	0.48	0	3.18	7668	0.1224	0.34884	-0.22644	NAF
NS0059	26	28	NS	E396510	396510	1	G	W	36.09	42.77	1.08	0.775	0.6	0.046	0.22	0.02	0.042	0.002	0.076	0.015	2.42	0.48	0.06	2.96	7673	0.0612	0.34884	-0.28764	NAF
NS0059	28	30	NS	E396511	396511	1	G	W	38.71	38.92	1.17	0.762	0.59	0.048	0.23	0.02	0.048	0.002	0.081	0.011	2.45	0.48	0.05	2.98	7674	0.0612	0.34884	-0.28764	NAF
NS0059	30	32	NS	E396512	396512	1	G	W	37.86	39.71	1.09	0.968	0.75	0.05	0.28	0.02	0.052	0.002	0.112	0.012	2.61	0.48	0.06	3.15	7675	0.0612	0.34884	-0.28764	NAF
NS0059	230	232	NS	E396613	396613	1	G	W	30.01	37.41	3.93	0.865	0.67	0.176	4.58	0.61	0.159	0.338	0.146	0.066	0.42	7.06	0.56	8.04	7775	10.3428	10.63962	-0.29682	NAF
NS0059	22	24	NS	E396508	396508	1	G	W	39.31	37.24	1.27	0.968	0.75	0.057	0.22	0.03	0.07	0.003	0.09	0.017	2.89	0.57	0.06	3.52	7671	0.0918	0.52326	-0.43146	NAF
NS0059	204	206	NS	E396599	396599	1	G	W	34.42	37.85	2.09	0.684	0.53	0.095	2.99	0.21	0.046	0.105	0.322	0.086	0.51	5.66	-0.06	6.11	7762	3.213	3.66282	-0.44982	NAF
NS0059	24	26	NS	E396509	396509	1	G	W	39.15	37.95	1.11	0.891	0.69	0.046	0.27	0.03	0.062	0.002	0.094	0.011	2.67	0.48	0	3.15	7672	0.0612	0.52326	-0.46206	NAF
NS0059	32	34	NS	E396513	396513	1	G	W	35.58	44.08	0.84	0.865	0.67	0.036	0.31	0.03	0.052	0.002	0.118	0.009	2.24	0.4	-0.01	2.63	7676	0.0612	0.52326	-0.46206	NAF
NS0059	34	36	NS	E396514	396514	1	G	W	36.05	41.88	1.25	1.046	0.81	0.049	0.36	0.04	0.064	0.002	0.189	0.009	2.43	0.54	0.1	3.07	7677	0.0612	0.69768	-0.63648	NAF
NS0059	36	38	NS	E396515	396515	1	G	W	38.87	37.35	1.27	0.71	0.55	0.052	0.27	0.05	0.081	0.006	0.087	0.016	3.19	0.69	0.14	4.02	7678	0.1836	0.8721	-0.6885	NAF
NS0059	20	22	NS	E396507	396507	1	G	W	41.07	34.47	1.31	0.955	0.74	0.058	0.25	0.05	0.068	0.002	0.081	0.015	2.86	0.58	0.02	3.46	7670	0.0612	0.8721	-0.8109	NAF
NS0059	254	256	NS	E396625	396625	1	G	W	21.34	54.76	2.9	0.581	0.45	0.127	3.07	0.48	0.095	0.247	0.574	0.064	0.5	5.44	0.57	6.51	7787	7.5582	8.37216	-0.81396	NAF
NS0059	206	208	NS	E396600	396600	1	G	W	31.67	38.68	3.39	0.646	0.5	0.153	3.64	0.39	0.096	0.195	0.622	0.117	0.57	5.61	0.22	6.4	7763	5.967	6.80238	-0.83538	NAF
NS0059	232	234	NS	E396614	396614	1	G	W	37.35	34.38	2.06	0.749	0.58	0.099	2.98	0.31	0.051	0.136	0.149	0.064	0.34	5.04	-0.12	5.26	7776	4.1616	5.40702	-1.24542	NAF
NS0059	84	86	NS	E396539	396539	1	G	W	24.36	41.55	4.29	0.568	0.44	0.196	3.38	0.64	0.076	0.323	0.245	0.075	1.14	11.61	0.88	13.63	7702	9.8838	11.16288	-1.27908	NAF
NS0059	154	156	NS	E396574	396574	1	G	W	32.95	34.84	2.31	0.646	0.5	0.108	3.48	0.41	0.069	0.149	0.653	0.094	0.65	9.24	0.09	9.98	7737	4.5594	7.15122	-2.59182	NAF
NS0059	176	178	NS	E396585	396585	1	G	W	31.96	40.97	1.87	0.71	0.55	0.083	2.85	0.59	0.144	0.251	0.773	0.104	0.35	4.98	0.34	5.67	7748	7.6806	10.29078	-2.61018	NAF
NS0059	80	82	NS	E396537	396537	1	G	W	26.52	39.18	3.74	0.503	0.39	0.168	4.11	0.57	0.095	0.235	0.437	0.132	0.96	11.35	0.62	12.93	7700	7.191	9.94194	-2.75094	NAF
NS0059	200	202	NS	E396597	396597	1	G	W	29.92	35.91	4.17	0.788	0.61	0.187	4.48	1.16	0.343	0.567	0.619	0.091	0.5	7.33	1.04	8.87	7760	17.3502	20.23272	-2.88252	NAF
NS0059	82	84	NS	E396538	396538	1	G	W	25.6	39.79	3.47	0.594	0.46	0.153	3.61	0.63	0.094	0.261	0.356	0.101	1.07	12.31	0.69	14.07	7701	7.9866	10.98846	-3.00186	NAF
NS0059	38	40	NS	E396516	396516	1	G	W	37.7	35.64	1.49	0.671	0.52	0.061	1.54	0.22	0.091	0.016	0.154	0.021	2.04	3.74	0.02	5.8	7679	0.4896	3.83724	-3.34764	NAF
NS0059	86	88	NS	E396540	396540	1	G	W	25.94	38.58	3.3	0.646	0.5	0.142	3.48	0.68	0.087	0.277	0.295	0.091	1.13	13.44	0.75	15.32	7703	8.4762	11.86056	-3.38436	NAF
NS0059	194	196	NS	E396594	396594	1	G	W	34.98	39.9	1.37	0.684	0.53	0.056	2.37	0.44	0.056	0.14	0.23	0.049	0.26	4.42	0	4.68	7757	4.284	7.67448	-3.39048	NAF
NS0059	190	192	NS	E396592	396592	1	G	W	37.01	38.87	0.96	0.594	0.46	0.043	1.95	0.31	0.057	0.022	0.077	0.028	0.21	4.07	-0.5	3.78	7755	0.6732	5.40702	-4.73382	NAF
NS0059	112	114	NS	E396553	396553	1	G	W	12.62	71.62	0.15	0.4	0.31	0.009	0.92	0.35	0.032	0.036	0.029	0.02	0.52	7.42	0.21	8.15	7716	1.1016	6.1047	-5.0031	NAF
NS0059	78	80	NS	E396536	396536	1	G	W	27.83	39.34	3.65	0.491	0.38	0.164	4.14	0.64	0.094	0.197	0.436	0.141	0.84	9.38	0.46	10.68	7699	6.0282	11.16288	-5.13468	NAF
NS0059	40	42	NS	E396517	396517	1	G	W	35.87	36.91	1.25	0.762	0.59	0.055	2.15	0.33	0.093	0.018	0.197	0.036	1.2	5.69	-0.18	6.71	7680	0.5508	5.75586	-5.20506	NAF
NS0059	156	158	NS	E396575	396575	1	G	W	32.55	36.47	1.85	0.775	0.6	0.081	3.15	0.71	0.189	0.227	0.448	0.08	0.54	7.8	0.26	8.6	7738	6.9462	12.38382	-5.43762	NAF
NS0059	44	46	NS	E396519	396519	1	G	W	35.21	35.9	1.11	0.8	0.62	0.045	2.79	0.4	0.088	0.03	0.288	0.043	0.69	7.43	-0.26	7.86	7682	0.918	6.9768	-6.0588	NAF
NS0059	170	172	NS	E396582	396582	1	G	W	38.31	35.23	1.27	0.684	0.53	0.061	2.52	0.4	0.107	0.027	0.21	0.06	0.26	4.35	-0.42	4.19	7745	0.8262	6.9768	-6.1506	NAF
NS0059	198	200	NS	E396596	396596	1	G	W	34.7	40.66	1.07	0.646	0.5	0.046	2.14	0.41	0.07	0.031	0.139	0.036	0.26	4.91	-0.35	4.82	7759	0.9486	7.15122	-6.20262	NAF
NS0059	42	44	NS	E396518	396518	1	G	W	34.43	37.67	1.04	0.788	0.61	0.04	2.43	0.42	0.093	0.036	0.217	0.04	1.01	6.79	-0.24	7.56	7681	1.1016	7.32564	-6.22404	NAF
NS0059	166	168	NS	E396580	396580	1	G	W	37.58	36.74	1.22	0.658	0.51	0.049	2.27	0.42	0.066	0.023	0.254	0.056	0.25	4.22	-0.39	4.08	7743	0.7038	7.32564	-6.62184	NAF
NS0059	174	176	NS	E396584	396584	1	G	W	36.3	37.19	1.27	0.775	0.6	0.051	2.41	0.45	0.089	0.024	0.569	0.059	0.26	5.24	-0.37	5.13	7747	0.7344	7.8489	-7.1145	NAF
NS0059	216	218	NS	E396606	396606	1	G	W	38	35.89	1.3	0.788	0.61	0.057	2.17	0.47	0.087	0.032	0.107	0.035	0.27	4.88	-0.47	4.68	7768	0.9792	8.19774	-7.21854	NAF
NS0059	114	116	NS	E396554	396554	1	G	W	14.49	67	0.27	0.4	0.31	0.01	1.18	0.48	0.053	0.037	0.034	0.014	0.67	8.62	0.16	9.45	7717	1.1322	8.37216	-7.23996	NAF
NS0059	46	48	NS	E396520	396520	1	G	W	33.4	38.27	0.91	0.865	0.67	0.036	2.72	0.46	0.096	0.022	0.235	0.04	0.62	7.71	-0.28	8.05	7683	0.6732	8.02332	-7.35012	NAF
NS0059	250	252	NS	E396623	396623	1	G	W	38.95	34.92	1.26	0.775	0.6	0.055	2.05	0.48	0.088	0.025	0.197	0.037	0.16	4.39	-0.47	4.08	7785	0.765	8.37216	-7.60716	NAF
NS0059	110	112	NS	E396552	396552	1	G	W	18.43	56.9	0.88	0.413	0.32	0.04	1.78	0.57	0.083	0.073	0.038	0.017	0.83	11.41	0.22	12.46	7715	2.2338	9.94194	-7.70814	NAF
NS0059	162	164	NS	E396578	396578	1	G	W	37.94	34.58	1.17	0.813	0.63	0.047	2.55	0.52	0.09	0.025	0.273	0.076	0.33	5.79	-0.4	5.72	7741	0.765	9.06984	-8.30484	NAF
NS0059	212	214	NS	E396604	396604	1	G	W	30.51	40.61	2.47	0.775	0.6	0.109	3.29	0.65	0.174	0.098	0.405	0.103	0.49	6.66	0	7.15	7766	2.9988	11.3373	-8.3385	NAF
NS0059	182	184	NS	E396588	396588	1	G	W	36.59	38.02	1.23	0.775	0.6	0.056	2.23	0.53	0.083	0.028	0.33	0.033	0.19	4.59	-0.39	4.39	7751	0.8568	9.24426	-8.38746	NAF
NS0059	96	98	NS	E396545	396545	1	G	W	35.01	35.89	1.28	0.684	0.53	0.055	2.49	0.54	0.092	0.031	0.109	0.017	0.56	8.11	-0.32	8.35	7708	0.9486	9.41868	-8.47008	NAF
NS0059	158	160	NS	E396576	396576	1	G	W	35.88	36.84	1.1	0.736	0.57	0.048	2.49	0.54	0.092	0.031	0.171	0.044	0.36	6.41	-0.4	6.37	7739	0.9486	9.41868	-8.47008	NAF
NS0059	188	190	NS	E396591	396591	1	G	W	35.61	38.99	1.06	0.736	0.57	0.049	2.29	0.54	0.081	0.031	0.151	0.029	0.18	4.91	-0.3	4.79	7754	0.9486	9.41868	-8.47008	NAF
NS0059	168	170	NS	E396581	396581	1	G	W	37.16	36.37	1.21	0.749	0.58	0.05	2.46	0.56	0.087	0.03	0.326	0.061	0.23	4.83	-0.33	4.73	7744	0.918	9.76752	-8.84952	NAF
NS0059	262	264	NS	E396629	396629	1	G	W	31.65	40.51	3.2	0.542	0.42	0.154	3.66	0.85	0.053	0.186	0.38	0.07	0.36	4.3	0.38	5.04	7791	5.6916	14.8257	-9.1341	NAF
NS0059	214	216	NS	E396605	396605	1	G	W	34.98	40.45	1.13	0.697	0.54	0.054	1.96	0.57	0.077	0.025	0.102	0.028	0.23	4.49	-0.32	4.4	7767	0.765	9.94194	-9.17694	NAF
NS0059	240	242	NS	E396618	396618	1	G	W	34.44	40.7	1.12	0.749	0.58	0.05	2.05	0.59	0.076	0.025	0.176	0.028	0.27	4.68	-0.29	4.66	7780	0.765	10.29078	-9.52578	NAF
NS0059	76	78	NS	E396535	396535	1	G	W	31.98	37.98	1.88	0.581	0.45	0.083	3.27	0.78	0.116	0.127	0.401	0.139	0.81	7.78	0.18	8.77	7698	3.8862	13.60476	-9.71856	NAF
NS0059	66	68	NS	E396530	396530	1	G	W	33.68	37.24	1.32	0.671	0.52	0.058	2.96	0.62	0.094	0.033	0.264	0.086	0.63	7.57	-0.2	8	7693	1.0098	10.81404	-9.80424	NAF
NS0059	172	174	NS	E396583	396583	1	G	W	35.27	38.14	1.14	0.813	0.63	0.055	2.49	0.61	0.091	0.025	0.395	0.05	0.25	5.37	-0.27	5.35	7746	0.765	10.63962	-9.87462	NAF
NS0059	152	154	NS	E396573	396573	1	G	W	32.28	41.18	0.85	0.646	0.5	0.038	1.99	0.62	0.086	0.021	0.222	0.028	0.56	7.7	-0.25	8.01	7736	0.6426	10.81404	-10.17144	NAF
NS0059	180	182	NS	E396587	396587	1	G	W	34.94	38.53	1.45	0.762	0.59	0.062	2.46	0.65	0.088	0.035	0.514	0.054	0.22	4.8	-0.14	4.88	7750	1.071	11.3373	-10.2663	NAF
NS0059	90	92	NS	E396542	396542	1	G	W	29.16	37.25	1.09	0.71	0.55	0.047	3.26	0.68	0.073	0.047	0.179	0.049	0.72	13.68	0.05	14.45	7705	1.4382	11.86056	-10.42236	NAF
NS0059	98	100	NS	E396546	396546	1	G	W	33.06	36.9	1.49	0.646	0.5	0.066	2.7	0.78	0.124	0.099	0.131	0.035	0.63	8.73	-0.04	9.32	7709	3.0294	13.60476	-10.57536	NAF
NS0059	266	268	NS	E396631	396631	1	G	W	35.63	37.91	1.6	0.684	0.53	0.077	2.51	0.76	0.064	0.078	0.262	0.034	0.19	4.37	-0.03	4.53	7793	2.3868	13.25592	-10.86912	NAF
NS0059	164	166	NS	E396579	396579	1	G	W	34.73	39.32	0.97	0.788	0.61	0.042	2.35	0.67	0.091	0.025	0.215	0.061	0.3	5.18	-0.19	5.29	7742	0.765	11.68614	-10.92114	NAF
NS0059	48	50	NS	E396521	396521	1	G	W	33.83	37.97	0.96	0.826	0.64	0.039	2.76	0.68	0.083	0.022	0.248	0.033	0.57	7.36	-0.12	7.81	7684	0.6732	11.86056	-11.18736	NAF
NS0059	238	240	NS	E396617	396617	1	G	W	29.36	47.29	0.93	0.839	0.65	0.041	2.1	0.68	0.063	0.019	0.183	0.023	0.33	5.4	0	5.73	7779	0.5814	11.86056	-11.27916	NAF
NS0059	92	94	NS	E396543	396543	1	G	W	30.97	39.21	1.14	0.684	0.53	0.048	2.76	0.74	0.07	0.049	0.131	0.038	0.49	10.13	0.02	10.64	7706	1.4994	12.90708	-11.40768	NAF
NS0059	50	52	NS	E396522	396522	1	G	W	34.23	38.34	0.94	0.762	0.59	0.037	2.7	0.72	0.101	0.036	0.253	0.051	0.48	6.42	-0.12	6.78	7685	1.1016	12.55824	-11.45664	NAF
NS0059	260	262	NS	E396628	396628	1	G	W	36.68	37.06	1.01	0.736	0.57	0.046	2.24	0.71	0.069	0.025	0.23	0.032	0.26	5.17	-0.18	5.25	7790	0.765	12.38382	-11.61882	NAF
NS0059	94	96	NS	E396544	396544	1	G	W	32.18	37.62	1.16	0.723	0.56	0.047	2.73	0.76	0.083	0.041	0.103	0.019	0.29	10.03	-0.08	10.24	7707	1.2546	13.25592	-12.00132	NAF
NS0059	116	118	NS	E396555	396555	1	G	W	26.37	37.88	1.06	0.581	0.45	0.046	2.62	0.78	0.073	0.05	0.081	0.002	1.3	17.35	0.18	18.83	7718	1.53	13.60476	-12.07476	NAF
NS0059	88	90	NS	E396541	396541	1	G	W	27.41	36.17	1.51	0.646	0.5	0.064	3.48	0.87	0.081	0.101	0.272	0.081	1	15.81	0.29	17.1	7704	3.0906	15.17454	-12.08394	NAF
NS0059	236	238	NS	E396616	396616	1	G	W	30.09	46.11	0.92	0.826	0.64	0.043	2.09	0.73	0.067	0.02	0.121	0.025	0.3	5.47	-0.05	5.72	7778	0.612	12.73266	-12.12066	NAF
NS0059	248	250	NS	E396622	396622	1	G	W	39.13	34.57	1.21	0.8	0.62	0.054	2.13	0.74	0.058	0.023	0.161	0.033	0.19	4.29	-0.22	4.26	7784	0.7038	12.90708	-12.20328	NAF
NS0059	150	152	NS	E396572	396572	1	G	W	33.11	32.83	1.02	0.749	0.58	0.041	2.86	0.77	0.085	0.03	0.226	0.047	0.72	12.99	-0.02	13.69	7735	0.918	13.43034	-12.51234	NAF
NS0059	196	198	NS	E396595	396595	1	G	W	36.49	38.28	0.96	0.71	0.55	0.041	2.09	0.76	0.077	0.021	0.092	0.021	0.22	4.43	-0.17	4.48	7758	0.6426	13.25592	-12.61332	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0059	54	56	NS	E396524	396524	1	G	W	33.98	38.22	1.01	0.775	0.6	0.041	2.73	0.77	0.091	0.025	0.232	0.048	0.45	6.59	-0.06	6.98	7687	0.765	13.43034	-12.66534	NAF
NS0059	60	62	NS	E396527	396527	1	G	W	35.29	35.8	1.15	0.775	0.6	0.048	2.87	0.78	0.107	0.029	0.279	0.076	0.61	6.73	-0.1	7.24	7690	0.8874	13.60476	-12.71736	NAF
NS0059	242	244	NS	E396619	396619	1	G	W	36.02	38.42	1.14	0.775	0.6	0.05	2.09	0.78	0.09	0.022	0.154	0.028	0.28	4.46	-0.14	4.6	7781	0.6732	13.60476	-12.93156	NAF
NS0059	178	180	NS	E396586	396586	1	G	W	35.25	37.66	1.23	0.826	0.64	0.055	2.37	0.81	0.104	0.03	0.578	0.038	0.21	5.23	-0.12	5.32	7749	0.918	14.12802	-13.21002	NAF
NS0059	258	260	NS	E396627	396627	1	G	W	36.16	37.26	1.17	0.646	0.5	0.05	2.22	0.83	0.1	0.037	0.345	0.059	0.29	5.02	-0.14	5.17	7789	1.1322	14.47686	-13.34466	NAF
NS0059	234	236	NS	E396615	396615	1	G	W	31.69	44.48	0.91	0.762	0.59	0.041	2.01	0.83	0.076	0.021	0.089	0.031	0.21	4.73	0.01	4.95	7777	0.6426	14.47686	-13.83426	NAF
NS0059	184	186	NS	E396589	396589	1	G	W	36.56	36.97	1.2	0.788	0.61	0.053	2.29	0.85	0.124	0.031	0.287	0.04	0.25	4.61	-0.17	4.69	7752	0.9486	14.8257	-13.8771	NAF
NS0059	68	70	NS	E396531	396531	1	G	W	34.65	36.69	1.21	0.684	0.53	0.049	2.75	0.87	0.097	0.031	0.213	0.062	0.38	7.3	-0.09	7.59	7694	0.9486	15.17454	-14.22594	NAF
NS0059	148	150	NS	E396571	396571	1	G	W	32.19	31.27	1.01	0.826	0.64	0.038	3.03	0.87	0.085	0.031	0.202	0.042	0.91	15.17	0.06	16.14	7734	0.9486	15.17454	-14.22594	NAF
NS0059	120	122	NS	E396557	396557	1	G	W	28.42	35.9	0.9	0.542	0.42	0.038	2.46	0.87	0.07	0.014	0.1	0.014	1.21	16.55	0.2	17.96	7720	0.4284	15.17454	-14.74614	NAF
NS0059	118	120	NS	E396556	396556	1	G	W	28.7	33.66	1.04	0.594	0.46	0.047	2.66	0.91	0.095	0.027	0.087	0.0005	1.14	18.05	0.17	19.36	7719	0.8262	15.87222	-15.04602	NAF
NS0059	62	64	NS	E396528	396528	1	G	W	34.28	36.52	1.43	0.684	0.53	0.063	3.08	0.95	0.135	0.041	0.314	0.097	0.55	6.71	0.02	7.28	7691	1.2546	16.5699	-15.3153	NAF
NS0059	64	66	NS	E396529	396529	1	G	W	33.62	38.37	0.96	0.749	0.58	0.039	2.61	0.92	0.086	0.023	0.19	0.063	0.47	6.91	0.04	7.42	7692	0.7038	16.04664	-15.34284	NAF
NS0059	52	54	NS	E396523	396523	1	G	W	33.42	39.52	0.81	0.749	0.58	0.034	2.57	0.94	0.101	0.022	0.214	0.048	0.46	6.12	0.05	6.63	7686	0.6732	16.39548	-15.72228	NAF
NS0059	100	102	NS	E396547	396547	1	G	W	33.08	33.27	1.16	0.62	0.48	0.052	3.04	0.97	0.104	0.037	0.097	0.018	0.81	11.97	0.09	12.87	7710	1.1322	16.91874	-15.78654	NAF
NS0059	264	266	NS	E396630	396630	1	G	W	37.7	36.89	1.07	0.671	0.52	0.047	1.98	0.95	0.175	0.024	0.127	0.024	0.14	3.83	-0.33	3.64	7792	0.7344	16.5699	-15.8355	NAF
NS0059	192	194	NS	E396593	396593	1	G	W	34.85	38.48	1.56	0.658	0.51	0.07	2.6	1.13	0.075	0.115	0.177	0.052	0.29	4.38	0.2	4.87	7756	3.519	19.70946	-16.19046	NAF
NS0059	102	104	NS	E396548	396548	1	G	W	28.46	36.29	0.82	0.594	0.46	0.031	2.85	1.09	0.13	0.061	0.185	0.038	1.26	15.51	0.19	16.96	7711	1.8666	19.01178	-17.14518	NAF
NS0059	222	224	NS	E396609	396609	1	G	W	33.59	38.18	1.84	0.826	0.64	0.083	2.92	1.14	0.125	0.088	0.209	0.068	0.35	5.42	0.19	5.96	7771	2.6928	19.88388	-17.19108	NAF
NS0059	58	60	NS	E396526	396526	1	G	W	29.8	44.52	0.86	0.723	0.56	0.037	2.57	1.04	0.072	0.021	0.197	0.06	0.45	6.17	0.32	6.94	7689	0.6426	18.13968	-17.49708	NAF
NS0059	146	148	NS	E396570	396570	1	G	W	31.53	30.37	0.89	0.762	0.59	0.037	2.95	1.08	0.089	0.031	0.209	0.014	1.16	16.88	0.27	18.31	7733	0.9486	18.83736	-17.88876	NAF
NS0059	130	132	NS	E396562	396562	1	G	W	30.54	27.3	0.86	0.813	0.63	0.032	3.35	1.05	0.087	0.012	0.054	0.001	1.67	20.68	0.2	22.55	7725	0.3672	18.3141	-17.9469	NAF
NS0059	134	136	NS	E396564	396564	1	G	W	29.38	30.45	0.75	0.788	0.61	0.028	3.11	1.05	0.08	0.003	0.044	0.007	1.17	19.94	0.28	21.39	7727	0.0918	18.3141	-18.2223	NAF
NS0059	218	220	NS	E396607	396607	1	G	W	38.15	34.89	1.22	0.775	0.6	0.055	2.2	1.1	0.083	0.026	0.103	0.035	0.19	4.26	0.07	4.52	7769	0.7956	19.1862	-18.3906	NAF
NS0059	160	162	NS	E396577	396577	1	G	W	35.65	38.04	0.82	0.736	0.57	0.036	2.2	1.12	0.094	0.02	0.167	0.048	0.25	4.86	0.08	5.19	7740	0.612	19.53504	-18.92304	NAF
NS0059	144	146	NS	E396569	396569	1	G	W	30.71	31.61	0.97	0.671	0.52	0.039	2.73	1.12	0.075	0.012	0.298	0.009	1.26	16.76	0.35	18.37	7732	0.3672	19.53504	-19.16784	NAF
NS0059	74	76	NS	E396534	396534	1	G	W	32.82	37.64	1.23	0.671	0.52	0.052	2.84	1.18	0.11	0.032	0.229	0.074	0.51	7.75	0.28	8.54	7697	0.9792	20.58156	-19.60236	NAF
NS0059	108	110	NS	E396551	396551	1	G	W	29.63	31.15	0.98	0.555	0.43	0.047	2.99	1.19	0.118	0.022	0.113	0.013	1.06	18.87	0.29	20.22	7714	0.6732	20.75598	-20.08278	NAF
NS0059	244	246	NS	E396620	396620	1	G	W	34.57	39.63	0.96	0.865	0.67	0.042	2.09	1.19	0.097	0.02	0.142	0.026	0.2	4.61	0.23	5.04	7782	0.612	20.75598	-20.14398	NAF
NS0059	104	106	NS	E396549	396549	1	G	W	27.72	34.04	0.76	0.555	0.43	0.033	3.23	1.19	0.109	0.018	0.213	0.045	1.01	18.28	0.43	19.72	7712	0.5508	20.75598	-20.20518	NAF
NS0059	72	74	NS	E396533	396533	1	G	W	32.6	39.12	1.17	0.607	0.47	0.048	2.71	1.22	0.056	0.032	0.193	0.065	0.38	6.84	0.52	7.74	7696	0.9792	21.27924	-20.30004	NAF
NS0059	56	58	NS	E396525	396525	1	G	W	34.27	37.5	0.97	0.775	0.6	0.04	2.76	1.21	0.092	0.024	0.213	0.062	0.43	6.17	0.36	6.96	7688	0.7344	21.10482	-20.37042	NAF
NS0059	228	230	NS	E396612	396612	1	G	W	36.02	37.27	1.04	0.839	0.65	0.048	2.26	1.23	0.114	0.026	0.085	0.03	0.24	4.77	0.19	5.2	7774	0.7956	21.45366	-20.65806	NAF
NS0059	122	124	NS	E396558	396558	1	G	W	30.5	31.2	0.96	0.62	0.48	0.039	2.72	1.2	0.072	0.007	0.108	0.005	1.18	17.54	0.43	19.15	7721	0.2142	20.9304	-20.7162	NAF
NS0059	70	72	NS	E396532	396532	1	G	W	32.23	39.05	1.15	0.646	0.5	0.048	2.82	1.26	0.066	0.032	0.192	0.067	0.41	7.31	0.51	8.23	7695	0.9792	21.97692	-20.99772	NAF
NS0059	138	140	NS	E396566	396566	1	G	W	29.24	30.44	0.84	0.762	0.59	0.033	3.13	1.21	0.092	0.003	0.093	0.009	1.29	19.45	0.37	21.11	7729	0.0918	21.10482	-21.01302	NAF
NS0059	270	272	NS	E396633	396633	1	G	W	34.41	39.28	1.55	0.568	0.44	0.069	2.5	1.29	0.105	0.032	0.428	0.041	0.22	3.92	0.39	4.53	7795	0.9792	22.50018	-21.52098	NAF
NS0059	124	126	NS	E396559	396559	1	G	W	30.34	28.59	0.82	0.684	0.53	0.035	3.04	1.25	0.074	0.008	0.1	0.0005	1.4	19.6	0.5	21.5	7722	0.2448	21.8025	-21.5577	NAF
NS0059	136	138	NS	E396565	396565	1	G	W	29.13	30.92	0.83	0.749	0.58	0.032	3.08	1.25	0.115	0.003	0.094	0.006	1.28	19.29	0.34	20.91	7728	0.0918	21.8025	-21.7107	NAF
NS0059	226	228	NS	E396611	396611	1	G	W	38.62	33.85	1.26	0.749	0.58	0.054	2.31	1.29	0.099	0.025	0.097	0.028	0.21	4.21	0.18	4.6	7773	0.765	22.50018	-21.73518	NAF
NS0059	132	134	NS	E396563	396563	1	G	W	30.72	25.66	0.88	0.788	0.61	0.035	3.59	1.27	0.082	0.004	0.099	0.0005	1.28	21.48	0.43	23.19	7726	0.1224	22.15134	-22.02894	NAF
NS0059	142	144	NS	E396568	396568	1	G	W	32.26	28.7	1.08	0.658	0.51	0.047	2.86	1.29	0.074	0.007	0.308	0.028	1.19	16.92	0.47	18.58	7731	0.2142	22.50018	-22.28598	NAF
NS0059	224	226	NS	E396610	396610	1	G	W	30.3	45.63	0.96	0.775	0.6	0.043	2.15	1.33	0.068	0.023	0.084	0.021	0.22	4.52	0.56	5.3	7772	0.7038	23.19786	-22.49406	NAF
NS0059	106	108	NS	E396550	396550	1	G	W	28.43	31.57	0.9	0.529	0.41	0.036	3.44	1.32	0.088	0.008	0.16	0.029	1.03	19.31	0.59	20.93	7713	0.2448	23.02344	-22.77864	NAF
NS0059	246	248	NS	E396621	396621	1	G	W	36.05	37.21	1.07	0.826	0.64	0.047	2.16	1.39	0.079	0.021	0.14	0.025	0.16	4.3	0.5	4.96	7783	0.6426	24.24438	-23.60178	NAF
NS0059	140	142	NS	E396567	396567	1	G	W	30.58	29.49	1.1	0.684	0.53	0.044	2.99	1.4	0.102	0.01	0.16	0.032	1.19	18.12	0.57	19.88	7730	0.306	24.4188	-24.1128	NAF
NS0059	268	270	NS	E396632	396632	1	G	W	33.39	40.06	1.9	0.568	0.44	0.088	2.67	1.58	0.1	0.082	0.362	0.046	0.25	3.62	0.68	4.55	7794	2.5092	27.55836	-25.04916	NAF
NS0059	272	274	NS	E396634	396634	1	G	W	30.39	45.12	1.01	0.594	0.46	0.048	2.14	1.61	0.064	0.021	0.512	0.034	0.13	3.9	0.92	4.95	7796	0.6426	28.08162	-27.43902	NAF
NS0059	128	130	NS	E396561	396561	1	G	W	30.09	28.35	0.8	0.697	0.54	0.036	3.5	1.59	0.075	0.006	0.037	0.0005	1.13	19.64	0.78	21.55	7724	0.1836	27.73278	-27.54918	NAF
NS0059	126	128	NS	E396560	396560	1	G	W	30.34	26.89	0.94	0.581	0.45	0.039	3.61	1.61	0.066	0.005	0.064	0.0005	1.71	19.75	0.87	22.33	7723	0.153	28.08162	-27.92862	NAF
NS0059	220	222	NS	E396608	396608	1	G	W	33.17	40.64	0.91	0.852	0.66	0.039	2.16	1.71	0.097	0.022	0.083	0.026	0.21	4.47	0.81	5.49	7770	0.6732	29.82582	-29.15262	NAF
NS0059	274	276	NS	E396635	396635	1	G	W	30.83	43.31	1.08	0.736	0.57	0.05	2.28	1.82	0.077	0.018	0.627	0.042	0.18	4.41	1.1	5.69	7797	0.5508	31.74444	-31.19364	NAC
NS0059	276	278	NS	E396636	396636	1	G	W	24.44	45.96	3.06	0.633	0.49	0.138	4.17	2.07	0.196	0.137	0.463	0.067	0.42	6.19	1.18	7.79	7798	4.1922	36.10494	-31.91274	NAC
NS0059	280	282	NS	E396638	396638	1	G	W	28.54	49.63	0.83	0.336	0.26	0.037	1.72	2.3	0.067	0.019	0.139	0.031	0.11	2.11	1.53	3.75	7800	0.5814	40.1166	-39.5352	NAC
NS0059	278	280	NS	E396637	396637	1	G	W	20.16	58.42	0.68	0.361	0.28	0.034	1.92	3.45	0.063	0.022	0.145	0.034	0.14	2.36	3.07	5.57	7799	0.6732	60.1749	-59.5017	NAC
NS0060	182	184	NS	E396731	396731	1	G	W	26.5	43.8	2.93	0.503	0.39	0.128	3.77	1.46	0.069	3.56	1.36	0.097	0.2	1.42	4.72	6.34	7892	108.936	25.46532	83.47068	PAF(HC)
NS0060	360	362	NS	E396821	396821	1	G	W	31.37	40.74	2.43	0.503	0.39	0.117	3.23	0.7	0.08	2.09	0.815	0.096	0.06	1.82	2.84	4.72	7981	63.954	12.2094	51.7446	PAF(HC)
NS0060	40	42	NS	E396659	396659	1	G	W	33.86	36.64	2.44	0.8	0.62	0.109	2.91	0.75	0.128	0.942	1.1	0.042	0.32	3.94	1.48	5.74	7821	28.8252	13.0815	15.7437	PAF(HC)
NS0060	30	32	NS	E396654	396654	1	G	W	35.11	39.88	2.02	0.826	0.64	0.091	1.19	0.67	0.198	0.403	0.751	0.049	1.35	1.31	0.81	3.47	7816	12.3318	11.68614	0.64566	PAF(LC)
NS0060	362	364	NS	E396822	396822	1	G	W	31.87	40.43	2.96	0.658	0.51	0.138	3.81	0.37	0.033	0.231	1.26	0.122	0.34	3.72	0.44	4.5	7982	7.0686	6.45354	0.61506	PAF(LC)
NS0060	8	10	NS	E396643	396643	1	G	W	37.59	36.47	3.37	-0.0129	-0.01	0.149	0.04	0.02	0.036	0.009	0.009	0.013	5.09	1.06	0.18	6.33	7805	0.2754	0.34884	-0.07344	NAF
NS0060	6	8	NS	E396642	396642	1	G	W	34.74	39.33	3.52	0.026	0.02	0.23	0.06	0.03	0.019	0.011	0.012	0.013	5.67	1.05	0.19	6.91	7804	0.3366	0.52326	-0.18666	NAF
NS0060	4	6	NS	E396641	396641	1	G	W	30.51	45.15	3.55	-0.0129	-0.01	0.252	0.05	0.04	0.014	0.012	0.012	0.011	5.68	1.02	0.2	6.9	7803	0.3672	0.69768	-0.33048	NAF
NS0060	2	4	NS	E396640	396640	1	G	W	30.38	46.86	3.34	0.026	0.02	0.206	0.05	0.05	0.024	0.011	0.04	0.016	4.74	0.9	0.16	5.8	7802	0.3366	0.8721	-0.5355	NAF
NS0060	10	12	NS	E396644	396644	1	G	W	38.57	35.34	3.71	0.026	0.02	0.24	0.07	0.05	0.054	0.007	0.005	0.006	4.12	1.03	0.15	5.3	7806	0.2142	0.8721	-0.6579	NAF
NS0060	14	16	NS	E396646	396646	1	G	W	37.18	40.92	1.5	0.077	0.06	0.087	0.11	0.05	0.048	0.004	0.007	0.016	3.42	0.51	0	3.93	7808	0.1224	0.8721	-0.7497	NAF
NS0060	12	14	NS	E396645	396645	1	G	W	33.29	41.72	3.86	0.026	0.02	0.279	0.1	0.06	0.028	0.005	0.006	0.005	4.66	1.11	0.15	5.92	7807	0.153	1.04652	-0.89352	NAF
NS0060	16	18	NS	E396647	396647	1	G	W	37.61	41.03	1.22	0.077	0.06	0.059	0.12	0.06	0.066	0.004	0.022	0.016	2.92	0.45	-0.02	3.35	7809	0.1224	1.04652	-0.92412	NAF
NS0060	20	22	NS	E396649	396649	1	G	W	37.74	41.37	1.26	0.555	0.43	0.054	0.23	0.06	0.036	0.004	0.295	0.015	1.67	0.39	0.04	2.1	7811	0.1224	1.04652	-0.92412	NAF
NS0060	18	20	NS	E396648	396648	1	G	W	37.08	42.26	1.31	0.129	0.1	0.064	0.15	0.06	0.057	0.003	0.089	0.016	2.25	0.42	-0.04	2.63	7810	0.0918	1.04652	-0.95472	NAF
NS0060	26	28	NS	E396652	396652	1	G	W	38.39	40.05	1.19	0.736	0.57	0.056	0.27	0.08	0.029	0.002	0.462	0.016	1.54	0.34	0.11	1.99	7814	0.0612	1.39536	-1.33416	NAF
NS0060	0	2	NS	E396639	396639	1	G	W	27.43	45.28	7.19	0.026	0.02	0.494	0.11	0.11	0.021	0.016	0.05	0.022	5.05	1.81	0.22	7.08	7801	0.4896	1.91862	-1.42902	NAF
NS0060	24	26	NS	E396651	396651	1	G	W	37.04	41.17	1.56	0.788	0.61	0.063	0.36	0.09	0.033	0.003	0.477	0.023	1.68	0.47	0.13	2.28	7813	0.0918	1.56978	-1.47798	NAF
NS0060	22	24	NS	E396650	396650	1	G	W	36.49	41.68	1.86	0.697	0.54	0.083	0.41	0.1	0.031	0.003	0.54	0.021	1.68	0.52	0.12	2.32	7812	0.0918	1.7442	-1.6524	NAF
NS0060	28	30	NS	E396653	396653	1	G	W	35.11	43.4	1.65	0.878	0.68	0.071	0.39	0.13	0.028	0.002	0.67	0.039	1.67	0.45	0.05	2.17	7815	0.0612	2.26746	-2.20626	NAF
NS0060	176	178	NS	E396728	396728	1	G	W	29.09	48.6	1.19	0.374	0.29	0.062	2.08	1.59	0.111	0.815	0.564	0.066	-0.01	1.35	1.33	2.67	7889	24.939	27.73278	-2.79378	NAF
NS0060	174	176	NS	E396727	396727	1	G	W	26.91	49.01	1.61	0.452	0.35	0.07	2.55	1.85	0.086	0.946	0.75	0.078	0.01	1.96	1.53	3.5	7888	28.9476	32.2677	-3.3201	NAF
NS0060	36	38	NS	E396657	396657	1	G	W	36.05	35.5	1.9	0.775	0.6	0.081	2.38	1.06	0.202	0.48	0.871	0.032	0.41	3.86	0.7	4.97	7819	14.688	18.48852	-3.80052	NAF
NS0060	142	144	NS	E396711	396711	1	G	W	31.73	40.01	3.26	0.555	0.43	0.149	3.74	0.95	0.072	0.406	0.947	0.106	0.35	2.97	0.83	4.15	7872	12.4236	16.5699	-4.1463	NAF
NS0060	196	198	NS	E396738	396738	1	G	W	30.79	39.74	2.2	0.826	0.64	0.102	3.42	1.51	0.149	0.691	1.15	0.087	0.25	4.36	1.33	5.94	7899	21.1446	26.33742	-5.19282	NAF
NS0060	58	60	NS	E396668	396668	1	G	W	31.13	37.86	4.36	0.607	0.47	0.203	4.65	0.78	0.083	0.269	1.1	0.099	0.57	3.71	0.67	4.95	7830	8.2314	13.60476	-5.37336	NAF
NS0060	180	182	NS	E396730	396730	1	G	W	26.93	53.06	0.94	0.336	0.26	0.047	1.73	1.66	0.107	0.669	0.416	0.067	-0.02	1.23	1.15	2.36	7891	20.4714	28.95372	-8.48232	NAF
NS0060	46	48	NS	E396662	396662	1	G	W	33.17	39.2	2.76	0.646	0.5	0.118	3.13	0.73	0.038	0.108	1.07	0.056	0.37	3.75	0.23	4.35	7824	3.3048	12.73266	-9.42786	NAF
NS0060	32	34	NS	E396655	396655	1	G	W	36.13	37.99	1.78	0.684	0.53	0.082	2.05	0.7	0.124	0.062	0.712	0.036	0.39	3.8	-0.09	4.1	7817	1.8972	12.2094	-10.3122	NAF
NS0060	296	298	NS	E396788	396788	1	G	W	40.73	31.47	1.76	0.62	0.48	0.079	2.81	0.77	0.109	0.04	0.417	0.066	0.2	3.25	-0.17	3.28	7949	1.224	13.43034	-12.20634	NAF
NS0060	396	398	NS	E396839	396839	1	G	W	39.12	34.24	1.17	0.788	0.61	0.05	2.44	0.88	0.093	0.098	0.8	0.079	0.13	3.04	0.13	3.3	7999	2.9988	15.34896	-12.35016	NAF
NS0060	44	46	NS	E396661	396661	1	G	W	37.9	35.29	1.65	0.658	0.51	0.075	2.29	0.93	0.115	0.122	0.743	0.035	0.22	3.37	0.02	3.61	7823	3.7332	16.22106	-12.48786	NAF
NS0060	98	100	NS	E396688	396688	1	G	W	37.68	35.16	1.66	0.684	0.53	0.075	2.54	0.9	0.105	0.097	0.696	0.079	0.24	3.48	0.09	3.81	7850	2.9682	15.6978	-12.7296	NAF
NS0060	198	200	NS	E396739	396739	1	G	W	31.81	42.93	1.41	0.671	0.52	0.067	2.55	1.16	0.077	0.239	0.718	0.058	0.15	3.49	0.53	4.17	7900	7.3134	20.23272	-12.91932	NAF
NS0060	96	98	NS	E396687	396687	1	G	W	34.94	37.07	1.84	0.762	0.59	0.08	2.74	1.17	0.14	0.219	0.849	0.077	0.24	3.99	0.39	4.62	7849	6.7014	20.40714	-13.70574	NAF
NS0060	388	390	NS	E396835	396835	1	G	W	37.04	36.39	1.59	0.646	0.5	0.07	2.86	0.85	0.1	0.028	1.07	0.074	0.09	2.99	0.07	3.15	7995	0.8568	14.8257	-13.9689	NAF
NS0060	136	138	NS	E396708	396708	1	G	W	34.87	37.94	1.26	0.684	0.53	0.057	2.4	1.76	0.149	0.531	0.566	0.06	0.13	3.42	0.9	4.45	7869	16.2486	30.69792	-14.44932	NAF
NS0060	56	58	NS	E396667	396667	1	G	W	34.97	37.46	2.06	0.684	0.53	0.094	2.84	1.05	0.076	0.102	0.813	0.069	0.39	3.6	0.33	4.32	7829	3.1212	18.3141	-15.1929	NAF
NS0060	114	116	NS	E396696	396696	1	G	W	34.2	37.85	2.83	0.568	0.44	0.127	3.35	1	0.1	0.073	0.859	0.096	0.42	3.33	0.26	4.01	7858	2.2338	17.442	-15.2082	NAF
NS0060	214	216	NS	E396747	396747	1	G	W	32.4	41.82	2.14	0.555	0.43	0.101	3.1	0.99	0.038	0.063	0.723	0.063	0.25	3.1	0.51	3.86	7908	1.9278	17.26758	-15.33978	NAF
NS0060	380	382	NS	E396831	396831	1	G	W	39.34	33.57	1.14	0.8	0.62	0.054	2.57	0.93	0.087	0.026	0.81	0.073	0.11	3.22	0.11	3.44	7991	0.7956	16.22106	-15.42546	NAF
NS0060	398	400	NS	E396840	396840	1	G	W	37.8	34.6	1.23	0.878	0.68	0.055	2.72	1	0.109	0.023	0.849	0.073	0.16	3.82	0.21	4.19	8000	0.7038	17.442	-16.7382	NAF
NS0060	48	50	NS	E396663	396663	1	G	W	34.1	38.6	1.81	0.788	0.61	0.081	2.78	1.05	0.041	0.047	0.82	0.047	0.36	4.21	0.45	5.02	7825	1.4382	18.3141	-16.8759	NAF
NS0060	94	96	NS	E396686	396686	1	G	W	35.56	37.23	1.91	0.633	0.49	0.086	2.73	1.25	0.115	0.154	0.749	0.084	0.24	3.26	0.45	3.95	7848	4.7124	21.8025	-17.0901	NAF
NS0060	222	224	NS	E396751	396751	1	G	W	34.45	38.72	2.09	0.607	0.47	0.089	2.98	1.08	0.078	0.046	0.906	0.061	0.2	3.33	0.42	3.95	7912	1.4076	18.83736	-17.42976	NAF
NS0060	200	202	NS	E396740	396740	1	G	W	36.84	36.63	1.14	0.736	0.57	0.054	2.33	1.07	0.095	0.024	0.637	0.06	0.19	3.72	0.22	4.13	7901	0.7344	18.66294	-17.92854	NAF
NS0060	312	314	NS	E396796	396796	1	G	W	36.55	36.35	1.86	0.62	0.48	0.107	2.76	1.15	0.205	0.058	0.731	0.088	0.22	3.13	0.09	3.44	7957	1.7748	20.0583	-18.2835	NAF
NS0060	256	258	NS	E396768	396768	1	G	W	38.19	34.33	1.5	0.736	0.57	0.075	2.44	1.18	0.103	0.075	0.812	0.064	0.17	3.26	0.26	3.69	7929	2.295	20.58156	-18.28656	NAF
NS0060	38	40	NS	E396658	396658	1	G	W	33.24	39.85	1.51	0.775	0.6	0.071	2.19	1.31	0.13	0.148	0.65	0.021	0.46	4.21	0.48	5.15	7820	4.5288	22.84902	-18.32022	NAF
NS0060	394	396	NS	E396838	396838	1	G	W	39.23	34.11	1.21	0.671	0.52	0.06	2.38	1.11	0.091	0.033	0.834	0.082	0.11	2.49	0.25	2.85	7998	1.0098	19.36062	-18.35082	NAF
NS0060	358	360	NS	E396820	396820	1	G	W	38.42	34.73	1.11	0.736	0.57	0.054	2.37	1.12	0.204	0.032	0.525	0.067	0.11	3.64	-0.04	3.71	7980	0.9792	19.53504	-18.55584	NAF
NS0060	166	168	NS	E396723	396723	1	G	W	33.36	39.62	2.5	0.555	0.43	0.11	3.26	1.18	0.097	0.059	0.911	0.082	0.28	2.92	0.5	3.7	7884	1.8054	20.58156	-18.77616	NAF
NS0060	234	236	NS	E396757	396757	1	G	W	37.67	36.34	1.31	0.684	0.53	0.067	2.33	1.16	0.083	0.042	0.637	0.056	0.16	3.02	0.29	3.47	7918	1.2852	20.23272	-18.94752	NAF
NS0060	216	218	NS	E396748	396748	1	G	W	37.02	36.72	1.28	0.646	0.5	0.061	2.33	1.16	0.12	0.03	0.646	0.042	0.13	3.21	0.24	3.58	7909	0.918	20.23272	-19.31472	NAF
NS0060	268	270	NS	E396774	396774	1	G	W	39.92	31.5	2.13	0.594	0.46	0.096	2.59	1.21	0.216	0.055	0.925	0.077	0.24	2.97	-0.04	3.17	7935	1.683	21.10482	-19.42182	NAF
NS0060	330	332	NS	E396806	396806	1	G	W	36.68	35.79	2.02	0.646	0.5	0.089	2.75	1.23	0.073	0.064	0.765	0.075	0.23	3.07	0.5	3.8	7966	1.9584	21.45366	-19.49526	NAF
NS0060	204	206	NS	E396742	396742	1	G	W	37.54	35.37	1.29	0.71	0.55	0.059	2.41	1.17	0.109	0.027	0.702	0.065	0.17	3.66	0.28	4.11	7903	0.8262	20.40714	-19.58094	NAF
NS0060	70	72	NS	E396674	396674	1	G	W	36.48	37.34	1.33	0.723	0.56	0.058	2.21	1.2	0.097	0.041	0.677	0.057	0.15	3.25	0.36	3.76	7836	1.2546	20.9304	-19.6758	NAF
NS0060	62	64	NS	E396670	396670	1	G	W	32.28	42.22	2.12	0.581	0.45	0.091	2.68	1.33	0.096	0.109	0.843	0.073	0.29	2.77	0.6	3.66	7832	3.3354	23.19786	-19.86246	NAF
NS0060	352	354	NS	E396817	396817	1	G	W	36.13	37.77	1.42	0.607	0.47	0.067	2.51	1.22	0.138	0.037	0.542	0.063	0.21	3.33	0.32	3.86	7977	1.1322	21.27924	-20.14704	NAF
NS0060	208	210	NS	E396744	396744	1	G	W	37.44	36.11	1.14	0.736	0.57	0.056	2.27	1.22	0.107	0.026	0.635	0.057	0.13	3.45	0.28	3.86	7905	0.7956	21.27924	-20.48364	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0060	106	108	NS	E396692	396692	1	G	W	39.87	33.01	1.02	0.762	0.59	0.048	2.05	1.22	0.147	0.02	0.449	0.045	0.11	3.77	0.09	3.97	7854	0.612	21.27924	-20.66724	NAF
NS0060	260	262	NS	E396770	396770	1	G	W	35.25	36.7	1.95	0.684	0.53	0.086	2.75	1.43	0.074	0.127	1.02	0.088	0.23	3.37	0.68	4.28	7931	3.8862	24.94206	-21.05586	NAF
NS0060	34	36	NS	E396656	396656	1	G	W	35.33	37.09	1.52	0.813	0.63	0.07	2.31	1.34	0.117	0.075	0.645	0.031	0.42	4.58	0.36	5.36	7818	2.295	23.37228	-21.07728	NAF
NS0060	80	82	NS	E396679	396679	1	G	W	38.43	34.21	1.21	0.775	0.6	0.055	2.29	1.26	0.113	0.026	0.51	0.058	0.19	3.61	0.32	4.12	7841	0.7956	21.97692	-21.18132	NAF
NS0060	324	326	NS	E396803	396803	1	G	W	40.61	32.41	1.17	0.697	0.54	0.055	1.87	1.27	0.127	0.021	0.698	0.045	0.12	2.66	0.22	3	7963	0.6426	22.15134	-21.50874	NAF
NS0060	140	142	NS	E396710	396710	1	G	W	34.92	37.28	1.72	0.736	0.57	0.079	2.87	1.35	0.114	0.06	0.717	0.086	0.3	4.03	0.57	4.9	7871	1.836	23.5467	-21.7107	NAF
NS0060	378	380	NS	E396830	396830	1	G	W	38.82	34.38	1.1	0.697	0.54	0.05	2.42	1.3	0.093	0.026	0.799	0.058	0.06	2.74	0.51	3.31	7990	0.7956	22.6746	-21.879	NAF
NS0060	270	272	NS	E396775	396775	1	G	W	40.07	31.57	1.43	0.658	0.51	0.073	2.43	1.33	0.122	0.033	0.685	0.072	0.24	3.2	0.33	3.77	7936	1.0098	23.19786	-22.18806	NAF
NS0060	100	102	NS	E396689	396689	1	G	W	33.22	40.29	1.69	0.684	0.53	0.075	2.63	1.49	0.105	0.104	0.696	0.078	0.21	3.48	0.73	4.42	7851	3.1824	25.98858	-22.80618	NAF
NS0060	226	228	NS	E396753	396753	1	G	W	37.37	34.84	1.64	0.71	0.55	0.078	2.6	1.45	0.101	0.07	0.851	0.061	0.19	3.22	0.57	3.98	7914	2.142	25.2909	-23.1489	NAF
NS0060	92	94	NS	E396685	396685	1	G	W	37.61	35.46	1.4	0.646	0.5	0.062	2.36	1.38	0.122	0.028	0.574	0.069	0.15	3.36	0.46	3.97	7847	0.8568	24.06996	-23.21316	NAF
NS0060	108	110	NS	E396693	396693	1	G	W	36.84	36.31	1.17	0.736	0.57	0.058	2.23	1.39	0.104	0.027	0.503	0.059	0.18	3.62	0.52	4.32	7855	0.8262	24.24438	-23.41818	NAF
NS0060	300	302	NS	E396790	396790	1	G	W	39.89	33.19	1.35	0.646	0.5	0.058	2.06	1.41	0.149	0.033	0.683	0.06	0.09	2.58	0.28	2.95	7951	1.0098	24.59322	-23.58342	NAF
NS0060	42	44	NS	E396660	396660	1	G	W	35.88	37.42	1.27	0.762	0.59	0.064	1.93	1.49	0.128	0.066	0.63	0.025	0.34	3.74	0.43	4.51	7822	2.0196	25.98858	-23.96898	NAF
NS0060	382	384	NS	E396832	396832	1	G	W	37.72	34.92	1	0.878	0.68	0.047	2.58	1.43	0.105	0.03	0.719	0.063	0.1	3.42	0.57	4.09	7992	0.918	24.94206	-24.02406	NAF
NS0060	90	92	NS	E396684	396684	1	G	W	35.58	38.35	1.07	0.684	0.53	0.051	2.18	1.44	0.113	0.026	0.445	0.055	0.19	3.81	0.5	4.5	7846	0.7956	25.11648	-24.32088	NAF
NS0060	52	54	NS	E396665	396665	1	G	W	35.04	38.35	1.47	0.736	0.57	0.064	2.26	1.48	0.112	0.044	0.799	0.055	0.24	3.41	0.57	4.22	7827	1.3464	25.81416	-24.46776	NAF
NS0060	76	78	NS	E396677	396677	1	G	W	34.66	39.1	1.48	0.697	0.54	0.067	2.4	1.53	0.115	0.072	0.686	0.054	0.23	3.21	0.66	4.1	7839	2.2032	26.68626	-24.48306	NAF
NS0060	202	204	NS	E396741	396741	1	G	W	36.83	35.89	1.16	0.736	0.57	0.056	2.44	1.45	0.106	0.023	0.66	0.058	0.17	3.76	0.53	4.46	7902	0.7038	25.2909	-24.5871	NAF
NS0060	178	180	NS	E396729	396729	1	G	W	27.2	49.98	1.62	0.439	0.34	0.076	2.65	1.5	0.132	0.051	0.645	0.088	0.28	2.53	0.79	3.6	7890	1.5606	26.163	-24.6024	NAF
NS0060	224	226	NS	E396752	396752	1	G	W	38.98	34.15	1.16	0.646	0.5	0.058	2.25	1.46	0.086	0.026	0.636	0.051	0.09	2.83	0.61	3.53	7913	0.7956	25.46532	-24.66972	NAF
NS0060	218	220	NS	E396749	396749	1	G	W	37.26	38.06	0.65	0.736	0.57	0.033	1.7	1.44	0.091	0.014	0.448	0.027	0.04	2.9	0.5	3.44	7910	0.4284	25.11648	-24.68808	NAF
NS0060	186	188	NS	E396733	396733	1	G	W	32.38	41.03	1.58	0.646	0.5	0.069	2.86	1.51	0.125	0.05	0.698	0.082	0.25	3.76	0.71	4.72	7894	1.53	26.33742	-24.80742	NAF
NS0060	230	232	NS	E396755	396755	1	G	W	39.01	33.77	0.99	0.813	0.63	0.05	2.17	1.47	0.06	0.023	0.618	0.043	0.1	3.27	0.69	4.06	7916	0.7038	25.63974	-24.93594	NAF
NS0060	86	88	NS	E396682	396682	1	G	W	35.99	38.07	1.05	0.684	0.53	0.05	2.2	1.49	0.11	0.024	0.486	0.055	0.15	3.27	0.68	4.1	7844	0.7344	25.98858	-25.25418	NAF
NS0060	276	278	NS	E396778	396778	1	G	W	36.73	36.92	1.13	0.723	0.56	0.047	2.01	1.51	0.12	0.031	0.731	0.065	0.18	3.1	0.63	3.91	7939	0.9486	26.33742	-25.38882	NAF
NS0060	304	306	NS	E396792	396792	1	G	W	38.78	34.14	1.1	0.788	0.61	0.049	1.91	1.49	0.113	0.019	0.737	0.045	0.07	3.11	0.57	3.75	7953	0.5814	25.98858	-25.40718	NAF
NS0060	264	266	NS	E396772	396772	1	G	W	36.27	37.01	1.14	0.762	0.59	0.051	2.17	1.53	0.085	0.041	0.752	0.042	0.12	3.45	0.76	4.33	7933	1.2546	26.68626	-25.43166	NAF
NS0060	344	346	NS	E396813	396813	1	G	W	35.26	37.05	1.4	0.762	0.59	0.068	2.63	1.62	0.133	0.09	0.614	0.061	0.25	3.99	0.68	4.92	7973	2.754	28.25604	-25.50204	NAF
NS0060	206	208	NS	E396743	396743	1	G	W	37.55	34.92	1.15	0.775	0.6	0.055	2.42	1.51	0.113	0.024	0.641	0.045	0.15	3.81	0.53	4.49	7904	0.7344	26.33742	-25.60302	NAF
NS0060	74	76	NS	E396676	396676	1	G	W	35.93	36.52	1.24	0.775	0.6	0.054	2.35	1.79	0.121	0.172	0.602	0.051	0.19	3.43	0.88	4.5	7838	5.2632	31.22118	-25.95798	NAF
NS0060	258	260	NS	E396769	396769	1	G	W	36.12	36.28	1.57	0.697	0.54	0.074	2.69	1.6	0.109	0.043	0.754	0.068	0.19	3.35	0.82	4.36	7930	1.3158	27.9072	-26.5914	NAF
NS0060	138	140	NS	E396709	396709	1	G	W	35.56	35.65	1.5	0.775	0.6	0.074	2.99	1.61	0.115	0.047	0.565	0.069	0.32	4.6	0.84	5.76	7870	1.4382	28.08162	-26.64342	NAF
NS0060	78	80	NS	E396678	396678	1	G	W	35.25	38.21	1.42	0.697	0.54	0.063	2.5	1.62	0.107	0.035	0.565	0.058	0.24	3.19	0.8	4.23	7840	1.071	28.25604	-27.18504	NAF
NS0060	390	392	NS	E396836	396836	1	G	W	37.03	36.64	1.27	0.607	0.47	0.058	2.5	1.61	0.084	0.021	0.884	0.063	0.08	2.29	0.9	3.27	7996	0.6426	28.08162	-27.43902	NAF
NS0060	346	348	NS	E396814	396814	1	G	W	35.4	37.14	1.48	0.646	0.5	0.069	2.68	1.64	0.114	0.038	0.581	0.077	0.23	3.51	0.85	4.59	7974	1.1628	28.60488	-27.44208	NAF
NS0060	160	162	NS	E396720	396720	1	G	W	34.63	39.01	1.58	0.62	0.48	0.073	2.46	1.67	0.127	0.051	0.818	0.08	0.17	2.78	0.77	3.72	7881	1.5606	29.12814	-27.56754	NAF
NS0060	384	386	NS	E396833	396833	1	G	W	37.06	35.76	1.16	0.762	0.59	0.051	2.52	1.63	0.095	0.028	0.801	0.075	0.1	2.79	0.88	3.77	7993	0.8568	28.43046	-27.57366	NAF
NS0060	368	370	NS	E396825	396825	1	G	W	38.72	32.86	1.23	0.878	0.68	0.054	2.44	1.69	0.141	0.062	0.789	0.071	0.1	3.28	0.7	4.08	7985	1.8972	29.47698	-27.57978	NAF
NS0060	386	388	NS	E396834	396834	1	G	W	36.72	36.77	0.96	0.736	0.57	0.043	2.37	1.63	0.082	0.023	0.674	0.065	0.05	2.8	0.93	3.78	7994	0.7038	28.43046	-27.72666	NAF
NS0060	318	320	NS	E396799	396799	1	G	W	33.31	38.52	2.38	0.671	0.52	0.114	3.04	1.74	0.169	0.084	0.959	0.083	0.28	3.14	0.82	4.24	7960	2.5704	30.34908	-27.77868	NAF
NS0060	50	52	NS	E396664	396664	1	G	W	34.1	38.86	1.45	0.749	0.58	0.065	2.41	1.67	0.098	0.039	0.727	0.042	0.27	3.64	0.86	4.77	7826	1.1934	29.12814	-27.93474	NAF
NS0060	72	74	NS	E396675	396675	1	G	W	33.32	37.96	1.58	0.826	0.64	0.072	2.66	2.18	0.179	0.329	0.765	0.065	0.2	3.64	1.17	5.01	7837	10.0674	38.02356	-27.95616	NAF
NS0060	232	234	NS	E396756	396756	1	G	W	38.53	32.78	1.26	0.826	0.64	0.092	2.38	1.68	0.283	0.042	0.728	0.048	0.14	3.73	0.28	4.15	7917	1.2852	29.30256	-28.01736	NAF
NS0060	250	252	NS	E396765	396765	1	G	W	39.95	33.03	0.98	0.684	0.53	0.048	1.88	1.64	0.115	0.019	0.62	0.052	0.05	2.57	0.63	3.25	7926	0.5814	28.60488	-28.02348	NAF
NS0060	88	90	NS	E396683	396683	1	G	W	33.88	40.2	1.05	0.736	0.57	0.049	2.27	1.69	0.104	0.037	0.45	0.056	0.18	3.55	0.87	4.6	7845	1.1322	29.47698	-28.34478	NAF
NS0060	242	244	NS	E396761	396761	1	G	W	39.4	34.81	0.74	0.684	0.53	0.038	1.71	1.65	0.115	0.014	0.437	0.042	0.07	2.51	0.66	3.24	7922	0.4284	28.7793	-28.3509	NAF
NS0060	144	146	NS	E396712	396712	1	G	W	36.48	37.11	0.88	0.813	0.63	0.042	1.99	1.68	0.101	0.029	0.481	0.038	0.1	3.45	0.86	4.41	7873	0.8874	29.30256	-28.41516	NAF
NS0060	336	338	NS	E396809	396809	1	G	W	35.5	36.98	1.67	0.62	0.48	0.073	2.51	1.72	0.099	0.051	0.568	0.056	0.95	2.93	0.84	4.72	7969	1.5606	30.00024	-28.43964	NAF
NS0060	112	114	NS	E396695	396695	1	G	W	36.17	37.05	1.27	0.71	0.55	0.058	2.4	1.71	0.106	0.034	0.394	0.051	0.18	3.49	0.81	4.48	7857	1.0404	29.82582	-28.78542	NAF
NS0060	266	268	NS	E396773	396773	1	G	W	35.88	37.74	0.95	0.762	0.59	0.04	2.02	1.69	0.102	0.019	0.606	0.051	0.14	3.25	0.85	4.24	7934	0.5814	29.47698	-28.89558	NAF
NS0060	194	196	NS	E396737	396737	1	G	W	35.19	40.61	0.82	0.594	0.46	0.038	1.87	1.7	0.071	0.019	0.457	0.043	0.04	2.27	0.95	3.26	7898	0.5814	29.6514	-29.07	NAF
NS0060	248	250	NS	E396764	396764	1	G	W	39.81	33.02	0.99	0.736	0.57	0.047	1.98	1.72	0.117	0.017	0.622	0.047	0.06	2.77	0.74	3.57	7925	0.5202	30.00024	-29.48004	NAF
NS0060	236	238	NS	E396758	396758	1	G	W	40.02	32.25	0.91	0.697	0.54	0.05	2.09	1.76	0.106	0.024	0.49	0.045	0.13	2.79	0.95	3.87	7919	0.7344	30.69792	-29.96352	NAF
NS0060	64	66	NS	E396671	396671	1	G	W	34.77	37.34	1.58	0.826	0.64	0.073	2.64	1.83	0.113	0.062	0.714	0.057	0.24	3.73	1	4.97	7833	1.8972	31.91886	-30.02166	NAC
NS0060	322	324	NS	E396802	396802	1	G	W	38.25	35.42	1.09	0.684	0.53	0.05	1.89	1.77	0.136	0.027	0.575	0.049	0.1	2.55	0.77	3.42	7962	0.8262	30.87234	-30.04614	NAC
NS0060	146	148	NS	E396713	396713	1	G	W	35.61	38.91	0.96	0.671	0.52	0.045	1.84	1.85	0.098	0.068	0.504	0.035	0.09	2.66	0.95	3.7	7874	2.0808	32.2677	-30.1869	NAC
NS0060	364	366	NS	E396823	396823	1	G	W	36.87	36.61	1.06	0.736	0.57	0.049	2.11	1.77	0.07	0.021	0.706	0.05	0.07	2.61	1.07	3.75	7983	0.6426	30.87234	-30.22974	NAC
NS0060	272	274	NS	E396776	396776	1	G	W	35.08	38.57	0.98	0.749	0.58	0.045	2.11	1.78	0.091	0.026	0.572	0.051	0.17	3.53	1	4.7	7937	0.7956	31.04676	-30.25116	NAC
NS0060	102	104	NS	E396690	396690	1	G	W	31.63	42.62	1.19	0.762	0.59	0.056	2.34	1.82	0.082	0.043	0.556	0.074	0.25	3.62	1.33	5.2	7852	1.3158	31.74444	-30.42864	NAC
NS0060	274	276	NS	E396777	396777	1	G	W	36.24	37.73	0.89	0.762	0.59	0.043	2	1.8	0.098	0.025	0.547	0.054	0.16	3.2	0.92	4.28	7938	0.765	31.3956	-30.6306	NAC
NS0060	150	152	NS	E396715	396715	1	G	W	38.15	35.25	0.97	0.736	0.57	0.042	1.88	1.79	0.119	0.014	0.626	0.052	0.09	2.76	0.92	3.77	7876	0.4284	31.22118	-30.79278	NAC
NS0060	82	84	NS	E396680	396680	1	G	W	35.85	37.27	1.15	0.762	0.59	0.055	2.24	1.81	0.097	0.025	0.487	0.055	0.25	3.45	1.02	4.72	7842	0.765	31.57002	-30.80502	NAC
NS0060	228	230	NS	E396754	396754	1	G	W	35.21	37.49	1.22	0.788	0.61	0.056	2.33	1.81	0.121	0.025	0.701	0.047	0.14	3.52	1.22	4.88	7915	0.765	31.57002	-30.80502	NAC
NS0060	104	106	NS	E396691	396691	1	G	W	35.7	37.38	1.03	0.788	0.61	0.048	2.26	1.81	0.1	0.024	0.466	0.047	0.15	3.72	1.02	4.89	7853	0.7344	31.57002	-30.83562	NAC
NS0060	168	170	NS	E396724	396724	1	G	W	33.37	39.51	1.53	0.491	0.38	0.069	2.37	1.86	0.109	0.051	0.654	0.061	1.89	2.28	0.95	5.12	7885	1.5606	32.44212	-30.88152	NAC
NS0060	332	334	NS	E396807	396807	1	G	W	36.3	37.71	1.17	0.646	0.5	0.052	2.04	1.82	0.098	0.024	0.599	0.057	0.14	2.53	1.03	3.7	7967	0.7344	31.74444	-31.01004	NAC
NS0060	110	112	NS	E396694	396694	1	G	W	34.18	40.65	1.03	0.658	0.51	0.048	2.05	1.82	0.095	0.021	0.372	0.041	0.14	2.96	1.05	4.15	7856	0.6426	31.74444	-31.10184	NAC
NS0060	282	284	NS	E396781	396781	1	G	W	30.11	45.64	1.09	0.71	0.55	0.05	2.03	1.83	0.091	0.024	0.616	0.065	0.19	3.17	1.19	4.55	7942	0.7344	31.91886	-31.18446	NAC
NS0060	290	292	NS	E396785	396785	1	G	W	35.24	39.75	0.84	0.71	0.55	0.039	1.83	1.83	0.11	0.024	0.369	0.048	0.07	2.82	0.93	3.82	7946	0.7344	31.91886	-31.18446	NAC
NS0060	66	68	NS	E396672	396672	1	G	W	32.52	40.67	1.66	0.736	0.57	0.073	2.57	1.91	0.1	0.061	0.693	0.068	0.26	3.14	1.21	4.61	7834	1.8666	33.31422	-31.44762	NAC
NS0060	60	62	NS	E396669	396669	1	G	W	31.55	41.65	1.71	0.71	0.55	0.08	2.65	1.94	0.09	0.077	0.725	0.061	0.22	3.19	1.29	4.7	7831	2.3562	33.83748	-31.48128	NAC
NS0060	288	290	NS	E396784	396784	1	G	W	37.01	36.62	1.21	0.62	0.48	0.05	2.02	1.88	0.121	0.029	0.575	0.06	0.09	2.52	0.98	3.59	7945	0.8874	32.79096	-31.90356	NAC
NS0060	246	248	NS	E396763	396763	1	G	W	35.78	37.61	0.88	0.8	0.62	0.039	1.96	1.89	0.09	0.018	0.562	0.045	0.08	3.11	1.26	4.45	7924	0.5508	32.96538	-32.41458	NAC
NS0060	164	166	NS	E396722	396722	1	G	W	33.98	38.57	1.54	0.697	0.54	0.073	2.66	1.95	0.109	0.047	0.724	0.064	0.19	3.27	1.15	4.61	7883	1.4382	34.0119	-32.5737	NAC
NS0060	152	154	NS	E396716	396716	1	G	W	37.37	35.73	0.99	0.762	0.59	0.045	1.95	1.9	0.126	0.014	0.596	0.042	0.12	2.99	0.97	4.08	7877	0.4284	33.1398	-32.7114	NAC
NS0060	314	316	NS	E396797	396797	1	G	W	37	35.08	1.31	0.762	0.59	0.067	2.4	1.94	0.123	0.036	0.738	0.063	0.11	3.11	1.14	4.36	7958	1.1016	33.83748	-32.73588	NAC
NS0060	342	344	NS	E396812	396812	1	G	W	34.29	39.08	1.23	0.684	0.53	0.058	2.32	1.98	0.096	0.049	0.614	0.064	0.21	3.16	1.23	4.6	7972	1.4994	34.53516	-33.03576	NAC
NS0060	356	358	NS	E396819	396819	1	G	W	34.42	39.91	1	0.62	0.48	0.048	2.18	2	0.097	0.058	0.354	0.046	0.09	2.95	1.16	4.2	7979	1.7748	34.884	-33.1092	NAC
NS0060	126	128	NS	E396703	396703	1	G	W	35	37.88	1.19	0.697	0.54	0.052	2.17	1.99	0.084	0.048	0.556	0.063	0.53	3.24	1.23	5	7864	1.4688	34.70958	-33.24078	NAC
NS0060	370	372	NS	E396826	396826	1	G	W	36.9	36.37	0.94	0.775	0.6	0.044	2.15	1.96	0.085	0.026	0.667	0.059	0.06	2.6	1.19	3.85	7986	0.7956	34.18632	-33.39072	NAC
NS0060	170	172	NS	E396725	396725	1	G	W	33.4	39.08	1.46	0.671	0.52	0.065	2.7	2.02	0.114	0.059	0.753	0.063	0.18	3.22	1.33	4.73	7886	1.8054	35.23284	-33.42744	NAC
NS0060	316	318	NS	E396798	396798	1	G	W	37.72	34.37	1.07	0.813	0.63	0.05	2.26	1.96	0.074	0.022	0.659	0.057	0.1	3.23	1.26	4.59	7959	0.6732	34.18632	-33.51312	NAC
NS0060	124	126	NS	E396702	396702	1	G	W	35.98	36.24	1.17	0.71	0.55	0.051	2.27	2.03	0.095	0.06	0.618	0.07	0.36	3.29	1.21	4.86	7863	1.836	35.40726	-33.57126	NAC
NS0060	280	282	NS	E396780	396780	1	G	W	32.91	41.68	0.99	0.736	0.57	0.046	2.01	1.96	0.105	0.02	0.561	0.05	0.15	3.17	1.2	4.52	7941	0.612	34.18632	-33.57432	NAC
NS0060	350	352	NS	E396816	396816	1	G	W	35.56	38.69	0.88	0.646	0.5	0.039	2.08	1.96	0.101	0.018	0.199	0.044	0.07	2.96	1.23	4.26	7976	0.5508	34.18632	-33.63552	NAC
NS0060	220	222	NS	E396750	396750	1	G	W	37.06	36.77	0.78	0.671	0.52	0.041	1.96	1.96	0.083	0.015	0.446	0.028	0	2.63	1.21	3.84	7911	0.459	34.18632	-33.72732	NAC
NS0060	308	310	NS	E396794	396794	1	G	W	37.93	35.22	0.95	0.775	0.6	0.045	1.89	1.97	0.091	0.016	0.639	0.045	0.04	2.74	1.2	3.98	7955	0.4896	34.36074	-33.87114	NAC
NS0060	154	156	NS	E396717	396717	1	G	W	36	38.78	0.83	0.684	0.53	0.036	1.78	1.97	0.13	0.013	0.484	0.036	0.08	2.56	1.02	3.66	7878	0.3978	34.36074	-33.96294	NAC
NS0060	240	242	NS	E396760	396760	1	G	W	30.97	45.52	0.73	0.684	0.53	0.031	1.73	1.98	0.112	0.012	0.473	0.031	0.11	2.7	1.13	3.94	7921	0.3672	34.53516	-34.16796	NAC
NS0060	348	350	NS	E396815	396815	1	G	W	33.19	40.26	1.52	0.555	0.43	0.069	2.57	2.08	0.097	0.069	0.489	0.062	0.14	2.74	1.42	4.3	7975	2.1114	36.27936	-34.16796	NAC
NS0060	262	264	NS	E396771	396771	1	G	W	37.4	35.71	0.84	0.762	0.59	0.042	1.96	2	0.099	0.023	0.577	0.045	0.09	3.14	1.06	4.29	7932	0.7038	34.884	-34.1802	NAC
NS0060	292	294	NS	E396786	396786	1	G	W	35.81	37.92	1.08	0.736	0.57	0.044	2.11	2	0.119	0.023	0.482	0.046	0.09	2.9	1.17	4.16	7947	0.7038	34.884	-34.1802	NAC
NS0060	310	312	NS	E396795	396795	1	G	W	35.17	37.67	1.2	0.852	0.66	0.051	2.19	2.02	0.088	0.028	0.656	0.041	0.07	3.27	1.29	4.63	7956	0.8568	35.23284	-34.37604	NAC
NS0060	340	342	NS	E396811	396811	1	G	W	32.1	42.66	1.19	0.62	0.48	0.054	2.22	2.03	0.088	0.03	0.473	0.05	0.17	2.52	1.59	4.28	7971	0.918	35.40726	-34.48926	NAC
NS0060	54	56	NS	E396666	396666	1	G	W	33.73	39.93	0.99	0.775	0.6	0.046	2.17	2.05	0.094	0.037	0.479	0.039	0.17	3.29	1.34	4.8	7828	1.1322	35.7561	-34.6239	NAC
NS0060	128	130	NS	E396704	396704	1	G	W	36.1	37.14	0.97	0.684	0.53	0.043	2.02	2.03	0.091	0.024	0.506	0.053	0.21	2.91	1.29	4.41	7865	0.7344	35.40726	-34.67286	NAC
NS0060	162	164	NS	E396721	396721	1	G	W	33.01	40.14	1.28	0.736	0.57	0.065	2.51	2.05	0.098	0.033	0.68	0.056	0.16	3.24	1.43	4.83	7882	1.0098	35.7561	-34.7463	NAC
NS0060	302	304	NS	E396791	396791	1	G	W	37.73	35.06	1.05	0.775	0.6	0.047	2.03	2.04	0.119	0.02	0.625	0.044	0.06	2.69	1.27	4.02	7952	0.612	35.58168	-34.96968	NAC
NS0060	278	280	NS	E396779	396779	1	G	W	35.43	38.98	0.87	0.684	0.53	0.042	1.82	2.05	0.114	0.016	0.539	0.054	0.13	2.6	1.14	3.87	7940	0.4896	35.7561	-35.2665	NAC
NS0060	116	118	NS	E396697	396697	1	G	W	34.26	38.94	1.33	0.684	0.53	0.061	2.39	2.08	0.091	0.031	0.523	0.054	0.2	3.14	1.43	4.77	7859	0.9486	36.27936	-35.33076	NAC
NS0060	338	340	NS	E396810	396810	1	G	W	33.35	41.49	0.87	0.658	0.51	0.041	1.88	2.08	0.099	0.029	0.392	0.043	0.62	2.63	1.3	4.55	7970	0.8874	36.27936	-35.39196	NAC
NS0060	244	246	NS	E396762	396762	1	G	W	36.13	36.14	0.96	0.865	0.67	0.041	2.24	2.07	0.11	0.021	0.569	0.041	0.11	3.56	1.33	5	7923	0.6426	36.10494	-35.46234	NAC
NS0060	212	214	NS	E396746	396746	1	G	W	35.86	36.09	1.61	0.633	0.49	0.076	2.78	2.12	0.085	0.04	0.73	0.068	0.14	2.63	1.57	4.34	7907	1.224	36.97704	-35.75304	NAC
NS0060	172	174	NS	E396726	396726	1	G	W	29.19	45.69	1.37	0.594	0.46	0.06	2.56	2.14	0.091	0.05	0.701	0.072	0.24	2.81	1.61	4.66	7887	1.53	37.32588	-35.79588	NAC
NS0060	84	86	NS	E396681	396681	1	G	W	33.83	38.9	1.02	0.826	0.64	0.047	2.4	2.11	0.097	0.029	0.502	0.059	0.25	3.86	1.31	5.42	7843	0.8874	36.80262	-35.91522	NAC
NS0060	286	288	NS	E396783	396783	1	G	W	34.91	39.69	1.03	0.646	0.5	0.044	1.94	2.11	0.106	0.021	0.483	0.044	0.06	2.38	1.44	3.88	7944	0.6426	36.80262	-36.16002	NAC
NS0060	284	286	NS	E396782	396782	1	G	W	34.3	41.06	0.72	0.684	0.53	0.035	1.8	2.1	0.098	0.014	0.356	0.034	0.03	2.46	1.44	3.93	7943	0.4284	36.6282	-36.1998	NAC
NS0060	374	376	NS	E396828	396828	1	G	W	35.99	36.77	1.07	0.749	0.58	0.045	2.27	2.14	0.109	0.027	0.767	0.064	0.11	2.57	1.25	3.93	7988	0.8262	37.32588	-36.49968	NAC
NS0060	68	70	NS	E396673	396673	1	G	W	33.68	39.7	1.16	0.762	0.59	0.052	2.22	2.14	0.089	0.025	0.584	0.05	0.16	3.08	1.51	4.75	7835	0.765	37.32588	-36.56088	NAC
NS0060	210	212	NS	E396745	396745	1	G	W	32.18	42.43	1.06	0.671	0.52	0.05	2.22	2.16	0.096	0.034	0.603	0.053	0.13	2.78	1.57	4.48	7906	1.0404	37.67472	-36.63432	NAC
NS0060	158	160	NS	E396719	396719	1	G	W	33.25	39.45	1.36	0.736	0.57	0.062	2.48	2.23	0.106	0.071	0.695	0.063	0.17	3.02	1.55	4.74	7880	2.1726	38.89566	-36.72306	NAC
NS0060	122	124	NS	E396700	396700	1	G	W	35.12	36.94	1.21	0.723	0.56	0.052	2.29	2.18	0.124	0.041	0.641	0.062	0.47	3.35	1.26	5.08	7862	1.2546	38.02356	-36.76896	NAC
NS0060	376	378	NS	E396829	396829	1	G	W	35.63	37.22	0.84	0.839	0.65	0.045	2.4	2.17	0.084	0.03	0.613	0.044	0.08	2.91	1.62	4.61	7989	0.918	37.84914	-36.93114	NAC
NS0060	134	136	NS	E396707	396707	1	G	W	35.71	36.09	1.15	0.736	0.57	0.05	2.38	2.17	0.148	0.022	0.627	0.065	0.36	3.55	1.26	5.17	7868	0.6732	37.84914	-37.17594	NAC
NS0060	188	190	NS	E396734	396734	1	G	W	31.8	43.72	0.92	0.594	0.46	0.04	2.19	2.19	0.09	0.026	0.363	0.044	0.11	2.72	1.53	4.36	7895	0.7956	38.19798	-37.40238	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0060	298	300	NS	E396789	396789	1	G	W	33.37	41.66	0.67	0.788	0.61	0.031	1.87	2.2	0.087	0.013	0.372	0.039	0.05	2.86	1.57	4.48	7950	0.3978	38.3724	-37.9746	NAC
NS0060	392	394	NS	E396837	396837	1	G	W	30.77	43.4	0.95	0.8	0.62	0.045	2.55	2.24	0.069	0.023	0.652	0.056	0.14	2.92	1.81	4.87	7997	0.7038	39.07008	-38.36628	NAC
NS0060	184	186	NS	E396732	396732	1	G	W	22.7	58.5	0.78	0.349	0.27	0.036	1.78	2.26	0.102	0.033	0.312	0.055	0.05	1.37	1.65	3.07	7893	1.0098	39.41892	-38.40912	NAC
NS0060	238	240	NS	E396759	396759	1	G	W	37.01	35.3	0.98	0.775	0.6	0.046	2.19	2.25	0.113	0.021	0.571	0.059	0.17	2.97	1.35	4.49	7920	0.6426	39.2445	-38.6019	NAC
NS0060	354	356	NS	E396818	396818	1	G	W	32.75	41.7	0.97	0.607	0.47	0.046	2.17	2.29	0.119	0.039	0.409	0.062	0.12	2.76	1.58	4.46	7978	1.1934	39.94218	-38.74878	NAC
NS0060	334	336	NS	E396808	396808	1	G	W	35.47	38.52	0.82	0.736	0.57	0.036	1.94	2.32	0.093	0.039	0.467	0.054	0.11	2.49	1.62	4.22	7968	1.1934	40.46544	-39.27204	NAC
NS0060	192	194	NS	E396736	396736	1	G	W	35.23	37.3	1.01	0.762	0.59	0.047	2.31	2.34	0.1	0.048	0.604	0.059	0.14	3.1	1.5	4.74	7897	1.4688	40.81428	-39.34548	NAC
NS0060	148	150	NS	E396714	396714	1	G	W	36.01	37.95	0.78	0.736	0.57	0.036	1.82	2.29	0.114	0.018	0.504	0.034	0.07	2.67	1.47	4.21	7875	0.5508	39.94218	-39.39138	NAC
NS0060	118	120	NS	E396698	396698	1	G	W	32.28	42.64	0.86	0.671	0.52	0.04	2	2.29	0.092	0.017	0.374	0.039	0.13	2.78	1.75	4.66	7860	0.5202	39.94218	-39.42198	NAC
NS0060	254	256	NS	E396767	396767	1	G	W	35.56	37.16	0.82	0.826	0.64	0.04	2.07	2.31	0.099	0.017	0.559	0.049	0.11	2.97	1.56	4.64	7928	0.5202	40.29102	-39.77082	NAC
NS0060	372	374	NS	E396827	396827	1	G	W	35.41	36.9	1.03	0.788	0.61	0.046	2.42	2.32	0.075	0.022	0.746	0.064	0.07	2.63	1.77	4.47	7987	0.6732	40.46544	-39.79224	NAC
NS0060	132	134	NS	E396706	396706	1	G	W	34.37	38.05	0.98	0.749	0.58	0.044	2.17	2.34	0.094	0.028	0.499	0.057	0.7	3.23	1.7	5.63	7867	0.8568	40.81428	-39.95748	NAC
NS0060	120	122	NS	E396699	396699	1	G	W	34.59	38.24	0.91	0.762	0.59	0.042	2.16	2.37	0.114	0.023	0.424	0.051	0.45	3.4	1.55	5.4	7861	0.7038	41.33754	-40.63374	NAC
NS0060	306	308	NS	E396793	396793	1	G	W	35.04	36.11	1.19	0.955	0.74	0.052	2.37	2.37	0.116	0.023	0.795	0.057	0.15	3.65	1.75	5.55	7954	0.7038	41.33754	-40.63374	NAC
NS0060	320	322	NS	E396800	396800	1	G	W	32.99	40.24	1.19	0.749	0.58	0.05	2.16	2.48	0.085	0.057	0.612	0.052	0.14	2.69	1.84	4.67	7961	1.7442	43.25616	-41.51196	NAC
NS0060	366	368	NS	E396824	396824	1	G	W	33.89	39.92	0.73	0.826	0.64	0.033	2.1	2.48	0.086	0.021	0.493	0.057	0.05	2.6	1.94	4.59	7984	0.6426	43.25616	-42.61356	NAC
NS0060	190	192	NS	E396735	396735	1	G	W	32.37	41.23	0.96	0.646	0.5	0.049	2.37	2.54	0.092	0.04	0.473	0.046	0.1	2.75	2.01	4.86	7896	1.224	44.30268	-43.07868	NAC
NS0060	252	254	NS	E396766	396766	1	G	W	35.79	36.94	0.78	0.8	0.62	0.041	2.07	2.54	0.1	0.018	0.51	0.05	0.09	2.76	1.92	4.77	7927	0.5508	44.30268	-43.75188	NAC
NS0060	130	132	NS	E396705	396705	1	G	W	32.65	40.99	0.85	0.736	0.57	0.038	2.09	2.56	0.09	0.019	0.475	0.056	0.15	2.9	2.08	5.13	7866	0.5814	44.65152	-44.07012	NAC
NS0060	328	330	NS	E396805	396805	1	G	W	29.09	43.38	1.9	0.671	0.52	0.083	2.98	2.69	0.1	0.053	0.691	0.085	0.25	2.77	2.24	5.26	7965	1.6218	46.91898	-45.29718	NAC
NS0060	156	158	NS	E396718	396718	1	G	W	31.32	44.25	0.58	0.684	0.53	0.028	1.77	2.66	0.112	0.013	0.345	0.034	0.05	2.38	2.09	4.52	7879	0.3978	46.39572	-45.99792	NAC
NS0060	294	296	NS	E396787	396787	1	G	W	32.05	42	0.84	0.736	0.57	0.037	2.04	2.86	0.102	0.02	0.398	0.042	0.08	2.5	2.33	4.91	7948	0.612	49.88412	-49.27212	NAC
NS0060	326	328	NS	E396804	396804	1	G	W	28.49	46.11	1.31	0.646	0.5	0.058	2.4	2.94	0.101	0.03	0.549	0.068	0.19	2.38	2.45	5.02	7964	0.918	51.27948	-50.36148	NAC
NS0061	34	36	NS	E396858	396858	1	G	W	29.16	44	4.15	0.374	0.29	0.189	2.07	0.08	0.021	0.22	1.02	0.014	0.65	4.67	0.6	5.92	8018	6.732	1.39536	5.33664	PAF(LC)
NS0061	208	210	NS	E396946	396946	1	G	W	26.62	38.43	4.68	0.465	0.36	0.205	2.6	0.29	0.035	0.27	0.248	0.006	1.74	12.25	0.62	14.61	8105	8.262	5.05818	3.20382	PAF(LC)
NS0061	228	230	NS	E396956	396956	1	G	W	26.97	37.25	4.23	0.491	0.38	0.191	2.65	0.23	0.02	0.229	0.031	0.018	2.12	13.44	0.54	16.1	8115	7.0074	4.01166	2.99574	PAF(LC)
NS0061	220	222	NS	E396952	396952	1	G	W	27.67	36.32	3.86	0.62	0.48	0.173	2.36	0.3	0.026	0.214	0.052	0.005	2.16	13.88	0.48	16.52	8111	6.5484	5.2326	1.3158	PAF(LC)
NS0061	226	228	NS	E396955	396955	1	G	W	27.08	36.73	3.67	0.568	0.44	0.174	2.58	0.27	0.029	0.189	0.026	0.014	2.08	14.2	0.46	16.74	8114	5.7834	4.70934	1.07406	PAF(LC)
NS0061	230	232	NS	E396957	396957	1	G	W	27.6	36.68	3.26	0.516	0.4	0.148	2.43	0.31	0.02	0.202	0.216	0.014	1.63	14.41	0.48	16.52	8116	6.1812	5.40702	0.77418	PAF(LC)
NS0061	160	162	NS	E396922	396922	1	G	W	27.12	38.53	2.39	0.594	0.46	0.111	1.92	0.2	0.015	0.127	0.69	0.008	1.97	13.93	0.39	16.29	8081	3.8862	3.4884	0.3978	PAF(LC)
NS0061	176	178	NS	E396930	396930	1	G	W	27.81	33.14	4.5	0.503	0.39	0.203	2.91	0.58	0.078	0.342	0.405	0.016	2.35	14.22	0.9	17.47	8089	10.4652	10.11636	0.34884	PAF(LC)
NS0061	86	88	NS	E396884	396884	1	G	W	40.17	38.06	1.69	0.116	0.09	0.074	0.11	0.03	0.136	0.024	0.236	0.008	0.88	0.6	0.23	1.71	8044	0.7344	0.52326	0.21114	PAF(LC)
NS0061	18	20	NS	E396850	396850	1	G	W	25.63	58.34	2.77	0.026	0.02	0.128	0.09	0.01	0.022	0.005	0.396	0.032	0.62	0.62	0.13	1.37	8010	0.153	0.17442	-0.02142	NAF
NS0061	88	90	NS	E396885	396885	1	G	W	31.02	49.33	2.25	1.226	0.95	0.108	0.12	0.03	0.087	0.013	0.23	0.009	1.15	0.78	0.32	2.25	8045	0.3978	0.52326	-0.12546	NAF
NS0061	16	18	NS	E396849	396849	1	G	W	25.52	56.28	4.07	-0.0129	-0.01	0.178	0.11	0.02	0.034	0.007	0.458	0.024	0.89	0.97	0.19	2.05	8009	0.2142	0.34884	-0.13464	NAF
NS0061	24	26	NS	E396853	396853	1	G	W	35.85	41.08	2.73	0.426	0.33	0.118	0.23	0.04	0.086	0.018	0.497	0.017	2.25	0.74	0.19	3.18	8013	0.5508	0.69768	-0.14688	NAF
NS0061	26	28	NS	E396854	396854	1	G	W	31.87	46.75	3.38	0.245	0.19	0.155	0.53	0.04	0.082	0.018	0.248	0.02	1.25	0.98	0.2	2.43	8014	0.5508	0.69768	-0.14688	NAF
NS0061	92	94	NS	E396887	396887	1	G	W	30.3	48.51	3.13	1.149	0.89	0.142	0.29	0.04	0.084	0.017	0.313	0.022	1.18	0.97	0.3	2.45	8047	0.5202	0.69768	-0.17748	NAF
NS0061	14	16	NS	E396848	396848	1	G	W	33.33	47.77	2.32	0.026	0.02	0.102	0.07	0.02	0.05	0.005	0.307	0.022	0.8	0.54	0.08	1.42	8008	0.153	0.34884	-0.19584	NAF
NS0061	82	84	NS	E396882	396882	1	G	W	30.62	38.96	2.36	0.749	0.58	0.107	2.47	0.33	0.077	0.179	0.392	0.028	0.72	9.31	0.3	10.33	8042	5.4774	5.75586	-0.27846	NAF
NS0061	20	22	NS	E396851	396851	1	G	W	17.44	63.54	6.73	0.026	0.02	0.29	0.14	0.03	0.028	0.006	0.65	0.046	1.27	1.63	0.27	3.17	8011	0.1836	0.52326	-0.33966	NAF
NS0061	10	12	NS	E396846	396846	1	G	W	33.11	47.48	2.54	0.039	0.03	0.111	0.14	0.03	0.046	0.005	0.333	0.015	1.06	0.6	0.05	1.71	8006	0.153	0.52326	-0.37026	NAF
NS0061	22	24	NS	E396852	396852	1	G	W	19.44	60	6.98	0.052	0.04	0.301	0.14	0.04	0.043	0.01	0.535	0.048	1.63	1.79	0.26	3.68	8012	0.306	0.69768	-0.39168	NAF
NS0061	6	8	NS	E396844	396844	1	G	W	25.75	56.91	2.97	0.026	0.02	0.107	0.09	0.04	0.025	0.008	0.155	0.032	1.59	0.79	0.08	2.46	8004	0.2448	0.69768	-0.45288	NAF
NS0061	8	10	NS	E396845	396845	1	G	W	31.34	48.3	3.57	0.052	0.04	0.154	0.14	0.04	0.048	0.007	0.394	0.014	1.22	0.95	0.1	2.27	8005	0.2142	0.69768	-0.48348	NAF
NS0061	12	14	NS	E396847	396847	1	G	W	30.16	51.6	2.43	0.065	0.05	0.107	0.11	0.04	0.059	0.007	0.29	0.019	1.26	0.61	0.06	1.93	8007	0.2142	0.69768	-0.48348	NAF
NS0061	90	92	NS	E396886	396886	1	G	W	21.21	56.68	5.03	2.853	2.21	0.229	0.25	0.06	0.06	0.015	0.445	0.052	1.42	1.57	0.54	3.53	8046	0.459	1.04652	-0.58752	NAF
NS0061	28	30	NS	E396855	396855	1	G	W	32.62	46.51	2.75	0.594	0.46	0.13	0.39	0.06	0.095	0.014	0.244	0.026	1.29	0.84	0.22	2.35	8015	0.4284	1.04652	-0.61812	NAF
NS0061	30	32	NS	E396856	396856	1	G	W	31.95	44.06	3.98	0.529	0.41	0.182	0.96	0.2	0.13	0.081	0.463	0.024	1.43	1.48	0.39	3.3	8016	2.4786	3.4884	-1.0098	NAF
NS0061	0	2	NS	E396841	396841	1	G	W	36.28	28.99	9.22	0.026	0.02	0.6	0.19	0.12	0.021	0.029	0.101	0.03	6.15	2.32	0.31	8.78	8001	0.8874	2.09304	-1.20564	NAF
NS0061	54	56	NS	E396868	396868	1	G	W	28.94	39.08	3.94	0.697	0.54	0.184	2.86	0.57	0.124	0.28	0.951	0.072	1.23	7.97	0.6	9.8	8028	8.568	9.94194	-1.37394	NAF
NS0061	38	40	NS	E396860	396860	1	G	W	30.79	44.43	2.53	0.413	0.32	0.116	1.54	0.21	0.073	0.069	0.465	0.02	0.91	4.78	0.18	5.87	8020	2.1114	3.66282	-1.55142	NAF
NS0061	180	182	NS	E396932	396932	1	G	W	27.98	32.2	2.88	0.736	0.57	0.128	2.81	0.42	0.031	0.186	0.529	0.008	1.47	17.79	0.58	19.84	8091	5.6916	7.32564	-1.63404	NAF
NS0061	94	96	NS	E396888	396888	1	G	W	33.07	42.46	2.16	0.788	0.61	0.097	0.9	0.2	0.087	0.034	0.267	0.022	1.15	4.04	0.12	5.31	8048	1.0404	3.4884	-2.448	NAF
NS0061	98	100	NS	E396890	396890	1	G	W	29	36.98	2.36	0.633	0.49	0.105	2.62	0.36	0.032	0.123	0.597	0.027	0.99	12.86	0.25	14.1	8050	3.7638	6.27912	-2.51532	NAF
NS0061	66	68	NS	E396874	396874	1	G	W	31.33	38.04	3.3	0.762	0.59	0.148	2.39	0.46	0.134	0.162	0.529	0.021	1.02	7.47	0.25	8.74	8034	4.9572	8.02332	-3.06612	NAF
NS0061	222	224	NS	E396953	396953	1	G	W	27.83	34.12	3.66	0.697	0.54	0.163	2.66	0.38	0.044	0.114	0.139	0.006	2.17	15.3	0.3	17.77	8112	3.4884	6.62796	-3.13956	NAF
NS0061	202	204	NS	E396943	396943	1	G	W	27.25	36.61	1.57	0.503	0.39	0.072	2.48	0.31	0.029	0.073	0.175	0.012	2	16.78	0.21	18.99	8102	2.2338	5.40702	-3.17322	NAF
NS0061	74	76	NS	E396878	396878	1	G	W	29.81	35.36	2.63	0.607	0.47	0.121	3.33	0.48	0.059	0.163	0.181	0.034	1.16	12.59	0.3	14.05	8038	4.9878	8.37216	-3.38436	NAF
NS0061	52	54	NS	E396867	396867	1	G	W	33.01	39.7	2.58	0.684	0.53	0.123	1.97	0.47	0.106	0.155	0.707	0.069	0.36	5.53	0.22	6.11	8027	4.743	8.19774	-3.45474	NAF
NS0061	42	44	NS	E396862	396862	1	G	W	34.04	42.59	1.81	0.465	0.36	0.08	1.28	0.28	0.097	0.046	0.332	0.031	0.45	3.7	0.01	4.16	8022	1.4076	4.88376	-3.47616	NAF
NS0061	44	46	NS	E396863	396863	1	G	W	34.79	42.14	1.53	0.607	0.47	0.072	1.17	0.28	0.089	0.039	0.306	0.038	0.43	3.38	0.01	3.82	8023	1.1934	4.88376	-3.69036	NAF
NS0061	156	158	NS	E396920	396920	1	G	W	32.4	35.13	1.83	0.555	0.43	0.091	1.76	0.26	0.023	0.02	0.612	0.02	1.11	12.04	-0.08	13.07	8079	0.612	4.53492	-3.92292	NAF
NS0061	32	34	NS	E396857	396857	1	G	W	33.81	42.42	1.77	0.439	0.34	0.08	1.33	0.31	0.099	0.046	0.47	0.012	0.54	4.03	-0.05	4.52	8017	1.4076	5.40702	-3.99942	NAF
NS0061	76	78	NS	E396879	396879	1	G	W	34.1	38.13	1.55	0.594	0.46	0.07	1.83	0.32	0.055	0.05	0.218	0.064	0.66	7.48	-0.22	7.92	8039	1.53	5.58144	-4.05144	NAF
NS0061	212	214	NS	E396948	396948	1	G	W	25.87	39.87	1.89	0.503	0.39	0.087	2.47	0.36	0.044	0.071	0.048	0.02	2.46	14.63	0.15	17.24	8107	2.1726	6.27912	-4.10652	NAF
NS0061	40	42	NS	E396861	396861	1	G	W	33	41.94	1.71	0.633	0.49	0.081	1.5	0.32	0.093	0.048	0.323	0.024	0.55	5.33	0.01	5.89	8021	1.4688	5.58144	-4.11264	NAF
NS0061	56	58	NS	E396869	396869	1	G	W	35.6	39.61	1.79	0.568	0.44	0.085	1.54	0.34	0.079	0.058	0.424	0.069	0.29	4.26	-0.2	4.35	8029	1.7748	5.93028	-4.15548	NAF
NS0061	60	62	NS	E396871	396871	1	G	W	35.79	40.06	1.3	0.646	0.5	0.06	1.19	0.3	0.08	0.03	0.414	0.043	0.35	4.1	-0.27	4.18	8031	0.918	5.2326	-4.3146	NAF
NS0061	240	242	NS	E396962	396962	1	G	W	30.31	32.56	2.36	0.646	0.5	0.108	2.48	0.36	0.043	0.061	0.412	0.0005	1.53	15.65	0.09	17.27	8121	1.8666	6.27912	-4.41252	NAF
NS0061	46	48	NS	E396864	396864	1	G	W	34.91	41.4	1.44	0.594	0.46	0.064	1.24	0.32	0.092	0.035	0.315	0.071	0.29	4.03	-0.01	4.31	8024	1.071	5.58144	-4.51044	NAF
NS0061	36	38	NS	E396859	396859	1	G	W	33.45	40.56	2.04	0.503	0.39	0.091	1.69	0.37	0.11	0.059	0.39	0.032	0.69	5.4	-0.05	6.04	8019	1.8054	6.45354	-4.64814	NAF
NS0061	62	64	NS	E396872	396872	1	G	W	35.75	39.9	1.27	0.646	0.5	0.062	1.2	0.32	0.085	0.03	0.344	0.013	0.51	4.29	-0.18	4.62	8032	0.918	5.58144	-4.66344	NAF
NS0061	148	150	NS	E396916	396916	1	G	W	32.62	36.27	2.27	0.374	0.29	0.103	1.88	0.28	0.025	0.006	1.21	0.019	0.93	10.1	-0.23	10.8	8075	0.1836	4.88376	-4.70016	NAF
NS0061	48	50	NS	E396865	396865	1	G	W	35.22	40.79	1.37	0.646	0.5	0.066	1.27	0.33	0.085	0.032	0.337	0.107	0.22	4.12	-0.03	4.31	8025	0.9792	5.75586	-4.77666	NAF
NS0061	214	216	NS	E396949	396949	1	G	W	31.48	30.21	2.76	0.568	0.44	0.119	2.5	0.4	0.035	0.067	0.056	0.012	2.72	15.19	0.03	17.94	8108	2.0502	6.9768	-4.9266	NAF
NS0061	64	66	NS	E396873	396873	1	G	W	36.1	38.15	1.42	0.671	0.52	0.064	1.41	0.36	0.097	0.04	0.336	0.013	0.56	5.24	-0.16	5.64	8033	1.224	6.27912	-5.05512	NAF
NS0061	50	52	NS	E396866	396866	1	G	W	35.98	39.74	1.52	0.62	0.48	0.071	1.33	0.36	0.096	0.036	0.421	0.08	0.24	4.09	-0.13	4.2	8026	1.1016	6.27912	-5.17752	NAF
NS0061	138	140	NS	E396911	396911	1	G	W	30.15	38.61	1.65	0.555	0.43	0.079	2	0.32	0.041	0.01	0.283	0.019	1.27	11.83	-0.17	12.93	8070	0.306	5.58144	-5.27544	NAF
NS0061	132	134	NS	E396908	396908	1	G	W	24.92	40.95	1.3	0.491	0.38	0.062	2.43	0.35	0.036	0.024	0.364	0.013	1.98	15.84	0.08	17.9	8067	0.7344	6.1047	-5.3703	NAF
NS0061	250	252	NS	E396967	396967	1	G	W	36.17	37.98	1.75	0.426	0.33	0.08	1.62	0.39	0.071	0.041	0.285	0.011	0.31	5.47	-0.47	5.31	8126	1.2546	6.80238	-5.54778	NAF
NS0061	158	160	NS	E396921	396921	1	G	W	30.23	35.56	2.09	0.62	0.48	0.096	2.03	0.35	0.054	0.018	0.594	0.027	1.82	13.36	-0.02	15.16	8080	0.5508	6.1047	-5.5539	NAF
NS0061	58	60	NS	E396870	396870	1	G	W	36.97	37.45	1.84	0.594	0.46	0.084	1.47	0.4	0.079	0.046	0.486	0.074	0.21	4.18	-0.24	4.15	8030	1.4076	6.9768	-5.5692	NAF
NS0061	166	168	NS	E396925	396925	1	G	W	31.96	34.35	1.5	0.555	0.43	0.069	2	0.33	0.027	0.006	0.563	0.018	2.38	12.42	-0.04	14.76	8084	0.1836	5.75586	-5.57226	NAF
NS0061	68	70	NS	E396875	396875	1	G	W	31.82	34.21	1.06	0.736	0.57	0.049	2.93	0.39	0.072	0.038	0.024	0.0005	1.96	12.76	-0.06	14.66	8035	1.1628	6.80238	-5.63958	NAF
NS0061	162	164	NS	E396923	396923	1	G	W	29.19	37.28	1.73	0.594	0.46	0.079	1.94	0.38	0.049	0.031	0.617	0.015	1.73	13.37	0.02	15.12	8082	0.9486	6.62796	-5.67936	NAF
NS0061	224	226	NS	E396954	396954	1	G	W	32.28	25.99	1.84	0.775	0.6	0.086	2.51	0.38	0.032	0.03	0.026	0.006	2.57	19.25	0.08	21.9	8113	0.918	6.62796	-5.70996	NAF
NS0061	172	174	NS	E396928	396928	1	G	W	30.62	35.95	1.31	0.503	0.39	0.059	2.14	0.36	0.027	0.013	0.471	0.02	1.65	13.46	0.02	15.13	8087	0.3978	6.27912	-5.88132	NAF
NS0061	84	86	NS	E396883	396883	1	G	W	31.7	37.17	1.75	0.826	0.64	0.083	2.19	0.52	0.14	0.104	0.183	0.053	1.18	9.72	0.19	11.09	8043	3.1824	9.06984	-5.88744	NAF
NS0061	168	170	NS	E396926	396926	1	G	W	31.27	37.87	1.13	0.594	0.46	0.052	1.63	0.35	0.024	0.006	0.424	0.007	1.86	11.12	-0.03	12.95	8085	0.1836	6.1047	-5.9211	NAF
NS0061	96	98	NS	E396889	396889	1	G	W	33.33	36.77	1.31	0.723	0.56	0.061	1.84	0.39	0.079	0.028	0.375	0.042	0.85	9.47	-0.11	10.21	8049	0.8568	6.80238	-5.94558	NAF
NS0061	80	82	NS	E396881	396881	1	G	W	34.91	37.25	1.4	0.671	0.52	0.067	1.76	0.41	0.097	0.03	0.251	0.031	0.53	7.47	-0.22	7.78	8041	0.918	7.15122	-6.23322	NAF
NS0061	128	130	NS	E396906	396906	1	G	W	30.45	28.57	1.44	0.723	0.56	0.067	2.9	0.42	0.053	0.035	0.536	0.015	2.01	19.11	0.15	21.27	8065	1.071	7.32564	-6.25464	NAF
NS0061	178	180	NS	E396931	396931	1	G	W	29.74	30.22	2.7	0.594	0.46	0.126	2.69	0.58	0.042	0.126	0.524	0.014	2.36	17.02	0.34	19.72	8090	3.8556	10.11636	-6.26076	NAF
NS0061	136	138	NS	E396910	396910	1	G	W	28.63	34.16	1.17	0.607	0.47	0.055	2.48	0.38	0.041	0.007	0.342	0.016	2.38	17.17	0.07	19.62	8069	0.2142	6.62796	-6.41376	NAF
NS0061	72	74	NS	E396877	396877	1	G	W	29.32	35.56	1.74	0.684	0.53	0.08	3.1	0.64	0.113	0.155	0.203	0.017	1.11	13.95	0.27	15.33	8037	4.743	11.16288	-6.41988	NAF
NS0061	232	234	NS	E396958	396958	1	G	W	29.93	34.19	2.63	0.62	0.48	0.121	2.14	0.51	0.023	0.08	0.52	0.017	1.47	14.39	0.09	15.95	8117	2.448	8.89542	-6.44742	NAF
NS0061	134	136	NS	E396909	396909	1	G	W	24.08	44.09	0.97	0.529	0.41	0.044	2.21	0.38	0.066	0.005	0.068	0.022	2.11	14.73	0.03	16.87	8068	0.153	6.62796	-6.47496	NAF
NS0061	206	208	NS	E396945	396945	1	G	W	26.01	42.45	1.25	0.542	0.42	0.059	2.05	0.47	0.03	0.044	0.226	0.0005	1.89	13.49	0.1	15.48	8104	1.3464	8.19774	-6.85134	NAF
NS0061	196	198	NS	E396940	396940	1	G	W	33.87	33.42	1.23	0.542	0.42	0.057	1.95	0.42	0.029	0.006	0.455	0.015	1.4	11.77	-0.07	13.1	8099	0.1836	7.32564	-7.14204	NAF
NS0061	248	250	NS	E396966	396966	1	G	W	35.12	36.6	1.92	0.581	0.45	0.088	2	0.52	0.081	0.059	0.383	0.016	0.45	7.39	-0.32	7.52	8125	1.8054	9.06984	-7.26444	NAF
NS0061	124	126	NS	E396904	396904	1	G	W	32.82	37.32	1.05	0.594	0.46	0.047	1.75	0.43	0.077	0.005	0.829	0.017	0.91	9.83	-0.21	10.53	8063	0.153	7.50006	-7.34706	NAF
NS0061	78	80	NS	E396880	396880	1	G	W	35.82	36.08	1.49	0.646	0.5	0.067	1.79	0.49	0.09	0.038	0.224	0.101	0.58	7.1	-0.24	7.44	8040	1.1628	8.54658	-7.38378	NAF
NS0061	70	72	NS	E396876	396876	1	G	W	32.41	32.83	1.41	0.646	0.5	0.065	2.88	0.52	0.085	0.052	0.079	0.007	1.33	13.39	-0.09	14.63	8036	1.5912	9.06984	-7.47864	NAF
NS0061	114	116	NS	E396898	396898	1	G	W	31.76	35.24	1.17	0.594	0.46	0.053	2.28	0.49	0.045	0.034	0.579	0.007	1.25	12.43	-0.05	13.63	8058	1.0404	8.54658	-7.50618	NAF
NS0061	122	124	NS	E396903	396903	1	G	W	30.63	34.1	1.03	0.594	0.46	0.047	2.42	0.47	0.06	0.021	0.349	0.031	1.39	15.41	-0.02	16.78	8062	0.6426	8.19774	-7.55514	NAF
NS0061	234	236	NS	E396959	396959	1	G	W	32.64	36.17	1.19	0.581	0.45	0.054	1.8	0.5	0.064	0.037	0.18	0.005	0.55	12.26	-0.24	12.57	8118	1.1322	8.721	-7.5888	NAF
NS0061	170	172	NS	E396927	396927	1	G	W	31.27	35.07	1.36	0.581	0.45	0.058	2.16	0.45	0.041	0.007	0.47	0.057	1.57	13.19	0	14.76	8086	0.2142	7.8489	-7.6347	NAF
NS0061	164	166	NS	E396924	396924	1	G	W	31.09	34.88	1.4	0.607	0.47	0.066	2.08	0.46	0.072	0.01	0.534	0.044	1.78	13.41	-0.04	15.15	8083	0.306	8.02332	-7.71732	NAF
NS0061	242	244	NS	E396963	396963	1	G	W	34.78	31.68	1.41	0.646	0.5	0.064	2.33	0.5	0.069	0.03	0.159	0.019	1.18	12.46	-0.29	13.35	8122	0.918	8.721	-7.803	NAF
NS0061	100	102	NS	E396891	396891	1	G	W	34.44	34.19	1.34	0.658	0.51	0.062	1.91	0.51	0.08	0.026	0.422	0.018	0.89	10.43	-0.13	11.19	8051	0.7956	8.89542	-8.09982	NAF
NS0061	182	184	NS	E396933	396933	1	G	W	30.55	30.59	1.27	0.775	0.6	0.062	2.51	0.54	0.027	0.041	0.331	0.01	2.22	17.56	0.14	19.92	8092	1.2546	9.41868	-8.16408	NAF
NS0061	246	248	NS	E396965	396965	1	G	W	32.78	41.36	1.03	0.594	0.46	0.047	1.55	0.53	0.065	0.027	0.182	0.009	0.42	7.31	-0.31	7.42	8124	0.8262	9.24426	-8.41806	NAF
NS0061	236	238	NS	E396960	396960	1	G	W	34.73	34.56	1.58	0.491	0.38	0.074	1.78	0.56	0.065	0.038	0.308	0.001	1.06	10	-0.21	10.85	8119	1.1628	9.76752	-8.60472	NAF
NS0061	104	106	NS	E396893	396893	1	G	W	31.84	33.9	1.18	0.658	0.51	0.053	2.56	0.55	0.063	0.031	0.369	0.0005	1.1	13.77	-0.07	14.8	8053	0.9486	9.5931	-8.6445	NAF
NS0061	118	120	NS	E396900	396900	1	G	W	29.38	37.19	2.02	0.568	0.44	0.093	2.34	0.64	0.08	0.077	0.818	0.009	0.93	12.72	0.19	13.84	8060	2.3562	11.16288	-8.80668	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0061	238	240	NS	E396961	396961	1	G	W	31.35	35.65	2.11	0.555	0.43	0.094	2.1	0.61	0.066	0.058	0.296	0.0005	1.48	11.98	-0.05	13.41	8120	1.7748	10.63962	-8.86482	NAF
NS0061	140	142	NS	E396912	396912	1	G	W	30.19	36.97	2.39	0.542	0.42	0.111	2.41	0.54	0.079	0.007	0.609	0.012	0.95	11.96	-0.05	12.86	8071	0.2142	9.41868	-9.20448	NAF
NS0061	192	194	NS	E396938	396938	1	G	W	30.84	38.86	1.02	0.568	0.44	0.049	1.93	0.56	0.031	0.008	0.376	0.017	0.98	11.26	0.12	12.36	8097	0.2448	9.76752	-9.52272	NAF
NS0061	210	212	NS	E396947	396947	1	G	W	23.45	46.59	1.32	0.452	0.35	0.062	1.96	0.67	0.02	0.07	0.106	0.013	1.93	12.59	0.25	14.77	8106	2.142	11.68614	-9.54414	NAF
NS0061	200	202	NS	E396942	396942	1	G	W	26.06	41.16	0.82	0.491	0.38	0.039	1.81	0.58	0.042	0.018	0.269	0.008	2.57	14.26	0.23	17.06	8101	0.5508	10.11636	-9.56556	NAF
NS0061	116	118	NS	E396899	396899	1	G	W	31.42	41.11	0.94	0.646	0.5	0.045	1.64	0.58	0.083	0.016	0.553	0.037	0.59	8.68	-0.07	9.2	8059	0.4896	10.11636	-9.62676	NAF
NS0061	154	156	NS	E396919	396919	1	G	W	29.73	41.29	1.06	0.646	0.5	0.048	1.78	0.59	0.081	0.014	0.423	0.029	0.73	10.36	-0.04	11.05	8078	0.4284	10.29078	-9.86238	NAF
NS0061	106	108	NS	E396894	396894	1	G	W	32.02	33.17	1.53	0.671	0.52	0.072	2.57	0.66	0.063	0.047	0.481	0.007	0.81	13.59	0.06	14.46	8054	1.4382	11.51172	-10.07352	NAF
NS0061	130	132	NS	E396907	396907	1	G	W	28.19	32.95	1.5	0.775	0.6	0.071	2.83	0.62	0.12	0.024	0.373	0.007	2.27	17.82	0.09	20.18	8066	0.7344	10.81404	-10.07964	NAF
NS0061	190	192	NS	E396937	396937	1	G	W	31.81	36.05	1.03	0.658	0.51	0.049	2.03	0.63	0.03	0.024	0.346	0.048	1.02	12.34	0.12	13.48	8096	0.7344	10.98846	-10.25406	NAF
NS0061	126	128	NS	E396905	396905	1	G	W	32.54	31.78	1.28	0.646	0.5	0.061	2.4	0.61	0.075	0.011	0.719	0.023	0.87	14.62	-0.03	15.46	8064	0.3366	10.63962	-10.30302	NAF
NS0061	150	152	NS	E396917	396917	1	G	W	27.76	41.79	1.12	0.465	0.36	0.055	2.04	0.61	0.062	0.007	0.326	0.021	1.24	12.1	0.06	13.4	8076	0.2142	10.63962	-10.42542	NAF
NS0061	218	220	NS	E396951	396951	1	G	W	32.31	33.28	1.49	0.658	0.51	0.068	1.69	0.67	0.047	0.015	0.445	0.015	1.67	13.51	0.02	15.2	8110	0.459	11.68614	-11.22714	NAF
NS0061	152	154	NS	E396918	396918	1	G	W	29.21	40.09	1.13	0.594	0.46	0.055	2.07	0.68	0.055	0.014	0.387	0.09	0.92	11.62	0.12	12.66	8077	0.4284	11.86056	-11.43216	NAF
NS0061	184	186	NS	E396934	396934	1	G	W	31.44	33.64	0.99	0.646	0.5	0.044	2.35	0.68	0.033	0.014	0.303	0.02	1.24	14.81	0.17	16.22	8093	0.4284	11.86056	-11.43216	NAF
NS0061	244	246	NS	E396964	396964	1	G	W	30.15	37.79	1.24	0.697	0.54	0.058	1.95	0.75	0.152	0.049	0.326	0.02	1.64	11.73	-0.15	13.22	8123	1.4994	13.0815	-11.5821	NAF
NS0061	216	218	NS	E396950	396950	1	G	W	28.57	40.39	1.53	0.465	0.36	0.07	1.71	0.68	0.029	0.007	0.335	0.011	1.71	11.86	0.16	13.73	8109	0.2142	11.86056	-11.64636	NAF
NS0061	120	122	NS	E396902	396902	1	G	W	29.36	39.9	0.97	0.671	0.52	0.046	2.28	0.73	0.075	0.032	0.229	0.079	0.72	11.78	0.1	12.6	8061	0.9792	12.73266	-11.75346	NAF
NS0061	142	144	NS	E396913	396913	1	G	W	27.95	39.96	1.36	0.516	0.4	0.063	2.26	0.73	0.064	0.018	0.39	0.025	1.01	13.17	0.15	14.33	8072	0.5508	12.73266	-12.18186	NAF
NS0061	186	188	NS	E396935	396935	1	G	W	30.17	33.44	0.95	0.684	0.53	0.044	2.46	0.74	0.025	0.021	0.155	0.01	1.89	16.01	0.28	18.18	8094	0.6426	12.90708	-12.26448	NAF
NS0061	144	146	NS	E396914	396914	1	G	W	30.49	41.24	1.61	0.465	0.36	0.076	1.74	0.73	0.067	0.012	0.92	0.024	0.52	8.61	0.08	9.21	8073	0.3672	12.73266	-12.36546	NAF
NS0061	102	104	NS	E396892	396892	1	G	W	30.69	36.83	1.13	0.607	0.47	0.053	2.18	0.76	0.074	0.027	0.377	0.02	0.94	12.53	0.08	13.55	8052	0.8262	13.25592	-12.42972	NAF
NS0061	188	190	NS	E396936	396936	1	G	W	31.26	35.32	1.12	0.594	0.46	0.051	2.09	0.77	0.027	0.025	0.306	0.04	1.38	13.1	0.25	14.73	8095	0.765	13.43034	-12.66534	NAF
NS0061	194	196	NS	E396939	396939	1	G	W	32.78	32.08	1.28	0.555	0.43	0.06	2.36	0.75	0.033	0.012	0.482	0.0005	1.02	13.99	0.3	15.31	8098	0.3672	13.0815	-12.7143	NAF
NS0061	174	176	NS	E396929	396929	1	G	W	30.82	36.71	1.26	0.542	0.42	0.059	1.9	0.75	0.066	0.011	0.468	0.01	1.7	11.8	0.2	13.7	8088	0.3366	13.0815	-12.7449	NAF
NS0061	204	206	NS	E396944	396944	1	G	W	26.85	42.59	0.91	0.491	0.38	0.043	1.85	0.77	0.028	0.01	0.212	0.003	1.42	12.69	0.28	14.39	8103	0.306	13.43034	-13.12434	NAF
NS0061	112	114	NS	E396897	396897	1	G	W	32.41	32.85	1.58	0.594	0.46	0.074	2.68	0.86	0.107	0.038	0.657	0.016	0.95	12.9	0.12	13.97	8057	1.1628	15.00012	-13.83732	NAF
NS0061	146	148	NS	E396915	396915	1	G	W	26.53	40.84	1.57	0.426	0.33	0.071	2.22	0.83	0.081	0.013	0.457	0.008	1.46	13.45	0.21	15.12	8074	0.3978	14.47686	-14.07906	NAF
NS0061	198	200	NS	E396941	396941	1	G	W	32.64	30.51	1.33	0.568	0.44	0.06	2.21	0.87	0.026	0.008	0.486	0.0005	1.65	14.96	0.39	17	8100	0.2448	15.17454	-14.92974	NAF
NS0061	4	6	NS	E396843	396843	1	G	W	26.06	51.86	4.83	-0.0129	-0.01	0.148	0.29	1.04	0.01	0.008	0.165	0.063	1.61	1.9	0.48	3.99	8003	0.2448	18.13968	-17.89488	NAF
NS0061	108	110	NS	E396895	396895	1	G	W	30.3	30.3	1.02	0.775	0.6	0.046	3.21	1.11	0.084	0.015	0.335	0.012	1.04	17.72	0.51	19.27	8055	0.459	19.36062	-18.90162	NAF
NS0061	2	4	NS	E396842	396842	1	G	W	35.26	33.73	6.28	-0.0129	-0.01	0.373	0.26	1.14	0.015	0.031	0.07	0.084	5.01	2.16	0.52	7.69	8002	0.9486	19.88388	-18.93528	NAF
NS0061	110	112	NS	E396896	396896	1	G	W	30.15	30.1	1.2	0.684	0.53	0.057	3.3	1.17	0.062	0.027	0.41	0.013	1.06	17.72	0.67	19.45	8056	0.8262	20.40714	-19.58094	NAF
NS0062	198	200	NS	E410068	410068	1	G	D	25.96	36.93	4.93	0.555	0.43	0.228	1.73	0.23	0.03	0.495	1.23	0.027	2.38	12.71	1.41	16.5	9137	15.147	4.01166	11.13534	PAF(HC)
NS0062	204	206	NS	E410071	410071	1	G	D	19.34	50.85	8.91	0.323	0.25	0.386	1.99	0.32	0.088	0.537	0.807	0.026	0.71	6.48	1.05	8.24	9140	16.4322	5.58144	10.85076	PAF(HC)
NS0062	124	126	NS	E410031	410031	1	G	D	26.11	37.47	4.83	0.361	0.28	0.218	3.22	0.23	0.011	0.412	0.39	0.017	1.59	12.95	0.99	15.53	9100	12.6072	4.01166	8.59554	PAF(LC)
NS0062	132	134	NS	E410035	410035	1	G	D	10.44	60.69	11.27	0.103	0.08	0.519	1.55	0.07	0.009	0.32	6.35	0.055	0.36	2.99	0.69	4.04	9104	9.792	1.22094	8.57106	PAF(LC)
NS0062	56	58	NS	E396996	396996	1	G	D	26.41	46.14	2.97	0.516	0.4	0.134	1.96	0.32	0.081	0.459	0.273	0.02	1.16	7.11	0.99	9.26	8155	14.0454	5.58144	8.46396	PAF(LC)
NS0062	110	112	NS	E410024	410024	1	G	D	25.65	48.1	7.32	0.103	0.08	0.331	1.96	0.02	0.045	0.261	0.772	0.021	1.57	2.14	0.75	4.46	9093	7.9866	0.34884	7.63776	PAF(LC)
NS0062	130	132	NS	E410034	410034	1	G	D	12.79	56.1	10.1	0.245	0.19	0.466	1.81	0.17	0.022	0.324	5.81	0.045	0.83	4.81	0.87	6.51	9103	9.9144	2.96514	6.94926	PAF(LC)
NS0062	212	214	NS	E410075	410075	1	G	D	22.81	45.65	9.23	0.245	0.19	0.391	2.69	0.24	0.055	0.3	0.053	0.011	0.7	7.5	0.41	8.61	9144	9.18	4.18608	4.99392	PAF(LC)
NS0062	64	66	NS	E397000	397000	1	G	D	30.87	44.41	3.38	0.426	0.33	0.158	1.3	0.32	0.114	0.337	0.447	0.025	1.29	2.68	0.85	4.82	8159	10.3122	5.58144	4.73076	PAF(LC)
NS0062	202	204	NS	E410070	410070	1	G	D	20.55	48.26	7.46	0.284	0.22	0.296	1.81	1.4	0.437	0.899	0.317	0.025	0.68	7.11	1.37	9.16	9139	27.5094	24.4188	3.0906	PAF(LC)
NS0062	200	202	NS	E410069	410069	1	G	D	26.45	36.77	3.98	0.568	0.44	0.179	1.82	0.46	0.104	0.333	0.716	0.025	2.57	13.61	0.93	17.11	9138	10.1898	8.02332	2.16648	PAF(LC)
NS0062	34	36	NS	E396985	396985	1	G	D	34.03	43.49	3.15	0.232	0.18	0.145	0.43	0.03	0.071	0.082	0.836	0.015	1.56	0.71	0.5	2.77	8144	2.5092	0.52326	1.98594	PAF(LC)
NS0062	298	300	NS	E410119	410119	1	G	D	28.22	38.9	3.83	0.646	0.5	0.183	3.01	0.59	0.157	0.392	0.175	0.189	1.1	9.39	0.88	11.37	9187	11.9952	10.29078	1.70442	PAF(LC)
NS0062	166	168	NS	E410052	410052	1	G	D	24.4	42.45	3.64	0.452	0.35	0.164	2.6	0.32	0.058	0.234	0.052	0.007	1.85	12.54	0.64	15.03	9121	7.1604	5.58144	1.57896	PAF(LC)
NS0062	108	110	NS	E410023	410023	1	G	D	32.09	47.12	3.25	0.039	0.03	0.142	0.52	0.02	0.111	0.05	0.569	0.018	0.98	0.76	0.34	2.08	9092	1.53	0.34884	1.18116	PAF(LC)
NS0062	102	104	NS	E410020	410020	1	G	D	36.65	40.06	2.96	0.116	0.09	0.14	0.28	0.02	0.118	0.043	0.581	0.02	1.81	0.85	0.28	2.94	9089	1.3158	0.34884	0.96696	PAF(LC)
NS0062	254	256	NS	E410096	410096	1	G	D	25.91	36.09	4.26	0.775	0.6	0.193	3.14	0.46	0.071	0.28	1.4	0.033	1.19	13.96	0.93	16.08	9165	8.568	8.02332	0.54468	PAF(LC)
NS0062	282	284	NS	E410111	410111	1	G	D	26.68	41.71	4.51	0.503	0.39	0.209	2.82	0.6	0.032	0.359	0.405	0.055	1.41	8.25	0.91	10.57	9179	10.9854	10.4652	0.5202	PAF(LC)
NS0062	16	18	NS	E396976	396976	1	G	D	32.08	47.66	3.31	0.065	0.05	0.145	0.14	0.02	0.087	0.019	0.271	0.014	1.05	0.92	0.26	2.23	8135	0.5814	0.34884	0.23256	PAF(LC)
NS0062	22	24	NS	E396979	396979	1	G	D	35.5	43.51	2.49	0.284	0.22	0.114	0.12	0.02	0.094	0.019	0.268	0.015	1.05	0.72	0.28	2.05	8138	0.5814	0.34884	0.23256	PAF(LC)
NS0062	24	26	NS	E396980	396980	1	G	D	33.16	47.82	1.54	0.219	0.17	0.061	0.09	0.02	0.104	0.019	0.164	0.02	1.61	0.5	0.24	2.35	8139	0.5814	0.34884	0.23256	PAF(LC)
NS0062	10	12	NS	E396973	396973	1	G	D	32.02	48.65	2.87	0.039	0.03	0.121	0.11	0.02	0.06	0.016	0.268	0.018	0.94	0.77	0.2	1.91	8132	0.4896	0.34884	0.14076	PAF(LC)
NS0062	18	20	NS	E396977	396977	1	G	D	31.71	46.23	4.81	0.052	0.04	0.226	0.15	0.02	0.05	0.016	0.339	0.02	0.99	1.32	0.32	2.63	8136	0.4896	0.34884	0.14076	PAF(LC)
NS0062	20	22	NS	E396978	396978	1	G	D	31.21	49.14	2.8	0.194	0.15	0.118	0.12	0.02	0.097	0.014	0.248	0.01	1.39	0.81	0.26	2.46	8137	0.4284	0.34884	0.07956	PAF(LC)
NS0062	26	28	NS	E396981	396981	1	G	D	35.97	44.19	1.6	0.194	0.15	0.068	0.1	0.005	0.099	0.005	0.156	0.009	1.2	0.45	0.23	1.88	8140	0.153	0.08721	0.06579	PAF(LC)
NS0062	12	14	NS	E396974	396974	1	G	D	34.61	45.18	2.46	0.065	0.05	0.12	0.12	0.03	0.094	0.018	0.265	0.017	0.96	0.69	0.25	1.9	8133	0.5508	0.52326	0.02754	PAF(LC)
NS0062	36	38	NS	E396986	396986	1	G	D	33.75	38.99	1.64	0.594	0.46	0.076	1.33	0.38	0.142	0.217	0.363	0.029	1.13	6.11	0.58	7.82	8145	6.6402	6.62796	0.01224	PAF(LC)
NS0062	14	16	NS	E396975	396975	1	G	D	33.64	46.23	2.82	0.052	0.04	0.101	0.11	0.03	0.083	0.017	0.24	0.012	0.95	0.78	0.25	1.98	8134	0.5202	0.52326	-0.00306	NAF
NS0062	194	196	NS	E410066	410066	1	G	D	24.9	40.26	4.34	0.465	0.36	0.199	2.07	0.25	0.03	0.142	1.23	0.026	1.94	12.81	0.5	15.25	9135	4.3452	4.3605	-0.0153	NAF
NS0062	106	108	NS	E410022	410022	1	G	D	23.75	58.88	3.4	0.452	0.35	0.153	0.21	0.01	0.033	0.004	1.02	0.023	0.96	0.6	0.19	1.75	9091	0.1224	0.17442	-0.05202	NAF
NS0062	42	44	NS	E396989	396989	1	G	D	35.55	45.05	1.34	0.194	0.15	0.061	0.11	0.02	0.086	0.009	0.222	0.012	1.18	0.44	0.15	1.77	8148	0.2754	0.34884	-0.07344	NAF
NS0062	48	50	NS	E396992	396992	1	G	D	37.41	40.34	2.51	0.116	0.09	0.119	0.39	0.05	0.11	0.024	0.53	0.028	1.22	0.57	0.21	2	8151	0.7344	0.8721	-0.1377	NAF
NS0062	28	30	NS	E396982	396982	1	G	D	34.57	45.86	1.73	0.374	0.29	0.068	0.11	0.02	0.097	0.006	0.179	0.015	1.04	0.53	0.29	1.86	8141	0.1836	0.34884	-0.16524	NAF
NS0062	104	106	NS	E410021	410021	1	G	D	27.5	52.45	3.18	1.084	0.84	0.145	0.32	0.04	0.061	0.014	0.616	0.025	1.19	1.07	0.31	2.57	9090	0.4284	0.69768	-0.26928	NAF
NS0062	32	34	NS	E396984	396984	1	G	D	30.56	51.53	1.21	0.465	0.36	0.055	0.2	0.02	0.05	0.002	0.194	0.011	1.76	0.4	0.23	2.39	8143	0.0612	0.34884	-0.28764	NAF
NS0062	122	124	NS	E410030	410030	1	G	D	24.74	40.76	3.64	0.387	0.3	0.161	2.88	0.52	0.026	0.287	0.299	0.009	1.97	12.84	0.68	15.49	9099	8.7822	9.06984	-0.28764	NAF
NS0062	46	48	NS	E396991	396991	1	G	D	35.19	44.05	2.25	0.503	0.39	0.106	0.22	0.04	0.073	0.013	0.478	0.02	0.91	0.59	0.23	1.73	8150	0.3978	0.69768	-0.29988	NAF
NS0062	30	32	NS	E396983	396983	1	G	D	36.78	42.15	1.92	0.426	0.33	0.088	0.35	0.03	0.09	0.002	0.223	0.014	1.13	0.58	0.25	1.96	8142	0.0612	0.52326	-0.46206	NAF
NS0062	136	138	NS	E410037	410037	1	G	D	25.69	38.06	3.09	0.503	0.39	0.141	3.27	0.33	0.034	0.173	0.276	0.013	2.12	14.68	0.46	17.26	9106	5.2938	5.75586	-0.46206	NAF
NS0062	210	212	NS	E410074	410074	1	G	D	21.38	49.37	4.71	0.413	0.32	0.195	2.15	0.31	0.064	0.161	0.061	0.011	1.5	9.87	0.36	11.73	9143	4.9266	5.40702	-0.48042	NAF
NS0062	8	10	NS	E396972	396972	1	G	D	26.95	52.85	4.8	0.026	0.02	0.178	0.11	0.06	0.065	0.013	0.28	0.013	1.26	1.37	0.23	2.86	8131	0.3978	1.04652	-0.64872	NAF
NS0062	256	258	NS	E410097	410097	1	G	D	25.72	39.13	4.33	0.62	0.48	0.202	2.76	0.51	0.083	0.266	1.52	0.038	1.14	11.55	0.83	13.52	9166	8.1396	8.89542	-0.75582	NAF
NS0062	44	46	NS	E396990	396990	1	G	D	37.19	41.98	1.45	0.581	0.45	0.062	0.21	0.06	0.111	0.008	0.252	0.017	1.24	0.47	0.12	1.83	8149	0.2448	1.04652	-0.80172	NAF
NS0062	394	396	NS	E410167	410167	1	G	D	22.99	45.51	3.04	0.503	0.39	0.15	2.51	0.39	0.039	0.194	0.144	0.016	5.59	8.34	0.65	14.58	9235	5.9364	6.80238	-0.86598	NAF
NS0062	128	130	NS	E410033	410033	1	G	D	22.67	41.3	5.75	0.516	0.4	0.257	2.99	0.48	0.092	0.234	1.65	0.019	1.65	11.81	0.6	14.06	9102	7.1604	8.37216	-1.21176	NAF
NS0062	146	148	NS	E410042	410042	1	G	D	25.73	38.69	2.18	0.646	0.5	0.097	2.63	0.41	0.052	0.193	0.444	0.011	1.69	15.49	0.5	17.68	9111	5.9058	7.15122	-1.24542	NAF
NS0062	40	42	NS	E396988	396988	1	G	D	37.5	38.16	2.55	0.4	0.31	0.12	0.61	0.13	0.086	0.022	0.645	0.013	0.98	2.25	0.2	3.43	8147	0.6732	2.26746	-1.59426	NAF
NS0062	100	102	NS	E410019	410019	1	G	D	35.77	41.39	1.39	0.258	0.2	0.066	0.8	0.15	0.1	0.032	0.248	0.009	0.95	3.16	0.13	4.24	9088	0.9792	2.6163	-1.6371	NAF
NS0062	50	52	NS	E396993	396993	1	G	D	35.56	40.49	1.35	0.503	0.39	0.063	0.78	0.14	0.053	0.024	0.303	0.018	1.16	4.06	0.02	5.24	8152	0.7344	2.44188	-1.70748	NAF
NS0062	140	142	NS	E410039	410039	1	G	D	21.08	49.01	5.04	0.439	0.34	0.223	2.53	0.53	0.131	0.242	0.146	0.014	1.77	9.04	0.58	11.39	9108	7.4052	9.24426	-1.83906	NAF
NS0062	66	68	NS	E410002	410002	1	G	D	34.13	41.26	1.92	0.478	0.37	0.089	1.23	0.29	0.083	0.098	0.356	0.019	0.76	4.39	0.17	5.32	9071	2.9988	5.05818	-2.05938	NAF
NS0062	284	286	NS	E410112	410112	1	G	D	25.4	41.88	5.78	0.426	0.33	0.262	3.67	0.85	0.01	0.416	0.254	0.046	0.51	8.57	0.92	10	9180	12.7296	14.8257	-2.0961	NAF
NS0062	0	2	NS	E396968	396968	1	G	D	17.34	68.63	4.06	0.026	0.02	0.195	0.1	0.13	0.01	0.002	0.227	0.036	0.6	1.1	0.07	1.77	8127	0.0612	2.26746	-2.20626	NAF
NS0062	208	210	NS	E410073	410073	1	G	D	21.17	50.35	2.69	0.503	0.39	0.113	1.98	0.32	0.056	0.11	0.062	0.024	1.94	11.15	0.29	13.38	9142	3.366	5.58144	-2.21544	NAF
NS0062	196	198	NS	E410067	410067	1	G	D	27.5	39.5	2.61	0.516	0.4	0.119	1.68	0.28	0.024	0.082	0.841	0.022	2.06	12.39	0.18	14.63	9136	2.5092	4.88376	-2.37456	NAF
NS0062	52	54	NS	E396994	396994	1	G	D	31.85	42.27	1.99	0.581	0.45	0.098	1.38	0.25	0.057	0.061	0.367	0.015	1.18	6.03	0.04	7.25	8153	1.8666	4.3605	-2.4939	NAF
NS0062	294	296	NS	E410117	410117	1	G	D	36.36	38.85	1.6	0.491	0.38	0.073	1.4	0.22	0.048	0.034	0.177	0.117	0.26	4.75	-0.13	4.88	9185	1.0404	3.83724	-2.79684	NAF
NS0062	392	394	NS	E410166	410166	1	G	D	17.78	58.51	1.42	0.426	0.33	0.066	1.75	0.37	0.038	0.115	0.099	0.016	4.32	6.98	0.44	11.74	9234	3.519	6.45354	-2.93454	NAF
NS0062	206	208	NS	E410072	410072	1	G	D	23.27	45.62	2.85	0.503	0.39	0.123	2.08	0.43	0.089	0.147	0.065	0.018	1.82	12.49	0.36	14.67	9141	4.4982	7.50006	-3.00186	NAF
NS0062	258	260	NS	E410098	410098	1	G	D	27.85	39.92	2.67	0.594	0.46	0.128	2.39	0.41	0.055	0.134	0.97	0.029	0.83	11.51	0.38	12.72	9167	4.1004	7.15122	-3.05082	NAF
NS0062	188	190	NS	E410063	410063	1	G	D	27.41	39.15	3.03	0.491	0.38	0.135	1.91	0.28	0.021	0.058	1.14	0.029	1.18	13.03	0.17	14.38	9132	1.7748	4.88376	-3.10896	NAF
NS0062	326	328	NS	E410133	410133	1	G	D	36.91	36.48	1.42	0.555	0.43	0.06	1.31	0.25	0.051	0.035	0.305	0.068	0.39	6.1	-0.07	6.42	9201	1.071	4.3605	-3.2895	NAF
NS0062	112	114	NS	E410025	410025	1	G	D	30.6	42.73	1.84	0.465	0.36	0.088	1.49	0.36	0.084	0.097	0.507	0.009	0.81	7.5	0.07	8.38	9094	2.9682	6.27912	-3.31092	NAF
NS0062	58	60	NS	E396997	396997	1	G	D	33.22	42.48	1.49	0.465	0.36	0.067	1.22	0.33	0.09	0.078	0.225	0.008	0.72	5.05	-0.03	5.74	8156	2.3868	5.75586	-3.36906	NAF
NS0062	252	254	NS	E410095	410095	1	G	D	27.59	37.13	4.02	0.736	0.57	0.182	2.66	0.65	0.123	0.258	1.21	0.056	0.84	11.73	0.8	13.37	9164	7.8948	11.3373	-3.4425	NAF
NS0062	98	100	NS	E410018	410018	1	G	D	37.11	34.42	1.86	0.503	0.39	0.086	1.7	0.28	0.069	0.046	0.283	0.011	0.85	6.58	0.01	7.44	9087	1.4076	4.88376	-3.47616	NAF
NS0062	134	136	NS	E410036	410036	1	G	D	23.64	39.9	3.93	0.646	0.5	0.18	2.68	0.5	0.08	0.171	1.6	0.02	1.77	13.98	0.48	16.23	9105	5.2326	8.721	-3.4884	NAF
NS0062	60	62	NS	E396998	396998	1	G	D	30.83	41.29	2.19	0.646	0.5	0.099	1.69	0.39	0.095	0.105	0.491	0.035	1.05	7.46	0.17	8.68	8157	3.213	6.80238	-3.58938	NAF
NS0062	38	40	NS	E396987	396987	1	G	D	31.58	41.65	2.82	0.465	0.36	0.131	1.44	0.47	0.159	0.148	0.77	0.025	0.6	5.45	0.4	6.45	8146	4.5288	8.19774	-3.66894	NAF
NS0062	322	324	NS	E410131	410131	1	G	D	38.2	34.32	1.49	0.555	0.43	0.066	1.32	0.28	0.064	0.037	0.365	0.099	0.81	5.96	-0.12	6.65	9199	1.1322	4.88376	-3.75156	NAF
NS0062	148	150	NS	E410043	410043	1	G	D	25.27	39.42	2.08	0.607	0.47	0.093	2.7	0.41	0.049	0.106	0.52	0.013	2.28	15.05	0.31	17.64	9112	3.2436	7.15122	-3.90762	NAF
NS0062	324	326	NS	E410132	410132	1	G	D	35.54	38.04	1.26	0.594	0.46	0.057	1.35	0.29	0.064	0.035	0.276	0.076	0.51	6.51	-0.09	6.93	9200	1.071	5.05818	-3.98718	NAF
NS0062	164	166	NS	E410051	410051	1	G	D	20.8	51.69	0.89	0.465	0.36	0.037	1.75	0.25	0.039	0.009	0.185	0.014	2.18	12.34	0.12	14.64	9120	0.2754	4.3605	-4.0851	NAF
NS0062	68	70	NS	E410003	410003	1	G	D	34.71	40.4	1.73	0.529	0.41	0.079	1.18	0.34	0.087	0.056	0.342	0.017	0.57	4.74	0.05	5.36	9072	1.7136	5.93028	-4.21668	NAF
NS0062	62	64	NS	E396999	396999	1	G	D	29.59	46.9	1.81	0.426	0.33	0.084	1.34	0.37	0.119	0.072	0.154	0.017	0.86	5.17	0.12	6.15	8158	2.2032	6.45354	-4.25034	NAF
NS0062	262	264	NS	E410100	410100	1	G	D	35.35	37.81	1.68	0.465	0.36	0.08	1.25	0.26	0.037	0.007	1.01	0.024	0.37	6.37	-0.13	6.61	9169	0.2142	4.53492	-4.32072	NAF
NS0062	6	8	NS	E396971	396971	1	G	D	20.71	61.93	4.75	0.026	0.02	0.211	0.14	0.26	0.023	0.006	0.507	0.017	0.84	1.3	0.21	2.35	8130	0.1836	4.53492	-4.35132	NAF
NS0062	70	72	NS	E410004	410004	1	G	D	35.94	39.03	1.23	0.633	0.49	0.056	1.13	0.31	0.079	0.034	0.19	0.028	0.6	5.18	-0.04	5.74	9073	1.0404	5.40702	-4.36662	NAF
NS0062	288	290	NS	E410114	410114	1	G	D	30.99	37.1	2.24	0.684	0.53	0.096	2.2	0.45	0.097	0.101	0.215	0.059	1.96	10.12	0.22	12.3	9182	3.0906	7.8489	-4.7583	NAF
NS0062	96	98	NS	E410017	410017	1	G	D	30.74	40.7	1.3	0.684	0.53	0.059	1.97	0.4	0.077	0.072	0.128	0.051	0.83	9.42	0.04	10.29	9086	2.2032	6.9768	-4.7736	NAF
NS0062	82	84	NS	E410010	410010	1	G	D	37.5	37.91	1.39	0.516	0.4	0.064	1.02	0.33	0.089	0.028	0.222	0.026	0.49	4.22	-0.06	4.65	9079	0.8568	5.75586	-4.89906	NAF
NS0062	90	92	NS	E410014	410014	1	G	D	35.33	40.62	1.21	0.542	0.42	0.053	1.09	0.33	0.084	0.027	0.192	0.073	0.47	4.64	-0.07	5.04	9083	0.8262	5.75586	-4.92966	NAF
NS0062	276	278	NS	E410108	410108	1	G	D	36.09	35.49	1.38	0.749	0.58	0.06	1.55	0.32	0.072	0.021	0.472	0.05	0.47	7.61	-0.11	7.97	9176	0.6426	5.58144	-4.93884	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0062	278	280	NS	E410109	410109	1	G	D	31.48	37.74	3.26	0.542	0.42	0.145	2.29	0.65	0.044	0.209	0.927	0.041	0.51	8	0.62	9.13	9177	6.3954	11.3373	-4.9419	NAF
NS0062	186	188	NS	E410062	410062	1	G	D	26.78	42.04	1.94	0.465	0.36	0.087	1.73	0.34	0.023	0.032	0.889	0.021	1.37	12.53	0.02	13.92	9131	0.9792	5.93028	-4.95108	NAF
NS0062	214	216	NS	E410076	410076	1	G	D	24.5	48.56	2.44	0.297	0.23	0.114	1.77	0.42	0.052	0.076	0.329	0.01	1.42	9.34	0.07	10.83	9145	2.3256	7.32564	-5.00004	NAF
NS0062	74	76	NS	E410006	410006	1	G	D	36.45	38.58	1.12	0.581	0.45	0.051	1.02	0.33	0.087	0.024	0.188	0.021	0.67	5.04	-0.02	5.69	9075	0.7344	5.75586	-5.02146	NAF
NS0062	84	86	NS	E410011	410011	1	G	D	36.06	39.06	1.32	0.594	0.46	0.058	1.05	0.36	0.096	0.036	0.213	0.069	0.55	4.83	-0.05	5.33	9080	1.1016	6.27912	-5.17752	NAF
NS0062	138	140	NS	E410038	410038	1	G	D	25.55	37.42	4.48	0.594	0.46	0.2	3.55	0.56	0.092	0.15	0.183	0.012	1.89	13.79	0.4	16.08	9107	4.59	9.76752	-5.17752	NAF
NS0062	300	302	NS	E410120	410120	1	G	D	33.68	35.89	1.17	0.684	0.53	0.06	2.06	0.35	0.071	0.03	0.046	0.189	1.19	10.02	-0.09	11.12	9188	0.918	6.1047	-5.1867	NAF
NS0062	80	82	NS	E410009	410009	1	G	D	35.88	38.74	1.41	0.62	0.48	0.064	1.15	0.36	0.087	0.032	0.231	0.026	0.66	5.25	-0.06	5.85	9078	0.9792	6.27912	-5.29992	NAF
NS0062	216	218	NS	E410077	410077	1	G	D	26.27	41.91	3.61	0.413	0.32	0.163	2.14	0.45	0.058	0.083	0.591	0.009	1.46	11.04	0.15	12.65	9146	2.5398	7.8489	-5.3091	NAF
NS0062	172	174	NS	E410055	410055	1	G	D	26.86	37.58	1.08	0.62	0.48	0.048	2.53	0.33	0.038	0.014	0.055	0.015	2.86	16.02	0.1	18.98	9124	0.4284	5.75586	-5.32746	NAF
NS0062	370	372	NS	E410155	410155	1	G	D	32.44	44.33	1.02	0.503	0.39	0.052	1.37	0.34	0.062	0.017	0.191	0.109	1.19	4.48	-0.18	5.49	9223	0.5202	5.93028	-5.41008	NAF
NS0062	320	322	NS	E410130	410130	1	G	D	35.54	34.84	1.35	0.581	0.45	0.062	1.68	0.39	0.072	0.045	0.32	0.11	1.67	7.86	-0.06	9.47	9198	1.377	6.80238	-5.42538	NAF
NS0062	190	192	NS	E410064	410064	1	G	D	29.38	38.92	2.22	0.542	0.42	0.099	1.62	0.4	0.023	0.05	0.829	0.023	1.17	11.78	0.04	12.99	9133	1.53	6.9768	-5.4468	NAF
NS0062	92	94	NS	E410015	410015	1	G	D	36.12	38.33	1.42	0.555	0.43	0.063	1.27	0.37	0.09	0.03	0.192	0.07	0.56	5.29	-0.08	5.77	9084	0.918	6.45354	-5.53554	NAF
NS0062	224	226	NS	E410081	410081	1	G	D	31.49	35.13	2.66	0.633	0.49	0.121	1.86	0.49	0.045	0.095	0.989	0.013	1.22	11.37	0.16	12.75	9150	2.907	8.54658	-5.63958	NAF
NS0062	78	80	NS	E410008	410008	1	G	D	35.95	38.74	1.37	0.542	0.42	0.064	1.15	0.38	0.103	0.032	0.194	0.037	0.63	5.24	-0.05	5.82	9077	0.9792	6.62796	-5.64876	NAF
NS0062	340	342	NS	E410140	410140	1	G	D	34.66	35.41	1.33	0.529	0.41	0.06	1.86	0.35	0.05	0.014	0.229	0.02	0.72	9.73	-0.12	10.33	9208	0.4284	6.1047	-5.6763	NAF
NS0062	302	304	NS	E410121	410121	1	G	D	35.32	34.63	1.19	0.646	0.5	0.056	2	0.38	0.082	0.029	0.072	0.158	1.03	9.23	-0.17	10.09	9189	0.8874	6.62796	-5.74056	NAF
NS0062	94	96	NS	E410016	410016	1	G	D	34.79	38.03	1.41	0.646	0.5	0.064	1.57	0.39	0.083	0.034	0.171	0.08	0.59	7.15	-0.1	7.64	9085	1.0404	6.80238	-5.76198	NAF
NS0062	174	176	NS	E410056	410056	1	G	D	28.02	36.21	1.24	0.646	0.5	0.053	2.39	0.35	0.036	0.01	0.193	0.007	2.53	15.96	0.03	18.52	9125	0.306	6.1047	-5.7987	NAF
NS0062	54	56	NS	E396995	396995	1	G	D	36.67	36.42	1.4	0.594	0.46	0.063	1.3	0.38	0.1	0.027	0.223	0.016	0.79	6.19	-0.2	6.78	8154	0.8262	6.62796	-5.80176	NAF
NS0062	268	270	NS	E410104	410104	1	G	D	35.51	36.31	1.63	0.723	0.56	0.071	1.24	0.34	0.051	0.004	1	0.055	0.42	7.21	-0.1	7.53	9172	0.1224	5.93028	-5.80788	NAF
NS0062	76	78	NS	E410007	410007	1	G	D	34.29	38.62	1.37	0.607	0.47	0.062	1.15	0.41	0.102	0.043	0.248	0.042	1.44	6.49	0	7.93	9076	1.3158	7.15122	-5.83542	NAF
NS0062	88	90	NS	E410013	410013	1	G	D	36.97	38.34	1.25	0.581	0.45	0.057	1.02	0.38	0.102	0.025	0.209	0.062	0.44	4.58	-0.04	4.98	9082	0.765	6.62796	-5.86296	NAF
NS0062	312	314	NS	E410126	410126	1	G	D	29.85	42.2	0.91	0.568	0.44	0.05	1.74	0.35	0.049	0.005	0.167	0.026	0.91	10.15	-0.09	10.97	9194	0.153	6.1047	-5.9517	NAF
NS0062	396	398	NS	E410168	410168	1	G	D	22.98	46.41	1.16	0.478	0.37	0.053	1.89	0.47	0.059	0.072	0.314	0.011	5.88	9.69	0.33	15.9	9236	2.2032	8.19774	-5.99454	NAF
NS0062	304	306	NS	E410122	410122	1	G	D	35.64	39.07	1.16	0.555	0.43	0.057	1.41	0.39	0.079	0.023	0.078	0.184	0.41	5.73	-0.26	5.88	9190	0.7038	6.80238	-6.09858	NAF
NS0062	372	374	NS	E410156	410156	1	G	D	35.42	38.02	1.25	0.555	0.43	0.061	1.71	0.39	0.082	0.022	0.243	0.066	1.56	5.44	-0.21	6.79	9224	0.6732	6.80238	-6.12918	NAF
NS0062	368	370	NS	E410154	410154	1	G	D	34.38	39.96	1.3	0.542	0.42	0.069	1.65	0.4	0.076	0.024	0.23	0.132	1.23	5.25	-0.21	6.27	9222	0.7344	6.9768	-6.2424	NAF
NS0062	162	164	NS	E410050	410050	1	G	D	28.19	34.98	1.11	0.555	0.43	0.046	2.65	0.4	0.068	0.023	0.056	0.013	2.97	16.42	0.09	19.48	9119	0.7038	6.9768	-6.273	NAF
NS0062	72	74	NS	E410005	410005	1	G	D	36.15	39.47	1.37	0.542	0.42	0.062	1.07	0.42	0.104	0.032	0.235	0.045	0.44	4.35	-0.03	4.76	9074	0.9792	7.32564	-6.34644	NAF
NS0062	144	146	NS	E410041	410041	1	G	D	28.03	37.8	1.32	0.555	0.43	0.058	1.97	0.45	0.056	0.045	0.352	0.009	1.83	15.22	0.07	17.12	9110	1.377	7.8489	-6.4719	NAF
NS0062	332	334	NS	E410136	410136	1	G	D	35.79	34.36	1.29	0.607	0.47	0.057	1.93	0.43	0.087	0.033	0.277	0.052	0.68	8.93	-0.07	9.54	9204	1.0098	7.50006	-6.49026	NAF
NS0062	290	292	NS	E410115	410115	1	G	D	34.48	37.26	1.42	0.646	0.5	0.061	1.54	0.45	0.094	0.044	0.141	0.1	1.75	6.86	-0.03	8.58	9183	1.3464	7.8489	-6.5025	NAF
NS0062	260	262	NS	E410099	410099	1	G	D	26.12	39.78	3.27	0.452	0.35	0.147	2.84	0.61	0.014	0.135	1.06	0.013	1.25	12.39	0.51	14.15	9168	4.131	10.63962	-6.50862	NAF
NS0062	328	330	NS	E410134	410134	1	G	D	35.56	36.32	1.36	0.646	0.5	0.059	1.59	0.45	0.08	0.042	0.231	0.115	0.49	7.63	-0.04	8.08	9202	1.2852	7.8489	-6.5637	NAF
NS0062	242	244	NS	E410090	410090	1	G	D	31.47	41.65	1.21	0.594	0.46	0.052	1.42	0.41	0.083	0.017	0.474	0.016	0.67	8.17	-0.09	8.75	9159	0.5202	7.15122	-6.63102	NAF
NS0062	86	88	NS	E410012	410012	1	G	D	35.74	38.68	1.12	0.646	0.5	0.049	1.07	0.43	0.118	0.028	0.145	0.072	0.66	5.66	-0.05	6.27	9081	0.8568	7.50006	-6.64326	NAF
NS0062	218	220	NS	E410078	410078	1	G	D	28.86	33.27	2.11	0.594	0.46	0.091	2.43	0.47	0.07	0.047	0.57	0.011	2.32	16.2	0.18	18.7	9147	1.4382	8.19774	-6.75954	NAF
NS0062	226	228	NS	E410082	410082	1	G	D	34.75	35.21	1.69	0.658	0.51	0.074	1.42	0.44	0.073	0.028	0.666	0.008	0.93	9.03	-0.14	9.82	9151	0.8568	7.67448	-6.81768	NAF
NS0062	374	376	NS	E410157	410157	1	G	D	32.42	38.56	1.13	0.594	0.46	0.06	2.34	0.44	0.06	0.028	0.178	0.024	1.58	8.48	-0.09	9.97	9225	0.8568	7.67448	-6.81768	NAF
NS0062	292	294	NS	E410116	410116	1	G	D	36.55	37.37	1.49	0.594	0.46	0.068	1.49	0.45	0.105	0.031	0.155	0.138	0.35	5.45	-0.18	5.62	9184	0.9486	7.8489	-6.9003	NAF
NS0062	180	182	NS	E410059	410059	1	G	D	31.36	42.55	1.16	0.491	0.38	0.054	1.46	0.41	0.068	0.003	0.547	0.031	0.71	7.63	-0.17	8.17	9128	0.0918	7.15122	-7.05942	NAF
NS0062	182	184	NS	E410060	410060	1	G	D	32.94	38.08	1.58	0.503	0.39	0.075	1.84	0.41	0.051	0.003	0.666	0.026	0.47	9.15	-0.12	9.5	9129	0.0918	7.15122	-7.05942	NAF
NS0062	248	250	NS	E410093	410093	1	G	D	28.69	46.06	1.04	0.646	0.5	0.048	1.43	0.46	0.085	0.03	0.374	0.036	0.6	8.02	-0.05	8.57	9162	0.918	8.02332	-7.10532	NAF
NS0062	192	194	NS	E410065	410065	1	G	D	31.99	36.86	1.52	0.568	0.44	0.071	1.67	0.43	0.024	0.012	0.447	0.019	1.1	11.58	-0.13	12.55	9134	0.3672	7.50006	-7.13286	NAF
NS0062	366	368	NS	E410153	410153	1	G	D	33.93	40.82	1.32	0.516	0.4	0.063	1.6	0.47	0.067	0.033	0.258	0.11	1.19	5.08	-0.15	6.12	9221	1.0098	8.19774	-7.18794	NAF
NS0062	306	308	NS	E410123	410123	1	G	D	33.71	40.35	1.06	0.594	0.46	0.05	1.61	0.46	0.075	0.023	0.07	0.145	0.47	6.84	-0.21	7.1	9191	0.7038	8.02332	-7.31952	NAF
NS0062	244	246	NS	E410091	410091	1	G	D	32.47	40.18	1.23	0.62	0.48	0.054	1.42	0.46	0.1	0.019	0.487	0.019	0.71	8.15	-0.1	8.76	9160	0.5814	8.02332	-7.44192	NAF
NS0062	270	272	NS	E410105	410105	1	G	D	33.15	40.17	1.05	0.749	0.58	0.045	1.32	0.45	0.059	0.003	0.521	0.069	0.45	7.56	-0.07	7.94	9173	0.0918	7.8489	-7.7571	NAF
NS0062	364	366	NS	E410152	410152	1	G	D	28.97	47.2	1.19	0.426	0.33	0.064	1.73	0.52	0.038	0.028	0.243	0.038	1.57	5.4	0	6.97	9220	0.8568	9.06984	-8.21304	NAF
NS0062	350	352	NS	E410145	410145	1	G	D	33.04	32.28	1.25	0.594	0.46	0.054	2.21	0.51	0.069	0.022	0.386	0.028	0.99	14.06	-0.03	15.02	9213	0.6732	8.89542	-8.22222	NAF
NS0062	250	252	NS	E410094	410094	1	G	D	32.32	39.9	1.12	0.826	0.64	0.053	1.52	0.52	0.099	0.024	0.373	0.084	0.71	8.4	-0.1	9.01	9163	0.7344	9.06984	-8.33544	NAF
NS0062	222	224	NS	E410080	410080	1	G	D	29.5	38.1	1.42	0.62	0.48	0.065	1.95	0.52	0.03	0.022	0.387	0.011	1.46	12.91	0.07	14.44	9149	0.6732	9.06984	-8.39664	NAF
NS0062	266	268	NS	E410103	410103	1	G	D	36.15	35.71	1.74	0.671	0.52	0.08	1.16	0.49	0.108	0.004	1.15	0.033	0.45	6.53	-0.12	6.86	9171	0.1224	8.54658	-8.42418	NAF
NS0062	356	358	NS	E410148	410148	1	G	D	31.54	31.94	1.16	0.516	0.4	0.055	2.63	0.5	0.05	0.009	0.35	0.021	1.49	15.91	0	17.4	9216	0.2754	8.721	-8.4456	NAF
NS0062	228	230	NS	E410083	410083	1	G	D	35.68	34.83	1.38	0.658	0.51	0.065	1.39	0.51	0.094	0.009	0.529	0.013	0.68	8.74	-0.17	9.25	9152	0.2754	8.89542	-8.62002	NAF
NS0062	376	378	NS	E410158	410158	1	G	D	28.68	45.24	0.88	0.594	0.46	0.045	1.67	0.51	0.061	0.009	0.294	0.027	1.63	7.63	0.06	9.32	9226	0.2754	8.89542	-8.62002	NAF
NS0062	296	298	NS	E410118	410118	1	G	D	32.61	39.07	1.92	0.684	0.53	0.09	1.89	0.71	0.189	0.119	0.175	0.186	0.49	7.38	0.12	7.99	9186	3.6414	12.38382	-8.74242	NAF
NS0062	348	350	NS	E410144	410144	1	G	D	29.3	39.45	1.23	0.503	0.39	0.064	1.97	0.56	0.089	0.03	0.33	0.026	1.17	12.45	-0.02	13.6	9212	0.918	9.76752	-8.84952	NAF
NS0062	310	312	NS	E410125	410125	1	G	D	28.89	39.36	0.79	0.723	0.56	0.042	2.26	0.53	0.068	0.012	0.061	0.077	1.99	12.49	-0.01	14.47	9193	0.3672	9.24426	-8.87706	NAF
NS0062	178	180	NS	E410058	410058	1	G	D	31.96	38.13	1.39	0.542	0.42	0.063	1.94	0.52	0.08	0.004	0.661	0.02	0.95	9.86	-0.09	10.72	9127	0.1224	9.06984	-8.94744	NAF
NS0062	126	128	NS	E410032	410032	1	G	D	27.39	34.31	2.96	0.658	0.51	0.139	2.98	0.79	0.175	0.156	0.166	0.013	1.87	15.95	0.41	18.23	9101	4.7736	13.77918	-9.00558	NAF
NS0062	346	348	NS	E410143	410143	1	G	D	31.8	35.53	1.09	0.516	0.4	0.053	2.36	0.56	0.06	0.022	0.14	0.028	1.27	12.74	0.03	14.04	9211	0.6732	9.76752	-9.09432	NAF
NS0062	114	116	NS	E410026	410026	1	G	D	31.39	38.68	2.37	0.555	0.43	0.109	1.78	0.72	0.173	0.113	0.841	0.012	0.86	8.51	0.11	9.48	9095	3.4578	12.55824	-9.10044	NAF
NS0062	398	400	NS	E410169	410169	1	G	D	29.13	37.23	1.1	0.671	0.52	0.051	2.44	0.61	0.066	0.037	0.27	0.035	5.4	10.05	0.09	15.54	9237	1.1322	10.63962	-9.50742	NAF
NS0062	246	248	NS	E410092	410092	1	G	D	32.96	35.39	1.96	0.646	0.5	0.09	1.92	0.64	0.129	0.054	0.755	0.04	0.87	10.02	0.03	10.92	9161	1.6524	11.16288	-9.51048	NAF
NS0062	316	318	NS	E410128	410128	1	G	D	32.62	37.98	1.13	0.671	0.52	0.056	1.97	0.61	0.064	0.028	0.318	0.074	0.61	9.43	0.12	10.16	9196	0.8568	10.63962	-9.78282	NAF
NS0062	314	316	NS	E410127	410127	1	G	D	32.52	34.27	1.19	0.658	0.51	0.06	2.38	0.58	0.052	0.01	0.228	0.062	1.52	12.35	0.04	13.91	9195	0.306	10.11636	-9.81036	NAF
NS0062	156	158	NS	E410047	410047	1	G	D	28.32	40.65	1.49	0.516	0.4	0.068	2.17	0.6	0.074	0.019	0.503	0.007	1.08	12	-0.02	13.06	9116	0.5814	10.4652	-9.8838	NAF
NS0062	308	310	NS	E410124	410124	1	G	D	33.3	37.52	0.97	0.684	0.53	0.046	2	0.62	0.081	0.03	0.052	0.133	0.86	9.3	-0.06	10.1	9192	0.918	10.81404	-9.89604	NAF
NS0062	336	338	NS	E410138	410138	1	G	D	33.46	35.38	1.18	0.813	0.63	0.057	2.05	0.63	0.13	0.031	0.265	0.072	0.63	10.74	-0.03	11.34	9206	0.9486	10.98846	-10.03986	NAF
NS0062	238	240	NS	E410088	410088	1	G	D	33.29	33.19	2.08	0.723	0.56	0.097	2.07	0.61	0.079	0.018	0.797	0.054	0.73	11.49	0.11	12.33	9157	0.5508	10.63962	-10.08882	NAF
NS0062	142	144	NS	E410040	410040	1	G	D	26.28	38.86	1.98	0.62	0.48	0.087	2.32	0.74	0.134	0.086	0.306	0.008	2.34	14.39	0.18	16.91	9109	2.6316	12.90708	-10.27548	NAF
NS0062	272	274	NS	E410106	410106	1	G	D	36.29	34.35	1.39	0.8	0.62	0.057	1.47	0.6	0.092	0.004	0.611	0.103	0.5	7.89	-0.05	8.34	9174	0.1224	10.4652	-10.3428	NAF
NS0062	236	238	NS	E410087	410087	1	G	D	33.53	33.35	1.94	0.749	0.58	0.093	2.06	0.62	0.067	0.014	0.749	0.052	0.68	11.35	0.11	12.14	9156	0.4284	10.81404	-10.38564	NAF
NS0062	158	160	NS	E410048	410048	1	G	D	29.25	39.59	1.62	0.503	0.39	0.074	2.19	0.7	0.076	0.056	0.655	0.015	0.98	11.55	0.05	12.58	9117	1.7136	12.2094	-10.4958	NAF
NS0062	274	276	NS	E410107	410107	1	G	D	34.27	38.97	1.15	0.788	0.61	0.05	1.21	0.61	0.11	0.004	0.522	0.077	0.48	6.77	-0.04	7.21	9175	0.1224	10.63962	-10.51722	NAF
NS0062	118	120	NS	E410028	410028	1	G	D	32.04	37.4	1.93	0.646	0.5	0.087	1.63	0.7	0.091	0.05	0.903	0.014	0.85	9.84	-0.19	10.5	9097	1.53	12.2094	-10.6794	NAF
NS0062	334	336	NS	E410137	410137	1	G	D	32.54	36.78	1.1	0.788	0.61	0.052	2.02	0.67	0.146	0.03	0.264	0.068	0.83	10.49	-0.03	11.29	9205	0.918	11.68614	-10.76814	NAF
NS0062	358	360	NS	E410149	410149	1	G	D	33.14	31.45	1.18	0.568	0.44	0.061	2.51	0.64	0.057	0.008	0.42	0.017	1.03	14.52	0.02	15.57	9217	0.2448	11.16288	-10.91808	NAF
NS0062	362	364	NS	E410151	410151	1	G	D	32.27	32.15	1.18	0.581	0.45	0.058	2.88	0.68	0.089	0.03	0.42	0.027	1.15	14.25	0.01	15.41	9219	0.918	11.86056	-10.94256	NAF
NS0062	176	178	NS	E410057	410057	1	G	D	27.49	39.73	1.19	0.568	0.44	0.053	2.25	0.65	0.05	0.01	0.301	0.007	1.89	13.6	0.14	15.63	9126	0.306	11.3373	-11.0313	NAF
NS0062	120	122	NS	E410029	410029	1	G	D	30.16	33.02	1.92	0.581	0.45	0.083	2.25	0.78	0.028	0.077	0.824	0.01	1.63	15.43	-0.04	17.02	9098	2.3562	13.60476	-11.24856	NAF
NS0062	220	222	NS	E410079	410079	1	G	D	30.75	33.39	1.59	0.646	0.5	0.068	2.29	0.69	0.046	0.021	0.44	0.004	1.91	14.54	0.22	16.67	9148	0.6426	12.03498	-11.39238	NAF
NS0062	330	332	NS	E410135	410135	1	G	D	34.8	34.21	1.28	0.749	0.58	0.059	2	0.74	0.175	0.044	0.222	0.145	0.57	9.61	-0.07	10.11	9203	1.3464	12.90708	-11.56068	NAF
NS0062	230	232	NS	E410084	410084	1	G	D	35.22	31	1.29	0.981	0.76	0.059	1.8	0.68	0.14	0.007	0.45	0.099	0.89	12.01	-0.16	12.74	9153	0.2142	11.86056	-11.64636	NAF
NS0062	154	156	NS	E410046	410046	1	G	D	30.17	40	1.26	0.542	0.42	0.056	1.95	0.69	0.062	0.008	0.592	0.016	0.93	10.43	0.02	11.38	9115	0.2448	12.03498	-11.79018	NAF
NS0062	184	186	NS	E410061	410061	1	G	D	23.92	44.23	1.05	0.503	0.39	0.047	2.39	0.71	0.034	0.017	0.257	0.022	1.48	14.58	0.26	16.32	9130	0.5202	12.38382	-11.86362	NAF
NS0062	152	154	NS	E410045	410045	1	G	D	29.91	37.98	1.68	0.555	0.43	0.076	1.92	0.7	0.064	0.01	0.902	0.014	1.02	12.13	0.02	13.17	9114	0.306	12.2094	-11.9034	NAF
NS0062	160	162	NS	E410049	410049	1	G	D	28.62	38.11	1.25	0.542	0.42	0.056	2.52	0.76	0.079	0.04	0.257	0.008	1.27	13.9	0.12	15.29	9118	1.224	13.25592	-12.03192	NAF
NS0062	338	340	NS	E410139	410139	1	G	D	33.31	32.83	1.25	0.852	0.66	0.059	2.32	0.79	0.149	0.03	0.264	0.099	0.73	12.67	0.04	13.44	9207	0.918	13.77918	-12.86118	NAF
NS0062	280	282	NS	E410110	410110	1	G	D	29.76	36.52	3.36	0.62	0.48	0.153	2.6	1.18	0.226	0.242	1.02	0.077	0.59	9.74	0.71	11.04	9178	7.4052	20.58156	-13.17636	NAF
NS0062	318	320	NS	E410129	410129	1	G	D	31.57	35.54	1.11	0.671	0.52	0.056	2.67	0.83	0.078	0.034	0.149	0.17	0.8	12.31	0.23	13.34	9197	1.0404	14.47686	-13.43646	NAF
NS0062	384	386	NS	E410162	410162	1	G	D	27.94	34.57	1.02	0.594	0.46	0.047	2.4	0.82	0.08	0.021	0.309	0.003	7.25	12.58	0.22	20.05	9230	0.6426	14.30244	-13.65984	NAF
NS0062	116	118	NS	E410027	410027	1	G	D	32.82	37.16	1.76	0.607	0.47	0.081	1.73	0.88	0.122	0.053	0.574	0.008	0.48	9.51	-0.04	9.95	9096	1.6218	15.34896	-13.72716	NAF
NS0062	264	266	NS	E410102	410102	1	G	D	34.92	36.69	1.96	0.646	0.5	0.081	1.17	0.8	0.208	0.004	1.28	0.035	0.25	6.56	-0.11	6.7	9170	0.1224	13.9536	-13.8312	NAF
NS0062	150	152	NS	E410044	410044	1	G	D	27.89	33.78	2.3	0.555	0.43	0.101	2.53	0.83	0.181	0.019	0.742	0.012	1.67	16.81	0.1	18.58	9113	0.5814	14.47686	-13.89546	NAF
NS0062	232	234	NS	E410085	410085	1	G	D	35.14	30.05	1.59	0.981	0.76	0.073	1.91	0.85	0.195	0.006	0.564	0.138	0.86	12.17	-0.12	12.91	9154	0.1836	14.8257	-14.6421	NAF
NS0062	342	344	NS	E410141	410141	1	G	D	33.05	32.5	1.21	0.581	0.45	0.057	2.61	0.88	0.056	0.008	0.07	0.03	0.78	13.6	0.28	14.66	9209	0.2448	15.34896	-15.10416	NAF
NS0062	380	382	NS	E410160	410160	1	G	D	31.08	30.7	1.25	0.633	0.49	0.056	2.48	0.89	0.049	0.008	0.455	0.005	5.58	12.81	0.37	18.76	9228	0.2448	15.52338	-15.27858	NAF
NS0062	240	242	NS	E410089	410089	1	G	D	30.9	34.87	1.83	0.788	0.61	0.086	2.21	0.9	0.2	0.011	0.677	0.052	1.05	12.67	0.06	13.78	9158	0.3366	15.6978	-15.3612	NAF
NS0062	170	172	NS	E410054	410054	1	G	D	28.43	33	1.94	0.646	0.5	0.086	2.71	0.93	0.227	0.028	0.155	0.006	2.61	16.43	0.11	19.15	9123	0.8568	16.22106	-15.36426	NAF
NS0062	4	6	NS	E396970	396970	1	G	D	12.98	76.79	1.48	0.026	0.02	0.072	0.07	0.92	0.024	0.004	0.06	0.015	0.66	0.71	0.37	1.74	8129	0.1224	16.04664	-15.92424	NAF
NS0062	360	362	NS	E410150	410150	1	G	D	30.96	29.78	1.05	0.633	0.49	0.046	3.18	0.95	0.056	0.013	0.378	0.025	1.12	17.78	0.39	19.29	9218	0.3978	16.5699	-16.1721	NAF
NS0062	388	390	NS	E410164	410164	1	G	D	30.94	30.97	1.14	0.594	0.46	0.051	2.49	0.96	0.064	0.014	0.398	0.005	5.56	12.92	0.37	18.85	9232	0.4284	16.74432	-16.31592	NAF
NS0062	234	236	NS	E410086	410086	1	G	D	34.67	30.99	1.83	0.8	0.62	0.087	2.01	0.97	0.192	0.011	0.679	0.093	0.74	11.63	0.06	12.43	9155	0.3366	16.91874	-16.58214	NAF
NS0062	344	346	NS	E410142	410142	1	G	D	29.58	33.94	1	0.607	0.47	0.045	2.9	0.99	0.068	0.011	0.066	0.03	1.62	15.75	0.38	17.75	9210	0.3366	17.26758	-16.93098	NAF
NS0062	378	380	NS	E410159	410159	1	G	D	32.61	34.01	1.25	0.594	0.46	0.063	2.06	1	0.069	0.006	0.467	0.012	3.18	10.13	0.37	13.68	9227	0.1836	17.442	-17.2584	NAF
NS0062	352	354	NS	E410146	410146	1	G	D	30.58	30.29	1.08	0.736	0.57	0.048	3.06	1.03	0.1	0.017	0.296	0.026	1.21	17.79	0.3	19.3	9214	0.5202	17.96526	-17.44506	NAF
NS0062	382	384	NS	E410161	410161	1	G	D	30.57	30.73	1.32	0.646	0.5	0.059	2.38	1.02	0.096	0.011	0.477	0.004	5.4	13.41	0.33	19.14	9229	0.3366	17.79084	-17.45424	NAF
NS0062	354	356	NS	E410147	410147	1	G	D	32.36	27.78	1.2	0.646	0.5	0.055	3.24	1.03	0.101	0.008	0.233	0.026	1.12	17.84	0.25	19.21	9215	0.2448	17.96526	-17.72046	NAF
NS0062	386	388	NS	E410163	410163	1	G	D	30.9	28.58	1.21	0.594	0.46	0.052	2.49	1.07	0.064	0.019	0.438	0.003	6.3	14.15	0.48	20.93	9231	0.5814	18.66294	-18.08154	NAF
NS0062	390	392	NS	E410165	410165	1	G	D	30.38	32.52	1.16	0.594	0.46	0.053	2.59	1.24	0.078	0.013	0.417	0.008	4.21	12.62	0.68	17.51	9233	0.3978	21.62808	-21.23028	NAF
NS0062	286	288	NS	E410113	410113	1	G	D	24.11	40.56	5.14	0.516	0.4	0.228	3.95	2.39	0.466	0.374	0.154	0.058	0.59	9.28	1.16	11.03	9181	11.4444	41.68638	-30.24198	NAC
NS0062	2	4	NS	E396969	396969	1	G	D	14.68	68.05	4.38	0.026	0.02	0.193	0.19	2.19	0.012	0.004	0.198	0.033	0.65	1.8	1.13	3.58	8128	0.1224	38.19798	-38.07558	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0062	168	170	NS	E410053	410053	1	G	D	26.26	36.4	1.62	0.555	0.43	0.068	2.23	2.35	0.691	0.013	0.038	0.001	2.87	14.5	0.09	17.46	9122	0.3978	40.9887	-40.5909	NAC
NS0063	194	196	NS	E410268	410268	1	G	W	26.67	39.82	4.32	0.813	0.63	0.184	3.94	0.46	0.071	3.17	1.06	0.217	0.43	5.6	4.39	10.42	9334	97.002	8.02332	88.97868	PAF(HC)
NS0063	140	142	NS	E410241	410241	1	G	W	26.47	39.88	6.65	0.413	0.32	0.288	5.08	0.35	0.061	3.06	0.49	0.241	0.5	4.65	3.08	8.23	9307	93.636	6.1047	87.5313	PAF(HC)
NS0063	192	194	NS	E410267	410267	1	G	W	26.68	45.96	2.32	0.607	0.47	0.1	2.79	0.66	0.039	2.94	0.739	0.131	0.18	4.05	4.03	8.26	9333	89.964	11.51172	78.45228	PAF(HC)
NS0063	190	192	NS	E410266	410266	1	G	W	27.29	43.86	3.15	0.568	0.44	0.138	3.49	0.65	0.056	2.17	0.73	0.17	0.26	4.53	3.18	7.97	9332	66.402	11.3373	55.0647	PAF(HC)
NS0063	224	226	NS	E410283	410283	1	G	W	31.47	39.76	2.49	0.607	0.47	0.108	3.04	1.11	0.107	1.05	0.452	0.141	0.35	4.53	1.74	6.62	9349	32.13	19.36062	12.76938	PAF(HC)
NS0063	218	220	NS	E410280	410280	1	G	W	22.03	46.76	6.74	0.555	0.43	0.284	4.71	0.62	0.05	0.714	0.729	0.177	0.56	5.78	1.22	7.56	9346	21.8484	10.81404	11.03436	PAF(HC)
NS0063	212	214	NS	E410277	410277	1	G	W	26.18	42.34	5.98	0.452	0.35	0.258	5.12	0.35	0.047	0.386	0.633	0.236	0.64	5.27	0.84	6.75	9343	11.8116	6.1047	5.7069	PAF(LC)
NS0063	16	18	NS	E410178	410178	1	G	W	38.26	42.17	0.78	0.219	0.17	0.037	0.11	0.02	0.024	0.005	0.01	0.009	1.58	0.39	0.07	2.04	9246	0.153	0.34884	-0.19584	NAF
NS0063	6	8	NS	E410173	410173	1	G	W	36.16	40.19	1.83	0.065	0.05	0.137	0.07	0.04	0.021	0.013	0.011	0.018	4.73	0.83	0.15	5.71	9241	0.3978	0.69768	-0.29988	NAF
NS0063	8	10	NS	E410174	410174	1	G	W	37.48	41.33	1.23	0.181	0.14	0.05	0.08	0.03	0.033	0.006	0.011	0.006	2.43	0.61	0.09	3.13	9242	0.1836	0.52326	-0.33966	NAF
NS0063	14	16	NS	E410177	410177	1	G	W	39.17	40.29	0.72	0.155	0.12	0.035	0.12	0.03	0.046	0.005	0.012	0.007	2.11	0.5	0.01	2.62	9245	0.153	0.52326	-0.37026	NAF
NS0063	10	12	NS	E410175	410175	1	G	W	38.01	41.06	0.7	0.813	0.63	0.031	0.11	0.03	0.048	0.004	0.026	0.001	1.88	0.45	0.05	2.38	9243	0.1224	0.52326	-0.40086	NAF
NS0063	20	22	NS	E410180	410180	1	G	W	38.43	41.09	1.05	0.374	0.29	0.039	0.09	0.03	0.057	0.004	0.016	0.015	1.81	0.4	-0.02	2.19	9248	0.1224	0.52326	-0.40086	NAF
NS0063	22	24	NS	E410181	410181	1	G	W	38.36	41.38	0.84	0.568	0.44	0.034	0.12	0.03	0.049	0.003	0.058	0.012	1.61	0.36	-0.08	1.89	9249	0.0918	0.52326	-0.43146	NAF
NS0063	0	2	NS	E410170	410170	1	G	W	34.7	40.84	2.69	0.039	0.03	0.299	0.18	0.06	0.02	0.016	0.038	0.024	4.61	1.29	0.15	6.05	9238	0.4896	1.04652	-0.55692	NAF
NS0063	12	14	NS	E410176	410176	1	G	W	35.35	42.87	1.79	0.129	0.1	0.151	0.12	0.05	0.034	0.01	0.021	0.011	3.34	0.82	0.14	4.3	9244	0.306	0.8721	-0.5661	NAF
NS0063	24	26	NS	E410182	410182	1	G	W	37.18	42.2	1.12	0.775	0.6	0.052	0.15	0.04	0.032	0.003	0.185	0.016	1.87	0.43	0.08	2.38	9250	0.0918	0.69768	-0.60588	NAF
NS0063	32	34	NS	E410186	410186	1	G	W	39.25	39.17	1.03	0.813	0.63	0.05	0.13	0.04	0.068	0.003	0.328	0.019	2.1	0.37	-0.02	2.45	9254	0.0918	0.69768	-0.60588	NAF
NS0063	144	146	NS	E410243	410243	1	G	W	31.52	31.54	4.7	0.684	0.53	0.2	5.26	0.44	0.067	0.23	0.344	0.183	0.63	9.79	0.48	10.9	9309	7.038	7.67448	-0.63648	NAF
NS0063	18	20	NS	E410179	410179	1	G	W	38.02	41.08	0.94	0.245	0.19	0.036	0.22	0.06	0.05	0.01	0.023	0.007	1.89	1.18	0	3.07	9247	0.306	1.04652	-0.74052	NAF
NS0063	26	28	NS	E410183	410183	1	G	W	39.31	38.12	1.24	1.123	0.87	0.071	0.15	0.05	0.041	0.003	0.351	0.018	1.85	0.44	0.11	2.4	9251	0.0918	0.8721	-0.7803	NAF
NS0063	4	6	NS	E410172	410172	1	G	W	34.77	42.64	2.23	0.039	0.03	0.149	0.08	0.07	0.012	0.013	0.014	0.02	4.16	0.89	0.15	5.2	9240	0.3978	1.22094	-0.82314	NAF
NS0063	30	32	NS	E410185	410185	1	G	W	37.91	39.29	1.52	0.955	0.74	0.073	0.18	0.06	0.091	0.003	0.292	0.018	2.39	0.64	0.05	3.08	9253	0.0918	1.04652	-0.95472	NAF
NS0063	2	4	NS	E410171	410171	1	G	W	31.19	45.26	2.96	0.026	0.02	0.307	0.13	0.09	0.016	0.015	0.026	0.023	5.22	1.19	0.17	6.58	9239	0.459	1.56978	-1.11078	NAF
NS0063	34	36	NS	E410187	410187	1	G	W	36.82	41.06	1.46	0.775	0.6	0.063	0.17	0.07	0.064	0.003	0.489	0.029	2.11	0.47	0.11	2.69	9255	0.0918	1.22094	-1.12914	NAF
NS0063	36	38	NS	E410188	410188	1	G	W	37.08	40.99	1.4	0.878	0.68	0.063	0.2	0.09	0.057	0.002	0.554	0.017	2.09	0.47	0.1	2.66	9256	0.0612	1.56978	-1.50858	NAF
NS0063	28	30	NS	E410184	410184	1	G	W	35.96	40.88	1.27	0.891	0.69	0.06	0.38	0.12	0.063	0.006	0.315	0.02	1.92	2.1	0.08	4.1	9252	0.1836	2.09304	-1.90944	NAF
NS0063	38	40	NS	E410189	410189	1	G	W	35.67	42.45	1.89	0.607	0.47	0.081	0.22	0.13	0.074	0.002	0.809	0.033	1.84	0.52	0.14	2.5	9257	0.0612	2.26746	-2.20626	NAF
NS0063	76	78	NS	E410209	410209	1	G	W	29.25	38.48	5.28	0.465	0.36	0.231	4.99	0.59	0.108	0.227	0.64	0.147	0.43	6.21	0.38	7.02	9275	6.9462	10.29078	-3.34458	NAF
NS0063	142	144	NS	E410242	410242	1	G	W	32.81	35.08	2.75	0.684	0.53	0.12	3.72	0.59	0.082	0.223	0.316	0.138	0.5	8.22	0.35	9.07	9308	6.8238	10.29078	-3.46698	NAF
NS0063	104	106	NS	E410223	410223	1	G	W	25.21	42.22	5.91	0.465	0.36	0.251	5.12	1.39	0.144	0.653	0.553	0.181	0.51	5.29	1.28	7.08	9289	19.9818	24.24438	-4.26258	NAF
NS0063	220	222	NS	E410281	410281	1	G	W	24.53	47.3	4.81	0.516	0.4	0.201	3.77	0.68	0.085	0.24	0.556	0.17	0.53	5.34	0.62	6.49	9347	7.344	11.86056	-4.51656	NAF
NS0063	216	218	NS	E410279	410279	1	G	W	27.72	48.21	1.3	0.607	0.47	0.056	2.17	0.72	0.057	0.261	0.396	0.095	0.22	5.72	0.3	6.24	9345	7.9866	12.55824	-4.57164	NAF
NS0063	186	188	NS	E410264	410264	1	G	W	29.96	44.02	2.03	0.516	0.4	0.089	2.77	1.69	0.102	0.786	0.549	0.09	0.15	3.67	1.11	4.93	9330	24.0516	29.47698	-5.42538	NAF
NS0063	164	166	NS	E410253	410253	1	G	W	31.33	39.24	1.72	0.775	0.6	0.074	3.16	0.56	0.11	0.092	0.575	0.126	0.39	7.95	0	8.34	9319	2.8152	9.76752	-6.95232	NAF
NS0063	214	216	NS	E410278	410278	1	G	W	24.48	42.83	4.45	0.736	0.57	0.183	4.83	0.83	0.167	0.238	0.632	0.228	0.7	8.3	0.71	9.71	9344	7.2828	14.47686	-7.19406	NAF
NS0063	210	212	NS	E410276	410276	1	G	W	25.27	46.19	3.97	0.503	0.39	0.165	4.12	0.86	0.073	0.184	0.453	0.196	0.55	5.44	0.64	6.63	9342	5.6304	15.00012	-9.36972	NAF
NS0063	226	228	NS	E410284	410284	1	G	W	34.92	38.86	1.38	0.646	0.5	0.062	2.25	1.1	0.073	0.282	0.26	0.084	0.18	4.42	0.43	5.03	9350	8.6292	19.1862	-10.557	NAF
NS0063	162	164	NS	E410252	410252	1	G	W	29.78	44.35	1.51	0.581	0.45	0.063	2.61	1.04	0.099	0.233	0.39	0.099	0.34	5.46	0.47	6.27	9318	7.1298	18.13968	-11.00988	NAF
NS0063	40	42	NS	E410190	410190	1	G	W	34.72	40.84	0.83	0.594	0.46	0.04	1.35	0.7	0.086	0.02	0.391	0.025	0.34	5.29	-0.09	5.54	9258	0.612	12.2094	-11.5974	NAF
NS0063	106	108	NS	E410224	410224	1	G	W	32.74	36.81	2.35	0.813	0.63	0.108	2.99	1.08	0.11	0.222	0.645	0.116	0.34	6.94	0.37	7.65	9290	6.7932	18.83736	-12.04416	NAF
NS0063	86	88	NS	E410214	410214	1	G	W	26.76	44.7	2.6	0.633	0.49	0.111	3.36	1.37	0.064	0.372	0.681	0.132	0.31	5.8	0.96	7.07	9280	11.3832	23.89554	-12.51234	NAF
NS0063	138	140	NS	E410240	410240	1	G	W	30.76	40.85	2.64	0.671	0.52	0.114	3.07	0.87	0.099	0.059	0.375	0.135	0.42	6.25	0.06	6.73	9306	1.8054	15.17454	-13.36914	NAF
NS0063	110	112	NS	E410226	410226	1	G	W	28.54	39.32	3.59	0.775	0.6	0.156	3.69	1.22	0.088	0.221	0.935	0.171	0.5	7.43	0.73	8.66	9292	6.7626	21.27924	-14.51664	NAF
NS0063	196	198	NS	E410269	410269	1	G	W	28.49	40.97	2.14	0.904	0.7	0.085	2.85	1.76	0.119	0.471	1.07	0.12	0.33	7.36	1.01	8.7	9335	14.4126	30.69792	-16.28532	NAF
NS0063	122	124	NS	E410232	410232	1	G	W	29.78	41.01	3.05	0.646	0.5	0.13	3.19	1.29	0.076	0.163	0.678	0.149	0.42	5.52	0.64	6.58	9298	4.9878	22.50018	-17.51238	NAF
NS0063	166	168	NS	E410254	410254	1	G	W	34.25	40.25	1.15	0.594	0.46	0.047	2.22	1.12	0.074	0.023	0.368	0.062	0.14	4.67	0.29	5.1	9320	0.7038	19.53504	-18.83124	NAF
NS0063	78	80	NS	E410210	410210	1	G	W	33.87	38.98	2	0.568	0.44	0.081	2.4	1.22	0.05	0.065	0.915	0.085	0.17	4.52	0.57	5.26	9276	1.989	21.27924	-19.29024	NAF
NS0063	100	102	NS	E410221	410221	1	G	W	32.82	36.33	2.95	0.671	0.52	0.137	3.42	1.31	0.07	0.114	0.804	0.167	0.45	5.93	0.58	6.96	9287	3.4884	22.84902	-19.36062	NAF
NS0063	108	110	NS	E410225	410225	1	G	W	29.7	40.82	3.43	0.62	0.48	0.144	3.25	1.33	0.169	0.115	1.05	0.156	0.4	5.59	0.42	6.41	9291	3.519	23.19786	-19.67886	NAF
NS0063	152	154	NS	E410247	410247	1	G	W	31.46	43.15	0.96	0.568	0.44	0.041	2.4	1.18	0.079	0.024	0.173	0.054	0.2	5.66	0.44	6.3	9313	0.7344	20.58156	-19.84716	NAF
NS0063	126	128	NS	E410234	410234	1	G	W	35.72	34.75	1.9	0.775	0.6	0.082	2.6	1.43	0.036	0.165	0.394	0.086	0.2	5.45	0.59	6.24	9300	5.049	24.94206	-19.89306	NAF
NS0063	136	138	NS	E410239	410239	1	G	W	32.48	38.79	2.18	0.697	0.54	0.092	2.73	1.25	0.079	0.05	0.462	0.123	0.33	6.01	0.45	6.79	9305	1.53	21.8025	-20.2725	NAF
NS0063	64	66	NS	E410203	410203	1	G	W	31.31	41.54	1.68	0.646	0.5	0.073	2.28	1.4	0.114	0.134	0.805	0.048	0.37	5.23	0.53	6.13	9269	4.1004	24.4188	-20.3184	NAF
NS0063	198	200	NS	E410270	410270	1	G	W	31.09	41.64	1.32	0.723	0.56	0.057	2.39	1.65	0.08	0.262	0.434	0.084	0.24	5.84	0.84	6.92	9336	8.0172	28.7793	-20.7621	NAF
NS0063	60	62	NS	E410200	410200	1	G	W	31.56	40.07	2.93	0.491	0.38	0.13	3.19	1.5	0.079	0.171	0.547	0.075	0.29	4.5	0.74	5.53	9267	5.2326	26.163	-20.9304	NAF
NS0063	46	48	NS	E410193	410193	1	G	W	35.32	39.11	0.83	0.594	0.46	0.038	1.63	1.25	0.084	0.025	0.393	0.023	0.12	4.7	0.35	5.17	9261	0.765	21.8025	-21.0375	NAF
NS0063	146	148	NS	E410244	410244	1	G	W	34.78	33.64	1.36	0.788	0.61	0.057	2.92	1.26	0.245	0.025	0.369	0.112	0.36	8.39	-0.07	8.68	9310	0.765	21.97692	-21.21192	NAF
NS0063	98	100	NS	E410220	410220	1	G	W	30.99	38.83	2.62	0.684	0.53	0.113	3.16	1.54	0.115	0.181	0.895	0.146	0.37	5.99	0.69	7.05	9286	5.5386	26.86068	-21.32208	NAF
NS0063	58	60	NS	E410199	410199	1	G	W	32.93	39.69	1.42	0.633	0.49	0.064	2.33	1.67	0.079	0.224	0.592	0.057	0.19	4.98	0.81	5.98	9266	6.8544	29.12814	-22.27374	NAF
NS0063	50	52	NS	E410195	410195	1	G	W	32.62	40.2	1.23	0.658	0.51	0.058	2.38	1.37	0.09	0.052	0.469	0.047	0.24	5.88	0.58	6.7	9263	1.5912	23.89554	-22.30434	NAF
NS0063	148	150	NS	E410245	410245	1	G	W	34.09	37.06	1.38	0.658	0.51	0.058	2.66	1.35	0.13	0.03	0.373	0.09	0.3	6.42	0.4	7.12	9311	0.918	23.5467	-22.6287	NAF
NS0063	150	152	NS	E410246	410246	1	G	W	33.15	39.87	1.11	0.594	0.46	0.049	2.48	1.42	0.086	0.036	0.187	0.058	0.25	5.71	0.65	6.61	9312	1.1016	24.76764	-23.66604	NAF
NS0063	42	44	NS	E410191	410191	1	G	W	32.43	41.76	1.47	0.503	0.39	0.056	1.6	1.47	0.094	0.043	0.919	0.037	0.25	4.2	0.69	5.14	9259	1.3158	25.63974	-24.32394	NAF
NS0063	130	132	NS	E410236	410236	1	G	W	30.62	40.79	2.58	0.62	0.48	0.113	2.9	1.68	0.126	0.162	0.424	0.131	0.36	5.04	0.76	6.16	9302	4.9572	29.30256	-24.34536	NAF
NS0063	160	162	NS	E410251	410251	1	G	W	33.92	40.13	1.14	0.568	0.44	0.05	2.44	1.48	0.092	0.023	0.233	0.069	0.17	4.68	0.67	5.52	9317	0.7038	25.81416	-25.11036	NAF
NS0063	228	230	NS	E410285	410285	1	G	W	34.01	38.14	1.43	0.684	0.53	0.063	2.34	1.53	0.051	0.05	0.494	0.084	0.26	4.95	0.79	6	9351	1.53	26.68626	-25.15626	NAF
NS0063	132	134	NS	E410237	410237	1	G	W	30.49	41.15	2.56	0.62	0.48	0.115	2.86	1.6	0.088	0.087	0.454	0.126	0.4	5.4	0.79	6.59	9303	2.6622	27.9072	-25.245	NAF
NS0063	120	122	NS	E410231	410231	1	G	W	31.66	40.05	2.38	0.646	0.5	0.107	2.78	1.66	0.071	0.121	0.51	0.117	0.29	4.9	0.89	6.08	9297	3.7026	28.95372	-25.25112	NAF
NS0063	222	224	NS	E410282	410282	1	G	W	33.76	40.08	0.91	0.646	0.5	0.039	1.97	1.52	0.073	0.037	0.29	0.065	0.39	4.72	0.72	5.83	9348	1.1322	26.51184	-25.37964	NAF
NS0063	134	136	NS	E410238	410238	1	G	W	30.16	42.21	2.55	0.581	0.45	0.108	2.79	1.57	0.031	0.061	0.524	0.114	0.31	5	0.97	6.28	9304	1.8666	27.38394	-25.51734	NAF
NS0063	88	90	NS	E410215	410215	1	G	W	31.34	42.72	1.43	0.542	0.42	0.066	2.25	2.02	0.073	0.289	0.459	0.078	0.13	3.7	1.18	5.01	9281	8.8434	35.23284	-26.38944	NAF
NS0063	72	74	NS	E410207	410207	1	G	W	29.56	40.71	2.21	0.723	0.56	0.095	3.15	1.64	0.128	0.067	0.791	0.091	0.28	6.7	0.89	7.87	9273	2.0502	28.60488	-26.55468	NAF
NS0063	128	130	NS	E410235	410235	1	G	W	35.04	36.96	1.82	0.71	0.55	0.075	2.27	1.59	0.046	0.037	0.522	0.068	0.18	4.76	0.81	5.75	9301	1.1322	27.73278	-26.60058	NAF
NS0063	158	160	NS	E410250	410250	1	G	W	32.62	39.32	1.21	0.594	0.46	0.052	2.85	1.57	0.135	0.025	0.193	0.074	0.21	6.17	0.6	6.98	9316	0.765	27.38394	-26.61894	NAF
NS0063	68	70	NS	E410205	410205	1	G	W	32.12	42.88	1.21	0.516	0.4	0.055	2.1	1.64	0.071	0.06	0.547	0.051	0.12	3.97	0.92	5.01	9271	1.836	28.60488	-26.76888	NAF
NS0063	230	232	NS	E410286	410286	1	G	W	35.17	36.98	1.23	0.775	0.6	0.056	2.2	1.6	0.078	0.03	0.43	0.068	0.19	4.86	0.8	5.85	9352	0.918	27.9072	-26.9892	NAF
NS0063	48	50	NS	E410194	410194	1	G	W	33.32	38.29	1.59	0.607	0.47	0.067	2.34	1.69	0.083	0.065	0.707	0.051	0.32	5.54	0.76	6.62	9262	1.989	29.47698	-27.48798	NAF
NS0063	94	96	NS	E410218	410218	1	G	W	34.85	38.24	0.94	0.684	0.53	0.044	2.03	1.64	0.082	0.022	0.385	0.06	0.16	5.1	0.73	5.99	9284	0.6732	28.60488	-27.93168	NAF
NS0063	118	120	NS	E410230	410230	1	G	W	34.91	37.04	1.92	0.633	0.49	0.081	2.14	1.69	0.169	0.032	0.657	0.083	0.21	4.28	0.51	5	9296	0.9792	29.47698	-28.49778	NAF
NS0063	112	114	NS	E410227	410227	1	G	W	31.03	41.03	1.99	0.71	0.55	0.084	2.63	1.73	0.071	0.054	0.511	0.107	0.35	5.39	1	6.74	9293	1.6524	30.17466	-28.52226	NAF
NS0063	66	68	NS	E410204	410204	1	G	W	33.92	39.14	0.99	0.71	0.55	0.044	2.09	1.68	0.12	0.023	0.5	0.039	0.22	5.13	0.75	6.1	9270	0.7038	29.30256	-28.59876	NAF
NS0063	246	248	NS	E410294	410294	1	G	W	33.2	40.64	1.44	0.646	0.5	0.066	2.25	1.74	0.065	0.041	0.428	0.081	0.16	3.71	1.11	4.98	9360	1.2546	30.34908	-29.09448	NAF
NS0063	250	252	NS	E410296	410296	1	G	W	33.58	39.15	1.3	0.684	0.53	0.059	2.35	1.77	0.12	0.053	0.575	0.107	0.22	4.67	0.87	5.76	9362	1.6218	30.87234	-29.25054	NAF
NS0063	44	46	NS	E410192	410192	1	G	W	34	41.45	0.71	0.555	0.43	0.035	1.45	1.75	0.114	0.02	0.356	0.015	0.11	4.07	0.85	5.03	9260	0.612	30.5235	-29.9115	NAF
NS0063	172	174	NS	E410257	410257	1	G	W	32.92	40.38	1.56	0.568	0.44	0.064	2.47	1.85	0.081	0.065	0.561	0.086	0.17	3.58	1	4.75	9323	1.989	32.2677	-30.2787	NAC
NS0063	242	244	NS	E410292	410292	1	G	W	34.62	38.9	1.32	0.658	0.51	0.058	2.09	1.81	0.083	0.03	0.444	0.065	0.14	3.56	0.98	4.68	9358	0.918	31.57002	-30.65202	NAC
NS0063	156	158	NS	E410249	410249	1	G	W	32.02	41.09	1.08	0.594	0.46	0.048	2.67	1.81	0.09	0.024	0.146	0.063	0.19	5.31	1.04	6.54	9315	0.7344	31.57002	-30.83562	NAC
NS0063	84	86	NS	E410213	410213	1	G	W	30.74	42.45	1.78	0.568	0.44	0.08	2.45	1.93	0.109	0.068	0.795	0.102	0.22	4.25	1.22	5.69	9279	2.0808	33.66306	-31.58226	NAC
NS0063	70	72	NS	E410206	410206	1	G	W	30.75	42.59	1.51	0.516	0.4	0.071	2.37	2	0.074	0.102	0.567	0.06	0.17	4.38	1.21	5.76	9272	3.1212	34.884	-31.7628	NAC
NS0063	56	58	NS	E410198	410198	1	G	W	34.83	37.72	0.84	0.684	0.53	0.038	1.99	1.88	0.077	0.018	0.418	0.048	0.21	4.89	1.07	6.17	9265	0.5508	32.79096	-32.24016	NAC
NS0063	180	182	NS	E410261	410261	1	G	W	33.9	40.13	0.97	0.71	0.55	0.039	2.01	1.94	0.128	0.025	0.479	0.057	0.06	3.89	0.99	4.94	9327	0.765	33.83748	-33.07248	NAC
NS0063	124	126	NS	E410233	410233	1	G	W	34.47	37.06	1.7	0.736	0.57	0.074	2.26	1.96	0.089	0.034	0.512	0.071	0.19	4.69	1.08	5.96	9299	1.0404	34.18632	-33.14592	NAC
NS0063	52	54	NS	E410196	410196	1	G	W	34.78	38.24	1.07	0.568	0.44	0.051	2.01	1.99	0.078	0.043	0.478	0.038	0.14	4.21	1.21	5.56	9264	1.3158	34.70958	-33.39378	NAC
NS0063	188	190	NS	E410265	410265	1	G	W	32.66	41.24	1.08	0.607	0.47	0.047	2.16	2.01	0.097	0.034	0.312	0.052	0.11	4.15	1.14	5.4	9331	1.0404	35.05842	-34.01802	NAC
NS0063	116	118	NS	E410229	410229	1	G	W	33.8	37.02	1.98	0.736	0.57	0.082	2.31	2.06	0.089	0.045	0.767	0.067	0.17	4.91	1.27	6.35	9295	1.377	35.93052	-34.55352	NAC
NS0063	114	116	NS	E410228	410228	1	G	W	31.18	38.94	2.74	0.723	0.56	0.112	2.66	2.12	0.119	0.051	0.927	0.11	0.32	4.88	1.32	6.52	9294	1.5606	36.97704	-35.41644	NAC
NS0063	178	180	NS	E410260	410260	1	G	W	34.53	39.73	0.92	0.633	0.49	0.039	1.89	2.07	0.088	0.015	0.496	0.049	0.03	3.19	1.17	4.39	9326	0.459	36.10494	-35.64594	NAC
NS0063	82	84	NS	E410212	410212	1	G	W	29.19	43.53	1.29	0.736	0.57	0.057	2.38	2.18	0.145	0.066	0.662	0.076	0.18	5.43	1.37	6.98	9278	2.0196	38.02356	-36.00396	NAC
NS0063	154	156	NS	E410248	410248	1	G	W	27.15	46.77	0.83	0.607	0.47	0.035	2.57	2.1	0.081	0.02	0.123	0.056	0.22	5.84	1.5	7.56	9314	0.612	36.6282	-36.0162	NAC
NS0063	248	250	NS	E410295	410295	1	G	W	33.6	40.39	1.02	0.646	0.5	0.043	1.97	2.11	0.073	0.02	0.422	0.06	0.09	3.6	1.42	5.11	9361	0.612	36.80262	-36.19062	NAC
NS0063	168	170	NS	E410255	410255	1	G	W	33.77	38.48	1.26	0.646	0.5	0.052	2.39	2.14	0.075	0.034	0.448	0.075	0.18	4.01	1.48	5.67	9321	1.0404	37.32588	-36.28548	NAC
NS0063	184	186	NS	E410263	410263	1	G	W	32.15	41.05	1.4	0.633	0.49	0.054	2.15	2.2	0.162	0.035	0.788	0.071	0.12	3.78	1.21	5.11	9329	1.071	38.3724	-37.3014	NAC
NS0063	206	208	NS	E410274	410274	1	G	W	33.17	41.59	0.88	0.581	0.45	0.036	1.64	2.24	0.084	0.024	0.434	0.038	0.02	2.96	1.57	4.55	9340	0.7344	39.07008	-38.33568	NAC
NS0063	238	240	NS	E410290	410290	1	G	W	32.38	41.84	1.38	0.529	0.41	0.059	2.16	2.3	0.094	0.029	0.387	0.069	0.15	2.96	1.59	4.7	9356	0.8874	40.1166	-39.2292	NAC
NS0063	232	234	NS	E410287	410287	1	G	W	30.62	45.33	1.06	0.491	0.38	0.048	1.91	2.3	0.04	0.027	0.303	0.049	0.1	2.74	1.75	4.59	9353	0.8262	40.1166	-39.2904	NAC
NS0063	102	104	NS	E410222	410222	1	G	W	27.32	41.45	2.42	0.762	0.59	0.107	3.19	2.84	0.215	0.334	0.917	0.176	0.41	5.62	1.72	7.75	9288	10.2204	49.53528	-39.31488	NAC
NS0063	90	92	NS	E410216	410216	1	G	W	30.95	41.62	1.89	0.542	0.42	0.086	2.51	2.66	0.083	0.225	0.655	0.089	0.18	3.37	1.93	5.48	9282	6.885	46.39572	-39.51072	NAC
NS0063	92	94	NS	E410217	410217	1	G	W	31.62	41.85	1.21	0.581	0.45	0.052	2.08	2.32	0.095	0.029	0.478	0.063	0.14	3.92	1.63	5.69	9283	0.8874	40.46544	-39.57804	NAC
NS0063	80	82	NS	E410211	410211	1	G	W	33.53	39.96	1.04	0.555	0.43	0.044	1.89	2.37	0.07	0.033	0.577	0.061	0.08	3.38	1.75	5.21	9277	1.0098	41.33754	-40.32774	NAC
NS0063	240	242	NS	E410291	410291	1	G	W	32.69	40.99	1.2	0.658	0.51	0.05	2.12	2.37	0.09	0.033	0.415	0.071	0.13	3.47	1.69	5.29	9357	1.0098	41.33754	-40.32774	NAC
NS0063	62	64	NS	E410202	410202	1	G	W	33.08	40.49	0.9	0.594	0.46	0.041	1.86	2.37	0.092	0.021	0.514	0.038	0.08	3.78	1.71	5.57	9268	0.6426	41.33754	-40.69494	NAC
NS0063	170	172	NS	E410256	410256	1	G	W	32.08	41.43	1.21	0.594	0.46	0.053	2.42	2.43	0.077	0.037	0.357	0.071	0.12	3.45	1.9	5.47	9322	1.1322	42.38406	-41.25186	NAC
NS0063	182	184	NS	E410262	410262	1	G	W	33.92	39.27	1.24	0.555	0.43	0.055	2.2	2.45	0.091	0.037	0.406	0.051	0.09	2.93	1.78	4.8	9328	1.1322	42.7329	-41.6007	NAC
NS0063	204	206	NS	E410273	410273	1	G	W	29.26	46.26	1.03	0.555	0.43	0.041	1.74	2.62	0.106	0.099	0.494	0.054	0.1	2.74	2.11	4.95	9339	3.0294	45.69804	-42.66864	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0063	202	204	NS	E410272	410272	1	G	W	28.69	47.22	0.96	0.478	0.37	0.041	1.74	2.68	0.06	0.119	0.429	0.055	0.11	2.72	1.98	4.81	9338	3.6414	46.74456	-43.10316	NAC
NS0063	174	176	NS	E410258	410258	1	G	W	32.29	41.78	0.98	0.503	0.39	0.043	2.15	2.83	0.102	0.027	0.295	0.052	0.06	2.46	2.18	4.7	9324	0.8262	49.36086	-48.53466	NAC
NS0063	74	76	NS	E410208	410208	1	G	W	29.41	45.97	1.04	0.413	0.32	0.049	1.99	2.96	0.078	0.033	0.215	0.053	0.11	2.35	2.36	4.82	9274	1.0098	51.62832	-50.61852	NAC
NS0063	200	202	NS	E410271	410271	1	G	W	28.63	44.89	1.11	0.633	0.49	0.051	2.15	2.99	0.103	0.037	0.468	0.07	0.15	4.03	2.38	6.56	9337	1.1322	52.15158	-51.01938	NAC
NS0063	208	210	NS	E410275	410275	1	G	W	30.58	44.14	0.89	0.555	0.43	0.04	1.91	3.08	0.081	0.031	0.292	0.048	0.08	2.58	2.6	5.26	9341	0.9486	53.72136	-52.77276	NAC
NS0063	236	238	NS	E410289	410289	1	G	W	26.57	48.65	0.9	0.646	0.5	0.039	1.96	3.33	0.111	0.16	0.296	0.056	0.09	3.03	2.52	5.64	9355	4.896	58.08186	-53.18586	NAC
NS0063	176	178	NS	E410259	410259	1	G	W	30.66	42.96	0.93	0.555	0.43	0.04	2.25	3.13	0.131	0.029	0.35	0.066	0.07	2.86	2.36	5.29	9325	0.8874	54.59346	-53.70606	NAC
NS0063	244	246	NS	E410293	410293	1	G	W	31.05	41.59	0.94	0.762	0.59	0.042	2.09	3.16	0.097	0.029	0.397	0.066	0.13	3.62	2.5	6.25	9359	0.8874	55.11672	-54.22932	NAC
NS0063	234	236	NS	E410288	410288	1	G	W	31.78	41.54	1.13	0.503	0.39	0.046	2.04	3.39	0.061	0.04	0.38	0.067	0.08	2.26	2.83	5.17	9354	1.224	59.12838	-57.90438	NAC
NS0063	96	98	NS	E410219	410219	1	G	W	24.59	52.02	0.7	0.465	0.36	0.034	1.49	3.99	0.069	0.031	0.359	0.042	0.01	1.55	3.77	5.33	9285	0.9486	69.59358	-68.64498	NAC
NS0064	58	60	NS	E410327	410327	1	G	W	27.21	44.08	4.22	0.646	0.5	0.182	3.09	0.44	0.095	0.953	0.715	0.107	1.4	4.12	1.53	7.05	9392	29.1618	7.67448	21.48732	PAF(HC)
NS0064	56	58	NS	E410326	410326	1	G	W	28.46	42.98	4.49	0.465	0.36	0.192	3.23	0.56	0.137	0.995	0.686	0.102	1.08	3.33	1.46	5.87	9391	30.447	9.76752	20.67948	PAF(HC)
NS0064	150	152	NS	E410373	410373	1	G	W	24.8	43.26	5.6	0.555	0.43	0.24	5.26	0.86	0.21	0.967	0.635	0.176	0.43	5.15	1.44	7.02	9436	29.5902	15.00012	14.59008	PAF(HC)
NS0064	168	170	NS	E410382	410382	1	G	W	30.87	37.47	2.44	0.813	0.63	0.102	3.93	0.48	0.068	0.328	0.358	0.158	0.53	8.55	0.53	9.61	9445	10.0368	8.37216	1.66464	PAF(LC)
NS0064	8	10	NS	E410302	410302	1	G	W	41.47	35.51	1.52	0.039	0.03	0.057	0.02	0.005	0.052	0.013	0.005	0.0005	3.09	0.34	0.06	3.49	9367	0.3978	0.08721	0.31059	PAF(LC)
NS0064	10	12	NS	E410303	410303	1	G	W	41.22	35.51	1.56	0.065	0.05	0.057	0.02	0.005	0.068	0.013	0.005	0.003	3.27	0.39	0.09	3.75	9368	0.3978	0.08721	0.31059	PAF(LC)
NS0064	22	24	NS	E410309	410309	1	G	W	40.04	36.38	1.98	0.323	0.25	0.073	0.02	0.005	0.061	0.013	0.015	0.006	2.97	0.66	0.14	3.77	9374	0.3978	0.08721	0.31059	PAF(LC)
NS0064	24	26	NS	E410310	410310	1	G	W	40.01	37.76	1.26	0.245	0.19	0.05	0.02	0.005	0.055	0.012	0.012	0.002	2.74	0.44	0.1	3.28	9375	0.3672	0.08721	0.27999	PAF(LC)
NS0064	20	22	NS	E410308	410308	1	G	W	39.01	39.79	1.53	0.052	0.04	0.063	0.03	0.005	0.051	0.009	0.004	0.009	2.06	0.51	0.09	2.66	9373	0.2754	0.08721	0.18819	PAF(LC)
NS0064	16	18	NS	E410306	410306	1	G	W	42.01	35.6	1.26	0.065	0.05	0.046	0.03	0.005	0.063	0.007	0.004	0.0005	2.3	0.4	0.07	2.77	9371	0.2142	0.08721	0.12699	PAF(LC)
NS0064	18	20	NS	E410307	410307	1	G	W	41.8	35.17	1.46	0.026	0.02	0.055	0.01	0.005	0.064	0.007	0.003	0.003	2.39	0.46	0.1	2.95	9372	0.2142	0.08721	0.12699	PAF(LC)
NS0064	14	16	NS	E410305	410305	1	G	W	39.22	40.49	0.86	0.039	0.03	0.038	0.02	0.005	0.06	0.004	0.005	0.004	1.63	0.32	0.01	1.96	9370	0.1224	0.08721	0.03519	PAF(LC)
NS0064	26	28	NS	E410311	410311	1	G	W	39.5	37.22	1.18	1.846	1.43	0.044	0.04	0.02	0.045	0.01	0.067	0.01	2.48	0.45	0.12	3.05	9376	0.306	0.34884	-0.04284	NAF
NS0064	4	6	NS	E410299	410299	1	G	W	40.69	36.3	1.99	0.026	0.02	0.092	0.05	0.03	0.032	0.014	0.012	0.015	2.78	0.51	0.04	3.33	9365	0.4284	0.52326	-0.09486	NAF
NS0064	6	8	NS	E410300	410300	1	G	W	37.86	39.83	1.66	0.065	0.05	0.078	0.05	0.04	0.031	0.016	0.009	0.005	3.2	0.46	0.06	3.72	9366	0.4896	0.69768	-0.20808	NAF
NS0064	2	4	NS	E410298	410298	1	G	W	40.64	31.39	3.87	0.026	0.02	0.217	0.07	0.05	0.024	0.021	0.018	0.016	5	1.01	0.15	6.16	9364	0.6426	0.8721	-0.2295	NAF
NS0064	28	30	NS	E410312	410312	1	G	W	40.22	36.89	1.19	1.64	1.27	0.045	0.1	0.02	0.038	0.003	0.087	0.007	1.86	0.44	0.04	2.34	9377	0.0918	0.34884	-0.25704	NAF
NS0064	12	14	NS	E410304	410304	1	G	W	37.78	40.99	1.67	0.039	0.03	0.07	0.04	0.03	0.115	0.005	0.015	0.005	2.45	0.54	0.1	3.09	9369	0.153	0.52326	-0.37026	NAF
NS0064	30	32	NS	E410313	410313	1	G	W	39.48	37.89	1.29	1.265	0.98	0.044	0.19	0.06	0.045	0.002	0.119	0.009	1.88	0.49	0.06	2.43	9378	0.0612	1.04652	-0.98532	NAF
NS0064	32	34	NS	E410314	410314	1	G	W	39.16	39.19	1.04	0.826	0.64	0.043	0.23	0.08	0.049	0.001	0.174	0.0005	1.61	0.4	0.09	2.1	9379	0.0306	1.39536	-1.36476	NAF
NS0064	34	36	NS	E410315	410315	1	G	W	38.74	39.59	1.12	0.684	0.53	0.048	0.28	0.21	0.075	0.001	0.201	0.006	1.68	0.39	0.08	2.15	9380	0.0306	3.66282	-3.63222	NAF
NS0064	128	130	NS	E410362	410362	1	G	W	29.28	41.05	2.86	0.762	0.59	0.125	3.2	1.57	0.166	0.775	1.26	0.129	0.3	4.89	1.48	6.67	9425	23.715	27.38394	-3.66894	NAF
NS0064	0	2	NS	E410297	410297	1	G	W	40.06	29.34	4.68	0.116	0.09	0.251	0.48	0.34	0.052	0.041	0.174	0.048	4.81	1.95	0.15	6.91	9363	1.2546	5.93028	-4.67568	NAF
NS0064	54	56	NS	E410325	410325	1	G	W	33.92	41.54	2.17	0.762	0.59	0.092	1.24	0.49	0.086	0.027	0.572	0.038	1.8	2.45	0.2	4.45	9390	0.8262	8.54658	-7.72038	NAF
NS0064	166	168	NS	E410381	410381	1	G	W	32.15	38.44	1.55	0.788	0.61	0.065	3.1	0.8	0.095	0.197	0.435	0.124	0.32	7.69	0.29	8.3	9444	6.0282	13.9536	-7.9254	NAF
NS0064	248	250	NS	E410423	410423	1	G	W	36.73	34.99	1.32	0.697	0.54	0.057	2.68	0.67	0.082	0.061	0.36	0.052	0.15	6.47	-0.17	6.45	9485	1.8666	11.68614	-9.81954	NAF
NS0064	50	52	NS	E410323	410323	1	G	W	28.85	39.81	2.56	0.878	0.68	0.112	3.6	0.78	0.148	0.117	0.677	0.094	0.68	8.65	0.28	9.61	9388	3.5802	13.60476	-10.02456	NAF
NS0064	278	280	NS	E410438	410438	1	G	W	40.02	32.06	0.88	0.607	0.47	0.043	2.17	0.66	0.071	0.02	0.312	0.023	0.09	5.71	-0.2	5.6	9500	0.612	11.51172	-10.89972	NAF
NS0064	60	62	NS	E410328	410328	1	G	W	33.3	40.11	1.39	0.749	0.58	0.056	2.07	0.89	0.102	0.132	0.506	0.041	0.41	5.61	0.2	6.22	9393	4.0392	15.52338	-11.48418	NAF
NS0064	148	150	NS	E410372	410372	1	G	W	35.28	38.38	1.67	0.658	0.51	0.074	2.29	0.88	0.066	0.042	0.556	0.083	0.2	4.25	0.1	4.55	9435	1.2852	15.34896	-14.06376	NAF
NS0064	48	50	NS	E410322	410322	1	G	W	32.55	38.34	2.26	0.684	0.53	0.095	2.98	1	0.094	0.097	0.531	0.065	0.5	6.22	0.22	6.94	9387	2.9682	17.442	-14.4738	NAF
NS0064	52	54	NS	E410324	410324	1	G	W	33.44	40.57	1.58	0.697	0.54	0.067	1.3	1.08	0.173	0.11	0.564	0.035	1.66	3.57	0.32	5.55	9389	3.366	18.83736	-15.47136	NAF
NS0064	200	202	NS	E410398	410398	1	G	W	33.59	38.66	2.29	0.658	0.51	0.092	2.68	1.01	0.068	0.054	0.813	0.109	0.23	4.88	0.32	5.43	9461	1.6524	17.61642	-15.96402	NAF
NS0064	244	246	NS	E410421	410421	1	G	W	34.94	36.83	1.54	0.646	0.5	0.068	2.76	1.14	0.154	0.061	0.526	0.064	0.22	5.73	0.15	6.1	9483	1.8666	19.88388	-18.01728	NAF
NS0064	182	184	NS	E410389	410389	1	G	W	35.12	37.18	1.17	0.633	0.49	0.047	2.62	1.09	0.091	0.023	0.191	0.06	0.31	5.85	0.17	6.33	9452	0.7038	19.01178	-18.30798	NAF
NS0064	62	64	NS	E410329	410329	1	G	W	34.35	39.88	1.32	0.62	0.48	0.058	2.01	1.17	0.096	0.056	0.362	0.045	0.23	4.43	0.27	4.93	9394	1.7136	20.40714	-18.69354	NAF
NS0064	36	38	NS	E410316	410316	1	G	W	36.46	38.13	1.15	0.865	0.67	0.047	1.27	1.14	0.089	0.037	0.233	0.02	0.7	3.34	0.34	4.38	9381	1.1322	19.88388	-18.75168	NAF
NS0064	180	182	NS	E410388	410388	1	G	W	33.77	40.33	1.07	0.555	0.43	0.043	2.35	1.12	0.095	0.024	0.196	0.061	0.18	5.03	0.26	5.47	9451	0.7344	19.53504	-18.80064	NAF
NS0064	230	232	NS	E410414	410414	1	G	W	35.92	40.28	0.77	0.491	0.38	0.035	1.6	1.14	0.056	0.017	0.404	0.029	0.06	3.39	0.32	3.77	9476	0.5202	19.88388	-19.36368	NAF
NS0064	276	278	NS	E410437	410437	1	G	W	32.24	37.19	2.93	0.607	0.47	0.125	3.54	1.32	0.292	0.09	0.768	0.108	0.4	6.01	0.19	6.6	9499	2.754	23.02344	-20.26944	NAF
NS0064	176	178	NS	E410386	410386	1	G	W	34.35	38.15	1.17	0.633	0.49	0.049	2.67	1.21	0.079	0.023	0.187	0.069	0.26	5.84	0.37	6.47	9449	0.7038	21.10482	-20.40102	NAF
NS0064	156	158	NS	E410376	410376	1	G	W	32.72	40.1	1.63	0.71	0.55	0.069	2.52	1.44	0.077	0.153	0.514	0.073	0.23	4.62	0.68	5.53	9439	4.6818	25.11648	-20.43468	NAF
NS0064	280	282	NS	E410439	410439	1	G	W	34.41	38.4	0.89	0.581	0.45	0.036	2.27	1.24	0.07	0.023	0.438	0.042	0.29	5.95	0.36	6.6	9501	0.7038	21.62808	-20.92428	NAF
NS0064	206	208	NS	E410402	410402	1	G	W	31	40.14	2.47	0.71	0.55	0.102	2.82	1.32	0.081	0.062	1.08	0.144	0.36	5.4	0.61	6.37	9464	1.8972	23.02344	-21.12624	NAF
NS0064	178	180	NS	E410387	410387	1	G	W	33.39	40.7	1.06	0.581	0.45	0.046	2.45	1.25	0.083	0.022	0.179	0.068	0.19	5.13	0.43	5.75	9450	0.6732	21.8025	-21.1293	NAF
NS0064	212	214	NS	E410405	410405	1	G	W	35.07	36.14	1.83	0.762	0.59	0.07	2.41	1.33	0.086	0.038	0.882	0.08	0.16	5.37	0.45	5.98	9467	1.1628	23.19786	-22.03506	NAF
NS0064	126	128	NS	E410361	410361	1	G	W	37.39	35.65	1.04	0.723	0.56	0.044	1.98	1.35	0.081	0.022	0.503	0.055	0.1	4.07	0.59	4.76	9424	0.6732	23.5467	-22.8735	NAF
NS0064	270	272	NS	E410434	410434	1	G	W	37.47	36.06	0.8	0.594	0.46	0.035	1.88	1.37	0.08	0.02	0.278	0.028	0.15	4.31	0.4	4.86	9496	0.612	23.89554	-23.28354	NAF
NS0064	170	172	NS	E410383	410383	1	G	W	31.16	43.36	0.98	0.594	0.46	0.042	2.3	1.39	0.081	0.029	0.246	0.067	0.18	4.96	0.72	5.86	9446	0.8874	24.24438	-23.35698	NAF
NS0064	210	212	NS	E410404	410404	1	G	W	30.98	40.2	1.8	0.723	0.56	0.079	2.83	1.87	0.087	0.288	0.523	0.106	0.35	5.5	1.11	6.96	9466	8.8128	32.61654	-23.80374	NAF
NS0064	240	242	NS	E410419	410419	1	G	W	31.78	42.44	1.32	0.542	0.42	0.051	2.27	1.5	0.077	0.059	0.69	0.062	0.1	4.37	0.79	5.26	9481	1.8054	26.163	-24.3576	NAF
NS0064	44	46	NS	E410320	410320	1	G	W	36.41	36.14	1.4	0.775	0.6	0.061	2.08	1.5	0.095	0.042	0.341	0.035	0.28	4.78	0.37	5.43	9385	1.2852	26.163	-24.8778	NAF
NS0064	242	244	NS	E410420	410420	1	G	W	32	42.28	1.24	0.542	0.42	0.048	2.27	1.54	0.069	0.064	0.593	0.07	0.14	4.17	0.85	5.16	9482	1.9584	26.86068	-24.90228	NAF
NS0064	40	42	NS	E410318	410318	1	G	W	37.15	36.07	1.2	0.775	0.6	0.051	1.76	1.48	0.092	0.029	0.344	0.035	0.29	4.02	0.35	4.66	9383	0.8874	25.81416	-24.92676	NAF
NS0064	190	192	NS	E410393	410393	1	G	W	31.88	41.25	1.14	0.684	0.53	0.047	2.52	1.52	0.077	0.04	0.318	0.074	0.2	5.35	0.79	6.34	9456	1.224	26.51184	-25.28784	NAF
NS0064	246	248	NS	E410422	410422	1	G	W	28.13	38.4	2.87	0.813	0.63	0.12	4.11	1.92	0.223	0.264	0.775	0.113	0.4	7.8	1.06	9.26	9484	8.0784	33.48864	-25.41024	NAF
NS0064	258	260	NS	E410428	410428	1	G	W	38.25	36.34	0.64	0.478	0.37	0.029	1.9	1.51	0.08	0.013	0.088	0.018	0.03	3.71	0.64	4.38	9490	0.3978	26.33742	-25.93962	NAF
NS0064	118	120	NS	E410357	410357	1	G	W	30.64	43.94	1.88	0.491	0.38	0.079	2.6	1.65	0.059	0.08	0.638	0.078	0.21	3.01	1.03	4.25	9420	2.448	28.7793	-26.3313	NAF
NS0064	160	162	NS	E410378	410378	1	G	W	30.81	41.46	1.82	0.736	0.57	0.075	2.71	1.74	0.108	0.131	0.536	0.103	0.25	4.94	0.93	6.12	9441	4.0086	30.34908	-26.34048	NAF
NS0064	238	240	NS	E410418	410418	1	G	W	32.33	37.41	1.92	0.697	0.54	0.083	3.18	1.74	0.143	0.131	0.815	0.086	0.29	6.27	0.85	7.41	9480	4.0086	30.34908	-26.34048	NAF
NS0064	214	216	NS	E410406	410406	1	G	W	35.43	36.2	1.5	0.826	0.64	0.06	2.21	1.57	0.09	0.029	0.736	0.051	0.17	5.39	0.63	6.19	9468	0.8874	27.38394	-26.49654	NAF
NS0064	202	204	NS	E410399	410399	1	G	W	35.14	37.7	1.19	0.8	0.62	0.049	2.07	1.58	0.102	0.026	0.484	0.046	0.14	4.66	0.64	5.44	9462	0.7956	27.55836	-26.76276	NAF
NS0064	158	160	NS	E410377	410377	1	G	W	33.49	38.5	1.54	0.71	0.55	0.067	2.46	1.64	0.095	0.051	0.601	0.088	0.24	4.91	0.85	6	9440	1.5606	28.60488	-27.04428	NAF
NS0064	68	70	NS	E410332	410332	1	G	W	35.75	38.2	1.03	0.594	0.46	0.042	2.08	1.61	0.063	0.023	0.355	0.039	0.11	3.56	0.81	4.48	9397	0.7038	28.08162	-27.37782	NAF
NS0064	262	264	NS	E410430	410430	1	G	W	34.4	41.17	0.74	0.555	0.43	0.033	1.78	1.6	0.057	0.014	0.241	0.024	0.04	3.67	0.88	4.59	9492	0.4284	27.9072	-27.4788	NAF
NS0064	204	206	NS	E410400	410400	1	G	W	33.82	38.88	1.6	0.684	0.53	0.068	2.24	1.69	0.088	0.065	0.692	0.069	0.14	4.22	0.88	5.24	9463	1.989	29.47698	-27.48798	NAF
NS0064	188	190	NS	E410392	410392	1	G	W	34.43	38.89	0.85	0.633	0.49	0.038	2.26	1.62	0.093	0.017	0.13	0.049	0.18	4.88	0.74	5.8	9455	0.5202	28.25604	-27.73584	NAF
NS0064	216	218	NS	E410407	410407	1	G	W	32.75	38.08	2.01	0.658	0.51	0.084	2.6	1.71	0.116	0.059	0.936	0.086	0.31	5.16	0.83	6.3	9469	1.8054	29.82582	-28.02042	NAF
NS0064	194	196	NS	E410395	410395	1	G	W	33.17	41.06	1.03	0.594	0.46	0.043	2.14	1.64	0.083	0.018	0.328	0.06	0.16	4.48	0.8	5.44	9458	0.5508	28.60488	-28.05408	NAF
NS0064	186	188	NS	E410391	410391	1	G	W	34.63	37.9	0.95	0.646	0.5	0.041	2.47	1.66	0.076	0.019	0.15	0.064	0.2	5.28	0.85	6.33	9454	0.5814	28.95372	-28.37232	NAF
NS0064	146	148	NS	E410371	410371	1	G	W	34.77	38.88	0.98	0.723	0.56	0.043	2.02	1.69	0.085	0.02	0.44	0.056	0.13	4.29	0.82	5.24	9434	0.612	29.47698	-28.86498	NAF
NS0064	222	224	NS	E410410	410410	1	G	W	33.15	39.23	1.64	0.555	0.43	0.069	2.36	2.03	0.075	0.205	0.69	0.081	0.18	4.01	1.23	5.42	9472	6.273	35.40726	-29.13426	NAF
NS0064	198	200	NS	E410397	410397	1	G	W	31.68	41.86	1.12	0.671	0.52	0.047	2.32	1.72	0.087	0.028	0.386	0.065	0.19	4.91	1.09	6.19	9460	0.8568	30.00024	-29.14344	NAF
NS0064	174	176	NS	E410385	410385	1	G	W	33.25	39.79	0.95	0.594	0.46	0.042	2.49	1.74	0.091	0.021	0.137	0.055	0.19	5.29	0.95	6.43	9448	0.6426	30.34908	-29.70648	NAF
NS0064	162	164	NS	E410379	410379	1	G	W	30.3	43.37	1.84	0.581	0.45	0.079	2.56	1.95	0.103	0.128	0.48	0.094	0.26	3.79	1.08	5.13	9442	3.9168	34.0119	-30.0951	NAC
NS0064	38	40	NS	E410317	410317	1	G	W	36.02	37.31	1.33	0.762	0.59	0.057	1.83	1.82	0.087	0.038	0.379	0.026	0.31	3.78	0.76	4.85	9382	1.1628	31.74444	-30.58164	NAC
NS0064	254	256	NS	E410426	410426	1	G	W	37.22	36.73	0.63	0.555	0.43	0.029	1.92	1.78	0.071	0.014	0.158	0.013	0.06	3.87	0.99	4.92	9488	0.4284	31.04676	-30.61836	NAC
NS0064	184	186	NS	E410390	410390	1	G	W	33.56	39.58	0.97	0.594	0.46	0.041	2.44	1.83	0.082	0.025	0.142	0.054	0.17	4.87	1.03	6.07	9453	0.765	31.91886	-31.15386	NAC
NS0064	104	106	NS	E410350	410350	1	G	W	34.18	41.47	0.75	0.555	0.43	0.032	1.87	1.84	0.073	0.015	0.417	0.043	0	2.71	1.14	3.85	9414	0.459	32.09328	-31.63428	NAC
NS0064	164	166	NS	E410380	410380	1	G	W	33.4	39.01	1.35	0.658	0.51	0.059	2.53	1.92	0.082	0.048	0.382	0.078	0.19	4.73	1.17	6.09	9443	1.4688	33.48864	-32.01984	NAC
NS0064	274	276	NS	E410436	410436	1	G	W	37.1	36.13	0.82	0.542	0.42	0.036	1.94	1.92	0.069	0.019	0.308	0.037	0.09	3.87	1.06	5.02	9498	0.5814	33.48864	-32.90724	NAC
NS0064	256	258	NS	E410427	410427	1	G	W	36.02	38.65	0.61	0.491	0.38	0.025	1.81	1.92	0.068	0.014	0.132	0.017	0.05	3.41	1.12	4.58	9489	0.4284	33.48864	-33.06024	NAC
NS0064	132	134	NS	E410364	410364	1	G	W	33.7	40.33	1.14	0.594	0.46	0.049	2	1.95	0.092	0.027	0.557	0.057	0.07	3.42	1.24	4.73	9427	0.8262	34.0119	-33.1857	NAC
NS0064	72	74	NS	E410334	410334	1	G	W	35.2	39.53	0.98	0.555	0.43	0.039	1.88	1.94	0.102	0.019	0.507	0.029	0.03	3.02	1	4.05	9399	0.5814	33.83748	-33.25608	NAC
NS0064	208	210	NS	E410403	410403	1	G	W	30.64	42.07	1.54	0.684	0.53	0.065	2.44	2.05	0.096	0.08	0.608	0.095	0.25	4.78	1.29	6.32	9465	2.448	35.7561	-33.3081	NAC
NS0064	172	174	NS	E410384	410384	1	G	W	32.7	39.6	0.94	0.594	0.46	0.041	2.5	2	0.139	0.044	0.144	0.07	0.24	5.35	1.01	6.6	9447	1.3464	34.884	-33.5376	NAC
NS0064	46	48	NS	E410321	410321	1	G	W	31.31	40	1.85	0.749	0.58	0.077	2.69	2.06	0.062	0.062	0.487	0.045	0.27	5.07	1.48	6.82	9386	1.8972	35.93052	-34.03332	NAC
NS0064	130	132	NS	E410363	410363	1	G	W	33.6	38.98	1.24	0.736	0.57	0.05	2.2	2.18	0.086	0.115	0.64	0.061	0.19	4.16	1.22	5.57	9426	3.519	38.02356	-34.50456	NAC
NS0064	272	274	NS	E410435	410435	1	G	W	32.02	43.93	0.76	0.452	0.35	0.033	1.79	2.01	0.058	0.017	0.273	0.038	0.09	3.16	1.39	4.64	9497	0.5202	35.05842	-34.53822	NAC
NS0064	224	226	NS	E410411	410411	1	G	W	37.83	35.87	0.93	0.439	0.34	0.046	1.79	2.03	0.059	0.025	0.304	0.043	0.05	2.86	1.18	4.09	9473	0.765	35.40726	-34.64226	NAC
NS0064	76	78	NS	E410336	410336	1	G	W	35.08	38.46	1.02	0.555	0.43	0.046	2.31	2.05	0.1	0.031	0.404	0.045	0.19	3.18	1.37	4.74	9401	0.9486	35.7561	-34.8075	NAC
NS0064	80	82	NS	E410338	410338	1	G	W	33.27	40.81	1.08	0.555	0.43	0.045	2.11	2.05	0.1	0.03	0.58	0.049	0.22	2.85	1.44	4.51	9403	0.918	35.7561	-34.8381	NAC
NS0064	42	44	NS	E410319	410319	1	G	W	35.36	36.67	1.39	0.8	0.62	0.059	2.01	2.08	0.144	0.043	0.485	0.032	0.21	4.23	1.03	5.47	9384	1.3158	36.27936	-34.96356	NAC
NS0064	236	238	NS	E410417	410417	1	G	W	31.79	39.99	1.93	0.568	0.44	0.082	2.72	2.2	0.157	0.11	0.817	0.078	0.25	4.23	1.17	5.65	9479	3.366	38.3724	-35.0064	NAC
NS0064	120	122	NS	E410358	410358	1	G	W	30.94	42.63	1.6	0.594	0.46	0.069	2.7	2.08	0.106	0.038	0.62	0.084	0.21	3.77	1.43	5.41	9421	1.1628	36.27936	-35.11656	NAC
NS0064	264	266	NS	E410431	410431	1	G	W	32.57	41.81	0.66	0.594	0.46	0.031	1.96	2.07	0.076	0.013	0.239	0.021	0.04	4.31	1.43	5.78	9493	0.3978	36.10494	-35.70714	NAC
NS0064	250	252	NS	E410424	410424	1	G	W	38.26	34.79	0.8	0.516	0.4	0.036	1.96	2.11	0.074	0.015	0.273	0.019	-0.01	3.38	1.31	4.68	9486	0.459	36.80262	-36.34362	NAC
NS0064	96	98	NS	E410346	410346	1	G	W	33.17	42.49	0.81	0.503	0.39	0.036	1.91	2.13	0.11	0.019	0.454	0.057	0.01	2.18	1.55	3.74	9410	0.5814	37.15146	-36.57006	NAC
NS0064	220	222	NS	E410409	410409	1	G	W	30.79	43.18	1.25	0.542	0.42	0.054	2.09	2.26	0.103	0.056	0.548	0.069	0.22	3.9	1.41	5.53	9471	1.7136	39.41892	-37.70532	NAC
NS0064	116	118	NS	E410356	410356	1	G	W	34.5	39.13	0.89	0.633	0.49	0.037	2.07	2.27	0.085	0.018	0.512	0.05	0.03	2.96	1.69	4.68	9419	0.5508	39.59334	-39.04254	NAC
NS0064	134	136	NS	E410365	410365	1	G	W	33.3	41.92	0.88	0.594	0.46	0.038	1.73	2.27	0.071	0.017	0.476	0.044	0.08	2.81	1.55	4.44	9428	0.5202	39.59334	-39.07314	NAC
NS0064	152	154	NS	E410374	410374	1	G	W	32.57	41.32	0.83	0.736	0.57	0.038	2.11	2.33	0.078	0.025	0.298	0.061	0.13	3.99	1.58	5.7	9437	0.765	40.63986	-39.87486	NAC
NS0064	196	198	NS	E410396	410396	1	G	W	33.13	40.2	0.78	0.646	0.5	0.035	2.12	2.32	0.079	0.014	0.216	0.038	0.11	4.44	1.55	6.1	9459	0.4284	40.46544	-40.03704	NAC
NS0064	252	254	NS	E410425	410425	1	G	W	31.75	45.58	0.64	0.374	0.29	0.028	1.59	2.32	0.064	0.014	0.118	0.015	0	2.12	1.65	3.77	9487	0.4284	40.46544	-40.03704	NAC
NS0064	138	140	NS	E410367	410367	1	G	W	31.33	42.66	1.77	0.465	0.36	0.075	2.4	2.36	0.071	0.027	0.695	0.069	0.16	2.75	1.73	4.64	9430	0.8262	41.16312	-40.33692	NAC
NS0064	112	114	NS	E410354	410354	1	G	W	32.22	42.26	1.08	0.555	0.43	0.038	2.01	2.37	0.071	0.017	0.549	0.048	0.01	2.55	1.85	4.41	9417	0.5202	41.33754	-40.81734	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0064	114	116	NS	E410355	410355	1	G	W	33.59	41.26	1.03	0.503	0.39	0.042	2.05	2.38	0.097	0.022	0.447	0.041	0.02	2.26	1.73	4.01	9418	0.6732	41.51196	-40.83876	NAC
NS0064	70	72	NS	E410333	410333	1	G	W	32.18	41.96	1.1	0.542	0.42	0.043	2.07	2.42	0.181	0.037	0.542	0.04	0.09	3.04	1.38	4.51	9398	1.1322	42.20964	-41.07744	NAC
NS0064	218	220	NS	E410408	410408	1	G	W	32.29	42.18	1.24	0.465	0.36	0.054	2.02	2.49	0.075	0.076	0.471	0.064	0.06	2.82	1.92	4.8	9470	2.3256	43.43058	-41.10498	NAC
NS0064	260	262	NS	E410429	410429	1	G	W	35.29	38.88	0.59	0.529	0.41	0.026	1.86	2.38	0.075	0.013	0.118	0.022	0.09	3.51	1.51	5.11	9491	0.3978	41.51196	-41.11416	NAC
NS0064	66	68	NS	E410331	410331	1	G	W	32.45	41.58	0.89	0.581	0.45	0.037	1.96	2.44	0.079	0.039	0.168	0.019	0.7	3.28	1.69	5.67	9396	1.1934	42.55848	-41.36508	NAC
NS0064	82	84	NS	E410339	410339	1	G	W	33.31	40.22	1.23	0.516	0.4	0.05	2.19	2.43	0.061	0.026	0.707	0.062	0.27	2.48	1.95	4.7	9404	0.7956	42.38406	-41.58846	NAC
NS0064	110	112	NS	E410353	410353	1	G	W	33.29	40.78	0.92	0.62	0.48	0.038	2.09	2.45	0.082	0.018	0.6	0.043	0.08	2.87	1.82	4.77	9416	0.5508	42.7329	-42.1821	NAC
NS0064	228	230	NS	E410413	410413	1	G	W	32.93	40.52	0.86	0.607	0.47	0.038	1.96	2.48	0.127	0.034	0.499	0.041	0.08	3.82	1.67	5.57	9475	1.0404	43.25616	-42.21576	NAC
NS0064	140	142	NS	E410368	410368	1	G	W	30.47	43.4	1.38	0.555	0.43	0.055	2.31	2.48	0.059	0.029	0.616	0.065	0.14	3.13	2.03	5.3	9431	0.8874	43.25616	-42.36876	NAC
NS0064	154	156	NS	E410375	410375	1	G	W	30.55	43.82	0.75	0.697	0.54	0.035	2.06	2.51	0.068	0.021	0.289	0.066	0.16	3.63	1.95	5.74	9438	0.6426	43.77942	-43.13682	NAC
NS0064	192	194	NS	E410394	410394	1	G	W	32.2	39.14	0.97	0.697	0.54	0.041	2.57	2.54	0.094	0.022	0.267	0.061	0.21	5.25	1.83	7.29	9457	0.6732	44.30268	-43.62948	NAC
NS0064	142	144	NS	E410369	410369	1	G	W	30.47	43.3	1.4	0.516	0.4	0.06	2.4	2.63	0.084	0.027	0.53	0.069	0.17	2.91	2.03	5.11	9432	0.8262	45.87246	-45.04626	NAC
NS0064	226	228	NS	E410412	410412	1	G	W	34.32	39.57	0.76	0.503	0.39	0.035	1.76	2.62	0.078	0.019	0.38	0.032	0.08	3.01	1.77	4.86	9474	0.5814	45.69804	-45.11664	NAC
NS0064	122	124	NS	E410359	410359	1	G	W	31.42	42.22	1.15	0.555	0.43	0.048	2.23	2.64	0.095	0.025	0.496	0.07	0.11	2.86	2.1	5.07	9422	0.765	46.04688	-45.28188	NAC
NS0064	94	96	NS	E410345	410345	1	G	W	21.53	59.41	0.34	0.465	0.36	0.015	1.51	2.63	0.086	0.014	0.172	0.014	0.04	1.89	2.31	4.24	9409	0.4284	45.87246	-45.44406	NAC
NS0064	78	80	NS	E410337	410337	1	G	W	33.22	39.95	0.85	0.503	0.39	0.036	2.04	2.7	0.068	0.024	0.469	0.052	0.67	2.63	2	5.3	9402	0.7344	47.0934	-46.359	NAC
NS0064	100	102	NS	E410348	410348	1	G	W	33.1	40.38	0.95	0.542	0.42	0.048	2.3	2.77	0.158	0.049	0.522	0.072	0.09	2.24	2.2	4.53	9412	1.4994	48.31434	-46.81494	NAC
NS0064	88	90	NS	E410342	410342	1	G	W	34.34	38.69	0.9	0.646	0.5	0.037	2.07	2.73	0.116	0.025	0.552	0.039	0.16	2.82	2.06	5.04	9407	0.765	47.61666	-46.85166	NAC
NS0064	144	146	NS	E410370	410370	1	G	W	30.69	43.98	1.24	0.465	0.36	0.053	2.15	2.75	0.074	0.026	0.439	0.063	0.21	2.5	1.93	4.64	9433	0.7956	47.9655	-47.1699	NAC
NS0064	136	138	NS	E410366	410366	1	G	W	33.19	40.44	0.97	0.633	0.49	0.042	2.01	2.75	0.086	0.018	0.543	0.054	0.13	3.09	1.94	5.16	9429	0.5508	47.9655	-47.4147	NAC
NS0064	232	234	NS	E410415	410415	1	G	W	32.06	43.88	0.65	0.452	0.35	0.027	1.57	2.75	0.058	0.013	0.391	0.028	-0.02	2.07	2.14	4.19	9477	0.3978	47.9655	-47.5677	NAC
NS0064	106	108	NS	E410351	410351	1	G	W	32.07	42.35	0.87	0.555	0.43	0.035	2.04	2.79	0.181	0.023	0.456	0.047	-0.02	2.51	1.95	4.44	9415	0.7038	48.66318	-47.95938	NAC
NS0064	92	94	NS	E410344	410344	1	G	W	27.79	49.66	0.63	0.478	0.37	0.024	1.81	2.79	0.078	0.017	0.299	0.027	0.02	1.87	2.56	4.45	9408	0.5202	48.66318	-48.14298	NAC
NS0064	102	104	NS	E410349	410349	1	G	W	32.16	41.01	1.26	0.542	0.42	0.052	2.45	2.83	0.103	0.039	0.621	0.086	0.04	2.23	2.44	4.71	9413	1.1934	49.36086	-48.16746	NAC
NS0064	266	268	NS	E410432	410432	1	G	W	33.38	40.83	0.74	0.465	0.36	0.036	1.77	2.86	0.077	0.016	0.344	0.039	0.02	2.68	2.2	4.9	9494	0.4896	49.88412	-49.39452	NAC
NS0064	234	236	NS	E410416	410416	1	G	W	35.38	39.41	0.63	0.4	0.31	0.03	1.55	2.88	0.077	0.013	0.353	0.027	-0.04	1.71	2.22	3.89	9478	0.3978	50.23296	-49.83516	NAC
NS0064	64	66	NS	E410330	410330	1	G	W	28.68	44.81	1.26	0.62	0.48	0.048	2.32	2.97	0.211	0.038	0.426	0.059	0.28	4.15	1.7	6.13	9395	1.1628	51.80274	-50.63994	NAC
NS0064	74	76	NS	E410335	410335	1	G	W	32.61	41.18	0.83	0.542	0.42	0.035	2.08	2.94	0.075	0.016	0.433	0.038	0	2.36	2.58	4.94	9400	0.4896	51.27948	-50.78988	NAC
NS0064	268	270	NS	E410433	410433	1	G	W	33.39	41.85	0.62	0.439	0.34	0.028	1.62	2.93	0.063	0.01	0.32	0.028	-0.04	2.11	2.5	4.57	9495	0.306	51.10506	-50.79906	NAC
NS0064	124	126	NS	E410360	410360	1	G	W	29.68	44.16	1.07	0.62	0.48	0.045	2.13	2.96	0.1	0.021	0.491	0.062	0.22	3.34	2.09	5.65	9423	0.6426	51.62832	-50.98572	NAC
NS0064	98	100	NS	E410347	410347	1	G	W	32.8	41.42	0.85	0.555	0.43	0.037	2.11	3.05	0.112	0.025	0.471	0.055	0.01	2.11	2.51	4.63	9411	0.765	53.1981	-52.4331	NAC
NS0064	86	88	NS	E410341	410341	1	G	W	31.87	41.66	0.67	0.568	0.44	0.031	2.03	3.3	0.112	0.024	0.337	0.044	0.15	2.2	2.86	5.21	9406	0.7344	57.5586	-56.8242	NAC
NS0064	84	86	NS	E410340	410340	1	G	W	30.11	45.41	0.52	0.503	0.39	0.025	1.85	3.42	0.065	0.014	0.171	0.029	0.18	1.56	3.29	5.03	9405	0.4284	59.65164	-59.22324	NAC
NS0065	302	304	NS	E410592	410592	1	G	W	28.73	40.84	3.37	0.555	0.43	0.153	3.7	0.42	0.079	0.258	0.399	0.185	0.65	7.32	0.5	8.47	9653	7.8948	7.32564	0.56916	PAF(LC)
NS0065	6	8	NS	E410443	410443	1	G	W	43.12	28.59	3.1	0.026	0.02	0.224	0.07	0.03	0.055	0.026	0.013	0.014	5.14	0.67	0.15	5.96	9505	0.7956	0.52326	0.27234	PAF(LC)
NS0065	8	10	NS	E410444	410444	1	G	W	40.65	33.47	2.53	0.026	0.02	0.135	0.08	0.03	0.054	0.026	0.004	0.013	4.58	0.57	0.09	5.24	9506	0.7956	0.52326	0.27234	PAF(LC)
NS0065	2	4	NS	E410441	410441	1	G	W	38.41	33.93	3.86	0.026	0.02	0.223	0.08	0.03	0.044	0.021	0.014	0.024	5.35	0.92	0.13	6.4	9503	0.6426	0.52326	0.11934	PAF(LC)
NS0065	10	12	NS	E410445	410445	1	G	W	36.63	39.71	2.41	0.026	0.02	0.13	0.06	0.03	0.044	0.021	0.005	0.01	4.24	0.55	0.07	4.86	9507	0.6426	0.52326	0.11934	PAF(LC)
NS0065	0	2	NS	E410440	410440	1	G	W	44.11	23.08	5.86	0.026	0.02	0.746	0.09	0.04	0.035	0.026	0.037	0.026	5.36	1.16	0.24	6.76	9502	0.7956	0.69768	0.09792	PAF(LC)
NS0065	4	6	NS	E410442	410442	1	G	W	37.39	39.61	2.3	0.026	0.02	0.134	0.09	0.02	0.037	0.014	0.007	0.01	3.66	0.47	0	4.13	9504	0.4284	0.34884	0.07956	PAF(LC)
NS0065	12	14	NS	E410446	410446	1	G	W	22.95	60.61	2.93	-0.0129	-0.01	0.118	0.04	0.04	0.021	0.014	0.007	0.019	2.65	0.83	0.1	3.58	9508	0.4284	0.69768	-0.26928	NAF
NS0065	14	16	NS	E410447	410447	1	G	W	29.49	51.94	2.13	-0.0129	-0.01	0.076	0.05	0.04	0.038	0.012	0.006	0.026	2.84	0.54	0.08	3.46	9509	0.3672	0.69768	-0.33048	NAF
NS0065	24	26	NS	E410452	410452	1	G	W	36.98	43.11	1.09	0.065	0.05	0.061	0.05	0.03	0.058	0.005	0.005	0.008	1.97	0.37	0.06	2.4	9514	0.153	0.52326	-0.37026	NAF
NS0065	26	28	NS	E410453	410453	1	G	W	38.19	39.77	1.12	1.123	0.87	0.07	0.05	0.04	0.058	0.004	0.045	0.018	1.93	0.45	0.2	2.58	9515	0.1224	0.69768	-0.57528	NAF
NS0065	16	18	NS	E410448	410448	1	G	W	31.4	49.08	2.07	0.026	0.02	0.077	0.06	0.05	0.058	0.008	0.006	0.029	2.79	0.6	0.09	3.48	9510	0.2448	0.8721	-0.6273	NAF
NS0065	22	24	NS	E410451	410451	1	G	W	36.16	42.17	1.93	0.065	0.05	0.083	0.07	0.06	0.103	0.007	0.005	0.023	2.9	0.59	0.11	3.6	9513	0.2142	1.04652	-0.83232	NAF
NS0065	20	22	NS	E410450	410450	1	G	W	29.87	48.42	2.92	0.052	0.04	0.136	0.08	0.07	0.116	0.008	0.006	0.05	4.03	0.88	0.14	5.05	9512	0.2448	1.22094	-0.97614	NAF
NS0065	18	20	NS	E410449	410449	1	G	W	30.17	50.14	2.09	0.026	0.02	0.097	0.09	0.08	0.083	0.01	0.013	0.036	2.99	0.68	0.07	3.74	9511	0.306	1.39536	-1.08936	NAF
NS0065	28	30	NS	E410454	410454	1	G	W	36.93	40.25	1.74	1.175	0.91	0.087	0.09	0.07	0.076	0.003	0.324	0.022	2.17	0.59	0.21	2.97	9516	0.0918	1.22094	-1.12914	NAF
NS0065	30	32	NS	E410455	410455	1	G	W	37.46	39.75	1.78	0.865	0.67	0.082	0.09	0.08	0.096	0.003	0.714	0.024	1.84	0.46	0.2	2.5	9517	0.0918	1.39536	-1.30356	NAF
NS0065	32	34	NS	E410456	410456	1	G	W	36.17	40.85	1.86	1.097	0.85	0.077	0.13	0.09	0.066	0.003	1.03	0.032	1.87	0.4	0.17	2.44	9518	0.0918	1.56978	-1.47798	NAF
NS0065	34	36	NS	E410457	410457	1	G	W	36.16	41.76	1.83	0.839	0.65	0.077	0.14	0.09	0.064	0.003	0.926	0.02	1.86	0.37	0.1	2.33	9519	0.0918	1.56978	-1.47798	NAF
NS0065	36	38	NS	E410458	410458	1	G	W	35.92	42.1	1.86	0.594	0.46	0.081	0.24	0.11	0.049	0.003	0.995	0.033	1.82	0.41	0.1	2.33	9520	0.0918	1.91862	-1.82682	NAF
NS0065	112	114	NS	E410496	410496	1	G	W	34.33	36.86	2.91	0.646	0.5	0.135	2.53	1.19	0.188	0.595	1.8	0.181	0.03	2.88	0.99	3.9	9558	18.207	20.75598	-2.54898	NAF
NS0065	312	314	NS	E410597	410597	1	G	W	30.62	41.41	2.56	0.581	0.45	0.109	3	0.62	0.08	0.248	0.294	0.135	0.47	5.93	0.45	6.85	9658	7.5888	10.81404	-3.22524	NAF
NS0065	38	40	NS	E410459	410459	1	G	W	33.97	44.92	1.64	0.516	0.4	0.074	0.31	0.25	0.087	0.029	0.861	0.031	1.64	0.49	0.13	2.26	9521	0.8874	4.3605	-3.4731	NAF
NS0065	300	302	NS	E410591	410591	1	G	W	32.49	37.35	2.49	0.633	0.49	0.111	3.17	0.84	0.168	0.265	0.317	0.15	0.49	6.73	0.34	7.56	9652	8.109	14.65128	-6.54228	NAF
NS0065	270	272	NS	E410576	410576	1	G	W	40.15	33.78	1.01	0.723	0.56	0.049	2.08	0.43	0.07	0.024	0.395	0.093	0.26	4.14	-0.41	3.99	9637	0.7344	7.50006	-6.76566	NAF
NS0065	318	320	NS	E410600	410600	1	G	W	29.42	39.52	4.03	0.555	0.43	0.178	4.07	1.58	0.295	0.654	0.568	0.188	0.5	4.55	1.05	6.1	9661	20.0124	27.55836	-7.54596	NAF
NS0065	268	270	NS	E410575	410575	1	G	W	39.13	32.94	1.15	0.878	0.68	0.06	2.54	0.49	0.036	0.027	0.292	0.08	0.33	5.65	-0.23	5.75	9636	0.8262	8.54658	-7.72038	NAF
NS0065	304	306	NS	E410593	410593	1	G	W	32.74	35.77	2.2	0.723	0.56	0.096	3.12	0.64	0.128	0.096	0.313	0.139	0.59	8.93	0	9.52	9654	2.9376	11.16288	-8.22528	NAF
NS0065	40	42	NS	E410460	410460	1	G	W	33.23	39.75	2.17	0.581	0.45	0.093	1.68	0.71	0.146	0.131	1.07	0.065	0.84	4.67	0.24	5.75	9522	4.0086	12.38382	-8.37522	NAF
NS0065	50	52	NS	E410465	410465	1	G	W	34.8	41.88	1.82	0.529	0.41	0.086	0.5	0.55	0.134	0.027	1.26	0.024	1.21	1.55	0.1	2.86	9527	0.8262	9.5931	-8.7669	NAF
NS0065	172	174	NS	E410527	410527	1	G	W	40.76	32.9	0.95	0.955	0.74	0.044	1.98	0.56	0.067	0.017	0.635	0.078	0.09	3.81	-0.25	3.65	9588	0.5202	9.76752	-9.24732	NAF
NS0065	284	286	NS	E410583	410583	1	G	W	36.49	33.09	1.49	0.736	0.57	0.062	3.09	0.61	0.097	0.038	0.381	0.151	0.49	7.35	-0.07	7.77	9644	1.1628	10.63962	-9.47682	NAF
NS0065	42	44	NS	E410461	410461	1	G	W	34.24	40.72	1.29	0.568	0.44	0.057	1.46	0.65	0.089	0.048	0.718	0.034	0.4	4.8	-0.09	5.11	9523	1.4688	11.3373	-9.8685	NAF
NS0065	178	180	NS	E410530	410530	1	G	W	42.84	28.8	1.24	0.813	0.63	0.056	2.34	0.64	0.069	0.019	0.798	0.097	0.15	3.38	-0.16	3.37	9591	0.5814	11.16288	-10.58148	NAF
NS0065	276	278	NS	E410579	410579	1	G	W	35.33	36.17	2.05	0.633	0.49	0.093	3.07	0.83	0.157	0.125	0.452	0.147	0.39	4.79	0.05	5.23	9640	3.825	14.47686	-10.65186	NAF
NS0065	278	280	NS	E410580	410580	1	G	W	34.61	37.66	1.52	0.684	0.53	0.067	2.86	0.68	0.08	0.039	0.34	0.116	0.43	5.86	-0.02	6.27	9641	1.1934	11.86056	-10.66716	NAF
NS0065	306	308	NS	E410594	410594	1	G	W	29.93	39.25	2.41	0.697	0.54	0.104	3.18	0.95	0.182	0.181	0.35	0.154	0.72	8.39	0.19	9.3	9655	5.5386	16.5699	-11.0313	NAF
NS0065	48	50	NS	E410464	410464	1	G	W	36.73	38.77	1.57	0.581	0.45	0.072	0.83	0.68	0.139	0.026	1.07	0.023	0.85	2.41	-0.04	3.22	9526	0.7956	11.86056	-11.06496	NAF
NS0065	52	54	NS	E410466	410466	1	G	W	35.23	40.1	1.79	0.594	0.46	0.08	0.93	0.72	0.129	0.03	1.29	0.026	0.86	2.6	0.08	3.54	9528	0.918	12.55824	-11.64024	NAF
NS0065	298	300	NS	E410590	410590	1	G	W	33.92	37.52	1.81	0.646	0.5	0.076	2.81	0.8	0.122	0.066	0.27	0.131	0.46	6.51	-0.07	6.9	9651	2.0196	13.9536	-11.934	NAF
NS0065	308	310	NS	E410595	410595	1	G	W	31.92	40.54	1.35	0.697	0.54	0.056	2.37	0.83	0.106	0.079	0.173	0.073	0.56	7.14	-0.05	7.65	9656	2.4174	14.47686	-12.05946	NAF
NS0065	274	276	NS	E410578	410578	1	G	W	38.36	35.15	1	0.684	0.53	0.046	2.04	0.76	0.083	0.022	0.462	0.102	0.26	4.09	-0.09	4.26	9639	0.6732	13.25592	-12.58272	NAF
NS0065	254	256	NS	E410568	410568	1	G	W	39.51	32.7	1.3	0.826	0.64	0.06	2.47	0.82	0.125	0.029	0.553	0.112	0.27	4.06	-0.14	4.19	9629	0.8874	14.30244	-13.41504	NAF
NS0065	314	316	NS	E410598	410598	1	G	W	33.93	40.04	1.03	0.658	0.51	0.046	2.11	0.82	0.098	0.023	0.181	0.064	0.3	5.82	-0.08	6.04	9659	0.7038	14.30244	-13.59864	NAF
NS0065	316	318	NS	E410599	410599	1	G	W	30.7	37.96	3.19	0.671	0.52	0.14	3.71	1.53	0.278	0.407	0.438	0.167	0.47	5.7	0.75	6.92	9660	12.4542	26.68626	-14.23206	NAF
NS0065	388	390	NS	E410636	410636	1	G	W	39.91	34.35	1.12	0.697	0.54	0.05	1.93	0.88	0.093	0.029	0.702	0.071	0.11	2.98	-0.13	2.96	9696	0.8874	15.34896	-14.46156	NAF
NS0065	398	400	NS	E410641	410641	1	G	W	37.61	37.27	0.92	0.826	0.64	0.042	1.92	0.87	0.086	0.016	0.617	0.051	0.09	3.26	0	3.35	9701	0.4896	15.17454	-14.68494	NAF
NS0065	170	172	NS	E410526	410526	1	G	W	41.69	31.28	0.91	0.917	0.71	0.039	1.84	0.88	0.103	0.016	0.651	0.062	0.01	3.38	-0.09	3.3	9587	0.4896	15.34896	-14.85936	NAF
NS0065	238	240	NS	E410560	410560	1	G	W	41.43	32.71	0.88	0.71	0.55	0.044	1.71	0.91	0.101	0.017	0.598	0.057	0.04	2.54	-0.08	2.5	9621	0.5202	15.87222	-15.35202	NAF
NS0065	174	176	NS	E410528	410528	1	G	W	17.45	67.69	0.48	0.568	0.44	0.023	1.08	1.14	0.048	0.146	0.364	0.01	0.01	2.81	0.63	3.45	9589	4.4676	19.88388	-15.41628	NAF
NS0065	280	282	NS	E410581	410581	1	G	W	34.27	37.27	0.94	0.723	0.56	0.045	2.67	0.94	0.088	0.024	0.317	0.109	0.38	6.89	0.15	7.42	9642	0.7344	16.39548	-15.66108	NAF
NS0065	126	128	NS	E410504	410504	1	G	W	32.09	42.56	1.81	0.581	0.45	0.085	2.08	1.34	0.18	0.235	1.09	0.182	0	2.76	0.44	3.2	9565	7.191	23.37228	-16.18128	NAF
NS0065	366	368	NS	E410625	410625	1	G	W	38.8	33.27	1.49	0.852	0.66	0.067	2.18	0.99	0.115	0.031	1.01	0.061	0.08	3.71	0.14	3.93	9685	0.9486	17.26758	-16.31898	NAF
NS0065	74	76	NS	E410477	410477	1	G	W	35.67	38.74	1.48	0.633	0.49	0.067	1.81	1.02	0.101	0.035	1.03	0.147	0	3.16	0.23	3.39	9539	1.071	17.79084	-16.71984	NAF
NS0065	394	396	NS	E410639	410639	1	G	W	39.32	35.14	0.95	0.684	0.53	0.046	1.87	1.03	0.137	0.029	0.586	0.067	0.06	2.65	0.02	2.73	9699	0.8874	17.96526	-17.07786	NAF
NS0065	58	60	NS	E410469	410469	1	G	W	36.57	38.26	1.53	0.607	0.47	0.07	1.3	1.03	0.121	0.027	1.19	0.014	0.32	2.81	0.19	3.32	9531	0.8262	17.96526	-17.13906	NAF
NS0065	210	212	NS	E410546	410546	1	G	W	38.96	35.11	1.19	0.775	0.6	0.047	1.75	1.03	0.076	0.023	0.952	0.041	-0.08	2.74	0.17	2.83	9607	0.7038	17.96526	-17.26146	NAF
NS0065	282	284	NS	E410582	410582	1	G	W	33.17	37.97	1.03	0.723	0.56	0.04	2.69	1.04	0.105	0.024	0.385	0.117	0.41	7.32	0.23	7.96	9643	0.7344	18.13968	-17.40528	NAF
NS0065	288	290	NS	E410585	410585	1	G	W	34.41	36.59	1.21	0.749	0.58	0.054	2.82	1.06	0.095	0.035	0.248	0.12	0.41	6.78	0.22	7.41	9646	1.071	18.48852	-17.41752	NAF
NS0065	272	274	NS	E410577	410577	1	G	W	36.67	35.76	1.29	0.736	0.57	0.058	2.47	1.08	0.091	0.043	0.519	0.129	0.33	4.3	0.25	4.88	9638	1.3158	18.83736	-17.52156	NAF
NS0065	294	296	NS	E410588	410588	1	G	W	35.17	36.27	1.55	0.658	0.51	0.067	2.69	1.13	0.146	0.062	0.209	0.103	0.4	5.9	0.07	6.37	9649	1.8972	19.70946	-17.81226	NAF
NS0065	56	58	NS	E410468	410468	1	G	W	36.97	37.66	1.2	0.658	0.51	0.055	1.42	1.08	0.101	0.023	0.982	0.02	0.05	3.12	0.24	3.41	9530	0.7038	18.83736	-18.13356	NAF
NS0065	386	388	NS	E410635	410635	1	G	W	38.01	36.33	1.19	0.646	0.5	0.051	1.97	1.12	0.085	0.04	0.728	0.072	0.08	2.67	0.29	3.04	9695	1.224	19.53504	-18.31104	NAF
NS0065	296	298	NS	E410589	410589	1	G	W	32.78	39.56	1.1	0.723	0.56	0.049	2.46	1.09	0.104	0.022	0.199	0.098	0.33	6.68	0.26	7.27	9650	0.6732	19.01178	-18.33858	NAF
NS0065	46	48	NS	E410463	410463	1	G	W	36.03	36.82	1.18	0.775	0.6	0.053	1.7	1.15	0.139	0.048	0.862	0.024	0.24	4.86	0.1	5.2	9525	1.4688	20.0583	-18.5895	NAF
NS0065	232	234	NS	E410557	410557	1	G	W	40.76	33.16	0.97	0.736	0.57	0.048	1.82	1.1	0.086	0.019	0.684	0.051	0.02	2.55	0.21	2.78	9618	0.5814	19.1862	-18.6048	NAF
NS0065	54	56	NS	E410467	410467	1	G	W	34.41	40.57	1.56	0.555	0.43	0.07	1.26	1.15	0.114	0.039	1.18	0.013	0.37	2.99	0.35	3.71	9529	1.1934	20.0583	-18.8649	NAF
NS0065	146	148	NS	E410514	410514	1	G	W	40.06	34.98	0.94	0.736	0.57	0.038	1.31	1.12	0.106	0.004	0.74	0.058	-0.09	2.06	0.24	2.21	9575	0.1224	19.53504	-19.41264	NAF
NS0065	180	182	NS	E410531	410531	1	G	W	37.14	37.95	1.05	0.684	0.53	0.042	1.86	1.18	0.079	0.029	0.702	0.066	0.02	2.62	0.38	3.02	9592	0.8874	20.58156	-19.69416	NAF
NS0065	72	74	NS	E410476	410476	1	G	W	37.07	36.95	1.32	0.71	0.55	0.059	1.68	1.18	0.132	0.021	0.951	0.096	0.02	3.18	0.2	3.4	9538	0.6426	20.58156	-19.93896	NAF
NS0065	222	224	NS	E410552	410552	1	G	W	34.59	40.5	1.06	0.891	0.69	0.044	1.94	1.21	0.082	0.037	0.802	0.044	0.03	3.27	0.43	3.73	9613	1.1322	21.10482	-19.97262	NAF
NS0065	364	366	NS	E410624	410624	1	G	W	35.72	36.54	1.78	0.788	0.61	0.074	2.29	1.23	0.101	0.048	1.2	0.074	0.13	3.6	0.45	4.18	9684	1.4688	21.45366	-19.98486	NAF
NS0065	264	266	NS	E410573	410573	1	G	W	37.63	34.56	1.23	0.775	0.6	0.059	2.53	1.21	0.116	0.03	0.225	0.073	0.24	4.54	0.26	5.04	9634	0.918	21.10482	-20.18682	NAF
NS0065	396	398	NS	E410640	410640	1	G	W	38.22	36.21	0.95	0.736	0.57	0.041	1.87	1.2	0.081	0.02	0.604	0.056	0.02	2.71	0.4	3.13	9700	0.612	20.9304	-20.3184	NAF
NS0065	286	288	NS	E410584	410584	1	G	W	33.73	38.76	0.98	0.736	0.57	0.04	2.48	1.21	0.086	0.024	0.266	0.098	0.36	6.15	0.4	6.91	9645	0.7344	21.10482	-20.37042	NAF
NS0065	346	348	NS	E410615	410615	1	G	W	37.3	35.91	1.07	0.8	0.62	0.048	2.08	1.22	0.107	0.026	0.586	0.06	0.11	3.76	0.31	4.18	9675	0.7956	21.27924	-20.48364	NAF
NS0065	122	124	NS	E410502	410502	1	G	W	36.87	35.74	1.35	0.749	0.58	0.063	2.14	1.21	0.113	0.02	0.847	0.172	0.01	3.91	0.4	4.32	9563	0.612	21.10482	-20.49282	NAF
NS0065	92	94	NS	E410486	410486	1	G	W	32.89	40.59	2.02	0.684	0.53	0.086	2.15	1.47	0.089	0.163	1.38	0.192	0.01	3.24	0.7	3.95	9548	4.9878	25.63974	-20.65194	NAF
NS0065	100	102	NS	E410490	410490	1	G	W	34.56	39.87	1.79	0.62	0.48	0.082	1.89	1.28	0.082	0.049	1.2	0.118	0.01	2.61	0.53	3.15	9552	1.4994	22.32576	-20.82636	NAF
NS0065	184	186	NS	E410533	410533	1	G	W	38.31	35.71	1.05	0.762	0.59	0.044	1.95	1.24	0.103	0.025	0.741	0.059	0	2.82	0.35	3.17	9594	0.765	21.62808	-20.86308	NAF
NS0065	176	178	NS	E410529	410529	1	G	W	18.2	64.9	0.49	0.697	0.54	0.024	1.38	1.38	0.064	0.103	0.347	0.026	0.06	3.53	0.82	4.41	9590	3.1518	24.06996	-20.91816	NAF
NS0065	148	150	NS	E410515	410515	1	G	W	35.13	38.46	1.8	0.762	0.59	0.076	1.9	1.42	0.09	0.115	1.27	0.13	0	2.67	0.59	3.26	9576	3.519	24.76764	-21.24864	NAF
NS0065	230	232	NS	E410556	410556	1	G	W	37.97	34.9	1.19	0.852	0.66	0.047	2.12	1.27	0.115	0.025	0.859	0.071	0.04	3.25	0.37	3.66	9617	0.765	22.15134	-21.38634	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0065	336	338	NS	E410610	410610	1	G	W	32.21	40.58	1.73	0.658	0.51	0.074	2.58	1.86	0.089	0.361	0.853	0.107	0.18	3.32	1.09	4.59	9670	11.0466	32.44212	-21.39552	NAF
NS0065	266	268	NS	E410574	410574	1	G	W	35.77	36.19	1.6	0.775	0.6	0.064	2.53	1.3	0.115	0.038	0.498	0.081	0.23	4.81	0.44	5.48	9635	1.1628	22.6746	-21.5118	NAF
NS0065	76	78	NS	E410478	410478	1	G	W	32.38	41.05	2.35	0.555	0.43	0.105	2.13	1.36	0.108	0.061	1.58	0.217	0.05	3.21	0.61	3.87	9540	1.8666	23.72112	-21.85452	NAF
NS0065	198	200	NS	E410540	410540	1	G	W	38.09	35.47	1.3	0.749	0.58	0.051	1.97	1.29	0.088	0.014	0.953	0.093	-0.03	2.79	0.52	3.28	9601	0.4284	22.50018	-22.07178	NAF
NS0065	376	378	NS	E410630	410630	1	G	W	39.52	34.78	0.94	0.684	0.53	0.043	1.7	1.31	0.069	0.023	0.621	0.042	0.03	2.38	0.47	2.88	9690	0.7038	22.84902	-22.14522	NAF
NS0065	82	84	NS	E410481	410481	1	G	W	34.71	38.24	1.51	0.736	0.57	0.069	1.94	1.65	0.107	0.209	1.07	0.125	-0.01	3.38	0.78	4.15	9543	6.3954	28.7793	-22.3839	NAF
NS0065	382	384	NS	E410633	410633	1	G	W	36.93	35.77	1.41	0.723	0.56	0.059	2.27	1.45	0.102	0.095	0.839	0.081	0.12	3.12	0.57	3.81	9693	2.907	25.2909	-22.3839	NAF
NS0065	78	80	NS	E410479	410479	1	G	W	32.6	40.07	2.38	0.62	0.48	0.092	2.08	1.61	0.171	0.168	1.41	0.18	0.02	3.22	0.54	3.78	9541	5.1408	28.08162	-22.94082	NAF
NS0065	234	236	NS	E410558	410558	1	G	W	39.96	34.16	0.98	0.671	0.52	0.042	1.66	1.36	0.093	0.018	0.695	0.048	-0.03	2.24	0.45	2.66	9619	0.5508	23.72112	-23.17032	NAF
NS0065	310	312	NS	E410596	410596	1	G	W	31.42	42.86	0.82	0.658	0.51	0.035	2	1.36	0.087	0.015	0.098	0.042	0.18	5.94	0.53	6.65	9657	0.459	23.72112	-23.26212	NAF
NS0065	320	322	NS	E410602	410602	1	G	W	30.9	38.1	2.63	0.749	0.58	0.11	3.43	1.98	0.235	0.363	0.572	0.152	0.41	5.22	0.99	6.62	9662	11.1078	34.53516	-23.42736	NAF
NS0065	256	258	NS	E410569	410569	1	G	W	38.75	34.62	0.96	0.723	0.56	0.044	2.07	1.39	0.088	0.02	0.494	0.081	0.11	3.13	0.56	3.8	9630	0.612	24.24438	-23.63238	NAF
NS0065	84	86	NS	E410482	410482	1	G	W	33.74	40.19	1.53	0.684	0.53	0.07	1.9	1.51	0.131	0.085	1.04	0.156	0	3.36	0.62	3.98	9544	2.601	26.33742	-23.73642	NAF
NS0065	66	68	NS	E410473	410473	1	G	W	36.11	37.8	1.26	0.736	0.57	0.058	1.66	1.43	0.087	0.028	1.04	0.036	-0.01	3.15	0.64	3.78	9535	0.8568	24.94206	-24.08526	NAF
NS0065	262	264	NS	E410572	410572	1	G	W	37.7	34.08	1.19	0.775	0.6	0.057	2.5	1.43	0.089	0.027	0.356	0.089	0.24	4.15	0.58	4.97	9633	0.8262	24.94206	-24.11586	NAF
NS0065	136	138	NS	E410509	410509	1	G	W	39.15	34.37	0.92	0.865	0.67	0.043	1.61	1.42	0.092	0.011	0.7	0.063	-0.08	2.79	0.66	3.37	9570	0.3366	24.76764	-24.43104	NAF
NS0065	120	122	NS	E410500	410500	1	G	W	32.88	40.7	1.63	0.697	0.54	0.073	2.26	1.56	0.14	0.09	0.906	0.198	0.03	3.46	0.73	4.22	9562	2.754	27.20952	-24.45552	NAF
NS0065	200	202	NS	E410541	410541	1	G	W	36.79	37.5	1.02	0.749	0.58	0.044	1.91	1.44	0.073	0.019	0.761	0.06	-0.02	2.67	0.67	3.32	9602	0.5814	25.11648	-24.53508	NAF
NS0065	224	226	NS	E410553	410553	1	G	W	38.5	35	1.1	0.813	0.63	0.047	1.9	1.45	0.127	0.021	0.83	0.053	0.01	2.72	0.53	3.26	9614	0.6426	25.2909	-24.6483	NAF
NS0065	330	332	NS	E410607	410607	1	G	W	36.48	36.06	1.23	0.813	0.63	0.052	2.17	1.46	0.094	0.026	0.618	0.085	0.2	3.83	0.61	4.64	9667	0.7956	25.46532	-24.66972	NAF
NS0065	102	104	NS	E410491	410491	1	G	W	38.11	35.47	1.04	0.749	0.58	0.05	1.77	1.47	0.117	0.025	0.721	0.089	-0.04	2.99	0.57	3.52	9553	0.765	25.63974	-24.87474	NAF
NS0065	130	132	NS	E410506	410506	1	G	W	38.43	35.82	0.99	0.762	0.59	0.046	1.61	1.47	0.111	0.023	0.733	0.064	-0.06	2.64	0.56	3.14	9567	0.7038	25.63974	-24.93594	NAF
NS0065	326	328	NS	E410605	410605	1	G	W	37.58	35.57	1.18	0.736	0.57	0.049	2.02	1.47	0.13	0.022	0.439	0.078	0.18	3.59	0.44	4.21	9665	0.6732	25.63974	-24.96654	NAF
NS0065	134	136	NS	E410508	410508	1	G	W	37.16	37.24	0.95	0.839	0.65	0.043	1.59	1.46	0.071	0.01	0.73	0.058	-0.06	2.77	0.77	3.48	9569	0.306	25.46532	-25.15932	NAF
NS0065	242	244	NS	E410562	410562	1	G	W	39.12	33.67	1.19	0.775	0.6	0.051	2.05	1.5	0.098	0.021	0.791	0.072	0.1	2.95	0.6	3.65	9623	0.6426	26.163	-25.5204	NAF
NS0065	144	146	NS	E410513	410513	1	G	W	36.55	38.42	0.95	0.775	0.6	0.042	1.58	1.5	0.096	0.01	0.709	0.07	-0.05	2.42	0.76	3.13	9574	0.306	26.163	-25.857	NAF
NS0065	80	82	NS	E410480	410480	1	G	W	33.97	39.79	1.47	0.723	0.56	0.064	1.91	1.63	0.111	0.084	1.03	0.127	0.02	3.51	0.74	4.27	9542	2.5704	28.43046	-25.86006	NAF
NS0065	322	324	NS	E410603	410603	1	G	W	35.77	36.05	1.12	0.904	0.7	0.049	2.32	1.55	0.086	0.035	0.229	0.062	0.25	5.13	0.68	6.06	9663	1.071	27.0351	-25.9641	NAF
NS0065	390	392	NS	E410637	410637	1	G	W	35.9	37.26	1.14	0.865	0.67	0.043	2.22	1.54	0.083	0.029	0.722	0.064	0.1	3.52	0.81	4.43	9697	0.8874	26.86068	-25.97328	NAF
NS0065	182	184	NS	E410532	410532	1	G	W	37.5	35.54	1.12	0.813	0.63	0.051	2.15	1.54	0.117	0.025	0.768	0.075	0.04	3.08	0.62	3.74	9593	0.765	26.86068	-26.09568	NAF
NS0065	356	358	NS	E410620	410620	1	G	W	36.2	38.57	1.02	0.736	0.57	0.043	1.81	1.53	0.085	0.018	0.674	0.056	0.04	2.62	0.73	3.39	9680	0.5508	26.68626	-26.13546	NAF
NS0065	168	170	NS	E410525	410525	1	G	W	36.85	37.98	0.99	0.71	0.55	0.038	1.72	1.54	0.083	0.023	0.733	0.064	-0.04	2.43	0.68	3.07	9586	0.7038	26.86068	-26.15688	NAF
NS0065	348	350	NS	E410616	410616	1	G	W	38.9	34.41	1.06	0.71	0.55	0.044	1.84	1.54	0.083	0.021	0.677	0.054	0.07	2.84	0.64	3.55	9676	0.6426	26.86068	-26.21808	NAF
NS0065	374	376	NS	E410629	410629	1	G	W	38.18	35.49	0.94	0.775	0.6	0.042	1.84	1.55	0.084	0.018	0.613	0.054	0.07	2.78	0.66	3.51	9689	0.5508	27.0351	-26.4843	NAF
NS0065	162	164	NS	E410522	410522	1	G	W	37.57	36.73	1.01	0.8	0.62	0.045	1.74	1.56	0.1	0.023	0.733	0.087	-0.05	2.37	0.84	3.16	9583	0.7038	27.20952	-26.50572	NAF
NS0065	62	64	NS	E410471	410471	1	G	W	35.76	38.63	1.43	0.646	0.5	0.07	1.66	1.59	0.13	0.034	1.14	0.039	0.04	2.93	0.69	3.66	9533	1.0404	27.73278	-26.69238	NAF
NS0065	60	62	NS	E410470	410470	1	G	W	35.46	38.83	1.33	0.633	0.49	0.061	1.5	1.59	0.122	0.025	1.09	0.027	0.05	2.79	0.71	3.55	9532	0.765	27.73278	-26.96778	NAF
NS0065	236	238	NS	E410559	410559	1	G	W	37.9	36.51	0.9	0.749	0.58	0.044	1.8	1.58	0.093	0.018	0.631	0.049	0.01	2.57	0.75	3.33	9620	0.5508	27.55836	-27.00756	NAF
NS0065	196	198	NS	E410539	410539	1	G	W	36.76	36.05	1.12	0.878	0.68	0.049	2.09	1.59	0.104	0.02	0.853	0.058	-0.02	3.22	0.92	4.12	9600	0.612	27.73278	-27.12078	NAF
NS0065	246	248	NS	E410564	410564	1	G	W	40.36	32.12	1	0.736	0.57	0.043	2.03	1.6	0.08	0.023	0.596	0.068	0.03	2.75	0.86	3.64	9625	0.7038	27.9072	-27.2034	NAF
NS0065	142	144	NS	E410512	410512	1	G	W	37.42	37.08	0.83	0.788	0.61	0.036	1.64	1.6	0.089	0.015	0.626	0.053	-0.07	2.53	0.83	3.29	9573	0.459	27.9072	-27.4482	NAF
NS0065	258	260	NS	E410570	410570	1	G	W	37.39	35.55	0.97	0.775	0.6	0.041	2.18	1.61	0.07	0.02	0.507	0.076	0.14	3.46	0.83	4.43	9631	0.612	28.08162	-27.46962	NAF
NS0065	94	96	NS	E410487	410487	1	G	W	35.83	37.96	1.17	0.8	0.62	0.05	1.65	1.62	0.114	0.024	0.901	0.063	-0.03	3.15	0.77	3.89	9549	0.7344	28.25604	-27.52164	NAF
NS0065	392	394	NS	E410638	410638	1	G	W	36.79	36.46	1.16	0.775	0.6	0.05	2.09	1.66	0.129	0.045	0.775	0.079	0.1	2.97	0.74	3.81	9698	1.377	28.95372	-27.57672	NAF
NS0065	44	46	NS	E410462	410462	1	G	W	35.33	36.73	1.12	0.684	0.53	0.051	1.75	1.69	0.141	0.059	0.766	0.034	0.33	4.93	0.6	5.86	9524	1.8054	29.47698	-27.67158	NAF
NS0065	380	382	NS	E410632	410632	1	G	W	38.73	35.03	0.81	0.775	0.6	0.04	1.92	1.62	0.087	0.018	0.507	0.052	0.08	2.83	0.72	3.63	9692	0.5508	28.25604	-27.70524	NAF
NS0065	104	106	NS	E410492	410492	1	G	W	34.95	38.72	1.4	0.749	0.58	0.061	1.87	1.7	0.087	0.058	0.998	0.111	0	2.97	0.92	3.89	9554	1.7748	29.6514	-27.8766	NAF
NS0065	190	192	NS	E410536	410536	1	G	W	37.26	35.7	1.21	0.775	0.6	0.051	2.12	1.64	0.109	0.023	0.875	0.064	0.02	2.9	0.81	3.73	9597	0.7038	28.60488	-27.90108	NAF
NS0065	68	70	NS	E410474	410474	1	G	W	34.89	38.47	1.33	0.788	0.61	0.059	1.76	1.66	0.124	0.025	1.06	0.046	0	3.45	0.78	4.23	9536	0.765	28.95372	-28.18872	NAF
NS0065	106	108	NS	E410493	410493	1	G	W	36.43	37.8	1.01	0.788	0.61	0.044	1.63	1.65	0.115	0.019	0.724	0.071	-0.02	2.97	0.83	3.78	9555	0.5814	28.7793	-28.1979	NAF
NS0065	108	110	NS	E410494	410494	1	G	W	35.01	37.4	1.59	0.826	0.64	0.072	2	1.94	0.272	0.179	1.07	0.155	0.03	3.51	0.59	4.13	9556	5.4774	33.83748	-28.36008	NAF
NS0065	138	140	NS	E410510	410510	1	G	W	37.43	36.48	0.96	0.8	0.62	0.042	1.64	1.65	0.075	0.01	0.705	0.077	-0.07	2.61	0.94	3.48	9571	0.306	28.7793	-28.4733	NAF
NS0065	332	334	NS	E410608	410608	1	G	W	36.22	35.49	1.33	0.826	0.64	0.057	2.32	1.68	0.094	0.025	0.681	0.079	0.19	4.05	0.83	5.07	9668	0.765	29.30256	-28.53756	NAF
NS0065	90	92	NS	E410485	410485	1	G	W	36.71	37.13	1.04	0.775	0.6	0.046	1.62	1.7	0.098	0.034	0.807	0.063	-0.05	3.01	0.93	3.89	9547	1.0404	29.6514	-28.611	NAF
NS0065	214	216	NS	E410548	410548	1	G	W	37.34	36.26	1.15	0.8	0.62	0.049	1.9	1.68	0.103	0.016	0.906	0.031	-0.01	2.74	0.78	3.51	9609	0.4896	29.30256	-28.81296	NAF
NS0065	252	254	NS	E410567	410567	1	G	W	37.98	33.67	1.13	0.813	0.63	0.055	2.41	1.7	0.097	0.027	0.484	0.083	0.2	3.67	0.87	4.74	9628	0.8262	29.6514	-28.8252	NAF
NS0065	290	292	NS	E410586	410586	1	G	W	33.95	38.19	1.09	0.71	0.55	0.046	2.48	1.72	0.115	0.038	0.181	0.079	0.26	5.41	0.81	6.48	9647	1.1628	30.00024	-28.83744	NAF
NS0065	384	386	NS	E410634	410634	1	G	W	37.36	35.94	0.97	0.658	0.51	0.057	2.21	1.82	0.08	0.092	0.504	0.071	0.14	2.86	0.93	3.93	9694	2.8152	31.74444	-28.92924	NAF
NS0065	188	190	NS	E410535	410535	1	G	W	38.18	35.48	0.92	0.762	0.59	0.041	1.89	1.71	0.115	0.021	0.665	0.042	0.01	2.77	0.6	3.38	9596	0.6426	29.82582	-29.18322	NAF
NS0065	212	214	NS	E410547	410547	1	G	W	37.71	35.74	1.09	0.8	0.62	0.046	1.89	1.7	0.103	0.012	0.868	0.04	-0.05	2.76	0.84	3.55	9608	0.3672	29.6514	-29.2842	NAF
NS0065	260	262	NS	E410571	410571	1	G	W	38.03	35.17	0.86	0.684	0.53	0.041	2.05	1.73	0.077	0.021	0.423	0.079	0.14	3.06	0.95	4.15	9632	0.6426	30.17466	-29.53206	NAF
NS0065	156	158	NS	E410519	410519	1	G	W	34.26	41.58	0.86	0.775	0.6	0.035	1.52	1.73	0.096	0.018	0.643	0.072	-0.06	2.24	1.03	3.21	9580	0.5508	30.17466	-29.62386	NAF
NS0065	98	100	NS	E410489	410489	1	G	W	37.25	36.71	0.95	0.813	0.63	0.042	1.5	1.72	0.119	0.012	0.752	0.053	-0.06	2.75	0.92	3.61	9551	0.3672	30.00024	-29.63304	NAF
NS0065	128	130	NS	E410505	410505	1	G	W	36.51	37.91	0.91	0.736	0.57	0.04	1.63	1.76	0.095	0.023	0.636	0.062	-0.03	2.6	0.94	3.51	9566	0.7038	30.69792	-29.99412	NAF
NS0065	110	112	NS	E410495	410495	1	G	W	34.61	41.06	0.85	0.736	0.57	0.037	1.51	1.76	0.12	0.018	0.605	0.065	0	2.5	0.88	3.38	9557	0.5508	30.69792	-30.14712	NAC
NS0065	292	294	NS	E410587	410587	1	G	W	33.12	39.2	0.94	0.736	0.57	0.04	2.43	1.78	0.1	0.025	0.22	0.091	0.3	5.44	0.95	6.69	9648	0.765	31.04676	-30.28176	NAC
NS0065	96	98	NS	E410488	410488	1	G	W	34.86	39.71	0.94	0.826	0.64	0.042	1.57	1.78	0.115	0.024	0.734	0.052	-0.03	2.95	1.01	3.93	9550	0.7344	31.04676	-30.31236	NAC
NS0065	338	340	NS	E410611	410611	1	G	W	34.64	38.11	1.27	0.684	0.53	0.056	2.38	1.83	0.112	0.045	0.566	0.077	0.19	3.71	0.96	4.86	9671	1.377	31.91886	-30.54186	NAC
NS0065	362	364	NS	E410623	410623	1	G	W	35.39	36.54	1.59	0.8	0.62	0.068	2.36	1.84	0.19	0.05	0.998	0.086	0.13	3.46	0.81	4.4	9683	1.53	32.09328	-30.56328	NAC
NS0065	86	88	NS	E410483	410483	1	G	W	33.74	39.62	1.37	0.8	0.62	0.06	1.86	1.85	0.118	0.054	0.982	0.099	0.02	3.39	1.01	4.42	9545	1.6524	32.2677	-30.6153	NAC
NS0065	70	72	NS	E410475	410475	1	G	W	35.78	36.98	1.27	0.826	0.64	0.057	1.79	1.8	0.142	0.024	0.997	0.068	0.03	3.64	0.74	4.41	9537	0.7344	31.3956	-30.6612	NAC
NS0065	334	336	NS	E410609	410609	1	G	W	34.91	39	1.12	0.71	0.55	0.049	2.09	1.81	0.113	0.022	0.541	0.092	0.16	3.19	0.95	4.3	9669	0.6732	31.57002	-30.89682	NAC
NS0065	64	66	NS	E410472	410472	1	G	W	32.16	42.15	1.8	0.503	0.39	0.081	1.85	1.85	0.101	0.038	1.46	0.05	0	2.58	1.12	3.7	9534	1.1628	32.2677	-31.1049	NAC
NS0065	240	242	NS	E410561	410561	1	G	W	37.75	33.45	1.13	0.981	0.76	0.045	2.28	1.82	0.08	0.019	0.795	0.067	0.1	3.73	1.14	4.97	9622	0.5814	31.74444	-31.16304	NAC
NS0065	352	354	NS	E410618	410618	1	G	W	36.16	37.72	0.94	0.762	0.59	0.044	1.82	1.82	0.086	0.018	0.619	0.057	0.08	2.83	0.96	3.87	9678	0.5508	31.74444	-31.19364	NAC
NS0065	370	372	NS	E410627	410627	1	G	W	37.59	35.94	0.92	0.736	0.57	0.039	1.88	1.82	0.082	0.016	0.583	0.053	0.05	2.55	1.06	3.66	9687	0.4896	31.74444	-31.25484	NAC
NS0065	220	222	NS	E410551	410551	1	G	W	36.29	38.14	0.91	0.8	0.62	0.04	1.79	1.84	0.077	0.027	0.688	0.038	-0.01	2.44	1.15	3.58	9612	0.8262	32.09328	-31.26708	NAC
NS0065	324	326	NS	E410604	410604	1	G	W	36.58	36.27	1.06	0.775	0.6	0.045	2.01	1.83	0.108	0.02	0.375	0.072	0.18	3.74	0.86	4.78	9664	0.612	31.91886	-31.30686	NAC
NS0065	354	356	NS	E410619	410619	1	G	W	35.76	38.34	1.06	0.762	0.59	0.043	1.88	1.83	0.08	0.019	0.694	0.086	0.07	2.77	1.02	3.86	9679	0.5814	31.91886	-31.33746	NAC
NS0065	360	362	NS	E410622	410622	1	G	W	38.16	35.7	0.98	0.684	0.53	0.04	1.73	1.83	0.078	0.016	0.672	0.048	0	2.27	1.03	3.3	9682	0.4896	31.91886	-31.42926	NAC
NS0065	88	90	NS	E410484	410484	1	G	W	33.74	40.11	1.16	0.826	0.64	0.051	1.76	1.89	0.116	0.037	0.867	0.074	0	3.33	1.12	4.45	9546	1.1322	32.96538	-31.83318	NAC
NS0065	158	160	NS	E410520	410520	1	G	W	37.14	37.03	0.8	0.852	0.66	0.036	1.59	1.86	0.114	0.019	0.614	0.045	-0.05	2.41	0.99	3.35	9581	0.5814	32.44212	-31.86072	NAC
NS0065	368	370	NS	E410626	410626	1	G	W	37.89	34.85	0.9	0.813	0.63	0.045	2.02	1.86	0.16	0.017	0.569	0.048	0.05	3.01	0.93	3.99	9686	0.5202	32.44212	-31.92192	NAC
NS0065	228	230	NS	E410555	410555	1	G	W	36.25	37.44	0.91	0.826	0.64	0.038	1.89	1.88	0.107	0.021	0.662	0.041	0	2.75	1.05	3.8	9616	0.6426	32.79096	-32.14836	NAC
NS0065	372	374	NS	E410628	410628	1	G	W	37.35	36.14	0.9	0.775	0.6	0.041	1.94	1.89	0.096	0.018	0.561	0.052	0.06	2.75	1.05	3.86	9688	0.5508	32.96538	-32.41458	NAC
NS0065	218	220	NS	E410550	410550	1	G	W	37.62	36.04	0.95	0.775	0.6	0.041	1.76	1.9	0.13	0.022	0.724	0.036	0.02	2.39	0.95	3.36	9611	0.6732	33.1398	-32.4666	NAC
NS0065	116	118	NS	E410498	410498	1	G	W	35.74	38.13	1.11	0.684	0.53	0.054	1.86	1.93	0.129	0.036	0.741	0.095	-0.03	2.76	1.08	3.81	9560	1.1016	33.66306	-32.56146	NAC
NS0065	378	380	NS	E410631	410631	1	G	W	35.94	38.49	0.86	0.736	0.57	0.038	1.82	1.9	0.059	0.015	0.556	0.04	0.05	2.51	1.24	3.8	9691	0.459	33.1398	-32.6808	NAC
NS0065	194	196	NS	E410538	410538	1	G	W	35.91	37.83	0.88	0.8	0.62	0.035	1.9	1.95	0.095	0.03	0.665	0.036	0.03	2.69	1.2	3.92	9599	0.918	34.0119	-33.0939	NAC
NS0065	248	250	NS	E410565	410565	1	G	W	37.5	35.92	0.87	0.723	0.56	0.041	2.01	1.93	0.072	0.016	0.497	0.063	0.07	2.64	1.18	3.89	9626	0.4896	33.66306	-33.17346	NAC
NS0065	344	346	NS	E410614	410614	1	G	W	35.58	36.59	1.24	0.736	0.57	0.048	2.26	1.97	0.113	0.034	0.695	0.073	0.13	3.57	1.12	4.82	9674	1.0404	34.36074	-33.32034	NAC
NS0065	226	228	NS	E410554	410554	1	G	W	38.43	34.77	1.02	0.826	0.64	0.043	1.93	1.96	0.112	0.024	0.738	0.046	0	2.42	0.87	3.29	9615	0.7344	34.18632	-33.45192	NAC
NS0065	164	166	NS	E410523	410523	1	G	W	36.58	37.79	0.88	0.762	0.59	0.038	1.64	1.99	0.077	0.025	0.677	0.048	-0.06	2.11	1.22	3.27	9584	0.765	34.70958	-33.94458	NAC
NS0065	244	246	NS	E410563	410563	1	G	W	40.52	30.71	0.94	0.826	0.64	0.048	2.14	1.99	0.098	0.021	0.587	0.066	0.09	3.01	1.1	4.2	9624	0.6426	34.70958	-34.06698	NAC
NS0065	192	194	NS	E410537	410537	1	G	W	36.02	37.31	1.01	0.762	0.59	0.042	2.05	2.01	0.098	0.025	0.728	0.056	0.16	2.74	1.28	4.18	9598	0.765	35.05842	-34.29342	NAC
NS0065	250	252	NS	E410566	410566	1	G	W	38.81	33.19	0.9	0.775	0.6	0.042	2.07	2.01	0.087	0.023	0.541	0.074	0.09	2.91	1.23	4.23	9627	0.7038	35.05842	-34.35462	NAC
NS0065	140	142	NS	E410511	410511	1	G	W	35.6	39.18	0.74	0.775	0.6	0.033	1.58	1.99	0.093	0.01	0.533	0.068	-0.07	2.38	1.32	3.63	9572	0.306	34.70958	-34.40358	NAC
NS0065	208	210	NS	E410545	410545	1	G	W	35.48	38.35	0.92	0.826	0.64	0.039	1.82	2.03	0.085	0.025	0.702	0.036	-0.03	2.66	1.25	3.88	9606	0.765	35.40726	-34.64226	NAC
NS0065	166	168	NS	E410524	410524	1	G	W	36.05	37.5	1	0.788	0.61	0.043	1.9	2.03	0.084	0.019	0.733	0.082	-0.04	2.47	1.33	3.76	9585	0.5814	35.40726	-34.82586	NAC
NS0065	342	344	NS	E410613	410613	1	G	W	36.62	37.48	0.84	0.62	0.48	0.039	1.96	2.05	0.109	0.024	0.412	0.051	0.07	2.84	1.21	4.12	9673	0.7344	35.7561	-35.0217	NAC
NS0065	118	120	NS	E410499	410499	1	G	W	35.66	37.95	1.02	0.646	0.5	0.05	1.88	2.1	0.109	0.022	0.657	0.086	-0.01	2.6	1.32	3.91	9561	0.6732	36.6282	-35.955	NAC
NS0065	150	152	NS	E410516	410516	1	G	W	35.14	39.7	0.87	0.8	0.62	0.039	1.65	2.1	0.076	0.02	0.653	0.058	-0.05	2.26	1.52	3.73	9577	0.612	36.6282	-36.0162	NAC
NS0065	202	204	NS	E410542	410542	1	G	W	34.81	39.36	0.89	0.762	0.59	0.039	1.89	2.18	0.077	0.024	0.662	0.048	-0.03	2.36	1.57	3.9	9603	0.7344	38.02356	-37.28916	NAC
NS0065	204	206	NS	E410543	410543	1	G	W	36.58	37.39	0.92	0.736	0.57	0.038	1.73	2.18	0.097	0.022	0.695	0.038	-0.07	2.05	1.47	3.45	9604	0.6732	38.02356	-37.35036	NAC
NS0065	358	360	NS	E410621	410621	1	G	W	35.23	38.3	1.06	0.736	0.57	0.039	1.88	2.2	0.076	0.021	0.712	0.056	0.07	2.55	1.44	4.06	9681	0.6426	38.3724	-37.7298	NAC
NS0065	350	352	NS	E410617	410617	1	G	W	36.04	37.65	0.84	0.749	0.58	0.037	1.84	2.22	0.081	0.017	0.531	0.05	0.04	2.48	1.52	4.04	9677	0.5202	38.72124	-38.20104	NAC
NS0065	114	116	NS	E410497	410497	1	G	W	32.85	41.38	1.25	0.697	0.54	0.053	1.8	2.33	0.194	0.064	0.851	0.11	0.01	2.57	1.38	3.96	9559	1.9584	40.63986	-38.68146	NAC
NS0065	124	126	NS	E410503	410503	1	G	W	36	38.81	0.77	0.555	0.43	0.035	1.58	2.26	0.104	0.023	0.46	0.051	-0.06	1.91	1.48	3.33	9564	0.7038	39.41892	-38.71512	NAC
NS0065	186	188	NS	E410534	410534	1	G	W	36.44	36.39	0.87	0.839	0.65	0.035	2	2.29	0.114	0.02	0.651	0.035	-0.03	2.83	1.54	4.34	9595	0.612	39.94218	-39.33018	NAC
NS0065	328	330	NS	E410606	410606	1	G	W	31.96	42.39	1.01	0.697	0.54	0.042	1.98	2.34	0.083	0.026	0.463	0.069	0.15	2.85	1.67	4.67	9666	0.7956	40.81428	-40.01868	NAC
NS0065	152	154	NS	E410517	410517	1	G	W	35.04	39.53	0.77	0.839	0.65	0.034	1.6	2.37	0.086	0.023	0.571	0.051	-0.05	2.15	1.68	3.78	9578	0.7038	41.33754	-40.63374	NAC
NS0065	206	208	NS	E410544	410544	1	G	W	35.87	37.38	0.86	0.826	0.64	0.037	1.87	2.38	0.096	0.021	0.651	0.043	-0.04	2.36	1.75	4.07	9605	0.6426	41.51196	-40.86936	NAC
NS0065	340	342	NS	E410612	410612	1	G	W	34.09	39.63	0.77	0.646	0.5	0.035	1.98	2.44	0.118	0.024	0.364	0.041	0.08	2.91	1.67	4.66	9672	0.7344	42.55848	-41.82408	NAC
NS0065	132	134	NS	E410507	410507	1	G	W	33.98	39.53	0.97	0.839	0.65	0.042	1.76	2.45	0.101	0.025	0.716	0.07	-0.04	2.52	1.88	4.36	9568	0.765	42.7329	-41.9679	NAC
NS0065	160	162	NS	E410521	410521	1	G	W	35.09	38.34	0.8	0.904	0.7	0.034	1.79	2.49	0.1	0.031	0.623	0.043	0	2.5	1.8	4.3	9582	0.9486	43.43058	-42.48198	NAC
NS0065	154	156	NS	E410518	410518	1	G	W	35.73	37.36	0.78	0.904	0.7	0.034	1.71	2.62	0.089	0.028	0.608	0.039	-0.06	2.21	2.04	4.19	9579	0.8568	45.69804	-44.84124	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0065	216	218	NS	E410549	410549	1	G	W	33.24	40.31	0.93	0.839	0.65	0.037	1.87	2.76	0.089	0.019	0.732	0.038	-0.04	2.18	2.36	4.5	9610	0.5814	48.13992	-47.55852	NAC
NS0066	54	56	NS	E410669	410669	1	G	W	23.03	46.07	8.37	0.297	0.23	0.365	2.44	0.41	0.117	1.45	0.176	0.012	0.67	6.07	1.49	8.23	9729	44.37	7.15122	37.21878	PAF(HC)
NS0066	56	58	NS	E410670	410670	1	G	W	27.11	42.62	2.54	0.4	0.31	0.112	1.82	0.37	0.081	0.423	0.2	0.004	2.07	9.76	1.06	12.89	9730	12.9438	6.45354	6.49026	PAF(LC)
NS0066	48	50	NS	E410666	410666	1	G	W	28.58	49.89	3.61	0.374	0.29	0.159	0.16	0.02	0.078	0.189	0.13	0.011	2.89	0.99	0.55	4.43	9726	5.7834	0.34884	5.43456	PAF(LC)
NS0066	58	60	NS	E410671	410671	1	G	W	25.15	42.19	3.36	0.465	0.36	0.147	1.9	1.15	0.3	0.82	0.972	0.016	0.75	10.31	1.96	13.02	9731	25.092	20.0583	5.0337	PAF(LC)
NS0066	46	48	NS	E410665	410665	1	G	W	32.7	43.67	2.55	1.149	0.89	0.115	0.16	0.02	0.112	0.025	0.19	0.012	3.82	0.96	0.28	5.06	9725	0.765	0.34884	0.41616	PAF(LC)
NS0066	20	22	NS	E410652	410652	1	G	W	32.26	44.37	3.84	0.194	0.15	0.17	0.12	0.02	0.09	0.024	0.116	0.023	3.17	1.32	0.23	4.72	9712	0.7344	0.34884	0.38556	PAF(LC)
NS0066	4	6	NS	E410644	410644	1	G	W	38.84	37.81	1.69	0.129	0.1	0.063	0.06	0.01	0.039	0.016	0.225	0.009	3.67	0.48	0.15	4.3	9704	0.4896	0.17442	0.31518	PAF(LC)
NS0066	26	28	NS	E410655	410655	1	G	W	28.46	50.8	3.14	0.181	0.14	0.14	0.14	0.01	0.088	0.01	0.347	0.004	3.1	0.95	0.2	4.25	9715	0.306	0.17442	0.13158	PAF(LC)
NS0066	14	16	NS	E410649	410649	1	G	W	22.46	63.47	1.62	0.026	0.02	0.057	0.02	0.005	0.038	0.007	0.041	0.005	2.24	0.49	0.1	2.83	9709	0.2142	0.08721	0.12699	PAF(LC)
NS0066	12	14	NS	E410648	410648	1	G	W	29.24	51.69	1.74	0.065	0.05	0.068	0.08	0.01	0.059	0.009	0.197	0.04	3.34	0.55	0.13	4.02	9708	0.2754	0.17442	0.10098	PAF(LC)
NS0066	22	24	NS	E410653	410653	1	G	W	27.6	54	1.76	0.284	0.22	0.061	0.09	0.01	0.081	0.009	0.042	0.01	3.29	0.68	0.14	4.11	9713	0.2754	0.17442	0.10098	PAF(LC)
NS0066	24	26	NS	E410654	410654	1	G	W	34.51	43.58	1.82	0.207	0.16	0.071	0.13	0.01	0.113	0.006	0.08	0.009	3.84	0.71	0.13	4.68	9714	0.1836	0.17442	0.00918	PAF(LC)
NS0066	52	54	NS	E410668	410668	1	G	W	33.38	44.05	1.84	0.555	0.43	0.079	0.17	0.02	0.118	0.011	0.545	0.007	3.62	0.55	0.23	4.4	9728	0.3366	0.34884	-0.01224	NAF
NS0066	16	18	NS	E410650	410650	1	G	W	36.15	44.21	1.1	0.052	0.04	0.045	0.05	0.01	0.081	0.005	0.157	0.002	1.99	0.36	0.1	2.45	9710	0.153	0.17442	-0.02142	NAF
NS0066	8	10	NS	E410646	410646	1	G	W	34.3	46.17	1.17	0.271	0.21	0.048	0.09	0.01	0.057	0.004	0.121	0.002	2.26	0.47	0.1	2.83	9706	0.1224	0.17442	-0.05202	NAF
NS0066	2	4	NS	E410643	410643	1	G	W	29.69	53.84	0.81	0.168	0.13	0.036	0.1	0.02	0.029	0.009	0.18	0.013	1.8	0.23	0.07	2.1	9703	0.2754	0.34884	-0.07344	NAF
NS0066	6	8	NS	E410645	410645	1	G	W	33.73	45.99	1.69	0.168	0.13	0.084	0.13	0.02	0.061	0.007	0.206	0.012	2.57	0.51	0.12	3.2	9705	0.2142	0.34884	-0.13464	NAF
NS0066	18	20	NS	E410651	410651	1	G	W	33.05	48.22	1.2	0.116	0.09	0.05	0.09	0.02	0.089	0.007	0.179	0.0005	2.06	0.4	0.11	2.57	9711	0.2142	0.34884	-0.13464	NAF
NS0066	40	42	NS	E410662	410662	1	G	W	21.07	65.17	1.3	0.361	0.28	0.054	0.08	0.02	0.076	0.007	0.129	0.013	1.79	0.39	0.13	2.31	9722	0.2142	0.34884	-0.13464	NAF
NS0066	10	12	NS	E410647	410647	1	G	W	35.03	42.28	1.91	0.116	0.09	0.081	0.08	0.02	0.123	0.006	0.188	0.012	3.79	0.68	0.14	4.61	9707	0.1836	0.34884	-0.16524	NAF
NS0066	28	30	NS	E410656	410656	1	G	W	32.91	42.7	3.23	0.646	0.5	0.136	0.18	0.02	0.125	0.006	0.254	0.005	3.79	1.06	0.21	5.06	9716	0.1836	0.34884	-0.16524	NAF
NS0066	32	34	NS	E410658	410658	1	G	W	28.15	53.6	1.35	0.684	0.53	0.057	0.12	0.02	0.086	0.006	0.091	0.014	2.5	0.55	0.13	3.18	9718	0.1836	0.34884	-0.16524	NAF
NS0066	0	2	NS	E410642	410642	1	G	W	25.61	53.99	4.11	0.077	0.06	0.231	0.09	0.04	0.059	0.017	0.051	0.019	3.22	1.25	0.12	4.59	9702	0.5202	0.69768	-0.17748	NAF
NS0066	30	32	NS	E410657	410657	1	G	W	32.83	41.98	3.76	0.762	0.59	0.165	0.17	0.02	0.113	0.005	0.114	0.0005	4.01	1.3	0.2	5.51	9717	0.153	0.34884	-0.19584	NAF
NS0066	36	38	NS	E410660	410660	1	G	W	30.13	48.04	2.41	0.955	0.74	0.108	0.16	0.02	0.108	0.005	0.193	0.012	3.58	0.87	0.21	4.66	9720	0.153	0.34884	-0.19584	NAF
NS0066	38	40	NS	E410661	410661	1	G	W	11.41	77.76	2.46	0.413	0.32	0.104	0.06	0.02	0.097	0.004	0.155	0.023	1.69	0.59	0.14	2.42	9721	0.1224	0.34884	-0.22644	NAF
NS0066	44	46	NS	E410664	410664	1	G	W	14.2	71.89	3.74	0.465	0.36	0.159	0.08	0.02	0.095	0.004	0.087	0.019	1.88	1.06	0.17	3.11	9724	0.1224	0.34884	-0.22644	NAF
NS0066	34	36	NS	E410659	410659	1	G	W	32.12	46.72	1.78	0.788	0.61	0.078	0.15	0.02	0.082	0.003	0.246	0.013	2.88	0.64	0.16	3.68	9719	0.0918	0.34884	-0.25704	NAF
NS0066	42	44	NS	E410663	410663	1	G	W	27.68	49.81	3.73	0.478	0.37	0.164	0.19	0.03	0.134	0.005	0.115	0.011	3.92	1.15	0.19	5.26	9723	0.153	0.52326	-0.37026	NAF
NS0066	50	52	NS	E410667	410667	1	G	W	32.7	42.97	2.36	1.084	0.84	0.101	0.31	0.03	0.116	0.005	0.656	0.015	4.12	0.72	0.32	5.16	9727	0.153	0.52326	-0.37026	NAF
NS0066	152	154	NS	E410719	410719	1	G	W	26.67	38.69	5.32	0.452	0.35	0.233	3.38	0.67	0.116	0.276	3.16	0.055	0.24	8.54	0.52	9.3	9778	8.4456	11.68614	-3.24054	NAF
NS0066	96	98	NS	E410690	410690	1	G	W	29.73	36.03	3.04	0.491	0.38	0.134	2.65	0.64	0.115	0.252	0.293	0.003	0.98	12.34	0.61	13.93	9750	7.7112	11.16288	-3.45168	NAF
NS0066	158	160	NS	E410722	410722	1	G	W	33.12	36.95	2.7	0.516	0.4	0.118	2.39	0.57	0.083	0.143	1.36	0.027	0.33	7.14	0	7.47	9781	4.3758	9.94194	-5.56614	NAF
NS0066	102	104	NS	E410693	410693	1	G	W	27.07	38.79	2.27	0.503	0.39	0.097	2.37	0.83	0.121	0.265	0.818	0.007	0.97	13.32	0.64	14.93	9753	8.109	14.47686	-6.36786	NAF
NS0066	156	158	NS	E410721	410721	1	G	W	28.52	44.51	2.7	0.503	0.39	0.118	2.49	0.98	0.114	0.304	0.635	0.043	0.27	6.06	0.52	6.85	9780	9.3024	17.09316	-7.79076	NAF
NS0066	66	68	NS	E410675	410675	1	G	W	34	37.12	0.74	0.413	0.32	0.031	1.56	0.48	0.077	0.008	0.327	0.005	0.6	9.95	-0.09	10.46	9735	0.2448	8.37216	-8.12736	NAF
NS0066	146	148	NS	E410716	410716	1	G	W	36.67	36.79	1.32	0.568	0.44	0.056	1.67	0.53	0.095	0.031	0.753	0.182	0.18	5.52	-0.24	5.46	9775	0.9486	9.24426	-8.29566	NAF
NS0066	178	180	NS	E410732	410732	1	G	W	33.62	37.28	2.68	0.516	0.4	0.116	2.71	0.92	0.092	0.244	0.977	0.088	0.24	5.4	0.37	6.01	9791	7.4664	16.04664	-8.58024	NAF
NS0066	138	140	NS	E410712	410712	1	G	W	34.48	42.39	0.68	0.516	0.4	0.029	1.17	0.54	0.076	0.009	0.389	0.11	0.25	4.42	-0.25	4.42	9771	0.2754	9.41868	-9.14328	NAF
NS0066	72	74	NS	E410678	410678	1	G	W	29.02	35.8	0.86	0.491	0.38	0.03	2	0.61	0.086	0.034	0.248	0.006	1.55	16.31	0.07	17.93	9738	1.0404	10.63962	-9.59922	NAF
NS0066	118	120	NS	E410702	410702	1	G	W	26.07	40.98	1.15	0.503	0.39	0.05	2.52	0.73	0.106	0.102	0.154	0.025	1.04	15.01	0.2	16.25	9761	3.1212	12.73266	-9.61146	NAF
NS0066	124	126	NS	E410705	410705	1	G	W	35.4	37.63	0.62	0.568	0.44	0.026	1.54	0.6	0.093	0.013	0.168	0.096	0.35	7.72	-0.16	7.91	9764	0.3978	10.4652	-10.0674	NAF
NS0066	148	150	NS	E410717	410717	1	G	W	30.19	49.55	0.78	0.387	0.3	0.033	1.13	0.61	0.044	0.016	0.486	0.023	0.09	3.5	-0.03	3.56	9776	0.4896	10.63962	-10.15002	NAF
NS0066	180	182	NS	E410733	410733	1	G	W	33.32	41.08	1.33	0.568	0.44	0.059	2	0.73	0.067	0.084	0.645	0.092	0.17	5.49	0	5.66	9792	2.5704	12.73266	-10.16226	NAF
NS0066	100	102	NS	E410692	410692	1	G	W	31.72	31.4	1.97	0.62	0.48	0.082	2.27	0.89	0.143	0.165	0.996	0.011	0.82	14.71	0.28	15.81	9752	5.049	15.52338	-10.47438	NAF
NS0066	168	170	NS	E410727	410727	1	G	W	32.71	41.33	1.12	0.594	0.46	0.048	1.87	0.78	0.063	0.102	0.636	0.069	0.23	6.23	0.04	6.5	9786	3.1212	13.60476	-10.48356	NAF
NS0066	106	108	NS	E410695	410695	1	G	W	31.61	40.7	0.68	0.542	0.42	0.03	1.45	0.64	0.087	0.009	0.393	0.022	0.59	9.77	-0.11	10.25	9755	0.2754	11.16288	-10.88748	NAF
NS0066	104	106	NS	E410694	410694	1	G	W	27.67	44.6	1.12	0.387	0.3	0.046	1.69	0.72	0.079	0.053	0.479	0.012	0.56	10.21	0.07	10.84	9754	1.6218	12.55824	-10.93644	NAF
NS0066	120	122	NS	E410703	410703	1	G	W	31.37	40.13	0.85	0.542	0.42	0.035	1.82	0.71	0.1	0.047	0.296	0.056	0.61	9.57	-0.02	10.16	9762	1.4382	12.38382	-10.94562	NAF
NS0066	144	146	NS	E410715	410715	1	G	W	36.22	40.36	0.73	0.529	0.41	0.033	1.17	0.64	0.085	0.006	0.452	0.093	0.04	3.99	-0.18	3.85	9774	0.1836	11.16288	-10.97928	NAF
NS0066	126	128	NS	E410706	410706	1	G	W	34.12	37.05	0.8	0.503	0.39	0.031	1.77	0.72	0.115	0.05	0.188	0.149	0.6	8.77	-0.01	9.36	9765	1.53	12.55824	-11.02824	NAF
NS0066	122	124	NS	E410704	410704	1	G	W	35.31	37.18	0.6	0.594	0.46	0.026	1.64	0.67	0.106	0.017	0.187	0.083	0.37	8.16	-0.19	8.34	9763	0.5202	11.68614	-11.16594	NAF
NS0066	154	156	NS	E410720	410720	1	G	W	34.91	39.98	0.86	0.658	0.51	0.033	1.42	0.68	0.08	0.022	0.617	0.009	0.19	5.39	-0.22	5.36	9779	0.6732	11.86056	-11.18736	NAF
NS0066	128	130	NS	E410707	410707	1	G	W	36.51	35.27	0.57	0.542	0.42	0.025	1.65	0.68	0.093	0.014	0.151	0.098	0.54	8.08	-0.13	8.49	9766	0.4284	11.86056	-11.43216	NAF
NS0066	150	152	NS	E410718	410718	1	G	W	35.48	41.48	0.67	0.555	0.43	0.029	1.19	0.7	0.081	0.019	0.43	0.019	0.06	4.26	-0.17	4.15	9777	0.5814	12.2094	-11.628	NAF
NS0066	92	94	NS	E410688	410688	1	G	W	25.63	45.67	1.19	0.503	0.39	0.052	1.9	0.76	0.1	0.053	0.39	0.015	0.59	11.64	0.15	12.38	9748	1.6218	13.25592	-11.63412	NAF
NS0066	164	166	NS	E410725	410725	1	G	W	31.26	38.62	2.35	0.646	0.5	0.102	2.83	1.01	0.136	0.194	0.495	0.031	0.39	8.09	0.3	8.78	9784	5.9364	17.61642	-11.68002	NAF
NS0066	64	66	NS	E410674	410674	1	G	W	31.67	36.55	0.91	0.594	0.46	0.036	1.84	0.71	0.125	0.013	0.489	0.012	0.91	12.38	-0.06	13.23	9734	0.3978	12.38382	-11.98602	NAF
NS0066	60	62	NS	E410672	410672	1	G	W	33.75	33.71	1.1	0.646	0.5	0.047	2.05	0.75	0.118	0.026	0.636	0.015	0.65	11.87	-0.11	12.41	9732	0.7956	13.0815	-12.2859	NAF
NS0066	94	96	NS	E410689	410689	1	G	W	27.28	41.62	1.31	0.478	0.37	0.055	2.21	0.88	0.103	0.093	0.231	0.008	0.51	12.96	0.19	13.66	9749	2.8458	15.34896	-12.50316	NAF
NS0066	134	136	NS	E410710	410710	1	G	W	34.73	39.73	0.54	0.542	0.42	0.023	1.57	0.75	0.071	0.018	0.136	0.101	0.31	6.37	0.1	6.78	9769	0.5508	13.0815	-12.5307	NAF
NS0066	140	142	NS	E410713	410713	1	G	W	37.83	35.65	0.95	0.594	0.46	0.043	1.46	0.76	0.143	0.016	0.459	0.197	0.24	5.49	-0.35	5.38	9772	0.4896	13.25592	-12.76632	NAF
NS0066	62	64	NS	E410673	410673	1	G	W	32.51	35.62	1.06	0.594	0.46	0.047	1.98	0.75	0.101	0.007	0.684	0.031	0.72	11.63	-0.04	12.31	9733	0.2142	13.0815	-12.8673	NAF
NS0066	84	86	NS	E410684	410684	1	G	W	26.27	39.87	2.06	0.452	0.35	0.087	2.42	0.96	0.104	0.117	0.661	0.013	0.53	14.59	0.32	15.44	9744	3.5802	16.74432	-13.16412	NAF
NS0066	90	92	NS	E410687	410687	1	G	W	29.7	37	1.37	0.529	0.41	0.058	2.26	0.79	0.089	0.017	0.835	0.04	0.61	13.45	0.13	14.19	9747	0.5202	13.77918	-13.25898	NAF
NS0066	78	80	NS	E410681	410681	1	G	W	34.45	31.1	0.83	0.646	0.5	0.035	1.82	0.81	0.122	0.022	0.42	0.035	1.27	13.51	-0.05	14.73	9741	0.6732	14.12802	-13.45482	NAF
NS0066	170	172	NS	E410728	410728	1	G	W	32.6	40.96	1.45	0.542	0.42	0.061	1.98	0.94	0.113	0.091	0.704	0.092	0.14	6.05	0	6.19	9787	2.7846	16.39548	-13.61088	NAF
NS0066	110	112	NS	E410697	410697	1	G	W	34.68	35.02	0.57	0.568	0.44	0.023	1.7	0.83	0.105	0.016	0.163	0.048	0.49	10.6	0.02	11.11	9757	0.4896	14.47686	-13.98726	NAF
NS0066	166	168	NS	E410726	410726	1	G	W	28.31	38.65	3.6	0.503	0.39	0.154	3.3	1.3	0.122	0.279	1.56	0.04	0.41	8.73	0.73	9.87	9785	8.5374	22.6746	-14.1372	NAF
NS0066	136	138	NS	E410711	410711	1	G	W	32.87	39.62	0.72	0.581	0.45	0.029	1.85	0.93	0.099	0.06	0.256	0.177	0.43	7.87	0.15	8.45	9770	1.836	16.22106	-14.38506	NAF
NS0066	112	114	NS	E410698	410698	1	G	W	32.04	36.83	0.6	0.594	0.46	0.024	1.81	0.86	0.081	0.01	0.157	0.075	0.61	11.98	0.05	12.64	9758	0.306	15.00012	-14.69412	NAF
NS0066	116	118	NS	E410700	410700	1	G	W	28.61	38.4	1.01	0.568	0.44	0.045	2.24	0.94	0.126	0.05	0.27	0.046	0.7	14.11	0.13	14.94	9760	1.53	16.39548	-14.86548	NAF
NS0066	70	72	NS	E410677	410677	1	G	W	28.8	36.48	0.88	0.503	0.39	0.032	2.36	0.91	0.114	0.03	0.132	0.0005	1.34	15.46	0.05	16.85	9737	0.918	15.87222	-14.95422	NAF
NS0066	222	224	NS	E410754	410754	1	G	W	29.55	43.02	2.57	0.516	0.4	0.115	2.47	1.59	0.136	0.416	0.945	0.051	0.15	5.17	0.66	5.98	9813	12.7296	27.73278	-15.00318	NAF
NS0066	86	88	NS	E410685	410685	1	G	W	27.83	42.4	0.98	0.465	0.36	0.041	2.02	0.95	0.085	0.046	0.192	0.001	0.5	12.09	0.25	12.84	9745	1.4076	16.5699	-15.1623	NAF
NS0066	98	100	NS	E410691	410691	1	G	W	25.39	39.67	2.19	0.542	0.42	0.091	2.44	1.03	0.168	0.09	1.04	0.009	0.72	15.21	0.31	16.24	9751	2.754	17.96526	-15.21126	NAF
NS0066	76	78	NS	E410680	410680	1	G	W	31.98	32.57	0.52	0.491	0.38	0.019	1.98	0.92	0.134	0.021	0.154	0.007	1.39	15.62	0.13	17.14	9740	0.6426	16.04664	-15.40404	NAF
NS0066	88	90	NS	E410686	410686	1	G	W	27.2	45.18	0.68	0.374	0.29	0.03	1.81	0.94	0.068	0.019	0.258	0.014	0.49	10.49	0.32	11.3	9746	0.5814	16.39548	-15.81408	NAF
NS0066	142	144	NS	E410714	410714	1	G	W	37.22	35.32	0.76	0.62	0.48	0.034	1.59	0.99	0.128	0.035	0.407	0.155	0.22	6.17	-0.04	6.35	9773	1.071	17.26758	-16.19658	NAF
NS0066	130	132	NS	E410708	410708	1	G	W	34.88	35.78	0.94	0.516	0.4	0.038	1.93	1.02	0.094	0.046	0.252	0.138	0.6	8.31	0.21	9.12	9767	1.4076	17.79084	-16.38324	NAF
NS0066	68	70	NS	E410676	410676	1	G	W	29.31	37.01	0.94	0.503	0.39	0.037	2.31	0.97	0.139	0.014	0.17	0.002	1.03	14.43	0.1	15.56	9736	0.4284	16.91874	-16.49034	NAF
NS0066	108	110	NS	E410696	410696	1	G	W	31.12	37.37	0.88	0.542	0.42	0.038	1.9	1.08	0.143	0.051	0.288	0.052	0.5	12.23	0.21	12.94	9756	1.5606	18.83736	-17.27676	NAF
NS0066	82	84	NS	E410683	410683	1	G	W	28.54	36.13	1.24	0.581	0.45	0.048	2.49	1.11	0.152	0.025	0.523	0.004	0.86	15.59	0.21	16.66	9743	0.765	19.36062	-18.59562	NAF
NS0066	74	76	NS	E410679	410679	1	G	W	27.61	41.84	0.52	0.439	0.34	0.021	2.05	1.1	0.161	0.007	0.201	0.028	0.43	13.41	0.23	14.07	9739	0.2142	19.1862	-18.972	NAF
NS0066	80	82	NS	E410682	410682	1	G	W	28.62	34.28	1.76	0.555	0.43	0.072	2.63	1.17	0.146	0.023	0.798	0.032	0.81	16.03	0.33	17.17	9742	0.7038	20.40714	-19.70334	NAF
NS0066	172	174	NS	E410729	410729	1	G	W	32.51	42.62	1.05	0.568	0.44	0.045	1.68	1.24	0.098	0.058	0.563	0.034	0.08	4.96	0.35	5.39	9788	1.7748	21.62808	-19.85328	NAF
NS0066	132	134	NS	E410709	410709	1	G	W	34.87	35.32	0.66	0.555	0.43	0.028	2.02	1.2	0.087	0.022	0.143	0.147	0.48	8.64	0.5	9.62	9768	0.6732	20.9304	-20.2572	NAF
NS0066	114	116	NS	E410699	410699	1	G	W	27.42	44.74	0.71	0.581	0.45	0.03	1.59	1.28	0.173	0.049	0.237	0.039	0.45	10.33	0.23	11.01	9759	1.4994	22.32576	-20.82636	NAF
NS0066	162	164	NS	E410724	410724	1	G	W	37.21	34.88	1.29	0.594	0.46	0.057	1.76	1.25	0.073	0.026	0.541	0.021	0.17	5.42	0.3	5.89	9783	0.7956	21.8025	-21.0069	NAF
NS0066	200	202	NS	E410743	410743	1	G	W	35.58	38.54	0.92	0.594	0.46	0.043	1.83	1.31	0.096	0.026	0.595	0.034	0.05	4.35	0.42	4.82	9802	0.7956	22.84902	-22.05342	NAF
NS0066	206	208	NS	E410746	410746	1	G	W	32.66	38.97	2.24	0.555	0.43	0.1	2.28	1.51	0.099	0.121	1.22	0.053	0.25	4.99	0.59	5.83	9805	3.7026	26.33742	-22.63482	NAF
NS0066	202	204	NS	E410744	410744	1	G	W	36.63	35.82	1.14	0.684	0.53	0.051	1.98	1.44	0.115	0.044	0.819	0.037	0.07	4.96	0.48	5.51	9803	1.3464	25.11648	-23.77008	NAF
NS0066	248	250	NS	E410767	410767	1	G	W	37.25	35.5	1.09	0.607	0.47	0.048	1.99	1.53	0.079	0.07	0.658	0.033	0.1	3.99	0.61	4.7	9826	2.142	26.68626	-24.54426	NAF
NS0066	176	178	NS	E410731	410731	1	G	W	36.58	37.36	0.85	0.646	0.5	0.036	1.57	1.45	0.07	0.021	0.655	0.043	0.08	4.08	0.55	4.71	9790	0.6426	25.2909	-24.6483	NAF
NS0066	160	162	NS	E410723	410723	1	G	W	33.11	41.94	1.02	0.491	0.38	0.044	1.55	1.48	0.058	0.023	0.412	0.006	0.11	4.44	0.65	5.2	9782	0.7038	25.81416	-25.11036	NAF
NS0066	184	186	NS	E410735	410735	1	G	W	37.43	35.32	0.95	0.697	0.54	0.041	1.69	1.49	0.068	0.025	0.632	0.035	0.09	4.62	0.59	5.3	9794	0.765	25.98858	-25.22358	NAF
NS0066	198	200	NS	E410742	410742	1	G	W	35.82	37.36	1.07	0.568	0.44	0.046	1.86	1.56	0.081	0.051	0.71	0.027	0.06	4.24	0.67	4.97	9801	1.5606	27.20952	-25.64892	NAF
NS0066	186	188	NS	E410736	410736	1	G	W	28.38	44.41	2.52	0.542	0.42	0.109	2.08	1.79	0.087	0.171	1.5	0.065	0.18	5.04	0.84	6.06	9795	5.2326	31.22118	-25.98858	NAF
NS0066	196	198	NS	E410741	410741	1	G	W	38.7	34.21	0.89	0.671	0.52	0.039	1.75	1.53	0.081	0.008	0.701	0.044	0.04	3.9	0.62	4.56	9800	0.2448	26.68626	-26.44146	NAF
NS0066	212	214	NS	E410749	410749	1	G	W	30.35	39.92	2.84	0.607	0.47	0.124	2.48	1.94	0.118	0.238	1.59	0.058	0.19	5.11	1.04	6.34	9808	7.2828	33.83748	-26.55468	NAF
NS0066	244	246	NS	E410765	410765	1	G	W	37.08	36.78	1.05	0.555	0.43	0.049	1.97	1.61	0.126	0.045	0.315	0.034	0.08	3.41	0.6	4.09	9824	1.377	28.08162	-26.70462	NAF
NS0066	208	210	NS	E410747	410747	1	G	W	36.99	36.05	1.6	0.478	0.37	0.072	2.02	1.74	0.093	0.108	0.575	0.034	0.12	3.31	0.69	4.12	9806	3.3048	30.34908	-27.04428	NAF
NS0066	226	228	NS	E410756	410756	1	G	W	34.53	40.11	0.92	0.503	0.39	0.041	1.77	1.59	0.07	0.021	0.37	0.015	0.12	3.91	0.71	4.74	9815	0.6426	27.73278	-27.09018	NAF
NS0066	192	194	NS	E410739	410739	1	G	W	37.45	36.96	0.78	0.555	0.43	0.033	1.42	1.61	0.073	0.019	0.491	0.015	0.01	3.59	0.68	4.28	9798	0.5814	28.08162	-27.50022	NAF
NS0066	216	218	NS	E410751	410751	1	G	W	33.91	41.05	0.99	0.503	0.39	0.044	1.73	1.77	0.055	0.068	0.368	0.025	0.15	3.71	0.94	4.8	9810	2.0808	30.87234	-28.79154	NAF
NS0066	214	216	NS	E410750	410750	1	G	W	36.62	36.52	1.15	0.607	0.47	0.052	1.84	1.71	0.068	0.027	0.466	0.025	0.11	3.97	0.93	5.01	9809	0.8262	29.82582	-28.99962	NAF
NS0066	246	248	NS	E410766	410766	1	G	W	35.65	39.43	0.74	0.516	0.4	0.033	1.59	1.76	0.077	0.046	0.365	0.014	0.25	3.03	0.76	4.04	9825	1.4076	30.69792	-29.29032	NAF
NS0066	188	190	NS	E410737	410737	1	G	W	34.92	39.81	0.91	0.555	0.43	0.04	1.55	1.83	0.066	0.076	0.432	0.019	0.08	3.81	0.83	4.72	9796	2.3256	31.91886	-29.59326	NAF
NS0066	194	196	NS	E410740	410740	1	G	W	30.86	44.13	1.3	0.516	0.4	0.057	1.98	1.94	0.075	0.129	0.464	0.041	0.11	3.89	1.01	5.01	9799	3.9474	33.83748	-29.89008	NAF
NS0066	204	206	NS	E410745	410745	1	G	W	34.85	40.23	0.71	0.568	0.44	0.031	1.47	1.78	0.086	0.028	0.499	0.015	0.03	3.35	0.89	4.27	9804	0.8568	31.04676	-30.18996	NAC
NS0066	210	212	NS	E410748	410748	1	G	W	36.08	38.47	0.88	0.503	0.39	0.038	1.51	1.84	0.085	0.051	0.509	0.021	0.02	3.15	1.03	4.2	9807	1.5606	32.09328	-30.53268	NAC
NS0066	190	192	NS	E410738	410738	1	G	W	37.3	36.15	0.84	0.581	0.45	0.043	1.6	1.85	0.061	0.023	0.396	0.026	0.03	3.84	1.02	4.89	9797	0.7038	32.2677	-31.5639	NAC
NS0066	228	230	NS	E410757	410757	1	G	W	35.97	36.58	1.08	0.555	0.43	0.048	1.98	1.91	0.076	0.052	0.548	0.026	0.09	4.02	1.13	5.24	9816	1.5912	33.31422	-31.72302	NAC
NS0066	238	240	NS	E410762	410762	1	G	W	32.63	40.71	1.59	0.516	0.4	0.069	2.14	1.96	0.08	0.079	0.862	0.045	0.15	3.7	1.08	4.93	9821	2.4174	34.18632	-31.76892	NAC
NS0066	218	220	NS	E410752	410752	1	G	W	35.46	38.5	0.76	0.671	0.52	0.034	1.55	1.9	0.094	0.016	0.441	0.023	0.14	4.18	0.87	5.19	9811	0.4896	33.1398	-32.6502	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0066	240	242	NS	E410763	410763	1	G	W	36.92	35.95	0.86	0.607	0.47	0.036	1.88	1.97	0.115	0.038	0.586	0.029	0.01	3.7	1.14	4.85	9822	1.1628	34.36074	-33.19794	NAC
NS0066	174	176	NS	E410730	410730	1	G	W	34.99	37.96	0.86	0.658	0.51	0.038	1.7	1.98	0.076	0.036	0.648	0.049	0.07	4.53	1.13	5.73	9789	1.1016	34.53516	-33.43356	NAC
NS0066	234	236	NS	E410760	410760	1	G	W	35.88	38.01	0.88	0.555	0.43	0.037	1.75	1.99	0.076	0.018	0.555	0.031	0.06	3.3	1.15	4.51	9819	0.5508	34.70958	-34.15878	NAC
NS0066	224	226	NS	E410755	410755	1	G	W	29.59	41.64	2.44	0.542	0.42	0.104	2.4	2.33	0.07	0.203	1.14	0.055	0.27	5.04	1.34	6.65	9814	6.2118	40.63986	-34.42806	NAC
NS0066	242	244	NS	E410764	410764	1	G	W	34.05	37.9	1.38	0.646	0.5	0.062	2.38	2.1	0.204	0.066	0.548	0.051	0.12	4.42	0.99	5.53	9823	2.0196	36.6282	-34.6086	NAC
NS0066	220	222	NS	E410753	410753	1	G	W	33.07	35.86	1.78	0.723	0.56	0.083	2.63	2.25	0.189	0.151	0.548	0.063	0.26	6.7	1.04	8	9812	4.6206	39.2445	-34.6239	NAC
NS0066	230	232	NS	E410758	410758	1	G	W	34.62	39.1	0.8	0.594	0.46	0.034	1.89	2.05	0.072	0.024	0.471	0.024	0.05	3.91	1.34	5.3	9817	0.7344	35.7561	-35.0217	NAC
NS0066	236	238	NS	E410761	410761	1	G	W	35.36	37.17	1.05	0.594	0.46	0.044	1.84	2.37	0.077	0.02	0.717	0.036	0.06	3.3	1.63	4.99	9820	0.612	41.33754	-40.72554	NAC
NS0066	182	184	NS	E410734	410734	1	G	W	35.37	37.95	0.8	0.646	0.5	0.033	1.47	2.37	0.071	0.015	0.637	0.014	0.02	3.33	1.61	4.96	9793	0.459	41.33754	-40.87854	NAC
NS0066	232	234	NS	E410759	410759	1	G	W	29.61	46.58	0.86	0.491	0.38	0.031	1.6	2.58	0.1	0.017	0.554	0.028	0	2.66	1.96	4.62	9818	0.5202	45.00036	-44.48016	NAC
NS0067	228	230	NS	E410883	410883	1	G	W	26.51	37.19	4.93	0.491	0.38	0.219	4.31	0.49	0.058	0.379	0.759	0.01	0.55	11.95	0.77	13.27	9941	11.5974	8.54658	3.05082	PAF(LC)
NS0067	118	120	NS	E410828	410828	1	G	W	20.82	41.38	7.13	0.271	0.21	0.314	2.77	0.59	0.055	0.429	3.15	0.024	0.65	12.18	1.49	14.32	9886	13.1274	10.29078	2.83662	PAF(LC)
NS0067	250	252	NS	E410894	410894	1	G	W	31.42	36.8	3.44	0.503	0.39	0.157	3.33	0.64	0.054	0.412	0.085	0.057	0.52	8.45	0.65	9.62	9952	12.6072	11.16288	1.44432	PAF(LC)
NS0067	40	42	NS	E410788	410788	1	G	W	34.79	38.98	3.9	0.594	0.46	0.189	0.18	0.02	0.109	0.019	0.428	0.003	3.7	1.29	0.3	5.29	9847	0.5814	0.34884	0.23256	PAF(LC)
NS0067	4	6	NS	E410770	410770	1	G	W	36.68	32.3	5.23	-0.0129	-0.01	0.899	0.06	0.03	0.037	0.022	0.023	0.012	7.02	1.37	0.25	8.64	9829	0.6732	0.52326	0.14994	PAF(LC)
NS0067	14	16	NS	E410775	410775	1	G	W	32.04	47.52	2.09	0.194	0.15	0.088	0.1	0.01	0.078	0.008	0.25	0.013	2.74	0.67	0.13	3.54	9834	0.2448	0.17442	0.07038	PAF(LC)
NS0067	46	48	NS	E410791	410791	1	G	W	32.87	46.24	0.91	0.555	0.43	0.044	0.09	0.005	0.077	0.005	0.238	0.008	3.92	0.52	0.17	4.61	9850	0.153	0.08721	0.06579	PAF(LC)
NS0067	54	56	NS	E410795	410795	1	G	W	35.49	43.91	1.08	0.581	0.45	0.05	0.08	0.005	0.075	0.005	0.192	0.004	2.3	0.5	0.17	2.97	9854	0.153	0.08721	0.06579	PAF(LC)
NS0067	64	66	NS	E410800	410800	1	G	W	40.04	37.18	1.46	0.594	0.46	0.071	0.07	0.005	0.089	0.005	0.607	0.014	1.98	0.43	0.15	2.56	9859	0.153	0.08721	0.06579	PAF(LC)
NS0067	38	40	NS	E410787	410787	1	G	W	33.75	39.97	2.65	1.627	1.26	0.118	0.18	0.01	0.117	0.007	0.781	0.017	4.58	0.84	0.38	5.8	9846	0.2142	0.17442	0.03978	PAF(LC)
NS0067	16	18	NS	E410776	410776	1	G	W	34.77	43.1	3.04	0.065	0.05	0.127	0.07	0.005	0.069	0.004	0.281	0.01	2.04	0.92	0.12	3.08	9835	0.1224	0.08721	0.03519	PAF(LC)
NS0067	60	62	NS	E410798	410798	1	G	W	36.15	42.15	1.29	0.284	0.22	0.062	0.08	0.005	0.1	0.004	0.421	0.011	3.04	0.44	0.14	3.62	9857	0.1224	0.08721	0.03519	PAF(LC)
NS0067	52	54	NS	E410794	410794	1	G	W	36.19	42.23	0.85	0.749	0.58	0.039	0.09	0.01	0.09	0.006	0.178	0.008	3.17	0.51	0.17	3.85	9853	0.1836	0.17442	0.00918	PAF(LC)
NS0067	44	46	NS	E410790	410790	1	G	W	25.69	46.15	9.41	0.503	0.39	0.437	0.1	0.02	0.089	0.011	0.451	0.011	2.78	2.76	0.36	5.9	9849	0.3366	0.34884	-0.01224	NAF
NS0067	62	64	NS	E410799	410799	1	G	W	36.4	43.3	0.78	0.865	0.67	0.035	0.07	0.01	0.076	0.005	0.248	0.003	1.84	0.35	0.14	2.33	9858	0.153	0.17442	-0.02142	NAF
NS0067	42	44	NS	E410789	410789	1	G	W	25.72	51.53	4.76	0.633	0.49	0.217	0.13	0.02	0.123	0.01	0.44	0.01	3.14	1.39	0.26	4.79	9848	0.306	0.34884	-0.04284	NAF
NS0067	6	8	NS	E410771	410771	1	G	W	35.54	44.06	1.51	0.232	0.18	0.079	0.08	0.01	0.05	0.004	0.025	0.006	2.47	0.54	0.01	3.02	9830	0.1224	0.17442	-0.05202	NAF
NS0067	12	14	NS	E410774	410774	1	G	W	35.43	43.03	2	0.374	0.29	0.097	0.11	0.01	0.095	0.004	0.195	0.009	2.34	0.67	0.06	3.07	9833	0.1224	0.17442	-0.05202	NAF
NS0067	18	20	NS	E410777	410777	1	G	W	34.85	45.96	1	0.336	0.26	0.047	0.09	0.01	0.074	0.004	0.106	0.011	1.89	0.44	0.11	2.44	9836	0.1224	0.17442	-0.05202	NAF
NS0067	24	26	NS	E410780	410780	1	G	W	36.25	43.27	0.88	0.258	0.2	0.039	0.05	0.01	0.116	0.004	0.097	0.005	2.65	0.47	0.12	3.24	9839	0.1224	0.17442	-0.05202	NAF
NS0067	34	36	NS	E410785	410785	1	G	W	35.52	42.21	1.21	0.491	0.38	0.058	0.1	0.01	0.095	0.004	0.312	0.003	3.61	0.52	0.17	4.3	9844	0.1224	0.17442	-0.05202	NAF
NS0067	36	38	NS	E410786	410786	1	G	W	34.56	43.88	0.58	0.646	0.5	0.026	0.09	0.01	0.09	0.004	0.15	0.009	4.14	0.49	0.15	4.78	9845	0.1224	0.17442	-0.05202	NAF
NS0067	30	32	NS	E410783	410783	1	G	W	38.01	41.49	0.82	0.491	0.38	0.036	0.04	0.005	0.083	0.001	0.081	0.003	1.76	0.41	0.09	2.26	9842	0.0306	0.08721	-0.05661	NAF
NS0067	20	22	NS	E410778	410778	1	G	W	37.8	41.62	0.86	0.439	0.34	0.039	0.09	0.01	0.068	0.003	0.07	0.002	2.07	0.43	0.12	2.62	9837	0.0918	0.17442	-0.08262	NAF
NS0067	22	24	NS	E410779	410779	1	G	W	36.68	42.41	0.94	0.503	0.39	0.041	0.11	0.01	0.087	0.003	0.149	0.003	2.43	0.44	0.13	3	9838	0.0918	0.17442	-0.08262	NAF
NS0067	32	34	NS	E410784	410784	1	G	W	38.28	39.05	0.89	0.491	0.38	0.042	0.09	0.01	0.128	0.003	0.166	0.001	3.66	0.51	0.14	4.31	9843	0.0918	0.17442	-0.08262	NAF
NS0067	50	52	NS	E410793	410793	1	G	W	31.08	49.25	1.14	0.4	0.31	0.053	0.11	0.01	0.073	0.003	0.222	0.004	3.39	0.54	0.16	4.09	9852	0.0918	0.17442	-0.08262	NAF
NS0067	58	60	NS	E410797	410797	1	G	W	34.8	44.05	1.08	1.02	0.79	0.049	0.05	0.01	0.108	0.003	0.354	0.009	2.72	0.45	0.2	3.37	9856	0.0918	0.17442	-0.08262	NAF
NS0067	26	28	NS	E410781	410781	1	G	W	34.83	46.29	0.78	0.284	0.22	0.032	0.03	0.01	0.099	0.002	0.075	0.008	2.19	0.37	0.07	2.63	9840	0.0612	0.17442	-0.11322	NAF
NS0067	28	30	NS	E410782	410782	1	G	W	35.09	46.51	0.69	0.323	0.25	0.032	0.04	0.01	0.076	0.001	0.075	0.007	1.68	0.3	0.03	2.01	9841	0.0306	0.17442	-0.14382	NAF
NS0067	10	12	NS	E410773	410773	1	G	W	35.49	44.9	1.09	0.542	0.42	0.051	0.11	0.02	0.05	0.004	0.074	0.003	1.73	0.44	0.09	2.26	9832	0.1224	0.34884	-0.22644	NAF
NS0067	8	10	NS	E410772	410772	1	G	W	35.65	44.09	1	0.465	0.36	0.045	0.12	0.02	0.07	0.003	0.05	0.008	2.22	0.43	0.06	2.71	9831	0.0918	0.34884	-0.25704	NAF
NS0067	66	68	NS	E410802	410802	1	G	W	35.23	45.42	0.69	0.439	0.34	0.035	0.05	0.02	0.081	0.003	0.266	0.004	2.31	0.33	0.09	2.73	9860	0.0918	0.34884	-0.25704	NAF
NS0067	48	50	NS	E410792	410792	1	G	W	6.14	85.68	2.67	0.503	0.39	0.116	0.08	0.02	0.027	0.001	0.629	0.027	0.55	0.56	0.22	1.33	9851	0.0306	0.34884	-0.31824	NAF
NS0067	56	58	NS	E410796	410796	1	G	W	37.49	37.04	1.55	1.872	1.45	0.067	0.13	0.02	0.107	0.001	0.406	0.007	3.59	0.67	0.29	4.55	9855	0.0306	0.34884	-0.31824	NAF
NS0067	68	70	NS	E410803	410803	1	G	W	38.02	41.49	0.59	0.155	0.12	0.029	0.05	0.02	0.123	0.001	0.199	0.006	2.73	0.35	0.05	3.13	9861	0.0306	0.34884	-0.31824	NAF
NS0067	2	4	NS	E410769	410769	1	G	W	35.09	31.61	8.04	-0.0129	-0.01	1.387	0.11	0.07	0.023	0.019	0.039	0.021	5.95	2.18	0.3	8.43	9828	0.5814	1.22094	-0.63954	NAF
NS0067	0	2	NS	E410768	410768	1	G	W	37.82	23.15	14.28	-0.0129	-0.01	0.981	0.11	0.08	0.016	0.017	0.048	0.028	3.37	3.39	0.34	7.1	9827	0.5202	1.39536	-0.87516	NAF
NS0067	230	232	NS	E410884	410884	1	G	W	28.89	40.99	2.69	0.503	0.39	0.122	3.12	0.43	0.061	0.171	0.05	0.008	0.58	9.6	0.18	10.36	9942	5.2326	7.50006	-2.26746	NAF
NS0067	240	242	NS	E410889	410889	1	G	W	33.08	37.61	1.1	0.71	0.55	0.054	2.26	0.64	0.144	0.225	0.05	0.017	0.61	8.98	0.26	9.85	9947	6.885	11.16288	-4.27788	NAF
NS0067	112	114	NS	E410825	410825	1	G	W	20.43	50.99	2.88	0.4	0.31	0.128	1.92	0.44	0.076	0.094	0.834	0.012	0.63	11.48	0.38	12.49	9883	2.8764	7.67448	-4.79808	NAF
NS0067	236	238	NS	E410887	410887	1	G	W	28.86	42.39	2.05	0.581	0.45	0.098	2.71	0.85	0.167	0.326	0.079	0.029	0.5	8.28	0.54	9.32	9945	9.9756	14.8257	-4.8501	NAF
NS0067	212	214	NS	E410875	410875	1	G	W	30.5	34.2	2.39	0.736	0.57	0.111	3.34	0.7	0.147	0.224	0.407	0.069	0.8	12.77	0.4	13.97	9933	6.8544	12.2094	-5.355	NAF
NS0067	214	216	NS	E410876	410876	1	G	W	28.77	40.7	1.83	0.62	0.48	0.084	2.76	0.79	0.129	0.27	0.267	0.048	0.52	10.05	0.44	11.01	9934	8.262	13.77918	-5.51718	NAF
NS0067	238	240	NS	E410888	410888	1	G	W	35.12	38.74	0.9	0.594	0.46	0.048	1.78	0.44	0.081	0.059	0.026	0.003	0.35	7.09	-0.39	7.05	9946	1.8054	7.67448	-5.86908	NAF
NS0067	262	264	NS	E410900	410900	1	G	W	26.54	46	2.4	0.374	0.29	0.107	2.52	0.66	0.097	0.182	0.094	0.041	0.63	8.38	0.24	9.25	9958	5.5692	11.51172	-5.94252	NAF
NS0067	114	116	NS	E410826	410826	1	G	W	24.28	37.4	4.81	0.478	0.37	0.215	2.72	0.68	0.092	0.192	2.04	0.012	0.74	15.06	0.8	16.6	9884	5.8752	11.86056	-5.98536	NAF
NS0067	184	186	NS	E410861	410861	1	G	W	27.18	36.41	3.34	0.452	0.35	0.151	3.13	0.82	0.107	0.263	0.259	0.048	1.18	14.14	0.71	16.03	9919	8.0478	14.30244	-6.25464	NAF
NS0067	116	118	NS	E410827	410827	1	G	W	25.73	42.45	3.97	0.31	0.24	0.178	2.06	0.53	0.095	0.093	1.27	0.005	1.5	10.04	0.46	12	9885	2.8458	9.24426	-6.39846	NAF
NS0067	166	168	NS	E410852	410852	1	G	W	28.03	34.72	3.3	0.529	0.41	0.142	2.87	0.89	0.136	0.296	0.485	0.075	0.99	14.73	0.73	16.45	9910	9.0576	15.52338	-6.46578	NAF
NS0067	246	248	NS	E410892	410892	1	G	W	31.22	40.21	1.82	0.491	0.38	0.08	2.5	1.12	0.135	0.425	0.061	0.027	0.44	7.33	0.68	8.45	9950	13.005	19.53504	-6.53004	NAF
NS0067	92	94	NS	E410815	410815	1	G	W	29.31	41.84	1.1	0.4	0.31	0.05	2.06	0.58	0.063	0.103	0.211	0.005	0.81	10.4	0.08	11.29	9873	3.1518	10.11636	-6.96456	NAF
NS0067	82	84	NS	E410810	410810	1	G	W	34.91	36.01	0.74	0.633	0.49	0.034	1.51	0.53	0.08	0.059	0.196	0.015	0.83	9.44	0.03	10.3	9868	1.8054	9.24426	-7.43886	NAF
NS0067	202	204	NS	E410870	410870	1	G	W	35.75	29.05	2.28	0.826	0.64	0.099	3.01	0.53	0.024	0.056	0.77	0.042	0.48	11.62	-0.22	11.88	9928	1.7136	9.24426	-7.53066	NAF
NS0067	88	90	NS	E410813	410813	1	G	W	29.71	29.37	2.64	0.71	0.55	0.121	3.38	0.96	0.161	0.299	0.047	0.001	1.3	17.17	0.77	19.24	9871	9.1494	16.74432	-7.59492	NAF
NS0067	90	92	NS	E410814	410814	1	G	W	29.65	39.89	1.33	0.529	0.41	0.062	1.92	0.66	0.073	0.105	0.23	0.01	1.14	11.03	0.19	12.36	9872	3.213	11.51172	-8.29872	NAF
NS0067	98	100	NS	E410818	410818	1	G	W	28.06	41.37	1.75	0.4	0.31	0.083	2.1	0.66	0.079	0.099	0.228	0.008	1.6	11.13	0.15	12.88	9876	3.0294	11.51172	-8.48232	NAF
NS0067	110	112	NS	E410824	410824	1	G	W	22.23	46.61	2.64	0.465	0.36	0.119	2.21	0.6	0.108	0.063	0.66	0.005	0.85	13.25	0.26	14.36	9882	1.9278	10.4652	-8.5374	NAF
NS0067	260	262	NS	E410899	410899	1	G	W	28.43	40.84	2.68	0.426	0.33	0.118	2.91	0.9	0.139	0.214	0.064	0.02	0.66	9.72	0.36	10.74	9957	6.5484	15.6978	-9.1494	NAF
NS0067	244	246	NS	E410891	410891	1	G	W	33.49	40.94	0.94	0.503	0.39	0.045	1.69	0.73	0.122	0.11	0.032	0.008	0.47	6.23	-0.06	6.64	9949	3.366	12.73266	-9.36666	NAF
NS0067	162	164	NS	E410850	410850	1	G	W	25.67	51.71	0.43	0.297	0.23	0.021	1.2	0.55	0.086	0.004	0.083	0.016	0.32	8.28	-0.07	8.53	9908	0.1224	9.5931	-9.4707	NAF
NS0067	278	280	NS	E410909	410909	1	G	W	29.05	41.14	1.95	0.465	0.36	0.09	2.61	0.86	0.088	0.179	0.104	0.042	0.88	9.71	0.29	10.88	9966	5.4774	15.00012	-9.52272	NAF
NS0067	216	218	NS	E410877	410877	1	G	W	30.46	41.64	1.82	0.503	0.39	0.084	2.55	0.74	0.068	0.109	0.098	0.012	0.13	8.57	0.01	8.71	9935	3.3354	12.90708	-9.57168	NAF
NS0067	234	236	NS	E410886	410886	1	G	W	31.66	40.64	1.41	0.529	0.41	0.062	2.3	0.7	0.1	0.079	0.064	0.01	0.56	7.91	-0.11	8.36	9944	2.4174	12.2094	-9.792	NAF
NS0067	126	128	NS	E410832	410832	1	G	W	33.95	35.01	0.86	0.594	0.46	0.041	1.77	0.59	0.076	0.006	0.426	0.009	0.77	11.2	-0.12	11.85	9890	0.1836	10.29078	-10.10718	NAF
NS0067	252	254	NS	E410895	410895	1	G	W	33.72	40.97	0.66	0.568	0.44	0.035	1.6	0.62	0.091	0.014	0.024	0.008	0.45	6.62	-0.36	6.71	9953	0.4284	10.81404	-10.38564	NAF
NS0067	134	136	NS	E410836	410836	1	G	W	31.53	38.4	0.81	0.555	0.43	0.037	1.66	0.61	0.065	0.005	0.289	0.023	1.11	10.9	-0.04	11.97	9894	0.153	10.63962	-10.48662	NAF
NS0067	232	234	NS	E410885	410885	1	G	W	29.45	45.88	1.14	0.478	0.37	0.054	1.96	0.72	0.143	0.061	0.049	0.022	0.4	7.05	-0.21	7.24	9943	1.8666	12.55824	-10.69164	NAF
NS0067	120	122	NS	E410829	410829	1	G	W	33.59	36.39	0.92	0.555	0.43	0.046	1.61	0.64	0.083	0.015	0.515	0.007	0.49	10.34	-0.13	10.7	9887	0.459	11.16288	-10.70388	NAF
NS0067	106	108	NS	E410822	410822	1	G	W	29.54	37.34	2.27	0.503	0.39	0.105	2.37	0.8	0.104	0.101	0.373	0.001	0.98	12.27	0.16	13.41	9880	3.0906	13.9536	-10.863	NAF
NS0067	158	160	NS	E410848	410848	1	G	W	28.61	46.15	0.44	0.336	0.26	0.021	1.46	0.63	0.091	0.004	0.062	0.02	0.68	8.9	-0.05	9.53	9906	0.1224	10.98846	-10.86606	NAF
NS0067	248	250	NS	E410893	410893	1	G	W	34.87	35.63	1.05	0.658	0.51	0.049	2.15	0.71	0.163	0.049	0.066	0.025	0.62	8.93	-0.27	9.28	9951	1.4994	12.38382	-10.88442	NAF
NS0067	148	150	NS	E410843	410843	1	G	W	26.04	39.39	3.68	0.387	0.3	0.163	2.81	0.94	0.188	0.18	0.386	0.007	1.01	12.69	0.48	14.18	9901	5.508	16.39548	-10.88748	NAF
NS0067	182	184	NS	E410860	410860	1	G	W	24.92	46.92	0.83	0.426	0.33	0.038	1.78	0.67	0.07	0.019	0.144	0.038	0.76	12.24	0.04	13.04	9918	0.5814	11.68614	-11.10474	NAF
NS0067	140	142	NS	E410839	410839	1	G	W	33.45	35.97	0.82	0.426	0.33	0.037	2.03	0.67	0.053	0.004	0.222	0.004	0.9	10.95	0	11.85	9897	0.1224	11.68614	-11.56374	NAF
NS0067	102	104	NS	E410820	410820	1	G	W	29.82	40.08	1.52	0.491	0.38	0.066	1.89	0.79	0.116	0.071	0.303	0.004	1.04	10.5	0.09	11.63	9878	2.1726	13.77918	-11.60658	NAF
NS0067	206	208	NS	E410872	410872	1	G	W	24.65	48.79	1.83	0.465	0.36	0.086	2.61	1.23	0.078	0.318	0.061	0.062	0.37	7.88	0.75	9	9930	9.7308	21.45366	-11.72286	NAF
NS0067	160	162	NS	E410849	410849	1	G	W	26.39	49.58	0.41	0.258	0.2	0.019	1.45	0.68	0.086	0.004	0.044	0.028	0.69	8.56	0.05	9.3	9907	0.1224	11.86056	-11.73816	NAF
NS0067	242	244	NS	E410890	410890	1	G	W	35.4	36.52	0.69	0.671	0.52	0.034	1.81	0.72	0.176	0.025	0.034	0.014	0.52	8.32	-0.39	8.45	9948	0.765	12.55824	-11.79324	NAF
NS0067	170	172	NS	E410854	410854	1	G	W	35.5	35.01	0.8	0.568	0.44	0.037	1.54	0.71	0.078	0.018	0.234	0.056	0.85	9.3	-0.17	9.98	9912	0.5508	12.38382	-11.83302	NAF
NS0067	96	98	NS	E410817	410817	1	G	W	30.41	40.99	0.76	0.426	0.33	0.035	1.71	0.72	0.062	0.023	0.14	0.0005	0.82	10.32	0.04	11.18	9875	0.7038	12.55824	-11.85444	NAF
NS0067	144	146	NS	E410841	410841	1	G	W	28.19	41.66	1.49	0.542	0.42	0.066	1.96	0.81	0.123	0.073	0.548	0.001	0.63	11.49	0.11	12.23	9899	2.2338	14.12802	-11.89422	NAF
NS0067	254	256	NS	E410896	410896	1	G	W	32.79	40.43	0.98	0.516	0.4	0.047	1.93	0.75	0.115	0.035	0.048	0.025	0.48	7.58	-0.22	7.84	9954	1.071	13.0815	-12.0105	NAF
NS0067	94	96	NS	E410816	410816	1	G	W	30	40.61	0.73	0.387	0.3	0.033	1.83	0.77	0.071	0.04	0.116	0.003	1.2	10.83	0	12.03	9874	1.224	13.43034	-12.20634	NAF
NS0067	132	134	NS	E410835	410835	1	G	W	33.24	35.23	0.97	0.594	0.46	0.048	1.78	0.71	0.098	0.004	0.39	0.024	0.74	11.57	-0.05	12.26	9893	0.1224	12.38382	-12.26142	NAF
NS0067	76	78	NS	E410807	410807	1	G	W	32.57	36.25	0.79	0.555	0.43	0.038	1.85	0.74	0.07	0.021	0.266	0.004	0.7	11.83	0.16	12.69	9865	0.6426	12.90708	-12.26448	NAF
NS0067	74	76	NS	E410806	410806	1	G	W	33.59	34.25	1.02	0.529	0.41	0.048	1.97	0.76	0.083	0.032	0.434	0.004	0.64	11.65	0.16	12.45	9864	0.9792	13.25592	-12.27672	NAF
NS0067	70	72	NS	E410804	410804	1	G	W	33.51	35.71	0.86	0.555	0.43	0.04	1.73	0.72	0.095	0.005	0.352	0.016	0.64	10.89	0.1	11.63	9862	0.153	12.55824	-12.40524	NAF
NS0067	190	192	NS	E410864	410864	1	G	W	33.74	37.31	0.59	0.594	0.46	0.027	1.7	0.76	0.078	0.026	0.208	0.053	0.6	9.45	-0.08	9.97	9922	0.7956	13.25592	-12.46032	NAF
NS0067	100	102	NS	E410819	410819	1	G	W	29.08	38.4	1.65	0.503	0.39	0.071	2.15	0.78	0.1	0.036	0.432	0.005	1.22	12.6	0.08	13.9	9877	1.1016	13.60476	-12.50316	NAF
NS0067	266	268	NS	E410903	410903	1	G	W	30.77	37.81	1.07	0.542	0.42	0.046	2.44	0.88	0.144	0.091	0.097	0.032	0.58	11.88	-0.04	12.42	9960	2.7846	15.34896	-12.56436	NAF
NS0067	124	126	NS	E410831	410831	1	G	W	31.31	36.18	1.23	0.491	0.38	0.055	2.2	0.73	0.072	0.005	0.532	0.043	0.63	12.53	0.12	13.28	9889	0.153	12.73266	-12.57966	NAF
NS0067	156	158	NS	E410847	410847	1	G	W	31.99	37.21	0.62	0.452	0.35	0.029	1.99	0.75	0.079	0.006	0.085	0.011	0.6	12.1	0.04	12.74	9905	0.1836	13.0815	-12.8979	NAF
NS0067	200	202	NS	E410869	410869	1	G	W	33.72	30.25	1.88	0.775	0.6	0.087	3.15	0.92	0.095	0.096	0.571	0.052	0.52	12.87	0.02	13.41	9927	2.9376	16.04664	-13.10904	NAF
NS0067	150	152	NS	E410844	410844	1	G	W	23.97	45.19	1.39	0.491	0.38	0.062	2.39	0.85	0.134	0.054	0.082	0.006	1.13	13.47	0.1	14.7	9902	1.6524	14.8257	-13.1733	NAF
NS0067	72	74	NS	E410805	410805	1	G	W	28.32	35.81	3.04	0.387	0.3	0.137	2.46	0.97	0.113	0.12	1.32	0.034	0.69	13.41	0.53	14.63	9863	3.672	16.91874	-13.24674	NAF
NS0067	180	182	NS	E410859	410859	1	G	W	30.3	37.05	1.17	0.568	0.44	0.051	2.1	0.91	0.086	0.085	0.325	0.058	0.44	13.53	0.17	14.14	9917	2.601	15.87222	-13.27122	NAF
NS0067	138	140	NS	E410838	410838	1	G	W	27.89	40.47	1.65	0.516	0.4	0.075	2.16	0.88	0.13	0.064	0.554	0.021	0.72	12.57	0.14	13.43	9896	1.9584	15.34896	-13.39056	NAF
NS0067	108	110	NS	E410823	410823	1	G	W	32.56	31.2	1.29	0.71	0.55	0.058	2.23	0.79	0.107	0.007	0.453	0.002	0.78	15.47	-0.04	16.21	9881	0.2142	13.77918	-13.56498	NAF
NS0067	104	106	NS	E410821	410821	1	G	W	31.8	35.15	0.95	0.529	0.41	0.042	2.23	0.81	0.082	0.012	0.295	0.0005	1.17	12.75	0.05	13.97	9879	0.3672	14.12802	-13.76082	NAF
NS0067	136	138	NS	E410837	410837	1	G	W	30.6	33.21	1.39	0.646	0.5	0.058	2.47	0.85	0.13	0.029	0.393	0.124	1.12	15.5	0.08	16.7	9895	0.8874	14.8257	-13.9383	NAF
NS0067	122	124	NS	E410830	410830	1	G	W	31.42	33.63	1.37	0.594	0.46	0.066	2.34	0.82	0.104	0.01	0.668	0.03	1.02	14.01	0.04	15.07	9888	0.306	14.30244	-13.99644	NAF
NS0067	84	86	NS	E410811	410811	1	G	W	34.61	35.64	0.95	0.555	0.43	0.047	1.54	0.88	0.129	0.04	0.229	0.029	1	9.06	0.11	10.17	9869	1.224	15.34896	-14.12496	NAF
NS0067	194	196	NS	E410866	410866	1	G	W	34.32	37.74	0.63	0.555	0.43	0.03	1.74	0.86	0.118	0.015	0.203	0.084	0.44	8.06	-0.14	8.36	9924	0.459	15.00012	-14.54112	NAF
NS0067	80	82	NS	E410809	410809	1	G	W	34.62	35.61	0.8	0.646	0.5	0.037	1.5	0.87	0.106	0.02	0.274	0.008	0.7	9.54	0.08	10.32	9867	0.612	15.17454	-14.56254	NAF
NS0067	172	174	NS	E410855	410855	1	G	W	29.62	40.22	1.08	0.555	0.43	0.047	1.82	0.99	0.129	0.087	0.289	0.07	0.84	11.15	0.17	12.16	9913	2.6622	17.26758	-14.60538	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0067	192	194	NS	E410865	410865	1	G	W	34.51	38.16	0.71	0.581	0.45	0.038	1.63	0.91	0.092	0.036	0.278	0.071	0.46	7.74	-0.1	8.1	9923	1.1016	15.87222	-14.77062	NAF
NS0067	78	80	NS	E410808	410808	1	G	W	32.28	38.94	0.75	0.555	0.43	0.038	1.45	0.91	0.094	0.023	0.255	0.013	0.71	9.72	0.21	10.64	9866	0.7038	15.87222	-15.16842	NAF
NS0067	152	154	NS	E410845	410845	1	G	W	25.86	40.03	2.14	0.426	0.33	0.093	2.8	1.02	0.17	0.073	0.074	0.006	1.03	14.5	0.13	15.66	9903	2.2338	17.79084	-15.55704	NAF
NS0067	268	270	NS	E410904	410904	1	G	W	32.11	40.39	1.27	0.529	0.41	0.058	2.04	1.05	0.114	0.08	0.105	0.045	0.44	7.51	0.04	7.99	9961	2.448	18.3141	-15.8661	NAF
NS0067	146	148	NS	E410842	410842	1	G	W	28.56	37.16	1.6	0.581	0.45	0.072	2.29	0.96	0.166	0.025	0.522	0.011	0.8	14.45	0.1	15.35	9900	0.765	16.74432	-15.97932	NAF
NS0067	178	180	NS	E410858	410858	1	G	W	30.56	41.03	0.86	0.503	0.39	0.039	1.59	0.96	0.102	0.019	0.286	0.034	0.61	9.91	0.1	10.62	9916	0.5814	16.74432	-16.16292	NAF
NS0067	168	170	NS	E410853	410853	1	G	W	26.75	43.36	0.95	0.465	0.36	0.038	1.57	1.03	0.155	0.056	0.259	0.039	1.77	11.68	0.16	13.61	9911	1.7136	17.96526	-16.25166	NAF
NS0067	142	144	NS	E410840	410840	1	G	W	27.67	40.71	1.2	0.503	0.39	0.054	2.2	0.96	0.123	0.012	0.405	0.021	0.86	12.94	0.18	13.98	9898	0.3672	16.74432	-16.37712	NAF
NS0067	188	190	NS	E410863	410863	1	G	W	27.72	42.15	1.38	0.503	0.39	0.065	2.4	1.21	0.082	0.147	0.175	0.053	0.77	10.85	0.44	12.06	9921	4.4982	21.10482	-16.60662	NAF
NS0067	210	212	NS	E410874	410874	1	G	W	28.62	45.62	1.43	0.503	0.39	0.07	2.04	1.18	0.126	0.126	0.153	0.098	0.39	6.89	0.31	7.59	9932	3.8556	20.58156	-16.72596	NAF
NS0067	198	200	NS	E410868	410868	1	G	W	36.46	35.59	0.55	0.516	0.4	0.026	1.63	0.98	0.077	0.011	0.078	0.095	0.36	7.64	0.03	8.03	9926	0.3366	17.09316	-16.75656	NAF
NS0067	204	206	NS	E410871	410871	1	G	W	32.23	36.41	2.04	0.646	0.5	0.093	2.64	1.1	0.047	0.075	0.508	0.091	0.52	9.07	0.31	9.9	9929	2.295	19.1862	-16.8912	NAF
NS0067	276	278	NS	E410908	410908	1	G	W	32.41	39.16	1.68	0.465	0.36	0.078	2.28	1.15	0.152	0.103	0.162	0.075	0.79	7.03	0.21	8.03	9965	3.1518	20.0583	-16.9065	NAF
NS0067	174	176	NS	E410856	410856	1	G	W	30.87	37.92	1.21	0.555	0.43	0.052	1.77	1.05	0.168	0.034	0.386	0.12	0.84	11.08	0.05	11.97	9914	1.0404	18.3141	-17.2737	NAF
NS0067	274	276	NS	E410907	410907	1	G	W	32.62	36.2	2.71	0.503	0.39	0.125	2.98	1.3	0.209	0.173	0.244	0.121	0.62	7.61	0.3	8.53	9964	5.2938	22.6746	-17.3808	NAF
NS0067	154	156	NS	E410846	410846	1	G	W	26.29	43.25	0.73	0.4	0.31	0.033	2.24	1.04	0.116	0.012	0.085	0.004	0.92	12.96	0.26	14.14	9904	0.3672	18.13968	-17.77248	NAF
NS0067	270	272	NS	E410905	410905	1	G	W	34.43	37.31	1.47	0.555	0.43	0.069	2.19	1.14	0.096	0.068	0.135	0.058	0.51	6.77	0.15	7.43	9962	2.0808	19.88388	-17.80308	NAF
NS0067	186	188	NS	E410862	410862	1	G	W	30.08	26.49	3.01	0.723	0.56	0.131	3.95	1.33	0.243	0.171	0.473	0.13	0.85	18.55	0.44	19.84	9920	5.2326	23.19786	-17.96526	NAF
NS0067	208	210	NS	E410873	410873	1	G	W	28.25	45.86	1.14	0.491	0.38	0.06	2.15	1.18	0.108	0.082	0.081	0.116	0.56	7.28	0.26	8.1	9931	2.5092	20.58156	-18.07236	NAF
NS0067	280	282	NS	E410910	410910	1	G	W	30.09	32.62	1.47	0.646	0.5	0.064	3.06	1.32	0.159	0.154	0.188	0.078	0.95	15.68	0.26	16.89	9967	4.7124	23.02344	-18.31104	NAF
NS0067	226	228	NS	E410882	410882	1	G	W	28.68	49.57	0.6	0.439	0.34	0.031	1.49	1.11	0.056	0.022	0.047	0.007	0.1	4.92	0.44	5.46	9940	0.6732	19.36062	-18.68742	NAF
NS0067	264	266	NS	E410902	410902	1	G	W	30.76	32.43	1.22	0.62	0.48	0.054	2.81	1.23	0.137	0.084	0.114	0.041	1.32	15.23	0.18	16.73	9959	2.5704	21.45366	-18.88326	NAF
NS0067	176	178	NS	E410857	410857	1	G	W	30.28	40.66	0.77	0.491	0.38	0.036	1.66	1.13	0.118	0.011	0.248	0.048	0.84	9.95	0.22	11.01	9915	0.3366	19.70946	-19.37286	NAF
NS0067	258	260	NS	E410898	410898	1	G	W	31.46	46.04	0.53	0.361	0.28	0.024	1.38	1.14	0.063	0.015	0.017	0.002	0.19	5.05	0.33	5.57	9956	0.459	19.88388	-19.42488	NAF
NS0067	130	132	NS	E410834	410834	1	G	W	23.81	44.74	1.44	0.478	0.37	0.064	2.27	1.17	0.19	0.01	0.43	0.038	0.82	13.7	0.27	14.79	9892	0.306	20.40714	-20.10114	NAF
NS0067	256	258	NS	E410897	410897	1	G	W	26.99	52.38	0.45	0.336	0.26	0.021	1.32	1.19	0.075	0.01	0.02	0.013	0.13	4.53	0.47	5.13	9955	0.306	20.75598	-20.44998	NAF
NS0067	86	88	NS	E410812	410812	1	G	W	28.97	39.14	1.3	0.529	0.41	0.061	2.63	1.47	0.065	0.136	0.142	0.02	0.63	11.62	0.68	12.93	9870	4.1616	25.63974	-21.47814	NAF
NS0067	164	166	NS	E410851	410851	1	G	W	32.22	36.88	0.71	0.439	0.34	0.035	1.91	1.37	0.141	0.029	0.135	0.012	0.8	10.78	0.42	12	9909	0.8874	23.89554	-23.00814	NAF
NS0067	196	198	NS	E410867	410867	1	G	W	33.85	33.45	0.66	0.542	0.42	0.028	2.25	1.42	0.092	0.055	0.164	0.12	0.64	11.42	0.47	12.53	9925	1.683	24.76764	-23.08464	NAF
NS0067	128	130	NS	E410833	410833	1	G	W	28.92	30.39	2	0.646	0.5	0.088	2.98	1.43	0.243	0.005	0.643	0.127	0.99	18.07	0.3	19.36	9891	0.153	24.94206	-24.78906	NAF
NS0067	220	222	NS	E410879	410879	1	G	W	26.87	49.68	1.24	0.465	0.36	0.06	1.96	1.69	0.084	0.117	0.037	0.007	0.11	5.03	0.99	6.13	9937	3.5802	29.47698	-25.89678	NAF
NS0067	222	224	NS	E410880	410880	1	G	W	26.66	51.84	0.58	0.413	0.32	0.032	1.53	1.6	0.043	0.025	0.037	0.004	0.16	4.34	1	5.5	9938	0.765	27.9072	-27.1422	NAF
NS0067	224	226	NS	E410881	410881	1	G	W	27.62	51.17	0.52	0.413	0.32	0.026	1.43	1.58	0.034	0.012	0.041	0.009	0.1	3.93	1	5.03	9939	0.3672	27.55836	-27.19116	NAF
NS0067	218	220	NS	E410878	410878	1	G	W	25.84	53.95	0.66	0.4	0.31	0.034	1.4	1.65	0.042	0.035	0.039	0.009	0.13	3.61	1.12	4.86	9936	1.071	28.7793	-27.7083	NAF
NS0067	272	274	NS	E410906	410906	1	G	W	33.04	35.71	2.59	0.452	0.35	0.121	2.96	2.02	0.254	0.112	0.213	0.104	0.46	6.66	0.69	7.81	9963	3.4272	35.23284	-31.80564	NAC
NS0068	136	138	NS	E410979	410979	1	G	W	23.97	42.62	5.76	0.71	0.55	0.252	3.08	1	0.107	1.25	4.45	0.14	0.31	5.01	1.86	7.18	10036	38.25	17.442	20.808	PAF(HC)
NS0068	0	2	NS	E410911	410911	1	G	W	33.77	40.15	4.11	0.103	0.08	0.2	0.31	0.12	0.052	0.018	0.12	0.056	4.74	1.23	0.19	6.16	9968	0.5508	2.09304	-1.54224	NAF
NS0068	2	4	NS	E410912	410912	1	G	W	29.28	48.06	2.79	0.09	0.07	0.145	0.29	0.13	0.04	0.013	0.141	0.052	4.67	1.09	0.18	5.94	9969	0.3978	2.26746	-1.86966	NAF
NS0068	32	34	NS	E410927	410927	1	G	W	34.61	41.54	2.33	0.594	0.46	0.103	0.43	0.17	0.046	0.0005	0.559	0.029	3.5	0.82	0.02	4.34	9984	0.0153	2.96514	-2.94984	NAF
NS0068	50	52	NS	E410936	410936	1	G	W	33.43	43.04	2.35	0.297	0.23	0.109	0.45	0.17	0.04	0.0005	0.561	0.018	3.82	0.87	0.1	4.79	9993	0.0153	2.96514	-2.94984	NAF
NS0068	20	22	NS	E410921	410921	1	G	W	36.01	41.76	1.76	0.103	0.08	0.089	0.31	0.18	0.067	0.005	0.134	0.047	2.98	0.7	0	3.68	9978	0.153	3.13956	-2.98656	NAF
NS0068	14	16	NS	E410918	410918	1	G	W	34.02	44.23	2.01	0.052	0.04	0.088	0.3	0.2	0.064	0.008	0.095	0.064	3.27	0.81	0.04	4.12	9975	0.2448	3.4884	-3.2436	NAF
NS0068	16	18	NS	E410919	410919	1	G	W	33.14	45.25	1.97	0.116	0.09	0.106	0.38	0.2	0.044	0.008	0.158	0.057	3.2	0.77	-0.01	3.96	9976	0.2448	3.4884	-3.2436	NAF
NS0068	28	30	NS	E410925	410925	1	G	W	26.64	53.93	2.41	0.297	0.23	0.099	0.42	0.19	0.038	0.001	0.429	0.029	2.88	0.89	0.05	3.82	9982	0.0306	3.31398	-3.28338	NAF
NS0068	18	20	NS	E410920	410920	1	G	W	35.06	41.82	2.34	0.077	0.06	0.121	0.35	0.21	0.061	0.008	0.153	0.055	3.4	0.89	0	4.29	9977	0.2448	3.66282	-3.41802	NAF
NS0068	4	6	NS	E410913	410913	1	G	W	22.96	56.69	3.41	0.09	0.07	0.279	0.32	0.23	0.051	0.019	0.11	0.061	4.14	1.23	0.22	5.59	9970	0.5814	4.01166	-3.43026	NAF
NS0068	40	42	NS	E410931	410931	1	G	W	33.04	44.4	1.94	0.942	0.73	0.091	0.43	0.2	0.037	0.0005	0.319	0.025	3.15	0.86	0.15	4.16	9988	0.0153	3.4884	-3.4731	NAF
NS0068	30	32	NS	E410926	410926	1	G	W	33.22	42.73	2.84	0.788	0.61	0.13	0.5	0.21	0.043	0.0005	0.654	0.033	3.32	1.02	0.11	4.45	9983	0.0153	3.66282	-3.64752	NAF
NS0068	46	48	NS	E410934	410934	1	G	W	32.44	40.83	3.58	0.917	0.71	0.165	0.72	0.21	0.053	0.0005	0.975	0.036	4.32	1.24	0.16	5.72	9991	0.0153	3.66282	-3.64752	NAF
NS0068	24	26	NS	E410923	410923	1	G	W	33.86	41.81	3.15	0.077	0.06	0.162	0.42	0.23	0.072	0.003	0.5	0.045	3.79	1.08	0.09	4.96	9980	0.0918	4.01166	-3.91986	NAF
NS0068	10	12	NS	E410916	410916	1	G	W	27.32	47.65	5.04	0.026	0.02	0.259	0.32	0.25	0.061	0.011	0.179	0.104	4.93	1.69	0.21	6.83	9973	0.3366	4.3605	-4.0239	NAF
NS0068	58	60	NS	E410940	410940	1	G	W	29.94	42.19	3.19	0.439	0.34	0.151	1.57	0.48	0.071	0.142	1.19	0.071	1.19	6.32	0.11	7.62	9997	4.3452	8.37216	-4.02696	NAF
NS0068	48	50	NS	E410935	410935	1	G	W	33.02	41.39	3.27	0.503	0.39	0.153	0.72	0.24	0.043	0.0005	0.648	0.028	3.98	1.18	0.16	5.32	9992	0.0153	4.18608	-4.17078	NAF
NS0068	52	54	NS	E410937	410937	1	G	W	27.91	43.06	5.74	0.555	0.43	0.265	0.86	0.24	0.086	0.0005	1.93	0.044	4.9	1.64	0.21	6.75	9994	0.0153	4.18608	-4.17078	NAF
NS0068	22	24	NS	E410922	410922	1	G	W	34.88	41.83	2.37	0.09	0.07	0.128	0.5	0.25	0.07	0.004	0.153	0.056	3.35	0.99	0.05	4.39	9979	0.1224	4.3605	-4.2381	NAF
NS0068	12	14	NS	E410917	410917	1	G	W	32.69	44.33	2.72	0.039	0.03	0.148	0.38	0.27	0.06	0.008	0.343	0.092	3.56	1.02	0.08	4.66	9974	0.2448	4.70934	-4.46454	NAF
NS0068	34	36	NS	E410928	410928	1	G	W	33.9	41.06	3.15	0.542	0.42	0.144	0.63	0.26	0.047	0.0005	0.753	0.041	3.3	1.13	0.05	4.48	9985	0.0153	4.53492	-4.51962	NAF
NS0068	26	28	NS	E410924	410924	1	G	W	32.63	44.34	2.62	0.077	0.06	0.125	0.47	0.28	0.056	0.001	0.294	0.041	3.46	1.05	0.04	4.55	9981	0.0306	4.88376	-4.85316	NAF
NS0068	42	44	NS	E410932	410932	1	G	W	28.81	45.47	4.35	0.568	0.44	0.201	0.81	0.31	0.041	0.0005	1.47	0.033	3.64	1.3	0.17	5.11	9989	0.0153	5.40702	-5.39172	NAF
NS0068	38	40	NS	E410930	410930	1	G	W	31.96	42.31	3.73	0.697	0.54	0.177	0.69	0.32	0.059	0.0005	0.942	0.035	3.58	1.3	0.16	5.04	9987	0.0153	5.58144	-5.56614	NAF
NS0068	36	38	NS	E410929	410929	1	G	W	28.81	44.77	4.83	0.581	0.45	0.221	0.84	0.34	0.054	0.0005	1.55	0.039	3.7	1.51	0.13	5.34	9986	0.0153	5.93028	-5.91498	NAF
NS0068	54	56	NS	E410938	410938	1	G	W	27.91	44.96	4.79	0.878	0.68	0.223	0.93	0.34	0.076	0.0005	1.46	0.041	4.2	1.46	0.21	5.87	9995	0.0153	5.93028	-5.91498	NAF
NS0068	56	58	NS	E410939	410939	1	G	W	28.47	45.64	4.4	0.374	0.29	0.2	0.98	0.38	0.068	0.002	1.2	0.03	4.02	1.48	0.16	5.66	9996	0.0612	6.62796	-6.56676	NAF
NS0068	144	146	NS	E410983	410983	1	G	W	32.94	40.81	2.25	0.646	0.5	0.099	2.2	0.58	0.103	0.106	1.81	0.047	0.01	4.08	-0.15	3.94	10040	3.2436	10.11636	-6.87276	NAF
NS0068	44	46	NS	E410933	410933	1	G	W	22.08	49.6	7.21	0.336	0.26	0.333	1.27	0.43	0.039	0.0005	2.76	0.071	3.95	1.93	0.21	6.09	9990	0.0153	7.50006	-7.48476	NAF
NS0068	8	10	NS	E410915	410915	1	G	W	24.41	51.52	4.85	0.052	0.04	0.25	0.62	0.48	0.051	0.009	0.252	0.11	4.64	1.86	0.23	6.73	9972	0.2754	8.37216	-8.09676	NAF
NS0068	6	8	NS	E410914	410914	1	G	W	22.23	52.04	6.5	0.065	0.05	0.362	0.85	0.52	0.041	0.013	0.774	0.105	4.01	2.21	0.25	6.47	9971	0.3978	9.06984	-8.67204	NAF
NS0068	60	62	NS	E410941	410941	1	G	W	34.13	37.81	2.31	0.478	0.37	0.109	1.51	0.62	0.101	0.059	0.737	0.064	0.7	6.39	-0.18	6.91	9998	1.8054	10.81404	-9.00864	NAF
NS0068	250	252	NS	E411037	411037	1	G	W	33.66	37.58	2.9	0.71	0.55	0.128	2.45	0.95	0.047	0.198	1.87	0.087	0.15	4.44	0.22	4.81	10093	6.0588	16.5699	-10.5111	NAF
NS0068	142	144	NS	E410982	410982	1	G	W	30	41.14	2.84	0.646	0.5	0.13	2.96	1.07	0.181	0.262	2.14	0.089	0.15	5.04	0.37	5.56	10039	8.0172	18.66294	-10.64574	NAF
NS0068	256	258	NS	E411040	411040	1	G	W	29.58	39.11	2.82	0.93	0.72	0.119	3.02	1.29	0.147	0.357	1.82	0.141	0.37	6.76	0.61	7.74	10096	10.9242	22.50018	-11.57598	NAF
NS0068	206	208	NS	E411015	411015	1	G	W	33.06	36.82	3.06	0.671	0.52	0.143	2.84	1.51	0.173	0.409	1.97	0.12	0.22	3.99	0.58	4.79	10071	12.5154	26.33742	-13.82202	NAF
NS0068	110	112	NS	E410966	410966	1	G	W	31.45	39.33	2.37	0.749	0.58	0.114	2.36	2.3	0.406	0.791	1.98	0.055	0.02	3.57	0.87	4.46	10023	24.2046	40.1166	-15.912	NAF
NS0068	258	260	NS	E411041	411041	1	G	W	28.64	40.88	3.9	0.646	0.5	0.17	3.2	1.55	0.094	0.355	2.44	0.139	0.28	4.57	0.89	5.74	10097	10.863	27.0351	-16.1721	NAF
NS0068	176	178	NS	E410999	410999	1	G	W	34.07	40.52	1.65	0.736	0.57	0.073	1.89	1.09	0.145	0.088	1.33	0.084	-0.01	3.37	0.07	3.43	10056	2.6928	19.01178	-16.31898	NAF
NS0068	180	182	NS	E411002	411002	1	G	W	37.44	38.18	1.16	0.684	0.53	0.06	1.62	1.05	0.094	0.049	0.936	0.057	-0.06	2.69	0.14	2.77	10058	1.4994	18.3141	-16.8147	NAF
NS0068	246	248	NS	E411035	411035	1	G	W	35.53	39.54	1.4	0.633	0.49	0.06	1.62	1.01	0.037	0.026	0.892	0.052	0.04	3.39	0.28	3.71	10091	0.7956	17.61642	-16.82082	NAF
NS0068	262	264	NS	E411043	411043	1	G	W	24.07	50.3	1.75	0.891	0.69	0.075	2.44	1.88	0.06	0.484	1.2	0.081	0.23	5.18	1.16	6.57	10099	14.8104	32.79096	-17.98056	NAF
NS0068	228	230	NS	E411026	411026	1	G	W	36.36	34.63	1.95	0.942	0.73	0.08	2.15	1.11	0.097	0.036	1.54	0.054	0.08	4.6	0.21	4.89	10082	1.1016	19.36062	-18.25902	NAF
NS0068	252	254	NS	E411038	411038	1	G	W	35.2	36.84	2.51	0.646	0.5	0.107	2.03	1.3	0.066	0.136	1.78	0.072	0.09	3.57	0.38	4.04	10094	4.1616	22.6746	-18.513	NAF
NS0068	212	214	NS	E411018	411018	1	G	W	32.1	40.34	2.03	0.646	0.5	0.093	2.35	1.41	0.077	0.173	1.42	0.095	0.22	4.16	0.67	5.05	10074	5.2938	24.59322	-19.29942	NAF
NS0068	80	82	NS	E410951	410951	1	G	W	34.75	38.87	1.5	0.62	0.48	0.072	1.62	1.16	0.081	0.03	1.13	0.034	0.16	4.47	0.3	4.93	10008	0.918	20.23272	-19.31472	NAF
NS0068	154	156	NS	E410988	410988	1	G	W	36.75	36.58	1.37	0.749	0.58	0.064	2.04	1.16	0.089	0.028	1.14	0.032	-0.01	3.62	0.38	3.99	10045	0.8568	20.23272	-19.37592	NAF
NS0068	82	84	NS	E410952	410952	1	G	W	32.95	40.9	1.47	0.607	0.47	0.068	1.76	1.2	0.105	0.043	1.07	0.044	0.2	4.58	0.28	5.06	10009	1.3158	20.9304	-19.6146	NAF
NS0068	208	210	NS	E411016	411016	1	G	W	35.22	37.27	1.85	0.62	0.48	0.085	2.29	1.27	0.125	0.067	1.27	0.09	0.15	3.92	0.36	4.43	10072	2.0502	22.15134	-20.10114	NAF
NS0068	168	170	NS	E410995	410995	1	G	W	40.58	33.9	1.09	0.775	0.6	0.044	1.48	1.19	0.1	0.016	0.934	0.02	-0.09	2.52	0.2	2.63	10052	0.4896	20.75598	-20.26638	NAF
NS0068	68	70	NS	E410945	410945	1	G	W	31.39	39.72	2.96	0.465	0.36	0.141	2.33	1.54	0.081	0.214	1.69	0.094	0.56	4.46	0.78	5.8	10002	6.5484	26.86068	-20.31228	NAF
NS0068	178	180	NS	E411000	411000	1	G	W	33.03	43.43	0.91	0.736	0.57	0.045	1.67	1.25	0.111	0.045	0.707	0.063	-0.05	2.98	0.36	3.29	10057	1.377	21.8025	-20.4255	NAF
NS0068	126	128	NS	E410974	410974	1	G	W	35.12	37.58	1.53	0.658	0.51	0.061	2.23	1.24	0.097	0.039	0.995	0.061	0.17	4.39	0.41	4.97	10031	1.1934	21.62808	-20.43468	NAF
NS0068	166	168	NS	E410994	410994	1	G	W	36.91	37.82	1.02	0.865	0.67	0.044	1.59	1.21	0.095	0.014	0.87	0.019	-0.03	3.09	0.3	3.36	10051	0.4284	21.10482	-20.67642	NAF
NS0068	234	236	NS	E411029	411029	1	G	W	37.31	36.58	1.43	0.671	0.52	0.063	1.74	1.25	0.042	0.026	1.01	0.053	0.03	3.14	0.41	3.58	10085	0.7956	21.8025	-21.0069	NAF
NS0068	170	172	NS	E410996	410996	1	G	W	34.53	41.38	0.98	0.788	0.61	0.04	1.55	1.23	0.07	0.013	0.831	0.031	-0.04	2.88	0.46	3.3	10053	0.3978	21.45366	-21.05586	NAF
NS0068	108	110	NS	E410965	410965	1	G	W	33.9	41.16	1.15	0.788	0.61	0.049	1.77	1.46	0.129	0.129	0.953	0.028	-0.03	3.36	0.41	3.74	10022	3.9474	25.46532	-21.51792	NAF
NS0068	100	102	NS	E410961	410961	1	G	W	34.19	41.34	1.27	0.671	0.52	0.056	1.7	1.27	0.112	0.02	1.06	0.025	-0.06	2.96	0.39	3.29	10018	0.612	22.15134	-21.53934	NAF
NS0068	172	174	NS	E410997	410997	1	G	W	38.12	35.14	1.28	0.839	0.65	0.055	1.8	1.3	0.096	0.035	1.09	0.026	-0.06	3.27	0.39	3.6	10054	1.071	22.6746	-21.6036	NAF
NS0068	146	148	NS	E410984	410984	1	G	W	32.25	40.75	2.38	0.646	0.5	0.128	2.14	1.43	0.153	0.109	1.96	0.048	0	3.48	0.44	3.92	10041	3.3354	24.94206	-21.60666	NAF
NS0068	124	126	NS	E410973	410973	1	G	W	37.54	36.05	1.18	0.723	0.56	0.056	1.88	1.32	0.096	0.038	0.889	0.04	0.04	3.38	0.41	3.83	10030	1.1628	23.02344	-21.86064	NAF
NS0068	174	176	NS	E410998	410998	1	G	W	38.42	34.74	1.29	0.8	0.62	0.053	1.73	1.32	0.091	0.027	1.1	0.024	-0.05	3.07	0.42	3.44	10055	0.8262	23.02344	-22.19724	NAF
NS0068	158	160	NS	E410990	410990	1	G	W	35.89	38.24	1.16	0.775	0.6	0.051	1.77	1.32	0.093	0.026	0.991	0.026	-0.05	3.24	0.52	3.71	10047	0.7956	23.02344	-22.22784	NAF
NS0068	280	282	NS	E411052	411052	1	G	W	36.11	37.71	1.26	0.775	0.6	0.057	1.75	1.35	0.076	0.042	0.623	0.045	0.15	3.81	0.47	4.43	10108	1.2852	23.5467	-22.2615	NAF
NS0068	66	68	NS	E410944	410944	1	G	W	33.3	39.54	1.77	0.555	0.43	0.084	1.72	1.36	0.065	0.042	0.972	0.063	0.42	4.97	0.58	5.97	10001	1.2852	23.72112	-22.43592	NAF
NS0068	76	78	NS	E410949	410949	1	G	W	33.53	39.07	1.96	0.568	0.44	0.088	1.88	1.39	0.103	0.045	1.3	0.051	0.36	4.35	0.47	5.18	10006	1.377	24.24438	-22.86738	NAF
NS0068	130	132	NS	E410976	410976	1	G	W	33.36	38.51	2.1	0.646	0.5	0.095	2.58	1.5	0.151	0.101	1.24	0.082	0.19	4.07	0.51	4.77	10033	3.0906	26.163	-23.0724	NAF
NS0068	214	216	NS	E411019	411019	1	G	W	36.34	38.12	1.02	0.788	0.61	0.043	1.57	1.37	0.079	0.015	0.804	0.032	0.04	3.3	0.65	3.99	10075	0.459	23.89554	-23.43654	NAF
NS0068	102	104	NS	E410962	410962	1	G	W	33.08	40.91	1.77	0.658	0.51	0.072	1.97	1.46	0.084	0.065	1.45	0.041	0.01	3.09	0.65	3.75	10019	1.989	25.46532	-23.47632	NAF
NS0068	62	64	NS	E410942	410942	1	G	W	32.74	39.55	1.98	0.503	0.39	0.091	1.79	1.44	0.085	0.052	0.959	0.076	0.53	5.14	0.56	6.23	9999	1.5912	25.11648	-23.52528	NAF
NS0068	238	240	NS	E411031	411031	1	G	W	37.04	36.36	1.43	0.788	0.61	0.062	1.72	1.41	0.076	0.028	1	0.042	0.03	3.49	0.55	4.07	10087	0.8568	24.59322	-23.73642	NAF
NS0068	242	244	NS	E411033	411033	1	G	W	35.15	38.61	1.39	0.775	0.6	0.056	1.73	1.41	0.085	0.027	0.961	0.051	0.13	3.83	0.82	4.78	10089	0.8262	24.59322	-23.76702	NAF
NS0068	64	66	NS	E410943	410943	1	G	W	32.19	39.56	2.16	0.542	0.42	0.101	1.96	1.54	0.12	0.101	1.12	0.08	0.58	5.19	0.49	6.26	10000	3.0906	26.86068	-23.77008	NAF
NS0068	248	250	NS	E411036	411036	1	G	W	36.11	36.05	1.38	0.852	0.66	0.057	1.95	1.41	0.136	0.021	0.942	0.06	0.1	4.62	0.33	5.05	10092	0.6426	24.59322	-23.95062	NAF
NS0068	182	184	NS	E411003	411003	1	G	W	33.77	38.24	2.05	0.775	0.6	0.097	2.13	1.66	0.174	0.152	1.64	0.098	-0.02	3.62	0.64	4.24	10059	4.6512	28.95372	-24.30252	NAF
NS0068	162	164	NS	E410992	410992	1	G	W	36.69	37.78	1.08	0.762	0.59	0.045	1.65	1.43	0.086	0.019	0.93	0.018	-0.06	2.9	0.7	3.54	10049	0.5814	24.94206	-24.36066	NAF
NS0068	156	158	NS	E410989	410989	1	G	W	36.66	37.25	1.33	0.723	0.56	0.058	1.84	1.44	0.106	0.023	1.11	0.037	-0.05	3.11	0.68	3.74	10046	0.7038	25.11648	-24.41268	NAF
NS0068	118	120	NS	E410970	410970	1	G	W	36.19	35.23	1.61	0.813	0.63	0.077	2.31	1.55	0.095	0.072	1.34	0.041	0.07	4.1	0.74	4.91	10027	2.2032	27.0351	-24.8319	NAF
NS0068	210	212	NS	E411017	411017	1	G	W	31.46	41.48	2.05	0.568	0.44	0.09	2.33	1.61	0.068	0.103	1.41	0.1	0.19	3.62	0.97	4.78	10073	3.1518	28.08162	-24.92982	NAF
NS0068	120	122	NS	E410971	410971	1	G	W	37.95	33.96	1.24	0.826	0.64	0.067	2.08	1.51	0.096	0.043	1.02	0.035	-0.02	3.7	0.77	4.45	10028	1.3158	26.33742	-25.02162	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0068	204	206	NS	E411014	411014	1	G	W	35.21	38.27	1.81	0.723	0.56	0.072	1.86	1.59	0.096	0.085	1.42	0.054	0.03	3.1	0.72	3.85	10070	2.601	27.73278	-25.13178	NAF
NS0068	106	108	NS	E410964	410964	1	G	W	32.41	41.75	1.62	0.723	0.56	0.066	1.87	1.66	0.174	0.123	1.36	0.033	-0.04	3.26	0.55	3.77	10021	3.7638	28.95372	-25.18992	NAF
NS0068	90	92	NS	E410956	410956	1	G	W	34.95	39.02	1.21	0.8	0.62	0.052	1.75	1.5	0.086	0.031	0.969	0.028	0.08	3.65	0.61	4.34	10013	0.9486	26.163	-25.2144	NAF
NS0068	116	118	NS	E410969	410969	1	G	W	40.83	30.9	1.01	0.762	0.59	0.061	1.99	1.52	0.125	0.041	0.836	0.023	-0.03	3.42	0.58	3.97	10026	1.2546	26.51184	-25.25724	NAF
NS0068	98	100	NS	E410960	410960	1	G	W	31.97	41.63	1.62	0.788	0.61	0.071	2.17	1.6	0.071	0.085	1.34	0.046	0.06	3.65	0.92	4.63	10017	2.601	27.9072	-25.3062	NAF
NS0068	274	276	NS	E411049	411049	1	G	W	37.8	35.27	1.34	0.788	0.61	0.056	1.75	1.5	0.108	0.027	0.719	0.049	0.09	3.67	0.52	4.28	10105	0.8262	26.163	-25.3368	NAF
NS0068	232	234	NS	E411028	411028	1	G	W	36.2	36.91	1.23	0.904	0.7	0.053	1.75	1.54	0.087	0.032	0.948	0.043	0	3.6	0.73	4.33	10084	0.9792	26.86068	-25.88148	NAF
NS0068	96	98	NS	E410959	410959	1	G	W	33.57	41.32	1.18	0.749	0.58	0.05	1.69	1.55	0.101	0.024	0.981	0.027	-0.02	3.07	0.74	3.79	10016	0.7344	27.0351	-26.3007	NAF
NS0068	264	266	NS	E411044	411044	1	G	W	34.9	38.32	1.43	0.762	0.59	0.059	1.8	1.79	0.093	0.154	1.02	0.041	0.03	3.31	0.91	4.25	10100	4.7124	31.22118	-26.50878	NAF
NS0068	128	130	NS	E410975	410975	1	G	W	23.67	56.37	0.75	0.594	0.46	0.033	1.47	1.64	0.15	0.067	0.5	0.041	0.14	3.83	0.66	4.63	10032	2.0502	28.60488	-26.55468	NAF
NS0068	278	280	NS	E411051	411051	1	G	W	38.67	35.06	1	0.736	0.57	0.05	1.7	1.58	0.099	0.025	0.453	0.042	0.08	3.3	0.71	4.09	10107	0.765	27.55836	-26.79336	NAF
NS0068	152	154	NS	E410987	410987	1	G	W	36.78	36.87	1.22	0.8	0.62	0.056	1.87	1.58	0.093	0.021	1.04	0.025	-0.05	3.21	0.87	4.03	10044	0.6426	27.55836	-26.91576	NAF
NS0068	268	270	NS	E411046	411046	1	G	W	36.69	37.49	1.02	0.826	0.64	0.044	1.61	1.58	0.101	0.019	0.7	0.043	0.01	3.37	0.72	4.1	10102	0.5814	27.55836	-26.97696	NAF
NS0068	186	188	NS	E411005	411005	1	G	W	34.9	37.99	1.75	0.736	0.57	0.075	1.92	1.68	0.138	0.074	1.46	0.05	0	3.21	0.83	4.04	10061	2.2644	29.30256	-27.03816	NAF
NS0068	254	256	NS	E411039	411039	1	G	W	31.83	38.9	2.88	0.62	0.48	0.129	2.57	1.85	0.114	0.168	1.91	0.109	0.18	3.79	0.99	4.96	10095	5.1408	32.2677	-27.1269	NAF
NS0068	240	242	NS	E411032	411032	1	G	W	34.56	38.17	1.88	0.723	0.56	0.076	2.14	1.62	0.072	0.034	1.17	0.073	0.02	3.62	0.55	4.19	10088	1.0404	28.25604	-27.21564	NAF
NS0068	122	124	NS	E410972	410972	1	G	W	37.17	35.94	1	0.775	0.6	0.048	1.87	1.61	0.096	0.028	0.811	0.027	-0.02	3.36	0.83	4.17	10029	0.8568	28.08162	-27.22482	NAF
NS0068	276	278	NS	E411050	411050	1	G	W	33.57	38.54	1.92	0.826	0.64	0.079	2.07	1.76	0.096	0.089	1.13	0.077	0.23	4.07	0.78	5.08	10106	2.7234	30.69792	-27.97452	NAF
NS0068	192	194	NS	E411008	411008	1	G	W	38.44	35.5	1.17	0.775	0.6	0.042	1.57	1.64	0.085	0.019	0.986	0.029	-0.06	2.59	0.84	3.37	10064	0.5814	28.60488	-28.02348	NAF
NS0068	216	218	NS	E411020	411020	1	G	W	28.85	40.92	3.05	0.749	0.58	0.132	3.02	1.93	0.17	0.181	2.14	0.119	0.26	4.45	1.17	5.88	10076	5.5386	33.66306	-28.12446	NAF
NS0068	94	96	NS	E410958	410958	1	G	W	33.28	41.72	1.07	0.813	0.63	0.047	1.64	1.72	0.12	0.056	0.887	0.029	-0.01	3.19	0.83	4.01	10015	1.7136	30.00024	-28.28664	NAF
NS0068	226	228	NS	E411025	411025	1	G	W	36.34	36.44	1.27	0.904	0.7	0.053	1.87	1.66	0.078	0.021	1.01	0.045	0.01	3.61	0.9	4.52	10081	0.6426	28.95372	-28.31112	NAF
NS0068	160	162	NS	E410991	410991	1	G	W	34.46	40.74	0.87	0.788	0.61	0.038	1.64	1.66	0.083	0.02	0.737	0.018	-0.02	2.89	0.97	3.84	10048	0.612	28.95372	-28.34172	NAF
NS0068	88	90	NS	E410955	410955	1	G	W	32.7	40.31	1.66	0.723	0.56	0.074	1.92	1.77	0.126	0.075	1.22	0.045	0.17	3.88	0.83	4.88	10012	2.295	30.87234	-28.57734	NAF
NS0068	190	192	NS	E411007	411007	1	G	W	35.83	37.82	1.12	0.904	0.7	0.045	1.83	1.67	0.088	0.018	0.949	0.021	-0.03	3.38	0.96	4.31	10063	0.5508	29.12814	-28.57734	NAF
NS0068	244	246	NS	E411034	411034	1	G	W	32.51	40	1.9	0.775	0.6	0.078	2.11	1.71	0.095	0.037	1.24	0.081	0.14	4.15	0.99	5.28	10090	1.1322	29.82582	-28.69362	NAF
NS0068	138	140	NS	E410980	410980	1	G	W	32.01	42	1.24	0.607	0.47	0.056	2.03	1.82	0.119	0.09	0.877	0.058	0.09	4.01	0.91	5.01	10037	2.754	31.74444	-28.99044	NAF
NS0068	164	166	NS	E410993	410993	1	G	W	36.44	37.52	1.07	0.813	0.63	0.049	1.67	1.68	0.086	0.006	0.912	0.026	-0.03	2.91	0.98	3.86	10050	0.1836	29.30256	-29.11896	NAF
NS0068	184	186	NS	E411004	411004	1	G	W	31.99	39.99	2.18	0.723	0.56	0.098	2.22	1.86	0.144	0.1	1.77	0.088	0.02	3.63	0.97	4.62	10060	3.06	32.44212	-29.38212	NAF
NS0068	86	88	NS	E410954	410954	1	G	W	32.48	39.93	1.31	0.736	0.57	0.059	2.07	1.82	0.158	0.073	0.921	0.049	0.21	4.79	0.86	5.86	10011	2.2338	31.74444	-29.51064	NAF
NS0068	194	196	NS	E411009	411009	1	G	W	36.49	37.61	1.02	0.865	0.67	0.042	1.68	1.73	0.097	0.017	0.867	0.019	-0.02	3.06	0.93	3.97	10065	0.5202	30.17466	-29.65446	NAF
NS0068	270	272	NS	E411047	411047	1	G	W	35.6	37.96	1.16	0.788	0.61	0.044	1.62	1.74	0.081	0.02	0.783	0.045	0.03	3.28	1.01	4.32	10103	0.612	30.34908	-29.73708	NAF
NS0068	70	72	NS	E410946	410946	1	G	W	35.36	36.57	1.86	0.503	0.39	0.089	1.76	1.82	0.156	0.062	1.11	0.063	0.33	4.06	0.77	5.16	10003	1.8972	31.74444	-29.84724	NAF
NS0068	134	136	NS	E410978	410978	1	G	W	34.87	37.66	1.12	0.762	0.59	0.046	2.01	1.78	0.121	0.023	0.778	0.047	0.06	4.41	0.89	5.36	10035	0.7038	31.04676	-30.34296	NAC
NS0068	188	190	NS	E411006	411006	1	G	W	36.42	37.02	1.02	0.917	0.71	0.041	1.81	1.78	0.107	0.021	0.859	0.046	-0.03	3.28	1	4.25	10062	0.6426	31.04676	-30.40416	NAC
NS0068	260	262	NS	E411042	411042	1	G	W	28.48	39.61	3.75	0.71	0.55	0.161	3.11	2.33	0.198	0.328	2.48	0.143	0.26	4.46	1.36	6.08	10098	10.0368	40.63986	-30.60306	NAC
NS0068	140	142	NS	E410981	410981	1	G	W	35.57	39.29	0.83	0.607	0.47	0.037	1.63	1.83	0.101	0.018	0.643	0.036	-0.04	3.12	0.89	3.97	10038	0.5508	31.91886	-31.36806	NAC
NS0068	148	150	NS	E410985	410985	1	G	W	37.34	35.96	0.95	0.839	0.65	0.042	1.66	1.85	0.097	0.022	0.809	0.02	-0.06	3.01	1.06	4.01	10042	0.6732	32.2677	-31.5945	NAC
NS0068	236	238	NS	E411030	411030	1	G	W	34.84	36.79	1.7	0.865	0.67	0.072	2.13	1.89	0.089	0.042	1.25	0.07	0.08	3.98	1.12	5.18	10086	1.2852	32.96538	-31.68018	NAC
NS0068	132	134	NS	E410977	410977	1	G	W	33.82	40.51	0.93	0.697	0.54	0.041	1.9	1.88	0.111	0.019	0.63	0.045	0.02	3.59	1.06	4.67	10034	0.5814	32.79096	-32.20956	NAC
NS0068	104	106	NS	E410963	410963	1	G	W	33.05	42.4	0.83	0.775	0.6	0.036	1.63	1.88	0.104	0.011	0.696	0.017	-0.05	3	1.11	4.06	10020	0.3366	32.79096	-32.45436	NAC
NS0068	196	198	NS	E411010	411010	1	G	W	35.76	37.89	0.97	0.865	0.67	0.04	1.72	1.9	0.096	0.018	0.801	0.028	0	3.11	1.07	4.18	10066	0.5508	33.1398	-32.589	NAC
NS0068	218	220	NS	E411021	411021	1	G	W	34.72	39.57	1.04	0.852	0.66	0.043	1.68	1.93	0.07	0.02	0.843	0.028	-0.02	3.05	1.31	4.34	10077	0.612	33.66306	-33.05106	NAC
NS0068	92	94	NS	E410957	410957	1	G	W	34.65	38.61	1.27	0.813	0.63	0.054	1.82	1.98	0.112	0.039	1.02	0.031	0.01	3.29	1.13	4.43	10014	1.1934	34.53516	-33.34176	NAC
NS0068	230	232	NS	E411027	411027	1	G	W	34.37	38.21	1.56	0.865	0.67	0.064	1.99	1.99	0.063	0.043	1.23	0.059	0.06	3.43	1.39	4.88	10083	1.3158	34.70958	-33.39378	NAC
NS0068	112	114	NS	E410967	410967	1	G	W	31.02	45.4	0.83	0.697	0.54	0.036	1.55	2.01	0.115	0.044	0.694	0.022	0.16	2.51	1.23	3.9	10024	1.3464	35.05842	-33.71202	NAC
NS0068	84	86	NS	E410953	410953	1	G	W	33.69	38.39	1.73	0.555	0.43	0.081	2.08	2.07	0.125	0.06	1.27	0.057	0.22	4.11	1.19	5.52	10010	1.836	36.10494	-34.26894	NAC
NS0068	272	274	NS	E411048	411048	1	G	W	37.01	35.05	1.34	0.775	0.6	0.059	1.82	2.03	0.1	0.036	0.754	0.047	0.21	3.4	1.14	4.75	10104	1.1016	35.40726	-34.30566	NAC
NS0068	74	76	NS	E410948	410948	1	G	W	33.51	37.89	2.25	0.516	0.4	0.106	2	2.09	0.102	0.07	1.49	0.054	0.28	3.85	1.33	5.46	10005	2.142	36.45378	-34.31178	NAC
NS0068	78	80	NS	E410950	410950	1	G	W	31.17	40.92	2.17	0.529	0.41	0.101	1.92	2.15	0.08	0.082	1.59	0.056	0.25	3.91	1.35	5.51	10007	2.5092	37.5003	-34.9911	NAC
NS0068	200	202	NS	E411012	411012	1	G	W	33.84	38.79	1.45	0.852	0.66	0.061	1.9	2.08	0.088	0.037	1.17	0.038	0.02	3.24	1.46	4.72	10068	1.1322	36.27936	-35.14716	NAC
NS0068	224	226	NS	E411024	411024	1	G	W	35.77	37.52	1.01	0.839	0.65	0.04	1.66	2.05	0.09	0.017	0.808	0.024	-0.02	2.89	1.43	4.3	10080	0.5202	35.7561	-35.2359	NAC
NS0068	198	200	NS	E411011	411011	1	G	W	33.59	41.66	0.94	0.788	0.61	0.036	1.56	2.08	0.095	0.027	0.784	0.023	-0.03	2.54	1.45	3.96	10067	0.8262	36.27936	-35.45316	NAC
NS0068	220	222	NS	E411022	411022	1	G	W	35.69	37.87	0.96	0.826	0.64	0.041	1.61	2.08	0.081	0.018	0.788	0.016	-0.02	2.82	1.37	4.17	10078	0.5508	36.27936	-35.72856	NAC
NS0068	114	116	NS	E410968	410968	1	G	W	36.04	37.8	0.83	0.697	0.54	0.043	1.71	2.09	0.104	0.023	0.693	0.021	0.11	2.55	1.32	3.98	10025	0.7038	36.45378	-35.74998	NAC
NS0068	202	204	NS	E411013	411013	1	G	W	33.88	38.41	1.56	0.775	0.6	0.07	2.03	2.2	0.134	0.056	1.2	0.051	0.04	3.24	1.46	4.74	10069	1.7136	38.3724	-36.6588	NAC
NS0068	266	268	NS	E411045	411045	1	G	W	34.46	38.42	1.28	0.775	0.6	0.053	1.78	2.22	0.066	0.04	0.91	0.042	0.06	3.06	1.56	4.68	10101	1.224	38.72124	-37.49724	NAC
NS0068	150	152	NS	E410986	410986	1	G	W	35.99	37.79	1.01	0.749	0.58	0.045	1.66	2.18	0.083	0.017	0.843	0.019	-0.08	2.44	1.68	4.04	10043	0.5202	38.02356	-37.50336	NAC
NS0068	222	224	NS	E411023	411023	1	G	W	35.87	36.92	1.03	0.852	0.66	0.044	1.74	2.27	0.083	0.018	0.82	0.033	0.01	2.9	1.61	4.52	10079	0.5508	39.59334	-39.04254	NAC
NS0068	72	74	NS	E410947	410947	1	G	W	27.48	40.66	4.18	0.374	0.29	0.199	2.8	3.06	0.364	0.293	2.62	0.131	0.57	3.36	1.49	5.42	10004	8.9658	53.37252	-44.40672	NAC
NS0069	248	250	NS	E411178	411178	1	G	W	23.95	47.12	5.84	0.219	0.17	0.262	4.52	0.38	0.067	1.41	0.795	0.232	0.79	3.31	1.7	5.8	10233	43.146	6.62796	36.51804	PAF(HC)
NS0069	164	166	NS	E411136	411136	1	G	W	26.92	40.42	5.2	0.336	0.26	0.239	3.76	0.84	0.18	0.997	1.44	0.39	1.26	5.26	1.52	8.04	10191	30.5082	14.65128	15.85692	PAF(HC)
NS0069	170	172	NS	E411139	411139	1	G	W	28.09	40.48	2.99	0.4	0.31	0.14	2.67	0.52	0.074	0.671	1.02	0.27	1.18	8.33	1.26	10.77	10194	20.5326	9.06984	11.46276	PAF(HC)
NS0069	162	164	NS	E411135	411135	1	G	W	29.13	38.4	4.05	0.413	0.32	0.186	3.35	0.88	0.099	0.746	1.23	0.333	1.14	6.64	1.3	9.08	10190	22.8276	15.34896	7.47864	PAF(LC)
NS0069	134	136	NS	E411121	411121	1	G	W	28.56	40.49	3.49	0.4	0.31	0.156	3.04	0.86	0.185	0.687	1.22	0.333	1.25	5.84	1.19	8.28	10176	21.0222	15.00012	6.02208	PAF(LC)
NS0069	180	182	NS	E411144	411144	1	G	W	29.68	38.36	2.65	0.62	0.48	0.121	2.62	0.87	0.103	0.57	0.844	0.249	1.08	8.71	0.85	10.64	10199	17.442	15.17454	2.26746	PAF(LC)
NS0069	144	146	NS	E411126	411126	1	G	W	26.58	41.61	4.24	0.413	0.32	0.2	3.65	0.9	0.163	0.557	1.48	0.402	1.41	5.8	1.3	8.51	10181	17.0442	15.6978	1.3464	PAF(LC)
NS0069	4	6	NS	E411055	411055	1	G	W	34.42	34.9	7.15	0.052	0.04	0.561	0.05	0.05	0.022	0.054	0.023	0.018	5.66	1.93	0.29	7.88	10111	1.6524	0.8721	0.7803	PAF(LC)
NS0069	6	8	NS	E411056	411056	1	G	W	36.35	32.83	5.94	0.026	0.02	0.337	0.03	0.05	0.017	0.043	0.016	0.01	6.79	1.63	0.27	8.69	10112	1.3158	0.8721	0.4437	PAF(LC)
NS0069	2	4	NS	E411054	411054	1	G	W	36.38	27.37	10.05	0.026	0.02	0.577	0.04	0.03	0.019	0.031	0.036	0.018	6.36	2.74	0.3	9.4	10110	0.9486	0.52326	0.42534	PAF(LC)
NS0069	16	18	NS	E411061	411061	1	G	W	35.42	40.97	1.98	0.039	0.03	0.084	0.04	0.02	0.061	0.025	0.009	0.019	5.54	0.77	0.15	6.46	10117	0.765	0.34884	0.41616	PAF(LC)
NS0069	18	20	NS	E411062	411062	1	G	W	35.49	38.79	2.13	0.052	0.04	0.075	0.05	0.03	0.084	0.029	0.008	0.013	6.5	0.9	0.14	7.54	10118	0.8874	0.52326	0.36414	PAF(LC)
NS0069	12	14	NS	E411059	411059	1	G	W	41.8	31.26	1.96	0.026	0.02	0.076	0.04	0.02	0.075	0.021	0.012	0.013	5.7	0.73	0.11	6.54	10115	0.6426	0.34884	0.29376	PAF(LC)
NS0069	10	12	NS	E411058	411058	1	G	W	37.31	35.31	3.29	0.039	0.03	0.135	0.05	0.03	0.028	0.022	0.01	0.012	6.29	1.17	0.17	7.63	10114	0.6732	0.52326	0.14994	PAF(LC)
NS0069	14	16	NS	E411060	411060	1	G	W	39.05	32.53	3.2	0.026	0.02	0.163	0.06	0.03	0.062	0.021	0.011	0.026	6.36	1.1	0.18	7.64	10116	0.6426	0.52326	0.11934	PAF(LC)
NS0069	8	10	NS	E411057	411057	1	G	W	32.51	41.32	4.26	0.026	0.02	0.274	0.04	0.04	0.018	0.021	0.021	0.026	5.72	1.38	0.2	7.3	10113	0.6426	0.69768	-0.05508	NAF
NS0069	94	96	NS	E411100	411100	1	G	W	23.5	47.87	6.92	0.155	0.12	0.33	4.6	0.24	0.054	0.103	1.38	0.4	1.27	2.34	0.4	4.01	10156	3.1518	4.18608	-1.03428	NAF
NS0069	178	180	NS	E411143	411143	1	G	W	20.62	53.72	4.97	0.336	0.26	0.225	2.76	0.97	0.06	0.516	0.565	0.173	0.74	4.93	0.91	6.58	10198	15.7896	16.91874	-1.12914	NAF
NS0069	0	2	NS	E411053	411053	1	G	W	35.99	20.54	16.55	0.052	0.04	0.926	0.14	0.11	0.026	0.024	0.09	0.027	4.86	4.58	0.3	9.74	10109	0.7344	1.91862	-1.18422	NAF
NS0069	26	28	NS	E411066	411066	1	G	W	38.95	36.03	1.48	0.065	0.05	0.052	0.27	0.09	0.087	0.011	0.008	0.049	4.84	0.9	0.07	5.81	10122	0.3366	1.56978	-1.23318	NAF
NS0069	20	22	NS	E411063	411063	1	G	W	37.19	38.75	1.81	0.065	0.05	0.074	0.27	0.12	0.083	0.015	0.008	0.049	4.47	0.94	0.05	5.46	10119	0.459	2.09304	-1.63404	NAF
NS0069	92	94	NS	E411099	411099	1	G	W	30.59	38.11	2.71	0.542	0.42	0.122	3.08	0.62	0.121	0.281	1.04	0.292	1.12	7.66	0.56	9.34	10155	8.5986	10.81404	-2.21544	NAF
NS0069	30	32	NS	E411068	411068	1	G	W	36.73	38.39	2.02	0.103	0.08	0.094	0.51	0.17	0.073	0.017	0.011	0.07	4.63	1.16	0.02	5.81	10124	0.5202	2.96514	-2.44494	NAF
NS0069	32	34	NS	E411069	411069	1	G	W	33.87	41.65	2.11	0.116	0.09	0.097	0.52	0.17	0.086	0.017	0.013	0.057	4.94	1.19	0.12	6.25	10125	0.5202	2.96514	-2.44494	NAF
NS0069	28	30	NS	E411067	411067	1	G	W	36.29	39.15	2.21	0.065	0.05	0.102	0.54	0.18	0.077	0.013	0.01	0.071	4.28	1.22	0.02	5.52	10123	0.3978	3.13956	-2.74176	NAF
NS0069	22	24	NS	E411064	411064	1	G	W	36.38	38.57	2.22	0.065	0.05	0.105	0.53	0.18	0.067	0.011	0.009	0.08	4.74	1.2	0.05	5.99	10120	0.3366	3.13956	-2.80296	NAF
NS0069	38	40	NS	E411072	411072	1	G	W	33.84	41.87	1.95	0.4	0.31	0.076	0.66	0.18	0.051	0.005	0.043	0.031	4.56	1.16	0.12	5.84	10128	0.153	3.13956	-2.98656	NAF
NS0069	36	38	NS	E411071	411071	1	G	W	34.27	39.92	2.98	0.387	0.3	0.117	0.61	0.19	0.048	0.007	0.041	0.041	4.66	1.48	0.14	6.28	10127	0.2142	3.31398	-3.09978	NAF
NS0069	34	36	NS	E411070	411070	1	G	W	35.03	38.09	3.29	0.258	0.2	0.138	0.71	0.21	0.068	0.012	0.045	0.066	5.06	1.67	0.12	6.85	10126	0.3672	3.66282	-3.29562	NAF
NS0069	76	78	NS	E411091	411091	1	G	W	30.15	41.24	3.34	0.258	0.2	0.153	3.64	0.57	0.066	0.203	1.4	0.367	1.22	3.62	0.49	5.33	10147	6.2118	9.94194	-3.73014	NAF
NS0069	176	178	NS	E411142	411142	1	G	W	27.76	40.18	3.95	0.452	0.35	0.178	3.29	0.67	0.114	0.249	1.31	0.359	1.3	7.64	0.57	9.51	10197	7.6194	11.68614	-4.06674	NAF
NS0069	40	42	NS	E411073	411073	1	G	W	35.42	38.01	2.59	0.336	0.26	0.119	1.06	0.28	0.071	0.004	0.321	0.095	4.64	1.53	0.06	6.23	10129	0.1224	4.88376	-4.76136	NAF
NS0069	152	154	NS	E411130	411130	1	G	W	28.34	39.66	3.02	0.503	0.39	0.136	3.01	0.93	0.166	0.374	1.06	0.287	1.11	8.46	0.83	10.4	10185	11.4444	16.22106	-4.77666	NAF
NS0069	42	44	NS	E411074	411074	1	G	W	32.39	41.56	2.55	0.336	0.26	0.121	1.15	0.29	0.071	0.006	0.379	0.102	4.95	1.54	0.12	6.61	10130	0.1836	5.05818	-4.87458	NAF
NS0069	212	214	NS	E411160	411160	1	G	W	29.43	42.41	3.72	0.4	0.31	0.173	3.23	0.76	0.107	0.272	0.675	0.201	0.69	4.59	0.54	5.82	10215	8.3232	13.25592	-4.93272	NAF
NS0069	24	26	NS	E411065	411065	1	G	W	36.66	34.2	3.35	0.09	0.07	0.163	0.96	0.31	0.074	0.011	0.017	0.121	5.74	1.91	0.19	7.84	10121	0.3366	5.40702	-5.07042	NAF
NS0069	136	138	NS	E411122	411122	1	G	W	30.95	37.9	2.56	0.594	0.46	0.112	2.7	0.59	0.075	0.142	1.06	0.292	1.09	8.01	0.28	9.38	10177	4.3452	10.29078	-5.94558	NAF
NS0069	46	48	NS	E411076	411076	1	G	W	35.92	37.68	2.45	0.258	0.2	0.114	1.09	0.37	0.067	0.004	0.114	0.037	4.43	1.53	0.08	6.04	10132	0.1224	6.45354	-6.33114	NAF
NS0069	174	176	NS	E411141	411141	1	G	W	23.43	47.74	3.84	0.336	0.26	0.177	2.97	1.19	0.129	0.464	1.07	0.309	1.12	6.31	0.96	8.39	10196	14.1984	20.75598	-6.55758	NAF
NS0069	246	248	NS	E411177	411177	1	G	W	24.13	46.36	5.14	0.297	0.23	0.231	4.45	1.62	0.136	0.7	0.903	0.266	0.85	3.69	1.12	5.66	10232	21.42	28.25604	-6.83604	NAF
NS0069	44	46	NS	E411075	411075	1	G	W	32.76	40.09	3.08	0.232	0.18	0.147	1.28	0.43	0.074	0.006	0.226	0.066	5.03	1.87	0.13	7.03	10131	0.1836	7.50006	-7.31646	NAF
NS0069	140	142	NS	E411124	411124	1	G	W	32.91	36.44	2.07	0.478	0.37	0.094	2.55	0.8	0.071	0.214	0.865	0.247	0.91	7.77	0.28	8.96	10179	6.5484	13.9536	-7.4052	NAF
NS0069	172	174	NS	E411140	411140	1	G	W	25.62	44.38	2.62	0.426	0.33	0.12	2.68	0.79	0.119	0.203	0.881	0.253	1.07	9.24	0.33	10.64	10195	6.2118	13.77918	-7.56738	NAF
NS0069	48	50	NS	E411077	411077	1	G	W	32	42.15	1.61	0.271	0.21	0.072	1.35	0.49	0.085	0.027	0.2	0.044	2.52	4.98	0.01	7.51	10133	0.8262	8.54658	-7.72038	NAF
NS0069	146	148	NS	E411127	411127	1	G	W	26.27	42.73	3.71	0.439	0.34	0.172	3.38	0.87	0.136	0.218	1.54	0.42	1.42	6.61	0.65	8.68	10182	6.6708	15.17454	-8.50374	NAF
NS0069	208	210	NS	E411158	411158	1	G	W	33.59	38.6	1.78	0.529	0.41	0.08	2.36	0.61	0.08	0.068	0.523	0.146	0.64	6.38	-0.07	6.95	10213	2.0808	10.63962	-8.55882	NAF
NS0069	102	104	NS	E411105	411105	1	G	W	32.06	39.08	2.62	0.374	0.29	0.124	2.64	0.88	0.096	0.21	1.05	0.275	0.98	5.58	0.26	6.82	10160	6.426	15.34896	-8.92296	NAF
NS0069	166	168	NS	E411137	411137	1	G	W	26.93	41.8	3.9	0.413	0.32	0.174	3.19	0.98	0.131	0.261	1.44	0.374	1.3	6.72	0.63	8.65	10192	7.9866	17.09316	-9.10656	NAF
NS0069	214	216	NS	E411161	411161	1	G	W	30.18	41.48	3.23	0.426	0.33	0.148	3.07	0.94	0.138	0.234	0.731	0.203	0.75	4.82	0.46	6.03	10216	7.1604	16.39548	-9.23508	NAF
NS0069	106	108	NS	E411107	411107	1	G	W	27.72	43.21	1.7	0.452	0.35	0.076	2.26	0.99	0.07	0.257	0.687	0.191	0.93	9.11	0.38	10.42	10162	7.8642	17.26758	-9.40338	NAF
NS0069	108	110	NS	E411108	411108	1	G	W	23.91	48.04	5.16	0.245	0.19	0.245	3.4	1.24	0.063	0.395	1.5	0.402	1.28	2.81	0.95	5.04	10163	12.087	21.62808	-9.54108	NAF
NS0069	186	188	NS	E411147	411147	1	G	W	28.49	41.65	3.42	0.4	0.31	0.158	3.15	0.97	0.104	0.239	1.03	0.295	1.06	6.15	0.57	7.78	10202	7.3134	16.91874	-9.60534	NAF
NS0069	198	200	NS	E411153	411153	1	G	W	25.8	43.42	6.6	0.194	0.15	0.311	4.75	1.43	0.15	0.496	1.12	0.317	1.01	2.61	0.96	4.58	10208	15.1776	24.94206	-9.76446	NAF
NS0069	132	134	NS	E411120	411120	1	G	W	30.97	38.8	1.95	0.478	0.37	0.09	2.46	0.77	0.086	0.109	0.849	0.24	0.94	8.48	0.14	9.56	10175	3.3354	13.43034	-10.09494	NAF
NS0069	104	106	NS	E411106	411106	1	G	W	30.55	40.12	2.62	0.323	0.25	0.129	2.66	0.89	0.154	0.166	1.07	0.285	1.1	6.18	0.26	7.54	10161	5.0796	15.52338	-10.44378	NAF
NS0069	148	150	NS	E411128	411128	1	G	W	27.33	41.15	3.96	0.413	0.32	0.177	3.39	0.82	0.16	0.124	1.62	0.414	1.42	6.57	0.44	8.43	10183	3.7944	14.30244	-10.50804	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0069	122	124	NS	E411115	411115	1	G	W	29.37	41.64	2.85	0.4	0.31	0.133	2.86	0.86	0.099	0.135	1.2	0.324	1.09	5.68	0.35	7.12	10170	4.131	15.00012	-10.86912	NAF
NS0069	182	184	NS	E411145	411145	1	G	W	33.87	33.89	1.32	0.607	0.47	0.056	2.13	0.79	0.076	0.088	0.543	0.159	0.78	10.98	-0.03	11.73	10200	2.6928	13.77918	-11.08638	NAF
NS0069	188	190	NS	E411148	411148	1	G	W	30.83	40.33	2.92	0.4	0.31	0.137	2.92	0.98	0.086	0.187	0.879	0.262	0.9	5.47	0.44	6.81	10203	5.7222	17.09316	-11.37096	NAF
NS0069	206	208	NS	E411157	411157	1	G	W	32.9	39.12	1.87	0.529	0.41	0.081	2.49	0.79	0.032	0.058	0.567	0.163	0.6	6.27	0.12	6.99	10212	1.7748	13.77918	-12.00438	NAF
NS0069	52	54	NS	E411079	411079	1	G	W	32.19	36.64	1.85	0.4	0.31	0.088	2.72	0.89	0.089	0.103	0.808	0.123	0.96	9.08	0.15	10.19	10135	3.1518	15.52338	-12.37158	NAF
NS0069	120	122	NS	E411114	411114	1	G	W	31.31	35.27	2.03	0.529	0.41	0.092	2.76	0.89	0.077	0.086	0.848	0.228	0.99	10.85	0.18	12.02	10169	2.6316	15.52338	-12.89178	NAF
NS0069	160	162	NS	E411134	411134	1	G	W	31.9	35.22	1.54	0.555	0.43	0.067	2.25	0.9	0.103	0.084	0.641	0.188	0.88	11.59	0	12.47	10189	2.5704	15.6978	-13.1274	NAF
NS0069	142	144	NS	E411125	411125	1	G	W	31.87	36.73	1.75	0.465	0.36	0.077	2.42	0.88	0.057	0.063	0.758	0.213	0.88	9.55	0.19	10.62	10180	1.9278	15.34896	-13.42116	NAF
NS0069	56	58	NS	E411081	411081	1	G	W	32.97	34.79	1.77	0.426	0.33	0.08	2.86	0.91	0.124	0.08	0.759	0.187	0.99	9.37	0.05	10.41	10137	2.448	15.87222	-13.42422	NAF
NS0069	100	102	NS	E411104	411104	1	G	W	32.85	36.48	2.3	0.374	0.29	0.106	2.63	0.95	0.097	0.101	0.931	0.257	1	7.56	0.11	8.67	10159	3.0906	16.5699	-13.4793	NAF
NS0069	130	132	NS	E411119	411119	1	G	W	31.88	35.52	1.96	0.607	0.47	0.084	2.74	1.02	0.128	0.136	0.865	0.25	1	9.43	0.22	10.65	10174	4.1616	17.79084	-13.62924	NAF
NS0069	154	156	NS	E411131	411131	1	G	W	30.55	37.9	2.18	0.439	0.34	0.099	2.57	1.14	0.131	0.201	0.886	0.24	0.99	9.02	0.33	10.34	10186	6.1506	19.88388	-13.73328	NAF
NS0069	50	52	NS	E411078	411078	1	G	W	30.64	39.99	2.11	0.336	0.26	0.1	2.55	0.97	0.106	0.087	0.838	0.128	0.94	7.42	0.15	8.51	10134	2.6622	16.91874	-14.25654	NAF
NS0069	190	192	NS	E411149	411149	1	G	W	30.14	42.85	2.32	0.4	0.31	0.106	2.64	0.98	0.08	0.089	0.803	0.235	0.82	5.26	0.29	6.37	10204	2.7234	17.09316	-14.36976	NAF
NS0069	138	140	NS	E411123	411123	1	G	W	30.91	41.35	1.77	0.374	0.29	0.079	2.14	1.03	0.088	0.112	0.756	0.215	0.8	6.81	0.22	7.83	10178	3.4272	17.96526	-14.53806	NAF
NS0069	200	202	NS	E411154	411154	1	G	W	32.42	39.85	1.81	0.594	0.46	0.084	2.48	0.95	0.071	0.064	0.578	0.17	0.64	6.05	0.11	6.8	10209	1.9584	16.5699	-14.6115	NAF
NS0069	256	258	NS	E411182	411182	1	G	W	36.56	33.03	1.24	0.594	0.46	0.051	2.39	0.9	0.159	0.034	0.358	0.104	0.51	8.19	-0.28	8.42	10237	1.0404	15.6978	-14.6574	NAF
NS0069	96	98	NS	E411102	411102	1	G	W	29.04	41.78	2.64	0.374	0.29	0.128	2.79	1.15	0.106	0.176	0.921	0.258	1	6.46	0.42	7.88	10157	5.3856	20.0583	-14.6727	NAF
NS0069	118	120	NS	E411113	411113	1	G	W	30.53	41.16	1.68	0.4	0.31	0.075	2.14	0.97	0.094	0.066	0.742	0.22	0.8	7.8	0.12	8.72	10168	2.0196	16.91874	-14.89914	NAF
NS0069	58	60	NS	E411082	411082	1	G	W	32.19	34.59	1.77	0.503	0.39	0.077	2.94	1.02	0.07	0.093	0.682	0.164	0.9	10.69	0.21	11.8	10138	2.8458	17.79084	-14.94504	NAF
NS0069	168	170	NS	E411138	411138	1	G	W	27.69	41.09	2.44	0.503	0.39	0.111	2.64	1.18	0.178	0.184	0.946	0.266	1.08	9.27	0.36	10.71	10193	5.6304	20.58156	-14.95116	NAF
NS0069	184	186	NS	E411146	411146	1	G	W	33.27	37.4	1.58	0.491	0.38	0.07	2.14	0.99	0.084	0.064	0.627	0.181	0.74	7.82	0.02	8.58	10201	1.9584	17.26758	-15.30918	NAF
NS0069	254	256	NS	E411181	411181	1	G	W	34.34	38.72	1.4	0.465	0.36	0.062	2.21	0.97	0.076	0.041	0.365	0.113	0.48	5.82	0.02	6.32	10236	1.2546	16.91874	-15.66414	NAF
NS0069	276	278	NS	E411192	411192	1	G	W	35.1	37.73	2.11	0.542	0.42	0.095	2.49	1.18	0.189	0.138	0.52	0.14	0.46	3.8	0.1	4.36	10247	4.2228	20.58156	-16.35876	NAF
NS0069	278	280	NS	E411193	411193	1	G	W	31.96	39.76	2.56	0.594	0.46	0.117	3.02	1.26	0.194	0.182	0.617	0.156	0.55	4.46	0.3	5.31	10248	5.5692	21.97692	-16.40772	NAF
NS0069	258	260	NS	E411183	411183	1	G	W	36.32	33.33	1.16	0.646	0.5	0.048	2.31	0.99	0.133	0.028	0.324	0.097	0.49	8.1	-0.12	8.47	10238	0.8568	17.26758	-16.41078	NAF
NS0069	116	118	NS	E411112	411112	1	G	W	31.06	39.09	2.4	0.387	0.3	0.108	2.64	1.1	0.124	0.089	1.07	0.293	1.01	6.71	0.29	8.01	10167	2.7234	19.1862	-16.4628	NAF
NS0069	156	158	NS	E411132	411132	1	G	W	34.04	34.69	1.27	0.529	0.41	0.054	2.04	1.15	0.072	0.114	0.549	0.165	0.72	9.72	0.05	10.49	10187	3.4884	20.0583	-16.5699	NAF
NS0069	210	212	NS	E411159	411159	1	G	W	26.84	43.19	5.13	0.284	0.22	0.24	3.96	1.62	0.295	0.379	0.879	0.263	0.87	3.46	0.81	5.14	10214	11.5974	28.25604	-16.65864	NAF
NS0069	194	196	NS	E411151	411151	1	G	W	26.19	43.89	4.94	0.284	0.22	0.233	4.03	1.57	0.22	0.347	0.979	0.294	0.95	3.75	0.85	5.55	10206	10.6182	27.38394	-16.76574	NAF
NS0069	260	262	NS	E411184	411184	1	G	W	34.42	37.21	1.34	0.568	0.44	0.058	2.31	1.09	0.113	0.057	0.429	0.118	0.48	6.61	0.04	7.13	10239	1.7442	19.01178	-17.26758	NAF
NS0069	192	194	NS	E411150	411150	1	G	W	32.94	38.61	1.79	0.503	0.39	0.079	2.41	1.08	0.089	0.048	0.612	0.176	0.63	6.36	0.21	7.2	10205	1.4688	18.83736	-17.36856	NAF
NS0069	64	66	NS	E411085	411085	1	G	W	32.98	36.55	1.59	0.374	0.29	0.069	2.45	1.14	0.104	0.075	0.736	0.203	0.81	8.24	0.2	9.25	10141	2.295	19.88388	-17.58888	NAF
NS0069	88	90	NS	E411097	411097	1	G	W	32.21	39.19	2.3	0.297	0.23	0.102	2.69	1.24	0.132	0.125	1.03	0.29	0.93	4.94	0.42	6.29	10153	3.825	21.62808	-17.80308	NAF
NS0069	150	152	NS	E411129	411129	1	G	W	29.16	41.98	2.75	0.349	0.27	0.123	2.6	1.21	0.103	0.092	1.15	0.309	1.04	5.92	0.44	7.4	10184	2.8152	21.10482	-18.28962	NAF
NS0069	98	100	NS	E411103	411103	1	G	W	32.71	36.87	2.83	0.336	0.26	0.155	2.91	1.26	0.199	0.105	1.1	0.293	1.02	5.48	0.25	6.75	10158	3.213	21.97692	-18.76392	NAF
NS0069	90	92	NS	E411098	411098	1	G	W	31.55	38.36	2.01	0.4	0.31	0.092	2.67	1.3	0.089	0.127	0.899	0.262	0.95	6.8	0.55	8.3	10154	3.8862	22.6746	-18.7884	NAF
NS0069	110	112	NS	E411109	411109	1	G	W	28.95	42.29	2.74	0.349	0.27	0.124	2.62	1.41	0.092	0.174	1.04	0.288	0.98	5.67	0.59	7.24	10164	5.3244	24.59322	-19.26882	NAF
NS0069	280	282	NS	E411194	411194	1	G	W	35.76	36.97	1.42	0.684	0.53	0.064	2.23	1.2	0.113	0.046	0.419	0.11	0.36	4.57	0.16	5.09	10249	1.4076	20.9304	-19.5228	NAF
NS0069	196	198	NS	E411152	411152	1	G	W	28.27	42.02	3.71	0.465	0.36	0.174	3.5	1.53	0.195	0.232	0.81	0.26	0.82	5.13	0.64	6.59	10207	7.0992	26.68626	-19.58706	NAF
NS0069	158	160	NS	E411133	411133	1	G	W	31.79	36.06	2.2	0.374	0.29	0.098	2.57	1.38	0.201	0.109	0.909	0.265	0.99	8.81	0.16	9.96	10188	3.3354	24.06996	-20.73456	NAF
NS0069	62	64	NS	E411084	411084	1	G	W	32.77	33.92	1.21	0.503	0.39	0.05	2.62	1.34	0.081	0.062	0.579	0.145	0.75	11.43	0.34	12.52	10140	1.8972	23.37228	-21.47508	NAF
NS0069	252	254	NS	E411180	411180	1	G	W	32.41	38.92	2.03	0.465	0.36	0.094	2.83	1.39	0.143	0.071	0.53	0.157	0.54	5.89	0.38	6.81	10235	2.1726	24.24438	-22.07178	NAF
NS0069	70	72	NS	E411088	411088	1	G	W	33.02	33.8	1.08	0.62	0.48	0.044	2.57	1.33	0.069	0.036	0.496	0.132	0.66	10.99	0.66	12.31	10144	1.1016	23.19786	-22.09626	NAF
NS0069	274	276	NS	E411191	411191	1	G	W	31.85	38.41	2.83	0.594	0.46	0.127	3.24	1.64	0.324	0.208	0.701	0.185	0.65	4.9	0.33	5.88	10246	6.3648	28.60488	-22.24008	NAF
NS0069	74	76	NS	E411090	411090	1	G	W	25.38	45.13	4.55	0.194	0.15	0.218	4.2	1.58	0.107	0.165	1.56	0.401	1.33	2.87	1.15	5.35	10146	5.049	27.55836	-22.50936	NAF
NS0069	54	56	NS	E411080	411080	1	G	W	30.73	38.91	1.74	0.374	0.29	0.079	2.66	1.51	0.092	0.116	0.753	0.141	0.9	8.05	0.65	9.6	10136	3.5496	26.33742	-22.78782	NAF
NS0069	68	70	NS	E411087	411087	1	G	W	28.79	41.36	1.84	0.4	0.31	0.089	2.75	1.42	0.081	0.055	0.858	0.23	0.87	7.79	0.83	9.49	10143	1.683	24.76764	-23.08464	NAF
NS0069	218	220	NS	E411163	411163	1	G	W	34.26	38.77	1.72	0.426	0.33	0.078	2.33	1.44	0.072	0.061	0.498	0.14	0.41	4.04	0.66	5.11	10218	1.8666	25.11648	-23.24988	NAF
NS0069	78	80	NS	E411092	411092	1	G	W	33.45	36.69	2.01	0.323	0.25	0.094	2.89	1.49	0.138	0.089	0.919	0.264	0.9	5.52	0.61	7.03	10148	2.7234	25.98858	-23.26518	NAF
NS0069	226	228	NS	E411167	411167	1	G	W	34.96	37.7	1.55	0.555	0.43	0.067	2.24	1.41	0.099	0.042	0.55	0.141	0.42	4.33	0.59	5.34	10222	1.2852	24.59322	-23.30802	NAF
NS0069	230	232	NS	E411169	411169	1	G	W	34.37	37.48	1.65	0.594	0.46	0.075	2.36	1.47	0.098	0.042	0.594	0.13	0.43	4.9	0.59	5.92	10224	1.2852	25.63974	-24.35454	NAF
NS0069	250	252	NS	E411179	411179	1	G	W	32.53	39.55	1.72	0.478	0.37	0.077	2.43	1.58	0.097	0.102	0.372	0.102	0.42	5.58	0.53	6.53	10234	3.1212	27.55836	-24.43716	NAF
NS0069	202	204	NS	E411155	411155	1	G	W	29.16	41.58	3.41	0.4	0.31	0.155	3.38	1.78	0.081	0.174	0.751	0.21	0.74	4.52	1.13	6.39	10210	5.3244	31.04676	-25.72236	NAF
NS0069	204	206	NS	E411156	411156	1	G	W	29.85	41.47	2.47	0.452	0.35	0.112	2.87	1.64	0.053	0.094	0.653	0.185	0.69	5.25	0.97	6.91	10211	2.8764	28.60488	-25.72848	NAF
NS0069	216	218	NS	E411162	411162	1	G	W	33.76	38.29	1.74	0.491	0.38	0.078	2.43	1.62	0.215	0.08	0.528	0.16	0.54	4.95	0.36	5.85	10217	2.448	28.25604	-25.80804	NAF
NS0069	232	234	NS	E411170	411170	1	G	W	34.68	36.76	1.78	0.542	0.42	0.08	2.47	1.59	0.077	0.045	0.645	0.135	0.44	4.59	0.87	5.9	10225	1.377	27.73278	-26.35578	NAF
NS0069	234	236	NS	E411171	411171	1	G	W	33.56	38.99	1.81	0.465	0.36	0.082	2.41	1.68	0.065	0.081	0.603	0.141	0.46	4	0.97	5.43	10226	2.4786	29.30256	-26.82396	NAF
NS0069	236	238	NS	E411172	411172	1	G	W	33.19	38.23	1.97	0.568	0.44	0.086	2.51	1.72	0.142	0.103	0.775	0.154	0.47	4.83	0.68	5.98	10227	3.1518	30.00024	-26.84844	NAF
NS0069	220	222	NS	E411164	411164	1	G	W	34.34	38.03	1.53	0.555	0.43	0.066	2.28	1.6	0.091	0.034	0.569	0.142	0.46	4.52	0.77	5.75	10219	1.0404	27.9072	-26.8668	NAF
NS0069	72	74	NS	E411089	411089	1	G	W	33.04	35.44	1.06	0.568	0.44	0.045	2.43	1.66	0.068	0.046	0.485	0.138	0.6	8.89	0.95	10.44	10145	1.4076	28.95372	-27.54612	NAF
NS0069	82	84	NS	E411094	411094	1	G	W	32.18	38.08	1.82	0.336	0.26	0.087	2.68	1.8	0.069	0.109	0.824	0.243	0.83	5.76	1.13	7.72	10150	3.3354	31.3956	-28.0602	NAF
NS0069	240	242	NS	E411174	411174	1	G	W	32.87	39.07	1.75	0.594	0.46	0.081	2.44	1.76	0.151	0.081	0.632	0.139	0.45	4.9	0.69	6.04	10229	2.4786	30.69792	-28.21932	NAF
NS0069	124	126	NS	E411116	411116	1	G	W	28.94	41.21	2.81	0.361	0.28	0.13	2.99	1.92	0.059	0.155	1.21	0.335	1.08	4.89	1.32	7.29	10171	4.743	33.48864	-28.74564	NAF
NS0069	128	130	NS	E411118	411118	1	G	W	30.5	38.5	1.94	0.491	0.38	0.086	2.66	1.83	0.095	0.067	0.862	0.253	0.94	7.48	0.92	9.34	10173	2.0502	31.91886	-29.86866	NAF
NS0069	114	116	NS	E411111	411111	1	G	W	30.13	40	2.05	0.4	0.31	0.095	2.48	1.97	0.139	0.14	0.918	0.264	0.91	6.24	0.85	8	10166	4.284	34.36074	-30.07674	NAC
NS0069	112	114	NS	E411110	411110	1	G	W	31.33	36.64	2.14	0.465	0.36	0.097	2.62	1.98	0.109	0.113	0.917	0.245	0.94	8.07	0.79	9.8	10165	3.4578	34.53516	-31.07736	NAC
NS0069	86	88	NS	E411096	411096	1	G	W	32.07	38.74	1.75	0.336	0.26	0.092	2.47	1.9	0.134	0.067	0.804	0.225	0.81	5.69	0.88	7.38	10152	2.0502	33.1398	-31.0896	NAC
NS0069	264	266	NS	E411186	411186	1	G	W	31.09	38.31	2.38	0.568	0.44	0.107	3.28	2.01	0.18	0.096	0.636	0.189	0.66	5.82	0.94	7.42	10241	2.9376	35.05842	-32.12082	NAC
NS0069	66	68	NS	E411086	411086	1	G	W	28.68	41.7	1.6	0.323	0.25	0.071	2.45	2.07	0.123	0.128	0.727	0.183	0.75	7.23	1.23	9.21	10142	3.9168	36.10494	-32.18814	NAC
NS0069	262	264	NS	E411185	411185	1	G	W	33.29	37.94	1.12	0.594	0.46	0.048	2.33	1.97	0.124	0.037	0.336	0.096	0.33	5.94	1.07	7.34	10240	1.1322	34.36074	-33.22854	NAC
NS0069	224	226	NS	E411166	411166	1	G	W	34.04	37.98	1.36	0.529	0.41	0.062	2.23	2.07	0.124	0.066	0.488	0.118	0.38	4.32	1.14	5.84	10221	2.0196	36.10494	-34.08534	NAC
NS0069	272	274	NS	E411190	411190	1	G	W	32.05	40.32	1.6	0.555	0.43	0.071	2.55	2.11	0.106	0.072	0.491	0.133	0.41	4.29	1.26	5.96	10245	2.2032	36.80262	-34.59942	NAC
NS0069	244	246	NS	E411176	411176	1	G	W	33.51	38.38	1.56	0.581	0.45	0.067	2.2	2.06	0.104	0.039	0.584	0.11	0.44	4.52	1.03	5.99	10231	1.1934	35.93052	-34.73712	NAC
NS0069	228	230	NS	E411168	411168	1	G	W	32.44	39.1	1.75	0.555	0.43	0.077	2.38	2.13	0.157	0.061	0.734	0.142	0.47	4.34	1.21	6.02	10223	1.8666	37.15146	-35.28486	NAC
NS0069	126	128	NS	E411117	411117	1	G	W	30.54	37.83	1.73	0.516	0.4	0.078	2.53	2.26	0.065	0.091	0.747	0.215	0.79	7.75	1.41	9.95	10172	2.7846	39.41892	-36.63432	NAC
NS0069	222	224	NS	E411165	411165	1	G	W	33.03	39.12	1.7	0.478	0.37	0.076	2.33	2.19	0.153	0.049	0.596	0.153	0.43	3.78	1.32	5.53	10220	1.4994	38.19798	-36.69858	NAC
NS0069	80	82	NS	E411093	411093	1	G	W	33.68	36.78	1.36	0.361	0.28	0.058	2.39	2.35	0.098	0.068	0.621	0.178	0.64	4.97	1.53	7.14	10149	2.0808	40.9887	-38.9079	NAC
NS0069	238	240	NS	E411173	411173	1	G	W	33.63	38.69	1.52	0.491	0.38	0.069	2.2	2.38	0.176	0.062	0.463	0.118	0.35	3.87	1.29	5.51	10228	1.8972	41.51196	-39.61476	NAC
NS0069	266	268	NS	E411187	411187	1	G	W	32.38	38.62	1.63	0.503	0.39	0.073	2.65	2.53	0.182	0.07	0.485	0.139	0.43	4.52	1.47	6.42	10242	2.142	44.12826	-41.98626	NAC
NS0069	270	272	NS	E411189	411189	1	G	W	31.78	39.79	1.13	0.555	0.43	0.049	2.42	2.62	0.108	0.046	0.392	0.106	0.41	5.05	1.66	7.12	10244	1.4076	45.69804	-44.29044	NAC
NS0069	242	244	NS	E411175	411175	1	G	W	31.45	40.6	1.44	0.594	0.46	0.066	2.17	2.63	0.088	0.04	0.588	0.109	0.33	4.03	1.99	6.35	10230	1.224	45.87246	-44.64846	NAC
NS0069	268	270	NS	E411188	411188	1	G	W	33.25	35.76	1.12	0.684	0.53	0.046	2.62	2.91	0.209	0.086	0.38	0.102	0.38	6.24	1.68	8.3	10243	2.6316	50.75622	-48.12462	NAC
NS0069	60	62	NS	E411083	411083	1	G	W	30.26	35.28	2.18	0.349	0.27	0.096	2.83	2.99	0.108	0.111	1.06	0.276	1.05	8.52	1.46	11.03	10139	3.3966	52.15158	-48.75498	NAC
NS0069	84	86	NS	E411095	411095	1	G	W	29.77	36.8	1.02	0.426	0.33	0.048	2.52	4.47	0.098	0.036	0.465	0.138	0.49	6.3	4.21	11	10151	1.1016	77.96574	-76.86414	NAC
NS0070	184	186	NS	E411288	411288	1	G	W	21.91	50.95	4.08	0.297	0.23	0.195	4.41	0.93	0.045	2.6	0.462	0.126	0.43	2.11	3.44	5.98	10342	79.56	16.22106	63.33894	PAF(HC)
NS0070	62	64	NS	E411227	411227	1	G	W	17.77	56.03	8.18	0.103	0.08	0.398	3.68	0.62	0.054	1.2	0.275	0.077	0.52	2.98	1.01	4.51	10281	36.72	10.81404	25.90596	PAF(HC)
NS0070	64	66	NS	E411228	411228	1	G	W	18.81	54.22	7.81	0.129	0.1	0.382	3.74	0.65	0.052	0.959	0.444	0.095	0.72	3.02	1.27	5.01	10282	29.3454	11.3373	18.0081	PAF(HC)
NS0070	60	62	NS	E411226	411226	1	G	W	17.25	57.93	7.69	0.155	0.12	0.365	3.46	0.36	0.036	0.398	0.248	0.054	0.56	3.51	0.71	4.78	10280	12.1788	6.27912	5.89968	PAF(LC)
NS0070	362	364	NS	E411378	411378	1	G	W	30.35	39.6	4.52	0.426	0.33	0.203	5.13	0.3	0.048	0.331	0.813	0.26	0.78	3.69	0.63	5.1	10431	10.1286	5.2326	4.896	PAF(LC)
NS0070	58	60	NS	E411225	411225	1	G	W	23.06	47.1	6.06	0.374	0.29	0.283	3.99	0.44	0.076	0.401	0.936	0.174	1.08	5.37	1.03	7.48	10279	12.2706	7.67448	4.59612	PAF(LC)
NS0070	390	392	NS	E411392	411392	1	G	W	27.17	40.22	4.12	0.594	0.46	0.18	5.01	0.43	0.11	0.393	0.545	0.147	0.64	7.19	0.67	8.5	10445	12.0258	7.50006	4.52574	PAF(LC)
NS0070	66	68	NS	E411229	411229	1	G	W	24.07	45.24	4.63	0.439	0.34	0.22	3.45	0.56	0.098	0.428	0.963	0.177	1.13	7.09	1.06	9.28	10283	13.0968	9.76752	3.32928	PAF(LC)
NS0070	54	56	NS	E411223	411223	1	G	W	22.1	50.61	3.98	0.31	0.24	0.18	2.8	0.28	0.044	0.205	0.86	0.131	1.18	6.88	0.58	8.64	10277	6.273	4.88376	1.38924	PAF(LC)
NS0070	388	390	NS	E411391	411391	1	G	W	31.2	39.97	2.38	0.62	0.48	0.106	3.65	0.62	0.174	0.382	0.544	0.15	0.59	5.32	0.57	6.48	10444	11.6892	10.81404	0.87516	PAF(LC)
NS0070	6	8	NS	E411198	411198	1	G	W	38.44	29.91	5.71	0.026	0.02	0.234	0.04	0.04	0.016	0.031	0.007	0.014	7.14	1.46	0.26	8.86	10253	0.9486	0.69768	0.25092	PAF(LC)
NS0070	182	184	NS	E411287	411287	1	G	W	15.71	64.45	2.48	0.361	0.28	0.115	3.12	1.05	0.076	0.599	0.303	0.088	0.37	3.52	1.08	4.97	10341	18.3294	18.3141	0.0153	PAF(LC)
NS0070	4	6	NS	E411197	411197	1	G	W	39.5	25.77	7.37	-0.0129	-0.01	0.285	0.03	0.07	0.015	0.036	0.009	0.018	7.73	1.68	0.29	9.7	10252	1.1016	1.22094	-0.11934	NAF
NS0070	8	10	NS	E411199	411199	1	G	W	44.51	21.64	6.47	0.039	0.03	0.638	0.07	0.06	0.016	0.03	0.005	0.013	5.58	1.35	0.25	7.18	10254	0.918	1.04652	-0.12852	NAF
NS0070	2	4	NS	E411196	411196	1	G	W	40.58	22.81	9.1	-0.0129	-0.01	0.613	0.06	0.05	0.017	0.022	0.036	0.018	6.93	1.97	0.27	9.17	10251	0.6732	0.8721	-0.1989	NAF
NS0070	0	2	NS	E411195	411195	1	G	W	32.07	38.51	7.27	0.026	0.02	0.564	0.06	0.06	0.014	0.019	0.058	0.019	5.49	1.73	0.2	7.42	10250	0.5814	1.04652	-0.46512	NAF
NS0070	302	304	NS	E411348	411348	1	G	W	30.1	41.4	3.28	0.439	0.34	0.149	3.57	0.24	0.031	0.118	0.838	0.261	0.93	5.47	0.18	6.58	10401	3.6108	4.18608	-0.57528	NAF
NS0070	16	18	NS	E411204	411204	1	G	W	29.29	47.29	3.66	0.039	0.03	0.16	0.12	0.08	0.055	0.012	0.011	0.037	4.98	1.26	0.13	6.37	10258	0.3672	1.39536	-1.02816	NAF
NS0070	10	12	NS	E411200	411200	1	G	W	29.77	43.04	7.31	0.039	0.03	0.586	0.14	0.1	0.012	0.019	0.012	0.049	3.63	1.89	0.22	5.74	10255	0.5814	1.7442	-1.1628	NAF
NS0070	56	58	NS	E411224	411224	1	G	W	25.31	43.24	3.87	0.465	0.36	0.178	3.35	0.39	0.068	0.18	1.1	0.167	1.25	8.89	0.56	10.7	10278	5.508	6.80238	-1.29438	NAF
NS0070	68	70	NS	E411230	411230	1	G	W	26.14	40.83	3.22	0.465	0.36	0.146	3.19	0.42	0.053	0.193	0.648	0.128	1.2	11.55	0.57	13.32	10284	5.9058	7.32564	-1.41984	NAF
NS0070	12	14	NS	E411202	411202	1	G	W	27.35	46.35	6.22	0.026	0.02	0.276	0.14	0.11	0.011	0.014	0.011	0.051	5.28	1.97	0.22	7.47	10256	0.4284	1.91862	-1.49022	NAF
NS0070	386	388	NS	E411390	411390	1	G	W	33.62	39.18	2.84	0.452	0.35	0.131	3.58	0.26	0.042	0.095	0.685	0.186	0.62	3.62	-0.08	4.16	10443	2.907	4.53492	-1.62792	NAF
NS0070	14	16	NS	E411203	411203	1	G	W	30.6	44.84	3.57	0.026	0.02	0.161	0.14	0.12	0.041	0.012	0.01	0.054	5.62	1.29	0.18	7.09	10257	0.3672	2.09304	-1.72584	NAF
NS0070	180	182	NS	E411286	411286	1	G	W	20.38	57.32	3.05	0.349	0.27	0.141	3.5	0.92	0.022	0.464	0.516	0.117	0.43	3.3	0.71	4.44	10340	14.1984	16.04664	-1.84824	NAF
NS0070	18	20	NS	E411205	411205	1	G	W	27.25	48.04	4.98	0.052	0.04	0.2	0.2	0.14	0.047	0.011	0.023	0.054	5.12	1.7	0.17	6.99	10259	0.3366	2.44188	-2.10528	NAF
NS0070	94	96	NS	E411243	411243	1	G	W	21.35	49.19	5.97	0.258	0.2	0.297	3.12	1.99	0.039	1.06	0.865	0.232	0.91	3.44	1.67	6.02	10297	32.436	34.70958	-2.27358	NAF
NS0070	298	300	NS	E411346	411346	1	G	W	28.62	39.47	2.73	0.671	0.52	0.115	3.96	0.27	0.021	0.079	0.829	0.221	0.96	9.43	0.16	10.55	10399	2.4174	4.70934	-2.29194	NAF
NS0070	396	398	NS	E411395	411395	1	G	W	31.57	41.72	2.56	0.503	0.39	0.119	3.48	0.44	0.031	0.162	0.701	0.183	0.67	3.91	0.18	4.76	10448	4.9572	7.67448	-2.71728	NAF
NS0070	202	204	NS	E411297	411297	1	G	W	32.08	37.4	2.37	0.478	0.37	0.109	3.76	0.34	0.06	0.101	0.796	0.232	0.9	7.27	0.06	8.23	10351	3.0906	5.93028	-2.83968	NAF
NS0070	344	346	NS	E411369	411369	1	G	W	32.14	40.68	2.02	0.555	0.43	0.091	3.18	0.64	0.126	0.259	0.593	0.16	0.54	4.71	0.25	5.5	10422	7.9254	11.16288	-3.23748	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0070	38	40	NS	E411215	411215	1	G	W	13.82	62.97	8.68	0.09	0.07	0.4	1.52	0.2	0.032	0.008	1.2	0.064	1.88	2.61	0.23	4.72	10269	0.2448	3.4884	-3.2436	NAF
NS0070	176	178	NS	E411284	411284	1	G	W	26.58	48.7	3.18	0.374	0.29	0.143	3.62	0.42	0.039	0.121	0.558	0.162	0.55	3.76	0.13	4.44	10338	3.7026	7.32564	-3.62304	NAF
NS0070	394	396	NS	E411394	411394	1	G	W	29.8	44	3.04	0.426	0.33	0.135	3.76	0.43	0.018	0.124	0.757	0.196	0.69	3.44	0.11	4.24	10447	3.7944	7.50006	-3.70566	NAF
NS0070	346	348	NS	E411370	411370	1	G	W	33.09	40.11	1.73	0.555	0.43	0.077	2.83	0.67	0.079	0.253	0.488	0.128	0.43	4.45	0.28	5.16	10423	7.7418	11.68614	-3.94434	NAF
NS0070	206	208	NS	E411299	411299	1	G	W	31.22	40.52	2.71	0.374	0.29	0.189	3.53	0.39	0.072	0.09	0.72	0.207	0.69	5.75	0.02	6.46	10353	2.754	6.80238	-4.04838	NAF
NS0070	28	30	NS	E411210	411210	1	G	W	27.04	47.28	3.71	1.924	1.49	0.162	0.53	0.25	0.035	0.007	0.104	0.044	4.98	1.57	0.29	6.84	10264	0.2142	4.3605	-4.1463	NAF
NS0070	236	238	NS	E411315	411315	1	G	W	31.31	39.71	2.39	0.555	0.43	0.108	3.4	0.42	0.049	0.102	0.708	0.192	0.76	6.52	0.01	7.29	10368	3.1212	7.32564	-4.20444	NAF
NS0070	52	54	NS	E411222	411222	1	G	W	21.94	54.9	5.12	0.31	0.24	0.239	0.89	0.33	0.074	0.04	0.178	0.033	3.94	1.95	0.2	6.09	10276	1.224	5.75586	-4.53186	NAF
NS0070	44	46	NS	E411218	411218	1	G	W	24.23	54.96	2.83	0.374	0.29	0.125	0.77	0.27	0.047	0.005	0.107	0.026	4.25	1.16	0.13	5.54	10272	0.153	4.70934	-4.55634	NAF
NS0070	200	202	NS	E411296	411296	1	G	W	30.98	40.24	2.58	0.426	0.33	0.121	3.8	0.62	0.116	0.188	0.933	0.268	0.87	4.88	0.32	6.07	10350	5.7528	10.81404	-5.06124	NAF
NS0070	24	26	NS	E411208	411208	1	G	W	25.4	53.89	2.94	0.065	0.05	0.131	0.36	0.31	0.052	0.007	0.024	0.058	4.34	1.29	0.07	5.7	10262	0.2142	5.40702	-5.19282	NAF
NS0070	178	180	NS	E411285	411285	1	G	W	25.91	50.49	3.24	0.336	0.26	0.145	3.53	0.47	0.047	0.094	0.558	0.156	0.56	3.23	0.1	3.89	10339	2.8764	8.19774	-5.32134	NAF
NS0070	36	38	NS	E411214	411214	1	G	W	17.5	57.64	8.2	0.168	0.13	0.374	1.43	0.32	0.025	0.006	1.05	0.061	2.7	2.56	0.25	5.51	10268	0.1836	5.58144	-5.39784	NAF
NS0070	42	44	NS	E411217	411217	1	G	W	29.36	44.79	3.67	0.594	0.46	0.166	0.95	0.32	0.053	0.006	0.15	0.023	5.42	1.46	0.23	7.11	10271	0.1836	5.58144	-5.39784	NAF
NS0070	392	394	NS	E411393	411393	1	G	W	29.31	43.37	2.27	0.607	0.47	0.101	3.5	0.71	0.082	0.228	0.538	0.144	0.56	5.26	0.31	6.13	10446	6.9768	12.38382	-5.40702	NAF
NS0070	256	258	NS	E411325	411325	1	G	W	32.55	40.63	2.18	0.465	0.36	0.101	2.94	0.41	0.033	0.054	0.646	0.177	0.64	5.08	-0.07	5.65	10378	1.6524	7.15122	-5.49882	NAF
NS0070	22	24	NS	E411207	411207	1	G	W	32.12	42.39	3.17	0.065	0.05	0.137	0.42	0.33	0.053	0.007	0.036	0.059	5.4	1.42	0.11	6.93	10261	0.2142	5.75586	-5.54166	NAF
NS0070	260	262	NS	E411327	411327	1	G	W	31.61	42.33	2.39	0.426	0.33	0.113	2.84	0.51	0.078	0.104	0.696	0.182	0.65	4.35	0.02	5.02	10380	3.1824	8.89542	-5.71302	NAF
NS0070	238	240	NS	E411316	411316	1	G	W	32.94	39.12	2.22	0.503	0.39	0.1	3.06	0.44	0.063	0.062	0.716	0.2	0.68	5.57	-0.04	6.21	10369	1.8972	7.67448	-5.77728	NAF
NS0070	264	266	NS	E411329	411329	1	G	W	32.86	39.8	2.26	0.503	0.39	0.102	2.9	0.44	0.052	0.06	0.651	0.176	0.63	5.17	-0.07	5.73	10382	1.836	7.67448	-5.83848	NAF
NS0070	268	270	NS	E411331	411331	1	G	W	31.59	39.64	2.37	0.529	0.41	0.109	3.12	0.52	0.079	0.102	0.681	0.185	0.73	6.28	0.02	7.03	10384	3.1212	9.06984	-5.94864	NAF
NS0070	50	52	NS	E411221	411221	1	G	W	19.47	59.38	4.06	0.516	0.4	0.188	1.28	0.35	0.033	0.005	0.312	0.05	3.69	1.7	0.2	5.59	10275	0.153	6.1047	-5.9517	NAF
NS0070	40	42	NS	E411216	411216	1	G	W	20.11	57.93	5.08	0.349	0.27	0.249	0.99	0.36	0.045	0.01	0.273	0.04	3.61	1.8	0.22	5.63	10270	0.306	6.27912	-5.97312	NAF
NS0070	26	28	NS	E411209	411209	1	G	W	26.26	49.66	4.11	0.361	0.28	0.176	0.72	0.4	0.044	0.008	0.066	0.062	4.67	1.78	0.12	6.57	10263	0.2448	6.9768	-6.732	NAF
NS0070	310	312	NS	E411352	411352	1	G	W	33.24	39.46	1.57	0.529	0.41	0.07	2.62	0.47	0.059	0.044	0.612	0.168	0.62	5.95	-0.08	6.49	10405	1.3464	8.19774	-6.85134	NAF
NS0070	20	22	NS	E411206	411206	1	G	W	28.4	47.75	3.9	0.065	0.05	0.18	0.54	0.41	0.032	0.007	0.059	0.068	4.53	1.61	0.13	6.27	10260	0.2142	7.15122	-6.93702	NAF
NS0070	228	230	NS	E411311	411311	1	G	W	33.23	39.28	2.08	0.503	0.39	0.096	2.79	0.5	0.079	0.055	0.631	0.183	0.69	5.21	-0.09	5.81	10364	1.683	8.721	-7.038	NAF
NS0070	266	268	NS	E411330	411330	1	G	W	32.09	40.03	2.63	0.478	0.37	0.124	3.09	0.62	0.118	0.12	0.664	0.189	0.71	5.1	0.07	5.88	10383	3.672	10.81404	-7.14204	NAF
NS0070	258	260	NS	E411326	411326	1	G	W	31.71	40.88	2.29	0.465	0.36	0.107	2.99	0.52	0.07	0.058	0.708	0.192	0.69	5.38	-0.03	6.04	10379	1.7748	9.06984	-7.29504	NAF
NS0070	320	322	NS	E411357	411357	1	G	W	31.32	40.47	2.39	0.529	0.41	0.108	3.27	0.53	0.084	0.057	0.736	0.204	0.74	5.96	-0.03	6.67	10410	1.7442	9.24426	-7.50006	NAF
NS0070	364	366	NS	E411379	411379	1	G	W	34.11	38.88	2.03	0.555	0.43	0.092	3.19	0.55	0.052	0.068	0.491	0.186	0.56	4.27	-0.02	4.81	10432	2.0808	9.5931	-7.5123	NAF
NS0070	46	48	NS	E411219	411219	1	G	W	23.83	51.24	5	0.168	0.13	0.226	1.39	0.44	0.038	0.005	0.355	0.063	4.38	1.93	0.23	6.54	10273	0.153	7.67448	-7.52148	NAF
NS0070	306	308	NS	E411350	411350	1	G	W	30.2	42.25	2.42	0.503	0.39	0.111	3.2	0.54	0.035	0.061	0.756	0.187	0.75	5.79	0.15	6.69	10403	1.8666	9.41868	-7.55208	NAF
NS0070	204	206	NS	E411298	411298	1	G	W	31.08	38.23	1.91	0.503	0.39	0.086	3.55	0.62	0.124	0.099	0.678	0.202	0.83	8.22	0.07	9.12	10352	3.0294	10.81404	-7.78464	NAF
NS0070	30	32	NS	E411211	411211	1	G	W	28.54	43.04	5.09	1.007	0.78	0.224	1	0.47	0.065	0.008	0.151	0.049	5.18	2.18	0.2	7.56	10265	0.2448	8.19774	-7.95294	NAF
NS0070	304	306	NS	E411349	411349	1	G	W	29.33	41.11	2.82	0.529	0.41	0.127	3.54	0.64	0.123	0.103	0.827	0.222	0.88	6.91	0.2	7.99	10402	3.1518	11.16288	-8.01108	NAF
NS0070	90	92	NS	E411241	411241	1	G	W	26.66	43.39	3.8	0.478	0.37	0.18	2.89	0.79	0.036	0.18	0.836	0.231	0.97	7.58	0.44	8.99	10295	5.508	13.77918	-8.27118	NAF
NS0070	222	224	NS	E411308	411308	1	G	W	28.68	45.11	2.51	0.439	0.34	0.117	3.07	0.62	0.069	0.073	0.72	0.213	0.8	4.91	0.16	5.87	10361	2.2338	10.81404	-8.58024	NAF
NS0070	208	210	NS	E411300	411300	1	G	W	34.31	38.4	1.9	0.426	0.33	0.088	2.88	0.62	0.082	0.072	0.718	0.204	0.71	4.42	0.05	5.18	10354	2.2032	10.81404	-8.61084	NAF
NS0070	48	50	NS	E411220	411220	1	G	W	20.39	53.42	6.93	0.129	0.1	0.315	1.78	0.51	0.035	0.007	0.484	0.058	3.92	2.55	0.23	6.7	10274	0.2142	8.89542	-8.68122	NAF
NS0070	32	34	NS	E411212	411212	1	G	W	30.19	43.35	3.99	0.4	0.31	0.184	0.91	0.51	0.059	0.006	0.136	0.051	5.16	1.78	0.13	7.07	10266	0.1836	8.89542	-8.71182	NAF
NS0070	220	222	NS	E411307	411307	1	G	W	31.11	41.34	2.11	0.503	0.39	0.096	2.96	0.62	0.109	0.067	0.699	0.201	0.78	5.91	0.01	6.7	10360	2.0502	10.81404	-8.76384	NAF
NS0070	230	232	NS	E411312	411312	1	G	W	32.89	38.93	2.32	0.529	0.41	0.105	3.01	0.62	0.083	0.066	0.641	0.174	0.67	5.63	-0.01	6.29	10365	2.0196	10.81404	-8.79444	NAF
NS0070	224	226	NS	E411309	411309	1	G	W	31.16	42.23	2.14	0.478	0.37	0.096	2.83	0.61	0.093	0.06	0.619	0.173	0.67	5.28	0.01	5.96	10362	1.836	10.63962	-8.80362	NAF
NS0070	342	344	NS	E411368	411368	1	G	W	31.84	41.7	1.82	0.542	0.42	0.081	2.93	0.63	0.095	0.069	0.566	0.151	0.58	5.01	0.02	5.61	10421	2.1114	10.98846	-8.87706	NAF
NS0070	34	36	NS	E411213	411213	1	G	W	27.97	43.76	5.31	0.658	0.51	0.243	1.21	0.52	0.053	0.006	0.223	0.049	5.27	2.18	0.17	7.62	10267	0.1836	9.06984	-8.88624	NAF
NS0070	262	264	NS	E411328	411328	1	G	W	32.75	39.43	2.21	0.503	0.39	0.097	2.94	0.62	0.091	0.063	0.675	0.186	0.69	5.34	0.01	6.04	10381	1.9278	10.81404	-8.88624	NAF
NS0070	226	228	NS	E411310	411310	1	G	W	32.22	41.15	2.27	0.426	0.33	0.104	2.87	0.61	0.082	0.055	0.733	0.21	0.73	4.39	0.01	5.13	10363	1.683	10.63962	-8.95662	NAF
NS0070	74	76	NS	E411233	411233	1	G	W	26.07	44.84	2.21	0.374	0.29	0.1	2.82	0.68	0.11	0.09	0.678	0.178	0.88	9.48	0.12	10.48	10287	2.754	11.86056	-9.10656	NAF
NS0070	70	72	NS	E411231	411231	1	G	W	26.5	44.02	2.09	0.374	0.29	0.095	2.53	0.73	0.082	0.116	0.536	0.134	0.81	10.01	0.14	10.96	10285	3.5496	12.73266	-9.18306	NAF
NS0070	296	298	NS	E411345	411345	1	G	W	27.36	41.11	3.41	0.594	0.46	0.149	4.16	0.76	0.155	0.131	0.931	0.249	1	7.89	0.4	9.29	10398	4.0086	13.25592	-9.24732	NAF
NS0070	234	236	NS	E411314	411314	1	G	W	31.4	40.83	2.28	0.503	0.39	0.107	3.01	0.69	0.106	0.09	0.71	0.2	0.68	5.57	0	6.25	10367	2.754	12.03498	-9.28098	NAF
NS0070	316	318	NS	E411355	411355	1	G	W	31.13	41.99	2.12	0.516	0.4	0.097	3	0.67	0.072	0.075	0.7	0.183	0.7	5.21	0.12	6.03	10408	2.295	11.68614	-9.39114	NAF
NS0070	216	218	NS	E411305	411305	1	G	W	28.38	45.5	2.31	0.374	0.29	0.109	2.97	0.68	0.07	0.076	0.777	0.216	0.82	4.85	0.21	5.88	10358	2.3256	11.86056	-9.53496	NAF
NS0070	384	386	NS	E411389	411389	1	G	W	35.39	39.54	1.46	0.503	0.39	0.064	2.45	0.6	0.083	0.026	0.452	0.123	0.44	3.49	-0.17	3.76	10442	0.7956	10.4652	-9.6696	NAF
NS0070	244	246	NS	E411319	411319	1	G	W	32.01	40.8	2.22	0.503	0.39	0.104	3.03	0.67	0.048	0.055	0.689	0.2	0.66	5.1	0.03	5.79	10372	1.683	11.68614	-10.00314	NAF
NS0070	286	288	NS	E411340	411340	1	G	W	33.28	39.15	2.65	0.387	0.3	0.116	3.1	0.71	0.077	0.067	0.722	0.191	0.66	4.23	0.07	4.96	10393	2.0502	12.38382	-10.33362	NAF
NS0070	218	220	NS	E411306	411306	1	G	W	29.71	42.64	2.48	0.465	0.36	0.118	3.23	0.72	0.168	0.071	0.796	0.222	0.8	5.56	0.03	6.39	10359	2.1726	12.55824	-10.38564	NAF
NS0070	272	274	NS	E411333	411333	1	G	W	31.33	42.04	2.23	0.439	0.34	0.102	2.92	0.69	0.085	0.053	0.691	0.192	0.66	4.85	0.02	5.53	10386	1.6218	12.03498	-10.41318	NAF
NS0070	300	302	NS	E411347	411347	1	G	W	29.03	40.6	2.47	0.62	0.48	0.111	3.6	0.76	0.136	0.079	0.8	0.212	0.96	7.87	0.19	9.02	10400	2.4174	13.25592	-10.83852	NAF
NS0070	76	78	NS	E411234	411234	1	G	W	27.35	42.97	2.43	0.336	0.26	0.113	2.94	0.82	0.069	0.104	0.71	0.206	0.93	8.73	0.26	9.92	10288	3.1824	14.30244	-11.12004	NAF
NS0070	174	176	NS	E411283	411283	1	G	W	27.27	48.24	2.88	0.374	0.29	0.132	3.47	0.79	0.071	0.084	0.639	0.173	0.57	3.01	0.23	3.81	10337	2.5704	13.77918	-11.20878	NAF
NS0070	284	286	NS	E411339	411339	1	G	W	29.22	42.18	2.78	0.529	0.41	0.123	3.49	0.81	0.075	0.086	0.801	0.212	0.84	5.78	0.32	6.94	10392	2.6316	14.12802	-11.49642	NAF
NS0070	352	354	NS	E411373	411373	1	G	W	34.11	38.82	1.4	0.646	0.5	0.065	2.74	1.14	0.104	0.274	0.454	0.122	0.39	4.44	0.44	5.27	10426	8.3844	19.88388	-11.49948	NAF
NS0070	398	400	NS	E411396	411396	1	G	W	30.1	43.76	1.88	0.581	0.45	0.085	3.03	0.91	0.089	0.138	0.529	0.139	0.52	4.66	0.24	5.42	10449	4.2228	15.87222	-11.64942	NAF
NS0070	308	310	NS	E411351	411351	1	G	W	30.93	41.46	1.72	0.555	0.43	0.076	2.82	0.76	0.094	0.046	0.619	0.168	0.62	6.58	0.08	7.28	10404	1.4076	13.25592	-11.84832	NAF
NS0070	358	360	NS	E411376	411376	1	G	W	34.57	36.51	1.39	0.839	0.65	0.062	2.96	1.15	0.176	0.267	0.444	0.121	0.39	5.62	0.37	6.38	10429	8.1702	20.0583	-11.8881	NAF
NS0070	276	278	NS	E411335	411335	1	G	W	35.09	36.9	3.26	0.297	0.23	0.29	2.42	0.79	0.07	0.058	0.558	0.163	1.19	3.35	0.23	4.77	10388	1.7748	13.77918	-12.00438	NAF
NS0070	242	244	NS	E411318	411318	1	G	W	29.95	42.55	2.52	0.465	0.36	0.115	3.21	0.92	0.072	0.116	0.652	0.185	0.66	5.08	0.24	5.98	10371	3.5496	16.04664	-12.49704	NAF
NS0070	382	384	NS	E411388	411388	1	G	W	34.65	40.03	1.08	0.684	0.53	0.046	2.4	0.77	0.055	0.023	0.36	0.1	0.35	4.65	-0.06	4.94	10441	0.7038	13.43034	-12.72654	NAF
NS0070	84	86	NS	E411238	411238	1	G	W	26.03	43.09	3.23	0.349	0.27	0.151	3.12	0.95	0.119	0.118	0.855	0.227	1.05	8.71	0.36	10.12	10292	3.6108	16.5699	-12.9591	NAF
NS0070	148	150	NS	E411270	411270	1	G	W	33.82	40.86	2.01	0.426	0.33	0.094	2.62	0.89	0.052	0.081	0.497	0.118	0.42	3.43	0.12	3.97	10324	2.4786	15.52338	-13.04478	NAF
NS0070	146	148	NS	E411269	411269	1	G	W	33.27	42.59	1.77	0.387	0.3	0.079	2.37	0.84	0.024	0.05	0.407	0.1	0.31	3.18	0.2	3.69	10323	1.53	14.65128	-13.12128	NAF
NS0070	214	216	NS	E411304	411304	1	G	W	34.02	37.11	2.09	0.4	0.31	0.095	3.1	0.9	0.136	0.081	0.678	0.187	0.66	5.53	0.08	6.27	10357	2.4786	15.6978	-13.2192	NAF
NS0070	282	284	NS	E411338	411338	1	G	W	34.26	37.29	2.43	0.503	0.39	0.17	2.77	0.86	0.101	0.054	0.64	0.177	0.85	5.04	0.14	6.03	10391	1.6524	15.00012	-13.34772	NAF
NS0070	166	168	NS	E411279	411279	1	G	W	32.18	43.36	2.42	0.349	0.27	0.115	2.88	0.95	0.041	0.105	0.551	0.114	0.38	2.45	0.25	3.08	10333	3.213	16.5699	-13.3569	NAF
NS0070	248	250	NS	E411321	411321	1	G	W	32.58	41.73	2.03	0.387	0.3	0.09	2.69	0.88	0.067	0.052	0.672	0.194	0.6	3.71	0.07	4.38	10374	1.5912	15.34896	-13.75776	NAF
NS0070	318	320	NS	E411356	411356	1	G	W	30.26	42.31	2.09	0.529	0.41	0.095	3.06	0.88	0.117	0.051	0.666	0.192	0.66	5.76	0.17	6.59	10409	1.5606	15.34896	-13.78836	NAF
NS0070	270	272	NS	E411332	411332	1	G	W	30.93	41.78	2.32	0.452	0.35	0.108	3.06	0.91	0.081	0.064	0.739	0.202	0.78	5.07	0.23	6.08	10385	1.9584	15.87222	-13.91382	NAF
NS0070	254	256	NS	E411324	411324	1	G	W	26.88	45.99	3.35	0.4	0.31	0.155	3.62	1.05	0.034	0.133	0.644	0.174	0.64	4.43	0.64	5.71	10377	4.0698	18.3141	-14.2443	NAF
NS0070	280	282	NS	E411337	411337	1	G	W	32.23	39.69	2.32	0.465	0.36	0.105	2.99	0.93	0.074	0.063	0.679	0.184	0.65	5.03	0.25	5.93	10390	1.9278	16.22106	-14.29326	NAF
NS0070	376	378	NS	E411385	411385	1	G	W	36.83	37.37	1.68	0.465	0.36	0.072	2.66	0.88	0.083	0.033	0.461	0.131	0.39	2.96	0.03	3.38	10438	1.0098	15.34896	-14.33916	NAF
NS0070	360	362	NS	E411377	411377	1	G	W	31.26	42.87	1.35	0.633	0.49	0.06	2.74	0.97	0.081	0.084	0.383	0.122	0.4	5	0.23	5.63	10430	2.5704	16.91874	-14.34834	NAF
NS0070	72	74	NS	E411232	411232	1	G	W	29.01	40.06	3.51	0.284	0.22	0.159	3.26	1.12	0.137	0.164	1.01	0.242	1.1	6.57	0.53	8.2	10286	5.0184	19.53504	-14.51664	NAF
NS0070	86	88	NS	E411239	411239	1	G	W	24.11	46.45	3.35	0.349	0.27	0.159	2.93	1.06	0.042	0.122	0.728	0.215	0.91	8.24	0.62	9.77	10293	3.7332	18.48852	-14.75532	NAF
NS0070	356	358	NS	E411375	411375	1	G	W	36.93	35.13	1.17	0.749	0.58	0.049	2.59	0.9	0.076	0.03	0.353	0.094	0.38	5.27	0.09	5.74	10428	0.918	15.6978	-14.7798	NAF
NS0070	322	324	NS	E411358	411358	1	G	W	30.56	40	2.38	0.594	0.46	0.109	3.45	1.13	0.073	0.16	0.66	0.187	0.7	6.12	0.51	7.33	10411	4.896	19.70946	-14.81346	NAF
NS0070	172	174	NS	E411282	411282	1	G	W	28.74	46.78	2.78	0.336	0.26	0.128	3.19	0.98	0.065	0.071	0.669	0.156	0.52	2.48	0.32	3.32	10336	2.1726	17.09316	-14.92056	NAF
NS0070	274	276	NS	E411334	411334	1	G	W	32.69	39.25	2.92	0.374	0.29	0.218	2.49	0.96	0.058	0.057	0.584	0.161	1.35	4.05	0.48	5.88	10387	1.7442	16.74432	-15.00012	NAF
NS0070	290	292	NS	E411342	411342	1	G	W	34.1	38.93	2.07	0.374	0.29	0.093	2.76	0.94	0.086	0.042	0.705	0.192	0.65	3.7	0.23	4.58	10395	1.2852	16.39548	-15.11028	NAF
NS0070	378	380	NS	E411386	411386	1	G	W	33.95	38.72	2.17	0.542	0.42	0.091	3.27	0.96	0.069	0.047	0.581	0.153	0.53	3.63	0.29	4.45	10439	1.4382	16.74432	-15.30612	NAF
NS0070	246	248	NS	E411320	411320	1	G	W	32.3	40.15	1.9	0.503	0.39	0.085	2.86	1.02	0.095	0.048	0.662	0.19	0.65	5.05	0.17	5.87	10373	1.4688	17.79084	-16.32204	NAF
NS0070	144	146	NS	E411268	411268	1	G	W	32.75	43.07	1.87	0.361	0.28	0.087	2.34	1.04	0.046	0.059	0.425	0.103	0.31	2.91	0.33	3.55	10322	1.8054	18.13968	-16.33428	NAF
NS0070	374	376	NS	E411384	411384	1	G	W	35.23	38.55	1.57	0.555	0.43	0.069	2.7	1.04	0.092	0.033	0.459	0.122	0.39	3.64	0.22	4.25	10437	1.0098	18.13968	-17.12988	NAF
NS0070	210	212	NS	E411302	411302	1	G	W	27.96	50.22	1.64	0.258	0.2	0.077	2.17	1.07	0.087	0.05	0.508	0.141	0.53	2.66	0.47	3.66	10355	1.53	18.66294	-17.13294	NAF
NS0070	88	90	NS	E411240	411240	1	G	W	23.72	45.38	6.13	0.271	0.21	0.29	3.88	1.7	0.095	0.389	1.17	0.306	1.11	3.83	1.34	6.28	10294	11.9034	29.6514	-17.748	NAF
NS0070	338	340	NS	E411366	411366	1	G	W	32.56	38.56	2.42	0.529	0.41	0.108	3.48	1.19	0.059	0.097	0.691	0.19	0.66	4.62	0.55	5.83	10419	2.9682	20.75598	-17.78778	NAF
NS0070	314	316	NS	E411354	411354	1	G	W	31.2	42.38	1.9	0.465	0.36	0.086	2.79	1.12	0.084	0.052	0.617	0.165	0.55	4.63	0.43	5.61	10407	1.5912	19.53504	-17.94384	NAF
NS0070	380	382	NS	E411387	411387	1	G	W	34.7	38.55	1.21	0.723	0.56	0.054	2.62	1.11	0.114	0.035	0.403	0.109	0.4	4.64	0.23	5.27	10440	1.071	19.36062	-18.28962	NAF
NS0070	240	242	NS	E411317	411317	1	G	W	29.34	44.17	2.19	0.439	0.34	0.102	3	1.2	0.113	0.082	0.694	0.205	0.7	4.59	0.36	5.65	10370	2.5092	20.9304	-18.4212	NAF
NS0070	250	252	NS	E411322	411322	1	G	W	32.68	39.45	1.94	0.503	0.39	0.087	2.89	1.16	0.062	0.054	0.627	0.179	0.61	5.09	0.37	6.07	10375	1.6524	20.23272	-18.58032	NAF
NS0070	212	214	NS	E411303	411303	1	G	W	28.76	47.34	1.58	0.323	0.25	0.071	2.42	1.16	0.08	0.049	0.541	0.148	0.49	3.73	0.56	4.78	10356	1.4994	20.23272	-18.73332	NAF
NS0070	368	370	NS	E411381	411381	1	G	W	34.57	39.45	0.94	0.684	0.53	0.041	2.3	1.13	0.107	0.028	0.311	0.095	0.28	4.7	0.24	5.22	10434	0.8568	19.70946	-18.85266	NAF
NS0070	82	84	NS	E411237	411237	1	G	W	27.11	42.57	2.56	0.336	0.26	0.118	2.85	1.33	0.089	0.131	0.76	0.192	0.95	8.44	0.58	9.97	10291	4.0086	23.19786	-19.18926	NAF
NS0070	150	152	NS	E411271	411271	1	G	W	33.15	41.23	2.3	0.374	0.29	0.108	2.67	1.22	0.083	0.068	0.668	0.139	0.44	2.54	0.44	3.42	10325	2.0808	21.27924	-19.19844	NAF
NS0070	348	350	NS	E411371	411371	1	G	W	30.5	42.63	1.18	0.775	0.6	0.049	2.66	1.21	0.075	0.062	0.344	0.096	0.34	6.14	0.5	6.98	10424	1.8972	21.10482	-19.20762	NAF
NS0070	340	342	NS	E411367	411367	1	G	W	31.58	41.73	1.62	0.529	0.41	0.074	2.73	1.18	0.099	0.039	0.54	0.14	0.49	4.99	0.43	5.91	10420	1.1934	20.58156	-19.38816	NAF
NS0070	288	290	NS	E411341	411341	1	G	W	31.7	40.68	3.23	0.374	0.29	0.2	2.74	1.26	0.117	0.081	0.634	0.172	0.89	3.56	0.53	4.98	10394	2.4786	21.97692	-19.49832	NAF
NS0070	366	368	NS	E411380	411380	1	G	W	32.93	41.43	1.07	0.684	0.53	0.048	2.5	1.19	0.104	0.033	0.326	0.082	0.39	4.76	0.31	5.46	10433	1.0098	20.75598	-19.74618	NAF
NS0070	294	296	NS	E411344	411344	1	G	W	30.96	40.72	2.2	0.491	0.38	0.103	3.08	1.3	0.086	0.091	0.698	0.187	0.7	5.32	0.65	6.67	10397	2.7846	22.6746	-19.89	NAF
NS0070	312	314	NS	E411353	411353	1	G	W	27.71	42.17	1.9	0.697	0.54	0.088	3.17	1.3	0.147	0.089	0.568	0.151	0.69	8.38	0.43	9.5	10406	2.7234	22.6746	-19.9512	NAF
NS0070	92	94	NS	E411242	411242	1	G	W	23.31	46.39	4.17	0.465	0.36	0.197	2.93	1.64	0.021	0.278	0.761	0.192	0.97	7.31	0.98	9.26	10296	8.5068	28.60488	-20.09808	NAF
NS0070	354	356	NS	E411374	411374	1	G	W	33.78	38.45	1.36	0.736	0.57	0.06	2.8	1.31	0.119	0.068	0.405	0.102	0.35	5.35	0.44	6.14	10427	2.0808	22.84902	-20.76822	NAF
NS0070	196	198	NS	E411294	411294	1	G	W	29.03	47.07	1.48	0.426	0.33	0.067	2.52	1.28	0.061	0.038	0.536	0.153	0.44	3.47	0.72	4.63	10348	1.1628	22.32576	-21.16296	NAF
NS0070	192	194	NS	E411292	411292	1	G	W	28.16	48.41	1.71	0.31	0.24	0.079	2.7	1.61	0.059	0.216	0.598	0.171	0.46	2.08	0.92	3.46	10346	6.6096	28.08162	-21.47202	NAF
NS0070	350	352	NS	E411372	411372	1	G	W	34.34	37.75	1.14	0.736	0.57	0.048	2.61	1.35	0.094	0.029	0.375	0.113	0.39	5.35	0.52	6.26	10425	0.8874	23.5467	-22.6593	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0070	96	98	NS	E411244	411244	1	G	W	24.04	50.56	2.91	0.323	0.25	0.135	2.08	1.73	0.042	0.243	0.664	0.18	0.72	4.81	0.85	6.38	10298	7.4358	30.17466	-22.73886	NAF
NS0070	292	294	NS	E411343	411343	1	G	W	34.82	37.74	1.66	0.413	0.32	0.075	2.58	1.37	0.092	0.027	0.605	0.167	0.56	4	0.62	5.18	10396	0.8262	23.89554	-23.06934	NAF
NS0070	158	160	NS	E411275	411275	1	G	W	33.34	41.5	2.18	0.374	0.29	0.101	2.56	1.43	0.076	0.055	0.586	0.133	0.42	2.1	0.64	3.16	10329	1.683	24.94206	-23.25906	NAF
NS0070	80	82	NS	E411236	411236	1	G	W	26.71	45.63	1.64	0.31	0.24	0.076	2.26	1.49	0.071	0.07	0.575	0.155	0.68	7.71	0.76	9.15	10290	2.142	25.98858	-23.84658	NAF
NS0070	194	196	NS	E411293	411293	1	G	W	31.32	43.3	1.4	0.452	0.35	0.063	2.61	1.45	0.074	0.047	0.497	0.147	0.45	3.6	0.72	4.77	10347	1.4382	25.2909	-23.8527	NAF
NS0070	128	130	NS	E411260	411260	1	G	W	31.53	42.14	2.29	0.465	0.36	0.107	2.54	1.51	0.078	0.069	0.399	0.095	0.48	3.89	0.61	4.98	10314	2.1114	26.33742	-24.22602	NAF
NS0070	332	334	NS	E411363	411363	1	G	W	31.74	39.32	2.54	0.465	0.36	0.113	3.52	1.56	0.024	0.071	0.644	0.166	0.59	4.06	1.13	5.78	10416	2.1726	27.20952	-25.03692	NAF
NS0070	78	80	NS	E411235	411235	1	G	W	28.83	41.5	2.66	0.284	0.22	0.125	2.87	1.72	0.181	0.161	0.841	0.23	0.9	6.27	0.75	7.92	10289	4.9266	30.00024	-25.07364	NAF
NS0070	278	280	NS	E411336	411336	1	G	W	30.06	41.75	2.29	0.491	0.38	0.107	3.13	1.6	0.178	0.092	0.641	0.174	0.64	5.19	0.6	6.43	10389	2.8152	27.9072	-25.092	NAF
NS0070	336	338	NS	E411365	411365	1	G	W	32.26	39.62	2.21	0.503	0.39	0.1	3.27	1.57	0.11	0.058	0.623	0.172	0.62	4.13	0.75	5.5	10418	1.7748	27.38394	-25.60914	NAF
NS0070	98	100	NS	E411245	411245	1	G	W	24.3	44.59	5.04	0.413	0.32	0.232	2.92	2.6	0.053	0.643	0.943	0.247	0.97	3.98	1.64	6.59	10299	19.6758	45.3492	-25.6734	NAF
NS0070	190	192	NS	E411291	411291	1	G	W	28.99	48.48	1.7	0.258	0.2	0.079	2.5	1.58	0.048	0.06	0.53	0.149	0.39	1.52	1.02	2.93	10345	1.836	27.55836	-25.72236	NAF
NS0070	168	170	NS	E411280	411280	1	G	W	31.14	44.43	2.17	0.323	0.25	0.103	2.65	1.58	0.053	0.057	0.6	0.124	0.35	1.95	0.87	3.17	10334	1.7442	27.55836	-25.81416	NAF
NS0070	186	188	NS	E411289	411289	1	G	W	27.76	48.94	1.9	0.284	0.22	0.088	2.67	1.74	0.066	0.146	0.551	0.144	0.4	1.66	1.1	3.16	10343	4.4676	30.34908	-25.88148	NAF
NS0070	330	332	NS	E411362	411362	1	G	W	33.63	38.36	2.05	0.478	0.37	0.092	3.03	1.61	0.066	0.046	0.569	0.158	0.53	3.74	0.95	5.22	10415	1.4076	28.08162	-26.67402	NAF
NS0070	164	166	NS	E411278	411278	1	G	W	29.34	44.01	2.66	0.426	0.33	0.124	3.32	1.67	0.085	0.08	0.721	0.134	0.5	3.05	0.95	4.5	10332	2.448	29.12814	-26.68014	NAF
NS0070	370	372	NS	E411382	411382	1	G	W	30.35	43.63	1.05	0.684	0.53	0.046	2.6	1.6	0.086	0.028	0.37	0.107	0.42	4.73	0.83	5.98	10435	0.8568	27.9072	-27.0504	NAF
NS0070	198	200	NS	E411295	411295	1	G	W	25.32	52.11	1.72	0.245	0.19	0.077	2.75	1.7	0.064	0.072	0.648	0.183	0.55	2.07	1.1	3.72	10349	2.2032	29.6514	-27.4482	NAF
NS0070	334	336	NS	E411364	411364	1	G	W	31.59	39.95	2.47	0.465	0.36	0.112	3.43	1.69	0.055	0.058	0.637	0.167	0.58	3.85	1.21	5.64	10417	1.7748	29.47698	-27.70218	NAF
NS0070	232	234	NS	E411313	411313	1	G	W	26.32	45.22	2.57	0.529	0.41	0.116	3.28	1.79	0.194	0.111	0.591	0.166	0.7	5.83	0.76	7.29	10366	3.3966	31.22118	-27.82458	NAF
NS0070	326	328	NS	E411360	411360	1	G	W	36.77	34.93	1.64	0.555	0.43	0.072	2.58	1.69	0.127	0.037	0.489	0.126	0.45	3.93	0.71	5.09	10413	1.1322	29.47698	-28.34478	NAF
NS0070	372	374	NS	E411383	411383	1	G	W	35.08	36.81	1.13	0.71	0.55	0.048	2.69	1.71	0.138	0.033	0.398	0.1	0.39	4.64	0.77	5.8	10436	1.0098	29.82582	-28.81602	NAF
NS0070	152	154	NS	E411272	411272	1	G	W	33.11	41.08	1.7	0.439	0.34	0.076	2.46	1.75	0.079	0.045	0.526	0.119	0.4	2.92	0.89	4.21	10326	1.377	30.5235	-29.1465	NAF
NS0070	124	126	NS	E411258	411258	1	G	W	31.24	40.16	2.7	0.542	0.42	0.129	2.98	1.86	0.08	0.084	0.587	0.124	0.46	4.39	1.1	5.95	10312	2.5704	32.44212	-29.87172	NAF
NS0070	132	134	NS	E411262	411262	1	G	W	29.73	45.01	2.14	0.4	0.31	0.105	2.37	1.86	0.101	0.056	0.574	0.113	0.4	3.03	0.99	4.42	10316	1.7136	32.44212	-30.72852	NAC
NS0070	134	136	NS	E411263	411263	1	G	W	32.26	41.1	2.04	0.439	0.34	0.096	2.39	1.88	0.128	0.05	0.644	0.113	0.39	3.15	0.96	4.5	10317	1.53	32.79096	-31.26096	NAC
NS0070	154	156	NS	E411273	411273	1	G	W	32	42.3	1.82	0.4	0.31	0.087	2.46	1.97	0.059	0.076	0.511	0.128	0.42	2.24	1.33	3.99	10327	2.3256	34.36074	-32.03514	NAC
NS0070	160	162	NS	E411276	411276	1	G	W	31.01	43.18	2.12	0.374	0.29	0.1	2.55	2.02	0.079	0.097	0.512	0.141	0.42	2.48	1.32	4.22	10330	2.9682	35.23284	-32.26464	NAC
NS0070	170	172	NS	E411281	411281	1	G	W	30.91	44.51	2.11	0.297	0.23	0.097	2.62	1.97	0.072	0.056	0.542	0.111	0.34	1.66	1.23	3.23	10335	1.7136	34.36074	-32.64714	NAC
NS0070	104	106	NS	E411248	411248	1	G	W	29.43	40.51	3.34	0.503	0.39	0.154	2.76	2.06	0.074	0.106	0.948	0.254	0.91	4.6	1.34	6.85	10302	3.2436	35.93052	-32.68692	NAC
NS0070	252	254	NS	E411323	411323	1	G	W	26.24	44.15	3.08	0.465	0.36	0.14	3.69	2.19	0.242	0.1	0.651	0.181	0.68	5.08	1.21	6.97	10376	3.06	38.19798	-35.13798	NAC
NS0070	324	326	NS	E411359	411359	1	G	W	30.42	42.02	1.72	0.555	0.43	0.073	2.75	2.16	0.112	0.076	0.476	0.13	0.48	4.22	1.4	6.1	10412	2.3256	37.67472	-35.34912	NAC
NS0070	126	128	NS	E411259	411259	1	G	W	25.17	50.56	1.84	0.439	0.34	0.086	2.34	2.24	0.062	0.098	0.329	0.086	0.33	3.69	1.61	5.63	10313	2.9988	39.07008	-36.07128	NAC
NS0070	156	158	NS	E411274	411274	1	G	W	30.07	43.51	2.22	0.426	0.33	0.101	2.68	2.29	0.052	0.092	0.685	0.114	0.33	2.25	1.86	4.44	10328	2.8152	39.94218	-37.12698	NAC
NS0070	116	118	NS	E411254	411254	1	G	W	29.76	41.01	3.46	0.361	0.28	0.166	3.09	2.61	0.073	0.25	0.36	0.112	0.4	3.27	1.78	5.45	10308	7.65	45.52362	-37.87362	NAC
NS0070	328	330	NS	E411361	411361	1	G	W	30.83	43.6	1.09	0.555	0.43	0.048	2.14	2.28	0.095	0.034	0.332	0.082	0.29	3.27	1.59	5.15	10414	1.0404	39.76776	-38.72736	NAC
NS0070	162	164	NS	E411277	411277	1	G	W	26.22	48.21	2.07	0.465	0.36	0.096	2.84	2.48	0.084	0.128	0.556	0.12	0.43	2.85	1.82	5.1	10331	3.9168	43.25616	-39.33936	NAC
NS0070	142	144	NS	E411267	411267	1	G	W	26.43	47.13	2.88	0.361	0.28	0.131	3.05	2.44	0.2	0.094	0.696	0.125	0.45	2.87	1.44	4.76	10321	2.8764	42.55848	-39.68208	NAC
NS0070	188	190	NS	E411290	411290	1	G	W	28.77	48.47	1.25	0.271	0.21	0.057	2.14	2.35	0.063	0.036	0.436	0.117	0.37	1.38	1.44	3.19	10344	1.1016	40.9887	-39.8871	NAC
NS0070	118	120	NS	E411255	411255	1	G	W	31.67	40.75	2.15	0.426	0.33	0.1	2.47	2.46	0.109	0.089	0.362	0.109	0.42	3.44	1.49	5.35	10309	2.7234	42.90732	-40.18392	NAC
NS0070	130	132	NS	E411261	411261	1	G	W	28.89	45.85	1.71	0.426	0.33	0.081	2.22	2.43	0.072	0.046	0.388	0.087	0.3	2.89	1.75	4.94	10315	1.4076	42.38406	-40.97646	NAC
NS0070	102	104	NS	E411247	411247	1	G	W	26.81	41.78	3.78	0.491	0.38	0.172	3.03	2.75	0.049	0.195	0.85	0.22	0.89	4.91	2.22	8.02	10301	5.967	47.9655	-41.9985	NAC
NS0070	138	140	NS	E411265	411265	1	G	W	28.95	45.75	1.75	0.4	0.31	0.082	2.27	2.56	0.077	0.046	0.587	0.102	0.32	2.48	1.9	4.7	10319	1.4076	44.65152	-43.24392	NAC
NS0070	140	142	NS	E411266	411266	1	G	W	33.4	39.68	1.56	0.413	0.32	0.076	2.21	2.57	0.076	0.036	0.578	0.097	0.26	2.31	1.87	4.44	10320	1.1016	44.82594	-43.72434	NAC
NS0070	110	112	NS	E411251	411251	1	G	W	29.06	38.92	3.04	0.555	0.43	0.141	3.15	2.82	0.091	0.108	0.734	0.21	0.76	5.25	2.2	8.21	10305	3.3048	49.18644	-45.88164	NAC
NS0070	106	108	NS	E411249	411249	1	G	W	21.99	54.59	2.37	0.297	0.23	0.107	2.28	2.78	0.052	0.077	0.554	0.16	0.52	2.22	2.35	5.09	10303	2.3562	48.48876	-46.13256	NAC
NS0070	114	116	NS	E411253	411253	1	G	W	30.86	42.31	1.75	0.4	0.31	0.082	2.14	3.08	0.092	0.097	0.402	0.104	0.38	2.59	2.24	5.21	10307	2.9682	53.72136	-50.75316	NAC
NS0070	120	122	NS	E411256	411256	1	G	W	29.9	42.57	2.2	0.4	0.31	0.103	2.53	3.1	0.066	0.064	0.513	0.111	0.38	2.47	2.45	5.3	10310	1.9584	54.0702	-52.1118	NAC
NS0070	136	138	NS	E411264	411264	1	G	W	31.35	39.19	1.99	0.503	0.39	0.092	2.65	3.15	0.112	0.059	0.665	0.105	0.37	3.39	2.36	6.12	10318	1.8054	54.9423	-53.1369	NAC
NS0070	100	102	NS	E411246	411246	1	G	W	26.12	40.08	3.26	0.697	0.54	0.151	2.89	3.34	0.293	0.125	0.864	0.228	0.99	7.17	1.87	10.03	10300	3.825	58.25628	-54.43128	NAC
NS0070	108	110	NS	E411250	411250	1	G	W	23.45	44.37	5.12	0.323	0.25	0.237	3.73	3.8	0.326	0.343	0.698	0.196	0.79	3.48	2.38	6.65	10304	10.4958	66.2796	-55.7838	NAC
NS0070	122	124	NS	E411257	411257	1	G	W	30.55	39.65	2.33	0.491	0.38	0.11	2.73	3.59	0.114	0.089	0.552	0.099	0.38	2.93	2.81	6.12	10311	2.7234	62.61678	-59.89338	NAC
NS0070	112	114	NS	E411252	411252	1	G	W	25.79	45.86	2.23	0.426	0.33	0.101	2.52	3.83	0.116	0.067	0.55	0.147	0.56	3.06	3.23	6.85	10306	2.0502	66.80286	-64.75266	NAC
NS0071	214	216	NS	E411506	411506	1	G	W	17.54	53.77	10.57	0.181	0.14	0.49	3.52	0.23	0.02	0.679	1.21	0.107	0.71	2.63	0.77	4.11	10557	20.7774	4.01166	16.76574	PAF(HC)
NS0071	52	54	NS	E411424	411424	1	G	W	19.26	47.99	8.86	0.387	0.3	0.418	3.58	0.64	0.041	0.697	3.89	0.183	0.94	3.91	1.23	6.08	10476	21.3282	11.16288	10.16532	PAF(HC)
NS0071	130	132	NS	E411463	411463	1	G	W	24.12	45.73	5.59	0.4	0.31	0.261	3.35	0.51	0.104	0.405	1.23	0.338	1.25	4.77	1.03	7.05	10515	12.393	8.89542	3.49758	PAF(LC)
NS0071	198	200	NS	E411497	411497	1	G	W	20.66	49.86	9.23	0.155	0.12	0.419	4.13	0.43	0.048	0.34	1.13	0.252	0.91	2.5	0.57	3.98	10549	10.404	7.50006	2.90394	PAF(LC)
NS0071	56	58	NS	E411426	411426	1	G	W	17.62	53.14	7.58	0.336	0.26	0.359	3.03	0.79	0.036	0.53	3.15	0.157	0.96	3.48	1.06	5.5	10478	16.218	13.77918	2.43882	PAF(LC)
NS0071	212	214	NS	E411505	411505	1	G	W	20.96	49.05	8.85	0.245	0.19	0.4	4.05	0.53	0.064	0.367	1.11	0.259	0.94	2.97	0.81	4.72	10556	11.2302	9.24426	1.98594	PAF(LC)
NS0071	128	130	NS	E411462	411462	1	G	W	20.29	52.98	6.97	0.168	0.13	0.329	3.36	0.63	0.1	0.376	0.917	0.258	1.06	2.51	0.78	4.35	10514	11.5056	10.98846	0.51714	PAF(LC)
NS0071	2	4	NS	E411398	411398	1	G	W	39.89	26.32	6.81	-0.0129	-0.01	0.383	0.05	0.02	0.018	0.019	0.027	0.015	7.2	1.79	0.25	9.24	10451	0.5814	0.34884	0.23256	PAF(LC)
NS0071	4	6	NS	E411399	411399	1	G	W	39.62	25.72	8.2	0.026	0.02	0.661	0.07	0.03	0.03	0.018	0.03	0.025	5.87	1.96	0.22	8.05	10452	0.5508	0.52326	0.02754	PAF(LC)
NS0071	132	134	NS	E411464	411464	1	G	W	24.31	44.93	4.87	0.4	0.31	0.296	3.13	0.6	0.103	0.34	1.1	0.3	1.31	6.19	0.94	8.44	10516	10.404	10.4652	-0.0612	NAF
NS0071	6	8	NS	E411400	411400	1	G	W	14.71	65.94	7.23	-0.0129	-0.01	0.441	0.06	0.03	0.015	0.01	0.039	0.033	2.69	2.2	0.17	5.06	10453	0.306	0.52326	-0.21726	NAF
NS0071	0	2	NS	E411397	411397	1	G	W	35	29	10.34	0.026	0.02	0.528	0.15	0.06	0.02	0.024	0.039	0.029	6.35	2.83	0.29	9.47	10450	0.7344	1.04652	-0.31212	NAF
NS0071	8	10	NS	E411402	411402	1	G	W	26.1	47.39	7.35	0.026	0.02	0.241	0.1	0.04	0.02	0.008	0.015	0.035	5.09	2.18	0.17	7.44	10454	0.2448	0.69768	-0.45288	NAF
NS0071	244	246	NS	E411521	411521	1	G	W	26.03	42.57	4.99	0.31	0.24	0.229	3.36	0.66	0.078	0.335	1.26	0.323	1.43	5.86	0.84	8.13	10572	10.251	11.51172	-1.26072	NAF
NS0071	48	50	NS	E411422	411422	1	G	W	28.23	44.34	3.64	0.336	0.26	0.171	1.31	0.32	0.063	0.123	0.572	0.078	3.79	4.23	0.4	8.42	10474	3.7638	5.58144	-1.81764	NAF
NS0071	10	12	NS	E411403	411403	1	G	W	24.55	47.68	8.13	0.026	0.02	0.344	0.43	0.17	0.015	0.01	0.193	0.107	4.67	2.6	0.25	7.52	10455	0.306	2.96514	-2.65914	NAF
NS0071	12	14	NS	E411404	411404	1	G	W	17.62	57.3	8.94	0.026	0.02	0.432	0.49	0.17	0.015	0.01	0.277	0.119	3.68	2.8	0.26	6.74	10456	0.306	2.96514	-2.65914	NAF
NS0071	14	16	NS	E411405	411405	1	G	W	13.33	63.04	9.8	0.026	0.02	0.46	0.58	0.21	0.013	0.01	0.486	0.127	2.65	3.08	0.2	5.93	10457	0.306	3.66282	-3.35682	NAF
NS0071	140	142	NS	E411468	411468	1	G	W	26.97	41.04	2.41	0.258	0.2	0.112	2.37	0.4	0.063	0.101	0.64	0.175	1.05	12.11	0.24	13.4	10520	3.0906	6.9768	-3.8862	NAF
NS0071	28	30	NS	E411412	411412	1	G	W	27.91	48.98	3.43	0.052	0.04	0.175	0.63	0.24	0.042	0.008	0.211	0.049	4.8	1.4	0.11	6.31	10464	0.2448	4.18608	-3.94128	NAF
NS0071	22	24	NS	E411409	411409	1	G	W	27.38	48.96	3.97	0.026	0.02	0.199	0.57	0.25	0.043	0.011	0.112	0.074	4.67	1.56	0.13	6.36	10461	0.3366	4.3605	-4.0239	NAF
NS0071	136	138	NS	E411466	411466	1	G	W	25.43	42.56	2.81	0.31	0.24	0.134	2.45	0.5	0.094	0.153	0.516	0.141	1.01	12.03	0.41	13.45	10518	4.6818	8.721	-4.0392	NAF
NS0071	118	120	NS	E411457	411457	1	G	W	23.14	47.12	3.99	0.361	0.28	0.188	2.74	0.75	0.099	0.283	0.757	0.215	1.03	8.29	0.7	10.02	10509	8.6598	13.0815	-4.4217	NAF
NS0071	16	18	NS	E411406	411406	1	G	W	17.36	59.1	7.86	0.039	0.03	0.374	0.73	0.27	0.021	0.005	0.438	0.129	3.21	2.63	0.27	6.11	10458	0.153	4.70934	-4.55634	NAF
NS0071	94	96	NS	E411445	411445	1	G	W	25.68	40.53	4	0.374	0.29	0.19	2.83	1.13	0.139	0.493	0.654	0.198	1.18	10.09	1.04	12.31	10497	15.0858	19.70946	-4.62366	NAF
NS0071	146	148	NS	E411471	411471	1	G	W	28.73	42.86	2.44	0.245	0.19	0.102	2.15	0.43	0.063	0.081	0.847	0.204	1.08	7.99	0.09	9.16	10523	2.4786	7.50006	-5.02146	NAF
NS0071	26	28	NS	E411411	411411	1	G	W	26.9	47.82	4.81	0.077	0.06	0.237	0.78	0.31	0.044	0.009	0.187	0.074	4.97	1.9	0.13	7	10463	0.2754	5.40702	-5.13162	NAF
NS0071	46	48	NS	E411421	411421	1	G	W	28.6	47.77	2.99	0.232	0.18	0.144	0.77	0.3	0.05	0.002	0.375	0.03	4.72	1.37	0.12	6.21	10473	0.0612	5.2326	-5.1714	NAF
NS0071	30	32	NS	E411413	411413	1	G	W	26.65	48.19	4.86	0.052	0.04	0.232	0.91	0.31	0.033	0.007	0.279	0.062	4.46	1.89	0.11	6.46	10465	0.2142	5.40702	-5.19282	NAF
NS0071	20	22	NS	E411408	411408	1	G	W	24.92	49.93	5.67	0.052	0.04	0.258	0.74	0.32	0.044	0.008	0.152	0.103	4.52	2.14	0.19	6.85	10460	0.2448	5.58144	-5.33664	NAF
NS0071	216	218	NS	E411507	411507	1	G	W	23.41	46.38	5.08	0.465	0.36	0.235	3.22	1.28	0.155	0.554	1.34	0.352	1.49	4.49	1.36	7.34	10558	16.9524	22.32576	-5.37336	NAF
NS0071	18	20	NS	E411407	411407	1	G	W	22.77	52.48	6.15	0.039	0.03	0.3	0.68	0.33	0.031	0.006	0.187	0.124	4.19	2.33	0.2	6.72	10459	0.1836	5.75586	-5.57226	NAF
NS0071	126	128	NS	E411461	411461	1	G	W	25.41	40.86	4.41	0.426	0.33	0.203	3.01	0.83	0.15	0.285	0.544	0.159	1	10.63	0.67	12.3	10513	8.721	14.47686	-5.75586	NAF
NS0071	142	144	NS	E411469	411469	1	G	W	28.19	39.49	3.81	0.245	0.19	0.18	3.07	0.67	0.145	0.19	1.1	0.261	1.47	8.13	0.51	10.11	10521	5.814	11.68614	-5.87214	NAF
NS0071	36	38	NS	E411416	411416	1	G	W	27.63	46.66	4.55	0.465	0.36	0.214	1.03	0.35	0.053	0.004	0.539	0.048	4.31	1.76	0.18	6.25	10468	0.1224	6.1047	-5.9823	NAF
NS0071	100	102	NS	E411448	411448	1	G	W	24.98	41.49	4.06	0.413	0.32	0.193	3.17	1.11	0.125	0.435	0.689	0.201	1.1	9.78	1.01	11.89	10500	13.311	19.36062	-6.04962	NAF
NS0071	24	26	NS	E411410	411410	1	G	W	25.1	49.27	5.9	0.039	0.03	0.276	0.9	0.36	0.048	0.007	0.221	0.093	4.49	2.18	0.16	6.83	10462	0.2142	6.27912	-6.06492	NAF
NS0071	34	36	NS	E411415	411415	1	G	W	26.03	48	5.54	0.09	0.07	0.259	1.1	0.36	0.056	0.005	0.52	0.064	4.39	2.01	0.2	6.6	10467	0.153	6.27912	-6.12612	NAF
NS0071	44	46	NS	E411420	411420	1	G	W	25.28	50.18	4.37	0.271	0.21	0.215	1.26	0.37	0.047	0.004	0.665	0.054	4.41	1.76	0.15	6.32	10472	0.1224	6.45354	-6.33114	NAF
NS0071	54	56	NS	E411425	411425	1	G	W	14.25	54.72	9.25	0.323	0.25	0.433	2.99	1.41	0.061	0.596	4.65	0.129	0.6	3.08	1.16	4.84	10477	18.2376	24.59322	-6.35562	NAF
NS0071	40	42	NS	E411418	411418	1	G	W	26.49	47.99	4.64	0.271	0.21	0.223	1.27	0.38	0.038	0.008	0.698	0.084	4.62	1.75	0.19	6.56	10470	0.2448	6.62796	-6.38316	NAF
NS0071	192	194	NS	E411494	411494	1	G	W	29.64	40.36	4.13	0.245	0.19	0.191	3.09	0.56	0.041	0.106	1.42	0.34	1.37	5.2	0.3	6.87	10546	3.2436	9.76752	-6.52392	NAF
NS0071	138	140	NS	E411467	411467	1	G	W	26.38	41.88	3.42	0.232	0.18	0.159	2.65	0.57	0.128	0.109	0.878	0.228	1.4	9.63	0.32	11.35	10519	3.3354	9.94194	-6.60654	NAF
NS0071	32	34	NS	E411414	411414	1	G	W	25.21	48.81	5.62	0.052	0.04	0.282	1.1	0.39	0.046	0.005	0.356	0.069	4.76	2.15	0.16	7.07	10466	0.153	6.80238	-6.64938	NAF
NS0071	38	40	NS	E411417	411417	1	G	W	26.02	48.83	4.48	0.361	0.28	0.223	1.11	0.4	0.049	0.004	0.562	0.056	4.64	1.64	0.15	6.43	10469	0.1224	6.9768	-6.8544	NAF
NS0071	158	160	NS	E411477	411477	1	G	W	27.73	42.87	4.21	0.323	0.25	0.195	3.25	0.84	0.087	0.254	1.16	0.29	1.19	4.81	0.63	6.63	10529	7.7724	14.65128	-6.87888	NAF
NS0071	98	100	NS	E411447	411447	1	G	W	22.53	46.15	5.47	0.31	0.24	0.259	3.44	1.11	0.092	0.404	0.737	0.214	1.11	6.62	1.11	8.84	10499	12.3624	19.36062	-6.99822	NAF
NS0071	42	44	NS	E411419	411419	1	G	W	26.35	45.75	5.41	0.297	0.23	0.27	1.56	0.45	0.038	0.004	0.817	0.084	5	2.14	0.21	7.35	10471	0.1224	7.8489	-7.7265	NAF
NS0071	148	150	NS	E411472	411472	1	G	W	29.27	42.44	2.08	0.284	0.22	0.094	2.18	0.58	0.091	0.057	0.83	0.217	1.02	7.72	0.01	8.75	10524	1.7442	10.11636	-8.37216	NAF
NS0071	120	122	NS	E411458	411458	1	G	W	20.03	51.65	8.53	0.194	0.15	0.395	3.55	0.9	0.049	0.223	0.637	0.131	0.8	3.04	0.64	4.48	10510	6.8238	15.6978	-8.874	NAF
NS0071	134	136	NS	E411465	411465	1	G	W	24.55	44.35	2.84	0.374	0.29	0.143	2.43	0.78	0.169	0.149	0.678	0.186	1.07	10.71	0.39	12.17	10517	4.5594	13.60476	-9.04536	NAF
NS0071	210	212	NS	E411504	411504	1	G	W	24.39	45.47	3.73	0.452	0.35	0.168	3.06	1.09	0.119	0.312	1.28	0.33	1.38	6.44	0.84	8.66	10555	9.5472	19.01178	-9.46458	NAF
NS0071	154	156	NS	E411475	411475	1	G	W	29.17	42.22	2.66	0.323	0.25	0.124	2.66	0.73	0.062	0.077	1.07	0.276	1.16	6.26	0.22	7.64	10527	2.3562	12.73266	-10.37646	NAF
NS0071	102	104	NS	E411449	411449	1	G	W	14.22	59.29	9.96	0.116	0.09	0.477	3.59	0.74	0.013	0.072	0.894	0.025	0.46	3.05	0.69	4.2	10501	2.2032	12.90708	-10.70388	NAF
NS0071	194	196	NS	E411495	411495	1	G	W	26.91	40.77	4.12	0.387	0.3	0.192	3.3	1	0.095	0.193	1.49	0.357	1.52	7	0.64	9.16	10547	5.9058	17.442	-11.5362	NAF
NS0071	80	82	NS	E411438	411438	1	G	W	24.31	49	4.29	0.116	0.09	0.208	3.16	0.98	0.027	0.165	1.26	0.275	1.1	3.53	0.7	5.33	10490	5.049	17.09316	-12.04416	NAF
NS0071	82	84	NS	E411439	411439	1	G	W	25.73	45.55	4.7	0.155	0.12	0.23	3.32	0.99	0.047	0.153	1.42	0.309	1.22	4.16	0.69	6.07	10491	4.6818	17.26758	-12.58578	NAF
NS0071	152	154	NS	E411474	411474	1	G	W	27.73	43.38	3.29	0.284	0.22	0.164	2.94	1.03	0.137	0.168	1.26	0.309	1.28	4.91	0.54	6.73	10526	5.1408	17.96526	-12.82446	NAF
NS0071	184	186	NS	E411490	411490	1	G	W	31.38	37.83	2.98	0.361	0.28	0.137	2.64	0.89	0.069	0.081	1.18	0.296	1.19	6.79	0.26	8.24	10542	2.4786	15.52338	-13.04478	NAF
NS0071	116	118	NS	E411456	411456	1	G	W	19.62	53.83	3	0.374	0.29	0.14	2.41	1.38	0.098	0.338	0.575	0.165	0.86	7.65	0.85	9.36	10508	10.3428	24.06996	-13.72716	NAF
NS0071	182	184	NS	E411489	411489	1	G	W	30.02	39.78	3.54	0.336	0.26	0.162	2.86	0.96	0.06	0.09	1.3	0.309	1.19	5.79	0.4	7.38	10541	2.754	16.74432	-13.99032	NAF
NS0071	124	126	NS	E411460	411460	1	G	W	25.35	41.2	3.64	0.374	0.29	0.172	2.78	1.18	0.197	0.191	0.613	0.179	1.02	11.19	0.38	12.59	10512	5.8446	20.58156	-14.73696	NAF
NS0071	196	198	NS	E411496	411496	1	G	W	24.52	45.37	3.78	0.413	0.32	0.17	3	1.3	0.085	0.248	1.31	0.323	1.34	6.62	0.8	8.76	10548	7.5888	22.6746	-15.0858	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0071	144	146	NS	E411470	411470	1	G	W	27.29	42.05	2.74	0.284	0.22	0.129	2.49	1.14	0.254	0.14	0.914	0.223	1.11	8.62	0.31	10.04	10522	4.284	19.88388	-15.59988	NAF
NS0071	208	210	NS	E411503	411503	1	G	W	34.06	33.36	2.49	0.374	0.29	0.109	2.3	1.04	0.081	0.081	0.964	0.24	1.1	8.43	0.18	9.71	10554	2.4786	18.13968	-15.66108	NAF
NS0071	202	204	NS	E411499	411499	1	G	W	29.37	41.77	2.57	0.31	0.24	0.118	2.38	1.05	0.06	0.079	1.02	0.248	1.03	6.83	0.3	8.16	10551	2.4174	18.3141	-15.8967	NAF
NS0071	160	162	NS	E411478	411478	1	G	W	27.13	43.83	4.37	0.258	0.2	0.204	3.27	1.37	0.133	0.257	1.21	0.296	1.11	3.65	0.78	5.54	10530	7.8642	23.89554	-16.03134	NAF
NS0071	58	60	NS	E411427	411427	1	G	W	24.05	44.55	5.17	0.336	0.26	0.248	3.15	1.44	0.139	0.294	1.7	0.266	1.32	6.17	0.73	8.22	10479	8.9964	25.11648	-16.12008	NAF
NS0071	206	208	NS	E411502	411502	1	G	W	31.74	36.89	2.97	0.336	0.26	0.138	2.65	1.1	0.07	0.096	1.14	0.285	1.17	6.95	0.34	8.46	10553	2.9376	19.1862	-16.2486	NAF
NS0071	200	202	NS	E411498	411498	1	G	W	29.17	38.34	3.83	0.387	0.3	0.176	3.06	1.3	0.149	0.205	1.27	0.304	1.31	6.92	0.58	8.81	10550	6.273	22.6746	-16.4016	NAF
NS0071	108	110	NS	E411452	411452	1	G	W	22.57	43.25	6.93	0.374	0.29	0.328	3.79	2.68	0.18	0.985	0.649	0.176	0.85	5.21	1.96	8.02	10504	30.141	46.74456	-16.60356	NAF
NS0071	50	52	NS	E411423	411423	1	G	W	21.24	47.7	5.37	0.439	0.34	0.255	3.09	1.81	0.058	0.474	1.96	0.183	1.07	5.74	1.14	7.95	10475	14.5044	31.57002	-17.06562	NAF
NS0071	92	94	NS	E411444	411444	1	G	W	22.45	46.65	5.46	0.349	0.27	0.257	3.42	1.56	0.099	0.329	0.973	0.269	1.19	5.73	1.15	8.07	10496	10.0674	27.20952	-17.14212	NAF
NS0071	88	90	NS	E411442	411442	1	G	W	21.88	47	4.96	0.336	0.26	0.238	2.89	1.6	0.07	0.351	1.35	0.227	1.04	6.8	1.12	8.96	10494	10.7406	27.9072	-17.1666	NAF
NS0071	150	152	NS	E411473	411473	1	G	W	26.23	45.71	2.25	0.323	0.25	0.104	2.33	1.14	0.173	0.081	0.892	0.219	1.14	7.28	0.29	8.71	10525	2.4786	19.88388	-17.40528	NAF
NS0071	252	254	NS	E411525	411525	1	G	W	29.31	42.12	2.95	0.284	0.22	0.139	2.54	1.14	0.049	0.078	1.17	0.289	1.18	5.17	0.55	6.9	10576	2.3868	19.88388	-17.49708	NAF
NS0071	110	112	NS	E411453	411453	1	G	W	24.33	41.46	7.44	0.361	0.28	0.354	4.06	1.39	0.106	0.22	0.708	0.201	0.95	6.68	0.91	8.54	10505	6.732	24.24438	-17.51238	NAF
NS0071	90	92	NS	E411443	411443	1	G	W	23.28	45.03	4.94	0.374	0.29	0.238	3.25	1.49	0.117	0.268	0.995	0.278	1.2	6.84	0.88	8.92	10495	8.2008	25.98858	-17.78778	NAF
NS0071	178	180	NS	E411487	411487	1	G	W	30.98	38.75	3.43	0.323	0.25	0.158	2.86	1.21	0.062	0.095	1.32	0.323	1.19	5.35	0.45	6.99	10539	2.907	21.10482	-18.19782	NAF
NS0071	180	182	NS	E411488	411488	1	G	W	28.02	41.57	4.28	0.284	0.22	0.2	3.23	1.25	0.047	0.114	1.53	0.364	1.34	4.64	0.71	6.69	10540	3.4884	21.8025	-18.3141	NAF
NS0071	66	68	NS	E411431	411431	1	G	W	25.88	43.83	4.23	0.336	0.26	0.2	3.2	1.4	0.119	0.198	1.51	0.238	1.15	5.44	0.69	7.28	10483	6.0588	24.4188	-18.36	NAF
NS0071	60	62	NS	E411428	411428	1	G	W	26.48	43.47	3.51	0.219	0.17	0.165	2.74	1.29	0.054	0.135	1.3	0.221	1.02	7.31	0.44	8.77	10480	4.131	22.50018	-18.36918	NAF
NS0071	78	80	NS	E411437	411437	1	G	W	23.5	49.19	4.44	0.142	0.11	0.221	3.28	1.45	0.053	0.214	1.28	0.272	1.09	3.45	1.05	5.59	10489	6.5484	25.2909	-18.7425	NAF
NS0071	114	116	NS	E411455	411455	1	G	W	22.57	44.38	5.68	0.465	0.36	0.27	3.56	2.1	0.054	0.577	0.615	0.173	0.85	6.88	1.58	9.31	10507	17.6562	36.6282	-18.972	NAF
NS0071	176	178	NS	E411486	411486	1	G	W	31.65	37.89	3.01	0.374	0.29	0.136	2.65	1.26	0.074	0.096	1.19	0.294	1.14	5.94	0.42	7.5	10538	2.9376	21.97692	-19.03932	NAF
NS0071	234	236	NS	E411516	411516	1	G	W	26.2	42.6	4.93	0.271	0.21	0.232	3.84	1.86	0.22	0.426	1.27	0.327	1.24	3.58	1.2	6.02	10567	13.0356	32.44212	-19.40652	NAF
NS0071	96	98	NS	E411446	411446	1	G	W	15.51	56.89	8.34	0.194	0.15	0.403	3.2	1.76	0.045	0.335	0.576	0.04	0.48	3.56	1.4	5.44	10498	10.251	30.69792	-20.44692	NAF
NS0071	112	114	NS	E411454	411454	1	G	W	21.37	46.63	5.61	0.374	0.29	0.266	3.5	2.12	0.044	0.527	0.621	0.121	0.84	6.33	1.6	8.77	10506	16.1262	36.97704	-20.85084	NAF
NS0071	104	106	NS	E411450	411450	1	G	W	19.97	48.63	7.81	0.284	0.22	0.362	3.67	2.24	0.075	0.569	0.499	0.149	0.75	4.04	1.71	6.5	10502	17.4114	39.07008	-21.65868	NAF
NS0071	270	272	NS	E411534	411534	1	G	W	27.27	43.16	2.89	0.361	0.28	0.132	2.68	1.91	0.079	0.376	1.11	0.289	1.3	5.19	1.16	7.65	10585	11.5056	33.31422	-21.80862	NAF
NS0071	174	176	NS	E411485	411485	1	G	W	28.84	41.1	3.26	0.387	0.3	0.149	2.81	1.53	0.168	0.159	1.25	0.308	1.22	5.51	0.58	7.31	10537	4.8654	26.68626	-21.82086	NAF
NS0071	186	188	NS	E411491	411491	1	G	W	27.6	41.04	3.86	0.336	0.26	0.179	3.04	1.73	0.247	0.262	1.38	0.336	1.38	5.55	0.82	7.75	10543	8.0172	30.17466	-22.15746	NAF
NS0071	156	158	NS	E411476	411476	1	G	W	29.65	41.83	2.74	0.31	0.24	0.126	2.57	1.52	0.168	0.114	1.01	0.257	1	4.97	0.52	6.49	10528	3.4884	26.51184	-23.02344	NAF
NS0071	272	274	NS	E411535	411535	1	G	W	28.05	42.94	3.17	0.297	0.23	0.144	2.7	1.62	0.09	0.166	1.18	0.289	1.17	4.77	0.82	6.76	10586	5.0796	28.25604	-23.17644	NAF
NS0071	204	206	NS	E411500	411500	1	G	W	29.33	38.96	3.18	0.426	0.33	0.149	2.76	1.57	0.082	0.134	1.16	0.285	1.23	7.11	0.61	8.95	10552	4.1004	27.38394	-23.28354	NAF
NS0071	106	108	NS	E411451	411451	1	G	W	21.83	45.04	7.62	0.31	0.24	0.354	3.82	2.17	0.133	0.47	0.643	0.122	0.88	4.68	1.61	7.17	10503	14.382	37.84914	-23.46714	NAF
NS0071	76	78	NS	E411436	411436	1	G	W	26.96	43.99	3.3	0.245	0.19	0.159	2.71	1.64	0.052	0.15	1.26	0.262	1.09	5.03	1.02	7.14	10488	4.59	28.60488	-24.01488	NAF
NS0071	250	252	NS	E411524	411524	1	G	W	27.47	43.03	3.51	0.297	0.23	0.161	2.84	1.63	0.077	0.14	1.18	0.294	1.16	5.03	0.83	7.02	10575	4.284	28.43046	-24.14646	NAF
NS0071	172	174	NS	E411484	411484	1	G	W	24.35	49.41	3.45	0.219	0.17	0.163	2.68	1.68	0.033	0.145	1.19	0.293	1.09	3.8	0.88	5.77	10536	4.437	29.30256	-24.86556	NAF
NS0071	74	76	NS	E411435	411435	1	G	W	27.61	43.18	3.3	0.284	0.22	0.159	2.89	1.66	0.094	0.119	1.27	0.231	1.06	5.11	0.99	7.16	10487	3.6414	28.95372	-25.31232	NAF
NS0071	170	172	NS	E411483	411483	1	G	W	30.17	42.28	2.22	0.297	0.23	0.102	2.18	1.57	0.064	0.064	0.929	0.233	0.91	5.13	0.63	6.67	10535	1.9584	27.38394	-25.42554	NAF
NS0071	84	86	NS	E411440	411440	1	G	W	24.13	48.72	3.26	0.232	0.18	0.158	2.36	1.78	0.124	0.175	0.976	0.227	0.99	5.36	0.75	7.1	10492	5.355	31.04676	-25.69176	NAF
NS0071	236	238	NS	E411517	411517	1	G	W	30.21	41.86	2.19	0.361	0.28	0.1	2.23	1.65	0.062	0.09	0.838	0.211	0.83	5.51	0.66	7	10568	2.754	28.7793	-26.0253	NAF
NS0071	246	248	NS	E411522	411522	1	G	W	22.31	48.79	3.28	0.413	0.32	0.154	2.7	1.92	0.084	0.241	0.971	0.242	1.04	6.93	1.02	8.99	10573	7.3746	33.48864	-26.11404	NAF
NS0071	122	124	NS	E411459	411459	1	G	W	19.88	50.98	6.09	0.361	0.28	0.287	3.14	2.15	0.095	0.372	0.764	0.218	0.94	4.34	1.17	6.45	10511	11.3832	37.5003	-26.1171	NAF
NS0071	162	164	NS	E411479	411479	1	G	W	29	41.71	3.12	0.336	0.26	0.147	2.77	1.7	0.172	0.112	1.13	0.299	1.09	4.62	0.72	6.43	10531	3.4272	29.6514	-26.2242	NAF
NS0071	72	74	NS	E411434	411434	1	G	W	28.04	41.87	3.49	0.284	0.22	0.167	2.99	1.71	0.089	0.113	1.36	0.239	1.11	5.1	1.06	7.27	10486	3.4578	29.82582	-26.36802	NAF
NS0071	70	72	NS	E411433	411433	1	G	W	28.15	43.58	2.75	0.284	0.22	0.13	2.41	1.7	0.067	0.104	1.11	0.203	0.99	5.23	0.99	7.21	10485	3.1824	29.6514	-26.469	NAF
NS0071	86	88	NS	E411441	411441	1	G	W	27.68	40.44	3.19	0.374	0.29	0.153	2.47	1.85	0.076	0.184	0.928	0.224	1.01	8.12	0.81	9.94	10493	5.6304	32.2677	-26.6373	NAF
NS0071	190	192	NS	E411493	411493	1	G	W	29.5	38.99	3.64	0.284	0.22	0.169	2.98	1.7	0.159	0.093	1.36	0.316	1.31	5.59	0.63	7.53	10545	2.8458	29.6514	-26.8056	NAF
NS0071	280	282	NS	E411539	411539	1	G	W	27.14	42.89	3.18	0.491	0.38	0.152	2.68	2.27	0.092	0.413	1.14	0.274	1.04	4.85	1.4	7.29	10590	12.6378	39.59334	-26.95554	NAF
NS0071	274	276	NS	E411536	411536	1	G	W	28.91	42.62	2.85	0.284	0.22	0.13	2.48	1.68	0.103	0.071	1.09	0.277	1.1	4.76	0.74	6.6	10587	2.1726	29.30256	-27.12996	NAF
NS0071	232	234	NS	E411515	411515	1	G	W	28.93	46.4	1.26	0.31	0.24	0.054	1.62	1.68	0.065	0.057	0.525	0.127	0.54	5.1	0.67	6.31	10566	1.7442	29.30256	-27.55836	NAF
NS0071	62	64	NS	E411429	411429	1	G	W	27.27	43.3	3.41	0.271	0.21	0.163	2.68	1.94	0.138	0.202	1.26	0.237	0.96	5.04	0.85	6.85	10481	6.1812	33.83748	-27.65628	NAF
NS0071	224	226	NS	E411511	411511	1	G	W	31.69	41.14	1.62	0.31	0.24	0.072	1.78	1.69	0.077	0.059	0.659	0.167	0.71	5.42	0.59	6.72	10562	1.8054	29.47698	-27.67158	NAF
NS0071	188	190	NS	E411492	411492	1	G	W	30.4	37.68	3.51	0.361	0.28	0.162	3	1.82	0.078	0.09	1.3	0.308	1.18	5.83	0.99	8	10544	2.754	31.74444	-28.99044	NAF
NS0071	230	232	NS	E411514	411514	1	G	W	31.34	41.37	1.7	0.374	0.29	0.077	1.92	1.85	0.116	0.104	0.66	0.163	0.65	5.08	0.79	6.52	10565	3.1824	32.2677	-29.0853	NAF
NS0071	278	280	NS	E411538	411538	1	G	W	27.5	40.42	3.1	0.516	0.4	0.143	2.71	2.37	0.124	0.347	1.11	0.274	1.24	6.28	1.22	8.74	10589	10.6182	41.33754	-30.71934	NAC
NS0071	222	224	NS	E411510	411510	1	G	W	30.9	42.55	1.68	0.271	0.21	0.076	1.78	1.89	0.075	0.063	0.687	0.169	0.69	4.57	0.8	6.06	10561	1.9278	32.96538	-31.03758	NAC
NS0071	68	70	NS	E411432	411432	1	G	W	28.01	42.41	2.68	0.31	0.24	0.126	2.49	2.02	0.097	0.111	1.08	0.188	0.94	5.9	1.06	7.9	10484	3.3966	35.23284	-31.83624	NAC
NS0071	254	256	NS	E411526	411526	1	G	W	23.74	45.46	4.17	0.361	0.28	0.197	3.33	2.27	0.053	0.253	1.07	0.27	1.17	5.63	1.49	8.29	10577	7.7418	39.59334	-31.85154	NAC
NS0071	228	230	NS	E411513	411513	1	G	W	30.75	42.46	1.46	0.349	0.27	0.066	1.76	1.98	0.068	0.057	0.615	0.153	0.64	5.14	0.92	6.7	10564	1.7442	34.53516	-32.79096	NAC
NS0071	276	278	NS	E411537	411537	1	G	W	29.4	39.42	2.64	0.503	0.39	0.119	2.5	2.04	0.153	0.081	1.03	0.257	1.05	6.58	0.98	8.61	10588	2.4786	35.58168	-33.10308	NAC
NS0071	256	258	NS	E411527	411527	1	G	W	28.6	39.3	3.52	0.336	0.26	0.166	3.19	2.2	0.094	0.149	1.26	0.318	1.28	5.63	1.47	8.38	10578	4.5594	38.3724	-33.813	NAC
NS0071	248	250	NS	E411523	411523	1	G	W	28.94	41.38	2.55	0.271	0.21	0.116	2.22	2.11	0.04	0.082	0.987	0.245	1.01	6.24	0.88	8.13	10574	2.5092	36.80262	-34.29342	NAC
NS0071	166	168	NS	E411481	411481	1	G	W	28.75	44.17	2.27	0.297	0.23	0.107	2.18	2.11	0.085	0.079	0.916	0.234	0.84	4.11	1.09	6.04	10533	2.4174	36.80262	-34.38522	NAC
NS0071	226	228	NS	E411512	411512	1	G	W	32.27	39.85	1.69	0.323	0.25	0.079	1.84	2.15	0.073	0.073	0.701	0.181	0.67	4.61	1.26	6.54	10563	2.2338	37.5003	-35.2665	NAC
NS0071	164	166	NS	E411480	411480	1	G	W	29.26	41.46	2.97	0.323	0.25	0.141	2.64	2.22	0.171	0.106	1.13	0.281	1.03	4.06	1.15	6.24	10532	3.2436	38.72124	-35.47764	NAC
NS0071	64	66	NS	E411430	411430	1	G	W	25.51	42.5	4.15	0.374	0.29	0.199	3.08	2.49	0.163	0.227	1.54	0.243	1.03	5.64	1.43	8.1	10482	6.9462	43.43058	-36.48438	NAC
NS0071	266	268	NS	E411532	411532	1	G	W	29.86	41.05	2.03	0.258	0.2	0.094	2.39	2.64	0.097	0.063	0.803	0.196	0.79	4.62	1.84	7.25	10583	1.9278	46.04688	-44.11908	NAC
NS0071	258	260	NS	E411528	411528	1	G	W	28.68	39.72	2.4	0.374	0.29	0.115	2.56	2.7	0.04	0.093	0.968	0.241	1.1	6.42	1.89	9.41	10579	2.8458	47.0934	-44.2476	NAC
NS0071	218	220	NS	E411508	411508	1	G	W	26.56	41.21	2.94	0.349	0.27	0.136	2.52	2.94	0.09	0.163	0.984	0.254	1.09	7.38	1.46	9.93	10559	4.9878	51.27948	-46.29168	NAC
NS0071	268	270	NS	E411533	411533	1	G	W	28.35	43.61	2.02	0.271	0.21	0.092	2.07	2.88	0.097	0.092	0.767	0.194	0.79	4.42	1.68	6.89	10584	2.8152	50.23296	-47.41776	NAC
NS0071	264	266	NS	E411531	411531	1	G	W	28.25	41.95	1.89	0.349	0.27	0.084	2.29	3	0.069	0.123	0.695	0.173	0.79	5.79	1.98	8.56	10582	3.7638	52.326	-48.5622	NAC
NS0071	242	244	NS	E411520	411520	1	G	W	25.6	41.4	3.45	0.336	0.26	0.158	2.73	3.27	0.087	0.162	1.04	0.261	1.11	7.5	1.6	10.21	10571	4.9572	57.03534	-52.07814	NAC
NS0071	240	242	NS	E411519	411519	1	G	W	28.12	37.58	3.38	0.374	0.29	0.156	2.78	3.45	0.242	0.124	1.14	0.292	1.18	6.9	1.63	9.71	10570	3.7944	60.1749	-56.3805	NAC
NS0071	260	262	NS	E411529	411529	1	G	W	30.89	36.06	2.24	0.374	0.29	0.102	2.57	3.47	0.148	0.079	0.893	0.226	0.97	5.66	2.56	9.19	10580	2.4174	60.52374	-58.10634	NAC
NS0071	238	240	NS	E411518	411518	1	G	W	28.04	39.56	2.53	0.336	0.26	0.117	2.3	3.58	0.14	0.089	0.931	0.235	1.01	6.94	1.61	9.56	10569	2.7234	62.44236	-59.71896	NAC
NS0071	168	170	NS	E411482	411482	1	G	W	26.99	43.89	1.93	0.297	0.23	0.091	2	3.7	0.071	0.073	0.773	0.183	0.72	5.09	2.26	8.07	10534	2.2338	64.5354	-62.3016	NAC
NS0071	220	222	NS	E411509	411509	1	G	W	29.69	39.74	1.56	0.297	0.23	0.074	1.74	4.3	0.063	0.072	0.655	0.154	0.68	5.14	2.64	8.46	10560	2.2032	75.0006	-72.7974	NAC
NS0071	262	264	NS	E411530	411530	1	G	W	23.29	48.19	1.43	0.232	0.18	0.066	1.59	5.52	0.038	0.073	0.576	0.138	0.67	4.17	3.74	8.58	10581	2.2338	96.27984	-94.04604	NAC
NS0072	134	136	NS	E411608	411608	1	G	W	21.48	48.88	6.68	0.284	0.22	0.323	2.97	0.63	0.066	0.62	1.96	0.258	1.05	4.78	1.06	6.89	10658	18.972	10.98846	7.98354	PAF(LC)
NS0072	264	266	NS	E411673	411673	1	G	W	19.83	49.78	9.41	0.219	0.17	0.448	3.62	1.03	0.044	0.712	1.7	0.209	0.83	3.03	0.97	4.83	10723	21.7872	17.96526	3.82194	PAF(LC)
NS0072	268	270	NS	E411675	411675	1	G	W	19.38	49.63	10.05	0.207	0.16	0.471	3.52	0.98	0.021	0.638	2.56	0.254	0.88	2.47	0.85	4.2	10725	19.5228	17.09316	2.42964	PAF(LC)
NS0072	176	178	NS	E411629	411629	1	G	W	26.27	44.32	5.49	0.245	0.19	0.262	3.34	0.36	0.054	0.284	1.31	0.318	1.29	4.76	0.68	6.73	10679	8.6904	6.27912	2.41128	PAF(LC)
NS0072	240	242	NS	E411661	411661	1	G	W	22.89	48.78	3.38	0.374	0.29	0.169	2.62	0.92	0.143	0.599	0.954	0.239	1.23	7.06	1.01	9.3	10711	18.3294	16.04664	2.28276	PAF(LC)
NS0072	270	272	NS	E411676	411676	1	G	W	19.11	50.6	9.1	0.245	0.19	0.426	3.35	1.12	0.036	0.636	2.64	0.261	0.95	2.52	0.99	4.46	10726	19.4616	19.53504	-0.07344	NAF
NS0072	18	20	NS	E411549	411549	1	G	W	31.05	45.75	3.56	0.052	0.04	0.153	0.16	0.09	0.064	0.023	0.024	0.055	4.31	1.38	0.13	5.82	10600	0.7038	1.56978	-0.86598	NAF
NS0072	2	4	NS	E411541	411541	1	G	W	23.86	48.36	8.95	0.026	0.02	0.4	0.14	0.09	0.018	0.02	0.101	0.027	4.73	2.59	0.25	7.57	10592	0.612	1.56978	-0.95778	NAF
NS0072	272	274	NS	E411677	411677	1	G	W	23.23	45.28	5.54	0.336	0.26	0.261	2.78	0.75	0.069	0.394	1.37	0.182	0.89	8.29	0.79	9.97	10727	12.0564	13.0815	-1.0251	NAF
NS0072	4	6	NS	E411542	411542	1	G	W	20.55	55.74	7.37	0.026	0.02	0.326	0.12	0.13	0.017	0.035	0.062	0.061	4.17	2.29	0.28	6.74	10593	1.071	2.26746	-1.19646	NAF
NS0072	12	14	NS	E411546	411546	1	G	W	29.8	44.64	4.45	0.065	0.05	0.169	0.21	0.13	0.029	0.034	0.024	0.055	5.47	1.65	0.27	7.39	10597	1.0404	2.26746	-1.22706	NAF
NS0072	14	16	NS	E411547	411547	1	G	W	32.61	41.8	3.45	0.077	0.06	0.146	0.24	0.15	0.051	0.042	0.056	0.052	5.31	1.47	0.21	6.99	10598	1.2852	2.6163	-1.3311	NAF
NS0072	6	8	NS	E411543	411543	1	G	W	23.8	51.7	6.02	0.052	0.04	0.225	0.22	0.13	0.013	0.028	0.07	0.072	4.84	2.02	0.25	7.11	10594	0.8568	2.26746	-1.41066	NAF
NS0072	16	18	NS	E411548	411548	1	G	W	29.04	46.94	4.09	0.039	0.03	0.191	0.22	0.12	0.038	0.017	0.022	0.068	5.17	1.25	0.18	6.6	10599	0.5202	2.09304	-1.57284	NAF
NS0072	20	22	NS	E411550	411550	1	G	W	32.36	44.21	2.82	0.065	0.05	0.126	0.24	0.14	0.052	0.017	0.026	0.05	4.48	1.01	0.08	5.57	10601	0.5202	2.44188	-1.92168	NAF
NS0072	0	2	NS	E411540	411540	1	G	W	19.45	52.83	10.71	0.026	0.02	0.57	0.23	0.18	0.019	0.026	0.188	0.045	3.63	3.14	0.25	7.02	10591	0.7956	3.13956	-2.34396	NAF
NS0072	10	12	NS	E411545	411545	1	G	W	14.55	59.65	11.11	0.026	0.02	0.504	0.34	0.19	0.009	0.02	0.108	0.093	2.95	3.61	0.28	6.84	10596	0.612	3.31398	-2.70198	NAF
NS0072	24	26	NS	E411552	411552	1	G	W	30.46	46.74	2.34	0.065	0.05	0.112	0.41	0.21	0.04	0.011	0.056	0.044	4.87	1.05	0.11	6.03	10603	0.3366	3.66282	-3.32622	NAF
NS0072	44	46	NS	E411562	411562	1	G	W	29.41	47.28	2.77	0.361	0.28	0.129	0.83	0.25	0.041	0.005	0.554	0.031	4.07	1.05	0.06	5.18	10613	0.153	4.3605	-4.2075	NAF
NS0072	8	10	NS	E411544	411544	1	G	W	16.49	57.94	9.43	0.026	0.02	0.413	0.5	0.29	0.008	0.021	0.21	0.129	3.63	3.17	0.33	7.13	10595	0.6426	5.05818	-4.41558	NAF
NS0072	266	268	NS	E411674	411674	1	G	W	25.52	41.53	2.87	0.555	0.43	0.136	2.62	0.84	0.109	0.327	0.661	0.164	1.05	11.96	0.68	13.69	10724	10.0062	14.65128	-4.64508	NAF
NS0072	36	38	NS	E411558	411558	1	G	W	29.4	45.73	3.86	0.207	0.16	0.189	0.88	0.28	0.046	0.004	0.671	0.03	4.17	1.27	0.15	5.59	10609	0.1224	4.88376	-4.76136	NAF
NS0072	28	30	NS	E411554	411554	1	G	W	18.05	63.65	3.58	0.065	0.05	0.174	0.69	0.31	0.041	0.02	0.247	0.048	3.52	1.33	0.13	4.98	10605	0.612	5.40702	-4.79502	NAF
NS0072	30	32	NS	E411555	411555	1	G	W	14.99	65.28	5.63	0.065	0.05	0.257	0.88	0.3	0.036	0.013	0.893	0.06	2.86	1.74	0.12	4.72	10606	0.3978	5.2326	-4.8348	NAF
NS0072	38	40	NS	E411559	411559	1	G	W	27.16	48.81	3.99	0.245	0.19	0.192	0.99	0.3	0.052	0.005	0.689	0.036	4.11	1.35	0.16	5.62	10610	0.153	5.2326	-5.0796	NAF
NS0072	34	36	NS	E411557	411557	1	G	W	27.93	46.74	4.05	0.439	0.34	0.196	0.95	0.31	0.052	0.007	0.537	0.045	4.67	1.56	0.12	6.35	10608	0.2142	5.40702	-5.19282	NAF
NS0072	48	50	NS	E411564	411564	1	G	W	26.55	46.51	5.22	0.361	0.28	0.243	0.9	0.31	0.077	0.004	1.98	0.038	4.31	1.54	0.16	6.01	10615	0.1224	5.40702	-5.28462	NAF
NS0072	32	34	NS	E411556	411556	1	G	W	18.7	61.97	3.54	0.581	0.45	0.169	0.81	0.34	0.05	0.019	0.267	0.045	3.55	1.49	0.15	5.19	10607	0.5814	5.93028	-5.34888	NAF
NS0072	234	236	NS	E411658	411658	1	G	W	19.76	54.46	5.75	0.245	0.19	0.28	3.24	0.82	0.058	0.285	1.19	0.278	1.11	3.34	0.68	5.13	10708	8.721	14.30244	-5.58144	NAF
NS0072	106	108	NS	E411593	411593	1	G	W	26.09	41.16	4.34	0.361	0.28	0.211	3.13	0.81	0.103	0.276	1.22	0.284	1.29	8.82	0.59	10.7	10644	8.4456	14.12802	-5.68242	NAF
NS0072	238	240	NS	E411660	411660	1	G	W	18.32	55.48	6.84	0.181	0.14	0.336	3.32	1.1	0.061	0.436	1.08	0.179	0.88	3.12	0.83	4.83	10710	13.3416	19.1862	-5.8446	NAF
NS0072	180	182	NS	E411631	411631	1	G	W	25.88	45.32	4.06	0.245	0.19	0.192	2.99	0.71	0.073	0.213	1.43	0.333	1.38	5.3	0.51	7.19	10681	6.5178	12.38382	-5.86602	NAF
NS0072	22	24	NS	E411551	411551	1	G	W	23.54	51.07	6.06	0.065	0.05	0.279	0.86	0.36	0.038	0.012	0.171	0.109	4.47	2.23	0.19	6.89	10602	0.3672	6.27912	-5.91192	NAF
NS0072	46	48	NS	E411563	411563	1	G	W	18.93	53.26	7.66	0.323	0.25	0.366	1.38	0.35	0.041	0.006	3.57	0.067	3.51	1.75	0.19	5.45	10614	0.1836	6.1047	-5.9211	NAF
NS0072	26	28	NS	E411553	411553	1	G	W	28.54	45.06	4.64	0.065	0.05	0.233	0.87	0.37	0.046	0.013	0.197	0.072	5.34	1.84	0.17	7.35	10604	0.3978	6.45354	-6.05574	NAF
NS0072	246	248	NS	E411664	411664	1	G	W	24.5	44.76	4.53	0.245	0.19	0.217	3.2	0.74	0.11	0.221	0.926	0.241	1.22	7.78	0.51	9.51	10714	6.7626	12.90708	-6.14448	NAF
NS0072	92	94	NS	E411586	411586	1	G	W	25.37	47.08	3.72	0.245	0.19	0.178	2.52	0.64	0.061	0.154	1.22	0.271	1.11	5.84	0.34	7.29	10637	4.7124	11.16288	-6.45048	NAF
NS0072	42	44	NS	E411561	411561	1	G	W	24.68	48.73	5.43	0.323	0.25	0.253	1.46	0.39	0.05	0.006	1.15	0.074	4.29	1.9	0.21	6.4	10612	0.1836	6.80238	-6.61878	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0072	40	42	NS	E411560	411560	1	G	W	25.7	47.48	5.47	0.361	0.28	0.266	1.44	0.41	0.048	0.005	0.945	0.059	4.34	1.95	0.25	6.54	10611	0.153	7.15122	-6.99822	NAF
NS0072	242	244	NS	E411662	411662	1	G	W	25.83	44.59	3.31	0.284	0.22	0.16	2.45	0.72	0.095	0.176	0.862	0.169	1.07	8.85	0.25	10.17	10712	5.3856	12.55824	-7.17264	NAF
NS0072	170	172	NS	E411626	411626	1	G	W	28.58	41.04	2.68	0.413	0.32	0.126	2.48	0.67	0.08	0.145	0.938	0.229	1.11	8.96	0.22	10.29	10676	4.437	11.68614	-7.24914	NAF
NS0072	250	252	NS	E411666	411666	1	G	W	24.23	44.54	3.31	0.465	0.36	0.161	2.82	0.8	0.116	0.196	0.727	0.196	1.11	10.4	0.37	11.88	10716	5.9976	13.9536	-7.956	NAF
NS0072	66	68	NS	E411573	411573	1	G	W	25.64	46.75	3.75	0.336	0.26	0.182	2.72	0.91	0.1	0.231	1.75	0.251	1	4.77	0.47	6.24	10624	7.0686	15.87222	-8.80362	NAF
NS0072	182	184	NS	E411632	411632	1	G	W	27.03	44.77	3.57	0.194	0.15	0.166	2.56	0.72	0.05	0.122	1.21	0.287	1.25	5.85	0.4	7.5	10682	3.7332	12.55824	-8.82504	NAF
NS0072	248	250	NS	E411665	411665	1	G	W	26	41.25	3.87	0.426	0.33	0.175	3.07	0.85	0.178	0.196	1.05	0.27	1.3	9.4	0.43	11.13	10715	5.9976	14.8257	-8.8281	NAF
NS0072	90	92	NS	E411585	411585	1	G	W	24.28	47.08	4.2	0.284	0.22	0.202	2.77	0.85	0.079	0.192	1.55	0.293	1.12	5.77	0.51	7.4	10636	5.8752	14.8257	-8.9505	NAF
NS0072	192	194	NS	E411637	411637	1	G	W	27.91	40.87	3.62	0.284	0.22	0.167	3.13	0.92	0.092	0.218	1.36	0.33	1.4	6.93	0.55	8.88	10687	6.6708	16.04664	-9.37584	NAF
NS0072	102	104	NS	E411591	411591	1	G	W	23.23	46.57	5.45	0.232	0.18	0.263	3.34	1.38	0.109	0.463	1.44	0.292	1.08	5.24	0.87	7.19	10642	14.1678	24.06996	-9.90216	NAF
NS0072	120	122	NS	E411600	411600	1	G	W	22.22	49.26	3.85	0.284	0.22	0.19	2.78	1	0.119	0.246	1.06	0.261	1.13	7.18	0.62	8.93	10651	7.5276	17.442	-9.9144	NAF
NS0072	224	226	NS	E411653	411653	1	G	W	24.22	45.28	6.19	0.232	0.18	0.295	4.15	1.43	0.071	0.491	1.47	0.343	1.19	3.2	1.11	5.5	10703	15.0246	24.94206	-9.91746	NAF
NS0072	122	124	NS	E411602	411602	1	G	W	23.5	44.83	3.68	0.413	0.32	0.18	3.28	0.95	0.08	0.199	0.754	0.198	1.01	10.08	0.51	11.6	10652	6.0894	16.5699	-10.4805	NAF
NS0072	210	212	NS	E411646	411646	1	G	W	22.41	48.36	6.68	0.155	0.12	0.315	3.48	1.41	0.128	0.457	1.54	0.363	1.28	2.6	1.06	4.94	10696	13.9842	24.59322	-10.60902	NAF
NS0072	220	222	NS	E411651	411651	1	G	W	24.94	48.98	3.71	0.271	0.21	0.172	2.58	0.86	0.069	0.14	1.3	0.301	1.18	4.17	0.47	5.82	10701	4.284	15.00012	-10.71612	NAF
NS0072	178	180	NS	E411630	411630	1	G	W	25.76	48.37	2.01	0.31	0.24	0.094	1.91	0.74	0.043	0.069	0.801	0.192	0.9	7.48	0.09	8.47	10680	2.1114	12.90708	-10.79568	NAF
NS0072	74	76	NS	E411577	411577	1	G	W	24.9	47.15	3.76	0.336	0.26	0.188	3.06	0.97	0.042	0.193	1.66	0.267	1.03	4.78	0.66	6.47	10628	5.9058	16.91874	-11.01294	NAF
NS0072	184	186	NS	E411633	411633	1	G	W	24.49	47.61	3.94	0.271	0.21	0.181	2.81	1	0.056	0.208	1.3	0.314	1.3	5.21	0.68	7.19	10683	6.3648	17.442	-11.0772	NAF
NS0072	232	234	NS	E411657	411657	1	G	W	19.39	55.53	5.85	0.142	0.11	0.279	2.87	1.21	0.098	0.327	1.47	0.309	1.06	2.56	0.64	4.26	10707	10.0062	21.10482	-11.09862	NAF
NS0072	206	208	NS	E411644	411644	1	G	W	25.42	43.96	3.81	0.284	0.22	0.18	3.01	1.01	0.152	0.209	1.31	0.3	1.35	7.09	0.66	9.1	10694	6.3954	17.61642	-11.22102	NAF
NS0072	110	112	NS	E411595	411595	1	G	W	24.94	44.29	3.22	0.297	0.23	0.158	2.38	1.02	0.072	0.209	1.02	0.233	1.11	9.82	0.4	11.33	10646	6.3954	17.79084	-11.39544	NAF
NS0072	50	52	NS	E411565	411565	1	G	W	23.99	49.36	5.03	0.245	0.19	0.24	2.43	0.97	0.086	0.173	1.67	0.145	2.14	2.45	0.66	5.25	10616	5.2938	16.91874	-11.62494	NAF
NS0072	58	60	NS	E411569	411569	1	G	W	29.39	46.36	2.91	0.284	0.22	0.144	1.35	0.71	0.132	0.022	0.762	0.085	3.27	1.47	0.08	4.82	10620	0.6732	12.38382	-11.71062	NAF
NS0072	260	262	NS	E411671	411671	1	G	W	25.11	42.38	5.23	0.361	0.28	0.245	3.36	1.15	0.144	0.269	1.13	0.28	1.24	7.36	0.67	9.27	10721	8.2314	20.0583	-11.8269	NAF
NS0072	208	210	NS	E411645	411645	1	G	W	24.58	45.16	3.87	0.374	0.29	0.185	2.97	1.27	0.069	0.334	1.26	0.312	1.31	6.75	0.9	8.96	10695	10.2204	22.15134	-11.93094	NAF
NS0072	98	100	NS	E411589	411589	1	G	W	21.81	48.34	5.02	0.361	0.28	0.239	3.1	1.26	0.062	0.32	1.59	0.272	1.12	6.15	0.92	8.19	10640	9.792	21.97692	-12.18492	NAF
NS0072	130	132	NS	E411606	411606	1	G	W	25.78	41.36	4.16	0.258	0.2	0.199	2.85	1.07	0.097	0.211	0.838	0.218	1.13	9.99	0.53	11.65	10656	6.4566	18.66294	-12.20634	NAF
NS0072	86	88	NS	E411583	411583	1	G	W	29.58	43.07	2.56	0.245	0.19	0.122	2.08	0.88	0.048	0.094	1.18	0.217	0.84	5.87	0.15	6.86	10634	2.8764	15.34896	-12.47256	NAF
NS0072	188	190	NS	E411635	411635	1	G	W	28.22	42.41	2.12	0.349	0.27	0.1	2.21	0.95	0.107	0.098	0.773	0.194	0.93	9.1	0.14	10.17	10685	2.9988	16.5699	-13.5711	NAF
NS0072	212	214	NS	E411647	411647	1	G	W	25.36	44.68	4.54	0.336	0.26	0.216	3.1	1.23	0.102	0.257	1.38	0.344	1.26	5.26	0.84	7.36	10697	7.8642	21.45366	-13.58946	NAF
NS0072	230	232	NS	E411656	411656	1	G	W	25	44.41	3.74	0.336	0.26	0.18	2.75	1.19	0.124	0.22	0.907	0.213	1.06	8.55	0.5	10.11	10706	6.732	20.75598	-14.02398	NAF
NS0072	278	280	NS	E411680	411680	1	G	W	18.02	54.56	6.74	0.245	0.19	0.316	3.06	1.63	0.106	0.441	1.91	0.267	0.92	2.98	1.07	4.97	10730	13.4946	28.43046	-14.93586	NAF
NS0072	262	264	NS	E411672	411672	1	G	W	15.18	58.34	8.3	0.258	0.2	0.388	2.92	2.05	0.053	0.675	1.27	0.11	0.55	2.62	1.22	4.39	10722	20.655	35.7561	-15.1011	NAF
NS0072	116	118	NS	E411598	411598	1	G	W	22.03	48.46	5.37	0.245	0.19	0.264	3.26	1.26	0.08	0.216	1.18	0.27	1.09	5.91	0.89	7.89	10649	6.6096	21.97692	-15.36732	NAF
NS0072	132	134	NS	E411607	411607	1	G	W	21.26	50.27	3.94	0.284	0.22	0.191	2.52	1.38	0.177	0.274	0.893	0.207	1.1	7.31	0.73	9.14	10657	8.3844	24.06996	-15.68556	NAF
NS0072	126	128	NS	E411604	411604	1	G	W	24.43	42.1	5.14	0.516	0.4	0.241	3.52	1.61	0.068	0.402	0.921	0.232	1.05	8.41	1.07	10.53	10654	12.3012	28.08162	-15.78042	NAF
NS0072	276	278	NS	E411679	411679	1	G	W	19.72	50.9	7.17	0.284	0.22	0.333	3.35	1.67	0.152	0.436	2.04	0.309	1.08	3.13	1.02	5.23	10729	13.3416	29.12814	-15.78654	NAF
NS0072	274	276	NS	E411678	411678	1	G	W	23.93	44.2	4.15	0.4	0.31	0.191	2.6	1.52	0.171	0.324	1.05	0.177	0.93	9.05	0.68	10.66	10728	9.9144	26.51184	-16.59744	NAF
NS0072	114	116	NS	E411597	411597	1	G	W	27.51	40.13	3.39	0.245	0.19	0.164	2.55	1.27	0.043	0.175	0.89	0.232	1.07	9.7	0.54	11.31	10648	5.355	22.15134	-16.79634	NAF
NS0072	100	102	NS	E411590	411590	1	G	W	27.75	41.91	3.21	0.271	0.21	0.154	2.4	1.38	0.109	0.232	1.1	0.246	1.03	7.66	0.51	9.2	10641	7.0992	24.06996	-16.97076	NAF
NS0072	78	80	NS	E411579	411579	1	G	W	26.91	46.08	2.9	0.258	0.2	0.139	2.25	1.16	0.016	0.105	1.37	0.235	0.87	5.09	0.75	6.71	10630	3.213	20.23272	-17.01972	NAF
NS0072	174	176	NS	E411628	411628	1	G	W	28.63	42.33	2.08	0.361	0.28	0.1	2.14	1.12	0.075	0.078	0.819	0.205	0.93	8.49	0.19	9.61	10678	2.3868	19.53504	-17.14824	NAF
NS0072	190	192	NS	E411636	411636	1	G	W	28.25	42.62	1.41	0.349	0.27	0.065	1.94	1.12	0.116	0.069	0.566	0.146	0.8	10.04	0.1	10.94	10686	2.1114	19.53504	-17.42364	NAF
NS0072	104	106	NS	E411592	411592	1	G	W	23.05	45.68	5.17	0.323	0.25	0.251	3.34	1.51	0.071	0.284	1.35	0.275	1.15	6.6	0.85	8.6	10643	8.6904	26.33742	-17.64702	NAF
NS0072	138	140	NS	E411610	411610	1	G	W	22.87	47.37	5.01	0.271	0.21	0.235	3.29	1.56	0.154	0.312	1.37	0.302	1.26	4.85	0.97	7.08	10660	9.5472	27.20952	-17.66232	NAF
NS0072	216	218	NS	E411649	411649	1	G	W	24.58	45.32	3.29	0.387	0.3	0.16	2.7	1.29	0.15	0.157	1.12	0.261	1.19	7.8	0.59	9.58	10699	4.8042	22.50018	-17.69598	NAF
NS0072	108	110	NS	E411594	411594	1	G	W	20.8	49.35	5.84	0.31	0.24	0.281	3.09	1.62	0.087	0.34	2.09	0.304	1.06	4.93	1	6.99	10645	10.404	28.25604	-17.85204	NAF
NS0072	52	54	NS	E411566	411566	1	G	W	26.1	46.18	3.76	0.245	0.19	0.177	2.73	1.4	0.091	0.21	1.45	0.164	0.92	4.43	0.7	6.05	10617	6.426	24.4188	-17.9928	NAF
NS0072	228	230	NS	E411655	411655	1	G	W	24.81	45.65	4.07	0.297	0.23	0.191	2.91	1.48	0.091	0.24	1.09	0.255	1.13	6.19	0.73	8.05	10705	7.344	25.81416	-18.47016	NAF
NS0072	218	220	NS	E411650	411650	1	G	W	23.87	45.39	5.56	0.284	0.22	0.266	3.49	1.71	0.106	0.344	1.52	0.335	1.34	4.24	1.09	6.67	10700	10.5264	29.82582	-19.29942	NAF
NS0072	168	170	NS	E411625	411625	1	G	W	20.94	50.42	5.71	0.245	0.19	0.264	3.32	1.76	0.138	0.371	1.65	0.309	1.18	3.52	1.11	5.81	10675	11.3526	30.69792	-19.34532	NAF
NS0072	204	206	NS	E411643	411643	1	G	W	25.05	43.67	3.17	0.323	0.25	0.151	2.88	1.49	0.086	0.215	1.04	0.255	1.2	8.64	0.78	10.62	10693	6.579	25.98858	-19.40958	NAF
NS0072	236	238	NS	E411659	411659	1	G	W	21.44	50.07	4.37	0.413	0.32	0.212	3.02	1.55	0.099	0.249	0.997	0.248	1.06	6.25	0.66	7.97	10709	7.6194	27.0351	-19.4157	NAF
NS0072	172	174	NS	E411627	411627	1	G	W	21.76	50.64	3.91	0.349	0.27	0.186	2.93	1.7	0.169	0.327	1.19	0.285	1.09	5.04	0.8	6.93	10677	10.0062	29.6514	-19.6452	NAF
NS0072	124	126	NS	E411603	411603	1	G	W	20.93	48.8	6.19	0.284	0.22	0.299	3.65	1.76	0.105	0.354	0.906	0.224	0.95	5.29	1.23	7.47	10653	10.8324	30.69792	-19.86552	NAF
NS0072	166	168	NS	E411624	411624	1	G	W	25.78	45.63	3.36	0.271	0.21	0.161	2.77	1.59	0.1	0.256	1.21	0.304	1.15	5.45	0.78	7.38	10674	7.8336	27.73278	-19.89918	NAF
NS0072	194	196	NS	E411638	411638	1	G	W	28.87	40.65	2.04	0.336	0.26	0.096	2.29	1.29	0.085	0.084	0.777	0.176	0.96	9.5	0.26	10.72	10688	2.5704	22.50018	-19.92978	NAF
NS0072	128	130	NS	E411605	411605	1	G	W	23.01	46.83	2.56	0.4	0.31	0.125	2.36	1.45	0.103	0.146	0.719	0.188	1.01	10.4	0.54	11.95	10655	4.4676	25.2909	-20.8233	NAF
NS0072	198	200	NS	E411640	411640	1	G	W	26.7	43	2.49	0.31	0.24	0.116	2.59	1.43	0.085	0.132	0.859	0.215	0.99	8.84	0.53	10.36	10690	4.0392	24.94206	-20.90286	NAF
NS0072	164	166	NS	E411623	411623	1	G	W	29.23	41.4	2.65	0.323	0.25	0.127	2.55	1.39	0.08	0.091	0.974	0.25	1.01	6.68	0.45	8.14	10673	2.7846	24.24438	-21.45978	NAF
NS0072	96	98	NS	E411588	411588	1	G	W	21.94	48.65	4.47	0.361	0.28	0.224	2.91	1.66	0.092	0.244	1.41	0.274	1.1	6.33	0.91	8.34	10639	7.4664	28.95372	-21.48732	NAF
NS0072	80	82	NS	E411580	411580	1	G	W	23.89	45.12	5.25	0.245	0.19	0.25	3.35	2.01	0.127	0.426	2.13	0.293	1.12	4.32	1.26	6.7	10631	13.0356	35.05842	-22.02282	NAF
NS0072	88	90	NS	E411584	411584	1	G	W	28.33	43.57	2.7	0.245	0.19	0.129	2.08	1.47	0.053	0.103	1.18	0.23	0.82	6.07	0.5	7.39	10635	3.1518	25.63974	-22.48794	NAF
NS0072	196	198	NS	E411639	411639	1	G	W	24.81	46.63	2.77	0.258	0.2	0.133	2.59	1.59	0.105	0.151	0.929	0.221	0.98	7.54	0.57	9.09	10689	4.6206	27.73278	-23.11218	NAF
NS0072	202	204	NS	E411642	411642	1	G	W	25.97	42.78	3.39	0.297	0.23	0.163	3.02	1.74	0.125	0.229	1.07	0.259	1.13	7.86	0.8	9.79	10692	7.0074	30.34908	-23.34168	NAF
NS0072	60	62	NS	E411570	411570	1	G	W	28.57	45.45	3.02	0.245	0.19	0.146	1.86	1.57	0.206	0.067	0.938	0.112	2.25	2.3	0.46	5.01	10621	2.0502	27.38394	-25.33374	NAF
NS0072	258	260	NS	E411670	411670	1	G	W	24.07	45.12	3.56	0.258	0.2	0.172	2.78	1.79	0.13	0.187	0.818	0.208	1.03	8.63	0.72	10.38	10720	5.7222	31.22118	-25.49898	NAF
NS0072	54	56	NS	E411567	411567	1	G	W	29.48	42.84	2.54	0.258	0.2	0.121	2.31	1.7	0.099	0.104	0.966	0.158	0.87	5	0.82	6.69	10618	3.1824	29.6514	-26.469	NAF
NS0072	200	202	NS	E411641	411641	1	G	W	28.29	41.32	1.98	0.323	0.25	0.093	2.23	1.71	0.094	0.085	0.761	0.196	0.85	9.01	0.61	10.47	10691	2.601	29.82582	-27.22482	NAF
NS0072	142	144	NS	E411612	411612	1	G	W	30.26	40.33	2.75	0.271	0.21	0.133	2.81	1.76	0.145	0.096	1.03	0.27	0.96	4.9	0.8	6.66	10662	2.9376	30.69792	-27.76032	NAF
NS0072	280	282	NS	E411681	411681	1	G	W	16.13	58.6	4.9	0.271	0.21	0.236	2.47	2.29	0.054	0.397	1.56	0.22	0.93	3.83	1.41	6.17	10731	12.1482	39.94218	-27.79398	NAF
NS0072	70	72	NS	E411575	411575	1	G	W	30.35	42.41	2.26	0.284	0.22	0.108	2.31	1.78	0.094	0.088	0.947	0.248	0.85	4.1	0.8	5.75	10626	2.6928	31.04676	-28.35396	NAF
NS0072	162	164	NS	E411622	411622	1	G	W	29.06	42.11	2.26	0.323	0.25	0.11	2.26	1.79	0.064	0.082	0.876	0.226	0.9	6.67	0.7	8.27	10672	2.5092	31.22118	-28.71198	NAF
NS0072	68	70	NS	E411574	411574	1	G	W	30.37	42.28	2.32	0.284	0.22	0.11	2.32	1.81	0.101	0.084	0.97	0.237	0.84	4.17	0.89	5.9	10625	2.5704	31.57002	-28.99962	NAF
NS0072	254	256	NS	E411668	411668	1	G	W	21.16	49.68	2.86	0.361	0.28	0.139	2.54	1.94	0.09	0.157	0.718	0.186	0.88	9.02	0.85	10.75	10718	4.8042	33.83748	-29.03328	NAF
NS0072	136	138	NS	E411609	411609	1	G	W	28.3	42.64	2.51	0.232	0.18	0.118	2.11	1.86	0.099	0.099	0.872	0.215	0.89	6.77	0.67	8.33	10659	3.0294	32.44212	-29.41272	NAF
NS0072	64	66	NS	E411572	411572	1	G	W	25.49	44.96	3.91	0.284	0.22	0.188	2.86	2.21	0.123	0.283	1.66	0.237	0.94	4.72	1.22	6.88	10623	8.6598	38.54682	-29.88702	NAF
NS0072	152	154	NS	E411617	411617	1	G	W	31.08	39.5	2.25	0.349	0.27	0.107	2.51	1.88	0.147	0.093	0.855	0.226	0.82	5.32	1.03	7.17	10667	2.8458	32.79096	-29.94516	NAF
NS0072	214	216	NS	E411648	411648	1	G	W	25.72	42.84	2.96	0.452	0.35	0.147	2.64	1.93	0.214	0.117	1.07	0.262	1.1	8.41	0.69	10.2	10698	3.5802	33.66306	-30.08286	NAC
NS0072	222	224	NS	E411652	411652	1	G	W	25.97	43.71	4.03	0.31	0.24	0.192	3.08	2.07	0.151	0.194	1.43	0.338	1.28	4.8	1.02	7.1	10702	5.9364	36.10494	-30.16854	NAC
NS0072	112	114	NS	E411596	411596	1	G	W	23.09	47.46	2.36	0.219	0.17	0.114	1.89	1.96	0.042	0.117	0.727	0.196	0.9	9.66	0.94	11.5	10647	3.5802	34.18632	-30.60612	NAC
NS0072	148	150	NS	E411615	411615	1	G	W	28.8	45.52	1.85	0.245	0.19	0.085	2.14	1.86	0.1	0.056	0.723	0.191	0.68	3.85	1.16	5.69	10665	1.7136	32.44212	-30.72852	NAC
NS0072	160	162	NS	E411621	411621	1	G	W	27.87	42.67	2.99	0.31	0.24	0.144	2.61	2.1	0.117	0.166	1.01	0.256	1.03	5.45	0.9	7.38	10671	5.0796	36.6282	-31.5486	NAC
NS0072	146	148	NS	E411614	411614	1	G	W	30	43.36	2.24	0.207	0.16	0.103	2.27	1.96	0.066	0.066	0.829	0.222	0.75	3.4	1.42	5.57	10664	2.0196	34.18632	-32.16672	NAC
NS0072	140	142	NS	E411611	411611	1	G	W	24.32	45.58	4.29	0.297	0.23	0.201	2.88	2.33	0.096	0.252	1.46	0.269	1.15	4.93	1.18	7.26	10661	7.7112	40.63986	-32.92866	NAC
NS0072	56	58	NS	E411568	411568	1	G	W	28.91	42.28	2.75	0.271	0.21	0.134	2.45	2.12	0.056	0.114	1.16	0.164	0.89	4.46	1.4	6.75	10619	3.4884	36.97704	-33.48864	NAC
NS0072	150	152	NS	E411616	411616	1	G	W	31.75	40.25	2.15	0.271	0.21	0.104	2.43	2.08	0.088	0.073	0.831	0.22	0.77	3.78	1.36	5.91	10666	2.2338	36.27936	-34.04556	NAC
NS0072	118	120	NS	E411599	411599	1	G	W	19.32	51.01	5.06	0.349	0.27	0.246	3.22	2.37	0.055	0.236	1.08	0.204	0.84	5.86	1.79	8.49	10650	7.2216	41.33754	-34.11594	NAC
NS0072	154	156	NS	E411618	411618	1	G	W	27.92	44.4	2.24	0.336	0.26	0.107	2.34	2.14	0.07	0.087	0.856	0.221	0.87	4.89	1.32	7.08	10668	2.6622	37.32588	-34.66368	NAC
NS0072	156	158	NS	E411619	411619	1	G	W	27.19	45.86	1.49	0.349	0.27	0.069	1.88	2.14	0.081	0.05	0.578	0.145	0.7	6.51	1.22	8.43	10669	1.53	37.32588	-35.79588	NAC
NS0072	226	228	NS	E411654	411654	1	G	W	29.42	43.61	1.96	0.245	0.19	0.094	1.97	2.21	0.083	0.078	0.725	0.18	0.73	5.11	0.87	6.71	10704	2.3868	38.54682	-36.16002	NAC
NS0072	158	160	NS	E411620	411620	1	G	W	24.73	43.92	3.38	0.426	0.33	0.156	3.15	2.39	0.124	0.176	1.09	0.273	1.06	6.58	1.48	9.12	10670	5.3856	41.68638	-36.30078	NAC
NS0072	72	74	NS	E411576	411576	1	G	W	27.41	43.66	2.82	0.258	0.2	0.139	2.61	2.63	0.062	0.118	1.28	0.267	0.92	3.64	2.07	6.63	10627	3.6108	45.87246	-42.26166	NAC
NS0072	244	246	NS	E411663	411663	1	G	W	20.86	48.78	3.38	0.374	0.29	0.162	2.69	2.8	0.082	0.185	0.809	0.204	0.95	8.12	1.25	10.32	10713	5.661	48.8376	-43.1766	NAC
NS0072	62	64	NS	E411571	411571	1	G	W	28.62	40.95	2.94	0.31	0.24	0.147	2.59	2.73	0.155	0.12	1.24	0.192	0.96	4.85	1.59	7.4	10622	3.672	47.61666	-43.94466	NAC
NS0072	76	78	NS	E411578	411578	1	G	W	24.68	43.79	3.52	0.465	0.36	0.173	2.76	2.96	0.122	0.234	1.5	0.237	0.94	5.93	1.99	8.86	10629	7.1604	51.62832	-44.46792	NAC
NS0072	82	84	NS	E411581	411581	1	G	W	23.83	44.21	4.21	0.361	0.28	0.2	2.91	3.05	0.189	0.253	1.76	0.285	1.04	5.31	1.91	8.26	10632	7.7418	53.1981	-45.4563	NAC
NS0072	94	96	NS	E411587	411587	1	G	W	20.79	48.62	4.18	0.361	0.28	0.208	2.8	3.26	0.09	0.269	1.28	0.259	1.01	6	1.82	8.83	10638	8.2314	56.86092	-48.62952	NAC
NS0072	256	258	NS	E411669	411669	1	G	W	20.94	47.83	3.03	0.336	0.26	0.145	2.57	3.31	0.076	0.165	0.701	0.175	0.88	8.77	1.76	11.41	10719	5.049	57.73302	-52.68402	NAC
NS0072	252	254	NS	E411667	411667	1	G	W	19.65	50.08	3.27	0.336	0.26	0.159	2.57	3.56	0.083	0.162	0.795	0.199	0.94	7.6	1.78	10.32	10717	4.9572	62.09352	-57.13632	NAC
NS0072	186	188	NS	E411634	411634	1	G	W	20.36	48.67	3.98	0.413	0.32	0.186	2.82	4.27	0.082	0.524	1.1	0.28	1.06	5.2	2.38	8.64	10684	16.0344	74.47734	-58.44294	NAC
NS0072	84	86	NS	E411582	411582	1	G	W	23.13	44.76	3.58	0.374	0.29	0.17	2.66	3.71	0.154	0.172	1.45	0.244	1.01	6.14	2.17	9.32	10633	5.2632	64.70982	-59.44662	NAC
NS0072	144	146	NS	E411613	411613	1	G	W	28.26	40.99	2.52	0.323	0.25	0.12	2.79	3.56	0.144	0.079	0.934	0.252	0.89	4.12	2.92	7.93	10663	2.4174	62.09352	-59.67612	NAC
NS0073	116	118	NS	E411741	411741	1	G	W	19.96	50.89	7.86	0.168	0.13	0.359	3.4	0.11	0.022	0.998	1.78	0.129	0.55	4.74	1.11	6.4	10790	30.5388	1.91862	28.62018	PAF(HC)
NS0073	114	116	NS	E411740	411740	1	G	W	16.79	56.54	7.58	0.194	0.15	0.338	2.76	0.2	0.043	0.728	1.86	0.05	0.54	4.41	1.01	5.96	10789	22.2768	3.4884	18.7884	PAF(HC)
NS0073	108	110	NS	E411737	411737	1	G	W	20.45	48.39	7.41	0.271	0.21	0.342	3	0.52	0.133	0.635	2.31	0.128	0.6	6.04	0.98	7.62	10786	19.431	9.06984	10.36116	PAF(HC)
NS0073	58	60	NS	E411712	411712	1	G	W	27.22	44.61	2.44	0.594	0.46	0.109	3.16	0.67	0.188	0.714	0.224	0.059	0.27	7.06	1.08	8.41	10761	21.8484	11.68614	10.16226	PAF(HC)
NS0073	64	66	NS	E411715	411715	1	G	W	29.44	42.66	3.51	0.503	0.39	0.148	3.38	0.3	0.067	0.449	0.359	0.05	0.3	5.67	0.53	6.5	10764	13.7394	5.2326	8.5068	PAF(LC)
NS0073	186	188	NS	E411776	411776	1	G	W	20.77	52.86	5.68	0.258	0.2	0.266	3.24	0.93	0.082	0.724	0.961	0.255	0.83	3.34	1.14	5.31	10825	22.1544	16.22106	5.93334	PAF(LC)
NS0073	62	64	NS	E411714	411714	1	G	W	29.22	41.5	4.92	0.336	0.26	0.219	4.22	0.18	0.04	0.239	0.434	0.105	0.51	5.19	0.23	5.93	10763	7.3134	3.13956	4.17384	PAF(LC)
NS0073	112	114	NS	E411739	411739	1	G	W	22.32	49.27	5.21	0.297	0.23	0.237	2.85	0.24	0.042	0.249	0.591	0.068	0.58	8	0.5	9.08	10788	7.6194	4.18608	3.43332	PAF(LC)
NS0073	118	120	NS	E411742	411742	1	G	W	25.01	46.34	4.36	0.374	0.29	0.193	2.96	0.25	0.045	0.234	0.699	0.07	0.57	7.52	0.37	8.46	10791	7.1604	4.3605	2.7999	PAF(LC)
NS0073	184	186	NS	E411775	411775	1	G	W	20.2	52.32	6.9	0.284	0.22	0.332	3.28	0.79	0.029	0.482	0.887	0.165	0.69	4.12	0.95	5.76	10824	14.7492	13.77918	0.97002	PAF(LC)
NS0073	110	112	NS	E411738	411738	1	G	W	22.88	47.69	3.61	0.426	0.33	0.166	2.68	0.24	0.027	0.152	0.313	0.03	0.48	11.03	0.25	11.76	10787	4.6512	4.18608	0.46512	PAF(LC)
NS0073	260	262	NS	E411814	411814	1	G	W	22.46	47.69	6.81	0.31	0.24	0.314	3.9	1.14	0.071	0.659	0.789	0.217	0.88	4.4	1.13	6.41	10862	20.1654	19.88388	0.28152	PAF(LC)
NS0073	6	8	NS	E411685	411685	1	G	W	36.12	38.47	2.77	0.065	0.05	0.161	0.07	0.03	0.016	0.019	0.011	0.009	5.59	0.82	0.19	6.6	10735	0.5814	0.52326	0.05814	PAF(LC)

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0073	10	12	NS	E411687	411687	1	G	W	37.62	34.16	3.55	0.026	0.02	0.199	0.04	0.04	0.016	0.023	0.005	0.018	6.82	1.02	0.22	8.06	10737	0.7038	0.69768	0.00612	PAF(LC)
NS0073	4	6	NS	E411684	411684	1	G	W	37.87	39.42	1.96	0.116	0.09	0.104	0.08	0.03	0.019	0.013	0.01	0.001	3.32	0.62	0.08	4.02	10734	0.3978	0.52326	-0.12546	NAF
NS0073	8	10	NS	E411686	411686	1	G	W	36.91	36.12	3	0.065	0.05	0.168	0.07	0.04	0.015	0.018	0.016	0.022	6.46	0.9	0.22	7.58	10736	0.5508	0.69768	-0.14688	NAF
NS0073	18	20	NS	E411691	411691	1	G	W	34.95	45.41	1.72	0.065	0.05	0.063	0.06	0.03	0.045	0.006	0.04	0.001	2.21	0.59	0.08	2.88	10741	0.1836	0.52326	-0.33966	NAF
NS0073	20	22	NS	E411692	411692	1	G	W	38.61	40.41	1.45	0.245	0.19	0.058	0.08	0.03	0.059	0.004	0.111	0.006	1.7	0.46	-0.05	2.11	10742	0.1224	0.52326	-0.40086	NAF
NS0073	22	24	NS	E411693	411693	1	G	W	36.45	43.67	1.54	0.065	0.05	0.059	0.04	0.03	0.057	0.004	0.03	0.002	1.56	0.51	-0.01	2.06	10743	0.1224	0.52326	-0.40086	NAF
NS0073	12	14	NS	E411688	411688	1	G	W	23.22	57.49	3.64	0.026	0.02	0.294	0.07	0.05	0.018	0.015	0.023	0.036	3.89	1.17	0.05	5.11	10738	0.459	0.8721	-0.4131	NAF
NS0073	38	40	NS	E411702	411702	1	G	W	38.93	38.96	1.41	0.71	0.55	0.058	0.19	0.03	0.064	0.003	0.676	0.006	1.9	0.35	0.01	2.26	10751	0.0918	0.52326	-0.43146	NAF
NS0073	16	18	NS	E411690	411690	1	G	W	37.08	40.82	1.66	0.142	0.11	0.067	0.13	0.05	0.077	0.008	0.078	0.018	2.87	0.64	0.05	3.56	10740	0.2448	0.8721	-0.6273	NAF
NS0073	40	42	NS	E411703	411703	1	G	W	31.25	44.65	2.7	0.568	0.44	0.118	2.17	0.24	0.058	0.115	0.869	0.011	0.43	3.33	-0.08	3.68	10752	3.519	4.18608	-0.66708	NAF
NS0073	0	2	NS	E411682	411682	1	G	W	29.7	45.56	5.18	0.065	0.05	0.487	0.09	0.07	0.029	0.017	0.079	0.031	4.28	1.18	0.19	5.65	10732	0.5202	1.22094	-0.70074	NAF
NS0073	24	26	NS	E411694	411694	1	G	W	34.03	44.5	1.53	0.594	0.46	0.06	0.15	0.05	0.097	0.004	0.135	0.008	3.02	0.61	0.07	3.7	10744	0.1224	0.8721	-0.7497	NAF
NS0073	14	16	NS	E411689	411689	1	G	W	28.95	50.27	2.8	0.116	0.09	0.166	0.1	0.06	0.036	0.009	0.013	0.023	3.7	0.97	0.1	4.77	10739	0.2754	1.04652	-0.77112	NAF
NS0073	36	38	NS	E411700	411700	1	G	W	38.79	39.12	1.37	0.775	0.6	0.058	0.24	0.05	0.068	0.002	0.515	0.002	1.84	0.39	0.1	2.33	10750	0.0612	0.8721	-0.8109	NAF
NS0073	32	34	NS	E411698	411698	1	G	W	35.55	41.85	2.52	0.529	0.41	0.105	0.47	0.06	0.054	0.002	0.192	0.016	2.24	0.85	-0.06	3.03	10748	0.0612	1.04652	-0.98532	NAF
NS0073	126	128	NS	E411746	411746	1	G	W	32.88	41.8	2.96	0.336	0.26	0.138	2.58	0.27	0.043	0.119	0.691	0.007	0.23	3.93	-0.11	4.05	10795	3.6414	4.70934	-1.06794	NAF
NS0073	74	76	NS	E411720	411720	1	G	W	32.64	39.45	2.54	0.594	0.46	0.105	2.6	0.39	0.078	0.181	0.989	0.045	0.18	5.88	-0.03	6.03	10769	5.5386	6.80238	-1.26378	NAF
NS0073	2	4	NS	E411683	411683	1	G	W	36.2	39.67	2.89	0.103	0.08	0.151	0.09	0.12	0.03	0.015	0.017	0.013	4.24	0.86	0.15	5.25	10733	0.459	2.09304	-1.63404	NAF
NS0073	26	28	NS	E411695	411695	1	G	W	33.53	44.58	1.64	0.646	0.5	0.068	0.37	0.1	0.098	0.003	0.192	0.017	3.12	0.71	-0.01	3.82	10745	0.0918	1.7442	-1.6524	NAF
NS0073	28	30	NS	E411696	411696	1	G	W	32.68	43.97	2.72	0.8	0.62	0.112	0.51	0.11	0.097	0.003	0.288	0.022	3.12	1.02	0.04	4.18	10746	0.0918	1.91862	-1.82682	NAF
NS0073	30	32	NS	E411697	411697	1	G	W	34.67	41.49	2.88	0.555	0.43	0.12	0.57	0.13	0.082	0.002	0.306	0.022	2.69	1.06	0.06	3.81	10747	0.0612	2.26746	-2.20626	NAF
NS0073	130	132	NS	E411748	411748	1	G	W	30.43	47.67	1.77	0.271	0.21	0.082	1.67	0.71	0.076	0.332	1.08	0.014	0.01	2.34	0.32	2.67	10797	10.1592	12.38382	-2.22462	NAF
NS0073	146	148	NS	E411756	411756	1	G	W	23.54	49.06	2.67	0.529	0.41	0.119	2.17	0.75	0.082	0.347	1.48	0.096	0.51	8.02	0.64	9.17	10805	10.6182	13.0815	-2.4633	NAF
NS0073	198	200	NS	E411782	411782	1	G	W	22.63	47.6	5.64	0.336	0.26	0.264	3.65	0.97	0.117	0.459	0.724	0.215	0.91	5.85	1.05	7.81	10831	14.0454	16.91874	-2.87334	NAF
NS0073	34	36	NS	E411699	411699	1	G	W	29.98	45.36	4.59	0.62	0.48	0.199	1.09	0.18	0.067	0.005	0.497	0.024	2.48	1.54	0.13	4.15	10749	0.153	3.13956	-2.98656	NAF
NS0073	196	198	NS	E411781	411781	1	G	W	23.97	44.6	3.73	0.336	0.26	0.174	3.48	0.56	0.103	0.216	0.598	0.183	0.93	9.9	0.55	11.38	10830	6.6096	9.76752	-3.15792	NAF
NS0073	128	130	NS	E411747	411747	1	G	W	29.9	46.75	2.74	0.284	0.22	0.126	2.53	0.45	0.056	0.137	0.629	0.012	0.14	3.44	-0.01	3.57	10796	4.1922	7.8489	-3.6567	NAF
NS0073	88	90	NS	E411727	411727	1	G	W	28.46	43.19	3.33	0.478	0.37	0.148	3.19	0.47	0.102	0.135	0.31	0.047	0.48	7.38	0.03	7.89	10776	4.131	8.19774	-4.06674	NAF
NS0073	158	160	NS	E411762	411762	1	G	W	29.59	39.76	2.76	0.542	0.42	0.122	3.35	0.37	0.071	0.072	0.37	0.1	0.52	9.47	-0.07	9.92	10811	2.2032	6.45354	-4.25034	NAF
NS0073	200	202	NS	E411783	411783	1	G	W	18.94	52.47	9.1	0.155	0.12	0.426	4.05	0.95	0.051	0.402	0.213	0.074	0.57	3.4	0.92	4.89	10832	12.3012	16.5699	-4.2687	NAF
NS0073	42	44	NS	E411704	411704	1	G	W	35.23	39.86	1.27	0.852	0.66	0.055	1.6	0.31	0.076	0.029	0.629	0.008	0.34	4.64	-0.4	4.58	10753	0.8874	5.40702	-4.51962	NAF
NS0073	156	158	NS	E411761	411761	1	G	W	29.04	43.19	3.03	0.413	0.32	0.138	3.17	0.45	0.056	0.108	0.347	0.085	0.48	6.81	0.02	7.31	10810	3.3048	7.8489	-4.5441	NAF
NS0073	120	122	NS	E411743	411743	1	G	W	30.65	42.35	3.16	0.426	0.33	0.145	2.57	0.56	0.093	0.167	0.492	0.044	0.26	5.61	0.01	5.88	10792	5.1102	9.76752	-4.65732	NAF
NS0073	48	50	NS	E411707	411707	1	G	W	33.08	42.51	0.96	0.826	0.64	0.04	2	0.31	0.071	0.023	0.63	0.009	0.19	5.6	-0.39	5.4	10756	0.7038	5.40702	-4.70322	NAF
NS0073	44	46	NS	E411705	411705	1	G	W	36.6	39.53	1.13	0.723	0.56	0.053	1.66	0.33	0.084	0.026	0.598	0.014	0.14	4.05	-0.46	3.73	10754	0.7956	5.75586	-4.96026	NAF
NS0073	106	108	NS	E411736	411736	1	G	W	25.93	44.48	3.67	0.478	0.37	0.168	2.86	0.55	0.07	0.144	0.212	0.023	0.57	9.48	0.06	10.11	10785	4.4064	9.5931	-5.1867	NAF
NS0073	138	140	NS	E411752	411752	1	G	W	31.87	39.07	2.48	0.426	0.33	0.112	2.66	0.71	0.151	0.234	0.756	0.038	0.18	7.13	0.15	7.46	10801	7.1604	12.38382	-5.22342	NAF
NS0073	46	48	NS	E411706	411706	1	G	W	35.48	39.65	1.11	0.762	0.59	0.049	1.84	0.35	0.088	0.026	0.623	0.014	0.18	4.46	-0.41	4.23	10755	0.7956	6.1047	-5.3091	NAF
NS0073	90	92	NS	E411728	411728	1	G	W	28.8	44.46	2.97	0.4	0.31	0.139	2.72	0.65	0.136	0.188	0.539	0.032	0.26	5.88	0.08	6.22	10777	5.7528	11.3373	-5.5845	NAF
NS0073	60	62	NS	E411713	411713	1	G	W	30.14	46.68	1.16	0.555	0.43	0.051	2.07	0.38	0.091	0.024	0.193	0.043	0.3	5.61	-0.33	5.58	10762	0.7344	6.62796	-5.89356	NAF
NS0073	154	156	NS	E411760	411760	1	G	W	30.16	42.91	2.49	0.465	0.36	0.113	2.75	0.59	0.051	0.133	0.456	0.075	0.44	6.03	0.11	6.58	10809	4.0698	10.29078	-6.22098	NAF
NS0073	124	126	NS	E411745	411745	1	G	W	34.48	39.83	2.37	0.4	0.31	0.107	2.14	0.49	0.084	0.071	1.02	0.017	0.15	4.1	-0.28	3.97	10794	2.1726	8.54658	-6.37398	NAF
NS0073	86	88	NS	E411726	411726	1	G	W	32.77	40.58	2.17	0.439	0.34	0.095	2.46	0.51	0.09	0.082	0.325	0.054	0.31	5.94	-0.28	5.97	10775	2.5092	8.89542	-6.38622	NAF
NS0073	132	134	NS	E411749	411749	1	G	W	32.96	44.64	1.64	0.349	0.27	0.082	1.6	0.52	0.062	0.082	1.02	0.012	0.03	3.15	-0.24	2.94	10798	2.5092	9.06984	-6.56064	NAF
NS0073	268	270	NS	E411818	411818	1	G	W	25.63	42.99	4.42	0.336	0.26	0.21	3.54	0.8	0.076	0.236	1.31	0.335	1.32	6.65	0.82	8.79	10866	7.2216	13.9536	-6.732	NAF
NS0073	270	272	NS	E411819	411819	1	G	W	24.21	45.63	5.3	0.284	0.22	0.252	3.95	0.93	0.118	0.295	1.31	0.337	1.28	4.58	0.91	6.77	10867	9.027	16.22106	-7.19406	NAF
NS0073	214	216	NS	E411790	411790	1	G	W	25.9	40.85	2.74	0.349	0.27	0.126	3.54	0.84	0.103	0.241	0.748	0.21	1.05	11.51	0.65	13.21	10839	7.3746	14.65128	-7.27668	NAF
NS0073	122	124	NS	E411744	411744	1	G	W	34.45	40.59	2.14	0.374	0.29	0.099	1.89	0.53	0.099	0.062	0.899	0.019	0.24	3.75	-0.31	3.68	10793	1.8972	9.24426	-7.34706	NAF
NS0073	66	68	NS	E411716	411716	1	G	W	35.55	35.28	1.43	0.788	0.61	0.059	2.42	0.5	0.12	0.043	0.267	0.035	0.48	7.8	-0.33	7.95	10765	1.3158	8.721	-7.4052	NAF
NS0073	82	84	NS	E411724	411724	1	G	W	30.7	38.71	2.7	0.646	0.5	0.119	3.03	0.64	0.154	0.12	0.436	0.065	0.42	8.98	-0.07	9.33	10773	3.672	11.16288	-7.49088	NAF
NS0073	68	70	NS	E411717	411717	1	G	W	32.79	39.52	2.48	0.671	0.52	0.105	2.81	0.61	0.088	0.102	0.528	0.04	0.25	5.88	-0.13	6	10766	3.1212	10.63962	-7.51842	NAF
NS0073	170	172	NS	E411768	411768	1	G	W	29.84	41.95	3.28	0.387	0.3	0.146	3.55	0.7	0.065	0.15	0.907	0.126	0.47	5.02	0.3	5.79	10817	4.59	12.2094	-7.6194	NAF
NS0073	50	52	NS	E411708	411708	1	G	W	36.23	37.8	1.11	0.788	0.61	0.045	2.05	0.48	0.097	0.024	0.595	0.02	0.22	5.21	-0.44	4.99	10757	0.7344	8.37216	-7.63776	NAF
NS0073	56	58	NS	E411711	411711	1	G	W	34	40.26	1.63	0.658	0.51	0.07	2.44	0.54	0.07	0.049	0.251	0.027	0.25	5.31	-0.3	5.26	10760	1.4994	9.41868	-7.91928	NAF
NS0073	98	100	NS	E411732	411732	1	G	W	34.31	40.34	2.2	0.374	0.29	0.105	1.97	0.58	0.078	0.065	0.813	0.025	0.15	4.23	-0.34	4.04	10781	1.989	10.11636	-8.12736	NAF
NS0073	208	210	NS	E411787	411787	1	G	W	25.71	40.94	2.41	0.374	0.29	0.108	3.39	0.83	0.088	0.205	0.697	0.203	0.94	12.33	0.53	13.8	10836	6.273	14.47686	-8.20386	NAF
NS0073	212	214	NS	E411789	411789	1	G	W	25.44	40.83	3.14	0.4	0.31	0.145	3.77	1.02	0.067	0.308	0.64	0.195	0.93	11.41	0.69	13.03	10838	9.4248	17.79084	-8.36604	NAF
NS0073	218	220	NS	E411792	411792	1	G	W	27.55	38.16	2.39	0.297	0.23	0.11	3.17	0.71	0.089	0.131	0.696	0.206	1.08	12.94	0.44	14.46	10841	4.0086	12.38382	-8.37522	NAF
NS0073	70	72	NS	E411718	411718	1	G	W	31.69	42.63	1.88	0.671	0.52	0.082	2.44	0.7	0.091	0.121	0.544	0.038	0.2	5.31	0.01	5.52	10767	3.7026	12.2094	-8.5068	NAF
NS0073	182	184	NS	E411774	411774	1	G	W	18.88	53.98	6.67	0.245	0.19	0.31	3.08	1.41	0.059	0.517	1.34	0.178	0.75	3.39	1.33	5.47	10823	15.8202	24.59322	-8.77302	NAF
NS0073	102	104	NS	E411734	411734	1	G	W	29.1	43.77	1.98	0.503	0.39	0.093	2.21	0.69	0.088	0.105	0.097	0.025	0.28	8.4	-0.23	8.45	10783	3.213	12.03498	-8.82198	NAF
NS0073	160	162	NS	E411763	411763	1	G	W	30.98	40.46	2.14	0.452	0.35	0.095	2.95	0.62	0.073	0.061	0.466	0.128	0.59	7.34	-0.02	7.91	10812	1.8666	10.81404	-8.94744	NAF
NS0073	100	102	NS	E411733	411733	1	G	W	33.81	40.74	1.89	0.426	0.33	0.089	1.87	0.64	0.092	0.062	0.412	0.03	0.25	5.33	-0.35	5.23	10782	1.8972	11.16288	-9.26568	NAF
NS0073	140	142	NS	E411753	411753	1	G	W	30.22	39.39	2.93	0.374	0.29	0.147	3.01	0.74	0.085	0.107	0.756	0.039	0.41	8.77	0.01	9.19	10802	3.2742	12.90708	-9.63288	NAF
NS0073	202	204	NS	E411784	411784	1	G	W	23.45	46.32	3.43	0.4	0.31	0.158	3.29	1.05	0.096	0.282	0.798	0.234	0.96	8.73	0.74	10.43	10833	8.6292	18.3141	-9.6849	NAF
NS0073	166	168	NS	E411766	411766	1	G	W	28.1	43.69	2.59	0.478	0.37	0.12	3.26	1.19	0.074	0.361	0.532	0.117	0.48	6.23	0.67	7.38	10815	11.0466	20.75598	-9.70938	NAF
NS0073	52	54	NS	E411709	411709	1	G	W	36.81	36.99	1.4	0.736	0.57	0.057	2.13	0.64	0.123	0.033	0.605	0.03	0.2	4.61	-0.36	4.45	10758	1.0098	11.16288	-10.15308	NAF
NS0073	72	74	NS	E411719	411719	1	G	W	33.23	41.02	1.47	0.658	0.51	0.063	2.29	0.69	0.109	0.053	0.498	0.036	0.18	5.43	-0.21	5.4	10768	1.6218	12.03498	-10.41318	NAF
NS0073	150	152	NS	E411758	411758	1	G	W	29.53	44.45	2.58	0.4	0.31	0.118	2.5	0.74	0.082	0.081	1.03	0.059	0.3	5.33	0.04	5.67	10807	2.4786	12.90708	-10.42848	NAF
NS0073	78	80	NS	E411722	411722	1	G	W	33.83	40.43	1.51	0.555	0.43	0.068	2.09	0.71	0.124	0.063	0.399	0.027	0.16	5.51	-0.29	5.38	10771	1.9278	12.38382	-10.45602	NAF
NS0073	190	192	NS	E411778	411778	1	G	W	28.1	42.63	2.65	0.361	0.28	0.123	3.01	0.92	0.091	0.179	0.834	0.237	0.97	7.37	0.42	8.76	10827	5.4774	16.04664	-10.56924	NAF
NS0073	206	208	NS	E411786	411786	1	G	W	23.56	45.86	2.73	0.349	0.27	0.128	3.42	0.99	0.078	0.217	0.777	0.225	0.94	9.99	0.6	11.53	10835	6.6402	17.26758	-10.62738	NAF
NS0073	96	98	NS	E411731	411731	1	G	W	32.16	42.29	2.36	0.4	0.31	0.11	2.24	0.78	0.14	0.095	0.771	0.017	0.19	4.9	-0.22	4.87	10780	2.907	13.60476	-10.69776	NAF
NS0073	252	254	NS	E411810	411810	1	G	W	24.34	45.3	3.71	0.374	0.29	0.182	2.73	1.8	0.088	0.675	0.846	0.236	1.08	7.35	1.07	9.5	10858	20.655	31.3956	-10.7406	NAF
NS0073	94	96	NS	E411730	411730	1	G	W	33.59	42.62	1.59	0.361	0.28	0.071	1.72	0.78	0.098	0.087	1.06	0.028	0.07	3.69	-0.14	3.62	10779	2.6622	13.60476	-10.94256	NAF
NS0073	210	212	NS	E411788	411788	1	G	W	25.58	40.37	3.25	0.374	0.29	0.15	3.82	1.17	0.101	0.307	0.715	0.203	1.05	11.03	0.8	12.88	10837	9.3942	20.40714	-11.01294	NAF
NS0073	92	94	NS	E411729	411729	1	G	W	35.23	38.42	1.76	0.439	0.34	0.087	2.04	0.71	0.15	0.04	1.2	0.022	0.07	5.07	-0.41	4.73	10778	1.224	12.38382	-11.15982	NAF
NS0073	168	170	NS	E411767	411767	1	G	W	31.05	43.11	1.84	0.413	0.32	0.082	2.57	0.87	0.141	0.119	0.62	0.093	0.31	5.17	0.04	5.52	10816	3.6414	15.17454	-11.53314	NAF
NS0073	84	86	NS	E411725	411725	1	G	W	30.88	43.18	1.81	0.491	0.38	0.081	2.28	0.8	0.137	0.075	0.369	0.044	0.25	5.98	-0.19	6.04	10774	2.295	13.9536	-11.6586	NAF
NS0073	264	266	NS	E411816	411816	1	G	W	26.61	43.8	2.97	0.219	0.17	0.141	2.78	0.94	0.062	0.15	0.858	0.212	1.08	8.19	0.35	9.62	10864	4.59	16.39548	-11.80548	NAF
NS0073	134	136	NS	E411750	411750	1	G	W	33.1	39.01	2.18	0.413	0.32	0.095	2.36	0.93	0.221	0.137	1.34	0.019	0.09	5.44	-0.09	5.44	10799	4.1922	16.22106	-12.02886	NAF
NS0073	76	78	NS	E411721	411721	1	G	W	32.53	39.55	1.39	0.749	0.58	0.057	2.32	0.79	0.129	0.053	0.598	0.043	0.28	7.35	-0.19	7.44	10770	1.6218	13.77918	-12.15738	NAF
NS0073	136	138	NS	E411751	411751	1	G	W	35.81	37.7	1.45	0.4	0.31	0.066	1.89	0.76	0.092	0.034	0.954	0.012	0.06	5.48	-0.19	5.35	10800	1.0404	13.25592	-12.21552	NAF
NS0073	80	82	NS	E411723	411723	1	G	W	32.5	40.83	1.88	0.529	0.41	0.084	2.47	0.86	0.1	0.083	0.384	0.04	0.27	5.98	-0.07	6.18	10772	2.5398	15.00012	-12.46032	NAF
NS0073	144	146	NS	E411755	411755	1	G	W	28.8	40.49	2.71	0.387	0.3	0.126	2.42	0.83	0.065	0.06	1.8	0.082	0.36	8.98	0.15	9.49	10804	1.836	14.47686	-12.64086	NAF
NS0073	204	206	NS	E411785	411785	1	G	W	23.99	44.04	2.85	0.413	0.32	0.136	3.47	1.1	0.133	0.198	0.644	0.189	0.92	10.91	0.55	12.38	10834	6.0588	19.1862	-13.1274	NAF
NS0073	224	226	NS	E411795	411795	1	G	W	24.11	44.83	4.23	0.232	0.18	0.202	3.52	1.34	0.084	0.332	0.916	0.246	1.09	7.15	1.14	9.38	10844	10.1592	23.37228	-13.21308	NAF
NS0073	152	154	NS	E411759	411759	1	G	W	29.22	44.05	2.49	0.426	0.33	0.114	2.63	0.88	0.082	0.062	0.774	0.05	0.28	5.79	0.15	6.22	10808	1.8972	15.34896	-13.45176	NAF
NS0073	104	106	NS	E411735	411735	1	G	W	26.5	45.39	3.31	0.426	0.33	0.156	2.65	1	0.158	0.114	0.166	0.039	0.4	7.84	-0.05	8.19	10784	3.4884	17.442	-13.9536	NAF
NS0073	276	278	NS	E411822	411822	1	G	W	21.84	48.43	4.87	0.452	0.35	0.234	3.44	1.83	0.086	0.568	0.879	0.239	1.06	5.15	1.69	7.9	10870	17.3808	31.91886	-14.53806	NAF
NS0073	216	218	NS	E411791	411791	1	G	W	25.66	41.04	3.34	0.336	0.26	0.156	3.8	1.13	0.1	0.155	0.904	0.246	1.13	10.11	0.59	11.83	10840	4.743	19.70946	-14.96646	NAF
NS0073	142	144	NS	E411754	411754	1	G	W	29.31	42.09	1.61	0.452	0.35	0.069	1.88	0.94	0.138	0.037	1.16	0.046	0.33	9.1	-0.09	9.34	10803	1.1322	16.39548	-15.26328	NAF
NS0073	262	264	NS	E411815	411815	1	G	W	26.5	41.15	3.16	0.374	0.29	0.145	2.98	1.38	0.112	0.279	0.836	0.234	1.05	9.88	0.61	11.54	10863	8.5374	24.06996	-15.53256	NAF
NS0073	226	228	NS	E411796	411796	1	G	W	25.78	40.84	2.84	0.555	0.43	0.128	3.02	1.5	0.098	0.342	0.851	0.243	1.14	10.31	1.07	12.52	10845	10.4652	26.163	-15.6978	NAF
NS0073	194	196	NS	E411780	411780	1	G	W	28.28	43.01	2.02	0.271	0.21	0.091	2.9	1.04	0.088	0.071	0.77	0.205	0.85	7.44	0.36	8.65	10829	2.1726	18.13968	-15.96708	NAF
NS0073	148	150	NS	E411757	411757	1	G	W	29.3	42.27	2.73	0.4	0.31	0.126	2.54	1.08	0.137	0.089	1.2	0.07	0.29	6.61	0.16	7.06	10806	2.7234	18.83736	-16.11396	NAF
NS0073	192	194	NS	E411779	411779	1	G	W	29.47	39.98	2.28	0.374	0.29	0.103	3.09	1.15	0.156	0.116	0.772	0.216	0.86	8.21	0.29	9.36	10828	3.5496	20.0583	-16.5087	NAF
NS0073	242	244	NS	E411805	411805	1	G	W	27.12	39.6	2.94	0.452	0.35	0.137	3.08	1.33	0.099	0.202	0.898	0.237	1.36	10.04	0.68	12.08	10853	6.1812	23.19786	-17.01666	NAF
NS0073	272	274	NS	E411820	411820	1	G	W	23.09	47.04	4.27	0.336	0.26	0.197	3.57	1.36	0.088	0.216	1.13	0.463	1.17	6.15	1.04	8.36	10868	6.6096	23.72112	-17.11152	NAF
NS0073	220	222	NS	E411793	411793	1	G	W	27.08	38.05	2.96	0.361	0.28	0.137	3.56	1.3	0.092	0.181	0.797	0.22	1.08	11.56	0.78	13.42	10842	5.5386	22.6746	-17.136	NAF
NS0073	54	56	NS	E411710	411710	1	G	W	35.61	38.95	0.98	0.684	0.53	0.041	2.06	1.11	0.087	0.023	0.274	0.029	0.11	4.25	0.21	4.57	10759	0.7038	19.36062	-18.65682	NAF
NS0073	188	190	NS	E411777	411777	1	G	W	27.35	42.7	2.65	0.336	0.26	0.122	3.02	1.34	0.104	0.138	0.709	0.202	0.81	7.91	0.56	9.28	10826	4.2228	23.37228	-19.14948	NAF
NS0073	248	250	NS	E411808	411808	1	G	W	22.99	46.17	2.78	0.439	0.34	0.134	2.41	2.67	0.107	0.896	0.752	0.197	1.1	8.18	1.79	11.07	10856	27.4176	46.57014	-19.15254	NAF
NS0073	278	280	NS	E411823	411823	1	G	W	19.58	53.74	4.58	0.323	0.25	0.214	2.98	1.93	0.08	0.462	0.765	0.206	0.81	4.58	1.51	6.9	10871	14.1372	33.66306	-19.52586	NAF
NS0073	234	236	NS	E411800	411800	1	G	W	26.15	40.25	4.17	0.336	0.26	0.196	3.52	1.55	0.124	0.243	1.01	0.272	1.26	8.45	0.84	10.55	10849	7.4358	27.0351	-19.5993	NAF
NS0073	244	246	NS	E411806	411806	1	G	W	27.84	35.45	3.08	0.529	0.41	0.142	3.55	1.48	0.141	0.183	0.865	0.233	1.35	12.2	0.61	14.16	10854	5.5998	25.81416	-20.21436	NAF
NS0073	228	230	NS	E411797	411797	1	G	W	27.85	38.38	2.99	0.426	0.33	0.147	3.08	1.61	0.111	0.251	0.91	0.248	1.18	9.71	0.91	11.8	10846	7.6806	28.08162	-20.40102	NAF
NS0073	238	240	NS	E411803	411803	1	G	W	23.34	46.35	4.26	0.336	0.26	0.202	3.37	1.58	0.131	0.221	0.997	0.259	1.05	6.73	0.76	8.54	10851	6.7626	27.55836	-20.79576	NAF
NS0073	236	238	NS	E411802	411802	1	G	W	23.23	46.6	5.97	0.207	0.16	0.282	3.69	1.42	0.057	0.128	1.04	0.28	1.12	4.86	0.93	6.91	10850	3.9168	24.76764	-20.85084	NAF
NS0073	280	282	NS	E411824	411824	1	G	W	27.92	39.2	2.81	0.323	0.25	0.131	3.21	1.55	0.087	0.177	0.953	0.211	1.01	9.76	0.71	11.48	10872	5.4162	27.0351	-21.6189	NAF
NS0073	240	242	NS	E411804	411804	1	G	W	28.41	36.2	3.1	0.465	0.36	0.146	3.23	1.62	0.133	0.176	0.871	0.237	1.33	10.89	0.68	12.9	10852	5.3856	28.25604	-22.87044	NAF
NS0073	246	248	NS	E411807	411807	1	G	W	25.1	43.48	4.28	0.349	0.27	0.207	3.36	1.86	0.085	0.299	0.969	0.25	1.3	6.54	1.22	9.06	10855	9.1494	32.44212	-23.29272	NAF
NS0073	266	268	NS	E411817	411817	1	G	W	26.2	41.8	3.35	0.336	0.26	0.157	3.09	1.64	0.084	0.146	1.03	0.261	1.1	8.47	0.79	10.36	10865	4.4676	28.60488	-24.13728	NAF
NS0073	254	256	NS	E411811	411811	1	G	W	20.11	52.89	3.04	0.374	0.29	0.142	2.5	1.93	0.094	0.276	0.705	0.198	0.87	7.16	1.11	9.14	10859	8.4456	33.66306	-25.21746	NAF
NS0073	258	260	NS	E411813	411813	1	G	W	21.1	50.16	2.83	0.491	0.38	0.13	2.69	2.09	0.14	0.367	0.747	0.202	0.97	7.63	1.12	9.72	10861	11.2302	36.45378	-25.22358	NAF
NS0073	274	276	NS	E411821	411821	1	G	W	27.27	41.48	2.03	0.297	0.23	0.093	2.4	1.62	0.088	0.093	0.721	0.178	0.84	10.26	0.65	11.75	10869	2.8458	28.25604	-25.41024	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0073	180	182	NS	E411773	411773	1	G	W	27.52	43.92	3.39	0.465	0.36	0.159	3.13	1.79	0.083	0.13	0.648	0.174	0.62	4.9	1.05	6.57	10822	3.978	31.22118	-27.24318	NAF
NS0073	256	258	NS	E411812	411812	1	G	W	20.41	51.21	4.64	0.374	0.29	0.212	3.31	2.21	0.079	0.357	0.912	0.256	0.94	4.7	1.67	7.31	10860	10.9242	38.54682	-27.62262	NAF
NS0073	230	232	NS	E411798	411798	1	G	W	30.84	35.97	2	0.374	0.29	0.091	2.51	1.8	0.092	0.115	0.753	0.203	0.87	9.94	0.76	11.57	10847	3.519	31.3956	-27.8766	NAF
NS0073	162	164	NS	E411764	411764	1	G	W	29.77	43.21	2.2	0.426	0.33	0.102	2.69	1.81	0.098	0.064	0.487	0.094	0.41	4.71	1.04	6.16	10813	1.9584	31.57002	-29.61162	NAF
NS0073	222	224	NS	E411794	411794	1	G	W	27.31	37.59	2.92	0.349	0.27	0.138	3.38	1.98	0.122	0.159	0.911	0.243	1.12	10.74	1.03	12.89	10843	4.8654	34.53516	-29.66976	NAF
NS0073	232	234	NS	E411799	411799	1	G	W	27.59	40.92	2.3	0.284	0.22	0.107	2.42	2.06	0.091	0.124	0.761	0.203	0.89	9.43	0.91	11.23	10848	3.7944	35.93052	-32.13612	NAC
NS0073	164	166	NS	E411765	411765	1	G	W	31.85	40.24	2.16	0.426	0.33	0.1	2.56	1.94	0.079	0.055	0.535	0.09	0.35	4.25	1.21	5.81	10814	1.683	33.83748	-32.15448	NAC
NS0073	176	178	NS	E411771	411771	1	G	W	31.95	41.83	2.24	0.323	0.25	0.103	2.67	2.23	0.063	0.103	0.77	0.082	0.19	2.13	1.59	3.91	10820	3.1518	38.89566	-35.74386	NAC
NS0073	178	180	NS	E411772	411772	1	G	W	30.87	42.14	2.13	0.426	0.33	0.1	2.61	2.27	0.098	0.077	0.647	0.089	0.31	3.08	1.47	4.86	10821	2.3562	39.59334	-37.23714	NAC
NS0073	172	174	NS	E411769	411769	1	G	W	27.82	49.51	1.52	0.245	0.19	0.069	2.02	2.39	0.058	0.034	0.598	0.06	0.17	1.46	1.91	3.54	10818	1.0404	41.68638	-40.64598	NAC
NS0073	250	252	NS	E411809	411809	1	G	W	25.31	45.04	2.85	0.258	0.2	0.135	2.35	2.59	0.086	0.117	0.831	0.22	0.88	7.13	1.28	9.29	10857	3.5802	45.17478	-41.59458	NAC
NS0073	174	176	NS	E411770	411770	1	G	W	25.8	50.93	1.67	0.245	0.19	0.078	2.17	3.11	0.087	0.137	0.62	0.058	0.15	1.29	2.52	3.96	10819	4.1922	54.24462	-50.05242	NAC
NS0074	36	38	NS	E411843	411843	1	G	W	31.04	39.61	3.58	0.71	0.55	0.162	3.42	0.34	0.079	1.03	0.776	0.051	0.23	5.17	1.42	6.82	10891	31.518	5.93028	25.58772	PAF(HC)
NS0074	92	94	NS	E411871	411871	1	G	W	28.8	42.53	3.02	0.529	0.41	0.138	3.32	0.51	0.123	0.679	1.01	0.288	1	4.5	1.19	6.69	10919	20.7774	8.89542	11.88198	PAF(HC)
NS0074	4	6	NS	E411827	411827	1	G	W	32.01	40.48	5.46	-0.0129	-0.01	0.345	0.03	0.01	0.014	0.018	0.013	0.017	5.97	1.34	0.23	7.54	10875	0.5508	0.17442	0.37638	PAF(LC)
NS0074	6	8	NS	E411828	411828	1	G	W	28.67	47.44	4.31	-0.0129	-0.01	0.215	0.04	0.02	0.009	0.015	0.01	0.016	5.33	1.26	0.2	6.79	10876	0.459	0.34884	0.11016	PAF(LC)
NS0074	102	104	NS	E411876	411876	1	G	W	26.32	46.29	4.03	0.258	0.2	0.198	3.69	0.58	0.068	0.333	1.19	0.315	1.16	2.99	0.92	5.07	10924	10.1898	10.11636	0.07344	PAF(LC)
NS0074	14	16	NS	E411832	411832	1	G	W	38.94	38.96	1.54	0.065	0.05	0.074	0.11	0.01	0.087	0.005	0.005	0.011	2.61	0.53	0.07	3.21	10880	0.153	0.17442	-0.02142	NAF
NS0074	2	4	NS	E411826	411826	1	G	W	32.3	34.97	10.44	-0.0129	-0.01	0.938	0.04	0.03	0.019	0.015	0.044	0.027	4.26	2.41	0.28	6.95	10874	0.459	0.52326	-0.06426	NAF
NS0074	10	12	NS	E411830	411830	1	G	W	37	37.56	3.16	0.026	0.02	0.15	0.06	0.02	0.041	0.008	0.006	0.012	4.75	0.92	0.13	5.8	10878	0.2448	0.34884	-0.10404	NAF
NS0074	8	10	NS	E411829	411829	1	G	W	33.35	38.79	5.48	-0.0129	-0.01	0.239	0.05	0.03	0.014	0.012	0.009	0.02	5.71	1.51	0.22	7.44	10877	0.3672	0.52326	-0.15606	NAF
NS0074	12	14	NS	E411831	411831	1	G	W	35.1	42.43	2.35	0.026	0.02	0.108	0.13	0.02	0.061	0.006	0.006	0.012	3.67	0.78	0.09	4.54	10879	0.1836	0.34884	-0.16524	NAF
NS0074	0	2	NS	E411825	411825	1	G	W	21.31	61.02	3.21	-0.0129	-0.01	0.759	0.06	0.04	0.02	0.017	0.066	0.029	3.27	0.71	0.13	4.11	10873	0.5202	0.69768	-0.17748	NAF
NS0074	16	18	NS	E411833	411833	1	G	W	37.88	40.94	1.3	0.181	0.14	0.065	0.14	0.02	0.077	0.004	0.009	0.018	2.31	0.45	0	2.76	10881	0.1224	0.34884	-0.22644	NAF
NS0074	18	20	NS	E411834	411834	1	G	W	37.33	42.19	1.2	0.232	0.18	0.057	0.15	0.03	0.073	0.003	0.084	0.019	1.76	0.39	0.03	2.18	10882	0.0918	0.52326	-0.43146	NAF
NS0074	34	36	NS	E411842	411842	1	G	W	34.99	37.95	1.91	0.762	0.59	0.083	2.4	0.4	0.099	0.207	0.44	0.042	0.32	4.99	0.08	5.39	10890	6.3342	6.9768	-0.6426	NAF
NS0074	22	24	NS	E411836	411836	1	G	W	37.81	40.71	1.31	0.684	0.53	0.056	0.28	0.06	0.064	0.003	0.405	0.021	1.59	0.36	0.04	1.99	10884	0.0918	1.04652	-0.95472	NAF
NS0074	20	22	NS	E411835	411835	1	G	W	37.23	41.12	1.48	0.955	0.74	0.062	0.34	0.07	0.047	0.003	0.378	0.023	1.6	0.44	0.04	2.08	10883	0.0918	1.22094	-1.12914	NAF
NS0074	28	30	NS	E411839	411839	1	G	W	39.12	38.87	1.29	0.658	0.51	0.058	0.37	0.07	0.035	0.003	0.462	0.024	1.46	0.36	0.03	1.85	10887	0.0918	1.22094	-1.12914	NAF
NS0074	24	26	NS	E411837	411837	1	G	W	36.63	41.28	1.79	0.646	0.5	0.079	0.39	0.08	0.064	0.003	0.531	0.013	1.75	0.46	0.07	2.28	10885	0.0918	1.39536	-1.30356	NAF
NS0074	26	28	NS	E411838	411838	1	G	W	36.92	42.05	1.38	0.71	0.55	0.066	0.4	0.08	0.031	0.003	0.435	0.015	1.42	0.4	0.11	1.93	10886	0.0918	1.39536	-1.30356	NAF
NS0074	108	110	NS	E411879	411879	1	G	W	31.07	40.51	2.81	0.336	0.26	0.126	2.85	0.4	0.079	0.175	1.05	0.272	1.13	5.38	0.38	6.89	10927	5.355	6.9768	-1.6218	NAF
NS0074	130	132	NS	E411890	411890	1	G	W	27.45	46.14	3.58	0.258	0.2	0.167	3.24	0.34	0.049	0.138	1.45	0.355	1.26	3.22	0.51	4.99	10938	4.2228	5.93028	-1.70748	NAF
NS0074	30	32	NS	E411840	411840	1	G	W	36.08	41.8	1.95	0.71	0.55	0.089	0.59	0.13	0.042	0.003	0.545	0.025	1.73	0.57	0.05	2.35	10888	0.0918	2.26746	-2.17566	NAF
NS0074	110	112	NS	E411880	411880	1	G	W	29.36	39.47	2.94	0.387	0.3	0.133	3.3	0.46	0.079	0.191	1.11	0.287	1.32	7.71	0.57	9.6	10928	5.8446	8.02332	-2.17872	NAF
NS0074	186	188	NS	E411919	411919	1	G	W	28.07	42.91	4.84	0.336	0.26	0.227	3.64	0.31	0.05	0.104	1.13	0.305	1.24	4.14	0.39	5.77	10966	3.1824	5.40702	-2.22462	NAF
NS0074	90	92	NS	E411870	411870	1	G	W	32.47	41	2.15	0.478	0.37	0.1	2.58	0.49	0.1	0.138	0.714	0.194	0.76	4.2	0.17	5.13	10918	4.2228	8.54658	-4.32378	NAF
NS0074	32	34	NS	E411841	411841	1	G	W	37.32	39.96	1.79	0.503	0.39	0.081	0.66	0.31	0.094	0.004	0.298	0.029	1.55	0.83	-0.01	2.37	10889	0.1224	5.40702	-5.28462	NAF
NS0074	106	108	NS	E411878	411878	1	G	W	32.62	38.6	1.62	0.413	0.32	0.074	2.39	0.41	0.072	0.058	0.717	0.193	0.95	7.42	-0.06	8.31	10926	1.7748	7.15122	-5.37642	NAF
NS0074	190	192	NS	E411921	411921	1	G	W	25	48.78	4.81	0.207	0.16	0.228	3.61	0.57	0.164	0.14	1.49	0.38	1.29	1.86	0.51	3.66	10968	4.284	9.94194	-5.65794	NAF
NS0074	128	130	NS	E411889	411889	1	G	W	28.61	42.11	3.48	0.297	0.23	0.167	3.26	0.6	0.101	0.154	1.25	0.331	1.37	4.84	0.55	6.76	10937	4.7124	10.4652	-5.7528	NAF
NS0074	100	102	NS	E411875	411875	1	G	W	33.35	39.05	2.21	0.323	0.25	0.106	2.81	0.51	0.099	0.096	1	0.268	0.95	4.21	0.17	5.33	10923	2.9376	8.89542	-5.95782	NAF
NS0074	98	100	NS	E411874	411874	1	G	W	30.63	41.24	2.25	0.426	0.33	0.108	2.99	0.54	0.087	0.108	0.935	0.247	1.07	5.56	0.24	6.87	10922	3.3048	9.41868	-6.11388	NAF
NS0074	246	248	NS	E411949	411949	1	G	W	35.12	33.5	1.4	0.516	0.4	0.065	2.67	0.51	0.086	0.071	0.583	0.159	1.16	8.68	-0.02	9.82	10996	2.1726	8.89542	-6.72282	NAF
NS0074	270	272	NS	E411961	411961	1	G	W	32.69	33.57	1.66	0.413	0.32	0.077	2.64	0.54	0.081	0.088	0.771	0.188	1.41	11.32	0.16	12.89	11008	2.6928	9.41868	-6.72588	NAF
NS0074	188	190	NS	E411920	411920	1	G	W	33.3	36.78	2.01	0.426	0.33	0.094	2.73	0.72	0.115	0.169	0.899	0.242	1.2	6.33	0.39	7.92	10967	5.1714	12.55824	-7.38684	NAF
NS0074	38	40	NS	E411844	411844	1	G	W	32.99	39.33	2.26	0.684	0.53	0.102	2.77	0.64	0.173	0.12	0.518	0.052	0.34	5.46	-0.11	5.69	10892	3.672	11.16288	-7.49088	NAF
NS0074	184	186	NS	E411918	411918	1	G	W	31.83	39.72	2.7	0.336	0.26	0.129	2.93	0.64	0.133	0.12	1.23	0.325	1.15	4.17	0.35	5.67	10965	3.672	11.16288	-7.49088	NAF
NS0074	40	42	NS	E411845	411845	1	G	W	36.72	38.59	1.2	0.658	0.51	0.055	2.01	0.48	0.099	0.028	0.166	0.035	0.17	4.17	-0.49	3.85	10893	0.8568	8.37216	-7.51536	NAF
NS0074	120	122	NS	E411885	411885	1	G	W	35.6	29.96	1.08	0.503	0.39	0.048	2.82	0.52	0.091	0.047	0.502	0.147	0.85	12.19	-0.19	12.85	10933	1.4382	9.06984	-7.63164	NAF
NS0074	112	114	NS	E411881	411881	1	G	W	32.49	36.42	1.64	0.426	0.33	0.075	2.68	0.61	0.12	0.097	0.75	0.209	1.07	8.75	0.04	9.86	10929	2.9682	10.63962	-7.67142	NAF
NS0074	236	238	NS	E411944	411944	1	G	W	30.95	40.85	2.45	0.297	0.23	0.118	2.96	0.63	0.14	0.108	1.11	0.278	1.16	5.01	0.36	6.53	10991	3.3048	10.98846	-7.68366	NAF
NS0074	146	148	NS	E411898	411898	1	G	W	34.76	35.55	1.82	0.323	0.25	0.084	2.74	0.63	0.112	0.096	0.813	0.22	1	6.6	0.13	7.73	10946	2.9376	10.98846	-8.05086	NAF
NS0074	162	164	NS	E411907	411907	1	G	W	30.21	40.69	3.1	0.194	0.15	0.15	3.24	0.92	0.153	0.255	1.36	0.35	1.36	3.89	0.76	6.01	10954	7.803	16.04664	-8.24364	NAF
NS0074	42	44	NS	E411846	411846	1	G	W	34.88	39.93	1.2	0.697	0.54	0.053	2.17	0.53	0.093	0.029	0.27	0.035	0.25	4.62	-0.33	4.54	10894	0.8874	9.24426	-8.35686	NAF
NS0074	208	210	NS	E411930	411930	1	G	W	31.13	39.93	2.11	0.361	0.28	0.103	2.9	0.82	0.071	0.187	0.989	0.275	1.08	5.82	0.6	7.5	10977	5.7222	14.30244	-8.58024	NAF
NS0074	50	52	NS	E411850	411850	1	G	W	33.81	39.74	1.95	0.607	0.47	0.086	2.89	0.67	0.119	0.081	0.396	0.065	0.32	4.28	-0.09	4.51	10898	2.4786	11.68614	-9.20754	NAF
NS0074	206	208	NS	E411929	411929	1	G	W	32.15	37.2	1.34	0.503	0.39	0.062	2.6	0.81	0.109	0.134	0.59	0.165	0.94	8.76	0.2	9.9	10976	4.1004	14.12802	-10.02762	NAF
NS0074	192	194	NS	E411922	411922	1	G	W	32.35	38.99	1.73	0.374	0.29	0.081	2.52	0.75	0.079	0.09	0.817	0.218	1.08	6.74	0.15	7.97	10969	2.754	13.0815	-10.3275	NAF
NS0074	196	198	NS	E411924	411924	1	G	W	33.25	36.03	1.76	0.387	0.3	0.087	2.67	0.76	0.088	0.093	0.839	0.241	0.97	7.93	0.14	9.04	10971	2.8458	13.25592	-10.41012	NAF
NS0074	210	212	NS	E411931	411931	1	G	W	32.6	38.37	1.58	0.387	0.3	0.076	2.62	0.76	0.11	0.086	0.69	0.192	1.09	6.89	0.13	8.11	10978	2.6316	13.25592	-10.62432	NAF
NS0074	238	240	NS	E411945	411945	1	G	W	31.97	41.71	2.35	0.232	0.18	0.123	2.85	0.75	0.105	0.08	1.1	0.284	1	3.14	0.32	4.46	10992	2.448	13.0815	-10.6335	NAF
NS0074	114	116	NS	E411882	411882	1	G	W	33.59	36.22	1.2	0.439	0.34	0.053	2.39	0.68	0.081	0.037	0.55	0.158	0.84	8.91	-0.08	9.67	10930	1.1322	11.86056	-10.72836	NAF
NS0074	74	76	NS	E411862	411862	1	G	W	33.02	40.2	1.93	0.684	0.53	0.087	2.96	0.76	0.075	0.077	0.387	0.111	0.42	4.64	0.12	5.18	10910	2.3562	13.25592	-10.89972	NAF
NS0074	44	46	NS	E411847	411847	1	G	W	35.7	38.83	1.32	0.646	0.5	0.06	2.27	0.68	0.091	0.03	0.246	0.033	0.24	4.31	-0.24	4.31	10895	0.918	11.86056	-10.94256	NAF
NS0074	200	202	NS	E411926	411926	1	G	W	33.82	35.28	1.42	0.426	0.33	0.067	2.62	0.75	0.1	0.069	0.667	0.191	0.87	8.7	0.02	9.59	10973	2.1114	13.0815	-10.9701	NAF
NS0074	56	58	NS	E411853	411853	1	G	W	33.22	39.27	2.37	0.684	0.53	0.107	3.17	0.9	0.123	0.154	0.537	0.052	0.27	4.23	0.17	4.67	10901	4.7124	15.6978	-10.9854	NAF
NS0074	254	256	NS	E411953	411953	1	G	W	32.62	38.61	1.62	0.349	0.27	0.078	2.37	0.78	0.092	0.083	0.747	0.2	0.91	6.8	0.13	7.84	11000	2.5398	13.60476	-11.06496	NAF
NS0074	178	180	NS	E411915	411915	1	G	W	34.08	36.74	1.83	0.413	0.32	0.088	2.67	0.76	0.102	0.067	0.838	0.224	0.97	6.27	0.06	7.3	10962	2.0502	13.25592	-11.20572	NAF
NS0074	166	168	NS	E411909	411909	1	G	W	32.84	36.8	1.85	0.361	0.28	0.086	2.92	0.83	0.129	0.106	0.791	0.215	1.18	7.05	0.25	8.48	10956	3.2436	14.47686	-11.23326	NAF
NS0074	136	138	NS	E411893	411893	1	G	W	33.16	34.54	2.12	0.387	0.3	0.097	3.27	0.87	0.179	0.128	0.918	0.244	1.2	7.84	0.34	9.38	10941	3.9168	15.17454	-11.25774	NAF
NS0074	220	222	NS	E411936	411936	1	G	W	29.69	41.34	2.29	0.374	0.29	0.104	2.64	0.86	0.061	0.12	0.909	0.24	1.29	6.19	0.5	7.98	10983	3.672	15.00012	-11.32812	NAF
NS0074	170	172	NS	E411911	411911	1	G	W	31.15	39	1.97	0.349	0.27	0.093	3.06	0.87	0.14	0.123	0.825	0.22	1.09	6.87	0.37	8.33	10958	3.7638	15.17454	-11.41074	NAF
NS0074	258	260	NS	E411955	411955	1	G	W	32.06	39.13	1.63	0.361	0.28	0.079	2.53	0.8	0.116	0.078	0.743	0.197	1.03	7.15	0.13	8.31	11002	2.3868	13.9536	-11.5668	NAF
NS0074	180	182	NS	E411916	411916	1	G	W	25.9	49.07	3.14	0.245	0.19	0.145	3.02	0.82	0.118	0.089	1.36	0.354	1.24	2.65	0.45	4.34	10963	2.7234	14.30244	-11.57904	NAF
NS0074	256	258	NS	E411954	411954	1	G	W	31.32	38.6	2.48	0.323	0.25	0.119	2.91	0.88	0.142	0.121	1.06	0.26	1.35	6.33	0.38	8.06	11001	3.7026	15.34896	-11.64636	NAF
NS0074	216	218	NS	E411934	411934	1	G	W	32.16	37.51	2.17	0.361	0.28	0.105	2.96	0.82	0.107	0.085	0.972	0.26	1.33	6.62	0.26	8.21	10981	2.601	14.30244	-11.70144	NAF
NS0074	222	224	NS	E411937	411937	1	G	W	28.02	44.8	2.09	0.323	0.25	0.098	2.57	0.91	0.166	0.134	0.924	0.244	1.24	5.36	0.43	7.03	10984	4.1004	15.87222	-11.77182	NAF
NS0074	230	232	NS	E411941	411941	1	G	W	33.25	37.38	1.82	0.361	0.28	0.087	2.54	0.87	0.137	0.097	0.803	0.212	1.12	6.24	0.2	7.56	10988	2.9682	15.17454	-12.20634	NAF
NS0074	168	170	NS	E411910	411910	1	G	W	31.6	39.92	1.79	0.323	0.25	0.083	2.81	0.77	0.117	0.037	0.731	0.205	1	6.57	0.09	7.66	10957	1.1322	13.43034	-12.29814	NAF
NS0074	104	106	NS	E411877	411877	1	G	W	30.44	43.82	1.65	0.336	0.26	0.078	2.28	0.86	0.105	0.087	0.713	0.198	0.79	4.83	0.24	5.86	10925	2.6622	15.00012	-12.33792	NAF
NS0074	226	228	NS	E411939	411939	1	G	W	31.98	38.09	1.71	0.426	0.33	0.082	2.71	0.86	0.126	0.087	0.796	0.213	1.18	7.41	0.21	8.8	10986	2.6622	15.00012	-12.33792	NAF
NS0074	154	156	NS	E411903	411903	1	G	W	33.5	34.96	1.68	0.503	0.39	0.078	2.88	0.93	0.092	0.125	0.742	0.197	1.1	8.44	0.2	9.74	10950	3.825	16.22106	-12.39606	NAF
NS0074	94	96	NS	E411872	411872	1	G	W	32.04	40.98	2.32	0.413	0.32	0.109	2.93	0.83	0.057	0.063	0.974	0.275	0.86	3.6	0.39	4.85	10920	1.9278	14.47686	-12.54906	NAF
NS0074	52	54	NS	E411851	411851	1	G	W	35.46	38.71	1.33	0.671	0.52	0.059	2.44	0.8	0.09	0.043	0.271	0.044	0.2	4.2	-0.05	4.35	10899	1.3158	13.9536	-12.6378	NAF
NS0074	70	72	NS	E411860	411860	1	G	W	31.21	43.15	1.67	0.555	0.43	0.08	2.62	1.55	0.087	0.463	0.308	0.086	0.26	3	1.02	4.28	10908	14.1678	27.0351	-12.8673	NAF
NS0074	248	250	NS	E411950	411950	1	G	W	34.94	35.35	1.46	0.426	0.33	0.099	2.42	0.86	0.138	0.062	0.625	0.172	0.97	7.1	0.02	8.09	10997	1.8972	15.00012	-13.10292	NAF
NS0074	172	174	NS	E411912	411912	1	G	W	34.95	34.08	1.48	0.426	0.33	0.066	2.82	0.91	0.165	0.09	0.6	0.17	0.94	7.87	0.03	8.84	10959	2.754	15.87222	-13.11822	NAF
NS0074	48	50	NS	E411849	411849	1	G	W	37.15	36.94	1.33	0.633	0.49	0.06	2.31	0.82	0.111	0.03	0.247	0.043	0.23	3.92	-0.16	3.99	10897	0.918	14.30244	-13.38444	NAF
NS0074	88	90	NS	E411869	411869	1	G	W	32.4	41.39	2.05	0.503	0.39	0.096	2.67	0.88	0.144	0.064	0.606	0.171	0.62	4.15	0.1	4.87	10917	1.9584	15.34896	-13.39056	NAF
NS0074	122	124	NS	E411886	411886	1	G	W	33.17	36.58	1.13	0.413	0.32	0.051	2.48	0.85	0.097	0.041	0.525	0.15	0.8	9.07	0.03	9.9	10934	1.2546	14.8257	-13.5711	NAF
NS0074	276	278	NS	E411964	411964	1	G	W	31.21	39.47	1.51	0.426	0.33	0.068	2.59	0.97	0.088	0.097	0.698	0.188	0.93	7.65	0.32	8.9	11011	2.9682	16.91874	-13.95054	NAF
NS0074	252	254	NS	E411952	411952	1	G	W	33.02	37.74	1.18	0.426	0.33	0.058	2.27	0.88	0.101	0.042	0.511	0.137	1.01	7.9	0.04	8.95	10999	1.2852	15.34896	-14.06376	NAF
NS0074	274	276	NS	E411963	411963	1	G	W	31.96	35.44	1.65	0.374	0.29	0.076	2.98	0.98	0.113	0.099	0.702	0.178	1.03	9.89	0.25	11.17	11010	3.0294	17.09316	-14.06376	NAF
NS0074	260	262	NS	E411956	411956	1	G	W	34.62	34.71	1.5	0.426	0.33	0.071	2.6	0.96	0.079	0.07	0.706	0.199	1.08	7.73	0.24	9.05	11003	2.142	16.74432	-14.60232	NAF
NS0074	76	78	NS	E411863	411863	1	G	W	31.42	43.26	1.99	0.555	0.43	0.091	2.87	0.94	0.143	0.052	0.423	0.118	0.39	3.81	0.15	4.35	10911	1.5912	16.39548	-14.80428	NAF
NS0074	140	142	NS	E411895	411895	1	G	W	30.72	42.12	2.2	0.297	0.23	0.104	2.68	1.08	0.096	0.125	0.966	0.252	1.2	3.86	0.57	5.63	10943	3.825	18.83736	-15.01236	NAF
NS0074	194	196	NS	E411923	411923	1	G	W	31.71	38.62	1.41	0.439	0.34	0.066	2.4	1	0.094	0.076	0.67	0.193	0.83	8.15	0.16	9.14	10970	2.3256	17.442	-15.1164	NAF
NS0074	202	204	NS	E411927	411927	1	G	W	34.71	34.61	1.14	0.452	0.35	0.051	2.46	0.96	0.088	0.05	0.495	0.141	0.85	8.5	0.06	9.41	10974	1.53	16.74432	-15.21432	NAF
NS0074	138	140	NS	E411894	411894	1	G	W	31.78	38.66	2.22	0.323	0.25	0.101	3.02	1.03	0.195	0.088	0.967	0.252	1.12	5.69	0.29	7.1	10942	2.6928	17.96526	-15.27246	NAF
NS0074	232	234	NS	E411942	411942	1	G	W	33.28	37.78	1.67	0.374	0.29	0.078	2.52	1.02	0.131	0.081	0.758	0.205	1.03	6.14	0.25	7.42	10989	2.4786	17.79084	-15.31224	NAF
NS0074	142	144	NS	E411896	411896	1	G	W	31.44	39.54	1.84	0.374	0.29	0.085	2.64	1.15	0.116	0.14	0.833	0.222	1	6.08	0.52	7.6	10944	4.284	20.0583	-15.7743	NAF
NS0074	134	136	NS	E411892	411892	1	G	W	30.79	38.73	2.2	0.349	0.27	0.103	3.09	1.09	0.178	0.101	0.954	0.253	1.15	6.87	0.4	8.42	10940	3.0906	19.01178	-15.92118	NAF
NS0074	234	236	NS	E411943	411943	1	G	W	33.63	38.35	1.37	0.349	0.27	0.063	2.26	1.08	0.096	0.095	0.63	0.169	0.78	5.99	0.29	7.06	10990	2.907	18.83736	-15.93036	NAF
NS0074	152	154	NS	E411902	411902	1	G	W	31.59	36.57	1.34	0.491	0.38	0.06	2.75	1.17	0.076	0.137	0.589	0.163	1.13	9.52	0.4	11.05	10949	4.1922	20.40714	-16.21494	NAF
NS0074	198	200	NS	E411925	411925	1	G	W	32.62	37.91	1.3	0.4	0.31	0.069	2.37	1.07	0.124	0.08	0.62	0.179	0.88	7.83	0.12	8.83	10972	2.448	18.66294	-16.21494	NAF
NS0074	174	176	NS	E411913	411913	1	G	W	32.06	38.61	1.91	0.374	0.29	0.091	2.82	1.05	0.143	0.066	0.836	0.222	1.04	6.26	0.17	7.47	10960	2.0196	18.3141	-16.2945	NAF
NS0074	150	152	NS	E411900	411900	1	G	W	29.83	40.61	1.41	0.387	0.3	0.064	2.68	1.08	0.096	0.083	0.589	0.162	1.01	8.64	0.32	9.97	10948	2.5398	18.83736	-16.29756	NAF
NS0074	132	134	NS	E411891	411891	1	G	W	30.02	40.64	1.93	0.374	0.29	0.091	2.76	1.1	0.151	0.089	0.871	0.229	1.06	6.84	0.4	8.3	10939	2.7234	19.1862	-16.4628	NAF
NS0074	46	48	NS	E411848	411848	1	G	W	35.71	37.94	1.38	0.671	0.52	0.065	2.4	1.02	0.086	0.039	0.233	0.031	0.2	4.25	0.16	4.61	10896	1.1934	17.79084	-16.59744	NAF
NS0074	218	220	NS	E411935	411935	1	G	W	33.16	37.39	1.73	0.336	0.26	0.086	2.6	1.09	0.097	0.077	0.776	0.208	1.17	6.42	0.39	7.98	10982	2.3562	19.01178	-16.65558	NAF
NS0074	272	274	NS	E411962	411962	1	G	W	31.44	33.77	1.51	0.349	0.27	0.07	2.68	1.09	0.122	0.07	0.73	0.179	1.39	12.3	0.27	13.96	11009	2.142	19.01178	-16.86978	NAF
NS0074	268	270	NS	E411960	411960	1	G	W	31.9	36.1	1.75	0.336	0.26	0.079	2.79	1.12	0.108	0.082	0.83	0.21	1.09	8.89	0.42	10.4	11007	2.5092	19.53504	-17.02584	NAF
NS0074	116	118	NS	E411883	411883	1	G	W	34.47	34.82	1.18	0.452	0.35	0.053	2.51	1.07	0.09	0.041	0.545	0.164	0.71	8.6	0.23	9.54	10931	1.2546	18.66294	-17.40834	NAF
NS0074	96	98	NS	E411873	411873	1	G	W	31.85	41.08	1.52	0.465	0.36	0.067	2.47	1.08	0.074	0.043	0.688	0.201	0.62	5.18	0.45	6.25	10921	1.3158	18.83736	-17.52156	NAF
NS0074	126	128	NS	E411888	411888	1	G	W	30.7	39.31	1.88	0.4	0.31	0.086	2.9	1.2	0.117	0.11	0.851	0.226	0.93	7.08	0.52	8.53	10936	3.366	20.9304	-17.5644	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0074	156	158	NS	E411904	411904	1	G	W	32.23	38.92	1.69	0.336	0.26	0.08	2.65	1.16	0.132	0.073	0.747	0.2	0.97	6.45	0.28	7.7	10951	2.2338	20.23272	-17.99892	NAF
NS0074	214	216	NS	E411933	411933	1	G	W	29.9	42.95	1.32	0.426	0.33	0.059	2.34	1.14	0.085	0.057	0.622	0.17	0.76	6.76	0.34	7.86	10980	1.7442	19.88388	-18.13968	NAF
NS0074	72	74	NS	E411861	411861	1	G	W	27.47	45.94	2.25	0.633	0.49	0.107	3.17	1.77	0.113	0.406	0.336	0.098	0.37	3.77	1.12	5.26	10909	12.4236	30.87234	-18.44874	NAF
NS0074	224	226	NS	E411938	411938	1	G	W	28.86	44.47	1.7	0.31	0.24	0.082	2.43	1.29	0.111	0.1	0.765	0.203	0.96	5.46	0.61	7.03	10985	3.06	22.50018	-19.44018	NAF
NS0074	144	146	NS	E411897	411897	1	G	W	28.84	42.03	1.74	0.361	0.28	0.081	2.73	1.34	0.156	0.127	0.752	0.208	1.06	7.05	0.62	8.73	10945	3.8862	23.37228	-19.48608	NAF
NS0074	250	252	NS	E411951	411951	1	G	W	30.45	39.54	1.37	0.426	0.33	0.062	2.46	1.26	0.173	0.077	0.634	0.176	1.04	8.41	0.3	9.75	10998	2.3562	21.97692	-19.62072	NAF
NS0074	228	230	NS	E411940	411940	1	G	W	24.07	51.66	1.2	0.361	0.28	0.063	1.99	1.24	0.088	0.063	0.529	0.149	0.81	6.39	0.71	7.91	10987	1.9278	21.62808	-19.70028	NAF
NS0074	240	242	NS	E411946	411946	1	G	W	33.33	38.81	1.65	0.336	0.26	0.084	2.48	1.31	0.159	0.101	0.683	0.183	0.92	4.96	0.43	6.31	10993	3.0906	22.84902	-19.75842	NAF
NS0074	182	184	NS	E411917	411917	1	G	W	32.09	40.58	2.05	0.284	0.22	0.095	2.56	1.3	0.191	0.092	0.945	0.255	0.91	3.96	0.37	5.24	10964	2.8152	22.6746	-19.8594	NAF
NS0074	264	266	NS	E411958	411958	1	G	W	34.13	36.81	1.58	0.361	0.28	0.073	2.54	1.29	0.11	0.063	0.758	0.196	0.84	5.57	0.5	6.91	11005	1.9278	22.50018	-20.57238	NAF
NS0074	86	88	NS	E411868	411868	1	G	W	30.63	43.23	2.06	0.529	0.41	0.1	2.73	1.33	0.064	0.081	0.485	0.131	0.48	3.92	0.76	5.16	10916	2.4786	23.19786	-20.71926	NAF
NS0074	64	66	NS	E411857	411857	1	G	W	34.78	39.41	1.6	0.607	0.47	0.074	2.58	1.34	0.084	0.082	0.451	0.061	0.2	2.97	0.55	3.72	10905	2.5092	23.37228	-20.86308	NAF
NS0074	160	162	NS	E411906	411906	1	G	W	30.02	42.44	1.89	0.258	0.2	0.088	2.69	1.44	0.104	0.136	0.822	0.229	0.91	4.94	0.7	6.55	10953	4.1616	25.11648	-20.95488	NAF
NS0074	204	206	NS	E411928	411928	1	G	W	33.3	38.6	1.13	0.374	0.29	0.053	2.23	1.34	0.128	0.071	0.496	0.144	0.65	6.26	0.39	7.3	10975	2.1726	23.37228	-21.19968	NAF
NS0074	212	214	NS	E411932	411932	1	G	W	28.94	42.78	1.21	0.439	0.34	0.055	2.47	1.5	0.083	0.135	0.559	0.164	0.86	7.66	0.65	9.17	10979	4.131	26.163	-22.032	NAF
NS0074	54	56	NS	E411852	411852	1	G	W	34.35	39.82	1.34	0.684	0.53	0.063	2.23	1.34	0.112	0.038	0.349	0.043	0.27	3.67	0.39	4.33	10900	1.1628	23.37228	-22.20948	NAF
NS0074	58	60	NS	E411854	411854	1	G	W	32.83	40.96	1.5	0.788	0.61	0.067	2.48	1.4	0.124	0.069	0.499	0.032	0.18	4.18	0.52	4.88	10902	2.1114	24.4188	-22.3074	NAF
NS0074	244	246	NS	E411948	411948	1	G	W	32.98	40	1.38	0.323	0.25	0.063	2.24	1.36	0.08	0.046	0.599	0.158	0.66	4.89	0.75	6.3	10995	1.4076	23.72112	-22.31352	NAF
NS0074	262	264	NS	E411957	411957	1	G	W	35.04	35.95	1.21	0.361	0.28	0.056	2.28	1.41	0.118	0.057	0.578	0.166	0.71	6.28	0.46	7.45	11004	1.7442	24.59322	-22.84902	NAF
NS0074	124	126	NS	E411887	411887	1	G	W	32.53	37.16	1.37	0.413	0.32	0.059	2.61	1.39	0.081	0.043	0.632	0.185	0.73	7.82	0.7	9.25	10935	1.3158	24.24438	-22.92858	NAF
NS0074	280	282	NS	E411966	411966	1	G	W	30.92	40.85	1.59	0.374	0.29	0.075	2.67	1.46	0.096	0.078	0.758	0.196	0.82	5.75	0.76	7.33	11013	2.3868	25.46532	-23.07852	NAF
NS0074	278	280	NS	E411965	411965	1	G	W	31.21	39.88	1.82	0.349	0.27	0.085	2.79	1.5	0.111	0.084	0.822	0.215	0.89	5.55	0.77	7.21	11012	2.5704	26.163	-23.5926	NAF
NS0074	78	80	NS	E411864	411864	1	G	W	32.35	41.19	1.78	0.646	0.5	0.083	2.68	1.51	0.088	0.081	0.313	0.089	0.37	3.73	0.76	4.86	10912	2.4786	26.33742	-23.85882	NAF
NS0074	84	86	NS	E411867	411867	1	G	W	31.12	41.64	2.3	0.555	0.43	0.106	3.01	1.52	0.065	0.069	0.526	0.145	0.53	3.8	0.97	5.3	10915	2.1114	26.51184	-24.40044	NAF
NS0074	242	244	NS	E411947	411947	1	G	W	32.12	38.17	1.73	0.4	0.31	0.083	2.69	1.56	0.133	0.052	0.749	0.205	1.04	6.08	0.74	7.86	10994	1.5912	27.20952	-25.61832	NAF
NS0074	164	166	NS	E411908	411908	1	G	W	31.02	35.22	1.57	0.426	0.33	0.073	3.06	1.61	0.059	0.071	0.75	0.219	1.1	10.14	0.91	12.15	10955	2.1726	28.08162	-25.90902	NAF
NS0074	148	150	NS	E411899	411899	1	G	W	26.98	43.11	1.61	0.374	0.29	0.074	2.76	1.86	0.103	0.174	0.74	0.207	1.04	7.9	1.01	9.95	10947	5.3244	32.44212	-27.11772	NAF
NS0074	158	160	NS	E411905	411905	1	G	W	28.32	39.89	2.31	0.374	0.29	0.11	3.26	1.86	0.169	0.167	1.02	0.275	1.24	7.29	1.02	9.55	10952	5.1102	32.44212	-27.33192	NAF
NS0074	266	268	NS	E411959	411959	1	G	W	29.97	41.09	2.31	0.284	0.22	0.109	2.9	1.74	0.184	0.088	0.99	0.266	1.09	4.57	0.84	6.5	11006	2.6928	30.34908	-27.65628	NAF
NS0074	176	178	NS	E411914	411914	1	G	W	28.15	42.88	1.4	0.452	0.35	0.066	2.67	1.88	0.171	0.112	0.595	0.167	0.87	7.17	0.79	8.83	10961	3.4272	32.79096	-29.36376	NAF
NS0074	62	64	NS	E411856	411856	1	G	W	34.2	38.96	1.33	0.697	0.54	0.061	2.41	1.96	0.102	0.056	0.435	0.044	0.22	3.19	1.13	4.54	10904	1.7136	34.18632	-32.47272	NAC
NS0074	118	120	NS	E411884	411884	1	G	W	24.08	52.98	0.91	0.271	0.21	0.045	1.89	1.93	0.075	0.027	0.426	0.132	0.48	4.81	1.33	6.62	10932	0.8262	33.66306	-32.83686	NAC
NS0074	60	62	NS	E411855	411855	1	G	W	34.05	39.24	1.27	0.736	0.57	0.056	2.25	2.07	0.095	0.03	0.424	0.037	0.17	3.13	1.32	4.62	10903	0.918	36.10494	-35.18694	NAC
NS0074	66	68	NS	E411858	411858	1	G	W	32.78	40.8	1.44	0.697	0.54	0.068	2.46	2.16	0.134	0.055	0.391	0.062	0.21	3.05	1.3	4.56	10906	1.683	37.67472	-35.99172	NAC
NS0074	68	70	NS	E411859	411859	1	G	W	36.36	35.58	1.09	0.865	0.67	0.05	2.2	2.12	0.109	0.03	0.336	0.042	0.19	3.68	1.17	5.04	10907	0.918	36.97704	-36.05904	NAC
NS0074	80	82	NS	E411865	411865	1	G	W	35.17	37.97	1.36	0.684	0.53	0.061	2.3	2.28	0.109	0.034	0.246	0.065	0.19	2.91	1.48	4.58	10913	1.0404	39.76776	-38.72736	NAC
NS0074	82	84	NS	E411866	411866	1	G	W	32.69	39.62	1.91	0.555	0.43	0.09	2.57	2.72	0.132	0.086	0.318	0.093	0.33	2.51	1.84	4.68	10914	2.6316	47.44224	-44.81064	NAC
NS0075	46	48	NS	E411990	411990	1	G	W	14.9	59.71	11.43	0.349	0.27	0.487	0.74	0.03	0.015	0.636	1.36	0.038	1	2.51	0.81	4.32	11037	19.4616	0.52326	18.93834	PAF(HC)
NS0075	218	220	NS	E412077	412077	1	G	W	15.96	54.64	8.95	0.245	0.19	0.413	3.26	0.24	0.065	0.662	2.62	0.077	0.58	4.29	1.22	6.09	11123	20.2572	4.18608	16.07112	PAF(HC)
NS0075	216	218	NS	E412076	412076	1	G	W	15.04	55.14	9.88	0.194	0.15	0.465	3.1	0.21	0.052	0.627	3.57	0.061	0.41	4.03	1.09	5.53	11122	19.1862	3.66282	15.52338	PAF(HC)
NS0075	188	190	NS	E412062	412062	1	G	W	20.48	49.4	6.55	0.297	0.23	0.305	3.22	0.49	0.082	0.663	1.71	0.118	0.64	6.48	1.24	8.36	11108	20.2878	8.54658	11.74122	PAF(HC)
NS0075	214	216	NS	E412075	412075	1	G	W	14.78	54.8	10.88	0.142	0.11	0.505	3.41	0.24	0.069	0.508	3.63	0.07	0.62	3.35	0.95	4.92	11121	15.5448	4.18608	11.35872	PAF(HC)
NS0075	210	212	NS	E412073	412073	1	G	W	17.99	50.48	8.86	0.271	0.21	0.409	3.5	0.28	0.063	0.526	2.38	0.068	0.61	5.61	1.11	7.33	11119	16.0956	4.88376	11.21184	PAF(HC)
NS0075	44	46	NS	E411989	411989	1	G	W	19.77	55.15	9.12	0.516	0.4	0.387	0.31	0.05	0.025	0.38	1.15	0.039	1.72	1.78	0.98	4.48	11036	11.628	0.8721	10.7559	PAF(HC)
NS0075	212	214	NS	E412074	412074	1	G	W	18.5	51.26	8.02	0.284	0.22	0.381	3.65	0.29	0.064	0.505	1.45	0.053	0.64	6.15	1.08	7.87	11120	15.453	5.05818	10.39482	PAF(HC)
NS0075	198	200	NS	E412067	412067	1	G	W	22.72	44.94	6.19	0.323	0.25	0.286	3.18	0.45	0.095	0.528	1.23	0.06	0.76	8.55	1.18	10.49	11113	16.1568	7.8489	8.3079	PAF(LC)
NS0075	204	206	NS	E412070	412070	1	G	W	16.71	54.91	8.18	0.219	0.17	0.39	3.33	0.39	0.083	0.481	1.9	0.073	0.44	4.99	0.92	6.35	11116	14.7186	6.80238	7.91622	PAF(LC)
NS0075	110	112	NS	E412023	412023	1	G	W	19.39	51.68	3.71	0.581	0.45	0.173	2.04	0.39	0.082	0.437	0.547	0.022	1.46	10.08	1.1	12.64	11069	13.3722	6.80238	6.56982	PAF(LC)
NS0075	208	210	NS	E412072	412072	1	G	W	18.73	50.11	8.22	0.336	0.26	0.384	3.72	0.47	0.091	0.47	1.68	0.071	0.66	6.16	1.03	7.85	11118	14.382	8.19774	6.18426	PAF(LC)
NS0075	108	110	NS	E412022	412022	1	G	W	21.04	50.33	3.36	0.749	0.58	0.145	1.64	0.3	0.07	0.341	0.31	0.016	1.29	10.64	0.85	12.78	11068	10.4346	5.2326	5.202	PAF(LC)
NS0075	98	100	NS	E412017	412017	1	G	W	25.88	50.3	5.35	0.09	0.07	0.251	0.91	0.07	0.115	0.19	0.825	0.024	1.96	2.18	0.58	4.72	11063	5.814	1.22094	4.59306	PAF(LC)
NS0075	140	142	NS	E412038	412038	1	G	W	24.22	46.54	4.8	0.297	0.23	0.225	2.87	0.46	0.086	0.351	0.122	0.036	1.21	7.63	0.79	9.63	11084	10.7406	8.02332	2.71728	PAF(LC)
NS0075	80	82	NS	E412008	412008	1	G	W	27.43	44.4	3.33	0.284	0.22	0.149	1.51	0.3	0.043	0.206	1.31	0.026	1.21	7.56	0.47	9.24	11054	6.3036	5.2326	1.071	PAF(LC)
NS0075	100	102	NS	E412018	412018	1	G	W	28.84	46.8	4.28	0.207	0.16	0.203	0.42	0.1	0.111	0.068	1.32	0.021	2.78	1.74	0.3	4.82	11064	2.0808	1.7442	0.3366	PAF(LC)
NS0075	104	106	NS	E412020	412020	1	G	W	28.32	48.09	3.82	0.207	0.16	0.182	0.67	0.11	0.09	0.065	0.889	0.028	2.57	2.31	0.27	5.15	11066	1.989	1.91862	0.07038	PAF(LC)
NS0075	70	72	NS	E412003	412003	1	G	W	34.6	46.67	1.63	0.155	0.12	0.087	0.07	0.02	0.028	0.012	0.436	0.023	0.82	0.38	0.18	1.38	11049	0.3672	0.34884	0.01836	PAF(LC)
NS0075	84	86	NS	E412010	412010	1	G	W	31.15	43.08	3.08	0.336	0.26	0.139	0.85	0.12	0.04	0.065	1.38	0.029	1.18	4.49	0.23	5.9	11056	1.989	2.09304	-0.10404	NAF
NS0075	74	76	NS	E412005	412005	1	G	W	35.44	43.63	1.61	0.762	0.59	0.074	0.1	0.02	0.025	0.007	0.517	0.015	1.75	0.45	0.2	2.4	11051	0.2142	0.34884	-0.13464	NAF
NS0075	76	78	NS	E412006	412006	1	G	W	34.13	46.49	1.43	0.077	0.06	0.063	0.1	0.02	0.039	0.006	0.443	0.009	1.64	0.37	0.18	2.19	11052	0.1836	0.34884	-0.16524	NAF
NS0075	90	92	NS	E412013	412013	1	G	W	31.09	48.6	2.49	0.555	0.43	0.114	0.16	0.04	0.084	0.016	0.533	0.017	1.56	0.8	0.18	2.54	11059	0.4896	0.69768	-0.20808	NAF
NS0075	72	74	NS	E412004	412004	1	G	W	32.45	48.21	2.13	0.194	0.15	0.1	0.15	0.03	0.034	0.007	0.544	0.019	1.29	0.46	0.2	1.95	11050	0.2142	0.52326	-0.30906	NAF
NS0075	78	80	NS	E412007	412007	1	G	W	32.1	50.03	1.36	0.077	0.06	0.064	0.1	0.03	0.033	0.006	0.301	0.015	1.54	0.35	0.09	1.98	11053	0.1836	0.52326	-0.33966	NAF
NS0075	206	208	NS	E412071	412071	1	G	W	23.26	42.16	4.78	0.594	0.46	0.222	3.74	0.53	0.109	0.289	0.616	0.07	0.91	11.83	0.76	13.5	11117	8.8434	9.24426	-0.40086	NAF
NS0075	88	90	NS	E412012	412012	1	G	W	31.83	48.02	2.12	0.4	0.31	0.098	0.2	0.05	0.122	0.014	0.539	0.021	1.3	1	0.21	2.51	11058	0.4284	0.8721	-0.4437	NAF
NS0075	18	20	NS	E411976	411976	1	G	W	20.5	59.43	6.06	0.077	0.06	0.247	0.1	0.06	0.065	0.019	0.176	0.061	2.13	1.75	0.25	4.13	11023	0.5814	1.04652	-0.46512	NAF
NS0075	62	64	NS	E411998	411998	1	G	W	24.99	56.48	3.33	0.284	0.22	0.121	0.08	0.04	0.046	0.007	0.352	0.027	2.21	0.9	0.14	3.25	11045	0.2142	0.69768	-0.48348	NAF
NS0075	36	38	NS	E411985	411985	1	G	W	37.06	42.09	1.1	0.349	0.27	0.043	0.18	0.05	0.048	0.011	0.078	0.022	2.42	0.49	0.1	3.01	11032	0.3366	0.8721	-0.5355	NAF
NS0075	94	96	NS	E412015	412015	1	G	W	32.61	44.4	3.18	0.142	0.11	0.147	0.26	0.07	0.107	0.022	1.49	0.034	1.91	1.01	0.16	3.08	11061	0.6732	1.22094	-0.54774	NAF
NS0075	24	26	NS	E411979	411979	1	G	W	23.84	59.99	1.52	0.039	0.03	0.059	0.05	0.05	0.125	0.01	0.076	0.029	3.22	0.44	0.13	3.79	11026	0.306	0.8721	-0.5661	NAF
NS0075	14	16	NS	E411974	411974	1	G	W	4.96	85.28	4.91	-0.0129	-0.01	0.113	0.05	0.05	0.009	0.009	0.015	0.076	1.03	1.47	0.14	2.64	11021	0.2754	0.8721	-0.5967	NAF
NS0075	56	58	NS	E411995	411995	1	G	W	31.82	47.52	2.16	1.11	0.86	0.095	0.12	0.05	0.079	0.008	0.747	0.026	1.74	0.58	0.2	2.52	11042	0.2448	0.8721	-0.6273	NAF
NS0075	64	66	NS	E411999	411999	1	G	W	28.98	51.07	2.48	0.568	0.44	0.115	0.2	0.05	0.034	0.008	0.583	0.023	2.22	0.63	0.23	3.08	11046	0.2448	0.8721	-0.6273	NAF
NS0075	16	18	NS	E411975	411975	1	G	W	8.07	79.56	5.24	-0.0129	-0.01	0.142	0.06	0.06	0.048	0.013	0.023	0.069	1.66	1.49	0.17	3.32	11022	0.3978	1.04652	-0.64872	NAF
NS0075	38	40	NS	E411986	411986	1	G	W	31.2	48.54	1.62	0.387	0.3	0.058	0.19	0.06	0.05	0.012	0.173	0.03	3.03	0.66	0.12	3.81	11033	0.3672	1.04652	-0.67932	NAF
NS0075	58	60	NS	E411996	411996	1	G	W	34.38	44.71	1.58	0.904	0.7	0.07	0.08	0.05	0.083	0.004	0.801	0.024	1.43	0.36	0.14	1.93	11043	0.1224	0.8721	-0.7497	NAF
NS0075	60	62	NS	E411997	411997	1	G	W	33.92	45.3	2.25	0.271	0.21	0.097	0.11	0.05	0.072	0.004	0.934	0.03	1.57	0.49	0.1	2.16	11044	0.1224	0.8721	-0.7497	NAF
NS0075	10	12	NS	E411972	411972	1	G	W	25.55	56.4	3.12	-0.0129	-0.01	0.101	0.06	0.08	0.021	0.021	0.051	0.074	2.24	0.9	0.17	3.31	11019	0.6426	1.39536	-0.75276	NAF
NS0075	20	22	NS	E411977	411977	1	G	W	28.01	49.88	4.67	0.129	0.1	0.2	0.13	0.07	0.068	0.015	0.489	0.051	2.37	1.33	0.3	4	11024	0.459	1.22094	-0.76194	NAF
NS0075	22	24	NS	E411978	411978	1	G	W	30.36	48.17	2.23	0.065	0.05	0.099	0.07	0.07	0.159	0.015	0.078	0.029	4.18	0.73	0.19	5.1	11025	0.459	1.22094	-0.76194	NAF
NS0075	42	44	NS	E411988	411988	1	G	W	30.87	48.28	1.67	0.62	0.48	0.069	0.25	0.07	0.03	0.015	0.028	0.035	3.59	0.8	0.2	4.59	11035	0.459	1.22094	-0.76194	NAF
NS0075	40	42	NS	E411987	411987	1	G	W	29.63	47.84	4.2	0.439	0.34	0.177	0.19	0.08	0.026	0.018	0.037	0.044	2.69	1.47	0.21	4.37	11034	0.5508	1.39536	-0.84456	NAF
NS0075	28	30	NS	E411981	411981	1	G	W	35.59	43.04	1.43	0.271	0.21	0.065	0.24	0.07	0.071	0.011	0.151	0.032	2.71	0.54	0.17	3.42	11028	0.3366	1.22094	-0.88434	NAF
NS0075	34	36	NS	E411984	411984	1	G	W	32.17	45.54	3.05	0.194	0.15	0.133	0.29	0.07	0.047	0.011	0.648	0.036	2.63	0.81	0.16	3.6	11031	0.3366	1.22094	-0.88434	NAF
NS0075	32	34	NS	E411983	411983	1	G	W	37.13	39.77	2.51	0.439	0.34	0.103	0.19	0.07	0.058	0.009	0.35	0.028	2.21	0.77	0.13	3.11	11030	0.2754	1.22094	-0.94554	NAF
NS0075	30	32	NS	E411982	411982	1	G	W	29.52	47.1	3.96	0.271	0.21	0.162	0.46	0.08	0.063	0.012	0.756	0.035	3.29	1.03	0.3	4.62	11029	0.3672	1.39536	-1.02816	NAF
NS0075	50	52	NS	E411992	411992	1	G	W	22.13	57.74	4.85	0.336	0.26	0.218	0.22	0.08	0.053	0.011	0.103	0.03	2.66	1.56	0.19	4.41	11039	0.3366	1.39536	-1.05876	NAF
NS0075	68	70	NS	E412002	412002	1	G	W	30.44	48.07	3.17	0.374	0.29	0.146	0.29	0.07	0.034	0.005	0.731	0.024	2.44	0.76	0.23	3.43	11048	0.153	1.22094	-1.06794	NAF
NS0075	48	50	NS	E411991	411991	1	G	W	27.26	49.25	4.92	0.904	0.7	0.212	0.33	0.1	0.034	0.02	0.137	0.036	2.62	1.67	0.28	4.57	11038	0.612	1.7442	-1.1322	NAF
NS0075	54	56	NS	E411994	411994	1	G	W	31.95	44.93	3.22	0.904	0.7	0.145	0.2	0.08	0.064	0.008	1.01	0.03	2.18	0.91	0.2	3.29	11041	0.2448	1.39536	-1.15056	NAF
NS0075	26	28	NS	E411980	411980	1	G	W	31.05	43.04	6.26	0.077	0.06	0.267	0.17	0.09	0.084	0.011	0.888	0.044	2.44	1.54	0.34	4.32	11027	0.3366	1.56978	-1.23318	NAF
NS0075	66	68	NS	E412000	412000	1	G	W	28.67	49.44	3.66	0.503	0.39	0.167	0.29	0.08	0.086	0.005	0.981	0.034	2.54	0.86	0.22	3.62	11047	0.153	1.39536	-1.24236	NAF
NS0075	106	108	NS	E412021	412021	1	G	W	25.7	46.38	2.68	0.31	0.24	0.127	1.35	0.31	0.108	0.134	1.13	0.018	2.98	7.21	0.33	10.52	11067	4.1004	5.40702	-1.30662	NAF
NS0075	12	14	NS	E411973	411973	1	G	W	6.67	81.67	5.18	-0.0129	-0.01	0.23	0.05	0.1	0.007	0.013	0.042	0.089	1.52	1.49	0.18	3.19	11020	0.3978	1.7442	-1.3464	NAF
NS0075	52	54	NS	E411993	411993	1	G	W	30.14	46.02	4.34	0.633	0.49	0.181	0.23	0.1	0.153	0.009	0.285	0.033	3	1.37	0.22	4.59	11040	0.2754	1.7442	-1.4688	NAF
NS0075	200	202	NS	E412068	412068	1	G	W	24.08	42.09	3.52	0.503	0.39	0.161	3.14	0.56	0.116	0.243	0.389	0.064	1.07	12.73	0.66	14.46	11114	7.4358	9.76752	-2.33172	NAF
NS0075	136	138	NS	E412036	412036	1	G	W	28.46	41.22	3.61	0.387	0.3	0.162	2.75	0.44	0.092	0.171	0.373	0.06	1.08	8.78	0.24	10.1	11082	5.2326	7.67448	-2.44188	NAF
NS0075	112	114	NS	E412024	412024	1	G	W	21.51	49.08	2.93	0.491	0.38	0.138	2.21	0.48	0.094	0.184	0.852	0.023	1.03	11.32	0.45	12.8	11070	5.6304	8.37216	-2.74176	NAF
NS0075	154	156	NS	E412045	412045	1	G	W	25.96	43.27	4.78	0.413	0.32	0.223	3.23	0.58	0.105	0.236	0.564	0.11	0.91	7.64	0.53	9.08	11091	7.2216	10.11636	-2.89476	NAF
NS0075	232	234	NS	E412084	412084	1	G	W	12.58	54.32	11.29	0.155	0.12	0.505	2.93	1.18	0.057	0.572	6.25	0.077	0.42	2.77	1.42	4.61	11130	17.5032	20.58156	-3.07836	NAF
NS0075	152	154	NS	E412044	412044	1	G	W	22.19	49.08	4.07	0.374	0.29	0.193	3.07	0.64	0.096	0.263	0.324	0.097	0.88	8.13	0.68	9.69	11090	8.0478	11.16288	-3.11508	NAF
NS0075	156	158	NS	E412046	412046	1	G	W	21.16	50.07	5.79	0.284	0.22	0.271	3.32	0.79	0.143	0.347	0.828	0.114	0.73	6.12	0.83	7.68	11092	10.6182	13.77918	-3.16098	NAF
NS0075	220	222	NS	E412078	412078	1	G	W	24.32	43.37	5.08	0.478	0.37	0.229	3.48	0.56	0.099	0.209	0.454	0.066	0.95	9.6	0.46	11.01	11124	6.3954	9.76752	-3.37212	NAF
NS0075	158	160	NS	E412047	412047	1	G	W	26.49	44.18	4.88	0.31	0.24	0.227	3.16	0.67	0.097	0.267	0.473	0.1	0.64	6.42	0.48	7.54	11093	8.1702	11.68614	-3.51594	NAF
NS0075	132	134	NS	E412034	412034	1	G	W	30.19	41.19	3.4	0.387	0.3	0.159	2.64	0.39	0.072	0.106	0.329	0.046	0.82	7.08	0.02	7.92	11080	3.2436	6.80238	-3.55878	NAF
NS0075	122	124	NS	E412029	412029	1	G	W	27.19	42.02	4.09	0.465	0.36	0.194	2.69	0.49	0.12	0.163	1.02	0.021	0.84	8.48	0.13	9.45	11075	4.9878	8.54658	-3.55878	NAF
NS0075	194	196	NS	E412065	412065	1	G	W	24.9	43.38	4.72	0.374	0.29	0.213	3.39	0.66	0.097	0.243	0.671	0.15	0.99	8.77	0.6	10.36	11111	7.4358	11.51172	-4.07592	NAF
NS0075	96	98	NS	E412016	412016	1	G	W	25.48	41.98	3.94	0.374	0.29	0.183	2.19	0.49	0.126	0.143	0.529	0.017	2.1	10.86	0.38	13.34	11062	4.3758	8.54658	-4.17078	NAF
NS0075	82	84	NS	E412009	412009	1	G	W	23.74	47.38	3.52	0.245	0.19	0.16	2.05	0.41	0.067	0.089	1.57	0.022	0.97	9.37	0.13	10.47	11055	2.7234	7.15122	-4.42782	NAF
NS0075	86	88	NS	E412011	412011	1	G	W	26.09	41.25	3.45	0.465	0.36	0.157	2.03	0.5	0.12	0.14	1.74	0.031	1.39	11	0.38	12.77	11057	4.284	8.721	-4.437	NAF
NS0075	164	166	NS	E412050	412050	1	G	W	23.72	46.97	5.53	0.284	0.22	0.255	3.48	0.83	0.094	0.324	0.267	0.066	0.65	6.35	0.74	7.74	11096	9.9144	14.47686	-4.56246	NAF
NS0075	134	136	NS	E412035	412035	1	G	W	21.75	51.29	4.05	0.323	0.25	0.191	2.79	0.82	0.121	0.313	0.621	0.067	0.81	6.58	0.78	8.17	11081	9.5778	14.30244	-4.72464	NAF
NS0075	102	104	NS	E412019	412019	1	G	W	24.43	40.99	4.48	0.336	0.26	0.208	2.33	0.47	0.091	0.112	1.9	0.027	1.3	12.33	0.25	13.88	11065	3.4272	8.19774	-4.77054	NAF
NS0075	230	232	NS	E412083	412083	1	G	W	19.41	49.1	7.86	0.297	0.23	0.349	3.17	0.74	0.095	0.252	3.31	0.106	0.54	5.39	0.61	6.54	11129	7.7112	12.90708	-5.19588	NAF
NS0075	202	204	NS	E412069	412069	1	G	W	25.46	39.53	2.31	0.542	0.42	0.103	2.96	0.52	0.098	0.121	0.057	0.01	1.29	15.58	0.35	17.22	11115	3.7026	9.06984	-5.36724	NAF
NS0075	176	178	NS	E412056	412056	1	G	W	22.39	48.81	4.74	0.31	0.24	0.216	3.33	0.72	0.106	0.22	0.395	0.094	0.8	7.43	0.61	8.84	11102	6.732	12.55824	-5.82624	NAF
NS0075	8	10	NS	E411971	411971	1	G	W	25.64	56.11	2.63	-0.0129	-0.01	0.074	0.16	0.37	0.067	0.012	0.033	0.043	2.58	1.05	0.15	3.78	11018	0.3672	6.45354	-6.08634	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0075	192	194	NS	E412064	412064	1	G	W	25.77	42.5	4.87	0.336	0.26	0.225	3.2	0.66	0.113	0.177	0.815	0.153	1.26	7.97	0.48	9.71	11110	5.4162	11.51172	-6.09552	NAF
NS0075	142	144	NS	E412039	412039	1	G	W	28.64	44.04	3.53	0.271	0.21	0.166	2.4	0.52	0.055	0.093	0.138	0.04	0.98	6.55	-0.01	7.52	11085	2.8458	9.06984	-6.22404	NAF
NS0075	196	198	NS	E412066	412066	1	G	W	26.77	40.9	4.03	0.374	0.29	0.18	3.07	0.75	0.16	0.221	0.489	0.122	1.11	9.62	0.49	11.22	11112	6.7626	13.0815	-6.3189	NAF
NS0075	174	176	NS	E412055	412055	1	G	W	28.31	41	3.57	0.413	0.32	0.164	3.06	0.73	0.113	0.209	0.338	0.096	0.76	8.59	0.35	9.7	11101	6.3954	12.73266	-6.33726	NAF
NS0075	92	94	NS	E412014	412014	1	G	W	29.69	42.83	2.92	0.284	0.22	0.136	1.28	0.48	0.15	0.066	1.06	0.022	1.31	6.71	0	8.02	11060	2.0196	8.37216	-6.35256	NAF
NS0075	6	8	NS	E411970	411970	1	G	W	26.51	52.55	3.79	-0.0129	-0.01	0.104	0.19	0.4	0.053	0.02	0.096	0.042	3.31	1.25	0.17	4.73	11017	0.612	6.9768	-6.3648	NAF
NS0075	228	230	NS	E412082	412082	1	G	W	24.7	44.39	5.01	0.491	0.38	0.215	3.34	0.57	0.107	0.116	0.968	0.106	0.99	7.77	0.24	9	11128	3.5496	9.94194	-6.39234	NAF
NS0075	120	122	NS	E412028	412028	1	G	W	28.66	40.23	3.35	0.374	0.29	0.158	2.8	0.67	0.144	0.173	0.788	0.036	0.97	8.6	0.25	9.82	11074	5.2938	11.68614	-6.39234	NAF
NS0075	170	172	NS	E412053	412053	1	G	W	25.03	46.09	4.24	0.361	0.28	0.196	3	0.87	0.145	0.272	0.471	0.083	0.85	6.78	0.63	8.26	11099	8.3232	15.17454	-6.85134	NAF
NS0075	172	174	NS	E412054	412054	1	G	W	27.77	41.93	3.51	0.413	0.32	0.161	2.9	0.58	0.104	0.105	0.376	0.092	1.07	8.64	0.15	9.86	11100	3.213	10.11636	-6.90336	NAF
NS0075	116	118	NS	E412026	412026	1	G	W	26.61	41.93	3.06	0.374	0.29	0.144	2.62	0.75	0.145	0.201	0.906	0.039	1.02	9.95	0.4	11.37	11072	6.1506	13.0815	-6.9309	NAF
NS0075	166	168	NS	E412051	412051	1	G	W	26.69	45.26	3.4	0.374	0.29	0.154	2.79	0.7	0.09	0.17	0.279	0.081	0.87	6.97	0.31	8.15	11097	5.202	12.2094	-7.0074	NAF
NS0075	178	180	NS	E412057	412057	1	G	W	25.08	43.74	4.77	0.336	0.26	0.212	3.47	0.9	0.16	0.284	0.373	0.111	0.82	7.95	0.66	9.43	11103	8.6904	15.6978	-7.0074	NAF
NS0075	264	266	NS	E412100	412100	1	G	W	25.71	43.66	4.13	0.62	0.48	0.188	3.14	0.91	0.109	0.288	1.33	0.103	0.93	7.03	0.72	8.68	11146	8.8128	15.87222	-7.05942	NAF
NS0075	130	132	NS	E412033	412033	1	G	W	29.53	42.22	2.94	0.465	0.36	0.139	2.52	0.64	0.157	0.131	0.275	0.032	0.89	7.28	0.09	8.26	11079	4.0086	11.16288	-7.15428	NAF
NS0075	114	116	NS	E412025	412025	1	G	W	23.95	46.6	2.47	0.4	0.31	0.116	2.16	0.77	0.138	0.204	0.834	0.028	0.88	10.38	0.38	11.64	11071	6.2424	13.43034	-7.18794	NAF
NS0075	160	162	NS	E412048	412048	1	G	W	29.27	43.49	3.26	0.349	0.27	0.149	2.48	0.62	0.056	0.113	0.235	0.055	0.75	6.38	0.05	7.18	11094	3.4578	10.81404	-7.35624	NAF
NS0075	184	186	NS	E412060	412060	1	G	W	26.3	46.1	3.69	0.323	0.25	0.168	2.74	0.75	0.097	0.186	0.286	0.085	0.58	6.89	0.34	7.81	11106	5.6916	13.0815	-7.3899	NAF
NS0075	244	246	NS	E412090	412090	1	G	W	17.77	48.96	8.54	0.413	0.32	0.373	3.26	1.04	0.114	0.343	4.25	0.121	0.63	5.2	1.04	6.87	11136	10.4958	18.13968	-7.64388	NAF
NS0075	128	130	NS	E412032	412032	1	G	W	28.01	45.84	2.56	0.413	0.32	0.119	2.15	0.62	0.089	0.092	0.306	0.019	0.49	6.91	-0.09	7.31	11078	2.8152	10.81404	-7.99884	NAF
NS0075	236	238	NS	E412086	412086	1	G	W	25.53	45.16	5.32	0.374	0.29	0.229	3.23	0.69	0.081	0.126	1.22	0.101	0.59	5.79	0.25	6.63	11132	3.8556	12.03498	-8.17938	NAF
NS0075	4	6	NS	E411969	411969	1	G	W	17.2	65.7	5.31	-0.0129	-0.01	0.091	0.19	0.5	0.015	0.015	0.068	0.038	1.48	1.8	0.23	3.51	11016	0.459	8.721	-8.262	NAF
NS0075	242	244	NS	E412089	412089	1	G	W	22.74	46.16	6.74	0.413	0.32	0.296	3.08	0.82	0.091	0.192	2.84	0.114	0.7	5.43	0.51	6.64	11135	5.8752	14.30244	-8.42724	NAF
NS0075	124	126	NS	E412030	412030	1	G	W	28.17	44.94	3.28	0.31	0.24	0.155	2.34	0.7	0.116	0.123	0.626	0.026	0.78	6.11	0.12	7.01	11076	3.7638	12.2094	-8.4456	NAF
NS0075	234	236	NS	E412085	412085	1	G	W	29.49	41.91	3.86	0.4	0.31	0.171	2.8	0.62	0.094	0.076	0.699	0.08	0.74	6.45	-0.06	7.13	11131	2.3256	10.81404	-8.48844	NAF
NS0075	138	140	NS	E412037	412037	1	G	W	19.91	53.13	3.59	0.336	0.26	0.167	2.54	0.93	0.237	0.237	0.463	0.076	0.75	8.26	0.56	9.57	11083	7.2522	16.22106	-8.96886	NAF
NS0075	126	128	NS	E412031	412031	1	G	W	29.86	41.9	3.12	0.387	0.3	0.149	2.44	0.85	0.145	0.166	0.511	0.025	0.75	6.6	0.2	7.55	11077	5.0796	14.8257	-9.7461	NAF
NS0075	186	188	NS	E412061	412061	1	G	W	27	41.89	3.4	0.452	0.35	0.157	2.89	1.01	0.207	0.244	0.347	0.088	0.96	9.05	0.54	10.55	11107	7.4664	17.61642	-10.15002	NAF
NS0075	118	120	NS	E412027	412027	1	G	W	27.93	43.67	2.92	0.297	0.23	0.138	2.56	0.76	0.124	0.096	0.576	0.036	0.61	8.19	-0.02	8.78	11073	2.9376	13.25592	-10.31832	NAF
NS0075	190	192	NS	E412063	412063	1	G	W	26.44	43.29	3.24	0.413	0.32	0.148	2.72	0.77	0.148	0.101	0.35	0.094	0.83	9.91	0.08	10.82	11109	3.0906	13.43034	-10.33974	NAF
NS0075	250	252	NS	E412093	412093	1	G	W	24.56	45.65	5.21	0.478	0.37	0.23	3.19	0.89	0.105	0.167	1.58	0.085	0.59	6.16	0.4	7.15	11139	5.1102	15.52338	-10.41318	NAF
NS0075	150	152	NS	E412043	412043	1	G	W	27.26	44.82	3.68	0.297	0.23	0.173	2.69	0.85	0.161	0.13	0.178	0.067	1.01	6.58	0.2	7.79	11089	3.978	14.8257	-10.8477	NAF
NS0075	260	262	NS	E412098	412098	1	G	W	25.64	41.46	3.8	0.762	0.59	0.169	3.33	1.08	0.16	0.255	1.15	0.105	0.64	9.62	0.49	10.75	11144	7.803	18.83736	-11.03436	NAF
NS0075	148	150	NS	E412042	412042	1	G	W	26.78	46.41	3.44	0.297	0.23	0.165	2.45	0.87	0.088	0.122	0.091	0.036	0.69	6.76	0.18	7.63	11088	3.7332	15.17454	-11.44134	NAF
NS0075	162	164	NS	E412049	412049	1	G	W	27.34	42.33	4.29	0.374	0.29	0.198	3.12	1.19	0.23	0.283	0.31	0.08	0.69	7.02	0.59	8.3	11095	8.6598	20.75598	-12.09618	NAF
NS0075	248	250	NS	E412092	412092	1	G	W	28.1	43.15	4.62	0.387	0.3	0.199	3.05	0.85	0.053	0.072	0.914	0.069	0.62	5.37	0.21	6.2	11138	2.2032	14.8257	-12.6225	NAF
NS0075	182	184	NS	E412059	412059	1	G	W	26.06	44.86	4.08	0.31	0.24	0.186	3.01	1.13	0.069	0.226	0.185	0.062	0.76	6.82	0.72	8.3	11105	6.9156	19.70946	-12.79386	NAF
NS0075	168	170	NS	E412052	412052	1	G	W	30.04	41.07	3.28	0.374	0.29	0.148	2.6	0.96	0.154	0.128	0.349	0.077	0.7	6.48	0.16	7.34	11098	3.9168	16.74432	-12.82752	NAF
NS0075	226	228	NS	E412081	412081	1	G	W	24.6	45.09	5.45	0.413	0.32	0.242	3.31	0.95	0.075	0.101	1.05	0.094	0.66	6.51	0.43	7.6	11127	3.0906	16.5699	-13.4793	NAF
NS0075	146	148	NS	E412041	412041	1	G	W	28.77	43.32	2.87	0.323	0.25	0.137	2.3	0.96	0.133	0.09	0.129	0.047	0.93	7.06	0.07	8.06	11087	2.754	16.74432	-13.99032	NAF
NS0075	252	254	NS	E412094	412094	1	G	W	28.87	42.64	4	0.478	0.37	0.177	2.7	0.95	0.113	0.074	0.99	0.071	0.47	5.42	0.14	6.03	11140	2.2644	16.5699	-14.3055	NAF
NS0075	246	248	NS	E412091	412091	1	G	W	26.45	44.34	4.75	0.426	0.33	0.208	3.1	1.01	0.137	0.099	1.14	0.082	0.51	5.94	0.22	6.67	11137	3.0294	17.61642	-14.58702	NAF
NS0075	144	146	NS	E412040	412040	1	G	W	26.61	43.28	3.79	0.31	0.24	0.181	2.82	1.17	0.24	0.139	0.106	0.041	1.11	8.1	0.22	9.43	11086	4.2534	20.40714	-16.15374	NAF
NS0075	238	240	NS	E412087	412087	1	G	W	24.21	43.23	5.33	0.503	0.39	0.235	3.63	1.29	0.232	0.195	1.41	0.124	0.79	7.41	0.56	8.76	11133	5.967	22.50018	-16.53318	NAF
NS0075	272	274	NS	E412105	412105	1	G	W	34.45	39.03	2.1	0.503	0.39	0.097	2.23	1.03	0.099	0.044	0.473	0.07	0.42	4.36	0.07	4.85	11150	1.3464	17.96526	-16.61886	NAF
NS0075	240	242	NS	E412088	412088	1	G	W	28.26	42.85	4.33	0.374	0.29	0.195	2.91	1.19	0.088	0.08	0.888	0.076	0.62	5.26	0.45	6.33	11134	2.448	20.75598	-18.30798	NAF
NS0075	224	226	NS	E412080	412080	1	G	W	19.68	46.99	7.95	0.361	0.28	0.347	3.73	1.64	0.26	0.324	2.29	0.118	0.8	5.44	1.15	7.39	11126	9.9144	28.60488	-18.69048	NAF
NS0075	274	276	NS	E412106	412106	1	G	W	34.03	38.01	2.25	0.542	0.42	0.102	2.4	1.26	0.14	0.047	0.555	0.07	0.45	5.1	0.24	5.79	11151	1.4382	21.97692	-20.53872	NAF
NS0075	180	182	NS	E412058	412058	1	G	W	27.41	41.94	3.3	0.413	0.32	0.154	2.9	1.45	0.181	0.147	0.177	0.05	1.01	8.17	0.42	9.6	11104	4.4982	25.2909	-20.7927	NAF
NS0075	258	260	NS	E412097	412097	1	G	W	29.47	40.95	3.7	0.503	0.39	0.162	2.83	1.32	0.141	0.059	0.766	0.085	0.66	5.75	0.34	6.75	11143	1.8054	23.02344	-21.21804	NAF
NS0075	268	270	NS	E412103	412103	1	G	W	32.58	39.55	2.27	0.555	0.43	0.102	2.52	1.42	0.145	0.052	0.444	0.071	0.35	5.27	0.39	6.01	11148	1.5912	24.76764	-23.17644	NAF
NS0075	262	264	NS	E412099	412099	1	G	W	27.96	41.08	4.3	0.465	0.36	0.191	3.19	1.46	0.147	0.069	0.806	0.079	0.63	6.75	0.51	7.89	11145	2.1114	25.46532	-23.35392	NAF
NS0075	278	280	NS	E412108	412108	1	G	W	32.69	40.62	1.95	0.516	0.4	0.085	2.21	1.41	0.074	0.037	0.407	0.054	0.38	4.95	0.52	5.85	11153	1.1322	24.59322	-23.46102	NAF
NS0075	266	268	NS	E412102	412102	1	G	W	31.73	38.95	2.63	0.62	0.48	0.116	2.84	1.5	0.097	0.061	0.484	0.065	0.51	5.89	0.61	7.01	11147	1.8666	26.163	-24.2964	NAF
NS0075	280	282	NS	E412109	412109	1	G	W	33.22	38.79	2.19	0.516	0.4	0.098	2.35	1.47	0.094	0.043	0.496	0.058	0.36	5.03	0.55	5.94	11154	1.3158	25.63974	-24.32394	NAF
NS0075	254	256	NS	E412095	412095	1	G	W	29.42	41.23	3.92	0.503	0.39	0.173	2.76	1.54	0.099	0.057	0.914	0.068	0.49	5.09	0.72	6.3	11141	1.7442	26.86068	-25.11648	NAF
NS0075	222	224	NS	E412079	412079	1	G	W	24.61	44.69	5.1	0.374	0.29	0.23	3.19	1.79	0.204	0.15	0.754	0.092	0.66	6.24	0.75	7.65	11125	4.59	31.22118	-26.63118	NAF
NS0075	270	272	NS	E412104	412104	1	G	W	33.53	39.31	1.96	0.581	0.45	0.088	2.15	1.69	0.114	0.056	0.617	0.067	0.26	4.41	0.73	5.4	11149	1.7136	29.47698	-27.76338	NAF
NS0075	276	278	NS	E412107	412107	1	G	W	31.53	40.4	1.86	0.594	0.46	0.084	2.38	1.67	0.187	0.044	0.505	0.065	0.5	5.8	0.48	6.78	11152	1.3464	29.12814	-27.78174	NAF
NS0075	256	258	NS	E412096	412096	1	G	W	29.32	40.7	4.04	0.503	0.39	0.183	2.9	1.83	0.136	0.078	0.984	0.081	0.4	4.97	0.87	6.24	11142	2.3868	31.91886	-29.53206	NAF
NS0075	0	2	NS	E411967	411967	1	G	W	14.18	69.58	3.57	0.026	0.02	0.105	0.18	2.04	0.018	0.018	0.129	0.042	1.12	1.4	1.3	3.82	11014	0.5508	35.58168	-35.03088	NAC
NS0075	2	4	NS	E411968	411968	1	G	W	17.91	57.67	6.06	-0.0129	-0.01	0.108	0.41	3.81	0.013	0.017	0.084	0.033	1.45	2.8	1.94	6.19	11015	0.5202	66.45402	-65.93382	NAC
NS0076	54	56	NS	E412137	412137	1	G	W	25.1	42.64	6.17	0.387	0.3	0.267	4.47	0.3	0.076	1.32	0.352	0.092	0.89	6.08	1.96	8.93	11182	40.392	5.2326	35.1594	PAF(HC)
NS0076	56	58	NS	E412138	412138	1	G	W	27.93	43.68	2.5	0.775	0.6	0.109	2.54	0.51	0.099	0.556	0.109	0.03	0.77	7.62	1.07	9.46	11183	17.0136	8.89542	8.11818	PAF(LC)
NS0076	58	60	NS	E412139	412139	1	G	W	28.58	42.4	3.23	0.671	0.52	0.141	3.36	0.47	0.107	0.34	0.321	0.061	0.66	6.56	0.59	7.81	11184	10.404	8.19774	2.20626	PAF(LC)
NS0076	44	46	NS	E412132	412132	1	G	W	32.14	45.36	2.59	0.336	0.26	0.118	1.13	0.31	0.105	0.203	0.077	0.023	2.01	0.96	0.51	3.48	11177	6.2118	5.40702	0.80478	PAF(LC)
NS0076	4	6	NS	E412112	412112	1	G	W	36.71	36.52	5.82	0.026	0.02	0.527	0.04	0.01	0.015	0.013	0.009	0.021	2.73	1.34	0.19	4.26	11157	0.3978	0.17442	0.22338	PAF(LC)
NS0076	16	18	NS	E412118	412118	1	G	W	34.4	47.81	1.06	0.129	0.1	0.047	0.05	0.01	0.014	0.007	0.006	0.009	1.34	0.42	0.13	1.89	11163	0.2142	0.17442	0.03978	PAF(LC)
NS0076	24	26	NS	E412122	412122	1	G	W	32.76	49.12	1.36	0.065	0.05	0.054	0.07	0.01	0.028	0.007	0.007	0.019	2.03	0.51	0.14	2.68	11167	0.2142	0.17442	0.03978	PAF(LC)
NS0076	22	24	NS	E412121	412121	1	G	W	35.81	44.24	1.41	0.09	0.07	0.061	0.08	0.01	0.012	0.006	0.005	0.02	2.17	0.58	0.16	2.91	11166	0.1836	0.17442	0.00918	PAF(LC)
NS0076	26	28	NS	E412123	412123	1	G	W	24.52	60.01	2.54	0.065	0.05	0.088	0.04	0.01	0.029	0.006	0.014	0.031	1.16	0.79	0.13	2.08	11168	0.1836	0.17442	0.00918	PAF(LC)
NS0076	30	32	NS	E412125	412125	1	G	W	24.78	58.01	3.2	0.349	0.27	0.133	0.05	0.01	0.087	0.004	0.026	0.025	1.54	0.91	0.14	2.59	11170	0.1224	0.17442	-0.05202	NAF
NS0076	8	10	NS	E412114	412114	1	G	W	38.14	40.83	1.72	0.168	0.13	0.081	0.05	0.02	0.028	0.007	0.006	0.007	1.88	0.62	0.09	2.59	11159	0.2142	0.34884	-0.13464	NAF
NS0076	28	30	NS	E412124	412124	1	G	W	26.37	57.62	1.32	0.103	0.08	0.049	0.04	0.02	0.105	0.007	0.012	0.012	2.18	0.48	0.11	2.77	11169	0.2142	0.34884	-0.13464	NAF
NS0076	20	22	NS	E412120	412120	1	G	W	36.05	42.86	1.44	0.039	0.03	0.064	0.03	0.02	0.132	0.006	0.007	0.016	3.24	0.5	0.1	3.84	11165	0.1836	0.34884	-0.16524	NAF
NS0076	18	20	NS	E412119	412119	1	G	W	33.34	48.77	1.27	0.026	0.02	0.05	0.04	0.02	0.051	0.005	0.008	0.011	1.28	0.47	0.14	1.89	11164	0.153	0.34884	-0.19584	NAF
NS0076	10	12	NS	E412115	412115	1	G	W	37.23	43.39	1.29	0.31	0.24	0.058	0.08	0.03	0.009	0.009	0.01	0.013	1.23	0.52	0.1	1.85	11160	0.2754	0.52326	-0.24786	NAF
NS0076	14	16	NS	E412117	412117	1	G	W	36.73	43.04	1.34	0.465	0.36	0.056	0.08	0.03	0.009	0.009	0.007	0.014	1.66	0.54	0.13	2.33	11162	0.2754	0.52326	-0.24786	NAF
NS0076	34	36	NS	E412127	412127	1	G	W	33.71	44.46	2.12	0.775	0.6	0.094	0.21	0.02	0.028	0.003	0.052	0.015	2.7	0.69	0.11	3.5	11172	0.0918	0.34884	-0.25704	NAF
NS0076	6	8	NS	E412113	412113	1	G	W	38.04	42.29	1.68	0.039	0.03	0.063	0.06	0.03	0.01	0.007	0.007	0.008	1	0.59	0.09	1.68	11158	0.2142	0.52326	-0.30906	NAF
NS0076	12	14	NS	E412116	412116	1	G	W	37.89	42.38	1.2	0.31	0.24	0.057	0.06	0.04	0.01	0.008	0.007	0.009	1.2	0.47	0.11	1.78	11161	0.2448	0.69768	-0.45288	NAF
NS0076	0	2	NS	E412110	412110	1	G	W	36.72	40.7	2.55	0.026	0.02	0.106	0.08	0.06	0.011	0.016	0.027	0.01	2.59	0.8	0.11	3.5	11155	0.4896	1.04652	-0.55692	NAF
NS0076	2	4	NS	E412111	412111	1	G	W	39.82	38.63	2.07	0.142	0.11	0.141	0.08	0.05	0.008	0.01	0.013	0.008	1.58	0.64	0.07	2.29	11156	0.306	0.8721	-0.5661	NAF
NS0076	32	34	NS	E412126	412126	1	G	W	35.14	41.07	2.97	0.607	0.47	0.13	0.27	0.04	0.052	0.004	0.119	0.017	3.28	0.88	0.15	4.31	11171	0.1224	0.69768	-0.57528	NAF
NS0076	38	40	NS	E412129	412129	1	G	W	36.13	40.57	2.14	1.059	0.82	0.089	0.42	0.05	0.044	0.004	0.157	0.019	2.73	0.7	0.06	3.49	11174	0.1224	0.8721	-0.7497	NAF
NS0076	40	42	NS	E412130	412130	1	G	W	38.29	39.21	1.43	0.852	0.66	0.061	0.38	0.06	0.059	0.003	0.202	0.013	2.41	0.48	0.03	2.92	11175	0.0918	1.04652	-0.95472	NAF
NS0076	52	54	NS	E412136	412136	1	G	W	34.54	42.6	1.9	0.671	0.52	0.081	0.55	0.11	0.089	0.019	0.168	0.02	3.1	0.82	0.14	4.06	11181	0.5814	1.91862	-1.33722	NAF
NS0076	42	44	NS	E412131	412131	1	G	W	36.65	37.66	2.76	0.71	0.55	0.125	0.82	0.19	0.073	0.064	0.284	0.039	3.52	0.92	0.29	4.73	11176	1.9584	3.31398	-1.35558	NAF
NS0076	50	52	NS	E412135	412135	1	G	W	30.5	49.95	1.21	0.865	0.67	0.052	0.37	0.1	0.063	0.006	0.135	0.016	2.69	0.62	0.08	3.39	11180	0.1836	1.7442	-1.5606	NAF
NS0076	36	38	NS	E412128	412128	1	G	W	32.99	43.48	2.5	0.891	0.69	0.107	0.5	0.1	0.072	0.003	0.31	0.029	3.29	0.83	0.15	4.27	11173	0.0918	1.7442	-1.6524	NAF
NS0076	46	48	NS	E412133	412133	1	G	W	27.54	46.17	1.75	0.594	0.46	0.078	2.14	0.47	0.108	0.205	0.187	0.067	1.39	6.74	0.45	8.58	11178	6.273	8.19774	-1.92474	NAF
NS0076	48	50	NS	E412134	412134	1	G	W	34.76	40.41	1.58	0.503	0.39	0.071	1.07	0.28	0.111	0.045	0.175	0.036	2.52	3.13	0.06	5.71	11179	1.377	4.88376	-3.50676	NAF
NS0076	156	158	NS	E412188	412188	1	G	W	33.16	36.76	3.28	0.646	0.5	0.144	3.84	0.64	0.143	0.24	0.543	0.231	0.63	4.91	0.29	5.83	11233	7.344	11.16288	-3.81888	NAF
NS0076	150	152	NS	E412185	412185	1	G	W	32.34	40.17	2.36	0.646	0.5	0.1	3.17	0.52	0.097	0.118	0.458	0.182	0.6	5.14	0.11	5.85	11230	3.6108	9.06984	-5.45904	NAF
NS0076	78	80	NS	E412149	412149	1	G	W	30.97	39.64	3.05	0.684	0.53	0.137	3.63	1	0.154	0.39	0.819	0.122	0.5	4.49	0.78	5.77	11194	11.934	17.442	-5.508	NAF
NS0076	256	258	NS	E412239	412239	1	G	W	24.25	45.79	4.07	0.413	0.32	0.184	3.03	1.34	0.115	0.559	2.32	0.186	0.69	5.26	1.23	7.18	11283	17.1054	23.37228	-6.26688	NAF
NS0076	152	154	NS	E412186	412186	1	G	W	34.65	37.43	1.91	0.736	0.57	0.083	2.96	0.6	0.118	0.097	0.401	0.154	0.56	5.37	-0.03	5.9	11231	2.9682	10.4652	-7.497	NAF
NS0076	162	164	NS	E412191	412191	1	G	W	36.31	35.98	1.24	0.813	0.63	0.049	2.53	0.5	0.087	0.021	0.405	0.147	0.5	5.81	-0.26	6.05	11236	0.6426	8.721	-8.0784	NAF
NS0076	172	174	NS	E412196	412196	1	G	W	37.32	35.44	1.3	0.826	0.64	0.055	2.44	0.54	0.095	0.026	0.276	0.12	0.4	5.36	-0.29	5.47	11241	0.7956	9.41868	-8.62308	NAF
NS0076	160	162	NS	E412190	412190	1	G	W	34.4	37.39	1.32	0.8	0.62	0.054	2.78	0.57	0.08	0.032	0.448	0.173	0.59	6.32	-0.06	6.85	11235	0.9792	9.94194	-8.96274	NAF
NS0076	142	144	NS	E412181	412181	1	G	W	25.85	46.17	2.16	0.529	0.41	0.098	3.47	1.03	0.128	0.278	0.571	0.201	0.79	6.47	0.8	8.06	11226	8.5068	17.96526	-9.45846	NAF
NS0076	168	170	NS	E412194	412194	1	G	W	35.95	36.73	1.37	0.775	0.6	0.062	2.5	0.61	0.106	0.028	0.295	0.126	0.44	5.48	-0.24	5.68	11239	0.8568	10.63962	-9.78282	NAF
NS0076	170	172	NS	E412195	412195	1	G	W	35.32	36.56	1.64	0.813	0.63	0.07	2.81	0.67	0.107	0.05	0.328	0.137	0.53	5.85	-0.11	6.27	11240	1.53	11.68614	-10.15614	NAF
NS0076	60	62	NS	E412140	412140	1	G	W	31.9	40.39	2.45	0.697	0.54	0.105	2.8	0.87	0.091	0.154	0.311	0.054	0.57	5.57	0.25	6.39	11185	4.7124	15.17454	-10.46214	NAF
NS0076	148	150	NS	E412184	412184	1	G	W	31.97	40.4	1.65	0.749	0.58	0.075	2.87	0.9	0.147	0.147	0.41	0.146	0.54	5.84	0.26	6.64	11229	4.4982	15.6978	-11.1996	NAF
NS0076	90	92	NS	E412155	412155	1	G	W	34.96	37.85	2.06	0.697	0.54	0.092	2.82	0.92	0.118	0.156	0.526	0.11	0.38	3.8	0.2	4.38	11200	4.7736	16.04664	-11.27304	NAF
NS0076	166	168	NS	E412193	412193	1	G	W	35.62	36.26	1.37	0.839	0.65	0.058	2.7	0.73	0.1	0.032	0.369	0.153	0.53	5.96	-0.08	6.41	11238	0.9792	12.73266	-11.75346	NAF
NS0076	164	166	NS	E412192	412192	1	G	W	36.09	36.21	1.18	0.826	0.64	0.05	2.43	0.73	0.118	0.022	0.333	0.127	0.39	5.86	-0.18	6.07	11237	0.6732	12.73266	-12.05946	NAF
NS0076	88	90	NS	E412154	412154	1	G	W	35.78	37.78	1.42	0.736	0.57	0.062	2.48	0.83	0.092	0.058	0.487	0.101	0.36	4.15	0	4.51	11199	1.7748	14.47686	-12.70206	NAF
NS0076	92	94	NS	E412156	412156	1	G	W	34.03	37.92	2.22	0.762	0.59	0.097	3.1	1.01	0.094	0.16	0.522	0.121	0.44	4.38	0.34	5.16	11201	4.896	17.61642	-12.72042	NAF
NS0076	68	70	NS	E412144	412144	1	G	W	33.96	39.12	2.22	0.684	0.53	0.099	2.43	1.02	0.1	0.113	0.903	0.048	0.39	3.84	0.24	4.47	11189	3.4578	17.79084	-14.33304	NAF
NS0076	194	196	NS	E412208	412208	1	G	W	36.09	38.63	1.73	0.568	0.44	0.077	1.96	0.92	0.079	0.034	1.32	0.053	0.01	2.72	0.09	2.82	11252	1.0404	16.04664	-15.00624	NAF
NS0076	276	278	NS	E412249	412249	1	G	W	33.25	40.64	1.59	0.594	0.46	0.072	1.81	0.95	0.079	0.04	0.895	0.107	0.42	5.15	0.11	5.68	11293	1.224	16.5699	-15.3459	NAF
NS0076	84	86	NS	E412152	412152	1	G	W	36.8	36.73	1.1	0.826	0.64	0.049	2.27	0.95	0.119	0.029	0.363	0.074	0.25	4.73	0.01	4.99	11197	0.8874	16.5699	-15.6825	NAF
NS0076	86	88	NS	E412153	412153	1	G	W	33.54	40.91	1.07	0.788	0.61	0.046	2.27	0.95	0.087	0.023	0.399	0.09	0.34	4.73	0.14	5.21	11198	0.7038	16.5699	-15.8661	NAF
NS0076	66	68	NS	E412143	412143	1	G	W	34.87	38.71	1.83	0.723	0.56	0.076	2.01	1.04	0.07	0.067	0.857	0.027	0.39	3.93	0.23	4.55	11188	2.0502	18.13968	-16.08948	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0076	174	176	NS	E412197	412197	1	G	W	35.09	38.43	1.04	0.826	0.64	0.042	2.32	1.04	0.101	0.019	0.241	0.104	0.31	5.32	0.17	5.8	11242	0.5814	18.13968	-17.55828	NAF
NS0076	80	82	NS	E412150	412150	1	G	W	37.23	36.83	1.02	0.775	0.6	0.045	2.14	1.06	0.085	0.024	0.334	0.062	0.28	4	0.15	4.43	11195	0.7344	18.48852	-17.75412	NAF
NS0076	184	186	NS	E412203	412203	1	G	W	35.82	37.3	1.75	0.684	0.53	0.081	2.13	1.33	0.114	0.154	0.841	0.089	0.24	3.17	0.46	3.87	11247	4.7124	23.19786	-18.48546	NAF
NS0076	140	142	NS	E412180	412180	1	G	W	36.07	35.82	1.22	0.813	0.63	0.05	2.56	1.11	0.102	0.025	0.313	0.112	0.41	5.53	0.17	6.11	11225	0.765	19.36062	-18.59562	NAF
NS0076	146	148	NS	E412183	412183	1	G	W	33.72	40.03	1.07	0.62	0.48	0.046	2.35	1.13	0.121	0.034	0.241	0.093	0.33	5.03	0.18	5.54	11228	1.0404	19.70946	-18.66906	NAF
NS0076	154	156	NS	E412187	412187	1	G	W	34.38	38.77	1.53	0.697	0.54	0.064	2.59	1.16	0.096	0.04	0.374	0.147	0.39	4.44	0.38	5.21	11232	1.224	20.23272	-19.00872	NAF
NS0076	230	232	NS	E412226	412226	1	G	W	34.82	38.29	1.48	0.646	0.5	0.07	1.94	1.3	0.12	0.103	1.21	0.035	0.07	4.19	0.35	4.61	11270	3.1518	22.6746	-19.5228	NAF
NS0076	82	84	NS	E412151	412151	1	G	W	36.22	36.59	0.99	0.852	0.66	0.043	2.32	1.18	0.099	0.028	0.358	0.091	0.32	4.9	0.25	5.47	11196	0.8568	20.58156	-19.72476	NAF
NS0076	158	160	NS	E412189	412189	1	G	W	33.26	39.46	1.17	0.749	0.58	0.047	2.54	1.24	0.089	0.041	0.34	0.141	0.44	5.3	0.48	6.22	11234	1.2546	21.62808	-20.37348	NAF
NS0076	114	116	NS	E412167	412167	1	G	W	33.13	39.85	2	0.749	0.58	0.091	2.4	1.41	0.12	0.129	0.788	0.094	0.3	3.69	0.53	4.52	11212	3.9474	24.59322	-20.64582	NAF
NS0076	248	250	NS	E412235	412235	1	G	W	29.93	41.79	2.05	0.491	0.38	0.098	2.72	1.43	0.118	0.136	0.747	0.122	0.57	6	0.61	7.18	11279	4.1616	24.94206	-20.78046	NAF
NS0076	144	146	NS	E412182	412182	1	G	W	33.33	40.03	1.22	0.594	0.46	0.056	2.68	1.27	0.086	0.04	0.209	0.085	0.29	5.43	0.48	6.2	11227	1.224	22.15134	-20.92734	NAF
NS0076	94	96	NS	E412157	412157	1	G	W	34.29	38.88	1.31	0.749	0.58	0.058	2.56	1.3	0.085	0.055	0.422	0.109	0.32	4.17	0.52	5.01	11202	1.683	22.6746	-20.9916	NAF
NS0076	76	78	NS	E412148	412148	1	G	W	33.27	39.67	1.75	0.775	0.6	0.077	2.57	1.37	0.107	0.091	0.804	0.072	0.36	4.22	0.56	5.14	11193	2.7846	23.89554	-21.11094	NAF
NS0076	108	110	NS	E412164	412164	1	G	W	33.25	38.99	1.94	0.775	0.6	0.081	2.75	1.3	0.069	0.049	0.789	0.109	0.29	4.1	0.68	5.07	11209	1.4994	22.6746	-21.1752	NAF
NS0076	100	102	NS	E412160	412160	1	G	W	32.39	39.1	2.01	0.749	0.58	0.091	2.94	1.43	0.214	0.122	0.769	0.143	0.4	4.72	0.39	5.51	11205	3.7332	24.94206	-21.20886	NAF
NS0076	176	178	NS	E412198	412198	1	G	W	36.01	38.07	1.01	0.736	0.57	0.044	2.07	1.27	0.108	0.026	0.237	0.089	0.26	4.19	0.32	4.77	11243	0.7956	22.15134	-21.35574	NAF
NS0076	64	66	NS	E412142	412142	1	G	W	35.81	35.85	1.86	0.839	0.65	0.079	2.25	1.39	0.108	0.07	0.846	0.04	0.45	4.61	0.38	5.44	11187	2.142	24.24438	-22.10238	NAF
NS0076	226	228	NS	E412224	412224	1	G	W	35.02	38.55	1.57	0.633	0.49	0.067	1.82	1.45	0.123	0.101	1.29	0.036	0.01	3.29	0.51	3.81	11268	3.0906	25.2909	-22.2003	NAF
NS0076	270	272	NS	E412246	412246	1	G	W	29.27	41.76	2.93	0.452	0.35	0.132	2.62	1.68	0.071	0.221	1.49	0.149	0.55	4.76	1.04	6.35	11290	6.7626	29.30256	-22.53996	NAF
NS0076	228	230	NS	E412225	412225	1	G	W	35.69	38.4	1.52	0.594	0.46	0.068	1.74	1.37	0.111	0.043	1.27	0.025	-0.01	3.21	0.48	3.68	11269	1.3158	23.89554	-22.57974	NAF
NS0076	118	120	NS	E412169	412169	1	G	W	36.67	36.76	1.44	0.788	0.61	0.062	2.05	1.41	0.089	0.06	0.69	0.081	0.2	3.29	0.53	4.02	11214	1.836	24.59322	-22.75722	NAF
NS0076	216	218	NS	E412219	412219	1	G	W	34.65	38.98	1.72	0.71	0.55	0.077	1.95	1.41	0.142	0.05	1.45	0.026	0	3.52	0.45	3.97	11263	1.53	24.59322	-23.06322	NAF
NS0076	218	220	NS	E412220	412220	1	G	W	36.76	36.4	1.38	0.762	0.59	0.061	1.77	1.43	0.112	0.043	1.19	0.017	-0.03	3.51	0.49	3.97	11264	1.3158	24.94206	-23.62626	NAF
NS0076	242	244	NS	E412232	412232	1	G	W	32.85	40.34	1.72	0.452	0.35	0.078	2.08	1.61	0.098	0.126	1.11	0.072	0.21	3.69	0.76	4.66	11276	3.8556	28.08162	-24.22602	NAF
NS0076	268	270	NS	E412245	412245	1	G	W	33.52	39.5	1.53	0.555	0.43	0.069	1.93	1.5	0.08	0.047	0.787	0.077	0.4	4.93	0.53	5.86	11289	1.4382	26.163	-24.7248	NAF
NS0076	106	108	NS	E412163	412163	1	G	W	35.27	37.1	1.49	0.826	0.64	0.063	2.41	1.51	0.121	0.046	0.713	0.097	0.25	3.82	0.62	4.69	11208	1.4076	26.33742	-24.92982	NAF
NS0076	204	206	NS	E412213	412213	1	G	W	34.77	37.71	1.89	0.762	0.59	0.083	2.15	1.56	0.12	0.067	1.41	0.054	0.16	3.66	0.63	4.45	11257	2.0502	27.20952	-25.15932	NAF
NS0076	214	216	NS	E412218	412218	1	G	W	35.9	37.16	1.49	0.736	0.57	0.066	1.81	1.57	0.133	0.072	1.25	0.025	0.02	3.41	0.5	3.93	11262	2.2032	27.38394	-25.18074	NAF
NS0076	240	242	NS	E412231	412231	1	G	W	34.71	38.35	1.46	0.503	0.39	0.063	1.96	1.52	0.112	0.043	1.08	0.065	0.19	4.02	0.57	4.78	11275	1.3158	26.51184	-25.19604	NAF
NS0076	252	254	NS	E412237	412237	1	G	W	29.99	42.62	2.14	0.297	0.23	0.101	2.8	1.63	0.092	0.08	0.525	0.116	0.48	5.14	0.97	6.59	11281	2.448	28.43046	-25.98246	NAF
NS0076	250	252	NS	E412236	412236	1	G	W	25.93	49.81	1.6	0.245	0.19	0.077	2.25	2.18	0.066	0.391	0.411	0.088	0.35	3.67	1.44	5.46	11280	11.9646	38.02356	-26.05896	NAF
NS0076	220	222	NS	E412221	412221	1	G	W	34.37	38.46	1.79	0.684	0.53	0.08	1.99	1.6	0.136	0.057	1.52	0.032	-0.01	3.49	0.7	4.18	11265	1.7442	27.9072	-26.163	NAF
NS0076	180	182	NS	E412200	412200	1	G	W	34.13	40.14	1.52	0.684	0.53	0.067	2.26	1.65	0.115	0.084	0.447	0.119	0.34	3.13	0.71	4.18	11245	2.5704	28.7793	-26.2089	NAF
NS0076	280	282	NS	E412251	412251	1	G	W	29.9	43.23	2.08	0.555	0.43	0.094	2.09	1.68	0.076	0.096	1.25	0.115	0.47	4.71	0.88	6.06	11295	2.9376	29.30256	-26.36496	NAF
NS0076	104	106	NS	E412162	412162	1	G	W	33.66	40.58	1.09	0.852	0.66	0.046	2.18	1.57	0.06	0.033	0.553	0.076	0.24	3.89	0.83	4.96	11207	1.0098	27.38394	-26.37414	NAF
NS0076	196	198	NS	E412209	412209	1	G	W	30.84	41.89	2.66	0.594	0.46	0.118	2.42	1.73	0.217	0.121	2.04	0.076	0.11	3.08	0.69	3.88	11253	3.7026	30.17466	-26.47206	NAF
NS0076	74	76	NS	E412147	412147	1	G	W	36.02	37.94	1.01	0.8	0.62	0.045	1.94	1.59	0.092	0.04	0.455	0.036	0.27	3.66	0.64	4.57	11192	1.224	27.73278	-26.50878	NAF
NS0076	188	190	NS	E412205	412205	1	G	W	34.41	38.9	1.74	0.658	0.51	0.079	2.08	1.63	0.102	0.061	1.15	0.064	0.13	2.97	0.79	3.89	11249	1.8666	28.43046	-26.56386	NAF
NS0076	96	98	NS	E412158	412158	1	G	W	34.67	38.09	1.55	0.762	0.59	0.068	2.61	1.61	0.087	0.049	0.557	0.114	0.29	3.69	0.92	4.9	11203	1.4994	28.08162	-26.58222	NAF
NS0076	224	226	NS	E412223	412223	1	G	W	34.58	38.72	1.68	0.607	0.47	0.076	1.88	1.61	0.118	0.049	1.39	0.037	0.03	3.27	0.7	4	11267	1.4994	28.08162	-26.58222	NAF
NS0076	200	202	NS	E412211	412211	1	G	W	35.4	38.24	1.47	0.749	0.58	0.066	1.89	1.64	0.118	0.055	1.19	0.029	0.02	3.24	0.69	3.95	11255	1.683	28.60488	-26.92188	NAF
NS0076	116	118	NS	E412168	412168	1	G	W	32.25	40.53	2.06	0.697	0.54	0.093	2.49	1.77	0.094	0.117	0.896	0.101	0.32	3.43	0.97	4.72	11213	3.5802	30.87234	-27.29214	NAF
NS0076	234	236	NS	E412228	412228	1	G	W	31.86	40.93	1.75	0.594	0.46	0.076	2.16	1.76	0.089	0.105	1.26	0.05	0.2	4.28	0.94	5.42	11272	3.213	30.69792	-27.48492	NAF
NS0076	102	104	NS	E412161	412161	1	G	W	31.25	42.19	1.25	0.852	0.66	0.051	2.37	1.92	0.11	0.191	0.566	0.091	0.27	4.1	1	5.37	11206	5.8446	33.48864	-27.64404	NAF
NS0076	258	260	NS	E412240	412240	1	G	W	31.51	41.13	1.78	0.452	0.35	0.079	2.18	1.69	0.058	0.047	0.812	0.092	0.36	4.79	1.01	6.16	11284	1.4382	29.47698	-28.03878	NAF
NS0076	274	276	NS	E412248	412248	1	G	W	29.06	40.8	3.31	0.465	0.36	0.152	2.55	2.04	0.121	0.244	1.89	0.161	0.62	4.6	1.22	6.44	11292	7.4664	35.58168	-28.11528	NAF
NS0076	178	180	NS	E412199	412199	1	G	W	34.18	39.03	1.1	0.839	0.65	0.049	2.26	1.68	0.118	0.038	0.259	0.085	0.3	4.57	0.76	5.63	11244	1.1628	29.30256	-28.13976	NAF
NS0076	206	208	NS	E412214	412214	1	G	W	34.96	37.23	1.9	0.775	0.6	0.088	2.08	1.72	0.126	0.052	1.55	0.035	0.03	3.56	0.78	4.37	11258	1.5912	30.00024	-28.40904	NAF
NS0076	260	262	NS	E412241	412241	1	G	W	31.3	40.78	1.96	0.478	0.37	0.087	2.29	1.79	0.076	0.087	1.03	0.102	0.38	5.02	1.09	6.49	11285	2.6622	31.22118	-28.55898	NAF
NS0076	70	72	NS	E412145	412145	1	G	W	35.45	37.85	1.2	0.826	0.64	0.053	1.87	1.71	0.093	0.036	0.576	0.027	0.2	3.63	0.81	4.64	11190	1.1016	29.82582	-28.72422	NAF
NS0076	98	100	NS	E412159	412159	1	G	W	32.97	39.69	1.64	0.71	0.55	0.072	2.62	1.75	0.083	0.058	0.551	0.112	0.35	3.67	0.98	5	11204	1.7748	30.5235	-28.7487	NAF
NS0076	138	140	NS	E412179	412179	1	G	W	34.35	38.52	1.05	0.839	0.65	0.043	2.38	1.7	0.102	0.024	0.32	0.109	0.32	4.25	0.87	5.44	11224	0.7344	29.6514	-28.917	NAF
NS0076	128	130	NS	E412174	412174	1	G	W	35.57	37.54	1.35	0.826	0.64	0.059	2.24	1.79	0.105	0.07	0.556	0.108	0.3	3.41	0.88	4.59	11219	2.142	31.22118	-29.07918	NAF
NS0076	278	280	NS	E412250	412250	1	G	W	30.67	42.55	2.01	0.465	0.36	0.092	1.99	1.85	0.114	0.088	1.12	0.111	0.43	4.12	0.87	5.42	11294	2.6928	32.2677	-29.5749	NAF
NS0076	264	266	NS	E412243	412243	1	G	W	31.68	39.98	2.1	0.439	0.34	0.093	2.28	1.88	0.108	0.097	1.1	0.119	0.48	4.62	0.95	6.05	11287	2.9682	32.79096	-29.82276	NAF
NS0076	198	200	NS	E412210	412210	1	G	W	31.86	41.44	1.86	0.71	0.55	0.081	2.08	1.8	0.182	0.05	1.49	0.047	0.06	3.39	0.75	4.2	11254	1.53	31.3956	-29.8656	NAF
NS0076	124	126	NS	E412172	412172	1	G	W	36.99	36.02	1.02	0.839	0.65	0.043	1.95	1.76	0.102	0.026	0.528	0.09	0.2	3.1	0.9	4.2	11217	0.7956	30.69792	-29.90232	NAF
NS0076	210	212	NS	E412216	412216	1	G	W	35.16	38.44	1.29	0.749	0.58	0.057	1.7	1.77	0.109	0.028	1.08	0.026	0	3.1	0.87	3.97	11260	0.8568	30.87234	-30.01554	NAC
NS0076	72	74	NS	E412146	412146	1	G	W	36.05	37.67	1.15	0.775	0.6	0.052	1.91	1.79	0.073	0.03	0.499	0.024	0.19	3.25	1.12	4.56	11191	0.918	31.22118	-30.30318	NAC
NS0076	262	264	NS	E412242	412242	1	G	W	31.59	41.84	1.26	0.581	0.45	0.056	1.85	1.8	0.079	0.03	0.673	0.078	0.28	4.75	1.06	6.09	11286	0.918	31.3956	-30.4776	NAC
NS0076	232	234	NS	E412227	412227	1	G	W	32.6	38.6	2.15	0.555	0.43	0.096	2.38	1.85	0.125	0.05	1.61	0.071	0.16	4.05	1.08	5.29	11271	1.53	32.2677	-30.7377	NAC
NS0076	222	224	NS	E412222	412222	1	G	W	34.08	39.47	1.59	0.607	0.47	0.074	1.93	1.86	0.135	0.049	1.33	0.027	-0.02	3.19	1.01	4.18	11266	1.4994	32.44212	-30.94272	NAC
NS0076	182	184	NS	E412202	412202	1	G	W	36.08	37.39	1.16	0.813	0.63	0.052	1.89	1.87	0.13	0.048	0.445	0.081	0.19	3.06	0.97	4.22	11246	1.4688	32.61654	-31.14774	NAC
NS0076	136	138	NS	E412178	412178	1	G	W	36.81	35.79	1.12	0.826	0.64	0.05	2.32	1.86	0.091	0.041	0.383	0.113	0.29	3.64	1.01	4.94	11223	1.2546	32.44212	-31.18752	NAC
NS0076	110	112	NS	E412165	412165	1	G	W	31.34	41.34	1.96	0.684	0.53	0.083	2.77	1.91	0.049	0.052	0.771	0.112	0.35	3.6	1.38	5.33	11210	1.5912	33.31422	-31.72302	NAC
NS0076	254	256	NS	E412238	412238	1	G	W	31.59	37.09	2.04	0.491	0.38	0.092	2.73	2.22	0.253	0.218	0.913	0.136	0.64	6.73	0.92	8.29	11282	6.6708	38.72124	-32.05044	NAC
NS0076	236	238	NS	E412229	412229	1	G	W	32.4	40.08	1.56	0.503	0.39	0.07	2.09	2.04	0.124	0.101	1.12	0.059	0.19	4.04	1.1	5.33	11273	3.0906	35.58168	-32.49108	NAC
NS0076	266	268	NS	E412244	412244	1	G	W	32.22	38.92	2.15	0.439	0.34	0.099	2.39	1.98	0.074	0.064	1.02	0.106	0.47	4.72	1.18	6.37	11288	1.9584	34.53516	-32.57676	NAC
NS0076	212	214	NS	E412217	412217	1	G	W	36.5	36.34	1.32	0.788	0.61	0.059	1.76	1.94	0.111	0.033	1.11	0.03	-0.02	3.3	0.97	4.25	11261	1.0098	33.83748	-32.82768	NAC
NS0076	202	204	NS	E412212	412212	1	G	W	34.14	39.05	1.35	0.8	0.62	0.06	1.78	1.98	0.122	0.053	1.09	0.034	-0.01	3.07	1.18	4.24	11256	1.6218	34.53516	-32.91336	NAC
NS0076	112	114	NS	E412166	412166	1	G	W	30.46	39.96	2.66	0.736	0.57	0.109	3.05	2.12	0.109	0.129	1.13	0.126	0.39	3.93	1.42	5.74	11211	3.9474	36.97704	-33.02964	NAC
NS0076	272	274	NS	E412247	412247	1	G	W	30.62	40.47	2.05	0.594	0.46	0.097	2.07	2.1	0.124	0.111	1.24	0.109	0.41	5.03	1.16	6.6	11291	3.3966	36.6282	-33.2316	NAC
NS0076	186	188	NS	E412204	412204	1	G	W	33.35	39.84	1.68	0.723	0.56	0.077	2.15	2.05	0.124	0.074	1.05	0.083	0.17	3.09	1.25	4.51	11248	2.2644	35.7561	-33.4917	NAC
NS0076	238	240	NS	E412230	412230	1	G	W	32.68	39.82	1.66	0.542	0.42	0.075	2.16	2.05	0.207	0.068	1.2	0.062	0.23	4.19	0.82	5.24	11274	2.0808	35.7561	-33.6753	NAC
NS0076	126	128	NS	E412173	412173	1	G	W	35.69	38.62	0.92	0.813	0.63	0.039	1.82	1.98	0.093	0.017	0.454	0.086	0.17	2.78	1.21	4.16	11218	0.5202	34.53516	-34.01496	NAC
NS0076	246	248	NS	E412234	412234	1	G	W	29.74	42.66	1.56	0.478	0.37	0.071	2.37	2.21	0.132	0.134	0.782	0.079	0.43	4.99	1.17	6.59	11278	4.1004	38.54682	-34.44642	NAC
NS0076	122	124	NS	E412171	412171	1	G	W	36.49	36.76	1.15	0.762	0.59	0.054	2.08	2.03	0.067	0.026	0.534	0.086	0.22	2.86	1.25	4.33	11216	0.7956	35.40726	-34.61166	NAC
NS0076	244	246	NS	E412233	412233	1	G	W	34.57	38.03	1.14	0.555	0.43	0.053	1.93	2.07	0.106	0.03	0.748	0.052	0.23	4.29	1	5.52	11277	0.918	36.10494	-35.18694	NAC
NS0076	132	134	NS	E412176	412176	1	G	W	34.05	38.43	1.18	0.852	0.66	0.05	2.21	2.13	0.114	0.064	0.461	0.092	0.24	3.61	1.35	5.2	11221	1.9584	37.15146	-35.19306	NAC
NS0076	62	64	NS	E412141	412141	1	G	W	33.12	39.12	1.39	0.852	0.66	0.058	2.17	2.14	0.076	0.064	0.327	0.023	0.41	4.55	1.12	6.08	11186	1.9584	37.32588	-35.36748	NAC
NS0076	208	210	NS	E412215	412215	1	G	W	36.27	36.65	1.19	0.788	0.61	0.055	1.66	2.13	0.14	0.023	0.992	0.025	-0.03	2.98	1.17	4.12	11259	0.7038	37.15146	-36.44766	NAC
NS0076	120	122	NS	E412170	412170	1	G	W	33.69	37.95	1.76	0.788	0.61	0.075	2.36	2.33	0.082	0.112	0.907	0.105	0.26	3.09	1.65	5	11215	3.4272	40.63986	-37.21266	NAC
NS0076	192	194	NS	E412207	412207	1	G	W	31.99	41.16	1.96	0.633	0.49	0.091	2.08	2.37	0.143	0.057	1.52	0.058	0.06	2.52	1.52	4.1	11251	1.7442	41.33754	-39.59334	NAC
NS0076	130	132	NS	E412175	412175	1	G	W	35.16	37.51	1.02	0.826	0.64	0.044	2.14	2.4	0.102	0.023	0.427	0.096	0.28	3.21	1.55	5.04	11220	0.7038	41.8608	-41.157	NAC
NS0076	190	192	NS	E412206	412206	1	G	W	32.89	39.29	1.91	0.62	0.48	0.087	2.09	2.59	0.233	0.042	1.43	0.066	0.22	2.61	1.39	4.22	11250	1.2852	45.17478	-43.88958	NAC
NS0076	134	136	NS	E412177	412177	1	G	W	34.25	36.24	1.02	0.878	0.68	0.041	2.4	3.32	0.087	0.022	0.445	0.102	0.32	3.26	2.62	6.2	11222	0.6732	57.90744	-57.23424	NAC
NS0077	178	180	NS	E889591	889591	1	G	W	21.86	48.92	6.63	0.2451	0.19	0.311	4.82	0.19	0.056	2.67	0.385	0.102	0.56	3.38	2.5	6.44	11385	81.702	3.31398	78.38802	PAF(HC)
NS0077	38	40	NS	E889520	889520	1	G	W	28.63	42.72	4.19	0.5418	0.42	0.19	3.48	0.35	0.085	1.1	0.684	0.069	0.39	4.19	1.15	5.73	11315	33.66	6.1047	27.5553	PAF(HC)
NS0077	180	182	NS	E889592	889592	1	G	W	34.05	36.8	2.32	0.7224	0.56	0.112	3.11	0.53	0.144	0.432	0.385	0.097	0.48	5.36	0.49	6.33	11386	13.2192	9.24426	3.97494	PAF(LC)
NS0077	274	276	NS	E889639	889639	1	G	W	31.19	41.33	3.11	0.645	0.5	0.139	3.59	0.46	0.057	0.286	0.255	0.058	0.4	4.48	0.37	5.25	11433	8.7516	8.02332	0.72828	PAF(LC)
NS0077	2	4	NS	E889502	889502	1	G	D	40.26	29.04	3.76	-0.0129	-0.01	0.232	0.06	0.03	0.014	0.019	0.018	0.008	7.73	0.98	0.23	8.94	11297	0.5814	0.52326	0.05814	PAF(LC)
NS0077	16	20	NS	BX159509-BX159510	X159509	2			66.28	3.359	0.23	0.064	0.04608	0.02	0.116	0.027	0.022	0.015	0.005	0.073	0.83	0.61	0.37	1.81	3469	0.459	0.470934	-0.011934	NAF
NS0077	0	4	NS	BX159501-BX159502	X159501	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3465	-0.0306	-0.01744	-0.013158	NAF
NS0077	4	8	NS	BX159503-BX159504	X159503	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3466	-0.0306	-0.01744	-0.013158	NAF
NS0077	4	6	NS	E889503	889503	1	G	D	41.85	27.68	2.85	0.0258	0.02	0.171	0.06	0.02	0.013	0.01	0.006	0.001	7.88	0.89	0.19	8.96	11298	0.306	0.34884	-0.04284	NAF
NS0077	178	182	NS	BX159591-BX159592	X159591	2			67.76	4.879	0.323	0.065	0.0468	0.032	0.413	0.064	0.011	0.035	0.043	0.14	-0.01	-0.01	-0.01	-0.03	3510	1.071	1.116288	-0.045288	NAF
NS0077	8	10	NS	E889505	889505	1	G	W	39.17	33.73	3.86	0.0516	0.04	0.23	0.06	0.02	0.027	0.006	0.005	0.001	4.45	1.05	0.07	5.57	11300	0.1836	0.34884	-0.16524	NAF
NS0077	6	8	NS	E889504	889504	1	G	D	38.03	33.61	3.76	0.0258	0.02	0.278	0.06	0.03	0.022	0.009	0.011	0.006	6.35	1.01	0.16	7.52	11299	0.2754	0.52326	-0.24786	NAF
NS0077	158	162	NS	BX159581-BX159582	X159581	2			67.26	4.586	0.379	0.065	0.0468	0.047	0.491	0.055	0.008	0.023	0.068	0.104	-0.01	-0.01	-0.01	-0.03	3505	0.7038	0.95931	-0.25551	NAF
NS0077	8	12	NS	BX159505-BX159506	X159505	2			66.03	3.854	0.526	0.03	0.0216	0.056	0.1	0.026	0.021	0.005	0.002	0.085	0.51	0.66	0.73	1.9	3467	0.153	0.453492	-0.300492	NAF
NS0077	24	28	NS	BX159513-BX159514	X159513	2			67.03	4.282	0.165	0.064	0.04608	0.016	0.136	0.026	0.015	0.001	0.027	0.058	0.47	0.34	0.01	0.82	3471	0.0306	0.453492	-0.422892	NAF
NS0077	20	24	NS	BX159511-BX159512	X159511	2			66.9	3.906	0.213	0.099	0.07128	0.017	0.123	0.027	0.025	0.001	0.013	0.065	0.67	0.44	0.16	1.27	3470	0.0306	0.470934	-0.440334	NAF
NS0077	12	16	NS	BX159507-BX159508	X159507	2			65.82	4.248	0.287	0.023	0.01656	0.016	0.103	0.031	0.023	0.003	0.005	0.103	0.45	0.72	0.8	1.97	3468	0.0918	0.540702	-0.448902	NAF
NS0077	154	158	NS	BX159579-BX159580	X159579	2			68.83	3.765	0.121	0.063	0.04536	0.018	0.308	0.059	0.01	0.018	0.039	0.11	-0.01	-0.01	-0.01	-0.03	3504	0.5508	1.029078	-0.478278	NAF
NS0077	28	32	NS	BX159515-BX159516	X159515	2			66.01	4.3	0.188	0.101	0.07272	0.016	0.131	0.03	0.026	0.001	0.03	0.064	0.67	0.47	0.13	1.27	3472	0.0306	0.52326	-0.49266	NAF
NS0077	36	40	NS	BX159519-BX159520	X159519	2			69.37	3.532	0.093	0.056	0.04032	0.017	0.199	0.046	0.009	0.008	0.034	0.06	-0.01	-0.01	-0.01	-0.03	3474	0.2448	0.802332	-0.557532	NAF
NS0077	152	154	NS	BX159578	X159578	2			68.86	4.671	0.09	0.063	0.04536	0.011	0.257	0.042	0.006	0.004	0.031	0.081	-0.01	-0.01	-0.01	-0.03	3503	0.1224	0.732564	-0.610164	NAF
NS0077	40	44	NS	BX159521-BX159522	X159521	2			70.48	2.84	0.068	0.047	0.03384	0.013	0.168	0.04	0.007	0.002	0.024	0.056	-0.01	-0.01	-0.01	-0.03	3475	0.0612	0.69768	-0.63648	NAF
NS0077	32	34	NS	BX159517-BX159517	X159517	2			69.07	2.815	0.065	0.049	0.03528	0.013	0.18	0.044	0.009	0.002	0.014	0.063	-0.01	-0.01	-0.01	-0.03	3473	0.0612	0.767448	-0.706248	NAF
NS0077	190	194	NS	BX159597-BX159598	X159597	2			70.06	3.076	0.068	0.045	0.0324	0.012	0.215	0.052	0.01	0.006	0.017	0.072	-0.01	-0.01	-0.01	-0.03	3513	0.1836	0.906984	-0.723384	NAF
NS0077	186	190	NS	BX159595-BX159596	X159595	2			70.07	2.416	0.043	0.04	0.0288	0.009	0.171	0.049	0.008	0.004	0.01	0.07	-0.01	-0.01	-0.01	-0.03	3512	0.1224	0.854658	-0.732258	NAF
NS0077	170	174	NS	BX159587-BX159588	X159587	2			68.4	4.627	0.181	0.046	0.03312	0.016	0.381	0.052	0.008	0.005	0.051	0.075	-0.01	-0.01	-0.01	-0.03	3508	0.153	0.906984	-0.753984	NAF
NS0077	124	128	NS	BX159563-BX159564	X159563	2			70.87	2.922	0.078	0.049	0.03528	0.013	0.218	0.054	0.009	0.006	0.02	0.064	-0.01	-0.01	-0.01	-0.03	3496	0.1836	0.941868	-0.758268	NAF
NS0077	120	124	NS	BX159561-BX159562	X159561	2			69.13	3.539	0.085	0.053	0.03816	0.022	0.223	0.051	0.009	0.004	0.027	0.061	-0.01	-0.01	-0.01	-0.03	3495	0.1224	0.889542	-0.767142	NAF
NS0077	104	108	NS	BX159553-BX159554	X159553	2			67.94	5.13	0.26	0.063	0.04536	0.025	0.357	0.064	0.011	0.011	0.107	0.066	-0.01	-0.01	-0.01	-0.03	3491	0.3366	1.116288	-0.779688	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0077	22	24	NS	E889512	889512	1	G	W	38.13	39.13	1.7	0.645	0.5	0.077	0.41	0.05	0.073	0.002	0.193	0.012	2.1	0.57	0.03	2.7	11307	0.0612	0.8721	-0.8109	NAF
NS0077	278	282	NS	BX159641-BX159642	X159641	2			67.07	5.873	0.275	0.071	0.05112	0.029	0.389	0.072	0.009	0.014	0.029	0.088	-0.01	-0.01	-0.01	-0.03	3535	0.4284	1.255824	-0.827424	NAF
NS0077	254	256	NS	BX159629	X159629	2			68.44	4.578	0.097	0.041	0.02952	0.017	0.257	0.06	0.01	0.007	0.016	0.062	-0.01	-0.01	-0.01	-0.03	3529	0.2142	1.04652	-0.83232	NAF
NS0077	222	226	NS	BX159613-BX159614	X159613	2			69.03	3.715	0.084	0.053	0.03816	0.013	0.23	0.058	0.008	0.005	0.065	0.082	-0.01	-0.01	-0.01	-0.03	3521	0.153	1.011636	-0.858636	NAF
NS0077	274	278	NS	BX159639-BX159640	X159639	2			68.38	4.834	0.139	0.063	0.04536	0.019	0.255	0.064	0.009	0.008	0.016	0.156	-0.01	-0.01	-0.01	-0.03	3534	0.2448	1.116288	-0.871488	NAF
NS0077	44	48	NS	BX159523-BX159524	X159523	2			69.12	4.223	0.127	0.062	0.04464	0.016	0.237	0.058	0.01	0.004	0.048	0.055	-0.01	-0.01	-0.01	-0.03	3476	0.1224	1.011636	-0.889236	NAF
NS0077	10	12	NS	E889506	889506	1	G	W	36.41	39.55	2.37	0.0645	0.05	0.123	0.12	0.06	0.048	0.005	0.011	0.015	4.42	0.82	0.08	5.32	11301	0.153	1.04652	-0.89352	NAF
NS0077	100	104	NS	BX159551-BX159552	X159551	2			69.55	3.553	0.135	0.057	0.04104	0.018	0.232	0.06	0.01	0.005	0.067	0.058	-0.01	-0.01	-0.01	-0.03	3490	0.153	1.04652	-0.89352	NAF
NS0077	218	222	NS	BX159611-BX159612	X159611	2			69.42	3.576	0.126	0.051	0.03672	0.007	0.249	0.065	0.012	0.006	0.095	0.062	-0.01	-0.01	-0.01	-0.03	3520	0.1836	1.13373	-0.95013	NAF
NS0077	14	16	NS	E889508	889508	1	G	W	36.4	42.07	1.68	0.0645	0.05	0.076	0.13	0.06	0.071	0.003	0.008	0.015	2.94	0.61	0.06	3.61	11303	0.0918	1.04652	-0.95472	NAF
NS0077	230	234	NS	BX159617-BX159618	X159617	2			69.38	3.962	0.107	0.06	0.0432	0.009	0.259	0.07	0.012	0.008	0.057	0.114	-0.01	-0.01	-0.01	-0.03	3523	0.2448	1.22094	-0.97614	NAF
NS0077	214	218	NS	BX159609-BX159610	X159609	2			69.53	2.707	0.054	0.043	0.03096	0.007	0.189	0.063	0.008	0.004	0.045	0.069	-0.01	-0.01	-0.01	-0.03	3519	0.1224	1.098846	-0.976446	NAF
NS0077	250	254	NS	BX159627-BX159628	X159627	2			68.85	4.799	0.096	0.075	0.054	0.013	0.269	0.067	0.013	0.006	0.046	0.083	-0.01	-0.01	-0.01	-0.03	3528	0.1836	1.168614	-0.985014	NAF
NS0077	262	266	NS	BX159633-BX159634	X159633	2			69.48	4.297	0.069	0.058	0.04176	0.014	0.223	0.062	0.011	0.003	0.015	0.06	-0.01	-0.01	-0.01	-0.03	3531	0.0918	1.081404	-0.989604	NAF
NS0077	128	132	NS	BX159565-BX159566	X159565	2			68.6	3.636	0.067	0.045	0.0324	0.011	0.2	0.064	0.011	0.004	0.021	0.074	-0.01	-0.01	-0.01	-0.03	3497	0.1224	1.116288	-0.993888	NAF
NS0077	148	152	NS	BX159575-BX159576	X159575	2			67.19	5.78	0.305	0.081	0.05832	0.031	0.488	0.084	0.013	0.015	0.059	0.092	-0.01	-0.01	-0.01	-0.03	3502	0.459	1.465128	-1.006128	NAF
NS0077	206	210	NS	BX159605-BX159606	X159605	2			68.33	4.435	0.156	0.059	0.04248	0.018	0.318	0.076	0.014	0.01	0.045	0.1	-0.01	-0.01	-0.01	-0.03	3517	0.306	1.325592	-1.019592	NAF
NS0077	140	144	NS	BX159571-BX159572	X159571	2			68.13	5.119	0.228	0.06	0.0432	0.014	0.289	0.069	0.011	0.006	0.019	0.077	-0.01	-0.01	-0.01	-0.03	3500	0.1836	1.203498	-1.019898	NAF
NS0077	182	186	NS	BX159593-BX159594	X159593	2			68.53	4.406	0.155	0.064	0.04608	0.017	0.308	0.071	0.011	0.007	0.022	0.074	-0.01	-0.01	-0.01	-0.03	3511	0.2142	1.238382	-1.024182	NAF
NS0077	112	116	NS	BX159557-BX159558	X159557	2			67.9	5.182	0.258	0.053	0.03816	0.022	0.365	0.074	0.016	0.008	0.096	0.074	-0.01	-0.01	-0.01	-0.03	3493	0.2448	1.290708	-1.045908	NAF
NS0077	246	250	NS	BX159625-BX159626	X159625	2			69.25	4.646	0.093	0.056	0.04032	0.014	0.26	0.066	0.01	0.003	0.04	0.059	-0.01	-0.01	-0.01	-0.03	3527	0.0918	1.151172	-1.059372	NAF
NS0077	194	198	NS	BX159599-BX159600	X159599	2			69.78	3.604	0.085	0.052	0.03744	0.013	0.246	0.068	0.013	0.004	0.016	0.069	-0.01	-0.01	-0.01	-0.03	3514	0.1224	1.186056	-1.063656	NAF
NS0077	226	230	NS	BX159615-BX159616	X159615	2			68.39	4.399	0.076	0.054	0.03888	0.009	0.232	0.068	0.01	0.004	0.052	0.07	-0.01	-0.01	-0.01	-0.03	3522	0.1224	1.186056	-1.063656	NAF
NS0077	270	274	NS	BX159637-BX159638	X159637	2			69.45	3.705	0.081	0.051	0.03672	0.013	0.212	0.068	0.007	0.004	0.009	0.065	-0.01	-0.01	-0.01	-0.03	3533	0.1224	1.186056	-1.063656	NAF
NS0077	258	262	NS	BX159631-BX159632	X159631	2			67.61	5.832	0.134	0.076	0.05472	0.016	0.308	0.074	0.014	0.007	0.043	0.074	-0.01	-0.01	-0.01	-0.03	3530	0.2142	1.290708	-1.076508	NAF
NS0077	238	242	NS	BX159621-BX159622	X159621	2			68.88	4.489	0.076	0.057	0.04104	0.01	0.236	0.069	0.01	0.004	0.047	0.068	-0.01	-0.01	-0.01	-0.03	3525	0.1224	1.203498	-1.081098	NAF
NS0077	80	84	NS	BX159541-BX159542	X159541	2			69.93	3.729	0.108	0.049	0.03528	0.012	0.224	0.077	0.013	0.008	0.067	0.081	-0.01	-0.01	-0.01	-0.03	3485	0.2448	1.343034	-1.098234	NAF
NS0077	198	202	NS	BX159601-BX159602	X159601	2			68.54	4.048	0.092	0.05	0.036	0.012	0.249	0.072	0.014	0.005	0.017	0.075	-0.01	-0.01	-0.01	-0.03	3515	0.153	1.255824	-1.102824	NAF
NS0077	48	52	NS	BX159525-BX159526	X159525	2			68.98	4.631	0.135	0.064	0.04608	0.018	0.245	0.074	0.013	0.006	0.045	0.058	-0.01	-0.01	-0.01	-0.03	3477	0.1836	1.290708	-1.107108	NAF
NS0077	52	56	NS	BX159527-BX159528	X159527	2			69.48	3.812	0.076	0.051	0.03672	0.014	0.194	0.069	0.011	0.003	0.044	0.062	-0.01	-0.01	-0.01	-0.03	3478	0.0918	1.203498	-1.111698	NAF
NS0077	144	148	NS	BX159573-BX159574	X159573	2			67.56	5.172	0.17	0.075	0.054	0.017	0.365	0.075	0.01	0.006	0.034	0.075	-0.01	-0.01	-0.01	-0.03	3501	0.1836	1.30815	-1.12455	NAF
NS0077	16	18	NS	E889509	889509	1	G	W	37.47	40.87	1.51	0.3354	0.26	0.068	0.26	0.07	0.064	0.003	0.032	0.028	2.22	0.56	-0.02	2.76	11304	0.0918	1.22094	-1.12914	NAF
NS0077	202	206	NS	BX159603-BX159604	X159603	2			67.34	5.634	0.28	0.067	0.04824	0.036	0.445	0.093	0.02	0.016	0.056	0.102	-0.01	-0.01	-0.01	-0.03	3516	0.4896	1.622106	-1.132506	NAF
NS0077	84	88	NS	BX159543-BX159544	X159543	2			69.59	3.635	0.11	0.048	0.03456	0.012	0.209	0.072	0.012	0.004	0.075	0.053	-0.01	-0.01	-0.01	-0.03	3486	0.1224	1.255824	-1.133424	NAF
NS0077	160	162	NS	E889582	889582	1	G	W	25.99	45.98	2.66	0.3999	0.31	0.117	3.42	0.28	0.053	0.122	0.576	0.163	0.94	7.46	0.23	8.63	11376	3.7332	4.88376	-1.15056	NAF
NS0077	20	22	NS	E889511	889511	1	G	W	37.48	40.06	1.68	0.8256	0.64	0.075	0.4	0.07	0.073	0.002	0.151	0.022	2.08	0.61	0	2.69	11306	0.0612	1.22094	-1.15974	NAF
NS0077	88	92	NS	BX159545-BX159546	X159545	2			68.53	4.656	0.161	0.058	0.04176	0.017	0.266	0.079	0.014	0.007	0.074	0.065	-0.01	-0.01	-0.01	-0.03	3487	0.2142	1.377918	-1.163718	NAF
NS0077	64	68	NS	BX159533-BX159534	X159533	2			67.98	4.901	0.123	0.057	0.04104	0.011	0.254	0.083	0.014	0.008	0.06	0.054	-0.01	-0.01	-0.01	-0.03	3481	0.2448	1.447686	-1.202886	NAF
NS0077	56	58	NS	BX159529	X159529	2			69.21	3.973	0.115	0.054	0.03888	0.013	0.227	0.073	0.015	0.002	0.054	0.055	-0.01	-0.01	-0.01	-0.03	3479	0.0612	1.273266	-1.212066	NAF
NS0077	132	136	NS	BX159567-BX159568	X159567	2			67.96	4.042	0.077	0.053	0.03816	0.014	0.237	0.073	0.013	0.002	0.015	0.054	-0.01	-0.01	-0.01	-0.03	3498	0.0612	1.273266	-1.212066	NAF
NS0077	60	64	NS	BX159531-BX159532	X159531	2			67.97	4.662	0.123	0.063	0.04536	0.011	0.248	0.076	0.013	0.003	0.065	0.075	-0.01	-0.01	-0.01	-0.03	3480	0.0918	1.325592	-1.233792	NAF
NS0077	72	76	NS	BX159537-BX159538	X159537	2			68.08	4.312	0.092	0.06	0.0432	0.015	0.222	0.075	0.012	0.002	0.064	0.06	-0.01	-0.01	-0.01	-0.03	3483	0.0612	1.30815	-1.24695	NAF
NS0077	166	170	NS	BX159585-BX159586	X159585	2			66.52	6.047	0.206	0.063	0.04536	0.018	0.415	0.086	0.015	0.008	0.058	0.264	-0.01	-0.01	-0.01	-0.03	3507	0.2448	1.500012	-1.255212	NAF
NS0077	174	176	NS	BX159589	X159589	2			66.4	6.383	0.322	0.054	0.03888	0.029	0.511	0.097	0.018	0.014	0.076	0.101	-0.01	-0.01	-0.01	-0.03	3509	0.4284	1.691874	-1.263474	NAF
NS0077	96	100	NS	BX159549-BX159550	X159549	2			68.39	4.604	0.151	0.06	0.0432	0.013	0.264	0.083	0.014	0.006	0.073	0.074	-0.01	-0.01	-0.01	-0.03	3489	0.1836	1.447686	-1.264086	NAF
NS0077	234	238	NS	BX159619-BX159620	X159619	2			66.91	6.279	0.186	0.094	0.06768	0.011	0.385	0.083	0.015	0.006	0.122	0.09	-0.01	-0.01	-0.01	-0.03	3524	0.1836	1.447686	-1.264086	NAF
NS0077	0	2	NS	E889501	889501	1	G	D	34.26	38.31	4.13	0.0258	0.02	0.418	0.12	0.11	0.017	0.02	0.036	0.015	6.41	1.08	0.2	7.69	11296	0.612	1.91862	-1.30662	NAF
NS0077	76	80	NS	BX159539-BX159540	X159539	2			67.29	5.115	0.144	0.062	0.04464	0.014	0.274	0.082	0.012	0.004	0.084	0.044	-0.01	-0.01	-0.01	-0.03	3484	0.1224	1.430244	-1.307844	NAF
NS0077	92	96	NS	BX159547-BX159548	X159547	2			67.28	5.639	0.24	0.063	0.04536	0.019	0.32	0.092	0.015	0.009	0.104	0.121	-0.01	-0.01	-0.01	-0.03	3488	0.2754	1.604664	-1.329264	NAF
NS0077	28	30	NS	E889515	889515	1	G	W	37.75	40.24	1.16	1.0836	0.84	0.057	0.38	0.08	0.081	0.002	0.273	0.022	1.95	0.49	0	2.44	11310	0.0612	1.39536	-1.33416	NAF
NS0077	162	166	NS	BX159583-BX159584	X159583	2			66.25	5.749	0.199	0.073	0.05256	0.027	0.417	0.103	0.023	0.015	0.054	0.089	-0.01	-0.01	-0.01	-0.03	3506	0.459	1.796526	-1.337526	NAF
NS0077	108	112	NS	BX159555-BX159556	X159555	2			68.91	5.184	0.194	0.066	0.04752	0.018	0.313	0.091	0.021	0.008	0.082	0.089	-0.01	-0.01	-0.01	-0.03	3492	0.2448	1.587222	-1.342422	NAF
NS0077	242	246	NS	BX159623-BX159624	X159623	2			68.23	5.086	0.116	0.069	0.04968	0.013	0.293	0.084	0.014	0.004	0.056	0.057	-0.01	-0.01	-0.01	-0.03	3526	0.1224	1.465128	-1.342728	NAF
NS0077	266	270	NS	BX159635-BX159636	X159635	2			67.4	5.437	0.123	0.078	0.05616	0.014	0.29	0.088	0.014	0.006	0.018	0.122	-0.01	-0.01	-0.01	-0.03	3532	0.1836	1.534896	-1.351296	NAF
NS0077	26	28	NS	E889514	889514	1	G	W	37.5	40.84	1.2	0.8643	0.67	0.053	0.43	0.08	0.046	0.001	0.28	0.022	1.87	0.49	-0.01	2.35	11309	0.0306	1.39536	-1.36476	NAF
NS0077	116	118	NS	BX159559	X159559	2			66.57	5.995	0.256	0.054	0.03888	0.031	0.38	0.097	0.02	0.01	0.086	0.066	-0.01	-0.01	-0.01	-0.03	3494	0.306	1.691874	-1.385874	NAF
NS0077	12	14	NS	E889507	889507	1	G	W	33.96	42.88	2.25	0.0387	0.03	0.123	0.12	0.09	0.058	0.004	0.008	0.033	4.39	0.84	0.09	5.32	11302	0.1224	1.56978	-1.44738	NAF
NS0077	68	72	NS	BX159535-BX159536	X159535	2			66.62	5.887	0.211	0.071	0.05112	0.018	0.349	0.121	0.024	0.021	0.087	0.076	-0.01	-0.01	-0.01	-0.03	3482	0.6426	2.110482	-1.467882	NAF
NS0077	136	140	NS	BX159569-BX159570	X159569	2			66.86	5.213	0.173	0.063	0.04536	0.019	0.35	0.097	0.014	0.007	0.025	0.058	-0.01	-0.01	-0.01	-0.03	3499	0.2142	1.691874	-1.477674	NAF
NS0077	24	26	NS	E889513	889513	1	G	W	39.04	38.15	1.45	0.6966	0.54	0.072	0.5	0.09	0.039	0.002	0.285	0.021	1.83	0.54	-0.02	2.35	11308	0.0612	1.56978	-1.50858	NAF
NS0077	210	214	NS	BX159607-BX159608	X159607	2			66.78	5.65	0.106	0.066	0.04752	0.012	0.276	0.095	0.014	0.004	0.059	0.063	-0.01	-0.01	-0.01	-0.03	3518	0.1224	1.65699	-1.53459	NAF
NS0077	40	42	NS	E889521	889521	1	G	W	33.99	40.02	1.71	0.7611	0.59	0.075	2.26	0.29	0.066	0.075	0.32	0.024	0.32	5.18	-0.25	5.25	11316	2.295	5.05818	-2.76318	NAF
NS0077	158	160	NS	E889581	889581	1	G	W	24.44	46.13	2.11	0.5934	0.46	0.091	3.37	0.4	0.074	0.131	0.472	0.123	0.91	9.93	0.28	11.12	11375	4.0086	6.9768	-2.9682	NAF
NS0077	18	20	NS	E889510	889510	1	G	W	32.26	41.27	5.23	0.7095	0.55	0.227	0.7	0.18	0.049	0.003	0.098	0.025	3.06	1.75	0.15	4.96	11305	0.0918	3.13956	-3.04776	NAF
NS0077	30	32	NS	E889516	889516	1	G	W	34.18	44.76	1.53	0.5676	0.44	0.072	0.56	0.22	0.076	0.018	0.213	0.02	1.91	0.63	0.04	2.58	11311	0.5508	3.83724	-3.28644	NAF
NS0077	154	156	NS	E889579	889579	1	G	W	40.09	33.47	1.14	0.5289	0.41	0.05	2.19	0.29	0.056	0.021	0.383	0.102	0.41	4.5	-0.5	4.41	11373	0.6426	5.05818	-4.41558	NAF
NS0077	32	34	NS	E889517	889517	1	G	W	36.34	38.72	1.54	0.5934	0.46	0.07	1.9	0.36	0.083	0.043	0.143	0.039	0.5	3.86	-0.33	4.03	11312	1.3158	6.27912	-4.96332	NAF
NS0077	190	192	NS	E889597	889597	1	G	W	35.35	38.63	1.12	0.7998	0.62	0.05	2.44	0.45	0.077	0.092	0.291	0.087	0.35	4.72	-0.11	4.96	11391	2.8152	7.8489	-5.0337	NAF
NS0077	156	158	NS	E889580	889580	1	G	W	26.85	40.77	1.24	0.9417	0.73	0.056	3.4	0.65	0.14	0.204	0.44	0.11	0.8	11.88	0.45	13.13	11374	6.2424	11.3373	-5.0949	NAF
NS0077	104	106	NS	E889553	889553	1	G	W	29.95	41.06	3.83	0.5934	0.46	0.167	4.37	0.66	0.06	0.188	1.2	0.11	0.49	3.76	0.43	4.68	11348	5.7528	11.51172	-5.75892	NAF
NS0077	162	164	NS	E889583	889583	1	G	W	28.22	41.04	1.52	0.6966	0.54	0.071	3.36	0.68	0.16	0.197	0.496	0.124	0.73	9.61	0.37	10.71	11377	6.0282	11.86056	-5.83236	NAF
NS0077	36	38	NS	E889519	889519	1	G	W	32.06	44.28	1.04	0.7998	0.62	0.045	1.89	0.41	0.08	0.025	0.18	0.028	0.27	4.9	-0.36	4.81	11314	0.765	7.15122	-6.38622	NAF
NS0077	192	194	NS	E889598	889598	1	G	W	36.27	39.84	0.94	0.6837	0.53	0.04	1.94	0.39	0.075	0.012	0.193	0.061	0.23	3.62	-0.41	3.44	11392	0.3672	6.80238	-6.43518	NAF
NS0077	34	36	NS	E889518	889518	1	G	W	36.8	38.08	1.53	0.6837	0.53	0.072	2.05	0.46	0.1	0.042	0.21	0.036	0.34	4.15	-0.44	4.05	11313	1.2852	8.02332	-6.73812	NAF
NS0077	176	178	NS	E889590	889590	1	G	W	32.99	40.99	1.39	0.5418	0.42	0.06	2.77	0.47	0.118	0.038	0.321	0.088	0.42	5.49	-0.27	5.64	11384	1.1628	8.19774	-7.03494	NAF
NS0077	204	206	NS	E889604	889604	1	G	W	32.74	40.07	2.5	0.6063	0.47	0.131	3.51	0.62	0.093	0.123	0.451	0.146	0.49	3.56	0.2	4.25	11398	3.7638	10.81404	-7.05024	NAF
NS0077	152	154	NS	E889578	889578	1	G	W	36.31	38.21	0.76	0.6837	0.53	0.034	2.06	0.47	0.066	0.015	0.31	0.082	0.35	5	-0.34	5.01	11372	0.459	8.19774	-7.73874	NAF
NS0077	146	148	NS	E889574	889574	1	G	W	39.73	32.51	1.82	0.5934	0.46	0.08	2.9	0.52	0.065	0.04	0.423	0.124	0.41	3.76	-0.24	3.93	11369	1.224	9.06984	-7.84584	NAF
NS0077	236	238	NS	E889620	889620	1	G	W	37.32	34.34	1.58	0.903	0.7	0.066	3.19	0.57	0.094	0.041	0.884	0.06	0.19	4.34	-0.13	4.4	11414	1.2546	9.94194	-8.68734	NAF
NS0077	120	122	NS	E889561	889561	1	G	W	35.53	36.4	2.48	0.5805	0.45	0.115	3.32	0.68	0.109	0.103	0.654	0.09	0.37	3.59	0.03	3.99	11356	3.1518	11.86056	-8.70876	NAF
NS0077	172	174	NS	E889588	889588	1	G	W	39.26	32.88	1.63	0.4257	0.33	0.071	3	0.57	0.108	0.034	0.536	0.154	0.5	3.77	-0.29	3.98	11382	1.0404	9.94194	-8.90154	NAF
NS0077	252	254	NS	E889628	889628	1	G	W	37.29	35.04	1.13	0.9546	0.74	0.051	2.59	0.59	0.105	0.035	0.536	0.083	0.35	4.8	-0.24	4.91	11422	1.071	10.29078	-9.21978	NAF
NS0077	164	166	NS	E889584	889584	1	G	W	35.51	37.3	1.06	0.6063	0.47	0.046	2.4	0.6	0.088	0.036	0.283	0.118	0.42	6	-0.22	6.2	11378	1.1016	10.4652	-9.3636	NAF
NS0077	42	44	NS	E889522	889522	1	G	W	36.06	39.29	1.33	0.6708	0.52	0.059	1.96	0.68	0.105	0.045	0.293	0.022	0.27	3.8	-0.28	3.79	11317	1.377	11.86056	-10.48356	NAF
NS0077	194	196	NS	E889599	889599	1	G	W	36.96	38.34	0.97	0.7224	0.56	0.044	2.09	0.68	0.099	0.018	0.186	0.034	0.18	3.66	-0.23	3.61	11393	0.5508	11.86056	-11.30976	NAF
NS0077	124	126	NS	E889563	889563	1	G	W	35.4	36.82	1.55	0.8256	0.64	0.069	2.97	0.78	0.059	0.063	0.359	0.077	0.3	5.24	0.1	5.64	11358	1.9278	13.60476	-11.67696	NAF
NS0077	108	110	NS	E889555	889555	1	G	W	36.34	35.99	1.58	0.7998	0.62	0.071	2.84	0.77	0.12	0.032	0.66	0.059	0.22	4.49	-0.09	4.62	11350	0.9792	13.43034	-12.45114	NAF
NS0077	256	258	NS	E889630	889630	1	G	W	36.04	38.78	1.54	0.5031	0.39	0.067	2.65	0.83	0.079	0.044	0.275	0.059	0.22	2.9	0.04	3.16	11424	1.3464	14.47686	-13.13046	NAF
NS0077	122	124	NS	E889562	889562	1	G	W	34.02	39.72	1.33	0.8127	0.63	0.063	2.6	0.86	0.086	0.059	0.387	0.085	0.32	4.83	0.09	5.24	11357	1.8054	15.00012	-13.19472	NAF
NS0077	106	108	NS	E889554	889554	1	G	W	36.17	37.45	1.64	0.6579	0.51	0.071	2.63	0.85	0.131	0.035	0.619	0.061	0.16	3.64	-0.05	3.75	11349	1.071	14.8257	-13.7547	NAF
NS0077	114	116	NS	E889558	889558	1	G	W	32.65	41.19	2.07	0.5676	0.44	0.089	3.05	0.92	0.073	0.063	0.703	0.086	0.31	3.39	0.3	4	11353	1.9278	16.04664	-14.11884	NAF
NS0077	136	138	NS	E889569	889569	1	G	W	31.46	42.16	2.29	0.5805	0.45	0.107	3.38	1.09	0.066	0.142	0.331	0.09	0.36	3.49	0.51	4.36	11364	4.3452	19.01178	-14.66658	NAF
NS0077	170	172	NS	E889587	889587	1	G	W	33.19	40.96	1.43	0.4515	0.35	0.063	2.89	0.95	0.04	0.034	0.395	0.082	0.38	4.15	0.33	4.86	11381	1.0404	16.5699	-15.5295	NAF
NS0077	280	282	NS	E889642	889642	1	G	W	31.36	40.83	2.3	0.6579	0.51	0.103	3.02	1.07	0.104	0.102	0.288	0.067	0.43	5.41	0.3	6.14	11436	3.1212	18.66294	-15.54174	NAF
NS0077	112	114	NS	E889557	889557	1	G	W	32.72	41.71	1.6	0.6579	0.51	0.072	2.69	0.98	0.119	0.041	0.592	0.067	0.29	3.78	0.15	4.22	11352	1.2546	17.09316	-15.83856	NAF
NS0077	44	46	NS	E889523	889523	1	G	W	35.01	37.67	1.91	0.7353	0.57	0.086	2.91	1.04	0.085	0.074	0.43	0.032	0.25	4.53	0.26	5.04	11318	2.2644	18.13968	-15.87528	NAF
NS0077	110	112	NS	E889556	889556	1	G	W	32.87	41.69	1.63	0.6579	0.51	0.072	2.69	0.99	0.119	0.042	0.591	0.067	0.22	3.51	0.37	4.1	11351	1.2852	17.26758	-15.98238	NAF
NS0077	46	48	NS	E889524	889524	1	G	W	33.93	39.51	1.38	0.7998	0.62	0.061	2.49	1.05	0.097	0.066	0.41	0.029	0.27	4.59	0.24	5.1	11319	2.0196	18.3141	-16.2945	NAF
NS0077	140	142	NS	E889571	889571	1	G	W	34.44	38.22	1.79	0.6579	0.51	0.083	3.13	1.03	0.091	0.046	0.305	0.085	0.3	4.3	0.33	4.93	11366	1.4076	17.96526	-16.55766	NAF
NS0077	88	90	NS	E889545	889545	1	G	W	32.36	39.7	2.45	0.6837	0.53	0.109	3.46	1.27	0.138	0.178	0.673	0.053	0.24	3.79	0.52	4.55	11340	5.4468	22.15134	-16.70454	NAF
NS0077	182	184	NS	E889593	889593	1	G	W	35.55	38.82	1.2	0.7095	0.55	0.054	2.31	1.02	0.073	0.031	0.23	0.07	0.27	3.91	0.17	4.35	11387	0.9486	17.79084	-16.84224	NAF
NS0077	126	128	NS	E889564	889564	1	G	W	34.02	38.66	1.28	0.8256	0.64	0.057	2.77	1.1	0.068	0.055	0.369	0.069	0.43	4.96	0.38	5.77	11359	1.683	19.1862	-17.5032	NAF
NS0077	250	252	NS	E889627	889627	1	G	W	36.29	37.85	1.02	0.8256	0.64	0.044	2.24	1.06	0.071	0.032	0.367	0.055	0.16	3.67	0.31	4.14	11421	0.9792	18.48852	-17.50932	NAF
NS0077	260	262	NS	E889632	889632	1	G	W	36.68	37.2	1.29	0.7353	0.57	0.053	2.44	1.06	0.083	0.032	0.351	0.073	0.25	3.51	0.2	3.96	11426	0.9792	18.48852	-17.50932	NAF
NS0077	70	72	NS	E889536	889536	1	G	W	33.81	40.35	1.46	0.6321	0.49	0.064	2.5	1.41	0.14	0.223	0.622	0.043	0.11	3.12	0.55	3.78	11331	6.8238	24.59322	-17.76942	NAF
NS0077	186	188	NS	E889595	889595	1	G	W	39.29	32.99	1.09	0.8256	0.64	0.05	2.42	1.08	0.085	0.029	0.209	0.055	0.4	3.88	0.18	4.46	11389	0.8874	18.83736	-17.94996	NAF
NS0077	266	268	NS	E889635	889635	1	G	W	37.02	35.58	1.29	0.8385	0.65	0.054	2.58	1.11	0.088	0.031	0.22	0.066	0.27	4.36	0.28	4.91	11429	0.9486	19.36062	-18.41202	NAF
NS0077	198	200	NS	E889601	889601	1	G	W	35.18	39.13	0.96	0.8127	0.63	0.04	2.32	1.1	0.075	0.025	0.18	0.041	0.2	3.97	0.32	4.49	11395	0.765	19.1862	-18.4212	NAF
NS0077	258	260	NS	E889631	889631	1	G	W	32.99	41.8	1.13	0.7869	0.61	0.05	2.48	1.14	0.098	0.047	0.339	0.06	0.22	3.99	0.35	4.56	11425	1.4382	19.88388	-18.44568	NAF
NS0077	134	136	NS	E889568	889568	1	G	W	35.9	38.12	1.08	0.6837	0.53	0.05	2.49	1.11	0.121	0.027	0.244	0.069	0.22	4.01	0.17	4.4	11363	0.8262	19.36062	-18.53442	NAF
NS0077	68	70	NS	E889535	889535	1	G	W	34.06	38.5	1.91	0.6708	0.52	0.087	3.15	1.25	0.109	0.081	0.537	0.053	0.23	3.88	0.47	4.58	11330	2.4786	21.8025	-19.3239	NAF
NS0077	272	274	NS	E889638	889638	1	G	W	37.35	36.18	1.61	0.6063	0.47	0.069	2.39	1.17	0.079	0.031	0.186	0.041	0.22	3.35	0.28	3.85	11432	0.9486	20.40714	-19.45854	NAF
NS0077	264	266	NS	E889634	889634	1	G	W	34.26	40.53	1.07	0.774	0.6	0.047	2.23	1.18	0.092	0.029	0.192	0.039	0.21	3.88	0.35	4.44	11428	0.8874	20.58156	-19.69416	NAF
NS0077	58	60	NS	E889530	889530	1	G	W	33.45	42.24	0.91	0.6966	0.54	0.039	1.99	1.17	0.093	0.02	0.315	0.024	0.09	3.61	0.36	4.06	11325	0.612	20.40714	-19.79514	NAF
NS0077	128	130	NS	E889565	889565	1	G	W	34.36	39.47	1.03	0.774	0.6	0.043	2.31	1.18	0.078	0.022	0.378	0.055	0.24	4.2	0.5	4.94	11360	0.6732	20.58156	-19.90836	NAF
NS0077	48	50	NS	E889525	889525	1	G	W	35.17	38.21	1.5	0.6966	0.54	0.065	2.48	1.23	0.102	0.046	0.407	0.031	0.33	4	0.41	4.74	11320	1.4076	21.45366	-20.04606	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0077	206	208	NS	E889605	889605	1	G	W	33.44	42.38	1.24	0.5676	0.44	0.056	2.32	1.23	0.093	0.044	0.26	0.063	0.2	2.61	0.47	3.28	11399	1.3464	21.45366	-20.10726	NAF
NS0077	148	150	NS	E889575	889575	1	G	W	32.34	35.12	3.64	0.7224	0.56	0.156	4.73	1.5	0.131	0.197	0.567	0.159	0.62	4.84	0.9	6.36	11370	6.0282	26.163	-20.1348	NAF
NS0077	94	96	NS	E889548	889548	1	G	W	32.51	40.78	1.85	0.6579	0.51	0.082	2.88	1.35	0.082	0.104	0.751	0.059	0.2	3.28	0.69	4.17	11343	3.1824	23.5467	-20.3643	NAF
NS0077	200	202	NS	E889602	889602	1	G	W	34.31	40.66	1.08	0.7095	0.55	0.046	2.34	1.25	0.09	0.03	0.213	0.052	0.17	3.27	0.53	3.97	11396	0.918	21.8025	-20.8845	NAF
NS0077	100	102	NS	E889551	889551	1	G	W	36.01	37.14	1.27	0.774	0.6	0.055	2.48	1.27	0.098	0.04	0.603	0.054	0.13	3.77	0.47	4.37	11346	1.224	22.15134	-20.92734	NAF
NS0077	102	104	NS	E889552	889552	1	G	W	35.85	37.6	1.25	0.7224	0.56	0.054	2.45	1.27	0.086	0.033	0.493	0.038	0.36	3.52	0.49	4.37	11347	1.0098	22.15134	-21.14154	NAF
NS0077	118	120	NS	E889560	889560	1	G	W	34.36	39.22	0.94	0.774	0.6	0.04	2.43	1.26	0.093	0.025	0.313	0.063	0.22	4.44	0.45	5.11	11355	0.765	21.97692	-21.21192	NAF
NS0077	184	186	NS	E889594	889594	1	G	W	35.91	36.42	1.7	0.7353	0.57	0.076	2.92	1.32	0.091	0.057	0.226	0.081	0.29	3.78	0.5	4.57	11388	1.7442	23.02344	-21.27924	NAF
NS0077	166	168	NS	E889585	889585	1	G	W	34.76	38.21	1.29	0.5805	0.45	0.057	2.74	1.3	0.116	0.036	0.399	0.107	0.39	4.21	0.42	5.02	11379	1.1016	22.6746	-21.573	NAF
NS0077	150	152	NS	E889576	889576	1	G	W	29.21	41.83	1.72	0.903	0.7	0.072	3.54	1.39	0.059	0.072	0.448	0.124	0.56	5.99	0.91	7.46	11371	2.2032	24.24438	-22.04118	NAF
NS0077	144	146	NS	E889573	889573	1	G	W	37.03	35.37	1.08	0.7869	0.61	0.05	2.52	1.33	0.098	0.023	0.259	0.076	0.24	4.35	0.54	5.13	11368	0.7038	23.19786	-22.49406	NAF
NS0077	234	236	NS	E889619	889619	1	G	W	36.12	36.69	1.25	0.774	0.6	0.052	2.73	1.34	0.086	0.028	0.734	0.053	0.13	3.33	0.67	4.13	11413	0.8568	23.37228	-22.51548	NAF
NS0077	52	54	NS	E889527	889527	1	G	W	35.6	38.86	1.17	0.645	0.5	0.05	2.14	1.35	0.09	0.032	0.438	0.031	0.15	3.14	0.52	3.81	11322	0.9792	23.5467	-22.5675	NAF
NS0077	262	264	NS	E889633	889633	1	G	W	35.98	38.33	0.98	0.7611	0.59	0.044	2.21	1.35	0.097	0.026	0.211	0.046	0.19	3.71	0.46	4.36	11427	0.7956	23.5467	-22.7511	NAF
NS0077	208	210	NS	E889606	889606	1	G	W	36.34	37.24	1.48	0.6192	0.48	0.066	2.68	1.44	0.074	0.077	0.374	0.058	0.25	2.62	0.61	3.48	11400	2.3562	25.11648	-22.76028	NAF
NS0077	254	256	NS	E889629	889629	1	G	W	34.73	40.55	1.42	0.4386	0.34	0.063	2.44	1.42	0.075	0.062	0.219	0.054	0.16	2.26	0.67	3.09	11423	1.8972	24.76764	-22.87044	NAF
NS0077	278	280	NS	E889641	889641	1	G	W	33.45	37.13	2.66	0.6579	0.51	0.116	3.18	1.54	0.227	0.13	0.282	0.087	0.4	4.8	0.35	5.55	11435	3.978	26.86068	-22.88268	NAF
NS0077	98	100	NS	E889550	889550	1	G	W	34.84	38.14	1.63	0.6837	0.53	0.075	2.75	1.39	0.118	0.044	0.66	0.055	0.16	3.4	0.56	4.12	11345	1.3464	24.24438	-22.89798	NAF
NS0077	72	74	NS	E889537	889537	1	G	W	33.56	39.77	1.23	0.7869	0.61	0.053	2.53	1.39	0.144	0.033	0.693	0.04	0.22	4.16	0.53	4.91	11332	1.0098	24.24438	-23.23458	NAF
NS0077	56	58	NS	E889529	889529	1	G	W	36.74	37.08	1.13	0.6837	0.53	0.051	2.21	1.4	0.119	0.029	0.466	0.034	0.17	3.37	0.48	4.02	11324	0.8874	24.4188	-23.5314	NAF
NS0077	276	278	NS	E889640	889640	1	G	W	33.5	41.2	0.99	0.774	0.6	0.043	1.93	1.39	0.099	0.022	0.123	0.034	0.22	4.26	0.42	4.9	11434	0.6732	24.24438	-23.57118	NAF
NS0077	246	248	NS	E889625	889625	1	G	W	36.18	37.44	1.21	0.645	0.5	0.051	2.57	1.43	0.078	0.038	0.453	0.06	0.2	2.83	0.74	3.77	11419	1.1628	24.94206	-23.77926	NAF
NS0077	66	68	NS	E889534	889534	1	G	W	33.06	41.94	1.25	0.645	0.5	0.056	2.33	1.53	0.108	0.086	0.443	0.043	0.13	3.07	0.7	3.9	11329	2.6316	26.68626	-24.05466	NAF
NS0077	202	204	NS	E889603	889603	1	G	W	33.06	41.94	1.33	0.6321	0.49	0.059	2.49	1.45	0.08	0.04	0.331	0.062	0.22	2.81	0.8	3.83	11397	1.224	25.2909	-24.0669	NAF
NS0077	50	52	NS	E889526	889526	1	G	W	34.43	40.04	1.02	0.6837	0.53	0.045	2.27	1.44	0.099	0.029	0.33	0.025	0.19	3.7	0.57	4.46	11321	0.8874	25.11648	-24.22908	NAF
NS0077	62	64	NS	E889532	889532	1	G	W	35	38.99	1.31	0.6837	0.53	0.057	2.35	1.46	0.091	0.039	0.498	0.037	0.16	3.19	0.61	3.96	11327	1.1934	25.46532	-24.27192	NAF
NS0077	138	140	NS	E889570	889570	1	G	W	34.22	38.11	1.46	0.7224	0.56	0.066	2.94	1.5	0.103	0.06	0.259	0.071	0.28	4.27	0.71	5.26	11365	1.836	26.163	-24.327	NAF
NS0077	86	88	NS	E889544	889544	1	G	W	36.11	37.35	1.12	0.7353	0.57	0.05	2.31	1.45	0.093	0.031	0.605	0.047	0.09	3.4	0.7	4.19	11339	0.9486	25.2909	-24.3423	NAF
NS0077	268	270	NS	E889636	889636	1	G	W	36.12	37.59	1.22	0.7353	0.57	0.053	2.22	1.45	0.103	0.031	0.164	0.052	0.21	3.56	0.48	4.25	11430	0.9486	25.2909	-24.3423	NAF
NS0077	244	246	NS	E889624	889624	1	G	W	35.93	37.54	1.21	0.7482	0.58	0.053	2.63	1.46	0.105	0.035	0.453	0.048	0.15	3.16	0.58	3.89	11418	1.071	25.46532	-24.39432	NAF
NS0077	188	190	NS	E889596	889596	1	G	W	28.98	48.84	0.75	0.6837	0.53	0.031	1.91	1.45	0.065	0.026	0.178	0.053	0.22	3.08	0.81	4.11	11390	0.7956	25.2909	-24.4953	NAF
NS0077	218	220	NS	E889611	889611	1	G	W	36.35	37.05	1.07	0.7482	0.58	0.048	2.45	1.46	0.077	0.024	0.731	0.048	0.12	2.77	0.82	3.71	11405	0.7344	25.46532	-24.73092	NAF
NS0077	80	82	NS	E889541	889541	1	G	W	37.15	35.24	1.45	0.6966	0.54	0.069	2.54	1.5	0.102	0.045	0.755	0.051	0.2	3.25	0.68	4.13	11336	1.377	26.163	-24.786	NAF
NS0077	116	118	NS	E889559	889559	1	G	W	28	47.56	1.67	0.5676	0.44	0.077	2.84	1.52	0.069	0.05	0.595	0.091	0.25	3.33	1.09	4.67	11354	1.53	26.51184	-24.98184	NAF
NS0077	168	170	NS	E889586	889586	1	G	W	33.73	39.06	1.36	0.5418	0.42	0.062	2.87	1.52	0.141	0.05	0.393	0.092	0.42	4.11	0.58	5.11	11380	1.53	26.51184	-24.98184	NAF
NS0077	76	78	NS	E889539	889539	1	G	W	32.83	41.5	1.28	0.6966	0.54	0.059	2.52	1.51	0.073	0.042	0.635	0.06	0.16	3.23	0.97	4.36	11334	1.2852	26.33742	-25.05222	NAF
NS0077	64	66	NS	E889533	889533	1	G	W	36.64	37.05	1.16	0.6708	0.52	0.051	2.26	1.49	0.115	0.024	0.594	0.035	0.13	3.13	0.57	3.83	11328	0.7344	25.98858	-25.25418	NAF
NS0077	142	144	NS	E889572	889572	1	G	W	34.25	40.14	0.96	0.7224	0.56	0.041	2.26	1.53	0.083	0.024	0.152	0.048	0.18	3.84	0.83	4.85	11367	0.7344	26.68626	-25.95186	NAF
NS0077	242	244	NS	E889623	889623	1	G	W	36.47	36.92	1.18	0.7482	0.58	0.051	2.46	1.55	0.082	0.034	0.522	0.066	0.18	2.82	0.77	3.77	11417	1.0404	27.0351	-25.9947	NAF
NS0077	220	222	NS	E889612	889612	1	G	W	31.04	40.89	1.93	0.7998	0.62	0.084	3.39	1.66	0.107	0.085	1.24	0.068	0.24	3.2	1.18	4.62	11406	2.601	28.95372	-26.35272	NAF
NS0077	96	98	NS	E889549	889549	1	G	W	33.78	40.09	1.23	0.7353	0.57	0.054	2.52	1.6	0.101	0.049	0.568	0.036	0.1	3.49	0.89	4.48	11344	1.4994	27.9072	-26.4078	NAF
NS0077	230	232	NS	E889617	889617	1	G	W	36.41	37.11	1.07	0.7611	0.59	0.049	2.54	1.58	0.078	0.034	0.605	0.071	0.13	2.82	0.91	3.86	11411	1.0404	27.55836	-26.51796	NAF
NS0077	60	62	NS	E889531	889531	1	G	W	37.48	35.47	1.1	0.7482	0.58	0.048	2.33	1.57	0.115	0.024	0.514	0.041	0.16	3.68	0.63	4.47	11326	0.7344	27.38394	-26.64954	NAF
NS0077	196	198	NS	E889600	889600	1	G	W	34.98	39.81	1	0.645	0.5	0.043	2.18	1.64	0.076	0.023	0.192	0.045	0.17	2.73	0.88	3.78	11394	0.7038	28.60488	-27.90108	NAF
NS0077	174	176	NS	E889589	889589	1	G	W	28.56	44.95	1.92	0.4257	0.33	0.085	3.32	1.71	0.084	0.057	0.468	0.122	0.5	3.98	1.14	5.62	11383	1.7442	29.82582	-28.08162	NAF
NS0077	74	76	NS	E889538	889538	1	G	W	36.23	37.57	0.92	0.6837	0.53	0.04	2.09	1.66	0.108	0.017	0.563	0.027	0.07	3.04	0.88	3.99	11333	0.5202	28.95372	-28.43352	NAF
NS0077	238	240	NS	E889621	889621	1	G	W	34.85	38.04	1.12	0.8256	0.64	0.049	2.72	1.71	0.122	0.036	0.627	0.054	0.15	3.39	0.86	4.4	11415	1.1016	29.82582	-28.72422	NAF
NS0077	132	134	NS	E889567	889567	1	G	W	34.98	38.03	0.94	0.774	0.6	0.041	2.43	1.69	0.107	0.024	0.194	0.046	0.21	4.13	0.89	5.23	11362	0.7344	29.47698	-28.74258	NAF
NS0077	224	226	NS	E889614	889614	1	G	W	34.91	39.61	0.97	0.7353	0.57	0.043	2.32	1.73	0.073	0.03	0.558	0.047	0.11	2.44	1.08	3.63	11408	0.918	30.17466	-29.25666	NAF
NS0077	90	92	NS	E889546	889546	1	G	W	36.04	37.21	1.08	0.6837	0.53	0.047	2.28	1.74	0.103	0.021	0.516	0.043	0.1	3.05	0.96	4.11	11341	0.6426	30.34908	-29.70648	NAF
NS0077	226	228	NS	E889615	889615	1	G	W	36.8	37.23	0.93	0.7095	0.55	0.041	2.17	1.74	0.107	0.021	0.539	0.045	0.09	2.33	0.92	3.34	11409	0.6426	30.34908	-29.70648	NAF
NS0077	248	250	NS	E889626	889626	1	G	W	35.46	38.41	1.03	0.6966	0.54	0.046	2.35	1.78	0.07	0.031	0.367	0.096	0.17	2.98	1.02	4.17	11420	0.9486	31.04676	-30.09816	NAC
NS0077	54	56	NS	E889528	889528	1	G	W	31.95	43.9	0.92	0.6579	0.51	0.042	1.92	1.77	0.133	0.019	0.417	0.018	0.18	3.04	0.87	4.09	11323	0.5814	30.87234	-30.29094	NAC
NS0077	228	230	NS	E889616	889616	1	G	W	35.29	39.02	0.96	0.6837	0.53	0.042	2.31	1.8	0.077	0.03	0.513	0.058	0.13	2.39	1.11	3.63	11410	0.918	31.3956	-30.4776	NAC
NS0077	232	234	NS	E889618	889618	1	G	W	34.92	38.87	0.98	0.7869	0.61	0.042	2.27	1.81	0.105	0.027	0.557	0.055	0.13	2.69	1.07	3.89	11412	0.8262	31.57002	-30.74382	NAC
NS0077	130	132	NS	E889566	889566	1	G	W	31.61	43.4	0.77	0.7353	0.57	0.034	2.23	1.87	0.102	0.019	0.222	0.04	0.17	3.86	1.17	5.2	11361	0.5814	32.61654	-32.03514	NAC
NS0077	78	80	NS	E889540	889540	1	G	W	32.83	40.61	1.33	0.6837	0.53	0.051	2.38	2.04	0.125	0.027	0.731	0.043	0.15	2.91	1.33	4.39	11335	0.8262	35.58168	-34.75548	NAC
NS0077	92	94	NS	E889547	889547	1	G	W	32.76	40.14	1.53	0.645	0.5	0.066	2.75	2.11	0.075	0.059	0.587	0.041	0.14	2.84	1.52	4.5	11342	1.8054	36.80262	-34.99722	NAC
NS0077	212	214	NS	E889608	889608	1	G	W	35.85	36.74	0.92	0.8127	0.63	0.039	2.49	2.09	0.084	0.025	0.447	0.048	0.12	2.84	1.53	4.49	11402	0.765	36.45378	-35.68878	NAC
NS0077	222	224	NS	E889613	889613	1	G	W	33.63	38.85	1.2	0.8643	0.67	0.051	2.77	2.12	0.067	0.038	0.736	0.065	0.18	3.07	1.64	4.89	11407	1.1628	36.97704	-35.81424	NAC
NS0077	270	272	NS	E889637	889637	1	G	W	33.86	39.21	1.07	0.7998	0.62	0.048	2.29	2.23	0.074	0.028	0.172	0.055	0.23	3.71	1.49	5.43	11431	0.8568	38.89566	-38.03886	NAC
NS0077	240	242	NS	E889622	889622	1	G	W	32.9	41.18	0.98	0.774	0.6	0.042	2.34	2.25	0.082	0.029	0.444	0.041	0.1	2.66	1.66	4.42	11416	0.8874	39.2445	-38.3571	NAC
NS0077	82	84	NS	E889542	889542	1	G	W	34.23	39.08	1.09	0.6837	0.53	0.05	2.31	2.25	0.107	0.027	0.606	0.043	0.12	2.78	1.6	4.5	11337	0.8262	39.2445	-38.4183	NAC
NS0077	216	218	NS	E889610	889610	1	G	W	33.03	39.16	1.04	0.8256	0.64	0.045	2.72	2.31	0.088	0.041	0.681	0.065	0.6	2.98	1.74	5.32	11404	1.2546	40.29102	-39.03642	NAC
NS0077	210	212	NS	E889607	889607	1	G	W	34.33	39.08	0.88	0.7998	0.62	0.038	2.38	2.3	0.076	0.024	0.344	0.044	0.12	2.75	1.76	4.63	11401	0.7344	40.1166	-39.3822	NAC
NS0077	84	86	NS	E889543	889543	1	G	W	33.07	39.4	1.43	0.6837	0.53	0.057	2.58	2.54	0.091	0.041	0.731	0.05	0.16	2.75	2	4.91	11338	1.2546	44.30268	-43.04808	NAC
NS0077	214	216	NS	E889609	889609	1	G	W	32.53	38.61	1.1	0.8772	0.68	0.047	2.98	2.9	0.086	0.043	0.581	0.055	0.19	3.08	2.61	5.88	11403	1.3158	50.5818	-49.266	NAC
NS0078	278	280	NS	E889783	889783	1	G	W	23.5	47.99	6.19	0.3225	0.25	0.286	3.4	0.27	0.073	1.44	0.929	0.284	1	3.54	1.89	6.43	11576	44.064	4.70934	39.35466	PAF(HC)
NS0078	80	82	NS	E889684	889684	1	G	W	25.19	47.54	2.68	0.2838	0.22	0.126	3.94	0.37	0.037	1.06	1.14	0.305	1.1	4.06	1.89	7.05	11477	32.436	6.45354	25.98246	PAF(HC)
NS0078	276	278	NS	E889782	889782	1	G	W	21.54	52.41	4.64	0.4257	0.33	0.208	2.87	0.3	0.066	0.876	0.793	0.188	0.94	4.71	1.41	7.06	11575	26.8056	5.2326	21.573	PAF(HC)
NS0078	80	84	NS	BX159683-BX159684	X159683	2			63.78	8.042	0.479	0.037	0.02664	0.051	0.657	0.049	0.007	0.53	0.168	0.111	-0.01	-0.01	-0.01	-0.03	3556	16.218	0.854658	15.363342	PAF(HC)
NS0078	82	84	NS	E889685	889685	1	G	W	27.36	46.41	2.38	0.258	0.2	0.109	3.71	0.36	0.045	0.685	1.01	0.287	0.99	3.77	1.18	5.94	11478	20.961	6.27912	14.68188	PAF(HC)
NS0078	84	88	NS	BX159685-BX159686	X159685	2			65.43	6.838	0.316	0.032	0.02304	0.042	0.496	0.046	0.006	0.327	0.114	0.108	-0.01	-0.01	-0.01	-0.03	3557	10.0062	0.802332	9.203868	PAF(LC)
NS0078	258	260	NS	E889773	889773	1	G	W	29.89	39.18	3.38	0.4644	0.36	0.155	3.63	0.49	0.115	0.357	1.33	0.387	1.61	5.08	0.98	7.67	11566	10.9242	8.54658	2.37762	PAF(LC)
NS0078	72	76	NS	BX159679-BX159680	X159679	2			67.42	6.005	0.185	0.034	0.02448	0.031	0.358	0.056	0.009	0.091	0.074	0.091	-0.01	-0.01	-0.01	-0.03	3554	2.7846	0.976752	1.807848	PAF(LC)
NS0078	148	152	NS	BX159717-BX159718	X159717	2			64.39	7.323	0.281	0.069	0.04968	0.027	0.495	0.086	0.013	0.108	0.099	0.092	-0.01	-0.01	-0.01	-0.03	3573	3.3048	1.500012	1.804788	PAF(LC)
NS0078	224	226	NS	E889756	889756	1	G	W	24.57	47.61	4.96	0.258	0.2	0.226	3.48	0.34	0.085	0.241	1.03	0.261	1.19	4.33	0.74	6.26	11549	7.3746	5.93028	1.44432	PAF(LC)
NS0078	272	274	NS	E889780	889780	1	G	W	21.63	53.07	3.96	0.4128	0.32	0.174	2.92	0.43	0.091	0.278	1.3	0.496	1.23	4.09	0.82	6.14	11573	8.5068	7.50006	1.00674	PAF(LC)
NS0078	2	4	NS	E889644	889644	1	G	M	50.28	8.92	7.57	-0.0129	-0.01	0.426	0.04	0.02	0.016	0.039	0.03	0.0005	8.69	1.78	0.36	10.83	11438	1.1934	0.34884	0.84456	PAF(LC)
NS0078	260	264	NS	BX159773-BX159774	X159773	2			58.82	11.281	0.733	0.103	0.07416	0.055	0.816	0.097	0.014	0.078	0.249	0.193	-0.01	-0.01	-0.01	-0.03	3601	2.3868	1.691874	0.694926	PAF(LC)
NS0078	4	6	NS	E889645	889645	1	G	M	41.92	24.58	5.66	0.0903	0.07	0.629	0.05	0.03	0.018	0.032	0.044	0.006	7.21	1.34	0.29	8.84	11439	0.9792	0.52326	0.45594	PAF(LC)
NS0078	156	160	NS	BX159721-BX159722	X159721	2			67.97	4.73	0.224	0.053	0.03816	0.034	0.337	0.076	0.014	0.058	0.075	0.1	-0.01	-0.01	-0.01	-0.03	3575	1.7748	1.325592	0.449208	PAF(LC)
NS0078	0	2	NS	E889643	889643	1	G	M	46.38	16.93	5.63	-0.0129	-0.01	0.344	0.06	0.04	0.016	0.036	0.057	0.011	8.86	1.49	0.32	10.67	11437	1.1016	0.69768	0.40392	PAF(LC)
NS0078	6	8	NS	E889647	889647	1	G	M	40.48	27.58	5.37	-0.0129	-0.01	0.813	0.02	0.02	0.015	0.024	0.011	0.002	6.82	1.38	0.27	8.47	11440	0.7344	0.34884	0.38556	PAF(LC)
NS0078	172	174	NS	BX159729	X159729	2			67.01	5.886	0.246	0.067	0.04824	0.038	0.353	0.07	0.011	0.05	0.084	0.116	-0.01	-0.01	-0.01	-0.03	3579	1.53	1.22094	0.30906	PAF(LC)
NS0078	236	240	NS	BX159761-BX159762	X159761	2			66.98	4.943	0.183	0.047	0.03384	0.025	0.31	0.069	0.01	0.046	0.074	0.103	-0.01	-0.01	-0.01	-0.03	3595	1.4076	1.203498	0.204102	PAF(LC)
NS0078	232	234	NS	BX159759	X159759	2			69.04	3.656	0.151	0.039	0.02808	0.028	0.264	0.063	0.01	0.036	0.06	0.098	-0.01	-0.01	-0.01	-0.03	3594	1.1016	1.098846	0.002754	PAF(LC)
NS0078	222	224	NS	E889755	889755	1	G	W																	11548	0	0	0	PAF(LC)
NS0078	0	4	NS	BX159643-BX159644	X159643	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3536	-0.0306	-0.01744	-0.013158	NAF
NS0078	4	6	NS	BX159645	X159645	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3537	-0.0306	-0.01744	-0.013158	NAF
NS0078	8	12	NS	BX159647-BX159648	X159647	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3538	-0.0306	-0.01744	-0.013158	NAF
NS0078	12	16	NS	BX159649-BX159650	X159649	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3539	-0.0306	-0.01744	-0.013158	NAF
NS0078	16	20	NS	BX159651-BX159652	X159651	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3540	-0.0306	-0.01744	-0.013158	NAF
NS0078	40	44	NS	BX159663-BX159664	X159663	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3546	-0.0306	-0.01744	-0.013158	NAF
NS0078	272	276	NS	BX159779-BX159780	X159779	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3604	-0.0306	-0.01744	-0.013158	NAF
NS0078	276	280	NS	BX159781-BX159782	X159781	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3605	-0.0306	-0.01744	-0.013158	NAF
NS0078	268	270	NS	E889778	889778	1	G	W	27.23	41.26	3.73	0.5547	0.43	0.17	3.42	0.47	0.096	0.264	1.35	0.341	1.62	7.03	0.85	9.5	11571	8.0784	8.19774	-0.11934	NAF
NS0078	8	10	NS	E889648	889648	1	G	M	40.25	26.18	6.59	-0.0129	-0.01	0.423	0.08	0.05	0.011	0.022	0.012	0.019	7.01	1.71	0.29	9.01	11441	0.6732	0.8721	-0.1989	NAF
NS0078	274	276	NS	E889781	889781	1	G	W	26.62	42.8	3.92	0.5547	0.43	0.18	3.29	0.39	0.079	0.215	1.45	0.356	1.56	6.68	0.78	9.02	11574	6.579	6.80238	-0.22338	NAF
NS0078	216	220	NS	BX159751-BX159752	X159751	2			69.18	3.596	0.114	0.045	0.0324	0.025	0.257	0.066	0.01	0.03	0.044	0.09	-0.01	-0.01	-0.01	-0.03	3590	0.918	1.151172	-0.233172	NAF
NS0078	224	228	NS	BX159755-BX159756	X159755	2			68.21	2.973	0.128	0.037	0.02664	0.036	0.194	0.066	0.013	0.03	0.034	0.092	-0.01	-0.01	-0.01	-0.03	3592	0.918	1.151172	-0.233172	NAF
NS0078	112	116	NS	BX159699-BX159700	X159699	2			69.67	2.703	0.094	0.029	0.02088	0.025	0.216	0.061	0.011	0.026	0.034	0.095	-0.01	-0.01	-0.01	-0.03	3564	0.7956	1.063962	-0.268362	NAF
NS0078	270	272	NS	E889779	889779	1	G	W	27.42	40.71	3.08	0.645	0.5	0.137	2.96	0.62	0.154	0.344	1.16	0.338	1.51	8.05	0.94	10.5	11572	10.5264	10.81404	-0.28764	NAF
NS0078	100	104	NS	BX159693-BX159684	X159693	2			70.59	2.434	0.064	0.025	0.018	0.024	0.188	0.051	0.009	0.014	0.027	0.079	-0.01	-0.01	-0.01	-0.03	3561	0.4284	0.889542	-0.461142	NAF
NS0078	96	100	NS	BX159691-BX159692	X159691	2			70.84	2.398	0.071	0.025	0.018	0.026	0.191	0.044	0.007	0.01	0.03	0.074	-0.01	-0.01	-0.01	-0.03	3560	0.306	0.767448	-0.461448	NAF
NS0078	76	80	NS	BX159681-BX159682	X159681	2			67.34	6.1	0.185	0.034	0.02448	0.034	0.364	0.088	0.02	0.034	0.073	0.099	-0.01	-0.01	-0.01	-0.03	3555	1.0404	1.534896	-0.494496	NAF
NS0078	128	132	NS	BX159707-BX159708	X159707	2			70.1	2.852	0.089	0.024	0.01728	0.025	0.2	0.05	0.008	0.011	0.037	0.124	-0.01	-0.01	-0.01	-0.03	3568	0.3366	0.8721	-0.5355	NAF
NS0078	164	168	NS	BX159725-BX159726	X159725	2			68.15	4.357	0.203	0.041	0.02952	0.031	0.292	0.08	0.016	0.028	0.075	0.086	-0.01	-0.01	-0.01	-0.03	3577	0.8568	1.39536	-0.53856	NAF
NS0078	44	48	NS	BX159665-BX159666	X159665	2			65.26	5.459	0.152	0.039	0.02808	0.039	0.131	0.035	0.012	0.002	0.01	0.088	0.02	0.04	0.14	0.2	3547	0.0612	0.61047	-0.54927	NAF
NS0078	124	128	NS	BX159705-BX159706	X159705	2			69.97	2.877	0.096	0.026	0.01872	0.025	0.208	0.054	0.009	0.012	0.038	0.16	-0.01	-0.01	-0.01	-0.03	3567	0.3672	0.941868	-0.574668	NAF
NS0078	116	120	NS	BX159701-BX159702	X159701	2			69.27	3.952	0.205	0.031	0.02232	0.043	0.29	0.056	0.009	0.013	0.063	0.102	-0.01	-0.01	-0.01	-0.03	3565	0.3978	0.976752	-0.578952	NAF
NS0078	28	32	NS	BX159657-BX159658	X159657	2			64.01	6.915	0.252	0.025	0.018	0.043	0.143	0.041	0.016	0.004	0.008	0.122	-0.01	-0.01	-0.01	-0.03	3543	0.1224	0.715122	-0.592722	NAF
NS0078	220	224	NS	BX159753-BX159754	X159753	2			70.07	2.703	0.081	0.034	0.02448	0.023	0.198	0.059	0.01	0.014	0.03	0.083	-0.01	-0.01	-0.01	-0.03	3591	0.4284	1.029078	-0.600678	NAF
NS0078	120	124	NS	BX159703-BX159704	X159703	2			67.97	4.164	0.212	0.039	0.02808	0.034	0.348	0.063	0.009	0.016	0.076	0.154	-0.01	-0.01	-0.01	-0.03	3566	0.4896	1.098846	-0.609246	NAF
NS0078	104	108	NS	BX159695-BX159696	X159695	2			69.92	2.884	0.181	0.038	0.02736	0.039	0.316	0.056	0.008	0.012	0.062	0.081	-0.01	-0.01	-0.01	-0.03	3562	0.3672	0.976752	-0.609552	NAF
NS0078	20	24	NS	BX159653-BX159654	X159653	2			65.47	6.099	0.185	0.038	0.02736	0.039	0.147	0.037	0.014	0.001	0.015	0.075	0.01	-0.01	-0.01	-0.01	3541	0.0306	0.645354	-0.614754	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0078	48	52	NS	BX159667-BX159668	X159667	2			66.75	5.402	0.162	0.039	0.02808	0.037	0.25	0.061	0.015	0.014	0.043	0.278	-0.01	-0.01	-0.01	-0.03	3548	0.4284	1.063962	-0.635562	NAF
NS0078	32	34	NS	BX159659	X159659	2			65.25	6.837	0.225	0.033	0.02376	0.049	0.151	0.042	0.014	0.003	0.008	0.095	0.01	0.08	0.11	0.2	3544	0.0918	0.732564	-0.640764	NAF
NS0078	268	272	NS	BX159777-BX159778	X159777	2			64.96	6.754	0.405	0.071	0.05112	0.048	0.461	0.079	0.011	0.024	0.126	0.13	-0.01	-0.01	-0.01	-0.03	3603	0.7344	1.377918	-0.643518	NAF
NS0078	108	112	NS	BX159697-BX159698	X159697	2			69.82	3.094	0.129	0.028	0.02016	0.03	0.243	0.058	0.01	0.012	0.048	0.088	-0.01	-0.01	-0.01	-0.03	3563	0.3672	1.011636	-0.644436	NAF
NS0078	168	172	NS	BX159727-BX159728	X159727	2			70.17	3.176	0.165	0.025	0.018	0.036	0.228	0.066	0.014	0.016	0.06	0.088	-0.01	-0.01	-0.01	-0.03	3578	0.4896	1.151172	-0.661572	NAF
NS0078	132	136	NS	BX159709-BX159710	X159709	2			68.71	4.153	0.135	0.044	0.03168	0.027	0.29	0.063	0.01	0.014	0.055	0.106	-0.01	-0.01	-0.01	-0.03	3569	0.4284	1.098846	-0.670446	NAF
NS0078	36	40	NS	BX159661-BX159662	X159661	2			65.14	6.527	0.239	0.038	0.02736	0.042	0.166	0.042	0.012	0.002	0.023	0.138	-0.01	-0.01	0.01	-0.01	3545	0.0612	0.732564	-0.671364	NAF
NS0078	24	28	NS	BX159655-BX159656	X159655	2			64.77	6.565	0.355	0.037	0.02664	0.084	0.183	0.045	0.01	0.003	0.016	0.104	-0.01	-0.01	-0.01	-0.03	3542	0.0918	0.78489	-0.69309	NAF
NS0078	196	200	NS	BX159741-BX159742	X159741	2			70.53	2.551	0.066	0.031	0.02232	0.019	0.19	0.058	0.008	0.009	0.029	0.081	-0.01	-0.01	-0.01	-0.03	3585	0.2754	1.011636	-0.736236	NAF
NS0078	160	164	NS	BX159723-BX159724	X159723	2			67.17	4.805	0.225	0.043	0.03096	0.034	0.333	0.078	0.015	0.019	0.082	0.096	-0.01	-0.01	-0.01	-0.03	3576	0.5814	1.360476	-0.779076	NAF
NS0078	140	144	NS	BX159713-BX159714	X159713	2			66.06	6.691	0.3	0.05	0.036	0.043	0.46	0.082	0.015	0.02	0.102	0.116	-0.01	-0.01	-0.01	-0.03	3571	0.612	1.430244	-0.818244	NAF
NS0078	88	92	NS	BX159687-BX159688	X159687	2			66.31	6.804	0.238	0.029	0.02088	0.031	0.425	0.072	0.01	0.014	0.099	0.132	-0.01	-0.01	-0.01	-0.03	3558	0.4284	1.255824	-0.827424	NAF
NS0078	188	192	NS	BX159737 -BX15973	X159737	2			67.35	5.06	0.249	0.055	0.0396	0.036	0.387	0.092	0.017	0.025	0.086	0.139	-0.01	-0.01	-0.01	-0.03	3583	0.765	1.604664	-0.839664	NAF
NS0078	212	216	NS	BX159749-BX159750	X159749	2			69.91	2.529	0.048	0.033	0.02376	0.019	0.174	0.065	0.012	0.009	0.022	0.082	-0.01	-0.01	-0.01	-0.03	3589	0.2754	1.13373	-0.85833	NAF
NS0078	56	60	NS	BX159671-BX159672	X159671	2			67.81	5.141	0.135	0.032	0.02304	0.026	0.289	0.064	0.011	0.008	0.047	0.102	-0.01	-0.01	-0.01	-0.03	3550	0.2448	1.116288	-0.871488	NAF
NS0078	228	232	NS	BX159757-BX159758	X159757	2			66.8	5.25	0.257	0.047	0.03384	0.043	0.363	0.088	0.017	0.021	0.095	0.09	-0.01	-0.01	-0.01	-0.03	3593	0.6426	1.534896	-0.892296	NAF
NS0078	200	204	NS	BX159743-BX159744	X159743	2			67.21	4.817	0.179	0.052	0.03744	0.024	0.356	0.081	0.012	0.017	0.072	0.081	-0.01	-0.01	-0.01	-0.03	3586	0.5202	1.412802	-0.892602	NAF
NS0078	248	252	NS	BX159767-BX159768	X159767	2			66.08	6.29	0.226	0.05	0.036	0.03	0.355	0.07	0.011	0.01	0.09	0.097	-0.01	-0.01	-0.01	-0.03	3598	0.306	1.22094	-0.91494	NAF
NS0078	192	196	NS	BX159739-BX159740	X159739	2			68.15	4.026	0.142	0.053	0.03816	0.019	0.315	0.072	0.012	0.011	0.056	0.09	-0.01	-0.01	-0.01	-0.03	3584	0.3366	1.255824	-0.919224	NAF
NS0078	244	248	NS	BX159765-BX159766	X159765	2			67.4	5.495	0.329	0.042	0.03024	0.039	0.402	0.076	0.014	0.013	0.122	0.092	-0.01	-0.01	-0.01	-0.03	3597	0.3978	1.325592	-0.927792	NAF
NS0078	240	244	NS	BX159763-BX159764	X159763	2			67.81	4.752	0.185	0.052	0.03744	0.024	0.337	0.08	0.013	0.015	0.073	0.094	-0.01	-0.01	-0.01	-0.03	3596	0.459	1.39536	-0.93636	NAF
NS0078	204	208	NS	BX159745-BX159746	X159745	2			68.55	4.118	0.108	0.041	0.02952	0.02	0.266	0.066	0.01	0.007	0.043	0.111	-0.01	-0.01	-0.01	-0.03	3587	0.2142	1.151172	-0.936972	NAF
NS0078	208	212	NS	BX159747-BX159748	X159747	2			68.17	3.94	0.1	0.039	0.02808	0.024	0.248	0.068	0.011	0.006	0.04	0.077	-0.01	-0.01	-0.01	-0.03	3588	0.1836	1.186056	-1.002456	NAF
NS0078	280	282	NS	BX159783	X159783	2			66.34	5.855	0.258	0.087	0.06264	0.032	0.386	0.098	0.008	0.023	0.087	0.127	-0.01	-0.01	-0.01	-0.03	3606	0.7038	1.709316	-1.005516	NAF
NS0078	252	256	NS	BX159769-BX159770	X159769	2			66.3	6.214	0.236	0.048	0.03456	0.029	0.365	0.07	0.01	0.007	0.093	0.08	-0.01	-0.01	-0.01	-0.03	3599	0.2142	1.22094	-1.00674	NAF
NS0078	176	180	NS	BX159731-BX159732	X159731	2			68.9	4.223	0.169	0.044	0.03168	0.023	0.299	0.085	0.017	0.015	0.061	0.082	-0.01	-0.01	-0.01	-0.03	3580	0.459	1.48257	-1.02357	NAF
NS0078	184	188	NS	BX159735-BX159736	X159735	2			66.61	5.881	0.289	0.054	0.03888	0.042	0.435	0.089	0.017	0.017	0.107	0.098	-0.01	-0.01	-0.01	-0.03	3582	0.5202	1.552338	-1.032138	NAF
NS0078	136	140	NS	BX159711-BX159712	X159711	2			66.62	5.086	0.205	0.041	0.02952	0.031	0.337	0.078	0.014	0.01	0.075	0.089	-0.01	-0.01	-0.01	-0.03	3570	0.306	1.360476	-1.054476	NAF
NS0078	92	94	NS	BX159689	X159689	2			66.43	6.867	0.227	0.029	0.02088	0.033	0.398	0.078	0.014	0.009	0.096	0.112	-0.01	-0.01	-0.01	-0.03	3559	0.2754	1.360476	-1.085076	NAF
NS0078	152	156	NS	BX159719-BX159720	X159719	2			65.47	6.183	0.227	0.07	0.0504	0.026	0.432	0.087	0.014	0.013	0.085	0.099	-0.01	-0.01	-0.01	-0.03	3574	0.3978	1.517454	-1.119654	NAF
NS0078	180	184	NS	BX159733-BX159734	X159733	2			67.6	5.402	0.214	0.058	0.04176	0.03	0.376	0.08	0.012	0.009	0.084	0.167	-0.01	-0.01	-0.01	-0.03	3581	0.2754	1.39536	-1.11996	NAF
NS0078	256	260	NS	BX159771-BX159772	X159771	2			64.93	7.734	0.378	0.069	0.04968	0.037	0.506	0.088	0.013	0.012	0.147	0.095	-0.01	-0.01	-0.01	-0.03	3600	0.3672	1.534896	-1.167696	NAF
NS0078	52	56	NS	BX159669-BX159670	X159669	2			66.96	6.117	0.179	0.031	0.02232	0.032	0.319	0.095	0.021	0.014	0.063	0.1	-0.01	-0.01	-0.01	-0.03	3549	0.4284	1.65699	-1.22859	NAF
NS0078	144	148	NS	BX159715-BX159716	X159715	2			66.22	6.735	0.289	0.056	0.04032	0.034	0.458	0.088	0.016	0.009	0.103	0.105	-0.01	-0.01	-0.01	-0.03	3572	0.2754	1.534896	-1.259496	NAF
NS0078	170	172	NS	E889729	889729	1	G	W	28.69	42.57	2.8	0.4386	0.34	0.133	2.92	0.56	0.088	0.278	1.17	0.309	1.37	5.39	0.79	7.55	11522	8.5068	9.76752	-1.26072	NAF
NS0078	264	266	NS	BX159775	X159775	2			64.02	8.021	0.442	0.073	0.05256	0.038	0.541	0.104	0.015	0.017	0.171	0.129	-0.01	-0.01	-0.01	-0.03	3602	0.5202	1.813968	-1.293768	NAF
NS0078	68	72	NS	BX159677-BX159678	X159677	2			66.58	6.703	0.198	0.034	0.02448	0.036	0.375	0.115	0.029	0.015	0.071	0.091	-0.01	-0.01	-0.01	-0.03	3553	0.459	2.00583	-1.54683	NAF
NS0078	60	64	NS	BX159673-BX159674	X159673	2			64.97	8.157	0.285	0.041	0.02952	0.039	0.486	0.119	0.027	0.009	0.101	0.127	-0.01	-0.01	-0.01	-0.03	3551	0.2754	2.075598	-1.800198	NAF
NS0078	64	68	NS	BX159675-BX159676	X159675	2			66.9	6.819	0.209	0.032	0.02304	0.038	0.391	0.126	0.031	0.012	0.078	0.112	-0.01	-0.01	-0.01	-0.03	3552	0.3672	2.197692	-1.830492	NAF
NS0078	168	170	NS	E889728	889728	1	G	W	28.35	46.22	4.15	0.1161	0.09	0.196	3.24	0.27	0.082	0.085	1.69	0.441	1.42	0.95	0.36	2.73	11521	2.601	4.70934	-2.10834	NAF
NS0078	156	158	NS	E889722	889722	1	G	W	31.08	40.1	2.31	0.4257	0.33	0.109	2.87	0.45	0.065	0.175	1.02	0.269	1.26	5.86	0.45	7.57	11515	5.355	7.8489	-2.4939	NAF
NS0078	164	166	NS	E889726	889726	1	G	W	28.54	45.41	4.1	0.1548	0.12	0.191	3.25	0.31	0.078	0.079	1.57	0.418	1.38	1.68	0.39	3.45	11519	2.4174	5.40702	-2.98962	NAF
NS0078	154	156	NS	E889721	889721	1	G	W	25.37	47.81	4.59	0.1677	0.13	0.214	3.81	0.31	0.039	0.069	1.61	0.41	1.46	2.3	0.51	4.27	11514	2.1114	5.40702	-3.29562	NAF
NS0078	260	262	NS	E889774	889774	1	G	W	28.32	42.23	3.22	0.4386	0.34	0.145	3.33	0.54	0.128	0.196	1.23	0.3	1.31	5.58	0.62	7.51	11567	5.9976	9.41868	-3.42108	NAF
NS0078	230	232	NS	E889759	889759	1	G	W	31.5	38.9	1.99	0.3741	0.29	0.09	2.66	0.47	0.099	0.142	0.938	0.267	1.24	7.3	0.27	8.81	11552	4.3452	8.19774	-3.85254	NAF
NS0078	246	248	NS	E889767	889767	1	G	W	33.14	36.07	2.11	0.3999	0.31	0.101	2.97	0.41	0.067	0.103	1	0.25	1.2	7.7	0.21	9.11	11560	3.1518	7.15122	-3.99942	NAF
NS0078	44	46	NS	E889666	889666	1	G	W	29.61	50.56	1.34	0.3999	0.31	0.063	0.61	0.24	0.037	0.004	0.061	0.044	3.08	0.97	0.02	4.07	11459	0.1224	4.18608	-4.06368	NAF
NS0078	42	44	NS	E889665	889665	1	G	W	31.08	48.67	1.41	0.2967	0.23	0.067	0.63	0.25	0.045	0.006	0.067	0.038	3.08	0.96	-0.09	3.95	11458	0.1836	4.3605	-4.1769	NAF
NS0078	266	268	NS	E889777	889777	1	G	W	28.66	42.19	2.83	0.4644	0.36	0.131	2.94	0.61	0.112	0.203	1.07	0.261	1.25	6.43	0.58	8.26	11570	6.2118	10.63962	-4.42782	NAF
NS0078	114	116	NS	E889701	889701	1	M	W	28.52	42.8	3.07	0.2451	0.19	0.145	3.39	0.61	0.139	0.2	1.3	0.325	1.32	4.88	0.66	6.86	11494	6.12	10.63962	-4.51962	NAF
NS0078	40	42	NS	E889664	889664	1	G	W	31.15	48.17	1.63	0.2967	0.23	0.077	0.69	0.27	0.053	0.006	0.091	0.08	3.26	1.07	-0.04	4.29	11457	0.1836	4.70934	-4.52574	NAF
NS0078	38	40	NS	E889663	889663	1	G	W	31.51	46.4	1.82	0.3225	0.25	0.084	0.75	0.28	0.046	0.007	0.114	0.043	3.5	1.17	-0.01	4.66	11456	0.2142	4.88376	-4.66956	NAF
NS0078	32	34	NS	E889660	889660	1	G	M	31.46	46.64	1.7	0.4128	0.32	0.077	0.65	0.28	0.036	0.006	0.049	0.057	3.5	1.09	0.01	4.6	11453	0.1836	4.88376	-4.70016	NAF
NS0078	102	104	NS	E889695	889695	1	G	W	30.78	40.35	2.05	0.2451	0.19	0.099	3	0.45	0.098	0.095	0.928	0.248	1.17	6.57	0.28	8.02	11488	2.907	7.8489	-4.9419	NAF
NS0078	36	38	NS	E889662	889662	1	G	M	31.31	46.43	2.16	0.258	0.2	0.105	0.78	0.3	0.031	0.007	0.124	0.066	3.6	1.3	0.01	4.91	11455	0.2142	5.2326	-5.0184	NAF
NS0078	46	48	NS	E889667	889667	1	G	W	30.43	47.67	1.58	0.3741	0.29	0.073	1.2	0.33	0.062	0.021	0.28	0.076	2.14	2.62	0.01	4.77	11460	0.6426	5.75586	-5.11326	NAF
NS0078	26	28	NS	E889657	889657	1	G	M	25.79	54.94	1.99	0.0516	0.04	0.094	0.61	0.31	0.038	0.006	0.021	0.041	3.58	1.18	0.09	4.85	11450	0.1836	5.40702	-5.22342	NAF
NS0078	12	14	NS	E889650	889650	1	G	M	26.18	50.84	3.44	0.0387	0.03	0.197	0.5	0.34	0.022	0.017	0.022	0.058	5	1.82	0.24	7.06	11443	0.5202	5.93028	-5.41008	NAF
NS0078	28	30	NS	E889658	889658	1	G	M	30.18	47.96	1.94	0.3999	0.31	0.088	0.62	0.32	0.047	0.005	0.028	0.041	3.91	1.21	0.06	5.18	11451	0.153	5.58144	-5.42844	NAF
NS0078	218	220	NS	E889753	889753	1	G	W	33.7	36.63	2.02	0.3483	0.27	0.091	2.56	0.57	0.147	0.145	0.968	0.256	1.06	6.3	0.25	7.61	11546	4.437	9.94194	-5.50494	NAF
NS0078	10	12	NS	E889649	889649	1	G	M	31.12	42.32	4.56	0.0258	0.02	0.35	0.51	0.35	0.015	0.015	0.028	0.077	4.87	1.67	0.28	6.82	11442	0.459	6.1047	-5.6457	NAF
NS0078	280	282	NS	E889784	889784	1	G	W	26	46.76	1.97	0.5676	0.44	0.087	2.24	0.68	0.107	0.203	0.75	0.203	1.21	7.33	0.53	9.07	11577	6.2118	11.86056	-5.64876	NAF
NS0078	34	36	NS	E889661	889661	1	G	M	32.6	44.71	2.08	0.2709	0.21	0.096	0.75	0.34	0.041	0.006	0.071	0.076	3.44	1.26	-0.04	4.66	11454	0.1836	5.93028	-5.74668	NAF
NS0078	120	122	NS	E889704	889704	1	G	W	31	37.54	2.37	0.3483	0.27	0.112	3.37	0.62	0.119	0.153	1.08	0.371	1.34	7.64	0.5	9.48	11497	4.6818	10.81404	-6.13224	NAF
NS0078	30	32	NS	E889659	889659	1	G	M	30.26	47.56	2.16	0.4128	0.32	0.102	0.71	0.37	0.042	0.008	0.042	0.048	3.7	1.32	0.03	5.05	11452	0.2448	6.45354	-6.20874	NAF
NS0078	242	244	NS	E889765	889765	1	G	W	28.56	43.9	3.38	0.2322	0.18	0.156	3.29	0.68	0.115	0.184	1.47	0.375	1.33	3.08	0.67	5.08	11558	5.6304	11.86056	-6.23016	NAF
NS0078	72	74	NS	E889680	889680	1	G	W	29.25	45.76	1.84	0.2838	0.22	0.083	2.95	0.59	0.06	0.123	0.834	0.415	0.9	3.8	0.38	5.08	11473	3.7638	10.29078	-6.52698	NAF
NS0078	158	160	NS	E889723	889723	1	G	W	29.77	42.02	2.01	0.4128	0.32	0.089	2.74	0.8	0.071	0.241	0.906	0.24	1.16	5.87	0.74	7.77	11516	7.3746	13.9536	-6.579	NAF
NS0078	244	246	NS	E889766	889766	1	G	W	36.23	35.02	2.04	0.2967	0.23	0.097	2.56	0.53	0.126	0.087	0.936	0.272	1.16	5.1	0.03	6.29	11559	2.6622	9.24426	-6.58206	NAF
NS0078	110	112	NS	E889699	889699	1	M	W	32.43	35.35	1.9	0.4128	0.32	0.087	3.28	0.6	0.111	0.123	0.806	0.209	1	9.34	0.3	10.64	11492	3.7638	10.4652	-6.7014	NAF
NS0078	20	22	NS	E889654	889654	1	G	M	28.47	47.15	3.13	0.0645	0.05	0.17	0.69	0.41	0.02	0.009	0.017	0.08	5.2	1.69	0.27	7.16	11447	0.2754	7.15122	-6.87582	NAF
NS0078	14	16	NS	E889651	889651	1	G	M	27.02	48.54	3.86	0.0645	0.05	0.205	0.72	0.45	0.021	0.014	0.037	0.074	4.94	1.89	0.28	7.11	11444	0.4284	7.8489	-7.4205	NAF
NS0078	176	178	NS	E889732	889732	1	G	W	33.15	36.91	2.1	0.3741	0.29	0.095	2.77	0.62	0.112	0.109	0.9	0.246	1.16	6.64	0.25	8.05	11525	3.3354	10.81404	-7.47864	NAF
NS0078	234	236	NS	E889761	889761	1	G	W	33.28	37.51	2.3	0.3612	0.28	0.107	2.8	0.65	0.08	0.125	1.09	0.285	1.21	5.32	0.41	6.94	11554	3.825	11.3373	-7.5123	NAF
NS0078	172	174	NS	E889730	889730	1	G	W	33.66	34.69	1.04	0.7224	0.56	0.045	2.43	0.57	0.07	0.079	0.481	0.13	0.88	10.98	-0.01	11.85	11523	2.4174	9.94194	-7.52454	NAF
NS0078	16	18	NS	E889652	889652	1	M	M	30.38	42.63	4.11	0.0774	0.06	0.227	0.78	0.45	0.037	0.01	0.027	0.103	5.44	1.97	0.28	7.69	11445	0.306	7.8489	-7.5429	NAF
NS0078	118	120	NS	E889703	889703	1	G	W	28.48	43.21	2.38	0.258	0.2	0.115	3.13	0.64	0.1	0.114	1.08	0.3	1.3	5.96	0.45	7.71	11496	3.4884	11.16288	-7.67448	NAF
NS0078	104	106	NS	E889696	889696	1	M	W	33.45	32.86	1.85	0.4257	0.33	0.088	3.23	0.6	0.105	0.087	0.83	0.232	1.14	10.48	0.2	11.82	11489	2.6622	10.4652	-7.803	NAF
NS0078	144	146	NS	E889716	889716	1	G	W	32.46	38.93	2.39	0.2838	0.22	0.115	2.99	0.71	0.19	0.148	1.07	0.281	1.11	5.07	0.41	6.59	11509	4.5288	12.38382	-7.85502	NAF
NS0078	94	96	NS	E889691	889691	1	M	W	34.1	35.78	1.32	0.3741	0.29	0.06	2.81	0.57	0.116	0.063	0.619	0.153	0.88	8.4	-0.04	9.24	11484	1.9278	9.94194	-8.01414	NAF
NS0078	24	26	NS	E889656	889656	1	M	M	30.88	43.81	3.14	0.0774	0.06	0.147	0.88	0.5	0.032	0.009	0.019	0.069	4.87	1.86	0.2	6.93	11449	0.2754	8.721	-8.4456	NAF
NS0078	100	102	NS	E889694	889694	1	M	W	31.83	37.3	1.21	0.3741	0.29	0.056	2.76	0.57	0.083	0.047	0.555	0.155	0.95	10.24	-0.05	11.14	11487	1.4382	9.94194	-8.50374	NAF
NS0078	220	222	NS	E889754	889754	1	G	W	32.86	35.4	1.01	0.5031	0.39	0.044	2.43	0.59	0.098	0.053	0.474	0.129	0.79	11.46	-0.09	12.16	11547	1.6218	10.29078	-8.66898	NAF
NS0078	126	128	NS	E889707	889707	1	G	W	30.6	39.44	1.92	0.2967	0.23	0.09	2.87	0.83	0.17	0.188	0.873	0.214	1.14	7.34	0.51	8.99	11500	5.7528	14.47686	-8.72406	NAF
NS0078	18	20	NS	E889653	889653	1	G	M	26.73	48.29	4.25	0.0645	0.05	0.197	0.96	0.52	0.02	0.01	0.021	0.067	4.9	2.12	0.27	7.29	11446	0.306	9.06984	-8.76384	NAF
NS0078	150	152	NS	E889719	889719	1	G	W	34.37	32.26	1.39	0.5031	0.39	0.065	2.78	0.61	0.1	0.061	0.643	0.167	1.06	10.77	0.01	11.84	11512	1.8666	10.63962	-8.77302	NAF
NS0078	78	80	NS	E889683	889683	1	G	W	28.27	46.59	1.41	0.3225	0.25	0.067	2.84	0.6	0.072	0.049	0.65	0.317	0.8	5.66	0.18	6.64	11476	1.4994	10.4652	-8.9658	NAF
NS0078	112	114	NS	E889700	889700	1	M	W	30.64	39.79	1.79	0.3354	0.26	0.079	2.94	0.95	0.135	0.247	0.779	0.186	1	7.34	0.66	9	11493	7.5582	16.5699	-9.0117	NAF
NS0078	240	242	NS	E889764	889764	1	G	W	34.49	33.39	1.42	0.516	0.4	0.065	2.79	0.61	0.1	0.052	0.676	0.18	0.92	9.99	-0.03	10.88	11557	1.5912	10.63962	-9.04842	NAF
NS0078	60	62	NS	E889674	889674	1	G	W	32.95	41.38	1.67	0.2709	0.21	0.084	2.76	0.59	0.079	0.04	0.749	0.185	0.86	3.88	0.01	4.75	11467	1.224	10.29078	-9.06678	NAF
NS0078	140	142	NS	E889714	889714	1	G	W	32.09	36.23	1.45	0.4644	0.36	0.065	2.92	0.69	0.104	0.093	0.589	0.154	0.97	10.15	0.14	11.26	11507	2.8458	12.03498	-9.18918	NAF
NS0078	116	118	NS	E889702	889702	1	M	W	29.33	41.37	1.79	0.3354	0.26	0.083	2.87	0.72	0.063	0.106	0.813	0.195	1.04	8.14	0.39	9.57	11495	3.2436	12.55824	-9.31464	NAF
NS0078	22	24	NS	E889655	889655	1	G	M	29.22	45.26	3.73	0.1161	0.09	0.169	0.95	0.57	0.026	0.009	0.041	0.067	4.72	1.99	0.2	6.91	11448	0.2754	9.94194	-9.66654	NAF
NS0078	200	202	NS	E889744	889744	1	G	W	34	34.21	1.42	0.4902	0.38	0.068	2.89	0.65	0.07	0.051	0.667	0.155	0.87	9.58	0.05	10.5	11537	1.5606	11.3373	-9.7767	NAF
NS0078	70	72	NS	E889679	889679	1	G	W	28.72	46.03	1.6	0.2967	0.23	0.073	2.84	0.95	0.057	0.221	0.747	0.205	0.8	4.22	0.73	5.75	11472	6.7626	16.5699	-9.8073	NAF
NS0078	198	200	NS	E889743	889743	1	G	W	34.81	33.84	1.62	0.4257	0.33	0.075	2.93	0.71	0.07	0.084	0.767	0.215	1.05	7.91	0.15	9.11	11536	2.5704	12.38382	-9.81342	NAF
NS0078	236	238	NS	E889762	889762	1	G	W	34.96	36.38	1.38	0.4257	0.33	0.066	2.27	0.79	0.088	0.126	0.644	0.175	0.85	6.45	0.12	7.42	11555	3.8556	13.77918	-9.92358	NAF
NS0078	64	66	NS	E889676	889676	1	G	W	31.29	44.67	1.55	0.2451	0.19	0.074	2.67	0.75	0.06	0.096	0.698	0.192	0.78	3.46	0.27	4.51	11469	2.9376	13.0815	-10.1439	NAF
NS0078	128	130	NS	E889708	889708	1	G	W	32.27	39.96	1.64	0.2709	0.21	0.078	2.53	0.69	0.156	0.058	0.736	0.19	0.91	6.53	0.09	7.53	11501	1.7748	12.03498	-10.26018	NAF
NS0078	188	190	NS	E889738	889738	1	G	W	31.83	37.01	1.54	0.4515	0.35	0.072	2.86	0.75	0.098	0.09	0.696	0.188	1.08	9.38	0.14	10.6	11531	2.754	13.0815	-10.3275	NAF
NS0078	62	64	NS	E889675	889675	1	G	W	31.1	44.37	1.72	0.258	0.2	0.083	2.61	0.68	0.067	0.045	0.664	0.183	1.11	3.83	0.08	5.02	11468	1.377	11.86056	-10.48356	NAF
NS0078	228	230	NS	E889758	889758	1	G	W	31.67	37.83	1.78	0.387	0.3	0.079	2.58	0.76	0.093	0.09	0.789	0.199	1.04	8.52	0.16	9.72	11551	2.754	13.25592	-10.50192	NAF
NS0078	136	138	NS	E889712	889712	1	G	W	30.18	40.5	1.51	0.3741	0.29	0.067	2.63	0.76	0.106	0.089	0.679	0.186	1.04	8.45	0.21	9.7	11505	2.7234	13.25592	-10.53252	NAF
NS0078	178	180	NS	E889733	889733	1	G	W	31.3	39.58	2.06	0.3741	0.29	0.096	2.81	0.72	0.115	0.065	0.942	0.259	1.13	6.74	0.2	8.07	11526	1.989	12.55824	-10.56924	NAF
NS0078	96	98	NS	E889692	889692	1	M	W	31.14	35.3	2.41	0.4257	0.33	0.112	3.72	0.68	0.118	0.04	1.11	0.287	1.28	9.32	0.25	10.85	11485	1.224	11.86056	-10.63656	NAF
NS0078	76	78	NS	E889682	889682	1	G	W	30.04	45.02	1.51	0.2967	0.23	0.072	2.78	0.7	0.074	0.048	0.701	0.186	0.78	4.38	0.24	5.4	11475	1.4688	12.2094	-10.7406	NAF
NS0078	216	218	NS	E889752	889752	1	G	W	32	36.27	1.31	0.5031	0.39	0.057	2.54	0.89	0.161	0.151	0.598	0.149	0.84	10.26	0.21	11.31	11545	4.6206	15.52338	-10.90278	NAF
NS0078	122	124	NS	E889705	889705	1	G	W	30.33	41.18	1.48	0.3354	0.26	0.067	2.63	0.78	0.097	0.084	0.665	0.182	1.01	7.64	0.24	8.89	11498	2.5704	13.60476	-11.03436	NAF
NS0078	74	76	NS	E889681	889681	1	G	W	30.88	43.46	1.62	0.2967	0.23	0.079	2.84	0.83	0.082	0.111	0.76	0.211	0.78	4.13	0.36	5.27	11474	3.3966	14.47686	-11.08026	NAF
NS0078	262	264	NS	E889775	889775	1	G	W	30.39	40.36	2.52	0.4257	0.33	0.114	2.96	0.79	0.111	0.087	1.11	0.309	1.32	6.04	0.32	7.68	11568	2.6622	13.77918	-11.11698	NAF
NS0078	184	186	NS	E889736	889736	1	G	W	30.33	41.61	1.92	0.3612	0.28	0.086	2.75	0.78	0.094	0.077	0.854	0.212	1.06	6.55	0.26	7.87	11529	2.3562	13.60476	-11.24856	NAF
NS0078	84	86	NS	E889686	889686	1	G	W	28.76	46.35	1.7	0.2193	0.17	0.079	3.11	0.82	0.033	0.092	0.811	0.226	0.84	3.93	0.49	5.26	11479	2.8152	14.30244	-11.48724	NAF
NS0078	92	94	NS	E889690	889690	1	M	W	28.75	40.47	1.58	0.4257	0.33	0.074	3.36	0.77	0.105	0.062	0.732	0.178	1.02	9.61	0.24	10.87	11483	1.8972	13.43034	-11.53314	NAF
NS0078	142	144	NS	E889715	889715	1	G	W	32.58	36.75	1.35	0.4644	0.36	0.063	2.67	0.78	0.099	0.064	0.593	0.141	0.77	9.35	0.07	10.19	11508	1.9584	13.60476	-11.64636	NAF
NS0078	214	216	NS	E889751	889751	1	G	W	30.25	40.69	1.31	0.4128	0.32	0.06	2.4	0.78	0.088	0.063	0.633	0.147	0.68	9.02	0.11	9.81	11544	1.9278	13.60476	-11.67696	NAF
NS0078	256	258	NS	E889772	889772	1	G	W	32.33	39.17	1.79	0.5289	0.41	0.082	2.6	0.79	0.062	0.062	0.804	0.252	1.15	6.17	0.24	7.56	11565	1.8972	13.77918	-11.88198	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0078	252	254	NS	E889770	889770	1	G	W	33.59	36.6	1.45	0.4644	0.36	0.067	2.56	0.78	0.088	0.055	0.687	0.163	0.89	7.93	0.13	8.95	11563	1.683	13.60476	-11.92176	NAF
NS0078	152	154	NS	E889720	889720	1	G	W	32.28	37.58	1.64	0.4386	0.34	0.076	2.66	0.83	0.105	0.081	0.767	0.2	0.93	8.04	0.2	9.17	11513	2.4786	14.47686	-11.99826	NAF
NS0078	212	214	NS	E889750	889750	1	G	W	32.53	36.54	1.18	0.4257	0.33	0.052	2.55	0.78	0.13	0.038	0.56	0.141	0.67	10	-0.08	10.59	11543	1.1628	13.60476	-12.44196	NAF
NS0078	98	100	NS	E889693	889693	1	M	W	29.93	40.51	2.21	0.2838	0.22	0.1	3.11	0.84	0.146	0.068	1.04	0.283	1.19	6.6	0.31	8.1	11486	2.0808	14.65128	-12.57048	NAF
NS0078	162	164	NS	E889725	889725	1	G	W	28.47	44.44	1.85	0.387	0.3	0.086	2.5	0.95	0.06	0.13	0.832	0.24	1.09	6.06	0.49	7.64	11518	3.978	16.5699	-12.5919	NAF
NS0078	130	132	NS	E889709	889709	1	G	W	30.28	40.67	1.37	0.387	0.3	0.063	2.58	0.85	0.096	0.066	0.618	0.178	0.96	8.59	0.17	9.72	11502	2.0196	14.8257	-12.8061	NAF
NS0078	192	194	NS	E889740	889740	1	G	W	35.34	32.77	1.28	0.4902	0.38	0.054	2.6	0.8	0.126	0.036	0.614	0.18	0.79	9.27	-0.03	10.03	11533	1.1016	13.9536	-12.852	NAF
NS0078	66	68	NS	E889677	889677	1	G	W	29.1	46.24	1.67	0.2451	0.19	0.081	2.93	0.96	0.075	0.125	0.773	0.208	0.79	3.49	0.52	4.8	11470	3.825	16.74432	-12.91932	NAF
NS0078	160	162	NS	E889724	889724	1	G	W	30.55	40.47	2.52	0.3354	0.26	0.119	2.88	0.92	0.172	0.102	1.09	0.253	1.12	5.41	0.36	6.89	11517	3.1212	16.04664	-12.92544	NAF
NS0078	180	182	NS	E889734	889734	1	G	W	33.7	34.76	1.6	0.516	0.4	0.074	2.84	0.83	0.072	0.048	0.757	0.209	1.07	8.77	0.12	9.96	11527	1.4688	14.47686	-13.00806	NAF
NS0078	124	126	NS	E889706	889706	1	G	W	29.19	40.14	1.98	0.3225	0.25	0.089	3.01	1.12	0.212	0.207	0.907	0.249	1.2	7.97	0.64	9.81	11499	6.3342	19.53504	-13.20084	NAF
NS0078	138	140	NS	E889713	889713	1	G	W	29.74	42.06	1.76	0.2967	0.23	0.084	2.73	0.99	0.154	0.131	0.759	0.228	1.13	6.57	0.43	8.13	11506	4.0086	17.26758	-13.25898	NAF
NS0078	264	266	NS	E889776	889776	1	G	W	32.39	38.88	1.96	0.4386	0.34	0.089	2.49	0.88	0.118	0.066	0.865	0.231	1.08	5.99	0.18	7.25	11569	2.0196	15.34896	-13.32936	NAF
NS0078	132	134	NS	E889710	889710	1	G	W	31.71	38.6	1.15	0.4902	0.38	0.052	2.38	0.89	0.073	0.068	0.513	0.141	0.9	8.93	0.19	10.02	11503	2.0808	15.52338	-13.44258	NAF
NS0078	248	250	NS	E889768	889768	1	G	W	31.86	40.1	1.32	0.516	0.4	0.073	2.32	0.84	0.073	0.039	0.571	0.179	0.8	7.65	0.12	8.57	11561	1.1934	14.65128	-13.45788	NAF
NS0078	88	90	NS	E889688	889688	1	G	W	31.47	43.5	1.88	0.1935	0.15	0.085	2.94	0.83	0.071	0.032	0.888	0.245	0.9	3.16	0.3	4.36	11481	0.9792	14.47686	-13.49766	NAF
NS0078	166	168	NS	E889727	889727	1	G	W	29.63	41.22	2.06	0.4257	0.33	0.09	2.65	0.91	0.154	0.077	0.967	0.282	1.19	6.76	0.29	8.24	11520	2.3562	15.87222	-13.51602	NAF
NS0078	106	108	NS	E889697	889697	1	G	W	29.46	41.07	1.09	0.3483	0.27	0.048	2.48	0.88	0.1	0.059	0.505	0.141	0.85	9.68	0.2	10.73	11490	1.8054	15.34896	-13.54356	NAF
NS0078	190	192	NS	E889739	889739	1	G	W	33.86	33.64	1.56	0.4773	0.37	0.071	2.86	0.97	0.185	0.11	0.731	0.205	1.05	9.45	0.1	10.6	11532	3.366	16.91874	-13.55274	NAF
NS0078	182	184	NS	E889735	889735	1	G	W	31.4	39.99	2.2	0.2967	0.23	0.107	2.85	0.94	0.147	0.086	0.983	0.275	1.14	5.36	0.3	6.8	11528	2.6316	16.39548	-13.76388	NAF
NS0078	202	204	NS	E889745	889745	1	G	W	34.15	35	1.18	0.4386	0.34	0.054	2.71	0.88	0.109	0.043	0.55	0.13	0.83	9.15	0.05	10.03	11538	1.3158	15.34896	-14.03316	NAF
NS0078	148	150	NS	E889718	889718	1	G	W	33.26	34.93	1.17	0.5031	0.39	0.051	2.63	0.93	0.08	0.066	0.526	0.13	0.88	10.22	0.18	11.28	11511	2.0196	16.22106	-14.20146	NAF
NS0078	210	212	NS	E889749	889749	1	G	W	21.87	57.02	0.82	0.2838	0.22	0.043	1.73	0.89	0.068	0.039	0.391	0.081	0.53	6.07	0.32	6.92	11542	1.1934	15.52338	-14.32998	NAF
NS0078	52	54	NS	E889670	889670	1	G	W	29.55	45.93	1.7	0.258	0.2	0.079	2.47	1.05	0.074	0.118	0.663	0.159	1.07	3.58	0.5	5.15	11463	3.6108	18.3141	-14.7033	NAF
NS0078	254	256	NS	E889771	889771	1	G	W	29.7	40.4	2.65	0.4128	0.32	0.123	3.22	1.13	0.271	0.158	1.21	0.307	1.35	5.62	0.53	7.5	11564	4.8348	19.70946	-14.87466	NAF
NS0078	146	148	NS	E889717	889717	1	G	W	30.35	39.59	2.2	0.3741	0.29	0.098	3.09	1.15	0.131	0.168	0.918	0.24	1.04	6.93	0.64	8.61	11510	5.1408	20.0583	-14.9175	NAF
NS0078	48	50	NS	E889668	889668	1	G	W	28.04	46.65	1.57	0.3612	0.28	0.072	2.49	0.93	0.069	0.039	0.614	0.124	1.17	5.41	0.33	6.91	11461	1.1934	16.22106	-15.02766	NAF
NS0078	68	70	NS	E889678	889678	1	G	W	28.97	46.97	1.33	0.3225	0.25	0.06	2.71	0.94	0.058	0.042	0.604	0.162	0.69	4.62	0.37	5.68	11471	1.2852	16.39548	-15.11028	NAF
NS0078	174	176	NS	E889731	889731	1	G	W	31.05	41.06	1.13	0.4257	0.33	0.047	2.17	1	0.156	0.066	0.458	0.168	0.81	7.74	0.08	8.63	11524	2.0196	17.442	-15.4224	NAF
NS0078	204	206	NS	E889746	889746	1	G	W	34.41	36.38	1.3	0.3999	0.31	0.065	2.38	0.94	0.153	0.031	0.591	0.198	0.83	7.24	-0.05	8.02	11539	0.9486	16.39548	-15.44688	NAF
NS0078	206	208	NS	E889747	889747	1	G	W	33.46	36.19	1.03	0.5031	0.39	0.046	2.45	0.94	0.081	0.022	0.481	0.139	0.8	9.38	0.11	10.29	11540	0.6732	16.39548	-15.72228	NAF
NS0078	108	110	NS	E889698	889698	1	G	W	28.75	41.05	2.82	0.2064	0.16	0.142	3.39	1.23	0.291	0.15	1.29	0.333	1.3	5.4	0.64	7.34	11491	4.59	21.45366	-16.86366	NAF
NS0078	186	188	NS	E889737	889737	1	G	W	25.16	47.98	2.06	0.3354	0.26	0.089	2.77	1.12	0.102	0.085	0.861	0.204	1.13	6.27	0.56	7.96	11530	2.601	19.53504	-16.93404	NAF
NS0078	86	88	NS	E889687	889687	1	G	W	28.96	45.64	1.83	0.1935	0.15	0.083	3.22	1.08	0.057	0.06	0.866	0.237	0.87	3.57	0.71	5.15	11480	1.836	18.83736	-17.00136	NAF
NS0078	196	198	NS	E889742	889742	1	G	W	30.96	40.96	1.53	0.3225	0.25	0.07	2.53	1.13	0.132	0.082	0.744	0.18	0.87	6.49	0.35	7.71	11535	2.5092	19.70946	-17.20026	NAF
NS0078	250	252	NS	E889769	889769	1	G	W	34.46	37.52	1.21	0.4644	0.36	0.057	2.14	1.05	0.077	0.022	0.571	0.183	0.81	6.35	0.24	7.4	11562	0.6732	18.3141	-17.6409	NAF
NS0078	50	52	NS	E889669	889669	1	M	W	29.39	45.93	1.44	0.2967	0.23	0.069	2.46	1.12	0.064	0.04	0.605	0.114	0.96	4.44	0.42	5.82	11462	1.224	19.53504	-18.31104	NAF
NS0078	54	56	NS	E889671	889671	1	G	W	29.33	43.66	1.57	0.3612	0.28	0.075	2.97	1.25	0.068	0.098	0.697	0.17	0.91	5.35	0.63	6.89	11464	2.9988	21.8025	-18.8037	NAF
NS0078	226	228	NS	E889757	889757	1	G	W	29.5	41.85	2.64	0.2451	0.19	0.136	2.66	1.29	0.285	0.117	1.13	0.275	1.18	4.87	0.45	6.5	11550	3.5802	22.50018	-18.91998	NAF
NS0078	238	240	NS	E889763	889763	1	G	W	30.61	40.69	1.62	0.3483	0.27	0.077	2.53	1.26	0.081	0.098	0.76	0.189	0.87	6.86	0.59	8.32	11556	2.9988	21.97692	-18.97812	NAF
NS0078	194	196	NS	E889741	889741	1	G	W	33.59	37.51	1.09	0.4386	0.34	0.045	2.31	1.19	0.079	0.037	0.525	0.148	0.79	7.47	0.29	8.55	11534	1.1322	20.75598	-19.62378	NAF
NS0078	90	92	NS	E889689	889689	1	G	W	28.15	47.36	1.65	0.1935	0.15	0.076	2.74	1.2	0.079	0.031	0.783	0.209	0.82	3.61	0.68	5.11	11482	0.9486	20.9304	-19.9818	NAF
NS0078	208	210	NS	E889748	889748	1	G	W	31.77	38.57	1.47	0.3354	0.26	0.07	2.55	1.3	0.276	0.077	0.699	0.217	1	7.5	0.13	8.63	11541	2.3562	22.6746	-20.3184	NAF
NS0078	134	136	NS	E889711	889711	1	G	W	31.75	36.89	1.55	0.387	0.3	0.073	2.67	1.3	0.182	0.074	0.738	0.195	0.91	8.9	0.31	10.12	11504	2.2644	22.6746	-20.4102	NAF
NS0078	56	58	NS	E889672	889672	1	G	W	28.59	46.24	1.3	0.3354	0.26	0.059	2.57	1.28	0.055	0.053	0.551	0.133	0.75	4.75	0.72	6.22	11465	1.6218	22.32576	-20.70396	NAF
NS0078	58	60	NS	E889673	889673	1	G	W	28.48	45.89	1.23	0.3741	0.29	0.056	2.72	1.39	0.061	0.039	0.529	0.135	0.73	5.39	0.84	6.96	11466	1.1934	24.24438	-23.05098	NAF
NS0078	232	234	NS	E889760	889760	1	G	W	26.24	47.78	2.32	0.2838	0.22	0.109	2.64	1.76	0.096	0.135	1.07	0.296	1.04	3.6	1.22	5.86	11553	4.131	30.69792	-26.56692	NAF
NS0079	94	96	NS	E889833	889833	1	G	W	26.06	39.04	3.23	0.5031	0.39	0.148	3.52	0.42	0.071	1.05	0.542	0.131	0.85	11.73	1.95	14.53	11625	32.13	7.32564	24.80436	PAF(HC)
NS0079	12	14	NS	E889791	889791	1	G	M	36.92	39.67	2.06	0.1548	0.12	0.11	0.18	0.02	0.022	0.017	0.007	0.02	4.05	0.76	0.13	4.94	11584	0.5202	0.34884	0.17136	PAF(LC)
NS0079	16	18	NS	E889793	889793	1	G	M	34.84	44.9	1.38	0.1032	0.08	0.059	0.09	0.005	0.057	0.007	0.004	0.013	2.59	0.51	0.06	3.16	11586	0.2142	0.08721	0.12699	PAF(LC)
NS0079	10	12	NS	E889790	889790	1	M	M	32.98	45.27	2.58	0.0645	0.05	0.136	0.08	0.02	0.016	0.015	0.007	0.021	3.53	0.84	0.13	4.5	11583	0.459	0.34884	0.11016	PAF(LC)
NS0079	6	8	NS	E889788	889788	1	M	D	34.61	40.59	3.43	0.0516	0.04	0.274	0.06	0.03	0.019	0.017	0.01	0.011	4.79	0.84	0.12	5.75	11581	0.5202	0.52326	-0.00306	NAF
NS0079	12	16	NS	BX159791-BX159792	X159791	2			66.28	3.359	0.23	0.064	0.04608	0.02	0.116	0.027	0.022	0.015	0.005	0.073	0.03	0.41	0.37	0.81	3610	0.459	0.470934	-0.011934	NAF
NS0079	50	52	NS	E889810	889810	1	G	W	26.88	38.21	4.63	0.516	0.4	0.207	4.18	0.55	0.057	0.313	0.203	0.051	0.86	11.34	0.75	12.95	11603	9.5778	9.5931	-0.0153	NAF
NS0079	14	16	NS	E889792	889792	1	G	M	32.27	47.37	1.84	0.0903	0.07	0.08	0.1	0.02	0.037	0.01	0.005	0.009	3.24	0.7	0.08	4.02	11585	0.306	0.34884	-0.04284	NAF
NS0079	8	10	NS	E889789	889789	1	M	M	36.13	41.61	1.78	0.1161	0.09	0.081	0.14	0.03	0.014	0.014	0.008	0.015	3.93	0.61	0.09	4.63	11582	0.4284	0.52326	-0.09486	NAF
NS0079	4	6	NS	E889787	889787	1	M	D	40.88	26.88	7.15	0.0645	0.05	0.573	0.09	0.05	0.027	0.022	0.044	0.018	4.94	1.5	0.22	6.66	11580	0.6732	0.8721	-0.1989	NAF
NS0079	18	20	NS	E889794	889794	1	G	M	38.78	39.56	1.41	0.2193	0.17	0.056	0.1	0.02	0.072	0.003	0.03	0.013	2.12	0.49	-0.05	2.56	11587	0.0918	0.34884	-0.25704	NAF
NS0079	20	22	NS	E889795	889795	1	G	M	39.43	38.85	1.62	0.4644	0.36	0.068	0.12	0.02	0.047	0.003	0.038	0.025	1.67	0.56	-0.02	2.21	11588	0.0918	0.34884	-0.25704	NAF
NS0079	2	4	NS	E889786	889786	1	G	D	38.2	33.37	4.55	0.0516	0.04	0.344	0.09	0.05	0.031	0.02	0.054	0.029	5.52	1.08	0.19	6.79	11579	0.612	0.8721	-0.2601	NAF
NS0079	0	4	NS	BX159785-BX159786	X159785	2			66.03	3.854	0.526	0.03	0.0216	0.056	0.1	0.026	0.021	0.005	0.002	0.085	0.51	0.66	0.73	1.9	3607	0.153	0.453492	-0.300492	NAF
NS0079	16	20	NS	BX159793-BX159794	X159793	2			67.43	2.444	0.201	0.033	0.02376	0.006	0.08	0.023	0.016	0.001	0.001	0.08	0.03	0.05	0.18	0.26	3611	0.0306	0.401166	-0.370566	NAF
NS0079	20	24	NS	BX159795-BX159796	X159795	2			67.48	2.78	0.24	0.073	0.05256	0.013	0.09	0.025	0.014	0.002	0.004	0.068	0.2	0.45	0.04	0.69	3612	0.0612	0.43605	-0.37485	NAF
NS0079	28	32	NS	BX159799-BX159800	X159799	2			68.51	2.097	0.172	0.115	0.0828	0.009	0.102	0.025	0.022	0.002	0.011	0.087	0.24	0.49	0.03	0.76	3614	0.0612	0.43605	-0.37485	NAF
NS0079	32	36	NS	BX159801-BX159802	X159801	2			68.34	1.904	0.173	0.092	0.06624	0.009	0.102	0.024	0.021	0.001	0.017	0.078	0.4	0.21	0.09	0.7	3615	0.0306	0.418608	-0.388008	NAF
NS0079	32	34	NS	E889801	889801	1	G	M	39.85	35.91	1.5	0.8643	0.67	0.065	0.33	0.03	0.078	0.004	0.302	0.02	3	0.58	0.05	3.63	11594	0.1224	0.52326	-0.40086	NAF
NS0079	8	10	NS	BX159789	X159789	2			68.16	2.278	0.252	0.039	0.02808	0.019	0.1	0.031	0.004	0.004	0.003	0.116	-0.01	-0.01	-0.01	-0.03	3609	0.1224	0.540702	-0.418302	NAF
NS0079	24	28	NS	BX159797-BX159798	X159797	2			68.37	2.359	0.161	0.1	0.072	0.009	0.098	0.026	0.027	0.001	0.01	0.068	0.19	0.3	-0.01	0.48	3613	0.0306	0.453492	-0.422892	NAF
NS0079	36	40	NS	BX159803-BX159804	X159803	2			66.62	2.638	0.238	0.115	0.0828	0.012	0.126	0.026	0.024	0.001	0.032	0.082	0.12	0.29	0.67	1.08	3616	0.0306	0.453492	-0.422892	NAF
NS0079	22	24	NS	E889796	889796	1	G	M	39.98	37.52	1.56	0.6063	0.47	0.07	0.17	0.03	0.053	0.003	0.094	0.015	1.73	0.53	-0.08	2.18	11589	0.0918	0.52326	-0.43146	NAF
NS0079	24	26	NS	E889797	889797	1	G	M	36.56	42.85	1.13	0.7353	0.57	0.049	0.21	0.03	0.077	0.003	0.178	0.021	1.73	0.41	-0.06	2.08	11590	0.0918	0.52326	-0.43146	NAF
NS0079	26	28	NS	E889798	889798	1	G	M	38.97	39.03	1.33	0.5289	0.41	0.057	0.24	0.03	0.086	0.002	0.297	0.021	1.81	0.43	-0.04	2.2	11591	0.0612	0.52326	-0.46206	NAF
NS0079	30	32	NS	E889800	889800	1	G	M	34.71	45.21	1.02	0.8385	0.65	0.047	0.2	0.03	0.07	0.002	0.277	0.021	1.85	0.42	-0.07	2.2	11593	0.0612	0.52326	-0.46206	NAF
NS0079	4	8	NS	BX159787-BX159788	X159787	2			63.76	3.357	3.278	0.054	0.03888	0.72	0.115	0.052	0.014	0.013	0.011	0.206	-0.01	-0.01	-0.01	-0.03	3608	0.3978	0.906984	-0.509184	NAF
NS0079	36	38	NS	E889803	889803	1	G	M	38.01	39.56	1.29	0.7353	0.57	0.055	0.34	0.04	0.073	0.003	0.251	0.017	2.25	0.45	0.02	2.72	11596	0.0918	0.69768	-0.60588	NAF
NS0079	48	52	NS	BX159809-BX159810	X159809	2			67.86	3.847	0.495	0.081	0.05832	0.057	0.464	0.082	0.014	0.026	0.011	0.105	-0.01	-0.01	-0.01	-0.03	3619	0.7956	1.430244	-0.634644	NAF
NS0079	28	30	NS	E889799	889799	1	G	M	39.55	38.23	1.48	0.774	0.6	0.062	0.26	0.04	0.075	0.002	0.354	0.02	1.78	0.47	-0.04	2.21	11592	0.0612	0.69768	-0.63648	NAF
NS0079	98	102	NS	BX159835-BX159836	X159835	2			69.03	3.281	0.232	0.053	0.03816	0.02	0.3	0.065	0.012	0.016	0.02	0.09	-0.01	-0.01	-0.01	-0.03	3632	0.4896	1.13373	-0.64413	NAF
NS0079	70	74	NS	BX159821-BX159822	X159821	2			70.78	1.983	0.102	0.041	0.02952	0.009	0.186	0.048	0.009	0.006	0.029	0.083	-0.01	-0.01	-0.01	-0.03	3625	0.1836	0.837216	-0.653616	NAF
NS0079	38	40	NS	E889804	889804	1	G	M	35.86	39.35	1.77	1.8318	1.42	0.077	0.32	0.05	0.112	0.007	0.304	0.016	3.36	0.71	0.27	4.34	11597	0.2142	0.8721	-0.6579	NAF
NS0079	78	82	NS	BX159825-BX159826	X159825	2			70.47	1.749	0.057	0.042	0.03024	0.008	0.172	0.046	0.008	0.003	0.024	0.067	-0.01	-0.01	-0.01	-0.03	3627	0.0918	0.802332	-0.710532	NAF
NS0079	52	56	NS	BX159811-BX159812	X159811	2			68.35	3.945	0.291	0.067	0.04824	0.029	0.317	0.069	0.01	0.016	0.022	0.125	-0.01	-0.01	-0.01	-0.03	3620	0.4896	1.203498	-0.713898	NAF
NS0079	82	86	NS	BX159827-BX159828	X159827	2			71.18	1.673	0.09	0.041	0.02952	0.01	0.193	0.051	0.009	0.005	0.053	0.082	-0.01	-0.01	-0.01	-0.03	3628	0.153	0.889542	-0.736542	NAF
NS0079	60	64	NS	BX159815-BX159816	X159815	2			69.72	2.068	0.057	0.043	0.03096	0.008	0.164	0.053	0.008	0.006	0.005	0.102	-0.01	-0.01	-0.01	-0.03	3622	0.1836	0.924426	-0.740826	NAF
NS0079	66	70	NS	BX159819-BX159820	X159819	2			69.63	3.187	0.193	0.043	0.03096	0.011	0.257	0.057	0.01	0.008	0.041	0.113	-0.01	-0.01	-0.01	-0.03	3624	0.2448	0.994194	-0.749394	NAF
NS0079	34	36	NS	E889802	889802	1	G	M	40.4	35.72	1.54	0.6321	0.49	0.069	0.4	0.05	0.096	0.003	0.346	0.02	2.37	0.49	0	2.86	11595	0.0918	0.8721	-0.7803	NAF
NS0079	140	144	NS	BX159857-BX159858	X159857	2			66.42	5.2	0.357	0.065	0.0468	0.03	0.375	0.068	0.014	0.013	0.029	0.077	-0.01	-0.01	-0.01	-0.03	3643	0.3978	1.186056	-0.788256	NAF
NS0079	90	94	NS	BX159831-BX159832	X159831	2			71.15	1.819	0.08	0.042	0.03024	0.014	0.189	0.051	0.008	0.003	0.034	0.075	-0.01	-0.01	-0.01	-0.03	3630	0.0918	0.889542	-0.797742	NAF
NS0079	74	78	NS	BX159823-BX159824	X159823	2			70.97	2.221	0.069	0.043	0.03096	0.009	0.158	0.05	0.009	0.002	0.063	0.071	-0.01	-0.01	-0.01	-0.03	3626	0.0612	0.8721	-0.8109	NAF
NS0079	44	48	NS	BX159807-BX159808	X159807	2			68.29	3.712	0.258	0.075	0.054	0.026	0.332	0.079	0.016	0.018	0.014	0.128	-0.01	-0.01	-0.01	-0.03	3618	0.5508	1.377918	-0.827118	NAF
NS0079	86	88	NS	BX159829	X159829	2			71.35	1.758	0.042	0.043	0.03096	0.007	0.182	0.053	0.008	0.003	0.031	0.081	-0.01	-0.01	-0.01	-0.03	3629	0.0918	0.924426	-0.832626	NAF
NS0079	94	98	NS	BX159833-BX159834	X159833	2			69.98	3.198	0.148	0.053	0.03816	0.015	0.247	0.062	0.012	0.008	0.02	0.064	-0.01	-0.01	-0.01	-0.03	3631	0.2448	1.081404	-0.836604	NAF
NS0079	124	128	NS	BX159849-BX159850	X159849	2			68.41	4.434	0.23	0.052	0.03744	0.02	0.251	0.064	0.012	0.009	0.115	0.074	-0.01	-0.01	-0.01	-0.03	3639	0.2754	1.116288	-0.840888	NAF
NS0079	40	44	NS	BX159805-BX159806	X159805	2			67.37	4.816	0.295	0.074	0.05328	0.02	0.272	0.062	0.016	0.006	0.037	0.078	-0.01	-0.01	-0.01	-0.03	3617	0.1836	1.081404	-0.897804	NAF
NS0079	64	66	NS	BX159818	X159818	2			69.98	2.004	0.088	0.052	0.03744	0.008	0.218	0.063	0.011	0.004	0.006	0.077	-0.01	-0.01	-0.01	-0.03	3623	0.1224	1.098846	-0.976446	NAF
NS0079	114	118	NS	BX159843-BX159844	X159843	2			69.88	3.362	0.126	0.047	0.03384	0.016	0.205	0.067	0.014	0.006	0.048	0.095	-0.01	-0.01	-0.01	-0.03	3636	0.1836	1.168614	-0.985014	NAF
NS0079	56	60	NS	BX159813-BX159814	X159813	2			69.55	3.024	0.138	0.061	0.04392	0.017	0.247	0.077	0.013	0.01	0.016	0.198	-0.01	-0.01	-0.01	-0.03	3621	0.306	1.343034	-1.037034	NAF
NS0079	118	120	NS	BX159846	X159846	2			69.37	3.776	0.19	0.051	0.03672	0.019	0.255	0.069	0.015	0.005	0.075	0.062	-0.01	-0.01	-0.01	-0.03	3637	0.153	1.203498	-1.050498	NAF
NS0079	110	114	NS	BX159841-BX159842	X159841	2			67.88	4.62	0.156	0.055	0.0396	0.018	0.251	0.086	0.02	0.01	0.047	0.075	-0.01	-0.01	-0.01	-0.03	3635	0.306	1.500012	-1.194012	NAF
NS0079	128	132	NS	BX159851-BX159852	X159851	2			68.16	4.435	0.199	0.06	0.0432	0.02	0.285	0.089	0.019	0.011	0.068	0.085	-0.01	-0.01	-0.01	-0.03	3640	0.3366	1.552338	-1.215738	NAF
NS0079	136	140	NS	BX159855-BX159856	X159855	2			66.37	5.944	0.289	0.053	0.03816	0.024	0.345	0.088	0.016	0.009	0.063	0.075	-0.01	-0.01	-0.01	-0.03	3642	0.2754	1.534896	-1.259496	NAF
NS0079	120	124	NS	BX159847-BX159848	X159847	2			67.22	4.848	0.281	0.058	0.04176	0.023	0.313	0.091	0.021	0.01	0.129	0.082	-0.01	-0.01	-0.01	-0.03	3638	0.306	1.587222	-1.281222	NAF
NS0079	132	136	NS	BX159853-BX159854	X159853	2			66.74	5.919	0.398	0.063	0.04536	0.034	0.419	0.099	0.021	0.012	0.096	0.086	-0.01	-0.01	-0.01	-0.03	3641	0.3672	1.726758	-1.359558	NAF
NS0079	106	110	NS	BX159839-BX159840	X159839	2			68.48	4.163	0.252	0.059	0.04248	0.023	0.33	0.131	0.033	0.024	0.057	0.111	-0.01	-0.01	-0.01	-0.03	3634	0.7344	2.284902	-1.550502	NAF
NS0079	40	42	NS	E889805	889805	1	G	M	37.56	38.72	1.49	0.774	0.6	0.065	0.7	0.13	0.083	0.012	0.148	0.028	1.98	1.91	-0.12	3.77	11598	0.3672	2.26746	-1.90026	NAF
NS0079	48	50	NS	E889809	889809	1	G	W	28.84	35.82	2.98	0.6192	0.48	0.137	3.44	0.46	0.082	0.189	0.134	0.018	0.89	13.21	0.34	14.44	11602	5.7834	8.02332	-2.23992	NAF
NS0079	102	106	NS	BX159837-BX159838	X159837	2			67.65	5.026	0.271	0.071	0.05112	0.029	0.358	0.154	0.038	0.01	0.083	0.072	-0.01	-0.01	-0.01	-0.03	3633	0.306	2.686068	-2.380068	NAF
NS0079	0	2	NS	E889785	889785	1	G	D	33.42	39.41	5.14	0.0516	0.04	0.319	0.11	0.22	0.039	0.025	0.101	0.037	4.89	1.36	0.18	6.43	11578	0.765	3.83724	-3.07224	NAF
NS0079	108	110	NS	E889840	889840	1	G	W	28.39	42.9	3.32	0.5805	0.45	0.144	3.35	0.69	0.177	0.29	0.712	0.086	0.53	5.88	0.44	6.85	11632	8.874	12.03498	-3.16098	NAF
NS0079	46	48	NS	E889808	889808	1	G	W	30.02	36.45	2.83	0.6192	0.48	0.127	3.14	0.45	0.078	0.152	0.134	0.021	1.16	11.44	0.21	12.81	11601	4.6512	7.8489	-3.1977	NAF
NS0079	142	144	NS	E889858	889858	1	G	W	28.41	44.63	2.59	0.4902	0.38	0.119	2.92	0.39	0.062	0.106	0.329	0.067	0.49	6.69	0.06	7.24	11649	3.2436	6.80238	-3.55878	NAF
NS0079	130	132	NS	E889852	889852	1	G	W	30.27	41.87	1.59	0.6579	0.51	0.073	2.6	0.76	0.086	0.295	0.5	0.057	0.45	7.48	0.52	8.45	11643	9.027	13.25592	-4.22892	NAF
NS0079	124	126	NS	E889849	889849	1	G	W	33.75	38.09	1.99	0.6063	0.47	0.087	2.45	0.56	0.075	0.125	0.881	0.051	0.41	6.4	-0.04	6.77	11640	3.825	9.76752	-5.94252	NAF
NS0079	44	46	NS	E889807	889807	1	G	W	31.36	39.28	1.57	0.6192	0.48	0.069	2.33	0.65	0.128	0.171	0.269	0.085	0.87	8.83	0.15	9.85	11600	5.2326	11.3373	-6.1047	NAF
NS0079	68	70	NS	E889820	889820	1	G	W	31.93	38.57	1.85	0.4257	0.33	0.082	2.61	0.48	0.06	0.073	0.573	0.017	0.52	9.09	-0.09	9.52	11612	2.2338	8.37216	-6.13836	NAF
NS0079	70	72	NS	E889821	889821	1	G	W	30.64	38.22	1.43	0.4902	0.38	0.062	2.7	0.55	0.074	0.103	0.501	0.011	0.73	11.18	0	11.91	11613	3.1518	9.5931	-6.4413	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0079	54	56	NS	E889812	889812	1	G	W	31	39.61	3.29	0.5934	0.46	0.145	2.67	0.72	0.104	0.188	0.275	0.088	1.25	6.08	0.37	7.7	11605	5.7528	12.55824	-6.80544	NAF
NS0079	56	58	NS	E889813	889813	1	G	W	30.56	39.36	3.49	0.6192	0.48	0.155	3.3	0.72	0.1	0.185	0.271	0.06	0.77	7.11	0.26	8.14	11606	5.661	12.55824	-6.89724	NAF
NS0079	52	54	NS	E889811	889811	1	G	W	28.62	39.33	4.2	0.5289	0.41	0.187	3.62	0.68	0.068	0.161	0.294	0.081	0.84	8.55	0.3	9.69	11604	4.9266	11.86056	-6.93396	NAF
NS0079	62	64	NS	E889816	889816	1	G	W	32.31	40.47	1.06	0.6837	0.53	0.045	2.11	0.45	0.083	0.028	0.11	0.026	0.67	7.9	-0.29	8.28	11609	0.8568	7.8489	-6.9921	NAF
NS0079	104	106	NS	E889838	889838	1	G	W	32.23	35.91	2.71	0.6321	0.49	0.129	3.31	0.65	0.099	0.142	0.891	0.106	0.62	8.35	0.1	9.07	11630	4.3452	11.3373	-6.9921	NAF
NS0079	140	142	NS	E889857	889857	1	G	W	31.07	43.04	2	0.4257	0.33	0.09	2.47	0.55	0.054	0.054	0.415	0.072	0.5	5.92	-0.04	6.38	11648	1.6524	9.5931	-7.9407	NAF
NS0079	118	120	NS	E889846	889846	1	G	W	34.33	38.4	1.66	0.5934	0.46	0.073	2.34	0.54	0.097	0.046	0.595	0.057	0.42	5.93	-0.21	6.14	11637	1.4076	9.41868	-8.01108	NAF
NS0079	112	114	NS	E889842	889842	1	G	W	28.78	49.78	0.87	0.5547	0.43	0.037	1.54	0.5	0.083	0.02	0.324	0.026	0.22	4.8	-0.23	4.79	11634	0.612	8.721	-8.109	NAF
NS0079	120	122	NS	E889847	889847	1	M	W	34.92	34.6	2.39	0.6579	0.51	0.102	2.71	0.62	0.138	0.083	1.04	0.086	0.49	6.8	-0.19	7.1	11638	2.5398	10.81404	-8.27424	NAF
NS0079	110	112	NS	E889841	889841	1	G	W	34.91	38.11	1.48	0.645	0.5	0.066	2.33	0.59	0.107	0.065	0.379	0.036	0.32	6.27	-0.25	6.34	11633	1.989	10.29078	-8.30178	NAF
NS0079	74	76	NS	E889823	889823	1	M	W	33.56	35.09	1.14	0.6321	0.49	0.046	2.38	0.53	0.082	0.027	0.83	0.005	0.92	10.03	-0.18	10.77	11615	0.8262	9.24426	-8.41806	NAF
NS0079	134	136	NS	E889854	889854	1	G	W	32.84	39.02	2.44	0.5031	0.39	0.109	2.86	0.66	0.1	0.1	0.637	0.077	0.57	6.24	-0.03	6.78	11645	3.06	11.51172	-8.45172	NAF
NS0079	122	124	NS	E889848	889848	1	G	W	37.05	34.27	1.52	0.5676	0.44	0.067	2.29	0.55	0.095	0.037	0.688	0.056	0.37	6.29	-0.3	6.36	11639	1.1322	9.5931	-8.4609	NAF
NS0079	116	118	NS	E889844	889844	1	G	W	33.63	39.76	1.3	0.6837	0.53	0.057	2.2	0.57	0.122	0.045	0.424	0.057	0.4	6.49	-0.29	6.6	11636	1.377	9.94194	-8.56494	NAF
NS0079	42	44	NS	E889806	889806	1	G	W	35.47	36.04	1.74	0.6321	0.49	0.078	1.93	0.62	0.106	0.063	0.171	0.031	1.26	6.59	-0.08	7.77	11599	1.9278	10.81404	-8.88624	NAF
NS0079	60	62	NS	E889815	889815	1	G	W	35.93	36.07	1.31	0.6837	0.53	0.058	2.03	0.58	0.084	0.031	0.125	0.03	0.7	6.94	-0.37	7.27	11608	0.9486	10.11636	-9.16776	NAF
NS0079	98	100	NS	E889835	889835	1	G	W	29.42	35.21	2.17	0.4644	0.36	0.094	3.5	0.7	0.115	0.098	0.386	0.09	0.99	13.84	0.17	15	11627	2.9988	12.2094	-9.2106	NAF
NS0079	114	116	NS	E889843	889843	1	G	W	35.12	38.61	1.2	0.5934	0.46	0.052	2.04	0.58	0.08	0.028	0.334	0.051	0.32	5.53	-0.16	5.69	11635	0.8568	10.11636	-9.25956	NAF
NS0079	66	68	NS	E889819	889819	1	G	W	30.89	39.72	1.37	0.5547	0.43	0.059	2.56	0.61	0.092	0.043	0.247	0.021	0.61	9.59	-0.16	10.04	11611	1.3158	10.63962	-9.32382	NAF
NS0079	100	102	NS	E889836	889836	1	G	W	29.37	41.18	1.81	0.6708	0.52	0.079	2.67	0.83	0.161	0.168	0.406	0.073	0.61	8.76	0.13	9.5	11628	5.1408	14.47686	-9.33606	NAF
NS0079	76	78	NS	E889824	889824	1	M	W	34.1	36.18	1.13	0.6579	0.51	0.048	2.17	0.6	0.091	0.03	0.939	0.013	0.65	8.83	-0.16	9.32	11616	0.918	10.4652	-9.5472	NAF
NS0079	138	140	NS	E889856	889856	1	G	W	30.87	43	2.26	0.4515	0.35	0.104	2.59	0.7	0.079	0.082	0.447	0.069	0.47	5.62	0.02	6.11	11647	2.5092	12.2094	-9.7002	NAF
NS0079	78	80	NS	E889825	889825	1	G	W	33.02	32.77	1.05	0.6321	0.49	0.045	2.97	0.64	0.081	0.035	0.479	0.005	1.02	12.76	-0.09	13.69	11617	1.071	11.16288	-10.09188	NAF
NS0079	92	94	NS	E889832	889832	1	G	W	31.41	32.33	1.81	0.5547	0.43	0.08	3.2	0.65	0.087	0.04	0.576	0.046	0.85	14.6	-0.06	15.39	11624	1.224	11.3373	-10.1133	NAF
NS0079	82	84	NS	E889827	889827	1	G	W	32.23	32.35	2.03	0.5934	0.46	0.088	3.1	0.79	0.118	0.101	0.964	0.015	0.67	12.75	0.01	13.43	11619	3.0906	13.77918	-10.68858	NAF
NS0079	72	74	NS	E889822	889822	1	M	W	31.23	38	1.27	0.5805	0.45	0.055	2.48	0.7	0.083	0.034	0.395	0.015	0.88	10.34	0.01	11.23	11614	1.0404	12.2094	-11.169	NAF
NS0079	96	98	NS	E889834	889834	1	G	W	30.08	35.65	1.75	0.5031	0.39	0.077	3.24	0.8	0.108	0.08	0.305	0.088	0.97	13.41	0.07	14.45	11626	2.448	13.9536	-11.5056	NAF
NS0079	126	128	NS	E889850	889850	1	G	W	34.98	37.16	1.47	0.645	0.5	0.061	2.06	0.75	0.101	0.045	0.743	0.034	0.37	6.28	-0.09	6.56	11641	1.377	13.0815	-11.7045	NAF
NS0079	80	82	NS	E889826	889826	1	G	W	32.76	35.04	1.04	0.6321	0.49	0.044	2.65	0.72	0.09	0.026	0.34	0.008	0.78	11.61	-0.07	12.32	11618	0.7956	12.55824	-11.76264	NAF
NS0079	64	66	NS	E889818	889818	1	G	W	33.5	34.61	1.12	0.7482	0.58	0.048	2.74	0.74	0.088	0.034	0.144	0.035	0.77	10.92	-0.14	11.55	11610	1.0404	12.90708	-11.86668	NAF
NS0079	58	60	NS	E889814	889814	1	G	W	34.19	37.23	1.56	0.6837	0.53	0.069	2.32	0.77	0.091	0.049	0.242	0.068	0.67	7.23	-0.15	7.75	11607	1.4994	13.43034	-11.93094	NAF
NS0079	132	134	NS	E889853	889853	1	G	W	26.36	46.83	1.64	0.5934	0.46	0.073	2.71	0.8	0.104	0.066	0.343	0.038	0.46	8.12	0.08	8.66	11644	2.0196	13.9536	-11.934	NAF
NS0079	84	86	NS	E889828	889828	1	G	W	32.74	33.63	0.9	0.645	0.5	0.041	2.65	0.73	0.09	0.022	0.552	0.01	0.81	12.69	-0.08	13.42	11620	0.6732	12.73266	-12.05946	NAF
NS0079	102	104	NS	E889837	889837	1	G	W	33.44	36.54	1.11	0.7353	0.57	0.049	2.61	0.77	0.085	0.035	0.34	0.045	0.51	8.95	-0.07	9.39	11629	1.071	13.43034	-12.35934	NAF
NS0079	90	92	NS	E889831	889831	1	G	W	33.74	34.45	1	0.6708	0.52	0.043	2.48	0.74	0.08	0.016	0.502	0.024	0.56	11.51	-0.11	11.96	11623	0.4896	12.90708	-12.41748	NAF
NS0079	106	108	NS	E889839	889839	1	G	W	35.61	34.94	1.1	0.7353	0.57	0.052	2.56	0.82	0.116	0.038	0.312	0.05	0.47	7.93	-0.14	8.26	11631	1.1628	14.30244	-13.13964	NAF
NS0079	88	90	NS	E889830	889830	1	G	W	32.68	34.82	0.88	0.6579	0.51	0.037	2.61	0.84	0.087	0.033	0.445	0.022	0.59	12.2	0.01	12.8	11622	1.0098	14.65128	-13.64148	NAF
NS0079	136	138	NS	E889855	889855	1	G	W	31.78	42.41	1.6	0.4902	0.38	0.071	2.31	0.92	0.092	0.049	0.405	0.039	0.41	5.76	0.05	6.22	11646	1.4994	16.04664	-14.54724	NAF
NS0079	128	130	NS	E889851	889851	1	G	W	34.12	37.79	0.99	0.7353	0.57	0.043	2.24	0.95	0.093	0.03	0.408	0.033	0.38	7.49	0.11	7.98	11642	0.918	16.5699	-15.6519	NAF
NS0079	86	88	NS	E889829	889829	1	G	W	29.63	36.95	0.89	0.6321	0.49	0.038	2.77	0.95	0.089	0.017	0.481	0.012	0.63	13.43	0.25	14.31	11621	0.5202	16.5699	-16.0497	NAF
NS0080	106	108	NS	E889913	889913	1	G	W	23.14	46.48	8.27	0.3483	0.27	0.397	3.82	0.73	0.071	0.672	1.25	0.318	1.16	2.56	1.19	4.91	11702	20.5632	12.73266	7.83054	PAF(LC)
NS0080	104	106	NS	E889912	889912	1	G	W	19.08	53.78	7.97	0.3354	0.26	0.379	3.46	0.94	0.052	0.583	0.812	0.228	0.85	2.51	1.11	4.47	11701	17.8398	16.39548	1.44432	PAF(LC)
NS0080	144	146	NS	E889932	889932	1	G	W	25.5	42.53	3.52	0.4386	0.34	0.17	3.05	0.76	0.062	0.456	0.983	0.251	1.26	8.67	1.26	11.19	11721	13.9536	13.25592	0.69768	PAF(LC)
NS0080	206	208	NS	E889964	889964	1	G	W	22.99	46.85	8.52	0.1935	0.15	0.398	4.22	0.47	0.036	0.288	0.91	0.258	1.07	2.94	0.85	4.86	11752	8.8128	8.19774	0.61506	PAF(LC)
NS0080	214	216	NS	E889968	889968	1	G	W	24.85	43.75	7.08	0.3225	0.25	0.336	4.06	0.57	0.063	0.34	1.19	0.327	1.29	3.89	1.1	6.28	11756	10.404	9.94194	0.46206	PAF(LC)
NS0080	186	188	NS	E889954	889954	1	G	W	23.85	45.42	8.87	0.1935	0.15	0.404	4.02	0.34	0.022	0.208	0.96	0.282	1.1	3.12	0.76	4.98	11742	6.3648	5.93028	0.43452	PAF(LC)
NS0080	188	190	NS	E889955	889955	1	G	W	23.35	46.5	8.5	0.1935	0.15	0.401	3.95	0.39	0.038	0.214	0.993	0.273	1.12	2.94	0.74	4.8	11743	6.5484	6.80238	-0.25398	NAF
NS0080	148	150	NS	E889934	889934	1	G	W	24.46	44.2	4.89	0.3354	0.26	0.239	3.33	0.68	0.069	0.378	0.892	0.242	1.3	7.22	1.08	9.6	11723	11.5668	11.86056	-0.29376	NAF
NS0080	102	104	NS	E889911	889911	1	G	W	18.73	53.55	7.95	0.3483	0.27	0.375	3.36	1.03	0.037	0.556	1.21	0.22	0.85	2.84	1.19	4.88	11700	17.0136	17.96526	-0.95166	NAF
NS0080	0	2	NS	E889859	889859	1	G	D	33.97	30.54	13.47	0.0258	0.02	1.082	0.09	0.08	0.018	0.013	0.134	0.044	2.05	3.47	0.31	5.83	11650	0.3978	1.39536	-0.99756	NAF
NS0080	4	6	NS	E889861	889861	1	G	D	11.18	68.83	8.72	-0.0129	-0.01	0.313	0.09	0.1	0.017	0.011	0.043	0.046	2.34	2.87	0.25	5.46	11652	0.3366	1.7442	-1.4076	NAF
NS0080	2	4	NS	E889860	889860	1	G	D	7.03	73.15	10.74	-0.0129	-0.01	0.454	0.1	0.11	0.01	0.006	0.051	0.048	1.14	3.49	0.25	4.88	11651	0.1836	1.91862	-1.73502	NAF
NS0080	6	8	NS	E889862	889862	1	G	D	19.95	56.37	7.88	0.0258	0.02	0.324	0.14	0.12	0.015	0.011	0.043	0.039	3.72	2.46	0.27	6.45	11653	0.3366	2.09304	-1.75644	NAF
NS0080	146	148	NS	E889933	889933	1	G	W	24.43	44.17	6.14	0.3096	0.24	0.3	3.85	0.79	0.131	0.386	1.03	0.297	1.27	5.06	1.17	7.5	11722	11.8116	13.77918	-1.96758	NAF
NS0080	24	26	NS	E889871	889871	1	G	M	32.09	45.61	1.77	0.0903	0.07	0.088	0.44	0.15	0.052	0.015	0.036	0.048	4.53	0.93	0.15	5.61	11662	0.459	2.6163	-2.1573	NAF
NS0080	184	186	NS	E889952	889952	1	G	W	23.08	46.89	8.06	0.2451	0.19	0.37	3.83	0.63	0.033	0.281	1	0.282	1.09	3.16	0.92	5.17	11741	8.5986	10.98846	-2.38986	NAF
NS0080	216	218	NS	E889969	889969	1	G	W	23.87	46.66	5.63	0.3483	0.27	0.274	3.6	0.68	0.09	0.303	1.19	0.341	1.29	4.57	0.98	6.84	11757	9.2718	11.86056	-2.58876	NAF
NS0080	108	110	NS	E889914	889914	1	G	W	26.57	41.39	3.44	0.4515	0.35	0.163	2.85	0.71	0.061	0.315	1.21	0.308	1.56	8.69	0.97	11.22	11703	9.639	12.38382	-2.74482	NAF
NS0080	30	32	NS	E889874	889874	1	G	M	26.22	51.42	2.61	0.6063	0.47	0.116	0.65	0.18	0.059	0.006	0.152	0.042	4.82	1.21	0.22	6.25	11665	0.1836	3.13956	-2.95596	NAF
NS0080	132	134	NS	E889926	889926	1	G	W	25.1	44.04	5.44	0.2193	0.17	0.26	3.49	0.62	0.097	0.256	1.12	0.312	2.67	4.48	0.87	8.02	11715	7.8336	10.81404	-2.98044	NAF
NS0080	26	28	NS	E889872	889872	1	G	M	29.64	47.68	2.45	0.1419	0.11	0.123	0.64	0.22	0.059	0.015	0.078	0.05	4.57	1.17	0.18	5.92	11663	0.459	3.83724	-3.37824	NAF
NS0080	164	166	NS	E889942	889942	1	G	W	24.05	45.82	4.41	0.2967	0.23	0.211	3.24	0.61	0.064	0.231	0.976	0.38	1.25	7.07	0.76	9.08	11731	7.0686	10.63962	-3.57102	NAF
NS0080	220	222	NS	E889971	889971	1	G	W	28.23	38.63	2.29	0.2451	0.19	0.108	2.52	0.43	0.053	0.119	0.868	0.238	1.4	12.2	0.36	13.96	11759	3.6414	7.50006	-3.85866	NAF
NS0080	174	176	NS	E889947	889947	1	G	W	18.16	52.81	11.06	0.1161	0.09	0.527	4.08	0.41	0.013	0.104	0.033	0.024	0.43	3.8	0.36	4.59	11736	3.1824	7.15122	-3.96882	NAF
NS0080	22	24	NS	E889870	889870	1	G	M	34.11	40.1	2.61	0.1548	0.12	0.116	0.68	0.26	0.066	0.018	0.061	0.059	5.26	1.3	0.21	6.77	11661	0.5508	4.53492	-3.98412	NAF
NS0080	208	210	NS	E889965	889965	1	G	W	22.77	48.81	5.44	0.3741	0.29	0.255	3.42	1.05	0.133	0.468	1.29	0.332	1.28	3.54	1.22	6.04	11753	14.3208	18.3141	-3.9933	NAF
NS0080	224	226	NS	E889973	889973	1	G	W	28.45	37.47	2.45	0.1935	0.15	0.114	2.51	0.44	0.048	0.12	0.634	0.22	1.36	13.19	0.34	14.89	11761	3.672	7.67448	-4.00248	NAF
NS0080	198	200	NS	E889960	889960	1	G	W	26.35	40.56	4.6	0.2967	0.23	0.218	3.45	0.74	0.137	0.284	0.961	0.258	1.36	8.31	0.88	10.55	11748	8.6904	12.90708	-4.21668	NAF
NS0080	32	34	NS	E889875	889875	1	G	M	21.06	58.19	3.61	0.5031	0.39	0.168	0.9	0.27	0.041	0.008	0.265	0.043	3.94	1.5	0.23	5.67	11666	0.2448	4.70934	-4.46454	NAF
NS0080	10	12	NS	E889864	889864	1	G	D	25.14	47.34	7.87	0.0258	0.02	0.424	0.49	0.29	0.037	0.017	0.094	0.079	4.33	2.5	0.29	7.12	11655	0.5202	5.05818	-4.53798	NAF
NS0080	178	180	NS	E889949	889949	1	G	W	17.41	54.57	10.89	0.1161	0.09	0.524	4.08	0.32	0.018	0.028	0.02	0.016	0.46	3.74	0.28	4.48	11738	0.8568	5.58144	-4.72464	NAF
NS0080	12	14	NS	E889865	889865	1	G	D	32.4	43.15	3.22	0.0258	0.02	0.119	0.29	0.31	0.079	0.021	0.037	0.051	4.48	1.27	0.19	5.94	11656	0.6426	5.40702	-4.76442	NAF
NS0080	20	22	NS	E889869	889869	1	G	M	32.06	42.37	3.19	0.1161	0.09	0.152	0.78	0.32	0.057	0.015	0.092	0.07	4.88	1.49	0.21	6.58	11660	0.459	5.58144	-5.12244	NAF
NS0080	242	244	NS	E889983	889983	1	G	W	27.27	40.39	2	0.3096	0.24	0.092	2.51	0.56	0.054	0.151	0.743	0.192	1.41	11.84	0.4	13.65	11770	4.6206	9.76752	-5.14692	NAF
NS0080	16	18	NS	E889867	889867	1	G	D	29.83	45.07	4.51	0.0645	0.05	0.21	0.68	0.32	0.063	0.014	0.643	0.078	3.6	1.54	0.16	5.3	11658	0.4284	5.58144	-5.15304	NAF
NS0080	18	20	NS	E889868	889868	1	G	M	30.71	45.62	3.27	0.0645	0.05	0.152	0.71	0.33	0.07	0.013	0.101	0.075	3.71	1.42	0.13	5.26	11659	0.3978	5.75586	-5.35806	NAF
NS0080	42	44	NS	E889880	889880	1	G	M	19.05	55.86	6.83	0.2838	0.22	0.323	1.33	0.32	0.039	0.007	1.48	0.049	3.49	2.05	0.29	5.83	11671	0.2142	5.58144	-5.36724	NAF
NS0080	200	202	NS	E889961	889961	1	G	W	24.4	44.14	4.06	0.3741	0.29	0.19	3	1	0.099	0.391	0.757	0.205	1.18	8.67	1.04	10.89	11749	11.9646	17.442	-5.4774	NAF
NS0080	34	36	NS	E889876	889876	1	G	M	22.36	53.01	4.85	0.6708	0.52	0.228	1.2	0.34	0.045	0.009	0.54	0.057	4.29	1.84	0.31	6.44	11667	0.2754	5.93028	-5.65488	NAF
NS0080	38	40	NS	E889878	889878	1	G	M	26.35	49	3.67	0.5547	0.43	0.174	1.1	0.34	0.058	0.008	0.262	0.047	4.92	1.66	0.29	6.87	11669	0.2448	5.93028	-5.68548	NAF
NS0080	190	192	NS	E889956	889956	1	G	W	22.15	49.08	7.72	0.2064	0.16	0.363	3.68	0.67	0.053	0.194	1.01	0.274	1.12	2.8	0.83	4.75	11744	5.9364	11.68614	-5.74974	NAF
NS0080	40	42	NS	E889879	889879	1	G	M	24.31	49.87	5.08	0.4386	0.34	0.241	1.33	0.35	0.049	0.008	0.564	0.055	4.59	1.98	0.29	6.86	11670	0.2448	6.1047	-5.8599	NAF
NS0080	44	46	NS	E889881	889881	1	G	M	18.57	56.63	6.47	0.4257	0.33	0.313	1.49	0.35	0.037	0.007	1.27	0.055	3.58	2.04	0.3	5.92	11672	0.2142	6.1047	-5.8905	NAF
NS0080	46	48	NS	E889882	889882	1	G	M	17.36	56.34	7.67	0.3225	0.25	0.366	1.6	0.35	0.032	0.006	2.33	0.066	3.31	2.09	0.3	5.7	11673	0.1836	6.1047	-5.9211	NAF
NS0080	246	248	NS	E889985	889985	1	G	W	28.72	38.63	2.19	0.2709	0.21	0.104	2.56	0.54	0.06	0.109	0.72	0.184	1.24	11.73	0.24	13.21	11772	3.3354	9.41868	-6.08328	NAF
NS0080	50	52	NS	E889884	889884	1	G	M	29.92	43.42	3.73	0.2193	0.17	0.183	1.05	0.37	0.094	0.005	0.259	0.045	5.66	1.74	0.24	7.64	11675	0.153	6.45354	-6.30054	NAF
NS0080	14	16	NS	E889866	889866	1	G	D	21.59	50.49	8.36	0.0387	0.03	0.376	0.91	0.4	0.047	0.018	1.2	0.145	4.13	2.54	0.29	6.96	11657	0.5508	6.9768	-6.426	NAF
NS0080	204	206	NS	E889963	889963	1	G	W	22.33	47.78	8.12	0.1935	0.15	0.372	4.08	0.89	0.1	0.297	0.928	0.262	1.07	2.95	0.91	4.93	11751	9.0882	15.52338	-6.43518	NAF
NS0080	28	30	NS	E889873	889873	1	G	M	25.44	45.65	6.88	0.129	0.1	0.314	1.52	0.39	0.049	0.007	0.42	0.075	4.82	2.56	0.32	7.7	11664	0.2142	6.80238	-6.58818	NAF
NS0080	36	38	NS	E889877	889877	1	G	M	28.14	41.97	5.73	0.7482	0.58	0.267	1.5	0.4	0.053	0.009	0.565	0.071	5.41	2.28	0.37	8.06	11668	0.2754	6.9768	-6.7014	NAF
NS0080	230	232	NS	E889977	889977	1	G	W	27.33	40.2	2.69	0.2838	0.22	0.129	2.78	0.75	0.084	0.207	0.856	0.221	1.26	10.75	0.58	12.59	11764	6.3342	13.0815	-6.7473	NAF
NS0080	212	214	NS	E889967	889967	1	G	W	23.51	46.57	5.37	0.3999	0.31	0.254	3.48	1.02	0.148	0.355	1.22	0.338	1.3	4.43	1.19	6.92	11755	10.863	17.79084	-6.92784	NAF
NS0080	152	154	NS	E889936	889936	1	G	W	23.3	46.14	6.63	0.2967	0.23	0.322	3.74	1.04	0.053	0.366	1.02	0.272	1.16	4.57	1.1	6.83	11725	11.1996	18.13968	-6.94008	NAF
NS0080	236	238	NS	E889980	889980	1	G	W	26.39	41.45	5.73	0.2193	0.17	0.268	4.13	0.92	0.129	0.296	1.41	0.353	1.45	4.65	1.03	7.13	11767	9.0576	16.04664	-6.98904	NAF
NS0080	210	212	NS	E889966	889966	1	G	W	24.12	46.06	4.84	0.4515	0.35	0.234	3.34	0.89	0.205	0.278	1.35	0.353	1.37	4.86	0.94	7.17	11754	8.5068	15.52338	-7.01658	NAF
NS0080	176	178	NS	E889948	889948	1	G	W	16.64	51.82	10.26	0.1161	0.09	0.499	3.72	0.67	0.014	0.143	0.03	0.015	0.44	3.53	0.55	4.52	11737	4.3758	11.68614	-7.31034	NAF
NS0080	150	152	NS	E889935	889935	1	G	W	23.29	46.78	5.65	0.3354	0.26	0.27	3.61	1	0.141	0.321	1.12	0.296	1.26	4.82	1	7.08	11724	9.8226	17.442	-7.6194	NAF
NS0080	222	224	NS	E889972	889972	1	G	W	28.52	37.46	2.15	0.258	0.2	0.099	2.45	0.64	0.079	0.113	0.737	0.194	1.42	13.23	0.28	14.93	11760	3.4578	11.16288	-7.70508	NAF
NS0080	8	10	NS	E889863	889863	1	G	D	25.16	49.27	6.08	0.0258	0.02	0.26	0.44	0.48	0.016	0.013	0.08	0.048	4.62	2.26	0.26	7.14	11654	0.3978	8.37216	-7.97436	NAF
NS0080	248	250	NS	E889986	889986	1	G	W	28.58	38.88	1.78	0.2838	0.22	0.085	2.36	0.64	0.067	0.082	0.62	0.162	1.29	12.4	0.22	13.91	11773	2.5092	11.16288	-8.65368	NAF
NS0080	48	50	NS	E889883	889883	1	G	M	22.2	50.9	5.86	0.3096	0.24	0.287	1.66	0.51	0.075	0.006	1.27	0.088	4.36	2.04	0.32	6.72	11674	0.1836	8.89542	-8.71182	NAF
NS0080	82	84	NS	E889900	889900	1	G	W	23.9	47.07	4.22	0.2064	0.16	0.21	2.88	0.96	0.054	0.245	1.11	0.258	1.13	6.47	0.86	8.46	11691	7.497	16.74432	-9.24732	NAF
NS0080	238	240	NS	E889981	889981	1	G	W	26.73	40.96	2.42	0.3354	0.26	0.113	2.81	0.76	0.101	0.125	0.929	0.254	1.4	10.92	0.39	12.71	11768	3.825	13.25592	-9.43092	NAF
NS0080	218	220	NS	E889970	889970	1	G	W	25.81	42.62	2.41	0.3612	0.28	0.114	2.62	0.85	0.116	0.176	0.844	0.235	1.33	10.83	0.52	12.68	11758	5.3856	14.8257	-9.4401	NAF
NS0080	142	144	NS	E889931	889931	1	G	W	23.47	45.44	4.42	0.4644	0.36	0.209	3.27	1.5	0.097	0.54	0.908	0.236	1.15	6.95	1.46	9.56	11720	16.524	26.163	-9.639	NAF
NS0080	170	172	NS	E889945	889945	1	G	W	20.67	51.69	6.51	0.2193	0.17	0.309	3.63	1.07	0.098	0.282	0.987	0.26	1.01	3.14	1.02	5.17	11734	8.6292	18.66294	-10.03374	NAF
NS0080	182	184	NS	E889951	889951	1	G	W	21.66	49.36	7.84	0.1935	0.15	0.359	3.57	1.26	0.126	0.386	0.947	0.273	1.01	2.64	1.08	4.73	11740	11.8116	21.97692	-10.16532	NAF
NS0080	124	126	NS	E889922	889922	1	G	W	26.2	42.3	3.24	0.1935	0.15	0.159	2.89	0.88	0.04	0.156	0.889	0.224	1.18	9.71	0.58	11.47	11711	4.7736	15.34896	-10.57536	NAF
NS0080	194	196	NS	E889958	889958	1	G	W	23.92	45.49	5.42	0.3096	0.24	0.257	3.58	1.11	0.136	0.281	1.03	0.267	1.23	5.52	1.07	7.82	11746	8.5986	19.36062	-10.76202	NAF
NS0080	66	68	NS	E889892	889892	1	G	W	23.05	46.37	5.44	0.2838	0.22	0.267	3.38	1.12	0.095	0.27	1.5	0.313	1.33	5.37	0.93	7.63	11683	8.262	19.53504	-11.27304	NAF
NS0080	240	242	NS	E889982	889982	1	G	W	25.66	43.8	1.55	0.2838	0.22	0.072	2.09	0.83	0.062	0.094	0.563	0.147	1.05	12.33	0.26	13.64	11769	2.8764	14.47686	-11.60046	NAF
NS0080	140	142	NS	E889930	889930	1	G	W	22.36	47.56	4.62	0.5031	0.39	0.217	3.21	1.58	0.076	0.52	0.827	0.223	1.06	6.49	1.48	9.03	11719	15.912	27.55836	-11.64636	NAF
NS0080	100	102	NS	E889910	889910	1	G	W	22.86	46.38	5.52	0.4902	0.38	0.267	3.49	1.47	0.078	0.438	1.29	0.337	1.22	4.84	1.47	7.53	11699	13.4028	25.63974	-12.23694	NAF
NS0080	256	258	NS	E889990	889990	1	G	W	28.31	39.99	2.46	0.2838	0.22	0.116	2.88	0.82	0.045	0.066	0.999	0.235	1.27	9.53	0.39	11.19	11777	2.0196	14.30244	-12.28284	NAF
NS0080	60	62	NS	E889889	889889	1	G	W	24.15	46.44	4.05	0.1935	0.15	0.199	2.47	1.07	0.061	0.203	1.14	0.219	1.22	7.17	0.73	9.12	11680	6.2118	18.66294	-12.45114	NAF
NS0080	64	66	NS	E889891	889891	1	G	W	23.68	45.74	4.81	0.2838	0.22	0.232	2.85	1.26	0.092	0.309	1.27	0.208	1.3	6.7	1.11	9.11	11682	9.4554	21.97692	-12.52152	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0080	162	164	NS	E889940	889940	1	G	W	25.79	41.1	4.58	0.258	0.2	0.219	3.4	1.08	0.177	0.206	0.954	0.268	1.33	8.38	0.7	10.41	11729	6.3036	18.83736	-12.53376	NAF
NS0080	250	252	NS	E889987	889987	1	G	W	28.05	41.26	1.62	0.2451	0.19	0.076	2.13	0.88	0.065	0.077	0.454	0.09	0.77	11.54	0.26	12.57	11774	2.3562	15.34896	-12.99276	NAF
NS0080	122	124	NS	E889921	889921	1	G	W	25.08	43.95	3.6	0.2064	0.16	0.175	3.07	1.01	0.047	0.149	1.02	0.293	1.14	8.57	0.65	10.36	11710	4.5594	17.61642	-13.05702	NAF
NS0080	166	168	NS	E889943	889943	1	G	W	21.18	50.47	5.85	0.2838	0.22	0.284	3.65	1.23	0.092	0.269	0.926	0.271	1.1	4.09	1.19	6.38	11732	8.2314	21.45366	-13.22226	NAF
NS0080	244	246	NS	E889984	889984	1	G	W	27.8	38.18	2.96	0.3612	0.28	0.13	2.97	1.06	0.113	0.162	0.933	0.326	1.38	11.14	0.54	13.06	11771	4.9572	18.48852	-13.53132	NAF
NS0080	160	162	NS	E889941	889941	1	G	W	23.62	47.05	3.1	0.3225	0.25	0.152	2.68	1.11	0.04	0.184	0.94	0.257	1.28	8.38	0.77	10.43	11730	5.6304	19.36062	-13.73022	NAF
NS0080	134	136	NS	E889927	889927	1	G	W	22.91	47.22	4.52	0.258	0.2	0.216	2.9	1.17	0.06	0.213	0.83	0.239	1.12	7.26	0.86	9.24	11716	6.5178	20.40714	-13.88934	NAF
NS0080	126	128	NS	E889923	889923	1	G	W	26.98	41.06	3.01	0.1935	0.15	0.15	2.73	1.04	0.062	0.134	0.833	0.233	1.27	10.01	0.48	11.76	11712	4.1004	18.13968	-14.03928	NAF
NS0080	110	112	NS	E889915	889915	1	G	W	25.67	42.66	3.82	0.2967	0.23	0.185	2.96	1.22	0.11	0.229	1.04	0.264	1.27	8.43	0.83	10.53	11704	7.0074	21.27924	-14.27184	NAF
NS0080	130	132	NS	E889925	889925	1	G	W	25.11	43.55	4.14	0.2838	0.22	0.194	3.09	1.28	0.082	0.257	1.02	0.271	1.3	7.7	0.97	9.97	11714	7.8642	22.32576	-14.46156	NAF
NS0080	192	194	NS	E889957	889957	1	G	W	19.94	53.11	3.61	0.4644	0.36	0.171	2.73	1.56	0.101	0.416	0.838	0.219	0.95	5.85	1.32	8.12	11745	12.7296	27.20952	-14.47992	NAF
NS0080	196	198	NS	E889959	889959	1	G	W	22.94	47.22	3.55	0.3354	0.26	0.162	2.93	1.31	0.097	0.273	0.863	0.23	1.17	7.76	1.03	9.96	11747	8.3538	22.84902	-14.49522	NAF
NS0080	180	182	NS	E889950	889950	1	G	W	20	50.49	8.51	0.2709	0.21	0.393	3.65	1.3	0.051	0.26	0.418	0.127	0.74	4.17	1.1	6.01	11739	7.956	22.6746	-14.7186	NAF
NS0080	258	260	NS	E889991	889991	1	G	W	28.17	40.45	2.07	0.2451	0.19	0.098	2.56	1	0.056	0.087	0.802	0.185	1.19	10.2	0.41	11.8	11778	2.6622	17.442	-14.7798	NAF
NS0080	252	254	NS	E889988	889988	1	G	W	28.01	39.71	2.11	0.258	0.2	0.096	2.66	0.98	0.049	0.067	0.804	0.195	1.19	11.08	0.41	12.68	11775	2.0502	17.09316	-15.04296	NAF
NS0080	98	100	NS	E889908	889908	1	G	W	26.66	40.53	2.75	0.2838	0.22	0.134	2.45	1.21	0.11	0.18	0.854	0.282	1.29	11.24	0.54	13.07	11698	5.508	21.10482	-15.59682	NAF
NS0080	228	230	NS	E889976	889976	1	G	W	28.56	36.86	2.27	0.258	0.2	0.11	2.58	1.14	0.059	0.128	0.8	0.221	1.29	12.68	0.49	14.46	11763	3.9168	19.88388	-15.96708	NAF
NS0080	158	160	NS	E889939	889939	1	G	W	24.58	43.6	3.48	0.3999	0.31	0.17	2.95	1.5	0.093	0.329	0.851	0.218	1.11	8.98	1.11	11.2	11728	10.0674	26.163	-16.0956	NAF
NS0080	172	174	NS	E889946	889946	1	G	W	23.86	44.75	3.57	0.4386	0.34	0.167	2.81	1.65	0.132	0.411	0.884	0.254	1.12	8.34	1.28	10.74	11735	12.5766	28.7793	-16.2027	NAF
NS0080	112	114	NS	E889916	889916	1	G	W	26.93	41.87	2.69	0.2451	0.19	0.128	2.45	1.14	0.06	0.119	0.863	0.182	1.02	10.05	0.52	11.59	11705	3.6414	19.88388	-16.24248	NAF
NS0080	278	280	NS	X068002	068002	1	G	W	27.5	41.64	2.41	0.2967	0.23	0.113	2.77	1.16	0.081	0.115	0.993	0.224	1.2	8.7	0.53	10.43	12553	3.519	20.23272	-16.71372	NAF
NS0080	78	80	NS	E889898	889898	1	G	W	23.82	44.5	3.86	0.4128	0.32	0.185	2.83	1.51	0.044	0.274	1.08	0.303	1.18	8.38	1.1	10.66	11689	8.3844	26.33742	-17.95302	NAF
NS0080	274	276	NS	E889999	889999	1	G	W	27.35	42.22	2.52	0.2838	0.22	0.116	2.8	1.21	0.045	0.085	1.03	0.207	1.13	8.28	0.57	9.98	11786	2.601	21.10482	-18.50382	NAF
NS0080	114	116	NS	E889917	889917	1	G	W	26.71	41.29	3.14	0.2709	0.21	0.149	2.81	1.26	0.06	0.113	1.03	0.237	1.19	9.45	0.64	11.28	11706	3.4578	21.97692	-18.51912	NAF
NS0080	234	236	NS	E889979	889979	1	G	W	24.88	44.2	5.51	0.1935	0.15	0.26	3.84	1.5	0.114	0.245	1.41	0.373	1.38	4.23	1.17	6.78	11766	7.497	26.163	-18.666	NAF
NS0080	202	204	NS	E889962	889962	1	G	W	19.01	54.43	6.56	0.1677	0.13	0.307	3.39	1.59	0.103	0.288	0.886	0.241	0.96	2.55	1.06	4.57	11750	8.8128	27.73278	-18.91998	NAF
NS0080	116	118	NS	E889918	889918	1	G	W	25.76	42.6	3.45	0.2451	0.19	0.166	2.99	1.3	0.122	0.122	1.1	0.248	1.24	8.5	0.62	10.36	11707	3.7332	22.6746	-18.9414	NAF
NS0080	96	98	NS	E889906	889906	1	G	W	28.77	39.2	2.4	0.2451	0.19	0.114	2.2	1.28	0.057	0.108	0.841	0.231	1.17	10.21	0.51	11.89	11697	3.3048	22.32576	-19.02096	NAF
NS0080	156	158	NS	E889938	889938	1	G	W	25.5	41.99	2.74	0.3741	0.29	0.133	2.61	1.52	0.059	0.222	0.857	0.228	1.22	10.67	0.82	12.71	11727	6.7932	26.51184	-19.71864	NAF
NS0080	58	60	NS	E889888	889888	1	G	W	24.4	45.43	3.93	0.1935	0.15	0.195	2.99	1.54	0.047	0.214	1.16	0.257	1.2	6.76	1.02	8.98	11679	6.5484	26.86068	-20.31228	NAF
NS0080	56	58	NS	E889887	889887	1	G	W	23.77	46.63	4.51	0.2064	0.16	0.22	2.77	1.6	0.061	0.238	1.36	0.229	1.33	5.72	1.07	8.12	11678	7.2828	27.9072	-20.6244	NAF
NS0080	260	262	NS	E889992	889992	1	G	W	27.52	41.16	2.3	0.2451	0.19	0.11	2.73	1.32	0.118	0.076	0.926	0.221	1.26	9.19	0.51	10.96	11779	2.3256	23.02344	-20.69784	NAF
NS0080	68	70	NS	E889893	889893	1	G	W	23.71	44.17	4.44	0.387	0.3	0.214	3.12	1.71	0.064	0.276	1.18	0.273	1.24	7.88	1.13	10.25	11684	8.4456	29.82582	-21.38022	NAF
NS0080	92	94	NS	E889904	889904	1	G	W	27.06	42.9	2.25	0.2709	0.21	0.107	2.07	1.47	0.048	0.138	0.819	0.204	0.96	9.13	0.7	10.79	11695	4.2228	25.63974	-21.41694	NAF
NS0080	88	90	NS	E889902	889902	1	G	W	25.1	44.41	4.17	0.2451	0.19	0.202	3.06	1.6	0.064	0.207	1.12	0.27	1.12	6.28	1.01	8.41	11693	6.3342	27.9072	-21.573	NAF
NS0080	266	268	NS	E889995	889995	1	G	W	26.93	43.03	2.26	0.2451	0.19	0.108	2.63	1.39	0.065	0.081	0.889	0.2	1.04	8.59	0.69	10.32	11782	2.4786	24.24438	-21.76578	NAF
NS0080	70	72	NS	E889894	889894	1	G	W	24.35	42.6	4.51	0.3096	0.24	0.218	3.05	1.76	0.058	0.275	1.03	0.256	1.19	8.53	1.13	10.85	11685	8.415	30.69792	-22.28292	NAF
NS0080	118	120	NS	E889919	889919	1	G	W	25.46	42.59	3.34	0.2838	0.22	0.161	2.95	1.53	0.132	0.126	1.05	0.25	1.3	8.77	0.7	10.77	11708	3.8556	26.68626	-22.83066	NAF
NS0080	52	54	NS	E889885	889885	1	G	M	25.53	41.07	4.91	0.3354	0.26	0.238	3.13	1.81	0.147	0.248	1.16	0.183	1.51	7.37	1.07	9.95	11676	7.5888	31.57002	-23.98122	NAF
NS0080	72	74	NS	E889895	889895	1	G	W	24.47	41.37	4.54	0.4902	0.38	0.219	3.34	2.18	0.15	0.375	1.21	0.294	1.24	7.88	1.46	10.58	11686	11.475	38.02356	-26.54856	NAF
NS0080	232	234	NS	E889978	889978	1	G	W	25.81	41.67	3.62	0.3354	0.26	0.171	3.25	1.92	0.205	0.188	1.34	0.333	1.43	7.39	1.01	9.83	11765	5.7528	33.48864	-27.73584	NAF
NS0080	80	82	NS	E889899	889899	1	G	W	20.47	49.92	5.61	0.258	0.2	0.27	3.61	2.3	0.096	0.375	1.34	0.308	1.09	3.94	1.7	6.73	11690	11.475	40.1166	-28.6416	NAF
NS0080	138	140	NS	E889929	889929	1	G	W	19.87	50.62	7.23	0.2838	0.22	0.356	3.66	2.29	0.046	0.358	0.689	0.197	0.88	3.57	1.64	6.09	11718	10.9548	39.94218	-28.98738	NAF
NS0080	84	86	NS	E890000	890000	1	G	W	26.56	41.28	3.56	0.3483	0.27	0.177	2.8	2.08	0.05	0.238	1.1	0.275	1.24	7.66	1.28	10.18	11787	7.2828	36.27936	-28.99656	NAF
NS0080	254	256	NS	E889989	889989	1	G	W	28.78	37.69	2.75	0.2838	0.22	0.131	3.06	1.88	0.258	0.11	1.12	0.251	1.27	8.88	0.72	10.87	11776	3.366	32.79096	-29.42496	NAF
NS0080	136	138	NS	E889928	889928	1	G	W	19.61	50.82	7.77	0.2451	0.19	0.372	3.81	2.08	0.088	0.223	0.709	0.2	0.89	3.36	1.34	5.59	11717	6.8238	36.27936	-29.45556	NAF
NS0080	128	130	NS	E889924	889924	1	G	W	26.49	39.23	3.68	0.258	0.2	0.179	2.91	1.99	0.213	0.16	0.876	0.224	1.24	9.85	0.85	11.94	11713	4.896	34.70958	-29.81358	NAF
NS0080	168	170	NS	E889944	889944	1	G	W	18.6	53.35	7.23	0.1806	0.14	0.349	3.8	2.09	0.069	0.207	0.708	0.201	0.84	2.86	1.52	5.22	11733	6.3342	36.45378	-30.11958	NAC
NS0080	154	156	NS	E889937	889937	1	G	W	23.23	45.75	4.08	0.387	0.3	0.198	2.88	2.14	0.148	0.207	1.03	0.263	1.13	7.12	1.12	9.37	11726	6.3342	37.32588	-30.99168	NAC
NS0080	86	88	NS	E889901	889901	1	G	W	25.97	42.34	3.63	0.2838	0.22	0.178	2.8	2.22	0.155	0.251	0.999	0.249	1.08	7.34	1.17	9.59	11692	7.6806	38.72124	-31.04064	NAC
NS0080	54	56	NS	E889886	889886	1	G	M	24.29	44.62	4.36	0.258	0.2	0.209	2.66	2.2	0.078	0.198	1.24	0.223	1.38	6.24	1.24	8.86	11677	6.0588	38.3724	-32.3136	NAC
NS0080	62	64	NS	E889890	889890	1	G	W	22.19	45.57	5.22	0.3741	0.29	0.253	3.3	2.61	0.096	0.416	1.5	0.278	1.19	5.7	1.91	8.8	11681	12.7296	45.52362	-32.79402	NAC
NS0080	90	92	NS	E889903	889903	1	G	W	24.78	42.27	3.9	0.3354	0.26	0.192	3.1	2.26	0.136	0.19	1.06	0.255	1.21	7.99	1.2	10.4	11694	5.814	39.41892	-33.60492	NAC
NS0080	74	76	NS	E889896	889896	1	G	W	24.65	40.43	3.98	0.5676	0.44	0.19	3.22	2.54	0.104	0.334	1.12	0.244	1.09	9.27	1.52	11.88	11687	10.2204	44.30268	-34.08228	NAC
NS0080	264	266	NS	E889994	889994	1	G	W	26.32	41.25	2.4	0.2967	0.23	0.115	2.74	2.31	0.169	0.078	1.01	0.27	1.21	9.04	0.99	11.24	11781	2.3868	40.29102	-37.90422	NAC
NS0080	268	270	NS	E889996	889996	1	G	W	26.64	40.82	2.78	0.3096	0.24	0.132	2.95	2.35	0.101	0.1	1.13	0.263	1.23	8.12	1.21	10.56	11783	3.06	40.9887	-37.9287	NAC
NS0080	120	122	NS	E889920	889920	1	G	W	24.38	43.14	3.52	0.2967	0.23	0.174	3.01	2.45	0.257	0.147	1.05	0.259	1.22	8.27	1.05	10.54	11709	4.4982	42.7329	-38.2347	NAC
NS0080	276	278	NS	X068001	068001	1	G	W	26.97	39	2.57	0.3741	0.29	0.125	3.01	2.68	0.1	0.188	1.07	0.234	1.18	9.15	1.4	11.73	12552	5.7528	46.74456	-40.99176	NAC
NS0080	262	264	NS	E889993	889993	1	G	W	26.9	41.73	2.74	0.2193	0.17	0.131	2.8	2.53	0.213	0.074	1.19	0.266	1.2	6.77	1.14	9.11	11780	2.2644	44.12826	-41.86386	NAC
NS0080	76	78	NS	E889897	889897	1	G	W	21.91	46.33	4.48	0.4128	0.32	0.222	3.02	3.09	0.095	0.365	1.28	0.276	1.08	6.25	1.91	9.24	11688	11.169	53.89578	-42.72678	NAC
NS0080	280	282	NS	X068003	068003	1	G	W	26.82	39.07	2.33	0.4257	0.33	0.113	2.94	2.92	0.142	0.212	0.946	0.196	1	9.8	1.36	12.16	12554	6.4872	50.93064	-44.44344	NAC
NS0080	270	272	NS	E889997	889997	1	G	W	28.21	36.75	3.47	0.3096	0.24	0.173	3.39	2.79	0.315	0.106	1.44	0.321	1.41	7.27	1.18	9.86	11784	3.2436	48.66318	-45.41958	NAC
NS0080	94	96	NS	E889905	889905	1	G	W	26.25	40.05	3.34	0.2709	0.21	0.166	2.8	3.1	0.163	0.218	1.03	0.269	1.14	8.21	1.61	10.96	11696	6.6708	54.0702	-47.3994	NAC
NS0080	226	228	NS	E889974	889974	1	G	W	25.14	40.18	1.81	0.258	0.2	0.089	2.14	3.49	0.115	0.082	0.672	0.158	0.91	12.09	1.72	14.72	11762	2.5092	60.87258	-58.36338	NAC
NS0080	272	274	NS	E889998	889998	1	G	W	26.16	39.67	2.2	0.3612	0.28	0.105	2.69	4.14	0.133	0.14	0.937	0.213	1.03	8.74	2.15	11.92	11785	4.284	72.20988	-67.92588	NAC
NS0081	58	60	NS	X068033	068033	1	G	D	19.83	53.61	6.2	0.3096	0.24	0.304	3	0.38	0.068	0.5	1.12	0.151	1.26	3.59	1.05	5.9	12584	15.3	6.62796	8.67204	PAF(LC)
NS0081	66	68	NS	X068038	068038	1	G	W	18.27	53.6	8.3	0.2451	0.19	0.399	2.76	0.48	0.073	0.454	1.53	0.065	1.54	3.19	1.08	5.81	12588	13.8924	8.37216	5.52024	PAF(LC)
NS0081	64	66	NS	X068037	068037	1	G	W	18.17	53.43	8.02	0.1935	0.15	0.384	2.46	0.55	0.067	0.462	1.62	0.062	1.91	2.87	1.12	5.9	12587	14.1372	9.5931	4.5441	PAF(LC)
NS0081	4	6	NS	X068006	068006	1	G	D	40.87	23.67	7.99	-0.0129	-0.01	0.66	0.005	0.03	0.018	0.028	0.023	0.02	6.45	1.87	0.3	8.62	12557	0.8568	0.52326	0.33354	PAF(LC)
NS0081	2	4	NS	X068005	068005	1	G	D	40.27	18.04	12.47	0.0258	0.02	0.959	0.03	0.05	0.022	0.038	0.067	0.075	6.67	3.17	0.4	10.24	12556	1.1628	0.8721	0.2907	PAF(LC)
NS0081	8	10	NS	X068008	068008	1	G	D	30.28	42.77	5.18	-0.0129	-0.01	0.244	0.13	0.03	0.019	0.015	0.03	0.054	5.87	1.75	0.25	7.87	12559	0.459	0.52326	-0.06426	NAF
NS0081	6	8	NS	X068007	068007	1	G	D	34.06	36.04	6.1	-0.0129	-0.01	0.312	0.07	0.05	0.016	0.017	0.033	0.044	6.19	1.8	0.24	8.23	12558	0.5202	0.8721	-0.3519	NAF
NS0081	10	12	NS	X068009	068009	1	G	D	29.35	44.13	5.03	-0.0129	-0.01	0.21	0.16	0.05	0.027	0.017	0.016	0.052	5.8	1.76	0.29	7.85	12560	0.5202	0.8721	-0.3519	NAF
NS0081	0	2	NS	X068004	068004	1	G	D	42.31	15.14	13.22	0.0516	0.04	1.362	0.07	0.11	0.026	0.038	0.076	0.061	4.95	3.34	0.4	8.69	12555	1.1628	1.91862	-0.75582	NAF
NS0081	12	14	NS	X068010	068010	1	G	D	26.88	49.47	4.41	0.0258	0.02	0.166	0.17	0.08	0.03	0.015	0.016	0.044	5.22	1.58	0.25	7.05	12561	0.459	1.39536	-0.93636	NAF
NS0081	266	268	NS	X068142	068142	1	G	W	23.62	45.78	7.04	0.2451	0.19	0.344	3.95	0.62	0.068	0.305	1.16	0.318	1.29	3.74	1.09	6.12	12688	9.333	10.81404	-1.48104	NAF
NS0081	14	16	NS	X068011	068011	1	G	D	31.17	42.74	4.08	0.0258	0.02	0.182	0.2	0.15	0.043	0.015	0.021	0.061	5.82	1.58	0.27	7.67	12562	0.459	2.6163	-2.1573	NAF
NS0081	128	130	NS	X068070	068070	1	G	W	23.23	46.77	5.74	0.2709	0.21	0.28	3.5	0.58	0.054	0.255	1.11	0.307	1.24	5.62	0.87	7.73	12619	7.803	10.11636	-2.31336	NAF
NS0081	122	124	NS	X068067	068067	1	G	W	19.44	50.83	7.19	0.3225	0.25	0.35	3.47	1.12	0.042	0.539	1.04	0.211	0.88	4.12	1.35	6.35	12616	16.4934	19.53504	-3.04164	NAF
NS0081	156	158	NS	X068084	068084	1	G	W	26.97	40.15	2.23	0.2322	0.18	0.102	2.43	0.46	0.058	0.16	0.64	0.174	1.11	13.08	0.44	14.63	12633	4.896	8.02332	-3.12732	NAF
NS0081	50	52	NS	X068029	068029	1	G	D	15.36	58.23	9.35	0.1548	0.12	0.452	1.5	0.21	0.037	0.006	2.96	0.052	2.4	2.24	0.27	4.91	12580	0.1836	3.66282	-3.47922	NAF
NS0081	48	50	NS	X068028	068028	1	G	D	16.59	57.71	8.48	0.1548	0.12	0.411	1.52	0.22	0.036	0.007	2.23	0.061	2.71	2.22	0.27	5.2	12579	0.2142	3.83724	-3.62304	NAF
NS0081	158	160	NS	X068085	068085	1	G	W	26.8	39.51	1.8	0.1935	0.15	0.081	2.08	0.46	0.067	0.141	0.264	0.074	0.89	15.2	0.37	16.46	12634	4.3146	8.02332	-3.70872	NAF
NS0081	26	28	NS	X068017	068017	1	G	D	32.97	42.02	3.07	0.0774	0.06	0.139	0.52	0.25	0.067	0.013	0.065	0.04	4.89	1.27	0.16	6.32	12568	0.3978	4.3605	-3.9627	NAF
NS0081	40	42	NS	X068024	068024	1	G	D	18.32	54.4	8.32	0.2451	0.19	0.399	1.33	0.26	0.041	0.006	2.9	0.049	3.31	1.91	0.26	5.48	12575	0.1836	4.53492	-4.35132	NAF
NS0081	44	46	NS	X068026	068026	1	G	D	29.3	44.53	3.1	0.5805	0.45	0.149	1	0.26	0.08	0.005	0.201	0.035	5.93	1.37	0.26	7.56	12577	0.153	4.53492	-4.38192	NAF
NS0081	190	192	NS	X068102	068102	1	G	W	26.5	40.65	2.02	0.2967	0.23	0.093	2.37	0.58	0.066	0.176	0.618	0.155	1	13.2	0.49	14.69	12650	5.3856	10.11636	-4.73076	NAF
NS0081	38	40	NS	X068023	068023	1	G	D	30.6	42.91	3.48	0.3354	0.26	0.164	0.86	0.3	0.074	0.01	0.178	0.034	5.84	1.4	0.24	7.48	12574	0.306	5.2326	-4.9266	NAF
NS0081	268	270	NS	X068143	068143	1	G	W	21.8	50.07	6.51	0.1935	0.15	0.307	3.65	0.85	0.081	0.323	1.3	0.363	1.3	2.53	1.02	4.85	12689	9.8838	14.8257	-4.9419	NAF
NS0081	16	18	NS	X068012	068012	1	G	D	29.11	44.22	5.08	0.0387	0.03	0.258	0.48	0.32	0.035	0.013	0.067	0.103	5.06	1.97	0.28	7.31	12563	0.3978	5.58144	-5.18364	NAF
NS0081	60	62	NS	X068034	068034	1	G	D	19.74	51.11	6.51	0.3999	0.31	0.311	3.1	1.07	0.116	0.438	1.41	0.126	1.21	4.46	1.23	6.9	12585	13.4028	18.66294	-5.26014	NAF
NS0081	22	24	NS	X068015	068015	1	G	D	27.36	48.76	3.96	0.0645	0.05	0.181	0.52	0.33	0.057	0.016	0.076	0.074	4.66	1.66	0.25	6.57	12566	0.4896	5.75586	-5.26626	NAF
NS0081	24	26	NS	X068016	068016	1	G	D	30.27	44.13	3.98	0.0774	0.06	0.192	0.66	0.34	0.06	0.018	0.094	0.055	5.1	1.6	0.23	6.93	12567	0.5508	5.93028	-5.37948	NAF
NS0081	198	200	NS	X068107	068107	1	G	W	26.75	41.85	2.01	0.1806	0.14	0.093	2.31	0.46	0.048	0.085	0.57	0.116	0.87	12.49	0.22	13.58	12654	2.601	8.02332	-5.42232	NAF
NS0081	18	20	NS	X068013	068013	1	G	D	27.47	45.81	5.35	0.0516	0.04	0.268	0.52	0.34	0.052	0.015	0.09	0.11	5.36	2.02	0.29	7.67	12564	0.459	5.93028	-5.47128	NAF
NS0081	90	92	NS	X068050	068050	1	G	W	20.47	49.61	6.51	0.2967	0.23	0.313	3.66	1.04	0.054	0.414	1.1	0.256	1	4.41	1.24	6.65	12600	12.6684	18.13968	-5.47128	NAF
NS0081	42	44	NS	X068025	068025	1	G	D	28.21	45.5	3.95	0.3096	0.24	0.188	1.15	0.33	0.078	0.006	0.292	0.047	5.76	1.61	0.26	7.63	12576	0.1836	5.75586	-5.57226	NAF
NS0081	32	34	NS	X068020	068020	1	G	D	29.46	44.13	4.08	0.3483	0.27	0.193	0.83	0.34	0.077	0.01	0.207	0.058	5.43	1.59	0.24	7.26	12571	0.306	5.93028	-5.62428	NAF
NS0081	56	58	NS	X068032	068032	1	G	D	23.72	51.23	5.27	0.2451	0.19	0.258	1.1	0.34	0.08	0.008	0.459	0.04	4.9	1.58	0.24	6.72	12583	0.2448	5.93028	-5.68548	NAF
NS0081	140	142	NS	X068076	068076	1	G	W	25.97	41.25	2.18	0.2451	0.19	0.1	2.63	0.51	0.068	0.103	0.52	0.145	0.97	13.57	0.29	14.83	12625	3.1518	8.89542	-5.74362	NAF
NS0081	36	38	NS	X068022	068022	1	G	D	24.03	51.64	4.6	0.3741	0.29	0.223	1.01	0.35	0.064	0.006	0.597	0.049	4.84	1.57	0.24	6.65	12573	0.1836	6.1047	-5.9211	NAF
NS0081	28	30	NS	X068018	068018	1	G	D	29.55	43.27	4.93	0.1161	0.09	0.237	0.83	0.36	0.062	0.01	0.154	0.061	5.11	1.93	0.24	7.28	12569	0.306	6.27912	-5.97312	NAF
NS0081	46	48	NS	X068027	068027	1	G	D	29.06	42.88	4.31	0.4257	0.33	0.207	1.32	0.36	0.086	0.007	0.387	0.052	5.89	1.8	0.3	7.99	12578	0.2142	6.27912	-6.06492	NAF
NS0081	142	144	NS	X068077	068077	1	G	W	26.54	39.65	2.43	0.3354	0.26	0.111	2.73	0.54	0.075	0.108	0.583	0.176	1.07	13.55	0.34	14.96	12626	3.3048	9.41868	-6.11388	NAF
NS0081	192	194	NS	X068103	068103	1	G	W	27.66	38.12	2.29	0.258	0.2	0.106	2.55	0.68	0.078	0.184	0.616	0.146	1	13.85	0.48	15.33	12651	5.6304	11.86056	-6.23016	NAF
NS0081	20	22	NS	X068014	068014	1	G	D	24.8	48.86	6.42	0.0516	0.04	0.317	0.63	0.39	0.049	0.016	0.126	0.119	4.6	2.44	0.3	7.34	12565	0.4896	6.80238	-6.31278	NAF
NS0081	52	54	NS	X068030	068030	1	G	D	18.63	56.96	6.22	0.4257	0.33	0.297	1.67	0.39	0.05	0.007	0.88	0.06	3.87	2.05	0.29	6.21	12581	0.2142	6.80238	-6.58818	NAF
NS0081	62	64	NS	X068036	068036	1	G	D	20.24	49.04	5.93	0.5418	0.42	0.277	3.04	1.15	0.096	0.439	1.55	0.11	1.04	6.01	1.37	8.42	12586	13.4334	20.0583	-6.6249	NAF
NS0081	30	32	NS	X068019	068019	1	G	D	19.05	52.52	8.65	0.2838	0.22	0.405	1.1	0.4	0.048	0.009	2.59	0.064	3.73	2.15	0.28	6.16	12570	0.2754	6.9768	-6.7014	NAF
NS0081	210	212	NS	X068113	068113	1	G	W	25.76	41.91	4.25	0.2838	0.22	0.196	3.42	0.77	0.152	0.219	1.22	0.321	1.38	7.64	0.77	9.79	12660	6.7014	13.43034	-6.72894	NAF
NS0081	54	56	NS	X068031	068031	1	G	D	24.88	48.87	4.85	0.3741	0.29	0.233	1.43	0.4	0.074	0.006	0.507	0.035	5.02	1.82	0.28	7.12	12582	0.1836	6.9768	-6.7932	NAF
NS0081	118	120	NS	X068065	068065	1	G	W	25.66	40.41	3.31	0.5031	0.39	0.158	3.2	1.12	0.116	0.407	0.98	0.258	1.28	10.11	1.03	12.42	12614	12.4542	19.53504	-7.08084	NAF
NS0081	270	272	NS	X068144	068144	1	G	W	19.96	50.99	8.79	0.129	0.1	0.404	3.96	0.81	0.04	0.23	0.68	0.18	0.92	2.8	0.89	4.61	12690	7.038	14.12802	-7.09002	NAF
NS0081	34	36	NS	X068021	068021	1	G	D	26.97	45.42	5.21	0.3483	0.27	0.246	1.18	0.43	0.07	0.008	0.387	0.07	5.49	1.94	0.31	7.74	12572	0.2448	7.50006	-7.25526	NAF
NS0081	274	276	NS	X068146	068146	1	G	W	22.85	45.28	6.29	0.3741	0.29	0.287	3.65	1.06	0.077	0.349	0.907	0.25	1.1	5.6	1.14	7.84	12692	10.6794	18.48852	-7.80912	NAF
NS0081	98	100	NS	X068055	068055	1	G	W	22.73	45.82	4.38	0.3096	0.24	0.213	3.03	0.97	0.09	0.295	0.741	0.188	1.08	8.48	0.98	10.54	12604	9.027	16.91874	-7.89174	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0081	114	116	NS	X068063	068063	1	G	W	23.98	43.01	3.54	0.4644	0.36	0.166	3.16	1.25	0.065	0.449	0.829	0.233	1.17	9.35	1.19	11.71	12612	13.7394	21.8025	-8.0631	NAF
NS0081	112	114	NS	X068062	068062	1	G	W	23.62	45.25	4.65	0.2838	0.22	0.224	3.41	0.85	0.073	0.215	1.04	0.297	1.24	7.58	0.82	9.64	12611	6.579	14.8257	-8.2467	NAF
NS0081	188	190	NS	X068101	068101	1	G	W	25.19	43.26	2.32	0.3225	0.25	0.106	2.47	0.77	0.083	0.165	0.729	0.203	1.05	11.56	0.5	13.11	12649	5.049	13.43034	-8.38134	NAF
NS0081	154	156	NS	X068083	068083	1	G	W	24.91	43.07	3.85	0.3354	0.26	0.183	3.36	0.92	0.106	0.243	1.03	0.261	1.13	8.63	0.82	10.58	12632	7.4358	16.04664	-8.61084	NAF
NS0081	150	152	NS	X068081	068081	1	G	W	23.84	45.7	3.62	0.2967	0.23	0.171	3.07	0.89	0.125	0.224	1.03	0.278	1.17	8.16	0.79	10.12	12630	6.8544	15.52338	-8.66898	NAF
NS0081	246	248	NS	X068131	068131	1	G	W	24.58	42.74	3.15	0.3741	0.29	0.149	3.1	0.91	0.126	0.217	0.763	0.187	1.1	10.57	0.66	12.33	12678	6.6402	15.87222	-9.23202	NAF
NS0081	160	162	NS	X068086	068086	1	G	W	25.13	42.39	3.15	0.2709	0.21	0.15	2.98	0.88	0.099	0.192	0.813	0.212	1.08	10.47	0.65	12.2	12635	5.8752	15.34896	-9.47376	NAF
NS0081	138	140	NS	X068075	068075	1	G	W	26.45	39.6	2.17	0.2967	0.23	0.101	2.7	0.87	0.072	0.184	0.677	0.187	1.19	13.06	0.53	14.78	12624	5.6304	15.17454	-9.54414	NAF
NS0081	168	170	NS	X068091	068091	1	G	W	24.19	44.77	2.59	0.3354	0.26	0.121	2.72	0.86	0.087	0.173	0.725	0.192	1.1	10.84	0.51	12.45	12639	5.2938	15.00012	-9.70632	NAF
NS0081	170	172	NS	X068092	068092	1	G	W	25.42	42.6	3.47	0.2451	0.19	0.165	3.26	0.83	0.117	0.152	0.987	0.273	1.21	9.65	0.55	11.41	12640	4.6512	14.47686	-9.82566	NAF
NS0081	242	244	NS	X068129	068129	1	G	W	24.61	43.76	3.67	0.3096	0.24	0.175	3.21	1.03	0.089	0.265	0.941	0.256	1.14	8.88	0.87	10.89	12676	8.109	17.96526	-9.85626	NAF
NS0081	102	104	NS	X068057	068057	1	G	W	23.41	44.93	4.4	0.2709	0.21	0.208	3.07	1	0.058	0.239	0.737	0.176	1.04	8.85	0.85	10.74	12606	7.3134	17.442	-10.1286	NAF
NS0081	124	126	NS	X068068	068068	1	G	W	18.19	52.27	7.99	0.2451	0.19	0.389	3.73	1.67	0.045	0.619	0.732	0.157	0.71	3.05	1.55	5.31	12617	18.9414	29.12814	-10.18674	NAF
NS0081	108	110	NS	X068060	068060	1	G	W	20.52	52.95	2.23	0.2451	0.19	0.105	2.19	0.92	0.084	0.188	0.675	0.192	0.99	8.77	0.58	10.34	12609	5.7528	16.04664	-10.29384	NAF
NS0081	110	112	NS	X068061	068061	1	G	W	23.64	45.49	3.26	0.2838	0.22	0.155	2.86	0.87	0.084	0.158	0.868	0.235	1.18	9.47	0.55	11.2	12610	4.8348	15.17454	-10.33974	NAF
NS0081	174	176	NS	X068094	068094	1	G	W	25.94	39.69	5.41	0.3096	0.24	0.255	4.18	0.95	0.176	0.199	0.997	0.292	1.26	7.95	0.81	10.02	12642	6.0894	16.5699	-10.4805	NAF
NS0081	186	188	NS	X068100	068100	1	G	W	23.82	46.06	2.05	0.3225	0.25	0.095	2.41	0.91	0.087	0.171	0.679	0.166	0.94	11.27	0.55	12.76	12648	5.2326	15.87222	-10.63962	NAF
NS0081	96	98	NS	X068054	068054	1	G	W	18.93	51.58	7.03	0.1935	0.15	0.343	3.45	1.04	0.061	0.235	1.08	0.211	2.49	3.23	1.11	6.83	12603	7.191	18.13968	-10.94868	NAF
NS0081	228	230	NS	X068122	068122	1	G	W	25.29	42.6	3.33	0.2709	0.21	0.154	2.94	0.98	0.131	0.198	0.972	0.245	1.17	9.47	0.73	11.37	12669	6.0588	17.09316	-11.03436	NAF
NS0081	120	122	NS	X068066	068066	1	G	W	22.05	46.88	3.41	0.516	0.4	0.163	2.94	1.64	0.087	0.566	0.81	0.221	1.08	7.93	1.61	10.62	12615	17.3196	28.60488	-11.28528	NAF
NS0081	226	228	NS	X068121	068121	1	G	W	24.62	44.37	4.35	0.3096	0.24	0.207	3.5	0.98	0.115	0.183	1.18	0.303	1.26	7.14	0.78	9.18	12668	5.5998	17.09316	-11.49336	NAF
NS0081	172	174	NS	X068093	068093	1	G	W	22.69	48.23	2.38	0.2064	0.16	0.109	2.59	0.86	0.053	0.114	0.755	0.195	0.98	10.07	0.51	11.56	12641	3.4884	15.00012	-11.51172	NAF
NS0081	264	266	NS	X068141	068141	1	G	W	22.9	45.98	4.79	0.4257	0.33	0.224	3.53	1.08	0.062	0.239	0.717	0.192	1.02	7.82	0.96	9.8	12687	7.3134	18.83736	-11.52396	NAF
NS0081	166	168	NS	X068090	068090	1	G	W	25.19	42.77	2.35	0.3225	0.25	0.109	2.59	0.93	0.1	0.153	0.698	0.197	1.02	11.9	0.47	13.39	12638	4.6818	16.22106	-11.53926	NAF
NS0081	262	264	NS	X068139	068139	1	G	W	25.76	40.71	4.89	0.3483	0.27	0.23	3.89	1.1	0.128	0.249	1.11	0.304	1.3	7.69	0.98	9.97	12686	7.6194	19.1862	-11.5668	NAF
NS0081	196	198	NS	X068105	068105	1	G	W	28.15	36.49	1.82	0.2451	0.19	0.084	2.27	0.92	0.052	0.146	0.543	0.125	0.84	15.12	0.47	16.43	12653	4.4676	16.04664	-11.57904	NAF
NS0081	152	154	NS	X068082	068082	1	G	W	22.64	48.22	4.25	0.2451	0.19	0.203	3.33	1.08	0.095	0.236	1.12	0.291	1.15	6.27	0.92	8.34	12631	7.2216	18.83736	-11.61576	NAF
NS0081	224	226	NS	X068120	068120	1	G	W	23.45	46.12	4.48	0.2709	0.21	0.211	3.48	1.05	0.109	0.217	1.12	0.281	1.11	6.46	0.87	8.44	12667	6.6402	18.3141	-11.6739	NAF
NS0081	232	234	NS	X068124	068124	1	G	W	23.63	44.9	4.28	0.3225	0.25	0.204	3.46	1.01	0.095	0.194	0.948	0.245	1.05	7.92	0.8	9.77	12671	5.9364	17.61642	-11.68002	NAF
NS0081	72	74	NS	X068041	068041	1	G	W	22.3	45.45	4.64	0.5676	0.44	0.214	3.16	1.57	0.098	0.498	1.07	0.15	1.07	7.44	1.56	10.07	12591	15.2388	27.38394	-12.14514	NAF
NS0081	182	184	NS	X068098	068098	1	G	W	23.04	47.98	2.05	0.3096	0.24	0.097	2.36	1	0.047	0.165	0.659	0.189	1.02	10.61	0.63	12.26	12646	5.049	17.442	-12.393	NAF
NS0081	200	202	NS	X068108	068108	1	G	W	28.57	38.99	1.86	0.2322	0.18	0.086	2.25	0.85	0.058	0.074	0.529	0.088	0.68	12.94	0.19	13.81	12655	2.2644	14.8257	-12.5613	NAF
NS0081	244	246	NS	X068130	068130	1	G	W	24.01	43.62	5.05	0.3225	0.25	0.24	3.8	1.13	0.087	0.227	1.07	0.282	1.17	6.82	1.02	9.01	12677	6.9462	19.70946	-12.76326	NAF
NS0081	280	282	NS	X068149	068149	1	G	W	25.85	41.15	2.48	0.2838	0.22	0.113	2.74	0.98	0.138	0.123	0.687	0.189	1.03	12.47	0.39	13.89	12695	3.7638	17.09316	-13.32936	NAF
NS0081	74	76	NS	X068042	068042	1	G	W	20.88	45.66	5.97	0.5031	0.39	0.281	3.44	2.01	0.092	0.705	1.22	0.169	1.03	5.7	2.03	8.76	12592	21.573	35.05842	-13.48542	NAF
NS0081	260	262	NS	X068138	068138	1	G	W	24.22	43.27	5.36	0.2967	0.23	0.251	3.74	1.09	0.085	0.178	1.03	0.288	1.19	6.89	0.9	8.98	12685	5.4468	19.01178	-13.56498	NAF
NS0081	100	102	NS	X068056	068056	1	G	W	25.26	40.63	3.82	0.4902	0.38	0.177	3.23	1.29	0.073	0.291	0.828	0.212	1.07	10.52	0.99	12.58	12605	8.9046	22.50018	-13.59558	NAF
NS0081	106	108	NS	X068059	068059	1	G	W	24.16	44.12	3.15	0.3096	0.24	0.147	2.81	1.1	0.067	0.177	0.783	0.198	1.1	10.31	0.66	12.07	12608	5.4162	19.1862	-13.77	NAF
NS0081	234	236	NS	X068125	068125	1	G	W	25.07	41.75	4.06	0.3483	0.27	0.194	3.53	1.15	0.075	0.196	1.06	0.3	1.24	8.58	0.91	10.73	12672	5.9976	20.0583	-14.0607	NAF
NS0081	208	210	NS	X068112	068112	1	G	W	25.39	42.16	3.62	0.387	0.3	0.165	3.23	1.08	0.124	0.154	1.18	0.315	1.28	8.68	0.67	10.63	12659	4.7124	18.83736	-14.12496	NAF
NS0081	126	128	NS	X068069	068069	1	G	W	20.67	47.59	5.58	0.4386	0.34	0.27	3.49	2.14	0.073	0.758	0.784	0.214	0.89	4.94	2.09	7.92	12618	23.1948	37.32588	-14.13108	NAF
NS0081	162	164	NS	X068087	068087	1	G	W	24.84	42.13	3.75	0.3612	0.28	0.179	3.41	1.18	0.103	0.202	0.997	0.255	1.17	9.14	0.84	11.15	12636	6.1812	20.58156	-14.40036	NAF
NS0081	256	258	NS	X068136	068136	1	G	W	24.97	42.65	2.88	0.258	0.2	0.134	2.89	1.08	0.085	0.144	0.841	0.226	1.6	10.25	0.63	12.48	12683	4.4064	18.83736	-14.43096	NAF
NS0081	130	132	NS	X068071	068071	1	G	W	22.78	46.32	4.89	0.3225	0.25	0.243	3.58	1.41	0.148	0.33	1.1	0.284	1.17	6.03	1.19	8.39	12620	10.098	24.59322	-14.49522	NAF
NS0081	216	218	NS	X068116	068116	1	G	W	22.27	48.64	3.79	0.3225	0.25	0.176	3.17	1.13	0.089	0.165	1.12	0.279	1.14	6.47	0.85	8.46	12663	5.049	19.70946	-14.66046	NAF
NS0081	116	118	NS	X068064	068064	1	G	W	23.96	42.15	5.89	0.4257	0.33	0.277	4	1.23	0.072	0.221	0.839	0.247	1.69	7.16	0.98	9.83	12613	6.7626	21.45366	-14.69106	NAF
NS0081	132	134	NS	X068072	068072	1	G	W	24.99	41.95	3.75	0.3354	0.26	0.179	3.02	1.17	0.122	0.175	0.926	0.251	1.37	9.48	0.7	11.55	12621	5.355	20.40714	-15.05214	NAF
NS0081	238	240	NS	X068127	068127	1	G	W	25.53	41	2.97	0.387	0.3	0.14	3.07	1.24	0.125	0.213	0.817	0.236	1.17	11.04	0.72	12.93	12674	6.5178	21.62808	-15.11028	NAF
NS0081	258	260	NS	X068137	068137	1	G	W	24.69	42.82	4.76	0.2709	0.21	0.223	3.73	1.24	0.082	0.21	1.07	0.273	1.18	7.34	1.07	9.59	12684	6.426	21.62808	-15.20208	NAF
NS0081	254	256	NS	X068135	068135	1	G	W	25.84	40.13	3.44	0.3741	0.29	0.163	3.3	1.29	0.112	0.237	0.856	0.206	1.13	10.54	0.89	12.56	12682	7.2522	22.50018	-15.24798	NAF
NS0081	250	252	NS	X068133	068133	1	G	W	25.12	41.96	5.02	0.3225	0.25	0.238	3.78	1.23	0.112	0.2	1.3	0.358	1.34	6.36	1.01	8.71	12680	6.12	21.45366	-15.33366	NAF
NS0081	276	278	NS	X068147	068147	1	G	W	20.81	50.33	4.38	0.4128	0.32	0.201	3.04	1.45	0.044	0.322	0.837	0.229	1.03	6.2	1.31	8.54	12693	9.8532	25.2909	-15.4377	NAF
NS0081	92	94	NS	X068051	068051	1	G	W	20.35	49.05	6.49	0.3096	0.24	0.298	3.72	1.57	0.02	0.386	0.88	0.216	0.94	4.92	1.57	7.43	12601	11.8116	27.38394	-15.57234	NAF
NS0081	212	214	NS	X068114	068114	1	G	W	22.8	47.31	4.35	0.258	0.2	0.204	3.41	1.23	0.095	0.192	1.19	0.321	1.24	5.82	0.97	8.03	12661	5.8752	21.45366	-15.57846	NAF
NS0081	78	80	NS	X068044	068044	1	G	W	19.53	50.25	6.61	0.3612	0.28	0.319	3.57	1.72	0.045	0.468	1.22	0.199	1.04	3.98	1.71	6.73	12594	14.3208	30.00024	-15.67944	NAF
NS0081	146	148	NS	X068079	068079	1	G	W	22.6	47.51	3.78	0.2709	0.21	0.177	3.21	1.19	0.094	0.162	0.997	0.274	1.12	7.46	0.8	9.38	12628	4.9572	20.75598	-15.79878	NAF
NS0081	222	224	NS	X068119	068119	1	G	W	22.94	47.18	4.37	0.2838	0.22	0.208	3.43	1.22	0.089	0.176	1.07	0.266	1.11	6.4	0.94	8.45	12666	5.3856	21.27924	-15.89364	NAF
NS0081	148	150	NS	X068080	068080	1	G	W	23.4	45.86	4.24	0.2967	0.23	0.209	3.39	1.24	0.114	0.178	1.04	0.279	1.14	7.27	0.88	9.29	12629	5.4468	21.62808	-16.18128	NAF
NS0081	164	166	NS	X068088	068088	1	G	W	22.82	46.4	4.6	0.3225	0.25	0.222	3.61	1.32	0.068	0.214	0.906	0.255	1.04	7.11	1.06	9.21	12637	6.5484	23.02344	-16.47504	NAF
NS0081	76	78	NS	X068043	068043	1	G	W	21.97	45.86	4.78	0.516	0.4	0.224	3.36	1.75	0.109	0.456	1.07	0.197	1.07	7.01	1.45	9.53	12593	13.9536	30.5235	-16.5699	NAF
NS0081	88	90	NS	X068049	068049	1	G	W	17.78	53	7.86	0.2322	0.18	0.383	3.85	1.6	0.028	0.37	1.17	0.19	0.83	2.74	1.64	5.21	12599	11.322	27.9072	-16.5852	NAF
NS0081	218	220	NS	X068117	068117	1	G	W	23.07	47.2	3.94	0.3225	0.25	0.19	3.23	1.27	0.111	0.163	1.07	0.254	1.11	7.05	0.82	8.98	12664	4.9878	22.15134	-17.16354	NAF
NS0081	220	222	NS	X068118	068118	1	G	W	23.25	46.36	3.84	0.3225	0.25	0.183	3.22	1.29	0.099	0.171	1.12	0.26	1.09	7.13	0.93	9.15	12665	5.2326	22.50018	-17.26758	NAF
NS0081	214	216	NS	X068115	068115	1	G	W	23.96	44.73	3.72	0.3741	0.29	0.178	3.27	1.27	0.143	0.145	1.12	0.288	1.17	7.89	0.75	9.81	12662	4.437	22.15134	-17.71434	NAF
NS0081	240	242	NS	X068128	068128	1	G	W	24.2	42.68	2.82	0.3741	0.29	0.13	3.03	1.5	0.082	0.275	0.788	0.186	1.01	10.65	1	12.66	12675	8.415	26.163	-17.748	NAF
NS0081	134	136	NS	X068073	068073	1	G	W	26.19	39.96	1.8	0.2451	0.19	0.084	2.45	1.22	0.06	0.108	0.382	0.109	0.87	14.83	0.49	16.19	12622	3.3048	21.27924	-17.97444	NAF
NS0081	176	178	NS	X068095	068095	1	G	W	24.71	41.62	4.76	0.4128	0.32	0.223	3.81	1.45	0.075	0.222	0.92	0.247	1.09	8.36	1.11	10.56	12643	6.7932	25.2909	-18.4977	NAF
NS0081	236	238	NS	X068126	068126	1	G	W	24.31	43.32	4.69	0.2967	0.23	0.222	3.74	1.4	0.117	0.185	1.22	0.3	1.22	6.7	1.06	8.98	12673	5.661	24.4188	-18.7578	NAF
NS0081	206	208	NS	X068111	068111	1	G	W	27.77	36.43	2.97	0.516	0.4	0.136	3.1	1.34	0.061	0.139	0.957	0.286	1.4	11.89	0.74	14.03	12658	4.2534	23.37228	-19.11888	NAF
NS0081	144	146	NS	X068078	068078	1	G	W	25.28	41.44	3.71	0.387	0.3	0.169	3.37	1.36	0.118	0.147	1.07	0.284	1.24	9.25	0.85	11.34	12627	4.4982	23.72112	-19.22292	NAF
NS0081	86	88	NS	X068048	068048	1	G	W	17.38	52.7	8.41	0.2064	0.16	0.415	3.96	1.68	0.037	0.324	1.19	0.171	0.78	2.74	1.7	5.22	12598	9.9144	29.30256	-19.38816	NAF
NS0081	180	182	NS	X068097	068097	1	G	W	23.28	44.57	3.03	0.387	0.3	0.145	2.95	1.65	0.096	0.3	0.793	0.202	1.03	9.48	1.18	11.69	12645	9.18	28.7793	-19.5993	NAF
NS0081	68	70	NS	X068039	068039	1	G	W	14.74	55.22	9.63	0.2451	0.19	0.467	3.19	1.45	0.03	0.153	2.71	0.058	0.78	3.28	1.23	5.29	12589	4.6818	25.2909	-20.6091	NAF
NS0081	70	72	NS	X068040	068040	1	G	W	14.88	55.74	9	0.2322	0.18	0.436	3.1	1.64	0.029	0.25	2.56	0.068	0.83	2.9	1.59	5.32	12590	7.65	28.60488	-20.95488	NAF
NS0081	194	196	NS	X068104	068104	1	G	W	25.79	40.87	1.79	0.2451	0.19	0.082	2.24	1.59	0.156	0.214	0.648	0.162	0.93	13	0.75	14.68	12652	6.5484	27.73278	-21.18438	NAF
NS0081	184	186	NS	X068099	068099	1	G	W	25.93	38	4.26	0.387	0.3	0.203	3.85	1.77	0.161	0.3	0.922	0.252	1.15	9.62	1.18	11.95	12647	9.18	30.87234	-21.69234	NAF
NS0081	252	254	NS	X068134	068134	1	G	W	23.92	43.34	4.04	0.3354	0.26	0.191	3.39	1.6	0.15	0.203	0.981	0.269	1.19	8.19	1.06	10.44	12681	6.2118	27.9072	-21.6954	NAF
NS0081	94	96	NS	X068052	068052	1	G	W	18.92	51.65	6.91	0.2451	0.19	0.334	3.72	1.88	0.067	0.338	0.901	0.215	0.96	3.54	1.69	6.19	12602	10.3428	32.79096	-22.44816	NAF
NS0081	104	106	NS	X068058	068058	1	G	W	24.5	42.09	3.72	0.3741	0.29	0.178	3.14	1.83	0.092	0.305	0.819	0.214	1.13	9.6	1.18	11.91	12607	9.333	31.91886	-22.58586	NAF
NS0081	136	138	NS	X068074	068074	1	G	W	26.07	39.57	2.43	0.2322	0.18	0.114	2.9	1.44	0.152	0.077	0.725	0.203	1.11	12.84	0.55	14.5	12623	2.3562	25.11648	-22.76028	NAF
NS0081	272	274	NS	X068145	068145	1	G	W	22.79	46.56	4.82	0.4257	0.33	0.219	3.28	1.93	0.156	0.315	1.01	0.276	1.17	5.12	1.44	7.73	12691	9.639	33.66306	-24.02406	NAF
NS0081	178	180	NS	X068096	068096	1	G	W	23.87	43.16	2.85	0.5031	0.39	0.133	3.03	1.93	0.078	0.307	0.845	0.209	0.92	9.79	1.53	12.24	12644	9.3942	33.66306	-24.26886	NAF
NS0081	278	280	NS	X068148	068148	1	G	W	24.6	42.1	3.27	0.3096	0.24	0.149	3.04	1.81	0.115	0.217	0.861	0.24	1.14	10.02	1.03	12.19	12694	6.6402	31.57002	-24.92982	NAF
NS0081	84	86	NS	X068047	068047	1	G	W	16.87	53.27	8.26	0.2193	0.17	0.402	3.81	1.9	0.097	0.259	1.24	0.173	0.81	2.9	1.67	5.38	12597	7.9254	33.1398	-25.2144	NAF
NS0081	230	232	NS	X068123	068123	1	G	W	22.21	47.24	3.54	0.2967	0.23	0.17	3.08	1.84	0.06	0.186	0.837	0.212	0.98	8.28	1.12	10.38	12670	5.6916	32.09328	-26.40168	NAF
NS0081	80	82	NS	X068045	068045	1	G	W	19.05	50.76	6.77	0.3354	0.26	0.326	3.69	2.15	0.057	0.298	1.17	0.189	0.93	3.84	2	6.77	12595	9.1188	37.5003	-28.3815	NAF
NS0081	202	204	NS	X068109	068109	1	G	W	26.28	39.37	1.94	0.3483	0.27	0.089	2.28	2.01	0.153	0.165	0.642	0.16	0.92	13.04	0.86	14.82	12656	5.049	35.05842	-30.00942	NAC
NS0081	82	84	NS	X068046	068046	1	G	W	16.74	52.37	8.61	0.2451	0.19	0.428	3.95	2.33	0.092	0.272	1.35	0.126	0.75	3.09	2.04	5.88	12596	8.3232	40.63986	-32.31666	NAC
NS0081	248	250	NS	X068132	068132	1	G	W	22.43	46	2.79	0.3354	0.26	0.132	2.82	2.2	0.05	0.169	0.847	0.227	1.04	9.18	1.44	11.66	12679	5.1714	38.3724	-33.201	NAC
NS0081	204	206	NS	X068110	068110	1	G	W	27.29	35.38	2.6	0.516	0.4	0.121	2.95	2.32	0.131	0.11	0.895	0.206	1.07	12.8	1.19	15.06	12657	3.366	40.46544	-37.09944	NAC
NS0082	230	232	NS	X068269	068269	1	G	D	20.83	52.01	5.93	0.3483	0.27	0.285	3.27	0.5	0.026	0.754	1.16	0.27	1.13	3.3	1.45	5.88	12811	23.0724	8.721	14.3514	PAF(HC)
NS0082	246	248	NS	X068278	068278	1	G	D	21.02	48.69	6.79	0.4128	0.32	0.329	3.66	0.53	0.091	0.582	2.45	0.311	1.22	3.5	1.27	5.99	12819	17.8092	9.24426	8.56494	PAF(LC)
NS0082	232	234	NS	X068270	068270	1	G	D	19.18	54.34	4.97	0.3225	0.25	0.233	2.86	1.34	0.041	1.01	1.08	0.297	1.04	3.07	1.7	5.81	12812	30.906	23.37228	7.53372	PAF(LC)
NS0082	4	6	NS	X068152	068152	1	G	D	47.82	15.21	5.31	-0.0129	-0.01	0.153	0.03	0.03	0.013	0.032	0.008	0.002	9.05	1.41	0.3	10.76	12698	0.9792	0.52326	0.45594	PAF(LC)
NS0082	0	2	NS	X068150	068150	1	G	D	36.3	26.65	11.03	0.0387	0.03	0.841	0.07	0.05	0.024	0.03	0.077	0.014	6.14	2.55	0.3	8.99	12696	0.918	0.8721	0.0459	PAF(LC)
NS0082	2	4	NS	X068151	068151	1	G	D	40.64	24.87	6.47	-0.0129	-0.01	0.337	0.06	0.03	0.016	0.017	0.018	0.011	7.86	1.6	0.24	9.7	12697	0.5202	0.52326	-0.00306	NAF
NS0082	8	10	NS	X068154	068154	1	G	D	39.64	28.61	6.01	-0.0129	-0.01	0.372	0.04	0.03	0.012	0.015	0.006	0.029	6.21	1.55	0.22	7.98	12700	0.459	0.52326	-0.06426	NAF
NS0082	6	8	NS	X068153	068153	1	G	D	39.49	27.53	6.51	-0.0129	-0.01	0.214	0.05	0.04	0.013	0.018	0.011	0.007	7.18	1.71	0.25	9.14	12699	0.5508	0.69768	-0.14688	NAF
NS0082	218	220	NS	X068263	068263	1	G	D	23.2	46.44	4.95	0.2838	0.22	0.242	3.31	0.68	0.065	0.38	1.01	0.258	1.39	6.13	1.13	8.65	12805	11.628	11.86056	-0.23256	NAF
NS0082	222	224	NS	X068265	068265	1	G	D	24.64	45.26	3.97	0.2322	0.18	0.189	2.99	0.38	0.058	0.204	1.21	0.319	1.76	7.03	0.67	9.46	12807	6.2424	6.62796	-0.38556	NAF
NS0082	278	280	NS	X068294	068294	1	G	D	23.96	45.81	5.98	0.258	0.2	0.285	3.66	0.65	0.115	0.354	1.42	0.368	1.59	3.9	1.01	6.5	12835	10.8324	11.3373	-0.5049	NAF
NS0082	248	250	NS	X068279	068279	1	G	D	25.87	41.42	3.64	0.4386	0.34	0.174	2.82	0.63	0.088	0.341	1.21	0.218	1.52	9.15	0.9	11.57	12820	10.4346	10.98846	-0.55386	NAF
NS0082	192	194	NS	X068249	068249	1	G	D	26.38	41.46	3.15	0.3741	0.29	0.15	2.87	0.51	0.059	0.271	1.13	0.28	1.64	9.09	0.75	11.48	12792	8.2926	8.89542	-0.60282	NAF
NS0082	272	274	NS	X068291	068291	1	G	D	25.56	42.45	4.69	0.3096	0.24	0.224	3.14	0.76	0.115	0.405	1.25	0.305	1.67	6.75	1.11	9.53	12832	12.393	13.25592	-0.86292	NAF
NS0082	16	18	NS	X068158	068158	1	G	D	30.33	49.32	1.31	0.0258	0.02	0.059	0.17	0.07	0.023	0.01	0.008	0.042	4.62	0.69	0.14	5.45	12704	0.306	1.22094	-0.91494	NAF
NS0082	14	16	NS	X068157	068157	1	G	D	27.66	52.03	2.43	-0.0129	-0.01	0.2	0.21	0.1	0.009	0.012	0.007	0.04	4.36	0.83	0.18	5.37	12703	0.3672	1.7442	-1.377	NAF
NS0082	12	14	NS	X068156	068156	1	G	D	23.75	57.68	1.83	-0.0129	-0.01	0.087	0.25	0.12	0.008	0.01	0.01	0.05	4.58	0.88	0.2	5.66	12702	0.306	2.09304	-1.78704	NAF
NS0082	10	12	NS	X068155	068155	1	G	D	34.48	39.62	3.28	-0.0129	-0.01	0.161	0.21	0.12	0.009	0.009	0.009	0.049	5.75	1.2	0.19	7.14	12701	0.2754	2.09304	-1.81764	NAF
NS0082	132	134	NS	X068218	068218	1	G	D	25.06	43.54	2.64	0.3999	0.31	0.124	2.59	0.74	0.101	0.355	0.756	0.213	1.47	9.75	0.95	12.17	12762	10.863	12.90708	-2.04408	NAF
NS0082	18	20	NS	X068159	068159	1	G	D	31.54	46.34	1.66	0.0387	0.03	0.077	0.28	0.15	0.032	0.009	0.008	0.054	4.82	0.89	0.13	5.84	12705	0.2754	2.6163	-2.3409	NAF
NS0082	28	30	NS	X068164	068164	1	G	D	37.42	38.76	1.12	0.1032	0.08	0.052	0.36	0.16	0.08	0.008	0.011	0.017	4.75	0.85	-0.01	5.59	12710	0.2448	2.79072	-2.54592	NAF
NS0082	228	230	NS	X068268	068268	1	G	D	21.27	50.7	4.24	0.3483	0.27	0.206	2.82	0.59	0.065	0.25	0.712	0.19	1.26	7.24	0.77	9.27	12810	7.65	10.29078	-2.64078	NAF
NS0082	126	128	NS	X068214	068214	1	G	D	24.53	44.51	5.2	0.3741	0.29	0.246	3.56	0.76	0.094	0.345	1.07	0.282	1.35	5.76	1.11	8.22	12759	10.557	13.25592	-2.69892	NAF
NS0082	224	226	NS	X068266	068266	1	G	D	22.15	47.52	5.42	0.387	0.3	0.26	3.56	0.8	0.088	0.365	1.03	0.274	1.31	5.55	1.13	7.99	12808	11.169	13.9536	-2.7846	NAF
NS0082	36	38	NS	X068168	068168	1	G	D	32.55	44.65	1.14	0.3354	0.26	0.054	0.49	0.17	0.098	0.004	0.057	0.029	4.94	0.86	0.06	5.86	12714	0.1224	2.96514	-2.84274	NAF
NS0082	24	26	NS	X068162	068162	1	G	D	34.87	42.5	1.35	0.0645	0.05	0.066	0.41	0.18	0.048	0.006	0.007	0.051	4.43	0.9	0.02	5.35	12708	0.1836	3.13956	-2.95596	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0082	22	24	NS	X068161	068161	1	G	D	36.98	38.45	1.41	0.0645	0.05	0.061	0.38	0.19	0.067	0.008	0.006	0.054	5.11	0.97	0.08	6.16	12707	0.2448	3.31398	-3.06918	NAF
NS0082	216	218	NS	X068262	068262	1	G	D	24.37	43.82	4.9	0.3741	0.29	0.237	3.41	0.79	0.077	0.343	1	0.26	1.47	7.16	1.08	9.71	12804	10.4958	13.77918	-3.28338	NAF
NS0082	38	40	NS	X068169	068169	1	G	D	32.05	44.59	1.32	0.3741	0.29	0.061	0.62	0.21	0.091	0.006	0.05	0.025	5.51	1.01	0.12	6.64	12715	0.1836	3.66282	-3.47922	NAF
NS0082	20	22	NS	X068160	068160	1	G	D	35.74	39.98	1.77	0.0645	0.05	0.086	0.41	0.23	0.048	0.007	0.009	0.057	4.73	1.06	0.03	5.82	12706	0.2142	4.01166	-3.79746	NAF
NS0082	32	34	NS	X068166	068166	1	G	D	33.98	42.34	1.58	0.3096	0.24	0.075	0.52	0.24	0.088	0.004	0.025	0.041	4.74	1.07	0.1	5.91	12712	0.1224	4.18608	-4.06368	NAF
NS0082	220	222	NS	X068264	068264	1	G	D	24.22	46.11	4.27	0.258	0.2	0.21	3.2	0.67	0.07	0.244	1.22	0.321	1.6	6.46	0.84	8.9	12806	7.4664	11.68614	-4.21974	NAF
NS0082	206	208	NS	X068257	068257	1	G	D	25.77	42.4	3.2	0.258	0.2	0.156	2.91	0.63	0.077	0.219	0.925	0.239	1.63	9.52	0.61	11.76	12799	6.7014	10.98846	-4.28706	NAF
NS0082	26	28	NS	X068163	068163	1	G	D	35.35	40.24	1.7	0.0774	0.06	0.087	0.54	0.26	0.069	0.005	0.011	0.047	5.02	1.13	0.04	6.19	12709	0.153	4.53492	-4.38192	NAF
NS0082	30	32	NS	X068165	068165	1	G	D	35.04	41.07	1.55	0.0774	0.06	0.076	0.58	0.26	0.059	0.005	0.019	0.037	4.75	1.11	0	5.86	12711	0.153	4.53492	-4.38192	NAF
NS0082	154	156	NS	X068229	068229	1	G	D	20.19	51.86	7.64	0.1677	0.13	0.364	3.8	0.81	0.046	0.314	0.748	0.207	0.98	2.82	1.05	4.85	12773	9.6084	14.12802	-4.51962	NAF
NS0082	164	166	NS	X068235	068235	1	G	D	24.04	44.37	4.48	0.4515	0.35	0.219	3.39	1	0.084	0.414	0.881	0.23	1.23	7.41	1.19	9.83	12778	12.6684	17.442	-4.7736	NAF
NS0082	44	46	NS	X068172	068172	1	G	D	32.74	43.34	1.66	0.3354	0.26	0.081	0.83	0.29	0.078	0.006	0.116	0.033	4.87	1.18	0.05	6.1	12718	0.1836	5.05818	-4.87458	NAF
NS0082	100	102	NS	X068201	068201	1	G	D	25.87	43.67	3.59	0.3483	0.27	0.172	3.36	0.56	0.077	0.156	1.27	0.321	1.69	6.83	0.62	9.14	12746	4.7736	9.76752	-4.99392	NAF
NS0082	34	36	NS	X068167	068167	1	G	D	32.8	42.84	1.84	0.3999	0.31	0.094	0.74	0.3	0.078	0.004	0.058	0.036	5.11	1.28	0.11	6.5	12713	0.1224	5.2326	-5.1102	NAF
NS0082	46	48	NS	X068173	068173	1	G	D	31.49	44.66	2	0.1677	0.13	0.1	0.87	0.46	0.093	0.072	0.121	0.034	3.8	1.71	0.23	5.74	12719	2.2032	8.02332	-5.82012	NAF
NS0082	208	210	NS	X068258	068258	1	G	D	25.43	41.74	4.43	0.3096	0.24	0.216	3.59	0.76	0.077	0.241	1.05	0.251	1.38	8.02	0.84	10.24	12800	7.3746	13.25592	-5.88132	NAF
NS0082	42	44	NS	X068171	068171	1	G	D	34.11	39.79	2.09	0.2838	0.22	0.097	0.96	0.36	0.1	0.006	0.121	0.028	5.46	1.48	0.17	7.11	12717	0.1836	6.27912	-6.09552	NAF
NS0082	274	276	NS	X068292	068292	1	G	D	24.01	46.11	5.08	0.2451	0.19	0.247	3.23	0.85	0.124	0.282	1.4	0.388	1.81	4.47	0.95	7.23	12833	8.6292	14.8257	-6.1965	NAF
NS0082	210	212	NS	X068259	068259	1	G	D	24.23	44.94	4.25	0.2838	0.22	0.204	3.38	0.78	0.083	0.241	1.09	0.27	1.42	7.03	0.86	9.31	12801	7.3746	13.60476	-6.23016	NAF
NS0082	240	242	NS	X068275	068275	1	G	D	25.02	43.5	4.36	0.3741	0.29	0.213	3.25	0.94	0.109	0.326	1.36	0.319	1.74	6.87	0.96	9.57	12816	9.9756	16.39548	-6.41988	NAF
NS0082	40	42	NS	X068170	068170	1	G	D	34.19	39.3	2.29	0.2838	0.22	0.114	0.95	0.39	0.096	0.006	0.115	0.044	5.56	1.49	0.11	7.16	12716	0.1836	6.80238	-6.61878	NAF
NS0082	104	106	NS	X068203	068203	1	G	D	24.37	47.51	4.15	0.3225	0.25	0.195	3.19	0.85	0.071	0.267	1.47	0.369	1.55	4.4	0.98	6.93	12748	8.1702	14.8257	-6.6555	NAF
NS0082	128	130	NS	X068215	068215	1	G	D	21.54	50.24	6.74	0.1935	0.15	0.312	3.8	0.95	0.121	0.324	1.05	0.284	1.24	2.59	0.98	4.81	12760	9.9144	16.5699	-6.6555	NAF
NS0082	130	132	NS	X068217	068217	1	G	D	20.14	53.56	6.94	0.129	0.1	0.326	3.59	0.75	0.083	0.209	1	0.283	1.27	1.96	0.75	3.98	12761	6.3954	13.0815	-6.6861	NAF
NS0082	188	190	NS	X068247	068247	1	G	D	26.47	42	3.62	0.2322	0.18	0.177	2.95	0.83	0.154	0.241	0.995	0.219	1.38	8.57	0.68	10.63	12790	7.3746	14.47686	-7.10226	NAF
NS0082	244	246	NS	X068277	068277	1	G	D	12.3	58.04	10.77	0.1419	0.11	0.534	3.41	0.94	0.036	0.302	4.05	0.101	0.51	2.23	1.03	3.77	12818	9.2412	16.39548	-7.15428	NAF
NS0082	204	206	NS	X068256	068256	1	G	D	23.19	44.99	5.52	0.4257	0.33	0.268	3.43	1.67	0.092	0.718	1.01	0.267	1.18	5.3	1.62	8.1	12798	21.9708	29.12814	-7.15734	NAF
NS0082	276	278	NS	X068293	068293	1	G	D	21.66	49.48	6.43	0.2838	0.22	0.303	3.57	0.94	0.111	0.299	1.25	0.314	1.28	3.23	1.1	5.61	12834	9.1494	16.39548	-7.24608	NAF
NS0082	250	252	NS	X068280	068280	1	G	D	21.08	48.84	6.45	0.2451	0.19	0.309	3.08	1.05	0.109	0.356	2.59	0.288	1.26	4.06	1.05	6.37	12821	10.8936	18.3141	-7.4205	NAF
NS0082	106	108	NS	X068204	068204	1	G	D	26.52	43.53	3.43	0.2709	0.21	0.164	3.01	0.74	0.056	0.158	1.29	0.328	1.64	6.67	0.62	8.93	12749	4.8348	12.90708	-8.07228	NAF
NS0082	156	158	NS	X068230	068230	1	G	D	22.9	47.8	2.87	0.3741	0.29	0.135	2.67	0.91	0.051	0.247	0.81	0.231	1.39	8.62	0.8	10.81	12774	7.5582	15.87222	-8.31402	NAF
NS0082	194	196	NS	X068251	068251	1	G	D	24.24	44.99	6.71	0.2064	0.16	0.326	4.14	0.95	0.123	0.268	1.31	0.335	1.41	3.37	1.02	5.8	12793	8.2008	16.5699	-8.3691	NAF
NS0082	172	174	NS	X068237	068237	1	G	D	24.16	45.78	3.96	0.2322	0.18	0.191	3.01	0.88	0.059	0.212	1.02	0.265	1.53	7.16	0.76	9.45	12780	6.4872	15.34896	-8.86176	NAF
NS0082	242	244	NS	X068276	068276	1	G	D	15.13	53.81	10.11	0.1806	0.14	0.5	3.85	1.17	0.048	0.37	3.22	0.135	0.63	2.6	1.18	4.41	12817	11.322	20.40714	-9.08514	NAF
NS0082	226	228	NS	X068267	068267	1	G	D	21.96	48.42	4.87	0.3999	0.31	0.243	3.2	1.07	0.118	0.313	1.07	0.275	1.37	5.72	1.05	8.14	12809	9.5778	18.66294	-9.08514	NAF
NS0082	102	104	NS	X068202	068202	1	G	D	26.62	42	2.81	0.3483	0.27	0.133	2.63	0.96	0.102	0.247	0.974	0.251	1.49	8.6	0.65	10.74	12747	7.5582	16.74432	-9.18612	NAF
NS0082	124	126	NS	X068213	068213	1	G	D	26.74	40.43	3.32	0.2967	0.23	0.165	2.91	0.82	0.127	0.167	0.876	0.229	1.43	10	0.49	11.92	12758	5.1102	14.30244	-9.19224	NAF
NS0082	98	100	NS	X068200	068200	1	G	D	28.01	40.51	2.33	0.2838	0.22	0.107	2.81	0.74	0.075	0.114	0.947	0.226	1.43	9.35	0.39	11.17	12745	3.4884	12.90708	-9.41868	NAF
NS0082	60	62	NS	X068181	068181	1	G	D	30.92	32.35	1.23	0.3225	0.25	0.057	2.83	0.68	0.1	0.073	0.561	0.155	1.75	15.72	0.15	17.62	12726	2.2338	11.86056	-9.62676	NAF
NS0082	160	162	NS	X068233	068233	1	G	D	24.1	44.46	4.64	0.3741	0.29	0.226	3.4	1.29	0.089	0.42	0.823	0.239	1.22	7.23	1.27	9.72	12776	12.852	22.50018	-9.64818	NAF
NS0082	190	192	NS	X068248	068248	1	G	D	25.67	42.39	3.64	0.2967	0.23	0.175	3.01	0.89	0.147	0.187	1.08	0.275	1.52	8.62	0.62	10.76	12791	5.7222	15.52338	-9.80118	NAF
NS0082	68	70	NS	X068185	068185	1	G	D	28.83	38.61	1.17	0.2838	0.22	0.053	2.58	0.73	0.11	0.095	0.529	0.15	1.51	12.64	0.14	14.29	12730	2.907	12.73266	-9.82566	NAF
NS0082	214	216	NS	X068261	068261	1	G	D	24.05	44.32	4.23	0.2451	0.19	0.209	3.3	1	0.072	0.243	0.995	0.245	1.29	7.82	0.92	10.03	12803	7.4358	17.442	-10.0062	NAF
NS0082	92	94	NS	X068197	068197	1	G	D	25.58	43.75	3.23	0.4644	0.36	0.15	3.07	1.07	0.091	0.275	1.2	0.281	1.39	6.93	1	9.32	12742	8.415	18.66294	-10.24794	NAF
NS0082	48	50	NS	X068174	068174	1	G	D	32.62	34.11	1.44	0.3741	0.29	0.067	2.49	0.71	0.133	0.068	0.388	0.066	1.59	11.58	0.05	13.22	12720	2.0808	12.38382	-10.30302	NAF
NS0082	66	68	NS	X068184	068184	1	G	D	29.32	37.91	1.05	0.3612	0.28	0.051	2.54	0.85	0.105	0.129	0.455	0.121	1.21	12.41	0.19	13.81	12729	3.9474	14.8257	-10.8783	NAF
NS0082	50	52	NS	X068175	068175	1	G	D	29.34	36.26	1.17	0.3612	0.28	0.054	2.67	0.83	0.103	0.114	0.457	0.074	1.42	13.75	0.16	15.33	12721	3.4884	14.47686	-10.98846	NAF
NS0082	64	66	NS	X068183	068183	1	G	D	31.67	34.6	1.51	0.3354	0.26	0.071	2.84	0.9	0.096	0.149	0.666	0.175	1.4	11.29	0.35	13.04	12728	4.5594	15.6978	-11.1384	NAF
NS0082	166	168	NS	X068236	068236	1	G	D	20.19	50.66	8.05	0.1935	0.15	0.396	4.04	1.06	0.051	0.233	0.74	0.201	1.02	2.91	0.98	4.91	12779	7.1298	18.48852	-11.35872	NAF
NS0082	62	64	NS	X068182	068182	1	G	D	29.7	37.59	1.79	0.2838	0.22	0.085	2.93	0.96	0.11	0.171	0.833	0.234	1.52	10.01	0.49	12.02	12727	5.2326	16.74432	-11.51172	NAF
NS0082	142	144	NS	X068223	068223	1	G	D	24.03	45.34	4.96	0.3741	0.29	0.244	3.26	1.14	0.136	0.268	1.07	0.292	1.3	6.07	1	8.37	12767	8.2008	19.88388	-11.68308	NAF
NS0082	162	164	NS	X068234	068234	1	G	D	22.57	47.23	5.6	0.3225	0.25	0.271	3.51	1.26	0.097	0.331	0.995	0.236	1.25	4.97	1.18	7.4	12777	10.1286	21.97692	-11.84832	NAF
NS0082	86	88	NS	X068194	068194	1	G	D	31.61	39.15	2.38	0.5031	0.39	0.108	2.85	0.94	0.094	0.145	1.01	0.257	1.21	5.2	0.59	7	12739	4.437	16.39548	-11.95848	NAF
NS0082	52	54	NS	X068176	068176	1	G	D	30.86	32.36	1.22	0.3354	0.26	0.055	2.75	0.84	0.099	0.08	0.516	0.126	1.52	15.29	0.16	16.97	12722	2.448	14.65128	-12.20328	NAF
NS0082	72	74	NS	X068187	068187	1	G	D	23.63	44.58	4.29	0.3225	0.25	0.201	3.29	1.5	0.081	0.448	0.816	0.226	1.17	7.11	1.65	9.93	12732	13.7088	26.163	-12.4542	NAF
NS0082	122	124	NS	X068212	068212	1	G	D	26.31	41	2.99	0.2838	0.22	0.143	2.99	1.01	0.122	0.148	0.895	0.235	1.41	9.89	0.56	11.86	12757	4.5288	17.61642	-13.08762	NAF
NS0082	134	136	NS	X068219	068219	1	G	D	27.69	40.04	2.46	0.2838	0.22	0.118	2.69	0.95	0.106	0.111	0.729	0.16	1.22	10.81	0.4	12.43	12763	3.3966	16.5699	-13.1733	NAF
NS0082	234	236	NS	X068272	068272	1	G	D	24.7	42.73	4.04	0.3741	0.29	0.193	3.1	1.24	0.102	0.276	1	0.227	1.55	8.34	0.94	10.83	12813	8.4456	21.62808	-13.18248	NAF
NS0082	200	202	NS	X068254	068254	1	G	D	24.11	45.43	3.74	0.3999	0.31	0.185	3.13	1.24	0.068	0.265	1.24	0.31	1.42	6.58	1.12	9.12	12796	8.109	21.62808	-13.51908	NAF
NS0082	150	152	NS	X068227	068227	1	G	D	22.89	46.83	3.76	0.4515	0.35	0.177	2.92	1.37	0.104	0.339	1.01	0.272	1.34	6.8	1.21	9.35	12771	10.3734	23.89554	-13.52214	NAF
NS0082	54	56	NS	X068177	068177	1	G	D	29.54	35.19	1.19	0.2709	0.21	0.058	2.69	0.93	0.093	0.079	0.504	0.132	1.42	14.86	0.16	16.44	12723	2.4174	16.22106	-13.80366	NAF
NS0082	58	60	NS	X068180	068180	1	G	D	29.91	33.04	1.12	0.3483	0.27	0.05	2.77	1.08	0.119	0.158	0.488	0.13	1.43	15.9	0.39	17.72	12725	4.8348	18.83736	-14.00256	NAF
NS0082	138	140	NS	X068221	068221	1	G	D	26.8	40.99	2.99	0.2838	0.22	0.141	2.83	1.09	0.106	0.157	0.751	0.187	1.42	9.9	0.56	11.88	12765	4.8042	19.01178	-14.20758	NAF
NS0082	146	148	NS	X068225	068225	1	G	D	22.1	49.73	5.18	0.3225	0.25	0.245	2.89	1.48	0.117	0.379	0.72	0.197	1.38	4.32	1.24	6.94	12769	11.5974	25.81416	-14.21676	NAF
NS0082	84	86	NS	X068193	068193	1	G	D	29.78	43.1	2.13	0.4515	0.35	0.098	2.72	0.98	0.081	0.091	0.964	0.233	1.1	4.84	0.53	6.47	12738	2.7846	17.09316	-14.30856	NAF
NS0082	168	170	NS	X068238	068238	1	G	D	22.43	47.07	4.28	0.3612	0.28	0.209	3.19	1.55	0.119	0.415	1.06	0.283	1.33	5.59	1.43	8.35	12781	12.699	27.0351	-14.3361	NAF
NS0082	144	146	NS	X068224	068224	1	G	D	23.55	46.31	4.87	0.3741	0.29	0.228	3.16	1.31	0.143	0.265	1.03	0.269	1.33	5.56	0.98	7.87	12768	8.109	22.84902	-14.74002	NAF
NS0082	110	112	NS	X068206	068206	1	G	D	26.07	42.94	3.2	0.3741	0.29	0.149	3.09	1.17	0.084	0.16	1.08	0.283	1.36	7.7	0.74	9.8	12751	4.896	20.40714	-15.51114	NAF
NS0082	152	154	NS	X068228	068228	1	G	D	23.65	44.6	2.9	0.4644	0.36	0.133	2.75	1.67	0.093	0.438	0.855	0.197	1.14	8.7	1.47	11.31	12772	13.4028	29.12814	-15.72534	NAF
NS0082	82	84	NS	X068192	068192	1	G	D	27.83	44.47	2.3	0.3354	0.26	0.103	3.04	1.43	0.062	0.288	0.951	0.234	1.04	4.51	1.31	6.86	12737	8.8128	24.94206	-16.12926	NAF
NS0082	56	58	NS	X068178	068178	1	G	D	27.93	35.91	2.27	0.3354	0.26	0.102	3.12	1.49	0.119	0.29	0.739	0.199	1.56	12.3	0.97	14.83	12724	8.874	25.98858	-17.11458	NAF
NS0082	158	160	NS	X068232	068232	1	G	D	24.45	43.44	3.31	0.3999	0.31	0.164	2.94	1.51	0.185	0.301	0.914	0.25	1.36	8.67	0.99	11.02	12775	9.2106	26.33742	-17.12682	NAF
NS0082	174	176	NS	X068240	068240	1	G	D	25.86	41.41	3.22	0.2838	0.22	0.148	2.75	1.34	0.143	0.2	0.936	0.251	1.67	9.35	0.71	11.73	12783	6.12	23.37228	-17.25228	NAF
NS0082	140	142	NS	X068222	068222	1	G	D	26.12	41.88	2.73	0.258	0.2	0.127	2.58	1.21	0.107	0.125	0.754	0.186	1.18	10.65	0.53	12.36	12766	3.825	21.10482	-17.27982	NAF
NS0082	180	182	NS	X068243	068243	1	G	D	24.92	43.56	3.57	0.1935	0.15	0.179	3.27	1.3	0.064	0.157	0.989	0.203	1.36	7.99	0.79	10.14	12786	4.8042	22.6746	-17.8704	NAF
NS0082	148	150	NS	X068226	068226	1	G	D	17.44	56	4.75	0.4386	0.34	0.222	2.68	1.91	0.079	0.502	0.512	0.142	0.76	4.73	1.57	7.06	12770	15.3612	33.31422	-17.95302	NAF
NS0082	176	178	NS	X068241	068241	1	G	D	27.22	39.07	3.04	0.2709	0.21	0.145	2.82	1.34	0.128	0.171	0.907	0.189	1.24	10.28	0.63	12.15	12784	5.2326	23.37228	-18.13968	NAF
NS0082	94	96	NS	X068198	068198	1	G	D	30.09	35.05	2.41	0.6321	0.49	0.112	2.87	1.25	0.099	0.116	1.04	0.254	1.4	10.91	0.62	12.93	12743	3.5496	21.8025	-18.2529	NAF
NS0082	212	214	NS	X068260	068260	1	G	D	25.51	39.98	3.54	0.4386	0.34	0.169	3.26	1.49	0.088	0.246	0.912	0.232	1.28	10.07	1.03	12.38	12802	7.5276	25.98858	-18.46098	NAF
NS0082	76	78	NS	X068189	068189	1	G	D	28.02	38.63	1.69	0.4644	0.36	0.078	2.97	1.28	0.063	0.126	0.68	0.188	1.24	11.33	0.78	13.35	12734	3.8556	22.32576	-18.47016	NAF
NS0082	260	262	NS	X068285	068285	1	G	D	21.09	46.87	6.62	0.3741	0.29	0.313	3.24	1.66	0.079	0.34	2.77	0.292	1.25	4.05	1.41	6.71	12826	10.404	28.95372	-18.54972	NAF
NS0082	96	98	NS	X068199	068199	1	G	D	25.41	45.05	2.87	0.3354	0.26	0.136	2.81	1.25	0.062	0.094	1.23	0.3	1.46	6.79	0.73	8.98	12744	2.8764	21.8025	-18.9261	NAF
NS0082	74	76	NS	X068188	068188	1	G	D	26.03	39.37	2.76	0.4128	0.32	0.127	3.3	1.56	0.083	0.263	0.798	0.214	1.33	10.62	1.3	13.25	12733	8.0478	27.20952	-19.16172	NAF
NS0082	88	90	NS	X068195	068195	1	G	D	30.93	40.45	2.09	0.3999	0.31	0.098	2.69	1.26	0.096	0.087	0.955	0.259	1.12	5	0.64	6.76	12740	2.6622	21.97692	-19.31472	NAF
NS0082	186	188	NS	X068246	068246	1	G	D	23.65	45.41	5.37	0.2322	0.18	0.261	3.6	1.47	0.076	0.202	1.05	0.274	1.4	5.72	1.02	8.14	12789	6.1812	25.63974	-19.45854	NAF
NS0082	170	172	NS	X068239	068239	1	G	D	23.19	46.21	3.55	0.3483	0.27	0.17	2.92	1.66	0.108	0.304	1	0.258	1.33	7.32	1.1	9.75	12782	9.3024	28.95372	-19.65132	NAF
NS0082	116	118	NS	X068209	068209	1	G	D	27.98	41	2.68	0.2967	0.23	0.128	2.93	1.32	0.105	0.091	1.07	0.252	1.23	7.81	0.65	9.69	12754	2.7846	23.02344	-20.23884	NAF
NS0082	114	116	NS	X068208	068208	1	G	D	28.82	40.12	2.37	0.3096	0.24	0.109	2.63	1.34	0.067	0.082	0.933	0.219	1.36	8.45	0.57	10.38	12753	2.5092	23.37228	-20.86308	NAF
NS0082	80	82	NS	X068191	068191	1	G	D	29.67	43.76	1.69	0.2838	0.22	0.081	2.66	1.36	0.062	0.081	0.764	0.214	0.9	4.4	0.84	6.14	12736	2.4786	23.72112	-21.24252	NAF
NS0082	196	198	NS	X068252	068252	1	G	D	25.83	41.45	2.81	0.2838	0.22	0.138	2.54	1.49	0.105	0.148	0.896	0.207	1.31	10.6	0.72	12.63	12794	4.5288	25.98858	-21.45978	NAF
NS0082	262	264	NS	X068286	068286	1	G	D	23.09	46.13	6.07	0.258	0.2	0.288	3.8	1.68	0.1	0.254	1.66	0.339	1.36	3.72	1.28	6.36	12827	7.7724	29.30256	-21.53016	NAF
NS0082	270	272	NS	X068290	068290	1	G	D	21.15	48.3	6.02	0.3741	0.29	0.291	3.65	1.69	0.086	0.25	1.27	0.291	1.24	4.55	1.3	7.09	12831	7.65	29.47698	-21.82698	NAF
NS0082	258	260	NS	X068284	068284	1	G	D	26.85	43.19	3.42	0.3096	0.24	0.165	2.46	1.57	0.096	0.168	1.23	0.266	1.34	6.25	0.77	8.36	12825	5.1408	27.38394	-22.24314	NAF
NS0082	236	238	NS	X068273	068273	1	G	D	26.18	42.2	2.57	0.3741	0.29	0.123	2.6	1.77	0.149	0.277	0.884	0.19	1.31	8.48	0.89	10.68	12814	8.4762	30.87234	-22.39614	NAF
NS0082	256	258	NS	X068283	068283	1	G	D	26.79	41.47	3.64	0.3354	0.26	0.172	2.8	1.6	0.097	0.137	1.15	0.276	1.48	7.22	0.77	9.47	12824	4.1922	27.9072	-23.715	NAF
NS0082	118	120	NS	X068210	068210	1	G	D	27.62	39.8	2.28	0.3096	0.24	0.108	2.85	1.62	0.083	0.144	0.943	0.241	1.35	9.72	0.84	11.91	12755	4.4064	28.25604	-23.84964	NAF
NS0082	264	266	NS	X068287	068287	1	G	D	29.98	40.66	2.15	0.2193	0.17	0.1	2.16	1.59	0.087	0.069	0.903	0.198	1.05	6.83	0.57	8.45	12828	2.1114	27.73278	-25.62138	NAF
NS0082	90	92	NS	X068196	068196	1	G	D	32.62	37.41	1.52	0.4644	0.36	0.071	2.3	1.6	0.089	0.058	0.681	0.185	0.98	6.81	0.82	8.61	12741	1.7748	27.9072	-26.1324	NAF
NS0082	178	180	NS	X068242	068242	1	G	D	25.78	40.42	3.24	0.2451	0.19	0.159	3.24	1.74	0.108	0.119	0.891	0.213	1.25	10.25	0.85	12.35	12785	3.6414	30.34908	-26.70768	NAF
NS0082	78	80	NS	X068190	068190	1	G	D	30.29	40.46	1.56	0.3612	0.28	0.081	2.77	1.69	0.097	0.081	0.681	0.188	0.95	6.31	0.99	8.25	12735	2.4786	29.47698	-26.99838	NAF
NS0082	268	270	NS	X068289	068289	1	G	D	24.47	42.88	3.6	0.2838	0.22	0.171	3.07	1.93	0.192	0.216	1.07	0.288	1.38	8.4	1.01	10.79	12830	6.6096	33.66306	-27.05346	NAF
NS0082	252	254	NS	X068281	068281	1	G	D	26.6	43.15	3.25	0.3096	0.24	0.152	2.5	1.83	0.095	0.155	1.02	0.224	1.2	6.81	0.87	8.88	12822	4.743	31.91886	-27.17586	NAF
NS0082	120	122	NS	X068211	068211	1	G	D	28.12	38.95	2.39	0.2838	0.22	0.113	2.78	1.76	0.177	0.106	0.791	0.21	1.31	9.98	0.66	11.95	12756	3.2436	30.69792	-27.45432	NAF
NS0082	70	72	NS	X068186	068186	1	G	D	25.96	39.57	2.68	0.2967	0.23	0.124	3.17	1.98	0.09	0.229	0.646	0.181	1.39	10.95	1.44	13.78	12731	7.0074	34.53516	-27.52776	NAF
NS0082	112	114	NS	X068207	068207	1	G	D	27.8	40.91	2.42	0.2838	0.22	0.115	2.64	1.79	0.086	0.101	0.939	0.218	1.23	8.46	0.85	10.54	12752	3.0906	31.22118	-28.13058	NAF
NS0082	198	200	NS	X068253	068253	1	G	D	25.21	41.34	3.8	0.2838	0.22	0.189	3.07	1.99	0.129	0.204	1.1	0.275	1.37	8.47	1.1	10.94	12795	6.2424	34.70958	-28.46718	NAF
NS0082	202	204	NS	X068255	068255	1	G	D	17.92	53.56	6.91	0.387	0.3	0.331	3.37	2.5	0.053	0.489	0.601	0.179	0.91	2.55	2.05	5.51	12797	14.9634	43.605	-28.6416	NAF
NS0082	280	282	NS	X068295	068295	1	G	D	26.68	40.3	2.32	0.2322	0.18	0.106	2.11	1.94	0.121	0.125	0.701	0.148	1.27	10.99	0.72	12.98	12836	3.825	33.83748	-30.01248	NAC
NS0082	238	240	NS	X068274	068274	1	G	D	25.66	41.22	2.99	0.3483	0.27	0.142	2.74	2.27	0.193	0.258	0.913	0.208	1.37	9.41	1.02	11.8	12815	7.8948	39.59334	-31.69854	NAC
NS0082	108	110	NS	X068205	068205	1	G	D	26.3	41.91	2.46	0.3354	0.26	0.117	2.56	2.03	0.08	0.117	0.962	0.243	1.39	9.06	1.05	11.5	12750	3.5802	35.40726	-31.82706	NAC
NS0082	182	184	NS	X068244	068244	1	G	D	28.17	39.55	3.01	0.2322	0.18	0.146	3.02	2.22	0.12	0.101	1.17	0.247	1.23	7.18	1.13	9.54	12787	3.0906	38.72124	-35.63064	NAC
NS0082	136	138	NS	X068220	068220	1	G	D	27.71	38.64	2.03	0.2709	0.21	0.095	2.6	2.25	0.131	0.074	0.629	0.136	1.01	10.84	0.95	12.8	12764	2.2644	39.2445	-36.9801	NAC
NS0082	266	268	NS	X068288	068288	1	G	D	27.1	39.68	2.86	0.258	0.2	0.137	2.68	2.32	0.12	0.095	0.942	0.237	1.25	9.03	1.08	11.36	12829	2.907	40.46544	-37.55844	NAC
NS0082	254	256	NS	X068282	068282	1	G	D	26.33	41.28	4.1	0.2967	0.23	0.194	3.02	2.39	0.2	0.114	1.24	0.276	1.35	6.32	1.04	8.71	12823	3.4884	41.68638	-38.19798	NAC
NS0082	184	186	NS	X068245	068245	1	G	D	25.49	42.53	2.14	0.2709	0.21	0.105	2.16	2.69	0.05	0.101	0.757	0.162	0.97	9.89	1.34	12.2	12788	3.0906	46.91898	-43.82838	NAC
NS0083	224	226	NS	X068413	068413	1	G	W	18.67	54.67	3.4	0.516	0.4	0.166	2.63	1.47	0.053	1.49	1.09	0.223	0.78	4.47	2.35	7.6	12949	45.594	25.63974	19.95426	PAF(HC)

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0083	122	124	NS	X068360	068360	1	G	W	24.76	41.5	5.26	0.6321	0.49	0.253	3.87	0.64	0.095	0.817	1.29	0.273	1.22	6.97	1.72	9.91	12898	25.0002	11.16288	13.83732	PAF(HC)
NS0083	222	224	NS	X068412	068412	1	G	W	16.96	59.51	2.16	0.4386	0.34	0.107	1.99	1.63	0.052	1.38	0.845	0.181	0.7	4.54	2.02	7.26	12948	42.228	28.43046	13.79754	PAF(HC)
NS0083	128	130	NS	X068363	068363	1	G	W	20.41	49.33	7.75	0.2709	0.21	0.39	4	0.45	0.083	0.65	1.56	0.243	0.97	3.54	1.28	5.79	12901	19.89	7.8489	12.0411	PAF(HC)
NS0083	130	132	NS	X068364	068364	1	G	W	18.07	52.82	8.64	0.1935	0.15	0.417	3.69	0.34	0.069	0.421	2.71	0.24	0.93	2.42	0.91	4.26	12902	12.8826	5.93028	6.95232	PAF(LC)
NS0083	132	134	NS	X068365	068365	1	G	W	27	39.32	3.04	0.5418	0.42	0.146	2.78	0.4	0.07	0.45	0.905	0.236	1.3	11.11	1.13	13.54	12903	13.77	6.9768	6.7932	PAF(LC)
NS0083	154	156	NS	X068376	068376	1	G	W	25.77	40.88	4.12	0.5676	0.44	0.2	3.39	0.49	0.051	0.456	1.17	0.274	1.25	9.06	1.24	11.55	12914	13.9536	8.54658	5.40702	PAF(LC)
NS0083	126	128	NS	X068362	068362	1	G	W	11.94	59.45	11.37	0.0774	0.06	0.56	3.48	0.18	0.021	0.258	3.75	0.043	0.35	2.34	0.48	3.17	12900	7.8948	3.13956	4.75524	PAF(LC)
NS0083	116	118	NS	X068357	068357	1	G	W	19.07	50.76	8.34	0.258	0.2	0.404	3.74	0.48	0.082	0.399	2.83	0.267	0.97	2.94	0.95	4.86	12895	12.2094	8.37216	3.83724	PAF(LC)
NS0083	146	148	NS	X068372	068372	1	G	W	19.54	50.01	7.22	0.258	0.2	0.352	3.45	0.72	0.129	0.517	2.46	0.238	0.97	4.13	1.29	6.39	12910	15.8202	12.55824	3.26196	PAF(LC)
NS0083	200	202	NS	X068399	068399	1	G	W	18.68	48.82	8.13	0.387	0.3	0.386	3.45	1.2	0.038	0.731	3.49	0.258	1.04	2.95	1.56	5.55	12937	22.3686	20.9304	1.4382	PAF(LC)
NS0083	216	218	NS	X068409	068409	1	G	W	23.83	44.9	4.55	0.3999	0.31	0.218	3.39	0.95	0.058	0.581	1.37	0.308	1.24	6.22	1.36	8.82	12945	17.7786	16.5699	1.2087	PAF(LC)
NS0083	114	116	NS	X068356	068356	1	G	W	16.44	53.2	10.06	0.1548	0.12	0.477	3.73	0.48	0.039	0.313	3.53	0.207	0.84	2.04	0.79	3.67	12894	9.5778	8.37216	1.20564	PAF(LC)
NS0083	152	154	NS	X068375	068375	1	G	W	23.1	45.23	6.14	0.3354	0.26	0.306	3.87	0.7	0.093	0.425	1.54	0.323	1.16	5.23	1.14	7.53	12913	13.005	12.2094	0.7956	PAF(LC)
NS0083	112	114	NS	X068355	068355	1	G	W	18.33	52.44	8.67	0.1548	0.12	0.415	3.92	0.54	0.066	0.319	2.57	0.273	0.96	2.11	0.83	3.9	12893	9.7614	9.41868	0.34272	PAF(LC)
NS0083	118	120	NS	X068358	068358	1	G	W	20.23	49.02	8.37	0.2451	0.19	0.408	4.2	0.56	0.15	0.327	2.18	0.293	1.11	2.8	0.84	4.75	12896	10.0062	9.76752	0.23868	PAF(LC)
NS0083	0	4	NS	BX076296-BX076297	X076296	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	108	-0.0306	-0.01744	-0.013158	NAF
NS0083	8	12	NS	BX076300-BX076301	X076300	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	110	-0.0306	-0.01744	-0.013158	NAF
NS0083	12	16	NS	BX076302-BX076303	X076302	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	111	-0.0306	-0.01744	-0.013158	NAF
NS0083	16	20	NS	BX076304-BX076305	X076304	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	112	-0.0306	-0.01744	-0.013158	NAF
NS0083	20	24	NS	BX076306-BX076307	X076306	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	113	-0.0306	-0.01744	-0.013158	NAF
NS0083	24	28	NS	BX076308-BX076309	X076308	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	114	-0.0306	-0.01744	-0.013158	NAF
NS0083	28	32	NS	BX076310-BX076311	X076310	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	115	-0.0306	-0.01744	-0.013158	NAF
NS0083	32	36	NS	BX076312-BX076313	X076312	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	116	-0.0306	-0.01744	-0.013158	NAF
NS0083	36	40	NS	BX076314-BX076315	X076314	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	117	-0.0306	-0.01744	-0.013158	NAF
NS0083	40	44	NS	BX076316-BX076317	X076316	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	118	-0.0306	-0.01744	-0.013158	NAF
NS0083	44	48	NS	BX076318-BX076319	X076318	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	119	-0.0306	-0.01744	-0.013158	NAF
NS0083	48	50	NS	BX076320	X076320	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	120	-0.0306	-0.01744	-0.013158	NAF
NS0083	50	54	NS	BX076322-BX076323	X076322	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	121	-0.0306	-0.01744	-0.013158	NAF
NS0083	54	58	NS	BX076324-BX076325	X076324	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	122	-0.0306	-0.01744	-0.013158	NAF
NS0083	58	62	NS	BX076326-BX076327	X076326	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	123	-0.0306	-0.01744	-0.013158	NAF
NS0083	62	66	NS	BX076328-BX076329	X076328	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	124	-0.0306	-0.01744	-0.013158	NAF
NS0083	80	84	NS	BX076338-BX076339	X076338	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	128	-0.0306	-0.01744	-0.013158	NAF
NS0083	110	114	NS	BX076354-BX076355	X076354	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	136	-0.0306	-0.01744	-0.013158	NAF
NS0083	114	118	NS	BX076356-BX076357	X076356	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	137	-0.0306	-0.01744	-0.013158	NAF
NS0083	118	122	NS	BX076358-BX076359	X076358	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	138	-0.0306	-0.01744	-0.013158	NAF
NS0083	124	126	NS	BX076361	X076361	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	139	-0.0306	-0.01744	-0.013158	NAF
NS0083	126	130	NS	BX076362-BX076363	X076362	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	140	-0.0306	-0.01744	-0.013158	NAF
NS0083	130	134	NS	BX076364-BX076365	X076364	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	141	-0.0306	-0.01744	-0.013158	NAF
NS0083	134	138	NS	BX076366-BX076367	X076366	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	142	-0.0306	-0.01744	-0.013158	NAF
NS0083	138	142	NS	BX076368-BX076369	X076368	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	143	-0.0306	-0.01744	-0.013158	NAF
NS0083	142	146	NS	BX076370-BX076371	X076370	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	144	-0.0306	-0.01744	-0.013158	NAF
NS0083	146	150	NS	BX076372-BX076373	X076372	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	145	-0.0306	-0.01744	-0.013158	NAF
NS0083	150	154	NS	BX076374-BX076375	X076374	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	146	-0.0306	-0.01744	-0.013158	NAF
NS0083	154	158	NS	BX076376-BX076377	X076376	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	147	-0.0306	-0.01744	-0.013158	NAF
NS0083	158	162	NS	BX076378-BX076379	X076378	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	148	-0.0306	-0.01744	-0.013158	NAF
NS0083	162	166	NS	BX076380-BX076381	X076380	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	149	-0.0306	-0.01744	-0.013158	NAF
NS0083	170	174	NS	BX076384-BX076385	X076384	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	151	-0.0306	-0.01744	-0.013158	NAF
NS0083	174	178	NS	BX076386-BX076387	X076386	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	152	-0.0306	-0.01744	-0.013158	NAF
NS0083	178	182	NS	BX076388-BX076389	X076388	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	153	-0.0306	-0.01744	-0.013158	NAF
NS0083	184	186	NS	BX076391	X076391	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	154	-0.0306	-0.01744	-0.013158	NAF
NS0083	186	190	NS	BX076392-BX076393	X076392	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	155	-0.0306	-0.01744	-0.013158	NAF
NS0083	190	194	NS	BX076394-BX076395	X076394	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	156	-0.0306	-0.01744	-0.013158	NAF
NS0083	194	198	NS	BX076396-BX076397	X076396	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	157	-0.0306	-0.01744	-0.013158	NAF
NS0083	198	202	NS	BX076398-BX076399	X076398	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	158	-0.0306	-0.01744	-0.013158	NAF
NS0083	202	204	NS	BX076401	X076401	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	159	-0.0306	-0.01744	-0.013158	NAF
NS0083	204	206	NS	BX076403	X076403	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	160	-0.0306	-0.01744	-0.013158	NAF
NS0083	214	218	NS	BX076408-BX076409	X076408	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	163	-0.0306	-0.01744	-0.013158	NAF
NS0083	218	222	NS	BX076410-BX076411	X076410	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	164	-0.0306	-0.01744	-0.013158	NAF
NS0083	222	226	NS	BX076412-BX076413	X076412	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	165	-0.0306	-0.01744	-0.013158	NAF
NS0083	226	230	NS	BX076414-BX076415	X076414	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	166	-0.0306	-0.01744	-0.013158	NAF
NS0083	234	238	NS	BX076418-BX076419	X076418	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	168	-0.0306	-0.01744	-0.013158	NAF
NS0083	238	242	NS	BX076420-BX076421	X076420	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	169	-0.0306	-0.01744	-0.013158	NAF
NS0083	254	258	NS	BX076428-BX076429	X076428	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	173	-0.0306	-0.01744	-0.013158	NAF
NS0083	260	260	NS	BX076431-BX076432	X076431	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	174	-0.0306	-0.01744	-0.013158	NAF
NS0083	262	264	NS	BX076433	X076433	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	175	-0.0306	-0.01744	-0.013158	NAF
NS0083	264	268	NS	BX076436-BX076437	X076436	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	176	-0.0306	-0.01744	-0.013158	NAF
NS0083	144	146	NS	X068371	068371	1	G	W	25	41.76	5.47	0.3225	0.25	0.264	3.52	0.58	0.117	0.329	1.22	0.259	1.23	7.71	0.98	9.92	12909	10.0674	10.11636	-0.04896	NAF
NS0083	156	158	NS	X068377	068377	1	G	W	21.94	47.07	7.24	0.3096	0.24	0.356	4.2	0.6	0.07	0.329	1.89	0.338	1.19	3.32	0.98	5.49	12915	10.0674	10.4652	-0.3978	NAF
NS0083	8	10	NS	X068300	068300	1	G	D	29.61	44.16	5.26	0.2838	0.22	0.278	0.1	0.05	0.021	0.014	0.021	0.025	5.08	1.62	0.27	6.97	12841	0.4284	0.8721	-0.4437	NAF
NS0083	134	136	NS	X068366	068366	1	G	W	21.02	50.06	6.72	0.2838	0.22	0.331	3.97	0.52	0.074	0.278	1.44	0.302	1.12	3.47	0.9	5.49	12904	8.5068	9.06984	-0.56304	NAF
NS0083	276	280	NS	BX076442-BX076443	X076442	2			61.26	10.852	0.77	0.045	0.0324	0.098	0.548	0.093	0.009	0.034	0.237	0.163	-0.01	-0.01	-0.01	-0.03	179	1.0404	1.622106	-0.581706	NAF
NS0083	10	12	NS	X068301	068301	1	G	D	29.58	43.42	5.56	0.4128	0.32	0.276	0.12	0.06	0.02	0.014	0.025	0.034	5.38	1.74	0.32	7.44	12842	0.4284	1.04652	-0.61812	NAF
NS0083	6	8	NS	X068299	068299	1	G	D	27.46	45.49	6.62	0.7869	0.61	0.384	0.1	0.07	0.013	0.014	0.04	0.046	4.37	2.05	0.35	6.77	12840	0.4284	1.22094	-0.79254	NAF
NS0083	280	282	NS	BX076444	X076444	2			60.74	12.565	0.763	0.042	0.03024	0.073	0.548	0.097	0.01	0.028	0.25	0.159	-0.01	-0.01	-0.01	-0.03	180	0.8568	1.691874	-0.835074	NAF
NS0083	246	250	NS	BX076424-BX076425	X076424	2			59.14	13.071	0.927	0.059	0.04248	0.105	0.657	0.133	0.011	0.045	0.284	0.204	-0.01	-0.01	-0.01	-0.03	171	1.377	2.319786	-0.942786	NAF
NS0083	84	88	NS	BX076340-BX076341	X076340	2			62.57	10.763	0.557	0.051	0.03672	0.054	0.467	0.159	0.016	0.058	0.196	0.13	-0.01	-0.01	-0.01	-0.03	129	1.7748	2.773278	-0.998478	NAF
NS0083	4	6	NS	X068298	068298	1	G	D	33.36	37.65	7.85	0.0645	0.05	0.619	0.1	0.1	0.014	0.024	0.019	0.046	3.5	2.11	0.29	5.9	12839	0.7344	1.7442	-1.0098	NAF
NS0083	210	214	NS	BX076406-BX076407	X076406	2			58.68	13.232	0.804	0.075	0.054	0.087	0.702	0.148	0.021	0.051	0.229	0.167	-0.01	-0.01	-0.01	-0.03	162	1.5606	2.581416	-1.020816	NAF
NS0083	14	16	NS	X068303	068303	1	G	D	18.53	55.35	9.8	0.0387	0.03	0.496	0.2	0.08	0.015	0.01	0.019	0.063	3.66	3.14	0.31	7.11	12844	0.306	1.39536	-1.08936	NAF
NS0083	106	110	NS	BX076352-BX076353	X076352	2			58.74	12.073	0.44	0.039	0.02808	0.045	0.416	0.144	0.022	0.042	0.117	0.237	-0.01	-0.01	-0.01	-0.03	135	1.2852	2.511648	-1.226448	NAF
NS0083	230	234	NS	BX076416-BX076417	X076416	2			64.31	7.16	0.588	0.038	0.02736	0.108	0.416	0.13	0.017	0.034	0.117	0.187	-0.01	-0.01	-0.01	-0.03	167	1.0404	2.26746	-1.22706	NAF
NS0083	76	80	NS	BX076336-BX076337	X076336	2			61.74	11.658	0.546	0.063	0.04536	0.055	0.485	0.127	0.015	0.029	0.166	0.138	-0.01	-0.01	-0.01	-0.03	127	0.8874	2.215134	-1.327734	NAF
NS0083	12	14	NS	X068302	068302	1	G	D	10.25	66.64	11.12	0.0387	0.03	0.549	0.21	0.09	0.007	0.007	0.016	0.077	2.24	3.72	0.34	6.3	12843	0.2142	1.56978	-1.35558	NAF
NS0083	4	8	NS	BX076298-BX076299	X076298	2			57.37	8.38	5.386	0.028	0.02016	1.108	0.152	0.12	0.019	0.023	0.018	0.139	-0.01	-0.01	-0.01	-0.03	109	0.7038	2.09304	-1.38924	NAF
NS0083	176	178	NS	X068387	068387	1	G	W	18.04	48.85	9.64	0.1548	0.12	0.463	3.47	1	0.047	0.524	4.6	0.286	1.01	2.31	1.28	4.6	12925	16.0344	17.442	-1.4076	NAF
NS0083	102	106	NS	BX076350-BX076351	X076350	2			60.9	12.506	0.642	0.064	0.04608	0.06	0.53	0.165	0.024	0.048	0.178	0.125	-0.01	-0.01	-0.01	-0.03	134	1.4688	2.87793	-1.40913	NAF
NS0083	250	254	NS	BX076426-BX076427	X076426	2			62.64	9.712	0.713	0.067	0.04824	0.118	0.531	0.154	0.024	0.039	0.199	0.131	-0.01	-0.01	-0.01	-0.03	172	1.1934	2.686068	-1.492668	NAF
NS0083	88	92	NS	BX076342-BX076343	X076342	2			64.07	9.079	0.415	0.053	0.03816	0.042	0.391	0.141	0.018	0.031	0.13	0.147	-0.01	-0.01	-0.01	-0.03	130	0.9486	2.459322	-1.510722	NAF
NS0083	242	246	NS	BX076422-BX076423	X076422	2			63.7	8.903	0.728	0.053	0.03816	0.122	0.522	0.149	0.02	0.034	0.193	0.187	-0.01	-0.01	-0.01	-0.03	170	1.0404	2.598858	-1.558458	NAF
NS0083	92	96	NS	BX076344-BX076345	X076344	2			65.22	7.606	0.461	0.056	0.04032	0.055	0.386	0.125	0.017	0.02	0.13	0.121	-0.01	-0.01	-0.01	-0.03	131	0.612	2.18025	-1.56825	NAF
NS0083	166	170	NS	BX076382-BX076383	X076382	2			55.95	15.727	0.738	0.049	0.03528	0.058	0.569	0.184	0.029	0.053	0.196	0.184	-0.01	-0.01	-0.01	-0.03	150	1.6218	3.209328	-1.587528	NAF
NS0083	0	2	NS	X068296	068296	1	G	D	28.08	35.92	13.78	0.0258	0.02	0.749	0.17	0.13	0.023	0.021	0.073	0.035	4.63	3.93	0.34	8.9	12837	0.6426	2.26746	-1.62486	NAF
NS0083	110	112	NS	X068354	068354	1	G	W	21.24	48.6	7.68	0.2064	0.16	0.376	4.12	0.65	0.105	0.317	1.83	0.327	1.31	2.72	0.97	5	12892	9.7002	11.3373	-1.6371	NAF
NS0083	202	204	NS	X068401	068401	1	G	W	16.3	49.99	10.49	0.3096	0.24	0.503	3.76	1.26	0.016	0.664	4.34	0.208	0.72	2.36	1.43	4.51	12938	20.3184	21.97692	-1.65852	NAF
NS0083	98	102	NS	BX076348-BX076349	X076348	2			61.85	10.676	0.635	0.053	0.03816	0.066	0.52	0.157	0.023	0.031	0.187	0.139	-0.01	-0.01	-0.01	-0.03	133	0.9486	2.738394	-1.789794	NAF
NS0083	268	272	NS	BX076438-BX076439	X076438	2			60.02	10.513	0.677	0.03	0.0216	0.066	0.42	0.149	0.012	0.024	0.154	0.153	-0.01	-0.01	-0.01	-0.03	177	0.7344	2.598858	-1.864458	NAF
NS0083	272	276	NS	BX076440-BX076441	X076440	2			60.01	12.539	0.899	0.052	0.03744	0.098	0.603	0.166	0.015	0.032	0.26	0.114	-0.01	-0.01	-0.01	-0.03	178	0.9792	2.895372	-1.916172	NAF
NS0083	206	210	NS	BX076404-BX076405	X076404	2			61.19	11.018	0.571	0.06	0.0432	0.057	0.545	0.195	0.034	0.041	0.185	0.181	-0.01	-0.01	-0.01	-0.03	161	1.2546	3.40119	-2.14659	NAF
NS0083	72	76	NS	BX076334-BX076335	X076334	2			61.05	12.807	0.57	0.059	0.04248	0.051	0.48	0.176	0.029	0.03	0.169	0.153	-0.01	-0.01	-0.01	-0.03	126	0.918	3.069792	-2.151792	NAF
NS0083	136	138	NS	X068367	068367	1	G	W	22.2	47.33	6.97	0.2451	0.19	0.342	4.09	0.68	0.086	0.316	1.51	0.321	1.24	3.68	0.99	5.91	12905	9.6696	11.86056	-2.19096	NAF
NS0083	96	98	NS	BX076347	X076347	2			64.36	7.651	0.636	0.066	0.04752	0.104	0.583	0.185	0.022	0.032	0.188	0.149	-0.01	-0.01	-0.01	-0.03	132	0.9792	3.22677	-2.24757	NAF
NS0083	68	72	NS	BX076332-BX076333	X076332	2			60.24	12.588	0.578	0.053	0.03816	0.059	0.506	0.185	0.025	0.028	0.161	0.136	-0.01	-0.01	-0.01	-0.03	125	0.8568	3.22677	-2.36997	NAF
NS0083	124	126	NS	X068361	068361	1	G	W	16.6	51.71	10.48	0.2193	0.17	0.514	4.26	0.85	0.056	0.407	2.31	0.101	0.55	3.27	1.01	4.83	12899	12.4542	14.8257	-2.3715	NAF
NS0083	16	18	NS	X068304	068304	1	G	D	23.37	50.45	7.22	0.0516	0.04	0.382	0.51	0.19	0.028	0.007	0.09	0.07	4.53	2.39	0.28	7.2	12845	0.2142	3.31398	-3.09978	NAF
NS0083	2	4	NS	X068297	068297	1	G	D	24.64	47.68	8.37	0.0258	0.02	0.402	0.15	0.26	0.013	0.027	0.053	0.036	4.47	2.61	0.29	7.37	12838	0.8262	4.53492	-3.70872	NAF
NS0083	158	160	NS	X068378	068378	1	G	W	19.52	50.1	7.41	0.2451	0.19	0.376	4.03	0.97	0.106	0.43	2.09	0.276	0.97	3.13	1.1	5.2	12916	13.158	16.91874	-3.76074	NAF
NS0083	138	140	NS	X068368	068368	1	G	W	22.88	45.58	6.76	0.258	0.2	0.335	3.98	0.86	0.157	0.359	1.47	0.31	1.24	4.49	1	6.73	12906	10.9854	15.00012	-4.01472	NAF
NS0083	180	182	NS	X068389	068389	1	G	W	20.12	46.29	8.21	0.258	0.2	0.389	3.52	1.21	0.049	0.553	3.72	0.301	1.04	3.55	1.32	5.91	12927	16.9218	21.10482	-4.18302	NAF
NS0083	20	22	NS	X068306	068306	1	G	D	19.83	58.17	5.65	0.0516	0.04	0.287	0.72	0.26	0.022	0.005	0.189	0.084	3.74	1.98	0.23	5.95	12847	0.153	4.53492	-4.38192	NAF
NS0083	34	36	NS	X068313	068313	1	G	D	16.26	60.38	7.37	0.0903	0.07	0.365	1.14	0.26	0.027	0.005	1.18	0.065	3.09	2.17	0.24	5.5	12854	0.153	4.53492	-4.38192	NAF
NS0083	168	170	NS	X068383	068383	1	G	W	17.71	49.99	8.63	0.2064	0.16	0.414	3.45	1.18	0.066	0.529	3.55	0.236	0.85	3.24	1.42	5.51	12921	16.1874	20.58156	-4.39416	NAF
NS0083	46	48	NS	X068319	068319	1	G	D	28.2	46.64	3.32	0.3354	0.26	0.157	1.03	0.26	0.086	0.002	0.156	0.022	5.59	1.35	0.26	7.2	12860	0.0612	4.53492	-4.47372	NAF
NS0083	44	46	NS	X068318	068318	1	G	D	26.16	48.84	3.84	0.4386	0.34	0.183	1.18	0.3	0.072	0.002	0.23	0.041	5.18	1.47	0.26	6.91	12859	0.0612	5.2326	-5.1714	NAF
NS0083	22	24	NS	X068307	068307	1	G	D	17.01	58.95	7.78	0.0516	0.04	0.386	0.99	0.31	0.02	0.004	0.257	0.096	3.31	2.74	0.29	6.34	12848	0.1224	5.40702	-5.28462	NAF
NS0083	36	38	NS	X068314	068314	1	G	D	17.86	55.42	8.38	0.258	0.2	0.429	1.37	0.31	0.032	0.004	1.59	0.078	3.49	2.38	0.33	6.2	12855	0.1224	5.40702	-5.28462	NAF
NS0083	80	82	NS	X068338	068338	1	G	W	19.07	49.86	7.62	0.2451	0.19	0.362	3.37	1.44	0.055	0.647	3.49	0.254	0.93	2.98	1.59	5.5	12877	19.7982	25.11648	-5.31828	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0083	18	20	NS	X068305	068305	1	G	D	20.5	53.95	7.53	0.0387	0.03	0.387	0.92	0.32	0.029	0.004	0.198	0.1	4.06	2.56	0.3	6.92	12846	0.1224	5.58144	-5.45904	NAF
NS0083	190	192	NS	X068394	068394	1	G	W	21.15	46.06	7.08	0.2967	0.23	0.342	3.51	1.25	0.103	0.533	2.72	0.263	1.04	4.68	1.4	7.12	12932	16.3098	21.8025	-5.4927	NAF
NS0083	140	142	NS	X068369	068369	1	G	W	17.73	52.64	8.41	0.1419	0.11	0.407	3.63	0.93	0.088	0.349	2.77	0.26	0.96	2.11	0.88	3.95	12907	10.6794	16.22106	-5.54166	NAF
NS0083	40	42	NS	X068316	068316	1	G	D	24.68	49.3	5	0.4773	0.37	0.241	1.26	0.34	0.054	0.005	0.324	0.056	4.95	1.88	0.33	7.16	12857	0.153	5.93028	-5.77728	NAF
NS0083	192	194	NS	X068395	068395	1	G	W	19.44	47.91	7.85	0.258	0.2	0.374	3.41	1.23	0.068	0.511	3.37	0.266	0.94	3.94	1.43	6.31	12933	15.6366	21.45366	-5.81706	NAF
NS0083	278	280	NS	X068443	068443	1	G	W	25.26	46.79	3.4	0.1935	0.15	0.169	2.38	0.71	0.032	0.213	1.29	0.249	1.33	6.13	0.57	8.03	12976	6.5178	12.38382	-5.86602	NAF
NS0083	120	122	NS	X068359	068359	1	G	W	21.08	46.95	7.77	0.3354	0.26	0.371	4.31	1.12	0.173	0.444	1.73	0.276	1.08	3.39	1.17	5.64	12897	13.5864	19.53504	-5.94864	NAF
NS0083	188	190	NS	X068393	068393	1	G	W	22.09	45.92	6.52	0.2838	0.22	0.312	3.3	0.98	0.077	0.364	2.59	0.276	1.08	5.35	1.05	7.48	12931	11.1384	17.09316	-5.95476	NAF
NS0083	42	44	NS	X068317	068317	1	G	D	25.93	47.89	4.51	0.5676	0.44	0.208	1.34	0.35	0.066	0.003	0.271	0.042	5.4	1.73	0.31	7.44	12858	0.0918	6.1047	-6.0129	NAF
NS0083	50	52	NS	X068322	068322	1	G	D	25.72	47.64	4.86	0.3354	0.26	0.234	1.45	0.35	0.078	0.002	0.452	0.045	5.19	1.76	0.28	7.23	12862	0.0612	6.1047	-6.0435	NAF
NS0083	58	60	NS	X068326	068326	1	G	D	23.98	49.12	5.97	0.5418	0.42	0.292	1.21	0.42	0.079	0.04	0.476	0.057	4.49	2.1	0.38	6.97	12866	1.224	7.32564	-6.10164	NAF
NS0083	48	50	NS	X068320	068320	1	G	D	27.46	45.63	4.4	0.3483	0.27	0.218	1.49	0.36	0.079	0.002	0.305	0.039	5.56	1.69	0.29	7.54	12861	0.0612	6.27912	-6.21792	NAF
NS0083	236	238	NS	X068419	068419	1	G	W	20.03	52	4.65	0.3354	0.26	0.226	3.07	1.4	0.083	0.59	1.34	0.267	0.99	4.29	1.4	6.68	12955	18.054	24.4188	-6.3648	NAF
NS0083	234	236	NS	X068418	068418	1	G	W	21.08	50.1	5.06	0.3096	0.24	0.243	3.25	1.22	0.07	0.487	1.49	0.3	1.09	4.23	1.19	6.51	12954	14.9022	21.27924	-6.37704	NAF
NS0083	38	40	NS	X068315	068315	1	G	D	23.98	47.8	6.55	0.6579	0.51	0.343	1.44	0.38	0.058	0.004	0.502	0.074	4.79	2.27	0.37	7.43	12856	0.1224	6.62796	-6.50556	NAF
NS0083	32	34	NS	X068312	068312	1	G	D	23.26	47.51	8.15	0.0903	0.07	0.398	1.42	0.39	0.04	0.008	0.448	0.089	4.58	2.87	0.32	7.77	12853	0.2448	6.80238	-6.55758	NAF
NS0083	26	28	NS	X068309	068309	1	G	D	22.53	51.45	6.53	0.0645	0.05	0.342	1.19	0.39	0.037	0.007	0.19	0.103	4.34	2.45	0.32	7.11	12850	0.2142	6.80238	-6.58818	NAF
NS0083	30	32	NS	X068311	068311	1	G	D	27.21	42.73	7.03	0.1419	0.11	0.344	1.4	0.4	0.044	0.012	0.255	0.087	5.32	2.6	0.32	8.24	12852	0.3672	6.9768	-6.6096	NAF
NS0083	28	30	NS	X068310	068310	1	G	D	24.34	47.02	7.35	0.0903	0.07	0.369	1.32	0.41	0.036	0.009	0.229	0.099	4.73	2.73	0.33	7.79	12851	0.2754	7.15122	-6.87582	NAF
NS0083	24	26	NS	X068308	068308	1	G	D	21.06	51.5	8.22	0.0645	0.05	0.406	1.26	0.41	0.042	0.005	0.234	0.113	3.95	3.05	0.36	7.36	12849	0.153	7.15122	-6.99822	NAF
NS0083	56	58	NS	X068325	068325	1	G	D	23.27	49.85	6.07	0.2838	0.22	0.293	1.62	0.41	0.056	0.002	0.568	0.066	4.69	2.17	0.31	7.17	12865	0.0612	7.15122	-7.09002	NAF
NS0083	52	54	NS	X068323	068323	1	G	D	25.77	45.76	5.86	0.3612	0.28	0.283	1.78	0.42	0.07	0.002	0.669	0.05	5.17	2.06	0.34	7.57	12863	0.0612	7.32564	-7.26444	NAF
NS0083	148	150	NS	X068373	068373	1	G	W	14.95	56.81	9.17	0.1161	0.09	0.442	3.3	0.95	0.059	0.303	3.6	0.181	0.71	1.83	0.89	3.43	12911	9.2718	16.5699	-7.2981	NAF
NS0083	174	176	NS	X068386	068386	1	G	W	16.92	50.8	9.42	0.1548	0.12	0.449	3.32	1.33	0.031	0.518	4.61	0.273	0.86	2.01	1.27	4.14	12924	15.8508	23.19786	-7.34706	NAF
NS0083	74	76	NS	X068335	068335	1	G	D	20.32	48.72	6.68	0.2967	0.23	0.318	3.62	1.19	0.07	0.433	2.19	0.242	1.03	3.93	1.25	6.21	12874	13.2498	20.75598	-7.50618	NAF
NS0083	54	56	NS	X068324	068324	1	G	D	22.17	49.52	6.95	0.1935	0.15	0.341	2.02	0.47	0.051	0.003	0.987	0.072	4.51	2.33	0.32	7.16	12864	0.0918	8.19774	-8.10594	NAF
NS0083	108	110	NS	X068353	068353	1	G	W	26.41	41.3	4.24	0.258	0.2	0.206	2.84	0.88	0.162	0.234	1.19	0.261	1.27	8.12	0.71	10.1	12891	7.1604	15.34896	-8.18856	NAF
NS0083	206	208	NS	X068404	068404	1	G	W	26.56	40.36	2.72	0.3225	0.25	0.131	2.61	0.88	0.12	0.213	0.972	0.246	1.2	11.2	0.61	13.01	12940	6.5178	15.34896	-8.83116	NAF
NS0083	150	152	NS	X068374	068374	1	G	W	16.99	54.62	7.64	0.1677	0.13	0.367	3.48	1.11	0.103	0.344	2.54	0.272	0.9	2.19	0.99	4.08	12912	10.5264	19.36062	-8.83422	NAF
NS0083	254	256	NS	X068428	068428	1	G	W	22.68	47.81	5.56	0.2322	0.18	0.272	3.4	0.94	0.052	0.244	1.73	0.306	1.15	4.76	0.97	6.88	12964	7.4664	16.39548	-8.92908	NAF
NS0083	166	168	NS	X068382	068382	1	G	W	19.66	50.04	7.61	0.1935	0.15	0.385	4	1.03	0.066	0.27	2.02	0.301	1	3.1	1.03	5.13	12920	8.262	17.96526	-9.70326	NAF
NS0083	248	250	NS	X068425	068425	1	G	W	24.85	47.38	3.8	0.2193	0.17	0.188	2.5	1.07	0.076	0.287	1.35	0.28	1.13	4.76	0.85	6.74	12961	8.7822	18.66294	-9.88074	NAF
NS0083	276	278	NS	X068442	068442	1	G	W	24.64	48.29	3.58	0.1806	0.14	0.173	2.32	0.89	0.029	0.18	1.33	0.257	1.4	5.14	0.62	7.16	12975	5.508	15.52338	-10.01538	NAF
NS0083	258	260	NS	X068432	068432	1	G	W	23.99	45.74	3.5	0.2967	0.23	0.169	2.48	1.03	0.083	0.259	1.23	0.215	1.07	8.2	0.77	10.04	12967	7.9254	17.96526	-10.03986	NAF
NS0083	256	258	NS	X068429	068429	1	G	W	22.42	48.13	4.86	0.2322	0.18	0.238	3.07	0.98	0.047	0.225	1.59	0.278	1.18	5.49	0.89	7.56	12965	6.885	17.09316	-10.20816	NAF
NS0083	142	144	NS	X068370	068370	1	G	W	16.74	54.22	8.56	0.129	0.1	0.412	3.39	1.11	0.075	0.295	3.27	0.267	0.91	2.01	0.93	3.85	12908	9.027	19.36062	-10.33362	NAF
NS0083	162	164	NS	X068380	068380	1	G	W	22.88	45.35	5.31	0.2709	0.21	0.264	3.34	1.2	0.117	0.344	1.43	0.25	1.11	6.26	1.1	8.47	12918	10.5264	20.9304	-10.404	NAF
NS0083	204	206	NS	X068403	068403	1	G	W	19.96	49.31	6.87	0.3741	0.29	0.33	3.71	1.41	0.094	0.449	2.38	0.298	1.05	3.57	1.41	6.03	12939	13.7394	24.59322	-10.85382	NAF
NS0083	264	266	NS	X068436	068436	1	G	W	22.03	43.75	6.28	0.4386	0.34	0.295	3.82	1.82	0.077	0.68	1.84	0.257	1.01	5.34	1.67	8.02	12969	20.808	31.74444	-10.93644	NAF
NS0083	178	180	NS	X068388	068388	1	G	W	26.17	40.66	4.07	0.2838	0.22	0.199	2.61	1.05	0.077	0.238	1.57	0.198	1.09	9.31	0.66	11.06	12926	7.2828	18.3141	-11.0313	NAF
NS0083	186	188	NS	X068392	068392	1	G	W	19.67	48.57	7.48	0.2709	0.21	0.361	3.52	1.43	0.069	0.437	3.1	0.3	1.07	3.36	1.41	5.84	12930	13.3722	24.94206	-11.56986	NAF
NS0083	182	184	NS	X068390	068390	1	G	W	14.69	51.58	10.51	0.2451	0.19	0.505	3.44	1.63	0.015	0.545	5.4	0.207	0.68	1.99	1.57	4.24	12928	16.677	28.43046	-11.75346	NAF
NS0083	268	270	NS	X068438	068438	1	G	W	25.32	42.57	3.7	0.3741	0.29	0.176	2.72	1.09	0.108	0.236	1.21	0.24	1.35	8.93	0.74	11.02	12971	7.2216	19.01178	-11.79018	NAF
NS0083	198	200	NS	X068398	068398	1	G	W	15.74	53.5	7.9	0.2838	0.22	0.373	3.01	1.7	0.093	0.581	3.69	0.197	0.78	3	1.48	5.26	12936	17.7786	29.6514	-11.8728	NAF
NS0083	66	68	NS	X068330	068330	1	G	D	22.67	45.68	6.01	0.2838	0.22	0.291	3.43	1.14	0.15	0.256	1.52	0.18	1.05	6.19	0.94	8.18	12870	7.8336	19.88388	-12.05028	NAF
NS0083	64	66	NS	X068329	068329	1	G	D	22.05	46.33	6.39	0.2838	0.22	0.309	3.48	1.15	0.137	0.253	1.67	0.192	1.05	5.56	0.91	7.52	12869	7.7418	20.0583	-12.3165	NAF
NS0083	266	268	NS	X068437	068437	1	G	W	23.53	43.31	3.58	0.6321	0.49	0.167	3.17	1.72	0.116	0.56	1.27	0.224	1.65	7.81	1.35	10.81	12970	17.136	30.00024	-12.86424	NAF
NS0083	160	162	NS	X068379	068379	1	G	W	25.73	41.8	3.91	0.2838	0.22	0.191	2.89	1.17	0.085	0.235	1.04	0.23	1.04	9.24	0.83	11.11	12917	7.191	20.40714	-13.21614	NAF
NS0083	260	262	NS	X068431	068431	1	G	W	23.92	44	4.53	0.3354	0.26	0.223	3.03	1.33	0.073	0.326	1.32	0.239	1.1	8.13	0.89	10.12	12966	9.9756	23.19786	-13.22226	NAF
NS0083	232	234	NS	X068417	068417	1	G	W	25.94	44.56	3.56	0.1935	0.15	0.179	2.41	1.17	0.049	0.218	1.05	0.23	1.05	7.09	0.73	8.87	12953	6.6708	20.40714	-13.73634	NAF
NS0083	194	196	NS	X068396	068396	1	G	W	22.96	45.16	5.46	0.2451	0.19	0.258	2.93	1.38	0.086	0.336	2.25	0.248	1.07	6.06	1.1	8.23	12934	10.2816	24.06996	-13.78836	NAF
NS0083	60	62	NS	X068327	068327	1	G	D	17.71	51.19	8.5	0.258	0.2	0.404	3.22	1.32	0.053	0.287	2.96	0.107	1.19	3.03	1.31	5.53	12867	8.7822	23.02344	-14.24124	NAF
NS0083	104	106	NS	X068351	068351	1	G	W	22.66	47.53	5.97	0.1806	0.14	0.284	3.7	1.22	0.07	0.209	1.45	0.254	1	4.33	0.91	6.24	12889	6.3954	21.27924	-14.88384	NAF
NS0083	68	70	NS	X068332	068332	1	G	D	25.87	42.78	3.64	0.3741	0.29	0.174	2.63	1.22	0.068	0.202	1.08	0.188	1.06	8.67	0.66	10.39	12871	6.1812	21.27924	-15.09804	NAF
NS0083	170	172	NS	X068384	068384	1	G	W	22.41	45.48	5.62	0.258	0.2	0.273	3.04	1.46	0.083	0.333	2.06	0.235	0.99	6.06	1.13	8.18	12922	10.1898	25.46532	-15.27552	NAF
NS0083	90	92	NS	X068343	068343	1	G	W	22.85	47.23	4.81	0.2967	0.23	0.234	3.07	1.55	0.087	0.349	1.48	0.236	1.05	4.89	1.15	7.09	12882	10.6794	27.0351	-16.3557	NAF
NS0083	250	252	NS	X068426	068426	1	G	W	24.4	46.05	4.51	0.2838	0.22	0.22	2.93	1.56	0.099	0.344	1.48	0.251	0.99	5.1	1.04	7.13	12962	10.5264	27.20952	-16.68312	NAF
NS0083	252	254	NS	X068427	068427	1	G	W	23.9	44.71	4.77	0.2838	0.22	0.232	3.11	1.49	0.05	0.291	1.58	0.284	1.14	6.13	1.06	8.33	12963	8.9046	25.98858	-17.08398	NAF
NS0083	82	84	NS	X068339	068339	1	G	W	24.72	44.7	4.47	0.3483	0.27	0.215	3.04	1.52	0.103	0.301	1.58	0.254	1.05	5.84	1	7.89	12878	9.2106	26.51184	-17.30124	NAF
NS0083	62	64	NS	X068328	068328	1	G	D	22.2	47.12	5.36	0.3999	0.31	0.256	3.31	1.39	0.061	0.226	1.71	0.191	1.13	5.8	1.02	7.95	12868	6.9156	24.24438	-17.32878	NAF
NS0083	280	282	NS	X068444	068444	1	G	W	25.08	46.7	3.37	0.2193	0.17	0.162	2.33	1.34	0.09	0.175	1.27	0.234	1.57	5.68	0.58	7.83	12977	5.355	23.37228	-18.01728	NAF
NS0083	184	186	NS	X068391	068391	1	G	W	18.69	49.84	7.42	0.2709	0.21	0.356	3.65	1.75	0.067	0.393	2.89	0.307	1.09	2.85	1.58	5.52	12929	12.0258	30.5235	-18.4977	NAF
NS0083	262	264	NS	X068433	068433	1	G	W	24	42.76	3.34	0.516	0.4	0.16	2.84	1.73	0.108	0.376	1.18	0.249	1.21	9.12	1.21	11.54	12968	11.5056	30.17466	-18.66906	NAF
NS0083	210	212	NS	X068406	068406	1	G	W	28.13	39.55	2.59	0.3354	0.26	0.124	2.77	1.29	0.088	0.123	0.851	0.204	1.09	10.16	0.42	11.67	12942	3.7638	22.50018	-18.73638	NAF
NS0083	212	214	NS	X068407	068407	1	G	W	27.96	38.85	2.23	0.387	0.3	0.107	2.65	1.33	0.084	0.094	0.788	0.172	0.99	11.89	0.39	13.27	12943	2.8764	23.19786	-20.32146	NAF
NS0083	218	220	NS	X068410	068410	1	G	W	28.18	37.54	2.61	0.5676	0.44	0.122	2.6	1.75	0.092	0.287	0.9	0.207	1.08	11.18	0.83	13.09	12946	8.7822	30.5235	-21.7413	NAF
NS0083	164	166	NS	X068381	068381	1	G	W	18.31	50.59	7.91	0.2064	0.16	0.384	3.51	1.79	0.078	0.278	2.99	0.254	0.89	3.16	1.4	5.45	12919	8.5068	31.22118	-22.71438	NAF
NS0083	106	108	NS	X068352	068352	1	G	W	28.06	40.2	2.99	0.2838	0.22	0.143	2.47	1.57	0.086	0.131	0.935	0.218	1.02	8.9	0.62	10.54	12890	4.0086	27.38394	-23.37534	NAF
NS0083	214	216	NS	X068408	068408	1	G	W	26.83	40.15	2.45	0.3483	0.27	0.117	2.63	1.57	0.102	0.125	0.794	0.21	1.01	11.18	0.62	12.81	12944	3.825	27.38394	-23.55894	NAF
NS0083	270	272	NS	X068439	068439	1	G	W	26.82	41.83	3.1	0.1935	0.15	0.152	2.16	1.63	0.04	0.157	0.99	0.194	1.05	9.19	0.79	11.03	12972	4.8042	28.43046	-23.62626	NAF
NS0083	230	232	NS	X068416	068416	1	G	W	24.93	43.51	4.44	0.2838	0.22	0.221	3.09	1.82	0.11	0.229	1.27	0.255	1.1	6.51	1.08	8.69	12952	7.0074	31.74444	-24.73704	NAF
NS0083	76	78	NS	X068336	068336	1	G	D	26.74	42.26	3.47	0.2967	0.23	0.169	2.64	1.74	0.154	0.171	1.08	0.255	1.04	7.14	0.76	8.94	12875	5.2326	30.34908	-25.11648	NAF
NS0083	226	228	NS	X068414	068414	1	G	W	18.41	54.35	3.76	0.3741	0.29	0.18	2.64	2.34	0.071	0.507	1.09	0.223	0.86	4.8	1.47	7.13	12950	15.5142	40.81428	-25.30008	NAF
NS0083	242	244	NS	X068422	068422	1	G	W	25.63	43.52	3.92	0.2709	0.21	0.192	2.71	1.81	0.115	0.202	1.31	0.241	1.02	6.76	0.91	8.69	12958	6.1812	31.57002	-25.38882	NAF
NS0083	196	198	NS	X068397	068397	1	G	W	25.13	40.79	3.93	0.4257	0.33	0.188	2.81	1.9	0.114	0.25	1.34	0.25	1.06	9.48	1.02	11.56	12935	7.65	33.1398	-25.4898	NAF
NS0083	240	242	NS	X068421	068421	1	G	W	24.18	42.98	4.87	0.3225	0.25	0.235	3.07	2.22	0.091	0.395	1.58	0.277	1.16	6.36	1.51	9.03	12957	12.087	38.72124	-26.63424	NAF
NS0083	228	230	NS	X068415	068415	1	G	W	23.54	43.36	5.03	0.3483	0.27	0.241	3.28	2.16	0.099	0.344	1.49	0.254	1.07	6.23	1.47	8.77	12951	10.5264	37.67472	-27.14832	NAF
NS0083	272	274	NS	X068440	068440	1	G	W	26.7	42.8	3.2	0.1935	0.15	0.155	2.18	1.83	0.06	0.148	1.09	0.203	0.95	7.97	0.79	9.71	12973	4.5288	31.91886	-27.39006	NAF
NS0083	88	90	NS	X068342	068342	1	G	W	27.36	42.58	3.86	0.2838	0.22	0.188	2.4	2.04	0.067	0.259	1.57	0.218	0.86	5.18	0.98	7.02	12881	7.9254	35.58168	-27.65628	NAF
NS0083	102	104	NS	X068350	068350	1	G	W	26.11	43.95	3.99	0.2451	0.19	0.19	2.71	2.01	0.083	0.23	1.2	0.208	0.88	5.74	1.01	7.63	12888	7.038	35.05842	-28.02042	NAF
NS0083	72	74	NS	X068334	068334	1	G	D	25.68	43.9	4.01	0.3096	0.24	0.193	2.91	1.91	0.106	0.17	1.07	0.216	0.96	6.29	0.91	8.16	12873	5.202	33.31422	-28.11222	NAF
NS0083	78	80	NS	X068337	068337	1	G	W	28.79	40.19	2.76	0.3354	0.26	0.135	2.23	2.01	0.111	0.184	0.999	0.231	0.98	7.47	0.87	9.32	12876	5.6304	35.05842	-29.42802	NAF
NS0083	244	246	NS	X068423	068423	1	G	W	24.31	46.06	3.79	0.2322	0.18	0.184	2.58	2.03	0.067	0.194	1.35	0.263	1.11	5.88	1.15	8.14	12959	5.9364	35.40726	-29.47086	NAF
NS0083	274	276	NS	X068441	068441	1	G	W	25.83	42.49	3.63	0.2967	0.23	0.177	2.68	2.01	0.104	0.179	1.24	0.246	1.08	7.23	1.01	9.32	12974	5.4774	35.05842	-29.58102	NAF
NS0083	172	174	NS	X068385	068385	1	G	W	17.53	50.45	6.53	0.2709	0.21	0.312	2.79	2.57	0.127	0.46	3.17	0.216	0.76	4.32	1.73	6.81	12923	14.076	44.82594	-30.74994	NAC
NS0083	238	240	NS	X068420	068420	1	G	W	22.45	45.95	4.22	0.3741	0.29	0.203	2.93	2.43	0.096	0.317	1.2	0.208	0.95	7.4	1.48	9.83	12956	9.7002	42.38406	-32.68386	NAC
NS0083	100	102	NS	X068349	068349	1	G	W	29.98	41.62	2.23	0.2451	0.19	0.106	1.92	2.02	0.08	0.08	0.847	0.193	0.77	5.9	0.85	7.52	12887	2.448	35.23284	-32.78484	NAC
NS0083	208	210	NS	X068405	068405	1	G	W	29.1	39.62	1.89	0.2709	0.21	0.092	2.07	2.05	0.093	0.09	0.741	0.172	0.8	9.46	0.76	11.02	12941	2.754	35.7561	-33.0021	NAC
NS0083	94	96	NS	X068345	068345	1	G	W	25.87	42.96	3.61	0.387	0.3	0.177	2.93	2.22	0.198	0.134	1.15	0.241	1	6.76	0.99	8.75	12884	4.1004	38.72124	-34.62084	NAC
NS0083	220	222	NS	X068411	068411	1	G	W	26.7	39.44	2.54	0.5031	0.39	0.121	2.36	2.48	0.098	0.28	0.834	0.175	0.94	10.57	1.23	12.74	12947	8.568	43.25616	-34.68816	NAC
NS0083	92	94	NS	X068344	068344	1	G	W	27.36	45.72	2.09	0.2967	0.23	0.101	1.77	2.2	0.077	0.111	0.77	0.172	0.67	5.68	0.95	7.3	12883	3.3966	38.3724	-34.9758	NAC
NS0083	70	72	NS	X068333	068333	1	G	D	28.07	41.98	2.43	0.2838	0.22	0.118	2.09	2.33	0.089	0.1	0.805	0.159	0.77	7.22	0.98	8.97	12872	3.06	40.63986	-37.57986	NAC
NS0083	84	86	NS	X068340	068340	1	G	W	27.09	43.48	2.61	0.258	0.2	0.125	2.03	2.5	0.077	0.153	1.04	0.19	0.79	6.38	1.18	8.35	12879	4.6818	43.605	-38.9232	NAC
NS0083	96	98	NS	X068347	068347	1	G	W	26.81	40.22	3.8	0.3741	0.29	0.186	3.06	2.48	0.207	0.137	1.24	0.268	1.11	6.85	1.18	9.14	12885	4.1922	43.25616	-39.06396	NAC
NS0083	86	88	NS	X068341	068341	1	G	W	30.2	40.11	2.24	0.2838	0.22	0.11	1.95	2.47	0.08	0.094	0.925	0.207	0.85	6.1	1.12	8.07	12880	2.8764	43.08174	-40.20534	NAC
NS0083	98	100	NS	X068348	068348	1	G	W	26.42	41.4	4.19	0.2838	0.22	0.205	3.14	2.57	0.154	0.131	1.28	0.268	1.08	5.73	1.4	8.21	12886	4.0086	44.82594	-40.81734	NAC
NS0083	246	248	NS	X068424	068424	1	G	W	23.91	45.47	3.84	0.2451	0.19	0.19	2.64	2.81	0.057	0.196	1.41	0.24	1.05	5.62	1.72	8.39	12960	5.9976	49.01202	-43.01442	NAC
NS0084	162	164	NS	X068529	068529	1	G	W	18.79	56.2	5.02	0.3354	0.26	0.22	3.41	0.35	0.093	1.08	0.303	0.178	0.58	4.43	1.75	6.76	13059	33.048	6.1047	26.9433	PAF(HC)
NS0084	212	214	NS	X068555	068555	1	G	W	23.37	38.18	9.93	0.1032	0.08	0.436	9.57	0.09	0.014	0.84	0.229	0.144	0.58	5.91	1.26	7.75	13084	25.704	1.56978	24.13422	PAF(HC)
NS0084	158	160	NS	X068527	068527	1	G	W	19.54	49.54	11.07	0.0516	0.04	0.512	5.44	0.02	0.006	0.684	0.017	0.038	0.49	4.04	0.61	5.14	13057	20.9304	0.34884	20.58156	PAF(HC)
NS0084	156	158	NS	X068526	068526	1	G	W	24.49	41.99	5.9	0.516	0.4	0.266	5.26	0.33	0.024	0.781	0.428	0.227	0.79	7.58	1.34	9.71	13056	23.8986	5.75586	18.14274	PAF(HC)
NS0084	124	126	NS	X068509	068509	1	G	W	25.91	41.46	7.1	0.2838	0.22	0.311	5.39	0.14	0.026	0.658	0.38	0.185	0.78	5.39	1.12	7.29	13040	20.1348	2.44188	17.69292	PAF(HC)
NS0084	160	162	NS	X068528	068528	1	G	W	18.15	52.67	10.36	0.0774	0.06	0.476	4.96	0.04	0.009	0.528	0.043	0.044	0.49	3.88	0.63	5	13058	16.1568	0.69768	15.45912	PAF(HC)
NS0084	140	142	NS	X068517	068517	1	G	W	28.12	39.41	2.99	0.4902	0.38	0.142	4.26	0.65	0.081	0.87	0.561	0.265	0.86	7.99	1.59	10.44	13048	26.622	11.3373	15.2847	PAF(HC)
NS0084	88	90	NS	X068490	068490	1	G	D	23.39	45.05	6.12	0.5031	0.39	0.267	3.89	0.25	0.041	0.578	0.565	0.255	0.99	7.11	1.16	9.26	13022	17.6868	4.3605	13.3263	PAF(HC)
NS0084	100	102	NS	X068497	068497	1	G	W	22.47	46.93	6.62	0.3741	0.29	0.293	4.18	0.35	0.082	0.59	0.614	0.272	0.92	5.39	1.38	7.69	13028	18.054	6.1047	11.9493	PAF(HC)
NS0084	200	202	NS	X068549	068549	1	G	W	25	38.17	8.8	0.1548	0.12	0.385	8.5	0.19	0.037	0.482	0.257	0.148	0.68	5.84	0.96	7.48	13078	14.7492	3.31398	11.43522	PAF(HC)
NS0084	90	92	NS	X068492	068492	1	G	D	24.47	42.29	6.25	0.4644	0.36	0.264	3.99	0.22	0.036	0.399	0.427	0.202	1.04	8.37	1.07	10.48	13023	12.2094	3.83724	8.37216	PAF(LC)
NS0084	202	204	NS	X068550	068550	1	G	W	24.09	39.65	8.34	0.1935	0.15	0.364	8.34	0.18	0.024	0.35	0.179	0.109	0.62	6.51	0.77	7.9	13079	10.71	3.13956	7.57044	PAF(LC)
NS0084	142	144	NS	X068518	068518	1	G	W	25.78	43.18	2.28	0.516	0.4	0.107	3.96	0.8	0.055	0.651	0.459	0.213	0.85	8.86	1.43	11.14	13049	19.9206	13.9536	5.967	PAF(LC)
NS0084	102	104	NS	X068498	068498	1	G	W	24.19	43.89	5.47	0.4644	0.36	0.24	4.33	0.27	0.05	0.339	0.721	0.574	1.14	6.94	0.91	8.99	13029	10.3734	4.70934	5.66406	PAF(LC)
NS0084	104	106	NS	X068499	068499	1	G	W	24.03	45.64	4.73	0.387	0.3	0.21	4.44	0.29	0.06	0.328	0.784	0.351	1.12	6.48	0.85	8.45	13030	10.0368	5.05818	4.97862	PAF(LC)
NS0084	148	150	NS	X068521	068521	1	G	W	29.62	36.07	3.57	0.6192	0.48	0.164	4.72	0.52	0.049	0.448	0.39	0.196	0.85	9.08	0.96	10.89	13052	13.7088	9.06984	4.63896	PAF(LC)
NS0084	164	166	NS	X068530	068530	1	G	W	30.33	38.38	3.05	0.4902	0.38	0.136	4.16	0.22	0.023	0.273	0.268	0.128	0.65	8.26	0.41	9.32	13060	8.3538	3.83724	4.51656	PAF(LC)
NS0084	98	100	NS	X068496	068496	1	G	W	24.3	43.71	5.56	0.4902	0.38	0.238	4.02	0.21	0.033	0.264	0.626	0.27	1.21	7.75	0.72	9.68	13027	8.0784	3.66282	4.41558	PAF(LC)
NS0084	122	124	NS	X068508	068508	1	G	W	25.25	42.13	5.04	0.5289	0.41	0.222	4.84	0.3	0.067	0.315	0.387	0.193	0.81	8.32	0.74	9.87	13039	9.639	5.2326	4.4064	PAF(LC)

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0084	144	146	NS	X068519	068519	1	G	W	27.42	39.46	3.75	0.4386	0.34	0.168	4.96	0.74	0.035	0.562	0.644	0.293	0.93	7.77	1.33	10.03	13050	17.1972	12.90708	4.29012	PAF(LC)
NS0084	126	128	NS	X068510	068510	1	G	W	26.97	42.07	4.47	0.5031	0.39	0.198	4.31	0.25	0.041	0.27	0.465	0.213	0.89	6.9	0.58	8.37	13041	8.262	4.3605	3.9015	PAF(LC)
NS0084	80	82	NS	X068486	068486	1	G	D	24.13	44.44	4.99	0.4386	0.34	0.225	3.93	0.26	0.035	0.267	0.664	0.294	1.15	8.02	0.77	9.94	13018	8.1702	4.53492	3.63528	PAF(LC)
NS0084	130	132	NS	X068512	068512	1	G	W	24.9	44.23	3.87	0.645	0.5	0.172	4.44	0.36	0.081	0.282	0.417	0.226	0.88	8.31	0.61	9.8	13043	8.6292	6.27912	2.35008	PAF(LC)
NS0084	272	274	NS	X068587	068587	1	G	W	25.67	42.69	4.23	0.5547	0.43	0.193	4.31	0.27	0.022	0.23	0.365	0.182	0.72	8.78	0.59	10.09	13114	7.038	4.70934	2.32866	PAF(LC)
NS0084	152	154	NS	X068524	068524	1	G	W	25.74	40.64	2.82	0.7095	0.55	0.129	4.52	0.93	0.115	0.599	0.463	0.228	0.88	10.05	1.27	12.2	13054	18.3294	16.22106	2.10834	PAF(LC)
NS0084	106	108	NS	X068500	068500	1	G	W	28.12	39.64	3.71	0.4902	0.38	0.162	4.22	0.33	0.068	0.256	0.525	0.263	1.04	8.27	0.58	9.89	13031	7.8336	5.75586	2.07774	PAF(LC)
NS0084	198	202	NS	BX076548-BX076549	X076548	2			65.24	6.535	1.263	0.036	0.02592	0.126	1.134	0.033	0.003	0.072	0.025	0.071	-0.01	-0.01	-0.01	-0.03	233	2.2032	0.575586	1.627614	PAF(LC)
NS0084	242	244	NS	X068571	068571	1	G	W	24.45	44.3	2.49	0.774	0.6	0.108	3.8	0.67	0.094	0.434	0.323	0.17	0.69	10.09	1	11.78	13099	13.2804	11.68614	1.59426	PAF(LC)
NS0084	264	266	NS	X068583	068583	1	G	W	24.48	42.62	4.33	0.5418	0.42	0.192	4.71	0.5	0.057	0.332	0.353	0.206	0.82	9.52	0.83	11.17	13110	10.1592	8.721	1.4382	PAF(LC)
NS0084	124	128	NS	BX076509-BX076510	X076509	2			65.73	6.807	0.778	0.058	0.04176	0.064	0.668	0.043	0.005	0.053	0.057	0.093	-0.01	-0.01	-0.01	-0.03	213	1.6218	0.750006	0.871794	PAF(LC)
NS0084	144	148	NS	BX076519-BX076520	X076519	2			68.86	3.93	0.336	0.056	0.04032	0.041	0.486	0.048	0.004	0.043	0.058	0.083	-0.01	-0.01	-0.01	-0.03	218	1.3158	0.837216	0.478584	PAF(LC)
NS0084	120	124	NS	BX076507-BX076508	X076507	2			64.04	7.865	0.781	0.073	0.05256	0.078	0.708	0.048	0.007	0.041	0.065	0.069	-0.01	-0.01	-0.01	-0.03	212	1.2546	0.837216	0.417384	PAF(LC)
NS0084	262	266	NS	BX076582-BX076583	X076582	2			63.92	7.697	0.86	0.099	0.07128	0.084	0.867	0.068	0.01	0.052	0.087	0.107	-0.01	-0.01	-0.01	-0.03	249	1.5912	1.186056	0.405144	PAF(LC)
NS0084	82	84	NS	X068487	068487	1	G	D	25.05	43.54	4.58	0.4515	0.35	0.215	4	0.18	0.014	0.115	1.01	0.424	1.38	7.69	0.5	9.57	13019	3.519	3.13956	0.37944	PAF(LC)
NS0084	140	144	NS	BX076517-BX076518	X076517	2			68.43	3.843	0.335	0.056	0.04032	0.045	0.466	0.053	0.007	0.041	0.055	0.09	-0.01	-0.01	-0.01	-0.03	217	1.2546	0.924426	0.330174	PAF(LC)
NS0084	128	132	NS	BX076511-BX076512	X076511	2			65.67	6.919	0.596	0.074	0.05328	0.054	0.608	0.054	0.008	0.04	0.05	0.096	-0.01	-0.01	-0.01	-0.03	214	1.224	0.941868	0.282132	PAF(LC)
NS0084	186	190	NS	BX076542-BX076543	X076542	2			66.57	6.163	0.599	0.074	0.05328	0.05	0.694	0.055	0.007	0.039	0.033	0.075	-0.01	-0.01	-0.01	-0.03	230	1.1934	0.95931	0.23409	PAF(LC)
NS0084	266	270	NS	BX076584-BX076585	X076584	2			65.58	7.105	0.684	0.067	0.04824	0.079	0.629	0.058	0.007	0.04	0.058	0.085	-0.01	-0.01	-0.01	-0.03	250	1.224	1.011636	0.212364	PAF(LC)
NS0084	150	154	NS	BX076523-BX076524	X076523	2			64.23	6.93	0.637	0.095	0.0684	0.065	0.772	0.066	0.008	0.042	0.084	0.093	-0.01	-0.01	-0.01	-0.03	220	1.2852	1.151172	0.134028	PAF(LC)
NS0084	258	262	NS	BX076580-BX076581	X076580	2			66.47	6.214	0.585	0.06	0.0432	0.072	0.572	0.059	0.006	0.038	0.051	0.084	-0.01	-0.01	-0.01	-0.03	248	1.1628	1.029078	0.133722	PAF(LC)
NS0084	104	108	NS	BX076499-BX076500	X076499	2			66.1	5.729	0.48	0.06	0.0432	0.045	0.542	0.056	0.008	0.036	0.072	0.081	-0.01	-0.01	-0.01	-0.03	208	1.1016	0.976752	0.124848	PAF(LC)
NS0084	132	136	NS	BX076513-BX076514	X076513	2			66.23	6.643	0.485	0.074	0.05328	0.043	0.532	0.043	0.006	0.028	0.034	0.071	-0.01	-0.01	-0.01	-0.03	215	0.8568	0.750006	0.106794	PAF(LC)
NS0084	162	164	NS	BX076529	X076529	2			68.71	4.13	0.219	0.052	0.03744	0.025	0.339	0.05	0.007	0.03	0.028	0.068	-0.01	-0.01	-0.01	-0.03	223	0.918	0.8721	0.0459	PAF(LC)
NS0084	182	186	NS	BX076540-BX076541	X076540	2			67.93	5.82	0.301	0.052	0.03744	0.035	0.431	0.035	0.004	0.021	0.031	0.145	-0.01	-0.01	-0.01	-0.03	229	0.6426	0.61047	0.03213	PAF(LC)
NS0084	256	258	NS	BX076578	X076578	2			63.26	9.103	0.625	0.111	0.07992	0.086	0.72	0.078	0.009	0.045	0.091	0.115	-0.01	-0.01	-0.01	-0.03	247	1.377	1.360476	0.016524	PAF(LC)
NS0084	0	2	NS	X068445	068445	1	G	D	37.34	28.98	8.57	0.1161	0.09	2.048	0.08	0.05	0.032	0.029	0.063	0.02	4.09	1.76	0.29	6.14	12978	0.8874	0.8721	0.0153	PAF(LC)
NS0084	0	4	NS	BX076445-BX076446	X076445	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	181	-0.0306	-0.01744	-0.013158	NAF
NS0084	4	6	NS	BX076447	X076447	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	182	-0.0306	-0.01744	-0.013158	NAF
NS0084	6	10	NS	BX076449-BX076450	X076449	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	183	-0.0306	-0.01744	-0.013158	NAF
NS0084	10	14	NS	BX076451-BX076452	X076451	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	184	-0.0306	-0.01744	-0.013158	NAF
NS0084	78	82	NS	BX076485-BX076486	X076485	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	201	-0.0306	-0.01744	-0.013158	NAF
NS0084	82	86	NS	BX076487-BX076488	X076487	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	202	-0.0306	-0.01744	-0.013158	NAF
NS0084	90	92	NS	BX076492	X076492	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	204	-0.0306	-0.01744	-0.013158	NAF
NS0084	96	100	NS	BX076495-BX076496	X076495	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	206	-0.0306	-0.01744	-0.013158	NAF
NS0084	100	104	NS	BX076497-BX076498	X076497	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	207	-0.0306	-0.01744	-0.013158	NAF
NS0084	158	162	NS	BX076527-BX076528	X076527	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	222	-0.0306	-0.01744	-0.013158	NAF
NS0084	280	282	NS	BX076591	X076591	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	253	-0.0306	-0.01744	-0.013158	NAF
NS0084	232	236	NS	BX076566-BX076567	X076566	2			66.47	6.45	0.715	0.038	0.02736	0.058	0.727	0.08	0.01	0.044	0.037	0.126	-0.01	-0.01	-0.01	-0.03	241	1.3464	1.39536	-0.04896	NAF
NS0084	42	46	NS	BX076467-BX076468	X076467	2			68.32	3.828	0.221	0.072	0.05184	0.028	0.313	0.043	0.006	0.022	0.017	0.07	-0.01	-0.01	-0.01	-0.03	192	0.6732	0.750006	-0.076806	NAF
NS0084	112	116	NS	BX076503-BX076504	X076503	2			66	7.065	0.537	0.07	0.0504	0.047	0.634	0.056	0.008	0.029	0.076	0.08	-0.01	-0.01	-0.01	-0.03	210	0.8874	0.976752	-0.089352	NAF
NS0084	148	150	NS	BX076521	X076521	2			66.45	5.701	0.457	0.089	0.06408	0.046	0.623	0.055	0.006	0.028	0.04	0.08	-0.01	-0.01	-0.01	-0.03	219	0.8568	0.95931	-0.10251	NAF
NS0084	2	4	NS	X068446	068446	1	G	D	22.09	55.16	6.5	0.0645	0.05	0.99	0.07	0.04	0.016	0.019	0.082	0.032	3.42	1.53	0.2	5.15	12979	0.5814	0.69768	-0.11628	NAF
NS0084	4	6	NS	X068447	068447	1	G	D	29.17	48.07	3.14	0.0903	0.07	0.395	0.06	0.04	0.012	0.019	0.025	0.019	4.95	0.93	0.18	6.06	12980	0.5814	0.69768	-0.11628	NAF
NS0084	252	256	NS	BX076576-BX076577	X076576	2			66.61	6.535	0.416	0.07	0.0504	0.047	0.485	0.058	0.007	0.029	0.066	0.095	-0.01	-0.01	-0.01	-0.03	246	0.8874	1.011636	-0.124236	NAF
NS0084	154	158	NS	BX076525-BX076526	X076525	2			66.77	5.049	0.439	0.069	0.04968	0.041	0.508	0.062	0.007	0.029	0.038	0.086	-0.01	-0.01	-0.01	-0.03	221	0.8874	1.081404	-0.194004	NAF
NS0084	202	206	NS	BX076550-BX076551	X076550	2			65.51	7.79	0.675	0.057	0.04104	0.052	0.813	0.075	0.011	0.036	0.05	0.057	-0.01	-0.01	-0.01	-0.03	234	1.1016	1.30815	-0.20655	NAF
NS0084	6	8	NS	X068449	068449	1	G	D	26.92	49.19	4.77	0.0645	0.05	1.099	0.06	0.05	0.014	0.02	0.024	0.022	4.4	1.2	0.19	5.79	12981	0.612	0.8721	-0.2601	NAF
NS0084	38	42	NS	BX076465-BX076466	X076465	2			69.21	3.343	0.197	0.051	0.03672	0.025	0.241	0.04	0.006	0.013	0.009	0.069	0.39	0.75	-0.01	1.13	191	0.3978	0.69768	-0.29988	NAF
NS0084	116	120	NS	BX076505-BX076506	X076505	2			65.23	7.12	0.484	0.084	0.06048	0.041	0.584	0.058	0.009	0.023	0.063	0.1	-0.01	-0.01	-0.01	-0.03	211	0.7038	1.011636	-0.307836	NAF
NS0084	86	88	NS	BX076489	X076489	2			61.81	6.681	0.45	0.114	0.08208	0.036	0.614	0.073	0.006	0.029	0.015	0.099	-0.01	-0.01	-0.01	-0.03	203	0.8874	1.273266	-0.385866	NAF
NS0084	136	140	NS	BX076515-BX076516	X076515	2			68.31	4.289	0.206	0.061	0.04392	0.022	0.342	0.042	0.006	0.011	0.026	0.078	-0.01	-0.01	-0.01	-0.03	216	0.3366	0.732564	-0.395964	NAF
NS0084	240	244	NS	BX076570-BX076571	X076570	2			67.58	5.654	0.336	0.074	0.05328	0.039	0.444	0.067	0.009	0.024	0.048	0.09	-0.01	-0.01	-0.01	-0.03	243	0.7344	1.168614	-0.434214	NAF
NS0084	74	78	NS	BX076483-BX076484	X076483	2			68.43	4.537	0.242	0.063	0.04536	0.033	0.331	0.048	0.006	0.013	0.027	0.089	-0.01	-0.01	-0.01	-0.03	200	0.3978	0.837216	-0.439416	NAF
NS0084	166	170	NS	BX076531-BX076532	X076531	2			67.1	5.797	0.31	0.055	0.0396	0.037	0.461	0.048	0.007	0.013	0.042	0.064	-0.01	-0.01	-0.01	-0.03	224	0.3978	0.837216	-0.439416	NAF
NS0084	70	74	NS	BX076481-BX076482	X076481	2			69.58	3.088	0.211	0.044	0.03168	0.031	0.282	0.042	0.005	0.009	0.025	0.081	-0.01	-0.01	-0.01	-0.03	199	0.2754	0.732564	-0.457164	NAF
NS0084	112	114	NS	X068503	068503	1	G	W	27.71	39.13	3.1	0.6321	0.49	0.136	4.35	0.62	0.099	0.338	0.464	0.223	0.9	9.53	0.75	11.18	13034	10.3428	10.81404	-0.47124	NAF
NS0084	8	10	NS	X068450	068450	1	G	D	34.96	38.03	3.32	-0.0129	-0.01	0.583	0.05	0.05	0.009	0.013	0.009	0.016	6.59	1.08	0.19	7.86	12982	0.3978	0.8721	-0.4743	NAF
NS0084	26	28	NS	BX076459	X076459	2			68.29	2.894	0.237	0.095	0.0684	0.016	0.105	0.029	0.025	0.001	0.003	0.051	0.27	0.55	0.29	1.11	188	0.0306	0.505818	-0.475218	NAF
NS0084	46	50	NS	BX076469-BX076470	X076469	2			70.42	2.833	0.076	0.052	0.03744	0.014	0.196	0.038	0.006	0.006	0.008	0.069	-0.01	-0.01	-0.01	-0.03	193	0.1836	0.662796	-0.479196	NAF
NS0084	14	18	NS	BX076453-BX076454	X076453	2			67.42	3.174	0.274	0.06	0.0432	0.017	0.104	0.032	0.012	0.002	0.004	0.069	-0.01	-0.01	-0.01	-0.03	185	0.0612	0.558144	-0.496944	NAF
NS0084	66	70	NS	BX076479-BX076480	X076479	2			66.16	6.405	0.372	0.068	0.04896	0.034	0.478	0.055	0.007	0.015	0.045	0.076	-0.01	-0.01	-0.01	-0.03	198	0.459	0.95931	-0.50031	NAF
NS0084	30	34	NS	BX076461-BX076462	X076461	2			66.86	3.693	0.113	0.051	0.03672	0.012	0.122	0.031	0.017	0.001	0.012	0.062	0.28	0.48	-0.01	0.75	189	0.0306	0.540702	-0.510102	NAF
NS0084	34	38	NS	BX076463-BX076464	X076463	2			67.02	3.827	0.258	0.104	0.07488	0.024	0.144	0.035	0.016	0.003	0.026	0.073	-0.01	-0.01	-0.01	-0.03	190	0.0918	0.61047	-0.51867	NAF
NS0084	170	174	NS	BX076533-BX076534	X076533	2			68.35	5.267	0.2	0.047	0.03384	0.023	0.37	0.05	0.007	0.01	0.044	0.099	-0.01	-0.01	-0.01	-0.03	225	0.306	0.8721	-0.5661	NAF
NS0084	22	24	NS	X068457	068457	1	G	D	37.73	40.03	1.49	0.8643	0.67	0.068	0.15	0.04	0.066	0.004	0.04	0.022	2.46	0.54	0.01	3.01	12989	0.1224	0.69768	-0.57528	NAF
NS0084	18	22	NS	BX076455-BX076456	X076455	2			67.4	3.814	0.231	0.075	0.054	0.016	0.117	0.035	0.025	0.001	0.003	0.055	0.31	0.6	0.27	1.18	186	0.0306	0.61047	-0.57987	NAF
NS0084	22	26	NS	BX076457-BX076458	X076457	2			66.57	3.669	0.271	0.116	0.08352	0.013	0.115	0.04	0.017	0.002	0.007	0.07	0.58	0.95	0.49	2.02	187	0.0612	0.69768	-0.63648	NAF
NS0084	210	214	NS	BX076554-BX076555	X076554	2			64.47	8.507	0.621	0.09	0.0648	0.057	0.702	0.093	0.008	0.032	0.062	0.087	-0.01	-0.01	-0.01	-0.03	236	0.9792	1.622106	-0.642906	NAF
NS0084	248	252	NS	BX076574-BX076575	X076574	2			68.17	5.112	0.311	0.052	0.03744	0.041	0.404	0.066	0.009	0.016	0.048	0.069	-0.01	-0.01	-0.01	-0.03	245	0.4896	1.151172	-0.661572	NAF
NS0084	50	54	NS	BX076471-BX076472	X076471	2			68.92	4.163	0.175	0.07	0.0504	0.023	0.301	0.054	0.009	0.009	0.02	0.065	-0.01	-0.01	-0.01	-0.03	194	0.2754	0.941868	-0.666468	NAF
NS0084	206	210	NS	BX076552-BX076553	X076552	2			68.43	5.716	0.255	0.039	0.02808	0.027	0.354	0.06	0.005	0.012	0.024	0.064	-0.01	-0.01	-0.01	-0.03	235	0.3672	1.04652	-0.67932	NAF
NS0084	54	58	NS	BX076473-BX076474	X076473	2			69.45	4.196	0.154	0.06	0.0432	0.018	0.284	0.053	0.009	0.008	0.021	0.068	-0.01	-0.01	-0.01	-0.03	195	0.2448	0.924426	-0.679626	NAF
NS0084	236	240	NS	BX076568-BX076569	X076568	2			66.07	7.416	0.447	0.077	0.05544	0.045	0.523	0.079	0.005	0.022	0.053	0.074	-0.01	-0.01	-0.01	-0.03	242	0.6732	1.377918	-0.704718	NAF
NS0084	58	62	NS	BX076475-BX076476	X076475	2			68.92	3.815	0.114	0.054	0.03888	0.015	0.244	0.051	0.007	0.006	0.012	0.064	-0.01	-0.01	-0.01	-0.03	196	0.1836	0.889542	-0.705942	NAF
NS0084	14	16	NS	X068453	068453	1	G	D	33.87	42.79	2.74	0.1548	0.12	0.142	0.13	0.06	0.061	0.01	0.015	0.011	4.09	0.88	0.09	5.06	12985	0.306	1.04652	-0.74052	NAF
NS0084	20	22	NS	X068456	068456	1	G	D	39.53	37.63	1.44	0.5547	0.43	0.068	0.17	0.05	0.1	0.004	0.052	0.027	2.53	0.49	-0.04	2.98	12988	0.1224	0.8721	-0.7497	NAF
NS0084	10	12	NS	X068451	068451	1	G	D	36.22	36.4	3.22	0.0258	0.02	0.311	0.07	0.06	0.009	0.009	0.011	0.024	6.77	1.09	0.17	8.03	12983	0.2754	1.04652	-0.77112	NAF
NS0084	24	26	NS	X068458	068458	1	G	D	36.81	41.89	1.54	0.2709	0.21	0.076	0.21	0.05	0.071	0.003	0.091	0.024	2.4	0.54	0.01	2.95	12990	0.0918	0.8721	-0.7803	NAF
NS0084	48	50	NS	X068470	068470	1	G	D	33.22	37.5	2.67	0.6837	0.53	0.119	3.43	0.28	0.063	0.134	0.421	0.107	0.63	6.15	0.01	6.79	13002	4.1004	4.88376	-0.78336	NAF
NS0084	224	228	NS	BX076562-BX076563	X076562	2			69.27	4.682	0.166	0.04	0.0288	0.02	0.291	0.067	0.009	0.01	0.03	0.083	-0.01	-0.01	-0.01	-0.03	239	0.306	1.168614	-0.862614	NAF
NS0084	244	248	NS	BX076572-BX076573	X076572	2			69.58	3.955	0.102	0.037	0.02664	0.016	0.215	0.057	0.007	0.004	0.024	0.059	-0.01	-0.01	-0.01	-0.03	244	0.1224	0.994194	-0.871794	NAF
NS0084	18	20	NS	X068455	068455	1	G	D	37.8	40.35	1.79	0.2967	0.23	0.096	0.17	0.06	0.063	0.005	0.039	0.017	2.19	0.59	-0.03	2.75	12987	0.153	1.04652	-0.89352	NAF
NS0084	62	66	NS	BX076477-BX076478	X076477	2			68.78	5.024	0.131	0.063	0.04536	0.015	0.281	0.062	0.007	0.006	0.021	0.091	-0.01	-0.01	-0.01	-0.03	197	0.1836	1.081404	-0.897804	NAF
NS0084	174	178	NS	BX076535-BX076536	X076535	2			67.75	5.8	0.161	0.041	0.02952	0.023	0.326	0.063	0.007	0.005	0.042	0.06	-0.01	-0.01	-0.01	-0.03	226	0.153	1.098846	-0.945846	NAF
NS0084	108	112	NS	BX076501-BX076502	X076501	2			67.1	6.389	0.193	0.05	0.036	0.021	0.351	0.069	0.013	0.007	0.048	0.077	-0.01	-0.01	-0.01	-0.03	209	0.2142	1.203498	-0.989298	NAF
NS0084	194	198	NS	BX076546-BX076547	X076546	2			68.8	5.222	0.238	0.039	0.02808	0.026	0.38	0.081	0.012	0.012	0.041	0.07	-0.01	-0.01	-0.01	-0.03	232	0.3672	1.412802	-1.045602	NAF
NS0084	262	264	NS	X068582	068582	1	G	W	25.89	40.96	5.56	0.387	0.3	0.249	5.14	0.49	0.08	0.245	0.358	0.198	0.77	7.92	0.6	9.29	13109	7.497	8.54658	-1.04958	NAF
NS0084	190	194	NS	BX076544-BX076545	X076544	2			68.23	5.612	0.245	0.048	0.03456	0.025	0.399	0.078	0.01	0.01	0.044	0.062	-0.01	-0.01	-0.01	-0.03	231	0.306	1.360476	-1.054476	NAF
NS0084	146	148	NS	X068520	068520	1	G	W	28.13	40.78	1.86	0.5934	0.46	0.084	3.77	0.77	0.035	0.404	0.402	0.208	0.79	9.29	0.89	10.97	13051	12.3624	13.43034	-1.06794	NAF
NS0084	178	180	NS	BX076537	X076537	2			68.34	5.142	0.177	0.047	0.03384	0.014	0.329	0.073	0.011	0.006	0.039	0.057	-0.01	-0.01	-0.01	-0.03	227	0.1836	1.273266	-1.089666	NAF
NS0084	30	32	NS	X068461	068461	1	G	D	37.09	41.99	1.16	0.4515	0.35	0.055	0.44	0.07	0.054	0.002	0.221	0.026	1.71	0.47	-0.15	2.03	12993	0.0612	1.22094	-1.15974	NAF
NS0084	180	182	NS	BX076539	X076539	2			69.53	4.04	0.124	0.04	0.0288	0.015	0.26	0.083	0.016	0.007	0.027	0.074	-0.01	-0.01	-0.01	-0.03	228	0.2142	1.447686	-1.233486	NAF
NS0084	40	42	NS	X068466	068466	1	G	D	28.8	39.84	3.97	0.645	0.5	0.177	3.76	0.71	0.21	0.363	0.25	0.059	0.61	7.51	0.48	8.6	12998	11.1078	12.38382	-1.27602	NAF
NS0084	92	96	NS	BX076493-BX076494	X076493	2			60.56	8.74	0.628	0.115	0.0828	0.041	0.852	0.117	0.015	0.024	0.069	0.124	-0.01	-0.01	-0.01	-0.03	205	0.7344	2.040714	-1.306314	NAF
NS0084	222	224	NS	BX076561	X076561	2			70.14	3.983	0.109	0.027	0.01944	0.015	0.219	0.088	0.01	0.006	0.023	0.063	-0.01	-0.01	-0.01	-0.03	238	0.1836	1.534896	-1.351296	NAF
NS0084	228	232	NS	BX076564-BX076565	X076564	2			66.37	7.359	0.422	0.062	0.04464	0.035	0.521	0.113	0.008	0.02	0.047	0.069	-0.01	-0.01	-0.01	-0.03	240	0.612	1.970946	-1.358946	NAF
NS0084	120	122	NS	X068507	068507	1	G	W	26.72	41.18	4.01	0.645	0.5	0.179	4.39	0.38	0.081	0.172	0.41	0.185	0.84	8.67	0.42	9.93	13038	5.2632	6.62796	-1.36476	NAF
NS0084	188	190	NS	X068543	068543	1	G	W	27.84	38.76	5.06	0.5031	0.39	0.224	5.87	0.51	0.147	0.245	0.246	0.13	0.66	7.31	0.47	8.44	13072	7.497	8.89542	-1.39842	NAF
NS0084	274	278	NS	BX076588-BX076589	X076588	2			66.36	6.091	0.301	0.121	0.08712	0.037	0.507	0.11	0.008	0.017	0.044	0.07	-0.01	-0.01	-0.01	-0.03	252	0.5202	1.91862	-1.39842	NAF
NS0084	214	218	NS	BX076556-BX076557	X076556	2			69.19	4.863	0.167	0.034	0.02448	0.014	0.285	0.097	0.012	0.008	0.036	0.111	-0.01	-0.01	-0.01	-0.03	237	0.2448	1.691874	-1.447074	NAF
NS0084	32	34	NS	X068462	068462	1	G	D	36.75	42.68	1.01	0.4386	0.34	0.055	0.32	0.09	0.054	0.003	0.119	0.03	1.87	0.45	-0.19	2.13	12994	0.0918	1.56978	-1.47798	NAF
NS0084	12	14	NS	X068452	068452	1	G	D	28.48	47.12	4.35	0.0387	0.03	0.398	0.17	0.11	0.032	0.012	0.016	0.025	5.08	1.38	0.15	6.61	12984	0.3672	1.91862	-1.55142	NAF
NS0084	16	18	NS	X068454	068454	1	G	D	35.23	42.32	2.37	0.516	0.4	0.117	0.19	0.1	0.042	0.005	0.038	0.022	2.95	0.79	0	3.74	12986	0.153	1.7442	-1.5912	NAF
NS0084	26	28	NS	X068459	068459	1	G	D	36.09	40.86	2.46	0.6321	0.49	0.114	0.4	0.1	0.073	0.004	0.121	0.031	2.46	0.8	0.02	3.28	12991	0.1224	1.7442	-1.6218	NAF
NS0084	134	136	NS	X068514	068514	1	G	W	31.76	38.77	2.37	0.5934	0.46	0.104	3.28	0.23	0.042	0.074	0.263	0.13	0.7	7.79	-0.14	8.35	13045	2.2644	4.01166	-1.74726	NAF
NS0084	28	30	NS	X068460	068460	1	G	D	37.63	39.2	1.98	0.6579	0.51	0.092	0.4	0.11	0.041	0.004	0.161	0.031	2.33	0.73	-0.04	3.02	12992	0.1224	1.91862	-1.79622	NAF
NS0084	128	130	NS	X068511	068511	1	G	W	27.91	41.46	3.15	0.6837	0.53	0.14	3.96	0.32	0.062	0.122	0.36	0.174	0.79	8.45	0.24	9.48	13042	3.7332	5.58144	-1.84824	NAF
NS0084	136	138	NS	X068515	068515	1	G	W	31.71	39.51	2.38	0.5547	0.43	0.105	3.2	0.19	0.032	0.047	0.23	0.12	0.58	7.6	-0.23	7.95	13046	1.4382	3.31398	-1.87578	NAF
NS0084	84	86	NS	X068488	068488	1	G	D	24.67	43.37	5.19	0.4386	0.34	0.23	4.07	0.37	0.074	0.148	0.955	0.417	1.41	7.14	0.6	9.15	13020	4.5288	6.45354	-1.92474	NAF
NS0084	266	268	NS	X068584	068584	1	G	W	26.76	37.17	5.68	0.5031	0.39	0.257	5.43	0.49	0.131	0.21	0.389	0.226	0.91	9.66	0.52	11.09	13111	6.426	8.54658	-2.12058	NAF
NS0084	270	274	NS	BX076586-BX076587	X076586	2			66.89	6.364	0.333	0.082	0.05904	0.031	0.427	0.153	0.015	0.016	0.04	0.068	-0.01	-0.01	-0.01	-0.03	251	0.4896	2.668626	-2.179026	NAF
NS0084	150	152	NS	X068523	068523	1	G	W	25.16	43.79	4.16	0.4773	0.37	0.189	4.73	0.4	0.09	0.156	0.562	0.288	0.98	7.3	0.44	8.72	13053	4.7736	6.9768	-2.2032	NAF
NS0084	86	88	NS	X068489	068489	1	G	D	28.42	33.36	2.51	0.8385	0.65	0.113	3.63	0.29	0.029	0.086	0.28	0.123	1.07	16.39	0.2	17.66	13021	2.6316	5.05818	-2.42658	NAF
NS0084	44	46	NS	X068468	068468	1	G	D	34.09	35.42	2.41	0.774	0.6	0.109	3.18	0.37	0.087	0.13	0.359	0.07	0.71	7.59	-0.05	8.25	13000	3.978	6.45354	-2.47554	NAF
NS0084	166	168	NS	X068531	068531	1	G	W	28.93	39.38	3.46	0.4773	0.37	0.154	4.54	0.49	0.053	0.193	0.257	0.118	0.6	8.33	0.32	9.25	13061	5.9058	8.54658	-2.64078	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0084	186	188	NS	X068542	068542	1	G	W	24.85	43.37	3.4	0.6063	0.47	0.153	5.29	0.57	0.151	0.235	0.224	0.141	0.58	8.51	1	10.09	13071	7.191	9.94194	-2.75094	NAF
NS0084	138	140	NS	X068516	068516	1	G	W	28.11	41.1	2.15	0.6321	0.49	0.099	3.63	0.55	0.113	0.219	0.453	0.21	1.04	8.93	0.47	10.44	13047	6.7014	9.5931	-2.8917	NAF
NS0084	240	242	NS	X068570	068570	1	G	W	28.26	37.33	3.58	0.8127	0.63	0.156	4.45	0.54	0.064	0.212	0.408	0.2	0.85	10.27	0.57	11.69	13098	6.4872	9.41868	-2.93148	NAF
NS0084	38	40	NS	X068465	068465	1	G	D	31.71	41.69	2.23	0.5934	0.46	0.106	2.38	0.36	0.099	0.105	0.146	0.055	0.95	5.86	-0.07	6.74	12997	3.213	6.27912	-3.06612	NAF
NS0084	78	80	NS	X068485	068485	1	G	D	26.69	40.35	2.18	0.5934	0.46	0.092	3.49	0.3	0.037	0.067	0.541	0.263	1.19	12.34	0.23	13.76	13017	2.0502	5.2326	-3.1824	NAF
NS0084	74	76	NS	X068483	068483	1	G	D	22.97	47.12	2.28	0.5805	0.45	0.1	3.38	0.32	0.041	0.076	0.425	0.164	0.92	11.09	0.24	12.25	13015	2.3256	5.58144	-3.25584	NAF
NS0084	36	38	NS	X068464	068464	1	G	D	29.91	45.05	3.8	0.6837	0.53	0.17	1.12	0.2	0.089	0.007	0.416	0.052	3.72	1.3	0.17	5.19	12996	0.2142	3.4884	-3.2742	NAF
NS0084	68	70	NS	X068480	068480	1	G	D	30	40.49	2.37	0.5934	0.46	0.104	3.42	0.33	0.054	0.069	0.405	0.165	0.79	7.86	0	8.65	13012	2.1114	5.75586	-3.64446	NAF
NS0084	234	236	NS	X068567	068567	1	G	W	26.02	42.21	4.17	0.5805	0.45	0.187	4.65	0.54	0.073	0.186	0.391	0.203	0.73	8.12	0.49	9.34	13095	5.6916	9.41868	-3.72708	NAF
NS0084	76	78	NS	X068484	068484	1	G	D	25.41	42.06	2.98	0.5547	0.43	0.127	3.73	0.39	0.065	0.092	0.358	0.153	0.94	11.85	0.27	13.06	13016	2.8152	6.80238	-3.98718	NAF
NS0084	50	52	NS	X068471	068471	1	G	D	35.42	35.42	1.87	0.774	0.6	0.083	2.93	0.32	0.07	0.05	0.303	0.085	0.59	6.81	-0.33	7.07	13003	1.53	5.58144	-4.05144	NAF
NS0084	256	258	NS	X068578	068578	1	G	W	29.56	43.02	1.71	0.516	0.4	0.078	2.85	0.38	0.021	0.073	0.427	0.251	0.92	7.16	0.04	8.12	13106	2.2338	6.62796	-4.39416	NAF
NS0084	72	74	NS	X068482	068482	1	G	D	28.17	37.35	3.31	0.6708	0.52	0.147	4.17	0.45	0.088	0.11	0.601	0.263	1.11	10.89	0.3	12.3	13014	3.366	7.8489	-4.4829	NAF
NS0084	114	116	NS	X068504	068504	1	G	W	31.29	37.98	2.49	0.5934	0.46	0.109	3.48	0.39	0.085	0.071	0.387	0.184	0.81	8.29	-0.08	9.02	13035	2.1726	6.80238	-4.62978	NAF
NS0084	116	118	NS	X068505	068505	1	G	W	30.02	38.67	2.61	0.645	0.5	0.112	3.74	0.41	0.075	0.081	0.374	0.17	1.02	8.87	0.02	9.91	13036	2.4786	7.15122	-4.67262	NAF
NS0084	96	98	NS	X068495	068495	1	G	W	28.19	34.33	2.34	0.8385	0.65	0.102	3.87	0.41	0.062	0.077	0.329	0.146	0.99	15.79	0.21	16.99	13026	2.3562	7.15122	-4.79502	NAF
NS0084	92	94	NS	X068493	068493	1	G	W	28.87	34	2.49	0.6837	0.53	0.103	3.83	0.46	0.079	0.1	0.371	0.169	1.11	15.25	0.2	16.56	13024	3.06	8.02332	-4.96332	NAF
NS0084	42	44	NS	X068467	068467	1	G	D	28.47	38.66	2.98	0.903	0.7	0.132	3.63	0.87	0.245	0.331	0.262	0.062	0.74	9.42	0.63	10.79	12999	10.1286	15.17454	-5.04594	NAF
NS0084	94	96	NS	X068494	068494	1	G	W	26.82	37.58	3.58	0.5031	0.39	0.155	4.14	0.5	0.105	0.104	0.486	0.2	1.14	12.37	0.25	13.76	13025	3.1824	8.721	-5.5386	NAF
NS0084	270	272	NS	X068586	068586	1	G	W	22.45	48.61	4.07	0.4128	0.32	0.183	4.08	0.78	0.106	0.259	0.388	0.219	0.76	7.03	0.8	8.59	13113	7.9254	13.60476	-5.67936	NAF
NS0084	66	68	NS	X068479	068479	1	G	D	31.92	39.29	2.88	0.5289	0.41	0.127	3.46	0.54	0.068	0.12	0.334	0.127	0.67	5.87	0.11	6.65	13011	3.672	9.41868	-5.74668	NAF
NS0084	118	120	NS	X068506	068506	1	G	W	27.52	40.58	2.88	0.7224	0.56	0.127	4.05	0.52	0.095	0.103	0.427	0.208	0.87	9.45	0.19	10.51	13037	3.1518	9.06984	-5.91804	NAF
NS0084	52	54	NS	X068472	068472	1	G	D	31.95	42.23	1.18	0.7482	0.58	0.052	2.28	0.41	0.052	0.03	0.189	0.064	0.47	6.4	-0.22	6.65	13004	0.918	7.15122	-6.23322	NAF
NS0084	258	260	NS	X068580	068580	1	G	W	26.18	40.62	3.28	0.7224	0.56	0.147	4.23	0.78	0.078	0.231	0.501	0.257	0.93	9.84	0.67	11.44	13107	7.0686	13.60476	-6.53616	NAF
NS0084	132	134	NS	X068513	068513	1	G	W	22.89	46.97	3.28	0.6837	0.53	0.143	4.03	0.74	0.2	0.204	0.327	0.148	0.8	8.83	0.51	10.14	13044	6.2424	12.90708	-6.66468	NAF
NS0084	190	192	NS	X068544	068544	1	G	W	25.29	43.55	2.75	0.8127	0.63	0.121	4.71	1.03	0.045	0.359	0.241	0.124	0.56	8.51	1.03	10.1	13073	10.9854	17.96526	-6.97986	NAF
NS0084	268	270	NS	X068585	068585	1	G	W	27.94	36.52	3.97	0.7353	0.57	0.176	4.72	0.68	0.145	0.156	0.464	0.235	0.9	10.5	0.42	11.82	13112	4.7736	11.86056	-7.08696	NAF
NS0084	244	246	NS	X068572	068572	1	G	W	27.17	40.99	2.97	0.516	0.4	0.126	3.81	0.71	0.083	0.167	0.36	0.185	0.8	10.02	0.39	11.21	13100	5.1102	12.38382	-7.27362	NAF
NS0084	54	56	NS	X068473	068473	1	G	D	33.15	39.62	1.4	0.7353	0.57	0.06	2.53	0.5	0.082	0.043	0.221	0.073	0.51	6.6	-0.25	6.86	13005	1.3158	8.721	-7.4052	NAF
NS0084	58	60	NS	X068475	068475	1	G	D	34.64	36.35	1.51	0.8127	0.63	0.065	2.87	0.5	0.088	0.043	0.186	0.072	0.5	7.48	-0.31	7.67	13007	1.3158	8.721	-7.4052	NAF
NS0084	56	58	NS	X068474	068474	1	G	D	38.12	34.32	1.6	0.5547	0.43	0.072	2.46	0.52	0.059	0.042	0.208	0.07	0.41	5.07	-0.3	5.18	13006	1.2852	9.06984	-7.78464	NAF
NS0084	170	172	NS	X068533	068533	1	G	W	30.83	40.87	1.79	0.5289	0.41	0.08	3.22	0.53	0.071	0.047	0.352	0.165	0.65	7.18	-0.08	7.75	13063	1.4382	9.24426	-7.80606	NAF
NS0084	210	212	NS	X068554	068554	1	G	W	23.34	49.02	4.84	0.2064	0.16	0.217	5.23	0.92	0.041	0.26	0.173	0.094	0.49	4.16	0.84	5.49	13083	7.956	16.04664	-8.09064	NAF
NS0084	70	72	NS	X068481	068481	1	G	D	27.08	36.9	3.44	0.7095	0.55	0.155	4.32	0.66	0.157	0.111	0.635	0.264	1.2	11.7	0.42	13.32	13013	3.3966	11.51172	-8.11512	NAF
NS0084	34	36	NS	X068463	068463	1	G	D	34.1	41.52	2.18	0.7611	0.59	0.105	0.74	0.48	0.142	0.005	0.309	0.04	3.39	0.85	0.09	4.33	12995	0.153	8.37216	-8.21916	NAF
NS0084	46	48	NS	X068469	068469	1	G	D	36.16	37.07	1.4	0.7353	0.57	0.063	2.21	0.56	0.091	0.042	0.088	0.022	0.43	5.75	-0.46	5.72	13001	1.2852	9.76752	-8.48232	NAF
NS0084	252	254	NS	X068576	068576	1	G	W	24.56	49.07	1.81	0.4386	0.34	0.08	2.91	0.68	0.047	0.108	0.315	0.191	0.76	8.01	0.32	9.09	13104	3.3048	11.86056	-8.55576	NAF
NS0084	254	256	NS	X068577	068577	1	G	W	26.12	41.98	2.68	0.6837	0.53	0.122	3.7	0.75	0.091	0.145	0.429	0.306	0.83	10.1	0.38	11.31	13105	4.437	13.0815	-8.6445	NAF
NS0084	64	66	NS	X068478	068478	1	G	D	33.99	39.37	1.44	0.5934	0.46	0.065	2.49	0.57	0.07	0.032	0.25	0.1	0.47	5.66	-0.22	5.91	13010	0.9792	9.94194	-8.96274	NAF
NS0084	168	170	NS	X068532	068532	1	G	W	26.19	47.65	2.27	0.4644	0.36	0.1	3.32	0.64	0.073	0.06	0.312	0.152	0.6	6.51	0.11	7.22	13062	1.836	11.16288	-9.32688	NAF
NS0084	172	174	NS	X068534	068534	1	G	W	30.48	43.45	1.62	0.4515	0.35	0.071	2.97	0.66	0.049	0.047	0.331	0.161	0.59	5.78	0.07	6.44	13064	1.4382	11.51172	-10.07352	NAF
NS0084	280	282	NS	X068591	068591	1	G	W	20.54	50.56	0.74	0.9288	0.72	0.031	2.86	0.7	0.035	0.041	0.17	0.088	0.71	13.22	0.31	14.24	13118	1.2546	12.2094	-10.9548	NAF
NS0084	204	206	NS	X068551	068551	1	G	W	29.72	37.75	4.18	0.4128	0.32	0.185	5.43	1.01	0.146	0.196	0.287	0.149	0.6	6.27	0.57	7.44	13080	5.9976	17.61642	-11.61882	NAF
NS0084	278	280	NS	X068590	068590	1	G	W	23.95	41.51	3.69	0.7353	0.57	0.165	4.48	1.18	0.091	0.253	0.334	0.168	0.76	11.28	0.93	12.97	13117	7.7418	20.58156	-12.83976	NAF
NS0084	108	110	NS	X068501	068501	1	G	W	23.95	54.79	1.08	0.3741	0.29	0.048	2.14	0.84	0.083	0.041	0.26	0.118	0.47	5.1	0.24	5.81	13032	1.2546	14.65128	-13.39668	NAF
NS0084	110	112	NS	X068502	068502	1	G	W	28.67	46.13	1.16	0.4644	0.36	0.051	2.54	0.84	0.053	0.037	0.304	0.146	0.55	6.16	0.2	6.91	13033	1.1322	14.65128	-13.51908	NAF
NS0084	184	186	NS	X068541	068541	1	G	W	31.08	41.97	1.22	0.645	0.5	0.055	2.98	0.9	0.08	0.069	0.259	0.117	0.44	6.22	0.16	6.82	13070	2.1114	15.6978	-13.5864	NAF
NS0084	62	64	NS	X068477	068477	1	G	D	34.41	37.88	1.33	0.7095	0.55	0.058	2.54	0.85	0.074	0.034	0.105	0.031	0.42	6.63	-0.03	7.02	13009	1.0404	14.8257	-13.7853	NAF
NS0084	206	208	NS	X068552	068552	1	G	W	32.41	37.43	2.98	0.387	0.3	0.132	4.38	1.12	0.071	0.135	0.297	0.162	0.56	5.28	0.5	6.34	13081	4.131	19.53504	-15.40404	NAF
NS0084	60	62	NS	X068476	068476	1	G	D	30.53	42.47	1.09	0.8256	0.64	0.047	2.52	0.99	0.065	0.04	0.094	0.045	0.44	7.27	0.18	7.89	13008	1.224	17.26758	-16.04358	NAF
NS0084	174	176	NS	X068535	068535	1	G	W	27.75	48.13	1.62	0.3999	0.31	0.071	2.79	1.01	0.038	0.045	0.354	0.165	0.51	4.48	0.43	5.42	13065	1.377	17.61642	-16.23942	NAF
NS0084	260	262	NS	X068581	068581	1	G	W	19.73	55.92	2.72	0.3354	0.26	0.125	3.26	1.28	0.054	0.172	0.351	0.18	0.69	5.71	0.85	7.25	13108	5.2632	22.32576	-17.06256	NAF
NS0084	198	200	NS	X068548	068548	1	G	W	30.93	42.88	2.15	0.3225	0.25	0.104	3.22	1.18	0.116	0.102	0.36	0.186	0.76	3.61	0.4	4.77	13077	3.1212	20.58156	-17.46036	NAF
NS0084	250	252	NS	X068575	068575	1	G	W	26.85	44.78	2.33	0.3483	0.27	0.101	3.33	1.18	0.064	0.101	0.414	0.214	0.72	7.01	0.66	8.39	13103	3.0906	20.58156	-17.49096	NAF
NS0084	154	156	NS	X068525	068525	1	G	W	25.48	46.68	1.34	0.645	0.5	0.062	3.12	1.21	0.066	0.076	0.23	0.114	0.57	8.8	0.56	9.93	13055	2.3256	21.10482	-18.77922	NAF
NS0084	214	216	NS	X068556	068556	1	G	W	24.68	49.36	3.45	0.258	0.2	0.153	4.05	1.43	0.095	0.152	0.193	0.112	0.51	3.62	0.91	5.04	13085	4.6512	24.94206	-20.29086	NAF
NS0084	246	248	NS	X068573	068573	1	G	W	31.18	44.12	0.86	0.3999	0.31	0.037	1.96	1.26	0.065	0.021	0.279	0.134	0.39	4.93	0.53	5.85	13101	0.6426	21.97692	-21.33432	NAF
NS0084	194	196	NS	X068546	068546	1	G	W	32.19	42.3	2	0.3354	0.26	0.089	3.01	1.4	0.051	0.069	0.355	0.182	0.49	2.9	0.63	4.02	13075	2.1114	24.4188	-22.3074	NAF
NS0084	276	278	NS	X068589	068589	1	G	W	30.78	34.49	2.09	0.9417	0.73	0.093	3.67	1.51	0.112	0.092	0.32	0.181	0.71	10.59	0.71	12.01	13116	2.8152	26.33742	-23.52222	NAF
NS0084	248	250	NS	X068574	068574	1	G	W	25.82	50.55	1	0.3354	0.26	0.044	2.11	1.42	0.059	0.034	0.21	0.103	0.44	5.7	0.79	6.93	13102	1.0404	24.76764	-23.72724	NAF
NS0084	178	180	NS	X068537	068537	1	G	W	30.9	42.67	1.33	0.5031	0.39	0.06	2.76	1.49	0.081	0.036	0.296	0.14	0.47	4.84	0.75	6.06	13067	1.1016	25.98858	-24.88698	NAF
NS0084	182	184	NS	X068540	068540	1	G	W	32.21	40.78	1.28	0.5547	0.43	0.057	2.76	1.5	0.095	0.034	0.288	0.138	0.43	4.96	0.66	6.05	13069	1.0404	26.163	-25.1226	NAF
NS0084	176	178	NS	X068536	068536	1	G	W	30.02	45.23	1.15	0.4257	0.33	0.052	2.51	1.51	0.056	0.032	0.281	0.136	0.4	4.31	0.74	5.45	13066	0.9792	26.33742	-25.35822	NAF
NS0084	208	210	NS	X068553	068553	1	G	W	17.31	64.14	1.39	0.3225	0.25	0.062	2.33	1.61	0.025	0.065	0.129	0.077	0.32	3.3	1.15	4.77	13082	1.989	28.08162	-26.09262	NAF
NS0084	192	194	NS	X068545	068545	1	G	W	32.2	39.6	1.59	0.5805	0.45	0.07	3.11	1.68	0.085	0.058	0.291	0.142	0.49	4.97	0.85	6.31	13074	1.7748	29.30256	-27.52776	NAF
NS0084	236	238	NS	X068568	068568	1	G	W	24.57	45.21	3.39	0.4644	0.36	0.147	4.04	1.88	0.106	0.154	0.341	0.166	0.66	6.79	1.24	8.69	13096	4.7124	32.79096	-28.07856	NAF
NS0084	226	228	NS	X068563	068563	1	G	W	29.26	41.67	1.99	0.5547	0.43	0.088	3.47	1.78	0.147	0.074	0.323	0.162	0.53	6.03	0.9	7.46	13091	2.2644	31.04676	-28.78236	NAF
NS0084	230	232	NS	X068565	068565	1	G	W	29.73	40.07	2.82	0.5289	0.41	0.121	3.7	1.9	0.077	0.128	0.217	0.107	0.46	5.78	1.19	7.43	13093	3.9168	33.1398	-29.223	NAF
NS0084	238	240	NS	X068569	068569	1	G	W	26.85	47.64	2.17	0.3612	0.28	0.099	2.78	1.84	0.034	0.071	0.274	0.152	0.49	4.36	1.19	6.04	13097	2.1726	32.09328	-29.92068	NAF
NS0084	180	182	NS	X068539	068539	1	G	W	27.54	46.44	1.23	0.516	0.4	0.057	2.79	1.85	0.108	0.036	0.252	0.131	0.52	5.28	1.02	6.82	13068	1.1016	32.2677	-31.1661	NAC
NS0084	228	230	NS	X068564	068564	1	G	W	31.03	45.9	0.93	0.3612	0.28	0.042	1.89	1.88	0.061	0.022	0.205	0.112	0.31	2.81	1	4.12	13092	0.6732	32.79096	-32.11776	NAC
NS0084	232	234	NS	X068566	068566	1	G	W	25.48	46.33	2.59	0.4128	0.32	0.119	3.52	2.12	0.113	0.108	0.362	0.177	0.6	5.33	1.41	7.34	13094	3.3048	36.97704	-33.67224	NAC
NS0084	196	198	NS	X068547	068547	1	G	W	30.49	42.51	2.4	0.3354	0.26	0.105	3.39	2.11	0.125	0.101	0.391	0.209	0.51	2.8	1.2	4.51	13076	3.0906	36.80262	-33.71202	NAC
NS0084	274	276	NS	X068588	068588	1	G	W	33.87	36.99	1.34	0.5547	0.43	0.061	2.39	2.61	0.068	0.033	0.224	0.14	0.4	4.69	1.82	6.91	13115	1.0098	45.52362	-44.51382	NAC
NS0084	218	220	NS	X068558	068558	1	G	W	29.7	47.53	0.87	0.2709	0.21	0.039	1.94	2.62	0.067	0.021	0.197	0.114	0.18	1.59	2.03	3.8	13087	0.6426	45.69804	-45.05544	NAC
NS0084	222	224	NS	X068561	068561	1	G	W	30.72	46.11	0.99	0.2451	0.19	0.044	1.86	2.7	0.069	0.024	0.186	0.086	0.17	1.27	1.96	3.4	13089	0.7344	47.0934	-46.359	NAC
NS0084	224	226	NS	X068562	068562	1	G	W	29.61	45.96	1	0.2838	0.22	0.046	2.07	3.07	0.081	0.026	0.21	0.125	0.22	1.7	2.39	4.31	13090	0.7956	53.54694	-52.75134	NAC
NS0084	220	222	NS	X068560	068560	1	G	W	27.05	48.37	1.11	0.2967	0.23	0.05	2.31	3.47	0.065	0.032	0.227	0.131	0.25	1.56	3.13	4.94	13088	0.9792	60.52374	-59.54454	NAC
NS0084	216	218	NS	X068557	068557	1	G	W	23.13	52.67	1.19	0.3354	0.26	0.051	2.55	3.56	0.05	0.039	0.179	0.093	0.27	2.27	3.39	5.93	13086	1.1934	62.09352	-60.90012	NAC
NS0085	202	204	NS	X068696	068696	1	G	W	24.41	41.11	6.18	0.3612	0.28	0.273	5.02	0.42	0.096	0.456	0.324	0.113	0.6	9.17	1.05	10.82	13220	13.9536	7.32564	6.62796	PAF(LC)
NS0085	116	118	NS	X068652	068652	1	G	W	31.48	37.87	3.13	0.774	0.6	0.15	3.91	0.8	0.147	0.653	0.958	0.067	0.33	5.14	1.31	6.78	13177	19.9818	13.9536	6.0282	PAF(LC)
NS0085	276	278	NS	X068734	068734	1	G	W	30.64	34.27	4.98	0.7224	0.56	0.21	4.59	0.83	0.214	0.505	1.49	0.111	0.42	6.94	1	8.36	13257	15.453	14.47686	0.97614	PAF(LC)
NS0085	200	204	NS	BX076695-BX076696	X076695	2			62.92	7.942	0.765	0.091	0.06552	0.073	0.683	0.06	0.008	0.04	0.056	0.093	-0.01	-0.01	-0.01	-0.03	306	1.224	1.04652	0.17748	PAF(LC)
NS0085	114	118	NS	BX076651-BX076652	X076651	2			68.61	4.148	0.252	0.057	0.04104	0.029	0.312	0.056	0.008	0.03	0.093	0.067	-0.01	-0.01	-0.01	-0.03	284	0.918	0.976752	-0.058752	NAF
NS0085	274	278	NS	BX076733-BX076734	X076733	2			66.8	6.064	0.461	0.078	0.05616	0.041	0.428	0.061	0.012	0.025	0.193	0.087	-0.01	-0.01	-0.01	-0.03	325	0.765	1.063962	-0.298962	NAF
NS0085	10	14	NS	BX076597-BX076598	X076597	2			67.18	2.994	0.272	0.042	0.03024	0.015	0.101	0.025	0.026	0.004	0.001	0.088	0.66	0.58	0.55	1.79	257	0.1224	0.43605	-0.31365	NAF
NS0085	12	14	NS	X068598	068598	1	G	D	35.41	40.46	3.04	0.0903	0.07	0.111	0.06	0.03	0.067	0.006	0.007	0.013	4.19	0.95	0.14	5.28	13125	0.1836	0.52326	-0.33966	NAF
NS0085	18	22	NS	BX076601-BX076602	X076601	2			67.46	2.825	0.147	0.048	0.03456	0.014	0.094	0.024	0.018	0.002	0.001	0.06	0.4	0.24	-0.01	0.63	259	0.0612	0.418608	-0.357408	NAF
NS0085	26	30	NS	BX076605-BX076606	X076605	2			66.7	3.123	0.096	0.07	0.0504	0.011	0.105	0.023	0.016	0.001	0.008	0.053	0.36	0.11	0.04	0.51	261	0.0306	0.401166	-0.370566	NAF
NS0085	30	34	NS	BX076607-BX076608	X076607	2			67.76	2.903	0.077	0.058	0.04176	0.013	0.106	0.023	0.015	0.001	0.008	0.058	0.4	0.19	0.27	0.86	262	0.0306	0.401166	-0.370566	NAF
NS0085	22	26	NS	BX076603-BX076604	X076603	2			66.97	2.929	0.11	0.051	0.03672	0.009	0.095	0.024	0.017	0.001	0.004	0.05	0.36	0.21	-0.01	0.56	260	0.0306	0.418608	-0.388008	NAF
NS0085	2	6	NS	BX076593-BX076594	X076593	2			66.93	3.578	0.334	0.038	0.02736	0.025	0.097	0.028	0.018	0.003	0.002	0.068	0.54	0.36	-0.01	0.89	255	0.0918	0.488376	-0.396576	NAF
NS0085	14	18	NS	BX076599-BX076600	X076599	2			67.58	3.388	0.186	0.048	0.03456	0.021	0.096	0.025	0.03	0.001	0.001	0.05	0.45	0.37	0.36	1.18	258	0.0306	0.43605	-0.40545	NAF
NS0085	218	222	NS	BX076705-BX076706	X076705	2			68.3	2.952	0.181	0.047	0.03384	0.019	0.285	0.05	0.007	0.014	0.016	0.074	-0.01	-0.01	-0.01	-0.03	311	0.4284	0.8721	-0.4437	NAF
NS0085	8	10	NS	X068596	068596	1	G	D	39.58	32.17	3.56	0.0516	0.04	0.227	0.06	0.04	0.03	0.007	0.004	0.024	5.94	0.98	0.19	7.11	13123	0.2142	0.69768	-0.48348	NAF
NS0085	6	10	NS	BX076595-BX076596	X076595	2			66.68	3.243	1.1	0.068	0.04896	0.211	0.098	0.035	0.011	0.004	0.003	0.062	-0.01	-0.01	-0.01	-0.03	256	0.1224	0.61047	-0.48807	NAF
NS0085	34	38	NS	BX076609-BX076610	X076609	2			67.44	2.679	0.066	0.063	0.04536	0.009	0.117	0.034	0.014	0.002	0.018	0.069	0.27	-0.01	-0.01	0.25	263	0.0612	0.593028	-0.531828	NAF
NS0085	82	86	NS	BX076634-BX076635	X076634	2			67.52	5.65	0.333	0.061	0.04392	0.03	0.409	0.052	0.008	0.012	0.108	0.08	-0.01	-0.01	-0.01	-0.03	275	0.3672	0.906984	-0.539784	NAF
NS0085	10	12	NS	X068597	068597	1	G	D	37.93	36.61	2.66	0.1161	0.09	0.098	0.08	0.04	0.048	0.005	0.004	0.017	4.96	0.85	0.13	5.94	13124	0.153	0.69768	-0.54468	NAF
NS0085	2	4	NS	X068593	068593	1	G	D	39.11	35.46	3.11	0.0516	0.04	0.149	0.06	0.05	0.038	0.009	0.019	0.018	4.22	0.76	0.04	5.02	13120	0.2754	0.8721	-0.5967	NAF
NS0085	196	200	NS	BX076693-BX076694	X076693	2			65.8	6.452	0.331	0.083	0.05976	0.031	0.45	0.059	0.009	0.014	0.038	0.063	-0.01	-0.01	-0.01	-0.03	305	0.4284	1.029078	-0.600678	NAF
NS0085	0	2	NS	BX076592	X076592	2			63.69	3.036	2.898	0.082	0.05904	0.576	0.121	0.047	0.022	0.007	0.01	0.082	-0.01	-0.01	-0.01	-0.03	254	0.2142	0.819774	-0.605574	NAF
NS0085	78	82	NS	BX076632-BX076633	X076632	2			66.54	6.188	0.414	0.069	0.04968	0.038	0.514	0.072	0.014	0.021	0.098	0.086	-0.01	-0.01	-0.01	-0.03	274	0.6426	1.255824	-0.613224	NAF
NS0085	54	58	NS	BX076619-BX076620	X076619	2			68.44	4.433	0.221	0.066	0.04752	0.024	0.295	0.06	0.01	0.014	0.102	0.066	-0.01	-0.01	-0.01	-0.03	268	0.4284	1.04652	-0.61812	NAF
NS0085	242	246	NS	BX076717-BX076718	X076717	2			69.63	3.668	0.101	0.046	0.03312	0.013	0.193	0.042	0.007	0.003	0.046	0.065	-0.01	-0.01	-0.01	-0.03	317	0.0918	0.732564	-0.640764	NAF
NS0085	246	250	NS	BX076719-BX076720	X076719	2			69.49	2.982	0.059	0.04	0.0288	0.009	0.168	0.044	0.008	0.004	0.028	0.098	-0.01	-0.01	-0.01	-0.03	318	0.1224	0.767448	-0.645048	NAF
NS0085	188	190	NS	BX076689	X076689	2			64.76	7.099	0.353	0.078	0.05616	0.03	0.448	0.083	0.016	0.026	0.046	0.073	-0.01	-0.01	-0.01	-0.03	303	0.7956	1.447686	-0.652086	NAF
NS0085	4	6	NS	X068594	068594	1	G	D	37.76	39.33	2.4	0.1548	0.12	0.125	0.05	0.05	0.052	0.006	0.01	0.022	3.12	0.58	-0.05	3.65	13121	0.1836	0.8721	-0.6885	NAF
NS0085	168	172	NS	BX076679-BX076680	X076679	2			68.54	4.627	0.13	0.046	0.03312	0.014	0.24	0.052	0.009	0.007	0.045	0.047	-0.01	-0.01	-0.01	-0.03	298	0.2142	0.906984	-0.692784	NAF
NS0085	136	140	NS	BX076663-BX076664	X076663	2			70.56	2.857	0.115	0.053	0.03816	0.012	0.218	0.063	0.009	0.013	0.061	0.161	-0.01	-0.01	-0.01	-0.03	290	0.3978	1.098846	-0.701046	NAF
NS0085	250	254	NS	BX076721-BX076722	X076721	2			67.88	5.092	0.163	0.061	0.04392	0.016	0.26	0.05	0.01	0.005	0.076	0.049	-0.01	-0.01	-0.01	-0.03	319	0.153	0.8721	-0.7191	NAF
NS0085	278	282	NS	BX076735-BX076736	X076735	2			68.31	5.431	0.091	0.06	0.0432	0.015	0.24	0.054	0.011	0.006	0.017	0.05	-0.01	-0.01	-0.01	-0.03	326	0.1836	0.941868	-0.758268	NAF
NS0085	214	218	NS	BX076703-BX076704	X076703	2			66.61	5.327	0.298	0.064	0.04608	0.025	0.449	0.079	0.015	0.02	0.037	0.08	-0.01	-0.01	-0.01	-0.03	310	0.612	1.377918	-0.765918	NAF
NS0085	222	226	NS	BX076707-BX076708	X076707	2			68.43	2.03	0.105	0.042	0.03024	0.009	0.207	0.058	0.008	0.008	0.004	0.083	-0.01	-0.01	-0.01	-0.03	312	0.2448	1.011636	-0.766836	NAF
NS0085	208	212	NS	BX076699-BX076700	X076699	2			69.33	3.383	0.075	0.041	0.02952	0.012	0.203	0.051	0.01	0.004	0.011	0.048	-0.01	-0.01	-0.01	-0.03	308	0.1224	0.889542	-0.767142	NAF
NS0085	6	8	NS	X068595	068595	1	G	D	38.39	35.91	3.81	0.1032	0.08	0.266	0.06	0.06	0.029	0.009	0.012	0.027	3.74	0.88	0.08	4.7	13122	0.2754	1.04652	-0.77112	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0085	204	208	NS	BX076697-BX076698	X076697	2			68.03	4.247	0.138	0.05	0.036	0.02	0.253	0.055	0.01	0.006	0.012	0.066	-0.01	-0.01	-0.01	-0.03	307	0.1836	0.95931	-0.77571	NAF
NS0085	160	164	NS	BX076675-BX076676	X076675	2			69.74	2.971	0.045	0.038	0.02736	0.006	0.152	0.047	0.007	0.001	0.034	0.053	-0.01	-0.01	-0.01	-0.03	296	0.0306	0.819774	-0.789174	NAF
NS0085	14	16	NS	X068599	068599	1	G	D	36.52	42.59	1.52	0.3741	0.29	0.062	0.07	0.05	0.072	0.002	0.013	0.016	2.18	0.53	0.03	2.74	13126	0.0612	0.8721	-0.8109	NAF
NS0085	130	132	NS	BX076659	X076659	2			69.81	3.07	0.085	0.046	0.03312	0.007	0.188	0.056	0.008	0.005	0.059	0.061	-0.01	-0.01	-0.01	-0.03	288	0.153	0.976752	-0.823752	NAF
NS0085	144	148	NS	BX076667-BX076668	X076667	2			68.11	4.056	0.075	0.052	0.03744	0.007	0.205	0.051	0.009	0.002	0.055	0.054	-0.01	-0.01	-0.01	-0.03	292	0.0612	0.889542	-0.828342	NAF
NS0085	270	274	NS	BX076731-BX076732	X076731	2			67	5.015	0.212	0.063	0.04536	0.018	0.301	0.062	0.013	0.008	0.085	0.048	-0.01	-0.01	-0.01	-0.03	324	0.2448	1.081404	-0.836604	NAF
NS0085	156	160	NS	BX076673-BX076674	X076673	2			68.86	4.092	0.086	0.055	0.0396	0.008	0.205	0.052	0.007	0.002	0.059	0.085	-0.01	-0.01	-0.01	-0.03	295	0.0612	0.906984	-0.845784	NAF
NS0085	234	238	NS	BX076713-BX076714	X076713	2			69.01	3.084	0.107	0.054	0.03888	0.024	0.188	0.054	0.01	0.003	0.079	0.051	-0.01	-0.01	-0.01	-0.03	315	0.0918	0.941868	-0.850068	NAF
NS0085	254	258	NS	BX076723-BX076724	X076723	2			67.71	4.154	0.095	0.054	0.03888	0.011	0.213	0.054	0.01	0.002	0.044	0.053	-0.01	-0.01	-0.01	-0.03	320	0.0612	0.941868	-0.880668	NAF
NS0085	172	176	NS	BX076681-BX076682	X076681	2			68.64	3.458	0.079	0.046	0.03312	0.012	0.186	0.058	0.008	0.004	0.026	0.087	-0.01	-0.01	-0.01	-0.03	299	0.1224	1.011636	-0.889236	NAF
NS0085	226	230	NS	BX076709-BX076710	X076709	2			70.16	2.013	0.06	0.048	0.03456	0.009	0.158	0.061	0.007	0.005	0.021	0.064	-0.01	-0.01	-0.01	-0.03	313	0.153	1.063962	-0.910962	NAF
NS0085	50	54	NS	BX076617-BX076618	X076617	2			68.77	3.236	0.098	0.042	0.03024	0.012	0.169	0.06	0.01	0.004	0.06	0.059	-0.01	-0.01	-0.01	-0.03	267	0.1224	1.04652	-0.92412	NAF
NS0085	70	74	NS	BX076627-BX076628	X076627	2			68.09	5.2	0.206	0.063	0.04536	0.024	0.277	0.08	0.014	0.015	0.095	0.093	-0.01	-0.01	-0.01	-0.03	272	0.459	1.39536	-0.93636	NAF
NS0085	164	168	NS	BX076677-BX076678	X076677	2			68.48	4.135	0.091	0.038	0.02736	0.012	0.227	0.058	0.009	0.002	0.025	0.062	-0.01	-0.01	-0.01	-0.03	297	0.0612	1.011636	-0.950436	NAF
NS0085	258	262	NS	BX076725-BX076726	X076725	2			68.7	4.695	0.104	0.06	0.0432	0.011	0.214	0.059	0.009	0.002	0.045	0.053	-0.01	-0.01	-0.01	-0.03	321	0.0612	1.029078	-0.967878	NAF
NS0085	66	70	NS	BX076625-BX076626	X076625	2			67.5	5.433	0.226	0.061	0.04392	0.022	0.292	0.072	0.011	0.009	0.098	0.054	-0.01	-0.01	-0.01	-0.03	271	0.2754	1.255824	-0.980424	NAF
NS0085	230	234	NS	BX076711-BX076712	X076711	2			68.55	2.502	0.084	0.049	0.03528	0.006	0.2	0.065	0.008	0.005	0.027	0.056	-0.01	-0.01	-0.01	-0.03	314	0.153	1.13373	-0.98073	NAF
NS0085	16	18	NS	X068600	068600	1	G	D	39.27	39.07	1.29	0.1548	0.12	0.06	0.11	0.06	0.095	0.002	0.007	0.03	2.21	0.5	0.08	2.79	13127	0.0612	1.04652	-0.98532	NAF
NS0085	152	156	NS	BX076671-BX076672	X076671	2			68.91	4.172	0.114	0.061	0.04392	0.007	0.225	0.061	0.01	0.002	0.094	0.056	-0.01	-0.01	-0.01	-0.03	294	0.0612	1.063962	-1.002762	NAF
NS0085	140	144	NS	BX076665-BX076666	X076665	2			69.42	3.409	0.094	0.061	0.04392	0.009	0.229	0.065	0.012	0.004	0.068	0.065	-0.01	-0.01	-0.01	-0.03	291	0.1224	1.13373	-1.01133	NAF
NS0085	38	42	NS	BX076611-BX076612	X076611	2			68.35	4.307	0.147	0.054	0.03888	0.017	0.22	0.067	0.016	0.004	0.058	0.05	-0.01	-0.01	-0.01	-0.03	264	0.1224	1.168614	-1.046214	NAF
NS0085	192	196	NS	BX076691-BX076692	X076691	2			66.57	5.346	0.12	0.051	0.03672	0.016	0.23	0.068	0.007	0.004	0.012	0.046	-0.01	-0.01	-0.01	-0.03	304	0.1224	1.186056	-1.063656	NAF
NS0085	18	20	NS	X068601	068601	1	G	D	36.89	42.22	1.49	0.3741	0.29	0.074	0.16	0.07	0.049	0.005	0.014	0.038	1.99	0.54	-0.01	2.52	13128	0.153	1.22094	-1.06794	NAF
NS0085	148	152	NS	BX076669-BX076670	X076669	2			68	5.069	0.129	0.075	0.054	0.01	0.261	0.071	0.012	0.004	0.097	0.078	-0.01	-0.01	-0.01	-0.03	293	0.1224	1.238382	-1.115982	NAF
NS0085	0	2	NS	X068592	068592	1	G	D	45.59	18.93	8.87	0.0645	0.05	0.723	0.08	0.08	0.035	0.009	0.217	0.062	3.27	2	0.25	5.52	13119	0.2754	1.39536	-1.11996	NAF
NS0085	58	62	NS	BX076621-BX076622	X076621	2			68	4.94	0.204	0.063	0.04536	0.02	0.285	0.079	0.013	0.008	0.098	0.074	-0.01	-0.01	-0.01	-0.03	269	0.2448	1.377918	-1.133118	NAF
NS0085	266	268	NS	BX076729	X076729	2			67.07	5.716	0.134	0.069	0.04968	0.015	0.272	0.072	0.014	0.004	0.047	0.044	-0.01	-0.01	-0.01	-0.03	323	0.1224	1.255824	-1.133424	NAF
NS0085	102	106	NS	BX076644-BX076645	X076644	2			69.16	4.327	0.131	0.053	0.03816	0.014	0.231	0.078	0.012	0.006	0.059	0.071	-0.01	-0.01	-0.01	-0.03	280	0.1836	1.360476	-1.176876	NAF
NS0085	112	114	NS	BX076650	X076650	2			68.49	4.492	0.122	0.047	0.03384	0.013	0.219	0.078	0.015	0.006	0.053	0.064	-0.01	-0.01	-0.01	-0.03	283	0.1836	1.360476	-1.176876	NAF
NS0085	212	214	NS	BX076702	X076702	2			68.34	4.214	0.111	0.056	0.04032	0.016	0.282	0.078	0.013	0.006	0.013	0.073	-0.01	-0.01	-0.01	-0.03	309	0.1836	1.360476	-1.176876	NAF
NS0085	98	102	NS	BX076642-BX076643	X076642	2			69.85	3.503	0.07	0.05	0.036	0.008	0.193	0.075	0.01	0.004	0.047	0.069	-0.01	-0.01	-0.01	-0.03	279	0.1224	1.30815	-1.18575	NAF
NS0085	134	136	NS	BX076662	X076662	2			70.27	2.985	0.085	0.046	0.03312	0.005	0.173	0.074	0.01	0.003	0.071	0.099	-0.01	-0.01	-0.01	-0.03	289	0.0918	1.290708	-1.198908	NAF
NS0085	42	46	NS	BX076613-BX076614	X076613	2			69.65	3.094	0.079	0.051	0.03672	0.007	0.162	0.076	0.011	0.003	0.062	0.09	-0.01	-0.01	-0.01	-0.03	265	0.0918	1.325592	-1.233792	NAF
NS0085	262	266	NS	BX076727-BX076728	X076727	2			67.53	4.982	0.112	0.075	0.054	0.013	0.271	0.079	0.014	0.004	0.027	0.056	-0.01	-0.01	-0.01	-0.03	322	0.1224	1.377918	-1.255518	NAF
NS0085	180	184	NS	BX076685-BX076686	X076685	2			68.27	4.826	0.116	0.062	0.04464	0.014	0.235	0.082	0.01	0.005	0.011	0.056	-0.01	-0.01	-0.01	-0.03	301	0.153	1.430244	-1.277244	NAF
NS0085	184	188	NS	BX076687-BX076688	X076687	2			68.03	4.704	0.112	0.052	0.03744	0.013	0.235	0.082	0.01	0.005	0.01	0.075	-0.01	-0.01	-0.01	-0.03	302	0.153	1.430244	-1.277244	NAF
NS0085	238	242	NS	BX076715-BX076716	X076715	2			67.88	3.45	0.107	0.047	0.03384	0.01	0.182	0.078	0.018	0.002	0.05	0.054	-0.01	-0.01	-0.01	-0.03	316	0.0612	1.360476	-1.299276	NAF
NS0085	122	126	NS	BX076655-BX076656	X076655	2			68.81	3.408	0.148	0.051	0.03672	0.01	0.219	0.088	0.011	0.007	0.085	0.205	-0.01	-0.01	-0.01	-0.03	286	0.2142	1.534896	-1.320696	NAF
NS0085	86	90	NS	BX076636-BX076637	X076636	2			69.43	3.994	0.085	0.06	0.0432	0.01	0.214	0.081	0.011	0.002	0.057	0.052	-0.01	-0.01	-0.01	-0.03	276	0.0612	1.412802	-1.351602	NAF
NS0085	20	22	NS	X068602	068602	1	G	D	40.97	36.93	1.35	0.4773	0.37	0.067	0.19	0.08	0.048	0.001	0.074	0.034	1.69	0.45	-0.13	2.01	13129	0.0306	1.39536	-1.36476	NAF
NS0085	26	28	NS	X068605	068605	1	G	D	38.23	40.63	1.13	0.774	0.6	0.053	0.27	0.08	0.043	0.001	0.302	0.025	1.41	0.41	0.03	1.85	13132	0.0306	1.39536	-1.36476	NAF
NS0085	110	112	NS	BX076648	X076648	2			69.79	3.123	0.088	0.05	0.036	0.014	0.19	0.089	0.013	0.006	0.018	0.081	-0.01	-0.01	-0.01	-0.03	282	0.1836	1.552338	-1.368738	NAF
NS0085	90	94	NS	BX076638-BX076639	X076638	2			69.04	4.168	0.107	0.056	0.04032	0.009	0.215	0.09	0.012	0.006	0.063	0.108	-0.01	-0.01	-0.01	-0.03	277	0.1836	1.56978	-1.38618	NAF
NS0085	126	130	NS	BX076657-BX076658	X076657	2			69.48	3.386	0.109	0.058	0.04176	0.007	0.195	0.087	0.009	0.004	0.088	0.062	-0.01	-0.01	-0.01	-0.03	287	0.1224	1.517454	-1.395054	NAF
NS0085	176	180	NS	BX076683-BX076684	X076683	2			68.88	4.062	0.087	0.054	0.03888	0.013	0.216	0.084	0.011	0.002	0.019	0.058	-0.01	-0.01	-0.01	-0.03	300	0.0612	1.465128	-1.403928	NAF
NS0085	46	50	NS	BX076615-BX076616	X076615	2			68.25	3.855	0.13	0.055	0.0396	0.011	0.192	0.091	0.011	0.005	0.083	0.071	-0.01	-0.01	-0.01	-0.03	266	0.153	1.587222	-1.434222	NAF
NS0085	62	66	NS	BX076623-BX076624	X076623	2			68.3	4.927	0.153	0.061	0.04392	0.015	0.237	0.09	0.014	0.004	0.075	0.065	-0.01	-0.01	-0.01	-0.03	270	0.1224	1.56978	-1.44738	NAF
NS0085	106	110	NS	BX076646-BX076647	X076646	2			69.78	2.943	0.089	0.054	0.03888	0.011	0.179	0.092	0.013	0.005	0.021	0.072	-0.01	-0.01	-0.01	-0.03	281	0.153	1.604664	-1.451664	NAF
NS0085	28	30	NS	X068606	068606	1	G	D	39.64	37.81	1.25	0.7611	0.59	0.061	0.36	0.09	0.06	0.002	0.263	0.031	1.78	0.46	0.06	2.3	13133	0.0612	1.56978	-1.50858	NAF
NS0085	30	32	NS	X068607	068607	1	G	D	41.02	36.3	1.14	0.645	0.5	0.054	0.32	0.1	0.053	0.002	0.267	0.029	1.6	0.45	0.08	2.13	13134	0.0612	1.7442	-1.683	NAF
NS0085	34	36	NS	X068609	068609	1	G	D	35.99	43.78	0.96	0.8643	0.67	0.044	0.25	0.1	0.046	0.001	0.386	0.023	1.49	0.35	0.07	1.91	13136	0.0306	1.7442	-1.7136	NAF
NS0085	94	98	NS	BX076640-BX076641	X076640	2			68.01	5.06	0.147	0.059	0.04248	0.011	0.233	0.11	0.012	0.006	0.071	0.1	-0.01	-0.01	-0.01	-0.03	278	0.1836	1.91862	-1.73502	NAF
NS0085	204	206	NS	X068697	068697	1	G	W	30.4	37.93	2.88	0.6321	0.49	0.127	3.51	0.51	0.065	0.231	0.207	0.07	0.57	9.01	0.41	9.99	13221	7.0686	8.89542	-1.82682	NAF
NS0085	268	270	NS	X068730	068730	1	G	W	33.06	35.27	3.05	0.5676	0.44	0.138	3.79	0.53	0.143	0.242	1.02	0.094	0.38	6.47	0.31	7.16	13253	7.4052	9.24426	-1.83906	NAF
NS0085	32	34	NS	X068608	068608	1	G	D	38.48	39.86	1.28	0.5934	0.46	0.061	0.4	0.11	0.034	0.002	0.311	0.034	1.57	0.49	0.09	2.15	13135	0.0612	1.91862	-1.85742	NAF
NS0085	24	26	NS	X068604	068604	1	G	D	37.68	40.33	1.53	0.8514	0.66	0.079	0.41	0.11	0.042	0.001	0.294	0.047	1.54	0.6	0.08	2.22	13131	0.0306	1.91862	-1.88802	NAF
NS0085	76	78	NS	BX076631	X076631	2			66.83	5.847	0.216	0.07	0.0504	0.027	0.305	0.13	0.031	0.009	0.108	0.065	-0.01	-0.01	-0.01	-0.03	273	0.2754	2.26746	-1.99206	NAF
NS0085	200	202	NS	X068695	068695	1	G	W	28.27	36.3	4.35	0.6321	0.49	0.198	4.31	0.45	0.098	0.183	0.383	0.126	0.67	11.03	0.45	12.15	13219	5.5998	7.8489	-2.2491	NAF
NS0085	118	122	NS	BX076653-BX076655	X076653	2			69.35	3.722	0.183	0.047	0.03384	0.023	0.246	0.157	0.041	0.009	0.068	0.058	-0.01	-0.01	-0.01	-0.03	285	0.2754	2.738394	-2.462994	NAF
NS0085	22	24	NS	X068603	068603	1	G	D	34.92	42.91	2.69	0.4128	0.32	0.124	0.53	0.16	0.053	0.001	0.225	0.048	1.86	0.89	0.02	2.77	13130	0.0306	2.79072	-2.76012	NAF
NS0085	82	84	NS	X068634	068634	1	G	W	30.3	39.75	4.32	0.5934	0.46	0.19	4.77	0.48	0.094	0.173	1.06	0.093	0.36	4.03	0.31	4.7	13160	5.2938	8.37216	-3.07836	NAF
NS0085	198	200	NS	X068694	068694	1	G	W	32.07	37.32	2.75	0.5805	0.45	0.126	3.27	0.48	0.111	0.128	0.312	0.096	0.51	7.96	0.04	8.51	13218	3.9168	8.37216	-4.45536	NAF
NS0085	226	228	NS	X068709	068709	1	G	W	13.8	68.9	0.33	0.387	0.3	0.014	1.16	0.31	0.037	0.029	0.047	0.02	0.43	8.36	0.17	8.96	13232	0.8874	5.40702	-4.51962	NAF
NS0085	216	218	NS	X068704	068704	1	G	W	30.71	37.7	3.06	0.5031	0.39	0.143	4.16	0.72	0.164	0.26	0.393	0.134	0.55	7.2	0.43	8.18	13227	7.956	12.55824	-4.60224	NAF
NS0085	244	246	NS	X068718	068718	1	G	W	38.41	34.39	1.68	0.5547	0.43	0.071	2.48	0.3	0.032	0.019	0.528	0.024	0.16	5.28	-0.39	5.05	13241	0.5814	5.2326	-4.6512	NAF
NS0085	220	222	NS	X068706	068706	1	G	W	27.73	35.3	1.96	0.5031	0.39	0.086	3.59	0.65	0.059	0.186	0.248	0.077	0.79	16.11	0.47	17.37	13229	5.6916	11.3373	-5.6457	NAF
NS0085	252	254	NS	X068722	068722	1	G	W	37.85	34.71	1.39	0.6837	0.53	0.058	2.43	0.39	0.084	0.017	0.482	0.031	0.17	5.67	-0.48	5.36	13245	0.5202	6.80238	-6.28218	NAF
NS0085	114	116	NS	X068651	068651	1	G	W	25.69	52.82	1.35	0.4644	0.36	0.061	2.08	1.66	0.082	0.738	0.582	0.047	0.01	2.27	1.28	3.56	13176	22.5828	28.95372	-6.37092	NAF
NS0085	280	282	NS	X068736	068736	1	G	W	37.04	36.24	0.98	0.7998	0.62	0.045	2.4	0.41	0.085	0.018	0.146	0.034	0.26	5.89	-0.44	5.71	13259	0.5508	7.15122	-6.60042	NAF
NS0085	190	192	NS	X068690	068690	1	G	W	34.01	38.77	1.84	0.5418	0.42	0.084	2.68	0.5	0.1	0.068	0.318	0.109	0.43	5.7	-0.18	5.95	13214	2.0808	8.721	-6.6402	NAF
NS0085	270	272	NS	X068731	068731	1	G	W	30.3	39.23	3.39	0.516	0.4	0.158	3.71	0.84	0.246	0.25	1.04	0.131	0.42	5.52	0.46	6.4	13254	7.65	14.65128	-7.00128	NAF
NS0085	36	38	NS	X068610	068610	1	G	D	37.91	39.55	1.19	0.9159	0.71	0.057	0.5	0.42	0.1	0.005	0.565	0.033	1.35	0.9	-0.04	2.21	13137	0.153	7.32564	-7.17264	NAF
NS0085	78	80	NS	X068632	068632	1	G	W	33.87	38.11	2.81	0.5934	0.46	0.125	3.49	0.75	0.11	0.189	0.705	0.059	0.33	3.41	0.33	4.07	13158	5.7834	13.0815	-7.2981	NAF
NS0085	250	252	NS	X068721	068721	1	G	W	35.1	38.28	1.36	0.645	0.5	0.067	2.48	0.55	0.114	0.071	0.414	0.038	0.25	5.45	-0.24	5.46	13244	2.1726	9.5931	-7.4205	NAF
NS0085	272	274	NS	X068732	068732	1	G	W	35.99	36.77	0.98	0.7482	0.58	0.047	2.29	0.46	0.105	0.017	0.391	0.046	0.26	6.6	-0.38	6.48	13255	0.5202	8.02332	-7.50312	NAF
NS0085	38	40	NS	X068611	068611	1	G	D	36.8	39.04	1.74	0.7095	0.55	0.079	1.51	0.54	0.136	0.044	0.566	0.043	0.9	1.94	-0.11	2.73	13138	1.3464	9.41868	-8.07228	NAF
NS0085	80	82	NS	X068633	068633	1	G	W	29.91	39.37	3.8	0.7095	0.55	0.171	4.56	0.95	0.153	0.274	0.902	0.07	0.36	4.47	0.68	5.51	13159	8.3844	16.5699	-8.1855	NAF
NS0085	278	280	NS	X068735	068735	1	G	W	33.42	40.14	0.89	0.8514	0.66	0.039	2.55	0.51	0.088	0.019	0.172	0.041	0.28	6.71	-0.3	6.69	13258	0.5814	8.89542	-8.31402	NAF
NS0085	218	220	NS	X068705	068705	1	G	W	29.88	34.33	1.84	0.6708	0.52	0.082	4.01	0.68	0.085	0.107	0.277	0.075	0.7	13.85	0.21	14.76	13228	3.2742	11.86056	-8.58636	NAF
NS0085	214	216	NS	X068703	068703	1	G	W	34.16	35.42	1.65	0.6966	0.54	0.074	3.48	0.62	0.081	0.059	0.243	0.073	0.41	8.35	-0.16	8.6	13226	1.8054	10.81404	-9.00864	NAF
NS0085	254	256	NS	X068723	068723	1	G	W	37.26	35.38	1.25	0.7353	0.57	0.058	2.5	0.55	0.097	0.018	0.385	0.039	0.21	5.59	-0.35	5.45	13246	0.5508	9.5931	-9.0423	NAF
NS0085	238	240	NS	X068715	068715	1	G	W	34.74	36.81	1.04	0.7611	0.59	0.05	2.52	0.56	0.081	0.019	0.415	0.021	0.26	7.77	-0.26	7.77	13238	0.5814	9.76752	-9.18612	NAF
NS0085	140	142	NS	X068665	068665	1	G	W	42.93	29.86	1.36	0.6837	0.53	0.051	2.11	0.57	0.105	0.021	0.949	0.051	0.04	2.85	-0.37	2.52	13189	0.6426	9.94194	-9.29934	NAF
NS0085	264	266	NS	X068728	068728	1	G	W	38.21	34.46	1.35	0.7482	0.58	0.062	2.48	0.58	0.092	0.024	0.298	0.031	0.04	5.63	-0.56	5.11	13251	0.7344	10.11636	-9.38196	NAF
NS0085	242	244	NS	X068717	068717	1	G	W	27.87	48.12	0.69	0.8901	0.69	0.03	2.09	0.57	0.075	0.014	0.435	0.013	0.11	7.2	-0.16	7.15	13240	0.4284	9.94194	-9.51354	NAF
NS0085	266	268	NS	X068729	068729	1	G	W	37.47	36.11	1.18	0.7095	0.55	0.057	2.34	0.6	0.104	0.024	0.293	0.035	0.18	5.05	-0.3	4.93	13252	0.7344	10.4652	-9.7308	NAF
NS0085	258	260	NS	X068725	068725	1	G	W	35.69	38.01	0.99	0.8256	0.64	0.045	2.12	0.59	0.082	0.017	0.425	0.018	0.29	5.64	-0.3	5.63	13248	0.5202	10.29078	-9.77058	NAF
NS0085	188	190	NS	X068689	068689	1	G	W	32.5	38.21	2.14	0.6837	0.53	0.102	2.97	0.92	0.154	0.205	0.291	0.104	0.46	6.44	0.26	7.16	13213	6.273	16.04664	-9.77364	NAF
NS0085	196	198	NS	X068693	068693	1	G	W	30.22	37.63	2.98	0.645	0.5	0.135	3.7	0.83	0.155	0.147	0.326	0.113	0.59	8.85	0.23	9.67	13217	4.4982	14.47686	-9.97866	NAF
NS0085	248	250	NS	X068720	068720	1	P	W	36.75	37.57	0.92	0.6579	0.51	0.044	2.11	0.61	0.137	0.016	0.198	0.02	0.2	5.09	-0.47	4.82	13243	0.4896	10.63962	-10.15002	NAF
NS0085	240	242	NS	X068716	068716	1	G	W	34.97	36.7	1.14	0.8514	0.66	0.053	2.46	0.65	0.096	0.021	0.583	0.019	0.25	7.27	-0.18	7.34	13239	0.6426	11.3373	-10.6947	NAF
NS0085	208	210	NS	X068699	068699	1	G	W	31.36	43.34	0.89	0.6321	0.49	0.042	2.36	0.68	0.073	0.02	0.166	0.048	0.29	6.47	-0.04	6.72	13223	0.612	11.86056	-11.24856	NAF
NS0085	246	248	NS	X068719	068719	1	G	W	36.95	35.41	0.97	0.7482	0.58	0.045	2.19	0.72	0.097	0.022	0.562	0.026	0.34	6.06	-0.22	6.18	13242	0.6732	12.55824	-11.88504	NAF
NS0085	262	264	NS	X068727	068727	1	G	W	37.95	34.38	1.35	0.7998	0.62	0.06	2.56	0.75	0.11	0.026	0.185	0.026	0.16	5.5	-0.33	5.33	13250	0.7956	13.0815	-12.2859	NAF
NS0085	236	238	NS	X068714	068714	1	G	W	33.68	33.61	1.05	0.8643	0.67	0.047	2.84	0.75	0.091	0.022	0.665	0.019	0.41	11.32	-0.09	11.64	13237	0.6732	13.0815	-12.4083	NAF
NS0085	210	212	NS	X068700	068700	1	G	W	33.71	36.98	1.27	0.7224	0.56	0.056	3.03	0.81	0.118	0.04	0.236	0.066	0.43	7.74	-0.05	8.12	13224	1.224	14.12802	-12.90402	NAF
NS0085	118	120	NS	X068653	068653	1	G	W	36.85	38.19	1.31	0.5676	0.44	0.069	2.16	0.83	0.088	0.036	0.478	0.051	0.11	3.11	-0.06	3.16	13178	1.1016	14.47686	-13.37526	NAF
NS0085	234	236	NS	X068713	068713	1	G	W	34.69	32.18	1.4	0.7224	0.56	0.056	2.74	0.83	0.108	0.027	0.878	0.016	0.41	10.9	-0.1	11.21	13236	0.8262	14.47686	-13.65066	NAF
NS0085	206	208	NS	X068698	068698	1	G	W	34.12	36.74	1.2	0.7095	0.55	0.055	2.73	0.86	0.126	0.034	0.148	0.039	0.36	8.13	-0.13	8.36	13222	1.0404	15.00012	-13.95972	NAF
NS0085	56	58	NS	X068620	068620	1	G	W	32.36	39.22	2.4	0.8256	0.64	0.108	3.27	1.01	0.135	0.119	0.907	0.057	0.31	4.5	0.3	5.11	13147	3.6414	17.61642	-13.97502	NAF
NS0085	222	224	NS	X068707	068707	1	G	W	31.56	32.85	1.04	0.5547	0.43	0.049	2.77	0.88	0.081	0.032	0.067	0.024	0.57	15.75	0.06	16.38	13230	0.9792	15.34896	-14.36976	NAF
NS0085	232	234	NS	X068712	068712	1	G	W	30.65	36.26	0.91	0.6966	0.54	0.041	2.65	0.88	0.067	0.025	0.447	0.015	0.5	13.26	0.18	13.94	13235	0.765	15.34896	-14.58396	NAF
NS0085	146	148	NS	X068668	068668	1	G	W	37.71	36.57	1	0.7353	0.57	0.044	2.25	0.89	0.085	0.024	0.625	0.036	0.05	3.4	0.04	3.49	13192	0.7344	15.52338	-14.78898	NAF
NS0085	170	172	NS	X068680	068680	1	G	W	36.39	37.7	1.38	0.6192	0.48	0.063	2.54	0.96	0.074	0.049	0.489	0.059	0.15	3.46	0.16	3.77	13204	1.4994	16.74432	-15.24492	NAF
NS0085	144	146	NS	X068667	068667	1	G	W	37.55	36.56	0.99	0.774	0.6	0.045	2.28	0.93	0.095	0.023	0.59	0.044	0.1	3.51	0.05	3.66	13191	0.7038	16.22106	-15.51726	NAF
NS0085	274	276	NS	X068733	068733	1	G	W	34.2	32.3	2.17	0.903	0.7	0.098	3.46	1.06	0.294	0.09	0.8	0.1	0.41	9.03	-0.03	9.41	13256	2.754	18.48852	-15.73452	NAF
NS0085	174	176	NS	X068682	068682	1	G	W	39.75	32.87	1.24	0.7353	0.57	0.058	2.42	0.98	0.096	0.025	0.343	0.063	0.17	3.87	0.02	4.06	13206	0.765	17.09316	-16.32816	NAF
NS0085	148	150	NS	X068669	068669	1	G	W	36.56	37.21	1.1	0.8256	0.64	0.051	2.42	0.98	0.089	0.024	0.759	0.05	0.08	3.63	0.21	3.92	13193	0.7344	17.09316	-16.35876	NAF
NS0085	212	214	NS	X068702	068702	1	G	W	34.44	36.69	1.36	0.645	0.5	0.062	3.02	1	0.093	0.035	0.173	0.054	0.33	6.77	0.17	7.27	13225	1.071	17.442	-16.371	NAF
NS0085	154	156	NS	X068672	068672	1	G	W	37.81	34.37	1.3	0.8256	0.64	0.06	2.73	1.01	0.088	0.019	0.938	0.045	0.08	3.94	0.26	4.28	13196	0.5814	17.61642	-17.03502	NAF
NS0085	224	226	NS	X068708	068708	1	G	W	27.09	36.94	0.76	0.5547	0.43	0.034	2.55	1.01	0.098	0.018	0.107	0.036	0.64	18.04	0.24	18.92	13231	0.5508	17.61642	-17.06562	NAF
NS0085	256	258	NS	X068724	068724	1	G	W	34.2	40.87	0.95	0.7353	0.57	0.042	2.04	1.01	0.086	0.017	0.415	0.018	0.1	4.58	0.2	4.88	13247	0.5202	17.61642	-17.09622	NAF
NS0085	260	262	NS	X068726	068726	1	G	W	36.11	38.03	0.95	0.7482	0.58	0.044	2.09	1.01	0.096	0.017	0.312	0.027	0.12	4.65	0.04	4.81	13249	0.5202	17.61642	-17.09622	NAF
NS0085	70	72	NS	X068627	068627	1	G	W	27.14	45.11	3.3	0.6192	0.48	0.16	4.2	1.19	0.039	0.106	1.08	0.095	0.41	3.7	0.89	5	13154	3.2436	20.75598	-17.51238	NAF
NS0085	142	144	NS	X068666	068666	1	G	W	33.16	42.65	0.95	0.7998	0.62	0.038	2.15	1.05	0.103	0.017	0.65	0.039	0.04	3.49	0.33	3.86	13190	0.5202	18.3141	-17.7939	NAF
NS0085	150	152	NS	X068670	068670	1	G	W	37.59	36.33	1.12	0.774	0.6	0.047	2.23	1.07	0.089	0.024	0.833	0.046	0.06	3.09	0.28	3.43	13194	0.7344	18.66294	-17.92854	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0085	160	162	NS	X068675	068675	1	G	W	35.74	38.76	0.96	0.774	0.6	0.047	2.24	1.06	0.08	0.015	0.583	0.045	0.07	3.72	0.27	4.06	13199	0.459	18.48852	-18.02952	NAF
NS0085	138	140	NS	X068664	068664	1	G	W	38.4	35.98	1.17	0.6579	0.51	0.042	1.96	1.11	0.094	0.02	0.811	0.039	0.22	2.44	0.28	2.94	13188	0.612	19.36062	-18.74862	NAF
NS0085	168	170	NS	X068679	068679	1	G	W	33.8	40.75	1.41	0.5676	0.44	0.061	2.67	1.16	0.084	0.039	0.473	0.07	0.2	3.42	0.49	4.11	13203	1.1934	20.23272	-19.03932	NAF
NS0085	158	160	NS	X068674	068674	1	G	W	35.75	38.18	1.02	0.7998	0.62	0.049	2.41	1.12	0.089	0.016	0.615	0.062	0.1	3.73	0.37	4.2	13198	0.4896	19.53504	-19.04544	NAF
NS0085	68	70	NS	X068626	068626	1	G	W	34.67	37.54	2.34	0.645	0.5	0.114	3.09	1.22	0.084	0.069	0.897	0.072	0.25	3.31	0.52	4.08	13153	2.1114	21.27924	-19.16784	NAF
NS0085	152	154	NS	X068671	068671	1	G	W	36.41	36.07	1.24	0.8772	0.68	0.054	2.67	1.14	0.07	0.018	0.938	0.046	0.05	4.08	0.45	4.58	13195	0.5508	19.88388	-19.33308	NAF
NS0085	228	230	NS	X068710	068710	1	G	W	36.51	28.62	1.16	0.7353	0.57	0.053	2.27	1.15	0.066	0.022	0.425	0.01	0.46	12.38	0.2	13.04	13233	0.6732	20.0583	-19.3851	NAF
NS0085	230	232	NS	X068711	068711	1	G	W	32.8	30.27	1.12	0.6321	0.49	0.052	2.9	1.34	0.092	0.112	0.19	0.012	0.49	15.11	0.36	15.96	13234	3.4272	23.37228	-19.94508	NAF
NS0085	156	158	NS	X068673	068673	1	G	W	36.01	38.38	1.02	0.774	0.6	0.044	2.24	1.18	0.071	0.02	0.641	0.056	0.08	3.33	0.45	3.86	13197	0.612	20.58156	-19.96956	NAF
NS0085	74	76	NS	X068630	068630	1	G	W	34.29	39.86	1.77	0.6321	0.49	0.083	2.54	1.25	0.092	0.056	0.691	0.053	0.16	3	0.48	3.64	13156	1.7136	21.8025	-20.0889	NAF
NS0085	184	186	NS	X068687	068687	1	G	W	34.29	37.99	1.76	0.645	0.5	0.079	2.73	1.37	0.096	0.103	0.193	0.1	0.53	4.54	0.37	5.44	13211	3.1518	23.89554	-20.74374	NAF
NS0085	76	78	NS	X068631	068631	1	G	W	36.47	35.33	1.68	0.7611	0.59	0.089	2.74	1.3	0.151	0.06	0.763	0.046	0.17	3.98	0.35	4.5	13157	1.836	22.6746	-20.8386	NAF
NS0085	104	106	NS	X068645	068645	1	G	W	34.93	37.28	2.01	0.6063	0.47	0.079	2.89	1.32	0.137	0.042	0.894	0.054	0.2	3.63	0.45	4.28	13171	1.2852	23.02344	-21.73824	NAF
NS0085	58	60	NS	X068621	068621	1	G	W	38.65	34.63	1.26	0.7095	0.55	0.058	2.11	1.35	0.094	0.023	0.715	0.044	0.1	2.92	0.46	3.48	13148	0.7038	23.5467	-22.8429	NAF
NS0085	162	164	NS	X068676	068676	1	G	W	35.22	39.61	0.89	0.7095	0.55	0.038	2	1.36	0.097	0.012	0.574	0.037	0.03	3.36	0.6	3.99	13200	0.3672	23.72112	-23.35392	NAF
NS0085	100	102	NS	X068643	068643	1	G	W	35.91	37.92	1.25	0.6837	0.53	0.055	2.28	1.41	0.141	0.028	0.683	0.034	0.07	3.4	0.38	3.85	13169	0.8568	24.59322	-23.73642	NAF
NS0085	84	86	NS	X068635	068635	1	G	W	31.12	42.3	1.91	0.7611	0.59	0.084	2.94	1.47	0.065	0.052	0.651	0.038	0.22	3.78	0.92	4.92	13161	1.5912	25.63974	-24.04854	NAF
NS0085	192	194	NS	X068691	068691	1	G	W	33.41	39.43	1.56	0.5934	0.46	0.072	2.43	1.49	0.073	0.047	0.174	0.058	0.25	5.05	0.67	5.97	13215	1.4382	25.98858	-24.55038	NAF
NS0085	180	182	NS	X068685	068685	1	G	W	35.87	37.18	1.48	0.6579	0.51	0.07	2.48	1.48	0.128	0.041	0.141	0.044	0.17	3.95	0.54	4.66	13209	1.2546	25.81416	-24.55956	NAF
NS0085	72	74	NS	X068628	068628	1	G	W	34.24	38.56	1.8	0.7482	0.58	0.077	2.63	1.51	0.136	0.05	0.684	0.045	0.22	3.64	0.71	4.57	13155	1.53	26.33742	-24.80742	NAF
NS0085	40	42	NS	X068612	068612	1	G	W	36.1	37.66	1.36	0.645	0.5	0.068	2.17	1.49	0.099	0.034	0.596	0.041	0.23	2.93	0.69	3.85	13139	1.0404	25.98858	-24.94818	NAF
NS0085	54	56	NS	X068619	068619	1	G	W	31.26	42.7	1.28	0.8127	0.63	0.057	2.32	1.83	0.148	0.202	0.702	0.048	0.15	3.55	0.88	4.58	13146	6.1812	31.91886	-25.73766	NAF
NS0085	92	94	NS	X068639	068639	1	G	W	37.97	35.87	1.09	0.6579	0.51	0.049	2.08	1.51	0.104	0.018	0.571	0.035	0.05	2.72	0.68	3.45	13165	0.5508	26.33742	-25.78662	NAF
NS0085	88	90	NS	X068637	068637	1	G	W	37.15	36.97	0.97	0.7224	0.56	0.046	2.04	1.52	0.094	0.016	0.578	0.031	0.04	2.86	0.77	3.67	13163	0.4896	26.51184	-26.02224	NAF
NS0085	60	62	NS	X068622	068622	1	G	W	31.46	40.82	2.57	0.645	0.5	0.121	3.18	1.76	0.074	0.152	0.908	0.055	0.26	2.88	1.15	4.29	13149	4.6512	30.69792	-26.04672	NAF
NS0085	194	196	NS	X068692	068692	1	G	W	32.73	40.65	1.41	0.5934	0.46	0.065	2.3	1.56	0.067	0.025	0.133	0.047	0.24	5.12	0.75	6.11	13216	0.765	27.20952	-26.44452	NAF
NS0085	112	114	NS	X068650	068650	1	G	W	34.61	39.97	1.15	0.5805	0.45	0.053	2.05	1.59	0.178	0.038	0.499	0.031	0.15	3.3	0.47	3.92	13175	1.1628	27.73278	-26.56998	NAF
NS0085	164	166	NS	X068677	068677	1	G	W	31.08	44.89	1.14	0.516	0.4	0.054	2.57	1.59	0.067	0.02	0.289	0.039	0.09	3.09	1.01	4.19	13201	0.612	27.73278	-27.12078	NAF
NS0085	86	88	NS	X068636	068636	1	G	W	34.94	40.14	0.92	0.6837	0.53	0.043	1.99	1.6	0.093	0.014	0.554	0.034	0.04	2.81	0.91	3.76	13162	0.4284	27.9072	-27.4788	NAF
NS0085	182	184	NS	X068686	068686	1	G	W	36.46	36.21	1.13	0.774	0.6	0.051	2.25	1.62	0.084	0.025	0.122	0.04	0.18	4.34	0.79	5.31	13210	0.765	28.25604	-27.49104	NAF
NS0085	66	68	NS	X068625	068625	1	G	W	35.38	38.88	1.32	0.6192	0.48	0.06	2.06	1.64	0.121	0.028	0.595	0.05	0.33	2.59	0.85	3.77	13152	0.8568	28.60488	-27.74808	NAF
NS0085	120	122	NS	X068654	068654	1	G	W	34.23	37.22	1.89	0.7482	0.58	0.089	2.85	1.89	0.07	0.088	0.748	0.05	0.28	3.57	1.27	5.12	13179	2.6928	32.96538	-30.27258	NAC
NS0085	108	110	NS	X068647	068647	1	G	W	37.46	37.49	0.81	0.5289	0.41	0.037	1.82	1.8	0.077	0.016	0.281	0.016	0.06	2.23	1.08	3.37	13173	0.4896	31.3956	-30.906	NAC
NS0085	172	174	NS	X068681	068681	1	G	W	34.7	38.62	1.05	0.774	0.6	0.047	2.32	1.81	0.094	0.021	0.422	0.041	0.06	3.66	1.17	4.89	13205	0.6426	31.57002	-30.92742	NAC
NS0085	126	128	NS	X068657	068657	1	G	W	37.58	36.15	1.06	0.7095	0.55	0.041	1.74	1.83	0.075	0.026	0.788	0.031	0.26	2.28	1.01	3.55	13182	0.7956	31.91886	-31.12326	NAC
NS0085	178	180	NS	X068684	068684	1	G	W	36.38	35.66	1.15	0.774	0.6	0.051	2.53	1.89	0.094	0.027	0.212	0.067	0.23	3.97	1.08	5.28	13208	0.8262	32.96538	-32.13918	NAC
NS0085	166	168	NS	X068678	068678	1	G	W	31.97	42.2	1.32	0.5418	0.42	0.059	2.87	1.89	0.076	0.025	0.301	0.069	0.16	3.26	1.33	4.75	13202	0.765	32.96538	-32.20038	NAC
NS0085	90	92	NS	X068638	068638	1	G	W	38.27	34.37	1.18	0.6708	0.52	0.054	2.23	1.89	0.1	0.018	0.57	0.036	0.18	2.65	1.06	3.89	13164	0.5508	32.96538	-32.41458	NAC
NS0085	62	64	NS	X068623	068623	1	G	W	33.84	40.56	1.27	0.6837	0.53	0.057	2.01	1.91	0.094	0.024	0.6	0.053	0.35	2.57	1.24	4.16	13150	0.7344	33.31422	-32.57982	NAC
NS0085	102	104	NS	X068644	068644	1	G	W	25.09	52.47	1.53	0.5031	0.39	0.071	2.39	2.02	0.21	0.085	0.626	0.048	0.13	2.58	1.07	3.78	13170	2.601	35.23284	-32.63184	NAC
NS0085	136	138	NS	X068663	068663	1	G	W	33.2	41.19	0.96	0.8256	0.64	0.039	2.21	1.9	0.076	0.012	0.71	0.034	0.07	2.96	1.35	4.38	13187	0.3672	33.1398	-32.7726	NAC
NS0085	176	178	NS	X068683	068683	1	G	W	36.06	36.73	1.14	0.7224	0.56	0.051	2.4	1.95	0.104	0.027	0.318	0.066	0.18	3.49	1.12	4.79	13207	0.8262	34.0119	-33.1857	NAC
NS0085	48	50	NS	X068616	068616	1	G	W	35.44	37.47	1.52	0.6966	0.54	0.068	2.29	2.01	0.111	0.056	0.681	0.033	0.14	2.71	1.32	4.17	13143	1.7136	35.05842	-33.34482	NAC
NS0085	96	98	NS	X068641	068641	1	G	W	35.94	36.96	1.25	0.6579	0.51	0.056	2.35	1.99	0.123	0.037	0.634	0.06	0.1	2.77	1.2	4.07	13167	1.1322	34.70958	-33.57738	NAC
NS0085	50	52	NS	X068617	068617	1	G	W	32.99	41.37	1.54	0.6063	0.47	0.07	2.18	2.04	0.097	0.045	0.684	0.038	0.14	2.35	1.36	3.85	13144	1.377	35.58168	-34.20468	NAC
NS0085	186	188	NS	X068688	068688	1	G	W	34.37	39.05	1.07	0.645	0.5	0.051	2.13	2.07	0.078	0.054	0.117	0.061	0.35	3.91	1.06	5.32	13212	1.6524	36.10494	-34.45254	NAC
NS0085	130	132	NS	X068659	068659	1	G	W	35.27	38.21	1.09	0.774	0.6	0.044	2.23	2.05	0.09	0.027	0.782	0.046	0.05	2.47	1.44	3.96	13184	0.8262	35.7561	-34.9299	NAC
NS0085	98	100	NS	X068642	068642	1	G	W	35.46	38.66	0.92	0.645	0.5	0.042	2.06	2.07	0.085	0.016	0.505	0.044	0.07	2.64	1.35	4.06	13168	0.4896	36.10494	-35.61534	NAC
NS0085	64	66	NS	X068624	068624	1	G	W	34.44	38.95	1.33	0.6708	0.52	0.063	2.37	2.12	0.103	0.033	0.584	0.052	0.18	2.72	1.31	4.21	13151	1.0098	36.97704	-35.96724	NAC
NS0085	124	126	NS	X068656	068656	1	G	W	34.25	38.24	1.63	0.6837	0.53	0.07	2.51	2.26	0.094	0.078	0.834	0.04	0.11	2.49	1.57	4.17	13181	2.3868	39.41892	-37.03212	NAC
NS0085	134	136	NS	X068662	068662	1	G	W	35.03	38.44	1.06	0.7353	0.57	0.042	2.11	2.16	0.09	0.012	0.791	0.035	0.2	2.38	1.61	4.19	13186	0.3672	37.67472	-37.30752	NAC
NS0085	110	112	NS	X068648	068648	1	G	W	35.2	39.8	0.75	0.5418	0.42	0.037	1.83	2.24	0.079	0.018	0.21	0.032	0.06	2.36	1.47	3.89	13174	0.5508	39.07008	-38.51928	NAC
NS0085	52	54	NS	X068618	068618	1	G	W	27.73	48	1.13	0.7611	0.59	0.048	2.12	2.29	0.091	0.041	0.616	0.04	0.16	3.07	1.79	5.02	13145	1.2546	39.94218	-38.68758	NAC
NS0085	128	130	NS	X068658	068658	1	G	W	35.42	37.37	1.07	0.7998	0.62	0.043	2.23	2.34	0.09	0.018	0.772	0.052	0.06	2.32	1.93	4.31	13183	0.5508	40.81428	-40.26348	NAC
NS0085	46	48	NS	X068615	068615	1	G	W	33.65	39.06	1.16	0.774	0.6	0.056	2.19	2.45	0.081	0.037	0.596	0.034	0.15	3.02	1.88	5.05	13142	1.1322	42.7329	-41.6007	NAC
NS0085	44	46	NS	X068614	068614	1	G	W	34.37	38.4	1.07	0.7869	0.61	0.05	2	2.47	0.097	0.02	0.58	0.023	0.2	3.05	1.75	5	13141	0.612	43.08174	-42.46974	NAC
NS0085	132	134	NS	X068660	068660	1	G	W	34.15	38.35	1.16	0.7611	0.59	0.044	2.37	2.59	0.074	0.019	0.849	0.05	0.15	2.33	2.2	4.68	13185	0.5814	45.17478	-44.59338	NAC
NS0085	42	44	NS	X068613	068613	1	G	W	32.39	40.7	0.96	0.8643	0.67	0.042	1.99	2.6	0.13	0.02	0.618	0.035	0.17	3.26	1.96	5.39	13140	0.612	45.3492	-44.7372	NAC
NS0085	106	108	NS	X068646	068646	1	G	W	32.89	41.7	0.79	0.5547	0.43	0.038	1.98	2.81	0.088	0.016	0.302	0.037	0.05	1.97	2.35	4.37	13172	0.4896	49.01202	-48.52242	NAC
NS0085	94	96	NS	X068640	068640	1	G	W	32.88	39.54	0.81	0.8772	0.68	0.033	2.24	2.89	0.093	0.011	0.518	0.043	0.08	3.17	2.44	5.69	13166	0.3366	50.40738	-50.07078	NAC
NS0085	122	124	NS	X068655	068655	1	G	W	35.36	36.64	0.91	0.7482	0.58	0.042	1.99	3.28	0.085	0.016	0.625	0.035	0.04	1.98	2.83	4.85	13180	0.4896	57.20976	-56.72016	NAC
NS0086	102	104	NS	X068788	068788	1	G	W	17.7	58.95	3.15	0.2838	0.22	0.137	1.83	0.92	0.099	1.9	0.234	0.057	0.44	5.6	2.75	8.79	13311	58.14	16.04664	42.09336	PAF(HC)
NS0086	132	136	NS	BX076805-BX076806	X076805	2			67.83	4.872	0.229	0.041	0.02952	0.039	0.32	0.08	0.013	1.407	0.058	0.128	-0.01	-0.01	-0.01	-0.03	361	43.0542	1.39536	41.65884	PAF(HC)
NS0086	124	126	NS	X068800	068800	1	G	W	21.23	52.66	5.36	0.2064	0.16	0.249	2.94	1.17	0.083	1.48	1.04	0.262	1	2.37	1.98	5.35	13322	45.288	20.40714	24.88086	PAF(HC)
NS0086	272	274	NS	X068875	068875	1	G	W	24.55	49.14	3.55	0.3225	0.25	0.147	2.82	0.52	0.068	0.912	1.14	0.312	1.1	3.91	1.45	6.46	13396	27.9072	9.06984	18.83736	PAF(HC)
NS0086	100	102	NS	X068787	068787	1	G	W	18.12	56.91	9.36	0.1419	0.11	0.458	2.36	0.24	0.045	0.707	0.12	0.028	0.52	3.13	0.48	4.13	13310	21.6342	4.18608	17.44812	PAF(HC)
NS0086	114	116	NS	X068795	068795	1	G	W	19.6	53.52	5.41	0.2193	0.17	0.251	2.8	1.74	0.061	1.16	0.545	0.144	0.78	3.85	2.37	7	13317	35.496	30.34908	5.14692	PAF(LC)
NS0086	80	84	NS	BX076777-BX076778	X076777	2			65.78	6.611	0.28	0.056	0.04032	0.035	0.337	0.076	0.009	0.168	0.08	0.118	-0.01	-0.01	-0.01	-0.03	347	5.1408	1.325592	3.815208	PAF(LC)
NS0086	260	262	NS	X068869	068869	1	G	W	29.41	38.06	5.5	0.2838	0.22	0.255	4.21	0.54	0.051	0.42	1.48	0.335	1.43	4.5	1.12	7.05	13390	12.852	9.41868	3.43332	PAF(LC)
NS0086	136	140	NS	BX076807-BX076808	X076807	2			69.8	2.384	0.091	0.028	0.02016	0.021	0.187	0.083	0.014	0.153	0.031	0.132	-0.01	-0.01	-0.01	-0.03	362	4.6818	1.447686	3.234114	PAF(LC)
NS0086	104	106	NS	X068789	068789	1	G	W	29.16	32.85	2.81	0.3354	0.26	0.126	3.07	0.84	0.108	0.549	0.339	0.084	1.07	15.12	1.27	17.46	13312	16.7994	14.65128	2.14812	PAF(LC)
NS0086	140	144	NS	BX076809-BX076810	X076809	2			69.46	3.538	0.188	0.032	0.02304	0.034	0.249	0.077	0.012	0.114	0.063	0.104	-0.01	-0.01	-0.01	-0.03	363	3.4884	1.343034	2.145366	PAF(LC)
NS0086	156	160	NS	BX076817-BX076818	X076817	2			69.78	2.702	0.107	0.034	0.02448	0.024	0.199	0.074	0.011	0.091	0.035	0.112	-0.01	-0.01	-0.01	-0.03	367	2.7846	1.290708	1.493892	PAF(LC)
NS0086	134	136	NS	X068806	068806	1	G	W	27.61	39.6	4.7	0.2451	0.19	0.215	4.29	0.54	0.057	0.35	1.23	0.301	1.38	6.16	1.1	8.64	13327	10.71	9.41868	1.29132	PAF(LC)
NS0086	98	100	NS	X068786	068786	1	G	W	19.34	53.69	7.74	0.258	0.2	0.337	2.56	0.83	0.103	0.505	0.233	0.059	0.62	4.63	0.94	6.19	13309	15.453	14.47686	0.97614	PAF(LC)
NS0086	12	14	NS	X068743	068743	1	G	D	36.04	36.69	4.29	0.0645	0.05	0.351	0.04	0.005	0.019	0.03	0.003	0.01	5.37	1.31	0.25	6.93	13266	0.918	0.08721	0.83079	PAF(LC)
NS0086	4	6	NS	X068739	068739	1	G	D	37.96	25.28	10.18	0.0387	0.03	0.954	0.02	0.02	0.025	0.035	0.031	0.006	5.98	2.59	0.36	8.93	13262	1.071	0.34884	0.72216	PAF(LC)
NS0086	8	10	NS	X068741	068741	1	G	D	40.99	25.19	6.38	-0.0129	-0.01	0.589	0.005	0.005	0.014	0.026	0.005	0.0005	7.01	1.86	0.32	9.19	13264	0.7956	0.08721	0.70839	PAF(LC)
NS0086	6	8	NS	X068740	068740	1	G	D	37.46	26.73	9.38	0.0258	0.02	0.677	0.01	0.02	0.02	0.034	0.016	0.007	6.64	2.45	0.35	9.44	13263	1.0404	0.34884	0.69156	PAF(LC)
NS0086	122	124	NS	X068799	068799	1	G	W	22.34	50.89	5.51	0.2451	0.19	0.26	3.03	0.9	0.064	0.53	1.11	0.291	1.16	3.03	1.4	5.59	13321	16.218	15.6978	0.5202	PAF(LC)
NS0086	2	4	NS	X068738	068738	1	G	D	32.96	32.82	9.95	-0.0129	-0.01	0.499	0.02	0.02	0.022	0.028	0.015	0.005	6.2	2.67	0.33	9.2	13261	0.8568	0.34884	0.50796	PAF(LC)
NS0086	144	148	NS	BX076811-BX076812	X076811	2			69.93	2.924	0.134	0.032	0.02304	0.027	0.217	0.081	0.013	0.061	0.039	0.112	-0.01	-0.01	-0.01	-0.03	364	1.8666	1.412802	0.453798	PAF(LC)
NS0086	10	12	NS	X068742	068742	1	G	D	37.42	31.78	5.43	-0.0129	-0.01	0.449	0.01	0.02	0.014	0.026	0.004	0.004	6.73	1.64	0.29	8.66	13265	0.7956	0.34884	0.44676	PAF(LC)
NS0086	0	2	NS	X068737	068737	1	G	D	34.89	24.11	14.38	0.0258	0.02	0.813	0.05	0.04	0.024	0.035	0.044	0.012	6.11	3.86	0.41	10.38	13260	1.071	0.69768	0.37332	PAF(LC)
NS0086	14	16	NS	X068744	068744	1	G	D	37.34	33.09	5.17	0.0258	0.02	0.442	0.07	0.03	0.017	0.027	0.004	0.017	5.74	1.54	0.28	7.56	13267	0.8262	0.52326	0.30294	PAF(LC)
NS0086	272	276	NS	BX076875-BX076876	X076875	2			68.42	3.914	0.141	0.049	0.03528	0.024	0.238	0.085	0.013	0.056	0.047	0.131	-0.01	-0.01	-0.01	-0.03	396	1.7136	1.48257	0.23103	PAF(LC)
NS0086	76	80	NS	BX076775-BX076776	X076775	2			60.79	12.66	0.649	0.091	0.06552	0.052	0.673	0.131	0.017	0.075	0.201	0.141	-0.01	-0.01	-0.01	-0.03	346	2.295	2.284902	0.010098	PAF(LC)
NS0086	0	4	NS	BX076737-BX076738	X076737	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	327	-0.0306	-0.01744	-0.013158	NAF
NS0086	4	8	NS	BX076739-BX076740	X076739	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	328	-0.0306	-0.01744	-0.013158	NAF
NS0086	8	12	NS	BX076741-BX076742	X076741	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	329	-0.0306	-0.01744	-0.013158	NAF
NS0086	12	16	NS	BX076743-BX076744	X076743	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	330	-0.0306	-0.01744	-0.013158	NAF
NS0086	16	20	NS	BX076745-BX076746	X076745	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	331	-0.0306	-0.01744	-0.013158	NAF
NS0086	20	24	NS	BX076747-BX076748	X076747	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	332	-0.0306	-0.01744	-0.013158	NAF
NS0086	32	36	NS	BX076753-BX076754	X076753	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	335	-0.0306	-0.01744	-0.013158	NAF
NS0086	36	40	NS	BX076755-BX076756	X076755	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	336	-0.0306	-0.01744	-0.013158	NAF
NS0086	44	46	NS	BX076759	X076759	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	338	-0.0306	-0.01744	-0.013158	NAF
NS0086	48	52	NS	BX076761-BX076762	X076761	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	339	-0.0306	-0.01744	-0.013158	NAF
NS0086	52	56	NS	BX076763-BX076764	X076763	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	340	-0.0306	-0.01744	-0.013158	NAF
NS0086	84	88	NS	BX076779-BX076780	X076779	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	348	-0.0306	-0.01744	-0.013158	NAF
NS0086	88	92	NS	BX076781-BX076782	X076781	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	349	-0.0306	-0.01744	-0.013158	NAF
NS0086	92	96	NS	BX076783-BX076784	X076783	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	350	-0.0306	-0.01744	-0.013158	NAF
NS0086	96	100	NS	BX076785-BX076786	X076785	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	351	-0.0306	-0.01744	-0.013158	NAF
NS0086	100	104	NS	BX076787-BX076788	X076787	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	352	-0.0306	-0.01744	-0.013158	NAF
NS0086	104	106	NS	BX076789	X076789	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	353	-0.0306	-0.01744	-0.013158	NAF
NS0086	108	110	NS	BX076792	X076792	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	354	-0.0306	-0.01744	-0.013158	NAF
NS0086	110	114	NS	BX076793-BX076794	X076793	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	355	-0.0306	-0.01744	-0.013158	NAF
NS0086	114	118	NS	BX076795-BX076796	X076795	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	356	-0.0306	-0.01744	-0.013158	NAF
NS0086	118	122	NS	BX076797-BX076798	X076797	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	357	-0.0306	-0.01744	-0.013158	NAF
NS0086	122	126	NS	BX076799-BX076800	X076799	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	358	-0.0306	-0.01744	-0.013158	NAF
NS0086	126	128	NS	BX076802	X076802	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	359	-0.0306	-0.01744	-0.013158	NAF
NS0086	128	132	NS	BX076803-BX076804	X076803	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	360	-0.0306	-0.01744	-0.013158	NAF
NS0086	56	60	NS	BX076765-BX076766	X076765	2			63.34	9.345	0.531	0.076	0.05472	0.059	0.455	0.085	0.009	0.043	0.145	0.163	-0.01	-0.01	-0.01	-0.03	341	1.3158	1.48257	-0.16677	NAF
NS0086	24	28	NS	BX076749-BX076750	X076749	2			63.8	7.04	0.476	0.033	0.02376	0.05	0.115	0.036	0.021	0.014	0.008	0.124	-0.01	-0.01	-0.01	-0.03	333	0.4284	0.627912	-0.199512	NAF
NS0086	88	90	NS	X068781	068781	1	G	W	27.94	37.12	3.34	0.5289	0.41	0.151	3.64	0.88	0.111	0.493	1.13	0.311	1.31	9.85	1.32	12.48	13304	15.0858	15.34896	-0.26316	NAF
NS0086	268	272	NS	BX076873-BX076874	X076873	2			68.91	3.008	0.155	0.038	0.02736	0.029	0.215	0.079	0.014	0.031	0.041	0.118	0.04	-0.01	-0.01	0.02	395	0.9486	1.377918	-0.429318	NAF
NS0086	148	152	NS	BX076813-BX076814	X076813	2			70.44	2.58	0.074	0.03	0.0216	0.021	0.18	0.076	0.013	0.029	0.028	0.089	-0.01	-0.01	-0.01	-0.03	365	0.8874	1.325592	-0.438192	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0086	172	176	NS	BX076825-BX076826	X076825	2			70.37	2.891	0.124	0.038	0.02736	0.025	0.214	0.078	0.015	0.029	0.042	0.095	-0.01	-0.01	-0.01	-0.03	371	0.8874	1.360476	-0.473076	NAF
NS0086	28	32	NS	BX076751-BX076752	X076751	2			62.12	8.544	0.329	0.022	0.01584	0.048	0.131	0.04	0.019	0.007	0.008	0.12	-0.01	-0.01	-0.01	-0.03	334	0.2142	0.69768	-0.48348	NAF
NS0086	180	182	NS	BX076829	X076829	2			68.88	3.258	0.119	0.044	0.03168	0.02	0.213	0.064	0.009	0.019	0.044	0.109	-0.01	-0.01	-0.01	-0.03	373	0.5814	1.116288	-0.534888	NAF
NS0086	152	156	NS	BX076815-BX076816	X076815	2			70.73	2.517	0.07	0.029	0.02088	0.02	0.166	0.073	0.011	0.024	0.024	0.079	-0.01	-0.01	-0.01	-0.03	366	0.7344	1.273266	-0.538866	NAF
NS0086	16	18	NS	X068745	068745	1	G	D	27.58	47.95	4.92	0.0258	0.02	0.322	0.14	0.06	0.014	0.016	0.007	0.05	4.94	1.67	0.31	6.92	13268	0.4896	1.04652	-0.55692	NAF
NS0086	168	172	NS	BX076823-BX076824	X076823	2			68.92	3.632	0.21	0.03	0.0216	0.032	0.259	0.075	0.015	0.022	0.073	0.105	-0.01	-0.01	-0.01	-0.03	370	0.6732	1.30815	-0.63495	NAF
NS0086	164	168	NS	BX076821-BX076822	X076821	2			69.17	2.776	0.092	0.034	0.02448	0.018	0.193	0.08	0.014	0.022	0.032	0.087	-0.01	-0.01	-0.01	-0.03	369	0.6732	1.39536	-0.72216	NAF
NS0086	160	164	NS	BX076819-BX076820	X076819	2			69.36	2.814	0.123	0.037	0.02664	0.024	0.212	0.076	0.01	0.019	0.036	0.118	-0.01	-0.01	-0.01	-0.03	368	0.5814	1.325592	-0.744192	NAF
NS0086	40	44	NS	BX076757-BX076758	X076757	2			62.92	8.924	0.243	0.024	0.01728	0.024	0.12	0.069	0.014	0.013	0.028	0.218	-0.01	-0.01	-0.01	-0.03	337	0.3978	1.203498	-0.805698	NAF
NS0086	260	264	NS	BX076869-BX076870	X076869	2			69.47	3.419	0.209	0.04	0.0288	0.035	0.26	0.082	0.014	0.02	0.056	0.106	-0.01	-0.01	-0.01	-0.03	393	0.612	1.430244	-0.818244	NAF
NS0086	176	180	NS	BX076827-BX076828	X076827	2			69.67	3.256	0.138	0.037	0.02664	0.024	0.222	0.072	0.013	0.014	0.05	0.105	-0.01	-0.01	-0.01	-0.03	372	0.4284	1.255824	-0.827424	NAF
NS0086	192	196	NS	BX076835-BX076836	X076835	2			68.51	4.876	0.18	0.055	0.0396	0.026	0.29	0.085	0.014	0.019	0.067	0.095	-0.01	-0.01	-0.01	-0.03	376	0.5814	1.48257	-0.90117	NAF
NS0086	60	64	NS	BX076767-BX076768	X076767	2			61.47	10.627	0.509	0.068	0.04896	0.043	0.508	0.094	0.012	0.024	0.163	0.121	-0.01	-0.01	-0.01	-0.03	342	0.7344	1.639548	-0.905148	NAF
NS0086	256	260	NS	BX076867-BX076868	X076867	2			67.11	4.673	0.302	0.047	0.03384	0.11	0.344	0.135	0.031	0.046	0.095	0.119	-0.01	-0.01	-0.01	-0.03	392	1.4076	2.35467	-0.94707	NAF
NS0086	184	188	NS	BX076831-BX076832	X076831	2			68.3	4.084	0.164	0.05	0.036	0.027	0.265	0.089	0.015	0.019	0.059	0.124	-0.01	-0.01	-0.01	-0.03	374	0.5814	1.552338	-0.970938	NAF
NS0086	228	232	NS	BX076853-BX076854	X076853	2			68.95	3.881	0.174	0.048	0.03456	0.024	0.251	0.096	0.017	0.022	0.056	0.115	-0.01	-0.01	-0.01	-0.03	385	0.6732	1.674432	-1.001232	NAF
NS0086	280	282	NS	BX076879	X076879	2			66.38	5.382	0.199	0.07	0.0504	0.027	0.333	0.097	0.011	0.022	0.067	0.095	-0.01	-0.01	-0.01	-0.03	398	0.6732	1.691874	-1.018674	NAF
NS0086	200	204	NS	BX076839-BX076840	X076839	2			67.94	5.151	0.2	0.056	0.04032	0.025	0.297	0.084	0.014	0.014	0.067	0.081	-0.01	-0.01	-0.01	-0.03	378	0.4284	1.465128	-1.036728	NAF
NS0086	224	228	NS	BX076851-BX076852	X076851	2			66.7	5.45	0.249	0.068	0.04896	0.049	0.355	0.109	0.02	0.028	0.079	0.121	0.1	-0.01	-0.01	0.08	384	0.8568	1.901178	-1.044378	NAF
NS0086	264	268	NS	BX076871-BX076872	X076871	2			68.2	3.068	0.136	0.038	0.02736	0.024	0.215	0.092	0.018	0.018	0.045	0.148	-0.01	-0.01	-0.01	-0.03	394	0.5508	1.604664	-1.053864	NAF
NS0086	244	248	NS	BX076861-BX076862	X076861	2			69.12	4.086	0.173	0.039	0.02808	0.034	0.254	0.084	0.016	0.013	0.063	0.107	-0.01	-0.01	-0.01	-0.03	389	0.3978	1.465128	-1.067328	NAF
NS0086	188	192	NS	BX076833-BX076834	X076833	2			68.39	4.42	0.172	0.053	0.03816	0.022	0.278	0.093	0.015	0.017	0.061	0.107	-0.01	-0.01	-0.01	-0.03	375	0.5202	1.622106	-1.101906	NAF
NS0086	236	240	NS	BX076857-BX076858	X076857	2			68.38	3.369	0.091	0.041	0.02952	0.018	0.188	0.079	0.014	0.009	0.033	0.094	-0.01	-0.01	-0.01	-0.03	387	0.2754	1.377918	-1.102518	NAF
NS0086	240	242	NS	BX076859	X076859	2			69.48	3.335	0.09	0.044	0.03168	0.018	0.194	0.081	0.014	0.01	0.035	0.111	-0.01	-0.01	-0.01	-0.03	388	0.306	1.412802	-1.106802	NAF
NS0086	220	224	NS	BX076849-BX076850	X076849	2			65.55	6.474	0.197	0.074	0.05328	0.023	0.331	0.091	0.014	0.015	0.068	0.133	0.04	-0.01	-0.01	0.02	383	0.459	1.587222	-1.128222	NAF
NS0086	232	236	NS	BX076855-BX076856	X076855	2			68.58	3.443	0.137	0.039	0.02808	0.02	0.216	0.084	0.015	0.011	0.05	0.103	-0.01	-0.01	-0.01	-0.03	386	0.3366	1.465128	-1.128528	NAF
NS0086	196	200	NS	BX076837-BX076838	X076837	2			67.87	3.914	0.136	0.039	0.02808	0.019	0.238	0.093	0.016	0.011	0.05	0.109	-0.01	-0.01	-0.01	-0.03	377	0.3366	1.622106	-1.285506	NAF
NS0086	276	280	NS	BX076877-BX076878	X076877	2			67.02	4.611	0.175	0.052	0.03744	0.026	0.276	0.101	0.017	0.014	0.061	0.11	-0.01	-0.01	-0.01	-0.03	397	0.4284	1.761642	-1.333242	NAF
NS0086	212	216	NS	BX076845-BX076846	X076845	2			67.6	4	0.2	0.045	0.0324	0.046	0.277	0.105	0.015	0.015	0.059	0.1	-0.01	-0.01	-0.01	-0.03	381	0.459	1.83141	-1.37241	NAF
NS0086	90	92	NS	X068782	068782	1	G	W	27.85	37.76	4.34	0.4128	0.32	0.204	3.87	0.76	0.151	0.388	1.24	0.314	1.4	8.4	1.04	10.84	13305	11.8728	13.25592	-1.38312	NAF
NS0086	216	220	NS	BX076847-BX076848	X076847	2			69.04	2.952	0.088	0.035	0.0252	0.021	0.185	0.099	0.018	0.009	0.031	0.083	-0.01	-0.01	-0.01	-0.03	382	0.2754	1.726758	-1.451358	NAF
NS0086	204	208	NS	BX076841-BX076842	X076841	2			67.96	4.454	0.151	0.053	0.03816	0.02	0.257	0.107	0.017	0.012	0.053	0.085	-0.01	-0.01	-0.01	-0.03	379	0.3672	1.866294	-1.499094	NAF
NS0086	24	26	NS	X068749	068749	1	G	D	32.75	44.76	1.85	0.0645	0.05	0.077	0.29	0.11	0.057	0.013	0.006	0.032	4.61	0.95	0.16	5.72	13272	0.3978	1.91862	-1.52082	NAF
NS0086	208	212	NS	BX076843-BX076844	X076843	2			67.67	4.396	0.147	0.055	0.0396	0.025	0.273	0.114	0.016	0.015	0.056	0.11	-0.01	-0.01	-0.01	-0.03	380	0.459	1.988388	-1.529388	NAF
NS0086	72	76	NS	BX076773-BX076774	X076773	2			64.16	9.144	0.502	0.064	0.04608	0.045	0.522	0.152	0.016	0.034	0.151	0.141	0.18	-0.01	-0.01	0.16	345	1.0404	2.651184	-1.610784	NAF
NS0086	252	256	NS	BX076865-BX076866	X076865	2			67.51	4.754	0.246	0.043	0.03096	0.079	0.307	0.121	0.026	0.012	0.087	0.102	-0.01	-0.01	-0.01	-0.03	391	0.3672	2.110482	-1.743282	NAF
NS0086	18	20	NS	X068746	068746	1	G	D	32.92	41.05	3.65	-0.0129	-0.01	0.184	0.23	0.13	0.034	0.013	0.007	0.068	5.8	1.39	0.28	7.47	13269	0.3978	2.26746	-1.86966	NAF
NS0086	64	68	NS	BX076769-BX076770	X076769	2			65.2	7.837	0.326	0.06	0.0432	0.035	0.405	0.171	0.017	0.022	0.111	0.097	0.11	-0.01	-0.01	0.09	343	0.6732	2.982582	-2.309382	NAF
NS0086	20	22	NS	X068747	068747	1	G	D	30.45	43.98	4.42	0.0258	0.02	0.194	0.31	0.16	0.038	0.011	0.032	0.061	5.16	1.72	0.27	7.15	13270	0.3366	2.79072	-2.45412	NAF
NS0086	86	88	NS	X068780	068780	1	G	W	31.47	30.13	1.73	0.4902	0.38	0.077	2.8	0.41	0.048	0.153	0.517	0.143	1.19	16.83	0.34	18.36	13303	4.6818	7.15122	-2.46942	NAF
NS0086	28	30	NS	X068751	068751	1	G	D	32.09	45.9	1.89	0.0387	0.03	0.085	0.4	0.17	0.051	0.007	0.008	0.035	4.2	1.03	0.13	5.36	13274	0.2142	2.96514	-2.75094	NAF
NS0086	68	72	NS	BX076771-BX076772	X076771	2			66.28	7.392	0.301	0.052	0.03744	0.033	0.374	0.187	0.019	0.012	0.102	0.099	0.06	-0.01	-0.01	0.04	344	0.3672	3.261654	-2.894454	NAF
NS0086	48	50	NS	X068761	068761	1	G	W	27.96	40.72	3.22	0.4644	0.36	0.149	2.68	0.92	0.086	0.423	1.02	0.21	1.57	7.58	1.16	10.31	13284	12.9438	16.04664	-3.10284	NAF
NS0086	22	24	NS	X068748	068748	1	G	D	21.3	54.2	6.99	0.0258	0.02	0.293	0.52	0.2	0.025	0.008	0.113	0.07	4.1	2.48	0.27	6.85	13271	0.2448	3.4884	-3.2436	NAF
NS0086	26	28	NS	X068750	068750	1	G	D	31.19	44.7	3.04	0.0645	0.05	0.135	0.56	0.21	0.055	0.01	0.017	0.051	4.69	1.43	0.2	6.32	13273	0.306	3.66282	-3.35682	NAF
NS0086	30	32	NS	X068752	068752	1	G	D	33.77	41.31	2.4	0.0645	0.05	0.113	0.56	0.23	0.052	0.008	0.019	0.038	5.31	1.29	0.17	6.77	13275	0.2448	4.01166	-3.76686	NAF
NS0086	40	42	NS	X068757	068757	1	G	D	31.75	41.35	2.91	0.3612	0.28	0.14	1.2	0.25	0.044	0.012	0.394	0.082	5.69	1.68	0.2	7.57	13280	0.3672	4.3605	-3.9933	NAF
NS0086	42	44	NS	X068758	068758	1	G	D	30.61	45.2	2.21	0.2838	0.22	0.101	0.89	0.24	0.049	0.006	0.207	0.039	5.31	1.33	0.12	6.76	13281	0.1836	4.18608	-4.00248	NAF
NS0086	84	86	NS	X068779	068779	1	G	W	28.64	37.69	1.91	0.516	0.4	0.083	2.64	0.49	0.071	0.146	0.676	0.176	1.07	12.84	0.37	14.28	13302	4.4676	8.54658	-4.07898	NAF
NS0086	182	184	NS	X068830	068830	1	G	W	28.42	42.46	2.59	0.3225	0.25	0.127	2.52	0.72	0.078	0.276	1.2	0.292	1.22	6.21	0.81	8.24	13351	8.4456	12.55824	-4.11264	NAF
NS0086	46	48	NS	X068760	068760	1	G	D	31.75	42.78	2.66	0.5031	0.39	0.114	0.75	0.25	0.073	0.006	0.119	0.03	5.3	1.53	0.19	7.02	13283	0.1836	4.3605	-4.1769	NAF
NS0086	248	252	NS	BX076863-BX076864	X076863	2			64.08	7.753	0.621	0.048	0.03456	0.34	0.556	0.294	0.079	0.019	0.215	0.152	0.03	-0.01	-0.01	0.01	390	0.5814	5.127948	-4.546548	NAF
NS0086	38	40	NS	X068756	068756	1	G	D	31.61	42.11	2.78	0.3096	0.24	0.128	0.91	0.28	0.038	0.01	0.17	0.045	5.92	1.63	0.2	7.75	13279	0.306	4.88376	-4.57776	NAF
NS0086	32	34	NS	X068753	068753	1	G	D	29.58	46.11	3.08	0.1935	0.15	0.134	0.67	0.28	0.056	0.008	0.032	0.036	5.1	1.59	0.2	6.89	13276	0.2448	4.88376	-4.63896	NAF
NS0086	120	122	NS	X068798	068798	1	G	W	26.98	38.72	4.52	0.3354	0.26	0.209	3.39	1.1	0.123	0.467	0.79	0.208	1.13	9.2	1.34	11.67	13320	14.2902	19.1862	-4.896	NAF
NS0086	270	272	NS	X068874	068874	1	G	W	24.86	46.56	5.95	0.2064	0.16	0.267	3.77	0.54	0.082	0.139	1.29	0.325	1.32	3.21	0.59	5.12	13395	4.2534	9.41868	-5.16528	NAF
NS0086	44	46	NS	X068759	068759	1	G	D	27.05	47.91	3.43	0.3612	0.28	0.158	1.15	0.32	0.068	0.012	0.353	0.077	5.19	1.82	0.22	7.23	13282	0.3672	5.58144	-5.21424	NAF
NS0086	128	130	NS	X068803	068803	1	G	W	25.1	44.95	4.08	0.3225	0.25	0.191	3.26	1.01	0.122	0.387	1.31	0.346	1.4	5.57	1.34	8.31	13324	11.8422	17.61642	-5.77422	NAF
NS0086	78	80	NS	X068776	068776	1	G	W	29.04	40.24	2.37	0.387	0.3	0.105	2.79	0.5	0.065	0.095	0.952	0.222	1.11	9.2	0.24	10.55	13299	2.907	8.721	-5.814	NAF
NS0086	178	180	NS	X068828	068828	1	G	W	31.82	40.2	2.73	0.2451	0.19	0.126	2.68	0.54	0.082	0.113	1.27	0.327	1.16	4.49	0.36	6.01	13349	3.4578	9.41868	-5.96088	NAF
NS0086	132	134	NS	X068805	068805	1	G	W	31.56	36.69	1.53	0.3096	0.24	0.069	2.44	0.58	0.102	0.131	0.552	0.17	1.06	10.72	0.19	11.97	13326	4.0086	10.11636	-6.10776	NAF
NS0086	80	82	NS	X068777	068777	1	G	W	32.17	36.91	1.75	0.4257	0.33	0.078	2.32	0.52	0.072	0.089	0.73	0.186	0.99	9.73	0.07	10.79	13300	2.7234	9.06984	-6.34644	NAF
NS0086	36	38	NS	X068755	068755	1	G	D	29.28	44.47	3.65	0.3999	0.31	0.172	0.91	0.38	0.048	0.008	0.078	0.042	5.47	1.94	0.25	7.66	13278	0.2448	6.62796	-6.38316	NAF
NS0086	58	60	NS	X068766	068766	1	G	W	26.81	44.35	3	0.3096	0.24	0.132	2.47	0.73	0.046	0.201	1.1	0.256	1.36	6.59	0.6	8.55	13289	6.1506	12.73266	-6.58206	NAF
NS0086	258	260	NS	X068868	068868	1	G	W	30.08	39.49	2.48	0.3999	0.31	0.147	2.75	0.81	0.173	0.239	1.04	0.271	1.1	7.01	0.45	8.56	13389	7.3134	14.12802	-6.81462	NAF
NS0086	92	94	NS	X068783	068783	1	G	W	26.4	40	3.59	0.4257	0.33	0.163	3.55	0.9	0.137	0.288	0.965	0.26	1.23	9.74	0.88	11.85	13306	8.8128	15.6978	-6.885	NAF
NS0086	34	36	NS	X068754	068754	1	G	D	30.93	40.97	4.27	0.4515	0.35	0.2	1.02	0.41	0.066	0.008	0.095	0.051	5.79	2.1	0.27	8.16	13277	0.2448	7.15122	-6.90642	NAF
NS0086	82	84	NS	X068778	068778	1	G	W	24.51	44.64	2.82	0.4515	0.35	0.126	3.08	1.06	0.091	0.369	0.914	0.229	1.1	8.29	1.14	10.53	13301	11.2914	18.48852	-7.19712	NAF
NS0086	168	170	NS	X068823	068823	1	G	W	31.6	40.59	3	0.1548	0.12	0.144	2.91	0.75	0.159	0.192	1.41	0.34	1.21	2.93	0.55	4.69	13344	5.8752	13.0815	-7.2063	NAF
NS0086	112	114	NS	X068794	068794	1	G	W	20.62	49.72	7.52	0.2193	0.17	0.348	3.19	1.84	0.057	0.776	0.359	0.09	0.68	4.48	1.82	6.98	13316	23.7456	32.09328	-8.34768	NAF
NS0086	170	172	NS	X068824	068824	1	G	W	32.17	40.14	2.77	0.1935	0.15	0.126	2.75	0.73	0.177	0.131	1.29	0.315	1.12	3.39	0.38	4.89	13345	4.0086	12.73266	-8.72406	NAF
NS0086	256	258	NS	X068867	068867	1	G	W	31.5	36.07	2.97	0.4128	0.32	0.138	3.05	1.01	0.21	0.283	1.19	0.288	1.25	6.73	0.66	8.64	13388	8.6598	17.61642	-8.95662	NAF
NS0086	106	108	NS	X068790	068790	1	G	W	29.2	31.88	2.49	0.2709	0.21	0.108	3.29	0.92	0.086	0.227	0.336	0.092	1.12	16.42	0.6	18.14	13313	6.9462	16.04664	-9.10044	NAF
NS0086	56	58	NS	X068765	068765	1	G	W	26.54	43.47	3.81	0.3483	0.27	0.171	2.91	0.77	0.082	0.133	1.25	0.299	1.57	6.49	0.51	8.57	13288	4.0698	13.43034	-9.36054	NAF
NS0086	246	248	NS	X068862	068862	1	G	W	36.35	35.56	1.59	0.2967	0.23	0.073	2.11	0.67	0.104	0.076	0.753	0.183	0.71	5.68	-0.06	6.33	13383	2.3256	11.68614	-9.36054	NAF
NS0086	60	62	NS	X068767	068767	1	G	W	28.82	43.28	2.4	0.3483	0.27	0.107	1.77	0.66	0.047	0.067	0.672	0.168	2.41	6.54	0.13	9.08	13290	2.0502	11.51172	-9.46152	NAF
NS0086	238	240	NS	X068858	068858	1	G	W	34.18	36.9	1.15	0.4644	0.36	0.053	2.05	0.62	0.073	0.04	0.531	0.138	0.66	8.4	-0.08	8.98	13379	1.224	10.81404	-9.59004	NAF
NS0086	200	202	NS	X068839	068839	1	G	W	32.98	36.65	1.58	0.5031	0.39	0.072	2.41	0.74	0.107	0.106	0.729	0.195	0.93	8.42	0.14	9.49	13360	3.2436	12.90708	-9.66348	NAF
NS0086	130	132	NS	X068804	068804	1	G	W	30.99	31.77	1.28	0.3096	0.24	0.054	2.8	0.89	0.162	0.189	0.565	0.118	0.98	15.81	0.41	17.2	13325	5.7834	15.52338	-9.73998	NAF
NS0086	50	52	NS	X068762	068762	1	G	W	28.71	38.91	3.19	0.4902	0.38	0.147	2.55	0.85	0.072	0.164	0.983	0.215	1.84	8.63	0.52	10.99	13285	5.0184	14.8257	-9.8073	NAF
NS0086	180	182	NS	X068829	068829	1	G	W	30.98	42.99	1.31	0.387	0.3	0.058	1.89	0.72	0.07	0.084	0.631	0.158	0.67	6.34	0.13	7.14	13350	2.5704	12.55824	-9.98784	NAF
NS0086	184	186	NS	X068831	068831	1	G	W	34.79	35.45	1.35	0.4128	0.32	0.059	2.04	0.78	0.105	0.116	0.65	0.162	0.67	8.19	-0.01	8.85	13352	3.5496	13.60476	-10.05516	NAF
NS0086	224	226	NS	X068851	068851	1	G	W	32.69	36.12	1.12	0.6321	0.49	0.048	2.2	0.75	0.088	0.062	0.519	0.123	0.56	10.93	-0.08	11.41	13372	1.8972	13.0815	-11.1843	NAF
NS0086	280	282	NS	X068879	068879	1	G	W	28.62	42.95	1.73	0.3225	0.25	0.08	2.09	0.86	0.062	0.123	0.778	0.184	0.88	8.3	0.39	9.57	13400	3.7638	15.00012	-11.23632	NAF
NS0086	142	144	NS	X068810	068810	1	G	W	30.19	40.79	3.88	0.1806	0.14	0.183	3.58	0.94	0.099	0.166	1.56	0.386	1.33	2.7	0.78	4.81	13331	5.0796	16.39548	-11.31588	NAF
NS0086	222	224	NS	X068850	068850	1	G	W	33.34	35.92	1.06	0.5676	0.44	0.046	2.09	0.72	0.074	0.033	0.501	0.144	0.68	10.42	-0.09	11.01	13371	1.0098	12.55824	-11.54844	NAF
NS0086	174	176	NS	X068826	068826	1	G	W	30.54	41.52	1.92	0.2967	0.23	0.09	2.41	0.86	0.1	0.112	0.927	0.218	0.89	6.29	0.3	7.48	13347	3.4272	15.00012	-11.57292	NAF
NS0086	144	146	NS	X068811	068811	1	G	W	33.64	35.36	1.32	0.3741	0.29	0.062	2.25	1	0.092	0.188	0.504	0.129	0.93	8.99	0.3	10.22	13332	5.7528	17.442	-11.6892	NAF
NS0086	118	120	NS	X068797	068797	1	G	W	25.54	40.81	3.79	0.2967	0.23	0.174	3.2	1.17	0.132	0.282	0.682	0.181	1.15	10.07	0.95	12.17	13319	8.6292	20.40714	-11.77794	NAF
NS0086	176	178	NS	X068827	068827	1	G	W	33.09	36.5	1.67	0.3999	0.31	0.079	2.39	0.97	0.143	0.153	0.805	0.221	0.99	7.65	0.27	8.91	13348	4.6818	16.91874	-12.23694	NAF
NS0086	234	236	NS	X068856	068856	1	G	W	33.7	37.1	1.48	0.4386	0.34	0.064	2.27	0.83	0.108	0.071	0.696	0.175	0.69	7.52	0.05	8.26	13377	2.1726	14.47686	-12.30426	NAF
NS0086	116	118	NS	X068796	068796	1	G	W	25.98	41.08	3.89	0.3225	0.25	0.182	3.26	1.5	0.135	0.443	0.827	0.205	1.13	8.46	1.47	11.06	13318	13.5558	26.163	-12.6072	NAF
NS0086	62	64	NS	X068768	068768	1	G	W	29.76	41.06	2.02	0.3612	0.28	0.089	2.36	0.83	0.063	0.059	0.861	0.216	1.18	7.99	0.19	9.36	13291	1.8054	14.47686	-12.67146	NAF
NS0086	110	112	NS	X068793	068793	1	G	W	25.08	40.75	5.16	0.3741	0.29	0.241	3.4	1.53	0.101	0.456	0.501	0.134	0.99	9.24	1.48	11.71	13315	13.9536	26.68626	-12.73266	NAF
NS0086	166	168	NS	X068822	068822	1	G	W	32.76	35.53	1.55	0.4257	0.33	0.066	2.63	0.89	0.064	0.088	0.614	0.139	0.81	10.05	0.18	11.04	13343	2.6928	15.52338	-12.83058	NAF
NS0086	108	110	NS	X068792	068792	1	G	W	26.03	36.39	4.58	0.2838	0.22	0.207	4.01	1.38	0.133	0.308	0.378	0.1	0.94	12.44	1	14.38	13314	9.4248	24.06996	-14.64516	NAF
NS0086	226	228	NS	X068852	068852	1	G	W	32.71	33.47	1.79	0.5031	0.39	0.076	2.77	1.12	0.102	0.158	0.775	0.182	0.91	10.6	0.42	11.93	13373	4.8348	19.53504	-14.70024	NAF
NS0086	254	256	NS	X068866	068866	1	G	W	31.81	37.85	1.46	0.4644	0.36	0.071	2.32	1.03	0.111	0.105	0.685	0.193	0.79	8.93	0.14	9.86	13387	3.213	17.96526	-14.75226	NAF
NS0086	186	188	NS	X068832	068832	1	G	W	31.38	39.5	1.5	0.4128	0.32	0.065	2.24	0.99	0.104	0.065	0.713	0.168	0.77	8.12	0.25	9.14	13353	1.989	17.26758	-15.27858	NAF
NS0086	188	190	NS	X068833	068833	1	G	W	32.29	39.73	1.69	0.3354	0.26	0.077	2.24	1.07	0.098	0.097	0.797	0.182	0.8	6.01	0.35	7.16	13354	2.9682	18.66294	-15.69474	NAF
NS0086	192	194	NS	X068835	068835	1	G	W	34.48	36.63	1.38	0.4644	0.36	0.064	2.11	1.04	0.084	0.075	0.642	0.164	0.72	6.89	0.19	7.8	13356	2.295	18.13968	-15.84468	NAF
NS0086	266	268	NS	X068872	068872	1	G	W	26.13	46.77	1.2	0.3354	0.26	0.053	1.97	1.19	0.065	0.157	0.569	0.135	0.75	8.47	0.54	9.76	13393	4.8042	20.75598	-15.95178	NAF
NS0086	198	200	NS	X068838	068838	1	G	W	33.9	37.94	1.44	0.3741	0.29	0.06	2.12	1.03	0.096	0.065	0.666	0.169	0.75	6.33	0.22	7.3	13359	1.989	17.96526	-15.97626	NAF
NS0086	126	128	NS	X068802	068802	1	G	W	24.16	46.01	4.71	0.2838	0.22	0.222	3.5	1.87	0.105	0.537	1.5	0.395	1.41	3.12	1.98	6.51	13323	16.4322	32.61654	-16.18434	NAF
NS0086	76	78	NS	X068775	068775	1	G	W	27.98	43.56	1.86	0.4128	0.32	0.082	2.39	1.04	0.082	0.063	0.758	0.185	0.92	7.94	0.4	9.26	13298	1.9278	18.13968	-16.21188	NAF
NS0086	138	140	NS	X068808	068808	1	G	W	31.16	40.34	2.26	0.2451	0.19	0.102	2.62	1.27	0.118	0.179	0.966	0.233	1.02	5.14	0.71	6.87	13329	5.4774	22.15134	-16.67394	NAF
NS0086	194	196	NS	X068836	068836	1	G	W	31.27	39.89	2.5	0.3225	0.25	0.114	2.75	1.22	0.189	0.15	1.19	0.311	1.09	4.6	0.59	6.28	13357	4.59	21.27924	-16.68924	NAF
NS0086	150	152	NS	X068814	068814	1	G	W	35.54	34.89	1.05	0.3225	0.25	0.047	2.01	1.03	0.083	0.04	0.431	0.121	0.73	7.94	0.19	8.86	13335	1.224	17.96526	-16.74126	NAF
NS0086	146	148	NS	X068812	068812	1	G	W	28.58	42.36	3.88	0.1806	0.14	0.181	3.47	1.38	0.165	0.233	1.32	0.328	1.24	2.78	0.98	5	13333	7.1298	24.06996	-16.94016	NAF
NS0086	190	192	NS	X068834	068834	1	G	W	29.43	42.43	2.88	0.258	0.2	0.137	2.87	1.14	0.096	0.091	1.32	0.324	1.19	4.1	0.64	5.93	13355	2.7846	19.88388	-17.09928	NAF
NS0086	262	264	NS	X068870	068870	1	G	W	31.92	37.11	1.77	0.4128	0.32	0.077	2.5	1.16	0.152	0.092	0.809	0.201	0.89	8.73	0.29	9.91	13391	2.8152	20.23272	-17.41752	NAF
NS0086	196	198	NS	X068837	068837	1	G	W	31.02	42.56	2.2	0.258	0.2	0.102	2.41	1.16	0.155	0.073	1.06	0.273	0.96	3.78	0.41	5.15	13358	2.2338	20.23272	-17.99892	NAF
NS0086	276	278	NS	X068877	068877	1	G	W	32.85	36.58	1.64	0.3354	0.26	0.076	2.18	1.16	0.096	0.065	0.778	0.192	0.87	8.58	0.25	9.7	13398	1.989	20.23272	-18.24372	NAF
NS0086	140	142	NS	X068809	068809	1	G	W	35.56	36.54	1.1	0.2838	0.22	0.047	1.95	1.12	0.111	0.04	0.508	0.125	0.57	6.29	0.14	7	13330	1.224	19.53504	-18.31104	NAF
NS0086	242	244	NS	X068860	068860	1	G	W	34.62	34.09	1.35	0.5031	0.39	0.064	2.29	1.24	0.238	0.105	0.641	0.176	0.78	8.57	0.06	9.41	13381	3.213	21.62808	-18.41508	NAF
NS0086	156	158	NS	X068817	068817	1	G	W	28.98	41.82	1.59	0.3483	0.27	0.076	2.44	1.18	0.072	0.069	0.708	0.165	1.25	8.01	0.56	9.82	13338	2.1114	20.58156	-18.47016	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0086	240	242	NS	X068859	068859	1	G	W	35.12	35.2	1.1	0.4644	0.36	0.047	1.97	1.16	0.13	0.037	0.519	0.135	0.58	7.99	0.1	8.67	13380	1.1322	20.23272	-19.10052	NAF
NS0086	96	98	NS	X068785	068785	1	G	W	23.36	43.18	5.45	0.4257	0.33	0.254	3.26	1.81	0.138	0.381	0.366	0.098	0.85	9.09	1.38	11.32	13308	11.6586	31.57002	-19.91142	NAF
NS0086	244	246	NS	X068861	068861	1	G	W	31.62	41.72	1.55	0.3354	0.26	0.103	2.08	1.19	0.084	0.026	0.72	0.176	0.64	5.3	0.65	6.59	13382	0.7956	20.75598	-19.96038	NAF
NS0086	230	232	NS	X068854	068854	1	G	W	36.61	34.83	1.39	0.3225	0.25	0.063	2.04	1.28	0.095	0.076	0.659	0.16	0.6	5.73	0.34	6.67	13375	2.3256	22.32576	-20.00016	NAF
NS0086	206	208	NS	X068842	068842	1	G	W	33.98	36.43	1.35	0.4257	0.33	0.06	2.22	1.28	0.128	0.075	0.627	0.167	0.77	7.32	0.31	8.4	13363	2.295	22.32576	-20.03076	NAF
NS0086	232	234	NS	X068855	068855	1	G	W	31.04	42.49	1.47	0.3612	0.28	0.064	2.09	1.27	0.095	0.068	0.681	0.19	0.68	5.48	0.54	6.7	13376	2.0808	22.15134	-20.07054	NAF
NS0086	236	238	NS	X068857	068857	1	G	W	33.19	37.64	1.52	0.3741	0.29	0.067	2.17	1.34	0.236	0.098	0.709	0.193	0.7	6.92	0.13	7.75	13378	2.9988	23.37228	-20.37348	NAF
NS0086	172	174	NS	X068825	068825	1	G	W	30.78	41.96	1.89	0.2838	0.22	0.088	2.38	1.37	0.128	0.115	0.879	0.21	0.85	4.87	0.63	6.35	13346	3.519	23.89554	-20.37654	NAF
NS0086	202	204	NS	X068840	068840	1	G	W	31.03	40.38	1.98	0.3741	0.29	0.098	2.49	1.32	0.108	0.084	0.934	0.218	0.94	5.83	0.53	7.3	13361	2.5704	23.02344	-20.45304	NAF
NS0086	162	164	NS	X068820	068820	1	G	W	30.11	36.29	1.52	0.4515	0.35	0.067	2.59	1.31	0.081	0.066	0.648	0.142	0.83	12.18	0.45	13.46	13341	2.0196	22.84902	-20.82942	NAF
NS0086	52	54	NS	X068763	068763	1	G	W	27.55	38.37	2.58	0.5676	0.44	0.118	2.55	1.6	0.067	0.229	0.909	0.211	1.34	10.7	0.89	12.93	13286	7.0074	27.9072	-20.8998	NAF
NS0086	252	254	NS	X068865	068865	1	G	W	33.17	36.65	1.49	0.4257	0.33	0.085	2.23	1.35	0.102	0.069	0.698	0.18	0.76	7.9	0.33	8.99	13386	2.1114	23.5467	-21.4353	NAF
NS0086	72	74	NS	X068773	068773	1	G	W	29.7	39.44	2.88	0.3354	0.26	0.133	3.01	1.49	0.094	0.147	0.992	0.258	1.17	6.4	0.77	8.34	13296	4.4982	25.98858	-21.49038	NAF
NS0086	268	270	NS	X068873	068873	1	G	W	32.91	34.76	1.67	0.3741	0.29	0.071	2.42	1.49	0.132	0.14	0.788	0.193	0.95	9.24	0.48	10.67	13394	4.284	25.98858	-21.70458	NAF
NS0086	74	76	NS	X068774	068774	1	G	W	29.75	40.91	2.41	0.3612	0.28	0.107	2.72	1.38	0.079	0.075	0.982	0.239	1.02	6.19	0.77	7.98	13297	2.295	24.06996	-21.77496	NAF
NS0086	274	276	NS	X068876	068876	1	G	W	31.24	37.91	1.05	0.4257	0.33	0.042	1.85	1.36	0.084	0.063	0.489	0.112	0.54	10.7	0.37	11.61	13397	1.9278	23.72112	-21.79332	NAF
NS0086	154	156	NS	X068816	068816	1	G	W	32.43	36.08	1.47	0.3354	0.26	0.064	2.59	1.43	0.145	0.062	0.683	0.189	0.78	8.91	0.68	10.37	13337	1.8972	24.94206	-23.04486	NAF
NS0086	94	96	NS	X068784	068784	1	G	W	23.54	44.61	3.3	0.4257	0.33	0.154	3.02	1.8	0.095	0.268	0.722	0.188	0.97	9.34	1.4	11.71	13307	8.2008	31.3956	-23.1948	NAF
NS0086	158	160	NS	X068818	068818	1	G	W	31.62	36.32	1.57	0.3354	0.26	0.07	2.59	1.49	0.119	0.091	0.723	0.19	0.94	9.63	0.53	11.1	13339	2.7846	25.98858	-23.20398	NAF
NS0086	278	280	NS	X068878	068878	1	G	W	29.48	40.43	1.15	0.3741	0.29	0.046	1.95	1.49	0.123	0.063	0.53	0.133	0.75	10.15	0.39	11.29	13399	1.9278	25.98858	-24.06078	NAF
NS0086	54	56	NS	X068764	068764	1	G	W	28.06	37.6	2.48	0.5805	0.45	0.112	2.61	1.54	0.082	0.087	0.959	0.22	1.34	11.38	0.63	13.35	13287	2.6622	26.86068	-24.19848	NAF
NS0086	216	218	NS	X068847	068847	1	G	W	35.44	35.08	1.08	0.4386	0.34	0.047	2.04	1.47	0.13	0.034	0.505	0.115	0.55	7.12	0.49	8.16	13368	1.0404	25.63974	-24.59934	NAF
NS0086	152	154	NS	X068815	068815	1	G	W	31.52	37.23	1.16	0.3354	0.26	0.051	2.51	1.64	0.088	0.106	0.519	0.13	0.71	9.36	0.89	10.96	13336	3.2436	28.60488	-25.36128	NAF
NS0086	220	222	NS	X068849	068849	1	G	W	32.64	34.54	1.15	0.5676	0.44	0.05	2.34	1.59	0.103	0.058	0.543	0.139	0.68	10.91	0.49	12.08	13370	1.7748	27.73278	-25.95798	NAF
NS0086	148	150	NS	X068813	068813	1	G	W	32.35	37.4	1.72	0.3354	0.26	0.077	2.61	1.64	0.11	0.085	0.77	0.186	0.8	7	0.84	8.64	13334	2.601	28.60488	-26.00388	NAF
NS0086	204	206	NS	X068841	068841	1	G	W	32.79	36.78	1.39	0.5418	0.42	0.059	2.34	1.62	0.086	0.073	0.642	0.153	0.67	7.71	0.9	9.28	13362	2.2338	28.25604	-26.02224	NAF
NS0086	228	230	NS	X068853	068853	1	G	W	29.54	41.52	1.36	0.4386	0.34	0.062	2.23	1.65	0.09	0.078	0.649	0.191	0.76	7.73	0.84	9.33	13374	2.3868	28.7793	-26.3925	NAF
NS0086	160	162	NS	X068819	068819	1	G	W	32.41	36.61	1.57	0.2838	0.22	0.069	2.43	1.6	0.14	0.049	0.732	0.184	0.81	8.14	0.68	9.63	13340	1.4994	27.9072	-26.4078	NAF
NS0086	264	266	NS	X068871	068871	1	G	W	32.38	37.15	1.33	0.3999	0.31	0.056	2.21	1.62	0.151	0.049	0.626	0.161	0.73	8.48	0.56	9.77	13392	1.4994	28.25604	-26.75664	NAF
NS0086	136	138	NS	X068807	068807	1	G	W	31.89	35.32	1.08	0.4257	0.33	0.048	2.33	1.67	0.08	0.058	0.443	0.109	0.69	11.29	0.64	12.62	13328	1.7748	29.12814	-27.35334	NAF
NS0086	64	66	NS	X068769	068769	1	G	W	31.32	38.55	1.72	0.4128	0.32	0.078	2.41	1.7	0.069	0.054	0.732	0.214	1.04	7.17	0.97	9.18	13292	1.6524	29.6514	-27.999	NAF
NS0086	218	220	NS	X068848	068848	1	G	W	33.33	37.96	1.8	0.3225	0.25	0.095	2.3	1.77	0.183	0.071	0.856	0.208	0.81	4.9	0.69	6.4	13369	2.1726	30.87234	-28.69974	NAF
NS0086	70	72	NS	X068772	068772	1	G	W	29.89	40.93	1.97	0.3999	0.31	0.088	2.56	1.83	0.097	0.066	0.835	0.211	0.94	6.11	1.11	8.16	13295	2.0196	31.91886	-29.89926	NAF
NS0086	66	68	NS	X068770	068770	1	G	W	31.29	38.58	1.78	0.3999	0.31	0.076	2.5	1.97	0.128	0.069	0.768	0.181	0.95	6.64	0.95	8.54	13293	2.1114	34.36074	-32.24934	NAC
NS0086	164	166	NS	X068821	068821	1	G	W	32.52	40.55	0.96	0.2709	0.21	0.044	1.76	1.98	0.093	0.051	0.45	0.123	0.47	5.29	1.17	6.93	13342	1.5606	34.53516	-32.97456	NAC
NS0086	208	210	NS	X068843	068843	1	G	W	22.37	53.96	1.18	0.3483	0.27	0.051	1.91	2.2	0.071	0.099	0.562	0.138	0.57	4.71	1.97	7.25	13364	3.0294	38.3724	-35.343	NAC
NS0086	214	216	NS	X068846	068846	1	G	W	35.57	34.29	1.66	0.3741	0.29	0.085	2.4	2.38	0.146	0.117	0.72	0.198	0.67	4.32	1.51	6.5	13367	3.5802	41.51196	-37.93176	NAC
NS0086	210	212	NS	X068844	068844	1	G	W	34.78	33.84	1.11	0.4902	0.38	0.047	2.22	2.25	0.08	0.033	0.521	0.132	0.59	7.58	1.24	9.41	13365	1.0098	39.2445	-38.2347	NAC
NS0086	68	70	NS	X068771	068771	1	G	W	30.44	39.47	1.83	0.4128	0.32	0.083	2.53	2.6	0.117	0.064	0.8	0.199	0.84	5.61	1.75	8.2	13294	1.9584	45.3492	-43.3908	NAC
NS0086	212	214	NS	X068845	068845	1	G	W	32.96	37.61	0.83	0.4644	0.36	0.036	1.95	2.62	0.072	0.031	0.403	0.089	0.45	6.34	1.81	8.6	13366	0.9486	45.69804	-44.74944	NAC
NS0086	250	252	NS	X068864	068864	1	G	W	29.46	39.27	2.14	0.3612	0.28	0.27	2.48	2.69	0.166	0.037	0.962	0.246	0.88	6.37	1.57	8.82	13385	1.1322	46.91898	-45.78678	NAC
NS0086	248	250	NS	X068863	068863	1	G	W	30.73	40.89	0.86	0.4257	0.33	0.031	1.84	2.95	0.142	0.049	0.414	0.12	0.46	5.72	1.95	8.13	13384	1.4994	51.4539	-49.9545	NAC
NS0087	214	216	NS	X068991	068991	1	G	W	20.6	56.5	1.7	0.4902	0.38	0.076	2.45	0.84	0.088	1.36	0.462	0.128	0.4	4.96	2.21	7.57	13508	41.616	14.65128	26.96472	PAF(HC)
NS0087	324	326	NS	X070050	070050	1	G	W	32.59	41.25	2.54	0.5031	0.39	0.116	3.06	0.75	0.069	0.779	0.549	0.083	0.23	2.95	1.01	4.19	13563	23.8374	13.0815	10.7559	PAF(HC)
NS0087	212	214	NS	X068990	068990	1	G	W	18.19	57.87	2.47	0.4902	0.38	0.114	2.92	0.69	0.129	0.726	0.531	0.155	0.56	6.11	1.6	8.27	13507	22.2156	12.03498	10.18062	PAF(HC)
NS0087	88	90	NS	X068925	068925	1	G	D	27.05	41.3	4.36	0.4257	0.33	0.2	4.43	0.51	0.099	0.616	1.43	0.394	1.36	5.03	1.38	7.77	13445	18.8496	8.89542	9.95418	PAF(LC)
NS0087	204	206	NS	X068986	068986	1	G	W	28.11	41.18	3.58	0.4644	0.36	0.164	3.73	0.37	0.073	0.489	0.913	0.284	1.04	6.54	1.12	8.7	13503	14.9634	6.45354	8.50986	PAF(LC)
NS0087	208	210	NS	X068988	068988	1	G	W	26.25	42.66	3.16	0.6192	0.48	0.136	3.76	0.34	0.065	0.376	0.921	0.245	1.12	8.23	1	10.35	13505	11.5056	5.93028	5.57532	PAF(LC)
NS0087	278	280	NS	X070024	070024	1	G	W	28.49	39.23	5.64	0.4257	0.33	0.262	5.24	0.55	0.094	0.438	0.543	0.153	0.69	5.25	0.86	6.8	13540	13.4028	9.5931	3.8097	PAF(LC)
NS0087	2	4	NS	X068881	068881	1	G	D	41.63	24.2	5.82	0.0774	0.06	0.543	0.07	0.02	0.027	0.026	0.096	0.024	7.58	1.61	0.29	9.48	13402	0.7956	0.34884	0.44676	PAF(LC)
NS0087	10	12	NS	X068885	068885	1	G	D	49.23	15.88	3.49	-0.0129	-0.01	0.113	0.005	0.02	0.019	0.023	0.004	0.0005	8.74	0.95	0.24	9.93	13406	0.7038	0.34884	0.35496	PAF(LC)
NS0087	12	14	NS	X068886	068886	1	G	D	45.21	23.85	2.45	-0.0129	-0.01	0.076	0.005	0.02	0.021	0.023	0.004	0.0005	7.87	0.81	0.21	8.89	13407	0.7038	0.34884	0.35496	PAF(LC)
NS0087	14	16	NS	X068887	068887	1	G	D	31.29	47.68	1.58	0.0258	0.02	0.049	0.02	0.01	0.058	0.017	0.006	0.002	5.03	0.55	0.14	5.72	13408	0.5202	0.17442	0.34578	PAF(LC)
NS0087	0	2	NS	X068880	068880	1	G	D	40.4	24.63	6.73	0.0258	0.02	0.54	0.07	0.04	0.024	0.031	0.073	0.01	7.7	1.9	0.3	9.9	13401	0.9486	0.69768	0.25092	PAF(LC)
NS0087	8	10	NS	X068884	068884	1	G	D	47.03	16.62	5.23	0.0645	0.05	0.258	0.04	0.04	0.029	0.03	0.053	0.014	8.59	1.44	0.32	10.35	13405	0.918	0.69768	0.22032	PAF(LC)
NS0087	6	8	NS	X068883	068883	1	G	D	42.19	23.84	5.22	0.0258	0.02	0.4	0.03	0.04	0.018	0.029	0.034	0.005	8.01	1.58	0.3	9.89	13404	0.8874	0.69768	0.18972	PAF(LC)
NS0087	4	6	NS	X068882	068882	1	G	D	35.52	36.26	4.06	-0.0129	-0.01	0.447	0.03	0.03	0.014	0.022	0.018	0.009	6.75	1.2	0.24	8.19	13403	0.6732	0.52326	0.14994	PAF(LC)
NS0087	124	126	NS	X068944	068944	1	G	W																	13463	0	0	0	PAF(LC)
NS0087	132	134	NS	X068948	068948	1	G	W																	13467	0	0	0	PAF(LC)
NS0087	348	350	NS	X070062	070062	1	G	W																	13575	0	0	0	PAF(LC)
NS0087	0	4	NS	BX076880-BX076881	X076880	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	399	-0.0306	-0.01744	-0.013158	NAF
NS0087	4	8	NS	BX076882-BX076883	X076882	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	400	-0.0306	-0.01744	-0.013158	NAF
NS0087	8	12	NS	BX076884-BX076885	X076884	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	401	-0.0306	-0.01744	-0.013158	NAF
NS0087	12	16	NS	BX076886-BX076887	X076886	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	402	-0.0306	-0.01744	-0.013158	NAF
NS0087	16	20	NS	BX076888-BX076889	X076888	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	403	-0.0306	-0.01744	-0.013158	NAF
NS0087	16	18	NS	X068888	068888	1	G	D	30.71	45.92	4.06	-0.0129	-0.01	0.408	0.03	0.03	0.029	0.015	0.009	0.012	4.13	1.05	0.17	5.35	13409	0.459	0.52326	-0.06426	NAF
NS0087	276	280	NS	BX077023-BX077024	X077023	2			66.2	6.719	0.576	0.068	0.04896	0.051	0.622	0.067	0.011	0.028	0.063	0.087	-0.01	-0.01	-0.01	-0.03	469	0.8568	1.168614	-0.311814	NAF
NS0087	226	230	NS	BX076997-BX076998	X076997	2			67.69	5.32	0.309	0.066	0.04752	0.041	0.389	0.062	0.01	0.022	0.076	0.101	-0.01	-0.01	-0.01	-0.03	456	0.6732	1.081404	-0.408204	NAF
NS0087	324	326	NS	BX077050	X077050	2			68.77	4.167	0.177	0.044	0.03168	0.024	0.264	0.047	0.008	0.013	0.056	0.063	-0.01	-0.01	-0.01	-0.03	482	0.3978	0.819774	-0.421974	NAF
NS0087	202	206	NS	BX076985-BX076986	X076985	2			67.33	5.203	0.281	0.056	0.04032	0.036	0.367	0.059	0.009	0.018	0.074	0.095	-0.01	-0.01	-0.01	-0.03	450	0.5508	1.029078	-0.478278	NAF
NS0087	284	286	NS	BX077027	X077027	2			67.03	6.07	0.305	0.062	0.04464	0.034	0.406	0.056	0.01	0.014	0.033	0.086	-0.01	-0.01	-0.01	-0.03	471	0.4284	0.976752	-0.548352	NAF
NS0087	22	26	NS	BX076891-BX076892	X076891	2			65.98	4.215	0.241	0.041	0.02952	0.051	0.112	0.037	0.018	0.003	0.006	0.062	-0.01	-0.01	-0.01	-0.03	404	0.0918	0.645354	-0.553554	NAF
NS0087	330	334	NS	BX077053-BX077054	X077053	2			69.05	3.471	0.158	0.043	0.03096	0.018	0.229	0.05	0.01	0.009	0.061	0.06	-0.01	-0.01	-0.01	-0.03	484	0.2754	0.8721	-0.5967	NAF
NS0087	210	212	NS	BX076989	X076989	2			67.63	5.092	0.195	0.058	0.04176	0.028	0.322	0.051	0.008	0.009	0.059	0.081	-0.01	-0.01	-0.01	-0.03	452	0.2754	0.889542	-0.614142	NAF
NS0087	26	30	NS	BX076893-BX076894	X076893	2			65.72	4.343	0.234	0.041	0.02952	0.043	0.126	0.039	0.018	0.002	0.01	0.063	0.01	0.01	0.01	0.03	405	0.0612	0.680238	-0.619038	NAF
NS0087	30	34	NS	BX076895-BX076896	X076895	2			65.48	4.248	0.254	0.071	0.05112	0.048	0.149	0.041	0.015	0.003	0.032	0.102	0.01	0.01	-0.01	0.01	406	0.0918	0.715122	-0.623322	NAF
NS0087	214	218	NS	BX076991-BX076992	X076991	2			68.04	4.406	0.153	0.048	0.03456	0.023	0.281	0.06	0.01	0.012	0.047	0.078	-0.01	-0.01	-0.01	-0.03	453	0.3672	1.04652	-0.67932	NAF
NS0087	358	362	NS	BX077067-BX077068	X077067	2			70.41	2.641	0.083	0.035	0.0252	0.018	0.171	0.047	0.009	0.004	0.038	0.056	-0.01	-0.01	-0.01	-0.03	491	0.1224	0.819774	-0.697374	NAF
NS0087	88	92	NS	BX076925-BX076926	X076925	2			68.45	3.251	0.163	0.043	0.03096	0.049	0.236	0.063	0.008	0.013	0.048	0.087	-0.01	-0.01	-0.01	-0.03	421	0.3978	1.098846	-0.701046	NAF
NS0087	18	20	NS	X068889	068889	1	G	D	15.86	61.4	8.65	0.0258	0.02	0.414	0.1	0.06	0.01	0.011	0.024	0.046	3.15	3.06	0.28	6.49	13410	0.3366	1.04652	-0.70992	NAF
NS0087	346	350	NS	BX077061-BX077062	X077061	2			69.54	2.416	0.047	0.036	0.02592	0.008	0.138	0.046	0.008	0.003	0.033	0.054	-0.01	-0.01	-0.01	-0.03	488	0.0918	0.802332	-0.710532	NAF
NS0087	338	342	NS	BX077057-BX077058	X077057	2			69.8	3.311	0.101	0.045	0.0324	0.014	0.203	0.048	0.009	0.004	0.046	0.061	-0.01	-0.01	-0.01	-0.03	486	0.1224	0.837216	-0.714816	NAF
NS0087	34	38	NS	BX076897-BX076898	X076897	2			63.91	5.588	0.368	0.088	0.06336	0.054	0.218	0.043	0.016	0.001	0.096	0.092	-0.01	-0.01	-0.01	-0.03	407	0.0306	0.750006	-0.719406	NAF
NS0087	38	42	NS	BX076899-BX076900	X076899	2			66.3	4.004	0.176	0.102	0.07344	0.029	0.141	0.043	0.017	0.001	0.017	0.066	0.01	0.01	-0.01	0.01	408	0.0306	0.750006	-0.719406	NAF
NS0087	334	338	NS	BX077055-BX077056	X077055	2			69.16	3.589	0.104	0.049	0.03528	0.017	0.215	0.052	0.01	0.006	0.048	0.069	-0.01	-0.01	-0.01	-0.03	485	0.1836	0.906984	-0.723384	NAF
NS0087	342	344	NS	BX077059	X077059	2			69.65	2.894	0.046	0.039	0.02808	0.011	0.157	0.046	0.008	0.002	0.025	0.063	-0.01	-0.01	-0.01	-0.03	487	0.0612	0.802332	-0.741132	NAF
NS0087	252	256	NS	BX077011-BX077012	X077011	2			69.33	3.889	0.142	0.054	0.03888	0.02	0.26	0.061	0.013	0.01	0.028	0.066	-0.01	-0.01	-0.01	-0.03	463	0.306	1.063962	-0.757962	NAF
NS0087	84	88	NS	BX076923-BX076924	X076923	2			64.31	7.659	0.402	0.07	0.0504	0.035	0.526	0.072	0.01	0.016	0.139	0.089	-0.01	-0.01	-0.01	-0.03	420	0.4896	1.255824	-0.766224	NAF
NS0087	326	330	NS	BX077051-BX077052	X077051	2			70	2.463	0.043	0.039	0.02808	0.011	0.144	0.046	0.009	0.001	0.024	0.064	-0.01	-0.01	-0.01	-0.03	483	0.0306	0.802332	-0.771732	NAF
NS0087	268	272	NS	BX077019-BX077020	X077019	2			66.5	5.216	0.345	0.056	0.04032	0.031	0.411	0.08	0.018	0.02	0.07	0.081	-0.01	-0.01	-0.01	-0.03	467	0.612	1.39536	-0.78336	NAF
NS0087	264	268	NS	BX077017-BX077018	X077017	2			69.11	2.893	0.083	0.045	0.0324	0.016	0.194	0.052	0.01	0.004	0.024	0.053	-0.01	-0.01	-0.01	-0.03	466	0.1224	0.906984	-0.784584	NAF
NS0087	280	284	NS	BX077025-BX077026	X077025	2			66.87	5.46	0.236	0.063	0.04536	0.031	0.363	0.063	0.012	0.01	0.033	0.065	-0.01	-0.01	-0.01	-0.03	470	0.306	1.098846	-0.792846	NAF
NS0087	300	304	NS	BX077037-BX077038	X077037	2			67.9	4.712	0.131	0.049	0.03528	0.017	0.253	0.052	0.008	0.003	0.031	0.061	-0.01	-0.01	-0.01	-0.03	476	0.0918	0.906984	-0.815184	NAF
NS0087	354	358	NS	BX077065-BX077066	X077065	2			70.19	2.577	0.063	0.04	0.0288	0.012	0.156	0.053	0.01	0.003	0.025	0.06	-0.01	-0.01	-0.01	-0.03	490	0.0918	0.924426	-0.832626	NAF
NS0087	308	312	NS	BX077041-BX077042	X077041	2			68.91	5.018	0.149	0.05	0.036	0.017	0.275	0.057	0.008	0.005	0.047	0.073	-0.01	-0.01	-0.01	-0.03	478	0.153	0.994194	-0.841194	NAF
NS0087	122	126	NS	BX076943-BX076944	X076943	2			66.8	6.789	0.303	0.07	0.0504	0.029	0.417	0.08	0.014	0.018	0.072	0.081	-0.01	-0.01	-0.01	-0.03	429	0.5508	1.39536	-0.84456	NAF
NS0087	238	240	NS	BX077003	X077003	2			68.2	3.871	0.138	0.057	0.04104	0.019	0.257	0.059	0.012	0.006	0.022	0.062	-0.01	-0.01	-0.01	-0.03	459	0.1836	1.029078	-0.845478	NAF
NS0087	368	372	NS	BX077073-BX077074	X077073	2			69.68	2.578	0.058	0.038	0.02736	0.009	0.158	0.052	0.008	0.002	0.031	0.054	-0.01	-0.01	-0.01	-0.03	494	0.0612	0.906984	-0.845784	NAF
NS0087	176	180	NS	BX076971-BX076972	X076971	2			66.97	5.817	0.267	0.067	0.04824	0.027	0.414	0.074	0.01	0.014	0.094	0.11	-0.01	-0.01	-0.01	-0.03	443	0.4284	1.290708	-0.862308	NAF
NS0087	196	198	NS	BX076981	X076981	2			65.77	6.759	0.361	0.072	0.05184	0.031	0.497	0.078	0.011	0.016	0.124	0.138	-0.01	-0.01	-0.01	-0.03	448	0.4896	1.360476	-0.870876	NAF
NS0087	188	192	NS	BX076977-BX076978	X076977	2			68.03	4.861	0.162	0.05	0.036	0.03	0.296	0.064	0.01	0.008	0.055	0.083	-0.01	-0.01	-0.01	-0.03	446	0.2448	1.116288	-0.871488	NAF
NS0087	384	388	NS	BX077081-BX077082	X077081	2			69.68	3.25	0.052	0.043	0.03096	0.013	0.159	0.052	0.007	0.001	0.032	0.06	-0.01	-0.01	-0.01	-0.03	498	0.0306	0.906984	-0.876384	NAF
NS0087	192	196	NS	BX076979-BX076980	X076979	2			68.63	4.144	0.184	0.054	0.03888	0.027	0.307	0.065	0.01	0.008	0.061	0.081	-0.01	-0.01	-0.01	-0.03	447	0.2448	1.13373	-0.88893	NAF
NS0087	256	260	NS	BX077013-BX077014	X077013	2			69.62	3.383	0.107	0.046	0.03312	0.017	0.222	0.062	0.013	0.006	0.022	0.058	-0.01	-0.01	-0.01	-0.03	464	0.1836	1.081404	-0.897804	NAF
NS0087	272	276	NS	BX077021-BX077022	X077021	2			68.71	4.414	0.168	0.051	0.03672	0.02	0.294	0.062	0.012	0.006	0.036	0.077	-0.01	-0.01	-0.01	-0.03	468	0.1836	1.081404	-0.897804	NAF
NS0087	372	376	NS	BX077075-BX077076	X077075	2			69.66	2.764	0.052	0.043	0.03096	0.007	0.16	0.056	0.009	0.002	0.036	0.062	-0.01	-0.01	-0.01	-0.03	495	0.0612	0.976752	-0.915552	NAF
NS0087	184	188	NS	BX076975-BX076976	X076975	2			67.32	5.118	0.184	0.058	0.04176	0.031	0.336	0.065	0.01	0.007	0.067	0.075	-0.01	-0.01	-0.01	-0.03	445	0.2142	1.13373	-0.91953	NAF
NS0087	298	300	NS	BX077035	X077035	2			67.17	5.67	0.193	0.054	0.03888	0.019	0.316	0.062	0.01	0.005	0.047	0.071	-0.01	-0.01	-0.01	-0.03	475	0.153	1.081404	-0.928404	NAF
NS0087	222	226	NS	BX076995-BX076996	X076995	2			66.84	6.073	0.275	0.059	0.04248	0.029	0.407	0.078	0.01	0.014	0.067	0.113	-0.01	-0.01	-0.01	-0.03	455	0.4284	1.360476	-0.932076	NAF
NS0087	396	400	NS	BX077087-BX077088	X077087	2			69.46	3.16	0.049	0.04	0.0288	0.009	0.164	0.057	0.009	0.002	0.018	0.053	-0.01	-0.01	-0.01	-0.03	501	0.0612	0.994194	-0.932994	NAF
NS0087	304	308	NS	BX077039-BX077040	X077039	2			68.35	4.953	0.135	0.053	0.03816	0.017	0.26	0.061	0.01	0.004	0.036	0.067	-0.01	-0.01	-0.01	-0.03	477	0.1224	1.063962	-0.941562	NAF
NS0087	312	316	NS	BX077043-BX077044	X077043	2			68.7	4.329	0.131	0.047	0.03384	0.016	0.262	0.061	0.011	0.004	0.037	0.066	-0.01	-0.01	-0.01	-0.03	479	0.1224	1.063962	-0.941562	NAF
NS0087	240	244	NS	BX077005-BX077006	X077005	2			69.58	3.15	0.086	0.051	0.03672	0.016	0.203	0.062	0.012	0.004	0.02	0.058	-0.01	-0.01	-0.01	-0.03	460	0.1224	1.081404	-0.959004	NAF
NS0087	126	130	NS	BX076945-BX076946	X076945	2			66.11	6.402	0.279	0.068	0.04896	0.025	0.395	0.071	0.013	0.009	0.069	0.079	-0.01	-0.01	-0.01	-0.03	430	0.2754	1.238382	-0.962982	NAF
NS0087	172	176	NS	BX076969-BX076970	X076969	2			66.31	5.794	0.245	0.056	0.04032	0.026	0.386	0.073	0.014	0.01	0.083	0.093	-0.01	-0.01	-0.01	-0.03	442	0.306	1.273266	-0.967266	NAF
NS0087	392	396	NS	BX077085-BX077086	X077085	2			68.7	3.593	0.072	0.057	0.04104	0.009	0.204	0.061	0.012	0.003	0.028	0.059	-0.01	-0.01	-0.01	-0.03	500	0.0918	1.063962	-0.972162	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0087	376	380	NS	BX077077-BX077078	X077077	2			69.16	3.887	0.104	0.055	0.0396	0.009	0.207	0.063	0.011	0.004	0.065	0.323	-0.01	-0.01	-0.01	-0.03	496	0.1224	1.098846	-0.976446	NAF
NS0087	180	184	NS	BX076973-BX076974	X076973	2			65.82	5.79	0.248	0.06	0.0432	0.024	0.395	0.067	0.009	0.006	0.092	0.082	-0.01	-0.01	-0.01	-0.03	444	0.1836	1.168614	-0.985014	NAF
NS0087	248	252	NS	BX077009-BX077010	X077009	2			69.02	3.984	0.128	0.056	0.04032	0.018	0.256	0.067	0.014	0.006	0.022	0.077	-0.01	-0.01	-0.01	-0.03	462	0.1836	1.168614	-0.985014	NAF
NS0087	380	384	NS	BX077079-BX077080	X077079	2			70.11	3.24	0.072	0.054	0.03888	0.01	0.184	0.059	0.009	0.001	0.046	0.061	-0.01	-0.01	-0.01	-0.03	497	0.0306	1.029078	-0.998478	NAF
NS0087	218	222	NS	BX076993-BX076994	X076993	2			66.46	5.314	0.265	0.065	0.0468	0.026	0.418	0.084	0.016	0.015	0.083	0.144	-0.01	-0.01	-0.01	-0.03	454	0.459	1.465128	-1.006128	NAF
NS0087	160	164	NS	BX076963-BX076964	X076963	2			69.31	3.567	0.123	0.048	0.03456	0.017	0.203	0.07	0.01	0.007	0.075	0.068	-0.01	-0.01	-0.01	-0.03	439	0.2142	1.22094	-1.00674	NAF
NS0087	130	134	NS	BX076947-BX076948	X076947	2			68.07	4.373	0.143	0.06	0.0432	0.016	0.274	0.074	0.012	0.008	0.037	0.074	-0.01	-0.01	-0.01	-0.03	431	0.2448	1.290708	-1.045908	NAF
NS0087	364	368	NS	BX077071-BX077072	X077071	2			69.83	2.952	0.07	0.042	0.03024	0.015	0.165	0.074	0.012	0.008	0.043	0.051	-0.01	-0.01	-0.01	-0.03	493	0.2448	1.290708	-1.045908	NAF
NS0087	260	264	NS	BX077015-BX077016	X077015	2			70.25	3.141	0.071	0.039	0.02808	0.013	0.183	0.067	0.014	0.004	0.017	0.069	-0.01	-0.01	-0.01	-0.03	465	0.1224	1.168614	-1.046214	NAF
NS0087	234	238	NS	BX077001-BX077002	X077001	2			69.11	4.063	0.087	0.053	0.03816	0.015	0.218	0.068	0.013	0.004	0.02	0.059	-0.01	-0.01	-0.01	-0.03	458	0.1224	1.186056	-1.063656	NAF
NS0087	114	118	NS	BX076939-BX076940	X076939	2			66.56	7.155	0.337	0.084	0.06048	0.03	0.485	0.083	0.015	0.012	0.086	0.1	-0.01	-0.01	-0.01	-0.03	427	0.3672	1.447686	-1.080486	NAF
NS0087	350	354	NS	BX077063-BX077064	X077063	2			65.53	6.941	0.295	0.072	0.05184	0.03	0.442	0.08	0.013	0.01	0.074	0.078	-0.01	-0.01	-0.01	-0.03	489	0.306	1.39536	-1.08936	NAF
NS0087	362	364	NS	BX077070	X077070	2			69.67	2.917	0.06	0.038	0.02736	0.01	0.152	0.066	0.012	0.002	0.043	0.063	-0.01	-0.01	-0.01	-0.03	492	0.0612	1.151172	-1.089972	NAF
NS0087	244	248	NS	BX077007-BX077008	X077007	2			69.69	3.109	0.061	0.047	0.03384	0.012	0.193	0.071	0.013	0.004	0.016	0.065	-0.01	-0.01	-0.01	-0.03	461	0.1224	1.238382	-1.115982	NAF
NS0087	388	392	NS	BX077083-BX077084	X077083	2			69.37	3.746	0.079	0.044	0.03168	0.01	0.194	0.071	0.009	0.004	0.027	0.056	-0.01	-0.01	-0.01	-0.03	499	0.1224	1.238382	-1.115982	NAF
NS0087	320	324	NS	BX077047-BX077048	X077047	2			68.69	5.042	0.162	0.061	0.04392	0.02	0.3	0.076	0.015	0.006	0.046	0.078	-0.01	-0.01	-0.01	-0.03	481	0.1836	1.325592	-1.141992	NAF
NS0087	110	114	NS	BX076937-BX076938	X076937	2			67.61	5.098	0.207	0.059	0.04248	0.018	0.322	0.081	0.012	0.007	0.059	0.09	-0.01	-0.01	-0.01	-0.03	426	0.2142	1.412802	-1.198602	NAF
NS0087	290	294	NS	BX077031-BX077032	X077031	2			67.98	5.243	0.161	0.065	0.0468	0.018	0.312	0.088	0.015	0.009	0.032	0.118	-0.01	-0.01	-0.01	-0.03	473	0.2754	1.534896	-1.259496	NAF
NS0087	286	288	NS	BX077029	X077029	2			66.19	6.879	0.2	0.053	0.03816	0.024	0.328	0.087	0.015	0.008	0.033	0.071	-0.01	-0.01	-0.01	-0.03	472	0.2448	1.517454	-1.272654	NAF
NS0087	72	76	NS	BX076917-BX076918	X076917	2			66.28	6.075	0.248	0.063	0.04536	0.029	0.367	0.086	0.012	0.007	0.09	0.074	-0.01	-0.01	-0.01	-0.03	417	0.2142	1.500012	-1.285812	NAF
NS0087	198	202	NS	BX076983-BX076984	X076983	2			68.1	4	0.134	0.05	0.036	0.02	0.278	0.085	0.01	0.006	0.048	0.089	-0.01	-0.01	-0.01	-0.03	449	0.1836	1.48257	-1.29897	NAF
NS0087	164	168	NS	BX076965-BX076966	X076965	2			67.71	5.185	0.184	0.054	0.03888	0.02	0.328	0.086	0.012	0.006	0.057	0.076	-0.01	-0.01	-0.01	-0.03	440	0.1836	1.500012	-1.316412	NAF
NS0087	42	46	NS	BX076901-BX076902	X076901	2			66.92	3.848	0.119	0.068	0.04896	0.02	0.194	0.079	0.014	0.002	0.027	0.063	-0.01	-0.01	-0.01	-0.03	409	0.0612	1.377918	-1.316718	NAF
NS0087	118	122	NS	BX076941-BX076942	X076941	2			68.41	4.947	0.192	0.068	0.04896	0.027	0.317	0.09	0.015	0.008	0.038	0.09	-0.01	-0.01	-0.01	-0.03	428	0.2448	1.56978	-1.32498	NAF
NS0087	230	234	NS	BX076999-BX077000	X076999	2			68.11	4.69	0.16	0.056	0.04032	0.014	0.238	0.089	0.013	0.006	0.02	0.067	-0.01	-0.01	-0.01	-0.03	457	0.1836	1.552338	-1.368738	NAF
NS0087	134	138	NS	BX076949-BX076950	X076949	2			67.33	5.065	0.187	0.065	0.0468	0.025	0.313	0.1	0.02	0.012	0.043	0.086	-0.01	-0.01	-0.01	-0.03	432	0.3672	1.7442	-1.377	NAF
NS0087	80	84	NS	BX076921-BX076922	X076921	2			66.18	6.695	0.287	0.068	0.04896	0.029	0.419	0.093	0.014	0.008	0.108	0.086	-0.01	-0.01	-0.01	-0.03	419	0.2448	1.622106	-1.377306	NAF
NS0087	76	80	NS	BX076919-BX076920	X076919	2			64.61	7.015	0.299	0.076	0.05472	0.036	0.429	0.097	0.01	0.01	0.105	0.08	-0.01	-0.01	-0.01	-0.03	418	0.306	1.691874	-1.385874	NAF
NS0087	92	96	NS	BX076928-BX076929	X076928	2			66.3	6.13	0.232	0.06	0.0432	0.025	0.369	0.096	0.016	0.009	0.083	0.082	-0.01	-0.01	-0.01	-0.03	422	0.2754	1.674432	-1.399032	NAF
NS0087	106	110	NS	BX076935-BX076936	X076935	2			67.6	5.743	0.222	0.064	0.04608	0.022	0.353	0.095	0.015	0.008	0.06	0.089	-0.01	-0.01	-0.01	-0.03	425	0.2448	1.65699	-1.41219	NAF
NS0087	294	298	NS	BX077033-BX077034	X077033	2			68.73	4.383	0.153	0.051	0.03672	0.023	0.257	0.095	0.019	0.008	0.031	0.078	-0.01	-0.01	-0.01	-0.03	474	0.2448	1.65699	-1.41219	NAF
NS0087	316	320	NS	BX077045-BX077046	X077045	2			67.66	5.714	0.149	0.053	0.03816	0.017	0.283	0.09	0.02	0.005	0.039	0.068	-0.01	-0.01	-0.01	-0.03	480	0.153	1.56978	-1.41678	NAF
NS0087	64	68	NS	BX076913-BX076914	X076913	2			67.06	5.771	0.196	0.059	0.04248	0.026	0.334	0.098	0.01	0.008	0.077	0.069	-0.01	-0.01	-0.01	-0.03	415	0.2448	1.709316	-1.464516	NAF
NS0087	168	172	NS	BX076967-BX076968	X076967	2			66.98	5.66	0.213	0.059	0.04248	0.019	0.36	0.107	0.017	0.01	0.071	0.106	-0.01	-0.01	-0.01	-0.03	441	0.306	1.866294	-1.560294	NAF
NS0087	144	148	NS	BX076955-BX076956	X076955	2			68.38	4.187	0.117	0.05	0.036	0.015	0.235	0.098	0.012	0.003	0.029	0.066	-0.01	-0.01	-0.01	-0.03	435	0.0918	1.709316	-1.617516	NAF
NS0087	98	102	NS	BX076931-BX076932	X076931	2			65.77	7.111	0.322	0.082	0.05904	0.034	0.459	0.12	0.021	0.012	0.093	0.093	-0.01	-0.01	-0.01	-0.03	423	0.3672	2.09304	-1.72584	NAF
NS0087	102	106	NS	BX076933-BX076934	X076933	2			66.87	6.346	0.248	0.077	0.05544	0.024	0.371	0.115	0.016	0.009	0.063	0.084	-0.01	-0.01	-0.01	-0.03	424	0.2754	2.00583	-1.73043	NAF
NS0087	68	72	NS	BX076915-BX076916	X076915	2			65.86	6.76	0.246	0.074	0.05328	0.026	0.378	0.116	0.015	0.009	0.089	0.082	-0.01	-0.01	-0.01	-0.03	416	0.2754	2.023272	-1.747872	NAF
NS0087	270	272	NS	X070020	070020	1	G	W	33.33	39.53	2.86	0.4515	0.35	0.128	3.27	0.42	0.085	0.182	0.461	0.128	0.44	3.83	0.15	4.42	13536	5.5692	7.32564	-1.75644	NAF
NS0087	206	210	NS	BX076987-BX076988	X076987	2			67.77	4.728	0.153	0.057	0.04104	0.019	0.275	0.12	0.018	0.007	0.029	0.076	-0.01	-0.01	-0.01	-0.03	451	0.2142	2.09304	-1.87884	NAF
NS0087	60	64	NS	BX076911-BX076912	X076911	2			66.85	4.986	0.147	0.063	0.04536	0.02	0.278	0.122	0.01	0.006	0.056	0.061	-0.01	-0.01	-0.01	-0.03	414	0.1836	2.127924	-1.944324	NAF
NS0087	138	142	NS	BX076951-BX076952	X076951	2			66.75	6.725	0.233	0.075	0.054	0.02	0.363	0.129	0.023	0.009	0.054	0.08	-0.01	-0.01	-0.01	-0.03	433	0.2754	2.250018	-1.974618	NAF
NS0087	156	160	NS	BX076961-BX076962	X076961	2			66.04	6.411	0.205	0.074	0.05328	0.023	0.369	0.131	0.014	0.007	0.05	0.078	-0.01	-0.01	-0.01	-0.03	438	0.2142	2.284902	-2.070702	NAF
NS0087	46	50	NS	BX076903-BX076904	X076903	2			66.46	5.29	0.196	0.071	0.05112	0.022	0.315	0.14	0.014	0.009	0.068	0.064	-0.01	-0.01	-0.01	-0.03	410	0.2754	2.44188	-2.16648	NAF
NS0087	148	152	NS	BX076957-BX076958	X076957	2			66.97	5.909	0.225	0.068	0.04896	0.024	0.365	0.142	0.021	0.008	0.047	0.075	-0.01	-0.01	-0.01	-0.03	436	0.2448	2.476764	-2.231964	NAF
NS0087	22	24	NS	X068891	068891	1	G	D	34.52	42.82	1.57	0.0387	0.03	0.068	0.19	0.15	0.062	0.011	0.007	0.036	4.5	0.87	0.13	5.5	13412	0.3366	2.6163	-2.2797	NAF
NS0087	142	144	NS	BX076953	X076953	2			66.7	6.55	0.269	0.068	0.04896	0.023	0.398	0.143	0.018	0.007	0.059	0.082	-0.01	-0.01	-0.01	-0.03	434	0.2142	2.494206	-2.280006	NAF
NS0087	152	154	NS	BX076959	X076959	2			65.39	6.513	0.228	0.074	0.05328	0.024	0.369	0.15	0.023	0.008	0.052	0.079	-0.01	-0.01	-0.01	-0.03	437	0.2448	2.6163	-2.3715	NAF
NS0087	50	54	NS	BX076905-BX076906	X076905	2			67.03	5.478	0.206	0.069	0.04968	0.025	0.337	0.152	0.012	0.009	0.071	0.066	-0.01	-0.01	-0.01	-0.03	411	0.2754	2.651184	-2.375784	NAF
NS0087	56	60	NS	BX076909-BX076910	X076909	2			66.74	6.309	0.231	0.069	0.04968	0.026	0.36	0.156	0.012	0.01	0.087	0.08	-0.01	-0.01	-0.01	-0.03	413	0.306	2.720952	-2.414952	NAF
NS0087	54	56	NS	BX076907	X076907	2			67.07	5.052	0.167	0.065	0.0468	0.022	0.302	0.162	0.01	0.007	0.064	0.064	-0.01	-0.01	-0.01	-0.03	412	0.2142	2.825604	-2.611404	NAF
NS0087	86	88	NS	X068924	068924	1	G	D	30.12	41.42	2.29	0.4386	0.34	0.103	3.22	0.29	0.034	0.063	0.997	0.28	1.11	6.37	0.15	7.63	13444	1.9278	5.05818	-3.13038	NAF
NS0087	20	22	NS	X068890	068890	1	G	D	26.24	49.23	4.95	0.0258	0.02	0.27	0.41	0.26	0.033	0.008	0.032	0.089	4.82	1.92	0.27	7.01	13411	0.2448	4.53492	-4.29012	NAF
NS0087	210	212	NS	X068989	068989	1	G	W	29.12	42.74	1.71	0.6192	0.48	0.074	2.79	0.46	0.078	0.105	0.56	0.157	0.82	8.05	0.09	8.96	13506	3.213	8.02332	-4.81032	NAF
NS0087	76	78	NS	X068919	068919	1	G	D	31.02	40.55	3.08	0.3483	0.27	0.144	3.3	0.49	0.054	0.115	1.31	0.346	1.29	3.81	0.47	5.57	13439	3.519	8.54658	-5.02758	NAF
NS0087	314	316	NS	X070044	070044	1	G	W	35.74	39.04	1.77	0.4773	0.37	0.074	2.56	0.35	0.062	0.035	0.482	0.093	0.3	3.78	-0.25	3.83	13558	1.071	6.1047	-5.0337	NAF
NS0087	206	208	NS	X068987	068987	1	G	W	30.52	39.36	1.92	0.645	0.5	0.084	3.02	0.39	0.077	0.051	0.699	0.194	1	8.7	0.04	9.74	13504	1.5606	6.80238	-5.24178	NAF
NS0087	24	26	NS	X068892	068892	1	G	D	27.36	49.31	3.48	0.0258	0.02	0.219	0.46	0.32	0.04	0.01	0.024	0.106	4.82	1.58	0.27	6.67	13413	0.306	5.58144	-5.27544	NAF
NS0087	114	116	NS	X068939	068939	1	G	D	31.93	42.04	2.4	0.516	0.4	0.106	3.04	0.4	0.058	0.054	0.749	0.2	0.76	3.59	0.09	4.44	13458	1.6524	6.9768	-5.3244	NAF
NS0087	252	254	NS	X070011	070011	1	G	W	35.21	37.2	2.17	0.7482	0.58	0.1	3.03	0.47	0.1	0.09	0.41	0.105	0.36	4.62	-0.09	4.89	13527	2.754	8.19774	-5.44374	NAF
NS0087	26	28	NS	X068893	068893	1	G	D	35.51	39.09	2.51	0.129	0.1	0.122	0.48	0.34	0.074	0.012	0.019	0.052	4.77	1.34	0.09	6.2	13414	0.3672	5.93028	-5.56308	NAF
NS0087	36	38	NS	X068898	068898	1	G	D	33.56	40.66	2.19	1.1739	0.91	0.097	1	0.33	0.065	0.006	0.499	0.16	4.02	1.41	0.19	5.62	13419	0.1836	5.75586	-5.57226	NAF
NS0087	42	44	NS	X068901	068901	1	G	D	36.17	40.56	1.55	0.5934	0.46	0.068	0.56	0.33	0.078	0.004	0.052	0.022	3.17	1.01	0.07	4.25	13422	0.1224	5.75586	-5.63346	NAF
NS0087	280	282	NS	X070025	070025	1	G	W	32.33	37.09	2.67	0.6708	0.52	0.118	3.63	0.74	0.101	0.227	0.387	0.107	0.45	6.69	0.32	7.46	13541	6.9462	12.90708	-5.96088	NAF
NS0087	38	40	NS	X068899	068899	1	G	D	35.21	40.89	1.83	0.4773	0.37	0.082	0.73	0.37	0.055	0.005	0.094	0.025	3.62	1.2	0.08	4.9	13420	0.153	6.45354	-6.30054	NAF
NS0087	300	302	NS	X070037	070037	1	G	W	36.06	38.23	1.53	0.5547	0.43	0.068	2.42	0.44	0.065	0.034	0.394	0.075	0.28	4.38	-0.26	4.4	13551	1.0404	7.67448	-6.63408	NAF
NS0087	40	42	NS	X068900	068900	1	G	D	34.91	40.64	1.94	0.6966	0.54	0.086	0.8	0.39	0.059	0.005	0.07	0.03	3.74	1.26	0.11	5.11	13421	0.153	6.80238	-6.64938	NAF
NS0087	32	34	NS	X068896	068896	1	G	D	28.27	49.14	2.61	0.4515	0.35	0.119	0.94	0.4	0.046	0.005	0.399	0.167	3.41	1.48	0.12	5.01	13417	0.153	6.9768	-6.8238	NAF
NS0087	34	36	NS	X068897	068897	1	G	D	30.04	44.04	3.19	0.5805	0.45	0.156	1.28	0.42	0.08	0.005	0.695	0.265	4.05	1.8	0.18	6.03	13418	0.153	7.32564	-7.17264	NAF
NS0087	190	192	NS	X068978	068978	1	G	W	26.1	51.22	1.44	0.3741	0.29	0.066	2.14	0.74	0.064	0.183	0.496	0.137	0.54	4.43	0.47	5.44	13496	5.5998	12.90708	-7.30728	NAF
NS0087	30	32	NS	X068895	068895	1	G	D	32.01	44.03	2.4	0.7353	0.57	0.105	0.71	0.45	0.056	0.005	0.104	0.071	3.82	1.39	0.11	5.32	13416	0.153	7.8489	-7.6959	NAF
NS0087	254	256	NS	X070012	070012	1	G	W	34.74	37.51	2.36	0.6837	0.53	0.105	3.08	0.65	0.123	0.115	0.428	0.099	0.37	4.26	0.03	4.66	13528	3.519	11.3373	-7.8183	NAF
NS0087	250	252	NS	X070010	070010	1	G	W	36.28	36.65	1.88	0.7224	0.56	0.082	2.76	0.61	0.115	0.071	0.333	0.081	0.26	4.37	-0.21	4.42	13526	2.1726	10.63962	-8.46702	NAF
NS0087	256	258	NS	X070013	070013	1	G	W	34.97	36.62	2.33	0.7224	0.56	0.108	3.22	0.78	0.096	0.161	0.425	0.097	0.34	4.51	0.13	4.98	13529	4.9266	13.60476	-8.67816	NAF
NS0087	196	198	NS	X068981	068981	1	G	W	32.89	38	2.16	0.5031	0.39	0.1	3.02	0.61	0.073	0.064	0.866	0.25	0.91	6.02	0.11	7.04	13499	1.9584	10.63962	-8.68122	NAF
NS0087	28	30	NS	X068894	068894	1	G	D	33.13	41.45	3.14	0.4257	0.33	0.13	0.7	0.52	0.063	0.008	0.062	0.059	4.09	1.66	0.09	5.84	13415	0.2448	9.06984	-8.82504	NAF
NS0087	176	178	NS	X068971	068971	1	G	W	34.85	35.97	1.89	0.5547	0.43	0.084	2.96	0.64	0.064	0.065	0.766	0.213	0.79	5.91	0.09	6.79	13489	1.989	11.16288	-9.17388	NAF
NS0087	316	318	NS	X070045	070045	1	G	W	36.01	37.68	1.44	0.6321	0.49	0.067	2.57	0.59	0.095	0.035	0.357	0.059	0.28	4.69	-0.15	4.82	13559	1.071	10.29078	-9.21978	NAF
NS0087	332	334	NS	X070054	070054	1	G	W	35.38	35.15	1.98	0.8256	0.64	0.085	2.98	1.09	0.158	0.318	0.571	0.058	0.24	4.62	0.54	5.4	13567	9.7308	19.01178	-9.28098	NAF
NS0087	306	308	NS	X070040	070040	1	G	W	35.64	37.92	1.64	0.5934	0.46	0.07	2.64	0.6	0.09	0.036	0.413	0.079	0.25	4.66	-0.22	4.69	13554	1.1016	10.4652	-9.3636	NAF
NS0087	322	324	NS	X070048	070048	1	G	W	36.7	35.73	1.62	0.7095	0.55	0.073	2.73	0.71	0.103	0.087	0.431	0.078	0.24	4.8	-0.08	4.96	13562	2.6622	12.38382	-9.72162	NAF
NS0087	128	130	NS	X068946	068946	1	G	W	31.42	43.05	2.41	0.4902	0.38	0.106	3.02	0.69	0.042	0.055	0.648	0.185	0.63	3.26	0.3	4.19	13465	1.683	12.03498	-10.35198	NAF
NS0087	284	286	NS	X070027	070027	1	G	W	29.62	41.75	2.57	0.6192	0.48	0.12	3.43	0.89	0.179	0.164	0.321	0.093	0.42	6.32	0.24	6.98	13543	5.0184	15.52338	-10.50498	NAF
NS0087	130	132	NS	X068947	068947	1	G	W	35.39	38.19	1.82	0.5805	0.45	0.079	2.6	0.69	0.123	0.043	0.543	0.156	0.5	3.84	-0.03	4.31	13466	1.3158	12.03498	-10.71918	NAF
NS0087	84	86	NS	X068923	068923	1	G	D	31.2	40.78	2.03	0.4644	0.36	0.09	2.88	0.83	0.07	0.115	0.901	0.249	0.91	5.35	0.39	6.65	13443	3.519	14.47686	-10.95786	NAF
NS0087	302	304	NS	X070038	070038	1	G	W	35.45	38.92	1.54	0.5547	0.43	0.067	2.45	0.7	0.081	0.036	0.335	0.068	0.24	4.16	-0.06	4.34	13552	1.1016	12.2094	-11.1078	NAF
NS0087	298	300	NS	X070035	070035	1	G	W	34.74	39.93	1.72	0.5031	0.39	0.076	2.49	0.72	0.077	0.045	0.412	0.075	0.24	3.85	-0.05	4.04	13550	1.377	12.55824	-11.18124	NAF
NS0087	174	176	NS	X068970	068970	1	G	W	34.23	37.83	2.02	0.4644	0.36	0.095	2.87	0.76	0.066	0.066	0.772	0.21	0.74	4.72	0.2	5.66	13488	2.0196	13.25592	-11.23632	NAF
NS0087	192	194	NS	X068979	068979	1	G	W	28.2	42.29	2.22	0.516	0.4	0.096	3.15	0.85	0.117	0.107	0.754	0.197	1.21	7.57	0.37	9.15	13497	3.2742	14.8257	-11.5515	NAF
NS0087	238	240	NS	X070003	070003	1	G	W	35.48	37.46	1.58	0.8256	0.64	0.069	2.58	0.78	0.103	0.065	0.3	0.072	0.32	4.86	0	5.18	13520	1.989	13.60476	-11.61576	NAF
NS0087	78	80	NS	X068920	068920	1	G	D	31.86	38.79	2.03	0.5289	0.41	0.09	2.9	0.76	0.054	0.05	0.903	0.241	1.01	6.58	0.34	7.93	13440	1.53	13.25592	-11.72592	NAF
NS0087	288	290	NS	X070030	070030	1	G	W	36.04	37.88	1.34	0.5805	0.45	0.058	2.28	0.75	0.087	0.036	0.208	0.058	0.22	4.77	-0.1	4.89	13545	1.1016	13.0815	-11.9799	NAF
NS0087	274	276	NS	X070022	070022	1	G	W	30.84	41.62	1.82	0.5805	0.45	0.081	3	0.82	0.119	0.053	0.473	0.117	0.48	6.33	0.08	6.89	13538	1.6218	14.30244	-12.68064	NAF
NS0087	170	172	NS	X068968	068968	1	G	W	35.46	35.99	1.64	0.5031	0.39	0.074	2.73	0.85	0.152	0.063	0.649	0.194	0.65	5.46	0.01	6.12	13486	1.9278	14.8257	-12.8979	NAF
NS0087	126	128	NS	X068945	068945	1	G	W	31.84	40.85	2.02	0.6837	0.53	0.091	3.01	0.9	0.123	0.09	0.598	0.165	0.63	4.74	0.29	5.66	13464	2.754	15.6978	-12.9438	NAF
NS0087	172	174	NS	X068969	068969	1	G	W	34.12	38.78	1.54	0.4515	0.35	0.068	2.52	0.84	0.138	0.055	0.629	0.175	0.61	4.95	0	5.56	13487	1.683	14.65128	-12.96828	NAF
NS0087	100	102	NS	X068932	068932	1	G	D	28.88	41.87	3.95	0.4257	0.33	0.17	3.97	1.09	0.182	0.196	0.975	0.279	1.03	3.22	0.74	4.99	13451	5.9976	19.01178	-13.01418	NAF
NS0087	218	220	NS	X068993	068993	1	G	W	32.84	37.71	1.97	0.5547	0.43	0.091	3.05	0.87	0.166	0.07	0.703	0.199	0.72	6.45	0.08	7.25	13510	2.142	15.17454	-13.03254	NAF
NS0087	182	184	NS	X068974	068974	1	G	W	34.49	36.23	1.79	0.4902	0.38	0.083	2.79	0.88	0.102	0.064	0.792	0.224	0.82	5.9	0.2	6.92	13492	1.9584	15.34896	-13.39056	NAF
NS0087	308	310	NS	X070041	070041	1	G	W	35.03	38.92	1.52	0.5676	0.44	0.067	2.54	0.83	0.06	0.033	0.403	0.07	0.27	4.35	0.12	4.74	13555	1.0098	14.47686	-13.46706	NAF
NS0087	266	268	NS	X070018	070018	1	G	W	30.59	43.23	1.43	0.6966	0.54	0.067	2.57	1.36	0.084	0.333	0.321	0.063	0.25	4.58	0.79	5.62	13534	10.1898	23.72112	-13.53132	NAF
NS0087	268	270	NS	X070019	070019	1	G	W	28.13	40.95	3.92	0.645	0.5	0.184	4.07	1.27	0.281	0.281	0.921	0.17	0.59	4.95	0.69	6.23	13535	8.5986	22.15134	-13.55274	NAF
NS0087	272	274	NS	X070021	070021	1	G	W	32.44	42.21	1.22	0.516	0.4	0.055	2.4	0.84	0.093	0.032	0.29	0.077	0.3	5.19	0.1	5.59	13537	0.9792	14.65128	-13.67208	NAF
NS0087	80	82	NS	X068921	068921	1	G	D	34.49	37.49	1.55	0.5289	0.41	0.067	2.41	0.84	0.079	0.03	0.685	0.185	0.73	5.82	0.13	6.68	13441	0.918	14.65128	-13.73328	NAF
NS0087	202	204	NS	X068985	068985	1	G	W	36.37	34.88	1.42	0.4902	0.38	0.063	2.45	0.86	0.082	0.038	0.613	0.17	0.61	6.09	0.1	6.8	13502	1.1628	15.00012	-13.83732	NAF
NS0087	154	156	NS	X068960	068960	1	G	W	33.36	39.81	2.13	0.5547	0.43	0.095	2.92	0.91	0.085	0.059	0.54	0.148	0.49	4.04	0.25	4.78	13478	1.8054	15.87222	-14.06682	NAF
NS0087	66	68	NS	X068914	068914	1	G	D	32.69	39.76	1.95	0.4257	0.33	0.09	2.74	0.94	0.055	0.058	0.871	0.251	0.95	4.55	0.4	5.9	13434	1.7748	16.39548	-14.62068	NAF
NS0087	98	100	NS	X068931	068931	1	G	D	31.34	39.04	2.36	0.645	0.5	0.112	3.16	1.25	0.228	0.23	0.713	0.214	0.78	5.12	0.6	6.5	13450	7.038	21.8025	-14.7645	NAF
NS0087	220	222	NS	X068994	068994	1	G	W	31.39	40.05	1.53	0.6579	0.51	0.067	2.87	0.94	0.103	0.047	0.533	0.143	0.61	7.03	0.27	7.91	13511	1.4382	16.39548	-14.95728	NAF
NS0087	194	196	NS	X068980	068980	1	G	W	31.28	39.46	1.88	0.5805	0.45	0.079	2.95	0.97	0.141	0.043	0.777	0.208	0.79	6.84	0.25	7.88	13498	1.3158	16.91874	-15.60294	NAF
NS0087	184	186	NS	X068975	068975	1	G	W	35.64	35.05	1.35	0.5934	0.46	0.057	2.61	1.03	0.168	0.053	0.595	0.167	0.65	6.41	0.07	7.13	13493	1.6218	17.96526	-16.34346	NAF
NS0087	134	136	NS	X068949	068949	1	G	W	33.09	40.37	2.14	0.5547	0.43	0.094	2.82	1.02	0.265	0.047	0.553	0.15	0.59	3.65	0	4.24	13468	1.4382	17.79084	-16.35264	NAF
NS0087	216	218	NS	X068992	068992	1	G	W	32.79	39.63	1.18	0.5547	0.43	0.052	2.44	1.04	0.13	0.048	0.463	0.125	0.54	6.51	0.19	7.24	13509	1.4688	18.13968	-16.67088	NAF
NS0087	394	396	NS	X070086	070086	1	G	W	35.82	28.95	0.92	1.032	0.8	0.035	3.06	1.04	0.155	0.043	0.405	0.067	0.8	11.99	0.11	12.9	13598	1.3158	18.13968	-16.82388	NAF
NS0087	392	394	NS	X070085	070085	1	G	W	34.02	34.78	0.93	0.903	0.7	0.037	2.65	1.02	0.149	0.03	0.394	0.055	0.64	9.26	0.11	10.01	13597	0.918	17.79084	-16.87284	NAF
NS0087	116	118	NS	X068940	068940	1	G	D	30.71	42.5	2.08	0.6321	0.49	0.095	2.99	1.12	0.145	0.078	0.61	0.161	0.6	4.32	0.4	5.32	13459	2.3868	19.53504	-17.14824	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0087	318	320	NS	X070046	070046	1	G	W	32.98	42.18	1.39	0.5418	0.42	0.063	2.38	1.05	0.104	0.034	0.346	0.073	0.24	3.85	0.28	4.37	13560	1.0404	18.3141	-17.2737	NAF
NS0087	338	340	NS	X070057	070057	1	G	W	35.79	37.37	1.52	0.7869	0.61	0.068	2.46	1.09	0.119	0.05	0.673	0.048	0.12	3.93	0.19	4.24	13570	1.53	19.01178	-17.48178	NAF
NS0087	336	338	NS	X070056	070056	1	G	W	35.28	36.75	1.69	0.7998	0.62	0.073	2.58	1.34	0.185	0.191	0.779	0.069	0.15	3.95	0.35	4.45	13569	5.8446	23.37228	-17.52768	NAF
NS0087	292	294	NS	X070032	070032	1	G	W	33.06	39.39	1.71	0.6708	0.52	0.074	2.84	1.14	0.103	0.074	0.282	0.073	0.31	5.36	0.35	6.02	13547	2.2644	19.88388	-17.61948	NAF
NS0087	96	98	NS	X068930	068930	1	G	D	31.17	38.12	1.94	0.7095	0.55	0.085	3.15	1.19	0.232	0.1	0.798	0.229	0.99	7.1	0.29	8.38	13449	3.06	20.75598	-17.69598	NAF
NS0087	180	182	NS	X068973	068973	1	G	W	38.06	33.15	1.34	0.4902	0.38	0.061	2.42	1.09	0.087	0.031	0.589	0.175	0.59	5.22	0.22	6.03	13491	0.9486	19.01178	-18.06318	NAF
NS0087	340	342	NS	X070058	070058	1	G	W	34.13	38.78	2.07	0.6837	0.53	0.092	2.86	1.26	0.084	0.125	0.727	0.059	0.18	3.39	0.53	4.1	13571	3.825	21.97692	-18.15192	NAF
NS0087	198	200	NS	X068983	068983	1	G	W	34.91	34.9	1.74	0.5031	0.39	0.078	2.76	1.17	0.111	0.067	0.708	0.204	1.45	5.81	0.28	7.54	13500	2.0502	20.40714	-18.35694	NAF
NS0087	264	266	NS	X070017	070017	1	G	W	34.27	36.08	1.81	0.8385	0.65	0.077	2.9	1.27	0.189	0.12	0.476	0.089	0.58	5.86	0.25	6.69	13533	3.672	22.15134	-18.47934	NAF
NS0087	92	94	NS	X068928	068928	1	G	D	33.27	38.53	1.31	0.5418	0.42	0.055	2.47	1.15	0.134	0.04	0.571	0.144	0.62	6.37	0.3	7.29	13447	1.224	20.0583	-18.8343	NAF
NS0087	360	362	NS	X070068	070068	1	G	W	37.05	37.27	1.55	0.5418	0.42	0.068	2.25	1.14	0.126	0.034	0.646	0.06	0.1	2.67	0.23	3	13581	1.0404	19.88388	-18.84348	NAF
NS0087	276	278	NS	X070023	070023	1	G	W	27.45	41.18	2.36	0.7611	0.59	0.105	3.69	1.43	0.314	0.193	0.48	0.136	0.62	8.17	0.51	9.3	13539	5.9058	24.94206	-19.03626	NAF
NS0087	118	120	NS	X068941	068941	1	G	D	28.71	46.18	1.16	0.774	0.6	0.046	2.38	1.17	0.083	0.044	0.325	0.084	0.43	5.69	0.49	6.61	13460	1.3464	20.40714	-19.06074	NAF
NS0087	106	108	NS	X068935	068935	1	G	D	35.61	38.23	1.73	0.5418	0.42	0.079	2.4	1.19	0.116	0.055	0.479	0.138	0.47	3.05	0.31	3.83	13454	1.683	20.75598	-19.07298	NAF
NS0087	334	336	NS	X070055	070055	1	G	W	33.81	41.05	1.37	0.6837	0.53	0.058	2.34	1.23	0.105	0.06	0.436	0.05	0.12	3.46	0.37	3.95	13568	1.836	21.45366	-19.61766	NAF
NS0087	102	104	NS	X068933	068933	1	G	D	34.34	38.57	1.92	0.5934	0.46	0.087	2.59	1.3	0.112	0.095	0.53	0.176	0.51	3.59	0.5	4.6	13452	2.907	22.6746	-19.7676	NAF
NS0087	260	262	NS	X070015	070015	1	G	W	34.41	38.46	1.44	0.7482	0.58	0.061	2.6	1.19	0.088	0.031	0.337	0.057	0.24	4.89	0.47	5.6	13531	0.9486	20.75598	-19.80738	NAF
NS0087	122	124	NS	X068943	068943	1	G	W	34.25	38.9	1.65	0.6192	0.48	0.073	2.59	1.22	0.082	0.048	0.443	0.118	0.46	4.15	0.5	5.11	13462	1.4688	21.27924	-19.81044	NAF
NS0087	188	190	NS	X068977	068977	1	G	W	32.51	40.78	1.24	0.4644	0.36	0.054	2.3	1.22	0.109	0.046	0.527	0.13	0.55	5.39	0.38	6.32	13495	1.4076	21.27924	-19.87164	NAF
NS0087	112	114	NS	X068938	068938	1	G	D	35.67	37.35	1.58	0.5805	0.45	0.068	2.48	1.21	0.075	0.036	0.51	0.143	0.49	3.76	0.48	4.73	13457	1.1016	21.10482	-20.00322	NAF
NS0087	72	74	NS	X068917	068917	1	G	D	29.33	39.89	2.87	0.4902	0.38	0.13	3.44	1.48	0.285	0.185	1.18	0.344	1.27	5.04	0.77	7.08	13437	5.661	25.81416	-20.15316	NAF
NS0087	82	84	NS	X068922	068922	1	G	D	31.11	38.71	2.28	0.4902	0.38	0.102	3.11	1.25	0.25	0.046	1.01	0.305	1.06	6.02	0.34	7.42	13442	1.4076	21.8025	-20.3949	NAF
NS0087	248	250	NS	X070009	070009	1	G	W	35.41	37.14	1.77	0.7482	0.58	0.08	2.73	1.31	0.119	0.079	0.257	0.052	0.28	4.14	0.42	4.84	13525	2.4174	22.84902	-20.43162	NAF
NS0087	258	260	NS	X070014	070014	1	G	W	36.53	35.64	1.41	0.7482	0.58	0.061	2.59	1.26	0.136	0.05	0.298	0.078	0.36	4.54	0.33	5.23	13530	1.53	21.97692	-20.44692	NAF
NS0087	236	238	NS	X070002	070002	1	G	W	35.97	37.75	1.18	0.7611	0.59	0.053	2.21	1.24	0.104	0.037	0.271	0.063	0.23	4.13	0.32	4.68	13519	1.1322	21.62808	-20.49588	NAF
NS0087	74	76	NS	X068918	068918	1	G	D	30.74	38.87	1.67	0.6063	0.47	0.069	2.84	1.25	0.064	0.042	0.71	0.204	0.84	7.97	0.8	9.61	13438	1.2852	21.8025	-20.5173	NAF
NS0087	222	224	NS	X068995	068995	1	G	W	31.28	41.22	2.16	0.5031	0.39	0.098	3.04	1.37	0.121	0.106	0.602	0.182	0.58	4.29	0.67	5.54	13512	3.2436	23.89554	-20.65194	NAF
NS0087	330	332	NS	X070053	070053	1	G	W	36.76	37.13	1.03	0.7611	0.59	0.042	2.04	1.24	0.098	0.03	0.468	0.036	0.07	3.72	0.43	4.22	13566	0.918	21.62808	-20.71008	NAF
NS0087	326	328	NS	X070051	070051	1	G	W	36.59	37.12	1.04	0.774	0.6	0.045	2.08	1.24	0.09	0.026	0.396	0.041	0.11	4.06	0.43	4.6	13564	0.7956	21.62808	-20.83248	NAF
NS0087	286	288	NS	X070029	070029	1	G	W	33.33	40.5	1.74	0.4773	0.37	0.08	2.55	1.31	0.159	0.065	0.275	0.076	0.32	4.25	0.31	4.88	13544	1.989	22.84902	-20.86002	NAF
NS0087	90	92	NS	X068926	068926	1	G	D	24.49	57.79	1	0.1548	0.12	0.048	1.42	1.31	0.052	0.063	0.429	0.121	0.32	1.3	0.79	2.41	13446	1.9278	22.84902	-20.92122	NAF
NS0087	262	264	NS	X070016	070016	1	G	W	33.24	40.24	0.98	0.7998	0.62	0.038	2.37	1.25	0.087	0.021	0.217	0.055	0.24	5.47	0.52	6.23	13532	0.6426	21.8025	-21.1599	NAF
NS0087	108	110	NS	X068936	068936	1	G	D	34.62	39.23	1.75	0.4773	0.37	0.079	2.47	1.29	0.116	0.043	0.559	0.202	0.53	2.87	0.51	3.91	13455	1.3158	22.50018	-21.18438	NAF
NS0087	164	166	NS	X068965	068965	1	G	W	34.18	37.38	1.77	0.5031	0.39	0.08	2.85	1.34	0.13	0.051	0.629	0.196	0.57	4.82	0.52	5.91	13483	1.5606	23.37228	-21.81168	NAF
NS0087	312	314	NS	X070043	070043	1	G	W	33.01	41	1.35	0.5805	0.45	0.058	2.47	1.31	0.112	0.033	0.365	0.066	0.29	4.35	0.55	5.19	13557	1.0098	22.84902	-21.83922	NAF
NS0087	138	140	NS	X068951	068951	1	G	W	37.88	34.95	1.31	0.7353	0.57	0.056	2.18	1.32	0.11	0.029	0.346	0.096	0.33	3.7	0.41	4.44	13470	0.8874	23.02344	-22.13604	NAF
NS0087	290	292	NS	X070031	070031	1	G	W	34.29	37.99	1.36	0.6708	0.52	0.059	2.61	1.33	0.108	0.032	0.258	0.059	0.28	5.34	0.51	6.13	13546	0.9792	23.19786	-22.21866	NAF
NS0087	178	180	NS	X068972	068972	1	G	W	29.93	43.76	1.31	0.5031	0.39	0.058	2.47	1.36	0.105	0.047	0.573	0.152	0.59	5.33	0.61	6.53	13490	1.4382	23.72112	-22.28292	NAF
NS0087	240	242	NS	X070005	070005	1	G	W	33.08	40.55	1.08	0.8901	0.69	0.045	2.3	1.36	0.106	0.027	0.28	0.069	0.28	4.82	0.62	5.72	13521	0.8262	23.72112	-22.89492	NAF
NS0087	282	284	NS	X070026	070026	1	G	W	27.51	43.75	2.27	0.7095	0.55	0.105	3.35	1.45	0.294	0.071	0.405	0.106	0.53	6.77	0.3	7.6	13542	2.1726	25.2909	-23.1183	NAF
NS0087	296	298	NS	X070034	070034	1	G	W	32.78	40.65	1.47	0.6837	0.53	0.062	2.45	1.45	0.124	0.057	0.328	0.049	0.25	4.57	0.6	5.42	13549	1.7442	25.2909	-23.5467	NAF
NS0087	200	202	NS	X068984	068984	1	G	W	31.05	42.77	1.11	0.4773	0.37	0.046	2.23	1.4	0.051	0.024	0.473	0.143	0.5	5.38	0.79	6.67	13501	0.7344	24.4188	-23.6844	NAF
NS0087	224	226	NS	X068996	068996	1	G	W	26.39	45.84	3.1	0.4644	0.36	0.14	3.56	1.79	0.209	0.239	0.592	0.174	0.61	3.79	1.08	5.48	13513	7.3134	31.22118	-23.90778	NAF
NS0087	304	306	NS	X070039	070039	1	G	W	35.45	38.32	1.21	0.6321	0.49	0.053	2.25	1.43	0.085	0.03	0.268	0.043	0.16	3.97	0.65	4.78	13553	0.918	24.94206	-24.02406	NAF
NS0087	242	244	NS	X070006	070006	1	G	W	34.21	38.93	1.3	0.8127	0.63	0.053	2.39	1.45	0.14	0.038	0.302	0.074	0.29	4.46	0.55	5.3	13522	1.1628	25.2909	-24.1281	NAF
NS0087	162	164	NS	X068964	068964	1	G	W	32.07	40.35	1.86	0.4773	0.37	0.083	2.85	1.5	0.2	0.055	0.604	0.167	0.57	4.63	0.51	5.71	13482	1.683	26.163	-24.48	NAF
NS0087	150	152	NS	X068958	068958	1	G	W	30.38	42.15	2.46	0.5676	0.44	0.107	3.22	1.61	0.126	0.11	0.499	0.14	0.49	3.75	0.92	5.16	13476	3.366	28.08162	-24.71562	NAF
NS0087	158	160	NS	X068962	068962	1	G	W	34.92	35.98	1.77	0.6579	0.51	0.079	2.84	1.59	0.195	0.087	0.534	0.154	0.5	4.91	0.47	5.88	13480	2.6622	27.73278	-25.07058	NAF
NS0087	156	158	NS	X068961	068961	1	G	W	34.05	38.37	1.91	0.5418	0.42	0.087	2.81	1.53	0.119	0.049	0.463	0.154	0.42	3.93	0.68	5.03	13479	1.4994	26.68626	-25.18686	NAF
NS0087	398	400	NS	X070088	070088	1	G	W	36.59	35.01	1.09	0.774	0.6	0.044	2.44	1.51	0.109	0.03	0.301	0.039	0.19	5.15	0.63	5.97	13600	0.918	26.33742	-25.41942	NAF
NS0087	144	146	NS	X068955	068955	1	G	W	36.53	36.33	1.32	0.645	0.5	0.056	2.35	1.52	0.102	0.032	0.357	0.098	0.33	3.62	0.77	4.72	13473	0.9792	26.51184	-25.53264	NAF
NS0087	396	398	NS	X070087	070087	1	G	W	35.02	38.56	1	0.6966	0.54	0.04	2.22	1.52	0.101	0.026	0.302	0.039	0.17	4.5	0.63	5.3	13599	0.7956	26.51184	-25.71624	NAF
NS0087	246	248	NS	X070008	070008	1	G	W	35.91	37.17	1.27	0.7353	0.57	0.056	2.35	1.55	0.094	0.039	0.248	0.067	0.32	3.7	0.76	4.78	13524	1.1934	27.0351	-25.8417	NAF
NS0087	382	384	NS	X070080	070080	1	G	W	35.53	37.25	1.21	0.903	0.7	0.052	2.49	1.52	0.106	0.021	0.652	0.031	0.09	3.95	0.71	4.75	13592	0.6426	26.51184	-25.86924	NAF
NS0087	166	168	NS	X068966	068966	1	G	W	29.67	45.59	1.56	0.3999	0.31	0.069	2.39	1.56	0.204	0.043	0.58	0.169	0.51	3.47	0.58	4.56	13484	1.3158	27.20952	-25.89372	NAF
NS0087	94	96	NS	X068929	068929	1	G	D	33.87	37.22	1.53	0.5289	0.41	0.07	2.71	1.56	0.121	0.042	0.672	0.189	0.69	5.31	0.72	6.72	13448	1.2852	27.20952	-25.92432	NAF
NS0087	310	312	NS	X070042	070042	1	G	W	29.07	43.61	1.53	0.7224	0.56	0.065	2.93	1.6	0.169	0.064	0.452	0.081	0.32	5.74	0.74	6.8	13556	1.9584	27.9072	-25.9488	NAF
NS0087	46	48	NS	X068903	068903	1	G	D	34.2	37.78	1.68	0.5547	0.43	0.075	2.36	1.57	0.068	0.045	0.684	0.137	0.75	4.35	0.87	5.97	13424	1.377	27.38394	-26.00694	NAF
NS0087	186	188	NS	X068976	068976	1	G	W	31.22	39.63	1.67	0.516	0.4	0.075	2.84	1.69	0.279	0.089	0.693	0.189	0.86	5.97	0.51	7.34	13494	2.7234	29.47698	-26.75358	NAF
NS0087	366	368	NS	X070072	070072	1	G	W	25.85	53.43	0.98	0.4386	0.34	0.039	1.72	2.05	0.109	0.292	0.429	0.159	0.03	1.55	1.25	2.83	13584	8.9352	35.7561	-26.8209	NAF
NS0087	120	122	NS	X068942	068942	1	G	D	34.08	37.65	1.56	0.7095	0.55	0.072	2.61	1.64	0.155	0.05	0.386	0.11	0.5	4.78	0.66	5.94	13461	1.53	28.60488	-27.07488	NAF
NS0087	58	60	NS	X068910	068910	1	G	D	32.76	38.79	2.21	0.4515	0.35	0.104	2.77	1.75	0.073	0.111	0.954	0.257	0.96	3.26	1.1	5.32	13430	3.3966	30.5235	-27.1269	NAF
NS0087	44	46	NS	X068902	068902	1	G	D	34.35	37.56	1.73	0.5805	0.45	0.073	2.25	1.63	0.071	0.037	0.624	0.159	0.85	4.21	0.9	5.96	13423	1.1322	28.43046	-27.29826	NAF
NS0087	140	142	NS	X068952	068952	1	G	W	35	36.7	1.61	0.7095	0.55	0.071	2.72	1.72	0.088	0.079	0.422	0.12	0.45	4.02	0.9	5.37	13471	2.4174	30.00024	-27.58284	NAF
NS0087	378	380	NS	X070078	070078	1	G	W	37.32	36.36	1.04	0.774	0.6	0.04	1.97	1.63	0.101	0.021	0.587	0.077	0.05	2.82	0.82	3.69	13590	0.6426	28.43046	-27.78786	NAF
NS0087	380	382	NS	X070079	070079	1	G	W	33	42.59	1	0.774	0.6	0.038	1.95	1.63	0.092	0.02	0.584	0.034	0.05	2.9	0.9	3.85	13591	0.612	28.43046	-27.81846	NAF
NS0087	68	70	NS	X068915	068915	1	G	D	33.52	38.27	1.38	0.516	0.4	0.064	2.39	1.69	0.096	0.052	0.61	0.164	0.69	5.1	0.8	6.59	13435	1.5912	29.47698	-27.88578	NAF
NS0087	358	360	NS	X070067	070067	1	G	W	27.3	49.84	1.1	0.645	0.5	0.043	2.14	1.66	0.073	0.025	0.554	0.043	0.13	3.33	1.12	4.58	13580	0.765	28.95372	-28.18872	NAF
NS0087	342	344	NS	X070059	070059	1	G	W	34.55	40.81	0.96	0.7095	0.55	0.044	1.95	1.67	0.097	0.029	0.47	0.026	0.03	2.8	0.93	3.76	13572	0.8874	29.12814	-28.24074	NAF
NS0087	354	356	NS	X070065	070065	1	G	W	36.4	36.53	1.45	0.645	0.5	0.064	2.44	1.69	0.133	0.039	0.571	0.057	0.16	3.28	0.81	4.25	13578	1.1934	29.47698	-28.28358	NAF
NS0087	376	378	NS	X070077	070077	1	G	W	35.73	37.91	1.2	0.8127	0.63	0.051	2.27	1.72	0.12	0.025	0.652	0.044	0.06	2.95	0.93	3.94	13589	0.765	30.00024	-29.23524	NAF
NS0087	294	296	NS	X070033	070033	1	G	W	26.79	46.35	2.06	0.6837	0.53	0.098	3.03	1.87	0.172	0.11	0.333	0.066	0.37	5.15	1.04	6.56	13548	3.366	32.61654	-29.25054	NAF
NS0087	48	50	NS	X068904	068904	1	G	D	34.16	37.21	1.82	0.5418	0.42	0.084	2.53	1.76	0.105	0.046	0.764	0.167	0.81	3.98	1.01	5.8	13425	1.4076	30.69792	-29.29032	NAF
NS0087	234	236	NS	X070001	070001	1	G	W	34.56	38.98	1.04	0.774	0.6	0.044	2.17	1.81	0.097	0.047	0.243	0.056	0.19	3.82	1.1	5.11	13518	1.4382	31.57002	-30.13182	NAC
NS0087	372	374	NS	X070075	070075	1	G	W	37.58	35.57	1.15	0.7353	0.57	0.046	2.19	1.8	0.1	0.022	0.609	0.054	0.09	2.73	1	3.82	13587	0.6732	31.3956	-30.7224	NAC
NS0087	136	138	NS	X068950	068950	1	G	W	33.25	39.86	1.17	0.7869	0.61	0.052	2.28	1.82	0.103	0.031	0.321	0.095	0.3	4.26	1.08	5.64	13469	0.9486	31.74444	-30.79584	NAC
NS0087	244	246	NS	X070007	070007	1	G	W	35.92	36.65	1.15	0.774	0.6	0.052	2.31	1.87	0.163	0.035	0.318	0.065	0.28	3.82	0.87	4.97	13523	1.071	32.61654	-31.54554	NAC
NS0087	146	148	NS	X068956	068956	1	G	W	37.3	34.39	1.19	0.7095	0.55	0.049	2.4	1.86	0.101	0.025	0.319	0.093	0.33	4.03	1.01	5.37	13474	0.765	32.44212	-31.67712	NAC
NS0087	152	154	NS	X068959	068959	1	G	W	31.09	41.6	2.08	0.5547	0.43	0.09	2.88	1.92	0.213	0.054	0.465	0.131	0.49	3.74	0.93	5.16	13477	1.6524	33.48864	-31.83624	NAC
NS0087	148	150	NS	X068957	068957	1	G	W	35.79	36.28	1.66	0.6063	0.47	0.073	2.55	1.9	0.182	0.041	0.422	0.116	0.41	3.43	0.82	4.66	13475	1.2546	33.1398	-31.8852	NAC
NS0087	386	388	NS	X070082	070082	1	G	W	34.64	39.27	0.99	0.8127	0.63	0.04	2.12	1.88	0.094	0.02	0.439	0.031	0.07	3.23	1.13	4.43	13594	0.612	32.79096	-32.17896	NAC
NS0087	56	58	NS	X068909	068909	1	G	D	32.01	38.6	2.1	0.5547	0.43	0.098	2.88	2.01	0.069	0.088	0.891	0.238	0.93	4.08	1.37	6.38	13429	2.6928	35.05842	-32.36562	NAC
NS0087	344	346	NS	X070060	070060	1	G	W	33.39	41.68	1	0.6837	0.53	0.043	2.04	1.93	0.11	0.039	0.524	0.032	0.04	2.77	1.18	3.99	13573	1.1934	33.66306	-32.46966	NAC
NS0087	70	72	NS	X068916	068916	1	G	D	30.53	40.03	2.07	0.5031	0.39	0.093	2.87	2.06	0.22	0.112	0.907	0.251	0.93	4.66	1.09	6.68	13436	3.4272	35.93052	-32.50332	NAC
NS0087	232	234	NS	X069000	069000	1	G	W	35.56	37.25	1.37	0.6966	0.54	0.062	2.33	1.96	0.099	0.049	0.242	0.062	0.18	3.45	1.17	4.8	13517	1.4994	34.18632	-32.68692	NAC
NS0087	110	112	NS	X068937	068937	1	G	D	32.56	41.01	1.24	0.6063	0.47	0.054	2.32	1.94	0.124	0.032	0.44	0.152	0.43	3.67	1.12	5.22	13456	0.9792	33.83748	-32.85828	NAC
NS0087	168	170	NS	X068967	068967	1	G	W	28.28	46.89	1.43	0.3999	0.31	0.064	2.35	1.97	0.195	0.04	0.554	0.165	0.52	3.46	1.07	5.05	13485	1.224	34.36074	-33.13674	NAC
NS0087	160	162	NS	X068963	068963	1	G	W	26.76	45.14	1.93	0.7353	0.57	0.081	3.09	2.03	0.248	0.074	0.504	0.142	0.56	5.8	0.96	7.32	13481	2.2644	35.40726	-33.14286	NAC
NS0087	226	228	NS	X068997	068997	1	G	W	33.86	39.07	1.79	0.5031	0.39	0.081	2.53	2.04	0.129	0.071	0.361	0.111	0.32	3.07	1.19	4.58	13514	2.1726	35.58168	-33.40908	NAC
NS0087	320	322	NS	X070047	070047	1	G	W	28.98	44.2	1.69	0.6708	0.52	0.075	2.96	2.04	0.159	0.044	0.417	0.077	0.27	4.42	1.37	6.06	13561	1.3464	35.58168	-34.23528	NAC
NS0087	346	348	NS	X070061	070061	1	G	W	36.44	36.16	1.16	0.774	0.6	0.051	2.29	2.05	0.107	0.045	0.591	0.04	0.08	3.13	1.3	4.51	13574	1.377	35.7561	-34.3791	NAC
NS0087	328	330	NS	X070052	070052	1	G	W	33.03	39.93	1.14	0.8256	0.64	0.047	2.32	2.06	0.114	0.041	0.541	0.052	0.14	4.01	1.37	5.52	13565	1.2546	35.93052	-34.67592	NAC
NS0087	52	54	NS	X068906	068906	1	G	D	32.15	38.15	2.05	0.516	0.4	0.093	2.9	2.14	0.051	0.069	0.864	0.236	0.89	4.06	1.67	6.62	13427	2.1114	37.32588	-35.21448	NAC
NS0087	142	144	NS	X068953	068953	1	G	W	32.77	39.02	1.88	0.645	0.5	0.079	2.93	2.12	0.093	0.045	0.412	0.144	0.44	3.72	1.37	5.53	13472	1.377	36.97704	-35.60004	NAC
NS0087	384	386	NS	X070081	070081	1	G	W	34.45	39.42	0.99	0.774	0.6	0.039	2.07	2.09	0.092	0.019	0.517	0.037	0.07	2.79	1.45	4.31	13593	0.5814	36.45378	-35.87238	NAC
NS0087	356	358	NS	X070066	070066	1	G	W	38.07	35.94	0.97	0.5676	0.44	0.042	1.9	2.12	0.1	0.021	0.368	0.028	0	2.09	1.39	3.48	13579	0.6426	36.97704	-36.33444	NAC
NS0087	62	64	NS	X068912	068912	1	G	D	32.09	37.24	1.55	0.6837	0.53	0.07	2.72	2.19	0.127	0.053	0.689	0.193	0.82	6.17	1.29	8.28	13432	1.6218	38.19798	-36.57618	NAC
NS0087	64	66	NS	X068913	068913	1	G	D	32.52	36.88	1.64	0.5934	0.46	0.072	2.62	2.24	0.346	0.071	0.721	0.222	0.89	5.86	0.74	7.49	13433	2.1726	39.07008	-36.89748	NAC
NS0087	352	354	NS	X070064	070064	1	G	W	28.69	46.38	1.1	0.7353	0.57	0.045	2.25	2.23	0.102	0.056	0.567	0.041	0.14	3.28	1.74	5.16	13577	1.7136	38.89566	-37.18206	NAC
NS0087	368	370	NS	X070073	070073	1	G	W	32.51	41.4	1.19	0.7611	0.59	0.051	2.3	2.21	0.096	0.035	0.543	0.036	0.07	2.91	1.65	4.63	13585	1.071	38.54682	-37.47582	NAC
NS0087	50	52	NS	X068905	068905	1	G	D	32.23	39.09	1.6	0.5031	0.39	0.071	2.53	2.26	0.06	0.061	0.681	0.182	0.75	4.23	1.7	6.68	13426	1.8666	39.41892	-37.55232	NAC
NS0087	370	372	NS	X070074	070074	1	G	W	35.31	37.88	1.06	0.774	0.6	0.046	2.2	2.26	0.083	0.024	0.533	0.041	0.1	2.7	1.68	4.48	13586	0.7344	39.41892	-38.68452	NAC
NS0087	390	392	NS	X070084	070084	1	G	W	34.54	37.99	1.08	0.774	0.6	0.045	2.33	2.37	0.119	0.032	0.403	0.039	0.11	3.38	1.67	5.16	13596	0.9792	41.33754	-40.35834	NAC
NS0087	350	352	NS	X070063	070063	1	G	W	34.37	38.32	1.2	0.7611	0.59	0.047	2.24	2.42	0.1	0.052	0.607	0.05	0.23	2.82	1.78	4.83	13576	1.5912	42.20964	-40.61844	NAC
NS0087	362	364	NS	X070070	070070	1	G	W	35.61	37.63	1.01	0.7095	0.55	0.043	2.09	2.4	0.109	0.022	0.559	0.032	0.07	2.57	1.67	4.31	13582	0.6732	41.8608	-41.1876	NAC
NS0087	374	376	NS	X070076	070076	1	G	W	35.64	36.83	1.03	0.8127	0.63	0.042	2.25	2.43	0.094	0.016	0.559	0.026	0.02	2.68	1.89	4.59	13588	0.4896	42.38406	-41.89446	NAC
NS0087	230	232	NS	X068999	068999	1	G	W	33.1	39.73	1.31	0.6966	0.54	0.059	2.27	2.68	0.102	0.079	0.238	0.068	0.23	3.16	1.82	5.21	13516	2.4174	46.74456	-44.32716	NAC
NS0087	104	106	NS	X068934	068934	1	G	D	34.75	37.34	1.38	0.5934	0.46	0.062	2.3	2.7	0.086	0.035	0.358	0.1	0.35	2.63	2.05	5.03	13453	1.071	47.0934	-46.0224	NAC
NS0087	364	366	NS	X070071	070071	1	G	W	34.44	37.59	1.04	0.7998	0.62	0.044	2.35	2.8	0.11	0.024	0.614	0.048	0.05	2.81	2.38	5.24	13583	0.7344	48.8376	-48.1032	NAC
NS0087	388	390	NS	X070083	070083	1	G	W	30.47	42.5	1.24	0.7095	0.55	0.049	2.69	2.82	0.061	0.032	0.293	0.03	0.12	3.24	2.48	5.84	13595	0.9792	49.18644	-48.20724	NAC
NS0087	54	56	NS	X068907	068907	1	G	D	28.5	40.81	1.89	0.5547	0.43	0.086	3.01	3.26	0.068	0.108	0.827	0.223	0.92	4.42	2.81	8.15	13428	3.3048	56.86092	-53.55612	NAC
NS0087	60	62	NS	X068911	068911	1	G	D	31.44	38.85	1.35	0.5934	0.46	0.059	2.48	3.23	0.093	0.033	0.602	0.159	0.69	4.04	2.53	7.26	13431	1.0098	56.33766	-55.32786	NAC
NS0087	228	230	NS	X068998	068998	1	G	W	31.83	38.78	1.04	0.8256	0.64	0.045	2.38	3.64	0.099	0.04	0.221	0.05	0.24	3.61	3.18	7.03	13515	1.224	63.48888	-62.26488	NAC
NS0088	92	94	NS	X070137	070137	1	G	W	22.06	44.47	12.92	0.1161	0.09	0.626	2.73	0.08	0.023	0.351	1.61	0.037	0.58	4.32	0.79	5.69	13647	10.7406	1.39536	9.34524	PAF(LC)
NS0088	150	152	NS	X070167	070167	1	G	W	31.2	32.88	3.18	0.5289	0.41	0.143	1.65	0.42	0.05	0.522	0.769	0.009	0.63	13.78	1.28	15.69	13676	15.9732	7.32564	8.64756	PAF(LC)
NS0088	6	8	NS	X070092	070092	1	G	M	35.14	40.76	2.49	-0.0129	-0.01	0.1	0.03	0.005	0.015	0.176	0.116	0.01	5.16	0.73	0.22	6.11	13604	5.3856	0.08721	5.29839	PAF(LC)

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0088	260	262	NS	X070223	070223	1	G	W	22.52	43.84	7.06	0.3096	0.24	0.336	3.78	0.8	0.108	0.585	0.095	0.015	0.54	9.39	0.97	10.9	13731	17.901	13.9536	3.9474	PAF(LC)
NS0088	144	146	NS	X070164	070164	1	G	W	23.39	44.05	7.14	0.3741	0.29	0.342	2.83	0.36	0.08	0.316	0.009	0.019	0.57	9.55	0.72	10.84	13673	9.6696	6.27912	3.39048	PAF(LC)
NS0088	238	240	NS	X070212	070212	1	G	W	17.27	56.64	7.01	0.1935	0.15	0.409	2.11	0.27	0.068	0.208	0.833	0.019	0.72	6.02	0.5	7.24	13720	6.3648	4.70934	1.65546	PAF(LC)
NS0088	24	26	NS	X070101	070101	1	G	M	29.08	54.8	1.11	0.3483	0.27	0.046	0.12	0.02	0.06	0.05	0.317	0.03	1.33	0.32	0.16	1.81	13613	1.53	0.34884	1.18116	PAF(LC)
NS0088	44	46	NS	X070112	070112	1	G	M	34.63	44.67	1.25	0.4386	0.34	0.059	0.09	0.005	0.088	0.036	0.444	0.008	2.73	0.43	0.15	3.31	13623	1.1016	0.08721	1.01439	PAF(LC)
NS0088	288	290	NS	X070237	070237	1	G	W	24.22	43	3.38	0.4773	0.37	0.155	2.97	0.63	0.099	0.374	1.07	0.081	0.73	11.71	0.83	13.27	13745	11.4444	10.98846	0.45594	PAF(LC)
NS0088	4	6	NS	X070091	070091	1	G	M	31.9	44.9	3.15	-0.0129	-0.01	0.126	0.02	0.005	0.016	0.017	0.05	0.009	5.29	0.8	0.17	6.26	13603	0.5202	0.08721	0.43299	PAF(LC)
NS0088	26	28	NS	X070102	070102	1	G	M	37.19	42.3	1.35	0.387	0.3	0.063	0.13	0.005	0.058	0.017	0.462	0.005	1.17	0.39	0.28	1.84	13614	0.5202	0.08721	0.43299	PAF(LC)
NS0088	12	14	NS	X070095	070095	1	G	M	20.07	65.86	2.09	-0.0129	-0.01	0.083	0.07	0.005	0.016	0.013	0.235	0.019	1.92	0.69	0.1	2.71	13607	0.3978	0.08721	0.31059	PAF(LC)
NS0088	40	42	NS	X070110	070110	1	G	M	35.6	41.58	2.13	0.7611	0.59	0.092	0.19	0.005	0.084	0.012	0.772	0.006	2.55	0.59	0.29	3.43	13621	0.3672	0.08721	0.27999	PAF(LC)
NS0088	20	22	NS	X070099	070099	1	G	M	31.69	51.83	1.1	0.2064	0.16	0.047	0.09	0.005	0.071	0.009	0.272	0.009	0.69	0.3	0.16	1.15	13611	0.2754	0.08721	0.18819	PAF(LC)
NS0088	42	44	NS	X070111	070111	1	G	M	30.83	51.63	1.28	0.2838	0.22	0.055	0.09	0.005	0.066	0.008	0.456	0.034	1.71	0.34	0.12	2.17	13622	0.2448	0.08721	0.15759	PAF(LC)
NS0088	8	10	NS	X070093	070093	1	G	M	32.48	48.19	2.36	0.0516	0.04	0.11	0.11	0.005	0.019	0.007	0.445	0.023	1.72	0.56	0.15	2.43	13605	0.2142	0.08721	0.12699	PAF(LC)
NS0088	316	318	NS	X070252	070252	1	G	W	31.75	38.14	2.19	0.645	0.5	0.102	2.97	0.44	0.072	0.254	0.674	0.037	0.35	8.43	0.24	9.02	13759	7.7724	7.67448	0.09792	PAF(LC)
NS0088	22	24	NS	X070100	070100	1	G	M	33.82	47.01	1.91	0.2838	0.22	0.083	0.15	0.02	0.073	0.014	0.489	0.012	1.04	0.47	0.21	1.72	13612	0.4284	0.34884	0.07956	PAF(LC)
NS0088	10	12	NS	X070094	070094	1	G	M	30.29	51.39	2.58	0.0387	0.03	0.127	0.11	0.005	0.01	0.005	0.474	0.004	1.29	0.55	0.11	1.95	13606	0.153	0.08721	0.06579	PAF(LC)
NS0088	18	20	NS	X070098	070098	1	G	M	23.39	63.38	1.05	0.1161	0.09	0.046	0.11	0.005	0.038	0.005	0.199	0.012	0.88	0.28	0.1	1.26	13610	0.153	0.08721	0.06579	PAF(LC)
NS0088	30	32	NS	X070105	070105	1	G	M	30.79	51.98	1.46	0.1677	0.13	0.062	0.11	0.02	0.046	0.013	0.361	0.038	1.03	0.37	0.17	1.57	13616	0.3978	0.34884	0.04896	PAF(LC)
NS0088	14	16	NS	X070096	070096	1	G	M	20.27	65.99	2.15	-0.0129	-0.01	0.082	0.08	0.005	0.037	0.004	0.268	0.02	1.67	0.51	0.1	2.28	13608	0.1224	0.08721	0.03519	PAF(LC)
NS0088	16	18	NS	X070097	070097	1	G	M	20.27	66.69	1.73	-0.0129	-0.01	0.071	0.09	0.005	0.05	0.004	0.386	0.021	1.22	0.36	0.08	1.66	13609	0.1224	0.08721	0.03519	PAF(LC)
NS0088	46	48	NS	X070113	070113	1	G	M	38.45	41.17	1.09	0.2451	0.19	0.048	0.08	0.005	0.081	0.003	0.31	0.007	1.43	0.34	0.09	1.86	13624	0.0918	0.08721	0.00459	PAF(LC)
NS0088	2	4	NS	X070090	070090	1	G	M	27.64	52.65	3.45	0.0774	0.06	0.165	0.09	0.02	0.031	0.011	0.23	0.008	2.67	0.91	0.15	3.73	13602	0.3366	0.34884	-0.01224	NAF
NS0088	28	30	NS	X070104	070104	1	G	M	31	51.56	1.37	0.3483	0.27	0.061	0.15	0.02	0.046	0.011	0.442	0.007	1.13	0.35	0.22	1.7	13615	0.3366	0.34884	-0.01224	NAF
NS0088	0	2	NS	BX077089	X077089	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	502	-0.0306	-0.01744	-0.013158	NAF
NS0088	4	8	NS	BX077091-BX077092	X077091	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	503	-0.0306	-0.01744	-0.013158	NAF
NS0088	8	12	NS	BX077093-BX077094	X077093	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	504	-0.0306	-0.01744	-0.013158	NAF
NS0088	12	16	NS	BX077095-BX077096	X077095	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	505	-0.0306	-0.01744	-0.013158	NAF
NS0088	16	20	NS	BX077097-BX077098	X077097	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	506	-0.0306	-0.01744	-0.013158	NAF
NS0088	20	24	NS	BX077099-BX077100	X077099	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	507	-0.0306	-0.01744	-0.013158	NAF
NS0088	24	28	NS	BX077101-BX077102	X077101	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	508	-0.0306	-0.01744	-0.013158	NAF
NS0088	28	30	NS	BX077104	X077104	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	509	-0.0306	-0.01744	-0.013158	NAF
NS0088	30	34	NS	BX077105-BX077106	X077105	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	510	-0.0306	-0.01744	-0.013158	NAF
NS0088	34	38	NS	BX077107-BX077108	X077107	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	511	-0.0306	-0.01744	-0.013158	NAF
NS0088	38	42	NS	BX077109-BX077110	X077109	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	512	-0.0306	-0.01744	-0.013158	NAF
NS0088	42	46	NS	BX077111-BX077112	X077111	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	513	-0.0306	-0.01744	-0.013158	NAF
NS0088	46	50	NS	BX077113-BX077114	X077113	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	514	-0.0306	-0.01744	-0.013158	NAF
NS0088	58	60	NS	BX077120	X077120	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	517	-0.0306	-0.01744	-0.013158	NAF
NS0088	146	150	NS	BX077165-BX077166	X077165	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	540	-0.0306	-0.01744	-0.013158	NAF
NS0088	244	248	NS	BX077215-BX077216	X077215	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	565	-0.0306	-0.01744	-0.013158	NAF
NS0088	260	264	NS	BX077223-BX077224	X077223	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	569	-0.0306	-0.01744	-0.013158	NAF
NS0088	38	40	NS	X070109	070109	1	G	M	33.37	44.37	1.79	0.7095	0.55	0.075	0.28	0.02	0.068	0.01	0.608	0.016	3.28	0.59	0.24	4.11	13620	0.306	0.34884	-0.04284	NAF
NS0088	50	52	NS	X070115	070115	1	G	M	36.4	43.18	1.18	0.0516	0.04	0.051	0.23	0.02	0.129	0.009	0.141	0.008	2.38	0.55	0.04	2.97	13626	0.2754	0.34884	-0.07344	NAF
NS0088	0	2	NS	X070089	070089	1	G	M	37.4	34.38	4.47	0.0516	0.04	0.223	0.08	0.04	0.032	0.02	0.158	0.018	5.82	1.11	0.22	7.15	13601	0.612	0.69768	-0.08568	NAF
NS0088	148	150	NS	X070166	070166	1	G	W	24.02	43.42	6.3	0.4257	0.33	0.282	2.54	0.37	0.077	0.206	0.007	0.002	0.75	10.66	0.5	11.91	13675	6.3036	6.45354	-0.14994	NAF
NS0088	32	34	NS	X070106	070106	1	G	M	32.98	46.08	1.76	0.5031	0.39	0.077	0.22	0.02	0.073	0.006	0.56	0.012	2.48	0.49	0.22	3.19	13617	0.1836	0.34884	-0.16524	NAF
NS0088	36	38	NS	X070108	070108	1	G	M	26.08	51.14	4.09	0.6966	0.54	0.178	0.47	0.05	0.099	0.022	0.991	0.025	3.07	1.08	0.3	4.45	13619	0.6732	0.8721	-0.1989	NAF
NS0088	48	50	NS	X070114	070114	1	G	M	39.17	40.89	0.91	0.0645	0.05	0.038	0.09	0.02	0.098	0.003	0.214	0.009	1.53	0.28	0.06	1.87	13625	0.0918	0.34884	-0.25704	NAF
NS0088	288	292	NS	BX077237-BX077238	X077237	2			70.54	1.326	0.139	0.038	0.02736	0.029	0.134	0.041	0.004	0.011	0.018	0.116	-0.01	-0.01	-0.01	-0.03	576	0.3366	0.715122	-0.378522	NAF
NS0088	50	54	NS	BX077115-BX077116	X077115	2			70.83	2.093	0.067	0.04	0.0288	0.002	0.105	0.031	0.013	0.005	0.01	0.092	-0.01	-0.01	-0.01	-0.03	515	0.153	0.540702	-0.387702	NAF
NS0088	150	154	NS	BX077167-BX077168	X077167	2			70.06	1.647	0.218	0.065	0.0468	0.017	0.235	0.04	0.007	0.01	0.016	0.078	-0.01	-0.01	-0.01	-0.03	541	0.306	0.69768	-0.39168	NAF
NS0088	284	288	NS	BX077235-BX077236	X077235	2			69.8	2.586	0.231	0.035	0.0252	0.024	0.204	0.037	0.003	0.008	0.036	0.081	-0.01	-0.01	-0.01	-0.03	575	0.2448	0.645354	-0.400554	NAF
NS0088	276	280	NS	BX077231-BX077232	X077231	2			69.89	2.085	0.166	0.027	0.01944	0.016	0.169	0.032	0.003	0.005	0.015	0.071	-0.01	-0.01	-0.01	-0.03	573	0.153	0.558144	-0.405144	NAF
NS0088	236	240	NS	BX077211-BX077212	X077211	2			70.44	1.58	0.107	0.025	0.018	0.01	0.108	0.029	0.004	0.003	0.026	0.076	-0.01	-0.01	-0.01	-0.03	563	0.0918	0.505818	-0.414018	NAF
NS0088	280	284	NS	BX077233-BX077234	X077233	2			70.94	1.379	0.199	0.034	0.02448	0.018	0.201	0.037	0.004	0.007	0.018	0.077	-0.01	-0.01	-0.01	-0.03	574	0.2142	0.645354	-0.431154	NAF
NS0088	198	202	NS	BX077191-BX077192	X077191	2			71.37	1.817	0.095	0.023	0.01656	0.013	0.114	0.03	0.004	0.003	0.043	0.076	-0.01	-0.01	-0.01	-0.03	553	0.0918	0.52326	-0.43146	NAF
NS0088	34	36	NS	X070107	070107	1	G	M	26.16	54.04	2.55	0.7095	0.55	0.106	0.36	0.04	0.086	0.008	0.565	0.019	2.52	0.81	0.24	3.57	13618	0.2448	0.69768	-0.45288	NAF
NS0088	224	228	NS	BX077205-BX077206	X077205	2			70.9	1.457	0.055	0.024	0.01728	0.005	0.105	0.028	0.004	0.001	0.037	0.078	-0.01	-0.01	-0.01	-0.03	560	0.0306	0.488376	-0.457776	NAF
NS0088	58	60	NS	X070120	070120	1	G	M	34.18	46.95	0.8	0.9546	0.74	0.034	0.12	0.04	0.071	0.007	0.193	0.022	0.91	0.55	0.09	1.55	13630	0.2142	0.69768	-0.48348	NAF
NS0088	268	272	NS	BX077227-BX077228	X077227	2			70.16	2.674	0.223	0.03	0.0216	0.023	0.208	0.04	0.004	0.007	0.047	0.066	-0.01	-0.01	-0.01	-0.03	571	0.2142	0.69768	-0.48348	NAF
NS0088	162	166	NS	BX077173-BX077174	X077173	2			71.28	1.465	0.051	0.036	0.02592	0.004	0.132	0.03	0.003	0.001	0.008	0.056	-0.01	-0.01	-0.01	-0.03	544	0.0306	0.52326	-0.49266	NAF
NS0088	154	158	NS	BX077169-BX077170	X077169	2			54.95	1.172	0.069	0.031	0.02232	0.012	0.109	0.031	0.005	0.001	0.006	0.049	-0.01	-0.01	-0.01	-0.03	542	0.0306	0.540702	-0.510102	NAF
NS0088	116	120	NS	BX077149-BX077150	X077149	2			68.73	2.135	0.039	0.04	0.0288	0.001	0.105	0.033	0.006	0.001	0.011	0.064	-0.01	-0.01	-0.01	-0.03	532	0.0306	0.575586	-0.544986	NAF
NS0088	166	170	NS	BX077175-BX077176	X077175	2			71.47	1.395	0.07	0.04	0.0288	0.008	0.129	0.033	0.004	0.001	0.018	0.07	-0.01	-0.01	-0.01	-0.03	545	0.0306	0.575586	-0.544986	NAF
NS0088	182	186	NS	BX077183-BX077184	X077183	2			70.38	2.368	0.168	0.033	0.02376	0.015	0.165	0.033	0.005	0.001	0.026	0.058	-0.01	-0.01	-0.01	-0.03	549	0.0306	0.575586	-0.544986	NAF
NS0088	88	92	NS	BX077135-BX077136	X077135	2			70.9	1.86	0.077	0.043	0.03096	0.005	0.126	0.037	0.007	0.003	0.015	0.1	-0.01	-0.01	-0.01	-0.03	525	0.0918	0.645354	-0.553554	NAF
NS0088	316	318	NS	BX077252	X077252	2			67.67	5.047	0.285	0.064	0.04608	0.027	0.324	0.053	0.009	0.012	0.075	0.063	-0.01	-0.01	-0.01	-0.03	583	0.3672	0.924426	-0.557226	NAF
NS0088	334	338	NS	BX077261-BX077262	X077261	2			71.09	1.645	0.065	0.031	0.02232	0.013	0.128	0.039	0.007	0.004	0.027	0.056	-0.01	-0.01	-0.01	-0.03	588	0.1224	0.680238	-0.557838	NAF
NS0088	202	206	NS	BX077193-BX077194	X077193	2			70.02	1.573	0.119	0.028	0.02016	0.014	0.125	0.034	0.005	0.001	0.061	0.064	-0.01	-0.01	-0.01	-0.03	554	0.0306	0.593028	-0.562428	NAF
NS0088	108	112	NS	BX077145-BX077146	X077145	2			71.15	2.298	0.058	0.037	0.02664	0.006	0.132	0.036	0.007	0.002	0.012	0.064	-0.01	-0.01	-0.01	-0.03	530	0.0612	0.627912	-0.566712	NAF
NS0088	206	210	NS	BX077195-BX077196	X077195	2			70.86	1.938	0.096	0.026	0.01872	0.011	0.127	0.036	0.005	0.002	0.035	0.073	-0.01	-0.01	-0.01	-0.03	555	0.0612	0.627912	-0.566712	NAF
NS0088	322	326	NS	BX077255-BX077256	X077255	2			71.06	1.681	0.055	0.032	0.02304	0.01	0.122	0.036	0.006	0.002	0.037	0.064	-0.01	-0.01	-0.01	-0.03	585	0.0612	0.627912	-0.566712	NAF
NS0088	112	116	NS	BX077147-BX077148	X077147	2			70.67	2.055	0.05	0.044	0.03168	0.003	0.131	0.038	0.007	0.003	0.014	0.058	-0.01	-0.01	-0.01	-0.03	531	0.0918	0.662796	-0.570996	NAF
NS0088	60	64	NS	BX077121-BX077122	X077121	2			69.37	3.994	0.105	0.062	0.04464	0.004	0.132	0.04	0.012	0.004	0.017	0.078	-0.01	-0.01	-0.01	-0.03	518	0.1224	0.69768	-0.57528	NAF
NS0088	120	122	NS	BX077152	X077152	2			71.23	2.304	0.04	0.041	0.02952	0.004	0.119	0.04	0.007	0.004	0.013	0.085	-0.01	-0.01	-0.01	-0.03	533	0.1224	0.69768	-0.57528	NAF
NS0088	218	220	NS	BX077202	X077202	2			71.01	1.766	0.094	0.028	0.02016	0.008	0.113	0.035	0.006	0.001	0.041	0.064	-0.01	-0.01	-0.01	-0.03	558	0.0306	0.61047	-0.57987	NAF
NS0088	96	100	NS	BX077139-BX077140	X077139	2			71.33	0.616	0.066	0.039	0.02808	0.009	0.131	0.037	0.006	0.002	0.013	0.052	-0.01	-0.01	-0.01	-0.03	527	0.0612	0.645354	-0.584154	NAF
NS0088	228	232	NS	BX077207-BX077208	X077207	2			71.26	1.914	0.115	0.025	0.018	0.013	0.131	0.037	0.006	0.002	0.052	0.076	-0.01	-0.01	-0.01	-0.03	561	0.0612	0.645354	-0.584154	NAF
NS0088	92	96	NS	BX077137-BX077138	X077137	2			70.57	2.288	0.196	0.047	0.03384	0.012	0.168	0.046	0.007	0.007	0.035	0.098	-0.01	-0.01	-0.01	-0.03	526	0.2142	0.802332	-0.588132	NAF
NS0088	126	130	NS	BX077155-BX077156	X077155	2			70.5	1.619	0.025	0.046	0.03312	0.001	0.136	0.038	0.006	0.002	0.003	0.055	-0.01	-0.01	-0.01	-0.03	535	0.0612	0.662796	-0.601596	NAF
NS0088	72	76	NS	BX077127-BX077128	X077127	2			70.17	1.935	0.102	0.052	0.03744	0.005	0.141	0.04	0.006	0.003	0.021	0.064	-0.01	-0.01	-0.01	-0.03	521	0.0918	0.69768	-0.60588	NAF
NS0088	186	190	NS	BX077185-BX077186	X077185	2			70.29	2.396	0.123	0.027	0.01944	0.007	0.134	0.037	0.007	0.001	0.035	0.072	-0.01	-0.01	-0.01	-0.03	550	0.0306	0.645354	-0.614754	NAF
NS0088	190	194	NS	BX077187-BX077188	X077187	2			70.58	1.965	0.139	0.037	0.02664	0.012	0.143	0.037	0.007	0.001	0.029	0.064	-0.01	-0.01	-0.01	-0.03	551	0.0306	0.645354	-0.614754	NAF
NS0088	210	214	NS	BX077197-BX077198	X077197	2			70.54	2.891	0.149	0.024	0.01728	0.016	0.151	0.037	0.005	0.001	0.036	0.114	-0.01	-0.01	-0.01	-0.03	556	0.0306	0.645354	-0.614754	NAF
NS0088	194	196	NS	BX077189	X077189	2			71.59	2.031	0.106	0.031	0.02232	0.015	0.128	0.038	0.006	0.001	0.031	0.065	-0.01	-0.01	-0.01	-0.03	552	0.0306	0.662796	-0.632196	NAF
NS0088	220	224	NS	BX077203-BX077204	X077203	2			70.78	1.975	0.105	0.029	0.02088	0.016	0.111	0.038	0.007	0.001	0.062	0.062	-0.01	-0.01	-0.01	-0.03	559	0.0306	0.662796	-0.632196	NAF
NS0088	130	134	NS	BX077157-BX077158	X077157	2			70.76	1.634	0.026	0.046	0.03312	0.001	0.148	0.04	0.007	0.002	0.004	0.065	-0.01	-0.01	-0.01	-0.03	536	0.0612	0.69768	-0.63648	NAF
NS0088	178	182	NS	BX077181-BX077182	X077181	2			69.37	2.498	0.202	0.036	0.02592	0.019	0.204	0.04	0.005	0.002	0.016	0.075	-0.01	-0.01	-0.01	-0.03	548	0.0612	0.69768	-0.63648	NAF
NS0088	64	68	NS	BX077123-BX077124	X077123	2			70.47	1.933	0.079	0.051	0.03672	0.006	0.129	0.042	0.008	0.003	0.018	0.064	-0.01	-0.01	-0.01	-0.03	519	0.0918	0.732564	-0.640764	NAF
NS0088	292	296	NS	BX077239-BX077240	X077239	2			69.89	2.457	0.244	0.041	0.02952	0.028	0.255	0.051	0.007	0.008	0.031	0.053	-0.01	-0.01	-0.01	-0.03	577	0.2448	0.889542	-0.644742	NAF
NS0088	342	346	NS	BX077265-BX077266	X077265	2			70.88	1.075	0.105	0.042	0.03024	0.015	0.204	0.046	0.007	0.005	0.047	0.055	-0.01	-0.01	-0.01	-0.03	590	0.153	0.802332	-0.649332	NAF
NS0088	214	218	NS	BX077199-BX077200	X077199	2			69.76	2.155	0.079	0.01	0.0072	0.001	0.094	0.039	0.006	0.001	0.038	0.1	-0.01	-0.01	-0.01	-0.03	557	0.0306	0.680238	-0.649638	NAF
NS0088	264	268	NS	BX077225-BX077226	X077225	2			71.73	1.083	0.053	0.031	0.02232	0.009	0.133	0.039	0.006	0.001	0.016	0.065	-0.01	-0.01	-0.01	-0.03	570	0.0306	0.680238	-0.649638	NAF
NS0088	272	274	NS	BX077229	X077229	2			70.43	1.937	0.214	0.034	0.02448	0.017	0.208	0.048	0.006	0.006	0.032	0.053	-0.01	-0.01	-0.01	-0.03	572	0.1836	0.837216	-0.653616	NAF
NS0088	104	108	NS	BX077143-BX077144	X077143	2			70.35	2.97	0.073	0.054	0.03888	0.005	0.126	0.041	0.007	0.002	0.02	0.064	-0.01	-0.01	-0.01	-0.03	529	0.0612	0.715122	-0.653922	NAF
NS0088	158	162	NS	BX077171-BX077172	X077171	2			70.49	1.725	0.122	0.045	0.0324	0.012	0.172	0.041	0.004	0.002	0.019	0.093	-0.01	-0.01	-0.01	-0.03	543	0.0612	0.715122	-0.653922	NAF
NS0088	330	332	NS	BX077259	X077259	2			70.79	1.966	0.055	0.037	0.02664	0.011	0.14	0.041	0.008	0.002	0.029	0.059	-0.01	-0.01	-0.01	-0.03	587	0.0612	0.715122	-0.653922	NAF
NS0088	312	316	NS	BX077249-BX077250	X077249	2			70.32	3.194	0.147	0.041	0.02952	0.019	0.204	0.047	0.009	0.004	0.059	0.062	-0.01	-0.01	-0.01	-0.03	582	0.1224	0.819774	-0.697374	NAF
NS0088	54	58	NS	BX077117-BX077118	X077117	2			70.05	2.877	0.087	0.084	0.06048	0.006	0.162	0.051	0.015	0.006	0.017	0.087	-0.01	-0.01	-0.01	-0.03	516	0.1836	0.889542	-0.705942	NAF
NS0088	100	104	NS	BX077141-BX077142	X077141	2			70.78	2.533	0.081	0.049	0.03528	0.005	0.134	0.044	0.008	0.002	0.015	0.067	-0.01	-0.01	-0.01	-0.03	528	0.0612	0.767448	-0.706248	NAF
NS0088	346	350	NS	BX077267-BX077268	X077267	2			71.32	2.044	0.11	0.038	0.02736	0.016	0.183	0.053	0.011	0.007	0.046	0.065	-0.01	-0.01	-0.01	-0.03	591	0.2142	0.924426	-0.710226	NAF
NS0088	296	300	NS	BX077241-BX077242	X077241	2			69.54	3.724	0.143	0.037	0.02664	0.016	0.185	0.046	0.007	0.003	0.052	0.045	-0.01	-0.01	-0.01	-0.03	578	0.0918	0.802332	-0.710532	NAF
NS0088	76	78	NS	BX077129	X077129	2			70.14	2.021	0.154	0.056	0.04032	0.01	0.172	0.052	0.009	0.006	0.028	0.085	-0.01	-0.01	-0.01	-0.03	522	0.1836	0.906984	-0.723384	NAF
NS0088	80	84	NS	BX077131-BX077132	X077131	2			70.84	1.165	0.709	0.053	0.03816	0.012	0.168	0.052	0.008	0.006	0.027	0.097	-0.01	-0.01	-0.01	-0.03	523	0.1836	0.906984	-0.723384	NAF
NS0088	326	330	NS	BX077257-BX077258	X077257	2			70.68	2.9	0.11	0.04	0.0288	0.015	0.175	0.052	0.01	0.006	0.057	0.067	-0.01	-0.01	-0.01	-0.03	586	0.1836	0.906984	-0.723384	NAF
NS0088	134	136	NS	BX077159	X077159	2			70.45	2.444	0.07	0.057	0.04104	0.001	0.192	0.047	0.007	0.003	0.002	0.079	-0.01	-0.01	-0.01	-0.03	537	0.0918	0.819774	-0.727974	NAF
NS0088	122	126	NS	BX077153-BX077154	X077153	2			69.23	2.014	0.004	0.023	0.01656	0.001	0.068	0.044	0.005	0.001	0.014	0.117	-0.01	-0.01	-0.01	-0.03	534	0.0306	0.767448	-0.736848	NAF
NS0088	308	312	NS	BX077247-BX077248	X077247	2			68.3	3.755	0.218	0.047	0.03384	0.022	0.226	0.055	0.011	0.007	0.094	0.073	-0.01	-0.01	-0.01	-0.03	581	0.2142	0.95931	-0.74511	NAF
NS0088	142	146	NS	BX077163-BX077164	X077163	2			71.36	1.575	0.079	0.063	0.04536	0.004	0.178	0.048	0.007	0.003	0.003	0.079	-0.01	-0.01	-0.01	-0.03	539	0.0918	0.837216	-0.745416	NAF
NS0088	84	88	NS	BX077133-BX077134	X077133	2			71.21	2.61	0.068	0.049	0.03528	0.004	0.14	0.048	0.009	0.002	0.012	0.071	-0.01	-0.01	-0.01	-0.03	524	0.0612	0.837216	-0.776016	NAF
NS0088	68	72	NS	BX077125-BX077126	X077125	2			69.95	2.785	0.076	0.059	0.04248	0.004	0.142	0.05	0.009	0.003	0.029	0.084	-0.01	-0.01	-0.01	-0.03	520	0.0918	0.8721	-0.7803	NAF
NS0088	252	256	NS	BX077219-BX077220	X077219	2			70.64	1.689	0.165	0.05	0.036	0.013	0.247	0.058	0.01	0.006	0.011	0.218	-0.01	-0.01	-0.01	-0.03	567	0.1836	1.011636	-0.828036	NAF
NS0088	318	322	NS	BX077253-BX077254	X077253	2			70.7	3.049	0.103	0.042	0.03024	0.017	0.158	0.053	0.01	0.003	0.067	0.066	-0.01	-0.01	-0.01	-0.03	584	0.0918	0.924426	-0.832626	NAF
NS0088	338	342	NS	BX077263-BX077264	X077263	2			71.08	2.017	0.085	0.056	0.04032	0.009	0.228	0.056	0.008	0.003	0.049	0.06	-0.01	-0.01	-0.01	-0.03	589	0.0918	0.976752	-0.884952	NAF
NS0088	256	260	NS	BX077221-BX077222	X077221	2			69.95	2.455	0.182	0.041	0.02952	0.015	0.26	0.063	0.01	0.006	0.009	0.072	-0.01	-0.01	-0.01	-0.03	568	0.1836	1.098846	-0.915246	NAF
NS0088	138	142	NS	BX077161-BX077162	X077161	2			70.4	1.704	0.077	0.051	0.03672	0.001	0.191	0.056	0.008	0.002	0.002	0.083	-0.01	-0.01	-0.01	-0.03	538	0.0612	0.976752	-0.915552	NAF
NS0088	240	244	NS	BX077213-BX077214	X077213	2			68.37	2.97	0.174	0.018	0.01296	0.001	0.109	0.055	0.006	0.001	0.013	0.083	-0.01	-0.01	-0.01	-0.03	564	0.0306	0.95931	-0.92871	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0088	232	236	NS	BX077209-BX077210	X077209	2			70.12	1.438	0.078	0.026	0.01872	0.011	0.119	0.058	0.007	0.002	0.024	0.144	-0.01	-0.01	-0.01	-0.03	562	0.0612	1.011636	-0.950436	NAF
NS0088	248	252	NS	BX077217-BX077218	X077217	2			68.67	2.519	0.169	0.036	0.02592	0.005	0.227	0.074	0.008	0.006	0.015	0.161	-0.01	-0.01	-0.01	-0.03	566	0.1836	1.290708	-1.107108	NAF
NS0088	304	308	NS	BX077245-BX077246	X077245	2			69.84	3.137	0.144	0.039	0.02808	0.017	0.183	0.076	0.017	0.004	0.066	0.062	-0.01	-0.01	-0.01	-0.03	580	0.1224	1.325592	-1.203192	NAF
NS0088	300	304	NS	BX077243-BX077244	X077243	2			70.25	3.448	0.149	0.041	0.02952	0.017	0.205	0.082	0.019	0.004	0.078	0.077	-0.01	-0.01	-0.01	-0.03	579	0.1224	1.430244	-1.307844	NAF
NS0088	60	62	NS	X070121	070121	1	G	M	34.06	42.86	1.28	0.3741	0.29	0.058	0.84	0.19	0.072	0.028	0.326	0.032	0.55	4.49	0.12	5.16	13631	0.8568	3.31398	-2.45718	NAF
NS0088	116	118	NS	X070149	070149	1	G	W	30.6	37.34	3.62	0.4515	0.35	0.165	2.59	0.49	0.08	0.191	0.856	0.043	0.5	9.08	0.49	10.07	13659	5.8446	8.54658	-2.70198	NAF
NS0088	170	174	NS	BX077177-BX077178	X077177	2			69.43	1.772	0.123	0.026	0.01872	0.007	0.123	0.179	0.004	0.001	0.024	0.071	-0.01	-0.01	-0.01	-0.03	546	0.0306	3.122118	-3.091518	NAF
NS0088	62	64	NS	X070122	070122	1	G	M	33.84	44.53	0.88	0.4128	0.32	0.038	0.77	0.25	0.072	0.04	0.181	0.041	0.29	4.28	-0.02	4.55	13632	1.224	4.3605	-3.1365	NAF
NS0088	74	76	NS	X070128	070128	1	G	M	34.76	39.04	1.46	0.516	0.4	0.071	1.31	0.27	0.038	0.037	0.304	0.025	0.31	7.29	-0.07	7.53	13638	1.1322	4.70934	-3.57714	NAF
NS0088	290	292	NS	X070238	070238	1	G	W	23.02	45.79	3.32	0.4773	0.37	0.154	2.79	0.47	0.1	0.149	1.19	0.064	0.71	11.29	0.33	12.33	13746	4.5594	8.19774	-3.63834	NAF
NS0088	174	178	NS	BX077179-BX077180	X077179	2			67.57	2.785	0.113	0.029	0.02088	0.005	0.128	0.211	0.006	0.001	0.021	0.066	-0.01	-0.01	-0.01	-0.03	547	0.0306	3.680262	-3.649662	NAF
NS0088	232	234	NS	X070209	070209	1	G	W	23.52	48.24	2.9	0.258	0.2	0.138	2.21	0.56	0.049	0.187	0.982	0.042	0.31	9.87	0.44	10.62	13717	5.7222	9.76752	-4.04532	NAF
NS0088	274	276	NS	X070230	070230	1	G	W	30.73	39.98	2.57	0.3741	0.29	0.121	2.51	0.37	0.04	0.073	0.651	0.014	0.5	8.71	-0.15	9.06	13738	2.2338	6.45354	-4.21974	NAF
NS0088	52	54	NS	X070116	070116	1	G	M	30.36	44.41	0.9	0.3741	0.29	0.038	1.34	0.29	0.066	0.005	0.113	0.007	1.05	7.58	0	8.63	13627	0.153	5.05818	-4.90518	NAF
NS0088	124	126	NS	X070154	070154	1	G	W	33.56	38	1.05	0.5676	0.44	0.044	1.92	0.49	0.099	0.116	0.181	0.059	0.36	8.97	0.14	9.47	13663	3.5496	8.54658	-4.99698	NAF
NS0088	346	348	NS	X070267	070267	1	G	W	29.2	38.94	2.21	0.6063	0.47	0.098	3.31	0.54	0.076	0.143	0.81	0.033	0.43	10.65	0.13	11.21	13774	4.3758	9.41868	-5.04288	NAF
NS0088	146	148	NS	X070165	070165	1	G	W	28.74	33.43	3.82	0.5547	0.43	0.17	2.61	0.5	0.066	0.117	0.006	0.003	0.8	16.28	0.31	17.39	13674	3.5802	8.721	-5.1408	NAF
NS0088	56	58	NS	X070118	070118	1	G	M	33.03	42.97	0.91	0.4515	0.35	0.042	1.06	0.31	0.084	0.007	0.254	0.004	0.63	6.09	0.04	6.76	13629	0.2142	5.40702	-5.19282	NAF
NS0088	64	66	NS	X070123	070123	1	G	M	37.99	38	1.11	0.4515	0.35	0.046	0.97	0.34	0.093	0.019	0.167	0.1	0.17	4.54	-0.14	4.57	13633	0.5814	5.93028	-5.34888	NAF
NS0088	200	202	NS	X070192	070192	1	G	W	24.78	49.5	2.49	0.2451	0.19	0.117	1.79	0.8	0.095	0.273	1.04	0.084	0.3	7.21	0.6	8.11	13701	8.3538	13.9536	-5.5998	NAF
NS0088	128	130	NS	X070156	070156	1	G	W	38.11	31.37	1.21	0.645	0.5	0.052	2.01	0.41	0.077	0.048	0.168	0.097	0.41	9	-0.1	9.31	13665	1.4688	7.15122	-5.68242	NAF
NS0088	78	80	NS	X070130	070130	1	G	M	31.88	43.7	1.38	0.4257	0.33	0.06	1.16	0.42	0.093	0.053	0.301	0.115	0.3	6.18	-0.03	6.45	13640	1.6218	7.32564	-5.70384	NAF
NS0088	314	316	NS	X070250	070250	1	G	W	36.17	35.07	2.02	0.5676	0.44	0.095	2.56	0.44	0.104	0.064	0.66	0.039	0.22	6.9	-0.35	6.77	13758	1.9584	7.67448	-5.71608	NAF
NS0088	276	278	NS	X070231	070231	1	G	W	29.45	40.81	2.76	0.3999	0.31	0.131	2.72	0.48	0.035	0.082	0.41	0.008	0.52	9.36	-0.05	9.83	13739	2.5092	8.37216	-5.86296	NAF
NS0088	106	108	NS	X070144	070144	1	G	W	36.99	38.31	0.96	0.5547	0.43	0.042	0.98	0.38	0.085	0.024	0.234	0.148	0.19	5.15	-0.14	5.2	13654	0.7344	6.62796	-5.89356	NAF
NS0088	294	296	NS	X070240	070240	1	G	W	30.89	39.89	2.77	0.4386	0.34	0.133	2.97	0.62	0.093	0.154	0.448	0.028	0.44	7.53	0.14	8.11	13748	4.7124	10.81404	-6.10164	NAF
NS0088	80	82	NS	X070131	070131	1	G	M	30.93	42.06	1.76	0.516	0.4	0.077	1.37	0.59	0.124	0.136	0.42	0.169	0.35	7.66	0.18	8.19	13641	4.1616	10.29078	-6.12918	NAF
NS0088	270	272	NS	X070228	070228	1	G	W	28.87	40.93	2.76	0.387	0.3	0.13	2.71	0.51	0.037	0.089	0.742	0.01	0.54	9.51	0.03	10.08	13736	2.7234	8.89542	-6.17202	NAF
NS0088	284	286	NS	X070235	070235	1	G	W	25.87	44.81	2.89	0.3741	0.29	0.132	3.02	0.49	0.046	0.076	0.58	0.025	0.57	10.03	0.07	10.67	13743	2.3256	8.54658	-6.22098	NAF
NS0088	300	302	NS	X070243	070243	1	G	W	33.43	38.95	1.79	0.5547	0.43	0.083	2.53	0.43	0.069	0.038	0.886	0.048	0.24	6.91	-0.27	6.88	13751	1.1628	7.50006	-6.33726	NAF
NS0088	172	174	NS	X070178	070178	1	G	W	30.42	37.47	2.2	0.4644	0.36	0.099	2.19	0.38	0.036	0.003	0.6	0.098	0.55	12.53	-0.02	13.06	13687	0.0918	6.62796	-6.53616	NAF
NS0088	328	330	NS	X070258	070258	1	G	W	37.3	32.86	1.32	0.5289	0.41	0.058	2.11	0.6	0.079	0.125	0.531	0.024	0.29	8.27	-0.08	8.48	13765	3.825	10.4652	-6.6402	NAF
NS0088	216	218	NS	X070200	070200	1	G	W	30.22	40.2	2.62	0.2838	0.22	0.122	2.17	0.39	0.054	0.003	1.04	0.064	0.37	9.8	-0.11	10.06	13709	0.0918	6.80238	-6.71058	NAF
NS0088	54	56	NS	X070117	070117	1	G	M	36.09	35.41	1.08	0.5547	0.43	0.046	1.53	0.4	0.094	0.005	0.165	0.009	0.76	8.19	0	8.95	13628	0.153	6.9768	-6.8238	NAF
NS0088	304	306	NS	X070245	070245	1	G	W	31.65	43.25	1.72	0.4644	0.36	0.077	2.29	0.45	0.054	0.032	0.75	0.039	0.19	5.77	-0.19	5.77	13753	0.9792	7.8489	-6.8697	NAF
NS0088	162	164	NS	X070173	070173	1	G	W	36.36	28.43	0.96	0.6966	0.54	0.035	2.37	0.4	0.033	0.003	0.116	0.1	0.49	14.49	-0.11	14.87	13682	0.0918	6.9768	-6.885	NAF
NS0088	278	280	NS	X070232	070232	1	G	W	30.05	40.33	2.09	0.4644	0.36	0.1	2.54	0.5	0.071	0.056	0.273	0.008	0.57	9.82	-0.16	10.23	13740	1.7136	8.721	-7.0074	NAF
NS0088	236	238	NS	X070211	070211	1	G	W	28.71	43.81	1.74	0.2838	0.22	0.081	1.75	0.42	0.044	0.008	0.7	0.014	0.52	9.92	-0.05	10.39	13719	0.2448	7.32564	-7.08084	NAF
NS0088	70	72	NS	X070126	070126	1	G	M	37.73	33.89	1.5	0.7353	0.57	0.068	1.21	0.47	0.102	0.033	0.399	0.187	0.29	7.14	-0.2	7.23	13636	1.0098	8.19774	-7.18794	NAF
NS0088	90	92	NS	X070136	070136	1	G	M	29.52	37.53	1.44	0.5289	0.41	0.059	1.64	0.5	0.093	0.048	0.303	0.02	1.13	14.02	0.1	15.25	13646	1.4688	8.721	-7.2522	NAF
NS0088	298	300	NS	X070242	070242	1	G	W	32.86	39.85	1.79	0.5031	0.39	0.079	2.45	0.49	0.059	0.04	0.633	0.055	0.26	6.54	-0.16	6.64	13750	1.224	8.54658	-7.32258	NAF
NS0088	154	156	NS	X070169	070169	1	G	W	32.53	25.81	1.75	0.7869	0.61	0.073	2.54	0.44	0.061	0.011	0.182	0.0005	1	20.52	0.06	21.58	13678	0.3366	7.67448	-7.33788	NAF
NS0088	102	104	NS	X070142	070142	1	G	W	33.61	42.13	0.93	0.5676	0.44	0.04	1	0.47	0.087	0.027	0.253	0.042	0.34	5.92	-0.15	6.11	13652	0.8262	8.19774	-7.37154	NAF
NS0088	72	74	NS	X070127	070127	1	G	M	28	50.24	0.86	0.4773	0.37	0.037	0.98	0.46	0.115	0.02	0.172	0.071	0.19	5.96	-0.12	6.03	13637	0.612	8.02332	-7.41132	NAF
NS0088	212	214	NS	X070198	070198	1	G	W	29.4	43.59	2.52	0.258	0.2	0.114	1.98	0.44	0.062	0.007	0.672	0.103	0.39	7.66	-0.11	7.94	13707	0.2142	7.67448	-7.46028	NAF
NS0088	334	336	NS	X070261	070261	1	G	W	34.88	36.42	1.85	0.5289	0.41	0.081	2.34	0.53	0.099	0.058	0.675	0.037	0.23	7.58	-0.26	7.55	13768	1.7748	9.24426	-7.46946	NAF
NS0088	118	120	NS	X070150	070150	1	G	W	36.12	40.94	0.92	0.5805	0.45	0.041	0.84	0.45	0.083	0.011	0.406	0.089	0.29	3.7	-0.1	3.89	13660	0.3366	7.8489	-7.5123	NAF
NS0088	108	110	NS	X070145	070145	1	G	W	32.61	36.98	1.41	0.6321	0.49	0.065	2.08	0.54	0.1	0.058	0.231	0.027	0.56	10.37	0.03	10.96	13655	1.7748	9.41868	-7.64388	NAF
NS0088	322	324	NS	X070255	070255	1	G	W	34.83	37.75	1.18	0.5934	0.46	0.047	2	0.49	0.061	0.027	0.711	0.028	0.27	6.98	-0.21	7.04	13762	0.8262	8.54658	-7.72038	NAF
NS0088	198	200	NS	X070191	070191	1	G	W	28.09	44.22	2.69	0.2451	0.19	0.126	1.83	0.66	0.055	0.119	1.16	0.173	0.3	7.72	0.2	8.22	13700	3.6414	11.51172	-7.87032	NAF
NS0088	120	122	NS	X070152	070152	1	G	W	35.09	40.06	1.55	0.4902	0.38	0.069	1.25	0.59	0.126	0.078	0.44	0.117	0.44	4.75	0.04	5.23	13661	2.3868	10.29078	-7.90398	NAF
NS0088	310	312	NS	X070248	070248	1	G	W	32.76	39.57	2.29	0.5418	0.42	0.102	2.48	0.57	0.114	0.066	0.978	0.042	0.22	6.21	-0.19	6.24	13756	2.0196	9.94194	-7.92234	NAF
NS0088	180	182	NS	X070182	070182	1	G	W	29.63	34.91	2.69	0.4257	0.33	0.126	3.42	0.47	0.053	0.006	0.251	0.007	0.6	14.72	-0.01	15.31	13691	0.1836	8.19774	-8.01414	NAF
NS0088	192	194	NS	X070188	070188	1	G	W	31.61	36.72	2.79	0.3741	0.29	0.137	2	0.47	0.079	0.005	0.855	0.067	0.5	10.52	0.06	11.08	13697	0.153	8.19774	-8.04474	NAF
NS0088	160	162	NS	X070172	070172	1	G	W	32.42	33.24	1.66	0.6063	0.47	0.072	2.46	0.48	0.049	0.01	0.365	0.042	0.54	14.23	-0.01	14.76	13681	0.306	8.37216	-8.06616	NAF
NS0088	224	226	NS	X070205	070205	1	G	W	31.23	40.58	1.79	0.4515	0.35	0.088	1.76	0.47	0.048	0.004	1.13	0.078	0.27	8.52	-0.12	8.67	13713	0.1224	8.19774	-8.07534	NAF
NS0088	112	114	NS	X070147	070147	1	G	W	32.79	37.32	1.07	0.5934	0.46	0.046	1.92	0.56	0.098	0.054	0.287	0.073	0.54	10.44	-0.06	10.92	13657	1.6524	9.76752	-8.11512	NAF
NS0088	114	116	NS	X070148	070148	1	G	W	22.09	48.8	3.15	0.4644	0.36	0.144	2.26	0.9	0.242	0.246	0.745	0.019	0.54	9.99	0.68	11.21	13658	7.5276	15.6978	-8.1702	NAF
NS0088	110	112	NS	X070146	070146	1	G	W	35.28	35.43	1.4	0.5031	0.39	0.063	1.9	0.55	0.079	0.046	0.323	0.058	0.37	8.95	-0.05	9.27	13656	1.4076	9.5931	-8.1855	NAF
NS0088	182	184	NS	X070183	070183	1	G	W	28.67	36.24	2.91	0.4902	0.38	0.137	3.27	0.51	0.053	0.021	0.407	0.017	0.58	13.92	0.04	14.54	13692	0.6426	8.89542	-8.25282	NAF
NS0088	226	228	NS	X070206	070206	1	G	W	29.48	42.92	1.86	0.3741	0.29	0.095	1.85	0.48	0.072	0.002	0.883	0.029	0.4	8.71	-0.05	9.06	13714	0.0612	8.37216	-8.31096	NAF
NS0088	96	98	NS	X070139	070139	1	G	W	32.05	38.36	1.07	0.5031	0.39	0.047	1.56	0.51	0.097	0.018	0.282	0.015	0.65	10.83	-0.12	11.36	13649	0.5508	8.89542	-8.34462	NAF
NS0088	320	322	NS	X070254	070254	1	G	W	35.45	37.48	1.64	0.5676	0.44	0.074	1.95	0.58	0.097	0.057	0.888	0.018	0.13	5.78	-0.27	5.64	13761	1.7442	10.11636	-8.37216	NAF
NS0088	332	334	NS	X070260	070260	1	G	W	35	39.74	1.14	0.4902	0.38	0.047	1.75	0.53	0.069	0.027	0.517	0.023	0.14	5.62	-0.21	5.55	13767	0.8262	9.24426	-8.41806	NAF
NS0088	94	96	NS	X070138	070138	1	G	W	29.69	37.4	2.79	0.9933	0.77	0.117	1.59	0.84	0.25	0.199	0.308	0.016	2.4	9.52	0.56	12.48	13648	6.0894	14.65128	-8.56188	NAF
NS0088	86	88	NS	X070134	070134	1	G	M	28.3	44.56	1.11	0.4644	0.36	0.045	1.38	0.53	0.106	0.022	0.171	0.009	0.69	10.11	-0.07	10.73	13644	0.6732	9.24426	-8.57106	NAF
NS0088	330	332	NS	X070259	070259	1	G	W	31.29	41.44	1.14	0.6063	0.47	0.047	2.07	0.57	0.092	0.044	0.52	0.035	0.32	8.36	-0.2	8.48	13766	1.3464	9.94194	-8.59554	NAF
NS0088	204	206	NS	X070194	070194	1	G	W	31.42	39.23	2.21	0.4128	0.32	0.102	1.85	0.55	0.105	0.032	1.08	0.103	0.25	9.03	-0.15	9.13	13703	0.9792	9.5931	-8.6139	NAF
NS0088	166	168	NS	X070175	070175	1	G	W	31.38	33.1	1.91	0.645	0.5	0.084	2.38	0.51	0.084	0.003	0.525	0.054	0.61	14.99	-0.04	15.56	13684	0.0918	8.89542	-8.80362	NAF
NS0088	186	188	NS	X070185	070185	1	G	W	30.98	39.15	2.3	0.4257	0.33	0.106	2.06	0.51	0.094	0.003	0.596	0.037	0.46	9.85	-0.1	10.21	13694	0.0918	8.89542	-8.80362	NAF
NS0088	122	124	NS	X070153	070153	1	G	W	37.62	32.76	1.59	0.645	0.5	0.075	1.77	0.69	0.161	0.104	0.456	0.126	0.27	7.48	0.01	7.76	13662	3.1824	12.03498	-8.85258	NAF
NS0088	336	338	NS	X070262	070262	1	G	W	31.92	38.28	1.17	0.5934	0.46	0.048	2.53	0.58	0.083	0.041	0.332	0.027	0.83	9.66	-0.21	10.28	13769	1.2546	10.11636	-8.86176	NAF
NS0088	324	326	NS	X070256	070256	1	G	W	33.59	37.7	1.23	0.7095	0.55	0.054	2.31	0.56	0.082	0.029	0.714	0.031	0.33	8.43	-0.23	8.53	13763	0.8874	9.76752	-8.88012	NAF
NS0088	188	190	NS	X070186	070186	1	G	W	32.77	36.77	2.45	0.4257	0.33	0.117	1.95	0.52	0.105	0.004	0.667	0.046	0.44	9.49	-0.16	9.77	13695	0.1224	9.06984	-8.94744	NAF
NS0088	308	310	NS	X070247	070247	1	G	W	30.23	41.58	2.24	0.5934	0.46	0.103	2.73	0.73	0.149	0.12	0.836	0.04	0.3	7.01	0	7.31	13755	3.672	12.73266	-9.06066	NAF
NS0088	344	346	NS	X070266	070266	1	G	W	32.07	36.38	1.59	0.5934	0.46	0.071	2.92	0.63	0.095	0.062	0.584	0.027	0.4	10.55	-0.15	10.8	13773	1.8972	10.98846	-9.09126	NAF
NS0088	104	106	NS	X070143	070143	1	G	W	35.05	38.45	1.26	0.5418	0.42	0.057	1.22	0.61	0.144	0.05	0.383	0.054	0.42	6.8	-0.06	7.16	13653	1.53	10.63962	-9.10962	NAF
NS0088	306	308	NS	X070246	070246	1	G	W	33.03	38.44	1.96	0.5934	0.46	0.09	2.68	0.63	0.13	0.061	0.691	0.04	0.28	7.13	-0.23	7.18	13754	1.8666	10.98846	-9.12186	NAF
NS0088	130	132	NS	X070157	070157	1	G	W	36.2	34.72	0.83	0.5676	0.44	0.035	1.84	0.55	0.089	0.011	0.126	0.136	0.4	8.58	-0.09	8.89	13666	0.3366	9.5931	-9.2565	NAF
NS0088	292	294	NS	X070239	070239	1	G	W	24.96	42.14	3.54	0.5289	0.41	0.167	3.32	0.72	0.124	0.106	1.1	0.042	0.52	12	0.16	12.68	13747	3.2436	12.55824	-9.31464	NAF
NS0088	280	282	NS	X070233	070233	1	G	W	24.81	47.48	2.03	0.4257	0.33	0.094	2.43	0.72	0.097	0.102	0.38	0.018	0.52	9.79	0.12	10.43	13741	3.1212	12.55824	-9.43704	NAF
NS0088	286	288	NS	X070236	070236	1	G	W	19.92	51.75	2.64	0.4386	0.34	0.121	2.65	1.06	0.07	0.293	0.865	0.046	0.5	10.14	0.72	11.36	13744	8.9658	18.48852	-9.52272	NAF
NS0088	222	224	NS	X070204	070204	1	G	W	29.71	42.88	2.01	0.4257	0.33	0.097	1.59	0.56	0.102	0.007	1.34	0.026	0.22	8.14	-0.15	8.21	13712	0.2142	9.76752	-9.55332	NAF
NS0088	152	154	NS	X070168	070168	1	G	W	34.48	26.16	1.13	0.6321	0.49	0.045	1.73	0.58	0.104	0.016	0.05	0.0005	1.53	18.57	0.03	20.13	13677	0.4896	10.11636	-9.62676	NAF
NS0088	258	260	NS	X070222	070222	1	G	W	28.04	33.9	1.89	0.4644	0.36	0.086	3.62	0.92	0.071	0.207	0.192	0.0005	0.77	17.37	0.37	18.51	13730	6.3342	16.04664	-9.71244	NAF
NS0088	134	136	NS	X070159	070159	1	G	W	33.34	34.72	0.94	0.4644	0.36	0.038	2.22	0.57	0.062	0.005	0.039	0.003	0.65	12.25	0.06	12.96	13668	0.153	9.94194	-9.78894	NAF
NS0088	164	166	NS	X070174	070174	1	G	W	34.59	31.79	1.15	0.6837	0.53	0.047	2.15	0.57	0.053	0.004	0.204	0.133	0.51	12.96	-0.08	13.39	13683	0.1224	9.94194	-9.81954	NAF
NS0088	168	170	NS	X070176	070176	1	G	W	30.32	38.94	1.95	0.4386	0.34	0.081	2.03	0.57	0.081	0.003	0.466	0.05	0.5	11.14	-0.04	11.6	13685	0.0918	9.94194	-9.85014	NAF
NS0088	170	172	NS	X070177	070177	1	G	W	30.58	38.89	1.95	0.4515	0.35	0.089	2.04	0.57	0.08	0.003	0.465	0.045	0.51	11.14	-0.04	11.61	13686	0.0918	9.94194	-9.85014	NAF
NS0088	190	192	NS	X070187	070187	1	G	W	30.03	40.04	2.21	0.4128	0.32	0.105	2.2	0.57	0.103	0.003	0.434	0.01	0.44	10.6	-0.04	11	13696	0.0918	9.94194	-9.85014	NAF
NS0088	68	70	NS	X070125	070125	1	G	M	36.89	34.86	1.56	0.6708	0.52	0.071	1.23	0.64	0.166	0.036	0.407	0.167	0.26	7.03	-0.14	7.15	13635	1.1016	11.16288	-10.06128	NAF
NS0088	136	138	NS	X070160	070160	1	G	W	36.62	27.67	1.12	0.5676	0.44	0.049	2.59	0.59	0.051	0.003	0.047	0.003	0.74	14.36	0.06	15.16	13669	0.0918	10.29078	-10.19898	NAF
NS0088	312	314	NS	X070249	070249	1	G	W	29.82	43.58	1.76	0.6063	0.47	0.079	2.4	0.68	0.15	0.053	0.703	0.04	0.24	6.92	-0.22	6.94	13757	1.6218	11.86056	-10.23876	NAF
NS0088	234	236	NS	X070210	070210	1	G	W	26.61	49.73	1.33	0.2451	0.19	0.072	1.5	0.6	0.059	0.007	0.528	0.026	0.26	7.07	0.09	7.42	13718	0.2142	10.4652	-10.251	NAF
NS0088	100	102	NS	X070141	070141	1	G	W	30.69	35.55	1.84	0.5934	0.46	0.085	2.14	0.72	0.149	0.075	0.202	0.011	0.85	13.31	0.13	14.29	13651	2.295	12.55824	-10.26324	NAF
NS0088	174	176	NS	X070179	070179	1	G	W	32.47	35.19	2.01	0.516	0.4	0.091	2.27	0.6	0.095	0.005	0.494	0.141	0.42	11.63	-0.11	11.94	13688	0.153	10.4652	-10.3122	NAF
NS0088	82	84	NS	X070132	070132	1	G	M	34.61	33.82	2.01	0.5934	0.46	0.095	1.71	0.76	0.189	0.096	0.395	0.091	0.47	10.07	0.14	10.68	13642	2.9376	13.25592	-10.31832	NAF
NS0088	84	86	NS	X070133	070133	1	G	M	28.78	46.62	0.82	0.516	0.4	0.032	1.2	0.62	0.129	0.016	0.14	0.015	0.51	8.19	-0.11	8.59	13643	0.4896	10.81404	-10.32444	NAF
NS0088	178	180	NS	X070181	070181	1	G	W	26.87	39.06	2.65	0.5031	0.39	0.121	2.99	0.62	0.11	0.009	0.212	0.01	0.62	14.17	-0.02	14.77	13690	0.2754	10.81404	-10.53864	NAF
NS0088	126	128	NS	X070155	070155	1	G	W	32.31	39.45	0.48	0.6063	0.47	0.017	1.87	0.63	0.076	0.013	0.069	0.029	0.52	9.79	0.05	10.36	13664	0.3978	10.98846	-10.59066	NAF
NS0088	250	252	NS	X070218	070218	1	G	W	29.31	33.34	1.57	0.5031	0.39	0.067	3.18	0.64	0.071	0.01	0.173	0.005	0.85	17.53	0.02	18.4	13726	0.306	11.16288	-10.85688	NAF
NS0088	256	258	NS	X070221	070221	1	G	W	30.68	33.3	2.1	0.4644	0.36	0.093	3.46	0.73	0.083	0.06	0.136	0.009	0.67	14.55	0	15.22	13729	1.836	12.73266	-10.89666	NAF
NS0088	184	186	NS	X070184	070184	1	G	W	26.51	43.74	3	0.4386	0.34	0.141	2.38	0.8	0.119	0.099	0.639	0.031	0.33	9.78	0.19	10.3	13693	3.0294	13.9536	-10.9242	NAF
NS0088	142	144	NS	X070163	070163	1	G	W	28.71	34.74	1.76	0.645	0.5	0.077	2.71	0.73	0.092	0.059	0.008	0.031	0.65	17.18	0.13	17.96	13672	1.8054	12.73266	-10.92726	NAF
NS0088	194	196	NS	X070189	070189	1	G	W	29.97	39.66	2.03	0.3741	0.29	0.094	1.88	0.69	0.13	0.035	0.641	0.035	0.49	10.82	0.09	11.4	13698	1.071	12.03498	-10.96398	NAF
NS0088	218	220	NS	X070202	070202	1	G	W	29.41	39.88	2	0.4257	0.33	0.09	2.29	0.64	0.088	0.003	0.894	0.079	0.44	10.94	0.02	11.4	13710	0.0918	11.16288	-11.07108	NAF
NS0088	240	242	NS	X070213	070213	1	G	W	26.89	37.37	2.13	0.4644	0.36	0.1	2.75	0.69	0.118	0.026	0.085	0.003	1.14	16.46	0.05	17.65	13721	0.7956	12.03498	-11.23938	NAF
NS0088	66	68	NS	X070124	070124	1	G	M	38.8	32.91	1.68	0.6063	0.47	0.079	1.23	0.7	0.194	0.031	0.425	0.152	0.23	6.51	-0.18	6.56	13634	0.9486	12.2094	-11.2608	NAF
NS0088	132	134	NS	X070158	070158	1	G	W	32.8	32.38	1.41	0.5934	0.46	0.06	2.81	0.84	0.185	0.108	0.114	0.021	0.73	13.85	0.18	14.76	13667	3.3048	14.65128	-11.34648	NAF
NS0088	88	90	NS	X070135	070135	1	G	M	31.18	34.73	1.84	0.5934	0.46	0.079	1.87	0.76	0.183	0.057	0.382	0.011	0.89	13.75	0.04	14.68	13645	1.7442	13.25592	-11.51172	NAF
NS0088	302	304	NS	X070244	070244	1	G	W	30.45	43.79	1.74	0.4644	0.36	0.078	2.3	0.72	0.119	0.034	0.754	0.038	0.13	5.83	-0.12	5.84	13752	1.0404	12.55824	-11.51784	NAF
NS0088	230	232	NS	X070208	070208	1	G	W	28.2	42.06	2.95	0.2709	0.21	0.143	2.17	0.67	0.074	0.004	1.32	0.044	1.48	8.54	-0.02	10	13716	0.1224	11.68614	-11.56374	NAF
NS0088	202	204	NS	X070193	070193	1	G	W	27.38	42.02	2.57	0.3612	0.28	0.12	2.28	0.73	0.074	0.035	1.16	0.117	0.47	10.7	0.15	11.32	13702	1.071	12.73266	-11.66166	NAF
NS0088	206	208	NS	X070195	070195	1	G	W	27.64	41.13	2.65	0.3483	0.27	0.125	2.41	0.77	0.076	0.057	0.961	0.077	0.43	10.92	0.2	11.55	13704	1.7442	13.43034	-11.68614	NAF
NS0088	282	284	NS	X070234	070234	1	G	W	27.99	40.6	2.84	0.4644	0.36	0.13	3.07	0.79	0.136	0.067	0.303	0.014	0.47	10.57	-0.03	11.01	13742	2.0502	13.77918	-11.72898	NAF
NS0088	140	142	NS	X070162	070162	1	G	W	34.94	29.4	1.13	0.6063	0.47	0.049	2.27	0.7	0.105	0.004	0.041	0.007	0.85	14.51	-0.07	15.29	13671	0.1224	12.2094	-12.087	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0088	296	298	NS	X070241	070241	1	G	W	32.55	40.89	1.62	0.5031	0.39	0.073	2.26	0.77	0.101	0.043	0.528	0.025	0.27	6.55	-0.1	6.72	13749	1.3158	13.43034	-12.11454	NAF
NS0088	272	274	NS	X070229	070229	1	G	W	28.19	42.92	2.18	0.4128	0.32	0.101	2.56	0.81	0.082	0.064	0.479	0.01	0.44	9.37	0.08	9.89	13737	1.9584	14.12802	-12.16962	NAF
NS0088	242	244	NS	X070214	070214	1	G	W	26.17	37.46	2.85	0.387	0.3	0.127	3.14	0.76	0.067	0.035	0.384	0.006	1.11	15.81	0.22	17.14	13722	1.071	13.25592	-12.18492	NAF
NS0088	264	266	NS	X070225	070225	1	G	W	31.31	35.74	1.09	0.6966	0.54	0.044	2.45	0.71	0.098	0.005	0.564	0.005	0.52	13.29	-0.11	13.7	13733	0.153	12.38382	-12.23082	NAF
NS0088	244	246	NS	X070215	070215	1	G	W	23.48	43.67	2.82	0.4644	0.36	0.128	3.04	0.71	0.109	0.004	0.066	0.0005	0.91	14.37	0.13	15.41	13723	0.1224	12.38382	-12.26142	NAF
NS0088	262	264	NS	X070224	070224	1	G	W	27.85	36.64	3.26	0.8385	0.65	0.148	3.04	1.12	0.119	0.236	0.649	0.014	0.44	13.32	0.36	14.12	13732	7.2216	19.53504	-12.31344	NAF
NS0088	176	178	NS	X070180	070180	1	G	W	31.01	37.66	1.72	0.4773	0.37	0.079	2.28	0.72	0.098	0.003	0.452	0.105	0.49	11.33	-0.01	11.81	13689	0.0918	12.55824	-12.46644	NAF
NS0088	338	340	NS	X070263	070263	1	G	W	29.75	35.79	1.03	0.5934	0.46	0.043	3.6	0.8	0.074	0.041	0.404	0.038	0.66	14.08	0.13	14.87	13770	1.2546	13.9536	-12.699	NAF
NS0088	252	254	NS	X070219	070219	1	G	W	28.12	34.28	1.4	0.5805	0.45	0.059	3.35	0.79	0.087	0.035	0.091	0.004	0.67	18.35	0.15	19.17	13727	1.071	13.77918	-12.70818	NAF
NS0088	246	248	NS	X070216	070216	1	G	W	24.86	40.63	2.24	0.4773	0.37	0.098	3.06	0.79	0.132	0.031	0.041	0.002	0.94	15.4	0.09	16.43	13724	0.9486	13.77918	-12.83058	NAF
NS0088	318	320	NS	X070253	070253	1	G	W	37.66	32.94	1.11	0.7869	0.61	0.047	2.06	0.79	0.099	0.027	0.796	0.021	0.18	7.67	-0.18	7.67	13760	0.8262	13.77918	-12.95298	NAF
NS0088	76	78	NS	X070129	070129	1	G	M	32.82	35.27	1.75	0.7224	0.56	0.081	1.8	0.84	0.214	0.051	0.303	0.065	0.41	10.88	0.06	11.35	13639	1.5606	14.65128	-13.09068	NAF
NS0088	196	198	NS	X070190	070190	1	G	W	26.17	48.69	1.51	0.2838	0.22	0.067	1.65	0.78	0.064	0.004	0.521	0.139	0.39	7.89	0.19	8.47	13699	0.1224	13.60476	-13.48236	NAF
NS0088	340	342	NS	X070264	070264	1	G	W	26.05	39.64	1.01	0.5934	0.46	0.035	3.2	0.8	0.076	0.013	0.635	0.03	0.59	15.39	0.23	16.21	13771	0.3978	13.9536	-13.5558	NAF
NS0088	156	158	NS	X070170	070170	1	G	W	30.78	30.58	1.81	0.645	0.5	0.072	2.84	0.79	0.029	0.003	0.23	0.003	0.68	17.79	0.35	18.82	13679	0.0918	13.77918	-13.68738	NAF
NS0088	254	256	NS	X070220	070220	1	G	W	27.99	35.48	1.73	0.5289	0.41	0.075	3.49	0.91	0.096	0.06	0.08	0.007	0.78	16.59	0.2	17.57	13728	1.836	15.87222	-14.03622	NAF
NS0088	214	216	NS	X070199	070199	1	G	W	29.56	43.14	2.46	0.2451	0.19	0.112	2.02	0.82	0.085	0.008	0.793	0.095	0.22	7.57	0.22	8.01	13708	0.2448	14.30244	-14.05764	NAF
NS0088	138	140	NS	X070161	070161	1	G	W	34.48	29.22	1.06	0.6192	0.48	0.042	2.26	0.84	0.137	0.003	0.046	0.007	1.05	14.89	-0.03	15.91	13670	0.0918	14.65128	-14.55948	NAF
NS0088	208	210	NS	X070196	070196	1	G	W	28.55	42.62	2.28	0.2709	0.21	0.101	2.22	0.85	0.09	0.006	0.545	0.034	0.44	9.23	0.15	9.82	13705	0.1836	14.8257	-14.6421	NAF
NS0088	220	222	NS	X070203	070203	1	G	W	28.26	39.87	2.51	0.4128	0.32	0.119	2.43	0.91	0.13	0.027	1.3	0.094	0.52	11.19	0.16	11.87	13711	0.8262	15.87222	-15.04602	NAF
NS0088	326	328	NS	X070257	070257	1	G	W	33	37.45	1.44	0.5934	0.46	0.062	2.51	1.05	0.276	0.093	0.693	0.056	0.35	8.22	-0.11	8.46	13764	2.8458	18.3141	-15.4683	NAF
NS0088	210	212	NS	X070197	070197	1	G	W	29.48	41.84	2.95	0.2322	0.18	0.138	2.25	0.91	0.103	0.009	0.634	0.079	0.44	7.71	0.15	8.3	13706	0.2754	15.87222	-15.59682	NAF
NS0088	248	250	NS	X070217	070217	1	G	W	26.92	35.65	2.09	0.5031	0.39	0.09	3.37	0.93	0.138	0.013	0.015	0.003	1.12	17.36	0.15	18.63	13725	0.3978	16.22106	-15.82326	NAF
NS0088	98	100	NS	X070140	070140	1	G	W	24.28	45.38	1.28	0.5031	0.39	0.053	1.82	1	0.248	0.045	0.298	0.015	1.07	12.75	0.12	13.94	13650	1.377	17.442	-16.065	NAF
NS0088	228	230	NS	X070207	070207	1	G	W	28.06	41.61	2.19	0.387	0.3	0.104	2.27	0.93	0.146	0.004	0.868	0.07	0.46	10.29	0.17	10.92	13715	0.1224	16.22106	-16.09866	NAF
NS0088	342	344	NS	X070265	070265	1	G	W	29.09	33.06	1.57	0.5805	0.45	0.067	3.86	0.99	0.081	0.035	0.836	0.05	0.67	15.79	0.39	16.85	13772	1.071	17.26758	-16.19658	NAF
NS0088	268	270	NS	X070227	070227	1	G	W	26.66	38.49	2.5	0.4128	0.32	0.114	3.09	1.05	0.084	0.069	0.731	0.01	0.76	13.89	0.36	15.01	13735	2.1114	18.3141	-16.2027	NAF
NS0088	348	350	NS	X070268	070268	1	G	W	33	37.82	1.55	0.5547	0.43	0.065	2.46	1.05	0.21	0.067	0.675	0.026	0.29	7.86	-0.13	8.02	13775	2.0502	18.3141	-16.2639	NAF
NS0088	158	160	NS	X070171	070171	1	G	W	31.24	31.77	1.74	0.5547	0.43	0.066	2.74	0.96	0.092	0.004	0.3	0.019	0.48	15.89	0.32	16.69	13680	0.1224	16.74432	-16.62192	NAF
NS0088	266	268	NS	X070226	070226	1	G	W	25.86	37.92	2.77	0.3999	0.31	0.121	3.16	1	0.099	0.013	0.846	0.005	0.86	15.04	0.39	16.29	13734	0.3978	17.442	-17.0442	NAF
NS0089	178	180	NS	X070359	070359	1	G	W	17.26	53.48	6.44	0.2838	0.22	0.28	1.84	0.32	0.049	1.37	3.4	0.016	0.21	6.17	2.43	8.81	13832	41.922	5.58144	36.34056	PAF(HC)
NS0089	156	158	NS	X070347	070347	1	G	W	25.31	52.94	2.48	0.2064	0.16	0.117	1.52	0.37	0.079	0.905	0.402	0.023	0.13	3.6	1.26	4.99	13821	27.693	6.45354	21.23946	PAF(HC)
NS0089	128	130	NS	X070333	070333	1	G	W	25.82	44.11	3.87	0.3612	0.28	0.179	2.54	0.33	0.065	0.761	0.354	0.015	0.4	8.91	1.48	10.79	13807	23.2866	5.75586	17.53074	PAF(HC)
NS0089	72	74	NS	X070305	070305	1	G	W	22.11	49.46	3.42	0.387	0.3	0.163	2.18	0.38	0.085	0.523	0.342	0.038	0.87	9.36	1.18	11.41	13780	16.0038	6.62796	9.37584	PAF(LC)
NS0089	220	222	NS	X070380	070380	1	G	W	21.45	48.92	6.66	0.3354	0.26	0.29	2.36	0.16	0.024	0.378	0.289	0.013	0.4	8.28	0.82	9.5	13853	11.5668	2.79072	8.77608	PAF(LC)
NS0089	146	148	NS	X070342	070342	1	G	W	26.18	48.74	3.3	0.258	0.2	0.151	2	0.81	0.083	0.699	0.907	0.187	0.06	4.05	1.2	5.31	13816	21.3894	14.12802	7.26138	PAF(LC)
NS0089	84	86	NS	X070311	070311	1	G	W	24.45	42.64	4.97	0.2838	0.22	0.232	3.02	0.37	0.083	0.439	0.536	0.074	0.81	10.27	1.07	12.15	13786	13.4334	6.45354	6.97986	PAF(LC)
NS0089	76	78	NS	X070307	070307	1	G	W	23.68	45.1	4.88	0.4773	0.37	0.227	2.69	0.41	0.115	0.454	0.296	0.037	1.22	9.36	0.99	11.57	13782	13.8924	7.15122	6.74118	PAF(LC)
NS0089	74	76	NS	X070306	070306	1	G	W	21.3	49.58	3.14	0.4644	0.36	0.144	2.37	0.51	0.118	0.473	0.184	0.056	0.59	10.4	1.15	12.14	13781	14.4738	8.89542	5.57838	PAF(LC)
NS0089	290	292	NS	X070416	070416	1	G	W	25.01	40.44	4.26	0.4773	0.37	0.196	2.78	0.26	0.045	0.318	0.137	0.0005	0.67	13.59	0.78	15.04	13888	9.7308	4.53492	5.19588	PAF(LC)
NS0089	124	126	NS	X070331	070331	1	G	W	23.11	45.57	4.22	0.3354	0.26	0.183	2.4	0.43	0.079	0.406	1.94	0.011	0.42	9.65	0.95	11.02	13805	12.4236	7.50006	4.92354	PAF(LC)
NS0089	70	72	NS	X070304	070304	1	G	W	24.54	43.98	4.17	0.3354	0.26	0.193	2.4	0.58	0.114	0.485	1.04	0.046	0.88	9.16	1.18	11.22	13779	14.841	10.11636	4.72464	PAF(LC)
NS0089	246	248	NS	X070393	070393	1	G	W	20	49.54	6.51	0.3096	0.24	0.298	3.15	0.55	0.129	0.432	0.281	0.026	0.45	8.49	1.04	9.98	13866	13.2192	9.5931	3.6261	PAF(LC)
NS0089	154	156	NS	X070346	070346	1	G	W	27.5	49.86	1.83	0.2838	0.22	0.085	1.48	0.6	0.112	0.441	0.295	0.031	0.11	4.79	0.77	5.67	13820	13.4946	10.4652	3.0294	PAF(LC)
NS0089	234	236	NS	X070387	070387	1	G	W	23.58	41.61	6.02	0.3483	0.27	0.269	3.15	0.48	0.083	0.322	1.38	0.008	0.39	11.06	0.9	12.35	13860	9.8532	8.37216	1.48104	PAF(LC)
NS0089	224	226	NS	X070382	070382	1	G	W	28.15	33.87	3.19	0.5547	0.43	0.146	2.75	0.45	0.07	0.268	0.394	0.005	0.58	16.47	0.72	17.77	13855	8.2008	7.8489	0.3519	PAF(LC)
NS0089	120	122	NS	X070329	070329	1	G	W	23.59	47.11	3.98	0.3354	0.26	0.183	2.25	0.66	0.157	0.385	1.39	0.031	0.59	7.85	0.88	9.32	13803	11.781	11.51172	0.26928	PAF(LC)
NS0089	0	4	NS	BX077269-BX077270	X077269	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	592	-0.0306	-0.01744	-0.013158	NAF
NS0089	4	8	NS	BX077271-BX077272	X077271	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	593	-0.0306	-0.01744	-0.013158	NAF
NS0089	20	24	NS	BX077279-BX077280	X077279	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	597	-0.0306	-0.01744	-0.013158	NAF
NS0089	24	28	NS	BX077281-BX077282	X077281	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	598	-0.0306	-0.01744	-0.013158	NAF
NS0089	28	32	NS	BX077283-BX077284	X077283	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	599	-0.0306	-0.01744	-0.013158	NAF
NS0089	32	36	NS	BX077285-BX077286	X077285	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	600	-0.0306	-0.01744	-0.013158	NAF
NS0089	36	40	NS	BX077287-BX077288	X077287	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	601	-0.0306	-0.01744	-0.013158	NAF
NS0089	40	42	NS	BX077289	X077289	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	602	-0.0306	-0.01744	-0.013158	NAF
NS0089	44	48	NS	BX077291-BX077292	X077291	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	603	-0.0306	-0.01744	-0.013158	NAF
NS0089	48	52	NS	BX077293-BX077294	X077293	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	604	-0.0306	-0.01744	-0.013158	NAF
NS0089	52	56	NS	BX077295-BX077296	X077295	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	605	-0.0306	-0.01744	-0.013158	NAF
NS0089	64	68	NS	BX077301-BX077302	X077301	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	608	-0.0306	-0.01744	-0.013158	NAF
NS0089	72	76	NS	BX077305-BX077306	X077305	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	610	-0.0306	-0.01744	-0.013158	NAF
NS0089	76	80	NS	BX077307-BX077308	X077307	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	611	-0.0306	-0.01744	-0.013158	NAF
NS0089	80	84	NS	BX077309-BX077310	X077309	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	612	-0.0306	-0.01744	-0.013158	NAF
NS0089	296	300	NS	BX077419-BX077420	X077419	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	666	-0.0306	-0.01744	-0.013158	NAF
NS0089	300	304	NS	BX077421-BX077422	X077421	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	667	-0.0306	-0.01744	-0.013158	NAF
NS0089	304	308	NS	BX077423-BX077424	X077423	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	668	-0.0306	-0.01744	-0.013158	NAF
NS0089	308	312	NS	BX077425-BX077426	X077425	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	669	-0.0306	-0.01744	-0.013158	NAF
NS0089	376	378	NS	BX077459	X077459	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	686	-0.0306	-0.01744	-0.013158	NAF
NS0089	380	384	NS	BX077461-BX077462	X077461	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	687	-0.0306	-0.01744	-0.013158	NAF
NS0089	384	388	NS	BX077463-BX077464	X077463	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	688	-0.0306	-0.01744	-0.013158	NAF
NS0089	388	392	NS	BX077465-BX077466	X077465	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	689	-0.0306	-0.01744	-0.013158	NAF
NS0089	392	396	NS	BX077467-BX077468	X077467	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	690	-0.0306	-0.01744	-0.013158	NAF
NS0089	160	162	NS	BX077349	X077349	2			68.84	3.928	0.32	0.028	0.02016	0.031	0.19	0.033	0.003	0.011	0.119	0.115	-0.01	-0.01	-0.01	-0.03	631	0.3366	0.575586	-0.238986	NAF
NS0089	156	160	NS	BX077347-BX077348	X077347	2			70.45	2.489	0.197	0.035	0.0252	0.02	0.164	0.032	0.005	0.01	0.03	0.061	-0.01	-0.01	-0.01	-0.03	630	0.306	0.558144	-0.252144	NAF
NS0089	258	260	NS	BX077399	X077399	2			71.05	2.032	0.102	0.039	0.02808	0.013	0.169	0.037	0.006	0.01	0.019	0.1	-0.01	-0.01	-0.01	-0.03	656	0.306	0.645354	-0.339354	NAF
NS0089	124	128	NS	BX077331-BX077332	X077331	2			68.74	3.766	0.301	0.032	0.02304	0.026	0.177	0.036	0.004	0.009	0.12	0.086	-0.01	-0.01	-0.01	-0.03	622	0.2754	0.627912	-0.352512	NAF
NS0089	178	180	NS	BX077359	X077359	2			70.07	2.71	0.227	0.047	0.03384	0.026	0.173	0.04	0.006	0.011	0.08	0.058	-0.01	-0.01	-0.01	-0.03	636	0.3366	0.69768	-0.36108	NAF
NS0089	108	112	NS	BX077323-BX077324	X077323	2			68.17	4.587	0.501	0.034	0.02448	0.036	0.275	0.044	0.007	0.013	0.138	0.07	-0.01	-0.01	-0.01	-0.03	618	0.3978	0.767448	-0.369648	NAF
NS0089	170	174	NS	BX077355-BX077356	X077355	2			66.95	5.253	0.361	0.046	0.03312	0.026	0.244	0.037	0.004	0.009	0.073	0.06	-0.01	-0.01	-0.01	-0.03	634	0.2754	0.645354	-0.369954	NAF
NS0089	340	344	NS	BX077441-BX077442	X077441	2			71.41	1.403	0.044	0.039	0.02808	0.003	0.133	0.029	0.004	0.004	0.008	0.065	-0.01	-0.01	-0.01	-0.03	677	0.1224	0.505818	-0.383418	NAF
NS0089	92	96	NS	BX077315-BX077316	X077315	2			68.12	3.277	0.383	0.03	0.0216	0.024	0.27	0.044	0.007	0.012	0.007	0.069	-0.01	-0.01	-0.01	-0.03	614	0.3672	0.767448	-0.400248	NAF
NS0089	56	60	NS	BX077297-BX077298	X077297	2			67.21	2.7	0.367	0.029	0.02088	0.025	0.177	0.03	0.018	0.004	0.046	0.099	-0.01	-0.01	-0.01	-0.03	606	0.1224	0.52326	-0.40086	NAF
NS0089	230	234	NS	BX077385-BX077386	X077385	2			70.98	1.859	0.124	0.034	0.02448	0.03	0.143	0.032	0.004	0.005	0.025	0.063	-0.01	-0.01	-0.01	-0.03	649	0.153	0.558144	-0.405144	NAF
NS0089	166	170	NS	BX077353-BX077354	X077353	2			69.06	4.089	0.293	0.028	0.02016	0.023	0.197	0.034	0.004	0.006	0.076	0.059	-0.01	-0.01	-0.01	-0.03	633	0.1836	0.593028	-0.409428	NAF
NS0089	320	324	NS	BX077431-BX077432	X077431	2			71.37	1.453	0.039	0.03	0.0216	0.001	0.133	0.027	0.003	0.002	0.006	0.11	-0.01	-0.01	-0.01	-0.03	672	0.0612	0.470934	-0.409734	NAF
NS0089	352	356	NS	BX077447-BX077448	X077447	2			71.75	1.142	0.029	0.028	0.02016	0.003	0.106	0.029	0.004	0.003	0.001	0.056	-0.01	-0.01	-0.01	-0.03	680	0.0918	0.505818	-0.414018	NAF
NS0089	60	64	NS	BX077299-BX077300	X077299	2			67.65	3.048	0.433	0.046	0.03312	0.027	0.176	0.031	0.017	0.004	0.06	0.087	-0.01	-0.01	-0.01	-0.03	607	0.1224	0.540702	-0.418302	NAF
NS0089	120	122	NS	BX077329	X077329	2			65.43	6.067	0.59	0.038	0.02736	0.04	0.286	0.063	0.013	0.022	0.248	0.099	-0.01	-0.01	-0.01	-0.03	621	0.6732	1.098846	-0.425646	NAF
NS0089	332	336	NS	BX077437-BX077438	X077437	2			69.55	3.837	0.066	0.043	0.03096	0.008	0.128	0.035	0.004	0.006	0.018	0.064	-0.01	-0.01	-0.01	-0.03	675	0.1836	0.61047	-0.42687	NAF
NS0089	96	100	NS	BX077317-BX077318	X077317	2			69.4	2.01	0.202	0.035	0.0252	0.013	0.185	0.037	0.005	0.007	0.003	0.075	-0.01	-0.01	-0.01	-0.03	615	0.2142	0.645354	-0.431154	NAF
NS0089	162	166	NS	BX077351-BX077352	X077351	2			69.45	3.661	0.23	0.025	0.018	0.019	0.161	0.036	0.005	0.006	0.083	0.06	-0.01	-0.01	-0.01	-0.03	632	0.1836	0.627912	-0.444312	NAF
NS0089	288	292	NS	BX077415-BX077416	X077415	2			70.6	1.287	0.089	0.027	0.01944	0.004	0.119	0.031	0.003	0.003	0.007	0.057	-0.01	-0.01	-0.01	-0.03	664	0.0918	0.540702	-0.448902	NAF
NS0089	152	156	NS	BX077345-BX077346	X077345	2			70.87	1.728	0.073	0.026	0.01872	0.006	0.116	0.033	0.005	0.004	0.011	0.063	-0.01	-0.01	-0.01	-0.03	629	0.1224	0.575586	-0.453186	NAF
NS0089	104	108	NS	BX077321-BX077322	X077321	2			67.48	3.992	0.433	0.04	0.0288	0.036	0.276	0.049	0.009	0.013	0.063	0.076	-0.01	-0.01	-0.01	-0.03	617	0.3978	0.854658	-0.456858	NAF
NS0089	276	280	NS	BX077409-BX077410	X077409	2			71.92	1.15	0.039	0.025	0.018	0.004	0.119	0.028	0.004	0.001	0.006	0.051	-0.01	-0.01	-0.01	-0.03	661	0.0306	0.488376	-0.457776	NAF
NS0089	234	238	NS	BX077387-BX077388	X077387	2			70.82	2.52	0.208	0.041	0.02952	0.025	0.195	0.037	0.005	0.006	0.037	0.056	-0.01	-0.01	-0.01	-0.03	650	0.1836	0.645354	-0.461754	NAF
NS0089	268	272	NS	BX077405-BX077406	X077405	2			71.56	1.413	0.057	0.031	0.02232	0.005	0.126	0.03	0.003	0.002	0.005	0.056	-0.01	-0.01	-0.01	-0.03	659	0.0612	0.52326	-0.46206	NAF
NS0089	88	92	NS	BX077313-BX077314	X077313	2			70.62	2.113	0.221	0.039	0.02808	0.024	0.201	0.046	0.008	0.011	0.009	0.074	-0.01	-0.01	-0.01	-0.03	613	0.3366	0.802332	-0.465732	NAF
NS0089	148	152	NS	BX077343-BX077344	X077343	2			71.01	2.186	0.076	0.027	0.01944	0.005	0.113	0.035	0.005	0.004	0.014	0.079	-0.01	-0.01	-0.01	-0.03	628	0.1224	0.61047	-0.48807	NAF
NS0089	280	284	NS	BX077411-BX077412	X077411	2			72.15	1.046	0.02	0.03	0.0216	0.004	0.114	0.03	0.003	0.001	0.005	0.058	-0.01	-0.01	-0.01	-0.03	662	0.0306	0.52326	-0.49266	NAF
NS0089	344	348	NS	BX077443-BX077444	X077443	2			71.53	1.767	0.024	0.03	0.0216	0.012	0.106	0.032	0.006	0.002	0.005	0.055	-0.01	-0.01	-0.01	-0.03	678	0.0612	0.558144	-0.496944	NAF
NS0089	238	240	NS	BX077389	X077389	2			70.37	2.525	0.187	0.034	0.02448	0.024	0.181	0.041	0.005	0.007	0.03	0.076	-0.01	-0.01	-0.01	-0.03	651	0.2142	0.715122	-0.500922	NAF
NS0089	116	120	NS	BX077327-BX077328	X077327	2			67.28	4.639	0.42	0.032	0.02304	0.026	0.221	0.043	0.006	0.008	0.174	0.068	-0.01	-0.01	-0.01	-0.03	620	0.2448	0.750006	-0.505206	NAF
NS0089	242	246	NS	BX077391-BX077392	X077391	2			69.77	2.455	0.266	0.057	0.04104	0.017	0.252	0.043	0.006	0.008	0.019	0.07	-0.01	-0.01	-0.01	-0.03	652	0.2448	0.750006	-0.505206	NAF
NS0089	324	328	NS	BX077433-BX077434	X077433	2			70.51	2.019	0.048	0.028	0.02016	0.003	0.124	0.031	0.003	0.001	0.007	0.057	-0.01	-0.01	-0.01	-0.03	673	0.0306	0.540702	-0.510102	NAF
NS0089	112	116	NS	BX077325-BX077326	X077325	2			68.79	3.093	0.273	0.034	0.02448	0.018	0.201	0.042	0.007	0.007	0.022	0.061	-0.01	-0.01	-0.01	-0.03	619	0.2142	0.732564	-0.518364	NAF
NS0089	68	72	NS	BX077303-BX077304	X077303	2			66.1	3.235	0.405	0.016	0.01152	0.026	0.159	0.046	0.01	0.009	0.095	0.099	-0.01	-0.01	-0.01	-0.03	609	0.2754	0.802332	-0.526932	NAF
NS0089	144	148	NS	BX077341-BX077342	X077341	2			68.05	4.478	0.248	0.032	0.02304	0.019	0.168	0.046	0.008	0.009	0.098	0.07	-0.01	-0.01	-0.01	-0.03	627	0.2754	0.802332	-0.526932	NAF
NS0089	348	352	NS	BX077445-BX077446	X077445	2			71.59	1.286	0.022	0.031	0.02232	0.001	0.101	0.032	0.004	0.001	0.005	0.115	-0.01	-0.01	-0.01	-0.03	679	0.0306	0.558144	-0.527544	NAF
NS0089	64	66	NS	X070301	070301	1	G	D	29.23	46.47	3.99	0.3225	0.25	0.191	0.58	0.09	0.118	0.034	0.967	0.027	3.52	1.1	0.23	4.85	13776	1.0404	1.56978	-0.52938	NAF
NS0089	174	178	NS	BX077357-BX077358	X077357	2			68.63	4.142	0.327	0.043	0.03096	0.028	0.221	0.041	0.006	0.006	0.079	0.064	-0.01	-0.01	-0.01	-0.03	635	0.1836	0.715122	-0.531522	NAF
NS0089	218	222	NS	BX077379-BX077380	X077379	2			68.73	2.288	0.205	0.042	0.03024	0.002	0.125	0.041	0.003	0.006	0.014	0.086	-0.01	-0.01	-0.01	-0.03	646	0.1836	0.715122	-0.531522	NAF
NS0089	100	104	NS	BX077319-BX077320	X077319	2			69.49	2.655	0.234	0.028	0.02016	0.017	0.197	0.043	0.006	0.007	0.014	0.063	-0.01	-0.01	-0.01	-0.03	616	0.2142	0.750006	-0.535806	NAF
NS0089	214	218	NS	BX077377-BX077378	X077377	2			70.22	1.654	0.067	0.042	0.03024	0.008	0.122	0.035	0.004	0.002	0.016	0.068	-0.01	-0.01	-0.01	-0.03	645	0.0612	0.61047	-0.54927	NAF
NS0089	264	268	NS	BX077403-BX077404	X077403	2			70.3	1.695	0.061	0.038	0.02736	0.001	0.149	0.035	0.006	0.002	0.006	0.053	-0.01	-0.01	-0.01	-0.03	658	0.0612	0.61047	-0.54927	NAF
NS0089	260	264	NS	BX077401-BX077402	X077401	2			70.38	1.965	0.057	0.041	0.02952	0.001	0.153	0.037	0.007	0.003	0.009	0.064	-0.01	-0.01	-0.01	-0.03	657	0.0918	0.645354	-0.553554	NAF
NS0089	284	288	NS	BX077413-BX077414	X077413	2			71.1	1.599	0.046	0.029	0.02088	0.004	0.109	0.034	0.003	0.001	0.012	0.049	-0.01	-0.01	-0.01	-0.03	663	0.0306	0.593028	-0.562428	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0089	12	16	NS	BX077275-BX077276	X077275	2			67.66	2.953	0.357	0.068	0.04896	0.026	0.127	0.04	0.019	0.004	0.024	0.083	-0.01	-0.01	-0.01	-0.03	595	0.1224	0.69768	-0.57528	NAF
NS0089	246	250	NS	BX077393-BX077394	X077393	2			70.63	2.524	0.189	0.049	0.03528	0.008	0.24	0.049	0.007	0.009	0.019	0.086	-0.01	-0.01	-0.01	-0.03	653	0.2754	0.854658	-0.579258	NAF
NS0089	222	226	NS	BX077381-BX077382	X077381	2			70.27	2.258	0.137	0.05	0.036	0.027	0.17	0.042	0.005	0.005	0.021	0.092	-0.01	-0.01	-0.01	-0.03	647	0.153	0.732564	-0.579564	NAF
NS0089	254	258	NS	BX077397-BX077398	X077397	2			71.04	1.805	0.055	0.044	0.03168	0.005	0.163	0.035	0.004	0.001	0.012	0.053	-0.01	-0.01	-0.01	-0.03	655	0.0306	0.61047	-0.57987	NAF
NS0089	316	318	NS	BX077429	X077429	2			71.01	1.404	0.031	0.04	0.0288	0.002	0.139	0.035	0.002	0.001	0.002	0.066	-0.01	-0.01	-0.01	-0.03	671	0.0306	0.61047	-0.57987	NAF
NS0089	272	276	NS	BX077407-BX077408	X077407	2			70.65	2.366	0.084	0.036	0.02592	0.008	0.159	0.037	0.004	0.002	0.017	0.055	-0.01	-0.01	-0.01	-0.03	660	0.0612	0.645354	-0.584154	NAF
NS0089	336	340	NS	BX077439-BX077440	X077439	2			71	2.748	0.056	0.036	0.02592	0.004	0.133	0.037	0.005	0.002	0.018	0.076	-0.01	-0.01	-0.01	-0.03	676	0.0612	0.645354	-0.584154	NAF
NS0089	356	360	NS	BX077449-BX077450	X077449	2			71.61	1.029	0.03	0.035	0.0252	0.003	0.157	0.037	0.004	0.002	0.001	0.056	-0.01	-0.01	-0.01	-0.03	681	0.0612	0.645354	-0.584154	NAF
NS0089	292	296	NS	BX077417-BX077418	X077417	2			71	1.654	0.127	0.043	0.03096	0.008	0.166	0.041	0.004	0.004	0.006	0.084	-0.01	-0.01	-0.01	-0.03	665	0.1224	0.715122	-0.592722	NAF
NS0089	16	20	NS	BX077277-BX077278	X077277	2			65.33	2.454	0.281	0.035	0.0252	0.015	0.086	0.036	0.014	0.001	0.011	0.08	-0.01	-0.01	-0.01	-0.03	596	0.0306	0.627912	-0.597312	NAF
NS0089	8	12	NS	BX077273-BX077274	X077273	2			69.23	2.152	0.196	0.035	0.0252	0.021	0.118	0.038	0.014	0.002	0.012	0.069	-0.01	-0.01	-0.01	-0.03	594	0.0612	0.662796	-0.601596	NAF
NS0089	226	230	NS	BX077383-BX077384	X077383	2			71.35	2.284	0.095	0.035	0.0252	0.011	0.144	0.038	0.004	0.002	0.024	0.065	-0.01	-0.01	-0.01	-0.03	648	0.0612	0.662796	-0.601596	NAF
NS0089	190	194	NS	BX077365-BX077366	X077365	2			70.13	2.897	0.156	0.045	0.0324	0.019	0.153	0.039	0.005	0.002	0.054	0.07	-0.01	-0.01	-0.01	-0.03	639	0.0612	0.680238	-0.619038	NAF
NS0089	194	198	NS	BX077367-BX077368	X077367	2			70.81	2.664	0.118	0.044	0.03168	0.011	0.14	0.04	0.006	0.002	0.039	0.119	-0.01	-0.01	-0.01	-0.03	640	0.0612	0.69768	-0.63648	NAF
NS0089	186	190	NS	BX077363-BX077364	X077363	2			70.72	2.376	0.106	0.041	0.02952	0.012	0.121	0.039	0.007	0.001	0.042	0.063	-0.01	-0.01	-0.01	-0.03	638	0.0306	0.680238	-0.649638	NAF
NS0089	250	254	NS	BX077395-BX077396	X077395	2			70.49	1.827	0.07	0.037	0.02664	0.007	0.158	0.041	0.006	0.002	0.004	0.053	-0.01	-0.01	-0.01	-0.03	654	0.0612	0.715122	-0.653922	NAF
NS0089	206	210	NS	BX077373-BX077374	X077373	2			70.8	2.419	0.11	0.041	0.02952	0.025	0.148	0.042	0.007	0.002	0.023	0.062	-0.01	-0.01	-0.01	-0.03	643	0.0612	0.732564	-0.671364	NAF
NS0089	182	186	NS	BX077361-BX077362	X077361	2			69.34	3.309	0.123	0.038	0.02736	0.009	0.134	0.041	0.006	0.001	0.045	0.076	-0.01	-0.01	-0.01	-0.03	637	0.0306	0.715122	-0.684522	NAF
NS0089	128	132	NS	BX077333-BX077334	X077333	2			70.03	2.692	0.169	0.034	0.02448	0.011	0.158	0.05	0.01	0.006	0.068	0.069	-0.01	-0.01	-0.01	-0.03	623	0.1836	0.8721	-0.6885	NAF
NS0089	140	144	NS	BX077339-BX077340	X077339	2			69.13	3.364	0.18	0.033	0.02376	0.011	0.148	0.048	0.009	0.004	0.092	0.066	-0.01	-0.01	-0.01	-0.03	626	0.1224	0.837216	-0.714816	NAF
NS0089	368	372	NS	BX077455-BX077456	X077455	2			70.1	1.899	0.037	0.046	0.03312	0.001	0.148	0.048	0.007	0.003	0.014	0.094	-0.01	-0.01	-0.01	-0.03	684	0.0918	0.837216	-0.745416	NAF
NS0089	210	214	NS	BX077375-BX077376	X077375	2			70.1	2.631	0.093	0.047	0.03384	0.01	0.144	0.049	0.008	0.003	0.026	0.054	-0.01	-0.01	-0.01	-0.03	644	0.0918	0.854658	-0.762858	NAF
NS0089	364	368	NS	BX077453-BX077454	X077453	2			71.46	1.553	0.054	0.048	0.03456	0.006	0.192	0.053	0.003	0.005	0.01	0.082	-0.01	-0.01	-0.01	-0.03	683	0.153	0.924426	-0.771426	NAF
NS0089	360	364	NS	BX077451-BX077452	X077451	2			71.38	1.457	0.04	0.045	0.0324	0.004	0.187	0.051	0.006	0.003	0.002	0.063	-0.01	-0.01	-0.01	-0.03	682	0.0918	0.889542	-0.797742	NAF
NS0089	198	202	NS	BX077369-BX077370	X077369	2			69.64	3.258	0.184	0.058	0.04176	0.028	0.176	0.053	0.008	0.004	0.068	0.053	-0.01	-0.01	-0.01	-0.03	641	0.1224	0.924426	-0.802026	NAF
NS0089	328	332	NS	BX077435-BX077436	X077435	2			71.18	2.391	0.069	0.048	0.03456	0.003	0.154	0.05	0.009	0.002	0.012	0.059	-0.01	-0.01	-0.01	-0.03	674	0.0612	0.8721	-0.8109	NAF
NS0089	132	136	NS	BX077335-BX077336	X077335	2			68.95	3.606	0.145	0.034	0.02448	0.008	0.148	0.052	0.01	0.003	0.066	0.068	-0.01	-0.01	-0.01	-0.03	624	0.0918	0.906984	-0.815184	NAF
NS0089	136	140	NS	BX077337-BX077338	X077337	2			69.88	3.839	0.163	0.04	0.0288	0.01	0.168	0.056	0.011	0.005	0.064	0.084	-0.01	-0.01	-0.01	-0.03	625	0.153	0.976752	-0.823752	NAF
NS0089	66	68	NS	X070302	070302	1	G	D	31.99	42.09	3.9	0.4902	0.38	0.185	0.66	0.09	0.13	0.024	0.619	0.022	4.11	1.24	0.24	5.59	13777	0.7344	1.56978	-0.83538	NAF
NS0089	202	206	NS	BX077371-BX077372	X077371	2			68.25	3.671	0.141	0.052	0.03744	0.014	0.17	0.06	0.01	0.004	0.05	0.068	-0.01	-0.01	-0.01	-0.03	642	0.1224	1.04652	-0.92412	NAF
NS0089	126	128	NS	X070332	070332	1	G	W	25.67	49.2	2.59	0.3096	0.24	0.118	1.44	0.21	0.039	0.089	0.756	0.013	0.82	7.39	0.09	8.3	13806	2.7234	3.66282	-0.93942	NAF
NS0089	372	376	NS	BX077457-BX077458	X077457	2			69.33	2.297	0.122	0.057	0.04104	0.007	0.213	0.061	0.005	0.002	0.063	0.08	-0.01	-0.01	-0.01	-0.03	685	0.0612	1.063962	-1.002762	NAF
NS0089	398	402	NS	BX077471-BX077472	X077471	2			68.33	2.784	0.173	0.071	0.05112	0.001	0.186	0.065	0.003	0.001	0.035	0.075	-0.01	-0.01	-0.01	-0.03	692	0.0306	1.13373	-1.10313	NAF
NS0089	232	234	NS	X070386	070386	1	G	W	27.47	42.96	3.04	0.4128	0.32	0.167	2.08	0.39	0.044	0.185	0.68	0.008	0.36	9.55	0.37	10.28	13859	5.661	6.80238	-1.14138	NAF
NS0089	80	82	NS	X070309	070309	1	G	W	23.83	44.28	3.31	0.3612	0.28	0.159	2.73	0.42	0.087	0.2	0.336	0.039	0.79	12.09	0.54	13.42	13784	6.12	7.32564	-1.20564	NAF
NS0089	396	398	NS	BX077469	X077469	2			70.13	2.939	0.116	0.068	0.04896	0.013	0.264	0.074	0.003	0.001	0.017	0.056	-0.01	-0.01	-0.01	-0.03	691	0.0306	1.290708	-1.260108	NAF
NS0089	108	110	NS	X070323	070323	1	G	W	23.54	44.48	4.61	0.3354	0.26	0.216	2.66	0.5	0.114	0.233	1.51	0.058	0.63	9.94	0.5	11.07	13798	7.1298	8.721	-1.5912	NAF
NS0089	172	174	NS	X070356	070356	1	G	W	25.78	47.53	2.65	0.3741	0.29	0.126	2.04	0.26	0.037	0.09	0.557	0.003	0.31	8.73	0.02	9.06	13829	2.754	4.53492	-1.78092	NAF
NS0089	160	162	NS	X070349	070349	1	G	W	26.35	45.66	3.83	0.3741	0.29	0.184	2.25	0.34	0.055	0.124	1.27	0.012	0.26	7.61	0.14	8.01	13823	3.7944	5.93028	-2.13588	NAF
NS0089	166	168	NS	X070353	070353	1	G	W	28.92	45.99	3.12	0.2451	0.19	0.147	1.68	0.28	0.056	0.087	1.34	0.036	0.18	5.46	-0.15	5.49	13826	2.6622	4.88376	-2.22156	NAF
NS0089	68	70	NS	X070303	070303	1	G	D	31.04	45.72	2.84	0.2322	0.18	0.132	0.68	0.18	0.145	0.019	0.401	0.023	3.5	1.3	0.14	4.94	13778	0.5814	3.13956	-2.55816	NAF
NS0089	312	316	NS	BX077427-BX077428	X077427	2			68.06	3.324	0.107	0.076	0.05472	0.006	0.287	0.153	0.012	0.003	0.019	0.068	-0.01	-0.01	-0.01	-0.03	670	0.0918	2.668626	-2.576826	NAF
NS0089	300	302	NS	X070421	070421	1	G	W	12.2	72.75	0.27	0.3354	0.26	0.011	0.84	0.2	0.028	0.026	0.03	0.0005	0.39	7.32	0.22	7.93	13893	0.7956	3.4884	-2.6928	NAF
NS0089	244	246	NS	X070392	070392	1	G	W	23	42.89	6.13	0.4257	0.33	0.269	3.49	0.66	0.165	0.278	0.05	0.003	0.39	11.25	0.63	12.27	13865	8.5068	11.51172	-3.00492	NAF
NS0089	302	304	NS	X070422	070422	1	G	W	17.46	59.79	0.51	0.4386	0.34	0.021	1.42	0.39	0.065	0.124	0.054	0.0005	0.52	11.11	0.42	12.05	13894	3.7944	6.80238	-3.00798	NAF
NS0089	298	300	NS	X070420	070420	1	G	W	18.18	57.59	1.14	0.3999	0.31	0.05	1.7	0.27	0.031	0.05	0.064	0.0005	0.55	11.56	0.26	12.37	13892	1.53	4.70934	-3.17934	NAF
NS0089	168	170	NS	X070354	070354	1	G	W	26	46.95	3.57	0.3354	0.26	0.169	2.21	0.42	0.084	0.12	0.959	0.017	0.26	7.27	0.09	7.62	13827	3.672	7.32564	-3.65364	NAF
NS0089	82	84	NS	X070310	070310	1	G	W	26.14	39.8	2.42	0.3612	0.28	0.112	2.56	0.48	0.09	0.142	0.124	0.023	0.89	14.95	0.39	16.23	13785	4.3452	8.37216	-4.02696	NAF
NS0089	242	244	NS	X070391	070391	1	G	W	31.21	36.65	2.33	0.5418	0.42	0.103	2.15	0.37	0.057	0.079	0.313	0.004	0.48	11.92	-0.01	12.39	13864	2.4174	6.45354	-4.03614	NAF
NS0089	258	260	NS	X070399	070399	1	G	W	27.55	37.65	2.14	0.5031	0.39	0.089	2.63	0.44	0.055	0.117	0.378	0.0005	1.81	14.16	0.26	16.23	13872	3.5802	7.67448	-4.09428	NAF
NS0089	304	306	NS	X070423	070423	1	G	W	13.66	68.79	0.27	0.3999	0.31	0.011	1.09	0.28	0.032	0.024	0.048	0.005	0.38	8.76	0.2	9.34	13895	0.7344	4.88376	-4.14936	NAF
NS0089	174	176	NS	X070357	070357	1	G	W	24.9	44.82	3.02	0.4644	0.36	0.142	2.29	0.4	0.069	0.092	1.04	0.003	0.51	10.92	0.11	11.54	13830	2.8152	6.9768	-4.1616	NAF
NS0089	118	120	NS	X070328	070328	1	G	W	27.18	43.59	3.31	0.3999	0.31	0.153	2.13	0.4	0.077	0.09	1.42	0.011	0.53	8.87	-0.03	9.37	13802	2.754	6.9768	-4.2228	NAF
NS0089	248	250	NS	X070394	070394	1	G	W	28.03	38.92	2.91	0.645	0.5	0.134	2.68	0.53	0.057	0.161	0.58	0.0005	0.48	12.09	0.3	12.87	13867	4.9266	9.24426	-4.31766	NAF
NS0089	112	114	NS	X070325	070325	1	G	W	29.02	43.67	2.75	0.3612	0.28	0.128	1.97	0.45	0.094	0.113	0.465	0.022	0.43	7.82	-0.03	8.22	13800	3.4578	7.8489	-4.3911	NAF
NS0089	294	296	NS	X070418	070418	1	G	W	26.22	38.89	2.98	0.3354	0.26	0.136	2.86	0.47	0.023	0.121	0.064	0.0005	0.62	15.26	0.27	16.15	13890	3.7026	8.19774	-4.49514	NAF
NS0089	78	80	NS	X070308	070308	1	G	W	26.2	38.11	3.44	0.4386	0.34	0.162	2.97	0.55	0.117	0.165	0.207	0.034	0.7	14.66	0.44	15.8	13783	5.049	9.5931	-4.5441	NAF
NS0089	158	160	NS	X070348	070348	1	G	W	25.88	46.89	3.3	0.3741	0.29	0.158	2.23	0.48	0.114	0.124	0.602	0.016	0.29	7.68	0.17	8.14	13822	3.7944	8.37216	-4.57776	NAF
NS0089	218	220	NS	X070379	070379	1	G	W	27.48	38.25	1.74	0.4644	0.36	0.073	2.28	0.45	0.047	0.1	0.274	0.0005	0.61	15.72	0.22	16.55	13852	3.06	7.8489	-4.7889	NAF
NS0089	164	166	NS	X070352	070352	1	G	W	26.92	48.97	3.03	0.2451	0.19	0.138	1.62	0.44	0.094	0.093	1.24	0.042	0.18	5.1	-0.08	5.2	13825	2.8458	7.67448	-4.82868	NAF
NS0089	104	106	NS	X070321	070321	1	G	W	27.35	43.44	3.01	0.4386	0.34	0.142	2.32	0.5	0.113	0.11	0.441	0.022	0.4	9.4	0.04	9.84	13796	3.366	8.721	-5.355	NAF
NS0089	144	146	NS	X070341	070341	1	G	W	29.88	44.37	2.57	0.3612	0.28	0.119	1.74	0.57	0.073	0.149	1.04	0.158	0.11	5.32	0.18	5.61	13815	4.5594	9.94194	-5.38254	NAF
NS0089	110	112	NS	X070324	070324	1	G	W	28.34	39.68	3.74	0.3612	0.28	0.17	2.56	0.54	0.108	0.13	1.01	0.031	0.52	10.12	0.13	10.77	13799	3.978	9.41868	-5.44068	NAF
NS0089	352	354	NS	X070447	070447	1	G	W	34.06	36.9	1.1	0.645	0.5	0.051	1.87	0.36	0.064	0.027	0.098	0.081	0.31	9.88	-0.35	9.84	13919	0.8262	6.27912	-5.45292	NAF
NS0089	94	96	NS	X070316	070316	1	G	W	27.48	46.23	2.81	0.3354	0.26	0.129	2.21	0.5	0.084	0.104	0.108	0.022	0.45	7.51	0.02	7.98	13791	3.1824	8.721	-5.5386	NAF
NS0089	92	94	NS	X070315	070315	1	G	W	28	42.6	4.16	0.2838	0.22	0.193	2.89	0.72	0.126	0.229	0.087	0.019	0.41	7.59	0.37	8.37	13790	7.0074	12.55824	-5.55084	NAF
NS0089	272	274	NS	X070407	070407	1	G	W	30.22	36.39	1.33	0.5547	0.43	0.061	2.53	0.51	0.055	0.102	0.252	0.0005	0.5	14.12	0.1	14.72	13879	3.1212	8.89542	-5.77422	NAF
NS0089	332	334	NS	X070437	070437	1	G	W	32.6	44.05	0.9	0.5805	0.45	0.037	1.31	0.37	0.039	0.018	0.261	0.117	0.12	5.5	-0.21	5.41	13909	0.5508	6.45354	-5.90274	NAF
NS0089	334	336	NS	X070438	070438	1	G	W	36.49	36.16	1.36	0.6321	0.49	0.064	1.73	0.39	0.075	0.023	0.374	0.192	0.13	6.96	-0.31	6.78	13910	0.7038	6.80238	-6.09858	NAF
NS0089	162	164	NS	X070351	070351	1	G	W	25.59	47.88	3.57	0.3354	0.26	0.17	2.01	0.6	0.092	0.142	1.39	0.02	0.2	6.45	0.16	6.81	13824	4.3452	10.4652	-6.12	NAF
NS0089	96	98	NS	X070317	070317	1	G	W	28.08	42.52	2.97	0.387	0.3	0.139	2.4	0.55	0.122	0.111	0.089	0.018	0.62	9.36	0.06	10.04	13792	3.3966	9.5931	-6.1965	NAF
NS0089	336	338	NS	X070439	070439	1	G	W	37.16	35.3	1.5	0.516	0.4	0.063	1.67	0.41	0.073	0.029	0.437	0.182	0.23	6.41	-0.31	6.33	13911	0.8874	7.15122	-6.26382	NAF
NS0089	296	298	NS	X070419	070419	1	G	W	25.45	40.36	1.14	0.4773	0.37	0.048	2.51	0.41	0.045	0.027	0.05	0.0005	0.62	17.42	0.08	18.12	13891	0.8262	7.15122	-6.32502	NAF
NS0089	322	324	NS	X070432	070432	1	G	W	34.16	34.64	1.27	0.5418	0.42	0.055	2.08	0.4	0.042	0.018	0.226	0.044	0.37	11.15	-0.08	11.44	13904	0.5508	6.9768	-6.426	NAF
NS0089	150	152	NS	X070344	070344	1	G	W	27.89	53.38	1.37	0.2064	0.16	0.059	1.05	0.43	0.069	0.033	0.252	0.048	0.08	2.9	-0.15	2.83	13818	1.0098	7.50006	-6.49026	NAF
NS0089	238	240	NS	X070389	070389	1	G	W	30.29	36.85	3.04	0.5031	0.39	0.136	2.53	0.67	0.058	0.167	0.509	0.011	0.39	10.99	0.31	11.69	13862	5.1102	11.68614	-6.57594	NAF
NS0089	170	172	NS	X070355	070355	1	G	W	21.52	51.13	3.82	0.3741	0.29	0.176	2.66	0.79	0.127	0.233	0.412	0.008	0.29	8.07	0.52	8.88	13828	7.1298	13.77918	-6.64938	NAF
NS0089	278	280	NS	X070410	070410	1	G	W	38.02	28.72	1.39	0.4773	0.37	0.067	2.23	0.4	0.046	0.009	0.19	0.004	0.47	11.93	-0.35	12.05	13882	0.2754	6.9768	-6.7014	NAF
NS0089	182	184	NS	X070361	070361	1	G	W	30.14	40.59	2.18	0.4644	0.36	0.104	1.85	0.42	0.078	0.02	0.646	0.005	0.34	9.94	-0.17	10.11	13834	0.612	7.32564	-6.71364	NAF
NS0089	326	328	NS	X070434	070434	1	G	W	35.58	36.25	1.52	0.4515	0.35	0.074	1.9	0.45	0.066	0.033	0.276	0.033	0.25	7.57	-0.23	7.59	13906	1.0098	7.8489	-6.8391	NAF
NS0089	320	322	NS	X070431	070431	1	G	W	34.36	32	1.25	0.5547	0.43	0.058	2.42	0.42	0.041	0.015	0.225	0.01	0.43	13.48	-0.12	13.79	13903	0.459	7.32564	-6.86664	NAF
NS0089	240	242	NS	X070390	070390	1	G	W	30.35	39.14	2.34	0.516	0.4	0.107	2.09	0.46	0.082	0.037	0.596	0.014	0.42	10.54	-0.1	10.86	13863	1.1322	8.02332	-6.89112	NAF
NS0089	152	154	NS	X070345	070345	1	G	W	37.27	37.87	1.83	0.2967	0.23	0.083	1.46	0.45	0.091	0.031	0.33	0.029	0.12	4.52	-0.25	4.39	13819	0.9486	7.8489	-6.9003	NAF
NS0089	306	308	NS	X070424	070424	1	G	W	23.51	44.2	1.98	0.3741	0.29	0.091	2.34	0.71	0.047	0.176	0.264	0.0005	0.52	14.97	0.48	15.97	13896	5.3856	12.38382	-6.99822	NAF
NS0089	342	344	NS	X070442	070442	1	G	W	33.05	30.06	1.14	0.9546	0.74	0.042	3.12	0.45	0.031	0.026	0.269	0.188	0.49	15.69	-0.08	16.1	13914	0.7956	7.8489	-7.0533	NAF
NS0089	180	182	NS	X070360	070360	1	G	W	29.26	41.5	2.42	0.4644	0.36	0.106	1.65	0.55	0.121	0.082	1.13	0.014	0.34	9.3	-0.06	9.58	13833	2.5092	9.5931	-7.0839	NAF
NS0089	222	224	NS	X070381	070381	1	G	W	28.34	40.58	1.28	0.516	0.4	0.052	1.83	0.44	0.04	0.019	0.185	0.0005	0.64	13.67	-0.01	14.3	13854	0.5814	7.67448	-7.09308	NAF
NS0089	102	104	NS	X070320	070320	1	G	W	26.92	46.41	3	0.3096	0.24	0.142	2.25	0.57	0.118	0.093	0.339	0.031	0.39	7.36	-0.01	7.74	13795	2.8458	9.94194	-7.09614	NAF
NS0089	196	198	NS	X070368	070368	1	G	W	29.22	41.08	2.03	0.5547	0.43	0.088	1.91	0.54	0.086	0.075	0.727	0.017	0.4	10.38	0.09	10.87	13841	2.295	9.41868	-7.12368	NAF
NS0089	190	192	NS	X070365	070365	1	G	W	30.82	37.34	3.2	0.5031	0.39	0.149	2.11	0.64	0.057	0.13	1.09	0.081	0.31	9.71	0.22	10.24	13838	3.978	11.16288	-7.18488	NAF
NS0089	354	356	NS	X070448	070448	1	G	W	31.18	38.18	0.96	0.645	0.5	0.04	2.2	0.46	0.047	0.026	0.051	0.081	0.46	12.09	-0.15	12.4	13920	0.7956	8.02332	-7.22772	NAF
NS0089	148	150	NS	X070343	070343	1	G	W	28.91	50.17	1.77	0.258	0.2	0.076	1.3	0.58	0.073	0.093	0.357	0.078	0.07	3.5	0.09	3.66	13817	2.8458	10.11636	-7.27056	NAF
NS0089	266	268	NS	X070404	070404	1	G	W	34.86	35.47	1.45	0.5547	0.43	0.064	1.97	0.47	0.083	0.026	0.221	0.015	0.31	9.13	-0.17	9.27	13876	0.7956	8.19774	-7.40214	NAF
NS0089	198	200	NS	X070369	070369	1	G	W	31.14	36.57	2.69	0.6321	0.49	0.123	1.95	0.57	0.098	0.078	1.01	0.019	0.54	10.8	0.07	11.41	13842	2.3868	9.94194	-7.55514	NAF
NS0089	134	136	NS	X070336	070336	1	G	W	29.46	44.81	1.93	0.3999	0.31	0.093	1.68	0.55	0.12	0.066	0.668	0.249	0.27	6.59	-0.05	6.81	13810	2.0196	9.5931	-7.5735	NAF
NS0089	276	278	NS	X070409	070409	1	G	W	38.28	29.8	1.68	0.4515	0.35	0.082	2.06	0.45	0.076	0.007	0.373	0.038	0.37	9.91	-0.35	9.93	13881	0.2142	7.8489	-7.6347	NAF
NS0089	344	346	NS	X070443	070443	1	G	W	34.86	34.14	1.37	0.7353	0.57	0.056	2.48	0.5	0.088	0.034	0.295	0.124	0.27	10.22	-0.24	10.25	13915	1.0404	8.721	-7.6806	NAF
NS0089	90	92	NS	X070314	070314	1	G	W	28.21	44.41	2.9	0.2709	0.21	0.135	2.27	0.62	0.108	0.102	0.128	0.034	0.46	7.91	-0.01	8.36	13789	3.1212	10.81404	-7.69284	NAF
NS0089	368	370	NS	X070455	070455	1	G	W	27.52	35.91	1.15	0.4773	0.37	0.046	2.73	0.48	0.038	0.017	0.075	0.0005	0.79	18.66	0.05	19.5	13927	0.5202	8.37216	-7.85196	NAF
NS0089	176	178	NS	X070358	070358	1	G	W	24.47	41.5	3.4	0.5547	0.43	0.15	2.89	0.59	0.13	0.079	0.553	0.0005	0.56	14.01	0.14	14.71	13831	2.4174	10.29078	-7.87338	NAF
NS0089	338	340	NS	X070440	070440	1	G	W	37.27	33.48	1.35	0.645	0.5	0.058	2.08	0.5	0.037	0.027	0.376	0.147	0.18	8.04	-0.18	8.04	13912	0.8262	8.721	-7.8948	NAF
NS0089	340	342	NS	X070441	070441	1	G	W	35.24	32.55	1.13	0.7611	0.59	0.05	2.53	0.5	0.048	0.027	0.265	0.179	0.39	11.01	-0.2	11.2	13913	0.8262	8.721	-7.8948	NAF
NS0089	254	256	NS	X070397	070397	1	G	W	29.93	38.11	1.46	0.5418	0.42	0.063	2.41	0.47	0.063	0.009	0.342	0.0005	0.48	12.96	-0.06	13.38	13870	0.2754	8.19774	-7.92234	NAF
NS0089	330	332	NS	X070436	070436	1	G	W	30.75	42.97	0.97	0.6837	0.53	0.043	1.76	0.5	0.053	0.025	0.226	0.151	0.21	8.13	-0.08	8.26	13908	0.765	8.721	-7.956	NAF
NS0089	230	232	NS	X070385	070385	1	G	W	29.41	37.78	2.19	0.645	0.5	0.096	2.22	0.56	0.116	0.056	0.642	0.0005	0.42	12.55	0.04	13.01	13858	1.7136	9.76752	-8.05392	NAF
NS0089	292	294	NS	X070417	070417	1	G	W	27.94	38.33	2.58	0.4773	0.37	0.116	2.45	0.66	0.039	0.113	0.121	0.0005	0.62	13.93	0.22	14.77	13889	3.4578	11.51172	-8.05392	NAF
NS0089	268	270	NS	X070405	070405	1	G	W	35.13	34.41	1.66	0.5547	0.43	0.076	2.18	0.52	0.097	0.033	0.285	0.002	0.25	9.44	-0.21	9.48	13877	1.0098	9.06984	-8.06004	NAF
NS0089	188	190	NS	X070364	070364	1	G	W	25.01	49.92	1.76	0.4902	0.38	0.081	1.58	0.51	0.084	0.026	0.628	0.028	0.32	8.54	-0.01	8.85	13837	0.7956	8.89542	-8.09982	NAF
NS0089	270	272	NS	X070406	070406	1	G	W	30.15	39.7	1.35	0.5547	0.43	0.058	2.19	0.53	0.055	0.032	0.237	0.0005	0.45	11.66	-0.04	12.07	13878	0.9792	9.24426	-8.26506	NAF
NS0089	202	204	NS	X070371	070371	1	G	W	31	39.93	1.56	0.5547	0.43	0.072	1.7	0.58	0.092	0.059	0.519	0.018	0.37	10.14	0.02	10.53	13844	1.8054	10.11636	-8.31096	NAF
NS0089	140	142	NS	X070339	070339	1	G	W	31.47	41.77	2.15	0.516	0.4	0.097	1.79	0.59	0.115	0.056	0.978	0.136	0.13	6.79	-0.14	6.78	13813	1.7136	10.29078	-8.57718	NAF
NS0089	106	108	NS	X070322	070322	1	G	W	25.38	42.94	3.41	0.5031	0.39	0.156	2.61	0.72	0.181	0.13	0.741	0.025	0.51	11.34	0.21	12.06	13797	3.978	12.55824	-8.58024	NAF
NS0089	208	210	NS	X070374	070374	1	G	W	32.33	35.12	2.07	0.6321	0.49	0.111	2.1	0.55	0.048	0.03	0.434	0.003	0.36	11.79	0.05	12.2	13847	0.918	9.5931	-8.6751	NAF
NS0089	136	138	NS	X070337	070337	1	G	W	31.53	42.24	1.91	0.4257	0.33	0.087	1.7	0.58	0.138	0.047	0.628	0.175	0.23	6.28	-0.08	6.43	13811	1.4382	10.11636	-8.67816	NAF
NS0089	356	358	NS	X070449	070449	1	G	W	32.31	31.92	1.01	0.6837	0.53	0.046	2.98	0.55	0.039	0.028	0.031	0.065	0.6	15.66	0	16.26	13921	0.8568	9.5931	-8.7363	NAF
NS0089	324	326	NS	X070433	070433	1	G	W	34.32	35.37	1.39	0.5418	0.42	0.063	2.3	0.56	0.057	0.033	0.262	0.058	0.34	9.94	-0.11	10.17	13905	1.0098	9.76752	-8.75772	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0089	98	100	NS	X070318	070318	1	G	W	30.14	40.08	2.23	0.3999	0.31	0.101	2.28	0.62	0.09	0.067	0.071	0.0005	0.61	10.39	-0.11	10.89	13793	2.0502	10.81404	-8.76384	NAF
NS0089	350	352	NS	X070446	070446	1	G	W	33.82	38.1	1.07	0.6837	0.53	0.046	1.84	0.55	0.075	0.027	0.167	0.113	0.22	8.63	-0.22	8.63	13918	0.8262	9.5931	-8.7669	NAF
NS0089	226	228	NS	X070383	070383	1	G	W	29.13	37.07	1.12	0.5418	0.42	0.049	2.32	0.54	0.027	0.008	0.308	0.005	0.53	15.52	0.1	16.15	13856	0.2448	9.41868	-9.17388	NAF
NS0089	122	124	NS	X070330	070330	1	G	W	26.36	49.07	2.75	0.2838	0.22	0.127	1.44	0.67	0.096	0.082	0.98	0.015	0.57	6	0	6.57	13804	2.5092	11.68614	-9.17694	NAF
NS0089	288	290	NS	X070415	070415	1	G	W	29.53	38.16	2.07	0.4773	0.37	0.09	2.23	0.72	0.107	0.109	0.259	0.001	0.42	12.89	0.13	13.44	13887	3.3354	12.55824	-9.22284	NAF
NS0089	264	266	NS	X070403	070403	1	G	W	35.74	30.04	1.51	0.645	0.5	0.066	2.66	0.58	0.084	0.029	0.197	0.0005	0.38	12.85	-0.16	13.07	13875	0.8874	10.11636	-9.22896	NAF
NS0089	184	186	NS	X070362	070362	1	G	W	30.94	42.21	1.61	0.4902	0.38	0.079	1.38	0.55	0.074	0.01	0.722	0.009	0.31	7.87	-0.03	8.15	13835	0.306	9.5931	-9.2871	NAF
NS0089	192	194	NS	X070366	070366	1	G	W	33.27	38.18	1.8	0.5805	0.45	0.083	1.57	0.56	0.049	0.014	0.605	0.079	0.28	8.32	0.03	8.63	13839	0.4284	9.76752	-9.33912	NAF
NS0089	114	116	NS	X070326	070326	1	G	W	27.98	43.4	2.45	0.3999	0.31	0.11	1.94	0.69	0.189	0.084	0.183	0.015	0.76	9.33	-0.03	10.06	13801	2.5704	12.03498	-9.46458	NAF
NS0089	262	264	NS	X070402	070402	1	G	W	34.73	32.86	1.42	0.6192	0.48	0.057	2.34	0.59	0.099	0.025	0.232	0.009	0.45	11.54	-0.14	11.85	13874	0.765	10.29078	-9.52578	NAF
NS0089	100	102	NS	X070319	070319	1	G	W	30.11	45.15	2.32	0.2451	0.19	0.103	1.82	0.68	0.103	0.075	0.059	0.011	0.36	5.95	-0.16	6.15	13794	2.295	11.86056	-9.56556	NAF
NS0089	260	262	NS	X070401	070401	1	G	W	33.26	34.82	1.42	0.645	0.5	0.053	2.24	0.6	0.094	0.029	0.232	0.014	0.34	11.49	-0.09	11.74	13873	0.8874	10.4652	-9.5778	NAF
NS0089	200	202	NS	X070370	070370	1	G	W	30.06	43.75	1.66	0.5031	0.39	0.076	1.41	0.6	0.081	0.025	0.605	0.039	0.24	7.8	0.04	8.08	13843	0.765	10.4652	-9.7002	NAF
NS0089	206	208	NS	X070373	070373	1	G	W	32.26	36.3	1.81	0.5934	0.46	0.082	1.9	0.61	0.081	0.03	0.405	0.035	0.6	11.15	-0.05	11.7	13846	0.918	10.63962	-9.72162	NAF
NS0089	132	134	NS	X070335	070335	1	G	W	27.7	47.95	1.84	0.3741	0.29	0.084	1.38	0.65	0.12	0.051	0.959	0.095	0.24	6.1	-0.07	6.27	13809	1.5606	11.3373	-9.7767	NAF
NS0089	274	276	NS	X070408	070408	1	G	W	34.25	33.97	1.63	0.4773	0.37	0.078	2.18	0.58	0.083	0.01	0.434	0.002	0.31	10.91	-0.17	11.05	13880	0.306	10.11636	-9.81036	NAF
NS0089	286	288	NS	X070414	070414	1	G	W	37.33	34.61	1.41	0.4257	0.33	0.07	1.49	0.58	0.036	0.009	0.457	0.007	0.2	7.3	-0.09	7.41	13886	0.2754	10.11636	-9.84096	NAF
NS0089	194	196	NS	X070367	070367	1	G	W	32.24	39.97	1.42	0.5934	0.46	0.062	1.54	0.58	0.062	0.006	0.446	0.073	0.31	8.63	0.01	8.95	13840	0.1836	10.11636	-9.93276	NAF
NS0089	138	140	NS	X070338	070338	1	G	W	30.91	41.47	1.74	0.516	0.4	0.086	1.76	0.66	0.151	0.051	0.648	0.166	0.26	7.96	-0.1	8.12	13812	1.5606	11.51172	-9.95112	NAF
NS0089	346	348	NS	X070444	070444	1	G	W	35.51	38.93	1.01	0.5676	0.44	0.045	1.48	0.61	0.101	0.022	0.277	0.103	0.12	6.01	-0.24	5.89	13916	0.6732	10.63962	-9.96642	NAF
NS0089	214	216	NS	X070377	070377	1	G	W	31.21	39.51	1.2	0.5934	0.46	0.053	1.61	0.58	0.093	0.004	0.334	0.012	0.35	10.73	-0.05	11.03	13850	0.1224	10.11636	-9.99396	NAF
NS0089	204	206	NS	X070372	070372	1	G	W	33.08	36.9	1.81	0.6192	0.48	0.079	1.67	0.63	0.102	0.032	0.637	0.009	0.31	9.65	-0.06	9.9	13845	0.9792	10.98846	-10.00926	NAF
NS0089	228	230	NS	X070384	070384	1	G	W	29.64	42.47	1.91	0.516	0.4	0.088	1.62	0.66	0.098	0.044	0.61	0.0005	0.33	8.86	0.05	9.24	13857	1.3464	11.51172	-10.16532	NAF
NS0089	186	188	NS	X070363	070363	1	G	W	31.36	42.52	2.02	0.4386	0.34	0.095	1.43	0.63	0.105	0.026	0.881	0.025	0.22	6.69	-0.04	6.87	13836	0.7956	10.98846	-10.19286	NAF
NS0089	318	320	NS	X070430	070430	1	G	W	31.03	33.72	0.93	0.6966	0.54	0.036	2.59	0.61	0.038	0.012	0.137	0.008	0.77	15.63	0.08	16.48	13902	0.3672	10.63962	-10.27242	NAF
NS0089	210	212	NS	X070375	070375	1	G	W	32.7	39.55	1.1	0.5547	0.43	0.05	1.49	0.6	0.101	0.005	0.303	0.032	0.25	8.93	-0.06	9.12	13848	0.153	10.4652	-10.3122	NAF
NS0089	130	132	NS	X070334	070334	1	G	W	31.62	41.16	1.83	0.4257	0.33	0.087	1.63	0.7	0.129	0.058	0.873	0.131	0.25	7.11	-0.04	7.32	13808	1.7748	12.2094	-10.4346	NAF
NS0089	328	330	NS	X070435	070435	1	G	W	32.52	35.15	1.27	0.645	0.5	0.051	2.43	0.67	0.078	0.035	0.155	0.078	0.44	12.05	0	12.49	13907	1.071	11.68614	-10.61514	NAF
NS0089	280	282	NS	X070411	070411	1	G	W	27.87	38.23	0.95	0.5805	0.45	0.042	2.27	0.62	0.031	0.006	0.155	0.0005	0.7	16.01	0.19	16.9	13883	0.1836	10.81404	-10.63044	NAF
NS0089	256	258	NS	X070398	070398	1	G	W	27.91	36.22	1.1	0.5805	0.45	0.049	3.01	0.66	0.092	0.027	0.234	0.0005	0.57	16.99	0.13	17.69	13871	0.8262	11.51172	-10.68552	NAF
NS0089	216	218	NS	X070378	070378	1	G	W	28.87	41.78	1.1	0.6063	0.47	0.05	1.74	0.62	0.035	0.003	0.256	0.0005	0.46	11.7	0.17	12.33	13851	0.0918	10.81404	-10.72224	NAF
NS0089	348	350	NS	X070445	070445	1	G	W	34.39	38.28	1.02	0.645	0.5	0.049	1.73	0.67	0.084	0.023	0.226	0.162	0.23	7.36	-0.09	7.5	13917	0.7038	11.68614	-10.98234	NAF
NS0089	142	144	NS	X070340	070340	1	G	W	30.83	43.89	2.31	0.387	0.3	0.104	1.6	0.78	0.12	0.067	1.02	0.129	0.11	4.99	0	5.1	13814	2.0502	13.60476	-11.55456	NAF
NS0089	282	284	NS	X070412	070412	1	G	W	33.38	37.16	1.05	0.4902	0.38	0.05	1.73	0.69	0.036	0.011	0.256	0.006	0.37	10.02	0.1	10.49	13884	0.3366	12.03498	-11.69838	NAF
NS0089	236	238	NS	X070388	070388	1	G	W	29.47	40.57	2.56	0.4902	0.38	0.117	2.23	0.84	0.122	0.081	0.462	0.002	0.36	9.59	0.08	10.03	13861	2.4786	14.65128	-12.17268	NAF
NS0089	316	318	NS	X070429	070429	1	G	W	30.13	35.4	0.85	0.6321	0.49	0.035	2.45	0.73	0.038	0.009	0.109	0.0005	0.5	15.7	0.17	16.37	13901	0.2754	12.73266	-12.45726	NAF
NS0089	360	362	NS	X070451	070451	1	G	W	32.38	28.42	0.9	0.6837	0.53	0.033	3.36	0.77	0.063	0.027	0.04	0.027	0.62	18.18	0.09	18.89	13923	0.8262	13.43034	-12.60414	NAF
NS0089	370	372	NS	X070456	070456	1	G	W	29.82	33.12	0.88	0.645	0.5	0.033	2.33	0.82	0.031	0.012	0.401	0.0005	0.63	17.99	0.19	18.81	13928	0.3672	14.30244	-13.93524	NAF
NS0089	212	214	NS	X070376	070376	1	G	W	32.39	36.03	1.79	0.5547	0.43	0.081	1.92	0.86	0.129	0.027	0.618	0.012	0.38	10.75	0.09	11.22	13849	0.8262	15.00012	-14.17392	NAF
NS0089	366	368	NS	X070454	070454	1	G	W	30.79	30.32	1.27	0.4773	0.37	0.05	2.9	0.87	0.039	0.031	0.354	0.0005	0.64	18.32	0.33	19.29	13926	0.9486	15.17454	-14.22594	NAF
NS0089	358	360	NS	X070450	070450	1	G	W	31.95	31.61	0.93	0.6321	0.49	0.036	3.18	0.86	0.077	0.025	0.041	0.05	0.54	15.82	0.12	16.48	13922	0.765	15.00012	-14.23512	NAF
NS0089	250	252	NS	X070395	070395	1	G	W	30.39	43.02	1.24	0.516	0.4	0.06	1.89	0.87	0.086	0.029	0.172	0.017	0.27	7.87	0.05	8.19	13868	0.8874	15.17454	-14.28714	NAF
NS0089	88	90	NS	X070313	070313	1	G	W	24.38	40.45	3.24	0.4644	0.36	0.153	2.94	1.35	0.384	0.243	0.502	0.047	0.62	12.99	0.65	14.26	13788	7.4358	23.5467	-16.1109	NAF
NS0089	86	88	NS	X070312	070312	1	G	W	25.39	39.17	2.39	0.4386	0.34	0.105	2.63	1.18	0.316	0.145	0.048	0.005	0.68	15.14	0.4	16.22	13787	4.437	20.58156	-16.14456	NAF
NS0089	284	286	NS	X070413	070413	1	G	W	26.85	45.74	0.88	0.4644	0.36	0.04	1.7	0.94	0.047	0.008	0.233	0.0005	0.4	10.37	0.42	11.19	13885	0.2448	16.39548	-16.15068	NAF
NS0089	364	366	NS	X070453	070453	1	G	W	30.75	31.34	0.96	0.5547	0.43	0.038	2.88	1.04	0.032	0.019	0.14	0.023	0.61	17.41	0.48	18.5	13925	0.5814	18.13968	-17.55828	NAF
NS0089	252	254	NS	X070396	070396	1	G	W	29.33	39.69	1.38	0.5805	0.45	0.059	2.59	1.08	0.109	0.039	0.09	0.013	0.47	11.31	0.27	12.05	13869	1.1934	18.83736	-17.64396	NAF
NS0089	314	316	NS	X070428	070428	1	G	W	28.69	33.3	0.84	0.6966	0.54	0.031	2.79	1.07	0.102	0.018	0.114	0.0005	0.52	18.72	0.36	19.6	13900	0.5508	18.66294	-18.11214	NAF
NS0089	362	364	NS	X070452	070452	1	G	W	31.16	30.8	0.88	0.645	0.5	0.034	2.95	1.11	0.05	0.017	0.072	0.004	0.52	17.63	0.49	18.64	13924	0.5202	19.36062	-18.84042	NAF
NS0089	308	310	NS	X070425	070425	1	G	W	31.78	24.55	1.49	0.5676	0.44	0.057	2.93	1.21	0.08	0.036	0.398	0.0005	0.66	21.74	0.45	22.85	13897	1.1016	21.10482	-20.00322	NAF
NS0089	312	314	NS	X070427	070427	1	G	W	31.02	26.9	1.15	0.6192	0.48	0.049	3.07	1.21	0.07	0.018	0.258	0.0005	0.64	20.8	0.52	21.96	13899	0.5508	21.10482	-20.55402	NAF
NS0089	310	312	NS	X070426	070426	1	G	W	31.21	26.01	1.37	0.5934	0.46	0.053	2.82	1.23	0.029	0.016	0.34	0.0005	0.58	21.43	0.58	22.59	13898	0.4896	21.45366	-20.96406	NAF
NS0090	146	148	NS	X070546	070546	1	G	W	28.8	41.69	4.22	0.6063	0.47	0.19	3.57	0.54	0.101	0.581	0.492	0.015	0.19	6.02	0.93	7.14	14074	17.7786	9.41868	8.35992	PAF(LC)
NS0090	200	202	NS	X070574	070574	1	G	W	30.47	39.36	1.9	0.5418	0.42	0.082	2.02	0.52	0.085	0.455	0.053	0.02	0.46	9.89	0.84	11.19	13975	13.923	9.06984	4.85316	PAF(LC)
NS0090	154	156	NS	X070551	070551	1	G	W	27.76	40.75	5.04	0.5676	0.44	0.23	3.99	0.49	0.114	0.42	0.114	0.02	0.28	7.54	0.67	8.49	14096	12.852	8.54658	4.30542	PAF(LC)
NS0090	148	150	NS	X070547	070547	1	G	W	28.36	39.07	4.7	0.6837	0.53	0.213	4.13	0.43	0.109	0.361	0.29	0.015	0.26	8.22	0.51	8.99	14075	11.0466	7.50006	3.54654	PAF(LC)
NS0090	172	174	NS	X070560	070560	1	G	W	21.95	47.54	6.03	0.3741	0.29	0.259	4.13	0.27	0.058	0.259	0.191	0.063	0.51	8.25	0.59	9.35	14105	7.9254	4.70934	3.21606	PAF(LC)
NS0090	212	214	NS	X070580	070580	1	G	W	24.11	41.66	7.51	0.4773	0.37	0.327	3.93	0.39	0.069	0.277	0.055	0.015	0.57	9.72	0.63	10.92	13981	8.4762	6.80238	1.67382	PAF(LC)
NS0090	210	212	NS	X070579	070579	1	G	W	22.81	46.84	7.53	0.2709	0.21	0.336	3.52	0.37	0.065	0.265	0.05	0.022	0.6	6.94	0.56	8.1	13980	8.109	6.45354	1.65546	PAF(LC)
NS0090	2	4	NS	X070474	070474	1	G	D	39.55	28.33	7.17	0.00645	0.005	0.784	0.03	0.02	0.017	0.022	0.013	0.026	5.15	1.57	0.27	6.99	13930	0.6732	0.34884	0.32436	PAF(LC)
NS0090	0	2	NS	X070473	070473	1	G	D	28.62	42.38	8	0.00645	0.005	0.779	0.05	0.03	0.025	0.022	0.045	0.035	5.32	1.89	0.26	7.47	13929	0.6732	0.52326	0.14994	PAF(LC)
NS0090	8	10	NS	X070477	070477	1	G	D	25.14	56.97	3.06	0.00645	0.005	0.12	0.03	0.02	0.014	0.012	0.007	0.022	2.5	1.03	0.14	3.67	13951	0.3672	0.34884	0.01836	PAF(LC)
NS0090	6	8	NS	X070476	070476	1	G	D	12.81	71.47	5.57	0.00645	0.005	0.347	0.03	0.02	0.006	0.011	0.01	0.039	2.05	1.73	0.17	3.95	13932	0.3366	0.34884	-0.01224	NAF
NS0090	0	4	NS	BX077473-BX077474	X077473	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	693	-0.0306	-0.01744	-0.013158	NAF
NS0090	4	8	NS	BX077475-BX077476	X077475	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	694	-0.0306	-0.01744	-0.013158	NAF
NS0090	10	12	NS	X070478	070478	1	G	D	35.59	42.86	2.25	0.00645	0.005	0.088	0.06	0.02	0.019	0.007	0.004	0.024	2.68	0.74	0.11	3.53	13952	0.2142	0.34884	-0.13464	NAF
NS0090	12	14	NS	X070479	070479	1	G	D	35.26	45.6	1.43	0.0645	0.05	0.063	0.06	0.02	0.018	0.007	0.004	0.031	1.64	0.49	0.1	2.23	13953	0.2142	0.34884	-0.13464	NAF
NS0090	18	20	NS	X070482	070482	1	G	D	40.27	36.95	1.26	0.3612	0.28	0.053	0.09	0.02	0.071	0.007	0.008	0.022	2.72	0.98	-0.27	3.43	13956	0.2142	0.34884	-0.13464	NAF
NS0090	202	204	NS	X070575	070575	1	G	W	22.54	45	6.98	0.4644	0.36	0.31	3.45	0.46	0.094	0.257	0.07	0.036	0.61	9.39	0.63	10.63	13976	7.8642	8.02332	-0.15912	NAF
NS0090	14	16	NS	X070480	070480	1	G	D	35.68	44.93	1.27	0.0903	0.07	0.049	0.06	0.02	0.031	0.006	0.005	0.019	1.83	0.45	0.1	2.38	13954	0.1836	0.34884	-0.16524	NAF
NS0090	16	18	NS	X070481	070481	1	G	D	36.29	44.29	0.99	0.1548	0.12	0.045	0.07	0.02	0.019	0.005	0.006	0.02	1.69	0.37	0.07	2.13	13955	0.153	0.34884	-0.19584	NAF
NS0090	20	22	NS	X070483	070483	1	G	D	38.07	40.32	1.91	0.1419	0.11	0.068	0.05	0.02	0.051	0.005	0.009	0.021	1.78	0.63	0.25	2.66	13957	0.153	0.34884	-0.19584	NAF
NS0090	154	158	NS	BX077551-BX077552	X077551	2			68.44	4.696	0.466	0.056	0.04032	0.043	0.387	0.045	0.007	0.019	0.009	0.062	-0.01	-0.01	-0.01	-0.03	732	0.5814	0.78489	-0.20349	NAF
NS0090	4	6	NS	X070475	070475	1	G	D	14.9	64.78	7.91	0.00645	0.005	0.33	0.03	0.03	0.006	0.01	0.01	0.034	2.66	2.37	0.2	5.23	13931	0.306	0.52326	-0.21726	NAF
NS0090	30	32	NS	X070488	070488	1	G	D	38.32	40.1	1.5	0.3999	0.31	0.065	0.1	0.02	0.035	0.003	0.018	0.023	2.14	0.56	0.1	2.8	13962	0.0918	0.34884	-0.25704	NAF
NS0090	8	12	NS	BX077477-BX077478	X077477	2			66.64	3.472	0.414	0.023	0.01656	0.017	0.114	0.026	0.008	0.005	0.003	0.101	-0.01	-0.01	-0.01	-0.03	695	0.153	0.453492	-0.300492	NAF
NS0090	16	20	NS	BX077481-BX077482	X077481	2			68.31	2.191	0.201	0.083	0.05976	0.011	0.113	0.022	0.014	0.002	0.001	0.073	0.26	0.51	0.64	1.41	697	0.0612	0.383724	-0.322524	NAF
NS0090	76	80	NS	BX077511-BX077512	X077511	2			68.27	3.191	0.271	0.078	0.05616	0.032	0.296	0.048	0.011	0.016	0.024	0.123	-0.01	-0.01	-0.01	-0.03	712	0.4896	0.837216	-0.347616	NAF
NS0090	56	60	NS	BX077501-BX077502	X077501	2			68.68	2.055	0.202	0.049	0.03528	0.011	0.105	0.022	0.01	0.001	0.001	0.108	-0.01	-0.01	-0.01	-0.03	707	0.0306	0.383724	-0.353124	NAF
NS0090	12	16	NS	BX077479-BX077480	X077479	2			67.82	2.841	0.254	0.052	0.03744	0.011	0.115	0.024	0.008	0.002	0.001	0.079	0.17	0.44	0.57	1.18	696	0.0612	0.418608	-0.357408	NAF
NS0090	20	24	NS	BX077483-BX077484	X077483	2			67.62	2.196	0.266	0.042	0.03024	0.01	0.104	0.025	0.007	0.002	0.001	0.089	0.19	0.53	0.6	1.32	698	0.0612	0.43605	-0.37485	NAF
NS0090	28	32	NS	BX077487-BX077488	X077487	2			68.69	1.949	0.163	0.113	0.08136	0.015	0.113	0.025	0.006	0.002	0.003	0.089	0.12	0.29	0.19	0.6	700	0.0612	0.43605	-0.37485	NAF
NS0090	24	28	NS	BX077485-BX077486	X077485	2			68.31	2.348	0.221	0.103	0.07416	0.011	0.105	0.024	0.005	0.001	0.002	0.081	0.19	0.43	0.43	1.05	699	0.0306	0.418608	-0.388008	NAF
NS0090	36	40	NS	BX077491-BX077492	X077491	2			68.32	1.994	0.111	0.079	0.05688	0.01	0.101	0.024	0.011	0.001	0.005	0.058	0.14	0.27	0.28	0.69	702	0.0306	0.418608	-0.388008	NAF
NS0090	60	64	NS	BX077503-BX077504	X077503	2			68.85	2.058	0.107	0.08	0.0576	0.011	0.114	0.024	0.011	0.001	0.003	0.075	-0.01	-0.01	-0.01	-0.03	708	0.0306	0.418608	-0.388008	NAF
NS0090	22	24	NS	X070484	070484	1	G	D	35.24	45.16	1.74	0.0774	0.06	0.051	0.04	0.03	0.013	0.004	0.007	0.018	1.41	0.59	0.19	2.19	13958	0.1224	0.52326	-0.40086	NAF
NS0090	40	44	NS	BX077493-BX077494	X077493	2			68.89	2.641	0.079	0.038	0.02736	0.012	0.11	0.026	0.014	0.001	0.007	0.058	0.14	0.25	0.07	0.46	703	0.0306	0.453492	-0.422892	NAF
NS0090	44	48	NS	BX077495-BX077496	X077495	2			67.03	3.242	0.114	0.09	0.0648	0.01	0.11	0.026	0.015	0.001	0.012	0.059	0.21	0.38	0.35	0.94	704	0.0306	0.453492	-0.422892	NAF
NS0090	64	68	NS	BX077505-BX077506	X077505	2			68.26	2.592	0.075	0.037	0.02664	0.011	0.127	0.026	0.014	0.001	0.006	0.087	-0.01	-0.01	-0.01	-0.03	709	0.0306	0.453492	-0.422892	NAF
NS0090	68	72	NS	BX077507-BX077508	X077507	2			68	3.225	0.126	0.093	0.06696	0.012	0.13	0.026	0.015	0.001	0.012	0.074	-0.01	-0.01	-0.01	-0.03	710	0.0306	0.453492	-0.422892	NAF
NS0090	26	28	NS	X070486	070486	1	G	D	37.86	40.12	1.47	0.5805	0.45	0.063	0.1	0.03	0.021	0.003	0.027	0.022	2.37	0.56	0.17	3.1	13960	0.0918	0.52326	-0.43146	NAF
NS0090	28	30	NS	X070487	070487	1	G	D	38.1	38.17	1.37	1.7673	1.37	0.056	0.15	0.03	0.021	0.003	0.059	0.015	2.65	0.63	0.25	3.53	13961	0.0918	0.52326	-0.43146	NAF
NS0090	32	34	NS	X070489	070489	1	G	D	34.17	46.27	1.78	0.3096	0.24	0.08	0.1	0.03	0.026	0.003	0.031	0.029	1.47	0.59	0.09	2.15	13963	0.0918	0.52326	-0.43146	NAF
NS0090	36	38	NS	X070491	070491	1	G	D	37.09	40.98	1.12	0.9417	0.73	0.047	0.25	0.03	0.038	0.003	0.1	0.022	2.36	0.52	0.13	3.01	13965	0.0918	0.52326	-0.43146	NAF
NS0090	32	34	NS	BX077489	X077489	2			68.27	2.596	0.103	0.048	0.03456	0.011	0.16	0.039	0.01	0.008	0.016	0.35	0.17	0.36	0.39	0.92	701	0.2448	0.680238	-0.435438	NAF
NS0090	48	52	NS	BX077497-BX077498	X077497	2			68.56	3.149	0.122	0.063	0.04536	0.016	0.183	0.038	0.014	0.007	0.015	0.067	-0.01	-0.01	-0.01	-0.03	705	0.2142	0.662796	-0.448596	NAF
NS0090	24	26	NS	X070485	070485	1	G	D	34.45	45.76	2.01	0.1419	0.11	0.052	0.05	0.03	0.015	0.002	0.006	0.018	1.65	0.68	0.17	2.5	13959	0.0612	0.52326	-0.46206	NAF
NS0090	244	246	NS	X070596	070596	1	G	W	30.82	37.86	2.24	0.5547	0.43	0.1	2.32	0.49	0.073	0.264	0.554	0.016	0.42	10.67	0.49	11.58	14051	8.0784	8.54658	-0.46818	NAF
NS0090	148	152	NS	BX077547-BX077548	X077547	2			69.72	3.797	0.258	0.052	0.03744	0.021	0.26	0.042	0.007	0.008	0.034	0.063	-0.01	-0.01	-0.01	-0.03	730	0.2448	0.732564	-0.487764	NAF
NS0090	280	282	NS	X070615	070615	1	G	W	31.22	39.06	2.2	0.5418	0.42	0.096	2.86	0.37	0.045	0.194	0.002	0.011	0.54	9.45	0.15	10.14	13943	5.9364	6.45354	-0.51714	NAF
NS0090	144	148	NS	BX077545-BX077546	X077545	2			69.56	3.93	0.251	0.054	0.03888	0.023	0.275	0.051	0.007	0.012	0.047	0.098	-0.01	-0.01	-0.01	-0.03	729	0.3672	0.889542	-0.522342	NAF
NS0090	210	214	NS	BX077579-BX077580	X077579	2			70.94	2.283	0.349	0.093	0.06696	0.017	0.353	0.06	0.009	0.017	0.012	0.1	-0.01	-0.01	-0.01	-0.03	746	0.5202	1.04652	-0.52632	NAF
NS0090	198	202	NS	BX077573-BX077574	X077573	2			70.85	2.64	0.225	0.041	0.02952	0.019	0.227	0.046	0.007	0.009	0.005	0.074	-0.01	-0.01	-0.01	-0.03	743	0.2754	0.802332	-0.526932	NAF
NS0090	178	182	NS	BX077563-BX077564	X077563	2			69.6	3.284	0.199	0.032	0.02304	0.018	0.253	0.041	0.006	0.006	0.009	0.117	-0.01	-0.01	-0.01	-0.03	738	0.1836	0.715122	-0.531522	NAF
NS0090	158	162	NS	BX077553-BX077554	X077553	2			68.18	4.897	0.469	0.057	0.04104	0.033	0.408	0.059	0.011	0.016	0.008	0.074	-0.01	-0.01	-0.01	-0.03	733	0.4896	1.029078	-0.539478	NAF
NS0090	186	190	NS	BX077567-BX077568	X077567	2			68.69	3.96	0.152	0.035	0.0252	0.015	0.219	0.04	0.006	0.005	0.054	0.086	-0.01	-0.01	-0.01	-0.03	740	0.153	0.69768	-0.54468	NAF
NS0090	174	178	NS	BX077561-BX077562	X077561	2			69.68	3.749	0.221	0.049	0.03528	0.019	0.268	0.051	0.008	0.011	0.006	0.078	-0.01	-0.01	-0.01	-0.03	737	0.3366	0.889542	-0.552942	NAF
NS0090	170	172	NS	BX077559	X077559	2			68.7	4.43	0.354	0.059	0.04248	0.019	0.345	0.048	0.006	0.009	0.008	0.091	-0.01	-0.01	-0.01	-0.03	736	0.2754	0.837216	-0.561816	NAF
NS0090	194	198	NS	BX077571-BX077572	X077571	2			70.88	2.708	0.126	0.033	0.02376	0.014	0.2	0.041	0.006	0.005	0.03	0.078	-0.01	-0.01	-0.01	-0.03	742	0.153	0.715122	-0.562122	NAF
NS0090	242	246	NS	BX077595-BX077596	X077595	2			70.88	2.251	0.089	0.04	0.0288	0.008	0.155	0.041	0.006	0.005	0.015	0.072	-0.01	-0.01	-0.01	-0.03	754	0.153	0.715122	-0.562122	NAF
NS0090	260	264	NS	BX077605-BX077606	X077605	2			70.93	1.61	0.029	0.035	0.0252	0.001	0.122	0.04	0.005	0.004	0.011	0.093	-0.01	-0.01	-0.01	-0.03	759	0.1224	0.69768	-0.57528	NAF
NS0090	280	282	NS	BX077615	X077615	2			71.13	2.378	0.107	0.041	0.02952	0.008	0.191	0.042	0.006	0.005	0.001	0.074	-0.01	-0.01	-0.01	-0.03	764	0.153	0.732564	-0.579564	NAF
NS0090	256	260	NS	BX077603-BX077604	X077603	2			71.24	2.23	0.066	0.044	0.03168	0.007	0.164	0.041	0.006	0.004	0.008	0.068	-0.01	-0.01	-0.01	-0.03	758	0.1224	0.715122	-0.592722	NAF
NS0090	72	76	NS	BX077509-BX077510	X077509	2			68.93	4.12	0.151	0.085	0.0612	0.024	0.258	0.05	0.017	0.009	0.019	0.115	-0.01	-0.01	-0.01	-0.03	711	0.2754	0.8721	-0.5967	NAF
NS0090	202	206	NS	BX077575-BX077576	X077575	2			71.41	1.983	0.21	0.041	0.02952	0.011	0.195	0.049	0.007	0.008	0.009	0.088	-0.01	-0.01	-0.01	-0.03	744	0.2448	0.854658	-0.609858	NAF
NS0090	52	56	NS	BX077499-BX077500	X077499	2			69.09	3.749	0.243	0.054	0.03888	0.027	0.276	0.058	0.009	0.013	0.055	0.098	-0.01	-0.01	-0.01	-0.03	706	0.3978	1.011636	-0.613836	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0090	152	154	NS	BX077549	X077549	2			69.34	4.258	0.202	0.062	0.04464	0.017	0.219	0.048	0.008	0.007	0.04	0.064	-0.01	-0.01	-0.01	-0.03	731	0.2142	0.837216	-0.623016	NAF
NS0090	222	226	NS	BX077585-BX077586	X077585	2			71.19	2.14	0.075	0.043	0.03096	0.007	0.183	0.043	0.005	0.004	0.013	0.084	-0.01	-0.01	-0.01	-0.03	749	0.1224	0.750006	-0.627606	NAF
NS0090	182	186	NS	BX077565-BX077566	X077565	2			70.64	2.814	0.079	0.034	0.02448	0.01	0.171	0.044	0.007	0.004	0.024	0.084	-0.01	-0.01	-0.01	-0.03	739	0.1224	0.767448	-0.645048	NAF
NS0090	100	104	NS	BX077523-BX077524	X077523	2			69.69	3.106	0.114	0.061	0.04392	0.009	0.225	0.048	0.01	0.006	0.08	0.073	-0.01	-0.01	-0.01	-0.03	718	0.1836	0.837216	-0.653616	NAF
NS0090	230	232	NS	BX077589	X077589	2			71.7	1.501	0.055	0.041	0.02952	0.006	0.135	0.043	0.007	0.003	0.014	0.065	-0.01	-0.01	-0.01	-0.03	751	0.0918	0.750006	-0.658206	NAF
NS0090	246	250	NS	BX077597-BX077598	X077597	2			70.15	3.385	0.134	0.05	0.036	0.007	0.196	0.049	0.007	0.006	0.02	0.074	-0.01	-0.01	-0.01	-0.03	755	0.1836	0.854658	-0.671058	NAF
NS0090	162	166	NS	BX077555-BX077556	X077555	2			69.62	4.357	0.205	0.056	0.04032	0.022	0.23	0.051	0.008	0.007	0.055	0.067	-0.01	-0.01	-0.01	-0.03	734	0.2142	0.889542	-0.675342	NAF
NS0090	108	112	NS	BX077527-BX077528	X077527	2			68.84	4.421	0.241	0.064	0.04608	0.03	0.287	0.053	0.012	0.008	0.116	0.066	-0.01	-0.01	-0.01	-0.03	720	0.2448	0.924426	-0.679626	NAF
NS0090	234	238	NS	BX077591-BX077592	X077591	2			71	1.632	0.074	0.04	0.0288	0.007	0.156	0.048	0.007	0.005	0.011	0.094	-0.01	-0.01	-0.01	-0.03	752	0.153	0.837216	-0.684216	NAF
NS0090	88	92	NS	BX077517-BX077518	X077517	2			70.46	3.215	0.068	0.046	0.03312	0.008	0.166	0.043	0.008	0.002	0.039	0.063	-0.01	-0.01	-0.01	-0.03	715	0.0612	0.750006	-0.688806	NAF
NS0090	272	276	NS	BX077611-BX077612	X077611	2			69.81	3.205	0.054	0.047	0.03384	0.002	0.161	0.043	0.007	0.002	0.011	0.074	-0.01	-0.01	-0.01	-0.03	762	0.0612	0.750006	-0.688806	NAF
NS0090	190	194	NS	BX077569-BX077570	X077569	2			69.71	3.754	0.261	0.049	0.03528	0.027	0.315	0.054	0.01	0.008	0.078	0.074	-0.01	-0.01	-0.01	-0.03	741	0.2448	0.941868	-0.697068	NAF
NS0090	80	84	NS	BX077513-BX077514	X077513	2			70.97	2.015	0.064	0.045	0.0324	0.011	0.168	0.046	0.008	0.003	0.034	0.077	-0.01	-0.01	-0.01	-0.03	713	0.0918	0.802332	-0.710532	NAF
NS0090	112	114	NS	BX077529	X077529	2			69.92	3.8	0.087	0.058	0.04176	0.005	0.192	0.046	0.008	0.003	0.051	0.101	-0.01	-0.01	-0.01	-0.03	721	0.0918	0.802332	-0.710532	NAF
NS0090	120	124	NS	BX077533-BX077534	X077533	2			68.08	5.085	0.145	0.068	0.04896	0.011	0.211	0.048	0.007	0.004	0.072	0.054	-0.01	-0.01	-0.01	-0.03	723	0.1224	0.837216	-0.714816	NAF
NS0090	264	268	NS	BX077607-BX077608	X077607	2			71.04	1.836	0.062	0.05	0.036	0.009	0.171	0.048	0.006	0.004	0.019	0.062	-0.01	-0.01	-0.01	-0.03	760	0.1224	0.837216	-0.714816	NAF
NS0090	214	218	NS	BX077581-BX077582	X077581	2			71.33	1.263	0.079	0.044	0.03168	0.007	0.146	0.05	0.008	0.005	0.015	0.112	-0.01	-0.01	-0.01	-0.03	747	0.153	0.8721	-0.7191	NAF
NS0090	96	100	NS	BX077521-BX077522	X077521	2			70.73	2.588	0.06	0.052	0.03744	0.008	0.176	0.047	0.009	0.003	0.052	0.072	-0.01	-0.01	-0.01	-0.03	717	0.0918	0.819774	-0.727974	NAF
NS0090	226	230	NS	BX077587-BX077588	X077587	2			70.17	2.333	0.087	0.04	0.0288	0.004	0.164	0.047	0.007	0.003	0.021	0.097	-0.01	-0.01	-0.01	-0.03	750	0.0918	0.819774	-0.727974	NAF
NS0090	116	120	NS	BX077531-BX077532	X077531	2			69.25	4.419	0.133	0.061	0.04392	0.009	0.226	0.049	0.008	0.004	0.061	0.064	-0.01	-0.01	-0.01	-0.03	722	0.1224	0.854658	-0.732258	NAF
NS0090	254	256	NS	BX077601	X077601	2			69.36	3.938	0.118	0.072	0.05184	0.007	0.206	0.051	0.008	0.005	0.03	0.086	-0.01	-0.01	-0.01	-0.03	757	0.153	0.889542	-0.736542	NAF
NS0090	276	280	NS	BX077613-BX077614	X077613	2			70.22	1.417	0.167	0.054	0.03888	0.011	0.234	0.051	0.008	0.005	0.008	0.069	-0.01	-0.01	-0.01	-0.03	763	0.153	0.889542	-0.736542	NAF
NS0090	238	242	NS	BX077593-BX077594	X077593	2			70.74	1.751	0.096	0.051	0.03672	0.01	0.178	0.057	0.008	0.008	0.016	0.115	-0.01	-0.01	-0.01	-0.03	753	0.2448	0.994194	-0.749394	NAF
NS0090	34	36	NS	X070490	070490	1	G	D	41.97	34.45	0.96	1.0449	0.81	0.039	0.16	0.05	0.097	0.003	0.081	0.015	2.59	0.46	0.11	3.16	13964	0.0918	0.8721	-0.7803	NAF
NS0090	104	108	NS	BX077525-BX077526	X077525	2			69.68	3.656	0.1	0.055	0.0396	0.008	0.187	0.05	0.011	0.003	0.067	0.081	-0.01	-0.01	-0.01	-0.03	719	0.0918	0.8721	-0.7803	NAF
NS0090	268	272	NS	BX077609-BX077610	X077609	2			70.35	2.361	0.054	0.047	0.03384	0.005	0.152	0.05	0.008	0.003	0.024	0.138	-0.01	-0.01	-0.01	-0.03	761	0.0918	0.8721	-0.7803	NAF
NS0090	92	96	NS	BX077519-BX077520	X077519	2			70.11	3.61	0.119	0.062	0.04464	0.01	0.226	0.053	0.011	0.004	0.085	0.079	-0.01	-0.01	-0.01	-0.03	716	0.1224	0.924426	-0.802026	NAF
NS0090	250	254	NS	BX077599-BX077600	X077599	2			69.95	2.971	0.056	0.05	0.036	0.001	0.151	0.05	0.009	0.002	0.011	0.073	-0.01	-0.01	-0.01	-0.03	756	0.0612	0.8721	-0.8109	NAF
NS0090	84	88	NS	BX077515-BX077516	X077515	2			70.32	2.682	0.06	0.054	0.03888	0.01	0.199	0.056	0.01	0.004	0.041	0.085	-0.01	-0.01	-0.01	-0.03	714	0.1224	0.976752	-0.854352	NAF
NS0090	218	222	NS	BX077583-BX077584	X077583	2			70.89	1.976	0.079	0.048	0.03456	0.002	0.194	0.056	0.009	0.003	0.007	0.088	-0.01	-0.01	-0.01	-0.03	748	0.0918	0.976752	-0.884952	NAF
NS0090	140	144	NS	BX077543-BX077544	X077543	2			69.24	4.746	0.195	0.061	0.04392	0.012	0.233	0.065	0.007	0.007	0.083	0.128	-0.01	-0.01	-0.01	-0.03	728	0.2142	1.13373	-0.91953	NAF
NS0090	124	128	NS	BX077535-BX077536	X077535	2			68.78	5.321	0.117	0.074	0.05328	0.011	0.214	0.059	0.01	0.003	0.067	0.207	-0.01	-0.01	-0.01	-0.03	724	0.0918	1.029078	-0.937278	NAF
NS0090	136	140	NS	BX077541-BX077542	X077541	2			69.42	4.548	0.142	0.057	0.04104	0.01	0.219	0.061	0.008	0.004	0.055	0.199	-0.01	-0.01	-0.01	-0.03	727	0.1224	1.063962	-0.941562	NAF
NS0090	48	50	NS	X070497	070497	1	G	D	31.42	43.95	2.23	0.645	0.5	0.098	2.06	0.36	0.114	0.174	0.233	0.046	1.17	3.07	0.39	4.63	13989	5.3244	6.27912	-0.95472	NAF
NS0090	206	210	NS	BX077577-BX077578	X077577	2			71.18	1.858	0.111	0.044	0.03168	0.009	0.184	0.067	0.011	0.006	0.014	0.078	-0.01	-0.01	-0.01	-0.03	745	0.1836	1.168614	-0.985014	NAF
NS0090	166	170	NS	BX077557-BX077558	X077557	2			69.27	4.607	0.159	0.058	0.04176	0.014	0.219	0.067	0.008	0.004	0.06	0.061	-0.01	-0.01	-0.01	-0.03	735	0.1224	1.168614	-1.046214	NAF
NS0090	128	132	NS	BX077537-BX077538	X077537	2			68.43	5.629	0.132	0.067	0.04824	0.01	0.212	0.073	0.01	0.003	0.066	0.071	-0.01	-0.01	-0.01	-0.03	725	0.0918	1.273266	-1.181466	NAF
NS0090	38	40	NS	X070492	070492	1	G	D	38.77	38.56	1.24	0.7482	0.58	0.051	0.35	0.08	0.044	0.003	0.106	0.025	2.25	0.52	0.1	2.87	13966	0.0918	1.39536	-1.30356	NAF
NS0090	132	136	NS	BX077539-BX077540	X077539	2			69.07	4.917	0.158	0.061	0.04392	0.015	0.231	0.088	0.008	0.004	0.062	0.062	-0.01	-0.01	-0.01	-0.03	726	0.1224	1.534896	-1.412496	NAF
NS0090	44	46	NS	X070495	070495	1	G	D	38.97	38.56	1.04	0.9288	0.72	0.044	0.44	0.09	0.039	0.003	0.146	0.013	2.22	0.52	0.08	2.82	13987	0.0918	1.56978	-1.47798	NAF
NS0090	46	48	NS	X070496	070496	1	G	D	36.45	41.67	1.17	0.7482	0.58	0.05	0.47	0.09	0.042	0.003	0.145	0.013	2.31	0.53	0.14	2.98	13988	0.0918	1.56978	-1.47798	NAF
NS0090	40	42	NS	X070493	070493	1	G	D	37.95	40.74	1.02	0.7224	0.56	0.043	0.39	0.11	0.039	0.002	0.126	0.026	1.83	0.47	0	2.3	13967	0.0612	1.91862	-1.85742	NAF
NS0090	62	64	NS	X070504	070504	1	G	W	32	37.83	3.3	0.5676	0.44	0.146	3.37	0.48	0.097	0.202	0.296	0.051	0.72	6.7	0.27	7.69	13996	6.1812	8.37216	-2.19096	NAF
NS0090	100	102	NS	X070523	070523	1	G	W	32.63	33.83	1.84	0.9288	0.72	0.081	3.48	0.52	0.107	0.215	1.15	0.051	0.32	10.4	0.24	10.96	14033	6.579	9.06984	-2.49084	NAF
NS0090	42	44	NS	X070494	070494	1	G	D	35.52	43.6	1.01	0.8643	0.67	0.044	0.44	0.16	0.057	0.004	0.148	0.016	1.92	0.51	0.06	2.49	13968	0.1224	2.79072	-2.66832	NAF
NS0090	52	54	NS	X070499	070499	1	G	W	29.97	39.02	3.22	0.7353	0.57	0.142	3.23	0.46	0.115	0.172	0.434	0.077	1.05	7.69	0.44	9.18	13991	5.2632	8.02332	-2.76012	NAF
NS0090	56	58	NS	X070501	070501	1	G	W	29.33	46.47	3.34	0.7353	0.57	0.141	1.22	0.27	0.088	0.063	0.377	0.047	2.55	2.21	0.37	5.13	13993	1.9278	4.70934	-2.78154	NAF
NS0090	50	52	NS	X070498	070498	1	G	D	31.41	42.63	1.96	0.5934	0.46	0.088	2.67	0.36	0.078	0.111	0.339	0.066	0.44	5.53	0	5.97	13990	3.3966	6.27912	-2.88252	NAF
NS0090	174	176	NS	X070561	070561	1	G	W	23.67	50.17	1.55	0.4257	0.33	0.067	2.33	0.36	0.063	0.109	0.063	0.026	0.52	9.86	0.11	10.49	14106	3.3354	6.27912	-2.94372	NAF
NS0090	178	180	NS	X070563	070563	1	G	W	24.14	45.56	4.56	0.387	0.3	0.201	4.41	0.58	0.146	0.224	0.058	0.031	0.4	8.29	0.4	9.09	14108	6.8544	10.11636	-3.26196	NAF
NS0090	156	158	NS	X070552	070552	1	G	W	25.63	48.4	2.21	0.5547	0.43	0.099	2.49	0.46	0.07	0.151	0.079	0.01	0.46	8.07	0.18	8.71	14097	4.6206	8.02332	-3.40272	NAF
NS0090	158	160	NS	X070553	070553	1	G	W	27.7	40.28	5.23	0.5289	0.41	0.238	4.28	0.75	0.205	0.308	0.048	0.014	0.3	7.59	0.47	8.36	14098	9.4248	13.0815	-3.6567	NAF
NS0090	236	238	NS	X070592	070592	1	G	W	29.83	35.6	2.58	0.5934	0.46	0.112	2.67	0.59	0.077	0.213	0.127	0.01	0.66	13.44	0.39	14.49	14047	6.5178	10.29078	-3.77298	NAF
NS0090	266	268	NS	X070608	070608	1	G	W	29.82	33.21	2.64	0.5418	0.42	0.116	2.24	0.69	0.103	0.266	0.225	0.024	1.08	15.01	0.6	16.69	13936	8.1396	12.03498	-3.89538	NAF
NS0090	110	112	NS	X070528	070528	1	G	W	35.97	33.85	2.71	0.7095	0.55	0.123	2.96	0.54	0.146	0.178	1.2	0.068	0.14	5.43	0.06	5.63	14038	5.4468	9.41868	-3.97188	NAF
NS0090	170	172	NS	X070559	070559	1	G	W	32.25	37.34	2.29	0.6321	0.49	0.097	2.72	0.37	0.052	0.077	0.038	0.02	0.47	9.62	-0.18	9.91	14104	2.3562	6.45354	-4.09734	NAF
NS0090	58	60	NS	X070502	070502	1	G	W	33.73	40.22	1.96	0.6579	0.51	0.089	1.99	0.36	0.079	0.063	0.24	0.05	0.82	5.06	0.03	5.91	13994	1.9278	6.27912	-4.35132	NAF
NS0090	248	250	NS	X070598	070598	1	G	W	29.02	44.08	2.12	0.4128	0.32	0.096	2.1	0.56	0.033	0.165	0.312	0.026	0.32	7.67	0.41	8.4	14053	5.049	9.76752	-4.71852	NAF
NS0090	278	280	NS	X070614	070614	1	G	W	28.87	38.59	2.6	0.6063	0.47	0.113	3.08	0.55	0.113	0.159	0.02	0.012	0.62	11.75	0.21	12.58	13942	4.8654	9.5931	-4.7277	NAF
NS0090	152	154	NS	X070549	070549	1	G	W	34.82	39.54	1.71	0.6966	0.54	0.078	1.94	0.38	0.065	0.049	0.387	0.021	0.16	5.27	-0.39	5.04	14095	1.4994	6.62796	-5.12856	NAF
NS0090	160	162	NS	X070554	070554	1	G	W	31.58	41.57	2.37	0.5934	0.46	0.112	2.42	0.51	0.101	0.123	0.191	0.014	0.23	6.39	-0.1	6.52	14099	3.7638	8.89542	-5.13162	NAF
NS0090	260	262	NS	X070605	070605	1	G	W	35.01	28.68	1.66	0.6579	0.51	0.072	2	0.56	0.093	0.151	0.581	0.061	0.88	13.74	0.19	14.81	13933	4.6206	9.76752	-5.14692	NAF
NS0090	74	76	NS	X070510	070510	1	G	W	26.42	37.79	1.85	0.4773	0.37	0.078	3.19	0.58	0.07	0.162	0.258	0.051	0.94	15.83	0.36	17.13	14002	4.9572	10.11636	-5.15916	NAF
NS0090	60	62	NS	X070503	070503	1	G	W	33.33	40.63	1.34	0.7998	0.62	0.058	1.72	0.35	0.071	0.029	0.099	0.029	0.74	6.28	-0.12	6.9	13995	0.8874	6.1047	-5.2173	NAF
NS0090	188	190	NS	X070568	070568	1	G	W	30	42.89	2.78	0.4257	0.33	0.124	3.06	0.48	0.088	0.102	0.89	0.017	0.19	5.8	-0.02	5.97	13969	3.1212	8.37216	-5.25096	NAF
NS0090	256	258	NS	X070603	070603	1	G	W	36.71	29.39	1.74	0.7095	0.55	0.078	2.24	0.5	0.066	0.11	0.391	0.202	0.5	11.67	-0.03	12.14	14057	3.366	8.721	-5.355	NAF
NS0090	198	200	NS	X070573	070573	1	G	W	25.86	42.66	3.23	0.5547	0.43	0.14	3.2	0.6	0.126	0.161	0.088	0.024	0.68	11.05	0.3	12.03	13974	4.9266	10.4652	-5.5386	NAF
NS0090	274	276	NS	X070612	070612	1	G	W	37.38	36.01	1.14	0.5676	0.44	0.055	1.68	0.4	0.077	0.042	0.263	0.079	0.22	6.23	-0.28	6.17	13940	1.2852	6.9768	-5.6916	NAF
NS0090	118	120	NS	X070532	070532	1	G	W	35.38	38.41	1.75	0.6708	0.52	0.079	2.32	0.47	0.053	0.081	0.609	0.034	0.06	4.57	-0.13	4.5	14060	2.4786	8.19774	-5.71914	NAF
NS0090	108	110	NS	X070527	070527	1	G	W	35.82	33.28	2.7	0.7224	0.56	0.122	2.98	0.65	0.182	0.182	1.17	0.072	0.16	5.97	0.18	6.31	14037	5.5692	11.3373	-5.7681	NAF
NS0090	216	218	NS	X070582	070582	1	G	W	36.79	36.35	1.07	0.5805	0.45	0.049	1.46	0.42	0.08	0.046	0.33	0.104	0.27	6.35	-0.02	6.6	13983	1.4076	7.32564	-5.91804	NAF
NS0090	54	56	NS	X070500	070500	1	G	W	24.72	47.54	4.12	0.5289	0.41	0.174	3.06	0.64	0.183	0.169	0.679	0.12	1.35	4.94	0.57	6.86	13992	5.1714	11.16288	-5.99148	NAF
NS0090	162	164	NS	X070555	070555	1	G	W	30.1	41.62	2.86	0.6966	0.54	0.128	2.71	0.67	0.154	0.186	0.394	0.012	0.29	6.8	0.13	7.22	14100	5.6916	11.68614	-5.99454	NAF
NS0090	272	274	NS	X070611	070611	1	G	W	35.84	38.04	1.1	0.5805	0.45	0.051	1.63	0.44	0.103	0.031	0.299	0.069	0.17	6.39	-0.31	6.25	13939	0.9486	7.67448	-6.72588	NAF
NS0090	64	66	NS	X070505	070505	1	G	W	29.96	42.41	1.55	0.5934	0.46	0.067	2.51	0.55	0.076	0.071	0.233	0.046	0.72	7.96	-0.02	8.66	13997	2.1726	9.5931	-7.4205	NAF
NS0090	242	244	NS	X070595	070595	1	G	W	30.11	40.59	2.16	0.4386	0.34	0.097	2.09	0.68	0.047	0.143	0.147	0.01	0.45	9.52	0.15	10.12	14050	4.3758	11.86056	-7.48476	NAF
NS0090	204	206	NS	X070576	070576	1	G	W	27.87	40.24	2.27	0.5676	0.44	0.096	2.4	0.62	0.097	0.105	0.095	0.012	0.71	12.52	0.07	13.3	13977	3.213	10.81404	-7.60104	NAF
NS0090	76	78	NS	X070511	070511	1	G	W	27.29	36.99	2.72	0.5418	0.42	0.123	3.14	0.69	0.138	0.142	0.724	0.124	1.14	13.57	0.43	15.14	14003	4.3452	12.03498	-7.68978	NAF
NS0090	104	106	NS	X070525	070525	1	G	W	34.67	37.64	1.26	0.774	0.6	0.053	2.23	0.49	0.095	0.027	0.827	0.029	0.19	6.62	-0.27	6.54	14035	0.8262	8.54658	-7.72038	NAF
NS0090	194	196	NS	X070571	070571	1	G	W	29.74	47.04	1.79	0.3483	0.27	0.078	2.16	0.55	0.083	0.058	0.558	0.02	0.12	4.55	-0.13	4.54	13972	1.7748	9.5931	-7.8183	NAF
NS0090	232	234	NS	X070590	070590	1	G	W	30.9	34.98	1.37	0.5547	0.43	0.061	1.91	0.56	0.098	0.063	0.454	0.014	1.02	14.27	0.01	15.3	14045	1.9278	9.76752	-7.83972	NAF
NS0090	186	188	NS	X070567	070567	1	G	W	30.52	46.03	1.65	0.3483	0.27	0.077	2.13	0.55	0.092	0.054	0.561	0.015	0.14	4.73	-0.19	4.68	14112	1.6524	9.5931	-7.9407	NAF
NS0090	122	124	NS	X070534	070534	1	G	W	37.26	37.89	1.24	0.7482	0.58	0.055	1.91	0.5	0.074	0.025	0.553	0.033	0.06	4.11	-0.25	3.92	14062	0.765	8.721	-7.956	NAF
NS0090	246	248	NS	X070597	070597	1	G	W	35.37	36.07	1.33	0.5934	0.46	0.059	1.75	0.56	0.075	0.057	0.247	0.093	0.32	8.06	-0.11	8.27	14052	1.7442	9.76752	-8.02332	NAF
NS0090	112	114	NS	X070529	070529	1	G	W	36.61	37.99	1.16	0.774	0.6	0.053	1.96	0.51	0.084	0.026	0.651	0.028	0.08	4.64	-0.28	4.44	14039	0.7956	8.89542	-8.09982	NAF
NS0090	68	70	NS	X070507	070507	1	G	W	34.07	33.16	1.17	0.6321	0.49	0.047	2.85	0.53	0.079	0.037	0.301	0.064	0.72	11.62	-0.18	12.16	13999	1.1322	9.24426	-8.11206	NAF
NS0090	120	122	NS	X070533	070533	1	G	W	33.08	42.65	1.21	0.7353	0.57	0.056	1.92	0.53	0.104	0.037	0.566	0.051	0.11	4.61	-0.16	4.56	14061	1.1322	9.24426	-8.11206	NAF
NS0090	254	256	NS	X070601	070601	1	G	W	33.9	33.54	1.89	0.7998	0.62	0.085	2.2	0.71	0.163	0.138	0.523	0.111	0.31	10.54	0.13	10.98	14056	4.2228	12.38382	-8.16102	NAF
NS0090	150	152	NS	X070548	070548	1	G	W	35.21	40.08	1.44	0.6837	0.53	0.063	1.74	0.54	0.092	0.04	0.508	0.009	0.08	4.62	-0.38	4.32	14076	1.224	9.41868	-8.19468	NAF
NS0090	102	104	NS	X070524	070524	1	G	W	32.62	39.25	1.11	0.8643	0.67	0.048	2.52	0.53	0.096	0.033	0.779	0.03	0.21	7.68	-0.13	7.76	14034	1.0098	9.24426	-8.23446	NAF
NS0090	252	254	NS	X070600	070600	1	G	W	31.78	38.83	2.08	0.5418	0.42	0.091	1.99	0.74	0.116	0.149	0.475	0.107	0.36	8.49	0.3	9.15	14055	4.5594	12.90708	-8.34768	NAF
NS0090	66	68	NS	X070506	070506	1	G	W	32.33	40.05	1.09	0.6063	0.47	0.046	2.07	0.54	0.093	0.033	0.121	0.038	0.71	8.18	-0.27	8.62	13998	1.0098	9.41868	-8.40888	NAF
NS0090	140	142	NS	X070543	070543	1	G	W	32.99	39.94	2.59	0.645	0.5	0.118	2.8	0.88	0.071	0.223	0.75	0.085	0.07	3.94	0.38	4.39	14071	6.8238	15.34896	-8.52516	NAF
NS0090	94	96	NS	X070520	070520	1	G	W	35.96	34.85	1.31	0.7095	0.55	0.051	2.42	0.55	0.085	0.032	0.836	0.009	0.21	7.29	-0.21	7.29	14030	0.9792	9.5931	-8.6139	NAF
NS0090	106	108	NS	X070526	070526	1	G	W	34.35	40.3	1.24	0.645	0.5	0.051	1.89	0.56	0.115	0.027	0.72	0.025	0.13	5	-0.25	4.88	14036	0.8262	9.76752	-8.94132	NAF
NS0090	88	90	NS	X070517	070517	1	G	W	37.74	34.89	1.24	0.6579	0.51	0.056	1.98	0.57	0.099	0.03	0.655	0.006	0.14	5.95	-0.36	5.73	14027	0.918	9.94194	-9.02394	NAF
NS0090	214	216	NS	X070581	070581	1	G	W	34.36	42.63	0.87	0.4257	0.33	0.04	1.14	0.57	0.078	0.023	0.312	0.013	0.12	4.64	-0.14	4.62	13982	0.7038	9.94194	-9.23814	NAF
NS0090	270	272	NS	X070610	070610	1	G	W	35.05	36.04	1.27	0.6579	0.51	0.06	1.93	0.59	0.119	0.032	0.417	0.052	0.36	8.46	-0.2	8.62	13938	0.9792	10.29078	-9.31158	NAF
NS0090	144	146	NS	X070545	070545	1	G	W	31.6	39.43	3.63	0.645	0.5	0.165	3.38	1.02	0.126	0.277	0.769	0.02	0.15	4.57	0.4	5.12	14073	8.4762	17.79084	-9.31464	NAF
NS0090	268	270	NS	X070609	070609	1	G	W	33.1	36.96	0.6	0.6192	0.48	0.023	1.65	0.58	0.086	0.024	0.331	0.015	0.97	10.51	-0.21	11.27	13937	0.7344	10.11636	-9.38196	NAF
NS0090	262	264	NS	X070606	070606	1	G	W	32.99	38.74	0.82	0.5547	0.43	0.034	1.45	0.57	0.096	0.018	0.234	0.103	0.44	9.49	-0.2	9.73	13934	0.5508	9.94194	-9.39114	NAF
NS0090	182	184	NS	X070565	070565	1	G	W	28.89	50.31	1.11	0.258	0.2	0.05	1.66	0.6	0.067	0.033	0.347	0.012	0.12	3.87	-0.11	3.88	14110	1.0098	10.4652	-9.4554	NAF
NS0090	176	178	NS	X070562	070562	1	G	W	24.18	52.71	1.41	0.3483	0.27	0.062	2.08	0.64	0.152	0.054	0.05	0.03	0.54	7.18	-0.12	7.6	14107	1.6524	11.16288	-9.51048	NAF
NS0090	192	194	NS	X070570	070570	1	G	W	30.02	43	2.36	0.4644	0.36	0.102	2.71	0.66	0.142	0.062	0.777	0.012	0.24	6.38	-0.13	6.49	13971	1.8972	11.51172	-9.61452	NAF
NS0090	234	236	NS	X070591	070591	1	G	W	29.9	38.61	1.6	0.5418	0.42	0.068	2.08	0.69	0.122	0.074	0.386	0.009	0.61	12.03	-0.02	12.62	14046	2.2644	12.03498	-9.77058	NAF
NS0090	98	100	NS	X070522	070522	1	G	W	33.14	38.63	0.93	0.8256	0.64	0.037	2.39	0.62	0.086	0.03	0.736	0.007	0.18	7.95	-0.1	8.03	14032	0.918	10.81404	-9.89604	NAF
NS0090	258	260	NS	X070604	070604	1	G	W	33	37.88	0.62	0.6192	0.48	0.027	1.69	0.6	0.084	0.017	0.158	0.113	0.48	10.33	-0.2	10.61	14058	0.5202	10.4652	-9.945	NAF
NS0090	90	92	NS	X070518	070518	1	G	W	36.47	37.3	1.08	0.6063	0.47	0.05	1.84	0.62	0.083	0.027	0.584	0.011	0.13	5.36	-0.27	5.22	14028	0.8262	10.81404	-9.98784	NAF
NS0090	224	226	NS	X070586	070586	1	G	W	33.2	33.38	1.66	0.5547	0.43	0.075	2.55	0.7	0.053	0.07	0.2	0.05	0.42	12.31	0.07	12.8	14041	2.142	12.2094	-10.0674	NAF
NS0090	240	242	NS	X070594	070594	1	G	W	27.01	37.59	1.8	0.5934	0.46	0.08	2.47	0.72	0.137	0.08	0.23	0.014	0.93	15.97	0.17	17.07	14049	2.448	12.55824	-10.11024	NAF
NS0090	72	74	NS	X070509	070509	1	G	W	28.93	37.2	0.84	0.5547	0.43	0.032	2.52	0.64	0.076	0.034	0.077	0.021	0.84	15.45	0	16.29	14001	1.0404	11.16288	-10.12248	NAF
NS0090	226	228	NS	X070587	070587	1	G	W	30.64	43.25	0.97	0.3999	0.31	0.043	1.74	0.63	0.084	0.026	0.156	0.085	0.3	8.35	-0.03	8.62	14042	0.7956	10.98846	-10.19286	NAF
NS0090	206	208	NS	X070577	070577	1	G	W	27.01	43.65	1.1	0.5289	0.41	0.046	1.99	0.68	0.107	0.053	0.278	0.012	0.82	12.12	-0.07	12.87	13978	1.6218	11.86056	-10.23876	NAF
NS0090	276	278	NS	X070613	070613	1	G	W	36.74	34.9	1.28	0.5805	0.45	0.061	1.96	0.67	0.083	0.045	0.228	0.054	0.27	7.18	-0.15	7.3	13941	1.377	11.68614	-10.30914	NAF
NS0090	92	94	NS	X070519	070519	1	G	W	36.27	33.36	1.4	0.8256	0.64	0.063	2.5	0.76	0.172	0.095	1.02	0.019	0.2	7.78	-0.17	7.81	14029	2.907	13.25592	-10.34892	NAF
NS0090	164	166	NS	X070556	070556	1	G	W	34.87	40.15	1.66	0.645	0.5	0.072	1.81	0.72	0.089	0.069	0.757	0.022	0.01	4.12	-0.19	3.94	14101	2.1114	12.55824	-10.44684	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0090	228	230	NS	X070588	070588	1	G	W	33.34	37.39	1.38	0.5805	0.45	0.062	1.99	0.68	0.112	0.043	0.398	0.082	0.3	9.19	-0.1	9.39	14043	1.3158	11.86056	-10.54476	NAF
NS0090	250	252	NS	X070599	070599	1	G	W	38.37	33.66	0.86	0.645	0.5	0.037	1.36	0.64	0.105	0.019	0.169	0.13	0.19	7.11	-0.2	7.1	14054	0.5814	11.16288	-10.58148	NAF
NS0090	238	240	NS	X070593	070593	1	G	W	28.33	40.56	1.66	0.516	0.4	0.074	2	0.76	0.133	0.085	0.211	0.015	0.75	12.26	0.02	13.03	14048	2.601	13.25592	-10.65492	NAF
NS0090	84	86	NS	X070515	070515	1	G	W	33.43	36.93	1.06	0.7224	0.56	0.045	2.38	0.67	0.08	0.033	0.435	0.011	0.41	9.1	-0.11	9.4	14025	1.0098	11.68614	-10.67634	NAF
NS0090	180	182	NS	X070564	070564	1	G	W	29.11	51.01	0.99	0.2451	0.19	0.045	1.52	0.66	0.071	0.027	0.189	0.017	0.11	3.25	-0.08	3.28	14109	0.8262	11.51172	-10.68552	NAF
NS0090	184	186	NS	X070566	070566	1	G	W	22.56	59.38	0.77	0.2838	0.22	0.034	1.38	0.66	0.089	0.022	0.427	0.019	0.12	4.08	0.03	4.23	14111	0.6732	11.51172	-10.83852	NAF
NS0090	264	266	NS	X070607	070607	1	G	W	32.09	29.28	1.7	0.7353	0.57	0.072	2.47	0.86	0.159	0.124	0.621	0.011	0.94	16.25	0.28	17.47	13935	3.7944	15.00012	-11.20572	NAF
NS0090	222	224	NS	X070585	070585	1	G	W	31.39	38.86	1.34	0.5289	0.41	0.057	2.07	0.71	0.102	0.037	0.285	0.075	0.44	10.13	-0.02	10.55	13986	1.1322	12.38382	-11.25162	NAF
NS0090	96	98	NS	X070521	070521	1	G	W	32.33	38.72	0.98	0.8643	0.67	0.042	2.52	0.72	0.078	0.038	0.683	0.013	0.27	8.5	0.01	8.78	14031	1.1628	12.55824	-11.39544	NAF
NS0090	230	232	NS	X070589	070589	1	G	W	35.05	32.05	1.59	0.5934	0.46	0.07	2.28	0.74	0.134	0.041	0.459	0.084	0.4	11.23	-0.18	11.45	14044	1.2546	12.90708	-11.65248	NAF
NS0090	116	118	NS	X070531	070531	1	G	W	38.08	35.6	1.41	0.7224	0.56	0.064	2.02	0.72	0.106	0.023	0.712	0.071	0.05	3.97	-0.12	3.9	14059	0.7038	12.55824	-11.85444	NAF
NS0090	190	192	NS	X070569	070569	1	G	W	29.46	41.26	2.89	0.5676	0.44	0.126	3.09	0.81	0.182	0.07	1.25	0.029	0.23	7.09	-0.09	7.23	13970	2.142	14.12802	-11.98602	NAF
NS0090	82	84	NS	X070514	070514	1	G	W	35.45	33.98	1.27	0.6708	0.52	0.052	2.32	0.75	0.095	0.034	0.745	0.01	0.33	8.78	-0.16	8.95	14024	1.0404	13.0815	-12.0411	NAF
NS0090	70	72	NS	X070508	070508	1	G	W	28.74	37.04	0.94	0.5934	0.46	0.037	2.97	0.77	0.079	0.035	0.258	0.057	0.96	14.69	0.08	15.73	14000	1.071	13.43034	-12.35934	NAF
NS0090	138	140	NS	X070542	070542	1	G	W	36.56	37.73	1.68	0.645	0.5	0.076	2.05	0.77	0.1	0.034	0.572	0.053	0.03	3.79	-0.11	3.71	14070	1.0404	13.43034	-12.38994	NAF
NS0090	126	128	NS	X070536	070536	1	G	W	37.2	37.18	1.26	0.7482	0.58	0.054	1.79	0.77	0.08	0.028	0.636	0.169	0.04	3.63	0.11	3.78	14064	0.8568	13.43034	-12.57354	NAF
NS0090	196	198	NS	X070572	070572	1	G	W	28.15	50.77	0.99	0.3354	0.26	0.04	1.5	0.82	0.07	0.025	0.516	0.019	0.09	4.27	0.07	4.43	13973	0.765	14.30244	-13.53744	NAF
NS0090	166	168	NS	X070557	070557	1	G	W	36	37.66	1.53	0.7353	0.57	0.068	1.9	0.86	0.093	0.034	0.835	0.017	0.03	4.45	-0.03	4.45	14102	1.0404	15.00012	-13.95972	NAF
NS0090	78	80	NS	X070512	070512	1	G	W	31.09	28.55	1.32	0.6579	0.51	0.055	3.12	0.99	0.102	0.096	0.794	0.05	0.79	18.29	0.26	19.34	14004	2.9376	17.26758	-14.32998	NAF
NS0090	168	170	NS	X070558	070558	1	G	W	33.1	41.19	1.45	0.7095	0.55	0.062	1.92	0.9	0.08	0.04	0.412	0.021	0.14	5.22	0.06	5.42	14103	1.224	15.6978	-14.4738	NAF
NS0090	218	220	NS	X070583	070583	1	G	W	34.68	32.96	1.22	0.5676	0.44	0.054	2.23	0.92	0.122	0.026	0.189	0.052	0.4	10.94	0.19	11.53	13984	0.7956	16.04664	-15.25104	NAF
NS0090	114	116	NS	X070530	070530	1	G	W	34.32	41.04	0.94	0.774	0.6	0.042	1.74	0.96	0.092	0.015	0.605	0.052	0.05	4.08	0.21	4.34	14040	0.459	16.74432	-16.28532	NAF
NS0090	220	222	NS	X070584	070584	1	G	W	31.48	38.97	0.83	0.4386	0.34	0.035	2.09	1.03	0.072	0.016	0.155	0.058	0.43	10.19	0.38	11	13985	0.4896	17.96526	-17.47566	NAF
NS0090	208	210	NS	X070578	070578	1	G	W	30.86	42.85	0.88	0.4257	0.33	0.039	1.65	1.07	0.095	0.029	0.092	0.014	0.38	7.87	0.13	8.38	13979	0.8874	18.66294	-17.77554	NAF
NS0090	124	126	NS	X070535	070535	1	G	W	37.12	36.69	1.1	0.8514	0.66	0.047	1.76	1.11	0.11	0.022	0.667	0.135	0.02	3.67	0.29	3.98	14063	0.6732	19.36062	-18.68742	NAF
NS0090	86	88	NS	X070516	070516	1	G	W	29.75	37.47	0.89	0.7611	0.59	0.035	3.01	1.13	0.082	0.028	0.512	0.018	0.54	12.33	0.46	13.33	14026	0.8568	19.70946	-18.85266	NAF
NS0090	142	144	NS	X070544	070544	1	G	W	35.35	39	1.44	0.7353	0.57	0.063	1.88	1.23	0.079	0.037	0.713	0.037	0.01	3.57	0.42	4	14072	1.1322	21.45366	-20.32146	NAF
NS0090	80	82	NS	X070513	070513	1	G	W	27.07	40.17	0.81	0.6579	0.51	0.028	2.8	1.21	0.081	0.023	0.572	0.018	0.59	13.55	0.54	14.68	14023	0.7038	21.10482	-20.40102	NAF
NS0090	136	138	NS	X070541	070541	1	G	W	35.56	38.26	1.68	0.6192	0.48	0.078	2.14	1.23	0.075	0.028	0.567	0.048	0.02	3.59	0.5	4.11	14069	0.8568	21.45366	-20.59686	NAF
NS0090	128	130	NS	X070537	070537	1	G	W	36.84	37.27	1.24	0.774	0.6	0.056	1.78	1.25	0.094	0.031	0.654	0.124	-0.02	3.34	0.55	3.87	14065	0.9486	21.8025	-20.8539	NAF
NS0090	130	132	NS	X070538	070538	1	G	W	36.63	38.17	1.26	0.6708	0.52	0.058	1.74	1.27	0.075	0.032	0.626	0.123	-0.01	2.92	0.57	3.48	14066	0.9792	22.15134	-21.17214	NAF
NS0090	134	136	NS	X070540	070540	1	G	W	30.79	35.89	2.78	0.9933	0.77	0.12	3.46	2.26	0.206	0.2	1.04	0.126	0.17	6.79	1.18	8.14	14068	6.12	39.41892	-33.29892	NAC
NS0090	132	134	NS	X070539	070539	1	G	W	32.86	42.1	1.06	0.6708	0.52	0.045	1.71	2.03	0.071	0.024	0.601	0.071	0.01	2.87	1.55	4.43	14067	0.7344	35.40726	-34.67286	NAC
NS0091	88	90	NS	X070660	070660	1	G	W	23.45	44.42	6.5	0.2838	0.22	0.285	5.41	0.32	0.047	0.371	0.755	0.165	0.8	5.76	0.91	7.47	14013	11.3526	5.58144	5.77116	PAF(LC)
NS0091	82	84	NS	X070657	070657	1	G	W	21.94	45.23	8.37	0.258	0.2	0.37	5.66	0.32	0.052	0.35	0.387	0.081	0.78	5.5	0.79	7.07	14010	10.71	5.58144	5.12856	PAF(LC)
NS0091	204	206	NS	X070719	070719	1	G	W	21.6	48.38	7.22	0.3354	0.26	0.333	2.46	0.58	0.075	0.434	0.097	0.051	0.78	7.36	1.02	9.16	14143	13.2804	10.11636	3.16404	PAF(LC)
NS0091	86	88	NS	X070659	070659	1	G	W	20.65	48.62	7.25	0.2451	0.19	0.319	5.32	0.42	0.049	0.341	0.456	0.107	0.71	5.19	0.88	6.78	14012	10.4346	7.32564	3.10896	PAF(LC)
NS0091	90	92	NS	X070661	070661	1	G	W	22.49	47.71	6.2	0.258	0.2	0.277	5.01	0.23	0.037	0.197	0.588	0.133	0.76	5.9	0.56	7.22	14014	6.0282	4.01166	2.01654	PAF(LC)
NS0091	128	130	NS	X070680	070680	1	G	W	26.39	35.65	5.77	0.516	0.4	0.255	5.3	0.43	0.084	0.303	0.19	0.045	0.52	11.97	0.71	13.2	14087	9.2718	7.50006	1.77174	PAF(LC)
NS0091	84	86	NS	X070658	070658	1	G	W	22.08	46.91	5	0.4644	0.36	0.219	4.47	0.73	0.129	0.46	0.482	0.107	0.75	7.02	1	8.77	14011	14.076	12.73266	1.34334	PAF(LC)
NS0091	98	100	NS	X070665	070665	1	G	W	20.23	51.55	2.24	0.6321	0.49	0.1	3.15	0.45	0.084	0.285	0.354	0.106	0.7	10.35	0.69	11.74	14018	8.721	7.8489	0.8721	PAF(LC)
NS0091	76	80	NS	BX077654-BX077655	X077654	2			69.22	2.959	0.187	0.06	0.0432	0.03	0.282	0.044	0.005	0.026	0.015	0.059	-0.01	-0.01	-0.01	-0.03	770	0.7956	0.767448	0.028152	PAF(LC)
NS0091	68	72	NS	BX077650-BX077651	X077650	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	768	-0.0306	-0.01744	-0.013158	NAF
NS0091	80	84	NS	BX077656-BX077657	X077656	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	771	-0.0306	-0.01744	-0.013158	NAF
NS0091	84	88	NS	BX077658-BX077659	X077658	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	772	-0.0306	-0.01744	-0.013158	NAF
NS0091	90	92	NS	BX077661	X077661	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	773	-0.0306	-0.01744	-0.013158	NAF
NS0091	92	96	NS	BX077662-BX077663	X077662	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	774	-0.0306	-0.01744	-0.013158	NAF
NS0091	156	160	NS	BX077694-BX077695	X077694	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	790	-0.0306	-0.01744	-0.013158	NAF
NS0091	100	104	NS	BX077666-BX077667	X077666	2			70.04	2.963	0.184	0.05	0.036	0.027	0.279	0.049	0.006	0.02	0.018	0.072	-0.01	-0.01	-0.01	-0.03	776	0.612	0.854658	-0.242658	NAF
NS0091	72	76	NS	BX077652-BX077653	X077652	2			68.99	2.939	0.213	0.059	0.04248	0.038	0.239	0.046	0.008	0.018	0.012	0.077	0.13	0.2	-0.01	0.32	769	0.5508	0.802332	-0.251532	NAF
NS0091	104	108	NS	BX077668-BX077669	X077668	2			70.66	2.528	0.141	0.043	0.03096	0.019	0.227	0.039	0.005	0.014	0.01	0.067	-0.01	-0.01	-0.01	-0.03	777	0.4284	0.680238	-0.251838	NAF
NS0091	96	100	NS	BX077664-BX077665	X077664	2			68.87	3.627	0.183	0.058	0.04176	0.026	0.282	0.056	0.008	0.022	0.021	0.109	-0.01	-0.01	-0.01	-0.03	775	0.6732	0.976752	-0.303552	NAF
NS0091	58	60	NS	BX077645	X077645	2			68.3	2.624	0.062	0.047	0.03384	0.012	0.104	0.024	0.012	0.001	0.003	0.061	0.21	0.51	0.26	0.98	765	0.0306	0.418608	-0.388008	NAF
NS0091	64	68	NS	BX077648-BX077649	X077648	2			68.06	2.767	0.136	0.061	0.04392	0.015	0.126	0.031	0.024	0.004	0.011	0.079	0.28	0.73	0.21	1.22	767	0.1224	0.540702	-0.418302	NAF
NS0091	60	64	NS	BX077646-BX077647	X077646	2			67.38	2.542	0.15	0.072	0.05184	0.018	0.116	0.028	0.014	0.002	0.009	0.069	0.35	0.88	0.57	1.8	766	0.0612	0.488376	-0.427176	NAF
NS0091	230	234	NS	BX077732-BX077733	X077732	2			71.17	1.268	0.032	0.033	0.02376	0.002	0.117	0.033	0.004	0.002	0.006	0.064	-0.01	-0.01	-0.01	-0.03	809	0.0612	0.575586	-0.514386	NAF
NS0091	160	164	NS	BX077696-BX077697	X077696	2			70.6	1.927	0.061	0.048	0.03456	0.005	0.138	0.04	0.003	0.004	0.011	0.067	-0.01	-0.01	-0.01	-0.03	791	0.1224	0.69768	-0.57528	NAF
NS0091	190	194	NS	BX077712-BX077713	X077712	2			70.41	2.926	0.108	0.047	0.03384	0.005	0.133	0.042	0.007	0.005	0.019	0.063	-0.01	-0.01	-0.01	-0.03	799	0.153	0.732564	-0.579564	NAF
NS0091	234	238	NS	BX077734-BX077735	X077734	2			71.13	1.52	0.015	0.036	0.02592	0.002	0.133	0.037	0.004	0.002	0.006	0.069	-0.01	-0.01	-0.01	-0.03	810	0.0612	0.645354	-0.584154	NAF
NS0091	202	206	NS	BX077718-BX077719	X077718	2			71.8	1.508	0.144	0.043	0.03096	0.008	0.156	0.045	0.005	0.006	0.005	0.068	-0.01	-0.01	-0.01	-0.03	802	0.1836	0.78489	-0.60129	NAF
NS0091	106	108	NS	X070669	070669	1	G	W	23.51	48.82	2.92	0.3741	0.29	0.125	3.25	0.3	0.047	0.151	0.155	0.052	0.66	8.92	0.25	9.83	14022	4.6206	5.2326	-0.612	NAF
NS0091	136	140	NS	BX077684-BX077685	X077684	2			71.4	1.791	0.126	0.038	0.02736	0.01	0.218	0.046	0.006	0.006	0.026	0.069	-0.01	-0.01	-0.01	-0.03	785	0.1836	0.802332	-0.618732	NAF
NS0091	140	144	NS	BX077686-BX077687	X077686	2			71.24	2.267	0.064	0.038	0.02736	0.006	0.171	0.045	0.005	0.005	0.019	0.071	-0.01	-0.01	-0.01	-0.03	786	0.153	0.78489	-0.63189	NAF
NS0091	124	128	NS	BX077678-BX077679	X077678	2			70.36	2.499	0.206	0.046	0.03312	0.021	0.272	0.052	0.008	0.008	0.013	0.063	-0.01	-0.01	-0.01	-0.03	782	0.2448	0.906984	-0.662184	NAF
NS0091	174	178	NS	BX077704-BX077705	X077704	2			71.12	1.587	0.033	0.039	0.02808	0.001	0.146	0.044	0.005	0.003	0.01	0.07	-0.01	-0.01	-0.01	-0.03	795	0.0918	0.767448	-0.675648	NAF
NS0091	182	186	NS	BX077708-BX077709	X077708	2			70.48	2.754	0.101	0.049	0.03528	0.003	0.141	0.046	0.007	0.004	0.021	0.072	-0.01	-0.01	-0.01	-0.03	797	0.1224	0.802332	-0.679932	NAF
NS0091	144	148	NS	BX077688-BX077689	X077688	2			70.58	2.196	0.073	0.04	0.0288	0.01	0.154	0.045	0.005	0.003	0.016	0.057	-0.01	-0.01	-0.01	-0.03	787	0.0918	0.78489	-0.69309	NAF
NS0091	128	132	NS	BX077680-BX077681	X077680	2			70.52	2.557	0.263	0.042	0.03024	0.019	0.293	0.054	0.009	0.008	0.028	0.062	-0.01	-0.01	-0.01	-0.03	783	0.2448	0.941868	-0.697068	NAF
NS0091	132	136	NS	BX077682-BX077683	X077682	2			71.16	1.842	0.059	0.036	0.02592	0.01	0.149	0.048	0.007	0.004	0.025	0.046	-0.01	-0.01	-0.01	-0.03	784	0.1224	0.837216	-0.714816	NAF
NS0091	152	156	NS	BX077692-BX077693	X077692	2			70.91	1.985	0.078	0.054	0.03888	0.006	0.177	0.051	0.006	0.005	0.014	0.066	-0.01	-0.01	-0.01	-0.03	789	0.153	0.889542	-0.736542	NAF
NS0091	228	230	NS	BX077731	X077731	2			71.62	1.515	0.02	0.04	0.0288	0.003	0.134	0.044	0.009	0.001	0.004	0.069	-0.01	-0.01	-0.01	-0.03	808	0.0306	0.767448	-0.736848	NAF
NS0091	150	152	NS	BX077691	X077691	2			70.94	2.32	0.094	0.051	0.03672	0.006	0.184	0.05	0.006	0.004	0.017	0.067	-0.01	-0.01	-0.01	-0.03	788	0.1224	0.8721	-0.7497	NAF
NS0091	214	218	NS	BX077724-BX077725	X077724	2			69.89	2.126	0.085	0.049	0.03528	0.007	0.187	0.051	0.007	0.004	0.002	0.095	-0.01	-0.01	-0.01	-0.03	805	0.1224	0.889542	-0.767142	NAF
NS0091	112	116	NS	BX077672-BX077673	X077672	2			69.75	2.461	0.092	0.044	0.03168	0.013	0.219	0.055	0.009	0.006	0.014	0.06	-0.01	-0.01	-0.01	-0.03	779	0.1836	0.95931	-0.77571	NAF
NS0091	186	190	NS	BX077710-BX077711	X077710	2			69.91	3.124	0.077	0.053	0.03816	0.001	0.132	0.052	0.007	0.004	0.022	0.07	-0.01	-0.01	-0.01	-0.03	798	0.1224	0.906984	-0.784584	NAF
NS0091	246	250	NS	BX077740-BX077741	X077740	2			70.47	1.493	0.026	0.029	0.02088	0.004	0.127	0.047	0.006	0.001	0.02	0.046	-0.01	-0.01	-0.01	-0.03	813	0.0306	0.819774	-0.789174	NAF
NS0091	194	198	NS	BX077714-BX077715	X077714	2			70.43	2.265	0.101	0.052	0.03744	0.003	0.16	0.053	0.008	0.004	0.011	0.071	-0.01	-0.01	-0.01	-0.03	800	0.1224	0.924426	-0.802026	NAF
NS0091	92	94	NS	X070662	070662	1	G	W	24.35	43.37	4.77	0.5289	0.41	0.211	4.48	0.35	0.056	0.173	0.428	0.109	0.7	9.24	0.48	10.42	14015	5.2938	6.1047	-0.8109	NAF
NS0091	170	174	NS	BX077702-BX077703	X077702	2			70.34	2.534	0.12	0.048	0.03456	0.005	0.178	0.054	0.006	0.004	0.023	0.075	-0.01	-0.01	-0.01	-0.03	794	0.1224	0.941868	-0.819468	NAF
NS0091	222	226	NS	BX077728-BX077729	X077728	2			69.69	2.868	0.1	0.067	0.04824	0.01	0.202	0.055	0.008	0.004	0.008	0.09	-0.01	-0.01	-0.01	-0.03	807	0.1224	0.95931	-0.83691	NAF
NS0091	210	214	NS	BX077722-BX077723	X077722	2			71.06	1.846	0.05	0.05	0.036	0.003	0.18	0.054	0.008	0.003	0.005	0.071	-0.01	-0.01	-0.01	-0.03	804	0.0918	0.941868	-0.850068	NAF
NS0091	218	222	NS	BX077726-BX077727	X077726	2			70.57	2.319	0.065	0.062	0.04464	0.003	0.182	0.051	0.008	0.001	0.01	0.07	-0.01	-0.01	-0.01	-0.03	806	0.0306	0.889542	-0.858942	NAF
NS0091	164	168	NS	BX077698-BX077699	X077698	2			69.81	3.634	0.234	0.063	0.04536	0.009	0.209	0.06	0.007	0.006	0.051	0.071	-0.01	-0.01	-0.01	-0.03	792	0.1836	1.04652	-0.86292	NAF
NS0091	250	254	NS	BX077742-BX077743	X077742	2			71.01	1.459	0.042	0.034	0.02448	0.014	0.154	0.053	0.009	0.002	0.019	0.053	-0.01	-0.01	-0.01	-0.03	814	0.0612	0.924426	-0.863226	NAF
NS0091	254	258	NS	BX077744-BX077745	X077744	2			71.48	1.086	0.098	0.037	0.02664	0.008	0.221	0.06	0.007	0.005	0.003	0.062	-0.01	-0.01	-0.01	-0.03	815	0.153	1.04652	-0.89352	NAF
NS0091	276	280	NS	BX077756-BX077757	X077756	2			70.63	2.522	0.054	0.033	0.02376	0.02	0.188	0.062	0.014	0.006	0.011	0.06	-0.01	-0.01	-0.01	-0.03	821	0.1836	1.081404	-0.897804	NAF
NS0091	108	112	NS	BX077670-BX077671	X077670	2			70.17	2.685	0.101	0.042	0.03024	0.016	0.225	0.067	0.011	0.008	0.013	0.071	-0.01	-0.01	-0.01	-0.03	778	0.2448	1.168614	-0.923814	NAF
NS0091	198	202	NS	BX077716-BX077717	X077716	2			70.88	1.806	0.097	0.062	0.04464	0.005	0.215	0.062	0.006	0.005	0.012	0.083	-0.01	-0.01	-0.01	-0.03	801	0.153	1.081404	-0.928404	NAF
NS0091	120	124	NS	BX077676-BX077677	X077676	2			69.68	2.678	0.079	0.038	0.02736	0.008	0.171	0.062	0.01	0.004	0.028	0.073	-0.01	-0.01	-0.01	-0.03	781	0.1224	1.081404	-0.959004	NAF
NS0091	266	268	NS	BX077750	X077750	2			69.01	3.856	0.094	0.055	0.0396	0.014	0.309	0.069	0.01	0.006	0.031	0.07	-0.01	-0.01	-0.01	-0.03	818	0.1836	1.203498	-1.019898	NAF
NS0091	116	120	NS	BX077674-BX077675	X077674	2			70.9	2.35	0.14	0.052	0.03744	0.017	0.252	0.073	0.014	0.008	0.013	0.061	-0.01	-0.01	-0.01	-0.03	780	0.2448	1.273266	-1.028466	NAF
NS0091	242	246	NS	BX077738-BX077739	X077738	2			71.15	1.353	0.041	0.032	0.02304	0.012	0.157	0.062	0.01	0.001	0.016	0.059	-0.01	-0.01	-0.01	-0.03	812	0.0306	1.081404	-1.050804	NAF
NS0091	168	170	NS	BX077701	X077701	2			69.36	2.852	0.097	0.062	0.04464	0.005	0.184	0.064	0.008	0.002	0.026	0.066	-0.01	-0.01	-0.01	-0.03	793	0.0612	1.116288	-1.055088	NAF
NS0091	206	210	NS	BX077720-BX077721	X077720	2			70.78	2.227	0.081	0.061	0.04392	0.005	0.179	0.067	0.007	0.002	0.013	0.078	-0.01	-0.01	-0.01	-0.03	803	0.0612	1.168614	-1.107414	NAF
NS0091	178	182	NS	BX077706-BX077707	X077706	2			69.63	3.278	0.173	0.042	0.03024	0.009	0.249	0.079	0.007	0.006	0.021	0.085	-0.01	-0.01	-0.01	-0.03	796	0.1836	1.377918	-1.194318	NAF
NS0091	268	272	NS	BX077752-BX077753	X077752	2			70.16	2.556	0.063	0.042	0.03024	0.016	0.226	0.086	0.015	0.009	0.018	0.069	0.15	-0.01	-0.01	0.13	819	0.2754	1.500012	-1.224612	NAF
NS0091	238	242	NS	BX077736-BX077737	X077736	2			69.72	2.625	0.047	0.023	0.01656	0.001	0.114	0.073	0.004	0.001	0.011	0.063	-0.01	-0.01	-0.01	-0.03	811	0.0306	1.273266	-1.242666	NAF
NS0091	272	276	NS	BX077754-BX077755	X077754	2			70.91	2.696	0.058	0.034	0.02448	0.02	0.245	0.083	0.018	0.005	0.018	0.068	-0.01	-0.01	-0.01	-0.03	820	0.153	1.447686	-1.294686	NAF
NS0091	280	282	NS	BX077758	X077758	2			71.21	1.487	0.047	0.038	0.02736	0.031	0.213	0.087	0.021	0.007	0.015	0.082	-0.01	-0.01	-0.01	-0.03	822	0.2142	1.517454	-1.303254	NAF
NS0091	58	60	NS	X070645	070645	1	G	M	29.45	53.12	1.02	0.5031	0.39	0.046	0.35	0.08	0.028	0.002	0.062	0.02	1.91	0.47	0.04	2.42	13944	0.0612	1.39536	-1.33416	NAF
NS0091	60	62	NS	X070646	070646	1	G	M	33.64	44.9	1.82	0.4644	0.36	0.081	0.55	0.09	0.043	0.002	0.11	0.014	2.79	0.69	0.13	3.61	13945	0.0612	1.56978	-1.50858	NAF
NS0091	190	192	NS	X070712	070712	1	G	W	35.42	37.03	1.62	0.5547	0.43	0.074	1.47	0.34	0.069	0.144	0.276	0.13	0.24	7.19	0.03	7.46	14136	4.4064	5.93028	-1.52388	NAF
NS0091	262	266	NS	BX077748-BX077749	X077748	2			66.34	7.004	0.307	0.08	0.0576	0.027	0.543	0.11	0.01	0.011	0.054	0.091	-0.01	-0.01	-0.01	-0.03	817	0.3366	1.91862	-1.58202	NAF
NS0091	258	262	NS	BX077746-BX077747	X077746	2			70.27	2.463	0.07	0.045	0.0324	0.011	0.238	0.107	0.015	0.005	0.014	0.069	-0.01	-0.01	-0.01	-0.03	816	0.153	1.866294	-1.713294	NAF
NS0091	68	70	NS	X070650	070650	1	G	M	16.64	65.58	3.49	0.6192	0.48	0.155	1.27	0.12	0.039	0.01	0.188	0.022	2.64	1.44	0.19	4.27	13949	0.306	2.09304	-1.78704	NAF
NS0091	70	72	NS	X070651	070651	1	G	M	28.6	47.05	3.81	0.2322	0.18	0.168	1.27	0.11	0.05	0.004	0.111	0.022	4.47	1.29	0.22	5.98	13950	0.1224	1.91862	-1.79622	NAF
NS0091	124	126	NS	X070678	070678	1	G	W	26.85	43.22	3.79	0.4644	0.36	0.169	3.92	0.49	0.078	0.218	0.173	0.041	0.48	7.92	0.43	8.83	14085	6.6708	8.54658	-1.87578	NAF
NS0091	76	78	NS	X070654	070654	1	G	M	32.98	35.14	3.64	0.6708	0.52	0.162	3.46	0.43	0.095	0.183	0.37	0.062	0.91	7.52	0.13	8.56	14007	5.5998	7.50006	-1.90026	NAF
NS0091	64	66	NS	X070648	070648	1	G	M	37.18	40.42	1.62	0.387	0.3	0.077	0.58	0.15	0.087	0.006	0.163	0.024	2.21	0.62	-0.01	2.82	13947	0.1836	2.6163	-2.4327	NAF
NS0091	270	272	NS	X070753	070753	1	G	W	27.04	44.92	0.99	0.3999	0.31	0.044	2.86	0.97	0.173	0.456	0.308	0.156	0.64	8.55	0.97	10.16	14176	13.9536	16.91874	-2.96514	NAF
NS0091	94	96	NS	X070663	070663	1	G	W	21.71	53.55	1.9	0.5031	0.39	0.088	2.72	0.32	0.05	0.062	0.309	0.077	0.6	8.37	0.1	9.07	14016	1.8972	5.58144	-3.68424	NAF
NS0091	72	74	NS	X070652	070652	1	G	M	21.94	48.6	8.46	0.1935	0.15	0.371	3.82	0.3	0.068	0.037	0.114	0.027	2.9	2.88	0.39	6.17	14005	1.1322	5.2326	-4.1004	NAF
NS0091	200	202	NS	X070717	070717	1	G	W	26.47	38.47	1.97	0.516	0.4	0.09	2.46	0.92	0.09	0.382	0.065	0.036	0.8	15.47	0.95	17.22	14141	11.6892	16.04664	-4.35744	NAF
NS0091	232	234	NS	X070733	070733	1	G	W	28.38	37.79	2.63	0.5031	0.39	0.114	2.55	0.7	0.145	0.252	0.305	0.135	0.66	12.97	0.61	14.24	14157	7.7112	12.2094	-4.4982	NAF
NS0091	192	194	NS	X070713	070713	1	G	W	36.04	37.01	1.42	0.6063	0.47	0.066	1.36	0.35	0.068	0.048	0.251	0.098	0.25	6.7	-0.24	6.71	14137	1.4688	6.1047	-4.6359	NAF
NS0091	100	102	NS	X070666	070666	1	G	W	26.83	34.32	4.61	0.6837	0.53	0.198	4.94	0.59	0.099	0.182	0.474	0.132	0.99	13.21	0.57	14.77	14019	5.5692	10.29078	-4.72158	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0091	104	106	NS	X070668	070668	1	G	W	28.36	41.12	2.26	0.5289	0.41	0.101	3.31	0.43	0.062	0.087	0.296	0.09	0.65	10.21	0	10.86	14021	2.6622	7.50006	-4.83786	NAF
NS0091	102	104	NS	X070667	070667	1	G	W	27.43	41.95	1.84	0.5418	0.42	0.084	3.23	0.46	0.071	0.069	0.371	0.106	0.75	11	0.02	11.77	14020	2.1114	8.02332	-5.91192	NAF
NS0091	96	98	NS	X070664	070664	1	G	W	29.07	41.06	1.89	0.5418	0.42	0.084	3.05	0.45	0.103	0.054	0.4	0.146	0.68	9.86	-0.09	10.45	14017	1.6524	7.8489	-6.1965	NAF
NS0091	182	184	NS	X070708	070708	1	G	W	33.49	40.66	1.45	0.5418	0.42	0.064	1.41	0.48	0.083	0.069	0.257	0.106	0.23	6.66	0.02	6.91	14132	2.1114	8.37216	-6.26076	NAF
NS0091	188	190	NS	X070711	070711	1	G	W	36.68	37.6	0.93	0.6192	0.48	0.044	1.05	0.42	0.084	0.019	0.197	0.19	0.18	6.14	-0.18	6.14	14135	0.5814	7.32564	-6.74424	NAF
NS0091	230	232	NS	X070732	070732	1	G	W	35.61	34.5	1.38	0.516	0.4	0.062	1.54	0.56	0.112	0.092	0.476	0.048	0.38	9.3	-0.07	9.61	14156	2.8152	9.76752	-6.95232	NAF
NS0091	184	186	NS	X070709	070709	1	G	W	37.34	35.66	1.28	0.6063	0.47	0.061	1.2	0.46	0.08	0.035	0.323	0.112	0.2	6.42	-0.07	6.55	14133	1.071	8.02332	-6.95232	NAF
NS0091	118	120	NS	X070675	070675	1	G	W	30.34	42.92	1.15	0.5547	0.43	0.053	2.41	0.48	0.053	0.046	0.205	0.067	0.47	7.89	-0.1	8.26	14082	1.4076	8.37216	-6.96456	NAF
NS0091	66	68	NS	X070649	070649	1	G	M	17.64	64.54	3.41	0.3354	0.26	0.152	1.45	0.47	0.155	0.032	0.097	0.024	2.13	1.18	0.2	3.51	13948	0.9792	8.19774	-7.21854	NAF
NS0091	180	182	NS	X070707	070707	1	G	W	35.29	34.68	1.43	0.5289	0.41	0.066	1.8	0.51	0.08	0.048	0.335	0.173	0.35	9.23	-0.05	9.53	14131	1.4688	8.89542	-7.42662	NAF
NS0091	80	82	NS	X070656	070656	1	G	M	19.76	54.35	3.35	0.5676	0.44	0.147	3.35	0.96	0.111	0.3	0.321	0.053	0.57	6.73	0.8	8.1	14009	9.18	16.74432	-7.56432	NAF
NS0091	186	188	NS	X070710	070710	1	G	W	35.81	38.32	1.2	0.6321	0.49	0.055	1.09	0.52	0.078	0.044	0.318	0.075	0.17	5.97	0.03	6.17	14134	1.3464	9.06984	-7.72344	NAF
NS0091	276	278	NS	X070756	070756	1	G	W	30.75	41.84	0.68	0.2709	0.21	0.031	2.73	0.48	0.12	0.02	0.232	0.111	0.48	8.91	-0.27	9.12	14179	0.612	8.37216	-7.76016	NAF
NS0091	156	158	NS	X070694	070694	1	G	W	26.8	37.31	2.32	0.5934	0.46	0.101	2.64	0.61	0.096	0.091	0.023	0.007	0.77	17	0.2	17.97	14119	2.7846	10.63962	-7.85502	NAF
NS0091	278	280	NS	X070757	070757	1	G	W	23.47	54.98	0.55	0.1935	0.15	0.026	2.06	0.52	0.145	0.037	0.181	0.095	0.44	6.97	-0.08	7.33	14180	1.1322	9.06984	-7.93764	NAF
NS0091	234	236	NS	X070734	070734	1	G	W	32.52	39.86	0.8	0.4386	0.34	0.038	1.45	0.48	0.084	0.014	0.179	0.141	0.46	9.38	-0.14	9.7	14158	0.4284	8.37216	-7.94376	NAF
NS0091	280	282	NS	X070758	070758	1	G	W	30.22	35.04	1.07	0.3354	0.26	0.05	3.74	0.54	0.105	0.044	0.372	0.189	0.9	14.04	0.05	14.99	14181	1.3464	9.41868	-8.07228	NAF
NS0091	220	222	NS	X070727	070727	1	G	W	33.9	39.56	0.68	0.5934	0.46	0.032	1.27	0.47	0.093	0.003	0.122	0.111	0.3	8.06	-0.11	8.25	14151	0.0918	8.19774	-8.10594	NAF
NS0091	214	216	NS	X070724	070724	1	G	W	34.05	31.75	1.27	0.5031	0.39	0.056	2.21	0.53	0.073	0.029	0.035	0.063	0.76	13.6	-0.01	14.35	14148	0.8874	9.24426	-8.35686	NAF
NS0091	222	224	NS	X070728	070728	1	G	W	34.82	35.95	1.13	0.5547	0.43	0.058	1.7	0.49	0.064	0.006	0.128	0.097	0.41	9.47	0.02	9.9	14152	0.1836	8.54658	-8.36298	NAF
NS0091	78	80	NS	X070655	070655	1	G	M	27.21	41.02	3.38	0.7095	0.55	0.148	3.7	0.98	0.192	0.285	0.481	0.086	0.71	8.13	0.59	9.43	14008	8.721	17.09316	-8.37216	NAF
NS0091	274	276	NS	X070755	070755	1	G	W	29.59	45.01	0.7	0.2322	0.18	0.032	2.56	0.56	0.098	0.044	0.23	0.103	0.53	7.18	-0.02	7.69	14178	1.3464	9.76752	-8.42112	NAF
NS0091	224	226	NS	X070729	070729	1	G	W	30.6	38.06	1.13	0.5676	0.44	0.052	2.04	0.53	0.082	0.024	0.05	0.056	0.56	12.8	0.01	13.37	14153	0.7344	9.24426	-8.50986	NAF
NS0091	268	270	NS	X070752	070752	1	G	W	30.53	34.87	1.06	0.6063	0.47	0.048	3.4	0.78	0.137	0.163	0.324	0.16	0.87	13.35	0.24	14.46	14175	4.9878	13.60476	-8.61696	NAF
NS0091	114	116	NS	X070673	070673	1	G	W	28.17	41.44	1.65	0.5934	0.46	0.074	3.12	0.66	0.112	0.084	0.252	0.079	0.64	10.59	0.07	11.3	14080	2.5704	11.51172	-8.94132	NAF
NS0091	74	76	NS	X070653	070653	1	G	M	29.32	41.79	3.99	0.4644	0.36	0.178	2.97	0.64	0.16	0.064	0.248	0.047	1.61	5.49	0.09	7.19	14006	1.9584	11.16288	-9.20448	NAF
NS0091	130	132	NS	X070681	070681	1	G	W	31.95	40.58	1.39	0.4257	0.33	0.061	2.32	0.61	0.065	0.046	0.314	0.02	0.27	7.95	-0.17	8.05	14088	1.4076	10.63962	-9.23202	NAF
NS0091	194	196	NS	X070714	070714	1	G	W	33.82	40.51	0.78	0.5676	0.44	0.035	1.21	0.57	0.099	0.019	0.167	0.145	0.31	7.01	-0.21	7.11	14138	0.5814	9.94194	-9.36054	NAF
NS0091	228	230	NS	X070731	070731	1	G	W	28.12	43.71	0.65	0.4515	0.35	0.029	1.49	0.56	0.086	0.008	0.11	0.166	0.59	11.53	-0.05	12.07	14155	0.2448	9.76752	-9.52272	NAF
NS0091	264	266	NS	X070749	070749	1	G	W	32.37	37.82	1.36	0.4902	0.38	0.061	2.92	0.64	0.04	0.05	0.31	0.153	0.67	8.85	0.03	9.55	14173	1.53	11.16288	-9.63288	NAF
NS0091	162	164	NS	X070697	070697	1	G	W	29.35	43.44	1.35	0.5934	0.46	0.063	1.39	0.8	0.1	0.124	0.382	0.044	0.4	9.03	0.24	9.67	14122	3.7944	13.9536	-10.1592	NAF
NS0091	226	228	NS	X070730	070730	1	G	W	34.44	31.74	1.22	0.4773	0.37	0.056	1.89	0.61	0.096	0.008	0.262	0.151	0.58	13.39	-0.1	13.87	14154	0.2448	10.63962	-10.39482	NAF
NS0091	202	204	NS	X070718	070718	1	G	W	31.47	33.21	2.84	0.5934	0.46	0.131	2.14	1	0.126	0.224	0.194	0.117	0.94	12.82	0.39	14.15	14142	6.8544	17.442	-10.5876	NAF
NS0091	126	128	NS	X070679	070679	1	G	W	30.66	38.97	1.66	0.645	0.5	0.074	3.14	0.74	0.062	0.064	0.206	0.039	0.5	9.83	0.09	10.42	14086	1.9584	12.90708	-10.94868	NAF
NS0091	198	200	NS	X070716	070716	1	G	W	36.77	25.25	1.43	0.6837	0.53	0.067	2.26	0.8	0.067	0.095	0.221	0.224	0.62	15.71	0.03	16.36	14140	2.907	13.9536	-11.0466	NAF
NS0091	166	168	NS	X070699	070699	1	G	W	36.35	35.03	1.01	0.6321	0.49	0.046	1.15	0.67	0.082	0.019	0.316	0.051	0.32	8.36	0.03	8.71	14124	0.5814	11.68614	-11.10474	NAF
NS0091	246	248	NS	X070740	070740	1	G	W	26.68	46.88	0.71	0.3096	0.24	0.032	1.81	0.66	0.075	0.013	0.386	0.016	0.45	10.11	0	10.56	14164	0.3978	11.51172	-11.11392	NAF
NS0091	158	160	NS	X070695	070695	1	G	W	28.55	35.92	0.94	0.5547	0.43	0.041	2.09	0.73	0.117	0.041	0.117	0.014	0.75	17.76	0.07	18.58	14120	1.2546	12.73266	-11.47806	NAF
NS0091	266	268	NS	X070751	070751	1	G	W	32.42	35.1	1.15	0.5418	0.42	0.051	3.27	0.72	0.105	0.031	0.366	0.178	0.67	11.25	-0.06	11.86	14174	0.9486	12.55824	-11.60964	NAF
NS0091	154	156	NS	X070693	070693	1	G	W	28.05	36.86	1.14	0.4257	0.33	0.054	2.36	0.75	0.047	0.039	0.12	0.01	0.64	17.32	0.15	18.11	14118	1.1934	13.0815	-11.8881	NAF
NS0091	108	110	NS	X070670	070670	1	G	W	29.21	41.65	1.71	0.4386	0.34	0.074	2.89	0.8	0.086	0.062	0.256	0.068	0.54	9.26	0.1	9.9	14077	1.8972	13.9536	-12.0564	NAF
NS0091	132	134	NS	X070682	070682	1	G	W	27.15	43.09	0.71	0.4515	0.35	0.031	2.37	0.72	0.084	0.015	0.404	0.011	0.43	12.68	0.05	13.16	14089	0.459	12.55824	-12.09924	NAF
NS0091	258	260	NS	X070746	070746	1	G	W	26.47	41.12	1.08	0.3612	0.28	0.051	3.1	0.83	0.066	0.077	0.152	0.08	0.67	14.15	0.2	15.02	14170	2.3562	14.47686	-12.12066	NAF
NS0091	170	172	NS	X070702	070702	1	G	W	32.64	30.9	1.93	0.7224	0.56	0.086	2.19	0.88	0.124	0.102	0.381	0.028	0.58	14.61	0.16	15.35	14126	3.1212	15.34896	-12.22776	NAF
NS0091	176	178	NS	X070705	070705	1	G	W	32.16	36.61	0.7	0.516	0.4	0.032	2.04	0.74	0.076	0.012	0.167	0.044	0.53	12.39	0.03	12.95	14129	0.3672	12.90708	-12.53988	NAF
NS0091	140	142	NS	X070686	070686	1	G	W	29.44	39.75	0.88	0.4644	0.36	0.039	2.4	0.77	0.074	0.023	0.361	0.038	0.34	12.3	0.11	12.75	14093	0.7038	13.43034	-12.72654	NAF
NS0091	208	210	NS	X070721	070721	1	G	W	31.61	38.2	0.75	0.5805	0.45	0.033	1.79	0.77	0.074	0.007	0.147	0.065	0.4	11.64	0.19	12.23	14145	0.2142	13.43034	-13.21614	NAF
NS0091	238	240	NS	X070736	070736	1	G	W	33.06	30.57	1.11	0.4386	0.34	0.05	2.65	0.77	0.047	0.005	0.282	0.096	0.65	16.15	0.21	17.01	14160	0.153	13.43034	-13.27734	NAF
NS0091	150	152	NS	X070691	070691	1	G	W	29.72	33.45	1.45	0.6966	0.54	0.065	2.41	0.94	0.156	0.101	0.352	0.009	0.49	16.77	0.12	17.38	14116	3.0906	16.39548	-13.30488	NAF
NS0091	172	174	NS	X070703	070703	1	G	W	35.83	31.66	1.03	0.6192	0.48	0.048	1.59	0.79	0.079	0.01	0.32	0.027	0.4	11.7	0.06	12.16	14127	0.306	13.77918	-13.47318	NAF
NS0091	116	118	NS	X070674	070674	1	G	W	27.74	36.41	2.31	0.7482	0.58	0.101	3.83	1.04	0.214	0.147	0.329	0.104	0.73	13.69	0.29	14.71	14081	4.4982	18.13968	-13.64148	NAF
NS0091	164	166	NS	X070698	070698	1	G	W	33.89	32.86	1.51	0.774	0.6	0.069	1.82	0.93	0.114	0.082	0.451	0.074	0.5	11.98	0.21	12.69	14123	2.5092	16.22106	-13.71186	NAF
NS0091	174	176	NS	X070704	070704	1	G	W	32.4	28.42	1.28	0.6837	0.53	0.056	2.69	0.81	0.138	0.01	0.338	0.028	0.66	18.21	-0.01	18.86	14128	0.306	14.12802	-13.82202	NAF
NS0091	160	162	NS	X070696	070696	1	G	W	28.09	35.12	2.11	0.4515	0.35	0.093	2.69	1.03	0.046	0.135	0.059	0.008	0.6	16.89	0.36	17.85	14121	4.131	17.96526	-13.83426	NAF
NS0091	62	64	NS	X070647	070647	1	G	M	29.6	44.5	4.17	0.6579	0.51	0.185	1.76	0.8	0.282	0.002	0.17	0.021	3.14	1.36	0.15	4.65	13946	0.0612	13.9536	-13.8924	NAF
NS0091	168	170	NS	X070701	070701	1	G	W	31.35	36.9	1.18	0.6579	0.51	0.053	1.84	0.85	0.095	0.027	0.351	0.049	0.39	12.32	0.14	12.85	14125	0.8262	14.8257	-13.9995	NAF
NS0091	240	242	NS	X070737	070737	1	G	W	27.37	39.4	1.81	0.3612	0.28	0.083	2.41	1.05	0.104	0.139	0.186	0.035	0.63	13.98	0.35	14.96	14161	4.2534	18.3141	-14.0607	NAF
NS0091	272	274	NS	X070754	070754	1	G	W	32.74	39.32	0.98	0.2451	0.19	0.048	2.84	0.88	0.153	0.041	0.328	0.153	0.53	7.16	-0.04	7.65	14177	1.2546	15.34896	-14.09436	NAF
NS0091	144	146	NS	X070688	070688	1	G	W	35.29	33.44	1.23	0.5547	0.43	0.056	2.06	0.83	0.113	0.011	0.369	0.064	0.37	10.09	0.09	10.55	14113	0.3366	14.47686	-14.14026	NAF
NS0091	216	218	NS	X070725	070725	1	G	W	29.67	36.5	0.96	0.5418	0.42	0.066	2.29	0.87	0.071	0.021	0.03	0.023	0.78	14.68	0.2	15.66	14149	0.6426	15.17454	-14.53194	NAF
NS0091	212	214	NS	X070723	070723	1	G	W	31.18	33.41	0.77	0.5547	0.43	0.033	2.37	0.84	0.074	0.003	0.025	0.093	0.62	16.61	0.14	17.37	14147	0.0918	14.65128	-14.55948	NAF
NS0091	248	250	NS	X070741	070741	1	G	W	27.69	40.18	0.75	0.4515	0.35	0.031	2.43	0.85	0.095	0.006	0.245	0.009	0.59	14.36	0.09	15.04	14165	0.1836	14.8257	-14.6421	NAF
NS0091	242	244	NS	X070738	070738	1	G	W	25.86	43.81	0.84	0.3483	0.27	0.036	2.24	0.9	0.075	0.034	0.127	0.015	0.6	13.6	0.24	14.44	14162	1.0404	15.6978	-14.6574	NAF
NS0091	256	258	NS	X070745	070745	1	G	W	30.47	30.07	2.43	0.4257	0.33	0.103	4.13	1.19	0.045	0.196	0.096	0.042	0.67	16.15	0.55	17.37	14169	5.9976	20.75598	-14.75838	NAF
NS0091	112	114	NS	X070672	070672	1	G	W	31.35	43.5	1	0.4257	0.33	0.044	2.08	0.89	0.074	0.024	0.265	0.084	0.44	5.97	0.08	6.49	14079	0.7344	15.52338	-14.78898	NAF
NS0091	206	208	NS	X070720	070720	1	G	W	33.41	33.13	2.19	0.6321	0.49	0.096	1.85	1.08	0.079	0.129	0.186	0.15	0.48	11.19	0.29	11.96	14144	3.9474	18.83736	-14.88996	NAF
NS0091	136	138	NS	X070684	070684	1	G	W	30.03	28.89	4.29	0.6063	0.47	0.182	5.19	1.23	0.244	0.214	0.54	0.017	0.52	14.16	0.51	15.19	14091	6.5484	21.45366	-14.90526	NAF
NS0091	122	124	NS	X070677	070677	1	G	W	35.36	39.36	1.07	0.516	0.4	0.049	1.88	0.91	0.079	0.029	0.417	0.027	0.18	4.68	0.06	4.92	14084	0.8874	15.87222	-14.98482	NAF
NS0091	148	150	NS	X070690	070690	1	G	W	31.26	38.76	0.87	0.4902	0.38	0.04	1.8	0.9	0.101	0.018	0.293	0.044	0.45	10.93	0.12	11.5	14115	0.5508	15.6978	-15.147	NAF
NS0091	110	112	NS	X070671	070671	1	G	W	27	45.45	0.85	0.4644	0.36	0.037	2.47	0.99	0.092	0.068	0.246	0.061	0.48	9.74	0.26	10.48	14078	2.0808	17.26758	-15.18678	NAF
NS0091	152	154	NS	X070692	070692	1	G	W	26.45	38.5	1.21	0.4773	0.37	0.055	2.55	0.96	0.125	0.035	0.123	0.008	0.71	16.98	0.14	17.83	14117	1.071	16.74432	-15.67332	NAF
NS0091	260	262	NS	X070747	070747	1	G	W	25.84	52.76	0.62	0.258	0.2	0.03	1.7	0.94	0.073	0.023	0.138	0.068	0.34	5.59	0.22	6.15	14171	0.7038	16.39548	-15.69168	NAF
NS0091	134	136	NS	X070683	070683	1	G	W	31.98	40.66	0.67	0.4902	0.38	0.028	2.02	0.94	0.077	0.018	0.312	0.01	0.28	8.24	0.14	8.66	14090	0.5508	16.39548	-15.84468	NAF
NS0091	236	238	NS	X070735	070735	1	G	W	30.74	32.21	0.7	0.4644	0.36	0.032	2.63	0.92	0.089	0.005	0.139	0.085	0.8	17.72	0.14	18.66	14159	0.153	16.04664	-15.89364	NAF
NS0091	178	180	NS	X070706	070706	1	G	W	32.23	34.27	1.46	0.6192	0.48	0.067	2.42	1.01	0.097	0.05	0.189	0.144	0.37	12.46	0.26	13.09	14130	1.53	17.61642	-16.08642	NAF
NS0091	244	246	NS	X070739	070739	1	G	W	31.98	35.17	0.86	0.3741	0.29	0.038	2.32	0.94	0.083	0.009	0.451	0.028	0.58	12.82	0.11	13.51	14163	0.2754	16.39548	-16.12008	NAF
NS0091	210	212	NS	X070722	070722	1	G	W	32.22	34.22	0.86	0.5547	0.43	0.04	2.24	0.95	0.078	0.011	0.114	0.064	0.52	13.67	0.23	14.42	14146	0.3366	16.5699	-16.2333	NAF
NS0091	218	220	NS	X070726	070726	1	G	W	34.29	31.14	1.23	0.5934	0.46	0.057	2.38	0.94	0.141	0.003	0.119	0.066	0.46	13.44	0.04	13.94	14150	0.0918	16.39548	-16.30368	NAF
NS0091	142	144	NS	X070687	070687	1	G	W	27.62	40.05	0.98	0.4644	0.36	0.046	2.59	0.98	0.08	0.012	0.307	0.096	0.52	13.57	0.45	14.54	14094	0.3672	17.09316	-16.72596	NAF
NS0091	252	254	NS	X070743	070743	1	G	W	30.21	38.1	0.72	0.4902	0.38	0.031	2.55	0.99	0.097	0.012	0.267	0.011	0.68	12.35	0.17	13.2	14167	0.3672	17.26758	-16.90038	NAF
NS0091	138	140	NS	X070685	070685	1	G	W	31.69	34.45	0.9	0.5934	0.46	0.041	3.02	1.05	0.086	0.026	0.465	0.014	0.61	12.83	0.22	13.66	14092	0.7956	18.3141	-17.5185	NAF
NS0091	250	252	NS	X070742	070742	1	G	W	31.13	30.79	1.1	0.5805	0.45	0.048	2.79	1.06	0.137	0.031	0.497	0.019	0.73	17.09	0.08	17.9	14166	0.9486	18.48852	-17.53992	NAF
NS0091	196	198	NS	X070715	070715	1	G	W	33.27	31.93	1.53	0.6837	0.53	0.067	1.94	1.16	0.178	0.082	0.234	0.208	0.53	13.55	0.11	14.19	14139	2.5092	20.23272	-17.72352	NAF
NS0091	262	264	NS	X070748	070748	1	G	W	32.71	37.28	1.5	0.4257	0.33	0.067	2.84	1.13	0.129	0.064	0.254	0.13	0.56	8.2	0.2	8.96	14172	1.9584	19.70946	-17.75106	NAF
NS0091	254	256	NS	X070744	070744	1	G	W	28.59	43.36	0.64	0.3741	0.29	0.03	2.52	1.05	0.075	0.012	0.044	0.013	0.44	9.88	0.32	10.64	14168	0.3672	18.3141	-17.9469	NAF
NS0091	146	148	NS	X070689	070689	1	G	W	28.19	36.93	2.52	0.4386	0.34	0.109	2.77	1.3	0.108	0.131	0.528	0.05	0.63	13.06	0.55	14.24	14114	4.0086	22.6746	-18.666	NAF
NS0091	120	122	NS	X070676	070676	1	G	W	29.84	47	0.8	0.4128	0.32	0.037	1.82	1.38	0.081	0.021	0.145	0.017	0.13	4.28	0.69	5.1	14083	0.6426	24.06996	-23.42736	NAF
NS0092	54	56	NS	X070786	070786	1	G	M	23.39	48.87	6.1	0.2451	0.19	0.268	3.49	0.22	0.046	0.63	0.491	0.132	0.9	4.55	1.07	6.52	14212	19.278	3.83724	15.44076	PAF(HC)
NS0092	56	58	NS	X070787	070787	1	G	W	24.64	49.65	1.95	0.3741	0.29	0.089	2.32	0.34	0.064	0.298	0.429	0.116	0.74	7.28	0.59	8.61	14213	9.1188	5.93028	3.18852	PAF(LC)
NS0092	210	212	NS	X070866	070866	1	G	W	38.04	35.77	2.26	0.4902	0.38	0.091	2.44	0.38	0.028	0.273	0.779	0.049	0.15	2.14	0.2	2.49	14362	8.3538	6.62796	1.72584	PAF(LC)
NS0092	80	82	NS	BX077799	X077799	2			66.67	5.408	0.401	0.058	0.04176	0.044	0.478	0.056	0.009	0.022	0.092	0.1	-0.01	-0.01	-0.01	-0.03	836	0.6732	0.976752	-0.303552	NAF
NS0092	28	32	NS	BX077773-BX077774	X077773	2			67.33	3.133	0.12	0.066	0.04752	0.012	0.131	0.03	0.009	0.001	0.01	0.074	0.22	0.12	-0.01	0.33	823	0.0306	0.52326	-0.49266	NAF
NS0092	82	86	NS	BX077801-BX077802	X077801	2			66.39	6.626	0.345	0.08	0.0576	0.029	0.492	0.053	0.007	0.014	0.074	0.088	-0.01	-0.01	-0.01	-0.03	837	0.4284	0.924426	-0.496026	NAF
NS0092	196	198	NS	BX077859	X077859	2			69.54	3.988	0.205	0.063	0.04536	0.02	0.297	0.057	0.01	0.016	0.095	0.07	-0.01	-0.01	-0.01	-0.03	866	0.4896	0.994194	-0.504594	NAF
NS0092	32	36	NS	BX077775-BX077776	X077775	2			66.64	3.166	0.114	0.065	0.0468	0.011	0.129	0.031	0.011	0.001	0.014	0.07	0.22	0.12	-0.01	0.33	824	0.0306	0.540702	-0.510102	NAF
NS0092	52	56	NS	BX077785-BX077786	X077785	2			66.33	5.771	0.339	0.058	0.04176	0.038	0.383	0.057	0.009	0.014	0.066	0.088	-0.01	-0.01	-0.01	-0.03	829	0.4284	0.994194	-0.565794	NAF
NS0092	60	62	NS	BX077789	X077789	2			67.85	4.682	0.192	0.055	0.0396	0.02	0.338	0.064	0.01	0.016	0.055	0.089	-0.01	-0.01	-0.01	-0.03	831	0.4896	1.116288	-0.626688	NAF
NS0092	56	60	NS	BX077787-BX077788	X077787	2			68.79	3.946	0.174	0.054	0.03888	0.037	0.289	0.059	0.01	0.011	0.04	0.091	-0.01	-0.01	-0.01	-0.03	830	0.3366	1.029078	-0.692478	NAF
NS0092	208	212	NS	BX077865-BX077866	X077865	2			69.21	3.74	0.132	0.05	0.036	0.014	0.23	0.059	0.009	0.01	0.061	0.037	-0.01	-0.01	-0.01	-0.03	869	0.306	1.029078	-0.723078	NAF
NS0092	36	40	NS	BX077777-BX077778	X077777	2			67.89	3.474	0.116	0.061	0.04392	0.016	0.168	0.048	0.011	0.003	0.016	0.084	0.11	-0.01	-0.01	0.09	825	0.0918	0.837216	-0.745416	NAF
NS0092	44	46	NS	BX077781	X077781	2			66.49	6.081	0.305	0.063	0.04536	0.028	0.406	0.069	0.008	0.013	0.072	0.082	-0.01	-0.01	-0.01	-0.03	827	0.3978	1.203498	-0.805698	NAF
NS0092	200	204	NS	BX077861-BX077862	X077861	2			70.25	3.266	0.149	0.053	0.03816	0.014	0.221	0.059	0.01	0.007	0.09	0.052	-0.01	-0.01	-0.01	-0.03	867	0.2142	1.029078	-0.814878	NAF
NS0092	146	150	NS	BX077833-BX077834	X077833	2			68.41	5.138	0.304	0.063	0.04536	0.029	0.403	0.072	0.013	0.012	0.068	0.094	-0.01	-0.01	-0.01	-0.03	853	0.3672	1.255824	-0.888624	NAF
NS0092	280	282	NS	BX077901	X077901	2			68.4	3.46	0.08	0.056	0.04032	0.007	0.223	0.058	0.01	0.004	0.068	0.058	-0.01	-0.01	-0.01	-0.03	887	0.1224	1.011636	-0.889236	NAF
NS0092	118	122	NS	BX077819-BX077820	X077819	2			66.77	6.203	0.303	0.074	0.05328	0.023	0.463	0.069	0.014	0.009	0.064	0.088	-0.01	-0.01	-0.01	-0.03	846	0.2754	1.203498	-0.928098	NAF
NS0092	188	192	NS	BX077855-BX077856	X077855	2			70.56	3.428	0.125	0.047	0.03384	0.016	0.219	0.068	0.013	0.008	0.07	0.085	-0.01	-0.01	-0.01	-0.03	864	0.2448	1.186056	-0.941256	NAF
NS0092	114	118	NS	BX077817-BX077818	X077817	2			67.71	4.898	0.172	0.063	0.04536	0.013	0.338	0.065	0.013	0.006	0.045	0.082	-0.01	-0.01	-0.01	-0.03	845	0.1836	1.13373	-0.95013	NAF
NS0092	142	146	NS	BX077831-BX077832	X077831	2			70.14	3.897	0.073	0.057	0.04104	0.009	0.236	0.058	0.008	0.002	0.062	0.061	-0.01	-0.01	-0.01	-0.03	852	0.0612	1.011636	-0.950436	NAF
NS0092	40	44	NS	BX077779-BX077780	X077779	2			67.68	4.274	0.176	0.064	0.04608	0.02	0.294	0.072	0.011	0.009	0.038	0.088	-0.01	-0.01	-0.01	-0.03	826	0.2754	1.255824	-0.980424	NAF
NS0092	236	240	NS	BX077879-BX077880	X077879	2			70.05	3.656	0.085	0.054	0.03888	0.01	0.198	0.061	0.009	0.002	0.055	0.052	-0.01	-0.01	-0.01	-0.03	876	0.0612	1.063962	-1.002762	NAF
NS0092	260	264	NS	BX077891-BX077892	X077891	2			70.5	3.447	0.055	0.058	0.04176	0.01	0.201	0.061	0.009	0.002	0.052	0.063	-0.01	-0.01	-0.01	-0.03	882	0.0612	1.063962	-1.002762	NAF
NS0092	72	76	NS	BX077795-BX077796	X077795	2			68.8	4.559	0.14	0.056	0.04032	0.019	0.297	0.07	0.013	0.007	0.042	0.075	-0.01	-0.01	-0.01	-0.03	834	0.2142	1.22094	-1.00674	NAF
NS0092	212	216	NS	BX077867-BX077868	X077867	2			69.47	3.52	0.127	0.047	0.03384	0.013	0.233	0.072	0.012	0.008	0.058	0.068	-0.01	-0.01	-0.01	-0.03	870	0.2448	1.255824	-1.011024	NAF
NS0092	76	80	NS	BX077797-BX077798	X077797	2			68.02	4.719	0.178	0.055	0.0396	0.02	0.325	0.073	0.01	0.008	0.045	0.101	-0.01	-0.01	-0.01	-0.03	835	0.2448	1.273266	-1.028466	NAF
NS0092	264	268	NS	BX077893-BX077894	X077893	2			69.48	3.522	0.13	0.047	0.03384	0.013	0.238	0.073	0.012	0.008	0.058	0.067	-0.01	-0.01	-0.01	-0.03	883	0.2448	1.273266	-1.028466	NAF
NS0092	248	252	NS	BX077885-BX077886	X077885	2			68.85	4.795	0.121	0.065	0.0468	0.007	0.245	0.061	0.01	0.001	0.093	0.061	-0.01	-0.01	-0.01	-0.03	879	0.0306	1.063962	-1.033362	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0092	192	196	NS	BX077857-BX077858	X077857	2			69.7	3.789	0.153	0.068	0.04896	0.017	0.274	0.071	0.017	0.006	0.082	0.052	-0.01	-0.01	-0.01	-0.03	865	0.1836	1.238382	-1.054782	NAF
NS0092	276	280	NS	BX077899-BX077900	X077899	2			69.43	3.723	0.073	0.057	0.04104	0.006	0.194	0.064	0.008	0.002	0.065	0.051	-0.01	-0.01	-0.01	-0.03	886	0.0612	1.116288	-1.055088	NAF
NS0092	126	130	NS	BX077823-BX077824	X077823	2			67.23	5.867	0.228	0.069	0.04968	0.021	0.372	0.073	0.015	0.007	0.043	0.073	-0.01	-0.01	-0.01	-0.03	848	0.2142	1.273266	-1.059066	NAF
NS0092	228	232	NS	BX077875-BX077876	X077875	2			70.15	2.856	0.058	0.049	0.03528	0.01	0.17	0.068	0.009	0.003	0.043	0.055	-0.01	-0.01	-0.01	-0.03	874	0.0918	1.186056	-1.094256	NAF
NS0092	52	54	NS	X070785	070785	1	G	M	27.91	42.57	2.66	0.4257	0.33	0.115	2.96	0.4	0.076	0.192	0.804	0.191	0.98	7.9	0.47	9.35	14211	5.8752	6.9768	-1.1016	NAF
NS0092	174	178	NS	BX077847-BX077848	X077847	2			69.6	3.818	0.179	0.054	0.03888	0.028	0.306	0.083	0.018	0.011	0.048	0.181	-0.01	-0.01	-0.01	-0.03	860	0.3366	1.447686	-1.111086	NAF
NS0092	240	244	NS	BX077881-BX077882	X077881	2			69.27	4.026	0.102	0.056	0.04032	0.01	0.207	0.071	0.011	0.004	0.063	0.063	-0.01	-0.01	-0.01	-0.03	877	0.1224	1.238382	-1.115982	NAF
NS0092	86	90	NS	BX077803-BX077804	X077803	2			67.99	5.055	0.185	0.062	0.04464	0.02	0.357	0.079	0.012	0.008	0.046	0.149	-0.01	-0.01	-0.01	-0.03	838	0.2448	1.377918	-1.133118	NAF
NS0092	204	208	NS	BX077863-BX077864	X077863	2			70.76	2.853	0.062	0.054	0.03888	0.011	0.193	0.072	0.01	0.004	0.043	0.115	-0.01	-0.01	-0.01	-0.03	868	0.1224	1.255824	-1.133424	NAF
NS0092	64	68	NS	BX077791-BX077792	X077791	2			66.59	5.526	0.215	0.057	0.04104	0.02	0.369	0.081	0.015	0.009	0.058	0.084	-0.01	-0.01	-0.01	-0.03	832	0.2754	1.412802	-1.137402	NAF
NS0092	68	72	NS	BX077793-BX077794	X077793	2			67.62	5.277	0.166	0.055	0.0396	0.017	0.323	0.077	0.013	0.006	0.046	0.082	-0.01	-0.01	-0.01	-0.03	833	0.1836	1.343034	-1.159434	NAF
NS0092	110	114	NS	BX077815-BX077816	X077815	2			67.66	5.422	0.238	0.063	0.04536	0.019	0.386	0.079	0.017	0.007	0.058	0.076	-0.01	-0.01	-0.01	-0.03	844	0.2142	1.377918	-1.163718	NAF
NS0092	158	162	NS	BX077839-BX077840	X077839	2			69.6	4.27	0.093	0.053	0.03816	0.015	0.224	0.072	0.011	0.003	0.027	0.067	-0.01	-0.01	-0.01	-0.03	856	0.0918	1.255824	-1.164024	NAF
NS0092	268	272	NS	BX077895-BX077896	X077895	2			69.46	4.074	0.083	0.066	0.04752	0.007	0.222	0.072	0.01	0.003	0.075	0.059	-0.01	-0.01	-0.01	-0.03	884	0.0918	1.255824	-1.164024	NAF
NS0092	216	220	NS	BX077869-BX077870	X077869	2			70.01	3.169	0.067	0.046	0.03312	0.01	0.181	0.074	0.012	0.004	0.04	0.047	-0.01	-0.01	-0.01	-0.03	871	0.1224	1.290708	-1.168308	NAF
NS0092	244	248	NS	BX077883-BX077884	X077883	2			69.72	3.7	0.109	0.057	0.04104	0.014	0.221	0.075	0.011	0.004	0.062	0.056	-0.01	-0.01	-0.01	-0.03	878	0.1224	1.30815	-1.18575	NAF
NS0092	186	188	NS	BX077854	X077854	2			69.62	4.203	0.146	0.054	0.03888	0.017	0.268	0.079	0.015	0.006	0.077	0.06	-0.01	-0.01	-0.01	-0.03	863	0.1836	1.377918	-1.194318	NAF
NS0092	220	224	NS	BX077871-BX077872	X077871	2			70.06	3.303	0.052	0.051	0.03672	0.008	0.163	0.072	0.01	0.002	0.046	0.048	-0.01	-0.01	-0.01	-0.03	872	0.0612	1.255824	-1.194624	NAF
NS0092	90	94	NS	BX077805-BX077806	X077805	2			67.58	5.766	0.229	0.072	0.05184	0.02	0.395	0.084	0.014	0.008	0.055	0.088	-0.01	-0.01	-0.01	-0.03	839	0.2448	1.465128	-1.220328	NAF
NS0092	232	236	NS	BX077877-BX077878	X077877	2			70.07	3.185	0.078	0.047	0.03384	0.011	0.182	0.075	0.012	0.002	0.054	0.053	-0.01	-0.01	-0.01	-0.03	875	0.0612	1.30815	-1.24695	NAF
NS0092	122	126	NS	BX077821-BX077822	X077821	2			67.4	5.585	0.225	0.067	0.04824	0.017	0.373	0.083	0.019	0.006	0.052	0.075	-0.01	-0.01	-0.01	-0.03	847	0.1836	1.447686	-1.264086	NAF
NS0092	252	256	NS	BX077887-BX077888	X077887	2			69.65	3.091	0.055	0.058	0.04176	0.008	0.18	0.077	0.01	0.002	0.047	0.053	-0.01	-0.01	-0.01	-0.03	880	0.0612	1.343034	-1.281834	NAF
NS0092	178	182	NS	BX077849-BX077850	X077849	2			70.14	2.942	0.078	0.047	0.03384	0.01	0.205	0.082	0.01	0.004	0.042	0.097	-0.01	-0.01	-0.01	-0.03	861	0.1224	1.430244	-1.307844	NAF
NS0092	182	186	NS	BX077851-BX077852	X077851	2			70.96	2.792	0.067	0.047	0.03384	0.01	0.194	0.082	0.014	0.004	0.041	0.073	-0.01	-0.01	-0.01	-0.03	862	0.1224	1.430244	-1.307844	NAF
NS0092	98	102	NS	BX077809-BX077810	X077809	2			68.07	5.079	0.18	0.062	0.04464	0.014	0.343	0.087	0.015	0.006	0.046	0.085	-0.01	-0.01	-0.01	-0.03	841	0.1836	1.517454	-1.333854	NAF
NS0092	162	166	NS	BX077841-BX077842	X077841	2			69.04	4.025	0.085	0.055	0.0396	0.013	0.209	0.082	0.011	0.002	0.02	0.062	-0.01	-0.01	-0.01	-0.03	857	0.0612	1.430244	-1.369044	NAF
NS0092	154	158	NS	BX077837-BX077838	X077837	2			69.78	3.875	0.111	0.059	0.04248	0.016	0.258	0.086	0.017	0.004	0.035	0.072	-0.01	-0.01	-0.01	-0.03	855	0.1224	1.500012	-1.377612	NAF
NS0092	170	174	NS	BX077845-BX077846	X077845	2			70.08	3.553	0.096	0.056	0.04032	0.017	0.246	0.088	0.013	0.005	0.032	0.074	-0.01	-0.01	-0.01	-0.03	859	0.153	1.534896	-1.381896	NAF
NS0092	150	154	NS	BX077835-BX077836	X077835	2			69.57	4.315	0.1	0.06	0.0432	0.012	0.238	0.087	0.017	0.004	0.031	0.071	-0.01	-0.01	-0.01	-0.03	854	0.1224	1.517454	-1.395054	NAF
NS0092	256	258	NS	BX077889	X077889	2			70.26	3.192	0.072	0.053	0.03816	0.007	0.21	0.082	0.01	0.001	0.062	0.051	-0.01	-0.01	-0.01	-0.03	881	0.0306	1.430244	-1.399644	NAF
NS0092	106	110	NS	BX077813-BX077814	X077813	2			67.33	5.638	0.21	0.066	0.04752	0.02	0.371	0.091	0.02	0.006	0.053	0.084	-0.01	-0.01	-0.01	-0.03	843	0.1836	1.587222	-1.403622	NAF
NS0092	138	140	NS	BX077829	X077829	2			68.76	4.775	0.106	0.063	0.04536	0.018	0.258	0.088	0.013	0.004	0.026	0.072	-0.01	-0.01	-0.01	-0.03	851	0.1224	1.534896	-1.412496	NAF
NS0092	130	134	NS	BX077825-BX077826	X077825	2			67.91	4.407	0.139	0.056	0.04032	0.012	0.283	0.092	0.017	0.006	0.036	0.078	-0.01	-0.01	-0.01	-0.03	849	0.1836	1.604664	-1.421064	NAF
NS0092	166	170	NS	BX077843-BX077844	X077843	2			69.08	3.924	0.095	0.054	0.03888	0.011	0.228	0.089	0.015	0.004	0.031	0.059	-0.01	-0.01	-0.01	-0.03	858	0.1224	1.552338	-1.429938	NAF
NS0092	94	98	NS	BX077807-BX077808	X077807	2			67.55	5.692	0.228	0.062	0.04464	0.022	0.348	0.099	0.02	0.006	0.05	0.078	-0.01	-0.01	-0.01	-0.03	840	0.1836	1.726758	-1.543158	NAF
NS0092	102	106	NS	BX077811-BX077812	X077811	2			67.24	5.307	0.178	0.066	0.04752	0.016	0.346	0.102	0.02	0.005	0.042	0.095	-0.01	-0.01	-0.01	-0.03	842	0.153	1.779084	-1.626084	NAF
NS0092	48	52	NS	BX077783-BX077784	X077783	2			65.39	6.761	0.28	0.065	0.0468	0.024	0.407	0.11	0.016	0.009	0.08	0.09	-0.01	-0.01	-0.01	-0.03	828	0.2754	1.91862	-1.64322	NAF
NS0092	134	138	NS	BX077827-BX077828	X077827	2			68.95	3.915	0.094	0.053	0.03816	0.015	0.23	0.111	0.016	0.008	0.029	0.067	-0.01	-0.01	-0.01	-0.03	850	0.2448	1.936062	-1.691262	NAF
NS0092	84	86	NS	X070802	070802	1	G	W	33.63	37.44	1.89	0.6837	0.53	0.084	2.91	0.27	0.047	0.087	0.5	0.156	0.66	6.86	-0.03	7.49	14245	2.6622	4.70934	-2.04714	NAF
NS0092	34	36	NS	X070776	070776	1	G	M	36.72	41.44	1.38	0.5418	0.42	0.067	0.49	0.19	0.032	0.002	0.124	0.035	2.41	0.72	-0.05	3.08	14184	0.0612	3.31398	-3.25278	NAF
NS0092	118	120	NS	X070819	070819	1	G	W	31.9	40.62	2.86	0.5418	0.42	0.126	3.31	0.37	0.095	0.102	0.564	0.159	0.61	4.7	0.06	5.37	14280	3.1212	6.45354	-3.33234	NAF
NS0092	30	32	NS	X070774	070774	1	G	M	36.3	41.03	1.63	0.5676	0.44	0.075	0.65	0.21	0.037	0.003	0.119	0.053	2.74	0.86	-0.04	3.56	14182	0.0918	3.66282	-3.57102	NAF
NS0092	32	34	NS	X070775	070775	1	G	M	35.54	41.4	1.8	0.5805	0.45	0.077	0.71	0.22	0.037	0.003	0.122	0.031	2.95	0.92	0.05	3.92	14183	0.0918	3.83724	-3.74544	NAF
NS0092	36	38	NS	X070777	070777	1	G	M	34.33	43.12	1.73	0.6063	0.47	0.078	0.5	0.23	0.054	0.004	0.131	0.033	3.05	1.03	0.14	4.22	14203	0.1224	4.01166	-3.88926	NAF
NS0092	44	46	NS	X070781	070781	1	G	M	30.5	40.14	2.72	0.516	0.4	0.122	3.1	0.61	0.07	0.212	0.758	0.151	0.85	6.27	0.44	7.56	14207	6.4872	10.63962	-4.15242	NAF
NS0092	196	198	NS	X070859	070859	1	G	W	36.83	34.38	2.23	0.774	0.6	0.097	2.85	0.55	0.112	0.176	1.11	0.111	0.26	4.07	0.11	4.44	14355	5.3856	9.5931	-4.2075	NAF
NS0092	224	228	NS	BX077873-BX077874	X077873	2			64.44	8.225	0.328	0.071	0.05112	0.058	0.398	0.274	0.054	0.011	0.139	0.07	-0.01	-0.01	-0.01	-0.03	873	0.3366	4.779108	-4.442508	NAF
NS0092	176	178	NS	X070848	070848	1	G	W	32.77	38.9	2.59	0.7095	0.55	0.126	3.42	0.5	0.066	0.127	0.76	0.103	0.41	5.11	0.17	5.69	14327	3.8862	8.721	-4.8348	NAF
NS0092	112	114	NS	X070816	070816	1	G	W	33.12	39.99	2.13	0.5805	0.45	0.096	2.85	0.43	0.102	0.081	0.565	0.171	0.66	4.65	0.01	5.32	14277	2.4786	7.50006	-5.02146	NAF
NS0092	126	128	NS	X070823	070823	1	G	W	31.25	42.69	2.11	0.6063	0.47	0.095	2.8	0.56	0.096	0.125	0.43	0.134	0.48	4.81	0.11	5.4	14284	3.825	9.76752	-5.94252	NAF
NS0092	116	118	NS	X070818	070818	1	G	W	34.21	38.3	1.82	0.645	0.5	0.079	2.81	0.48	0.112	0.072	0.487	0.149	0.53	5.36	-0.09	5.8	14279	2.2032	8.37216	-6.16896	NAF
NS0092	120	122	NS	X070820	070820	1	G	W	35.4	37.39	2	0.5676	0.44	0.089	2.72	0.47	0.124	0.064	0.493	0.162	0.52	4.5	-0.15	4.87	14281	1.9584	8.19774	-6.23934	NAF
NS0092	110	112	NS	X070815	070815	1	G	W	33.76	39.86	1.92	0.5547	0.43	0.087	2.71	0.48	0.116	0.068	0.542	0.164	0.55	4.33	-0.1	4.78	14276	2.0808	8.37216	-6.29136	NAF
NS0092	122	124	NS	X070821	070821	1	G	W	34.54	39.08	1.89	0.5676	0.44	0.085	2.62	0.46	0.114	0.042	0.482	0.148	0.52	4.51	-0.18	4.85	14282	1.2852	8.02332	-6.73812	NAF
NS0092	200	202	NS	X070861	070861	1	G	W	30.57	39.95	3.13	0.8127	0.63	0.125	3.48	1.06	0.053	0.376	1.49	0.102	0.31	4.58	0.9	5.79	14357	11.5056	18.48852	-6.98292	NAF
NS0092	78	80	NS	X070798	070798	1	G	W	30.93	41.75	2.72	0.4128	0.32	0.128	2.82	0.58	0.074	0.101	0.605	0.175	1.02	4.96	0.23	6.21	14242	3.0906	10.11636	-7.02576	NAF
NS0092	86	88	NS	X070803	070803	1	G	W	32.72	39.47	2.44	0.5418	0.42	0.11	3.09	0.54	0.063	0.072	0.575	0.158	0.64	5.12	0.08	5.84	14246	2.2032	9.41868	-7.21548	NAF
NS0092	124	126	NS	X070822	070822	1	G	W	34.4	39.19	1.78	0.6063	0.47	0.079	2.53	0.48	0.114	0.037	0.449	0.14	0.46	4.82	-0.2	5.08	14283	1.1322	8.37216	-7.23996	NAF
NS0092	40	42	NS	X070779	070779	1	G	M	30.98	39.21	1.94	0.6837	0.53	0.083	2.5	0.96	0.121	0.285	0.521	0.103	0.8	7.34	0.56	8.7	14205	8.721	16.74432	-8.02332	NAF
NS0092	198	200	NS	X070860	070860	1	G	W	30.66	33.37	3.73	1.29	1	0.116	4.07	1.33	0.339	0.494	1.74	0.135	0.66	7.88	0.89	9.43	14356	15.1164	23.19786	-8.08146	NAF
NS0092	74	76	NS	X070796	070796	1	G	W	32.03	40.69	1.24	0.5934	0.46	0.053	2.36	0.62	0.092	0.087	0.451	0.14	0.62	7	-0.02	7.6	14240	2.6622	10.81404	-8.15184	NAF
NS0092	194	196	NS	X070858	070858	1	G	W	37.1	34.49	1.87	0.7869	0.61	0.086	2.65	0.75	0.176	0.154	0.935	0.094	0.22	4.09	0.06	4.37	14354	4.7124	13.0815	-8.3691	NAF
NS0092	128	130	NS	X070824	070824	1	G	W	35.18	37.6	1.77	0.6837	0.53	0.079	2.58	0.6	0.112	0.063	0.355	0.123	0.44	5.22	-0.13	5.53	14285	1.9278	10.4652	-8.5374	NAF
NS0092	114	116	NS	X070817	070817	1	G	W	35.96	36.77	1.35	0.6837	0.53	0.059	2.44	0.6	0.135	0.032	0.429	0.125	0.5	5.4	-0.22	5.68	14278	0.9792	10.4652	-9.486	NAF
NS0092	108	110	NS	X070814	070814	1	G	W	34.04	38.89	1.91	0.5934	0.46	0.086	2.75	0.64	0.154	0.045	0.481	0.151	0.67	4.79	-0.12	5.34	14275	1.377	11.16288	-9.78588	NAF
NS0092	58	60	NS	X070788	070788	1	G	W	29.97	36.08	1.63	0.6966	0.54	0.072	3.01	0.76	0.17	0.106	0.554	0.159	0.91	12.47	0.19	13.57	14214	3.2436	13.25592	-10.01232	NAF
NS0092	130	132	NS	X070825	070825	1	G	W	35	37.16	1.63	0.7482	0.58	0.071	2.65	0.82	0.104	0.124	0.425	0.132	0.49	5.04	0.13	5.66	14286	3.7944	14.30244	-10.50804	NAF
NS0092	80	82	NS	X070799	070799	1	G	W	26.31	45.68	2.8	0.5547	0.43	0.131	3.38	0.88	0.157	0.138	0.761	0.233	0.86	5.92	0.43	7.21	14243	4.2228	15.34896	-11.12616	NAF
NS0092	70	72	NS	X070794	070794	1	G	W	35.14	35.22	1.48	0.5805	0.45	0.063	2.74	0.7	0.118	0.033	0.489	0.149	0.66	7.42	-0.17	7.91	14220	1.0098	12.2094	-11.1996	NAF
NS0092	50	52	NS	X070784	070784	1	G	M	31.65	39.37	1.98	0.5418	0.42	0.089	2.62	0.72	0.092	0.044	0.661	0.169	0.86	7.23	0.08	8.17	14210	1.3464	12.55824	-11.21184	NAF
NS0092	186	188	NS	X070854	070854	1	G	W	36.23	35.9	1.88	0.7095	0.55	0.093	2.73	0.96	0.119	0.179	0.893	0.09	0.24	3.76	0.32	4.32	14350	5.4774	16.74432	-11.26692	NAF
NS0092	82	84	NS	X070801	070801	1	G	W	31.46	38.23	2.47	0.6579	0.51	0.109	3.35	0.86	0.229	0.118	0.725	0.221	0.9	6.54	0.23	7.67	14244	3.6108	15.00012	-11.38932	NAF
NS0092	274	276	NS	X070898	070898	1	G	W	38.42	34.37	1.3	0.8256	0.64	0.06	2.76	0.69	0.109	0.015	0.872	0.129	0.02	3.84	-0.05	3.81	14232	0.459	12.03498	-11.57598	NAF
NS0092	106	108	NS	X070813	070813	1	G	W	32.94	40.51	1.86	0.6063	0.47	0.079	2.73	0.73	0.141	0.037	0.486	0.149	0.55	4.63	-0.03	5.15	14256	1.1322	12.73266	-11.60046	NAF
NS0092	38	40	NS	X070778	070778	1	G	M	33.51	42.27	2	0.5418	0.42	0.087	1.12	0.7	0.096	0.011	0.232	0.06	2.38	2.28	0.1	4.76	14204	0.3366	12.2094	-11.8728	NAF
NS0092	140	142	NS	X070830	070830	1	G	W	33.65	36.28	3.87	0.4386	0.34	0.176	3.88	1.12	0.282	0.246	0.741	0.221	0.7	2.84	0.36	3.9	14291	7.5276	19.53504	-12.00744	NAF
NS0092	64	66	NS	X070791	070791	1	G	W	34.23	36.19	1.53	0.5934	0.46	0.069	2.71	0.8	0.105	0.046	0.519	0.146	0.62	7.36	0.01	7.99	14217	1.4076	13.9536	-12.546	NAF
NS0092	42	44	NS	X070780	070780	1	G	M	32.22	40.22	1.58	0.5934	0.46	0.07	2.33	0.8	0.093	0.038	0.503	0.089	0.64	6.69	0.02	7.35	14206	1.1628	13.9536	-12.7908	NAF
NS0092	72	74	NS	X070795	070795	1	G	W	32.26	37.86	1.49	0.645	0.5	0.065	2.75	0.86	0.173	0.059	0.508	0.159	0.78	8.21	-0.03	8.96	14239	1.8054	15.00012	-13.19472	NAF
NS0092	94	96	NS	X070807	070807	1	G	W	36.21	37.12	1.89	0.4902	0.38	0.096	2.28	0.87	0.122	0.059	0.439	0.125	0.71	3.77	0.08	4.56	14250	1.8054	15.17454	-13.36914	NAF
NS0092	98	100	NS	X070809	070809	1	G	W	35.3	37.87	1.71	0.5547	0.43	0.075	2.55	0.86	0.11	0.043	0.476	0.162	0.51	4.26	0.08	4.85	14252	1.3158	15.00012	-13.68432	NAF
NS0092	144	146	NS	X070832	070832	1	G	W	37.24	35.24	1.37	0.8127	0.63	0.071	2.35	0.86	0.15	0.043	0.273	0.081	0.32	4.95	-0.18	5.09	14311	1.3158	15.00012	-13.68432	NAF
NS0092	226	228	NS	X070874	070874	1	G	W	31.72	39.39	2.92	0.6837	0.53	0.135	3.68	1.11	0.142	0.174	0.986	0.083	0.27	4	0.5	4.77	14388	5.3244	19.36062	-14.03622	NAF
NS0092	96	98	NS	X070808	070808	1	G	W	35.81	38.28	1.52	0.516	0.4	0.068	2.25	0.86	0.117	0.03	0.419	0.123	0.44	3.82	0.03	4.29	14251	0.918	15.00012	-14.08212	NAF
NS0092	272	276	NS	BX077897-BX077898	X077897	2			50.94	23.863	1.078	0.374	0.26928	0.039	1.252	0.86	0.109	0.018	0.722	0.082	-0.01	-0.01	-0.01	-0.03	885	0.5508	15.00012	-14.44932	NAF
NS0092	46	48	NS	X070782	070782	1	G	M	31.25	40.64	1.92	0.5676	0.44	0.083	2.57	0.93	0.068	0.057	0.58	0.426	0.66	6.46	0.31	7.43	14208	1.7442	16.22106	-14.47686	NAF
NS0092	214	216	NS	X070868	070868	1	G	W	36.28	34.91	2.84	0.5547	0.43	0.13	3.36	1.11	0.137	0.155	0.787	0.109	0.28	2.87	0.35	3.5	14364	4.743	19.36062	-14.61762	NAF
NS0092	90	92	NS	X070805	070805	1	G	W	31.98	40.7	2.05	0.5676	0.44	0.089	2.81	0.99	0.104	0.083	0.512	0.155	0.67	4.83	0.31	5.81	14248	2.5398	17.26758	-14.72778	NAF
NS0092	100	102	NS	X070810	070810	1	G	W	34.71	38.16	1.48	0.6966	0.54	0.065	2.52	1	0.106	0.049	0.429	0.128	0.49	4.88	0.14	5.51	14253	1.4994	17.442	-15.9426	NAF
NS0092	60	62	NS	X070789	070789	1	G	W	32.39	34.69	1.49	0.6708	0.52	0.064	2.9	1.12	0.22	0.1	0.558	0.178	0.85	10.36	0.05	11.26	14215	3.06	19.53504	-16.47504	NAF
NS0092	148	150	NS	X070834	070834	1	G	W	35.42	36.69	1.88	0.7353	0.57	0.087	2.63	1.06	0.089	0.056	0.539	0.119	0.38	4.46	0.25	5.09	14313	1.7136	18.48852	-16.77492	NAF
NS0092	192	194	NS	X070857	070857	1	G	W	30.85	42.36	2.11	0.6966	0.54	0.093	2.76	1.39	0.177	0.243	0.859	0.101	0.35	3.58	0.55	4.48	14353	7.4358	24.24438	-16.80858	NAF
NS0092	174	176	NS	X070847	070847	1	G	W	29.09	48.61	1.14	0.5031	0.39	0.07	1.98	1.2	0.089	0.124	0.335	0.066	0.27	3.14	0.54	3.95	14326	3.7944	20.9304	-17.136	NAF
NS0092	76	78	NS	X070797	070797	1	G	W	33.17	39.3	1	0.6063	0.47	0.045	2.26	1.04	0.114	0.026	0.388	0.123	0.55	6.67	0.12	7.34	14241	0.7956	18.13968	-17.34408	NAF
NS0092	102	104	NS	X070811	070811	1	G	W	35.62	36.97	1.44	0.7353	0.57	0.063	2.46	1.04	0.144	0.026	0.394	0.112	0.44	4.81	0.1	5.35	14254	0.7956	18.13968	-17.34408	NAF
NS0092	62	64	NS	X070790	070790	1	G	W	35.85	31.86	1.56	0.6321	0.49	0.067	2.77	1.13	0.246	0.06	0.585	0.319	0.74	8.37	-0.07	9.04	14216	1.836	19.70946	-17.87346	NAF
NS0092	92	94	NS	X070806	070806	1	G	W	34.59	37.66	1.71	0.645	0.5	0.075	2.42	1.16	0.138	0.05	0.409	0.121	0.75	4.85	0.24	5.84	14249	1.53	20.23272	-18.70272	NAF
NS0092	68	70	NS	X070793	070793	1	G	W	32.25	38.75	1.5	0.5418	0.42	0.066	2.76	1.16	0.121	0.034	0.539	0.164	0.67	7.03	0.38	8.08	14219	1.0404	20.23272	-19.19232	NAF
NS0092	188	190	NS	X070855	070855	1	G	W	35.56	37.74	1.56	0.7353	0.57	0.073	2.49	1.24	0.098	0.051	0.734	0.078	0.19	3.62	0.43	4.24	14351	1.5606	21.62808	-20.06748	NAF
NS0092	272	274	NS	X070897	070897	1	G	W	34.22	40.97	1.06	0.7611	0.59	0.045	2.3	1.2	0.076	0.026	0.743	0.083	0	2.96	0.55	3.51	14231	0.7956	20.9304	-20.1348	NAF
NS0092	224	226	NS	X070873	070873	1	G	W	36.98	36.06	1.23	0.7998	0.62	0.137	2.32	1.23	0.191	0.039	0.615	0.04	0.08	3.84	0.15	4.07	14387	1.1934	21.45366	-20.26026	NAF
NS0092	66	68	NS	X070792	070792	1	G	W	32.57	38.01	1.72	0.5031	0.39	0.076	2.8	1.25	0.134	0.046	0.557	0.162	0.7	6.7	0.45	7.85	14218	1.4076	21.8025	-20.3949	NAF
NS0092	146	148	NS	X070833	070833	1	G	W	30.12	39.24	3.49	0.6837	0.53	0.164	3.98	1.51	0.23	0.191	0.735	0.19	0.63	4.59	0.77	5.99	14312	5.8446	26.33742	-20.49282	NAF
NS0092	242	244	NS	X070882	070882	1	G	W	35.24	37.64	1.69	0.6966	0.54	0.067	2.75	1.24	0.117	0.037	0.766	0.056	0.11	3.62	0.43	4.16	14396	1.1322	21.62808	-20.49588	NAF
NS0092	158	160	NS	X070839	070839	1	G	W	35.24	37.04	1.79	0.7224	0.56	0.078	2.55	1.27	0.097	0.04	0.668	0.097	0.34	4.25	0.42	5.01	14318	1.224	22.15134	-20.92734	NAF
NS0092	244	246	NS	X070883	070883	1	G	W	33.17	40.19	2.14	0.5934	0.46	0.095	3.06	1.29	0.129	0.049	0.808	0.075	0.16	3.19	0.53	3.88	14397	1.4994	22.50018	-21.00078	NAF
NS0092	152	154	NS	X070836	070836	1	G	W	38.19	34.46	1.04	0.7869	0.61	0.043	2.16	1.3	0.15	0.023	0.39	0.112	0.26	4.04	0.31	4.61	14315	0.7038	22.6746	-21.9708	NAF
NS0092	88	90	NS	X070804	070804	1	G	W	34.31	36.92	1.71	0.6063	0.47	0.072	2.85	1.36	0.106	0.056	0.476	0.155	0.58	5.31	0.55	6.44	14247	1.7136	23.72112	-22.00752	NAF
NS0092	260	262	NS	X070891	070891	1	G	W	37.66	36.04	1	0.7869	0.61	0.04	2.26	1.29	0.102	0.014	0.712	0.051	0.02	3.06	0.48	3.56	14225	0.4284	22.50018	-22.07178	NAF
NS0092	156	158	NS	X070838	070838	1	G	W	39	31.86	1.03	0.8643	0.67	0.05	2.51	1.34	0.169	0.023	0.373	0.112	0.37	5.03	0.29	5.69	14317	0.7038	23.37228	-22.66848	NAF
NS0092	262	264	NS	X070892	070892	1	G	W	37	37.39	0.77	0.7869	0.61	0.033	2.15	1.37	0.094	0.017	0.551	0.043	0	3.08	0.56	3.64	14226	0.5202	23.89554	-23.37534	NAF
NS0092	150	152	NS	X070835	070835	1	G	W	34.88	38.72	0.89	0.8643	0.67	0.037	2.1	1.38	0.094	0.021	0.343	0.079	0.26	4.62	0.56	5.44	14314	0.6426	24.06996	-23.42736	NAF
NS0092	132	134	NS	X070826	070826	1	G	W	35.02	36.71	1.02	0.8901	0.69	0.044	2.37	1.39	0.117	0.024	0.37	0.113	0.4	5.69	0.48	6.57	14287	0.7344	24.24438	-23.50998	NAF
NS0092	166	168	NS	X070843	070843	1	G	W	36.18	37.87	1.31	0.6063	0.47	0.057	2.21	1.39	0.103	0.024	0.291	0.065	0.18	3.42	0.53	4.13	14322	0.7344	24.24438	-23.50998	NAF
NS0092	190	192	NS	X070856	070856	1	G	W	35.56	37.42	1.13	0.8514	0.66	0.051	2.27	1.4	0.124	0.027	0.541	0.076	0.16	4.16	0.52	4.84	14352	0.8262	24.4188	-23.5926	NAF
NS0092	238	240	NS	X070880	070880	1	G	W	36.06	37.45	1.49	0.7353	0.57	0.055	2.28	1.49	0.095	0.064	0.777	0.036	0.06	3.01	0.63	3.7	14394	1.9584	25.98858	-24.03018	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0092	154	156	NS	X070837	070837	1	G	W	38.94	33.03	1.14	0.774	0.6	0.045	2.21	1.44	0.16	0.027	0.383	0.086	0.28	4.17	0.3	4.75	14316	0.8262	25.11648	-24.29028	NAF
NS0092	172	174	NS	X070846	070846	1	G	W	33.13	41.26	0.95	0.6708	0.52	0.045	2.31	1.44	0.135	0.025	0.278	0.054	0.18	4.65	0.48	5.31	14325	0.765	25.11648	-24.35148	NAF
NS0092	104	106	NS	X070812	070812	1	G	W	32.95	39.6	1.75	0.645	0.5	0.078	2.74	1.53	0.174	0.059	0.468	0.146	0.5	4.29	0.58	5.37	14255	1.8054	26.68626	-24.88086	NAF
NS0092	236	238	NS	X070879	070879	1	G	W	38.93	34.75	1.06	0.774	0.6	0.046	1.94	1.48	0.117	0.021	0.728	0.035	0.03	2.96	0.1	3.09	14393	0.6426	25.81416	-25.17156	NAF
NS0092	270	272	NS	X070896	070896	1	G	W	36.52	37.24	0.94	0.8514	0.66	0.037	2.27	1.5	0.106	0.025	0.695	0.057	0.01	3.17	0.59	3.77	14230	0.765	26.163	-25.398	NAF
NS0092	264	266	NS	X070893	070893	1	G	W	36.22	37.38	0.88	0.7998	0.62	0.036	2.43	1.52	0.087	0.018	0.595	0.04	0.05	3.31	0.82	4.18	14227	0.5508	26.51184	-25.96104	NAF
NS0092	48	50	NS	X070783	070783	1	G	M	29.84	41.62	2.16	0.4644	0.36	0.095	2.7	1.6	0.174	0.062	0.681	0.141	0.76	5.73	0.71	7.2	14209	1.8972	27.9072	-26.01	NAF
NS0092	266	268	NS	X070894	070894	1	G	W	36.39	36.94	1.02	0.774	0.6	0.044	2.53	1.54	0.084	0.027	0.672	0.066	0.04	3.08	0.87	3.99	14228	0.8262	26.86068	-26.03448	NAF
NS0092	134	136	NS	X070827	070827	1	G	W	33.78	39.55	1.4	0.6708	0.52	0.061	2.21	1.65	0.126	0.067	0.551	0.11	0.35	3.83	0.7	4.88	14288	2.0502	28.7793	-26.7291	NAF
NS0092	178	180	NS	X070849	070849	1	G	W	34.52	37.87	1.66	0.7095	0.55	0.066	2.71	1.68	0.081	0.07	0.572	0.074	0.28	3.62	0.98	4.88	14328	2.142	29.30256	-27.16056	NAF
NS0092	142	144	NS	X070831	070831	1	G	W	36.13	36.36	1.04	0.8643	0.67	0.046	2.17	1.61	0.099	0.023	0.261	0.079	0.27	4.69	0.7	5.66	14292	0.7038	28.08162	-27.37782	NAF
NS0092	202	204	NS	X070862	070862	1	G	W	37.65	34.9	1.11	0.8256	0.64	0.049	2.1	1.62	0.117	0.023	0.637	0.05	0.1	3.6	0.69	4.39	14358	0.7038	28.25604	-27.55224	NAF
NS0092	268	270	NS	X070895	070895	1	G	W	34.82	38.42	0.99	0.8514	0.66	0.041	2.59	1.66	0.089	0.027	0.704	0.075	0.03	3.43	0.99	4.45	14229	0.8262	28.95372	-28.12752	NAF
NS0092	276	278	NS	X070899	070899	1	G	W	35.06	39	0.97	0.7869	0.61	0.039	2.34	1.65	0.1	0.02	0.68	0.076	0.02	2.88	1.01	3.91	14233	0.612	28.7793	-28.1673	NAF
NS0092	184	186	NS	X070852	070852	1	G	W	34.97	38.4	1.22	0.7224	0.56	0.062	2.28	1.73	0.117	0.04	0.573	0.06	0.15	3.49	0.92	4.56	14349	1.224	30.17466	-28.95066	NAF
NS0092	280	282	NS	X070901	070901	1	G	W	36.95	35.61	1.13	0.8514	0.66	0.046	2.55	1.71	0.104	0.011	0.781	0.105	0.03	3.05	0.95	4.03	14235	0.3366	29.82582	-29.48922	NAF
NS0092	168	170	NS	X070844	070844	1	G	W	32.29	41.71	0.93	0.7998	0.62	0.041	2.22	1.78	0.104	0.028	0.408	0.089	0.26	4.25	1.11	5.62	14323	0.8568	31.04676	-30.18996	NAC
NS0092	232	234	NS	X070877	070877	1	G	W	36.48	36.14	1.47	0.7095	0.55	0.064	2.41	1.82	0.141	0.028	0.784	0.056	0.11	3.01	0.81	3.93	14391	0.8568	31.74444	-30.88764	NAC
NS0092	278	280	NS	X070900	070900	1	G	W	35.82	38.11	0.93	0.7998	0.62	0.041	2.24	1.81	0.085	0.019	0.649	0.073	0.01	2.58	1.16	3.75	14234	0.5814	31.57002	-30.98862	NAC
NS0092	222	224	NS	X070872	070872	1	G	W	35.8	38.76	0.82	0.7611	0.59	0.034	1.85	1.82	0.098	0.021	0.498	0.046	0.06	2.81	1.02	3.89	14386	0.6426	31.74444	-31.10184	NAC
NS0092	248	250	NS	X070885	070885	1	G	W	36.6	37.19	0.92	0.7353	0.57	0.037	1.98	1.84	0.097	0.019	0.628	0.043	0.02	2.83	1.04	3.89	14399	0.5814	32.09328	-31.51188	NAC
NS0092	138	140	NS	X070829	070829	1	G	W	34.78	39.17	1.1	0.645	0.5	0.049	2.05	1.89	0.104	0.034	0.296	0.091	0.29	3.37	1	4.66	14290	1.0404	32.96538	-31.92498	NAC
NS0092	256	258	NS	X070889	070889	1	G	W	36.8	36.03	1.18	0.7224	0.56	0.052	2.45	1.87	0.105	0.022	0.818	0.066	0.05	2.64	1.18	3.87	14223	0.6732	32.61654	-31.94334	NAC
NS0092	204	206	NS	X070863	070863	1	G	W	38.52	32.58	1.17	0.8643	0.67	0.047	2.26	1.91	0.132	0.037	0.634	0.056	0.15	3.79	0.96	4.9	14359	1.1322	33.31422	-32.18202	NAC
NS0092	160	162	NS	X070840	070840	1	G	W	34.13	40.71	0.66	0.7353	0.57	0.026	1.73	1.87	0.096	0.012	0.19	0.042	0.1	3.64	1.02	4.76	14319	0.3672	32.61654	-32.24934	NAC
NS0092	254	256	NS	X070888	070888	1	G	W	36.43	36.89	0.97	0.7482	0.58	0.041	2.23	1.9	0.097	0.029	0.655	0.054	0.03	2.81	1.21	4.05	14222	0.8874	33.1398	-32.2524	NAC
NS0092	258	260	NS	X070890	070890	1	G	W	35.86	37.37	0.98	0.7998	0.62	0.038	2.32	1.91	0.11	0.012	0.706	0.049	0.06	2.92	1.21	4.19	14224	0.3672	33.31422	-32.94702	NAC
NS0092	216	218	NS	X070869	070869	1	G	W	36.04	36.29	1.37	0.6966	0.54	0.061	2.52	2	0.11	0.052	0.524	0.064	0.2	3.06	1.19	4.45	14383	1.5912	34.884	-33.2928	NAC
NS0092	246	248	NS	X070884	070884	1	G	W	35.21	38	1.05	0.774	0.6	0.041	2.2	1.98	0.103	0.024	0.668	0.032	0.04	3.18	1.34	4.56	14398	0.7344	34.53516	-33.80076	NAC
NS0092	208	210	NS	X070865	070865	1	G	W	36.32	36.63	1.29	0.7224	0.56	0.055	2.23	2.01	0.165	0.041	0.523	0.043	0.08	3.06	0.89	4.03	14361	1.2546	35.05842	-33.80382	NAC
NS0092	212	214	NS	X070867	070867	1	G	W	36.49	36.32	1.14	0.7353	0.57	0.049	2.21	1.99	0.104	0.026	0.519	0.053	0.12	2.95	1.27	4.34	14363	0.7956	34.70958	-33.91398	NAC
NS0092	162	164	NS	X070841	070841	1	G	W	35.87	38.14	0.79	0.6966	0.54	0.04	1.76	2.01	0.099	0.018	0.23	0.052	0.16	3.29	1.12	4.57	14320	0.5508	35.05842	-34.50762	NAC
NS0092	206	208	NS	X070864	070864	1	G	W	35.59	37.52	1	0.7869	0.61	0.043	2.15	2.03	0.093	0.021	0.498	0.027	0.08	3.41	1.23	4.72	14360	0.6426	35.40726	-34.76466	NAC
NS0092	230	232	NS	X070876	070876	1	G	W	33.52	40.31	1.2	0.7224	0.56	0.058	2.22	2.09	0.092	0.028	0.687	0.051	0.07	2.75	1.5	4.32	14390	0.8568	36.45378	-35.59698	NAC
NS0092	182	184	NS	X070851	070851	1	G	W	36.47	36.99	0.88	0.774	0.6	0.037	1.88	2.07	0.084	0.016	0.561	0.051	0.08	2.95	1.27	4.3	14348	0.4896	36.10494	-35.61534	NAC
NS0092	136	138	NS	X070828	070828	1	G	W	35.51	37.03	0.95	0.7482	0.58	0.042	2.07	2.11	0.119	0.023	0.321	0.082	0.27	3.86	1.24	5.37	14289	0.7038	36.80262	-36.09882	NAC
NS0092	250	252	NS	X070886	070886	1	G	W	34.3	40.34	0.75	0.7224	0.56	0.036	1.97	2.11	0.096	0.017	0.454	0.044	0.06	2.64	1.56	4.26	14400	0.5202	36.80262	-36.28242	NAC
NS0092	240	242	NS	X070881	070881	1	G	W	33.59	41.85	0.7	0.7353	0.57	0.028	1.72	2.14	0.082	0.018	0.445	0.024	0	2.49	1.47	3.96	14395	0.5508	37.32588	-36.77508	NAC
NS0092	228	230	NS	X070875	070875	1	G	W	33.5	40.4	0.93	0.774	0.6	0.036	2.05	2.22	0.087	0.028	0.572	0.05	0.12	2.9	1.65	4.67	14389	0.8568	38.72124	-37.86444	NAC
NS0092	252	254	NS	X070887	070887	1	G	W	32.94	39.89	1.32	0.7611	0.59	0.053	2.54	2.29	0.134	0.047	0.743	0.061	0.13	3.01	1.64	4.78	14221	1.4382	39.94218	-38.50398	NAC
NS0092	218	220	NS	X070870	070870	1	G	W	33.43	40.41	0.93	0.7869	0.61	0.04	2.23	2.25	0.091	0.02	0.442	0.065	0.14	3.16	1.62	4.92	14384	0.612	39.2445	-38.6325	NAC
NS0092	170	172	NS	X070845	070845	1	G	W	31.83	42.18	0.92	0.6837	0.53	0.039	2.27	2.25	0.098	0.019	0.307	0.06	0.19	3.66	1.56	5.41	14324	0.5814	39.2445	-38.6631	NAC
NS0092	234	236	NS	X070878	070878	1	G	W	29.38	47.38	0.68	0.7224	0.56	0.027	1.75	2.27	0.07	0.017	0.446	0.023	0.01	2.43	1.86	4.3	14392	0.5202	39.59334	-39.07314	NAC
NS0092	164	166	NS	X070842	070842	1	G	W	32.91	39.66	1.01	0.774	0.6	0.043	2.33	2.44	0.085	0.027	0.291	0.061	0.19	3.89	1.81	5.89	14321	0.8262	42.55848	-41.73228	NAC
NS0092	220	222	NS	X070871	070871	1	G	W	33.07	40.59	0.83	0.7998	0.62	0.038	2.07	2.46	0.087	0.032	0.494	0.043	0.09	3	1.85	4.94	14385	0.9792	42.90732	-41.92812	NAC
NS0092	180	182	NS	X070850	070850	1	G	W	32.43	39.17	0.84	0.903	0.7	0.036	2.25	3.16	0.077	0.018	0.508	0.038	0.14	3.27	2.9	6.31	14347	0.5508	55.11672	-54.56592	NAC
NS0093	226	228	NS	X071018	071018	1	G	W	27.75	34.24	1.21	0.5934	0.46	0.053	3.26	1.23	0.062	1.49	0.238	0.067	0.5	15.56	2.81	18.87	14440	45.594	21.45366	24.14034	PAF(HC)
NS0093	64	66	NS	X070934	070934	1	G	M	29.42	42.38	3.3	0.6063	0.47	0.148	3.7	0.49	0.129	0.403	0.434	0.081	0.47	5.36	0.68	6.51	14305	12.3318	8.54658	3.78522	PAF(LC)
NS0093	182	184	NS	X070995	070995	1	G	W																	14202	0	0	0	PAF(LC)
NS0093	186	188	NS	X070997	070997	1	G	W																	14402	0	0	0	PAF(LC)
NS0093	188	190	NS	X070998	070998	1	G	W																	14403	0	0	0	PAF(LC)
NS0093	192	194	NS	X071000	071000	1	G	W																	14405	0	0	0	PAF(LC)
NS0093	224	228	NS	BX078017-BX078018	X078017	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	938	-0.0306	-0.01744	-0.013158	NAF
NS0093	62	66	NS	BX077933-BX077934	X077933	2			65.19	7.946	0.662	0.115	0.0828	0.044	0.576	0.077	0.015	0.038	0.11	0.076	-0.01	-0.01	-0.01	-0.03	896	1.1628	1.343034	-0.180234	NAF
NS0093	36	38	NS	X070920	070920	1	G	M	39.67	39.73	1.1	0.516	0.4	0.047	0.1	0.02	0.028	0.003	0.232	0.019	0.91	0.36	0.05	1.32	14237	0.0918	0.34884	-0.25704	NAF
NS0093	36	40	NS	BX077920-BX077921	X077920	2			67.61	2.785	0.157	0.093	0.06696	0.007	0.098	0.024	0.016	0.002	0.006	0.065	-0.01	0.13	0.21	0.33	889	0.0612	0.418608	-0.357408	NAF
NS0093	40	44	NS	BX077922-BX077923	X077922	2			68.01	2.499	0.097	0.072	0.05184	0.01	0.097	0.024	0.02	0.002	0.005	0.066	0.03	0.14	0.12	0.29	890	0.0612	0.418608	-0.357408	NAF
NS0093	34	36	NS	BX077919	X077919	2			68.18	2.975	0.138	0.147	0.10584	0.007	0.099	0.023	0.031	0.001	0.007	0.054	0.02	0.08	-0.01	0.09	888	0.0306	0.401166	-0.370566	NAF
NS0093	34	36	NS	X070919	070919	1	G	M	38.31	40.8	0.99	1.0836	0.84	0.045	0.08	0.03	0.084	0.003	0.246	0.019	1.23	0.34	0.03	1.6	14236	0.0918	0.52326	-0.43146	NAF
NS0093	58	62	NS	BX077931-BX077932	X077931	2			66.13	4.349	0.162	0.048	0.03456	0.015	0.143	0.032	0.025	0.004	0.009	0.072	0.15	0.16	0.08	0.39	895	0.1224	0.558144	-0.435744	NAF
NS0093	52	54	NS	BX077928	X077928	2			68.39	2.981	0.146	0.118	0.08496	0.01	0.115	0.027	0.021	0.001	0.02	0.058	0.11	0.12	0.02	0.25	893	0.0306	0.470934	-0.440334	NAF
NS0093	38	40	NS	X070921	070921	1	G	M	40.95	36.54	1.07	1.1481	0.89	0.051	0.12	0.03	0.086	0.002	0.202	0.021	1.36	0.39	0.09	1.84	14238	0.0612	0.52326	-0.46206	NAF
NS0093	44	48	NS	BX077924-BX077925	X077924	2			67.24	3.362	0.117	0.04	0.0288	0.012	0.098	0.03	0.024	0.002	0.021	0.057	0.15	0.22	0.25	0.62	891	0.0612	0.52326	-0.46206	NAF
NS0093	54	56	NS	BX077930	X077930	2			66.23	4.358	0.196	0.094	0.06768	0.016	0.118	0.03	0.022	0.002	0.023	0.064	0.15	0.32	0.46	0.93	894	0.0612	0.52326	-0.46206	NAF
NS0093	40	42	NS	X070922	070922	1	G	M	37.71	40.69	1.02	1.4964	1.16	0.043	0.13	0.04	0.077	0.003	0.272	0.021	1.49	0.38	0.12	1.99	14293	0.0918	0.69768	-0.60588	NAF
NS0093	236	240	NS	BX078023-BX078024	X078023	2			69.73	2.393	0.066	0.047	0.03384	0.008	0.173	0.042	0.006	0.004	0.045	0.073	-0.01	-0.01	-0.01	-0.03	941	0.1224	0.732564	-0.610164	NAF
NS0093	244	248	NS	BX078027-BX078028	X078027	2			70.83	2.594	0.065	0.042	0.03024	0.009	0.15	0.042	0.007	0.002	0.024	0.039	-0.01	-0.01	-0.01	-0.03	943	0.0612	0.732564	-0.671364	NAF
NS0093	120	124	NS	BX077963-BX077964	X077963	2			69.36	3.109	0.273	0.055	0.0396	0.028	0.297	0.069	0.01	0.017	0.105	0.056	-0.01	-0.01	-0.01	-0.03	911	0.5202	1.203498	-0.683298	NAF
NS0093	140	144	NS	BX077973-BX077974	X077973	2			67.48	4.049	0.243	0.092	0.06624	0.024	0.381	0.087	0.014	0.027	0.127	0.094	-0.01	-0.01	-0.01	-0.03	916	0.8262	1.517454	-0.691254	NAF
NS0093	232	236	NS	BX078021-BX078022	X078021	2			72.08	1.278	0.012	0.037	0.02664	0.009	0.132	0.042	0.006	0.001	0.02	0.046	-0.01	-0.01	-0.01	-0.03	940	0.0306	0.732564	-0.701964	NAF
NS0093	240	244	NS	BX078025-BX078026	X078025	2			70.06	3.18	0.054	0.05	0.036	0.009	0.13	0.042	0.007	0.001	0.039	0.039	-0.01	-0.01	-0.01	-0.03	942	0.0306	0.732564	-0.701964	NAF
NS0093	252	256	NS	BX078031-BX078032	X078031	2			69.56	2.869	0.071	0.047	0.03384	0.013	0.171	0.055	0.007	0.006	0.045	0.223	-0.01	-0.01	-0.01	-0.03	945	0.1836	0.95931	-0.77571	NAF
NS0093	42	44	NS	X070923	070923	1	G	M	37.8	41.26	1.14	0.7869	0.61	0.051	0.24	0.05	0.05	0.003	0.254	0.023	1.35	0.41	0.06	1.82	14294	0.0918	0.8721	-0.7803	NAF
NS0093	48	52	NS	BX077926-BX077927	X077926	2			68.02	5.04	0.098	0.083	0.05976	0.012	0.191	0.053	0.013	0.004	0.023	0.066	-0.01	-0.01	-0.01	-0.03	892	0.1224	0.924426	-0.802026	NAF
NS0093	162	166	NS	BX077985-BX077986	X077985	2			69.72	3.548	0.08	0.049	0.03528	0.012	0.187	0.054	0.006	0.004	0.016	0.055	-0.01	-0.01	-0.01	-0.03	922	0.1224	0.941868	-0.819468	NAF
NS0093	178	182	NS	BX077993-BX077994	X077993	2			69.34	3.942	0.106	0.047	0.03384	0.016	0.222	0.055	0.009	0.004	0.024	0.047	-0.01	-0.01	-0.01	-0.03	926	0.1224	0.95931	-0.83691	NAF
NS0093	70	74	NS	BX077937-BX077938	X077937	2			69.11	4.135	0.129	0.056	0.04032	0.018	0.246	0.059	0.01	0.006	0.024	0.074	-0.01	-0.01	-0.01	-0.03	898	0.1836	1.029078	-0.845478	NAF
NS0093	152	156	NS	BX077979-BX077980	X077979	2			68.02	4.527	0.207	0.067	0.04824	0.021	0.331	0.077	0.013	0.016	0.068	0.051	-0.01	-0.01	-0.01	-0.03	919	0.4896	1.343034	-0.853434	NAF
NS0093	182	186	NS	BX077995-BX077996	X077995	2			69.64	3.538	0.079	0.049	0.03528	0.015	0.202	0.057	0.008	0.004	0.02	0.047	-0.01	-0.01	-0.01	-0.03	927	0.1224	0.994194	-0.871794	NAF
NS0093	156	160	NS	BX077981-BX077982	X077981	2			69.23	4	0.121	0.047	0.03384	0.015	0.215	0.061	0.01	0.006	0.027	0.048	-0.01	-0.01	-0.01	-0.03	920	0.1836	1.063962	-0.880362	NAF
NS0093	174	178	NS	BX077991-BX077992	X077991	2			69.23	4	0.121	0.047	0.03384	0.015	0.215	0.061	0.01	0.006	0.027	0.048	-0.01	-0.01	-0.01	-0.03	925	0.1836	1.063962	-0.880362	NAF
NS0093	280	282	NS	BX078045	X078045	2			69.38	3.878	0.085	0.063	0.04536	0.015	0.233	0.054	0.007	0.002	0.018	0.04	-0.01	-0.01	-0.01	-0.03	952	0.0612	0.941868	-0.880668	NAF
NS0093	58	60	NS	X070931	070931	1	G	M	38.87	39.31	1.27	0.1548	0.12	0.054	0.39	0.07	0.114	0.011	0.098	0.019	1.98	0.47	0.14	2.59	14302	0.3366	1.22094	-0.88434	NAF
NS0093	248	250	NS	BX078029	X078029	2			70.95	1.546	0.055	0.051	0.03672	0.01	0.193	0.056	0.007	0.002	0.03	0.046	-0.01	-0.01	-0.01	-0.03	944	0.0612	0.976752	-0.915552	NAF
NS0093	60	62	NS	X070932	070932	1	G	M	38.02	38.72	1.67	0.1935	0.15	0.075	0.75	0.14	0.115	0.049	0.074	0.012	2.4	1.11	0.15	3.66	14303	1.4994	2.44188	-0.94248	NAF
NS0093	272	276	NS	BX078041-BX078042	X078041	2			69.42	3.882	0.092	0.064	0.04608	0.013	0.241	0.058	0.009	0.002	0.03	0.067	-0.01	-0.01	-0.01	-0.03	950	0.0612	1.011636	-0.950436	NAF
NS0093	268	272	NS	BX078039-BX078040	X078039	2			67.56	4.895	0.125	0.072	0.05184	0.012	0.282	0.06	0.011	0.002	0.036	0.084	-0.01	-0.01	-0.01	-0.03	949	0.0612	1.04652	-0.98532	NAF
NS0093	104	108	NS	BX077955-BX077956	X077955	2			67.53	4.708	0.066	0.059	0.04248	0.001	0.238	0.082	0.011	0.014	0.014	0.126	-0.01	-0.01	-0.01	-0.03	907	0.4284	1.430244	-1.001844	NAF
NS0093	170	172	NS	BX077989	X077989	2			69.26	3.99	0.091	0.051	0.03672	0.014	0.194	0.067	0.006	0.005	0.032	0.045	-0.01	-0.01	-0.01	-0.03	924	0.153	1.168614	-1.015614	NAF
NS0093	260	264	NS	BX078035-BX078036	X078035	2			68.85	4.272	0.089	0.06	0.0432	0.013	0.216	0.062	0.01	0.002	0.026	0.053	-0.01	-0.01	-0.01	-0.03	947	0.0612	1.081404	-1.020204	NAF
NS0093	256	260	NS	BX078033-BX078034	X078033	2			69.85	3.421	0.077	0.051	0.03672	0.012	0.191	0.063	0.008	0.002	0.022	0.055	-0.01	-0.01	-0.01	-0.03	946	0.0612	1.098846	-1.037646	NAF
NS0093	66	70	NS	BX077935-BX077936	X077935	2			68.79	4.145	0.16	0.06	0.0432	0.017	0.244	0.073	0.013	0.007	0.037	0.078	-0.01	-0.01	-0.01	-0.03	897	0.2142	1.273266	-1.059066	NAF
NS0093	144	148	NS	BX077975-BX077976	X077975	2			67.19	4.106	0.172	0.108	0.07776	0.017	0.435	0.093	0.014	0.018	0.106	0.069	-0.01	0.03	-0.01	0.01	917	0.5508	1.622106	-1.071306	NAF
NS0093	190	194	NS	BX077999-BX078000	X077999	2			69.72	3.245	0.058	0.047	0.03384	0.01	0.198	0.064	0.009	0.001	0.007	0.044	-0.01	-0.01	-0.01	-0.03	929	0.0306	1.116288	-1.085688	NAF
NS0093	74	78	NS	BX077939-BX077940	X077939	2			69.96	3.44	0.068	0.055	0.0396	0.012	0.199	0.07	0.01	0.004	0.012	0.063	-0.01	-0.01	-0.01	-0.03	899	0.1224	1.22094	-1.09854	NAF
NS0093	206	210	NS	BX078007-BX078008	X078007	2			69.1	4.699	0.106	0.06	0.0432	0.015	0.276	0.074	0.011	0.006	0.016	0.049	-0.01	-0.01	-0.01	-0.03	933	0.1836	1.290708	-1.107108	NAF
NS0093	108	112	NS	BX077957-BX077958	X077957	2			67.01	2.546	0.085	0.06	0.0432	0.001	0.176	0.098	0.012	0.018	0.017	0.114	-0.01	-0.01	-0.01	-0.03	908	0.5508	1.709316	-1.158516	NAF
NS0093	128	132	NS	BX077967-BX077968	X077967	2			65.41	6.781	0.376	0.066	0.04752	0.041	0.429	0.106	0.016	0.022	0.063	0.058	-0.01	-0.01	-0.01	-0.03	913	0.6732	1.848852	-1.175652	NAF
NS0093	166	170	NS	BX077987-BX077988	X077987	2			68.28	5.03	0.124	0.055	0.0396	0.017	0.231	0.08	0.01	0.007	0.025	0.045	-0.01	-0.01	-0.01	-0.03	923	0.2142	1.39536	-1.18116	NAF
NS0093	78	82	NS	BX077941-BX077942	X077941	2			68.84	3.719	0.085	0.05	0.036	0.012	0.201	0.075	0.012	0.004	0.015	0.055	-0.01	-0.01	-0.01	-0.03	900	0.1224	1.30815	-1.18575	NAF
NS0093	210	214	NS	BX078009-BX078010	X078009	2			68.35	4.637	0.136	0.055	0.0396	0.017	0.295	0.082	0.016	0.007	0.019	0.072	-0.01	-0.01	-0.01	-0.03	934	0.2142	1.430244	-1.216044	NAF
NS0093	82	86	NS	BX077943-BX077944	X077943	2			69.65	3.661	0.073	0.062	0.04464	0.011	0.221	0.075	0.012	0.003	0.009	0.067	-0.01	-0.01	-0.01	-0.03	901	0.0918	1.30815	-1.21635	NAF
NS0093	202	206	NS	BX078005-BX078006	X078005	2			69.08	4.468	0.12	0.072	0.05184	0.015	0.325	0.078	0.013	0.004	0.021	0.05	-0.01	-0.01	-0.01	-0.03	932	0.1224	1.360476	-1.238076	NAF
NS0093	216	220	NS	BX078013-BX078014	X078013	2			69	2.977	0.072	0.054	0.03888	0.009	0.252	0.084	0.012	0.007	0.012	0.063	-0.01	-0.01	-0.01	-0.03	936	0.2142	1.465128	-1.250928	NAF
NS0093	264	268	NS	BX078037-BX078038	X078037	2			68.27	4.543	0.097	0.068	0.04896	0.013	0.223	0.08	0.017	0.002	0.031	0.045	-0.01	-0.01	-0.01	-0.03	948	0.0612	1.39536	-1.33416	NAF
NS0093	160	162	NS	BX077983	X077983	2			69.02	3.436	0.1	0.047	0.03384	0.016	0.203	0.088	0.01	0.006	0.027	0.048	-0.01	-0.01	-0.01	-0.03	921	0.1836	1.534896	-1.351296	NAF
NS0093	214	216	NS	BX078012	X078012	2			69.13	3.516	0.064	0.042	0.03024	0.01	0.196	0.085	0.013	0.003	0.006	0.042	-0.01	-0.01	-0.01	-0.03	935	0.0918	1.48257	-1.39077	NAF
NS0093	228	232	NS	BX078019-BX078020	X078019	2			70.07	1.997	0.068	0.06	0.0432	0.008	0.246	0.087	0.01	0.004	0.024	0.059	-0.01	-0.01	-0.01	-0.03	939	0.1224	1.517454	-1.395054	NAF
NS0093	148	152	NS	BX077977-BX077978	X077977	2			68.03	3.359	0.241	0.091	0.06552	0.02	0.385	0.104	0.021	0.013	0.156	0.07	-0.01	-0.01	-0.01	-0.03	918	0.3978	1.813968	-1.416168	NAF
NS0093	198	202	NS	BX078003-BX078004	X078003	2			68.09	4.724	0.134	0.076	0.05472	0.014	0.347	0.091	0.014	0.005	0.026	0.072	-0.01	-0.01	-0.01	-0.03	931	0.153	1.587222	-1.434222	NAF
NS0093	102	104	NS	BX077953	X077953	2			68.17	4.981	0.112	0.061	0.04392	0.014	0.292	0.097	0.015	0.008	0.012	0.074	-0.01	-0.01	-0.01	-0.03	906	0.2448	1.691874	-1.447074	NAF
NS0093	194	198	NS	BX078001-BX078002	X078001	2			67.79	5.323	0.143	0.083	0.05976	0.014	0.359	0.092	0.017	0.005	0.017	0.066	-0.01	-0.01	-0.01	-0.03	930	0.153	1.604664	-1.451664	NAF
NS0093	186	190	NS	BX077997-BX077998	X077997	2			69.62	4.117	0.081	0.057	0.04104	0.011	0.22	0.091	0.014	0.002	0.016	0.049	-0.01	-0.01	-0.01	-0.03	928	0.0612	1.587222	-1.526022	NAF
NS0093	124	128	NS	BX077965-BX077966	X077965	2			67.61	5.675	0.172	0.072	0.05184	0.018	0.28	0.099	0.014	0.005	0.052	0.055	-0.01	-0.01	-0.01	-0.03	912	0.153	1.726758	-1.573758	NAF
NS0093	54	56	NS	X070929	070929	1	G	M	36.11	41.14	1.94	0.8514	0.66	0.086	0.55	0.1	0.073	0.005	0.354	0.03	2.11	0.78	0.15	3.04	14300	0.153	1.7442	-1.5912	NAF
NS0093	56	58	NS	X070930	070930	1	G	M	37.78	39.71	1.55	0.8127	0.63	0.067	0.6	0.1	0.065	0.003	0.266	0.022	1.86	0.59	0.06	2.51	14301	0.0918	1.7442	-1.6524	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0093	52	54	NS	X070928	070928	1	G	M	37.78	40.24	1.14	1.0707	0.83	0.051	0.44	0.11	0.077	0.008	0.253	0.023	1.52	0.68	0.08	2.28	14299	0.2448	1.91862	-1.67382	NAF
NS0093	86	90	NS	BX077945-BX077946	X077945	2			66.47	5.931	0.175	0.098	0.07056	0.013	0.376	0.105	0.014	0.005	0.017	0.065	-0.01	-0.01	-0.01	-0.03	902	0.153	1.83141	-1.67841	NAF
NS0093	116	120	NS	BX077961-BX077962	X077961	2			67.56	6.269	0.217	0.064	0.04608	0.023	0.303	0.113	0.017	0.009	0.056	0.061	-0.01	-0.01	-0.01	-0.03	910	0.2754	1.970946	-1.695546	NAF
NS0093	98	102	NS	BX077951-BX077952	X077951	2			67.21	5.909	0.147	0.074	0.05328	0.017	0.336	0.113	0.015	0.008	0.016	0.064	-0.01	-0.01	-0.01	-0.03	905	0.2448	1.970946	-1.726146	NAF
NS0093	132	136	NS	BX077969-BX077970	X077969	2			68.51	4.015	0.123	0.078	0.05616	0.017	0.289	0.107	0.017	0.004	0.013	0.053	-0.01	-0.01	-0.01	-0.03	914	0.1224	1.866294	-1.743894	NAF
NS0093	136	140	NS	BX077971-BX077972	X077971	2			66.79	5.829	0.137	0.075	0.054	0.017	0.303	0.111	0.015	0.005	0.026	0.054	-0.01	-0.01	-0.01	-0.03	915	0.153	1.936062	-1.783062	NAF
NS0093	220	224	NS	BX078015-BX078016	X078015	2			67.1	3.274	0.116	0.09	0.0648	0.002	0.28	0.113	0.013	0.006	0.014	0.067	-0.01	-0.01	-0.01	-0.03	937	0.1836	1.970946	-1.787346	NAF
NS0093	46	48	NS	X070925	070925	1	G	M	39.05	39.68	1.14	0.1032	0.08	0.049	0.34	0.12	0.11	0.009	0.293	0.018	1.65	0.36	0.06	2.07	14296	0.2754	2.09304	-1.81764	NAF
NS0093	90	94	NS	BX077947-BX077948	X077947	2			68.21	4.925	0.105	0.077	0.05544	0.013	0.302	0.115	0.015	0.004	0.013	0.06	-0.01	-0.01	-0.01	-0.03	903	0.1224	2.00583	-1.88343	NAF
NS0093	112	114	NS	BX077959	X077959	2			69	2.457	0.107	0.083	0.05976	0.012	0.312	0.116	0.018	0.004	0.063	0.07	-0.01	-0.01	-0.01	-0.03	909	0.1224	2.023272	-1.900872	NAF
NS0093	276	280	NS	BX078043-BX078044	X078043	2			66.13	6.193	0.146	0.085	0.0612	0.015	0.331	0.118	0.023	0.004	0.042	0.065	-0.01	-0.01	-0.01	-0.03	951	0.1224	2.058156	-1.935756	NAF
NS0093	62	64	NS	X070933	070933	1	G	M	31.67	38.11	3.05	0.774	0.6	0.137	3.7	0.5	0.134	0.217	0.447	0.082	0.49	6.37	0.32	7.18	14304	6.6402	8.721	-2.0808	NAF
NS0093	44	46	NS	X070924	070924	1	G	M	37.65	39.45	1.73	0.903	0.7	0.077	0.26	0.13	0.101	0.004	0.481	0.026	1.9	0.56	0.21	2.67	14295	0.1224	2.26746	-2.14506	NAF
NS0093	94	98	NS	BX077949-BX077950	X077949	2			67.81	5.597	0.103	0.083	0.05976	0.016	0.318	0.134	0.019	0.005	0.013	0.061	-0.01	-0.01	-0.01	-0.03	904	0.153	2.337228	-2.184228	NAF
NS0093	148	150	NS	X070977	070977	1	G	W	31.34	30.69	2.22	0.645	0.5	0.095	3.68	0.67	0.142	0.264	1.28	0.151	0.76	14.31	0.49	15.56	14185	8.0784	11.68614	-3.60774	NAF
NS0093	48	50	NS	X070926	070926	1	G	M	36.42	40.33	1.07	0.8643	0.67	0.048	1.21	0.31	0.086	0.019	0.172	0.02	0.5	3.25	-0.31	3.44	14297	0.5814	5.40702	-4.82562	NAF
NS0093	208	210	NS	X071008	071008	1	G	W	31.89	40.66	1.44	0.6063	0.47	0.065	2.95	0.94	0.101	0.363	0.179	0.073	0.28	5.76	0.57	6.61	14413	11.1078	16.39548	-5.28768	NAF
NS0093	140	142	NS	X070973	070973	1	G	W	20.16	54.86	1.13	0.4773	0.37	0.05	2.34	0.54	0.083	0.124	0.556	0.105	0.5	10.09	0.31	10.9	14271	3.7944	9.41868	-5.62428	NAF
NS0093	146	148	NS	X070976	070976	1	G	W	30.78	31.4	1.37	0.7353	0.57	0.058	3.56	0.71	0.09	0.19	0.805	0.085	0.6	15.82	0.29	16.71	14274	5.814	12.38382	-6.56982	NAF
NS0093	142	144	NS	X070974	070974	1	G	W	33.27	26.84	1.98	0.7611	0.59	0.09	3.71	0.47	0.066	0.045	1.15	0.124	0.64	16.53	-0.1	17.07	14272	1.377	8.19774	-6.82074	NAF
NS0093	66	68	NS	X070935	070935	1	G	W	29.36	45.23	1.26	0.7353	0.57	0.055	2.44	0.57	0.132	0.091	0.254	0.049	0.26	6.55	-0.07	6.74	14306	2.7846	9.94194	-7.15734	NAF
NS0093	242	244	NS	X071026	071026	1	G	W	35.4	37.86	0.87	0.7353	0.57	0.043	1.74	0.45	0.07	0.02	0.432	0.026	0.27	6.91	-0.3	6.88	14448	0.612	7.8489	-7.2369	NAF
NS0093	238	240	NS	X071024	071024	1	G	W	34.62	34.52	1.1	0.8643	0.67	0.047	2.5	0.5	0.074	0.024	0.54	0.026	0.35	10.05	-0.29	10.11	14446	0.7344	8.721	-7.9866	NAF
NS0093	122	124	NS	X070964	070964	1	G	W	29.67	36.21	2.8	0.5934	0.46	0.122	3.34	0.95	0.144	0.272	1.37	0.117	0.45	10.13	0.47	11.05	14262	8.3232	16.5699	-8.2467	NAF
NS0093	84	86	NS	X070954	070954	1	G	W	37.63	35.8	1.33	0.6966	0.54	0.057	2.42	0.51	0.1	0.021	0.198	0.04	0.21	5.03	-0.41	4.83	14378	0.6426	8.89542	-8.25282	NAF
NS0093	106	108	NS	X070956	070956	1	G	W	18.48	57.72	0.85	0.4773	0.37	0.037	1.68	0.63	0.094	0.087	0.229	0.054	0.52	10.7	0.25	11.47	14380	2.6622	10.98846	-8.32626	NAF
NS0093	270	272	NS	X071040	071040	1	G	W	37.62	34.63	1.44	0.7224	0.56	0.063	2.74	0.51	0.114	0.018	0.275	0.073	0.34	5.4	-0.37	5.37	14480	0.5508	8.89542	-8.34462	NAF
NS0093	50	52	NS	X070927	070927	1	G	M	36.11	38.85	1.39	0.9933	0.77	0.062	1.71	0.56	0.157	0.042	0.212	0.03	0.29	4.11	-0.27	4.13	14298	1.2852	9.76752	-8.48232	NAF
NS0093	240	242	NS	X071025	071025	1	G	W	33.91	39.7	0.84	0.8256	0.64	0.037	1.81	0.55	0.093	0.019	0.437	0.018	0.32	6.8	-0.27	6.85	14447	0.5814	9.5931	-9.0117	NAF
NS0093	264	266	NS	X071037	071037	1	G	W	36.36	37.14	1.19	0.6837	0.53	0.05	2.44	0.57	0.07	0.021	0.143	0.037	0.17	5.54	-0.28	5.43	14477	0.6426	9.94194	-9.29934	NAF
NS0093	244	246	NS	X071027	071027	1	G	W	36.82	35.02	1.18	0.645	0.5	0.05	2.1	0.58	0.096	0.025	0.32	0.026	0.23	7.28	-0.38	7.13	14449	0.765	10.11636	-9.35136	NAF
NS0093	70	72	NS	X070937	070937	1	G	W	31.73	40.71	2.25	0.6321	0.49	0.1	3.16	0.69	0.073	0.059	0.498	0.074	0.37	5.63	0.05	6.05	14308	1.8054	12.03498	-10.22958	NAF
NS0093	204	206	NS	X071006	071006	1	G	W	33.71	36.32	1.48	0.8256	0.64	0.065	3.51	0.67	0.108	0.034	0.2	0.089	0.39	8.13	-0.07	8.45	14411	1.0404	11.68614	-10.64574	NAF
NS0093	268	270	NS	X071039	071039	1	G	W	35.38	37.66	0.99	0.8643	0.67	0.044	2.43	0.65	0.086	0.013	0.313	0.036	0.16	5.94	-0.16	5.94	14479	0.3978	11.3373	-10.9395	NAF
NS0093	198	200	NS	X071003	071003	1	G	W	34.78	35.43	1.31	0.7869	0.61	0.057	3.34	0.69	0.095	0.027	0.189	0.083	0.36	7.71	-0.06	8.01	14408	0.8262	12.03498	-11.20878	NAF
NS0093	196	198	NS	X071002	071002	1	G	W	34.01	37.04	1.43	0.7482	0.58	0.063	3.31	0.71	0.09	0.034	0.156	0.066	0.33	7.17	-0.03	7.47	14407	1.0404	12.38382	-11.34342	NAF
NS0093	262	264	NS	X071036	071036	1	G	W	36.26	35.88	1.08	0.7998	0.62	0.048	2.55	0.71	0.102	0.022	0.255	0.043	0.27	6.2	-0.16	6.31	14476	0.6732	12.38382	-11.71062	NAF
NS0093	236	238	NS	X071023	071023	1	G	W	34.47	34.82	0.99	0.774	0.6	0.041	2.37	0.72	0.087	0.026	0.62	0.031	0.4	9.69	-0.13	9.96	14445	0.7956	12.55824	-11.76264	NAF
NS0093	232	234	NS	X071021	071021	1	G	W	29.22	39.05	0.74	0.6708	0.52	0.033	2.28	0.69	0.095	0.006	0.504	0.024	0.51	13.57	-0.08	14	14443	0.1836	12.03498	-11.85138	NAF
NS0093	254	256	NS	X071032	071032	1	G	W	34.43	37.36	1.06	0.7611	0.59	0.046	2.26	0.74	0.083	0.027	0.364	0.024	0.24	7.63	-0.15	7.72	14454	0.8262	12.90708	-12.08088	NAF
NS0093	246	248	NS	X071028	071028	1	G	W	31.55	37.6	1.02	0.7353	0.57	0.042	2.62	0.77	0.067	0.028	0.253	0.043	0.47	10.9	0.02	11.39	14450	0.8568	13.43034	-12.57354	NAF
NS0093	280	282	NS	X071045	071045	1	G	W	36.76	35.89	1.08	0.774	0.6	0.048	2.62	0.76	0.059	0.02	0.167	0.037	0.21	5.63	-0.11	5.73	14485	0.612	13.25592	-12.64392	NAF
NS0093	152	154	NS	X070979	070979	1	G	W	32.76	27.11	1.44	0.9288	0.72	0.059	4.09	1.03	0.105	0.165	0.637	0.097	0.62	16.08	0.36	17.06	14187	5.049	17.96526	-12.91626	NAF
NS0093	104	106	NS	X070955	070955	1	G	W	26.73	41.75	0.79	0.4902	0.38	0.034	2.58	0.82	0.076	0.045	0.25	0.078	0.68	13.82	0.19	14.69	14379	1.377	14.30244	-12.92544	NAF
NS0093	68	70	NS	X070936	070936	1	G	W	32.97	40.48	1.25	0.6966	0.54	0.053	2.47	0.81	0.126	0.034	0.325	0.045	0.29	6.05	-0.14	6.2	14307	1.0404	14.12802	-13.08762	NAF
NS0093	86	88	NS	X070944	070944	1	G	W	36.5	36.12	1.31	0.774	0.6	0.052	2.71	0.79	0.074	0.022	0.142	0.052	0.21	5.63	-0.03	5.81	14369	0.6732	13.77918	-13.10598	NAF
NS0093	174	176	NS	X070991	070991	1	G	W	33.71	38.81	1.98	0.5676	0.44	0.091	2.89	0.95	0.078	0.11	0.473	0.123	0.35	4.77	0.25	5.37	14198	3.366	16.5699	-13.2039	NAF
NS0093	260	262	NS	X071035	071035	1	G	W	36.62	35.23	1.07	0.8127	0.63	0.047	2.43	0.83	0.101	0.023	0.311	0.045	0.28	6.3	-0.2	6.38	14475	0.7038	14.47686	-13.77306	NAF
NS0093	210	212	NS	X071009	071009	1	G	W	34.16	36.14	2.16	0.5676	0.44	0.097	3.45	0.89	0.174	0.056	0.306	0.14	0.45	6.44	-0.05	6.84	14414	1.7136	15.52338	-13.80978	NAF
NS0093	144	146	NS	X070975	070975	1	G	W	34.19	25.22	1.02	0.9546	0.74	0.044	3.54	0.86	0.163	0.026	0.6	0.073	0.65	17.75	-0.13	18.27	14273	0.7956	15.00012	-14.20452	NAF
NS0093	72	74	NS	X070938	070938	1	G	W	31.98	42.4	1.17	0.7482	0.58	0.051	2.43	0.9	0.086	0.037	0.219	0.04	0.23	5.71	0.14	6.08	14309	1.1322	15.6978	-14.5656	NAF
NS0093	206	208	NS	X071007	071007	1	G	W	33.37	37.42	1.22	0.7611	0.59	0.052	3.25	0.89	0.099	0.029	0.226	0.1	0.34	7.38	0.16	7.88	14412	0.8874	15.52338	-14.63598	NAF
NS0093	266	268	NS	X071038	071038	1	G	W	34.31	37.57	0.99	1.032	0.8	0.045	2.44	0.88	0.127	0.022	0.415	0.04	0.27	6.83	-0.04	7.06	14478	0.6732	15.34896	-14.67576	NAF
NS0093	278	280	NS	X071044	071044	1	G	W	36.33	35	1.34	0.7869	0.61	0.056	2.97	0.91	0.117	0.035	0.3	0.063	0.16	6.03	-0.05	6.14	14484	1.071	15.87222	-14.80122	NAF
NS0093	194	196	NS	X071001	071001	1	G	W	35.53	33.68	1.45	0.8385	0.65	0.063	3.48	0.9	0.128	0.029	0.164	0.074	0.31	7.73	0.02	8.06	14406	0.8874	15.6978	-14.8104	NAF
NS0093	150	152	NS	X070978	070978	1	G	W	36.27	22.17	1.59	0.9804	0.76	0.062	3.62	0.91	0.196	0.031	0.978	0.105	0.64	16.7	-0.21	17.13	14186	0.9486	15.87222	-14.92362	NAF
NS0093	248	250	NS	X071029	071029	1	G	W	32.69	28.98	1.05	0.7998	0.62	0.045	3.42	0.89	0.097	0.017	0.454	0.047	0.65	16.45	0.12	17.22	14451	0.5202	15.52338	-15.00318	NAF
NS0093	272	274	NS	X071041	071041	1	G	W	35.09	37.56	1.02	0.7998	0.62	0.046	2.55	0.9	0.083	0.017	0.325	0.05	0.26	5.84	0.14	6.24	14481	0.5202	15.6978	-15.1776	NAF
NS0093	110	112	NS	X070958	070958	1	G	W	23.4	46.23	1	0.4902	0.38	0.044	2.42	0.99	0.079	0.063	0.337	0.075	0.55	13.52	0.44	14.51	14382	1.9278	17.26758	-15.33978	NAF
NS0093	234	236	NS	X071022	071022	1	G	W	31.46	33.44	0.81	0.7224	0.56	0.03	2.97	0.95	0.091	0.017	0.563	0.026	0.52	14.53	0.22	15.27	14444	0.5202	16.5699	-16.0497	NAF
NS0093	274	276	NS	X071042	071042	1	G	W	35.99	36.43	1.13	0.7482	0.58	0.048	2.62	0.98	0.104	0.028	0.256	0.063	0.14	5.64	0.08	5.86	14482	0.8568	17.09316	-16.23636	NAF
NS0093	154	156	NS	X070980	070980	1	G	W	32.59	38.55	2.33	0.5676	0.44	0.101	3.06	1.14	0.171	0.114	0.549	0.11	0.36	5.82	0.22	6.4	14188	3.4884	19.88388	-16.39548	NAF
NS0093	256	258	NS	X071033	071033	1	G	W	35.4	36.12	1.24	0.7095	0.55	0.053	2.5	1	0.086	0.031	0.166	0.022	0.32	6.86	0.03	7.21	14473	0.9486	17.442	-16.4934	NAF
NS0093	212	214	NS	X071010	071010	1	G	W	31.71	39.62	1.12	0.7224	0.56	0.048	3.02	1.03	0.096	0.031	0.132	0.048	0.37	7.84	0.25	8.46	14415	0.9486	17.96526	-17.01666	NAF
NS0093	162	164	NS	X070985	070985	1	G	W	33.05	39.57	1.58	0.645	0.5	0.072	2.8	1.1	0.056	0.059	0.297	0.09	0.29	5.29	0.52	6.1	14192	1.8054	19.1862	-17.3808	NAF
NS0093	88	90	NS	X070945	070945	1	G	W	34.92	35.72	1.41	0.8127	0.63	0.06	3.14	1.08	0.095	0.035	0.193	0.056	0.27	6.62	0.33	7.22	14370	1.071	18.83736	-17.76636	NAF
NS0093	114	116	NS	X070960	070960	1	G	W	30.45	35.7	1.12	0.645	0.5	0.046	3.07	1.1	0.094	0.04	0.528	0.079	0.46	12.96	0.38	13.8	14258	1.224	19.1862	-17.9622	NAF
NS0093	108	110	NS	X070957	070957	1	G	W	27.22	37.56	1.14	0.7095	0.55	0.049	2.56	1.16	0.144	0.062	0.43	0.077	0.67	15.99	0.31	16.97	14381	1.8972	20.23272	-18.33552	NAF
NS0093	202	204	NS	X071005	071005	1	G	W	34.8	34.99	1.59	0.6966	0.54	0.068	3.41	1.12	0.091	0.039	0.34	0.133	0.49	6.47	0.44	7.4	14410	1.1934	19.53504	-18.34164	NAF
NS0093	112	114	NS	X070959	070959	1	G	W	35.13	23.84	1.16	0.7611	0.59	0.05	3.05	1.07	0.127	0.008	0.626	0.063	0.64	18.05	0.1	18.79	14257	0.2448	18.66294	-18.41814	NAF
NS0093	102	104	NS	X070953	070953	1	G	W	31.39	35.33	0.91	0.645	0.5	0.041	3.15	1.12	0.11	0.032	0.161	0.061	0.53	12.64	0.32	13.49	14377	0.9792	19.53504	-18.55584	NAF
NS0093	276	278	NS	X071043	071043	1	G	W	36.01	36.71	1.06	0.8127	0.63	0.046	2.37	1.12	0.096	0.028	0.298	0.04	0.17	5.25	0.22	5.64	14483	0.8568	19.53504	-18.67824	NAF
NS0093	252	254	NS	X071031	071031	1	G	W	33.32	37.02	0.84	0.774	0.6	0.037	2.27	1.13	0.076	0.022	0.42	0.019	0.37	8.94	0.27	9.58	14453	0.6732	19.70946	-19.03626	NAF
NS0093	124	126	NS	X070965	070965	1	G	W	32.07	39	1.32	0.6579	0.51	0.059	2.53	1.19	0.071	0.037	0.403	0.083	0.41	7.53	0.59	8.53	14263	1.1322	20.75598	-19.62378	NAF
NS0093	176	178	NS	X070992	070992	1	G	W	34.72	38.01	1.33	0.6837	0.53	0.058	2.5	1.17	0.138	0.025	0.227	0.072	0.25	5.47	0.14	5.86	14199	0.765	20.40714	-19.64214	NAF
NS0093	134	136	NS	X070970	070970	1	G	W	34.98	34.79	1.38	0.8385	0.65	0.06	3.05	1.25	0.105	0.03	0.101	0.04	0.17	7.44	0.39	8	14268	0.918	21.8025	-20.8845	NAF
NS0093	178	180	NS	X070993	070993	1	G	W	32.57	38.79	1.65	0.6579	0.51	0.073	2.96	1.32	0.216	0.061	0.366	0.115	0.38	6.14	0.24	6.76	14200	1.8666	23.02344	-21.15684	NAF
NS0093	222	224	NS	X071016	071016	1	G	W	31.97	26.15	1.19	0.8514	0.66	0.054	2.81	1.32	0.12	0.041	0.192	0.029	0.78	20.17	0.33	21.28	14438	1.2546	23.02344	-21.76884	NAF
NS0093	200	202	NS	X071004	071004	1	G	W	34.28	35.15	1.4	0.7353	0.57	0.06	3.4	1.3	0.09	0.028	0.297	0.118	0.4	6.99	0.71	8.1	14409	0.8568	22.6746	-21.8178	NAF
NS0093	216	218	NS	X071013	071013	1	G	W	30.63	33.93	0.88	0.5805	0.45	0.038	3.11	1.31	0.1	0.031	0.19	0.07	0.75	14.51	0.54	15.8	14417	0.9486	22.84902	-21.90042	NAF
NS0093	190	192	NS	X070999	070999	1	G	W	36.37	35.02	1.22	0.7353	0.57	0.051	2.87	1.31	0.115	0.019	0.199	0.079	0.22	5.43	0.46	6.11	14404	0.5814	22.84902	-22.26762	NAF
NS0093	78	80	NS	X070941	070941	1	G	W	34.27	38.44	1.44	0.7095	0.55	0.063	2.61	1.39	0.101	0.059	0.317	0.074	0.32	4.67	0.57	5.56	14366	1.8054	24.24438	-22.43898	NAF
NS0093	214	216	NS	X071012	071012	1	G	W	31.72	39.49	0.94	0.5676	0.44	0.041	2.64	1.37	0.13	0.028	0.127	0.054	0.31	8.21	0.5	9.02	14416	0.8568	23.89554	-23.03874	NAF
NS0093	76	78	NS	X070940	070940	1	G	W	34.1	37.61	1.24	0.8514	0.66	0.053	2.67	1.39	0.112	0.034	0.23	0.061	0.27	5.89	0.57	6.73	14365	1.0404	24.24438	-23.20398	NAF
NS0093	258	260	NS	X071034	071034	1	G	W	34.96	36.98	0.95	0.774	0.6	0.042	2.3	1.39	0.08	0.021	0.311	0.034	0.17	6.09	0.55	6.81	14474	0.6426	24.24438	-23.60178	NAF
NS0093	74	76	NS	X070939	070939	1	G	W	32.68	41.43	1.12	0.7095	0.55	0.048	2.32	1.4	0.076	0.023	0.195	0.039	0.21	4.77	0.7	5.68	14310	0.7038	24.4188	-23.715	NAF
NS0093	90	92	NS	X070946	070946	1	G	W	33.04	37.8	1.25	0.8127	0.63	0.054	3.17	1.42	0.09	0.032	0.204	0.067	0.33	6.67	0.77	7.77	14371	0.9792	24.76764	-23.78844	NAF
NS0093	218	220	NS	X071014	071014	1	G	W	28.33	33.87	0.86	0.5289	0.41	0.039	3.18	1.44	0.118	0.033	0.231	0.084	0.7	17.59	0.59	18.88	14418	1.0098	25.11648	-24.10668	NAF
NS0093	130	132	NS	X070968	070968	1	G	W	31.43	38.28	2.71	0.5547	0.43	0.133	3.46	1.75	0.154	0.202	0.413	0.094	0.34	5.43	0.9	6.67	14266	6.1812	30.5235	-24.3423	NAF
NS0093	228	230	NS	X071019	071019	1	G	W	31.7	24.2	0.96	0.8643	0.67	0.042	3.86	1.43	0.087	0.016	0.285	0.055	0.75	21.3	0.62	22.67	14441	0.4896	24.94206	-24.45246	NAF
NS0093	180	182	NS	X070994	070994	1	G	W	31.13	41.53	1.14	0.7224	0.56	0.051	2.66	1.47	0.08	0.035	0.271	0.074	0.23	6.14	0.84	7.21	14201	1.071	25.63974	-24.56874	NAF
NS0093	136	138	NS	X070971	070971	1	G	W	35.08	36.9	1.21	0.7095	0.55	0.052	2.54	1.5	0.082	0.019	0.094	0.025	0.12	5.64	0.7	6.46	14269	0.5814	26.163	-25.5816	NAF
NS0093	220	222	NS	X071015	071015	1	G	W	28.11	35.26	1.89	0.516	0.4	0.087	2.85	1.66	0.166	0.109	0.166	0.054	0.77	15.43	0.54	16.74	14437	3.3354	28.95372	-25.61832	NAF
NS0093	100	102	NS	X070952	070952	1	G	W	30.39	40.77	1.49	0.645	0.5	0.065	3.01	1.79	0.13	0.173	0.19	0.07	0.34	6.57	0.87	7.78	14376	5.2938	31.22118	-25.92738	NAF
NS0093	184	186	NS	X070996	070996	1	G	W	33.32	37.14	1.61	0.774	0.6	0.07	3.09	1.64	0.159	0.083	0.379	0.114	0.37	5.77	0.77	6.91	14401	2.5398	28.60488	-26.06508	NAF
NS0093	224	226	NS	X071017	071017	1	G	W	24.94	39.1	2.06	0.5805	0.45	0.093	3.1	1.8	0.102	0.173	0.222	0.089	0.66	15.09	0.97	16.72	14439	5.2938	31.3956	-26.1018	NAF
NS0093	160	162	NS	X070983	070983	1	G	W	35.06	38.51	1.09	0.645	0.5	0.05	2.2	1.59	0.116	0.027	0.201	0.048	0.15	4.35	0.67	5.17	14191	0.8262	27.73278	-26.90658	NAF
NS0093	138	140	NS	X070972	070972	1	G	W	29.8	38.48	1.47	0.6708	0.52	0.066	3.2	1.67	0.099	0.057	0.498	0.094	0.44	9.44	0.96	10.84	14270	1.7442	29.12814	-27.38394	NAF
NS0093	96	98	NS	X070950	070950	1	G	W	32.38	39.18	1.17	0.7482	0.58	0.05	2.93	1.63	0.097	0.034	0.162	0.056	0.27	6.29	0.98	7.54	14374	1.0404	28.43046	-27.39006	NAF
NS0093	80	82	NS	X070942	070942	1	G	W	34.56	38.14	1.22	0.7095	0.55	0.053	2.47	1.64	0.111	0.039	0.237	0.056	0.23	4.53	0.83	5.59	14367	1.1934	28.60488	-27.41148	NAF
NS0093	230	232	NS	X071020	071020	1	G	W	30.55	29.04	0.99	0.645	0.5	0.042	3.53	1.62	0.059	0.011	0.373	0.054	0.67	18.19	0.92	19.78	14442	0.3366	28.25604	-27.91944	NAF
NS0093	92	94	NS	X070947	070947	1	G	W	32.52	39	1.11	0.774	0.6	0.05	2.96	1.68	0.125	0.028	0.192	0.062	0.29	6.17	0.94	7.4	14372	0.8568	29.30256	-28.44576	NAF
NS0093	168	170	NS	X070988	070988	1	G	W	33.71	40.61	1.01	0.645	0.5	0.044	2.12	1.7	0.077	0.035	0.209	0.049	0.12	3.81	1.03	4.96	14195	1.071	29.6514	-28.5804	NAF
NS0093	98	100	NS	X070951	070951	1	G	W	31.43	39.87	1.08	0.774	0.6	0.047	2.89	1.77	0.114	0.027	0.139	0.06	0.24	6.74	1.13	8.11	14375	0.8262	30.87234	-30.04614	NAC
NS0093	164	166	NS	X070986	070986	1	G	W	32.77	41.64	1.03	0.7095	0.55	0.043	2.13	1.82	0.058	0.032	0.22	0.042	0.1	3.91	1.29	5.3	14193	0.9792	31.74444	-30.76524	NAC
NS0093	172	174	NS	X070990	070990	1	G	W	31.28	39.22	1.52	0.7869	0.61	0.064	2.93	1.93	0.14	0.049	0.55	0.101	0.3	6.25	1.25	7.8	14197	1.4994	33.66306	-32.16366	NAC
NS0093	166	168	NS	X070987	070987	1	G	W	32.2	40.16	1.65	0.6708	0.52	0.071	2.76	1.95	0.092	0.058	0.367	0.082	0.24	4.35	1.32	5.91	14194	1.7748	34.0119	-32.2371	NAC
NS0093	156	158	NS	X070981	070981	1	G	W	34.4	38.02	1.41	0.5676	0.44	0.063	2.37	1.99	0.159	0.078	0.372	0.069	0.17	4.17	1.05	5.39	14189	2.3868	34.70958	-32.32278	NAC
NS0093	120	122	NS	X070963	070963	1	G	W	27.58	39.03	2.13	0.7095	0.55	0.091	3.54	2.14	0.107	0.131	0.502	0.101	0.43	9.6	1.67	11.7	14261	4.0086	37.32588	-33.31728	NAC
NS0093	126	128	NS	X070966	070966	1	G	W	33.12	37.75	1.28	0.6837	0.53	0.059	2.43	2	0.123	0.023	0.308	0.044	0.23	6.04	1.34	7.61	14264	0.7038	34.884	-34.1802	NAC
NS0093	132	134	NS	X070969	070969	1	G	W	32.23	38.12	1.29	0.7611	0.59	0.056	2.87	2.03	0.124	0.039	0.191	0.047	0.22	6.42	1.36	8	14267	1.1934	35.40726	-34.21386	NAC
NS0093	116	118	NS	X070961	070961	1	G	W	30.54	40.95	1.16	0.6063	0.47	0.05	2.52	2.02	0.115	0.027	0.26	0.053	0.21	6.8	1.43	8.44	14259	0.8262	35.23284	-34.40664	NAC
NS0093	94	96	NS	X070949	070949	1	G	W	31.45	39.45	1	0.7869	0.61	0.044	2.98	2.06	0.126	0.028	0.175	0.067	0.25	6.38	1.45	8.08	14373	0.8568	35.93052	-35.07372	NAC
NS0093	128	130	NS	X070967	070967	1	G	W	31.45	37.97	2.23	0.5934	0.46	0.106	3.16	2.23	0.135	0.112	0.459	0.088	0.33	5.76	1.45	7.54	14265	3.4272	38.89566	-35.46846	NAC
NS0093	170	172	NS	X070989	070989	1	G	W	33.65	38.34	1.33	0.6708	0.52	0.057	2.51	2.22	0.06	0.048	0.413	0.078	0.2	4.02	1.81	6.03	14196	1.4688	38.72124	-37.25244	NAC
NS0093	82	84	NS	X070943	070943	1	G	W	32.09	40.69	0.99	0.7353	0.57	0.041	2.47	2.23	0.114	0.022	0.172	0.038	0.19	4.55	1.64	6.38	14368	0.6732	38.89566	-38.22246	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0093	250	252	NS	X071030	071030	1	G	W	30.98	27.98	0.98	0.7611	0.59	0.04	3.65	2.29	0.061	0.029	0.307	0.034	0.61	17.54	1.24	19.39	14452	0.8874	39.94218	-39.05478	NAC
NS0093	118	120	NS	X070962	070962	1	G	W	29.71	39.27	1.73	0.645	0.5	0.075	2.94	2.64	0.11	0.065	0.477	0.073	0.3	6.82	2.19	9.31	14260	1.989	46.04688	-44.05788	NAC
NS0093	158	160	NS	X070982	070982	1	G	W	31.01	39.29	1.42	0.6708	0.52	0.063	2.84	3.14	0.121	0.066	0.363	0.079	0.25	4.33	2.7	7.28	14190	2.0196	54.76788	-52.74828	NAC
NS0094	32	36	NS	BX078063-BX078064	X078063	2			67.58	3.419	0.068	0.088	0.06336	0.011	0.105	0.026	0.015	0.001	0.014	0.067	0.17	0.14	0.03	0.34	954	0.0306	0.453492	-0.422892	NAF
NS0094	28	32	NS	BX078061-BX078062	X078061	2			68.17	3.361	0.122	0.116	0.08352	0.014	0.112	0.027	0.017	0.001	0.016	0.067	0.29	0.36	0.12	0.77	953	0.0306	0.470934	-0.440334	NAF
NS0094	36	40	NS	BX078065-BX078066	X078065	2			68.77	3.019	0.055	0.076	0.05472	0.013	0.105	0.028	0.015	0.001	0.015	0.083	0.18	0.07	-0.01	0.24	955	0.0306	0.488376	-0.457776	NAF
NS0094	246	250	NS	BX078171-BX078172	X078171	2			70.45	2.894	0.046	0.048	0.03456	0.005	0.167	0.04	0.007	0.003	0.048	0.059	-0.01	-0.01	-0.01	-0.03	1007	0.0918	0.69768	-0.60588	NAF
NS0094	262	266	NS	BX078179-BX078180	X078179	2			70.76	3.024	0.046	0.045	0.0324	0.013	0.161	0.046	0.007	0.002	0.049	0.062	-0.01	-0.01	-0.01	-0.03	1011	0.0612	0.802332	-0.741132	NAF
NS0094	258	262	NS	BX078177-BX078178	X078177	2			71.23	2.262	0.054	0.05	0.036	0.009	0.171	0.051	0.008	0.004	0.058	0.07	-0.01	-0.01	-0.01	-0.03	1010	0.1224	0.889542	-0.767142	NAF
NS0094	212	214	NS	BX078154	X078154	2			70.55	2.688	0.078	0.049	0.03528	0.011	0.209	0.053	0.011	0.004	0.062	0.101	-0.01	-0.01	-0.01	-0.03	998	0.1224	0.924426	-0.802026	NAF
NS0094	214	218	NS	BX078155-BX078156	X078155	2			69.78	3.654	0.056	0.045	0.0324	0.01	0.173	0.053	0.009	0.002	0.047	0.071	-0.01	-0.01	-0.01	-0.03	999	0.0612	0.924426	-0.863226	NAF
NS0094	172	176	NS	BX078133-BX078134	X078133	2			70.71	2.692	0.044	0.046	0.03312	0.01	0.157	0.053	0.01	0.001	0.035	0.058	-0.01	-0.01	-0.01	-0.03	988	0.0306	0.924426	-0.893826	NAF
NS0094	176	180	NS	BX078135-BX078136	X078135	2			70.72	3.072	0.05	0.043	0.03096	0.011	0.161	0.054	0.01	0.001	0.04	0.062	-0.01	-0.01	-0.01	-0.03	989	0.0306	0.941868	-0.911268	NAF
NS0094	208	212	NS	BX078151-BX078152	X078151	2			70.41	2.951	0.079	0.052	0.03744	0.012	0.203	0.056	0.011	0.002	0.058	0.054	-0.01	-0.01	-0.01	-0.03	997	0.0612	0.976752	-0.915552	NAF
NS0094	234	238	NS	BX078165-BX078166	X078165	2			70.45	2.902	0.097	0.046	0.03312	0.013	0.199	0.056	0.011	0.002	0.078	0.056	-0.01	-0.01	-0.01	-0.03	1004	0.0612	0.976752	-0.915552	NAF
NS0094	254	258	NS	BX078175-BX078176	X078175	2			70.89	2.7	0.066	0.052	0.03744	0.009	0.189	0.057	0.009	0.002	0.067	0.076	-0.01	-0.01	-0.01	-0.03	1009	0.0612	0.994194	-0.932994	NAF
NS0094	278	282	NS	BX078187-BX078188	X078187	2			70.7	2.351	0.065	0.053	0.03816	0.008	0.203	0.056	0.01	0.001	0.059	0.066	-0.01	-0.01	-0.01	-0.03	1015	0.0306	0.976752	-0.946152	NAF
NS0094	40	44	NS	BX078067-BX078068	X078067	2			68.96	3.876	0.076	0.064	0.04608	0.011	0.215	0.058	0.012	0.002	0.022	0.057	-0.01	-0.01	-0.01	-0.03	956	0.0612	1.011636	-0.950436	NAF
NS0094	44	48	NS	BX078069-BX078070	X078069	2			69.55	3.645	0.076	0.062	0.04464	0.013	0.197	0.058	0.01	0.002	0.035	0.067	-0.01	-0.01	-0.01	-0.03	957	0.0612	1.011636	-0.950436	NAF
NS0094	218	222	NS	BX078157-BX078158	X078157	2			70.18	2.886	0.078	0.057	0.04104	0.012	0.195	0.062	0.011	0.004	0.059	0.092	-0.01	-0.01	-0.01	-0.03	1000	0.1224	1.081404	-0.959004	NAF
NS0094	204	208	NS	BX078149-BX078150	X078149	2			71.21	1.601	0.076	0.057	0.04104	0.011	0.202	0.058	0.009	0.001	0.059	0.058	-0.01	-0.01	-0.01	-0.03	996	0.0306	1.011636	-0.981036	NAF
NS0094	230	232	NS	BX078163	X078163	2			71.32	2.28	0.078	0.045	0.0324	0.011	0.196	0.058	0.011	0.001	0.064	0.059	-0.01	-0.01	-0.01	-0.03	1003	0.0306	1.011636	-0.981036	NAF
NS0094	274	278	NS	BX078185-BX078186	X078185	2			70.11	3.298	0.088	0.06	0.0432	0.01	0.207	0.061	0.009	0.002	0.069	0.063	-0.01	-0.01	-0.01	-0.03	1014	0.0612	1.063962	-1.002762	NAF
NS0094	180	184	NS	BX078137-BX078138	X078137	2			70.16	4.087	0.064	0.056	0.04032	0.012	0.184	0.06	0.01	0.001	0.048	0.056	-0.01	-0.01	-0.01	-0.03	990	0.0306	1.04652	-1.01592	NAF
NS0094	266	270	NS	BX078181-BX078182	X078181	2			70.51	3.029	0.075	0.058	0.04176	0.008	0.212	0.062	0.01	0.002	0.067	0.071	-0.01	-0.01	-0.01	-0.03	1012	0.0612	1.081404	-1.020204	NAF
NS0094	144	148	NS	BX078119-BX078120	X078119	2			70.06	3.404	0.073	0.049	0.03528	0.007	0.175	0.064	0.013	0.001	0.066	0.05	-0.01	-0.01	-0.01	-0.03	981	0.0306	1.116288	-1.085688	NAF
NS0094	270	274	NS	BX078183-BX078184	X078183	2			70.45	2.705	0.077	0.055	0.0396	0.01	0.2	0.066	0.013	0.002	0.074	0.072	-0.01	-0.01	-0.01	-0.03	1013	0.0612	1.151172	-1.089972	NAF
NS0094	140	144	NS	BX078117-BX078118	X078117	2			70.6	2.931	0.078	0.049	0.03528	0.011	0.177	0.065	0.011	0.001	0.068	0.065	-0.01	-0.01	-0.01	-0.03	980	0.0306	1.13373	-1.10313	NAF
NS0094	192	196	NS	BX078143-BX078144	X078143	2			69.02	5.033	0.104	0.063	0.04536	0.01	0.246	0.065	0.012	0.001	0.072	0.056	-0.01	-0.01	-0.01	-0.03	993	0.0306	1.13373	-1.10313	NAF
NS0094	238	242	NS	BX078167-BX078168	X078167	2			70.13	3.76	0.1	0.053	0.03816	0.012	0.2	0.067	0.012	0.002	0.075	0.074	-0.01	-0.01	-0.01	-0.03	1005	0.0612	1.168614	-1.107414	NAF
NS0094	52	56	NS	BX078073-BX078074	X078073	2			68.92	4.05	0.062	0.055	0.0396	0.012	0.184	0.066	0.012	0.001	0.032	0.058	-0.01	-0.01	-0.01	-0.03	959	0.0306	1.151172	-1.120572	NAF
NS0094	184	188	NS	BX078139-BX078140	X078139	2			70.37	3.555	0.066	0.052	0.03744	0.01	0.179	0.066	0.012	0.001	0.049	0.052	-0.01	-0.01	-0.01	-0.03	991	0.0306	1.151172	-1.120572	NAF
NS0094	48	52	NS	BX078071-BX078072	X078071	2			69.71	3.58	0.079	0.058	0.04176	0.013	0.189	0.068	0.014	0.002	0.043	0.053	-0.01	-0.01	-0.01	-0.03	958	0.0612	1.186056	-1.124856	NAF
NS0094	196	200	NS	BX078145-BX078146	X078145	2			69.56	3.722	0.096	0.07	0.0504	0.011	0.255	0.067	0.012	0.001	0.069	0.049	-0.01	-0.01	-0.01	-0.03	994	0.0306	1.168614	-1.138014	NAF
NS0094	120	124	NS	BX078107-BX078108	X078107	2			69.92	3.569	0.096	0.057	0.04104	0.011	0.198	0.069	0.015	0.002	0.064	0.062	-0.01	-0.01	-0.01	-0.03	976	0.0612	1.203498	-1.142298	NAF
NS0094	112	116	NS	BX078103-BX078104	X078103	2			69.7	4.218	0.14	0.056	0.04032	0.017	0.245	0.08	0.018	0.008	0.073	0.075	-0.01	-0.01	-0.01	-0.03	974	0.2448	1.39536	-1.15056	NAF
NS0094	102	106	NS	BX078097-BX078098	X078097	2			68.82	5.097	0.134	0.06	0.0432	0.015	0.248	0.072	0.017	0.003	0.064	0.067	-0.01	-0.01	-0.01	-0.03	971	0.0918	1.255824	-1.164024	NAF
NS0094	242	246	NS	BX078169-BX078170	X078169	2			71.32	2.311	0.089	0.05	0.036	0.015	0.18	0.069	0.011	0.001	0.075	0.047	-0.01	-0.01	-0.01	-0.03	1006	0.0306	1.203498	-1.172898	NAF
NS0094	250	254	NS	BX078173-BX078174	X078173	2			69.94	3.451	0.111	0.067	0.04824	0.011	0.232	0.07	0.015	0.001	0.103	0.059	-0.01	-0.01	-0.01	-0.03	1008	0.0306	1.22094	-1.19034	NAF
NS0094	110	112	NS	BX078102	X078102	2			69.57	4.404	0.14	0.064	0.04608	0.017	0.266	0.079	0.019	0.006	0.074	0.072	-0.01	-0.01	-0.01	-0.03	973	0.1836	1.377918	-1.194318	NAF
NS0094	124	128	NS	BX078109-BX078110	X078109	2			69.59	4.25	0.081	0.053	0.03816	0.01	0.198	0.072	0.015	0.002	0.059	0.051	-0.01	-0.01	-0.01	-0.03	977	0.0612	1.255824	-1.194624	NAF
NS0094	152	156	NS	BX078123-BX078124	X078123	2			69.69	4.302	0.075	0.046	0.03312	0.01	0.181	0.071	0.012	0.001	0.066	0.054	-0.01	-0.01	-0.01	-0.03	983	0.0306	1.238382	-1.207782	NAF
NS0094	116	120	NS	BX078105-BX078106	X078105	2			69.43	4.663	0.1	0.058	0.04176	0.012	0.221	0.077	0.016	0.004	0.063	0.08	-0.01	-0.01	-0.01	-0.03	975	0.1224	1.343034	-1.220634	NAF
NS0094	98	102	NS	BX078095-BX078096	X078095	2			66.62	6	0.159	0.067	0.04824	0.017	0.284	0.078	0.018	0.004	0.077	0.067	-0.01	-0.01	-0.01	-0.03	970	0.1224	1.360476	-1.238076	NAF
NS0094	148	152	NS	BX078121-BX078122	X078121	2			69.49	4.492	0.109	0.054	0.03888	0.009	0.2	0.075	0.016	0.002	0.088	0.075	-0.01	-0.01	-0.01	-0.03	982	0.0612	1.30815	-1.24695	NAF
NS0094	132	136	NS	BX078113-BX078114	X078113	2			69.58	3.652	0.112	0.064	0.04608	0.012	0.216	0.077	0.016	0.003	0.086	0.074	-0.01	-0.01	-0.01	-0.03	979	0.0918	1.343034	-1.251234	NAF
NS0094	200	204	NS	BX078147-BX078148	X078147	2			70.15	2.943	0.101	0.06	0.0432	0.01	0.226	0.074	0.015	0.001	0.07	0.055	-0.01	-0.01	-0.01	-0.03	995	0.0306	1.290708	-1.260108	NAF
NS0094	156	160	NS	BX078125-BX078126	X078125	2			69.38	4.136	0.093	0.05	0.036	0.009	0.195	0.078	0.015	0.002	0.079	0.077	-0.01	-0.01	-0.01	-0.03	984	0.0612	1.360476	-1.299276	NAF
NS0094	226	230	NS	BX078161-BX078162	X078161	2			70.8	2.315	0.084	0.052	0.03744	0.011	0.191	0.078	0.014	0.002	0.067	0.064	-0.01	-0.01	-0.01	-0.03	1002	0.0612	1.360476	-1.299276	NAF
NS0094	188	192	NS	BX078141-BX078142	X078141	2			71.12	2.304	0.077	0.055	0.0396	0.01	0.208	0.077	0.015	0.001	0.058	0.053	-0.01	-0.01	-0.01	-0.03	992	0.0306	1.343034	-1.312434	NAF
NS0094	106	110	NS	BX078099-BX078100	X078099	2			70.09	3.047	0.078	0.05	0.036	0.01	0.213	0.081	0.019	0.003	0.042	0.071	-0.01	-0.01	-0.01	-0.03	972	0.0918	1.412802	-1.321002	NAF
NS0094	60	64	NS	BX078077-BX078078	X078077	2			68.51	4.463	0.106	0.058	0.04176	0.011	0.206	0.084	0.017	0.004	0.059	0.071	-0.01	-0.01	-0.01	-0.03	961	0.1224	1.465128	-1.342728	NAF
NS0094	58	58	NS	BX078075-BX078076	X078075	2			69.39	3.833	0.073	0.052	0.03744	0.009	0.174	0.083	0.015	0.003	0.046	0.072	-0.01	-0.01	-0.01	-0.03	960	0.0918	1.447686	-1.355886	NAF
NS0094	64	68	NS	BX078079-BX078080	X078079	2			68.75	4.472	0.132	0.056	0.04032	0.014	0.225	0.09	0.02	0.006	0.064	0.063	-0.01	-0.01	-0.01	-0.03	962	0.1836	1.56978	-1.38618	NAF
NS0094	222	224	NS	BX078159	X078159	2			70.38	2.971	0.124	0.062	0.04464	0.016	0.228	0.084	0.018	0.002	0.088	0.058	-0.01	-0.01	-0.01	-0.03	1001	0.0612	1.465128	-1.403928	NAF
NS0094	76	80	NS	BX078085-BX078086	X078085	2			69.8	3.531	0.1	0.057	0.04104	0.015	0.187	0.103	0.016	0.012	0.069	0.072	-0.01	-0.01	-0.01	-0.03	965	0.3672	1.796526	-1.429326	NAF
NS0094	80	84	NS	BX078087-BX078088	X078087	2			68.75	4.195	0.187	0.064	0.04608	0.02	0.231	0.115	0.018	0.018	0.121	0.076	-0.01	-0.01	-0.01	-0.03	966	0.5508	2.00583	-1.45503	NAF
NS0094	164	166	NS	BX078129	X078129	2			68.9	5.585	0.132	0.053	0.03816	0.012	0.205	0.087	0.017	0.002	0.102	0.059	-0.01	-0.01	-0.01	-0.03	986	0.0612	1.517454	-1.456254	NAF
NS0094	168	172	NS	BX078131-BX078132	X078131	2			69.65	4.407	0.112	0.065	0.0468	0.013	0.225	0.088	0.017	0.002	0.074	0.062	-0.01	-0.01	-0.01	-0.03	987	0.0612	1.534896	-1.473696	NAF
NS0094	128	132	NS	BX078111-BX078112	X078111	2			68.33	5.54	0.123	0.066	0.04752	0.012	0.237	0.09	0.021	0.002	0.088	0.056	-0.01	-0.01	-0.01	-0.03	978	0.0612	1.56978	-1.50858	NAF
NS0094	160	164	NS	BX078127-BX078128	X078127	2			68.26	5.405	0.14	0.056	0.04032	0.011	0.224	0.09	0.017	0.002	0.103	0.066	-0.01	-0.01	-0.01	-0.03	985	0.0612	1.56978	-1.50858	NAF
NS0094	72	76	NS	BX078083-BX078084	X078083	2			69.03	3.615	0.105	0.056	0.04032	0.013	0.187	0.102	0.017	0.008	0.071	0.06	-0.01	-0.01	-0.01	-0.03	964	0.2448	1.779084	-1.534284	NAF
NS0094	84	88	NS	BX078089	X078089	2			68.38	5.555	0.179	0.065	0.0468	0.019	0.278	0.103	0.019	0.008	0.092	0.052	-0.01	-0.01	-0.01	-0.03	967	0.2448	1.796526	-1.551726	NAF
NS0094	68	72	NS	BX078081-BX078082	X078081	2			70.26	2.702	0.125	0.057	0.04104	0.016	0.207	0.102	0.019	0.006	0.072	0.06	-0.01	-0.01	-0.01	-0.03	963	0.1836	1.779084	-1.595484	NAF
NS0094	36	38	NS	X071065	071065	1	G	D	34.69	45.99	1.1	0.7095	0.55	0.051	0.26	0.11	0.032	0.004	0.412	0.032	1.53	0.38	-0.02	1.89	14490	0.1224	1.91862	-1.79622	NAF
NS0094	90	94	NS	BX078091-BX078092	X078091	2			68.02	5.497	0.141	0.063	0.04536	0.018	0.25	0.117	0.029	0.007	0.07	0.077	-0.01	-0.01	-0.01	-0.03	968	0.2142	2.040714	-1.826514	NAF
NS0094	32	34	NS	X071063	071063	1	G	D	35.42	42.76	1.58	0.8127	0.63	0.07	0.38	0.12	0.034	0.004	0.494	0.037	1.94	0.56	0.09	2.59	14488	0.1224	2.09304	-1.97064	NAF
NS0094	34	36	NS	X071064	071064	1	G	D	36.87	41.96	1.33	0.6321	0.49	0.057	0.25	0.12	0.041	0.004	0.455	0.03	1.63	0.47	0.06	2.16	14489	0.1224	2.09304	-1.97064	NAF
NS0094	38	40	NS	X071066	071066	1	G	D	37.69	40.55	0.98	0.8127	0.63	0.05	0.19	0.12	0.079	0.004	0.278	0.031	2.23	0.48	0.11	2.82	14491	0.1224	2.09304	-1.97064	NAF
NS0094	94	98	NS	BX078093-BX078094	X078093	2			68.21	5.611	0.147	0.061	0.04392	0.018	0.241	0.122	0.031	0.005	0.078	0.057	-0.01	-0.01	-0.01	-0.03	969	0.153	2.127924	-1.974924	NAF
NS0094	28	30	NS	X071061	071061	1	G	D	38.37	38.55	1.36	1.1481	0.89	0.074	0.4	0.13	0.059	0.004	0.273	0.037	2.3	0.61	0.05	2.96	14486	0.1224	2.26746	-2.14506	NAF
NS0094	30	32	NS	X071062	071062	1	G	D	36.37	40.45	1.78	0.8643	0.67	0.086	0.49	0.14	0.047	0.004	0.375	0.031	2.38	0.72	0.04	3.14	14487	0.1224	2.44188	-2.31948	NAF
NS0094	250	252	NS	X071173	071173	1	G	W	38.34	35.35	1.32	0.8643	0.67	0.057	2.35	0.69	0.088	0.017	1.04	0.055	0.02	3.34	-0.06	3.3	14470	0.5202	12.03498	-11.51478	NAF
NS0094	40	42	NS	X071067	071067	1	G	D	36.59	36.76	1.23	0.7482	0.58	0.059	1.93	0.72	0.107	0.033	0.318	0.058	0.44	4.9	-0.11	5.23	14492	1.0098	12.55824	-11.54844	NAF
NS0094	248	250	NS	X071172	071172	1	G	W	39.5	33.76	1.32	0.7998	0.62	0.059	2.18	0.86	0.139	0.025	1.05	0.047	0	2.95	-0.09	2.86	14469	0.765	15.00012	-14.23512	NAF
NS0094	120	122	NS	X071107	071107	1	G	W	38.24	36.22	1	0.7869	0.61	0.043	1.76	0.87	0.092	0.022	0.62	0.054	0.04	3.3	0.05	3.39	14531	0.6732	15.17454	-14.50134	NAF
NS0094	110	112	NS	X071102	071102	1	G	W	34.8	38.11	1.55	0.7998	0.62	0.071	2.44	1.06	0.143	0.107	0.839	0.116	0.27	4.32	0.2	4.79	14526	3.2742	18.48852	-15.21432	NAF
NS0094	252	254	NS	X071174	071174	1	G	W	37.12	36.67	1.1	0.8643	0.67	0.046	2.18	1.05	0.086	0.093	0.843	0.047	0	3.03	0.19	3.22	14471	2.8458	18.3141	-15.4683	NAF
NS0094	212	214	NS	X071154	071154	1	G	W	40.91	32.94	1.12	0.6708	0.52	0.048	1.9	0.95	0.124	0.024	0.745	0.062	0.1	2.52	-0.11	2.51	14433	0.7344	16.5699	-15.8355	NAF
NS0094	196	198	NS	X071145	071145	1	G	W	36.6	38.37	1.02	0.6837	0.53	0.045	2.1	0.95	0.099	0.019	0.64	0.065	0.07	3.02	0.13	3.22	14425	0.5814	16.5699	-15.9885	NAF
NS0094	246	248	NS	X071171	071171	1	G	W	37.97	36.26	1.08	0.8643	0.67	0.047	2.04	0.96	0.069	0.022	0.829	0.04	0	3.01	0.2	3.21	14468	0.6732	16.74432	-16.07112	NAF
NS0094	80	82	NS	X071087	071087	1	G	W	34.7	36.61	1.87	0.7482	0.58	0.09	2.24	1.89	0.15	0.545	1.14	0.113	0.27	2.67	1.26	4.2	14512	16.677	32.96538	-16.28838	NAF
NS0094	214	216	NS	X071155	071155	1	G	W	37.69	37.35	1.09	0.6579	0.51	0.048	1.81	1	0.063	0.028	0.697	0.062	0.07	2.48	0.24	2.79	14434	0.8568	17.442	-16.5852	NAF
NS0094	118	120	NS	X071106	071106	1	G	W	38.02	36.08	0.96	0.8514	0.66	0.041	1.82	0.99	0.089	0.018	0.594	0.062	0.09	3.64	0.12	3.85	14530	0.5508	17.26758	-16.71678	NAF
NS0094	98	100	NS	X071095	071095	1	G	W	34.25	39.17	1.84	0.7095	0.55	0.082	2.52	1.06	0.096	0.054	0.85	0.106	0.29	3.95	0.3	4.54	14520	1.6524	18.48852	-16.83612	NAF
NS0094	210	212	NS	X071152	071152	1	G	W	39.2	34.6	1.16	0.7353	0.57	0.052	2.1	1.02	0.106	0.029	0.751	0.074	0.15	2.87	0.13	3.15	14432	0.8874	17.79084	-16.90344	NAF
NS0094	106	108	NS	X071099	071099	1	G	W	34.3	40.8	0.93	0.6966	0.54	0.039	1.95	1.01	0.13	0.022	0.511	0.075	0.18	3.89	0.13	4.2	14524	0.6732	17.61642	-16.94322	NAF
NS0094	128	130	NS	X071111	071111	1	G	W	39.05	34.59	1.15	0.7611	0.59	0.054	1.94	1.03	0.127	0.032	0.707	0.062	0.07	3.03	0.05	3.15	14535	0.9792	17.96526	-16.98606	NAF
NS0094	198	200	NS	X071146	071146	1	G	W	37.1	37.09	1.18	0.7353	0.57	0.05	2.11	1.03	0.099	0.022	0.792	0.073	0.09	3.13	0.2	3.42	14426	0.6732	17.96526	-17.29206	NAF
NS0094	278	280	NS	X071187	071187	1	G	W	39.85	32.96	1.17	0.8643	0.67	0.051	2.27	1.06	0.134	0.016	0.882	0.052	0.02	3.09	0.13	3.24	14556	0.4896	18.48852	-17.99892	NAF
NS0094	234	236	NS	X071165	071165	1	G	W	39.62	34.36	1.14	0.6708	0.52	0.05	1.94	1.12	0.126	0.019	0.787	0.057	-0.02	2.24	0.19	2.41	14462	0.5814	19.53504	-18.95364	NAF
NS0094	112	114	NS	X071103	071103	1	G	W	35.94	37.58	1.46	0.7482	0.58	0.066	2.2	1.2	0.086	0.063	0.793	0.092	0.2	3.53	0.47	4.2	14527	1.9278	20.9304	-19.0026	NAF
NS0094	42	44	NS	X071068	071068	1	G	M	35.65	37.29	1.03	0.7611	0.59	0.052	2.19	1.14	0.106	0.026	0.298	0.055	0.32	5.4	0.29	6.01	14493	0.7956	19.88388	-19.08828	NAF
NS0094	268	270	NS	X071182	071182	1	G	W	35.95	39.03	1	0.7353	0.57	0.047	2.1	1.26	0.09	0.088	0.718	0.052	0.03	2.47	0.45	2.95	14551	2.6928	21.97692	-19.28412	NAF
NS0094	126	128	NS	X071110	071110	1	G	W	38.73	35.65	1.1	0.6708	0.52	0.05	1.72	1.15	0.127	0.022	0.663	0.055	0.07	2.54	0.17	2.78	14534	0.6732	20.0583	-19.3851	NAF
NS0094	236	238	NS	X071166	071166	1	G	W	39.29	34.11	1.23	0.7353	0.57	0.056	2.11	1.19	0.092	0.038	0.856	0.073	0.05	2.58	0.26	2.89	14463	1.1628	20.75598	-19.59318	NAF
NS0094	146	148	NS	X071120	071120	1	G	W	39.36	33.76	1.22	0.8385	0.65	0.049	1.9	1.17	0.111	0.015	0.897	0.063	0.02	2.8	0.32	3.14	14544	0.459	20.40714	-19.94814	NAF
NS0094	94	96	NS	X071093	071093	1	G	W	36.1	36.95	1.6	0.7611	0.59	0.081	2.24	1.29	0.186	0.079	0.77	0.087	0.19	3.58	0.2	3.97	14518	2.4174	22.50018	-20.08278	NAF
NS0094	218	220	NS	X071157	071157	1	G	W	35.36	39.62	0.89	0.8385	0.65	0.039	1.88	1.2	0.077	0.025	0.579	0.043	0.11	3.29	0.47	3.87	14436	0.765	20.9304	-20.1654	NAF
NS0094	116	118	NS	X071105	071105	1	G	W	35.8	39.04	1	0.7611	0.59	0.043	1.79	1.2	0.081	0.02	0.553	0.064	0.11	3.18	0.41	3.7	14529	0.612	20.9304	-20.3184	NAF
NS0094	280	282	NS	X071188	071188	1	G	W	36.89	37.47	1.05	0.7224	0.56	0.047	2.25	1.2	0.086	0.02	0.77	0.061	0.02	2.73	0.46	3.21	14557	0.612	20.9304	-20.3184	NAF
NS0094	114	116	NS	X071104	071104	1	G	W	37.46	36.81	0.96	0.7611	0.59	0.044	1.83	1.31	0.103	0.026	0.545	0.067	0.11	3.23	0.47	3.81	14528	0.7956	22.84902	-22.05342	NAF
NS0094	272	274	NS	X071184	071184	1	G	W	39.93	33.51	1.07	0.774	0.6	0.049	2	1.31	0.133	0.022	0.809	0.044	-0.02	2.49	0.29	2.76	14553	0.6732	22.84902	-22.17582	NAF
NS0094	224	226	NS	X071160	071160	1	G	W	37.71	36.62	1.13	0.6966	0.54	0.05	2.01	1.32	0.087	0.026	0.71	0.062	0.05	2.54	0.55	3.14	14457	0.7956	23.02344	-22.22784	NAF
NS0094	264	266	NS	X071180	071180	1	G	W	37.61	36.32	1.08	0.7482	0.58	0.052	2.16	1.35	0.098	0.021	0.786	0.055	0.01	2.62	0.58	3.21	14549	0.6426	23.5467	-22.9041	NAF
NS0094	192	194	NS	X071143	071143	1	G	W	36.57	38.33	0.99	0.6837	0.53	0.045	2.02	1.36	0.088	0.02	0.649	0.071	0.08	2.64	0.6	3.32	14423	0.612	23.72112	-23.10912	NAF
NS0094	78	80	NS	X071086	071086	1	G	W	35.45	38.46	1.41	0.6837	0.53	0.063	1.87	1.48	0.102	0.088	0.864	0.095	0.23	2.66	0.62	3.51	14511	2.6928	25.81416	-23.12136	NAF
NS0094	274	276	NS	X071185	071185	1	G	W	37.9	36.51	0.91	0.7611	0.59	0.041	1.87	1.38	0.073	0.022	0.697	0.037	-0.04	2.36	0.63	2.95	14554	0.6732	24.06996	-23.39676	NAF
NS0094	92	94	NS	X071092	071092	1	G	W	34.46	38.1	2.18	0.6708	0.52	0.102	2.58	1.57	0.093	0.125	1.04	0.111	0.3	2.9	0.83	4.03	14517	3.825	27.38394	-23.55894	NAF
NS0094	64	66	NS	X071079	071079	1	G	W	35.39	37.9	1.7	0.6579	0.51	0.076	2.14	1.47	0.134	0.06	0.798	0.101	0.26	3.27	0.52	4.05	14504	1.836	25.63974	-23.80374	NAF
NS0094	76	78	NS	X071085	071085	1	G	W	33.94	38.43	1.77	0.7611	0.59	0.083	2.25	1.79	0.119	0.233	1.05	0.11	0.26	3.23	0.96	4.45	14510	7.1298	31.22118	-24.09138	NAF
NS0094	256	258	NS	X071176	071176	1	G	W	36.39	38.35	0.98	0.7869	0.61	0.04	1.96	1.46	0.098	0.023	0.744	0.053	-0.02	2.46	0.72	3.16	14545	0.7038	25.46532	-24.76152	NAF
NS0094	44	46	NS	X071069	071069	1	G	M	31.75	41.58	1.56	0.7353	0.57	0.07	2.28	1.55	0.163	0.064	0.582	0.057	0.29	4.63	0.63	5.55	14494	1.9584	27.0351	-25.0767	NAF
NS0094	46	48	NS	X071070	071070	1	G	M	34.95	38.24	1.22	0.774	0.6	0.052	2.09	1.49	0.119	0.029	0.54	0.062	0.28	4.62	0.56	5.46	14495	0.8874	25.98858	-25.10118	NAF
NS0094	104	106	NS	X071098	071098	1	G	W	35.47	38.2	1.35	0.6837	0.53	0.059	2.12	1.49	0.103	0.026	0.626	0.066	0.17	3.33	0.71	4.21	14523	0.7956	25.98858	-25.19298	NAF
NS0094	188	190	NS	X071141	071141	1	G	W	40.98	31.05	1.1	0.7998	0.62	0.054	2.11	1.49	0.144	0.026	0.727	0.068	0.08	2.95	0.48	3.51	14421	0.7956	25.98858	-25.19298	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0094	50	52	NS	X071072	071072	1	G	M	33.23	38.78	1.46	0.8643	0.67	0.063	2.35	1.57	0.144	0.066	0.72	0.063	0.26	5.16	0.69	6.11	14497	2.0196	27.38394	-25.36434	NAF
NS0094	52	54	NS	X071073	071073	1	G	M	35.38	37.96	1	0.7998	0.62	0.046	1.99	1.53	0.109	0.029	0.469	0.06	0.2	4.49	0.7	5.39	14498	0.8874	26.68626	-25.79886	NAF
NS0094	266	268	NS	X071181	071181	1	G	W	37.49	36.22	1.16	0.7611	0.59	0.052	2.32	1.52	0.088	0.022	0.832	0.069	0.03	2.59	0.84	3.46	14550	0.6732	26.51184	-25.83864	NAF
NS0094	108	110	NS	X071100	071100	1	G	W	33.27	41.13	0.99	0.6966	0.54	0.045	2.03	1.54	0.108	0.033	0.529	0.088	0.19	3.62	0.8	4.61	14525	1.0098	26.86068	-25.85088	NAF
NS0094	222	224	NS	X071159	071159	1	G	W	37.93	34.28	1.09	0.9288	0.72	0.046	2.28	1.53	0.126	0.026	0.72	0.067	0.11	3.7	0.68	4.49	14456	0.7956	26.68626	-25.89066	NAF
NS0094	202	204	NS	X071148	071148	1	G	W	39.05	33.95	1.13	0.7611	0.59	0.05	2.03	1.53	0.141	0.02	0.752	0.069	0.07	2.75	0.61	3.43	14428	0.612	26.68626	-26.07426	NAF
NS0094	62	64	NS	X071078	071078	1	G	W	35.09	38.68	1.1	0.7611	0.59	0.049	2	1.54	0.11	0.025	0.546	0.081	0.23	3.98	0.67	4.88	14503	0.765	26.86068	-26.09568	NAF
NS0094	74	76	NS	X071084	071084	1	G	W	34.33	39.39	1.46	0.7353	0.57	0.065	1.95	1.7	0.1	0.102	0.897	0.093	0.21	3.04	0.9	4.15	14509	3.1212	29.6514	-26.5302	NAF
NS0094	102	104	NS	X071097	071097	1	G	W	36.49	37.39	1.07	0.7095	0.55	0.049	1.85	1.56	0.109	0.022	0.555	0.07	0.13	3.3	0.69	4.12	14522	0.6732	27.20952	-26.53632	NAF
NS0094	134	136	NS	X071114	071114	1	G	W	36.41	37.16	1.13	0.8256	0.64	0.049	1.98	1.57	0.095	0.022	0.815	0.055	0.06	2.85	0.81	3.72	14538	0.6732	27.38394	-26.71074	NAF
NS0094	160	162	NS	X071127	071127	1	G	W	37.71	36.22	1.14	0.7353	0.57	0.049	1.95	1.58	0.108	0.022	0.791	0.061	0.05	2.47	0.8	3.32	14335	0.6732	27.55836	-26.88516	NAF
NS0094	70	72	NS	X071082	071082	1	G	W	36.03	37.6	1.39	0.7353	0.57	0.069	1.9	1.63	0.127	0.037	0.827	0.084	0.23	3.02	0.75	4	14507	1.1322	28.43046	-27.29826	NAF
NS0094	262	264	NS	X071179	071179	1	G	W	37.08	36.87	0.96	0.8514	0.66	0.04	1.95	1.68	0.067	0.061	0.733	0.034	-0.03	2.6	0.95	3.52	14548	1.8666	29.30256	-27.43596	NAF
NS0094	254	256	NS	X071175	071175	1	G	W	34.81	40.04	0.99	0.8256	0.64	0.044	2.1	1.65	0.077	0.025	0.758	0.044	-0.04	2.63	1.03	3.62	14472	0.765	28.7793	-28.0143	NAF
NS0094	56	58	NS	X071075	071075	1	G	W	35.79	37.28	1.19	0.7998	0.62	0.054	1.89	1.66	0.103	0.03	0.673	0.059	0.22	3.82	0.87	4.91	14500	0.918	28.95372	-28.03572	NAF
NS0094	158	160	NS	X071126	071126	1	G	W	37.28	35.64	1.27	0.7869	0.61	0.052	2.12	1.67	0.101	0.029	0.905	0.067	0.06	2.73	0.95	3.74	14334	0.8874	29.12814	-28.24074	NAF
NS0094	54	56	NS	X071074	071074	1	G	W	34.83	38.08	1.07	0.774	0.6	0.046	2.05	1.69	0.118	0.021	0.511	0.065	0.24	4.2	0.88	5.32	14499	0.6426	29.47698	-28.83438	NAF
NS0094	84	88	NS	X071089	071089	1	G	W	36.02	36.98	1.5	0.7611	0.59	0.068	2.02	1.77	0.145	0.057	0.896	0.088	0.18	3.05	0.85	4.08	14514	1.7442	30.87234	-29.12814	NAF
NS0094	194	196	NS	X071144	071144	1	G	W	37.61	35.05	1.15	0.7482	0.58	0.049	2.28	1.71	0.088	0.018	0.758	0.075	0.08	2.88	1.01	3.97	14424	0.5508	29.82582	-29.27502	NAF
NS0094	220	222	NS	X071158	071158	1	G	W	34.7	38.87	0.98	0.9159	0.71	0.045	2.19	1.76	0.091	0.041	0.642	0.051	0.1	3.52	1.11	4.73	14455	1.2546	30.69792	-29.44332	NAF
NS0094	60	62	NS	X071077	071077	1	G	W	35.21	38.34	1.28	0.6966	0.54	0.056	1.83	1.76	0.119	0.038	0.735	0.067	0.21	3.01	0.96	4.18	14502	1.1628	30.69792	-29.53512	NAF
NS0094	100	102	NS	X071096	071096	1	G	W	34.67	38.84	0.93	0.8127	0.63	0.041	2.02	1.76	0.09	0.021	0.474	0.064	0.13	3.96	1.08	5.17	14521	0.6426	30.69792	-30.05532	NAC
NS0094	178	180	NS	X071136	071136	1	G	W	37.96	35.78	0.98	0.7224	0.56	0.045	1.88	1.78	0.08	0.029	0.588	0.062	0.06	2.39	1.06	3.51	14344	0.8874	31.04676	-30.15936	NAC
NS0094	148	150	NS	X071121	071121	1	G	W	38.52	34.49	1.13	0.7998	0.62	0.049	1.95	1.8	0.136	0.02	0.827	0.049	0.01	2.61	0.92	3.54	14329	0.612	31.3956	-30.7836	NAC
NS0094	182	184	NS	X071138	071138	1	G	W	35.57	39.65	0.84	0.7353	0.57	0.037	1.76	1.81	0.078	0.019	0.558	0.05	0.04	2.4	1.11	3.55	14346	0.5814	31.57002	-30.98862	NAC
NS0094	68	70	NS	X071081	071081	1	G	W	33.21	39.57	1.71	0.7353	0.57	0.085	2.26	1.89	0.112	0.056	0.844	0.096	0.28	3.11	1.23	4.62	14506	1.7136	32.96538	-31.25178	NAC
NS0094	184	186	NS	X071139	071139	1	G	W	37.69	34.97	0.87	0.8643	0.67	0.04	2	1.84	0.091	0.022	0.582	0.056	0.06	3.01	1.1	4.17	14419	0.6732	32.09328	-31.42008	NAC
NS0094	142	144	NS	X071118	071118	1	G	W	38.15	34.83	1.01	0.8127	0.63	0.047	1.91	1.84	0.085	0.017	0.727	0.053	0.03	2.45	1.14	3.62	14542	0.5202	32.09328	-31.57308	NAC
NS0094	230	232	NS	X071163	071163	1	G	W	37.67	35.41	1.16	0.7224	0.56	0.05	2.15	1.86	0.097	0.021	0.787	0.071	0.06	2.38	1.13	3.57	14460	0.6426	32.44212	-31.79952	NAC
NS0094	82	84	NS	X071088	071088	1	G	W	32.91	41.18	1.58	0.6837	0.53	0.075	2.1	1.96	0.104	0.077	0.881	0.087	0.2	2.63	1.24	4.07	14513	2.3562	34.18632	-31.83012	NAC
NS0094	174	176	NS	X071134	071134	1	G	W	36.48	35.83	1.02	0.8127	0.63	0.045	2.03	1.9	0.091	0.031	0.632	0.075	1.37	2.93	1.09	5.39	14342	0.9486	33.1398	-32.1912	NAC
NS0094	132	134	NS	X071113	071113	1	G	W	34.4	39.41	1.01	0.9159	0.71	0.042	2.03	1.91	0.089	0.021	0.726	0.043	0.05	3.14	1.31	4.5	14537	0.6426	33.31422	-32.67162	NAC
NS0094	48	50	NS	X071071	071071	1	G	M	32.93	40.18	0.87	0.8127	0.63	0.038	2.03	1.92	0.103	0.021	0.404	0.045	0.19	4.57	1.19	5.95	14496	0.6426	33.48864	-32.84604	NAC
NS0094	240	242	NS	X071168	071168	1	G	W	37.01	35.81	1	0.8385	0.65	0.041	2.04	1.93	0.105	0.02	0.721	0.045	0	2.65	1.23	3.88	14465	0.612	33.66306	-33.05106	NAC
NS0094	66	68	NS	X071080	071080	1	G	W	35.37	37.23	1.4	0.7353	0.57	0.064	2.11	1.96	0.115	0.035	0.653	0.084	0.22	3.19	1.21	4.62	14505	1.071	34.18632	-33.11532	NAC
NS0094	260	262	NS	X071178	071178	1	G	W	34.47	39.37	0.82	0.8385	0.65	0.038	1.96	2.21	0.074	0.175	0.631	0.025	-0.02	2.38	1.44	3.8	14547	5.355	38.54682	-33.19182	NAC
NS0094	72	74	NS	X071083	071083	1	G	W	34.9	37.23	1.43	0.8256	0.64	0.066	2.03	2.06	0.167	0.079	0.874	0.077	0.22	3.62	1.07	4.91	14508	2.4174	35.93052	-33.51312	NAC
NS0094	58	60	NS	X071076	071076	1	G	W	32.76	40.32	1	0.8643	0.67	0.044	1.97	1.96	0.097	0.021	0.487	0.059	0.3	4.31	1.33	5.94	14501	0.6426	34.18632	-33.54372	NAC
NS0094	180	182	NS	X071137	071137	1	G	W	36.09	37.1	0.96	0.8901	0.69	0.045	2.1	2	0.077	0.028	0.629	0.073	0.09	3.04	1.4	4.53	14345	0.8568	34.884	-34.0272	NAC
NS0094	270	272	NS	X071183	071183	1	G	W	35.74	36.63	1.16	0.8643	0.67	0.047	2.38	1.99	0.116	0.022	0.856	0.054	0.03	2.9	1.31	4.24	14552	0.6732	34.70958	-34.03638	NAC
NS0094	238	240	NS	X071167	071167	1	G	W	35.53	37.49	1.11	0.8127	0.63	0.051	2.18	2	0.077	0.025	0.779	0.055	0.04	2.6	1.42	4.06	14464	0.765	34.884	-34.119	NAC
NS0094	124	126	NS	X071109	071109	1	G	W	34.24	39.88	1	0.7998	0.62	0.043	1.99	2.01	0.079	0.022	0.62	0.056	0.09	2.85	1.44	4.38	14533	0.6732	35.05842	-34.38522	NAC
NS0094	122	124	NS	X071108	071108	1	G	W	34.88	38.92	0.83	0.8385	0.65	0.039	1.9	2.02	0.081	0.021	0.508	0.05	0.06	3.1	1.41	4.57	14532	0.6426	35.23284	-34.59024	NAC
NS0094	130	132	NS	X071112	071112	1	G	W	37.08	36.44	0.91	0.7869	0.61	0.042	1.84	2.03	0.112	0.019	0.626	0.043	0.02	2.62	1.23	3.87	14536	0.5814	35.40726	-34.82586	NAC
NS0094	200	202	NS	X071147	071147	1	G	W	36.26	35.77	1.13	0.8127	0.63	0.05	2.3	2.04	0.108	0.021	0.736	0.071	0.1	3	1.36	4.46	14427	0.6426	35.58168	-34.93908	NAC
NS0094	140	142	NS	X071117	071117	1	G	W	36.91	36.86	0.98	0.7353	0.57	0.044	1.8	2.05	0.083	0.015	0.709	0.049	-0.01	2.06	1.47	3.52	14541	0.459	35.7561	-35.2971	NAC
NS0094	244	246	NS	X071170	071170	1	G	W	36.21	38.08	1.03	0.7482	0.58	0.045	1.92	2.07	0.099	0.025	0.767	0.049	-0.01	2.08	1.32	3.39	14467	0.765	36.10494	-35.33994	NAC
NS0094	258	260	NS	X071177	071177	1	G	W	35.16	37.78	1	0.903	0.7	0.042	2.14	2.16	0.072	0.059	0.763	0.045	0	2.73	1.6	4.33	14546	1.8054	37.67472	-35.86932	NAC
NS0094	226	228	NS	X071161	071161	1	G	W	35.36	37.21	1.15	0.7998	0.62	0.047	2.24	2.12	0.124	0.028	0.766	0.063	0.09	2.85	1.45	4.39	14458	0.8568	36.97704	-36.12024	NAC
NS0094	96	98	NS	X071094	071094	1	G	W	33.31	41.19	0.83	0.8256	0.64	0.039	1.85	2.16	0.098	0.029	0.409	0.045	0.15	3.39	1.43	4.97	14519	0.8874	37.67472	-36.78732	NAC
NS0094	150	152	NS	X071122	071122	1	G	W	35.39	37.82	0.97	0.8772	0.68	0.043	2.06	2.14	0.082	0.017	0.694	0.054	0.05	2.83	1.54	4.42	14330	0.5202	37.32588	-36.80568	NAC
NS0094	88	90	NS	X071090	071090	1	G	W	33.59	40.13	1.18	0.8256	0.64	0.053	1.94	2.2	0.102	0.037	0.705	0.072	0.17	3.03	1.57	4.77	14515	1.1322	38.3724	-37.2402	NAC
NS0094	204	206	NS	X071149	071149	1	G	W	33.48	40.06	1.06	0.8256	0.64	0.044	2.21	2.19	0.077	0.021	0.686	0.062	0.09	3.02	1.66	4.77	14429	0.6426	38.19798	-37.55538	NAC
NS0094	172	174	NS	X071133	071133	1	G	W	35.41	36.98	1.02	0.8772	0.68	0.045	2.19	2.22	0.128	0.028	0.634	0.075	0.13	3.16	1.47	4.76	14341	0.8568	38.72124	-37.86444	NAC
NS0094	136	138	NS	X071115	071115	1	G	W	34.85	39.19	0.96	0.8643	0.67	0.043	1.7	2.22	0.119	0.013	0.575	0.043	0.27	2.47	1.58	4.32	14539	0.3978	38.72124	-38.32344	NAC
NS0094	186	188	NS	X071140	071140	1	G	W	35.98	36.96	0.96	0.774	0.6	0.041	2.01	2.27	0.084	0.039	0.638	0.06	0.06	2.42	1.7	4.18	14420	1.1934	39.59334	-38.39994	NAC
NS0094	90	92	NS	X071091	071091	1	G	W	34.26	39.44	0.98	0.7353	0.57	0.044	1.82	2.37	0.106	0.04	0.566	0.06	0.14	2.57	1.63	4.34	14516	1.224	41.33754	-40.11354	NAC
NS0094	152	154	NS	X071123	071123	1	G	W	35.08	38.56	0.88	0.7869	0.61	0.035	1.87	2.33	0.076	0.013	0.643	0.041	-0.01	2.29	1.88	4.16	14331	0.3978	40.63986	-40.24206	NAC
NS0094	232	234	NS	X071164	071164	1	G	W	35.03	38.62	1.05	0.7353	0.57	0.047	2.14	2.37	0.057	0.021	0.722	0.05	0.04	2.15	2	4.19	14461	0.6426	41.33754	-40.69494	NAC
NS0094	276	278	NS	X071186	071186	1	G	W	32.97	40.97	0.87	0.8643	0.67	0.036	2.22	2.38	0.074	0.02	0.655	0.045	0.02	2.74	1.89	4.65	14555	0.612	41.51196	-40.89996	NAC
NS0094	206	208	NS	X071150	071150	1	G	W	31.19	43.64	0.98	0.774	0.6	0.043	2.09	2.4	0.053	0.027	0.646	0.057	0.08	2.61	1.96	4.65	14430	0.8262	41.8608	-41.0346	NAC
NS0094	162	164	NS	X071128	071128	1	G	W	35.45	38.27	1.02	0.7353	0.57	0.044	1.96	2.39	0.089	0.019	0.692	0.061	0	2.19	1.89	4.08	14336	0.5814	41.68638	-41.10498	NAC
NS0094	176	178	NS	X071135	071135	1	G	W	36.35	36.59	0.81	0.774	0.6	0.037	1.86	2.44	0.085	0.022	0.492	0.048	0.08	2.25	1.93	4.26	14343	0.6732	42.55848	-41.88528	NAC
NS0094	216	218	NS	X071156	071156	1	G	W	27.52	48.99	0.68	0.8385	0.65	0.028	1.87	2.46	0.062	0.02	0.446	0.033	0.07	2.83	2.16	5.06	14435	0.612	42.90732	-42.29532	NAC
NS0094	164	166	NS	X071129	071129	1	G	W	36.24	36.14	1	0.7869	0.61	0.046	2	2.46	0.097	0.017	0.661	0.046	0.01	2.43	1.86	4.3	14337	0.5202	42.90732	-42.38712	NAC
NS0094	208	210	NS	X071151	071151	1	G	W	31.33	42.79	0.82	0.8256	0.64	0.04	2.11	2.58	0.052	0.026	0.524	0.048	0.08	2.81	2.16	5.05	14431	0.7956	45.00036	-44.20476	NAC
NS0094	242	244	NS	X071169	071169	1	G	W	32.72	40.41	1.14	0.8514	0.66	0.045	2.14	2.59	0.107	0.023	0.846	0.049	0.04	2.49	2.03	4.56	14466	0.7038	45.17478	-44.47098	NAC
NS0094	190	192	NS	X071142	071142	1	G	W	36.21	35.12	1.1	0.8514	0.66	0.046	2.38	2.66	0.111	0.028	0.701	0.068	0.12	2.89	2.08	5.09	14422	0.8568	46.39572	-45.53892	NAC
NS0094	168	170	NS	X071131	071131	1	G	W	33.99	38.32	1.09	0.8514	0.66	0.043	2.18	2.67	0.095	0.023	0.678	0.06	0.07	2.88	2.14	5.09	14339	0.7038	46.57014	-45.86634	NAC
NS0094	170	172	NS	X071132	071132	1	G	W	34.08	37.7	1.05	0.8772	0.68	0.044	2.24	2.78	0.096	0.022	0.638	0.042	0.08	2.89	2.3	5.27	14340	0.6732	48.48876	-47.81556	NAC
NS0094	166	168	NS	X071130	071130	1	G	W	34.19	37.88	1.01	0.903	0.7	0.044	2.22	2.78	0.105	0.019	0.648	0.058	0.07	2.98	2.26	5.31	14338	0.5814	48.48876	-47.90736	NAC
NS0094	138	140	NS	X071116	071116	1	G	W	33.41	40.03	0.84	0.8901	0.69	0.037	2.01	2.79	0.082	0.018	0.61	0.042	0.03	2.44	2.47	4.94	14540	0.5508	48.66318	-48.11238	NAC
NS0094	156	158	NS	X071125	071125	1	G	W	34.52	38.52	0.85	0.774	0.6	0.035	1.97	2.8	0.083	0.013	0.606	0.047	0	2.15	2.44	4.59	14333	0.3978	48.8376	-48.4398	NAC
NS0094	154	156	NS	X071124	071124	1	G	W	34.2	38.67	0.83	0.8256	0.64	0.039	2.03	2.87	0.087	0.015	0.59	0.041	0.02	2.32	2.53	4.87	14332	0.459	50.05854	-49.59954	NAC
NS0094	228	230	NS	X071162	071162	1	G	W	32.6	38.82	1.03	0.8514	0.66	0.046	2.4	3.31	0.111	0.027	0.702	0.053	0.1	2.61	2.95	5.66	14459	0.8262	57.73302	-56.90682	NAC
NS0094	144	146	NS	X071119	071119	1	G	W	27.19	47.33	0.75	0.8643	0.67	0.031	1.97	3.54	0.066	0.018	0.546	0.031	0.04	2.13	3.55	5.72	14543	0.5508	61.74468	-61.19388	NAC
NS0095	224	226	NS	X071304	071304	2	G	W	21.12	49.88	8.33	0.1677	0.13	0.397	3.8	0.53	0.061	0.61	0.613	0.201	0.98	3.37	1.2	5.55	14764	18.666	9.24426	9.42174	PAF(LC)
NS0095	220	222	NS	X071302	071302	2	G	W	22	49.5	5.82	0.2064	0.16	0.264	3.48	0.34	0.073	0.5	1.02	0.3	1.16	3.92	1.2	6.28	14762	15.3	5.93028	9.36972	PAF(LC)
NS0095	152	154	NS	X071267	071267	2	G	W	25.36	42.46	5.04	0.3612	0.28	0.233	2.96	1.4	0.057	0.839	1.79	0.239	0.95	5.91	1.52	8.38	14692	25.6734	24.4188	1.2546	PAF(LC)
NS0095	218	222	NS	BX078301-BX078302	X078301	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1064	-0.0306	-0.01744	-0.013158	NAF
NS0095	222	226	NS	BX078303-BX078304	X078303	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1065	-0.0306	-0.01744	-0.013158	NAF
NS0095	226	230	NS	BX078305-BX078306	X078305	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1066	-0.0306	-0.01744	-0.013158	NAF
NS0095	242	244	NS	X071313	071313	2	G	W	27.85	40.06	4.25	0.2967	0.23	0.192	3.38	0.82	0.15	0.455	1.38	0.349	1.63	6.28	1.09	9	14773	13.923	14.30244	-0.37944	NAF
NS0095	30	34	NS	BX078205-BX078206	X078205	2			68.56	2.434	0.049	0.114	0.08208	0.01	0.093	0.024	0.022	0.001	0.009	0.059	0.26	0.28	0.08	0.62	1017	0.0306	0.418608	-0.388008	NAF
NS0095	28	30	NS	BX078204	X078204	2			69.12	2.245	0.047	0.09	0.0648	0.011	0.106	0.026	0.02	0.001	0.006	0.06	-0.01	-0.01	-0.01	-0.03	1016	0.0306	0.453492	-0.422892	NAF
NS0095	34	38	NS	BX078207-BX078208	X078207	2			68.76	2.574	0.045	0.094	0.06768	0.01	0.106	0.028	0.02	0.002	0.013	0.074	-0.01	-0.01	-0.01	-0.03	1018	0.0612	0.488376	-0.427176	NAF
NS0095	38	42	NS	BX078209-BX078210	X078209	2			69.19	2.434	0.039	0.069	0.04968	0.007	0.086	0.028	0.022	0.001	0.014	0.046	0.37	0.25	-0.01	0.61	1019	0.0306	0.488376	-0.457776	NAF
NS0095	42	46	NS	BX078211-BX078212	X078211	2			67.11	2.293	0.048	0.085	0.0612	0.006	0.099	0.03	0.024	0.002	0.014	0.055	0.28	0.14	0.06	0.48	1020	0.0612	0.52326	-0.46206	NAF
NS0095	46	50	NS	BX078213-BX078214	X078213	2			68.44	2.84	0.068	0.086	0.06192	0.011	0.109	0.046	0.022	0.002	0.028	0.073	0.38	0.2	-0.01	0.57	1021	0.0612	0.802332	-0.741132	NAF
NS0095	250	252	NS	BX078317	X078317	2			67.22	5.147	0.265	0.041	0.02952	0.037	0.275	0.084	0.013	0.02	0.075	0.077	-0.01	-0.01	-0.01	-0.03	1072	0.612	1.465128	-0.853128	NAF
NS0095	172	176	NS	BX078277-BX078278	X078277	2			69.06	4.152	0.192	0.054	0.03888	0.037	0.263	0.074	0.013	0.012	0.055	0.088	-0.01	-0.01	-0.01	-0.03	1052	0.3672	1.290708	-0.923508	NAF
NS0095	50	54	NS	BX078215-BX078216	X078215	2			68.83	4.185	0.135	0.061	0.04392	0.014	0.156	0.064	0.015	0.006	0.102	0.065	-0.01	-0.01	-0.01	-0.03	1022	0.1836	1.116288	-0.932688	NAF
NS0095	28	30	NS	X071204	071204	2	G	D	39.53	38.07	1.57	0.7482	0.58	0.07	0.1	0.06	0.085	0.003	0.432	0.011	1.41	0.42	0.1	1.93	14558	0.0918	1.04652	-0.95472	NAF
NS0095	168	172	NS	BX078275-BX078276	X078275	2			70.06	2.778	0.179	0.047	0.03384	0.057	0.231	0.077	0.014	0.012	0.041	0.094	-0.01	-0.01	-0.01	-0.03	1051	0.3672	1.343034	-0.975834	NAF
NS0095	54	58	NS	BX078217-BX078218	X078217	2			69.72	4.243	0.149	0.059	0.04248	0.013	0.164	0.063	0.011	0.004	0.131	0.055	-0.01	-0.01	-0.01	-0.03	1023	0.1224	1.098846	-0.976446	NAF
NS0095	242	246	NS	BX078313-BX078314	X078313	2			68.16	4.78	0.229	0.04	0.0288	0.036	0.273	0.083	0.011	0.015	0.07	0.102	-0.01	-0.01	-0.01	-0.03	1070	0.459	1.447686	-0.988686	NAF
NS0095	114	118	NS	BX078247-BX078248	X078247	2			66.58	6.248	0.283	0.056	0.04032	0.029	0.363	0.085	0.013	0.015	0.086	0.105	-0.01	-0.01	-0.01	-0.03	1038	0.459	1.48257	-1.02357	NAF
NS0095	226	228	NS	X071305	071305	2	G	W	22.56	48.08	5	0.2838	0.22	0.235	3.32	0.75	0.095	0.392	0.963	0.299	1.27	5.38	1.24	7.89	14765	11.9952	13.0815	-1.0863	NAF
NS0095	30	32	NS	X071205	071205	2	G	D	34.8	44.31	1.49	0.9417	0.73	0.064	0.12	0.07	0.075	0.004	0.615	0.031	1.64	0.47	0.16	2.27	14559	0.1224	1.22094	-1.09854	NAF
NS0095	58	62	NS	BX078219-BX078220	X078219	2			70.01	3.899	0.113	0.046	0.03312	0.009	0.138	0.065	0.011	0.001	0.107	0.106	-0.01	-0.01	-0.01	-0.03	1024	0.0306	1.13373	-1.10313	NAF
NS0095	110	114	NS	BX078245-BX078246	X078245	2			66.94	5.777	0.249	0.058	0.04176	0.026	0.34	0.09	0.011	0.015	0.071	0.083	-0.01	-0.01	-0.01	-0.03	1037	0.459	1.56978	-1.11078	NAF
NS0095	148	152	NS	BX078265-BX078266	X078265	2			66.23	3.911	0.21	0.042	0.03024	0.022	0.217	0.088	0.013	0.012	0.044	0.092	-0.01	-0.01	-0.01	-0.03	1046	0.3672	1.534896	-1.167696	NAF
NS0095	122	126	NS	BX078252-BX078253	X078252	2			66.33	6.704	0.243	0.07	0.0504	0.025	0.357	0.085	0.012	0.01	0.083	0.084	-0.01	-0.01	-0.01	-0.03	1040	0.306	1.48257	-1.17657	NAF
NS0095	130	134	NS	BX078256-BX078257	X078256	2			66.13	7.142	0.326	0.065	0.0468	0.032	0.406	0.094	0.013	0.015	0.111	0.109	-0.01	-0.01	-0.01	-0.03	1042	0.459	1.639548	-1.180548	NAF
NS0095	144	148	NS	BX078263-BX078264	X078263	2			70.39	2.64	0.104	0.038	0.02736	0.023	0.181	0.08	0.011	0.007	0.033	0.088	-0.01	-0.01	-0.01	-0.03	1045	0.2142	1.39536	-1.18116	NAF
NS0095	118	122	NS	BX078249-BX078250	X078249	2			66.75	7.063	0.273	0.067	0.04824	0.027	0.377	0.09	0.012	0.012	0.089	0.075	-0.01	-0.01	-0.01	-0.03	1039	0.3672	1.56978	-1.20258	NAF
NS0095	126	130	NS	BX078254-BX078255	X078254	2			66.89	6.518	0.295	0.06	0.0432	0.038	0.363	0.09	0.014	0.012	0.095	0.08	-0.01	-0.01	-0.01	-0.03	1041	0.3672	1.56978	-1.20258	NAF
NS0095	238	242	NS	BX078311-BX078312	X078311	2			68.19	3.818	0.203	0.038	0.02736	0.04	0.242	0.091	0.015	0.011	0.063	0.068	-0.01	-0.01	-0.01	-0.03	1069	0.3366	1.587222	-1.250622	NAF
NS0095	180	184	NS	BX078281-BX078282	X078281	2			68.24	5.121	0.237	0.063	0.04536	0.032	0.299	0.091	0.012	0.01	0.082	0.074	-0.01	-0.01	-0.01	-0.03	1054	0.306	1.587222	-1.281222	NAF
NS0095	62	66	NS	BX078221-BX078222	X078221	2			70.12	3.546	0.121	0.045	0.0324	0.011	0.133	0.078	0.01	0.002	0.109	0.052	-0.01	-0.01	-0.01	-0.03	1025	0.0612	1.360476	-1.299276	NAF
NS0095	234	238	NS	BX078309-BX078310	X078309	2			69.01	3.675	0.141	0.035	0.0252	0.026	0.227	0.087	0.014	0.007	0.05	0.08	-0.01	-0.01	-0.01	-0.03	1068	0.2142	1.517454	-1.303254	NAF
NS0095	32	34	NS	X071206	071206	2	G	D	38.53	38.83	1.59	0.9675	0.75	0.066	0.13	0.08	0.072	0.003	0.831	0.034	1.5	0.36	0.1	1.96	14560	0.0918	1.39536	-1.30356	NAF
NS0095	140	144	NS	BX078261-BX078262	X078261	2			69.26	3.479	0.194	0.058	0.04176	0.035	0.272	0.098	0.013	0.013	0.058	0.077	-0.01	-0.01	-0.01	-0.03	1044	0.3978	1.709316	-1.311516	NAF
NS0095	176	180	NS	BX078279-BX078280	X078279	2			69.11	4.445	0.314	0.053	0.03816	0.065	0.324	0.099	0.016	0.013	0.083	0.1	-0.01	-0.01	-0.01	-0.03	1053	0.3978	1.726758	-1.328958	NAF
NS0095	66	70	NS	BX078223-BX078224	X078223	2			69.29	3.73	0.146	0.047	0.03384	0.017	0.174	0.086	0.01	0.005	0.106	0.069	-0.01	-0.01	-0.01	-0.03	1026	0.153	1.500012	-1.347012	NAF
NS0095	90	94	NS	BX078235-BX078236	X078235	2			69.6	3.41	0.099	0.048	0.03456	0.013	0.19	0.097	0.016	0.01	0.064	0.059	-0.01	-0.01	-0.01	-0.03	1032	0.306	1.691874	-1.385874	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0095	152	156	NS	BX078267-BX078268	X078267	2			68.14	4.849	0.246	0.063	0.04536	0.03	0.284	0.101	0.013	0.012	0.065	0.071	-0.01	-0.01	-0.01	-0.03	1047	0.3672	1.761642	-1.394442	NAF
NS0095	156	160	NS	BX078269-BX078270	X078269	2			69.09	3.987	0.202	0.048	0.03456	0.027	0.234	0.094	0.01	0.008	0.061	0.073	-0.01	-0.01	-0.01	-0.03	1048	0.2448	1.639548	-1.394748	NAF
NS0095	70	74	NS	BX078225-BX078226	X078225	2			69.97	3.864	0.143	0.049	0.03528	0.017	0.184	0.095	0.011	0.008	0.109	0.059	-0.01	-0.01	-0.01	-0.03	1027	0.2448	1.65699	-1.41219	NAF
NS0095	82	86	NS	BX078231-BX078232	X078231	2			69.66	3.678	0.154	0.05	0.036	0.02	0.194	0.094	0.014	0.007	0.115	0.051	-0.01	-0.01	-0.01	-0.03	1030	0.2142	1.639548	-1.425348	NAF
NS0095	164	168	NS	BX078273-BX078274	X078273	2			68.7	2.212	0.258	0.054	0.03888	0.046	0.283	0.105	0.019	0.013	0.07	0.099	-0.01	-0.01	-0.01	-0.03	1050	0.3978	1.83141	-1.43361	NAF
NS0095	200	204	NS	BX078291-BX078292	X078291	2			67.98	5.286	0.263	0.066	0.04752	0.036	0.336	0.13	0.019	0.027	0.089	0.114	-0.01	-0.01	-0.01	-0.03	1059	0.8262	2.26746	-1.44126	NAF
NS0095	106	110	NS	BX078243-BX078244	X078243	2			69.22	4.228	0.161	0.049	0.03528	0.017	0.266	0.097	0.017	0.008	0.05	0.072	-0.01	-0.01	-0.01	-0.03	1036	0.2448	1.691874	-1.447074	NAF
NS0095	222	224	NS	X071303	071303	2	G	W	26.37	38.53	3.99	0.2838	0.22	0.187	3.57	0.62	0.116	0.305	0.63	0.174	1.47	11.07	0.89	13.43	14763	9.333	10.81404	-1.48104	NAF
NS0095	86	90	NS	BX078233-BX078234	X078233	2			69.16	3.825	0.162	0.05	0.036	0.023	0.217	0.105	0.017	0.011	0.109	0.053	-0.01	-0.01	-0.01	-0.03	1031	0.3366	1.83141	-1.49481	NAF
NS0095	78	80	NS	BX078229	X078229	2			69.52	3.522	0.144	0.05	0.036	0.017	0.193	0.102	0.014	0.009	0.113	0.075	-0.01	-0.01	-0.01	-0.03	1029	0.2754	1.779084	-1.503684	NAF
NS0095	134	138	NS	BX078258-BX078259	X078258	2			68.32	5.592	0.159	0.056	0.04032	0.021	0.263	0.095	0.012	0.005	0.055	0.063	-0.01	-0.01	-0.01	-0.03	1043	0.153	1.65699	-1.50399	NAF
NS0095	102	106	NS	BX078241-BX078242	X078241	2			68.42	4.185	0.151	0.06	0.0432	0.018	0.262	0.101	0.019	0.008	0.055	0.074	-0.01	-0.01	-0.01	-0.03	1035	0.2448	1.761642	-1.516842	NAF
NS0095	94	98	NS	BX078237-BX078238	X078237	2			69.71	4.12	0.114	0.051	0.03672	0.015	0.201	0.096	0.014	0.005	0.062	0.064	-0.01	-0.01	-0.01	-0.03	1033	0.153	1.674432	-1.521432	NAF
NS0095	192	196	NS	BX078287-BX078288	X078287	2			68.29	4.654	0.332	0.05	0.036	0.045	0.335	0.124	0.018	0.02	0.089	0.105	-0.01	-0.01	-0.01	-0.03	1057	0.612	2.162808	-1.550808	NAF
NS0095	230	234	NS	BX078307-BX078308	X078307	2			68.93	4.369	0.188	0.038	0.02736	0.03	0.269	0.107	0.018	0.01	0.06	0.09	-0.01	-0.01	-0.01	-0.03	1067	0.306	1.866294	-1.560294	NAF
NS0095	160	164	NS	BX078271-BX078272	X078271	2			68.58	4.342	0.282	0.065	0.0468	0.037	0.295	0.112	0.012	0.011	0.071	0.087	-0.01	-0.01	-0.01	-0.03	1049	0.3366	1.953504	-1.616904	NAF
NS0095	98	102	NS	BX078239-BX078240	X078239	2			68.76	4.427	0.178	0.058	0.04176	0.02	0.263	0.109	0.016	0.008	0.075	0.065	-0.01	-0.01	-0.01	-0.03	1034	0.2448	1.901178	-1.656378	NAF
NS0095	184	188	NS	BX078283-BX078284	X078283	2			68.33	4.616	0.216	0.05	0.036	0.029	0.275	0.117	0.018	0.012	0.076	0.079	-0.01	-0.01	-0.01	-0.03	1055	0.3672	2.040714	-1.673514	NAF
NS0095	212	216	NS	BX078297-BX078298	X078297	2			69.29	4.418	0.19	0.046	0.03312	0.032	0.244	0.118	0.019	0.012	0.061	0.104	-0.01	-0.01	-0.01	-0.03	1062	0.3672	2.058156	-1.690956	NAF
NS0095	74	78	NS	BX078227-BX078228	X078227	2			70.19	3.487	0.124	0.04	0.0288	0.014	0.16	0.104	0.015	0.004	0.101	0.054	-0.01	-0.01	-0.01	-0.03	1028	0.1224	1.813968	-1.691568	NAF
NS0095	208	212	NS	BX078295-BX078296	X078295	2			69.58	3.76	0.172	0.048	0.03456	0.029	0.238	0.115	0.017	0.01	0.057	0.088	-0.01	-0.01	-0.01	-0.03	1061	0.306	2.00583	-1.69983	NAF
NS0095	188	192	NS	BX078285-BX078286	X078285	2			69.12	4.416	0.228	0.05	0.036	0.033	0.263	0.116	0.015	0.01	0.067	0.065	-0.01	-0.01	-0.01	-0.03	1056	0.306	2.023272	-1.717272	NAF
NS0095	216	218	NS	BX078299	X078299	2			66.28	5.4	0.199	0.066	0.04752	0.029	0.305	0.126	0.023	0.014	0.069	0.09	-0.01	-0.01	-0.01	-0.03	1063	0.4284	2.197692	-1.769292	NAF
NS0095	204	208	NS	BX078293-BX078294	X078293	2			67.87	4.961	0.324	0.057	0.04104	0.038	0.367	0.143	0.02	0.023	0.103	0.081	-0.01	-0.01	-0.01	-0.03	1060	0.7038	2.494206	-1.790406	NAF
NS0095	250	252	NS	X071317	071317	2	G	W	24.52	44.83	4.66	0.3096	0.24	0.217	2.99	0.82	0.101	0.407	1.07	0.273	1.5	5.93	1.05	8.48	14777	12.4542	14.30244	-1.84824	NAF
NS0095	42	44	NS	X071211	071211	2	G	D	36.76	42.23	1.32	0.9417	0.73	0.061	0.11	0.12	0.106	0.004	0.734	0.037	1.31	0.33	0.15	1.79	14583	0.1224	2.09304	-1.97064	NAF
NS0095	196	198	NS	BX078289	X078289	2			68.73	4.005	0.201	0.045	0.0324	0.031	0.255	0.136	0.018	0.012	0.065	0.098	-0.01	-0.01	-0.01	-0.03	1058	0.3672	2.372112	-2.004912	NAF
NS0095	34	36	NS	X071207	071207	2	G	D	36.92	41.08	1.67	1.1352	0.88	0.075	0.18	0.14	0.066	0.003	0.793	0.03	1.4	0.41	0.11	1.92	14561	0.0918	2.44188	-2.35008	NAF
NS0095	40	42	NS	X071210	071210	2	G	D	38.36	40.71	1.18	0.7224	0.56	0.052	0.09	0.14	0.08	0.003	0.793	0.062	1.08	0.18	0.01	1.27	14582	0.0918	2.44188	-2.35008	NAF
NS0095	48	50	NS	X071214	071214	2	G	D	35.83	41.57	1.81	0.6837	0.53	0.091	0.24	0.29	0.137	0.087	1.06	0.052	1.69	0.28	0.29	2.26	14586	2.6622	5.05818	-2.39598	NAF
NS0095	44	46	NS	X071212	071212	2	G	D	37.81	39.04	1.59	1.3932	1.08	0.068	0.12	0.15	0.133	0.004	0.926	0.053	1.47	0.39	0.17	2.03	14584	0.1224	2.6163	-2.4939	NAF
NS0095	246	250	NS	BX078315-BX078316	X078315	2			64.56	8.202	0.309	0.055	0.0396	0.033	0.381	0.188	0.017	0.017	0.109	0.113	-0.01	-0.01	-0.01	-0.03	1071	0.5202	3.279096	-2.758896	NAF
NS0095	36	38	NS	X071208	071208	2	G	D	37.04	41.67	1.43	0.6966	0.54	0.064	0.13	0.17	0.112	0.004	0.797	0.053	1.44	0.33	0.08	1.85	14562	0.1224	2.96514	-2.84274	NAF
NS0095	38	40	NS	X071209	071209	2	G	D	36.77	41.44	1.76	0.5676	0.44	0.089	0.2	0.33	0.177	0.081	0.945	0.057	1.25	0.22	0.22	1.69	14581	2.4786	5.75586	-3.27726	NAF
NS0095	228	230	NS	X071306	071306	2	G	W	23.19	47.62	5.13	0.2193	0.17	0.241	3.16	0.66	0.112	0.228	0.979	0.278	1.35	5.86	0.83	8.04	14766	6.9768	11.51172	-4.53492	NAF
NS0095	46	48	NS	X071213	071213	2	G	D	37.61	41.28	1.11	0.8514	0.66	0.051	0.17	0.32	0.123	0.003	0.761	0.036	1.02	0.18	-0.02	1.18	14585	0.0918	5.58144	-5.48964	NAF
NS0095	172	174	NS	X071277	071277	2	G	W	28.31	39.79	3.43	0.4128	0.32	0.159	3.07	0.67	0.1	0.199	1.07	0.287	1.39	8.2	0.57	10.16	14702	6.0894	11.68614	-5.59674	NAF
NS0095	168	170	NS	X071275	071275	2	G	W	29.16	38.43	3.18	0.4128	0.32	0.151	2.96	0.66	0.096	0.162	1.06	0.293	1.29	9.05	0.46	10.8	14700	4.9572	11.51172	-6.55452	NAF
NS0095	240	242	NS	X071312	071312	2	G	W	25.01	46.94	3.49	0.258	0.2	0.157	2.89	0.87	0.119	0.28	1.15	0.284	1.35	5.6	0.82	7.77	14772	8.568	15.17454	-6.60654	NAF
NS0095	218	220	NS	X071301	071301	2	G	W	29.47	36.55	2.28	0.3741	0.29	0.11	2.33	0.69	0.101	0.177	0.618	0.175	1.59	12.31	0.41	14.31	14761	5.4162	12.03498	-6.61878	NAF
NS0095	174	176	NS	X071278	071278	2	G	W	29.94	39.03	2.64	0.4386	0.34	0.123	2.72	0.64	0.101	0.131	0.872	0.226	1.25	8.46	0.32	10.03	14703	4.0086	11.16288	-7.15428	NAF
NS0095	148	150	NS	X071265	071265	2	G	W	20.98	49.99	6.04	0.2967	0.23	0.28	3.08	1.67	0.08	0.659	1.15	0.22	0.87	3.81	1.54	6.22	14690	20.1654	29.12814	-8.96274	NAF
NS0095	190	192	NS	X071286	071286	2	G	W	26.49	42.32	4.98	0.387	0.3	0.234	3.45	1.12	0.08	0.345	1.48	0.38	1.38	4.55	1.17	7.1	14729	10.557	19.53504	-8.97804	NAF
NS0095	236	238	NS	X071310	071310	2	G	W	32.33	36.6	2.04	0.3612	0.28	0.1	2.52	1.03	0.087	0.292	0.892	0.238	1.07	7.89	0.68	9.64	14770	8.9352	17.96526	-9.03006	NAF
NS0095	196	198	NS	X071289	071289	2	G	W	27.21	41.87	5.13	0.3096	0.24	0.234	3.95	1.16	0.077	0.366	1.51	0.428	1.43	3.29	1.28	6	14732	11.1996	20.23272	-9.03312	NAF
NS0095	150	152	NS	X071266	071266	2	G	W	24.3	44.43	4.46	0.3741	0.29	0.207	2.66	1.23	0.077	0.383	1.03	0.187	1.02	7.56	1.08	9.66	14691	11.7198	21.45366	-9.73386	NAF
NS0095	170	172	NS	X071276	071276	2	G	W	27.48	40.03	2.4	0.387	0.3	0.107	2.66	0.82	0.102	0.135	0.849	0.211	1.33	11.06	0.35	12.74	14701	4.131	14.30244	-10.17144	NAF
NS0095	230	232	NS	X071307	071307	2	G	W	29.24	39.62	3.12	0.3354	0.26	0.15	2.97	0.87	0.095	0.151	0.865	0.218	1.25	7.95	0.45	9.65	14767	4.6206	15.17454	-10.55394	NAF
NS0095	132	134	NS	X071257	071257	2	G	W	32.96	37.69	1.94	0.5031	0.39	0.091	2.52	0.71	0.055	0.051	0.76	0.201	0.81	7.12	0.16	8.09	14664	1.5606	12.38382	-10.82322	NAF
NS0095	138	140	NS	X071260	071260	2	G	W	29.14	39.97	1.74	0.5031	0.39	0.079	2.25	1.07	0.102	0.254	0.629	0.178	0.92	9.32	0.52	10.76	14667	7.7724	18.66294	-10.89054	NAF
NS0095	124	126	NS	X071253	071253	2	G	W	33.24	37.49	1.82	0.5418	0.42	0.083	2.5	0.75	0.09	0.061	0.721	0.198	0.86	7.09	0.07	8.02	14660	1.8666	13.0815	-11.2149	NAF
NS0095	166	168	NS	X071274	071274	2	G	W	30.23	39.18	2.46	0.4386	0.34	0.117	2.39	0.84	0.088	0.094	0.899	0.248	1.12	8.2	0.28	9.6	14699	2.8764	14.65128	-11.77488	NAF
NS0095	102	104	NS	X071241	071241	2	G	W	35.15	37.81	1.19	0.6192	0.48	0.054	2.03	0.8	0.124	0.039	0.486	0.117	0.47	5.83	-0.04	6.26	14631	1.1934	13.9536	-12.7602	NAF
NS0095	130	132	NS	X071256	071256	2	G	W	31.03	40.3	2.01	0.4257	0.33	0.089	2.5	0.89	0.094	0.083	0.787	0.208	0.89	6.6	0.3	7.79	14663	2.5398	15.52338	-12.98358	NAF
NS0095	118	120	NS	X071249	071249	2	G	W	31.57	40.09	1.95	0.4644	0.36	0.086	2.56	0.97	0.119	0.122	0.756	0.21	0.82	6.14	0.29	7.25	14657	3.7332	16.91874	-13.18554	NAF
NS0095	216	218	NS	X071299	071299	2	G	W	32.59	35.32	1.74	0.4128	0.32	0.082	2.01	0.93	0.062	0.084	0.657	0.166	1.04	10.41	0.17	11.62	14742	2.5704	16.22106	-13.65066	NAF
NS0095	52	54	NS	X071216	071216	2	G	D	35.41	39.09	1.45	0.6837	0.53	0.068	1.68	0.95	0.115	0.088	0.975	0.11	0.06	3.47	0.23	3.76	14588	2.6928	16.5699	-13.8771	NAF
NS0095	112	114	NS	X071246	071246	2	G	W	32.05	40.12	2.22	0.4773	0.37	0.098	2.52	0.91	0.087	0.06	0.626	0.15	0.69	5.64	0.23	6.56	14654	1.836	15.87222	-14.03622	NAF
NS0095	56	58	NS	X071218	071218	2	G	D	33.62	38.36	2.72	0.7353	0.57	0.123	1.98	1.05	0.1	0.127	2.05	0.08	0.15	3.93	0.32	4.4	14590	3.8862	18.3141	-14.4279	NAF
NS0095	120	122	NS	X071250	071250	2	G	W	32.61	39.69	1.87	0.5289	0.41	0.084	2.43	0.93	0.064	0.052	0.676	0.181	0.71	5.92	0.27	6.9	14658	1.5912	16.22106	-14.62986	NAF
NS0095	182	184	NS	X071282	071282	2	G	W	28.77	43	2.21	0.4515	0.35	0.101	2.38	1.05	0.069	0.116	0.897	0.225	0.93	6.37	0.51	7.81	14725	3.5496	18.3141	-14.7645	NAF
NS0095	110	112	NS	X071245	071245	2	G	W	32.83	39.2	2.16	0.4257	0.33	0.101	2.63	1.23	0.108	0.211	0.699	0.182	0.64	4.77	0.57	5.98	14653	6.4566	21.45366	-14.99706	NAF
NS0095	94	96	NS	X071237	071237	2	G	W	34.32	39.64	1.33	0.5289	0.41	0.061	1.86	0.95	0.11	0.042	0.687	0.094	0.35	4.95	0.05	5.35	14627	1.2852	16.5699	-15.2847	NAF
NS0095	140	142	NS	X071261	071261	2	G	W	28.92	37.96	2.57	0.4386	0.34	0.118	2.73	1.31	0.111	0.229	0.878	0.225	1.21	10.13	0.56	11.9	14668	7.0074	22.84902	-15.84162	NAF
NS0095	114	116	NS	X071247	071247	2	G	W	31.44	39.29	2.28	0.4644	0.36	0.104	2.74	1.11	0.209	0.115	0.788	0.218	0.84	6.2	0.25	7.29	14655	3.519	19.36062	-15.84162	NAF
NS0095	244	246	NS	X071314	071314	2	G	W	26.05	45.04	2.26	0.3225	0.25	0.103	2.53	1.38	0.103	0.265	0.962	0.259	1.3	7.27	0.91	9.48	14774	8.109	24.06996	-15.96096	NAF
NS0095	50	52	NS	X071215	071215	2	G	D	33.96	42.98	1.05	0.7482	0.58	0.049	1.03	0.96	0.1	0.024	0.689	0.059	0.49	2.97	0.4	3.86	14587	0.7344	16.74432	-16.00992	NAF
NS0095	176	178	NS	X071279	071279	2	G	W	31.28	39.47	2.56	0.4902	0.38	0.194	2.55	1.12	0.088	0.086	0.89	0.254	0.96	5.93	0.5	7.39	14704	2.6316	19.53504	-16.90344	NAF
NS0095	104	106	NS	X071242	071242	2	G	W	33	41.42	1.34	0.516	0.4	0.065	1.99	1.05	0.131	0.043	0.517	0.126	0.44	4.65	0.19	5.28	14632	1.3158	18.3141	-16.9983	NAF
NS0095	106	108	NS	X071243	071243	2	G	W	35.1	37.69	1.41	0.516	0.4	0.068	2.09	1.11	0.121	0.06	0.531	0.139	0.55	5	0.16	5.71	14633	1.836	19.36062	-17.52462	NAF
NS0095	126	128	NS	X071254	071254	2	G	W	32.14	38.9	2.04	0.4644	0.36	0.09	2.49	1.14	0.183	0.072	0.753	0.202	0.81	6.58	0.19	7.58	14661	2.2032	19.88388	-17.68068	NAF
NS0095	202	204	NS	X071292	071292	2	G	W	27.84	42.38	3.13	0.4257	0.33	0.148	2.87	1.32	0.05	0.167	1.11	0.296	1.16	6.1	0.85	8.11	14735	5.1102	23.02344	-17.91324	NAF
NS0095	128	130	NS	X071255	071255	2	G	W	31.16	39.12	2.25	0.4515	0.35	0.103	2.62	1.23	0.204	0.112	0.876	0.247	0.92	6.4	0.34	7.66	14662	3.4272	21.45366	-18.02646	NAF
NS0095	136	138	NS	X071259	071259	2	G	W	30.56	40.36	1.47	0.4644	0.36	0.065	2.14	1.14	0.094	0.049	0.596	0.154	0.8	8.28	0.35	9.43	14666	1.4994	19.88388	-18.38448	NAF
NS0095	92	94	NS	X071236	071236	2	G	W	32.24	40.86	1.47	0.5805	0.45	0.066	2.14	1.22	0.201	0.09	0.806	0.118	0.45	5.61	0.18	6.24	14626	2.754	21.27924	-18.52524	NAF
NS0095	214	216	NS	X071298	071298	2	G	W	28.42	40.83	3.71	0.3096	0.24	0.171	3.14	1.57	0.125	0.285	1.24	0.313	1.31	5.04	1.11	7.46	14741	8.721	27.38394	-18.66294	NAF
NS0095	180	182	NS	X071281	071281	2	G	W	31.25	39.26	2.44	0.5547	0.43	0.114	2.54	1.26	0.088	0.101	0.918	0.271	0.93	6.11	0.56	7.6	14706	3.0906	21.97692	-18.88632	NAF
NS0095	58	60	NS	X071219	071219	2	G	D	36.64	37.42	1.55	0.5676	0.44	0.074	1.67	1.17	0.109	0.04	1.21	0.058	0.02	2.97	0.31	3.3	14591	1.224	20.40714	-19.18314	NAF
NS0095	116	118	NS	X071248	071248	2	G	W	30.52	41.49	2.06	0.4386	0.34	0.091	2.59	1.27	0.143	0.079	0.728	0.172	0.76	5.83	0.45	7.04	14656	2.4174	22.15134	-19.73394	NAF
NS0095	164	166	NS	X071273	071273	2	G	W	27.87	40.14	3.94	0.4128	0.32	0.183	3.08	1.53	0.119	0.222	1.17	0.305	1.18	6.35	0.97	8.5	14698	6.7932	26.68626	-19.89306	NAF
NS0095	122	124	NS	X071252	071252	2	G	W	32.93	39.52	1.41	0.5676	0.44	0.066	2.19	1.2	0.085	0.033	0.557	0.141	0.58	5.99	0.43	7	14659	1.0098	20.9304	-19.9206	NAF
NS0095	234	236	NS	X071309	071309	2	G	W	34.25	37.86	1.43	0.2838	0.22	0.066	1.97	1.32	0.091	0.057	0.611	0.145	0.71	5.99	0.48	7.18	14769	1.7442	23.02344	-21.27924	NAF
NS0095	134	136	NS	X071258	071258	2	G	W	30.62	41.67	1.28	0.5547	0.43	0.061	2.07	1.36	0.106	0.059	0.529	0.133	0.67	7.02	0.47	8.16	14665	1.8054	23.72112	-21.91572	NAF
NS0095	212	214	NS	X071297	071297	2	G	W	31.62	39.21	2.66	0.3741	0.29	0.121	2.5	1.58	0.071	0.164	0.928	0.226	0.87	5.22	0.84	6.93	14740	5.0184	27.55836	-22.53996	NAF
NS0095	178	180	NS	X071280	071280	2	G	W	32.03	39.89	2.16	0.4257	0.33	0.099	2.44	1.47	0.085	0.101	0.88	0.272	0.82	4.54	0.77	6.13	14705	3.0906	25.63974	-22.54914	NAF
NS0095	54	56	NS	X071217	071217	2	G	D	35.6	37.92	1.44	0.7482	0.58	0.065	1.77	1.47	0.105	0.085	1.04	0.121	0.01	3.49	0.62	4.12	14589	2.601	25.63974	-23.03874	NAF
NS0095	108	110	NS	X071244	071244	2	G	W	33.78	40.17	1.26	0.4257	0.33	0.058	2.01	1.4	0.117	0.044	0.479	0.13	0.42	4.25	0.58	5.25	14634	1.3464	24.4188	-23.0724	NAF
NS0095	98	100	NS	X071239	071239	2	G	W	36.74	36.28	1.36	0.5031	0.39	0.063	2.02	1.42	0.082	0.055	0.619	0.113	0.34	4.03	0.52	4.89	14629	1.683	24.76764	-23.08464	NAF
NS0095	84	86	NS	X071232	071232	2	G	W	35.44	38.22	1.51	0.6192	0.48	0.068	1.63	1.42	0.133	0.052	1.01	0.074	0.43	3.43	0.62	4.48	14622	1.5912	24.76764	-23.17644	NAF
NS0095	200	202	NS	X071291	071291	2	G	W	29.46	40.35	3.29	0.3741	0.29	0.155	2.73	1.89	0.079	0.315	0.967	0.282	1.02	4.28	1.38	6.68	14734	9.639	32.96538	-23.32638	NAF
NS0095	62	64	NS	X071221	071221	2	G	W	35.26	39.24	1.28	0.5934	0.46	0.058	1.61	1.51	0.136	0.035	1.01	0.026	0.06	3.33	0.52	3.91	14593	1.071	26.33742	-25.26642	NAF
NS0095	88	90	NS	X071234	071234	2	G	W	35.07	37.15	1.8	0.5031	0.39	0.081	2.18	1.64	0.114	0.108	1.12	0.1	0.3	4.01	0.69	5	14624	3.3048	28.60488	-25.30008	NAF
NS0095	60	62	NS	X071220	071220	2	G	W	36.54	37.57	1.37	0.6321	0.49	0.065	1.58	1.51	0.101	0.031	1.14	0.027	0.02	2.95	0.68	3.65	14592	0.9486	26.33742	-25.38882	NAF
NS0095	142	144	NS	X071262	071262	2	G	W	30.23	37.64	2.11	0.4902	0.38	0.1	2.55	1.76	0.097	0.132	0.763	0.185	0.9	8.51	0.96	10.37	14669	4.0392	30.69792	-26.65872	NAF
NS0095	156	158	NS	X071269	071269	2	G	W	29.36	42.33	3	0.3999	0.31	0.142	2.49	1.86	0.095	0.189	1.1	0.254	0.82	3.98	1.21	6.01	14694	5.7834	32.44212	-26.65872	NAF
NS0095	72	74	NS	X071226	071226	2	G	W	34.21	38.06	1.79	0.5031	0.39	0.081	2.09	1.71	0.12	0.099	1.23	0.083	0.23	3.84	0.82	4.89	14598	3.0294	29.82582	-26.79642	NAF
NS0095	66	68	NS	X071223	071223	2	G	W	33.61	39.08	1.81	0.5934	0.46	0.084	2.02	1.67	0.102	0.061	1.24	0.03	0.28	3.92	0.86	5.06	14595	1.8666	29.12814	-27.26154	NAF
NS0095	74	76	NS	X071227	071227	2	G	W	36.08	36.5	1.58	0.4644	0.36	0.073	2	1.65	0.102	0.042	1.16	0.064	0.12	3.49	0.87	4.48	14617	1.2852	28.7793	-27.4941	NAF
NS0095	160	162	NS	X071271	071271	2	G	W	28.19	40.55	4.33	0.4257	0.33	0.201	3.45	2.14	0.063	0.316	1.31	0.265	0.86	3.42	1.66	5.94	14696	9.6696	37.32588	-27.65628	NAF
NS0095	246	248	NS	X071315	071315	2	G	W	28.34	42.13	2.86	0.2967	0.23	0.134	2.83	1.91	0.105	0.177	0.971	0.24	1.04	5.51	1.17	7.72	14775	5.4162	33.31422	-27.89802	NAF
NS0095	238	240	NS	X071311	071311	2	G	W	31.22	38.17	2.17	0.3741	0.29	0.1	2.48	2.13	0.108	0.301	0.877	0.238	0.94	5.55	1.4	7.89	14771	9.2106	37.15146	-27.94086	NAF
NS0095	82	84	NS	X071231	071231	2	G	W	32.91	38.74	2.23	0.4644	0.36	0.104	2.4	1.8	0.101	0.104	1.52	0.103	0.31	3.81	1	5.12	14621	3.1824	31.3956	-28.2132	NAF
NS0095	204	206	NS	X071293	071293	2	G	W	30.97	37.53	3.5	0.3225	0.25	0.166	3.09	2.15	0.17	0.292	1.24	0.343	1.19	3.7	1.33	6.22	14736	8.9352	37.5003	-28.5651	NAF
NS0095	154	156	NS	X071268	071268	2	G	W	30.44	39.27	2.77	0.4257	0.33	0.132	2.58	1.95	0.087	0.174	0.904	0.211	0.81	5.48	1.22	7.51	14693	5.3244	34.0119	-28.6875	NAF
NS0095	162	164	NS	X071272	071272	2	G	W	30.84	39.2	2.99	0.4257	0.33	0.145	2.74	1.92	0.105	0.145	0.984	0.255	0.9	4.51	1.21	6.62	14697	4.437	33.48864	-29.05164	NAF
NS0095	78	80	NS	X071229	071229	2	G	W	33.64	39.12	1.61	0.516	0.4	0.074	1.97	1.76	0.127	0.052	1.16	0.065	0.22	3.88	0.82	4.92	14619	1.5912	30.69792	-29.10672	NAF
NS0095	64	66	NS	X071222	071222	2	G	W	32.92	39.36	1.8	0.5418	0.42	0.085	2.17	1.78	0.131	0.055	1.24	0.047	0.18	4.22	0.94	5.34	14594	1.683	31.04676	-29.36376	NAF
NS0095	86	88	NS	X071233	071233	2	G	W	33.62	38.14	1.67	0.5547	0.43	0.078	2.18	1.92	0.212	0.13	1.08	0.084	0.32	4.18	0.69	5.19	14623	3.978	33.48864	-29.51064	NAF
NS0095	96	98	NS	X071238	071238	2	G	W	34.13	38.81	1.36	0.5289	0.41	0.06	1.91	1.78	0.141	0.043	0.706	0.08	0.35	4.3	0.76	5.41	14628	1.3158	31.04676	-29.73096	NAF
NS0095	210	212	NS	X071296	071296	2	G	W	32.36	38.48	2.59	0.3741	0.29	0.126	2.48	1.99	0.102	0.157	0.979	0.246	0.88	4.09	1.17	6.14	14739	4.8042	34.70958	-29.90538	NAF
NS0095	90	92	NS	X071235	071235	2	G	W	34.75	37.72	1.47	0.516	0.4	0.069	2.05	1.81	0.12	0.053	0.917	0.102	0.25	4.12	0.88	5.25	14625	1.6218	31.57002	-29.94822	NAF
NS0095	146	148	NS	X071264	071264	2	G	W	30.53	38.01	2.76	0.4257	0.33	0.129	2.69	2.08	0.139	0.201	0.897	0.225	0.95	6.54	1.16	8.65	14689	6.1506	36.27936	-30.12876	NAC
NS0095	100	102	NS	X071240	071240	2	G	W	34.42	36.36	2.11	0.5547	0.43	0.094	2.33	1.87	0.111	0.063	1.11	0.115	0.4	4.27	1.04	5.71	14630	1.9278	32.61654	-30.68874	NAC
NS0095	186	188	NS	X071284	071284	2	G	W	32.72	37.84	2.12	0.4386	0.34	0.098	2.32	1.97	0.119	0.113	0.853	0.225	0.84	4.83	1.07	6.74	14727	3.4578	34.36074	-30.90294	NAC
NS0095	80	82	NS	X071230	071230	2	G	W	34.81	37.38	1.57	0.5676	0.44	0.071	1.96	1.91	0.128	0.073	1.14	0.064	0.17	3.9	0.99	5.06	14620	2.2338	33.31422	-31.08042	NAC
NS0095	184	186	NS	X071283	071283	2	G	W	29.34	44.91	1.6	0.3612	0.28	0.074	1.94	1.98	0.133	0.085	0.644	0.166	0.62	4.09	1.02	5.73	14726	2.601	34.53516	-31.93416	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0095	144	146	NS	X071263	071263	2	G	W	32.58	38.5	1.46	0.5547	0.43	0.067	2.07	2.02	0.077	0.049	0.576	0.151	0.64	5.91	1.15	7.7	14670	1.4994	35.23284	-33.73344	NAC
NS0095	70	72	NS	X071225	071225	2	G	W	33.58	39.45	1.35	0.5676	0.44	0.063	1.9	2.06	0.126	0.05	0.93	0.06	0.17	4.1	1.19	5.46	14597	1.53	35.93052	-34.40052	NAC
NS0095	68	70	NS	X071224	071224	2	G	W	31.18	42.36	1.34	0.5934	0.46	0.06	1.88	2.09	0.127	0.053	0.838	0.06	0.27	4.35	1.09	5.71	14596	1.6218	36.45378	-34.83198	NAC
NS0095			NS	X078289	078289	2			30.98	39.36	2.48	0.3999	0.31	0.114	2.44	2.33	0.118	0.168	0.961	0.259	0.97	4.32	1.51	6.8	18319	5.1408	40.63986	-35.49906	NAC
NS0095	76	78	NS	X071228	071228	2	G	W	34.39	38.66	1.4	0.5031	0.39	0.069	1.74	2.14	0.138	0.038	1.04	0.048	0.18	3.4	1.04	4.62	14618	1.1628	37.32588	-36.16308	NAC
NS0095	198	200	NS	X071290	071290	2	G	W	30.82	39.62	2.35	0.4128	0.32	0.111	2.34	2.37	0.106	0.149	0.9	0.241	0.86	4.5	1.44	6.8	14733	4.5594	41.33754	-36.77814	NAC
NS0095	208	210	NS	X071295	071295	2	G	W	30.76	39.7	2.28	0.3999	0.31	0.108	2.28	2.39	0.11	0.16	0.841	0.219	0.8	4.69	1.32	6.81	14738	4.896	41.68638	-36.79038	NAC
NS0095	194	196	NS	X071288	071288	2	G	W	30.88	40.47	2.05	0.3999	0.31	0.096	2.21	2.32	0.091	0.118	0.812	0.225	0.79	4.63	1.27	6.69	14731	3.6108	40.46544	-36.85464	NAC
NS0095	188	190	NS	X071285	071285	2	G	W	32.07	39.8	1.86	0.4128	0.32	0.09	1.99	2.29	0.07	0.098	0.695	0.217	0.64	4.42	1.36	6.42	14728	2.9988	39.94218	-36.94338	NAC
NS0095	206	208	NS	X071294	071294	2	G	W	32.15	39.13	1.9	0.3741	0.29	0.088	2.04	2.47	0.093	0.167	0.702	0.196	0.67	4.3	1.32	6.29	14737	5.1102	43.08174	-37.97154	NAC
NS0095	232	234	NS	X071308	071308	2	G	W	32.9	37.03	1.69	0.2838	0.22	0.08	2.39	2.33	0.122	0.083	0.721	0.184	0.8	5.78	1.34	7.92	14768	2.5398	40.63986	-38.10006	NAC
NS0095	248	250	NS	X071316	071316	2	G	W	27.76	43.59	1.77	0.3354	0.26	0.082	2.14	2.57	0.103	0.094	0.733	0.197	0.91	5.61	1.61	8.13	14776	2.8764	44.82594	-41.94954	NAC
NS0095	158	160	NS	X071270	071270	2	G	W	29.79	40.46	2.82	0.4644	0.36	0.13	2.73	2.78	0.14	0.205	0.991	0.234	0.75	3.45	2	6.2	14695	6.273	48.48876	-42.21576	NAC
NS0095	192	194	NS	X071287	071287	2	G	W	30.08	39.69	2.22	0.3741	0.29	0.107	2.23	3.31	0.074	0.131	0.8	0.197	0.77	4.93	1.97	7.67	14730	4.0086	57.73302	-53.72442	NAC
NS0096	236	238	NS	X071438	071438	1	G	W	29.03	38.35	6.38	0.5031	0.39	0.296	5.35	0.4	0.093	1.08	0.601	0.16	0.44	3.92	1.66	6.02	14671	33.048	6.9768	26.0712	PAF(HC)
NS0096	232	234	NS	X071436	071436	1	G	W	22.56	48.5	5.16	0.5418	0.42	0.232	4.44	0.6	0.153	1.18	0.655	0.151	0.43	4.32	1.74	6.49	14651	36.108	10.4652	25.6428	PAF(HC)
NS0096	230	232	NS	X071435	071435	1	G	W	26.58	41.87	6.79	0.4128	0.32	0.306	5.29	0.33	0.082	0.709	0.568	0.182	0.46	4.56	0.98	6	14650	21.6954	5.75586	15.93954	PAF(HC)
NS0096	218	220	NS	X071429	071429	1	G	W	33.83	38.2	2.54	0.6837	0.53	0.115	3.19	0.49	0.091	0.325	0.444	0.132	0.33	4.63	0.5	5.46	14644	9.945	8.54658	1.39842	PAF(LC)
NS0096	230	234	NS	BX078435-BX078436	X078435	2			66.27	5.957	0.616	0.06	0.0432	0.052	0.507	0.055	0.012	0.055	0.113	0.086	-0.01	-0.01	-0.01	-0.03	1217	1.683	0.95931	0.72369	PAF(LC)
NS0096	218	220	NS	BX078429	X078429	2			64.43	9.221	0.464	0.097	0.06984	0.047	0.546	0.052	0.008	0.049	0.09	0.062	-0.01	-0.01	-0.01	-0.03	1214	1.4994	0.906984	0.592416	PAF(LC)
NS0096	234	238	NS	BX078437-BX078438	X078437	2			66.98	6.19	0.521	0.068	0.04896	0.039	0.495	0.053	0.01	0.035	0.075	0.072	-0.01	-0.01	-0.01	-0.03	1218	1.071	0.924426	0.146574	PAF(LC)
NS0096	18	20	NS	X071327	071327	1	G	M	38.53	41.17	0.87	0.3741	0.29	0.042	0.1	0.02	0.063	0.003	0.058	0.024	1.67	0.34	0.02	2.03	14778	0.0918	0.34884	-0.25704	NAF
NS0096	30	34	NS	BX078333-BX078334	X078333	2			67.05	2.805	0.09	0.106	0.07632	0.009	0.086	0.021	0.024	0.001	0.009	0.061	0.24	0.27	0.45	0.96	1076	0.0306	0.366282	-0.335682	NAF
NS0096	166	170	NS	BX078403-BX078404	X078403	2			66.6	6.423	0.326	0.073	0.05256	0.032	0.41	0.055	0.01	0.02	0.082	0.093	-0.01	-0.01	-0.01	-0.03	1201	0.612	0.95931	-0.34731	NAF
NS0096	38	42	NS	BX078337-BX078338	X078337	2			68.07	3.368	0.073	0.094	0.06768	0.01	0.105	0.022	0.02	0.001	0.008	0.055	0.2	0.13	0.02	0.35	1078	0.0306	0.383724	-0.353124	NAF
NS0096	20	24	NS	BX078328-BX078329	X078328	2			68.61	2.577	0.092	0.066	0.04752	0.01	0.091	0.023	0.021	0.001	0.001	0.044	0.26	0.27	0.21	0.74	1074	0.0306	0.401166	-0.370566	NAF
NS0096	26	30	NS	BX078331-BX078332	X078331	2			69.02	2.461	0.06	0.127	0.09144	0.015	0.099	0.023	0.018	0.001	0.004	0.047	0.22	0.22	0.24	0.68	1075	0.0306	0.401166	-0.370566	NAF
NS0096	34	38	NS	BX078335-BX078336	X078335	2			67.53	3.527	0.086	0.098	0.07056	0.012	0.102	0.024	0.021	0.001	0.01	0.06	0.22	0.21	0.12	0.55	1077	0.0306	0.418608	-0.388008	NAF
NS0096	214	218	NS	BX078427-BX078428	X078427	2			65.72	8.053	0.442	0.09	0.0648	0.043	0.503	0.065	0.011	0.023	0.086	0.063	-0.01	-0.01	-0.01	-0.03	1213	0.7038	1.13373	-0.42993	NAF
NS0096	182	186	NS	BX078411-BX078412	X078411	2			66.48	6.818	0.439	0.094	0.06768	0.043	0.513	0.073	0.014	0.026	0.091	0.058	-0.01	-0.01	-0.01	-0.03	1205	0.7956	1.273266	-0.477666	NAF
NS0096	124	128	NS	BX078381-BX078382	X078381	2			64.1	7.004	0.399	0.075	0.054	0.031	0.445	0.059	0.01	0.018	0.092	0.089	-0.01	-0.01	-0.01	-0.03	1190	0.5508	1.029078	-0.478278	NAF
NS0096	174	178	NS	BX078407-BX078408	X078407	2			66.58	6.586	0.206	0.069	0.04968	0.024	0.352	0.042	0.007	0.008	0.06	0.065	-0.01	-0.01	-0.01	-0.03	1203	0.2448	0.732564	-0.487764	NAF
NS0096	116	120	NS	BX078377-BX078378	X078377	2			66.69	6.538	0.454	0.081	0.05832	0.041	0.464	0.072	0.01	0.023	0.103	0.059	-0.01	-0.01	-0.01	-0.03	1098	0.7038	1.255824	-0.552024	NAF
NS0096	170	174	NS	BX078405-BX078406	X078405	2			66.65	7.23	0.234	0.072	0.05184	0.024	0.391	0.053	0.009	0.012	0.058	0.095	-0.01	-0.01	-0.01	-0.03	1202	0.3672	0.924426	-0.557226	NAF
NS0096	28	30	NS	X071332	071332	1	G	M	37.54	41.99	1.02	0.5031	0.39	0.04	0.12	0.04	0.081	0.003	0.227	0.022	1.69	0.36	0.05	2.1	14783	0.0918	0.69768	-0.60588	NAF
NS0096	30	32	NS	X071333	071333	1	G	M	36.34	42.73	1.26	0.6966	0.54	0.052	0.14	0.04	0.084	0.002	0.256	0.038	1.87	0.43	0.1	2.4	14784	0.0612	0.69768	-0.63648	NAF
NS0096	120	124	NS	BX078379-BX078380	X078379	2			68.46	5.097	0.265	0.067	0.04824	0.026	0.333	0.06	0.008	0.012	0.078	0.063	-0.01	-0.01	-0.01	-0.03	1189	0.3672	1.04652	-0.67932	NAF
NS0096	58	62	NS	BX078347-BX078348	X078347	2			67.72	5.553	0.133	0.058	0.04176	0.018	0.315	0.064	0.013	0.013	0.026	0.104	-0.01	-0.01	-0.01	-0.03	1083	0.3978	1.116288	-0.718488	NAF
NS0096	226	230	NS	BX078433-BX078434	X078433	2			67.12	7.05	0.227	0.081	0.05832	0.024	0.334	0.063	0.013	0.012	0.053	0.06	-0.01	-0.01	-0.01	-0.03	1216	0.3672	1.098846	-0.731646	NAF
NS0096	148	152	NS	BX078393-BX078394	X078393	2			67.05	5.573	0.174	0.132	0.09504	0.017	0.391	0.055	0.006	0.007	0.084	0.062	-0.01	-0.01	-0.01	-0.03	1196	0.2142	0.95931	-0.74511	NAF
NS0096	210	214	NS	BX078425-BX078426	X078425	2			67.63	5.672	0.168	0.074	0.05328	0.021	0.292	0.06	0.012	0.009	0.036	0.06	-0.01	-0.01	-0.01	-0.03	1212	0.2754	1.04652	-0.77112	NAF
NS0096	20	22	NS	X071328	071328	1	G	M	39.56	37.86	1.7	0.3354	0.26	0.087	0.19	0.05	0.062	0.003	0.021	0.039	2.2	0.62	-0.04	2.78	14779	0.0918	0.8721	-0.7803	NAF
NS0096	38	40	NS	X071337	071337	1	G	M	36.61	42.73	0.81	0.7611	0.59	0.034	0.24	0.05	0.057	0.001	0.165	0.027	1.91	0.37	-0.02	2.26	14788	0.0306	0.8721	-0.8415	NAF
NS0096	42	46	NS	BX078339-BX078340	X078339	2			68.08	4.132	0.06	0.046	0.03312	0.01	0.164	0.053	0.011	0.002	0.009	0.056	-0.01	-0.01	-0.01	-0.03	1079	0.0612	0.924426	-0.863226	NAF
NS0096	62	66	NS	BX078349-BX078350	X078349	2			69.7	3.863	0.12	0.063	0.04536	0.013	0.259	0.072	0.014	0.012	0.028	0.078	-0.01	-0.01	-0.01	-0.03	1084	0.3672	1.255824	-0.888624	NAF
NS0096	152	156	NS	BX078395-BX078396	X078395	2			67.53	5.986	0.169	0.129	0.09288	0.015	0.369	0.072	0.007	0.012	0.071	0.077	-0.01	-0.01	-0.01	-0.03	1197	0.3672	1.255824	-0.888624	NAF
NS0096	54	58	NS	BX078345-BX078346	X078345	2			69.16	4.354	0.077	0.047	0.03384	0.013	0.214	0.058	0.013	0.004	0.016	0.056	-0.01	-0.01	-0.01	-0.03	1082	0.1224	1.011636	-0.889236	NAF
NS0096	238	242	NS	BX078439-BX078440	X078439	2			68.58	4.76	0.134	0.065	0.0468	0.015	0.236	0.062	0.01	0.004	0.041	0.053	-0.01	-0.01	-0.01	-0.03	1219	0.1224	1.081404	-0.959004	NAF
NS0096	22	24	NS	X071329	071329	1	G	M	39.54	38.68	1.26	0.5031	0.39	0.059	0.16	0.06	0.06	0.002	0.123	0.037	1.65	0.47	-0.02	2.1	14780	0.0612	1.04652	-0.98532	NAF
NS0096	190	194	NS	BX078415-BX078416	X078415	2			65.13	8.536	0.357	0.116	0.08352	0.028	0.492	0.09	0.017	0.019	0.079	0.067	-0.01	-0.01	-0.01	-0.03	1207	0.5814	1.56978	-0.98838	NAF
NS0096	258	260	NS	BX078449	X078449	2			67.68	5.87	0.341	0.067	0.04824	0.024	0.317	0.083	0.012	0.015	0.188	0.061	-0.01	-0.01	-0.01	-0.03	1224	0.459	1.447686	-0.988686	NAF
NS0096	260	264	NS	BX078451-BX078452	X078451	2			66.92	6.436	0.276	0.069	0.04968	0.022	0.328	0.075	0.012	0.01	0.11	0.064	-0.01	-0.01	-0.01	-0.03	1225	0.306	1.30815	-1.00215	NAF
NS0096	164	166	NS	BX078402	X078402	2			68.21	5.626	0.099	0.075	0.054	0.02	0.256	0.061	0.012	0.002	0.02	0.063	-0.01	-0.01	-0.01	-0.03	1200	0.0612	1.063962	-1.002762	NAF
NS0096	32	34	NS	X071334	071334	1	G	M	38.3	38.94	1.22	1.1739	0.91	0.058	0.26	0.06	0.076	0.001	0.269	0.042	2	0.52	0.14	2.66	14785	0.0306	1.04652	-1.01592	NAF
NS0096	34	36	NS	X071335	071335	1	G	M	38.52	39.74	1.05	0.8127	0.63	0.045	0.25	0.06	0.07	0.001	0.206	0.026	1.85	0.45	0.09	2.39	14786	0.0306	1.04652	-1.01592	NAF
NS0096	18	20	NS	BX078327	X078327	2			67.12	6.787	0.187	0.087	0.06264	0.017	0.356	0.071	0.013	0.006	0.042	0.072	-0.01	-0.01	-0.01	-0.03	1073	0.1836	1.238382	-1.054782	NAF
NS0096	46	50	NS	BX078341-BX078342	X078341	2			68.09	4.644	0.089	0.067	0.04824	0.014	0.226	0.07	0.014	0.005	0.018	0.057	-0.01	-0.01	-0.01	-0.03	1080	0.153	1.22094	-1.06794	NAF
NS0096	186	190	NS	BX078413-BX078414	X078413	2			67.6	6.383	0.123	0.082	0.05904	0.012	0.282	0.067	0.012	0.003	0.039	0.05	-0.01	-0.01	-0.01	-0.03	1206	0.0918	1.168614	-1.076814	NAF
NS0096	108	112	NS	BX078373-BX078374	X078373	2			69.53	4.597	0.138	0.069	0.04968	0.014	0.231	0.069	0.009	0.004	0.062	0.075	-0.01	-0.01	-0.01	-0.03	1096	0.1224	1.203498	-1.081098	NAF
NS0096	222	226	NS	BX078431-BX078432	X078431	2			67.85	5.169	0.102	0.063	0.04536	0.013	0.216	0.067	0.014	0.002	0.024	0.054	-0.01	-0.01	-0.01	-0.03	1215	0.0612	1.168614	-1.107414	NAF
NS0096	206	210	NS	BX078423-BX078424	X078423	2			67.46	6.145	0.162	0.082	0.05904	0.016	0.291	0.073	0.014	0.005	0.045	0.071	-0.01	-0.01	-0.01	-0.03	1211	0.153	1.273266	-1.120266	NAF
NS0096	104	108	NS	BX078371-BX078372	X078371	2			67.75	6.414	0.32	0.076	0.05472	0.029	0.328	0.089	0.008	0.014	0.152	0.057	-0.01	-0.01	-0.01	-0.03	1095	0.4284	1.552338	-1.123938	NAF
NS0096	272	276	NS	BX078457-BX078458	X078457	2			68.92	4.094	0.149	0.115	0.0828	0.013	0.412	0.068	0.009	0.002	0.1	0.047	-0.01	-0.01	-0.01	-0.03	1228	0.0612	1.186056	-1.124856	NAF
NS0096	264	268	NS	BX078453-BX078454	X078453	2			69.4	4.556	0.141	0.057	0.04104	0.015	0.18	0.072	0.01	0.004	0.101	0.055	-0.01	-0.01	-0.01	-0.03	1226	0.1224	1.255824	-1.133424	NAF
NS0096	82	84	NS	BX078359	X078359	2			65.84	8.464	0.312	0.076	0.05472	0.029	0.425	0.097	0.01	0.018	0.103	0.067	-0.01	-0.01	-0.01	-0.03	1089	0.5508	1.691874	-1.141074	NAF
NS0096	198	202	NS	BX078419-BX078420	X078419	2			66.42	7.312	0.167	0.106	0.07632	0.016	0.348	0.075	0.007	0.005	0.053	0.076	-0.01	-0.01	-0.01	-0.03	1209	0.153	1.30815	-1.15515	NAF
NS0096	202	206	NS	BX078421-BX078422	X078421	2			67.09	7.007	0.173	0.101	0.07272	0.018	0.359	0.077	0.01	0.006	0.048	0.084	-0.01	-0.01	-0.01	-0.03	1210	0.1836	1.343034	-1.159434	NAF
NS0096	70	74	NS	BX078353-BX078354	X078353	2			67.38	6.323	0.16	0.081	0.05832	0.018	0.324	0.082	0.013	0.008	0.045	0.062	-0.01	-0.01	-0.01	-0.03	1086	0.2448	1.430244	-1.185444	NAF
NS0096	66	70	NS	BX078351-BX078352	X078351	2			67.56	5.765	0.136	0.085	0.0612	0.011	0.294	0.077	0.016	0.004	0.038	0.068	-0.01	-0.01	-0.01	-0.03	1085	0.1224	1.343034	-1.220634	NAF
NS0096	178	182	NS	BX078409-BX078410	X078409	2			67.82	6.019	0.094	0.072	0.05184	0.013	0.253	0.076	0.014	0.003	0.027	0.063	-0.01	-0.01	-0.01	-0.03	1204	0.0918	1.325592	-1.233792	NAF
NS0096	194	198	NS	BX078417-BX078418	X078417	2			66.72	6.308	0.223	0.106	0.07632	0.02	0.374	0.085	0.01	0.008	0.058	0.059	-0.01	-0.01	-0.01	-0.03	1208	0.2448	1.48257	-1.23777	NAF
NS0096	246	250	NS	BX078443-BX078444	X078443	2			67.39	5.888	0.135	0.058	0.04176	0.014	0.223	0.078	0.008	0.004	0.045	0.054	-0.01	-0.01	-0.01	-0.03	1221	0.1224	1.360476	-1.238076	NAF
NS0096	268	272	NS	BX078455-BX078456	X078455	2			68.48	4.637	0.138	0.056	0.04032	0.012	0.197	0.078	0.011	0.004	0.098	0.105	-0.01	-0.01	-0.01	-0.03	1227	0.1224	1.360476	-1.238076	NAF
NS0096	160	164	NS	BX078399-BX078400	X078399	2			65.31	7.754	0.174	0.089	0.06408	0.017	0.321	0.085	0.018	0.006	0.037	0.07	-0.01	-0.01	-0.01	-0.03	1199	0.1836	1.48257	-1.29897	NAF
NS0096	112	116	NS	BX078375-BX078376	X078375	2			67.36	6.241	0.232	0.083	0.05976	0.02	0.314	0.086	0.008	0.006	0.088	0.059	-0.01	-0.01	-0.01	-0.03	1097	0.1836	1.500012	-1.316412	NAF
NS0096	242	246	NS	BX078441-BX078442	X078441	2			67.89	5.888	0.142	0.069	0.04968	0.014	0.245	0.081	0.008	0.003	0.043	0.065	-0.01	-0.01	-0.01	-0.03	1220	0.0918	1.412802	-1.321002	NAF
NS0096	36	38	NS	X071336	071336	1	G	M	37.46	40.46	1.28	0.7353	0.57	0.058	0.38	0.08	0.058	0.002	0.224	0.038	2.14	0.55	0	2.69	14787	0.0612	1.39536	-1.33416	NAF
NS0096	156	160	NS	BX078397-BX078398	X078397	2			68.05	5.777	0.181	0.077	0.05544	0.016	0.212	0.087	0.017	0.005	0.157	0.189	-0.01	-0.01	-0.01	-0.03	1198	0.153	1.517454	-1.364454	NAF
NS0096	98	100	NS	BX078368	X078368	2			67.83	6.468	0.207	0.072	0.05184	0.022	0.253	0.103	0.017	0.012	0.128	0.069	-0.01	-0.01	-0.01	-0.03	1093	0.3672	1.796526	-1.429326	NAF
NS0096	132	136	NS	BX078385-BX078386	X078385	2			67.45	6.052	0.16	0.096	0.06912	0.013	0.301	0.095	0.009	0.007	0.056	0.076	-0.01	-0.01	-0.01	-0.03	1192	0.2142	1.65699	-1.44279	NAF
NS0096	144	148	NS	BX078391-BX078392	X078391	2			66.22	6.416	0.147	0.093	0.06696	0.011	0.303	0.088	0.01	0.003	0.05	0.066	-0.01	-0.01	-0.01	-0.03	1195	0.0918	1.534896	-1.443096	NAF
NS0096	250	254	NS	BX078445-BX078446	X078445	2			67.58	5.479	0.139	0.065	0.0468	0.026	0.225	0.09	0.014	0.004	0.064	0.076	-0.01	-0.01	-0.01	-0.03	1222	0.1224	1.56978	-1.44738	NAF
NS0096	94	98	NS	BX078365-BX078366	X078365	2			65.32	8.531	0.46	0.09	0.0648	0.039	0.485	0.122	0.007	0.022	0.179	0.075	-0.01	-0.01	-0.01	-0.03	1092	0.6732	2.127924	-1.454724	NAF
NS0096	254	258	NS	BX078447-BX078448	X078447	2			69.22	4.77	0.114	0.063	0.04536	0.015	0.203	0.087	0.012	0.002	0.064	0.054	-0.01	-0.01	-0.01	-0.03	1223	0.0612	1.517454	-1.456254	NAF
NS0096	24	26	NS	X071330	071330	1	G	M	38.72	37.69	2.37	0.4515	0.35	0.11	0.37	0.09	0.049	0.002	0.315	0.058	1.93	0.81	0.07	2.81	14781	0.0612	1.56978	-1.50858	NAF
NS0096	26	28	NS	X071331	071331	1	G	M	38.23	38.26	1.71	1.3158	1.02	0.074	0.28	0.09	0.043	0.002	0.399	0.052	1.78	0.63	0.11	2.52	14782	0.0612	1.56978	-1.50858	NAF
NS0096	100	104	NS	BX078369-BX078370	X078369	2			68.25	5.037	0.236	0.069	0.04968	0.023	0.251	0.115	0.008	0.013	0.123	0.063	-0.01	-0.01	-0.01	-0.03	1094	0.3978	2.00583	-1.60803	NAF
NS0096	50	54	NS	BX078343-BX078344	X078343	2			67.84	4.902	0.091	0.076	0.05472	0.013	0.267	0.103	0.017	0.006	0.023	0.057	-0.01	-0.01	-0.01	-0.03	1081	0.1836	1.796526	-1.612926	NAF
NS0096	136	140	NS	BX078387-BX078388	X078387	2			66.79	6.471	0.141	0.096	0.06912	0.011	0.3	0.104	0.008	0.003	0.068	0.07	-0.01	-0.01	-0.01	-0.03	1193	0.0918	1.813968	-1.722168	NAF
NS0096	74	78	NS	BX078355-BX078356	X078355	2			66.75	7.017	0.163	0.098	0.07056	0.015	0.332	0.112	0.018	0.007	0.061	0.069	-0.01	-0.01	-0.01	-0.03	1087	0.2142	1.953504	-1.739304	NAF
NS0096	128	132	NS	BX078383-BX078384	X078383	2			67.54	6.61	0.188	0.088	0.06336	0.018	0.324	0.11	0.012	0.005	0.046	0.063	-0.01	-0.01	-0.01	-0.03	1191	0.153	1.91862	-1.76562	NAF
NS0096	90	94	NS	BX078363-BX078364	X078363	2			67.23	6.775	0.152	0.087	0.06264	0.014	0.259	0.107	0.013	0.003	0.087	0.05	-0.01	-0.01	-0.01	-0.03	1091	0.0918	1.866294	-1.774494	NAF
NS0096	78	82	NS	BX078357-BX078358	X078357	2			66.81	7.269	0.159	0.09	0.0648	0.015	0.305	0.111	0.016	0.003	0.069	0.07	-0.01	-0.01	-0.01	-0.03	1088	0.0918	1.936062	-1.844262	NAF
NS0096	276	278	NS	BX078459	X078459	2			67.42	6.365	0.248	0.07	0.0504	0.019	0.261	0.115	0.013	0.005	0.165	0.06	-0.01	-0.01	-0.01	-0.03	1229	0.153	2.00583	-1.85283	NAF
NS0096	280	282	NS	BX078461	X078461	2			66.28	7.019	0.303	0.076	0.05472	0.023	0.334	0.121	0.015	0.008	0.168	0.059	-0.01	-0.01	-0.01	-0.03	1230	0.2448	2.110482	-1.865682	NAF
NS0096	216	218	NS	X071428	071428	1	G	W	34.08	37.44	2.86	0.645	0.5	0.129	3.19	0.61	0.134	0.283	0.404	0.115	0.61	4.68	0.46	5.75	14643	8.6598	10.63962	-1.97982	NAF
NS0096	86	90	NS	BX078361-BX078362	X078361	2			67.4	6.827	0.146	0.09	0.0648	0.017	0.263	0.121	0.014	0.004	0.09	0.057	-0.01	-0.01	-0.01	-0.03	1090	0.1224	2.110482	-1.988082	NAF
NS0096	140	142	NS	BX078389	X078389	2			65.3	7.95	0.208	0.11	0.0792	0.015	0.395	0.16	0.008	0.004	0.082	0.066	-0.01	-0.01	-0.01	-0.03	1194	0.1224	2.79072	-2.66832	NAF
NS0096	168	170	NS	X071404	071404	1	G	W	33.14	38.29	3.16	0.5547	0.43	0.146	3.51	0.43	0.044	0.152	0.693	0.15	0.47	4.65	0.22	5.34	14601	4.6512	7.50006	-2.84886	NAF
NS0096	40	42	NS	X071338	071338	1	G	M	34.53	40.39	3.21	1.1739	0.91	0.146	0.63	0.17	0.07	0.001	0.298	0.027	2.78	1.27	0.22	4.27	14789	0.0306	2.96514	-2.93454	NAF
NS0096	126	128	NS	X071382	071382	1	G	W	26.56	43.58	4.39	0.5934	0.46	0.179	4.06	0.73	0.133	0.261	0.83	0.148	0.46	5.49	0.51	6.46	14832	7.9866	12.73266	-4.74606	NAF
NS0096	150	152	NS	X071394	071394	1	G	W	40.53	29.48	1.47	1.0578	0.82	0.061	2.79	0.4	0.023	0.041	0.674	0.174	0.42	5.78	-0.24	5.96	14574	1.2546	6.9768	-5.7222	NAF
NS0096	152	154	NS	X071395	071395	1	G	W	41.01	28.02	1.3	1.1739	0.91	0.055	2.77	0.4	0.037	0.022	0.64	0.128	0.37	6.68	-0.39	6.66	14575	0.6732	6.9768	-6.3036	NAF
NS0096	170	172	NS	X071405	071405	1	G	W	35.04	37.94	1.59	0.6321	0.49	0.076	2.82	0.5	0.079	0.059	0.326	0.119	0.3	5.25	-0.15	5.4	14602	1.8054	8.721	-6.9156	NAF
NS0096	52	54	NS	X071344	071344	1	G	M	34.86	35.62	1.25	0.8514	0.66	0.051	2.76	0.44	0.1	0.024	0.326	0.056	0.41	8.38	-0.32	8.47	14795	0.7344	7.67448	-6.94008	NAF
NS0096	48	50	NS	X071342	071342	1	G	M	35.69	36.72	1.04	0.9804	0.76	0.041	2.24	0.44	0.086	0.022	0.281	0.031	0.38	7	-0.37	7.01	14793	0.6732	7.67448	-7.00128	NAF
NS0096	50	52	NS	X071343	071343	1	G	M	35.32	37.93	1.22	0.8514	0.66	0.053	2.28	0.45	0.103	0.027	0.361	0.061	0.29	6.39	-0.4	6.28	14794	0.8262	7.8489	-7.0227	NAF
NS0096	234	236	NS	X071437	071437	1	G	W	35.9	37.69	1.67	0.7869	0.61	0.074	2.33	0.56	0.079	0.064	0.433	0.047	0.18	4.47	-0.24	4.41	14652	1.9584	9.76752	-7.80912	NAF
NS0096	156	158	NS	X071397	071397	1	G	W	39.16	33.88	1.46	0.7224	0.56	0.065	2.46	0.5	0.051	0.028	0.294	0.111	0.26	4.25	-0.26	4.25	14577	0.8568	8.721	-7.8642	NAF
NS0096	54	56	NS	X071345	071345	1	G	M	33.48	38.35	1.29	0.7095	0.55	0.058	2.79	0.59	0.126	0.047	0.311	0.07	0.39	7.68	-0.22	7.85	14796	1.4382	10.29078	-8.85258	NAF
NS0096	176	178	NS	X071408	071408	1	G	W	34.76	38.79	1.55	0.645	0.5	0.072	2.68	0.6	0.055	0.047	0.404	0.118	0.31	4.74	-0.03	5.02	14605	1.4382	10.4652	-9.027	NAF
NS0096	118	120	NS	X071378	071378	1	G	W	26.73	43.63	3.76	0.6837	0.53	0.163	3.76	0.89	0.134	0.201	0.886	0.16	0.49	5.89	0.52	6.9	14828	6.1506	15.52338	-9.37278	NAF
NS0096	46	48	NS	X071341	071341	1	G	M	36.71	35.2	1.56	0.8256	0.64	0.068	2.57	0.63	0.086	0.046	0.258	0.05	0.3	6.15	-0.18	6.27	14792	1.4076	10.98846	-9.58086	NAF
NS0096	192	194	NS	X071416	071416	1	G	W	32.83	35.99	3.46	0.7869	0.61	0.144	3.86	1.13	0.307	0.326	0.604	0.148	0.33	5.59	0.43	6.35	14613	9.9756	19.70946	-9.73386	NAF
NS0096	42	44	NS	X071339	071339	1	G	M	36.58	39.12	1.43	0.6579	0.51	0.063	0.9	0.57	0.169	0.006	0.147	0.035	1.81	2.16	0.06	4.03	14790	0.1836	9.94194	-9.75834	NAF
NS0096	174	176	NS	X071407	071407	1	G	W	33.32	39.81	1.65	0.7095	0.55	0.076	2.85	0.69	0.066	0.07	0.499	0.139	0.38	5.4	0.08	5.86	14604	2.142	12.03498	-9.89298	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0096	120	122	NS	X071379	071379	1	G	W	31.21	41.02	2.67	0.645	0.5	0.112	3	0.81	0.079	0.13	0.737	0.117	0.41	4.83	0.32	5.56	14829	3.978	14.12802	-10.15002	NAF
NS0096	184	186	NS	X071412	071412	1	G	W	32.23	35.37	3.89	0.7998	0.62	0.169	4.21	1.05	0.2	0.266	0.776	0.168	0.46	5.86	0.52	6.84	14609	8.1396	18.3141	-10.1745	NAF
NS0096	188	190	NS	X071414	071414	1	G	W	36.51	37.72	1.11	0.8127	0.63	0.052	2.22	0.63	0.063	0.023	0.296	0.077	0.2	4.83	-0.16	4.87	14611	0.7038	10.98846	-10.28466	NAF
NS0096	166	168	NS	X071403	071403	1	G	W	32.48	38.21	2.6	0.7998	0.62	0.11	3.41	0.85	0.14	0.144	0.625	0.121	0.37	5.93	0.25	6.55	14600	4.4064	14.8257	-10.4193	NAF
NS0096	258	260	NS	X071449	071449	1	G	W	35.3	37.91	2.57	0.5934	0.46	0.12	2.89	0.98	0.068	0.203	0.738	0.102	0.17	2.79	0.29	3.25	14682	6.2118	17.09316	-10.88136	NAF
NS0096	204	206	NS	X071422	071422	1	G	W	37.27	35.18	1.42	0.7611	0.59	0.064	2.56	0.7	0.055	0.031	0.293	0.109	0.28	4.9	-0.08	5.1	14637	0.9486	12.2094	-11.2608	NAF
NS0096	172	174	NS	X071406	071406	1	G	W	33.65	38.43	1.62	0.6837	0.53	0.075	2.93	0.75	0.081	0.057	0.376	0.121	0.38	5.87	0.11	6.36	14603	1.7442	13.0815	-11.3373	NAF
NS0096	190	192	NS	X071415	071415	1	G	W	38.11	35.65	1.2	0.7611	0.59	0.054	2.16	0.73	0.096	0.023	0.314	0.083	0.18	4.26	-0.19	4.25	14612	0.7038	12.73266	-12.02886	NAF
NS0096	64	66	NS	X071350	071350	1	G	M	34.96	38.25	1.15	0.7353	0.57	0.048	2.41	0.81	0.088	0.061	0.26	0.074	0.26	5.66	0.05	5.97	14801	1.8666	14.12802	-12.26142	NAF
NS0096	186	188	NS	X071413	071413	1	G	W	37.04	37.17	1.19	0.7095	0.55	0.056	2.27	0.77	0.084	0.034	0.331	0.114	0.23	4.23	-0.12	4.34	14610	1.0404	13.43034	-12.38994	NAF
NS0096	62	64	NS	X071349	071349	1	G	M	24.08	49.96	1.01	0.6837	0.53	0.042	2.75	1.1	0.083	0.21	0.299	0.077	0.42	8.27	0.65	9.34	14800	6.426	19.1862	-12.7602	NAF
NS0096	60	62	NS	X071348	071348	1	G	M	28.55	42.1	1.31	0.5934	0.46	0.059	3.24	0.87	0.077	0.075	0.326	0.101	0.54	9.32	0.31	10.17	14799	2.295	15.17454	-12.87954	NAF
NS0096	116	118	NS	X071377	071377	1	G	W	29.63	43.19	2.55	0.6966	0.54	0.107	2.86	0.97	0.059	0.128	0.74	0.113	0.37	5.03	0.41	5.81	14827	3.9168	16.91874	-13.00194	NAF
NS0096	164	166	NS	X071402	071402	1	G	W	37.33	36.62	1.01	0.7998	0.62	0.044	2.07	0.79	0.086	0.016	0.176	0.057	0.18	4.56	-0.1	4.64	14599	0.4896	13.77918	-13.28958	NAF
NS0096	72	74	NS	X071354	071354	1	G	W	35.81	38.06	1.49	0.6966	0.54	0.068	2.5	0.99	0.094	0.124	0.36	0.113	0.26	3.95	0.18	4.39	14805	3.7944	17.26758	-13.47318	NAF
NS0096	124	126	NS	X071381	071381	1	G	W	31.33	41.96	1.77	0.7224	0.56	0.074	2.52	0.88	0.068	0.056	0.583	0.1	0.3	5.66	0.23	6.19	14831	1.7136	15.34896	-13.63536	NAF
NS0096	122	124	NS	X071380	071380	1	G	W	33	40.71	2.15	0.6321	0.49	0.091	2.45	0.92	0.063	0.072	0.677	0.103	0.32	4.56	0.27	5.15	14830	2.2032	16.04664	-13.84344	NAF
NS0096	160	162	NS	X071399	071399	1	G	W	34.05	39.09	1.65	0.7353	0.57	0.071	2.65	0.98	0.155	0.073	0.35	0.102	0.27	4.68	0.08	5.03	14579	2.2338	17.09316	-14.85936	NAF
NS0096	44	46	NS	X071340	071340	1	G	M	35.64	37.63	0.91	0.8256	0.64	0.035	2.07	0.92	0.085	0.025	0.155	0.034	0.27	5.81	0.01	6.09	14791	0.765	16.04664	-15.28164	NAF
NS0096	66	68	NS	X071351	071351	1	G	M	36.19	36	1.2	0.8385	0.65	0.047	2.51	0.93	0.105	0.028	0.317	0.089	0.28	5.57	0.07	5.92	14802	0.8568	16.22106	-15.36426	NAF
NS0096	132	134	NS	X071385	071385	1	G	W	36.85	35.45	1.39	0.8772	0.68	0.058	2.35	0.94	0.061	0.03	0.388	0.078	0.26	4.98	0.2	5.44	14565	0.918	16.39548	-15.47748	NAF
NS0096	206	208	NS	X071423	071423	1	G	W	36.36	36.42	1.71	0.7224	0.56	0.069	2.48	1	0.167	0.041	0.382	0.107	0.24	4.58	-0.1	4.72	14638	1.2546	17.442	-16.1874	NAF
NS0096	200	202	NS	X071420	071420	1	G	W	35.38	37.55	1.14	0.903	0.7	0.054	2.41	0.98	0.033	0.029	0.306	0.083	0.27	5.19	0.34	5.8	14635	0.8874	17.09316	-16.20576	NAF
NS0096	196	198	NS	X071418	071418	1	G	W	37.06	35.35	1.16	0.8514	0.66	0.054	2.39	1	0.054	0.028	0.306	0.118	0.27	4.84	0.24	5.35	14615	0.8568	17.442	-16.5852	NAF
NS0096	182	184	NS	X071411	071411	1	G	W	32.49	37.04	3.01	0.774	0.6	0.131	3.78	1.23	0.189	0.153	0.479	0.162	0.41	5.62	0.4	6.43	14608	4.6818	21.45366	-16.77186	NAF
NS0096	214	216	NS	X071427	071427	1	G	W	31.23	38.77	3.36	0.6966	0.54	0.14	3.65	1.25	0.159	0.159	0.531	0.109	0.32	5.13	0.49	5.94	14642	4.8654	21.8025	-16.9371	NAF
NS0096	114	116	NS	X071376	071376	1	G	W	35.99	37.14	2.01	0.6837	0.53	0.086	2.37	1.1	0.047	0.046	0.674	0.076	0.23	3.95	0.44	4.62	14826	1.4076	19.1862	-17.7786	NAF
NS0096	56	58	NS	X071346	071346	1	G	M	33.3	40.18	0.9	0.645	0.5	0.04	2.39	1.07	0.112	0.028	0.224	0.046	0.23	6.26	0.22	6.71	14797	0.8568	18.66294	-17.80614	NAF
NS0096	226	228	NS	X071433	071433	1	G	W	30.29	40.36	3	0.7224	0.56	0.128	3.59	1.41	0.144	0.218	0.509	0.125	0.34	4.92	0.71	5.97	14648	6.6708	24.59322	-17.92242	NAF
NS0096	68	70	NS	X071352	071352	1	G	W	35.82	36.95	1.01	0.7869	0.61	0.043	2.33	1.12	0.094	0.05	0.287	0.077	0.29	5.35	0.28	5.92	14803	1.53	19.53504	-18.00504	NAF
NS0096	84	86	NS	X071360	071360	1	G	W	35.97	36	1.81	0.8901	0.69	0.074	2.53	1.18	0.067	0.051	0.932	0.142	0.27	3.75	0.5	4.52	14811	1.5606	20.58156	-19.02096	NAF
NS0096	228	230	NS	X071434	071434	1	G	W	34	41.34	0.87	0.8385	0.65	0.038	1.87	1.12	0.086	0.016	0.235	0.064	0.16	4.54	0.22	4.92	14649	0.4896	19.53504	-19.04544	NAF
NS0096	58	60	NS	X071347	071347	1	G	M	31.54	40.55	0.97	0.7353	0.57	0.036	2.74	1.14	0.121	0.022	0.229	0.056	0.36	7.38	0.31	8.05	14798	0.6732	19.88388	-19.21068	NAF
NS0096	210	212	NS	X071425	071425	1	G	W	33.46	37.83	1.92	0.8643	0.67	0.082	2.91	1.24	0.183	0.077	0.305	0.099	0.3	5.9	0.19	6.39	14640	2.3562	21.62808	-19.27188	NAF
NS0096	212	214	NS	X071426	071426	1	G	W	36.13	36.96	0.91	0.8643	0.67	0.041	2.15	1.14	0.1	0.018	0.25	0.088	0.17	4.95	0.29	5.41	14641	0.5508	19.88388	-19.33308	NAF
NS0096	238	240	NS	X071439	071439	1	G	W	36.7	35.97	1.45	0.8127	0.63	0.065	2.34	1.18	0.091	0.039	0.408	0.065	0.18	4.25	0.35	4.78	14672	1.1934	20.58156	-19.38816	NAF
NS0096	162	164	NS	X071400	071400	1	G	W	35.75	38.63	0.93	0.8127	0.63	0.043	2.08	1.14	0.087	0.016	0.166	0.063	0.13	4.54	0.27	4.94	14580	0.4896	19.88388	-19.39428	NAF
NS0096	194	196	NS	X071417	071417	1	G	W	34.92	37.2	1.48	0.8643	0.67	0.065	2.63	1.25	0.059	0.06	0.36	0.09	0.25	5.19	0.5	5.94	14614	1.836	21.8025	-19.9665	NAF
NS0096	224	226	NS	X071432	071432	1	G	W	35.02	37.93	1.39	0.8256	0.64	0.057	2.32	1.23	0.125	0.039	0.297	0.073	0.19	4.64	0.3	5.13	14647	1.1934	21.45366	-20.26026	NAF
NS0096	158	160	NS	X071398	071398	1	G	W	37.52	36.1	1.08	0.7095	0.55	0.049	2.15	1.26	0.091	0.039	0.215	0.074	0.14	3.72	0.38	4.24	14578	1.1934	21.97692	-20.78352	NAF
NS0096	198	200	NS	X071419	071419	1	G	W	35.45	36.83	1.13	0.903	0.7	0.049	2.46	1.25	0.047	0.029	0.374	0.085	0.28	5.15	0.58	6.01	14616	0.8874	21.8025	-20.9151	NAF
NS0096	260	262	NS	X071451	071451	1	G	W	32.99	38.37	2.86	0.6708	0.52	0.124	3.12	1.56	0.074	0.196	1.19	0.114	0.18	3.39	0.91	4.48	14683	5.9976	27.20952	-21.21192	NAF
NS0096	128	130	NS	X071383	071383	1	G	W	33.88	38.91	2.08	0.6708	0.52	0.092	2.74	1.32	0.083	0.046	0.366	0.095	0.29	4.37	0.61	5.27	14563	1.4076	23.02344	-21.61584	NAF
NS0096	146	148	NS	X071392	071392	1	G	W	37.04	34.76	1.23	0.8643	0.67	0.051	2.37	1.28	0.051	0.021	0.374	0.105	0.24	4.56	0.58	5.38	14572	0.6426	22.32576	-21.68316	NAF
NS0096	76	78	NS	X071356	071356	1	G	W	35.69	35.49	1.53	0.9288	0.72	0.069	2.83	1.47	0.158	0.106	0.488	0.103	0.27	4.78	0.47	5.52	14807	3.2436	25.63974	-22.39614	NAF
NS0096	70	72	NS	X071353	071353	1	G	W	35.91	38.02	1.11	0.7095	0.55	0.048	2.22	1.36	0.093	0.026	0.371	0.097	0.22	3.66	0.56	4.44	14804	0.7956	23.72112	-22.92552	NAF
NS0096	78	80	NS	X071357	071357	1	G	W	38.01	35.15	1.17	0.774	0.6	0.053	2.21	1.36	0.105	0.026	0.42	0.085	0.17	3.42	0.47	4.06	14808	0.7956	23.72112	-22.92552	NAF
NS0096	130	132	NS	X071384	071384	1	G	W	35.48	36.85	1.39	0.8256	0.64	0.058	2.28	1.39	0.072	0.033	0.373	0.069	0.23	4.54	0.7	5.47	14564	1.0098	24.24438	-23.23458	NAF
NS0096	208	210	NS	X071424	071424	1	G	W	36.01	36.09	0.99	0.9159	0.71	0.04	2.26	1.41	0.095	0.02	0.215	0.067	0.2	5.41	0.55	6.16	14639	0.612	24.59322	-23.98122	NAF
NS0096	98	100	NS	X071368	071368	1	G	W	34.62	38.07	1.91	0.7482	0.58	0.082	2.22	1.56	0.201	0.103	1.05	0.111	0.21	3.8	0.42	4.43	14818	3.1518	27.20952	-24.05772	NAF
NS0096	80	82	NS	X071358	071358	1	G	W	36.17	38.52	1	0.6837	0.53	0.042	1.88	1.44	0.09	0.02	0.49	0.067	0.12	2.8	0.63	3.55	14809	0.612	25.11648	-24.50448	NAF
NS0096	106	108	NS	X071372	071372	1	G	W	32.73	37.6	2.96	0.7611	0.59	0.131	3	1.64	0.107	0.102	1.19	0.116	0.31	4.26	0.94	5.51	14822	3.1212	28.60488	-25.48368	NAF
NS0096	280	282	NS	X071461	071461	1	G	W	35.49	36.22	2.03	0.6837	0.53	0.086	2.6	1.55	0.069	0.05	0.925	0.069	0.11	3.64	0.95	4.7	14711	1.53	27.0351	-25.5051	NAF
NS0096	96	98	NS	X071366	071366	1	G	W	32.3	37.17	3.59	0.6579	0.51	0.172	3.61	1.79	0.049	0.184	1.3	0.141	0.35	3.6	1.32	5.27	14817	5.6304	31.22118	-25.59078	NAF
NS0096	266	268	NS	X071454	071454	1	G	W	35	36.74	1.97	0.8127	0.63	0.084	2.3	1.58	0.144	0.061	1.12	0.068	0.11	3.79	0.63	4.53	14686	1.8666	27.55836	-25.69176	NAF
NS0096	248	250	NS	X071444	071444	1	G	W	34.96	38.26	1.86	0.645	0.5	0.08	2.56	1.64	0.043	0.067	0.515	0.069	0.16	3.14	1.03	4.33	14677	2.0502	28.60488	-26.55468	NAF
NS0096	100	102	NS	X071369	071369	1	G	W	33.41	38.5	2.13	0.6837	0.53	0.099	2.48	1.79	0.061	0.152	1.06	0.098	0.22	3.45	1.1	4.77	14819	4.6512	31.22118	-26.56998	NAF
NS0096	144	146	NS	X071391	071391	1	G	W	34.37	39.46	1.21	0.7869	0.61	0.049	2.29	1.58	0.093	0.023	0.391	0.089	0.19	4.01	0.91	5.11	14571	0.7038	27.55836	-26.85456	NAF
NS0096	136	138	NS	X071387	071387	1	G	W	35.79	36.35	1.19	0.903	0.7	0.053	2.24	1.59	0.081	0.027	0.51	0.098	0.23	4.26	0.83	5.32	14567	0.8262	27.73278	-26.90658	NAF
NS0096	242	244	NS	X071441	071441	1	G	W	38.01	34.81	1.42	0.7095	0.55	0.063	2.2	1.61	0.04	0.029	0.36	0.068	0.08	3.1	0.97	4.15	14674	0.8874	28.08162	-27.19422	NAF
NS0096	272	274	NS	X071457	071457	1	G	W	36.27	36.41	1.71	0.7482	0.58	0.065	2.14	1.62	0.051	0.027	0.983	0.048	0.07	3.13	1.02	4.22	14707	0.8262	28.25604	-27.42984	NAF
NS0096	240	242	NS	X071440	071440	1	G	W	37.59	34.82	1.27	0.7611	0.59	0.056	2.22	1.62	0.053	0.026	0.268	0.071	0.14	3.52	0.94	4.6	14673	0.7956	28.25604	-27.46044	NAF
NS0096	222	224	NS	X071431	071431	1	G	W	34.45	39.56	0.9	0.8514	0.66	0.04	2.06	1.61	0.121	0.017	0.192	0.066	0.11	4.41	0.76	5.28	14646	0.5202	28.08162	-27.56142	NAF
NS0096	202	204	NS	X071421	071421	1	G	W	34.5	36.48	1.08	0.9933	0.77	0.048	2.65	1.65	0.062	0.026	0.325	0.087	0.27	5.78	1.02	7.07	14636	0.7956	28.7793	-27.9837	NAF
NS0096	110	112	NS	X071374	071374	1	G	W	36.04	38.06	1.1	0.8256	0.64	0.048	1.83	1.66	0.079	0.026	0.466	0.064	0.08	3.5	0.86	4.44	14824	0.7956	28.95372	-28.15812	NAF
NS0096	134	136	NS	X071386	071386	1	G	W	36.9	34.82	1.13	0.8772	0.68	0.045	2.16	1.72	0.073	0.052	0.467	0.076	0.16	4.08	1.03	5.27	14566	1.5912	30.00024	-28.40904	NAF
NS0096	94	96	NS	X071365	071365	1	G	W	35.78	36.65	1.75	0.6579	0.51	0.082	2.42	1.75	0.06	0.064	0.69	0.1	0.2	3.03	1.13	4.36	14816	1.9584	30.5235	-28.5651	NAF
NS0096	90	92	NS	X071363	071363	1	G	W	36.47	37.67	1.02	0.7998	0.62	0.047	1.84	1.7	0.088	0.027	0.567	0.057	0.09	2.94	0.95	3.98	14814	0.8262	29.6514	-28.8252	NAF
NS0096	112	114	NS	X071375	071375	1	G	W	34.3	38.68	1.43	0.7869	0.61	0.059	2.1	1.7	0.063	0.024	0.658	0.064	0.15	3.8	1.08	5.03	14825	0.7344	29.6514	-28.917	NAF
NS0096	82	84	NS	X071359	071359	1	G	W	32.02	41.22	1.89	0.6837	0.53	0.086	2.91	1.9	0.078	0.129	0.668	0.151	0.34	3.1	1.28	4.72	14810	3.9474	33.1398	-29.1924	NAF
NS0096	108	110	NS	X071373	071373	1	G	W	34.31	38.49	1.54	0.8256	0.64	0.066	2.12	1.76	0.089	0.039	0.651	0.062	0.15	3.64	1.02	4.81	14823	1.1934	30.69792	-29.50452	NAF
NS0096	244	246	NS	X071442	071442	1	G	W	35.55	38.29	1.06	0.7611	0.59	0.046	1.97	1.78	0.096	0.023	0.298	0.04	0.09	3.26	0.98	4.33	14675	0.7038	31.04676	-30.34296	NAC
NS0096	278	280	NS	X071460	071460	1	G	W	34.38	37.73	2.01	0.6579	0.51	0.083	2.41	1.83	0.1	0.039	1.09	0.062	0.11	3.13	1.2	4.44	14710	1.1934	31.91886	-30.72546	NAC
NS0096	220	222	NS	X071430	071430	1	G	W	32.66	37.51	1.94	0.8643	0.67	0.08	2.95	1.95	0.293	0.102	0.327	0.117	0.31	5.46	0.54	6.31	14645	3.1212	34.0119	-30.8907	NAC
NS0096	104	106	NS	X071371	071371	1	G	W	34.88	37.21	1.73	0.7998	0.62	0.073	2.17	1.9	0.107	0.073	0.931	0.072	0.12	3.44	1.13	4.69	14821	2.2338	33.1398	-30.906	NAC
NS0096	140	142	NS	X071389	071389	1	G	W	35.19	35.54	1.45	0.8772	0.68	0.058	2.8	1.92	0.055	0.034	0.535	0.111	0.32	4.56	1.4	6.28	14569	1.0404	33.48864	-32.44824	NAC
NS0096	142	144	NS	X071390	071390	1	G	W	35.89	36.66	1.22	0.774	0.6	0.049	2.37	1.91	0.054	0.021	0.401	0.092	0.2	3.75	1.34	5.29	14570	0.6426	33.31422	-32.67162	NAC
NS0096	252	254	NS	X071446	071446	1	G	W	36.8	36.18	1.18	0.8127	0.63	0.049	2.08	1.92	0.081	0.025	0.43	0.054	0.05	3.27	1.15	4.47	14679	0.765	33.48864	-32.72364	NAC
NS0096	86	88	NS	X071361	071361	1	G	W	35.6	36.4	1.31	0.9159	0.71	0.057	2.37	1.96	0.085	0.039	0.711	0.12	0.23	3.45	1.35	5.03	14812	1.1934	34.18632	-32.99292	NAC
NS0096	268	270	NS	X071455	071455	1	G	W	35.19	37.24	1.44	0.7869	0.61	0.062	2.14	1.98	0.084	0.031	0.795	0.05	0.11	3.18	1.35	4.64	14687	0.9486	34.53516	-33.58656	NAC
NS0096	74	76	NS	X071355	071355	1	G	W	35.16	38.17	0.92	0.8127	0.63	0.037	2.09	1.97	0.104	0.022	0.382	0.075	0.15	3.29	1.28	4.72	14806	0.6732	34.36074	-33.68754	NAC
NS0096	92	94	NS	X071364	071364	1	G	W	36.36	35.48	1.63	0.774	0.6	0.073	2.34	2.04	0.116	0.057	0.807	0.099	0.22	3.09	1.22	4.53	14815	1.7442	35.58168	-33.83748	NAC
NS0096	148	150	NS	X071393	071393	1	G	W	22.55	52.22	0.96	1.0449	0.81	0.04	2.42	2.09	0.094	0.08	0.468	0.095	0.31	5.75	1.58	7.64	14573	2.448	36.45378	-34.00578	NAC
NS0096	178	180	NS	X071409	071409	1	G	W	34.5	38.03	1.04	0.774	0.6	0.045	2.35	1.99	0.105	0.021	0.259	0.074	0.2	4.26	1.23	5.69	14606	0.6426	34.70958	-34.06698	NAC
NS0096	246	248	NS	X071443	071443	1	G	W	34.67	39.27	1.04	0.7482	0.58	0.042	1.99	2.01	0.11	0.026	0.283	0.036	0.07	3.11	1.2	4.38	14676	0.7956	35.05842	-34.26282	NAC
NS0096	256	258	NS	X071448	071448	1	G	W	37.67	34.84	1.16	0.8256	0.64	0.053	2.14	2.05	0.084	0.025	0.506	0.052	0.07	3.09	1.33	4.49	14681	0.765	35.7561	-34.9911	NAC
NS0096	262	264	NS	X071452	071452	1	G	W	35.17	36.18	1.81	0.7353	0.57	0.076	2.5	2.1	0.154	0.053	1.01	0.092	0.15	3.56	1.22	4.93	14684	1.6218	36.6282	-35.0064	NAC
NS0096	264	266	NS	X071453	071453	1	G	W	34.44	40.38	0.83	0.774	0.6	0.037	1.76	2.05	0.078	0.019	0.407	0.033	0.07	2.72	1.5	4.29	14685	0.5814	35.7561	-35.1747	NAC
NS0096	270	272	NS	X071456	071456	1	G	W	35.24	35.65	1.61	0.8256	0.64	0.062	2.34	2.22	0.142	0.034	0.963	0.06	0.11	3.37	1.54	5.02	14688	1.0404	38.72124	-37.68084	NAC
NS0096	138	140	NS	X071388	071388	1	G	W	34.16	37.99	1.11	0.8385	0.65	0.043	2.38	2.23	0.096	0.021	0.459	0.094	0.24	3.99	1.67	5.9	14568	0.6426	38.89566	-38.25306	NAC
NS0096	274	276	NS	X071458	071458	1	G	W	34.88	37.17	1.38	0.8127	0.63	0.058	2.13	2.31	0.078	0.029	0.867	0.039	0.04	3.03	1.76	4.83	14708	0.8874	40.29102	-39.40362	NAC
NS0096	154	156	NS	X071396	071396	1	G	W	29.13	39.59	1.21	1.1739	0.91	0.049	3.15	2.7	0.083	0.148	0.511	0.107	0.35	6.46	2.24	9.05	14576	4.5288	47.0934	-42.5646	NAC
NS0096	250	252	NS	X071445	071445	1	G	W	36.59	34.18	1.37	0.8127	0.63	0.057	2.37	2.53	0.095	0.048	0.519	0.064	0.12	3.15	1.87	5.14	14678	1.4688	44.12826	-42.65946	NAC
NS0096	180	182	NS	X071410	071410	1	G	W	33.32	38.32	0.91	0.8256	0.64	0.042	2.49	2.6	0.089	0.022	0.232	0.077	0.2	4.4	2.08	6.68	14607	0.6732	45.3492	-44.676	NAC
NS0096	276	278	NS	X071459	071459	1	G	W	33.54	38.17	1.65	0.7611	0.59	0.07	2.45	2.64	0.077	0.035	0.942	0.053	0.1	3	2.26	5.36	14709	1.071	46.04688	-44.97588	NAC
NS0096	88	90	NS	X071362	071362	1	G	W	35.06	37.15	0.99	0.8514	0.66	0.041	1.99	2.85	0.094	0.025	0.534	0.074	0.11	2.77	2.11	4.99	14813	0.765	49.7097	-48.9447	NAC
NS0096	102	104	NS	X071370	071370	1	G	W	33.6	37.25	1.58	0.8385	0.65	0.068	2.26	2.93	0.077	0.068	0.97	0.089	0.17	3.11	2.53	5.81	14820	2.0808	51.10506	-49.02426	NAC
NS0096	254	256	NS	X071447	071447	1	G	W	34.51	36.58	1.18	0.9159	0.71	0.054	2.31	2.88	0.093	0.026	0.561	0.054	0.1	3.33	2.35	5.78	14680	0.7956	50.23296	-49.43736	NAC
NS0097	36	38	NS	X071480	071480	1	G	M	25.47	44.91	6.61	0.1419	0.11	0.284	2.98	0.09	0.066	4.51	1.95	0.052	1.21	2.27	2.81	6.29	14719	138.006	1.56978	136.43622	PAF(HC)
NS0097	40	42	NS	X071482	071482	1	G	M	23.88	46.2	7.92	0.516	0.4	0.359	2.89	0.13	0.049	1.67	2.17	0.038	1.67	1.84	1.74	5.25	14721	51.102	2.26746	48.83454	PAF(HC)
NS0097	38	40	NS	X071481	071481	1	G	M	25.36	43.2	7	0.4128	0.32	0.315	3.99	0.34	0.097	1.15	2.33	0.071	0.63	3.21	1.76	5.6	14720	35.19	5.93028	29.25972	PAF(HC)
NS0097	34	36	NS	X071479	071479	1	G	M	30.78	45.61	3.4	0.6966	0.54	0.149	1.04	0.06	0.085	0.956	1.19	0.03	1.75	0.39	1.25	3.39	14718	29.2536	1.04652	28.20708	PAF(HC)
NS0097	148	150	NS	X071537	071537	1	G	W	27.99	48.02	2.52	0.3999	0.31	0.112	3.03	0.7	0.163	1.11	0.703	0.072	0.05	2.18	1.45	3.68	14865	33.966	12.2094	21.7566	PAF(HC)
NS0097	42	44	NS	X071483	071483	1	G	M	21.32	48.79	9.34	0.1677	0.13	0.422	4.23	0.2	0.061	0.413	1.56	0.039	1.08	2.47	0.83	4.38	14722	12.6378	3.4884	9.1494	PAF(LC)
NS0097	264	266	NS	X071596	071596	1	G	W	30.71	41.33	3.61	0.4644	0.36	0.162	3.58	0.67	0.065	0.456	1.09	0.122	0.29	3.88	0.64	4.81	14923	13.9536	11.68614	2.26746	PAF(LC)
NS0097	280	282	NS	X071605	071605	1	G	W	31.13	38.95	2.66	0.6063	0.47	0.123	3.68	0.41	0.077	0.257	0.35	0.095	0.55	6.97	0.42	7.94	14931	7.8642	7.15122	0.71298	PAF(LC)
NS0097	36	40	NS	BX078480-BX078481	X078480	2			66.21	4.488	0.621	0.048	0.03456	0.068	0.32	0.047	0.013	0.038	0.291	0.079	-0.01	-0.01	-0.01	-0.03	1235	1.1628	0.819774	0.343026	PAF(LC)
NS0097	276	280	NS	BX078603-BX078604	X078603	2			63.89	8.254	0.639	0.099	0.07128	0.058	0.693	0.079	0.015	0.054	0.118	0.093	-0.01	-0.01	-0.01	-0.03	1296	1.6524	1.377918	0.274482	PAF(LC)
NS0097	262	266	NS	BX078595-BX078596	X078595	2			64.11	8.685	0.46	0.078	0.05616	0.035	0.504	0.077	0.014	0.036	0.156	0.1	-0.01	-0.01	-0.01	-0.03	1292	1.1016	1.343034	-0.241434	NAF
NS0097	20	24	NS	BX078472-BX078473	X078472	2			68.08	3.462	0.046	0.096	0.06912	0.006	0.098	0.02	0.016	0.001	0.015	0.05	0.12	0.13	-0.01	0.24	1231	0.0306	0.34884	-0.31824	NAF
NS0097	24	28	NS	BX078474-BX078475	X078474	2			67.02	3.855	0.062	0.072	0.05184	0.009	0.096	0.022	0.019	0.001	0.014	0.058	0.18	0.29	0.25	0.72	1232	0.0306	0.383724	-0.353124	NAF
NS0097	28	32	NS	BX078476-BX078477	X078476	2			68.87	2.546	0.055	0.077	0.05544	0.012	0.103	0.024	0.018	0.001	0.012	0.069	0.25	0.23	0.06	0.54	1233	0.0306	0.418608	-0.388008	NAF
NS0097	280	282	NS	BX078605	X078605	2			67.3	6.21	0.357	0.076	0.05472	0.032	0.481	0.056	0.01	0.018	0.043	0.075	-0.01	-0.01	-0.01	-0.03	1099	0.5508	0.976752	-0.425952	NAF
NS0097	32	36	NS	BX078478-BX078479	X078478	2			69.11	2.866	0.068	0.108	0.07776	0.011	0.116	0.027	0.017	0.001	0.016	0.057	0.05	-0.01	-0.01	0.03	1234	0.0306	0.470934	-0.440334	NAF
NS0097	24	26	NS	X071474	071474	1	G	M	37.82	41.41	1.35	0.7224	0.56	0.059	0.18	0.04	0.03	0.004	0.618	0.017	1.15	0.32	0.07	1.54	14713	0.1224	0.69768	-0.57528	NAF
NS0097	148	152	NS	BX078537-BX078538	X078537	2			65.93	6.658	0.373	0.08	0.0576	0.028	0.473	0.1	0.025	0.038	0.139	0.08	-0.01	-0.01	-0.01	-0.03	1263	1.1628	1.7442	-0.5814	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0097	22	24	NS	X071473	071473	1	G	M	39.38	39.48	1.02	0.7611	0.59	0.041	0.1	0.04	0.047	0.002	0.547	0.01	1.24	0.2	-0.01	1.43	14712	0.0612	0.69768	-0.63648	NAF
NS0097	26	28	NS	X071475	071475	1	G	M	38.44	40.4	1.17	0.7869	0.61	0.06	0.14	0.04	0.05	0.002	0.568	0.009	1.38	0.31	0.09	1.78	14714	0.0612	0.69768	-0.63648	NAF
NS0097	112	116	NS	BX078519-BX078520	X078519	2			64.49	8.832	0.604	0.07	0.0504	0.048	0.613	0.067	0.014	0.017	0.226	0.071	-0.01	-0.01	-0.01	-0.03	1254	0.5202	1.168614	-0.648414	NAF
NS0097	62	66	NS	BX078493-BX078494	X078493	2			63.09	10.52	0.781	0.081	0.05832	0.058	0.711	0.081	0.017	0.022	0.307	0.077	-0.01	-0.01	-0.01	-0.03	1241	0.6732	1.412802	-0.739602	NAF
NS0097	66	70	NS	BX078495-BX078496	X078495	2			66.47	7.112	0.497	0.073	0.05256	0.035	0.477	0.065	0.013	0.011	0.236	0.064	-0.01	-0.01	-0.01	-0.03	1242	0.3366	1.13373	-0.79713	NAF
NS0097	230	234	NS	BX078579-BX078580	X078579	2			67.99	4.855	0.131	0.068	0.04896	0.009	0.22	0.058	0.01	0.003	0.116	0.068	-0.01	-0.01	-0.01	-0.03	1284	0.0918	1.011636	-0.919836	NAF
NS0097	272	276	NS	BX078601-BX078602	X078601	2			65.38	8.152	0.371	0.082	0.05904	0.035	0.476	0.095	0.017	0.023	0.105	0.078	-0.01	-0.01	-0.01	-0.03	1295	0.7038	1.65699	-0.95319	NAF
NS0097	30	32	NS	X071477	071477	1	G	M	36.51	43.45	1.11	0.5805	0.45	0.048	0.25	0.06	0.047	0.003	0.407	0.015	1.2	0.35	0.09	1.64	14716	0.0918	1.04652	-0.95472	NAF
NS0097	32	34	NS	X071478	071478	1	G	M	38.15	41.66	0.92	0.6192	0.48	0.04	0.28	0.06	0.048	0.003	0.365	0.013	1.05	0.23	-0.07	1.21	14717	0.0918	1.04652	-0.95472	NAF
NS0097	144	148	NS	BX078535-BX078536	X078535	2			68.42	3.721	0.103	0.048	0.03456	0.015	0.233	0.065	0.014	0.005	0.037	0.064	-0.01	-0.01	-0.01	-0.03	1262	0.153	1.13373	-0.98073	NAF
NS0097	104	108	NS	BX078515-BX078516	X078515	2			68.03	5.481	0.263	0.06	0.0432	0.02	0.283	0.069	0.012	0.007	0.161	0.07	-0.01	-0.01	-0.01	-0.03	1252	0.2142	1.203498	-0.989298	NAF
NS0097	226	230	NS	BX078577-BX078578	X078577	2			68.77	4.825	0.131	0.067	0.04824	0.01	0.226	0.068	0.012	0.005	0.115	0.083	-0.01	-0.01	-0.01	-0.03	1283	0.153	1.186056	-1.033056	NAF
NS0097	156	160	NS	BX078541-BX078542	X078541	2			67.15	7.261	0.359	0.074	0.05328	0.024	0.384	0.079	0.012	0.01	0.195	0.064	-0.01	-0.01	-0.01	-0.03	1265	0.306	1.377918	-1.071918	NAF
NS0097	206	210	NS	BX078567-BX078568	X078567	2			67.53	6.145	0.174	0.075	0.054	0.012	0.3	0.067	0.013	0.003	0.125	0.079	-0.01	-0.01	-0.01	-0.03	1278	0.0918	1.168614	-1.076814	NAF
NS0097	198	202	NS	BX078563-BX078564	X078563	2			67.47	6.194	0.186	0.079	0.05688	0.01	0.301	0.071	0.014	0.005	0.139	0.107	-0.01	-0.01	-0.01	-0.03	1276	0.153	1.238382	-1.085382	NAF
NS0097	84	88	NS	BX078505-BX078506	X078505	2			66.53	7.285	0.286	0.073	0.05256	0.028	0.342	0.081	0.015	0.01	0.167	0.079	-0.01	-0.01	-0.01	-0.03	1247	0.306	1.412802	-1.106802	NAF
NS0097	92	96	NS	BX078509-BX078510	X078509	2			69.27	4.938	0.126	0.061	0.04392	0.017	0.213	0.072	0.011	0.004	0.098	0.053	-0.01	-0.01	-0.01	-0.03	1249	0.1224	1.255824	-1.133424	NAF
NS0097	44	48	NS	BX078484-BX078485	X078484	2			68.17	5.443	0.19	0.102	0.07344	0.019	0.243	0.077	0.017	0.006	0.113	0.054	-0.01	-0.01	-0.01	-0.03	1237	0.1836	1.343034	-1.159434	NAF
NS0097	202	206	NS	BX078565-BX078566	X078565	2			66.9	6.649	0.192	0.079	0.05688	0.009	0.302	0.074	0.014	0.004	0.139	0.101	-0.01	-0.01	-0.01	-0.03	1277	0.1224	1.290708	-1.168308	NAF
NS0097	176	178	NS	BX078551	X078551	2			68.64	4.946	0.12	0.064	0.04608	0.007	0.216	0.069	0.012	0.001	0.104	0.078	-0.01	-0.01	-0.01	-0.03	1270	0.0306	1.203498	-1.172898	NAF
NS0097	214	218	NS	BX078571-BX078572	X078571	2			66.42	6.093	0.147	0.079	0.05688	0.01	0.264	0.073	0.011	0.003	0.117	0.077	-0.01	-0.01	-0.01	-0.03	1280	0.0918	1.273266	-1.181466	NAF
NS0097	270	272	NS	BX078599	X078599	2			67.47	5.624	0.149	0.053	0.03816	0.019	0.267	0.082	0.013	0.008	0.039	0.057	-0.01	-0.01	-0.01	-0.03	1294	0.2448	1.430244	-1.185444	NAF
NS0097	80	84	NS	BX078503-BX078504	X078503	2			69.06	5.045	0.125	0.059	0.04248	0.012	0.223	0.072	0.01	0.002	0.079	0.055	-0.01	-0.01	-0.01	-0.03	1246	0.0612	1.255824	-1.194624	NAF
NS0097	116	120	NS	BX078521-BX078522	X078521	2			65.96	7.687	0.305	0.089	0.06408	0.025	0.389	0.085	0.017	0.009	0.175	0.064	-0.01	-0.01	-0.01	-0.03	1255	0.2754	1.48257	-1.20717	NAF
NS0097	58	62	NS	BX078491-BX078492	X078491	2			68.77	4.989	0.185	0.054	0.03888	0.016	0.23	0.079	0.014	0.005	0.097	0.076	-0.01	-0.01	-0.01	-0.03	1240	0.153	1.377918	-1.224918	NAF
NS0097	182	186	NS	BX078555-BX078556	X078555	2			68.74	5.368	0.138	0.066	0.04752	0.011	0.225	0.072	0.012	0.001	0.114	0.062	-0.01	-0.01	-0.01	-0.03	1272	0.0306	1.255824	-1.225224	NAF
NS0097	70	74	NS	BX078497-BX078498	X078497	2			65.29	8.92	0.614	0.074	0.05328	0.052	0.587	0.102	0.022	0.018	0.271	0.067	-0.01	-0.01	-0.01	-0.03	1243	0.5508	1.779084	-1.228284	NAF
NS0097	266	270	NS	BX078597-BX078598	X078597	2			66.78	6.008	0.171	0.063	0.04536	0.021	0.3	0.082	0.017	0.006	0.05	0.07	-0.01	-0.01	-0.01	-0.03	1293	0.1836	1.430244	-1.246644	NAF
NS0097	120	124	NS	BX078523-BX078524	X078523	2			69.27	4.6	0.13	0.06	0.0432	0.01	0.203	0.075	0.015	0.002	0.094	0.067	-0.01	-0.01	-0.01	-0.03	1256	0.0612	1.30815	-1.24695	NAF
NS0097	210	214	NS	BX078569-BX078570	X078569	2			67.06	6.346	0.169	0.076	0.05472	0.009	0.298	0.075	0.014	0.002	0.125	0.065	-0.01	-0.01	-0.01	-0.03	1279	0.0612	1.30815	-1.24695	NAF
NS0097	238	242	NS	BX078583-BX078584	X078583	2			67.24	5.508	0.131	0.066	0.04752	0.012	0.232	0.077	0.011	0.003	0.108	0.064	-0.01	-0.01	-0.01	-0.03	1286	0.0918	1.343034	-1.251234	NAF
NS0097	178	182	NS	BX078553-BX078554	X078553	2			68.93	4.919	0.092	0.056	0.04032	0.007	0.196	0.074	0.012	0.001	0.082	0.052	-0.01	-0.01	-0.01	-0.03	1271	0.0306	1.290708	-1.260108	NAF
NS0097	250	252	NS	BX078589	X078589	2			67.17	6.137	0.204	0.089	0.06408	0.012	0.321	0.078	0.013	0.003	0.163	0.069	-0.01	-0.01	-0.01	-0.03	1289	0.0918	1.360476	-1.268676	NAF
NS0097	28	30	NS	X071476	071476	1	G	M	31.18	49.93	1.65	0.6192	0.48	0.076	0.23	0.08	0.055	0.004	0.672	0.016	1.35	0.44	0.11	1.9	14715	0.1224	1.39536	-1.27296	NAF
NS0097	194	198	NS	BX078561-BX078562	X078561	2			67.81	6.442	0.161	0.076	0.05472	0.012	0.299	0.082	0.015	0.005	0.123	0.097	-0.01	-0.01	-0.01	-0.03	1275	0.153	1.430244	-1.277244	NAF
NS0097	96	100	NS	BX078511-BX078512	X078511	2			68.76	5.473	0.198	0.058	0.04176	0.021	0.271	0.084	0.015	0.006	0.107	0.067	-0.01	-0.01	-0.01	-0.03	1250	0.1836	1.465128	-1.281528	NAF
NS0097	160	164	NS	BX078543-BX078544	X078543	2			69.11	4.211	0.114	0.054	0.03888	0.015	0.189	0.078	0.014	0.002	0.093	0.07	-0.01	-0.01	-0.01	-0.03	1266	0.0612	1.360476	-1.299276	NAF
NS0097	100	104	NS	BX078513-BX078514	X078513	2			67.46	6.457	0.218	0.079	0.05688	0.015	0.298	0.086	0.015	0.006	0.134	0.075	-0.01	-0.01	-0.01	-0.03	1251	0.1836	1.500012	-1.316412	NAF
NS0097	44	46	NS	X071484	071484	1	G	M	27.58	41.56	3.94	1.0707	0.83	0.161	2.91	0.78	0.22	0.401	1.5	0.043	0.4	6.85	0.74	7.99	14723	12.2706	13.60476	-1.33416	NAF
NS0097	140	144	NS	BX078533-BX078534	X078533	2			67.3	5.755	0.174	0.061	0.04392	0.016	0.28	0.089	0.013	0.007	0.088	0.069	-0.01	-0.01	-0.01	-0.03	1261	0.2142	1.552338	-1.338138	NAF
NS0097	74	78	NS	BX078499-BX078500	X078499	2			68.65	5.603	0.132	0.064	0.04608	0.012	0.232	0.081	0.012	0.002	0.087	0.056	-0.01	-0.01	-0.01	-0.03	1244	0.0612	1.412802	-1.351602	NAF
NS0097	258	262	NS	BX078593-BX078594	X078593	2			66.72	7.196	0.237	0.079	0.05688	0.024	0.374	0.097	0.017	0.01	0.09	0.07	-0.01	-0.01	-0.01	-0.03	1291	0.306	1.691874	-1.385874	NAF
NS0097	112	114	NS	X071519	071519	1	G	W	31.22	40.63	4.36	0.4257	0.33	0.198	4.46	0.32	0.059	0.137	1.31	0.11	0.23	2.66	0.18	3.07	14847	4.1922	5.58144	-1.38924	NAF
NS0097	132	134	NS	BX078529	X078529	2			67.67	5.449	0.174	0.059	0.04248	0.013	0.266	0.087	0.016	0.004	0.101	0.073	-0.01	-0.01	-0.01	-0.03	1259	0.1224	1.517454	-1.395054	NAF
NS0097	234	238	NS	BX078581-BX078582	X078581	2			67.89	5.541	0.157	0.07	0.0504	0.014	0.254	0.085	0.013	0.002	0.126	0.052	-0.01	-0.01	-0.01	-0.03	1285	0.0612	1.48257	-1.42137	NAF
NS0097	190	192	NS	BX078559	X078559	2			67.14	5.784	0.189	0.07	0.0504	0.009	0.281	0.088	0.019	0.003	0.136	0.072	-0.01	-0.01	-0.01	-0.03	1274	0.0918	1.534896	-1.443096	NAF
NS0097	246	250	NS	BX078587-BX078588	X078587	2			67.43	5.761	0.165	0.073	0.05256	0.011	0.26	0.09	0.016	0.004	0.136	0.063	-0.01	-0.01	-0.01	-0.03	1288	0.1224	1.56978	-1.44738	NAF
NS0097	222	226	NS	BX078575-BX078576	X078575	2			65.73	8.699	0.319	0.091	0.06552	0.011	0.377	0.092	0.016	0.005	0.225	0.087	-0.01	-0.01	-0.01	-0.03	1282	0.153	1.604664	-1.451664	NAF
NS0097	164	168	NS	BX078545-BX078546	X078545	2			69.01	4.462	0.111	0.055	0.0396	0.009	0.199	0.087	0.013	0.002	0.093	0.064	-0.01	-0.01	-0.01	-0.03	1267	0.0612	1.517454	-1.456254	NAF
NS0097	186	190	NS	BX078557-BX078558	X078557	2			67.92	5.159	0.121	0.059	0.04248	0.007	0.226	0.087	0.017	0.002	0.09	0.072	-0.01	-0.01	-0.01	-0.03	1273	0.0612	1.517454	-1.456254	NAF
NS0097	108	112	NS	BX078517-BX078518	X078517	2			67.79	5.807	0.156	0.064	0.04608	0.013	0.24	0.088	0.015	0.002	0.109	0.056	-0.01	-0.01	-0.01	-0.03	1253	0.0612	1.534896	-1.473696	NAF
NS0097	128	132	NS	BX078527-BX078528	X078527	2			69.31	4.107	0.119	0.061	0.04392	0.013	0.227	0.092	0.015	0.004	0.085	0.061	-0.01	-0.01	-0.01	-0.03	1258	0.1224	1.604664	-1.482264	NAF
NS0097	168	172	NS	BX078547-BX078548	X078547	2			68.73	5.281	0.177	0.059	0.04248	0.013	0.25	0.095	0.017	0.005	0.128	0.088	-0.01	-0.01	-0.01	-0.03	1268	0.153	1.65699	-1.50399	NAF
NS0097	52	56	NS	BX078488-BX078489	X078488	2			67.52	5.451	0.116	0.064	0.04608	0.009	0.208	0.091	0.015	0.002	0.068	0.056	-0.01	-0.01	-0.01	-0.03	1239	0.0612	1.587222	-1.526022	NAF
NS0097	88	92	NS	BX078507-BX078508	X078507	2			68.69	4.729	0.108	0.061	0.04392	0.009	0.194	0.091	0.012	0.002	0.091	0.064	-0.01	-0.01	-0.01	-0.03	1248	0.0612	1.587222	-1.526022	NAF
NS0097	172	176	NS	BX078549-BX078550	X078549	2			68.79	5.192	0.163	0.059	0.04248	0.012	0.249	0.1	0.022	0.006	0.123	0.102	-0.01	-0.01	-0.01	-0.03	1269	0.1836	1.7442	-1.5606	NAF
NS0097	254	258	NS	BX078591-BX078592	X078591	2			67.3	5.431	0.139	0.064	0.04608	0.012	0.239	0.101	0.015	0.006	0.08	0.095	-0.01	-0.01	-0.01	-0.03	1290	0.1836	1.761642	-1.578042	NAF
NS0097	124	128	NS	BX078525-BX078526	X078525	2			68.7	5.331	0.154	0.079	0.05688	0.012	0.247	0.096	0.015	0.002	0.123	0.072	-0.01	-0.01	-0.01	-0.03	1257	0.0612	1.674432	-1.613232	NAF
NS0097	136	140	NS	BX078531-BX078532	X078531	2			66.67	6.519	0.212	0.071	0.05112	0.017	0.316	0.11	0.017	0.006	0.119	0.073	-0.01	-0.01	-0.01	-0.03	1260	0.1836	1.91862	-1.73502	NAF
NS0097	218	222	NS	BX078573-BX078574	X078573	2			66.84	6.381	0.145	0.079	0.05688	0.009	0.25	0.103	0.016	0.002	0.121	0.072	-0.01	-0.01	-0.01	-0.03	1281	0.0612	1.796526	-1.735326	NAF
NS0097	242	246	NS	BX078585-BX078586	X078585	2			66.58	6.45	0.225	0.083	0.05976	0.016	0.351	0.108	0.013	0.004	0.145	0.062	-0.01	-0.01	-0.01	-0.03	1287	0.1224	1.883736	-1.761336	NAF
NS0097	78	80	NS	BX078502	X078502	2			68.67	4.737	0.091	0.055	0.0396	0.008	0.165	0.128	0.015	0.002	0.083	0.064	-0.01	-0.01	-0.01	-0.03	1245	0.0612	2.232576	-2.171376	NAF
NS0097	276	278	NS	X071603	071603	1	G	W	27.25	42.45	3.4	0.6579	0.51	0.153	4.15	0.69	0.129	0.311	0.638	0.118	0.46	6.77	0.68	7.91	14929	9.5166	12.03498	-2.51838	NAF
NS0097	48	52	NS	BX078486-BX078487	X078486	2			67.29	6.651	0.138	0.088	0.06336	0.013	0.272	0.15	0.017	0.003	0.075	0.066	-0.01	-0.01	-0.01	-0.03	1238	0.0918	2.6163	-2.5245	NAF
NS0097	154	156	NS	X071540	071540	1	G	W	24.29	48.12	4.79	0.3741	0.29	0.237	5.13	0.85	0.024	0.378	1.28	0.147	0.43	2.73	1.02	4.18	14868	11.5668	14.8257	-3.2589	NAF
NS0097	152	156	NS	BX078539-BX078540	X078539	2			61.28	11.262	0.889	0.07	0.0504	0.082	0.886	0.262	0.075	0.035	0.274	0.072	-0.01	-0.01	-0.01	-0.03	1264	1.071	4.569804	-3.498804	NAF
NS0097	40	44	NS	BX078482-BX078483	X078482	2			60.63	11.868	0.58	0.041	0.02952	0.052	1.113	0.305	0.018	0.024	0.228	0.11	-0.01	-0.01	-0.01	-0.03	1236	0.7344	5.31981	-4.58541	NAF
NS0097	64	66	NS	X071494	071494	1	G	W	28.06	43.86	4.35	0.4644	0.36	0.179	4.27	0.58	0.15	0.119	1.4	0.104	0.34	3.41	0.24	3.99	14751	3.6414	10.11636	-6.47496	NAF
NS0097	278	280	NS	X071604	071604	1	G	W	25.86	43.48	3.34	0.6837	0.53	0.148	4.15	1	0.127	0.276	0.701	0.111	0.41	7.44	0.68	8.53	14930	8.4456	17.442	-8.9964	NAF
NS0097	266	268	NS	X071597	071597	1	G	W	36.03	37.63	1.64	0.6063	0.47	0.071	2.58	0.63	0.077	0.042	0.436	0.077	0.17	4.45	-0.21	4.41	14924	1.2852	10.98846	-9.70326	NAF
NS0097	62	64	NS	X071493	071493	1	G	W	31.85	41.12	2.73	0.5805	0.45	0.12	3.27	0.74	0.065	0.098	1.07	0.068	0.35	3.6	0.3	4.25	14750	2.9988	12.90708	-9.90828	NAF
NS0097	224	226	NS	X071576	071576	1	G	W	36.14	37.83	1.68	0.6579	0.51	0.07	2.77	0.64	0.087	0.04	1.01	0.097	0.02	3.33	-0.06	3.29	14903	1.224	11.16288	-9.93888	NAF
NS0097	262	264	NS	X071595	071595	1	G	W	32.15	39.31	2.28	0.6579	0.51	0.106	3.19	0.84	0.129	0.154	0.755	0.101	0.32	5.47	0.18	5.97	14922	4.7124	14.65128	-9.93888	NAF
NS0097	150	152	NS	X071538	071538	1	G	W	36.71	36.74	1.42	0.6837	0.53	0.064	2.65	0.71	0.174	0.063	0.518	0.045	0.11	4.25	-0.21	4.15	14866	1.9278	12.38382	-10.45602	NAF
NS0097	68	70	NS	X071496	071496	1	G	W	32.27	38.58	3.97	0.4644	0.36	0.166	3.96	0.81	0.18	0.105	1.44	0.105	0.35	3.11	0.17	3.63	14753	3.213	14.12802	-10.91502	NAF
NS0097	72	74	NS	X071498	071498	1	G	W	31.18	40.63	3.49	0.5031	0.39	0.163	3.69	0.87	0.118	0.114	1.28	0.097	0.34	3.33	0.35	4.02	14755	3.4884	15.17454	-11.68614	NAF
NS0097	114	116	NS	X071520	071520	1	G	W	35.42	36.96	2.72	0.5805	0.45	0.121	3.3	0.79	0.085	0.063	0.913	0.064	0.17	3.17	0.08	3.42	14848	1.9278	13.77918	-11.85138	NAF
NS0097	202	204	NS	X071565	071565	1	G	W	36.26	36.83	1.33	0.8514	0.66	0.054	2.91	0.73	0.094	0.024	0.858	0.167	0.08	4.04	0.07	4.19	14892	0.7344	12.73266	-11.99826	NAF
NS0097	230	232	NS	X071579	071579	1	G	W	34.87	37.97	0.94	0.8256	0.64	0.033	2.08	0.76	0.16	0.039	0.728	0.039	0.39	6.16	-0.16	6.39	14906	1.1934	13.25592	-12.06252	NAF
NS0097	152	154	NS	X071539	071539	1	G	W	34.76	38.66	2.35	0.5289	0.41	0.134	3	0.84	0.17	0.081	0.762	0.054	0.06	3.26	-0.05	3.27	14867	2.4786	14.65128	-12.17268	NAF
NS0097	46	48	NS	X071485	071485	1	G	M	35.19	38.27	1.44	0.8256	0.64	0.059	1.95	0.84	0.115	0.076	0.577	0.015	0.24	5.19	-0.15	5.28	14724	2.3256	14.65128	-12.32568	NAF
NS0097	86	88	NS	X071506	071506	1	G	W	38.41	34.99	1.85	0.6321	0.49	0.08	2.45	0.85	0.115	0.063	0.907	0.039	0.08	2.86	-0.07	2.87	14834	1.9278	14.8257	-12.8979	NAF
NS0097	118	120	NS	X071522	071522	1	G	W	32.52	40.64	2.95	0.5547	0.43	0.135	3.38	0.87	0.156	0.067	1.13	0.075	0.1	3.1	0.08	3.28	14850	2.0502	15.17454	-13.12434	NAF
NS0097	200	202	NS	X071564	071564	1	G	W	35.95	38.42	1.17	0.8127	0.63	0.048	2.51	0.86	0.092	0.025	0.783	0.113	-0.02	3.4	0.13	3.51	14891	0.765	15.00012	-14.23512	NAF
NS0097	228	230	NS	X071578	071578	1	G	W	35.96	37.92	1.12	0.8385	0.65	0.041	2.14	0.97	0.116	0.054	0.854	0.047	0.07	4.04	0.11	4.22	14905	1.6524	16.91874	-15.26634	NAF
NS0097	274	276	NS	X071602	071602	1	G	W	28.56	42.39	2.86	0.5676	0.44	0.135	3.74	1.15	0.18	0.155	0.609	0.125	0.36	5.89	0.44	6.69	14928	4.743	20.0583	-15.3153	NAF
NS0097	250	252	NS	X071589	071589	1	G	W	37.4	35.19	1.22	0.8385	0.65	0.05	2.66	0.94	0.085	0.022	0.861	0.049	0.03	4.27	0.18	4.48	14916	0.6732	16.39548	-15.72228	NAF
NS0097	156	158	NS	X071541	071541	1	G	W	29.07	42.95	2.94	0.6837	0.53	0.129	3.68	1.25	0.06	0.181	1.17	0.091	0.24	3.85	0.82	4.91	14869	5.5386	21.8025	-16.2639	NAF
NS0097	146	148	NS	X071536	071536	1	G	W	32.82	41.62	1.48	0.645	0.5	0.064	2.7	1.01	0.172	0.042	0.551	0.072	0.15	4.32	0.04	4.51	14864	1.2852	17.61642	-16.33122	NAF
NS0097	206	208	NS	X071567	071567	1	G	W	35.87	38.57	1.09	0.8385	0.65	0.04	2.4	1.03	0.097	0.023	0.753	0.091	0.03	3.37	0.27	3.67	14894	0.7038	17.96526	-17.26146	NAF
NS0097	98	100	NS	X071512	071512	1	G	W	32.62	40.28	2.76	0.5547	0.43	0.131	3.28	1.16	0.157	0.091	1.13	0.064	0.11	2.96	0.32	3.39	14840	2.7846	20.23272	-17.44812	NAF
NS0097	212	214	NS	X071570	071570	1	G	W	36.42	36.12	1.19	0.8643	0.67	0.047	2.68	1.07	0.127	0.037	0.823	0.093	0.05	4.54	0.1	4.69	14897	1.1322	18.66294	-17.53074	NAF
NS0097	66	68	NS	X071495	071495	1	G	W	32.46	39.72	2.37	0.6837	0.53	0.104	3.19	1.15	0.076	0.079	0.877	0.057	0.28	4.21	0.45	4.94	14752	2.4174	20.0583	-17.6409	NAF
NS0097	120	122	NS	X071523	071523	1	G	W	37.98	36.22	1.26	0.7353	0.57	0.051	1.9	1.06	0.126	0.024	0.722	0.039	0.06	3.08	0.12	3.26	14851	0.7344	18.48852	-17.75412	NAF
NS0097	56	58	NS	X071490	071490	1	G	M	32.5	39.39	2.67	0.6063	0.47	0.12	3.17	1.22	0.151	0.109	1.02	0.078	0.27	3.88	0.36	4.51	14747	3.3354	21.27924	-17.94384	NAF
NS0097	210	212	NS	X071569	071569	1	G	W	37.85	35.97	1.15	0.7353	0.57	0.047	2.47	1.08	0.102	0.025	0.768	0.07	0.01	3.01	0.29	3.31	14896	0.765	18.83736	-18.07236	NAF
NS0097	124	126	NS	X071525	071525	1	G	W	40.25	32.01	1.16	0.8643	0.67	0.047	2.15	1.06	0.128	0.013	0.833	0.04	0.01	3.69	0.03	3.73	14853	0.3978	18.48852	-18.09072	NAF
NS0097	222	224	NS	X071575	071575	1	G	W	36.91	36.27	1.36	0.7353	0.57	0.056	2.61	1.11	0.073	0.027	0.934	0.122	0.02	3.34	0.43	3.79	14902	0.8262	19.36062	-18.53442	NAF
NS0097	232	234	NS	X071580	071580	1	G	W	34.52	40.75	0.93	0.8256	0.64	0.036	2.16	1.13	0.061	0.024	0.699	0.055	0.04	3.34	0.44	3.82	14907	0.7344	19.70946	-18.97506	NAF
NS0097	116	118	NS	X071521	071521	1	G	W	36.77	36.66	1.45	0.7353	0.57	0.061	2.32	1.19	0.095	0.051	0.863	0.062	0	3.29	0.36	3.65	14849	1.5606	20.75598	-19.19538	NAF
NS0097	268	270	NS	X071598	071598	1	G	W	36.22	37.79	1.53	0.5547	0.43	0.065	2.34	1.22	0.125	0.038	0.342	0.06	0.15	3.53	0.18	3.86	14925	1.1628	21.27924	-20.11644	NAF
NS0097	198	200	NS	X071563	071563	1	G	W	34.9	40.17	1	0.8256	0.64	0.039	2.36	1.21	0.095	0.025	0.682	0.089	-0.02	3.13	0.44	3.55	14890	0.765	21.10482	-20.33982	NAF
NS0097	204	206	NS	X071566	071566	1	G	W	35.22	39.8	1.07	0.7611	0.59	0.04	2.3	1.2	0.101	0.019	0.729	0.109	0.01	2.96	0.45	3.42	14893	0.5814	20.9304	-20.349	NAF
NS0097	102	104	NS	X071514	071514	1	G	W	37.8	35.66	1.18	0.7869	0.61	0.048	2.2	1.22	0.115	0.025	0.746	0.037	-0.01	3.4	0.33	3.72	14842	0.765	21.27924	-20.51424	NAF
NS0097	70	72	NS	X071497	071497	1	G	W	31.1	41.82	2.82	0.5547	0.43	0.118	3.27	1.33	0.08	0.087	1.14	0.082	0.22	3.15	0.74	4.11	14754	2.6622	23.19786	-20.53566	NAF
NS0097	208	210	NS	X071568	071568	1	G	W	34.27	40.26	1.13	0.7095	0.55	0.043	2.61	1.25	0.084	0.024	0.68	0.094	0.05	3.17	0.61	3.83	14895	0.7344	21.8025	-21.0681	NAF
NS0097	106	108	NS	X071516	071516	1	G	W	31.57	41.36	2.43	0.6579	0.51	0.106	3.01	1.37	0.077	0.079	1.22	0.068	0.14	3.12	0.8	4.06	14844	2.4174	23.89554	-21.47814	NAF
NS0097	74	76	NS	X071499	071499	1	G	W	35.92	38.43	1.36	0.6192	0.48	0.058	2.27	1.3	0.081	0.037	0.572	0.044	0.07	3.02	0.53	3.62	14756	1.1322	22.6746	-21.5424	NAF
NS0097	216	218	NS	X071572	071572	1	G	W	37.08	36.54	1.06	0.8772	0.68	0.038	2.21	1.3	0.081	0.026	0.729	0.061	0.05	3.15	0.6	3.8	14899	0.7956	22.6746	-21.879	NAF
NS0097	272	274	NS	X071601	071601	1	G	W	32.85	39.53	1.75	0.6192	0.48	0.073	2.75	1.35	0.127	0.054	0.56	0.082	0.27	5.01	0.49	5.77	14927	1.6524	23.5467	-21.8943	NAF
NS0097	236	238	NS	X071582	071582	1	G	W	36.1	38	1.08	0.774	0.6	0.04	2.27	1.31	0.073	0.026	0.779	0.049	0	3.07	0.61	3.68	14909	0.7956	22.84902	-22.05342	NAF
NS0097	244	246	NS	X071586	071586	1	G	W	34.93	38.22	1.32	0.7998	0.62	0.053	2.8	1.33	0.072	0.029	0.748	0.057	0.07	3.72	0.71	4.5	14913	0.8874	23.19786	-22.31046	NAF
NS0097	166	168	NS	X071546	071546	1	G	W	39.06	35.06	1.09	0.6708	0.52	0.046	1.92	1.32	0.082	0.014	0.729	0.042	-0.04	2.4	0.45	2.81	14874	0.4284	23.02344	-22.59504	NAF
NS0097	246	248	NS	X071587	071587	1	G	W	37.16	36.31	1.11	0.774	0.6	0.044	2.31	1.41	0.104	0.028	0.751	0.05	0	3.17	0.62	3.79	14914	0.8568	24.59322	-23.73642	NAF
NS0097	140	142	NS	X071533	071533	1	G	W	30.78	42.84	1.88	0.6321	0.49	0.08	3.03	1.59	0.144	0.11	0.802	0.066	0.1	3.68	0.78	4.56	14861	3.366	27.73278	-24.36678	NAF
NS0097	100	102	NS	X071513	071513	1	G	W	37.1	36.06	1.36	0.7224	0.56	0.052	2.3	1.51	0.12	0.062	0.828	0.046	0.05	3.13	0.56	3.74	14841	1.8972	26.33742	-24.44022	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0097	248	250	NS	X071588	071588	1	G	W	34.91	39.43	0.97	0.8127	0.63	0.035	2.17	1.46	0.099	0.033	0.689	0.047	0.01	3.4	0.63	4.04	14915	1.0098	25.46532	-24.45552	NAF
NS0097	214	216	NS	X071571	071571	1	G	W	32.8	42.29	0.97	0.8643	0.67	0.038	2.28	1.46	0.077	0.031	0.667	0.062	0.05	3.29	0.79	4.13	14898	0.9486	25.46532	-24.51672	NAF
NS0097	160	162	NS	X071543	071543	1	G	W	37.79	36.56	0.98	0.7353	0.57	0.037	1.85	1.44	0.098	0.01	0.66	0.033	0	2.86	0.47	3.33	14871	0.306	25.11648	-24.81048	NAF
NS0097	194	196	NS	X071561	071561	1	G	W	35.36	38.65	0.99	0.8385	0.65	0.037	2.4	1.47	0.112	0.024	0.671	0.073	0.01	3.09	0.76	3.86	14888	0.7344	25.63974	-24.90534	NAF
NS0097	240	242	NS	X071584	071584	1	G	W	34.68	40.68	1.05	0.6708	0.52	0.039	2.07	1.52	0.091	0.027	0.722	0.035	-0.03	2.52	0.83	3.32	14911	0.8262	26.51184	-25.68564	NAF
NS0097	192	194	NS	X071560	071560	1	G	W	33.85	41.33	0.95	0.7998	0.62	0.035	2.21	1.53	0.092	0.028	0.66	0.075	0	2.79	0.84	3.63	14887	0.8568	26.68626	-25.82946	NAF
NS0097	260	262	NS	X071594	071594	1	G	W	30.59	41.06	1.87	0.6966	0.54	0.081	3.12	1.59	0.224	0.057	0.64	0.088	0.25	5.56	0.57	6.38	14921	1.7442	27.73278	-25.98858	NAF
NS0097	196	198	NS	X071562	071562	1	G	W	35.53	38.18	0.97	0.8127	0.63	0.038	2.51	1.58	0.085	0.026	0.62	0.075	0	3.13	0.9	4.03	14889	0.7956	27.55836	-26.76276	NAF
NS0097	48	50	NS	X071486	071486	1	G	M	35.36	36.89	1.44	0.7353	0.57	0.062	2.24	1.69	0.145	0.085	0.571	0.028	0.17	4.42	0.55	5.14	14743	2.601	29.47698	-26.87598	NAF
NS0097	60	62	NS	X071492	071492	1	G	W	33.54	40.57	1.37	0.6837	0.53	0.058	2.23	1.7	0.099	0.075	0.632	0.053	0.1	3.4	0.87	4.37	14749	2.295	29.6514	-27.3564	NAF
NS0097	252	254	NS	X071590	071590	1	G	W	35.9	38.64	0.94	0.6966	0.54	0.039	2.04	1.62	0.088	0.024	0.592	0.046	0.03	3.01	0.76	3.8	14917	0.7344	28.25604	-27.52164	NAF
NS0097	234	236	NS	X071581	071581	1	G	W	36.93	35.59	1.21	0.8127	0.63	0.041	2.39	1.64	0.146	0.024	0.935	0.058	0	3.25	0.73	3.98	14908	0.7344	28.60488	-27.87048	NAF
NS0097	270	272	NS	X071599	071599	1	G	W	34.58	39.33	1.36	0.5547	0.43	0.059	2.35	1.71	0.079	0.062	0.314	0.055	0.11	3.48	0.94	4.53	14926	1.8972	29.82582	-27.92862	NAF
NS0097	226	228	NS	X071577	071577	1	G	W	30.06	47.14	0.75	0.7482	0.58	0.028	1.96	1.65	0.058	0.027	0.523	0.057	0.02	2.59	1.21	3.82	14904	0.8262	28.7793	-27.9531	NAF
NS0097	136	138	NS	X071531	071531	1	G	W	32.53	41.6	1.38	0.7095	0.55	0.058	2.53	1.72	0.13	0.063	0.635	0.068	0.1	3.4	0.87	4.37	14859	1.9278	30.00024	-28.07244	NAF
NS0097	80	82	NS	X071503	071503	1	G	W	34.99	38.81	1.52	0.6192	0.48	0.065	2.43	1.67	0.075	0.034	0.649	0.047	0.09	2.93	0.89	3.91	14759	1.0404	29.12814	-28.08774	NAF
NS0097	176	178	NS	X071551	071551	1	G	W	34.32	40.34	0.98	0.8643	0.67	0.037	2.16	1.62	0.096	0.003	0.717	0.057	-0.01	2.81	1.04	3.84	14879	0.0918	28.25604	-28.16424	NAF
NS0097	190	192	NS	X071559	071559	1	G	W	35.29	38.55	1.06	0.8256	0.64	0.044	2.37	1.66	0.121	0.022	0.712	0.095	-0.04	2.82	0.99	3.77	14886	0.6732	28.95372	-28.28052	NAF
NS0097	104	106	NS	X071515	071515	1	G	W	34.3	39.88	1.1	0.8127	0.63	0.048	2.09	1.67	0.085	0.025	0.684	0.038	0.06	3.28	0.91	4.25	14843	0.765	29.12814	-28.36314	NAF
NS0097	110	112	NS	X071518	071518	1	G	W	34.1	41.45	0.91	0.7224	0.56	0.038	1.84	1.69	0.095	0.014	0.564	0.03	-0.04	2.78	0.95	3.69	14846	0.4284	29.47698	-29.04858	NAF
NS0097	168	170	NS	X071547	071547	1	G	W	36.15	36.86	1.62	0.6708	0.52	0.066	2.5	1.73	0.152	0.033	0.915	0.057	0.03	2.48	0.91	3.42	14875	1.0098	30.17466	-29.16486	NAF
NS0097	54	56	NS	X071489	071489	1	G	M	33.01	42.04	1.2	0.6708	0.52	0.053	2.01	1.75	0.112	0.043	0.535	0.029	0.04	3.14	0.92	4.1	14746	1.3158	30.5235	-29.2077	NAF
NS0097	242	244	NS	X071585	071585	1	G	W	32.72	40.89	1.44	0.6837	0.53	0.057	2.87	1.75	0.075	0.04	0.635	0.037	0.11	3.37	1.05	4.53	14912	1.224	30.5235	-29.2995	NAF
NS0097	238	240	NS	X071583	071583	1	G	W	35.44	38.57	0.88	0.8385	0.65	0.032	2.1	1.76	0.111	0.032	0.646	0.045	0.01	3.12	0.93	4.06	14910	0.9792	30.69792	-29.71872	NAF
NS0097	184	186	NS	X071556	071556	1	G	W	34.51	40.03	0.9	0.8256	0.64	0.036	2.16	1.74	0.083	0.013	0.628	0.067	-0.02	2.56	1.3	3.84	14883	0.3978	30.34908	-29.95128	NAF
NS0097	174	176	NS	X071550	071550	1	G	W	34.13	40.57	0.95	0.8643	0.67	0.036	2.07	1.74	0.088	0.005	0.706	0.049	-0.04	2.8	1.12	3.88	14878	0.153	30.34908	-30.19608	NAC
NS0097	162	164	NS	X071544	071544	1	G	W	32.34	44.95	0.85	0.6063	0.47	0.035	1.68	1.75	0.091	0.009	0.545	0.032	-0.05	1.91	1.1	2.96	14872	0.2754	30.5235	-30.2481	NAC
NS0097	84	86	NS	X071505	071505	1	G	W	30.59	42.12	1.97	0.7611	0.59	0.085	2.92	1.95	0.086	0.119	0.896	0.047	0.17	3.49	1.21	4.87	14833	3.6414	34.0119	-30.3705	NAC
NS0097	138	140	NS	X071532	071532	1	G	W	33.24	40.44	1.25	0.7224	0.56	0.051	2.48	1.81	0.109	0.031	0.687	0.051	0.03	3.44	1.16	4.63	14860	0.9486	31.57002	-30.62142	NAC
NS0097	220	222	NS	X071574	071574	1	G	W	33.43	41.56	0.88	0.7998	0.62	0.036	2.14	1.79	0.097	0.016	0.642	0.061	0	2.81	1.2	4.01	14901	0.4896	31.22118	-30.73158	NAC
NS0097	258	260	NS	X071593	071593	1	G	W	32.23	39.69	1.63	0.6837	0.53	0.071	2.84	1.95	0.244	0.079	0.499	0.082	0.21	4.82	0.73	5.76	14920	2.4174	34.0119	-31.5945	NAC
NS0097	88	90	NS	X071507	071507	1	G	W	34.49	40.28	1.01	0.7482	0.58	0.043	1.94	1.88	0.093	0.021	0.714	0.032	-0.01	2.78	1.12	3.89	14835	0.6426	32.79096	-32.14836	NAC
NS0097	126	128	NS	X071526	071526	1	G	W	33	41.96	0.96	0.7869	0.61	0.035	1.94	1.88	0.094	0.015	0.695	0.039	-0.02	2.83	1.3	4.11	14854	0.459	32.79096	-32.33196	NAC
NS0097	178	180	NS	X071553	071553	1	G	W	33.45	41.83	0.75	0.8514	0.66	0.033	2.04	1.87	0.085	0.002	0.548	0.05	-0.03	2.72	1.36	4.05	14880	0.0612	32.61654	-32.55534	NAC
NS0097	94	96	NS	X071510	071510	1	G	W	33.39	39.56	1.7	0.6966	0.54	0.07	2.52	1.99	0.1	0.064	0.945	0.041	0.13	2.99	1.17	4.29	14838	1.9584	34.70958	-32.75118	NAC
NS0097	82	84	NS	X071504	071504	1	G	W	34.27	41.01	0.75	0.7353	0.57	0.032	1.78	1.92	0.086	0.02	0.471	0.019	-0.03	2.85	1.13	3.95	14760	0.612	33.48864	-32.87664	NAC
NS0097	132	134	NS	X071529	071529	1	G	W	32.3	43.42	1.02	0.6837	0.53	0.038	1.97	1.95	0.107	0.023	0.579	0.043	-0.03	2.61	1.28	3.86	14857	0.7038	34.0119	-33.3081	NAC
NS0097	158	160	NS	X071542	071542	1	G	W	33.5	40.7	0.91	0.8127	0.63	0.033	2.07	1.94	0.081	0.014	0.604	0.044	-0.03	3.22	1.36	4.55	14870	0.4284	33.83748	-33.40908	NAC
NS0097	52	54	NS	X071488	071488	1	G	M	32.18	43.15	0.87	0.6966	0.54	0.035	1.85	2	0.106	0.028	0.391	0.02	0.06	3.5	1.14	4.7	14745	0.8568	34.884	-34.0272	NAC
NS0097	108	110	NS	X071517	071517	1	G	W	30.48	44.5	1.3	0.7482	0.58	0.049	2.31	2	0.121	0.028	0.745	0.046	0	3.08	1.35	4.43	14845	0.8568	34.884	-34.0272	NAC
NS0097	58	60	NS	X071491	071491	1	G	M	31.25	43.44	0.94	0.7611	0.59	0.035	2.14	2	0.11	0.026	0.489	0.038	0.1	3.77	1.27	5.14	14748	0.7956	34.884	-34.0884	NAC
NS0097	182	184	NS	X071555	071555	1	G	W	35.16	38.81	0.91	0.8256	0.64	0.034	2.18	1.98	0.092	0.013	0.654	0.058	0	2.64	1.35	3.99	14882	0.3978	34.53516	-34.13736	NAC
NS0097	92	94	NS	X071509	071509	1	G	W	35.2	39.32	0.84	0.7998	0.62	0.035	1.83	1.99	0.085	0.015	0.635	0.031	-0.01	2.82	1.25	4.06	14837	0.459	34.70958	-34.25058	NAC
NS0097	254	256	NS	X071591	071591	1	G	W	34.33	38.85	1.03	0.8127	0.63	0.039	2.27	2.06	0.086	0.032	0.547	0.052	0.06	3.68	1.39	5.13	14918	0.9792	35.93052	-34.95132	NAC
NS0097	218	220	NS	X071573	071573	1	G	W	33.28	41.41	0.81	0.8514	0.66	0.03	2.06	2.11	0.096	0.024	0.602	0.052	0.03	2.8	1.41	4.24	14900	0.7344	36.80262	-36.06822	NAC
NS0097	130	132	NS	X071528	071528	1	G	W	33.42	40.91	1.02	0.774	0.6	0.041	2.1	2.12	0.104	0.021	0.635	0.038	-0.01	2.68	1.61	4.28	14856	0.6426	36.97704	-36.33444	NAC
NS0097	172	174	NS	X071549	071549	1	G	W	35.45	36.96	1.5	0.7095	0.55	0.056	2.57	2.14	0.244	0.032	0.942	0.065	0.01	2.49	1.1	3.6	14877	0.9792	37.32588	-36.34668	NAC
NS0097	256	258	NS	X071592	071592	1	G	W	34.3	37.9	1.23	0.774	0.6	0.052	2.42	2.19	0.115	0.04	0.478	0.048	0.11	4.03	1.39	5.53	14919	1.224	38.19798	-36.97398	NAC
NS0097	144	146	NS	X071535	071535	1	G	W	32.4	43.58	0.73	0.5547	0.43	0.029	2.02	2.19	0.09	0.022	0.185	0.03	0	2.66	1.49	4.15	14863	0.6732	38.19798	-37.52478	NAC
NS0097	142	144	NS	X071534	071534	1	G	W	33.17	40.56	0.98	0.6837	0.53	0.04	2.43	2.28	0.079	0.071	0.458	0.04	-0.01	3.17	1.72	4.88	14862	2.1726	39.76776	-37.59516	NAC
NS0097	180	182	NS	X071554	071554	1	G	W	30.77	46.35	0.74	0.6579	0.51	0.026	1.77	2.18	0.087	0.008	0.546	0.047	-0.07	1.7	1.79	3.42	14881	0.2448	38.02356	-37.77876	NAC
NS0097	186	188	NS	X071557	071557	1	G	W	31.01	43.88	0.99	0.7869	0.61	0.036	2.28	2.21	0.159	0.02	0.643	0.101	0.04	2.47	1.73	4.24	14884	0.612	38.54682	-37.93482	NAC
NS0097	50	52	NS	X071487	071487	1	G	M	30.91	43	0.99	0.7611	0.59	0.038	2.13	2.23	0.107	0.03	0.421	0.019	0.07	4.14	1.54	5.75	14744	0.918	38.89566	-37.97766	NAC
NS0097	128	130	NS	X071527	071527	1	G	W	33.44	40.08	0.87	0.8643	0.67	0.031	2.15	2.33	0.102	0.022	0.512	0.041	-0.04	3.3	1.75	5.01	14855	0.6732	40.63986	-39.96666	NAC
NS0097	76	78	NS	X071500	071500	1	G	W	34.38	40.6	0.79	0.6837	0.53	0.033	1.7	2.35	0.091	0.022	0.511	0.017	0.04	2.5	1.43	3.97	14757	0.6732	40.9887	-40.3155	NAC
NS0097	96	98	NS	X071511	071511	1	G	W	33.33	42.42	0.66	0.6579	0.51	0.026	1.56	2.44	0.103	0.019	0.48	0.023	-0.05	2.09	1.72	3.76	14839	0.5814	42.55848	-41.97708	NAC
NS0097	122	124	NS	X071524	071524	1	G	W	30.79	43.73	0.87	0.8256	0.64	0.03	2.09	2.58	0.087	0.024	0.585	0.037	-0.02	2.86	2.18	5.02	14852	0.7344	45.00036	-44.26596	NAC
NS0097	134	136	NS	X071530	071530	1	G	W	31.16	42.88	0.85	0.7869	0.61	0.033	2.19	2.73	0.101	0.014	0.546	0.044	0.06	3.03	2.15	5.24	14858	0.4284	47.61666	-47.18826	NAC
NS0097	188	190	NS	X071558	071558	1	G	W	32.37	39.73	0.97	0.9546	0.74	0.04	2.62	2.73	0.085	0.004	0.637	0.094	0.03	3.07	2.53	5.63	14885	0.1224	47.61666	-47.49426	NAC
NS0097	90	92	NS	X071508	071508	1	G	W	30.71	43.62	0.81	0.8256	0.64	0.031	1.96	2.88	0.086	0.026	0.566	0.023	0	2.61	2.34	4.95	14836	0.7956	50.23296	-49.43736	NAC
NS0097	170	172	NS	X071548	071548	1	G	W	27.47	48.36	0.74	0.7869	0.61	0.028	2.05	2.86	0.074	0.013	0.521	0.028	0.03	2.33	2.65	5.01	14876	0.3978	49.88412	-49.48632	NAC
NS0097	164	166	NS	X071545	071545	1	G	W	30.16	43.52	0.74	0.8901	0.69	0.03	2.22	3.17	0.085	0.011	0.502	0.026	0.02	2.82	2.82	5.66	14873	0.3366	55.29114	-54.95454	NAC
NS0097	78	80	NS	X071502	071502	1	G	W	31.53	42.29	0.73	0.7611	0.59	0.029	1.8	3.4	0.108	0.021	0.518	0.017	-0.01	2.01	2.95	4.95	14758	0.6426	59.3028	-58.6602	NAC
NS0098	54	56	NS	X071633	071633	1	G	M	24.1	42.82	6.12	0.5031	0.39	0.255	3.32	0.23	0.039	5.83	0.581	0.081	0.6	6.34	3.53	10.47	14959	178.398	4.01166	174.38634	PAF(HC)
NS0098	250	252	NS	X071733	071733	1	G	W	13.18	50.59	10.36	0.2838	0.22	0.441	4.31	1.13	0.019	3.74	2.08	0.073	0.24	5.33	4.93	10.5	15057	114.444	19.70946	94.73454	PAF(HC)
NS0098	234	236	NS	X071725	071725	1	G	W	9.88	53.01	12.31	0.1806	0.14	0.471	3.44	1.39	0.014	3.64	3.4	0.089	0.16	4.78	4.46	9.4	15049	111.384	24.24438	87.13962	PAF(HC)
NS0098	228	230	NS	X071722	071722	1	G	W	13.7	50.99	10.11	0.3225	0.25	0.426	3.47	0.17	0.019	2.68	2.71	0.083	0.18	7.33	4.16	11.67	15046	82.008	2.96514	79.04286	PAF(HC)
NS0098	232	234	NS	X071724	071724	1	G	W	10.21	54.72	11.88	0.2451	0.19	0.568	3.42	0.88	0.015	2.84	3.09	0.077	0.16	4.97	3.83	8.96	15048	86.904	15.34896	71.55504	PAF(HC)
NS0098	226	228	NS	X071721	071721	1	G	W	14.63	50.05	9.67	0.3225	0.25	0.396	2.57	0.25	0.052	2.42	2.82	0.076	0.24	8.4	3.75	12.39	15045	74.052	4.3605	69.6915	PAF(HC)
NS0098	242	244	NS	X071729	071729	1	G	W	10.26	54.32	12.32	0.1935	0.15	0.533	4.16	1.36	0.014	3.01	2.67	0.093	0.24	4.16	3.9	8.3	15053	92.106	23.72112	68.38488	PAF(HC)
NS0098	178	180	NS	X071696	071696	1	G	W	28.64	39.9	1.89	0.3096	0.24	0.086	2.9	0.71	0.127	2.58	0.105	0.076	0.27	7.9	4.19	12.36	15021	78.948	12.38382	66.56418	PAF(HC)
NS0098	230	232	NS	X071723	071723	1	G	W	12.3	52.04	11.12	0.3096	0.24	0.493	3.75	0.18	0.028	2.15	2.79	0.082	0.16	6.45	3.79	10.4	15047	65.79	3.13956	62.65044	PAF(HC)
NS0098	240	242	NS	X071728	071728	1	G	W	10.57	55.12	10.51	0.2967	0.23	0.423	3.74	1.03	0.019	2.62	2.65	0.086	0.18	5.25	4.07	9.5	15052	80.172	17.96526	62.20674	PAF(HC)
NS0098	248	250	NS	X071732	071732	1	G	W	13.81	48.39	8.66	0.387	0.3	0.371	4.65	2.07	0.025	3.09	1.77	0.066	0.2	6.4	5.2	11.8	15056	94.554	36.10494	58.44906	PAF(HC)
NS0098	220	222	NS	X071718	071718	1	G	W	25.54	37.57	1.62	0.4902	0.38	0.074	2.61	0.76	0.116	2.3	0.462	0.044	0.25	14.44	4.89	19.58	15042	70.38	13.25592	57.12408	PAF(HC)
NS0098	260	262	NS	X071738	071738	1	G	W	13.28	49.62	10.27	0.3741	0.29	0.429	4.5	1.78	0.017	2.62	1.88	0.066	0.25	5.79	4.14	10.18	15062	80.172	31.04676	49.12524	PAF(HC)
NS0098	258	260	NS	X071737	071737	1	G	W	13.59	49.59	9.53	0.387	0.3	0.399	4.6	1.94	0.026	2.68	1.7	0.061	0.23	6.03	4.16	10.42	15061	82.008	33.83748	48.17052	PAF(HC)
NS0098	238	240	NS	X071727	071727	1	G	W	10.67	53.04	9.61	0.2838	0.22	0.382	4.03	2.18	0.029	2.44	2.57	0.079	0.16	6.05	4.41	10.62	15051	74.664	38.02356	36.64044	PAF(HC)
NS0098	276	278	NS	X071746	071746	1	G	W	10.89	53.27	12.38	0.2451	0.19	0.528	4.61	1.75	0.019	2.08	2	0.075	0.43	3.99	3.04	7.46	15070	63.648	30.5235	33.1245	PAF(HC)
NS0098	254	256	NS	X071735	071735	1	G	W	11.21	52.58	11.42	0.2838	0.22	0.485	4.54	1.63	0.016	1.9	2.23	0.071	0.28	5.15	3.3	8.73	15059	58.14	28.43046	29.70954	PAF(HC)
NS0098	252	254	NS	X071734	071734	1	G	W	12.55	48.07	10.04	0.3483	0.27	0.429	4.89	3.06	0.023	2.39	1.94	0.072	0.25	5.98	3.81	10.04	15058	73.134	53.37252	19.76148	PAF(HC)
NS0098	264	266	NS	X071740	071740	1	G	W	14.8	46.66	10.78	0.3612	0.28	0.455	4.81	1.92	0.021	1.71	1.66	0.067	0.34	7.12	3.1	10.56	15064	52.326	33.48864	18.83736	PAF(HC)
NS0098	278	280	NS	X071747	071747	1	G	W	11.57	53.11	11.34	0.2967	0.23	0.489	4.82	2.13	0.019	1.8	1.53	0.064	0.3	4.33	2.86	7.49	15071	55.08	37.15146	17.92854	PAF(HC)
NS0098	246	248	NS	X071731	071731	1	G	W	11.22	50.38	10.99	0.3741	0.29	0.472	4.59	1.93	0.019	1.68	2.75	0.086	0.24	7.21	3.51	10.96	15055	51.408	33.66306	17.74494	PAF(HC)
NS0098	72	74	NS	X071642	071642	1	G	M	36.2	42.07	1.33	0.5031	0.39	0.058	0.38	0.12	0.095	0.624	0.155	0.023	1.65	0.05	1.12	2.82	14968	19.0944	2.09304	17.00136	PAF(HC)
NS0098	262	264	NS	X071739	071739	1	G	W	14.82	48.17	7.82	0.4386	0.34	0.327	4.54	2.56	0.024	1.99	1.24	0.058	0.28	7.83	3.31	11.42	15063	60.894	44.65152	16.24248	PAF(HC)
NS0098	244	246	NS	X071730	071730	1	G	W	11.5	50.65	10.7	0.3999	0.31	0.467	4.7	1.76	0.02	1.53	2.52	0.079	0.22	7.43	3.24	10.89	15054	46.818	30.69792	16.12008	PAF(HC)
NS0098	222	224	NS	X071719	071719	1	G	W	21.14	46.94	1.82	0.3225	0.25	0.07	2.63	0.74	0.119	0.945	0.534	0.044	0.35	13.76	2.39	16.5	15043	28.917	12.90708	16.00992	PAF(HC)
NS0098	224	226	NS	X071720	071720	1	G	W	23.77	41.19	1.31	0.387	0.3	0.052	3.07	0.73	0.107	0.929	0.368	0.038	0.45	16.03	2.3	18.78	15044	28.4274	12.73266	15.69474	PAF(HC)
NS0098	274	276	NS	X071745	071745	1	G	W	12.14	51.07	11.65	0.3354	0.26	0.512	4.9	2.09	0.02	1.69	1.66	0.062	0.33	4.89	2.86	8.08	15069	51.714	36.45378	15.26022	PAF(HC)
NS0098	256	258	NS	X071736	071736	1	G	W	11.64	51.85	11.09	0.3225	0.25	0.465	4.74	1.97	0.017	1.6	2.06	0.074	0.31	5.68	3.05	9.04	15060	48.96	34.36074	14.59926	PAF(HC)
NS0098	180	182	NS	X071697	071697	1	G	W	28.95	46.1	0.85	0.3354	0.26	0.037	1.95	0.71	0.104	0.877	0.063	0.055	0.12	6.32	1.53	7.97	15022	26.8362	12.38382	14.45238	PAF(HC)
NS0098	56	58	NS	X071634	071634	1	G	M	24.24	50.28	2.74	0.5934	0.46	0.116	2.16	0.31	0.05	0.64	0.491	0.061	0.54	6.21	1.27	8.02	14960	19.584	5.40702	14.17698	PAF(HC)
NS0098	268	270	NS	X071742	071742	1	G	W	17.74	45.8	8.03	0.2967	0.23	0.33	4.33	1.81	0.033	1.44	0.779	0.049	0.36	9.03	2.45	11.84	15066	44.064	31.57002	12.49398	PAF(HC)
NS0098	272	274	NS	X071744	071744	1	G	W	14.37	48.61	9.39	0.4644	0.36	0.396	4.91	2.51	0.028	1.79	1.17	0.061	0.36	6.62	3.18	10.16	15068	54.774	43.77942	10.99458	PAF(HC)
NS0098	58	60	NS	X071635	071635	1	G	M	32.48	42.61	1.14	0.7095	0.55	0.047	1.28	0.52	0.092	0.519	0.43	0.037	0.29	4.9	0.89	6.08	14961	15.8814	9.06984	6.81156	PAF(LC)
NS0098	50	52	NS	X071631	071631	1	G	M	30.02	42.82	3.82	0.5031	0.39	0.161	2.11	0.18	0.079	0.321	0.507	0.071	2.1	3.54	0.95	6.59	14957	9.8226	3.13956	6.68304	PAF(LC)
NS0098	212	214	NS	X071714	071714	1	G	W	32.56	25.31	0.61	0.6837	0.53	0.024	2.86	1.17	0.233	0.875	0.008	0.026	1.08	19.22	2.01	22.31	15038	26.775	20.40714	6.36786	PAF(LC)
NS0098	88	90	NS	X071651	071651	1	G	W	27.57	44.96	1.63	0.6321	0.49	0.069	2.67	0.44	0.082	0.458	0.2	0.051	0.44	8.24	0.94	9.62	14976	14.0148	7.67448	6.34032	PAF(LC)
NS0098	86	88	NS	X071649	071649	1	G	W	27.19	41.17	4.6	0.4773	0.37	0.202	4.13	0.46	0.077	0.45	0.472	0.076	0.41	7.8	0.82	9.03	14975	13.77	8.02332	5.74668	PAF(LC)
NS0098	74	76	NS	X071643	071643	1	G	M	28.79	51.09	2.04	0.129	0.1	0.085	0.63	0.1	0.076	0.244	0.126	0.035	2.42	0.51	0.69	3.62	14969	7.4664	1.7442	5.7222	PAF(LC)
NS0098	60	62	NS	X071636	071636	1	G	M	33.39	41.05	1.2	0.903	0.7	0.051	1.41	0.45	0.077	0.435	0.433	0.038	0.37	4.75	0.83	5.95	14962	13.311	7.8489	5.4621	PAF(LC)
NS0098	66	68	NS	X071639	071639	1	G	M	30.94	47.57	1.51	1.7931	1.39	0.06	0.61	0.23	0.066	0.274	0.479	0.042	1.25	0.74	0.78	2.77	14965	8.3844	4.01166	4.37274	PAF(LC)
NS0098	190	192	NS	X071703	071703	1	G	W	25.33	44.86	3.91	0.5289	0.41	0.178	2.39	0.73	0.107	0.5	0.149	0.077	0.37	9.31	0.83	10.51	15027	15.3	12.73266	2.56734	PAF(LC)
NS0098	62	64	NS	X071637	071637	1	G	M	31.6	49.03	1.75	0.1548	0.12	0.077	0.58	0.14	0.073	0.151	0.417	0.037	1.29	0.58	0.4	2.27	14963	4.6206	2.44188	2.17872	PAF(LC)
NS0098	166	168	NS	X071690	071690	1	G	W	27.7	40.23	2.35	0.3999	0.31	0.1	3.54	0.88	0.172	0.57	0.111	0.083	0.4	10.2	1.1	11.7	15015	17.442	15.34896	2.09304	PAF(LC)
NS0098	52	54	NS	X071632	071632	1	G	M	21.21	49.49	7.17	0.4644	0.36	0.301	3.87	0.33	0.079	0.25	0.55	0.105	0.75	5.25	0.78	6.78	14958	7.65	5.75586	1.89414	PAF(LC)
NS0098	90	92	NS	X071652	071652	1	G	W	24.1	50.9	2.53	0.4386	0.34	0.112	2.6	0.51	0.104	0.351	0.487	0.061	0.36	6.3	0.65	7.31	14977	10.7406	8.89542	1.84518	PAF(LC)
NS0098	92	94	NS	X071653	071653	1	G	W	22.62	49.08	4.08	0.3612	0.28	0.175	3.53	0.63	0.073	0.376	0.986	0.064	0.36	7.07	0.79	8.22	14978	11.5056	10.98846	0.51714	PAF(LC)
NS0098	0	4	NS	BX078606-BX078607	X078606	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1100	-0.0306	-0.01744	-0.013158	NAF
NS0098	12	16	NS	BX078612-BX078613	X078612	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1103	-0.0306	-0.01744	-0.013158	NAF
NS0098	16	20	NS	BX078614-BX078615	X078614	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1104	-0.0306	-0.01744	-0.013158	NAF
NS0098	20	24	NS	BX078616-BX078617	X078616	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1105	-0.0306	-0.01744	-0.013158	NAF
NS0098	210	214	NS	BX078713-BX078714	X078713	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1153	-0.0306	-0.01744	-0.013158	NAF
NS0098	214	218	NS	BX078715-BX078716	X078715	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1154	-0.0306	-0.01744	-0.013158	NAF
NS0098	218	222	NS	BX078717-BX078718	X078717	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1155	-0.0306	-0.01744	-0.013158	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0098	92	96	NS	BX078653-BX078654	X078653	2			68.05	4.125	0.457	0.063	0.04536	0.048	0.407	0.06	0.011	0.032	0.102	0.103	-0.01	-0.01	-0.01	-0.03	1123	0.9792	1.04652	-0.06732	NAF
NS0098	280	282	NS	X071748	071748	1	G	W	16.65	46.19	8.98	0.5289	0.41	0.391	5.25	2.18	0.034	1.24	0.434	0.055	0.35	7.71	2.29	10.35	15072	37.944	38.02356	-0.07956	NAF
NS0098	86	88	NS	BX078649	X078649	2			68.25	3.393	0.429	0.06	0.0432	0.043	0.416	0.05	0.009	0.025	0.051	0.069	-0.01	-0.01	-0.01	-0.03	1121	0.765	0.8721	-0.1071	NAF
NS0098	74	78	NS	BX078643-BX078644	X078643	2			65.41	4.223	0.414	0.085	0.0612	0.039	0.323	0.054	0.016	0.023	0.031	0.093	-0.01	-0.01	-0.01	-0.03	1118	0.7038	0.941868	-0.238068	NAF
NS0098	36	40	NS	BX078624-BX078625	X078624	2			68.66	2.541	0.13	0.209	0.15048	0.027	0.094	0.024	0.014	0.004	0.011	0.093	-0.01	-0.01	-0.01	-0.03	1109	0.1224	0.418608	-0.296208	NAF
NS0098	12	14	NS	X071612	071612	1	G	D	27.65	52.04	3.44	0.0645	0.05	0.123	0.09	0.04	0.068	0.012	0.006	0.039	2.8	1.13	0.14	4.07	14938	0.3672	0.69768	-0.33048	NAF
NS0098	28	32	NS	BX078620-BX078621	X078620	2			67.98	2.202	0.131	0.084	0.06048	0.011	0.08	0.021	0.018	0.001	0.001	0.065	-0.01	-0.01	-0.01	-0.03	1107	0.0306	0.366282	-0.335682	NAF
NS0098	28	30	NS	X071620	071620	1	G	M	39.2	40.74	0.83	0.4257	0.33	0.036	0.08	0.03	0.049	0.006	0.013	0.022	1.27	0.26	-0.05	1.48	14946	0.1836	0.52326	-0.33966	NAF
NS0098	30	32	NS	X071621	071621	1	G	M	38.73	37.16	2.25	0.645	0.5	0.104	0.12	0.03	0.086	0.006	0.026	0.024	2.7	0.8	0.19	3.69	14947	0.1836	0.52326	-0.33966	NAF
NS0098	32	36	NS	BX078622-BX078623	X078622	2			68.22	2.198	0.076	0.137	0.09864	0.013	0.089	0.023	0.017	0.002	0.004	0.088	0.16	0.13	0.05	0.34	1108	0.0612	0.401166	-0.339966	NAF
NS0098	40	44	NS	BX078626-BX078627	X078626	2			67.73	2.253	0.069	0.167	0.12024	0.01	0.086	0.022	0.02	0.001	0.007	0.063	-0.01	-0.01	-0.01	-0.03	1110	0.0306	0.383724	-0.353124	NAF
NS0098	44	48	NS	BX078628-BX078629	X078628	2			67.84	2.701	0.099	0.085	0.0612	0.013	0.087	0.022	0.018	0.001	0.012	0.072	0.31	0.32	0.41	1.04	1111	0.0306	0.383724	-0.353124	NAF
NS0098	50	54	NS	BX078631-BX078632	X078631	2			66.64	3.711	0.18	0.041	0.02952	0.015	0.128	0.031	0.019	0.006	0.022	0.092	-0.01	-0.01	-0.01	-0.03	1112	0.1836	0.540702	-0.357102	NAF
NS0098	14	16	NS	X071613	071613	1	G	D	33.87	43.78	3.04	0.0645	0.05	0.132	0.08	0.04	0.084	0.011	0.006	0.036	2.82	1.08	0.16	4.06	14939	0.3366	0.69768	-0.36108	NAF
NS0098	4	8	NS	BX078608-BX078609	X078608	2			68.66	2.903	0.224	0.041	0.02952	0.013	0.088	0.03	0.013	0.005	0.005	0.095	-0.01	-0.01	-0.01	-0.03	1101	0.153	0.52326	-0.37026	NAF
NS0098	22	24	NS	X071617	071617	1	G	M	33.53	49.17	0.77	0.0258	0.02	0.032	0.05	0.03	0.067	0.005	0.004	0.03	1.18	0.27	0.06	1.51	14943	0.153	0.52326	-0.37026	NAF
NS0098	88	92	NS	BX078651-BX078652	X078651	2			69.55	2.863	0.222	0.059	0.04248	0.026	0.28	0.052	0.01	0.017	0.038	0.074	-0.01	-0.01	-0.01	-0.03	1122	0.5202	0.906984	-0.386784	NAF
NS0098	104	106	NS	BX078659	X078659	2			68.36	3.597	0.388	0.057	0.04104	0.031	0.359	0.054	0.01	0.018	0.18	0.089	-0.01	-0.01	-0.01	-0.03	1126	0.5508	0.941868	-0.391068	NAF
NS0098	8	12	NS	BX078610-BX078611	X078610	2			68.28	2.48	0.187	0.056	0.04032	0.014	0.081	0.026	0.017	0.002	0.004	0.067	-0.01	-0.01	-0.01	-0.03	1102	0.0612	0.453492	-0.392292	NAF
NS0098	24	28	NS	BX078618-BX078619	X078618	2			69.76	1.901	0.069	0.042	0.03024	0.009	0.08	0.026	0.019	0.002	0.002	0.083	-0.01	-0.01	-0.01	-0.03	1106	0.0612	0.453492	-0.392292	NAF
NS0098	34	36	NS	X071623	071623	1	G	M	37.95	42.11	0.81	0.1419	0.11	0.038	0.08	0.03	0.085	0.004	0.009	0.022	1.49	0.32	0.11	1.92	14949	0.1224	0.52326	-0.40086	NAF
NS0098	10	12	NS	X071611	071611	1	G	D	36.28	39.89	2.92	0.0516	0.04	0.12	0.06	0.05	0.106	0.015	0.007	0.033	3.48	0.89	0.13	4.5	14937	0.459	0.8721	-0.4131	NAF
NS0098	62	66	NS	BX078637-BX078638	X078637	2			67.8	2.969	0.108	0.04	0.0288	0.012	0.111	0.026	0.011	0.001	0.018	0.061	-0.01	0.01	-0.01	-0.01	1115	0.0306	0.453492	-0.422892	NAF
NS0098	66	70	NS	BX078639-BX078640	X078639	2			67.94	3.088	0.103	0.098	0.07056	0.011	0.107	0.028	0.014	0.001	0.013	0.057	0.04	0.03	-0.01	0.06	1116	0.0306	0.488376	-0.457776	NAF
NS0098	70	74	NS	BX078641-BX078642	X078641	2			66.46	3.513	0.17	0.047	0.03384	0.011	0.119	0.029	0.015	0.001	0.017	0.065	0.26	0.27	0.23	0.76	1117	0.0306	0.505818	-0.475218	NAF
NS0098	16	18	NS	X071614	071614	1	G	D	33.02	46.27	2.6	0.0645	0.05	0.106	0.07	0.05	0.064	0.012	0.006	0.041	2.22	0.78	0.13	3.13	14940	0.3672	0.8721	-0.5049	NAF
NS0098	18	20	NS	X071615	071615	1	G	D	31.53	49.95	1.63	0.0258	0.02	0.079	0.07	0.05	0.056	0.012	0.006	0.039	2.03	0.62	0.13	2.78	14941	0.3672	0.8721	-0.5049	NAF
NS0098	20	22	NS	X071616	071616	1	G	D	33.8	48.3	1.11	0.0258	0.02	0.046	0.06	0.04	0.044	0.006	0.006	0.033	1.18	0.35	0.08	1.61	14942	0.1836	0.69768	-0.51408	NAF
NS0098	24	26	NS	X071618	071618	1	G	M	35.46	46.09	0.68	0.0387	0.03	0.033	0.06	0.04	0.087	0.006	0.005	0.025	1.62	0.16	-0.04	1.74	14944	0.1836	0.69768	-0.51408	NAF
NS0098	54	58	NS	BX078633-BX078634	X078633	2			65.96	5.038	0.168	0.062	0.04464	0.021	0.201	0.046	0.01	0.009	0.06	0.085	-0.01	-0.01	-0.01	-0.03	1113	0.2754	0.802332	-0.526932	NAF
NS0098	26	28	NS	X071619	071619	1	G	M	32.1	51.5	0.54	0.2451	0.19	0.024	0.07	0.04	0.047	0.005	0.007	0.031	1.09	0.14	-0.05	1.18	14945	0.153	0.69768	-0.54468	NAF
NS0098	36	38	NS	X071624	071624	1	G	M	33.4	46.51	1.43	0.7869	0.61	0.071	0.1	0.04	0.073	0.005	0.063	0.021	2.03	0.41	0.24	2.68	14950	0.153	0.69768	-0.54468	NAF
NS0098	144	148	NS	BX078679-BX078680	X078679	2			70.07	2.249	0.203	0.027	0.01944	0.023	0.231	0.053	0.011	0.012	0.005	0.078	-0.01	-0.01	-0.01	-0.03	1136	0.3672	0.924426	-0.557226	NAF
NS0098	42	44	NS	X071627	071627	1	G	M	34.92	45.89	0.74	0.8127	0.63	0.031	0.09	0.04	0.072	0.004	0.124	0.028	1.28	0.29	0.14	1.71	14953	0.1224	0.69768	-0.57528	NAF
NS0098	6	8	NS	X071609	071609	1	G	D	29.06	54.53	1.64	0.0516	0.04	0.054	0.09	0.05	0.035	0.009	0.011	0.048	1.51	0.41	-0.06	1.86	14935	0.2754	0.8721	-0.5967	NAF
NS0098	46	48	NS	X071629	071629	1	G	M	37.51	40.55	1.36	0.8385	0.65	0.06	0.23	0.05	0.072	0.008	0.498	0.029	1.8	0.4	0.19	2.39	14955	0.2448	0.8721	-0.6273	NAF
NS0098	148	152	NS	BX078681-BX078682	X078681	2			71.15	1.965	0.068	0.029	0.02088	0.011	0.158	0.047	0.01	0.006	0.008	0.073	-0.01	-0.01	-0.01	-0.03	1137	0.1836	0.819774	-0.636174	NAF
NS0098	96	100	NS	BX078655-BX078656	X078655	2			69.6	3.105	0.222	0.057	0.04104	0.018	0.259	0.059	0.013	0.012	0.04	0.068	-0.01	-0.01	-0.01	-0.03	1124	0.3672	1.029078	-0.661878	NAF
NS0098	152	156	NS	BX078683-BX078684	X078683	2			69.59	3.661	0.25	0.038	0.02736	0.024	0.311	0.059	0.013	0.012	0.044	0.111	-0.01	-0.01	-0.01	-0.03	1138	0.3672	1.029078	-0.661878	NAF
NS0098	78	82	NS	BX078645-BX078646	X078645	2			69.18	3.633	0.153	0.054	0.03888	0.015	0.238	0.053	0.011	0.008	0.029	0.071	-0.01	-0.01	-0.01	-0.03	1119	0.2448	0.924426	-0.679626	NAF
NS0098	140	144	NS	BX078677-BX078678	X078677	2			70.66	1.691	0.077	0.033	0.02376	0.009	0.171	0.047	0.01	0.004	0.025	0.059	-0.01	-0.01	-0.01	-0.03	1135	0.1224	0.819774	-0.697374	NAF
NS0098	176	180	NS	BX078695-BX078696	X078695	2			71.04	1.822	0.063	0.026	0.01872	0.018	0.146	0.088	0.021	0.027	0.005	0.072	-0.01	-0.01	-0.01	-0.03	1144	0.8262	1.534896	-0.708696	NAF
NS0098	32	34	NS	X071622	071622	1	G	M	34.93	46.22	0.7	0.9675	0.75	0.032	0.13	0.05	0.038	0.005	0.05	0.035	1.12	0.26	0.06	1.44	14948	0.153	0.8721	-0.7191	NAF
NS0098	184	186	NS	BX078699	X078699	2			69.9	2.685	0.092	0.042	0.03024	0.012	0.213	0.049	0.009	0.004	0.007	0.062	-0.01	-0.01	-0.01	-0.03	1146	0.1224	0.854658	-0.732258	NAF
NS0098	120	124	NS	BX078667-BX078668	X078667	2			68.41	3.963	0.238	0.059	0.04248	0.016	0.262	0.065	0.014	0.013	0.108	0.076	-0.01	-0.01	-0.01	-0.03	1130	0.3978	1.13373	-0.73593	NAF
NS0098	124	128	NS	BX078669-BX078670	X078669	2			69.47	3.782	0.28	0.059	0.04248	0.025	0.267	0.065	0.013	0.013	0.09	0.058	-0.01	-0.01	-0.01	-0.03	1131	0.3978	1.13373	-0.73593	NAF
NS0098	164	166	NS	BX078689	X078689	2			71.26	2.33	0.077	0.039	0.02808	0.016	0.189	0.051	0.01	0.005	0.007	0.079	-0.01	-0.01	-0.01	-0.03	1141	0.153	0.889542	-0.736542	NAF
NS0098	2	4	NS	X071607	071607	1	G	D	12.64	75.2	3.49	-0.0129	-0.01	0.115	0.12	0.06	0.01	0.01	0.036	0.068	1.39	1.01	0.14	2.54	14933	0.306	1.04652	-0.74052	NAF
NS0098	108	112	NS	BX078661-BX078662	X078661	2			69.98	3.545	0.074	0.05	0.036	0.007	0.175	0.048	0.01	0.003	0.041	0.081	-0.01	-0.01	-0.01	-0.03	1127	0.0918	0.837216	-0.745416	NAF
NS0098	82	86	NS	BX078647-BX078648	X078647	2			69.22	3.953	0.134	0.057	0.04104	0.018	0.222	0.06	0.012	0.009	0.044	0.089	-0.01	-0.01	-0.01	-0.03	1120	0.2754	1.04652	-0.77112	NAF
NS0098	112	116	NS	BX078663-BX078664	X078663	2			69.48	3.174	0.085	0.048	0.03456	0.009	0.168	0.051	0.011	0.003	0.047	0.071	-0.01	-0.01	-0.01	-0.03	1128	0.0918	0.889542	-0.797742	NAF
NS0098	8	10	NS	X071610	071610	1	G	D	28.21	56.13	1.43	0.1032	0.08	0.043	0.1	0.06	0.031	0.008	0.012	0.04	1.16	0.29	-0.11	1.34	14936	0.2448	1.04652	-0.80172	NAF
NS0098	116	120	NS	BX078665-BX078666	X078665	2			68.07	5.524	0.204	0.066	0.04752	0.018	0.262	0.061	0.013	0.008	0.09	0.062	-0.01	-0.01	-0.01	-0.03	1129	0.2448	1.063962	-0.819162	NAF
NS0098	0	2	NS	X071606	071606	1	G	D	23.72	52.15	7.91	-0.0129	-0.01	0.276	0.14	0.07	0.014	0.013	0.052	0.064	2.73	2.19	0.25	5.17	14932	0.3978	1.22094	-0.82314	NAF
NS0098	194	198	NS	BX078705-BX078706	X078705	2			68.6	3.966	0.086	0.056	0.04032	0.005	0.155	0.058	0.01	0.006	0.055	0.12	-0.01	-0.01	-0.01	-0.03	1149	0.1836	1.011636	-0.828036	NAF
NS0098	136	140	NS	BX078675-BX078676	X078675	2			71.53	1.522	0.062	0.026	0.01872	0.01	0.152	0.057	0.012	0.005	0.012	0.066	-0.01	-0.01	-0.01	-0.03	1134	0.153	0.994194	-0.841194	NAF
NS0098	128	132	NS	BX078671-BX078672	X078671	2			69.62	4.056	0.126	0.06	0.0432	0.012	0.215	0.063	0.012	0.008	0.03	0.087	-0.01	-0.01	-0.01	-0.03	1132	0.2448	1.098846	-0.854046	NAF
NS0098	38	40	NS	X071625	071625	1	G	M	29.43	45.34	3.9	2.2833	1.77	0.173	0.27	0.06	0.076	0.006	0.22	0.048	3.16	1.38	0.32	4.86	14951	0.1836	1.04652	-0.86292	NAF
NS0098	48	50	NS	X071630	071630	1	G	M	36.66	43.22	0.89	0.4515	0.35	0.037	0.18	0.06	0.068	0.006	0.301	0.031	1.5	0.3	0.07	1.87	14956	0.1836	1.04652	-0.86292	NAF
NS0098	100	104	NS	BX078657-BX078658	X078657	2			70.11	2.948	0.172	0.053	0.03816	0.013	0.239	0.067	0.015	0.009	0.07	0.077	-0.01	-0.01	-0.01	-0.03	1125	0.2754	1.168614	-0.893214	NAF
NS0098	180	184	NS	BX078697-BX078698	X078697	2			70.28	3.15	0.082	0.043	0.03096	0.014	0.22	0.069	0.013	0.01	0.008	0.085	-0.01	-0.01	-0.01	-0.03	1145	0.306	1.203498	-0.897498	NAF
NS0098	132	136	NS	BX078673-BX078674	X078673	2			70.62	1.767	0.121	0.054	0.03888	0.015	0.227	0.073	0.016	0.012	0.019	0.079	-0.01	-0.01	-0.01	-0.03	1133	0.3672	1.273266	-0.906066	NAF
NS0098	58	62	NS	BX078635-BX078636	X078635	2			66.14	6.51	0.141	0.082	0.05904	0.011	0.192	0.059	0.011	0.004	0.08	0.072	-0.01	-0.01	-0.01	-0.03	1114	0.1224	1.029078	-0.906678	NAF
NS0098	4	6	NS	X071608	071608	1	G	D	26	57.86	2.15	0.0258	0.02	0.085	0.09	0.07	0.022	0.01	0.024	0.055	1.71	0.62	0.07	2.4	14934	0.306	1.22094	-0.91494	NAF
NS0098	172	176	NS	BX078693-BX078694	X078693	2			71.54	1.531	0.051	0.032	0.02304	0.018	0.138	0.065	0.015	0.006	0.006	0.082	-0.01	-0.01	-0.01	-0.03	1143	0.1836	1.13373	-0.95013	NAF
NS0098	198	202	NS	BX078707-BX078708	X078707	2			69.15	3.878	0.1	0.057	0.04104	0.012	0.198	0.07	0.011	0.008	0.05	0.104	-0.01	-0.01	-0.01	-0.03	1150	0.2448	1.22094	-0.97614	NAF
NS0098	190	194	NS	BX078703-BX078704	X078703	2			70.14	2.72	0.07	0.054	0.03888	0.005	0.154	0.07	0.01	0.006	0.039	0.098	-0.01	-0.01	-0.01	-0.03	1148	0.1836	1.22094	-1.03734	NAF
NS0098	202	206	NS	BX078709-BX078710	X078709	2			69.92	3.252	0.064	0.046	0.03312	0.01	0.178	0.067	0.01	0.003	0.022	0.069	-0.01	-0.01	-0.01	-0.03	1151	0.0918	1.168614	-1.076814	NAF
NS0098	206	210	NS	BX078711-BX078712	X078711	2			70.06	3.732	0.084	0.058	0.04176	0.01	0.235	0.08	0.01	0.01	0.009	0.09	-0.01	-0.01	-0.01	-0.03	1152	0.306	1.39536	-1.08936	NAF
NS0098	186	190	NS	BX078701-BX078702	X078701	2			70	2.775	0.041	0.03	0.0216	0.001	0.129	0.067	0.011	0.002	0.006	0.079	-0.01	-0.01	-0.01	-0.03	1147	0.0612	1.168614	-1.107414	NAF
NS0098	160	164	NS	BX078687-BX078688	X078687	2			70.96	2.471	0.065	0.033	0.02376	0.01	0.162	0.073	0.012	0.005	0.007	0.077	-0.01	-0.01	-0.01	-0.03	1140	0.153	1.273266	-1.120266	NAF
NS0098	44	46	NS	X071628	071628	1	G	M	33.06	46.49	1.35	1.1352	0.88	0.058	0.19	0.09	0.07	0.014	0.249	0.036	1.9	0.51	0.22	2.63	14954	0.4284	1.56978	-1.14138	NAF
NS0098	40	42	NS	X071626	071626	1	G	M	32.31	45.1	2.08	1.5609	1.21	0.08	0.15	0.08	0.103	0.006	0.553	0.039	2.74	0.65	0.24	3.63	14952	0.1836	1.39536	-1.21176	NAF
NS0098	156	160	NS	BX078685-BX078686	X078685	2			71.05	2.445	0.077	0.043	0.03096	0.012	0.182	0.08	0.016	0.004	0.021	0.067	-0.01	-0.01	-0.01	-0.03	1139	0.1224	1.39536	-1.27296	NAF
NS0098	168	172	NS	BX078691-BX078692	X078691	2			71.77	1.57	0.051	0.04	0.0288	0.022	0.16	0.086	0.022	0.005	0.006	0.066	-0.01	-0.01	-0.01	-0.03	1142	0.153	1.500012	-1.347012	NAF
NS0098	68	70	NS	X071640	071640	1	G	M	32.2	45.05	2.06	1.1481	0.89	0.088	0.74	0.28	0.079	0.112	0.452	0.039	2.32	0.71	0.43	3.46	14966	3.4272	4.88376	-1.45656	NAF
NS0098	76	78	NS	X071644	071644	1	G	M	26.56	43.89	3.04	1.0449	0.81	0.131	2.67	0.54	0.097	0.259	0.286	0.06	0.74	8.92	0.59	10.25	14970	7.9254	9.41868	-1.49328	NAF
NS0098	94	96	NS	X071654	071654	1	G	W	27.18	40.89	3.2	0.645	0.5	0.137	3.6	0.78	0.189	0.37	0.417	0.064	0.47	9.26	0.72	10.45	14979	11.322	13.60476	-2.28276	NAF
NS0098	64	66	NS	X071638	071638	1	G	M	31.8	48.25	1.4	0.8643	0.67	0.059	0.49	0.21	0.065	0.036	0.392	0.035	1.59	0.51	0.19	2.29	14964	1.1016	3.66282	-2.56122	NAF
NS0098	134	136	NS	X071674	071674	1	G	W	32.68	31.52	1.29	0.645	0.5	0.056	2.99	0.78	0.13	0.358	0.101	0.072	0.69	14.61	0.63	15.93	14999	10.9548	13.60476	-2.64996	NAF
NS0098	210	212	NS	X071713	071713	1	G	W	33.6	21.34	2.33	0.6321	0.49	0.106	3.83	0.78	0.116	0.358	0.009	0.028	1.01	21.51	0.86	23.38	15037	10.9548	13.60476	-2.64996	NAF
NS0098	116	118	NS	X071665	071665	1	G	W	30.48	43.93	1.4	0.645	0.5	0.064	2.08	0.36	0.062	0.115	0.523	0.082	0.26	6.51	0.07	6.84	14990	3.519	6.27912	-2.76012	NAF
NS0098	78	80	NS	X071645	071645	1	G	W	30.86	40.98	1.73	0.7482	0.58	0.07	2.37	0.44	0.083	0.14	0.252	0.053	0.62	8.11	0.16	8.89	14971	4.284	7.67448	-3.39048	NAF
NS0098	70	72	NS	X071641	071641	1	G	M	33.53	45.93	1.42	0.6708	0.52	0.058	0.52	0.34	0.11	0.06	0.374	0.035	1.77	0.47	0.11	2.35	14967	1.836	5.93028	-4.09428	NAF
NS0098	218	220	NS	X071717	071717	1	G	W	28.65	31.74	1.01	0.5031	0.39	0.042	3.67	0.83	0.088	0.321	0.013	0.031	0.83	19.77	0.83	21.43	15041	9.8226	14.47686	-4.65426	NAF
NS0098	204	206	NS	X071710	071710	1	G	W	30.52	37.71	0.82	0.5547	0.43	0.035	2.27	0.71	0.095	0.251	0.238	0.076	0.61	12.47	0.43	13.51	15034	7.6806	12.38382	-4.70322	NAF
NS0098	104	106	NS	X071659	071659	1	G	W	27.94	38.2	3.26	0.5547	0.43	0.139	3.87	0.61	0.122	0.175	1.11	0.068	0.39	10.98	0.32	11.69	14984	5.355	10.63962	-5.28462	NAF
NS0098	150	152	NS	X071682	071682	1	G	W	27.31	48.85	1.11	0.258	0.2	0.048	2.07	0.52	0.086	0.109	0.111	0.063	0.28	7	0.02	7.3	15007	3.3354	9.06984	-5.73444	NAF
NS0098	142	144	NS	X071678	071678	1	G	W	42.77	23.05	1.44	0.5934	0.46	0.06	3.09	0.53	0.103	0.083	0.353	0.125	0.35	9.23	-0.32	9.26	15003	2.5398	9.24426	-6.70446	NAF
NS0098	96	98	NS	X071655	071655	1	G	W	30.75	41.84	1.8	0.6192	0.48	0.078	2.33	0.68	0.105	0.166	0.275	0.04	0.55	6.89	0.24	7.68	14980	5.0796	11.86056	-6.78096	NAF
NS0098	146	148	NS	X071680	071680	1	G	W	33.76	40.52	1.23	0.2709	0.21	0.054	2.46	0.47	0.051	0.045	0.016	0.027	0.27	6.36	-0.13	6.5	15005	1.377	8.19774	-6.82074	NAF
NS0098	80	82	NS	X071646	071646	1	G	W	33.85	37.21	1.74	0.5676	0.44	0.073	2.72	0.65	0.104	0.143	0.265	0.047	0.43	7.19	0.14	7.76	14972	4.3758	11.3373	-6.9615	NAF
NS0098	98	100	NS	X071656	071656	1	G	W	34.1	37.18	1.27	0.7353	0.57	0.055	2.39	0.52	0.096	0.064	0.186	0.04	0.64	8.26	-0.15	8.75	14981	1.9584	9.06984	-7.11144	NAF
NS0098	152	154	NS	X071683	071683	1	G	W	29.42	42.24	3.17	0.2838	0.22	0.138	3.67	0.79	0.184	0.215	0.228	0.188	0.26	5.94	0.35	6.55	15008	6.579	13.77918	-7.20018	NAF
NS0098	184	186	NS	X071699	071699	1	G	W	36.48	34.63	1.54	0.3741	0.29	0.069	2.42	0.48	0.049	0.035	0.151	0.101	0.43	7.58	-0.2	7.81	15024	1.071	8.37216	-7.30116	NAF
NS0098	208	210	NS	X071712	071712	1	G	W	29.95	31.62	0.8	0.6192	0.48	0.032	2.62	0.92	0.096	0.285	0.017	0.031	0.89	18.77	0.58	20.24	15036	8.721	16.04664	-7.32564	NAF
NS0098	140	142	NS	X071677	071677	1	G	W	33.72	42.69	0.67	0.3354	0.26	0.028	1.83	0.5	0.053	0.025	0.219	0.069	0.13	4.95	-0.15	4.93	15002	0.765	8.721	-7.956	NAF
NS0098	124	126	NS	X071669	071669	1	G	W	33.2	39	1.61	0.5805	0.45	0.076	2.08	0.64	0.086	0.093	0.399	0.059	0.35	7.33	-0.11	7.57	14994	2.8458	11.16288	-8.31708	NAF
NS0098	118	120	NS	X071666	071666	1	G	W	31.14	41.21	1.76	0.5676	0.44	0.077	2.42	0.67	0.118	0.11	0.483	0.053	0.3	7.37	-0.01	7.66	14991	3.366	11.68614	-8.32014	NAF
NS0098	110	112	NS	X071662	071662	1	G	W	35.75	39.96	0.74	0.5418	0.42	0.032	1.64	0.53	0.075	0.016	0.305	0.18	0.04	4.74	-0.14	4.64	14987	0.4896	9.24426	-8.75466	NAF
NS0098	144	146	NS	X071679	071679	1	G	W	28.22	51.83	0.58	0.2709	0.21	0.026	1.57	0.53	0.066	0.016	0.032	0.037	0.14	4.4	-0.06	4.48	15004	0.4896	9.24426	-8.75466	NAF
NS0098	114	116	NS	X071664	071664	1	G	W	33.66	39.9	1.33	0.5547	0.43	0.059	2.01	0.74	0.112	0.109	0.54	0.199	0.11	5.65	0.1	5.86	14989	3.3354	12.90708	-9.57168	NAF
NS0098	84	86	NS	X071648	071648	1	G	W	29.93	43.88	1.24	0.6063	0.47	0.05	2.14	0.73	0.117	0.102	0.387	0.054	0.34	7.25	0.05	7.64	14974	3.1212	12.73266	-9.61146	NAF
NS0098	148	150	NS	X071681	071681	1	G	W	32.8	44.19	0.6	0.3096	0.24	0.026	1.8	0.59	0.059	0.019	0.023	0.043	0.18	5.18	-0.1	5.26	15006	0.5814	10.29078	-9.70938	NAF
NS0098	128	130	NS	X071671	071671	1	G	W	30.24	41	1.17	0.6837	0.53	0.049	2.2	0.73	0.088	0.094	0.329	0.082	0.42	9.92	-0.06	10.28	14996	2.8764	12.73266	-9.85626	NAF
NS0098	154	156	NS	X071684	071684	1	G	W	28.24	47.52	2.03	0.2709	0.21	0.088	2.63	0.8	0.179	0.124	0.229	0.136	0.22	4.73	0.14	5.09	15009	3.7944	13.9536	-10.1592	NAF
NS0098	164	166	NS	X071689	071689	1	G	W	30.54	43.02	1.46	0.387	0.3	0.064	2.45	0.8	0.117	0.104	0.099	0.079	0.33	7.07	0.08	7.48	15014	3.1824	13.9536	-10.7712	NAF
NS0098	172	174	NS	X071693	071693	1	G	W	24.61	51.81	0.6	0.2838	0.22	0.025	1.44	0.72	0.177	0.056	0.076	0.073	0.6	8.55	-0.02	9.13	15018	1.7136	12.55824	-10.84464	NAF
NS0098	186	188	NS	X071701	071701	1	G	W	27.83	50.65	0.51	0.3612	0.28	0.023	1.38	0.67	0.081	0.022	0.094	0.049	0.26	5.92	-0.05	6.13	15025	0.6732	11.68614	-11.01294	NAF
NS0098	126	128	NS	X071670	071670	1	G	W	28.79	40.82	1.81	0.5934	0.46	0.078	2.54	0.84	0.159	0.11	0.422	0.06	0.53	10.6	0.05	11.18	14995	3.366	14.65128	-11.28528	NAF
NS0098	194	196	NS	X071705	071705	1	G	W	35.65	36.16	0.99	0.6192	0.48	0.041	1.62	0.74	0.112	0.052	0.608	0.162	0.36	7.35	-0.06	7.65	15029	1.5912	12.90708	-11.31588	NAF
NS0098	108	110	NS	X071661	071661	1	G	W	33.29	43.25	0.77	0.5031	0.39	0.033	1.65	0.72	0.076	0.04	0.325	0.156	0.06	4.45	0.08	4.59	14986	1.224	12.55824	-11.33424	NAF
NS0098	196	198	NS	X071706	071706	1	G	W	38.51	33.38	0.76	0.645	0.5	0.032	1.57	0.72	0.123	0.038	0.403	0.177	0.28	6.63	-0.18	6.73	15030	1.1628	12.55824	-11.39544	NAF
NS0098	122	124	NS	X071668	071668	1	G	W	34.61	36.06	1.28	0.6708	0.52	0.057	2.2	0.72	0.121	0.034	0.458	0.055	0.41	8.62	-0.29	8.74	14993	1.0404	12.55824	-11.51784	NAF
NS0098	170	172	NS	X071692	071692	1	G	W	30.4	36.56	1.19	0.4773	0.37	0.05	2.79	0.77	0.162	0.06	0.157	0.111	0.79	13.42	-0.03	14.18	15017	1.836	13.43034	-11.59434	NAF
NS0098	158	160	NS	X071686	071686	1	G	W	38.53	32.56	0.87	0.5547	0.43	0.037	2.3	0.77	0.144	0.052	0.286	0.073	0.19	7.3	-0.29	7.2	15011	1.5912	13.43034	-11.83914	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0098	162	164	NS	X071688	071688	1	G	W	35.18	41.24	1.07	0.2838	0.22	0.045	1.79	0.8	0.1	0.067	0.093	0.058	0.12	3.94	-0.17	3.89	15013	2.0502	13.9536	-11.9034	NAF
NS0098	102	104	NS	X071658	071658	1	G	W	28.01	45.16	1.36	0.516	0.4	0.061	2.28	0.82	0.108	0.077	0.561	0.043	0.28	8.26	0.04	8.58	14983	2.3562	14.30244	-11.94624	NAF
NS0098	198	200	NS	X071707	071707	1	G	W	33.61	40.03	0.77	0.6063	0.47	0.032	1.6	0.74	0.107	0.03	0.365	0.166	0.19	7.15	-0.14	7.2	15031	0.918	12.90708	-11.98908	NAF
NS0098	112	114	NS	X071663	071663	1	G	W	34.14	41.11	0.72	0.5934	0.46	0.032	1.74	0.74	0.075	0.022	0.358	0.142	0.06	5.3	0.03	5.39	14988	0.6732	12.90708	-12.23388	NAF
NS0098	100	102	NS	X071657	071657	1	G	W	32.1	40.35	1.22	0.6063	0.47	0.052	2.29	0.84	0.1	0.072	0.228	0.036	0.32	7.51	-0.02	7.81	14982	2.2032	14.65128	-12.44808	NAF
NS0098	214	216	NS	X071715	071715	1	G	W	23.72	42.11	0.24	0.516	0.4	0.003	3.64	0.77	0.099	0.031	0.005	0.035	1.08	17.68	0.13	18.89	15039	0.9486	13.43034	-12.48174	NAF
NS0098	182	184	NS	X071698	071698	1	G	W	29.89	46.2	0.72	0.3612	0.28	0.031	1.84	0.78	0.091	0.036	0.056	0.053	0.26	6.55	-0.02	6.79	15023	1.1016	13.60476	-12.50316	NAF
NS0098	168	170	NS	X071691	071691	1	G	W	29.11	38.11	1.16	0.4773	0.37	0.049	2.98	0.79	0.145	0.037	0.15	0.101	0.81	13.73	-0.01	14.53	15016	1.1322	13.77918	-12.64698	NAF
NS0098	132	134	NS	X071673	071673	1	G	W	35.43	31.13	1.13	0.7095	0.55	0.047	2.45	0.83	0.136	0.054	0.178	0.074	0.91	11.67	-0.24	12.34	14998	1.6524	14.47686	-12.82446	NAF
NS0098	130	132	NS	X071672	071672	1	G	W	33.24	40.38	0.99	0.5547	0.43	0.041	1.8	0.82	0.106	0.047	0.117	0.037	0.3	6.95	-0.16	7.09	14997	1.4382	14.30244	-12.86424	NAF
NS0098	106	108	NS	X071660	071660	1	G	W	34.44	40.48	0.96	0.5289	0.41	0.041	1.9	0.81	0.075	0.039	0.215	0.072	0.12	5.37	0	5.49	14985	1.1934	14.12802	-12.93462	NAF
NS0098	156	158	NS	X071685	071685	1	G	W	32.36	42.42	0.96	0.3741	0.29	0.043	2.2	0.93	0.158	0.103	0.067	0.06	0.13	5.97	-0.05	6.05	15010	3.1518	16.22106	-13.06926	NAF
NS0098	188	190	NS	X071702	071702	1	G	W	26.45	50.26	0.59	0.2967	0.23	0.025	1.25	0.84	0.12	0.024	0.103	0.051	0.53	7.71	0.02	8.26	15026	0.7344	14.65128	-13.91688	NAF
NS0098	160	162	NS	X071687	071687	1	G	W	33.36	43.27	0.92	0.2838	0.22	0.04	1.86	0.87	0.082	0.032	0.103	0.043	0.11	4.47	0.07	4.65	15012	0.9792	15.17454	-14.19534	NAF
NS0098	174	176	NS	X071694	071694	1	G	W	26.12	47.76	0.66	0.3354	0.26	0.029	1.71	0.87	0.196	0.03	0.077	0.074	0.64	10.23	-0.1	10.77	15019	0.918	15.17454	-14.25654	NAF
NS0098	136	138	NS	X071675	071675	1	G	W	32.55	41.61	1.54	0.1935	0.15	0.064	2.52	0.99	0.102	0.084	0.171	0.056	0.18	5.25	0.2	5.63	15000	2.5704	17.26758	-14.69718	NAF
NS0098	200	202	NS	X071708	071708	1	G	W	33.23	39.86	0.77	0.5547	0.43	0.031	1.87	0.91	0.116	0.037	0.319	0.046	0.4	7.25	-0.05	7.6	15032	1.1322	15.87222	-14.74002	NAF
NS0098	216	218	NS	X071716	071716	1	G	W	27.3	34.27	0.34	0.516	0.4	0.012	3.98	0.96	0.106	0.058	0.007	0.028	0.85	19.93	0.18	20.96	15040	1.7748	16.74432	-14.96952	NAF
NS0098	120	122	NS	X071667	071667	1	G	W	30.72	36.78	1.77	0.645	0.5	0.074	2.87	1.08	0.144	0.118	0.616	0.053	0.4	11.13	0.19	11.72	14992	3.6108	18.83736	-15.22656	NAF
NS0098	202	204	NS	X071709	071709	1	G	W	33.62	39.63	0.74	0.5547	0.43	0.031	1.9	0.94	0.107	0.021	0.217	0.032	0.4	7.06	0.03	7.49	15033	0.6426	16.39548	-15.75288	NAF
NS0098	206	208	NS	X071711	071711	1	G	W	32.02	31.76	0.86	0.5031	0.39	0.037	2.82	1.1	0.106	0.064	0.128	0.08	0.85	15.82	0.18	16.85	15035	1.9584	19.1862	-17.2278	NAF
NS0098	192	194	NS	X071704	071704	1	G	W	35.65	35.39	0.73	0.7095	0.55	0.029	1.55	1.07	0.107	0.029	0.467	0.101	0.26	8	0.11	8.37	15028	0.8874	18.66294	-17.77554	NAF
NS0098	176	178	NS	X071695	071695	1	G	W	29.96	47.25	0.48	0.1548	0.12	0.02	1.56	1.13	0.093	0.026	0.028	0.045	0.36	5.67	0.19	6.22	15020	0.7956	19.70946	-18.91386	NAF
NS0098	266	268	NS	X071741	071741	1	G	W	17.79	45.11	5.63	0.4257	0.33	0.223	4.28	2.71	0.051	0.91	0.686	0.046	0.41	11.28	2.45	14.14	15065	27.846	47.26782	-19.42182	NAF
NS0098	82	84	NS	X071647	071647	1	G	W	31.64	42.82	1.21	0.4902	0.38	0.051	2.12	1.27	0.108	0.071	0.163	0.037	0.25	5.43	0.43	6.11	14973	2.1726	22.15134	-19.97874	NAF
NS0098	138	140	NS	X071676	071676	1	G	W	30.59	49.06	0.52	0.1677	0.13	0.024	1.44	1.3	0.092	0.022	0.115	0.037	-0.01	2.69	0.54	3.22	15001	0.6732	22.6746	-22.0014	NAF
NS0098	270	272	NS	X071743	071743	1	G	W	18.74	41.44	5.1	0.5547	0.43	0.204	4.8	3.44	0.068	1.19	0.421	0.046	0.33	11.73	2.61	14.67	15067	36.414	60.00048	-23.58648	NAF
NS0098	236	238	NS	X071726	071726	1	G	W	6.96	46.41	13.87	0.2451	0.19	0.398	5.1	6.24	0.028	0.82	4.05	0.089	0.23	4.27	7.48	11.98	15050	25.092	108.8381	-83.74608	NAC
NS0099	274	276	NS	X071889	071889	1	G	W	27.83	39.92	4.48	0.7482	0.58	0.187	3.88	1.11	0.107	1.21	1.76	0.168	0.35	5.34	2.27	7.96	15210	37.026	19.36062	17.66538	PAF(HC)
NS0099	0	2	NS	X071749	071749	1	G	D	39.69	30.56	6.72	0.0258	0.02	0.372	0.07	0.04	0.032	0.017	0.018	0.035	3.56	1.67	0.14	5.37	15073	0.5202	0.69768	-0.17748	NAF
NS0099	274	276	NS	BX078889	X078889	2			67.69	5.2	0.449	0.06	0.0432	0.031	0.343	0.087	0.015	0.037	0.2	0.08	-0.01	-0.01	-0.01	-0.03	1365	1.1322	1.517454	-0.385254	NAF
NS0099	42	46	NS	BX078771-BX078772	X078771	2			66.97	2.859	0.05	0.073	0.05256	0.008	0.094	0.026	0.013	0.001	0.019	0.06	0.15	0.42	0.11	0.68	1162	0.0306	0.453492	-0.422892	NAF
NS0099	34	38	NS	BX078767-BX078768	X078767	2			67.4	4.095	0.059	0.068	0.04896	0.012	0.096	0.03	0.012	0.003	0.032	0.107	0.19	0.25	-0.01	0.43	1160	0.0918	0.52326	-0.43146	NAF
NS0099	18	20	NS	BX078758	X078758	2			67.65	3.133	0.089	0.099	0.07128	0.016	0.107	0.027	0.014	0.001	0.034	0.053	0.19	0.35	-0.01	0.53	1156	0.0306	0.470934	-0.440334	NAF
NS0099	22	26	NS	BX078761-BX078762	X078761	2			68.08	3.454	0.053	0.112	0.08064	0.008	0.098	0.03	0.013	0.001	0.018	0.072	0.16	0.33	0.06	0.55	1157	0.0306	0.52326	-0.49266	NAF
NS0099	46	50	NS	BX078773-BX078774	X078773	2			68.48	2.798	0.041	0.074	0.05328	0.01	0.101	0.03	0.014	0.001	0.015	0.068	0.14	0.26	-0.01	0.39	1163	0.0306	0.52326	-0.49266	NAF
NS0099	26	30	NS	BX078763-BX078764	X078763	2			68.05	3.257	0.05	0.081	0.05832	0.009	0.108	0.032	0.013	0.002	0.017	0.079	0.14	0.24	-0.01	0.37	1158	0.0612	0.558144	-0.496944	NAF
NS0099	38	42	NS	BX078769-BX078770	X078769	2			68.26	3.249	0.054	0.092	0.06624	0.01	0.094	0.031	0.014	0.001	0.027	0.072	0.18	0.41	-0.01	0.58	1161	0.0306	0.540702	-0.510102	NAF
NS0099	8	10	NS	X071753	071753	1	G	D	37.39	41.8	1.31	0.1548	0.12	0.108	0.1	0.04	0.028	0.004	0.06	0.047	2.12	0.48	-0.03	2.57	15077	0.1224	0.69768	-0.57528	NAF
NS0099	4	6	NS	X071751	071751	1	G	D	36.67	43.43	1.72	0.1548	0.12	0.086	0.1	0.04	0.024	0.003	0.03	0.05	1.49	0.53	-0.05	1.97	15075	0.0918	0.69768	-0.60588	NAF
NS0099	270	274	NS	BX078887-BX078888	X078887	2			66.27	7.192	0.327	0.079	0.05688	0.029	0.391	0.073	0.015	0.016	0.12	0.068	-0.01	-0.01	-0.01	-0.03	1364	0.4896	1.273266	-0.783666	NAF
NS0099	50	54	NS	BX078775-BX078776	X078775	2			67.94	2.795	0.035	0.073	0.05256	0.013	0.105	0.047	0.021	0.001	0.017	0.069	0.21	0.32	0.08	0.61	1164	0.0306	0.819774	-0.789174	NAF
NS0099	42	44	NS	X071771	071771	1	G	D	40.74	37.07	1.24	0.6837	0.53	0.058	0.12	0.05	0.034	0.002	0.885	0.032	1.15	0.23	0.06	1.44	15094	0.0612	0.8721	-0.8109	NAF
NS0099	172	176	NS	BX078837-BX078838	X078837	2			68.04	5.024	0.311	0.064	0.04608	0.034	0.212	0.09	0.02	0.024	0.201	0.083	-0.01	-0.01	-0.01	-0.03	1339	0.7344	1.56978	-0.83538	NAF
NS0099	70	74	NS	BX078785-BX078786	X078785	2			68.66	4.281	0.164	0.065	0.0468	0.02	0.25	0.064	0.013	0.008	0.122	0.129	-0.01	-0.01	-0.01	-0.03	1169	0.2448	1.116288	-0.871488	NAF
NS0099	250	254	NS	BX078877-BX078878	X078877	2			65.67	8.084	0.519	0.071	0.05112	0.032	0.342	0.105	0.015	0.031	0.344	0.073	-0.01	-0.01	-0.01	-0.03	1359	0.9486	1.83141	-0.88281	NAF
NS0099	54	58	NS	BX078777-BX078778	X078777	2			68.89	2.942	0.068	0.044	0.03168	0.011	0.107	0.055	0.016	0.002	0.054	0.054	0.02	-0.01	-0.01	0	1165	0.0612	0.95931	-0.89811	NAF
NS0099	278	282	NS	BX078891-BX078892	X078891	2			68.44	4.171	0.164	0.05	0.036	0.017	0.231	0.067	0.008	0.008	0.064	0.073	-0.01	-0.01	-0.01	-0.03	1366	0.2448	1.168614	-0.923814	NAF
NS0099	266	270	NS	BX078885-BX078886	X078885	2			66.92	6.541	0.21	0.08	0.0576	0.017	0.291	0.071	0.015	0.01	0.101	0.07	-0.01	-0.01	-0.01	-0.03	1363	0.306	1.238382	-0.932382	NAF
NS0099	192	196	NS	BX078847-BX078848	X078847	2			70.07	2.86	0.075	0.049	0.03528	0.019	0.13	0.057	0.011	0.001	0.072	0.058	-0.01	-0.01	-0.01	-0.03	1344	0.0306	0.994194	-0.963594	NAF
NS0099	66	70	NS	BX078783-BX078784	X078783	2			68.77	4.495	0.131	0.066	0.04752	0.015	0.21	0.065	0.014	0.005	0.1	0.061	-0.01	-0.01	-0.01	-0.03	1168	0.153	1.13373	-0.98073	NAF
NS0099	14	16	NS	X071756	071756	1	G	D	36.83	42.93	1.36	0.2451	0.19	0.068	0.19	0.06	0.04	0.002	0.404	0.042	1.45	0.36	-0.04	1.77	15080	0.0612	1.04652	-0.98532	NAF
NS0099	22	24	NS	X071761	071761	1	G	D	37.3	42.1	1.02	1.0578	0.82	0.045	0.1	0.06	0.033	0.002	0.629	0.03	1.24	0.24	0.11	1.59	15084	0.0612	1.04652	-0.98532	NAF
NS0099	24	26	NS	X071762	071762	1	G	D	35.72	44.7	0.96	1.032	0.8	0.04	0.09	0.06	0.029	0.002	0.613	0.033	0.96	0.21	0.03	1.2	15085	0.0612	1.04652	-0.98532	NAF
NS0099	58	62	NS	BX078779-BX078780	X078779	2			66.88	5.591	0.308	0.082	0.05904	0.023	0.252	0.075	0.016	0.01	0.217	0.063	-0.01	-0.01	-0.01	-0.03	1166	0.306	1.30815	-1.00215	NAF
NS0099	198	202	NS	BX078851-BX078852	X078851	2			68.7	4.787	0.222	0.057	0.04104	0.021	0.18	0.072	0.013	0.008	0.172	0.072	-0.01	-0.01	-0.01	-0.03	1346	0.2448	1.255824	-1.011024	NAF
NS0099	98	100	NS	BX078799	X078799	2			68.87	3.975	0.097	0.062	0.04464	0.008	0.16	0.06	0.012	0.001	0.099	0.051	-0.01	-0.01	-0.01	-0.03	1176	0.0306	1.04652	-1.01592	NAF
NS0099	210	214	NS	BX078857-BX078858	X078857	2			68.58	3.573	0.148	0.049	0.03528	0.014	0.163	0.076	0.012	0.01	0.105	0.068	-0.01	-0.01	-0.01	-0.03	1349	0.306	1.325592	-1.019592	NAF
NS0099	136	140	NS	BX078819-BX078820	X078819	2			68.49	4.822	0.207	0.061	0.04392	0.022	0.242	0.077	0.014	0.01	0.095	0.075	-0.01	-0.01	-0.01	-0.03	1186	0.306	1.343034	-1.037034	NAF
NS0099	180	184	NS	BX078841-BX078842	X078841	2			68.94	4.553	0.136	0.054	0.03888	0.02	0.187	0.075	0.013	0.008	0.103	0.08	-0.01	-0.01	-0.01	-0.03	1341	0.2448	1.30815	-1.06335	NAF
NS0099	108	112	NS	BX078805-BX078806	X078805	2			68.2	4.608	0.114	0.061	0.04392	0.013	0.179	0.075	0.015	0.007	0.105	0.085	-0.01	-0.01	-0.01	-0.03	1179	0.2142	1.30815	-1.09395	NAF
NS0099	6	8	NS	X071752	071752	1	G	D	34.98	44.32	2.04	0.2838	0.22	0.113	0.22	0.07	0.032	0.004	0.392	0.093	1.85	0.7	-0.02	2.53	15076	0.1224	1.22094	-1.09854	NAF
NS0099	94	98	NS	BX078797-BX078798	X078797	2			68.89	3.845	0.076	0.053	0.03816	0.009	0.163	0.067	0.014	0.002	0.077	0.065	-0.01	-0.01	-0.01	-0.03	1175	0.0612	1.168614	-1.107414	NAF
NS0099	90	94	NS	BX078795-BX078796	X078795	2			69.32	3.732	0.075	0.053	0.03816	0.012	0.148	0.071	0.015	0.004	0.07	0.083	-0.01	-0.01	-0.01	-0.03	1174	0.1224	1.238382	-1.115982	NAF
NS0099	168	172	NS	BX078835-BX078836	X078835	2			69.49	4.047	0.078	0.059	0.04248	0.009	0.148	0.068	0.012	0.002	0.077	0.063	-0.01	-0.01	-0.01	-0.03	1338	0.0612	1.186056	-1.124856	NAF
NS0099	78	80	NS	BX078789	X078789	2			69.53	4.342	0.117	0.067	0.04824	0.014	0.196	0.07	0.016	0.003	0.092	0.079	-0.01	-0.01	-0.01	-0.03	1171	0.0918	1.22094	-1.12914	NAF
NS0099	74	78	NS	BX078787-BX078788	X078787	2			69.29	4.271	0.112	0.069	0.04968	0.012	0.21	0.08	0.017	0.008	0.099	0.106	-0.01	-0.01	-0.01	-0.03	1170	0.2448	1.39536	-1.15056	NAF
NS0099	20	22	NS	X071760	071760	1	G	D	36.15	42.34	1.72	0.7095	0.55	0.079	0.16	0.07	0.034	0.002	0.788	0.04	1.5	0.41	0.11	2.02	15083	0.0612	1.22094	-1.15974	NAF
NS0099	26	28	NS	X071763	071763	1	G	D	36.25	44.27	0.94	0.8772	0.68	0.042	0.09	0.07	0.028	0.002	0.625	0.025	0.94	0.21	0.04	1.19	15086	0.0612	1.22094	-1.15974	NAF
NS0099	28	30	NS	X071764	071764	1	G	D	37.83	41.32	0.94	0.7998	0.62	0.041	0.11	0.07	0.029	0.002	0.601	0.028	1.29	0.22	0.05	1.56	15087	0.0612	1.22094	-1.15974	NAF
NS0099	38	40	NS	X071769	071769	1	G	D	38.46	39.02	1.63	0.8643	0.67	0.07	0.14	0.07	0.037	0.002	1.14	0.044	1.37	0.25	-0.01	1.61	15092	0.0612	1.22094	-1.15974	NAF
NS0099	44	46	NS	X071772	071772	1	G	D	38.78	39.99	1.17	0.7353	0.57	0.055	0.12	0.07	0.033	0.002	0.812	0.04	1.09	0.23	0.02	1.34	15095	0.0612	1.22094	-1.15974	NAF
NS0099	82	86	NS	BX078791-BX078792	X078791	2			68.88	4.131	0.087	0.054	0.03888	0.016	0.16	0.072	0.015	0.003	0.074	0.054	-0.01	-0.01	-0.01	-0.03	1172	0.0918	1.255824	-1.164024	NAF
NS0099	100	104	NS	BX078801-BX078802	X078801	2			68.7	4.727	0.109	0.066	0.04752	0.011	0.175	0.071	0.014	0.002	0.105	0.071	-0.01	-0.01	-0.01	-0.03	1177	0.0612	1.238382	-1.177182	NAF
NS0099	2	4	NS	X071750	071750	1	G	D	38.34	38.24	3.45	0.0516	0.04	0.164	0.09	0.08	0.028	0.007	0.014	0.027	2.07	0.99	0.03	3.09	15074	0.2142	1.39536	-1.18116	NAF
NS0099	196	198	NS	BX078849	X078849	2			68.81	4.101	0.103	0.068	0.04896	0.01	0.166	0.07	0.013	0.001	0.097	0.064	-0.01	-0.01	-0.01	-0.03	1345	0.0306	1.22094	-1.19034	NAF
NS0099	230	234	NS	BX078867-BX078868	X078867	2			67.38	5.663	0.162	0.056	0.04032	0.011	0.192	0.07	0.011	0.001	0.119	0.059	-0.01	-0.01	-0.01	-0.03	1354	0.0306	1.22094	-1.19034	NAF
NS0099	86	90	NS	BX078793-BX078794	X078793	2			68.27	5.017	0.12	0.069	0.04968	0.015	0.183	0.08	0.018	0.006	0.101	0.062	-0.01	-0.01	-0.01	-0.03	1173	0.1836	1.39536	-1.21176	NAF
NS0099	164	168	NS	BX078833-BX078834	X078833	2			66.69	6.397	0.146	0.074	0.05328	0.011	0.198	0.073	0.013	0.001	0.126	0.055	-0.01	-0.01	-0.01	-0.03	1337	0.0306	1.273266	-1.242666	NAF
NS0099	234	238	NS	BX078869-BX078870	X078869	2			67.44	6.239	0.154	0.067	0.04824	0.01	0.182	0.073	0.013	0.001	0.137	0.053	-0.01	-0.01	-0.01	-0.03	1355	0.0306	1.273266	-1.242666	NAF
NS0099	30	34	NS	BX078765-BX078766	X078765	2			69.15	4.818	0.183	0.066	0.04752	0.013	0.2	0.081	0.014	0.005	0.137	0.152	-0.01	-0.01	-0.01	-0.03	1159	0.153	1.412802	-1.259802	NAF
NS0099	184	188	NS	BX078843-BX078844	X078843	2			69.76	2.769	0.065	0.045	0.0324	0.016	0.144	0.084	0.017	0.006	0.059	0.07	-0.01	-0.01	-0.01	-0.03	1342	0.1836	1.465128	-1.281528	NAF
NS0099	226	230	NS	BX078865-BX078866	X078865	2			70.71	2.832	0.069	0.045	0.0324	0.017	0.148	0.083	0.015	0.005	0.06	0.066	-0.01	-0.01	-0.01	-0.03	1353	0.153	1.447686	-1.294686	NAF
NS0099	160	164	NS	BX078831-BX078832	X078831	2			68.65	5.661	0.12	0.072	0.05184	0.011	0.179	0.076	0.016	0.001	0.111	0.062	-0.01	-0.01	-0.01	-0.03	1336	0.0306	1.325592	-1.294992	NAF
NS0099	132	136	NS	BX078817-BX078818	X078817	2			69.28	3.62	0.218	0.065	0.0468	0.018	0.243	0.092	0.014	0.01	0.104	0.08	-0.01	-0.01	-0.01	-0.03	1185	0.306	1.604664	-1.298664	NAF
NS0099	18	20	NS	X071758	071758	1	G	D	33.96	44.69	2.37	0.774	0.6	0.103	0.19	0.08	0.048	0.002	1.41	0.044	1.4	0.39	0.05	1.84	15082	0.0612	1.39536	-1.33416	NAF
NS0099	30	32	NS	X071765	071765	1	G	D	37.44	41.72	0.97	1.0578	0.82	0.041	0.11	0.08	0.035	0.002	0.633	0.031	1.32	0.24	0.09	1.65	15088	0.0612	1.39536	-1.33416	NAF
NS0099	32	34	NS	X071766	071766	1	G	D	36.6	43.05	1.03	0.8256	0.64	0.046	0.1	0.08	0.033	0.002	0.748	0.03	1.13	0.17	0.05	1.35	15089	0.0612	1.39536	-1.33416	NAF
NS0099	34	36	NS	X071767	071767	1	G	D	36.49	43.1	1.08	0.8772	0.68	0.048	0.11	0.08	0.036	0.002	0.773	0.031	1.22	0.2	0.03	1.45	15090	0.0612	1.39536	-1.33416	NAF
NS0099	40	42	NS	X071770	071770	1	G	D	38.03	40.12	1.53	0.8256	0.64	0.068	0.13	0.08	0.029	0.002	1.06	0.032	1.32	0.29	0.08	1.69	15093	0.0612	1.39536	-1.33416	NAF
NS0099	46	48	NS	X071773	071773	1	G	D	37.6	41.69	1.21	0.903	0.7	0.054	0.14	0.08	0.035	0.002	0.784	0.033	1.23	0.26	0.01	1.5	15096	0.0612	1.39536	-1.33416	NAF
NS0099	104	108	NS	BX078803-BX078804	X078803	2			68.39	5.569	0.147	0.064	0.04608	0.011	0.183	0.08	0.017	0.002	0.133	0.06	-0.01	-0.01	-0.01	-0.03	1178	0.0612	1.39536	-1.33416	NAF
NS0099	112	116	NS	BX078807-BX078808	X078807	2			68.29	5.786	0.168	0.077	0.05544	0.015	0.201	0.084	0.017	0.004	0.151	0.08	-0.01	-0.01	-0.01	-0.03	1180	0.1224	1.465128	-1.342728	NAF
NS0099	62	66	NS	BX078781-BX078782	X078781	2			68.46	5.033	0.138	0.072	0.05184	0.014	0.207	0.085	0.019	0.004	0.111	0.063	-0.01	-0.01	-0.01	-0.03	1167	0.1224	1.48257	-1.36017	NAF
NS0099	140	144	NS	BX078821-BX078822	X078821	2			67.77	5.923	0.196	0.077	0.05544	0.014	0.223	0.089	0.017	0.006	0.162	0.088	-0.01	-0.01	-0.01	-0.03	1187	0.1836	1.552338	-1.368738	NAF
NS0099	214	216	NS	BX078859	X078859	2			69.15	3.748	0.089	0.052	0.03744	0.011	0.148	0.084	0.014	0.002	0.079	0.058	-0.01	-0.01	-0.01	-0.03	1350	0.0612	1.465128	-1.403928	NAF
NS0099	188	192	NS	BX078845-BX078846	X078845	2			68.58	3.913	0.139	0.055	0.0396	0.022	0.18	0.102	0.02	0.012	0.101	0.078	-0.01	-0.01	-0.01	-0.03	1343	0.3672	1.779084	-1.411884	NAF
NS0099	222	226	NS	BX078863-BX078864	X078863	2			69.59	3.463	0.077	0.053	0.03816	0.015	0.165	0.09	0.017	0.005	0.065	0.142	-0.01	-0.01	-0.01	-0.03	1352	0.153	1.56978	-1.41678	NAF
NS0099	12	14	NS	X071755	071755	1	G	D	35.05	42.51	2.85	0.2451	0.19	0.127	0.28	0.09	0.025	0.004	1.01	0.068	1.7	0.69	0	2.39	15079	0.1224	1.56978	-1.44738	NAF
NS0099	238	242	NS	BX078871-BX078872	X078871	2			68.13	5.564	0.149	0.067	0.04824	0.012	0.197	0.087	0.014	0.002	0.131	0.067	-0.01	-0.01	-0.01	-0.03	1356	0.0612	1.517454	-1.456254	NAF
NS0099	218	222	NS	BX078861-BX078862	X078861	2			69.26	3.982	0.141	0.064	0.04608	0.013	0.172	0.091	0.016	0.004	0.113	0.062	-0.01	-0.01	-0.01	-0.03	1351	0.1224	1.587222	-1.464822	NAF
NS0099	144	148	NS	BX078823-BX078824	X078823	2			66.68	6.502	0.212	0.085	0.0612	0.016	0.218	0.097	0.019	0.006	0.179	0.072	-0.01	-0.01	-0.01	-0.03	1188	0.1836	1.691874	-1.508274	NAF
NS0099	206	210	NS	BX078855-BX078856	X078855	2			68.7	4.288	0.13	0.057	0.04104	0.015	0.177	0.097	0.013	0.005	0.105	0.054	-0.01	-0.01	-0.01	-0.03	1348	0.153	1.691874	-1.538874	NAF
NS0099	120	124	NS	BX078811-BX078812	X078811	2			66.96	6.256	0.217	0.07	0.0504	0.018	0.231	0.108	0.017	0.011	0.168	0.061	-0.01	-0.01	-0.01	-0.03	1182	0.3366	1.883736	-1.547136	NAF
NS0099	258	262	NS	BX078881-BX078882	X078881	2			66.89	7.095	0.167	0.074	0.05328	0.012	0.23	0.094	0.017	0.003	0.123	0.065	-0.01	-0.01	-0.01	-0.03	1361	0.0918	1.639548	-1.547748	NAF
NS0099	176	180	NS	BX078839-BX078840	X078839	2			67.51	6.381	0.218	0.082	0.05904	0.014	0.232	0.096	0.017	0.004	0.175	0.061	-0.01	-0.01	-0.01	-0.03	1340	0.1224	1.674432	-1.552032	NAF
NS0099	254	258	NS	BX078879-BX078880	X078879	2			66.25	6.978	0.174	0.08	0.0576	0.01	0.231	0.095	0.017	0.003	0.139	0.063	-0.01	-0.01	-0.01	-0.03	1360	0.0918	1.65699	-1.56519	NAF
NS0099	262	266	NS	BX078883-BX078884	X078883	2			66.54	6.641	0.159	0.076	0.05472	0.013	0.253	0.1	0.017	0.005	0.095	0.103	-0.01	-0.01	-0.01	-0.03	1362	0.153	1.7442	-1.5912	NAF
NS0099	116	120	NS	BX078809-BX078810	X078809	2			66.58	7.353	0.307	0.082	0.05904	0.018	0.246	0.104	0.02	0.006	0.25	0.07	-0.01	-0.01	-0.01	-0.03	1181	0.1836	1.813968	-1.630368	NAF
NS0099	156	158	NS	BX078829	X078829	2			66.98	6.68	0.155	0.078	0.05616	0.012	0.223	0.099	0.014	0.002	0.133	0.078	-0.01	-0.01	-0.01	-0.03	1335	0.0612	1.726758	-1.665558	NAF
NS0099	242	246	NS	BX078873-BX078874	X078873	2			66.31	7.634	0.231	0.089	0.06408	0.015	0.245	0.109	0.02	0.006	0.188	0.072	-0.01	-0.01	-0.01	-0.03	1357	0.1836	1.901178	-1.717578	NAF
NS0099	148	152	NS	BX078825-BX078826	X078825	2			66.93	7.325	0.155	0.083	0.05976	0.014	0.203	0.106	0.019	0.004	0.132	0.081	-0.01	-0.01	-0.01	-0.03	1333	0.1224	1.848852	-1.726452	NAF
NS0099	48	50	NS	X071774	071774	1	G	D	38	40.21	1.36	0.6837	0.53	0.067	0.11	0.11	0.056	0.002	0.923	0.025	1.36	0.26	0.02	1.64	15097	0.0612	1.91862	-1.85742	NAF
NS0099	202	206	NS	BX078853-BX078854	X078853	2			68.1	4.804	0.229	0.062	0.04464	0.022	0.21	0.124	0.014	0.008	0.151	0.059	-0.01	-0.01	-0.01	-0.03	1347	0.2448	2.162808	-1.918008	NAF
NS0099	152	156	NS	BX078827-BX078828	X078827	2			67.49	6.149	0.203	0.094	0.06768	0.015	0.24	0.117	0.015	0.002	0.174	0.069	-0.01	-0.01	-0.01	-0.03	1334	0.0612	2.040714	-1.979514	NAF
NS0099	246	250	NS	BX078875-BX078876	X078875	2			65.89	7.314	0.203	0.079	0.05688	0.012	0.225	0.121	0.017	0.004	0.172	0.067	-0.01	-0.01	-0.01	-0.03	1358	0.1224	2.110482	-1.988082	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0099	10	12	NS	X071754	071754	1	G	D	32.45	43.92	4.2	0.2064	0.16	0.22	0.29	0.12	0.019	0.002	1.74	0.088	1.94	0.87	0.07	2.88	15078	0.0612	2.09304	-2.03184	NAF
NS0099	124	128	NS	BX078813-BX078814	X078813	2			66.8	7.395	0.221	0.083	0.05976	0.021	0.238	0.141	0.016	0.012	0.165	0.079	-0.01	-0.01	-0.01	-0.03	1183	0.3672	2.459322	-2.092122	NAF
NS0099	16	18	NS	X071757	071757	1	G	D	31.33	45.12	3.84	0.5031	0.39	0.154	0.31	0.13	0.067	0.002	1.77	0.057	1.93	0.8	0.15	2.88	15081	0.0612	2.26746	-2.20626	NAF
NS0099	36	38	NS	X071768	071768	1	G	D	33.21	44.87	2.96	0.516	0.4	0.13	0.25	0.13	0.03	0.002	1.93	0.042	1.27	0.37	0.01	1.65	15091	0.0612	2.26746	-2.20626	NAF
NS0099	128	132	NS	BX078815-BX078816	X078815	2			68.15	5.522	0.208	0.076	0.05472	0.016	0.234	0.139	0.016	0.006	0.147	0.081	-0.01	-0.01	-0.01	-0.03	1184	0.1836	2.424438	-2.240838	NAF
NS0099	52	54	NS	X071776	071776	1	G	D	37.15	41.68	0.96	0.774	0.6	0.045	0.1	0.33	0.144	0.002	0.644	0.03	1.37	0.32	0.1	1.79	15099	0.0612	5.75586	-5.69466	NAF
NS0099	50	52	NS	X071775	071775	1	G	D	36.65	40.37	1.95	0.9288	0.72	0.085	0.15	0.35	0.117	0.002	1.34	0.04	1.48	0.37	0.16	2.01	15098	0.0612	6.1047	-6.0435	NAF
NS0099	176	178	NS	X071839	071839	1	G	W	33.01	36.98	2.58	0.7998	0.62	0.102	2.88	1.25	0.082	0.47	1.63	0.326	0	4.6	1.03	5.63	15161	14.382	21.8025	-7.4205	NAF
NS0099	54	56	NS	X071777	071777	1	G	D	36.57	41.87	1.18	0.4902	0.38	0.048	0.23	0.45	0.137	0.01	0.767	0.017	1.05	0.85	0.02	1.92	15100	0.306	7.8489	-7.5429	NAF
NS0099	80	82	NS	X071790	071790	1	G	W	36.07	36.78	1.56	0.8385	0.65	0.071	2.04	0.57	0.073	0.06	1.14	0.051	0.29	4.53	-0.04	4.78	15113	1.836	9.94194	-8.10594	NAF
NS0099	56	58	NS	X071778	071778	1	G	D	36.65	38.24	1.18	0.903	0.7	0.052	1.13	0.57	0.132	0.039	0.8	0.021	0.3	4.21	-0.15	4.36	15101	1.1934	9.94194	-8.74854	NAF
NS0099	60	62	NS	X071780	071780	1	G	D	35.01	37.49	2.23	0.7353	0.57	0.099	1.96	0.89	0.136	0.108	1.47	0.065	0.31	3.86	0.11	4.28	15103	3.3048	15.52338	-12.21858	NAF
NS0099	68	70	NS	X071784	071784	1	G	W	34.17	38.93	1.53	0.7353	0.57	0.066	2.37	0.9	0.086	0.083	0.923	0.067	0.24	4.93	0.11	5.28	15107	2.5398	15.6978	-13.158	NAF
NS0099	272	274	NS	X071888	071888	1	G	W	32.13	38.13	2.89	0.6579	0.51	0.123	3.35	0.99	0.113	0.124	0.93	0.112	0.31	5.52	0.33	6.16	15209	3.7944	17.26758	-13.47318	NAF
NS0099	136	138	NS	X071819	071819	1	G	W	26.96	44.97	2.74	0.6837	0.53	0.118	2.79	1.65	0.105	0.493	1.13	0.089	0.26	5.21	1.29	6.76	15141	15.0858	28.7793	-13.6935	NAF
NS0099	70	72	NS	X071785	071785	1	G	W	27.6	46.83	1.33	0.6966	0.54	0.06	2.7	0.97	0.068	0.056	0.844	0.057	0.28	6.3	0.53	7.11	15108	1.7136	16.91874	-15.20514	NAF
NS0099	72	74	NS	X071786	071786	1	G	W	27.5	48.92	1.37	0.645	0.5	0.058	2.11	0.99	0.122	0.051	0.888	0.061	0.29	4.34	0.31	4.94	15109	1.5606	17.26758	-15.70698	NAF
NS0099	266	268	NS	X071885	071885	1	G	W	33.72	38.47	2.26	0.7353	0.57	0.091	2.8	1.12	0.077	0.121	0.777	0.099	0.21	4.42	0.45	5.08	15206	3.7026	19.53504	-15.83244	NAF
NS0099	268	270	NS	X071886	071886	1	G	W	35.87	36.72	1.54	0.8256	0.64	0.064	2.3	1	0.072	0.047	0.649	0.065	0.16	4.76	0.17	5.09	15207	1.4382	17.442	-16.0038	NAF
NS0099	78	80	NS	X071789	071789	1	G	W	36.67	38.58	1.01	0.7482	0.58	0.043	1.65	0.96	0.086	0.019	0.727	0.054	0.07	2.99	0.17	3.23	15112	0.5814	16.74432	-16.16292	NAF
NS0099	146	148	NS	X071824	071824	1	G	W	37.44	35.74	1.34	0.903	0.7	0.057	1.89	1	0.127	0.033	1.02	0.089	-0.01	4.17	0.05	4.21	15146	1.0098	17.442	-16.4322	NAF
NS0099	58	60	NS	X071779	071779	1	G	D	33.9	38.97	1.95	0.7869	0.61	0.082	2	1.14	0.109	0.09	1.2	0.053	0.27	4.11	0.32	4.7	15102	2.754	19.88388	-17.12988	NAF
NS0099	132	134	NS	X071817	071817	1	G	W	33.51	40.3	1.9	0.6063	0.47	0.086	2.13	1.17	0.101	0.072	0.822	0.039	0.13	4.64	0.27	5.04	15139	2.2032	20.40714	-18.20394	NAF
NS0099	134	136	NS	X071818	071818	1	G	W	32.64	39.69	1.77	0.7353	0.57	0.079	2.31	1.16	0.16	0.063	0.655	0.041	0.2	6.13	0.09	6.42	15140	1.9278	20.23272	-18.30492	NAF
NS0099	142	144	NS	X071822	071822	1	G	W	37.36	35.24	1.43	0.8385	0.65	0.061	2.01	1.12	0.092	0.022	1.12	0.037	0.02	4.37	0.26	4.65	15144	0.6732	19.53504	-18.86184	NAF
NS0099	64	66	NS	X071782	071782	1	G	D	39.34	33.46	1.17	0.7482	0.58	0.055	1.77	1.14	0.148	0.03	0.796	0.041	0.15	3.78	-0.01	3.92	15105	0.918	19.88388	-18.96588	NAF
NS0099	226	228	NS	X071865	071865	1	G	W	38.79	32.93	1.45	0.8256	0.64	0.062	2.06	1.27	0.115	0.09	0.866	0.049	0	4.11	0.26	4.37	15186	2.754	22.15134	-19.39734	NAF
NS0099	194	196	NS	X071848	071848	1	G	W	38.28	35.73	1.03	0.8256	0.64	0.045	1.69	1.16	0.088	0.021	0.741	0.098	-0.02	3.48	0.12	3.58	15170	0.6426	20.23272	-19.59012	NAF
NS0099	74	76	NS	X071787	071787	1	G	W	36.75	37.4	0.98	0.7353	0.57	0.041	1.83	1.19	0.117	0.02	0.684	0.047	0.1	3.53	0.3	3.93	15110	0.612	20.75598	-20.14398	NAF
NS0099	66	68	NS	X071783	071783	1	G	W	38.26	35.14	1.03	0.774	0.6	0.051	1.81	1.22	0.113	0.024	0.699	0.034	0.21	3.87	0.17	4.25	15106	0.7344	21.27924	-20.54484	NAF
NS0099	270	272	NS	X071887	071887	1	G	W	35.74	37.68	1.06	0.7353	0.57	0.05	2.2	1.23	0.092	0.026	0.289	0.058	0.15	4.47	0.35	4.97	15208	0.7956	21.45366	-20.65806	NAF
NS0099	196	198	NS	X071849	071849	1	G	W	37.15	37.16	1.02	0.8772	0.68	0.04	1.67	1.23	0.098	0.022	0.776	0.065	-0.02	3.76	0.27	4.01	15171	0.6732	21.45366	-20.78046	NAF
NS0099	76	78	NS	X071788	071788	1	G	W	33.47	40.71	1.48	0.7353	0.57	0.064	2.09	1.29	0.108	0.049	1.03	0.061	0.24	3.53	0.55	4.32	15111	1.4994	22.50018	-21.00078	NAF
NS0099	234	236	NS	X071869	071869	1	G	W	37.47	37.44	1.04	0.7998	0.62	0.045	1.7	1.26	0.085	0.019	0.785	0.091	-0.07	2.9	0.41	3.24	15190	0.5814	21.97692	-21.39552	NAF
NS0099	140	142	NS	X071821	071821	1	G	W	35.55	38.53	1.29	0.6579	0.51	0.057	1.91	1.33	0.105	0.057	0.762	0.032	0.05	3.59	0.35	3.99	15143	1.7442	23.19786	-21.45366	NAF
NS0099	62	64	NS	X071781	071781	1	G	D	37.37	35.04	1.43	0.8256	0.64	0.067	1.88	1.39	0.215	0.065	0.999	0.044	0.2	4.22	0.16	4.58	15104	1.989	24.24438	-22.25538	NAF
NS0099	116	118	NS	X071809	071809	1	G	W	36.32	37.14	1.41	0.7611	0.59	0.06	1.94	1.34	0.094	0.032	1.02	0.066	0	3.32	0.45	3.77	15131	0.9792	23.37228	-22.39308	NAF
NS0099	82	84	NS	X071791	071791	1	G	W	36.01	38.98	1.11	0.7869	0.61	0.048	1.58	1.33	0.087	0.02	0.786	0.042	0.21	2.85	0.63	3.69	15114	0.612	23.19786	-22.58586	NAF
NS0099	98	100	NS	X071799	071799	1	G	W	36.12	37.52	1.19	0.8643	0.67	0.047	1.85	1.32	0.095	0.011	0.996	0.032	-0.03	3.4	0.61	3.98	15122	0.3366	23.02344	-22.68684	NAF
NS0099	232	234	NS	X071868	071868	1	G	W	37.66	36.17	1.35	0.6708	0.52	0.062	2.08	1.33	0.051	0.015	0.861	0.202	-0.04	2.94	0.61	3.51	15189	0.459	23.19786	-22.73886	NAF
NS0099	166	168	NS	X071834	071834	1	G	W	37.75	35.97	1.14	0.7482	0.58	0.049	1.87	1.35	0.071	0.016	0.831	0.108	-0.08	2.94	0.6	3.46	15156	0.4896	23.5467	-23.0571	NAF
NS0099	200	202	NS	X071852	071852	1	G	W	34.73	37.63	1.88	0.774	0.6	0.081	2.18	1.53	0.078	0.116	1.28	0.142	0	3.77	0.67	4.44	15173	3.5496	26.68626	-23.13666	NAF
NS0099	102	104	NS	X071802	071802	1	G	W	37.34	36.34	1.11	0.8127	0.63	0.041	1.82	1.36	0.084	0.018	0.884	0.043	-0.03	3.08	0.58	3.63	15124	0.5508	23.72112	-23.17032	NAF
NS0099	124	126	NS	X071813	071813	1	G	W	31.57	42.47	1.63	0.6837	0.53	0.077	2.09	1.73	0.071	0.207	0.963	0.059	0.13	3.87	0.88	4.88	15135	6.3342	30.17466	-23.84046	NAF
NS0099	108	110	NS	X071805	071805	1	G	W	34.44	39.85	1.1	0.8256	0.64	0.045	1.79	1.46	0.094	0.052	0.874	0.042	0.01	3.45	0.72	4.18	15127	1.5912	25.46532	-23.87412	NAF
NS0099	172	174	NS	X071837	071837	1	G	W	37.35	36.15	1.39	0.6837	0.53	0.066	2.05	1.42	0.075	0.026	0.853	0.191	-0.07	2.9	0.7	3.53	15159	0.7956	24.76764	-23.97204	NAF
NS0099	158	160	NS	X071830	071830	1	G	W	37.58	37.39	0.88	0.8127	0.63	0.037	1.54	1.46	0.08	0.018	0.696	0.041	-0.1	2.54	0.68	3.12	15152	0.5508	25.46532	-24.91452	NAF
NS0099	198	200	NS	X071851	071851	1	G	W	35.92	37.46	1.46	0.7998	0.62	0.061	1.95	1.55	0.112	0.056	0.945	0.115	0.02	3.29	0.61	3.92	15172	1.7136	27.0351	-25.3215	NAF
NS0099	88	90	NS	X071794	071794	1	G	W	35.02	38.12	1.06	0.8901	0.69	0.047	2.06	1.52	0.126	0.023	0.843	0.038	0.01	3.97	0.67	4.65	15117	0.7038	26.51184	-25.80804	NAF
NS0099	160	162	NS	X071831	071831	1	G	W	35.91	39.34	1.02	0.7869	0.61	0.043	1.72	1.53	0.078	0.026	0.77	0.089	-0.07	2.64	0.75	3.32	15153	0.7956	26.68626	-25.89066	NAF
NS0099	192	194	NS	X071847	071847	1	G	W	37.69	35.43	1.06	0.8643	0.67	0.047	1.85	1.53	0.103	0.026	0.715	0.096	0	3.53	0.6	4.13	15169	0.7956	26.68626	-25.89066	NAF
NS0099	162	164	NS	X071832	071832	1	G	W	36.53	37.75	0.97	0.8772	0.68	0.041	1.67	1.54	0.109	0.019	0.728	0.075	-0.07	2.9	0.67	3.5	15154	0.5814	26.86068	-26.27928	NAF
NS0099	154	156	NS	X071828	071828	1	G	W	36.6	37.67	1.13	0.774	0.6	0.054	1.87	1.55	0.073	0.023	0.861	0.078	-0.04	2.96	0.79	3.71	15150	0.7038	27.0351	-26.3313	NAF
NS0099	164	166	NS	X071833	071833	1	G	W	35.87	39.15	0.9	0.7869	0.61	0.037	1.61	1.55	0.106	0.015	0.675	0.077	-0.07	2.65	0.71	3.29	15155	0.459	27.0351	-26.5761	NAF
NS0099	206	208	NS	X071855	071855	1	G	W	36.36	37.48	1.13	0.6837	0.53	0.047	1.67	1.59	0.088	0.023	0.721	0.034	0.02	3.28	0.75	4.05	15176	0.7038	27.73278	-27.02898	NAF
NS0099	244	246	NS	X071874	071874	1	G	W	34.89	39.57	0.81	0.8514	0.66	0.032	1.73	1.6	0.1	0.017	0.635	0.042	-0.02	3.48	0.74	4.2	15195	0.5202	27.9072	-27.387	NAF
NS0099	86	88	NS	X071793	071793	1	G	W	35.86	38.59	0.84	0.8127	0.63	0.035	1.74	1.67	0.105	0.056	0.65	0.031	0.01	3.12	0.8	3.93	15116	1.7136	29.12814	-27.41454	NAF
NS0099	138	140	NS	X071820	071820	1	G	W	33.69	40.76	1.28	0.6063	0.47	0.051	1.93	1.63	0.092	0.032	0.538	0.037	0.05	3.77	0.82	4.64	15142	0.9792	28.43046	-27.45126	NAF
NS0099	252	254	NS	X071878	071878	1	G	W	34.94	39.24	1.27	0.774	0.6	0.053	1.87	1.67	0.13	0.049	0.871	0.103	0.08	3.35	0.67	4.1	15199	1.4994	29.12814	-27.62874	NAF
NS0099	118	120	NS	X071810	071810	1	G	W	33.07	38.88	2.06	0.8127	0.63	0.083	2.25	1.74	0.112	0.083	1.53	0.056	0.03	3.82	0.91	4.76	15132	2.5398	30.34908	-27.80928	NAF
NS0099	228	230	NS	X071866	071866	1	G	W	36.94	36.31	1.16	0.7869	0.61	0.05	1.8	1.65	0.105	0.031	0.725	0.087	0	3.3	0.72	4.02	15187	0.9486	28.7793	-27.8307	NAF
NS0099	106	108	NS	X071804	071804	1	G	W	36.72	36.79	1.07	0.8256	0.64	0.044	1.82	1.63	0.109	0.017	0.862	0.038	-0.05	3.09	0.84	3.88	15126	0.5202	28.43046	-27.91026	NAF
NS0099	104	106	NS	X071803	071803	1	G	W	36.78	37.42	0.98	0.8256	0.64	0.043	1.77	1.63	0.102	0.016	0.784	0.035	-0.03	3.04	0.78	3.79	15125	0.4896	28.43046	-27.94086	NAF
NS0099	250	252	NS	X071877	071877	1	G	W	32.96	36.85	2.43	0.774	0.6	0.106	2.74	1.98	0.272	0.208	1.49	0.117	0.13	4.42	0.75	5.3	15198	6.3648	34.53516	-28.17036	NAF
NS0099	144	146	NS	X071823	071823	1	G	W	35.41	38.26	1.19	0.7482	0.58	0.053	1.91	1.7	0.107	0.046	0.873	0.07	0.03	3.48	0.8	4.31	15145	1.4076	29.6514	-28.2438	NAF
NS0099	148	150	NS	X071825	071825	1	G	W	36.87	37.39	1.06	0.774	0.6	0.047	1.79	1.66	0.101	0.023	0.788	0.046	-0.05	3.03	0.82	3.8	15147	0.7038	28.95372	-28.24992	NAF
NS0099	84	86	NS	X071792	071792	1	G	W	34.52	40.83	0.81	0.774	0.6	0.035	1.61	1.69	0.093	0.023	0.633	0.033	-0.01	2.75	0.99	3.73	15115	0.7038	29.47698	-28.77318	NAF
NS0099	112	114	NS	X071807	071807	1	G	W	36.47	36.7	1.08	0.8643	0.67	0.045	1.86	1.68	0.096	0.017	0.865	0.038	-0.01	3.34	0.87	4.2	15129	0.5202	29.30256	-28.78236	NAF
NS0099	186	188	NS	X071844	071844	1	G	W	33.57	39.28	1.2	0.7095	0.55	0.054	2.16	2.27	0.159	0.339	0.741	0.166	0.03	3.32	1.29	4.64	15166	10.3734	39.59334	-29.21994	NAF
NS0099	90	92	NS	X071795	071795	1	G	W	35.67	38.76	0.92	0.7869	0.61	0.041	1.85	1.72	0.094	0.017	0.731	0.038	-0.04	2.89	1.08	3.93	15118	0.5202	30.00024	-29.48004	NAF
NS0099	238	240	NS	X071871	071871	1	G	W	36.87	36.48	1.15	0.8256	0.64	0.049	2	1.75	0.09	0.028	0.851	0.068	-0.03	3.11	0.93	4.01	15192	0.8568	30.5235	-29.6667	NAF
NS0099	128	130	NS	X071815	071815	1	G	W	36.23	35.89	1.5	0.7224	0.56	0.066	1.91	1.77	0.114	0.035	0.919	0.043	0.06	4.09	0.82	4.97	15137	1.071	30.87234	-29.80134	NAF
NS0099	152	154	NS	X071827	071827	1	G	W	37.16	35.84	1.19	0.8256	0.64	0.052	1.98	1.74	0.095	0.017	0.898	0.078	-0.04	3.13	0.96	4.05	15149	0.5202	30.34908	-29.82888	NAF
NS0099	100	102	NS	X071801	071801	1	G	W	33.48	41.07	0.97	0.8385	0.65	0.037	1.75	1.75	0.089	0.022	0.771	0.02	0.01	3.19	1.06	4.26	15123	0.6732	30.5235	-29.8503	NAF
NS0099	254	256	NS	X071879	071879	1	G	W	36.02	38.34	0.92	0.8127	0.63	0.037	1.76	1.75	0.088	0.017	0.668	0.039	0.03	3.17	0.84	4.04	15200	0.5202	30.5235	-30.0033	NAC
NS0099	230	232	NS	X071867	071867	1	G	W	36.69	37.45	1.1	0.7998	0.62	0.046	1.82	1.77	0.072	0.022	0.787	0.129	-0.05	2.78	1.07	3.8	15188	0.6732	30.87234	-30.19914	NAC
NS0099	246	248	NS	X071875	071875	1	G	W	37.45	34.95	1.09	0.8256	0.64	0.044	1.94	1.81	0.11	0.039	0.795	0.055	-0.03	3.33	0.97	4.27	15196	1.1934	31.57002	-30.37662	NAC
NS0099	222	224	NS	X071863	071863	1	G	W	35.9	37.42	1.05	0.6966	0.54	0.045	1.95	1.8	0.137	0.032	0.405	0.024	0.04	4.02	0.76	4.82	15184	0.9792	31.3956	-30.4164	NAC
NS0099	178	180	NS	X071840	071840	1	G	W	34.49	38.77	1.19	0.7482	0.58	0.056	2.12	1.85	0.11	0.052	0.766	0.132	-0.02	3.47	1.11	4.56	15162	1.5912	32.2677	-30.6765	NAC
NS0099	212	214	NS	X071858	071858	1	G	W	36.07	35.81	1.23	0.8772	0.68	0.052	1.95	1.81	0.106	0.029	0.844	0.06	0.06	4.42	0.82	5.3	15179	0.8874	31.57002	-30.68262	NAC
NS0099	218	220	NS	X071861	071861	1	G	W	35.43	36.37	1.49	0.8643	0.67	0.061	2.05	1.84	0.084	0.045	1.03	0.058	0.06	4.4	1.01	5.47	15182	1.377	32.09328	-30.71628	NAC
NS0099	190	192	NS	X071846	071846	1	G	W	35.51	38.49	1.23	0.6063	0.47	0.06	2.02	1.88	0.118	0.065	0.751	0.141	0.01	2.79	0.99	3.79	15168	1.989	32.79096	-30.80196	NAC
NS0099	258	260	NS	X071881	071881	1	G	W	36.88	36.89	1	0.8514	0.66	0.04	1.89	1.81	0.083	0.021	0.654	0.056	0.04	3.24	0.98	4.26	15202	0.6426	31.57002	-30.92742	NAC
NS0099	92	94	NS	X071796	071796	1	G	W	34.01	40.7	1.03	0.8514	0.66	0.042	1.88	1.87	0.098	0.048	0.828	0.028	-0.01	2.91	1.12	4.02	15119	1.4688	32.61654	-31.14774	NAC
NS0099	170	172	NS	X071836	071836	1	G	W	36.57	37.89	0.88	0.8127	0.63	0.038	1.66	1.83	0.082	0.021	0.658	0.07	-0.07	2.69	1.05	3.67	15158	0.6426	31.91886	-31.27626	NAC
NS0099	224	226	NS	X071864	071864	1	G	W	32.17	42.06	1.41	0.5805	0.45	0.066	2.1	1.98	0.105	0.101	0.462	0.068	0.06	3.37	1.19	4.62	15185	3.0906	34.53516	-31.44456	NAC
NS0099	156	158	NS	X071829	071829	1	G	W	37.4	36.38	1	0.8127	0.63	0.042	1.73	1.84	0.082	0.021	0.768	0.041	-0.03	2.69	0.94	3.6	15151	0.6426	32.09328	-31.45068	NAC
NS0099	260	262	NS	X071882	071882	1	G	W	37.56	35.52	1.02	0.8256	0.64	0.044	1.92	1.84	0.098	0.02	0.618	0.061	0.04	3.29	0.95	4.28	15203	0.612	32.09328	-31.48128	NAC
NS0099	278	280	NS	X071891	071891	1	G	W	35.81	36.17	1.52	0.6708	0.52	0.066	2.44	1.91	0.091	0.054	0.476	0.045	0.11	4.23	0.95	5.29	15212	1.6524	33.31422	-31.66182	NAC
NS0099	210	212	NS	X071857	071857	1	G	W	30.12	41.11	2.59	0.6708	0.52	0.105	2.67	2.3	0.172	0.274	1.34	0.096	0.09	4.01	1.23	5.33	15178	8.3844	40.1166	-31.7322	NAC
NS0099	220	222	NS	X071862	071862	1	G	W	36.04	37.02	1.16	0.7353	0.57	0.052	1.9	1.87	0.115	0.024	0.67	0.051	0.01	3.78	0.97	4.76	15183	0.7344	32.61654	-31.88214	NAC
NS0099	242	244	NS	X071873	071873	1	G	W	32.38	39.14	2.29	0.7482	0.58	0.097	2.71	2.08	0.139	0.142	1.42	0.165	0.09	3.32	1.22	4.63	15194	4.3452	36.27936	-31.93416	NAC
NS0099	256	258	NS	X071880	071880	1	G	W	35.59	38.43	0.89	0.8643	0.67	0.039	1.85	1.87	0.092	0.016	0.605	0.045	0.01	3.19	1.12	4.32	15201	0.4896	32.61654	-32.12694	NAC
NS0099	150	152	NS	X071826	071826	1	G	W	37.02	36.02	0.95	0.8772	0.68	0.039	1.81	1.89	0.111	0.026	0.752	0.04	-0.03	3.18	1	4.15	15148	0.7956	32.96538	-32.16978	NAC
NS0099	110	112	NS	X071806	071806	1	G	W	35.04	39.86	0.93	0.774	0.6	0.039	1.69	1.91	0.084	0.028	0.746	0.035	-0.01	2.75	1.16	3.9	15128	0.8568	33.31422	-32.45742	NAC
NS0099	174	176	NS	X071838	071838	1	G	W	36.12	39.47	1.05	0.4773	0.37	0.051	1.76	1.93	0.081	0.037	0.642	0.105	-0.08	1.67	1.24	2.83	15160	1.1322	33.66306	-32.53086	NAC
NS0099	120	122	NS	X071811	071811	1	G	W	34.24	39.02	1.28	0.7869	0.61	0.05	1.84	1.94	0.099	0.036	0.938	0.045	0.05	3.31	1.15	4.51	15133	1.1016	33.83748	-32.73588	NAC
NS0099	94	96	NS	X071797	071797	1	G	W	33.59	41.36	0.87	0.8514	0.66	0.035	1.79	1.92	0.091	0.017	0.696	0.02	0	2.93	1.2	4.13	15120	0.5202	33.48864	-32.96844	NAC
NS0099	122	124	NS	X071812	071812	1	G	W	33.13	40	1.47	0.7224	0.56	0.065	2.06	2.09	0.09	0.108	0.942	0.048	0.05	3.57	1.21	4.83	15134	3.3048	36.45378	-33.14898	NAC
NS0099	114	116	NS	X071808	071808	1	G	W	35.87	37.06	1.11	0.8643	0.67	0.047	1.87	1.98	0.099	0.021	0.875	0.041	0.03	3.23	1.13	4.39	15130	0.6426	34.53516	-33.89256	NAC
NS0099	168	170	NS	X071835	071835	1	G	W	36.36	37.8	0.94	0.8256	0.64	0.039	1.72	2	0.079	0.032	0.707	0.07	-0.1	2.54	1.39	3.83	15157	0.9792	34.884	-33.9048	NAC
NS0099	182	184	NS	X071842	071842	1	G	W	35.61	37.77	1	0.6837	0.53	0.047	1.95	2	0.116	0.031	0.675	0.088	-0.03	3.14	1.07	4.18	15164	0.9486	34.884	-33.9354	NAC
NS0099	262	264	NS	X071883	071883	1	G	W	35.83	36.66	1.06	0.8385	0.65	0.047	2.2	2.02	0.058	0.024	0.548	0.063	0.12	3.78	1.3	5.2	15204	0.7344	35.23284	-34.49844	NAC
NS0099	202	204	NS	X071853	071853	1	G	W	36.84	36.25	1	0.7998	0.62	0.042	1.67	2.04	0.109	0.022	0.74	0.063	0	3.26	0.98	4.24	15174	0.6732	35.58168	-34.90848	NAC
NS0099	214	216	NS	X071859	071859	1	G	W	33.78	40.58	1.05	0.7353	0.57	0.043	1.7	2.04	0.105	0.022	0.722	0.062	0	3.33	1.28	4.61	15180	0.6732	35.58168	-34.90848	NAC
NS0099	188	190	NS	X071845	071845	1	G	W	34.68	39.62	0.92	0.6708	0.52	0.041	1.86	2.09	0.12	0.042	0.636	0.087	-0.05	3	1.3	4.25	15167	1.2852	36.45378	-35.16858	NAC
NS0099	236	238	NS	X071870	071870	1	G	W	36.3	37.54	1.04	0.774	0.6	0.041	1.81	2.05	0.098	0.01	0.759	0.073	-0.07	2.53	1.39	3.85	15191	0.306	35.7561	-35.4501	NAC
NS0099	240	242	NS	X071872	071872	1	G	W	35.09	39.27	0.91	0.8385	0.65	0.035	1.78	2.12	0.09	0.026	0.669	0.063	-0.05	2.84	1.46	4.25	15193	0.7956	36.97704	-36.18144	NAC
NS0099	180	182	NS	X071841	071841	1	G	W	32.89	41.54	0.91	0.6837	0.53	0.04	1.9	2.15	0.109	0.037	0.586	0.099	-0.01	2.95	1.47	4.41	15163	1.1322	37.5003	-36.3681	NAC
NS0099	216	218	NS	X071860	071860	1	G	W	32.68	41.1	1.21	0.7869	0.61	0.049	1.78	2.2	0.073	0.038	0.893	0.042	0.01	3.54	1.63	5.18	15181	1.1628	38.3724	-37.2096	NAC
NS0099	208	210	NS	X071856	071856	1	G	W	31.89	39.84	1.99	0.6708	0.52	0.086	2.5	2.38	0.094	0.092	1.12	0.165	0.18	3.47	1.64	5.29	15177	2.8152	41.51196	-38.69676	NAC
NS0099	280	282	NS	X071892	071892	1	G	W	31.22	43.03	1.31	0.5676	0.44	0.061	2.31	2.47	0.085	0.122	0.425	0.054	0.09	3.47	1.68	5.24	15213	3.7332	43.08174	-39.34854	NAC
NS0099	204	206	NS	X071854	071854	1	G	W	31.41	37.49	2.87	0.645	0.5	0.123	2.95	2.63	0.162	0.213	1.46	0.142	0.66	3.96	1.53	6.15	15175	6.5178	45.87246	-39.35466	NAC
NS0099	248	250	NS	X071876	071876	1	G	W	35.99	35.43	1.06	0.8772	0.68	0.044	2.1	2.33	0.09	0.023	0.79	0.053	0.03	3.69	1.51	5.23	15197	0.7038	40.63986	-39.93606	NAC
NS0099	96	98	NS	X071798	071798	1	G	W	33.94	39.43	0.95	0.8772	0.68	0.036	1.97	2.37	0.09	0.017	0.744	0.028	0.05	2.96	1.72	4.73	15121	0.5202	41.33754	-40.81734	NAC
NS0099	126	128	NS	X071814	071814	1	G	W	34.2	38.84	1.22	0.6837	0.53	0.051	1.77	2.4	0.163	0.031	0.801	0.055	0.07	3.27	1.4	4.74	15136	0.9486	41.8608	-40.9122	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0099	264	266	NS	X071884	071884	1	G	W	33.72	37.51	1.1	0.8514	0.66	0.05	2.35	2.65	0.128	0.038	0.533	0.071	0.15	4	1.82	5.97	15205	1.1628	46.2213	-45.0585	NAC
NS0099	184	186	NS	X071843	071843	1	G	W	32.2	41.51	0.98	0.645	0.5	0.043	2.1	2.67	0.107	0.026	0.543	0.124	0.06	2.67	1.99	4.72	15165	0.7956	46.57014	-45.77454	NAC
NS0099	276	278	NS	X071890	071890	1	G	W	33.81	39.45	0.85	0.5934	0.46	0.037	1.93	2.82	0.082	0.021	0.296	0.025	0	2.86	2.23	5.09	15211	0.6426	49.18644	-48.54384	NAC
NS0099	130	132	NS	X071816	071816	1	G	W	29.87	36.8	2.15	0.645	0.5	0.092	2.37	5.37	0.095	0.081	1.32	0.086	0.28	3.85	3.97	8.1	15138	2.4786	93.66354	-91.18494	NAC
NS0100	90	92	NS	X071939	071939	1	G	D	31.72	39.41	2.85	0.4128	0.32	0.127	3.71	0.28	0.032	1.07	1.02	0.271	0.75	3.71	1.72	6.18	15281	32.742	4.88376	27.85824	PAF(HC)
NS0100	158	160	NS	X071974	071974	1	G	D	26.68	48.57	1.74	0.5031	0.39	0.082	2.85	0.37	0.084	0.863	0.649	0.199	0.55	4.61	1.36	6.52	15387	26.4078	6.45354	19.95426	PAF(HC)
NS0100	88	90	NS	X071938	071938	1	G	D	23.96	52.63	1.69	0.4257	0.33	0.076	2.81	0.37	0.064	0.685	0.62	0.166	0.57	4.35	1.37	6.29	15280	20.961	6.45354	14.50746	PAF(HC)
NS0100	108	110	NS	X071948	071948	1	G	D	22.98	44.78	7.76	0.1677	0.13	0.332	6.57	0.13	0.023	0.516	0.773	0.229	0.86	3.78	1.04	5.68	15326	15.7896	2.26746	13.52214	PAF(HC)
NS0100	68	70	NS	X071928	071928	1	G	D	23.72	45.17	6.26	0.3354	0.26	0.269	5.12	0.38	0.1	0.617	0.985	0.268	1.03	4.38	1.3	6.71	15270	18.8802	6.62796	12.25224	PAF(HC)
NS0100	78	80	NS	X071933	071933	1	G	D	21.12	45.55	8.69	0.0645	0.05	0.373	7.1	0.1	0.021	0.447	0.824	0.234	0.99	4.26	0.84	6.09	15275	13.6782	1.7442	11.934	PAF(HC)
NS0100	150	152	NS	X071970	071970	1	G	D	30.52	39.52	4	0.4257	0.33	0.177	4.25	0.22	0.045	0.504	0.984	0.288	1.02	4.12	0.97	6.11	15383	15.4224	3.83724	11.58516	PAF(HC)
NS0100	106	108	NS	X071947	071947	1	G	D	23.51	46.26	4.85	0.3354	0.26	0.217	5.37	0.56	0.152	0.617	1.07	0.305	1.01	3.93	1.37	6.31	15325	18.8802	9.76752	9.11268	PAF(LC)
NS0100	146	148	NS	X071968	071968	1	G	D	25.69	39.83	5.52	0.4644	0.36	0.244	5.44	0.81	0.237	0.509	1	0.286	0.99	5.8	1.2	7.99	15381	15.5754	14.12802	1.44738	PAF(LC)
NS0100	90	94	NS	BX078939-BX078940	X078939	2			66.2	6.333	0.328	0.056	0.04032	0.029	0.502	0.056	0.011	0.051	0.116	0.109	-0.01	-0.01	-0.01	-0.03	1383	1.5606	0.976752	0.583848	PAF(LC)
NS0100	116	118	NS	X071953	071953	1	G	D	26.99	43.24	4.96	0.2838	0.22	0.241	5.56	0.36	0.032	0.213	1.45	0.405	1.2	2.51	0.8	4.51	15330	6.5178	6.27912	0.23868	PAF(LC)
NS0100	86	90	NS	BX078937-BX078938	X078937	2			66.91	7.184	0.295	0.056	0.04032	0.029	0.504	0.053	0.01	0.03	0.102	0.088	-0.01	-0.01	-0.01	-0.03	1382	0.918	0.924426	-0.006426	NAF
NS0100	46	50	NS	BX078917-BX078918	X078917	2			62.88	9.425	0.841	0.07	0.0504	0.086	0.952	0.075	0.015	0.041	0.178	0.134	-0.01	-0.01	-0.01	-0.03	1372	1.2546	1.30815	-0.05355	NAF
NS0100	116	120	NS	BX078953-BX078954	X078953	2			60.41	12.458	0.998	0.092	0.06624	0.08	1.217	0.099	0.017	0.05	0.306	0.128	-0.01	-0.01	-0.01	-0.03	1390	1.53	1.726758	-0.196758	NAF
NS0100	156	160	NS	BX078973-BX078974	X078973	2			65.79	7.889	0.503	0.075	0.054	0.042	0.653	0.075	0.016	0.032	0.146	0.106	-0.01	-0.01	-0.01	-0.03	1400	0.9792	1.30815	-0.32895	NAF
NS0100	110	112	NS	BX078949	X078949	2			65.51	7.486	0.447	0.05	0.036	0.038	0.595	0.044	0.007	0.014	0.121	0.097	-0.01	-0.01	-0.01	-0.03	1388	0.4284	0.767448	-0.339048	NAF
NS0100	34	38	NS	BX078911-BX078912	X078911	2			66.65	3.534	0.131	0.08	0.0576	0.019	0.148	0.033	0.014	0.005	0.016	0.152	0.55	0.5	0.36	1.41	1369	0.153	0.575586	-0.422586	NAF
NS0100	94	98	NS	BX078941-BX078942	X078941	2			64.72	8.209	0.401	0.047	0.03384	0.032	0.573	0.044	0.007	0.011	0.121	0.091	-0.01	-0.01	-0.01	-0.03	1384	0.3366	0.767448	-0.430848	NAF
NS0100	148	152	NS	BX078969-BX078970	X078969	2			66.26	7.415	0.337	0.075	0.054	0.028	0.515	0.052	0.009	0.014	0.112	0.082	-0.01	-0.01	-0.01	-0.03	1398	0.4284	0.906984	-0.478584	NAF
NS0100	28	32	NS	BX078907-BX078908	X078907	2			66.12	4.985	0.25	0.062	0.04464	0.029	0.166	0.034	0.02	0.003	0.027	0.091	0.64	1.72	1.55	3.91	1367	0.0918	0.593028	-0.501228	NAF
NS0100	32	34	NS	BX078910	X078910	2			66.11	5.031	0.263	0.06	0.0432	0.027	0.157	0.033	0.02	0.001	0.023	0.066	0.55	0.44	0.26	1.25	1368	0.0306	0.575586	-0.544986	NAF
NS0100	172	176	NS	BX078981-BX078982	X078981	2			68.15	5.825	0.194	0.067	0.04824	0.019	0.384	0.054	0.01	0.01	0.067	0.098	-0.01	-0.01	-0.01	-0.03	1404	0.306	0.941868	-0.635868	NAF
NS0100	98	102	NS	BX078943-BX078944	X078943	2			68.14	5.132	0.125	0.04	0.0288	0.019	0.297	0.048	0.012	0.006	0.054	0.078	-0.01	-0.01	-0.01	-0.03	1385	0.1836	0.837216	-0.653616	NAF
NS0100	38	42	NS	BX078913-BX078914	X078913	2			67.58	4.041	0.115	0.082	0.05904	0.013	0.187	0.045	0.015	0.004	0.016	0.101	0.25	-0.01	-0.01	0.23	1370	0.1224	0.78489	-0.66249	NAF
NS0100	82	86	NS	BX078935-BX078936	X078935	2			67.76	6.835	0.16	0.045	0.0324	0.019	0.354	0.048	0.009	0.005	0.06	0.079	-0.01	-0.01	-0.01	-0.03	1381	0.153	0.837216	-0.684216	NAF
NS0100	128	130	NS	BX078959	X078959	2			64.86	7.446	0.458	0.092	0.06624	0.036	0.699	0.063	0.011	0.013	0.161	0.124	-0.01	-0.01	-0.01	-0.03	1393	0.3978	1.098846	-0.701046	NAF
NS0100	106	110	NS	BX078947-BX078948	X078947	2			67.64	4.151	0.098	0.083	0.05976	0.014	0.188	0.046	0.015	0.003	0.018	0.081	0.18	0.03	-0.01	0.2	1387	0.0918	0.802332	-0.710532	NAF
NS0100	144	148	NS	BX078967-BX078968	X078967	2			66.7	6.448	0.212	0.066	0.04752	0.023	0.377	0.061	0.012	0.008	0.062	0.082	-0.01	-0.01	-0.01	-0.03	1397	0.2448	1.063962	-0.819162	NAF
NS0100	50	54	NS	BX078919-BX078920	X078919	2			66.95	5.342	0.166	0.082	0.05904	0.018	0.268	0.055	0.017	0.004	0.032	0.066	0.31	0.05	-0.01	0.35	1373	0.1224	0.95931	-0.83691	NAF
NS0100	168	172	NS	BX078979-BX078980	X078979	2			67.52	5.872	0.157	0.059	0.04248	0.014	0.365	0.064	0.012	0.008	0.067	0.109	-0.01	-0.01	-0.01	-0.03	1403	0.2448	1.116288	-0.871488	NAF
NS0100	164	168	NS	BX078977-BX078978	X078977	2			68.91	4.951	0.132	0.057	0.04104	0.014	0.327	0.061	0.012	0.005	0.055	0.078	-0.01	-0.01	-0.01	-0.03	1402	0.153	1.063962	-0.910962	NAF
NS0100	102	106	NS	BX078945-BX078946	X078945	2			68.76	5.289	0.121	0.054	0.03888	0.016	0.3	0.06	0.012	0.004	0.046	0.068	-0.01	-0.01	-0.01	-0.03	1386	0.1224	1.04652	-0.92412	NAF
NS0100	140	144	NS	BX078965-BX078966	X078965	2			67.52	6.374	0.284	0.074	0.05328	0.025	0.483	0.066	0.011	0.007	0.104	0.078	-0.01	-0.01	-0.01	-0.03	1396	0.2142	1.151172	-0.936972	NAF
NS0100	176	180	NS	BX078983-BX078984	X078983	2			67.33	6.499	0.227	0.071	0.05112	0.019	0.426	0.066	0.014	0.007	0.078	0.082	-0.01	-0.01	-0.01	-0.03	1405	0.2142	1.151172	-0.936972	NAF
NS0100	160	164	NS	BX078975-BX078976	X078975	2			68.77	5.229	0.168	0.055	0.0396	0.017	0.34	0.066	0.014	0.006	0.062	0.09	-0.01	-0.01	-0.01	-0.03	1401	0.1836	1.151172	-0.967572	NAF
NS0100	94	96	NS	X071941	071941	1	G	D	28.27	43.1	3.47	0.4257	0.33	0.15	4.22	0.33	0.065	0.156	0.914	0.262	1	5.05	0.42	6.47	15319	4.7736	5.75586	-0.98226	NAF
NS0100	120	124	NS	BX078955-BX078956	X078955	2			64.78	8.067	0.459	0.073	0.05256	0.03	0.652	0.083	0.018	0.014	0.152	0.1	-0.01	-0.01	-0.01	-0.03	1391	0.4284	1.447686	-1.019286	NAF
NS0100	42	46	NS	BX078915-BX078916	X078915	2			68.43	3.131	0.081	0.079	0.05688	0.019	0.138	0.066	0.021	0.004	0.015	0.109	0.25	0.02	-0.01	0.26	1371	0.1224	1.151172	-1.028772	NAF
NS0100	58	62	NS	BX078923-BX078924	X078923	2			68.6	4.051	0.101	0.051	0.03672	0.016	0.252	0.066	0.015	0.004	0.03	0.071	-0.01	-0.01	-0.01	-0.03	1375	0.1224	1.151172	-1.028772	NAF
NS0100	74	78	NS	BX078931-BX078932	X078931	2			68.45	5.795	0.092	0.061	0.04392	0.013	0.288	0.068	0.011	0.005	0.039	0.087	-0.01	-0.01	-0.01	-0.03	1379	0.153	1.186056	-1.033056	NAF
NS0100	112	116	NS	BX078951-BX078952	X078951	2			65.38	7.822	0.521	0.073	0.05256	0.039	0.736	0.093	0.021	0.019	0.165	0.101	-0.01	-0.01	-0.01	-0.03	1389	0.5814	1.622106	-1.040706	NAF
NS0100	132	136	NS	BX078961-BX078962	X078961	2			68.59	5.62	0.147	0.063	0.04536	0.017	0.329	0.072	0.015	0.006	0.058	0.096	-0.01	-0.01	-0.01	-0.03	1394	0.1836	1.255824	-1.072224	NAF
NS0100	66	70	NS	BX078927-BX078928	X078927	2			67.18	6.65	0.258	0.077	0.05544	0.021	0.425	0.081	0.018	0.011	0.073	0.078	-0.01	-0.01	-0.01	-0.03	1377	0.3366	1.412802	-1.076202	NAF
NS0100	76	78	NS	X071932	071932	1	G	D	23.99	44.41	6.94	0.1935	0.15	0.299	6.22	0.6	0.18	0.302	0.842	0.252	0.97	3.58	1.09	5.64	15274	9.2412	10.4652	-1.224	NAF
NS0100	152	156	NS	BX078971-BX078972	X078971	2			67.54	6.301	0.217	0.071	0.05112	0.022	0.42	0.083	0.019	0.007	0.07	0.079	-0.01	-0.01	-0.01	-0.03	1399	0.2142	1.447686	-1.233486	NAF
NS0100	54	58	NS	BX078921-BX078922	X078921	2			66.82	5.498	0.157	0.08	0.0576	0.017	0.353	0.094	0.022	0.012	0.043	0.072	-0.01	-0.01	-0.01	-0.03	1374	0.3672	1.639548	-1.272348	NAF
NS0100	136	140	NS	BX078963-BX078964	X078963	2			67.69	5.719	0.155	0.074	0.05328	0.017	0.339	0.085	0.015	0.004	0.056	0.076	-0.01	-0.01	-0.01	-0.03	1395	0.1224	1.48257	-1.36017	NAF
NS0100	70	72	NS	BX078929	X078929	2			67.56	5.54	0.253	0.075	0.054	0.015	0.372	0.091	0.019	0.007	0.073	0.1	-0.01	-0.01	-0.01	-0.03	1378	0.2142	1.587222	-1.373022	NAF
NS0100	124	128	NS	BX078957-BX078958	X078957	2			66.94	5.69	0.145	0.061	0.04392	0.019	0.323	0.098	0.023	0.006	0.059	0.101	-0.01	-0.01	-0.01	-0.03	1392	0.1836	1.709316	-1.525716	NAF
NS0100	78	82	NS	BX078933-BX078934	X078933	2			64.67	8.651	0.395	0.056	0.04032	0.03	0.577	0.129	0.034	0.016	0.113	0.27	0.16	-0.01	-0.01	0.14	1380	0.4896	2.250018	-1.760418	NAF
NS0100	174	176	NS	X071982	071982	1	G	D	34.43	36.75	2.02	0.645	0.5	0.091	3.3	0.43	0.053	0.17	0.628	0.187	0.72	5.44	0.22	6.38	15251	5.202	7.50006	-2.29806	NAF
NS0100	50	52	NS	X071919	071919	1	G	D	35.18	40.28	1.47	0.7353	0.57	0.065	1.27	0.34	0.101	0.115	0.224	0.045	2.31	2.33	0.33	4.97	15225	3.519	5.93028	-2.41128	NAF
NS0100	156	158	NS	X071973	071973	1	G	D	29.12	39.07	3.8	0.4902	0.38	0.168	4.42	0.44	0.112	0.165	1.02	0.297	1.21	6.04	0.49	7.74	15386	5.049	7.67448	-2.62548	NAF
NS0100	74	76	NS	X071931	071931	1	G	D	32.63	40.32	2.43	0.3354	0.26	0.107	3.45	0.31	0.079	0.083	0.9	0.258	0.86	4.29	0.1	5.25	15273	2.5398	5.40702	-2.86722	NAF
NS0100	92	94	NS	X071940	071940	1	G	D	29.51	44.14	1.23	0.5805	0.45	0.053	2.76	0.6	0.106	0.243	0.502	0.14	0.61	6.12	0.44	7.17	15282	7.4358	10.4652	-3.0294	NAF
NS0100	48	50	NS	X071918	071918	1	G	D	37.03	40.47	0.9	0.9288	0.72	0.041	0.53	0.19	0.063	0.006	0.094	0.024	2.42	1.22	0.05	3.69	15224	0.1836	3.31398	-3.13038	NAF
NS0100	152	154	NS	X071971	071971	1	G	D	29.89	40.39	2.56	0.5934	0.46	0.109	3.68	0.39	0.091	0.115	0.778	0.232	0.94	6.88	0.25	8.07	15384	3.519	6.80238	-3.28338	NAF
NS0100	62	66	NS	BX078925-BX078926	X078925	2			66.42	6.508	0.183	0.08	0.0576	0.022	0.384	0.198	0.055	0.005	0.059	0.078	-0.01	-0.01	-0.01	-0.03	1376	0.153	3.453516	-3.300516	NAF
NS0100	32	34	NS	X071910	071910	1	G	D	36	42.14	1.41	0.645	0.5	0.065	0.57	0.2	0.041	0.003	0.134	0.025	2.46	0.71	0.01	3.18	15216	0.0918	3.4884	-3.3966	NAF
NS0100	38	40	NS	X071913	071913	1	G	D	35.81	41.93	1.51	0.645	0.5	0.069	0.63	0.21	0.039	0.003	0.138	0.022	2.43	0.75	0.06	3.24	15219	0.0918	3.66282	-3.57102	NAF
NS0100	36	38	NS	X071912	071912	1	G	D	37.06	40.48	1.4	0.5934	0.46	0.061	0.59	0.21	0.044	0.002	0.099	0.029	2.34	0.72	0.04	3.1	15218	0.0612	3.66282	-3.60162	NAF
NS0100	28	30	NS	X071907	071907	1	G	D	32.3	46.28	1.87	0.5289	0.41	0.081	0.53	0.22	0.077	0.004	0.172	0.031	2.68	0.79	0.07	3.54	15214	0.1224	3.83724	-3.71484	NAF
NS0100	30	32	NS	X071908	071908	1	G	D	32.08	46.44	1.67	0.6837	0.53	0.074	0.66	0.23	0.052	0.004	0.149	0.034	2.82	0.84	0.01	3.67	15215	0.1224	4.01166	-3.88926	NAF
NS0100	130	132	NS	X071960	071960	1	G	D	34.44	35.86	2.78	0.5547	0.43	0.122	4.02	0.39	0.064	0.094	1.01	0.291	0.88	4.62	0.19	5.69	15373	2.8764	6.80238	-3.92598	NAF
NS0100	178	180	NS	X071984	071984	1	G	D	33.05	38.75	2.1	0.6321	0.49	0.096	3.5	0.38	0.067	0.088	0.746	0.232	0.78	5.54	0.06	6.38	15253	2.6928	6.62796	-3.93516	NAF
NS0100	148	150	NS	X071969	071969	1	G	D	23.43	54.5	1.44	0.5031	0.39	0.064	2.49	0.36	0.085	0.071	0.571	0.167	0.62	5.31	0.09	6.02	15382	2.1726	6.27912	-4.10652	NAF
NS0100	98	100	NS	X071943	071943	1	G	D	31.97	42.65	1.66	0.387	0.3	0.073	2.87	0.33	0.058	0.05	0.687	0.201	0.71	4.43	-0.07	5.07	15321	1.53	5.75586	-4.22586	NAF
NS0100	96	98	NS	X071942	071942	1	G	D	30.73	46.55	1.36	0.2709	0.21	0.058	2.32	0.34	0.057	0.055	0.572	0.169	0.77	3.31	-0.13	3.95	15320	1.683	5.93028	-4.24728	NAF
NS0100	40	42	NS	X071914	071914	1	G	D	35.46	41.16	1.94	0.5676	0.44	0.087	0.88	0.26	0.042	0.002	0.278	0.032	2.59	0.98	-0.01	3.56	15220	0.0612	4.53492	-4.47372	NAF
NS0100	34	36	NS	X071911	071911	1	G	D	35.06	41.71	2.25	0.5934	0.46	0.1	0.89	0.27	0.05	0.003	0.238	0.026	2.63	1.01	0.04	3.68	15217	0.0918	4.70934	-4.61754	NAF
NS0100	42	44	NS	X071915	071915	1	G	D	29.08	49.57	1.95	1.0062	0.78	0.086	0.79	0.3	0.049	0.018	0.2	0.03	2.6	1.04	0.22	3.86	15221	0.5508	5.2326	-4.6818	NAF
NS0100	80	82	NS	X071934	071934	1	G	D	29.06	47.07	1.4	0.387	0.3	0.061	2.66	0.39	0.066	0.046	0.525	0.151	0.61	5.15	-0.08	5.68	15276	1.4076	6.80238	-5.39478	NAF
NS0100	128	130	NS	X071959	071959	1	G	D	33.65	36.32	2.86	0.5418	0.42	0.129	4.11	0.44	0.05	0.074	1.04	0.295	0.92	4.5	0.18	5.6	15336	2.2644	7.67448	-5.41008	NAF
NS0100	86	88	NS	X071937	071937	1	G	D	27.78	48.17	1.64	0.3354	0.26	0.072	2.87	0.46	0.103	0.084	0.633	0.17	0.72	4.64	0.11	5.47	15279	2.5704	8.02332	-5.45292	NAF
NS0100	154	156	NS	X071972	071972	1	G	D	30.68	40.09	1.95	0.6192	0.48	0.083	3.31	0.46	0.114	0.082	0.6	0.166	0.89	7.55	0.08	8.52	15385	2.5092	8.02332	-5.51412	NAF
NS0100	82	84	NS	X071935	071935	1	G	D	30.38	45.73	1.2	0.3741	0.29	0.055	2.49	0.39	0.062	0.033	0.487	0.129	0.56	5	-0.11	5.45	15277	1.0098	6.80238	-5.79258	NAF
NS0100	120	122	NS	X071955	071955	1	G	D	31.2	39.19	4.05	0.3225	0.25	0.18	4.74	0.67	0.035	0.191	1.27	0.372	1.19	2.33	0.73	4.25	15332	5.8446	11.68614	-5.84154	NAF
NS0100	140	142	NS	X071965	071965	1	G	D	35.18	37.16	2.1	0.4902	0.38	0.089	3.18	0.47	0.028	0.044	0.885	0.247	0.84	4.13	0.08	5.05	15378	1.3464	8.19774	-6.85134	NAF
NS0100	46	48	NS	X071917	071917	1	G	D	33.65	39.8	1.28	0.7353	0.57	0.054	2.32	0.47	0.104	0.036	0.331	0.074	0.59	6.07	-0.25	6.41	15223	1.1016	8.19774	-7.09614	NAF
NS0100	176	178	NS	X071983	071983	1	G	D	37.51	35	1.06	0.7353	0.57	0.045	2.55	0.47	0.077	0.034	0.439	0.132	0.49	5.83	-0.28	6.04	15252	1.0404	8.19774	-7.15734	NAF
NS0100	44	46	NS	X071916	071916	1	G	D	32.21	44.54	1.18	0.516	0.4	0.05	1.33	0.46	0.093	0.016	0.114	0.024	1.33	4.16	-0.08	5.41	15222	0.4896	8.02332	-7.53372	NAF
NS0100	66	68	NS	X071927	071927	1	G	D	36.56	35.8	1.37	0.645	0.5	0.058	2.5	0.53	0.124	0.041	0.538	0.136	0.66	5.33	-0.18	5.81	15269	1.2546	9.24426	-7.98966	NAF
NS0100	70	72	NS	X071929	071929	1	G	D	35.15	35.95	1.62	0.6837	0.53	0.074	2.56	0.54	0.129	0.046	0.553	0.149	0.84	6.52	-0.14	7.22	15271	1.4076	9.41868	-8.01108	NAF
NS0100	72	74	NS	X071930	071930	1	G	D	35.23	35.66	1.36	0.7353	0.57	0.061	2.62	0.53	0.125	0.04	0.551	0.163	0.81	6.92	-0.23	7.5	15272	1.224	9.24426	-8.02026	NAF
NS0100	84	86	NS	X071936	071936	1	G	D	28.69	46.49	1.53	0.3741	0.29	0.069	2.97	0.7	0.141	0.094	0.566	0.168	0.62	5.42	0.1	6.14	15278	2.8764	12.2094	-9.333	NAF
NS0100	112	114	NS	X071951	071951	1	G	D	31.04	37.46	3.56	0.5934	0.46	0.167	4.81	0.89	0.068	0.165	1	0.297	1.01	4.83	0.77	6.61	15328	5.049	15.52338	-10.47438	NAF
NS0100	142	144	NS	X071966	071966	1	G	D	34.56	36.43	1.95	0.5934	0.46	0.09	3.14	0.81	0.138	0.111	0.729	0.193	0.67	5.33	0.15	6.15	15379	3.3966	14.12802	-10.73142	NAF
NS0100	52	54	NS	X071920	071920	1	G	D	30.81	43.24	1.39	0.7353	0.57	0.057	2.58	0.71	0.09	0.045	0.435	0.085	0.63	5.77	0.07	6.47	15226	1.377	12.38382	-11.00682	NAF
NS0100	114	116	NS	X071952	071952	1	G	D	32.51	37.54	3.24	0.4257	0.33	0.139	4.32	0.88	0.105	0.134	1.07	0.312	0.93	3.38	0.6	4.91	15329	4.1004	15.34896	-11.24856	NAF
NS0100	60	62	NS	X071924	071924	1	G	D	34.39	38.58	1.31	0.6837	0.53	0.06	2.37	0.73	0.105	0.035	0.441	0.078	0.77	5.48	-0.09	6.16	15266	1.071	12.73266	-11.66166	NAF
NS0100	144	146	NS	X071967	071967	1	G	D	33.87	39.4	0.91	0.7611	0.59	0.039	2.39	0.73	0.084	0.029	0.386	0.11	0.54	6.37	-0.04	6.87	15380	0.8874	12.73266	-11.84526	NAF
NS0100	62	64	NS	X071925	071925	1	G	D	36.02	36.96	1.35	0.6321	0.49	0.069	2.48	0.75	0.142	0.038	0.489	0.099	0.56	5.09	-0.14	5.51	15267	1.1628	13.0815	-11.9187	NAF
NS0100	172	174	NS	X071981	071981	1	G	D	36.27	36.08	0.97	0.7353	0.57	0.04	2.44	0.76	0.078	0.022	0.414	0.128	0.45	5.56	-0.04	5.97	15250	0.6732	13.25592	-12.58272	NAF
NS0100	54	56	NS	X071921	071921	1	G	D	31.93	43.4	0.94	0.645	0.5	0.043	2.07	0.86	0.084	0.075	0.311	0.066	0.46	4.98	0.1	5.54	15227	2.295	15.00012	-12.70512	NAF
NS0100	64	66	NS	X071926	071926	1	G	D	35.21	37.97	1.1	0.6837	0.53	0.051	2.36	0.81	0.089	0.026	0.432	0.103	0.53	5.33	0.01	5.87	15268	0.7956	14.12802	-13.33242	NAF
NS0100	168	170	NS	X071979	071979	1	G	D	35.33	38.4	1.42	0.5547	0.43	0.056	2.7	0.9	0.1	0.059	0.545	0.169	0.53	3.45	0.1	4.08	15248	1.8054	15.6978	-13.8924	NAF
NS0100	164	166	NS	X071977	071977	1	G	D	36.37	36.31	1.1	0.6708	0.52	0.048	2.61	0.88	0.095	0.03	0.467	0.132	0.68	4.66	0.05	5.39	15390	0.918	15.34896	-14.43096	NAF
NS0100	100	102	NS	X071944	071944	1	G	D	34.57	39.46	0.8	0.6708	0.52	0.035	2.23	0.87	0.089	0.02	0.336	0.103	0.42	5.49	0.01	5.92	15322	0.612	15.17454	-14.56254	NAF
NS0100	104	106	NS	X071946	071946	1	G	D	36.13	35.72	1.65	0.5805	0.45	0.067	3	0.98	0.091	0.066	0.616	0.185	0.65	4.61	0.23	5.49	15324	2.0196	17.09316	-15.07356	NAF
NS0100	166	168	NS	X071978	071978	1	G	D	36.14	35.97	1.48	0.645	0.5	0.067	2.93	0.96	0.065	0.053	0.57	0.166	0.61	4.14	0.26	5.01	15247	1.6218	16.74432	-15.12252	NAF
NS0100	162	164	NS	X071976	071976	1	G	D	31.29	43.64	0.84	0.7095	0.55	0.035	2.37	0.93	0.074	0.031	0.352	0.103	0.53	5.29	0.22	6.04	15389	0.9486	16.22106	-15.27246	NAF
NS0100	122	124	NS	X071956	071956	1	G	D	37.87	33.77	1.41	0.645	0.5	0.061	2.8	0.98	0.13	0.038	0.572	0.172	0.56	4.68	0.04	5.28	15333	1.1628	17.09316	-15.93036	NAF
NS0100	160	162	NS	X071975	071975	1	G	D	30.96	42.79	1.21	0.6837	0.53	0.052	2.78	1	0.076	0.049	0.491	0.139	0.6	5.57	0.34	6.51	15388	1.4994	17.442	-15.9426	NAF
NS0100	132	134	NS	X071961	071961	1	G	D	31.72	41.08	1.31	0.7353	0.57	0.06	2.82	1.03	0.093	0.053	0.51	0.141	0.52	5.57	0.35	6.44	15374	1.6218	17.96526	-16.34346	NAF
NS0100	102	104	NS	X071945	071945	1	G	D	33.36	39.05	0.74	0.7998	0.62	0.03	2.42	1	0.101	0.024	0.315	0.082	0.44	6.75	0.16	7.35	15323	0.7344	17.442	-16.7076	NAF
NS0100	56	58	NS	X071922	071922	1	G	D	32.12	39.56	1.57	0.7611	0.59	0.069	2.96	1.06	0.108	0.056	0.523	0.105	0.7	6.18	0.3	7.18	15228	1.7136	18.48852	-16.77492	NAF
NS0100	170	172	NS	X071980	071980	1	G	D	35.8	37.21	0.93	0.6708	0.52	0.04	2.44	1.02	0.079	0.024	0.398	0.122	0.41	4.69	0.25	5.35	15249	0.7344	17.79084	-17.05644	NAF
NS0100	126	128	NS	X071958	071958	1	G	D	35.2	37.12	1.09	0.6837	0.53	0.052	2.51	1.15	0.086	0.05	0.466	0.147	0.76	4.81	0.38	5.95	15335	1.53	20.0583	-18.5283	NAF
NS0100	136	138	NS	X071963	071963	1	G	D	34.6	37.84	0.99	0.774	0.6	0.045	2.5	1.17	0.094	0.024	0.424	0.112	0.48	5.62	0.35	6.45	15376	0.7344	20.40714	-19.67274	NAF
NS0100	134	136	NS	X071962	071962	1	G	D	34.17	37.74	0.98	0.7998	0.62	0.044	2.57	1.18	0.1	0.026	0.413	0.117	0.54	5.96	0.31	6.81	15375	0.7956	20.58156	-19.78596	NAF
NS0100	138	140	NS	X071964	071964	1	G	D	37.57	33.63	1.24	0.7224	0.56	0.055	2.75	1.22	0.083	0.03	0.526	0.148	0.56	5.03	0.47	6.06	15377	0.918	21.27924	-20.36124	NAF
NS0100	124	126	NS	X071957	071957	1	G	D	33.35	38.54	1.18	0.7482	0.58	0.052	2.71	1.33	0.115	0.036	0.487	0.143	0.54	5.35	0.51	6.4	15334	1.1016	23.19786	-22.09626	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0100	58	60	NS	X071923	071923	1	G	D	29.78	43.08	1.22	0.7482	0.58	0.052	2.76	1.36	0.113	0.039	0.438	0.088	0.53	6.07	0.63	7.23	15265	1.1934	23.72112	-22.52772	NAF
NS0100	110	112	NS	X071949	071949	1	G	D	33.42	39.41	0.9	0.6966	0.54	0.036	2.47	1.36	0.079	0.028	0.326	0.097	0.34	5.46	0.68	6.48	15327	0.8568	23.72112	-22.86432	NAF
NS0100	118	120	NS	X071954	071954	1	G	D	28.8	40.93	2.91	0.6063	0.47	0.138	4.25	1.77	0.049	0.182	0.894	0.252	0.84	4.46	1.49	6.79	15331	5.5692	30.87234	-25.30314	NAF
NS0101	4	6	NS	E400924	400924	1	G	W	43.6	15.03	10.18	-0.0129	-0.01	0.604	0.04	0.005	0.028	0.04	0.008	0.038	8.32	2.55	0.35	11.22	8932	1.224	0.08721	1.13679	PAF(LC)
NS0101	6	8	NS	E400925	400925	1	G	W	38.66	26.47	7.97	-0.0129	-0.01	0.271	0.05	0.02	0.015	0.027	0.009	0.029	7.35	2.09	0.25	9.69	8933	0.8262	0.34884	0.47736	PAF(LC)
NS0101	2	4	NS	E400923	400923	1	G	W	38.32	18.93	13.8	-0.0129	-0.01	0.996	0.08	0.03	0.028	0.031	0.024	0.037	6.9	3.72	0.32	10.94	8931	0.9486	0.52326	0.42534	PAF(LC)
NS0101	8	10	NS	E400926	400926	1	G	W	24.06	46.35	10.45	-0.0129	-0.01	0.275	0.07	0.04	0.01	0.019	0.009	0.039	4.67	3.04	0.22	7.93	8934	0.5814	0.69768	-0.11628	NAF
NS0101	0	2	NS	E400922	400922	1	G	W	41.29	15.67	15.06	0.103	0.08	0.94	0.16	0.07	0.026	0.034	0.059	0.049	4.43	3.61	0.36	8.4	8930	1.0404	1.22094	-0.18054	NAF
NS0101	18	20	NS	E400931	400931	1	G	W	26.7	52.23	2.24	0.065	0.05	0.08	0.31	0.12	0.02	0.021	0.009	0.071	5.11	1.08	0.19	6.38	8939	0.6426	2.09304	-1.45044	NAF
NS0101	22	24	NS	E400933	400933	1	G	W	28.11	51.99	1.4	0.039	0.03	0.044	0.23	0.1	0.06	0.008	0.005	0.023	4.65	0.83	0.09	5.57	8941	0.2448	1.7442	-1.4994	NAF
NS0101	10	12	NS	E400927	400927	1	G	W	26.25	49.55	4.94	-0.0129	-0.01	0.14	0.18	0.13	0.011	0.02	0.013	0.083	5.05	1.7	0.27	7.02	8935	0.612	2.26746	-1.65546	NAF
NS0101	20	22	NS	E400932	400932	1	G	W	30.93	47.54	1.59	0.065	0.05	0.059	0.24	0.12	0.057	0.013	0.007	0.041	4.97	0.9	0.12	5.99	8940	0.3978	2.09304	-1.69524	NAF
NS0101	158	160	NS	E401002	401002	1	G	W	34.22	34.15	1.59	0.426	0.33	0.07	2.82	0.58	0.076	0.273	0.716	0.195	1.11	8.37	0.45	9.93	9009	8.3538	10.11636	-1.76256	NAF
NS0101	26	28	NS	E400935	400935	1	G	W	35.36	41.18	1.29	0.09	0.07	0.052	0.33	0.14	0.069	0.009	0.011	0.025	5.14	0.88	0.03	6.05	8943	0.2754	2.44188	-2.16648	NAF
NS0101	28	30	NS	E400936	400936	1	G	W	35.64	39.03	1.43	0.09	0.07	0.059	0.43	0.17	0.086	0.006	0.009	0.032	6.07	1.02	0.09	7.18	8944	0.1836	2.96514	-2.78154	NAF
NS0101	34	36	NS	E400939	400939	1	G	W	37.72	36.93	1.21	0.491	0.38	0.052	0.42	0.17	0.087	0.004	0.033	0.032	5.69	0.99	0.07	6.75	8947	0.1224	2.96514	-2.84274	NAF
NS0101	32	34	NS	E400938	400938	1	G	W	40.3	31.7	1.33	0.555	0.43	0.054	0.47	0.18	0.083	0.005	0.034	0.042	6.29	1.05	0.1	7.44	8946	0.153	3.13956	-2.98656	NAF
NS0101	30	32	NS	E400937	400937	1	G	W	40.31	31.29	1.55	0.439	0.34	0.069	0.48	0.2	0.087	0.006	0.03	0.037	6.57	1.14	0.13	7.84	8945	0.1836	3.4884	-3.3048	NAF
NS0101	16	18	NS	E400930	400930	1	G	W	22.97	55.51	4.53	-0.0129	-0.01	0.196	0.38	0.21	0.01	0.011	0.042	0.133	4.01	1.72	0.25	5.98	8938	0.3366	3.66282	-3.32622	NAF
NS0101	36	38	NS	E400940	400940	1	G	W	35.19	40.72	1.37	0.387	0.3	0.057	0.56	0.2	0.086	0.003	0.041	0.028	4.84	0.93	0.06	5.83	8948	0.0918	3.4884	-3.3966	NAF
NS0101	14	16	NS	E400929	400929	1	G	W	18.7	63.59	3.53	-0.0129	-0.01	0.164	0.37	0.22	0.011	0.011	0.028	0.122	3.36	1.45	0.24	5.05	8937	0.3366	3.83724	-3.50064	NAF
NS0101	24	26	NS	E400934	400934	1	G	W	36.9	36.4	1.93	0.116	0.09	0.082	0.56	0.22	0.066	0.011	0.008	0.045	6.35	1.22	0.11	7.68	8942	0.3366	3.83724	-3.50064	NAF
NS0101	12	14	NS	E400928	400928	1	G	W	22.59	57.31	3.23	-0.0129	-0.01	0.109	0.36	0.23	0.02	0.013	0.034	0.141	4.41	1.41	0.28	6.1	8936	0.3978	4.01166	-3.61386	NAF
NS0101	96	98	NS	E400970	400970	1	G	W	32.31	37.03	2.98	0.31	0.24	0.136	3.54	0.47	0.101	0.138	1.1	0.287	1.22	6.27	0.36	7.85	8978	4.2228	8.19774	-3.97494	NAF
NS0101	198	200	NS	E401022	401022	1	G	W	33.7	40.84	2.44	0.168	0.13	0.103	2.52	0.35	0.094	0.066	1.14	0.293	1	2.51	0.04	3.55	9029	2.0196	6.1047	-4.0851	NAF
NS0101	208	210	NS	E401027	401027	1	G	W	35.24	35.58	2.12	0.336	0.26	0.093	2.87	0.41	0.081	0.095	0.925	0.249	1.04	5.41	0.18	6.63	9034	2.907	7.15122	-4.24422	NAF
NS0101	60	62	NS	E400952	400952	1	G	W	32.22	36.53	2.6	0.284	0.22	0.123	3.43	0.47	0.089	0.108	1.11	0.272	1.39	7.15	0.37	8.91	8960	3.3048	8.19774	-4.89294	NAF
NS0101	38	40	NS	E400941	400941	1	G	W	34.1	41.35	1.79	0.271	0.21	0.077	0.69	0.3	0.083	0.005	0.058	0.04	4.81	1.16	0.06	6.03	8949	0.153	5.2326	-5.0796	NAF
NS0101	112	114	NS	E400978	400978	1	G	W	34	34.84	1.45	0.555	0.43	0.063	2.75	0.52	0.07	0.13	0.613	0.17	0.82	8.77	0.15	9.74	8986	3.978	9.06984	-5.09184	NAF
NS0101	266	268	NS	E401056	401056	1	G	W	34.76	37	1.86	0.349	0.27	0.09	2.79	0.41	0.09	0.06	0.792	0.207	0.91	5.6	0.01	6.52	9063	1.836	7.15122	-5.31522	NAF
NS0101	256	258	NS	E401051	401051	1	G	W	35.15	35.33	1.79	0.4	0.31	0.087	2.89	0.47	0.091	0.082	0.773	0.198	0.95	6.76	0.03	7.74	9058	2.5092	8.19774	-5.68854	NAF
NS0101	196	198	NS	E401021	401021	1	G	W	33.77	39.13	2.23	0.232	0.18	0.093	2.54	0.64	0.099	0.176	1.06	0.278	0.97	3.58	0.27	4.82	9028	5.3856	11.16288	-5.77728	NAF
NS0101	48	50	NS	E400946	400946	1	G	W	28.35	42.66	2.41	0.284	0.22	0.109	2.22	0.83	0.167	0.281	0.604	0.113	2.15	6.05	0.76	8.96	8954	8.5986	14.47686	-5.87826	NAF
NS0101	72	74	NS	E400958	400958	1	G	W	34.05	36.39	2.06	0.284	0.22	0.094	2.94	0.53	0.059	0.1	0.872	0.221	1.12	6.19	0.22	7.53	8966	3.06	9.24426	-6.18426	NAF
NS0101	194	196	NS	E401020	401020	1	G	W	34.54	36.13	1.8	0.374	0.29	0.079	2.68	0.56	0.111	0.117	0.843	0.225	0.95	6.56	0.08	7.59	9027	3.5802	9.76752	-6.18732	NAF
NS0101	40	42	NS	E400942	400942	1	G	W	26.2	51.22	2.66	0.245	0.19	0.124	1.08	0.39	0.062	0.005	0.243	0.086	4.38	1.48	0.11	5.97	8950	0.153	6.80238	-6.64938	NAF
NS0101	260	262	NS	E401053	401053	1	G	W	32.72	38.08	1.25	0.503	0.39	0.055	2.61	0.46	0.067	0.044	0.512	0.135	0.84	8.7	-0.06	9.48	9060	1.3464	8.02332	-6.67692	NAF
NS0101	190	192	NS	E401018	401018	1	G	W	33.76	35.59	1.76	0.465	0.36	0.074	2.79	0.57	0.119	0.102	0.783	0.197	0.96	7.78	0.06	8.8	9025	3.1212	9.94194	-6.82074	NAF
NS0101	248	250	NS	E401047	401047	1	G	W	34.59	35.16	1.85	0.413	0.32	0.093	2.94	0.55	0.091	0.09	0.835	0.219	1.05	7.21	0.05	8.31	9054	2.754	9.5931	-6.8391	NAF
NS0101	138	140	NS	E400991	400991	1	G	W	32.85	37.1	1.9	0.374	0.29	0.09	2.95	0.59	0.101	0.109	0.849	0.231	1	7.32	0.19	8.51	8999	3.3354	10.29078	-6.95538	NAF
NS0101	210	212	NS	E401028	401028	1	G	W	33.08	40.88	1.8	0.271	0.21	0.086	2.45	0.44	0.078	0.021	0.798	0.2	0.87	4.76	-0.02	5.61	9035	0.6426	7.67448	-7.03188	NAF
NS0101	180	182	NS	E401013	401013	1	G	W	32.17	39.28	2.72	0.271	0.21	0.136	3.14	0.61	0.063	0.116	1.17	0.299	1.13	4.49	0.25	5.87	9020	3.5496	10.63962	-7.09002	NAF
NS0101	42	44	NS	E400943	400943	1	G	W	30.03	45.16	2.75	0.31	0.24	0.123	1.04	0.42	0.079	0.005	0.124	0.054	4.97	1.57	0.13	6.67	8951	0.153	7.32564	-7.17264	NAF
NS0101	46	48	NS	E400945	400945	1	G	W	28.82	46.25	2.73	0.361	0.28	0.115	1.19	0.46	0.086	0.026	0.206	0.061	5.08	1.61	0.2	6.89	8953	0.7956	8.02332	-7.22772	NAF
NS0101	92	94	NS	E400968	400968	1	G	W	31.77	39.96	3.46	0.142	0.11	0.161	3.34	0.61	0.157	0.105	1.49	0.373	1.29	2.6	0.33	4.22	8976	3.213	10.63962	-7.42662	NAF
NS0101	200	202	NS	E401023	401023	1	G	W	32.16	42.44	2.29	0.207	0.16	0.105	2.51	0.58	0.133	0.085	1.06	0.265	0.95	3.15	0.1	4.2	9030	2.601	10.11636	-7.51536	NAF
NS0101	172	174	NS	E401009	401009	1	G	W	31.59	39.73	2.04	0.349	0.27	0.093	2.89	0.68	0.149	0.136	0.881	0.223	1.08	6.08	0.29	7.45	9016	4.1616	11.86056	-7.69896	NAF
NS0101	206	208	NS	E401026	401026	1	G	W	36.56	30.52	1.23	0.607	0.47	0.051	2.7	0.55	0.075	0.06	0.533	0.153	0.99	10.15	-0.08	11.06	9033	1.836	9.5931	-7.7571	NAF
NS0101	262	264	NS	E401054	401054	1	G	W	34.13	37.58	1.6	0.387	0.3	0.075	2.66	0.5	0.08	0.031	0.661	0.173	0.77	6.37	-0.08	7.06	9061	0.9486	8.721	-7.7724	NAF
NS0101	280	282	NS	E401063	401063	1	G	W	34.84	33.61	1.12	0.452	0.35	0.046	2.65	0.53	0.103	0.046	0.346	0.098	0.83	10.12	-0.14	10.81	9070	1.4076	9.24426	-7.83666	NAF
NS0101	140	142	NS	E400992	400992	1	G	W	33.79	32.76	1.04	0.581	0.45	0.043	2.85	0.63	0.093	0.095	0.408	0.119	0.85	11.9	0.05	12.8	9000	2.907	10.98846	-8.08146	NAF
NS0101	162	164	NS	E401004	401004	1	G	W	30.26	41.21	2.45	0.297	0.23	0.12	3.06	0.65	0.081	0.102	1.1	0.282	1.19	5.54	0.26	6.99	9011	3.1212	11.3373	-8.2161	NAF
NS0101	250	252	NS	E401048	401048	1	G	W	32.44	36.8	2.05	0.374	0.29	0.103	3	0.67	0.133	0.113	0.969	0.262	1.19	7.54	0.15	8.88	9055	3.4578	11.68614	-8.22834	NAF
NS0101	268	270	NS	E401057	401057	1	G	W	32.99	35.41	1.03	0.555	0.43	0.045	2.73	0.54	0.073	0.035	0.414	0.114	0.74	10.92	-0.17	11.49	9064	1.071	9.41868	-8.34768	NAF
NS0101	98	100	NS	E400971	400971	1	G	W	32.65	39.45	1.42	0.31	0.24	0.062	2.51	0.7	0.109	0.121	0.579	0.151	0.76	6.52	0.12	7.4	8979	3.7026	12.2094	-8.5068	NAF
NS0101	270	272	NS	E401058	401058	1	G	W	36.5	37.74	1.47	0.232	0.18	0.068	2.13	0.57	0.121	0.044	0.629	0.164	0.7	4.05	-0.2	4.55	9065	1.3464	9.94194	-8.59554	NAF
NS0101	156	158	NS	E401000	401000	1	G	W	32.92	37.84	1.49	0.374	0.29	0.065	2.61	0.69	0.102	0.111	0.611	0.165	0.9	7.43	0.19	8.52	9008	3.3966	12.03498	-8.63838	NAF
NS0101	254	256	NS	E401050	401050	1	G	W	36.05	32.76	1.15	0.555	0.43	0.049	2.57	0.57	0.086	0.036	0.526	0.141	0.83	9.28	-0.17	9.94	9057	1.1016	9.94194	-8.84034	NAF
NS0101	44	46	NS	E400944	400944	1	G	W	30.18	42.86	3.15	0.31	0.24	0.149	1.38	0.52	0.082	0.003	0.217	0.081	5.59	1.84	0.14	7.57	8952	0.0918	9.06984	-8.97804	NAF
NS0101	212	214	NS	E401029	401029	1	G	W	33.15	38.79	1.85	0.374	0.29	0.088	2.78	0.69	0.101	0.097	0.791	0.208	0.93	5.82	0.22	6.97	9036	2.9682	12.03498	-9.06678	NAF
NS0101	252	254	NS	E401049	401049	1	G	W	33.82	35.76	1.86	0.374	0.29	0.091	2.82	0.59	0.109	0.027	0.882	0.239	1.07	7.87	0	8.94	9056	0.8262	10.29078	-9.46458	NAF
NS0101	110	112	NS	E400977	400977	1	G	W	35.44	31.21	1.05	0.658	0.51	0.047	2.71	0.65	0.079	0.055	0.46	0.131	0.73	11.59	-0.08	12.24	8985	1.683	11.3373	-9.6543	NAF
NS0101	224	226	NS	E401035	401035	1	G	W	35.01	36.9	1.09	0.465	0.36	0.047	2.14	0.63	0.08	0.034	0.514	0.145	0.7	7.31	-0.19	7.82	9042	1.0404	10.98846	-9.94806	NAF
NS0101	264	266	NS	E401055	401055	1	G	W	35.61	35.29	1.41	0.452	0.35	0.065	2.52	0.63	0.126	0.029	0.609	0.156	0.78	6.67	-0.16	7.29	9062	0.8874	10.98846	-10.10106	NAF
NS0101	94	96	NS	E400969	400969	1	G	W	31.07	40.55	2.98	0.194	0.15	0.136	3.22	0.91	0.144	0.174	1.2	0.307	1.14	3.3	0.53	4.97	8977	5.3244	15.87222	-10.54782	NAF
NS0101	222	224	NS	E401034	401034	1	G	W	35.05	36.83	1.14	0.439	0.34	0.049	2.14	0.65	0.076	0.014	0.544	0.138	0.74	7.05	-0.19	7.6	9041	0.4284	11.3373	-10.9089	NAF
NS0101	220	222	NS	E401033	401033	1	G	W	35.17	36.05	1.16	0.465	0.36	0.049	2.17	0.67	0.074	0.013	0.562	0.153	0.65	7.53	-0.1	8.08	9040	0.3978	11.68614	-11.28834	NAF
NS0101	124	126	NS	E400984	400984	1	G	W	34.51	33.86	1.3	0.452	0.35	0.056	2.72	0.81	0.086	0.065	0.559	0.158	0.85	9.28	0.04	10.17	8992	1.989	14.12802	-12.13902	NAF
NS0101	164	166	NS	E401005	401005	1	G	W	34.77	34.54	1.18	0.478	0.37	0.047	2.45	0.77	0.069	0.04	0.56	0.156	0.89	9.36	0.01	10.26	9012	1.224	13.43034	-12.20634	NAF
NS0101	218	220	NS	E401032	401032	1	G	W	33.6	36.03	1.4	0.503	0.39	0.063	2.57	0.8	0.107	0.056	0.648	0.175	0.87	8.19	0.01	9.07	9039	1.7136	13.9536	-12.24	NAF
NS0101	68	70	NS	E400956	400956	1	G	W	33.84	35.09	1.62	0.284	0.22	0.072	2.73	0.84	0.101	0.071	0.734	0.197	1.07	8.29	0.06	9.42	8964	2.1726	14.65128	-12.47868	NAF
NS0101	90	92	NS	E400967	400967	1	G	W	33.84	38	2.02	0.245	0.19	0.092	2.77	0.86	0.129	0.08	0.866	0.231	0.9	4.63	0.19	5.72	8975	2.448	15.00012	-12.55212	NAF
NS0101	132	134	NS	E400988	400988	1	G	W	35.46	32.57	1.15	0.516	0.4	0.049	2.71	0.78	0.081	0.03	0.494	0.141	0.84	9.84	-0.02	10.66	8996	0.918	13.60476	-12.68676	NAF
NS0101	258	260	NS	E401052	401052	1	G	W	36.1	35.48	1.22	0.413	0.32	0.054	2.38	0.78	0.088	0.028	0.486	0.123	0.6	6.46	-0.02	7.04	9059	0.8568	13.60476	-12.74796	NAF
NS0101	148	150	NS	E400996	400996	1	G	W	30.74	39.06	1.5	0.374	0.29	0.06	2.71	0.95	0.118	0.118	0.688	0.191	0.97	8.71	0.28	9.96	9004	3.6108	16.5699	-12.9591	NAF
NS0101	232	234	NS	E401039	401039	1	G	W	33.36	38.27	1.7	0.323	0.25	0.078	2.63	0.85	0.152	0.052	0.761	0.191	0.86	5.86	0.07	6.79	9046	1.5912	14.8257	-13.2345	NAF
NS0101	228	230	NS	E401037	401037	1	G	W	35.78	30.19	1.23	0.671	0.52	0.046	2.76	0.88	0.091	0.065	0.586	0.171	1.02	10.84	0.04	11.9	9044	1.989	15.34896	-13.35996	NAF
NS0101	236	238	NS	E401041	401041	1	G	W	35.42	32.88	1.12	0.555	0.43	0.047	2.76	0.87	0.097	0.057	0.463	0.131	0.82	9.62	0	10.44	9048	1.7442	15.17454	-13.43034	NAF
NS0101	244	246	NS	E401045	401045	1	G	W	36.48	31.28	1.36	0.555	0.43	0.06	2.92	0.86	0.095	0.038	0.574	0.151	0.8	8.68	0	9.48	9052	1.1628	15.00012	-13.83732	NAF
NS0101	182	184	NS	E401014	401014	1	G	W	35.52	37.23	1.74	0.258	0.2	0.079	2.39	0.99	0.114	0.11	0.818	0.216	0.81	4.29	0.21	5.31	9021	3.366	17.26758	-13.90158	NAF
NS0101	278	280	NS	E401062	401062	1	G	W	32.79	37.8	1.04	0.439	0.34	0.047	2.42	0.83	0.094	0.015	0.389	0.094	0.63	9.22	0	9.85	9069	0.459	14.47686	-14.01786	NAF
NS0101	144	146	NS	E400994	400994	1	G	W	30.97	37.31	2.03	0.374	0.29	0.092	3.18	1.01	0.193	0.113	0.875	0.233	1.08	8.33	0.35	9.76	9002	3.4578	17.61642	-14.15862	NAF
NS0101	70	72	NS	E400957	400957	1	G	W	34.66	33.31	1.38	0.336	0.26	0.059	2.77	0.96	0.1	0.072	0.603	0.162	1.01	9.28	0.1	10.39	8965	2.2032	16.74432	-14.54112	NAF
NS0101	242	244	NS	E401044	401044	1	G	W	34.94	36.42	1.74	0.336	0.26	0.076	2.84	1.02	0.061	0.096	0.766	0.198	0.83	5.27	0.35	6.45	9051	2.9376	17.79084	-14.85324	NAF
NS0101	50	52	NS	E400947	400947	1	G	W	31.97	37.43	1.88	0.31	0.24	0.086	2.81	1	0.097	0.08	0.716	0.114	1.29	8.08	0.25	9.62	8955	2.448	17.442	-14.994	NAF
NS0101	274	276	NS	E401060	401060	1	G	W	33.79	40.8	1.79	0.194	0.15	0.082	2.28	0.92	0.095	0.029	0.847	0.218	0.76	3.28	0.16	4.2	9067	0.8874	16.04664	-15.15924	NAF
NS0101	66	68	NS	E400955	400955	1	G	W	31.91	33.49	1.02	0.374	0.29	0.044	2.85	0.95	0.071	0.045	0.467	0.13	1.07	13.28	0.11	14.46	8963	1.377	16.5699	-15.1929	NAF
NS0101	174	176	NS	E401010	401010	1	G	W	27.42	44.61	3.21	0.258	0.2	0.15	3.37	0.99	0.045	0.06	1.28	0.313	1.25	4.63	0.6	6.48	9017	1.836	17.26758	-15.43158	NAF
NS0101	128	130	NS	E400986	400986	1	G	W	34.04	36.27	1.34	0.374	0.29	0.057	2.7	0.95	0.119	0.035	0.536	0.144	0.75	7.46	0.12	8.33	8994	1.071	16.5699	-15.4989	NAF
NS0101	116	118	NS	E400980	400980	1	G	W	34.84	34.6	1.39	0.336	0.26	0.058	2.58	1	0.118	0.046	0.627	0.173	0.78	8.07	0.15	9	8988	1.4076	17.442	-16.0344	NAF
NS0101	88	90	NS	E400966	400966	1	G	W	34.8	34.44	1.34	0.439	0.34	0.057	2.88	1.09	0.108	0.094	0.529	0.143	0.79	8.22	0.19	9.2	8974	2.8764	19.01178	-16.13538	NAF
NS0101	226	228	NS	E401036	401036	1	G	W	34.5	34.96	1.05	0.555	0.43	0.044	2.33	0.96	0.072	0.016	0.495	0.127	0.7	8.71	0.14	9.55	9043	0.4896	16.74432	-16.25472	NAF
NS0101	192	194	NS	E401019	401019	1	G	W	28.39	43.89	2.3	0.323	0.25	0.106	2.96	1.15	0.07	0.118	1.07	0.272	1.1	4.98	0.6	6.68	9026	3.6108	20.0583	-16.4475	NAF
NS0101	142	144	NS	E400993	400993	1	G	W	32.4	38.74	1.15	0.387	0.3	0.049	2.44	1.03	0.099	0.044	0.481	0.134	0.61	8.11	0.2	8.92	9001	1.3464	17.96526	-16.61886	NAF
NS0101	122	124	NS	E400983	400983	1	G	W	34.15	34.2	1.26	0.465	0.36	0.055	2.71	1.05	0.069	0.054	0.534	0.145	0.72	9.17	0.26	10.15	8991	1.6524	18.3141	-16.6617	NAF
NS0101	188	190	NS	E401017	401017	1	G	W	27.67	45.62	2.04	0.336	0.26	0.093	2.73	1.22	0.118	0.143	0.935	0.237	1	5.24	0.52	6.76	9024	4.3758	21.27924	-16.90344	NAF
NS0101	186	188	NS	E401016	401016	1	G	W	28.16	43.12	2.2	0.361	0.28	0.104	3.04	1.32	0.054	0.198	1.01	0.242	1.08	5.93	0.8	7.81	9023	6.0588	23.02344	-16.96464	NAF
NS0101	86	88	NS	E400965	400965	1	G	W	34.48	35.44	2.01	0.284	0.22	0.09	2.88	1.18	0.295	0.118	0.797	0.22	1.14	5.22	0.25	6.61	8973	3.6108	20.58156	-16.97076	NAF
NS0101	170	172	NS	E401008	401008	1	G	W	31.67	38.01	1.36	0.478	0.37	0.058	2.65	1.13	0.11	0.087	0.583	0.162	0.85	8.83	0.23	9.91	9015	2.6622	19.70946	-17.04726	NAF
NS0101	202	204	NS	E401024	401024	1	G	W	23.61	52.68	2.42	0.207	0.16	0.116	2.61	1.21	0.098	0.129	1.07	0.261	1.06	3.3	0.67	5.03	9031	3.9474	21.10482	-17.15742	NAF
NS0101	150	152	NS	E400997	400997	1	G	W	32.46	36.9	1.2	0.374	0.29	0.053	2.57	1.16	0.116	0.091	0.511	0.136	0.82	8.98	0.28	10.08	9005	2.7846	20.23272	-17.44812	NAF
NS0101	56	58	NS	E400950	400950	1	G	W	30.45	40.73	1.73	0.271	0.21	0.075	2.74	1.13	0.105	0.072	0.683	0.17	1.06	7.2	0.37	8.63	8958	2.2032	19.70946	-17.50626	NAF
NS0101	100	102	NS	E400972	400972	1	G	W	29.95	40.83	1.85	0.336	0.26	0.081	2.99	1.18	0.159	0.082	0.783	0.205	0.97	6.89	0.37	8.23	8980	2.5092	20.58156	-18.07236	NAF
NS0101	104	106	NS	E400974	400974	1	G	W	31.47	40.41	1.68	0.31	0.24	0.075	2.7	1.16	0.093	0.07	0.732	0.185	0.84	5.96	0.44	7.24	8982	2.142	20.23272	-18.09072	NAF
NS0101	52	54	NS	E400948	400948	1	G	W	29.24	42.53	1.87	0.258	0.2	0.085	2.63	1.28	0.085	0.128	0.724	0.158	1.06	6.19	0.62	7.87	8956	3.9168	22.32576	-18.40896	NAF
NS0101	178	180	NS	E401012	401012	1	G	W	32.92	37.78	1.97	0.361	0.28	0.089	2.87	1.2	0.23	0.076	0.841	0.219	0.95	5.82	0.14	6.91	9019	2.3256	20.9304	-18.6048	NAF
NS0101	230	232	NS	E401038	401038	1	G	W	29.62	41.83	1.84	0.387	0.3	0.085	2.79	1.31	0.145	0.137	0.829	0.213	1.01	6.38	0.51	7.9	9045	4.1922	22.84902	-18.65682	NAF
NS0101	80	82	NS	E400962	400962	1	G	W	34.22	34.81	1.26	0.374	0.29	0.056	2.53	1.16	0.09	0.051	0.582	0.157	0.81	8.56	0.38	9.75	8970	1.5606	20.23272	-18.67212	NAF
NS0101	114	116	NS	E400979	400979	1	G	W	32.08	35.6	1.36	0.491	0.38	0.06	2.82	1.27	0.098	0.111	0.602	0.169	0.91	10.03	0.47	11.41	8987	3.3966	22.15134	-18.75474	NAF
NS0101	118	120	NS	E400981	400981	1	G	W	32.53	32.74	1.4	0.503	0.39	0.061	3.03	1.28	0.08	0.116	0.658	0.186	0.97	11.78	0.52	13.27	8989	3.5496	22.32576	-18.77616	NAF
NS0101	62	64	NS	E400953	400953	1	G	W	32.03	35.79	1.48	0.361	0.28	0.064	2.88	1.19	0.127	0.061	0.564	0.157	1.04	9.94	0.28	11.26	8961	1.8666	20.75598	-18.88938	NAF
NS0101	276	278	NS	E401061	401061	1	G	W	26.63	47.24	1.74	0.284	0.22	0.083	2.57	1.19	0.053	0.06	0.781	0.196	0.93	5.84	0.55	7.32	9068	1.836	20.75598	-18.91998	NAF
NS0101	58	60	NS	E400951	400951	1	G	W	28.61	41.11	2.24	0.284	0.22	0.099	3.12	1.43	0.173	0.193	0.957	0.247	1.31	6.81	0.72	8.84	8959	5.9058	24.94206	-19.03626	NAF
NS0101	76	78	NS	E400960	400960	1	G	W	31.03	40.62	2.22	0.232	0.18	0.102	2.9	1.26	0.103	0.087	0.929	0.241	1	4.99	0.65	6.64	8968	2.6622	21.97692	-19.31472	NAF
NS0101	238	240	NS	E401042	401042	1	G	W	32.87	39.05	1.06	0.426	0.33	0.045	2.35	1.2	0.114	0.03	0.447	0.128	0.61	7.03	0.34	7.98	9049	0.918	20.9304	-20.0124	NAF
NS0101	176	178	NS	E401011	401011	1	G	W	28.22	43.06	2.87	0.271	0.21	0.134	3.26	1.26	0.153	0.064	1.19	0.299	1.22	4.78	0.49	6.49	9018	1.9584	21.97692	-20.01852	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0101	184	186	NS	E401015	401015	1	G	W	31.93	37.32	2.32	0.271	0.21	0.106	3.01	1.58	0.292	0.245	1.1	0.294	1.09	5.44	0.57	7.1	9022	7.497	27.55836	-20.06136	NAF
NS0101	102	104	NS	E400973	400973	1	G	W	31.2	39.47	1.79	0.323	0.25	0.081	2.95	1.31	0.091	0.09	0.761	0.198	0.89	6.75	0.62	8.26	8981	2.754	22.84902	-20.09502	NAF
NS0101	126	128	NS	E400985	400985	1	G	W	32.55	40.77	1.27	0.284	0.22	0.057	2.33	1.31	0.108	0.083	0.516	0.137	0.63	5.27	0.42	6.32	8993	2.5398	22.84902	-20.30922	NAF
NS0101	214	216	NS	E401030	401030	1	G	W	32.11	40.46	1.95	0.284	0.22	0.087	2.61	1.34	0.107	0.089	0.877	0.224	0.86	4	0.55	5.41	9037	2.7234	23.37228	-20.64888	NAF
NS0101	146	148	NS	E400995	400995	1	G	W	31.85	37.18	1.27	0.387	0.3	0.056	2.71	1.39	0.093	0.108	0.534	0.14	0.75	8.77	0.61	10.13	9003	3.3048	24.24438	-20.93958	NAF
NS0101	130	132	NS	E400987	400987	1	G	W	33.14	36.44	1.55	0.387	0.3	0.066	2.92	1.31	0.105	0.062	0.67	0.181	0.83	7.32	0.53	8.68	8995	1.8972	22.84902	-20.95182	NAF
NS0101	204	206	NS	E401025	401025	1	G	W	25.58	50.71	1.33	0.284	0.22	0.059	2.09	1.43	0.069	0.101	0.546	0.142	0.83	4.63	0.85	6.31	9032	3.0906	24.94206	-21.85146	NAF
NS0101	82	84	NS	E400963	400963	1	G	W	34.44	39.06	1.27	0.245	0.19	0.056	2.17	1.38	0.095	0.035	0.539	0.137	0.59	4.47	0.56	5.62	8971	1.071	24.06996	-22.99896	NAF
NS0101	108	110	NS	E400976	400976	1	G	W	31.3	39.15	0.94	0.478	0.37	0.04	2.31	1.38	0.069	0.031	0.419	0.121	0.62	8.64	0.59	9.85	8984	0.9486	24.06996	-23.12136	NAF
NS0101	106	108	NS	E400975	400975	1	G	W	32.88	38.04	1	0.503	0.39	0.044	2.28	1.41	0.056	0.025	0.418	0.114	0.57	7.65	0.6	8.82	8983	0.765	24.59322	-23.82822	NAF
NS0101	64	66	NS	E400954	400954	1	G	W	29	40.55	1.68	0.284	0.22	0.074	2.86	1.57	0.123	0.108	0.682	0.181	1.17	8.45	0.66	10.28	8962	3.3048	27.38394	-24.07914	NAF
NS0101	136	138	NS	E400990	400990	1	G	W	28.8	45.11	1.56	0.219	0.17	0.065	2.38	1.68	0.121	0.112	0.725	0.2	0.76	4.73	0.76	6.25	8998	3.4272	29.30256	-25.87536	NAF
NS0101	272	274	NS	E401059	401059	1	G	W	35.43	38.95	1.8	0.142	0.11	0.084	2.13	1.56	0.256	0.04	0.861	0.224	0.72	2.22	0.23	3.17	9066	1.224	27.20952	-25.98552	NAF
NS0101	234	236	NS	E401040	401040	1	G	W	32.75	35.49	1.17	0.529	0.41	0.049	2.75	1.6	0.101	0.049	0.516	0.14	0.8	8.94	0.79	10.53	9047	1.4994	27.9072	-26.4078	NAF
NS0101	240	242	NS	E401043	401043	1	G	W	33.63	38.77	1.63	0.284	0.22	0.074	2.55	1.71	0.184	0.064	0.711	0.182	0.8	3.98	0.6	5.38	9050	1.9584	29.82582	-27.86742	NAF
NS0101	160	162	NS	E401003	401003	1	G	W	29.92	41.58	2.17	0.284	0.22	0.099	2.91	1.85	0.136	0.095	0.957	0.246	0.96	4.57	1.01	6.54	9010	2.907	32.2677	-29.3607	NAF
NS0101	216	218	NS	E401031	401031	1	G	W	32.57	37.74	1.35	0.413	0.32	0.058	2.48	1.85	0.178	0.04	0.59	0.159	0.73	6.61	0.7	8.04	9038	1.224	32.2677	-31.0437	NAC
NS0101	74	76	NS	E400959	400959	1	G	W	30.77	39.93	1.78	0.271	0.21	0.078	2.84	1.99	0.065	0.108	0.757	0.201	0.88	5.56	1.32	7.76	8967	3.3048	34.70958	-31.40478	NAC
NS0101	168	170	NS	E401007	401007	1	G	W	29.02	40.35	1.72	0.413	0.32	0.073	2.98	2.08	0.069	0.133	0.767	0.194	0.93	6.94	1.34	9.21	9014	4.0698	36.27936	-32.20956	NAC
NS0101	152	154	NS	E400998	400998	1	G	W	29.87	40.37	1.41	0.349	0.27	0.066	2.72	2.05	0.125	0.094	0.599	0.153	0.75	7.02	1.26	9.03	9006	2.8764	35.7561	-32.8797	NAC
NS0101	134	136	NS	E400989	400989	1	G	W	28.76	45.72	1.21	0.194	0.15	0.048	2.03	2.04	0.153	0.069	0.559	0.148	0.59	4.54	0.99	6.12	8997	2.1114	35.58168	-33.47028	NAC
NS0101	78	80	NS	E400961	400961	1	G	W	27.41	43.19	1.85	0.323	0.25	0.082	2.74	2.18	0.098	0.063	0.785	0.203	0.97	6.32	1.48	8.77	8969	1.9278	38.02356	-36.09576	NAC
NS0101	154	156	NS	E400999	400999	1	G	W	27.65	46.03	0.95	0.284	0.22	0.039	2.18	2.17	0.082	0.053	0.376	0.098	0.54	6.03	1.34	7.91	9007	1.6218	37.84914	-36.22734	NAC
NS0101	246	248	NS	E401046	401046	1	G	W	35	33.49	1.12	0.452	0.35	0.047	2.61	2.27	0.066	0.04	0.495	0.133	0.7	6.68	1.45	8.83	9053	1.224	39.59334	-38.36934	NAC
NS0101	84	86	NS	E400964	400964	1	G	W	28.46	44.5	1.57	0.271	0.21	0.068	2.56	2.36	0.193	0.09	0.654	0.179	0.79	4.3	1.31	6.4	8972	2.754	41.16312	-38.40912	NAC
NS0101	54	56	NS	E400949	400949	1	G	W	26.22	45.82	1.49	0.232	0.18	0.066	2.57	2.41	0.081	0.077	0.576	0.145	1.01	6.4	1.59	9	8957	2.3562	42.03522	-39.67902	NAC
NS0101	166	168	NS	E401006	401006	1	G	W	26.37	43.09	2.07	0.361	0.28	0.094	3.06	2.59	0.238	0.141	0.963	0.251	1.09	6.34	1.48	8.91	9013	4.3146	45.17478	-40.86018	NAC
NS0101	120	122	NS	E400982	400982	1	G	W	26.12	47.79	0.85	0.271	0.21	0.037	1.97	2.81	0.091	0.037	0.372	0.1	0.52	5.27	2.04	7.83	8990	1.1322	49.01202	-47.87982	NAC
NS0106	92	94	NS	X073049	073049	1	G	W	27.98	48.85	1.93	0.3741	0.29	0.088	2.74	0.99	0.15	0.967	0.282	0.092	0.18	2.39	1.36	3.93	15961	29.5902	17.26758	12.32262	PAF(HC)
NS0106	20	22	NS	X073012	073012	1	G	D	35.22	43.5	1.92	0.9288	0.72	0.084	0.28	0.05	0.038	0.03	0.337	0.024	1.7	0.71	0.12	2.53	16105	0.918	0.8721	0.0459	PAF(LC)
NS0106	20	24	NS	BX080012-BX080013	X080012	2			68.26	2.717	0.103	0.082	0.05904	0.009	0.112	0.025	0.014	0.009	0.007	0.067	0.31	0.24	0.16	0.71	1495	0.2754	0.43605	-0.16065	NAF
NS0106	4	8	NS	BX080004-BX080005	X080004	2			66.46	3.378	0.368	0.031	0.02232	0.027	0.097	0.022	0.016	0.002	0.001	0.074	0.5	0.26	0.03	0.79	1491	0.0612	0.383724	-0.322524	NAF
NS0106	8	12	NS	BX080006-BX080007	X080006	2			67.45	2.979	0.249	0.05	0.036	0.014	0.096	0.022	0.019	0.001	0.001	0.062	0.39	0.11	-0.01	0.49	1492	0.0306	0.383724	-0.353124	NAF
NS0106	12	16	NS	BX080008-BX080009	X080008	2			66.31	2.787	0.254	0.079	0.05688	0.01	0.096	0.022	0.016	0.001	0.002	0.071	0.35	0.16	-0.01	0.5	1493	0.0306	0.383724	-0.353124	NAF
NS0106	16	20	NS	BX080010-BX080011	X080010	2			66.85	2.612	0.116	0.072	0.05184	0.009	0.108	0.024	0.018	0.002	0.005	0.088	0.27	-0.01	-0.01	0.25	1494	0.0612	0.418608	-0.357408	NAF
NS0106	24	28	NS	BX080014-BX080015	X080014	2			66.34	2.609	0.081	0.082	0.05904	0.008	0.108	0.023	0.011	0.001	0.008	0.072	0.32	0.22	0.12	0.66	1496	0.0306	0.401166	-0.370566	NAF
NS0106	92	96	NS	BX080049-BX080050	X080049	2			68.48	4.475	0.255	0.056	0.04032	0.025	0.388	0.073	0.016	0.029	0.029	0.069	-0.01	-0.01	-0.01	-0.03	1513	0.8874	1.273266	-0.385866	NAF
NS0106	22	24	NS	X073013	073013	1	G	D	37.64	40.07	1.65	0.8901	0.69	0.069	0.32	0.04	0.048	0.008	0.461	0.023	1.71	0.53	0.1	2.34	16106	0.2448	0.69768	-0.45288	NAF
NS0106	28	32	NS	BX080016-BX080017	X080016	2			67.78	2.91	0.115	0.063	0.04536	0.01	0.15	0.033	0.017	0.003	0.029	0.078	0.06	-0.01	-0.01	0.04	1497	0.0918	0.575586	-0.483786	NAF
NS0106	0	4	NS	BX080002-BX080003	X080002	2			61.76	3.269	2.502	0.04	0.0288	0.937	0.078	0.047	0.018	0.009	0.003	0.165	-0.01	-0.01	-0.01	-0.03	1490	0.2754	0.819774	-0.544374	NAF
NS0106	36	40	NS	BX080020-BX080021	X080020	2			67.51	4.478	0.201	0.061	0.04392	0.019	0.268	0.057	0.01	0.013	0.081	0.081	-0.01	-0.01	-0.01	-0.03	1499	0.3978	0.994194	-0.596394	NAF
NS0106	32	36	NS	BX080018-BX080019	X080018	2			67.65	4.042	0.158	0.064	0.04608	0.022	0.237	0.049	0.01	0.006	0.057	0.082	-0.01	-0.01	-0.01	-0.03	1498	0.1836	0.854658	-0.671058	NAF
NS0106	26	28	NS	X073015	073015	1	G	D	35.44	42.44	1.91	1.0062	0.78	0.081	0.38	0.05	0.037	0.003	0.558	0.023	1.89	0.6	0.1	2.59	16108	0.0918	0.8721	-0.7803	NAF
NS0106	28	30	NS	X073016	073016	1	G	D	38.77	39.23	1.45	0.903	0.7	0.057	0.18	0.05	0.069	0.002	0.376	0.021	1.64	0.5	0.08	2.22	16109	0.0612	0.8721	-0.8109	NAF
NS0106	158	162	NS	BX080083-BX080084	X080083	2			68.99	4.151	0.076	0.061	0.04392	0.007	0.226	0.054	0.008	0.002	0.067	0.065	-0.01	-0.01	-0.01	-0.03	1529	0.0612	0.941868	-0.880668	NAF
NS0106	174	178	NS	BX080091-BX080092	X080091	2			70.46	3.477	0.068	0.052	0.03744	0.008	0.22	0.054	0.008	0.002	0.053	0.067	-0.01	-0.01	-0.01	-0.03	1533	0.0612	0.941868	-0.880668	NAF
NS0106	48	52	NS	BX080027-BX080028	X080027	2			68.35	3.776	0.07	0.048	0.03456	0.007	0.173	0.062	0.01	0.006	0.045	0.059	-0.01	-0.01	-0.01	-0.03	1502	0.1836	1.081404	-0.897804	NAF
NS0106	88	92	NS	BX080047-BX080048	X080047	2			69.97	3.301	0.084	0.044	0.03168	0.017	0.223	0.062	0.011	0.005	0.015	0.063	-0.01	-0.01	-0.01	-0.03	1512	0.153	1.081404	-0.928404	NAF
NS0106	226	230	NS	BX080118-BX080119	X080118	2			71.01	2.983	0.046	0.045	0.0324	0.006	0.181	0.055	0.008	0.001	0.043	0.055	-0.01	-0.01	-0.01	-0.03	1546	0.0306	0.95931	-0.92871	NAF
NS0106	252	256	NS	BX080131-BX080132	X080131	2			69.54	4.474	0.111	0.059	0.04248	0.01	0.241	0.057	0.01	0.002	0.085	0.067	-0.01	-0.01	-0.01	-0.03	1552	0.0612	0.994194	-0.932994	NAF
NS0106	154	158	NS	BX080081-BX080082	X080081	2			69	3.799	0.06	0.055	0.0396	0.006	0.21	0.056	0.007	0.001	0.053	0.055	-0.01	-0.01	-0.01	-0.03	1528	0.0306	0.976752	-0.946152	NAF
NS0106	186	190	NS	BX080097-BX080098	X080097	2			69.68	4.049	0.079	0.056	0.04032	0.008	0.222	0.056	0.008	0.001	0.068	0.054	-0.01	-0.01	-0.01	-0.03	1536	0.0306	0.976752	-0.946152	NAF
NS0106	210	214	NS	BX080110-BX080111	X080110	2			69.57	4.227	0.08	0.056	0.04032	0.009	0.253	0.057	0.01	0.001	0.056	0.054	-0.01	-0.01	-0.01	-0.03	1542	0.0306	0.994194	-0.963594	NAF
NS0106	162	166	NS	BX080085-BX080086	X080085	2			69.71	4.035	0.068	0.063	0.04536	0.005	0.222	0.058	0.008	0.001	0.062	0.056	-0.01	-0.01	-0.01	-0.03	1530	0.0306	1.011636	-0.981036	NAF
NS0106	166	170	NS	BX080087-BX080088	X080087	2			70.1	3.727	0.072	0.062	0.04464	0.008	0.24	0.058	0.01	0.001	0.057	0.067	-0.01	-0.01	-0.01	-0.03	1531	0.0306	1.011636	-0.981036	NAF
NS0106	242	246	NS	BX080126-BX080127	X080126	2			68.8	4.373	0.105	0.061	0.04392	0.011	0.254	0.06	0.01	0.002	0.07	0.061	-0.01	-0.01	-0.01	-0.03	1550	0.0612	1.04652	-0.98532	NAF
NS0106	64	68	NS	BX080035-BX080036	X080035	2			69.11	3.834	0.123	0.048	0.03456	0.015	0.242	0.066	0.012	0.005	0.038	0.09	-0.01	-0.01	-0.01	-0.03	1506	0.153	1.151172	-0.998172	NAF
NS0106	194	198	NS	BX080102-BX080103	X080102	2			70.25	3.059	0.055	0.046	0.03312	0.011	0.2	0.059	0.012	0.001	0.049	0.05	-0.01	-0.01	-0.01	-0.03	1538	0.0306	1.029078	-0.998478	NAF
NS0106	130	134	NS	BX080069-BX080070	X080069	2			68.86	3.854	0.06	0.052	0.03744	0.007	0.221	0.062	0.009	0.002	0.029	0.066	-0.01	-0.01	-0.01	-0.03	1522	0.0612	1.081404	-1.020204	NAF
NS0106	214	218	NS	BX080112-BX080113	X080112	2			69.53	3.963	0.075	0.055	0.0396	0.01	0.244	0.062	0.01	0.002	0.058	0.052	-0.01	-0.01	-0.01	-0.03	1543	0.0612	1.081404	-1.020204	NAF
NS0106	68	72	NS	BX080037-BX080038	X080037	2			69.48	3.411	0.084	0.047	0.03384	0.013	0.214	0.066	0.011	0.004	0.023	0.076	-0.01	-0.01	-0.01	-0.03	1507	0.1224	1.151172	-1.028772	NAF
NS0106	146	150	NS	BX080077-BX080078	X080077	2			69.08	4.435	0.079	0.064	0.04608	0.01	0.256	0.061	0.01	0.001	0.057	0.054	-0.01	-0.01	-0.01	-0.03	1526	0.0306	1.063962	-1.033362	NAF
NS0106	238	242	NS	BX080124-BX080125	X080124	2			69.82	4.067	0.078	0.056	0.04032	0.008	0.237	0.061	0.01	0.001	0.058	0.052	-0.01	-0.01	-0.01	-0.03	1549	0.0306	1.063962	-1.033362	NAF
NS0106	80	84	NS	BX080043-BX080044	X080043	2			67.37	6.08	0.255	0.066	0.04752	0.021	0.429	0.091	0.017	0.018	0.034	0.094	-0.01	-0.01	-0.01	-0.03	1510	0.5508	1.587222	-1.036422	NAF
NS0106	182	186	NS	BX080095-BX080096	X080095	2			67.96	4.879	0.082	0.056	0.04032	0.007	0.218	0.062	0.009	0.001	0.072	0.056	-0.01	-0.01	-0.01	-0.03	1535	0.0306	1.081404	-1.050804	NAF
NS0106	126	130	NS	BX080067-BX080068	X080067	2			69.53	4.238	0.058	0.052	0.03744	0.009	0.227	0.064	0.01	0.002	0.024	0.057	-0.01	-0.01	-0.01	-0.03	1521	0.0612	1.116288	-1.055088	NAF
NS0106	218	222	NS	BX080114-BX080115	X080114	2			68.93	4.098	0.087	0.056	0.04032	0.008	0.228	0.064	0.013	0.002	0.067	0.066	-0.01	-0.01	-0.01	-0.03	1544	0.0612	1.116288	-1.055088	NAF
NS0106	72	76	NS	BX080039-BX080040	X080039	2			68.48	4.275	0.125	0.057	0.04104	0.017	0.265	0.07	0.012	0.005	0.03	0.063	-0.01	-0.01	-0.01	-0.03	1508	0.153	1.22094	-1.06794	NAF
NS0106	222	226	NS	BX080116-BX080117	X080116	2			69.01	3.907	0.089	0.061	0.04392	0.006	0.252	0.063	0.01	0.001	0.074	0.055	-0.01	-0.01	-0.01	-0.03	1545	0.0306	1.098846	-1.068246	NAF
NS0106	246	250	NS	BX080128-BX080129	X080128	2			68.68	3.665	0.07	0.054	0.03888	0.007	0.21	0.065	0.009	0.002	0.054	0.062	-0.01	-0.01	-0.01	-0.03	1551	0.0612	1.13373	-1.07253	NAF
NS0106	138	142	NS	BX080073-BX080074	X080073	2			69.08	4.059	0.077	0.055	0.0396	0.009	0.232	0.069	0.01	0.004	0.048	0.076	-0.01	-0.01	-0.01	-0.03	1524	0.1224	1.203498	-1.081098	NAF
NS0106	206	210	NS	BX080108-BX080109	X080108	2			70.07	3.872	0.096	0.06	0.0432	0.011	0.243	0.064	0.013	0.001	0.066	0.052	-0.01	-0.01	-0.01	-0.03	1541	0.0306	1.116288	-1.085688	NAF
NS0106	104	108	NS	BX080056-BX080057	X080056	2			68.8	4.592	0.191	0.056	0.04032	0.024	0.316	0.075	0.01	0.007	0.043	0.069	-0.01	-0.01	-0.01	-0.03	1516	0.2142	1.30815	-1.09395	NAF
NS0106	40	44	NS	BX080022-BX080023	X080022	2			68.1	4.026	0.087	0.05	0.036	0.009	0.183	0.068	0.011	0.003	0.056	0.083	-0.01	-0.01	-0.01	-0.03	1500	0.0918	1.186056	-1.094256	NAF
NS0106	24	26	NS	X073014	073014	1	G	D	32.97	45.01	2.23	1.0191	0.79	0.095	0.51	0.07	0.047	0.004	0.609	0.027	1.88	0.7	0.14	2.72	16107	0.1224	1.22094	-1.09854	NAF
NS0106	178	182	NS	BX080093-BX080094	X080093	2			69.37	3.657	0.077	0.05	0.036	0.007	0.213	0.069	0.011	0.003	0.061	0.066	-0.01	-0.01	-0.01	-0.03	1534	0.0918	1.203498	-1.111698	NAF
NS0106	44	48	NS	BX080024-BX080025	X080024	2			68.43	4.275	0.113	0.058	0.04176	0.011	0.227	0.071	0.011	0.004	0.055	0.103	-0.01	-0.01	-0.01	-0.03	1501	0.1224	1.238382	-1.115982	NAF
NS0106	260	264	NS	BX080135-BX080136	X080135	2			69.15	4.408	0.091	0.06	0.0432	0.008	0.233	0.071	0.011	0.004	0.071	0.059	-0.01	-0.01	-0.01	-0.03	1554	0.1224	1.238382	-1.115982	NAF
NS0106	234	238	NS	BX080122-BX080123	X080122	2			69.1	4.284	0.075	0.054	0.03888	0.007	0.232	0.068	0.01	0.002	0.059	0.054	-0.01	-0.01	-0.01	-0.03	1548	0.0612	1.186056	-1.124856	NAF
NS0106	52	54	NS	BX080029	X080029	2			68.14	4.606	0.106	0.056	0.04032	0.012	0.213	0.075	0.012	0.005	0.056	0.069	-0.01	-0.01	-0.01	-0.03	1503	0.153	1.30815	-1.15515	NAF
NS0106	56	60	NS	BX080031-BX080032	X080031	2			67.61	4.873	0.15	0.062	0.04464	0.015	0.286	0.077	0.014	0.006	0.047	0.056	-0.01	-0.01	-0.01	-0.03	1504	0.1836	1.343034	-1.159434	NAF
NS0106	96	100	NS	BX080052-BX080053	X080052	2			68.59	3.587	0.083	0.052	0.03744	0.008	0.239	0.07	0.017	0.002	0.013	0.051	-0.01	-0.01	-0.01	-0.03	1514	0.0612	1.22094	-1.15974	NAF
NS0106	122	126	NS	BX080065-BX080066	X080065	2			69.36	4.331	0.065	0.054	0.03888	0.01	0.224	0.07	0.01	0.002	0.027	0.059	-0.01	-0.01	-0.01	-0.03	1520	0.0612	1.22094	-1.15974	NAF
NS0106	170	172	NS	BX080089	X080089	2			69.51	4.477	0.061	0.059	0.04248	0.008	0.21	0.071	0.01	0.002	0.052	0.058	-0.01	-0.01	-0.01	-0.03	1532	0.0612	1.238382	-1.177182	NAF
NS0106	264	268	NS	BX080137-BX080138	X080137	2			69.69	4.3	0.09	0.059	0.04248	0.009	0.234	0.071	0.01	0.002	0.065	0.055	-0.01	-0.01	-0.01	-0.03	1555	0.0612	1.238382	-1.177182	NAF
NS0106	150	154	NS	BX080079-BX080080	X080079	2			69.59	4.31	0.1	0.07	0.0504	0.008	0.267	0.072	0.013	0.002	0.077	0.062	-0.01	-0.01	-0.01	-0.03	1527	0.0612	1.255824	-1.194624	NAF
NS0106	190	194	NS	BX080099-BX080100	X080099	2			70.24	3.539	0.079	0.055	0.0396	0.009	0.229	0.072	0.01	0.002	0.063	0.059	-0.01	-0.01	-0.01	-0.03	1537	0.0612	1.255824	-1.194624	NAF
NS0106	134	138	NS	BX080071-BX080072	X080071	2			67.95	4.206	0.073	0.056	0.04032	0.009	0.243	0.075	0.013	0.002	0.043	0.058	-0.01	-0.01	-0.01	-0.03	1523	0.0612	1.30815	-1.24695	NAF
NS0106	230	234	NS	BX080120-BX080121	X080120	2			69.05	4.29	0.125	0.065	0.0468	0.006	0.267	0.075	0.016	0.002	0.093	0.053	-0.01	-0.01	-0.01	-0.03	1547	0.0612	1.30815	-1.24695	NAF
NS0106	84	88	NS	BX080045-BX080046	X080045	2			70.56	3.351	0.073	0.045	0.0324	0.016	0.223	0.08	0.013	0.004	0.012	0.067	-0.01	-0.01	-0.01	-0.03	1511	0.1224	1.39536	-1.27296	NAF
NS0106	118	122	NS	BX080063-BX080064	X080063	2			69.75	3.841	0.059	0.052	0.03744	0.01	0.211	0.077	0.01	0.002	0.019	0.063	-0.01	-0.01	-0.01	-0.03	1519	0.0612	1.343034	-1.281834	NAF
NS0106	268	272	NS	BX080139-BX080140	X080139	2			68.17	5.014	0.107	0.056	0.04032	0.034	0.223	0.077	0.014	0.002	0.074	0.053	-0.01	-0.01	-0.01	-0.03	1556	0.0612	1.343034	-1.281834	NAF
NS0106	60	64	NS	BX080033-BX080034	X080033	2			67.83	4.217	0.086	0.055	0.0396	0.011	0.22	0.081	0.014	0.004	0.029	0.071	-0.01	-0.01	-0.01	-0.03	1505	0.1224	1.412802	-1.290402	NAF
NS0106	256	260	NS	BX080133-BX080134	X080133	2			69.04	4.891	0.119	0.062	0.04464	0.01	0.251	0.079	0.012	0.002	0.092	0.057	-0.01	-0.01	-0.01	-0.03	1553	0.0612	1.377918	-1.316718	NAF
NS0106	100	104	NS	BX080054-BX080055	X080054	2			68.36	5.099	0.186	0.066	0.04752	0.021	0.34	0.088	0.02	0.007	0.043	0.07	-0.01	-0.01	-0.01	-0.03	1515	0.2142	1.534896	-1.320696	NAF
NS0106	142	146	NS	BX080075-BX080076	X080075	2			68.92	5.068	0.109	0.071	0.05112	0.011	0.292	0.081	0.016	0.003	0.062	0.06	-0.01	-0.01	-0.01	-0.03	1525	0.0918	1.412802	-1.321002	NAF
NS0106	198	202	NS	BX080104-BX080105	X080104	2			68.81	4.136	0.11	0.058	0.04176	0.009	0.252	0.08	0.016	0.002	0.083	0.053	-0.01	-0.01	-0.01	-0.03	1539	0.0612	1.39536	-1.33416	NAF
NS0106	272	276	NS	BX080141-BX080142	X080141	2			67.67	5.523	0.126	0.068	0.04896	0.01	0.258	0.084	0.013	0.002	0.073	0.061	-0.01	-0.01	-0.01	-0.03	1557	0.0612	1.465128	-1.403928	NAF
NS0106	114	118	NS	BX080061-BX080062	X080061	2			69.04	4	0.102	0.063	0.04536	0.013	0.272	0.088	0.01	0.004	0.033	0.068	-0.01	-0.01	-0.01	-0.03	1518	0.1224	1.534896	-1.412496	NAF
NS0106	108	112	NS	BX080058-BX080059	X080058	2			69.51	3.868	0.086	0.053	0.03816	0.012	0.218	0.088	0.011	0.002	0.032	0.057	-0.01	-0.01	-0.01	-0.03	1517	0.0612	1.534896	-1.473696	NAF
NS0106	202	206	NS	BX080106-BX080107	X080106	2			69.11	4.398	0.132	0.065	0.0468	0.011	0.283	0.103	0.023	0.003	0.092	0.061	-0.01	-0.01	-0.01	-0.03	1540	0.0918	1.796526	-1.704726	NAF
NS0106	76	80	NS	BX080041-BX080042	X080041	2			67.68	4.562	0.111	0.064	0.04608	0.012	0.278	0.113	0.013	0.004	0.024	0.091	-0.01	-0.01	-0.01	-0.03	1509	0.1224	1.970946	-1.848546	NAF
NS0106	276	280	NS	BX080143-BX080144	X080143	2			68.61	5.122	0.12	0.066	0.04752	0.012	0.25	0.113	0.013	0.003	0.056	0.063	-0.01	-0.01	-0.01	-0.03	1558	0.0918	1.970946	-1.879146	NAF
NS0106	94	96	NS	X073050	073050	1	G	W	34.12	37	3.05	0.5805	0.45	0.139	3.98	0.46	0.122	0.169	0.347	0.117	0.43	4.96	0.06	5.45	15962	5.1714	8.02332	-2.85192	NAF
NS0106	30	32	NS	X073017	073017	1	G	D	35.33	40.9	1.72	0.6837	0.53	0.073	1.6	0.29	0.098	0.035	0.566	0.024	0.69	2.62	-0.17	3.14	16110	1.071	5.05818	-3.98718	NAF
NS0106	38	40	NS	X073021	073021	1	G	D	30.84	42.47	3.28	0.5289	0.41	0.149	3.62	0.84	0.122	0.261	0.776	0.049	0.23	3.21	0.39	3.83	15898	7.9866	14.65128	-6.66468	NAF
NS0106	32	34	NS	X073018	073018	1	G	D	35.59	39.84	1.98	0.6579	0.51	0.087	2.07	0.47	0.091	0.05	0.453	0.026	0.55	2.78	-0.12	3.21	15895	1.53	8.19774	-6.66774	NAF
NS0106	96	98	NS	X073052	073052	1	G	W	39.38	34.29	1.17	0.6192	0.48	0.054	2.32	0.63	0.174	0.041	0.164	0.056	0.13	4.27	-0.44	3.96	15963	1.2546	10.98846	-9.73386	NAF
NS0106	98	100	NS	X073053	073053	1	G	W	37.79	35.1	1.17	0.6837	0.53	0.056	2.56	0.72	0.176	0.045	0.221	0.065	0.2	4.94	-0.29	4.85	15964	1.377	12.55824	-11.18124	NAF
NS0106	70	72	NS	X073038	073038	1	G	W	34.96	36.34	2.23	0.7353	0.57	0.1	3.43	0.92	0.1	0.128	0.47	0.1	0.34	4.87	0.21	5.42	15950	3.9168	16.04664	-12.12984	NAF
NS0106	222	224	NS	X073116	073116	1	G	W	37.65	35.88	1.26	0.7869	0.61	0.053	2.7	0.76	0.084	0.024	0.849	0.077	0.05	3.3	0.04	3.39	16188	0.7344	13.25592	-12.52152	NAF
NS0106	244	246	NS	X073127	073127	1	G	W	40.97	31.99	1.3	0.7224	0.56	0.06	2.47	0.91	0.09	0.041	0.686	0.07	0.05	2.81	0.07	2.93	16199	1.2546	15.87222	-14.61762	NAF
NS0106	100	102	NS	X073054	073054	1	G	W	36.89	36.67	1.33	0.6579	0.51	0.072	2.57	0.93	0.187	0.045	0.273	0.069	0.18	4.43	-0.12	4.49	15965	1.377	16.22106	-14.84406	NAF
NS0106	82	84	NS	X073044	073044	1	G	W	33.6	38.73	2.35	0.5547	0.43	0.107	3.55	1.06	0.17	0.114	0.349	0.109	0.31	4.24	0.26	4.81	15956	3.4884	18.48852	-15.00012	NAF
NS0106	232	234	NS	X073121	073121	1	G	W	38.9	33.75	1.45	0.7482	0.58	0.061	2.62	0.9	0.118	0.021	0.963	0.081	0.26	3.01	0.14	3.41	16193	0.6426	15.6978	-15.0552	NAF
NS0106	88	90	NS	X073047	073047	1	G	W	31.54	43.34	1.45	0.5547	0.43	0.064	2.71	0.98	0.131	0.062	0.3	0.088	0.26	4.34	0.15	4.75	15959	1.8972	17.09316	-15.19596	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0106	36	38	NS	X073020	073020	1	G	D	33.41	40.68	1.98	0.645	0.5	0.089	2.7	1.13	0.102	0.111	0.548	0.038	0.19	3.56	0.33	4.08	15897	3.3966	19.70946	-16.31286	NAF
NS0106	220	222	NS	X073115	073115	1	G	W	37.16	37.73	0.97	0.7224	0.56	0.048	1.9	0.99	0.088	0.018	0.476	0.055	0.62	2.66	0.32	3.6	16187	0.5508	17.26758	-16.71678	NAF
NS0106	196	198	NS	X073103	073103	1	G	W	40.11	34.39	0.92	0.7095	0.55	0.043	2.16	1.02	0.118	0.013	0.593	0.07	0.05	2.36	0.15	2.56	16157	0.3978	17.79084	-17.39304	NAF
NS0106	104	106	NS	X073056	073056	1	G	W	33.72	37.89	2.38	0.6579	0.51	0.115	3.41	1.24	0.131	0.128	0.449	0.098	0.29	4.13	0.45	4.87	16111	3.9168	21.62808	-17.71128	NAF
NS0106	230	232	NS	X073120	073120	1	G	W	38.42	35.16	1.27	0.7482	0.58	0.053	2.54	1.07	0.107	0.022	0.867	0.083	0.06	2.81	0.27	3.14	16192	0.6732	18.66294	-17.98974	NAF
NS0106	218	220	NS	X073114	073114	1	G	W	33.35	42.39	0.81	0.8643	0.67	0.041	2.27	1.07	0.097	0.015	0.551	0.069	0.08	3.56	0.41	4.05	16186	0.459	18.66294	-18.20394	NAF
NS0106	90	92	NS	X073048	073048	1	G	W	23.29	59.69	0.75	0.3096	0.24	0.033	1.5	1.12	0.136	0.033	0.123	0.044	0.05	2.06	0.36	2.47	15960	1.0098	19.53504	-18.52524	NAF
NS0106	254	256	NS	X073132	073132	1	G	W	39.22	34.57	1.13	0.7095	0.55	0.053	2.2	1.11	0.084	0.022	0.734	0.071	0.02	2.5	0.34	2.86	16222	0.6732	19.36062	-18.68742	NAF
NS0106	34	36	NS	X073019	073019	1	G	D	32.63	39.79	2.44	0.6837	0.53	0.108	2.97	1.37	0.214	0.163	0.713	0.039	0.31	3.75	0.4	4.46	15896	4.9878	23.89554	-18.90774	NAF
NS0106	46	48	NS	X073025	073025	1	G	W	36.71	36.92	1.48	0.7224	0.56	0.065	2.21	1.17	0.105	0.045	0.532	0.044	0.35	3.2	0.44	3.99	15902	1.377	20.40714	-19.03014	NAF
NS0106	210	212	NS	X073110	073110	1	G	W	36.63	37.74	0.93	0.7482	0.58	0.042	2.37	1.13	0.087	0.02	0.58	0.066	0.08	3.01	0.4	3.49	16164	0.612	19.70946	-19.09746	NAF
NS0106	166	168	NS	X073087	073087	1	G	W	38.07	35.16	1.26	0.8127	0.63	0.057	2.7	1.14	0.135	0.018	0.806	0.082	0.05	3.01	0.31	3.37	15980	0.5508	19.88388	-19.33308	NAF
NS0106	208	210	NS	X073109	073109	1	G	W	36.5	38.25	0.95	0.7998	0.62	0.043	2.34	1.16	0.106	0.023	0.599	0.07	0.06	2.97	0.39	3.42	16163	0.7038	20.23272	-19.52892	NAF
NS0106	200	202	NS	X073105	073105	1	G	W	39.19	33.66	1.18	0.774	0.6	0.048	2.49	1.17	0.115	0.024	0.734	0.079	0.08	2.89	0.31	3.28	16159	0.7344	20.40714	-19.67274	NAF
NS0106	158	160	NS	X073083	073083	1	G	W	39.29	34.02	0.99	0.8643	0.67	0.045	2.25	1.21	0.085	0.023	0.681	0.06	0.02	2.78	0.41	3.21	15976	0.7038	21.10482	-20.40102	NAF
NS0106	252	254	NS	X073131	073131	1	G	W	39.43	34.17	1.05	0.7353	0.57	0.05	2.19	1.23	0.132	0.029	0.687	0.068	0.01	2.75	0.29	3.05	16221	0.8874	21.45366	-20.56626	NAF
NS0106	242	244	NS	X073126	073126	1	G	W	36.42	38.07	0.86	0.8256	0.64	0.038	2.18	1.24	0.087	0.02	0.53	0.061	0.01	3.2	0.51	3.72	16198	0.612	21.62808	-21.01608	NAF
NS0106	212	214	NS	X073111	073111	1	G	W	37.7	36.22	1.01	0.7224	0.56	0.044	2.47	1.25	0.09	0.014	0.618	0.075	0.09	2.86	0.54	3.49	16183	0.4284	21.8025	-21.3741	NAF
NS0106	80	82	NS	X073043	073043	1	G	W	33.77	39.56	1.45	0.645	0.5	0.062	2.74	1.33	0.174	0.057	0.231	0.071	0.22	4.27	0.38	4.87	15955	1.7442	23.19786	-21.45366	NAF
NS0106	102	104	NS	X073055	073055	1	G	W	31.9	39.41	2.24	0.7224	0.56	0.117	3.5	1.46	0.218	0.131	0.483	0.1	0.33	4.85	0.45	5.63	15966	4.0086	25.46532	-21.45672	NAF
NS0106	264	266	NS	X073137	073137	1	G	W	37.18	35.71	1.16	0.8256	0.64	0.051	2.57	1.29	0.084	0.031	0.7	0.064	0.1	3.45	0.6	4.15	16227	0.9486	22.50018	-21.55158	NAF
NS0106	164	166	NS	X073086	073086	1	G	W	38.48	35.51	0.9	0.7869	0.61	0.04	2.23	1.26	0.081	0.009	0.638	0.07	0.01	2.54	0.59	3.14	15979	0.2754	21.97692	-21.70152	NAF
NS0106	240	242	NS	X073125	073125	1	G	W	36.82	37.28	1.09	0.7353	0.57	0.049	2.45	1.29	0.109	0.022	0.636	0.081	0.08	2.79	0.55	3.42	16197	0.6732	22.50018	-21.82698	NAF
NS0106	74	76	NS	X073040	073040	1	G	W	35.37	37.65	1.35	0.7095	0.55	0.056	2.67	1.33	0.109	0.044	0.293	0.087	0.28	4.29	0.47	5.04	15952	1.3464	23.19786	-21.85146	NAF
NS0106	58	60	NS	X073032	073032	1	G	W	36.77	36.47	1.59	0.6579	0.51	0.07	2.6	1.41	0.096	0.085	0.379	0.049	0.19	3.17	0.59	3.95	15908	2.601	24.59322	-21.99222	NAF
NS0106	152	154	NS	X073080	073080	1	G	W	36.08	37.42	1.19	0.8127	0.63	0.052	2.67	1.3	0.122	0.019	0.765	0.082	0.11	3.1	0.5	3.71	15973	0.5814	22.6746	-22.0932	NAF
NS0106	176	178	NS	X073092	073092	1	G	W	38.49	35.25	1.08	0.7353	0.57	0.047	2.33	1.31	0.076	0.018	0.656	0.072	0.02	2.45	0.62	3.09	16147	0.5508	22.84902	-22.29822	NAF
NS0106	168	170	NS	X073088	073088	1	G	W	36.82	37.55	0.97	0.7998	0.62	0.043	2.32	1.31	0.091	0.017	0.611	0.072	0.03	2.68	0.65	3.36	15981	0.5202	22.84902	-22.32882	NAF
NS0106	206	208	NS	X073108	073108	1	G	W	36.5	37.58	1.02	0.8643	0.67	0.045	2.42	1.33	0.113	0.028	0.678	0.069	0.08	3.09	0.58	3.75	16162	0.8568	23.19786	-22.34106	NAF
NS0106	144	146	NS	X073076	073076	1	G	W	39.16	34.84	1.03	0.6837	0.53	0.049	2.29	1.35	0.134	0.025	0.479	0.063	0.04	2.33	0.39	2.76	15969	0.765	23.5467	-22.7817	NAF
NS0106	150	152	NS	X073079	073079	1	G	W	36.22	37.98	0.98	0.8643	0.67	0.045	2.39	1.34	0.118	0.019	0.64	0.065	0.07	3.08	0.53	3.68	15972	0.5814	23.37228	-22.79088	NAF
NS0106	54	56	NS	X073030	073030	1	G	W	32.94	40.27	1.87	0.6837	0.53	0.081	2.89	1.61	0.11	0.171	0.451	0.052	0.17	3.46	0.8	4.43	15906	5.2326	28.08162	-22.84902	NAF
NS0106	172	174	NS	X073090	073090	1	G	W	37.81	36.11	0.91	0.8256	0.64	0.04	2.23	1.35	0.085	0.021	0.57	0.06	0.03	2.73	0.55	3.31	15983	0.6426	23.5467	-22.9041	NAF
NS0106	114	116	NS	X073061	073061	1	G	W	36.34	36.33	1.5	0.7353	0.57	0.069	2.97	1.41	0.094	0.044	0.341	0.091	0.18	3.66	0.68	4.52	16116	1.3464	24.59322	-23.24682	NAF
NS0106	66	68	NS	X073036	073036	1	G	W	34.61	38.24	1.48	0.7095	0.55	0.066	2.71	1.41	0.101	0.038	0.365	0.063	0.19	3.95	0.77	4.91	15912	1.1628	24.59322	-23.43042	NAF
NS0106	148	150	NS	X073078	073078	1	G	W	34.67	40.11	0.92	0.8385	0.65	0.04	2.42	1.38	0.078	0.02	0.547	0.078	0.07	2.97	0.75	3.79	15971	0.612	24.06996	-23.45796	NAF
NS0106	186	188	NS	X073097	073097	1	G	W	37.93	35.96	0.96	0.7998	0.62	0.042	2.22	1.4	0.09	0.021	0.653	0.054	0.01	2.62	0.64	3.27	16152	0.6426	24.4188	-23.7762	NAF
NS0106	204	206	NS	X073107	073107	1	G	W	34.84	39.49	0.99	0.8643	0.67	0.042	2.44	1.43	0.128	0.02	0.651	0.071	0.06	3.17	0.74	3.97	16161	0.612	24.94206	-24.33006	NAF
NS0106	214	216	NS	X073112	073112	1	G	W	37.04	37.19	0.95	0.6837	0.53	0.041	2.4	1.43	0.089	0.02	0.576	0.073	0.06	2.42	0.78	3.26	16184	0.612	24.94206	-24.33006	NAF
NS0106	56	58	NS	X073031	073031	1	G	W	35.39	38.4	1.32	0.6837	0.53	0.059	2.36	1.55	0.114	0.078	0.387	0.043	0.12	3.23	0.71	4.06	15907	2.3868	27.0351	-24.6483	NAF
NS0106	44	46	NS	X073024	073024	1	G	W	33.07	41.5	1.49	0.6579	0.51	0.068	2.31	1.54	0.107	0.05	0.462	0.035	0.13	3.07	0.77	3.97	15901	1.53	26.86068	-25.33068	NAF
NS0106	154	156	NS	X073081	073081	1	G	W	37.39	36.27	0.98	0.8256	0.64	0.042	2.32	1.48	0.08	0.015	0.67	0.067	0.02	2.62	0.82	3.46	15974	0.459	25.81416	-25.35516	NAF
NS0106	146	148	NS	X073077	073077	1	G	W	37.71	35.89	1.03	0.774	0.6	0.047	2.44	1.51	0.112	0.024	0.574	0.073	0.06	2.69	0.69	3.44	15970	0.7344	26.33742	-25.60302	NAF
NS0106	52	54	NS	X073029	073029	1	G	W	34.97	38.53	1.48	0.7095	0.55	0.067	2.32	1.56	0.095	0.05	0.498	0.047	0.3	3.06	0.94	4.3	15905	1.53	27.20952	-25.67952	NAF
NS0106	182	184	NS	X073095	073095	1	G	W	37.98	35.7	0.89	0.8256	0.64	0.041	2.25	1.54	0.08	0.018	0.604	0.059	0.02	2.71	0.83	3.56	16150	0.5508	26.86068	-26.30988	NAF
NS0106	78	80	NS	X073042	073042	1	G	W	35.51	36.54	1.21	0.7482	0.58	0.052	2.7	1.57	0.124	0.029	0.278	0.067	0.21	4.47	0.79	5.47	15954	0.8874	27.38394	-26.49654	NAF
NS0106	238	240	NS	X073124	073124	1	G	W	37.27	36.15	1.02	0.7869	0.61	0.045	2.4	1.56	0.082	0.022	0.639	0.075	0.05	2.76	0.96	3.77	16196	0.6732	27.20952	-26.53632	NAF
NS0106	160	162	NS	X073084	073084	1	G	W	37.06	36.48	0.98	0.8772	0.68	0.042	2.32	1.55	0.092	0.016	0.678	0.072	0.02	2.8	0.82	3.64	15977	0.4896	27.0351	-26.5455	NAF
NS0106	234	236	NS	X073122	073122	1	G	W	36.86	36.32	1.14	0.7224	0.56	0.05	2.6	1.57	0.09	0.024	0.738	0.087	0.06	2.51	1	3.57	16194	0.7344	27.38394	-26.64954	NAF
NS0106	60	62	NS	X073033	073033	1	G	W	37.14	37.45	0.86	0.7353	0.57	0.04	2	1.57	0.13	0.021	0.245	0.039	0.08	3.28	0.6	3.96	15909	0.6426	27.38394	-26.74134	NAF
NS0106	40	42	NS	X073022	073022	1	G	D	34.02	40.69	1.37	0.7224	0.56	0.056	2.03	1.62	0.105	0.044	0.5	0.022	0.31	3.2	0.85	4.36	15899	1.3464	28.25604	-26.90964	NAF
NS0106	68	70	NS	X073037	073037	1	G	W	34.48	39.14	1.15	0.6966	0.54	0.052	2.48	1.61	0.093	0.029	0.255	0.049	0.1	3.72	1	4.82	15949	0.8874	28.08162	-27.19422	NAF
NS0106	126	128	NS	X073067	073067	1	G	W	36.64	38.08	0.82	0.6966	0.54	0.038	2.24	1.59	0.09	0.017	0.271	0.054	0.06	2.61	0.86	3.53	16122	0.5202	27.73278	-27.21258	NAF
NS0106	64	66	NS	X073035	073035	1	G	W	34.5	37.9	1.63	0.7353	0.57	0.072	2.68	1.66	0.097	0.053	0.466	0.061	0.27	3.79	1	5.06	15911	1.6218	28.95372	-27.33192	NAF
NS0106	162	164	NS	X073085	073085	1	G	W	36.65	37.09	0.91	0.8643	0.67	0.04	2.27	1.61	0.081	0.013	0.651	0.063	0.06	2.61	0.98	3.65	15978	0.3978	28.08162	-27.68382	NAF
NS0106	112	114	NS	X073060	073060	1	G	W	36.8	37.62	0.89	0.6321	0.49	0.039	2.15	1.63	0.081	0.019	0.224	0.056	0.07	2.73	0.87	3.67	16115	0.5814	28.43046	-27.84906	NAF
NS0106	272	274	NS	X073141	073141	1	G	W	37.11	36.1	1.15	0.8256	0.64	0.053	2.34	1.65	0.096	0.021	0.616	0.075	0.12	3.07	0.96	4.15	16231	0.6426	28.7793	-28.1367	NAF
NS0106	72	74	NS	X073039	073039	1	G	W	31.95	41.85	1.27	0.7353	0.57	0.057	2.62	1.73	0.098	0.061	0.306	0.065	0.18	4.15	1.17	5.5	15951	1.8666	30.17466	-28.30806	NAF
NS0106	106	108	NS	X073057	073057	1	G	W	37.42	36.3	0.95	0.6708	0.52	0.043	2.13	1.66	0.086	0.021	0.289	0.04	0.02	3.11	0.87	4	16112	0.6426	28.95372	-28.31112	NAF
NS0106	42	44	NS	X073023	073023	1	G	D	35.92	37.87	1.31	0.6579	0.51	0.058	2.2	1.69	0.109	0.038	0.437	0.027	0.13	2.76	1.02	3.91	15900	1.1628	29.47698	-28.31418	NAF
NS0106	192	194	NS	X073100	073100	1	G	W	35.15	38.74	0.91	0.8643	0.67	0.045	2.4	1.66	0.086	0.02	0.603	0.062	0.08	3.05	1.01	4.14	16155	0.612	28.95372	-28.34172	NAF
NS0106	174	176	NS	X073091	073091	1	G	W	38.26	35.03	0.91	0.8127	0.63	0.039	2.28	1.68	0.078	0.019	0.572	0.056	0.01	2.44	1.08	3.53	15984	0.5814	29.30256	-28.72116	NAF
NS0106	124	126	NS	X073066	073066	1	G	W	33.52	41.82	0.78	0.774	0.6	0.035	2.25	1.68	0.086	0.017	0.291	0.05	0.06	3.14	1.01	4.21	16121	0.5202	29.30256	-28.78236	NAF
NS0106	142	144	NS	X073075	073075	1	G	W	35.64	37.47	1.11	0.8385	0.65	0.046	2.63	1.7	0.098	0.026	0.547	0.066	0.12	3.15	0.92	4.19	15968	0.7956	29.6514	-28.8558	NAF
NS0106	132	134	NS	X073070	073070	1	G	W	35.61	38.69	0.99	0.6966	0.54	0.044	2.47	1.72	0.078	0.033	0.346	0.064	0.11	2.48	1.08	3.67	16125	1.0098	30.00024	-28.99044	NAF
NS0106	184	186	NS	X073096	073096	1	G	W	35.16	39.42	0.8	0.8127	0.63	0.038	2.15	1.7	0.07	0.017	0.559	0.049	0.01	2.57	1.18	3.76	16151	0.5202	29.6514	-29.1312	NAF
NS0106	270	272	NS	X073140	073140	1	G	W	35.98	37.9	0.97	0.774	0.6	0.042	2.12	1.72	0.09	0.026	0.526	0.051	0.07	2.75	1.06	3.88	16230	0.7956	30.00024	-29.20464	NAF
NS0106	156	158	NS	X073082	073082	1	G	W	37.13	37.08	0.85	0.7998	0.62	0.04	2.16	1.7	0.074	0.014	0.58	0.055	0.01	2.3	1.07	3.38	15975	0.4284	29.6514	-29.223	NAF
NS0106	188	190	NS	X073098	073098	1	G	W	37.66	36.1	0.92	0.774	0.6	0.042	2.33	1.71	0.077	0.019	0.619	0.059	0.01	2.5	1.08	3.59	16153	0.5814	29.82582	-29.24442	NAF
NS0106	180	182	NS	X073094	073094	1	G	W	37.37	36.35	1.05	0.7353	0.57	0.049	2.44	1.73	0.103	0.024	0.644	0.08	0.05	2.34	1.08	3.47	16149	0.7344	30.17466	-29.44026	NAF
NS0106	198	200	NS	X073104	073104	1	G	W	34.98	39.81	0.83	0.774	0.6	0.038	2.22	1.72	0.147	0.015	0.531	0.07	0.07	2.55	0.93	3.55	16158	0.459	30.00024	-29.54124	NAF
NS0106	48	50	NS	X073027	073027	1	G	W	33.34	41.09	1.17	0.7869	0.61	0.049	2.15	1.74	0.108	0.025	0.537	0.035	0.16	3.4	0.92	4.48	15903	0.765	30.34908	-29.58408	NAF
NS0106	260	262	NS	X073135	073135	1	G	W	35.63	38.61	0.9	0.7611	0.59	0.039	2.14	1.77	0.095	0.023	0.613	0.056	0.03	2.6	1.15	3.78	16225	0.7038	30.87234	-30.16854	NAC
NS0106	194	196	NS	X073102	073102	1	G	W	34.98	39.02	1	0.774	0.6	0.044	2.33	1.78	0.117	0.028	0.635	0.063	0.04	2.58	1.1	3.72	16156	0.8568	31.04676	-30.18996	NAC
NS0106	258	260	NS	X073134	073134	1	G	W	36.07	37.46	1.02	0.774	0.6	0.044	2.29	1.77	0.096	0.018	0.692	0.055	0.06	2.7	1.11	3.87	16224	0.5508	30.87234	-30.32154	NAC
NS0106	190	192	NS	X073099	073099	1	G	W	36.63	36.3	1.03	0.8127	0.63	0.049	2.52	1.78	0.106	0.021	0.647	0.06	0.05	2.76	1.15	3.96	16154	0.6426	31.04676	-30.40416	NAC
NS0106	228	230	NS	X073119	073119	1	G	W	34.22	39.8	0.95	0.8514	0.66	0.042	2.46	1.78	0.095	0.016	0.639	0.058	0.04	2.95	1.26	4.25	16191	0.4896	31.04676	-30.55716	NAC
NS0106	250	252	NS	X073130	073130	1	G	W	36.46	36.88	0.85	0.8514	0.66	0.04	2.23	1.8	0.091	0.02	0.585	0.046	0.02	2.99	1.13	4.14	16220	0.612	31.3956	-30.7836	NAC
NS0106	256	258	NS	X073133	073133	1	G	W	33.85	40.96	1.02	0.7353	0.57	0.042	2.19	1.81	0.078	0.024	0.662	0.056	0.04	2.35	1.3	3.69	16223	0.7344	31.57002	-30.83562	NAC
NS0106	268	270	NS	X073139	073139	1	G	W	36.51	37.32	0.93	0.7611	0.59	0.045	2.09	1.81	0.124	0.021	0.562	0.056	0.09	2.77	0.97	3.83	16229	0.6426	31.57002	-30.92742	NAC
NS0106	134	136	NS	X073071	073071	1	G	W	35.74	37.5	0.99	0.8256	0.64	0.044	2.72	1.84	0.113	0.028	0.471	0.086	0.11	2.93	1.26	4.3	16126	0.8568	32.09328	-31.23648	NAC
NS0106	216	218	NS	X073113	073113	1	G	W	32.32	42.02	0.94	0.8256	0.64	0.041	2.57	1.83	0.083	0.022	0.606	0.072	0.11	3.08	1.35	4.54	16185	0.6732	31.91886	-31.24566	NAC
NS0106	84	86	NS	X073045	073045	1	G	W	32.49	41.46	1.29	0.5934	0.46	0.056	2.69	1.9	0.121	0.047	0.224	0.06	0.19	3.56	1.15	4.9	15957	1.4382	33.1398	-31.7016	NAC
NS0106	248	250	NS	X073129	073129	1	G	W	33.41	41.82	0.84	0.7482	0.58	0.04	2.13	1.86	0.081	0.022	0.528	0.047	0.04	2.59	1.3	3.93	16219	0.6732	32.44212	-31.76892	NAC
NS0106	236	238	NS	X073123	073123	1	G	W	34.01	40.87	0.84	0.774	0.6	0.038	2.21	1.86	0.081	0.018	0.532	0.058	0.05	2.52	1.33	3.9	16195	0.5508	32.44212	-31.89132	NAC
NS0106	274	276	NS	X073142	073142	1	G	W	36.61	36.86	1.07	0.774	0.6	0.049	2.21	1.88	0.101	0.024	0.479	0.061	0.1	2.83	1.16	4.09	16232	0.7344	32.79096	-32.05656	NAC
NS0106	202	204	NS	X073106	073106	1	G	W	31.42	41.73	1.26	0.8643	0.67	0.052	2.81	1.92	0.187	0.034	0.777	0.082	0.17	3.4	1.15	4.72	16160	1.0404	33.48864	-32.44824	NAC
NS0106	86	88	NS	X073046	073046	1	G	W	34.15	40.11	1.03	0.5418	0.42	0.048	2.44	1.93	0.099	0.031	0.147	0.049	0.1	3.18	1.35	4.63	15958	0.9486	33.66306	-32.71446	NAC
NS0106	276	278	NS	X073143	073143	1	G	W	36.52	35.96	1.17	0.8256	0.64	0.05	2.35	1.92	0.107	0.025	0.568	0.079	0.15	3.15	1.16	4.46	16233	0.765	33.48864	-32.72364	NAC
NS0106	262	264	NS	X073136	073136	1	G	W	35.72	36.81	1.11	0.8514	0.66	0.048	2.58	1.96	0.098	0.045	0.689	0.07	0.1	3.17	1.4	4.67	16226	1.377	34.18632	-32.80932	NAC
NS0106	50	52	NS	X073028	073028	1	G	W	34.86	39.38	0.94	0.7611	0.59	0.043	2.04	1.93	0.095	0.025	0.455	0.042	0.06	2.94	1.34	4.34	15904	0.765	33.66306	-32.89806	NAC
NS0106	110	112	NS	X073059	073059	1	G	W	37.1	36.02	1.05	0.6837	0.53	0.05	2.32	1.93	0.095	0.023	0.32	0.062	0.09	2.86	1.2	4.15	16114	0.7038	33.66306	-32.95926	NAC
NS0106	128	130	NS	X073068	073068	1	G	W	36.12	37.75	0.88	0.7353	0.57	0.041	2.35	1.97	0.082	0.021	0.241	0.046	0.06	2.57	1.35	3.98	16123	0.6426	34.36074	-33.71814	NAC
NS0106	116	118	NS	X073062	073062	1	G	W	35.38	38.02	0.99	0.7869	0.61	0.044	2.49	1.98	0.086	0.023	0.303	0.065	0.08	3.19	1.37	4.64	16117	0.7038	34.53516	-33.83136	NAC
NS0106	130	132	NS	X073069	073069	1	G	W	35.6	37.88	0.81	0.8256	0.64	0.037	2.48	2	0.079	0.019	0.297	0.053	0.09	2.99	1.38	4.46	16124	0.5814	34.884	-34.3026	NAC
NS0106	138	140	NS	X073073	073073	1	G	W	35.68	37.14	1.08	0.7482	0.58	0.047	2.69	2.05	0.087	0.029	0.476	0.077	0.12	2.61	1.47	4.2	16128	0.8874	35.7561	-34.8687	NAC
NS0106	224	226	NS	X073117	073117	1	G	W	34.67	37.73	0.94	0.8643	0.67	0.042	2.67	2.08	0.116	0.021	0.642	0.063	0.08	3.18	1.56	4.82	16189	0.6426	36.27936	-35.63676	NAC
NS0106	266	268	NS	X073138	073138	1	G	W	33.68	40.3	1.01	0.7353	0.57	0.043	2.31	2.13	0.071	0.019	0.592	0.066	0.08	2.51	1.76	4.35	16228	0.5814	37.15146	-36.57006	NAC
NS0106	62	64	NS	X073034	073034	1	G	W	34.82	38.54	1.04	0.6708	0.52	0.055	2.33	2.2	0.146	0.033	0.368	0.066	0.15	2.86	1.42	4.43	15910	1.0098	38.3724	-37.3626	NAC
NS0106	118	120	NS	X073063	073063	1	G	W	35.95	37.02	0.89	0.774	0.6	0.042	2.41	2.18	0.08	0.021	0.237	0.054	0.07	2.96	1.61	4.64	16118	0.6426	38.02356	-37.38096	NAC
NS0106	226	228	NS	X073118	073118	1	G	W	33.34	39.69	0.91	0.8643	0.67	0.038	2.47	2.18	0.08	0.016	0.595	0.051	0.15	3.06	1.86	5.07	16190	0.4896	38.02356	-37.53396	NAC
NS0106	170	172	NS	X073089	073089	1	G	W	32.03	42.67	0.72	0.8643	0.67	0.033	2.19	2.2	0.079	0.02	0.467	0.049	0.01	2.64	1.76	4.41	15982	0.612	38.3724	-37.7604	NAC
NS0106	246	248	NS	X073128	073128	1	G	W	33.98	39	0.91	0.8643	0.67	0.04	2.52	2.21	0.072	0.023	0.563	0.068	0.09	2.89	1.79	4.77	16200	0.7038	38.54682	-37.84302	NAC
NS0106	122	124	NS	X073065	073065	1	G	W	35.15	37.81	0.78	0.8256	0.64	0.035	2.4	2.3	0.088	0.02	0.261	0.047	0.09	3.07	1.74	4.9	16120	0.612	40.1166	-39.5046	NAC
NS0106	76	78	NS	X073041	073041	1	G	W	31.98	40.59	1.09	0.7095	0.55	0.048	2.72	2.36	0.113	0.027	0.255	0.069	0.21	3.95	1.81	5.97	15953	0.8262	41.16312	-40.33692	NAC
NS0106	278	280	NS	X073144	073144	1	G	W	36.06	35.74	1.35	0.7353	0.57	0.06	2.57	2.37	0.122	0.03	0.489	0.079	0.17	2.86	1.64	4.67	16234	0.918	41.33754	-40.41954	NAC
NS0106	136	138	NS	X073072	073072	1	G	W	34.34	38.84	0.95	0.7998	0.62	0.043	2.68	2.45	0.083	0.021	0.437	0.068	0.08	2.54	2.08	4.7	16127	0.6426	42.7329	-42.0903	NAC
NS0106	108	110	NS	X073058	073058	1	G	W	34.6	38.81	0.86	0.7095	0.55	0.039	2.19	2.46	0.098	0.022	0.281	0.044	0.07	2.88	1.87	4.82	16113	0.6732	42.90732	-42.23412	NAC
NS0106	120	122	NS	X073064	073064	1	G	W	34.7	38.28	0.8	0.7998	0.62	0.036	2.4	2.46	0.088	0.018	0.258	0.059	0.07	2.91	1.95	4.93	16119	0.5508	42.90732	-42.35652	NAC
NS0106	178	180	NS	X073093	073093	1	G	W	32.89	40.84	0.91	0.7998	0.62	0.04	2.4	2.66	0.13	0.031	0.578	0.064	0.05	2.23	2.21	4.49	16148	0.9486	46.39572	-45.44712	NAC
NS0106	140	142	NS	X073074	073074	1	G	W	33.24	38.37	0.93	0.9546	0.74	0.044	2.81	2.68	0.087	0.026	0.491	0.065	0.11	3.23	2.39	5.73	15967	0.7956	46.74456	-45.94896	NAC
NS0107	118	120	NS	X073205	073205	1	G	D	12.19	62.52	9.25	0.0645	0.05	0.392	2.04	0.005	0.021	3.84	1.74	0.031	0.39	4.14	1.12	5.65	16177	117.504	0.08721	117.41679	PAF(HC)
NS0107	120	122	NS	X073206	073206	1	G	D	12.06	58.48	10.67	0.258	0.2	0.465	2.58	0.05	0.014	3.6	2.25	0.035	0.25	4.87	2.54	7.66	16178	110.16	0.8721	109.2879	PAF(HC)
NS0107	124	126	NS	X073208	073208	1	G	D	12.79	56.46	11.01	0.2451	0.19	0.479	3.08	0.08	0.018	3.22	1.83	0.036	0.16	5.3	2.14	7.6	16180	98.532	1.39536	97.13664	PAF(HC)
NS0107	164	166	NS	X073228	073228	1	G	D	9.73	56.98	13.15	0.2451	0.19	0.639	5.17	0.08	0.014	3.04	2.27	0.04	0.26	3.96	2.68	6.9	16218	93.024	1.39536	91.62864	PAF(HC)
NS0107	126	128	NS	X073209	073209	1	G	D	16.31	52.78	8.13	0.4515	0.35	0.355	3.59	0.15	0.025	3.02	0.881	0.024	0.22	6.36	3.58	10.16	16181	92.412	2.6163	89.7957	PAF(HC)

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0107	130	132	NS	X073211	073211	1	G	D	12.09	56	12.97	0.0903	0.07	0.595	3.63	0.02	0.031	2.77	2.63	0.04	0.61	3.21	2.55	6.37	16201	84.762	0.34884	84.41316	PAF(HC)
NS0107	114	116	NS	X073203	073203	1	G	D	13.42	58.74	11.59	0.1677	0.13	0.454	1.53	0.02	0.033	2.57	2.45	0.042	0.63	3.77	1.25	5.65	16175	78.642	0.34884	78.29316	PAF(HC)
NS0107	132	134	NS	X073212	073212	1	G	D	10.22	59.03	12.57	0.1935	0.15	0.599	4.49	0.04	0.017	2.4	2.13	0.037	0.28	3.58	2.13	5.99	16202	73.44	0.69768	72.74232	PAF(HC)
NS0107	122	124	NS	X073207	073207	1	G	D	12.85	57.93	10.4	0.3612	0.28	0.453	3.2	0.08	0.018	2.32	1.62	0.056	0.17	5.12	2.33	7.62	16179	70.992	1.39536	69.59664	PAF(HC)
NS0107	162	164	NS	X073227	073227	1	G	D	9.41	58.08	13.38	0.1935	0.15	0.653	5.57	0.05	0.012	2.26	2.12	0.046	0.18	3.39	2.62	6.19	16217	69.156	0.8721	68.2839	PAF(HC)
NS0107	148	150	NS	X073220	073220	1	G	D	9.31	58.19	13.59	0.0645	0.05	0.654	5.58	0.04	0.015	1.95	2.13	0.037	0.26	3.63	1.97	5.86	16210	59.67	0.69768	58.97232	PAF(HC)
NS0107	150	152	NS	X073221	073221	1	G	D	9.17	56.88	14.14	0.0774	0.06	0.67	5.49	0.03	0.015	1.91	2.38	0.045	0.33	3.39	2.29	6.01	16211	58.446	0.52326	57.92274	PAF(HC)
NS0107	128	130	NS	X073210	073210	1	G	D	16.15	54.98	8.15	0.2838	0.22	0.365	3.64	0.08	0.042	1.93	0.735	0.019	0.79	4.09	2.67	7.55	16182	59.058	1.39536	57.66264	PAF(HC)
NS0107	116	118	NS	X073204	073204	1	G	D	10.09	58.46	15.03	0.0903	0.07	0.603	2.84	0.02	0.037	1.85	3.31	0.049	0.26	3.28	1.47	5.01	16176	56.61	0.34884	56.26116	PAF(HC)
NS0107	178	180	NS	X073235	073235	1	G	D	9.56	54.52	13.4	0.1161	0.09	0.64	6.32	1.19	0.015	2.34	1.92	0.037	0.2	3.67	3.03	6.9	15919	71.604	20.75598	50.84802	PAF(HC)
NS0107	140	142	NS	X073216	073216	1	G	D	10.57	56.73	12.53	0.2967	0.23	0.684	5.91	0.39	0.015	1.87	1.59	0.035	0.3	3.39	2.6	6.29	16206	57.222	6.80238	50.41962	PAF(HC)
NS0107	170	172	NS	X073231	073231	1	G	D	9.1	56.39	13.46	0.1419	0.11	0.676	5.83	0.93	0.015	2.12	2.2	0.042	0.2	3.38	2.82	6.4	15915	64.872	16.22106	48.65094	PAF(HC)
NS0107	168	170	NS	X073230	073230	1	G	D	9.27	52.17	12.44	0.2451	0.19	0.696	5.86	2.61	0.024	3.06	2.23	0.04	0.37	3.09	4.36	7.82	15914	93.636	45.52362	48.11238	PAF(HC)
NS0107	152	154	NS	X073222	073222	1	G	D	9.6	57.6	13.58	0.1806	0.14	0.654	5.89	0.04	0.013	1.56	1.93	0.036	0.35	3.85	1.69	5.89	16212	47.736	0.69768	47.03832	PAF(HC)
NS0107	166	168	NS	X073229	073229	1	G	D	9.54	54.38	13.05	0.2838	0.22	0.683	5.63	1.5	0.019	2.38	2.26	0.034	0.16	3.44	3.38	6.98	15913	72.828	26.163	46.665	PAF(HC)
NS0107	142	144	NS	X073217	073217	1	G	D	11.12	55.4	12.88	0.3741	0.29	0.696	6.21	0.31	0.018	1.7	1.54	0.036	0.25	3.37	2.55	6.17	16207	52.02	5.40702	46.61298	PAF(HC)
NS0107	176	178	NS	X073234	073234	1	G	D	9.03	54.82	13.18	0.129	0.1	0.628	5.89	1.53	0.021	2.39	2.18	0.033	0.34	3.51	3.2	7.05	15918	73.134	26.68626	46.44774	PAF(HC)
NS0107	146	148	NS	X073219	073219	1	G	D	8.91	59.44	13.42	0.1161	0.09	0.659	5.31	0.09	0.015	1.55	2.21	0.043	0.29	3.51	1.83	5.63	16209	47.43	1.56978	45.86022	PAF(HC)
NS0107	144	146	NS	X073218	073218	1	G	D	9.65	57.65	13.7	0.1548	0.12	0.723	5.75	0.09	0.014	1.54	2.01	0.052	0.22	3.39	2.07	5.68	16208	47.124	1.56978	45.55422	PAF(HC)
NS0107	134	136	NS	X073213	073213	1	G	D	9.87	57.85	13.05	0.1161	0.09	0.647	5.46	0.33	0.017	1.62	1.95	0.045	0.42	3.19	2.2	5.81	16203	49.572	5.75586	43.81614	PAF(HC)
NS0107	154	156	NS	X073223	073223	1	G	D	9.54	57.39	14	0.2838	0.22	0.68	5.82	0.04	0.012	1.37	2.13	0.041	0.21	3.58	1.98	5.77	16213	41.922	0.69768	41.22432	PAF(HC)
NS0107	156	158	NS	X073224	073224	1	G	D	10.48	57.19	12.67	0.2838	0.22	0.627	6.12	0.05	0.012	1.37	1.46	0.032	0.28	3.86	1.82	5.96	16214	41.922	0.8721	41.0499	PAF(HC)
NS0107	186	188	NS	X073239	073239	1	G	D	8.48	56.69	14.15	0.0903	0.07	0.664	6.17	0.76	0.012	1.76	2.3	0.036	0.15	3.6	2.45	6.2	15923	53.856	13.25592	40.60008	PAF(HC)
NS0107	190	192	NS	X073241	073241	1	G	D	8.57	57.55	13.01	0.1161	0.09	0.618	5.98	1.1	0.013	1.94	2.03	0.031	0.2	3.45	2.76	6.41	15925	59.364	19.1862	40.1778	PAF(HC)
NS0107	160	162	NS	X073226	073226	1	G	D	10.7	57.81	12.47	0.2451	0.19	0.619	5.65	0.06	0.021	1.32	1.66	0.034	0.47	3.16	2.12	5.75	16216	40.392	1.04652	39.34548	PAF(HC)
NS0107	112	114	NS	X073202	073202	1	G	D	13.99	59.39	11.52	0.0774	0.06	0.498	0.78	0.02	0.045	1.15	2.48	0.035	0.97	2.84	1.12	4.93	16174	35.19	0.34884	34.84116	PAF(HC)
NS0107	158	160	NS	X073225	073225	1	G	D	9.98	57.18	13.03	0.4257	0.33	0.653	5.99	0.06	0.012	1.1	1.69	0.032	0.25	3.95	2.06	6.26	16215	33.66	1.04652	32.61348	PAF(HC)
NS0107	188	190	NS	X073240	073240	1	G	D	8.28	55.82	13.65	0.1419	0.11	0.612	6	1.64	0.028	1.9	2.37	0.048	0.41	3.44	3.17	7.02	15924	58.14	28.60488	29.53512	PAF(HC)
NS0107	172	174	NS	X073232	073232	1	G	D	9.1	56.24	13.21	0.1548	0.12	0.651	6.21	0.86	0.016	1.41	1.85	0.042	0.29	3.5	2.41	6.2	15916	43.146	15.00012	28.14588	PAF(HC)
NS0107	182	184	NS	X073237	073237	1	G	D	8.56	56.23	13.78	0.1161	0.09	0.653	6.4	1.26	0.012	1.39	2.12	0.04	0.16	3.61	2.57	6.34	15921	42.534	21.97692	20.55708	PAF(HC)
NS0107	174	176	NS	X073233	073233	1	G	D	8.84	56.02	13.48	0.1548	0.12	0.648	6.21	1.2	0.013	1.22	2.03	0.032	0.19	3.57	2.4	6.16	15917	37.332	20.9304	16.4016	PAF(HC)
NS0107	194	196	NS	X073243	073243	1	G	D	8.7	54.28	12.14	0.1935	0.15	0.578	6.07	2.69	0.027	1.98	1.95	0.031	0.14	3.38	3.48	7	15927	60.588	46.91898	13.66902	PAF(HC)
NS0107	192	194	NS	X073242	073242	1	G	D	8.38	55.7	12.25	0.1935	0.15	0.575	5.99	2.3	0.019	1.73	1.96	0.037	0.22	3.51	3.27	7	15926	52.938	40.1166	12.8214	PAF(HC)
NS0107	200	202	NS	X073247	073247	1	G	D	9.28	56.17	12.75	0.129	0.1	0.636	6.48	1.46	0.015	1.22	1.62	0.085	0.2	3.64	2.38	6.22	15930	37.332	25.46532	11.86668	PAF(HC)
NS0107	184	186	NS	X073238	073238	1	G	D	8.67	55.94	13.23	0.1548	0.12	0.641	6.46	1.58	0.016	1.19	1.96	0.036	0.2	3.83	2.5	6.53	15922	36.414	27.55836	8.85564	PAF(LC)
NS0107	180	182	NS	X073236	073236	1	G	D	8.87	54.43	13.16	0.1806	0.14	0.625	6.47	2.48	0.021	1.64	2.08	0.039	0.44	3.68	3.35	7.47	15920	50.184	43.25616	6.92784	PAF(LC)
NS0107	64	66	NS	X073177	073177	1	G	D	27.66	47.22	1.2	0.5418	0.42	0.05	1.83	0.45	0.102	0.327	0.211	0.049	0.62	7.66	0.63	8.91	16258	10.0062	7.8489	2.1573	PAF(LC)
NS0107	106	108	NS	X073199	073199	1	G	D	52.85	12.92	1.65	2.0124	1.56	0.071	0.47	0.1	0.172	0.116	0.21	0.045	3.69	1.78	0.8	6.27	16171	3.5496	1.7442	1.8054	PAF(LC)
NS0107	110	112	NS	X073201	073201	1	G	D	28.11	47.98	5.11	0.5418	0.42	0.218	0.76	0.05	0.088	0.082	0.562	0.036	2.04	1.46	0.62	4.12	16173	2.5092	0.8721	1.6371	PAF(LC)
NS0107	108	110	NS	X073200	073200	1	G	D	32.64	41.88	4.41	1.1223	0.87	0.175	0.42	0.05	0.122	0.081	0.296	0.02	2.62	1.55	0.65	4.82	16172	2.4786	0.8721	1.6065	PAF(LC)
NS0107	100	102	NS	X073196	073196	1	G	D	55.22	8.73	1.66	3.4314	2.66	0.079	0.31	0.08	0.215	0.092	0.186	0.041	3.63	1.55	0.8	5.98	16168	2.8152	1.39536	1.41984	PAF(LC)
NS0107	62	64	NS	X073176	073176	1	G	D	30.5	46.86	0.96	0.3612	0.28	0.039	1.56	0.36	0.079	0.233	0.173	0.046	0.62	5.07	0.34	6.03	16257	7.1298	6.27912	0.85068	PAF(LC)
NS0107	102	104	NS	X073197	073197	1	G	D	55.39	9.08	1.17	2.5155	1.95	0.053	0.3	0.07	0.2	0.061	0.149	0.023	4.97	1.27	0.67	6.91	16169	1.8666	1.22094	0.64566	PAF(LC)
NS0107	98	100	NS	X073194	073194	1	G	D	52.16	12.21	1.77	4.1796	3.24	0.083	0.34	0.09	0.192	0.068	0.18	0.04	3.52	1.62	0.86	6	16167	2.0808	1.56978	0.51102	PAF(LC)
NS0107	104	106	NS	X073198	073198	1	G	D	53.53	12.25	1.18	1.8447	1.43	0.05	0.42	0.09	0.183	0.068	0.167	0.043	4.84	1.5	0.7	7.04	16170	2.0808	1.56978	0.51102	PAF(LC)
NS0107	54	56	NS	X073172	073172	1	G	D	34.62	37.77	3.63	0.2967	0.23	0.162	0.82	0.09	0.163	0.056	0.071	0.022	5.28	1.43	0.31	7.02	16145	1.7136	1.56978	0.14382	PAF(LC)
NS0107	24	26	NS	X073157	073157	1	G	D	33.66	47.64	1.76	0.2838	0.22	0.071	0.11	0.02	0.055	0.016	0.014	0.01	1.22	0.65	0.02	1.89	16130	0.4896	0.34884	0.14076	PAF(LC)
NS0107	20	22	NS	X073155	073155	1	G	D	33.27	47.13	2.11	0.2838	0.22	0.087	0.13	0.02	0.053	0.015	0.009	0.012	1.69	0.77	0.06	2.52	16236	0.459	0.34884	0.11016	PAF(LC)
NS0107	18	20	NS	X073154	073154	1	G	D	32.29	51.1	1.18	0.0645	0.05	0.049	0.06	0.005	0.034	0.005	0.008	0.019	0.99	0.38	-0.01	1.36	16235	0.153	0.08721	0.06579	PAF(LC)
NS0107	22	24	NS	X073156	073156	1	G	D	29.55	50.27	3.07	0.3741	0.29	0.123	0.15	0.02	0.06	0.013	0.015	0.026	1.96	1.11	0.19	3.26	16129	0.3978	0.34884	0.04896	PAF(LC)
NS0107	66	68	NS	X073178	073178	1	G	D																	16259	0	0	0	PAF(LC)
NS0107	4	8	NS	BX080147-BX080148	X080147	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1560	-0.0306	-0.01744	-0.013158	NAF
NS0107	8	12	NS	BX080149-BX080150	X080149	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1561	-0.0306	-0.01744	-0.013158	NAF
NS0107	12	16	NS	BX080151-BX080152	X080151	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1562	-0.0306	-0.01744	-0.013158	NAF
NS0107	32	36	NS	BX080161-BX080162	X080161	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1567	-0.0306	-0.01744	-0.013158	NAF
NS0107	96	100	NS	BX080193-BX080194	X080193	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1583	-0.0306	-0.01744	-0.013158	NAF
NS0107	100	104	NS	BX080196-BX080197	X080196	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1584	-0.0306	-0.01744	-0.013158	NAF
NS0107	104	108	NS	BX080198-BX080199	X080198	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1585	-0.0306	-0.01744	-0.013158	NAF
NS0107	108	112	NS	BX080200-BX080201	X080200	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1586	-0.0306	-0.01744	-0.013158	NAF
NS0107	112	116	NS	BX080202-BX080203	X080202	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1587	-0.0306	-0.01744	-0.013158	NAF
NS0107	116	120	NS	BX080204-BX080205	X080204	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1588	-0.0306	-0.01744	-0.013158	NAF
NS0107	120	124	NS	BX080206-BX080207	X080206	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1589	-0.0306	-0.01744	-0.013158	NAF
NS0107	124	128	NS	BX080208-BX080209	X080208	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1590	-0.0306	-0.01744	-0.013158	NAF
NS0107	128	132	NS	BX080210-BX080211	X080210	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1591	-0.0306	-0.01744	-0.013158	NAF
NS0107	132	136	NS	BX080212-BX080213	X080212	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1592	-0.0306	-0.01744	-0.013158	NAF
NS0107	136	140	NS	BX080214-BX080215	X080214	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1593	-0.0306	-0.01744	-0.013158	NAF
NS0107	140	144	NS	BX080216-BX080217	X080216	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1594	-0.0306	-0.01744	-0.013158	NAF
NS0107	144	148	NS	BX080218-BX080219	X080218	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1595	-0.0306	-0.01744	-0.013158	NAF
NS0107	148	152	NS	BX080220-BX080221	X080220	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1596	-0.0306	-0.01744	-0.013158	NAF
NS0107	152	156	NS	BX080222-BX080223	X080222	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1597	-0.0306	-0.01744	-0.013158	NAF
NS0107	156	160	NS	BX080224-BX080225	X080224	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1598	-0.0306	-0.01744	-0.013158	NAF
NS0107	160	164	NS	BX080226-BX080227	X080226	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1599	-0.0306	-0.01744	-0.013158	NAF
NS0107	164	168	NS	BX080228-BX080229	X080228	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1600	-0.0306	-0.01744	-0.013158	NAF
NS0107	170	174	NS	BX080231-BX080232	X080231	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1601	-0.0306	-0.01744	-0.013158	NAF
NS0107	174	178	NS	BX080233-BX080234	X080233	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1602	-0.0306	-0.01744	-0.013158	NAF
NS0107	178	182	NS	BX080235-BX080236	X080235	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1603	-0.0306	-0.01744	-0.013158	NAF
NS0107	182	186	NS	BX080237-BX080238	X080237	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1604	-0.0306	-0.01744	-0.013158	NAF
NS0107	186	190	NS	BX080239-BX080240	X080239	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1605	-0.0306	-0.01744	-0.013158	NAF
NS0107	190	194	NS	BX080241-BX080242	X080241	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1606	-0.0306	-0.01744	-0.013158	NAF
NS0107	194	198	NS	BX080243-BX080244	X080243	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1607	-0.0306	-0.01744	-0.013158	NAF
NS0107	198	200	NS	BX080245	X080245	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1608	-0.0306	-0.01744	-0.013158	NAF
NS0107	200	202	NS	BX080247	X080247	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1609	-0.0306	-0.01744	-0.013158	NAF
NS0107	56	58	NS	X073173	073173	1	G	D	35.88	42.86	1.42	0.5934	0.46	0.058	0.25	0.05	0.08	0.028	0.045	0.016	2.67	0.61	0.11	3.39	16146	0.8568	0.8721	-0.0153	NAF
NS0107	26	28	NS	X073158	073158	1	G	D	36.86	43.46	1.34	0.2193	0.17	0.058	0.13	0.02	0.052	0.009	0.012	0.018	1.37	0.47	-0.03	1.81	16131	0.2754	0.34884	-0.07344	NAF
NS0107	28	30	NS	X073159	073159	1	G	D	31.15	51.91	1.41	0.1677	0.13	0.057	0.16	0.02	0.055	0.007	0.008	0.016	1.32	0.44	-0.13	1.63	16132	0.2142	0.34884	-0.13464	NAF
NS0107	30	32	NS	X073160	073160	1	G	D	34.34	48.46	1.01	0.1161	0.09	0.043	0.1	0.02	0.049	0.007	0.008	0.028	0.83	0.29	-0.07	1.05	16133	0.2142	0.34884	-0.13464	NAF
NS0107	32	34	NS	X073161	073161	1	G	D	36.05	43.71	1.74	0.4644	0.36	0.067	0.14	0.02	0.072	0.007	0.02	0.014	1.33	0.59	-0.02	1.9	16134	0.2142	0.34884	-0.13464	NAF
NS0107	34	36	NS	X073162	073162	1	G	D	29.33	55.31	0.92	0.3354	0.26	0.04	0.1	0.02	0.048	0.005	0.016	0.016	0.76	0.3	-0.03	1.03	16135	0.153	0.34884	-0.19584	NAF
NS0107	16	20	NS	BX080153-BX080154	X080153	2			69.68	1.902	0.152	0.031	0.02232	0.007	0.094	0.025	0.011	0.006	0.002	0.086	-0.01	-0.01	-0.01	-0.03	1563	0.1836	0.43605	-0.25245	NAF
NS0107	24	28	NS	BX080157-BX080158	X080157	2			69.76	1.502	0.135	0.055	0.0396	0.005	0.083	0.023	0.013	0.004	0.001	0.069	-0.01	-0.01	-0.01	-0.03	1565	0.1224	0.401166	-0.278766	NAF
NS0107	88	90	NS	BX080189	X080189	2			68.95	2.035	0.116	0.118	0.08496	0.013	0.087	0.027	0.024	0.004	0.005	0.074	-0.01	-0.01	-0.01	-0.03	1581	0.1224	0.470934	-0.348534	NAF
NS0107	36	38	NS	X073163	073163	1	G	D	29	55.92	0.87	0.3225	0.25	0.035	0.1	0.03	0.052	0.005	0.014	0.013	0.74	0.24	-0.1	0.88	16136	0.153	0.52326	-0.37026	NAF
NS0107	90	92	NS	X073190	073190	1	G	D	46.22	25.93	0.87	0.2838	0.22	0.037	0.25	0.03	0.133	0.005	0.012	0.005	5.58	0.65	0.12	6.35	16271	0.153	0.52326	-0.37026	NAF
NS0107	52	56	NS	BX080171-BX080172	X080171	2			69.1	1.883	0.12	0.111	0.07992	0.014	0.091	0.029	0.015	0.004	0.006	0.072	-0.01	-0.01	-0.01	-0.03	1572	0.1224	0.505818	-0.383418	NAF
NS0107	84	88	NS	BX080187-BX080188	X080187	2			68.29	2.017	0.063	0.029	0.02088	0.011	0.09	0.027	0.024	0.002	0.001	0.053	0.18	-0.01	-0.01	0.16	1580	0.0612	0.470934	-0.409734	NAF
NS0107	96	98	NS	X073193	073193	1	G	D	47.98	20.77	1.58	2.7348	2.12	0.066	0.29	0.08	0.157	0.032	0.13	0.033	3.38	1.36	0.67	5.41	16166	0.9792	1.39536	-0.41616	NAF
NS0107	36	40	NS	BX080163-BX080164	X080163	2			70.47	1.48	0.076	0.061	0.04392	0.003	0.098	0.03	0.019	0.003	0.002	0.066	-0.01	-0.01	-0.01	-0.03	1568	0.0918	0.52326	-0.43146	NAF
NS0107	38	40	NS	X073164	073164	1	G	D	29.09	55.93	0.62	0.4386	0.34	0.024	0.1	0.03	0.045	0.003	0.045	0.017	0.67	0.09	-0.11	0.65	16137	0.0918	0.52326	-0.43146	NAF
NS0107	42	44	NS	X073166	073166	1	G	D	31.47	52.8	0.67	0.0903	0.07	0.03	0.1	0.03	0.046	0.003	0.074	0.014	0.63	0.19	0.05	0.87	16139	0.0918	0.52326	-0.43146	NAF
NS0107	44	48	NS	BX080167-BX080168	X080167	2			69.24	1.678	0.065	0.051	0.03672	0.005	0.083	0.03	0.017	0.003	0.002	0.068	-0.01	-0.01	-0.01	-0.03	1570	0.0918	0.52326	-0.43146	NAF
NS0107	48	52	NS	BX080169-BX080170	X080169	2			69.71	1.365	0.062	0.051	0.03672	0.008	0.091	0.03	0.014	0.003	0.003	0.065	-0.01	-0.01	-0.01	-0.03	1571	0.0918	0.52326	-0.43146	NAF
NS0107	28	30	NS	BX080159	X080159	2			69.41	1.962	0.152	0.069	0.04968	0.009	0.114	0.033	0.018	0.004	0.007	0.077	-0.01	-0.01	-0.01	-0.03	1566	0.1224	0.575586	-0.453186	NAF
NS0107	40	44	NS	BX080165-BX080166	X080165	2			70.27	1.876	0.075	0.054	0.03888	0.002	0.097	0.032	0.017	0.003	0.004	0.067	-0.01	-0.01	-0.01	-0.03	1569	0.0918	0.558144	-0.466344	NAF
NS0107	0	4	NS	BX080145-BX080146	X080145	2			67.63	2.043	0.136	0.043	0.03096	0.001	0.029	0.038	0.005	0.006	0.006	0.096	-0.01	-0.01	-0.01	-0.03	1559	0.1836	0.662796	-0.479196	NAF
NS0107	76	80	NS	BX080183-BX080184	X080183	2			66.47	4.12	0.093	0.066	0.04752	0.004	0.146	0.035	0.02	0.004	0.006	0.073	-0.01	-0.01	-0.01	-0.03	1578	0.1224	0.61047	-0.48807	NAF
NS0107	20	24	NS	BX080155-BX080156	X080155	2			66.85	1.488	0.135	0.005	0.0036	0.001	0.009	0.032	0.015	0.002	0.001	0.105	-0.01	-0.01	-0.01	-0.03	1564	0.0612	0.558144	-0.496944	NAF
NS0107	40	42	NS	X073165	073165	1	G	D	35.11	46.4	1.06	0.3483	0.27	0.044	0.12	0.04	0.065	0.006	0.078	0.012	1.06	0.34	0.04	1.44	16138	0.1836	0.69768	-0.51408	NAF
NS0107	72	76	NS	BX080181-BX080182	X080181	2			66.69	4.114	0.064	0.053	0.03816	0.001	0.162	0.034	0.01	0.002	0.009	0.068	-0.01	-0.01	-0.01	-0.03	1577	0.0612	0.593028	-0.531828	NAF
NS0107	48	50	NS	X073169	073169	1	G	D	37.57	42.65	1	0.258	0.2	0.045	0.08	0.04	0.083	0.005	0.049	0.009	1.32	0.4	0.16	1.88	16142	0.153	0.69768	-0.54468	NAF
NS0107	86	88	NS	X073188	073188	1	G	D	40.54	36.63	0.76	0.1032	0.08	0.029	0.11	0.04	0.192	0.005	0.009	0.017	3.34	0.51	-0.01	3.84	16269	0.153	0.69768	-0.54468	NAF
NS0107	92	94	NS	X073191	073191	1	G	D	35.4	41.77	0.94	1.548	1.2	0.039	0.17	0.04	0.123	0.005	0.062	0.018	3.48	0.4	0.51	4.39	16272	0.153	0.69768	-0.54468	NAF
NS0107	88	90	NS	X073189	073189	1	G	D	47	24.96	0.99	0.4644	0.36	0.038	0.25	0.04	0.159	0.004	0.024	0.019	4.79	0.7	0.1	5.59	16270	0.1224	0.69768	-0.57528	NAF
NS0107	80	84	NS	BX080185-BX080186	X080185	2			68.69	3.293	0.076	0.057	0.04104	0.009	0.14	0.039	0.013	0.003	0.008	0.067	-0.01	-0.01	-0.01	-0.03	1579	0.0918	0.680238	-0.588438	NAF
NS0107	92	96	NS	BX080191-BX080192	X080191	2			65.8	4.197	0.122	0.233	0.16776	0.001	0.059	0.039	0.025	0.003	0.01	0.1	-0.01	-0.01	-0.01	-0.03	1582	0.0918	0.680238	-0.588438	NAF
NS0107	52	54	NS	X073171	073171	1	G	D	36.35	37.36	2.44	2.1414	1.66	0.098	0.3	0.05	0.101	0.009	0.207	0.016	3.5	1.04	0.26	4.8	16144	0.2754	0.8721	-0.5967	NAF
NS0107	56	60	NS	BX080173-BX080174	X080173	2			69.76	1.734	0.112	0.054	0.03888	0.019	0.118	0.043	0.014	0.005	0.006	0.072	-0.01	-0.01	-0.01	-0.03	1573	0.153	0.750006	-0.597006	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0107	44	46	NS	X073167	073167	1	G	D	34.04	48.64	0.92	0.258	0.2	0.04	0.08	0.04	0.07	0.003	0.135	0.016	0.79	0.31	0.13	1.23	16140	0.0918	0.69768	-0.60588	NAF
NS0107	46	48	NS	X073168	073168	1	G	D	34.98	46.58	0.82	0.5031	0.39	0.039	0.07	0.05	0.062	0.006	0.083	0.006	1.21	0.25	-0.04	1.42	16141	0.1836	0.8721	-0.6885	NAF
NS0107	64	68	NS	BX080177-BX080178	X080177	2			68.17	3.576	0.07	0.059	0.04248	0.01	0.192	0.048	0.009	0.004	0.012	0.074	-0.01	-0.01	-0.01	-0.03	1575	0.1224	0.837216	-0.714816	NAF
NS0107	50	52	NS	X073170	073170	1	G	D	36.48	43.67	1.09	0.5031	0.39	0.042	0.15	0.05	0.062	0.004	0.072	0.016	1.38	0.39	-0.03	1.74	16143	0.1224	0.8721	-0.7497	NAF
NS0107	68	72	NS	BX080179-BX080180	X080179	2			69.43	4.058	0.067	0.062	0.04464	0.012	0.184	0.053	0.012	0.004	0.014	0.067	-0.01	-0.01	-0.01	-0.03	1576	0.1224	0.924426	-0.802026	NAF
NS0107	60	64	NS	BX080175-BX080176	X080175	2			69.66	1.75	0.03	0.029	0.02088	0.011	0.123	0.059	0.014	0.006	0.004	0.061	-0.01	-0.01	-0.01	-0.03	1574	0.1836	1.029078	-0.845478	NAF
NS0107	78	80	NS	X073184	073184	1	G	D	39.28	40.81	0.69	0.2838	0.22	0.031	0.12	0.06	0.116	0.005	0.141	0.027	1.1	0.55	0.03	1.68	16265	0.153	1.04652	-0.89352	NAF
NS0107	94	96	NS	X073192	073192	1	G	D	41.6	32.24	1.17	1.1739	0.91	0.047	0.44	0.11	0.137	0.013	0.072	0.062	3.03	1.53	0.44	5	16165	0.3978	1.91862	-1.52082	NAF
NS0107	136	138	NS	X073214	073214	1	G	D	12.04	51.1	12.25	0.2193	0.17	0.676	7.33	1.9	0.038	1.03	1.12	0.027	0.36	3.69	2.71	6.76	16204	31.518	33.1398	-1.6218	NAF
NS0107	84	86	NS	X073187	073187	1	G	D	38.04	37.75	0.73	0.2838	0.22	0.032	0.75	0.14	0.115	0.014	0.029	0.097	1.89	3.45	0.02	5.36	16268	0.4284	2.44188	-2.01348	NAF
NS0107	58	60	NS	X073174	073174	1	G	D	30.29	42.42	2.17	0.387	0.3	0.093	2.16	0.32	0.092	0.101	0.196	0.038	1.4	7.06	0.35	8.81	16255	3.0906	5.58144	-2.49084	NAF
NS0107	76	78	NS	X073183	073183	1	G	D	37.87	39.28	0.65	0.5676	0.44	0.03	0.8	0.2	0.111	0.021	0.075	0.111	0.82	3.21	0	4.03	16264	0.6426	3.4884	-2.8458	NAF
NS0107	82	84	NS	X073186	073186	1	G	D	36.55	38.93	0.82	0.4515	0.35	0.033	0.97	0.27	0.132	0.046	0.104	0.173	1.61	4.34	0	5.95	16267	1.4076	4.70934	-3.30174	NAF
NS0107	60	62	NS	X073175	073175	1	G	D	32.28	47.37	0.74	0.2064	0.16	0.034	0.8	0.32	0.085	0.055	0.04	0.021	0.69	3.65	-0.01	4.33	16256	1.683	5.58144	-3.89844	NAF
NS0107	72	74	NS	X073181	073181	1	G	D	35.68	40.66	0.71	0.5547	0.43	0.03	1.48	0.28	0.092	0.03	0.155	0.142	0.21	4.72	-0.08	4.85	16262	0.918	4.88376	-3.96576	NAF
NS0107	70	72	NS	X073180	073180	1	G	D	33.86	40.32	1.14	0.6063	0.47	0.048	1.59	0.46	0.13	0.118	0.158	0.37	0.17	6.39	-0.11	6.45	16261	3.6108	8.02332	-4.41252	NAF
NS0107	74	76	NS	X073182	073182	1	G	D	36.24	41.1	0.54	0.5934	0.46	0.025	1.2	0.31	0.092	0.012	0.131	0.13	0.08	4.22	-0.2	4.1	16263	0.3672	5.40702	-5.03982	NAF
NS0107	80	82	NS	X073185	073185	1	G	D	35.87	37.9	1.08	0.6321	0.49	0.047	1.35	0.44	0.125	0.066	0.137	0.35	0.36	6.35	-0.11	6.6	16266	2.0196	7.67448	-5.65488	NAF
NS0107	68	70	NS	X073179	073179	1	G	D	35.28	40.07	1.06	0.5934	0.46	0.044	1.48	0.41	0.116	0.046	0.153	0.324	0.35	4.65	-0.22	4.78	16260	1.4076	7.15122	-5.74362	NAF
NS0107	198	200	NS	X073245	073245	1	G	D	8.33	53.88	12.69	0.2064	0.16	0.605	6.37	3	0.017	1.34	2.06	0.049	0.18	3.59	3.72	7.49	15929	41.004	52.326	-11.322	NAF
NS0107	196	198	NS	X073244	073244	1	G	D	8.84	50.63	10.48	0.3612	0.28	0.503	6.71	5.17	0.033	1.79	1.54	0.021	0.31	3.78	5.37	9.46	15928	54.774	90.17514	-35.40114	NAC
NS0107	138	140	NS	X073215	073215	1	G	D	9.84	49.77	10.48	0.2838	0.22	0.52	7.88	4.54	0.017	1.36	0.911	0.024	0.38	3.97	4.95	9.3	16205	41.616	79.18668	-37.57068	NAC
NS0108	176	178	NS	X073337	073337	1	M	W	27.97	40.81	2.27	0.6966	0.54	0.1	2.68	0.55	0.092	0.978	0.096	0.005	0.46	10.03	1.83	12.32	16397	29.9268	9.5931	20.3337	PAF(HC)
NS0108	174	176	NS	X073336	073336	1	G	W	23.16	47.61	3.21	0.6063	0.47	0.141	2.81	0.33	0.059	0.774	0.104	0.015	0.47	9.03	1.64	11.14	16396	23.6844	5.75586	17.92854	PAF(HC)
NS0108	34	36	NS	X073265	073265	1	G	D	33.56	45.44	1.78	0.5934	0.46	0.088	0.33	0.04	0.088	0.174	0.473	0.005	1.76	0.2	0.37	2.33	16326	5.3244	0.69768	4.62672	PAF(LC)
NS0108	92	94	NS	X073294	073294	1	G	D	34.79	38.25	2.21	0.7353	0.57	0.093	1.91	0.19	0.076	0.133	0.441	0.003	0.73	4.98	0.35	6.06	16355	4.0698	3.31398	0.75582	PAF(LC)
NS0108	32	34	NS	X073264	073264	1	G	D	35.97	43.57	1.66	0.5418	0.42	0.08	0.22	0.03	0.079	0.03	0.683	0.014	1.14	0.34	0.02	1.5	16325	0.918	0.52326	0.39474	PAF(LC)
NS0108	12	14	NS	X073254	073254	1	G	D	33.85	45.02	2.53	0.0645	0.05	0.112	0.21	0.05	0.027	0.041	0.053	0.012	2.09	0.82	0.24	3.15	16315	1.2546	0.8721	0.3825	PAF(LC)
NS0108	14	16	NS	X073255	073255	1	G	D	33.96	45.97	2.26	0.0645	0.05	0.101	0.19	0.04	0.032	0.033	0.047	0.011	1.83	0.69	0.1	2.62	16316	1.0098	0.69768	0.31212	PAF(LC)
NS0108	52	54	NS	X073274	073274	1	G	D	35.99	42.14	2.42	0.645	0.5	0.106	0.31	0.1	0.065	0.067	0.55	0.012	1.25	0.59	0.18	2.02	16335	2.0502	1.7442	0.306	PAF(LC)
NS0108	30	32	NS	X073263	073263	1	G	D	36.12	42.18	2.07	0.6579	0.51	0.093	0.24	0.04	0.082	0.029	0.618	0.015	1.38	0.47	0	1.85	16324	0.8874	0.69768	0.18972	PAF(LC)
NS0108	16	18	NS	X073256	073256	1	G	D	36.04	43.35	2.38	0.0774	0.06	0.104	0.13	0.03	0.028	0.018	0.032	0.011	1.65	0.64	-0.13	2.16	16317	0.5508	0.52326	0.02754	PAF(LC)
NS0108	0	4	NS	BX080248-BX080249	X080248	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1610	-0.0306	-0.01744	-0.013158	NAF
NS0108	4	8	NS	BX080250-BX080251	X080250	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1611	-0.0306	-0.01744	-0.013158	NAF
NS0108	8	12	NS	BX080252-BX080253	X080252	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1612	-0.0306	-0.01744	-0.013158	NAF
NS0108	20	22	NS	X073258	073258	1	G	D	35.9	41.88	2.96	0.1548	0.12	0.114	0.12	0.03	0.084	0.014	0.034	0.013	1.75	0.96	0.12	2.83	16319	0.4284	0.52326	-0.09486	NAF
NS0108	28	30	NS	X073262	073262	1	G	D	39.71	39.34	1.36	0.2967	0.23	0.064	0.17	0.02	0.077	0.008	0.265	0.011	1.21	0.27	-0.19	1.29	16323	0.2448	0.34884	-0.10404	NAF
NS0108	36	38	NS	X073266	073266	1	G	D	36.61	42.12	1.44	0.8643	0.67	0.068	0.2	0.02	0.089	0.008	0.595	0.007	1.4	0.33	-0.04	1.69	16327	0.2448	0.34884	-0.10404	NAF
NS0108	38	40	NS	X073267	073267	1	G	D	35.44	43.64	1.5	0.8772	0.68	0.075	0.16	0.02	0.087	0.008	0.632	0.005	1.3	0.36	0.09	1.75	16328	0.2448	0.34884	-0.10404	NAF
NS0108	26	28	NS	X073261	073261	1	G	D	36.69	42.28	2.06	0.2451	0.19	0.081	0.12	0.02	0.092	0.006	0.078	0.008	1.71	0.63	-0.07	2.27	16322	0.1836	0.34884	-0.16524	NAF
NS0108	40	42	NS	X073268	073268	1	G	D	36.73	42.59	1.63	0.516	0.4	0.075	0.07	0.02	0.111	0.006	0.524	0.026	1.13	0.39	0.1	1.62	16329	0.1836	0.34884	-0.16524	NAF
NS0108	58	60	NS	X073277	073277	1	G	D	36.47	41.72	1.95	0.8256	0.64	0.086	0.18	0.03	0.094	0.01	0.579	0.016	1.32	0.49	0.16	1.97	16338	0.306	0.52326	-0.21726	NAF
NS0108	44	46	NS	X073270	073270	1	G	D	37.56	41.38	1.5	0.7353	0.57	0.065	0.1	0.02	0.099	0.004	0.552	0.004	0.95	0.34	0.09	1.38	16331	0.1224	0.34884	-0.22644	NAF
NS0108	46	48	NS	X073271	073271	1	G	D	37.58	41.39	1.54	0.7611	0.59	0.07	0.08	0.02	0.082	0.004	0.591	0.01	0.89	0.38	0.08	1.35	16332	0.1224	0.34884	-0.22644	NAF
NS0108	50	52	NS	X073273	073273	1	G	D	37.24	41.14	1.82	0.8385	0.65	0.08	0.17	0.02	0.055	0.004	0.693	0.029	1	0.38	0.08	1.46	16334	0.1224	0.34884	-0.22644	NAF
NS0108	24	26	NS	X073260	073260	1	G	D	30.63	50.74	2.12	0.1161	0.09	0.08	0.1	0.03	0.099	0.009	0.02	0.009	1.79	0.67	-0.05	2.41	16321	0.2754	0.52326	-0.24786	NAF
NS0108	42	44	NS	X073269	073269	1	G	D	36.87	42.86	1.31	0.6966	0.54	0.057	0.1	0.02	0.097	0.003	0.445	0.002	0.94	0.31	0.09	1.34	16330	0.0918	0.34884	-0.25704	NAF
NS0108	48	50	NS	X073272	073272	1	G	D	38.04	40.27	1.69	0.8901	0.69	0.076	0.15	0.02	0.068	0.003	0.66	0.014	1.12	0.32	0	1.44	16333	0.0918	0.34884	-0.25704	NAF
NS0108	18	20	NS	X073257	073257	1	G	D	35.73	42.91	2.61	0.0645	0.05	0.104	0.11	0.04	0.083	0.014	0.027	0.022	1.62	0.84	0.11	2.57	16318	0.4284	0.69768	-0.26928	NAF
NS0108	60	62	NS	X073278	073278	1	G	D	33.33	45.67	2.29	0.7998	0.62	0.109	0.17	0.03	0.124	0.008	0.577	0.011	1.41	0.61	0.19	2.21	16339	0.2448	0.52326	-0.27846	NAF
NS0108	64	66	NS	X073280	073280	1	G	D	37.74	41.24	1.11	0.903	0.7	0.052	0.11	0.03	0.102	0.008	0.28	0.002	1.33	0.36	0.13	1.82	16341	0.2448	0.52326	-0.27846	NAF
NS0108	94	96	NS	X073295	073295	1	G	D	32.31	39.37	2.43	0.7353	0.57	0.104	2.35	0.35	0.11	0.19	0.492	0.019	0.56	6.01	0.44	7.01	16356	5.814	6.1047	-0.2907	NAF
NS0108	78	82	NS	BX080287-BX080288	X080287	2			69.19	3.944	0.124	0.054	0.03888	0.013	0.16	0.033	0.009	0.009	0.049	0.076	-0.01	-0.01	-0.01	-0.03	1629	0.2754	0.575586	-0.300186	NAF
NS0108	66	68	NS	X073281	073281	1	G	D	36.95	41.69	1.52	1.032	0.8	0.071	0.17	0.03	0.074	0.007	0.325	0.016	1.24	0.44	0.13	1.81	16342	0.2142	0.52326	-0.30906	NAF
NS0108	82	84	NS	BX080289	X080289	2			69.12	3.169	0.133	0.059	0.04248	0.017	0.167	0.039	0.01	0.012	0.031	0.09	-0.01	-0.01	-0.01	-0.03	1630	0.3672	0.680238	-0.313038	NAF
NS0108	12	16	NS	BX080254-BX080255	X080254	2			68.17	1.999	0.191	0.028	0.02016	0.011	0.089	0.026	0.007	0.004	0.003	0.083	-0.01	-0.01	-0.01	-0.03	1613	0.1224	0.453492	-0.331092	NAF
NS0108	30	34	NS	BX080263-BX080264	X080263	2			68.88	2.241	0.125	0.091	0.06552	0.015	0.093	0.026	0.026	0.004	0.017	0.094	0.04	-0.01	-0.01	0.02	1617	0.1224	0.453492	-0.331092	NAF
NS0108	54	56	NS	X073275	073275	1	G	D	36.82	42.18	1.67	0.8514	0.66	0.075	0.17	0.03	0.065	0.006	0.599	0.011	0.96	0.36	0.03	1.35	16336	0.1836	0.52326	-0.33966	NAF
NS0108	62	64	NS	X073279	073279	1	G	D	35.86	41.78	2.17	0.9933	0.77	0.098	0.21	0.03	0.113	0.006	0.564	0.019	1.58	0.58	0.21	2.37	16340	0.1836	0.52326	-0.33966	NAF
NS0108	34	38	NS	BX080265-BX080266	X080265	2			68.86	2.448	0.123	0.098	0.07056	0.013	0.092	0.023	0.031	0.002	0.008	0.063	0.09	0.04	-0.01	0.12	1618	0.0612	0.401166	-0.339966	NAF
NS0108	38	42	NS	BX080267-BX080268	X080267	2			68.94	2.553	0.134	0.111	0.07992	0.01	0.085	0.023	0.031	0.002	0.012	0.063	0.18	0.13	-0.01	0.3	1619	0.0612	0.401166	-0.339966	NAF
NS0108	42	46	NS	BX080269-BX080270	X080269	2			67.4	4.255	0.174	0.105	0.0756	0.007	0.094	0.025	0.039	0.003	0.014	0.073	-0.01	-0.01	-0.01	-0.03	1620	0.0918	0.43605	-0.34425	NAF
NS0108	54	58	NS	BX080275-BX080276	X080275	2			66.8	3.827	0.156	0.088	0.06336	0.009	0.087	0.022	0.024	0.001	0.025	0.049	0.13	0.04	-0.01	0.16	1623	0.0306	0.383724	-0.353124	NAF
NS0108	16	20	NS	BX080256-BX080257	X080256	2			69.25	2.189	0.178	0.031	0.02232	0.017	0.088	0.026	0.013	0.003	0.003	0.076	0.09	0.02	-0.01	0.1	1614	0.0918	0.453492	-0.361692	NAF
NS0108	50	54	NS	BX080273-BX080274	X080273	2			68.32	3.731	0.15	0.077	0.05544	0.007	0.101	0.026	0.017	0.003	0.015	0.073	0.03	0.01	-0.01	0.03	1622	0.0918	0.453492	-0.361692	NAF
NS0108	22	24	NS	X073259	073259	1	G	D	32.85	47.73	2.11	0.129	0.1	0.078	0.13	0.03	0.062	0.005	0.024	0.01	1.83	0.67	-0.02	2.48	16320	0.153	0.52326	-0.37026	NAF
NS0108	56	58	NS	X073276	073276	1	G	D	35.85	42.71	2.11	0.7353	0.57	0.095	0.18	0.03	0.076	0.005	0.911	0.017	1.09	0.4	0.06	1.55	16337	0.153	0.52326	-0.37026	NAF
NS0108	46	50	NS	BX080271-BX080272	X080271	2			67.09	3.391	0.113	0.086	0.06192	0.005	0.084	0.023	0.021	0.001	0.01	0.065	0.06	-0.01	-0.01	0.04	1621	0.0306	0.401166	-0.370566	NAF
NS0108	62	66	NS	BX080279-BX080280	X080279	2			68.71	3.268	0.169	0.115	0.0828	0.01	0.099	0.032	0.027	0.006	0.019	0.103	-0.01	-0.01	-0.01	-0.03	1625	0.1836	0.558144	-0.374544	NAF
NS0108	26	30	NS	BX080261-BX080262	X080261	2			68.9	2.306	0.148	0.06	0.0432	0.013	0.093	0.025	0.025	0.002	0.006	0.07	0.02	-0.01	-0.01	0	1616	0.0612	0.43605	-0.37485	NAF
NS0108	58	62	NS	BX080277-BX080278	X080277	2			66.87	4.857	0.19	0.092	0.06624	0.013	0.095	0.028	0.026	0.003	0.018	0.075	-0.01	-0.01	-0.01	-0.03	1624	0.0918	0.488376	-0.396576	NAF
NS0108	70	74	NS	BX080283-BX080284	X080283	2			69.35	2.417	0.09	0.068	0.04896	0.005	0.091	0.028	0.024	0.003	0.013	0.095	0.05	-0.01	-0.01	0.03	1627	0.0918	0.488376	-0.396576	NAF
NS0108	66	70	NS	BX080281-BX080282	X080281	2			67.25	2.719	0.125	0.095	0.0684	0.007	0.096	0.03	0.023	0.004	0.011	0.085	0.12	0.11	-0.01	0.22	1626	0.1224	0.52326	-0.40086	NAF
NS0108	20	24	NS	BX080258-BX080259	X080258	2			68.75	2.055	0.167	0.048	0.03456	0.02	0.091	0.027	0.022	0.002	0.003	0.065	0.21	0.42	-0.01	0.62	1615	0.0612	0.470934	-0.409734	NAF
NS0108	74	78	NS	BX080285-BX080286	X080285	2			68.78	2.343	0.114	0.069	0.04968	0.007	0.092	0.027	0.025	0.001	0.016	0.061	0.11	0.04	-0.01	0.14	1628	0.0306	0.470934	-0.440334	NAF
NS0108	168	172	NS	BX080333-BX080334	X080333	2			68.23	5.4	0.343	0.065	0.0468	0.036	0.301	0.057	0.004	0.018	0.059	0.115	-0.01	-0.01	-0.01	-0.03	1652	0.5508	0.994194	-0.443394	NAF
NS0108	90	94	NS	BX080293-BX080294	X080293	2			69.58	2.732	0.142	0.05	0.036	0.009	0.164	0.039	0.021	0.007	0.014	0.061	-0.01	-0.01	-0.01	-0.03	1632	0.2142	0.680238	-0.466038	NAF
NS0108	258	262	NS	BX080379-BX080380	X080379	2			69.94	2.946	0.081	0.047	0.03384	0.004	0.173	0.049	0.005	0.012	0.025	0.201	-0.01	-0.01	-0.01	-0.03	1674	0.3672	0.854658	-0.487458	NAF
NS0108	208	212	NS	BX080354-BX080355	X080354	2			69.19	2.739	0.175	0.051	0.03672	0.015	0.236	0.05	0.007	0.012	0.009	0.073	-0.01	-0.01	-0.01	-0.03	1662	0.3672	0.8721	-0.5049	NAF
NS0108	172	176	NS	BX080335-BX080336	X080335	2			70.54	3.001	0.154	0.051	0.03672	0.016	0.191	0.044	0.005	0.008	0.015	0.057	-0.01	-0.01	-0.01	-0.03	1653	0.2448	0.767448	-0.522648	NAF
NS0108	144	148	NS	BX080321-BX080322	X080321	2			68.6	5.4	0.196	0.07	0.0504	0.017	0.207	0.054	0.008	0.012	0.066	0.106	-0.01	-0.01	-0.01	-0.03	1646	0.3672	0.941868	-0.574668	NAF
NS0108	200	204	NS	BX080350-BX080351	X080350	2			71.02	2.292	0.068	0.044	0.03168	0.004	0.137	0.04	0.004	0.004	0.016	0.108	-0.01	-0.01	-0.01	-0.03	1660	0.1224	0.69768	-0.57528	NAF
NS0108	98	100	NS	BX080297	X080297	2			70.18	3.456	0.082	0.05	0.036	0.009	0.163	0.045	0.009	0.006	0.009	0.091	-0.01	-0.01	-0.01	-0.03	1634	0.1836	0.78489	-0.60129	NAF
NS0108	86	90	NS	BX080291-BX080292	X080291	2			68.33	4.166	0.112	0.072	0.05184	0.007	0.152	0.04	0.019	0.003	0.018	0.068	-0.01	-0.01	-0.01	-0.03	1631	0.0918	0.69768	-0.60588	NAF
NS0108	100	104	NS	BX080299-BX080300	X080299	2			69.8	3.089	0.092	0.063	0.04536	0.009	0.17	0.052	0.012	0.009	0.018	0.08	-0.01	-0.01	-0.01	-0.03	1635	0.2754	0.906984	-0.631584	NAF
NS0108	176	180	NS	BX080337-BX080338	X080337	2			70.5	2.594	0.098	0.045	0.0324	0.012	0.166	0.054	0.009	0.01	0.014	0.062	-0.01	-0.01	-0.01	-0.03	1654	0.306	0.941868	-0.635868	NAF
NS0108	164	168	NS	BX080331-BX080332	X080331	2			67.91	5.366	0.361	0.071	0.05112	0.032	0.305	0.064	0.005	0.014	0.065	0.07	-0.01	-0.01	-0.01	-0.03	1651	0.4284	1.116288	-0.687888	NAF
NS0108	242	246	NS	BX080371-BX080372	X080371	2			70.42	2.924	0.083	0.045	0.0324	0.008	0.164	0.052	0.008	0.007	0.026	0.091	-0.01	-0.01	-0.01	-0.03	1670	0.2142	0.906984	-0.692784	NAF
NS0108	140	144	NS	BX080319-BX080320	X080319	2			69.46	3.972	0.127	0.059	0.04248	0.007	0.161	0.049	0.007	0.005	0.04	0.073	-0.01	-0.01	-0.01	-0.03	1645	0.153	0.854658	-0.701658	NAF
NS0108	136	140	NS	BX080317-BX080318	X080317	2			69.23	4.101	0.128	0.055	0.0396	0.012	0.158	0.051	0.009	0.006	0.042	0.069	-0.01	-0.01	-0.01	-0.03	1644	0.1836	0.889542	-0.705942	NAF
NS0108	76	78	NS	X073286	073286	1	G	D	33.9	44.02	2.29	0.8127	0.63	0.101	0.51	0.16	0.131	0.068	0.97	0.011	1.27	0.58	0.25	2.1	16347	2.0808	2.79072	-0.70992	NAF
NS0108	148	152	NS	BX080323-BX080324	X080323	2			69.19	4.457	0.106	0.068	0.04896	0.006	0.145	0.046	0.008	0.003	0.029	0.073	-0.01	-0.01	-0.01	-0.03	1647	0.0918	0.802332	-0.710532	NAF
NS0108	68	70	NS	X073282	073282	1	G	D	38.61	40.68	1.16	0.4902	0.38	0.054	0.16	0.05	0.093	0.005	0.371	0.024	1.05	0.26	0.04	1.35	16343	0.153	0.8721	-0.7191	NAF
NS0108	230	234	NS	BX080365-BX080366	X080365	2			71.16	2.584	0.027	0.046	0.03312	0.003	0.146	0.047	0.008	0.003	0.007	0.053	-0.01	-0.01	-0.01	-0.03	1667	0.0918	0.819774	-0.727974	NAF
NS0108	278	280	NS	BX080389	X080389	2			70.91	1.564	0.067	0.048	0.03456	0.001	0.132	0.053	0.007	0.006	0.006	0.08	-0.01	-0.01	-0.01	-0.03	1679	0.1836	0.924426	-0.740826	NAF
NS0108	226	230	NS	BX080363-BX080364	X080363	2			70.23	3.011	0.071	0.052	0.03744	0.003	0.185	0.054	0.009	0.006	0.015	0.077	-0.01	-0.01	-0.01	-0.03	1666	0.1836	0.941868	-0.758268	NAF
NS0108	254	258	NS	BX080377-BX080378	X080377	2			70.72	2.511	0.077	0.048	0.03456	0.008	0.16	0.053	0.008	0.005	0.017	0.073	-0.01	-0.01	-0.01	-0.03	1673	0.153	0.924426	-0.771426	NAF
NS0108	152	156	NS	BX080325-BX080326	X080325	2			69.23	4.846	0.103	0.068	0.04896	0.005	0.158	0.048	0.007	0.002	0.034	0.07	-0.01	-0.01	-0.01	-0.03	1648	0.0612	0.837216	-0.776016	NAF
NS0108	234	238	NS	BX080367-BX080368	X080367	2			70.43	3.126	0.057	0.051	0.03672	0.004	0.165	0.048	0.007	0.002	0.016	0.066	-0.01	-0.01	-0.01	-0.03	1668	0.0612	0.837216	-0.776016	NAF
NS0108	74	76	NS	X073285	073285	1	G	D	38.99	39.31	1.16	0.8901	0.69	0.053	0.17	0.05	0.094	0.003	0.406	0.016	1.16	0.32	0.1	1.58	16346	0.0918	0.8721	-0.7803	NAF
NS0108	216	220	NS	BX080358-BX080359	X080358	2			70.84	2.739	0.055	0.063	0.04536	0.003	0.189	0.052	0.009	0.004	0.006	0.066	-0.01	-0.01	-0.01	-0.03	1664	0.1224	0.906984	-0.784584	NAF
NS0108	10	12	NS	X073253	073253	1	G	D	31.74	47.43	2.66	0.0903	0.07	0.123	0.23	0.11	0.034	0.037	0.05	0.01	2.44	0.87	0.2	3.51	16314	1.1322	1.91862	-0.78642	NAF
NS0108	262	266	NS	BX080381-BX080382	X080381	2			70.21	3.071	0.062	0.058	0.04176	0.002	0.148	0.053	0.007	0.004	0.016	0.085	-0.01	-0.01	-0.01	-0.03	1675	0.1224	0.924426	-0.802026	NAF
NS0108	204	208	NS	BX080352-BX080353	X080352	2			70.41	2.422	0.065	0.053	0.03816	0.006	0.179	0.057	0.007	0.006	0.008	0.073	-0.01	-0.01	-0.01	-0.03	1661	0.1836	0.994194	-0.810594	NAF
NS0108	274	278	NS	BX080387-BX080388	X080387	2			69.48	3.327	0.059	0.07	0.0504	0.002	0.176	0.056	0.009	0.005	0.018	0.105	-0.01	-0.01	-0.01	-0.03	1678	0.153	0.976752	-0.823752	NAF
NS0108	180	184	NS	BX080339-BX080340	X080339	2			69.37	3.899	0.087	0.057	0.04104	0.006	0.177	0.055	0.01	0.004	0.021	0.059	-0.01	-0.01	-0.01	-0.03	1655	0.1224	0.95931	-0.83691	NAF
NS0108	188	192	NS	BX080343-BX080344	X080343	2			71.48	2.148	0.048	0.05	0.036	0.007	0.139	0.054	0.009	0.003	0.004	0.071	-0.01	-0.01	-0.01	-0.03	1657	0.0918	0.941868	-0.850068	NAF
NS0108	246	250	NS	BX080373-BX080374	X080373	2			70.68	3.137	0.06	0.051	0.03672	0.006	0.151	0.054	0.009	0.003	0.016	0.077	-0.01	-0.01	-0.01	-0.03	1671	0.0918	0.941868	-0.850068	NAF
NS0108	104	108	NS	BX080301-BX080302	X080301	2			69.52	4.671	0.104	0.07	0.0504	0.009	0.175	0.06	0.014	0.006	0.021	0.074	-0.01	-0.01	-0.01	-0.03	1636	0.1836	1.04652	-0.86292	NAF
NS0108	212	216	NS	BX080356-BX080357	X080356	2			70.91	2.404	0.067	0.051	0.03672	0.003	0.18	0.057	0.009	0.004	0.008	0.083	-0.01	-0.01	-0.01	-0.03	1663	0.1224	0.994194	-0.871794	NAF
NS0108	270	274	NS	BX080385-BX080386	X080385	2			70.05	3.067	0.067	0.06	0.0432	0.003	0.165	0.059	0.01	0.005	0.016	0.089	-0.01	-0.01	-0.01	-0.03	1677	0.153	1.029078	-0.876078	NAF
NS0108	108	112	NS	BX080303-BX080304	X080303	2			69.13	4.772	0.083	0.071	0.05112	0.009	0.164	0.054	0.012	0.002	0.031	0.068	-0.01	-0.01	-0.01	-0.03	1637	0.0612	0.941868	-0.880668	NAF
NS0108	266	270	NS	BX080383-BX080384	X080383	2			70.83	2.396	0.032	0.052	0.03744	0.001	0.141	0.057	0.009	0.003	0.009	0.089	-0.01	-0.01	-0.01	-0.03	1676	0.0918	0.994194	-0.902394	NAF
NS0108	196	200	NS	BX080347-BX080348	X080347	2			69.99	3.046	0.088	0.053	0.03816	0.007	0.171	0.059	0.007	0.004	0.014	0.07	-0.01	-0.01	-0.01	-0.03	1659	0.1224	1.029078	-0.906678	NAF
NS0108	222	226	NS	BX080361-BX080362	X080361	2			70.21	3.28	0.072	0.057	0.04104	0.004	0.195	0.063	0.009	0.006	0.011	0.092	-0.01	-0.01	-0.01	-0.03	1665	0.1836	1.098846	-0.915246	NAF
NS0108	238	242	NS	BX080369-BX080370	X080369	2			69.85	3.527	0.056	0.058	0.04176	0.004	0.165	0.058	0.01	0.003	0.022	0.077	-0.01	-0.01	-0.01	-0.03	1669	0.0918	1.011636	-0.919836	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0108	132	136	NS	BX080315-BX080316	X080315	2			69.01	5.314	0.104	0.073	0.05256	0.007	0.169	0.06	0.01	0.004	0.042	0.084	-0.01	-0.01	-0.01	-0.03	1643	0.1224	1.04652	-0.92412	NAF
NS0108	184	188	NS	BX080341-BX080342	X080341	2			70.98	2.811	0.064	0.051	0.03672	0.003	0.159	0.06	0.01	0.004	0.006	0.073	-0.01	-0.01	-0.01	-0.03	1656	0.1224	1.04652	-0.92412	NAF
NS0108	250	254	NS	BX080375-BX080376	X080375	2			68.56	4.233	0.097	0.068	0.04896	0.007	0.186	0.064	0.011	0.006	0.032	0.085	-0.01	-0.01	-0.01	-0.03	1672	0.1836	1.116288	-0.932688	NAF
NS0108	160	162	NS	BX080329	X080329	2			67.67	5.437	0.271	0.071	0.05112	0.029	0.289	0.083	0.003	0.014	0.046	0.064	-0.01	-0.01	-0.01	-0.03	1650	0.4284	1.447686	-1.019286	NAF
NS0108	192	196	NS	BX080345-BX080346	X080345	2			68.57	4.33	0.106	0.074	0.05328	0.005	0.226	0.071	0.011	0.007	0.02	0.075	-0.01	-0.01	-0.01	-0.03	1658	0.2142	1.238382	-1.024182	NAF
NS0108	120	124	NS	BX080309-BX080310	X080309	2			67.41	6.809	0.251	0.099	0.07128	0.021	0.226	0.077	0.014	0.009	0.135	0.053	-0.01	-0.01	-0.01	-0.03	1640	0.2754	1.343034	-1.067634	NAF
NS0108	156	160	NS	BX080327-BX080328	X080327	2			68.31	6.071	0.201	0.08	0.0576	0.011	0.208	0.069	0.009	0.004	0.038	0.075	-0.01	-0.01	-0.01	-0.03	1649	0.1224	1.203498	-1.081098	NAF
NS0108	70	72	NS	X073283	073283	1	G	D	36.55	43.98	1.01	0.4128	0.32	0.044	0.1	0.07	0.096	0.004	0.439	0.028	1.03	0.19	0.03	1.25	16344	0.1224	1.22094	-1.09854	NAF
NS0108	112	116	NS	BX080305-BX080306	X080305	2			69.46	4.126	0.123	0.069	0.04968	0.034	0.183	0.07	0.015	0.004	0.056	0.073	-0.01	-0.01	-0.01	-0.03	1638	0.1224	1.22094	-1.09854	NAF
NS0108	128	132	NS	BX080313-BX080314	X080313	2			68.16	6.376	0.124	0.086	0.06192	0.008	0.185	0.07	0.012	0.004	0.057	0.078	-0.01	-0.01	-0.01	-0.03	1642	0.1224	1.22094	-1.09854	NAF
NS0108	94	98	NS	BX080295-BX080296	X080295	2			69.05	4.181	0.138	0.081	0.05832	0.012	0.209	0.081	0.016	0.009	0.021	0.071	-0.01	-0.01	-0.01	-0.03	1633	0.2754	1.412802	-1.137402	NAF
NS0108	124	128	NS	BX080311-BX080312	X080311	2			68.39	5.816	0.145	0.08	0.0576	0.011	0.202	0.07	0.011	0.002	0.057	0.062	-0.01	-0.01	-0.01	-0.03	1641	0.0612	1.22094	-1.15974	NAF
NS0108	72	74	NS	X073284	073284	1	G	D	36.19	43.71	1.06	0.7998	0.62	0.049	0.15	0.08	0.1	0.004	0.485	0.013	1	0.23	0.03	1.26	16345	0.1224	1.39536	-1.27296	NAF
NS0108	140	142	NS	X073319	073319	1	G	W	33.85	38.41	2.56	0.645	0.5	0.113	2.18	0.37	0.069	0.161	0.748	0.016	0.31	5.35	0.26	5.92	16379	4.9266	6.45354	-1.52694	NAF
NS0108	80	82	NS	X073288	073288	1	G	D	31.59	42.57	1.9	0.6708	0.52	0.087	1.75	0.32	0.087	0.131	0.725	0.003	0.32	5.45	0.11	5.88	16349	4.0086	5.58144	-1.57284	NAF
NS0108	102	104	NS	X073300	073300	1	G	D	32.55	40.24	1.57	0.8385	0.65	0.074	1.93	0.45	0.115	0.162	0.343	0.002	0.43	6.46	0.25	7.14	16360	4.9572	7.8489	-2.8917	NAF
NS0108	98	100	NS	X073297	073297	1	G	D	35	39.56	1.2	0.7224	0.56	0.055	1.87	0.27	0.069	0.053	0.128	0.007	0.37	5.54	-0.09	5.82	16358	1.6218	4.70934	-3.08754	NAF
NS0108	100	102	NS	X073299	073299	1	G	D	35.24	38.2	1.42	0.8127	0.63	0.062	1.87	0.4	0.107	0.127	0.262	0.019	0.27	5.55	0.11	5.93	16359	3.8862	6.9768	-3.0906	NAF
NS0108	96	98	NS	X073296	073296	1	G	D	34.44	41.8	0.89	0.7353	0.57	0.04	1.4	0.24	0.064	0.028	0.088	0.008	0.4	4.95	-0.12	5.23	16357	0.8568	4.18608	-3.32928	NAF
NS0108	90	92	NS	X073293	073293	1	G	D	36.75	38.98	1.18	0.6063	0.47	0.058	1.13	0.26	0.138	0.028	0.178	0.009	0.94	3.32	0.07	4.33	16354	0.8568	4.53492	-3.67812	NAF
NS0108	88	90	NS	X073292	073292	1	G	D	36.79	38.32	1.33	1.0062	0.78	0.057	1.09	0.34	0.161	0.059	0.306	0.01	0.85	3.41	0.18	4.44	16353	1.8054	5.93028	-4.12488	NAF
NS0108	8	10	NS	X073252	073252	1	G	D	17.59	64.94	5.07	0.0645	0.05	0.185	0.21	0.27	0.018	0.013	0.039	0.038	1.94	1.74	0.18	3.86	16313	0.3978	4.70934	-4.31154	NAF
NS0108	104	106	NS	X073301	073301	1	G	D	33.24	39.93	1.28	0.8127	0.63	0.057	1.94	0.56	0.156	0.17	0.279	0.019	0.29	6.14	0.2	6.63	16361	5.202	9.76752	-4.56552	NAF
NS0108	78	80	NS	X073287	073287	1	G	D	30.51	45.48	1.62	0.7482	0.58	0.08	1.46	0.43	0.137	0.09	0.474	0.018	0.51	4.5	0.09	5.1	16348	2.754	7.50006	-4.74606	NAF
NS0108	86	88	NS	X073291	073291	1	G	D	36.04	37.85	1.22	0.8643	0.67	0.058	1.76	0.32	0.107	0.027	0.301	0.015	0.29	5.49	-0.04	5.74	16352	0.8262	5.58144	-4.75524	NAF
NS0108	106	108	NS	X073302	073302	1	G	D	37.06	37.7	1.21	0.8256	0.64	0.054	1.42	0.33	0.095	0.032	0.351	0.018	0.25	4.7	-0.21	4.74	16362	0.9792	5.75586	-4.77666	NAF
NS0108	84	86	NS	X073290	073290	1	G	D	34.84	40.05	1.06	0.7998	0.62	0.045	1.56	0.34	0.101	0.033	0.262	0.029	0.35	5.38	-0.12	5.61	16351	1.0098	5.93028	-4.92048	NAF
NS0108	4	6	NS	X073250	073250	1	G	D	31.27	47.63	2.84	0.0645	0.05	0.121	0.16	0.31	0.055	0.014	0.034	0.033	2.48	1.19	0.14	3.81	16311	0.4284	5.40702	-4.97862	NAF
NS0108	6	8	NS	X073251	073251	1	G	D	4.33	80.24	8.33	0.0258	0.02	0.338	0.2	0.3	0.012	0.007	0.044	0.086	0.9	2.85	0.2	3.95	16312	0.2142	5.2326	-5.0184	NAF
NS0108	82	84	NS	X073289	073289	1	G	D	31.69	39.84	2.11	0.8514	0.66	0.096	2.18	0.5	0.137	0.111	0.573	0.026	0.35	7.2	0.08	7.63	16350	3.3966	8.721	-5.3244	NAF
NS0108	218	220	NS	X073359	073359	1	G	W	36.32	36.21	0.96	0.7095	0.55	0.046	2.03	0.45	0.085	0.079	0.131	0.013	0.22	6.7	0.02	6.94	16238	2.4174	7.8489	-5.4315	NAF
NS0108	260	262	NS	X073380	073380	1	G	W	33.34	42.04	1.6	0.4257	0.33	0.07	1.51	0.52	0.04	0.102	0.431	0.177	0.16	5.05	0.14	5.35	16277	3.1212	9.06984	-5.94864	NAF
NS0108	2	4	NS	X073249	073249	1	G	D	24.69	51.91	6.01	0.1161	0.09	0.265	0.19	0.41	0.035	0.023	0.122	0.039	3.01	2.06	0.21	5.28	16310	0.7038	7.15122	-6.44742	NAF
NS0108	108	110	NS	X073303	073303	1	G	D	38.26	36.49	1.01	0.903	0.7	0.045	1.33	0.41	0.091	0.016	0.389	0.012	0.16	4.5	-0.28	4.38	16363	0.4896	7.15122	-6.66162	NAF
NS0108	208	210	NS	X073354	073354	1	G	W	29.97	40.39	2.99	0.5289	0.41	0.129	3.33	0.79	0.12	0.207	0.144	0.004	0.44	7.11	0.47	8.02	16413	6.3342	13.77918	-7.44498	NAF
NS0108	172	174	NS	X073335	073335	1	G	W	32.43	37.42	1.95	0.7611	0.59	0.086	2.37	0.61	0.096	0.104	0.245	0.005	0.54	9.17	0	9.71	16395	3.1824	10.63962	-7.45722	NAF
NS0108	116	120	NS	BX080307-BX080308	X080307	2			54.69	21.723	1.041	0.052	0.03744	0.293	0.863	0.447	0.071	0.011	0.067	0.088	-0.01	-0.01	-0.01	-0.03	1639	0.3366	7.796574	-7.459974	NAF
NS0108	170	172	NS	X073334	073334	1	G	W	29.72	40.17	3.29	0.6579	0.51	0.138	2.68	0.89	0.084	0.247	0.632	0.011	0.33	7.33	0.58	8.24	16394	7.5582	15.52338	-7.96518	NAF
NS0108	148	150	NS	X073323	073323	1	G	W	36.95	38.02	1.27	0.8643	0.67	0.052	1.33	0.51	0.098	0.03	0.385	0.023	0.27	3.9	-0.12	4.05	16383	0.918	8.89542	-7.97742	NAF
NS0108	262	264	NS	X073381	073381	1	G	W	36.57	38.75	0.83	0.6321	0.49	0.035	1.2	0.54	0.064	0.046	0.146	0.245	0.08	4.91	-0.1	4.89	16278	1.4076	9.41868	-8.01108	NAF
NS0108	280	282	NS	X073390	073390	1	G	W	29.04	37.18	2.4	0.5031	0.39	0.101	2.74	0.86	0.098	0.215	0.756	0.203	0.5	11.64	0.64	12.78	16287	6.579	15.00012	-8.42112	NAF
NS0108	166	168	NS	X073332	073332	1	G	W	28.74	41.37	3.71	0.6837	0.53	0.159	2.95	0.74	0.049	0.144	0.619	0.021	0.25	7.2	0.35	7.8	16392	4.4064	12.90708	-8.50068	NAF
NS0108	232	234	NS	X073366	073366	1	G	W	33.01	43.1	0.79	0.5031	0.39	0.038	1.68	0.63	0.071	0.08	0.185	0.055	0.14	5.27	0.14	5.55	16245	2.448	10.98846	-8.54046	NAF
NS0108	244	246	NS	X073372	073372	1	G	W	31.8	39.64	1.92	0.5805	0.45	0.083	2.03	0.79	0.117	0.168	0.595	0.039	0.21	7.49	0.25	7.95	16251	5.1408	13.77918	-8.63838	NAF
NS0108	246	248	NS	X073373	073373	1	G	W	35.14	37.67	1.48	0.5031	0.39	0.067	1.73	0.67	0.091	0.097	0.417	0.107	0.36	6.23	-0.02	6.57	16252	2.9682	11.68614	-8.71794	NAF
NS0108	254	256	NS	X073377	073377	1	G	W	34.79	40.28	0.65	0.5676	0.44	0.03	1.41	0.56	0.072	0.034	0.184	0.158	0.19	5.76	-0.11	5.84	16274	1.0404	9.76752	-8.72712	NAF
NS0108	274	276	NS	X073387	073387	1	G	W	33.31	42.85	0.66	0.516	0.4	0.029	1.31	0.56	0.093	0.027	0.147	0.235	0.13	5.32	-0.03	5.42	16284	0.8262	9.76752	-8.94132	NAF
NS0108	272	274	NS	X073386	073386	1	G	W	33.86	41.42	0.99	0.4644	0.36	0.043	1.43	0.7	0.127	0.101	0.249	0.238	0.11	5.16	0.11	5.38	16283	3.0906	12.2094	-9.1188	NAF
NS0108	216	218	NS	X073358	073358	1	G	W	34.93	38.3	0.68	0.6837	0.53	0.032	1.91	0.56	0.084	0.021	0.186	0.004	0.26	7.1	-0.02	7.34	16237	0.6426	9.76752	-9.12492	NAF
NS0108	112	114	NS	X073305	073305	1	G	D	34.86	36.21	1.05	0.8643	0.67	0.049	2.14	0.62	0.12	0.054	0.516	0.021	0.36	7.95	-0.1	8.21	16365	1.6524	10.81404	-9.16164	NAF
NS0108	276	278	NS	X073388	073388	1	G	W	36.07	38.73	0.67	0.6063	0.47	0.029	1.29	0.55	0.08	0.011	0.181	0.245	0.22	5.42	-0.03	5.61	16285	0.3366	9.5931	-9.2565	NAF
NS0108	180	182	NS	X073339	073339	1	G	W	35.67	37.7	1.1	0.7482	0.58	0.047	1.82	0.63	0.091	0.053	0.311	0.013	0.26	5.71	-0.06	5.91	16399	1.6218	10.98846	-9.36666	NAF
NS0108	136	138	NS	X073317	073317	1	G	W	35.18	37.96	2.1	0.7611	0.59	0.094	1.97	0.72	0.107	0.095	0.578	0.016	0.42	4.56	0.12	5.1	16377	2.907	12.55824	-9.65124	NAF
NS0108	258	260	NS	X073379	073379	1	G	W	34.12	40.16	1.05	0.4902	0.38	0.045	1.53	0.62	0.061	0.035	0.231	0.248	0.2	6.09	-0.01	6.28	16276	1.071	10.81404	-9.74304	NAF
NS0108	230	232	NS	X073365	073365	1	G	W	32.76	41.19	0.66	0.5676	0.44	0.031	1.84	0.63	0.14	0.039	0.217	0.04	0.25	7.34	-0.1	7.49	16244	1.1934	10.98846	-9.79506	NAF
NS0108	168	170	NS	X073333	073333	1	G	W	31.95	39.43	2.78	0.6321	0.49	0.122	2.66	0.75	0.031	0.094	0.363	0.002	0.36	6.71	0.19	7.26	16393	2.8764	13.0815	-10.2051	NAF
NS0108	182	184	NS	X073340	073340	1	G	W	34.71	38.15	1.12	0.6837	0.53	0.052	2.1	0.69	0.111	0.053	0.269	0.01	0.3	6.44	0.03	6.77	16400	1.6218	12.03498	-10.41318	NAF
NS0108	184	186	NS	X073341	073341	1	G	W	34.46	41.14	0.96	0.5934	0.46	0.042	1.79	0.68	0.082	0.035	0.136	0.022	0.2	4.6	0.16	4.96	16401	1.071	11.86056	-10.78956	NAF
NS0108	206	208	NS	X073353	073353	1	G	W	34.12	38.79	1.18	0.645	0.5	0.057	2.19	0.76	0.078	0.075	0.1	0.015	0.25	6.67	0.1	7.02	16412	2.295	13.25592	-10.96092	NAF
NS0108	278	280	NS	X073389	073389	1	G	W	34.05	41.33	0.68	0.5418	0.42	0.027	1.38	0.74	0.067	0.057	0.162	0.167	0.14	5.52	0.17	5.83	16286	1.7442	12.90708	-11.16288	NAF
NS0108	190	192	NS	X073344	073344	1	G	W	34.74	40.4	0.76	0.7482	0.58	0.035	1.63	0.7	0.083	0.019	0.108	0.004	0.41	4.93	0.17	5.51	16404	0.5814	12.2094	-11.628	NAF
NS0108	226	228	NS	X073363	073363	1	G	W	33.52	40.75	1.11	0.5676	0.44	0.054	1.92	0.81	0.099	0.078	0.275	0.029	0.19	5.39	0.21	5.79	16242	2.3868	14.12802	-11.74122	NAF
NS0108	214	216	NS	X073357	073357	1	G	W	31.86	41.71	0.94	0.6321	0.49	0.045	1.98	0.76	0.122	0.049	0.179	0.036	0.25	7.12	0.06	7.43	16416	1.4994	13.25592	-11.75652	NAF
NS0108	256	258	NS	X073378	073378	1	G	W	35.25	35.23	1.84	0.4644	0.36	0.079	2.06	0.92	0.08	0.134	0.388	0.171	0.3	7.09	0.3	7.69	16275	4.1004	16.04664	-11.94624	NAF
NS0108	250	252	NS	X073375	073375	1	G	W	34.55	39.52	1.23	0.5547	0.43	0.051	1.58	0.81	0.112	0.071	0.39	0.21	0.11	5.29	0.12	5.52	16254	2.1726	14.12802	-11.95542	NAF
NS0108	222	224	NS	X073361	073361	1	G	W	32.69	41.27	0.72	0.6579	0.51	0.032	2.03	0.74	0.091	0.024	0.162	0.049	0.24	6.59	0.22	7.05	16240	0.7344	12.90708	-12.17268	NAF
NS0108	252	254	NS	X073376	073376	1	G	W	34.88	39	1.1	0.5934	0.46	0.049	1.52	0.84	0.112	0.078	0.375	0.193	0.14	5.49	0.15	5.78	16273	2.3868	14.65128	-12.26448	NAF
NS0108	234	236	NS	X073367	073367	1	G	W	33.96	39.71	1.2	0.5934	0.46	0.056	1.91	0.79	0.126	0.047	0.247	0.115	0.15	5.84	0.1	6.09	16246	1.4382	13.77918	-12.34098	NAF
NS0108	120	122	NS	X073309	073309	1	G	D	35.77	36.19	1.91	0.8643	0.67	0.083	2.05	0.85	0.109	0.078	0.677	0.021	0.16	5.24	0.16	5.56	16369	2.3868	14.8257	-12.4389	NAF
NS0108	242	244	NS	X073371	073371	1	G	W	34.29	40.45	1.11	0.5418	0.42	0.055	1.64	0.85	0.109	0.078	0.328	0.073	0.02	5.11	0.12	5.25	16250	2.3868	14.8257	-12.4389	NAF
NS0108	114	116	NS	X073306	073306	1	G	D	33.35	36.9	2.51	0.8514	0.66	0.112	2.35	0.81	0.101	0.048	1.1	0.019	0.61	6.34	0.17	7.12	16366	1.4688	14.12802	-12.65922	NAF
NS0108	138	140	NS	X073318	073318	1	G	W	35.89	37.66	1.49	0.7095	0.55	0.066	1.75	0.84	0.137	0.059	0.433	0.027	0.22	4.71	-0.04	4.89	16378	1.8054	14.65128	-12.84588	NAF
NS0108	248	250	NS	X073374	073374	1	G	W	33.39	39.05	1.09	0.5934	0.46	0.051	1.8	0.9	0.151	0.088	0.308	0.162	0.27	7.19	0.04	7.5	16253	2.6928	15.6978	-13.005	NAF
NS0108	238	240	NS	X073369	073369	1	G	W	35.64	38.44	0.81	0.6321	0.49	0.037	1.56	0.81	0.103	0.024	0.283	0.126	0.1	5.49	0.06	5.65	16248	0.7344	14.12802	-13.39362	NAF
NS0108	240	242	NS	X073370	073370	1	G	W	35.7	36.69	1.31	0.645	0.5	0.057	1.88	0.86	0.093	0.041	0.454	0.118	0.14	6.01	0.14	6.29	16249	1.2546	15.00012	-13.74552	NAF
NS0108	270	272	NS	X073385	073385	1	G	W	35.67	39.25	0.63	0.5418	0.42	0.028	1.39	0.81	0.103	0.012	0.158	0.2	0.14	5.16	0.16	5.46	16282	0.3672	14.12802	-13.76082	NAF
NS0108	268	270	NS	X073384	073384	1	G	W	35.43	37.86	0.63	0.645	0.5	0.026	1.58	0.81	0.077	0.009	0.145	0.241	0.22	6.48	0.16	6.86	16281	0.2754	14.12802	-13.85262	NAF
NS0108	142	144	NS	X073320	073320	1	G	W	37.23	38.11	1	0.774	0.6	0.043	1.33	0.84	0.093	0.026	0.351	0.037	0.12	3.63	-0.04	3.71	16380	0.7956	14.65128	-13.85568	NAF
NS0108	186	188	NS	X073342	073342	1	G	W	34.02	42.06	0.75	0.6063	0.47	0.032	1.65	0.84	0.089	0.026	0.092	0.01	0.19	4.33	0.17	4.69	16402	0.7956	14.65128	-13.85568	NAF
NS0108	264	266	NS	X073382	073382	1	G	W	35.23	39.06	1.08	0.5805	0.45	0.048	1.4	0.88	0.112	0.047	0.281	0.242	0.13	5.32	0.09	5.54	16279	1.4382	15.34896	-13.91076	NAF
NS0108	266	268	NS	X073383	073383	1	G	W	35.61	38.09	0.73	0.5676	0.44	0.034	1.53	0.83	0.07	0.017	0.155	0.252	0.18	6.04	0.15	6.37	16280	0.5202	14.47686	-13.95666	NAF
NS0108	228	230	NS	X073364	073364	1	G	W	32.35	42.85	0.93	0.5289	0.41	0.044	1.8	0.9	0.125	0.052	0.22	0.036	0.17	5.37	0.17	5.71	16243	1.5912	15.6978	-14.1066	NAF
NS0108	134	136	NS	X073316	073316	1	G	W	37.6	37.56	1.05	0.774	0.6	0.049	1.38	0.85	0.091	0.022	0.472	0.006	0.06	3.58	-0.01	3.63	16376	0.6732	14.8257	-14.1525	NAF
NS0108	178	180	NS	X073338	073338	1	G	W	32.27	40.76	1.25	0.6579	0.51	0.055	2.07	1.07	0.1	0.147	0.223	0.006	0.15	6.49	0.28	6.92	16398	4.4982	18.66294	-14.16474	NAF
NS0108	210	212	NS	X073355	073355	1	G	W	34.05	41.88	0.98	0.5031	0.39	0.046	1.61	0.9	0.083	0.045	0.104	0.023	0.15	4.24	0.25	4.64	16414	1.377	15.6978	-14.3208	NAF
NS0108	110	112	NS	X073304	073304	1	G	D	35.79	38.27	1.11	0.8643	0.67	0.049	1.58	0.89	0.087	0.031	0.432	0.014	0.24	4.58	0.18	5	16364	0.9486	15.52338	-14.57478	NAF
NS0108	236	238	NS	X073368	073368	1	G	W	32.34	42.12	1.08	0.5934	0.46	0.053	1.75	0.89	0.147	0.031	0.303	0.113	0.15	5.87	0.1	6.12	16247	0.9486	15.52338	-14.57478	NAF
NS0108	164	166	NS	X073331	073331	1	G	W	29.53	40.12	3.05	0.774	0.6	0.127	2.84	1.15	0.123	0.17	0.545	0.007	0.25	7.99	0.4	8.64	16391	5.202	20.0583	-14.8563	NAF
NS0108	220	222	NS	X073360	073360	1	G	W	33.33	42.2	0.98	0.516	0.4	0.045	1.8	1.04	0.108	0.1	0.151	0.022	0.12	4.79	0.33	5.24	16239	3.06	18.13968	-15.07968	NAF
NS0108	188	190	NS	X073343	073343	1	G	W	33.78	42.68	0.81	0.5805	0.45	0.036	1.58	0.92	0.082	0.024	0.095	0.011	0.14	3.96	0.27	4.37	16403	0.7344	16.04664	-15.31224	NAF
NS0108	204	206	NS	X073352	073352	1	G	W	32.04	39.16	0.96	0.7998	0.62	0.042	2.28	0.96	0.079	0.038	0.179	0.007	0.32	9.01	0.2	9.53	16411	1.1628	16.74432	-15.58152	NAF
NS0108	144	146	NS	X073321	073321	1	G	W	33.22	38.28	2.43	0.7998	0.62	0.099	2.35	1.12	0.15	0.109	0.668	0.125	0.21	5.35	0.34	5.9	16381	3.3354	19.53504	-16.19964	NAF
NS0108	212	214	NS	X073356	073356	1	G	W	33.45	40.27	0.94	0.5805	0.45	0.043	2.06	1.06	0.122	0.061	0.111	0.022	0.26	6	0.19	6.45	16415	1.8666	18.48852	-16.62192	NAF
NS0108	192	194	NS	X073345	073345	1	G	W	34.82	39.87	0.88	0.7224	0.56	0.037	1.7	0.99	0.072	0.021	0.15	0.008	0.17	4.73	0.49	5.39	16405	0.6426	17.26758	-16.62498	NAF
NS0108	154	156	NS	X073326	073326	1	G	W	35.84	38.7	1.39	0.8256	0.64	0.06	1.41	1.01	0.076	0.032	0.423	0.027	0.22	3.75	0.41	4.38	16386	0.9792	17.61642	-16.63722	NAF
NS0108	224	226	NS	X073362	073362	1	G	W	32.07	42.88	0.76	0.5934	0.46	0.037	2.05	1	0.079	0.017	0.137	0.01	0.19	5.77	0.4	6.36	16241	0.5202	17.442	-16.9218	NAF
NS0108	158	160	NS	X073328	073328	1	G	W	35.36	38.65	1.65	0.7224	0.56	0.071	1.78	1.06	0.096	0.037	0.298	0.008	0.22	4.41	0.1	4.73	16388	1.1322	18.48852	-17.35632	NAF
NS0108	160	162	NS	X073329	073329	1	G	W	30.4	38.18	3.18	0.7611	0.59	0.141	2.99	1.33	0.068	0.161	0.452	0.02	0.32	7.63	0.7	8.65	16389	4.9266	23.19786	-18.27126	NAF
NS0108	202	204	NS	X073351	073351	1	G	W	35.92	38.28	1.04	0.6966	0.54	0.046	1.6	1.11	0.069	0.016	0.259	0.006	0.86	3.77	0.53	5.16	16410	0.4896	19.36062	-18.87102	NAF
NS0108	152	154	NS	X073325	073325	1	G	W	37.16	37.24	1.12	0.8385	0.65	0.05	1.54	1.13	0.07	0.024	0.383	0.039	0.16	3.83	0.39	4.38	16385	0.7344	19.70946	-18.97506	NAF
NS0108	146	148	NS	X073322	073322	1	G	W	34.55	37.44	1.84	0.903	0.7	0.074	2.05	1.21	0.104	0.066	0.572	0.132	0.21	5.1	0.49	5.8	16382	2.0196	21.10482	-19.08522	NAF
NS0108	200	202	NS	X073350	073350	1	G	W	31.98	39.8	1.7	0.774	0.6	0.077	2.34	1.35	0.109	0.139	0.306	0.098	0.27	6.29	0.6	7.16	16409	4.2534	23.5467	-19.2933	NAF
NS0108	156	158	NS	X073327	073327	1	G	W	35.93	37.78	1.46	0.8385	0.65	0.064	1.65	1.18	0.076	0.031	0.451	0.025	0.21	4.16	0.31	4.68	16387	0.9486	20.58156	-19.63296	NAF
NS0108	130	132	NS	X073314	073314	1	G	D	37.35	36.73	1.02	0.8256	0.64	0.047	1.48	1.19	0.101	0.021	0.472	0.032	0.05	3.76	0.31	4.12	16374	0.6426	20.75598	-20.11338	NAF
NS0108	150	152	NS	X073324	073324	1	G	W	36.38	37.14	1.32	0.8256	0.64	0.057	1.77	1.22	0.069	0.033	0.436	0.027	0.14	4.11	0.57	4.82	16384	1.0098	21.27924	-20.26944	NAF
NS0108	126	128	NS	X073312	073312	1	G	D	36.25	37.92	1.14	0.7869	0.61	0.048	1.64	1.21	0.102	0.025	0.473	0.0005	0.08	3.83	0.35	4.26	16372	0.765	21.10482	-20.33982	NAF
NS0108	194	196	NS	X073346	073346	1	G	W	33.91	40.54	1.12	0.6579	0.51	0.049	1.71	1.26	0.092	0.033	0.237	0.013	0.14	4.43	0.67	5.24	16406	1.0098	21.97692	-20.96712	NAF
NS0108	124	126	NS	X073311	073311	1	G	D	37.5	35.76	1.12	0.8643	0.67	0.048	1.65	1.25	0.096	0.022	0.525	0.005	0.04	4.11	0.49	4.64	16371	0.6732	21.8025	-21.1293	NAF
NS0108	132	134	NS	X073315	073315	1	G	D	37.35	36.43	1.08	0.8256	0.64	0.048	1.58	1.26	0.097	0.025	0.474	0.016	0.13	3.88	0.35	4.36	16375	0.765	21.97692	-21.21192	NAF
NS0108	196	198	NS	X073347	073347	1	G	W	31.05	40.33	1.76	0.7224	0.56	0.085	2.51	1.37	0.143	0.069	0.264	0.014	0.93	6.3	0.58	7.81	16407	2.1114	23.89554	-21.78414	NAF
NS0108	128	130	NS	X073313	073313	1	G	D	36.35	36.6	1.27	0.7998	0.62	0.054	1.78	1.38	0.097	0.032	0.474	0.035	0.15	4.28	0.61	5.04	16373	0.9792	24.06996	-23.09076	NAF
NS0108	198	200	NS	X073348	073348	1	G	W	32.71	42.66	1.24	0.5547	0.43	0.055	1.74	1.4	0.077	0.034	0.201	0.012	0.16	3.93	0.8	4.89	16408	1.0404	24.4188	-23.3784	NAF
NS0108	116	118	NS	X073307	073307	1	G	D	24.69	40	7.82	0.2967	0.23	0.353	6.63	1.44	0.107	0.042	0.207	0.022	0.36	5.69	1.22	7.27	16367	1.2852	25.11648	-23.83128	NAF
NS0108	162	164	NS	X073330	073330	1	G	W	28.91	37.05	3.03	0.9288	0.72	0.131	3.22	1.86	0.187	0.239	0.506	0.019	0.4	9.25	0.81	10.46	16390	7.3134	32.44212	-25.12872	NAF
NS0108	122	124	NS	X073310	073310	1	G	D	35.57	37.28	1.23	0.7998	0.62	0.057	1.81	1.54	0.115	0.037	0.512	0.012	0.12	4.37	0.64	5.13	16370	1.1322	26.86068	-25.72848	NAF
NS0108	118	120	NS	X073308	073308	1	G	D	25.69	38.3	6.81	0.4644	0.36	0.317	6.36	1.54	0.111	0.023	0.156	0.022	0.45	7.39	1.28	9.12	16368	0.7038	26.86068	-26.15688	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0108	0	2	NS	X073248	073248	1	G	D	4.56	69.23	13.65	0.0258	0.02	0.673	0.35	2.2	0.011	0.027	0.328	0.097	0.86	4.53	1.26	6.65	16309	0.8262	38.3724	-37.5462	NAC
NS0109	124	126	NS	X073455	073455	1	G	W	13.27	54.79	12.49	0.1161	0.09	0.589	3.58	0.48	0.019	0.653	4.03	0.042	0.77	2.46	0.93	4.16	16458	19.9818	8.37216	11.60964	PAF(HC)
NS0109	282	284	NS	X073535	073535	1	G	W	12.06	58.17	12.1	0.0645	0.05	0.593	3.94	0.13	0.013	0.435	3.58	0.031	0.29	2.58	0.66	3.53	16537	13.311	2.26746	11.04354	PAF(HC)
NS0109	122	124	NS	X073454	073454	1	G	W	16.36	54.37	8.22	0.258	0.2	0.412	3.28	0.93	0.034	0.881	1.89	0.048	0.69	4.17	1.72	6.58	16457	26.9586	16.22106	10.73754	PAF(HC)
NS0109	294	296	NS	X073541	073541	1	G	W	15.83	56	9.59	0.1548	0.12	0.471	3.86	0.43	0.033	0.459	0.923	0.04	0.47	3.5	0.95	4.92	16543	14.0454	7.50006	6.54534	PAF(LC)
NS0109	280	282	NS	X073534	073534	1	G	W	13.07	56.17	11.86	0.1032	0.08	0.581	3.79	0.52	0.019	0.506	3.62	0.038	0.38	2.81	0.96	4.15	16536	15.4836	9.06984	6.41376	PAF(LC)
NS0109	64	66	NS	X073424	073424	1	G	D	11.22	57.79	12.89	0.0903	0.07	0.59	2.79	0.11	0.043	0.234	4.94	0.058	1.26	2.05	0.66	3.97	16428	7.1604	1.91862	5.24178	PAF(LC)
NS0109	82	84	NS	X073433	073433	1	G	W	18.28	53.51	7.26	0.2967	0.23	0.336	2.94	0.33	0.072	0.342	2.13	0.128	1.07	4.1	0.93	6.1	16437	10.4652	5.75586	4.70934	PAF(LC)
NS0109	126	128	NS	X073456	073456	1	G	W	13.33	54.34	12.29	0.129	0.1	0.599	3.63	0.84	0.021	0.615	4.02	0.03	0.66	2.57	1.25	4.48	16459	18.819	14.65128	4.16772	PAF(LC)
NS0109	66	68	NS	X073425	073425	1	G	D	8.37	59.32	14.15	0.0645	0.05	0.641	2.98	0.06	0.014	0.151	6.54	0.071	0.71	1.92	0.51	3.14	16429	4.6206	1.04652	3.57408	PAF(LC)
NS0109	268	270	NS	X073528	073528	1	G	W	18.94	50.03	8.56	0.1935	0.15	0.424	3.97	1.25	0.046	0.829	1.32	0.142	0.8	3.27	1.53	5.6	16530	25.3674	21.8025	3.5649	PAF(LC)
NS0109	104	106	NS	X073444	073444	1	G	W	18.76	51.19	9.75	0.2322	0.18	0.452	3.81	0.21	0.044	0.217	1.34	0.066	0.85	4.22	0.66	5.73	16448	6.6402	3.66282	2.97738	PAF(LC)
NS0109	196	198	NS	X073491	073491	1	G	W	21.74	47.02	5.81	0.258	0.2	0.283	4.14	0.48	0.063	0.341	0.808	0.153	0.96	6.62	1.1	8.68	16494	10.4346	8.37216	2.06244	PAF(LC)
NS0109	288	290	NS	X073538	073538	1	G	W	19.28	50.89	7.35	0.2322	0.18	0.344	4	1.25	0.133	0.765	0.807	0.174	0.86	3.68	1.45	5.99	16540	23.409	21.8025	1.6065	PAF(LC)
NS0109	112	114	NS	X073448	073448	1	G	W	21.52	47.95	5.96	0.3741	0.29	0.271	3.01	0.43	0.087	0.296	0.926	0.079	1.14	7.51	0.84	9.49	16452	9.0576	7.50006	1.55754	PAF(LC)
NS0109	102	104	NS	X073443	073443	1	G	W	16.75	54.9	9.92	0.1677	0.13	0.467	3.67	0.21	0.046	0.154	1.37	0.051	0.74	3.6	0.54	4.88	16447	4.7124	3.66282	1.04958	PAF(LC)
NS0109	274	276	NS	X073531	073531	1	G	W	25.64	39.86	3.74	0.4257	0.33	0.179	3.07	0.85	0.086	0.515	0.749	0.143	0.97	11.05	1.39	13.41	16533	15.759	14.8257	0.9333	PAF(LC)
NS0109	100	102	NS	X073442	073442	1	G	W	18.4	52.28	9.29	0.2193	0.17	0.433	3.86	0.27	0.056	0.177	0.889	0.07	1.03	4.13	0.64	5.8	16446	5.4162	4.70934	0.70686	PAF(LC)
NS0109	74	76	NS	X073429	073429	1	G	W	20.57	51.37	8.03	0.2451	0.19	0.363	2.24	0.35	0.118	0.221	1.35	0.024	2.6	2.16	0.69	5.45	16433	6.7626	6.1047	0.6579	PAF(LC)
NS0109	98	100	NS	X073441	073441	1	G	W	20.14	49.71	7.66	0.3612	0.28	0.359	3.61	0.36	0.073	0.218	1.06	0.083	0.84	5.57	0.76	7.17	16445	6.6708	6.27912	0.39168	PAF(LC)
NS0109	120	122	NS	X073453	073453	1	G	W	25.76	38.7	4.32	0.5934	0.46	0.195	3.34	0.54	0.089	0.32	0.5	0.066	0.97	12.6	0.9	14.47	16456	9.792	9.41868	0.37332	PAF(LC)
NS0109	194	196	NS	X073490	073490	1	G	W	21.76	48.22	5.83	0.3096	0.24	0.291	4.15	0.43	0.046	0.254	1.12	0.193	1.11	5.54	0.92	7.57	16493	7.7724	7.50006	0.27234	PAF(LC)
NS0109	4	6	NS	X073393	073393	1	G	D	30.58	41.33	6.85	0.0387	0.03	0.205	0.05	0.08	0.013	0.047	0.015	0.067	4.61	2.1	0.32	7.03	16290	1.4382	1.39536	0.04284	PAF(LC)
NS0109	6	8	NS	X073394	073394	1	G	D	28.73	42.99	7.69	0.0258	0.02	0.256	0.07	0.07	0.01	0.041	0.012	0.044	4.65	2.27	0.3	7.22	16291	1.2546	1.22094	0.03366	PAF(LC)
NS0109	8	10	NS	X073395	073395	1	G	D	31.36	44.29	5.31	0.0645	0.05	0.227	0.06	0.06	0.022	0.029	0.01	0.039	3.01	1.6	0.2	4.81	16292	0.8874	1.04652	-0.15912	NAF
NS0109	114	116	NS	X073449	073449	1	G	W	22.39	46.54	6.06	0.3999	0.31	0.278	3.17	0.49	0.105	0.268	0.975	0.103	1.04	7.4	0.82	9.26	16453	8.2008	8.54658	-0.34578	NAF
NS0109	14	16	NS	X073398	073398	1	G	D	33.23	42.42	4.34	0.0645	0.05	0.166	0.24	0.09	0.047	0.039	0.143	0.051	2.72	1.45	0.16	4.33	16295	1.1934	1.56978	-0.37638	NAF
NS0109	10	12	NS	X073396	073396	1	G	D	29.97	45.11	6.05	0.0774	0.06	0.266	0.07	0.08	0.045	0.029	0.016	0.039	3.12	1.91	0.22	5.25	16293	0.8874	1.39536	-0.50796	NAF
NS0109	156	158	NS	X073471	073471	1	G	W	22.54	45.71	6.43	0.3354	0.26	0.313	3.73	0.71	0.072	0.381	1.14	0.188	1.13	6.31	1.1	8.54	16474	11.6586	12.38382	-0.72522	NAF
NS0109	84	86	NS	X073434	073434	1	G	W	22.25	45.92	6.61	0.4257	0.33	0.306	2.74	0.47	0.101	0.237	2.01	0.076	1.17	6.94	0.68	8.79	16438	7.2522	8.19774	-0.94554	NAF
NS0109	236	238	NS	X073512	073512	1	G	W	24.75	43.68	3.81	0.2838	0.22	0.18	2.52	0.5	0.055	0.253	0.892	0.11	1.01	10.49	0.75	12.25	16514	7.7418	8.721	-0.9792	NAF
NS0109	168	170	NS	X073477	073477	1	G	W	24.58	43.24	5.17	0.3741	0.29	0.251	3.32	0.6	0.087	0.304	1.14	0.256	1.39	7.47	0.93	9.79	16480	9.3024	10.4652	-1.1628	NAF
NS0109	296	298	NS	X073542	073542	1	G	W	17.05	53.88	9.37	0.1548	0.12	0.466	4.15	0.82	0.024	0.425	0.473	0.06	0.72	3.65	1.2	5.57	16544	13.005	14.30244	-1.29744	NAF
NS0109	70	72	NS	X073427	073427	1	G	W	13.89	57.02	11.18	0.1806	0.14	0.519	2.58	0.17	0.051	0.051	3.09	0.034	2	2.38	0.41	4.79	16431	1.5606	2.96514	-1.40454	NAF
NS0109	68	70	NS	X073426	073426	1	G	W	16.24	54.49	10.43	0.5031	0.39	0.476	2.25	0.21	0.07	0.071	2.6	0.045	2.47	2.35	0.47	5.29	16430	2.1726	3.66282	-1.49022	NAF
NS0109	292	294	NS	X073540	073540	1	G	W	23.82	41.47	3.91	0.5031	0.39	0.182	3.56	1.34	0.048	0.706	0.684	0.147	0.85	10.18	1.43	12.46	16542	21.6036	23.37228	-1.76868	NAF
NS0109	72	74	NS	X073428	073428	1	G	W	17.37	53.78	9.85	0.4773	0.37	0.454	2.23	0.19	0.063	0.049	2.41	0.042	2.5	2.33	0.41	5.24	16432	1.4994	3.31398	-1.81458	NAF
NS0109	40	42	NS	X073412	073412	1	G	D	31.28	42.88	3.5	0.9933	0.77	0.154	0.79	0.11	0.095	0.001	0.567	0.03	4.08	1.27	0.23	5.58	16308	0.0306	1.91862	-1.88802	NAF
NS0109	80	82	NS	X073432	073432	1	G	W	23.72	43.87	6.12	0.4644	0.36	0.273	3	0.53	0.074	0.236	1.41	0.075	1.1	7.83	0.73	9.66	16436	7.2216	9.24426	-2.02266	NAF
NS0109	36	38	NS	X073410	073410	1	G	D	31	43.2	3.65	1.0836	0.84	0.155	0.62	0.12	0.094	0.002	0.52	0.037	4.1	1.25	0.25	5.6	16306	0.0612	2.09304	-2.03184	NAF
NS0109	116	118	NS	X073450	073450	1	G	W	23.92	43.3	4.76	0.4257	0.33	0.216	3.1	0.58	0.087	0.264	0.822	0.102	0.97	9.78	0.78	11.53	16454	8.0784	10.11636	-2.03796	NAF
NS0109	136	138	NS	X073461	073461	1	G	W	24.46	43.55	4.52	0.2967	0.23	0.212	2.74	0.63	0.109	0.286	0.943	0.119	1.33	9.07	0.8	11.2	16464	8.7516	10.98846	-2.23686	NAF
NS0109	48	50	NS	X073416	073416	1	G	D	32.02	42.09	3.72	0.7998	0.62	0.156	0.63	0.13	0.086	0.0005	0.424	0.026	4.09	1.29	0.21	5.59	16420	0.0153	2.26746	-2.25216	NAF
NS0109	24	26	NS	X073404	073404	1	G	D	32.93	42.08	3.72	0.8256	0.64	0.161	0.64	0.14	0.068	0.006	0.826	0.048	2.8	1.13	0.16	4.09	16300	0.1836	2.44188	-2.25828	NAF
NS0109	2	4	NS	X073392	073392	1	G	D	31.17	39.39	7.31	0.0645	0.05	0.241	0.09	0.23	0.015	0.054	0.026	0.088	5.05	2.4	0.37	7.82	16289	1.6524	4.01166	-2.35926	NAF
NS0109	96	98	NS	X073440	073440	1	G	W	23.94	44.02	5.48	0.4902	0.38	0.253	3.29	0.49	0.086	0.202	1.1	0.108	1	8.43	0.64	10.07	16444	6.1812	8.54658	-2.36538	NAF
NS0109	110	112	NS	X073447	073447	1	G	W	21.54	47.16	5.72	0.4128	0.32	0.262	3.22	0.49	0.081	0.201	0.851	0.076	0.93	8.45	0.68	10.06	16451	6.1506	8.54658	-2.39598	NAF
NS0109	130	132	NS	X073458	073458	1	G	W	24.33	41.26	4.67	0.4773	0.37	0.22	3.61	0.94	0.095	0.457	0.835	0.129	1.15	9.72	1.27	12.14	16461	13.9842	16.39548	-2.41128	NAF
NS0109	16	18	NS	X073399	073399	1	G	D	19.47	52.23	10.09	0.0645	0.05	0.468	0.46	0.19	0.035	0.029	2.6	0.092	2.67	2.46	0.26	5.39	16296	0.8874	3.31398	-2.42658	NAF
NS0109	76	78	NS	X073430	073430	1	G	W	19.5	52.06	8.8	0.4257	0.33	0.403	1.85	0.32	0.088	0.103	2.1	0.04	3	2.08	0.51	5.59	16434	3.1518	5.58144	-2.42964	NAF
NS0109	26	28	NS	X073405	073405	1	G	D	33.52	42.15	3.14	0.8385	0.65	0.14	0.61	0.15	0.084	0.006	0.629	0.037	2.74	1.03	0.14	3.91	16301	0.1836	2.6163	-2.4327	NAF
NS0109	18	20	NS	X073400	073400	1	G	D	31.9	43.38	4.63	0.1161	0.09	0.174	0.53	0.18	0.052	0.02	0.619	0.054	2.94	1.46	0.14	4.54	16297	0.612	3.13956	-2.52756	NAF
NS0109	22	24	NS	X073403	073403	1	G	D	29.89	46.25	4.06	0.5547	0.43	0.177	0.65	0.16	0.062	0.007	1.05	0.045	2.62	1.2	0.14	3.96	16299	0.2142	2.79072	-2.57652	NAF
NS0109	118	120	NS	X073452	073452	1	G	W	24.49	42.06	4.1	0.4644	0.36	0.186	3.03	0.48	0.082	0.188	0.673	0.079	1.08	11.22	0.6	12.9	16455	5.7528	8.37216	-2.61936	NAF
NS0109	200	202	NS	X073493	073493	1	G	W	19.61	49.86	8.32	0.1548	0.12	0.401	4.22	0.67	0.077	0.292	1.63	0.148	0.86	3.79	1.05	5.7	16496	8.9352	11.68614	-2.75094	NAF
NS0109	42	44	NS	X073413	073413	1	G	D	26.11	49.39	4.57	0.8127	0.63	0.211	0.88	0.17	0.074	0.002	0.8	0.049	3.69	1.46	0.23	5.38	16417	0.0612	2.96514	-2.90394	NAF
NS0109	46	48	NS	X073415	073415	1	G	D	32.89	41.86	3.41	0.7998	0.62	0.146	0.69	0.17	0.079	0.0005	0.362	0.027	3.71	1.17	0.17	5.05	16419	0.0153	2.96514	-2.94984	NAF
NS0109	154	156	NS	X073470	073470	1	G	W	20.37	48.03	7.61	0.2451	0.19	0.373	3.76	0.95	0.057	0.442	1.63	0.172	0.92	4.81	1.23	6.96	16473	13.5252	16.5699	-3.0447	NAF
NS0109	32	34	NS	X073408	073408	1	G	D	33.37	42.53	3.01	0.645	0.5	0.16	0.65	0.18	0.084	0.003	0.575	0.037	3.23	0.89	0.1	4.22	16304	0.0918	3.13956	-3.04776	NAF
NS0109	44	46	NS	X073414	073414	1	G	D	31.18	43.87	3.54	0.6708	0.52	0.16	0.79	0.18	0.08	0.001	0.539	0.036	3.71	1.17	0.18	5.06	16418	0.0306	3.13956	-3.10896	NAF
NS0109	20	22	NS	X073401	073401	1	G	D	30.33	44.65	4.79	0.1677	0.13	0.208	0.75	0.21	0.062	0.017	0.937	0.077	2.92	1.42	0.14	4.48	16298	0.5202	3.66282	-3.14262	NAF
NS0109	56	58	NS	X073420	073420	1	G	D	15.48	56.96	10.01	0.2451	0.19	0.45	1.88	0.19	0.035	0.003	2.7	0.048	2.12	2.38	0.28	4.78	16424	0.0918	3.31398	-3.22218	NAF
NS0109	52	54	NS	X073418	073418	1	G	D	13.1	63	8.96	0.1548	0.12	0.432	1.71	0.19	0.025	0.002	1.84	0.033	1.88	2.28	0.24	4.4	16422	0.0612	3.31398	-3.25278	NAF
NS0109	54	56	NS	X073419	073419	1	G	D	18.89	54.67	8.47	0.4773	0.37	0.39	1.7	0.19	0.053	0.002	1.34	0.034	2.48	2.34	0.28	5.1	16423	0.0612	3.31398	-3.25278	NAF
NS0109	28	30	NS	X073406	073406	1	G	D	27.22	46.29	5.74	0.8514	0.66	0.261	0.94	0.2	0.101	0.005	1.56	0.065	2.9	1.49	0.22	4.61	16302	0.153	3.4884	-3.3354	NAF
NS0109	134	136	NS	X073460	073460	1	G	W	21.17	47.96	6.85	0.2451	0.19	0.327	3.56	0.81	0.073	0.351	1.07	0.128	0.91	5.95	1.12	7.98	16463	10.7406	14.12802	-3.38742	NAF
NS0109	50	52	NS	X073417	073417	1	G	D	23.99	51.88	4.85	0.645	0.5	0.219	1.03	0.2	0.067	0.001	0.622	0.034	3.79	1.62	0.25	5.66	16421	0.0306	3.4884	-3.4578	NAF
NS0109	170	172	NS	X073478	073478	1	G	W	23.21	44.43	5.32	0.3354	0.26	0.257	3.24	0.84	0.059	0.364	1.25	0.19	1.11	7.79	1.1	10	16481	11.1384	14.65128	-3.51288	NAF
NS0109	276	278	NS	X073532	073532	1	G	W	26.3	39.42	3.18	0.4128	0.32	0.151	3.05	0.85	0.114	0.366	0.77	0.162	1.1	11.65	1.02	13.77	16534	11.1996	14.8257	-3.6261	NAF
NS0109	60	62	NS	X073422	073422	1	G	D	18.55	57.2	7.16	0.4773	0.37	0.33	1.29	0.22	0.054	0.006	1.12	0.026	2.89	2.02	0.25	5.16	16426	0.1836	3.83724	-3.65364	NAF
NS0109	230	232	NS	X073509	073509	1	G	W	24.82	42.32	3.95	0.3096	0.24	0.192	2.73	0.69	0.065	0.267	0.799	0.129	1.07	10.65	0.75	12.47	16511	8.1702	12.03498	-3.86478	NAF
NS0109	12	14	NS	X073397	073397	1	G	D	33.8	42.7	3.75	0.129	0.1	0.165	0.11	0.27	0.01	0.027	0.009	0.047	2.54	1.39	0.17	4.1	16294	0.8262	4.70934	-3.88314	NAF
NS0109	30	32	NS	X073407	073407	1	G	D	27.72	46.81	4.95	0.8514	0.66	0.244	0.88	0.23	0.093	0.004	1.07	0.056	3.18	1.44	0.2	4.82	16303	0.1224	4.01166	-3.88926	NAF
NS0109	34	36	NS	X073409	073409	1	G	D	31.3	43.85	3.85	0.6837	0.53	0.184	0.8	0.23	0.074	0.003	0.617	0.048	3.26	1.2	0.12	4.58	16305	0.0918	4.01166	-3.91986	NAF
NS0109	58	60	NS	X073421	073421	1	G	D	19.71	52.76	8.9	0.3741	0.29	0.402	1.61	0.23	0.051	0.003	1.48	0.045	2.62	2.48	0.3	5.4	16425	0.0918	4.01166	-3.91986	NAF
NS0109	38	40	NS	X073411	073411	1	G	D	23.42	49.81	6.61	0.7353	0.57	0.303	1.01	0.23	0.078	0.002	1.33	0.042	3.79	1.86	0.27	5.92	16307	0.0612	4.01166	-3.95046	NAF
NS0109	272	274	NS	X073530	073530	1	G	W	19.86	48.95	7.25	0.2451	0.19	0.354	3.67	1.25	0.09	0.582	1.14	0.153	0.74	4.82	1.37	6.93	16532	17.8092	21.8025	-3.9933	NAF
NS0109	208	210	NS	X073497	073497	1	G	W	18.87	49.95	8.98	0.1935	0.15	0.431	4.21	1.09	0.09	0.49	1.49	0.122	0.79	3.56	1.22	5.57	16500	14.994	19.01178	-4.01778	NAF
NS0109	188	190	NS	X073487	073487	1	G	W	24.76	42.45	3.47	0.2967	0.23	0.166	3.25	0.45	0.057	0.124	0.546	0.117	0.97	12.03	0.41	13.41	16490	3.7944	7.8489	-4.0545	NAF
NS0109	86	88	NS	X073435	073435	1	G	W	25.2	42.74	5.69	0.516	0.4	0.263	2.84	0.54	0.117	0.165	1.41	0.105	0.95	7.99	0.49	9.43	16439	5.049	9.41868	-4.36968	NAF
NS0109	62	64	NS	X073423	073423	1	G	D	28.12	44.81	5.09	0.4257	0.33	0.232	1.23	0.26	0.089	0.001	0.557	0.04	4.82	1.59	0.27	6.68	16427	0.0306	4.53492	-4.50432	NAF
NS0109	138	140	NS	X073462	073462	1	G	W	23.21	45.67	5.14	0.3225	0.25	0.245	3.16	0.75	0.127	0.279	1.12	0.169	1.67	6.78	0.91	9.36	16465	8.5374	13.0815	-4.5441	NAF
NS0109	78	80	NS	X073431	073431	1	G	W	21.8	48.21	7.68	0.4644	0.36	0.349	2.46	0.54	0.124	0.148	1.68	0.08	2.11	3.78	0.59	6.48	16435	4.5288	9.41868	-4.88988	NAF
NS0109	192	194	NS	X073489	073489	1	G	W	23.47	44.31	4.92	0.2838	0.22	0.237	3.83	0.68	0.106	0.216	0.872	0.166	1.16	8.32	0.78	10.26	16492	6.6096	11.86056	-5.25096	NAF
NS0109	198	200	NS	X073492	073492	1	G	W	24.31	41.31	4.23	0.387	0.3	0.196	3.69	0.7	0.074	0.227	0.509	0.083	0.93	11.38	0.73	13.04	16495	6.9462	12.2094	-5.2632	NAF
NS0109	166	168	NS	X073476	073476	1	G	W	22.25	44.86	6.46	0.3741	0.29	0.316	3.76	1.1	0.08	0.443	1.32	0.216	1.16	5.86	1.42	8.44	16479	13.5558	19.1862	-5.6304	NAF
NS0109	202	204	NS	X073494	073494	1	G	W	18.82	50.99	8.63	0.1548	0.12	0.414	4.09	0.79	0.061	0.26	1.61	0.128	0.87	3.73	1.01	5.61	16497	7.956	13.77918	-5.82318	NAF
NS0109	234	236	NS	X073511	073511	1	G	W	25.2	43.17	3.92	0.2838	0.22	0.186	2.48	0.65	0.044	0.18	0.948	0.144	1.1	10.29	0.54	11.93	16513	5.508	11.3373	-5.8293	NAF
NS0109	158	160	NS	X073472	073472	1	G	W	22.34	45.14	5.86	0.3999	0.31	0.283	3.64	1.18	0.071	0.479	1.14	0.189	1.01	6.48	1.46	8.95	16475	14.6574	20.58156	-5.92416	NAF
NS0109	186	188	NS	X073486	073486	1	G	W	24.13	42.39	4.33	0.3612	0.28	0.202	3.8	0.68	0.093	0.192	0.779	0.165	1.08	10.01	0.71	11.8	16489	5.8752	11.86056	-5.98536	NAF
NS0109	238	240	NS	X073513	073513	1	G	W	22.57	44.84	5.06	0.2838	0.22	0.242	3.3	0.89	0.06	0.305	0.884	0.107	0.82	9.58	0.85	11.25	16515	9.333	15.52338	-6.19038	NAF
NS0109	106	108	NS	X073445	073445	1	G	W	19.02	50.11	8.45	0.2838	0.22	0.392	3.65	0.81	0.042	0.25	1.55	0.085	0.85	4.53	0.99	6.37	16449	7.65	14.12802	-6.47802	NAF
NS0109	94	96	NS	X073439	073439	1	G	W	20.99	48.62	6.7	0.4257	0.33	0.312	3.3	0.64	0.094	0.146	1.45	0.11	1.06	5.88	0.62	7.56	16443	4.4676	11.16288	-6.69528	NAF
NS0109	258	260	NS	X073523	073523	1	G	W	23.71	42.46	4.53	0.387	0.3	0.218	3.37	0.96	0.08	0.324	0.595	0.116	0.81	10.38	1.02	12.21	16525	9.9144	16.74432	-6.82992	NAF
NS0109	212	214	NS	X073499	073499	1	G	W	17.37	51.47	10.2	0.1419	0.11	0.492	4.27	0.95	0.044	0.313	1.74	0.099	0.61	3.07	1.06	4.74	16502	9.5778	16.5699	-6.9921	NAF
NS0109	142	144	NS	X073464	073464	1	G	W	23.17	44.13	4.84	0.4257	0.33	0.237	3.44	0.99	0.069	0.328	0.949	0.145	1.15	8.3	1.08	10.53	16467	10.0368	17.26758	-7.23078	NAF
NS0109	228	230	NS	X073508	073508	1	G	W	21.6	46.41	7.18	0.2709	0.21	0.35	3.64	1.05	0.118	0.357	1.4	0.174	0.92	5.56	1.16	7.64	16510	10.9242	18.3141	-7.3899	NAF
NS0109	286	288	NS	X073537	073537	1	G	W	20.3	47.27	6.72	0.3354	0.26	0.33	4.1	1.61	0.114	0.674	0.755	0.163	0.85	5.12	1.69	7.66	16539	20.6244	28.08162	-7.45722	NAF
NS0109	214	216	NS	X073500	073500	1	G	W	20.89	48.01	6.71	0.2838	0.22	0.321	3.86	1.25	0.089	0.467	0.985	0.149	0.79	5.83	1.21	7.83	16503	14.2902	21.8025	-7.5123	NAF
NS0109	232	234	NS	X073510	073510	1	G	W	24.6	44.12	3.89	0.2838	0.22	0.184	2.53	0.71	0.04	0.14	0.951	0.146	1.11	9.97	0.47	11.55	16512	4.284	12.38382	-8.09982	NAF
NS0109	108	110	NS	X073446	073446	1	G	W	18.33	52.14	7.9	0.2709	0.21	0.374	3.57	0.91	0.062	0.251	1.41	0.088	0.92	4.69	0.97	6.58	16450	7.6806	15.87222	-8.19162	NAF
NS0109	88	90	NS	X073436	073436	1	G	W	24.23	43.79	6.14	0.4773	0.37	0.28	3.18	0.72	0.079	0.14	1.27	0.112	1	7.12	0.51	8.63	16440	4.284	12.55824	-8.27424	NAF
NS0109	160	162	NS	X073473	073473	1	G	W	19.7	48.95	7.48	0.2838	0.22	0.361	3.76	1.27	0.063	0.451	1.73	0.189	0.98	4.24	1.4	6.62	16476	13.8006	22.15134	-8.35074	NAF
NS0109	216	218	NS	X073502	073502	1	G	W	22.95	44.89	5.06	0.3741	0.29	0.238	3.44	1.07	0.065	0.332	0.729	0.113	0.86	8.87	1.06	10.79	16504	10.1592	18.66294	-8.50374	NAF
NS0109	180	182	NS	X073483	073483	1	G	W	19.04	47.6	8.44	0.1935	0.15	0.407	4.03	1.73	0.049	0.703	1.38	0.113	0.74	4.42	1.79	6.95	16486	21.5118	30.17466	-8.66286	NAF
NS0109	206	208	NS	X073496	073496	1	G	W	17.16	52.46	9.74	0.1419	0.11	0.468	4.24	1.04	0.043	0.305	1.73	0.11	0.66	3.02	1.13	4.81	16499	9.333	18.13968	-8.80668	NAF
NS0109	152	154	NS	X073469	073469	1	G	W	24.11	41.93	4.35	0.3741	0.29	0.204	3.14	1.07	0.093	0.308	0.746	0.122	0.93	10.35	0.96	12.24	16472	9.4248	18.66294	-9.23814	NAF
NS0109	290	292	NS	X073539	073539	1	G	W	22.68	43.25	4.89	0.4386	0.34	0.231	3.79	1.87	0.118	0.746	0.938	0.206	1.07	7.24	2.11	10.42	16541	22.8276	32.61654	-9.78894	NAF
NS0109	146	148	NS	X073466	073466	1	G	W	22.4	46.04	5.51	0.3612	0.28	0.264	3.54	1.11	0.087	0.309	0.993	0.183	1.03	7	1.12	9.15	16469	9.4554	19.36062	-9.90522	NAF
NS0109	182	184	NS	X073484	073484	1	G	W	20.85	46.25	6.51	0.3483	0.27	0.312	3.67	1.41	0.059	0.476	1.25	0.136	0.84	6.92	1.43	9.19	16487	14.5656	24.59322	-10.02762	NAF
NS0109	184	186	NS	X073485	073485	1	G	W	22.49	45.11	4.77	0.3741	0.29	0.228	3.65	1.07	0.104	0.28	1.02	0.166	1.02	8.43	0.89	10.34	16488	8.568	18.66294	-10.09494	NAF
NS0109	140	142	NS	X073463	073463	1	G	W	22.59	44.18	5.63	0.2451	0.19	0.268	3.57	1.25	0.08	0.361	0.96	0.114	1.1	7.58	1.24	9.92	16466	11.0466	21.8025	-10.7559	NAF
NS0109	204	206	NS	X073495	073495	1	G	W	16.89	52.51	9.95	0.129	0.1	0.485	4.32	1.1	0.039	0.26	1.7	0.094	0.6	2.98	1.17	4.75	16498	7.956	19.1862	-11.2302	NAF
NS0109	190	192	NS	X073488	073488	1	G	W	24.52	42.06	3.74	0.3225	0.25	0.179	3.44	0.89	0.17	0.12	0.632	0.136	1.09	11.29	0.4	12.78	16491	3.672	15.52338	-11.85138	NAF
NS0109	132	134	NS	X073459	073459	1	G	W	20.43	48.07	6.07	0.3483	0.27	0.288	3.63	1.47	0.109	0.439	0.842	0.119	1.46	5.72	1.59	8.77	16462	13.4334	25.63974	-12.20634	NAF
NS0109	210	212	NS	X073498	073498	1	G	W	16.59	51.97	10.35	0.1548	0.12	0.497	4.24	1.2	0.064	0.273	1.99	0.087	0.5	3.15	1.17	4.82	16501	8.3538	20.9304	-12.5766	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0109	128	130	NS	X073457	073457	1	G	W	16.17	50.16	10.04	0.258	0.2	0.477	3.94	2.19	0.03	0.836	2.29	0.06	0.63	3.57	2.1	6.3	16460	25.5816	38.19798	-12.61638	NAF
NS0109	242	244	NS	X073515	073515	1	G	W	22.27	46.24	5.09	0.2838	0.22	0.243	3.12	1.13	0.086	0.221	0.811	0.075	0.73	9.16	0.83	10.72	16517	6.7626	19.70946	-12.94686	NAF
NS0109	270	272	NS	X073529	073529	1	G	W	21.51	45.93	5.85	0.3741	0.29	0.281	3.64	1.39	0.089	0.365	0.696	0.12	0.79	7.68	1.29	9.76	16531	11.169	24.24438	-13.07538	NAF
NS0109	220	222	NS	X073504	073504	1	G	W	21	47.51	7.06	0.2193	0.17	0.347	3.94	1.3	0.147	0.29	0.993	0.176	0.92	5.02	1.14	7.08	16506	8.874	22.6746	-13.8006	NAF
NS0109	244	246	NS	X073516	073516	1	G	W	22.68	44.42	5.13	0.3741	0.29	0.246	3.4	1.15	0.073	0.191	0.936	0.119	0.95	9.01	0.81	10.77	16518	5.8446	20.0583	-14.2137	NAF
NS0109	218	220	NS	X073503	073503	1	G	W	22.93	44.08	4.65	0.2967	0.23	0.22	3.4	1.25	0.108	0.243	0.633	0.117	0.85	9.56	0.94	11.35	16505	7.4358	21.8025	-14.3667	NAF
NS0109	162	164	NS	X073474	073474	1	G	W	16.87	52.12	8.79	0.2322	0.18	0.424	3.72	1.38	0.074	0.305	1.91	0.12	0.76	3.75	1.27	5.78	16477	9.333	24.06996	-14.73696	NAF
NS0109	224	226	NS	X073506	073506	1	G	W	19.86	48.74	7.58	0.2451	0.19	0.374	4.1	1.48	0.068	0.355	1.26	0.172	0.89	3.79	1.53	6.21	16508	10.863	25.81416	-14.95116	NAF
NS0109	150	152	NS	X073468	073468	1	G	W	21.6	46.92	6.43	0.3354	0.26	0.313	3.8	1.44	0.068	0.326	1.3	0.189	1.07	5.45	1.38	7.9	16471	9.9756	25.11648	-15.14088	NAF
NS0109	252	254	NS	X073520	073520	1	G	W	18.48	49.52	8.07	0.3225	0.25	0.391	4.19	1.67	0.063	0.427	1.02	0.121	0.61	4.71	1.55	6.87	16522	13.0662	29.12814	-16.06194	NAF
NS0109	284	286	NS	X073536	073536	1	G	W	15.24	52.33	9.97	0.2322	0.18	0.482	4.53	1.95	0.049	0.586	1.41	0.047	0.44	3.57	1.88	5.89	16538	17.9316	34.0119	-16.0803	NAF
NS0109	92	94	NS	X073438	073438	1	G	W	20.36	48.62	6.94	0.3741	0.29	0.326	3.52	1.26	0.147	0.159	1.61	0.136	1.04	5.24	0.8	7.08	16442	4.8654	21.97692	-17.11152	NAF
NS0109	246	248	NS	X073517	073517	1	G	W	21.34	45.82	5.94	0.387	0.3	0.285	3.75	1.55	0.11	0.323	1.12	0.132	0.94	6.76	1.28	8.98	16519	9.8838	27.0351	-17.1513	NAF
NS0109	148	150	NS	X073467	073467	1	G	W	19.97	49.05	6.95	0.2451	0.19	0.345	3.82	1.68	0.087	0.397	1.58	0.211	1.12	3.53	1.64	6.29	16470	12.1482	29.30256	-17.15436	NAF
NS0109	266	268	NS	X073527	073527	1	G	W	20.76	45.55	6.75	0.4515	0.35	0.326	3.91	1.87	0.079	0.49	0.839	0.133	0.83	6.36	1.68	8.87	16529	14.994	32.61654	-17.62254	NAF
NS0109	144	146	NS	X073465	073465	1	G	W	23.14	43.23	4.52	0.4257	0.33	0.216	3.39	1.49	0.091	0.273	0.795	0.134	0.99	9.31	1.15	11.45	16468	8.3538	25.98858	-17.63478	NAF
NS0109	222	224	NS	X073505	073505	1	G	W	20.73	47.81	6.5	0.2967	0.23	0.316	3.93	1.48	0.089	0.262	1.03	0.176	0.91	5.27	1.34	7.52	16507	8.0172	25.81416	-17.79696	NAF
NS0109	226	228	NS	X073507	073507	1	G	W	21.56	46.3	6.21	0.3741	0.29	0.302	3.75	1.68	0.151	0.365	1.16	0.194	0.99	5.66	1.4	8.05	16509	11.169	29.30256	-18.13356	NAF
NS0109	240	242	NS	X073514	073514	1	G	W	21.78	45.69	5.71	0.3096	0.24	0.276	3.51	1.6	0.042	0.272	0.966	0.093	0.77	7.88	1.45	10.1	16516	8.3232	27.9072	-19.584	NAF
NS0109	172	174	NS	X073479	073479	1	G	W	21.51	45.11	5.32	0.3354	0.26	0.259	3.38	1.98	0.085	0.466	0.979	0.134	0.94	7.77	1.7	10.41	16482	14.2596	34.53516	-20.27556	NAF
NS0109	256	258	NS	X073522	073522	1	G	W	20.69	46.64	6.43	0.4128	0.32	0.318	3.99	1.85	0.097	0.379	0.992	0.167	0.81	6.1	1.63	8.54	16524	11.5974	32.2677	-20.6703	NAF
NS0109	260	262	NS	X073524	073524	1	G	W	17.82	50.92	7.45	0.3354	0.26	0.351	3.79	2.02	0.057	0.461	1.07	0.107	0.63	4.74	1.85	7.22	16526	14.1066	35.23284	-21.12624	NAF
NS0109	178	180	NS	X073482	073482	1	G	W	20.24	46.69	6.81	0.3096	0.24	0.329	3.78	1.99	0.069	0.424	1.33	0.161	0.91	5.85	1.79	8.55	16485	12.9744	34.70958	-21.73518	NAF
NS0109	90	92	NS	X073437	073437	1	G	W	21.98	44.56	6.65	0.4773	0.37	0.308	3.7	1.55	0.081	0.158	1.42	0.106	1.03	6.77	1.03	8.83	16441	4.8348	27.0351	-22.2003	NAF
NS0109	264	266	NS	X073526	073526	1	G	W	14.3	53.2	10.3	0.2451	0.19	0.494	3.83	1.89	0.023	0.336	2.55	0.043	0.41	3.19	1.94	5.54	16528	10.2816	32.96538	-22.68378	NAF
NS0109	278	280	NS	X073533	073533	1	G	W	16.8	50.48	7.91	0.3225	0.25	0.382	3.7	2.17	0.074	0.487	1.79	0.085	0.6	4.9	1.9	7.4	16535	14.9022	37.84914	-22.94694	NAF
NS0109	254	256	NS	X073521	073521	1	G	W	18.17	50.03	6.67	0.387	0.3	0.321	3.95	2.44	0.087	0.631	0.933	0.144	0.7	4.34	2.11	7.15	16523	19.3086	42.55848	-23.24988	NAF
NS0109	250	252	NS	X073519	073519	1	G	W	18.03	49.53	8.15	0.2709	0.21	0.406	4.32	2.41	0.082	0.547	0.878	0.127	0.71	3.61	2.14	6.46	16521	16.7382	42.03522	-25.29702	NAF
NS0109	0	2	NS	X073391	073391	1	G	D	25.14	46.95	7.47	0.0258	0.02	0.248	0.15	1.86	0.014	0.033	0.076	0.069	3.04	3.01	0.83	6.88	16288	1.0098	32.44212	-31.43232	NAC
NS0109	164	166	NS	X073475	073475	1	G	W	16.52	50.06	8.92	0.2967	0.23	0.435	3.81	2.35	0.036	0.237	2.29	0.098	0.63	4.24	2.12	6.99	16478	7.2522	40.9887	-33.7365	NAC
NS0109	262	264	NS	X073525	073525	1	G	W	16.03	52.18	8.04	0.3612	0.28	0.38	3.6	2.7	0.095	0.404	1.97	0.076	0.52	4.26	2.36	7.14	16527	12.3624	47.0934	-34.731	NAC
NS0109	248	250	NS	X073518	073518	1	G	W	18.04	48.93	8.35	0.2709	0.21	0.405	4.25	2.81	0.149	0.457	1.22	0.124	0.71	3.3	2.4	6.41	16520	13.9842	49.01202	-35.02782	NAC
NS0109	174	176	NS	X073480	073480	1	G	W	18.07	49.39	8.09	0.1806	0.14	0.395	3.92	2.66	0.112	0.279	1.64	0.162	0.81	3.52	2.12	6.45	16483	8.5374	46.39572	-37.85832	NAC
NS0109	176	178	NS	X073481	073481	1	G	W	15.78	51.87	9.35	0.1548	0.12	0.461	3.86	2.4	0.033	0.119	2.12	0.124	0.66	3.43	2.2	6.29	16484	3.6414	41.8608	-38.2194	NAC
NS0111	296	298	NS	X073770	073770	1	G	D	11.86	56.24	11.03	0.3354	0.26	0.477	2.57	0.14	0.025	3.64	2.79	0.047	0.13	5.57	3.19	8.89	16693	111.384	2.44188	108.94212	PAF(HC)
NS0111	294	296	NS	X073769	073769	1	G	D	22.49	39.55	3.79	0.4515	0.35	0.155	3.61	0.69	0.096	1.24	0.999	0.021	0.38	14.96	2.98	18.32	16692	37.944	12.03498	25.90902	PAF(HC)
NS0111	132	134	NS	X073686	073686	1	G	D	28.03	43.85	3.48	0.4257	0.33	0.152	2.41	0.58	0.066	0.871	0.921	0.043	0.16	6.08	1.4	7.64	16611	26.6526	10.11636	16.53624	PAF(HC)
NS0111	176	178	NS	X073709	073709	1	G	D	26.16	39.97	4.58	0.4644	0.36	0.196	2.87	0.59	0.126	0.62	0.24	0.019	0.54	11.47	1.31	13.32	16633	18.972	10.29078	8.68122	PAF(LC)
NS0111	108	110	NS	X073674	073674	1	G	D	34.97	36.08	2.02	0.645	0.5	0.091	2.13	0.38	0.102	0.415	0.473	0.009	0.21	6.49	0.77	7.47	16599	12.699	6.62796	6.07104	PAF(LC)
NS0111	74	76	NS	X073657	073657	1	G	D	35.39	43.96	1.67	1.1352	0.88	0.074	0.17	0.02	0.045	0.053	0.173	0.013	0.96	0.52	0.2	1.68	16582	1.6218	0.34884	1.27296	PAF(LC)
NS0111	72	74	NS	X073656	073656	1	G	D	32.18	48.23	2.18	0.8772	0.68	0.094	0.17	0.02	0.067	0.051	0.185	0.016	1.12	0.63	0.24	1.99	16581	1.5606	0.34884	1.21176	PAF(LC)
NS0111	94	96	NS	X073667	073667	1	G	D	32.04	43.16	2.2	0.645	0.5	0.102	1.43	0.24	0.078	0.175	0.373	0.013	1.09	4.16	0.32	5.57	16592	5.355	4.18608	1.16892	PAF(LC)
NS0111	0	2	NS	X073619	073619	1	G	D	34.22	43.13	3.79	0.0387	0.03	0.197	0.2	0.05	0.043	0.052	0.235	0.032	2.04	1.05	0.21	3.3	16545	1.5912	0.8721	0.7191	PAF(LC)
NS0111	98	100	NS	X073669	073669	1	G	D	35.04	39.6	1.27	0.6708	0.52	0.058	1.53	0.19	0.045	0.131	0.271	0.008	0.18	5.4	0.06	5.64	16594	4.0086	3.31398	0.69462	PAF(LC)
NS0111	22	24	NS	X073630	073630	1	G	D	28.89	52.38	2.92	0.0645	0.05	0.106	0.1	0.005	0.063	0.024	0.391	0.019	1.52	0.76	0.22	2.5	16556	0.7344	0.08721	0.64719	PAF(LC)
NS0111	48	50	NS	X073643	073643	1	G	D	34.45	45.7	1.6	0.5547	0.43	0.06	0.09	0.005	0.05	0.016	0.153	0.0005	1.55	0.52	0.08	2.15	16569	0.4896	0.08721	0.40239	PAF(LC)
NS0111	44	46	NS	X073641	073641	1	G	D	35.59	45.57	1.13	0.387	0.3	0.042	0.07	0.005	0.034	0.015	0.128	0.005	1.1	0.38	0.13	1.61	16567	0.459	0.08721	0.37179	PAF(LC)
NS0111	36	38	NS	X073637	073637	1	G	D	34.6	47.35	1.17	0.2322	0.18	0.05	0.06	0.005	0.041	0.012	0.089	0.002	0.69	0.36	0.08	1.13	16563	0.3672	0.08721	0.27999	PAF(LC)
NS0111	46	48	NS	X073642	073642	1	G	D	36.89	43.89	0.95	0.3354	0.26	0.037	0.06	0.005	0.036	0.011	0.092	0.007	1.05	0.31	0.05	1.41	16568	0.3366	0.08721	0.24939	PAF(LC)
NS0111	64	66	NS	X073652	073652	1	G	D	37.09	42.99	1.08	0.5934	0.46	0.048	0.07	0.005	0.057	0.011	0.131	0.006	1.21	0.27	0.06	1.54	16577	0.3366	0.08721	0.24939	PAF(LC)
NS0111	16	18	NS	X073627	073627	1	G	D	33.57	47.96	1.86	0.0387	0.03	0.067	0.07	0.005	0.018	0.01	0.238	0.011	0.85	0.47	0.11	1.43	16553	0.306	0.08721	0.21879	PAF(LC)
NS0111	18	20	NS	X073628	073628	1	G	D	35.17	46.21	1.38	0.0387	0.03	0.062	0.06	0.005	0.042	0.009	0.183	0.005	1.04	0.37	0.1	1.51	16554	0.2754	0.08721	0.18819	PAF(LC)
NS0111	38	40	NS	X073638	073638	1	G	D	37.72	43.02	0.97	0.3999	0.31	0.044	0.07	0.005	0.021	0.009	0.116	0.017	0.85	0.3	0.09	1.24	16564	0.2754	0.08721	0.18819	PAF(LC)
NS0111	58	60	NS	X073648	073648	1	G	D	37.25	42.9	1.29	0.4773	0.37	0.054	0.06	0.005	0.034	0.009	0.177	0.0005	0.92	0.37	0.1	1.39	16574	0.2754	0.08721	0.18819	PAF(LC)
NS0111	62	64	NS	X073650	073650	1	G	D	34.65	44.05	2.64	0.4902	0.38	0.117	0.11	0.005	0.094	0.009	0.453	0.008	1.46	0.62	0.15	2.23	16576	0.2754	0.08721	0.18819	PAF(LC)
NS0111	66	68	NS	X073653	073653	1	G	D	36.04	43.79	1.14	1.1352	0.88	0.048	0.07	0.005	0.054	0.009	0.187	0.014	1.1	0.34	0.12	1.56	16578	0.2754	0.08721	0.18819	PAF(LC)
NS0111	68	70	NS	X073654	073654	1	G	D	34.94	44.88	1.13	1.6641	1.29	0.048	0.07	0.005	0.05	0.009	0.189	0.019	1.01	0.38	0.2	1.59	16579	0.2754	0.08721	0.18819	PAF(LC)
NS0111	14	16	NS	X073626	073626	1	G	D	32.25	49.68	1.96	0.0258	0.02	0.065	0.07	0.005	0.019	0.008	0.288	0.004	0.78	0.45	0.11	1.34	16552	0.2448	0.08721	0.15759	PAF(LC)
NS0111	20	22	NS	X073629	073629	1	G	D	31.26	50.15	2.16	0.0516	0.04	0.071	0.07	0.005	0.072	0.008	0.195	0.009	1.5	0.63	0.12	2.25	16555	0.2448	0.08721	0.15759	PAF(LC)
NS0111	24	26	NS	X073631	073631	1	G	D	29.5	53.48	1.83	0.0516	0.04	0.061	0.06	0.005	0.053	0.008	0.217	0.009	1.08	0.49	0.1	1.67	16557	0.2448	0.08721	0.15759	PAF(LC)
NS0111	40	42	NS	X073639	073639	1	G	D	38.16	42.85	0.92	0.2322	0.18	0.04	0.05	0.005	0.015	0.008	0.139	0.007	0.74	0.24	0.08	1.06	16565	0.2448	0.08721	0.15759	PAF(LC)
NS0111	42	44	NS	X073640	073640	1	G	D	38.72	42.12	0.95	0.258	0.2	0.042	0.05	0.005	0.02	0.008	0.125	0.009	0.9	0.27	0.08	1.25	16566	0.2448	0.08721	0.15759	PAF(LC)
NS0111	54	56	NS	X073646	073646	1	G	D	38.61	41.24	1.13	0.7482	0.58	0.042	0.07	0.005	0.045	0.008	0.111	0.006	1.12	0.37	0.06	1.55	16572	0.2448	0.08721	0.15759	PAF(LC)
NS0111	50	52	NS	X073644	073644	1	G	D	38.03	42.94	0.84	0.1806	0.14	0.033	0.06	0.005	0.034	0.007	0.067	0.004	1.01	0.26	-0.06	1.21	16570	0.2142	0.08721	0.12699	PAF(LC)
NS0111	52	54	NS	X073645	073645	1	G	D	38.97	40.94	0.91	0.5031	0.39	0.035	0.06	0.005	0.046	0.007	0.083	0.004	1.1	0.3	0.02	1.42	16571	0.2142	0.08721	0.12699	PAF(LC)
NS0111	56	58	NS	X073647	073647	1	G	D	36.94	44.61	0.79	0.5547	0.43	0.033	0.05	0.005	0.018	0.007	0.06	0.006	0.83	0.25	0.02	1.1	16573	0.2142	0.08721	0.12699	PAF(LC)
NS0111	60	62	NS	X073649	073649	1	G	D	36.95	43.5	0.99	0.3612	0.28	0.041	0.05	0.005	0.056	0.007	0.112	0.009	1.17	0.29	0.06	1.52	16575	0.2142	0.08721	0.12699	PAF(LC)
NS0111	26	28	NS	X073632	073632	1	G	D	31.41	51.36	1.22	0.129	0.1	0.053	0.08	0.02	0.067	0.015	0.098	0.002	1.47	0.42	0.11	2	16558	0.459	0.34884	0.11016	PAF(LC)
NS0111	32	34	NS	X073635	073635	1	G	D	35.13	41.29	3.21	0.258	0.2	0.127	0.16	0.02	0.082	0.015	0.341	0.02	2.62	1.02	0.17	3.81	16561	0.459	0.34884	0.11016	PAF(LC)
NS0111	6	8	NS	X073622	073622	1	G	D	35.32	47.42	1	0.0258	0.02	0.04	0.04	0.005	0.015	0.006	0.095	0.004	0.48	0.27	0.06	0.81	16548	0.1836	0.08721	0.09639	PAF(LC)
NS0111	70	72	NS	X073655	073655	1	G	D	33.84	47.15	1.19	1.1997	0.93	0.048	0.05	0.005	0.042	0.006	0.166	0.007	0.88	0.33	0.13	1.34	16580	0.1836	0.08721	0.09639	PAF(LC)
NS0111	28	30	NS	X073633	073633	1	G	D	32.68	48.78	1.74	0.1161	0.09	0.064	0.09	0.02	0.068	0.014	0.166	0.005	1.42	0.47	0.12	2.01	16559	0.4284	0.34884	0.07956	PAF(LC)
NS0111	34	36	NS	X073636	073636	1	G	D	35.05	44.62	1.82	0.2451	0.19	0.075	0.14	0.02	0.084	0.014	0.287	0.012	1.71	0.54	0.17	2.42	16562	0.4284	0.34884	0.07956	PAF(LC)
NS0111	84	86	NS	X073662	073662	1	G	D	34.33	39.67	1.72	0.5805	0.45	0.073	1.89	0.34	0.094	0.195	0.207	0.027	0.17	5.59	0.28	6.04	16587	5.967	5.93028	0.03672	PAF(LC)
NS0111	12	14	NS	X073625	073625	1	G	D	36.89	44.77	1.05	0.0645	0.05	0.049	0.06	0.02	0.017	0.012	0.161	0.013	0.8	0.29	0.08	1.17	16551	0.3672	0.34884	0.01836	PAF(LC)
NS0111	30	32	NS	X073634	073634	1	G	D	37.75	41.7	1.38	0.1806	0.14	0.057	0.09	0.02	0.077	0.012	0.147	0.009	1.25	0.44	0.13	1.82	16560	0.3672	0.34884	0.01836	PAF(LC)
NS0111	266	270	NS	BX080755-BX080756	X080755	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1736	-0.0306	-0.01744	-0.013158	NAF
NS0111	290	294	NS	BX080767-BX080768	X080767	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1742	-0.0306	-0.01744	-0.013158	NAF
NS0111	294	298	NS	BX080769-BX080770	X080769	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1743	-0.0306	-0.01744	-0.013158	NAF
NS0111	102	104	NS	X073671	073671	1	G	D	34.86	41	0.9	0.6579	0.51	0.044	1.37	0.09	0.021	0.048	0.129	0.003	0.26	5.43	-0.04	5.65	16596	1.4688	1.56978	-0.10098	NAF
NS0111	8	10	NS	X073623	073623	1	G	D	34.65	47.72	1.16	0.0258	0.02	0.048	0.04	0.02	0.015	0.008	0.074	0.008	0.59	0.33	0.05	0.97	16549	0.2448	0.34884	-0.10404	NAF
NS0111	10	12	NS	X073624	073624	1	G	D	36.46	44.82	1.29	0.0387	0.03	0.045	0.04	0.02	0.011	0.008	0.075	0.01	0.75	0.37	0.03	1.15	16550	0.2448	0.34884	-0.10404	NAF
NS0111	76	78	NS	X073658	073658	1	G	D	36.52	43.26	0.85	1.3029	1.01	0.043	0.08	0.02	0.065	0.008	0.108	0.002	1.13	0.37	0.08	1.58	16583	0.2448	0.34884	-0.10404	NAF
NS0111	4	6	NS	X073621	073621	1	G	D	34.11	48.53	1.43	0.0258	0.02	0.053	0.05	0.02	0.013	0.007	0.111	0.008	0.52	0.39	0.04	0.95	16547	0.2142	0.34884	-0.13464	NAF
NS0111	56	60	NS	BX080647-BX080648	X080647	2			69.16	1.995	0.104	0.066	0.04752	0.004	0.099	0.025	0.01	0.008	0.007	0.111	-0.01	-0.01	-0.01	-0.03	1682	0.2448	0.43605	-0.19125	NAF
NS0111	60	62	NS	BX080649	X080649	2			69.15	2.089	0.128	0.063	0.04536	0.004	0.093	0.024	0.02	0.006	0.007	0.096	-0.01	-0.01	-0.01	-0.03	1683	0.1836	0.418608	-0.235008	NAF
NS0111	70	74	NS	BX080655-BX080656	X080655	2			68.21	2.813	0.156	0.113	0.08136	0.004	0.091	0.021	0.015	0.003	0.006	0.083	0.18	-0.01	-0.01	0.16	1686	0.0918	0.366282	-0.274482	NAF
NS0111	48	52	NS	BX080643-BX080644	X080643	2			69.2	3.022	0.133	0.063	0.04536	0.01	0.11	0.027	0.013	0.006	0.011	0.074	0.16	-0.01	-0.01	0.14	1680	0.1836	0.470934	-0.287334	NAF
NS0111	52	56	NS	BX080645-BX080646	X080645	2			68.61	1.846	0.083	0.061	0.04392	0.001	0.096	0.024	0.015	0.004	0.005	0.091	-0.01	-0.01	-0.01	-0.03	1681	0.1224	0.418608	-0.296208	NAF
NS0111	66	70	NS	BX080653-BX080654	X080653	2			68.72	2.171	0.123	0.114	0.08208	0.004	0.09	0.024	0.019	0.004	0.007	0.079	-0.01	-0.01	-0.01	-0.03	1685	0.1224	0.418608	-0.296208	NAF
NS0111	64	66	NS	BX080652	X080652	2			69.29	1.827	0.081	0.07	0.0504	0.008	0.096	0.028	0.017	0.006	0.007	0.105	-0.01	-0.01	-0.01	-0.03	1684	0.1836	0.488376	-0.304776	NAF
NS0111	74	78	NS	BX080657-BX080658	X080657	2			68.19	2.267	0.117	0.09	0.0648	0.019	0.075	0.02	0.017	0.001	0.004	0.071	0.14	-0.01	-0.01	0.12	1687	0.0306	0.34884	-0.31824	NAF
NS0111	78	80	NS	X073659	073659	1	G	D	37.41	42.49	0.86	0.9933	0.77	0.042	0.09	0.03	0.087	0.006	0.11	0.001	1.02	0.34	0.06	1.42	16584	0.1836	0.52326	-0.33966	NAF
NS0111	106	110	NS	BX080673-BX080674	X080673	2			67.27	4.734	0.137	0.1	0.072	0.01	0.176	0.032	0.009	0.007	0.028	0.076	-0.01	-0.01	-0.01	-0.03	1695	0.2142	0.558144	-0.343944	NAF
NS0111	78	80	NS	BX080659	X080659	2			68.78	2.051	0.124	0.091	0.06552	0.003	0.079	0.022	0.026	0.001	0.003	0.066	0.2	0.11	-0.01	0.3	1688	0.0306	0.383724	-0.353124	NAF
NS0111	82	86	NS	BX080661-BX080662	X080661	2			54.74	23.145	0.305	0.093	0.06696	0.036	0.278	0.08	0.023	0.034	0.033	0.082	-0.01	-0.01	-0.01	-0.03	1689	1.0404	1.39536	-0.35496	NAF
NS0111	98	102	NS	BX080669-BX080670	X080669	2			67.25	5.79	0.135	0.085	0.0612	0.008	0.213	0.035	0.009	0.007	0.019	0.062	-0.01	-0.01	-0.01	-0.03	1693	0.2142	0.61047	-0.39627	NAF
NS0111	102	106	NS	BX080671-BX080672	X080671	2			66.59	6.089	0.106	0.096	0.06912	0.005	0.22	0.029	0.009	0.003	0.011	0.094	-0.01	-0.01	-0.01	-0.03	1694	0.0918	0.505818	-0.414018	NAF
NS0111	192	196	NS	BX080717-BX080718	X080717	2			71.03	1.81	0.054	0.031	0.02232	0.005	0.133	0.036	0.005	0.005	0.013	0.077	-0.01	-0.01	-0.01	-0.03	1717	0.153	0.627912	-0.474912	NAF
NS0111	172	176	NS	BX080707-BX080708	X080707	2			69.29	1.706	0.031	0.03	0.0216	0.001	0.104	0.033	0.005	0.002	0.01	0.069	-0.01	-0.01	-0.01	-0.03	1712	0.0612	0.575586	-0.514386	NAF
NS0111	196	200	NS	BX080719-BX080720	X080719	2			70.35	1.854	0.044	0.029	0.02088	0.003	0.138	0.035	0.003	0.003	0.012	0.067	-0.01	-0.01	-0.01	-0.03	1718	0.0918	0.61047	-0.51867	NAF
NS0111	204	208	NS	BX080723-BX080724	X080723	2			71.01	1.201	0.05	0.026	0.01872	0.005	0.124	0.037	0.006	0.004	0.003	0.072	-0.01	-0.01	-0.01	-0.03	1720	0.1224	0.645354	-0.522954	NAF
NS0111	126	130	NS	BX080683-BX080684	X080683	2			70.18	2.826	0.242	0.047	0.03384	0.023	0.221	0.054	0.01	0.012	0.025	0.061	-0.01	-0.01	-0.01	-0.03	1700	0.3672	0.941868	-0.574668	NAF
NS0111	200	204	NS	BX080721-BX080722	X080721	2			70.91	1.46	0.054	0.038	0.02736	0.009	0.182	0.039	0.004	0.003	0.011	0.079	-0.01	-0.01	-0.01	-0.03	1719	0.0918	0.680238	-0.588438	NAF
NS0111	176	180	NS	BX080709-BX080710	X080709	2			70.84	1.827	0.156	0.03	0.0216	0.006	0.132	0.043	0.007	0.005	0.014	0.091	-0.01	-0.01	-0.01	-0.03	1713	0.153	0.750006	-0.597006	NAF
NS0111	2	4	NS	X073620	073620	1	G	D	30.39	53.24	1.4	0.0258	0.02	0.061	0.08	0.07	0.05	0.02	0.073	0.011	1.02	0.46	0.09	1.57	16546	0.612	1.22094	-0.60894	NAF
NS0111	106	108	NS	X073673	073673	1	G	D	35.8	40.06	0.95	0.774	0.6	0.045	0.8	0.09	0.031	0.031	0.109	0.008	0.62	4.84	0	5.46	16598	0.9486	1.56978	-0.62118	NAF
NS0111	146	150	NS	BX080693-BX080694	X080693	2			70.81	2.076	0.1	0.04	0.0288	0.014	0.185	0.048	0.008	0.007	0.004	0.063	-0.01	-0.01	-0.01	-0.03	1705	0.2142	0.837216	-0.623016	NAF
NS0111	104	106	NS	X073672	073672	1	G	D	34.97	41.43	0.76	0.6837	0.53	0.033	1.12	0.1	0.033	0.036	0.072	0.02	0.44	5.15	-0.02	5.57	16597	1.1016	1.7442	-0.6426	NAF
NS0111	188	192	NS	BX080715-BX080716	X080715	2			71.73	1.663	0.044	0.027	0.01944	0.006	0.125	0.044	0.007	0.003	0.008	0.071	-0.01	-0.01	-0.01	-0.03	1716	0.0918	0.767448	-0.675648	NAF
NS0111	184	188	NS	BX080713-BX080714	X080713	2			69.28	2.665	0.057	0.037	0.02664	0.004	0.156	0.043	0.006	0.002	0.018	0.075	-0.01	-0.01	-0.01	-0.03	1715	0.0612	0.750006	-0.688806	NAF
NS0111	100	102	NS	X073670	073670	1	G	D	33.46	42.58	1.03	0.6837	0.53	0.048	1.11	0.14	0.041	0.056	0.164	0.003	1.41	4.61	-0.1	5.92	16595	1.7136	2.44188	-0.72828	NAF
NS0111	86	90	NS	BX080663-BX080664	X080663	2			62	12.594	0.202	0.091	0.06552	0.02	0.257	0.07	0.018	0.016	0.037	0.066	-0.01	-0.01	-0.01	-0.03	1690	0.4896	1.22094	-0.73134	NAF
NS0111	122	126	NS	BX080681-BX080682	X080681	2			68.63	3.182	0.162	0.054	0.03888	0.017	0.209	0.055	0.01	0.007	0.021	0.056	-0.01	-0.01	-0.01	-0.03	1699	0.2142	0.95931	-0.74511	NAF
NS0111	180	184	NS	BX080711-BX080712	X080711	2			69.3	2.546	0.053	0.041	0.02952	0.001	0.162	0.048	0.007	0.003	0.017	0.069	-0.01	-0.01	-0.01	-0.03	1714	0.0918	0.837216	-0.745416	NAF
NS0111	208	212	NS	BX080725-BX080726	X080725	2			69.93	3.408	0.083	0.049	0.03528	0.006	0.218	0.054	0.009	0.006	0.01	0.095	-0.01	-0.01	-0.01	-0.03	1721	0.1836	0.941868	-0.758268	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0111	114	118	NS	BX080677-BX080678	X080677	2			68.22	3.927	0.09	0.064	0.04608	0.004	0.19	0.049	0.011	0.003	0.021	0.075	-0.01	-0.01	-0.01	-0.03	1697	0.0918	0.854658	-0.762858	NAF
NS0111	168	172	NS	BX080705-BX080706	X080705	2			69.73	2.304	0.109	0.046	0.03312	0.007	0.173	0.052	0.006	0.004	0.02	0.08	-0.01	-0.01	-0.01	-0.03	1711	0.1224	0.906984	-0.784584	NAF
NS0111	110	114	NS	BX080675-BX080676	X080675	2			67.83	4.655	0.104	0.083	0.05976	0.006	0.229	0.055	0.012	0.005	0.017	0.066	-0.01	-0.01	-0.01	-0.03	1696	0.153	0.95931	-0.80631	NAF
NS0111	158	162	NS	BX080699-BX080700	X080699	2			69.87	1.959	0.097	0.035	0.0252	0.009	0.155	0.055	0.008	0.005	0.01	0.068	-0.01	-0.01	-0.01	-0.03	1708	0.153	0.95931	-0.80631	NAF
NS0111	94	98	NS	BX080667-BX080668	X080667	2			65.53	6.943	0.149	0.091	0.06552	0.009	0.23	0.061	0.016	0.008	0.037	0.081	-0.01	-0.01	-0.01	-0.03	1692	0.2448	1.063962	-0.819162	NAF
NS0111	134	138	NS	BX080687-BX080688	X080687	2			69.45	3.778	0.074	0.064	0.04608	0.006	0.187	0.058	0.011	0.006	0.014	0.076	-0.01	-0.01	-0.01	-0.03	1702	0.1836	1.011636	-0.828036	NAF
NS0111	142	146	NS	BX080691-BX080692	X080691	2			70.85	2.268	0.077	0.035	0.0252	0.014	0.186	0.059	0.013	0.006	0.004	0.082	-0.01	-0.01	-0.01	-0.03	1704	0.1836	1.029078	-0.845478	NAF
NS0111	118	122	NS	BX080679-BX080680	X080679	2			69.1	4.589	0.081	0.078	0.05616	0.006	0.209	0.054	0.011	0.003	0.018	0.053	-0.01	-0.01	-0.01	-0.03	1698	0.0918	0.941868	-0.850068	NAF
NS0111	162	164	NS	BX080702	X080702	2			70.26	2.353	0.118	0.039	0.02808	0.013	0.184	0.06	0.009	0.006	0.005	0.052	-0.01	-0.01	-0.01	-0.03	1709	0.1836	1.04652	-0.86292	NAF
NS0111	212	216	NS	BX080727-BX080728	X080727	2			69.65	3.108	0.038	0.049	0.03528	0.004	0.181	0.054	0.01	0.002	0.01	0.075	-0.01	-0.01	-0.01	-0.03	1722	0.0612	0.941868	-0.880668	NAF
NS0111	220	224	NS	BX080731-BX080732	X080731	2			70.59	2.114	0.095	0.032	0.02304	0.011	0.177	0.063	0.01	0.007	0.002	0.075	-0.01	-0.01	-0.01	-0.03	1724	0.2142	1.098846	-0.884646	NAF
NS0111	216	218	NS	BX080729	X080729	2			69.77	2.708	0.056	0.043	0.03096	0.006	0.178	0.055	0.01	0.002	0.012	0.076	-0.01	-0.01	-0.01	-0.03	1723	0.0612	0.95931	-0.89811	NAF
NS0111	80	82	NS	X073660	073660	1	G	D	35.45	42.23	1.28	0.6708	0.52	0.056	0.82	0.18	0.119	0.073	0.229	0.004	0.8	2.64	0.18	3.62	16585	2.2338	3.13956	-0.90576	NAF
NS0111	252	256	NS	BX080747-BX080748	X080747	2			70.31	3.03	0.063	0.048	0.03456	0.011	0.199	0.065	0.008	0.007	0.006	0.085	-0.01	-0.01	-0.01	-0.03	1732	0.2142	1.13373	-0.91953	NAF
NS0111	90	94	NS	BX080665-BX080666	X080665	2			65.94	6.282	0.114	0.081	0.05832	0.007	0.2	0.06	0.015	0.004	0.028	0.07	-0.01	-0.01	-0.01	-0.03	1691	0.1224	1.04652	-0.92412	NAF
NS0111	130	134	NS	BX080685-BX080686	X080685	2			69.07	3.901	0.106	0.058	0.04176	0.009	0.188	0.063	0.012	0.005	0.035	0.047	-0.01	-0.01	-0.01	-0.03	1701	0.153	1.098846	-0.945846	NAF
NS0111	224	228	NS	BX080733-BX080734	X080733	2			71.09	2.041	0.095	0.035	0.0252	0.012	0.186	0.065	0.009	0.006	0.002	0.078	-0.01	-0.01	-0.01	-0.03	1725	0.1836	1.13373	-0.95013	NAF
NS0111	150	154	NS	BX080695-BX080696	X080695	2			69.34	3.303	0.204	0.056	0.04032	0.019	0.234	0.074	0.009	0.01	0.007	0.063	-0.01	-0.01	-0.01	-0.03	1706	0.306	1.290708	-0.984708	NAF
NS0111	248	252	NS	BX080745-BX080746	X080745	2			69.78	3.925	0.085	0.05	0.036	0.007	0.165	0.064	0.011	0.004	0.017	0.112	-0.01	-0.01	-0.01	-0.03	1731	0.1224	1.116288	-0.993888	NAF
NS0111	138	140	NS	BX080689	X080689	2			67.66	5.877	0.092	0.081	0.05832	0.004	0.245	0.065	0.012	0.004	0.023	0.082	-0.01	-0.01	-0.01	-0.03	1703	0.1224	1.13373	-1.01133	NAF
NS0111	164	168	NS	BX080703-BX080704	X080703	2			69.08	2.7	0.076	0.056	0.04032	0.005	0.188	0.062	0.008	0.002	0.047	0.11	-0.01	-0.01	-0.01	-0.03	1710	0.0612	1.081404	-1.020204	NAF
NS0111	240	244	NS	BX080741-BX080742	X080741	2			69.2	4.609	0.073	0.047	0.03384	0.008	0.183	0.061	0.009	0.001	0.039	0.086	-0.01	-0.01	-0.01	-0.03	1729	0.0306	1.063962	-1.033362	NAF
NS0111	286	290	NS	BX080765-BX080766	X080765	2			71.02	1.506	0.011	0.057	0.04104	0.006	0.183	0.065	0.007	0.002	0.001	0.064	-0.01	-0.01	-0.01	-0.03	1741	0.0612	1.13373	-1.07253	NAF
NS0111	232	236	NS	BX080737-BX080738	X080737	2			67.1	4.828	0.125	0.066	0.04752	0.008	0.212	0.072	0.011	0.004	0.032	0.095	-0.01	-0.01	-0.01	-0.03	1727	0.1224	1.255824	-1.133424	NAF
NS0111	244	248	NS	BX080743-BX080744	X080743	2			67.25	4.924	0.082	0.061	0.04392	0.075	0.179	0.068	0.013	0.001	0.033	0.078	-0.01	-0.01	-0.01	-0.03	1730	0.0306	1.186056	-1.155456	NAF
NS0111	232	234	NS	X073737	073737	1	G	D	24.27	44.06	2.49	0.5934	0.46	0.112	2.8	0.83	0.09	0.435	0.027	0.051	0.45	12.75	0.89	14.09	16661	13.311	14.47686	-1.16586	NAF
NS0111	228	232	NS	BX080735-BX080736	X080735	2			67.76	4.518	0.085	0.056	0.04032	0.009	0.201	0.077	0.012	0.005	0.005	0.067	-0.01	-0.01	-0.01	-0.03	1726	0.153	1.343034	-1.190034	NAF
NS0111	154	158	NS	BX080697-BX080698	X080697	2			68.82	4.018	0.14	0.05	0.036	0.009	0.208	0.082	0.014	0.007	0.028	0.065	-0.01	-0.01	-0.01	-0.03	1707	0.2142	1.430244	-1.216044	NAF
NS0111	236	240	NS	BX080739-BX080740	X080739	2			68.42	4.522	0.079	0.057	0.04104	0.008	0.196	0.076	0.013	0.002	0.027	0.078	-0.01	-0.01	-0.01	-0.03	1728	0.0612	1.325592	-1.264392	NAF
NS0111	274	276	NS	BX080759	X080759	2			69.41	3.684	0.021	0.08	0.0576	0.001	0.206	0.083	0.014	0.003	0.002	0.066	-0.01	-0.01	-0.01	-0.03	1738	0.0918	1.447686	-1.355886	NAF
NS0111	282	286	NS	BX080763-BX080764	X080763	2			70.4	2.177	0.023	0.066	0.04752	0.008	0.192	0.087	0.01	0.004	0.001	0.069	-0.01	-0.01	-0.01	-0.03	1740	0.1224	1.517454	-1.395054	NAF
NS0111	256	260	NS	BX080749-BX080750	X080749	2			66.95	4.354	0.046	0.04	0.0288	0.001	0.198	0.083	0.014	0.001	0.006	0.15	-0.01	-0.01	-0.01	-0.03	1733	0.0306	1.447686	-1.417086	NAF
NS0111	228	230	NS	X073735	073735	1	G	D	28.11	40.76	1.21	0.387	0.3	0.052	2.34	0.63	0.119	0.306	0.059	0.01	0.47	12.37	0.6	13.44	16659	9.3636	10.98846	-1.62486	NAF
NS0111	260	262	NS	BX080752	X080752	2			65.53	6.581	0.154	0.125	0.09	0.028	0.413	0.13	0.017	0.015	0.015	0.094	-0.01	-0.01	-0.01	-0.03	1734	0.459	2.26746	-1.80846	NAF
NS0111	218	220	NS	X073730	073730	1	G	D	25.09	41.93	3.11	0.4515	0.35	0.134	3.11	0.58	0.087	0.268	0.01	0.025	0.49	13.34	0.61	14.44	16654	8.2008	10.11636	-1.91556	NAF
NS0111	262	266	NS	BX080753-BX080754	X080753	2			65.13	7.936	0.13	0.118	0.08496	0.021	0.371	0.124	0.016	0.006	0.016	0.072	0.05	0.67	-0.01	0.71	1735	0.1836	2.162808	-1.979208	NAF
NS0111	96	98	NS	X073668	073668	1	G	D	34.14	40.56	1.5	0.645	0.5	0.066	1.59	0.34	0.093	0.123	0.433	0.016	0.14	5.32	0.01	5.47	16593	3.7638	5.93028	-2.16648	NAF
NS0111	270	274	NS	BX080757-BX080758	X080757	2			70.38	2.112	0.03	0.073	0.05256	0.012	0.216	0.144	0.029	0.008	0.003	0.071	-0.01	-0.01	-0.01	-0.03	1737	0.2448	2.511648	-2.266848	NAF
NS0111	86	88	NS	X073663	073663	1	G	D	34.83	39.29	1.41	0.645	0.5	0.063	1.73	0.36	0.102	0.128	0.2	0.013	0.17	5.68	0.08	5.93	16588	3.9168	6.27912	-2.36232	NAF
NS0111	278	282	NS	BX080761-BX080762	X080761	2			65.94	5.589	0.082	0.136	0.09792	0.006	0.393	0.163	0.025	0.008	0.019	0.092	-0.01	0.49	-0.01	0.47	1739	0.2448	2.843046	-2.598246	NAF
NS0111	82	84	NS	X073661	073661	1	G	D	32.99	40.81	1.67	0.7095	0.55	0.076	1.99	0.36	0.111	0.115	0.161	0.012	0.41	6.18	0.13	6.72	16586	3.519	6.27912	-2.76012	NAF
NS0111	146	148	NS	X073693	073693	1	G	D	28.52	45.5	1.58	0.3741	0.29	0.07	2.48	0.45	0.074	0.164	0.033	0.004	0.26	8.24	0.16	8.66	16618	5.0184	7.8489	-2.8305	NAF
NS0111	144	146	NS	X073692	073692	1	G	D	33.49	43.26	1.03	0.2451	0.19	0.048	1.93	0.54	0.081	0.212	0.021	0.007	0.06	4.85	0.2	5.11	16617	6.4872	9.41868	-2.93148	NAF
NS0111	112	114	NS	X073676	073676	1	G	D	35.71	39.15	1.16	0.6192	0.48	0.052	1.56	0.32	0.084	0.081	0.264	0.007	0.21	5.26	0.04	5.51	16601	2.4786	5.58144	-3.10284	NAF
NS0111	124	126	NS	X073682	073682	1	G	D	31.35	41.43	1.91	0.5418	0.42	0.088	2.08	0.45	0.084	0.15	0.197	0.016	0.2	7.56	0.09	7.85	16607	4.59	7.8489	-3.2589	NAF
NS0111	178	180	NS	X073710	073710	1	G	D	26.38	48.63	2.05	0.2193	0.17	0.092	1.76	0.4	0.083	0.119	0.335	0.065	0.35	8.07	0.21	8.63	16634	3.6414	6.9768	-3.3354	NAF
NS0111	114	116	NS	X073677	073677	1	G	D	33.99	42.27	1.11	0.5418	0.42	0.054	1.43	0.32	0.087	0.073	0.196	0.006	0.2	4.92	0.08	5.2	16602	2.2338	5.58144	-3.34764	NAF
NS0111	196	198	NS	X073719	073719	1	G	D	25.4	49.09	1.82	0.2967	0.23	0.079	1.95	0.42	0.054	0.13	0.23	0.025	0.35	8.84	0.23	9.42	16643	3.978	7.32564	-3.34764	NAF
NS0111	88	90	NS	X073664	073664	1	G	D	34.66	40.37	1.31	0.645	0.5	0.057	1.54	0.36	0.102	0.085	0.309	0.013	0.13	5.28	-0.01	5.4	16589	2.601	6.27912	-3.67812	NAF
NS0111	122	124	NS	X073681	073681	1	G	D	32.97	43.57	0.99	0.4773	0.37	0.043	1.49	0.35	0.083	0.07	0.075	0.021	0.09	5.28	-0.2	5.17	16606	2.142	6.1047	-3.9627	NAF
NS0111	208	210	NS	X073725	073725	1	G	D	30.34	47.97	0.89	0.2838	0.22	0.042	1.46	0.45	0.081	0.127	0.106	0.168	0.26	4.58	0.18	5.02	16649	3.8862	7.8489	-3.9627	NAF
NS0111	120	122	NS	X073680	073680	1	G	D	35.67	40.17	0.92	0.5289	0.41	0.041	1.42	0.35	0.091	0.058	0.206	0.01	0.14	4.88	-0.15	4.87	16605	1.7748	6.1047	-4.3299	NAF
NS0111	110	112	NS	X073675	073675	1	G	D	37.57	37.37	0.93	0.5934	0.46	0.044	1.5	0.33	0.089	0.042	0.1	0.008	0.2	5.01	-0.04	5.17	16600	1.2852	5.75586	-4.47066	NAF
NS0111	92	94	NS	X073666	073666	1	G	D	33.56	40.61	1.27	0.7353	0.57	0.058	1.6	0.39	0.111	0.072	0.345	0.0005	0.2	6.01	-0.04	6.17	16591	2.2032	6.80238	-4.59918	NAF
NS0111	116	118	NS	X073678	073678	1	G	D	34.85	41.98	0.81	0.5418	0.42	0.035	1.27	0.34	0.088	0.038	0.218	0.006	0.1	4.6	-0.18	4.52	16603	1.1628	5.93028	-4.76748	NAF
NS0111	202	204	NS	X073722	073722	1	G	D	27.98	39.06	2.52	0.4128	0.32	0.108	3.3	0.57	0.109	0.166	0.095	0.037	1.15	11.8	0.34	13.29	16646	5.0796	9.94194	-4.86234	NAF
NS0111	222	224	NS	X073732	073732	1	G	D	26.5	41.32	2.64	0.2967	0.23	0.113	2.73	0.86	0.154	0.326	0.006	0.003	0.49	11.86	0.71	13.06	16656	9.9756	15.00012	-5.02452	NAF
NS0111	268	270	NS	X073756	073756	1	G	D	28.63	32.09	1.55	0.6063	0.47	0.064	2.49	0.86	0.171	0.325	0.003	0.004	1.82	17.8	0.9	20.52	16679	9.945	15.00012	-5.05512	NAF
NS0111	90	92	NS	X073665	073665	1	G	D	34.47	41.48	0.83	0.7611	0.59	0.039	1.17	0.35	0.096	0.031	0.241	0.007	0.21	5.34	-0.14	5.41	16590	0.9486	6.1047	-5.1561	NAF
NS0111	192	194	NS	X073717	073717	1	G	D	27.04	52.67	0.56	0.1419	0.11	0.024	1.2	0.34	0.067	0.015	0.158	0.011	0.28	5.55	-0.02	5.81	16641	0.459	5.93028	-5.47128	NAF
NS0111	126	128	NS	X073683	073683	1	G	D	31.51	39.99	2.46	0.5547	0.43	0.109	2.28	0.66	0.117	0.178	0.241	0.018	0.27	7.69	0.16	8.12	16608	5.4468	11.51172	-6.06492	NAF
NS0111	162	164	NS	X073702	073702	1	G	D	26.2	45.16	1.83	0.3741	0.29	0.079	2.15	0.67	0.11	0.181	0.048	0.016	0.37	11.04	0.26	11.67	16626	5.5386	11.68614	-6.14754	NAF
NS0111	118	120	NS	X073679	073679	1	G	D	35.54	40.2	0.66	0.645	0.5	0.029	1.14	0.42	0.114	0.038	0.212	0.019	0.14	5.2	-0.14	5.2	16604	1.1628	7.32564	-6.16284	NAF
NS0111	170	172	NS	X073706	073706	1	G	D	27	41.01	2.06	0.4644	0.36	0.086	2.22	0.62	0.103	0.149	0.257	0.008	0.54	13.09	0.33	13.96	16630	4.5594	10.81404	-6.25464	NAF
NS0111	174	176	NS	X073708	073708	1	G	D	32.58	43.49	0.62	0.3354	0.26	0.026	1.15	0.39	0.062	0.016	0.208	0.023	0.25	6.5	-0.07	6.68	16632	0.4896	6.80238	-6.31278	NAF
NS0111	182	184	NS	X073712	073712	1	G	D	29.87	42.32	0.67	0.3225	0.25	0.031	1.73	0.38	0.04	0.008	0.235	0.043	0.49	11.12	-0.03	11.58	16636	0.2448	6.62796	-6.38316	NAF
NS0111	128	130	NS	X073684	073684	1	G	D	32.66	41.35	1.75	0.5031	0.39	0.074	1.85	0.57	0.105	0.115	0.221	0.012	0.18	6.3	-0.06	6.42	16609	3.519	9.94194	-6.42294	NAF
NS0111	184	186	NS	X073713	073713	1	G	D	29.99	45.87	0.75	0.258	0.2	0.034	1.43	0.39	0.057	0.012	0.238	0.028	0.34	7.73	-0.03	8.04	16637	0.3672	6.80238	-6.43518	NAF
NS0111	206	208	NS	X073724	073724	1	G	D	30.43	48.67	0.69	0.2193	0.17	0.031	1.24	0.42	0.089	0.024	0.072	0.068	0.17	4.41	-0.08	4.5	16648	0.7344	7.32564	-6.59124	NAF
NS0111	210	212	NS	X073726	073726	1	G	D	28.89	51.23	0.62	0.258	0.2	0.029	1.22	0.42	0.075	0.021	0.058	0.098	0.15	4.14	-0.08	4.21	16650	0.6426	7.32564	-6.68304	NAF
NS0111	214	216	NS	X073728	073728	1	G	D	29.36	48.4	0.5	0.3612	0.28	0.02	1.36	0.45	0.082	0.033	0.087	0.113	0.2	6.06	-0.11	6.15	16652	1.0098	7.8489	-6.8391	NAF
NS0111	254	256	NS	X073748	073748	1	G	D	26.73	41.16	1.23	0.4644	0.36	0.047	2.49	0.85	0.147	0.259	0.125	0.6	0.31	13.4	0.47	14.18	16672	7.9254	14.8257	-6.9003	NAF
NS0111	156	158	NS	X073698	073698	1	G	D	27.03	44.23	3.05	0.3999	0.31	0.131	2.19	0.92	0.084	0.297	0.155	0.028	0.35	8.72	0.56	9.63	16623	9.0882	16.04664	-6.95844	NAF
NS0111	270	272	NS	X073757	073757	1	G	D	29.78	37.95	0.59	0.5418	0.42	0.023	1.87	0.72	0.114	0.179	0.029	0.012	0.83	14.12	0.25	15.2	16680	5.4774	12.55824	-7.08084	NAF
NS0111	172	174	NS	X073707	073707	1	G	D	29.18	44.31	1.07	0.387	0.3	0.047	1.55	0.57	0.093	0.075	0.227	0.036	0.41	9.16	0.12	9.69	16631	2.295	9.94194	-7.64694	NAF
NS0111	204	206	NS	X073723	073723	1	G	D	28.3	41.31	2.33	0.387	0.3	0.102	3.16	0.71	0.122	0.147	0.046	0.081	0.38	10.05	0.24	10.67	16647	4.4982	12.38382	-7.88562	NAF
NS0111	188	190	NS	X073715	073715	1	G	D	25.87	50.19	1.02	0.2322	0.18	0.046	1.65	0.48	0.091	0.012	0.103	0.009	0.46	8.83	-0.05	9.24	16639	0.3672	8.37216	-8.00496	NAF
NS0111	280	282	NS	X073762	073762	1	G	D	32.17	38.2	0.54	0.6063	0.47	0.022	2.06	0.92	0.162	0.261	0.032	0.09	0.24	10.42	0.08	10.74	16685	7.9866	16.04664	-8.06004	NAF
NS0111	198	200	NS	X073720	073720	1	G	D	32.39	42.62	0.66	0.2709	0.21	0.03	1.56	0.53	0.048	0.024	0.177	0.055	0.26	7.24	0.06	7.56	16644	0.7344	9.24426	-8.50986	NAF
NS0111	138	140	NS	X073689	073689	1	G	D	35.18	41.77	0.64	0.5031	0.39	0.029	1.27	0.53	0.099	0.022	0.164	0.032	0.1	4.47	-0.07	4.5	16614	0.6732	9.24426	-8.57106	NAF
NS0111	274	276	NS	X073759	073759	1	G	D	29.52	43.34	0.32	0.4902	0.38	0.011	1.68	0.74	0.085	0.136	0.046	0.063	0.96	9.37	0.07	10.4	16682	4.1616	12.90708	-8.74548	NAF
NS0111	168	170	NS	X073705	073705	1	G	D	27.15	40.2	2.28	0.4902	0.38	0.1	2.07	0.74	0.095	0.13	0.391	0.017	0.57	13.48	0.25	14.3	16629	3.978	12.90708	-8.92908	NAF
NS0111	226	228	NS	X073734	073734	1	G	D	25.29	44.61	1.6	0.4257	0.33	0.066	2.63	0.72	0.139	0.117	0.01	0.006	0.51	12.8	0.18	13.49	16658	3.5802	12.55824	-8.97804	NAF
NS0111	266	268	NS	X073755	073755	1	G	D	35.81	16.21	1.61	0.7224	0.56	0.062	2.94	1.48	0.366	0.548	0.016	0.035	0.8	22.22	1.31	24.33	16678	16.7688	25.81416	-9.04536	NAF
NS0111	256	258	NS	X073749	073749	1	G	D	28.04	40	0.61	0.4902	0.38	0.021	2.59	0.66	0.102	0.08	0.048	0.318	0.49	14.02	0.07	14.58	16673	2.448	11.51172	-9.06372	NAF
NS0111	216	218	NS	X073729	073729	1	G	D	32.7	41.62	0.79	0.3741	0.29	0.033	1.7	0.61	0.101	0.043	0.151	0.167	0.21	7.17	-0.07	7.31	16653	1.3158	10.63962	-9.32382	NAF
NS0111	142	144	NS	X073691	073691	1	G	D	33.96	41.67	0.99	0.3483	0.27	0.044	1.86	0.68	0.119	0.079	0.071	0.009	0.13	5.35	-0.13	5.35	16616	2.4174	11.86056	-9.44316	NAF
NS0111	186	188	NS	X073714	073714	1	G	D	28.77	42.02	0.68	0.3741	0.29	0.031	1.76	0.58	0.117	0.021	0.175	0.011	0.58	12.34	0	12.92	16638	0.6426	10.11636	-9.47376	NAF
NS0111	290	292	NS	X073767	073767	1	G	D	25.64	36.67	0.47	0.4773	0.37	0.014	3.63	1.02	0.131	0.267	0.007	0.003	0.62	19.12	0.43	20.17	16690	8.1702	17.79084	-9.62064	NAF
NS0111	200	202	NS	X073721	073721	1	G	D	32.5	35.4	0.87	0.3999	0.31	0.035	2.26	0.59	0.058	0.014	0.248	0.068	0.5	12.64	0.04	13.18	16645	0.4284	10.29078	-9.86238	NAF
NS0111	212	214	NS	X073727	073727	1	G	D	32.93	43.06	0.68	0.3999	0.31	0.03	1.51	0.61	0.098	0.024	0.119	0.161	0.17	5.45	0.03	5.65	16651	0.7344	10.63962	-9.90522	NAF
NS0111	130	132	NS	X073685	073685	1	G	D	32.03	45.54	1.01	0.4257	0.33	0.047	1.34	0.71	0.102	0.08	0.259	0.004	0.07	4.5	-0.06	4.51	16610	2.448	12.38382	-9.93582	NAF
NS0111	190	192	NS	X073716	073716	1	G	D	29.15	47.21	0.68	0.1548	0.12	0.031	1.52	0.6	0.13	0.017	0.147	0.041	0.36	7.23	-0.03	7.56	16640	0.5202	10.4652	-9.945	NAF
NS0111	160	162	NS	X073700	073700	1	G	D	30.46	42.12	2.16	0.387	0.3	0.094	1.94	0.83	0.092	0.145	0.138	0.015	0.32	7.8	0.12	8.24	16625	4.437	14.47686	-10.03986	NAF
NS0111	260	262	NS	X073752	073752	1	G	D	25.3	41.1	2.71	0.5547	0.43	0.114	2.97	1.15	0.224	0.321	0.127	0.073	0.57	13.02	0.75	14.34	16675	9.8226	20.0583	-10.2357	NAF
NS0111	152	154	NS	X073696	073696	1	G	D	27.73	43.85	2.46	0.4644	0.36	0.105	2.2	0.95	0.108	0.196	0.098	0.015	0.43	9	0.38	9.81	16621	5.9976	16.5699	-10.5723	NAF
NS0111	150	152	NS	X073695	073695	1	G	D	27.57	44.85	2.58	0.4773	0.37	0.112	2.18	1.01	0.1	0.23	0.096	0.013	0.29	7.77	0.38	8.44	16620	7.038	17.61642	-10.57842	NAF
NS0111	180	182	NS	X073711	073711	1	G	D	27.75	50.03	0.56	0.1677	0.13	0.023	1.3	0.63	0.158	0.01	0.242	0.022	0.3	6.45	-0.01	6.74	16635	0.306	10.98846	-10.68246	NAF
NS0111	240	242	NS	X073741	073741	1	G	D	29.44	45.59	1.05	0.3741	0.29	0.042	2.01	0.74	0.067	0.065	0.43	0.298	0.12	6.81	0.11	7.04	16665	1.989	12.90708	-10.91808	NAF
NS0111	194	196	NS	X073718	073718	1	G	D	27.39	46.77	1.17	0.3354	0.26	0.051	1.79	0.72	0.166	0.051	0.21	0.029	0.3	8.65	0.02	8.97	16642	1.5606	12.55824	-10.99764	NAF
NS0111	148	150	NS	X073694	073694	1	G	D	28.06	48.12	1.01	0.4386	0.34	0.046	1.69	0.82	0.108	0.104	0.091	0.009	0.32	6.56	0	6.88	16619	3.1824	14.30244	-11.12004	NAF
NS0111	242	244	NS	X073742	073742	1	G	D	35.07	42.25	0.53	0.4515	0.35	0.023	1.43	0.69	0.088	0.007	0.245	0.109	-0.05	3.97	-0.1	3.82	16666	0.2142	12.03498	-11.82078	NAF
NS0111	292	294	NS	X073768	073768	1	G	D	25.59	37.52	0.35	0.4644	0.36	0.011	3.37	0.94	0.118	0.149	0.061	0.0005	0.69	19.12	0.3	20.11	16691	4.5594	16.39548	-11.83608	NAF
NS0111	246	248	NS	X073744	073744	1	G	D	35.67	39.91	0.7	0.516	0.4	0.027	1.33	0.72	0.105	0.023	0.234	0.263	-0.01	5	-0.2	4.79	16668	0.7038	12.55824	-11.85444	NAF
NS0111	136	138	NS	X073688	073688	1	G	D	34.81	42.72	0.64	0.4644	0.36	0.03	1.22	0.72	0.073	0.022	0.127	0.028	0.06	3.86	0.18	4.1	16613	0.6732	12.55824	-11.88504	NAF
NS0111	220	222	NS	X073731	073731	1	G	D	27.14	42.01	1.34	0.3354	0.26	0.054	2.26	0.88	0.114	0.111	0.018	0.0005	0.58	12.88	0.14	13.6	16655	3.3966	15.34896	-11.95236	NAF
NS0111	278	280	NS	X073761	073761	1	G	D	36.51	37.73	0.36	0.6579	0.51	0.014	1.56	0.87	0.134	0.1	0.027	0.179	0.09	5.49	-0.01	5.57	16684	3.06	15.17454	-12.11454	NAF
NS0111	154	156	NS	X073697	073697	1	G	D	30.73	48.15	0.64	0.2967	0.23	0.028	1.18	0.74	0.088	0.025	0.168	0.028	0.05	4.25	-0.01	4.29	16622	0.765	12.90708	-12.14208	NAF
NS0111	272	274	NS	X073758	073758	1	G	D	31.13	38.5	0.34	0.5418	0.42	0.014	1.75	0.9	0.136	0.107	0.042	0.019	0.37	12.22	-0.06	12.53	16681	3.2742	15.6978	-12.4236	NAF
NS0111	230	232	NS	X073736	073736	1	G	D	27.81	39.5	0.77	0.5418	0.42	0.031	2.36	0.77	0.127	0.025	0.006	0.008	0.56	15.16	-0.03	15.69	16660	0.765	13.43034	-12.66534	NAF
NS0111	164	166	NS	X073703	073703	1	G	D	29.4	41.15	0.73	0.4902	0.38	0.032	1.83	0.76	0.101	0.017	0.279	0.015	0.51	12.07	-0.03	12.55	16627	0.5202	13.25592	-12.73572	NAF
NS0111	134	136	NS	X073687	073687	1	G	D	30.52	43.81	1.04	0.516	0.4	0.044	1.65	0.93	0.175	0.104	0.145	0.014	0.25	7.15	0.08	7.48	16612	3.1824	16.22106	-13.03866	NAF
NS0111	238	240	NS	X073740	073740	1	G	D	36.42	36.28	0.89	0.5547	0.43	0.034	1.84	0.82	0.106	0.04	0.279	0.319	0.03	6.26	-0.11	6.18	16664	1.224	14.30244	-13.07844	NAF
NS0111	262	264	NS	X073753	073753	1	G	D	31.42	37.89	0.98	0.6063	0.47	0.044	1.98	0.89	0.129	0.064	0.142	0.072	0.46	11.69	-0.04	12.11	16676	1.9584	15.52338	-13.56498	NAF
NS0111	264	266	NS	X073754	073754	1	G	D	29.46	38.5	1.1	0.5676	0.44	0.047	2.16	0.94	0.164	0.085	0.123	0.056	0.43	13.55	0.02	14	16677	2.601	16.39548	-13.79448	NAF
NS0111	252	254	NS	X073747	073747	1	G	D	32.39	35.78	1.05	0.5418	0.42	0.036	2.29	0.89	0.107	0.051	0.098	0.471	0.28	11.72	-0.02	11.98	16671	1.5606	15.52338	-13.96278	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0111	282	284	NS	X073763	073763	1	G	D	32.68	38.11	0.36	0.5934	0.46	0.011	1.85	0.95	0.108	0.083	0.021	0.091	0.37	10.55	-0.05	10.87	16686	2.5398	16.5699	-14.0301	NAF
NS0111	244	246	NS	X073743	073743	1	G	D	34.78	39.23	0.66	0.6063	0.47	0.027	1.75	0.84	0.106	0.017	0.222	0.22	0.04	6.08	0.02	6.14	16667	0.5202	14.65128	-14.13108	NAF
NS0111	224	226	NS	X073733	073733	1	G	D	31.13	38.81	1.31	0.3483	0.27	0.057	2.14	0.96	0.059	0.072	0.005	0.0005	0.39	10.91	0.14	11.44	16657	2.2032	16.74432	-14.54112	NAF
NS0111	250	252	NS	X073746	073746	1	G	D	34.56	40.41	0.5	0.5805	0.45	0.019	1.48	0.86	0.089	0.012	0.12	0.211	0.08	6.03	-0.05	6.06	16670	0.3672	15.00012	-14.63292	NAF
NS0111	140	142	NS	X073690	073690	1	G	D	32.2	44.92	0.97	0.3999	0.31	0.043	1.58	1	0.098	0.078	0.115	0.012	0.07	4.06	0.22	4.35	16615	2.3868	17.442	-15.0552	NAF
NS0111	276	278	NS	X073760	073760	1	G	D	37.63	34.63	0.36	0.7095	0.55	0.013	1.71	0.92	0.137	0.028	0.012	0.151	0.37	6.99	-0.19	7.17	16683	0.8568	16.04664	-15.18984	NAF
NS0111	258	260	NS	X073750	073750	1	G	D	31.58	42.46	0.88	0.3999	0.31	0.039	1.8	1	0.108	0.062	0.16	0.142	0.27	6.92	0.15	7.34	16674	1.8972	17.442	-15.5448	NAF
NS0111	288	290	NS	X073766	073766	1	G	D	27.72	33.06	0.29	0.4644	0.36	0.008	3.6	0.99	0.093	0.052	0.004	0.0005	0.72	20.76	0.16	21.64	16689	1.5912	17.26758	-15.67638	NAF
NS0111	158	160	NS	X073699	073699	1	G	D	28.16	40.93	2.03	0.4773	0.37	0.086	2.18	1.22	0.092	0.17	0.067	0.012	0.44	11.2	0.4	12.04	16624	5.202	21.27924	-16.07724	NAF
NS0111	284	286	NS	X073764	073764	1	G	D	29.47	35.17	0.39	0.645	0.5	0.014	2.36	1.08	0.121	0.084	0.018	0.021	0.42	17.02	0.05	17.49	16687	2.5704	18.83736	-16.26696	NAF
NS0111	234	236	NS	X073738	073738	1	G	D	36.86	34.89	0.85	0.6063	0.47	0.028	1.73	0.99	0.156	0.026	0.221	0.312	0.09	6.93	-0.1	6.92	16662	0.7956	17.26758	-16.47198	NAF
NS0111	166	168	NS	X073704	073704	1	G	D	35.62	30.77	1	0.6321	0.49	0.042	1.86	0.99	0.143	0.016	0.578	0.05	0.41	12.23	-0.11	12.53	16628	0.4896	17.26758	-16.77798	NAF
NS0111	248	250	NS	X073745	073745	1	G	D	35.57	35.65	1.16	0.5805	0.45	0.041	1.77	1.22	0.214	0.095	0.158	0.572	0.13	6.7	0.01	6.84	16669	2.907	21.27924	-18.37224	NAF
NS0111	286	288	NS	X073765	073765	1	G	D	34.31	32.02	0.37	0.6837	0.53	0.012	2.25	1.16	0.119	0.047	0.005	0.15	0.5	13.28	0.06	13.84	16688	1.4382	20.23272	-18.79452	NAF
NS0111	236	238	NS	X073739	073739	1	G	D	31.57	40.28	0.72	0.5934	0.46	0.028	2.14	1.41	0.106	0.05	0.234	0.237	0.13	7.91	0.62	8.66	16663	1.53	24.59322	-23.06322	NAF
NS0112	232	234	NS	X073889	073889	1	G	W	27.44	39.11	3.81	0.5031	0.39	0.184	1.99	0.39	0.079	0.458	1.41	0.024	0.3	11.16	1.21	12.67	16918	14.0148	6.80238	7.21242	PAF(LC)
NS0112	78	80	NS	X073811	073811	1	G	D	34.75	38.97	1.8	0.6708	0.52	0.081	1.21	0.22	0.121	0.296	0.4	0.004	0.67	4.98	0.78	6.43	16769	9.0576	3.83724	5.22036	PAF(LC)
NS0112	56	58	NS	X073799	073799	1	G	D	31.64	49.98	1.59	0.2967	0.23	0.068	0.08	0.02	0.074	0.021	0.438	0.018	1.54	0.44	0.22	2.2	16740	0.6426	0.34884	0.29376	PAF(LC)
NS0112	44	46	NS	X073793	073793	1	G	D	12.64	73.26	4.17	0.2322	0.18	0.192	0.08	0.02	0.131	0.016	0.127	0.036	1.9	1.3	0.19	3.39	16734	0.4896	0.34884	0.14076	PAF(LC)
NS0112	22	24	NS	X073782	073782	1	G	D	29.71	51.97	2.22	0.1419	0.11	0.102	0.13	0.02	0.036	0.015	0.007	0.027	1.9	0.84	0.04	2.78	16723	0.459	0.34884	0.11016	PAF(LC)
NS0112	62	64	NS	X073803	073803	1	G	D	34.95	45.06	1.9	0.4644	0.36	0.09	0.12	0.03	0.102	0.019	0.628	0.027	0.72	0.43	0.25	1.4	16761	0.5814	0.52326	0.05814	PAF(LC)
NS0112	20	22	NS	X073781	073781	1	G	D	33.79	46.71	1.87	0.0903	0.07	0.087	0.09	0.02	0.051	0.013	0.008	0.027	2.13	0.76	0.08	2.97	16704	0.3978	0.34884	0.04896	PAF(LC)
NS0112	26	28	NS	X073784	073784	1	G	D	37.38	43.29	1.3	0.0645	0.05	0.058	0.05	0.02	0.039	0.013	0.007	0.008	1.29	0.47	0	1.76	16725	0.3978	0.34884	0.04896	PAF(LC)
NS0112	64	66	NS	X073804	073804	1	G	D	34.36	46.25	1.42	0.5547	0.43	0.065	0.09	0.02	0.107	0.013	0.425	0.03	1.24	0.37	0.19	1.8	16762	0.3978	0.34884	0.04896	PAF(LC)
NS0112	274	276	NS	X073911	073911	1	G	W																	16975	0	0	0	PAF(LC)
NS0112	24	26	NS	X073783	073783	1	G	D	31.68	48.94	2.33	0.0903	0.07	0.099	0.08	0.02	0.103	0.011	0.008	0.026	2.1	0.79	0.02	2.91	16724	0.3366	0.34884	-0.01224	NAF
NS0112	56	60	NS	BX080799-BX080800	X080799	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1744	-0.0306	-0.01744	-0.013158	NAF
NS0112	64	68	NS	BX080804-BX080805	X080804	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1746	-0.0306	-0.01744	-0.013158	NAF
NS0112	58	60	NS	X073800	073800	1	G	D	35.27	45.6	1.61	0.2064	0.16	0.076	0.11	0.03	0.087	0.016	0.506	0.034	0.69	0.36	0.25	1.3	16759	0.4896	0.52326	-0.03366	NAF
NS0112	104	106	NS	X073824	073824	1	G	D	30.38	48.59	2.39	0.8643	0.67	0.109	0.4	0.09	0.111	0.05	0.363	0.035	1.1	1.72	0.3	3.12	16800	1.53	1.56978	-0.03978	NAF
NS0112	30	32	NS	X073786	073786	1	G	D	34.61	43.77	1.79	0.2193	0.17	0.067	0.17	0.02	0.08	0.01	0.018	0.004	3.02	0.8	0.09	3.91	16727	0.306	0.34884	-0.04284	NAF
NS0112	34	36	NS	X073788	073788	1	G	D	34.08	45.88	1.45	0.2838	0.22	0.066	0.12	0.02	0.071	0.01	0.041	0.0005	2.38	0.61	0.02	3.01	16729	0.306	0.34884	-0.04284	NAF
NS0112	36	38	NS	X073789	073789	1	G	D	31.53	47.63	2.1	0.3096	0.24	0.089	0.18	0.02	0.132	0.01	0.068	0.034	3.05	0.89	0.1	4.04	16730	0.306	0.34884	-0.04284	NAF
NS0112	28	30	NS	X073785	073785	1	G	D	31.81	47.43	3.01	0.0645	0.05	0.123	0.08	0.02	0.121	0.009	0.021	0.031	2.41	1.02	0.04	3.47	16726	0.2754	0.34884	-0.07344	NAF
NS0112	46	48	NS	X073794	073794	1	G	D	9.26	79.94	3.35	0.2064	0.16	0.149	0.11	0.02	0.092	0.009	0.353	0.031	1.13	0.83	0.19	2.15	16735	0.2754	0.34884	-0.07344	NAF
NS0112	60	62	NS	X073802	073802	1	G	D	30.65	52.43	1.65	0.3096	0.24	0.072	0.08	0.02	0.034	0.009	0.444	0.015	0.43	0.33	0.17	0.93	16760	0.2754	0.34884	-0.07344	NAF
NS0112	42	44	NS	X073792	073792	1	G	D	6.35	85.93	2.15	0.1806	0.14	0.097	0.06	0.02	0.109	0.008	0.072	0.028	1.09	0.65	0.08	1.82	16733	0.2448	0.34884	-0.10404	NAF
NS0112	70	72	NS	X073807	073807	1	G	D	29.33	50.9	2.17	2.064	1.6	0.091	0.14	0.02	0.049	0.007	0.681	0.022	0.75	0.42	0.42	1.59	16765	0.2142	0.34884	-0.13464	NAF
NS0112	48	50	NS	X073795	073795	1	G	D	12.7	75.19	2.71	0.8772	0.68	0.103	0.1	0.02	0.085	0.006	0.492	0.028	0.96	0.66	0.31	1.93	16736	0.1836	0.34884	-0.16524	NAF
NS0112	12	14	NS	X073777	073777	1	G	D	33.54	45.47	2.57	0.258	0.2	0.111	0.19	0.03	0.058	0.011	0.009	0.035	2.21	0.95	-0.03	3.13	16700	0.3366	0.52326	-0.18666	NAF
NS0112	16	18	NS	X073779	073779	1	G	D	31.78	48.97	1.76	0.1032	0.08	0.079	0.11	0.03	0.08	0.011	0.007	0.024	2.42	0.68	0	3.1	16702	0.3366	0.52326	-0.18666	NAF
NS0112	50	52	NS	X073796	073796	1	G	D	11.25	77.32	3.33	0.2064	0.16	0.134	0.13	0.02	0.058	0.005	0.811	0.031	0.73	0.58	0.39	1.7	16737	0.153	0.34884	-0.19584	NAF
NS0112	52	54	NS	X073797	073797	1	G	D	23.78	61.62	2.23	0.1548	0.12	0.091	0.1	0.02	0.031	0.005	0.595	0.023	0.34	0.37	0.2	0.91	16738	0.153	0.34884	-0.19584	NAF
NS0112	54	56	NS	X073798	073798	1	G	D	24.85	61.04	1.64	0.1419	0.11	0.07	0.08	0.02	0.039	0.005	0.458	0.024	0.44	0.31	0.17	0.92	16739	0.153	0.34884	-0.19584	NAF
NS0112	74	76	NS	X073809	073809	1	G	D	37.47	41.63	1.64	0.6192	0.48	0.074	0.14	0.04	0.086	0.016	0.43	0.022	0.9	0.45	0.22	1.57	16767	0.4896	0.69768	-0.20808	NAF
NS0112	18	20	NS	X073780	073780	1	G	D	31.9	48.74	1.85	0.0645	0.05	0.086	0.09	0.03	0.119	0.01	0.009	0.013	2.53	0.68	0	3.21	16703	0.306	0.52326	-0.21726	NAF
NS0112	68	70	NS	X073806	073806	1	G	D	36.33	42.77	1.61	0.4644	0.36	0.073	0.16	0.04	0.115	0.014	0.459	0.023	1.21	0.42	0.2	1.83	16764	0.4284	0.69768	-0.26928	NAF
NS0112	38	40	NS	X073790	073790	1	G	D	15.93	68.34	3.25	0.4773	0.37	0.103	0.03	0.03	0.271	0.007	0.047	0.041	2.63	1.19	0.2	4.02	16731	0.2142	0.52326	-0.30906	NAF
NS0112	68	72	NS	BX080806-BX080807	X080806	2			65.92	5.641	0.19	0.008	0.00576	0.008	0.083	0.024	0.034	0.003	0.034	0.072	-0.01	-0.01	-0.01	-0.03	1747	0.0918	0.418608	-0.326808	NAF
NS0112	8	10	NS	X073775	073775	1	G	D	31.96	46.95	2.4	0.1806	0.14	0.107	0.15	0.04	0.054	0.012	0.01	0.044	3.04	0.93	0.04	4.01	16698	0.3672	0.69768	-0.33048	NAF
NS0112	10	12	NS	X073776	073776	1	G	D	36.25	42.45	1.95	0.258	0.2	0.083	0.19	0.04	0.048	0.012	0.009	0.032	2.43	0.73	-0.12	3.04	16699	0.3672	0.69768	-0.33048	NAF
NS0112	14	16	NS	X073778	073778	1	G	D	24.58	53.93	5.37	0.1677	0.13	0.258	0.17	0.04	0.029	0.012	0.012	0.042	2.54	1.88	0.15	4.57	16701	0.3672	0.69768	-0.33048	NAF
NS0112	40	42	NS	X073791	073791	1	G	D	11.12	76.86	2.95	0.2451	0.19	0.114	0.08	0.03	0.199	0.006	0.062	0.027	1.82	1.06	0.15	3.03	16732	0.1836	0.52326	-0.33966	NAF
NS0112	60	64	NS	BX080802-BX080803	X080802	2			65.78	4.196	0.119	0.001	0.00072	0.001	0.047	0.025	0.024	0.002	0.018	0.069	-0.01	-0.01	-0.01	-0.03	1745	0.0612	0.43605	-0.37485	NAF
NS0112	66	68	NS	X073805	073805	1	G	D	31.26	48.21	1.83	0.7869	0.61	0.075	0.18	0.04	0.117	0.01	0.535	0.024	2.29	0.51	0.25	3.05	16763	0.306	0.69768	-0.39168	NAF
NS0112	76	80	NS	BX080810-BX080811	X080810	2			66.06	5.922	0.279	0.022	0.01584	0.022	0.231	0.052	0.045	0.016	0.048	0.072	-0.01	-0.01	-0.01	-0.03	1749	0.4896	0.906984	-0.417384	NAF
NS0112	92	96	NS	BX080818-BX080819	X080818	2			66.7	3.286	0.136	0.002	0.00144	0.002	0.105	0.037	0.041	0.004	0.018	0.07	-0.01	-0.01	-0.01	-0.03	1752	0.1224	0.645354	-0.522954	NAF
NS0112	72	76	NS	BX080808-BX080809	X080808	2			63.18	5.835	0.172	0.001	0.00072	0.001	0.035	0.032	0.04	0.001	0.026	0.087	-0.01	-0.01	-0.01	-0.03	1748	0.0306	0.558144	-0.527544	NAF
NS0112	236	238	NS	BX080891	X080891	2			68.55	3.877	0.154	0.018	0.01296	0.018	0.168	0.048	0.009	0.009	0.053	0.08	-0.01	-0.01	-0.01	-0.03	1788	0.2754	0.837216	-0.561816	NAF
NS0112	296	298	NS	BX080922	X080922	2			64.58	8.341	0.216	0.009	0.00648	0.009	0.232	0.046	0.009	0.007	0.046	0.078	-0.01	-0.01	-0.01	-0.03	1804	0.2142	0.802332	-0.588132	NAF
NS0112	32	34	NS	X073787	073787	1	G	D	22.45	62.42	1.63	0.1806	0.14	0.072	0.06	0.05	0.187	0.008	0.033	0.019	2.43	0.61	0.07	3.11	16728	0.2448	0.8721	-0.6273	NAF
NS0112	292	296	NS	BX080920-BX080921	X080920	2			65.02	8.351	0.183	0.009	0.00648	0.009	0.252	0.056	0.01	0.006	0.036	0.089	-0.01	-0.01	-0.01	-0.03	1803	0.1836	0.976752	-0.793152	NAF
NS0112	256	260	NS	BX080902-BX080903	X080902	2			66.9	5.776	0.129	0.009	0.00648	0.009	0.245	0.051	0.008	0.003	0.023	0.059	-0.01	-0.01	-0.01	-0.03	1794	0.0918	0.889542	-0.797742	NAF
NS0112	268	272	NS	BX080908-BX080909	X080908	2			67.09	6.102	0.12	0.009	0.00648	0.009	0.195	0.067	0.015	0.012	0.021	0.073	-0.01	-0.01	-0.01	-0.03	1797	0.3672	1.168614	-0.801414	NAF
NS0112	226	230	NS	BX080886-BX080887	X080886	2			68.73	3.385	0.091	0.003	0.00216	0.003	0.187	0.052	0.009	0.001	0.037	0.076	-0.01	-0.01	-0.01	-0.03	1786	0.0306	0.906984	-0.876384	NAF
NS0112	156	158	NS	BX080850	X080850	2			68.58	4.049	0.169	0.009	0.00648	0.009	0.233	0.054	0.009	0.002	0.047	0.081	-0.01	-0.01	-0.01	-0.03	1768	0.0612	0.941868	-0.880668	NAF
NS0112	238	242	NS	BX080892-BX080893	X080892	2			69.7	3.313	0.082	0.007	0.00504	0.007	0.201	0.055	0.01	0.001	0.03	0.084	-0.01	-0.01	-0.01	-0.03	1789	0.0306	0.95931	-0.92871	NAF
NS0112	230	234	NS	BX080888-BX080889	X080888	2			69.57	3.011	0.063	0.004	0.00288	0.004	0.195	0.056	0.01	0.001	0.026	0.071	-0.01	-0.01	-0.01	-0.03	1787	0.0306	0.976752	-0.946152	NAF
NS0112	162	166	NS	BX080854-BX080855	X080854	2			68.02	4.226	0.231	0.023	0.01656	0.023	0.241	0.065	0.013	0.006	0.072	0.083	-0.01	-0.01	-0.01	-0.03	1770	0.1836	1.13373	-0.95013	NAF
NS0112	6	8	NS	X073774	073774	1	G	D	28.43	49.38	3.78	0.1935	0.15	0.171	0.2	0.08	0.066	0.014	0.015	0.033	3.49	1.47	0.16	5.12	16697	0.4284	1.39536	-0.96696	NAF
NS0112	100	104	NS	BX080822-BX080823	X080822	2			68.26	3.492	0.111	0.007	0.00504	0.007	0.194	0.062	0.03	0.003	0.013	0.057	0.11	-0.01	-0.01	0.09	1754	0.0918	1.081404	-0.989604	NAF
NS0112	250	254	NS	BX080898-BX080899	X080898	2			68.54	4.327	0.061	0.003	0.00216	0.003	0.179	0.061	0.012	0.002	0.018	0.078	-0.01	-0.01	-0.01	-0.03	1792	0.0612	1.063962	-1.002762	NAF
NS0112	276	280	NS	BX080912-BX080913	X080912	2			68.18	5.406	0.083	0.003	0.00216	0.003	0.187	0.066	0.014	0.004	0.013	0.09	-0.01	-0.01	-0.01	-0.03	1799	0.1224	1.151172	-1.028772	NAF
NS0112	80	84	NS	BX080812-BX080813	X080812	2			66.81	6.107	0.153	0.008	0.00576	0.008	0.226	0.065	0.023	0.003	0.051	0.063	0.12	-0.01	-0.01	0.1	1750	0.0918	1.13373	-1.04193	NAF
NS0112	166	170	NS	BX080856-BX080857	X080856	2			69.6	2.713	0.097	0.011	0.00792	0.011	0.197	0.069	0.014	0.005	0.02	0.082	-0.01	-0.01	-0.01	-0.03	1771	0.153	1.203498	-1.050498	NAF
NS0112	260	264	NS	BX080904-BX080905	X080904	2			66.15	7.289	0.165	0.01	0.0072	0.01	0.217	0.073	0.015	0.007	0.043	0.083	-0.01	-0.01	-0.01	-0.03	1795	0.2142	1.273266	-1.059066	NAF
NS0112	284	288	NS	BX080916-BX080917	X080916	2			66.75	6.23	0.128	0.008	0.00576	0.008	0.203	0.068	0.014	0.004	0.025	0.077	0.05	-0.01	-0.01	0.03	1801	0.1224	1.186056	-1.063656	NAF
NS0112	84	88	NS	BX080814-BX080815	X080814	2			67.42	5.776	0.215	0.014	0.01008	0.014	0.26	0.07	0.023	0.005	0.057	0.058	0.1	-0.01	-0.01	0.08	1751	0.153	1.22094	-1.06794	NAF
NS0112	186	190	NS	BX080866-BX080867	X080866	2			68.59	4.532	0.108	0.003	0.00216	0.003	0.178	0.066	0.015	0.002	0.029	0.081	-0.01	-0.01	-0.01	-0.03	1776	0.0612	1.151172	-1.089972	NAF
NS0112	214	218	NS	BX080880-BX080881	X080880	2			68.41	4.433	0.061	0.003	0.00216	0.003	0.185	0.065	0.014	0.001	0.019	0.069	-0.01	-0.01	-0.01	-0.03	1783	0.0306	1.13373	-1.10313	NAF
NS0112	152	156	NS	BX080848-BX080849	X080848	2			69.13	3.832	0.094	0.005	0.0036	0.005	0.205	0.066	0.013	0.001	0.025	0.071	-0.01	-0.01	-0.01	-0.03	1767	0.0306	1.151172	-1.120572	NAF
NS0112	178	182	NS	BX080862-BX080863	X080862	2			69.02	3.538	0.079	0.003	0.00216	0.003	0.225	0.069	0.014	0.002	0.015	0.076	-0.01	-0.01	-0.01	-0.03	1774	0.0612	1.203498	-1.142298	NAF
NS0112	242	246	NS	BX080894-BX080895	X080894	2			69.35	3.302	0.063	0.005	0.0036	0.005	0.207	0.069	0.011	0.002	0.027	0.077	-0.01	-0.01	-0.01	-0.03	1790	0.0612	1.203498	-1.142298	NAF
NS0112	140	144	NS	BX080842-BX080843	X080842	2			67.77	4.915	0.12	0.005	0.0036	0.005	0.243	0.08	0.017	0.008	0.031	0.065	-0.01	-0.01	-0.01	-0.03	1764	0.2448	1.39536	-1.15056	NAF
NS0112	280	284	NS	BX080914-BX080915	X080914	2			66.76	6.906	0.136	0.01	0.0072	0.01	0.215	0.073	0.016	0.004	0.028	0.069	0.09	-0.01	-0.01	0.07	1800	0.1224	1.273266	-1.150866	NAF
NS0112	158	162	NS	BX080852-BX080853	X080852	2			68.67	4.593	0.185	0.009	0.00648	0.009	0.235	0.069	0.013	0.001	0.058	0.062	-0.01	-0.01	-0.01	-0.03	1769	0.0306	1.203498	-1.172898	NAF
NS0112	182	186	NS	BX080864-BX080865	X080864	2			69.37	4.145	0.091	0.001	0.00072	0.001	0.185	0.071	0.016	0.002	0.023	0.08	-0.01	-0.01	-0.01	-0.03	1775	0.0612	1.238382	-1.177182	NAF
NS0112	136	140	NS	BX080840-BX080841	X080840	2			67.08	6.636	0.161	0.009	0.00648	0.009	0.26	0.084	0.019	0.009	0.046	0.075	-0.01	-0.01	-0.01	-0.03	1763	0.2754	1.465128	-1.189728	NAF
NS0112	246	250	NS	BX080896-BX080897	X080896	2			67.4	4.916	0.087	0.005	0.0036	0.005	0.189	0.072	0.014	0.001	0.032	0.076	-0.01	-0.01	-0.01	-0.03	1791	0.0306	1.255824	-1.225224	NAF
NS0112	194	198	NS	BX080870-BX080871	X080870	2			67.43	5.046	0.12	0.006	0.00432	0.006	0.225	0.074	0.015	0.002	0.044	0.065	-0.01	-0.01	-0.01	-0.03	1778	0.0612	1.290708	-1.229508	NAF
NS0112	4	6	NS	X073773	073773	1	G	D	28.71	48.04	4.48	0.1806	0.14	0.204	0.15	0.1	0.073	0.016	0.021	0.039	3.37	1.7	0.17	5.24	16696	0.4896	1.7442	-1.2546	NAF
NS0112	210	214	NS	BX080878-BX080879	X080878	2			68.03	5.337	0.088	0.007	0.00504	0.007	0.195	0.076	0.018	0.002	0.029	0.071	-0.01	-0.01	-0.01	-0.03	1782	0.0612	1.325592	-1.264392	NAF
NS0112	2	4	NS	X073772	073772	1	G	D	30.64	46.49	4.06	0.1548	0.12	0.179	0.13	0.1	0.089	0.015	0.017	0.029	3	1.55	0.18	4.73	16695	0.459	1.7442	-1.2852	NAF
NS0112	148	152	NS	BX080846-BX080847	X080846	2			67.78	5.524	0.146	0.004	0.00288	0.004	0.257	0.082	0.017	0.003	0.042	0.088	-0.01	-0.01	-0.01	-0.03	1766	0.0918	1.430244	-1.338444	NAF
NS0112	190	194	NS	BX080868-BX080869	X080868	2			68.72	4.845	0.104	0.008	0.00576	0.008	0.219	0.084	0.018	0.004	0.033	0.071	-0.01	-0.01	-0.01	-0.03	1777	0.1224	1.465128	-1.342728	NAF
NS0112	288	292	NS	BX080918-BX080919	X080918	2			66.22	6.315	0.132	0.009	0.00648	0.009	0.237	0.084	0.017	0.004	0.023	0.089	-0.01	-0.01	-0.01	-0.03	1802	0.1224	1.465128	-1.342728	NAF
NS0112	254	256	NS	BX080900	X080900	2			68.99	3.902	0.065	0.005	0.0036	0.005	0.255	0.088	0.014	0.006	0.014	0.078	-0.01	-0.01	-0.01	-0.03	1793	0.1836	1.534896	-1.351296	NAF
NS0112	94	96	NS	X073819	073819	1	G	D	38.1	39.26	1.11	0.774	0.6	0.048	0.45	0.12	0.107	0.023	0.25	0.01	0.7	2.48	0.24	3.42	16795	0.7038	2.09304	-1.38924	NAF
NS0112	272	276	NS	BX080910-BX080911	X080910	2			66.89	6.682	0.083	0.007	0.00504	0.007	0.183	0.084	0.017	0.002	0.02	0.091	-0.01	-0.01	-0.01	-0.03	1798	0.0612	1.465128	-1.403928	NAF
NS0112	120	124	NS	BX080832-BX080833	X080832	2			67.54	5.366	0.148	0.005	0.0036	0.005	0.264	0.097	0.022	0.009	0.03	0.091	-0.01	-0.01	-0.01	-0.03	1759	0.2754	1.691874	-1.416474	NAF
NS0112	202	206	NS	BX080874-BX080875	X080874	2			67.28	6.256	0.139	0.006	0.00432	0.006	0.224	0.085	0.019	0.002	0.045	0.147	-0.01	-0.01	-0.01	-0.03	1780	0.0612	1.48257	-1.42137	NAF
NS0112	198	202	NS	BX080872-BX080873	X080872	2			66.43	6.164	0.127	0.006	0.00432	0.006	0.238	0.087	0.02	0.001	0.045	0.065	-0.01	-0.01	-0.01	-0.03	1779	0.0306	1.517454	-1.486854	NAF
NS0112	270	272	NS	X073909	073909	1	G	W	34.31	39.6	1.84	0.7224	0.56	0.08	1.34	0.4	0.091	0.179	0.4	0.118	0.12	5.53	0.25	5.9	16955	5.4774	6.9768	-1.4994	NAF
NS0112	144	148	NS	BX080844-BX080845	X080844	2			66.55	6.654	0.161	0.007	0.00504	0.007	0.282	0.1	0.022	0.008	0.05	0.071	-0.01	-0.01	-0.01	-0.03	1765	0.2448	1.7442	-1.4994	NAF
NS0112	124	128	NS	BX080834-BX080835	X080834	2			66.35	5.541	0.112	0.001	0.00072	0.001	0.253	0.102	0.023	0.009	0.022	0.082	-0.01	-0.01	-0.01	-0.03	1760	0.2754	1.779084	-1.503684	NAF
NS0112	264	268	NS	BX080906-BX080907	X080906	2			64.97	8.656	0.099	0.006	0.00432	0.006	0.232	0.092	0.021	0.003	0.024	0.08	-0.01	-0.01	-0.01	-0.03	1796	0.0918	1.604664	-1.512864	NAF
NS0112	72	74	NS	X073808	073808	1	G	D	36.76	41.02	2.03	1.1739	0.91	0.093	0.17	0.11	0.139	0.013	0.547	0.041	0.93	0.54	0.29	1.76	16766	0.3978	1.91862	-1.52082	NAF
NS0112	76	78	NS	X073810	073810	1	G	D	36.42	39.96	1.92	0.5418	0.42	0.082	0.83	0.17	0.121	0.047	0.414	0.025	0.61	2.72	0.26	3.59	16768	1.4382	2.96514	-1.52694	NAF
NS0112	132	136	NS	BX080838-BX080839	X080838	2			67.12	6.247	0.138	0.007	0.00504	0.007	0.272	0.112	0.027	0.012	0.032	0.08	-0.01	-0.01	-0.01	-0.03	1762	0.3672	1.953504	-1.586304	NAF
NS0112	108	112	NS	BX080826-BX080827	X080826	2			67.13	5.49	0.105	0.005	0.0036	0.005	0.242	0.096	0.023	0.002	0.024	0.074	-0.01	-0.01	-0.01	-0.03	1756	0.0612	1.674432	-1.613232	NAF
NS0112	206	210	NS	BX080876-BX080877	X080876	2			67.1	5.986	0.13	0.007	0.00504	0.007	0.227	0.103	0.025	0.005	0.043	0.188	-0.01	-0.01	-0.01	-0.03	1781	0.153	1.796526	-1.643526	NAF
NS0112	222	226	NS	BX080884-BX080885	X080884	2			68.54	4.86	0.058	0.005	0.0036	0.005	0.174	0.102	0.025	0.004	0.021	0.096	-0.01	-0.01	-0.01	-0.03	1785	0.1224	1.779084	-1.656684	NAF
NS0112	118	120	NS	BX080831	X080831	2			67.51	5.145	0.107	0.001	0.00072	0.001	0.279	0.099	0.024	0.002	0.011	0.075	-0.01	-0.01	-0.01	-0.03	1758	0.0612	1.726758	-1.665558	NAF
NS0112	128	132	NS	BX080836-BX080837	X080836	2			67.31	5.662	0.138	0.003	0.00216	0.003	0.293	0.107	0.024	0.003	0.024	0.102	-0.01	-0.01	-0.01	-0.03	1761	0.0918	1.866294	-1.774494	NAF
NS0112	170	174	NS	BX080858-BX080859	X080858	2			68.67	3.806	0.265	0.007	0.00504	0.007	0.227	0.115	0.028	0.006	0.023	0.078	-0.01	-0.01	-0.01	-0.03	1772	0.1836	2.00583	-1.82223	NAF
NS0112	112	116	NS	BX080828-BX080829	X080828	2			67.13	4.749	0.164	0.015	0.0108	0.015	0.214	0.122	0.042	0.006	0.031	0.064	-0.01	-0.01	-0.01	-0.03	1757	0.1836	2.127924	-1.944324	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0112	104	108	NS	BX080824-BX080825	X080824	2			65.74	6.435	0.194	0.01	0.0072	0.01	0.313	0.129	0.028	0.009	0.027	0.073	0.04	-0.01	-0.01	0.02	1755	0.2754	2.250018	-1.974618	NAF
NS0112	84	86	NS	X073814	073814	1	G	D	33.95	38.74	2.32	0.6579	0.51	0.105	1.41	0.4	0.137	0.161	0.576	0.027	0.72	5.8	0.38	6.9	16772	4.9266	6.9768	-2.0502	NAF
NS0112	0	2	NS	X073771	073771	1	G	D	29.13	47.5	4.57	0.0645	0.05	0.194	0.1	0.15	0.047	0.018	0.05	0.053	3.56	1.56	0.19	5.31	16694	0.5508	2.6163	-2.0655	NAF
NS0112	96	100	NS	BX080820-BX080821	X080820	2			67.74	5.335	0.121	0.008	0.00576	0.008	0.229	0.136	0.045	0.002	0.025	0.059	0.06	-0.01	-0.01	0.04	1753	0.0612	2.372112	-2.310912	NAF
NS0112	218	222	NS	BX080882-BX080883	X080882	2			67.35	4.821	0.077	0.005	0.0036	0.005	0.202	0.139	0.022	0.001	0.018	0.069	-0.01	-0.01	-0.01	-0.03	1784	0.0306	2.424438	-2.393838	NAF
NS0112	176	178	NS	BX080861	X080861	2			68.06	4.534	0.087	0.007	0.00504	0.007	0.268	0.154	0.04	0.002	0.017	0.078	-0.01	-0.01	-0.01	-0.03	1773	0.0612	2.686068	-2.624868	NAF
NS0112	258	260	NS	X073903	073903	1	G	W	35.86	34.1	1.8	0.6837	0.53	0.083	1.82	0.43	0.092	0.139	0.415	0.0005	0.24	8.29	0.1	8.63	16949	4.2534	7.50006	-3.24666	NAF
NS0112	256	258	NS	X073902	073902	1	G	W	40.6	26.95	1.38	0.8385	0.65	0.067	1.68	0.29	0.024	0.038	0.325	0.004	0.41	10.02	-0.07	10.36	16948	1.1628	5.05818	-3.89538	NAF
NS0112	82	84	NS	X073813	073813	1	G	D	35.38	38.46	1.51	0.7482	0.58	0.066	1.08	0.32	0.115	0.039	0.395	0.006	0.84	5.28	0.02	6.14	16771	1.1934	5.58144	-4.38804	NAF
NS0112	102	104	NS	X073823	073823	1	G	D	34.17	37.27	1.71	0.5805	0.45	0.073	1.55	0.4	0.146	0.067	0.22	0.018	0.86	7.68	0.15	8.69	16799	2.0502	6.9768	-4.9266	NAF
NS0112	90	92	NS	X073817	073817	1	G	D	33.6	35.6	1.37	0.8772	0.68	0.055	1.87	0.46	0.121	0.101	0.349	0.009	0.73	9.78	0.3	10.81	16775	3.0906	8.02332	-4.93272	NAF
NS0112	92	94	NS	X073818	073818	1	G	D	33.92	36	1.17	1.3029	1.01	0.045	1.44	0.37	0.137	0.043	0.233	0.028	1.21	8.75	0.27	10.23	16776	1.3158	6.45354	-5.13774	NAF
NS0112	296	298	NS	X073922	073922	1	G	W	37.8	36.84	1.4	0.7353	0.57	0.063	1.18	0.39	0.097	0.051	0.28	0.071	0.11	4.56	-0.02	4.65	16986	1.5606	6.80238	-5.24178	NAF
NS0112	96	98	NS	X073820	073820	1	G	D	35.8	34.86	1.25	0.8127	0.63	0.052	1.58	0.38	0.106	0.041	0.308	0.017	0.42	8.45	0.03	8.9	16796	1.2546	6.62796	-5.37336	NAF
NS0112	88	90	NS	X073816	073816	1	G	D	35.63	35.51	1.5	0.7869	0.61	0.067	1.65	0.5	0.126	0.105	0.441	0.023	0.3	7.46	0.13	7.89	16774	3.213	8.721	-5.508	NAF
NS0112	114	116	NS	X073829	073829	1	G	D	34.88	36.75	1.35	0.8643	0.67	0.059	1.51	0.43	0.086	0.065	0.223	0.014	0.28	8.37	0.01	8.66	16805	1.989	7.50006	-5.51106	NAF
NS0112	100	102	NS	X073822	073822	1	G	D	32.94	38.22	1.08	0.774	0.6	0.046	1.67	0.43	0.1	0.064	0.149	0.027	0.49	9.48	0.02	9.99	16798	1.9584	7.50006	-5.54166	NAF
NS0112	136	138	NS	X073840	073840	1	G	D	36.26	36.78	0.97	0.7869	0.61	0.043	1.3	0.4	0.092	0.044	0.23	0.0005	0.18	7.08	-0.1	7.16	16834	1.3464	6.9768	-5.6304	NAF
NS0112	292	294	NS	X073920	073920	1	G	W	35.28	41.4	1.13	0.7224	0.56	0.05	1.08	0.4	0.071	0.042	0.208	0.078	0.06	4.38	-0.1	4.34	16984	1.2852	6.9768	-5.6916	NAF
NS0112	80	82	NS	X073812	073812	1	G	D	35.61	36.18	1.04	0.8385	0.65	0.045	1.63	0.44	0.112	0.06	0.322	0.014	0.3	7.66	-0.01	7.95	16770	1.836	7.67448	-5.83848	NAF
NS0112	162	164	NS	X073854	073854	1	G	W	27.09	42.27	1.63	0.6192	0.48	0.07	1.83	0.49	0.081	0.083	0.497	0.0005	0.38	12.75	0.2	13.33	16847	2.5398	8.54658	-6.00678	NAF
NS0112	106	108	NS	X073825	073825	1	G	D	33.93	36.32	1.49	0.7611	0.59	0.072	1.68	0.48	0.122	0.06	0.306	0.024	0.53	9.47	0.09	10.09	16801	1.836	8.37216	-6.53616	NAF
NS0112	138	140	NS	X073841	073841	1	G	D	38.19	33.83	1.11	0.8256	0.64	0.051	1.38	0.44	0.1	0.026	0.274	0.019	0.21	7.26	-0.16	7.31	16835	0.7956	7.67448	-6.87888	NAF
NS0112	266	268	NS	X073907	073907	1	G	W	35.97	39.47	0.71	0.8385	0.65	0.033	0.93	0.43	0.095	0.017	0.17	0.034	0.15	5.97	-0.2	5.92	16953	0.5202	7.50006	-6.97986	NAF
NS0112	282	284	NS	X073915	073915	1	G	W	37.76	37.19	1.05	0.6966	0.54	0.053	1.08	0.46	0.084	0.033	0.227	0.054	0.03	4.82	-0.28	4.57	16979	1.0098	8.02332	-7.01352	NAF
NS0112	186	188	NS	X073866	073866	1	G	W	36.79	36.85	0.94	0.645	0.5	0.041	1.11	0.44	0.109	0.018	0.23	0.016	0.22	6.46	-0.19	6.49	16877	0.5508	7.67448	-7.12368	NAF
NS0112	264	266	NS	X073906	073906	1	G	W	36.29	39.69	0.81	0.7611	0.59	0.041	0.92	0.45	0.094	0.023	0.199	0.033	0.06	5.15	-0.25	4.96	16952	0.7038	7.8489	-7.1451	NAF
NS0112	164	166	NS	X073855	073855	1	G	W	29.09	38.23	2.02	0.6321	0.49	0.091	1.92	0.59	0.123	0.101	0.662	0.017	0.44	12.93	0.28	13.65	16848	3.0906	10.29078	-7.20018	NAF
NS0112	124	126	NS	X073834	073834	1	G	D	35.85	37.33	0.82	0.8256	0.64	0.035	1.2	0.47	0.102	0.032	0.141	0.019	0.21	7.32	-0.01	7.52	16810	0.9792	8.19774	-7.21854	NAF
NS0112	110	112	NS	X073827	073827	1	G	D	34.77	36.86	0.87	0.7869	0.61	0.041	1.54	0.46	0.089	0.023	0.153	0.015	0.37	8.93	-0.17	9.13	16803	0.7038	8.02332	-7.31952	NAF
NS0112	126	128	NS	X073835	073835	1	G	D	36.01	36.64	0.86	0.8385	0.65	0.038	1.35	0.48	0.1	0.031	0.145	0.01	0.22	7.96	-0.09	8.09	16811	0.9486	8.37216	-7.42356	NAF
NS0112	146	148	NS	X073845	073845	1	G	D	36.38	35.17	1.03	0.8643	0.67	0.049	1.41	0.47	0.089	0.025	0.296	0.03	0.28	8.39	-0.12	8.55	16839	0.765	8.19774	-7.43274	NAF
NS0112	254	256	NS	X073900	073900	1	G	W	32.37	31.73	1.33	1.032	0.8	0.06	2.35	0.6	0.08	0.097	0.316	0.007	0.5	15.08	0.15	15.73	16947	2.9682	10.4652	-7.497	NAF
NS0112	116	118	NS	X073830	073830	1	G	D	36.72	36.37	0.84	0.8256	0.64	0.036	1.28	0.48	0.099	0.025	0.118	0.017	0.23	7.32	-0.11	7.44	16806	0.765	8.37216	-7.60716	NAF
NS0112	148	150	NS	X073846	073846	1	G	D	34.43	35.44	0.99	0.8385	0.65	0.048	1.58	0.47	0.078	0.018	0.252	0.009	0.39	10.55	-0.05	10.89	16840	0.5508	8.19774	-7.64694	NAF
NS0112	284	286	NS	X073916	073916	1	G	W	35.81	38.34	1.18	0.645	0.5	0.056	1.21	0.53	0.118	0.052	0.181	0.039	0.16	6.01	-0.19	5.98	16980	1.5912	9.24426	-7.65306	NAF
NS0112	122	124	NS	X073833	073833	1	G	D	38.24	33.26	1.11	0.8256	0.64	0.048	1.34	0.49	0.117	0.026	0.22	0.01	0.25	7.6	-0.08	7.77	16809	0.7956	8.54658	-7.75098	NAF
NS0112	294	296	NS	X073921	073921	1	G	W	37.91	36.4	1.13	0.8772	0.68	0.056	1.16	0.53	0.141	0.048	0.198	0.129	0.09	5.1	-0.12	5.07	16985	1.4688	9.24426	-7.77546	NAF
NS0112	144	146	NS	X073844	073844	1	G	D	37.53	33.67	0.99	0.8643	0.67	0.055	1.54	0.49	0.09	0.025	0.234	0.044	0.2	8.16	-0.14	8.22	16838	0.765	8.54658	-7.78158	NAF
NS0112	194	196	NS	X073870	073870	1	G	W	34.09	33.39	1.39	0.7353	0.57	0.06	1.95	0.58	0.097	0.074	0.463	0.011	0.38	11.85	0.03	12.26	16881	2.2644	10.11636	-7.85196	NAF
NS0112	262	264	NS	X073905	073905	1	G	W	36.29	37.31	1.4	0.6837	0.53	0.069	1.24	0.66	0.151	0.119	0.378	0.029	0.09	5.45	0.1	5.64	16951	3.6414	11.51172	-7.87032	NAF
NS0112	190	192	NS	X073868	073868	1	G	W	36.01	34.78	0.97	0.774	0.6	0.042	1.52	0.49	0.097	0.022	0.272	0.016	0.29	9.11	-0.21	9.19	16879	0.6732	8.54658	-7.87338	NAF
NS0112	86	88	NS	X073815	073815	1	G	D	34.1	35.86	1.23	0.8643	0.67	0.056	1.82	0.57	0.12	0.067	0.325	0.005	0.38	9.46	0.06	9.9	16773	2.0502	9.94194	-7.89174	NAF
NS0112	130	132	NS	X073837	073837	1	G	D	35.05	34.72	0.9	0.8256	0.64	0.037	1.71	0.49	0.095	0.019	0.148	0.02	0.33	10.21	-0.06	10.48	16831	0.5814	8.54658	-7.96518	NAF
NS0112	172	174	NS	X073859	073859	1	G	W	31.9	35.64	1.38	0.6837	0.53	0.063	2.22	0.6	0.116	0.081	0.264	0.014	0.41	12.73	0.03	13.17	16870	2.4786	10.4652	-7.9866	NAF
NS0112	280	282	NS	X073914	073914	1	G	W	35.75	37.63	0.98	0.7998	0.62	0.046	1.26	0.52	0.092	0.033	0.172	0.131	0.21	6.81	-0.2	6.82	16978	1.0098	9.06984	-8.06004	NAF
NS0112	188	190	NS	X073867	073867	1	G	W	37.48	34.86	1.07	0.6837	0.53	0.045	1.24	0.53	0.127	0.035	0.262	0.01	0.26	7.15	-0.14	7.27	16878	1.071	9.24426	-8.17326	NAF
NS0112	108	110	NS	X073826	073826	1	G	D	34.95	35.26	0.91	0.8514	0.66	0.039	1.72	0.51	0.106	0.023	0.184	0.017	0.43	10.12	-0.1	10.45	16802	0.7038	8.89542	-8.19162	NAF
NS0112	236	238	NS	X073891	073891	1	G	W	33.8	36.08	0.87	0.6708	0.52	0.042	1.55	0.49	0.084	0.006	0.303	0.007	0.38	11.05	-0.14	11.29	16920	0.1836	8.54658	-8.36298	NAF
NS0112	230	232	NS	X073888	073888	1	G	W	30.54	35.15	0.75	0.7224	0.56	0.033	1.78	0.5	0.071	0.011	0.265	0.008	0.58	16.14	0.01	16.73	16917	0.3366	8.721	-8.3844	NAF
NS0112	118	120	NS	X073831	073831	1	G	D	35.15	37.53	0.7	0.7353	0.57	0.029	1.49	0.52	0.101	0.02	0.07	0.025	0.23	7.94	-0.07	8.1	16807	0.612	9.06984	-8.45784	NAF
NS0112	160	162	NS	X073853	073853	1	G	W	33.1	36.38	1.6	0.6063	0.47	0.071	1.55	0.55	0.124	0.036	0.464	0.008	0.35	10.95	0.03	11.33	16846	1.1016	9.5931	-8.4915	NAF
NS0112	98	100	NS	X073821	073821	1	G	D	36.73	38.1	0.81	0.6321	0.49	0.037	1.12	0.52	0.144	0.018	0.165	0.007	0.3	5.89	-0.17	6.02	16797	0.5508	9.06984	-8.51904	NAF
NS0112	234	236	NS	X073890	073890	1	G	W	32.5	35.96	0.89	0.7224	0.56	0.041	1.61	0.53	0.107	0.023	0.32	0.0005	0.41	12.59	-0.05	12.95	16919	0.7038	9.24426	-8.54046	NAF
NS0112	214	216	NS	X073880	073880	1	G	W	34.43	36.48	0.83	0.7611	0.59	0.039	1.27	0.51	0.124	0.01	0.242	0.0005	0.43	9.64	-0.15	9.92	16909	0.306	8.89542	-8.58942	NAF
NS0112	174	176	NS	X073860	073860	1	G	W	34.21	33.03	1.14	0.774	0.6	0.05	2	0.54	0.096	0.024	0.262	0.003	0.39	12.46	-0.12	12.73	16871	0.7344	9.41868	-8.68428	NAF
NS0112	184	186	NS	X073865	073865	1	G	W	37.15	34.96	0.91	0.7353	0.57	0.038	1.29	0.53	0.117	0.018	0.197	0.023	0.27	7.81	-0.25	7.83	16876	0.5508	9.24426	-8.69346	NAF
NS0112	250	252	NS	X073898	073898	1	G	W	36.99	37.64	0.85	0.7224	0.56	0.039	1.02	0.53	0.087	0.018	0.278	0.022	0.12	5.82	-0.24	5.7	16945	0.5508	9.24426	-8.69346	NAF
NS0112	128	130	NS	X073836	073836	1	G	D	35.5	36.57	0.83	0.7869	0.61	0.033	1.46	0.54	0.107	0.022	0.13	0.021	0.28	8.35	-0.12	8.51	16812	0.6732	9.41868	-8.74548	NAF
NS0112	120	122	NS	X073832	073832	1	G	D	36.44	35.23	0.86	0.8127	0.63	0.037	1.5	0.55	0.101	0.026	0.125	0.02	0.23	8.35	-0.12	8.46	16808	0.7956	9.5931	-8.7975	NAF
NS0112	290	292	NS	X073919	073919	1	G	W	38.29	34.19	1.32	0.8901	0.69	0.063	1.41	0.56	0.109	0.031	0.231	0.141	0.15	6.43	-0.16	6.42	16983	0.9486	9.76752	-8.81892	NAF
NS0112	238	240	NS	X073892	073892	1	G	W	34.17	34.04	0.84	0.6579	0.51	0.041	1.8	0.52	0.079	0.007	0.306	0.011	0.37	12.49	-0.12	12.74	16939	0.2142	9.06984	-8.85564	NAF
NS0112	142	144	NS	X073843	073843	1	G	D	36.28	35.49	0.99	0.8256	0.64	0.042	1.44	0.56	0.096	0.029	0.23	0.083	0.25	8.09	-0.13	8.21	16837	0.8874	9.76752	-8.88012	NAF
NS0112	276	278	NS	X073912	073912	1	G	W	36.61	37.54	0.91	0.8256	0.64	0.044	1.06	0.56	0.094	0.029	0.183	0.188	0.15	5.63	-0.11	5.67	16976	0.8874	9.76752	-8.88012	NAF
NS0112	134	136	NS	X073839	073839	1	G	D	36.55	36.69	0.9	0.774	0.6	0.039	1.16	0.57	0.131	0.032	0.19	0.028	0.18	6.62	-0.07	6.73	16833	0.9792	9.94194	-8.96274	NAF
NS0112	216	218	NS	X073881	073881	1	G	W	32.71	39.35	0.76	0.7353	0.57	0.038	1.31	0.53	0.124	0.008	0.213	0.007	0.34	9.69	-0.14	9.89	16910	0.2448	9.24426	-8.99946	NAF
NS0112	198	200	NS	X073872	073872	1	G	W	35.39	33.72	1.04	0.7998	0.62	0.043	1.57	0.59	0.11	0.042	0.352	0.004	0.53	10.11	-0.03	10.61	16883	1.2852	10.29078	-9.00558	NAF
NS0112	286	288	NS	X073917	073917	1	G	W	36.78	37.47	0.87	0.8127	0.63	0.043	1.17	0.58	0.086	0.036	0.2	0.068	0.08	5.64	-0.15	5.57	16981	1.1016	10.11636	-9.01476	NAF
NS0112	132	134	NS	X073838	073838	1	G	D	35.42	36.63	0.96	0.8385	0.65	0.039	1.41	0.56	0.11	0.024	0.177	0.016	0.3	8.15	-0.06	8.39	16832	0.7344	9.76752	-9.03312	NAF
NS0112	242	244	NS	X073894	073894	1	G	W	32.73	37.38	0.77	0.6837	0.53	0.038	1.6	0.54	0.073	0.011	0.276	0.01	0.3	11.55	-0.1	11.75	16941	0.3366	9.41868	-9.08208	NAF
NS0112	226	228	NS	X073886	073886	1	G	W	34.25	34.81	1.11	0.7095	0.55	0.055	1.67	0.58	0.082	0.031	0.391	0.0005	0.32	11.11	-0.09	11.34	16915	0.9486	10.11636	-9.16776	NAF
NS0112	156	158	NS	X073850	073850	1	G	W	31.98	37.07	1.62	0.5934	0.46	0.072	1.7	0.56	0.087	0.018	0.403	0.025	0.4	11.29	-0.02	11.67	16844	0.5508	9.76752	-9.21672	NAF
NS0112	212	214	NS	X073879	073879	1	G	W	33.59	37.23	0.95	0.7353	0.57	0.047	1.39	0.56	0.129	0.013	0.313	0.006	0.48	10.16	-0.15	10.49	16908	0.3978	9.76752	-9.36972	NAF
NS0112	112	114	NS	X073828	073828	1	G	D	37.04	31.44	0.99	0.8643	0.67	0.04	1.84	0.6	0.124	0.035	0.113	0.018	0.35	10.43	-0.12	10.66	16804	1.071	10.4652	-9.3942	NAF
NS0112	278	280	NS	X073913	073913	1	G	W	34.36	38.15	0.83	0.774	0.6	0.042	1.33	0.6	0.103	0.034	0.117	0.137	0.24	8.05	-0.06	8.23	16977	1.0404	10.4652	-9.4248	NAF
NS0112	170	172	NS	X073858	073858	1	G	W	33.55	36.95	0.99	0.6837	0.53	0.043	1.81	0.62	0.118	0.041	0.173	0.003	0.32	10.2	-0.11	10.41	16869	1.2546	10.81404	-9.55944	NAF
NS0112	158	160	NS	X073852	073852	1	G	W	32.76	36.77	1.24	0.6321	0.49	0.051	1.5	0.58	0.119	0.017	0.384	0.004	0.32	11.23	-0.05	11.5	16845	0.5202	10.11636	-9.59616	NAF
NS0112	268	270	NS	X073908	073908	1	G	W	34.02	39.41	1.22	0.7611	0.59	0.058	1.3	0.69	0.171	0.077	0.242	0.099	0.21	6.74	0.06	7.01	16954	2.3562	12.03498	-9.67878	NAF
NS0112	210	212	NS	X073878	073878	1	G	W	34.49	35.27	0.95	0.8127	0.63	0.043	1.61	0.6	0.109	0.024	0.318	0.003	0.45	10.32	-0.2	10.57	16907	0.7344	10.4652	-9.7308	NAF
NS0112	182	184	NS	X073864	073864	1	G	W	35.6	38.11	0.9	0.6837	0.53	0.038	1.28	0.6	0.107	0.018	0.198	0.021	0.19	7.14	-0.16	7.17	16875	0.5508	10.4652	-9.9144	NAF
NS0112	260	262	NS	X073904	073904	1	G	W	35.57	40.13	0.98	0.6708	0.52	0.047	1.04	0.65	0.122	0.046	0.275	0.005	0.05	4.76	-0.15	4.66	16950	1.4076	11.3373	-9.9297	NAF
NS0112	224	226	NS	X073885	073885	1	G	W	31.38	38.45	1.04	0.6966	0.54	0.045	1.51	0.62	0.131	0.019	0.331	0.005	0.33	11.74	-0.07	12	16914	0.5814	10.81404	-10.23264	NAF
NS0112	178	180	NS	X073862	073862	1	G	W	32.52	34.78	0.86	0.7611	0.59	0.036	2.06	0.61	0.088	0.012	0.16	0.059	0.46	13.44	-0.06	13.84	16873	0.3672	10.63962	-10.27242	NAF
NS0112	206	208	NS	X073876	073876	1	G	W	35.52	34.13	0.97	0.8385	0.65	0.042	1.62	0.64	0.118	0.02	0.319	0.009	0.34	9.96	-0.22	10.08	16905	0.612	11.16288	-10.55088	NAF
NS0112	150	152	NS	X073847	073847	1	G	W	35.27	35.55	0.99	0.7482	0.58	0.045	1.53	0.65	0.103	0.022	0.246	0.009	0.28	9.18	-0.07	9.39	16841	0.6732	11.3373	-10.6641	NAF
NS0112	222	224	NS	X073884	073884	1	G	W	31.56	38.46	0.86	0.6708	0.52	0.041	1.37	0.63	0.145	0.008	0.279	0.019	0.51	12.09	-0.08	12.52	16913	0.2448	10.98846	-10.74366	NAF
NS0112	140	142	NS	X073842	073842	1	G	D	35.36	36.26	0.86	0.8256	0.64	0.037	1.49	0.67	0.116	0.03	0.139	0.049	0.2	8.56	-0.08	8.68	16836	0.918	11.68614	-10.76814	NAF
NS0112	252	254	NS	X073899	073899	1	G	W	34.07	34.19	0.77	0.8514	0.66	0.034	1.74	0.69	0.137	0.038	0.205	0.006	0.42	11.98	-0.09	12.31	16946	1.1628	12.03498	-10.87218	NAF
NS0112	228	230	NS	X073887	073887	1	G	W	32.58	34.85	0.9	0.6837	0.53	0.04	1.73	0.65	0.116	0.014	0.309	0.0005	0.39	13.31	-0.07	13.63	16916	0.4284	11.3373	-10.9089	NAF
NS0112	240	242	NS	X073893	073893	1	G	W	32.17	35.47	0.84	0.7353	0.57	0.039	1.8	0.64	0.1	0.008	0.3	0.001	0.42	13.28	-0.07	13.63	16940	0.2448	11.16288	-10.91808	NAF
NS0112	200	202	NS	X073873	073873	1	G	W	36.01	34.67	0.87	0.8256	0.64	0.039	1.61	0.66	0.104	0.018	0.279	0.028	0.33	8.83	-0.16	9	16884	0.5508	11.51172	-10.96092	NAF
NS0112	192	194	NS	X073869	073869	1	G	W	32.27	37.1	1.15	0.6837	0.53	0.047	1.85	0.75	0.119	0.059	0.351	0.027	0.35	11.04	0.06	11.45	16880	1.8054	13.0815	-11.2761	NAF
NS0112	152	154	NS	X073848	073848	1	G	W	32.41	35.72	0.91	0.8643	0.67	0.041	1.83	0.67	0.116	0.013	0.197	0.017	0.6	12.37	-0.01	12.96	16842	0.3978	11.68614	-11.28834	NAF
NS0112	204	206	NS	X073875	073875	1	G	W	37.43	34.36	0.96	0.8256	0.64	0.044	1.44	0.69	0.126	0.024	0.324	0.017	0.19	7.52	-0.22	7.49	16904	0.7344	12.03498	-11.30058	NAF
NS0112	208	210	NS	X073877	073877	1	G	W	33.51	36.48	1.06	0.7611	0.59	0.048	1.56	0.73	0.141	0.043	0.353	0.012	0.31	10.24	-0.09	10.46	16906	1.3158	12.73266	-11.41686	NAF
NS0112	272	274	NS	X073910	073910	1	G	W	37.86	37.21	0.82	0.8127	0.63	0.036	0.92	0.69	0.095	0.016	0.161	0.154	0.03	4.49	-0.01	4.51	16956	0.4896	12.03498	-11.54538	NAF
NS0112	154	156	NS	X073849	073849	1	G	W	34.39	36	0.87	0.7482	0.58	0.036	1.44	0.68	0.092	0.01	0.219	0.016	0.26	9.94	0.01	10.21	16843	0.306	11.86056	-11.55456	NAF
NS0112	244	246	NS	X073895	073895	1	G	W	32.8	34.2	0.76	0.774	0.6	0.034	1.98	0.68	0.087	0.007	0.269	0.0005	0.39	13.61	-0.03	13.97	16942	0.2142	11.86056	-11.64636	NAF
NS0112	168	170	NS	X073857	073857	1	G	W	31.78	34.03	2.08	0.7095	0.55	0.095	2.17	0.88	0.19	0.116	0.564	0.022	0.36	12.59	0.23	13.18	16868	3.5496	15.34896	-11.79936	NAF
NS0112	196	198	NS	X073871	073871	1	G	W	35.68	33.69	0.95	0.7998	0.62	0.041	1.64	0.71	0.103	0.013	0.331	0.009	0.32	10.04	-0.11	10.25	16882	0.3978	12.38382	-11.98602	NAF
NS0112	288	290	NS	X073918	073918	1	G	W	31.11	43.14	0.79	0.9546	0.74	0.033	1.42	0.73	0.073	0.019	0.137	0.153	0.11	7.39	0.19	7.69	16982	0.5814	12.73266	-12.15126	NAF
NS0112	248	250	NS	X073897	073897	1	G	W	37.94	35.05	0.9	0.7998	0.62	0.044	1.18	0.74	0.099	0.019	0.308	0.009	0.11	6.49	-0.16	6.44	16944	0.5814	12.90708	-12.32568	NAF
NS0112	180	182	NS	X073863	073863	1	G	W	34.53	34.35	0.83	0.7869	0.61	0.036	1.79	0.74	0.112	0.017	0.141	0.068	0.37	10.97	-0.06	11.28	16874	0.5202	12.90708	-12.38688	NAF
NS0112	246	248	NS	X073896	073896	1	G	W	34.22	35.8	0.75	0.8256	0.64	0.035	1.71	0.76	0.095	0.019	0.251	0.01	0.29	10.37	-0.07	10.59	16943	0.5814	13.25592	-12.67452	NAF
NS0112	220	222	NS	X073883	073883	1	G	W	29.27	40.49	0.98	0.7353	0.57	0.046	1.54	0.81	0.158	0.025	0.248	0.002	0.55	12.41	-0.02	12.94	16912	0.765	14.12802	-13.36302	NAF
NS0112	176	178	NS	X073861	073861	1	G	W	31.73	36.19	0.87	0.774	0.6	0.036	2.01	0.79	0.168	0.013	0.162	0.01	0.5	12.74	-0.08	13.16	16872	0.3978	13.77918	-13.38138	NAF
NS0112	166	168	NS	X073856	073856	1	G	W	30.5	38.48	0.92	0.645	0.5	0.043	1.82	0.8	0.132	0.018	0.159	0.006	0.48	12.49	-0.01	12.96	16867	0.5508	13.9536	-13.4028	NAF
NS0112	202	204	NS	X073874	073874	1	G	W	35.74	36.27	0.88	0.7998	0.62	0.039	1.53	0.8	0.116	0.017	0.275	0.023	0.19	7.91	0	8.1	16903	0.5202	13.9536	-13.4334	NAF
NS0112	218	220	NS	X073882	073882	1	G	W	30.76	37.57	0.96	0.7353	0.57	0.047	1.6	0.81	0.154	0.007	0.27	0.0005	0.27	13.06	-0.04	13.29	16911	0.2142	14.12802	-13.91382	NAF
NS0113	176	178	NS	X074013	074013	1	G	W	21.21	44.08	7.18	0.2967	0.23	0.353	2.49	0.35	0.059	0.502	2.76	0.026	0.55	10.01	0.91	11.47	16708	15.3612	6.1047	9.2565	PAF(LC)
NS0113	296	298	NS	X074074	074074	1	G	W	23.95	44.27	4.62	0.3741	0.29	0.209	2.46	0.46	0.107	0.548	1.99	0.008	0.26	9.03	1.25	10.54	16966	16.7688	8.02332	8.74548	PAF(LC)
NS0113	140	142	NS	X073994	073994	1	G	W	25.73	43.53	4.46	0.4128	0.32	0.206	2.43	0.36	0.069	0.47	1.7	0.069	0.73	7.98	0.85	9.56	16888	14.382	6.27912	8.10288	PAF(LC)
NS0113	110	112	NS	X073979	073979	1	G	W	23.67	47.26	5.55	0.2451	0.19	0.259	2.69	0.37	0.089	0.465	0.931	0.118	1.22	5.89	0.99	8.1	16819	14.229	6.45354	7.77546	PAF(LC)
NS0113	160	162	NS	X074005	074005	1	G	W	20.06	48.76	6.06	0.2838	0.22	0.278	2.76	0.41	0.086	0.482	1.12	0.006	0.37	9.36	0.8	10.53	16898	14.7492	7.15122	7.59798	PAF(LC)
NS0113	76	78	NS	X073962	073962	1	G	W	21.39	48.73	7.05	0.1935	0.15	0.335	3.59	0.25	0.058	0.389	0.194	0.043	1.21	5.96	0.89	8.06	16748	11.9034	4.3605	7.5429	PAF(LC)
NS0113	232	234	NS	X074041	074041	1	G	W	24.17	42.53	5.17	0.4257	0.33	0.231	3.08	0.41	0.076	0.455	0.504	0.065	0.73	10.47	1.01	12.21	16934	13.923	7.15122	6.77178	PAF(LC)

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0113	230	232	NS	X074040	074040	1	G	W	23.67	44.08	4.66	0.4257	0.33	0.207	2.98	0.42	0.077	0.45	0.372	0.043	0.73	10.92	0.97	12.62	16933	13.77	7.32564	6.44436	PAF(LC)
NS0113	84	86	NS	X073966	073966	1	G	W	22.09	48.65	5.66	0.3096	0.24	0.266	3.15	0.38	0.097	0.415	0.619	0.074	1.19	6.14	0.91	8.24	16752	12.699	6.62796	6.07104	PAF(LC)
NS0113	174	176	NS	X074012	074012	1	G	W	20.23	51.52	6.2	0.1935	0.15	0.288	2.46	0.48	0.122	0.461	0.303	0.015	0.42	7.67	0.89	8.98	16707	14.1066	8.37216	5.73444	PAF(LC)
NS0113	212	214	NS	X074031	074031	1	G	W	21.51	46.48	5.08	0.3354	0.26	0.235	2.92	0.51	0.104	0.467	1.5	0.071	0.62	9.46	1.08	11.16	16924	14.2902	8.89542	5.39478	PAF(LC)
NS0113	236	238	NS	X074043	074043	1	G	W	23.28	44.24	5.25	0.3741	0.29	0.234	2.93	0.52	0.113	0.472	0.268	0.032	0.47	10.37	1.05	11.89	16936	14.4432	9.06984	5.37336	PAF(LC)
NS0113	246	248	NS	X074048	074048	1	G	W	25.51	39.45	4.99	0.3741	0.29	0.225	3.02	0.63	0.142	0.511	0.297	0.037	0.49	12.24	1.09	13.82	16851	15.6366	10.98846	4.64814	PAF(LC)
NS0113	222	224	NS	X074036	074036	1	G	W	23.85	42.65	4.51	0.4128	0.32	0.204	3.16	0.51	0.102	0.435	0.559	0.05	0.6	11.67	0.98	13.25	16929	13.311	8.89542	4.41558	PAF(LC)
NS0113	200	202	NS	X074025	074025	1	G	W	27.74	41.37	2.76	0.3741	0.29	0.13	2.03	0.73	0.089	0.553	1.55	0.027	0.4	9.39	1.09	10.88	16720	16.9218	12.73266	4.18914	PAF(LC)
NS0113	202	204	NS	X074026	074026	1	G	W	26.08	38.88	4.19	0.387	0.3	0.194	2.34	0.56	0.089	0.45	2.28	0.052	0.59	11.11	1.02	12.72	16721	13.77	9.76752	4.00248	PAF(LC)
NS0113	210	212	NS	X074030	074030	1	G	W	25.55	42.49	4.44	0.3741	0.29	0.205	2.61	0.55	0.079	0.443	1.33	0.036	0.49	9.49	0.85	10.83	16923	13.5558	9.5931	3.9627	PAF(LC)
NS0113	242	244	NS	X074046	074046	1	G	W	25.08	41.14	4.47	0.3741	0.29	0.205	2.86	0.62	0.141	0.479	0.181	0.021	0.54	11.83	1	13.37	16849	14.6574	10.81404	3.84336	PAF(LC)
NS0113	234	236	NS	X074042	074042	1	G	W	23.69	43.91	4.64	0.3741	0.29	0.209	2.84	0.54	0.117	0.416	0.25	0.044	0.62	11.08	0.92	12.62	16935	12.7296	9.41868	3.31092	PAF(LC)
NS0113	244	246	NS	X074047	074047	1	G	W	24.17	43.8	4.04	0.3354	0.26	0.18	2.64	0.5	0.106	0.379	0.139	0.011	0.48	11.76	0.88	13.12	16850	11.5974	8.721	2.8764	PAF(LC)
NS0113	118	120	NS	X073983	073983	1	G	W	28.77	43.35	4.05	0.258	0.2	0.187	2.27	0.41	0.098	0.325	1.09	0.1	0.9	5.63	0.45	6.98	16823	9.945	7.15122	2.79378	PAF(LC)
NS0113	112	114	NS	X073980	073980	1	G	W	25.01	44.04	4.31	0.3483	0.27	0.204	2.59	0.51	0.122	0.378	0.395	0.074	1.09	9	0.82	10.91	16820	11.5668	8.89542	2.67138	PAF(LC)
NS0113	86	88	NS	X073967	073967	1	G	W	23.64	45.2	5.39	0.3483	0.27	0.274	3.12	0.48	0.117	0.342	0.512	0.064	1.2	8.03	0.97	10.2	16753	10.4652	8.37216	2.09304	PAF(LC)
NS0113	238	240	NS	X074044	074044	1	G	W	25.84	39.45	4.47	0.3741	0.29	0.214	2.81	0.41	0.059	0.3	0.124	0.013	0.57	13.03	0.71	14.31	16937	9.18	7.15122	2.02878	PAF(LC)
NS0113	148	150	NS	X073998	073998	1	G	W	26.04	42.38	4.78	0.3354	0.26	0.221	2.64	0.48	0.113	0.337	1.97	0.075	0.55	7.93	0.61	9.09	16892	10.3122	8.37216	1.94004	PAF(LC)
NS0113	66	68	NS	X073957	073957	1	G	D	25.35	41.27	3.48	0.4128	0.32	0.162	2.63	0.42	0.076	0.29	0.252	0.052	1.52	12.18	0.69	14.39	16743	8.874	7.32564	1.54836	PAF(LC)
NS0113	116	118	NS	X073982	073982	1	G	W	29.37	41.3	3.66	0.2838	0.22	0.173	2.46	0.43	0.097	0.284	0.623	0.094	1.01	6.98	0.51	8.5	16822	8.6904	7.50006	1.19034	PAF(LC)
NS0113	218	220	NS	X074034	074034	1	G	W	24.12	43.78	4.13	0.3612	0.28	0.189	2.93	0.45	0.08	0.295	0.364	0.02	0.59	11.24	0.7	12.53	16927	9.027	7.8489	1.1781	PAF(LC)
NS0113	142	144	NS	X073995	073995	1	G	W	27.39	45.76	3.89	0.3354	0.26	0.185	2.18	0.43	0.096	0.279	1.38	0.078	0.54	5.25	0.52	6.31	16889	8.5374	7.50006	1.03734	PAF(LC)
NS0113	264	266	NS	X074058	074058	1	G	W	26.83	37.36	2.4	0.5676	0.44	0.109	2.46	0.55	0.093	0.346	0.008	0.0005	0.78	15.73	0.86	17.37	16860	10.5876	9.5931	0.9945	PAF(LC)
NS0113	228	230	NS	X074039	074039	1	G	W	25.52	38.97	4.09	0.4902	0.38	0.188	3.06	0.5	0.084	0.313	0.306	0.039	0.83	13.44	0.36	14.63	16932	9.5778	8.721	0.8568	PAF(LC)
NS0113	78	80	NS	X073963	073963	1	G	W	25.51	42.7	4.09	0.2451	0.19	0.195	2.74	0.43	0.091	0.269	0.186	0.03	1.53	9.92	0.57	12.02	16749	8.2314	7.50006	0.73134	PAF(LC)
NS0113	220	222	NS	X074035	074035	1	G	W	24.18	41.33	4.39	0.4257	0.33	0.196	3.2	0.59	0.126	0.352	0.586	0.043	0.76	12.03	0.87	13.66	16928	10.7712	10.29078	0.48042	PAF(LC)
NS0113	82	84	NS	X073965	073965	1	G	W	24.77	44.95	4.49	0.4644	0.36	0.21	2.84	0.38	0.094	0.23	0.305	0.039	1.91	7.58	0.63	10.12	16751	7.038	6.62796	0.41004	PAF(LC)
NS0113	64	66	NS	X073956	073956	1	G	D	21.32	48.79	5.8	0.3354	0.26	0.275	2.69	0.35	0.067	0.207	0.249	0.066	1.65	7.95	0.62	10.22	16742	6.3342	6.1047	0.2295	PAF(LC)
NS0113	108	110	NS	X073978	073978	1	G	W	28.98	43	2.76	0.2838	0.22	0.129	2.14	0.43	0.099	0.248	0.518	0.093	0.83	7.33	0.41	8.57	16818	7.5888	7.50006	0.08874	PAF(LC)
NS0113	226	228	NS	X074038	074038	1	G	W	25.27	39.48	4.5	0.4644	0.36	0.205	3.24	0.62	0.134	0.355	0.414	0.054	0.69	12.71	0.73	14.13	16931	10.863	10.81404	0.04896	PAF(LC)
NS0113	80	84	NS	BX080964-BX080965	X080964	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1805	-0.0306	-0.01744	-0.013158	NAF
NS0113	84	88	NS	BX080966-BX080967	X080966	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1806	-0.0306	-0.01744	-0.013158	NAF
NS0113	158	162	NS	BX081004-BX081005	X081004	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1826	-0.0306	-0.01744	-0.013158	NAF
NS0113	170	174	NS	BX081010-BX081011	X081010	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1829	-0.0306	-0.01744	-0.013158	NAF
NS0113	174	178	NS	BX081012-BX081013	X081012	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1830	-0.0306	-0.01744	-0.013158	NAF
NS0113	212	214	NS	BX081031	X081031	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1839	-0.0306	-0.01744	-0.013158	NAF
NS0113	218	222	NS	BX081034-BX081035	X081034	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1841	-0.0306	-0.01744	-0.013158	NAF
NS0113	222	224	NS	BX081036	X081036	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1842	-0.0306	-0.01744	-0.013158	NAF
NS0113	250	252	NS	BX081050	X081050	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1843	-0.0306	-0.01744	-0.013158	NAF
NS0113	252	256	NS	BX081052-BX081053	X081052	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1844	-0.0306	-0.01744	-0.013158	NAF
NS0113	264	268	NS	BX081058-BX081059	X081058	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1847	-0.0306	-0.01744	-0.013158	NAF
NS0113	140	142	NS	BX080994	X080994	2			69.43	3.609	0.285	0.034	0.02448	0.034	0.233	0.064	0.012	0.035	0.063	0.079	-0.01	-0.01	-0.01	-0.03	1820	1.071	1.116288	-0.045288	NAF
NS0113	214	216	NS	X074032	074032	1	G	W	26.72	40.3	4.21	0.3354	0.26	0.194	2.94	0.6	0.144	0.34	0.348	0.014	0.53	11.06	0.65	12.24	16925	10.404	10.4652	-0.0612	NAF
NS0113	74	76	NS	X073961	073961	1	G	W	24.94	42.4	3.89	0.4128	0.32	0.185	2.82	0.53	0.121	0.294	0.405	0.067	1.58	10.56	0.76	12.9	16747	8.9964	9.24426	-0.24786	NAF
NS0113	80	82	NS	X073964	073964	1	G	W	27.35	46.33	3.27	0.4128	0.32	0.152	1.56	0.25	0.092	0.134	0.142	0.023	3.22	4.35	0.43	8	16750	4.1004	4.3605	-0.2601	NAF
NS0113	260	264	NS	BX081056-BX081057	X081056	2			69.85	2.455	0.208	0.024	0.01728	0.024	0.23	0.061	0.01	0.026	0.006	0.123	-0.01	-0.01	-0.01	-0.03	1846	0.7956	1.063962	-0.268362	NAF
NS0113	186	190	NS	BX081018-BX081019	X081018	2			70.14	2.741	0.149	0.017	0.01224	0.017	0.156	0.042	0.007	0.015	0.097	0.079	-0.01	-0.01	-0.01	-0.03	1833	0.459	0.732564	-0.273564	NAF
NS0113	198	202	NS	BX081024-BX081025	X081024	2			68.34	4.344	0.36	0.034	0.02448	0.034	0.226	0.055	0.007	0.022	0.208	0.095	-0.01	-0.01	-0.01	-0.03	1836	0.6732	0.95931	-0.28611	NAF
NS0113	128	130	NS	X073988	073988	1	G	W	29.89	41.7	2.87	0.387	0.3	0.134	2.04	0.36	0.064	0.195	0.918	0.079	0.62	7.48	0.29	8.39	16828	5.967	6.27912	-0.31212	NAF
NS0113	202	206	NS	BX081026-BX081027	X081026	2			70.78	2.309	0.22	0.028	0.02016	0.028	0.191	0.051	0.007	0.014	0.09	0.105	-0.01	-0.01	-0.01	-0.03	1837	0.4284	0.889542	-0.461142	NAF
NS0113	178	182	NS	BX081014-BX081015	X081014	2			69.86	3.08	0.28	0.029	0.02088	0.029	0.203	0.052	0.009	0.011	0.098	0.09	-0.01	-0.01	-0.01	-0.03	1831	0.3366	0.906984	-0.570384	NAF
NS0113	284	288	NS	BX081068-BX081069	X081068	2			68.82	2.96	0.224	0.027	0.01944	0.027	0.192	0.05	0.009	0.009	0.164	0.077	-0.01	-0.01	-0.01	-0.03	1852	0.2754	0.8721	-0.5967	NAF
NS0113	152	154	NS	BX081000	X081000	2			69.95	2.794	0.281	0.035	0.0252	0.035	0.208	0.058	0.012	0.013	0.075	0.089	-0.01	-0.01	-0.01	-0.03	1824	0.3978	1.011636	-0.613836	NAF
NS0113	296	300	NS	BX081074-BX081075	X081074	2			68.15	3.747	0.196	0.026	0.01872	0.026	0.215	0.055	0.011	0.011	0.055	0.091	-0.01	-0.01	-0.01	-0.03	1855	0.3366	0.95931	-0.62271	NAF
NS0113	152	154	NS	X074000	074000	1	G	W	29.67	41.33	3.37	0.3612	0.28	0.161	2.36	0.41	0.09	0.213	1.04	0.042	0.44	7.59	0.28	8.31	16894	6.5178	7.15122	-0.63342	NAF
NS0113	190	194	NS	BX081020-BX081021	X081020	2			69.68	3.479	0.182	0.019	0.01368	0.019	0.172	0.047	0.009	0.006	0.151	0.08	-0.01	-0.01	-0.01	-0.03	1834	0.1836	0.819774	-0.636174	NAF
NS0113	162	166	NS	BX081006-BX081007	X081006	2			70.42	2.567	0.173	0.015	0.0108	0.015	0.206	0.055	0.01	0.01	0.021	0.077	-0.01	-0.01	-0.01	-0.03	1827	0.306	0.95931	-0.65331	NAF
NS0113	182	186	NS	BX081016-BX081017	X081016	2			69.29	3.895	0.286	0.026	0.01872	0.026	0.195	0.059	0.011	0.012	0.159	0.081	-0.01	-0.01	-0.01	-0.03	1832	0.3672	1.029078	-0.661878	NAF
NS0113	292	296	NS	BX081072-BX081073	X081072	2			68.94	3.454	0.151	0.019	0.01368	0.019	0.202	0.052	0.009	0.008	0.057	0.075	-0.01	-0.01	-0.01	-0.03	1854	0.2448	0.906984	-0.662184	NAF
NS0113	142	146	NS	BX080996-BX080997	X080996	2			69.9	3.065	0.241	0.027	0.01944	0.027	0.19	0.061	0.012	0.012	0.08	0.08	-0.01	-0.01	-0.01	-0.03	1822	0.3672	1.063962	-0.696762	NAF
NS0113	256	260	NS	BX081054-BX081055	X081054	2			69.61	2.14	0.123	0.016	0.01152	0.016	0.177	0.061	0.011	0.012	0.004	0.09	-0.01	-0.01	-0.01	-0.03	1845	0.3672	1.063962	-0.696762	NAF
NS0113	288	292	NS	BX081070-BX081071	X081070	2			68.81	3.293	0.134	0.012	0.00864	0.012	0.183	0.051	0.009	0.005	0.077	0.087	-0.01	-0.01	-0.01	-0.03	1853	0.153	0.889542	-0.736542	NAF
NS0113	272	276	NS	BX081062-BX081063	X081062	2			69.13	3.211	0.216	0.021	0.01512	0.021	0.208	0.067	0.01	0.014	0.059	0.091	-0.01	-0.01	-0.01	-0.03	1849	0.4284	1.168614	-0.740214	NAF
NS0113	206	210	NS	BX081028-BX081029	X081028	2			69.42	3.541	0.265	0.024	0.01728	0.024	0.223	0.064	0.009	0.011	0.078	0.083	-0.01	-0.01	-0.01	-0.03	1838	0.3366	1.116288	-0.779688	NAF
NS0113	154	158	NS	BX081002-BX081003	X081002	2			70.28	2.926	0.204	0.022	0.01584	0.022	0.191	0.066	0.014	0.012	0.065	0.074	-0.01	-0.01	-0.01	-0.03	1825	0.3672	1.151172	-0.783972	NAF
NS0113	88	92	NS	BX080968-BX080969	X080968	2			65.17	7.373	0.434	0.062	0.04464	0.062	0.383	0.119	0.026	0.041	0.037	0.123	-0.01	-0.01	-0.01	-0.03	1807	1.2546	2.075598	-0.820998	NAF
NS0113	128	132	NS	BX080988-BX080989	X080988	2			69.97	2.868	0.14	0.019	0.01368	0.019	0.17	0.064	0.013	0.009	0.021	0.078	-0.01	-0.01	-0.01	-0.03	1817	0.2754	1.116288	-0.840888	NAF
NS0113	166	170	NS	BX081008-BX081009	X081008	2			68.41	3.259	0.195	0.013	0.00936	0.013	0.243	0.063	0.011	0.008	0.076	0.103	0.08	-0.01	-0.01	0.06	1828	0.2448	1.098846	-0.854046	NAF
NS0113	124	128	NS	BX080986-BX080987	X080986	2			70.15	2.972	0.163	0.019	0.01368	0.019	0.183	0.067	0.013	0.01	0.038	0.068	-0.01	-0.01	-0.01	-0.03	1816	0.306	1.168614	-0.862614	NAF
NS0113	224	226	NS	X074037	074037	1	G	W	25.32	39.79	3.13	0.5031	0.39	0.142	2.96	0.49	0.084	0.249	0.318	0.037	0.62	14.36	0.63	15.61	16930	7.6194	8.54658	-0.92718	NAF
NS0113	214	218	NS	BX081032-BX081033	X081032	2			67.78	4.404	0.428	0.073	0.05256	0.073	0.37	0.092	0.018	0.022	0.026	0.099	-0.01	-0.01	-0.01	-0.03	1840	0.6732	1.604664	-0.931464	NAF
NS0113	136	140	NS	BX080992-BX080993	X080992	2			69.71	3.445	0.24	0.027	0.01944	0.027	0.21	0.075	0.015	0.012	0.059	0.071	-0.01	-0.01	-0.01	-0.03	1819	0.3672	1.30815	-0.94095	NAF
NS0113	146	148	NS	BX080995	X080995	2			69.43	4.165	0.413	0.029	0.02088	0.029	0.198	0.072	0.014	0.01	0.081	0.077	-0.01	-0.01	-0.01	-0.03	1821	0.306	1.255824	-0.949824	NAF
NS0113	194	198	NS	BX081022-BX081023	X081022	2			69.43	3.859	0.232	0.02	0.0144	0.02	0.185	0.067	0.011	0.007	0.173	0.069	-0.01	-0.01	-0.01	-0.03	1835	0.2142	1.168614	-0.954414	NAF
NS0113	158	160	NS	X074004	074004	1	G	W	25.57	43.06	4.01	0.3741	0.29	0.178	2.71	0.49	0.1	0.248	0.43	0.011	0.39	10.81	0.4	11.6	16897	7.5888	8.54658	-0.95778	NAF
NS0113	148	152	NS	BX080998-BX080999	X080998	2			69.72	3.582	0.173	0.018	0.01296	0.018	0.199	0.069	0.015	0.008	0.026	0.077	-0.01	-0.01	-0.01	-0.03	1823	0.2448	1.203498	-0.958698	NAF
NS0113	276	280	NS	BX081064-BX081065	X081064	2			68.34	2.969	0.16	0.019	0.01368	0.019	0.192	0.068	0.011	0.007	0.072	0.075	-0.01	-0.01	-0.01	-0.03	1850	0.2142	1.186056	-0.971856	NAF
NS0113	108	112	NS	BX080978-BX080979	X080978	2			68.44	4.348	0.257	0.033	0.02376	0.033	0.271	0.096	0.021	0.022	0.031	0.09	-0.01	-0.01	-0.01	-0.03	1812	0.6732	1.674432	-1.001232	NAF
NS0113	248	250	NS	X074049	074049	1	G	W	23.6	44.47	3.13	0.3999	0.31	0.142	2.6	0.55	0.103	0.28	0.309	0.04	0.64	12.43	0.67	13.74	16852	8.568	9.5931	-1.0251	NAF
NS0113	134	136	NS	BX080991	X080991	2			69.69	2.926	0.099	0.01	0.0072	0.01	0.151	0.07	0.014	0.006	0.017	0.071	-0.01	-0.01	-0.01	-0.03	1818	0.1836	1.22094	-1.03734	NAF
NS0113	120	124	NS	BX080984-BX080985	X080984	2			70.27	2.503	0.196	0.027	0.01944	0.027	0.189	0.079	0.017	0.011	0.04	0.081	-0.01	-0.01	-0.01	-0.03	1815	0.3366	1.377918	-1.041318	NAF
NS0113	92	96	NS	BX080970-BX080971	X080970	2			66.47	5.845	0.336	0.038	0.02736	0.038	0.318	0.096	0.021	0.02	0.05	0.096	0.11	-0.01	-0.01	0.09	1808	0.612	1.674432	-1.062432	NAF
NS0113	100	104	NS	BX080974-BX080975	X080974	2			68.12	4.562	0.178	0.021	0.01512	0.021	0.254	0.084	0.019	0.013	0.023	0.075	-0.01	-0.01	-0.01	-0.03	1810	0.3978	1.465128	-1.067328	NAF
NS0113	270	272	NS	BX081061	X081061	2			68.59	2.646	0.211	0.023	0.01656	0.023	0.217	0.088	0.01	0.014	0.056	0.084	-0.01	-0.01	-0.01	-0.03	1848	0.4284	1.534896	-1.106496	NAF
NS0113	104	108	NS	BX080976-BX080977	X080976	2			69.86	3.227	0.143	0.024	0.01728	0.024	0.19	0.083	0.019	0.011	0.023	0.087	-0.01	-0.01	-0.01	-0.03	1811	0.3366	1.447686	-1.111086	NAF
NS0113	162	164	NS	X074006	074006	1	G	W	26.59	41.83	2.95	0.3354	0.26	0.14	2.52	0.42	0.074	0.199	0.116	0.005	0.59	12.2	0.37	13.16	16899	6.0894	7.32564	-1.23624	NAF
NS0113	280	284	NS	BX081066-BX081067	X081066	2			68.42	3.028	0.17	0.022	0.01584	0.022	0.204	0.088	0.01	0.008	0.076	0.075	-0.01	-0.01	-0.01	-0.03	1851	0.2448	1.534896	-1.290096	NAF
NS0113	96	100	NS	BX080972-BX080973	X080972	2			69.04	4.16	0.177	0.027	0.01944	0.027	0.225	0.101	0.024	0.013	0.025	0.08	-0.01	-0.01	-0.01	-0.03	1809	0.3978	1.761642	-1.363842	NAF
NS0113	112	116	NS	BX080980-BX080981	X080980	2			68.87	4.123	0.243	0.032	0.02304	0.032	0.254	0.124	0.03	0.02	0.024	0.079	-0.01	-0.01	-0.01	-0.03	1813	0.612	2.162808	-1.550808	NAF
NS0113	116	120	NS	BX080982-BX080983	X080982	2			69.91	2.697	0.185	0.028	0.02016	0.028	0.197	0.111	0.027	0.012	0.028	0.084	-0.01	-0.01	-0.01	-0.03	1814	0.3672	1.936062	-1.568862	NAF
NS0113	172	174	NS	X074011	074011	1	G	W	24.1	43.1	4.04	0.3225	0.25	0.205	2.53	0.52	0.101	0.244	0.149	0.01	0.64	12.56	0.61	13.81	16706	7.4664	9.06984	-1.60344	NAF
NS0113	72	74	NS	X073960	073960	1	G	W	23.58	48.56	4.09	0.3612	0.28	0.192	2.01	0.49	0.133	0.225	0.253	0.056	2.34	6.72	0.63	9.69	16746	6.885	8.54658	-1.66158	NAF
NS0113	62	64	NS	X073955	073955	1	G	D	12.14	74.05	3.33	0.3225	0.25	0.162	0.49	0.13	0.042	0.018	0.16	0.022	2.36	1.04	0.16	3.56	16741	0.5508	2.26746	-1.71666	NAF
NS0113	254	256	NS	X074053	074053	1	G	W	23.39	44.16	3.54	0.4644	0.36	0.164	2.37	0.56	0.114	0.258	0.142	0.02	0.61	12.9	0.7	14.21	16855	7.8948	9.76752	-1.87272	NAF
NS0113	198	200	NS	X074024	074024	1	G	W	24.73	48.06	2.06	0.4515	0.35	0.099	1.75	0.33	0.045	0.116	1.13	0.017	0.41	9.95	0.1	10.46	16719	3.5496	5.75586	-2.20626	NAF
NS0113	60	62	NS	X073954	073954	1	G	D	15.63	68.38	3.32	0.2451	0.19	0.152	0.59	0.15	0.062	0.013	0.201	0.02	2.99	1.15	0.18	4.32	16992	0.3978	2.6163	-2.2185	NAF
NS0113	192	194	NS	X074021	074021	1	G	W	31.46	37.68	2.65	0.4773	0.37	0.126	2.09	0.53	0.077	0.227	2	0.013	0.27	8.45	0.26	8.98	16716	6.9462	9.24426	-2.29806	NAF
NS0113	58	60	NS	X073953	073953	1	G	D	21.45	56.77	4.27	0.4515	0.35	0.204	0.78	0.15	0.043	0.01	0.281	0.031	4.35	1.9	0.33	6.58	16991	0.306	2.6163	-2.3103	NAF
NS0113	70	72	NS	X073959	073959	1	G	W	32.16	40.23	3.79	0.5676	0.44	0.182	0.63	0.16	0.13	0.009	0.185	0.019	5.82	1.52	0.25	7.59	16745	0.2754	2.79072	-2.51532	NAF
NS0113	170	172	NS	X074010	074010	1	G	W	26.78	38.1	3.45	0.3741	0.29	0.179	2.73	0.6	0.117	0.255	0.125	0.01	0.6	14.5	0.61	15.71	16705	7.803	10.4652	-2.6622	NAF
NS0113	88	90	NS	X073968	073968	1	G	W	26.82	41.69	3.39	0.3225	0.25	0.164	2.55	0.51	0.118	0.192	0.377	0.052	1.05	10.08	0.46	11.59	16754	5.8752	8.89542	-3.02022	NAF
NS0113	52	54	NS	X073949	073949	1	G	D	21.45	51.42	8.45	0.3741	0.29	0.412	1.13	0.19	0.031	0.008	0.328	0.038	3.74	2.69	0.34	6.77	16988	0.2448	3.31398	-3.06918	NAF
NS0113	250	252	NS	X074050	074050	1	G	W	23.9	43.64	3.23	0.3999	0.31	0.147	2.68	0.57	0.11	0.218	0.147	0.028	0.65	13.31	0.53	14.49	16853	6.6708	9.94194	-3.27114	NAF
NS0113	50	52	NS	X073948	073948	1	G	D	21.62	50.85	8.1	0.4257	0.33	0.389	1.41	0.2	0.04	0.007	0.54	0.034	3.66	2.61	0.34	6.61	16987	0.2142	3.4884	-3.2742	NAF
NS0113	100	102	NS	X073974	073974	1	G	W	29.43	43.47	3.12	0.3999	0.31	0.139	1.79	0.37	0.081	0.1	0.31	0.063	1.76	5.87	0.04	7.67	16814	3.06	6.45354	-3.39354	NAF
NS0113	146	148	NS	X073997	073997	1	G	W	31.61	40.3	2.78	0.387	0.3	0.13	1.97	0.46	0.109	0.151	1.08	0.067	0.49	6.11	0.1	6.7	16891	4.6206	8.02332	-3.40272	NAF
NS0113	256	258	NS	X074054	074054	1	G	W	24.07	43.12	3.22	0.4644	0.36	0.144	2.5	0.53	0.097	0.19	0.178	0.031	0.62	13.57	0.51	14.7	16856	5.814	9.24426	-3.43026	NAF
NS0113	90	92	NS	X073969	073969	1	G	W	26.82	44.13	3.5	0.2838	0.22	0.166	2.53	0.51	0.106	0.176	0.551	0.068	0.95	7.89	0.39	9.23	16755	5.3856	8.89542	-3.50982	NAF
NS0113	132	134	NS	X073990	073990	1	G	W	29.48	40.96	3	0.2967	0.23	0.139	2.13	0.62	0.14	0.23	0.705	0.077	0.6	7.91	0.41	8.92	16830	7.038	10.81404	-3.77604	NAF
NS0113	130	132	NS	X073989	073989	1	G	W	30.55	41.67	2.74	0.3354	0.26	0.126	2.01	0.65	0.112	0.237	0.551	0.083	0.65	6.58	0.38	7.61	16829	7.2522	11.3373	-4.0851	NAF
NS0113	178	180	NS	X074014	074014	1	G	W	26.43	40.17	3.27	0.3483	0.27	0.152	2.37	0.55	0.106	0.177	0.696	0.015	0.69	12.92	0.36	13.97	16709	5.4162	9.5931	-4.1769	NAF
NS0113	180	182	NS	X074015	074015	1	G	W	29.11	39.14	3.33	0.3354	0.26	0.158	2.39	0.5	0.108	0.147	1.49	0.009	0.53	9.67	0.13	10.33	16710	4.4982	8.721	-4.2228	NAF
NS0113	164	166	NS	X074007	074007	1	G	W	31.03	36.83	2.34	0.3612	0.28	0.162	2.31	0.47	0.089	0.129	0.435	0.012	0.5	11.68	0.05	12.23	16900	3.9474	8.19774	-4.25034	NAF
NS0113	106	108	NS	X073977	073977	1	G	W	27.53	44.38	3.19	0.3225	0.25	0.147	2.44	0.6	0.156	0.203	0.675	0.118	0.93	6.44	0.4	7.77	16817	6.2118	10.4652	-4.2534	NAF
NS0113	186	188	NS	X074018	074018	1	G	W	29.69	39.66	2.21	0.4257	0.33	0.101	1.75	0.42	0.071	0.1	1.33	0.009	0.51	10.52	-0.01	11.02	16713	3.06	7.32564	-4.26564	NAF
NS0113	56	58	NS	X073952	073952	1	G	D	24.91	47.32	6.31	0.6579	0.51	0.3	1.45	0.26	0.082	0.007	0.533	0.029	4.74	2.12	0.37	7.23	16990	0.2142	4.53492	-4.32072	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0113	260	262	NS	X074056	074056	1	G	W	30.31	35.91	1.86	0.5031	0.39	0.083	2.08	0.55	0.112	0.172	0.003	0.0005	0.63	14.36	0.28	15.27	16858	5.2632	9.5931	-4.3299	NAF
NS0113	270	272	NS	X074061	074061	1	G	W	31.49	38.33	2.31	0.5031	0.39	0.11	1.82	0.45	0.068	0.111	0.624	0.004	0.41	9.87	-0.04	10.24	16863	3.3966	7.8489	-4.4523	NAF
NS0113	258	260	NS	X074055	074055	1	G	W	31.17	40.67	1.19	0.4773	0.37	0.055	1.5	0.38	0.073	0.069	0.003	0.0005	0.49	10.5	-0.18	10.81	16857	2.1114	6.62796	-4.51656	NAF
NS0113	94	96	NS	X073971	073971	1	G	W	25.87	48.75	4.67	0.2967	0.23	0.209	1.27	0.41	0.096	0.085	0.273	0.057	2.5	4.13	0.19	6.82	16757	2.601	7.15122	-4.55022	NAF
NS0113	294	296	NS	X074073	074073	1	G	W	31.69	40.31	1.8	0.5031	0.39	0.081	2.02	0.37	0.076	0.06	0.678	0.004	0.22	8.41	-0.14	8.49	16965	1.836	6.45354	-4.61754	NAF
NS0113	54	56	NS	X073950	073950	1	G	D	19.23	53.49	8.6	0.2709	0.21	0.416	1.9	0.29	0.045	0.006	0.492	0.039	3.53	2.73	0.37	6.63	16989	0.1836	5.05818	-4.87458	NAF
NS0113	184	186	NS	X074017	074017	1	G	W	29.33	39.72	2.66	0.4515	0.35	0.124	1.97	0.55	0.122	0.147	1.24	0.013	0.35	10.08	0.1	10.53	16712	4.4982	9.5931	-5.0949	NAF
NS0113	292	294	NS	X074072	074072	1	G	W	32.12	38.61	1.96	0.5031	0.39	0.091	2.2	0.51	0.114	0.116	0.647	0.002	0.24	8.79	0.05	9.08	16964	3.5496	8.89542	-5.34582	NAF
NS0113	154	156	NS	X074002	074002	1	G	W	32.11	40.18	2.41	0.4257	0.33	0.115	1.91	0.54	0.129	0.128	0.759	0.031	0.31	7	-0.03	7.28	16895	3.9168	9.41868	-5.50188	NAF
NS0113	290	292	NS	X074071	074071	1	G	W	35.44	38.21	1.46	0.5031	0.39	0.07	1.54	0.41	0.078	0.051	0.641	0.01	0.15	6.01	-0.26	5.9	16963	1.5606	7.15122	-5.59062	NAF
NS0113	216	218	NS	X074033	074033	1	G	W	25.32	39.88	4.9	0.3741	0.29	0.227	3.26	0.97	0.256	0.367	0.219	0.022	0.6	11.48	0.71	12.79	16926	11.2302	16.91874	-5.68854	NAF
NS0113	266	268	NS	X074059	074059	1	G	W	25.92	40.14	2.82	0.4902	0.38	0.132	2.33	0.7	0.154	0.208	0.013	0.0005	0.66	14.06	0.49	15.21	16861	6.3648	12.2094	-5.8446	NAF
NS0113	156	158	NS	X074003	074003	1	G	W	31.95	38.07	2.56	0.3741	0.29	0.121	2.26	0.55	0.135	0.122	0.783	0.035	0.38	8.42	-0.03	8.77	16896	3.7332	9.5931	-5.8599	NAF
NS0113	252	254	NS	X074052	074052	1	G	W	23.38	44.67	2.33	0.3999	0.31	0.104	2.4	0.61	0.13	0.152	0.038	0.005	0.59	14.25	0.4	15.24	16854	4.6512	10.63962	-5.98842	NAF
NS0113	206	208	NS	X074028	074028	1	G	W	34.24	36.88	1.82	0.4386	0.34	0.085	1.88	0.44	0.058	0.054	0.531	0.015	0.35	8.5	-0.34	8.51	16921	1.6524	7.67448	-6.02208	NAF
NS0113	298	300	NS	X074075	074075	1	G	W	31.48	42.75	1.5	0.3612	0.28	0.075	1.88	0.48	0.114	0.076	0.286	0.004	0.2	6.98	-0.06	7.12	16967	2.3256	8.37216	-6.04656	NAF
NS0113	134	136	NS	X073991	073991	1	G	W	32.51	42.68	1.51	0.3612	0.28	0.069	1.38	0.51	0.094	0.089	0.356	0.051	0.42	5.89	-0.31	6	16885	2.7234	8.89542	-6.17202	NAF
NS0113	68	70	NS	X073958	073958	1	G	W	25.18	48.37	4.01	0.3096	0.24	0.192	1.56	0.44	0.096	0.048	0.154	0.041	4.22	3.73	0.33	8.28	16744	1.4688	7.67448	-6.20568	NAF
NS0113	92	94	NS	X073970	073970	1	G	W	27.74	44.25	3.31	0.3483	0.27	0.156	2.48	0.62	0.129	0.149	0.672	0.102	0.99	6.72	0.25	7.96	16756	4.5594	10.81404	-6.25464	NAF
NS0113	124	126	NS	X073986	073986	1	G	W	31.58	41.57	2.41	0.4386	0.34	0.114	1.86	0.59	0.072	0.131	0.799	0.067	0.49	5.85	0.03	6.37	16826	4.0086	10.29078	-6.28218	NAF
NS0113	102	104	NS	X073975	073975	1	G	W	31.97	45.71	1.56	0.2838	0.22	0.072	1.39	0.49	0.127	0.072	0.322	0.064	0.42	4.09	-0.21	4.3	16815	2.2032	8.54658	-6.34338	NAF
NS0113	240	242	NS	X074045	074045	1	G	W	26.86	39.24	3.22	0.3741	0.29	0.147	2.48	0.7	0.16	0.189	0.049	0.011	0.49	13.68	0.39	14.56	16938	5.7834	12.2094	-6.426	NAF
NS0113	136	138	NS	X073992	073992	1	G	W	29.57	41.43	3.47	0.3096	0.24	0.167	2.33	0.75	0.106	0.215	1.12	0.089	0.64	6.44	0.35	7.43	16886	6.579	13.0815	-6.5025	NAF
NS0113	114	116	NS	X073981	073981	1	G	W	32.05	37.52	1.71	0.387	0.3	0.076	1.83	0.62	0.15	0.137	0.34	0.064	1.4	9.66	0.06	11.12	16821	4.1922	10.81404	-6.62184	NAF
NS0113	166	168	NS	X074008	074008	1	G	W	29.98	36.9	2.19	0.3741	0.29	0.106	2.17	0.54	0.109	0.09	1.08	0.022	0.47	12.56	0	13.03	16901	2.754	9.41868	-6.66468	NAF
NS0113	182	184	NS	X074016	074016	1	G	W	31.66	37.95	2.88	0.3741	0.29	0.135	2.03	0.63	0.108	0.14	1.63	0.016	0.23	8.23	-0.03	8.43	16711	4.284	10.98846	-6.70446	NAF
NS0113	138	140	NS	X073993	073993	1	G	W	33.37	38.52	2.21	0.4515	0.35	0.105	1.78	0.62	0.136	0.133	0.49	0.059	0.5	7.25	0.03	7.78	16887	4.0698	10.81404	-6.74424	NAF
NS0113	280	282	NS	X074066	074066	1	G	W	34.2	37.16	1.66	0.6063	0.47	0.08	1.87	0.48	0.106	0.049	0.813	0.013	0.22	8.21	-0.25	8.18	16958	1.4994	8.37216	-6.87276	NAF
NS0113	150	152	NS	X073999	073999	1	G	W	35.24	37.86	1.29	0.516	0.4	0.062	1.43	0.49	0.114	0.051	0.23	0.024	0.23	7.17	-0.35	7.05	16893	1.5606	8.54658	-6.98598	NAF
NS0113	288	290	NS	X074070	074070	1	G	W	33.44	38.47	1.52	0.6192	0.48	0.068	1.81	0.49	0.105	0.05	0.85	0.007	0.22	7.96	-0.26	7.92	16962	1.53	8.54658	-7.01658	NAF
NS0113	282	284	NS	X074067	074067	1	G	W	31.09	39.78	2.17	0.5934	0.46	0.1	2.06	0.62	0.129	0.124	0.96	0.008	0.23	8.46	0.01	8.7	16959	3.7944	10.81404	-7.01964	NAF
NS0113	120	122	NS	X073984	073984	1	G	W	28.45	44.07	3.38	0.2838	0.22	0.158	2.21	0.84	0.136	0.246	0.795	0.082	0.84	5.62	0.45	6.91	16824	7.5276	14.65128	-7.12368	NAF
NS0113	168	170	NS	X074009	074009	1	G	W	29.31	35.43	2.6	0.3612	0.28	0.127	2.43	0.68	0.14	0.153	0.58	0.004	0.57	14.07	0.25	14.89	16902	4.6818	11.86056	-7.17876	NAF
NS0113	190	192	NS	X074020	074020	1	G	W	33.89	37.31	1.3	0.5934	0.46	0.06	1.71	0.47	0.097	0.028	1.06	0.009	0.25	8.57	-0.33	8.49	16715	0.8568	8.19774	-7.34094	NAF
NS0113	278	280	NS	X074065	074065	1	G	W	32.13	38.44	1.5	0.645	0.5	0.074	1.98	0.52	0.105	0.046	0.75	0.006	0.26	9.41	-0.23	9.44	16957	1.4076	9.06984	-7.66224	NAF
NS0113	104	106	NS	X073976	073976	1	G	W	31.91	43.94	1.64	0.3096	0.24	0.076	1.4	0.55	0.141	0.062	0.383	0.076	0.57	5.1	-0.21	5.46	16816	1.8972	9.5931	-7.6959	NAF
NS0113	284	286	NS	X074068	074068	1	G	W	28.89	40.98	2.54	0.5031	0.39	0.118	2.2	0.74	0.148	0.169	1.61	0.015	0.2	8.75	0.15	9.1	16960	5.1714	12.90708	-7.73568	NAF
NS0113	268	270	NS	X074060	074060	1	G	W	29.99	36.36	2.14	0.516	0.4	0.096	2.13	0.65	0.122	0.116	0.213	0.01	0.81	13.33	0.15	14.29	16862	3.5496	11.3373	-7.7877	NAF
NS0113	276	278	NS	X074064	074064	1	G	W	33.28	39.04	1.8	0.6321	0.49	0.082	1.71	0.56	0.109	0.057	0.693	0.004	0.18	7.54	-0.29	7.43	16866	1.7442	9.76752	-8.02332	NAF
NS0113	262	264	NS	X074057	074057	1	G	W	23.67	42.84	4.07	0.4128	0.32	0.186	2.54	0.88	0.22	0.237	0.014	0.002	0.63	12.79	0.58	14	16859	7.2522	15.34896	-8.09676	NAF
NS0113	144	146	NS	X073996	073996	1	G	W	30.99	40.88	2.96	0.3741	0.29	0.144	2.02	0.76	0.104	0.166	1.15	0.076	0.5	5.7	0.15	6.35	16890	5.0796	13.25592	-8.17632	NAF
NS0113	208	210	NS	X074029	074029	1	G	W	28.49	40.62	3.29	0.387	0.3	0.158	2.38	1.01	0.11	0.306	0.794	0.026	0.38	8.36	0.59	9.33	16922	9.3636	17.61642	-8.25282	NAF
NS0113	96	98	NS	X073972	073972	1	G	W	31.9	44	1.97	0.3354	0.26	0.091	1.57	0.63	0.176	0.088	0.39	0.072	0.59	4.2	-0.15	4.64	16758	2.6928	10.98846	-8.29566	NAF
NS0113	98	100	NS	X073973	073973	1	G	W	31.38	42.79	2.2	0.3612	0.28	0.104	1.78	0.72	0.198	0.134	0.383	0.065	0.58	5.16	-0.02	5.72	16813	4.1004	12.55824	-8.45784	NAF
NS0113	286	288	NS	X074069	074069	1	G	W	31.26	36.73	1.95	0.5676	0.44	0.085	2.16	0.56	0.128	0.04	1.46	0.01	0.31	11.01	-0.14	11.18	16961	1.224	9.76752	-8.54352	NAF
NS0113	122	124	NS	X073985	073985	1	G	W	31.26	40.72	2.89	0.2967	0.23	0.138	2.12	0.79	0.129	0.152	0.935	0.089	0.66	5.66	0.16	6.48	16825	4.6512	13.77918	-9.12798	NAF
NS0113	126	128	NS	X073987	073987	1	G	W	33.88	39.96	1.89	0.3483	0.27	0.089	1.56	0.79	0.073	0.117	0.47	0.059	0.36	5.22	0.02	5.6	16827	3.5802	13.77918	-10.19898	NAF
NS0113	196	198	NS	X074023	074023	1	G	W	32.35	37.34	1.63	0.5547	0.43	0.075	1.75	0.72	0.123	0.058	1.03	0.013	0.33	10	-0.21	10.12	16718	1.7748	12.55824	-10.78344	NAF
NS0113	194	196	NS	X074022	074022	1	G	W	33.3	37.17	1.83	0.516	0.4	0.087	1.89	0.74	0.089	0.068	1.4	0.011	0.21	8.29	-0.13	8.37	16717	2.0808	12.90708	-10.82628	NAF
NS0113	188	190	NS	X074019	074019	1	G	W	29.89	37.92	2.37	0.4128	0.32	0.109	2.06	0.69	0.123	0.039	1.41	0.015	0.43	11.48	-0.13	11.78	16714	1.1934	12.03498	-10.84158	NAF
NS0113	274	276	NS	X074063	074063	1	G	W	31.74	40.56	2.2	0.516	0.4	0.104	1.82	0.9	0.134	0.109	0.543	0.014	0.22	7.01	-0.05	7.18	16865	3.3354	15.6978	-12.3624	NAF
NS0113	272	274	NS	X074062	074062	1	G	W	31.4	39.82	2.81	0.4644	0.36	0.132	1.96	1.03	0.158	0.139	0.611	0.007	0.3	7.28	0.08	7.66	16864	4.2534	17.96526	-13.71186	NAF
NS0113	204	206	NS	X074027	074027	1	G	W	29.9	36.37	3.32	0.3612	0.28	0.154	2.39	1.11	0.119	0.101	1.67	0.053	0.52	10.2	0.23	10.95	16722	3.0906	19.36062	-16.27002	NAF
NS0115	88	90	NS	X074194	074194	1	G	W	18.81	48.93	9.44	0.2193	0.17	0.388	2.55	0.12	0.026	3.03	2.08	0.031	0.3	5.28	3.01	8.59	17012	92.718	2.09304	90.62496	PAF(HC)
NS0115	210	212	NS	X074257	074257	1	G	W	23.5	44.83	6.53	0.3096	0.24	0.283	2.84	0.31	0.054	0.874	0.045	0.039	0.47	9.23	1.44	11.14	17073	26.7444	5.40702	21.33738	PAF(HC)
NS0115	86	88	NS	X074193	074193	1	G	W	30.9	38.13	2.57	0.774	0.6	0.106	2.02	0.4	0.081	0.378	0.389	0.012	0.43	9.52	0.8	10.75	17011	11.5668	6.9768	4.59	PAF(LC)
NS0115	92	94	NS	X074196	074196	1	G	W	25.7	42.66	3.06	0.7353	0.57	0.13	2.78	0.35	0.056	0.325	0.111	0.019	0.59	11.65	0.78	13.02	17014	9.945	6.1047	3.8403	PAF(LC)
NS0115	84	86	NS	X074192	074192	1	G	W	34.5	39.45	1.59	0.7224	0.56	0.071	1.47	0.32	0.084	0.283	0.212	0.014	0.38	5.81	0.54	6.73	17010	8.6598	5.58144	3.07836	PAF(LC)
NS0115	36	38	NS	X074168	074168	1	G	W	39.48	38.63	1.5	0.0258	0.02	0.065	0.1	0.005	0.086	0.059	0.354	0.023	2	0.31	0.2	2.51	16788	1.8054	0.08721	1.71819	PAF(LC)
NS0115	0	2	NS	X074149	074149	1	G	D	38.91	39.17	1.42	0.0258	0.02	0.074	0.1	0.03	0.058	0.068	0.166	0.012	2.15	0.48	0.23	2.86	16968	2.0808	0.52326	1.55754	PAF(LC)
NS0115	18	20	NS	X074159	074159	1	G	W	38.48	41.26	1.19	0.0258	0.02	0.06	0.09	0.005	0.043	0.05	0.262	0.017	1.38	0.31	0.18	1.87	16779	1.53	0.08721	1.44279	PAF(LC)
NS0115	26	28	NS	X074163	074163	1	G	W	37.88	40.44	1.72	0.0258	0.02	0.08	0.09	0.005	0.113	0.04	0.344	0.008	2.08	0.42	0.2	2.7	16783	1.224	0.08721	1.13679	PAF(LC)
NS0115	104	106	NS	X074203	074203	1	G	W	31.04	43.11	1.46	0.5934	0.46	0.063	1.52	0.37	0.086	0.237	0.071	0.014	0.42	6.82	0.51	7.75	17020	7.2522	6.45354	0.79866	PAF(LC)
NS0115	22	24	NS	X074161	074161	1	G	W	39.25	40.15	1.32	0.0258	0.02	0.061	0.06	0.005	0.05	0.024	0.308	0.013	1.43	0.35	0.14	1.92	16781	0.7344	0.08721	0.64719	PAF(LC)
NS0115	28	30	NS	X074164	074164	1	G	W	34.63	44.09	2.65	0.0258	0.02	0.119	0.09	0.005	0.091	0.019	0.546	0.015	1.67	0.58	0.18	2.43	16784	0.5814	0.08721	0.49419	PAF(LC)
NS0115	2	4	NS	X074150	074150	1	G	D	39.08	40.35	0.96	0.0258	0.02	0.046	0.05	0.01	0.095	0.016	0.18	0.013	1.7	0.31	0.1	2.11	16969	0.4896	0.17442	0.31518	PAF(LC)
NS0115	4	6	NS	X074152	074152	1	G	W	40.81	37.77	1.18	0.0258	0.02	0.052	0.06	0.01	0.091	0.012	0.237	0.023	1.61	0.38	0.09	2.08	16970	0.3672	0.17442	0.19278	PAF(LC)
NS0115	8	10	NS	X074154	074154	1	G	W	42.71	32.77	1.16	0.0645	0.05	0.043	0.04	0.01	0.072	0.011	0.116	0.016	3.75	0.58	0.11	4.44	16972	0.3366	0.17442	0.16218	PAF(LC)
NS0115	56	58	NS	X074178	074178	1	G	W	35.93	42.87	2.06	0.5934	0.46	0.085	0.21	0.03	0.093	0.022	0.311	0.017	1.16	0.64	0.15	1.95	16996	0.6732	0.52326	0.14994	PAF(LC)
NS0115	6	8	NS	X074153	074153	1	G	W	41.75	35.73	0.94	0.0516	0.04	0.048	0.04	0.005	0.066	0.007	0.176	0.021	2.54	0.41	0.08	3.03	16971	0.2142	0.08721	0.12699	PAF(LC)
NS0115	48	50	NS	X074174	074174	1	G	W	33.07	46.7	2.78	0.3741	0.29	0.116	0.1	0.01	0.066	0.009	0.42	0.018	0.89	0.72	0.16	1.77	16794	0.2754	0.17442	0.10098	PAF(LC)
NS0115	16	18	NS	X074158	074158	1	G	W	41.02	35.42	1.02	0.0645	0.05	0.041	0.04	0.005	0.118	0.006	0.185	0.011	3.45	0.5	0.12	4.07	16778	0.1836	0.08721	0.09639	PAF(LC)
NS0115	24	26	NS	X074162	074162	1	G	W	39.49	39.44	1.26	0.0258	0.02	0.055	0.05	0.005	0.064	0.006	0.295	0.011	1.7	0.36	0.12	2.18	16782	0.1836	0.08721	0.09639	PAF(LC)
NS0115	32	34	NS	X074166	074166	1	G	W	36.46	43.3	1.39	0.0258	0.02	0.06	0.06	0.005	0.093	0.006	0.293	0.011	1.83	0.38	0.1	2.31	16786	0.1836	0.08721	0.09639	PAF(LC)
NS0115	14	16	NS	X074157	074157	1	G	W	40.65	37.31	1.29	0.0258	0.02	0.053	0.05	0.005	0.071	0.005	0.277	0.018	2.06	0.42	0.09	2.57	16777	0.153	0.08721	0.06579	PAF(LC)
NS0115	20	22	NS	X074160	074160	1	G	W	38.79	40.42	1.23	0.0258	0.02	0.057	0.05	0.005	0.045	0.005	0.292	0.014	1.43	0.36	0.11	1.9	16780	0.153	0.08721	0.06579	PAF(LC)
NS0115	30	32	NS	X074165	074165	1	G	W	36.02	43.18	2.09	0.0258	0.02	0.094	0.07	0.005	0.075	0.005	0.406	0.01	1.44	0.5	0.11	2.05	16785	0.153	0.08721	0.06579	PAF(LC)
NS0115	34	36	NS	X074167	074167	1	G	W	38.33	40.66	1.57	0.0258	0.02	0.065	0.07	0.005	0.081	0.005	0.353	0.017	1.76	0.39	0.11	2.26	16787	0.153	0.08721	0.06579	PAF(LC)
NS0115	38	40	NS	X074169	074169	1	G	W	39.49	38.52	1.47	0.0258	0.02	0.056	0.06	0.005	0.097	0.005	0.339	0.012	2.14	0.4	0.1	2.64	16789	0.153	0.08721	0.06579	PAF(LC)
NS0115	40	42	NS	X074170	074170	1	G	W	39.42	39.03	1.34	0.0258	0.02	0.057	0.06	0.005	0.099	0.005	0.347	0.005	2.05	0.36	0.11	2.52	16790	0.153	0.08721	0.06579	PAF(LC)
NS0115	50	52	NS	X074175	074175	1	G	W	33.39	45.76	2.94	0.5805	0.45	0.125	0.15	0.02	0.108	0.013	0.351	0.023	1.08	0.87	0.21	2.16	16993	0.3978	0.34884	0.04896	PAF(LC)
NS0115	62	64	NS	X074181	074181	1	G	W	37.3	42.77	1.36	0.516	0.4	0.058	0.07	0.01	0.066	0.007	0.199	0.015	0.81	0.45	0.13	1.39	16999	0.2142	0.17442	0.03978	PAF(LC)
NS0115	42	44	NS	X074171	074171	1	G	W	38.59	40.34	1.13	0.0516	0.04	0.049	0.06	0.005	0.094	0.003	0.342	0.011	1.9	0.3	0.1	2.3	16791	0.0918	0.08721	0.00459	PAF(LC)
NS0115	44	46	NS	X074172	074172	1	G	W	34.81	46.56	1.3	0.0258	0.02	0.056	0.06	0.005	0.079	0.003	0.371	0.019	1.33	0.31	0.13	1.77	16792	0.0918	0.08721	0.00459	PAF(LC)
NS0115	46	48	NS	X074173	074173	1	G	W	32.19	50.29	1.85	0.0258	0.02	0.086	0.07	0.005	0.05	0.003	0.368	0.013	0.55	0.39	0.11	1.05	16793	0.0918	0.08721	0.00459	PAF(LC)
NS0115	64	66	NS	X074182	074182	1	G	W	36.35	44.41	1.5	0.3354	0.26	0.063	0.09	0.02	0.048	0.011	0.215	0.015	0.77	0.47	0.15	1.39	17000	0.3366	0.34884	-0.01224	NAF
NS0115	172	176	NS	BX081237-BX081238	X081237	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1885	-0.0306	-0.01744	-0.013158	NAF
NS0115	10	12	NS	X074155	074155	1	G	W	43.34	33.63	1.2	0.0387	0.03	0.05	0.05	0.02	0.064	0.009	0.166	0.024	2.38	0.47	0.11	2.96	16973	0.2754	0.34884	-0.07344	NAF
NS0115	60	62	NS	X074180	074180	1	G	W	29.25	51.69	1.96	1.5738	1.22	0.081	0.1	0.02	0.072	0.007	0.191	0.025	1.04	0.71	0.24	1.99	16998	0.2142	0.34884	-0.13464	NAF
NS0115	66	68	NS	X074183	074183	1	G	W	37.28	42.9	1.15	0.5805	0.45	0.051	0.06	0.02	0.065	0.007	0.149	0.018	0.7	0.43	0.15	1.28	17001	0.2142	0.34884	-0.13464	NAF
NS0115	68	70	NS	X074184	074184	1	G	W	37.99	42.66	1.02	0.1935	0.15	0.045	0.15	0.02	0.086	0.007	0.131	0.017	0.66	0.37	0.1	1.13	17002	0.2142	0.34884	-0.13464	NAF
NS0115	70	72	NS	X074185	074185	1	G	W	38.99	41.53	0.96	0.0903	0.07	0.047	0.13	0.02	0.092	0.007	0.119	0.014	0.6	0.32	0.11	1.03	17003	0.2142	0.34884	-0.13464	NAF
NS0115	52	54	NS	X074176	074176	1	G	W	33.22	42.42	3.97	1.419	1.1	0.17	0.32	0.03	0.133	0.012	0.478	0.023	1.71	1.21	0.28	3.2	16994	0.3672	0.52326	-0.15606	NAF
NS0115	72	74	NS	X074186	074186	1	G	W	35.74	45.27	0.95	0.2322	0.18	0.042	0.11	0.02	0.075	0.006	0.132	0.015	1.09	0.36	0.1	1.55	17004	0.1836	0.34884	-0.16524	NAF
NS0115	12	14	NS	X074156	074156	1	G	W	41.11	36.62	1.21	0.0258	0.02	0.06	0.07	0.02	0.082	0.005	0.283	0.017	2.44	0.41	0.09	2.94	16974	0.153	0.34884	-0.19584	NAF
NS0115	54	56	NS	X074177	074177	1	G	W	35.16	43.61	2.49	0.7353	0.57	0.106	0.19	0.03	0.101	0.01	0.313	0.017	1.1	0.78	0.18	2.06	16995	0.306	0.52326	-0.21726	NAF
NS0115	172	174	NS	X074237	074237	1	G	W	26.14	54.21	1.26	0.2193	0.17	0.053	0.61	0.1	0.078	0.048	0.027	0.017	1.98	3.44	0.22	5.64	17054	1.4688	1.7442	-0.2754	NAF
NS0115	62	66	NS	BX081181-BX081182	X081181	2			63.96	6.576	0.222	0.075	0.054	0.008	0.086	0.026	0.045	0.005	0.017	0.09	-0.01	-0.01	-0.01	-0.03	1857	0.153	0.453492	-0.300492	NAF
NS0115	58	60	NS	X074179	074179	1	G	W	29.48	49.12	3.16	1.0578	0.82	0.14	0.37	0.03	0.106	0.007	0.436	0.033	1.79	0.97	0.22	2.98	16997	0.2142	0.52326	-0.30906	NAF
NS0115	58	62	NS	BX081179-BX081180	X081179	2			64.3	5.71	0.301	0.12	0.0864	0.022	0.106	0.029	0.052	0.006	0.021	0.082	-0.01	-0.01	-0.01	-0.03	1856	0.1836	0.505818	-0.322218	NAF
NS0115	66	70	NS	BX081183-BX081184	X081183	2			65.53	4.369	0.186	0.072	0.05184	0.006	0.087	0.03	0.059	0.004	0.008	0.08	-0.01	-0.01	-0.01	-0.03	1858	0.1224	0.52326	-0.40086	NAF
NS0115	70	74	NS	BX081185-BX081186	X081185	2			64.1	4.382	0.169	0.042	0.03024	0.001	0.063	0.033	0.048	0.005	0.005	0.127	-0.01	-0.01	-0.01	-0.03	1859	0.153	0.575586	-0.422586	NAF
NS0115	108	110	NS	X074205	074205	1	G	W	32.06	39.83	1.96	0.6321	0.49	0.088	1.99	0.49	0.131	0.264	0.133	0.013	0.37	7.26	0.62	8.25	17022	8.0784	8.54658	-0.46818	NAF
NS0115	236	240	NS	BX081270-BX081271	X081270	2			71.17	1.643	0.06	0.029	0.02088	0.011	0.133	0.037	0.005	0.005	0.006	0.107	-0.01	-0.01	-0.01	-0.03	1902	0.153	0.645354	-0.492354	NAF
NS0115	86	90	NS	BX081193-BX081194	X081193	2			66.66	5.518	0.204	0.086	0.06192	0.01	0.233	0.055	0.01	0.015	0.031	0.067	-0.01	-0.01	-0.01	-0.03	1863	0.459	0.95931	-0.50031	NAF
NS0115	256	260	NS	BX081280-BX081281	X081280	2			71.48	1.162	0.065	0.038	0.02736	0.008	0.163	0.041	0.007	0.004	0.009	0.063	-0.01	-0.01	-0.01	-0.03	1907	0.1224	0.715122	-0.592722	NAF
NS0115	232	236	NS	BX081268-BX081269	X081268	2			71.41	1.961	0.112	0.034	0.02448	0.015	0.148	0.045	0.007	0.006	0.007	0.069	-0.01	-0.01	-0.01	-0.03	1901	0.1836	0.78489	-0.60129	NAF
NS0115	74	76	NS	X074187	074187	1	G	W	35.83	43.05	0.87	0.3999	0.31	0.036	0.54	0.06	0.051	0.014	0.119	0.01	0.58	2.54	0.05	3.17	17005	0.4284	1.04652	-0.61812	NAF
NS0115	224	228	NS	BX081264-BX081265	X081264	2			70.74	1.918	0.035	0.032	0.02304	0.008	0.111	0.039	0.006	0.002	0.006	0.056	-0.01	-0.01	-0.01	-0.03	1899	0.0612	0.680238	-0.619038	NAF
NS0115	252	256	NS	BX081278-BX081279	X081278	2			70.73	2.721	0.083	0.046	0.03312	0.009	0.19	0.044	0.007	0.004	0.011	0.061	-0.01	-0.01	-0.01	-0.03	1906	0.1224	0.767448	-0.645048	NAF
NS0115	84	86	NS	BX081192	X081192	2			67.76	5.698	0.14	0.098	0.07056	0.009	0.223	0.055	0.011	0.01	0.017	0.061	-0.01	-0.01	-0.01	-0.03	1862	0.306	0.95931	-0.65331	NAF
NS0115	244	248	NS	BX081274-BX081275	X081274	2			70.27	2.261	0.091	0.034	0.02448	0.007	0.169	0.046	0.009	0.004	0.006	0.058	-0.01	-0.01	-0.01	-0.03	1904	0.1224	0.802332	-0.679932	NAF
NS0115	200	202	NS	BX081252	X081252	2			70.93	2.288	0.058	0.05	0.036	0.006	0.183	0.047	0.006	0.004	0.011	0.094	-0.01	-0.01	-0.01	-0.03	1892	0.1224	0.819774	-0.697374	NAF
NS0115	248	252	NS	BX081276-BX081277	X081276	2			71.37	1.187	0.017	0.027	0.01944	0.004	0.111	0.047	0.01	0.004	0.004	0.08	-0.01	-0.01	-0.01	-0.03	1905	0.1224	0.819774	-0.697374	NAF
NS0115	240	244	NS	BX081272-BX081273	X081272	2			68.99	4.011	0.084	0.047	0.03384	0.007	0.194	0.048	0.009	0.004	0.008	0.061	-0.01	-0.01	-0.01	-0.03	1903	0.1224	0.837216	-0.714816	NAF
NS0115	218	222	NS	BX081261-BX081262	X081261	2			70.17	3.243	0.031	0.056	0.04032	0.001	0.144	0.047	0.007	0.003	0.016	0.064	-0.01	-0.01	-0.01	-0.03	1897	0.0918	0.819774	-0.727974	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0115	108	112	NS	BX081205-BX081206	X081205	2			67.62	4.052	0.129	0.098	0.07056	0.009	0.234	0.06	0.012	0.01	0.01	0.085	-0.01	-0.01	-0.01	-0.03	1869	0.306	1.04652	-0.74052	NAF
NS0115	102	104	NS	BX081202	X081202	2			66.23	4.195	0.137	0.121	0.08712	0.014	0.27	0.067	0.012	0.013	0.009	0.074	-0.01	-0.01	-0.01	-0.03	1867	0.3978	1.168614	-0.770814	NAF
NS0115	278	280	NS	BX081291	X081291	2			71.34	2.112	0.032	0.037	0.02664	0.004	0.115	0.046	0.008	0.001	0.017	0.058	-0.01	-0.01	-0.01	-0.03	1912	0.0306	0.802332	-0.771732	NAF
NS0115	74	78	NS	BX081187-BX081188	X081187	2			65.76	6.942	0.149	0.141	0.10152	0.006	0.231	0.053	0.018	0.004	0.018	0.074	0.05	-0.01	-0.01	0.03	1860	0.1224	0.924426	-0.802026	NAF
NS0115	206	210	NS	BX081255-BX081256	X081255	2			71.12	1.741	0.044	0.054	0.03888	0.004	0.178	0.057	0.008	0.006	0.012	0.124	-0.01	-0.01	-0.01	-0.03	1894	0.1836	0.994194	-0.810594	NAF
NS0115	260	264	NS	BX081282-BX081283	X081282	2			71.26	2.15	0.031	0.038	0.02736	0.004	0.132	0.05	0.009	0.002	0.012	0.061	-0.01	-0.01	-0.01	-0.03	1908	0.0612	0.8721	-0.8109	NAF
NS0115	264	268	NS	BX081284-BX081285	X081284	2			71.04	2.339	0.076	0.036	0.02592	0.01	0.141	0.057	0.01	0.005	0.015	0.086	-0.01	-0.01	-0.01	-0.03	1909	0.153	0.994194	-0.841194	NAF
NS0115	228	232	NS	BX081266-BX081267	X081266	2			70.29	3.26	0.114	0.044	0.03168	0.013	0.181	0.06	0.011	0.006	0.013	0.062	-0.01	-0.01	-0.01	-0.03	1900	0.1836	1.04652	-0.86292	NAF
NS0115	202	206	NS	BX081253-BX081254	X081253	2			71.25	1.647	0.039	0.051	0.03672	0.005	0.163	0.053	0.008	0.002	0.006	0.07	-0.01	-0.01	-0.01	-0.03	1893	0.0612	0.924426	-0.863226	NAF
NS0115	78	80	NS	X074189	074189	1	G	W	34.87	39.7	1.07	0.774	0.6	0.045	1.25	0.15	0.028	0.057	0.14	0.01	0.33	6.47	0.04	6.84	17007	1.7442	2.6163	-0.8721	NAF
NS0115	268	272	NS	BX081286-BX081287	X081286	2			69.46	2.473	0.107	0.05	0.036	0.011	0.194	0.069	0.01	0.01	0.004	0.113	-0.01	-0.01	-0.01	-0.03	1910	0.306	1.203498	-0.897498	NAF
NS0115	136	140	NS	BX081219-BX081220	X081219	2			68	4.98	0.09	0.095	0.0684	0.004	0.191	0.059	0.012	0.004	0.014	0.06	-0.01	-0.01	-0.01	-0.03	1876	0.1224	1.029078	-0.906678	NAF
NS0115	90	94	NS	BX081195-BX081196	X081195	2			66.34	4.616	0.15	0.107	0.07704	0.013	0.302	0.072	0.01	0.011	0.011	0.07	-0.01	-0.01	-0.01	-0.03	1864	0.3366	1.255824	-0.919224	NAF
NS0115	78	80	NS	BX081189	X081189	2			65.2	6.658	0.169	0.189	0.13608	0.008	0.306	0.064	0.01	0.006	0.019	0.059	0.19	0.33	-0.01	0.51	1861	0.1836	1.116288	-0.932688	NAF
NS0115	104	108	NS	BX081203-BX081204	X081203	2			66.2	5.8	0.137	0.129	0.09288	0.011	0.272	0.073	0.014	0.011	0.013	0.078	-0.01	-0.01	-0.01	-0.03	1868	0.3366	1.273266	-0.936666	NAF
NS0115	124	128	NS	BX081213-BX081214	X081213	2			67.67	3.849	0.083	0.077	0.05544	0.007	0.178	0.066	0.014	0.007	0.01	0.074	-0.01	-0.01	-0.01	-0.03	1873	0.2142	1.151172	-0.936972	NAF
NS0115	94	98	NS	BX081197-BX081198	X081197	2			67.71	4.773	0.092	0.096	0.06912	0.006	0.224	0.061	0.012	0.004	0.012	0.09	-0.01	-0.01	-0.01	-0.03	1865	0.1224	1.063962	-0.941562	NAF
NS0115	176	180	NS	BX081239-BX081240	X081239	2			68.47	3.405	0.072	0.067	0.04824	0.003	0.208	0.058	0.009	0.002	0.01	0.063	-0.01	-0.01	-0.01	-0.03	1886	0.0612	1.011636	-0.950436	NAF
NS0115	132	136	NS	BX081217-BX081218	X081217	2			68.62	4.269	0.09	0.087	0.06264	0.006	0.188	0.062	0.014	0.004	0.009	0.057	-0.01	-0.01	-0.01	-0.03	1875	0.1224	1.081404	-0.959004	NAF
NS0115	140	144	NS	BX081221-BX081222	X081221	2			68.94	4.096	0.06	0.08	0.0576	0.005	0.172	0.062	0.013	0.004	0.009	0.067	-0.01	-0.01	-0.01	-0.03	1877	0.1224	1.081404	-0.959004	NAF
NS0115	188	192	NS	BX081245-BX081246	X081245	2			69.94	2.882	0.051	0.064	0.04608	0.002	0.174	0.059	0.01	0.001	0.013	0.061	-0.01	-0.01	-0.01	-0.03	1889	0.0306	1.029078	-0.998478	NAF
NS0115	116	120	NS	BX081209-BX081210	X081209	2			68.28	4.291	0.092	0.094	0.06768	0.004	0.217	0.068	0.015	0.005	0.008	0.063	-0.01	-0.01	-0.01	-0.03	1871	0.153	1.186056	-1.033056	NAF
NS0115	164	168	NS	BX081233-BX081234	X081233	2			68.51	3.794	0.079	0.095	0.0684	0.003	0.164	0.063	0.022	0.002	0.018	0.053	0.02	-0.01	-0.01	0	1883	0.0612	1.098846	-1.037646	NAF
NS0115	192	196	NS	BX081247-BX081248	X081247	2			69.97	3.537	0.052	0.072	0.05184	0.003	0.174	0.063	0.011	0.002	0.015	0.062	-0.01	-0.01	-0.01	-0.03	1890	0.0612	1.098846	-1.037646	NAF
NS0115	222	224	NS	BX081263	X081263	2			70.36	2.987	0.053	0.046	0.03312	0.006	0.206	0.069	0.009	0.005	0.019	0.089	-0.01	-0.01	-0.01	-0.03	1898	0.153	1.203498	-1.050498	NAF
NS0115	112	116	NS	BX081207-BX081208	X081207	2			66.56	5.764	0.09	0.121	0.08712	0.004	0.238	0.066	0.014	0.003	0.011	0.072	-0.01	-0.01	-0.01	-0.03	1870	0.0918	1.151172	-1.059372	NAF
NS0115	168	172	NS	BX081235-BX081236	X081235	2			68.35	3.846	0.094	0.087	0.06264	0.004	0.193	0.068	0.022	0.004	0.02	0.073	0.03	-0.01	-0.01	0.01	1884	0.1224	1.186056	-1.063656	NAF
NS0115	272	276	NS	BX081288-BX081289	X081288	2			70.05	3.013	0.098	0.034	0.02448	0.018	0.172	0.073	0.015	0.006	0.003	0.061	-0.01	-0.01	-0.01	-0.03	1911	0.1836	1.273266	-1.089666	NAF
NS0115	160	164	NS	BX081231-BX081232	X081231	2			68.17	3.813	0.063	0.095	0.0684	0.001	0.198	0.067	0.013	0.002	0.016	0.068	-0.01	-0.01	-0.01	-0.03	1882	0.0612	1.168614	-1.107414	NAF
NS0115	98	102	NS	BX081199-BX081200	X081199	2			67.13	4.62	0.108	0.098	0.07056	0.012	0.237	0.078	0.018	0.008	0.007	0.063	-0.01	-0.01	-0.01	-0.03	1866	0.2448	1.360476	-1.115676	NAF
NS0115	210	214	NS	BX081257-BX081258	X081257	2			68.37	4.49	0.128	0.059	0.04248	0.006	0.218	0.08	0.01	0.009	0.016	0.113	-0.01	-0.01	-0.01	-0.03	1895	0.2754	1.39536	-1.11996	NAF
NS0115	196	200	NS	BX081249-BX081250	X081249	2			68.71	3.835	0.08	0.072	0.05184	0.01	0.197	0.081	0.016	0.009	0.018	0.08	-0.01	-0.01	-0.01	-0.03	1891	0.2754	1.412802	-1.137402	NAF
NS0115	152	156	NS	BX081227-BX081228	X081227	2			66.1	5.493	0.112	0.108	0.07776	0.008	0.284	0.071	0.012	0.003	0.013	0.061	-0.01	-0.01	-0.01	-0.03	1880	0.0918	1.238382	-1.146582	NAF
NS0115	214	216	NS	BX081259	X081259	2			67.73	4.444	0.101	0.069	0.04968	0.005	0.216	0.078	0.013	0.006	0.016	0.075	-0.01	-0.01	-0.01	-0.03	1896	0.1836	1.360476	-1.176876	NAF
NS0115	148	152	NS	BX081225-BX081226	X081225	2			66.16	5.891	0.092	0.105	0.0756	0.004	0.22	0.073	0.014	0.002	0.014	0.066	-0.01	-0.01	-0.01	-0.03	1879	0.0612	1.273266	-1.212066	NAF
NS0115	234	236	NS	X074269	074269	1	G	W	27.52	43.46	3.22	0.4644	0.36	0.141	2.6	0.68	0.122	0.345	0.053	0.077	0.35	8.6	0.63	9.58	17085	10.557	11.86056	-1.30356	NAF
NS0115	156	158	NS	BX081229	X081229	2			65.36	6.755	0.161	0.118	0.08496	0.009	0.323	0.082	0.01	0.003	0.039	0.091	-0.01	-0.01	-0.01	-0.03	1881	0.0918	1.430244	-1.338444	NAF
NS0115	144	148	NS	BX081223-BX081224	X081223	2			67.62	4.933	0.092	0.122	0.08784	0.003	0.252	0.084	0.012	0.003	0.009	0.063	0.02	-0.01	-0.01	0	1878	0.0918	1.465128	-1.373328	NAF
NS0115	180	184	NS	BX081241-BX081242	X081241	2			66.74	5.865	0.111	0.105	0.0756	0.001	0.25	0.083	0.014	0.002	0.023	0.063	-0.01	-0.01	-0.01	-0.03	1887	0.0612	1.447686	-1.386486	NAF
NS0115	166	168	NS	X074234	074234	1	G	W	37.91	40.7	0.8	0.2322	0.18	0.034	0.35	0.11	0.083	0.017	0.207	0.011	1.14	2.07	0.08	3.29	17051	0.5202	1.91862	-1.39842	NAF
NS0115	120	124	NS	BX081211-BX081212	X081211	2			67.21	4.321	0.102	0.103	0.07416	0.005	0.219	0.095	0.023	0.007	0.013	0.099	-0.01	-0.01	-0.01	-0.03	1872	0.2142	1.65699	-1.44279	NAF
NS0115	184	188	NS	BX081243-BX081244	X081243	2			65.69	6.423	0.109	0.112	0.08064	0.002	0.255	0.091	0.017	0.004	0.021	0.066	-0.01	-0.01	-0.01	-0.03	1888	0.1224	1.587222	-1.464822	NAF
NS0115	128	132	NS	BX081215-BX081216	X081215	2			64.93	7.523	0.116	0.136	0.09792	0.008	0.257	0.097	0.024	0.007	0.026	0.387	-0.01	-0.01	-0.01	-0.03	1874	0.2142	1.691874	-1.477674	NAF
NS0115	270	272	NS	X074287	074287	1	G	W	25.26	41.42	2.99	0.4902	0.38	0.136	2.81	0.5	0.079	0.232	0.007	0.016	0.62	14.14	0.58	15.34	17103	7.0992	8.721	-1.6218	NAF
NS0115	90	92	NS	X074195	074195	1	G	W	27.26	37.59	2.1	0.7482	0.58	0.088	2.58	0.56	0.097	0.257	0.169	0.016	0.56	15.24	0.65	16.45	17013	7.8642	9.76752	-1.90332	NAF
NS0115	106	108	NS	X074204	074204	1	G	W	34.26	39.2	1.19	0.6837	0.53	0.054	1.42	0.44	0.115	0.169	0.124	0.015	0.33	6.65	0.31	7.29	17021	5.1714	7.67448	-2.50308	NAF
NS0115	76	78	NS	X074188	074188	1	G	W	36.61	39	1.06	0.6837	0.53	0.045	0.99	0.18	0.057	0.02	0.16	0.017	0.36	4.9	-0.04	5.22	17006	0.612	3.13956	-2.52756	NAF
NS0115	228	230	NS	X074266	074266	1	G	W	27.08	45.56	2.87	0.4128	0.32	0.124	2.28	0.57	0.132	0.235	0.171	0.115	0.34	8.03	0.41	8.78	17082	7.191	9.94194	-2.75094	NAF
NS0115	214	216	NS	X074259	074259	1	G	W	26.08	41.23	2.87	0.4644	0.36	0.121	2.47	0.59	0.106	0.238	0.088	0.028	0.57	12.89	0.57	14.03	17075	7.2828	10.29078	-3.00798	NAF
NS0115	80	82	NS	X074190	074190	1	G	W	35.61	40.34	1.03	0.6837	0.53	0.044	1.09	0.22	0.051	0.025	0.155	0.014	0.29	5.24	-0.05	5.48	17008	0.765	3.83724	-3.07224	NAF
NS0115	242	244	NS	X074273	074273	1	G	W	31.73	43.3	1.34	0.387	0.3	0.059	1.76	0.37	0.079	0.091	0.111	0.144	0.27	6.2	0.14	6.61	17089	2.7846	6.45354	-3.66894	NAF
NS0115	82	84	NS	X074191	074191	1	G	W	33.82	42.32	1.23	0.6321	0.49	0.058	1.24	0.3	0.083	0.048	0.137	0.014	0.26	5.25	-0.09	5.42	17009	1.4688	5.2326	-3.7638	NAF
NS0115	102	104	NS	X074202	074202	1	G	W	31.92	40.34	1.45	0.6966	0.54	0.067	1.72	0.45	0.103	0.128	0.112	0.014	0.46	8.29	0.22	8.97	17019	3.9168	7.8489	-3.9321	NAF
NS0115	114	116	NS	X074208	074208	1	G	W	38.5	36.7	0.73	0.5934	0.46	0.031	1.07	0.28	0.073	0.029	0.109	0.021	0.17	5.09	-0.13	5.13	17025	0.8874	4.88376	-3.99636	NAF
NS0115	162	164	NS	X074232	074232	1	G	W	36.02	36.8	0.81	0.6063	0.47	0.033	1.2	0.35	0.084	0.068	0.205	0.004	0.26	7.46	0.03	7.75	17049	2.0808	6.1047	-4.0239	NAF
NS0115	132	134	NS	X074217	074217	1	G	W	34.94	39.73	1.08	0.645	0.5	0.045	1.22	0.35	0.091	0.056	0.138	0.021	0.24	6.24	0	6.48	17034	1.7136	6.1047	-4.3911	NAF
NS0115	100	102	NS	X074200	074200	1	G	W	36.44	35.66	1.25	0.6579	0.51	0.056	1.65	0.45	0.115	0.111	0.071	0.01	0.4	7.33	0.13	7.86	17018	3.3966	7.8489	-4.4523	NAF
NS0115	274	276	NS	X074289	074289	1	G	W	23.2	44.31	2.35	0.3741	0.29	0.1	2.63	0.79	0.141	0.304	0.006	0.014	0.56	14.08	0.74	15.38	17105	9.3024	13.77918	-4.47678	NAF
NS0115	112	114	NS	X074207	074207	1	G	W	34.22	43.93	0.62	0.5418	0.42	0.028	0.93	0.3	0.081	0.019	0.094	0.016	0.19	4.42	-0.04	4.57	17024	0.5814	5.2326	-4.6512	NAF
NS0115	148	150	NS	X074225	074225	1	G	W	34.26	40.61	0.88	0.645	0.5	0.038	1.14	0.35	0.078	0.047	0.158	0.012	0.23	6.74	-0.06	6.91	17042	1.4382	6.1047	-4.6665	NAF
NS0115	94	96	NS	X074197	074197	1	G	W	35.24	38.07	1.1	0.6321	0.49	0.046	1.45	0.38	0.09	0.06	0.153	0.015	0.3	6.96	-0.11	7.15	17015	1.836	6.62796	-4.79196	NAF
NS0115	126	128	NS	X074214	074214	1	G	W	34.77	41.62	0.73	0.5547	0.43	0.033	1.08	0.32	0.078	0.02	0.14	0.02	0.24	5.23	-0.15	5.32	17031	0.612	5.58144	-4.96944	NAF
NS0115	170	172	NS	X074236	074236	1	G	W	35.34	35.12	1.08	0.645	0.5	0.045	1.58	0.48	0.124	0.105	0.184	0.018	0.4	9.33	0.17	9.9	17053	3.213	8.37216	-5.15916	NAF
NS0115	118	120	NS	X074210	074210	1	G	W	36.31	40.63	0.64	0.5418	0.42	0.029	1	0.34	0.091	0.025	0.076	0.011	0.18	4.3	-0.01	4.47	17027	0.765	5.93028	-5.16528	NAF
NS0115	168	170	NS	X074235	074235	1	G	W	36.37	36.65	1.3	0.5418	0.42	0.055	1.21	0.46	0.137	0.092	0.265	0.009	0.38	6.65	0.17	7.2	17052	2.8152	8.02332	-5.20812	NAF
NS0115	110	112	NS	X074206	074206	1	G	W	37.23	36.7	0.87	0.645	0.5	0.037	1.27	0.36	0.092	0.033	0.077	0.013	0.4	5.92	0	6.32	17023	1.0098	6.27912	-5.26932	NAF
NS0115	138	140	NS	X074220	074220	1	G	W	35.27	40.41	0.91	0.6321	0.49	0.04	1.04	0.35	0.091	0.027	0.171	0.012	0.2	5.49	-0.14	5.55	17037	0.8262	6.1047	-5.2785	NAF
NS0115	136	138	NS	X074219	074219	1	G	W	36.81	38.07	0.8	0.645	0.5	0.036	1.1	0.34	0.09	0.019	0.145	0.019	0.22	5.76	-0.14	5.84	17036	0.5814	5.93028	-5.34888	NAF
NS0115	226	228	NS	X074265	074265	1	G	W	29.04	49.12	0.91	0.3096	0.24	0.037	1.3	0.63	0.073	0.179	0.098	0.069	0.1	5.11	0.18	5.39	17081	5.4774	10.98846	-5.51106	NAF
NS0115	244	246	NS	X074274	074274	1	G	W	30.51	47.3	1.61	0.2322	0.18	0.07	1.74	0.46	0.09	0.081	0.096	0.083	0.21	4.18	0.06	4.45	17090	2.4786	8.02332	-5.54472	NAF
NS0115	128	130	NS	X074215	074215	1	G	W	37.22	38.6	0.66	0.5934	0.46	0.028	0.9	0.35	0.091	0.015	0.131	0.011	0.15	4.78	-0.1	4.83	17032	0.459	6.1047	-5.6457	NAF
NS0115	272	274	NS	X074288	074288	1	G	W	27.89	45.59	1.33	0.2967	0.23	0.058	1.77	0.6	0.136	0.156	0.005	0.011	0.49	9.52	0.2	10.21	17104	4.7736	10.4652	-5.6916	NAF
NS0115	150	152	NS	X074226	074226	1	G	W	36.72	37.04	0.89	0.6708	0.52	0.04	1.25	0.37	0.088	0.023	0.147	0.008	0.21	6.73	-0.19	6.75	17043	0.7038	6.45354	-5.74974	NAF
NS0115	160	162	NS	X074231	074231	1	G	W	34.72	37.6	0.58	0.6192	0.48	0.023	1.27	0.39	0.08	0.03	0.134	0.012	0.33	9.05	-0.07	9.31	17048	0.918	6.80238	-5.88438	NAF
NS0115	180	182	NS	X074241	074241	1	G	W	31.28	38.22	1.69	0.5934	0.46	0.075	2.13	0.55	0.091	0.119	0.188	0.074	0.44	10.93	0.13	11.5	17058	3.6414	9.5931	-5.9517	NAF
NS0115	144	146	NS	X074223	074223	1	G	W	36.26	34.2	0.74	0.903	0.7	0.03	1.48	0.38	0.067	0.02	0.119	0.011	0.33	9.99	-0.13	10.19	17040	0.612	6.62796	-6.01596	NAF
NS0115	134	136	NS	X074218	074218	1	G	W	32.37	43.24	0.81	0.6708	0.52	0.034	1.22	0.44	0.115	0.052	0.121	0.017	0.27	6.71	-0.01	6.97	17035	1.5912	7.67448	-6.08328	NAF
NS0115	96	98	NS	X074198	074198	1	G	W	34.87	38.51	0.94	0.7224	0.56	0.042	1.42	0.44	0.105	0.05	0.118	0.016	0.39	7.15	0	7.54	17016	1.53	7.67448	-6.14448	NAF
NS0115	142	144	NS	X074222	074222	1	G	W	32.78	38.73	0.81	0.6966	0.54	0.035	1.57	0.45	0.101	0.052	0.138	0.019	0.41	9.81	-0.01	10.21	17039	1.5912	7.8489	-6.2577	NAF
NS0115	152	154	NS	X074227	074227	1	G	W	32.97	37.16	1.26	0.6966	0.54	0.054	1.81	0.63	0.154	0.153	0.095	0.018	0.34	9.73	0.19	10.26	17044	4.6818	10.98846	-6.30666	NAF
NS0115	120	122	NS	X074211	074211	1	G	W	36.63	37.96	1.01	0.5934	0.46	0.042	1.15	0.44	0.123	0.044	0.148	0.018	0.22	5.25	-0.04	5.43	17028	1.3464	7.67448	-6.32808	NAF
NS0115	98	100	NS	X074199	074199	1	G	W	35.65	39.55	0.88	0.5805	0.45	0.038	1.22	0.44	0.112	0.042	0.08	0.016	0.23	5.79	-0.04	5.98	17017	1.2852	7.67448	-6.38928	NAF
NS0115	164	166	NS	X074233	074233	1	G	W	37.03	36	0.82	0.6837	0.53	0.033	1.08	0.43	0.109	0.035	0.204	0.019	0.23	7.02	-0.02	7.23	17050	1.071	7.50006	-6.42906	NAF
NS0115	124	126	NS	X074213	074213	1	G	W	35.05	37.98	1.27	0.6321	0.49	0.056	1.49	0.52	0.133	0.081	0.125	0.015	0.31	7.07	0.04	7.42	17030	2.4786	9.06984	-6.59124	NAF
NS0115	122	124	NS	X074212	074212	1	G	W	34.69	39.13	0.92	0.6837	0.53	0.04	1.36	0.45	0.117	0.04	0.134	0.016	0.31	6.92	-0.08	7.15	17029	1.224	7.8489	-6.6249	NAF
NS0115	246	248	NS	X074275	074275	1	G	W	32.84	44.45	1	0.258	0.2	0.048	1.35	0.48	0.106	0.057	0.137	0.082	0.17	4.52	-0.02	4.67	17091	1.7442	8.37216	-6.62796	NAF
NS0115	252	254	NS	X074278	074278	1	G	W	32.99	42.61	1.21	0.387	0.3	0.052	1.67	0.48	0.091	0.055	0.156	0.165	0.17	5.63	-0.06	5.74	17094	1.683	8.37216	-6.68916	NAF
NS0115	268	270	NS	X074286	074286	1	G	W	29.54	36.91	2.12	0.4773	0.37	0.092	2.62	0.68	0.077	0.167	0.012	0.008	0.46	13.5	0.29	14.25	17102	5.1102	11.86056	-6.75036	NAF
NS0115	202	204	NS	X074253	074253	1	G	W	32.51	36.32	1.6	0.5418	0.42	0.07	2.15	0.67	0.114	0.158	0.084	0.132	0.43	10.77	0.19	11.39	17069	4.8348	11.68614	-6.85134	NAF
NS0115	146	148	NS	X074224	074224	1	G	W	34.93	37.12	0.97	0.6837	0.53	0.041	1.52	0.44	0.101	0.026	0.109	0.029	0.32	8.34	-0.1	8.56	17041	0.7956	7.67448	-6.87888	NAF
NS0115	184	186	NS	X074243	074243	1	G	W	32.37	41.16	1.58	0.5031	0.39	0.069	1.54	0.64	0.134	0.14	0.139	0.05	0.28	6.85	0.26	7.39	17060	4.284	11.16288	-6.87888	NAF
NS0115	130	132	NS	X074216	074216	1	G	W	34.64	39.74	1.03	0.645	0.5	0.046	1.22	0.5	0.138	0.059	0.133	0.014	0.24	6.25	0	6.49	17033	1.8054	8.721	-6.9156	NAF
NS0115	240	242	NS	X074272	074272	1	G	W	32.82	47.39	0.71	0.1935	0.15	0.03	0.99	0.44	0.067	0.021	0.073	0.037	0.14	3.07	-0.04	3.17	17088	0.6426	7.67448	-7.03188	NAF
NS0115	216	218	NS	X074260	074260	1	G	W	32.69	39.99	1.41	0.4386	0.34	0.06	1.75	0.64	0.09	0.131	0.097	0.028	0.32	7.52	0.22	8.06	17076	4.0086	11.16288	-7.15428	NAF
NS0115	140	142	NS	X074221	074221	1	G	W	34.34	38.61	0.82	0.7095	0.55	0.037	1.25	0.46	0.117	0.027	0.149	0.027	0.51	8.24	-0.12	8.63	17038	0.8262	8.02332	-7.19712	NAF
NS0115	186	188	NS	X074244	074244	1	G	W	34.98	38.67	0.88	0.5805	0.45	0.036	1.34	0.51	0.09	0.047	0.158	0.127	0.28	7.17	-0.06	7.39	17061	1.4382	8.89542	-7.45722	NAF
NS0115	174	176	NS	X074238	074238	1	G	W	30.89	39.58	1.04	0.5031	0.39	0.042	1.66	0.45	0.135	0.01	0.039	0.01	1.15	10.84	0.03	12.02	17055	0.306	7.8489	-7.5429	NAF
NS0115	218	220	NS	X074261	074261	1	G	W	34.58	42.78	0.61	0.4515	0.35	0.027	1.08	0.47	0.064	0.021	0.154	0.03	0.17	4.76	0.03	4.96	17077	0.6426	8.19774	-7.55514	NAF
NS0115	156	158	NS	X074229	074229	1	G	W	31.2	33.1	1.35	0.5547	0.43	0.057	2.05	0.46	0.07	0.015	0.299	0.003	0.63	16.61	0.03	17.27	17046	0.459	8.02332	-7.56432	NAF
NS0115	200	202	NS	X074252	074252	1	G	W	33.92	37.32	1.1	0.5289	0.41	0.044	1.8	0.57	0.088	0.077	0.154	0.221	0.38	8.9	-0.1	9.18	17068	2.3562	9.94194	-7.58574	NAF
NS0115	236	238	NS	X074270	074270	1	G	W	32.68	41.73	1.32	0.387	0.3	0.057	1.54	0.67	0.066	0.132	0.074	0.064	0.27	6.57	0.06	6.9	17086	4.0392	11.68614	-7.64694	NAF
NS0115	208	210	NS	X074256	074256	1	G	W	32.05	33.16	0.98	0.5934	0.46	0.043	2.11	0.7	0.116	0.144	0.113	0.056	0.71	14.95	0.17	15.83	17072	4.4064	12.2094	-7.803	NAF
NS0115	182	184	NS	X074242	074242	1	G	W	34.65	39.54	0.94	0.5676	0.44	0.042	1.27	0.52	0.109	0.035	0.143	0.05	0.26	6.75	-0.12	6.89	17059	1.071	9.06984	-7.99884	NAF
NS0115	178	180	NS	X074240	074240	1	G	W	32.71	36.92	1.06	0.5934	0.46	0.045	1.85	0.6	0.125	0.08	0.176	0.036	0.47	11	0.02	11.49	17057	2.448	10.4652	-8.0172	NAF
NS0115	248	250	NS	X074276	074276	1	G	W	30.03	51.96	0.58	0.129	0.1	0.023	0.93	0.49	0.091	0.016	0.065	0.036	0.05	2.37	-0.07	2.35	17092	0.4896	8.54658	-8.05698	NAF
NS0115	116	118	NS	X074209	074209	1	G	W	35.7	36.79	1.14	0.6837	0.53	0.048	1.57	0.59	0.166	0.071	0.118	0.019	0.27	7.26	0.04	7.57	17026	2.1726	10.29078	-8.11818	NAF
NS0115	154	156	NS	X074228	074228	1	G	W	30.9	37.85	1.2	0.5547	0.43	0.053	1.89	0.55	0.121	0.046	0.119	0.018	0.45	12.48	0	12.93	17045	1.4076	9.5931	-8.1855	NAF
NS0115	158	160	NS	X074230	074230	1	G	W	33.86	32.28	0.83	0.645	0.5	0.035	1.95	0.5	0.088	0.015	0.154	0.011	0.55	14.28	-0.04	14.79	17047	0.459	8.721	-8.262	NAF
NS0115	198	200	NS	X074250	074250	1	G	W	32.97	37.4	0.94	0.5934	0.46	0.042	1.82	0.65	0.132	0.096	0.156	0.145	0.43	10.19	0.14	10.76	17067	2.9376	11.3373	-8.3997	NAF
NS0115	238	240	NS	X074271	074271	1	G	W	33.9	38.72	1.81	0.3354	0.26	0.081	1.97	0.65	0.13	0.095	0.026	0.079	0.34	7.29	-0.09	7.54	17087	2.907	11.3373	-8.4303	NAF
NS0115	176	178	NS	X074239	074239	1	G	W	31.06	40.36	0.73	0.5031	0.39	0.033	1.79	0.5	0.078	0.009	0.05	0.015	0.51	10.71	-0.04	11.18	17056	0.2754	8.721	-8.4456	NAF
NS0115	254	256	NS	X074279	074279	1	G	W	33.52	38.63	1.27	0.4515	0.35	0.055	2.06	0.63	0.14	0.078	0.157	0.091	0.3	7.67	0.01	7.98	17095	2.3868	10.98846	-8.60166	NAF
NS0115	232	234	NS	X074268	074268	1	G	W	30.04	44.62	1.87	0.4257	0.33	0.082	1.79	0.81	0.103	0.177	0.132	0.092	0.18	6.09	0.31	6.58	17084	5.4162	14.12802	-8.71182	NAF
NS0115	192	194	NS	X074247	074247	1	G	W	34.12	36.32	1.27	0.5934	0.46	0.055	1.62	0.79	0.104	0.163	0.262	0.124	0.31	9.18	0.33	9.82	17064	4.9878	13.77918	-8.79138	NAF
NS0115	262	264	NS	X074283	074283	1	G	W	35.6	41.13	0.68	0.3999	0.31	0.029	1.24	0.54	0.092	0.017	0.193	0.163	0.05	4.69	-0.12	4.62	17099	0.5202	9.41868	-8.89848	NAF
NS0115	256	258	NS	X074280	074280	1	G	W	31.67	41.84	1.22	0.4386	0.34	0.048	1.98	0.65	0.093	0.074	0.137	0.264	0.2	7.53	-0.01	7.72	17096	2.2644	11.3373	-9.0729	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0115	250	252	NS	X074277	074277	1	G	W	31.43	48.85	0.61	0.1935	0.15	0.028	1.14	0.56	0.099	0.02	0.065	0.061	0.11	2.98	-0.01	3.08	17093	0.612	9.76752	-9.15552	NAF
NS0115	196	198	NS	X074249	074249	1	G	W	33.96	37.17	1.47	0.5676	0.44	0.064	1.65	0.76	0.136	0.131	0.364	0.205	0.35	8.42	0.2	8.97	17066	4.0086	13.25592	-9.24732	NAF
NS0115	188	190	NS	X074245	074245	1	G	W	32.91	37.35	0.73	0.5805	0.45	0.03	1.6	0.59	0.092	0.019	0.146	0.102	0.44	10.82	-0.04	11.22	17062	0.5814	10.29078	-9.70938	NAF
NS0115	194	196	NS	X074248	074248	1	G	W	35.15	39	0.64	0.6321	0.49	0.029	1.32	0.63	0.09	0.026	0.142	0.13	0.17	6.97	-0.17	6.97	17065	0.7956	10.98846	-10.19286	NAF
NS0115	276	278	NS	X074290	074290	1	G	W	29.6	34.13	1.38	0.5934	0.46	0.057	2.21	0.81	0.129	0.126	0.204	0.082	0.78	16.47	0.2	17.45	17106	3.8556	14.12802	-10.27242	NAF
NS0115	258	260	NS	X074281	074281	1	G	W	33.22	39.93	1.55	0.3741	0.29	0.066	1.91	0.76	0.154	0.09	0.155	0.28	0.14	6.59	0	6.73	17097	2.754	13.25592	-10.50192	NAF
NS0115	278	280	NS	X074291	074291	1	G	W	33.27	38.47	1.11	0.5418	0.42	0.047	1.73	0.81	0.097	0.114	0.483	0.252	0.18	8.01	-0.04	8.15	17107	3.4884	14.12802	-10.63962	NAF
NS0115	266	268	NS	X074285	074285	1	G	W	31.17	48.94	0.81	0.2838	0.22	0.041	0.94	0.71	0.077	0.056	0.11	0.04	0.02	3.26	0.03	3.31	17101	1.7136	12.38382	-10.67022	NAF
NS0115	206	208	NS	X074255	074255	1	G	W	32.12	32.74	1.39	0.6063	0.47	0.059	2.56	0.75	0.115	0.078	0.201	0.116	0.54	14.66	0.08	15.28	17071	2.3868	13.0815	-10.6947	NAF
NS0115	190	192	NS	X074246	074246	1	G	W	33.93	35.07	0.81	0.6192	0.48	0.032	1.55	0.68	0.104	0.029	0.202	0.093	0.44	11.58	0	12.02	17063	0.8874	11.86056	-10.97316	NAF
NS0115	222	224	NS	X074263	074263	1	G	W	33.13	39.83	0.94	0.5031	0.39	0.041	1.64	0.8	0.099	0.093	0.261	0.241	0.19	7.93	-0.05	8.07	17079	2.8458	13.9536	-11.1078	NAF
NS0115	224	226	NS	X074264	074264	1	G	W	36.54	38.1	0.79	0.4257	0.33	0.033	1.34	0.72	0.094	0.036	0.169	0.206	0.12	5.59	-0.17	5.54	17080	1.1016	12.55824	-11.45664	NAF
NS0115	230	232	NS	X074267	074267	1	G	W	31.22	45.02	0.95	0.3741	0.29	0.041	1.41	0.82	0.116	0.068	0.124	0.188	0.22	5.45	0.1	5.77	17083	2.0808	14.30244	-12.22164	NAF
NS0115	260	262	NS	X074282	074282	1	G	W	30.08	51.98	0.5	0.1935	0.15	0.023	0.84	0.77	0.083	0.017	0.163	0.061	-0.05	2.27	0.12	2.34	17098	0.5202	13.43034	-12.91014	NAF
NS0115	204	206	NS	X074254	074254	1	G	W	35.63	32.78	0.75	0.5934	0.46	0.03	1.82	0.82	0.13	0.043	0.146	0.102	0.41	11.01	-0.04	11.38	17070	1.3158	14.30244	-12.98664	NAF
NS0115	212	214	NS	X074258	074258	1	G	W	34.31	35.03	1.14	0.5547	0.43	0.047	1.97	1.01	0.086	0.13	0.165	0.041	0.42	9.74	0.08	10.24	17074	3.978	17.61642	-13.63842	NAF
NS0115	220	222	NS	X074262	074262	1	G	W	34.81	41.78	0.67	0.4257	0.33	0.03	1.05	0.89	0.122	0.032	0.202	0.066	0.14	4.5	0.1	4.74	17078	0.9792	15.52338	-14.54418	NAF
NS0115	264	266	NS	X074284	074284	1	G	W	33.7	38.98	1.64	0.3999	0.31	0.071	1.82	1.25	0.214	0.156	0.241	0.349	0.13	5.7	0.31	6.14	17100	4.7736	21.8025	-17.0289	NAF
NS0116	132	134	NS	X074360	074360	1	G	W	21	48.37	6.96	0.1677	0.13	0.325	3.33	0.72	0.055	1.05	0.395	0.108	0.64	5.82	1.49	7.95	17174	32.13	12.55824	19.57176	PAF(HC)
NS0116	108	110	NS	X074347	074347	1	G	W	20.96	50.44	7.21	0.2064	0.16	0.336	2.78	0.43	0.094	0.883	0.576	0.056	0.69	5.47	1.34	7.5	17162	27.0198	7.50006	19.51974	PAF(HC)
NS0116	114	116	NS	X074350	074350	1	G	W	20.52	49.31	7.07	0.2451	0.19	0.326	2.81	0.91	0.099	0.938	0.806	0.055	0.54	6.18	1.43	8.15	17165	28.7028	15.87222	12.83058	PAF(HC)
NS0116	122	124	NS	X074355	074355	1	G	W	21.71	47.95	5.4	0.2322	0.18	0.244	2.65	0.66	0.102	0.678	0.634	0.121	0.73	6.64	1.48	8.85	17169	20.7468	11.51172	9.23508	PAF(LC)
NS0116	110	112	NS	X074348	074348	1	G	W	23.08	48.01	4.41	0.2967	0.23	0.199	2.32	0.61	0.126	0.605	0.432	0.066	0.71	8.1	1.22	10.03	17163	18.513	10.63962	7.87338	PAF(LC)
NS0116	78	80	NS	X074332	074332	1	G	W	23.15	48.23	6.05	0.2064	0.16	0.287	3.11	0.44	0.107	0.478	0.784	0.187	1.43	4.52	1.07	7.02	17147	14.6268	7.67448	6.95232	PAF(LC)
NS0116	104	106	NS	X074345	074345	1	G	W	24.2	47.66	3.77	0.2967	0.23	0.169	2.3	0.6	0.092	0.537	0.403	0.064	0.83	7.71	1.09	9.63	17160	16.4322	10.4652	5.967	PAF(LC)
NS0116	70	72	NS	X074328	074328	1	G	W	22.05	47.95	6.23	0.2838	0.22	0.301	3.37	0.38	0.089	0.388	0.611	0.157	1.1	6.47	1.07	8.64	17143	11.8728	6.62796	5.24484	PAF(LC)
NS0116	112	114	NS	X074349	074349	1	G	W	22.96	47.29	4.52	0.2967	0.23	0.204	2.36	0.73	0.127	0.576	0.507	0.057	0.63	8.63	1.08	10.34	17164	17.6256	12.73266	4.89294	PAF(LC)
NS0116	80	82	NS	X074333	074333	1	G	W	24.73	44.87	4.36	0.3612	0.28	0.201	2.67	0.54	0.102	0.437	0.498	0.109	1.46	7.99	1.19	10.64	17148	13.3722	9.41868	3.95352	PAF(LC)
NS0116	136	138	NS	X074362	074362	1	G	W	23.2	44.28	6.67	0.2709	0.21	0.309	3.6	1.02	0.081	0.702	0.412	0.102	0.65	7.46	1.48	9.59	17176	21.4812	17.79084	3.69036	PAF(LC)
NS0116	106	108	NS	X074346	074346	1	G	W	25.2	44.04	3.44	0.3741	0.29	0.156	2.15	0.64	0.137	0.472	0.281	0.043	1.34	9.31	1.13	11.78	17161	14.4432	11.16288	3.28032	PAF(LC)
NS0116	82	84	NS	X074334	074334	1	G	W	24.21	44.58	4.38	0.4128	0.32	0.202	2.96	0.76	0.104	0.537	0.598	0.115	1.1	8.42	1.37	10.89	17149	16.4322	13.25592	3.17628	PAF(LC)
NS0116	68	70	NS	X074327	074327	1	G	D	22.67	46.47	6.18	0.3096	0.24	0.304	3.31	0.42	0.106	0.342	0.556	0.15	0.98	7.42	0.95	9.35	17142	10.4652	7.32564	3.13956	PAF(LC)
NS0116	116	118	NS	X074352	074352	1	G	W	24.69	43.5	3.85	0.3483	0.27	0.175	2.54	0.62	0.099	0.448	0.324	0.061	0.67	10.9	1.04	12.61	17166	13.7088	10.81404	2.89476	PAF(LC)
NS0116	124	126	NS	X074356	074356	1	G	W	24.54	42.49	4.75	0.3354	0.26	0.221	2.95	0.66	0.09	0.405	0.427	0.093	0.86	10.14	1.07	12.07	17170	12.393	11.51172	0.88128	PAF(LC)
NS0116	204	206	NS	X074396	074396	1	G	W	23.51	44.47	5.99	0.3096	0.24	0.275	3.13	0.97	0.085	0.557	1.05	0.159	0.88	7.27	1.44	9.59	17210	17.0442	16.91874	0.12546	PAF(LC)
NS0116	134	136	NS	X074361	074361	1	G	W	24.67	41.57	4.96	0.2709	0.21	0.23	3.19	0.77	0.076	0.441	0.249	0.057	0.72	11.01	1.14	12.87	17175	13.4946	13.43034	0.06426	PAF(LC)
NS0116	76	80	NS	BX081331-BX081332	X081331	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1913	-0.0306	-0.01744	-0.013158	NAF
NS0116	80	84	NS	BX081333-BX081334	X081333	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1914	-0.0306	-0.01744	-0.013158	NAF
NS0116	118	122	NS	BX081353-BX081354	X081353	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1924	-0.0306	-0.01744	-0.013158	NAF
NS0116	126	130	NS	BX081357-BX081358	X081357	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1925	-0.0306	-0.01744	-0.013158	NAF
NS0116	130	132	NS	BX081359	X081359	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1926	-0.0306	-0.01744	-0.013158	NAF
NS0116	134	138	NS	BX081361-BX081362	X081361	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1927	-0.0306	-0.01744	-0.013158	NAF
NS0116	202	206	NS	BX081395-BX081396	X081395	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1944	-0.0306	-0.01744	-0.013158	NAF
NS0116	184	186	NS	X074386	074386	1	G	W	24.44	43.39	6.41	0.258	0.2	0.324	3.38	0.86	0.127	0.48	1.1	0.129	0.67	6.68	1.08	8.43	17200	14.688	15.00012	-0.31212	NAF
NS0116	174	178	NS	BX081381-BX081382	X081381	2			69.36	2.631	0.253	0.038	0.02736	0.038	0.221	0.071	0.01	0.016	0.065	0.121	-0.01	-0.01	-0.01	-0.03	1937	0.4896	1.238382	-0.748782	NAF
NS0116	248	252	NS	BX081419-BX081420	X081419	2			67.97	4.087	0.187	0.022	0.01584	0.022	0.208	0.065	0.014	0.011	0.089	0.077	-0.01	-0.01	-0.01	-0.03	1956	0.3366	1.13373	-0.79713	NAF
NS0116	244	248	NS	BX081417-BX081418	X081417	2			67.94	5.547	0.313	0.028	0.02016	0.028	0.227	0.072	0.011	0.014	0.229	0.078	-0.01	-0.01	-0.01	-0.03	1955	0.4284	1.255824	-0.827424	NAF
NS0116	260	264	NS	BX081425-BX081426	X081425	2			68.23	4.912	0.26	0.022	0.01584	0.022	0.203	0.062	0.013	0.008	0.201	0.11	-0.01	-0.01	-0.01	-0.03	1959	0.2448	1.081404	-0.836604	NAF
NS0116	252	256	NS	BX081421-BX081422	X081421	2			67.76	4.912	0.324	0.023	0.01656	0.023	0.231	0.071	0.016	0.013	0.24	0.098	-0.01	-0.01	-0.01	-0.03	1957	0.3978	1.238382	-0.840582	NAF
NS0116	264	268	NS	BX081427-BX081428	X081427	2			67.73	4.751	0.227	0.016	0.01152	0.016	0.21	0.061	0.013	0.007	0.184	0.069	-0.01	-0.01	-0.01	-0.03	1960	0.2142	1.063962	-0.849762	NAF
NS0116	182	186	NS	BX081385-BX081386	X081385	2			67.96	4.471	0.363	0.043	0.03096	0.043	0.322	0.086	0.013	0.02	0.049	0.137	-0.01	-0.01	-0.01	-0.03	1939	0.612	1.500012	-0.888012	NAF
NS0116	194	198	NS	BX081391-BX081392	X081391	2			68.18	3.091	0.307	0.056	0.04032	0.056	0.26	0.086	0.012	0.02	0.053	0.149	-0.01	-0.01	-0.01	-0.03	1942	0.612	1.500012	-0.888012	NAF
NS0116	248	250	NS	X074419	074419	1	G	W	31.85	43	1.77	0.4386	0.34	0.087	1.86	0.37	0.082	0.181	0.627	0.024	0.28	5.65	0.07	6	17232	5.5386	6.45354	-0.91494	NAF
NS0116	198	202	NS	BX081393-BX081394	X081393	2			64.79	4.733	0.349	0.051	0.03672	0.051	0.362	0.118	0.014	0.037	0.043	0.166	-0.01	-0.01	-0.01	-0.03	1943	1.1322	2.058156	-0.925956	NAF
NS0116	108	112	NS	BX081347-BX081348	X081347	2			64.7	5.363	0.307	0.03	0.0216	0.03	0.26	0.098	0.019	0.025	0.03	0.146	-0.01	-0.01	-0.01	-0.03	1921	0.765	1.709316	-0.944316	NAF
NS0116	256	260	NS	BX081423-BX081424	X081423	2			67.76	5.104	0.262	0.018	0.01296	0.018	0.219	0.069	0.015	0.008	0.209	0.085	-0.01	-0.01	-0.01	-0.03	1958	0.2448	1.203498	-0.958698	NAF
NS0116	206	210	NS	BX081397-BX081398	X081397	2			66.28	6.323	0.423	0.072	0.05184	0.072	0.406	0.096	0.015	0.023	0.041	0.128	-0.01	-0.01	-0.01	-0.03	1945	0.7038	1.674432	-0.970632	NAF
NS0116	268	270	NS	BX081429	X081429	2			66.82	5.402	0.263	0.019	0.01368	0.019	0.224	0.072	0.016	0.009	0.22	0.067	-0.01	-0.01	-0.01	-0.03	1961	0.2754	1.255824	-0.980424	NAF
NS0116	112	116	NS	BX081349-BX081350	X081349	2			62.28	7.639	0.42	0.027	0.01944	0.027	0.329	0.116	0.017	0.034	0.035	0.195	-0.01	-0.01	-0.01	-0.03	1922	1.0404	2.023272	-0.982872	NAF
NS0116	142	146	NS	BX081365-BX081366	X081365	2			69.13	3.445	0.199	0.025	0.018	0.025	0.207	0.075	0.01	0.01	0.042	0.098	-0.01	-0.01	-0.01	-0.03	1929	0.306	1.30815	-1.00215	NAF
NS0116	146	150	NS	BX081367-BX081368	X081367	2			69.91	2.938	0.191	0.024	0.01728	0.024	0.197	0.085	0.012	0.014	0.051	0.111	-0.01	-0.01	-0.01	-0.03	1930	0.4284	1.48257	-1.05417	NAF
NS0116	138	142	NS	BX081363-BX081364	X081363	2			68.86	3.225	0.23	0.029	0.02088	0.029	0.225	0.087	0.014	0.015	0.03	0.099	-0.01	-0.01	-0.01	-0.03	1928	0.459	1.517454	-1.058454	NAF
NS0116	216	220	NS	BX081403-BX081404	X081403	2			67.58	3.723	0.316	0.054	0.03888	0.054	0.274	0.103	0.015	0.024	0.042	0.131	-0.01	-0.01	-0.01	-0.03	1948	0.7344	1.796526	-1.062126	NAF
NS0116	272	276	NS	BX081431-BX081432	X081431	2			67.15	5.369	0.229	0.017	0.01224	0.017	0.211	0.075	0.015	0.008	0.186	0.083	-0.01	-0.01	-0.01	-0.03	1962	0.2448	1.30815	-1.06335	NAF
NS0116	150	154	NS	BX081369-BX081370	X081369	2			70.56	3.047	0.204	0.026	0.01872	0.026	0.189	0.085	0.012	0.012	0.063	0.091	-0.01	-0.01	-0.01	-0.03	1931	0.3672	1.48257	-1.11537	NAF
NS0116	178	182	NS	BX081383-BX081384	X081383	2			69.59	3.431	0.193	0.021	0.01512	0.021	0.216	0.079	0.014	0.008	0.028	0.083	-0.01	-0.01	-0.01	-0.03	1938	0.2448	1.377918	-1.133118	NAF
NS0116	166	170	NS	BX081377-BX081378	X081377	2			67.13	4.789	0.323	0.039	0.02808	0.039	0.216	0.08	0.012	0.008	0.193	0.076	-0.01	-0.01	-0.01	-0.03	1935	0.2448	1.39536	-1.15056	NAF
NS0116	116	118	NS	BX081352	X081352	2			61.15	10.225	0.692	0.04	0.0288	0.04	0.472	0.141	0.027	0.04	0.043	0.404	-0.01	-0.01	-0.01	-0.03	1923	1.224	2.459322	-1.235322	NAF
NS0116	236	240	NS	BX081413-BX081414	X081413	2			66.73	6.225	0.34	0.025	0.018	0.025	0.248	0.091	0.014	0.011	0.214	0.083	-0.01	-0.01	-0.01	-0.03	1953	0.3366	1.587222	-1.250622	NAF
NS0116	170	174	NS	BX081379-BX081380	X081379	2			68.2	3.651	0.227	0.022	0.01584	0.022	0.211	0.089	0.013	0.009	0.075	0.077	-0.01	-0.01	-0.01	-0.03	1936	0.2754	1.552338	-1.276938	NAF
NS0116	158	162	NS	BX081373-BX081374	X081373	2			68.16	3.795	0.207	0.023	0.01656	0.023	0.188	0.093	0.011	0.011	0.098	0.075	-0.01	-0.01	-0.01	-0.03	1933	0.3366	1.622106	-1.285506	NAF
NS0116	154	158	NS	BX081371-BX081372	X081371	2			68.91	3.606	0.198	0.021	0.01512	0.021	0.202	0.092	0.012	0.01	0.067	0.088	-0.01	-0.01	-0.01	-0.03	1932	0.306	1.604664	-1.298664	NAF
NS0116	214	216	NS	BX081402	X081402	2			69.04	3.13	0.311	0.063	0.04536	0.063	0.264	0.101	0.017	0.014	0.028	0.084	-0.01	-0.01	-0.01	-0.03	1947	0.4284	1.761642	-1.333242	NAF
NS0116	240	244	NS	BX081415-BX081416	X081415	2			66.68	5.741	0.255	0.019	0.01368	0.019	0.209	0.088	0.014	0.006	0.184	0.075	-0.01	-0.01	-0.01	-0.03	1954	0.1836	1.534896	-1.351296	NAF
NS0116	16	18	NS	X074300	074300	1	G	D	32.62	40.68	3.21	0.1935	0.15	0.167	0.45	0.11	0.065	0.018	0.144	0.053	6.27	1.26	0.26	7.79	17116	0.5508	1.91862	-1.36782	NAF
NS0116	232	236	NS	BX081411-BX081412	X081411	2			67.35	5.654	0.371	0.031	0.02232	0.031	0.262	0.109	0.011	0.016	0.198	0.076	-0.01	-0.01	-0.01	-0.03	1952	0.4896	1.901178	-1.411578	NAF
NS0116	96	100	NS	BX081341-BX081342	X081341	2			68.06	3.955	0.178	0.026	0.01872	0.026	0.229	0.099	0.018	0.01	0.04	0.073	-0.01	-0.01	-0.01	-0.03	1918	0.306	1.726758	-1.420758	NAF
NS0116	92	96	NS	BX081339-BX081340	X081339	2			68.94	3.35	0.139	0.03	0.0216	0.03	0.207	0.108	0.023	0.014	0.023	0.082	-0.01	-0.01	-0.01	-0.03	1917	0.4284	1.883736	-1.455336	NAF
NS0116	72	74	NS	X074329	074329	1	G	W	24.78	42.78	3.45	0.3483	0.27	0.158	2.68	0.51	0.101	0.243	0.336	0.076	0.94	12.1	0.64	13.68	17144	7.4358	8.89542	-1.45962	NAF
NS0116	210	214	NS	BX081399-BX081400	X081399	2			67.9	4.156	0.282	0.048	0.03456	0.048	0.268	0.117	0.014	0.018	0.035	0.089	0.1	-0.01	-0.01	0.08	1946	0.5508	2.040714	-1.489914	NAF
NS0116	104	108	NS	BX081345-BX081346	X081345	2			64.63	6.923	0.303	0.041	0.02952	0.041	0.324	0.13	0.028	0.025	0.03	0.139	-0.01	-0.01	-0.01	-0.03	1920	0.765	2.26746	-1.50246	NAF
NS0116	162	166	NS	BX081375-BX081376	X081375	2			68.29	4.362	0.306	0.029	0.02088	0.029	0.223	0.109	0.011	0.013	0.174	0.076	-0.01	-0.01	-0.01	-0.03	1934	0.3978	1.901178	-1.503378	NAF
NS0116	12	14	NS	X074298	074298	1	G	D	24.64	49.6	6.99	0.3354	0.26	0.332	0.42	0.12	0.027	0.018	0.289	0.072	4.06	2.19	0.29	6.54	17114	0.5508	2.09304	-1.54224	NAF
NS0116	88	92	NS	BX081337-BX081338	X081337	2			69.27	2.619	0.105	0.027	0.01944	0.027	0.168	0.112	0.027	0.012	0.015	0.077	-0.01	-0.01	-0.01	-0.03	1916	0.3672	1.953504	-1.586304	NAF
NS0116	228	232	NS	BX081409-BX081410	X081409	2			66.64	5.577	0.281	0.03	0.0216	0.03	0.247	0.122	0.014	0.014	0.101	0.076	-0.01	-0.01	-0.01	-0.03	1951	0.4284	2.127924	-1.699524	NAF
NS0116	100	104	NS	BX081343-BX081344	X081343	2			67.98	4.229	0.203	0.03	0.0216	0.03	0.26	0.135	0.031	0.021	0.034	0.1	0.03	-0.01	-0.01	0.01	1919	0.6426	2.35467	-1.71207	NAF
NS0116	14	16	NS	X074299	074299	1	G	D	29.06	45.4	4.34	0.1677	0.13	0.208	0.36	0.13	0.03	0.018	0.136	0.067	5.43	1.49	0.26	7.18	17115	0.5508	2.26746	-1.71666	NAF
NS0116	10	12	NS	X074297	074297	1	G	D	15.82	57.85	11.01	0.0516	0.04	0.557	0.4	0.13	0.037	0.017	0.345	0.066	2.83	3.32	0.28	6.43	17113	0.5202	2.26746	-1.74726	NAF
NS0116	190	192	NS	BX081389	X081389	2			68.7	3.717	0.215	0.021	0.01512	0.021	0.223	0.118	0.014	0.008	0.039	0.082	-0.01	-0.01	-0.01	-0.03	1941	0.2448	2.058156	-1.813356	NAF
NS0116	18	20	NS	X074302	074302	1	G	D	28.05	46.5	4.62	0.2709	0.21	0.232	0.52	0.13	0.068	0.014	0.223	0.056	5.22	1.57	0.26	7.05	17117	0.4284	2.26746	-1.83906	NAF
NS0116	186	190	NS	BX081387-BX081388	X081387	2			67.01	4.826	0.505	0.077	0.05544	0.077	0.336	0.134	0.018	0.015	0.124	0.091	-0.01	-0.01	-0.01	-0.03	1940	0.459	2.337228	-1.878228	NAF
NS0116	52	54	NS	X074319	074319	1	G	D	27.15	47.83	4.2	0.516	0.4	0.201	0.8	0.13	0.097	0.006	0.307	0.038	4.79	1.51	0.25	6.55	17134	0.1836	2.26746	-2.08386	NAF
NS0116	30	32	NS	X074308	074308	1	G	D	26.89	47.31	5.14	0.387	0.3	0.238	0.73	0.14	0.081	0.009	0.415	0.053	5.03	1.72	0.26	7.01	17123	0.2754	2.44188	-2.16648	NAF
NS0116	220	224	NS	BX081405-BX081406	X081405	2			66.92	4.611	0.217	0.028	0.02016	0.028	0.283	0.155	0.016	0.014	0.022	0.077	-0.01	-0.01	-0.01	-0.03	1949	0.4284	2.70351	-2.27511	NAF
NS0116	28	30	NS	X074307	074307	1	G	D	28.18	46.36	4.31	0.3354	0.26	0.211	0.64	0.15	0.092	0.009	0.258	0.055	5.19	1.52	0.24	6.95	17122	0.2754	2.6163	-2.3409	NAF
NS0116	26	28	NS	X074306	074306	1	G	D	29.18	44.09	4.62	0.3999	0.31	0.221	0.68	0.17	0.097	0.009	0.301	0.055	5.38	1.67	0.27	7.32	17121	0.2754	2.96514	-2.68974	NAF
NS0116	34	36	NS	X074310	074310	1	G	D	24.88	48.99	5.71	0.5547	0.43	0.278	0.8	0.17	0.07	0.009	0.422	0.056	4.75	1.91	0.29	6.95	17125	0.2754	2.96514	-2.68974	NAF
NS0116	54	56	NS	X074320	074320	1	G	D	19.53	55.16	7.62	0.2967	0.23	0.364	1.14	0.17	0.058	0.007	0.821	0.051	3.3	2.37	0.27	5.94	17135	0.2142	2.96514	-2.75094	NAF
NS0116	48	50	NS	X074317	074317	1	G	D	21.54	51.99	6.84	0.5676	0.44	0.326	1.07	0.17	0.077	0.006	1.18	0.046	3.8	2.09	0.3	6.19	17132	0.1836	2.96514	-2.78154	NAF
NS0116	84	88	NS	BX081335-BX081336	X081335	2			66.52	4.99	0.226	0.031	0.02232	0.031	0.282	0.195	0.05	0.018	0.022	0.089	-0.01	-0.01	-0.01	-0.03	1915	0.5508	3.40119	-2.85039	NAF
NS0116	224	228	NS	BX081407-BX081408	X081407	2			67.07	5.445	0.277	0.036	0.02592	0.036	0.285	0.188	0.016	0.014	0.073	0.077	-0.01	-0.01	-0.01	-0.03	1950	0.4284	3.279096	-2.850696	NAF
NS0116	36	38	NS	X074311	074311	1	G	D	20.99	52.52	7.26	0.5289	0.41	0.343	1.01	0.18	0.063	0.009	0.931	0.068	4.01	2.23	0.31	6.55	17126	0.2754	3.13956	-2.86416	NAF
NS0116	8	10	NS	X074296	074296	1	G	D	16.53	57.67	10.45	0.0258	0.02	0.475	0.13	0.21	0.136	0.022	0.064	0.066	3.19	3.32	0.27	6.78	17112	0.6732	3.66282	-2.98962	NAF
NS0116	38	40	NS	X074312	074312	1	G	D	21.78	52.68	7.17	0.4515	0.35	0.345	1.04	0.2	0.072	0.008	0.958	0.066	2.8	2.19	0.31	5.3	17127	0.2448	3.4884	-3.2436	NAF
NS0116	60	62	NS	X074323	074323	1	G	D	25.71	48.44	4.94	0.4515	0.35	0.232	1.01	0.2	0.08	0.006	0.372	0.042	4.92	1.73	0.27	6.92	17138	0.1836	3.4884	-3.3048	NAF
NS0116	74	76	NS	X074330	074330	1	G	W	24.32	44.83	3.7	0.2451	0.19	0.169	2.36	0.49	0.109	0.169	0.262	0.061	1.42	10.46	0.48	12.36	17145	5.1714	8.54658	-3.37518	NAF
NS0116	32	34	NS	X074309	074309	1	G	D	20.74	52.47	7.79	0.3354	0.26	0.371	1.03	0.21	0.056	0.009	0.806	0.076	3.98	2.42	0.28	6.68	17124	0.2754	3.66282	-3.38742	NAF
NS0116	20	22	NS	X074303	074303	1	G	D	24.82	47.17	7.1	0.3354	0.26	0.355	0.83	0.22	0.084	0.014	0.405	0.088	4.71	2.35	0.31	7.37	17118	0.4284	3.83724	-3.40884	NAF
NS0116	50	52	NS	X074318	074318	1	G	D	24.59	48.82	5.77	0.5805	0.45	0.286	1.16	0.21	0.079	0.006	0.491	0.055	4.64	1.99	0.32	6.95	17133	0.1836	3.66282	-3.47922	NAF
NS0116	40	42	NS	X074313	074313	1	G	D	21.54	50.61	7.86	0.4257	0.33	0.388	1.29	0.22	0.066	0.008	0.959	0.066	4.08	2.44	0.31	6.83	17128	0.2448	3.83724	-3.59244	NAF
NS0116	76	78	NS	X074331	074331	1	G	W	26.96	46.77	5.3	0.1032	0.08	0.251	1.14	0.31	0.126	0.059	0.114	0.03	4.69	1.93	0.41	7.03	17146	1.8054	5.40702	-3.60162	NAF
NS0116	44	46	NS	X074315	074315	1	G	D	21.99	50.74	7.33	0.4644	0.36	0.363	1.21	0.22	0.076	0.007	0.677	0.056	4.19	2.36	0.3	6.85	17130	0.2142	3.83724	-3.62304	NAF
NS0116	46	48	NS	X074316	074316	1	G	D	22.02	51.53	6.76	0.5289	0.41	0.332	1.2	0.22	0.072	0.007	0.669	0.052	4.08	2.23	0.3	6.61	17131	0.2142	3.83724	-3.62304	NAF
NS0116	58	60	NS	X074322	074322	1	G	D	25.79	47.49	5.11	0.4773	0.37	0.27	1.29	0.22	0.093	0.005	0.413	0.047	5.06	1.79	0.3	7.15	17137	0.153	3.83724	-3.68424	NAF
NS0116	42	44	NS	X074314	074314	1	G	D	22.17	50.24	7.45	0.4386	0.34	0.353	1.22	0.23	0.078	0.008	0.685	0.07	4.26	2.39	0.32	6.97	17129	0.2448	4.01166	-3.76686	NAF
NS0116	56	58	NS	X074321	074321	1	G	D	20.19	52.93	8.12	0.2451	0.19	0.391	1.44	0.23	0.064	0.007	0.863	0.059	3.6	2.57	0.31	6.48	17136	0.2142	4.01166	-3.79746	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0116	202	204	NS	X074395	074395	1	G	W	22.1	45.94	5.89	0.3096	0.24	0.27	3.03	1.13	0.113	0.514	1.14	0.144	0.84	7.29	1.31	9.44	17209	15.7284	19.70946	-3.98106	NAF
NS0116	62	64	NS	X074324	074324	1	G	D	21.4	51.62	7.5	0.2838	0.22	0.361	1.48	0.24	0.081	0.006	0.786	0.063	3.96	2.37	0.27	6.6	17139	0.1836	4.18608	-4.00248	NAF
NS0116	84	86	NS	X074335	074335	1	G	W	28.04	41.41	2.62	0.3741	0.29	0.124	2.26	0.63	0.113	0.227	0.337	0.06	0.87	10.2	0.45	11.52	17150	6.9462	10.98846	-4.04226	NAF
NS0116	24	26	NS	X074305	074305	1	G	D	22.93	49.41	7.53	0.2709	0.21	0.37	1.07	0.26	0.064	0.012	0.621	0.082	4.36	2.44	0.3	7.1	17120	0.3672	4.53492	-4.16772	NAF
NS0116	22	24	NS	X074304	074304	1	G	D	25.53	46.54	6.53	0.3612	0.28	0.328	0.99	0.27	0.071	0.013	0.448	0.094	4.88	2.22	0.31	7.41	17119	0.3978	4.70934	-4.31154	NAF
NS0116	0	2	NS	X074292	074292	1	G	D	17.97	53.76	11.64	0.0258	0.02	0.546	0.2	0.31	0.025	0.032	0.131	0.049	3.01	3.88	0.28	7.17	17108	0.9792	5.40702	-4.42782	NAF
NS0116	130	132	NS	X074359	074359	1	G	W	22.54	45.72	6.23	0.2709	0.21	0.29	3.39	1.05	0.101	0.445	0.512	0.124	0.81	7.13	1.28	9.22	17173	13.617	18.3141	-4.6971	NAF
NS0116	64	66	NS	X074325	074325	1	G	D	18.8	54.33	8.47	0.2193	0.17	0.414	1.44	0.28	0.095	0.005	0.664	0.055	3.79	2.69	0.3	6.78	17140	0.153	4.88376	-4.73076	NAF
NS0116	128	130	NS	X074358	074358	1	G	W	23.84	43.71	5.03	0.3483	0.27	0.238	3.25	0.98	0.123	0.403	0.579	0.138	0.86	9.02	1.15	11.03	17172	12.3318	17.09316	-4.76136	NAF
NS0116	66	68	NS	X074326	074326	1	G	D	22.26	49.8	6.71	0.2967	0.23	0.335	2.31	0.58	0.164	0.161	0.56	0.149	2.91	3.28	0.64	6.83	17141	4.9266	10.11636	-5.18976	NAF
NS0116	120	122	NS	X074354	074354	1	G	W	21.9	47.82	4.32	0.3483	0.27	0.194	2.68	1.17	0.13	0.485	0.56	0.11	0.73	8.3	1.28	10.31	17168	14.841	20.40714	-5.56614	NAF
NS0116	88	90	NS	X074337	074337	1	G	W	28.97	45.18	2.36	0.2967	0.23	0.113	1.67	0.59	0.127	0.132	0.347	0.06	0.93	6.29	0.11	7.33	17152	4.0392	10.29078	-6.25158	NAF
NS0116	216	218	NS	X074403	074403	1	G	W	29.89	38.73	2.39	0.4773	0.37	0.109	2.17	0.57	0.072	0.115	0.412	0.047	0.57	11.25	0.07	11.89	17216	3.519	9.94194	-6.42294	NAF
NS0116	208	210	NS	X074398	074398	1	G	W	27.65	38.8	3.82	0.3225	0.25	0.179	2.69	0.84	0.108	0.26	0.4	0.081	0.69	11.02	0.63	12.34	17212	7.956	14.65128	-6.69528	NAF
NS0116	126	128	NS	X074357	074357	1	G	W	24.82	41.87	4.28	0.3612	0.28	0.2	3.14	0.84	0.132	0.255	0.489	0.123	0.87	11.04	0.75	12.66	17171	7.803	14.65128	-6.84828	NAF
NS0116	250	252	NS	X074420	074420	1	G	W	33.67	40.36	1.35	0.5547	0.43	0.061	1.54	0.55	0.139	0.088	0.484	0.019	0.27	6.1	-0.17	6.2	17233	2.6928	9.5931	-6.9003	NAF
NS0116	90	92	NS	X074338	074338	1	G	W	26.83	46.77	3.26	0.258	0.2	0.145	1.93	0.76	0.107	0.203	0.802	0.093	0.86	5.58	0.45	6.89	17153	6.2118	13.25592	-7.04412	NAF
NS0116	6	8	NS	X074295	074295	1	G	D	16.65	56.31	11.06	0.0129	0.01	0.499	0.15	0.45	0.114	0.021	0.029	0.045	3.3	3.58	0.29	7.17	17111	0.6426	7.8489	-7.2063	NAF
NS0116	206	208	NS	X074397	074397	1	G	W	25.27	41.2	3.93	0.3354	0.26	0.18	2.77	0.89	0.087	0.261	0.391	0.079	0.81	11.55	0.77	13.13	17211	7.9866	15.52338	-7.53678	NAF
NS0116	176	178	NS	X074382	074382	1	G	W	24.93	44.09	4.86	0.3354	0.26	0.224	2.93	1.15	0.05	0.396	2.16	0.154	0.76	5.65	1.13	7.54	17196	12.1176	20.0583	-7.9407	NAF
NS0116	118	120	NS	X074353	074353	1	G	W	24.23	45.63	3.66	0.2838	0.22	0.174	2.41	0.92	0.116	0.261	0.357	0.079	0.84	9.82	0.69	11.35	17167	7.9866	16.04664	-8.06004	NAF
NS0116	252	254	NS	X074421	074421	1	G	W	32.87	40	1.87	0.5676	0.44	0.087	1.95	0.71	0.191	0.14	1.11	0.031	0.23	5.84	0.03	6.1	17234	4.284	12.38382	-8.09982	NAF
NS0116	102	104	NS	X074344	074344	1	G	W	27.23	45.38	2.41	0.2709	0.21	0.109	1.95	0.8	0.116	0.183	0.515	0.068	0.66	8.02	0.31	8.99	17159	5.5998	13.9536	-8.3538	NAF
NS0116	100	102	NS	X074343	074343	1	G	W	27.37	42.09	3	0.3354	0.26	0.135	2.38	0.95	0.15	0.258	0.734	0.097	0.76	8.82	0.63	10.21	17158	7.8948	16.5699	-8.6751	NAF
NS0116	2	4	NS	X074293	074293	1	G	D	15.89	57.56	10.98	0.0129	0.01	0.53	0.16	0.58	0.024	0.03	0.042	0.046	3.18	3.59	0.32	7.09	17109	0.918	10.11636	-9.19836	NAF
NS0116	264	266	NS	X074427	074427	1	G	W	34.27	39.32	1.63	0.5547	0.43	0.074	1.93	0.69	0.102	0.078	1.13	0.021	0.13	5.05	-0.07	5.11	17240	2.3868	12.03498	-9.64818	NAF
NS0116	200	202	NS	X074394	074394	1	G	W	22.25	46.61	5.31	0.3225	0.25	0.241	3.02	1.36	0.173	0.457	1.19	0.198	0.93	6.9	1.25	9.08	17208	13.9842	23.72112	-9.73692	NAF
NS0116	256	258	NS	X074423	074423	1	G	W	32.28	40.33	1.47	0.5676	0.44	0.065	2.06	0.7	0.135	0.065	1.03	0.022	0.24	6.99	-0.12	7.11	17236	1.989	12.2094	-10.2204	NAF
NS0116	198	200	NS	X074393	074393	1	G	W	26.5	38.46	4.27	0.4128	0.32	0.198	3.03	1.39	0.106	0.451	0.627	0.114	0.83	9.86	1.32	12.01	17207	13.8006	24.24438	-10.44378	NAF
NS0116	196	198	NS	X074392	074392	1	G	W	27.76	39.76	3.23	0.4386	0.34	0.15	2.53	1.06	0.156	0.255	0.868	0.117	0.74	9.74	0.6	11.08	17206	7.803	18.48852	-10.68552	NAF
NS0116	246	248	NS	X074418	074418	1	G	W	31.62	43.01	1.78	0.4773	0.37	0.084	1.89	0.83	0.095	0.123	0.97	0.049	0.23	5	0.05	5.28	17231	3.7638	14.47686	-10.71306	NAF
NS0116	270	272	NS	X074430	074430	1	G	W	36.33	37.46	1.66	0.5031	0.39	0.076	1.78	0.74	0.125	0.06	1.32	0.025	0.03	4.21	-0.12	4.12	17243	1.836	12.90708	-11.07108	NAF
NS0116	4	6	NS	X074294	074294	1	G	D	13.51	60.33	11.27	0.0129	0.01	0.509	0.14	0.67	0.047	0.018	0.05	0.065	2.89	3.71	0.35	6.95	17110	0.5508	11.68614	-11.13534	NAF
NS0116	138	140	NS	X074363	074363	1	G	W	26.53	41.34	4.4	0.2838	0.22	0.205	2.96	1.34	0.079	0.391	0.403	0.075	0.64	8.78	0.91	10.33	17177	11.9646	23.37228	-11.40768	NAF
NS0116	254	256	NS	X074422	074422	1	G	W	33.01	38.25	1.85	0.6192	0.48	0.086	2.31	0.89	0.185	0.131	1.15	0.028	0.24	6.84	0.02	7.1	17235	4.0086	15.52338	-11.51478	NAF
NS0116	182	184	NS	X074385	074385	1	G	W	21.76	46.94	5.17	0.3741	0.29	0.23	3.15	1.32	0.09	0.376	1.32	0.157	0.8	7.47	1.22	9.49	17199	11.5056	23.02344	-11.51784	NAF
NS0116	174	176	NS	X074381	074381	1	G	W	22.07	44.34	6.05	0.3741	0.29	0.278	3.14	1.61	0.09	0.539	2.96	0.17	0.75	5.97	1.48	8.2	17195	16.4934	28.08162	-11.58822	NAF
NS0116	140	142	NS	X074364	074364	1	G	W	26.31	44.19	4.52	0.2967	0.23	0.215	2.45	1.22	0.092	0.315	0.558	0.112	1.09	6.19	0.92	8.2	17178	9.639	21.27924	-11.64024	NAF
NS0116	258	260	NS	X074424	074424	1	G	W	35.36	37.54	1.55	0.5547	0.43	0.07	1.94	0.78	0.125	0.059	1.03	0.027	0.1	5.41	-0.11	5.4	17237	1.8054	13.60476	-11.79936	NAF
NS0116	194	196	NS	X074391	074391	1	G	W	25.83	41.11	5.79	0.2838	0.22	0.278	3.17	1.34	0.092	0.377	1.91	0.152	0.79	6.12	1.01	7.92	17205	11.5362	23.37228	-11.83608	NAF
NS0116	86	88	NS	X074336	074336	1	G	W	28.32	48.39	1.04	0.3096	0.24	0.048	1.17	0.78	0.183	0.055	0.15	0.028	0.48	6.63	-0.17	6.94	17151	1.683	13.60476	-11.92176	NAF
NS0116	266	268	NS	X074428	074428	1	G	W	34.18	39.67	1.38	0.5418	0.42	0.064	1.9	0.81	0.18	0.064	0.909	0.025	0.16	5.26	-0.2	5.22	17241	1.9584	14.12802	-12.16962	NAF
NS0116	268	270	NS	X074429	074429	1	G	W	35.38	37.62	1.7	0.5418	0.42	0.077	1.92	0.84	0.162	0.076	1.25	0.029	0.06	4.97	-0.18	4.85	17242	2.3256	14.65128	-12.32568	NAF
NS0116	186	188	NS	X074387	074387	1	G	W	27.44	41.12	2.5	0.4128	0.32	0.117	2.46	1.08	0.061	0.202	0.229	0.039	0.52	10.85	0.56	11.93	17201	6.1812	18.83736	-12.65616	NAF
NS0116	262	264	NS	X074426	074426	1	G	W	34.2	40.13	1.53	0.516	0.4	0.069	1.83	0.86	0.118	0.069	1.05	0.023	0.05	4.73	-0.01	4.77	17239	2.1114	15.00012	-12.88872	NAF
NS0116	218	220	NS	X074404	074404	1	G	W	24.02	41.66	4.06	0.5289	0.41	0.184	3.1	1.69	0.098	0.536	0.939	0.143	0.89	9.52	1.46	11.87	17217	16.4016	29.47698	-13.07538	NAF
NS0116	210	212	NS	X074399	074399	1	G	W	26.25	41.15	3.94	0.3354	0.26	0.179	2.65	1.56	0.106	0.457	0.524	0.097	0.69	8.84	1.1	10.63	17213	13.9842	27.20952	-13.22532	NAF
NS0116	146	148	NS	X074367	074367	1	G	W	27.34	43.44	3.74	0.3612	0.28	0.175	2.32	1.37	0.09	0.342	1.43	0.104	0.54	5.52	0.96	7.02	17181	10.4652	23.89554	-13.43034	NAF
NS0116	92	94	NS	X074339	074339	1	G	W	27.14	45.46	2.37	0.2967	0.23	0.108	2.03	1.11	0.1	0.178	0.646	0.098	0.73	6.96	0.46	8.15	17154	5.4468	19.36062	-13.91382	NAF
NS0116	214	216	NS	X074402	074402	1	G	W	26.9	40.52	3.55	0.4257	0.33	0.159	2.69	1.16	0.098	0.205	0.506	0.097	0.68	10.12	0.61	11.41	17215	6.273	20.23272	-13.95972	NAF
NS0116	260	262	NS	X074425	074425	1	G	W	33.31	40.22	1.61	0.5547	0.43	0.074	1.95	0.95	0.152	0.077	1.04	0.023	0.13	5.37	0	5.5	17238	2.3562	16.5699	-14.2137	NAF
NS0116	168	170	NS	X074378	074378	1	G	W	33.24	41.22	1.77	0.4257	0.33	0.098	1.66	1.01	0.093	0.06	0.677	0.049	0.34	4.38	0.13	4.85	17192	1.836	17.61642	-15.78042	NAF
NS0116	180	182	NS	X074384	074384	1	G	W	32.14	38.94	2.54	0.3225	0.25	0.118	2.28	1.29	0.168	0.122	0.486	0.086	0.48	6.59	0.26	7.33	17198	3.7332	22.50018	-18.76698	NAF
NS0116	272	274	NS	X074431	074431	1	G	W	34.39	39.07	1.42	0.5676	0.44	0.065	1.86	1.2	0.17	0.052	1.07	0.026	0.03	4.8	0.09	4.92	17244	1.5912	20.9304	-19.3392	NAF
NS0116	238	240	NS	X074414	074414	1	G	W	32.8	40.78	1.97	0.4902	0.38	0.088	1.84	1.28	0.109	0.089	1.06	0.042	0.16	4.59	0.33	5.08	17227	2.7234	22.32576	-19.60236	NAF
NS0116	278	280	NS	X074434	074434	1	G	W	33.55	39.34	1.55	0.5418	0.42	0.072	1.89	1.34	0.142	0.108	1.03	0.022	0.05	4.94	0.35	5.34	17247	3.3048	23.37228	-20.06748	NAF
NS0116	144	146	NS	X074366	074366	1	G	W	31	42.69	1.89	0.3999	0.31	0.09	1.69	1.4	0.085	0.124	0.512	0.064	0.36	5.36	0.49	6.21	17180	3.7944	24.4188	-20.6244	NAF
NS0116	274	276	NS	X074432	074432	1	G	W	35.05	38.14	1.52	0.5418	0.42	0.07	1.87	1.3	0.139	0.06	1.13	0.013	0.03	4.5	0.28	4.81	17245	1.836	22.6746	-20.8386	NAF
NS0116	150	152	NS	X074369	074369	1	G	W	26.46	42.35	4.69	0.2967	0.23	0.217	2.86	1.72	0.151	0.299	1.58	0.143	0.74	5.4	1.05	7.19	17183	9.1494	30.00024	-20.85084	NAF
NS0116	94	96	NS	X074340	074340	1	G	W	28.58	45.62	1.84	0.2709	0.21	0.083	1.74	1.4	0.105	0.091	0.417	0.074	0.61	6.24	0.42	7.27	17155	2.7846	24.4188	-21.6342	NAF
NS0116	178	180	NS	X074383	074383	1	G	W	31.62	41.35	2.31	0.2967	0.23	0.104	2.21	1.41	0.092	0.087	0.445	0.076	0.46	5.46	0.53	6.45	17197	2.6622	24.59322	-21.93102	NAF
NS0116	96	98	NS	X074341	074341	1	G	W	30.28	44.52	1.78	0.2838	0.22	0.082	1.71	1.4	0.108	0.077	0.482	0.082	0.59	5.25	0.4	6.24	17156	2.3562	24.4188	-22.0626	NAF
NS0116	142	144	NS	X074365	074365	1	G	W	27.49	41.43	4.05	0.3354	0.26	0.189	2.85	1.76	0.089	0.277	1.1	0.148	0.71	5.98	1.24	7.93	17179	8.4762	30.69792	-22.22172	NAF
NS0116	244	246	NS	X074417	074417	1	G	W	33.22	38.19	2.05	0.5547	0.43	0.096	2.11	1.6	0.122	0.18	1.17	0.057	0.22	5.2	0.58	6	17230	5.508	27.9072	-22.3992	NAF
NS0116	98	100	NS	X074342	074342	1	G	W	30.41	41.34	2.45	0.258	0.2	0.113	2.25	1.53	0.122	0.117	0.606	0.106	0.72	5.94	0.64	7.3	17157	3.5802	26.68626	-23.10606	NAF
NS0116	232	234	NS	X074411	074411	1	G	W	30.65	40.68	2.69	0.5031	0.39	0.122	2.23	1.65	0.115	0.176	1.17	0.057	0.31	5.38	0.7	6.39	17224	5.3856	28.7793	-23.3937	NAF
NS0116	152	154	NS	X074370	074370	1	G	W	31.46	42.45	2.46	0.2967	0.23	0.112	1.61	1.58	0.089	0.116	0.616	0.06	0.49	4.11	0.66	5.26	17184	3.5496	27.55836	-24.00876	NAF
NS0116	164	166	NS	X074376	074376	1	G	W	31.85	39.53	2.18	0.5031	0.39	0.103	2.07	1.53	0.101	0.086	0.889	0.068	0.48	6.05	0.63	7.16	17190	2.6316	26.68626	-24.05466	NAF
NS0116	166	168	NS	X074377	074377	1	G	W	33.69	38.6	2.02	0.4644	0.36	0.112	1.86	1.54	0.105	0.091	0.851	0.055	0.39	4.72	0.58	5.69	17191	2.7846	26.86068	-24.07608	NAF
NS0116	156	158	NS	X074372	074372	1	G	W	30.18	40.33	3.09	0.2967	0.23	0.147	2.35	1.74	0.138	0.172	0.976	0.094	0.5	5.5	0.82	6.82	17186	5.2632	30.34908	-25.08588	NAF
NS0116	276	278	NS	X074433	074433	1	G	W	35.45	38.15	1.52	0.4773	0.37	0.075	1.75	1.53	0.105	0.044	1.08	0.028	0.01	3.78	0.64	4.43	17246	1.3464	26.68626	-25.33986	NAF
NS0116	234	236	NS	X074412	074412	1	G	W	31.54	40.04	2.41	0.5289	0.41	0.111	2.09	1.71	0.102	0.139	1.1	0.055	0.3	5.15	0.71	6.16	17225	4.2534	29.82582	-25.57242	NAF
NS0116	222	224	NS	X074406	074406	1	G	W	30.49	38.55	2.16	0.5031	0.39	0.101	2.23	2.2	0.092	0.41	0.436	0.057	0.49	7.34	1.36	9.19	17219	12.546	38.3724	-25.8264	NAF
NS0116	240	242	NS	X074415	074415	1	G	W	33.21	40.38	1.7	0.5418	0.42	0.079	1.74	1.6	0.118	0.056	1.05	0.035	0.12	4.26	0.62	5	17228	1.7136	27.9072	-26.1936	NAF
NS0116	242	244	NS	X074416	074416	1	G	W	33.06	40.01	1.77	0.6063	0.47	0.082	1.82	1.6	0.113	0.052	1.06	0.038	0.17	4.79	0.53	5.49	17229	1.5912	27.9072	-26.316	NAF
NS0116	148	150	NS	X074368	074368	1	G	W	30.72	41.84	2.4	0.3354	0.26	0.109	1.98	1.82	0.128	0.148	0.666	0.079	0.46	5.19	0.86	6.51	17182	4.5288	31.74444	-27.21564	NAF
NS0116	172	174	NS	X074380	074380	1	G	W	35.64	36.25	1.73	0.4386	0.34	0.081	1.87	1.69	0.116	0.069	0.48	0.062	0.37	5.3	0.6	6.27	17194	2.1114	29.47698	-27.36558	NAF
NS0116	154	156	NS	X074371	074371	1	G	W	31.43	41.01	2.07	0.3999	0.31	0.098	1.8	1.8	0.081	0.123	0.636	0.071	0.39	5.12	0.86	6.37	17185	3.7638	31.3956	-27.6318	NAF
NS0116	236	238	NS	X074413	074413	1	G	W	31.88	40.35	2.01	0.5031	0.39	0.095	2.13	1.75	0.143	0.094	0.845	0.057	0.27	5.21	0.68	6.16	17226	2.8764	30.5235	-27.6471	NAF
NS0116	228	230	NS	X074409	074409	1	G	W	33.31	38.54	2.43	0.3999	0.31	0.116	2.13	1.77	0.108	0.102	0.606	0.046	0.29	4.79	0.78	5.86	17222	3.1212	30.87234	-27.75114	NAF
NS0116	170	172	NS	X074379	074379	1	G	W	30.67	41.85	2.6	0.3483	0.27	0.121	2.31	1.85	0.14	0.133	0.826	0.086	0.41	4.21	0.87	5.49	17193	4.0698	32.2677	-28.1979	NAF
NS0116	162	164	NS	X074375	074375	1	G	W	30.8	40.46	2.75	0.387	0.3	0.128	2.13	1.91	0.09	0.164	1.08	0.103	0.51	4.78	1.02	6.31	17189	5.0184	33.31422	-28.29582	NAF
NS0116	192	194	NS	X074390	074390	1	G	W	34.27	36.86	2.09	0.3354	0.26	0.096	1.97	1.79	0.08	0.083	0.367	0.062	0.41	5.71	0.77	6.89	17204	2.5398	31.22118	-28.68138	NAF
NS0116	158	160	NS	X074373	074373	1	G	W	32.47	39.24	2.47	0.4128	0.32	0.116	1.99	1.92	0.113	0.138	0.913	0.087	0.44	4.67	0.9	6.01	17187	4.2228	33.48864	-29.26584	NAF
NS0116	160	162	NS	X074374	074374	1	G	W	31.53	39.45	2.33	0.4257	0.33	0.11	2.05	1.95	0.091	0.135	0.952	0.079	0.45	5.14	1.15	6.74	17188	4.131	34.0119	-29.8809	NAF
NS0116	220	222	NS	X074405	074405	1	G	W	30.14	38.1	1.7	0.5676	0.44	0.076	2.23	1.9	0.089	0.045	0.173	0.027	0.52	9.9	1.01	11.43	17218	1.377	33.1398	-31.7628	NAC
NS0116	190	192	NS	X074389	074389	1	G	W	33.6	37.81	2.19	0.3612	0.28	0.101	2.05	2.07	0.086	0.101	0.455	0.086	0.39	5.1	1.05	6.54	17203	3.0906	36.10494	-33.01434	NAC
NS0116	230	232	NS	X074410	074410	1	G	W	31.48	40.12	2.39	0.4515	0.35	0.113	2.13	2.32	0.143	0.128	0.766	0.053	0.3	4.35	1.22	5.87	17223	3.9168	40.46544	-36.54864	NAC
NS0116	224	226	NS	X074407	074407	1	G	W	30.4	40.6	2.04	0.4773	0.37	0.098	2.12	2.32	0.079	0.084	0.513	0.05	0.37	5.79	1.46	7.62	17220	2.5704	40.46544	-37.89504	NAC
NS0116	188	190	NS	X074388	074388	1	G	W	31.3	37.93	3.61	0.2838	0.22	0.245	2.72	2.52	0.155	0.19	0.656	0.11	0.47	4.62	1.47	6.56	17202	5.814	43.95384	-38.13984	NAC
NS0116	226	228	NS	X074408	074408	1	G	W	28.12	43.17	2.39	0.4773	0.37	0.116	2.33	2.49	0.152	0.11	0.539	0.041	0.39	5.72	1.48	7.59	17221	3.366	43.43058	-40.06458	NAC
NS0116	212	214	NS	X074400	074400	1	G	W	27.97	39.34	3.09	0.4128	0.32	0.143	2.31	2.73	0.154	0.218	0.435	0.089	0.66	8.48	1.36	10.5	17214	6.6708	47.61666	-40.94586	NAC
NS0117	82	84	NS	X074477	074477	1	G	W	11.94	57.88	11	0.1419	0.11	0.566	3.98	0.58	0.023	0.609	3.19	0.033	0.52	3.01	1.11	4.64	17325	18.6354	10.11636	8.51904	PAF(LC)
NS0117	74	76	NS	X074473	074473	1	G	W	19.04	51.57	7.9	0.3096	0.24	0.388	3.68	0.53	0.111	0.416	1.39	0.11	0.82	4.63	1.04	6.49	17321	12.7296	9.24426	3.48534	PAF(LC)
NS0117	78	80	NS	X074475	074475	1	G	W	22.82	46.32	5.42	0.4257	0.33	0.264	3.65	0.5	0.087	0.377	0.803	0.147	0.9	7.73	1.03	9.66	17323	11.5362	8.721	2.8152	PAF(LC)
NS0117	234	236	NS	X074555	074555	1	G	W	25.09	40.34	4.17	0.4644	0.36	0.188	3.17	0.58	0.121	0.406	1.85	0.138	0.83	10.89	0.88	12.6	17400	12.4236	10.11636	2.30724	PAF(LC)
NS0117	166	168	NS	X074520	074520	1	G	W	20.05	54	5.6	0.2967	0.23	0.276	2.65	0.45	0.059	0.312	0.616	0.125	1.44	4.31	1.02	6.77	17330	9.5472	7.8489	1.6983	PAF(LC)
NS0117	76	78	NS	X074474	074474	1	G	W	24.99	42.4	3.86	0.3612	0.28	0.183	2.76	0.48	0.089	0.304	0.793	0.135	0.94	10.37	0.86	12.17	17322	9.3024	8.37216	0.93024	PAF(LC)
NS0117	16	18	NS	X074443	074443	1	G	D	22.73	51.87	8.11	0.2193	0.17	0.366	0.12	0.06	0.011	0.035	0.018	0.055	3.82	2.35	0.3	6.47	17256	1.071	1.04652	0.02448	PAF(LC)
NS0117	174	178	NS	BX081524-BX081525	X081524	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1965	-0.0306	-0.01744	-0.013158	NAF
NS0117	220	222	NS	X074547	074547	1	G	W	26.68	39.92	3.88	0.3483	0.27	0.177	2.58	0.56	0.09	0.309	1.13	0.11	0.85	10.43	0.76	12.04	17393	9.4554	9.76752	-0.31212	NAF
NS0117	18	20	NS	X074444	074444	1	G	D	22.76	52.05	7.24	0.4386	0.34	0.328	0.16	0.08	0.013	0.031	0.025	0.042	3.96	2.2	0.32	6.48	17257	0.9486	1.39536	-0.44676	NAF
NS0117	222	226	NS	BX081548-BX081549	X081548	2			68.78	3.427	0.347	0.048	0.03456	0.048	0.254	0.059	0.01	0.019	0.038	0.084	-0.01	-0.01	-0.01	-0.03	1977	0.5814	1.029078	-0.447678	NAF
NS0117	232	236	NS	BX081554-BX081555	X081554	2			69.46	3.065	0.364	0.055	0.0396	0.055	0.3	0.073	0.013	0.026	0.093	0.118	-0.01	-0.01	-0.01	-0.03	1980	0.7956	1.273266	-0.477666	NAF
NS0117	14	16	NS	X074442	074442	1	G	D	24.98	48.2	8.05	0.1677	0.13	0.33	0.14	0.08	0.014	0.027	0.012	0.056	4.15	2.47	0.29	6.91	17255	0.8262	1.39536	-0.56916	NAF
NS0117	168	170	NS	BX081521	X081521	2			64.08	8.888	0.487	0.042	0.03024	0.042	0.386	0.126	0.021	0.052	0.084	0.099	-0.01	-0.01	-0.01	-0.03	1963	1.5912	2.197692	-0.606492	NAF
NS0117	252	256	NS	BX081564-BX081565	X081564	2			68.66	4.436	0.371	0.031	0.02232	0.031	0.209	0.065	0.013	0.014	0.274	0.072	-0.01	-0.01	-0.01	-0.03	1985	0.4284	1.13373	-0.70533	NAF
NS0117	256	260	NS	BX081566-BX081567	X081566	2			69.65	3.523	0.199	0.02	0.0144	0.02	0.179	0.057	0.013	0.009	0.156	0.072	-0.01	-0.01	-0.01	-0.03	1986	0.2754	0.994194	-0.718794	NAF
NS0117	20	22	NS	X074445	074445	1	G	D	19.97	53.94	8.79	0.3999	0.31	0.389	0.36	0.08	0.033	0.022	0.346	0.054	3.65	2.59	0.3	6.54	17258	0.6732	1.39536	-0.72216	NAF
NS0117	202	206	NS	BX081538-BX081539	X081538	2			69.57	2.502	0.158	0.021	0.01512	0.021	0.18	0.066	0.011	0.014	0.076	0.098	-0.01	-0.01	-0.01	-0.03	1972	0.4284	1.151172	-0.722772	NAF
NS0117	260	264	NS	BX081568-BX081569	X081568	2			69.76	3.726	0.187	0.015	0.0108	0.015	0.175	0.057	0.014	0.008	0.161	0.075	-0.01	-0.01	-0.01	-0.03	1987	0.2448	0.994194	-0.749394	NAF
NS0117	194	198	NS	BX081534-BX081535	X081534	2			70.26	2.558	0.179	0.026	0.01872	0.026	0.196	0.065	0.01	0.012	0.031	0.105	-0.01	-0.01	-0.01	-0.03	1970	0.3672	1.13373	-0.76653	NAF
NS0117	268	272	NS	BX081572-BX081573	X081572	2			68.87	4.142	0.196	0.006	0.00432	0.006	0.182	0.056	0.013	0.006	0.116	0.061	-0.01	-0.01	-0.01	-0.03	1989	0.1836	0.976752	-0.793152	NAF
NS0117	10	12	NS	X074440	074440	1	G	D	23.67	49.53	8.94	0.0903	0.07	0.384	0.16	0.08	0.055	0.019	0.089	0.066	3.51	2.86	0.26	6.63	17253	0.5814	1.39536	-0.81396	NAF
NS0117	206	210	NS	BX081540-BX081541	X081540	2			68.95	3.547	0.235	0.025	0.018	0.025	0.237	0.073	0.012	0.015	0.129	0.079	-0.01	-0.01	-0.01	-0.03	1973	0.459	1.273266	-0.814266	NAF
NS0117	226	228	NS	BX081550	X081550	2			69.53	3.447	0.255	0.025	0.018	0.025	0.246	0.066	0.008	0.011	0.056	0.086	-0.01	-0.01	-0.01	-0.03	1978	0.3366	1.151172	-0.814572	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0117	240	244	NS	BX081558-BX081559	X081558	2			68.53	3.879	0.216	0.024	0.01728	0.024	0.222	0.066	0.011	0.01	0.139	0.083	-0.01	-0.01	-0.01	-0.03	1982	0.306	1.151172	-0.845172	NAF
NS0117	170	174	NS	BX081522-BX081523	X081522	2			68.88	3.828	0.312	0.028	0.02016	0.028	0.272	0.077	0.01	0.016	0.082	0.094	-0.01	-0.01	-0.01	-0.03	1964	0.4896	1.343034	-0.853434	NAF
NS0117	218	222	NS	BX081546-BX081547	X081546	2			69.91	2.891	0.255	0.03	0.0216	0.03	0.241	0.079	0.014	0.017	0.057	0.123	-0.01	-0.01	-0.01	-0.03	1976	0.5202	1.377918	-0.857718	NAF
NS0117	12	14	NS	X074441	074441	1	G	D	19.86	55.87	8.46	0.0903	0.07	0.344	0.09	0.09	0.013	0.023	0.015	0.065	3.39	2.42	0.26	6.07	17254	0.7038	1.56978	-0.86598	NAF
NS0117	198	202	NS	BX081536-BX081537	X081536	2			70.23	3.153	0.235	0.027	0.01944	0.027	0.231	0.073	0.012	0.013	0.081	0.079	-0.01	-0.01	-0.01	-0.03	1971	0.3978	1.273266	-0.875466	NAF
NS0117	264	268	NS	BX081570-BX081571	X081570	2			69.03	4.505	0.291	0.014	0.01008	0.014	0.187	0.065	0.015	0.007	0.209	0.07	-0.01	-0.01	-0.01	-0.03	1988	0.2142	1.13373	-0.91953	NAF
NS0117	210	214	NS	BX081542-BX081543	X081542	2			69.46	3.029	0.216	0.027	0.01944	0.027	0.224	0.076	0.012	0.013	0.071	0.089	-0.01	-0.01	-0.01	-0.03	1974	0.3978	1.325592	-0.927792	NAF
NS0117	246	248	NS	BX081561	X081561	2			68.56	4.247	0.264	0.021	0.01512	0.021	0.226	0.07	0.011	0.009	0.195	0.07	-0.01	-0.01	-0.01	-0.03	1983	0.2754	1.22094	-0.94554	NAF
NS0117	26	28	NS	X074448	074448	1	G	D	21.49	54.94	6.4	0.2967	0.23	0.305	0.37	0.08	0.033	0.014	0.313	0.042	3.98	2.06	0.26	6.3	17261	0.4284	1.39536	-0.96696	NAF
NS0117	248	252	NS	BX081562-BX081563	X081562	2			67.85	4.792	0.278	0.018	0.01296	0.018	0.217	0.068	0.012	0.007	0.223	0.071	-0.01	-0.01	-0.01	-0.03	1984	0.2142	1.186056	-0.971856	NAF
NS0117	272	276	NS	BX081574-BX081575	X081574	2			69.37	4.145	0.192	0.013	0.00936	0.013	0.191	0.068	0.015	0.007	0.084	0.066	-0.01	-0.01	-0.01	-0.03	1990	0.2142	1.186056	-0.971856	NAF
NS0117	6	8	NS	X074438	074438	1	G	D	24.46	52.82	6.1	0.0645	0.05	0.263	0.1	0.1	0.023	0.022	0.022	0.06	2.85	2	0.22	5.07	17251	0.6732	1.7442	-1.071	NAF
NS0117	8	10	NS	X074439	074439	1	G	D	22.27	52.28	8.69	0.0645	0.05	0.386	0.12	0.1	0.043	0.022	0.062	0.066	3.24	2.76	0.26	6.26	17252	0.6732	1.7442	-1.071	NAF
NS0117	276	280	NS	BX081576-BX081577	X081576	2			68.51	5.053	0.215	0.008	0.00576	0.008	0.207	0.076	0.017	0.006	0.089	0.079	-0.01	-0.01	-0.01	-0.03	1991	0.1836	1.325592	-1.141992	NAF
NS0117	188	190	NS	BX081531	X081531	2			68.9	3.657	0.215	0.024	0.01728	0.024	0.251	0.095	0.015	0.016	0.033	0.076	-0.01	-0.01	-0.01	-0.03	1968	0.4896	1.65699	-1.16739	NAF
NS0117	24	26	NS	X074447	074447	1	G	D	17.48	56.19	10.82	0.1677	0.13	0.501	0.43	0.09	0.015	0.013	0.412	0.061	2.82	3.2	0.28	6.3	17260	0.3978	1.56978	-1.17198	NAF
NS0117	236	240	NS	BX081556-BX081557	X081556	2			67.33	5.236	0.357	0.029	0.02088	0.029	0.32	0.097	0.014	0.015	0.176	0.091	-0.01	-0.01	-0.01	-0.03	1981	0.459	1.691874	-1.232874	NAF
NS0117	190	194	NS	BX081532-BX081533	X081532	2			69.48	3.184	0.171	0.021	0.01512	0.021	0.206	0.09	0.014	0.011	0.031	0.081	-0.01	-0.01	-0.01	-0.03	1969	0.3366	1.56978	-1.23318	NAF
NS0117	214	218	NS	BX081544-BX081545	X081544	2			68.95	3.893	0.286	0.024	0.01728	0.024	0.267	0.097	0.015	0.012	0.11	0.08	-0.01	-0.01	-0.01	-0.03	1975	0.3672	1.691874	-1.324674	NAF
NS0117	228	232	NS	BX081552-BX081553	X081552	2			63.48	8.699	0.519	0.054	0.03888	0.054	0.511	0.159	0.027	0.042	0.07	0.11	-0.01	-0.01	-0.01	-0.03	1979	1.2852	2.773278	-1.488078	NAF
NS0117	72	74	NS	X074472	074472	1	G	W	21.94	46.37	6.41	0.3354	0.26	0.306	3.24	0.67	0.065	0.333	1.47	0.143	1.03	6.84	1.04	8.91	17320	10.1898	11.68614	-1.49634	NAF
NS0117	4	6	NS	X074437	074437	1	G	D	17.24	59.62	9.06	0.0258	0.02	0.378	0.1	0.14	0.016	0.026	0.03	0.041	2.52	2.84	0.25	5.61	17250	0.7956	2.44188	-1.64628	NAF
NS0117	222	224	NS	X074548	074548	1	G	W	24	45.4	4.08	0.3225	0.25	0.189	2.31	0.68	0.169	0.33	0.662	0.078	0.72	9.87	0.8	11.39	17394	10.098	11.86056	-1.76256	NAF
NS0117	182	186	NS	BX081528-BX081529	X081528	2			68.99	4.097	0.194	0.02	0.0144	0.02	0.226	0.123	0.019	0.011	0.034	0.079	-0.01	-0.01	-0.01	-0.03	1967	0.3366	2.145366	-1.808766	NAF
NS0117	232	234	NS	X074554	074554	1	G	W	27.58	38.42	3.74	0.4257	0.33	0.167	2.96	0.49	0.098	0.219	1.17	0.061	0.67	11.48	0.46	12.61	17399	6.7014	8.54658	-1.84518	NAF
NS0117	40	42	NS	X074456	074456	1	G	D	29.96	45.22	2.92	0.4386	0.34	0.142	0.72	0.12	0.1	0.006	0.123	0.032	5.58	1.23	0.22	7.03	17286	0.1836	2.09304	-1.90944	NAF
NS0117	22	24	NS	X074446	074446	1	G	D	17.31	53.64	12.21	0.5676	0.44	0.547	0.64	0.13	0.011	0.011	0.731	0.076	2.45	3.59	0.35	6.39	17259	0.3366	2.26746	-1.93086	NAF
NS0117	178	182	NS	BX081526-BX081527	X081526	2			65.56	5.926	0.47	0.052	0.03744	0.052	0.446	0.178	0.028	0.031	0.044	0.112	-0.01	-0.01	-0.01	-0.03	1966	0.9486	3.104676	-2.156076	NAF
NS0117	30	32	NS	X074450	074450	1	G	D	18.78	53.94	9.56	0.4515	0.35	0.451	0.82	0.15	0.027	0.01	1.44	0.059	2.71	2.76	0.29	5.76	17281	0.306	2.6163	-2.3103	NAF
NS0117	28	30	NS	X074449	074449	1	G	D	16.44	54.22	12.26	0.1677	0.13	0.618	0.79	0.16	0.012	0.012	1.36	0.06	2.48	3.54	0.32	6.34	17262	0.3672	2.79072	-2.42352	NAF
NS0117	164	166	NS	X074519	074519	1	G	W	22.93	45.16	4.7	0.5031	0.39	0.234	3.2	0.9	0.085	0.426	0.389	0.109	0.83	9.33	1.19	11.35	17329	13.0356	15.6978	-2.6622	NAF
NS0117	54	56	NS	X074463	074463	1	G	D	12.32	59.84	10.75	0.1806	0.14	0.553	2.02	0.17	0.047	0.006	3.88	0.054	1.9	2.24	0.33	4.47	17293	0.1836	2.96514	-2.78154	NAF
NS0117	38	40	NS	X074455	074455	1	G	D	29.35	44.04	3.96	0.3999	0.31	0.191	0.85	0.2	0.112	0.006	0.173	0.034	5.6	1.58	0.24	7.42	17285	0.1836	3.4884	-3.3048	NAF
NS0117	42	44	NS	X074457	074457	1	G	D	30.24	43.54	3.44	0.4257	0.33	0.172	0.95	0.2	0.104	0.006	0.131	0.034	5.55	1.5	0.26	7.31	17287	0.1836	3.4884	-3.3048	NAF
NS0117	32	34	NS	X074452	074452	1	G	D	25.31	46.94	6.42	0.4644	0.36	0.315	0.96	0.21	0.06	0.009	0.944	0.06	4.57	2.08	0.27	6.92	17282	0.2754	3.66282	-3.38742	NAF
NS0117	44	46	NS	X074458	074458	1	G	D	22.4	56.25	3.64	0.3999	0.31	0.183	1.01	0.21	0.066	0.007	0.16	0.041	3.88	1.52	0.22	5.62	17288	0.2142	3.66282	-3.44862	NAF
NS0117	68	70	NS	X074470	074470	1	G	M	18.35	53.4	8.62	0.2322	0.18	0.428	3.66	0.5	0.079	0.167	0.924	0.106	1.8	2.92	0.58	5.3	17318	5.1102	8.721	-3.6108	NAF
NS0117	254	256	NS	X074565	074565	1	G	W	26.88	42.6	3.83	0.4386	0.34	0.17	2.44	0.6	0.098	0.211	2.55	0.056	0.37	7.82	0.37	8.56	17266	6.4566	10.4652	-4.0086	NAF
NS0117	36	38	NS	X074454	074454	1	G	D	25.48	47.41	5.91	0.5418	0.42	0.288	1.04	0.26	0.084	0.009	0.467	0.053	4.73	2.1	0.29	7.12	17284	0.2754	4.53492	-4.25952	NAF
NS0117	230	232	NS	X074553	074553	1	G	W	28.18	38.38	3.64	0.387	0.3	0.167	2.65	0.61	0.081	0.206	1.63	0.033	0.5	10.75	0.39	11.64	17398	6.3036	10.63962	-4.33602	NAF
NS0117	34	36	NS	X074453	074453	1	G	D	25.9	45.18	6.77	0.5418	0.42	0.317	1.08	0.27	0.089	0.008	0.476	0.063	4.93	2.35	0.3	7.58	17283	0.2448	4.70934	-4.46454	NAF
NS0117	52	54	NS	X074462	074462	1	G	D	15.85	57.59	8.43	0.3354	0.26	0.423	1.84	0.28	0.06	0.006	2.32	0.053	3.64	1.43	0.34	5.41	17292	0.1836	4.88376	-4.70016	NAF
NS0117	84	86	NS	X074478	074478	1	G	W	10.09	59.92	10.17	0.1935	0.15	0.52	3.71	1.36	0.019	0.617	3.67	0.031	0.37	2.68	1.52	4.57	17326	18.8802	23.72112	-4.84092	NAF
NS0117	46	48	NS	X074459	074459	1	G	D	26.22	47.79	4.6	0.3999	0.31	0.231	1.45	0.29	0.066	0.006	0.213	0.041	4.91	1.91	0.3	7.12	17289	0.1836	5.05818	-4.87458	NAF
NS0117	50	52	NS	X074461	074461	1	G	D	23.35	50.74	5.65	0.4257	0.33	0.284	1.61	0.29	0.07	0.005	0.317	0.053	4.44	2.03	0.34	6.81	17291	0.153	5.05818	-4.90518	NAF
NS0117	212	214	NS	X074543	074543	1	G	W	28.01	37.6	3.56	0.3354	0.26	0.163	2.73	0.69	0.104	0.229	1.7	0.103	0.73	11.05	0.51	12.29	17389	7.0074	12.03498	-5.02758	NAF
NS0117	64	66	NS	X074468	074468	1	G	M	28.34	46.98	3.62	0.3096	0.24	0.172	1.12	0.31	0.068	0.009	0.126	0.046	4.77	1.5	0.22	6.49	17298	0.2754	5.40702	-5.13162	NAF
NS0117	48	50	NS	X074460	074460	1	G	D	23.94	49.66	5.77	0.2709	0.21	0.292	1.61	0.32	0.067	0.006	0.381	0.05	4.56	2.13	0.32	7.01	17290	0.1836	5.58144	-5.39784	NAF
NS0117	56	58	NS	X074464	074464	1	G	D	17.28	57.14	7.51	0.1806	0.14	0.374	2.03	0.33	0.059	0.005	1.04	0.063	3.29	2.3	0.36	5.95	17294	0.153	5.75586	-5.60286	NAF
NS0117	62	64	NS	X074467	074467	1	G	M	21.96	52.33	5.79	0.516	0.4	0.285	1.62	0.33	0.082	0.005	0.972	0.059	4.06	1.83	0.33	6.22	17297	0.153	5.75586	-5.60286	NAF
NS0117	58	60	NS	X074465	074465	1	G	D	21.23	53.58	5.74	0.4644	0.36	0.284	1.74	0.34	0.073	0.005	0.572	0.052	4.09	1.97	0.32	6.38	17295	0.153	5.93028	-5.77728	NAF
NS0117	224	226	NS	X074549	074549	1	G	W	29.91	34.68	3.84	0.4128	0.32	0.18	2.89	0.78	0.17	0.251	0.448	0.095	0.75	11.79	0.52	13.06	17395	7.6806	13.60476	-5.92416	NAF
NS0117	174	176	NS	X074524	074524	1	G	W	23.11	45.75	4.16	0.2451	0.19	0.201	3.27	0.87	0.083	0.289	0.505	0.141	0.82	9.62	0.83	11.27	17334	8.8434	15.17454	-6.33114	NAF
NS0117	278	280	NS	X074577	074577	1	G	W	33.45	42.82	1	0.5547	0.43	0.043	1.21	0.42	0.091	0.025	0.395	0.017	0.17	5.21	0.07	5.45	17278	0.765	7.32564	-6.56064	NAF
NS0117	256	258	NS	X074566	074566	1	G	W	30.76	41.15	1.86	0.4773	0.37	0.085	2.34	0.67	0.097	0.157	0.943	0.036	0.32	7.61	0.13	8.06	17267	4.8042	11.68614	-6.88194	NAF
NS0117	276	278	NS	X074576	074576	1	G	W	35.95	38.16	1.03	0.7869	0.61	0.045	1.33	0.46	0.104	0.025	0.423	0.017	0.18	5.98	0	6.16	17277	0.765	8.02332	-7.25832	NAF
NS0117	178	180	NS	X074526	074526	1	G	W	25.75	40.21	4.57	0.258	0.2	0.219	3.39	0.86	0.095	0.25	0.471	0.11	0.9	10.83	0.75	12.48	17354	7.65	15.00012	-7.35012	NAF
NS0117	194	196	NS	X074534	074534	1	G	W	28.72	40.24	2.94	0.2967	0.23	0.138	2.48	0.75	0.106	0.181	0.873	0.131	0.74	9.44	0.39	10.57	17362	5.5386	13.0815	-7.5429	NAF
NS0117	60	62	NS	X074466	074466	1	G	M	19.83	52.45	7.56	0.3483	0.27	0.372	1.94	0.46	0.111	0.006	1.3	0.065	3.81	2.26	0.36	6.43	17296	0.1836	8.02332	-7.83972	NAF
NS0117	70	72	NS	X074471	074471	1	G	W	19.67	51.1	6.92	0.258	0.2	0.329	3.38	1.16	0.074	0.403	0.816	0.12	1.21	4.64	1.12	6.97	17319	12.3318	20.23272	-7.90092	NAF
NS0117	204	206	NS	X074539	074539	1	G	W	29.96	37.63	2.73	0.3096	0.24	0.124	2.22	0.75	0.118	0.168	1.38	0.095	0.64	10.12	0.26	11.02	17367	5.1408	13.0815	-7.9407	NAF
NS0117	272	274	NS	X074574	074574	1	G	W	34.95	38.89	1.27	0.7224	0.56	0.055	1.55	0.73	0.131	0.149	0.562	0.047	0.14	5.79	0.32	6.25	17275	4.5594	12.73266	-8.17326	NAF
NS0117	0	2	NS	X074435	074435	1	G	D	15.14	55.16	14.24	0.0129	0.01	0.552	0.13	0.52	0.015	0.025	0.074	0.048	2.02	4.78	0.33	7.13	17248	0.765	9.06984	-8.30484	NAF
NS0117	226	228	NS	X074550	074550	1	G	W	29.31	38.57	2.61	0.4257	0.33	0.121	2.53	0.75	0.085	0.147	0.46	0.052	0.59	11.31	0.25	12.15	17396	4.4982	13.0815	-8.5833	NAF
NS0117	88	90	NS	X074480	074480	1	G	W	20.96	48.41	6.41	0.3225	0.25	0.317	4.08	1.04	0.075	0.31	0.873	0.151	0.88	5.64	1.06	7.58	17328	9.486	18.13968	-8.65368	NAF
NS0117	268	270	NS	X074572	074572	1	G	W	35.25	37.59	1.34	0.7095	0.55	0.059	1.59	0.6	0.109	0.048	0.728	0.071	0.16	6.57	0.09	6.82	17273	1.4688	10.4652	-8.9964	NAF
NS0117	176	178	NS	X074525	074525	1	G	W	24.44	42.6	4.17	0.2709	0.21	0.198	3.27	0.92	0.083	0.23	0.433	0.118	0.85	11.04	0.66	12.55	17353	7.038	16.04664	-9.00864	NAF
NS0117	66	68	NS	X074469	074469	1	G	M	26.58	43.68	4.14	0.3741	0.29	0.199	2.28	0.89	0.07	0.212	0.329	0.098	2.78	5.97	0.6	9.35	17317	6.4872	15.52338	-9.03618	NAF
NS0117	240	242	NS	X074558	074558	1	G	W	29.99	36.92	1.7	0.5289	0.41	0.077	1.85	0.63	0.122	0.062	1.12	0.045	0.73	13.02	-0.04	13.71	17403	1.8972	10.98846	-9.09126	NAF
NS0117	274	276	NS	X074575	074575	1	G	W	32.72	41.49	1.59	0.5547	0.43	0.075	1.58	0.65	0.091	0.057	0.577	0.015	0.15	5.94	0.21	6.3	17276	1.7442	11.3373	-9.5931	NAF
NS0117	264	266	NS	X074570	074570	1	G	W	33.6	38.91	1.69	0.5805	0.45	0.077	1.78	0.69	0.11	0.073	0.972	0.068	0.17	6.63	0.03	6.83	17271	2.2338	12.03498	-9.80118	NAF
NS0117	202	204	NS	X074538	074538	1	G	W	29.61	41.88	1.83	0.2967	0.23	0.084	1.89	0.76	0.072	0.11	0.892	0.06	0.49	9.22	0.09	9.8	17366	3.366	13.25592	-9.88992	NAF
NS0117	250	252	NS	X074563	074563	1	G	W	32.68	35.17	2.18	0.5805	0.45	0.1	1.96	0.78	0.115	0.12	1.49	0.043	0.47	9.92	0.01	10.4	17264	3.672	13.60476	-9.93276	NAF
NS0117	196	198	NS	X074535	074535	1	G	W	30.14	40.62	2.32	0.2838	0.22	0.106	2.08	0.86	0.106	0.155	0.54	0.092	0.63	8.73	0.21	9.57	17363	4.743	15.00012	-10.25712	NAF
NS0117	270	272	NS	X074573	074573	1	G	W	35.01	37.2	1.31	0.7353	0.57	0.058	1.75	0.68	0.096	0.051	0.584	0.054	0.18	6.76	0.17	7.11	17274	1.5606	11.86056	-10.29996	NAF
NS0117	260	262	NS	X074568	074568	1	G	W	33.09	40.72	1.55	0.4902	0.38	0.07	1.71	0.75	0.137	0.09	1.19	0.021	0.11	5.39	-0.01	5.49	17269	2.754	13.0815	-10.3275	NAF
NS0117	2	4	NS	X074436	074436	1	G	D	15.77	54.1	14.05	0.00645	0.005	0.539	0.11	0.65	0.021	0.02	0.038	0.061	2.51	4.83	0.39	7.73	17249	0.612	11.3373	-10.7253	NAF
NS0117	198	200	NS	X074536	074536	1	G	W	32.42	39.61	2.11	0.3483	0.27	0.097	1.98	0.87	0.072	0.145	0.772	0.086	0.47	6.78	0.21	7.46	17364	4.437	15.17454	-10.73754	NAF
NS0117	80	82	NS	X074476	074476	1	G	W	15.72	52.42	8.88	0.3225	0.25	0.443	4.15	1.47	0.048	0.476	1.86	0.077	0.89	4.4	1.6	6.89	17324	14.5656	25.63974	-11.07414	NAF
NS0117	262	264	NS	X074569	074569	1	G	W	32.3	38.78	1.79	0.6192	0.48	0.083	1.98	0.9	0.163	0.139	1.15	0.025	0.25	7.3	0.15	7.7	17270	4.2534	15.6978	-11.4444	NAF
NS0117	200	202	NS	X074537	074537	1	G	W	28.56	38.08	3.73	0.3225	0.25	0.177	2.92	1.11	0.163	0.254	1.85	0.12	0.61	8.82	0.64	10.07	17365	7.7724	19.36062	-11.58822	NAF
NS0117	244	246	NS	X074560	074560	1	G	W	32.24	36.03	1.78	0.5934	0.46	0.082	2.08	0.8	0.103	0.071	1.15	0.051	0.55	10.48	0.02	11.05	17405	2.1726	13.9536	-11.781	NAF
NS0117	258	260	NS	X074567	074567	1	G	W	33.66	40.19	1.42	0.5418	0.42	0.066	1.76	0.82	0.135	0.081	1.16	0.017	0.13	5.42	-0.03	5.52	17268	2.4786	14.30244	-11.82384	NAF
NS0117	236	238	NS	X074556	074556	1	G	W	32.1	37.26	2.25	0.5289	0.41	0.104	2.2	0.85	0.094	0.098	0.992	0.06	0.49	8.64	0.09	9.22	17401	2.9988	14.8257	-11.8269	NAF
NS0117	242	244	NS	X074559	074559	1	G	W	31.02	35.06	1.91	0.5289	0.41	0.086	2.21	0.82	0.158	0.074	1.16	0.074	0.65	12.33	0	12.98	17404	2.2644	14.30244	-12.03804	NAF
NS0117	246	248	NS	X074561	074561	1	G	W	32.6	37.83	1.41	0.6063	0.47	0.062	1.98	0.78	0.103	0.051	0.965	0.035	0.41	9.21	-0.09	9.53	17406	1.5606	13.60476	-12.04416	NAF
NS0117	252	254	NS	X074564	074564	1	G	W	33.42	39.03	1.53	0.5418	0.42	0.068	1.79	0.8	0.129	0.051	1.04	0.028	0.26	6.89	-0.14	7.01	17265	1.5606	13.9536	-12.393	NAF
NS0117	206	208	NS	X074540	074540	1	G	W	31.09	37.19	2.15	0.3741	0.29	0.098	2.2	0.94	0.087	0.127	1.14	0.086	0.53	9.85	0.19	10.57	17368	3.8862	16.39548	-12.50928	NAF
NS0117	248	250	NS	X074562	074562	1	G	W	32.27	38.5	1.9	0.4902	0.38	0.085	1.98	0.88	0.127	0.092	1.36	0.034	0.29	7.65	-0.02	7.92	17263	2.8152	15.34896	-12.53376	NAF
NS0117	228	230	NS	X074552	074552	1	G	W	31.82	38.46	2.02	0.4386	0.34	0.09	2.11	0.87	0.054	0.082	0.533	0.036	0.44	8.73	0.12	9.29	17397	2.5092	15.17454	-12.66534	NAF
NS0117	168	170	NS	X074521	074521	1	G	W	27.27	42.06	2.81	0.3225	0.25	0.131	2.23	1.21	0.084	0.228	0.482	0.129	0.79	9.38	0.57	10.74	17331	6.9768	21.10482	-14.12802	NAF
NS0117	218	220	NS	X074546	074546	1	G	W	28.37	39.23	3.25	0.3354	0.26	0.152	2.58	1.18	0.185	0.208	1.11	0.08	0.61	9.65	0.46	10.72	17392	6.3648	20.58156	-14.21676	NAF
NS0117	208	210	NS	X074541	074541	1	G	W	32.04	36.15	1.85	0.4128	0.32	0.086	2.36	1.01	0.096	0.105	0.94	0.075	0.58	10.13	0.23	10.94	17369	3.213	17.61642	-14.40342	NAF
NS0117	188	190	NS	X074531	074531	1	G	W	28.66	40.43	3.13	0.4386	0.34	0.146	2.53	1.31	0.057	0.273	0.915	0.123	0.66	7.99	0.82	9.47	17359	8.3538	22.84902	-14.49522	NAF
NS0117	266	268	NS	X074571	074571	1	G	W	33.76	37.98	1.72	0.6321	0.49	0.078	1.65	0.95	0.168	0.062	1.17	0.052	0.18	6.59	0.17	6.94	17272	1.8972	16.5699	-14.6727	NAF
NS0117	214	216	NS	X074544	074544	1	G	W	29.97	39.85	2.61	0.3225	0.25	0.12	2.4	1.13	0.113	0.115	1.02	0.073	0.5	8.29	0.31	9.1	17390	3.519	19.70946	-16.19046	NAF
NS0117	210	212	NS	X074542	074542	1	G	W	32.2	37.88	2.17	0.4257	0.33	0.103	2.21	1.13	0.089	0.101	0.779	0.058	0.45	8.37	0.24	9.06	17370	3.0906	19.70946	-16.61886	NAF
NS0117	170	172	NS	X074522	074522	1	G	W	24.85	43	4.32	0.2709	0.21	0.199	3	1.93	0.138	0.545	0.713	0.197	0.88	7.42	1.48	9.78	17332	16.677	33.66306	-16.98606	NAF
NS0117	216	218	NS	X074545	074545	1	G	W	34.36	36.45	2	0.3999	0.31	0.092	2.04	1.17	0.092	0.079	0.639	0.048	0.41	7.04	0.18	7.63	17391	2.4174	20.40714	-17.98974	NAF
NS0117	238	240	NS	X074557	074557	1	G	W	30.98	35.56	2.2	0.5547	0.43	0.098	2.47	1.26	0.14	0.094	1.03	0.061	0.56	11.17	0.3	12.03	17402	2.8764	21.97692	-19.10052	NAF
NS0117	172	174	NS	X074523	074523	1	G	W	26.14	42.35	3	0.2838	0.22	0.141	2.75	1.39	0.113	0.162	0.484	0.127	0.74	10.07	0.59	11.4	17333	4.9572	24.24438	-19.28718	NAF
NS0117	192	194	NS	X074533	074533	1	G	W	30.57	40.04	3.01	0.3225	0.25	0.143	2.47	1.47	0.113	0.148	0.825	0.135	0.61	6.11	0.62	7.34	17361	4.5288	25.63974	-21.11094	NAF
NS0117	186	188	NS	X074530	074530	1	G	W	28.14	40.21	3.36	0.3483	0.27	0.155	2.93	1.66	0.146	0.235	0.799	0.15	0.75	7.94	0.94	9.63	17358	7.191	28.95372	-21.76272	NAF
NS0117	190	192	NS	X074532	074532	1	G	W	32.77	38.77	1.62	0.4386	0.34	0.078	1.81	1.65	0.076	0.116	0.401	0.08	0.43	6.72	0.65	7.8	17360	3.5496	28.7793	-25.2297	NAF
NS0117	180	182	NS	X074527	074527	1	G	W	29.45	37.71	2.81	0.3483	0.27	0.132	2.53	1.87	0.075	0.217	0.373	0.092	0.65	9.68	0.89	11.22	17355	6.6402	32.61654	-25.97634	NAF
NS0117	86	88	NS	X074479	074479	1	G	W	17.52	48.31	7.65	0.4773	0.37	0.377	4.37	2.37	0.066	0.477	1.4	0.09	0.66	5.51	2.1	8.27	17327	14.5962	41.33754	-26.74134	NAF
NS0117	184	186	NS	X074529	074529	1	G	W	32.56	39.4	2.23	0.3225	0.25	0.105	2.06	1.98	0.077	0.137	0.492	0.102	0.47	4.76	1.03	6.26	17357	4.1922	34.53516	-30.34296	NAC
NS0117	182	184	NS	X074528	074528	1	G	W	31.5	42.24	1.57	0.4128	0.32	0.073	1.65	2.24	0.078	0.077	0.353	0.082	0.39	3.99	1.26	5.64	17356	2.3562	39.07008	-36.71388	NAC
NS0118	178	180	NS	X074669	074669	1	G	W	11.97	50.62	14.46	0.0903	0.07	0.621	1.18	0.1	0.016	7.71	4.26	0.064	0.19	7.84	2.43	10.46	17440	235.926	1.7442	234.1818	PAF(HC)
NS0118	180	182	NS	X074670	074670	1	G	W	11.59	51.7	14.38	0.0774	0.06	0.615	1.13	0.08	0.013	7.66	4.21	0.061	0.26	7.7	2.24	10.2	17441	234.396	1.39536	233.00064	PAF(HC)
NS0118	216	218	NS	X074688	074688	1	G	W	16.13	48.13	8.69	0.3612	0.28	0.357	1.52	0.28	0.042	4.58	2.63	0.052	0.17	10.17	3.47	13.81	17459	140.148	4.88376	135.26424	PAF(HC)
NS0118	252	254	NS	X074707	074707	1	G	W	9.35	57.84	13.12	0.129	0.1	0.53	2.16	0.1	0.011	4.44	3.79	0.06	0.18	5.47	2.48	8.13	17477	135.864	1.7442	134.1198	PAF(HC)
NS0118	182	184	NS	X074671	074671	1	G	W	8.12	60.07	14.03	0.0774	0.06	0.597	1.05	0.09	0.015	3.84	4.09	0.061	0.19	5.6	1.76	7.55	17442	117.504	1.56978	115.93422	PAF(HC)
NS0118	254	256	NS	X074708	074708	1	G	W	10.93	55.38	11.52	0.2322	0.18	0.459	2.78	0.33	0.014	3.88	3.13	0.056	0.17	5.62	3.63	9.42	17478	118.728	5.75586	112.97214	PAF(HC)
NS0118	164	166	NS	X074662	074662	1	G	W	23.87	41.06	2.57	0.645	0.5	0.11	2.64	0.6	0.097	3.68	0.157	0.023	0.34	11.42	5.21	16.97	17433	112.608	10.4652	102.1428	PAF(HC)
NS0118	250	252	NS	X074706	074706	1	G	W	10.74	55.3	11.84	0.2193	0.17	0.471	2.64	0.31	0.018	3.41	3.34	0.06	0.18	5.87	3.33	9.38	17476	104.346	5.40702	98.93898	PAF(HC)

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0118	224	226	NS	X074692	074692	1	G	W	19.32	43.38	6.98	0.5547	0.43	0.284	2.01	0.39	0.06	3.42	2.19	0.038	0.17	11.26	4.45	15.88	17463	104.652	6.80238	97.84962	PAF(HC)
NS0118	230	232	NS	X074695	074695	1	G	W	16.96	46.04	7.64	0.4386	0.34	0.295	2.35	0.66	0.061	3.01	2.35	0.039	0.17	9.97	4.74	14.88	17466	92.106	11.51172	80.59428	PAF(HC)
NS0118	246	248	NS	X074704	074704	1	G	W	12.45	51.35	10.74	0.3612	0.28	0.441	3.02	0.37	0.022	2.69	3.05	0.051	0.16	6.86	4.27	11.29	17474	82.314	6.45354	75.86046	PAF(HC)
NS0118	212	214	NS	X074686	074686	1	G	W	19.28	43.93	6.64	0.4902	0.38	0.277	2.06	0.34	0.026	2.51	2.02	0.043	0.19	11.91	3.89	15.99	17457	76.806	5.93028	70.87572	PAF(HC)
NS0118	222	224	NS	X074691	074691	1	G	W	22.09	42.13	3.79	0.5547	0.43	0.148	2.18	0.4	0.06	2.53	1.15	0.034	0.16	12.77	4.35	17.28	17462	77.418	6.9768	70.4412	PAF(HC)
NS0118	176	178	NS	X074668	074668	1	G	W	17.68	46.91	7.37	0.4515	0.35	0.315	2.08	0.47	0.066	2.56	2.07	0.042	0.15	10.05	3.95	14.15	17439	78.336	8.19774	70.13826	PAF(HC)
NS0118	232	234	NS	X074696	074696	1	G	W	18.75	43.43	6.23	0.5418	0.42	0.298	2.78	0.66	0.069	2.62	1.97	0.04	0.11	11.12	5.05	16.28	17467	80.172	11.51172	68.66028	PAF(HC)
NS0118	244	246	NS	X074703	074703	1	G	W	12.3	52.65	10.82	0.3483	0.27	0.434	2.55	0.23	0.037	2.19	3.23	0.053	0.15	7.38	3.61	11.14	17473	67.014	4.01166	63.00234	PAF(HC)
NS0118	242	244	NS	X074702	074702	1	G	W	13.51	50.55	10.15	0.4128	0.32	0.407	2.38	0.27	0.045	2.21	3.15	0.052	0.17	7.95	3.98	12.1	17472	67.626	4.70934	62.91666	PAF(HC)
NS0118	248	250	NS	X074705	074705	1	G	W	12.15	52.51	10.77	0.3483	0.27	0.432	2.71	0.46	0.036	2.03	3.25	0.054	0.13	7.47	3.57	11.17	17475	62.118	8.02332	54.09468	PAF(HC)
NS0118	210	212	NS	X074685	074685	1	G	W	25.93	35.08	2.39	0.8385	0.65	0.099	2.57	0.52	0.041	1.85	0.728	0.029	0.31	15.64	4.28	20.23	17456	56.61	9.06984	47.54016	PAF(HC)
NS0118	214	216	NS	X074687	074687	1	G	W	22.38	38.83	5.38	0.5934	0.46	0.218	2.43	0.47	0.057	1.79	1.64	0.034	0.22	13.81	3.96	17.99	17458	54.774	8.19774	46.57626	PAF(HC)
NS0118	256	258	NS	X074709	074709	1	G	W	13.4	51.44	9.64	0.4644	0.36	0.406	3.73	0.56	0.023	1.78	2.37	0.046	0.19	7.71	3.51	11.41	17479	54.468	9.76752	44.70048	PAF(HC)
NS0118	174	176	NS	X074667	074667	1	G	W	24.35	35.48	4.33	0.6708	0.52	0.182	2.79	0.87	0.13	1.75	1.15	0.03	0.23	14.95	3.81	18.99	17438	53.55	15.17454	38.37546	PAF(HC)
NS0118	258	260	NS	X074710	074710	1	G	W	12.26	52.1	10.49	0.3096	0.24	0.466	3.86	1.32	0.02	1.99	2.36	0.059	0.15	6.05	3.6	9.8	17480	60.894	23.02344	37.87056	PAF(HC)
NS0118	162	164	NS	X074661	074661	1	G	W	25.1	42.04	2.36	0.4386	0.34	0.1	2.56	0.53	0.112	1.49	0.054	0.014	1	10.83	3.44	15.27	17432	45.594	9.24426	36.34974	PAF(HC)
NS0118	94	96	NS	X074626	074626	1	G	D	31.08	44.8	2.88	0.645	0.5	0.125	0.86	0.06	0.132	1.1	0.028	0.022	3.27	1.31	1.26	5.84	17380	33.66	1.04652	32.61348	PAF(HC)
NS0118	238	240	NS	X074699	074699	1	G	W	18.76	45.46	5.81	0.5547	0.43	0.236	2.52	0.5	0.077	1.31	1.83	0.033	0.15	12.3	3.16	15.61	17470	40.086	8.721	31.365	PAF(HC)
NS0118	260	262	NS	X074711	074711	1	G	W	14.73	48.72	9.01	0.3612	0.28	0.399	4.21	1.57	0.026	1.79	1.78	0.049	0.22	7.99	3.37	11.58	17481	54.774	27.38394	27.39006	PAF(HC)
NS0118	240	242	NS	X074700	074700	1	G	W	18.45	46.15	5.87	0.5547	0.43	0.244	2.44	0.41	0.067	1.11	1.85	0.031	0.2	12.5	2.58	15.28	17471	33.966	7.15122	26.81478	PAF(HC)
NS0118	234	236	NS	X074697	074697	1	G	W	20.29	42.2	5.09	0.5805	0.45	0.225	2.73	0.71	0.102	1.27	1.58	0.034	0.27	13.57	3.11	16.95	17468	38.862	12.38382	26.47818	PAF(HC)
NS0118	236	238	NS	X074698	074698	1	G	W	21.9	39.03	4.58	0.645	0.5	0.195	2.77	0.68	0.107	1.22	1.44	0.029	0.24	14.81	3.09	18.14	17469	37.332	11.86056	25.47144	PAF(HC)
NS0118	90	92	NS	X074624	074624	1	G	D	27.29	43.75	2.48	0.3741	0.29	0.102	1.86	0.23	0.048	0.831	0.011	0.019	1.54	8.65	1.66	11.85	17378	25.4286	4.01166	21.41694	PAF(HC)
NS0118	204	206	NS	X074682	074682	1	G	W	26.99	32.98	1.48	0.8901	0.69	0.058	3.17	0.43	0.03	0.809	0.399	0.016	0.56	18.64	2.21	21.41	17453	24.7554	7.50006	17.25534	PAF(HC)
NS0118	218	220	NS	X074689	074689	1	G	W	21.17	43.97	3.55	0.5676	0.44	0.143	2.35	0.64	0.101	0.92	1.07	0.023	0.27	14.06	2.45	16.78	17460	28.152	11.16288	16.98912	PAF(HC)
NS0118	144	146	NS	X074652	074652	1	G	D	27.47	36.84	0.65	0.4902	0.38	0.031	2.4	0.7	0.112	0.812	0.006	0.011	0.77	15.67	2.05	18.49	17423	24.8472	12.2094	12.6378	PAF(HC)
NS0118	92	94	NS	X074625	074625	1	G	D	32.22	43.54	2.06	0.4257	0.33	0.091	0.61	0.05	0.13	0.413	0.035	0.027	3.94	0.97	0.99	5.9	17379	12.6378	0.8721	11.7657	PAF(HC)
NS0118	166	168	NS	X074663	074663	1	G	W	24.61	39.59	0.94	0.4644	0.36	0.037	3.27	0.84	0.101	0.818	0.079	0.017	0.37	16.6	1.97	18.94	17434	25.0308	14.65128	10.37952	PAF(HC)
NS0118	198	200	NS	X074679	074679	1	G	W	23.75	43.02	1.55	0.5547	0.43	0.061	2.59	0.28	0.014	0.388	0.278	0.017	0.47	16.03	1.18	17.68	17450	11.8728	4.88376	6.98904	PAF(LC)
NS0118	172	174	NS	X074666	074666	1	G	W	26.2	31.59	3.22	0.6192	0.48	0.133	3.24	0.92	0.111	0.744	0.847	0.028	0.39	18.51	2.02	20.92	17437	22.7664	16.04664	6.71976	PAF(LC)
NS0118	142	144	NS	X074650	074650	1	G	D	32.1	37.35	1.43	0.3741	0.29	0.062	1.42	0.42	0.13	0.448	0.03	0.015	3.14	7.7	1.08	11.92	17422	13.7088	7.32564	6.38316	PAF(LC)
NS0118	206	208	NS	X074683	074683	1	G	W	25.12	37.82	1.24	0.8127	0.63	0.052	3	0.63	0.081	0.531	0.357	0.02	0.48	17.75	1.57	19.8	17454	16.2486	10.98846	5.26014	PAF(LC)
NS0118	208	210	NS	X074684	074684	1	G	W	26.61	36.02	1.11	0.7611	0.59	0.043	2.47	0.32	0.022	0.248	0.324	0.012	0.66	18.71	0.85	20.22	17455	7.5888	5.58144	2.00736	PAF(LC)
NS0118	202	204	NS	X074681	074681	1	G	W	25.42	37.37	1.28	0.645	0.5	0.048	3.41	0.4	0.024	0.275	0.294	0.013	0.59	18.63	0.89	20.11	17452	8.415	6.9768	1.4382	PAF(LC)
NS0118	226	228	NS	X074693	074693	1	G	W	21.54	46.17	0.88	0.5934	0.46	0.033	2.57	0.54	0.072	0.336	0.256	0.02	0.38	15.57	1.07	17.02	17464	10.2816	9.41868	0.86292	PAF(LC)
NS0118	220	222	NS	X074690	074690	1	G	W	25.62	35.83	1.67	0.6837	0.53	0.063	3.03	0.56	0.07	0.337	0.476	0.015	0.45	18.77	1.06	20.28	17461	10.3122	9.76752	0.54468	PAF(LC)
NS0118	196	198	NS	X074678	074678	1	G	W	19.65	51.49	1.23	0.4644	0.36	0.05	2.87	0.37	0.025	0.222	0.056	0.015	0.46	13.67	0.7	14.83	17449	6.7932	6.45354	0.33966	PAF(LC)
NS0118	184	186	NS	X074672	074672	1	G	W	22.77	43.48	1.1	0.5289	0.41	0.041	2.83	0.53	0.082	0.313	0.225	0.019	0.44	16.3	1.01	17.75	17443	9.5778	9.24426	0.33354	PAF(LC)
NS0118	98	100	NS	BX081628	X081628	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1992	-0.0306	-0.01744	-0.013158	NAF
NS0118	140	144	NS	BX081649-BX081650	X081649	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2003	-0.0306	-0.01744	-0.013158	NAF
NS0118	144	146	NS	BX081652	X081652	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2004	-0.0306	-0.01744	-0.013158	NAF
NS0118	150	154	NS	BX081655-BX081656	X081655	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2006	-0.0306	-0.01744	-0.013158	NAF
NS0118	154	158	NS	BX081657-BX081658	X081657	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2007	-0.0306	-0.01744	-0.013158	NAF
NS0118	158	160	NS	BX081659	X081659	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2008	-0.0306	-0.01744	-0.013158	NAF
NS0118	162	166	NS	BX081661-BX081662	X081661	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2009	-0.0306	-0.01744	-0.013158	NAF
NS0118	166	170	NS	BX081663-BX081664	X081663	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2010	-0.0306	-0.01744	-0.013158	NAF
NS0118	50	52	NS	X074604	074604	1	G	D	32.56	50.1	1.06	0.1032	0.08	0.049	0.08	0.01	0.041	0.004	0.09	0.025	1.1	0.37	0.09	1.56	17340	0.1224	0.17442	-0.05202	NAF
NS0118	46	48	NS	X074602	074602	1	G	D	20.96	64.61	3.1	0.0258	0.02	0.128	0.12	0.02	0.037	0.009	0.139	0.032	0.87	0.89	0.11	1.87	17338	0.2754	0.34884	-0.07344	NAF
NS0118	72	74	NS	X074615	074615	1	G	D	38.25	41.01	0.87	0.5676	0.44	0.039	0.19	0.03	0.033	0.014	0.114	0.015	1.46	0.46	0.18	2.1	17351	0.4284	0.52326	-0.09486	NAF
NS0118	34	36	NS	X074595	074595	1	G	D	28.79	54.17	2.13	0.0258	0.02	0.087	0.12	0.02	0.062	0.007	0.26	0.025	1.2	0.51	0.1	1.81	17314	0.2142	0.34884	-0.13464	NAF
NS0118	42	44	NS	X074599	074599	1	G	D	22.04	64.91	1.85	0.0258	0.02	0.084	0.1	0.02	0.035	0.006	0.104	0.027	0.66	0.47	0.08	1.21	17336	0.1836	0.34884	-0.16524	NAF
NS0118	44	46	NS	X074600	074600	1	G	D	15.35	69.96	4.79	0.0258	0.02	0.182	0.14	0.02	0.039	0.005	0.175	0.043	0.75	1.39	0.17	2.31	17337	0.153	0.34884	-0.19584	NAF
NS0118	48	50	NS	X074603	074603	1	G	D	24.81	60.58	1.72	0.0774	0.06	0.085	0.11	0.02	0.027	0.005	0.169	0.032	0.73	0.49	0.11	1.33	17339	0.153	0.34884	-0.19584	NAF
NS0118	36	38	NS	X074596	074596	1	G	D	31.5	50.95	2.01	0.0258	0.02	0.087	0.12	0.02	0.031	0.004	0.237	0.022	0.71	0.48	0.09	1.28	17315	0.1224	0.34884	-0.22644	NAF
NS0118	52	54	NS	X074605	074605	1	G	D	27.91	55.4	1.79	0.129	0.1	0.066	0.13	0.02	0.048	0.004	0.227	0.033	1.43	0.52	0.14	2.09	17341	0.1224	0.34884	-0.22644	NAF
NS0118	54	56	NS	X074606	074606	1	G	D	20.28	63.89	2.59	0.4644	0.36	0.101	0.12	0.02	0.1	0.004	0.048	0.03	2.23	0.83	0.19	3.25	17342	0.1224	0.34884	-0.22644	NAF
NS0118	62	64	NS	X074610	074610	1	G	D	28.35	56.23	1.47	0.0645	0.05	0.063	0.15	0.02	0.026	0.004	0.2	0.026	0.45	0.33	0.08	0.86	17346	0.1224	0.34884	-0.22644	NAF
NS0118	64	66	NS	X074611	074611	1	G	D	25.27	61.35	1.3	0.0387	0.03	0.053	0.13	0.02	0.019	0.004	0.208	0.026	0.33	0.27	0.08	0.68	17347	0.1224	0.34884	-0.22644	NAF
NS0118	28	30	NS	X074592	074592	1	G	D	31.37	52.74	1.4	0.0258	0.02	0.053	0.11	0.02	0.035	0.003	0.295	0.025	0.29	0.26	0.07	0.62	17311	0.0918	0.34884	-0.25704	NAF
NS0118	30	32	NS	X074593	074593	1	G	D	30.16	53.25	1.84	0.0258	0.02	0.057	0.12	0.02	0.034	0.003	0.389	0.025	0.29	0.36	0.1	0.75	17312	0.0918	0.34884	-0.25704	NAF
NS0118	38	40	NS	X074597	074597	1	G	D	30.64	52.51	2.15	0.0258	0.02	0.089	0.11	0.02	0.041	0.003	0.27	0.022	0.59	0.52	0.08	1.19	17316	0.0918	0.34884	-0.25704	NAF
NS0118	40	42	NS	X074598	074598	1	G	D	26.84	56.57	2.88	0.0258	0.02	0.112	0.15	0.02	0.034	0.003	0.469	0.037	0.46	0.62	0.16	1.24	17335	0.0918	0.34884	-0.25704	NAF
NS0118	56	58	NS	X074607	074607	1	G	D	19.45	67.23	2.12	0.1677	0.13	0.088	0.12	0.02	0.072	0.003	0.087	0.036	1.34	0.62	0.15	2.11	17343	0.0918	0.34884	-0.25704	NAF
NS0118	60	62	NS	X074609	074609	1	G	D	23.21	63.74	1.49	0.0903	0.07	0.066	0.13	0.02	0.034	0.003	0.263	0.034	0.49	0.29	0.11	0.89	17345	0.0918	0.34884	-0.25704	NAF
NS0118	66	68	NS	X074612	074612	1	G	D	33.7	47.65	1.14	0.3741	0.29	0.046	0.22	0.03	0.024	0.006	0.137	0.022	1.21	0.44	0.13	1.78	17348	0.1836	0.52326	-0.33966	NAF
NS0118	24	26	NS	X074590	074590	1	G	D	32.67	49.24	1.67	0.0258	0.02	0.057	0.11	0.03	0.074	0.005	0.354	0.03	0.92	0.33	0.1	1.35	17309	0.153	0.52326	-0.37026	NAF
NS0118	26	28	NS	X074591	074591	1	G	D	28.51	54.7	2.38	0.0258	0.02	0.094	0.17	0.03	0.047	0.005	0.655	0.033	0.49	0.35	0.16	1	17310	0.153	0.52326	-0.37026	NAF
NS0118	12	14	NS	X074584	074584	1	G	D	30.13	46.61	3.57	0.0258	0.02	0.101	0.16	0.05	0.014	0.016	0.077	0.057	4.99	1.02	0.22	6.23	17303	0.4896	0.8721	-0.3825	NAF
NS0118	14	16	NS	X074585	074585	1	G	D	27	54.91	1.98	0.0258	0.02	0.066	0.12	0.04	0.017	0.01	0.087	0.036	3.34	0.6	0.12	4.06	17304	0.306	0.69768	-0.39168	NAF
NS0118	58	60	NS	X074608	074608	1	G	D	17.67	69.39	2.33	0.1677	0.13	0.105	0.17	0.03	0.071	0.004	0.091	0.034	1.28	0.64	0.13	2.05	17344	0.1224	0.52326	-0.40086	NAF
NS0118	140	142	NS	X074649	074649	1	G	D	29.3	31.09	1.29	0.5418	0.42	0.053	3.03	0.85	0.128	0.471	0.009	0.019	0.93	18.49	1.12	20.54	17421	14.4126	14.8257	-0.4131	NAF
NS0118	16	18	NS	X074586	074586	1	G	D	19.52	63.27	3.38	0.0258	0.02	0.113	0.15	0.04	0.015	0.009	0.069	0.057	3.42	1.04	0.15	4.61	17305	0.2754	0.69768	-0.42228	NAF
NS0118	68	70	NS	X074613	074613	1	G	D	37.52	41.83	1.38	0.387	0.3	0.059	0.27	0.04	0.025	0.009	0.18	0.018	1.11	0.51	0.15	1.77	17349	0.2754	0.69768	-0.42228	NAF
NS0118	22	24	NS	X074589	074589	1	G	D	29.35	52.69	1.79	0.0258	0.02	0.049	0.11	0.04	0.131	0.008	0.18	0.03	2.09	0.49	0.1	2.68	17308	0.2448	0.69768	-0.45288	NAF
NS0118	0	2	NS	X074578	074578	1	G	D	48.12	15.49	7.89	0.0516	0.04	0.654	0.19	0.1	0.029	0.042	0.177	0.039	4.12	2.05	0.36	6.53	17279	1.2852	1.7442	-0.459	NAF
NS0118	70	72	NS	X074614	074614	1	G	D	39.29	37.83	1.87	0.4386	0.34	0.086	0.39	0.05	0.029	0.013	0.222	0.021	1.84	0.75	0.2	2.79	17350	0.3978	0.8721	-0.4743	NAF
NS0118	128	132	NS	BX081643-BX081644	X081643	2			69.66	1.825	0.042	0.05	0.036	0.001	0.141	0.04	0.009	0.006	0.009	0.13	0.16	-0.01	-0.01	0.14	2000	0.1836	0.69768	-0.51408	NAF
NS0118	4	6	NS	X074580	074580	1	G	D	40.08	23.01	10.2	0.0258	0.02	0.518	0.21	0.12	0.022	0.051	0.061	0.063	4.98	2.77	0.45	8.2	17299	1.5606	2.09304	-0.53244	NAF
NS0118	82	84	NS	X074620	074620	1	G	D	33.06	46.38	1.11	0.5934	0.46	0.052	0.3	0.04	0.089	0.005	0.036	0.02	3.2	0.73	0.09	4.02	17374	0.153	0.69768	-0.54468	NAF
NS0118	116	120	NS	BX081637-BX081638	X081637	2			70.96	1.295	0.033	0.035	0.0252	0.004	0.141	0.039	0.005	0.003	0.013	0.103	0.01	-0.01	-0.01	-0.01	1997	0.0918	0.680238	-0.588438	NAF
NS0118	120	124	NS	BX081639-BX081640	X081639	2			71.34	1.305	0.041	0.039	0.02808	0.008	0.163	0.038	0.003	0.002	0.023	0.088	-0.01	-0.01	-0.01	-0.03	1998	0.0612	0.662796	-0.601596	NAF
NS0118	124	128	NS	BX081641-BX081642	X081641	2			71.59	1.395	0.038	0.048	0.03456	0.007	0.157	0.041	0.005	0.002	0.009	0.087	-0.01	-0.01	-0.01	-0.03	1999	0.0612	0.715122	-0.653922	NAF
NS0118	112	116	NS	BX081635-BX081636	X081635	2			71.3	1.195	0.019	0.032	0.02304	0.003	0.11	0.041	0.007	0.001	0.008	0.093	-0.01	-0.01	-0.01	-0.03	1996	0.0306	0.715122	-0.684522	NAF
NS0118	132	136	NS	BX081645-BX081646	X081645	2			71	1.672	0.025	0.054	0.03888	0.002	0.155	0.045	0.007	0.003	0.005	0.085	0.01	-0.01	-0.01	-0.01	2001	0.0918	0.78489	-0.69309	NAF
NS0118	146	150	NS	BX081653-BX081654	X081653	2			70.83	1.399	0.007	0.035	0.0252	0.002	0.163	0.049	0.005	0.005	0.003	0.094	-0.01	-0.01	-0.01	-0.03	2005	0.153	0.854658	-0.701658	NAF
NS0118	6	8	NS	X074581	074581	1	G	D	11.24	68.26	9.69	0.0258	0.02	0.31	0.23	0.06	0.009	0.011	0.095	0.119	1.77	3	0.3	5.07	17300	0.3366	1.04652	-0.70992	NAF
NS0118	32	34	NS	X074594	074594	1	G	D	24.45	57.46	4.31	0.0258	0.02	0.158	0.27	0.05	0.054	0.005	0.849	0.041	0.83	0.82	0.19	1.84	17313	0.153	0.8721	-0.7191	NAF
NS0118	2	4	NS	X074579	074579	1	G	D	52.47	10.34	5.14	0.1032	0.08	1.651	0.11	0.15	0.034	0.059	0.023	0.027	5.37	1.11	0.37	6.85	17280	1.8054	2.6163	-0.8109	NAF
NS0118	108	112	NS	BX081633-BX081634	X081633	2			67.92	2.103	0.067	0.035	0.0252	0.001	0.181	0.069	0.008	0.012	0.005	0.207	-0.01	-0.01	-0.01	-0.03	1995	0.3672	1.203498	-0.836298	NAF
NS0118	104	108	NS	BX081631-BX081632	X081631	2			70.8	1.638	0.046	0.046	0.03312	0.009	0.196	0.057	0.007	0.004	0.005	0.09	0.47	-0.01	-0.01	0.45	1994	0.1224	0.994194	-0.871794	NAF
NS0118	136	140	NS	BX081647-BX081648	X081647	2			70.71	1.788	0.041	0.047	0.03384	0.003	0.221	0.064	0.007	0.006	0.013	0.191	-0.01	-0.01	-0.01	-0.03	2002	0.1836	1.116288	-0.932688	NAF
NS0118	200	202	NS	X074680	074680	1	G	W	22.64	43.94	0.98	0.5031	0.39	0.041	3.24	0.4	0.026	0.193	0.162	0.023	0.58	16.66	0.64	17.88	17451	5.9058	6.9768	-1.071	NAF
NS0118	20	22	NS	X074588	074588	1	G	D	18.67	61.37	6.21	0.0258	0.02	0.252	0.3	0.09	0.083	0.01	0.232	0.087	2.14	1.87	0.21	4.22	17307	0.306	1.56978	-1.26378	NAF
NS0118	80	82	NS	X074619	074619	1	G	D	29.88	48.18	1.23	0.5418	0.42	0.053	0.65	0.11	0.091	0.012	0.066	0.019	2.7	3.1	0.08	5.88	17373	0.3672	1.91862	-1.55142	NAF
NS0118	10	12	NS	X074583	074583	1	G	D	29.08	47.67	4.71	0.0258	0.02	0.129	0.23	0.14	0.011	0.024	0.237	0.081	3.58	1.32	0.25	5.15	17302	0.7344	2.44188	-1.70748	NAF
NS0118	100	102	NS	BX081629	X081629	2			64.94	4.634	0.091	0.049	0.03528	0.001	0.205	0.113	0.012	0.008	0.001	0.191	-0.01	-0.01	-0.01	-0.03	1993	0.2448	1.970946	-1.726146	NAF
NS0118	98	100	NS	X074628	074628	1	G	D	33.02	41.22	0.54	0.2838	0.22	0.023	0.9	0.16	0.09	0.034	0.008	0.006	3.8	5.63	0.14	9.57	17382	1.0404	2.79072	-1.75032	NAF
NS0118	192	194	NS	X074676	074676	1	G	W	26.09	37.62	1.11	0.6192	0.48	0.038	3.03	0.35	0.022	0.139	0.032	0.015	0.59	18.08	0.71	19.38	17447	4.2534	6.1047	-1.8513	NAF
NS0118	88	90	NS	X074623	074623	1	G	D	32.27	41.16	1.08	0.3741	0.29	0.048	1.05	0.22	0.111	0.055	0.007	0.017	3.39	5.81	0.18	9.38	17377	1.683	3.83724	-2.15424	NAF
NS0118	86	88	NS	X074622	074622	1	G	D	30.86	40.97	1.53	0.3612	0.28	0.068	1.56	0.34	0.114	0.116	0.008	0.019	2.51	8.05	0.28	10.84	17376	3.5496	5.93028	-2.38068	NAF
NS0118	194	196	NS	X074677	074677	1	G	W	24.79	40.02	1.11	0.5676	0.44	0.045	3.26	0.43	0.034	0.165	0.057	0.019	0.57	17.51	0.69	18.77	17448	5.049	7.50006	-2.45106	NAF
NS0118	168	170	NS	X074664	074664	1	G	W	27.13	33.64	1.05	0.3741	0.29	0.039	3.58	1.03	0.112	0.505	0.033	0.021	0.56	19	1.16	20.72	17435	15.453	17.96526	-2.51226	NAF
NS0118	74	76	NS	X074616	074616	1	G	D	37.07	38.19	2.06	0.258	0.2	0.088	0.76	0.18	0.079	0.013	0.115	0.021	1.7	3.14	0.12	4.96	17352	0.3978	3.13956	-2.74176	NAF
NS0118	130	132	NS	X074644	074644	1	G	D	36.31	35.65	0.45	0.6192	0.48	0.019	1.01	0.27	0.076	0.051	0.063	0.027	1.22	8.07	0.13	9.42	17416	1.5606	4.70934	-3.14874	NAF
NS0118	128	130	NS	X074643	074643	1	G	D	34.05	39.2	0.41	0.5676	0.44	0.015	1.22	0.3	0.055	0.062	0.149	0.035	0.57	8.67	0.01	9.25	17415	1.8972	5.2326	-3.3354	NAF
NS0118	228	230	NS	X074694	074694	1	G	W	20.28	50.64	0.65	0.5676	0.44	0.024	2.43	0.35	0.043	0.069	0.179	0.014	0.43	14.92	0.37	15.72	17465	2.1114	6.1047	-3.9933	NAF
NS0118	18	20	NS	X074587	074587	1	G	D	16.83	67.42	4.25	0.0258	0.02	0.178	0.26	0.29	0.031	0.01	0.069	0.077	1.74	1.5	0.14	3.38	17306	0.306	5.05818	-4.75218	NAF
NS0118	96	98	NS	X074627	074627	1	G	D	29.73	37.62	0.72	0.4257	0.33	0.029	1.8	0.39	0.111	0.064	0.007	0.008	2.47	13.19	0.2	15.86	17381	1.9584	6.80238	-4.84398	NAF
NS0118	76	78	NS	X074617	074617	1	G	D	31.19	41.68	1.34	0.3741	0.29	0.056	1.66	0.37	0.075	0.048	0.06	0.021	0.64	8.9	-0.02	9.52	17371	1.4688	6.45354	-4.98474	NAF
NS0118	126	128	NS	X074642	074642	1	G	D	33.67	32.27	0.52	0.5805	0.45	0.019	1.96	0.4	0.052	0.061	0.136	0.045	0.89	14.61	0.02	15.52	17414	1.8666	6.9768	-5.1102	NAF
NS0118	190	192	NS	X074675	074675	1	G	W	24.5	41.13	0.4	0.6192	0.48	0.015	2.95	0.43	0.042	0.07	0.024	0.012	0.68	17.79	0.39	18.86	17446	2.142	7.50006	-5.35806	NAF
NS0118	186	188	NS	X074673	074673	1	G	W	25.69	35.15	1.32	0.6192	0.48	0.052	4.12	0.71	0.081	0.228	0.163	0.023	0.56	19.42	0.74	20.72	17444	6.9768	12.38382	-5.40702	NAF
NS0118	108	110	NS	X074633	074633	1	G	D	32.22	21.74	1.08	0.7998	0.62	0.044	3.73	1.09	0.205	0.429	0.134	0.043	0.76	22.29	1.02	24.07	17387	13.1274	19.01178	-5.88438	NAF
NS0118	116	118	NS	X074637	074637	1	G	D	32.71	41.27	0.3	0.4773	0.37	0.012	1.38	0.37	0.084	0.006	0.059	0.014	0.66	8.61	-0.2	9.07	17409	0.1836	6.45354	-6.26994	NAF
NS0118	120	122	NS	X074639	074639	1	G	D	38.58	22.91	0.86	0.5805	0.45	0.033	2.34	0.38	0.035	0.009	0.399	0.136	1.01	16.25	-0.26	17	17411	0.2754	6.62796	-6.35256	NAF
NS0118	156	158	NS	X074658	074658	1	G	D	27.05	35.71	0.91	0.5289	0.41	0.037	2.76	0.89	0.14	0.298	0.006	0.02	0.51	18.37	0.78	19.66	17429	9.1188	15.52338	-6.40458	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0118	114	116	NS	X074636	074636	1	G	D	36.67	35.66	0.38	0.5031	0.39	0.017	1.37	0.4	0.078	0.009	0.118	0.018	0.38	9.04	-0.32	9.1	17408	0.2754	6.9768	-6.7014	NAF
NS0118	78	80	NS	X074618	074618	1	G	D	35.39	32.74	0.91	0.4386	0.34	0.037	1.86	0.44	0.071	0.014	0.042	0.015	0.81	12.01	-0.14	12.68	17372	0.4284	7.67448	-7.24608	NAF
NS0118	84	86	NS	X074621	074621	1	G	D	28.44	45.63	0.63	0.2451	0.19	0.029	1.54	0.45	0.07	0.009	0.009	0.01	1.35	9.22	-0.1	10.47	17375	0.2754	7.8489	-7.5735	NAF
NS0118	100	102	NS	X074629	074629	1	G	D	25.95	41.29	0.66	0.5031	0.39	0.025	2.31	0.55	0.079	0.042	0.003	0.011	0.87	16.34	0.1	17.31	17383	1.2852	9.5931	-8.3079	NAF
NS0118	8	10	NS	X074582	074582	1	G	D	22.26	55.99	5.92	0.0258	0.02	0.2	0.4	0.53	0.01	0.016	0.118	0.12	2.07	2.18	0.33	4.58	17301	0.4896	9.24426	-8.75466	NAF
NS0118	122	124	NS	X074640	074640	1	G	D	34.08	25.28	0.98	0.5934	0.46	0.039	2.79	0.69	0.099	0.098	0.223	0.124	0.81	19.05	0.11	19.97	17412	2.9988	12.03498	-9.03618	NAF
NS0118	134	136	NS	X074646	074646	1	G	D	31.18	35.17	0.47	0.6579	0.51	0.018	1.92	0.64	0.078	0.06	0.112	0.038	0.91	14.9	-0.02	15.79	17418	1.836	11.16288	-9.32688	NAF
NS0118	118	120	NS	X074638	074638	1	G	D	32.97	30.8	0.81	0.5676	0.44	0.031	2.59	0.57	0.055	0.02	0.296	0.184	0.74	15.89	-0.08	16.55	17410	0.612	9.94194	-9.32994	NAF
NS0118	154	156	NS	X074657	074657	1	G	D	28.78	35.35	0.28	0.4257	0.33	0.009	2.37	0.57	0.052	0.013	0.008	0.01	0.64	18.79	0.16	19.59	17428	0.3978	9.94194	-9.54414	NAF
NS0118	104	106	NS	X074631	074631	1	G	D	29.38	37.87	0.39	0.4773	0.37	0.015	2.41	0.66	0.095	0.05	0.049	0.041	0.64	15.13	-0.03	15.74	17385	1.53	11.51172	-9.98172	NAF
NS0118	124	126	NS	X074641	074641	1	G	D	34.06	28.1	0.8	0.6321	0.49	0.032	2.45	0.62	0.1	0.018	0.259	0.052	0.74	17.14	-0.11	17.77	17413	0.5508	10.81404	-10.26324	NAF
NS0118	188	190	NS	X074674	074674	1	G	W	25.4	36.86	0.65	0.6321	0.49	0.024	3.76	0.73	0.1	0.078	0.039	0.02	0.66	19.39	0.33	20.38	17445	2.3868	12.73266	-10.34586	NAF
NS0118	102	104	NS	X074630	074630	1	G	D	29.14	35.4	0.44	0.5031	0.39	0.017	2.44	0.62	0.067	0.01	0.004	0.013	0.82	17.62	0	18.44	17384	0.306	10.81404	-10.50804	NAF
NS0118	112	114	NS	X074635	074635	1	G	D	34.98	33.17	0.48	0.5805	0.45	0.019	1.95	0.66	0.138	0.026	0.167	0.052	0.52	12.24	-0.23	12.53	17407	0.7956	11.51172	-10.71612	NAF
NS0118	106	108	NS	X074632	074632	1	G	D	30.73	31.34	0.66	0.5805	0.45	0.027	3.18	0.91	0.136	0.154	0.126	0.098	0.65	17.69	0.21	18.55	17386	4.7124	15.87222	-11.15982	NAF
NS0118	160	162	NS	X074660	074660	1	G	D	25.46	39.53	0.4	0.5031	0.39	0.013	2.81	0.77	0.101	0.066	0.004	0.015	0.69	18.08	0.37	19.14	17431	2.0196	13.43034	-11.41074	NAF
NS0118	170	172	NS	X074665	074665	1	G	W	27.6	32.36	0.93	0.3612	0.28	0.037	3.58	0.96	0.118	0.174	0.053	0.015	0.7	20.13	0.51	21.34	17436	5.3244	16.74432	-11.41992	NAF
NS0118	146	148	NS	X074653	074653	1	G	D	30.47	35.56	0.38	0.4257	0.33	0.015	2.24	0.77	0.084	0.062	0.042	0.042	0.68	15.54	0.09	16.31	17424	1.8972	13.43034	-11.53314	NAF
NS0118	158	160	NS	X074659	074659	1	G	D	29.41	31.84	0.44	0.4644	0.36	0.014	2.74	0.81	0.075	0.061	0.006	0.017	0.72	20.34	0.2	21.26	17430	1.8666	14.12802	-12.26142	NAF
NS0118	132	134	NS	X074645	074645	1	G	D	30.18	35.09	0.53	0.645	0.5	0.019	2.09	0.87	0.175	0.087	0.177	0.038	0.71	15.68	0.14	16.53	17417	2.6622	15.17454	-12.51234	NAF
NS0118	152	154	NS	X074656	074656	1	G	D	30.13	29.2	0.33	0.4773	0.37	0.011	3.35	0.75	0.081	0.009	0.004	0.014	0.73	21.43	0.11	22.27	17427	0.2754	13.0815	-12.8061	NAF
NS0118	148	150	NS	X074654	074654	1	G	D	32.33	34.33	0.3	0.4515	0.35	0.011	2.36	0.78	0.097	0.022	0.074	0.071	0.46	14.4	0.08	14.94	17425	0.6732	13.60476	-12.93156	NAF
NS0118	138	140	NS	X074648	074648	1	G	D	28.1	36.78	0.26	0.4902	0.38	0.008	2.32	0.81	0.095	0.011	0.01	0.01	0.89	17.89	0	18.78	17420	0.3366	14.12802	-13.79142	NAF
NS0118	136	138	NS	X074647	074647	1	G	D	32.4	32.39	0.3	0.5934	0.46	0.012	2.29	0.91	0.107	0.01	0.113	0.039	0.7	16.06	-0.02	16.74	17419	0.306	15.87222	-15.56622	NAF
NS0118	150	152	NS	X074655	074655	1	G	D	28.93	35.86	0.3	0.5418	0.42	0.009	2.44	0.95	0.142	0.032	0.028	0.038	0.59	17.17	0.07	17.83	17426	0.9792	16.5699	-15.5907	NAF
NS0118	110	112	NS	X074634	074634	1	G	D	31.85	26.35	0.96	0.7224	0.56	0.038	3.31	1	0.21	0.054	0.142	0.102	0.84	20.28	0.11	21.23	17388	1.6524	17.442	-15.7896	NAF
NS0119	52	54	NS	X074738	074738	1	G	D	17.4	55.35	9.63	0.0645	0.05	0.477	4.01	0.11	0.053	0.663	0.315	0.022	0.78	2.96	0.87	4.61	17508	20.2878	1.91862	18.36918	PAF(HC)
NS0119	60	62	NS	X074742	074742	1	G	D	18.28	53.05	8.92	0.2064	0.16	0.435	4.14	0.24	0.056	0.409	0.214	0.03	0.6	4.89	0.76	6.25	17512	12.5154	4.18608	8.32932	PAF(LC)
NS0119	48	50	NS	X074736	074736	1	G	D	23.22	52.3	6.3	0.0774	0.06	0.304	2.15	0.12	0.099	0.331	0.058	0.033	1.97	1.84	0.84	4.65	17506	10.1286	2.09304	8.03556	PAF(LC)
NS0119	50	52	NS	X074737	074737	1	G	D	19.31	51.37	8.52	0.2451	0.19	0.419	3.99	0.12	0.036	0.328	0.078	0.007	0.75	5.6	0.77	7.12	17507	10.0368	2.09304	7.94376	PAF(LC)
NS0119	62	64	NS	X074743	074743	1	G	D	19.41	51.16	7.73	0.3096	0.24	0.379	3.89	0.33	0.079	0.42	0.238	0.038	0.48	6.41	0.99	7.88	17513	12.852	5.75586	7.09614	PAF(LC)
NS0119	54	56	NS	X074739	074739	1	G	D	14.98	56.28	10.67	0.1419	0.11	0.529	4.27	0.14	0.041	0.294	1.37	0.024	0.52	3.52	0.59	4.63	17509	8.9964	2.44188	6.55452	PAF(LC)
NS0119	56	58	NS	X074740	074740	1	G	D	19.07	50.66	7.39	0.4257	0.33	0.361	3.76	0.32	0.074	0.36	0.372	0.026	0.62	7.18	0.97	8.77	17510	11.016	5.58144	5.43456	PAF(LC)
NS0119	58	60	NS	X074741	074741	1	G	D	18.14	53.37	8.09	0.2967	0.23	0.396	3.94	0.35	0.089	0.366	0.214	0.035	0.52	5.49	0.96	6.97	17511	11.1996	6.1047	5.0949	PAF(LC)
NS0119	10	12	NS	X074717	074717	1	G	D	7.62	67.47	14.11	0.0258	0.02	0.619	0.1	0.07	0.019	0.024	0.037	0.082	1.17	4.73	0.36	6.26	17487	0.7344	1.22094	-0.48654	NAF
NS0119	14	16	NS	X074719	074719	1	G	D	15.95	68.42	4.74	0.0645	0.05	0.203	0.08	0.06	0.02	0.017	0.038	0.056	1.36	1.67	0.19	3.22	17489	0.5202	1.04652	-0.52632	NAF
NS0119	12	14	NS	X074718	074718	1	G	D	5.24	76.48	10.03	-0.0129	-0.01	0.429	0.09	0.06	0.031	0.016	0.063	0.083	1.11	3.32	0.27	4.7	17488	0.4896	1.04652	-0.55692	NAF
NS0119	16	18	NS	X074720	074720	1	G	D	28.25	45.45	5.73	0.129	0.1	0.252	0.27	0.1	0.063	0.036	0.079	0.081	5.13	1.85	0.32	7.3	17490	1.1016	1.7442	-0.6426	NAF
NS0119	18	20	NS	X074721	074721	1	G	D	30.94	41.64	4.56	0.2709	0.21	0.215	0.56	0.15	0.059	0.036	0.182	0.087	5.73	1.58	0.32	7.63	17491	1.1016	2.6163	-1.5147	NAF
NS0119	4	6	NS	X074714	074714	1	G	D	12.32	66.25	9.05	0.0645	0.05	0.4	0.14	0.15	0.022	0.027	0.04	0.082	2.42	2.93	0.3	5.65	17484	0.8262	2.6163	-1.7901	NAF
NS0119	46	48	NS	X074735	074735	1	G	D	18.86	53.56	9.54	0.1161	0.09	0.451	2.82	0.16	0.067	0.019	0.27	0.038	2.3	3.07	0.3	5.67	17505	0.5814	2.79072	-2.20932	NAF
NS0119	34	36	NS	X074729	074729	1	G	D	25.78	49.64	4.26	0.5418	0.42	0.202	1.16	0.22	0.073	0.012	0.269	0.076	4.39	1.56	0.3	6.25	17499	0.3672	3.83724	-3.47004	NAF
NS0119	22	24	NS	X074723	074723	1	G	D	22.37	48.93	8	0.3741	0.29	0.379	1.39	0.27	0.065	0.017	1.2	0.125	3.94	2.52	0.35	6.81	17493	0.5202	4.70934	-4.18914	NAF
NS0119	40	42	NS	X074732	074732	1	G	D	23.42	52.11	5.56	0.3096	0.24	0.253	1.29	0.27	0.074	0.015	0.313	0.072	3.72	1.96	0.32	6	17502	0.459	4.70934	-4.25034	NAF
NS0119	28	30	NS	X074726	074726	1	G	D	18.89	53.77	8.75	0.1935	0.15	0.407	1.77	0.27	0.074	0.011	1.25	0.13	3.11	2.61	0.34	6.06	17496	0.3366	4.70934	-4.37274	NAF
NS0119	24	26	NS	X074724	074724	1	G	D	21.05	51.51	7.74	0.4257	0.33	0.365	1.44	0.28	0.065	0.015	0.942	0.134	3.77	2.46	0.35	6.58	17494	0.459	4.88376	-4.42476	NAF
NS0119	20	22	NS	X074722	074722	1	G	D	23.92	48.45	6.83	0.3483	0.27	0.297	1.22	0.3	0.073	0.02	0.389	0.143	4.42	2.46	0.35	7.23	17492	0.612	5.2326	-4.6206	NAF
NS0119	42	44	NS	X074733	074733	1	G	D	24.27	51.4	5.1	0.387	0.3	0.238	1.41	0.3	0.077	0.014	0.267	0.074	3.29	1.84	0.3	5.43	17503	0.4284	5.2326	-4.8042	NAF
NS0119	32	34	NS	X074728	074728	1	G	D	21.22	54.38	5.67	0.3612	0.28	0.268	1.4	0.3	0.07	0.012	0.498	0.105	3.87	1.97	0.29	6.13	17498	0.3672	5.2326	-4.8654	NAF
NS0119	26	28	NS	X074725	074725	1	G	D	23.23	49.22	6.93	0.2838	0.22	0.326	1.42	0.31	0.087	0.016	0.763	0.134	4.21	2.27	0.34	6.82	17495	0.4896	5.40702	-4.91742	NAF
NS0119	30	32	NS	X074727	074727	1	G	D	22.87	50.83	6.13	0.3741	0.29	0.286	1.49	0.32	0.087	0.016	0.626	0.115	4.13	2.04	0.33	6.5	17497	0.4896	5.58144	-5.09184	NAF
NS0119	44	46	NS	X074734	074734	1	G	D	21.47	55.16	5.01	0.6192	0.48	0.239	1.11	0.31	0.083	0.01	0.344	0.059	3.72	1.81	0.28	5.81	17504	0.306	5.40702	-5.10102	NAF
NS0119	38	40	NS	X074731	074731	1	G	D	25.46	48.08	5.42	0.3483	0.27	0.258	1.34	0.32	0.07	0.011	0.294	0.091	4.53	2.02	0.32	6.87	17501	0.3366	5.58144	-5.24484	NAF
NS0119	6	8	NS	X074715	074715	1	G	D	15.17	56.61	12.55	0.0258	0.02	0.567	0.31	0.41	0.034	0.03	0.04	0.096	2.54	4.51	0.35	7.4	17485	0.918	7.15122	-6.23322	NAF
NS0119	2	4	NS	X074713	074713	1	G	D	21.86	49.35	9.9	0.0774	0.06	0.462	0.3	0.43	0.019	0.041	0.023	0.076	3.97	3.3	0.32	7.59	17483	1.2546	7.50006	-6.24546	NAF
NS0119	36	38	NS	X074730	074730	1	G	D	18.27	56.17	7.42	0.2064	0.16	0.347	1.97	0.38	0.058	0.012	0.404	0.116	3.37	2.54	0.35	6.26	17500	0.3672	6.62796	-6.26076	NAF
NS0119	8	10	NS	X074716	074716	1	G	D	8.71	66.81	12.49	0.0258	0.02	0.552	0.32	0.41	0.018	0.026	0.038	0.094	1.35	4.65	0.34	6.34	17486	0.7956	7.15122	-6.35562	NAF
NS0119	0	2	NS	X074712	074712	1	G	D	24.61	42.42	8.88	0.0903	0.07	0.406	0.71	2.31	0.033	0.048	0.036	0.077	4.68	3.48	1.39	9.55	17482	1.4688	40.29102	-38.82222	NAC
NS0120	124	128	NS	BX081824-BX081825	X081824	2			54.62	15.086	0.591	0.037	0.02664	0.037	0.52	0.153	0.019	1.98	0.158	0.178	-0.01	-0.01	-0.01	-0.03	2021	60.588	2.668626	57.919374	PAF(HC)
NS0120	118	120	NS	BX081821	X081821	2			51.88	19.725	0.978	0.098	0.07056	0.098	0.871	0.162	0.019	1.524	0.238	0.125	-0.01	-0.01	-0.01	-0.03	2019	46.6344	2.825604	43.808796	PAF(HC)
NS0120	208	210	NS	X074867	074867	1	G	W	13.42	67.96	3.35	0.2451	0.19	0.157	2.03	0.26	0.026	1.32	0.387	0.086	0.42	3.5	2	5.92	17584	40.392	4.53492	35.85708	PAF(HC)
NS0120	210	212	NS	X074868	074868	1	G	W	14.02	67.29	2.68	0.2967	0.23	0.128	1.89	0.16	0.021	1.13	0.369	0.105	0.47	4.01	1.81	6.29	17585	34.578	2.79072	31.78728	PAF(HC)
NS0120	212	214	NS	X074869	074869	1	G	W	15.35	63.32	3.38	0.3225	0.25	0.16	2.24	0.23	0.041	1.02	0.358	0.113	0.54	4.77	1.6	6.91	17586	31.212	4.01166	27.20034	PAF(HC)
NS0120	128	132	NS	BX081826-BX081827	X081826	2			52.34	18.477	1.019	0.098	0.07056	0.098	0.913	0.293	0.014	0.928	0.26	0.163	-0.01	-0.01	-0.01	-0.03	2022	28.3968	5.110506	23.286294	PAF(HC)
NS0120	228	230	NS	X074877	074877	1	G	W	24.36	43.24	5.1	0.4257	0.33	0.246	3.61	1.23	0.072	1.42	1.85	0.295	0.98	4.89	2.14	8.01	17594	43.452	21.45366	21.99834	PAF(HC)
NS0120	206	208	NS	X074866	074866	1	G	W	21.27	48.63	5.31	0.387	0.3	0.251	3.35	0.36	0.074	0.736	0.208	0.068	0.57	8.61	1.41	10.59	17583	22.5216	6.27912	16.24248	PAF(HC)
NS0120	148	152	NS	BX081836-BX081837	X081836	2			57.57	15.036	0.723	0.067	0.04824	0.067	0.642	0.19	0.015	0.632	0.179	0.133	-0.01	-0.01	-0.01	-0.03	2027	19.3392	3.31398	16.02522	PAF(HC)
NS0120	94	98	NS	BX081808-BX081809	X081808	2			54.97	15.634	0.703	0.05	0.036	0.05	0.648	0.162	0.019	0.511	0.18	0.195	-0.01	-0.01	-0.01	-0.03	2013	15.6366	2.825604	12.810996	PAF(HC)
NS0120	240	242	NS	X074883	074883	1	G	W	21.74	46.82	6.9	0.1419	0.11	0.329	3.9	0.25	0.052	0.521	2.21	0.24	0.93	5.88	1.18	7.99	17600	15.9426	4.3605	11.5821	PAF(HC)
NS0120	114	118	NS	BX081818-BX081819	X081818	2			57.24	15.502	1.049	0.115	0.0828	0.115	0.877	0.226	0.017	0.452	0.25	0.155	-0.01	-0.01	-0.01	-0.03	2018	13.8312	3.941892	9.889308	PAF(LC)
NS0120	242	244	NS	X074884	074884	1	G	W	25.99	42.72	5.45	0.258	0.2	0.25	3.22	0.39	0.089	0.533	1.74	0.214	0.86	5.89	1	7.75	17601	16.3098	6.80238	9.50742	PAF(LC)
NS0120	204	206	NS	X074865	074865	1	G	W	19.05	49.51	8.03	0.2838	0.22	0.395	4.1	0.32	0.064	0.428	0.657	0.054	0.51	6.81	1.08	8.4	17582	13.0968	5.58144	7.51536	PAF(LC)
NS0120	258	260	NS	X074892	074892	1	G	W	23.48	44.57	5.47	0.2709	0.21	0.245	2.52	0.48	0.116	0.506	2.39	0.169	0.85	7.52	1.17	9.54	17609	15.4836	8.37216	7.11144	PAF(LC)
NS0120	214	216	NS	X074870	074870	1	G	W	24.84	45.35	3.77	0.2967	0.23	0.183	2.72	0.38	0.071	0.384	0.393	0.11	0.75	9.11	0.92	10.78	17587	11.7504	6.62796	5.12244	PAF(LC)
NS0120	106	110	NS	BX081814-BX081815	X081814	2			56.81	15.864	0.851	0.091	0.06552	0.091	0.776	0.185	0.015	0.269	0.237	0.149	-0.01	-0.01	-0.01	-0.03	2016	8.2314	3.22677	5.00463	PAF(LC)
NS0120	252	254	NS	X074889	074889	1	G	W	27.01	41.44	4.12	0.3225	0.25	0.19	2.8	0.47	0.101	0.425	1.72	0.164	0.74	7.26	0.95	8.95	17606	13.005	8.19774	4.80726	PAF(LC)
NS0120	256	258	NS	X074891	074891	1	G	W	25.64	43.06	4.71	0.3741	0.29	0.219	2.64	0.53	0.114	0.443	2.3	0.258	1.22	6.5	0.98	8.7	17608	13.5558	9.24426	4.31154	PAF(LC)
NS0120	200	202	NS	X074863	074863	1	G	W	17.44	53.11	8.88	0.2193	0.17	0.449	4.24	0.5	0.066	0.406	0.824	0.073	0.48	4.54	1.05	6.07	17580	12.4236	8.721	3.7026	PAF(LC)
NS0120	90	94	NS	BX081806-BX081807	X081806	2			58.32	14.674	0.787	0.072	0.05184	0.072	0.714	0.168	0.015	0.215	0.217	0.15	-0.01	-0.01	-0.01	-0.03	2012	6.579	2.930256	3.648744	PAF(LC)
NS0120	98	102	NS	BX081810-BX081811	X081810	2			55.01	16.671	0.924	0.078	0.05616	0.078	0.924	0.138	0.021	0.193	0.247	0.153	-0.01	-0.01	-0.01	-0.03	2014	5.9058	2.406996	3.498804	PAF(LC)
NS0120	226	230	NS	BX081876-BX081877	X081876	2			64.79	6.838	0.704	0.084	0.06048	0.084	0.493	0.099	0.02	0.116	0.223	0.107	-0.01	-0.01	-0.01	-0.03	2047	3.5496	1.726758	1.822842	PAF(LC)
NS0120	238	240	NS	X074882	074882	1	G	W	24.63	43.57	4.62	0.2967	0.23	0.219	3.32	0.45	0.085	0.316	0.873	0.159	0.88	8.99	0.72	10.59	17599	9.6696	7.8489	1.8207	PAF(LC)
NS0120	110	114	NS	BX081816-BX081817	X081816	2			57.37	15.621	0.968	0.101	0.07272	0.101	0.816	0.233	0.018	0.191	0.263	0.185	-0.01	-0.01	-0.01	-0.03	2017	5.8446	4.063986	1.780614	PAF(LC)
NS0120	256	258	NS	BX081891	X081891	2			63.57	5.557	0.895	0.1	0.072	0.1	0.376	0.1	0.017	0.105	0.422	0.126	-0.01	-0.01	-0.01	-0.03	2054	3.213	1.7442	1.4688	PAF(LC)
NS0120	102	106	NS	BX081812-BX081813	X081812	2			55.74	15.963	0.947	0.104	0.07488	0.104	0.88	0.142	0.017	0.117	0.26	0.14	-0.01	-0.01	-0.01	-0.03	2015	3.5802	2.476764	1.103436	PAF(LC)
NS0120	88	90	NS	BX081805	X081805	2			67.17	4.368	0.376	0.017	0.01224	0.017	0.225	0.065	0.007	0.068	0.11	0.166	-0.01	-0.01	-0.01	-0.03	2011	2.0808	1.13373	0.94707	PAF(LC)
NS0120	260	262	NS	X074893	074893	1	G	W	28.5	37.65	3.63	0.3354	0.26	0.168	2.76	0.5	0.096	0.314	1.84	0.165	0.9	9.81	0.7	11.41	17610	9.6084	8.721	0.8874	PAF(LC)
NS0120	214	218	NS	BX081870-BX081871	X081870	2			61.76	10.374	0.716	0.064	0.04608	0.064	0.63	0.134	0.027	0.086	0.126	0.107	-0.01	-0.01	-0.01	-0.03	2044	2.6316	2.337228	0.294372	PAF(LC)
NS0120	156	160	NS	BX081840-BX081841	X081840	2			58.26	13.844	0.829	0.08	0.0576	0.08	0.679	0.254	0.021	0.147	0.231	0.119	-0.01	-0.01	-0.01	-0.03	2029	4.4982	4.430268	0.067932	PAF(LC)
NS0120	152	156	NS	BX081838-BX081839	X081838	2			59.62	13.152	0.619	0.064	0.04608	0.064	0.551	0.248	0.015	0.141	0.18	0.113	-0.01	-0.01	-0.01	-0.03	2028	4.3146	4.325616	-0.011016	NAF
NS0120	120	124	NS	BX081822-BX081823	X081822	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2020	-0.0306	-0.01744	-0.013158	NAF
NS0120	132	136	NS	BX081828-BX081829	X081828	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2023	-0.0306	-0.01744	-0.013158	NAF
NS0120	138	140	NS	BX081831	X081831	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2024	-0.0306	-0.01744	-0.013158	NAF
NS0120	140	144	NS	BX081832-BX081833	X081832	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2025	-0.0306	-0.01744	-0.013158	NAF
NS0120	144	148	NS	BX081834-BX081835	X081834	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2026	-0.0306	-0.01744	-0.013158	NAF
NS0120	160	164	NS	BX081842-BX081843	X081842	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2030	-0.0306	-0.01744	-0.013158	NAF
NS0120	164	168	NS	BX081844-BX081845	X081844	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2031	-0.0306	-0.01744	-0.013158	NAF
NS0120	168	172	NS	BX081846-BX081847	X081846	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2032	-0.0306	-0.01744	-0.013158	NAF
NS0120	172	176	NS	BX081848-BX081849	X081848	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2033	-0.0306	-0.01744	-0.013158	NAF
NS0120	176	178	NS	BX081850	X081850	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2034	-0.0306	-0.01744	-0.013158	NAF
NS0120	178	182	NS	BX081852-BX081853	X081852	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2035	-0.0306	-0.01744	-0.013158	NAF
NS0120	182	186	NS	BX081854-BX081855	X081854	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2036	-0.0306	-0.01744	-0.013158	NAF
NS0120	186	190	NS	BX081856-BX081857	X081856	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2037	-0.0306	-0.01744	-0.013158	NAF
NS0120	190	194	NS	BX081858-BX081859	X081858	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2038	-0.0306	-0.01744	-0.013158	NAF
NS0120	196	198	NS	BX081861	X081861	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2039	-0.0306	-0.01744	-0.013158	NAF
NS0120	198	202	NS	BX081862-BX081863	X081862	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2040	-0.0306	-0.01744	-0.013158	NAF
NS0120	202	206	NS	BX081864-BX081865	X081864	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2041	-0.0306	-0.01744	-0.013158	NAF
NS0120	206	210	NS	BX081866-BX081867	X081866	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2042	-0.0306	-0.01744	-0.013158	NAF
NS0120	210	214	NS	BX081868-BX081869	X081868	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2043	-0.0306	-0.01744	-0.013158	NAF
NS0120	238	242	NS	BX081882-BX081883	X081882	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2050	-0.0306	-0.01744	-0.013158	NAF
NS0120	270	274	NS	BX081898-BX081899	X081898	2			66.36	5.724	0.56	0.055	0.0396	0.055	0.357	0.071	0.013	0.035	0.291	0.093	-0.01	-0.01	-0.01	-0.03	2058	1.071	1.238382	-0.167382	NAF
NS0120	262	264	NS	X074894	074894	1	G	W	28.31	43.43	2.62	0.3741	0.29	0.123	2.04	0.38	0.052	0.208	1.3	0.085	0.54	7.9	0.29	8.73	17611	6.3648	6.62796	-0.26316	NAF
NS0120	258	262	NS	BX081892-BX081893	X081892	2			67.48	4.457	0.63	0.075	0.054	0.075	0.35	0.1	0.023	0.048	0.283	0.095	-0.01	-0.01	-0.01	-0.03	2055	1.4688	1.7442	-0.2754	NAF
NS0120	262	266	NS	BX081894-BX081895	X081894	2			68.75	3.776	0.343	0.035	0.0252	0.035	0.282	0.073	0.014	0.024	0.137	0.083	-0.01	-0.01	-0.01	-0.03	2056	0.7344	1.273266	-0.538866	NAF
NS0120	250	254	NS	BX081888-BX081889	X081888	2			68.56	3.418	0.403	0.056	0.04032	0.056	0.292	0.093	0.021	0.031	0.155	0.079	-0.01	-0.01	-0.01	-0.03	2053	0.9486	1.622106	-0.673506	NAF
NS0120	266	270	NS	BX081896-BX081897	X081896	2			68.29	3.509	0.25	0.032	0.02304	0.032	0.258	0.076	0.014	0.019	0.09	0.081	-0.01	-0.01	-0.01	-0.03	2057	0.5814	1.325592	-0.744192	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0120	230	234	NS	BX081878-BX081879	X081878	2			66.82	6.277	0.355	0.038	0.02736	0.038	0.328	0.083	0.014	0.022	0.087	0.072	-0.01	-0.01	-0.01	-0.03	2048	0.6732	1.447686	-0.774486	NAF
NS0120	218	222	NS	BX081872-BX081873	X081872	2			66.61	6.223	0.339	0.037	0.02664	0.037	0.344	0.099	0.021	0.027	0.068	0.08	-0.01	-0.01	-0.01	-0.03	2045	0.8262	1.726758	-0.900558	NAF
NS0120	234	238	NS	BX081880-BX081881	X081880	2			67.06	5.891	0.422	0.047	0.03384	0.047	0.389	0.095	0.02	0.022	0.09	0.087	-0.01	-0.01	-0.01	-0.03	2049	0.6732	1.65699	-0.98379	NAF
NS0120	242	246	NS	BX081884-BX081885	X081884	2			69.38	3.102	0.228	0.032	0.02304	0.032	0.24	0.1	0.021	0.023	0.047	0.088	-0.01	-0.01	-0.01	-0.03	2051	0.7038	1.7442	-1.0404	NAF
NS0120	270	272	NS	X074898	074898	1	G	W	29.17	39.91	3.1	0.4773	0.37	0.145	2.6	0.48	0.084	0.239	1.41	0.113	0.61	8.67	0.42	9.7	17615	7.3134	8.37216	-1.05876	NAF
NS0120	246	250	NS	BX081886-BX081887	X081886	2			70.56	2.606	0.177	0.031	0.02232	0.031	0.217	0.092	0.021	0.015	0.045	0.076	-0.01	-0.01	-0.01	-0.03	2052	0.459	1.604664	-1.145664	NAF
NS0120	222	226	NS	BX081874-BX081875	X081874	2			65.28	7.528	0.392	0.034	0.02448	0.034	0.386	0.101	0.023	0.02	0.091	0.089	-0.01	-0.01	-0.01	-0.03	2046	0.612	1.761642	-1.149642	NAF
NS0120	274	276	NS	BX081900	X081900	2			66.16	5.542	0.387	0.032	0.02304	0.032	0.328	0.096	0.015	0.016	0.197	0.074	-0.01	-0.01	-0.01	-0.03	2059	0.4896	1.674432	-1.184832	NAF
NS0120	236	238	NS	X074881	074881	1	G	W	27.8	42.4	2.63	0.3225	0.25	0.122	2.54	0.59	0.118	0.281	0.523	0.137	0.78	8.8	0.55	10.13	17598	8.5986	10.29078	-1.69218	NAF
NS0120	202	204	NS	X074864	074864	1	G	W	17.75	51.71	8.64	0.258	0.2	0.422	4.12	0.78	0.056	0.38	1.09	0.066	0.51	5.14	1.13	6.78	17581	11.628	13.60476	-1.97676	NAF
NS0120	244	246	NS	X074885	074885	1	G	W	28.68	42.57	2.86	0.3741	0.29	0.134	2.29	0.59	0.111	0.271	1.03	0.135	0.77	7.29	0.48	8.54	17602	8.2926	10.29078	-1.99818	NAF
NS0120	248	250	NS	X074887	074887	1	G	W	28.47	42.64	3.06	0.3354	0.26	0.143	2.5	0.63	0.125	0.24	1.05	0.152	0.66	7.54	0.42	8.62	17604	7.344	10.98846	-3.64446	NAF
NS0120	70	72	NS	X074795	074795	1	G	W	20.73	48.56	6.12	0.3354	0.26	0.29	3.34	1.01	0.073	0.455	0.635	0.089	0.74	7.01	1.28	9.03	17515	13.923	17.61642	-3.69342	NAF
NS0120	190	192	NS	X074858	074858	1	G	W	19.19	49.71	7.49	0.3483	0.27	0.37	4.18	1.16	0.066	0.535	0.421	0.081	0.57	5.72	1.49	7.78	17575	16.371	20.23272	-3.86172	NAF
NS0120	254	256	NS	X074890	074890	1	G	W	30.31	37.11	2.67	0.4128	0.32	0.125	2.42	0.56	0.114	0.185	1.23	0.138	0.72	10.32	0.33	11.37	17607	5.661	9.76752	-4.10652	NAF
NS0120	188	190	NS	X074857	074857	1	G	W	15.38	56.22	9.62	0.1677	0.13	0.483	4.49	0.79	0.043	0.316	0.703	0.053	0.4	3.52	0.94	4.86	17574	9.6696	13.77918	-4.10958	NAF
NS0120	272	274	NS	X074899	074899	1	G	W	28.65	41.9	2.59	0.5289	0.41	0.119	2.45	0.51	0.082	0.149	1.28	0.099	0.55	8.53	0.18	9.26	17616	4.5594	8.89542	-4.33602	NAF
NS0120	250	252	NS	X074888	074888	1	G	W	28.03	44.56	3.13	0.2709	0.21	0.148	2.29	0.59	0.115	0.192	1.26	0.146	0.59	5.61	0.38	6.58	17605	5.8752	10.29078	-4.41558	NAF
NS0120	98	100	NS	X074810	074810	1	G	W	24.73	43.18	5.25	0.3225	0.25	0.25	3.72	0.86	0.055	0.335	1	0.268	1.11	7.21	1.1	9.42	17529	10.251	15.00012	-4.74912	NAF
NS0120	268	270	NS	X074897	074897	1	G	W	30.06	41.01	2.5	0.4515	0.35	0.115	2.41	0.59	0.105	0.176	0.791	0.115	0.67	7.52	0.3	8.49	17614	5.3856	10.29078	-4.90518	NAF
NS0120	198	200	NS	X074862	074862	1	G	W	22.32	43.77	5.52	0.4773	0.37	0.262	3.81	0.89	0.062	0.343	0.217	0.063	0.61	10.23	1.04	11.88	17579	10.4958	15.52338	-5.02758	NAF
NS0120	196	198	NS	X074861	074861	1	G	W	22.39	45.95	5.53	0.3096	0.24	0.275	3.59	0.78	0.08	0.277	0.478	0.116	0.89	8.53	0.97	10.39	17578	8.4762	13.60476	-5.12856	NAF
NS0120	276	280	NS	BX081902-BX081903	X081902	2			57.21	14.585	2.439	0.214	0.15408	0.214	0.818	0.359	0.04	0.037	1.475	0.103	0.26	0.03	-0.01	0.28	2060	1.1322	6.261678	-5.129478	NAF
NS0120	216	218	NS	X074871	074871	1	G	W	29.01	43.62	2.53	0.2838	0.22	0.121	2.28	0.53	0.084	0.127	0.604	0.177	0.77	6.94	0.21	7.92	17588	3.8862	9.24426	-5.35806	NAF
NS0120	226	228	NS	X074876	074876	1	G	W	27.3	43.76	3.06	0.3741	0.29	0.153	2.62	0.64	0.149	0.178	1.16	0.13	0.62	7.1	0.32	8.04	17593	5.4468	11.16288	-5.71608	NAF
NS0120	264	266	NS	X074895	074895	1	G	W	31.96	39.57	2.37	0.3741	0.29	0.112	2.18	0.61	0.079	0.156	1	0.164	0.51	6.9	0.21	7.62	17612	4.7736	10.63962	-5.86602	NAF
NS0120	184	186	NS	X074855	074855	1	G	W	14.57	56.62	8.49	0.2193	0.17	0.426	3.74	1.02	0.052	0.377	2.23	0.08	0.63	3.66	1.23	5.52	17572	11.5362	17.79084	-6.25464	NAF
NS0120	80	82	NS	X074800	074800	1	G	W	25.63	41.58	3.42	0.4128	0.32	0.156	3.09	0.62	0.081	0.137	0.841	0.104	1.06	10.97	0.42	12.45	17520	4.1922	10.81404	-6.62184	NAF
NS0120	182	184	NS	X074854	074854	1	G	W	19.35	49.91	6.61	0.3354	0.26	0.321	3.98	1.37	0.073	0.547	0.676	0.121	0.69	5.86	1.49	8.04	17571	16.7382	23.89554	-7.15734	NAF
NS0120	194	196	NS	X074860	074860	1	G	W	21.11	48.15	6.34	0.3096	0.24	0.321	3.8	0.93	0.102	0.271	0.604	0.146	0.84	6.51	1.04	8.39	17577	8.2926	16.22106	-7.92846	NAF
NS0120	180	182	NS	X074853	074853	1	G	W	19.55	51.56	6.92	0.2193	0.17	0.327	3.86	1.21	0.087	0.426	0.798	0.208	0.94	3.64	1.38	5.96	17570	13.0356	21.10482	-8.06922	NAF
NS0120	100	102	NS	X074811	074811	1	G	W	29.24	38.43	2.96	0.387	0.3	0.14	2.85	0.69	0.063	0.117	0.821	0.243	1.04	9.5	0.34	10.88	17530	3.5802	12.03498	-8.45478	NAF
NS0120	68	70	NS	X074794	074794	1	G	W	20.1	49.29	7.28	0.3096	0.24	0.346	3.69	1.14	0.109	0.354	0.71	0.099	0.72	5.76	1.23	7.71	17514	10.8324	19.88388	-9.05148	NAF
NS0120	120	122	NS	X074822	074822	1	G	W	23.51	44.19	5.08	0.3354	0.26	0.241	3.75	0.93	0.083	0.233	0.919	0.236	1.2	7.46	0.9	9.56	17540	7.1298	16.22106	-9.09126	NAF
NS0120	222	224	NS	X074874	074874	1	G	W	34.44	39.9	1.96	0.3225	0.25	0.092	1.98	0.64	0.095	0.062	0.521	0.178	0.46	4.08	-0.08	4.46	17591	1.8972	11.16288	-9.26568	NAF
NS0120	186	188	NS	X074856	074856	1	G	W	20.31	45.68	6.67	0.5418	0.42	0.331	4.43	1.62	0.08	0.612	0.45	0.087	0.57	7.37	1.78	9.72	17573	18.7272	28.25604	-9.52884	NAF
NS0120	178	180	NS	X074852	074852	1	G	W	18.29	55.4	4.89	0.2709	0.21	0.232	3.03	1.19	0.08	0.35	0.514	0.127	0.73	5.42	1.22	7.37	17569	10.71	20.75598	-10.04598	NAF
NS0120	78	80	NS	X074799	074799	1	G	W	25.43	42.29	3.73	0.3612	0.28	0.176	3.13	0.92	0.128	0.19	0.882	0.146	0.94	9.72	0.56	11.22	17519	5.814	16.04664	-10.23264	NAF
NS0120	170	172	NS	X074847	074847	1	G	W	18.84	50.07	7.89	0.258	0.2	0.372	3.91	1.64	0.076	0.593	0.639	0.115	0.64	4.48	1.66	6.78	17565	18.1458	28.60488	-10.45908	NAF
NS0120	246	248	NS	X074886	074886	1	G	W	32.55	39.75	2.2	0.2967	0.23	0.1	2.06	0.85	0.099	0.139	0.698	0.134	0.53	6.01	0.17	6.71	17603	4.2534	14.8257	-10.5723	NAF
NS0120	274	276	NS	X074900	074900	1	G	W	32.38	38.52	2.28	0.5031	0.39	0.104	2.16	0.86	0.119	0.134	1.06	0.095	0.44	6.74	0.12	7.3	17617	4.1004	15.00012	-10.89972	NAF
NS0120	234	236	NS	X074880	074880	1	G	W	29.25	44.17	2.76	0.2322	0.18	0.13	2.34	0.91	0.106	0.135	0.775	0.168	0.64	4.89	0.34	5.87	17597	4.131	15.87222	-11.74122	NAF
NS0120	146	148	NS	X074835	074835	1	G	W	21.51	44.84	7.18	0.3096	0.24	0.345	3.88	1.84	0.062	0.645	1.21	0.246	0.97	4.8	1.61	7.38	17553	19.737	32.09328	-12.35628	NAF
NS0120	172	174	NS	X074848	074848	1	G	W	22.33	46.43	5.86	0.3612	0.28	0.284	3.5	1.38	0.083	0.381	0.769	0.178	0.98	5.97	1.31	8.26	17566	11.6586	24.06996	-12.41136	NAF
NS0120	174	176	NS	X074849	074849	1	G	W	24.55	42.03	3.78	0.3354	0.26	0.182	3.02	1.04	0.131	0.187	0.526	0.136	0.92	11.41	0.56	12.89	17567	5.7222	18.13968	-12.41748	NAF
NS0120	192	194	NS	X074859	074859	1	G	W	18.89	50.52	7.41	0.3096	0.24	0.369	4.23	1.33	0.064	0.351	0.409	0.1	0.6	5.32	1.5	7.42	17576	10.7406	23.19786	-12.45726	NAF
NS0120	162	164	NS	X074843	074843	1	G	W	23.96	43.63	4.68	0.3612	0.28	0.232	3.39	1.22	0.09	0.269	0.764	0.202	1.02	8.75	0.92	10.69	17561	8.2314	21.27924	-13.04784	NAF
NS0120	164	166	NS	X074844	074844	1	G	W	20.27	48.23	7.18	0.2967	0.23	0.341	3.85	1.41	0.089	0.367	0.765	0.177	0.82	5.01	1.35	7.18	17562	11.2302	24.59322	-13.36302	NAF
NS0120	232	234	NS	X074879	074879	1	G	W	29.49	46.72	1.96	0.2709	0.21	0.09	1.91	0.93	0.065	0.079	0.546	0.117	0.48	4.31	0.25	5.04	17596	2.4174	16.22106	-13.80366	NAF
NS0120	140	142	NS	X074832	074832	1	G	W	23.34	44.51	4.86	0.3999	0.31	0.229	3.39	1.52	0.149	0.415	1.1	0.296	1.15	6.71	1.23	9.09	17550	12.699	26.51184	-13.81284	NAF
NS0120	124	126	NS	X074824	074824	1	G	W	24.18	43.13	4.24	0.3096	0.24	0.206	3.81	1.17	0.084	0.213	0.812	0.206	1.11	9.13	0.88	11.12	17542	6.5178	20.40714	-13.88934	NAF
NS0120	72	74	NS	X074796	074796	1	G	W	21.64	46.85	5.82	0.3096	0.24	0.279	3.49	1.36	0.155	0.321	0.783	0.128	0.89	6.77	1.21	8.87	17516	9.8226	23.72112	-13.89852	NAF
NS0120	266	268	NS	X074896	074896	1	G	W	34.79	37.05	1.89	0.4257	0.33	0.09	1.98	1	0.126	0.112	0.636	0.107	0.42	6.15	0.09	6.66	17613	3.4272	17.442	-14.0148	NAF
NS0120	224	226	NS	X074875	074875	1	G	W	32.46	42.82	1.93	0.2967	0.23	0.093	1.98	0.96	0.151	0.08	0.532	0.132	0.46	4.09	0.05	4.6	17592	2.448	16.74432	-14.29632	NAF
NS0120	82	84	NS	X074802	074802	1	G	W	24.12	43.73	3.78	0.3612	0.28	0.178	3.46	1.11	0.073	0.158	1.01	0.147	1.1	9.47	0.7	11.27	17521	4.8348	19.36062	-14.52582	NAF
NS0120	118	120	NS	X074821	074821	1	G	W	25.77	42.39	3.77	0.3741	0.29	0.179	2.86	1.13	0.069	0.15	0.741	0.188	1.02	9.56	0.57	11.15	17539	4.59	19.70946	-15.11946	NAF
NS0120	176	178	NS	X074850	074850	1	G	W	23.58	42.74	4.94	0.3354	0.26	0.238	3.55	1.28	0.13	0.207	0.58	0.149	0.9	9.54	0.87	11.31	17568	6.3342	22.32576	-15.99156	NAF
NS0120	230	232	NS	X074878	074878	1	G	W	29.5	43.58	2.7	0.3225	0.25	0.126	2.34	1.28	0.119	0.191	0.741	0.157	0.61	4.52	0.57	5.7	17595	5.8446	22.32576	-16.48116	NAF
NS0120	144	146	NS	X074834	074834	1	G	W	21.47	46.7	6.52	0.3096	0.24	0.305	3.63	1.48	0.073	0.303	1.19	0.252	0.99	5.48	1.32	7.79	17552	9.2718	25.81416	-16.54236	NAF
NS0120	142	144	NS	X074833	074833	1	G	W	23.35	44.38	5.28	0.3612	0.28	0.252	3.45	1.73	0.137	0.44	1.08	0.281	1.2	6.18	1.39	8.77	17551	13.464	30.17466	-16.71066	NAF
NS0120	220	222	NS	X074873	074873	1	G	W	31.2	43.94	2.17	0.258	0.2	0.103	2.01	1.16	0.135	0.115	0.509	0.144	0.5	3.74	0.3	4.54	17590	3.519	20.23272	-16.71372	NAF
NS0120	218	220	NS	X074872	074872	1	G	W	28.96	46.46	2.03	0.2709	0.21	0.099	1.96	1.11	0.115	0.085	0.519	0.135	0.54	4.56	0.29	5.39	17589	2.601	19.36062	-16.75962	NAF
NS0120	96	98	NS	X074809	074809	1	G	W	24.83	41.93	3.9	0.3096	0.24	0.186	3.62	1.33	0.098	0.193	0.93	0.252	1.17	9.09	0.83	11.09	17528	5.9058	23.19786	-17.29206	NAF
NS0120	168	170	NS	X074846	074846	1	G	W	16.22	53.37	9.62	0.1806	0.14	0.452	4.02	1.75	0.063	0.43	1.01	0.054	0.43	3.64	1.64	5.71	17564	13.158	30.5235	-17.3655	NAF
NS0120	74	76	NS	X074797	074797	1	G	W	22.6	44.68	6.48	0.258	0.2	0.308	3.66	1.31	0.077	0.153	0.752	0.127	0.89	7.19	1.02	9.1	17517	4.6818	22.84902	-18.16722	NAF
NS0120	128	130	NS	X074826	074826	1	G	W	23.02	45.53	4.49	0.2967	0.23	0.218	3.54	1.41	0.062	0.187	0.961	0.262	1.13	7.43	1	9.56	17544	5.7222	24.59322	-18.87102	NAF
NS0120	122	124	NS	X074823	074823	1	G	W	22.34	46.7	3.21	0.387	0.3	0.151	3.16	1.52	0.064	0.243	0.649	0.171	1.1	9.72	0.86	11.68	17541	7.4358	26.51184	-19.07604	NAF
NS0120	76	78	NS	X074798	074798	1	G	W	23.83	43.19	4.62	0.3225	0.25	0.216	3.42	1.56	0.065	0.265	0.81	0.145	0.92	8.59	1.11	10.62	17518	8.109	27.20952	-19.10052	NAF
NS0120	88	90	NS	X074805	074805	1	G	W	23.58	44.14	4.57	0.3741	0.29	0.219	3.42	1.57	0.066	0.255	0.99	0.256	1.14	7.53	1.15	9.82	17524	7.803	27.38394	-19.58094	NAF
NS0120	132	134	NS	X074828	074828	1	G	W	22.51	47.36	4.81	0.3354	0.26	0.233	3.33	1.61	0.035	0.217	1.14	0.297	1.12	5.89	1.21	8.22	17546	6.6402	28.08162	-21.44142	NAF
NS0120	86	88	NS	X074804	074804	1	G	W	23.87	44.31	4.41	0.3225	0.25	0.213	3.38	1.54	0.072	0.174	0.98	0.212	1.07	8.11	0.95	10.13	17523	5.3244	26.86068	-21.53628	NAF
NS0120	160	162	NS	X074842	074842	1	G	W	23.99	42.75	4.56	0.3225	0.25	0.227	3.22	1.92	0.131	0.387	1.05	0.228	1.07	7.55	1.37	9.99	17560	11.8422	33.48864	-21.64644	NAF
NS0120	102	104	NS	X074812	074812	1	G	W	26.22	40.66	3.9	0.387	0.3	0.184	3.29	1.59	0.096	0.148	0.913	0.231	1.08	8.86	0.86	10.8	17531	4.5288	27.73278	-23.20398	NAF
NS0120	136	138	NS	X074830	074830	1	G	W	24.98	41.97	4.1	0.3354	0.26	0.194	3.18	1.79	0.175	0.249	0.98	0.26	1.12	8.27	0.99	10.38	17548	7.6194	31.22118	-23.60178	NAF
NS0120	278	280	NS	X074903	074903	1	G	W	24.77	40.88	5.34	0.387	0.3	0.253	3.79	1.66	0.149	0.148	1.63	0.078	0.53	8.08	0.91	9.52	17619	4.5288	28.95372	-24.42492	NAF
NS0120	94	96	NS	X074808	074808	1	G	W	23.91	45.35	3.83	0.2838	0.22	0.186	3.14	1.79	0.083	0.218	0.905	0.244	1.06	7.35	1.08	9.49	17527	6.6708	31.22118	-24.55038	NAF
NS0120	104	106	NS	X074813	074813	1	G	W	25.56	41.97	3.87	0.3483	0.27	0.187	3.34	1.69	0.158	0.155	0.963	0.269	1.09	7.84	0.88	9.81	17532	4.743	29.47698	-24.73398	NAF
NS0120	84	86	NS	X074803	074803	1	G	W	23.67	44.68	4.3	0.3225	0.25	0.207	3.29	1.78	0.08	0.175	0.975	0.216	1.09	7.89	1.07	10.05	17522	5.355	31.04676	-25.69176	NAF
NS0120	148	150	NS	X074836	074836	1	G	W	24.33	43.47	4	0.3612	0.28	0.186	2.77	1.93	0.082	0.24	0.817	0.199	0.96	9.03	1.09	11.08	17554	7.344	33.66306	-26.31906	NAF
NS0120	150	152	NS	X074837	074837	1	G	W	25.42	41.71	4.17	0.3483	0.27	0.2	2.95	1.92	0.092	0.222	0.812	0.209	1	8.23	1.06	10.29	17555	6.7932	33.48864	-26.69544	NAF
NS0120	138	140	NS	X074831	074831	1	G	W	22.24	44.99	6.09	0.3096	0.24	0.293	3.63	2	0.132	0.259	1.19	0.268	1.01	5.96	1.38	8.35	17549	7.9254	34.884	-26.9586	NAF
NS0120	92	94	NS	X074807	074807	1	G	W	25.24	44.35	3.45	0.2838	0.22	0.163	2.92	1.84	0.064	0.157	0.901	0.241	1	7.12	1.05	9.17	17526	4.8042	32.09328	-27.28908	NAF
NS0120	166	168	NS	X074845	074845	1	G	W	17.27	50.82	8.76	0.2322	0.18	0.417	3.96	2.21	0.086	0.364	1.04	0.085	0.56	3.93	1.93	6.42	17563	11.1384	38.54682	-27.40842	NAF
NS0120	130	132	NS	X074827	074827	1	G	W	26.12	42.21	3.47	0.387	0.3	0.169	2.89	1.81	0.056	0.127	0.933	0.253	1.08	8.25	0.93	10.26	17545	3.8862	31.57002	-27.68382	NAF
NS0120	126	128	NS	X074825	074825	1	G	W	24.32	45.72	3.24	0.2322	0.18	0.161	2.65	1.81	0.092	0.12	0.773	0.215	0.93	8.08	0.86	9.87	17543	3.672	31.57002	-27.89802	NAF
NS0120	106	108	NS	X074814	074814	1	G	W	25.95	42.29	3.76	0.3741	0.29	0.178	3	1.96	0.081	0.205	1	0.265	1.03	7.3	1.16	9.49	17533	6.273	34.18632	-27.91332	NAF
NS0120	110	112	NS	X074816	074816	1	G	W	22.92	45.27	5.65	0.258	0.2	0.268	3.81	2.27	0.117	0.246	1.19	0.306	1.17	4.93	1.51	7.61	17535	7.5276	39.59334	-32.06574	NAC
NS0120	108	110	NS	X074815	074815	1	G	W	23.25	44.52	4.62	0.3354	0.26	0.219	3.35	2.38	0.152	0.253	1.17	0.316	1.14	5.93	1.47	8.54	17534	7.7418	41.51196	-33.77016	NAC
NS0120	276	278	NS	X074902	074902	1	G	W	24.76	37.2	7.76	0.2838	0.22	0.357	4.22	2.19	0.049	0.061	3.42	0.088	0.46	6.26	1.96	8.68	17618	1.8666	38.19798	-36.33138	NAC
NS0120	152	154	NS	X074838	074838	1	G	W	26.35	41.1	3.51	0.387	0.3	0.165	2.67	2.41	0.094	0.17	0.82	0.202	0.95	7.96	1.21	10.12	17556	5.202	42.03522	-36.83322	NAC
NS0120	90	92	NS	X074806	074806	1	G	W	24.2	43.8	4.1	0.3096	0.24	0.192	3.2	2.47	0.108	0.179	0.998	0.265	1.08	6.92	1.45	9.45	17525	5.4774	43.08174	-37.60434	NAC
NS0120	158	160	NS	X074841	074841	1	G	W	23.84	43.36	4.47	0.3354	0.26	0.215	3.24	2.62	0.123	0.235	1.05	0.234	1.01	6.72	1.57	9.3	17559	7.191	45.69804	-38.50704	NAC
NS0120	134	136	NS	X074829	074829	1	G	W	21.52	47.12	4.78	0.3225	0.25	0.231	3.45	2.59	0.098	0.213	1.15	0.291	1.14	5.33	1.74	8.21	17547	6.5178	45.17478	-38.65698	NAC
NS0120	114	116	NS	X074818	074818	1	G	W	25.94	42.29	3.3	0.3612	0.28	0.156	2.91	2.57	0.061	0.161	0.858	0.226	0.9	6.92	1.73	9.55	17537	4.9266	44.82594	-39.89934	NAC
NS0120	116	118	NS	X074819	074819	1	G	W	24.86	42.46	3.86	0.3225	0.25	0.184	3.15	2.54	0.129	0.135	0.829	0.213	0.95	7.49	1.55	9.99	17538	4.131	44.30268	-40.17168	NAC
NS0120	154	156	NS	X074839	074839	1	G	W	27.69	41.54	2.91	0.387	0.3	0.142	2.44	2.58	0.122	0.131	0.892	0.225	0.91	6.56	1.21	8.68	17557	4.0086	45.00036	-40.99176	NAC
NS0120	112	114	NS	X074817	074817	1	G	W	26.06	42.03	3.38	0.3612	0.28	0.16	2.8	2.73	0.09	0.146	0.92	0.247	0.94	6.6	1.69	9.23	17536	4.4676	47.61666	-43.14906	NAC
NS0120	156	158	NS	X074840	074840	1	G	W	28.58	40.18	2.52	0.3999	0.31	0.121	2.25	2.81	0.088	0.085	0.827	0.203	0.84	6.85	1.52	9.21	17558	2.601	49.01202	-46.41102	NAC
NS0121	50	52	NS	X074929	074929	1	G	D	14.04	54.54	12.69	0.0903	0.07	0.595	4.5	0.08	0.018	0.065	2.64	0.028	0.74	3.2	0.4	4.34	17645	1.989	1.39536	0.59364	PAF(LC)
NS0121	48	50	NS	X074928	074928	1	G	D	12.22	55.51	13.6	0.0645	0.05	0.618	4.08	0.07	0.019	0.04	4.22	0.022	0.79	2.86	0.35	4	17644	1.224	1.22094	0.00306	PAF(LC)
NS0121	10	12	NS	X074909	074909	1	G	D	7.18	59.4	15.65	0.0645	0.05	0.659	2.99	0.09	0.012	0.006	6.87	0.07	0.78	2.29	0.41	3.48	17625	0.1836	1.56978	-1.38618	NAF
NS0121	12	14	NS	X074910	074910	1	G	D	10.87	56.91	14.4	0.0774	0.06	0.641	2.76	0.11	0.016	0.007	5.05	0.081	1.12	2.78	0.38	4.28	17626	0.2142	1.91862	-1.70442	NAF
NS0121	52	54	NS	X074930	074930	1	G	D	18.04	53.7	9.38	0.7353	0.57	0.431	3.67	0.23	0.064	0.072	0.429	0.03	1.95	2.87	0.46	5.28	17646	2.2032	4.01166	-1.80846	NAF
NS0121	8	10	NS	X074908	074908	1	G	D	8.59	59.34	14.55	0.0903	0.07	0.645	3.16	0.14	0.011	0.008	5.68	0.069	0.99	2.58	0.36	3.93	17624	0.2448	2.44188	-2.19708	NAF
NS0121	54	56	NS	X074931	074931	1	G	W	21.6	51.49	6.61	0.3741	0.29	0.309	2.74	0.49	0.129	0.192	0.297	0.052	2.65	2.87	0.65	6.17	17647	5.8752	8.54658	-2.67138	NAF
NS0121	6	8	NS	X074907	074907	1	G	D	8.88	59.35	14.44	0.0903	0.07	0.636	2.93	0.17	0.012	0.008	5.39	0.071	0.92	2.68	0.38	3.98	17623	0.2448	2.96514	-2.72034	NAF
NS0121	14	16	NS	X074911	074911	1	G	D	28.49	43.83	5.64	0.6579	0.51	0.256	1.05	0.22	0.077	0.009	0.748	0.059	4.62	1.72	0.28	6.62	17627	0.2754	3.83724	-3.56184	NAF
NS0121	16	18	NS	X074912	074912	1	G	D	21.14	51.99	7.48	0.4515	0.35	0.346	1.37	0.23	0.066	0.009	1.25	0.087	3.79	2.14	0.32	6.25	17628	0.2754	4.01166	-3.73626	NAF
NS0121	20	22	NS	X074914	074914	1	G	D	22.36	49.91	7.51	0.4644	0.36	0.333	1.57	0.23	0.067	0.004	1.06	0.059	3.86	2.27	0.33	6.46	17630	0.1224	4.01166	-3.88926	NAF
NS0121	18	20	NS	X074913	074913	1	G	D	19.4	51.89	9.61	0.1935	0.15	0.438	1.74	0.27	0.073	0.004	1.48	0.078	3.32	2.64	0.32	6.28	17629	0.1224	4.70934	-4.58694	NAF
NS0121	30	32	NS	X074919	074919	1	G	D	21.14	50.68	7.79	0.3225	0.25	0.359	3.11	0.3	0.046	0.002	0.548	0.061	3.37	2.68	0.28	6.33	17635	0.0612	5.2326	-5.1714	NAF
NS0121	22	24	NS	X074915	074915	1	G	D	16.45	55.92	9.37	0.3096	0.24	0.442	2.24	0.32	0.059	0.003	1.52	0.065	2.71	2.56	0.32	5.59	17631	0.0918	5.58144	-5.48964	NAF
NS0121	44	46	NS	X074926	074926	1	G	D	16.78	52.78	10.87	0.2709	0.21	0.499	3.58	0.38	0.089	0.003	1.59	0.044	2.2	3.13	0.39	5.72	17642	0.0918	6.62796	-6.53616	NAF
NS0121	24	26	NS	X074916	074916	1	G	D	22.02	51.32	6.29	0.5805	0.45	0.282	1.71	0.39	0.075	0.002	0.664	0.059	4.21	1.99	0.32	6.52	17632	0.0612	6.80238	-6.74118	NAF
NS0121	56	58	NS	X074932	074932	1	G	W	21.53	45.4	7.56	0.5418	0.42	0.356	4.29	0.77	0.083	0.214	0.633	0.13	0.86	7.2	0.84	8.9	17648	6.5484	13.43034	-6.88194	NAF
NS0121	38	40	NS	X074923	074923	1	G	D	22.68	50.34	6.43	0.4515	0.35	0.299	2.22	0.42	0.094	0.003	0.453	0.048	4.12	2.14	0.32	6.58	17639	0.0918	7.32564	-7.23384	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0121	4	6	NS	X074906	074906	1	G	D	13.97	59.31	11	0.1806	0.14	0.512	1.32	0.45	0.014	0.011	1.66	0.052	1.78	3.05	0.28	5.11	17622	0.3366	7.8489	-7.5123	NAF
NS0121	46	48	NS	X074927	074927	1	G	D	16.03	55.25	9.62	0.3612	0.28	0.448	3.21	0.48	0.114	0.012	1.81	0.043	2.41	2.54	0.39	5.34	17643	0.3672	8.37216	-8.00496	NAF
NS0121	42	44	NS	X074925	074925	1	G	D	14.42	57.38	10.22	0.2451	0.19	0.468	3.3	0.47	0.129	0.004	1.77	0.039	1.9	2.69	0.32	4.91	17641	0.1224	8.19774	-8.07534	NAF
NS0121	26	28	NS	X074917	074917	1	G	D	23.58	48.34	6.93	0.2838	0.22	0.319	1.84	0.52	0.077	0.003	0.631	0.075	4.43	2.2	0.3	6.93	17633	0.0918	9.06984	-8.97804	NAF
NS0121	60	62	NS	X074934	074934	1	G	W	19.21	49.39	8.71	0.3483	0.27	0.411	4.29	0.96	0.043	0.25	0.979	0.107	0.72	5.02	1.07	6.81	17650	7.65	16.74432	-9.09432	NAF
NS0121	34	36	NS	X074921	074921	1	G	D	21.37	51.44	6.62	0.3741	0.29	0.307	2.58	0.53	0.118	0.003	0.641	0.06	3.91	2.31	0.32	6.54	17637	0.0918	9.24426	-9.15246	NAF
NS0121	36	38	NS	X074922	074922	1	G	D	25.12	46.62	6.13	0.3612	0.28	0.279	2.11	0.63	0.144	0.002	0.384	0.053	4.74	2.09	0.33	7.16	17638	0.0612	10.98846	-10.92726	NAF
NS0121	32	34	NS	X074920	074920	1	G	D	20.31	50.3	8.27	0.2709	0.21	0.383	3.29	0.66	0.168	0.003	0.744	0.061	3.24	2.88	0.33	6.45	17636	0.0918	11.51172	-11.41992	NAF
NS0121	40	42	NS	X074924	074924	1	G	D	18.41	53.54	8.07	0.5031	0.39	0.369	2.91	0.79	0.224	0.003	0.89	0.039	2.99	2.53	0.36	5.88	17640	0.0918	13.77918	-13.68738	NAF
NS0121	28	30	NS	X074918	074918	1	G	D	21.29	50.05	7.33	0.4902	0.38	0.343	2.74	0.8	0.17	0.002	0.508	0.09	3.68	2.63	0.33	6.64	17634	0.0612	13.9536	-13.8924	NAF
NS0121	58	60	NS	X074933	074933	1	G	W	19.14	50.11	7.51	0.4257	0.33	0.361	4.09	1.24	0.054	0.15	0.664	0.107	0.65	5.88	1.05	7.58	17649	4.59	21.62808	-17.03808	NAF
NS0121	2	4	NS	X074905	074905	1	G	D	19.53	53.69	9.28	0.1032	0.08	0.395	0.24	1.14	0.045	0.014	0.062	0.043	3.19	3.26	0.53	6.98	17621	0.4284	19.88388	-19.45548	NAF
NS0121	0	2	NS	X074904	074904	1	G	D	17.23	52.69	6.62	0.0903	0.07	0.299	0.31	5.68	0.058	0.017	0.043	0.019	2.83	3.06	3.51	9.4	17620	0.5202	99.07056	-98.55036	NAC
NS0122	132	134	NS	X075115	075115	1	G	W	27.17	40.68	5.08	0.3354	0.26	0.24	3.38	0.51	0.042	0.393	1.43	0.356	1.29	6.17	0.97	8.43	17717	12.0258	8.89542	3.13038	PAF(LC)
NS0122	168	170	NS	X075133	075133	1	G	W	25.69	44.1	5.29	0.2709	0.21	0.252	2.99	0.93	0.096	0.559	1.74	0.42	1.08	4.43	1.19	6.7	17735	17.1054	16.22106	0.88434	PAF(LC)
NS0122	4	6	NS	X075049	075049	1	G	D	43.22	24.24	5.4	-0.0129	-0.01	0.476	0.07	0.04	0.027	0.033	0.025	0.023	5.93	1.26	0.29	7.48	17653	1.0098	0.69768	0.31212	PAF(LC)
NS0122	6	8	NS	X075050	075050	1	G	D	37.74	39.41	1.88	-0.0129	-0.01	0.091	0.05	0.03	0.043	0.023	0.008	0.016	3.71	0.56	0.12	4.39	17654	0.7038	0.52326	0.18054	PAF(LC)
NS0122	2	4	NS	X075048	075048	1	G	D	44.26	24.18	4.43	-0.0129	-0.01	0.383	0.07	0.05	0.038	0.034	0.043	0.017	5.69	1.12	0.24	7.05	17652	1.0404	0.8721	0.1683	PAF(LC)
NS0122	8	10	NS	X075052	075052	1	G	D	37.21	39.89	1.98	0.0258	0.02	0.098	0.05	0.04	0.041	0.023	0.01	0.015	3.67	0.59	0.14	4.4	17655	0.7038	0.69768	0.00612	PAF(LC)
NS0122	16	18	NS	X075056	075056	1	G	D	38.58	33.83	3.82	0.0258	0.02	0.159	0.06	0.07	0.048	0.037	0.006	0.056	4.97	1.15	0.22	6.34	17659	1.1322	1.22094	-0.08874	NAF
NS0122	10	12	NS	X075053	075053	1	G	D	32.11	46.12	2.83	0.0258	0.02	0.133	0.06	0.05	0.028	0.022	0.008	0.035	3.8	0.82	0.15	4.77	17656	0.6732	0.8721	-0.1989	NAF
NS0122	14	16	NS	X075055	075055	1	G	D	34.34	44.98	1.73	0.0258	0.02	0.058	0.06	0.05	0.039	0.02	0.006	0.032	3.11	0.55	0.12	3.78	17658	0.612	0.8721	-0.2601	NAF
NS0122	18	20	NS	X075057	075057	1	G	D	32.91	43.35	3.52	0.0258	0.02	0.162	0.07	0.07	0.036	0.028	0.01	0.051	4.2	1.19	0.21	5.6	17660	0.8568	1.22094	-0.36414	NAF
NS0122	12	14	NS	X075054	075054	1	G	D	33.5	42.76	4	0.0258	0.02	0.144	0.07	0.06	0.032	0.022	0.006	0.043	3.66	1.23	0.18	5.07	17657	0.6732	1.04652	-0.37332	NAF
NS0122	128	130	NS	X075113	075113	1	G	W	26.55	41.24	5.09	0.3612	0.28	0.24	3.46	0.72	0.031	0.398	1.41	0.346	1.24	6.33	1.13	8.7	17715	12.1788	12.55824	-0.37944	NAF
NS0122	0	2	NS	X075047	075047	1	G	D	34.7	39.45	3.96	0.0258	0.02	0.277	0.11	0.07	0.028	0.026	0.087	0.03	4.87	1.09	0.19	6.15	17651	0.7956	1.22094	-0.42534	NAF
NS0122	206	208	NS	X075153	075153	1	G	W	17.39	49.87	9.45	0.1161	0.09	0.435	3.22	1.03	0.042	0.572	5.2	0.29	0.88	1.91	1.25	4.04	17754	17.5032	17.96526	-0.46206	NAF
NS0122	66	70	NS	BX082081-BX082082	X082081	2			69.96	3.369	0.239	0.04	0.0288	0.069	0.235	0.071	0.009	0.016	0.057	0.102	-0.01	-0.01	-0.01	-0.03	2063	0.4896	1.238382	-0.748782	NAF
NS0122	62	66	NS	BX082079-BX082080	X082079	2			70.68	2.969	0.225	0.034	0.02448	0.067	0.226	0.072	0.009	0.015	0.047	0.113	-0.01	-0.01	-0.01	-0.03	2062	0.459	1.255824	-0.796824	NAF
NS0122	70	74	NS	BX082083-BX082084	X082083	2			70.54	2.711	0.168	0.033	0.02376	0.052	0.187	0.068	0.01	0.012	0.038	0.076	-0.01	-0.01	-0.01	-0.03	2064	0.3672	1.186056	-0.818856	NAF
NS0122	208	212	NS	BX082154-BX082155	X082154	2			68.51	3.273	0.337	0.042	0.03024	0.066	0.243	0.089	0.012	0.022	0.113	0.08	-0.01	-0.01	-0.01	-0.03	2098	0.6732	1.552338	-0.879138	NAF
NS0122	150	154	NS	BX082124-BX082125	X082124	2			68.66	3.61	0.299	0.039	0.02808	0.058	0.267	0.076	0.011	0.013	0.063	0.077	-0.01	-0.01	-0.01	-0.03	2084	0.3978	1.325592	-0.927792	NAF
NS0122	192	196	NS	BX082145-BX082146	X082145	2			70.67	2.138	0.162	0.043	0.03096	0.029	0.2	0.066	0.011	0.007	0.048	0.071	-0.01	-0.01	-0.01	-0.03	2094	0.2142	1.151172	-0.936972	NAF
NS0122	216	220	NS	BX082158-BX082159	X082158	2			71.36	2.505	0.337	0.039	0.02808	0.078	0.244	0.086	0.013	0.018	0.07	0.117	-0.01	-0.01	-0.01	-0.03	2100	0.5508	1.500012	-0.949212	NAF
NS0122	58	62	NS	BX082077-BX082078	X082077	2			70.2	2.32	0.137	0.032	0.02304	0.05	0.163	0.069	0.01	0.008	0.033	0.066	0.01	-0.01	-0.01	-0.01	2061	0.2448	1.203498	-0.958698	NAF
NS0122	126	130	NS	BX082112-BX082113	X082112	2			67.52	4.497	0.383	0.056	0.04032	0.066	0.334	0.085	0.013	0.017	0.076	0.105	-0.01	-0.01	-0.01	-0.03	2078	0.5202	1.48257	-0.96237	NAF
NS0122	74	78	NS	BX082085-BX082086	X082085	2			70.23	2.762	0.171	0.039	0.02808	0.064	0.203	0.078	0.01	0.012	0.039	0.072	-0.01	-0.01	-0.01	-0.03	2065	0.3672	1.360476	-0.993276	NAF
NS0122	212	216	NS	BX082156-BX082157	X082156	2			70.64	1.301	0.197	0.051	0.03672	0.03	0.234	0.079	0.012	0.012	0.057	0.078	-0.01	-0.01	-0.01	-0.03	2099	0.3672	1.377918	-1.010718	NAF
NS0122	146	150	NS	BX082122-BX082123	X082122	2			70.32	2.846	0.325	0.038	0.02736	0.081	0.248	0.083	0.014	0.014	0.055	0.095	-0.01	-0.01	-0.01	-0.03	2083	0.4284	1.447686	-1.019286	NAF
NS0122	200	204	NS	BX082149-BX082150	X082149	2			70.93	2.856	0.343	0.036	0.02592	0.062	0.244	0.093	0.013	0.018	0.096	0.083	-0.01	-0.01	-0.01	-0.03	2096	0.5508	1.622106	-1.071306	NAF
NS0122	204	208	NS	BX082152-BX082153	X082152	2			70.98	2.518	0.29	0.033	0.02376	0.057	0.211	0.088	0.013	0.015	0.084	0.07	-0.01	-0.01	-0.01	-0.03	2097	0.459	1.534896	-1.075896	NAF
NS0122	130	134	NS	BX082114-BX082115	X082114	2			64.5	7.963	0.293	0.068	0.04896	0.032	0.304	0.087	0.012	0.014	0.083	0.089	-0.01	-0.01	-0.01	-0.03	2079	0.4284	1.517454	-1.089054	NAF
NS0122	20	22	NS	X075058	075058	1	G	D	36.39	39.11	2.97	0.0387	0.03	0.183	0.16	0.1	0.045	0.021	0.05	0.06	3.99	1.1	0.17	5.26	17661	0.6426	1.7442	-1.1016	NAF
NS0122	138	142	NS	BX082118-BX082119	X082118	2			70.36	1.979	0.164	0.038	0.02736	0.039	0.198	0.086	0.015	0.013	0.042	0.085	-0.01	-0.01	-0.01	-0.03	2081	0.3978	1.500012	-1.102212	NAF
NS0122	238	242	NS	BX082169-BX082170	X082169	2			66.38	7.145	0.337	0.073	0.05256	0.034	0.373	0.092	0.012	0.016	0.117	0.09	-0.01	-0.01	-0.01	-0.03	2105	0.4896	1.604664	-1.115064	NAF
NS0122	188	192	NS	BX082143-BX082144	X082143	2			70.64	1.295	0.184	0.041	0.02952	0.041	0.212	0.084	0.016	0.011	0.049	0.074	-0.01	-0.01	-0.01	-0.03	2093	0.3366	1.465128	-1.128528	NAF
NS0122	154	158	NS	BX082126-BX082127	X082126	2			70.77	2.408	0.184	0.032	0.02304	0.051	0.185	0.083	0.011	0.01	0.04	0.078	-0.01	-0.01	-0.01	-0.03	2085	0.306	1.447686	-1.141686	NAF
NS0122	106	110	NS	BX082102-BX082103	X082102	2			71.1	2.398	0.094	0.026	0.01872	0.022	0.145	0.082	0.014	0.007	0.028	0.059	-0.01	-0.01	-0.01	-0.03	2073	0.2142	1.430244	-1.216044	NAF
NS0122	134	138	NS	BX082116-BX082117	X082116	2			70.55	2.757	0.16	0.034	0.02448	0.042	0.182	0.084	0.014	0.008	0.037	0.063	-0.01	-0.01	-0.01	-0.03	2080	0.2448	1.465128	-1.220328	NAF
NS0122	168	172	NS	BX082133-BX082134	X082133	2			71.24	1.215	0.131	0.03	0.0216	0.032	0.164	0.084	0.018	0.008	0.034	0.066	-0.01	-0.01	-0.01	-0.03	2088	0.2448	1.465128	-1.220328	NAF
NS0122	114	118	NS	BX082106-BX082107	X082106	2			70.5	2.532	0.23	0.031	0.02232	0.043	0.211	0.092	0.013	0.012	0.053	0.073	-0.01	-0.01	-0.01	-0.03	2075	0.3672	1.604664	-1.237464	NAF
NS0122	158	162	NS	BX082128-BX082129	X082128	2			70.36	2.349	0.179	0.04	0.0288	0.032	0.211	0.085	0.014	0.008	0.052	0.068	-0.01	-0.01	-0.01	-0.03	2086	0.2448	1.48257	-1.23777	NAF
NS0122	164	168	NS	BX082131-BX082132	X082131	2			71.18	1.514	0.171	0.031	0.02232	0.043	0.179	0.091	0.017	0.011	0.041	0.074	-0.01	-0.01	-0.01	-0.03	2087	0.3366	1.587222	-1.250622	NAF
NS0122	254	258	NS	BX082177-BX082178	X082177	2			70.42	2.095	0.214	0.033	0.02376	0.032	0.21	0.091	0.013	0.011	0.062	0.069	-0.01	-0.01	-0.01	-0.03	2109	0.3366	1.587222	-1.250622	NAF
NS0122	274	278	NS	BX082187-BX082188	X082187	2			68.41	4.184	0.416	0.051	0.03672	0.059	0.304	0.107	0.013	0.02	0.138	0.072	-0.01	-0.01	-0.01	-0.03	2114	0.612	1.866294	-1.254294	NAF
NS0122	184	188	NS	BX082141-BX082142	X082141	2			70.71	2.373	0.145	0.03	0.0216	0.039	0.174	0.09	0.017	0.01	0.039	0.078	-0.01	-0.01	-0.01	-0.03	2092	0.306	1.56978	-1.26378	NAF
NS0122	196	200	NS	BX082147-BX082148	X082147	2			69.05	3.784	0.201	0.043	0.03096	0.034	0.233	0.092	0.015	0.011	0.061	0.082	-0.01	-0.01	-0.01	-0.03	2095	0.3366	1.604664	-1.268064	NAF
NS0122	266	270	NS	BX082183-BX082184	X082183	2			69.46	2.302	0.152	0.028	0.02016	0.028	0.164	0.085	0.013	0.007	0.041	0.063	-0.01	-0.01	-0.01	-0.03	2112	0.2142	1.48257	-1.26837	NAF
NS0122	172	176	NS	BX082135-BX082136	X082135	2			68.85	3.763	0.352	0.037	0.02664	0.06	0.283	0.11	0.013	0.021	0.085	0.116	-0.01	-0.01	-0.01	-0.03	2089	0.6426	1.91862	-1.27602	NAF
NS0122	250	254	NS	BX082175-BX082176	X082175	2			69.78	3.212	0.177	0.035	0.0252	0.026	0.199	0.095	0.013	0.012	0.051	0.083	-0.01	-0.01	-0.01	-0.03	2108	0.3672	1.65699	-1.28979	NAF
NS0122	142	146	NS	BX082120-BX082121	X082120	2			70.48	1.88	0.161	0.037	0.02664	0.045	0.199	0.092	0.018	0.01	0.042	0.065	-0.01	-0.01	-0.01	-0.03	2082	0.306	1.604664	-1.298664	NAF
NS0122	242	246	NS	BX082171-BX082172	X082171	2			65.8	7.306	0.234	0.078	0.05616	0.019	0.306	0.092	0.014	0.009	0.077	0.082	-0.01	-0.01	-0.01	-0.03	2106	0.2754	1.604664	-1.329264	NAF
NS0122	270	274	NS	BX082185-BX082186	X082185	2			70.68	2.422	0.188	0.034	0.02448	0.044	0.185	0.094	0.016	0.01	0.052	0.073	-0.01	-0.01	-0.01	-0.03	2113	0.306	1.639548	-1.333548	NAF
NS0122	176	180	NS	BX082137-BX082138	X082137	2			70.54	2.051	0.276	0.035	0.0252	0.05	0.244	0.103	0.016	0.015	0.067	0.088	-0.01	-0.01	-0.01	-0.03	2090	0.459	1.796526	-1.337526	NAF
NS0122	118	122	NS	BX082108-BX082109	X082108	2			70.13	2.855	0.23	0.034	0.02448	0.039	0.212	0.1	0.018	0.013	0.056	0.073	-0.01	-0.01	-0.01	-0.03	2076	0.3978	1.7442	-1.3464	NAF
NS0122	222	226	NS	BX082161-BX082162	X082161	2			71.25	1.84	0.181	0.034	0.02448	0.034	0.203	0.097	0.017	0.011	0.054	0.086	-0.01	-0.01	-0.01	-0.03	2101	0.3366	1.691874	-1.355274	NAF
NS0122	180	184	NS	BX082139-BX082140	X082139	2			70.91	2.233	0.101	0.031	0.02232	0.029	0.154	0.098	0.022	0.009	0.029	0.077	-0.01	-0.01	-0.01	-0.03	2091	0.2754	1.709316	-1.433916	NAF
NS0122	230	234	NS	BX082165-BX082166	X082165	2			68.09	4.254	0.326	0.065	0.0468	0.036	0.328	0.115	0.014	0.018	0.116	0.09	-0.01	-0.01	-0.01	-0.03	2103	0.5508	2.00583	-1.45503	NAF
NS0122	234	238	NS	BX082167-BX082168	X082167	2			66.1	6.474	0.459	0.089	0.06408	0.041	0.446	0.136	0.011	0.029	0.169	0.1	-0.01	-0.01	-0.01	-0.03	2104	0.8874	2.372112	-1.484712	NAF
NS0122	110	114	NS	BX082104-BX082105	X082104	2			69.83	3.605	0.178	0.043	0.03096	0.024	0.228	0.103	0.018	0.01	0.053	0.074	-0.01	-0.01	-0.01	-0.03	2074	0.306	1.796526	-1.490526	NAF
NS0122	278	280	NS	BX082189	X082189	2			68.23	4.488	0.33	0.06	0.0432	0.042	0.314	0.112	0.012	0.015	0.103	0.069	0.02	-0.01	-0.01	0	2115	0.459	1.953504	-1.494504	NAF
NS0122	98	102	NS	BX082097-BX082098	X082097	2			70.13	3.173	0.204	0.037	0.02664	0.037	0.236	0.107	0.02	0.012	0.05	0.076	-0.01	-0.01	-0.01	-0.03	2071	0.3672	1.866294	-1.499094	NAF
NS0122	102	106	NS	BX082099-BX082100	X082099	2			68.83	3.116	0.194	0.034	0.02448	0.028	0.226	0.105	0.015	0.01	0.052	0.069	-0.01	-0.01	-0.01	-0.03	2072	0.306	1.83141	-1.52541	NAF
NS0122	122	126	NS	BX082110-BX082111	X082110	2			69.27	4.015	0.218	0.049	0.03528	0.036	0.243	0.112	0.019	0.013	0.061	0.075	-0.01	-0.01	-0.01	-0.03	2077	0.3978	1.953504	-1.555704	NAF
NS0122	90	94	NS	BX082093-BX082094	X082093	2			69.64	3.848	0.126	0.051	0.03672	0.021	0.219	0.102	0.019	0.006	0.041	0.056	-0.01	-0.01	-0.01	-0.03	2069	0.1836	1.779084	-1.595484	NAF
NS0122	262	266	NS	BX082181-BX082182	X082181	2			68.56	3.263	0.31	0.032	0.02304	0.041	0.239	0.122	0.014	0.017	0.101	0.074	-0.01	-0.01	-0.01	-0.03	2111	0.5202	2.127924	-1.607724	NAF
NS0122	94	98	NS	BX082095-BX082096	X082095	2			69.53	3.343	0.241	0.042	0.03024	0.059	0.256	0.125	0.024	0.018	0.053	0.09	-0.01	-0.01	-0.01	-0.03	2070	0.5508	2.18025	-1.62945	NAF
NS0122	86	90	NS	BX082091-BX082092	X082091	2			66.21	6.497	0.33	0.077	0.05544	0.033	0.4	0.12	0.018	0.014	0.096	0.079	-0.01	-0.01	-0.01	-0.03	2068	0.4284	2.09304	-1.66464	NAF
NS0122	226	230	NS	BX082163-BX082164	X082163	2			70.91	2.243	0.181	0.025	0.018	0.035	0.166	0.119	0.018	0.012	0.054	0.068	-0.01	-0.01	-0.01	-0.03	2102	0.3672	2.075598	-1.708398	NAF
NS0122	182	184	NS	X075140	075140	1	G	W	28.53	41.32	4.37	0.2967	0.23	0.204	2.59	0.98	0.085	0.5	1.4	0.282	1	5.08	1.14	7.22	17742	15.3	17.09316	-1.79316	NAF
NS0122	246	250	NS	BX082173-BX082174	X082173	2			68.51	4.544	0.415	0.047	0.03384	0.044	0.328	0.138	0.017	0.018	0.12	0.08	-0.01	-0.01	-0.01	-0.03	2107	0.5508	2.406996	-1.856196	NAF
NS0122	82	84	NS	BX082089	X082089	2			67.1	5.875	0.225	0.081	0.05832	0.026	0.4	0.135	0.022	0.014	0.075	0.088	-0.01	-0.01	-0.01	-0.03	2067	0.4284	2.35467	-1.92627	NAF
NS0122	258	262	NS	BX082179-BX082180	X082179	2			69.02	3.587	0.472	0.031	0.02232	0.054	0.319	0.173	0.014	0.022	0.14	0.115	-0.01	-0.01	-0.01	-0.03	2110	0.6732	3.017466	-2.344266	NAF
NS0122	68	70	NS	X075082	075082	1	G	W	22.71	46.86	6.7	0.2451	0.19	0.321	3.35	0.86	0.092	0.405	2.2	0.248	1.09	4.05	1.02	6.16	17685	12.393	15.00012	-2.60712	NAF
NS0122	44	46	NS	X075070	075070	1	G	D	31.8	46.01	1.79	0.3612	0.28	0.079	0.57	0.22	0.038	0.007	0.192	0.039	3.79	1.01	0.11	4.91	17673	0.2142	3.83724	-3.62304	NAF
NS0122	148	150	NS	X075123	075123	1	G	W	24.28	44.64	6.21	0.2451	0.19	0.3	3.65	0.8	0.025	0.332	1.61	0.394	1.29	4.13	1.08	6.5	17725	10.1592	13.9536	-3.7944	NAF
NS0122	46	48	NS	X075071	075071	1	G	D	33.13	44.06	1.83	0.3483	0.27	0.082	0.58	0.23	0.055	0.006	0.201	0.046	3.71	1.02	0.09	4.82	17674	0.1836	4.01166	-3.82806	NAF
NS0122	38	40	NS	X075067	075067	1	G	D	28.61	45.97	4.1	0.2322	0.18	0.186	1.1	0.29	0.036	0.009	1.01	0.181	3.69	1.67	0.18	5.54	17670	0.2754	5.05818	-4.78278	NAF
NS0122	86	88	NS	X075091	075091	1	G	W	28.83	39.6	3.74	0.387	0.3	0.173	3.13	0.74	0.033	0.264	1.01	0.25	1.02	7.29	0.67	8.98	17694	8.0784	12.90708	-4.82868	NAF
NS0122	42	44	NS	X075069	075069	1	G	D	28.08	46.89	3.77	0.3354	0.26	0.178	1.1	0.29	0.032	0.007	0.821	0.177	4.02	1.66	0.19	5.87	17672	0.2142	5.05818	-4.84398	NAF
NS0122	22	24	NS	X075059	075059	1	G	D	30.61	40.11	6.96	0.0516	0.04	0.316	0.71	0.33	0.053	0.024	0.197	0.116	4.41	2.61	0.23	7.25	17662	0.7344	5.75586	-5.02146	NAF
NS0122	78	82	NS	BX082087-BX082088	X082087	2			58.42	12.475	0.545	0.073	0.05256	0.032	0.688	0.378	0.031	0.036	0.157	0.183	-0.01	-0.01	-0.01	-0.03	2066	1.1016	6.593076	-5.491476	NAF
NS0122	26	28	NS	X075061	075061	1	G	D	31.59	43.75	3.52	0.1806	0.14	0.153	0.59	0.34	0.051	0.014	0.188	0.079	3.98	1.5	0.08	5.56	17664	0.4284	5.93028	-5.50188	NAF
NS0122	40	42	NS	X075068	075068	1	G	D	28.92	44.63	4.07	0.387	0.3	0.193	1.26	0.35	0.034	0.006	0.82	0.184	4.24	1.83	0.22	6.29	17671	0.1836	6.1047	-5.9211	NAF
NS0122	36	38	NS	X075066	075066	1	G	D	26.27	47.19	4.85	0.3483	0.27	0.224	1.55	0.37	0.029	0.013	0.997	0.289	3.92	2.13	0.2	6.25	17669	0.3978	6.45354	-6.05574	NAF
NS0122	216	218	NS	X075158	075158	1	G	W	19.98	48.22	7.69	0.2064	0.16	0.353	3.33	1.19	0.14	0.48	3.82	0.259	0.89	3.37	1.29	5.55	17759	14.688	20.75598	-6.06798	NAF
NS0122	34	36	NS	X075065	075065	1	G	D	28.11	45.39	4.39	0.3741	0.29	0.201	1.31	0.38	0.037	0.017	0.804	0.287	3.9	1.96	0.15	6.01	17668	0.5202	6.62796	-6.10776	NAF
NS0122	190	192	NS	X075144	075144	1	G	W	28.85	39.9	2.4	0.4902	0.38	0.108	2.3	0.68	0.115	0.188	0.873	0.226	1.06	9.78	0.39	11.23	17746	5.7528	11.86056	-6.10776	NAF
NS0122	196	198	NS	X075147	075147	1	G	W	29.58	41.19	3.37	0.3483	0.27	0.159	2.13	0.7	0.044	0.175	1.43	0.21	0.86	6.63	0.33	7.82	17749	5.355	12.2094	-6.8544	NAF
NS0122	32	34	NS	X075064	075064	1	G	D	28.46	45.17	4.47	0.4902	0.38	0.209	0.96	0.43	0.051	0.012	0.795	0.107	4.17	1.79	0.16	6.12	17667	0.3672	7.50006	-7.13286	NAF
NS0122	240	242	NS	X075170	075170	1	G	W	30.23	41.28	2.3	0.3999	0.31	0.103	2.21	0.61	0.036	0.114	0.91	0.189	0.76	7.59	0.23	8.58	17771	3.4884	10.63962	-7.15122	NAF
NS0122	28	30	NS	X075062	075062	1	G	D	32.39	39.85	4.38	0.2451	0.19	0.192	0.75	0.46	0.071	0.014	0.147	0.087	4.92	1.89	0.17	6.98	17665	0.4284	8.02332	-7.59492	NAF
NS0122	24	26	NS	X075060	075060	1	G	D	29.2	40.82	7.25	0.0645	0.05	0.309	0.93	0.47	0.039	0.019	0.409	0.128	4.57	2.78	0.24	7.59	17663	0.5814	8.19774	-7.61634	NAF
NS0122	194	196	NS	X075146	075146	1	G	W	25.75	43.74	5.01	0.258	0.2	0.232	2.82	1.04	0.148	0.337	1.97	0.305	1.08	4.46	0.84	6.38	17748	10.3122	18.13968	-7.82748	NAF
NS0122	150	152	NS	X075124	075124	1	G	W	23.8	45.72	5.88	0.2322	0.18	0.287	3.53	1.01	0.024	0.303	1.57	0.33	1.18	4.39	1.11	6.68	17726	9.2718	17.61642	-8.34462	NAF
NS0122	140	142	NS	X075119	075119	1	G	W	28.64	39.42	4.09	0.3225	0.25	0.189	2.87	1.06	0.105	0.326	1.21	0.326	1.16	6.75	0.92	8.83	17721	9.9756	18.48852	-8.51292	NAF
NS0122	48	50	NS	X075072	075072	1	G	D	36.16	37.99	2.56	0.516	0.4	0.118	0.75	0.5	0.122	0.004	0.385	0.062	3.53	1.26	0.17	4.96	17675	0.1224	8.721	-8.5986	NAF
NS0122	50	52	NS	X075073	075073	1	G	D	33.7	38	3.69	0.6192	0.48	0.176	1.15	0.51	0.12	0.005	0.54	0.101	4.5	1.64	0.22	6.36	17676	0.153	8.89542	-8.74242	NAF
NS0122	212	214	NS	X075156	075156	1	G	W	26.81	43.37	2.83	0.4257	0.33	0.129	2.41	1.03	0.043	0.292	1.17	0.202	0.95	7.47	0.77	9.19	17757	8.9352	17.96526	-9.03006	NAF
NS0122	30	32	NS	X075063	075063	1	G	D	31.4	39.82	5.02	0.4515	0.35	0.223	0.96	0.54	0.061	0.012	0.282	0.092	4.86	2.19	0.2	7.25	17666	0.3672	9.41868	-9.05148	NAF
NS0122	52	54	NS	X075074	075074	1	G	D	33.14	40.73	2.95	0.3612	0.28	0.131	1.14	0.58	0.126	0.004	0.59	0.12	3.91	1.48	0.03	5.42	17677	0.1224	10.11636	-9.99396	NAF
NS0122	70	72	NS	X075083	075083	1	G	W	26.3	42.83	5.13	0.2709	0.21	0.242	3.33	1.04	0.094	0.266	1.57	0.278	1.15	4.7	0.96	6.81	17686	8.1396	18.13968	-10.00008	NAF
NS0122	210	212	NS	X075155	075155	1	G	W	21.3	49.59	5.29	0.2709	0.21	0.246	2.6	1.26	0.058	0.387	2.69	0.232	0.87	4.52	1.12	6.51	17756	11.8422	21.97692	-10.13472	NAF
NS0122	94	96	NS	X075095	075095	1	G	W	27.45	39.38	3.17	0.3612	0.28	0.151	3.05	1.14	0.101	0.311	0.99	0.247	1.05	9.65	0.84	11.54	17698	9.5166	19.88388	-10.36728	NAF
NS0122	72	74	NS	X075084	075084	1	G	W	27.69	38.56	3.72	0.3999	0.31	0.175	3.47	1.11	0.109	0.258	1.21	0.288	1.26	8.11	0.94	10.31	17687	7.8948	19.36062	-11.46582	NAF
NS0122	192	194	NS	X075145	075145	1	G	W	32.07	39.36	1.24	0.4128	0.32	0.057	1.54	0.75	0.075	0.052	0.488	0.13	0.62	9.13	-0.13	9.62	17747	1.5912	13.0815	-11.4903	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0122	244	246	NS	X075172	075172	1	G	W	34.2	39.32	1.22	0.4257	0.33	0.055	1.49	0.78	0.071	0.056	0.465	0.118	0.46	6.53	-0.04	6.95	17773	1.7136	13.60476	-11.89116	NAF
NS0122	242	244	NS	X075171	075171	1	G	W	32.6	42.09	1.17	0.4128	0.32	0.052	1.4	0.76	0.058	0.043	0.451	0.124	0.43	6.07	-0.05	6.45	17772	1.3158	13.25592	-11.94012	NAF
NS0122	174	176	NS	X075136	075136	1	G	W	27.39	39.61	4.89	0.3354	0.26	0.232	3.42	1.41	0.044	0.409	1.51	0.386	1.31	5.87	1.28	8.46	17738	12.5154	24.59322	-12.07782	NAF
NS0122	138	140	NS	X075118	075118	1	G	W	29.83	39.57	2.6	0.4128	0.32	0.118	2.17	1.16	0.086	0.262	0.871	0.236	0.95	7.59	0.7	9.24	17720	8.0172	20.23272	-12.21552	NAF
NS0122	54	56	NS	X075075	075075	1	G	D	31.01	43.02	3.22	0.4386	0.34	0.146	1.18	0.72	0.173	0.009	0.623	0.098	3.87	1.68	0.13	5.68	17678	0.2754	12.55824	-12.28284	NAF
NS0122	142	144	NS	X075120	075120	1	G	W	30.19	39.22	2.46	0.3741	0.29	0.116	2.16	1	0.081	0.134	0.819	0.21	0.86	8.76	0.3	9.92	17722	4.1004	17.442	-13.3416	NAF
NS0122	218	220	NS	X075159	075159	1	G	W	22.22	46.41	6.12	0.2967	0.23	0.286	3.34	1.51	0.146	0.412	2.75	0.292	0.98	4.22	1.39	6.59	17760	12.6072	26.33742	-13.73022	NAF
NS0122	56	58	NS	X075076	075076	1	G	D	27.79	45.92	3.36	0.3612	0.28	0.155	1.65	0.92	0.149	0.063	0.712	0.114	3.02	2.91	0.31	6.24	17679	1.9278	16.04664	-14.11884	NAF
NS0122	188	190	NS	X075143	075143	1	G	W	29.96	40.15	3.79	0.2709	0.21	0.174	2.65	1.27	0.077	0.247	1.21	0.318	1.11	4.77	0.88	6.76	17745	7.5582	22.15134	-14.59314	NAF
NS0122	234	236	NS	X075167	075167	1	G	W	31.11	36.3	2.8	0.4644	0.36	0.126	2.6	1.26	0.038	0.235	1.11	0.213	0.89	8.61	0.85	10.35	17768	7.191	21.97692	-14.78592	NAF
NS0122	176	178	NS	X075137	075137	1	G	W	26.58	42.62	3.98	0.3354	0.26	0.188	3	1.37	0.088	0.295	1.25	0.334	1.15	6.08	1.1	8.33	17739	9.027	23.89554	-14.86854	NAF
NS0122	134	136	NS	X075116	075116	1	G	W	28.42	39.02	4.04	0.3612	0.28	0.19	2.94	1.41	0.155	0.307	1.22	0.339	1.17	6.71	0.95	8.83	17718	9.3942	24.59322	-15.19902	NAF
NS0122	186	188	NS	X075142	075142	1	G	W	29.95	39.26	3.46	0.3225	0.25	0.157	2.65	1.29	0.082	0.23	1.12	0.306	1.16	5.7	0.8	7.66	17744	7.038	22.50018	-15.46218	NAF
NS0122	126	128	NS	X075112	075112	1	G	W	30.27	38.02	3.54	0.3483	0.27	0.166	2.54	1.25	0.1	0.201	1.12	0.243	0.95	6.95	0.68	8.58	17714	6.1506	21.8025	-15.6519	NAF
NS0122	62	64	NS	X075079	075079	1	G	W	29.11	41.31	3.24	0.2838	0.22	0.151	2.42	1.33	0.091	0.24	0.964	0.179	1.04	5.62	0.83	7.49	17682	7.344	23.19786	-15.85386	NAF
NS0122	66	68	NS	X075081	075081	1	G	W	28.01	41.65	3.01	0.387	0.3	0.138	2.59	1.25	0.087	0.189	1.03	0.201	1.05	6.94	0.67	8.66	17684	5.7834	21.8025	-16.0191	NAF
NS0122	116	118	NS	X075107	075107	1	G	W	24.55	43.08	6.77	0.2451	0.19	0.316	3.72	1.62	0.131	0.386	2.29	0.366	1.19	2.99	1.34	5.52	17709	11.8116	28.25604	-16.44444	NAF
NS0122	236	238	NS	X075168	075168	1	G	W	32.95	37.84	1.72	0.4257	0.33	0.08	1.78	1.16	0.047	0.121	0.729	0.136	0.57	7.49	0.36	8.42	17769	3.7026	20.23272	-16.53012	NAF
NS0122	166	168	NS	X075132	075132	1	G	W	24.9	42.56	5.64	0.258	0.2	0.266	3.24	1.96	0.046	0.564	1.81	0.366	1.17	4.09	1.63	6.89	17734	17.2584	34.18632	-16.92792	NAF
NS0122	82	84	NS	X075089	075089	1	G	W	31.13	37.13	1.31	0.4644	0.36	0.058	2.16	1.09	0.077	0.063	0.508	0.114	0.69	11.12	0.19	12	17692	1.9278	19.01178	-17.08398	NAF
NS0122	224	226	NS	X075162	075162	1	G	W	27.7	43.58	3.15	0.2838	0.22	0.146	2.13	1.62	0.079	0.352	1.27	0.203	0.72	5.56	1.1	7.38	17763	10.7712	28.25604	-17.48484	NAF
NS0122	214	216	NS	X075157	075157	1	G	W	31.23	37.86	2.02	0.4386	0.34	0.089	2.16	1.27	0.054	0.149	0.76	0.157	0.71	8.45	0.65	9.81	17758	4.5594	22.15134	-17.59194	NAF
NS0122	118	120	NS	X075108	075108	1	G	W	23.46	45.63	6.4	0.2451	0.19	0.297	3.33	1.78	0.116	0.439	2.32	0.308	0.96	3.17	1.38	5.51	17710	13.4334	31.04676	-17.61336	NAF
NS0122	130	132	NS	X075114	075114	1	G	W	26.78	48.16	1.82	0.3354	0.26	0.082	1.6	1.19	0.035	0.097	0.615	0.16	0.63	6.38	0.38	7.39	17716	2.9682	20.75598	-17.78778	NAF
NS0122	274	276	NS	X075187	075187	1	G	W	25.72	42.15	4.96	0.3741	0.29	0.233	2.82	1.62	0.091	0.329	2.4	0.237	0.87	5.74	1.31	7.92	17788	10.0674	28.25604	-18.18864	NAF
NS0122	220	222	NS	X075160	075160	1	G	W	30.33	41.22	2.41	0.3741	0.29	0.111	2.01	1.31	0.071	0.146	0.985	0.178	0.66	6.12	0.6	7.38	17761	4.4676	22.84902	-18.38142	NAF
NS0122	248	250	NS	X075174	075174	1	G	W	26.77	39.67	5.27	0.3096	0.24	0.257	3.45	1.61	0.041	0.31	1.89	0.29	1.01	5.76	1.4	8.17	17775	9.486	28.08162	-18.59562	NAF
NS0122	96	98	NS	X075096	075096	1	G	W	25.68	42.56	3.97	0.3096	0.24	0.182	3.1	1.79	0.144	0.409	1.15	0.327	0.99	6.27	1.32	8.58	17699	12.5154	31.22118	-18.70578	NAF
NS0122	222	224	NS	X075161	075161	1	G	W	29.48	40.52	3.58	0.2838	0.22	0.168	2.62	1.53	0.132	0.237	1.26	0.261	0.86	5.03	0.97	6.86	17762	7.2522	26.68626	-19.43406	NAF
NS0122	146	148	NS	X075122	075122	1	G	W	29.42	40.34	3.18	0.3999	0.31	0.147	2.51	1.44	0.088	0.176	1.02	0.266	0.95	6.25	0.8	8	17724	5.3856	25.11648	-19.73088	NAF
NS0122	254	256	NS	X075177	075177	1	G	W	32.24	41.57	1.23	0.2709	0.21	0.054	1.41	1.23	0.09	0.053	0.461	0.131	0.46	6.1	0.24	6.8	17778	1.6218	21.45366	-19.83186	NAF
NS0122	154	156	NS	X075126	075126	1	G	W	26.42	43.13	4.15	0.3225	0.25	0.197	2.98	1.64	0.08	0.277	1.22	0.322	1.1	5.18	1.24	7.52	17728	8.4762	28.60488	-20.12868	NAF
NS0122	144	146	NS	X075121	075121	1	G	W	29.45	39.91	3.16	0.3612	0.28	0.145	2.51	1.48	0.177	0.185	1.02	0.293	1.05	6.33	0.71	8.09	17723	5.661	25.81416	-20.15316	NAF
NS0122	158	160	NS	X075128	075128	1	G	W	30.81	40.89	1.9	0.2838	0.22	0.086	1.81	1.38	0.078	0.111	0.69	0.172	0.69	7.16	0.49	8.34	17730	3.3966	24.06996	-20.67336	NAF
NS0122	170	172	NS	X075134	075134	1	G	W	30.69	42.59	2.09	0.2709	0.21	0.098	1.69	1.47	0.11	0.153	0.701	0.17	0.62	5.33	0.47	6.42	17736	4.6818	25.63974	-20.95794	NAF
NS0122	152	154	NS	X075125	075125	1	G	W	29.34	40.64	2.73	0.3225	0.25	0.127	2.28	1.49	0.075	0.163	0.907	0.246	0.88	6.92	0.77	8.57	17727	4.9878	25.98858	-21.00078	NAF
NS0122	162	164	NS	X075130	075130	1	G	W	29.03	40.61	3	0.3612	0.28	0.138	2.44	1.61	0.105	0.218	0.98	0.259	0.95	6.54	0.94	8.43	17732	6.6708	28.08162	-21.41082	NAF
NS0122	256	258	NS	X075178	075178	1	G	W	26.21	44.4	3.64	0.2838	0.22	0.172	2.67	1.64	0.048	0.222	1.36	0.227	0.83	5.4	1.25	7.48	17779	6.7932	28.60488	-21.81168	NAF
NS0122	278	280	NS	X075189	075189	1	G	W	29.78	37.7	3.66	0.3999	0.31	0.176	2.71	1.68	0.057	0.243	1.51	0.257	0.95	6.39	1.23	8.57	17790	7.4358	29.30256	-21.86676	NAF
NS0122	64	66	NS	X075080	075080	1	G	W	27.74	42.5	3.44	0.3225	0.25	0.16	2.68	1.63	0.074	0.209	1.14	0.2	1.09	5.85	1	7.94	17683	6.3954	28.43046	-22.03506	NAF
NS0122	252	254	NS	X075176	075176	1	G	W	25.39	45.77	2.53	0.387	0.3	0.116	2.51	1.62	0.037	0.191	0.925	0.212	0.81	7.34	1.06	9.21	17777	5.8446	28.25604	-22.41144	NAF
NS0122	120	122	NS	X075109	075109	1	G	W	31.11	40.33	2.14	0.3354	0.26	0.1	1.85	1.61	0.105	0.185	0.782	0.182	0.66	6.18	0.62	7.46	17711	5.661	28.08162	-22.42062	NAF
NS0122	272	274	NS	X075186	075186	1	G	W	29.67	40.33	2.82	0.387	0.3	0.128	2.32	1.61	0.083	0.171	1.02	0.253	0.8	6.74	0.9	8.44	17787	5.2326	28.08162	-22.84902	NAF
NS0122	204	206	NS	X075152	075152	1	G	W	26.53	41.31	4.06	0.4386	0.34	0.186	2.81	1.83	0.129	0.292	1.66	0.27	1.04	6.06	1.28	8.38	17753	8.9352	31.91886	-22.98366	NAF
NS0122	270	272	NS	X075185	075185	1	G	W	28.07	40.84	3.38	0.3741	0.29	0.154	2.52	1.71	0.139	0.223	1.26	0.245	0.87	6.29	1.01	8.17	17786	6.8238	29.82582	-23.00202	NAF
NS0122	232	234	NS	X075166	075166	1	G	W	31.26	40.31	1.75	0.4128	0.32	0.08	1.75	1.49	0.052	0.088	0.73	0.158	0.61	7.07	0.59	8.27	17767	2.6928	25.98858	-23.29578	NAF
NS0122	92	94	NS	X075094	075094	1	G	W	33.64	36.71	1.51	0.3741	0.29	0.069	1.9	1.49	0.078	0.076	0.549	0.144	0.58	7.82	0.4	8.8	17697	2.3256	25.98858	-23.66298	NAF
NS0122	198	200	NS	X075148	075148	1	G	W	30.15	38.75	4.28	0.2709	0.21	0.207	2.79	1.74	0.15	0.217	1.39	0.29	1.06	4.27	1.04	6.37	17750	6.6402	30.34908	-23.70888	NAF
NS0122	100	102	NS	X075098	075098	1	G	W	30.24	40.18	2.18	0.3225	0.25	0.098	2.39	1.59	0.059	0.13	0.751	0.188	0.76	6.89	0.88	8.53	17701	3.978	27.73278	-23.75478	NAF
NS0122	200	202	NS	X075149	075149	1	G	W	29.11	41.48	3.62	0.2967	0.23	0.169	2.52	1.85	0.064	0.276	1.44	0.257	0.89	4.32	1.26	6.47	17751	8.4456	32.2677	-23.8221	NAF
NS0122	238	240	NS	X075169	075169	1	G	W	30.44	40.61	2	0.387	0.3	0.095	1.92	1.63	0.06	0.117	0.808	0.167	0.67	6.9	0.77	8.34	17770	3.5802	28.43046	-24.85026	NAF
NS0122	124	126	NS	X075111	075111	1	G	W	28.2	45.03	2.46	0.3354	0.26	0.101	1.84	1.66	0.048	0.127	0.707	0.188	0.69	6.07	0.7	7.46	17713	3.8862	28.95372	-25.06752	NAF
NS0122	276	278	NS	X075188	075188	1	G	W	29.95	37.6	3.61	0.4128	0.32	0.177	2.7	1.77	0.055	0.185	1.4	0.258	0.91	6.73	1.22	8.86	17789	5.661	30.87234	-25.21134	NAF
NS0122	58	60	NS	X075077	075077	1	G	D	28.18	39.99	3.07	0.4386	0.34	0.14	2.65	1.8	0.108	0.193	0.99	0.176	1.05	7.36	1.02	9.43	17680	5.9058	31.3956	-25.4898	NAF
NS0122	268	270	NS	X075184	075184	1	G	W	29.03	39.27	3.73	0.3096	0.24	0.175	2.75	1.96	0.12	0.274	1.29	0.285	0.98	5.57	1.37	7.92	17785	8.3844	34.18632	-25.80192	NAF
NS0122	102	104	NS	X075099	075099	1	G	W	30.42	39.58	2.48	0.3354	0.26	0.113	2.59	1.72	0.059	0.133	0.861	0.225	0.86	6.18	1.11	8.15	17702	4.0698	30.00024	-25.93044	NAF
NS0122	250	252	NS	X075175	075175	1	G	W	31.12	41.37	1.76	0.2838	0.22	0.081	1.67	1.66	0.078	0.095	0.675	0.145	0.55	6.03	0.67	7.25	17776	2.907	28.95372	-26.04672	NAF
NS0122	98	100	NS	X075097	075097	1	G	W	27.35	41.41	4.04	0.258	0.2	0.19	3.01	2.05	0.099	0.313	1.12	0.245	0.95	5.45	1.39	7.79	17700	9.5778	35.7561	-26.1783	NAF
NS0122	88	90	NS	X075092	075092	1	G	W	34.81	35.64	1.45	0.4257	0.33	0.065	1.81	1.62	0.071	0.059	0.536	0.136	0.57	6.94	0.5	8.01	17695	1.8054	28.25604	-26.45064	NAF
NS0122	266	268	NS	X075183	075183	1	G	W	31.64	39.87	1.88	0.2967	0.23	0.087	1.83	1.7	0.094	0.094	0.716	0.18	0.63	6.37	0.72	7.72	17784	2.8764	29.6514	-26.775	NAF
NS0122	74	76	NS	X075085	075085	1	G	W	26.84	40.14	2.98	0.4644	0.36	0.136	3.07	1.91	0.066	0.207	1.07	0.234	1.01	8.33	1.46	10.8	17688	6.3342	33.31422	-26.98002	NAF
NS0122	184	186	NS	X075141	075141	1	G	W	30.38	40.18	2.28	0.3354	0.26	0.105	2.02	1.85	0.084	0.166	0.808	0.223	0.83	6.5	0.87	8.2	17743	5.0796	32.2677	-27.1881	NAF
NS0122	156	158	NS	X075127	075127	1	G	W	28.82	40.48	3.26	0.3354	0.26	0.152	2.46	1.93	0.078	0.21	0.985	0.267	0.92	5.79	1.15	7.86	17729	6.426	33.66306	-27.23706	NAF
NS0122	160	162	NS	X075129	075129	1	G	W	30.18	38.97	3.11	0.3354	0.26	0.147	2.33	1.88	0.064	0.15	1.02	0.239	1	5.89	1.12	8.01	17731	4.59	32.79096	-28.20096	NAF
NS0122	202	204	NS	X075150	075150	1	G	W	27.2	40.47	4.65	0.3354	0.26	0.218	2.98	2.14	0.086	0.287	1.83	0.316	1.04	4.47	1.61	7.12	17752	8.7822	37.32588	-28.54368	NAF
NS0122	112	114	NS	X075105	075105	1	G	W	33.7	37.62	1.44	0.4386	0.34	0.067	1.75	1.78	0.086	0.079	0.532	0.148	0.53	6.13	0.71	7.37	17707	2.4174	31.04676	-28.62936	NAF
NS0122	122	124	NS	X075110	075110	1	G	W	29.32	40.72	3.39	0.2838	0.22	0.155	2.53	2.09	0.12	0.245	1.03	0.262	0.92	5.14	1.16	7.22	17712	7.497	36.45378	-28.95678	NAF
NS0122	80	82	NS	X075088	075088	1	G	W	21.02	45.38	7.07	0.1806	0.14	0.327	4.39	2.06	0.034	0.223	2.11	0.19	0.82	4.91	2.01	7.74	17691	6.8238	35.93052	-29.10672	NAF
NS0122	104	106	NS	X075100	075100	1	G	W	29.35	42.46	2.93	0.258	0.2	0.14	2.46	1.93	0.079	0.146	0.932	0.249	0.81	3.55	1.34	5.7	17703	4.4676	33.66306	-29.19546	NAF
NS0122	76	78	NS	X075086	075086	1	G	W	23.78	42.21	4.11	0.3741	0.29	0.199	3.73	2.3	0.136	0.317	1.39	0.293	1.18	7.01	1.76	9.95	17689	9.7002	40.1166	-30.4164	NAC
NS0122	84	86	NS	X075090	075090	1	G	W	33.15	37.06	1.62	0.3612	0.28	0.075	1.95	1.89	0.07	0.075	0.577	0.131	0.56	6.75	1.03	8.34	17693	2.295	32.96538	-30.67038	NAC
NS0122	208	210	NS	X075154	075154	1	G	W	21.12	49.42	4.57	0.2967	0.23	0.21	2.63	2.61	0.227	0.363	2.18	0.236	0.81	3.7	1.68	6.19	17755	11.1078	45.52362	-34.41582	NAC
NS0122	110	112	NS	X075104	075104	1	G	W	32.65	38.45	2.55	0.3225	0.25	0.119	2.33	2.23	0.112	0.141	0.873	0.238	0.72	3.32	1.39	5.43	17706	4.3146	38.89566	-34.58106	NAC
NS0122	180	182	NS	X075139	075139	1	G	W	28.47	45.42	1.9	0.2709	0.21	0.091	1.56	2.21	0.118	0.122	0.613	0.162	0.62	5.26	0.87	6.75	17741	3.7332	38.54682	-34.81362	NAC
NS0122	264	266	NS	X075182	075182	1	G	W	27	44.11	2.29	0.3096	0.24	0.105	2.08	2.36	0.078	0.144	0.889	0.175	0.64	6.12	1.41	8.17	17783	4.4064	41.16312	-36.75672	NAC
NS0122	164	166	NS	X075131	075131	1	G	W	28.77	42.54	2.25	0.2838	0.22	0.101	1.85	2.41	0.129	0.164	0.784	0.21	0.7	5.7	1.13	7.53	17733	5.0184	42.03522	-37.01682	NAC
NS0122	60	62	NS	X075078	075078	1	G	D	29.75	38.35	3.22	0.3354	0.26	0.149	2.61	2.44	0.187	0.159	1.05	0.195	1.02	5.52	1.38	7.92	17681	4.8654	42.55848	-37.69308	NAC
NS0122	90	92	NS	X075093	075093	1	G	W	34.16	37.1	1.09	0.387	0.3	0.049	1.5	2.3	0.097	0.058	0.415	0.116	0.41	6.13	0.94	7.48	17696	1.7748	40.1166	-38.3418	NAC
NS0122	178	180	NS	X075138	075138	1	G	W	28.36	41.31	3.23	0.3096	0.24	0.146	2.51	2.51	0.16	0.17	1.06	0.287	0.94	4.69	1.45	7.08	17740	5.202	43.77942	-38.57742	NAC
NS0122	246	248	NS	X075173	075173	1	G	W	32.13	37.82	2.63	0.3354	0.26	0.124	2.24	2.47	0.169	0.136	0.946	0.194	0.58	4.74	1.46	6.78	17774	4.1616	43.08174	-38.92014	NAC
NS0122	106	108	NS	X075102	075102	1	G	W	28.59	48.77	1.23	0.2322	0.18	0.057	1.42	2.39	0.074	0.056	0.459	0.131	0.35	2.18	1.63	4.16	17704	1.7136	41.68638	-39.97278	NAC
NS0122	114	116	NS	X075106	075106	1	G	W	30.51	38.74	3.13	0.3354	0.26	0.145	2.67	2.62	0.073	0.186	1.02	0.267	0.87	3.49	2.03	6.39	17708	5.6916	45.69804	-40.00644	NAC
NS0122	108	110	NS	X075103	075103	1	G	W	27.02	46.77	2.08	0.2838	0.22	0.093	2.15	2.56	0.102	0.131	0.75	0.207	0.67	3.24	1.94	5.85	17705	4.0086	44.65152	-40.64292	NAC
NS0122	262	264	NS	X075181	075181	1	G	W	27.54	39.05	4.88	0.258	0.2	0.23	3.1	2.82	0.17	0.256	1.96	0.253	0.84	3.67	2.02	6.53	17782	7.8336	49.18644	-41.35284	NAC
NS0122	258	260	NS	X075179	075179	1	G	W	26.94	39.14	5.46	0.2451	0.19	0.254	3.48	3.06	0.101	0.294	1.99	0.311	0.95	3.47	2.55	6.97	17780	8.9964	53.37252	-44.37612	NAC
NS0122	172	174	NS	X075135	075135	1	G	W	28.01	42.14	2.9	0.2838	0.22	0.13	2.32	2.92	0.187	0.203	0.98	0.269	0.87	4.79	1.74	7.4	17737	6.2118	50.93064	-44.71884	NAC
NS0122	230	232	NS	X075165	075165	1	G	W	28.25	41.15	2.63	0.3225	0.25	0.122	2.13	2.99	0.076	0.217	1.06	0.194	0.69	5.34	2.01	8.04	17766	6.6402	52.15158	-45.51138	NAC
NS0122	226	228	NS	X075163	075163	1	G	W	29.16	41.3	2.96	0.258	0.2	0.136	2.19	3.04	0.105	0.185	1.06	0.23	0.72	3.63	2.35	6.7	17764	5.661	53.02368	-47.36268	NAC
NS0122	136	138	NS	X075117	075117	1	G	W	28.94	41.9	1.54	0.3096	0.24	0.069	1.49	2.91	0.096	0.11	0.531	0.152	0.64	7.18	1.24	9.06	17719	3.366	50.75622	-47.39022	NAC
NS0122	228	230	NS	X075164	075164	1	G	W	29.11	38.98	3.24	0.2838	0.22	0.152	2.44	3.22	0.189	0.284	1.18	0.239	0.84	4.34	2.22	7.4	17765	8.6904	56.16324	-47.47284	NAC
NS0122	78	80	NS	X075087	075087	1	G	W	20.55	43.32	5.27	0.2838	0.22	0.249	4.04	3.2	0.07	0.151	1.68	0.164	0.81	7.52	3.09	11.42	17690	4.6206	55.8144	-51.1938	NAC
NS0122	260	262	NS	X075180	075180	1	G	W	26.97	38.33	4.64	0.2838	0.22	0.222	3.27	3.92	0.226	0.263	1.75	0.281	0.89	3.45	3.03	7.37	17781	8.0478	68.37264	-60.32484	NAC
NS0124	132	134	NS	X075400	075400	1	G	D	23.21	47.71	8.1	0.1161	0.09	0.391	4.22	0.28	0.057	0.526	1.2	0.353	1.23	1.87	0.95	4.05	17833	16.0956	4.88376	11.21184	PAF(HC)
NS0124	128	130	NS	X075398	075398	1	G	D	25.15	43.54	7.94	0.1677	0.13	0.391	4.4	0.32	0.076	0.476	1.32	0.378	1.35	2.64	0.98	4.97	17831	14.5656	5.58144	8.98416	PAF(LC)
NS0124	130	132	NS	X075399	075399	1	G	D	21.13	52.73	6.87	0.1161	0.09	0.332	3.73	0.3	0.054	0.446	1.19	0.345	1.22	1.67	0.87	3.76	17832	13.6476	5.2326	8.415	PAF(LC)
NS0124	134	136	NS	X075402	075402	1	G	D	24.66	45.31	5.33	0.2838	0.22	0.255	3.66	0.51	0.088	0.54	1.4	0.402	1.42	4.17	1.22	6.81	17834	16.524	8.89542	7.62858	PAF(LC)
NS0124	264	266	NS	X075468	075468	1	G	D	24.43	45.21	7.21	0.1677	0.13	0.327	4.19	0.9	0.115	0.681	1.55	0.413	1.36	1.94	1.29	4.59	17899	20.8386	15.6978	5.1408	PAF(LC)
NS0124	142	144	NS	X075406	075406	1	G	D	26.39	41.54	6.14	0.1677	0.13	0.289	4.31	0.46	0.094	0.389	1.19	0.319	1.38	4.95	1.01	7.34	17838	11.9034	8.02332	3.88008	PAF(LC)
NS0124	126	128	NS	X075397	075397	1	G	D	24.14	46.65	4.75	0.3096	0.24	0.221	3.28	0.5	0.109	0.402	1.33	0.352	1.46	4.68	1.13	7.27	17830	12.3012	8.721	3.5802	PAF(LC)
NS0124	232	234	NS	X075452	075452	1	G	D	23.86	45.69	8.14	0.1419	0.11	0.387	4.65	0.2	0.042	0.195	1.36	0.397	1.39	2.31	0.62	4.32	17883	5.967	3.4884	2.4786	PAF(LC)
NS0124	206	208	NS	X075438	075438	1	G	D	27.19	40.93	2.84	0.4386	0.34	0.132	2.94	0.42	0.064	0.271	1	0.275	1.43	9.99	0.72	12.14	17870	8.2926	7.32564	0.96696	PAF(LC)
NS0124	160	164	NS	BX082415-BX082416	X082415	2			65.97	6.427	0.298	0.058	0.04176	0.043	0.355	0.171	0.031	0.125	0.073	0.122	-0.01	-0.01	-0.01	-0.03	2145	3.825	2.982582	0.842418	PAF(LC)
NS0124	226	228	NS	X075448	075448	1	G	D	27.01	41.44	5.25	0.2967	0.23	0.246	3.9	0.5	0.11	0.31	1.5	0.397	1.46	4.68	0.95	7.09	17880	9.486	8.721	0.765	PAF(LC)
NS0124	154	156	NS	X075412	075412	1	G	D	25.52	42.9	4.53	0.3999	0.31	0.213	3.49	0.8	0.083	0.468	1.23	0.346	1.44	6.32	1.2	8.96	17844	14.3208	13.9536	0.3672	PAF(LC)
NS0124	230	232	NS	X075450	075450	1	G	D	22.95	48.08	7.47	0.1419	0.11	0.366	4.38	0.4	0.089	0.232	1.37	0.405	1.33	2.13	0.67	4.13	17882	7.0992	6.9768	0.1224	PAF(LC)
NS0124	54	58	NS	BX082361-BX082362	X082361	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2118	-0.0306	-0.01744	-0.013158	NAF
NS0124	70	74	NS	BX082369-BX082370	X082369	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2122	-0.0306	-0.01744	-0.013158	NAF
NS0124	78	82	NS	BX082373-BX082374	X082373	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2124	-0.0306	-0.01744	-0.013158	NAF
NS0124	82	86	NS	BX082375-BX082376	X082375	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2125	-0.0306	-0.01744	-0.013158	NAF
NS0124	86	90	NS	BX082377-BX082378	X082377	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2126	-0.0306	-0.01744	-0.013158	NAF
NS0124	126	130	NS	BX082397-BX082398	X082397	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2136	-0.0306	-0.01744	-0.013158	NAF
NS0124	130	134	NS	BX082399-BX082400	X082399	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2137	-0.0306	-0.01744	-0.013158	NAF
NS0124	134	136	NS	BX082402	X082402	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2138	-0.0306	-0.01744	-0.013158	NAF
NS0124	140	144	NS	BX082405-BX082406	X082405	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2140	-0.0306	-0.01744	-0.013158	NAF
NS0124	152	156	NS	BX082411-BX082412	X082411	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2143	-0.0306	-0.01744	-0.013158	NAF
NS0124	156	160	NS	BX082413-BX082414	X082413	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2144	-0.0306	-0.01744	-0.013158	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0124	204	208	NS	BX082437-BX082438	X082437	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2156	-0.0306	-0.01744	-0.013158	NAF
NS0124	208	212	NS	BX082439-BX082440	X082439	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2157	-0.0306	-0.01744	-0.013158	NAF
NS0124	228	232	NS	BX082449-BX082450	X082449	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2162	-0.0306	-0.01744	-0.013158	NAF
NS0124	232	236	NS	BX082452-BX082453	X082452	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2163	-0.0306	-0.01744	-0.013158	NAF
NS0124	74	78	NS	BX082371-BX082372	X082371	2			59.09	12.629	0.547	0.054	0.03888	0.072	0.508	0.146	0.024	0.06	0.147	0.123	-0.01	-0.01	-0.01	-0.03	2123	1.836	2.546532	-0.710532	NAF
NS0124	50	52	NS	BX082359	X082359	2			65.06	6.653	0.403	0.04	0.0288	0.059	0.2	0.043	0.015	0.001	0.063	0.097	-0.01	-0.01	-0.01	-0.03	2117	0.0306	0.750006	-0.719406	NAF
NS0124	184	188	NS	BX082427-BX082428	X082427	2			68.81	4.73	0.234	0.046	0.03312	0.058	0.277	0.082	0.016	0.022	0.06	0.085	-0.01	-0.01	-0.01	-0.03	2151	0.6732	1.430244	-0.757044	NAF
NS0124	48	50	NS	BX082358	X082358	2			64	6.376	0.371	0.032	0.02304	0.059	0.141	0.051	0.013	0.004	0.049	0.192	-0.01	-0.01	-0.01	-0.03	2116	0.1224	0.889542	-0.767142	NAF
NS0124	200	204	NS	BX082435-BX082436	X082435	2			66.93	7.125	0.337	0.052	0.03744	0.085	0.387	0.089	0.017	0.025	0.104	0.102	-0.01	-0.01	-0.01	-0.03	2155	0.765	1.552338	-0.787338	NAF
NS0124	240	244	NS	BX082456-BX082457	X082456	2			65.48	7.117	0.351	0.08	0.0576	0.066	0.377	0.119	0.024	0.035	0.099	0.127	-0.01	-0.01	-0.01	-0.03	2165	1.071	2.075598	-1.004598	NAF
NS0124	224	228	NS	BX082447-BX082448	X082447	2			65.52	7.752	0.39	0.065	0.0468	0.075	0.427	0.112	0.022	0.03	0.101	0.1	-0.01	-0.01	-0.01	-0.03	2161	0.918	1.953504	-1.035504	NAF
NS0124	250	252	NS	BX082461	X082461	2			69.88	3.444	0.062	0.04	0.0288	0.024	0.181	0.071	0.01	0.006	0.024	0.07	-0.01	-0.01	-0.01	-0.03	2167	0.1836	1.238382	-1.054782	NAF
NS0124	148	152	NS	BX082409-BX082410	X082409	2			64.32	9.021	0.297	0.067	0.04824	0.048	0.406	0.127	0.023	0.037	0.081	0.089	0.12	-0.01	-0.01	0.1	2142	1.1322	2.215134	-1.082934	NAF
NS0124	188	190	NS	BX082429	X082429	2			66.06	7.735	0.344	0.057	0.04104	0.055	0.413	0.105	0.019	0.024	0.102	0.101	-0.01	-0.01	-0.01	-0.03	2152	0.7344	1.83141	-1.09701	NAF
NS0124	196	200	NS	BX082433-BX082434	X082433	2			68.15	4.267	0.12	0.034	0.02448	0.044	0.219	0.086	0.017	0.012	0.041	0.089	-0.01	-0.01	-0.01	-0.03	2154	0.3672	1.500012	-1.132812	NAF
NS0124	220	224	NS	BX082445-BX082446	X082445	2			67.36	5.818	0.177	0.048	0.03456	0.048	0.31	0.086	0.015	0.012	0.052	0.111	-0.01	-0.01	-0.01	-0.03	2160	0.3672	1.500012	-1.132812	NAF
NS0124	148	150	NS	X075409	075409	1	G	D	26.54	43.32	3.63	0.2322	0.18	0.167	3.15	0.49	0.046	0.242	0.932	0.268	1.26	7.65	0.72	9.63	17841	7.4052	8.54658	-1.14138	NAF
NS0124	212	216	NS	BX082441-BX082442	X082441	2			65.47	6.229	0.16	0.064	0.04608	0.041	0.436	0.1	0.012	0.017	0.051	0.138	-0.01	-0.01	-0.01	-0.03	2158	0.5202	1.7442	-1.224	NAF
NS0124	180	184	NS	BX082425-BX082426	X082425	2			67.81	5.298	0.178	0.045	0.0324	0.034	0.277	0.095	0.017	0.014	0.064	0.11	-0.01	-0.01	-0.01	-0.03	2150	0.4284	1.65699	-1.22859	NAF
NS0124	216	220	NS	BX082443-BX082444	X082443	2			67.57	5.865	0.174	0.052	0.03744	0.052	0.333	0.097	0.017	0.013	0.047	0.129	-0.01	-0.01	-0.01	-0.03	2159	0.3978	1.691874	-1.294074	NAF
NS0124	192	196	NS	BX082431-BX082432	X082431	2			63.98	8.802	0.387	0.048	0.03456	0.048	0.432	0.121	0.023	0.026	0.116	0.108	-0.01	-0.01	-0.01	-0.03	2153	0.7956	2.110482	-1.314882	NAF
NS0124	264	268	NS	BX082468-BX082469	X082468	2			70.04	4.141	0.251	0.046	0.03312	0.036	0.278	0.118	0.025	0.024	0.061	0.09	-0.01	-0.01	-0.01	-0.03	2171	0.7344	2.058156	-1.323756	NAF
NS0124	176	180	NS	BX082423-BX082424	X082423	2			69.08	4.399	0.18	0.042	0.03024	0.033	0.262	0.098	0.018	0.011	0.053	0.088	-0.01	-0.01	-0.01	-0.03	2149	0.3366	1.709316	-1.372716	NAF
NS0124	240	242	NS	X075456	075456	1	G	D	28.59	40.72	3.2	0.4644	0.36	0.148	2.82	0.59	0.083	0.291	1.09	0.292	1.32	6.96	0.76	9.04	17887	8.9046	10.29078	-1.38618	NAF
NS0124	256	260	NS	BX082464-BX082465	X082464	2			68.43	4.342	0.201	0.061	0.04392	0.042	0.285	0.124	0.025	0.023	0.057	0.082	-0.01	-0.01	-0.01	-0.03	2169	0.7038	2.162808	-1.459008	NAF
NS0124	292	296	NS	BX082482-BX082483	X082482	2			65.41	6.346	0.336	0.08	0.0576	0.056	0.383	0.115	0.018	0.017	0.095	0.122	-0.01	-0.01	-0.01	-0.03	2178	0.5202	2.00583	-1.48563	NAF
NS0124	268	272	NS	BX082470-BX082471	X082470	2			70.04	3.276	0.166	0.033	0.02376	0.037	0.209	0.103	0.02	0.009	0.049	0.092	-0.01	-0.01	-0.01	-0.03	2172	0.2754	1.796526	-1.521126	NAF
NS0124	288	292	NS	BX082480-BX082481	X082480	2			66.41	5.166	0.309	0.06	0.0432	0.05	0.346	0.111	0.021	0.013	0.079	0.085	-0.01	-0.01	-0.01	-0.03	2177	0.3978	1.936062	-1.538262	NAF
NS0124	172	176	NS	BX082421-BX082422	X082421	2			68.69	4.282	0.215	0.042	0.03024	0.04	0.276	0.117	0.024	0.016	0.053	0.091	-0.01	-0.01	-0.01	-0.03	2148	0.4896	2.040714	-1.551114	NAF
NS0124	228	230	NS	X075449	075449	1	G	D	23.74	47.33	6.21	0.2322	0.18	0.298	3.93	0.46	0.078	0.211	1.25	0.356	1.27	3.56	0.72	5.55	17881	6.4566	8.02332	-1.56672	NAF
NS0124	280	284	NS	BX082476-BX082477	X082476	2			70.07	2.208	0.294	0.032	0.02304	0.057	0.27	0.122	0.022	0.018	0.071	0.087	-0.01	-0.01	-0.01	-0.03	2175	0.5508	2.127924	-1.577124	NAF
NS0124	136	140	NS	BX082403-BX082404	X082403	2			62.83	10.17	0.337	0.056	0.04032	0.051	0.461	0.123	0.02	0.018	0.095	0.1	-0.01	-0.01	-0.01	-0.03	2139	0.5508	2.145366	-1.594566	NAF
NS0124	284	288	NS	BX082478-BX082479	X082478	2			69.09	3.78	0.229	0.039	0.02808	0.048	0.258	0.119	0.024	0.015	0.056	0.097	-0.01	-0.01	-0.01	-0.03	2176	0.459	2.075598	-1.616598	NAF
NS0124	224	226	NS	X075447	075447	1	G	D	27.43	41.44	4.86	0.2451	0.19	0.233	3.84	0.5	0.072	0.232	1.41	0.374	1.47	5.22	0.74	7.43	17879	7.0992	8.721	-1.6218	NAF
NS0124	260	264	NS	BX082466-BX082467	X082466	2			69.55	3.599	0.169	0.037	0.02664	0.039	0.224	0.121	0.024	0.014	0.05	0.068	-0.01	-0.01	-0.01	-0.03	2170	0.4284	2.110482	-1.682082	NAF
NS0124	272	276	NS	BX082472-BX082473	X082472	2			68.57	3.564	0.224	0.034	0.02448	0.045	0.25	0.118	0.022	0.012	0.063	0.089	-0.01	-0.01	-0.01	-0.03	2173	0.3672	2.058156	-1.690956	NAF
NS0124	236	238	NS	X075454	075454	1	G	D	25	45.66	5.53	0.2838	0.22	0.261	3.59	0.49	0.04	0.224	1.24	0.335	1.27	4.7	0.7	6.67	17885	6.8544	8.54658	-1.69218	NAF
NS0124	168	172	NS	BX082419-BX082420	X082419	2			68.23	4.904	0.223	0.042	0.03024	0.051	0.296	0.12	0.024	0.013	0.065	0.081	-0.01	-0.01	-0.01	-0.03	2147	0.3978	2.09304	-1.69524	NAF
NS0124	252	256	NS	BX082462-BX082463	X082462	2			69.46	3.457	0.077	0.041	0.02952	0.027	0.184	0.115	0.024	0.009	0.03	0.095	-0.01	-0.01	-0.01	-0.03	2168	0.2754	2.00583	-1.73043	NAF
NS0124	244	248	NS	BX082458-BX082459	X082458	2			65.77	7.056	0.324	0.082	0.05904	0.044	0.45	0.134	0.024	0.019	0.104	0.101	-0.01	-0.01	-0.01	-0.03	2166	0.5814	2.337228	-1.755828	NAF
NS0124	276	280	NS	BX082474-BX082475	X082474	2			70.18	2.656	0.199	0.032	0.02304	0.046	0.235	0.119	0.022	0.01	0.058	0.087	-0.01	-0.01	-0.01	-0.03	2174	0.306	2.075598	-1.769598	NAF
NS0124	122	126	NS	BX082395-BX082396	X082395	2			66.54	6.975	0.23	0.05	0.036	0.051	0.301	0.124	0.024	0.012	0.062	0.089	-0.01	-0.01	-0.01	-0.03	2135	0.3672	2.162808	-1.795608	NAF
NS0124	144	148	NS	BX082407-BX082408	X082407	2			66.7	6.585	0.218	0.063	0.04536	0.041	0.344	0.142	0.029	0.02	0.058	0.097	-0.01	-0.01	-0.01	-0.03	2141	0.612	2.476764	-1.864764	NAF
NS0124	114	118	NS	BX082391-BX082392	X082391	2			66.16	5.916	0.296	0.059	0.04248	0.049	0.354	0.137	0.023	0.014	0.095	0.086	-0.01	-0.01	-0.01	-0.03	2133	0.4284	2.389554	-1.961154	NAF
NS0124	164	168	NS	BX082417-BX082418	X082417	2			68.84	3.8	0.173	0.04	0.0288	0.047	0.265	0.138	0.023	0.012	0.052	0.082	-0.01	-0.01	-0.01	-0.03	2146	0.3672	2.406996	-2.039796	NAF
NS0124	118	122	NS	BX082393-BX082394	X082393	2			68.94	4.036	0.155	0.042	0.03024	0.032	0.256	0.131	0.027	0.007	0.052	0.067	-0.01	-0.01	-0.01	-0.03	2134	0.2142	2.284902	-2.070702	NAF
NS0124	90	94	NS	BX082379-BX082380	X082379	2			57.22	17.496	0.865	0.075	0.054	0.058	0.747	0.228	0.045	0.062	0.231	0.139	-0.01	-0.01	-0.01	-0.03	2127	1.8972	3.976776	-2.079576	NAF
NS0124	242	244	NS	X075457	075457	1	G	D	24.85	44.93	5.6	0.3483	0.27	0.266	3.49	0.85	0.092	0.415	1.46	0.407	1.42	3.98	1.07	6.47	17888	12.699	14.8257	-2.1267	NAF
NS0124	296	298	NS	BX082484	X082484	2			65.4	6.269	0.398	0.089	0.06408	0.059	0.434	0.161	0.031	0.022	0.09	0.111	-0.01	-0.01	-0.01	-0.03	2179	0.6732	2.808162	-2.134962	NAF
NS0124	94	98	NS	BX082381-BX082382	X082381	2			62.03	10.984	0.587	0.067	0.04824	0.062	0.555	0.179	0.027	0.026	0.183	0.11	0.02	-0.01	-0.01	0	2128	0.7956	3.122118	-2.326518	NAF
NS0124	172	174	NS	X075421	075421	1	G	D	26.2	43.13	5.77	0.1806	0.14	0.272	3.7	0.7	0.062	0.318	0.937	0.253	1.07	5.25	0.85	7.17	17853	9.7308	12.2094	-2.4786	NAF
NS0124	74	76	NS	X075371	075371	1	G	D	25.94	42.82	3.26	0.2967	0.23	0.151	2.74	0.62	0.108	0.26	0.911	0.221	1.18	9.11	0.72	11.01	17804	7.956	10.81404	-2.85804	NAF
NS0124	58	62	NS	BX082363-BX082364	X082363	2			60.16	13.843	0.671	0.065	0.0468	0.058	0.624	0.21	0.022	0.026	0.205	0.108	-0.01	-0.01	-0.01	-0.03	2119	0.7956	3.66282	-2.86722	NAF
NS0124	110	112	NS	BX082389	X082389	2			65.07	8.973	0.378	0.047	0.03384	0.042	0.428	0.204	0.022	0.021	0.137	0.112	-0.01	-0.01	-0.01	-0.03	2132	0.6426	3.558168	-2.915568	NAF
NS0124	98	102	NS	BX082383-BX082384	X082383	2			64.31	9.697	0.374	0.058	0.04176	0.044	0.417	0.212	0.017	0.019	0.118	0.103	-0.01	-0.01	-0.01	-0.03	2129	0.5814	3.697704	-3.116304	NAF
NS0124	106	110	NS	BX082387-BX082388	X082387	2			65.94	7.298	0.24	0.051	0.03672	0.032	0.369	0.201	0.022	0.01	0.082	0.097	-0.01	-0.01	-0.01	-0.03	2131	0.306	3.505842	-3.199842	NAF
NS0124	66	70	NS	BX082367-BX082368	X082367	2			60.31	13.752	0.496	0.065	0.0468	0.044	0.531	0.223	0.024	0.02	0.163	0.113	-0.01	-0.01	-0.01	-0.03	2121	0.612	3.889566	-3.277566	NAF
NS0124	204	206	NS	X075437	075437	1	G	D	26.1	43.08	5.29	0.2838	0.22	0.251	3.92	0.78	0.212	0.335	1.42	0.383	1.43	4.44	0.98	6.85	17869	10.251	13.60476	-3.35376	NAF
NS0124	282	284	NS	X075477	075477	1	G	D	26.44	42.51	5.33	0.1806	0.14	0.254	3.4	1.3	0.048	0.631	1.31	0.331	1.17	3.62	1.55	6.34	17908	19.3086	22.6746	-3.366	NAF
NS0124	202	204	NS	X075436	075436	1	G	D	27.65	40.84	3.49	0.3483	0.27	0.159	3.45	0.54	0.111	0.191	1.22	0.331	1.41	7.49	0.61	9.51	17868	5.8446	9.41868	-3.57408	NAF
NS0124	102	106	NS	BX082385-BX082386	X082385	2			63.16	10.879	0.47	0.065	0.0468	0.048	0.534	0.236	0.019	0.015	0.165	0.097	-0.01	-0.01	-0.01	-0.03	2130	0.459	4.116312	-3.657312	NAF
NS0124	160	162	NS	X075415	075415	1	G	D	21.67	49.88	6.89	0.1161	0.09	0.325	3.9	1.14	0.099	0.528	1.24	0.355	1.24	1.98	1.3	4.52	17847	16.1568	19.88388	-3.72708	NAF
NS0124	222	224	NS	X075446	075446	1	G	D	28.83	39.04	2.75	0.2967	0.23	0.127	2.98	0.49	0.07	0.154	0.943	0.259	1.21	9.59	0.45	11.25	17878	4.7124	8.54658	-3.83418	NAF
NS0124	236	240	NS	BX082454-BX082455	X082454	2			60.7	11.519	0.868	0.095	0.0684	0.076	0.757	0.331	0.034	0.063	0.245	0.167	-0.01	-0.01	-0.01	-0.03	2164	1.9278	5.773302	-3.845502	NAF
NS0124	234	236	NS	X075453	075453	1	G	D	23.45	46.89	6.86	0.1677	0.13	0.32	4.17	0.79	0.215	0.314	1.61	0.447	1.48	1.91	0.8	4.19	17884	9.6084	13.77918	-4.17078	NAF
NS0124	156	158	NS	X075413	075413	1	G	D	22.24	48.64	6.27	0.1935	0.15	0.295	3.74	1.14	0.089	0.501	1.16	0.327	1.2	3.21	1.34	5.75	17845	15.3306	19.88388	-4.55328	NAF
NS0124	62	66	NS	BX082365-BX082366	X082365	2			59.64	14.612	0.587	0.078	0.05616	0.044	0.621	0.294	0.027	0.018	0.192	0.115	0.03	-0.01	-0.01	0.01	2120	0.5508	5.127948	-4.577148	NAF
NS0124	50	52	NS	X075359	075359	1	G	D	29.32	48.51	2.65	0.2322	0.18	0.116	0.77	0.28	0.044	0.009	0.193	0.044	3.61	1.27	0.07	4.95	17792	0.2754	4.88376	-4.60836	NAF
NS0124	52	54	NS	X075360	075360	1	G	D	31.3	44.46	2.83	0.3225	0.25	0.134	0.92	0.28	0.044	0.008	0.206	0.038	4.18	1.38	0.1	5.66	17793	0.2448	4.88376	-4.63896	NAF
NS0124	238	240	NS	X075455	075455	1	G	D	26.26	45.25	3.3	0.3225	0.25	0.151	2.81	0.56	0.046	0.167	1.03	0.279	1.19	6.49	0.45	8.13	17886	5.1102	9.76752	-4.65732	NAF
NS0124	90	92	NS	X075379	075379	1	G	D	23.96	45.83	6.09	0.2967	0.23	0.289	3.56	1.03	0.076	0.423	1.44	0.375	1.35	3.43	1.22	6	17812	12.9438	17.96526	-5.02146	NAF
NS0124	178	180	NS	X075424	075424	1	G	D	27.83	41.86	4.74	0.1806	0.14	0.227	3.54	0.79	0.128	0.277	1.23	0.33	1.24	3.93	0.86	6.03	17856	8.4762	13.77918	-5.30298	NAF
NS0124	144	146	NS	X075407	075407	1	G	D	28.58	37.51	3.03	0.3354	0.26	0.136	3	0.67	0.109	0.205	0.743	0.189	1.2	11.24	0.55	12.99	17839	6.273	11.68614	-5.41314	NAF
NS0124	54	56	NS	X075361	075361	1	G	D	17.84	54.08	8.38	0.3096	0.24	0.405	1.49	0.33	0.037	0.007	3.55	0.047	3.24	1.97	0.27	5.48	17794	0.2142	5.75586	-5.54166	NAF
NS0124	214	216	NS	X075442	075442	1	G	D	30.68	32.74	2.02	0.4128	0.32	0.093	3.24	0.58	0.084	0.145	0.767	0.214	1.42	14.05	0.33	15.8	17874	4.437	10.11636	-5.67936	NAF
NS0124	48	50	NS	X075358	075358	1	G	D	27.13	47.91	3.9	0.3999	0.31	0.186	1.17	0.35	0.055	0.013	0.357	0.067	4.25	1.83	0.21	6.29	17791	0.3978	6.1047	-5.7069	NAF
NS0124	124	126	NS	X075396	075396	1	G	D	25.66	43.15	3.45	0.3483	0.27	0.161	2.88	0.82	0.107	0.274	0.938	0.239	1.23	8.77	0.79	10.79	17829	8.3844	14.30244	-5.91804	NAF
NS0124	56	58	NS	X075362	075362	1	G	D	22.3	49.38	7.28	0.3096	0.24	0.345	1.39	0.35	0.071	0.006	2.03	0.037	4.18	2.18	0.28	6.64	17795	0.1836	6.1047	-5.9211	NAF
NS0124	190	192	NS	X075430	075430	1	G	D	26.68	41.95	5.12	0.1677	0.13	0.242	3.94	0.84	0.151	0.285	1.48	0.394	1.65	4.35	0.89	6.89	17862	8.721	14.65128	-5.93028	NAF
NS0124	188	190	NS	X075429	075429	1	G	D	27.48	40.99	3.72	0.2709	0.21	0.175	3.27	0.7	0.064	0.204	1.15	0.275	1.37	7.2	0.62	9.19	17861	6.2424	12.2094	-5.967	NAF
NS0124	256	258	NS	X075464	075464	1	G	D	29.02	39.67	4.42	0.2709	0.21	0.212	3.21	0.98	0.133	0.357	1.32	0.331	1.35	5.16	0.93	7.44	17895	10.9242	17.09316	-6.16896	NAF
NS0124	294	296	NS	X075483	075483	1	G	D	25.97	44.7	2.37	0.3354	0.26	0.106	2.2	0.65	0.065	0.161	0.834	0.231	1.13	9.7	0.41	11.24	17914	4.9266	11.3373	-6.4107	NAF
NS0124	186	188	NS	X075428	075428	1	G	D	27	42.81	3.5	0.2709	0.21	0.162	3.06	0.7	0.043	0.189	1.11	0.279	1.82	6.68	0.65	9.15	17860	5.7834	12.2094	-6.426	NAF
NS0124	212	214	NS	X075441	075441	1	G	D	31.74	29.68	1.7	0.4128	0.32	0.074	3.27	0.57	0.073	0.113	0.708	0.18	1.33	15.86	0.23	17.42	17873	3.4578	9.94194	-6.48414	NAF
NS0124	266	268	NS	X075469	075469	1	G	D	30.48	40.26	3.56	0.2967	0.23	0.162	2.65	1	0.079	0.358	0.949	0.245	0.99	5.07	0.87	6.93	17900	10.9548	17.442	-6.4872	NAF
NS0124	208	210	NS	X075439	075439	1	G	D	30.14	33.35	1.81	0.4515	0.35	0.083	2.79	0.53	0.073	0.085	0.704	0.191	1.19	15.12	0.24	16.55	17871	2.601	9.24426	-6.64326	NAF
NS0124	150	152	NS	X075410	075410	1	G	D	32.2	35.28	1.72	0.3612	0.28	0.077	2.26	0.67	0.094	0.163	0.604	0.174	1.02	11.03	0.22	12.27	17842	4.9878	11.68614	-6.69834	NAF
NS0124	216	218	NS	X075443	075443	1	G	D	29.84	34.92	2.78	0.3225	0.25	0.127	3.29	0.81	0.19	0.235	0.976	0.263	1.42	11.08	0.6	13.1	17875	7.191	14.12802	-6.93702	NAF
NS0124	192	194	NS	X075431	075431	1	G	D	28.4	40.4	4.12	0.1806	0.14	0.197	3.21	0.94	0.215	0.293	1.56	0.409	1.59	5.09	0.88	7.56	17863	8.9658	16.39548	-7.42968	NAF
NS0124	184	186	NS	X075427	075427	1	G	D	26.92	40.39	6.07	0.1161	0.09	0.29	4.26	0.96	0.179	0.293	1.52	0.396	2.36	2.86	1.01	6.23	17859	8.9658	16.74432	-7.77852	NAF
NS0124	200	202	NS	X075435	075435	1	G	D	29.67	39.2	3.31	0.2838	0.22	0.15	3.25	0.75	0.15	0.15	1.27	0.347	1.4	6.61	0.48	8.49	17867	4.59	13.0815	-8.4915	NAF
NS0124	198	200	NS	X075434	075434	1	G	D	32.54	38.61	1.96	0.258	0.2	0.089	2.2	0.62	0.094	0.072	0.775	0.212	0.92	7.1	-0.03	7.99	17866	2.2032	10.81404	-8.61084	NAF
NS0124	88	90	NS	X075378	075378	1	G	D	22.78	48.32	5.87	0.2322	0.18	0.281	3.4	1.24	0.133	0.425	1.36	0.35	1.36	3.09	1.21	5.66	17811	13.005	21.62808	-8.62308	NAF
NS0124	136	138	NS	X075403	075403	1	G	D	31.22	35.75	1.48	0.3096	0.24	0.068	2.27	0.67	0.08	0.097	0.519	0.139	0.88	12.89	0.13	13.9	17835	2.9682	11.68614	-8.71794	NAF
NS0124	180	182	NS	X075425	075425	1	G	D	32.05	37.76	2.62	0.3096	0.24	0.12	2.55	0.75	0.08	0.14	0.881	0.228	1.02	7.22	0.31	8.55	17857	4.284	13.0815	-8.7975	NAF
NS0124	288	290	NS	X075480	075480	1	G	D	30.08	37.83	3.6	0.2967	0.23	0.162	2.9	0.97	0.122	0.265	1.24	0.327	1.29	7.05	0.72	9.06	17911	8.109	16.91874	-8.80974	NAF
NS0124	292	294	NS	X075482	075482	1	G	D	30.74	35.47	2.25	0.3999	0.31	0.105	2.31	0.7	0.08	0.109	0.794	0.209	1.16	11.62	0.26	13.04	17913	3.3354	12.2094	-8.874	NAF
NS0124	210	212	NS	X075440	075440	1	G	D	29.07	34.47	2.01	0.4386	0.34	0.09	3.29	0.66	0.071	0.082	0.835	0.231	1.35	14.42	0.17	15.94	17872	2.5092	11.51172	-9.00252	NAF
NS0124	218	220	NS	X075444	075444	1	G	D	30.33	35.56	0.89	0.3741	0.29	0.039	2.51	0.62	0.081	0.058	0.37	0.12	0.95	15.03	0.02	16	17876	1.7748	10.81404	-9.03924	NAF
NS0124	92	94	NS	X075380	075380	1	G	D	25.81	43.88	3.5	0.3354	0.26	0.165	2.52	1.04	0.082	0.297	0.954	0.252	1.13	7.62	0.83	9.58	17813	9.0882	18.13968	-9.05148	NAF
NS0124	140	142	NS	X075405	075405	1	G	D	26.17	42.78	1.4	0.3483	0.27	0.064	2.22	0.68	0.097	0.087	0.527	0.143	0.98	12.59	0.16	13.73	17837	2.6622	11.86056	-9.19836	NAF
NS0124	58	60	NS	X075363	075363	1	G	D	29.18	44.93	2.59	0.2064	0.16	0.124	1.85	0.72	0.091	0.104	0.78	0.131	1.37	4.49	0.23	6.09	17796	3.1824	12.55824	-9.37584	NAF
NS0124	138	140	NS	X075404	075404	1	G	D	31.02	35.36	1.67	0.2838	0.22	0.075	2.39	0.72	0.074	0.097	0.64	0.17	1.14	12.58	0.17	13.89	17836	2.9682	12.55824	-9.59004	NAF
NS0124	220	222	NS	X075445	075445	1	G	D	31.15	33.61	0.98	0.387	0.3	0.043	2.48	0.67	0.075	0.052	0.423	0.123	0.99	15.08	-0.01	16.06	17877	1.5912	11.68614	-10.09494	NAF
NS0124	244	246	NS	X075458	075458	1	G	D	28.35	39.43	2.19	0.4386	0.34	0.1	2.37	0.88	0.065	0.151	0.81	0.221	1.11	11.11	0.36	12.58	17889	4.6206	15.34896	-10.72836	NAF
NS0124	296	298	NS	X075484	075484	1	G	D	28.14	39.74	2.15	0.387	0.3	0.1	2.15	0.92	0.09	0.171	0.684	0.175	1.05	11.34	0.42	12.81	17915	5.2326	16.04664	-10.81404	NAF
NS0124	290	292	NS	X075481	075481	1	G	D	29.19	38.99	2.11	0.3999	0.31	0.095	2.23	0.9	0.112	0.138	0.732	0.202	1.08	10.75	0.28	12.11	17912	4.2228	15.6978	-11.475	NAF
NS0124	146	148	NS	X075408	075408	1	G	D	31.01	35.72	1.96	0.387	0.3	0.089	2.45	0.87	0.098	0.116	0.598	0.167	1.05	11.42	0.25	12.72	17840	3.5496	15.17454	-11.62494	NAF
NS0124	72	74	NS	X075370	075370	1	G	D	22.43	47.34	6.83	0.2064	0.16	0.333	3.74	1.36	0.089	0.389	1.61	0.341	1.27	2.8	1.23	5.3	17803	11.9034	23.72112	-11.81772	NAF
NS0124	194	196	NS	X075432	075432	1	G	D	30.71	36.74	2.7	0.258	0.2	0.129	2.88	0.94	0.149	0.144	1.05	0.277	1.21	8.76	0.35	10.32	17864	4.4064	16.39548	-11.98908	NAF
NS0124	158	160	NS	X075414	075414	1	G	D	20.38	51.12	6.61	0.1419	0.11	0.313	3.64	1.77	0.123	0.609	1.05	0.311	1.13	2.31	1.66	5.1	17846	18.6354	30.87234	-12.23694	NAF
NS0124	270	272	NS	X075471	075471	1	G	D	27.67	42.91	3.39	0.3096	0.24	0.156	3	1.26	0.079	0.311	1.08	0.329	1.18	5.31	1.05	7.54	17902	9.5166	21.97692	-12.46032	NAF
NS0124	70	72	NS	X075369	075369	1	G	D	21.61	48.72	5.28	0.3612	0.28	0.253	3.17	1.71	0.084	0.518	1.33	0.26	1.11	4.46	1.53	7.1	17802	15.8508	29.82582	-13.97502	NAF
NS0124	246	248	NS	X075459	075459	1	G	D	32.73	34.06	1.49	0.4257	0.33	0.068	2.02	0.91	0.073	0.059	0.611	0.172	0.99	12.06	0	13.05	17890	1.8054	15.87222	-14.06682	NAF
NS0124	152	154	NS	X075411	075411	1	G	D	21.98	49.49	4.37	0.258	0.2	0.202	3.17	1.56	0.131	0.422	1.19	0.329	1.26	4.48	1.36	7.1	17843	12.9132	27.20952	-14.29632	NAF
NS0124	284	286	NS	X075478	075478	1	G	D	28.34	40.27	3.93	0.2709	0.21	0.182	2.89	1.41	0.061	0.314	1.05	0.258	1.04	6.36	1.01	8.41	17909	9.6084	24.59322	-14.98482	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0124	196	198	NS	X075433	075433	1	G	D	31.81	37.49	2.08	0.258	0.2	0.099	2.33	1.18	0.128	0.119	0.675	0.172	0.97	8.21	0.07	9.25	17865	3.6414	20.58156	-16.94016	NAF
NS0124	122	124	NS	X075395	075395	1	G	D	31.2	38.35	1.72	0.2838	0.22	0.078	1.82	1.17	0.093	0.08	0.544	0.144	0.87	9.43	0.25	10.55	17828	2.448	20.40714	-17.95914	NAF
NS0124	82	84	NS	X075375	075375	1	G	D	25.6	42.71	2.91	0.3096	0.24	0.138	2.56	1.36	0.13	0.177	0.857	0.211	1.09	9.45	0.66	11.2	17808	5.4162	23.72112	-18.30492	NAF
NS0124	286	288	NS	X075479	075479	1	G	D	30.47	37.14	3.44	0.2967	0.23	0.158	2.86	1.45	0.19	0.228	1.2	0.309	1.26	6.22	0.73	8.21	17910	6.9768	25.2909	-18.3141	NAF
NS0124	252	254	NS	X075462	075462	1	G	D	29.76	38.68	1.12	0.4128	0.32	0.05	1.79	1.2	0.106	0.066	0.468	0.116	0.84	12.17	0.12	13.13	17893	2.0196	20.9304	-18.9108	NAF
NS0124	182	184	NS	X075426	075426	1	G	D	31.41	41.55	1.36	0.2967	0.23	0.062	1.73	1.31	0.098	0.085	0.536	0.159	0.64	6.83	0.24	7.71	17858	2.601	22.84902	-20.24802	NAF
NS0124	170	172	NS	X075420	075420	1	G	D	27.12	40.57	3.76	0.3225	0.25	0.178	3.11	1.88	0.187	0.394	1.03	0.274	1.13	6.74	1.29	9.16	17852	12.0564	32.79096	-20.73456	NAF
NS0124	78	80	NS	X075373	075373	1	G	D	22.7	47.85	4.46	0.2451	0.19	0.216	3.07	1.76	0.126	0.313	1.16	0.242	1.09	5.35	1.19	7.63	17806	9.5778	30.69792	-21.12012	NAF
NS0124	168	170	NS	X075419	075419	1	G	D	32.08	36.34	1.75	0.2709	0.21	0.082	2.07	1.38	0.076	0.082	0.657	0.158	0.8	9.66	0.38	10.84	17851	2.5092	24.06996	-21.56076	NAF
NS0124	258	260	NS	X075465	075465	1	G	D	30.92	37.67	2.47	0.4386	0.34	0.111	2.27	1.78	0.085	0.308	0.681	0.182	0.87	7.95	0.82	9.64	17896	9.4248	31.04676	-21.62196	NAF
NS0124	76	78	NS	X075372	075372	1	G	D	25.46	43.69	3.16	0.2709	0.21	0.149	2.62	1.62	0.137	0.188	1	0.22	1.14	8.13	0.82	10.09	17805	5.7528	28.25604	-22.50324	NAF
NS0124	86	88	NS	X075377	075377	1	G	D	22.64	46.88	4.9	0.3225	0.25	0.237	3.15	1.85	0.084	0.306	1.1	0.29	1.25	5.74	1.25	8.24	17810	9.3636	32.2677	-22.9041	NAF
NS0124	262	264	NS	X075467	075467	1	G	D	27.84	42.48	3.48	0.258	0.2	0.157	2.73	1.92	0.15	0.31	1.08	0.281	1.1	4.39	1.22	6.71	17898	9.486	33.48864	-24.00264	NAF
NS0124	84	86	NS	X075376	075376	1	G	D	24.71	43.71	2.79	0.3741	0.29	0.128	2.5	1.73	0.102	0.201	0.808	0.214	1.04	9.8	0.87	11.71	17809	6.1506	30.17466	-24.02406	NAF
NS0124	272	274	NS	X075472	075472	1	G	D	29.32	41.59	2.62	0.3096	0.24	0.123	2.58	1.78	0.098	0.202	0.956	0.253	1	5.42	1.02	7.44	17903	6.1812	31.04676	-24.86556	NAF
NS0124	248	250	NS	X075460	075460	1	G	D	28.93	43.23	1	0.3225	0.25	0.045	1.5	1.52	0.065	0.045	0.42	0.122	0.6	9.08	0.25	9.93	17891	1.377	26.51184	-25.13484	NAF
NS0124	60	62	NS	X075364	075364	1	G	D	28.57	44.3	2.26	0.2838	0.22	0.105	2.16	1.62	0.067	0.096	0.773	0.133	0.93	5.05	0.97	6.95	17797	2.9376	28.25604	-25.31844	NAF
NS0124	112	114	NS	X075390	075390	1	G	D	28.03	41.86	2.49	0.3096	0.24	0.115	2.67	1.9	0.095	0.252	1	0.278	1.14	5.92	1.2	8.26	17823	7.7112	33.1398	-25.4286	NAF
NS0124	162	164	NS	X075416	075416	1	G	D	27.18	39.97	2.86	0.4257	0.33	0.13	2.54	2.18	0.082	0.408	0.764	0.217	0.96	8.84	1.51	11.31	17848	12.4848	38.02356	-25.53876	NAF
NS0124	176	178	NS	X075423	075423	1	G	D	34.52	35.35	1.23	0.3354	0.26	0.057	1.71	1.61	0.087	0.056	0.5	0.126	0.62	8.58	0.27	9.47	17855	1.7136	28.08162	-26.36802	NAF
NS0124	100	102	NS	X075384	075384	1	G	D	27.08	40.92	3.89	0.2838	0.22	0.178	3.43	2.09	0.114	0.31	1.22	0.315	1.2	4.93	1.53	7.66	17817	9.486	36.45378	-26.96778	NAF
NS0124	96	98	NS	X075382	075382	1	G	D	29.43	40.51	2.72	0.2838	0.22	0.128	2.53	1.81	0.102	0.142	1.01	0.27	1.02	6.28	0.81	8.11	17815	4.3452	31.57002	-27.22482	NAF
NS0124	174	176	NS	X075422	075422	1	G	D	30.47	38.88	1.77	0.2838	0.22	0.08	2.02	1.75	0.098	0.093	0.633	0.162	0.81	8.69	0.52	10.02	17854	2.8458	30.5235	-27.6777	NAF
NS0124	120	122	NS	X075394	075394	1	G	D	31.5	38.86	1.6	0.258	0.2	0.072	1.91	1.81	0.088	0.09	0.573	0.154	0.71	8.12	0.52	9.35	17827	2.754	31.57002	-28.81602	NAF
NS0124	254	256	NS	X075463	075463	1	G	D	29.94	41.87	1.35	0.3096	0.24	0.059	1.74	1.79	0.159	0.068	0.553	0.141	0.65	7.59	0.33	8.57	17894	2.0808	31.22118	-29.14038	NAF
NS0124	64	66	NS	X075366	075366	1	G	D	31.18	41.59	1.77	0.2967	0.23	0.082	2	1.8	0.132	0.067	0.737	0.134	0.8	4.79	0.84	6.43	17799	2.0502	31.3956	-29.3454	NAF
NS0124	276	278	NS	X075474	075474	1	G	D	28.71	38.46	3.78	0.3096	0.24	0.174	3.28	2.15	0.223	0.232	1.35	0.363	1.31	5.62	1.26	8.19	17905	7.0992	37.5003	-30.4011	NAC
NS0124	62	64	NS	X075365	075365	1	G	D	30.12	42.08	2.04	0.2967	0.23	0.096	2.11	1.9	0.07	0.085	0.774	0.111	0.83	4.73	1.18	6.74	17798	2.601	33.1398	-30.5388	NAC
NS0124	250	252	NS	X075461	075461	1	G	D	28.59	42.24	0.88	0.3612	0.28	0.037	1.55	1.83	0.073	0.033	0.357	0.086	0.62	10.47	0.37	11.46	17892	1.0098	31.91886	-30.90906	NAC
NS0124	278	280	NS	X075475	075475	1	G	D	29.5	42.85	2.11	0.2322	0.18	0.099	2.05	2.05	0.101	0.136	0.786	0.221	0.77	5.06	1.04	6.87	17906	4.1616	35.7561	-31.5945	NAC
NS0124	66	68	NS	X075367	075367	1	G	D	30.57	42.12	1.67	0.2709	0.21	0.077	1.94	1.92	0.1	0.06	0.661	0.146	0.71	5.19	0.96	6.86	17800	1.836	33.48864	-31.65264	NAC
NS0124	166	168	NS	X075418	075418	1	G	D	31.8	35.49	2.28	0.2838	0.22	0.102	2.5	2.13	0.115	0.124	0.81	0.201	0.89	8.76	0.95	10.6	17850	3.7944	37.15146	-33.35706	NAC
NS0124	118	120	NS	X075393	075393	1	G	D	32.89	37.7	1.37	0.2709	0.21	0.062	1.75	2.13	0.098	0.073	0.545	0.134	0.58	6.96	0.68	8.22	17826	2.2338	37.15146	-34.91766	NAC
NS0124	280	282	NS	X075476	075476	1	G	D	31.11	38.72	2.71	0.2451	0.19	0.125	2.49	2.3	0.144	0.146	1.03	0.274	0.93	4.63	1.26	6.82	17907	4.4676	40.1166	-35.649	NAC
NS0124	260	262	NS	X075466	075466	1	G	D	29.56	39.47	2.76	0.2967	0.23	0.129	2.49	2.37	0.158	0.168	0.915	0.232	0.97	6.02	0.87	7.86	17897	5.1408	41.33754	-36.19674	NAC
NS0124	104	106	NS	X075386	075386	1	G	D	29.99	40.15	1.94	0.3096	0.24	0.093	2.44	2.34	0.093	0.078	0.809	0.219	0.87	5.91	1.53	8.31	17819	2.3868	40.81428	-38.42748	NAC
NS0124	98	100	NS	X075383	075383	1	G	D	29.24	41.14	2.15	0.3096	0.24	0.1	2.18	2.44	0.094	0.101	0.799	0.229	0.85	6.08	1.16	8.09	17816	3.0906	42.55848	-39.46788	NAC
NS0124	102	104	NS	X075385	075385	1	G	D	28.22	42.06	2.32	0.2967	0.23	0.109	2.46	2.49	0.105	0.12	0.932	0.245	0.92	5.46	1.57	7.95	17818	3.672	43.43058	-39.75858	NAC
NS0124	108	110	NS	X075388	075388	1	G	D	26.99	42.52	2.38	0.3612	0.28	0.107	2.68	2.6	0.108	0.182	0.806	0.206	0.88	6.27	1.66	8.81	17821	5.5692	45.3492	-39.78	NAC
NS0124	274	276	NS	X075473	075473	1	G	D	28.62	39.46	3.08	0.3096	0.24	0.141	2.9	2.69	0.129	0.196	1.14	0.292	1.09	5.46	1.68	8.23	17904	5.9976	46.91898	-40.92138	NAC
NS0124	268	270	NS	X075470	075470	1	G	D	28.35	46.33	1.63	0.2322	0.18	0.077	1.61	2.52	0.091	0.092	0.614	0.167	0.61	3.84	1.35	5.8	17901	2.8152	43.95384	-41.13864	NAC
NS0124	106	108	NS	X075387	075387	1	G	D	31.59	37.31	1.58	0.3354	0.26	0.073	2.36	2.48	0.089	0.051	0.67	0.197	0.81	6.95	1.41	9.17	17820	1.5606	43.25616	-41.69556	NAC
NS0124	94	96	NS	X075381	075381	1	G	D	25.96	44.67	2.44	0.2709	0.21	0.111	2.08	2.72	0.134	0.141	0.808	0.219	0.89	6.82	1.1	8.81	17814	4.3146	47.44224	-43.12764	NAC
NS0124	80	82	NS	X075374	075374	1	G	D	24.55	42.45	3.42	0.3483	0.27	0.163	2.78	2.87	0.151	0.208	1.05	0.271	1.2	8.32	1.41	10.93	17807	6.3648	50.05854	-43.69374	NAC
NS0124	114	116	NS	X075391	075391	1	G	D	24.91	43.78	2.73	0.3483	0.27	0.124	2.67	2.96	0.138	0.248	0.995	0.254	1.05	6.82	1.52	9.39	17824	7.5888	51.62832	-44.03952	NAC
NS0124	116	118	NS	X075392	075392	1	G	D	26.66	43.33	1.97	0.3225	0.25	0.092	2.08	3.01	0.074	0.174	0.728	0.184	0.78	6.98	1.43	9.19	17825	5.3244	52.50042	-47.17602	NAC
NS0124	110	112	NS	X075389	075389	1	G	D	27.15	43.18	1.68	0.3096	0.24	0.078	2.24	2.94	0.125	0.125	0.718	0.192	0.8	6.93	1.66	9.39	17822	3.825	51.27948	-47.45448	NAC
NS0124	68	70	NS	X075368	075368	1	G	D	25.67	41.55	2.38	0.2967	0.23	0.112	2.27	3.32	0.115	0.126	0.804	0.175	0.96	8.97	1.52	11.45	17801	3.8556	57.90744	-54.05184	NAC
NS0124	164	166	NS	X075417	075417	1	G	D	26.5	41.5	1.06	0.2838	0.22	0.05	1.49	4.7	0.07	0.066	0.371	0.093	0.54	9.22	2.23	11.99	17849	2.0196	81.9774	-79.9578	NAC
NS0125	44	46	NS	X075508	075508	1	G	W	25.65	41.29	4.72	0.516	0.4	0.207	3.2	0.53	0.114	0.396	0.463	0.119	0.89	9.84	0.7	11.43	17938	12.1176	9.24426	2.87334	PAF(LC)
NS0125	234	236	NS	X075605	075605	1	G	W	34.45	35.62	3.23	0.5547	0.43	0.14	4.02	0.48	0.091	0.285	0.291	0.096	0.22	4.99	0.19	5.4	18033	8.721	8.37216	0.34884	PAF(LC)
NS0125	2	4	NS	X075486	075486	1	G	D	34.42	36.51	5.22	0.0258	0.02	0.694	0.07	0.03	0.028	0.018	0.014	0.049	6.27	1.33	0.21	7.81	17917	0.5508	0.52326	0.02754	PAF(LC)
NS0125	30	32	NS	BX082500	X082500	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2180	-0.0306	-0.01744	-0.013158	NAF
NS0125	90	94	NS	BX082531-BX082532	X082531	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2196	-0.0306	-0.01744	-0.013158	NAF
NS0125	94	98	NS	BX082533-BX082534	X082533	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2197	-0.0306	-0.01744	-0.013158	NAF
NS0125	4	6	NS	X075487	075487	1	G	D	33.04	40.35	4.24	0.0258	0.02	0.424	0.09	0.03	0.024	0.014	0.017	0.054	5.88	1.28	0.2	7.36	17918	0.4284	0.52326	-0.09486	NAF
NS0125	10	12	NS	X075490	075490	1	G	D	36.84	29.73	8.37	0.00645	0.005	1.477	0.07	0.03	0.021	0.014	0.006	0.048	4.78	2.19	0.27	7.24	17921	0.4284	0.52326	-0.09486	NAF
NS0125	140	142	NS	X075557	075557	1	G	W	30.94	34.35	2.48	0.7482	0.58	0.112	4.01	0.5	0.102	0.281	0.634	0.079	0.37	11.69	0.42	12.48	17986	8.5986	8.721	-0.1224	NAF
NS0125	6	8	NS	X075488	075488	1	G	D	34.89	41.85	2.96	0.0645	0.05	0.941	0.08	0.03	0.031	0.012	0.013	0.047	2.99	0.72	0.18	3.89	17919	0.3672	0.52326	-0.15606	NAF
NS0125	8	10	NS	X075489	075489	1	G	D	24.54	52.03	6.18	0.0258	0.02	1.205	0.07	0.03	0.016	0.01	0.011	0.071	2.95	1.69	0.2	4.84	17920	0.306	0.52326	-0.21726	NAF
NS0125	12	14	NS	X075491	075491	1	G	D	26.35	47.47	7.8	0.0258	0.02	0.837	0.09	0.03	0.024	0.008	0.007	0.068	3.38	2.19	0.22	5.79	17922	0.2448	0.52326	-0.27846	NAF
NS0125	228	230	NS	BX082602	X082602	2			63.75	9.793	0.62	0.055	0.0396	0.055	0.767	0.112	0.028	0.053	0.106	0.078	-0.01	-0.01	-0.01	-0.03	2231	1.6218	1.953504	-0.331704	NAF
NS0125	132	136	NS	BX082553-BX082554	X082553	2			70.65	2.689	0.068	0.008	0.00576	0.008	0.151	0.036	0.008	0.001	0.071	0.059	-0.01	-0.01	-0.01	-0.03	2207	0.0306	0.627912	-0.597312	NAF
NS0125	144	146	NS	BX082559	X082559	2			65.79	7.757	0.268	0.025	0.018	0.025	0.387	0.064	0.014	0.016	0.102	0.069	-0.01	-0.01	-0.01	-0.03	2210	0.4896	1.116288	-0.626688	NAF
NS0125	0	2	NS	X075485	075485	1	G	D	39.13	25.85	7.28	0.0645	0.05	0.914	0.14	0.08	0.032	0.025	0.052	0.052	7.01	1.99	0.27	9.27	17916	0.765	1.39536	-0.63036	NAF
NS0125	140	144	NS	BX082557-BX082558	X082557	2			67.2	5.721	0.311	0.025	0.018	0.025	0.484	0.064	0.013	0.015	0.164	0.066	-0.01	-0.01	-0.01	-0.03	2209	0.459	1.116288	-0.657288	NAF
NS0125	14	16	NS	X075492	075492	1	G	D	32.66	39.69	5.41	0.1032	0.08	0.343	0.2	0.05	0.03	0.007	0.032	0.066	5.09	1.81	0.23	7.13	17923	0.2142	0.8721	-0.6579	NAF
NS0125	230	234	NS	BX082603-BX082604	X082603	2			66.98	6.952	0.257	0.026	0.01872	0.026	0.432	0.066	0.014	0.016	0.035	0.093	-0.01	-0.01	-0.01	-0.03	2232	0.4896	1.151172	-0.661572	NAF
NS0125	234	238	NS	BX082605-BX082606	X082605	2			65.14	7.845	0.382	0.033	0.02376	0.033	0.552	0.088	0.019	0.028	0.068	0.084	-0.01	-0.01	-0.01	-0.03	2233	0.8568	1.534896	-0.678096	NAF
NS0125	24	26	NS	X075497	075497	1	G	D	35.56	39.69	2.01	0.3741	0.29	0.077	0.38	0.05	0.09	0.005	0.134	0.054	4.76	0.9	0.16	5.82	17928	0.153	0.8721	-0.7191	NAF
NS0125	42	46	NS	BX082507-BX082508	X082507	2			66.68	4.17	0.267	0.036	0.02592	0.036	0.335	0.067	0.011	0.014	0.03	0.118	-0.01	-0.01	-0.01	-0.03	2184	0.4284	1.168614	-0.740214	NAF
NS0125	118	122	NS	BX082545-BX082546	X082545	2			65.82	7.829	0.387	0.029	0.02088	0.029	0.325	0.076	0.018	0.019	0.183	0.089	-0.01	-0.01	-0.01	-0.03	2203	0.5814	1.325592	-0.744192	NAF
NS0125	22	24	NS	X075496	075496	1	G	D	33.52	42.66	2.19	0.1935	0.15	0.105	0.45	0.05	0.092	0.004	0.164	0.056	4.79	1	0.15	5.94	17927	0.1224	0.8721	-0.7497	NAF
NS0125	18	20	NS	X075494	075494	1	G	D	30.23	44.49	4.18	0.129	0.1	0.206	0.27	0.06	0.061	0.007	0.157	0.064	5.22	1.52	0.21	6.95	17925	0.2142	1.04652	-0.83232	NAF
NS0125	20	22	NS	X075495	075495	1	G	D	30.58	46.71	2.27	0.1548	0.12	0.105	0.37	0.06	0.099	0.006	0.105	0.057	4.91	1.04	0.16	6.11	17926	0.1836	1.04652	-0.86292	NAF
NS0125	32	34	NS	BX082502	X082502	2			67.25	5.703	0.335	0.101	0.07272	0.101	0.341	0.073	0.015	0.012	0.095	0.117	-0.01	-0.01	-0.01	-0.03	2181	0.3672	1.273266	-0.906066	NAF
NS0125	130	132	NS	BX082552	X082552	2			69.14	4.525	0.185	0.026	0.01872	0.026	0.247	0.058	0.012	0.003	0.084	0.066	-0.01	-0.01	-0.01	-0.03	2206	0.0918	1.011636	-0.919836	NAF
NS0125	28	30	NS	X075499	075499	1	G	D	34.36	41.08	1.89	0.645	0.5	0.091	0.46	0.06	0.08	0.004	0.418	0.053	4.62	0.89	0.17	5.68	17930	0.1224	1.04652	-0.92412	NAF
NS0125	220	224	NS	BX082597-BX082598	X082597	2			68.15	5.245	0.143	0.017	0.01224	0.017	0.333	0.063	0.012	0.005	0.042	0.103	-0.01	-0.01	-0.01	-0.03	2229	0.153	1.098846	-0.945846	NAF
NS0125	34	38	NS	BX082503-BX082504	X082503	2			67.09	4.503	0.196	0.024	0.01728	0.024	0.341	0.064	0.011	0.005	0.054	0.068	-0.01	0.31	-0.01	0.29	2182	0.153	1.116288	-0.963288	NAF
NS0125	46	50	NS	BX082509-BX082510	X082509	2			67.57	5.049	0.162	0.014	0.01008	0.014	0.272	0.064	0.016	0.004	0.017	0.08	-0.01	-0.01	-0.01	-0.03	2185	0.1224	1.116288	-0.993888	NAF
NS0125	164	168	NS	BX082569-BX082570	X082569	2			66.75	7.955	0.178	0.024	0.01728	0.024	0.319	0.066	0.013	0.004	0.051	0.078	-0.01	-0.01	-0.01	-0.03	2215	0.1224	1.151172	-1.028772	NAF
NS0125	122	126	NS	BX082547-BX082548	X082547	2			68.11	6.09	0.194	0.014	0.01008	0.014	0.262	0.068	0.012	0.005	0.085	0.094	-0.01	-0.01	-0.01	-0.03	2204	0.153	1.186056	-1.033056	NAF
NS0125	224	228	NS	BX082599-BX082600	X082599	2			68.47	5.719	0.112	0.014	0.01008	0.014	0.29	0.067	0.014	0.004	0.021	0.072	-0.01	-0.01	-0.01	-0.03	2230	0.1224	1.168614	-1.046214	NAF
NS0125	192	196	NS	BX082583-BX082584	X082583	2			64.6	8.821	0.245	0.019	0.01368	0.019	0.376	0.068	0.008	0.004	0.037	0.068	-0.01	-0.01	-0.01	-0.03	2222	0.1224	1.186056	-1.063656	NAF
NS0125	126	130	NS	BX082549-BX082550	X082549	2			69.18	4.678	0.119	0.009	0.00648	0.009	0.227	0.066	0.013	0.002	0.061	0.057	-0.01	-0.01	-0.01	-0.03	2205	0.0612	1.151172	-1.089972	NAF
NS0125	26	28	NS	X075498	075498	1	G	D	32.93	41.7	2.74	0.7482	0.58	0.126	0.58	0.07	0.064	0.004	0.246	0.06	4.63	1.18	0.26	6.07	17929	0.1224	1.22094	-1.09854	NAF
NS0125	114	118	NS	BX082543-BX082544	X082543	2			66.78	7.244	0.224	0.014	0.01008	0.014	0.33	0.072	0.016	0.004	0.109	0.084	-0.01	-0.01	-0.01	-0.03	2202	0.1224	1.255824	-1.133424	NAF
NS0125	16	18	NS	X075493	075493	1	G	D	30.38	44.53	4.21	0.1806	0.14	0.204	0.38	0.08	0.042	0.007	0.218	0.084	4.44	1.54	0.19	6.17	17924	0.2142	1.39536	-1.18116	NAF
NS0125	66	70	NS	BX082519-BX082520	X082519	2			66.6	4.218	0.14	0.013	0.00936	0.013	0.293	0.081	0.017	0.007	0.028	0.104	-0.01	-0.01	-0.01	-0.03	2190	0.2142	1.412802	-1.198602	NAF
NS0125	168	172	NS	BX082571-BX082572	X082571	2			67.19	6.811	0.171	0.019	0.01368	0.019	0.382	0.078	0.014	0.005	0.043	0.069	-0.01	-0.01	-0.01	-0.03	2216	0.153	1.360476	-1.207476	NAF
NS0125	136	140	NS	BX082555-BX082556	X082555	2			66.81	6.1	0.23	0.028	0.02016	0.028	0.472	0.084	0.018	0.008	0.11	0.058	-0.01	-0.01	-0.01	-0.03	2208	0.2448	1.465128	-1.220328	NAF
NS0125	54	58	NS	BX082513-BX082514	X082513	2			64.85	8.776	0.363	0.03	0.0216	0.03	0.416	0.091	0.02	0.011	0.121	0.087	-0.01	-0.01	-0.01	-0.03	2187	0.3366	1.587222	-1.250622	NAF
NS0125	152	156	NS	BX082563-BX082564	X082563	2			67.16	7.263	0.134	0.015	0.0108	0.015	0.31	0.079	0.014	0.004	0.042	0.074	-0.01	-0.01	-0.01	-0.03	2212	0.1224	1.377918	-1.255518	NAF
NS0125	38	42	NS	BX082505-BX082506	X082505	2			67.46	4.9	0.205	0.017	0.01224	0.017	0.398	0.083	0.014	0.006	0.028	0.084	-0.01	0.05	-0.01	0.03	2183	0.1836	1.447686	-1.264086	NAF
NS0125	184	188	NS	BX082579-BX082580	X082579	2			66.84	7.008	0.169	0.013	0.00936	0.013	0.314	0.083	0.013	0.006	0.067	0.071	-0.01	-0.01	-0.01	-0.03	2220	0.1836	1.447686	-1.264086	NAF
NS0125	200	204	NS	BX082587-BX082588	X082587	2			66.46	6.765	0.139	0.015	0.0108	0.015	0.301	0.076	0.01	0.002	0.031	0.064	-0.01	-0.01	-0.01	-0.03	2224	0.0612	1.325592	-1.264392	NAF
NS0125	156	160	NS	BX082565-BX082566	X082565	2			67.46	7.027	0.142	0.016	0.01152	0.016	0.314	0.08	0.016	0.003	0.045	0.066	-0.01	-0.01	-0.01	-0.03	2213	0.0918	1.39536	-1.30356	NAF
NS0125	58	62	NS	BX082515-BX082516	X082515	2			66.21	6.218	0.213	0.02	0.0144	0.02	0.374	0.101	0.021	0.014	0.045	0.062	-0.01	-0.01	-0.01	-0.03	2188	0.4284	1.761642	-1.333242	NAF
NS0125	148	152	NS	BX082561-BX082562	X082561	2			66.44	7.655	0.158	0.015	0.0108	0.015	0.303	0.084	0.014	0.004	0.082	0.075	-0.01	-0.01	-0.01	-0.03	2211	0.1224	1.465128	-1.342728	NAF
NS0125	78	82	NS	BX082525-BX082526	X082525	2			68.95	3.579	0.063	0.008	0.00576	0.008	0.311	0.081	0.013	0.002	0.021	0.079	-0.01	-0.01	-0.01	-0.03	2193	0.0612	1.412802	-1.351602	NAF
NS0125	172	176	NS	BX082573-BX082574	X082573	2			67.98	5.781	0.152	0.023	0.01656	0.023	0.275	0.085	0.021	0.004	0.068	0.078	-0.01	-0.01	-0.01	-0.03	2217	0.1224	1.48257	-1.36017	NAF
NS0125	160	164	NS	BX082567-BX082568	X082567	2			65	8.415	0.183	0.022	0.01584	0.022	0.363	0.089	0.016	0.006	0.034	0.092	-0.01	-0.01	-0.01	-0.03	2214	0.1836	1.552338	-1.368738	NAF
NS0125	208	212	NS	BX082591-BX082592	X082591	2			66.06	7.189	0.295	0.024	0.01728	0.024	0.431	0.114	0.025	0.02	0.092	0.076	-0.01	-0.01	-0.01	-0.03	2226	0.612	1.988388	-1.376388	NAF
NS0125	86	88	NS	BX082529	X082529	2			67.86	3.87	0.2	0.05	0.036	0.05	0.28	0.083	0.013	0.002	0.03	0.099	-0.01	-0.01	-0.01	-0.03	2195	0.0612	1.447686	-1.386486	NAF
NS0125	188	192	NS	BX082581-BX082582	X082581	2			66.38	7.168	0.136	0.013	0.00936	0.013	0.294	0.084	0.013	0.002	0.035	0.064	-0.01	-0.01	-0.01	-0.03	2221	0.0612	1.465128	-1.403928	NAF
NS0125	50	54	NS	BX082511-BX082512	X082511	2			67.02	6.481	0.348	0.018	0.01296	0.018	0.345	0.093	0.021	0.006	0.111	0.076	-0.01	-0.01	-0.01	-0.03	2186	0.1836	1.622106	-1.438506	NAF
NS0125	70	74	NS	BX082521-BX082522	X082521	2			69.16	3.469	0.124	0.009	0.00648	0.009	0.294	0.086	0.013	0.002	0.028	0.085	-0.01	0.05	-0.01	0.03	2191	0.0612	1.500012	-1.438812	NAF
NS0125	196	200	NS	BX082585-BX082586	X082585	2			65.01	8.461	0.23	0.025	0.018	0.025	0.384	0.099	0.018	0.005	0.046	0.077	-0.01	-0.01	-0.01	-0.03	2223	0.153	1.726758	-1.573758	NAF
NS0125	62	66	NS	BX082517-BX082518	X082517	2			66.59	5.882	0.229	0.031	0.02232	0.031	0.38	0.108	0.018	0.01	0.043	0.119	-0.01	-0.01	-0.01	-0.03	2189	0.306	1.883736	-1.577736	NAF
NS0125	106	110	NS	BX082539-BX082540	X082539	2			67.21	7.033	0.212	0.015	0.0108	0.015	0.306	0.098	0.019	0.003	0.094	0.062	-0.01	-0.01	-0.01	-0.03	2200	0.0918	1.709316	-1.617516	NAF
NS0125	102	106	NS	BX082537-BX082538	X082537	2			66.48	6.882	0.201	0.015	0.0108	0.015	0.319	0.102	0.024	0.004	0.13	0.075	-0.01	-0.01	-0.01	-0.03	2199	0.1224	1.779084	-1.656684	NAF
NS0125	82	86	NS	BX082527-BX082528	X082527	2			68.38	3.925	0.117	0.016	0.01152	0.016	0.321	0.097	0.012	0.001	0.046	0.074	-0.01	-0.01	-0.01	-0.03	2194	0.0306	1.691874	-1.661274	NAF
NS0125	204	206	NS	BX082589	X082589	2			67.42	6.179	0.242	0.017	0.01224	0.017	0.334	0.107	0.012	0.006	0.103	0.065	-0.01	-0.01	-0.01	-0.03	2225	0.1836	1.866294	-1.682694	NAF
NS0125	74	78	NS	BX082523-BX082524	X082523	2			68.89	4.3	0.225	0.011	0.00792	0.011	0.341	0.105	0.017	0.004	0.026	0.073	-0.01	-0.01	-0.01	-0.03	2192	0.1224	1.83141	-1.70901	NAF
NS0125	242	244	NS	BX082609	X082609	2			67.15	6.716	0.12	0.014	0.01008	0.014	0.316	0.103	0.019	0.002	0.033	0.068	-0.01	-0.01	-0.01	-0.03	2235	0.0612	1.796526	-1.735326	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0125	180	184	NS	BX082577-BX082578	X082577	2			66.49	7.428	0.201	0.029	0.02088	0.029	0.331	0.106	0.018	0.003	0.041	0.059	-0.01	-0.01	-0.01	-0.03	2219	0.0918	1.848852	-1.757052	NAF
NS0125	212	216	NS	BX082593-BX082594	X082593	2			66.94	7.406	0.188	0.017	0.01224	0.017	0.359	0.112	0.022	0.004	0.045	0.068	-0.01	-0.01	-0.01	-0.03	2227	0.1224	1.953504	-1.831104	NAF
NS0125	144	146	NS	X075559	075559	1	G	W	35.31	35.39	1.93	0.645	0.5	0.09	3.02	0.41	0.07	0.173	0.47	0.058	0.17	6.57	-0.08	6.66	17988	5.2938	7.15122	-1.85742	NAF
NS0125	176	180	NS	BX082575-BX082576	X082575	2			64.61	9.057	0.201	0.026	0.01872	0.026	0.423	0.123	0.021	0.009	0.045	0.098	-0.01	-0.01	-0.01	-0.03	2218	0.2754	2.145366	-1.869966	NAF
NS0125	98	102	NS	BX082535-BX082536	X082535	2			66.22	4.576	0.206	0.005	0.0036	0.005	0.489	0.143	0.026	0.016	0.105	0.185	-0.01	-0.01	-0.01	-0.03	2198	0.4896	2.494206	-2.004606	NAF
NS0125	110	114	NS	BX082541-BX082542	X082541	2			67.17	6.279	0.161	0.013	0.00936	0.013	0.242	0.132	0.034	0.003	0.089	0.062	-0.01	-0.01	-0.01	-0.03	2201	0.0918	2.302344	-2.210544	NAF
NS0125	216	220	NS	BX082595-BX082596	X082595	2			66.34	8.38	0.175	0.018	0.01296	0.018	0.384	0.135	0.018	0.004	0.021	0.069	-0.01	-0.01	-0.01	-0.03	2228	0.1224	2.35467	-2.23227	NAF
NS0125	120	122	NS	X075546	075546	1	G	W	31.72	38.34	3.1	0.6321	0.49	0.141	3.1	0.61	0.147	0.264	1.04	0.251	0.15	6.36	0.4	6.91	17976	8.0784	10.63962	-2.56122	NAF
NS0125	238	242	NS	BX082607-BX082608	X082607	2			65.32	8.686	0.172	0.017	0.01224	0.017	0.392	0.155	0.043	0.004	0.026	0.069	-0.01	-0.01	-0.01	-0.03	2234	0.1224	2.70351	-2.58111	NAF
NS0125	228	230	NS	X075602	075602	1	G	W	35.5	34.25	3.17	0.4644	0.36	0.145	3.97	0.62	0.149	0.258	0.403	0.117	0.26	5.02	0.23	5.51	18030	7.8948	10.81404	-2.91924	NAF
NS0125	36	38	NS	X075504	075504	1	G	W	30.37	36.14	1.87	0.5547	0.43	0.089	2.61	0.49	0.1	0.18	0.571	0.092	0.62	12.69	0.15	13.46	17934	5.508	8.54658	-3.03858	NAF
NS0125	30	32	NS	X075500	075500	1	G	D	30.79	36.7	2.55	0.5805	0.45	0.127	2.48	0.38	0.072	0.082	0.652	0.15	2.35	9.83	0.27	12.45	17931	2.5092	6.62796	-4.11876	NAF
NS0125	230	232	NS	X075603	075603	1	G	W	32.37	40.69	2.08	0.7224	0.56	0.097	3.26	0.46	0.067	0.126	0.199	0.08	0.21	5.68	0.01	5.9	18031	3.8556	8.02332	-4.16772	NAF
NS0125	222	224	NS	X075598	075598	1	P	W	35.62	34.67	1.37	0.8256	0.64	0.059	2.94	0.41	0.066	0.094	0.337	0.07	0.3	8.26	-0.22	8.34	18027	2.8764	7.15122	-4.27482	NAF
NS0125	98	100	NS	X075535	075535	1	G	W	20.57	51.85	1.99	0.5289	0.41	0.087	2.05	0.54	0.075	0.166	0.199	0.064	0.48	12.32	0.44	13.24	17965	5.0796	9.41868	-4.33908	NAF
NS0125	42	44	NS	X075507	075507	1	G	W	26.89	39.26	4.74	0.5676	0.44	0.216	3.53	0.76	0.069	0.287	0.222	0.084	1.36	9.39	0.54	11.29	17937	8.7822	13.25592	-4.47372	NAF
NS0125	90	92	NS	X075531	075531	1	G	W	28.19	34.93	1.08	0.6321	0.49	0.045	2.64	0.52	0.063	0.143	0.241	0.047	0.72	18.46	0.34	19.52	17961	4.3758	9.06984	-4.69404	NAF
NS0125	46	48	NS	X075509	075509	1	G	W	32.99	43.2	1.3	0.4257	0.33	0.056	0.76	0.31	0.145	0.013	0.143	0.051	3.44	2.54	0.13	6.11	17939	0.3978	5.40702	-5.00922	NAF
NS0125	96	98	NS	X075534	075534	1	G	W	18.1	57.66	1.21	0.4902	0.38	0.054	1.7	0.65	0.125	0.201	0.063	0.059	0.4	11.04	0.56	12	17964	6.1506	11.3373	-5.1867	NAF
NS0125	68	70	NS	X075520	075520	1	G	W	35.59	29.2	1.65	0.6063	0.47	0.074	1.96	0.4	0.088	0.052	0.338	0.04	2.11	12.43	0.07	14.61	17950	1.5912	6.9768	-5.3856	NAF
NS0125	132	134	NS	X075553	075553	1	G	W	35.39	34.39	1	0.6837	0.53	0.044	2.16	0.37	0.08	0.026	0.84	0.045	0.42	9.64	-0.39	9.67	17982	0.7956	6.45354	-5.65794	NAF
NS0125	136	138	NS	X075555	075555	1	G	W	32.74	32.24	1.44	0.7095	0.55	0.126	2.95	0.5	0.114	0.1	0.57	0.053	0.75	13.5	-0.18	14.07	17984	3.06	8.721	-5.661	NAF
NS0125	116	118	NS	X075544	075544	1	G	W	36.32	33.66	1.32	0.7482	0.58	0.057	2.52	0.4	0.073	0.041	0.543	0.226	0.16	8.66	-0.35	8.47	17974	1.2546	6.9768	-5.7222	NAF
NS0125	134	136	NS	X075554	075554	1	G	W	35.83	32.35	0.99	0.6192	0.48	0.045	2.3	0.38	0.077	0.023	0.836	0.042	0.5	10.98	-0.43	11.05	17983	0.7038	6.62796	-5.92416	NAF
NS0125	56	58	NS	X075514	075514	1	G	W	31.74	37.58	2.48	0.5676	0.44	0.13	2.51	0.71	0.172	0.202	0.377	0.046	0.68	8.55	0.14	9.37	17944	6.1812	12.38382	-6.20262	NAF
NS0125	34	36	NS	X075503	075503	1	G	W	31.66	40.31	3.7	0.9288	0.72	0.174	0.8	0.41	0.138	0.026	0.642	0.1	5.06	1.72	0.31	7.09	17933	0.7956	7.15122	-6.35562	NAF
NS0125	92	94	NS	X075532	075532	1	G	W	19.61	54.97	0.96	0.4128	0.32	0.042	1.76	0.41	0.064	0.025	0.05	0.059	0.57	12.64	0.08	13.29	17962	0.765	7.15122	-6.38622	NAF
NS0125	130	132	NS	X075552	075552	1	G	W	37.36	31.79	1.19	0.7611	0.59	0.133	2.24	0.44	0.086	0.024	0.52	0.041	0.57	8.91	-0.4	9.08	17981	0.7344	7.67448	-6.94008	NAF
NS0125	138	140	NS	X075556	075556	1	G	W	33.82	33.59	1.19	0.8385	0.65	0.056	3.34	0.47	0.083	0.033	0.407	0.059	0.39	11.37	-0.27	11.49	17985	1.0098	8.19774	-7.18794	NAF
NS0125	66	68	NS	X075519	075519	1	G	W	17.2	61.58	0.77	0.4515	0.35	0.04	1.45	0.5	0.085	0.045	0.1	0.067	0.62	9.73	0.16	10.51	17949	1.377	8.721	-7.344	NAF
NS0125	122	124	NS	X075547	075547	1	G	W	34.18	39.72	1.14	0.645	0.5	0.053	2.09	0.49	0.072	0.026	0.373	0.187	0.05	5.94	-0.13	5.86	17977	0.7956	8.54658	-7.75098	NAF
NS0125	128	130	NS	X075550	075550	1	G	W	34.65	34.63	0.87	0.8256	0.64	0.042	2.61	0.5	0.097	0.024	0.534	0.053	0.25	10.3	-0.35	10.2	17980	0.7344	8.721	-7.9866	NAF
NS0125	146	148	NS	X075560	075560	1	G	W	37.25	34.95	1.04	0.8256	0.64	0.046	2.41	0.52	0.104	0.028	0.319	0.046	0.16	6.38	-0.48	6.06	17989	0.8568	9.06984	-8.21304	NAF
NS0125	32	34	NS	X075502	075502	1	G	D	29.39	36.51	2.34	0.5031	0.39	0.209	2.61	0.53	0.087	0.032	0.572	0.114	1.53	12.64	0.01	14.18	17932	0.9792	9.24426	-8.26506	NAF
NS0125	220	222	NS	X075597	075597	1	G	W	31.77	36.95	1.1	0.8514	0.66	0.044	3.02	0.7	0.085	0.128	0.409	0.097	0.44	10.14	0.08	10.66	18026	3.9168	12.2094	-8.2926	NAF
NS0125	118	120	NS	X075545	075545	1	G	W	36.02	36.54	1.32	0.7611	0.59	0.059	2.13	0.56	0.079	0.046	0.631	0.161	0.06	6.1	-0.2	5.96	17975	1.4076	9.76752	-8.35992	NAF
NS0125	192	194	NS	X075583	075583	1	M	W	38.68	36.5	1.55	0.5289	0.41	0.067	2.13	0.54	0.046	0.027	0.165	0.041	0.03	3.04	-0.32	2.75	18012	0.8262	9.41868	-8.59248	NAF
NS0125	100	102	NS	X075536	075536	1	G	W	33.55	23.14	1.66	0.7224	0.56	0.072	3.6	0.9	0.061	0.231	0.93	0.044	0.62	20.06	0.49	21.17	17966	7.0686	15.6978	-8.6292	NAF
NS0125	210	212	NS	X075592	075592	1	M	W	32.66	38.9	2.48	0.6708	0.52	0.118	3.3	0.87	0.145	0.208	0.504	0.102	0.24	5.19	0.25	5.68	18021	6.3648	15.17454	-8.80974	NAF
NS0125	104	106	NS	X075538	075538	1	G	W	35.33	35.62	0.9	0.8127	0.63	0.039	1.94	0.56	0.095	0.022	0.692	0.044	0.25	8.56	-0.34	8.47	17968	0.6732	9.76752	-9.09432	NAF
NS0125	54	56	NS	X075513	075513	1	G	W	32.91	39.21	1.33	0.6579	0.51	0.062	2.11	0.58	0.085	0.03	0.505	0.112	0.35	7.87	-0.22	8	17943	0.918	10.11636	-9.19836	NAF
NS0125	194	196	NS	X075584	075584	1	M	W	38.37	36.37	1.64	0.5676	0.44	0.071	2.25	0.58	0.032	0.029	0.179	0.039	0.03	3.27	-0.22	3.08	18013	0.8874	10.11636	-9.22896	NAF
NS0125	224	226	NS	X075599	075599	1	G	W	34.51	39.14	0.9	0.8643	0.67	0.037	2.26	0.57	0.092	0.021	0.154	0.06	0.14	6.26	-0.34	6.06	18028	0.6426	9.94194	-9.29934	NAF
NS0125	106	108	NS	X075539	075539	1	G	W	37.79	33.82	1.28	0.6708	0.52	0.056	2.12	0.59	0.114	0.028	0.382	0.039	0.12	6.69	-0.46	6.35	17969	0.8568	10.29078	-9.43398	NAF
NS0125	94	96	NS	X075533	075533	1	G	W	25.43	41.17	1.28	0.5547	0.43	0.058	2.32	0.61	0.111	0.035	0.041	0.054	0.59	16.69	0.11	17.39	17963	1.071	10.63962	-9.56862	NAF
NS0125	196	198	NS	X075585	075585	1	M	W	38.19	35.55	1.67	0.645	0.5	0.115	2.3	0.6	0.076	0.028	0.221	0.044	0.14	3.95	-0.26	3.83	18014	0.8568	10.4652	-9.6084	NAF
NS0125	78	80	NS	X075525	075525	1	G	W	31.21	34.63	0.79	0.774	0.6	0.037	2.17	0.58	0.104	0.01	0.188	0.043	1.4	14.29	0	15.69	17955	0.306	10.11636	-9.81036	NAF
NS0125	142	144	NS	X075558	075558	1	G	W	36.65	29.4	1.63	0.9417	0.73	0.079	3.29	0.68	0.177	0.061	0.75	0.074	0.33	10.15	-0.36	10.12	17987	1.8666	11.86056	-9.99396	NAF
NS0125	172	174	NS	X075573	075573	1	G	W	38.21	34.72	1.37	0.6708	0.52	0.146	2.11	0.62	0.074	0.024	0.344	0.057	0.23	4.68	-0.2	4.71	18002	0.7344	10.81404	-10.07964	NAF
NS0125	114	116	NS	X075543	075543	1	G	W	34.08	37.64	0.96	0.774	0.6	0.042	2.41	0.63	0.103	0.028	0.582	0.069	0.09	7.65	-0.21	7.53	17973	0.8568	10.98846	-10.13166	NAF
NS0125	238	240	NS	X075607	075607	1	G	W	39.28	34.45	1.17	0.5934	0.46	0.054	2.3	0.65	0.171	0.038	0.1	0.059	0.09	4.31	-0.53	3.87	18035	1.1628	11.3373	-10.1745	NAF
NS0125	166	168	NS	X075570	075570	1	G	W	37.31	36.34	1.26	0.7224	0.56	0.117	2.16	0.63	0.052	0.024	0.273	0.051	0.14	4.83	-0.15	4.82	17999	0.7344	10.98846	-10.25406	NAF
NS0125	58	60	NS	X075515	075515	1	G	W	31.88	37.64	1.33	0.5805	0.45	0.059	2.43	0.74	0.115	0.081	0.194	0.042	0.57	10.88	-0.17	11.28	17945	2.4786	12.90708	-10.42848	NAF
NS0125	40	42	NS	X075506	075506	1	G	W	32.5	36.08	1.87	0.5676	0.44	0.083	2.67	0.68	0.077	0.046	0.177	0.064	1.03	10.18	-0.04	11.17	17936	1.4076	11.86056	-10.45296	NAF
NS0125	168	170	NS	X075571	075571	1	G	W	34.22	35.47	1.25	0.8772	0.68	0.058	3.18	0.67	0.073	0.032	0.29	0.073	0.2	8.53	-0.12	8.61	18000	0.9792	11.68614	-10.70694	NAF
NS0125	62	64	NS	X075517	075517	1	G	W	28.79	34.68	1.93	0.5934	0.46	0.091	2.57	0.89	0.119	0.155	0.204	0.042	0.95	16.26	0.24	17.45	17947	4.743	15.52338	-10.78038	NAF
NS0125	200	202	NS	X075587	075587	1	M	W	37.32	37.24	1.42	0.645	0.5	0.061	2.23	0.67	0.065	0.025	0.207	0.043	0.08	3.66	-0.19	3.55	18016	0.765	11.68614	-10.92114	NAF
NS0125	102	104	NS	X075537	075537	1	G	W	37.82	29.33	1.2	0.7998	0.62	0.052	2.29	0.7	0.134	0.034	0.628	0.042	0.29	10.72	-0.38	10.63	17967	1.0404	12.2094	-11.169	NAF
NS0125	240	242	NS	X075608	075608	1	G	W	35.62	38.67	1.04	0.7353	0.57	0.043	2.27	0.68	0.074	0.02	0.145	0.052	0.08	4.96	-0.22	4.82	18036	0.612	11.86056	-11.24856	NAF
NS0125	52	54	NS	X075512	075512	1	G	W	34.5	37.17	1.4	0.6837	0.53	0.066	2.06	0.7	0.098	0.03	0.653	0.088	0.33	7.49	-0.2	7.62	17942	0.918	12.2094	-11.2914	NAF
NS0125	236	238	NS	X075606	075606	1	G	W	35.05	37.61	1.68	0.645	0.5	0.076	2.83	0.79	0.121	0.078	0.378	0.078	0.2	4.94	-0.1	5.04	18034	2.3868	13.77918	-11.39238	NAF
NS0125	148	150	NS	X075561	075561	1	G	W	36.85	36.56	1.1	0.7095	0.55	0.05	2.19	0.71	0.081	0.029	0.375	0.047	0.09	5.07	-0.14	5.02	17990	0.8874	12.38382	-11.49642	NAF
NS0125	86	88	NS	X075529	075529	1	G	W	28.09	34.77	1.12	0.645	0.5	0.075	2.45	0.7	0.071	0.012	0.271	0.048	2.1	17.51	0.11	19.72	17959	0.3672	12.2094	-11.8422	NAF
NS0125	124	126	NS	X075548	075548	1	G	W	36.79	35.64	1.34	0.6966	0.54	0.073	2.14	0.75	0.083	0.029	0.45	0.076	0.13	5.58	-0.06	5.65	17978	0.8874	13.0815	-12.1941	NAF
NS0125	160	162	NS	X075567	075567	1	G	W	38.13	34.76	1.29	0.7095	0.55	0.096	2.32	0.76	0.075	0.028	0.184	0.047	0.16	4.6	-0.07	4.69	17996	0.8568	13.25592	-12.39912	NAF
NS0125	212	214	NS	X075593	075593	1	M	W	37.61	36.06	1.29	0.6837	0.53	0.056	2.23	0.76	0.133	0.028	0.23	0.056	0.12	4.24	-0.27	4.09	18022	0.8568	13.25592	-12.39912	NAF
NS0125	110	112	NS	X075541	075541	1	G	W	36.38	36.65	1.09	0.6708	0.52	0.048	2.18	0.77	0.108	0.033	0.383	0.043	0.06	5.7	-0.16	5.6	17971	1.0098	13.43034	-12.42054	NAF
NS0125	232	234	NS	X075604	075604	1	G	W	33.86	38.86	1.83	0.6321	0.49	0.081	3.04	0.9	0.123	0.102	0.238	0.084	0.18	5.11	0.01	5.3	18032	3.1212	15.6978	-12.5766	NAF
NS0125	226	228	NS	X075600	075600	1	G	W	30.81	41.47	1.09	0.8901	0.69	0.047	2.97	0.83	0.099	0.059	0.207	0.085	0.25	7.77	0.05	8.07	18029	1.8054	14.47686	-12.67146	NAF
NS0125	64	66	NS	X075518	075518	1	G	W	29.62	30.61	2.95	0.5418	0.42	0.135	3.1	0.83	0.124	0.057	0.164	0.055	1	17.88	0.12	19	17948	1.7442	14.47686	-12.73266	NAF
NS0125	108	110	NS	X075540	075540	1	G	W	36.04	36.27	1.06	0.7611	0.59	0.045	2.12	0.79	0.103	0.027	0.577	0.038	0.06	6.51	-0.16	6.41	17970	0.8262	13.77918	-12.95298	NAF
NS0125	170	172	NS	X075572	075572	1	G	W	35.64	35.49	1.35	0.7869	0.61	0.06	3.01	0.85	0.077	0.035	0.234	0.063	0.13	6.74	0.07	6.94	18001	1.071	14.8257	-13.7547	NAF
NS0125	88	90	NS	X075530	075530	1	G	W	30.59	31.27	0.76	0.6837	0.53	0.031	2.58	0.82	0.081	0.012	0.391	0.038	0.97	18.39	0.14	19.5	17960	0.3672	14.30244	-13.93524	NAF
NS0125	48	50	NS	X075510	075510	1	G	W	30.83	38.27	1.22	0.6192	0.48	0.056	2.39	0.86	0.09	0.034	0.139	0.057	0.82	11.08	0.09	11.99	17940	1.0404	15.00012	-13.95972	NAF
NS0125	190	192	NS	X075582	075582	1	M	W	37.44	36.68	1.34	0.6579	0.51	0.059	2.21	0.86	0.095	0.028	0.209	0.044	0.04	3.84	-0.12	3.76	18011	0.8568	15.00012	-14.14332	NAF
NS0125	74	76	NS	X075523	075523	1	G	W	28.45	35.41	0.78	0.8256	0.64	0.035	2.52	0.83	0.107	0.006	0.15	0.045	0.84	17.64	0.17	18.65	17953	0.1836	14.47686	-14.29326	NAF
NS0125	76	78	NS	X075524	075524	1	G	W	30.4	33.82	1.14	0.7353	0.57	0.072	2.49	0.85	0.104	0.017	0.226	0.046	0.78	16.21	0.1	17.09	17954	0.5202	14.8257	-14.3055	NAF
NS0125	186	188	NS	X075580	075580	1	M	W	38.23	35.06	0.98	0.8256	0.64	0.048	2.23	0.87	0.054	0.028	0.153	0.049	0.07	4.67	-0.01	4.73	18009	0.8568	15.17454	-14.31774	NAF
NS0125	174	176	NS	X075574	075574	1	G	W	38.06	34.28	1.07	0.8127	0.63	0.046	2.37	0.89	0.196	0.023	0.348	0.066	0.11	5.65	-0.36	5.4	18003	0.7038	15.52338	-14.81958	NAF
NS0125	176	178	NS	X075575	075575	1	G	W	31.62	36.38	1.21	1.1094	0.86	0.053	3.32	0.98	0.131	0.071	0.348	0.087	0.35	10.56	0.15	11.06	18004	2.1726	17.09316	-14.92056	NAF
NS0125	184	186	NS	X075579	075579	1	M	W	35.69	37.32	1.29	0.8256	0.64	0.057	2.3	0.99	0.117	0.068	0.447	0.065	0.09	4.79	-0.01	4.87	18008	2.0808	17.26758	-15.18678	NAF
NS0125	156	158	NS	X075565	075565	1	G	W	35.08	37.84	1.05	0.8385	0.65	0.046	2.52	0.93	0.104	0.027	0.229	0.057	0.1	5.7	0.07	5.87	17994	0.8262	16.22106	-15.39486	NAF
NS0125	126	128	NS	X075549	075549	1	G	W	32.9	41.11	0.97	0.774	0.6	0.045	2.06	0.94	0.091	0.03	0.4	0.047	0.07	5.98	0.12	6.17	17979	0.918	16.39548	-15.47748	NAF
NS0125	112	114	NS	X075542	075542	1	G	W	33.54	39.39	1.08	0.8256	0.64	0.048	2.06	0.96	0.113	0.028	0.671	0.051	0.07	6.15	0.07	6.29	17972	0.8568	16.74432	-15.88752	NAF
NS0125	214	216	NS	X075594	075594	1	G	W	37.06	36.35	1.11	0.774	0.6	0.05	2.25	0.98	0.105	0.034	0.118	0.048	0.05	4.67	0	4.72	18023	1.0404	17.09316	-16.05276	NAF
NS0125	162	164	NS	X075568	075568	1	G	W	33.38	41.75	1.04	0.7482	0.58	0.054	2.35	0.99	0.082	0.031	0.086	0.052	0.1	4.84	0.16	5.1	17997	0.9486	17.26758	-16.31898	NAF
NS0125	164	166	NS	X075569	075569	1	G	W	35.37	37.99	1.12	0.774	0.6	0.05	2.43	0.99	0.081	0.027	0.128	0.055	0.08	5.02	0.18	5.28	17998	0.8262	17.26758	-16.44138	NAF
NS0125	188	190	NS	X075581	075581	1	M	W	36.5	37.94	1.03	0.774	0.6	0.046	2.2	0.98	0.068	0.019	0.172	0.053	0.07	4.23	0.16	4.46	18010	0.5814	17.09316	-16.51176	NAF
NS0125	70	72	NS	X075521	075521	1	G	W	33.82	29.72	1.33	0.645	0.5	0.061	2.34	0.97	0.111	0.012	0.345	0.045	0.56	15.49	0.07	16.12	17951	0.3672	16.91874	-16.55154	NAF
NS0125	72	74	NS	X075522	075522	1	G	W	30.48	32.4	0.99	0.6579	0.51	0.046	2.6	0.97	0.083	0.007	0.276	0.043	0.53	17.74	0.21	18.48	17952	0.2142	16.91874	-16.70454	NAF
NS0125	208	210	NS	X075591	075591	1	M	W	38.8	34.09	1.12	0.8385	0.65	0.053	2.2	1.02	0.186	0.031	0.311	0.063	0.1	4.59	-0.21	4.48	18020	0.9486	17.79084	-16.84224	NAF
NS0125	84	86	NS	X075528	075528	1	G	W	28.67	35.75	0.82	0.6966	0.54	0.035	2.41	1	0.071	0.008	0.405	0.044	0.49	17.04	0.33	17.86	17958	0.2448	17.442	-17.1972	NAF
NS0125	60	62	NS	X075516	075516	1	G	W	30.16	33.88	1.11	0.5676	0.44	0.06	2.62	1.07	0.117	0.04	0.276	0.048	0.94	15.97	0.17	17.08	17946	1.224	18.66294	-17.43894	NAF
NS0125	202	204	NS	X075588	075588	1	M	W	37.57	35.63	1.11	0.774	0.6	0.069	2.22	1.08	0.063	0.045	0.185	0.05	0.09	4.34	0.26	4.69	18017	1.377	18.83736	-17.46036	NAF
NS0125	80	82	NS	X075526	075526	1	G	W	30.38	28.34	0.74	0.8256	0.64	0.031	3.16	1.01	0.097	0.005	0.241	0.042	0.67	21.13	0.28	22.08	17956	0.153	17.61642	-17.46342	NAF
NS0125	38	40	NS	X075505	075505	1	G	W	31.35	33.13	1.33	0.7095	0.55	0.058	3.11	1.06	0.178	0.028	0.333	0.065	0.57	14.48	0.02	15.07	17935	0.8568	18.48852	-17.63172	NAF
NS0125	242	244	NS	X075609	075609	1	G	W	35.01	39.36	0.9	0.774	0.6	0.04	2.23	1.06	0.122	0.023	0.217	0.076	0.1	4.5	0.07	4.67	18037	0.7038	18.48852	-17.78472	NAF
NS0125	150	152	NS	X075562	075562	1	G	W	36.01	36.69	1.04	0.7998	0.62	0.044	2.4	1.08	0.08	0.026	0.386	0.046	0.09	5.34	0.26	5.69	17991	0.7956	18.83736	-18.04176	NAF
NS0125	158	160	NS	X075566	075566	1	G	W	35.3	37.56	1.07	0.7998	0.62	0.045	2.47	1.08	0.085	0.026	0.241	0.047	0.11	5.24	0.26	5.61	17995	0.7956	18.83736	-18.04176	NAF
NS0125	82	84	NS	X075527	075527	1	G	W	27.45	36.52	1.09	0.6321	0.49	0.053	2.51	1.07	0.061	0.007	0.358	0.043	0.51	17.11	0.49	18.11	17957	0.2142	18.66294	-18.44874	NAF
NS0125	182	184	NS	X075578	075578	1	M	W	35.32	38.34	1.14	0.774	0.6	0.056	2.33	1.11	0.086	0.026	0.154	0.043	0.09	4.62	0.24	4.95	18007	0.7956	19.36062	-18.56502	NAF
NS0125	198	200	NS	X075586	075586	1	M	W	36.3	36.75	1.4	0.7482	0.58	0.064	2.45	1.13	0.112	0.027	0.274	0.051	0.1	4.47	0.18	4.75	18015	0.8262	19.70946	-18.88326	NAF
NS0125	50	52	NS	X075511	075511	1	G	W	28.16	44.09	1.13	0.5934	0.46	0.052	2.28	1.17	0.085	0.033	0.32	0.052	0.49	8.93	0.42	9.84	17941	1.0098	20.40714	-19.39734	NAF
NS0125	218	220	NS	X075596	075596	1	G	W	37.66	35.26	1.13	0.6966	0.54	0.049	2.26	1.18	0.075	0.028	0.096	0.044	0.09	4.49	0.26	4.84	18025	0.8568	20.58156	-19.72476	NAF
NS0125	180	182	NS	X075577	075577	1	M	W	35.9	36.48	1.38	0.774	0.6	0.162	2.29	1.2	0.093	0.029	0.186	0.049	0.27	4.8	0.38	5.45	18006	0.8874	20.9304	-20.043	NAF
NS0125	178	180	NS	X075576	075576	1	G	W	35.19	38.1	1.2	0.774	0.6	0.091	2.35	1.21	0.091	0.031	0.122	0.051	0.15	4.74	0.37	5.26	18005	0.9486	21.10482	-20.15622	NAF
NS0125	152	154	NS	X075563	075563	1	G	W	35.81	36.56	1.06	0.774	0.6	0.046	2.59	1.24	0.084	0.029	0.237	0.05	0.1	5.32	0.42	5.84	17992	0.8874	21.62808	-20.74068	NAF
NS0125	154	156	NS	X075564	075564	1	G	W	34.97	37.83	0.99	0.7869	0.61	0.043	2.48	1.26	0.086	0.031	0.176	0.053	0.1	5.2	0.45	5.75	17993	0.9486	21.97692	-21.02832	NAF
NS0125	206	208	NS	X075590	075590	1	M	W	37.95	34.55	1.1	0.8643	0.67	0.046	2.18	1.3	0.225	0.024	0.421	0.066	0.09	4.46	-0.05	4.5	18019	0.7344	22.6746	-21.9402	NAF
NS0125	216	218	NS	X075595	075595	1	G	W	37.36	34.86	1.15	0.8256	0.64	0.049	2.42	1.33	0.078	0.027	0.071	0.045	0.09	5.09	0.41	5.59	18024	0.8262	23.19786	-22.37166	NAF
NS0125	204	206	NS	X075589	075589	1	M	W	33.18	37.9	1.49	0.8901	0.69	0.065	2.75	2.09	0.183	0.068	0.559	0.086	0.18	5.1	1.07	6.35	18018	2.0808	36.45378	-34.37298	NAC
NS0126	120	122	NS	X075671	075671	1	G	W	23.36	48.89	5.73	0.3741	0.29	0.269	3.26	0.53	0.102	0.865	1.3	0.364	1.27	2.82	1.27	5.36	18260	26.469	9.24426	17.22474	PAF(HC)
NS0126	170	172	NS	X075696	075696	1	G	W	21.66	54.33	4.9	0.1677	0.13	0.221	3.72	0.18	0.044	0.607	1.17	0.317	1.02	1.62	1	3.64	18105	18.5742	3.13956	15.43464	PAF(HC)
NS0126	54	58	NS	BX082637-BX082638	X082637	2			67.26	4.012	0.244	0.058	0.04176	0.058	0.253	0.064	0.01	0.312	0.055	0.155	-0.01	-0.01	-0.01	-0.03	2239	9.5472	1.116288	8.430912	PAF(LC)
NS0126	108	112	NS	BX082665-BX082666	X082665	2			64.93	7.202	0.385	0.059	0.04248	0.059	0.438	0.083	0.014	0.161	0.114	0.116	-0.01	-0.01	-0.01	-0.03	2253	4.9266	1.447686	3.478914	PAF(LC)
NS0126	6	8	NS	X075613	075613	1	G	D	42.69	17.37	10.94	0.0129	0.01	1.016	0.05	0.06	0.02	0.136	0.017	0.018	5.86	2.82	0.34	9.02	18041	4.1616	1.04652	3.11508	PAF(LC)

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0126	110	112	NS	X075666	075666	1	G	W	27.64	42.7	3.69	0.3741	0.29	0.166	3.05	0.62	0.131	0.422	1.31	0.346	1.35	5.26	0.93	7.54	18255	12.9132	10.81404	2.09916	PAF(LC)
NS0126	168	170	NS	X075695	075695	1	G	W	28.02	41.83	3.65	0.4257	0.33	0.162	3.71	0.43	0.106	0.272	1.24	0.324	1.2	5.72	0.68	7.6	18104	8.3232	7.50006	0.82314	PAF(LC)
NS0126	14	16	NS	X075617	075617	1	G	D	39.61	32.95	3.08	0.0258	0.02	0.162	0.02	0.02	0.043	0.035	0.005	0.007	5.76	0.88	0.22	6.86	18045	1.071	0.34884	0.72216	PAF(LC)
NS0126	10	12	NS	X075615	075615	1	G	D	38.23	30.21	5.9	0.0129	0.01	0.251	0.02	0.03	0.02	0.04	0.006	0.0005	6.86	1.65	0.3	8.81	18043	1.224	0.52326	0.70074	PAF(LC)
NS0126	12	14	NS	X075616	075616	1	G	D	46.02	20.91	3.66	0.0258	0.02	0.133	0.04	0.03	0.023	0.038	0.009	0.011	7.81	1.1	0.29	9.2	18044	1.1628	0.52326	0.63954	PAF(LC)
NS0126	172	174	NS	X075697	075697	1	G	W	26.76	45.44	2.61	0.5031	0.39	0.123	3.11	0.74	0.123	0.437	0.858	0.248	0.91	5.77	0.91	7.59	18106	13.3722	12.90708	0.46512	PAF(LC)
NS0126	4	6	NS	X075612	075612	1	G	D	43.44	17.28	9.04	0.0129	0.01	0.695	0.05	0.04	0.023	0.032	0.013	0.004	8.08	2.46	0.36	10.9	18040	0.9792	0.69768	0.28152	PAF(LC)
NS0126	2	4	NS	X075611	075611	1	G	D	40.38	15.75	14.23	0.00645	0.005	0.964	0.02	0.04	0.022	0.031	0.014	0.01	6.49	3.84	0.41	10.74	18039	0.9486	0.69768	0.25092	PAF(LC)
NS0126	16	18	NS	X075618	075618	1	G	D	39.25	31.62	3.64	0.0258	0.02	0.188	0.06	0.04	0.039	0.029	0.007	0.014	6.41	1.25	0.24	7.9	18046	0.8874	0.69768	0.18972	PAF(LC)
NS0126	90	92	NS	X075656	075656	1	G	W																	18191	0	0	0	PAF(LC)
NS0126	116	120	NS	BX082669-BX082670	X082669	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2255	-0.0306	-0.01744	-0.013158	NAF
NS0126	20	22	NS	X075620	075620	1	G	D	36.31	39.5	2.33	0.0387	0.03	0.099	0.05	0.03	0.067	0.015	0.006	0.018	4.62	0.86	0.16	5.64	18048	0.459	0.52326	-0.06426	NAF
NS0126	50	54	NS	BX082635-BX082636	X082635	2			68.75	3.058	0.167	0.033	0.02376	0.033	0.191	0.045	0.007	0.022	0.033	0.127	-0.01	-0.01	-0.01	-0.03	2238	0.6732	0.78489	-0.11169	NAF
NS0126	112	116	NS	BX082667-BX082668	X082667	2			63.06	7.436	0.361	0.037	0.02664	0.037	0.394	0.085	0.011	0.043	0.098	0.176	-0.01	-0.01	-0.01	-0.03	2254	1.3158	1.48257	-0.16677	NAF
NS0126	18	20	NS	X075619	075619	1	G	D	37.21	37.07	2.59	0.0516	0.04	0.104	0.11	0.05	0.06	0.023	0.007	0.03	5.56	0.98	0.21	6.75	18047	0.7038	0.8721	-0.1683	NAF
NS0126	8	10	NS	X075614	075614	1	G	D	36.09	31.5	8.06	0.0129	0.01	0.648	0.04	0.05	0.017	0.021	0.009	0.011	5.43	2.14	0.28	7.85	18042	0.6426	0.8721	-0.2295	NAF
NS0126	168	172	NS	BX082695-BX082696	X082695	2			64.68	7.48	0.494	0.065	0.0468	0.065	0.539	0.06	0.009	0.02	0.132	0.11	-0.01	-0.01	-0.01	-0.03	2268	0.612	1.04652	-0.43452	NAF
NS0126	262	266	NS	BX082743-BX082744	X082743	2			65.15	7.544	0.411	0.041	0.02952	0.041	0.597	0.06	0.01	0.018	0.136	0.12	-0.01	-0.01	-0.01	-0.03	2292	0.5508	1.04652	-0.49572	NAF
NS0126	120	124	NS	BX082671-BX082672	X082671	2			63.77	7.636	0.395	0.032	0.02304	0.032	0.482	0.106	0.013	0.044	0.117	0.117	-0.01	-0.01	-0.01	-0.03	2256	1.3464	1.848852	-0.502452	NAF
NS0126	46	50	NS	BX082633-BX082634	X082633	2			67.69	4.115	0.111	0.029	0.02088	0.029	0.182	0.049	0.012	0.009	0.026	0.085	0.02	-0.01	-0.01	0	2237	0.2754	0.854658	-0.579258	NAF
NS0126	74	78	NS	BX082647-BX082648	X082647	2			69.46	3.258	0.14	0.031	0.02232	0.031	0.243	0.054	0.007	0.011	0.045	0.109	-0.01	-0.01	-0.01	-0.03	2244	0.3366	0.941868	-0.605268	NAF
NS0126	128	132	NS	BX082675-BX082676	X082675	2			65.87	6.989	0.359	0.036	0.02592	0.036	0.439	0.076	0.012	0.02	0.114	0.109	-0.01	-0.01	-0.01	-0.03	2258	0.612	1.325592	-0.713592	NAF
NS0126	42	46	NS	BX082631-BX082632	X082631	2			66.91	4.908	0.239	0.046	0.03312	0.046	0.236	0.05	0.016	0.004	0.043	0.108	-0.01	-0.01	-0.01	-0.03	2236	0.1224	0.8721	-0.7497	NAF
NS0126	66	70	NS	BX082643-BX082644	X082643	2			69.7	3.395	0.166	0.035	0.0252	0.035	0.278	0.067	0.012	0.01	0.053	0.083	-0.01	-0.01	-0.01	-0.03	2242	0.306	1.168614	-0.862614	NAF
NS0126	258	262	NS	BX082741-BX082742	X082741	2			64.78	8.362	0.501	0.038	0.02736	0.038	0.655	0.074	0.014	0.013	0.152	0.112	-0.01	-0.01	-0.01	-0.03	2291	0.3978	1.290708	-0.892908	NAF
NS0126	156	158	NS	BX082689	X082689	2			62.87	10.244	0.556	0.045	0.0324	0.045	0.682	0.094	0.015	0.024	0.208	0.126	-0.01	-0.01	-0.01	-0.03	2265	0.7344	1.639548	-0.905148	NAF
NS0126	62	66	NS	BX082641-BX082642	X082641	2			69.97	3.652	0.186	0.023	0.01656	0.023	0.235	0.075	0.014	0.013	0.037	0.103	-0.01	-0.01	-0.01	-0.03	2241	0.3978	1.30815	-0.91035	NAF
NS0126	250	254	NS	BX082737-BX082738	X082737	2			64.96	8.534	0.511	0.038	0.02736	0.038	0.681	0.097	0.017	0.024	0.157	0.112	-0.01	-0.01	-0.01	-0.03	2289	0.7344	1.691874	-0.957474	NAF
NS0126	198	202	NS	BX082711-BX082712	X082711	2			66.98	5.901	0.291	0.027	0.01944	0.027	0.384	0.083	0.015	0.013	0.056	0.097	-0.01	-0.01	-0.01	-0.03	2276	0.3978	1.447686	-1.049886	NAF
NS0126	78	82	NS	BX082649-BX082650	X082649	2			69.3	3.646	0.264	0.03	0.0216	0.03	0.244	0.073	0.012	0.007	0.051	0.087	-0.01	-0.01	-0.01	-0.03	2245	0.2142	1.273266	-1.059066	NAF
NS0126	124	128	NS	BX082673-BX082674	X082673	2			64.91	6.781	0.35	0.037	0.02664	0.037	0.437	0.082	0.011	0.012	0.126	0.104	-0.01	-0.01	-0.01	-0.03	2257	0.3672	1.430244	-1.063044	NAF
NS0126	274	278	NS	BX082749-BX082750	X082749	2			64.67	8.268	0.401	0.033	0.02376	0.033	0.633	0.093	0.019	0.018	0.124	0.126	-0.01	-0.01	-0.01	-0.03	2295	0.5508	1.622106	-1.071306	NAF
NS0126	100	104	NS	BX082661-BX082662	X082661	2			68.98	3.607	0.187	0.026	0.01872	0.026	0.258	0.081	0.014	0.011	0.046	0.087	-0.01	-0.01	-0.01	-0.03	2251	0.3366	1.412802	-1.076202	NAF
NS0126	58	62	NS	BX082639-BX082640	X082639	2			65.13	8.202	0.291	0.035	0.0252	0.035	0.459	0.079	0.013	0.009	0.103	0.092	-0.01	-0.01	-0.01	-0.03	2240	0.2754	1.377918	-1.102518	NAF
NS0126	70	74	NS	BX082645-BX082646	X082645	2			68.56	4.172	0.21	0.024	0.01728	0.024	0.29	0.079	0.012	0.009	0.058	0.082	-0.01	-0.01	-0.01	-0.03	2243	0.2754	1.377918	-1.102518	NAF
NS0126	164	168	NS	BX082693-BX082694	X082693	2			61.99	10.647	0.523	0.036	0.02592	0.036	0.658	0.097	0.014	0.019	0.175	0.11	-0.01	-0.01	-0.01	-0.03	2267	0.5814	1.691874	-1.110474	NAF
NS0126	160	164	NS	BX082691-BX082692	X082691	2			62.97	9.782	0.418	0.037	0.02664	0.037	0.58	0.09	0.013	0.014	0.157	0.106	-0.01	-0.01	-0.01	-0.03	2266	0.4284	1.56978	-1.14138	NAF
NS0126	172	176	NS	BX082697-BX082698	X082697	2			66.41	6.446	0.304	0.032	0.02304	0.032	0.424	0.089	0.014	0.012	0.089	0.097	-0.01	-0.01	-0.01	-0.03	2269	0.3672	1.552338	-1.185138	NAF
NS0126	266	270	NS	BX082745-BX082746	X082745	2			66.23	6.988	0.32	0.024	0.01728	0.024	0.481	0.085	0.016	0.009	0.098	0.103	-0.01	-0.01	-0.01	-0.03	2293	0.2754	1.48257	-1.20717	NAF
NS0126	270	274	NS	BX082747-BX082748	X082747	2			66.86	5.767	0.32	0.02	0.0144	0.02	0.418	0.086	0.017	0.008	0.076	0.101	-0.01	-0.01	-0.01	-0.03	2294	0.2448	1.500012	-1.255212	NAF
NS0126	242	246	NS	BX082733-BX082734	X082733	2			64.41	8.769	0.372	0.029	0.02088	0.029	0.543	0.094	0.016	0.01	0.104	0.108	-0.01	-0.01	-0.01	-0.03	2287	0.306	1.639548	-1.333548	NAF
NS0126	234	236	NS	BX082729	X082729	2			64.92	8.374	0.354	0.032	0.02304	0.032	0.543	0.102	0.022	0.013	0.089	0.099	-0.01	-0.01	-0.01	-0.03	2285	0.3978	1.779084	-1.381284	NAF
NS0126	104	108	NS	BX082663-BX082664	X082663	2			64.65	7.974	0.317	0.03	0.0216	0.03	0.467	0.095	0.014	0.009	0.12	0.119	-0.01	-0.01	-0.01	-0.03	2252	0.2754	1.65699	-1.38159	NAF
NS0126	180	182	NS	BX082702	X082702	2			63.27	10.303	0.427	0.038	0.02736	0.038	0.592	0.105	0.012	0.014	0.137	0.095	-0.01	-0.01	-0.01	-0.03	2271	0.4284	1.83141	-1.40301	NAF
NS0126	82	84	NS	BX082652	X082652	2			69.11	4.095	0.112	0.023	0.01656	0.023	0.236	0.095	0.011	0.007	0.044	0.105	-0.01	-0.01	-0.01	-0.03	2246	0.2142	1.65699	-1.44279	NAF
NS0126	152	156	NS	BX082687-BX082688	X082687	2			65.68	7.699	0.355	0.026	0.01872	0.026	0.416	0.109	0.013	0.014	0.098	0.101	-0.01	-0.01	-0.01	-0.03	2264	0.4284	1.901178	-1.472778	NAF
NS0126	96	98	NS	BX082659	X082659	2			64.32	8.314	0.385	0.041	0.02952	0.041	0.509	0.102	0.014	0.01	0.143	0.11	-0.01	-0.01	-0.01	-0.03	2250	0.306	1.779084	-1.473084	NAF
NS0126	238	242	NS	BX082731-BX082732	X082731	2			65.34	7.801	0.231	0.024	0.01728	0.024	0.45	0.099	0.021	0.008	0.067	0.109	-0.01	-0.01	-0.01	-0.03	2286	0.2448	1.726758	-1.481958	NAF
NS0126	114	116	NS	X075668	075668	1	G	W	26.78	42.5	3.13	0.4773	0.37	0.136	2.92	0.53	0.097	0.253	1.27	0.335	1.44	7.65	0.76	9.85	18257	7.7418	9.24426	-1.50246	NAF
NS0126	92	96	NS	BX082657-BX082658	X082657	2			68.49	4.211	0.127	0.027	0.01944	0.027	0.282	0.11	0.013	0.01	0.053	0.105	-0.01	-0.01	-0.01	-0.03	2249	0.306	1.91862	-1.61262	NAF
NS0126	206	210	NS	BX082715-BX082716	X082715	2			65.5	6.533	0.306	0.018	0.01296	0.018	0.364	0.109	0.023	0.009	0.051	0.079	-0.01	-0.01	-0.01	-0.03	2278	0.2754	1.901178	-1.625778	NAF
NS0126	254	258	NS	BX082739-BX082740	X082739	2			64.42	8.512	0.301	0.024	0.01728	0.024	0.525	0.109	0.022	0.008	0.108	0.101	-0.01	-0.01	-0.01	-0.03	2290	0.2448	1.901178	-1.656378	NAF
NS0126	202	206	NS	BX082713-BX082714	X082713	2			67.69	5.296	0.109	0.015	0.0108	0.015	0.264	0.102	0.021	0.004	0.034	0.08	-0.01	-0.01	-0.01	-0.03	2277	0.1224	1.779084	-1.656684	NAF
NS0126	194	198	NS	BX082709-BX082710	X082709	2			65.4	7.575	0.311	0.023	0.01656	0.023	0.472	0.111	0.023	0.008	0.084	0.101	-0.01	-0.01	-0.01	-0.03	2275	0.2448	1.936062	-1.691262	NAF
NS0126	246	250	NS	BX082735-BX082736	X082735	2			64.94	8.519	0.357	0.031	0.02232	0.031	0.587	0.123	0.023	0.013	0.128	0.092	-0.01	-0.01	-0.01	-0.03	2288	0.3978	2.145366	-1.747566	NAF
NS0126	84	88	NS	BX082653-BX082654	X082653	2			63.84	8.999	0.386	0.035	0.0252	0.035	0.515	0.141	0.012	0.022	0.127	0.117	-0.01	-0.01	-0.01	-0.03	2247	0.6732	2.459322	-1.786122	NAF
NS0126	0	2	NS	X075610	075610	1	G	D	43.08	13.4	12.99	0.0258	0.02	0.563	0.07	0.16	0.025	0.032	0.023	0.013	7.49	3.31	0.4	11.2	18038	0.9792	2.79072	-1.81152	NAF
NS0126	210	214	NS	BX082717-BX082718	X082717	2			67.23	6.293	0.178	0.019	0.01368	0.019	0.334	0.119	0.022	0.008	0.044	0.078	-0.01	-0.01	-0.01	-0.03	2279	0.2448	2.075598	-1.830798	NAF
NS0126	22	24	NS	X075621	075621	1	G	D	37.8	38.22	2.02	0.0903	0.07	0.079	0.23	0.13	0.079	0.014	0.005	0.008	4.04	0.92	0.12	5.08	18049	0.4284	2.26746	-1.83906	NAF
NS0126	24	26	NS	X075622	075622	1	G	D	33.03	46.2	1.4	0.129	0.1	0.048	0.21	0.13	0.066	0.009	0.006	0.009	3.61	0.74	0.06	4.41	18050	0.2754	2.26746	-1.99206	NAF
NS0126	148	152	NS	BX082685-BX082686	X082685	2			64.79	7.63	0.344	0.031	0.02232	0.031	0.501	0.146	0.017	0.018	0.131	0.126	-0.01	-0.01	-0.01	-0.03	2263	0.5508	2.546532	-1.995732	NAF
NS0126	176	180	NS	BX082699-BX082700	X082699	2			64.79	8.724	0.47	0.033	0.02376	0.033	0.534	0.132	0.018	0.01	0.129	0.098	-0.01	-0.01	-0.01	-0.03	2270	0.306	2.302344	-1.996344	NAF
NS0126	278	280	NS	BX082752	X082752	2			64.59	7.979	0.428	0.039	0.02808	0.039	0.65	0.152	0.037	0.021	0.118	0.099	-0.01	-0.01	-0.01	-0.03	2296	0.6426	2.651184	-2.008584	NAF
NS0126	132	136	NS	BX082677-BX082678	X082677	2			66.28	5.786	0.354	0.036	0.02592	0.036	0.427	0.147	0.012	0.016	0.112	0.119	-0.01	-0.01	-0.01	-0.03	2259	0.4896	2.563974	-2.074374	NAF
NS0126	88	92	NS	BX082655-BX082656	X082655	2			65.24	7.391	0.286	0.033	0.02376	0.033	0.45	0.142	0.016	0.013	0.113	0.1	0.12	-0.01	-0.01	0.1	2248	0.3978	2.476764	-2.078964	NAF
NS0126	190	194	NS	BX082707-BX082708	X082707	2			64.95	8.218	0.308	0.024	0.01728	0.024	0.448	0.132	0.021	0.007	0.091	0.089	-0.01	-0.01	-0.01	-0.03	2274	0.2142	2.302344	-2.088144	NAF
NS0126	214	218	NS	BX082719-BX082720	X082719	2			66.93	6.615	0.247	0.029	0.02088	0.029	0.391	0.141	0.024	0.012	0.052	0.086	-0.01	-0.01	-0.01	-0.03	2280	0.3672	2.459322	-2.092122	NAF
NS0126	218	222	NS	BX082721-BX082722	X082721	2			65.04	8.921	0.352	0.03	0.0216	0.03	0.509	0.14	0.023	0.011	0.08	0.099	-0.01	-0.01	-0.01	-0.03	2281	0.3366	2.44188	-2.10528	NAF
NS0126	230	234	NS	BX082727-BX082728	X082727	2			66.96	6.62	0.257	0.027	0.01944	0.027	0.419	0.135	0.031	0.008	0.07	0.103	-0.01	-0.01	-0.01	-0.03	2284	0.2448	2.35467	-2.10987	NAF
NS0126	222	226	NS	BX082723-BX082724	X082723	2			65.22	8.619	0.341	0.023	0.01656	0.023	0.463	0.142	0.024	0.008	0.077	0.092	-0.01	-0.01	-0.01	-0.03	2282	0.2448	2.476764	-2.231964	NAF
NS0126	182	186	NS	BX082703-BX082704	X082703	2			62.99	9.762	0.373	0.034	0.02448	0.034	0.566	0.15	0.016	0.012	0.127	0.148	-0.01	-0.01	-0.01	-0.03	2272	0.3672	2.6163	-2.2491	NAF
NS0126	226	230	NS	BX082725-BX082726	X082725	2			64.24	9.057	0.409	0.031	0.02232	0.031	0.561	0.154	0.032	0.012	0.094	0.085	-0.01	-0.01	-0.01	-0.03	2283	0.3672	2.686068	-2.318868	NAF
NS0126	116	118	NS	X075669	075669	1	G	W	27.79	39.23	4.09	0.5031	0.39	0.184	3.31	0.71	0.174	0.327	1.4	0.375	1.59	6.97	1.01	9.57	18258	10.0062	12.38382	-2.37762	NAF
NS0126	144	148	NS	BX082683-BX082684	X082683	2			65.2	7.864	0.274	0.025	0.018	0.025	0.441	0.158	0.016	0.01	0.106	0.092	-0.01	-0.01	-0.01	-0.03	2262	0.306	2.755836	-2.449836	NAF
NS0126	186	190	NS	BX082705-BX082706	X082705	2			64.3	8.603	0.333	0.029	0.02088	0.029	0.499	0.167	0.023	0.012	0.096	0.098	-0.01	-0.01	-0.01	-0.03	2273	0.3672	2.912814	-2.545614	NAF
NS0126	140	144	NS	BX082681-BX082682	X082681	2			63.52	9.141	0.358	0.031	0.02232	0.031	0.494	0.179	0.015	0.011	0.137	0.103	-0.01	-0.01	-0.01	-0.03	2261	0.3366	3.122118	-2.785518	NAF
NS0126	128	130	NS	X075675	075675	1	G	W	29.31	42.4	3.54	0.3741	0.29	0.161	3.08	0.6	0.076	0.248	1.15	0.311	1.14	4	0.67	5.81	18264	7.5888	10.4652	-2.8764	NAF
NS0126	136	140	NS	BX082679-BX082680	X082679	2			67.05	5.254	0.171	0.022	0.01584	0.022	0.33	0.196	0.02	0.01	0.065	0.092	-0.01	-0.01	-0.01	-0.03	2260	0.306	3.418632	-3.112632	NAF
NS0126	48	50	NS	X075634	075634	1	G	D	29.45	41.91	2.07	0.3354	0.26	0.092	2.15	0.43	0.064	0.143	0.741	0.125	1.16	8.25	0.36	9.77	18116	4.3758	7.50006	-3.12426	NAF
NS0126	112	114	NS	X075667	075667	1	G	W	28.56	39.83	3.09	0.4257	0.33	0.135	2.72	0.58	0.131	0.227	1.06	0.285	1.35	8.45	0.63	10.43	18256	6.9462	10.11636	-3.17016	NAF
NS0126	258	260	NS	X075741	075741	1	G	W	31.43	41.85	2.17	0.4386	0.34	0.097	3.04	0.29	0.045	0.055	0.844	0.244	0.85	4.99	0	5.84	18167	1.683	5.05818	-3.37518	NAF
NS0126	26	28	NS	X075623	075623	1	G	D	37.79	37.49	1.69	0.1032	0.08	0.066	0.39	0.23	0.074	0.009	0.007	0.021	4.42	1.11	0.09	5.62	18051	0.2754	4.01166	-3.73626	NAF
NS0126	28	30	NS	X075624	075624	1	G	D	38.67	35.98	1.69	0.0645	0.05	0.073	0.4	0.23	0.064	0.008	0.007	0.019	4.67	1.09	0.11	5.87	18052	0.2448	4.01166	-3.76686	NAF
NS0126	132	134	NS	X075677	075677	1	G	W	30.73	39.87	3.41	0.4515	0.35	0.155	3.2	0.64	0.074	0.23	1.23	0.339	1.18	4.31	0.67	6.16	18266	7.038	11.16288	-4.12488	NAF
NS0126	46	48	NS	X075633	075633	1	G	D	34.24	41.82	1.85	0.3612	0.28	0.084	0.85	0.32	0.091	0.03	0.338	0.076	3.64	1.28	0.2	5.12	18115	0.918	5.58144	-4.66344	NAF
NS0126	34	36	NS	X075627	075627	1	G	D	34.01	42.08	1.87	0.1161	0.09	0.081	0.52	0.29	0.068	0.007	0.022	0.026	4.64	1.23	0.12	5.99	18109	0.2142	5.05818	-4.84398	NAF
NS0126	44	46	NS	X075632	075632	1	G	D	30.4	45.07	2.31	0.4257	0.33	0.103	1.05	0.29	0.058	0.006	0.435	0.1	4.78	1.55	0.13	6.46	18114	0.1836	5.05818	-4.87458	NAF
NS0126	30	32	NS	X075625	075625	1	G	D	34.73	39.07	3.03	0.1548	0.12	0.125	0.62	0.32	0.084	0.01	0.072	0.03	4.86	1.59	0.15	6.6	18053	0.306	5.58144	-5.27544	NAF
NS0126	42	44	NS	X075631	075631	1	G	D	32.07	42	2.51	0.516	0.4	0.111	1.01	0.32	0.061	0.01	0.368	0.099	5.17	1.65	0.18	7	18113	0.306	5.58144	-5.27544	NAF
NS0126	52	54	NS	X075636	075636	1	G	W	27.41	42.37	5.86	0.1677	0.13	0.275	3.78	0.55	0.107	0.136	1.77	0.304	1.7	2.71	0.66	5.07	18118	4.1616	9.5931	-5.4315	NAF
NS0126	166	168	NS	X075694	075694	1	G	W	31.67	39.61	1.82	0.4773	0.37	0.082	2.71	0.45	0.057	0.074	0.816	0.227	0.91	7.53	0.03	8.47	18103	2.2644	7.8489	-5.5845	NAF
NS0126	58	60	NS	X075639	075639	1	G	W	32.51	35.76	2.18	0.4902	0.38	0.108	2.53	0.49	0.081	0.096	0.799	0.212	1.49	8.58	0.17	10.24	18121	2.9376	8.54658	-5.60898	NAF
NS0126	32	34	NS	X075626	075626	1	G	D	32.19	44.53	2.27	0.1806	0.14	0.087	0.54	0.34	0.071	0.007	0.022	0.035	4.32	1.39	0.09	5.8	18054	0.2142	5.93028	-5.71608	NAF
NS0126	38	40	NS	X075629	075629	1	G	D	18.3	54.57	8.96	0.1032	0.08	0.391	1.7	0.35	0.042	0.006	1.24	0.064	2.84	2.96	0.3	6.1	18111	0.1836	6.1047	-5.9211	NAF
NS0126	50	52	NS	X075635	075635	1	G	W	27.4	45	3.84	0.2064	0.16	0.173	2.84	0.69	0.192	0.189	1.34	0.215	1.34	3.34	0.63	5.31	18117	5.7834	12.03498	-6.25158	NAF
NS0126	264	266	NS	X075744	075744	1	G	W	31.23	39.97	1.98	0.5676	0.44	0.09	3.13	0.67	0.097	0.17	0.718	0.202	0.77	6.26	0.32	7.35	18170	5.202	11.68614	-6.48414	NAF
NS0126	156	158	NS	X075689	075689	1	G	W	32.71	40.13	2.05	0.4386	0.34	0.092	2.64	0.57	0.076	0.106	0.924	0.263	0.91	4.7	0.2	5.81	18098	3.2436	9.94194	-6.69834	NAF
NS0126	56	58	NS	X075638	075638	1	G	W	27.84	43.05	3.46	0.3354	0.26	0.16	3.09	0.79	0.163	0.218	1.36	0.343	1.5	4.76	0.75	7.01	18120	6.6708	13.77918	-7.10838	NAF
NS0126	108	110	NS	X075665	075665	1	G	W	28.2	41.56	2.14	0.4902	0.38	0.095	2.46	0.7	0.091	0.163	0.79	0.219	1.06	9.12	0.34	10.52	18254	4.9878	12.2094	-7.2216	NAF
NS0126	130	132	NS	X075676	075676	1	G	W	33.11	39.6	1.68	0.5676	0.44	0.076	2.24	0.53	0.04	0.066	0.746	0.206	0.83	6.12	0.01	6.96	18265	2.0196	9.24426	-7.22466	NAF
NS0126	262	264	NS	X075743	075743	1	G	W	28.95	46.26	1.52	0.4773	0.37	0.068	2.5	0.52	0.054	0.046	0.6	0.172	0.67	5.44	0.02	6.13	18169	1.4076	9.06984	-7.66224	NAF
NS0126	118	120	NS	X075670	075670	1	G	W	23.27	48.51	2.74	0.6708	0.52	0.111	2.66	1.01	0.109	0.303	1.08	0.302	1.24	7.23	0.9	9.37	18259	9.2718	17.61642	-8.34462	NAF
NS0126	36	38	NS	X075628	075628	1	G	D	29.53	43.99	3.91	0.5934	0.46	0.174	1.04	0.51	0.072	0.006	0.199	0.045	4.52	2.02	0.26	6.8	18110	0.1836	8.89542	-8.71182	NAF
NS0126	256	258	NS	X075740	075740	1	G	W	33.77	39.37	1.47	0.4773	0.37	0.065	2.5	0.74	0.097	0.136	0.587	0.165	0.59	5.22	0.11	5.92	18166	4.1616	12.90708	-8.74548	NAF
NS0126	54	56	NS	X075637	075637	1	G	W	19.18	58.54	2.1	0.3354	0.26	0.092	2.17	1.08	0.078	0.329	0.817	0.192	1.15	4.61	1.09	6.85	18119	10.0674	18.83736	-8.76996	NAF
NS0126	150	152	NS	X075686	075686	1	G	W	31.48	40.98	1.82	0.5547	0.43	0.079	2.54	0.64	0.079	0.077	0.817	0.231	0.83	6.13	0.13	7.09	18095	2.3562	11.16288	-8.80668	NAF
NS0126	72	74	NS	X075646	075646	1	G	W	32.41	37.14	3.18	0.3096	0.24	0.146	3.19	0.84	0.105	0.185	1.15	0.314	1.14	4.6	0.63	6.37	18182	5.661	14.65128	-8.99028	NAF
NS0126	160	162	NS	X075691	075691	1	G	W	31.13	38.67	1.9	0.5934	0.46	0.085	2.88	0.66	0.113	0.081	0.842	0.24	0.95	7.82	0.12	8.89	18100	2.4786	11.51172	-9.03312	NAF
NS0126	260	262	NS	X075742	075742	1	G	W	31.68	41.27	1.91	0.4644	0.36	0.083	2.9	0.62	0.101	0.056	0.707	0.2	0.71	5.64	0.01	6.36	18168	1.7136	10.81404	-9.10044	NAF
NS0126	124	126	NS	X075673	075673	1	G	W	31.23	39.53	2.14	0.4386	0.34	0.094	2.41	0.71	0.08	0.1	0.92	0.245	1.1	7.02	0.17	8.29	18262	3.06	12.38382	-9.32382	NAF
NS0126	274	276	NS	X075749	075749	1	G	W	34.67	38.43	1.61	0.4902	0.38	0.072	2.66	0.62	0.088	0.048	0.614	0.174	0.63	5.01	-0.05	5.59	18175	1.4688	10.81404	-9.34524	NAF
NS0126	40	42	NS	X075630	075630	1	G	D	22.75	53.15	4.44	0.3354	0.26	0.194	1.23	0.55	0.053	0.007	0.401	0.1	4.16	2.22	0.24	6.62	18112	0.2142	9.5931	-9.3789	NAF
NS0126	100	102	NS	X075661	075661	1	G	W	28.98	40.45	3.95	0.387	0.3	0.181	3.09	0.83	0.071	0.162	0.882	0.248	1.1	6.48	0.56	8.14	18196	4.9572	14.47686	-9.51966	NAF
NS0126	198	200	NS	X075711	075711	1	G	W	35.21	38.79	1.62	0.5934	0.46	0.073	2.31	1.12	0.095	0.302	0.459	0.122	0.37	3.06	0.5	3.93	18209	9.2412	19.53504	-10.29384	NAF
NS0126	78	80	NS	X075649	075649	1	G	W	32.56	37.99	2.79	0.258	0.2	0.127	3	0.74	0.17	0.066	1.31	0.348	1.25	5.09	0.22	6.56	18185	2.0196	12.90708	-10.88748	NAF
NS0126	244	246	NS	X075734	075734	1	G	W	35.1	37.09	1.61	0.5289	0.41	0.073	2.68	0.75	0.108	0.048	0.618	0.167	0.59	5.18	0.02	5.79	18070	1.4688	13.0815	-11.6127	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0126	64	66	NS	X075642	075642	1	G	W	35.72	36.21	1.72	0.2838	0.22	0.079	2.25	0.78	0.096	0.065	0.754	0.218	0.85	5.32	0.03	6.2	18124	1.989	13.60476	-11.61576	NAF
NS0126	158	160	NS	X075690	075690	1	G	W	28.35	42.76	2.35	0.5031	0.39	0.103	3.03	0.88	0.141	0.112	1.04	0.291	1.08	6.25	0.42	7.75	18099	3.4272	15.34896	-11.92176	NAF
NS0126	122	124	NS	X075672	075672	1	G	W	32.12	36.22	1.51	0.6192	0.48	0.066	2.15	0.89	0.061	0.112	0.65	0.174	1	10.58	0.18	11.76	18261	3.4272	15.52338	-12.09618	NAF
NS0126	148	150	NS	X075685	075685	1	G	W	33.96	37.42	1.83	0.5418	0.42	0.083	2.53	0.83	0.09	0.074	0.823	0.231	0.85	5.51	0.16	6.52	18094	2.2644	14.47686	-12.21246	NAF
NS0126	126	128	NS	X075674	075674	1	G	W	31.17	40.42	2.18	0.4386	0.34	0.098	2.45	0.82	0.086	0.061	0.962	0.261	1	5.99	0.27	7.26	18263	1.8666	14.30244	-12.43584	NAF
NS0126	152	154	NS	X075687	075687	1	G	W	32.52	39.82	1.48	0.6321	0.49	0.062	2.35	0.78	0.073	0.037	0.662	0.185	0.67	6.42	0.11	7.2	18096	1.1322	13.60476	-12.47256	NAF
NS0126	74	76	NS	X075647	075647	1	G	W	29.19	43.83	2.35	0.3483	0.27	0.108	2.6	0.91	0.064	0.109	0.99	0.279	1.02	4.88	0.5	6.4	18183	3.3354	15.87222	-12.53682	NAF
NS0126	60	62	NS	X075640	075640	1	G	W	33.44	36.75	1.45	0.4773	0.37	0.069	2.04	0.76	0.068	0.019	0.559	0.157	1	8.41	-0.08	9.33	18122	0.5814	13.25592	-12.67452	NAF
NS0126	164	166	NS	X075693	075693	1	G	W	31.05	39.86	1.61	0.6063	0.47	0.069	2.68	1.03	0.104	0.171	0.721	0.195	0.81	7.25	0.41	8.47	18102	5.2326	17.96526	-12.73266	NAF
NS0126	154	156	NS	X075688	075688	1	G	W	33.33	39.25	1.47	0.5547	0.43	0.064	2.33	0.83	0.094	0.046	0.659	0.192	0.7	5.95	0.14	6.79	18097	1.4076	14.47686	-13.06926	NAF
NS0126	240	242	NS	X075732	075732	1	G	W	35.6	36.19	1.3	0.6966	0.54	0.057	2.52	0.87	0.125	0.067	0.444	0.13	0.51	6.18	0	6.69	18068	2.0502	15.17454	-13.12434	NAF
NS0126	194	196	NS	X075709	075709	1	G	W	36.59	36.44	1.45	0.7353	0.57	0.061	2.34	0.83	0.111	0.043	0.502	0.142	0.45	4.42	-0.03	4.84	18207	1.3158	14.47686	-13.16106	NAF
NS0126	266	268	NS	X075745	075745	1	G	W	28.71	46.12	1.51	0.4773	0.37	0.066	2.61	0.85	0.062	0.052	0.577	0.17	0.58	5.41	0.32	6.31	18171	1.5912	14.8257	-13.2345	NAF
NS0126	238	240	NS	X075731	075731	1	G	W	36.08	36.23	1.36	0.6063	0.47	0.062	2.4	0.89	0.13	0.061	0.442	0.129	0.48	5.48	-0.04	5.92	18067	1.8666	15.52338	-13.65678	NAF
NS0126	162	164	NS	X075692	075692	1	G	W	32.61	38.09	1.65	0.5547	0.43	0.072	2.66	0.9	0.141	0.065	0.741	0.21	0.86	7.05	0.13	8.04	18101	1.989	15.6978	-13.7088	NAF
NS0126	272	274	NS	X075748	075748	1	G	W	33.11	39.05	1.59	0.5289	0.41	0.07	2.75	0.92	0.184	0.061	0.595	0.168	0.59	5.6	0.01	6.2	18174	1.8666	16.04664	-14.18004	NAF
NS0126	80	82	NS	X075650	075650	1	G	W	30	41.02	2.81	0.2709	0.21	0.136	3.08	0.92	0.128	0.059	1.28	0.341	1.22	4.9	0.44	6.56	18186	1.8054	16.04664	-14.24124	NAF
NS0126	252	254	NS	X075738	075738	1	G	W	30.91	41.21	2.48	0.4128	0.32	0.115	3.24	1.1	0.08	0.151	0.819	0.232	0.79	4.4	0.61	5.8	18164	4.6206	19.1862	-14.5656	NAF
NS0126	250	252	NS	X075737	075737	1	G	W	32.49	38.24	2.23	0.4902	0.38	0.101	3.17	1.15	0.231	0.162	0.786	0.229	0.78	5.05	0.38	6.21	18163	4.9572	20.0583	-15.1011	NAF
NS0126	276	278	NS	X075750	075750	1	G	W	31.49	40.73	1.61	0.5805	0.45	0.071	2.83	0.97	0.143	0.053	0.557	0.152	0.62	6.12	0.12	6.86	18176	1.6218	16.91874	-15.29694	NAF
NS0126	234	236	NS	X075729	075729	1	G	W	31.91	41.28	1.95	0.5289	0.41	0.085	2.78	1.06	0.157	0.103	0.517	0.143	0.54	4.47	0.2	5.21	18065	3.1518	18.48852	-15.33672	NAF
NS0126	236	238	NS	X075730	075730	1	G	W	29.97	41.88	1.92	0.6708	0.52	0.086	3.09	1	0.132	0.068	0.625	0.177	0.69	6.15	0.28	7.12	18066	2.0808	17.442	-15.3612	NAF
NS0126	270	272	NS	X075747	075747	1	G	W	32.29	42.27	1.24	0.4773	0.37	0.054	2.41	0.95	0.089	0.032	0.481	0.139	0.49	4.94	0.19	5.62	18173	0.9792	16.5699	-15.5907	NAF
NS0126	106	108	NS	X075664	075664	1	G	W	33.67	35.97	1.53	0.5289	0.41	0.069	2.13	1	0.072	0.053	0.675	0.184	0.83	8.39	0.11	9.33	18253	1.6218	17.442	-15.8202	NAF
NS0126	70	72	NS	X075645	075645	1	G	W	34.85	34.72	2.07	0.3741	0.29	0.096	2.67	1.04	0.145	0.072	0.921	0.249	1.05	6.62	0.2	7.87	18181	2.2032	18.13968	-15.93648	NAF
NS0126	268	270	NS	X075746	075746	1	G	W	32.61	40.55	1.48	0.4644	0.36	0.066	2.64	0.99	0.103	0.038	0.575	0.154	0.56	5.02	0.24	5.82	18172	1.1628	17.26758	-16.10478	NAF
NS0126	226	228	NS	X075725	075725	1	G	W	34.57	39.89	1.88	0.5547	0.43	0.086	2.53	1.06	0.14	0.059	0.483	0.138	0.43	3.12	0.16	3.71	18061	1.8054	18.48852	-16.68312	NAF
NS0126	278	280	NS	X075752	075752	1	G	W	31.57	39.44	1.85	0.6063	0.47	0.082	3.09	1.1	0.218	0.075	0.607	0.171	0.67	6.36	0.1	7.13	18177	2.295	19.1862	-16.8912	NAF
NS0126	246	248	NS	X075735	075735	1	G	W	33.79	37.16	1.62	0.6192	0.48	0.072	2.87	1.07	0.154	0.057	0.634	0.183	0.66	6.12	0.22	7	18071	1.7442	18.66294	-16.91874	NAF
NS0126	242	244	NS	X075733	075733	1	G	W	30.89	40.85	1.73	0.6192	0.48	0.077	2.88	1.21	0.126	0.135	0.553	0.155	0.61	5.93	0.44	6.98	18069	4.131	21.10482	-16.97382	NAF
NS0126	104	106	NS	X075663	075663	1	G	W	32.6	36.78	1.66	0.4902	0.38	0.073	2.42	1.07	0.075	0.045	0.72	0.201	0.88	8.53	0.28	9.69	18198	1.377	18.66294	-17.28594	NAF
NS0126	232	234	NS	X075728	075728	1	G	W	34.13	39.68	1.63	0.5289	0.41	0.072	2.45	1.19	0.126	0.097	0.47	0.126	0.43	3.75	0.32	4.5	18064	2.9682	20.75598	-17.78778	NAF
NS0126	254	256	NS	X075739	075739	1	G	W	36.29	36.21	1.23	0.4902	0.38	0.052	2.28	1.13	0.161	0.031	0.478	0.127	0.46	5.14	0.01	5.61	18165	0.9486	19.70946	-18.76086	NAF
NS0126	146	148	NS	X075684	075684	1	G	W	33.6	37.54	1.78	0.5934	0.46	0.08	2.61	1.23	0.085	0.07	0.803	0.226	0.81	5.41	0.5	6.72	18093	2.142	21.45366	-19.31166	NAF
NS0126	62	64	NS	X075641	075641	1	G	W	31.77	38.55	1.42	0.4515	0.35	0.067	2.26	1.25	0.1	0.061	0.571	0.169	0.95	8.4	0.3	9.65	18123	1.8666	21.8025	-19.9359	NAF
NS0126	96	98	NS	X075659	075659	1	G	W	29.86	40.53	2	0.4515	0.35	0.09	2.64	1.33	0.108	0.103	0.905	0.242	1.03	6.6	0.61	8.24	18194	3.1518	23.19786	-20.04606	NAF
NS0126	208	210	NS	X075716	075716	1	G	W	35.2	38.32	1.94	0.6192	0.48	0.09	2.61	1.34	0.144	0.095	0.472	0.126	0.44	2.97	0.44	3.85	18214	2.907	23.37228	-20.46528	NAF
NS0126	196	198	NS	X075710	075710	1	G	W	32.75	40.34	1.79	0.6579	0.51	0.08	2.63	1.31	0.12	0.069	0.537	0.146	0.52	4.01	0.51	5.04	18208	2.1114	22.84902	-20.73762	NAF
NS0126	248	250	NS	X075736	075736	1	G	W	30.59	42.39	1.38	0.5676	0.44	0.061	2.67	1.31	0.122	0.055	0.566	0.166	0.6	5.69	0.59	6.88	18072	1.683	22.84902	-21.16602	NAF
NS0126	76	78	NS	X075648	075648	1	G	W	28.23	42.21	1.84	0.4773	0.37	0.082	2.59	1.5	0.058	0.159	0.799	0.216	0.96	7.78	0.95	9.69	18184	4.8654	26.163	-21.2976	NAF
NS0126	228	230	NS	X075726	075726	1	G	W	34.84	37.41	2.08	0.645	0.5	0.096	2.78	1.38	0.16	0.082	0.495	0.135	0.45	3.79	0.44	4.68	18062	2.5092	24.06996	-21.56076	NAF
NS0126	192	194	NS	X075708	075708	1	G	W	33.85	40.2	1.21	0.7095	0.55	0.052	2.18	1.33	0.115	0.05	0.433	0.109	0.38	4.16	0.45	4.99	18206	1.53	23.19786	-21.66786	NAF
NS0126	224	226	NS	X075724	075724	1	G	W	34.83	38.64	1.81	0.5676	0.44	0.081	2.54	1.34	0.142	0.055	0.494	0.141	0.43	3.18	0.47	4.08	18060	1.683	23.37228	-21.68928	NAF
NS0126	86	88	NS	X075654	075654	1	G	W	28.69	40.15	2.66	0.4257	0.33	0.121	3.25	1.78	0.125	0.292	1.09	0.298	1.13	5.93	1.26	8.32	18189	8.9352	31.04676	-22.11156	NAF
NS0126	174	176	NS	X075698	075698	1	G	W	34.23	36.95	1.52	0.516	0.4	0.068	2.57	1.37	0.179	0.057	0.676	0.178	0.71	5.68	0.34	6.73	18107	1.7442	23.89554	-22.15134	NAF
NS0126	66	68	NS	X075643	075643	1	G	W	31.2	39.89	2.21	0.3354	0.26	0.099	2.73	1.5	0.103	0.092	0.964	0.268	0.99	5.41	0.84	7.24	18125	2.8152	26.163	-23.3478	NAF
NS0126	98	100	NS	X075660	075660	1	G	W	29.01	40.05	2.62	0.4644	0.36	0.118	2.69	1.83	0.177	0.275	1.11	0.309	1.22	5.87	0.93	8.02	18195	8.415	31.91886	-23.50386	NAF
NS0126	184	186	NS	X075704	075704	1	G	W	33.82	39.51	1.91	0.4902	0.38	0.087	2.69	1.44	0.073	0.052	0.661	0.188	0.57	3.17	0.82	4.56	18202	1.5912	25.11648	-23.52528	NAF
NS0126	180	182	NS	X075702	075702	1	G	W	32.02	40.27	1.7	0.5676	0.44	0.079	2.73	1.48	0.088	0.065	0.687	0.188	0.68	4.42	0.93	6.03	18200	1.989	25.81416	-23.82516	NAF
NS0126	88	90	NS	X075655	075655	1	G	W	31.44	37.62	1.54	0.5031	0.39	0.068	2.64	1.54	0.09	0.055	0.701	0.178	1.06	7.92	0.91	9.89	18190	1.683	26.86068	-25.17768	NAF
NS0126	186	188	NS	X075705	075705	1	G	W	31.85	40.11	1.98	0.5805	0.45	0.091	2.78	1.78	0.114	0.19	0.619	0.171	0.59	3.68	1.03	5.3	18203	5.814	31.04676	-25.23276	NAF
NS0126	84	86	NS	X075653	075653	1	G	W	32.4	37.53	1.49	0.5289	0.41	0.068	2.51	1.56	0.159	0.064	0.657	0.18	0.77	7.21	0.61	8.59	18188	1.9584	27.20952	-25.25112	NAF
NS0126	230	232	NS	X075727	075727	1	G	W	34.88	37.84	1.57	0.6321	0.49	0.071	2.5	1.57	0.13	0.041	0.456	0.132	0.39	3.89	0.71	4.99	18063	1.2546	27.38394	-26.12934	NAF
NS0126	210	212	NS	X075717	075717	1	G	W	34.38	38.89	1.61	0.645	0.5	0.071	2.45	1.65	0.106	0.07	0.431	0.113	0.4	2.94	0.92	4.26	18215	2.142	28.7793	-26.6373	NAF
NS0126	102	104	NS	X075662	075662	1	G	W	31.97	38.84	2.01	0.3354	0.26	0.091	2.41	1.67	0.118	0.072	0.884	0.238	0.91	5.62	0.84	7.37	18197	2.2032	29.12814	-26.92494	NAF
NS0126	176	178	NS	X075699	075699	1	G	W	33.14	39.06	1.74	0.5031	0.39	0.08	2.72	1.65	0.148	0.053	0.742	0.215	0.66	4.29	0.87	5.82	18108	1.6218	28.7793	-27.1575	NAF
NS0126	190	192	NS	X075707	075707	1	G	W	34.9	38.86	1.65	0.5031	0.39	0.074	2.35	1.64	0.096	0.044	0.571	0.156	0.46	2.67	0.93	4.06	18205	1.3464	28.60488	-27.25848	NAF
NS0126	94	96	NS	X075658	075658	1	G	W	31.48	37.02	1.44	0.5418	0.42	0.061	2.55	1.71	0.081	0.079	0.657	0.178	0.93	8.5	1.05	10.48	18193	2.4174	29.82582	-27.40842	NAF
NS0126	200	202	NS	X075712	075712	1	G	W	32.89	39.73	1.53	0.7869	0.61	0.067	2.51	1.7	0.081	0.053	0.433	0.112	0.4	4.21	1.02	5.63	18210	1.6218	29.6514	-28.0296	NAF
NS0126	206	208	NS	X075715	075715	1	G	W	34.39	38.93	1.25	0.7482	0.58	0.053	2.21	1.7	0.151	0.048	0.383	0.11	0.32	3.66	0.73	4.71	18213	1.4688	29.6514	-28.1826	NAF
NS0126	178	180	NS	X075700	075700	1	G	W	33.74	38.53	1.73	0.4644	0.36	0.077	2.59	1.79	0.11	0.063	0.696	0.177	0.66	3.63	1.04	5.33	18199	1.9278	31.22118	-29.29338	NAF
NS0126	222	224	NS	X075723	075723	1	G	W	34.47	38.97	1.59	0.5547	0.43	0.072	2.38	1.77	0.148	0.049	0.427	0.115	0.38	2.83	0.88	4.09	18059	1.4994	30.87234	-29.37294	NAF
NS0126	220	222	NS	X075722	075722	1	G	W	32.77	40.2	1.93	0.5676	0.44	0.091	2.65	1.82	0.16	0.061	0.474	0.135	0.53	3.05	1.02	4.6	18058	1.8666	31.74444	-29.87784	NAF
NS0126	218	220	NS	X075721	075721	1	G	W	32.86	39.58	1.81	0.6579	0.51	0.081	2.74	1.91	0.14	0.09	0.445	0.121	0.41	3.46	1.09	4.96	18057	2.754	33.31422	-30.56022	NAC
NS0126	92	94	NS	X075657	075657	1	G	W	31.63	39.01	1.85	0.3483	0.27	0.083	2.46	1.84	0.206	0.043	0.859	0.229	0.91	5.48	0.92	7.31	18192	1.3158	32.09328	-30.77748	NAC
NS0126	204	206	NS	X075714	075714	1	G	W	35.47	37.71	0.78	0.8643	0.67	0.034	1.98	1.82	0.109	0.018	0.285	0.075	0.22	4.31	1.01	5.54	18212	0.5508	31.74444	-31.19364	NAC
NS0126	140	142	NS	X075681	075681	1	G	W	31.94	38.86	1.86	0.5289	0.41	0.08	2.59	1.94	0.163	0.068	0.841	0.231	0.81	4.7	1.21	6.72	18270	2.0808	33.83748	-31.75668	NAC
NS0126	138	140	NS	X075680	075680	1	G	W	32.77	37.52	1.52	0.5547	0.43	0.067	2.43	1.94	0.142	0.049	0.693	0.191	0.75	5.48	1.2	7.43	18269	1.4994	33.83748	-32.33808	NAC
NS0126	202	204	NS	X075713	075713	1	G	W	32.76	41.86	0.95	0.6837	0.53	0.041	1.99	1.93	0.112	0.037	0.337	0.094	0.26	3.2	1.09	4.55	18211	1.1322	33.66306	-32.53086	NAC
NS0126	214	216	NS	X075719	075719	1	G	W	34.95	37.29	1.62	0.6708	0.52	0.092	2.18	1.96	0.091	0.045	0.367	0.098	0.76	3.12	1.42	5.3	18055	1.377	34.18632	-32.80932	NAC
NS0126	68	70	NS	X075644	075644	1	G	W	30.73	38.54	1.26	0.4773	0.37	0.054	2.32	2.06	0.07	0.059	0.531	0.134	0.74	8.49	1.16	10.39	18126	1.8054	35.93052	-34.12512	NAC
NS0126	182	184	NS	X075703	075703	1	G	W	34.54	36.62	1.56	0.6063	0.47	0.072	2.61	2.07	0.195	0.05	0.63	0.173	0.57	4.31	1.08	5.96	18201	1.53	36.10494	-34.57494	NAC
NS0126	216	218	NS	X075720	075720	1	G	W	33.69	38.05	1.61	0.7353	0.57	0.071	2.63	2.18	0.106	0.111	0.385	0.112	0.36	3.46	1.48	5.3	18056	3.3966	38.02356	-34.62696	NAC
NS0126	142	144	NS	X075682	075682	1	G	W	32.6	39.44	1.69	0.4902	0.38	0.079	2.46	2.08	0.078	0.047	0.767	0.208	0.74	3.82	1.42	5.98	18091	1.4382	36.27936	-34.84116	NAC
NS0126	188	190	NS	X075706	075706	1	G	W	31.84	41.11	1.76	0.5418	0.42	0.082	2.5	2.35	0.154	0.067	0.564	0.15	0.47	2.83	1.61	4.91	18204	2.0502	40.9887	-38.9385	NAC
NS0126	144	146	NS	X075683	075683	1	G	W	32.89	38	1.42	0.5547	0.43	0.061	2.36	2.56	0.1	0.041	0.634	0.173	0.61	4.07	1.9	6.58	18092	1.2546	44.65152	-43.39692	NAC
NS0126	134	136	NS	X075678	075678	1	G	W	32.4	36.84	1.92	0.5031	0.39	0.083	2.53	2.7	0.119	0.063	0.846	0.231	0.79	4.8	2.04	7.63	18267	1.9278	47.0934	-45.1656	NAC
NS0126	136	138	NS	X075679	075679	1	G	W	30.54	39.63	1.38	0.5547	0.43	0.06	2.25	2.7	0.159	0.042	0.62	0.163	1.16	5.07	2	8.23	18268	1.2852	47.0934	-45.8082	NAC
NS0126	212	214	NS	X075718	075718	1	G	W	35.44	35.97	1.08	0.8385	0.65	0.049	2.24	2.73	0.107	0.026	0.304	0.085	0.26	3.24	2.18	5.68	18216	0.7956	47.61666	-46.82106	NAC
NS0126	82	84	NS	X075652	075652	1	G	W	28.27	42.82	1.39	0.4386	0.34	0.063	2.37	2.79	0.071	0.053	0.641	0.175	0.74	5.36	2.32	8.42	18187	1.6218	48.66318	-47.04138	NAC
NS0127	122	124	NS	X075814	075814	1	G	W	15.77	60.31	7.25	0.1548	0.12	0.308	3.16	0.33	0.09	1.16	0.069	0.045	0.43	3.67	1.45	5.55	18077	35.496	5.75586	29.74014	PAF(HC)
NS0127	124	126	NS	X075815	075815	1	G	W	19.32	52.44	10.09	0.0903	0.07	0.433	4.28	0.09	0.021	0.803	0.023	0.027	0.45	4.14	0.84	5.43	18078	24.5718	1.56978	23.00202	PAF(HC)
NS0127	28	30	NS	X075767	075767	1	G	D	25.88	47.28	6.61	0.4773	0.37	0.279	2.11	0.25	0.098	0.596	0.095	0.035	2.28	1.55	1.39	5.22	18228	18.2376	4.3605	13.8771	PAF(HC)
NS0127	260	262	NS	X075884	075884	1	G	W	11.79	62.13	11.18	0.0516	0.04	0.475	2.79	0.03	0.01	0.42	3.44	0.055	0.29	2.31	0.48	3.08	18308	12.852	0.52326	12.32874	PAF(HC)
NS0127	262	264	NS	X075885	075885	1	G	W	26.56	34.17	2.91	0.9675	0.75	0.119	3.43	0.82	0.133	0.767	0.207	0.025	0.56	16.46	1.66	18.68	18309	23.4702	14.30244	9.16776	PAF(LC)
NS0127	248	250	NS	X075878	075878	1	G	W	20.49	48.55	8.08	0.2967	0.23	0.348	3.88	0.26	0.055	0.441	0.103	0.03	0.43	7.81	0.69	8.93	18302	13.4946	4.53492	8.95968	PAF(LC)
NS0127	242	244	NS	X075875	075875	1	G	W	20.84	47.44	9.52	0.1419	0.11	0.4	4.35	0.14	0.023	0.361	0.118	0.026	0.46	6.9	0.68	8.04	18299	11.0466	2.44188	8.60472	PAF(LC)
NS0127	116	118	NS	X075811	075811	1	G	W	24.06	42.12	2.24	0.9288	0.72	0.094	2.91	0.67	0.139	0.634	0.177	0.045	0.77	13.33	1.64	15.74	18074	19.4004	11.68614	7.71426	PAF(LC)
NS0127	40	42	NS	X075773	075773	1	G	D	25.3	43.45	6.93	0.3999	0.31	0.289	3.9	0.23	0.056	0.371	0.16	0.026	0.65	7.2	0.8	8.65	18234	11.3526	4.01166	7.34094	PAF(LC)
NS0127	118	120	NS	X075812	075812	1	G	W	23.63	43.67	1.93	0.903	0.7	0.076	2.75	0.87	0.194	0.732	0.181	0.05	0.67	12.9	1.72	15.29	18075	22.3992	15.17454	7.22466	PAF(LC)
NS0127	120	122	NS	X075813	075813	1	G	W	13.79	66.04	2.64	0.3741	0.29	0.075	1.91	0.77	0.181	0.661	0.173	0.055	0.39	5.42	1.49	7.3	18076	20.2266	13.43034	6.79626	PAF(LC)
NS0127	80	82	NS	X075793	075793	1	G	W	27.46	40.6	5.1	0.3354	0.26	0.216	3.43	0.32	0.032	0.316	1.82	0.039	0.3	7.97	0.55	8.82	18272	9.6696	5.58144	4.08816	PAF(LC)
NS0127	264	266	NS	X075886	075886	1	G	W	21.39	46.61	7.06	0.3741	0.29	0.298	3.54	0.32	0.054	0.309	0.382	0.032	0.62	9.48	0.73	10.83	18310	9.4554	5.58144	3.87396	PAF(LC)
NS0127	140	142	NS	X075823	075823	1	G	W	25.28	39.39	6.3	0.5547	0.43	0.281	3.89	0.37	0.065	0.335	0.124	0.046	0.67	11.6	0.79	13.06	18086	10.251	6.45354	3.79746	PAF(LC)
NS0127	108	110	NS	X075807	075807	1	G	W	28.62	44.91	2.11	0.5031	0.39	0.091	2.24	0.59	0.134	0.445	0.124	0.032	0.25	7.36	0.76	8.37	18286	13.617	10.29078	3.32622	PAF(LC)
NS0127	26	28	NS	X075766	075766	1	G	D	23.95	48.22	7.58	0.4128	0.32	0.323	2.98	0.11	0.056	0.166	0.031	0.028	1.18	4.29	0.56	6.03	18227	5.0796	1.91862	3.16098	PAF(LC)
NS0127	90	92	NS	X075798	075798	1	G	W	26.51	38.15	8.41	0.3354	0.26	0.355	5.2	0.27	0.054	0.256	0.362	0.026	0.44	8.04	0.52	9	18277	7.8336	4.70934	3.12426	PAF(LC)
NS0127	114	116	NS	X075810	075810	1	G	W	23.89	48.34	1.43	0.5547	0.43	0.059	2.17	0.41	0.085	0.313	0.062	0.03	0.89	10.86	0.76	12.51	18073	9.5778	7.15122	2.42658	PAF(LC)
NS0127	144	146	NS	X075825	075825	1	G	W	23.08	44.44	5.58	0.5031	0.39	0.233	3.46	0.35	0.062	0.272	0.129	0.049	0.65	10.61	0.7	11.96	18088	8.3232	6.1047	2.2185	PAF(LC)
NS0127	244	246	NS	X075876	075876	1	G	W	22.57	44.03	6.43	0.3741	0.29	0.27	3.9	0.31	0.057	0.244	0.073	0.019	0.63	10.78	0.68	12.09	18300	7.4664	5.40702	2.05938	PAF(LC)
NS0127	258	260	NS	X075883	075883	1	G	W	21.52	45.04	7.5	0.5418	0.42	0.31	3.79	0.36	0.072	0.253	0.604	0.021	0.42	10.2	0.49	11.11	18307	7.7418	6.27912	1.46268	PAF(LC)
NS0127	152	154	NS	X075829	075829	1	G	W	30.68	37.14	2.11	0.645	0.5	0.087	2.83	0.42	0.08	0.287	0.021	0.018	0.6	11.33	0.42	12.35	18128	8.7822	7.32564	1.45656	PAF(LC)
NS0127	46	48	NS	X075776	075776	1	G	D	28.57	46.95	5.49	0.4257	0.33	0.244	1.4	0.09	0.092	0.096	0.988	0.032	1.42	1.51	0.37	3.3	18237	2.9376	1.56978	1.36782	PAF(LC)
NS0127	102	104	NS	X075804	075804	1	G	W	27.49	43.79	4.35	0.4386	0.34	0.189	3.47	0.46	0.082	0.297	0.314	0.033	0.4	6.89	0.46	7.75	18283	9.0882	8.02332	1.06488	PAF(LC)
NS0127	142	144	NS	X075824	075824	1	G	W	25.55	37.71	5.94	0.6321	0.49	0.255	3.87	0.37	0.06	0.24	0.139	0.049	0.72	12.49	0.63	13.84	18087	7.344	6.45354	0.89046	PAF(LC)
NS0127	126	128	NS	X075816	075816	1	G	W	21.36	47.38	7.41	0.3354	0.26	0.317	4.18	0.4	0.09	0.255	0.189	0.079	0.64	7.89	0.62	9.15	18079	7.803	6.9768	0.8262	PAF(LC)
NS0127	250	252	NS	X075879	075879	1	G	W	21.81	46.15	5.36	0.5289	0.41	0.236	3.43	0.48	0.109	0.295	0.083	0.023	0.55	11.06	0.72	12.33	18303	9.027	8.37216	0.65484	PAF(LC)
NS0127	138	140	NS	X075822	075822	1	G	W	22.71	45.59	5.11	0.3999	0.31	0.211	3.23	0.38	0.075	0.228	0.043	0.033	0.74	11.02	0.61	12.37	18085	6.9768	6.62796	0.34884	PAF(LC)
NS0127	246	248	NS	X075877	075877	1	G	W	22.02	48.06	3.42	0.5289	0.41	0.143	2.82	0.27	0.028	0.165	0.033	0.023	0.71	12.48	0.44	13.63	18301	5.049	4.70934	0.33966	PAF(LC)
NS0127	82	86	NS	BX082794-BX082795	X082794	2			68.25	3.971	0.468	0.038	0.02736	0.038	0.384	0.038	0.007	0.032	0.053	0.086	-0.01	-0.01	-0.01	-0.03	2318	0.9792	0.662796	0.316404	PAF(LC)
NS0127	238	240	NS	X075873	075873	1	G	W	26.1	42.34	2.68	0.5031	0.39	0.113	2.55	0.42	0.047	0.249	0.034	0.014	0.81	12.26	0.52	13.59	18297	7.6194	7.32564	0.29376	PAF(LC)
NS0127	252	254	NS	X075880	075880	1	G	W	23.59	42.02	5.04	0.5934	0.46	0.219	3.54	0.34	0.059	0.202	0.075	0.011	0.56	13.04	0.46	14.06	18304	6.1812	5.93028	0.25092	PAF(LC)
NS0127	254	256	NS	X075881	075881	1	G	W	25.26	42.5	3.19	0.2451	0.19	0.137	2.38	0.2	0.01	0.122	0.037	0.007	0.83	13.93	0.29	15.05	18305	3.7332	3.4884	0.2448	PAF(LC)
NS0127	106	110	NS	BX082806-BX082807	X082806	2			68.57	4.321	0.384	0.035	0.0252	0.035	0.324	0.037	0.007	0.029	0.021	0.086	-0.01	-0.01	-0.01	-0.03	2324	0.8874	0.645354	0.242046	PAF(LC)
NS0127	38	40	NS	X075772	075772	1	G	D	28.21	41.28	3.81	0.5031	0.39	0.159	2.74	0.36	0.079	0.213	0.495	0.02	0.77	8.86	0.42	10.05	18233	6.5178	6.27912	0.23868	PAF(LC)
NS0127	38	42	NS	BX082772-BX082773	X082772	2			67.81	3.768	0.342	0.027	0.01944	0.027	0.265	0.035	0.008	0.022	0.024	0.081	0.04	-0.01	-0.01	0.02	2307	0.6732	0.61047	0.06273	PAF(LC)

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0127	150	154	NS	BX082828-BX082829	X082828	2			67.81	5.261	0.383	0.021	0.01512	0.021	0.414	0.05	0.008	0.029	0.001	0.076	0.07	-0.01	-0.01	0.05	2335	0.8874	0.8721	0.0153	PAF(LC)
NS0127	236	240	NS	BX082872-BX082873	X082872	2			67.02	5.798	0.558	0.043	0.03096	0.043	0.394	0.042	0.006	0.024	0.008	0.087	-0.01	-0.01	-0.01	-0.03	2357	0.7344	0.732564	0.001836	PAF(LC)
NS0127	86	90	NS	BX082796-BX082797	X082796	2			67.71	5.304	0.284	0.02	0.0144	0.02	0.293	0.039	0.007	0.022	0.016	0.076	-0.01	-0.01	-0.01	-0.03	2319	0.6732	0.680238	-0.007038	NAF
NS0127	0	2	NS	BX082753	X082753	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2297	-0.0306	-0.01744	-0.013158	NAF
NS0127	26	30	NS	BX082766-BX082767	X082766	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2304	-0.0306	-0.01744	-0.013158	NAF
NS0127	30	34	NS	BX082768-BX082769	X082768	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2305	-0.0306	-0.01744	-0.013158	NAF
NS0127	114	118	NS	BX082810-BX082811	X082810	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2326	-0.0306	-0.01744	-0.013158	NAF
NS0127	118	122	NS	BX082812-BX082813	X082812	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2327	-0.0306	-0.01744	-0.013158	NAF
NS0127	122	126	NS	BX082814-BX082815	X082814	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2328	-0.0306	-0.01744	-0.013158	NAF
NS0127	126	130	NS	BX082816-BX082817	X082816	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2329	-0.0306	-0.01744	-0.013158	NAF
NS0127	130	134	NS	BX082818-BX082819	X082818	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2330	-0.0306	-0.01744	-0.013158	NAF
NS0127	134	138	NS	BX082820-BX082821	X082820	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2331	-0.0306	-0.01744	-0.013158	NAF
NS0127	138	142	NS	BX082822-BX082823	X082822	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2332	-0.0306	-0.01744	-0.013158	NAF
NS0127	142	146	NS	BX082824-BX082825	X082824	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2333	-0.0306	-0.01744	-0.013158	NAF
NS0127	146	150	NS	BX082826-BX082827	X082826	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2334	-0.0306	-0.01744	-0.013158	NAF
NS0127	240	244	NS	BX082874-BX082875	X082874	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2358	-0.0306	-0.01744	-0.013158	NAF
NS0127	244	248	NS	BX082876-BX082877	X082876	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2359	-0.0306	-0.01744	-0.013158	NAF
NS0127	248	250	NS	BX082878	X082878	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2360	-0.0306	-0.01744	-0.013158	NAF
NS0127	90	94	NS	BX082798-BX082799	X082798	2			67.23	4.589	1.106	0.07	0.0504	0.07	0.803	0.081	0.016	0.042	0.067	0.086	0.15	0.21	-0.01	0.35	2320	1.2852	1.412802	-0.127602	NAF
NS0127	110	114	NS	BX082808-BX082809	X082808	2			69.63	4.253	0.131	0.015	0.0108	0.015	0.198	0.036	0.007	0.016	0.006	0.075	-0.01	-0.01	-0.01	-0.03	2325	0.4896	0.627912	-0.138312	NAF
NS0127	134	136	NS	X075820	075820	1	G	W	23.86	41.21	6.7	0.3483	0.27	0.292	4.18	0.3	0.039	0.166	0.024	0.019	0.72	11.25	0.51	12.48	18083	5.0796	5.2326	-0.153	NAF
NS0127	102	106	NS	BX082804-BX082805	X082804	2			69.65	4.059	0.216	0.02	0.0144	0.02	0.246	0.032	0.006	0.013	0.006	0.068	-0.01	-0.01	-0.01	-0.03	2323	0.3978	0.558144	-0.160344	NAF
NS0127	2	6	NS	BX082754-BX082755	X082754	2			67.84	3.489	0.322	0.02	0.0144	0.02	0.099	0.032	0.023	0.012	0.008	0.089	0.28	0.21	-0.01	0.48	2298	0.3672	0.558144	-0.190944	NAF
NS0127	78	82	NS	BX082792-BX082793	X082792	2			68.63	4.56	0.307	0.023	0.01656	0.023	0.259	0.035	0.007	0.013	0.069	0.073	-0.01	-0.01	-0.01	-0.03	2317	0.3978	0.61047	-0.21267	NAF
NS0127	34	36	NS	X075770	075770	1	G	D	29.3	45.39	4.4	0.4773	0.37	0.189	1.44	0.09	0.083	0.044	0.072	0.021	3.32	1.84	0.26	5.42	18231	1.3464	1.56978	-0.22338	NAF
NS0127	148	150	NS	X075827	075827	1	G	W	24.6	40.48	5.55	0.516	0.4	0.23	3.71	0.36	0.064	0.197	0.085	0.046	0.67	12.33	0.55	13.55	18090	6.0282	6.27912	-0.25092	NAF
NS0127	50	54	NS	BX082778-BX082779	X082778	2			69.28	3.433	0.165	0.014	0.01008	0.014	0.207	0.034	0.006	0.01	0.01	0.068	-0.01	-0.01	-0.01	-0.03	2310	0.306	0.593028	-0.287028	NAF
NS0127	46	50	NS	BX082776-BX082777	X082776	2			68.35	4.573	0.298	0.029	0.02088	0.029	0.2	0.042	0.014	0.013	0.053	0.086	-0.01	-0.01	-0.01	-0.03	2309	0.3978	0.732564	-0.334764	NAF
NS0127	42	46	NS	BX082774-BX082775	X082774	2			68.52	2.421	0.225	0.011	0.00792	0.011	0.137	0.03	0.029	0.006	0.008	0.082	0.24	0.16	-0.01	0.39	2308	0.1836	0.52326	-0.33966	NAF
NS0127	34	38	NS	BX082770-BX082771	X082770	2			69.71	2.909	0.146	0.011	0.00792	0.011	0.136	0.032	0.011	0.006	0.006	0.082	0.01	-0.01	-0.01	-0.01	2306	0.1836	0.558144	-0.374544	NAF
NS0127	58	62	NS	BX082782-BX082783	X082782	2			69.82	3.544	0.167	0.011	0.00792	0.011	0.217	0.043	0.007	0.012	0.006	0.077	-0.01	-0.01	-0.01	-0.03	2312	0.3672	0.750006	-0.382806	NAF
NS0127	10	14	NS	BX082758-BX082759	X082758	2			67.7	4.137	0.239	0.01	0.0072	0.01	0.139	0.036	0.027	0.007	0.019	0.096	0.16	-0.01	-0.01	0.14	2300	0.2142	0.627912	-0.413712	NAF
NS0127	62	66	NS	BX082784-BX082785	X082784	2			69.4	3.389	0.138	0.011	0.00792	0.011	0.192	0.044	0.009	0.011	0.002	0.073	-0.01	-0.01	-0.01	-0.03	2313	0.3366	0.767448	-0.430848	NAF
NS0127	54	58	NS	BX082780-BX082781	X082780	2			68.1	5.26	0.244	0.019	0.01368	0.019	0.253	0.046	0.004	0.012	0.009	0.077	-0.01	-0.01	-0.01	-0.03	2311	0.3672	0.802332	-0.435132	NAF
NS0127	16	18	NS	BX082761	X082761	2			68.48	2.724	0.18	0.007	0.00504	0.007	0.107	0.027	0.021	0.001	0.017	0.067	0.21	0.08	-0.01	0.28	2301	0.0306	0.470934	-0.440334	NAF
NS0127	94	98	NS	BX082800-BX082801	X082800	2			71.2	2.14	0.063	0.011	0.00792	0.011	0.148	0.038	0.008	0.007	0.004	0.082	-0.01	-0.01	-0.01	-0.03	2321	0.2142	0.662796	-0.448596	NAF
NS0127	22	26	NS	BX082764-BX082765	X082764	2			65.24	5.78	0.516	0.026	0.01872	0.026	0.201	0.039	0.027	0.007	0.048	0.116	-0.01	-0.01	-0.01	-0.03	2303	0.2142	0.680238	-0.466038	NAF
NS0127	66	70	NS	BX082786-BX082787	X082786	2			69.27	4.166	0.156	0.015	0.0108	0.015	0.219	0.045	0.01	0.01	0.012	0.087	-0.01	-0.01	-0.01	-0.03	2314	0.306	0.78489	-0.47889	NAF
NS0127	18	22	NS	BX082762-BX082763	X082762	2			66.4	4.945	0.256	0.013	0.00936	0.013	0.126	0.03	0.027	0.001	0.021	0.07	0.24	0.07	-0.01	0.3	2302	0.0306	0.52326	-0.49266	NAF
NS0127	220	224	NS	BX082864-BX082865	X082864	2			71.78	1.377	0.088	0.007	0.00504	0.007	0.13	0.034	0.005	0.003	0.037	0.07	-0.01	-0.01	-0.01	-0.03	2353	0.0918	0.593028	-0.501228	NAF
NS0127	224	228	NS	BX082866-BX082867	X082866	2			71.41	1.855	0.075	0.009	0.00648	0.009	0.128	0.035	0.006	0.003	0.032	0.07	-0.01	-0.01	-0.01	-0.03	2354	0.0918	0.61047	-0.51867	NAF
NS0127	76	78	NS	BX082791	X082791	2			68.55	3.817	0.192	0.012	0.00864	0.012	0.223	0.044	0.017	0.008	0.013	0.075	-0.01	-0.01	-0.01	-0.03	2316	0.2448	0.767448	-0.522648	NAF
NS0127	214	216	NS	BX082861	X082861	2			70.7	3.387	0.063	0.007	0.00504	0.007	0.138	0.034	0.005	0.002	0.04	0.061	-0.01	-0.01	-0.01	-0.03	2351	0.0612	0.593028	-0.531828	NAF
NS0127	98	102	NS	BX082802-BX082803	X082802	2			70.38	3.341	0.102	0.013	0.00936	0.013	0.168	0.045	0.01	0.008	0.006	0.078	-0.01	-0.01	-0.01	-0.03	2322	0.2448	0.78489	-0.54009	NAF
NS0127	6	10	NS	BX082756-BX082757	X082756	2			66.67	5.198	0.431	0.029	0.02088	0.029	0.166	0.046	0.027	0.008	0.026	0.107	0.19	0.03	-0.01	0.21	2299	0.2448	0.802332	-0.557532	NAF
NS0127	216	220	NS	BX082862-BX082863	X082862	2			71.39	1.887	0.06	0.007	0.00504	0.007	0.127	0.04	0.007	0.004	0.032	0.09	-0.01	-0.01	-0.01	-0.03	2352	0.1224	0.69768	-0.57528	NAF
NS0127	204	208	NS	BX082856-BX082857	X082856	2			70.91	1.481	0.115	0.013	0.00936	0.013	0.167	0.048	0.007	0.008	0.061	0.101	-0.01	-0.01	-0.01	-0.03	2349	0.2448	0.837216	-0.592416	NAF
NS0127	74	76	NS	X075790	075790	1	G	W	35.83	42.85	1.29	0.8256	0.64	0.054	0.54	0.07	0.055	0.02	0.105	0.01	0.79	1.71	0.14	2.64	18251	0.612	1.22094	-0.60894	NAF
NS0127	208	212	NS	BX082858-BX082859	X082858	2			69.77	3.998	0.127	0.012	0.00864	0.012	0.153	0.044	0.007	0.005	0.08	0.06	-0.01	-0.01	-0.01	-0.03	2350	0.153	0.767448	-0.614448	NAF
NS0127	70	74	NS	BX082788-BX082789	X082788	2			68.3	3.976	0.196	0.012	0.00864	0.012	0.229	0.05	0.019	0.008	0.013	0.083	-0.01	-0.01	-0.01	-0.03	2315	0.2448	0.8721	-0.6273	NAF
NS0127	196	200	NS	BX082852-BX082853	X082852	2			69.74	4.301	0.178	0.011	0.00792	0.011	0.194	0.047	0.007	0.006	0.084	0.093	-0.01	-0.01	-0.01	-0.03	2347	0.1836	0.819774	-0.636174	NAF
NS0127	194	196	NS	BX082850	X082850	2			69.89	3.709	0.118	0.013	0.00936	0.013	0.16	0.046	0.007	0.005	0.081	0.073	-0.01	-0.01	-0.01	-0.03	2346	0.153	0.802332	-0.649332	NAF
NS0127	190	194	NS	BX082848-BX082849	X082848	2			69.04	4.867	0.204	0.015	0.0108	0.015	0.229	0.05	0.006	0.007	0.078	0.068	-0.01	-0.01	-0.01	-0.03	2345	0.2142	0.8721	-0.6579	NAF
NS0127	182	186	NS	BX082844-BX082845	X082844	2			69.82	4.203	0.188	0.015	0.0108	0.015	0.228	0.052	0.006	0.006	0.04	0.09	-0.01	-0.01	-0.01	-0.03	2343	0.1836	0.906984	-0.723384	NAF
NS0127	166	170	NS	BX082836-BX082837	X082836	2			68.5	4.752	0.211	0.017	0.01224	0.017	0.255	0.057	0.007	0.008	0.024	0.067	-0.01	-0.01	-0.01	-0.03	2339	0.2448	0.994194	-0.749394	NAF
NS0127	174	178	NS	BX082840-BX082841	X082840	2			69.17	4.056	0.174	0.015	0.0108	0.015	0.211	0.051	0.007	0.004	0.061	0.068	-0.01	-0.01	-0.01	-0.03	2341	0.1224	0.889542	-0.767142	NAF
NS0127	186	190	NS	BX082846-BX082847	X082846	2			69.41	4.118	0.183	0.015	0.0108	0.015	0.224	0.06	0.01	0.009	0.057	0.081	-0.01	-0.01	-0.01	-0.03	2344	0.2754	1.04652	-0.77112	NAF
NS0127	162	166	NS	BX082834-BX082835	X082834	2			69.61	4.345	0.196	0.014	0.01008	0.014	0.238	0.055	0.008	0.006	0.013	0.069	-0.01	-0.01	-0.01	-0.03	2338	0.1836	0.95931	-0.77571	NAF
NS0127	228	232	NS	BX082868-BX082869	X082868	2			70.46	2.655	0.131	0.011	0.00792	0.011	0.169	0.053	0.006	0.004	0.043	0.071	-0.01	-0.01	-0.01	-0.03	2355	0.1224	0.924426	-0.802026	NAF
NS0127	200	204	NS	BX082854-BX082855	X082854	2			69.19	4.201	0.206	0.018	0.01296	0.018	0.211	0.061	0.008	0.006	0.103	0.069	-0.01	-0.01	-0.01	-0.03	2348	0.1836	1.063962	-0.880362	NAF
NS0127	72	74	NS	X075789	075789	1	G	W	35.87	42.84	1.36	0.4257	0.33	0.058	0.7	0.09	0.052	0.022	0.109	0.021	0.91	1.96	0.06	2.93	18250	0.6732	1.56978	-0.89658	NAF
NS0127	178	182	NS	BX082842-BX082843	X082842	2			67.37	6.016	0.279	0.019	0.01368	0.019	0.274	0.07	0.011	0.008	0.074	0.091	-0.01	-0.01	-0.01	-0.03	2342	0.2448	1.22094	-0.97614	NAF
NS0127	170	174	NS	BX082838-BX082839	X082838	2			67.82	5.317	0.297	0.022	0.01584	0.022	0.333	0.076	0.012	0.01	0.019	0.073	-0.01	-0.01	-0.01	-0.03	2340	0.306	1.325592	-1.019592	NAF
NS0127	136	138	NS	X075821	075821	1	G	W	23.36	45.71	2.56	0.3483	0.27	0.107	2.63	0.18	0.009	0.068	0.006	0.011	0.92	13.81	0.19	14.92	18084	2.0808	3.13956	-1.05876	NAF
NS0127	4	6	NS	X075755	075755	1	G	D	26.23	52.91	4.67	0.0645	0.05	0.112	0.12	0.09	0.052	0.015	0.038	0.044	2.5	1.58	0.13	4.21	18180	0.459	1.56978	-1.11078	NAF
NS0127	24	26	NS	X075765	075765	1	G	D	25.78	51.1	5.23	0.5289	0.41	0.226	1.69	0.12	0.041	0.029	0.111	0.032	1.84	1.77	0.26	3.87	18226	0.8874	2.09304	-1.20564	NAF
NS0127	18	20	NS	X075762	075762	1	G	D	31.08	50.34	1.35	0.6837	0.53	0.057	0.34	0.08	0.063	0.006	0.488	0.027	1.31	0.4	0.03	1.74	18223	0.1836	1.39536	-1.21176	NAF
NS0127	86	88	NS	X075796	075796	1	G	W	30.13	40.53	3.09	0.5289	0.41	0.136	2.8	0.35	0.08	0.158	0.284	0.033	0.39	8.31	0.05	8.75	18275	4.8348	6.1047	-1.2699	NAF
NS0127	150	152	NS	X075828	075828	1	G	W	26.4	36.43	4.99	0.6192	0.48	0.206	3.74	0.43	0.075	0.203	0.034	0.022	0.66	14.36	0.5	15.52	18127	6.2118	7.50006	-1.28826	NAF
NS0127	240	242	NS	X075874	075874	1	G	W	22.62	45.91	3.34	0.4644	0.36	0.142	2.95	0.41	0.091	0.188	0.032	0.015	0.77	12.8	0.46	14.03	18298	5.7528	7.15122	-1.39842	NAF
NS0127	232	236	NS	BX082870-BX082871	X082870	2			67.75	5.632	0.335	0.023	0.01656	0.023	0.293	0.105	0.011	0.01	0.04	0.075	-0.01	-0.01	-0.01	-0.03	2356	0.306	1.83141	-1.52541	NAF
NS0127	158	162	NS	BX082832-BX082833	X082832	2			67.84	5.886	0.276	0.016	0.01152	0.016	0.34	0.105	0.01	0.008	0.01	0.072	-0.01	-0.01	-0.01	-0.03	2337	0.2448	1.83141	-1.58661	NAF
NS0127	16	18	NS	X075761	075761	1	G	D	30.4	51.65	1.3	0.6837	0.53	0.055	0.32	0.1	0.054	0.005	0.491	0.023	1.15	0.37	0.04	1.56	18222	0.153	1.7442	-1.5912	NAF
NS0127	12	14	NS	X075759	075759	1	G	D	35.82	43.66	1.52	0.6063	0.47	0.067	0.26	0.11	0.072	0.006	0.587	0.035	1.07	0.37	0	1.44	18220	0.1836	1.91862	-1.73502	NAF
NS0127	156	158	NS	BX082831	X082831	2			67.12	6.7	0.337	0.022	0.01584	0.022	0.332	0.112	0.012	0.007	0.116	0.071	-0.01	-0.01	-0.01	-0.03	2336	0.2142	1.953504	-1.739304	NAF
NS0127	70	72	NS	X075788	075788	1	G	W	30.86	47.28	1.45	0.4257	0.33	0.062	1.22	0.18	0.064	0.044	0.133	0.012	0.61	4.2	0.05	4.86	18249	1.3464	3.13956	-1.79316	NAF
NS0127	20	22	NS	X075763	075763	1	G	D	36.45	43.11	1.81	0.4257	0.33	0.078	0.46	0.12	0.079	0.008	0.293	0.036	0.93	0.57	0.03	1.53	18224	0.2448	2.09304	-1.84824	NAF
NS0127	0	2	NS	X075753	075753	1	G	D	30.89	43.48	6.21	0.00645	0.005	0.255	0.08	0.14	0.015	0.018	0.083	0.02	3.04	1.88	0.19	5.11	18178	0.5508	2.44188	-1.89108	NAF
NS0127	42	44	NS	X075774	075774	1	G	D	31.77	49.36	1.39	0.4257	0.33	0.055	0.51	0.13	0.078	0.012	0.101	0.022	1.31	0.74	0.07	2.12	18235	0.3672	2.26746	-1.90026	NAF
NS0127	78	80	NS	X075792	075792	1	G	W	34.78	41.06	1.75	0.4515	0.35	0.08	1.59	0.21	0.056	0.051	0.09	0.015	0.38	4.41	-0.26	4.53	18271	1.5606	3.66282	-2.10222	NAF
NS0127	44	46	NS	X075775	075775	1	G	D	33.01	46.56	1.43	0.7095	0.55	0.061	0.47	0.14	0.118	0.011	0.114	0.012	1.75	0.73	0.12	2.6	18236	0.3366	2.44188	-2.10528	NAF
NS0127	236	238	NS	X075872	075872	1	G	W	26.42	43.33	4.14	0.4386	0.34	0.176	2.69	0.4	0.06	0.159	0.095	0.013	0.64	9.76	0.23	10.63	18296	4.8654	6.9768	-2.1114	NAF
NS0127	88	90	NS	X075797	075797	1	G	W	31.8	42.23	2.22	0.4386	0.34	0.096	2.05	0.27	0.056	0.084	0.145	0.009	0.36	6.25	-0.2	6.41	18276	2.5704	4.70934	-2.13894	NAF
NS0127	2	4	NS	X075754	075754	1	G	D	34.94	41.21	3.69	0.0387	0.03	0.116	0.08	0.16	0.027	0.019	0.043	0.025	2.9	1.21	0.11	4.22	18179	0.5814	2.79072	-2.20932	NAF
NS0127	106	108	NS	X075806	075806	1	G	W	26.7	42.26	4.57	0.5547	0.43	0.199	3.49	0.67	0.167	0.308	0.296	0.028	0.47	8.1	0.57	9.14	18285	9.4248	11.68614	-2.26134	NAF
NS0127	32	34	NS	X075769	075769	1	G	D	27.75	48.1	5.1	0.5547	0.43	0.218	1.39	0.15	0.052	0.01	0.126	0.031	2.39	1.84	0.18	4.41	18230	0.306	2.6163	-2.3103	NAF
NS0127	132	134	NS	X075819	075819	1	G	W	22.64	43.75	6.29	0.4257	0.33	0.268	4.15	0.35	0.049	0.115	0.047	0.036	0.63	11.14	0.35	12.12	18082	3.519	6.1047	-2.5857	NAF
NS0127	10	12	NS	X075758	075758	1	G	D	36.83	42.21	1.68	0.5031	0.39	0.072	0.49	0.17	0.038	0.009	0.271	0.041	1.12	0.76	0.06	1.94	18219	0.2754	2.96514	-2.68974	NAF
NS0127	36	38	NS	X075771	075771	1	G	D	31.42	48.44	1.35	0.2838	0.22	0.061	0.79	0.21	0.063	0.024	0.125	0.014	1.04	2.74	-0.09	3.69	18232	0.7344	3.66282	-2.92842	NAF
NS0127	14	16	NS	X075760	075760	1	G	D	37.36	40.13	2.1	0.774	0.6	0.093	0.5	0.18	0.071	0.006	0.66	0.04	1.14	0.6	0.06	1.8	18221	0.1836	3.13956	-2.95596	NAF
NS0127	84	86	NS	X075795	075795	1	G	W	27.19	44.8	3.48	0.4257	0.33	0.147	2.89	0.45	0.11	0.159	0.156	0.015	0.49	7.68	0.2	8.37	18274	4.8654	7.8489	-2.9835	NAF
NS0127	22	24	NS	X075764	075764	1	G	D	31.16	44.95	3.72	0.8643	0.67	0.161	0.78	0.18	0.094	0.005	1.05	0.04	1.81	1.08	0.22	3.11	18225	0.153	3.13956	-2.98656	NAF
NS0127	104	106	NS	X075805	075805	1	G	W	31.97	44.29	1.89	0.3999	0.31	0.082	1.86	0.27	0.037	0.055	0.049	0.008	0.32	4.81	-0.23	4.9	18284	1.683	4.70934	-3.02634	NAF
NS0127	128	130	NS	X075817	075817	1	G	W	24.37	39.86	5.86	0.5934	0.46	0.254	4.31	0.45	0.077	0.156	0.144	0.053	0.69	12.31	0.48	13.48	18080	4.7736	7.8489	-3.0753	NAF
NS0127	8	10	NS	X075757	075757	1	G	D	33.99	42.63	3.74	0.3741	0.29	0.154	0.44	0.21	0.044	0.012	0.621	0.029	1.09	1.62	0.09	2.8	18218	0.3672	3.66282	-3.29562	NAF
NS0127	154	156	NS	X075830	075830	1	G	W	32.85	40.48	2.35	0.5289	0.41	0.099	2.34	0.31	0.037	0.064	0.086	0.017	0.41	6.13	-0.22	6.32	18129	1.9584	5.40702	-3.44862	NAF
NS0127	30	32	NS	X075768	075768	1	G	D	27.01	53.14	2.03	0.8772	0.68	0.09	0.7	0.22	0.101	0.009	0.1	0.031	2.78	0.98	0.2	3.96	18229	0.2754	3.83724	-3.56184	NAF
NS0127	82	84	NS	X075794	075794	1	G	W	24.61	44.64	3.61	0.5805	0.45	0.157	3.27	0.54	0.114	0.188	0.932	0.026	0.43	9.81	0.43	10.67	18273	5.7528	9.41868	-3.66588	NAF
NS0127	76	78	NS	X075791	075791	1	G	W	35.8	38.93	1.72	0.645	0.5	0.076	1.44	0.28	0.093	0.037	0.222	0.007	0.64	4.7	-0.04	5.3	18252	1.1322	4.88376	-3.75156	NAF
NS0127	56	58	NS	X075781	075781	1	G	D	30.73	45.44	2.59	0.3225	0.25	0.111	1.84	0.47	0.038	0.144	0.185	0.017	0.28	4.6	0.03	4.91	18242	4.4064	8.19774	-3.79134	NAF
NS0127	100	102	NS	X075803	075803	1	G	W	30.46	42.72	2.93	0.4128	0.32	0.127	2.5	0.43	0.09	0.114	0.19	0.019	0.41	6.07	-0.04	6.44	18282	3.4884	7.50006	-4.01166	NAF
NS0127	48	50	NS	X075777	075777	1	G	D	28.71	44.78	2.37	0.3999	0.31	0.1	1.88	0.39	0.081	0.077	0.434	0.013	0.55	8.02	-0.06	8.51	18238	2.3562	6.80238	-4.44618	NAF
NS0127	52	54	NS	X075779	075779	1	G	D	25.4	48.91	2.56	0.4257	0.33	0.109	2.12	0.43	0.08	0.093	0.2	0.016	0.55	8	0.06	8.61	18240	2.8458	7.50006	-4.65426	NAF
NS0127	192	194	NS	X075849	075849	1	G	W	37.68	35.71	1.75	0.6837	0.53	0.076	1.72	0.32	0.042	0.029	0.887	0.021	0.06	5.14	-0.43	4.77	18148	0.8874	5.58144	-4.69404	NAF
NS0127	64	66	NS	X075785	075785	1	G	W	31.79	44.19	1.71	0.4386	0.34	0.072	1.64	0.36	0.056	0.048	0.05	0.002	0.42	5.3	-0.22	5.5	18246	1.4688	6.27912	-4.81032	NAF
NS0127	112	114	NS	X075809	075809	1	G	W	29.17	46.72	1.49	0.3741	0.29	0.063	1.92	0.47	0.053	0.11	0.071	0.029	0.32	6.77	-0.05	7.04	18288	3.366	8.19774	-4.83174	NAF
NS0127	168	170	NS	X075837	075837	1	G	W	34.1	40.15	1.97	0.6063	0.47	0.084	1.87	0.37	0.061	0.051	0.193	0.028	0.2	5.49	-0.32	5.37	18136	1.5606	6.45354	-4.89294	NAF
NS0127	256	258	NS	X075882	075882	1	G	W	23.31	43.1	4.72	0.5031	0.39	0.203	3.26	0.5	0.111	0.124	0.056	0.018	0.83	12.47	0.33	13.63	18306	3.7944	8.721	-4.9266	NAF
NS0127	146	148	NS	X075826	075826	1	G	W	22.32	46.26	3.8	0.5676	0.44	0.152	3.13	0.49	0.108	0.118	0.107	0.048	0.76	12.04	0.35	13.15	18089	3.6108	8.54658	-4.93578	NAF
NS0127	68	70	NS	X075787	075787	1	G	W	29.25	49.79	1.3	0.4257	0.33	0.054	1.3	0.35	0.065	0.035	0.208	0.016	0.38	4.29	-0.13	4.54	18248	1.071	6.1047	-5.0337	NAF
NS0127	50	52	NS	X075778	075778	1	G	D	31.63	39.62	1.63	0.4257	0.33	0.067	2.07	0.37	0.058	0.043	0.092	0.014	0.5	9.71	-0.29	9.92	18239	1.3158	6.45354	-5.13774	NAF
NS0127	182	184	NS	X075844	075844	1	G	W	39.53	34.73	1.7	0.5418	0.42	0.083	1.58	0.37	0.048	0.042	0.449	0.019	0.12	3.72	-0.37	3.47	18143	1.2852	6.45354	-5.16834	NAF
NS0127	170	172	NS	X075838	075838	1	G	W	33.99	41.1	2.22	0.516	0.4	0.105	2.02	0.42	0.034	0.055	0.249	0.012	0.2	4.86	-0.25	4.81	18137	1.683	7.32564	-5.64264	NAF
NS0127	220	222	NS	X075864	075864	1	G	W	35.6	39.13	1.71	0.5547	0.43	0.076	1.41	0.46	0.094	0.058	0.767	0.016	0.09	4.57	-0.32	4.34	18162	1.7748	8.02332	-6.24852	NAF
NS0127	58	60	NS	X075782	075782	1	G	D	32.96	41.5	2.21	0.4257	0.33	0.093	1.88	0.51	0.045	0.082	0.134	0.014	0.31	5.6	-0.22	5.69	18243	2.5092	8.89542	-6.38622	NAF
NS0127	180	182	NS	X075843	075843	1	G	W	38.17	36.36	1.64	0.5547	0.43	0.078	1.57	0.44	0.081	0.039	0.389	0.013	0.07	4.13	-0.42	3.78	18142	1.1934	7.67448	-6.48108	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0127	110	112	NS	X075808	075808	1	G	W	31.01	46.16	1.4	0.3612	0.28	0.057	1.67	0.5	0.054	0.073	0.095	0.023	0.22	5.01	-0.22	5.01	18287	2.2338	8.721	-6.4872	NAF
NS0127	96	98	NS	X075801	075801	1	G	W	32.42	45.72	1.15	0.3741	0.29	0.048	1.34	0.42	0.057	0.027	0.127	0.019	0.4	4.08	-0.4	4.08	18280	0.8262	7.32564	-6.49944	NAF
NS0127	66	68	NS	X075786	075786	1	G	W	33.84	41.6	1.5	0.4773	0.37	0.064	1.6	0.45	0.067	0.037	0.145	0.007	0.27	5.25	-0.36	5.16	18247	1.1322	7.8489	-6.7167	NAF
NS0127	196	198	NS	X075852	075852	1	G	W	37.16	37.06	1.63	0.5934	0.46	0.071	1.56	0.46	0.059	0.033	0.995	0.022	0.03	4.41	-0.32	4.12	18150	1.0098	8.02332	-7.01352	NAF
NS0127	62	64	NS	X075784	075784	1	G	D	35.49	37.67	1.71	0.5805	0.45	0.074	1.84	0.48	0.112	0.041	0.054	0.018	0.29	6.38	-0.33	6.34	18245	1.2546	8.37216	-7.11756	NAF
NS0127	60	62	NS	X075783	075783	1	G	D	36.22	36.49	1.73	0.6063	0.47	0.078	1.89	0.49	0.09	0.045	0.097	0.019	0.32	6.61	-0.42	6.51	18244	1.377	8.54658	-7.16958	NAF
NS0127	162	164	NS	X075834	075834	1	G	W	35.41	39.05	1.7	0.6321	0.49	0.074	1.85	0.49	0.082	0.045	0.13	0.017	0.25	5.14	-0.33	5.06	18133	1.377	8.54658	-7.16958	NAF
NS0127	174	176	NS	X075840	075840	1	G	W	37.33	37.61	1.46	0.5547	0.43	0.068	1.56	0.49	0.049	0.034	0.456	0.018	0.07	4.3	-0.3	4.07	18139	1.0404	8.54658	-7.50618	NAF
NS0127	130	132	NS	X075818	075818	1	G	W	22.43	44.32	4.84	0.5547	0.43	0.215	3.86	0.57	0.119	0.078	0.089	0.036	0.6	12.22	0.25	13.07	18081	2.3868	9.94194	-7.55514	NAF
NS0127	208	210	NS	X075858	075858	1	G	W	39.19	35.41	1.5	0.5547	0.43	0.067	1.46	0.49	0.054	0.032	0.866	0.012	0	3.96	-0.34	3.62	18156	0.9792	8.54658	-7.56738	NAF
NS0127	188	190	NS	X075847	075847	1	G	W	39.54	34.71	1.69	0.5547	0.43	0.08	1.64	0.5	0.075	0.035	0.536	0.025	0.07	3.98	-0.43	3.62	18146	1.071	8.721	-7.65	NAF
NS0127	186	188	NS	X075846	075846	1	G	W	38.14	37.63	1.38	0.5418	0.42	0.063	1.38	0.51	0.069	0.03	0.543	0.011	0.04	3.44	-0.36	3.12	18145	0.918	8.89542	-7.97742	NAF
NS0127	94	96	NS	X075800	075800	1	G	W	29.56	49.52	1.09	0.3612	0.28	0.046	1.31	0.52	0.055	0.028	0.078	0.012	0.48	4.16	-0.27	4.37	18279	0.8568	9.06984	-8.21304	NAF
NS0127	190	192	NS	X075848	075848	1	G	W	36.18	37.12	2.02	0.6063	0.47	0.089	2.04	0.56	0.043	0.049	0.55	0.022	0.16	4.87	-0.21	4.82	18147	1.4994	9.76752	-8.26812	NAF
NS0127	6	8	NS	X075756	075756	1	G	D	30.93	47.67	2.98	0.0903	0.07	0.121	0.33	0.49	0.086	0.008	0.155	0.028	2.18	1.29	0.1	3.57	18217	0.2448	8.54658	-8.30178	NAF
NS0127	228	230	NS	X075868	075868	1	G	W	35.59	38.23	1.6	0.5676	0.44	0.074	1.46	0.56	0.074	0.047	0.504	0.018	0.53	5.31	-0.33	5.51	18292	1.4382	9.76752	-8.32932	NAF
NS0127	184	186	NS	X075845	075845	1	G	W	39.75	34.78	1.65	0.5418	0.42	0.076	1.59	0.55	0.077	0.037	0.449	0.024	0.05	3.65	-0.42	3.28	18144	1.1322	9.5931	-8.4609	NAF
NS0127	54	56	NS	X075780	075780	1	G	D	26.26	49.15	2.62	0.3612	0.28	0.113	2.15	0.65	0.035	0.088	0.121	0.015	0.35	6.47	0.08	6.9	18241	2.6928	11.3373	-8.6445	NAF
NS0127	230	232	NS	X075869	075869	1	G	W	38.66	35.02	1.69	0.5547	0.43	0.08	1.47	0.57	0.058	0.037	0.51	0.022	0.15	4.81	-0.37	4.59	18293	1.1322	9.94194	-8.80974	NAF
NS0127	92	94	NS	X075799	075799	1	G	W	29.78	41.04	2.67	0.5547	0.43	0.115	2.82	0.69	0.169	0.105	0.185	0.02	0.45	8.29	-0.02	8.72	18278	3.213	12.03498	-8.82198	NAF
NS0127	98	100	NS	X075802	075802	1	G	W	33	44.77	1.24	0.3612	0.28	0.055	1.35	0.56	0.106	0.03	0.13	0.021	0.21	4.09	-0.42	3.88	18281	0.918	9.76752	-8.84952	NAF
NS0127	226	228	NS	X075867	075867	1	G	W	27.83	49.45	1.38	0.5547	0.43	0.06	1.33	0.57	0.069	0.034	0.613	0.012	0.21	5.72	-0.13	5.8	18291	1.0404	9.94194	-8.90154	NAF
NS0127	176	178	NS	X075841	075841	1	G	W	31.61	45.13	1.22	0.6063	0.47	0.053	1.42	0.57	0.049	0.028	0.618	0.025	0.1	4.76	-0.17	4.69	18140	0.8568	9.94194	-9.08514	NAF
NS0127	206	208	NS	X075857	075857	1	G	W	38.48	35.02	2.04	0.5031	0.39	0.089	1.61	0.61	0.079	0.045	1.06	0.014	0.01	3.74	-0.3	3.45	18155	1.377	10.63962	-9.26262	NAF
NS0127	234	236	NS	X075871	075871	1	G	W	32.19	41.48	2.21	0.4386	0.34	0.108	1.83	0.64	0.05	0.062	0.088	0.014	0.39	6.48	-0.11	6.76	18295	1.8972	11.16288	-9.26568	NAF
NS0127	266	268	NS	X075887	075887	1	G	W	21.74	49.21	1.23	0.3612	0.28	0.051	2.16	0.61	0.072	0.039	0.015	0.011	1.02	14.11	0.12	15.25	18311	1.1934	10.63962	-9.44622	NAF
NS0127	214	216	NS	X075861	075861	1	G	W	34.07	41.7	1.21	0.645	0.5	0.051	1.41	0.61	0.049	0.027	0.797	0.013	0.12	4.91	-0.14	4.89	18159	0.8262	10.63962	-9.81342	NAF
NS0127	202	204	NS	X075855	075855	1	G	W	38.26	35.25	2.05	0.5031	0.39	0.095	1.69	0.64	0.082	0.043	0.987	0.014	0.04	3.68	-0.22	3.5	18153	1.3158	11.16288	-9.84708	NAF
NS0127	210	212	NS	X075859	075859	1	G	W	38.21	35.35	2.02	0.5418	0.42	0.087	1.65	0.64	0.077	0.042	1.06	0.02	0.02	4.13	-0.24	3.91	18157	1.2852	11.16288	-9.87768	NAF
NS0127	222	224	NS	X075865	075865	1	G	W	36.42	38.01	1.61	0.5934	0.46	0.067	1.4	0.62	0.074	0.028	0.813	0.022	0.08	4.64	-0.21	4.51	18289	0.8568	10.81404	-9.95724	NAF
NS0127	166	168	NS	X075836	075836	1	G	W	36.04	37.34	1.91	0.6192	0.48	0.081	1.95	0.66	0.057	0.045	0.355	0.011	0.27	4.81	-0.17	4.91	18135	1.377	11.51172	-10.13472	NAF
NS0127	178	180	NS	X075842	075842	1	G	W	34.76	39.14	1.79	0.6192	0.48	0.076	1.79	0.67	0.085	0.037	0.539	0.011	0.13	5.18	-0.28	5.03	18141	1.1322	11.68614	-10.55394	NAF
NS0127	156	158	NS	X075831	075831	1	G	W	34.11	39.51	1.82	0.6192	0.48	0.079	2.11	0.73	0.127	0.068	0.084	0.037	0.31	5.65	-0.22	5.74	18130	2.0808	12.73266	-10.65186	NAF
NS0127	218	220	NS	X075863	075863	1	G	W	24.4	54.55	0.88	0.6192	0.48	0.035	1.35	0.66	0.048	0.025	0.489	0.017	0.18	6.05	0.08	6.31	18161	0.765	11.51172	-10.74672	NAF
NS0127	204	206	NS	X075856	075856	1	G	W	36.9	37.46	1.67	0.5418	0.42	0.068	1.53	0.69	0.064	0.035	0.941	0.023	0.05	3.86	-0.16	3.75	18154	1.071	12.03498	-10.96398	NAF
NS0127	200	202	NS	X075854	075854	1	G	W	37.85	35.59	1.93	0.5418	0.42	0.088	1.75	0.7	0.065	0.037	0.911	0.014	0.02	4.08	-0.13	3.97	18152	1.1322	12.2094	-11.0772	NAF
NS0127	172	174	NS	X075839	075839	1	G	W	35.73	37.84	1.88	0.5934	0.46	0.083	1.91	0.71	0.066	0.038	0.586	0.026	0.12	4.86	-0.07	4.91	18138	1.1628	12.38382	-11.22102	NAF
NS0127	164	166	NS	X075835	075835	1	G	W	35.51	38.76	1.79	0.5934	0.46	0.075	1.9	0.74	0.08	0.045	0.193	0.015	0.25	4.58	-0.19	4.64	18134	1.377	12.90708	-11.53008	NAF
NS0127	224	226	NS	X075866	075866	1	G	W	26.25	52.45	1.01	0.6192	0.48	0.042	1.3	0.71	0.052	0.026	0.447	0.013	0.28	5.24	0.1	5.62	18290	0.7956	12.38382	-11.58822	NAF
NS0127	198	200	NS	X075853	075853	1	G	W	35.14	40.7	1.53	0.5289	0.41	0.067	1.54	0.74	0.059	0.036	0.688	0.009	0.02	3.72	-0.04	3.7	18151	1.1016	12.90708	-11.80548	NAF
NS0127	158	160	NS	X075832	075832	1	G	W	34.82	38.69	2.12	0.5805	0.45	0.087	2.21	0.79	0.05	0.058	0.088	0.024	0.28	5.3	-0.05	5.53	18131	1.7748	13.77918	-12.00438	NAF
NS0127	194	196	NS	X075850	075850	1	G	W	26	52.62	0.98	0.6708	0.52	0.038	1.45	0.77	0.047	0.024	0.63	0.015	0.09	5.33	0.17	5.59	18149	0.7344	13.43034	-12.69594	NAF
NS0127	232	234	NS	X075870	075870	1	G	W	36.6	36.12	1.95	0.5031	0.39	0.091	1.72	0.89	0.09	0.044	0.277	0.017	0.23	5.68	-0.16	5.75	18294	1.3464	15.52338	-14.17698	NAF
NS0127	160	162	NS	X075833	075833	1	G	W	34.66	38.56	1.8	0.6579	0.51	0.078	2.14	0.99	0.09	0.046	0.132	0.009	0.29	5.53	0.02	5.84	18132	1.4076	17.26758	-15.85998	NAF
NS0127	212	214	NS	X075860	075860	1	G	W	37.65	36.1	1.39	0.5934	0.46	0.058	1.51	0.99	0.045	0.03	0.877	0.02	0.04	4.31	0.16	4.51	18158	0.918	17.26758	-16.34958	NAF
NS0127	216	218	NS	X075862	075862	1	G	W	23.89	53.78	0.78	0.645	0.5	0.029	1.45	1.3	0.061	0.021	0.446	0.013	0.32	6.29	0.7	7.31	18160	0.6426	22.6746	-22.032	NAF
NS0128	152	154	NS	X138072	138072	1	G	W	21.64	43.82	9.43	0.2064	0.16	0.433	4.25	0.14	0.029	0.834	0.526	0.022	0.45	8.01	1.46	9.92	20129	25.5204	2.44188	23.07852	PAF(HC)
NS0128	154	156	NS	X138073	138073	1	G	W	25.06	40.84	5.16	0.5547	0.43	0.232	3.34	0.46	0.115	0.523	0.721	0.026	0.46	10.87	1.04	12.37	20130	16.0038	8.02332	7.98048	PAF(LC)
NS0128	150	152	NS	X138071	138071	1	G	W	24.64	37.84	6.04	0.5547	0.43	0.268	3.84	0.67	0.172	0.584	0.517	0.011	0.43	12.59	1.41	14.43	20128	17.8704	11.68614	6.18426	PAF(LC)
NS0128	202	204	NS	X138097	138097	1	G	W	20.07	49.51	7.23	0.1935	0.15	0.36	3.49	0.11	0.01	0.207	0.016	0.017	0.75	8.48	0.59	9.82	20172	6.3342	1.91862	4.41558	PAF(LC)
NS0128	200	202	NS	X138096	138096	1	G	W	25.85	36.94	3.65	0.5031	0.39	0.173	3.65	0.35	0.054	0.331	0.065	0.01	0.68	15.77	0.84	17.29	20171	10.1286	6.1047	4.0239	PAF(LC)
NS0128	198	200	NS	X138095	138095	1	G	W	28.52	35.56	1.8	0.4515	0.35	0.081	2.56	0.54	0.089	0.413	0.466	0.01	0.44	16.14	0.99	17.57	20170	12.6378	9.41868	3.21912	PAF(LC)
NS0128	78	80	NS	X138034	138034	1	G	D	27.32	42.43	5.28	0.3096	0.24	0.244	2.24	0.38	0.076	0.282	0.315	0.014	1.85	6.74	0.8	9.39	20056	8.6292	6.62796	2.00124	PAF(LC)
NS0128	204	206	NS	X138098	138098	1	G	W	23.14	43.16	5.63	0.3612	0.28	0.272	3.49	0.36	0.082	0.253	0.016	0.01	0.86	11.72	0.66	13.24	20173	7.7418	6.27912	1.46268	PAF(LC)
NS0128	68	70	NS	BX140029	X140029	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3029	-0.0306	-0.01744	-0.013158	NAF
NS0128	72	76	NS	BX140031-BX140032	X140031	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3030	-0.0306	-0.01744	-0.013158	NAF
NS0128	76	80	NS	BX140033-BX140034	X140033	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3031	-0.0306	-0.01744	-0.013158	NAF
NS0128	150	154	NS	BX140071-BX140072	X140071	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3050	-0.0306	-0.01744	-0.013158	NAF
NS0128	202	206	NS	BX140097-BX140098	X140097	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3063	-0.0306	-0.01744	-0.013158	NAF
NS0128	206	210	NS	BX140099-BX140100	X140099	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3064	-0.0306	-0.01744	-0.013158	NAF
NS0128	154	158	NS	BX140073-BX140074	X140073	2			64.27	7.578	0.53	0.053	0.03816	0.053	0.346	0.048	0.008	0.024	0.09	0.073	-0.01	-0.01	-0.01	-0.03	3051	0.7344	0.837216	-0.102816	NAF
NS0128	10	12	NS	X075899	075899	1	G	D	29.22	50.17	1.53	0.0258	0.02	0.056	0.05	0.02	0.102	0.007	0.338	0.014	4.75	0.62	0.17	5.54	18317	0.2142	0.34884	-0.13464	NAF
NS0128	14	16	NS	X138002	138002	1	G	D	19.87	65.28	1.67	0.0258	0.02	0.062	0.08	0.02	0.109	0.005	0.468	0.02	3.13	0.52	0.19	3.84	20294	0.153	0.34884	-0.19584	NAF
NS0128	158	162	NS	BX140075-BX140076	X140075	2			67.76	4.884	0.409	0.053	0.03816	0.053	0.277	0.04	0.006	0.016	0.066	0.101	-0.01	-0.01	-0.01	-0.03	3052	0.4896	0.69768	-0.20808	NAF
NS0128	6	8	NS	X075897	075897	1	G	D	26.82	54.57	1.74	0.0258	0.02	0.071	0.05	0.03	0.073	0.009	0.287	0.013	3.87	0.56	0.15	4.58	18315	0.2754	0.52326	-0.24786	NAF
NS0128	74	76	NS	X138032	138032	1	G	D	33.07	46.69	1.05	0.1806	0.14	0.046	0.07	0.02	0.139	0.003	0.353	0.012	3.22	0.51	0.11	3.84	20054	0.0918	0.34884	-0.25704	NAF
NS0128	4	6	NS	X075896	075896	1	G	D	31.46	46.37	2.33	0.0774	0.06	0.082	0.07	0.04	0.022	0.014	0.389	0.017	4.35	0.7	0.19	5.24	18314	0.4284	0.69768	-0.26928	NAF
NS0128	22	24	NS	X138006	138006	1	G	D	1.62	93.49	2.49	0.0258	0.02	0.117	0.04	0.02	0.016	0.002	0.026	0.031	0.37	0.85	0.14	1.36	20298	0.0612	0.34884	-0.28764	NAF
NS0128	66	68	NS	X138028	138028	1	G	D	38.98	38.73	1.42	0.5289	0.41	0.067	0.13	0.03	0.079	0.007	0.715	0.027	1.94	0.54	0.17	2.65	20032	0.2142	0.52326	-0.30906	NAF
NS0128	72	74	NS	X138031	138031	1	G	D	38.55	39.81	1.39	0.3096	0.24	0.066	0.12	0.03	0.095	0.007	0.404	0.013	1.73	0.53	0.22	2.48	20053	0.2142	0.52326	-0.30906	NAF
NS0128	8	10	NS	X075898	075898	1	G	D	21.88	62.64	1.37	0.0258	0.02	0.06	0.04	0.03	0.062	0.006	0.155	0.016	3.4	0.52	0.11	4.03	18316	0.1836	0.52326	-0.33966	NAF
NS0128	12	14	NS	X075900	075900	1	G	D	24.73	57.1	1.77	0.0387	0.03	0.068	0.06	0.03	0.117	0.006	0.343	0.013	4.03	0.61	0.15	4.79	18318	0.1836	0.52326	-0.33966	NAF
NS0128	68	70	NS	X138029	138029	1	G	D	37.11	41.22	1.14	0.8256	0.64	0.049	0.12	0.03	0.069	0.006	0.515	0.023	2.24	0.51	0.14	2.89	20033	0.1836	0.52326	-0.33966	NAF
NS0128	70	72	NS	X138030	138030	1	G	D	38.27	38.23	1.3	1.3803	1.07	0.061	0.15	0.03	0.072	0.006	0.374	0.012	2.28	0.66	0.22	3.16	20034	0.1836	0.52326	-0.33966	NAF
NS0128	24	26	NS	X138007	138007	1	G	D	3.01	87.13	5.18	0.0129	0.01	0.242	0.04	0.03	0.031	0.004	0.024	0.03	0.67	1.66	0.15	2.48	20299	0.1224	0.52326	-0.40086	NAF
NS0128	170	174	NS	BX140081-BX140082	X140081	2			66.71	6.695	0.195	0.006	0.00432	0.006	0.195	0.038	0.006	0.008	0.048	0.07	-0.01	-0.01	-0.01	-0.03	3055	0.2448	0.662796	-0.417996	NAF
NS0128	162	166	NS	BX140077-BX140078	X140077	2			67	5.112	0.152	0.005	0.0036	0.005	0.18	0.031	0.004	0.004	0.025	0.069	-0.01	-0.01	-0.01	-0.03	3053	0.1224	0.540702	-0.418302	NAF
NS0128	60	62	NS	X138025	138025	1	G	D	34.48	42.53	1.27	0.4257	0.33	0.059	0.22	0.03	0.072	0.003	0.462	0.013	4.76	0.69	0.17	5.62	20029	0.0918	0.52326	-0.43146	NAF
NS0128	32	34	NS	X138011	138011	1	G	D	6.72	78.38	7.2	0.1548	0.12	0.319	0.07	0.04	0.078	0.008	0.031	0.032	1.25	2.2	0.21	3.66	20303	0.2448	0.69768	-0.45288	NAF
NS0128	18	20	NS	X138004	138004	1	G	D	5.58	85.57	3.07	0.1935	0.15	0.12	0.1	0.04	0.064	0.005	0.486	0.036	1	0.75	0.21	1.96	20296	0.153	0.69768	-0.54468	NAF
NS0128	174	178	NS	BX140083-BX140084	X140083	2			67.22	4.017	0.104	0.001	0.00072	0.001	0.141	0.033	0.004	0.001	0.026	0.05	-0.01	-0.01	-0.01	-0.03	3056	0.0306	0.575586	-0.544986	NAF
NS0128	36	38	NS	X138013	138013	1	G	D	11.79	73.1	5.53	0.0516	0.04	0.192	0.09	0.05	0.112	0.01	0.027	0.031	1.84	1.57	0.2	3.61	20017	0.306	0.8721	-0.5661	NAF
NS0128	20	22	NS	X138005	138005	1	G	D	1.78	89.71	4.8	0.2322	0.18	0.253	0.05	0.04	0.018	0.004	0.04	0.039	0.49	1.56	0.2	2.25	20297	0.1224	0.69768	-0.57528	NAF
NS0128	58	60	NS	X138024	138024	1	G	D	40.1	32.53	1.63	0.8772	0.68	0.072	0.56	0.04	0.119	0.004	0.534	0.014	4.75	0.85	0.26	5.86	20028	0.1224	0.69768	-0.57528	NAF
NS0128	76	78	NS	X138033	138033	1	G	D	34.97	42.48	1.23	0.7224	0.56	0.054	0.22	0.04	0.086	0.004	0.413	0.016	3.91	0.6	0.21	4.72	20055	0.1224	0.69768	-0.57528	NAF
NS0128	166	170	NS	BX140079-BX140080	X140079	2			68.21	4.059	0.21	0.022	0.01584	0.022	0.235	0.047	0.006	0.007	0.021	0.065	-0.01	-0.01	-0.01	-0.03	3054	0.2142	0.819774	-0.605574	NAF
NS0128	30	32	NS	X138010	138010	1	G	D	3.19	77.86	11.52	0.1032	0.08	0.523	0.08	0.05	0.054	0.008	0.043	0.038	1.01	3.55	0.27	4.83	20302	0.2448	0.8721	-0.6273	NAF
NS0128	34	36	NS	X138012	138012	1	G	D	8	78.37	5.86	0.0903	0.07	0.152	0.09	0.05	0.084	0.008	0.024	0.041	1.64	1.64	0.19	3.47	20304	0.2448	0.8721	-0.6273	NAF
NS0128	26	28	NS	X138008	138008	1	G	D	2.94	78.66	11.34	0.0387	0.03	0.466	0.09	0.05	0.04	0.007	0.036	0.046	0.96	3.48	0.25	4.69	20300	0.2142	0.8721	-0.6579	NAF
NS0128	178	182	NS	BX140085-BX140086	X140085	2			67.2	5.549	0.226	0.01	0.0072	0.01	0.286	0.05	0.007	0.007	0.064	0.074	-0.01	-0.01	-0.01	-0.03	3057	0.2142	0.8721	-0.6579	NAF
NS0128	122	126	NS	BX140057-BX140058	X140057	2			64.44	7.963	0.35	0.018	0.01296	0.018	0.332	0.066	0.01	0.016	0.117	0.088	-0.01	-0.01	-0.01	-0.03	3043	0.4896	1.151172	-0.661572	NAF
NS0128	92	96	NS	BX140041-BX140042	X140041	2			69.18	3.114	0.093	0.009	0.00648	0.009	0.204	0.045	0.007	0.004	0.049	0.078	0.04	-0.01	-0.01	0.02	3035	0.1224	0.78489	-0.66249	NAF
NS0128	28	30	NS	X138009	138009	1	G	D	3.57	75.75	12.53	0.0258	0.02	0.533	0.09	0.05	0.047	0.006	0.052	0.04	1.09	3.86	0.27	5.22	20301	0.1836	0.8721	-0.6885	NAF
NS0128	38	40	NS	X138014	138014	1	G	D	9.72	78.28	4.09	0.0516	0.04	0.143	0.09	0.05	0.106	0.006	0.025	0.053	1.64	1.21	0.16	3.01	20018	0.1836	0.8721	-0.6885	NAF
NS0128	198	202	NS	BX140095-BX140096	X140095	2			65.84	4.959	0.246	0.007	0.00504	0.007	0.28	0.058	0.007	0.01	0.073	0.111	-0.01	-0.01	-0.01	-0.03	3062	0.306	1.011636	-0.705636	NAF
NS0128	186	188	NS	BX140089	X140089	2			67.99	4.03	0.195	0.012	0.00864	0.012	0.235	0.044	0.005	0.002	0.072	0.068	-0.01	-0.01	-0.01	-0.03	3059	0.0612	0.767448	-0.706248	NAF
NS0128	16	18	NS	X138003	138003	1	G	D	7.79	82.6	2.82	0.1032	0.08	0.107	0.12	0.05	0.072	0.005	0.626	0.033	1.29	0.56	0.26	2.11	20295	0.153	0.8721	-0.7191	NAF
NS0128	146	150	NS	BX140069-BX140070	X140069	2			66.24	6.017	0.242	0.013	0.00936	0.013	0.288	0.054	0.008	0.007	0.048	0.085	-0.01	-0.01	-0.01	-0.03	3049	0.2142	0.941868	-0.727668	NAF
NS0128	64	66	NS	X138027	138027	1	G	D	35.53	42.67	1.21	0.4128	0.32	0.054	0.18	0.05	0.087	0.004	0.61	0.022	2.9	0.72	0.1	3.72	20031	0.1224	0.8721	-0.7497	NAF
NS0128	40	42	NS	X138015	138015	1	G	D	11.81	73.83	4.49	0.0387	0.03	0.172	0.19	0.06	0.122	0.009	0.071	0.045	2.13	1.32	0.18	3.63	20019	0.2754	1.04652	-0.77112	NAF
NS0128	88	92	NS	BX140039-BX140040	X140039	2			68.83	3.21	0.095	0.005	0.0036	0.005	0.199	0.048	0.007	0.002	0.056	0.083	-0.01	-0.01	-0.01	-0.03	3034	0.0612	0.837216	-0.776016	NAF
NS0128	130	134	NS	BX140061-BX140062	X140061	2			65.96	6.222	0.261	0.011	0.00792	0.011	0.306	0.054	0.007	0.003	0.092	0.093	-0.01	-0.01	-0.01	-0.03	3045	0.0918	0.941868	-0.850068	NAF
NS0128	46	48	NS	X138018	138018	1	G	D	27.95	50.84	2.2	0.6063	0.47	0.095	0.53	0.06	0.064	0.005	0.223	0.036	3.95	1.04	0.19	5.18	20022	0.153	1.04652	-0.89352	NAF
NS0128	52	54	NS	X138021	138021	1	G	D	30.81	46.24	2.01	0.5805	0.45	0.093	0.66	0.06	0.089	0.004	0.43	0.027	4.62	0.97	0.2	5.79	20025	0.1224	1.04652	-0.92412	NAF
NS0128	96	100	NS	BX140043-BX140044	X140043	2			67.87	2.944	0.104	0.001	0.00072	0.001	0.26	0.06	0.011	0.004	0.024	0.101	-0.01	-0.01	-0.01	-0.03	3036	0.1224	1.04652	-0.92412	NAF
NS0128	182	186	NS	BX140087-BX140088	X140087	2			66.77	5.537	0.248	0.018	0.01296	0.018	0.275	0.06	0.006	0.004	0.088	0.075	-0.01	-0.01	-0.01	-0.03	3058	0.1224	1.04652	-0.92412	NAF
NS0128	142	146	NS	BX140067-BX140068	X140067	2			66.98	5.432	0.227	0.013	0.00936	0.013	0.272	0.066	0.011	0.007	0.043	0.106	-0.01	-0.01	-0.01	-0.03	3048	0.2142	1.151172	-0.936972	NAF
NS0128	80	84	NS	BX140035-BX140036	X140035	2			68.46	3.069	0.118	0.005	0.0036	0.005	0.237	0.056	0.009	0.001	0.041	0.065	-0.01	-0.01	-0.01	-0.03	3032	0.0306	0.976752	-0.946152	NAF
NS0128	126	128	NS	BX140059	X140059	2			67.11	4.786	0.209	0.011	0.00792	0.011	0.327	0.058	0.005	0.001	0.078	0.074	-0.01	0.04	-0.01	0.02	3044	0.0306	1.011636	-0.981036	NAF
NS0128	104	108	NS	BX140047-BX140048	X140047	2			67.05	4.984	0.133	0.008	0.00576	0.008	0.293	0.061	0.01	0.002	0.035	0.084	-0.01	-0.01	-0.01	-0.03	3038	0.0612	1.063962	-1.002762	NAF
NS0128	194	198	NS	BX140093-BX140094	X140093	2			68.63	3.485	0.184	0.015	0.0108	0.015	0.2	0.062	0.006	0.001	0.066	0.069	-0.01	-0.01	-0.01	-0.03	3061	0.0306	1.081404	-1.050804	NAF
NS0128	56	58	NS	X138023	138023	1	G	D	28.41	52.16	1.46	0.645	0.5	0.068	0.41	0.07	0.09	0.004	0.14	0.026	2.85	0.93	0.21	3.99	20027	0.1224	1.22094	-1.09854	NAF
NS0128	100	104	NS	BX140045-BX140046	X140045	2			66.62	4.355	0.135	0.007	0.00504	0.007	0.366	0.071	0.016	0.004	0.026	0.108	-0.01	-0.01	-0.01	-0.03	3037	0.1224	1.238382	-1.115982	NAF
NS0128	190	194	NS	BX140091-BX140092	X140091	2			68.01	3.987	0.209	0.014	0.01008	0.014	0.216	0.068	0.007	0.002	0.066	0.069	-0.01	-0.01	-0.01	-0.03	3060	0.0612	1.186056	-1.124856	NAF
NS0128	108	112	NS	BX140049-BX140050	X140049	2			67.69	4.13	0.117	0.009	0.00648	0.009	0.345	0.072	0.01	0.002	0.013	0.081	-0.01	-0.01	-0.01	-0.03	3039	0.0612	1.255824	-1.194624	NAF
NS0128	84	88	NS	BX140037-BX140038	X140037	2			68.96	2.539	0.123	0.008	0.00576	0.008	0.235	0.072	0.012	0.001	0.068	0.067	-0.01	-0.01	-0.01	-0.03	3033	0.0306	1.255824	-1.225224	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0128	42	44	NS	X138016	138016	1	G	D	20.97	60.1	3.99	0.1806	0.14	0.16	0.45	0.09	0.065	0.008	0.16	0.049	2.95	1.36	0.22	4.53	20020	0.2448	1.56978	-1.32498	NAF
NS0128	118	122	NS	BX140055-BX140056	X140055	2			66.4	6.211	0.23	0.015	0.0108	0.015	0.341	0.086	0.014	0.003	0.091	0.078	-0.01	-0.01	-0.01	-0.03	3042	0.0918	1.500012	-1.408212	NAF
NS0128	48	50	NS	X138019	138019	1	G	D	27.41	49.14	4.3	0.645	0.5	0.197	0.75	0.09	0.032	0.005	0.203	0.035	3.15	1.65	0.23	5.03	20023	0.153	1.56978	-1.41678	NAF
NS0128	138	142	NS	BX140065-BX140066	X140065	2			66.28	5.448	0.311	0.016	0.01152	0.016	0.384	0.102	0.02	0.009	0.041	0.121	-0.01	0.01	0.01	0.01	3047	0.2754	1.779084	-1.503684	NAF
NS0128	54	56	NS	X138022	138022	1	G	D	30.17	43.78	3.79	0.6708	0.52	0.174	0.89	0.1	0.115	0.006	0.883	0.034	4.27	1.36	0.25	5.88	20026	0.1836	1.7442	-1.5606	NAF
NS0128	134	138	NS	BX140063-BX140064	X140063	2			65.81	6.154	0.369	0.024	0.01728	0.024	0.367	0.108	0.024	0.009	0.059	0.19	-0.01	-0.01	-0.01	-0.03	3046	0.2754	1.883736	-1.608336	NAF
NS0128	114	118	NS	BX140053-BX140054	X140053	2			64.22	6.913	0.29	0.023	0.01656	0.023	0.47	0.101	0.013	0.005	0.077	0.129	-0.01	-0.01	-0.01	-0.03	3041	0.153	1.761642	-1.608642	NAF
NS0128	162	164	NS	X138077	138077	1	G	W	33.72	38.02	1.76	0.5934	0.46	0.08	1.89	0.19	0.029	0.051	0.244	0.014	0.31	8.47	-0.11	8.67	20134	1.5606	3.31398	-1.75338	NAF
NS0128	50	52	NS	X138020	138020	1	G	D	28.79	46.27	4.52	0.7224	0.56	0.192	0.81	0.11	0.074	0.004	0.692	0.046	3.51	1.58	0.23	5.32	20024	0.1224	1.91862	-1.79622	NAF
NS0128	170	172	NS	X138081	138081	1	G	W	34.14	40.6	1.5	0.516	0.4	0.071	1.38	0.16	0.024	0.032	0.274	0.009	0.21	6.12	-0.07	6.26	20138	0.9792	2.79072	-1.81152	NAF
NS0128	112	114	NS	BX140052	X140052	2			65.22	4.589	0.152	0.005	0.0036	0.005	0.405	0.114	0.016	0.003	0.012	0.108	-0.01	-0.01	-0.01	-0.03	3040	0.0918	1.988388	-1.896588	NAF
NS0128	44	46	NS	X138017	138017	1	G	D	24.99	52.52	4.81	0.1806	0.14	0.2	0.6	0.13	0.08	0.008	0.454	0.068	3.14	1.68	0.24	5.06	20021	0.2448	2.26746	-2.02266	NAF
NS0128	0	2	NS	X075894	075894	1	G	D	18.82	57.83	8.09	0.0129	0.01	0.258	0.13	0.15	0.01	0.017	0.168	0.04	3.67	2.3	0.22	6.19	18312	0.5202	2.6163	-2.0961	NAF
NS0128	2	4	NS	X075895	075895	1	G	D	29.02	48.38	2.88	0.1548	0.12	0.082	0.1	0.15	0.012	0.013	0.321	0.022	5.14	0.96	0.23	6.33	18313	0.3978	2.6163	-2.2185	NAF
NS0128	96	98	NS	X138043	138043	1	G	W	28.99	38.41	2.35	0.9804	0.76	0.105	1.99	0.34	0.081	0.121	0.366	0.004	2.11	11.09	0.36	13.56	20065	3.7026	5.93028	-2.22768	NAF
NS0128	166	168	NS	X138079	138079	1	G	W	35.17	38.28	1.45	0.5676	0.44	0.072	1.56	0.24	0.047	0.028	0.179	0.012	0.24	7.18	-0.19	7.23	20136	0.8568	4.18608	-3.32928	NAF
NS0128	208	210	NS	X138100	138100	1	G	W	22.22	46.75	2.43	0.6063	0.47	0.11	2.54	0.24	0.033	0.025	0.019	0.001	1.07	13.95	0.08	15.1	20175	0.765	4.18608	-3.42108	NAF
NS0128	146	148	NS	X138069	138069	1	G	W	29.25	37.75	2.47	0.6063	0.47	0.113	2.73	0.38	0.062	0.102	0.312	0.008	0.52	12.79	0.11	13.42	20126	3.1212	6.62796	-3.50676	NAF
NS0128	158	160	NS	X138075	138075	1	G	W	29.98	37.54	3.96	0.5676	0.44	0.18	2.78	0.55	0.141	0.184	0.582	0.014	0.44	9.56	0.36	10.36	20132	5.6304	9.5931	-3.9627	NAF
NS0128	160	162	NS	X138076	138076	1	G	W	25.24	39.98	6.49	0.5547	0.43	0.288	3.24	0.71	0.178	0.272	1.21	0.052	0.42	9.32	0.74	10.48	20133	8.3232	12.38382	-4.06062	NAF
NS0128	100	102	NS	X138045	138045	1	G	W	34.62	32.69	1.28	0.6321	0.49	0.058	1.91	0.26	0.069	0.007	0.254	0.008	1.82	11.12	0.05	12.99	20067	0.2142	4.53492	-4.32072	NAF
NS0128	206	208	NS	X138099	138099	1	G	W	21.65	47.39	5.54	0.4386	0.34	0.255	2.88	0.44	0.111	0.106	0.011	0.013	0.71	10.77	0.24	11.72	20174	3.2436	7.67448	-4.43088	NAF
NS0128	156	158	NS	X138074	138074	1	G	W	28.07	39.43	3.96	0.5547	0.43	0.177	2.59	0.78	0.22	0.285	0.804	0.015	0.36	9.91	0.55	10.82	20131	8.721	13.60476	-4.88376	NAF
NS0128	94	96	NS	X138042	138042	1	G	W	26.53	34.24	3.26	0.6321	0.49	0.147	3.05	0.55	0.061	0.142	1.01	0.018	2.24	16.17	0.43	18.84	20064	4.3452	9.5931	-5.2479	NAF
NS0128	172	174	NS	X138082	138082	1	G	W	31.59	42.94	1.25	0.7095	0.55	0.058	1.42	0.37	0.083	0.035	0.297	0.002	0.28	7.25	0.01	7.54	20139	1.071	6.45354	-5.38254	NAF
NS0128	164	166	NS	X138078	138078	1	G	W	33.22	39.86	1.4	0.6321	0.49	0.068	1.76	0.37	0.087	0.034	0.201	0.013	0.26	7.94	-0.1	8.1	20135	1.0404	6.45354	-5.41314	NAF
NS0128	122	124	NS	X138057	138057	1	G	W	29.78	36.71	1.94	0.516	0.4	0.087	2.33	0.45	0.068	0.072	0.802	0.015	0.49	13.57	0.08	14.14	20096	2.2032	7.8489	-5.6457	NAF
NS0128	132	134	NS	X138062	138062	1	G	W	30.76	34.24	1.63	0.6966	0.54	0.073	2.44	0.36	0.032	0.015	0.552	0.0005	0.7	15.21	-0.01	15.9	20101	0.459	6.27912	-5.82012	NAF
NS0128	174	176	NS	X138083	138083	1	G	W	30.04	45.3	1.13	0.645	0.5	0.052	1.49	0.4	0.072	0.029	0.261	0.021	0.17	7.3	-0.03	7.44	20140	0.8874	6.9768	-6.0894	NAF
NS0128	124	126	NS	X138058	138058	1	G	W	32	36.76	1.76	0.5289	0.41	0.079	2.09	0.47	0.076	0.066	0.603	0.01	0.48	11.33	0.04	11.85	20097	2.0196	8.19774	-6.17814	NAF
NS0128	180	182	NS	X138086	138086	1	G	W	32.74	36.61	1.77	0.6063	0.47	0.084	2.23	0.41	0.071	0.031	0.486	0.013	0.33	10.36	0.01	10.7	20161	0.9486	7.15122	-6.20262	NAF
NS0128	148	150	NS	X138070	138070	1	G	W	32.33	34.36	1.75	0.7611	0.59	0.082	2.27	0.47	0.088	0.064	0.271	0.005	0.45	12.75	-0.08	13.12	20127	1.9584	8.19774	-6.23934	NAF
NS0128	182	184	NS	X138087	138087	1	G	W	31.3	35.2	2.19	0.6192	0.48	0.101	2.7	0.4	0.077	0.023	0.799	0.015	0.31	12.8	0.12	13.23	20162	0.7038	6.9768	-6.273	NAF
NS0128	126	128	NS	X138059	138059	1	G	W	32.23	36.24	1.63	0.5547	0.43	0.075	2.01	0.43	0.074	0.035	0.585	0.003	0.39	11.42	-0.07	11.74	20098	1.071	7.50006	-6.42906	NAF
NS0128	116	118	NS	X138054	138054	1	G	W	27.75	34.82	2.52	0.5934	0.46	0.113	3.02	0.58	0.055	0.116	0.522	0.003	0.8	16.79	0.27	17.86	20093	3.5496	10.11636	-6.56676	NAF
NS0128	134	136	NS	X138063	138063	1	G	W	29.56	35.87	1.95	0.6063	0.47	0.086	2.73	0.46	0.079	0.034	0.39	0.006	0.58	14.59	-0.02	15.15	20102	1.0404	8.02332	-6.98292	NAF
NS0128	128	130	NS	X138060	138060	1	G	W	30.11	35.38	2.03	0.5934	0.46	0.091	2.61	0.48	0.049	0.042	0.643	0.009	0.75	13.97	0.08	14.8	20099	1.2852	8.37216	-7.08696	NAF
NS0128	130	132	NS	X138061	138061	1	G	W	31.23	32.96	1.47	0.7482	0.58	0.068	2.51	0.45	0.041	0.018	0.536	0.0005	0.7	15.81	0.01	16.52	20100	0.5508	7.8489	-7.2981	NAF
NS0128	104	106	NS	X138047	138047	1	G	W	32.07	32.5	1.18	0.645	0.5	0.053	2.57	0.44	0.071	0.009	0.236	0.005	0.74	15.38	-0.02	16.1	20069	0.2754	7.67448	-7.39908	NAF
NS0128	144	146	NS	X138068	138068	1	G	W	30.53	40.31	1.46	0.6192	0.48	0.068	1.99	0.52	0.09	0.053	0.338	0.011	0.41	10.43	-0.08	10.76	20125	1.6218	9.06984	-7.44804	NAF
NS0128	176	178	NS	X138084	138084	1	G	W	32.83	37.66	1.68	0.645	0.5	0.082	2.18	0.51	0.085	0.044	0.361	0.021	0.33	9.35	0.07	9.75	20141	1.3464	8.89542	-7.54902	NAF
NS0128	92	94	NS	X138041	138041	1	G	W	32.09	35.64	1.21	0.5934	0.46	0.053	1.99	0.47	0.075	0.008	0.783	0.023	0.53	12.56	-0.13	12.96	20063	0.2448	8.19774	-7.95294	NAF
NS0128	98	100	NS	X138044	138044	1	G	W	29.67	35.62	1.13	0.9159	0.71	0.049	2.43	0.5	0.084	0.018	0.256	0.004	1.45	14.8	0.08	16.33	20066	0.5508	8.721	-8.1702	NAF
NS0128	186	188	NS	X138089	138089	1	G	W	29.01	35.71	1.88	0.5805	0.45	0.087	2.68	0.52	0.073	0.009	0.69	0.007	0.5	15.13	0.81	16.44	20164	0.2754	9.06984	-8.79444	NAF
NS0128	142	144	NS	X138067	138067	1	G	W	32.43	37	1.61	0.5934	0.46	0.073	2.19	0.61	0.099	0.054	0.249	0.003	0.34	10.59	-0.17	10.76	20106	1.6524	10.63962	-8.98722	NAF
NS0128	136	138	NS	X138064	138064	1	G	W	28.76	36.9	2.91	0.5934	0.46	0.126	3.01	0.79	0.145	0.152	0.378	0.013	0.56	12.88	0.27	13.71	20103	4.6512	13.77918	-9.12798	NAF
NS0128	102	104	NS	X138046	138046	1	G	W	31.04	31.57	1.02	0.7095	0.55	0.046	2.82	0.55	0.099	0.012	0.129	0.0005	0.81	17.4	0.01	18.22	20068	0.3672	9.5931	-9.2259	NAF
NS0128	196	198	NS	X138094	138094	1	G	W	29.35	35.57	2.03	0.4515	0.35	0.095	2.65	0.59	0.083	0.03	0.688	0.008	0.56	15.05	0.08	15.69	20169	0.918	10.29078	-9.37278	NAF
NS0128	90	92	NS	X138040	138040	1	G	W	31.76	35.33	1.38	0.5676	0.44	0.061	2.1	0.56	0.075	0.009	0.827	0.021	0.5	12.77	0	13.27	20062	0.2754	9.76752	-9.49212	NAF
NS0128	178	180	NS	X138085	138085	1	G	W	31.99	36.27	1.83	0.645	0.5	0.084	2.42	0.64	0.116	0.047	0.45	0.014	0.4	10.66	0.1	11.16	20142	1.4382	11.16288	-9.72468	NAF
NS0128	140	142	NS	X138066	138066	1	G	W	29.4	35.81	2.22	0.6837	0.53	0.098	3.01	0.72	0.116	0.088	0.248	0.009	0.48	13.95	0.07	14.5	20105	2.6928	12.55824	-9.86544	NAF
NS0128	106	108	NS	X138048	138048	1	G	W	30.11	36.5	1.12	0.5934	0.46	0.05	2.35	0.64	0.093	0.01	0.27	0.008	0.64	14.29	0.01	14.94	20070	0.306	11.16288	-10.85688	NAF
NS0128	188	190	NS	X138090	138090	1	G	W	26.26	44.28	1.07	0.5418	0.42	0.049	1.97	0.64	0.046	0.009	0.385	0.0005	0.46	12.4	0.27	13.13	20165	0.2754	11.16288	-10.88748	NAF
NS0128	88	90	NS	X138039	138039	1	G	W	30.3	36.49	1.02	0.6708	0.52	0.046	2.22	0.69	0.085	0.009	0.587	0.017	0.8	13.7	0.04	14.54	20061	0.2754	12.03498	-11.75958	NAF
NS0128	62	64	NS	X138026	138026	1	G	D	29.27	40.12	0.98	0.6837	0.53	0.044	1.66	0.7	0.107	0.007	0.504	0.004	2.14	10.66	0.06	12.86	20030	0.2142	12.2094	-11.9952	NAF
NS0128	82	84	NS	X138036	138036	1	G	D	32.02	32.75	1.28	0.6321	0.49	0.056	2.51	0.72	0.079	0.009	0.51	0.01	0.61	14.97	0.09	15.67	20058	0.2754	12.55824	-12.28284	NAF
NS0128	84	86	NS	X138037	138037	1	G	W	30.07	37.28	1.08	0.645	0.5	0.045	2.12	0.72	0.098	0.008	0.497	0.012	0.53	13.73	0.05	14.31	20059	0.2448	12.55824	-12.31344	NAF
NS0128	192	194	NS	X138092	138092	1	G	W	29.48	34.39	1.5	0.5547	0.43	0.069	2.5	0.77	0.067	0.01	0.5	0.007	0.74	16.23	0.26	17.23	20167	0.306	13.43034	-13.12434	NAF
NS0128	108	110	NS	X138049	138049	1	G	W	29.7	33.9	1.02	0.5934	0.46	0.046	2.9	0.77	0.067	0.009	0.118	0.004	0.67	16.98	0.17	17.82	20089	0.2754	13.43034	-13.15494	NAF
NS0128	110	112	NS	X138050	138050	1	G	W	30.34	29.88	1.16	0.6708	0.52	0.048	3.35	0.78	0.067	0.012	0.078	0.0005	0.72	19.35	0.17	20.24	20090	0.3672	13.60476	-13.23756	NAF
NS0128	86	88	NS	X138038	138038	1	G	W	31.18	33.34	1.73	0.7224	0.56	0.075	2.22	0.83	0.133	0.032	1.05	0.012	0.49	14.08	0.04	14.61	20060	0.9792	14.47686	-13.49766	NAF
NS0128	120	122	NS	X138056	138056	1	G	W	28.67	35.23	1.65	0.5676	0.44	0.075	2.62	0.81	0.105	0.019	0.762	0.007	0.64	15.89	0.18	16.71	20095	0.5814	14.12802	-13.54662	NAF
NS0128	138	140	NS	X138065	138065	1	G	W	28.94	35.38	2.36	0.7224	0.56	0.103	3.07	1.01	0.218	0.124	0.34	0.01	0.58	13.83	0.21	14.62	20104	3.7944	17.61642	-13.82202	NAF
NS0128	194	196	NS	X138093	138093	1	G	W	30.55	37.71	1.89	0.3999	0.31	0.095	2.06	0.9	0.078	0.017	0.683	0.011	0.32	11.3	0.28	11.9	20168	0.5202	15.6978	-15.1776	NAF
NS0128	168	170	NS	X138080	138080	1	G	W	27.25	36.9	4.54	0.6192	0.48	0.207	3.87	1.33	0.205	0.256	0.206	0.02	0.46	11.49	0.79	12.74	20137	7.8336	23.19786	-15.36426	NAF
NS0128	190	192	NS	X138091	138091	1	G	W	28.5	39.85	1.59	0.516	0.4	0.079	2.32	0.95	0.082	0.009	0.537	0.013	0.46	12.17	0.47	13.1	20166	0.2754	16.5699	-16.2945	NAF
NS0128	112	114	NS	X138052	138052	1	G	W	29.43	31.42	1.02	0.7482	0.58	0.044	3.2	0.98	0.084	0.014	0.085	0.0005	0.89	18.82	0.24	19.95	20091	0.4284	17.09316	-16.66476	NAF
NS0128	114	116	NS	X138053	138053	1	G	W	27.47	36.58	1.08	0.6321	0.49	0.05	2.78	1.01	0.054	0.012	0.299	0.002	0.64	16.65	0.48	17.77	20092	0.3672	17.61642	-17.24922	NAF
NS0128	80	82	NS	X138035	138035	1	G	D	30.37	32.21	1.18	0.5934	0.46	0.049	2.69	1.09	0.17	0.014	0.253	0.008	1.25	16.52	0.23	18	20057	0.4284	19.01178	-18.58338	NAF
NS0128	118	120	NS	X138055	138055	1	G	W	25.62	35.55	2.27	0.5289	0.41	0.1	3.29	1.39	0.097	0.047	0.705	0.002	0.57	17.34	1.02	18.93	20094	1.4382	24.24438	-22.80618	NAF
NS0128	184	186	NS	X138088	138088	1	G	W	27.9	31.38	3.09	0.5547	0.43	0.14	3.87	1.46	0.089	0.022	1.13	0.01	0.53	16.33	1.26	18.12	20163	0.6732	25.46532	-24.79212	NAF
NS0129	290	292	NS	X138285	138285	1	G	W	31.48	39.71	2.78	0.4128	0.32	0.135	3.06	0.36	0.086	0.556	0.756	0.235	1.12	5.19	0.9	7.21	20327	17.0136	6.27912	10.73448	PAF(HC)
NS0129	212	214	NS	X138245	138245	1	G	W	30.8	40.21	3.35	0.3483	0.27	0.162	3.52	0.24	0.043	0.371	0.489	0.124	0.91	5.56	0.59	7.06	20414	11.3526	4.18608	7.16652	PAF(LC)
NS0129	256	258	NS	X138268	138268	1	G	W	24.35	43.34	6.68	0.2838	0.22	0.31	4.52	0.4	0.107	0.352	0.868	0.254	1.29	5.59	1.05	7.93	20202	10.7712	6.9768	3.7944	PAF(LC)
NS0129	254	256	NS	X138267	138267	1	G	W	25.77	41.55	5.51	0.4257	0.33	0.26	3.89	0.28	0.057	0.27	0.713	0.206	1.57	7.32	0.77	9.66	20201	8.262	4.88376	3.37824	PAF(LC)
NS0129	258	260	NS	X138269	138269	1	G	W	26.93	41.23	5.2	0.3483	0.27	0.248	3.48	0.25	0.052	0.236	0.553	0.17	1.82	6.83	0.71	9.36	20203	7.2216	4.3605	2.8611	PAF(LC)
NS0129	250	252	NS	X138265	138265	1	G	W	30.47	37.94	4.92	0.3354	0.26	0.235	3.54	0.33	0.079	0.268	0.886	0.255	1.91	5.17	0.77	7.85	20199	8.2008	5.75586	2.44494	PAF(LC)
NS0129	272	274	NS	X138276	138276	1	G	W	26.62	40.38	3.78	0.5031	0.39	0.175	3.99	0.38	0.086	0.253	0.743	0.202	1.3	9.44	0.76	11.5	20210	7.7418	6.62796	1.11384	PAF(LC)
NS0129	100	102	NS	X138188	138188	1	G	W	34.45	39.35	3.12	0.5934	0.46	0.151	1.17	0.05	0.056	0.059	0.013	0.014	0.68	5.13	0.1	5.91	20250	1.8054	0.8721	0.9333	PAF(LC)
NS0129	252	254	NS	X138266	138266	1	G	W	25.83	41.49	5.27	0.3741	0.29	0.239	4.11	0.47	0.12	0.285	0.96	0.275	1.52	7.15	0.79	9.46	20200	8.721	8.19774	0.52326	PAF(LC)
NS0129	110	112	NS	X138193	138193	1	G	W	37.31	38.09	1.97	0.3096	0.24	0.085	0.74	0.06	0.05	0.039	0.02	0.017	2.94	1.74	0.21	4.89	20309	1.1934	1.04652	0.14688	PAF(LC)
NS0129	144	146	NS	X138211	138211	1	G	W	28.64	42.59	3.47	0.5031	0.39	0.148	3.58	0.31	0.071	0.181	0.432	0.047	0.32	6.67	0.2	7.19	20344	5.5386	5.40702	0.13158	PAF(LC)
NS0129	98	100	NS	X138187	138187	1	G	W	36	40.85	3.02	0.516	0.4	0.143	0.45	0.04	0.035	0.023	0.068	0.02	1.42	1.48	0.22	3.12	20249	0.7038	0.69768	0.00612	PAF(LC)
NS0129	122	126	NS	BX140199-BX140200	X140199	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3080	-0.0306	-0.01744	-0.013158	NAF
NS0129	254	258	NS	BX140267-BX140268	X140267	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3114	-0.0306	-0.01744	-0.013158	NAF
NS0129	64	66	NS	X138170	138170	1	G	D	33.78	47.79	1.97	0.0645	0.05	0.086	0.05	0.02	0.018	0.008	0.065	0.02	0.76	0.82	0.2	1.78	20178	0.2448	0.34884	-0.10404	NAF
NS0129	66	68	NS	X138171	138171	1	G	D	38.03	42.81	1.45	0.4773	0.37	0.065	0.06	0.02	0.036	0.008	0.063	0.025	0.15	0.07	0	0.22	20233	0.2448	0.34884	-0.10404	NAF
NS0129	60	62	NS	X138168	138168	1	G	D	30.97	52.13	1.82	0.1548	0.12	0.079	0.04	0.02	0.02	0.006	0.047	0.013	0.49	0.52	0.13	1.14	20176	0.1836	0.34884	-0.16524	NAF
NS0129	70	72	NS	X138173	138173	1	G	D	36.08	45.21	1.14	0.3741	0.29	0.053	0.07	0.02	0.027	0.006	0.015	0.008	0.93	0.4	-0.02	1.31	20235	0.1836	0.34884	-0.16524	NAF
NS0129	98	102	NS	BX140187-BX140188	X140187	2			65.87	4.92	0.304	0.033	0.02376	0.033	0.227	0.03	0.027	0.011	0.004	0.097	0.08	0.39	-0.01	0.46	3074	0.3366	0.52326	-0.18666	NAF
NS0129	68	70	NS	X138172	138172	1	G	D	40.14	38.33	1.55	0.4773	0.37	0.074	0.07	0.03	0.02	0.009	0.087	0.015	0.93	0.53	0.06	1.52	20234	0.2754	0.52326	-0.24786	NAF
NS0129	102	104	NS	BX140189	X140189	2			66.38	3.749	0.306	0.029	0.02088	0.029	0.163	0.031	0.027	0.008	0.01	0.125	-0.01	-0.01	-0.01	-0.03	3075	0.2448	0.540702	-0.295902	NAF
NS0129	70	74	NS	BX140173-BX140174	X140173	2			68.36	3.155	0.248	0.008	0.00576	0.008	0.099	0.021	0.011	0.001	0.001	0.079	0.15	0.22	-0.01	0.36	3067	0.0306	0.366282	-0.335682	NAF
NS0129	62	64	NS	X138169	138169	1	G	D	31.4	51.71	1.94	0.1032	0.08	0.086	0.05	0.03	0.023	0.006	0.053	0.015	0.53	0.57	0.11	1.21	20177	0.1836	0.52326	-0.33966	NAF
NS0129	72	74	NS	X138174	138174	1	G	D	36.44	45.01	1.12	0.4257	0.33	0.05	0.08	0.03	0.028	0.006	0.014	0.027	0.94	0.4	-0.01	1.33	20236	0.1836	0.52326	-0.33966	NAF
NS0129	74	76	NS	X138175	138175	1	G	D	34.56	46.07	1.83	0.2322	0.18	0.088	0.14	0.03	0.049	0.006	0.024	0.009	1.01	0.69	0.03	1.73	20237	0.1836	0.52326	-0.33966	NAF
NS0129	74	78	NS	BX140175-BX140176	X140175	2			68.16	3.179	0.334	0.019	0.01368	0.019	0.115	0.024	0.014	0.002	0.003	0.083	0.21	0.38	0.14	0.73	3068	0.0612	0.418608	-0.357408	NAF
NS0129	66	70	NS	BX140171-BX140172	X140171	2			68.45	3.297	0.281	0.007	0.00504	0.007	0.106	0.023	0.01	0.001	0.002	0.076	0.15	0.21	-0.01	0.35	3066	0.0306	0.401166	-0.370566	NAF
NS0129	270	274	NS	BX140275-BX140276	X140275	2			62.99	8.838	0.564	0.07	0.0504	0.07	0.695	0.111	0.023	0.051	0.113	0.128	-0.01	-0.01	-0.01	-0.03	3118	1.5606	1.936062	-0.375462	NAF
NS0129	102	104	NS	X138189	138189	1	G	W	34.84	41.04	3.02	0.9675	0.75	0.147	0.56	0.05	0.113	0.014	0.12	0.017	2.02	1.48	0.28	3.78	20305	0.4284	0.8721	-0.4437	NAF
NS0129	250	254	NS	BX140265-BX140266	X140265	2			62.25	8.74	0.709	0.07	0.0504	0.07	0.64	0.086	0.015	0.033	0.134	0.147	-0.01	-0.01	-0.01	-0.03	3113	1.0098	1.500012	-0.490212	NAF
NS0129	78	82	NS	BX140177-BX140178	X140177	2			68.25	3.373	0.256	0.014	0.01008	0.014	0.141	0.031	0.021	0.001	0.025	0.098	0.13	0.16	-0.01	0.28	3069	0.0306	0.540702	-0.510102	NAF
NS0129	132	136	NS	BX140205-BX140206	X140205	2			67.4	5.097	0.325	0.028	0.02016	0.028	0.38	0.058	0.011	0.016	0.08	0.086	-0.01	-0.01	-0.01	-0.03	3083	0.4896	1.011636	-0.522036	NAF
NS0129	62	66	NS	BX140169-BX140170	X140169	2			64.4	4.646	0.362	0.001	0.00072	0.001	0.064	0.035	0.013	0.002	0.003	0.127	-0.01	-0.01	-0.01	-0.03	3065	0.0612	0.61047	-0.54927	NAF
NS0129	114	118	NS	BX140195-BX140196	X140195	2			56.06	4.504	0.156	0.001	0.00072	0.001	0.208	0.039	0.008	0.004	0.023	0.072	-0.01	-0.01	-0.01	-0.03	3078	0.1224	0.680238	-0.557838	NAF
NS0129	140	144	NS	BX140209-BX140210	X140209	2			67.19	5.269	0.348	0.029	0.02088	0.029	0.394	0.053	0.01	0.011	0.086	0.094	-0.01	-0.01	-0.01	-0.03	3085	0.3366	0.924426	-0.587826	NAF
NS0129	94	98	NS	BX140185-BX140186	X140185	2			67.68	4.161	0.167	0.019	0.01368	0.019	0.224	0.039	0.012	0.003	0.001	0.084	-0.01	-0.01	-0.01	-0.03	3073	0.0918	0.680238	-0.588438	NAF
NS0129	82	86	NS	BX140179-BX140180	X140179	2			68.43	4.58	0.211	0.017	0.01224	0.017	0.217	0.045	0.016	0.005	0.044	0.09	-0.01	-0.01	-0.01	-0.03	3070	0.153	0.78489	-0.63189	NAF
NS0129	258	262	NS	BX140269-BX140270	X140269	2			66.73	6.244	0.296	0.032	0.02304	0.032	0.383	0.06	0.011	0.012	0.07	0.103	-0.01	-0.01	-0.01	-0.03	3115	0.3672	1.04652	-0.67932	NAF
NS0129	78	80	NS	X138177	138177	1	G	D	36.23	42.88	1.48	0.5031	0.39	0.064	0.25	0.05	0.058	0.006	0.224	0.02	1.72	0.57	0.08	2.37	20239	0.1836	0.8721	-0.6885	NAF
NS0129	106	110	NS	BX140191-BX140192	X140191	2			67.93	4.101	0.233	0.019	0.01368	0.019	0.302	0.053	0.014	0.007	0.015	0.089	-0.01	0.11	-0.01	0.09	3076	0.2142	0.924426	-0.710226	NAF
NS0129	286	290	NS	BX140283-BX140284	X140283	2			65.41	7.1	0.353	0.03	0.0216	0.03	0.471	0.07	0.014	0.016	0.097	0.132	-0.01	-0.01	-0.01	-0.03	3122	0.4896	1.22094	-0.73134	NAF
NS0129	110	114	NS	BX140193-BX140194	X140193	2			69.27	3.332	0.178	0.014	0.01008	0.014	0.191	0.049	0.015	0.004	0.008	0.084	0.02	-0.01	-0.01	0	3077	0.1224	0.854658	-0.732258	NAF
NS0129	160	164	NS	BX140219-BX140220	X140219	2			65.1	6.419	0.353	0.026	0.01872	0.026	0.398	0.061	0.014	0.01	0.037	0.087	0.01	-0.01	-0.01	-0.01	3090	0.306	1.063962	-0.757962	NAF
NS0129	90	94	NS	BX140183-BX140184	X140183	2			69.36	4.04	0.105	0.017	0.01224	0.017	0.25	0.051	0.012	0.004	0.001	0.078	-0.01	-0.01	-0.01	-0.03	3072	0.1224	0.889542	-0.767142	NAF
NS0129	128	132	NS	BX140203-BX140204	X140203	2			68.31	5.327	0.223	0.024	0.01728	0.024	0.343	0.055	0.011	0.006	0.04	0.077	-0.01	-0.01	-0.01	-0.03	3082	0.1836	0.95931	-0.77571	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0129	144	148	NS	BX140211-BX140212	X140211	2			67.96	5.819	0.334	0.03	0.0216	0.03	0.391	0.064	0.013	0.011	0.051	0.086	-0.01	-0.01	-0.01	-0.03	3086	0.3366	1.116288	-0.779688	NAF
NS0129	148	152	NS	BX140213-BX140214	X140213	2			68.44	5.111	0.365	0.022	0.01584	0.022	0.307	0.059	0.012	0.008	0.074	0.136	-0.01	-0.01	-0.01	-0.03	3087	0.2448	1.029078	-0.784278	NAF
NS0129	86	90	NS	BX140181-BX140182	X140181	2			69.23	4.281	0.114	0.015	0.0108	0.015	0.226	0.049	0.014	0.002	0.003	0.07	-0.01	-0.01	-0.01	-0.03	3071	0.0612	0.854658	-0.793458	NAF
NS0129	238	240	NS	BX140259	X140259	2			67.08	6.861	0.294	0.031	0.02232	0.031	0.512	0.058	0.013	0.007	0.083	0.097	-0.01	-0.01	-0.01	-0.03	3110	0.2142	1.011636	-0.797436	NAF
NS0129	76	78	NS	X138176	138176	1	G	D	24.25	58.68	3.58	0.1935	0.15	0.159	0.41	0.06	0.029	0.008	0.049	0.035	0.91	1.21	0.14	2.26	20238	0.2448	1.04652	-0.80172	NAF
NS0129	126	128	NS	BX140202	X140202	2			67.42	6.242	0.27	0.029	0.02088	0.029	0.43	0.064	0.013	0.01	0.012	0.129	-0.01	-0.01	-0.01	-0.03	3081	0.306	1.116288	-0.810288	NAF
NS0129	96	98	NS	X138186	138186	1	G	W	34.27	42.63	2.21	0.2838	0.22	0.108	1.08	0.08	0.041	0.019	0.024	0.018	1.09	3.25	0.1	4.44	20248	0.5814	1.39536	-0.81396	NAF
NS0129	176	180	NS	BX140227-BX140228	X140227	2			63.89	8.549	0.486	0.037	0.02664	0.037	0.629	0.075	0.016	0.016	0.132	0.163	0.04	-0.01	-0.01	0.02	3094	0.4896	1.30815	-0.81855	NAF
NS0129	266	270	NS	BX140273-BX140274	X140273	2			64.33	8.067	0.434	0.039	0.02808	0.039	0.567	0.078	0.016	0.017	0.127	0.115	-0.01	-0.01	-0.01	-0.03	3117	0.5202	1.360476	-0.840276	NAF
NS0129	246	250	NS	BX140263-BX140264	X140263	2			65.36	8.464	0.418	0.035	0.0252	0.035	0.546	0.07	0.012	0.012	0.111	0.113	-0.01	-0.01	-0.01	-0.03	3112	0.3672	1.22094	-0.85374	NAF
NS0129	200	204	NS	BX140239-BX140240	X140239	2			67.47	4.978	0.215	0.022	0.01584	0.022	0.339	0.063	0.013	0.008	0.04	0.088	-0.01	-0.01	-0.01	-0.03	3100	0.2448	1.098846	-0.854046	NAF
NS0129	80	82	NS	X138178	138178	1	G	D	36.6	42.14	1.28	0.6966	0.54	0.054	0.27	0.06	0.06	0.006	0.326	0.032	1.84	0.49	0.05	2.38	20240	0.1836	1.04652	-0.86292	NAF
NS0129	136	140	NS	BX140207-BX140208	X140207	2			67.62	5.318	0.26	0.022	0.01584	0.022	0.347	0.062	0.013	0.007	0.1	0.085	-0.01	-0.01	-0.01	-0.03	3084	0.2142	1.081404	-0.867204	NAF
NS0129	212	216	NS	BX140245-BX140246	X140245	2			67.27	5.697	0.288	0.025	0.018	0.025	0.404	0.068	0.015	0.01	0.054	0.095	-0.01	-0.01	-0.01	-0.03	3103	0.306	1.186056	-0.880056	NAF
NS0129	104	106	NS	X138190	138190	1	G	W	34.33	42.22	1.69	0.3354	0.26	0.076	1.27	0.15	0.068	0.056	0.085	0.026	0.64	4.16	-0.05	4.75	20306	1.7136	2.6163	-0.9027	NAF
NS0129	294	298	NS	BX140287-BX140288	X140287	2			67.15	5.935	0.272	0.027	0.01944	0.027	0.354	0.063	0.013	0.006	0.06	0.108	-0.01	-0.01	-0.01	-0.03	3124	0.1836	1.098846	-0.915246	NAF
NS0129	278	282	NS	BX140279-BX140280	X140279	2			63.66	9.292	0.409	0.028	0.02016	0.028	0.644	0.076	0.014	0.013	0.126	0.115	-0.01	-0.01	-0.01	-0.03	3120	0.3978	1.325592	-0.927792	NAF
NS0129	164	168	NS	BX140221-BX140222	X140221	2			67.36	4.717	0.321	0.026	0.01872	0.026	0.357	0.068	0.021	0.008	0.058	0.069	-0.01	-0.01	-0.01	-0.03	3091	0.2448	1.186056	-0.941256	NAF
NS0129	184	188	NS	BX140231-BX140232	X140231	2			70.23	2.898	0.174	0.026	0.01872	0.026	0.22	0.056	0.008	0.001	0.074	0.075	-0.01	-0.01	-0.01	-0.03	3096	0.0306	0.976752	-0.946152	NAF
NS0129	168	172	NS	BX140223-BX140224	X140223	2			68.18	5.396	0.276	0.025	0.018	0.025	0.344	0.069	0.014	0.008	0.059	0.082	-0.01	-0.01	-0.01	-0.03	3092	0.2448	1.203498	-0.958698	NAF
NS0129	234	238	NS	BX140257-BX140258	X140257	2			67.75	5.456	0.178	0.017	0.01224	0.017	0.39	0.062	0.014	0.004	0.062	0.087	-0.01	-0.01	-0.01	-0.03	3109	0.1224	1.081404	-0.959004	NAF
NS0129	118	122	NS	BX140197-BX140198	X140197	2			68.29	4.766	0.145	0.014	0.01008	0.014	0.328	0.063	0.013	0.004	0.03	0.094	-0.01	-0.01	-0.01	-0.03	3079	0.1224	1.098846	-0.976446	NAF
NS0129	282	286	NS	BX140281-BX140282	X140281	2			67.29	6.528	0.206	0.017	0.01224	0.017	0.385	0.065	0.011	0.005	0.066	0.105	-0.01	-0.01	-0.01	-0.03	3121	0.153	1.13373	-0.98073	NAF
NS0129	262	266	NS	BX140271-BX140272	X140271	2			65.03	7.713	0.343	0.037	0.02664	0.037	0.535	0.083	0.016	0.015	0.1	0.086	-0.01	-0.01	-0.01	-0.03	3116	0.459	1.447686	-0.988686	NAF
NS0129	156	160	NS	BX140217-BX140218	X140217	2			65.14	7.567	0.409	0.031	0.02232	0.031	0.48	0.078	0.017	0.012	0.081	0.093	-0.01	-0.01	-0.01	-0.03	3089	0.3672	1.360476	-0.993276	NAF
NS0129	226	230	NS	BX140253-BX140254	X140253	2			67.17	5.515	0.181	0.015	0.0108	0.015	0.367	0.066	0.014	0.005	0.049	0.084	-0.01	-0.01	-0.01	-0.03	3107	0.153	1.151172	-0.998172	NAF
NS0129	274	278	NS	BX140277-BX140278	X140277	2			69.07	4.194	0.169	0.015	0.0108	0.015	0.253	0.07	0.013	0.005	0.123	0.089	-0.01	-0.01	-0.01	-0.03	3119	0.153	1.22094	-1.06794	NAF
NS0129	208	212	NS	BX140243-BX140244	X140243	2			68.18	5.329	0.208	0.021	0.01512	0.021	0.369	0.072	0.016	0.006	0.039	0.085	-0.01	-0.01	-0.01	-0.03	3102	0.1836	1.255824	-1.072224	NAF
NS0129	220	224	NS	BX140249-BX140250	X140249	2			67.3	5.95	0.246	0.026	0.01872	0.026	0.391	0.074	0.016	0.007	0.053	0.1	-0.01	-0.01	-0.01	-0.03	3105	0.2142	1.290708	-1.076508	NAF
NS0129	152	156	NS	BX140215-BX140216	X140215	2			67.11	6.119	0.383	0.028	0.02016	0.028	0.402	0.083	0.02	0.012	0.128	0.077	-0.01	-0.01	-0.01	-0.03	3088	0.3672	1.447686	-1.080486	NAF
NS0129	204	208	NS	BX140241-BX140242	X140241	2			68.58	4.601	0.182	0.021	0.01512	0.021	0.309	0.076	0.018	0.008	0.024	0.081	-0.01	-0.01	-0.01	-0.03	3101	0.2448	1.325592	-1.080792	NAF
NS0129	172	176	NS	BX140225-BX140226	X140225	2			67.48	5.539	0.188	0.014	0.01008	0.014	0.381	0.069	0.014	0.004	0.061	0.171	-0.01	-0.01	-0.01	-0.03	3093	0.1224	1.203498	-1.081098	NAF
NS0129	224	226	NS	BX140252	X140252	2			67.9	5.509	0.217	0.016	0.01152	0.016	0.362	0.072	0.015	0.005	0.055	0.093	-0.01	-0.01	-0.01	-0.03	3106	0.153	1.255824	-1.102824	NAF
NS0129	192	196	NS	BX140235-BX140236	X140235	2			69.24	3.222	0.22	0.027	0.01944	0.027	0.3	0.069	0.013	0.003	0.039	0.087	-0.01	-0.01	-0.01	-0.03	3098	0.0918	1.203498	-1.111698	NAF
NS0129	180	182	NS	BX140229	X140229	2			68.58	3.853	0.246	0.018	0.01296	0.018	0.27	0.077	0.017	0.007	0.159	0.08	-0.01	-0.01	-0.01	-0.03	3095	0.2142	1.343034	-1.128834	NAF
NS0129	242	246	NS	BX140261-BX140262	X140261	2			65.98	7.225	0.254	0.02	0.0144	0.02	0.473	0.08	0.013	0.006	0.081	0.103	-0.01	-0.01	-0.01	-0.03	3111	0.1836	1.39536	-1.21176	NAF
NS0129	230	234	NS	BX140255-BX140256	X140255	2			67.94	4.369	0.268	0.021	0.01512	0.021	0.378	0.086	0.015	0.008	0.112	0.095	-0.01	-0.01	-0.01	-0.03	3108	0.2448	1.500012	-1.255212	NAF
NS0129	196	200	NS	BX140237-BX140238	X140237	2			68.44	4.623	0.183	0.024	0.01728	0.024	0.297	0.082	0.018	0.005	0.037	0.086	-0.01	-0.01	-0.01	-0.03	3099	0.153	1.430244	-1.277244	NAF
NS0129	216	220	NS	BX140247-BX140248	X140247	2			68	5.838	0.297	0.033	0.02376	0.033	0.401	0.091	0.022	0.009	0.058	0.09	-0.01	-0.01	-0.01	-0.03	3104	0.2754	1.587222	-1.311822	NAF
NS0129	270	272	NS	X138275	138275	1	G	W	28.39	37.65	3.32	0.5418	0.42	0.167	3.48	0.38	0.078	0.171	0.647	0.192	1.36	10.52	0.44	12.32	20209	5.2326	6.62796	-1.39536	NAF
NS0129	108	110	NS	X138192	138192	1	G	W	35.06	35.64	1.98	0.6321	0.49	0.087	1.83	0.21	0.055	0.066	0.014	0.01	1.67	7.43	0.09	9.19	20308	2.0196	3.66282	-1.64322	NAF
NS0129	274	276	NS	X138277	138277	1	G	W	31.51	36.99	3.89	0.4386	0.34	0.191	3.46	0.36	0.089	0.146	0.75	0.224	1.76	5.79	0.4	7.95	20211	4.4676	6.27912	-1.81152	NAF
NS0129	156	158	NS	X138217	138217	1	G	W	30.96	39.66	2.75	0.5934	0.46	0.121	2.93	0.34	0.075	0.129	0.552	0.052	0.41	7.45	-0.01	7.85	20350	3.9474	5.93028	-1.98288	NAF
NS0129	142	144	NS	X138210	138210	1	G	W	32.54	39.07	2.5	0.5805	0.45	0.113	3.07	0.3	0.06	0.099	0.5	0.05	0.32	6.72	-0.1	6.94	20343	3.0294	5.2326	-2.2032	NAF
NS0129	82	84	NS	X138179	138179	1	G	D	34.33	42.64	1.27	0.774	0.6	0.055	0.95	0.18	0.08	0.022	0.346	0.03	1.26	3.26	-0.02	4.5	20241	0.6732	3.13956	-2.46636	NAF
NS0129	188	192	NS	BX140233-BX140234	X140233	2			66.64	4.764	0.355	0.029	0.02088	0.029	0.36	0.169	0.038	0.014	0.106	0.126	-0.01	-0.01	-0.01	-0.03	3097	0.4284	2.947698	-2.519298	NAF
NS0129	164	166	NS	X138221	138221	1	G	W	27.07	51.92	2.09	0.5031	0.39	0.094	0.97	0.21	0.132	0.031	0.318	0.018	2.28	2.03	0.12	4.43	20354	0.9486	3.66282	-2.71422	NAF
NS0129	118	120	NS	X138197	138197	1	G	W	34.81	35.99	1.19	0.7224	0.56	0.053	1.95	0.21	0.038	0.03	0.177	0.011	0.82	8.96	-0.2	9.58	20313	0.918	3.66282	-2.74482	NAF
NS0129	134	136	NS	X138206	138206	1	G	W	27.45	43.71	4.17	0.4515	0.35	0.185	3.82	0.63	0.162	0.269	0.588	0.066	0.32	5.67	0.41	6.4	20321	8.2314	10.98846	-2.75706	NAF
NS0129	116	118	NS	X138196	138196	1	G	W	34.55	37.27	1.4	0.6708	0.52	0.058	1.77	0.24	0.046	0.042	0.238	0.005	0.66	8.16	-0.28	8.54	20312	1.2852	4.18608	-2.90088	NAF
NS0129	84	86	NS	X138180	138180	1	G	D	36.39	37.77	1.66	0.5934	0.46	0.071	1.84	0.26	0.073	0.04	0.275	0.024	0.36	5.15	-0.36	5.15	20242	1.224	4.53492	-3.31092	NAF
NS0129	174	176	NS	X138226	138226	1	G	W	32.69	34.29	2.4	0.6063	0.47	0.108	2.78	0.55	0.073	0.2	0.719	0.031	0.4	10.48	0.09	10.97	20377	6.12	9.5931	-3.4731	NAF
NS0129	162	164	NS	X138220	138220	1	G	W	30.37	39.86	2.24	0.6966	0.54	0.1	2.37	0.33	0.071	0.071	0.255	0.007	0.89	9.48	-0.13	10.24	20353	2.1726	5.75586	-3.58326	NAF
NS0129	210	212	NS	X138244	138244	1	G	W	34.1	37.66	2.45	0.5418	0.42	0.114	2.93	0.36	0.074	0.08	0.455	0.103	0.77	5.33	-0.05	6.05	20413	2.448	6.27912	-3.83112	NAF
NS0129	248	250	NS	X138264	138264	1	G	W	32.01	37.42	3.82	0.4644	0.36	0.171	3.43	0.48	0.119	0.146	0.732	0.21	1.25	5.43	0.23	6.91	20198	4.4676	8.37216	-3.90456	NAF
NS0129	288	290	NS	X138284	138284	1	G	W	34.5	37.14	4.56	0.2838	0.22	0.264	1.29	0.28	0.045	0.032	0.269	0.111	2.19	3.96	-0.04	6.11	20326	0.9792	4.88376	-3.90456	NAF
NS0129	278	280	NS	X138279	138279	1	G	W	34.16	35.53	2.78	0.516	0.4	0.128	3.47	0.44	0.06	0.123	0.777	0.223	1.23	5.38	0.28	6.89	20213	3.7638	7.67448	-3.91068	NAF
NS0129	140	142	NS	X138209	138209	1	G	W	33.11	39.38	2	0.5805	0.45	0.087	2.83	0.36	0.06	0.07	0.53	0.065	0.24	6.31	-0.23	6.32	20342	2.142	6.27912	-4.13712	NAF
NS0129	276	278	NS	X138278	138278	1	G	W	33.71	36.91	2.76	0.4902	0.38	0.14	3.03	0.4	0.096	0.092	0.729	0.213	1.3	5.29	0.08	6.67	20212	2.8152	6.9768	-4.1616	NAF
NS0129	264	266	NS	X138272	138272	1	G	W	29.82	40.94	2.19	0.4644	0.36	0.102	2.74	0.35	0.071	0.06	0.618	0.172	1.35	8.1	0.08	9.53	20206	1.836	6.1047	-4.2687	NAF
NS0129	92	94	NS	X138184	138184	1	G	W	35.32	38.79	1.43	0.5547	0.43	0.062	2.12	0.33	0.086	0.048	0.012	0.015	0.33	6.15	-0.44	6.04	20246	1.4688	5.75586	-4.28706	NAF
NS0129	262	264	NS	X138271	138271	1	G	W	31.68	38.57	2.71	0.4128	0.32	0.14	2.58	0.39	0.08	0.079	0.535	0.16	1.78	6.78	0.19	8.75	20205	2.4174	6.80238	-4.38498	NAF
NS0129	260	262	NS	X138270	138270	1	G	W	32.17	39.45	1.85	0.4644	0.36	0.089	2.47	0.35	0.077	0.056	0.495	0.145	1.13	7.46	-0.08	8.51	20204	1.7136	6.1047	-4.3911	NAF
NS0129	88	90	NS	X138182	138182	1	G	W	34.22	41.2	1.22	0.5934	0.46	0.052	1.9	0.31	0.084	0.033	0.01	0.016	0.33	5.72	-0.32	5.73	20244	1.0098	5.40702	-4.39722	NAF
NS0129	94	96	NS	X138185	138185	1	G	W	34.37	39.76	1.07	0.5805	0.45	0.044	1.93	0.31	0.075	0.025	0.006	0.001	0.37	6.61	-0.32	6.66	20247	0.765	5.40702	-4.64202	NAF
NS0129	90	92	NS	X138183	138183	1	G	W	33.89	40.81	1.41	0.5547	0.43	0.06	2.09	0.36	0.096	0.053	0.013	0.007	0.08	6.27	-0.55	5.8	20245	1.6218	6.27912	-4.65732	NAF
NS0129	218	220	NS	X138248	138248	1	G	W	36.94	33.08	3.13	0.3741	0.29	0.179	2.32	0.54	0.088	0.155	0.405	0.11	1.81	4.13	0.29	6.23	20417	4.743	9.41868	-4.67568	NAF
NS0129	154	156	NS	X138216	138216	1	G	W	28.65	42.77	2.65	0.6579	0.51	0.117	3.07	0.51	0.132	0.137	0.601	0.058	0.36	7.82	0.07	8.25	20349	4.1922	8.89542	-4.70322	NAF
NS0129	216	218	NS	X138247	138247	1	G	W	32.07	41.3	1.91	0.4257	0.33	0.098	2.4	0.36	0.091	0.05	0.408	0.115	1.09	5.71	-0.04	6.76	20416	1.53	6.27912	-4.74912	NAF
NS0129	268	270	NS	X138274	138274	1	G	W	29.73	37.23	2.05	0.6321	0.49	0.094	2.93	0.41	0.082	0.076	0.537	0.143	1.48	11.24	0.09	12.81	20208	2.3256	7.15122	-4.82562	NAF
NS0129	106	108	NS	X138191	138191	1	G	W	32.68	39.2	1.54	0.5547	0.43	0.071	2.24	0.38	0.078	0.048	0.146	0.059	0.45	8.84	-0.28	9.01	20307	1.4688	6.62796	-5.15916	NAF
NS0129	238	240	NS	X138259	138259	1	G	W	36.51	37.87	2.6	0.258	0.2	0.14	2.12	0.38	0.043	0.045	0.427	0.141	1.71	1.94	0.06	3.71	20427	1.377	6.62796	-5.25096	NAF
NS0129	150	152	NS	X138214	138214	1	G	W	33.15	40.02	2.16	0.5031	0.39	0.093	2.61	0.5	0.085	0.11	0.457	0.037	0.23	5.71	-0.09	5.85	20347	3.366	8.721	-5.355	NAF
NS0129	292	294	NS	X138286	138286	1	G	W	33.11	36.39	3.65	0.3741	0.29	0.178	3.04	0.49	0.135	0.104	0.756	0.235	1.86	4.9	0.31	7.07	20328	3.1824	8.54658	-5.36418	NAF
NS0129	122	124	NS	X138199	138199	1	G	W	31.67	38.2	2.04	0.516	0.4	0.096	2.92	0.61	0.165	0.172	0.096	0.036	0.41	9.13	0.07	9.61	20315	5.2632	10.63962	-5.37642	NAF
NS0129	112	114	NS	X138194	138194	1	G	W	32.07	40.81	1.08	0.4902	0.38	0.048	1.5	0.36	0.09	0.028	0.108	0.003	1.01	8.45	-0.18	9.28	20310	0.8568	6.27912	-5.42232	NAF
NS0129	120	122	NS	X138198	138198	1	G	W	34.83	36.29	1.15	0.7353	0.57	0.048	2.37	0.36	0.073	0.028	0.179	0.028	0.55	8.86	-0.42	8.99	20314	0.8568	6.27912	-5.42232	NAF
NS0129	160	162	NS	X138219	138219	1	G	W	32.43	40.06	2.26	0.5031	0.39	0.1	2.51	0.44	0.103	0.071	0.459	0.043	0.36	6.65	-0.28	6.73	20352	2.1726	7.67448	-5.50188	NAF
NS0129	158	160	NS	X138218	138218	1	G	W	31.55	41.15	2.18	0.5031	0.39	0.096	2.57	0.46	0.117	0.082	0.483	0.049	0.39	6.38	-0.18	6.59	20351	2.5092	8.02332	-5.51412	NAF
NS0129	114	116	NS	X138195	138195	1	G	W	33.3	37.85	1.01	0.6063	0.47	0.047	1.73	0.37	0.069	0.03	0.244	0.029	0.93	9.62	-0.29	10.26	20311	0.918	6.45354	-5.53554	NAF
NS0129	86	88	NS	X138181	138181	1	G	D	35.34	38.47	1.29	0.645	0.5	0.056	1.87	0.39	0.106	0.03	0.043	0.015	0.38	5.91	-0.26	6.03	20243	0.918	6.80238	-5.88438	NAF
NS0129	166	168	NS	X138222	138222	1	G	W	29.93	40.07	2.15	0.645	0.5	0.095	2.9	0.5	0.11	0.083	0.458	0.046	0.54	9.34	-0.18	9.7	20355	2.5398	8.721	-6.1812	NAF
NS0129	126	128	NS	X138202	138202	1	G	W	31.31	41.24	2	0.516	0.4	0.088	2.94	0.55	0.109	0.11	0.107	0.05	0.34	7.51	-0.1	7.75	20317	3.366	9.5931	-6.2271	NAF
NS0129	124	126	NS	X138200	138200	1	G	W	24.66	46.3	1.16	0.5676	0.44	0.05	2.9	0.51	0.106	0.082	0.133	0.029	0.6	11.84	0.06	12.5	20316	2.5092	8.89542	-6.38622	NAF
NS0129	290	294	NS	BX140285-BX140286	X140285	2			64.57	7.524	0.393	0.045	0.0324	0.045	0.563	0.431	0.128	0.017	0.139	0.168	-0.01	-0.01	-0.01	-0.03	3123	0.5202	7.517502	-6.997302	NAF
NS0129	294	296	NS	X138287	138287	1	G	W	36.8	32.34	2.76	0.4644	0.36	0.138	2.89	0.56	0.159	0.088	0.791	0.231	1.33	5.23	0.02	6.58	20329	2.6928	9.76752	-7.07472	NAF
NS0129	266	268	NS	X138273	138273	1	G	W	32.55	36.21	1.76	0.5547	0.43	0.08	2.85	0.53	0.116	0.055	0.605	0.174	1.07	8.84	-0.01	9.9	20207	1.683	9.24426	-7.56126	NAF
NS0129	136	138	NS	X138207	138207	1	G	W	32.05	40.68	1.79	0.6063	0.47	0.074	2.7	0.61	0.093	0.088	0.635	0.05	0.25	6.27	-0.06	6.46	20322	2.6928	10.63962	-7.94682	NAF
NS0129	206	208	NS	X138242	138242	1	G	W	34.34	38.99	2.12	0.4902	0.38	0.098	2.7	0.64	0.113	0.102	0.288	0.095	0.49	4.39	-0.02	4.86	20393	3.1212	11.16288	-8.04168	NAF
NS0129	236	238	NS	X138258	138258	1	G	W	39.56	34.61	1.19	0.645	0.5	0.054	2.4	0.52	0.086	0.033	0.437	0.119	0.37	3.23	-0.4	3.2	20426	1.0098	9.06984	-8.06004	NAF
NS0129	170	172	NS	X138224	138224	1	G	W	32.34	38.19	1.78	0.6579	0.51	0.082	2.42	0.55	0.076	0.049	0.578	0.012	0.37	8.65	-0.22	8.8	20357	1.4994	9.5931	-8.0937	NAF
NS0129	204	206	NS	X138241	138241	1	G	W	36.67	36.16	2.04	0.5031	0.39	0.121	1.85	0.52	0.074	0.031	0.197	0.057	1.23	4.69	-0.12	5.8	20392	0.9486	9.06984	-8.12124	NAF
NS0129	146	148	NS	X138212	138212	1	G	W	34.92	39.1	1.5	0.5289	0.41	0.064	2.29	0.55	0.093	0.043	0.316	0.021	0.17	5.45	-0.29	5.33	20345	1.3158	9.5931	-8.2773	NAF
NS0129	168	170	NS	X138223	138223	1	G	W	30.87	42.46	2.04	0.4773	0.37	0.091	2.48	0.62	0.084	0.079	0.322	0.034	0.35	6.48	-0.11	6.72	20356	2.4174	10.81404	-8.39664	NAF
NS0129	152	154	NS	X138215	138215	1	G	W	31.71	41.2	2.03	0.5805	0.45	0.081	2.58	0.64	0.122	0.085	0.589	0.056	0.3	6.66	-0.12	6.84	20348	2.601	11.16288	-8.56188	NAF
NS0129	296	298	NS	X138288	138288	1	G	W	34.51	36.18	2.14	0.4773	0.37	0.108	2.89	0.62	0.177	0.072	0.754	0.227	1.02	5.4	-0.02	6.4	20330	2.2032	10.81404	-8.61084	NAF
NS0129	132	134	NS	X138205	138205	1	G	W	32.23	40.78	1.79	0.6321	0.49	0.077	2.66	0.64	0.104	0.079	0.453	0.033	0.23	6.47	-0.13	6.57	20320	2.4174	11.16288	-8.74548	NAF
NS0129	208	210	NS	X138243	138243	1	G	W	37.5	34.53	1.93	0.5289	0.41	0.102	2.36	0.63	0.078	0.069	0.325	0.084	0.88	4.73	-0.08	5.53	20394	2.1114	10.98846	-8.87706	NAF
NS0129	234	236	NS	X138257	138257	1	G	W	38.1	36.79	1.41	0.5805	0.45	0.075	2.15	0.56	0.069	0.028	0.425	0.111	0.59	2.55	-0.07	3.07	20425	0.8568	9.76752	-8.91072	NAF
NS0129	214	216	NS	X138246	138246	1	G	W	31.39	40.95	1.73	0.5934	0.46	0.077	3	0.61	0.155	0.054	0.609	0.181	0.71	6.42	-0.07	7.06	20415	1.6524	10.63962	-8.98722	NAF
NS0129	192	194	NS	X138235	138235	1	G	W	32.84	33.67	2.38	0.4644	0.36	0.148	2.22	0.55	0.072	0.017	0.437	0.021	1.69	11	-0.01	12.68	20386	0.5202	9.5931	-9.0729	NAF
NS0129	130	132	NS	X138204	138204	1	G	W	31.81	40.36	1.62	0.7095	0.55	0.072	2.65	0.62	0.122	0.054	0.27	0.029	0.3	7.71	-0.25	7.76	20319	1.6524	10.81404	-9.16164	NAF
NS0129	246	248	NS	X138263	138263	1	G	W	36.02	34.16	3.6	0.3741	0.29	0.188	2.63	0.7	0.103	0.093	0.524	0.147	1.95	3.54	0.28	5.77	20197	2.8458	12.2094	-9.3636	NAF
NS0129	202	204	NS	X138240	138240	1	G	W	35.44	37.15	1.9	0.516	0.4	0.101	1.97	0.6	0.081	0.034	0.179	0.052	1.15	5.19	-0.09	6.25	20391	1.0404	10.4652	-9.4248	NAF
NS0129	220	222	NS	X138249	138249	1	G	W	39.61	30.73	2.42	0.5289	0.41	0.137	2.13	0.65	0.068	0.052	0.327	0.109	1.65	4.11	0.08	5.84	20418	1.5912	11.3373	-9.7461	NAF
NS0129	138	140	NS	X138208	138208	1	G	W	32.53	40.83	1.77	0.5676	0.44	0.074	2.57	0.67	0.092	0.063	0.609	0.05	0.21	5.77	-0.12	5.86	20341	1.9278	11.68614	-9.75834	NAF
NS0129	226	228	NS	X138253	138253	1	G	W	38.38	34.76	1.59	0.5676	0.44	0.079	2.31	0.69	0.066	0.054	0.341	0.104	0.71	3.64	0.04	4.39	20421	1.6524	12.03498	-10.38258	NAF
NS0129	180	182	NS	X138229	138229	1	G	W	30.93	35.16	2.21	0.5547	0.43	0.099	2.47	0.74	0.132	0.079	1.28	0.012	0.55	11.9	-0.06	12.39	20380	2.4174	12.90708	-10.48968	NAF
NS0129	240	242	NS	X138260	138260	1	G	W	35.55	38.78	2.37	0.2709	0.21	0.128	2.27	0.69	0.047	0.039	0.466	0.135	1.33	1.95	0.3	3.58	20428	1.1934	12.03498	-10.84158	NAF
NS0129	230	232	NS	X138255	138255	1	G	W	38.11	36.06	1.38	0.5676	0.44	0.066	2.23	0.7	0.067	0.034	0.364	0.096	0.44	3.11	0.01	3.56	20423	1.0404	12.2094	-11.169	NAF
NS0129	128	130	NS	X138203	138203	1	G	W	31.38	41.23	1.19	0.6837	0.53	0.052	2.44	0.71	0.128	0.036	0.252	0.029	0.29	7.98	-0.23	8.04	20318	1.1016	12.38382	-11.28222	NAF
NS0129	198	200	NS	X138238	138238	1	G	W	33.46	39.93	1.91	0.4515	0.35	0.099	2.22	0.77	0.071	0.06	0.349	0.076	0.58	5.11	0.12	5.81	20389	1.836	13.43034	-11.59434	NAF
NS0129	200	202	NS	X138239	138239	1	G	W	35.36	38.48	1.3	0.516	0.4	0.06	2.21	0.74	0.091	0.037	0.213	0.055	0.3	5.11	-0.08	5.33	20390	1.1322	12.90708	-11.77488	NAF
NS0129	148	150	NS	X138213	138213	1	G	W	31.43	42.5	1.37	0.6192	0.48	0.06	2.3	0.76	0.078	0.041	0.455	0.033	0.18	6.3	0	6.48	20346	1.2546	13.25592	-12.00132	NAF
NS0129	242	244	NS	X138261	138261	1	G	W	35.91	38.5	1.75	0.4128	0.32	0.083	2.61	0.78	0.056	0.045	0.52	0.161	0.81	2.48	0.29	3.58	20429	1.377	13.60476	-12.22776	NAF
NS0129	184	186	NS	X138231	138231	1	G	W	29.46	37.61	1.83	0.5805	0.45	0.089	2.18	0.73	0.078	0.015	0.844	0.01	0.87	12.38	0.38	13.63	20382	0.459	12.73266	-12.27366	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0129	172	174	NS	X138225	138225	1	G	W	30.97	35.34	1.76	0.7095	0.55	0.078	2.88	0.81	0.15	0.052	0.836	0.028	0.52	12.23	-0.11	12.64	20358	1.5912	14.12802	-12.53682	NAF
NS0129	176	178	NS	X138227	138227	1	G	W	30.02	37.88	2.18	0.5805	0.45	0.096	2.72	0.97	0.074	0.143	1.15	0.04	0.31	10.45	0.24	11	20378	4.3758	16.91874	-12.54294	NAF
NS0129	228	230	NS	X138254	138254	1	G	W	38.75	35.22	1.4	0.516	0.4	0.07	2.14	0.77	0.066	0.027	0.355	0.1	0.56	2.93	0.08	3.57	20422	0.8262	13.43034	-12.60414	NAF
NS0129	194	196	NS	X138236	138236	1	G	W	30.95	37.26	2.2	0.4515	0.35	0.104	2.68	0.79	0.064	0.036	0.427	0.052	0.85	10.29	0.18	11.32	20387	1.1016	13.77918	-12.67758	NAF
NS0129	182	184	NS	X138230	138230	1	G	W	31.75	34.46	1.71	0.5805	0.45	0.078	2.21	0.78	0.117	0.015	1.14	0.012	0.67	12.51	-0.03	13.15	20381	0.459	13.60476	-13.14576	NAF
NS0129	232	234	NS	X138256	138256	1	G	W	36.45	38.42	1.11	0.645	0.5	0.053	2.19	0.81	0.07	0.025	0.378	0.1	0.4	3.15	0.16	3.71	20424	0.765	14.12802	-13.36302	NAF
NS0129	286	288	NS	X138283	138283	1	G	W	39.24	32.23	2.27	0.3483	0.27	0.128	1.71	0.83	0.061	0.028	0.321	0.111	1.76	3.55	0.28	5.59	20325	0.8568	14.47686	-13.62006	NAF
NS0129	190	192	NS	X138234	138234	1	G	W	32.23	32.45	2.15	0.5418	0.42	0.11	2.84	1.03	0.103	0.132	0.449	0.024	0.99	12.42	0.29	13.7	20385	4.0392	17.96526	-13.92606	NAF
NS0129	186	188	NS	X138232	138232	1	G	W	31.42	36.49	1.76	0.5418	0.42	0.111	2.02	0.82	0.071	0.012	0.666	0.013	1.11	11.04	0.18	12.33	20383	0.3672	14.30244	-13.93524	NAF
NS0129	196	198	NS	X138237	138237	1	G	W	34.33	34.79	1.81	0.5031	0.39	0.108	2.28	0.86	0.069	0.031	0.278	0.053	1.16	8.46	0.32	9.94	20388	0.9486	15.00012	-14.05152	NAF
NS0129	178	180	NS	X138228	138228	1	G	W	30.94	38.56	1.11	0.645	0.5	0.049	2.08	0.86	0.083	0.024	0.722	0.004	0.46	10.59	0.1	11.15	20379	0.7344	15.00012	-14.26572	NAF
NS0129	224	226	NS	X138252	138252	1	G	W	39.25	33.66	1.39	0.5547	0.43	0.065	2.27	0.88	0.068	0.029	0.367	0.116	0.55	3.33	0.16	4.04	20420	0.8874	15.34896	-14.46156	NAF
NS0129	244	246	NS	X138262	138262	1	G	W	37.35	34.27	2.19	0.5031	0.39	0.122	2.14	0.95	0.067	0.034	0.398	0.129	1.53	3.56	0.4	5.49	20430	1.0404	16.5699	-15.5295	NAF
NS0129	280	282	NS	X138280	138280	1	G	W	34.93	36.22	1.92	0.5289	0.41	0.095	2.37	0.99	0.057	0.037	0.394	0.12	1.34	4.95	0.57	6.86	20214	1.1322	17.26758	-16.13538	NAF
NS0129	222	224	NS	X138250	138250	1	G	W	38.11	34.07	2.03	0.5031	0.39	0.112	2.22	1.05	0.066	0.048	0.322	0.089	0.99	3.42	0.39	4.8	20419	1.4688	18.3141	-16.8453	NAF
NS0129	188	190	NS	X138233	138233	1	G	W	28.76	37.8	1.5	0.5289	0.41	0.067	2.59	1.09	0.096	0.024	0.492	0.028	0.69	13.06	0.41	14.16	20384	0.7344	19.01178	-18.27738	NAF
NS0129	282	284	NS	X138281	138281	1	G	W	35.39	36.97	1.48	0.5289	0.41	0.069	2.36	1.12	0.057	0.04	0.394	0.121	0.83	4.59	0.66	6.08	20323	1.224	19.53504	-18.31104	NAF
NS0129	284	286	NS	X138282	138282	1	G	W	33.1	39.49	2	0.3741	0.29	0.111	2.22	1.23	0.057	0.041	0.421	0.123	1.16	4.03	0.89	6.08	20324	1.2546	21.45366	-20.19906	NAF
NS0130	72	74	NS	X138326	138326	1	G	D	31.1	39.94	2.81	0.4128	0.32	0.126	3.26	0.39	0.095	0.26	0.648	0.185	0.71	6.21	0.42	7.34	20277	7.956	6.80238	1.15362	PAF(LC)
NS0130	44	46	NS	X138312	138312	1	G	D	33.96	39.79	3.42	0.3999	0.31	0.152	1.53	0.33	0.08	0.204	0.172	0.036	1.97	2.62	0.37	4.96	20407	6.2424	5.75586	0.48654	PAF(LC)
NS0130	14	16	NS	X138296	138296	1	G	D	40.83	35.41	1.65	0.2451	0.19	0.073	0.12	0.005	0.014	0.011	0.008	0.009	2.94	0.7	0.16	3.8	20338	0.3366	0.08721	0.24939	PAF(LC)
NS0130	12	14	NS	X138295	138295	1	G	D	36.54	42.43	1.61	0.1548	0.12	0.073	0.1	0.005	0.017	0.01	0.006	0.022	2.47	0.64	0.12	3.23	20337	0.306	0.08721	0.21879	PAF(LC)
NS0130	16	18	NS	X138297	138297	1	G	D	36.78	42.23	1.71	0.1032	0.08	0.088	0.06	0.005	0.033	0.007	0.006	0.012	2.16	0.64	0.15	2.95	20339	0.2142	0.08721	0.12699	PAF(LC)
NS0130	18	20	NS	X138298	138298	1	G	D	38.97	39.52	1.37	0.2322	0.18	0.052	0.06	0.005	0.042	0.005	0.011	0.013	2.15	0.54	0.13	2.82	20340	0.153	0.08721	0.06579	PAF(LC)
NS0130	10	12	NS	X138294	138294	1	G	D	37.85	40.21	1.97	0.1806	0.14	0.092	0.1	0.02	0.013	0.011	0.007	0.018	2.22	0.72	0.12	3.06	20336	0.3366	0.34884	-0.01224	NAF
NS0130	2	4	NS	X138290	138290	1	P	D	33.5	37.58	6.79	0.00645	0.005	0.672	0.06	0.03	0.02	0.015	0.033	0.031	4.84	1.42	0.21	6.47	20332	0.459	0.52326	-0.06426	NAF
NS0130	0	2	NS	X138289	138289	1	G	D	33.85	33.48	8.29	0.00645	0.005	0.585	0.08	0.05	0.017	0.022	0.045	0.042	6.64	2.21	0.29	9.14	20331	0.6732	0.8721	-0.1989	NAF
NS0130	20	22	NS	X138299	138299	1	G	D	40.74	35.64	1.24	1.2255	0.95	0.053	0.1	0.02	0.008	0.004	0.075	0.027	2.32	0.58	0.11	3.01	20395	0.1224	0.34884	-0.22644	NAF
NS0130	6	8	NS	X138292	138292	1	P	D	15.43	61.4	11.2	0.00645	0.005	0.613	0.07	0.03	0.009	0.009	0.013	0.034	1.81	2.53	0.17	4.51	20334	0.2754	0.52326	-0.24786	NAF
NS0130	8	10	NS	X138293	138293	1	G	D	18.12	63.96	5.96	0.00645	0.005	0.245	0.09	0.03	0.01	0.009	0.011	0.029	2.02	1.91	0.16	4.09	20335	0.2754	0.52326	-0.24786	NAF
NS0130	4	6	NS	X138291	138291	1	G	D	15.41	59.23	12.18	0.00645	0.005	0.812	0.06	0.03	0.007	0.008	0.016	0.042	1.99	3.47	0.21	5.67	20333	0.2448	0.52326	-0.27846	NAF
NS0130	30	34	NS	BX140305-BX140306	X140305	2			68.33	3.067	0.164	0.02	0.0144	0.02	0.132	0.024	0.019	0.002	0.009	0.082	0.36	0.38	0.13	0.87	3125	0.0612	0.418608	-0.357408	NAF
NS0130	34	38	NS	BX140307-BX140308	X140307	2			67.63	3.372	0.184	0.019	0.01368	0.019	0.147	0.024	0.018	0.001	0.016	0.071	0.44	0.58	0.34	1.36	3126	0.0306	0.418608	-0.388008	NAF
NS0130	24	26	NS	X138302	138302	1	G	D	36.14	42.66	1.79	0.4386	0.34	0.047	0.09	0.03	0.066	0.004	0.06	0.01	1.91	0.67	0.12	2.7	20397	0.1224	0.52326	-0.40086	NAF
NS0130	22	24	NS	X138300	138300	1	G	D	38.5	39.22	1.2	1.0965	0.85	0.05	0.09	0.03	0.021	0.003	0.132	0.013	2	0.54	0.14	2.68	20396	0.0918	0.52326	-0.43146	NAF
NS0130	26	28	NS	X138303	138303	1	G	D	39.77	37.72	1.22	0.7353	0.57	0.046	0.14	0.04	0.072	0.003	0.062	0.015	2.28	0.52	0.1	2.9	20398	0.0918	0.69768	-0.60588	NAF
NS0130	42	46	NS	BX140311-BX140312	X140311	2			68.81	3.603	0.127	0.015	0.0108	0.015	0.153	0.046	0.018	0.005	0.006	0.074	0.12	-0.01	-0.01	0.1	3128	0.153	0.802332	-0.649332	NAF
NS0130	78	80	NS	BX140329	X140329	2			68.86	4.719	0.214	0.025	0.018	0.025	0.364	0.064	0.014	0.013	0.053	0.108	-0.01	-0.01	-0.01	-0.03	3137	0.3978	1.116288	-0.718488	NAF
NS0130	38	42	NS	BX140309-BX140310	X140309	2			66.65	3.519	0.108	0.015	0.0108	0.015	0.169	0.049	0.019	0.002	0.009	0.077	0.17	0.09	-0.01	0.25	3127	0.0612	0.854658	-0.793458	NAF
NS0130	70	74	NS	BX140325-BX140326	X140325	2			65.07	8.48	0.435	0.031	0.02232	0.031	0.601	0.08	0.015	0.017	0.118	0.126	-0.01	-0.01	-0.01	-0.03	3135	0.5202	1.39536	-0.87516	NAF
NS0130	124	128	NS	BX140353-BX140354	X140353	2			66.8	6.144	0.267	0.027	0.01944	0.027	0.42	0.078	0.015	0.015	0.097	0.093	-0.01	-0.01	-0.01	-0.03	3149	0.459	1.360476	-0.901476	NAF
NS0130	94	98	NS	BX140337-BX140338	X140337	2			69.12	3.921	0.159	0.019	0.01368	0.019	0.347	0.064	0.012	0.007	0.042	0.079	-0.01	-0.01	-0.01	-0.03	3141	0.2142	1.116288	-0.902088	NAF
NS0130	82	86	NS	BX140331-BX140332	X140331	2			68.64	5.185	0.188	0.017	0.01224	0.017	0.377	0.066	0.014	0.008	0.052	0.09	-0.01	-0.01	-0.01	-0.03	3138	0.2448	1.151172	-0.906372	NAF
NS0130	90	94	NS	BX140335-BX140336	X140335	2			66.07	7.034	0.292	0.022	0.01584	0.022	0.51	0.073	0.015	0.011	0.088	0.094	-0.01	-0.01	-0.01	-0.03	3140	0.3366	1.273266	-0.936666	NAF
NS0130	98	102	NS	BX140339-BX140340	X140339	2			67.54	5.591	0.258	0.026	0.01872	0.026	0.465	0.078	0.016	0.012	0.075	0.098	-0.01	-0.01	-0.01	-0.03	3142	0.3672	1.360476	-0.993276	NAF
NS0130	74	78	NS	BX140327-BX140328	X140327	2			69.31	3.848	0.212	0.025	0.018	0.025	0.378	0.073	0.016	0.009	0.053	0.08	-0.01	-0.01	-0.01	-0.03	3136	0.2754	1.273266	-0.997866	NAF
NS0130	136	138	NS	BX140359	X140359	2			67.44	5.428	0.4	0.078	0.05616	0.078	0.368	0.078	0.014	0.011	0.077	0.075	-0.01	-0.01	-0.01	-0.03	3152	0.3366	1.360476	-1.023876	NAF
NS0130	122	124	NS	BX140352	X140352	2			61.08	12.777	0.772	0.062	0.04464	0.062	0.915	0.121	0.026	0.035	0.25	0.125	-0.01	-0.01	-0.01	-0.03	3148	1.071	2.110482	-1.039482	NAF
NS0130	132	136	NS	BX140357-BX140358	X140357	2			66.08	7.472	0.297	0.027	0.01944	0.027	0.495	0.087	0.017	0.015	0.111	0.09	-0.01	-0.01	-0.01	-0.03	3151	0.459	1.517454	-1.058454	NAF
NS0130	66	70	NS	BX140323-BX140324	X140323	2			64.24	8.933	0.432	0.035	0.0252	0.035	0.626	0.08	0.012	0.011	0.112	0.099	-0.01	-0.01	-0.01	-0.03	3134	0.3366	1.39536	-1.05876	NAF
NS0130	50	54	NS	BX140315-BX140316	X140315	2			63.53	9.121	0.529	0.045	0.0324	0.045	0.646	0.089	0.013	0.016	0.064	0.096	0.02	-0.01	-0.01	0	3130	0.4896	1.552338	-1.062738	NAF
NS0130	128	132	NS	BX140355-BX140356	X140355	2			66.2	6.943	0.341	0.029	0.02088	0.029	0.514	0.087	0.017	0.012	0.123	0.089	-0.01	-0.01	-0.01	-0.03	3150	0.3672	1.517454	-1.150254	NAF
NS0130	140	142	NS	BX140361	X140361	2			68.27	4.811	0.252	0.034	0.02448	0.034	0.379	0.093	0.017	0.015	0.086	0.079	-0.01	-0.01	-0.01	-0.03	3153	0.459	1.622106	-1.163106	NAF
NS0130	106	110	NS	BX140343-BX140344	X140343	2			66.83	5.37	0.483	0.106	0.07632	0.106	0.292	0.082	0.011	0.008	0.059	0.115	-0.01	-0.01	-0.01	-0.03	3144	0.2448	1.430244	-1.185444	NAF
NS0130	102	106	NS	BX140341-BX140342	X140341	2			67.11	7.245	0.288	0.026	0.01872	0.026	0.426	0.09	0.011	0.012	0.084	0.089	-0.01	-0.01	-0.01	-0.03	3143	0.3672	1.56978	-1.20258	NAF
NS0130	110	114	NS	BX140345-BX140346	X140345	2			67.32	6.783	0.292	0.026	0.01872	0.026	0.426	0.092	0.014	0.012	0.073	0.082	-0.01	-0.01	-0.01	-0.03	3145	0.3672	1.604664	-1.237464	NAF
NS0130	28	30	NS	X138304	138304	1	G	D	38.44	37.83	1.41	1.2513	0.97	0.062	0.39	0.08	0.062	0.003	0.126	0.031	2.43	0.65	0.1	3.18	20399	0.0918	1.39536	-1.30356	NAF
NS0130	30	32	NS	X138305	138305	1	G	D	36.99	39.56	1.74	1.0449	0.81	0.095	0.54	0.08	0.063	0.003	0.155	0.034	2.63	0.76	0.08	3.47	20400	0.0918	1.39536	-1.30356	NAF
NS0130	118	122	NS	BX140349-BX140350	X140349	2			67.21	6.656	0.296	0.028	0.02016	0.028	0.457	0.1	0.017	0.012	0.093	0.082	-0.01	-0.01	-0.01	-0.03	3147	0.3672	1.7442	-1.377	NAF
NS0130	46	50	NS	BX140313-BX140314	X140313	2			67.12	5.814	0.33	0.035	0.0252	0.035	0.48	0.104	0.024	0.014	0.038	0.087	0.02	-0.01	-0.01	0	3129	0.4284	1.813968	-1.385568	NAF
NS0130	86	90	NS	BX140333-BX140334	X140333	2			67.85	5.652	0.253	0.038	0.02736	0.038	0.429	0.1	0.018	0.011	0.071	0.089	-0.01	-0.01	-0.01	-0.03	3139	0.3366	1.7442	-1.4076	NAF
NS0130	32	34	NS	X138306	138306	1	G	D	29.94	48.31	2.43	0.6966	0.54	0.1	0.75	0.1	0.064	0.003	0.222	0.034	2.85	0.95	0.13	3.93	20401	0.0918	1.7442	-1.6524	NAF
NS0130	38	40	NS	X138309	138309	1	G	D	34.37	42.53	2.08	0.8643	0.67	0.084	0.78	0.18	0.075	0.048	0.122	0.029	2.55	0.91	0.27	3.73	20404	1.4688	3.13956	-1.67076	NAF
NS0130	36	38	NS	X138308	138308	1	G	D	29.43	49.23	2.76	0.4515	0.35	0.117	0.97	0.11	0.034	0.004	0.454	0.045	2.32	1.07	0.08	3.47	20403	0.1224	1.91862	-1.79622	NAF
NS0130	34	36	NS	X138307	138307	1	G	D	33.87	43.52	2.35	0.5676	0.44	0.099	0.82	0.12	0.052	0.003	0.24	0.04	2.43	1	0.1	3.53	20402	0.0918	2.09304	-2.00124	NAF
NS0130	62	66	NS	BX140321-BX140322	X140321	2			65.14	8.842	0.441	0.034	0.02448	0.034	0.578	0.155	0.018	0.014	0.063	0.099	-0.01	-0.01	-0.01	-0.03	3133	0.4284	2.70351	-2.27511	NAF
NS0130	114	118	NS	BX140347-BX140348	X140347	2			65.34	8.672	0.309	0.023	0.01656	0.023	0.465	0.168	0.02	0.012	0.086	0.097	-0.01	-0.01	-0.01	-0.03	3146	0.3672	2.930256	-2.563056	NAF
NS0130	54	58	NS	BX140317-BX140318	X140317	2			66.23	7.807	0.395	0.032	0.02304	0.032	0.477	0.187	0.014	0.014	0.045	0.079	-0.01	-0.01	-0.01	-0.03	3131	0.4284	3.261654	-2.833254	NAF
NS0130	58	62	NS	BX140319-BX140320	X140319	2			65.42	8.032	0.398	0.028	0.02016	0.028	0.522	0.268	0.017	0.013	0.055	0.102	-0.01	-0.01	-0.01	-0.03	3132	0.3978	4.674456	-4.276656	NAF
NS0130	42	44	NS	X138311	138311	1	G	D	36.68	39.35	1.75	0.4902	0.38	0.077	1.23	0.36	0.11	0.039	0.051	0.024	1.03	2.67	-0.17	3.53	20406	1.1934	6.27912	-5.08572	NAF
NS0130	74	76	NS	X138327	138327	1	G	D	30.57	42.4	1.98	0.4128	0.32	0.09	2.92	0.42	0.074	0.063	0.532	0.159	0.59	6.61	-0.07	7.13	20278	1.9278	7.32564	-5.39784	NAF
NS0130	100	102	NS	X138340	138340	1	G	D	34.67	38.56	1.73	0.4773	0.37	0.082	2.78	0.51	0.11	0.094	0.576	0.163	0.51	4.35	-0.07	4.79	20435	2.8764	8.89542	-6.01902	NAF
NS0130	70	72	NS	X138325	138325	1	G	D	34.53	37.98	1.61	0.4644	0.36	0.073	2.55	0.41	0.079	0.035	0.627	0.178	0.68	5.74	-0.18	6.24	20276	1.071	7.15122	-6.08022	NAF
NS0130	78	80	NS	X138329	138329	1	G	D	31.36	41.61	1.92	0.387	0.3	0.088	2.97	0.77	0.185	0.223	0.538	0.165	0.52	5.49	0.36	6.37	20280	6.8238	13.43034	-6.60654	NAF
NS0130	50	52	NS	X138315	138315	1	G	D	31	40.23	2.64	0.6321	0.49	0.115	3.39	0.53	0.096	0.08	0.455	0.088	0.58	6.59	0.03	7.2	20410	2.448	9.24426	-6.79626	NAF
NS0130	126	128	NS	X138354	138354	1	G	D	33.14	37.84	2.71	0.3354	0.26	0.126	3.14	0.75	0.193	0.194	1.05	0.3	0.97	4.62	0.21	5.8	20448	5.9364	13.0815	-7.1451	NAF
NS0130	130	132	NS	X138356	138356	1	G	D	33.43	38	2.27	0.3741	0.29	0.104	2.86	0.65	0.123	0.134	0.937	0.265	0.89	4.92	0.23	6.04	20468	4.1004	11.3373	-7.2369	NAF
NS0130	128	130	NS	X138355	138355	1	G	D	31.79	41.63	1.63	0.4644	0.36	0.076	2.44	0.56	0.075	0.075	0.677	0.194	0.69	5.95	0	6.64	20467	2.295	9.76752	-7.47252	NAF
NS0130	88	90	NS	X138334	138334	1	G	D	34.92	37.75	1.45	0.4515	0.35	0.066	2.71	0.53	0.119	0.041	0.492	0.149	0.53	5.48	-0.1	5.91	20285	1.2546	9.24426	-7.98966	NAF
NS0130	46	48	NS	X138313	138313	1	G	D	31.42	42.37	2.08	0.7353	0.57	0.094	2.44	0.67	0.139	0.109	0.211	0.056	0.43	5.62	0	6.05	20408	3.3354	11.68614	-8.35074	NAF
NS0130	82	84	NS	X138331	138331	1	G	D	35.24	37.8	1.45	0.4773	0.37	0.068	2.67	0.57	0.072	0.044	0.429	0.137	0.54	5.2	-0.08	5.66	20282	1.3464	9.94194	-8.59554	NAF
NS0130	138	140	NS	X138360	138360	1	G	D	31.18	41.39	2.35	0.2838	0.22	0.112	3.15	1.03	0.14	0.295	0.946	0.272	0.81	4.03	0.69	5.53	20472	9.027	17.96526	-8.93826	NAF
NS0130	84	86	NS	X138332	138332	1	G	D	34.93	39.09	1.45	0.4386	0.34	0.068	2.53	0.63	0.105	0.059	0.443	0.139	0.37	4.77	-0.14	5	20283	1.8054	10.98846	-9.18306	NAF
NS0130	40	42	NS	X138310	138310	1	G	D	34.66	39.03	2.09	0.6579	0.51	0.096	2.16	0.74	0.197	0.12	0.057	0.035	0.58	4.69	-0.08	5.19	20405	3.672	12.90708	-9.23508	NAF
NS0130	134	136	NS	X138358	138358	1	G	D	31.95	40.16	1.53	0.4386	0.34	0.067	2.62	0.75	0.087	0.094	0.672	0.197	0.69	6.3	0.17	7.16	20470	2.8764	13.0815	-10.2051	NAF
NS0130	98	100	NS	X138339	138339	1	G	D	31.17	44.24	1.28	0.4386	0.34	0.075	2.5	0.67	0.101	0.04	0.387	0.13	0.42	5.12	0.03	5.57	20434	1.224	11.68614	-10.46214	NAF
NS0130	68	70	NS	X138324	138324	1	G	D	31.52	39.7	2.17	0.4386	0.34	0.1	3.18	0.79	0.129	0.098	0.649	0.167	0.71	6.23	0.13	7.07	20275	2.9988	13.77918	-10.78038	NAF
NS0130	96	98	NS	X138338	138338	1	G	D	34.86	39.09	1.43	0.4128	0.32	0.064	2.64	0.7	0.09	0.044	0.439	0.145	0.48	4.65	0	5.13	20433	1.3464	12.2094	-10.863	NAF
NS0130	124	126	NS	X138353	138353	1	G	D	33.89	37.98	1.69	0.4773	0.37	0.078	2.6	0.78	0.146	0.086	0.702	0.205	0.68	5.91	0.08	6.67	20447	2.6316	13.60476	-10.97316	NAF
NS0130	86	88	NS	X138333	138333	1	G	D	34.22	38.15	2.38	0.3225	0.25	0.177	3.11	0.9	0.232	0.154	0.661	0.209	0.6	3.71	0.18	4.49	20284	4.7124	15.6978	-10.9854	NAF
NS0130	90	92	NS	X138335	138335	1	G	D	33.46	40.13	1.6	0.4644	0.36	0.073	2.75	0.71	0.098	0.045	0.54	0.157	0.48	4.78	0.06	5.32	20286	1.377	12.38382	-11.00682	NAF
NS0130	122	124	NS	X138352	138352	1	G	D	30.36	43.04	2.51	0.2967	0.23	0.119	3.02	0.89	0.124	0.126	0.957	0.275	0.8	3.6	0.38	4.78	20446	3.8556	15.52338	-11.66778	NAF
NS0130	94	96	NS	X138337	138337	1	G	D	26.45	52.18	1.06	0.4128	0.32	0.047	2.24	0.74	0.082	0.034	0.339	0.104	0.29	4.35	0.17	4.81	20432	1.0404	12.90708	-11.86668	NAF
NS0130	66	68	NS	X138323	138323	1	G	D	31.41	41.79	2.11	0.4257	0.33	0.094	2.92	0.81	0.087	0.072	0.587	0.142	0.59	5.44	0.14	6.17	20274	2.2032	14.12802	-11.92482	NAF
NS0130	80	82	NS	X138330	138330	1	G	D	36.12	36.91	1.35	0.4515	0.35	0.061	2.5	0.77	0.105	0.04	0.386	0.124	0.34	4.97	-0.1	5.21	20281	1.224	13.43034	-12.20634	NAF
NS0130	52	54	NS	X138316	138316	1	G	D	28.58	42.94	3.33	0.5547	0.43	0.154	3.5	0.88	0.132	0.1	0.49	0.101	0.6	5.76	0.28	6.64	20411	3.06	15.34896	-12.28896	NAF
NS0130	76	78	NS	X138328	138328	1	G	D	32.01	40.71	1.44	0.4644	0.36	0.066	2.65	0.8	0.164	0.04	0.429	0.135	0.47	6.52	-0.09	6.9	20279	1.224	13.9536	-12.7296	NAF
NS0130	64	66	NS	X138322	138322	1	G	D	29.61	42.74	2.52	0.4773	0.37	0.119	3.16	0.97	0.116	0.127	0.441	0.136	0.49	5.89	0.27	6.65	20273	3.8862	16.91874	-13.03254	NAF
NS0130	92	94	NS	X138336	138336	1	G	D	32.01	40.23	1.95	0.516	0.4	0.087	3.18	0.88	0.211	0.069	0.632	0.174	0.57	5.2	0.01	5.78	20431	2.1114	15.34896	-13.23756	NAF
NS0130	132	134	NS	X138357	138357	1	G	D	31.49	40	2.04	0.3741	0.29	0.095	2.89	1	0.132	0.12	0.88	0.259	0.86	5.56	0.38	6.8	20469	3.672	17.442	-13.77	NAF
NS0130	140	142	NS	X138361	138361	1	G	D	31.87	40.1	2.05	0.3354	0.26	0.094	3.04	1.34	0.118	0.307	0.867	0.241	0.75	4.28	0.85	5.88	20473	9.3942	23.37228	-13.97808	NAF
NS0130	136	138	NS	X138359	138359	1	G	D	33.34	39.33	1.87	0.3612	0.28	0.134	2.39	1.08	0.103	0.072	0.659	0.196	0.71	4.85	0.38	5.94	20471	2.2032	18.83736	-16.63416	NAF
NS0130	110	112	NS	X138345	138345	1	G	D	30.9	45.06	1.94	0.3354	0.26	0.09	2.58	1.44	0.097	0.116	0.558	0.155	0.48	2.21	0.7	3.39	20440	3.5496	25.11648	-21.56688	NAF
NS0130	106	108	NS	X138343	138343	1	G	D	37.41	35.92	2.47	0.3096	0.24	0.268	1.89	1.55	0.067	0.162	0.474	0.104	0.52	1.52	0.78	2.82	20438	4.9572	27.0351	-22.0779	NAF
NS0130	48	50	NS	X138314	138314	1	G	D	29.16	40.48	2.77	0.6708	0.52	0.121	3.65	1.46	0.294	0.107	0.56	0.107	0.59	6.57	0.32	7.48	20409	3.2742	25.46532	-22.19112	NAF
NS0130	120	122	NS	X138350	138350	1	G	D	31.33	41.92	1.96	0.3741	0.29	0.09	2.73	1.43	0.222	0.08	0.74	0.224	0.67	4.05	0.4	5.12	20445	2.448	24.94206	-22.49406	NAF
NS0130	54	56	NS	X138317	138317	1	G	D	30.6	40.57	2.92	0.5418	0.42	0.132	3.26	1.72	0.116	0.186	0.378	0.083	0.4	4.74	0.92	6.06	20412	5.6916	30.00024	-24.30864	NAF
NS0130	118	120	NS	X138349	138349	1	G	D	31.5	41.64	1.87	0.4257	0.33	0.084	2.73	1.57	0.115	0.082	0.615	0.177	0.54	3.86	0.79	5.19	20444	2.5092	27.38394	-24.87474	NAF
NS0130	102	104	NS	X138341	138341	1	G	D	29.11	47.16	1.76	0.3612	0.28	0.08	2.64	1.61	0.076	0.08	0.529	0.146	0.39	2.53	1.04	3.96	20436	2.448	28.08162	-25.63362	NAF
NS0130	62	64	NS	X138321	138321	1	G	D	30.96	42.05	2.25	0.4773	0.37	0.104	2.85	1.59	0.08	0.061	0.381	0.105	0.4	4.63	0.85	5.88	20272	1.8666	27.73278	-25.86618	NAF
NS0130	56	58	NS	X138318	138318	1	G	D	32.27	40.45	2.21	0.4773	0.37	0.102	2.62	1.79	0.097	0.079	0.385	0.083	0.37	3.71	0.99	5.07	20269	2.4174	31.22118	-28.80378	NAF
NS0130	114	116	NS	X138347	138347	1	G	D	31.47	42.13	2.11	0.3741	0.29	0.1	2.86	1.95	0.12	0.13	0.562	0.178	0.44	2.33	1.22	3.99	20442	3.978	34.0119	-30.0339	NAC
NS0130	112	114	NS	X138346	138346	1	G	D	32.78	40.62	2.03	0.387	0.3	0.094	2.78	1.98	0.141	0.102	0.56	0.159	0.43	2.19	1.26	3.88	20441	3.1212	34.53516	-31.41396	NAC
NS0130	60	62	NS	X138320	138320	1	G	D	31.52	40.42	2.03	0.5031	0.39	0.091	2.7	2.12	0.158	0.061	0.369	0.106	0.41	4.38	1.13	5.92	20271	1.8666	36.97704	-35.11044	NAC
NS0130	116	118	NS	X138348	138348	1	G	D	34.03	39.44	1.24	0.5547	0.43	0.055	2.18	2.11	0.1	0.03	0.45	0.135	0.35	2.88	1.35	4.58	20443	0.918	36.80262	-35.88462	NAC
NS0130	58	60	NS	X138319	138319	1	G	D	31.22	41.01	2.32	0.4902	0.38	0.108	2.79	2.23	0.117	0.073	0.37	0.091	0.36	3.7	1.5	5.56	20270	2.2338	38.89566	-36.66186	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0130	104	106	NS	X138342	138342	1	G	D	28.94	47.53	1.34	0.3999	0.31	0.059	2.22	2.33	0.068	0.064	0.44	0.103	0.22	1.91	1.71	3.84	20437	1.9584	40.63986	-38.68146	NAC
NS0130	108	110	NS	X138344	138344	1	G	D	29.63	46.82	1.29	0.3612	0.28	0.061	2.07	2.6	0.069	0.049	0.51	0.097	0.2	1.2	2.28	3.68	20439	1.4994	45.3492	-43.8498	NAC
NS0131	42	44	NS	X067022	067022	1	G	W	24.29	42.52	1.19	0.4515	0.35	0.054	2.76	0.61	0.088	2.9	0.016	0.011	0.27	11.76	5.26	17.29	11813	88.74	10.63962	78.10038	PAF(HC)
NS0131	48	50	NS	X067025	067025	1	G	W	26.98	38.74	0.53	0.4644	0.36	0.023	2.77	0.59	0.076	0.721	0.024	0.004	0.76	15.44	1.62	17.82	11816	22.0626	10.29078	11.77182	PAF(HC)
NS0131	44	46	NS	X067023	067023	1	G	W	25.93	38.67	0.39	0.4902	0.38	0.016	3.38	0.65	0.099	0.649	0.005	0.003	0.53	17.07	1.5	19.1	11814	19.8594	11.3373	8.5221	PAF(LC)
NS0131	88	90	NS	X067045	067045	1	G	W	24.15	48	3.98	0.5031	0.39	0.179	2.99	0.45	0.073	0.491	0.165	0.04	0.43	7.35	0.85	8.63	11854	15.0246	7.8489	7.1757	PAF(LC)
NS0131	446	448	NS	X067226	067226	1	G	W	25.73	47.08	2.92	0.3096	0.24	0.142	2.89	0.46	0.055	0.491	0.747	0.172	0.78	6.35	0.95	8.08	11907	15.0246	8.02332	7.00128	PAF(LC)
NS0131	404	406	NS	X067205	067205	1	G	W	32.98	40.19	2.33	0.6579	0.51	0.101	2.47	0.51	0.079	0.468	1.44	0.095	0.26	3.32	0.64	4.22	12084	14.3208	8.89542	5.42538	PAF(LC)
NS0131	28	30	NS	X067015	067015	1	G	D	21.05	66.15	0.97	0.1548	0.12	0.096	0.08	0.03	0.072	0.126	0.213	0.013	1.26	0.47	0.37	2.1	11788	3.8556	0.52326	3.33234	PAF(LC)
NS0131	46	48	NS	X067024	067024	1	G	W	26.11	39.69	0.32	0.4515	0.35	0.012	2.7	0.49	0.073	0.38	0.004	0.001	0.87	16.9	0.91	18.68	11815	11.628	8.54658	3.08142	PAF(LC)
NS0131	444	446	NS	X067225	067225	1	G	W	27.88	42.92	2.88	0.258	0.2	0.142	2.99	0.57	0.086	0.388	0.796	0.187	0.82	6.49	0.86	8.17	11906	11.8728	9.94194	1.93086	PAF(LC)
NS0131	34	36	NS	X067018	067018	1	G	D	30.29	39.49	1.11	0.4386	0.34	0.05	2.62	0.56	0.082	0.322	0.161	0.039	0.63	10.87	0.55	12.05	11809	9.8532	9.76752	0.08568	PAF(LC)
NS0131	64	66	NS	X067033	067033	1	G	W	27.56	41.04	2.44	0.4257	0.33	0.107	2.64	0.4	0.074	0.213	0.087	0.014	1.15	11.56	0.48	13.19	11824	6.5178	6.9768	-0.459	NAF
NS0131	52	54	NS	X067027	067027	1	G	W	27.55	33.7	1.15	0.4902	0.38	0.049	3.65	0.65	0.088	0.351	0.006	0.001	0.86	18.52	0.88	20.26	11818	10.7406	11.3373	-0.5967	NAF
NS0131	56	58	NS	X067029	067029	1	G	W	31.73	41.5	0.92	0.1935	0.15	0.043	1.17	0.21	0.197	0.087	0.027	0.015	4.27	5.72	0.29	10.28	11820	2.6622	3.66282	-1.00062	NAF
NS0131	32	34	NS	X067017	067017	1	G	D	27.37	41.37	0.95	0.4257	0.33	0.042	2.8	0.49	0.071	0.242	0.141	0.091	0.65	13.05	0.53	14.23	11790	7.4052	8.54658	-1.14138	NAF
NS0131	62	64	NS	X067032	067032	1	G	W	27.81	47.89	1.17	0.2064	0.16	0.051	1.2	0.27	0.093	0.112	0.041	0.01	2.2	6.58	0.2	8.98	11823	3.4272	4.70934	-1.28214	NAF
NS0131	30	32	NS	X067016	067016	1	G	D	33.69	43.01	0.46	0.3354	0.26	0.022	0.74	0.17	0.102	0.053	0.047	0.013	2.91	3.79	0.21	6.91	11789	1.6218	2.96514	-1.34334	NAF
NS0131	116	118	NS	X067059	067059	1	G	W	26.84	43.84	2.36	0.6708	0.52	0.105	3.42	0.58	0.086	0.26	0.268	0.111	0.51	8.41	0.48	9.4	11886	7.956	10.11636	-2.16036	NAF
NS0131	50	52	NS	X067026	067026	1	G	W	28.39	30.98	1.32	0.645	0.5	0.057	3.9	0.75	0.103	0.326	0.005	0.007	0.94	19.54	0.8	21.28	11817	9.9756	13.0815	-3.1059	NAF
NS0131	442	444	NS	X067224	067224	1	G	W	30.26	41.6	1.78	0.4644	0.36	0.089	2.58	0.64	0.101	0.254	0.441	0.135	0.61	7.74	0.35	8.7	11905	7.7724	11.16288	-3.39048	NAF
NS0131	58	60	NS	X067030	067030	1	G	W	28.31	36.57	2.25	0.4257	0.33	0.094	2.63	0.49	0.103	0.151	0.013	0.003	1.76	14.2	0.42	16.38	11821	4.6206	8.54658	-3.92598	NAF
NS0131	352	354	NS	X067179	067179	1	G	W	33.08	39.36	2.76	0.6063	0.47	0.135	2.53	0.77	0.099	0.298	1.29	0.078	0.24	3.58	0.37	4.19	12022	9.1188	13.43034	-4.31154	NAF
NS0131	84	86	NS	X067043	067043	1	G	W	30.05	38.4	3.68	0.5418	0.42	0.162	3.19	0.74	0.114	0.269	0.388	0.042	0.37	7.91	0.46	8.74	11852	8.2314	12.90708	-4.67568	NAF
NS0131	118	120	NS	X067060	067060	1	G	W	31.89	40.36	2.23	0.5805	0.45	0.1	3.05	0.56	0.067	0.141	0.227	0.101	0.51	6.18	0.07	6.76	11887	4.3146	9.76752	-5.45292	NAF
NS0131	60	62	NS	X067031	067031	1	G	W	27.56	38.94	1.48	0.4644	0.36	0.064	2.38	0.49	0.056	0.097	0.027	0.009	1.1	15.13	0.17	16.4	11822	2.9682	8.54658	-5.57838	NAF
NS0131	270	272	NS	X067137	067137	1	G	W	36.15	36.23	1.07	0.7998	0.62	0.051	2.55	0.42	0.087	0.038	0.411	0.121	0.54	5.85	-0.3	6.09	11945	1.1628	7.32564	-6.16284	NAF
NS0131	72	74	NS	X067037	067037	1	G	W	29.64	37.52	1.16	0.4257	0.33	0.052	2.58	0.55	0.088	0.091	0.091	0.023	0.67	13.72	0	14.39	11846	2.7846	9.5931	-6.8085	NAF
NS0131	136	138	NS	X067070	067070	1	G	W	34.97	38.44	1.74	0.6579	0.51	0.084	2.54	0.62	0.081	0.112	0.319	0.125	0.51	4.56	-0.12	4.95	11896	3.4272	10.81404	-7.38684	NAF
NS0131	66	68	NS	X067034	067034	1	G	W	31.58	38.9	0.76	0.5805	0.45	0.032	2.34	0.49	0.09	0.036	0.13	0.027	0.49	11.05	-0.18	11.36	11825	1.1016	8.54658	-7.44498	NAF
NS0131	412	414	NS	X067209	067209	1	G	W	31.04	39.7	2.49	0.7353	0.57	0.116	2.69	1.32	0.136	0.504	1.35	0.093	0.3	4.47	0.92	5.69	12088	15.4224	23.02344	-7.60104	NAF
NS0131	312	314	NS	X067158	067158	1	G	W	26.03	42.44	3.61	0.6321	0.49	0.163	3.85	1.06	0.281	0.355	0.436	0.187	0.87	7.79	0.82	9.48	11984	10.863	18.48852	-7.62552	NAF
NS0131	318	320	NS	X067161	067161	1	G	W	26.88	43.48	2.93	0.6837	0.53	0.13	3.36	0.85	0.133	0.235	0.383	0.146	0.85	7.51	0.58	8.94	11987	7.191	14.8257	-7.6347	NAF
NS0131	108	110	NS	X067055	067055	1	G	W	29.33	41.26	2.73	0.5934	0.46	0.119	3.64	0.75	0.097	0.175	0.196	0.191	0.42	7.13	0.35	7.9	11882	5.355	13.0815	-7.7265	NAF
NS0131	162	164	NS	X067083	067083	1	G	W	32.68	41.93	1.3	0.8256	0.64	0.069	2.75	0.61	0.082	0.084	0.394	0.184	0.19	4.62	0.02	4.83	11927	2.5704	10.63962	-8.06922	NAF
NS0131	122	124	NS	X067062	067062	1	G	W	30.1	42.37	2.06	0.6708	0.52	0.095	2.96	0.58	0.074	0.058	0.33	0.11	0.54	6.75	-0.01	7.28	11889	1.7748	10.11636	-8.34156	NAF
NS0131	268	270	NS	X067136	067136	1	G	W	36.18	37.11	1.48	0.7353	0.57	0.066	2.58	0.69	0.124	0.119	0.53	0.111	0.33	4.12	-0.04	4.41	11944	3.6414	12.03498	-8.39358	NAF
NS0131	54	56	NS	X067028	067028	1	G	W	30.51	31.74	0.55	0.4644	0.36	0.025	3.59	0.56	0.059	0.043	0.055	0.007	0.92	18.36	0.02	19.3	11819	1.3158	9.76752	-8.45172	NAF
NS0131	160	162	NS	X067082	067082	1	G	W	34.44	37.53	1.84	0.7998	0.62	0.085	3.05	0.8	0.096	0.175	0.493	0.295	0.18	4.37	0.3	4.85	11926	5.355	13.9536	-8.5986	NAF
NS0131	38	40	NS	X067020	067020	1	G	W	29.12	37.99	0.31	0.3999	0.31	0.015	2.63	0.68	0.082	0.106	0.028	0.036	0.79	14.75	0.04	15.58	11811	3.2436	11.86056	-8.61696	NAF
NS0131	70	72	NS	X067036	067036	1	G	W	28.93	39.2	1.06	0.5289	0.41	0.045	2.67	0.67	0.089	0.098	0.102	0.022	0.62	13.36	0.03	14.01	11845	2.9988	11.68614	-8.68734	NAF
NS0131	68	70	NS	X067035	067035	1	G	W	30.75	35.61	1.19	0.5934	0.46	0.058	2.72	0.68	0.097	0.097	0.139	0.028	0.6	13.99	0	14.59	11826	2.9682	11.86056	-8.89236	NAF
NS0131	238	240	NS	X067121	067121	1	G	W	31.27	37.19	3.78	0.5418	0.42	0.177	4.09	0.81	0.139	0.171	0.336	0.147	0.51	6.92	0.35	7.78	11875	5.2326	14.12802	-8.89542	NAF
NS0131	40	42	NS	X067021	067021	1	G	W	27.6	38.19	0.34	0.3483	0.27	0.014	2.95	0.73	0.082	0.12	0.042	0.026	0.72	16.31	0.16	17.19	11812	3.672	12.73266	-9.06066	NAF
NS0131	284	286	NS	X067144	067144	1	G	W	33.46	38.65	1.09	0.7482	0.58	0.051	2.62	0.66	0.099	0.069	0.222	0.126	0.7	6.7	-0.13	7.27	11952	2.1114	11.51172	-9.40032	NAF
NS0131	256	258	NS	X067130	067130	1	G	W	35.32	36.83	1.29	0.774	0.6	0.06	2.5	0.69	0.108	0.083	0.401	0.091	0.41	5.89	-0.14	6.16	11938	2.5398	12.03498	-9.49518	NAF
NS0131	134	136	NS	X067069	067069	1	G	W	33.05	39.5	1.84	0.6837	0.53	0.086	2.63	0.87	0.116	0.183	0.394	0.129	0.7	5.03	0.22	5.95	11895	5.5998	15.17454	-9.57474	NAF
NS0131	220	222	NS	X067112	067112	1	G	W	32.9	34.19	0.89	0.6579	0.51	0.036	3.12	0.65	0.073	0.051	0.471	0.05	0.42	12.01	-0.06	12.37	11866	1.5606	11.3373	-9.7767	NAF
NS0131	378	380	NS	X067192	067192	1	G	W	31.3	44.71	1.34	0.6966	0.54	0.062	2.28	0.64	0.129	0.041	0.454	0.071	0.36	4.79	-0.24	4.91	12053	1.2546	11.16288	-9.90828	NAF
NS0131	222	224	NS	X067113	067113	1	G	W	33.2	29.14	1.09	0.7224	0.56	0.047	3.43	0.72	0.079	0.083	0.416	0.096	1.14	15.26	0.01	16.41	11867	2.5398	12.55824	-10.01844	NAF
NS0131	36	38	NS	X067019	067019	1	G	D	29	37.07	0.33	0.4386	0.34	0.014	2.86	0.79	0.089	0.122	0.038	0.045	0.71	15.9	0.06	16.67	11810	3.7332	13.77918	-10.04598	NAF
NS0131	368	370	NS	X067187	067187	1	G	W	33.56	40	1.46	0.7095	0.55	0.072	2.34	0.68	0.096	0.058	0.522	0.093	0.61	4.88	-0.15	5.34	12048	1.7748	11.86056	-10.08576	NAF
NS0131	110	112	NS	X067056	067056	1	G	W	32.29	41.4	1.38	0.6321	0.49	0.066	2.45	0.76	0.081	0.1	0.279	0.097	0.22	5.64	0.03	5.89	11883	3.06	13.25592	-10.19592	NAF
NS0131	240	242	NS	X067122	067122	1	G	W	27.22	39.02	4.12	0.6321	0.49	0.181	4.38	1.06	0.284	0.267	0.366	0.151	1.3	8.54	0.63	10.47	11876	8.1702	18.48852	-10.31832	NAF
NS0131	366	368	NS	X067186	067186	1	G	W	35.81	39.56	1.11	0.645	0.5	0.056	1.96	0.64	0.112	0.027	0.405	0.083	0.4	4.27	-0.44	4.23	12047	0.8262	11.16288	-10.33668	NAF
NS0131	214	216	NS	X067109	067109	1	G	W	40.33	34.49	1.18	0.5418	0.42	0.044	1.74	0.65	0.088	0.027	0.822	0.044	0.02	3.24	-0.42	2.84	11863	0.8262	11.3373	-10.5111	NAF
NS0131	208	210	NS	X067106	067106	1	G	W	37.5	35.8	1.92	0.5289	0.41	0.089	2.58	0.86	0.116	0.134	0.585	0.073	0.12	3.45	0.06	3.63	11806	4.1004	15.00012	-10.89972	NAF
NS0131	164	166	NS	X067084	067084	1	G	W	33.28	41.14	1.58	0.7353	0.57	0.064	2.48	0.7	0.061	0.04	0.738	0.19	0.12	4	0.04	4.16	11928	1.224	12.2094	-10.9854	NAF
NS0131	138	140	NS	X067071	067071	1	G	W	36.63	37	1.72	0.7224	0.56	0.081	2.47	0.72	0.065	0.045	0.376	0.099	0.17	4.33	-0.05	4.45	11897	1.377	12.55824	-11.18124	NAF
NS0131	154	156	NS	X067079	067079	1	G	W	34.07	38.42	2.06	0.7482	0.58	0.092	3.03	0.87	0.068	0.128	0.563	0.304	0.13	4.18	0.24	4.55	11923	3.9168	15.17454	-11.25774	NAF
NS0131	120	122	NS	X067061	067061	1	G	W	32.93	38.47	2.05	0.645	0.5	0.09	2.87	0.75	0.072	0.053	0.334	0.096	0.73	6.16	0	6.89	11888	1.6218	13.0815	-11.4597	NAF
NS0131	320	322	NS	X067162	067162	1	G	W	29.63	40.86	4.16	0.516	0.4	0.196	3.65	1.14	0.154	0.271	0.406	0.139	0.55	4.74	0.6	5.89	11988	8.2926	19.88388	-11.59128	NAF
NS0131	290	292	NS	X067147	067147	1	G	W	34.82	36.17	1.33	0.7869	0.61	0.059	2.8	0.75	0.101	0.041	0.393	0.183	0.78	6.44	-0.07	7.15	11973	1.2546	13.0815	-11.8269	NAF
NS0131	218	220	NS	X067111	067111	1	G	W	37.99	35.22	1	0.6966	0.54	0.041	2.18	0.74	0.092	0.034	0.464	0.04	0.09	5.01	-0.13	4.97	11865	1.0404	12.90708	-11.86668	NAF
NS0131	258	260	NS	X067131	067131	1	G	W	34.1	37.75	2.09	0.6579	0.51	0.098	3.04	0.88	0.117	0.113	0.496	0.096	0.39	4.89	0.08	5.36	11939	3.4578	15.34896	-11.89116	NAF
NS0131	272	274	NS	X067138	067138	1	G	W	35.55	37.72	1.22	0.8643	0.67	0.056	2.59	0.77	0.112	0.047	0.41	0.114	0.37	4.77	-0.04	5.1	11946	1.4382	13.43034	-11.99214	NAF
NS0131	370	372	NS	X067188	067188	1	G	W	34.65	39.85	1.1	0.7095	0.55	0.054	2.07	0.76	0.115	0.041	0.326	0.059	0.31	4.92	-0.13	5.1	12049	1.2546	13.25592	-12.00132	NAF
NS0131	376	378	NS	X067191	067191	1	G	W	33.87	40.12	1.11	0.774	0.6	0.05	2.2	0.76	0.103	0.039	0.4	0.071	0.3	5.19	-0.12	5.37	12052	1.1934	13.25592	-12.06252	NAF
NS0131	224	226	NS	X067114	067114	1	G	W	27.94	37.41	1.22	0.645	0.5	0.054	2.88	0.94	0.09	0.135	0.413	0.095	0.76	14.53	0.28	15.57	11868	4.131	16.39548	-12.26448	NAF
NS0131	210	212	NS	X067107	067107	1	G	W	35.65	38.5	1.32	0.774	0.6	0.061	2.33	0.78	0.094	0.04	0.539	0.062	0.15	4.33	-0.04	4.44	11807	1.224	13.60476	-12.38076	NAF
NS0131	380	382	NS	X067193	067193	1	G	W	33.25	39.71	1.92	0.7482	0.58	0.083	2.66	0.86	0.137	0.076	0.716	0.125	0.38	4.66	0.05	5.09	12054	2.3256	15.00012	-12.67452	NAF
NS0131	254	256	NS	X067129	067129	1	G	W	35.78	35.62	1.09	0.8901	0.69	0.048	2.46	0.78	0.114	0.03	0.374	0.055	0.35	6.87	-0.16	7.06	11937	0.918	13.60476	-12.68676	NAF
NS0131	76	78	NS	X067039	067039	1	G	W	34.73	38.65	1.44	0.5031	0.39	0.064	2.2	0.88	0.089	0.084	0.131	0.05	0.16	6	-0.09	6.07	11848	2.5704	15.34896	-12.77856	NAF
NS0131	372	374	NS	X067189	067189	1	G	W	32.83	40.79	1.73	0.645	0.5	0.081	2.44	0.89	0.113	0.087	0.645	0.109	0.37	4.31	0.11	4.79	12050	2.6622	15.52338	-12.86118	NAF
NS0131	216	218	NS	X067110	067110	1	G	W	37.19	35.62	1.11	0.774	0.6	0.05	2.47	0.77	0.089	0.017	0.443	0.043	0.18	5.02	-0.08	5.12	11864	0.5202	13.43034	-12.91014	NAF
NS0131	86	88	NS	X067044	067044	1	G	W	30.3	40.05	2.05	0.6966	0.54	0.094	2.44	0.97	0.162	0.13	0.286	0.044	0.36	8.9	0.06	9.32	11853	3.978	16.91874	-12.94074	NAF
NS0131	382	384	NS	X067194	067194	1	G	W	35.26	37.87	1.62	0.774	0.6	0.075	2.42	0.86	0.118	0.055	0.591	0.103	0.31	4.24	0.02	4.57	12055	1.683	15.00012	-13.31712	NAF
NS0131	206	208	NS	X067105	067105	1	G	W	39.99	34.61	0.97	0.645	0.5	0.04	1.77	0.84	0.092	0.027	0.376	0.062	0.07	3.09	-0.14	3.02	11805	0.8262	14.65128	-13.82508	NAF
NS0131	282	284	NS	X067143	067143	1	G	W	35.35	37.22	1.05	0.7998	0.62	0.05	2.62	0.86	0.084	0.037	0.237	0.116	0.47	5.56	0	6.03	11951	1.1322	15.00012	-13.86792	NAF
NS0131	74	76	NS	X067038	067038	1	G	W	35.5	35.47	0.66	0.5934	0.46	0.032	2.14	0.86	0.069	0.035	0.172	0.081	0.29	8.8	-0.02	9.07	11847	1.071	15.00012	-13.92912	NAF
NS0131	182	184	NS	X067093	067093	1	G	W	31.27	40.94	2.38	0.7095	0.55	0.109	2.78	1.33	0.138	0.298	0.586	0.243	0.2	4.58	0.67	5.45	11793	9.1188	23.19786	-14.07906	NAF
NS0131	78	80	NS	X067040	067040	1	G	W	32.65	39.59	1.59	0.6579	0.51	0.074	2.38	1.06	0.106	0.143	0.348	0.065	0.21	6.93	0.18	7.32	11849	4.3758	18.48852	-14.11272	NAF
NS0131	90	92	NS	X067046	067046	1	G	W	29.09	43.33	3.05	0.4644	0.36	0.137	3.02	1.24	0.078	0.234	0.117	0.039	0.32	5.36	0.6	6.28	11855	7.1604	21.62808	-14.46768	NAF
NS0131	226	228	NS	X067115	067115	1	G	W	30.62	32.29	1.65	0.6579	0.51	0.074	3.34	1.02	0.095	0.108	0.378	0.118	0.79	14.99	0.33	16.11	11869	3.3048	17.79084	-14.48604	NAF
NS0131	174	176	NS	X067089	067089	1	G	W	34.67	39.34	1.93	0.7095	0.55	0.084	2.64	1.03	0.075	0.113	0.575	0.216	0.08	3.26	0.32	3.66	11933	3.4578	17.96526	-14.50746	NAF
NS0131	146	148	NS	X067075	067075	1	G	W	32.25	38.81	2.66	0.8256	0.64	0.121	3.29	1.48	0.079	0.366	0.543	0.264	0.16	4.57	0.99	5.72	11919	11.1996	25.81416	-14.61456	NAF
NS0131	212	214	NS	X067108	067108	1	G	W	40.01	34.88	1.04	0.5934	0.46	0.042	1.74	0.87	0.074	0.017	0.593	0.047	0	2.99	0.02	3.01	11808	0.5202	15.17454	-14.65434	NAF
NS0131	310	312	NS	X067157	067157	1	G	W	33.02	39.56	1.41	0.6321	0.49	0.064	2.53	0.94	0.075	0.049	0.257	0.102	0.48	6.03	0.18	6.69	11983	1.4994	16.39548	-14.89608	NAF
NS0131	250	252	NS	X067127	067127	1	G	W	35.2	36.29	1.31	0.7353	0.57	0.06	2.38	0.97	0.125	0.063	0.268	0.08	0.41	6.31	-0.03	6.69	11935	1.9278	16.91874	-14.99094	NAF
NS0131	156	158	NS	X067080	067080	1	G	W	37.44	37.07	1.2	0.774	0.6	0.055	2.11	0.91	0.102	0.025	0.464	0.221	0.02	3.47	0	3.49	11924	0.765	15.87222	-15.10722	NAF
NS0131	450	452	NS	X067228	067228	1	G	W	33.48	39.07	2.03	0.5031	0.39	0.097	2.42	1.03	0.106	0.087	0.677	0.121	0.52	5.37	0.15	6.04	11909	2.6622	17.96526	-15.30306	NAF
NS0131	364	366	NS	X067185	067185	1	G	W	34.05	40.01	1.51	0.7611	0.59	0.066	2.2	1.04	0.118	0.089	0.647	0.091	0.26	4.03	0.24	4.53	12046	2.7234	18.13968	-15.41628	NAF
NS0131	166	168	NS	X067085	067085	1	G	W	36.36	39.08	1.03	0.7482	0.58	0.048	2.18	0.93	0.093	0.026	0.281	0.122	0.06	3.4	0.06	3.52	11929	0.7956	16.22106	-15.42546	NAF
NS0131	448	450	NS	X067227	067227	1	G	W	30.89	41.85	1.88	0.516	0.4	0.089	2.35	1	0.12	0.059	0.47	0.121	0.54	6.23	0.11	6.88	11908	1.8054	17.442	-15.6366	NAF
NS0131	140	142	NS	X067072	067072	1	G	W	35.26	36.97	2.01	0.7998	0.62	0.091	2.71	1.03	0.104	0.075	0.482	0.295	0.14	4.34	0.24	4.72	11898	2.295	17.96526	-15.67026	NAF
NS0131	252	254	NS	X067128	067128	1	G	W	34.82	37.46	0.96	0.8127	0.63	0.044	2.33	0.97	0.089	0.033	0.284	0.072	0.6	6.49	0.06	7.15	11936	1.0098	16.91874	-15.90894	NAF
NS0131	234	236	NS	X067119	067119	1	G	W	28.8	41.8	2.08	0.7224	0.56	0.097	3.27	1.24	0.141	0.184	0.28	0.107	0.48	7.64	0.54	8.66	11873	5.6304	21.62808	-15.99768	NAF
NS0131	98	100	NS	X067050	067050	1	G	W	32.29	39.61	1.51	0.5934	0.46	0.07	2.72	1.05	0.147	0.066	0.274	0.12	0.34	6.48	0.14	6.96	11859	2.0196	18.3141	-16.2945	NAF
NS0131	204	206	NS	X067104	067104	1	G	W	35.92	38.48	1.01	0.8256	0.64	0.046	2.22	1	0.081	0.022	0.377	0.086	0.2	3.99	0.21	4.4	11804	0.6732	17.442	-16.7688	NAF
NS0131	82	84	NS	X067042	067042	1	G	W	31.87	41.57	1.52	0.6321	0.49	0.071	2.14	1.14	0.086	0.097	0.207	0.029	0.19	5.98	0.21	6.38	11851	2.9682	19.88388	-16.91568	NAF
NS0131	286	288	NS	X067145	067145	1	G	W	32.76	39.84	1.03	0.5934	0.46	0.05	2.72	1.08	0.102	0.059	0.225	0.124	0.64	6.32	0.2	7.16	11971	1.8054	18.83736	-17.03196	NAF
NS0131	80	82	NS	X067041	067041	1	G	W	32.87	40.24	1.67	0.6321	0.49	0.079	2.11	1.29	0.083	0.172	0.485	0.072	0.13	5.6	0.38	6.11	11850	5.2632	22.50018	-17.23698	NAF
NS0131	292	294	NS	X067148	067148	1	G	W	34.47	37.17	1.13	0.7353	0.57	0.053	2.59	1.06	0.106	0.038	0.352	0.151	0.66	6.1	0.2	6.96	11974	1.1628	18.48852	-17.32572	NAF
NS0131	402	404	NS	X067204	067204	1	G	W	35.72	38.81	1.35	0.6837	0.53	0.063	1.92	1.05	0.127	0.026	0.888	0.071	0.23	3.41	0.12	3.76	12083	0.7956	18.3141	-17.5185	NAF
NS0131	242	244	NS	X067123	067123	1	G	W	29.46	43.1	1.83	0.6321	0.49	0.081	2.76	1.26	0.104	0.144	0.205	0.076	0.37	6.11	0.46	6.94	11877	4.4064	21.97692	-17.57052	NAF
NS0131	202	204	NS	X067103	067103	1	G	W	36.6	37.27	1.09	0.7482	0.58	0.05	2	1.07	0.087	0.035	0.425	0.106	0.7	3.53	0.15	4.38	11803	1.071	18.66294	-17.59194	NAF
NS0131	190	192	NS	X067097	067097	1	G	W	35.37	37.8	1.71	0.8256	0.64	0.081	2.34	1.16	0.101	0.081	0.484	0.275	0.07	3.99	0.31	4.37	11797	2.4786	20.23272	-17.75412	NAF
NS0131	230	232	NS	X067117	067117	1	G	W	34.01	36.68	1.26	0.774	0.6	0.059	3.08	1.1	0.105	0.038	0.162	0.071	0.36	7.45	0.28	8.09	11871	1.1628	19.1862	-18.0234	NAF
NS0131	248	250	NS	X067126	067126	1	G	W	34.53	36.3	1.28	0.7869	0.61	0.057	2.8	1.15	0.113	0.066	0.128	0.051	0.35	7.17	0.18	7.7	11880	2.0196	20.0583	-18.0387	NAF
NS0131	374	376	NS	X067190	067190	1	G	W	34.81	39.3	0.9	0.7224	0.56	0.043	2.05	1.09	0.094	0.022	0.321	0.064	0.23	4.72	0.2	5.15	12051	0.6732	19.01178	-18.33858	NAF
NS0131	440	442	NS	X067223	067223	1	G	W	33.66	40	1.02	0.5547	0.43	0.05	1.93	1.12	0.099	0.036	0.297	0.068	0.37	6.06	0.06	6.49	11904	1.1016	19.53504	-18.43344	NAF
NS0131	112	114	NS	X067057	067057	1	G	W	32.8	41.57	1.07	0.6321	0.49	0.05	2.28	1.11	0.101	0.022	0.326	0.059	0.22	5.2	0.32	5.74	11884	0.6732	19.36062	-18.68742	NAF
NS0131	276	278	NS	X067140	067140	1	G	W	34.43	38.61	1.32	0.6708	0.52	0.058	2.72	1.21	0.104	0.065	0.299	0.13	0.58	4.28	0.37	5.23	11948	1.989	21.10482	-19.11582	NAF
NS0131	228	230	NS	X067116	067116	1	G	W	32.05	37.21	1.58	0.645	0.5	0.075	3.4	1.29	0.144	0.11	0.198	0.081	0.42	8.3	0.3	9.02	11870	3.366	22.50018	-19.13418	NAF
NS0131	114	116	NS	X067058	067058	1	G	W	29.39	45.63	1.17	0.5289	0.41	0.055	2.3	1.16	0.051	0.035	0.266	0.072	0.74	5.06	0.55	6.35	11885	1.071	20.23272	-19.16172	NAF
NS0131	338	340	NS	X067172	067172	1	G	W	43.15	30.86	1.05	0.5934	0.46	0.044	1.51	1.14	0.067	0.022	0.867	0.029	-0.16	1.64	0.36	1.84	12015	0.6732	19.88388	-19.21068	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0131	294	296	NS	X067149	067149	1	G	W	32.26	38.27	1.49	0.8127	0.63	0.068	2.91	1.34	0.085	0.13	0.343	0.141	0.74	6.89	0.56	8.19	11975	3.978	23.37228	-19.39428	NAF
NS0131	236	238	NS	X067120	067120	1	G	W	33.94	37.47	1.72	0.5934	0.46	0.075	2.77	1.21	0.07	0.052	0.229	0.102	0.39	5.86	0.41	6.66	11874	1.5912	21.10482	-19.51362	NAF
NS0131	194	196	NS	X067099	067099	1	G	W	32.36	40.75	1.98	0.6966	0.54	0.093	2.5	1.25	0.142	0.071	0.614	0.291	0.14	4.63	0.36	5.13	11799	2.1726	21.8025	-19.6299	NAF
NS0131	92	94	NS	X067047	067047	1	G	W	33.14	40.76	1.12	0.645	0.5	0.052	2.12	1.21	0.065	0.047	0.262	0.042	0.18	5.55	0.39	6.12	11856	1.4382	21.10482	-19.66662	NAF
NS0131	150	152	NS	X067077	067077	1	G	W	35.11	37.59	1.76	0.7611	0.59	0.082	2.63	1.31	0.133	0.092	0.314	0.15	0.13	3.98	0.25	4.36	11921	2.8152	22.84902	-20.03382	NAF
NS0131	344	346	NS	X067175	067175	1	G	W	41.28	33.18	1.03	0.5934	0.46	0.039	1.52	1.21	0.082	0.015	0.814	0.053	-0.12	1.81	0.36	2.05	12018	0.459	21.10482	-20.64582	NAF
NS0131	106	108	NS	X067054	067054	1	G	W	30.23	42.1	2.07	0.5547	0.43	0.096	2.89	1.43	0.07	0.136	0.19	0.179	0.24	5.68	0.76	6.68	11881	4.1616	24.94206	-20.78046	NAF
NS0131	180	182	NS	X067092	067092	1	G	W	31.06	39.84	3.14	0.6579	0.51	0.145	3.44	1.62	0.136	0.236	0.5	0.165	0.21	3.81	0.82	4.84	11792	7.2216	28.25604	-21.03444	NAF
NS0131	400	402	NS	X067203	067203	1	G	W	35.06	38.92	1.37	0.7482	0.58	0.066	1.9	1.28	0.107	0.035	0.932	0.061	0.44	3.49	0.4	4.33	12082	1.071	22.32576	-21.25476	NAF
NS0131	452	454	NS	X067229	067229	1	G	W	33.45	39.5	1.77	0.4902	0.38	0.083	2.32	1.34	0.11	0.069	0.536	0.115	0.68	4.84	0.4	5.92	11910	2.1114	23.37228	-21.26088	NAF
NS0131	304	306	NS	X067154	067154	1	G	W	35.22	36.19	1.25	0.6837	0.53	0.054	2.51	1.3	0.088	0.043	0.286	0.11	0.47	5.68	0.45	6.6	11980	1.3158	22.6746	-21.3588	NAF
NS0131	132	134	NS	X067068	067068	1	G	W	35.33	37.85	1.46	0.7353	0.57	0.07	2.11	1.38	0.088	0.084	0.37	0.127	0.72	3.99	0.45	5.16	11894	2.5704	24.06996	-21.49956	NAF
NS0131	296	298	NS	X067150	067150	1	G	W	32.49	39.46	1.22	0.7095	0.55	0.057	2.47	1.39	0.1	0.078	0.299	0.143	0.69	5.85	0.53	7.07	11976	2.3868	24.24438	-21.85758	NAF
NS0131	96	98	NS	X067049	067049	1	G	W	26.12	44.65	2.2	0.7224	0.56	0.098	3.31	1.53	0.139	0.152	0.38	0.138	0.42	7.88	0.7	9	11858	4.6512	26.68626	-22.03506	NAF
NS0131	280	282	NS	X067142	067142	1	G	W	35.52	36.72	0.97	0.7998	0.62	0.045	2.61	1.33	0.09	0.035	0.212	0.099	0.35	4.9	0.51	5.76	11950	1.071	23.19786	-22.12686	NAF
NS0131	232	234	NS	X067118	067118	1	G	W	32.96	38.46	1.21	0.7353	0.57	0.059	2.8	1.35	0.092	0.043	0.183	0.072	0.37	6.67	0.5	7.54	11872	1.3158	23.5467	-22.2309	NAF
NS0131	306	308	NS	X067155	067155	1	G	W	31.12	40.54	1.27	0.6321	0.49	0.061	2.65	1.38	0.105	0.059	0.272	0.126	1.47	5.99	0.51	7.97	11981	1.8054	24.06996	-22.26456	NAF
NS0131	288	290	NS	X067146	067146	1	G	W	33.23	37.68	1.14	0.6837	0.53	0.053	2.9	1.4	0.115	0.052	0.354	0.161	0.63	6.38	0.6	7.61	11972	1.5912	24.4188	-22.8276	NAF
NS0131	274	276	NS	X067139	067139	1	G	W	35.49	37.99	1.07	0.774	0.6	0.05	2.51	1.36	0.09	0.029	0.275	0.099	0.29	4	0.45	4.74	11947	0.8874	23.72112	-22.83372	NAF
NS0131	246	248	NS	X067125	067125	1	G	W	34.71	36.76	1.24	0.7353	0.57	0.054	2.64	1.4	0.104	0.038	0.142	0.06	0.67	6.13	0.42	7.22	11879	1.1628	24.4188	-23.256	NAF
NS0131	152	154	NS	X067078	067078	1	G	W	36.04	37.7	1.22	0.7353	0.57	0.059	2.29	1.42	0.123	0.045	0.34	0.166	0.05	3.49	0.42	3.96	11922	1.377	24.76764	-23.39064	NAF
NS0131	394	396	NS	X067200	067200	1	G	W	33.45	39.64	1.88	0.7353	0.57	0.092	2.41	1.61	0.138	0.147	1.05	0.086	0.28	3.3	0.36	3.94	12079	4.4982	28.08162	-23.58342	NAF
NS0131	124	126	NS	X067063	067063	1	G	W	31.33	40.7	2.16	0.6708	0.52	0.095	2.78	1.45	0.165	0.054	0.415	0.096	0.51	4.86	0.57	5.94	11890	1.6524	25.2909	-23.6385	NAF
NS0131	178	180	NS	X067091	067091	1	G	W	35.98	37.47	1.57	0.7224	0.56	0.074	2.27	1.43	0.107	0.042	0.443	0.117	0.06	3.11	0.57	3.74	11791	1.2852	24.94206	-23.65686	NAF
NS0131	396	398	NS	X067201	067201	1	G	W	31.92	40.45	2.12	0.6708	0.52	0.095	2.68	1.55	0.105	0.107	1.09	0.086	1.23	2.95	0.75	4.93	12080	3.2742	27.0351	-23.7609	NAF
NS0131	438	440	NS	X067222	067222	1	G	W	32.05	41.04	1.7	0.516	0.4	0.084	2.42	1.48	0.12	0.064	0.481	0.113	0.48	4.97	0.61	6.06	11903	1.9584	25.81416	-23.85576	NAF
NS0131	336	338	NS	X067171	067171	1	G	W	37.04	36.89	1.08	0.774	0.6	0.046	2.05	1.43	0.089	0.027	0.857	0.05	0.07	2.56	0.69	3.32	12014	0.8262	24.94206	-24.11586	NAF
NS0131	266	268	NS	X067135	067135	1	G	W	36.97	35.91	1.04	0.8127	0.63	0.049	2.46	1.43	0.089	0.026	0.404	0.085	0.31	3.94	0.61	4.86	11943	0.7956	24.94206	-24.14646	NAF
NS0131	410	412	NS	X067208	067208	1	G	W	33.56	40.48	0.99	0.8256	0.64	0.043	1.83	1.49	0.107	0.044	0.642	0.046	0.17	4.16	0.61	4.94	12087	1.3464	25.98858	-24.64218	NAF
NS0131	432	434	NS	X067219	067219	1	G	W	33.38	39.91	1.85	0.5289	0.41	0.085	2.11	1.54	0.101	0.063	1.1	0.092	0.35	3.38	0.67	4.4	11900	1.9278	26.86068	-24.93288	NAF
NS0131	130	132	NS	X067067	067067	1	G	W	35.56	37.4	1.79	0.7224	0.56	0.079	2.31	1.58	0.073	0.083	0.562	0.182	0.11	3.22	0.82	4.15	11893	2.5398	27.55836	-25.01856	NAF
NS0131	334	336	NS	X067170	067170	1	G	W	38.38	35.77	0.92	0.7482	0.58	0.038	1.82	1.48	0.078	0.024	0.704	0.037	-0.06	2.31	0.8	3.05	12013	0.7344	25.81416	-25.07976	NAF
NS0131	100	102	NS	X067051	067051	1	G	W	33	39.45	1.71	0.5418	0.42	0.079	2.74	1.6	0.108	0.092	0.236	0.096	0.21	4.98	0.63	5.82	11860	2.8152	27.9072	-25.092	NAF
NS0131	302	304	NS	X067153	067153	1	G	W	31.22	41.35	1.31	0.5934	0.46	0.057	2.61	1.71	0.103	0.151	0.263	0.106	0.55	5.31	0.81	6.67	11979	4.6206	29.82582	-25.20522	NAF
NS0131	278	280	NS	X067141	067141	1	G	W	35.65	36.34	1.13	0.774	0.6	0.051	2.82	1.51	0.091	0.035	0.24	0.111	0.33	4.56	0.76	5.65	11949	1.071	26.33742	-25.26642	NAF
NS0131	406	408	NS	X067206	067206	1	G	W	36.81	37.06	1.11	0.8127	0.63	0.056	1.84	1.51	0.103	0.033	0.711	0.065	0.2	3.26	0.67	4.13	12085	1.0098	26.33742	-25.32762	NAF
NS0131	158	160	NS	X067081	067081	1	G	W	36.61	36.68	0.98	0.8514	0.66	0.047	2.25	1.49	0.112	0.021	0.371	0.16	0.07	3.74	0.62	4.43	11925	0.6426	25.98858	-25.34598	NAF
NS0131	196	198	NS	X067100	067100	1	G	W	34.35	38.18	1.76	0.7353	0.57	0.085	2.57	1.62	0.096	0.084	0.396	0.124	0.12	3.88	0.8	4.8	11800	2.5704	28.25604	-25.68564	NAF
NS0131	148	150	NS	X067076	067076	1	G	W	32.85	38.76	2.05	0.774	0.6	0.096	2.91	1.73	0.141	0.146	0.397	0.244	0.16	4.51	0.74	5.41	11920	4.4676	30.17466	-25.70706	NAF
NS0131	94	96	NS	X067048	067048	1	G	W	31.01	43.25	1.37	0.5805	0.45	0.063	2.32	1.57	0.085	0.053	0.207	0.033	0.19	5.02	0.77	5.98	11857	1.6218	27.38394	-25.76214	NAF
NS0131	264	266	NS	X067134	067134	1	G	W	36.56	35.32	1.2	0.8256	0.64	0.051	2.56	1.56	0.11	0.037	0.456	0.094	0.4	4.19	0.7	5.29	11942	1.1322	27.20952	-26.07732	NAF
NS0131	414	416	NS	X067210	067210	1	G	W	35.98	36.45	1.4	0.7224	0.56	0.066	2.05	1.55	0.099	0.03	0.864	0.061	0.19	4.19	0.64	5.02	12089	0.918	27.0351	-26.1171	NAF
NS0131	340	342	NS	X067173	067173	1	G	W	37.17	36.75	1.11	0.774	0.6	0.043	2.08	1.55	0.093	0.024	0.835	0.04	0	2.62	0.83	3.45	12016	0.7344	27.0351	-26.3007	NAF
NS0131	308	310	NS	X067156	067156	1	G	W	32.46	39.44	1.28	0.6063	0.47	0.058	2.62	1.66	0.089	0.072	0.263	0.109	0.5	5.44	0.97	6.91	11982	2.2032	28.95372	-26.75052	NAF
NS0131	186	188	NS	X067095	067095	1	G	W	35.11	38.5	1.6	0.774	0.6	0.073	2.11	1.62	0.088	0.048	0.515	0.194	0.06	3.33	0.74	4.13	11795	1.4688	28.25604	-26.78724	NAF
NS0131	384	386	NS	X067195	067195	1	G	W	35.1	38.52	1.28	0.7353	0.57	0.058	2.27	1.61	0.115	0.038	0.52	0.103	0.29	3.51	0.74	4.54	12056	1.1628	28.08162	-26.91882	NAF
NS0131	390	392	NS	X067198	067198	1	G	W	34.07	39.8	1.85	0.5547	0.43	0.084	2.29	1.67	0.108	0.068	1.01	0.101	0.25	2.37	0.92	3.54	12059	2.0808	29.12814	-27.04734	NAF
NS0131	330	332	NS	X067168	067168	1	G	W	36.14	38.56	1.09	0.774	0.6	0.043	1.95	1.63	0.09	0.025	0.81	0.054	0.15	2.39	0.96	3.5	12011	0.765	28.43046	-27.66546	NAF
NS0131	342	344	NS	X067174	067174	1	G	W	37.45	36.88	0.99	0.6579	0.51	0.038	1.72	1.66	0.086	0.029	0.77	0.112	-0.07	2.05	0.96	2.94	12017	0.8874	28.95372	-28.06632	NAF
NS0131	126	128	NS	X067065	067065	1	G	W	36.55	37.13	1.12	0.774	0.6	0.048	1.96	1.65	0.067	0.022	0.372	0.118	0.17	3.21	0.93	4.31	11891	0.6732	28.7793	-28.1061	NAF
NS0131	184	186	NS	X067094	067094	1	G	W	36.76	35.46	1.49	0.8256	0.64	0.067	2.13	1.68	0.063	0.039	0.519	0.13	0.06	3.78	0.92	4.76	11794	1.1934	29.30256	-28.10916	NAF
NS0131	430	432	NS	X067218	067218	1	G	W	36.58	37.2	1.43	0.5934	0.46	0.068	1.78	1.73	0.113	0.056	1.09	0.048	0.24	2.73	0.66	3.63	11899	1.7136	30.17466	-28.46106	NAF
NS0131	198	200	NS	X067101	067101	1	G	W	35.76	35.34	1.51	0.7482	0.58	0.074	2.47	1.78	0.075	0.081	0.397	0.099	1.64	3.8	0.94	6.38	11801	2.4786	31.04676	-28.56816	NAF
NS0131	142	144	NS	X067073	067073	1	G	W	36.58	36.35	1.38	0.774	0.6	0.064	2.33	1.7	0.075	0.034	0.434	0.169	0.07	3.45	0.93	4.45	11917	1.0404	29.6514	-28.611	NAF
NS0131	102	104	NS	X067052	067052	1	G	W	32.38	41.65	1.25	0.5031	0.39	0.06	2.31	1.72	0.084	0.039	0.22	0.089	0.18	4.13	1.02	5.33	11861	1.1934	30.00024	-28.80684	NAF
NS0131	144	146	NS	X067074	067074	1	G	W	34.89	38.12	1.53	0.7869	0.61	0.068	2.4	1.73	0.079	0.035	0.464	0.154	0.09	3.71	0.96	4.76	11918	1.071	30.17466	-29.10366	NAF
NS0131	332	334	NS	X067169	067169	1	G	W	39.51	34.5	0.96	0.6192	0.48	0.037	1.69	1.71	0.071	0.023	0.727	0.033	-0.06	1.65	1.09	2.68	12012	0.7038	29.82582	-29.12202	NAF
NS0131	346	348	NS	X067176	067176	1	G	W	38.84	35.35	0.99	0.6579	0.51	0.041	1.7	1.71	0.088	0.019	0.759	0.058	-0.05	1.95	1.06	2.96	12019	0.5814	29.82582	-29.24442	NAF
NS0131	434	436	NS	X067220	067220	1	G	W	33.71	38.31	1.72	0.5418	0.42	0.081	2.26	1.8	0.101	0.064	0.875	0.093	0.35	4.07	0.98	5.4	11901	1.9584	31.3956	-29.4372	NAF
NS0131	322	324	NS	X067163	067163	1	G	W	33.78	38.33	1.88	0.6708	0.52	0.086	2.45	1.85	0.138	0.092	0.436	0.076	0.29	3.72	0.88	4.89	12007	2.8152	32.2677	-29.4525	NAF
NS0131	426	428	NS	X067216	067216	1	M	W	35.2	37.99	1.54	0.774	0.6	0.071	1.96	1.76	0.11	0.04	1.22	0.049	0.17	3.33	0.39	3.89	12095	1.224	30.69792	-29.47392	NAF
NS0131	422	424	NS	X067214	067214	1	G	W	36.33	36.74	1.66	0.6192	0.48	0.077	1.96	1.79	0.122	0.055	1.26	0.064	0.14	2.8	0.51	3.45	12093	1.683	31.22118	-29.53818	NAF
NS0131	362	364	NS	X067184	067184	1	G	W	36.81	36.68	1.07	0.7224	0.56	0.054	1.86	1.78	0.127	0.048	0.521	0.059	0.13	3.06	0.83	4.02	12045	1.4688	31.04676	-29.57796	NAF
NS0131	436	438	NS	X067221	067221	1	G	W	30.6	44.83	1.31	0.4386	0.34	0.064	1.97	1.8	0.079	0.043	0.502	0.083	0.29	3.51	1.12	4.92	11902	1.3158	31.3956	-30.0798	NAC
NS0131	200	202	NS	X067102	067102	1	G	W	33.53	39.35	1.31	0.8127	0.63	0.062	2.37	1.82	0.081	0.049	0.574	0.129	0.45	3.69	1.15	5.29	11802	1.4994	31.74444	-30.24504	NAC
NS0131	354	356	NS	X067180	067180	1	G	W	34.99	39.75	1.24	0.5418	0.42	0.058	1.61	1.85	0.089	0.059	0.664	0.055	0.05	2.3	1.13	3.48	12023	1.8054	32.2677	-30.4623	NAC
NS0131	300	302	NS	X067152	067152	1	G	W	33.61	38.92	0.96	0.5805	0.45	0.043	2.24	1.84	0.095	0.025	0.206	0.084	0.37	4.97	1.07	6.41	11978	0.765	32.09328	-31.32828	NAC
NS0131	192	194	NS	X067098	067098	1	G	W	34.47	39.71	1.07	0.8127	0.63	0.051	1.73	1.83	0.069	0.019	0.526	0.107	0	2.98	1.25	4.23	11798	0.5814	31.91886	-31.33746	NAC
NS0131	392	394	NS	X067199	067199	1	G	W	34.04	39.07	1.32	0.7611	0.59	0.056	2.05	1.86	0.12	0.035	0.813	0.071	0.59	3.2	0.89	4.68	12060	1.071	32.44212	-31.37112	NAC
NS0131	262	264	NS	X067133	067133	1	G	W	35.35	37.87	0.94	0.8127	0.63	0.043	2.26	1.85	0.095	0.029	0.338	0.074	0.21	3.69	1.01	4.91	11941	0.8874	32.2677	-31.3803	NAC
NS0131	314	316	NS	X067159	067159	1	G	W	29.66	43.32	1.27	0.6579	0.51	0.055	2.29	1.94	0.096	0.065	0.187	0.086	0.45	5.5	1.08	7.03	11985	1.989	33.83748	-31.84848	NAC
NS0131	128	130	NS	X067066	067066	1	G	W	39.35	33.07	1.45	0.6837	0.53	0.059	2.09	1.88	0.091	0.03	0.563	0.226	0.07	2.53	1.19	3.79	11892	0.918	32.79096	-31.87296	NAC
NS0131	244	246	NS	X067124	067124	1	G	W	33.79	38.58	1.13	0.6579	0.51	0.061	2.4	1.89	0.086	0.032	0.187	0.078	0.33	4.82	1.15	6.3	11878	0.9792	32.96538	-31.98618	NAC
NS0131	328	330	NS	X067167	067167	1	G	W	36.44	37.71	1.08	0.7611	0.59	0.045	1.96	1.9	0.088	0.026	0.723	0.071	0.08	2.24	1.31	3.63	12010	0.7956	33.1398	-32.3442	NAC
NS0131	398	400	NS	X067202	067202	1	G	W	33.68	38.7	1.43	0.7482	0.58	0.063	2.19	1.96	0.118	0.044	0.943	0.065	0.96	3.14	1.08	5.18	12081	1.3464	34.18632	-32.83992	NAC
NS0131	418	420	NS	X067212	067212	1	G	W	33.25	39.46	1.86	0.645	0.5	0.082	2.07	1.99	0.132	0.055	1.33	0.067	0.15	3.3	1.01	4.46	12091	1.683	34.70958	-33.02658	NAC
NS0131	326	328	NS	X067166	067166	1	G	W	38.1	35.11	1.21	0.6708	0.52	0.052	1.86	1.95	0.094	0.03	0.732	0.055	0.1	1.96	1.39	3.45	12009	0.918	34.0119	-33.0939	NAC
NS0131	386	388	NS	X067196	067196	1	G	W	33.82	39.4	1.28	0.6837	0.53	0.056	2.32	1.98	0.095	0.042	0.598	0.078	0.2	3.22	1.36	4.78	12057	1.2852	34.53516	-33.24996	NAC
NS0131	360	362	NS	X067183	067183	1	G	W	35.94	37.12	1.3	0.7224	0.56	0.06	1.97	2.02	0.137	0.042	0.682	0.076	0.15	2.79	1.18	4.12	12044	1.2852	35.23284	-33.94764	NAC
NS0131	350	352	NS	X067178	067178	1	G	W	37.57	36.21	1.08	0.6837	0.53	0.044	1.69	2	0.101	0.02	0.723	0.058	0.02	2.19	1.21	3.42	12021	0.612	34.884	-34.272	NAC
NS0131	172	174	NS	X067088	067088	1	G	W	35.26	37.95	1.08	0.7998	0.62	0.052	2.21	2.04	0.084	0.028	0.396	0.126	0.04	3.07	1.29	4.4	11932	0.8568	35.58168	-34.72488	NAC
NS0131	424	426	NS	X067215	067215	1	M	W	32.73	39.62	2.12	0.5934	0.46	0.092	2.05	2.15	0.119	0.087	1.65	0.062	0.27	2.77	1.16	4.2	12094	2.6622	37.5003	-34.8381	NAC
NS0131	298	300	NS	X067151	067151	1	G	W	32.56	38.76	1.07	0.6837	0.53	0.05	2.46	2.08	0.097	0.032	0.249	0.104	0.45	5.42	1.37	7.24	11977	0.9792	36.27936	-35.30016	NAC
NS0131	176	178	NS	X067090	067090	1	G	W	35.37	36.96	1.21	0.8643	0.67	0.053	2.21	2.11	0.081	0.033	0.512	0.13	0.09	3.32	1.43	4.84	11934	1.0098	36.80262	-35.79282	NAC
NS0131	388	390	NS	X067197	067197	1	G	W	34.16	38.78	1.35	0.7482	0.58	0.054	2.17	2.13	0.126	0.035	0.758	0.075	0.17	2.97	1.43	4.57	12058	1.071	37.15146	-36.08046	NAC
NS0131	416	418	NS	X067211	067211	1	G	W	31.81	41.53	1.57	0.6321	0.49	0.075	1.97	2.17	0.111	0.055	1.02	0.057	0.14	3.34	1.41	4.89	12090	1.683	37.84914	-36.16614	NAC
NS0131	428	430	NS	X067217	067217	1	G	W	32.63	38.65	2.35	0.5934	0.46	0.106	2.1	2.21	0.128	0.07	1.87	0.055	0.53	2.69	1.43	4.65	12096	2.142	38.54682	-36.40482	NAC
NS0131	170	172	NS	X067087	067087	1	G	W	35.58	37.2	1	0.8385	0.65	0.045	2.27	2.16	0.088	0.027	0.457	0.12	0.03	3.25	1.42	4.7	11931	0.8262	37.67472	-36.84852	NAC
NS0131	358	360	NS	X067182	067182	1	G	W	34.55	39.61	1.04	0.6708	0.52	0.045	1.81	2.24	0.102	0.024	0.525	0.04	0.21	2.45	1.52	4.18	12043	0.7344	39.07008	-38.33568	NAC
NS0131	420	422	NS	X067213	067213	1	G	W	33.04	38.96	1.8	0.5934	0.46	0.07	1.98	2.31	0.246	0.045	1.37	0.066	0.43	2.98	1.09	4.5	12092	1.377	40.29102	-38.91402	NAC
NS0131	316	318	NS	X067160	067160	1	G	W	30.8	40.77	1.21	0.7095	0.55	0.059	2.35	2.37	0.111	0.066	0.19	0.095	0.44	5.81	1.45	7.7	11986	2.0196	41.33754	-39.31794	NAC
NS0131	260	262	NS	X067132	067132	1	G	W	34.19	36.54	1.43	0.7869	0.61	0.065	2.82	2.4	0.093	0.081	0.476	0.094	0.34	4.01	1.66	6.01	11940	2.4786	41.8608	-39.3822	NAC
NS0131	104	106	NS	X067053	067053	1	G	W	30.66	42.07	1.5	0.5418	0.42	0.068	2.5	2.37	0.08	0.06	0.241	0.141	0.18	4.43	1.79	6.4	11862	1.836	41.33754	-39.50154	NAC
NS0131	324	326	NS	X067165	067165	1	G	W	34.3	38.09	1.51	0.7353	0.57	0.075	2.25	2.47	0.074	0.081	0.544	0.073	0.24	2.78	1.7	4.72	12008	2.4786	43.08174	-40.60314	NAC
NS0131	168	170	NS	X067086	067086	1	G	W	33.87	39.48	0.84	0.8772	0.68	0.039	2.31	2.42	0.088	0.019	0.321	0.098	0.03	3.28	1.81	5.12	11930	0.5814	42.20964	-41.62824	NAC
NS0131	348	350	NS	X067177	067177	1	G	W	36.16	36.92	0.98	0.7353	0.57	0.034	1.79	2.44	0.083	0.02	0.688	0.045	0.01	1.98	2.04	4.03	12020	0.612	42.55848	-41.94648	NAC
NS0131	408	410	NS	X067207	067207	1	G	W	32.08	40.88	1.46	0.7095	0.55	0.064	2.24	2.59	0.152	0.091	0.827	0.074	0.3	2.9	1.75	4.95	12086	2.7846	45.17478	-42.39018	NAC
NS0131	356	358	NS	X067181	067181	1	G	W	33.85	39.02	1.31	0.6966	0.54	0.057	2.08	2.56	0.106	0.033	0.724	0.069	0.12	2.49	2.03	4.64	12024	1.0098	44.65152	-43.64172	NAC
NS0131	188	190	NS	X067096	067096	1	G	W	35.29	36.81	1.05	0.8772	0.68	0.049	1.93	2.57	0.099	0.022	0.572	0.169	0	2.81	2.03	4.84	11796	0.6732	44.82594	-44.15274	NAC
NS0132	90	92	NS	X122380	122380	1	G	M	26.35	40.2	1.56	0.5547	0.43	0.08	2.68	0.8	0.12	1.07	0.135	0.013	0.43	12.24	2.24	14.91	19534	32.742	13.9536	18.7884	PAF(HC)
NS0132	78	80	NS	X122373	122373	1	G	M	28.93	45.78	3.39	0.2967	0.23	0.156	1.21	0.35	0.108	0.193	0.969	0.016	1.23	4.02	0.58	5.83	19528	5.9058	6.1047	-0.1989	NAF
NS0132	74	76	NS	X122371	122371	1	G	M	33.37	44.39	3.17	0.516	0.4	0.144	0.21	0.05	0.061	0.01	1	0.009	1.33	0.67	0.32	2.32	19526	0.306	0.8721	-0.5661	NAF
NS0132	62	64	NS	X122365	122365	1	G	M	28.83	51.42	1.5	0.8643	0.67	0.079	0.21	0.04	0.033	0.004	0.491	0.012	2.96	0.57	0.21	3.74	19520	0.1224	0.69768	-0.57528	NAF
NS0132	94	96	NS	X122382	122382	1	G	M	37.58	40.97	1.86	0.2322	0.18	0.091	0.48	0.07	0.073	0.019	0.128	0.012	1	1.01	0.15	2.16	19536	0.5814	1.22094	-0.63954	NAF
NS0132	58	60	NS	X122363	122363	1	G	M	16.58	65.54	4.5	0.3741	0.29	0.204	1.37	0.05	0.032	0.003	0.254	0.02	1.81	1.65	0.18	3.64	19518	0.0918	0.8721	-0.7803	NAF
NS0132	60	62	NS	X122364	122364	1	G	M	26.93	51.96	3.13	0.4644	0.36	0.151	1.03	0.06	0.028	0.003	0.279	0.023	2.77	1.35	0.19	4.31	19519	0.0918	1.04652	-0.95472	NAF
NS0132	52	54	NS	X122360	122360	1	G	M	24.16	53.06	5.44	0.5676	0.44	0.251	0.4	0.06	0.05	0.002	1.73	0.022	2.19	1.05	0.4	3.64	19515	0.0612	1.04652	-0.98532	NAF
NS0132	2	4	NS	X122335	122335	1	G	M	30.65	47.73	3.43	0.2709	0.21	0.161	0.41	0.08	0.042	0.008	1.05	0.037	2.25	0.65	0.19	3.09	19490	0.2448	1.39536	-1.15056	NAF
NS0132	54	56	NS	X122361	122361	1	G	M	24.88	53.69	4.27	0.1548	0.12	0.195	0.52	0.1	0.055	0.003	1.35	0.025	2.67	0.73	0.26	3.66	19516	0.0918	1.7442	-1.6524	NAF
NS0132	92	94	NS	X122381	122381	1	G	M	30.91	34.56	2.53	0.4515	0.35	0.118	2.94	0.55	0.125	0.255	0.203	0.015	0.69	12.41	0.65	13.75	19535	7.803	9.5931	-1.7901	NAF
NS0132	82	84	NS	X122375	122375	1	G	M	27.12	43.38	2.45	0.5547	0.43	0.109	2.4	0.27	0.054	0.095	0.364	0.024	0.72	10.24	0.33	11.29	19530	2.907	4.70934	-1.80234	NAF
NS0132	18	20	NS	X122343	122343	1	G	M	31.32	48.11	2.53	0.3612	0.28	0.117	0.27	0.11	0.08	0.003	0.925	0.022	1.74	0.52	0.25	2.51	19498	0.0918	1.91862	-1.82682	NAF
NS0132	28	30	NS	X122348	122348	1	G	M	26.35	52.29	2.99	0.4128	0.32	0.14	0.63	0.15	0.059	0.005	1.11	0.011	1.98	2.07	0.18	4.23	19503	0.153	2.6163	-2.4633	NAF
NS0132	56	58	NS	X122362	122362	1	G	M	20.27	60.5	4.56	0.3354	0.26	0.21	1.1	0.16	0.065	0.006	0.588	0.03	1.89	1.16	0.2	3.25	19517	0.1836	2.79072	-2.60712	NAF
NS0132	48	50	NS	X122358	122358	1	G	M	29.69	46.15	4.27	0.4257	0.33	0.239	0.59	0.17	0.079	0.007	1.62	0.02	2.88	0.45	0.29	3.62	19513	0.2142	2.96514	-2.75094	NAF
NS0132	80	82	NS	X122374	122374	1	G	M	29.84	44.21	2.64	0.4128	0.32	0.122	1.43	0.31	0.092	0.078	0.638	0.012	0.95	5.7	0.31	6.96	19529	2.3868	5.40702	-3.02022	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0132	22	24	NS	X122345	122345	1	G	M	29.26	50.03	2.76	0.2838	0.22	0.128	0.46	0.18	0.08	0.003	0.821	0.022	1.99	0.75	0.18	2.92	19500	0.0918	3.13956	-3.04776	NAF
NS0132	8	10	NS	X122338	122338	1	G	M	26.28	43.48	3.58	0.3096	0.24	0.174	2.38	0.36	0.057	0.099	1.21	0.03	0.57	9.51	0.28	10.36	19493	3.0294	6.27912	-3.24972	NAF
NS0132	34	36	NS	X122351	122351	1	G	M	30.05	46.67	4.13	0.3096	0.24	0.192	0.58	0.2	0.072	0.005	1.62	0.023	1.35	1.68	0.28	3.31	19506	0.153	3.4884	-3.3354	NAF
NS0132	42	44	NS	X122355	122355	1	G	M	30.36	46.05	3.88	0.2838	0.22	0.186	0.71	0.23	0.059	0.011	1.65	0.029	0.97	2.13	0.27	3.37	19510	0.3366	4.01166	-3.67506	NAF
NS0132	104	106	NS	X122387	122387	1	G	M	31.49	40.56	1.96	0.4128	0.32	0.104	1.81	0.25	0.041	0.022	0.501	0.019	0.31	8.93	0.07	9.31	19541	0.6732	4.3605	-3.6873	NAF
NS0132	96	98	NS	X122383	122383	1	G	M	31.01	46.23	1.45	0.258	0.2	0.066	1.06	0.23	0.062	0.01	0.085	0.011	1.16	4.52	0.05	5.73	19537	0.306	4.01166	-3.70566	NAF
NS0132	32	34	NS	X122350	122350	1	G	M	28.8	49.99	3.57	0.2451	0.19	0.166	0.29	0.22	0.078	0.004	1.6	0.019	1.46	0.56	0.23	2.25	19505	0.1224	3.83724	-3.71484	NAF
NS0132	46	48	NS	X122357	122357	1	G	M	29.7	46.65	3.79	0.3741	0.29	0.183	0.73	0.25	0.085	0.017	1.37	0.02	1.09	2.37	0.29	3.75	19512	0.5202	4.3605	-3.8403	NAF
NS0132	44	46	NS	X122356	122356	1	G	M	30.87	47.29	3.3	0.2064	0.16	0.159	0.53	0.25	0.092	0.01	1.18	0.018	1.33	1.08	0.25	2.66	19511	0.306	4.3605	-4.0545	NAF
NS0132	0	2	NS	X122334	122334	1	G	M	29.66	48.44	3.5	0.2322	0.18	0.183	0.33	0.25	0.049	0.009	1.23	0.025	2.15	0.7	0.2	3.05	19489	0.2754	4.3605	-4.0851	NAF
NS0132	72	74	NS	X122370	122370	1	G	M	32.82	44.35	2.48	0.258	0.2	0.123	0.67	0.29	0.112	0.026	0.914	0.014	1.01	2.68	0.27	3.96	19525	0.7956	5.05818	-4.26258	NAF
NS0132	110	112	NS	X122390	122390	1	G	M	34.28	38.98	1.6	0.5031	0.39	0.077	1.56	0.29	0.058	0.025	0.406	0.018	0.37	7.13	0.06	7.56	19544	0.765	5.05818	-4.29318	NAF
NS0132	146	148	NS	X122408	122408	1	G	M	31.02	40.04	2.01	0.4257	0.33	0.098	2	0.26	0.044	0.004	0.703	0.015	0.56	9.6	0.11	10.27	19562	0.1224	4.53492	-4.41252	NAF
NS0132	26	28	NS	X122347	122347	1	G	M	22.86	45.48	5.32	0.3096	0.24	0.248	2.36	0.5	0.095	0.134	1.5	0.032	1.18	8.89	0.55	10.62	19502	4.1004	8.721	-4.6206	NAF
NS0132	84	86	NS	X122376	122376	1	G	M	28.91	42.39	2.41	0.4773	0.37	0.114	2.1	0.4	0.086	0.076	0.529	0.017	0.75	9.16	0.23	10.14	19531	2.3256	6.9768	-4.6512	NAF
NS0132	38	40	NS	X122353	122353	1	G	M	24.26	44.79	4.57	0.387	0.3	0.215	2.22	0.44	0.073	0.088	1.51	0.022	0.95	9.71	0.32	10.98	19508	2.6928	7.67448	-4.98168	NAF
NS0132	64	66	NS	X122366	122366	1	G	M	25.92	50	1.75	0.2451	0.19	0.084	1.19	0.34	0.051	0.031	0.674	0.012	1.36	6.89	0.14	8.39	19521	0.9486	5.93028	-4.98168	NAF
NS0132	112	114	NS	X122391	122391	1	G	M	31.57	44.44	1.42	0.4515	0.35	0.066	1.36	0.34	0.062	0.028	0.32	0.009	0.25	6.21	0.05	6.51	19545	0.8568	5.93028	-5.07348	NAF
NS0132	116	118	NS	X122393	122393	1	G	M	30.88	44.21	1.61	0.4386	0.34	0.075	1.56	0.32	0.073	0.014	0.348	0.009	0.34	6.66	0.06	7.06	19547	0.4284	5.58144	-5.15304	NAF
NS0132	108	110	NS	X122389	122389	1	G	M	33.52	39.13	1.68	0.4902	0.38	0.077	1.6	0.32	0.069	0.011	0.429	0.013	0.33	7.5	0.03	7.86	19543	0.3366	5.58144	-5.24484	NAF
NS0132	106	108	NS	X122388	122388	1	G	M	34.85	37.08	1.47	0.5547	0.43	0.067	1.56	0.34	0.073	0.019	0.366	0.008	0.35	8.01	0.04	8.4	19542	0.5814	5.93028	-5.34888	NAF
NS0132	192	194	NS	X122431	122431	1	G	W	32.34	36.19	1.65	0.6579	0.51	0.074	1.99	0.32	0.019	0.007	0.59	0.023	0.66	11.49	0.1	12.25	19585	0.2142	5.58144	-5.36724	NAF
NS0132	124	126	NS	X122397	122397	1	G	M	35.21	38.54	1.76	0.4902	0.38	0.08	1.33	0.34	0.079	0.012	0.455	0.01	0.26	5.77	0.07	6.1	19551	0.3672	5.93028	-5.56308	NAF
NS0132	118	120	NS	X122394	122394	1	G	M	34.07	39.85	1.49	0.5418	0.42	0.069	1.4	0.35	0.077	0.016	0.42	0.014	0.29	6.59	0.06	6.94	19548	0.4896	6.1047	-5.6151	NAF
NS0132	190	192	NS	X122430	122430	1	G	W	31.52	36.95	1.96	0.6708	0.52	0.09	1.96	0.43	0.082	0.052	0.664	0.017	0.58	10.89	0.17	11.64	19584	1.5912	7.50006	-5.90886	NAF
NS0132	170	172	NS	X122420	122420	1	G	W	27.8	36.51	1.75	0.4386	0.34	0.079	2.78	0.93	0.087	0.336	0.184	0.008	0.9	15.22	0.81	16.93	19574	10.2816	16.22106	-5.93946	NAF
NS0132	50	52	NS	X122359	122359	1	G	M	28.62	45.66	3.83	0.2838	0.22	0.181	0.91	0.35	0.093	0.002	1.68	0.017	2.08	3.19	0.22	5.49	19514	0.0612	6.1047	-6.0435	NAF
NS0132	144	146	NS	X122407	122407	1	G	M	32.31	39.02	1.62	0.5547	0.43	0.073	1.82	0.36	0.073	0.006	0.577	0.008	0.66	9.11	0.06	9.83	19561	0.1836	6.27912	-6.09552	NAF
NS0132	76	78	NS	X122372	122372	1	G	M	27.57	42.42	2.94	0.5289	0.41	0.135	2.03	0.46	0.112	0.062	0.895	0.021	0.92	9.5	0.29	10.71	19527	1.8972	8.02332	-6.12612	NAF
NS0132	12	14	NS	X122340	122340	1	G	M	27.5	48.67	2.28	0.3999	0.31	0.111	1.2	0.38	0.076	0.016	0.797	0.024	2.04	4.47	0.13	6.64	19495	0.4896	6.62796	-6.13836	NAF
NS0132	86	88	NS	X122377	122377	1	G	M	28.11	45.81	1.71	0.4644	0.36	0.081	1.75	0.43	0.073	0.036	0.345	0.011	0.46	8.07	0.06	8.59	19532	1.1016	7.50006	-6.39846	NAF
NS0132	114	116	NS	X122392	122392	1	G	M	30.56	45.25	1.87	0.4128	0.32	0.085	1.32	0.4	0.097	0.018	0.455	0.013	0.62	5.79	0.05	6.46	19546	0.5508	6.9768	-6.426	NAF
NS0132	150	152	NS	X122410	122410	1	G	W	30.18	42.32	2.35	0.5031	0.39	0.113	1.53	0.43	0.107	0.032	0.877	0.015	0.71	7.28	0.25	8.24	19564	0.9792	7.50006	-6.52086	NAF
NS0132	120	122	NS	X122395	122395	1	G	M	27.54	48.72	1.2	0.5547	0.43	0.05	1.44	0.41	0.087	0.015	0.308	0.009	0.35	6.95	0.03	7.33	19549	0.459	7.15122	-6.69222	NAF
NS0132	188	190	NS	X122429	122429	1	G	W	33.6	36.47	1.43	0.7998	0.62	0.064	1.72	0.4	0.084	0.005	0.536	0.011	0.53	9.81	0.06	10.4	19583	0.153	6.9768	-6.8238	NAF
NS0132	100	102	NS	X122385	122385	1	G	M	32.86	34.76	1.3	0.5031	0.39	0.064	2.3	0.43	0.057	0.02	0.095	0.004	0.55	12.75	0.03	13.33	19539	0.612	7.50006	-6.88806	NAF
NS0132	186	188	NS	X122428	122428	1	G	W	34	37.68	1.74	0.6837	0.53	0.077	1.41	0.41	0.068	0.008	0.646	0.017	0.55	7.65	0.19	8.39	19582	0.2448	7.15122	-6.90642	NAF
NS0132	24	26	NS	X122346	122346	1	G	M	27.59	45.96	3.46	0.2709	0.21	0.161	1.68	0.44	0.077	0.022	1.01	0.025	1.64	5.44	0.23	7.31	19501	0.6732	7.67448	-7.00128	NAF
NS0132	132	134	NS	X122402	122402	1	G	M	34.71	38.75	1.48	0.6579	0.51	0.069	1.46	0.48	0.071	0.011	0.43	0.009	0.28	6.57	0.13	6.98	19556	0.3366	8.37216	-8.03556	NAF
NS0132	98	100	NS	X122384	122384	1	G	M	29.1	41.32	1.89	0.4257	0.33	0.089	2.26	0.51	0.086	0.027	0.134	0.008	0.54	10.55	0.03	11.12	19538	0.8262	8.89542	-8.06922	NAF
NS0132	10	12	NS	X122339	122339	1	G	M	25.04	45.85	3.09	0.3354	0.26	0.148	2.19	0.61	0.124	0.083	1.02	0.03	0.93	9.17	0.23	10.33	19494	2.5398	10.63962	-8.09982	NAF
NS0132	88	90	NS	X122379	122379	1	G	M	30.53	42.38	1.59	0.516	0.4	0.077	1.78	0.5	0.081	0.018	0.258	0.007	0.49	8.34	0.01	8.84	19533	0.5508	8.721	-8.1702	NAF
NS0132	240	242	NS	X122456	122456	1	G	W	34.73	37.21	1.36	0.5805	0.45	0.062	1.51	0.48	0.049	0.005	0.5	0.005	0.27	7.75	0.22	8.24	19609	0.153	8.37216	-8.21916	NAF
NS0132	16	18	NS	X122342	122342	1	G	M	29.25	48.88	3	0.2967	0.23	0.141	0.62	0.49	0.151	0.007	1.13	0.022	1.66	1.12	0.35	3.13	19497	0.2142	8.54658	-8.33238	NAF
NS0132	6	8	NS	X122337	122337	1	G	M	27.25	44.59	3.24	0.2451	0.19	0.152	2.22	0.58	0.096	0.058	1.13	0.047	0.36	8.01	0.08	8.45	19492	1.7748	10.11636	-8.34156	NAF
NS0132	40	42	NS	X122354	122354	1	G	M	23.9	44.25	4.95	0.3741	0.29	0.229	2.22	0.58	0.119	0.056	2.15	0.025	0.77	9.65	0.27	10.69	19509	1.7136	10.11636	-8.40276	NAF
NS0132	194	196	NS	X122432	122432	1	G	W	31.96	37.32	1.73	0.5934	0.46	0.079	1.85	0.5	0.054	0.004	0.56	0.015	0.55	10.8	0.12	11.47	19586	0.1224	8.721	-8.5986	NAF
NS0132	36	38	NS	X122352	122352	1	G	M	25.59	48.39	3.98	0.2967	0.23	0.188	1.54	0.57	0.143	0.043	1.33	0.024	1.29	5.48	0.23	7	19507	1.3158	9.94194	-8.62614	NAF
NS0132	30	32	NS	X122349	122349	1	G	M	31.64	42.67	4.01	0.5031	0.39	0.187	0.42	0.51	0.207	0.008	1.82	0.028	2.72	0.66	0.4	3.78	19504	0.2448	8.89542	-8.65062	NAF
NS0132	182	184	NS	X122426	122426	1	G	W	34.18	36.85	1.57	0.645	0.5	0.068	1.6	0.51	0.057	0.004	0.58	0.013	0.4	8.14	0.24	8.78	19580	0.1224	8.89542	-8.77302	NAF
NS0132	4	6	NS	X122336	122336	1	G	M	28.75	48.43	3.15	0.2838	0.22	0.157	0.96	0.53	0.088	0.015	1.14	0.036	1.34	2.27	0.34	3.95	19491	0.459	9.24426	-8.78526	NAF
NS0132	152	154	NS	X122411	122411	1	G	W	32.84	38.69	1.99	0.5547	0.43	0.083	1.56	0.52	0.078	0.009	0.765	0.008	0.53	7.55	0.28	8.36	19565	0.2754	9.06984	-8.79444	NAF
NS0132	238	240	NS	X122455	122455	1	G	W	31.27	38.5	1.48	0.6579	0.51	0.063	2	0.53	0.029	0.006	0.543	0.007	0.39	10.58	0.31	11.28	19608	0.1836	9.24426	-9.06066	NAF
NS0132	218	220	NS	X122444	122444	1	G	W	34.2	36.18	1.87	0.6708	0.52	0.082	1.59	0.54	0.056	0.006	0.688	0.011	0.49	8.34	0.2	9.03	19598	0.1836	9.41868	-9.23508	NAF
NS0132	224	226	NS	X122447	122447	1	G	W	32.65	38.17	1.76	0.6708	0.52	0.087	1.72	0.54	0.061	0.004	0.659	0.01	0.36	8.85	0.22	9.43	19601	0.1224	9.41868	-9.29628	NAF
NS0132	268	270	NS	X122471	122471	1	G	W	19.21	47.86	6.49	0.3096	0.24	0.28	2.81	0.76	0.009	0.113	1.48	0.029	0.39	10.91	0.84	12.14	19623	3.4578	13.25592	-9.79812	NAF
NS0132	242	244	NS	X122457	122457	1	G	W	34.89	35.7	1.39	0.5934	0.46	0.055	1.67	0.57	0.074	0.004	0.486	0.018	0.3	8.53	0.19	9.02	19610	0.1224	9.94194	-9.81954	NAF
NS0132	70	72	NS	X122369	122369	1	G	M	26.94	42.35	3.63	0.4128	0.32	0.167	2.12	0.63	0.101	0.035	1.47	0.021	1.16	8.68	0.22	10.06	19524	1.071	10.98846	-9.91746	NAF
NS0132	270	272	NS	X122472	122472	1	G	W	26.57	43.11	2.06	0.4644	0.36	0.102	2.07	0.61	0.02	0.022	0.727	0.019	0.47	11.68	0.38	12.53	19624	0.6732	10.63962	-9.96642	NAF
NS0132	14	16	NS	X122341	122341	1	G	M	29.08	46.48	3.79	0.3999	0.31	0.172	0.66	0.59	0.202	0.01	1.66	0.037	2.45	1.57	0.3	4.32	19496	0.306	10.29078	-9.98478	NAF
NS0132	306	308	NS	X122490	122490	1	G	W	25.1	40.14	2.58	0.5418	0.42	0.115	2.57	0.84	0.063	0.151	0.264	0.008	0.62	15.55	0.39	16.56	19642	4.6206	14.65128	-10.03068	NAF
NS0132	200	202	NS	X122435	122435	1	G	W	33.42	36.13	1.4	0.6063	0.47	0.066	1.77	0.61	0.07	0.012	0.504	0.019	0.49	10.1	0.13	10.72	19589	0.3672	10.63962	-10.27242	NAF
NS0132	162	164	NS	X122416	122416	1	G	W	24.04	40.17	2.92	0.4773	0.37	0.134	3.07	1.21	0.064	0.353	0.368	0.015	0.88	14.43	0.98	16.29	19570	10.8018	21.10482	-10.30302	NAF
NS0132	222	224	NS	X122446	122446	1	G	W	32.63	38.32	1.66	0.6321	0.49	0.078	1.67	0.6	0.055	0.004	0.608	0.01	0.37	8.77	0.3	9.44	19600	0.1224	10.4652	-10.3428	NAF
NS0132	172	174	NS	X122421	122421	1	G	W	25.27	42.49	1.66	0.4902	0.38	0.079	2.37	0.88	0.116	0.162	0.356	0.016	0.78	13.96	0.47	15.21	19575	4.9572	15.34896	-10.39176	NAF
NS0132	66	68	NS	X122367	122367	1	G	M	26.64	38.72	2.83	0.4257	0.33	0.129	2.47	0.61	0.061	0.005	1.3	0.019	0.69	14.09	0.13	14.91	19522	0.153	10.63962	-10.48662	NAF
NS0132	184	186	NS	X122427	122427	1	G	W	33.81	36.82	1.63	0.7611	0.59	0.071	1.69	0.66	0.105	0.031	0.603	0.019	0.46	8.68	0.26	9.4	19581	0.9486	11.51172	-10.56312	NAF
NS0132	204	206	NS	X122437	122437	1	G	W	34.23	36.01	1.5	0.6837	0.53	0.07	1.67	0.62	0.058	0.007	0.542	0.009	0.5	9.07	0.13	9.7	19591	0.2142	10.81404	-10.59984	NAF
NS0132	208	210	NS	X122439	122439	1	G	W	33.63	36.68	1.63	0.6192	0.48	0.071	1.69	0.66	0.053	0.01	0.585	0.007	0.45	8.72	0.27	9.44	19593	0.306	11.51172	-11.20572	NAF
NS0132	148	150	NS	X122409	122409	1	G	M	33.38	38.76	1.45	0.5676	0.44	0.066	1.51	0.65	0.076	0.004	0.537	0.027	0.43	7.46	0.34	8.23	19563	0.1224	11.3373	-11.2149	NAF
NS0132	68	70	NS	X122368	122368	1	G	M	27.71	39.07	2.94	0.4773	0.37	0.138	2.27	0.67	0.109	0.013	1.15	0.02	1.12	11.77	0.08	12.97	19523	0.3978	11.68614	-11.28834	NAF
NS0132	138	140	NS	X122404	122404	1	G	M	32.97	38.59	1.92	0.5289	0.41	0.091	1.83	0.66	0.06	0.006	0.519	0.013	0.32	7.58	0.26	8.16	19558	0.1836	11.51172	-11.32812	NAF
NS0132	126	128	NS	X122398	122398	1	G	M	34.31	38.23	1.45	0.6837	0.53	0.067	1.5	0.67	0.086	0.011	0.408	0.019	0.31	6.74	0.22	7.27	19552	0.3366	11.68614	-11.34954	NAF
NS0132	220	222	NS	X122445	122445	1	G	W	33.96	35.45	1.9	0.6579	0.51	0.087	1.73	0.67	0.05	0.007	0.688	0.012	0.61	8.95	0.18	9.74	19599	0.2142	11.68614	-11.47194	NAF
NS0132	196	198	NS	X122433	122433	1	G	W	32.87	36.54	1.56	0.6579	0.51	0.065	1.75	0.68	0.074	0.004	0.558	0.016	0.44	9.96	0.15	10.55	19587	0.1224	11.86056	-11.73816	NAF
NS0132	178	180	NS	X122424	122424	1	G	W	33.74	38.05	1.5	0.5934	0.46	0.067	1.64	0.69	0.048	0.005	0.547	0.007	0.37	7.74	0.44	8.55	19578	0.153	12.03498	-11.88198	NAF
NS0132	134	136	NS	X122401	122401	1	G	M	32.54	41.26	1.4	0.5934	0.46	0.064	1.56	0.7	0.078	0.01	0.373	0.008	0.25	6.75	0.25	7.25	19555	0.306	12.2094	-11.9034	NAF
NS0132	212	214	NS	X122441	122441	1	G	W	34.08	34.15	1.8	0.6837	0.53	0.08	1.9	0.7	0.08	0.005	0.653	0.019	0.41	10.17	0.15	10.73	19595	0.153	12.2094	-12.0564	NAF
NS0132	168	170	NS	X122419	122419	1	G	W	26.05	44.13	2.26	0.3741	0.29	0.111	2.01	0.82	0.077	0.073	0.778	0.016	0.27	10.89	0.62	11.78	19573	2.2338	14.30244	-12.06864	NAF
NS0132	230	232	NS	X122451	122451	1	G	W	32.4	35.71	1.47	0.7224	0.56	0.066	2.12	0.7	0.051	0.003	0.548	0.007	0.34	11.65	0.37	12.36	19604	0.0918	12.2094	-12.1176	NAF
NS0132	20	22	NS	X122344	122344	1	G	M	30.71	46.44	3.06	0.4257	0.33	0.142	0.54	0.71	0.144	0.003	1.08	0.021	1.94	0.88	0.45	3.27	19499	0.0918	12.38382	-12.29202	NAF
NS0132	276	278	NS	X122475	122475	1	G	W	28.47	34.88	2.14	0.5547	0.43	0.096	2.71	0.76	0.077	0.029	0.736	0.014	0.54	16.54	0.33	17.41	19627	0.8874	13.25592	-12.36852	NAF
NS0132	262	264	NS	X122467	122467	1	G	W	30.32	37.51	2.6	0.5547	0.43	0.118	2.24	0.73	0.029	0.009	0.873	0.016	0.4	11.21	0.52	12.13	19620	0.2754	12.73266	-12.45726	NAF
NS0132	244	246	NS	X122458	122458	1	G	W	30.94	40.14	1.51	0.7482	0.58	0.065	1.89	0.73	0.087	0.005	0.566	0.012	0.36	9.58	0.3	10.24	19611	0.153	12.73266	-12.57966	NAF
NS0132	304	306	NS	X122489	122489	1	G	W	20.35	48.61	5.41	0.3483	0.27	0.242	2.76	1.09	0.097	0.208	0.068	0.015	0.56	10.11	0.6	11.27	19641	6.3648	19.01178	-12.64698	NAF
NS0132	176	178	NS	X122423	122423	1	G	W	33.35	36.66	1.69	0.5934	0.46	0.074	1.88	0.74	0.055	0.003	0.628	0.011	0.44	8.84	0.45	9.73	19577	0.0918	12.90708	-12.81528	NAF
NS0132	252	254	NS	X122462	122462	1	G	W	34.04	35.5	1.7	0.6321	0.49	0.083	1.92	0.74	0.067	0.003	0.631	0.018	0.28	9.2	0.45	9.93	19615	0.0918	12.90708	-12.81528	NAF
NS0132	272	274	NS	X122473	122473	1	G	W	28.79	38.44	2.65	0.5031	0.39	0.126	2.4	0.75	0.041	0.006	0.868	0.016	0.44	12.41	0.42	13.27	19625	0.1836	13.0815	-12.8979	NAF
NS0132	266	268	NS	X122470	122470	1	G	W	25.08	40.32	4.65	0.4128	0.32	0.201	2.79	0.84	0.026	0.057	1.31	0.02	0.43	12.24	0.7	13.37	19622	1.7442	14.65128	-12.90708	NAF
NS0132	310	312	NS	X122492	122492	1	G	W	30.61	36.66	2.26	0.5805	0.45	0.108	2.19	0.76	0.061	0.004	0.62	0.018	0.45	11.75	0.39	12.59	19644	0.1224	13.25592	-13.13352	NAF
NS0132	102	104	NS	X122386	122386	1	G	M	24.13	48.32	1.75	0.4773	0.37	0.08	2.11	0.97	0.107	0.121	0.306	0.008	0.47	10.47	0.34	11.28	19540	3.7026	16.91874	-13.21614	NAF
NS0132	260	262	NS	X122466	122466	1	G	W	29.48	35.98	2.2	0.5547	0.43	0.112	2.59	0.77	0.097	0.004	0.483	0.014	0.47	13.88	0.29	14.64	19619	0.1224	13.43034	-13.30794	NAF
NS0132	202	204	NS	X122436	122436	1	G	W	30.75	38.68	1.36	0.6837	0.53	0.068	1.87	0.78	0.108	0.007	0.463	0.016	0.5	10.74	0.25	11.49	19590	0.2142	13.60476	-13.39056	NAF
NS0132	308	310	NS	X122491	122491	1	G	W	31.49	34.37	2.44	0.5934	0.46	0.111	2.23	0.79	0.062	0.011	0.77	0.013	0.52	12.36	0.43	13.31	19643	0.3366	13.77918	-13.44258	NAF
NS0132	216	218	NS	X122443	122443	1	G	W	32.74	34.16	1.87	0.7095	0.55	0.089	2.08	0.79	0.081	0.008	0.648	0.024	0.57	11.28	0.39	12.24	19597	0.2448	13.77918	-13.53438	NAF
NS0132	288	290	NS	X122481	122481	1	G	W	24.69	40.61	2.34	0.3999	0.31	0.102	2.37	1.23	0.092	0.254	0.105	0.008	0.85	15.27	0.53	16.65	19633	7.7724	21.45366	-13.68126	NAF
NS0132	234	236	NS	X122453	122453	1	G	W	32.91	35.76	1.75	0.645	0.5	0.077	2.07	0.8	0.052	0.007	0.66	0.013	0.53	10.3	0.46	11.29	19606	0.2142	13.9536	-13.7394	NAF
NS0132	122	124	NS	X122396	122396	1	G	M	30.55	43.77	1.39	0.5289	0.41	0.063	1.7	0.81	0.078	0.012	0.318	0.015	0.33	7.24	0.29	7.86	19550	0.3672	14.12802	-13.76082	NAF
NS0132	180	182	NS	X122425	122425	1	G	W	31.38	41.5	1.33	0.6063	0.47	0.057	1.55	0.8	0.066	0.005	0.49	0.021	0.37	7.53	0.48	8.38	19579	0.153	13.9536	-13.8006	NAF
NS0132	130	132	NS	X122400	122400	1	G	M	31.69	42.36	1.46	0.6063	0.47	0.064	1.53	0.82	0.062	0.016	0.414	0.01	0.26	6.28	0.45	6.99	19554	0.4896	14.30244	-13.81284	NAF
NS0132	232	234	NS	X122452	122452	1	G	W	32.66	35.35	1.82	0.6708	0.52	0.084	2.1	0.8	0.043	0.003	0.678	0.01	0.35	10.62	0.55	11.52	19605	0.0918	13.9536	-13.8618	NAF
NS0132	206	208	NS	X122438	122438	1	G	W	34.04	34.47	1.93	0.6966	0.54	0.085	1.91	0.81	0.088	0.006	0.689	0.032	0.44	9.83	0.37	10.64	19592	0.1836	14.12802	-13.94442	NAF
NS0132	128	130	NS	X122399	122399	1	G	M	28.85	47.21	1.25	0.5934	0.46	0.058	1.35	0.83	0.118	0.007	0.37	0.01	0.23	5.81	0.33	6.37	19553	0.2142	14.47686	-14.26266	NAF
NS0132	174	176	NS	X122422	122422	1	G	W	30.71	38.48	1.45	0.6192	0.48	0.065	2.04	0.89	0.094	0.007	0.53	0.007	0.49	10.53	0.43	11.45	19576	0.2142	15.52338	-15.30918	NAF
NS0132	254	256	NS	X122463	122463	1	G	W	31.04	37.2	1.93	0.6321	0.49	0.091	2.2	0.89	0.056	0.005	0.656	0.01	0.36	10.73	0.57	11.66	19616	0.153	15.52338	-15.37038	NAF
NS0132	136	138	NS	X122403	122403	1	G	M	34.73	35.29	1.73	0.6837	0.53	0.081	1.95	0.95	0.133	0.01	0.481	0.007	0.32	8.22	0.35	8.89	19557	0.306	16.5699	-16.2639	NAF
NS0132	198	200	NS	X122434	122434	1	G	W	30.67	38.78	1.52	0.5934	0.46	0.071	1.82	0.95	0.11	0.009	0.539	0.025	0.56	10.46	0.44	11.46	19588	0.2754	16.5699	-16.2945	NAF
NS0132	274	276	NS	X122474	122474	1	G	W	24.24	40.38	2.79	0.5031	0.39	0.118	2.85	0.95	0.022	0.008	0.593	0.017	0.54	15.31	0.79	16.64	19626	0.2448	16.5699	-16.3251	NAF
NS0132	214	216	NS	X122442	122442	1	G	W	31.43	37.38	1.96	0.5676	0.44	0.092	2	0.95	0.071	0.004	0.658	0.016	0.41	9.9	0.56	10.87	19596	0.1224	16.5699	-16.4475	NAF
NS0132	300	302	NS	X122487	122487	1	G	W	25.34	37.68	3.73	0.5031	0.39	0.155	2.86	1.06	0.053	0.055	0.357	0.03	0.58	15.82	0.64	17.04	19639	1.683	18.48852	-16.80552	NAF
NS0132	164	166	NS	X122417	122417	1	G	W	28.97	37.99	2.1	0.5289	0.41	0.093	2.32	1.24	0.082	0.152	0.661	0.017	0.6	11.72	0.71	13.03	19571	4.6512	21.62808	-16.97688	NAF
NS0132	160	162	NS	X122415	122415	1	G	W	26.96	37.58	3.18	0.5547	0.43	0.152	2.83	1.08	0.077	0.049	0.992	0.011	0.58	13.43	0.72	14.73	19569	1.4994	18.83736	-17.33796	NAF
NS0132	228	230	NS	X122450	122450	1	G	W	31.63	34.05	1.58	0.645	0.5	0.074	2.38	1.01	0.052	0.004	0.576	0.01	0.47	13.25	0.66	14.38	19603	0.1224	17.61642	-17.49402	NAF
NS0132	282	284	NS	X122478	122478	1	G	W	22.84	43.51	2.13	0.4515	0.35	0.093	2.72	1.12	0.064	0.065	0.121	0.011	0.87	15.26	0.57	16.7	19630	1.989	19.53504	-17.54604	NAF
NS0132	302	304	NS	X122488	122488	1	G	W	22.49	43.74	4.72	0.4386	0.34	0.202	2.97	1.15	0.031	0.057	0.089	0.016	0.57	12.87	0.74	14.18	19640	1.7442	20.0583	-18.3141	NAF
NS0132	280	282	NS	X122477	122477	1	G	W	24.54	38.74	3.01	0.5289	0.41	0.129	2.93	1.25	0.056	0.096	0.33	0.014	0.63	16.27	0.72	17.62	19629	2.9376	21.8025	-18.8649	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0132	226	228	NS	X122449	122449	1	G	W	31.09	37.47	1.56	0.6966	0.54	0.076	2.08	1.1	0.069	0.004	0.585	0.015	0.33	10.69	0.73	11.75	19602	0.1224	19.1862	-19.0638	NAF
NS0132	142	144	NS	X122406	122406	1	G	M	31.64	35.56	2.06	0.5805	0.45	0.094	2.59	1.12	0.147	0.014	0.452	0.011	0.51	11.21	0.34	12.06	19560	0.4284	19.53504	-19.10664	NAF
NS0132	292	294	NS	X122483	122483	1	G	W	25.87	37.13	2.52	0.5547	0.43	0.108	2.78	1.21	0.031	0.063	0.122	0.007	0.62	16.88	0.78	18.28	19635	1.9278	21.10482	-19.17702	NAF
NS0132	210	212	NS	X122440	122440	1	G	W	32.41	35.66	1.77	0.6966	0.54	0.078	1.86	1.14	0.211	0.006	0.635	0.02	0.4	10.29	0.21	10.9	19594	0.1836	19.88388	-19.70028	NAF
NS0132	246	248	NS	X122459	122459	1	G	W	32.29	36.18	1.7	0.7353	0.57	0.074	2.14	1.14	0.099	0.004	0.641	0.013	0.28	10.04	0.75	11.07	19612	0.1224	19.88388	-19.76148	NAF
NS0132	154	156	NS	X122412	122412	1	G	W	29.15	41.9	1.92	0.4902	0.38	0.086	1.92	1.15	0.119	0.009	0.718	0.015	0.41	8.38	0.75	9.54	19566	0.2754	20.0583	-19.7829	NAF
NS0132	166	168	NS	X122418	122418	1	G	W	30.18	38.33	2	0.5031	0.39	0.088	2.04	1.2	0.071	0.027	0.745	0.006	0.53	10.18	0.81	11.52	19572	0.8262	20.9304	-20.1042	NAF
NS0132	264	266	NS	X122469	122469	1	G	W	25	39.93	3.95	0.5031	0.39	0.177	2.69	1.2	0.114	0.007	1.45	0.022	0.37	12.55	0.98	13.9	19621	0.2142	20.9304	-20.7162	NAF
NS0132	156	158	NS	X122413	122413	1	G	W	30.22	38.94	2.22	0.5547	0.43	0.1	2.09	1.26	0.105	0.025	0.874	0.015	0.41	8.79	0.97	10.17	19567	0.765	21.97692	-21.21192	NAF
NS0132	294	296	NS	X122484	122484	1	G	W	25.63	36.53	2.55	0.5289	0.41	0.108	2.44	1.57	0.056	0.197	0.563	0.01	0.67	17.02	0.96	18.65	19636	6.0282	27.38394	-21.35574	NAF
NS0132	140	142	NS	X122405	122405	1	G	M	31.85	37.58	1.63	0.5805	0.45	0.073	2.29	1.31	0.072	0.008	0.395	0.008	0.39	9.02	0.84	10.25	19559	0.2448	22.84902	-22.60422	NAF
NS0132	290	292	NS	X122482	122482	1	G	W	22.19	44	4.44	0.3999	0.31	0.189	3.04	1.55	0.062	0.091	0.026	0.014	0.75	12.56	1.04	14.35	19634	2.7846	27.0351	-24.2505	NAF
NS0132	278	280	NS	X122476	122476	1	G	W	25.66	36.05	2.52	0.5031	0.39	0.11	2.92	1.41	0.049	0.01	0.669	0.01	0.58	17.57	1.01	19.16	19628	0.306	24.59322	-24.28722	NAF
NS0132	250	252	NS	X122461	122461	1	G	W	32.81	36.12	1.73	0.6708	0.52	0.073	1.95	1.42	0.132	0.004	0.639	0.006	0.25	9.06	0.99	10.3	19614	0.1224	24.76764	-24.64524	NAF
NS0132	158	160	NS	X122414	122414	1	G	W	29.88	36.92	2.02	0.6192	0.48	0.089	2.45	1.44	0.129	0.005	0.792	0.011	0.44	10.95	0.97	12.36	19568	0.153	25.11648	-24.96348	NAF
NS0132	248	250	NS	X122460	122460	1	G	W	32.2	34.97	1.92	0.6837	0.53	0.085	2.19	1.44	0.111	0.005	0.722	0.018	0.31	9.9	1.05	11.26	19613	0.153	25.11648	-24.96348	NAF
NS0132	236	238	NS	X122454	122454	1	G	W	30.94	37.3	1.91	0.645	0.5	0.087	2.11	1.5	0.278	0.011	0.719	0.011	0.27	10.1	0.62	10.99	19607	0.3366	26.163	-25.8264	NAF
NS0132	298	300	NS	X122486	122486	1	G	W	27.29	35.71	2.52	0.5289	0.41	0.118	2.42	1.62	0.094	0.021	0.86	0.003	0.38	15.1	1.19	16.67	19638	0.6426	28.25604	-27.61344	NAF
NS0132	256	258	NS	X122464	122464	1	G	W	26.21	41.22	2.98	0.516	0.4	0.141	2.66	1.63	0.131	0.004	0.682	0.015	0.33	10.47	1.21	12.01	19617	0.1224	28.43046	-28.30806	NAF
NS0132	284	286	NS	X122479	122479	1	G	W	27.91	32.95	1.56	0.4644	0.36	0.066	2.58	1.93	0.062	0.087	0.504	0.008	0.63	17.82	1.24	19.69	19631	2.6622	33.66306	-31.00086	NAC
NS0132	296	298	NS	X122485	122485	1	G	W	26.79	35.4	2.35	0.516	0.4	0.107	2.19	1.91	0.117	0.07	0.871	0.006	0.46	16.06	1.25	17.77	19637	2.142	33.31422	-31.17222	NAC
NS0132	286	288	NS	X122480	122480	1	G	W	25.75	38.43	1.53	0.387	0.3	0.066	2.11	1.98	0.041	0.087	0.469	0.014	0.55	15.73	1.26	17.54	19632	2.6622	34.53516	-31.87296	NAC
NS0132	258	260	NS	X122465	122465	1	G	W	23.01	42.82	4.19	0.4386	0.34	0.2	3.12	2.13	0.23	0.086	0.84	0.035	0.41	11	1.34	12.75	19618	2.6316	37.15146	-34.51986	NAC
NS0133	200	202	NS	X138592	138592	1	G	W	22.46	46.91	2.56	0.2838	0.22	0.122	2.5	0.98	0.177	0.862	0.351	0.09	0.79	10.44	1.79	13.02	20566	26.3772	17.09316	9.28404	PAF(LC)
NS0133	52	54	NS	X138519	138519	1	G	W	29.4	44.74	3.91	0.2709	0.21	0.185	2.03	0.12	0.032	0.137	0.275	0.025	0.76	4.58	0.2	5.54	20492	4.1922	2.09304	2.09916	PAF(LC)
NS0133	84	86	NS	X138535	138535	1	G	W	27.06	45.1	4.24	0.258	0.2	0.208	2.61	0.17	0.027	0.161	0.966	0.003	0.51	6.62	0.1	7.23	20508	4.9266	2.96514	1.96146	PAF(LC)
NS0133	72	74	NS	X138529	138529	1	G	W	24	47.71	3.63	0.3354	0.26	0.174	2.33	0.16	0.017	0.145	1.07	0.003	1.16	8.48	0.25	9.89	20502	4.437	2.79072	1.64628	PAF(LC)
NS0133	262	264	NS	X138625	138625	1	G	W	23.94	45.99	4.84	0.3225	0.25	0.233	3.08	0.72	0.16	0.457	0.449	0.029	0.47	7.46	0.85	8.78	20363	13.9842	12.55824	1.42596	PAF(LC)
NS0133	76	78	NS	X138531	138531	1	G	W	26.83	46.21	3.55	0.3225	0.25	0.169	2.36	0.21	0.041	0.138	0.705	0.004	0.64	7.26	0.13	8.03	20504	4.2228	3.66282	0.55998	PAF(LC)
NS0133	74	76	NS	X138530	138530	1	G	W	24.62	47.78	5.35	0.2451	0.19	0.258	2.39	0.27	0.077	0.165	1.03	0.0005	1.02	5.77	0.39	7.18	20503	5.049	4.70934	0.33966	PAF(LC)
NS0133	100	102	NS	X138543	138543	1	G	W	25.34	43.61	4.47	0.4257	0.33	0.214	2.94	0.49	0.126	0.288	0.657	0.0005	0.63	8.65	0.51	9.79	20516	8.8128	8.54658	0.26622	PAF(LC)
NS0133	112	114	NS	X138549	138549	1	G	W	25.04	46.06	4.72	0.3354	0.26	0.222	2.66	0.4	0.117	0.232	0.576	0.0005	1.02	7.33	0.48	8.83	20522	7.0992	6.9768	0.1224	PAF(LC)
NS0133	44	46	NS	X138515	138515	1	G	D	29.69	48.27	3.58	0.2193	0.17	0.173	1.5	0.08	0.052	0.041	0.34	0.004	1.01	2.23	0.13	3.37	20488	1.2546	1.39536	-0.14076	NAF
NS0133	10	12	NS	X122498	122498	1	G	D	32.81	46.35	3.27	0.0645	0.05	0.158	0.12	0.03	0.087	0.006	0.327	0.011	1.6	0.89	0.1	2.59	19650	0.1836	0.52326	-0.33966	NAF
NS0133	12	14	NS	X122499	122499	1	G	D	31.07	49.5	3.1	0.0516	0.04	0.142	0.1	0.03	0.037	0.004	0.431	0.003	0.93	0.78	0.15	1.86	19651	0.1224	0.52326	-0.40086	NAF
NS0133	8	10	NS	X122497	122497	1	G	D	28.38	51.62	3.83	0.0387	0.03	0.17	0.11	0.04	0.078	0.009	0.264	0.014	1.65	1.02	0.13	2.8	19649	0.2754	0.69768	-0.42228	NAF
NS0133	32	34	NS	X138509	138509	1	G	D	31.15	46.21	3.22	0.258	0.2	0.152	0.27	0.04	0.062	0.006	0.64	0.011	3.14	1.06	0.15	4.35	20482	0.1836	0.69768	-0.51408	NAF
NS0133	96	98	NS	X138541	138541	1	G	W	26.32	46.69	4.06	0.2838	0.22	0.197	2.63	0.32	0.061	0.165	0.638	0.004	0.59	6.46	0.19	7.24	20514	5.049	5.58144	-0.53244	NAF
NS0133	66	68	NS	X138526	138526	1	G	W	23.74	56.55	2.99	0.4257	0.33	0.145	0.5	0.08	0.064	0.028	1.49	0.001	1.54	1.82	0.14	3.5	20499	0.8568	1.39536	-0.53856	NAF
NS0133	26	28	NS	X138506	138506	1	G	D	32.02	47.57	3.08	0.1161	0.09	0.15	0.54	0.04	0.042	0.005	0.183	0.0005	1.11	0.97	0.13	2.21	20479	0.153	0.69768	-0.54468	NAF
NS0133	0	2	NS	X122493	122493	1	G	D	28.82	50.01	3.87	0.1677	0.13	0.172	0.18	0.05	0.103	0.008	0.721	0.004	2.13	0.95	0.19	3.27	19645	0.2448	0.8721	-0.6273	NAF
NS0133	34	36	NS	X138510	138510	1	G	D	30.1	47.31	2.93	0.5676	0.44	0.133	0.25	0.05	0.065	0.006	0.379	0.003	3.71	1.1	0.22	5.03	20483	0.1836	0.8721	-0.6885	NAF
NS0133	22	24	NS	X138504	138504	1	G	D	28.4	52.52	3.61	0.1032	0.08	0.174	0.41	0.05	0.048	0.005	0.416	0.003	0.96	0.91	0.04	1.91	20477	0.153	0.8721	-0.7191	NAF
NS0133	24	26	NS	X138505	138505	1	G	D	30.77	47.93	3.79	0.3354	0.26	0.181	0.7	0.05	0.025	0.005	0.341	0.008	1.21	1.14	0.14	2.49	20478	0.153	0.8721	-0.7191	NAF
NS0133	58	60	NS	X138522	138522	1	G	W	26.84	50.75	4.45	0.2967	0.23	0.212	0.88	0.1	0.1	0.031	1.1	0.005	1.37	1.74	0.18	3.29	20495	0.9486	1.7442	-0.7956	NAF
NS0133	36	38	NS	X138511	138511	1	G	D	29.71	48.06	3.1	0.3483	0.27	0.138	0.46	0.06	0.068	0.006	0.804	0.011	2.99	0.98	0.15	4.12	20484	0.1836	1.04652	-0.86292	NAF
NS0133	40	42	NS	X138513	138513	1	G	D	30.12	49.38	3.05	0.5289	0.41	0.145	0.32	0.06	0.147	0.006	0.15	0.0005	1.6	1.07	0.16	2.83	20486	0.1836	1.04652	-0.86292	NAF
NS0133	54	56	NS	X138520	138520	1	G	W	29.35	49.27	3.63	0.4644	0.36	0.173	0.73	0.08	0.072	0.017	0.159	0.0005	1.49	1.29	0.19	2.97	20493	0.5202	1.39536	-0.87516	NAF
NS0133	28	30	NS	X138507	138507	1	G	D	27.21	53.01	3.35	0.5031	0.39	0.16	0.36	0.06	0.022	0.004	0.211	0.0005	1.94	1.12	0.17	3.23	20480	0.1224	1.04652	-0.92412	NAF
NS0133	68	70	NS	X138527	138527	1	G	W	29.21	47.84	3.33	1.0062	0.78	0.16	0.77	0.08	0.091	0.015	0.214	0.006	2.21	1.99	0.22	4.42	20500	0.459	1.39536	-0.93636	NAF
NS0133	18	20	NS	X138502	138502	1	G	D	26.68	51.68	4.65	0.1548	0.12	0.228	0.48	0.07	0.087	0.009	0.557	0.005	1.99	1.45	0.12	3.56	20475	0.2754	1.22094	-0.94554	NAF
NS0133	110	112	NS	X138548	138548	1	G	W	25.48	45.92	4.45	0.258	0.2	0.217	2.79	0.38	0.052	0.185	0.981	0.0005	0.54	7.31	0.24	8.09	20521	5.661	6.62796	-0.96696	NAF
NS0133	2	4	NS	X122494	122494	1	G	D	21.97	57.99	5.46	0.0387	0.03	0.239	0.15	0.08	0.064	0.013	0.711	0.01	1.72	1.32	0.25	3.29	19646	0.3978	1.39536	-0.99756	NAF
NS0133	14	16	NS	X122500	122500	1	G	D	32.07	46.79	3.19	0.2451	0.19	0.159	0.33	0.08	0.069	0.005	0.465	0.019	1.31	0.87	0.12	2.3	19652	0.153	1.39536	-1.24236	NAF
NS0133	20	22	NS	X138503	138503	1	G	D	32.96	45.33	3.21	0.2064	0.16	0.159	0.58	0.08	0.072	0.005	0.369	0.005	1.31	0.91	0.09	2.31	20476	0.153	1.39536	-1.24236	NAF
NS0133	264	266	NS	X138626	138626	1	G	W	24	47.63	4.95	0.2838	0.22	0.238	3.01	0.6	0.136	0.301	0.487	0.023	0.57	6.75	0.64	7.96	20364	9.2106	10.4652	-1.2546	NAF
NS0133	266	268	NS	X138627	138627	1	G	W	23.97	46.68	5.26	0.2838	0.22	0.252	3.1	0.65	0.132	0.32	0.539	0.025	0.61	6.68	0.68	7.97	20365	9.792	11.3373	-1.5453	NAF
NS0133	16	18	NS	X138501	138501	1	G	D	28.2	51.94	3.45	0.3741	0.29	0.168	0.42	0.1	0.091	0.003	0.493	0.006	1.57	0.91	0.13	2.61	20474	0.0918	1.7442	-1.6524	NAF
NS0133	38	40	NS	X138512	138512	1	G	D	29.88	49.2	2.91	0.3483	0.27	0.14	0.52	0.12	0.09	0.006	0.513	0.005	1.79	0.99	0.13	2.91	20485	0.1836	2.09304	-1.90944	NAF
NS0133	104	106	NS	X138545	138545	1	G	W	26.38	44.15	3.55	0.3612	0.28	0.17	2.73	0.36	0.077	0.142	0.631	0.005	0.97	8.92	0.17	10.06	20518	4.3452	6.27912	-1.93392	NAF
NS0133	120	122	NS	X138553	138553	1	G	W	27.29	44.94	3.69	0.3354	0.26	0.174	2.27	0.35	0.05	0.135	1.55	0.005	0.49	6.99	0.08	7.56	20526	4.131	6.1047	-1.9737	NAF
NS0133	190	192	NS	X138588	138588	1	G	W	25.33	40.64	3.76	0.3741	0.29	0.175	2.54	0.37	0.049	0.144	0.639	0.013	1.31	13.36	0.35	15.02	20561	4.4064	6.45354	-2.04714	NAF
NS0133	30	32	NS	X138508	138508	1	G	D	31.44	47.02	3.62	0.3354	0.26	0.172	0.45	0.13	0.075	0.004	0.265	0.013	1.56	1.18	0.16	2.9	20481	0.1224	2.26746	-2.14506	NAF
NS0133	46	48	NS	X138516	138516	1	G	W	28.52	45.98	4.22	0.4257	0.33	0.201	1.85	0.3	0.146	0.1	0.297	0.019	1.16	3.94	0.25	5.35	20489	3.06	5.2326	-2.1726	NAF
NS0133	126	128	NS	X138556	138556	1	G	W	26.07	44.83	3.63	0.2838	0.22	0.172	2.46	0.35	0.057	0.127	1.24	0.023	0.65	8.74	0.09	9.48	20529	3.8862	6.1047	-2.2185	NAF
NS0133	70	72	NS	X138528	138528	1	G	W	25.97	45.99	3.6	0.9159	0.71	0.171	1.59	0.27	0.105	0.081	0.457	0.008	2.05	6.61	0.29	8.95	20501	2.4786	4.70934	-2.23074	NAF
NS0133	206	208	NS	X138595	138595	1	G	W	25.41	44.24	3.44	0.3354	0.26	0.164	3.13	0.41	0.061	0.16	0.227	0.015	0.72	9.87	0.28	10.87	20569	4.896	7.15122	-2.25522	NAF
NS0133	202	204	NS	X138593	138593	1	G	W	25.4	40.55	2.74	0.2967	0.23	0.13	2.96	0.65	0.084	0.294	0.287	0.072	1.11	13.41	0.64	15.16	20567	8.9964	11.3373	-2.3409	NAF
NS0133	240	242	NS	X138614	138614	1	G	W	30.23	42.9	3.25	0.2838	0.22	0.155	2.36	0.29	0.03	0.086	0.316	0.032	0.54	6.26	-0.14	6.66	20586	2.6316	5.05818	-2.42658	NAF
NS0133	238	240	NS	X138613	138613	1	G	W	25.95	47.11	4.07	0.2709	0.21	0.192	2.63	0.45	0.073	0.176	0.472	0.017	0.47	6.4	0.24	7.11	20585	5.3856	7.8489	-2.4633	NAF
NS0133	56	58	NS	X138521	138521	1	G	W	30.52	47.9	3.1	0.3483	0.27	0.142	0.47	0.16	0.116	0.009	0.144	0.013	2.18	1.13	0.17	3.48	20494	0.2754	2.79072	-2.51532	NAF
NS0133	64	66	NS	X138525	138525	1	G	W	27.3	45.29	3.24	0.2838	0.22	0.154	1.46	0.29	0.079	0.083	2.37	0.013	1.06	6.75	0.04	7.85	20498	2.5398	5.05818	-2.51838	NAF
NS0133	90	92	NS	X138538	138538	1	G	W	26.26	46.58	3.63	0.2967	0.23	0.173	2.69	0.39	0.068	0.14	0.23	0.0005	0.58	6.87	0.16	7.61	20511	4.284	6.80238	-2.51838	NAF
NS0133	50	52	NS	X138518	138518	1	G	W	28.51	43.94	3.54	0.3741	0.29	0.169	2.38	0.36	0.098	0.122	0.26	0.0005	2.21	4.98	0.15	7.34	20491	3.7332	6.27912	-2.54592	NAF
NS0133	92	94	NS	X138539	138539	1	G	W	24.17	46.85	4.74	0.3096	0.24	0.224	3.07	0.47	0.062	0.184	0.829	0.002	0.57	7.23	0.38	8.18	20512	5.6304	8.19774	-2.56734	NAF
NS0133	88	90	NS	X138537	138537	1	G	W	25.71	46.25	4.53	0.2838	0.22	0.223	2.77	0.48	0.135	0.183	0.584	0.002	0.71	6.42	0.28	7.41	20510	5.5998	8.37216	-2.77236	NAF
NS0133	42	44	NS	X138514	138514	1	G	D	27.58	49.3	4.84	0.3741	0.29	0.238	1.2	0.19	0.152	0.006	0.373	0.009	1.75	1.57	0.18	3.5	20487	0.1836	3.31398	-3.13038	NAF
NS0133	60	62	NS	X138523	138523	1	G	W	25.47	43.77	3.96	0.3354	0.26	0.188	2.29	0.49	0.084	0.175	1.89	0.018	0.96	8.95	0.32	10.23	20496	5.355	8.54658	-3.19158	NAF
NS0133	48	50	NS	X138517	138517	1	G	W	28.96	43.34	3.65	0.3741	0.29	0.173	2.42	0.48	0.134	0.165	0.269	0.022	0.53	6.56	0.16	7.25	20490	5.049	8.37216	-3.32316	NAF
NS0133	116	118	NS	X138551	138551	1	G	W	23.02	54.62	2.5	0.2838	0.22	0.119	1.85	0.36	0.05	0.096	0.721	0.0005	0.4	5.46	0.03	5.89	20524	2.9376	6.27912	-3.34152	NAF
NS0133	270	272	NS	X138629	138629	1	G	W	21.71	47.09	6.23	0.3354	0.26	0.299	3.62	0.63	0.093	0.247	0.773	0.039	0.72	7.16	0.7	8.58	20367	7.5582	10.98846	-3.43026	NAF
NS0133	94	96	NS	X138540	138540	1	G	W	21.61	49.55	6.01	0.2451	0.19	0.291	3.37	0.63	0.099	0.242	1.1	0.011	0.53	6.09	0.59	7.21	20513	7.4052	10.98846	-3.58326	NAF
NS0133	6	8	NS	X122496	122496	1	G	D	20.39	64.54	3.57	0.00645	0.005	0.14	0.09	0.22	0.01	0.005	0.24	0.008	0.56	1.11	0.12	1.79	19648	0.153	3.83724	-3.68424	NAF
NS0133	178	180	NS	X138582	138582	1	G	W	25.3	44.1	2.69	0.2967	0.23	0.125	1.89	0.39	0.029	0.099	1.82	0.0005	0.96	11.23	0.11	12.3	20555	3.0294	6.80238	-3.77298	NAF
NS0133	98	100	NS	X138542	138542	1	G	W	25.18	45.29	4.09	0.3483	0.27	0.197	3.03	0.58	0.111	0.205	0.516	0.002	0.55	8.24	0.33	9.12	20515	6.273	10.11636	-3.84336	NAF
NS0133	122	124	NS	X138554	138554	1	G	W	26.06	47.5	3.79	0.2451	0.19	0.178	2.19	0.45	0.085	0.127	1.26	0.005	0.44	6	0.07	6.51	20527	3.8862	7.8489	-3.9627	NAF
NS0133	130	132	NS	X138558	138558	1	G	W	26.36	43.14	3.53	0.3225	0.25	0.165	2.29	0.45	0.072	0.122	1.94	0.007	0.88	9.12	0.11	10.11	20531	3.7332	7.8489	-4.1157	NAF
NS0133	134	136	NS	X138560	138560	1	G	W	27.72	41.5	3.72	0.3612	0.28	0.18	2.34	0.51	0.078	0.144	2.04	0.01	0.64	8.76	0.1	9.5	20533	4.4064	8.89542	-4.48902	NAF
NS0133	254	256	NS	X138621	138621	1	G	W	26.85	43.64	3.72	0.387	0.3	0.176	2.84	0.55	0.118	0.163	0.29	0.031	0.68	8.6	0.24	9.52	20359	4.9878	9.5931	-4.6053	NAF
NS0133	250	252	NS	X138619	138619	1	G	W	27.26	43.09	3.77	0.4128	0.32	0.18	2.78	0.68	0.151	0.236	0.347	0.04	0.62	8.33	0.37	9.32	20591	7.2216	11.86056	-4.63896	NAF
NS0133	78	80	NS	X138532	138532	1	G	W	25.74	46.75	3.76	0.2967	0.23	0.177	2.37	0.5	0.12	0.128	0.911	0.002	0.85	6.79	0.09	7.73	20505	3.9168	8.721	-4.8042	NAF
NS0133	138	140	NS	X138562	138562	1	G	W	26.8	46.2	3.8	0.1806	0.14	0.18	2.17	0.49	0.065	0.117	1.82	0.009	0.47	5.68	0	6.15	20535	3.5802	8.54658	-4.96638	NAF
NS0133	304	306	NS	X138646	138646	1	G	W	27.52	43.92	4.48	0.387	0.3	0.2	2.73	1.11	0.056	0.47	1.61	0.018	0.31	4.41	0.79	5.51	20456	14.382	19.36062	-4.97862	NAF
NS0133	208	210	NS	X138597	138597	1	G	W	30.07	42.79	2.96	0.2838	0.22	0.142	2.61	0.46	0.088	0.095	0.126	0.019	0.52	6.62	-0.1	7.04	20570	2.907	8.02332	-5.11632	NAF
NS0133	136	138	NS	X138561	138561	1	G	W	26.76	47.29	3.13	0.2451	0.19	0.147	2.38	0.51	0.078	0.122	0.723	0.0005	0.47	6.04	0.04	6.55	20534	3.7332	8.89542	-5.16222	NAF
NS0133	210	212	NS	X138598	138598	1	G	W	29.58	43.54	3.02	0.258	0.2	0.146	2.67	0.48	0.059	0.102	0.092	0.006	0.57	6.53	-0.06	7.04	20571	3.1212	8.37216	-5.25096	NAF
NS0133	290	292	NS	X138639	138639	1	G	W	26.5	45.76	4.48	0.258	0.2	0.226	3.06	0.65	0.044	0.197	0.587	0.022	0.44	5.94	0.38	6.76	20449	6.0282	11.3373	-5.3091	NAF
NS0133	156	158	NS	X138571	138571	1	G	W	29.29	43.44	3.01	0.2322	0.18	0.143	2.32	0.48	0.064	0.1	1.01	0.0005	0.39	6.89	-0.12	7.16	20544	3.06	8.37216	-5.31216	NAF
NS0133	4	6	NS	X122495	122495	1	G	D	9.46	77.8	5.08	0.00645	0.005	0.184	0.1	0.33	0.009	0.007	0.104	0.019	0.72	1.84	0.17	2.73	19647	0.2142	5.75586	-5.54166	NAF
NS0133	124	126	NS	X138555	138555	1	G	W	26.64	44.05	3.63	0.3741	0.29	0.173	2.42	0.6	0.12	0.149	1.35	0.0005	0.61	8.03	0.12	8.76	20528	4.5594	10.4652	-5.9058	NAF
NS0133	258	260	NS	X138623	138623	1	G	W	25.88	43.81	3.62	0.4386	0.34	0.175	2.79	0.68	0.163	0.193	0.353	0.031	0.82	8.75	0.38	9.95	20361	5.9058	11.86056	-5.95476	NAF
NS0133	174	176	NS	X138580	138580	1	G	W	25.98	41.72	3.6	0.3096	0.24	0.167	2.41	0.58	0.083	0.134	1.84	0.012	0.73	10.57	0.16	11.46	20553	4.1004	10.11636	-6.01596	NAF
NS0133	118	120	NS	X138552	138552	1	G	W	27.14	46.25	3.24	0.3225	0.25	0.154	2.08	0.56	0.114	0.119	1.32	0.013	0.55	6.33	0.02	6.9	20525	3.6414	9.76752	-6.12612	NAF
NS0133	272	274	NS	X138630	138630	1	G	W	24.74	46.36	4.79	0.3354	0.26	0.231	3.14	0.71	0.135	0.204	0.552	0.017	0.6	7.05	0.43	8.08	20368	6.2424	12.38382	-6.14142	NAF
NS0133	148	150	NS	X138567	138567	1	G	W	25.34	43.89	4.52	0.2838	0.22	0.216	2.82	0.73	0.116	0.215	1.9	0.007	0.48	7.64	0.43	8.55	20540	6.579	12.73266	-6.15366	NAF
NS0133	256	258	NS	X138622	138622	1	G	W	26.53	43.44	3.2	0.5031	0.39	0.156	2.71	0.58	0.115	0.129	0.302	0.033	0.72	9.55	0.19	10.46	20360	3.9474	10.11636	-6.16896	NAF
NS0133	236	238	NS	X138612	138612	1	G	W	28.69	43.88	3.5	0.3354	0.26	0.169	2.55	0.62	0.074	0.144	0.372	0.047	0.47	6.57	0.11	7.15	20584	4.4064	10.81404	-6.40764	NAF
NS0133	204	206	NS	X138594	138594	1	G	W	23.47	44.18	3.13	0.3354	0.26	0.146	3.05	0.86	0.119	0.28	0.406	0.044	0.66	11.95	0.65	13.26	20568	8.568	15.00012	-6.43212	NAF
NS0133	220	222	NS	X138604	138604	1	G	W	26.34	44.25	5.12	0.2709	0.21	0.25	3.24	0.75	0.214	0.216	0.438	0.017	0.42	6.13	0.3	6.85	20576	6.6096	13.0815	-6.4719	NAF
NS0133	226	228	NS	X138607	138607	1	G	W	26.17	46	3.81	0.3354	0.26	0.184	2.64	0.96	0.105	0.331	0.621	0.045	0.39	6.02	0.69	7.1	20579	10.1286	16.74432	-6.61572	NAF
NS0133	218	220	NS	X138603	138603	1	G	W	29	44.05	3.27	0.3225	0.25	0.154	2.86	0.62	0.109	0.137	0.138	0.03	0.49	6.04	0.12	6.65	20575	4.1922	10.81404	-6.62184	NAF
NS0133	162	164	NS	X138574	138574	1	G	W	30.85	42.43	2.44	0.2709	0.21	0.117	2.17	0.55	0.087	0.09	0.579	0.002	0.39	6.59	-0.17	6.81	20547	2.754	9.5931	-6.8391	NAF
NS0133	232	234	NS	X138610	138610	1	G	W	21.88	47.15	5.79	0.3483	0.27	0.274	3.44	0.88	0.1	0.273	0.793	0.061	0.65	7.18	0.72	8.55	20582	8.3538	15.34896	-6.99516	NAF
NS0133	132	134	NS	X138559	138559	1	G	W	23.85	48.02	3.18	0.2967	0.23	0.151	2.32	0.59	0.075	0.101	1.2	0.0005	0.57	8.86	0.05	9.48	20532	3.0906	10.29078	-7.20018	NAF
NS0133	172	174	NS	X138579	138579	1	G	W	25.18	43.67	3.67	0.3225	0.25	0.172	2.72	0.71	0.114	0.168	1.3	0.013	0.72	9.89	0.32	10.93	20552	5.1408	12.38382	-7.24302	NAF
NS0133	108	110	NS	X138547	138547	1	G	W	24.07	45.03	4.26	0.4515	0.35	0.206	2.79	0.73	0.206	0.176	0.86	0.0005	1.01	9.33	0.35	10.69	20520	5.3856	12.73266	-7.34706	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0133	170	172	NS	X138578	138578	1	G	W	28.79	41.72	3.2	0.2709	0.21	0.15	2.63	0.6	0.033	0.099	0.845	0.011	0.56	8.53	0.01	9.1	20551	3.0294	10.4652	-7.4358	NAF
NS0133	242	244	NS	X138615	138615	1	G	W	28.78	45.33	2.99	0.2838	0.22	0.14	2.12	0.57	0.114	0.079	0.417	0.019	0.62	5.49	-0.09	6.02	20587	2.4174	9.94194	-7.52454	NAF
NS0133	300	302	NS	X138644	138644	1	G	W	24.11	44.78	6.05	0.4902	0.38	0.274	3.44	1	0.037	0.323	1.94	0.033	0.4	6.03	0.87	7.3	20454	9.8838	17.442	-7.5582	NAF
NS0133	252	254	NS	X138620	138620	1	G	W	27.95	42.86	3.38	0.3354	0.26	0.16	2.68	0.69	0.141	0.142	0.332	0.026	0.61	8	0.12	8.73	20592	4.3452	12.03498	-7.68978	NAF
NS0133	244	246	NS	X138616	138616	1	G	W	28.94	43.77	3.45	0.3354	0.26	0.169	2.51	0.66	0.112	0.116	0.338	0.035	0.56	6.66	0.04	7.26	20588	3.5496	11.51172	-7.96212	NAF
NS0133	274	276	NS	X138631	138631	1	G	W	27.36	44.36	3.94	0.3354	0.26	0.189	2.87	0.78	0.079	0.182	0.416	0.031	0.53	6.42	0.22	7.17	20369	5.5692	13.60476	-8.03556	NAF
NS0133	166	168	NS	X138576	138576	1	G	W	27.1	44.67	3.45	0.1935	0.15	0.164	2.58	0.68	0.071	0.119	0.715	0.001	0.61	7.56	0.12	8.29	20549	3.6414	11.86056	-8.21916	NAF
NS0133	268	270	NS	X138628	138628	1	G	W	28.88	43.42	3.3	0.3354	0.26	0.157	2.46	0.85	0.088	0.205	0.413	0.028	0.56	6.33	0.35	7.24	20366	6.273	14.8257	-8.5527	NAF
NS0133	184	186	NS	X138585	138585	1	G	W	23.51	41.12	3.13	0.4386	0.34	0.147	2.23	0.54	0.082	0.027	2.28	0.012	1.15	14.86	0.07	16.08	20558	0.8262	9.41868	-8.59248	NAF
NS0133	144	146	NS	X138565	138565	1	G	W	25.76	45.86	3.93	0.2967	0.23	0.19	2.31	0.76	0.113	0.148	1.93	0.015	0.36	6.78	0.07	7.21	20538	4.5288	13.25592	-8.72712	NAF
NS0133	234	236	NS	X138611	138611	1	G	W	23.76	43	5.56	0.4386	0.34	0.271	3.66	0.99	0.174	0.275	0.723	0.08	0.89	8.32	0.8	10.01	20583	8.415	17.26758	-8.85258	NAF
NS0133	128	130	NS	X138557	138557	1	G	W	24.98	42.41	3.72	0.2709	0.21	0.181	2.71	0.6	0.057	0.049	1.89	0.017	1.26	11.08	0.1	12.44	20530	1.4994	10.4652	-8.9658	NAF
NS0133	160	162	NS	X138573	138573	1	G	W	28.72	44.47	2.78	0.2838	0.22	0.132	2.33	0.71	0.059	0.102	0.71	0.006	0.43	6.64	0.04	7.11	20546	3.1212	12.38382	-9.26262	NAF
NS0133	216	218	NS	X138602	138602	1	G	W	30.42	44.36	2.56	0.2838	0.22	0.125	2.39	0.69	0.09	0.09	0.073	0.011	0.35	5.31	-0.11	5.55	20574	2.754	12.03498	-9.28098	NAF
NS0133	150	152	NS	X138568	138568	1	G	W	27.08	43.96	4.03	0.2451	0.19	0.195	2.53	0.88	0.161	0.198	1.54	0.0005	0.46	6.52	0.34	7.32	20541	6.0588	15.34896	-9.29016	NAF
NS0133	164	166	NS	X138575	138575	1	G	W	28.16	44.37	3.37	0.1806	0.14	0.161	2.45	0.75	0.054	0.115	0.931	0.0005	0.53	6.22	0.15	6.9	20548	3.519	13.0815	-9.5625	NAF
NS0133	86	88	NS	X138536	138536	1	G	W	23.65	47.38	4.73	0.3225	0.25	0.232	2.81	0.92	0.28	0.209	0.669	0.0005	0.58	7.03	0.35	7.96	20509	6.3954	16.04664	-9.65124	NAF
NS0133	140	142	NS	X138563	138563	1	G	W	29.94	41.26	2.83	0.3096	0.24	0.133	2.24	0.76	0.129	0.102	1.3	0.0005	0.5	7.44	-0.1	7.84	20536	3.1212	13.25592	-10.13472	NAF
NS0133	292	294	NS	X138640	138640	1	G	W	26.01	44.62	4.49	0.3354	0.26	0.215	3.2	0.93	0.088	0.193	0.635	0.011	0.45	6.87	0.4	7.72	20450	5.9058	16.22106	-10.31526	NAF
NS0133	260	262	NS	X138624	138624	1	G	W	26.72	41.71	4.28	0.387	0.3	0.206	2.98	0.99	0.251	0.227	0.389	0.033	0.58	8.48	0.38	9.44	20362	6.9462	17.26758	-10.32138	NAF
NS0133	222	224	NS	X138605	138605	1	G	W	28.89	43.72	2.98	0.3741	0.29	0.143	2.49	0.78	0.133	0.107	0.361	0.023	0.39	6.8	0	7.19	20577	3.2742	13.60476	-10.33056	NAF
NS0133	230	232	NS	X138609	138609	1	G	W	22.4	47.14	5.37	0.387	0.3	0.258	3.41	1.05	0.146	0.257	0.762	0.065	0.56	7.72	0.72	9	20581	7.8642	18.3141	-10.4499	NAF
NS0133	248	250	NS	X138618	138618	1	G	W	26.45	45.06	3.57	0.3999	0.31	0.169	2.63	0.84	0.102	0.135	0.343	0.03	0.52	7.49	0.17	8.18	20590	4.131	14.65128	-10.52028	NAF
NS0133	212	214	NS	X138599	138599	1	G	W	30.48	43.86	2.96	0.2322	0.18	0.138	2.56	0.77	0.087	0.09	0.07	0.02	0.45	5.15	0	5.6	20572	2.754	13.43034	-10.67634	NAF
NS0133	176	178	NS	X138581	138581	1	G	W	21.25	44.43	4.95	0.3096	0.24	0.238	2.89	1.19	0.153	0.326	2.08	0.059	0.84	10.52	0.86	12.22	20554	9.9756	20.75598	-10.78038	NAF
NS0133	246	248	NS	X138617	138617	1	G	W	25.63	45.01	3.9	0.3354	0.26	0.186	2.91	0.97	0.184	0.198	0.28	0.023	0.64	8.11	0.39	9.14	20589	6.0588	16.91874	-10.85994	NAF
NS0133	294	296	NS	X138641	138641	1	G	W	23.95	49.39	4.96	0.2322	0.18	0.247	2.81	0.94	0.125	0.176	0.981	0.028	0.52	4.39	0.44	5.35	20451	5.3856	16.39548	-11.00988	NAF
NS0133	188	190	NS	X138587	138587	1	G	W	24.64	38.72	3.23	0.3741	0.29	0.155	2.5	0.68	0.086	0.024	2.09	0.002	1.33	15.09	0.12	16.54	20560	0.7344	11.86056	-11.12616	NAF
NS0133	102	104	NS	X138544	138544	1	G	W	27.33	40.88	3.22	0.5418	0.42	0.149	2.61	0.91	0.259	0.145	0.628	0.0005	0.98	10.05	0.19	11.22	20517	4.437	15.87222	-11.43522	NAF
NS0133	158	160	NS	X138572	138572	1	G	W	29.12	43.73	2.85	0.2451	0.19	0.136	2.29	0.82	0.096	0.092	0.93	0.006	0.33	6.55	-0.01	6.87	20545	2.8152	14.30244	-11.48724	NAF
NS0133	146	148	NS	X138566	138566	1	G	W	22.84	47.43	4.58	0.2967	0.23	0.221	2.77	0.99	0.171	0.188	1.85	0.005	0.41	7.18	0.33	7.92	20539	5.7528	17.26758	-11.51478	NAF
NS0133	82	84	NS	X138534	138534	1	G	W	24.73	45.55	4.35	0.3225	0.25	0.212	2.8	1.04	0.277	0.211	1.06	0.0005	0.49	7.14	0.34	7.97	20507	6.4566	18.13968	-11.68308	NAF
NS0133	224	226	NS	X138606	138606	1	G	W	25.59	45.02	4.2	0.3612	0.28	0.202	2.98	0.97	0.132	0.171	0.637	0.036	0.59	7.37	0.42	8.38	20578	5.2326	16.91874	-11.68614	NAF
NS0133	154	156	NS	X138570	138570	1	G	W	22.75	45.46	4.48	0.3354	0.26	0.213	2.91	1.01	0.139	0.183	2.1	0.009	0.5	9.19	0.43	10.12	20543	5.5998	17.61642	-12.01662	NAF
NS0133	198	200	NS	X138591	138591	1	G	W	24.24	42.54	4.09	0.2967	0.23	0.189	2.71	0.88	0.165	0.065	0.517	0.024	0.86	12.08	0.11	13.05	20565	1.989	15.34896	-13.35996	NAF
NS0133	228	230	NS	X138608	138608	1	G	W	27.67	44.3	2.95	0.3741	0.29	0.142	2.46	1	0.141	0.132	0.41	0.02	0.57	7.32	0.22	8.11	20580	4.0392	17.442	-13.4028	NAF
NS0133	288	290	NS	X138638	138638	1	G	W	25.69	45.95	3.94	0.3096	0.24	0.191	2.9	1.12	0.058	0.194	0.678	0.012	0.5	6.31	0.55	7.36	20376	5.9364	19.53504	-13.59864	NAF
NS0133	80	82	NS	X138533	138533	1	G	W	26.32	47.83	3.38	0.2451	0.19	0.165	2.23	1	0.304	0.113	0.797	0.008	0.53	5.49	0.09	6.11	20506	3.4578	17.442	-13.9842	NAF
NS0133	282	284	NS	X138635	138635	1	G	W	28.53	46.01	2.9	0.258	0.2	0.143	2.38	1	0.077	0.109	0.351	0.022	0.43	4.95	0.2	5.58	20373	3.3354	17.442	-14.1066	NAF
NS0133	298	300	NS	X138643	138643	1	G	W	25.13	44.58	5.32	0.3741	0.29	0.247	3.04	1.11	0.073	0.157	1.79	0.025	0.41	5.95	0.55	6.91	20453	4.8042	19.36062	-14.55642	NAF
NS0133	196	198	NS	X138590D	138590D	1	G	W	27.48	40.61	2.55	0.258	0.2	0.119	2.42	0.99	0.085	0.086	0.657	0.003	0.92	11.3	0.25	12.47	20564	2.6316	17.26758	-14.63598	NAF
NS0133	106	108	NS	X138546	138546	1	G	W	25.99	43.04	3.86	0.4257	0.33	0.188	2.74	1.2	0.354	0.195	0.881	0.013	0.6	8.8	0.3	9.7	20519	5.967	20.9304	-14.9634	NAF
NS0133	284	286	NS	X138636	138636	1	G	W	28.1	45.12	3.61	0.2451	0.19	0.174	2.59	1.12	0.054	0.129	0.487	0.022	0.37	4.8	0.39	5.56	20374	3.9474	19.53504	-15.58764	NAF
NS0133	152	154	NS	X138569	138569	1	G	W	23.08	43.74	4.37	0.387	0.3	0.211	3.04	1.29	0.22	0.198	1.97	0.01	0.77	9.71	0.58	11.06	20542	6.0588	22.50018	-16.44138	NAF
NS0133	142	144	NS	X138564	138564	1	G	W	26.89	44.94	3.33	0.258	0.2	0.161	2.27	1.16	0.175	0.117	1.37	0.0005	0.45	6.72	0.1	7.27	20537	3.5802	20.23272	-16.65252	NAF
NS0133	194	196	NS	X138590	138590	1	G	W	27.42	36.66	2.51	0.2451	0.19	0.119	2.78	1.05	0.061	0.038	1.28	0.026	0.73	14.41	0.47	15.61	20563	1.1628	18.3141	-17.1513	NAF
NS0133	168	170	NS	X138577	138577	1	G	W	25.69	44.19	3.3	0.2322	0.18	0.159	2.93	1.18	0.089	0.111	0.459	0.0005	0.53	9.38	0.45	10.36	20550	3.3966	20.58156	-17.18496	NAF
NS0133	180	182	NS	X138583	138583	1	G	W	24.96	39.26	2.72	0.3483	0.27	0.127	2.54	1.03	0.159	0.023	1.79	0.032	0.77	14.86	0.19	15.82	20556	0.7038	17.96526	-17.26146	NAF
NS0133	182	184	NS	X138584	138584	1	G	W	21.59	42.23	5.26	0.1935	0.15	0.253	2.9	1.27	0.059	0.152	2.65	0.081	0.9	11.55	0.79	13.24	20557	4.6512	22.15134	-17.50014	NAF
NS0133	214	216	NS	X138601	138601	1	G	W	28.95	44.17	2.56	0.3096	0.24	0.121	2.57	1.2	0.218	0.096	0.075	0.015	0.47	6.17	0.08	6.72	20573	2.9376	20.9304	-17.9928	NAF
NS0133	62	64	NS	X138524	138524	1	G	W	23.58	43.53	4.4	0.258	0.2	0.211	2.66	1.3	0.171	0.134	2.19	0.011	0.85	9.65	0.43	10.93	20497	4.1004	22.6746	-18.5742	NAF
NS0133	280	282	NS	X138634	138634	1	G	W	26.36	46.43	3.37	0.3096	0.24	0.163	2.67	1.35	0.109	0.152	0.45	0.025	0.37	5.6	0.49	6.46	20372	4.6512	23.5467	-18.8955	NAF
NS0133	192	194	NS	X138589	138589	1	G	W	25.8	37.54	2.29	0.2838	0.22	0.107	2.69	1.26	0.207	0.015	1.5	0.041	0.69	15.54	0.26	16.49	20562	0.459	21.97692	-21.51792	NAF
NS0133	278	280	NS	X138633	138633	1	G	W	30.14	42.85	2.88	0.2838	0.22	0.136	2.56	1.41	0.06	0.1	0.224	0.03	0.42	5.07	0.53	6.02	20371	3.06	24.59322	-21.53322	NAF
NS0133	114	116	NS	X138550	138550	1	G	W	26.46	43.99	3.27	0.3483	0.27	0.155	2.6	1.48	0.127	0.127	0.845	0.014	0.58	7.62	0.55	8.75	20523	3.8862	25.81416	-21.92796	NAF
NS0133	302	304	NS	X138645	138645	1	G	W	30.05	41.86	3.57	0.4128	0.32	0.165	2.54	1.42	0.079	0.07	0.971	0.022	0.34	4.63	0.53	5.5	20455	2.142	24.76764	-22.62564	NAF
NS0133	276	278	NS	X138632	138632	1	G	W	28.78	43.87	3.21	0.2838	0.22	0.155	2.64	1.56	0.07	0.12	0.272	0.017	0.4	5.29	0.69	6.38	20370	3.672	27.20952	-23.53752	NAF
NS0133	186	188	NS	X138586	138586	1	G	W	25.09	35.2	3.31	0.5547	0.43	0.158	2.54	1.45	0.221	0.018	2.4	0.031	0.94	16.28	0.38	17.6	20559	0.5508	25.2909	-24.7401	NAF
NS0133	286	288	NS	X138637	138637	1	G	W	26.02	49.72	2.54	0.2838	0.22	0.124	2	1.78	0.076	0.096	0.555	0.024	0.31	4.16	0.86	5.33	20375	2.9376	31.04676	-28.10916	NAF
NS0133	296	298	NS	X138642	138642	1	G	W	26.84	44.71	3.86	0.3096	0.24	0.188	2.76	1.89	0.32	0.135	0.717	0.045	0.44	5.47	0.43	6.34	20452	4.131	32.96538	-28.83438	NAF
NS0134	188	190	NS	X067326	067326	1	G	W	12.44	53.9	11.5	0.1419	0.11	0.489	1.54	0.15	0.023	4.58	3.59	0.064	0.28	7.31	2.98	10.57	11911	140.148	2.6163	137.5317	PAF(HC)
NS0134	192	194	NS	X067328	067328	1	G	W	27.32	35.87	2.16	0.3483	0.27	0.093	2.62	0.51	0.099	1.99	0.129	0.023	0.28	14.52	4.05	18.85	11913	60.894	8.89542	51.99858	PAF(HC)
NS0134	194	196	NS	X067329	067329	1	G	W	27.22	42.47	0.97	0.4128	0.32	0.048	2.46	0.59	0.106	1.51	0.124	0.046	0.23	10.57	2.68	13.48	11914	46.206	10.29078	35.91522	PAF(HC)
NS0134	190	192	NS	X067327	067327	1	G	W	23.51	38.54	4.41	0.4257	0.33	0.192	2.8	0.58	0.094	1.09	1.16	0.035	0.31	14.75	2.73	17.79	11912	33.354	10.11636	23.23764	PAF(HC)
NS0134	206	208	NS	X067335	067335	1	G	W	23.34	50.21	3.12	0.3225	0.25	0.133	2.98	0.79	0.05	0.527	0.182	0.11	0.48	6.05	1.18	7.71	11992	16.1262	13.77918	2.34702	PAF(LC)
NS0134	374	376	NS	X067421	067421	1	G	W	28.01	43.46	4.17	0.6321	0.49	0.195	2.24	1.11	0.071	0.611	3.03	0.117	0.3	3.57	0.8	4.67	12112	18.6966	19.36062	-0.66402	NAF
NS0134	302	304	NS	X067384	067384	1	G	W	30.69	38.67	2.68	0.645	0.5	0.12	3.34	0.51	0.111	0.146	0.431	0.201	0.75	8.15	0.18	9.08	11968	4.4676	8.89542	-4.42782	NAF
NS0134	446	448	NS	X067457	067457	1	G	W	29.16	40.31	3.56	0.4257	0.33	0.167	2.62	0.65	0.073	0.219	0.972	0.242	0.92	7.09	0.43	8.44	12184	6.7014	11.3373	-4.6359	NAF
NS0134	450	452	NS	X067459	067459	1	G	W	30.44	39.44	3	0.3612	0.28	0.144	2.7	0.61	0.066	0.191	0.992	0.281	1.08	6.73	0.4	8.21	12186	5.8446	10.63962	-4.79502	NAF
NS0134	434	436	NS	X067451	067451	1	G	W	26.42	40.58	4.7	0.3225	0.25	0.22	3.07	1.49	0.087	0.669	1.36	0.311	0.66	7.99	1.37	10.02	12178	20.4714	25.98858	-5.51718	NAF
NS0134	438	440	NS	X067453	067453	1	G	W	27.25	41.61	4.82	0.3354	0.26	0.222	3.12	1.53	0.09	0.68	1.4	0.292	1.11	4.56	1.6	7.27	12180	20.808	26.68626	-5.87826	NAF
NS0134	448	450	NS	X067458	067458	1	G	W	27.58	43.11	3.07	0.3741	0.29	0.143	2.68	0.65	0.096	0.171	0.955	0.261	1.03	7.46	0.42	8.91	12185	5.2326	11.3373	-6.1047	NAF
NS0134	304	306	NS	X067385	067385	1	G	W	30.77	40.48	2.6	0.5676	0.44	0.118	3.24	0.63	0.106	0.147	0.539	0.254	0.62	6.07	0.2	6.89	11969	4.4982	10.98846	-6.49026	NAF
NS0134	214	216	NS	X067339	067339	1	G	W	28.62	37.43	1.93	0.4128	0.32	0.084	2.8	0.73	0.095	0.175	0.148	0.077	0.6	13.62	0.34	14.56	11996	5.355	12.73266	-7.37766	NAF
NS0134	218	220	NS	X067341	067341	1	G	W	27.04	37.13	1.66	0.5547	0.43	0.071	2.78	0.83	0.102	0.215	0.221	0.085	0.79	16.2	0.39	17.38	11998	6.579	14.47686	-7.89786	NAF
NS0134	198	200	NS	X067331	067331	1	G	W	28.71	43.54	1.05	0.4902	0.38	0.045	2.71	0.88	0.13	0.224	0.185	0.097	0.36	8.25	0.4	9.01	11916	6.8544	15.34896	-8.49456	NAF
NS0134	310	312	NS	X067388	067388	1	G	W	35.21	36.14	1.54	0.7869	0.61	0.067	2.6	0.66	0.104	0.063	0.338	0.155	0.47	6.41	-0.13	6.75	11828	1.9278	11.51172	-9.58392	NAF
NS0134	316	318	NS	X067391	067391	1	G	W	37.32	36.51	1.01	0.7998	0.62	0.042	2.16	0.66	0.098	0.053	0.313	0.209	0.32	4.33	-0.19	4.46	11831	1.6218	11.51172	-9.88992	NAF
NS0134	426	428	NS	X067447	067447	1	G	W	23.63	46	5.03	0.3999	0.31	0.228	2.85	1.59	0.107	0.567	0.853	0.205	0.88	6.58	1.17	8.63	12174	17.3502	27.73278	-10.38258	NAF
NS0134	196	198	NS	X067330	067330	1	G	W	30.74	42.77	0.44	0.5031	0.39	0.02	2.39	1.04	0.114	0.252	0.135	0.07	0.28	6.9	0.46	7.64	11915	7.7112	18.13968	-10.42848	NAF
NS0134	420	422	NS	X067444	067444	1	G	W	33.09	39.58	1.97	0.4902	0.38	0.094	2.23	0.83	0.106	0.124	0.757	0.177	0.66	5.34	0.07	6.07	12171	3.7944	14.47686	-10.68246	NAF
NS0134	452	454	NS	X067460	067460	1	G	W	28.53	44.22	1.37	0.3999	0.31	0.063	1.84	0.78	0.06	0.077	0.548	0.15	0.69	8.68	0.12	9.49	12205	2.3562	13.60476	-11.24856	NAF
NS0134	230	232	NS	X067347	067347	1	G	W	28.48	44.72	0.81	0.4773	0.37	0.035	1.9	0.73	0.079	0.006	0.659	0.028	0.27	9.31	-0.05	9.53	12004	0.1836	12.73266	-12.54906	NAF
NS0134	212	214	NS	X067338	067338	1	G	W	33.87	38.88	0.98	0.2967	0.23	0.052	2.29	0.81	0.088	0.051	0.096	0.06	0.32	7.5	-0.02	7.8	11995	1.5606	14.12802	-12.56742	NAF
NS0134	408	410	NS	X067438	067438	1	G	W	26.13	46.74	2.55	0.2838	0.22	0.124	2.94	1.27	0.104	0.313	0.582	0.166	0.67	5.44	0.71	6.82	12147	9.5778	22.15134	-12.57354	NAF
NS0134	444	446	NS	X067456	067456	1	G	W	29.91	39.55	3.07	0.4902	0.38	0.142	2.79	1.13	0.063	0.231	0.921	0.271	1.21	6.03	0.6	7.84	12183	7.0686	19.70946	-12.64086	NAF
NS0134	308	310	NS	X067387	067387	1	G	W	34.39	38.27	1.29	0.6708	0.52	0.056	2.4	0.86	0.13	0.067	0.377	0.177	0.5	5.8	-0.06	6.24	11827	2.0502	15.00012	-12.94992	NAF
NS0134	296	298	NS	X067381	067381	1	G	W	34.66	36.3	1.34	0.7353	0.57	0.058	3	0.82	0.116	0.043	0.353	0.17	0.42	6.73	0.04	7.19	11965	1.3158	14.30244	-12.98664	NAF
NS0134	248	250	NS	X067356	067356	1	G	W	29.26	43.49	2.47	0.6579	0.51	0.111	2.76	0.95	0.111	0.113	0.536	0.105	0.36	5.99	0.26	6.61	12067	3.4578	16.5699	-13.1121	NAF
NS0134	216	218	NS	X067340	067340	1	G	W	27.43	38.46	1.1	0.3741	0.29	0.048	2.58	0.94	0.115	0.098	0.189	0.102	0.63	15.76	0.12	16.51	11997	2.9988	16.39548	-13.39668	NAF
NS0134	306	308	NS	X067386	067386	1	G	W	34.23	36.55	1.34	0.7353	0.57	0.061	2.6	0.9	0.107	0.067	0.353	0.16	0.7	7.27	0.02	7.99	11970	2.0502	15.6978	-13.6476	NAF
NS0134	312	314	NS	X067389	067389	1	G	W	36.28	36.75	1.04	0.774	0.6	0.046	2.23	0.86	0.104	0.043	0.298	0.143	0.41	4.91	-0.01	5.31	11829	1.3158	15.00012	-13.68432	NAF
NS0134	300	302	NS	X067383	067383	1	G	W	32.75	39.54	1.75	0.5289	0.41	0.08	2.79	1.05	0.082	0.142	0.303	0.145	0.57	5.79	0.3	6.66	11967	4.3452	18.3141	-13.9689	NAF
NS0134	224	226	NS	X067344	067344	1	G	W	24.2	45.1	1.28	0.4257	0.33	0.057	2.45	0.85	0.09	0.014	0.101	0.046	0.46	14.09	0.21	14.76	12001	0.4284	14.8257	-14.3973	NAF
NS0134	298	300	NS	X067382	067382	1	G	W	35.11	36.69	1.21	0.7353	0.57	0.057	2.73	0.9	0.112	0.036	0.364	0.172	0.4	6.12	0.03	6.55	11966	1.1016	15.6978	-14.5962	NAF
NS0134	266	268	NS	X067365	067365	1	G	W	28.01	43.1	3.44	0.645	0.5	0.145	3.25	1.24	0.129	0.227	1.04	0.127	0.39	4.84	0.73	5.96	12076	6.9462	21.62808	-14.68188	NAF
NS0134	290	292	NS	X067377	067377	1	G	W	37.43	36.48	1	0.7224	0.56	0.044	2.27	0.91	0.091	0.027	0.269	0.115	0.2	4	0.14	4.34	11962	0.8262	15.87222	-15.04602	NAF
NS0134	228	230	NS	X067346	067346	1	G	W	27.62	40.18	0.94	0.5289	0.41	0.04	2.4	0.92	0.081	0.006	0.553	0.044	0.45	13.71	0.24	14.4	12003	0.1836	16.04664	-15.86304	NAF
NS0134	222	224	NS	X067343	067343	1	G	W	27.45	37.6	1.47	0.5031	0.39	0.065	2.63	0.95	0.092	0.014	0.107	0.053	0.64	16.21	0.22	17.07	12000	0.4284	16.5699	-16.1415	NAF
NS0134	430	432	NS	X067449	067449	1	G	W	24.45	44.04	4.48	0.3741	0.29	0.2	2.84	1.65	0.104	0.407	1.05	0.279	1.07	6.51	1.21	8.79	12176	12.4542	28.7793	-16.3251	NAF
NS0134	250	252	NS	X067357	067357	1	G	W	28.39	44.34	2.29	0.5934	0.46	0.102	3.08	1.13	0.173	0.093	0.275	0.119	0.39	6.33	0.23	6.95	12068	2.8458	19.70946	-16.86366	NAF
NS0134	226	228	NS	X067345	067345	1	G	W	25.98	39.67	1.44	0.4902	0.38	0.06	2.9	1.01	0.114	0.019	0.319	0.085	0.6	15.62	0.29	16.51	12002	0.5814	17.61642	-17.03502	NAF
NS0134	314	316	NS	X067390	067390	1	G	W	37.21	35.35	1	0.7998	0.62	0.044	2.38	1.09	0.099	0.052	0.281	0.134	0.27	4.86	0.17	5.3	11830	1.5912	19.01178	-17.42058	NAF
NS0134	258	260	NS	X067361	067361	1	G	W	32.17	41.23	1.49	0.6192	0.48	0.062	2.81	1.17	0.126	0.094	0.431	0.091	0.14	5.04	0.37	5.55	12072	2.8764	20.40714	-17.53074	NAF
NS0134	220	222	NS	X067342	067342	1	G	W	28.85	33.83	1.79	0.5547	0.43	0.077	2.83	1.05	0.093	0.018	0.257	0.069	0.66	17.08	0.23	17.97	11999	0.5508	18.3141	-17.7633	NAF
NS0134	232	234	NS	X067348	067348	1	G	W	28.72	39.42	1.08	0.5031	0.39	0.044	2.59	1.05	0.079	0.014	0.766	0.044	0.33	12.4	0.38	13.11	12005	0.4284	18.3141	-17.8857	NAF
NS0134	278	280	NS	X067371	067371	1	G	W	35.25	37.92	1.86	0.774	0.6	0.079	2.21	1.21	0.09	0.063	1.02	0.091	0.16	3.5	0.42	4.08	11956	1.9278	21.10482	-19.17702	NAF
NS0134	424	426	NS	X067446	067446	1	G	W	32.77	39.77	1.9	0.4515	0.35	0.091	2.06	1.25	0.082	0.085	0.586	0.157	0.54	5.53	0.52	6.59	12173	2.601	21.8025	-19.2015	NAF
NS0134	294	296	NS	X067380	067380	1	G	W	32.58	40.63	0.99	0.645	0.5	0.041	2.59	1.19	0.141	0.047	0.298	0.145	0.47	5.57	0.31	6.35	11964	1.4382	20.75598	-19.31778	NAF
NS0134	288	290	NS	X067376	067376	1	G	W	36.71	37.19	0.89	0.7482	0.58	0.041	2.18	1.17	0.095	0.033	0.26	0.098	0.27	3.76	0.41	4.44	11961	1.0098	20.40714	-19.39734	NAF
NS0134	264	266	NS	X067364	067364	1	G	W	32.65	41.16	1.9	0.5934	0.46	0.083	2.44	1.22	0.078	0.056	0.562	0.091	0.2	3.97	0.54	4.71	12075	1.7136	21.27924	-19.56564	NAF
NS0134	376	378	NS	X067422	067422	1	G	W	35.19	38.17	1.74	0.5418	0.42	0.077	1.83	1.24	0.076	0.061	1.11	0.09	0.16	3.73	0.52	4.41	12113	1.8666	21.62808	-19.76148	NAF
NS0134	410	412	NS	X067439	067439	1	G	W	28.35	42.56	2.94	0.3354	0.26	0.134	2.65	1.59	0.092	0.255	1.19	0.194	0.89	5.38	0.9	7.17	12148	7.803	27.73278	-19.92978	NAF
NS0134	254	256	NS	X067359	067359	1	G	W	31.01	43.5	1.34	0.645	0.5	0.061	2.37	1.29	0.132	0.077	0.294	0.088	0.22	4.94	0.36	5.52	12070	2.3562	22.50018	-20.14398	NAF
NS0134	320	322	NS	X067393	067393	1	G	W	37.53	35.79	1.12	0.8256	0.64	0.051	2.32	1.24	0.091	0.041	0.383	0.121	0.16	3.38	0.46	4	11833	1.2546	21.62808	-20.37348	NAF
NS0134	366	368	NS	X067417	067417	1	G	W	35.13	40.29	1.23	0.6579	0.51	0.052	1.65	1.27	0.085	0.055	0.984	0.051	0.28	2.54	0.54	3.36	12108	1.683	22.15134	-20.46834	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0134	292	294	NS	X067378	067378	1	G	W	35.75	38.07	1.07	0.6579	0.51	0.049	2.33	1.25	0.099	0.031	0.279	0.135	0.23	3.93	0.5	4.66	11963	0.9486	21.8025	-20.8539	NAF
NS0134	240	242	NS	X067352	067352	1	G	W	31.1	38.75	2	0.6837	0.53	0.094	2.84	1.46	0.101	0.145	0.24	0.078	0.54	7.76	0.61	8.91	12063	4.437	25.46532	-21.02832	NAF
NS0134	204	206	NS	X067334	067334	1	G	W	32.13	42.16	0.8	0.5547	0.43	0.037	2.04	1.35	0.085	0.058	0.212	0.061	0.49	5.5	0.53	6.52	11991	1.7748	23.5467	-21.7719	NAF
NS0134	280	282	NS	X067372	067372	1	G	W	36.74	37.2	1.29	0.7611	0.59	0.057	1.9	1.34	0.087	0.051	0.702	0.074	0.1	3.11	0.5	3.71	11957	1.5606	23.37228	-21.81168	NAF
NS0134	394	396	NS	X067431	067431	1	G	W	34.88	37.36	2.2	0.6837	0.53	0.099	2	1.45	0.12	0.111	1.83	0.062	0.03	3.02	0.54	3.59	12140	3.3966	25.2909	-21.8943	NAF
NS0134	418	420	NS	X067443	067443	1	G	W	32.94	40.83	1.74	0.4773	0.37	0.082	2.02	1.43	0.081	0.096	0.763	0.141	0.52	3.81	0.69	5.02	12170	2.9376	24.94206	-22.00446	NAF
NS0134	324	326	NS	X067395	067395	1	G	W	38.27	35.26	1.07	0.8385	0.65	0.052	2.1	1.36	0.098	0.037	0.7	0.096	0.06	2.84	0.61	3.51	11835	1.1322	23.72112	-22.58892	NAF
NS0134	412	414	NS	X067440	067440	1	G	W	29.22	42.35	2.56	0.3741	0.29	0.116	2.38	1.57	0.117	0.156	1.16	0.177	0.68	5.42	0.91	7.01	12149	4.7736	27.38394	-22.61034	NAF
NS0134	322	324	NS	X067394	067394	1	G	W	37.79	37.05	1.07	0.7095	0.55	0.045	1.92	1.38	0.085	0.045	0.554	0.111	0.07	2.3	0.61	2.98	11834	1.377	24.06996	-22.69296	NAF
NS0134	346	348	NS	X067406	067406	1	G	W	34.77	37.67	2.29	0.645	0.5	0.102	2.37	1.53	0.131	0.129	1.29	0.11	0.06	2.7	0.7	3.46	12098	3.9474	26.68626	-22.73886	NAF
NS0134	396	398	NS	X067432	067432	1	G	W	37.11	35.7	1.44	0.7482	0.58	0.061	1.83	1.43	0.101	0.062	1.19	0.05	0.14	3.21	0.55	3.9	12141	1.8972	24.94206	-23.04486	NAF
NS0134	422	424	NS	X067445	067445	1	G	W	34.05	38.49	1.7	0.4773	0.37	0.079	2.11	1.42	0.111	0.056	0.566	0.154	0.47	4.68	0.62	5.77	12172	1.7136	24.76764	-23.05404	NAF
NS0134	350	352	NS	X067408	067408	1	G	W	33.32	39.97	1.59	0.7353	0.57	0.071	2.01	1.69	0.119	0.203	1.09	0.166	0.58	2.88	0.84	4.3	12100	6.2118	29.47698	-23.26518	NAF
NS0134	260	262	NS	X067362	067362	1	G	W	30.2	46.06	1.06	0.5031	0.39	0.049	2.28	1.41	0.078	0.042	0.388	0.077	0.11	3.73	0.77	4.61	12073	1.2852	24.59322	-23.30802	NAF
NS0134	282	284	NS	X067373	067373	1	G	W	34.23	39.2	1.76	0.7095	0.55	0.08	2.32	1.53	0.091	0.11	0.867	0.109	0.12	2.86	0.78	3.76	11958	3.366	26.68626	-23.32026	NAF
NS0134	380	382	NS	X067424	067424	1	G	W	38.12	35.82	1.57	0.5031	0.39	0.068	1.52	1.45	0.081	0.063	1.27	0.05	0.07	2.1	0.65	2.82	12133	1.9278	25.2909	-23.3631	NAF
NS0134	200	202	NS	X067332	067332	1	G	W	32.7	40.3	0.65	0.5547	0.43	0.028	2.61	1.44	0.113	0.057	0.13	0.066	0.2	6.2	0.63	7.03	11989	1.7442	25.11648	-23.37228	NAF
NS0134	246	248	NS	X067355	067355	1	G	W	32.56	40.43	2.16	0.6063	0.47	0.098	2.45	1.5	0.113	0.065	0.594	0.074	0.13	3.97	0.61	4.71	12066	1.989	26.163	-24.174	NAF
NS0134	364	366	NS	X067416	067416	1	G	W	35.81	38.68	1.24	0.7482	0.58	0.055	1.66	1.54	0.128	0.086	1.02	0.062	-0.03	2.75	0.63	3.35	12107	2.6316	26.86068	-24.22908	NAF
NS0134	356	358	NS	X067412	067412	1	G	W	33.03	41.69	1.41	0.7353	0.57	0.064	1.81	1.7	0.132	0.172	1.01	0.1	0.09	2.74	0.84	3.67	12103	5.2632	29.6514	-24.3882	NAF
NS0134	336	338	NS	X067401	067401	1	G	W	34.88	38.36	1.65	0.6837	0.53	0.081	2.11	1.59	0.094	0.107	0.945	0.075	0.38	2.94	0.82	4.14	11841	3.2742	27.73278	-24.45858	NAF
NS0134	286	288	NS	X067375	067375	1	G	W	36.66	36.14	1.03	0.8385	0.65	0.045	2.31	1.5	0.099	0.053	0.43	0.111	0.27	3.76	0.69	4.72	11960	1.6218	26.163	-24.5412	NAF
NS0134	344	346	NS	X067405	067405	1	G	W	38.27	36.48	1.09	0.6837	0.53	0.045	1.58	1.51	0.093	0.045	0.805	0.073	-0.07	2.1	0.81	2.84	12097	1.377	26.33742	-24.96042	NAF
NS0134	414	416	NS	X067441	067441	1	G	W	34.54	37.27	1.74	0.5289	0.41	0.078	2.04	1.58	0.105	0.072	0.842	0.133	0.64	4.19	0.76	5.59	12150	2.2032	27.55836	-25.35516	NAF
NS0134	392	394	NS	X067430	067430	1	G	W	37.13	35.62	1.55	0.7095	0.55	0.069	1.82	1.62	0.119	0.092	1.26	0.045	0.02	2.82	0.75	3.59	12139	2.8152	28.25604	-25.44084	NAF
NS0134	210	212	NS	X067337	067337	1	G	W	28.4	46.63	0.81	0.1935	0.15	0.038	2.19	1.58	0.1	0.068	0.101	0.062	0.22	6.38	0.77	7.37	11994	2.0808	27.55836	-25.47756	NAF
NS0134	388	390	NS	X067428	067428	1	G	W	38.46	35.74	1.42	0.5934	0.46	0.059	1.5	1.55	0.11	0.047	1.18	0.048	-0.08	2.11	0.71	2.74	12137	1.4382	27.0351	-25.5969	NAF
NS0134	256	258	NS	X067360	067360	1	G	W	31.84	42.56	1.32	0.5547	0.43	0.062	2.44	1.57	0.138	0.058	0.26	0.088	0.18	4.18	0.64	5	12071	1.7748	27.38394	-25.60914	NAF
NS0134	318	320	NS	X067392	067392	1	G	W	36.27	37.36	0.98	0.8256	0.64	0.043	2.34	1.53	0.087	0.035	0.305	0.157	0.2	3.59	0.77	4.56	11832	1.071	26.68626	-25.61526	NAF
NS0134	208	210	NS	X067336	067336	1	G	W	29.92	47.77	0.38	0.1548	0.12	0.02	1.67	1.52	0.073	0.028	0.054	0.042	0.11	4.52	0.8	5.43	11993	0.8568	26.51184	-25.65504	NAF
NS0134	442	444	NS	X067455	067455	1	G	W	31.21	39.52	2.52	0.4386	0.34	0.118	2.57	1.81	0.085	0.181	0.836	0.226	0.77	5.02	1.04	6.83	12182	5.5386	31.57002	-26.03142	NAF
NS0134	368	370	NS	X067418	067418	1	G	W	36.22	37.88	1.16	0.7353	0.57	0.057	1.69	1.58	0.095	0.045	0.972	0.039	0.01	2.63	0.79	3.43	12109	1.377	27.55836	-26.18136	NAF
NS0134	386	388	NS	X067427	067427	1	G	W	36.18	37.23	1.73	0.6063	0.47	0.076	1.7	1.63	0.102	0.067	1.45	0.048	0.07	2.51	0.79	3.37	12136	2.0502	28.43046	-26.38026	NAF
NS0134	390	392	NS	X067429	067429	1	G	W	38.7	34.78	1.39	0.6063	0.47	0.057	1.52	1.63	0.105	0.047	1.15	0.038	0.15	2.21	0.77	3.13	12138	1.4382	28.43046	-26.99226	NAF
NS0134	370	372	NS	X067419	067419	1	G	W	38.36	35.07	1.12	0.774	0.6	0.052	1.71	1.65	0.104	0.057	0.942	0.036	0.01	2.71	0.77	3.49	12110	1.7442	28.7793	-27.0351	NAF
NS0134	400	402	NS	X067434	067434	1	G	W	33.79	39.61	1.77	0.6837	0.53	0.076	1.89	1.71	0.129	0.088	1.43	0.054	0.08	3.06	0.85	3.99	12143	2.6928	29.82582	-27.13302	NAF
NS0134	352	354	NS	X067409	067409	1	G	W	32.73	41.67	1.18	0.7095	0.55	0.057	1.66	2.19	0.152	0.326	0.876	0.098	0.19	2.2	1.18	3.57	12101	9.9756	38.19798	-28.22238	NAF
NS0134	382	384	NS	X067425	067425	1	G	W	34.63	37.99	2.06	0.5934	0.46	0.092	1.86	1.84	0.117	0.124	1.71	0.052	0.01	2.48	1.03	3.52	12134	3.7944	32.09328	-28.29888	NAF
NS0134	384	386	NS	X067426	067426	1	G	W	33.04	40.17	1.74	0.6837	0.53	0.074	1.72	1.86	0.138	0.13	1.44	0.047	0.49	2.68	0.91	4.08	12135	3.978	32.44212	-28.46412	NAF
NS0134	334	336	NS	X067400	067400	1	G	W	37.97	36.12	1.22	0.7095	0.55	0.049	1.76	1.69	0.1	0.031	0.962	0.052	-0.07	1.97	1.03	2.93	11840	0.9486	29.47698	-28.52838	NAF
NS0134	440	442	NS	X067454	067454	1	G	W	30.82	39.14	2.4	0.4515	0.35	0.109	2.4	1.97	0.097	0.172	0.799	0.234	0.79	5.49	1.07	7.35	12181	5.2632	34.36074	-29.09754	NAF
NS0134	432	434	NS	X067450	067450	1	G	W	27.84	38.48	2.85	0.3741	0.29	0.131	2.32	2.23	0.135	0.315	0.826	0.229	1.03	9.59	1.05	11.67	12177	9.639	38.89566	-29.25666	NAF
NS0134	252	254	NS	X067358	067358	1	G	W	31.03	43.21	0.98	0.6579	0.51	0.043	2.18	1.75	0.123	0.04	0.247	0.072	0.19	4.87	0.9	5.96	12069	1.224	30.5235	-29.2995	NAF
NS0134	342	344	NS	X067404	067404	1	G	W	34.93	40.23	1.03	0.6579	0.51	0.043	1.67	1.75	0.099	0.037	0.744	0.08	-0.03	2.2	1.18	3.35	11844	1.1322	30.5235	-29.3913	NAF
NS0134	354	356	NS	X067411	067411	1	G	W	32.76	40.11	1.4	0.6579	0.51	0.066	1.98	2.26	0.188	0.323	0.955	0.143	0.33	2.51	1.22	4.06	12102	9.8838	39.41892	-29.53512	NAF
NS0134	348	350	NS	X067407	067407	1	G	W	36.74	36.8	0.93	0.7224	0.56	0.041	1.72	1.76	0.118	0.038	0.685	0.07	0.79	2.42	1.04	4.25	12099	1.1628	30.69792	-29.53512	NAF
NS0134	358	360	NS	X067413	067413	1	G	W	34.18	39.99	1.35	0.7353	0.57	0.06	1.76	1.91	0.142	0.104	0.992	0.091	0.02	2.58	1.05	3.65	12104	3.1824	33.31422	-30.13182	NAC
NS0134	276	278	NS	X067370	067370	1	G	W	36.26	36.95	1.33	0.7869	0.61	0.056	1.81	1.81	0.085	0.038	0.809	0.054	0.07	2.93	1.03	4.03	11955	1.1628	31.57002	-30.40722	NAC
NS0134	362	364	NS	X067415	067415	1	G	W	37.01	36.93	1	0.7353	0.57	0.048	1.63	1.82	0.104	0.033	0.762	0.052	0.07	2.42	1.21	3.7	12106	1.0098	31.74444	-30.73464	NAC
NS0134	372	374	NS	X067420	067420	1	G	W	34.78	38.15	1.59	0.645	0.5	0.071	1.9	1.89	0.079	0.072	1.27	0.067	0.17	2.66	1.3	4.13	12111	2.2032	32.96538	-30.76218	NAC
NS0134	338	340	NS	X067402	067402	1	G	W	34.99	39.17	1.11	0.645	0.5	0.05	2.02	1.86	0.104	0.049	0.491	0.064	0.07	3.18	1.18	4.43	11842	1.4994	32.44212	-30.94272	NAC
NS0134	262	264	NS	X067363	067363	1	G	W	33.43	40.63	1.03	0.5934	0.46	0.048	2.14	1.85	0.071	0.034	0.557	0.069	0.08	3.63	1.28	4.99	12074	1.0404	32.2677	-31.2273	NAC
NS0134	404	406	NS	X067436	067436	1	G	W	33.07	40.6	1.52	0.4644	0.36	0.069	2	1.93	0.154	0.075	0.931	0.103	0.29	3.22	1.03	4.54	12145	2.295	33.66306	-31.36806	NAC
NS0134	332	334	NS	X067399	067399	1	G	W	36.28	38.54	0.91	0.7353	0.57	0.036	1.77	1.85	0.087	0.028	0.73	0.047	-0.05	1.98	1.29	3.22	11839	0.8568	32.2677	-31.4109	NAC
NS0134	340	342	NS	X067403	067403	1	G	W	35.53	37.5	1.28	0.7353	0.57	0.057	2	1.88	0.129	0.037	0.865	0.062	0.05	3.22	1.08	4.35	11843	1.1322	32.79096	-31.65876	NAC
NS0134	202	204	NS	X067333	067333	1	G	W	32.74	40.51	0.82	0.5547	0.43	0.036	2.5	1.89	0.098	0.041	0.302	0.058	0.14	4.89	1.13	6.16	11990	1.2546	32.96538	-31.71078	NAC
NS0134	398	400	NS	X067433	067433	1	G	W	32.97	39.46	2.12	0.6837	0.53	0.095	2.06	2.06	0.122	0.132	1.71	0.075	0.07	2.76	1.27	4.1	12142	4.0392	35.93052	-31.89132	NAC
NS0134	402	404	NS	X067435	067435	1	G	W	33.45	38.52	1.61	0.5934	0.46	0.071	2.17	1.94	0.146	0.062	1.17	0.088	0.34	3.77	1.14	5.25	12144	1.8972	33.83748	-31.94028	NAC
NS0134	328	330	NS	X067397	067397	1	G	W	35.5	38.61	0.94	0.8256	0.64	0.04	1.93	1.96	0.086	0.05	0.695	0.059	0	2.4	1.38	3.78	11837	1.53	34.18632	-32.65632	NAC
NS0134	360	362	NS	X067414	067414	1	G	W	35.65	38.59	1.06	0.7353	0.57	0.047	1.53	2	0.097	0.046	0.836	0.063	0.06	2.18	1.26	3.5	12105	1.4076	34.884	-33.4764	NAC
NS0134	244	246	NS	X067354	067354	1	G	W	35.14	37.71	1.28	0.8256	0.64	0.052	1.93	1.99	0.093	0.036	0.513	0.034	0.08	3.9	1.1	5.08	12065	1.1016	34.70958	-33.60798	NAC
NS0134	330	332	NS	X067398	067398	1	G	W	36.51	37.02	1.13	0.7482	0.58	0.051	2.03	1.96	0.104	0.013	0.902	0.056	-0.01	2.22	1.38	3.59	11838	0.3978	34.18632	-33.78852	NAC
NS0134	406	408	NS	X067437	067437	1	G	W	33.89	37.11	1.38	0.5547	0.43	0.064	2.27	2.14	0.105	0.1	0.697	0.116	0.47	4.91	1.38	6.76	12146	3.06	37.32588	-34.26588	NAC
NS0134	378	380	NS	X067423	067423	1	G	W	31.26	40.79	1.98	0.6192	0.48	0.096	2.2	2.18	0.097	0.107	1.41	0.091	0.31	3.39	1.59	5.29	12114	3.2742	38.02356	-34.74936	NAC
NS0134	284	286	NS	X067374	067374	1	G	W	36.95	35.37	1.06	0.8385	0.65	0.049	2.15	2.05	0.102	0.031	0.578	0.104	0.13	2.99	1.36	4.48	11959	0.9486	35.7561	-34.8075	NAC
NS0134	234	236	NS	X067349	067349	1	G	W	27.61	44.8	0.77	0.4257	0.33	0.037	2.25	2.08	0.084	0.024	0.263	0.03	0.19	7.78	1.57	9.54	12006	0.7344	36.27936	-35.54496	NAC
NS0134	416	418	NS	X067442	067442	1	G	W	35.75	35.1	1.82	0.4644	0.36	0.085	2.05	2.22	0.073	0.102	0.958	0.129	0.45	3.19	1.67	5.31	12169	3.1212	38.72124	-35.60004	NAC
NS0134	270	272	NS	X067367	067367	1	G	W	34.17	39.24	1.21	0.8643	0.67	0.048	1.88	2.09	0.081	0.026	0.62	0.052	0.06	3.13	1.53	4.72	12078	0.7956	36.45378	-35.65818	NAC
NS0134	268	270	NS	X067366	067366	1	G	W	36.69	35.76	1.56	0.645	0.5	0.07	2.16	2.18	0.069	0.04	0.59	0.072	0.15	2.83	1.52	4.5	12077	1.224	38.02356	-36.79956	NAC
NS0134	238	240	NS	X067351	067351	1	G	W	30.8	41.96	1.55	0.5547	0.43	0.073	2.21	2.24	0.092	0.065	0.24	0.039	0.12	5	1.53	6.65	12062	1.989	39.07008	-37.08108	NAC
NS0134	326	328	NS	X067396	067396	1	G	W	35.72	37.2	0.95	0.8514	0.66	0.039	2.11	2.21	0.093	0.042	0.636	0.073	0.04	2.64	1.65	4.33	11836	1.2852	38.54682	-37.26162	NAC
NS0134	242	244	NS	X067353	067353	1	G	W	30.74	41.73	1.5	0.7095	0.55	0.067	2.21	2.3	0.113	0.079	0.335	0.067	0.15	4.8	1.53	6.48	12064	2.4174	40.1166	-37.6992	NAC
NS0134	272	274	NS	X067368	067368	1	G	W	34.37	39.78	1.01	0.774	0.6	0.039	1.59	2.37	0.066	0.064	0.586	0.058	0.05	2.62	1.69	4.36	11953	1.9584	41.33754	-39.37914	NAC
NS0134	274	276	NS	X067369	067369	1	G	W	35.22	38.4	1.03	0.774	0.6	0.039	1.47	2.59	0.087	0.13	0.669	0.05	0.04	2.41	1.71	4.16	11954	3.978	45.17478	-41.19678	NAC
NS0134	236	238	NS	X067350	067350	1	G	W	27.21	47.45	0.73	0.4386	0.34	0.035	1.88	2.57	0.066	0.023	0.176	0.035	0.16	5.29	2.06	7.51	12061	0.7038	44.82594	-44.12214	NAC
NS0134	436	438	NS	X067452	067452	1	G	W	25.93	42.5	3.12	0.4128	0.32	0.144	2.26	3.18	0.105	0.298	1.11	0.234	0.85	6	1.74	8.59	12179	9.1188	55.46556	-46.34676	NAC
NS0134	428	430	NS	X067448	067448	1	G	W	24.61	42.91	2.77	0.387	0.3	0.129	2.31	3.22	0.128	0.158	0.791	0.22	0.86	8.39	1.79	11.04	12175	4.8348	56.16324	-51.32844	NAC
NS0136	208	210	NS	X138881	138881	1	G	W	22.63	44.96	6.96	0.5418	0.42	0.313	3.26	0.32	0.075	0.261	2.5	0.024	0.49	7.24	0.56	8.29	20663	7.9866	5.58144	2.40516	PAF(LC)
NS0136	48	50	NS	X138801	138801	1	G	D	33.37	47.41	2.36	0.3354	0.26	0.113	0.12	0.04	0.028	0.012	0.091	0.016	0.91	0.8	0.17	1.88	20457	0.3672	0.69768	-0.33048	NAF
NS0136	52	54	NS	X138803	138803	1	G	D	34.1	45.06	3.02	0.1677	0.13	0.136	0.75	0.04	0.057	0.006	0.113	0.017	0.81	1.03	0.19	2.03	20459	0.1836	0.69768	-0.51408	NAF
NS0136	60	62	NS	X138807	138807	1	G	W	31.21	45.61	3.52	1.0449	0.81	0.153	0.89	0.07	0.027	0.02	0.259	0.016	1.38	2	0.2	3.58	20463	0.612	1.22094	-0.60894	NAF
NS0136	50	52	NS	X138802	138802	1	G	D	29.29	53.16	1.86	0.2709	0.21	0.084	0.43	0.06	0.05	0.007	0.158	0.018	0.84	0.66	0.16	1.66	20458	0.2142	1.04652	-0.83232	NAF
NS0136	68	70	NS	X138811	138811	1	G	W	31.66	46.55	4.28	0.2838	0.22	0.192	0.29	0.06	0.093	0.005	0.152	0.017	1.29	1.43	0.15	2.87	20593	0.153	1.04652	-0.89352	NAF
NS0136	62	64	NS	X138808	138808	1	G	W	32.72	44.48	2.79	0.5289	0.41	0.122	0.95	0.08	0.052	0.009	0.161	0.012	2.06	1.36	0.16	3.58	20464	0.2754	1.39536	-1.11996	NAF
NS0136	58	60	NS	X138806	138806	1	G	D	32.41	42.26	2.84	0.4386	0.34	0.126	2.06	0.17	0.068	0.056	0.226	0.033	0.55	4.87	0.01	5.43	20462	1.7136	2.96514	-1.25154	NAF
NS0136	66	68	NS	X138810	138810	1	G	W	30.23	49.43	2.78	0.5289	0.41	0.124	0.41	0.09	0.094	0.005	0.083	0.019	1.39	1.12	0.17	2.68	20466	0.153	1.56978	-1.41678	NAF
NS0136	56	58	NS	X138805	138805	1	G	D	31.55	43.54	2.74	0.4386	0.34	0.127	2.1	0.15	0.05	0.038	0.28	0.015	0.4	4.64	0.06	5.1	20461	1.1628	2.6163	-1.4535	NAF
NS0136	54	56	NS	X138804	138804	1	G	D	33.85	42.76	2.39	0.5676	0.44	0.111	1.27	0.12	0.078	0.02	0.219	0.013	0.79	2.66	0.09	3.54	20460	0.612	2.09304	-1.48104	NAF
NS0136	214	216	NS	X138884	138884	1	G	W	31.87	41.35	3.13	0.5031	0.39	0.147	2.21	0.25	0.06	0.066	1.11	0.027	0.24	5.05	0.17	5.46	20666	2.0196	4.3605	-2.3409	NAF
NS0136	204	206	NS	X138879	138879	1	G	W	26.56	42.96	5.63	0.5547	0.43	0.256	3	0.3	0.072	0.084	1.44	0.032	0.43	6.71	0.05	7.19	20661	2.5704	5.2326	-2.6622	NAF
NS0136	70	72	NS	X138812	138812	1	G	W	27.12	44.88	5.27	0.3612	0.28	0.235	2.49	0.45	0.06	0.162	1.23	0.023	0.7	4.69	0.34	5.73	20594	4.9572	7.8489	-2.8917	NAF
NS0136	64	66	NS	X138809	138809	1	G	W	31.79	45.98	2.95	0.5031	0.39	0.131	0.93	0.18	0.083	0.007	0.204	0.022	1.78	1.38	0.15	3.31	20465	0.2142	3.13956	-2.92536	NAF
NS0136	206	208	NS	X138880	138880	1	G	W	26.83	43.15	5.74	0.4644	0.36	0.261	2.94	0.36	0.092	0.083	1.52	0.021	0.47	6.26	0.01	6.74	20662	2.5398	6.27912	-3.73932	NAF
NS0136	192	194	NS	X138873	138873	1	G	W	26.71	43.11	5.6	0.5547	0.43	0.252	3	0.43	0.101	0.093	1.52	0.022	0.45	6.41	0.02	6.88	20655	2.8458	7.50006	-4.65426	NAF
NS0136	198	200	NS	X138876	138876	1	G	W	28.47	42.13	4.64	0.5805	0.45	0.211	2.76	0.42	0.106	0.072	1	0.03	0.35	6.4	0.09	6.84	20658	2.2032	7.32564	-5.12244	NAF
NS0136	156	158	NS	X138855	138855	1	G	W	30.07	44.39	3.32	0.4644	0.36	0.141	2.24	0.43	0.109	0.076	0.88	0.017	0.26	4.7	0.12	5.08	20637	2.3256	7.50006	-5.17446	NAF
NS0136	228	230	NS	X138891	138891	1	G	W	30.5	44.27	3.08	0.4773	0.37	0.138	2.19	0.39	0.075	0.053	1.17	0.023	0.19	4.21	0.16	4.56	20673	1.6218	6.80238	-5.18058	NAF
NS0136	202	204	NS	X138878	138878	1	G	W	26.73	43.47	5.25	0.5676	0.44	0.239	2.88	0.45	0.116	0.085	1.24	0.022	0.39	6.7	0	7.09	20660	2.601	7.8489	-5.2479	NAF
NS0136	210	212	NS	X138882	138882	1	G	W	29.28	41.37	3.6	0.5547	0.43	0.169	2.52	0.47	0.122	0.09	0.949	0.022	0.34	7.2	0.08	7.62	20664	2.754	8.19774	-5.44374	NAF
NS0136	200	202	NS	X138877	138877	1	G	W	27.23	43.34	5.04	0.516	0.4	0.229	2.87	0.46	0.125	0.073	1.14	0.019	0.4	6.22	0.01	6.63	20659	2.2338	8.02332	-5.78952	NAF
NS0136	196	198	NS	X138875	138875	1	G	W	27.78	41.78	5.05	0.5805	0.45	0.232	3.06	0.46	0.044	0.067	1.26	0.023	0.5	6.83	0.01	7.34	20657	2.0502	8.02332	-5.97312	NAF
NS0136	212	214	NS	X138883	138883	1	G	W	31.37	40.38	3.11	0.5289	0.41	0.148	2.31	0.56	0.154	0.123	1.05	0.026	0.32	6.34	0.04	6.7	20665	3.7638	9.76752	-6.00372	NAF
NS0136	158	160	NS	X138856	138856	1	G	W	33.27	39.48	3.2	0.4644	0.36	0.133	2.46	0.45	0.07	0.051	0.684	0.026	0.31	5.22	0.27	5.8	20638	1.5606	7.8489	-6.2883	NAF
NS0136	154	156	NS	X138854	138854	1	G	W	29.89	45.39	2.78	0.4515	0.35	0.118	1.94	0.6	0.101	0.069	0.965	0.024	0.21	4.72	0.17	5.1	20636	2.1114	10.4652	-8.3538	NAF
NS0136	178	180	NS	X138866	138866	1	G	W	27.65	45.51	3.73	0.4773	0.37	0.164	2.94	0.73	0.056	0.137	0.965	0.034	0.31	5.23	0.2	5.74	20648	4.1922	12.73266	-8.54046	NAF
NS0136	160	162	NS	X138857	138857	1	G	W	26.96	45.75	5.26	0.2838	0.22	0.204	3.37	0.72	0.025	0.104	0.917	0.011	0.38	4.09	0.28	4.75	20639	3.1824	12.55824	-9.37584	NAF
NS0136	80	82	NS	X138817	138817	1	G	W	29.41	43.2	3.26	0.4128	0.32	0.147	2.44	0.74	0.077	0.094	0.867	0.071	1.44	4.87	0.04	6.35	20599	2.8764	12.90708	-10.03068	NAF
NS0136	240	242	NS	X138897	138897	1	G	W	28.08	43.52	4.79	0.4257	0.33	0.236	3	0.95	0.041	0.207	1.63	0.094	0.14	3.9	0.51	4.55	20679	6.3342	16.5699	-10.2357	NAF
NS0136	250	252	NS	X138903	138903	1	G	W	31.39	42.1	3.08	0.5676	0.44	0.14	2.27	0.7	0.077	0.054	1.15	0.066	0.18	4.76	0.07	5.01	20684	1.6524	12.2094	-10.557	NAF
NS0136	78	80	NS	X138816	138816	1	G	W	30.13	42.77	3.29	0.5031	0.39	0.155	2.55	0.7	0.05	0.051	0.929	0.141	0.25	5.06	0.1	5.41	20598	1.5606	12.2094	-10.6488	NAF
NS0136	82	84	NS	X138818	138818	1	G	W	29.61	44.61	2.45	0.4257	0.33	0.115	2.49	0.81	0.057	0.078	0.367	0.019	0.4	5.58	0.13	6.11	20600	2.3868	14.12802	-11.74122	NAF
NS0136	216	218	NS	X138885	138885	1	G	W	30.36	41.72	3.57	0.4515	0.35	0.167	2.58	0.84	0.083	0.061	1.3	0.02	0.21	5.13	0.09	5.43	20667	1.8666	14.65128	-12.78468	NAF
NS0136	238	240	NS	X138896	138896	1	G	W	30.59	42.12	4.02	0.3741	0.29	0.184	2.59	0.89	0.038	0.082	1.34	0.08	0.18	3.39	0.3	3.87	20678	2.5092	15.52338	-13.01418	NAF
NS0136	76	78	NS	X138815	138815	1	G	W	31.44	39.61	3.14	0.5547	0.43	0.143	2.75	0.85	0.044	0.058	0.641	0.081	0.52	6.17	0.24	6.93	20597	1.7748	14.8257	-13.0509	NAF
NS0136	162	164	NS	X138858	138858	1	G	W	22.99	47.08	7.6	0.1548	0.12	0.316	4.33	1.33	0.008	0.331	1.41	0.029	0.27	3.18	1.11	4.56	20640	10.1286	23.19786	-13.06926	NAF
NS0136	244	246	NS	X138899	138899	1	G	W	32.65	40.33	3.4	0.4386	0.34	0.171	2.58	0.87	0.067	0.059	0.995	0.07	0.18	3.85	0.21	4.24	20681	1.8054	15.17454	-13.36914	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0136	194	196	NS	X138874	138874	1	G	W	24.87	44.04	5.79	0.5676	0.44	0.263	2.95	1	0.232	0.114	1.66	0.037	0.42	6.56	0.15	7.13	20656	3.4884	17.442	-13.9536	NAF
NS0136	150	152	NS	X138852	138852	1	G	W	23.56	46.2	6.55	0.2838	0.22	0.277	3.11	1.41	0.073	0.313	2.68	0.03	0.22	3.8	0.84	4.86	20634	9.5778	24.59322	-15.01542	NAF
NS0136	90	92	NS	X138822	138822	1	G	W	26.26	43.01	4.2	0.4902	0.38	0.176	3.44	1.22	0.08	0.178	0.964	0.024	0.75	6.5	0.59	7.84	20604	5.4468	21.27924	-15.83244	NAF
NS0136	174	176	NS	X138864	138864	1	G	W	28.27	44.26	3.1	0.4902	0.38	0.129	2.71	1.29	0.038	0.211	0.881	0.021	0.22	5.23	0.63	6.08	20646	6.4566	22.50018	-16.04358	NAF
NS0136	106	108	NS	X138830	138830	1	G	W	32.96	40.63	2.32	0.5805	0.45	0.103	2.33	0.99	0.078	0.033	0.786	0.245	0.11	4.08	0.31	4.5	20612	1.0098	17.26758	-16.25778	NAF
NS0136	148	150	NS	X138851	138851	1	G	W	25.72	45.47	4.78	0.3612	0.28	0.2	3.19	1.43	0.092	0.257	1.14	0.02	0.28	4.63	0.82	5.73	20633	7.8642	24.94206	-17.07786	NAF
NS0136	130	132	NS	X138842	138842	1	G	W	27.26	44.71	4.12	0.4257	0.33	0.175	2.98	1.22	0.056	0.134	1.13	0.047	0.34	4.88	0.52	5.74	20624	4.1004	21.27924	-17.17884	NAF
NS0136	124	126	NS	X138839	138839	1	G	W	28.36	43.11	3.82	0.4902	0.38	0.165	3.01	1.27	0.08	0.158	0.882	0.025	0.38	5.29	0.59	6.26	20621	4.8348	22.15134	-17.31654	NAF
NS0136	144	146	NS	X138849	138849	1	G	W	27.38	43.52	4.51	0.3741	0.29	0.193	3.21	1.29	0.1	0.166	0.972	0.025	0.32	5.15	0.58	6.05	20631	5.0796	22.50018	-17.42058	NAF
NS0136	84	86	NS	X138819	138819	1	G	W	26	47.34	2.93	0.4128	0.32	0.133	2.9	1.2	0.06	0.111	0.349	0.019	0.26	5.91	0.61	6.78	20601	3.3966	20.9304	-17.5338	NAF
NS0136	248	250	NS	X138902	138902	1	G	W	32.66	41.27	2.7	0.5031	0.39	0.135	2.12	1.08	0.065	0.041	1.07	0.153	0.07	3.62	0.49	4.18	20683	1.2546	18.83736	-17.58276	NAF
NS0136	222	224	NS	X138888	138888	1	G	W	29.99	42.84	3.48	0.4644	0.36	0.16	2.55	1.11	0.059	0.049	1.61	0.027	0.1	4.02	0.48	4.6	20670	1.4994	19.36062	-17.86122	NAF
NS0136	92	94	NS	X138823	138823	1	G	W	29.21	42.15	3.59	0.4257	0.33	0.161	3.04	1.19	0.076	0.092	0.83	0.025	0.72	5.07	0.46	6.25	20605	2.8152	20.75598	-17.94078	NAF
NS0136	218	220	NS	X138886	138886	1	G	W	28.56	41.69	3.76	0.5031	0.39	0.177	2.89	1.19	0.093	0.092	1.49	0.026	0.22	6.3	0.38	6.9	20668	2.8152	20.75598	-17.94078	NAF
NS0136	126	128	NS	X138840	138840	1	G	W	30.6	41.46	3.47	0.4128	0.32	0.147	2.67	1.23	0.12	0.11	1.04	0.015	0.18	4.45	0.3	4.93	20622	3.366	21.45366	-18.08766	NAF
NS0136	170	172	NS	X138862	138862	1	G	W	24.64	45.88	4.39	0.4257	0.33	0.184	3.25	1.86	0.117	0.466	1.12	0.019	0.26	4.97	1.1	6.33	20644	14.2596	32.44212	-18.18252	NAF
NS0136	246	248	NS	X138901	138901	1	G	W	34.68	39.23	2.63	0.4128	0.32	0.148	1.97	1.13	0.075	0.045	0.969	0.116	0.03	2.96	0.45	3.44	20682	1.377	19.70946	-18.33246	NAF
NS0136	108	110	NS	X138831	138831	1	G	W	32.29	41.74	2.67	0.4773	0.37	0.119	2.25	1.31	0.069	0.144	0.934	0.108	0.14	3.32	0.53	3.99	20613	4.4064	22.84902	-18.44262	NAF
NS0136	190	192	NS	X138872	138872	1	G	W	29.39	41.79	3.75	0.4773	0.37	0.177	2.81	1.27	0.105	0.112	0.796	0.019	0.37	5.61	0.37	6.35	20654	3.4272	22.15134	-18.72414	NAF
NS0136	164	166	NS	X138859	138859	1	G	W	22.41	47.47	5.62	0.3483	0.27	0.201	4.03	1.47	0.103	0.224	0.95	0.026	0.33	5.38	0.97	6.68	20641	6.8544	25.63974	-18.78534	NAF
NS0136	234	236	NS	X138894	138894	1	G	W	31.02	41.76	3.21	0.4773	0.37	0.149	2.51	1.18	0.045	0.056	1.14	0.135	0.15	3.96	0.63	4.74	20676	1.7136	20.58156	-18.86796	NAF
NS0136	188	190	NS	X138871	138871	1	G	W	30.72	42.2	3.54	0.3741	0.29	0.164	2.34	1.25	0.081	0.082	1.13	0.024	0.25	3.79	0.38	4.42	20653	2.5092	21.8025	-19.2933	NAF
NS0136	122	124	NS	X138838	138838	1	G	W	25.93	45.99	4.5	0.3741	0.29	0.195	3.07	1.31	0.093	0.112	1.15	0.034	0.28	4.7	0.61	5.59	20620	3.4272	22.84902	-19.42182	NAF
NS0136	128	130	NS	X138841	138841	1	G	W	29.42	42.57	3.37	0.4386	0.34	0.141	2.76	1.29	0.127	0.094	0.937	0.015	0.29	4.89	0.41	5.59	20623	2.8764	22.50018	-19.62378	NAF
NS0136	86	88	NS	X138820	138820	1	G	W	26.63	44.68	3.97	0.3999	0.31	0.18	3.16	1.41	0.115	0.144	0.75	0.019	0.27	5.34	0.63	6.24	20602	4.4064	24.59322	-20.18682	NAF
NS0136	224	226	NS	X138889	138889	1	G	W	30.8	41.49	3.26	0.4902	0.38	0.15	2.55	1.25	0.087	0.049	1.48	0.021	0.11	4.1	0.48	4.69	20671	1.4994	21.8025	-20.3031	NAF
NS0136	72	74	NS	X138813	138813	1	G	W	29.76	41.38	2.9	0.5289	0.41	0.126	2.62	1.28	0.087	0.05	0.559	0.018	0.47	6.63	0.58	7.68	20595	1.53	22.32576	-20.79576	NAF
NS0136	236	238	NS	X138895	138895	1	G	W	30.98	41.46	3.19	0.4902	0.38	0.147	2.47	1.29	0.034	0.054	1.09	0.113	0.15	3.89	0.74	4.78	20677	1.6524	22.50018	-20.84778	NAF
NS0136	74	76	NS	X138814	138814	1	G	W	31.04	40.57	2.76	0.5418	0.42	0.125	2.52	1.3	0.142	0.045	0.832	0.046	0.32	5.9	0.43	6.65	20596	1.377	22.6746	-21.2976	NAF
NS0136	146	148	NS	X138850	138850	1	G	W	26.31	44.27	4.14	0.4257	0.33	0.175	3.16	1.64	0.099	0.211	0.917	0.022	0.38	5.39	0.88	6.65	20632	6.4566	28.60488	-22.14828	NAF
NS0136	226	228	NS	X138890	138890	1	G	W	29.23	43.93	3.28	0.4386	0.34	0.147	2.55	1.37	0.078	0.053	1.38	0.018	0.11	3.8	0.75	4.66	20672	1.6218	23.89554	-22.27374	NAF
NS0136	152	154	NS	X138853	138853	1	G	W	28.56	44.31	3.24	0.4257	0.33	0.137	2.48	1.45	0.054	0.075	1.2	0.019	0.2	4.67	0.71	5.58	20635	2.295	25.2909	-22.9959	NAF
NS0136	166	168	NS	X138860	138860	1	G	W	22.58	49.01	3.75	0.4515	0.35	0.154	3.17	1.78	0.08	0.257	0.896	0.025	0.27	5.88	1.11	7.26	20642	7.8642	31.04676	-23.18256	NAF
NS0136	232	234	NS	X138893	138893	1	G	W	30.52	42.58	3.01	0.4386	0.34	0.133	2.47	1.44	0.039	0.052	1	0.085	0.35	3.64	0.91	4.9	20675	1.5912	25.11648	-23.52528	NAF
NS0136	182	184	NS	X138868	138868	1	G	W	28.75	43.61	3.31	0.4257	0.33	0.145	2.65	1.54	0.058	0.08	1.06	0.018	0.23	4.18	0.88	5.29	20650	2.448	26.86068	-24.41268	NAF
NS0136	242	244	NS	X138898	138898	1	G	W	29.13	42.25	3.74	0.5289	0.41	0.187	2.85	1.59	0.148	0.102	1.22	0.099	0.2	4.63	0.71	5.54	20680	3.1212	27.73278	-24.61158	NAF
NS0136	120	122	NS	X138837	138837	1	G	W	28.71	39.63	4.04	0.5676	0.44	0.174	3.35	1.64	0.209	0.119	1	0.031	0.3	6.92	0.49	7.71	20619	3.6414	28.60488	-24.96348	NAF
NS0136	110	112	NS	X138832	138832	1	G	W	29.69	42.3	3.47	0.4773	0.37	0.151	2.8	1.55	0.159	0.066	1.1	0.068	0.16	4.07	0.55	4.78	20614	2.0196	27.0351	-25.0155	NAF
NS0136	180	182	NS	X138867	138867	1	G	W	30.56	42.49	2.82	0.4257	0.33	0.123	2.51	1.54	0.077	0.052	0.661	0.013	0.23	4.17	0.8	5.2	20649	1.5912	26.86068	-25.26948	NAF
NS0136	112	114	NS	X138833	138833	1	G	W	29.09	43.85	3.4	0.4386	0.34	0.151	2.84	1.62	0.09	0.086	0.936	0.031	0.21	3.88	0.82	4.91	20615	2.6316	28.25604	-25.62444	NAF
NS0136	104	106	NS	X138829	138829	1	G	W	31.78	41.4	2.3	0.5547	0.43	0.103	2.34	1.55	0.122	0.035	0.75	0.231	0.1	3.84	0.75	4.69	20611	1.071	27.0351	-25.9641	NAF
NS0136	220	222	NS	X138887	138887	1	G	W	28.32	42.92	3.5	0.4644	0.36	0.162	2.51	1.75	0.09	0.145	1.68	0.036	0.2	4.53	0.92	5.65	20669	4.437	30.5235	-26.0865	NAF
NS0136	176	178	NS	X138865	138865	1	G	W	27.55	43.87	3.34	0.5031	0.39	0.144	2.93	1.79	0.071	0.142	0.99	0.037	0.3	5.33	1.02	6.65	20647	4.3452	31.22118	-26.87598	NAF
NS0136	172	174	NS	X138863	138863	1	G	W	22.89	42.65	5.77	0.6192	0.48	0.241	3.94	1.89	0.098	0.192	1.84	0.016	0.38	7.52	1.27	9.17	20645	5.8752	32.96538	-27.09018	NAF
NS0136	230	232	NS	X138892	138892	1	G	W	29.91	42.37	3.08	0.5031	0.39	0.141	2.54	1.68	0.077	0.053	1.12	0.048	0.17	4	1.06	5.23	20674	1.6218	29.30256	-27.68076	NAF
NS0136	102	104	NS	X138828	138828	1	G	W	33.07	40.36	2.38	0.5031	0.39	0.108	2.27	1.69	0.071	0.034	0.881	0.127	0.09	3.33	0.93	4.35	20610	1.0404	29.47698	-28.43658	NAF
NS0136	88	90	NS	X138821	138821	1	G	W	27.59	45.24	3.97	0.3354	0.26	0.176	2.76	1.8	0.046	0.088	1	0.023	0.25	3.74	1.11	5.1	20603	2.6928	31.3956	-28.7028	NAF
NS0136	118	120	NS	X138836	138836	1	G	W	28.77	45.11	2.72	0.4644	0.36	0.124	2.48	1.77	0.07	0.066	0.683	0.018	0.18	4.14	1.01	5.33	20618	2.0196	30.87234	-28.85274	NAF
NS0136	132	134	NS	X138843	138843	1	G	W	24.78	47.04	3.35	0.516	0.4	0.137	3	1.94	0.075	0.13	0.72	0.029	0.22	5.44	1.38	7.04	20625	3.978	33.83748	-29.85948	NAF
NS0136	136	138	NS	X138845	138845	1	G	W	26.87	45.21	3.7	0.3483	0.27	0.149	2.95	1.92	0.1	0.096	0.704	0.032	0.39	4.14	1.15	5.68	20627	2.9376	33.48864	-30.55104	NAC
NS0136	186	188	NS	X138870	138870	1	G	W	31.69	41.73	2.41	0.4128	0.32	0.112	2.17	1.86	0.077	0.039	0.888	0.022	0.12	3.5	1.17	4.79	20652	1.1934	32.44212	-31.24872	NAC
NS0136	142	144	NS	X138848	138848	1	G	W	28.09	43.83	3.38	0.3741	0.29	0.142	2.84	2.01	0.138	0.098	0.75	0.035	0.25	4.65	1.14	6.04	20630	2.9988	35.05842	-32.05962	NAC
NS0136	114	116	NS	X138834	138834	1	G	W	27.77	43.62	3.77	0.4515	0.35	0.17	2.89	2.13	0.145	0.15	1.32	0.028	0.16	3.91	1.15	5.22	20616	4.59	37.15146	-32.56146	NAC
NS0136	98	100	NS	X138826	138826	1	G	W	31.14	43.01	2.34	0.4128	0.32	0.107	2.16	1.98	0.043	0.032	0.661	0.036	0.12	2.66	1.4	4.18	20608	0.9792	34.53516	-33.55596	NAC
NS0136	168	170	NS	X138861	138861	1	G	W	30.58	43.14	2.34	0.3483	0.27	0.104	2.18	2.01	0.15	0.037	0.523	0.028	0.18	3.56	0.96	4.7	20643	1.1322	35.05842	-33.92622	NAC
NS0136	134	136	NS	X138844	138844	1	G	W	24.76	46.96	3.7	0.4257	0.33	0.154	3.08	2.26	0.095	0.12	0.774	0.02	0.46	4.8	1.41	6.67	20626	3.672	39.41892	-35.74692	NAC
NS0136	94	96	NS	X138824	138824	1	G	W	31.23	41.89	2.4	0.4515	0.35	0.111	2.4	2.14	0.074	0.039	0.629	0.02	0.19	3.19	1.6	4.98	20606	1.1934	37.32588	-36.13248	NAC
NS0136	138	140	NS	X138846	138846	1	G	W	27.78	43.98	3.33	0.3612	0.28	0.138	2.89	2.22	0.168	0.078	0.681	0.025	0.22	4.32	1.34	5.88	20628	2.3868	38.72124	-36.33444	NAC
NS0136	96	98	NS	X138825	138825	1	G	W	30.98	40.78	2.89	0.4773	0.37	0.128	2.59	2.32	0.06	0.042	0.94	0.074	0.11	3.23	1.95	5.29	20607	1.2852	40.46544	-39.18024	NAC
NS0136	116	118	NS	X138835	138835	1	G	W	28.81	42.55	3.23	0.4515	0.35	0.143	2.65	2.48	0.103	0.112	1.19	0.024	0.16	3.62	1.67	5.45	20617	3.4272	43.25616	-39.82896	NAC
NS0136	140	142	NS	X138847	138847	1	G	W	28.91	42.7	2.77	0.3999	0.31	0.117	2.73	2.51	0.188	0.061	0.623	0.028	0.3	4.71	1.37	6.38	20629	1.8666	43.77942	-41.91282	NAC
NS0136	184	186	NS	X138869	138869	1	G	W	26.98	42.26	3.77	0.4902	0.38	0.168	3.14	2.72	0.069	0.179	1.34	0.035	0.31	4.5	2.01	6.82	20651	5.4774	47.44224	-41.96484	NAC
NS0136	100	102	NS	X138827	138827	1	G	W	30.45	42.54	2.13	0.4644	0.36	0.094	2.31	2.69	0.1	0.033	0.566	0.043	0.16	3.14	1.97	5.27	20609	1.0098	46.91898	-45.90918	NAC
NS0137	142	144	NS	X067533	067533	1	G	W	25.79	40.86	2.67	0.645	0.5	0.115	3.55	0.55	0.077	0.837	0.361	0.152	0.64	11.17	1.66	13.47	12042	25.6122	9.5931	16.0191	PAF(HC)
NS0137	242	244	NS	X067583	067583	1	G	W	25.13	42.14	5.66	0.3999	0.31	0.25	4.34	0.44	0.107	0.309	0.324	0.113	0.59	8.05	0.65	9.29	12200	9.4554	7.67448	1.78092	PAF(LC)
NS0137	170	172	NS	X067547	067547	1	G	W	25.19	44.1	3.53	0.5934	0.46	0.151	3.96	0.37	0.074	0.259	0.236	0.107	0.56	9.13	0.57	10.26	12128	7.9254	6.45354	1.47186	PAF(LC)
NS0137	38	40	NS	X067480	067480	1	G	M	35.07	44.54	1.36	0.1161	0.09	0.06	0.07	0.04	0.098	0.066	0.059	0.012	2.34	0.87	0.25	3.46	12206	2.0196	0.69768	1.32192	PAF(LC)
NS0137	284	286	NS	X067604	067604	1	G	W	24.71	41.68	3.44	0.6321	0.49	0.149	3.71	0.46	0.087	0.225	0.475	0.138	0.83	12.01	0.51	13.35	12257	6.885	8.02332	-1.13832	NAF
NS0137	174	176	NS	X067549	067549	1	G	W	25.31	43.34	4.4	0.6063	0.47	0.184	4.48	0.43	0.093	0.205	0.292	0.134	0.65	8.07	0.47	9.19	12130	6.273	7.50006	-1.22706	NAF
NS0137	146	148	NS	X067535	067535	1	G	W	26.79	42.47	3.35	0.5289	0.41	0.145	3.88	0.42	0.055	0.19	0.319	0.137	0.67	9.06	0.32	10.05	12116	5.814	7.32564	-1.51164	NAF
NS0137	442	444	NS	X067686	067686	1	G	W	19.47	50.15	5.96	0.387	0.3	0.285	3.34	2	0.024	1.08	1.4	0.19	0.73	3.22	1.82	5.77	12336	33.048	34.884	-1.836	NAF
NS0137	324	326	NS	X067625	067625	1	G	W	29.47	37.7	3.1	0.5547	0.43	0.136	3.91	0.64	0.108	0.3	0.275	0.102	0.6	9.71	0.47	10.78	12277	9.18	11.16288	-1.98288	NAF
NS0137	172	174	NS	X067548	067548	1	G	W	28.51	43.71	2.89	0.4773	0.37	0.126	3.36	0.24	0.044	0.069	0.322	0.135	0.61	6.87	-0.04	7.44	12129	2.1114	4.18608	-2.07468	NAF
NS0137	168	170	NS	X067546	067546	1	G	W	29.16	40.71	3.71	0.4386	0.34	0.156	3.94	0.36	0.047	0.131	0.276	0.127	0.59	7.63	0.15	8.37	12127	4.0086	6.27912	-2.27052	NAF
NS0137	192	194	NS	X067558	067558	1	G	W	27.18	44.24	4.94	0.4902	0.38	0.239	4.29	1	0.119	0.49	0.719	0.055	0.23	3.68	0.77	4.68	12157	14.994	17.442	-2.448	NAF
NS0137	50	52	NS	X067486	067486	1	G	W	24.59	41.98	5.64	0.4386	0.34	0.26	2.42	0.67	0.115	0.274	0.074	0.007	0.62	11.71	0.56	12.89	12212	8.3844	11.68614	-3.30174	NAF
NS0137	126	128	NS	X067525	067525	1	G	W	30.59	37.78	3.64	0.4515	0.35	0.163	3.99	0.49	0.048	0.163	0.162	0.082	0.54	8.54	0.22	9.3	12034	4.9878	8.54658	-3.55878	NAF
NS0137	240	242	NS	X067582	067582	1	G	W	26.44	39.95	3.28	0.6063	0.47	0.146	3.62	0.58	0.092	0.202	0.243	0.073	0.54	12.02	0.42	12.98	12199	6.1812	10.11636	-3.93516	NAF
NS0137	446	448	NS	X067688	067688	1	G	W	22.84	46	5.02	0.4644	0.36	0.221	3.38	1.25	0.097	0.568	0.749	0.176	0.76	6.24	1.23	8.23	12338	17.3808	21.8025	-4.4217	NAF
NS0137	92	94	NS	X067507	067507	1	G	W	37.03	16.4	2.65	0.5676	0.44	0.116	2.69	0.57	0.075	0.173	0.055	0.0005	1.48	21.72	0.42	23.62	12233	5.2938	9.94194	-4.64814	NAF
NS0137	244	246	NS	X067584	067584	1	G	W	31.1	38.84	2.36	0.5805	0.45	0.105	3.26	0.48	0.105	0.119	0.384	0.115	0.64	8.34	0.06	9.04	12201	3.6414	8.37216	-4.73076	NAF
NS0137	144	146	NS	X067534	067534	1	G	W	30.43	40.57	1.89	0.516	0.4	0.082	2.94	0.54	0.063	0.138	0.363	0.15	0.68	8.04	0.15	8.87	12115	4.2228	9.41868	-5.19588	NAF
NS0137	58	60	NS	X067490	067490	1	G	W	28.63	35.34	2.04	0.4644	0.36	0.088	2.47	0.69	0.079	0.223	0.047	0.011	0.8	16.25	0.46	17.51	12216	6.8238	12.03498	-5.21118	NAF
NS0137	166	168	NS	X067545	067545	1	G	W	28.01	43.34	2.98	0.4644	0.36	0.125	3.64	0.47	0.043	0.09	0.367	0.163	0.63	7.04	0.14	7.81	12126	2.754	8.19774	-5.44374	NAF
NS0137	238	240	NS	X067581	067581	1	G	W	30.51	36.36	3.34	0.5547	0.43	0.148	3.69	0.68	0.089	0.209	0.173	0.061	0.57	9.71	0.33	10.61	12198	6.3954	11.86056	-5.46516	NAF
NS0137	424	426	NS	X067677	067677	1	G	W	31.52	41.22	2.9	0.6063	0.47	0.136	3.12	0.69	0.087	0.207	0.863	0.066	0.23	4.32	0.25	4.8	12327	6.3342	12.03498	-5.70078	NAF
NS0137	136	138	NS	X067530	067530	1	G	W	26.23	46.1	3.02	0.4128	0.32	0.136	3.15	0.56	0.058	0.119	0.316	0.137	0.6	7.36	0.19	8.15	12039	3.6414	9.76752	-6.12612	NAF
NS0137	392	394	NS	X067660	067660	1	G	W	32.92	38.9	1.52	0.6966	0.54	0.067	2.58	0.48	0.083	0.072	0.191	0.051	0.4	7.7	-0.18	7.92	12311	2.2032	8.37216	-6.16896	NAF
NS0137	100	102	NS	X067511	067511	1	G	W	31.06	40.14	1.94	0.4386	0.34	0.084	2.08	0.56	0.087	0.116	0.289	0.083	0.47	9.08	0.17	9.72	12237	3.5496	9.76752	-6.21792	NAF
NS0137	280	282	NS	X067602	067602	1	G	W	29.72	39.58	3.35	0.5031	0.39	0.15	3.71	0.7	0.086	0.193	0.462	0.149	0.56	7.1	0.28	7.94	12255	5.9058	12.2094	-6.3036	NAF
NS0137	326	328	NS	X067626	067626	1	G	W	29.81	39.4	3.43	0.5547	0.43	0.149	3.87	0.73	0.101	0.209	0.452	0.146	0.4	7.81	0.06	8.27	12278	6.3954	12.73266	-6.33726	NAF
NS0137	72	74	NS	X067497	067497	1	G	W	27.22	39.3	3.27	0.5547	0.43	0.146	2.42	0.62	0.09	0.146	0.103	0.022	0.8	13.33	0.19	14.32	12223	4.4676	10.81404	-6.34644	NAF
NS0137	128	130	NS	X067526	067526	1	G	W	28.44	40.08	3.72	0.4644	0.36	0.163	4.09	0.62	0.133	0.145	0.155	0.081	0.55	8.72	0.23	9.5	12035	4.437	10.81404	-6.37704	NAF
NS0137	214	216	NS	X067569	067569	1	G	W	34.14	38.38	1.68	0.7095	0.55	0.073	2.75	0.59	0.116	0.118	0.367	0.026	0.08	6.11	-0.21	5.98	12168	3.6108	10.29078	-6.67998	NAF
NS0137	108	110	NS	X067515	067515	1	G	W	32.75	41.42	1.25	0.5031	0.39	0.055	1.33	0.44	0.069	0.03	0.365	0.118	0.32	6.84	-0.07	7.09	12025	0.918	7.67448	-6.75648	NAF
NS0137	44	46	NS	X067483	067483	1	G	W	31.06	35.56	1.08	0.3225	0.25	0.045	2.09	0.46	0.034	0.029	0.088	0.036	1.67	14.35	-0.05	15.97	12209	0.8874	8.02332	-7.13592	NAF
NS0137	374	376	NS	X067651	067651	1	G	W	34.54	39.94	1.27	0.6579	0.51	0.055	2.37	0.71	0.11	0.16	0.201	0.042	0.24	4.6	-0.07	4.77	12302	4.896	12.38382	-7.48782	NAF
NS0137	106	108	NS	X067514	067514	1	G	W	33.83	39.21	1.38	0.5676	0.44	0.062	1.47	0.51	0.092	0.039	0.394	0.138	0.37	7.42	-0.08	7.71	12240	1.1934	8.89542	-7.70202	NAF
NS0137	308	310	NS	X067617	067617	1	G	W	31.79	31.65	1.35	0.6708	0.52	0.054	2.37	1.06	0.104	0.35	0.308	0.005	0.44	15.12	0.44	16	12269	10.71	18.48852	-7.77852	NAF
NS0137	42	44	NS	X067482	067482	1	G	W	28.59	35.52	0.88	0.4644	0.36	0.036	2.54	0.51	0.046	0.028	0.027	0.011	0.97	17.93	0.02	18.92	12208	0.8568	8.89542	-8.03862	NAF
NS0137	204	206	NS	X067564	067564	1	G	W	33.53	40.14	2.2	0.6063	0.47	0.104	2.8	0.69	0.105	0.129	0.339	0.022	0.11	4.66	-0.08	4.69	12163	3.9474	12.03498	-8.08758	NAF
NS0137	90	92	NS	X067506	067506	1	G	W	30.65	35.34	1.88	0.4644	0.36	0.082	2.22	0.64	0.086	0.099	0.069	0.01	0.72	13.88	0.14	14.74	12232	3.0294	11.16288	-8.13348	NAF
NS0137	76	78	NS	X067499	067499	1	G	W	28.5	39.62	2.76	0.5289	0.41	0.122	2.07	0.72	0.101	0.144	0.331	0.028	0.55	11.84	0.24	12.63	12225	4.4064	12.55824	-8.15184	NAF
NS0137	54	56	NS	X067488	067488	1	G	W	30.15	35.76	2.25	0.4773	0.37	0.098	1.92	0.74	0.06	0.151	0.161	0.016	0.62	14.34	0.2	15.16	12214	4.6206	12.90708	-8.28648	NAF
NS0137	394	396	NS	X067661	067661	1	G	W	36.37	36.76	1.25	0.8772	0.68	0.054	2.37	0.55	0.094	0.042	0.228	0.061	0.29	5.5	-0.32	5.47	12312	1.2852	9.5931	-8.3079	NAF
NS0137	56	58	NS	X067489	067489	1	G	W	31.14	39.49	0.67	0.3612	0.28	0.027	1.73	0.54	0.079	0.03	0.048	0.002	0.68	11.5	0.02	12.2	12215	0.918	9.41868	-8.50068	NAF
NS0137	104	106	NS	X067513	067513	1	G	W	33.44	36.74	2.25	0.5289	0.41	0.097	2.05	0.67	0.106	0.104	0.393	0.14	0.38	8.52	0.12	9.02	12239	3.1824	11.68614	-8.50374	NAF
NS0137	68	70	NS	X067495	067495	1	G	W	29.85	33.76	1.06	0.5676	0.44	0.048	2.24	0.54	0.063	0.025	0.189	0.014	1.06	17.4	0.01	18.47	12221	0.765	9.41868	-8.65368	NAF
NS0137	440	442	NS	X067685	067685	1	G	W	19.72	52.66	6.63	0.258	0.2	0.318	3.71	1.14	0.029	0.363	0.773	0.155	0.7	3.54	1.12	5.36	12335	11.1078	19.88388	-8.77608	NAF
NS0137	102	104	NS	X067512	067512	1	G	W	33.97	31.9	2.43	0.5676	0.44	0.109	2.55	0.69	0.128	0.104	0.414	0.148	0.49	11.58	0.1	12.17	12238	3.1824	12.03498	-8.85258	NAF
NS0137	62	64	NS	X067492	067492	1	G	W	30.86	28.83	0.91	0.4902	0.38	0.045	2.71	0.55	0.062	0.022	0.02	0.006	1.09	20.77	0.06	21.92	12218	0.6732	9.5931	-8.9199	NAF
NS0137	98	100	NS	X067510	067510	1	G	W	29.79	37.75	2.33	0.5031	0.39	0.107	2.57	0.7	0.081	0.107	0.246	0.074	0.56	11.96	0.19	12.71	12236	3.2742	12.2094	-8.9352	NAF
NS0137	96	98	NS	X067509	067509	1	G	W	33.33	34.7	1.71	0.5289	0.41	0.078	2.21	0.63	0.066	0.057	0.197	0.069	0.48	11.52	-0.05	11.95	12235	1.7442	10.98846	-9.24426	NAF
NS0137	140	142	NS	X067532	067532	1	G	W	26.06	45.83	4.33	0.2967	0.23	0.185	3.48	0.8	0.061	0.148	0.314	0.146	0.55	5.85	0.38	6.78	12041	4.5288	13.9536	-9.4248	NAF
NS0137	94	96	NS	X067508	067508	1	G	W	32.45	26.22	2.69	0.4644	0.36	0.112	2.64	0.82	0.124	0.152	0.067	0.006	1.12	18.46	0.29	19.87	12234	4.6512	14.30244	-9.65124	NAF
NS0137	80	82	NS	X067501	067501	1	G	W	30.01	37.75	1.75	0.4773	0.37	0.075	2.35	0.77	0.076	0.121	0.098	0.025	0.52	12.53	0.21	13.26	12227	3.7026	13.43034	-9.72774	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0137	318	320	NS	X067622	067622	1	G	W	24.54	42.24	1.56	0.5805	0.45	0.065	2.37	0.98	0.089	0.24	0.111	0.03	0.51	15.36	0.42	16.29	12274	7.344	17.09316	-9.74916	NAF
NS0137	52	54	NS	X067487	067487	1	G	W	27.38	35.7	2.82	0.516	0.4	0.125	2.55	0.79	0.096	0.13	0.025	0.01	0.75	16.82	0.22	17.79	12213	3.978	13.77918	-9.80118	NAF
NS0137	294	296	NS	X067610	067610	1	G	W	31.64	33.32	2.26	0.5418	0.42	0.098	3.22	0.93	0.098	0.2	0.228	0.073	0.82	12.35	0.26	13.43	12262	6.12	16.22106	-10.10106	NAF
NS0137	60	62	NS	X067491	067491	1	G	W	30	31.19	1.17	0.4902	0.38	0.049	2.63	0.64	0.092	0.033	0.029	0.01	1.19	19.39	0.07	20.65	12217	1.0098	11.16288	-10.15308	NAF
NS0137	70	72	NS	X067496	067496	1	G	W	28.17	35.14	1.53	0.5676	0.44	0.063	2.49	0.67	0.11	0.045	0.093	0.021	0.97	17.6	0.05	18.62	12222	1.377	11.68614	-10.30914	NAF
NS0137	220	222	NS	X067572	067572	1	G	W	32.79	35.64	0.9	0.9546	0.74	0.04	2.94	0.65	0.089	0.03	0.412	0.011	0.25	11.16	-0.17	11.24	12189	0.918	11.3373	-10.4193	NAF
NS0137	134	136	NS	X067529	067529	1	G	W	28.99	41.49	2.34	0.5289	0.41	0.103	3.28	0.8	0.101	0.108	0.212	0.102	0.57	8.6	0.15	9.32	12038	3.3048	13.9536	-10.6488	NAF
NS0137	74	76	NS	X067498	067498	1	G	W	30.48	37.38	1.45	0.5547	0.43	0.06	1.94	0.72	0.083	0.061	0.263	0.029	0.68	12.69	0.05	13.42	12224	1.8666	12.55824	-10.69164	NAF
NS0137	286	288	NS	X067605	067605	1	G	W	30.92	40.61	1.13	0.7224	0.56	0.05	2.59	0.71	0.117	0.055	0.315	0.1	0.48	8.59	-0.18	8.89	12258	1.683	12.38382	-10.70082	NAF
NS0137	84	86	NS	X067503	067503	1	G	W	30.83	38.18	1.37	0.3612	0.28	0.059	2.1	0.65	0.069	0.019	0.443	0.038	0.43	11.91	0.12	12.46	12229	0.5814	11.3373	-10.7559	NAF
NS0137	88	90	NS	X067505	067505	1	G	W	31.39	36.97	1.19	0.4773	0.37	0.054	2.08	0.71	0.077	0.051	0.158	0.017	0.59	12.34	0.13	13.06	12231	1.5606	12.38382	-10.82322	NAF
NS0137	110	112	NS	X067516	067516	1	G	W	32.54	38.1	1.3	0.5805	0.45	0.059	1.82	0.7	0.109	0.042	0.349	0.186	0.38	9.62	0.01	10.01	12026	1.2852	12.2094	-10.9242	NAF
NS0137	358	360	NS	X067643	067643	1	G	W	38.87	33.64	1.42	0.8514	0.66	0.06	2.61	0.68	0.092	0.03	0.89	0.05	0.06	3.71	-0.18	3.59	12294	0.918	11.86056	-10.94256	NAF
NS0137	130	132	NS	X067527	067527	1	G	W	29.07	45.74	1.59	0.4515	0.35	0.071	2.46	0.74	0.081	0.06	0.152	0.067	0.34	6.51	-0.02	6.83	12036	1.836	12.90708	-11.07108	NAF
NS0137	438	440	NS	X067684	067684	1	G	W	28.48	42.89	2.93	0.4257	0.33	0.137	2.63	1.53	0.091	0.509	0.774	0.098	0.46	4.72	1.06	6.24	12334	15.5754	26.68626	-11.11086	NAF
NS0137	64	66	NS	X067493	067493	1	G	W	28.1	34.94	0.84	0.4902	0.38	0.035	2.46	0.68	0.122	0.021	0.02	0.002	1.16	18.64	0.06	19.86	12219	0.6426	11.86056	-11.21796	NAF
NS0137	82	84	NS	X067502	067502	1	G	W	30.9	39.87	0.94	0.4644	0.36	0.039	1.83	0.68	0.089	0.018	0.227	0.05	0.64	10.8	-0.05	11.39	12228	0.5508	11.86056	-11.30976	NAF
NS0137	354	356	NS	X067641	067641	1	G	W	37.35	37.01	1.13	0.8643	0.67	0.049	2.27	0.71	0.083	0.035	0.673	0.053	0.13	3.82	-0.47	3.48	12292	1.071	12.38382	-11.31282	NAF
NS0137	46	48	NS	X067484	067484	1	G	W	27.83	37.57	0.97	0.3741	0.29	0.038	2.44	0.68	0.073	0.015	0.023	0.006	1.11	16.38	0.04	17.53	12210	0.459	11.86056	-11.40156	NAF
NS0137	248	250	NS	X067586	067586	1	G	W	33.54	38.89	2.07	0.5418	0.42	0.091	2.95	0.9	0.075	0.138	0.233	0.071	0.31	5.04	0.16	5.51	12203	4.2228	15.6978	-11.475	NAF
NS0137	322	324	NS	X067624	067624	1	G	W	27.02	36.89	2.59	0.4902	0.38	0.11	3.55	0.99	0.083	0.175	0.267	0.093	0.79	14.8	0.4	15.99	12276	5.355	17.26758	-11.91258	NAF
NS0137	224	226	NS	X067574	067574	1	G	W	32.06	31	0.87	0.6579	0.51	0.047	2.97	0.74	0.078	0.026	0.614	0.007	0.63	16	-0.02	16.61	12191	0.7956	12.90708	-12.11148	NAF
NS0137	282	284	NS	X067603	067603	1	G	W	29.15	40.61	2.31	0.6321	0.49	0.103	3.18	0.82	0.163	0.068	0.494	0.154	0.66	8.64	0.05	9.35	12256	2.0808	14.30244	-12.22164	NAF
NS0137	138	140	NS	X067531	067531	1	G	W	25.7	49.44	1.37	0.4515	0.35	0.058	2.36	0.81	0.06	0.06	0.304	0.114	0.56	7.12	0.2	7.88	12040	1.836	14.12802	-12.29202	NAF
NS0137	246	248	NS	X067585	067585	1	G	W	30.88	37.44	1.88	0.8385	0.65	0.087	3.5	0.86	0.124	0.088	0.305	0.1	0.56	9.7	0.02	10.28	12202	2.6928	15.00012	-12.30732	NAF
NS0137	230	232	NS	X067577	067577	1	G	W	27.74	33.78	2.5	0.4773	0.37	0.113	3.1	1.1	0.147	0.216	0.113	0.023	0.63	17.02	0.39	18.04	12194	6.6096	19.1862	-12.5766	NAF
NS0137	278	280	NS	X067601	067601	1	G	W	30.76	40.19	2.98	0.5676	0.44	0.134	3.51	1.04	0.095	0.18	0.391	0.134	0.5	5.69	0.45	6.64	12254	5.508	18.13968	-12.63168	NAF
NS0137	210	212	NS	X067567	067567	1	G	W	35.37	36	2.06	0.7224	0.56	0.09	2.86	0.89	0.101	0.094	0.427	0.014	0.07	5.66	-0.08	5.65	12166	2.8764	15.52338	-12.64698	NAF
NS0137	122	124	NS	X067523	067523	1	G	W	31.39	43.27	1.1	0.4644	0.36	0.05	1.89	0.81	0.097	0.045	0.207	0.028	0.37	6.69	-0.07	6.99	12032	1.377	14.12802	-12.75102	NAF
NS0137	372	374	NS	X067650	067650	1	G	W	32.69	40.74	1.96	0.645	0.5	0.087	3.05	0.9	0.201	0.081	0.274	0.065	0.34	4.7	0	5.04	12301	2.4786	15.6978	-13.2192	NAF
NS0137	298	300	NS	X067612	067612	1	G	W	26.69	37.05	1.18	0.5676	0.44	0.05	2.61	0.92	0.071	0.091	0.119	0.04	0.68	17.66	0.22	18.56	12264	2.7846	16.04664	-13.26204	NAF
NS0137	388	390	NS	X067658	067658	1	G	W	36.73	35.9	1.13	0.9288	0.72	0.05	2.36	0.85	0.081	0.046	0.294	0.06	0.23	5.17	0	5.4	12309	1.4076	14.8257	-13.4181	NAF
NS0137	390	392	NS	X067659	067659	1	G	W	36.21	36.47	1.53	0.7611	0.59	0.069	2.45	0.91	0.147	0.078	0.347	0.065	0.23	4.71	-0.06	4.88	12310	2.3868	15.87222	-13.48542	NAF
NS0137	382	384	NS	X067655	067655	1	G	W	40.74	31.26	1.34	0.7353	0.57	0.062	2.5	0.82	0.105	0.024	0.259	0.061	0.25	4.33	-0.21	4.37	12306	0.7344	14.30244	-13.56804	NAF
NS0137	78	80	NS	X067500	067500	1	G	W	29.64	38.49	2.16	0.5031	0.39	0.094	2.18	0.9	0.085	0.067	0.173	0.021	0.47	11.93	0.2	12.6	12226	2.0502	15.6978	-13.6476	NAF
NS0137	86	88	NS	X067504	067504	1	G	W	30.07	37.59	1.05	0.4257	0.33	0.045	2.24	0.82	0.09	0.016	0.335	0.029	0.67	13.59	0.18	14.44	12230	0.4896	14.30244	-13.81284	NAF
NS0137	288	290	NS	X067606	067606	1	G	W	31.58	40.38	1.56	0.5805	0.45	0.072	2.81	0.89	0.096	0.054	0.33	0.107	0.44	6.87	0.06	7.37	12259	1.6524	15.52338	-13.87098	NAF
NS0137	234	236	NS	X067579	067579	1	G	W	31.97	31.92	1.46	0.6321	0.49	0.064	2.99	0.87	0.086	0.041	0.156	0.048	0.56	15.4	0.06	16.02	12196	1.2546	15.17454	-13.91994	NAF
NS0137	112	114	NS	X067517	067517	1	G	W	30.25	40.32	1.27	0.4902	0.38	0.055	1.82	0.89	0.079	0.045	0.35	0.151	0.36	10.19	0.21	10.76	12027	1.377	15.52338	-14.14638	NAF
NS0137	378	380	NS	X067653	067653	1	G	W	34.61	38.17	2.13	0.6579	0.51	0.099	3.06	0.97	0.116	0.088	0.406	0.068	0.23	4.25	0.15	4.63	12304	2.6928	16.91874	-14.22594	NAF
NS0137	40	42	NS	X067481	067481	1	G	W	29.24	36.15	0.7	0.5805	0.45	0.03	2.3	0.86	0.104	0.025	0.055	0.051	0.82	16.24	0.02	17.08	12207	0.765	15.00012	-14.23512	NAF
NS0137	206	208	NS	X067565	067565	1	G	W	36.17	38.06	1.39	0.6708	0.52	0.062	2.26	0.9	0.095	0.042	0.354	0.012	0.09	4.37	-0.11	4.35	12164	1.2852	15.6978	-14.4126	NAF
NS0137	222	224	NS	X067573	067573	1	G	W	35.5	35.38	1.09	0.6708	0.52	0.049	2.48	0.89	0.097	0.036	0.216	0.01	0.19	7.93	-0.13	7.99	12190	1.1016	15.52338	-14.42178	NAF
NS0137	66	68	NS	X067494	067494	1	G	W	29.88	31.03	1.06	0.516	0.4	0.043	2.33	0.89	0.204	0.032	0.042	0.006	1.39	19.13	0.05	20.57	12220	0.9792	15.52338	-14.54418	NAF
NS0137	356	358	NS	X067642	067642	1	G	W	37.39	36.74	1.07	0.8127	0.63	0.046	2.25	0.9	0.094	0.034	0.662	0.05	0.09	3.25	0.07	3.41	12293	1.0404	15.6978	-14.6574	NAF
NS0137	48	50	NS	X067485	067485	1	G	W	27.98	38	1.75	0.387	0.3	0.074	2.22	0.99	0.14	0.082	0.077	0.016	0.73	14.94	0.13	15.8	12211	2.5092	17.26758	-14.75838	NAF
NS0137	306	308	NS	X067616	067616	1	G	W	27.62	35.16	1.93	0.5805	0.45	0.084	2.43	0.98	0.13	0.071	0.113	0.036	1.15	17.23	0.15	18.53	12268	2.1726	17.09316	-14.92056	NAF
NS0137	118	120	NS	X067521	067521	1	G	W	30.16	37.53	1.62	0.5547	0.43	0.067	2.49	0.96	0.068	0.045	0.304	0.014	0.56	12.13	0.16	12.85	12030	1.377	16.74432	-15.36732	NAF
NS0137	350	352	NS	X067638	067638	1	G	W	36.71	37.92	1.11	0.7869	0.61	0.049	2.18	0.94	0.098	0.032	0.694	0.04	0.07	3.07	0.06	3.2	12290	0.9792	16.39548	-15.41628	NAF
NS0137	328	330	NS	X067627	067627	1	G	W	33.17	38.21	1.45	0.7095	0.55	0.063	2.71	0.98	0.081	0.054	0.173	0.052	0.63	6.5	0.42	7.55	12279	1.6524	17.09316	-15.44076	NAF
NS0137	304	306	NS	X067615	067615	1	G	W	26.64	37.68	1.34	0.5031	0.39	0.056	2.48	0.93	0.096	0.02	0.132	0.038	0.74	17.32	0.17	18.23	12267	0.612	16.22106	-15.60906	NAF
NS0137	202	204	NS	X067563	067563	1	G	W	35.47	38.63	1.35	0.774	0.6	0.062	2.29	1.02	0.096	0.071	0.272	0.02	0.06	4.5	0.02	4.58	12162	2.1726	17.79084	-15.61824	NAF
NS0137	212	214	NS	X067568	067568	1	G	W	36.03	37.92	1.2	0.7482	0.58	0.052	2.32	0.95	0.095	0.028	0.256	0.01	0.07	5.07	-0.07	5.07	12167	0.8568	16.5699	-15.7131	NAF
NS0137	208	210	NS	X067566	067566	1	G	W	36.49	37.04	1.04	0.7998	0.62	0.045	2.08	0.96	0.093	0.027	0.33	0.017	0.08	4.91	-0.03	4.96	12165	0.8262	16.74432	-15.91812	NAF
NS0137	216	218	NS	X067570	067570	1	G	W	35.47	38.1	1.11	0.7611	0.59	0.048	2.19	1	0.094	0.035	0.364	0.009	0.1	5.48	0.02	5.6	12187	1.071	17.442	-16.371	NAF
NS0137	274	276	NS	X067599	067599	1	G	W	33.83	39.15	2.29	0.4386	0.34	0.102	2.97	1.19	0.097	0.142	0.298	0.098	0.34	3.68	0.39	4.41	12252	4.3452	20.75598	-16.41078	NAF
NS0137	376	378	NS	X067652	067652	1	G	W	35.9	36.61	1.15	0.8514	0.66	0.049	2.41	1.02	0.12	0.043	0.258	0.06	0.27	5.28	0.04	5.59	12303	1.3158	17.79084	-16.47504	NAF
NS0137	366	368	NS	X067647	067647	1	G	W	37.54	37.33	0.97	0.7611	0.59	0.047	2.12	1	0.088	0.027	0.62	0.057	0.05	2.99	0.17	3.21	12298	0.8262	17.442	-16.6158	NAF
NS0137	272	274	NS	X067598	067598	1	G	W	33.42	38.03	2.34	0.5934	0.46	0.104	3.34	1.22	0.111	0.152	0.328	0.103	0.38	4.9	0.39	5.67	12251	4.6512	21.27924	-16.62804	NAF
NS0137	410	412	NS	X067670	067670	1	G	W	36.74	37.17	1.54	0.7224	0.56	0.066	2.16	1.15	0.093	0.099	0.94	0.026	0.04	3.05	0.26	3.35	12320	3.0294	20.0583	-17.0289	NAF
NS0137	254	256	NS	X067589	067589	1	G	W	36.33	36.51	1.19	0.7482	0.58	0.054	2.71	1.06	0.096	0.037	0.252	0.088	0.28	4.64	0.16	5.08	12242	1.1322	18.48852	-17.35632	NAF
NS0137	132	134	NS	X067528	067528	1	G	W	32.06	37.56	1.39	0.5676	0.44	0.059	2.98	1.09	0.112	0.054	0.263	0.118	0.53	8.9	0.17	9.6	12037	1.6524	19.01178	-17.35938	NAF
NS0137	120	122	NS	X067522	067522	1	G	W	31.06	39.62	1.17	0.5031	0.39	0.052	2.25	1.06	0.13	0.032	0.248	0.012	0.36	9.78	0.1	10.24	12031	0.9792	18.48852	-17.50932	NAF
NS0137	148	150	NS	X067536	067536	1	G	W	29.74	42.76	2.48	0.4515	0.35	0.107	3.18	1.23	0.101	0.124	0.254	0.106	0.47	5.6	0.47	6.54	12117	3.7944	21.45366	-17.65926	NAF
NS0137	296	298	NS	X067611	067611	1	G	W	27.4	35.65	2.05	0.5289	0.41	0.085	3.03	1.25	0.115	0.127	0.231	0.075	0.74	16.47	0.44	17.65	12263	3.8862	21.8025	-17.9163	NAF
NS0137	348	350	NS	X067637	067637	1	G	W	35.96	39.23	1.06	0.7482	0.58	0.043	1.99	1.08	0.082	0.027	0.674	0.039	0.05	2.73	0.31	3.09	12289	0.8262	18.83736	-18.01116	NAF
NS0137	236	238	NS	X067580	067580	1	G	W	32.18	33.65	1.39	0.6966	0.54	0.059	3.24	1.15	0.123	0.064	0.09	0.031	0.53	12.58	0.18	13.29	12197	1.9584	20.0583	-18.0999	NAF
NS0137	384	386	NS	X067656	067656	1	G	W	38.34	34.36	1.14	0.774	0.6	0.053	2.34	1.09	0.106	0.026	0.262	0.062	0.24	4.37	0.08	4.69	12307	0.7956	19.01178	-18.21618	NAF
NS0137	232	234	NS	X067578	067578	1	G	W	28.83	33.79	0.93	0.5418	0.42	0.04	2.69	1.08	0.088	0.019	0.125	0.025	0.64	18.05	0.31	19	12195	0.5814	18.83736	-18.25596	NAF
NS0137	226	228	NS	X067575	067575	1	G	W	29.37	30.39	0.96	0.6579	0.51	0.039	3.18	1.12	0.09	0.034	0.382	0.027	0.71	19.46	0.42	20.59	12192	1.0404	19.53504	-18.49464	NAF
NS0137	362	364	NS	X067645	067645	1	G	W	36.96	37.29	1.22	0.7482	0.58	0.054	2.23	1.13	0.095	0.033	0.696	0.043	0.11	3.14	0.28	3.53	12296	1.0098	19.70946	-18.69966	NAF
NS0137	292	294	NS	X067608	067608	1	G	W	34.72	35.31	1.44	0.6708	0.52	0.064	2.86	1.16	0.083	0.045	0.133	0.042	0.25	7.4	0.27	7.92	12261	1.377	20.23272	-18.85572	NAF
NS0137	252	254	NS	X067588	067588	1	G	W	35.91	36.28	1.53	0.6579	0.51	0.067	2.79	1.23	0.128	0.083	0.212	0.071	0.26	4.69	0.17	5.12	12241	2.5398	21.45366	-18.91386	NAF
NS0137	260	262	NS	X067592	067592	1	G	W	34.64	38.45	1.1	0.7998	0.62	0.063	2.79	1.15	0.098	0.034	0.279	0.099	0.28	4.94	0.39	5.61	12245	1.0404	20.0583	-19.0179	NAF
NS0137	302	304	NS	X067614	067614	1	G	W	27.83	34.76	0.98	0.5676	0.44	0.041	2.62	1.14	0.097	0.028	0.049	0.01	0.74	18.65	0.34	19.73	12266	0.8568	19.88388	-19.02708	NAF
NS0137	346	348	NS	X067636	067636	1	G	W	36.95	37.94	1.13	0.7224	0.56	0.05	2.06	1.14	0.094	0.028	0.647	0.042	0.02	2.68	0.27	2.97	12288	0.8568	19.88388	-19.02708	NAF
NS0137	228	230	NS	X067576	067576	1	G	W	27.99	35.2	0.78	0.7224	0.56	0.031	2.76	1.15	0.07	0.026	0.276	0.022	0.57	17.42	0.47	18.46	12193	0.7956	20.0583	-19.2627	NAF
NS0137	184	186	NS	X067554	067554	1	G	W	34.18	39.22	2.23	0.6966	0.54	0.103	2.54	1.33	0.094	0.128	0.334	0.046	0.27	3.69	0.44	4.4	12153	3.9168	23.19786	-19.28106	NAF
NS0137	290	292	NS	X067607	067607	1	G	W	33.76	37.61	1.6	0.6321	0.49	0.071	2.92	1.24	0.089	0.072	0.291	0.098	0.31	5.8	0.49	6.6	12260	2.2032	21.62808	-19.42488	NAF
NS0137	176	178	NS	X067550	067550	1	G	W	32.81	39.84	2.29	0.6321	0.49	0.099	2.92	1.24	0.158	0.061	0.216	0.097	0.35	4.6	0.18	5.13	12131	1.8666	21.62808	-19.76148	NAF
NS0137	316	318	NS	X067621	067621	1	G	W	31.39	25.86	1.22	0.7353	0.57	0.049	3.01	1.39	0.103	0.144	0.155	0.029	0.84	20.76	0.35	21.95	12273	4.4064	24.24438	-19.83798	NAF
NS0137	116	118	NS	X067520	067520	1	G	W	31.7	34.9	1	0.5805	0.45	0.045	1.9	1.16	0.111	0.008	0.549	0.048	0.51	13.23	0.23	13.97	12029	0.2448	20.23272	-19.98792	NAF
NS0137	352	354	NS	X067639	067639	1	G	W	36.13	37.87	1.09	0.8772	0.68	0.048	2.35	1.21	0.087	0.031	0.667	0.046	0.1	3.46	0.46	4.02	12291	0.9486	21.10482	-20.15622	NAF
NS0137	310	312	NS	X067618	067618	1	G	W	30.82	28.39	1.06	0.774	0.6	0.053	3.02	1.18	0.089	0.009	0.309	0.006	0.83	19.32	0.36	20.51	12270	0.2754	20.58156	-20.30616	NAF
NS0137	320	322	NS	X067623	067623	1	G	W	29.04	34.53	1.2	0.5676	0.44	0.05	2.63	1.27	0.09	0.059	0.148	0.057	0.68	16.59	0.4	17.67	12275	1.8054	22.15134	-20.34594	NAF
NS0137	330	332	NS	X067628	067628	1	G	W	32.09	38.68	2.15	0.645	0.5	0.095	3.07	1.38	0.117	0.121	0.245	0.088	0.41	6.35	0.52	7.28	12280	3.7026	24.06996	-20.36736	NAF
NS0137	380	382	NS	X067654	067654	1	G	W	36.54	36.33	1.19	0.7869	0.61	0.052	2.44	1.21	0.092	0.024	0.278	0.064	0.22	4.49	0.4	5.11	12305	0.7344	21.10482	-20.37042	NAF
NS0137	114	116	NS	X067518	067518	1	G	W	30.37	35.95	1.18	0.5289	0.41	0.053	2.09	1.22	0.096	0.009	0.445	0.071	0.52	13.93	0.39	14.84	12028	0.2754	21.27924	-21.00384	NAF
NS0137	256	258	NS	X067590	067590	1	G	W	36.78	36.59	1.22	0.6708	0.52	0.06	2.61	1.28	0.102	0.043	0.218	0.072	0.24	3.97	0.38	4.59	12243	1.3158	22.32576	-21.00996	NAF
NS0137	426	428	NS	X067678	067678	1	G	W	33.94	40.26	1.79	0.5418	0.42	0.083	2.41	1.31	0.063	0.056	0.642	0.047	0.13	3.39	0.6	4.12	12328	1.7136	22.84902	-21.13542	NAF
NS0137	368	370	NS	X067648	067648	1	G	W	36.09	38.33	1.11	0.7611	0.59	0.049	2.17	1.27	0.093	0.031	0.64	0.037	0.07	3.05	0.51	3.63	12299	0.9486	22.15134	-21.20274	NAF
NS0137	312	314	NS	X067619	067619	1	G	W	30.51	28.93	1.11	0.7611	0.59	0.044	3.09	1.25	0.097	0.018	0.131	0.002	0.77	19.37	0.47	20.61	12271	0.5508	21.8025	-21.2517	NAF
NS0137	218	220	NS	X067571	067571	1	G	W	37.58	35.33	1.31	0.5547	0.43	0.057	2.26	1.29	0.071	0.034	0.088	0.006	0.11	4.59	0.29	4.99	12188	1.0404	22.50018	-21.45978	NAF
NS0137	428	430	NS	X067679	067679	1	G	W	32.67	42.84	1.65	0.4644	0.36	0.076	2.09	1.34	0.089	0.049	0.692	0.04	0.1	2.81	0.54	3.45	12329	1.4994	23.37228	-21.87288	NAF
NS0137	386	388	NS	X067657	067657	1	G	W	37.01	37.27	1.02	0.7095	0.55	0.048	2.06	1.36	0.1	0.027	0.203	0.042	0.11	3.65	0.44	4.2	12308	0.8262	23.72112	-22.89492	NAF
NS0137	124	126	NS	X067524	067524	1	G	W	35.07	40.77	0.83	0.4386	0.34	0.039	1.64	1.36	0.079	0.024	0.151	0.019	0.18	3.7	0.49	4.37	12033	0.7344	23.72112	-22.98672	NAF
NS0137	264	266	NS	X067594	067594	1	G	W	33.42	39.34	1.07	0.8256	0.64	0.049	2.78	1.37	0.091	0.029	0.234	0.073	0.29	5.54	0.65	6.48	12247	0.8874	23.89554	-23.00814	NAF
NS0137	422	424	NS	X067676	067676	1	G	W	30.91	41.44	2.57	0.516	0.4	0.118	2.9	1.71	0.165	0.221	0.772	0.058	0.2	3.46	0.73	4.39	12326	6.7626	29.82582	-23.06322	NAF
NS0137	156	158	NS	X067540	067540	1	G	W	26.37	43.3	4.06	0.4128	0.32	0.173	4.74	1.54	0.048	0.123	0.212	0.101	0.49	5.78	1.08	7.35	12121	3.7638	26.86068	-23.09688	NAF
NS0137	158	160	NS	X067541	067541	1	G	W	29.02	42.03	3.35	0.4128	0.32	0.146	4.09	1.57	0.052	0.137	0.198	0.101	0.48	4.94	0.91	6.33	12122	4.1922	27.38394	-23.19174	NAF
NS0137	276	278	NS	X067600	067600	1	G	W	30.61	39.65	2.2	0.6966	0.54	0.1	3.32	1.69	0.083	0.197	0.3	0.095	0.4	6.09	0.97	7.46	12253	6.0282	29.47698	-23.44878	NAF
NS0137	250	252	NS	X067587	067587	1	G	W	33.76	38.89	1.4	0.7482	0.58	0.066	2.62	1.56	0.167	0.119	0.149	0.059	0.16	5.14	0.42	5.72	12204	3.6414	27.20952	-23.56812	NAF
NS0137	396	398	NS	X067662	067662	1	G	W	34.36	38.89	1.47	0.7869	0.61	0.074	2.53	1.44	0.089	0.049	0.29	0.045	0.16	4.03	0.64	4.83	12313	1.4994	25.11648	-23.61708	NAF
NS0137	408	410	NS	X067669	067669	1	G	W	35.94	38.86	1.25	0.7224	0.56	0.056	1.86	1.43	0.113	0.034	0.883	0.035	0.05	2.77	0.54	3.36	12319	1.0404	24.94206	-23.90166	NAF
NS0137	360	362	NS	X067644	067644	1	G	W	30.07	44.6	1.09	0.9675	0.75	0.043	2.5	1.44	0.092	0.029	0.645	0.048	0.21	4.41	0.69	5.31	12295	0.8874	25.11648	-24.22908	NAF
NS0137	180	182	NS	X067552	067552	1	G	W	35.07	38.72	1.64	0.7869	0.61	0.073	2.26	1.5	0.071	0.056	0.292	0.043	0.1	3.62	0.7	4.42	12151	1.7136	26.163	-24.4494	NAF
NS0137	300	302	NS	X067613	067613	1	G	W	29.28	29.7	0.91	0.5934	0.46	0.037	2.82	1.46	0.123	0.031	0.051	0.016	1.88	19.74	0.45	22.07	12265	0.9486	25.46532	-24.51672	NAF
NS0137	258	260	NS	X067591	067591	1	G	W	34.93	37.6	1.25	0.6837	0.53	0.054	2.71	1.52	0.096	0.046	0.266	0.081	0.31	4.37	0.78	5.46	12244	1.4076	26.51184	-25.10424	NAF
NS0137	418	420	NS	X067674	067674	1	G	W	34.7	38.73	1.41	0.7482	0.58	0.067	2.25	1.54	0.085	0.052	0.491	0.027	0.08	3.9	0.77	4.75	12324	1.5912	26.86068	-25.26948	NAF
NS0137	186	188	NS	X067555	067555	1	G	W	32.52	38.73	2.87	0.6966	0.54	0.131	3.1	1.77	0.111	0.181	0.281	0.035	0.32	4.04	0.8	5.16	12154	5.5386	30.87234	-25.33374	NAF
NS0137	450	452	NS	X067690	067690	1	G	W	32.58	38.24	2.39	0.4902	0.38	0.11	2.61	1.57	0.046	0.067	0.41	0.055	0.43	5.71	0.85	6.99	12340	2.0502	27.38394	-25.33374	NAF
NS0137	416	418	NS	X067673	067673	1	G	W	34.78	40.1	1.19	0.6837	0.53	0.053	1.96	1.52	0.102	0.037	0.645	0.025	0.07	3.01	0.74	3.82	12323	1.1322	26.51184	-25.37964	NAF
NS0137	448	450	NS	X067689	067689	1	G	W	30.46	40.85	2.39	0.5031	0.39	0.107	2.54	1.66	0.072	0.112	0.468	0.077	0.45	6.12	0.89	7.46	12339	3.4272	28.95372	-25.52652	NAF
NS0137	370	372	NS	X067649	067649	1	G	W	35.17	38.51	1.01	0.8127	0.63	0.049	2.21	1.54	0.107	0.031	0.409	0.043	0.13	3.61	0.77	4.51	12300	0.9486	26.86068	-25.91208	NAF
NS0137	200	202	NS	X067562	067562	1	G	W	35.73	37.56	1.33	0.7869	0.61	0.061	2.3	1.6	0.093	0.059	0.381	0.013	0.02	3.83	0.72	4.57	12161	1.8054	27.9072	-26.1018	NAF
NS0137	364	366	NS	X067646	067646	1	G	W	34.72	40.07	1.1	0.7611	0.59	0.047	2.29	1.55	0.079	0.029	0.737	0.059	0.07	2.76	0.77	3.6	12297	0.8874	27.0351	-26.1477	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0137	262	264	NS	X067593	067593	1	G	W	33.66	38.11	1.22	0.7095	0.55	0.052	2.94	1.58	0.084	0.036	0.269	0.087	0.3	4.98	0.94	6.22	12246	1.1016	27.55836	-26.45676	NAF
NS0137	430	432	NS	X067680	067680	1	G	W	34.73	39.01	1.67	0.4644	0.36	0.075	2.25	1.61	0.073	0.045	0.854	0.04	0.08	2.9	0.83	3.81	12330	1.377	28.08162	-26.70462	NAF
NS0137	314	316	NS	X067620	067620	1	G	W	30.7	25.98	1.09	0.774	0.6	0.045	3.37	1.7	0.106	0.084	0.173	0.097	0.72	20.8	0.8	22.32	12272	2.5704	29.6514	-27.081	NAF
NS0137	164	166	NS	X067544	067544	1	G	W	28.38	47.48	1.47	0.3612	0.28	0.068	2.43	1.66	0.049	0.06	0.26	0.11	0.33	3.68	1.05	5.06	12125	1.836	28.95372	-27.11772	NAF
NS0137	344	346	NS	X067635	067635	1	G	W	36.1	38.37	1.27	0.7095	0.55	0.061	2.28	1.63	0.089	0.04	0.598	0.045	0.07	2.45	0.85	3.37	12287	1.224	28.43046	-27.20646	NAF
NS0137	268	270	NS	X067596	067596	1	G	W	33.45	38.68	1.85	0.645	0.5	0.082	3.03	1.72	0.084	0.086	0.229	0.078	0.25	4.21	1	5.46	12249	2.6316	30.00024	-27.36864	NAF
NS0137	196	198	NS	X067560	067560	1	G	W	34.61	37.82	2.07	0.6966	0.54	0.091	2.6	1.82	0.106	0.128	0.495	0.019	0.12	3.51	0.89	4.52	12159	3.9168	31.74444	-27.82764	NAF
NS0137	444	446	NS	X067687	067687	1	G	W	25.13	44.93	4.16	0.4257	0.33	0.197	2.87	2.46	0.064	0.491	0.85	0.136	0.67	4.05	1.83	6.55	12337	15.0246	42.90732	-27.88272	NAF
NS0137	398	400	NS	X067663	067663	1	G	W	35.4	37.91	1.42	0.7353	0.57	0.065	2.46	1.69	0.117	0.046	0.427	0.044	0.09	3.43	0.85	4.37	12314	1.4076	29.47698	-28.06938	NAF
NS0137	182	184	NS	X067553	067553	1	G	W	34.46	39.69	1.39	0.7482	0.58	0.061	2.05	1.72	0.076	0.052	0.27	0.035	0.12	3.18	0.9	4.2	12152	1.5912	30.00024	-28.40904	NAF
NS0137	404	406	NS	X067666	067666	1	G	W	35.06	38.6	1.31	0.7353	0.57	0.06	2.21	1.71	0.096	0.046	0.797	0.035	0.06	2.97	0.87	3.9	12317	1.4076	29.82582	-28.41822	NAF
NS0137	194	196	NS	X067559	067559	1	G	W	33.3	38.12	2.5	0.7224	0.56	0.108	2.86	1.96	0.304	0.183	0.578	0.047	0.13	4.03	0.48	4.64	12158	5.5998	34.18632	-28.58652	NAF
NS0137	434	436	NS	X067682	067682	1	G	W	33.94	38.58	1.98	0.5547	0.43	0.084	2.16	1.75	0.097	0.044	1.01	0.035	0.12	3.67	0.98	4.77	12332	1.3464	30.5235	-29.1771	NAF
NS0137	270	272	NS	X067597	067597	1	G	W	33.19	40.35	0.94	0.7482	0.58	0.043	2.26	1.72	0.1	0.021	0.144	0.048	0.13	4.68	1.01	5.82	12250	0.6426	30.00024	-29.35764	NAF
NS0137	400	402	NS	X067664	067664	1	G	W	35.67	37.57	1.51	0.6579	0.51	0.067	2.3	1.83	0.125	0.057	0.609	0.033	0.11	2.67	1	3.78	12315	1.7442	31.91886	-30.17466	NAC
NS0137	432	434	NS	X067681	067681	1	G	W	34.18	39.08	1.51	0.6579	0.51	0.069	2.06	1.85	0.128	0.054	0.963	0.03	0.08	3.56	0.88	4.52	12331	1.6524	32.2677	-30.6153	NAC
NS0137	414	416	NS	X067672	067672	1	G	W	31.22	42.27	1.89	0.6708	0.52	0.083	2.51	1.98	0.168	0.103	0.929	0.039	0.08	2.98	1.1	4.16	12322	3.1518	34.53516	-31.38336	NAC
NS0137	412	414	NS	X067671	067671	1	G	W	35.83	38.06	1.25	0.6966	0.54	0.054	1.89	1.87	0.089	0.032	0.731	0.018	0.01	2.42	1.1	3.53	12321	0.9792	32.61654	-31.63734	NAC
NS0137	198	200	NS	X067561	067561	1	G	W	35.1	37.25	1.48	0.7611	0.59	0.066	2.43	1.93	0.091	0.062	0.454	0.019	0.06	3.72	1.13	4.91	12160	1.8972	33.66306	-31.76586	NAC
NS0137	452	454	NS	X067691	067691	1	G	W	31.43	38.15	2.41	0.5418	0.42	0.111	2.72	1.95	0.11	0.073	0.534	0.074	0.37	6.27	1.15	7.79	12341	2.2338	34.0119	-31.7781	NAC
NS0137	338	340	NS	X067632	067632	1	G	W	36.68	37.06	1.18	0.7095	0.55	0.05	2.18	1.9	0.088	0.031	0.534	0.046	0.05	2.28	1.21	3.54	12284	0.9486	33.1398	-32.1912	NAC
NS0137	420	422	NS	X067675	067675	1	G	W	31.94	41.07	2.05	0.5934	0.46	0.1	2.64	2.01	0.106	0.085	0.668	0.052	0.17	3.31	1.29	4.77	12325	2.601	35.05842	-32.45742	NAC
NS0137	340	342	NS	X067633	067633	1	G	W	35.71	38.63	0.97	0.7869	0.61	0.047	2.05	1.98	0.092	0.029	0.505	0.037	0.04	2.52	1.26	3.82	12285	0.8874	34.53516	-33.64776	NAC
NS0137	190	192	NS	X067557	067557	1	G	W	31.05	40	2.71	0.7482	0.58	0.131	3.2	2.37	0.185	0.198	0.411	0.037	0.13	3.93	1.34	5.4	12156	6.0588	41.33754	-35.27874	NAC
NS0137	266	268	NS	X067595	067595	1	G	W	34.84	37.53	1.19	0.6837	0.53	0.053	2.59	2.13	0.082	0.031	0.194	0.069	0.23	3.88	1.39	5.5	12248	0.9486	37.15146	-36.20286	NAC
NS0137	336	338	NS	X067631	067631	1	G	W	34.02	39.22	1.19	0.7611	0.59	0.052	2.32	2.19	0.093	0.039	0.36	0.048	0.15	3.31	1.58	5.04	12283	1.1934	38.19798	-37.00458	NAC
NS0137	178	180	NS	X067551	067551	1	G	W	32.76	40.24	1.57	0.774	0.6	0.069	2.33	2.25	0.079	0.059	0.135	0.045	0.2	3.55	1.4	5.15	12132	1.8054	39.2445	-37.4391	NAC
NS0137	160	162	NS	X067542	067542	1	G	W	29.72	43.67	1.55	0.5031	0.39	0.069	2.67	2.24	0.079	0.047	0.196	0.089	0.25	3.92	1.68	5.85	12123	1.4382	39.07008	-37.63188	NAC
NS0137	402	404	NS	X067665	067665	1	G	W	37.42	35.03	1.04	0.774	0.6	0.048	2.11	2.22	0.11	0.035	0.662	0.034	0.09	2.8	1.48	4.37	12316	1.071	38.72124	-37.65024	NAC
NS0137	332	334	NS	X067629	067629	1	G	W	32.94	39.11	1.43	0.7353	0.57	0.063	2.56	2.27	0.117	0.058	0.172	0.057	0.28	4.38	1.5	6.16	12281	1.7748	39.59334	-37.81854	NAC
NS0137	188	190	NS	X067556	067556	1	G	W	34.79	37.61	1.71	0.7482	0.58	0.076	2.26	2.41	0.091	0.083	0.225	0.033	0.11	3.06	1.59	4.76	12155	2.5398	42.03522	-39.49542	NAC
NS0137	342	344	NS	X067634	067634	1	G	W	35.02	38.19	1.07	0.8127	0.63	0.049	2.2	2.35	0.108	0.031	0.606	0.041	0.08	2.68	1.66	4.42	12286	0.9486	40.9887	-40.0401	NAC
NS0137	334	336	NS	X067630	067630	1	G	W	34.5	38.08	1.37	0.7095	0.55	0.064	2.52	2.37	0.095	0.041	0.14	0.044	0.18	3.15	1.71	5.04	12282	1.2546	41.33754	-40.08294	NAC
NS0137	406	408	NS	X067667	067667	1	G	W	34.16	39.1	1.18	0.7224	0.56	0.05	2.03	2.4	0.101	0.032	0.797	0.024	0.02	2.39	1.83	4.24	12318	0.9792	41.8608	-40.8816	NAC
NS0137	150	152	NS	X067537	067537	1	G	W	29.8	44.79	1.41	0.387	0.3	0.088	2.23	2.69	0.073	0.056	0.193	0.079	0.25	2.95	2.08	5.28	12118	1.7136	46.91898	-45.20538	NAC
NS0137	162	164	NS	X067543	067543	1	G	W	28.64	45.56	1.02	0.5418	0.42	0.045	2.37	2.74	0.076	0.036	0.183	0.085	0.26	3.87	2.2	6.33	12124	1.1016	47.79108	-46.68948	NAC
NS0137	436	438	NS	X067683	067683	1	G	W	33.61	38.57	1.34	0.5676	0.44	0.062	1.8	2.84	0.072	0.056	0.729	0.026	0.1	3.39	2.1	5.59	12333	1.7136	49.53528	-47.82168	NAC
NS0137	154	156	NS	X067539	067539	1	G	W	29.05	46.46	0.98	0.3096	0.24	0.046	1.93	3.46	0.058	0.033	0.15	0.07	0.19	1.43	2.99	4.61	12120	1.0098	60.34932	-59.33952	NAC
NS0137	152	154	NS	X067538	067538	1	G	W	26.34	44.49	0.91	0.4644	0.36	0.04	2.44	5.6	0.067	0.032	0.143	0.06	0.22	1.98	5.5	7.7	12119	0.9792	97.6752	-96.696	NAC
NS0139	116	118	NS	X139091	139091	1	G	W	14.14	54.89	9.46	0.2322	0.18	0.416	2.07	0.13	0.031	3.02	5.91	0.108	0.33	3.72	1.83	5.88	20728	92.412	2.26746	90.14454	PAF(HC)
NS0139	114	116	NS	X139090	139090	1	G	W	13.69	55.63	10.87	0.0903	0.07	0.499	2.54	0.08	0.021	2.2	6.05	0.115	0.41	2.37	1.27	4.05	20727	67.32	1.39536	65.92464	PAF(HC)
NS0139	110	112	NS	X139087	139087	1	G	W	28.67	36.43	3.01	0.903	0.7	0.145	3.2	0.26	0.041	0.228	0.339	0.007	0.75	12.94	0.42	14.11	20725	6.9768	4.53492	2.44188	PAF(LC)
NS0139	30	32	NS	X139047	139047	1	G	D	32.02	47.57	3.88	0.0516	0.04	0.164	0.04	0.04	0.018	0.009	0.01	0.032	0.88	1.22	0.06	2.16	20685	0.2754	0.69768	-0.42228	NAF
NS0139	32	34	NS	X139048	139048	1	G	D	34.5	45.01	3.16	0.1419	0.11	0.14	0.06	0.05	0.016	0.011	0.011	0.053	1.11	0.98	0.02	2.11	20686	0.3366	0.8721	-0.5355	NAF
NS0139	34	36	NS	X139049	139049	1	G	D	34.52	43.58	3.35	0.8772	0.68	0.152	0.08	0.05	0.041	0.008	0.074	0.026	1.09	1.17	0.04	2.3	20687	0.2448	0.8721	-0.6273	NAF
NS0139	40	42	NS	X139052	139052	1	G	D	34.68	43.27	3.36	0.5547	0.43	0.162	0.42	0.06	0.052	0.007	0.519	0.027	0.99	0.99	0.17	2.15	20690	0.2142	1.04652	-0.83232	NAF
NS0139	66	68	NS	X139065	139065	1	G	D	33.11	44.97	3.04	0.5934	0.46	0.145	0.61	0.1	0.099	0.025	0.581	0.04	1.32	0.9	0.26	2.48	20703	0.765	1.7442	-0.9792	NAF
NS0139	36	38	NS	X139050	139050	1	G	D	34.93	43	2.9	0.6837	0.53	0.142	0.32	0.07	0.054	0.007	0.398	0.038	1.2	0.91	0.1	2.21	20688	0.2142	1.22094	-1.00674	NAF
NS0139	44	46	NS	X139054	139054	1	G	D	33.76	41.84	2.87	0.6837	0.53	0.135	1.41	0.12	0.086	0.031	0.73	0.023	1.13	2.53	0.12	3.78	20692	0.9486	2.09304	-1.14444	NAF
NS0139	46	48	NS	X139055	139055	1	G	D	36.17	40.84	3.01	0.1935	0.15	0.143	0.5	0.1	0.179	0.011	0.72	0.031	1.35	0.88	0.16	2.39	20693	0.3366	1.7442	-1.4076	NAF
NS0139	58	60	NS	X139061	139061	1	G	D	33.25	43.77	3.02	0.645	0.5	0.147	0.85	0.1	0.057	0.005	1.1	0.036	1.66	0.81	0.08	2.55	20699	0.153	1.7442	-1.5912	NAF
NS0139	42	44	NS	X139053	139053	1	G	D	33.97	42.45	3.25	0.6321	0.49	0.159	0.73	0.12	0.108	0.007	0.995	0.03	1.33	0.87	0.14	2.34	20691	0.2142	2.09304	-1.87884	NAF
NS0139	38	40	NS	X139051	139051	1	G	D	34.1	42.08	3.51	0.9288	0.72	0.167	0.92	0.13	0.081	0.006	0.819	0.035	1.39	1.02	0.24	2.65	20689	0.1836	2.26746	-2.08386	NAF
NS0139	50	52	NS	X139057	139057	1	G	D	36.97	40.65	2.36	0.5676	0.44	0.122	0.55	0.14	0.114	0.005	0.894	0.034	1.03	0.58	0.03	1.64	20695	0.153	2.44188	-2.28888	NAF
NS0139	98	100	NS	X139081	139081	1	G	W	31.83	41.11	3.14	0.6192	0.48	0.15	2.45	0.27	0.05	0.071	0.387	0.016	0.29	6.15	-0.25	6.19	20719	2.1726	4.70934	-2.53674	NAF
NS0139	68	70	NS	X139066	139066	1	G	D	31.84	45.7	3.54	0.2193	0.17	0.172	1.47	0.28	0.125	0.071	0.862	0.022	0.39	1.38	-0.02	1.75	20704	2.1726	4.88376	-2.71116	NAF
NS0139	108	110	NS	X139086	139086	1	G	W	31.97	39.5	3.05	0.5934	0.46	0.143	2.37	0.3	0.074	0.077	0.376	0.018	0.67	7.12	0	7.79	20724	2.3562	5.2326	-2.8764	NAF
NS0139	106	108	NS	X139085	139085	1	G	W	29.48	38.99	3.37	0.6837	0.53	0.157	3.05	0.31	0.053	0.082	0.487	0.014	0.8	10.01	-0.06	10.75	20723	2.5092	5.40702	-2.89782	NAF
NS0139	78	80	NS	X139071	139071	1	G	D	33.98	41.01	2.6	0.5934	0.46	0.123	1.53	0.25	0.086	0.046	0.369	0.018	0.79	3.55	-0.2	4.14	20709	1.4076	4.3605	-2.9529	NAF
NS0139	76	78	NS	X139070	139070	1	G	D	35.02	41.62	2.59	0.5418	0.42	0.119	1.28	0.24	0.092	0.035	0.465	0.018	0.65	2.38	-0.2	2.83	20708	1.071	4.18608	-3.11508	NAF
NS0139	136	138	NS	X139101	139101	1	G	W	34.46	41.8	2.64	0.4257	0.33	0.126	1.28	0.26	0.114	0.041	0.563	0.023	0.89	2.56	-0.05	3.4	20738	1.2546	4.53492	-3.28032	NAF
NS0139	62	64	NS	X139063	139063	1	G	D	34.74	42.74	3.08	0.645	0.5	0.149	0.42	0.2	0.144	0.006	0.814	0.039	1.08	0.89	0.08	2.05	20701	0.1836	3.4884	-3.3048	NAF
NS0139	100	102	NS	X139082	139082	1	G	W	32.56	40.91	3.2	0.6321	0.49	0.144	2.16	0.31	0.074	0.064	0.419	0.026	0.48	5.2	-0.17	5.51	20720	1.9584	5.40702	-3.44862	NAF
NS0139	74	76	NS	X139069	139069	1	G	D	34.76	41.17	2.41	0.6192	0.48	0.112	1.52	0.27	0.08	0.038	0.453	0.019	0.28	3.3	-0.42	3.16	20707	1.1628	4.70934	-3.54654	NAF
NS0139	96	98	NS	X139080	139080	1	G	W	31.63	39.93	3.33	0.6063	0.47	0.156	2.97	0.36	0.054	0.084	0.496	0.028	0.37	6.73	-0.21	6.89	20718	2.5704	6.27912	-3.70872	NAF
NS0139	88	90	NS	X139076	139076	1	G	W	26.78	43.48	5.65	0.4515	0.35	0.281	3.45	0.68	0.186	0.247	1.43	0.044	0.27	4.96	0.29	5.52	20714	7.5582	11.86056	-4.30236	NAF
NS0139	112	114	NS	X139088	139088	1	G	W	31.75	39.71	2.84	0.6579	0.51	0.135	2.46	0.34	0.073	0.048	0.498	0.026	0.55	7.56	-0.23	7.88	20726	1.4688	5.93028	-4.46148	NAF
NS0139	92	94	NS	X139078	139078	1	G	W	27.02	44.21	5.36	0.4128	0.32	0.251	3.39	0.6	0.072	0.196	1.2	0.031	0.35	4.61	0.23	5.19	20716	5.9976	10.4652	-4.4676	NAF
NS0139	48	50	NS	X139056	139056	1	G	D	35.85	41.4	2.36	0.6966	0.54	0.124	0.59	0.28	0.129	0.005	1.03	0.037	1.26	0.54	0.06	1.86	20694	0.153	4.88376	-4.73076	NAF
NS0139	64	66	NS	X139064	139064	1	G	D	34.07	42.81	2.89	0.9933	0.77	0.135	0.65	0.31	0.178	0.005	0.601	0.039	1.45	0.99	0.11	2.55	20702	0.153	5.40702	-5.25402	NAF
NS0139	52	54	NS	X139058	139058	1	G	D	33.76	42.51	2.83	0.5418	0.42	0.144	1	0.32	0.13	0.005	0.895	0.031	1.6	0.84	0.21	2.65	20696	0.153	5.58144	-5.42844	NAF
NS0139	102	104	NS	X139083	139083	1	G	W	32.13	41.37	3.04	0.6321	0.49	0.149	2.22	0.42	0.093	0.059	0.431	0.025	0.45	5.41	-0.17	5.69	20721	1.8054	7.32564	-5.52024	NAF
NS0139	248	250	NS	X139158	139158	1	G	W	21.77	45.85	5.41	0.4644	0.36	0.22	3.87	0.65	0.076	0.186	0.106	0.034	0.87	10.66	0.42	11.95	20794	5.6916	11.3373	-5.6457	NAF
NS0139	80	82	NS	X139072	139072	1	G	D	32.3	40.63	3.01	0.7353	0.57	0.143	2.23	0.44	0.118	0.062	0.521	0.023	0.47	5.56	-0.27	5.76	20710	1.8972	7.67448	-5.77728	NAF
NS0139	54	56	NS	X139059	139059	1	G	D	33.28	43.44	3.03	0.4386	0.34	0.146	0.84	0.36	0.144	0.005	1.24	0.037	1.55	0.72	0.1	2.37	20697	0.153	6.27912	-6.12612	NAF
NS0139	72	74	NS	X139068	139068	1	G	D	33.43	41.21	2.7	0.6837	0.53	0.123	1.96	0.44	0.114	0.045	0.589	0.026	0.28	4.47	-0.46	4.29	20706	1.377	7.67448	-6.29748	NAF
NS0139	70	72	NS	X139067	139067	1	G	D	32.65	40.07	3.44	0.903	0.7	0.158	2.3	0.47	0.084	0.059	0.986	0.034	0.32	4.88	-0.33	4.87	20705	1.8054	8.19774	-6.39234	NAF
NS0139	134	136	NS	X139100	139100	1	G	W	32.49	41.1	2.84	0.774	0.6	0.137	1.92	0.48	0.103	0.058	0.856	0.032	0.31	5.2	-0.27	5.24	20737	1.7748	8.37216	-6.59736	NAF
NS0139	82	84	NS	X139073	139073	1	G	W	29.26	43.77	4.02	0.5418	0.42	0.19	2.72	0.6	0.086	0.12	0.968	0.028	0.34	4.43	0.03	4.8	20711	3.672	10.4652	-6.7932	NAF
NS0139	138	140	NS	X139102	139102	1	G	W	33.41	40.79	2.86	0.5547	0.43	0.135	1.7	0.5	0.146	0.05	0.708	0.021	0.69	3.92	-0.09	4.52	20739	1.53	8.721	-7.191	NAF
NS0139	90	92	NS	X139077	139077	1	G	W	26.8	43.16	5.14	0.5289	0.41	0.237	3.55	0.81	0.186	0.208	1.15	0.049	0.39	5.66	0.27	6.32	20715	6.3648	14.12802	-7.76322	NAF
NS0139	60	62	NS	X139062	139062	1	G	D	28.92	46.32	4.69	0.6063	0.47	0.225	1.56	0.46	0.165	0.005	1.5	0.057	1.41	1.24	0.13	2.78	20700	0.153	8.02332	-7.87032	NAF
NS0139	94	96	NS	X139079	139079	1	G	W	27.29	40.72	4.52	0.5934	0.46	0.217	3.89	1.01	0.139	0.28	0.965	0.03	0.42	7.06	0.55	8.03	20717	8.568	17.61642	-9.04842	NAF
NS0139	120	122	NS	X139093	139093	1	G	W	31.54	40.43	2.85	0.5676	0.44	0.137	2.7	0.7	0.088	0.087	0.522	0.057	0.46	6.4	-0.2	6.66	20730	2.6622	12.2094	-9.5472	NAF
NS0139	56	58	NS	X139060	139060	1	G	D	34.01	41.75	2.97	0.645	0.5	0.145	0.86	0.56	0.223	0.005	1.09	0.039	1.63	0.78	0.08	2.49	20698	0.153	9.76752	-9.61452	NAF
NS0139	146	148	NS	X139106	139106	1	G	W	32.33	39.18	3.19	0.4644	0.36	0.157	2.46	1.31	0.103	0.419	1.25	0.039	0.15	3.86	0.53	4.54	20743	12.8214	22.84902	-10.02762	NAF
NS0139	144	146	NS	X139105	139105	1	G	W	29.76	44.99	3.15	0.4902	0.38	0.147	2.12	0.69	0.114	0.063	1.24	0.037	0.32	4.35	-0.2	4.47	20742	1.9278	12.03498	-10.10718	NAF
NS0139	228	230	NS	X139147	139147	1	G	W	24.4	46.68	4.28	0.3741	0.29	0.173	3.14	0.78	0.071	0.084	0.609	0.102	1.01	7.37	0.26	8.64	20784	2.5704	13.60476	-11.03436	NAF
NS0139	104	106	NS	X139084	139084	1	G	W	31.66	39.69	2.86	0.6708	0.52	0.135	2.58	0.74	0.104	0.051	0.448	0.03	0.36	7.11	-0.25	7.22	20722	1.5606	12.90708	-11.34648	NAF
NS0139	118	120	NS	X139092	139092	1	G	W	29.83	42.09	3.33	0.516	0.4	0.155	2.62	0.8	0.076	0.071	0.799	0.053	0.42	6.14	-0.14	6.42	20729	2.1726	13.9536	-11.781	NAF
NS0139	246	248	NS	X139157	139157	1	G	W	23.7	43.94	3.73	0.4257	0.33	0.152	3.3	0.88	0.092	0.083	0.24	0.049	1.17	11.89	0.25	13.31	20793	2.5398	15.34896	-12.80916	NAF
NS0139	84	86	NS	X139074	139074	1	G	W	30.77	42.28	4.04	0.3741	0.29	0.193	2.88	0.87	0.039	0.072	0.89	0.039	0.35	3.77	0.23	4.35	20712	2.2032	15.17454	-12.97134	NAF
NS0139	188	190	NS	X139127	139127	1	G	W	25.09	42.72	4.41	0.5547	0.43	0.186	3.62	1.8	0.102	0.537	1.02	0.115	0.56	6.4	1.38	8.34	20764	16.4322	31.3956	-14.9634	NAF
NS0139	160	162	NS	X139113	139113	1	G	W	29.08	43.65	3.82	0.4773	0.37	0.175	2.32	0.99	0.202	0.075	1.69	0.057	0.25	4.53	-0.17	4.61	20750	2.295	17.26758	-14.97258	NAF
NS0139	224	226	NS	X139145	139145	1	G	W	24.21	44.79	4.28	0.4257	0.33	0.174	3.73	1.23	0.062	0.123	0.711	0.111	0.91	7.48	0.79	9.18	20782	3.7638	21.45366	-17.68986	NAF
NS0139	208	210	NS	X139137	139137	1	G	W	23.18	46.13	3.93	0.3612	0.28	0.16	3.54	1.82	0.112	0.417	0.469	0.158	0.78	6.9	1.3	8.98	20774	12.7602	31.74444	-18.98424	NAF
NS0139	124	126	NS	X139095	139095	1	G	W	31.34	40.83	3.11	0.516	0.4	0.144	2.54	1.25	0.091	0.083	0.982	0.04	0.24	4.58	0.29	5.11	20732	2.5398	21.8025	-19.2627	NAF
NS0139	132	134	NS	X139099	139099	1	G	W	30.69	41.05	3.46	0.5547	0.43	0.171	2.49	1.38	0.177	0.122	1.24	0.053	0.25	4.41	0.18	4.84	20736	3.7332	24.06996	-20.33676	NAF
NS0139	154	156	NS	X139110	139110	1	G	W	28.64	42.06	4.43	0.4386	0.34	0.201	2.73	1.39	0.042	0.123	1.98	0.046	0.26	4.44	0.53	5.23	20747	3.7638	24.24438	-20.48058	NAF
NS0139	198	200	NS	X139132	139132	1	G	W	27.61	42.24	3.75	0.3999	0.31	0.156	3.29	1.45	0.144	0.138	0.78	0.135	0.68	6.34	0.59	7.61	20769	4.2228	25.2909	-21.0681	NAF
NS0139	142	144	NS	X139104	139104	1	G	W	31.34	42.34	2.7	0.4902	0.38	0.124	2.33	1.29	0.096	0.046	0.907	0.03	0.26	4.36	0.33	4.95	20741	1.4076	22.50018	-21.09258	NAF
NS0139	148	150	NS	X139107	139107	1	G	W	29.52	42.39	3.9	0.4644	0.36	0.181	2.63	1.39	0.11	0.099	1.46	0.04	0.19	4.32	0.41	4.92	20744	3.0294	24.24438	-21.21498	NAF
NS0139	184	186	NS	X139125	139125	1	G	W	25.67	47.32	3.64	0.3741	0.29	0.158	2.81	1.65	0.088	0.215	0.838	0.073	0.4	4.12	0.89	5.41	20762	6.579	28.7793	-22.2003	NAF
NS0139	192	194	NS	X139129	139129	1	G	W	27.64	43.8	3.01	0.3999	0.31	0.127	3.05	1.54	0.099	0.133	0.522	0.096	0.53	5.67	0.79	6.99	20766	4.0698	26.86068	-22.79088	NAF
NS0139	152	154	NS	X139109	139109	1	G	W	30.22	41.18	3.84	0.4644	0.36	0.176	2.66	1.44	0.094	0.07	1.38	0.045	0.29	4.47	0.39	5.15	20746	2.142	25.11648	-22.97448	NAF
NS0139	222	224	NS	X139144	139144	1	G	W	22.43	48.02	4.55	0.2967	0.23	0.189	3.8	1.56	0.108	0.123	0.695	0.12	0.84	6.17	0.97	7.98	20781	3.7638	27.20952	-23.44572	NAF
NS0139	212	214	NS	X139139	139139	1	G	W	23.94	43.62	3.27	0.3741	0.29	0.138	3.36	2.14	0.085	0.436	0.557	0.175	0.93	8.16	1.51	10.6	20776	13.3416	37.32588	-23.98428	NAF
NS0139	156	158	NS	X139111	139111	1	G	W	27.76	42.57	4.4	0.4773	0.37	0.203	2.81	1.57	0.079	0.111	2.2	0.08	0.35	4.79	0.69	5.83	20748	3.3966	27.38394	-23.98734	NAF
NS0139	238	240	NS	X139153	139153	1	G	W	18.77	53	3.31	0.3741	0.29	0.136	3.06	1.83	0.069	0.25	0.509	0.146	0.93	7.98	1.24	10.15	20789	7.65	31.91886	-24.26886	NAF
NS0139	166	168	NS	X139116	139116	1	G	W	21.6	45.9	5.6	0.5031	0.39	0.229	3.89	2	0.095	0.311	1.9	0.083	0.39	5.89	1.32	7.6	20753	9.5166	34.884	-25.3674	NAF
NS0139	196	198	NS	X139131	139131	1	G	W	29.65	41.68	3.1	0.3483	0.27	0.136	2.97	1.78	0.105	0.161	0.419	0.096	0.54	4.97	0.92	6.43	20768	4.9266	31.04676	-26.12016	NAF
NS0139	162	164	NS	X139114	139114	1	G	W	30.49	41.22	3.07	0.5289	0.41	0.136	2.47	1.69	0.124	0.083	1.27	0.059	0.32	4.76	0.5	5.58	20751	2.5398	29.47698	-26.93718	NAF
NS0139	122	124	NS	X139094	139094	1	G	W	29.5	41.72	3.42	0.5031	0.39	0.164	2.94	1.68	0.057	0.073	0.878	0.051	0.36	5.1	0.84	6.3	20731	2.2338	29.30256	-27.06876	NAF
NS0139	200	202	NS	X139133	139133	1	G	W	30.6	41.42	2.7	0.3612	0.28	0.113	2.64	1.73	0.18	0.084	0.412	0.12	0.59	5.24	0.54	6.37	20770	2.5704	30.17466	-27.60426	NAF
NS0139	170	172	NS	X139118	139118	1	G	W	32.53	41.45	2.61	0.3741	0.29	0.116	2.2	1.66	0.085	0.037	0.896	0.047	0.16	3.29	0.72	4.17	20755	1.1322	28.95372	-27.82152	NAF
NS0139	244	246	NS	X139156	139156	1	G	W	23.64	42.89	4.1	0.3999	0.31	0.169	3.59	1.7	0.119	0.055	0.45	0.087	0.88	10.18	0.95	12.01	20792	1.683	29.6514	-27.9684	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0139	230	232	NS	X139148	139148	1	G	W	22.33	45.96	4.61	0.3354	0.26	0.185	3.6	1.85	0.061	0.111	0.518	0.096	0.85	7.93	1.48	10.26	20785	3.3966	32.2677	-28.8711	NAF
NS0139	226	228	NS	X139146	139146	1	G	W	23.77	45.8	4.03	0.3999	0.31	0.159	3.46	1.79	0.06	0.062	0.67	0.103	0.85	6.58	1.39	8.82	20783	1.8972	31.22118	-29.32398	NAF
NS0139	206	208	NS	X139136	139136	1	G	W	26.15	43.24	3.65	0.3354	0.26	0.151	3.33	2.13	0.109	0.222	0.469	0.153	0.79	6.44	1.33	8.56	20773	6.7932	37.15146	-30.35826	NAC
NS0139	158	160	NS	X139112	139112	1	G	W	26.94	44.6	3.9	0.4257	0.33	0.17	2.56	1.88	0.146	0.078	1.92	0.047	0.28	4.09	0.81	5.18	20749	2.3868	32.79096	-30.40416	NAC
NS0139	150	152	NS	X139108	139108	1	G	W	29.31	39.39	3.97	0.5805	0.45	0.187	2.71	2.28	0.239	0.3	1.79	0.067	0.26	4.65	0.9	5.81	20745	9.18	39.76776	-30.58776	NAC
NS0139	164	166	NS	X139115	139115	1	G	W	27.47	47.29	2.41	0.4257	0.33	0.107	2.17	1.92	0.073	0.092	0.86	0.042	0.18	3.97	0.98	5.13	20752	2.8152	33.48864	-30.67344	NAC
NS0139	220	222	NS	X139143	139143	1	G	W	20.72	47.9	5.23	0.3096	0.24	0.215	4.35	2	0.069	0.134	0.736	0.152	0.97	6.28	1.59	8.84	20780	4.1004	34.884	-30.7836	NAC
NS0139	240	242	NS	X139154	139154	1	G	W	22.96	42.92	4.51	0.4644	0.36	0.184	3.99	2.03	0.101	0.11	0.506	0.125	0.94	9.39	1.42	11.75	20790	3.366	35.40726	-32.04126	NAC
NS0139	86	88	NS	X139075	139075	1	G	W	32.34	39.69	2.35	0.5547	0.43	0.116	2.48	1.92	0.173	0.046	0.454	0.028	0.31	4.78	0.81	5.9	20713	1.4076	33.48864	-32.08104	NAC
NS0139	210	212	NS	X139138	139138	1	G	W	22.99	45.04	3.51	0.387	0.3	0.142	3.65	2.07	0.108	0.12	0.62	0.182	0.94	8.39	1.49	10.82	20775	3.672	36.10494	-32.43294	NAC
NS0139	204	206	NS	X139135	139135	1	G	W	25.58	46.27	3.01	0.2967	0.23	0.128	2.84	2.31	0.13	0.235	0.358	0.116	0.54	5.12	1.41	7.07	20772	7.191	40.29102	-33.10002	NAC
NS0139	250	252	NS	X139159	139159	1	G	W	18.61	49.75	6.73	0.387	0.3	0.282	4.28	2.24	0.083	0.157	0.135	0.033	0.6	6.93	1.61	9.14	20795	4.8042	39.07008	-34.26588	NAC
NS0139	168	170	NS	X139117	139117	1	G	W	29.67	44.4	2.26	0.3999	0.31	0.1	2.21	2.15	0.057	0.082	0.704	0.053	0.19	3.52	1.21	4.92	20754	2.5092	37.5003	-34.9911	NAC
NS0139	178	180	NS	X139122	139122	1	G	W	31.42	42.17	2.6	0.3741	0.29	0.115	2.28	2.11	0.026	0.043	0.805	0.043	0.18	2.8	1.57	4.55	20759	1.3158	36.80262	-35.48682	NAC
NS0139	218	220	NS	X139142	139142	1	G	W	21.83	43.55	6.13	0.3225	0.25	0.252	4.78	2.59	0.051	0.302	0.649	0.16	0.77	6.31	2.43	9.51	20779	9.2412	45.17478	-35.93358	NAC
NS0139	130	132	NS	X139098	139098	1	G	W	30.7	40.02	2.79	0.6192	0.48	0.13	2.87	2.19	0.091	0.074	0.845	0.028	0.25	4.92	1.33	6.5	20735	2.2644	38.19798	-35.93358	NAC
NS0139	180	182	NS	X139123	139123	1	G	W	30.72	40.97	2.79	0.4644	0.36	0.125	2.49	2.18	0.092	0.054	0.846	0.053	0.28	3.82	1.48	5.58	20760	1.6524	38.02356	-36.37116	NAC
NS0139	186	188	NS	X139126	139126	1	G	W	30.51	40.83	2.86	0.4257	0.33	0.124	2.53	2.19	0.09	0.056	0.665	0.073	0.33	3.97	1.51	5.81	20763	1.7136	38.19798	-36.48438	NAC
NS0139	236	238	NS	X139152	139152	1	G	W	20.94	46.15	4.81	0.4515	0.35	0.194	3.97	2.35	0.102	0.135	0.78	0.191	1.02	7.61	1.8	10.43	20788	4.131	40.9887	-36.8577	NAC
NS0139	194	196	NS	X139130	139130	1	G	W	27.94	44.7	2.59	0.3354	0.26	0.107	2.72	2.28	0.079	0.051	0.418	0.092	0.39	4.28	1.81	6.48	20767	1.5606	39.76776	-38.20716	NAC
NS0139	126	128	NS	X139096	139096	1	G	W	29.67	40.81	3.22	0.5418	0.42	0.155	2.93	2.41	0.157	0.115	0.986	0.046	0.26	4.38	1.36	6	20733	3.519	42.03522	-38.51622	NAC
NS0139	174	176	NS	X139120	139120	1	G	W	28.32	42.48	3.53	0.4257	0.33	0.156	2.83	2.45	0.193	0.113	1.05	0.069	0.27	3.98	1.23	5.48	20757	3.4578	42.7329	-39.2751	NAC
NS0139	242	244	NS	X139155	139155	1	G	W	23.86	44.7	3.58	0.2967	0.23	0.153	3.15	2.36	0.115	0.047	0.491	0.106	0.79	7.97	1.65	10.41	20791	1.4382	41.16312	-39.72492	NAC
NS0139	128	130	NS	X139097	139097	1	G	W	28.86	40.49	3.58	0.5547	0.43	0.164	3.32	2.5	0.124	0.124	1.05	0.055	0.29	4.7	1.64	6.63	20734	3.7944	43.605	-39.8106	NAC
NS0139	190	192	NS	X139128	139128	1	G	W	30.14	40.96	2.7	0.3999	0.31	0.12	2.67	2.53	0.117	0.083	0.477	0.085	0.38	4.12	1.79	6.29	20765	2.5398	44.12826	-41.58846	NAC
NS0139	202	204	NS	X139134	139134	1	G	W	30.4	39.88	2.5	0.3741	0.29	0.103	2.58	2.55	0.14	0.064	0.368	0.102	0.47	4.94	1.73	7.14	20771	1.9584	44.4771	-42.5187	NAC
NS0139	172	174	NS	X139119	139119	1	G	W	30.47	41.09	2.79	0.3612	0.28	0.119	2.6	2.65	0.099	0.079	0.986	0.079	0.24	3.12	1.76	5.12	20756	2.4174	46.2213	-43.8039	NAC
NS0139	232	234	NS	X139150	139150	1	G	W	21.37	43.15	6.55	0.3483	0.27	0.264	4.59	2.83	0.08	0.152	0.634	0.122	0.9	6.78	2.53	10.21	20786	4.6512	49.36086	-44.70966	NAC
NS0139	214	216	NS	X139140	139140	1	G	W	21.73	44.98	2.86	0.4257	0.33	0.118	3.25	3.42	0.101	0.483	0.544	0.172	0.8	7.95	2.58	11.33	20777	14.7798	59.65164	-44.87184	NAC
NS0139	140	142	NS	X139103	139103	1	G	W	25.89	43.57	3.06	0.6063	0.47	0.143	3.01	2.9	0.12	0.077	1.06	0.029	0.32	5.32	2.23	7.87	20740	2.3562	50.5818	-48.2256	NAC
NS0139	216	218	NS	X139141	139141	1	G	W	23.57	41.14	3.29	0.4515	0.35	0.133	3.68	3.25	0.089	0.274	0.62	0.179	0.92	8.6	2.65	12.17	20778	8.3844	56.6865	-48.3021	NAC
NS0139	176	178	NS	X139121	139121	1	G	W	30.87	40.81	2.27	0.4773	0.37	0.103	2.36	3.01	0.069	0.04	0.715	0.051	0.23	3.16	2.45	5.84	20758	1.224	52.50042	-51.27642	NAC
NS0139	182	184	NS	X139124	139124	1	G	W	25.98	42.13	3.84	0.5418	0.42	0.165	3.17	3.39	0.21	0.106	1.2	0.1	0.42	4.69	2.51	7.62	20761	3.2436	59.12838	-55.88478	NAC
NS0139	234	236	NS	X139151	139151	1	G	W	21.37	43.22	5.18	0.4128	0.32	0.215	4.07	3.45	0.133	0.111	0.711	0.164	1.09	7.14	2.85	11.08	20787	3.3966	60.1749	-56.7783	NAC
NS0140	28	30	NS	X139174	139174	1	G	D	20.04	48.26	12.93	0.0258	0.02	0.507	0.81	0.02	0.03	4.29	0.029	0.015	1.28	6.49	0.82	8.59	20810	131.274	0.34884	130.92516	PAF(HC)
NS0140	26	28	NS	X139173	139173	1	G	D	5	59.56	21.68	0.00645	0.005	0.837	0.41	0.01	0.01	3.04	0.033	0.02	0.65	8.74	0.77	10.16	20809	93.024	0.17442	92.84958	PAF(HC)
NS0140	24	26	NS	X139172	139172	1	G	D	19.57	49.04	14.15	0.00645	0.005	0.591	0.06	0.01	0.014	2.38	0.102	0.027	1.03	6.03	0.81	7.87	20808	72.828	0.17442	72.65358	PAF(HC)
NS0140	70	72	NS	X139195	139195	1	G	D	22.15	45.19	5.07	0.6708	0.52	0.237	2.35	0.29	0.048	1.3	1.53	0.008	0.99	9.15	2.52	12.66	20831	39.78	5.05818	34.72182	PAF(HC)
NS0140	76	78	NS	X139198	139198	1	G	D	22.85	50.23	4.66	0.3096	0.24	0.217	1.73	0.21	0.061	0.338	1.5	0.007	1.48	5.8	0.88	8.16	20834	10.3428	3.66282	6.67998	PAF(LC)
NS0140	66	68	NS	X139193	139193	1	G	D	26.8	47.46	4.88	0.645	0.5	0.236	0.36	0.08	0.04	0.234	2.21	0.018	4.13	0.69	0.72	5.54	20829	7.1604	1.39536	5.76504	PAF(LC)
NS0140	58	60	NS	X139189	139189	1	G	D	25.53	52.29	3.42	0.2967	0.23	0.156	1.15	0.14	0.07	0.14	0.993	0.01	0.89	3.49	0.38	4.76	20825	4.284	2.44188	1.84212	PAF(LC)
NS0140	72	74	NS	X139196	139196	1	G	D	21.38	47.72	4.28	0.4515	0.35	0.192	2.54	0.24	0.032	0.193	1.34	0.027	1.36	10.53	0.59	12.48	20832	5.9058	4.18608	1.71972	PAF(LC)
NS0140	56	58	NS	X139188	139188	1	G	D	26.63	53.41	3.16	0.1548	0.12	0.146	0.51	0.08	0.048	0.087	1.01	0.017	1.14	1.72	0.36	3.22	20824	2.6622	1.39536	1.26684	PAF(LC)
NS0140	22	24	NS	X139171	139171	1	G	D	19	63.33	4.6	0.0258	0.02	0.126	0.04	0.03	0.075	0.056	0.021	0.004	2.63	1.42	0.33	4.38	20807	1.7136	0.52326	1.19034	PAF(LC)
NS0140	40	42	NS	X139180	139180	1	G	D	36.89	41.72	1.97	0.3483	0.27	0.087	0.36	0.06	0.05	0.053	0.351	0.002	0.78	1.02	0.28	2.08	20816	1.6218	1.04652	0.57528	PAF(LC)
NS0140	30	32	NS	X139175	139175	1	G	D	28	55.49	1.34	0.0258	0.02	0.05	0.02	0.02	0.064	0.021	0.017	0.012	2.03	0.47	0.22	2.72	20811	0.6426	0.34884	0.29376	PAF(LC)
NS0140	74	76	NS	X139197	139197	1	G	D	24.98	45.59	4.23	0.3999	0.31	0.195	2.01	0.28	0.065	0.163	1.36	0.006	1.11	8.41	0.4	9.92	20833	4.9878	4.88376	0.10404	PAF(LC)
NS0140	32	34	NS	X139176	139176	1	G	D	28.26	55.58	1.28	0.0258	0.02	0.051	0.02	0.02	0.092	0.012	0.011	0.006	1.75	0.46	0.12	2.33	20812	0.3672	0.34884	0.01836	PAF(LC)
NS0140	20	22	NS	X139170	139170	1	G	D	12.36	74.96	3.81	0.0258	0.02	0.152	0.03	0.03	0.04	0.016	0.011	0.013	1.82	1.14	0.19	3.15	20806	0.4896	0.52326	-0.03366	NAF
NS0140	18	20	NS	X139169	139169	1	G	D	20.53	64.83	2.84	0.00645	0.005	0.141	0.03	0.03	0.028	0.015	0.009	0.017	1.59	0.84	0.15	2.58	20805	0.459	0.52326	-0.06426	NAF
NS0140	12	14	NS	X139166	139166	1	G	D	23.88	62.61	1.61	0.00645	0.005	0.068	0.02	0.02	0.032	0.004	0.01	0.02	0.73	0.53	0.12	1.38	20802	0.1224	0.34884	-0.22644	NAF
NS0140	14	16	NS	X139167	139167	1	G	D	23.58	63.66	1.24	0.00645	0.005	0.054	0.02	0.02	0.028	0.004	0.011	0.011	0.62	0.38	0.09	1.09	20803	0.1224	0.34884	-0.22644	NAF
NS0140	8	10	NS	X139164	139164	1	G	D	22.01	59.69	3.29	0.0258	0.02	0.123	0.05	0.04	0.055	0.014	0.011	0.012	3.79	1.08	0.17	5.04	20800	0.4284	0.69768	-0.26928	NAF
NS0140	62	64	NS	X139191	139191	1	G	D	34.11	42.64	2.99	0.3999	0.31	0.138	0.1	0.04	0.135	0.014	0.061	0.008	3.1	1.15	0.22	4.47	20827	0.4284	0.69768	-0.26928	NAF
NS0140	10	12	NS	X139165	139165	1	G	D	19.72	68.13	1.83	0.0258	0.02	0.083	0.04	0.03	0.019	0.007	0.012	0.01	0.87	0.57	0.1	1.54	20801	0.2142	0.52326	-0.30906	NAF
NS0140	68	70	NS	X139194	139194	1	G	D	28.03	54.47	1.66	0.2709	0.21	0.076	0.16	0.06	0.06	0.024	0.467	0.016	1.76	0.57	0.18	2.51	20830	0.7344	1.04652	-0.31212	NAF
NS0140	92	94	NS	X139206	139206	1	G	W	32	43.87	3.44	0.3354	0.26	0.162	0.74	0.14	0.139	0.068	0.155	0.011	1.68	3.01	0.28	4.97	20842	2.0808	2.44188	-0.36108	NAF
NS0140	16	18	NS	X139168	139168	1	G	D	22.53	64.39	1.84	0.00645	0.005	0.076	0.03	0.03	0.02	0.005	0.01	0.019	0.59	0.58	0.12	1.29	20804	0.153	0.52326	-0.37026	NAF
NS0140	38	40	NS	X139179	139179	1	G	D	35.43	43.81	1.85	0.5031	0.39	0.079	0.17	0.08	0.089	0.033	0.22	0.018	1.45	0.64	0.24	2.33	20815	1.0098	1.39536	-0.38556	NAF
NS0140	64	66	NS	X139192	139192	1	G	D	29.13	51.92	2.26	0.3225	0.25	0.108	0.14	0.06	0.061	0.013	0.08	0.012	2.06	0.97	0.17	3.2	20828	0.3978	1.04652	-0.64872	NAF
NS0140	0	2	NS	X139160	139160	1	G	D	23.48	53.3	7.24	0.0258	0.02	0.255	0.09	0.06	0.015	0.011	0.076	0.026	2.8	2.16	0.24	5.2	20796	0.3366	1.04652	-0.70992	NAF
NS0140	34	36	NS	X139177	139177	1	G	D	29.54	50.89	2.44	0.3741	0.29	0.1	0.3	0.07	0.061	0.011	0.121	0.016	2.12	0.87	0.18	3.17	20813	0.3366	1.22094	-0.88434	NAF
NS0140	60	62	NS	X139190	139190	1	G	D	31.23	44.93	2.61	0.3354	0.26	0.125	0.98	0.17	0.098	0.062	0.46	0.005	1.07	4.13	0.2	5.4	20826	1.8972	2.96514	-1.06794	NAF
NS0140	2	4	NS	X139161	139161	1	G	D	22.7	59.34	4.05	0.00645	0.005	0.166	0.09	0.08	0.012	0.008	0.03	0.019	2.31	1.2	0.18	3.69	20797	0.2448	1.39536	-1.15056	NAF
NS0140	36	38	NS	X139178	139178	1	G	D	29.55	47.71	3.84	0.3354	0.26	0.155	0.66	0.13	0.057	0.023	0.191	0.021	2.89	1.35	0.26	4.5	20814	0.7038	2.26746	-1.56366	NAF
NS0140	42	44	NS	X139181	139181	1	G	D	31.27	44.4	1.99	0.6063	0.47	0.083	1.19	0.24	0.078	0.068	0.545	0.0005	0.8	4.97	0.13	5.9	20817	2.0808	4.18608	-2.10528	NAF
NS0140	6	8	NS	X139163	139163	1	G	D	20.92	59.5	5.25	0.0258	0.02	0.273	0.07	0.15	0.021	0.014	0.045	0.019	2.7	1.72	0.2	4.62	20799	0.4284	2.6163	-2.1879	NAF
NS0140	46	48	NS	X139183	139183	1	G	D	33.67	41.45	1.74	0.5418	0.42	0.078	1.34	0.23	0.088	0.055	0.647	0.003	0.88	4.34	0.24	5.46	20819	1.683	4.01166	-2.32866	NAF
NS0140	90	92	NS	X139205	139205	1	G	W	30.7	46.38	2.88	0.4515	0.35	0.134	0.75	0.2	0.126	0.036	0.124	0.007	1.9	2.73	0.19	4.82	20841	1.1016	3.4884	-2.3868	NAF
NS0140	48	50	NS	X139184	139184	1	G	D	31.86	45.55	1.56	0.4644	0.36	0.067	1.15	0.24	0.083	0.041	0.772	0.005	0.55	3.65	0.09	4.29	20820	1.2546	4.18608	-2.93148	NAF
NS0140	44	46	NS	X139182	139182	1	G	D	33.76	40.93	1.71	0.5934	0.46	0.073	1.44	0.3	0.084	0.07	0.677	0.002	0.54	5.09	0.06	5.69	20818	2.142	5.2326	-3.0906	NAF
NS0140	110	112	NS	X139215	139215	1	G	W	26.19	45.6	4.03	0.3741	0.29	0.192	2.93	0.54	0.094	0.195	0.792	0.093	0.63	6.62	0.36	7.61	20851	5.967	9.41868	-3.45168	NAF
NS0140	50	52	NS	X139185	139185	1	G	D	30.58	45.37	2.01	0.4902	0.38	0.093	1.61	0.32	0.085	0.068	0.736	0.009	0.37	4.92	0.02	5.31	20821	2.0808	5.58144	-3.50064	NAF
NS0140	78	80	NS	X139199	139199	1	G	D	27.73	45.87	2.99	0.3999	0.31	0.134	2.01	0.38	0.021	0.095	0.677	0.012	0.6	7.14	0.03	7.77	20835	2.907	6.62796	-3.72096	NAF
NS0140	94	96	NS	X139207	139207	1	G	W	26.96	45.98	3.74	0.3354	0.26	0.174	2.41	0.46	0.105	0.138	0.431	0.033	0.92	6.15	0.23	7.3	20843	4.2228	8.02332	-3.80052	NAF
NS0140	80	82	NS	X139200	139200	1	G	D	27.93	41.31	3.88	0.4386	0.34	0.176	2.59	0.56	0.132	0.169	0.989	0.024	0.69	8.64	0.25	9.58	20836	5.1714	9.76752	-4.59612	NAF
NS0140	120	122	NS	X139220	139220	1	G	W	25.77	45.33	3.85	0.387	0.3	0.184	2.9	1.33	0.175	0.605	0.937	0.083	0.57	5.98	1.18	7.73	20856	18.513	23.19786	-4.68486	NAF
NS0140	84	86	NS	X139202	139202	1	G	W	27.67	43.83	3.19	0.4257	0.33	0.147	2.32	0.76	0.166	0.28	1.2	0.031	0.48	7.25	0.41	8.14	20838	8.568	13.25592	-4.68792	NAF
NS0140	170	172	NS	X139248	139248	1	G	W	25.64	43.2	4.41	0.5289	0.41	0.209	3	0.52	0.065	0.141	0.585	0.018	0.81	9.66	0.26	10.73	20881	4.3146	9.06984	-4.75524	NAF
NS0140	88	90	NS	X139204	139204	1	G	W	30.18	43.45	2.35	0.3483	0.27	0.106	1.85	0.43	0.125	0.074	0.178	0.012	0.93	6.74	0.03	7.7	20840	2.2644	7.50006	-5.23566	NAF
NS0140	82	84	NS	X139201	139201	1	G	W	26.75	43.42	3.64	0.4515	0.35	0.167	2.58	0.69	0.156	0.214	1.08	0.033	0.68	8.15	0.37	9.2	20837	6.5484	12.03498	-5.48658	NAF
NS0140	140	142	NS	X139230	139230	1	G	W	28	43.29	3.83	0.3741	0.29	0.183	2.75	0.57	0.053	0.142	0.805	0.079	0.59	6.58	0.2	7.37	20866	4.3452	9.94194	-5.59674	NAF
NS0140	116	118	NS	X139218	139218	1	G	W	25.75	45.41	3.69	0.4257	0.33	0.174	2.88	0.66	0.087	0.193	0.765	0.076	0.6	7.58	0.41	8.59	20854	5.9058	11.51172	-5.60592	NAF
NS0140	52	54	NS	X139186	139186	1	G	D	30.04	42.68	3.13	0.4644	0.36	0.141	2.05	0.53	0.141	0.117	1.23	0.06	0.64	5.53	0.11	6.28	20822	3.5802	9.24426	-5.66406	NAF
NS0140	86	88	NS	X139203	139203	1	G	W	28.95	42.92	3.15	0.3741	0.29	0.148	2.37	0.54	0.094	0.122	1.07	0.033	0.63	6.97	0.05	7.65	20839	3.7332	9.41868	-5.68548	NAF
NS0140	214	216	NS	X139270	139270	1	G	W	26.37	45.16	3.75	0.4257	0.33	0.177	2.57	0.53	0.123	0.116	1.23	0.062	0.65	7.07	0.15	7.87	20903	3.5496	9.24426	-5.69466	NAF
NS0140	112	114	NS	X139216	139216	1	G	W	27.97	44.02	3.85	0.3225	0.25	0.183	2.83	0.62	0.1	0.142	0.665	0.086	0.63	5.89	0.24	6.76	20852	4.3452	10.81404	-6.46884	NAF
NS0140	54	56	NS	X139187	139187	1	G	D	30.76	42.79	2.43	0.4644	0.36	0.113	1.59	0.51	0.157	0.059	0.785	0.007	0.97	5.88	0.01	6.86	20823	1.8054	8.89542	-7.09002	NAF
NS0140	216	218	NS	X139271	139271	1	G	W	28.28	42.07	3.69	0.4128	0.32	0.182	2.77	0.7	0.099	0.132	1.07	0.057	0.68	7.16	0.17	8.01	20904	4.0392	12.2094	-8.1702	NAF
NS0140	168	170	NS	X139247	139247	1	G	W	25.27	44.93	4.22	0.4257	0.33	0.201	3.02	0.76	0.084	0.149	0.985	0.06	0.71	7.59	0.36	8.66	20880	4.5594	13.25592	-8.69652	NAF
NS0140	104	106	NS	X139212	139212	1	G	W	27.63	44.62	3.49	0.4128	0.32	0.164	2.72	0.74	0.108	0.13	0.6	0.076	0.53	6.61	0.16	7.3	20848	3.978	12.90708	-8.92908	NAF
NS0140	108	110	NS	X139214	139214	1	G	W	27.88	42.93	3.64	0.4128	0.32	0.17	2.89	0.83	0.164	0.157	0.705	0.108	0.74	6.89	0.26	7.89	20850	4.8042	14.47686	-9.67266	NAF
NS0140	222	224	NS	X139274	139274	1	G	W	27.45	43.73	3.78	0.3741	0.29	0.178	2.77	0.79	0.043	0.115	1.02	0.063	0.46	7	0.27	7.73	20907	3.519	13.77918	-10.26018	NAF
NS0140	138	140	NS	X139229	139229	1	G	W	27.1	44.01	4.13	0.3612	0.28	0.208	2.97	0.88	0.082	0.157	0.752	0.084	0.55	6.12	0.37	7.04	20865	4.8042	15.34896	-10.54476	NAF
NS0140	102	104	NS	X139211	139211	1	G	W	27.95	44.89	3.29	0.3612	0.28	0.156	2.57	0.8	0.093	0.111	0.445	0.059	0.58	6.38	0.11	7.07	20847	3.3966	13.9536	-10.557	NAF
NS0140	142	144	NS	X139231	139231	1	G	W	24.89	45.76	4.35	0.3999	0.31	0.205	3.04	0.87	0.153	0.142	0.951	0.098	0.73	7.22	0.29	8.24	20867	4.3452	15.17454	-10.82934	NAF
NS0140	248	250	NS	X139288	139288	1	G	W	26.58	44.71	4.11	0.3354	0.26	0.199	2.88	1.04	0.068	0.237	0.894	0.072	0.42	5.76	0.6	6.78	20920	7.2522	18.13968	-10.88748	NAF
NS0140	100	102	NS	X139210	139210	1	G	W	28.15	46.63	2.92	0.2838	0.22	0.14	2.34	0.83	0.056	0.095	0.305	0.054	0.66	5.08	0.2	5.94	20846	2.907	14.47686	-11.56986	NAF
NS0140	114	116	NS	X139217	139217	1	G	W	28.95	42.9	3.11	0.387	0.3	0.147	2.64	0.9	0.129	0.126	0.594	0.08	0.55	6.64	0.18	7.37	20853	3.8556	15.6978	-11.8422	NAF
NS0140	226	228	NS	X139276	139276	1	G	W	27.66	42.13	4.05	0.3741	0.29	0.188	3.21	1.01	0.083	0.188	0.838	0.087	0.62	6.97	0.56	8.15	20909	5.7528	17.61642	-11.86362	NAF
NS0140	158	160	NS	X139241	139241	1	G	W	23.74	45.72	5.23	0.3354	0.26	0.25	3.32	1.12	0.041	0.203	1.47	0.084	0.81	6.32	0.79	7.92	20875	6.2118	19.53504	-13.32324	NAF
NS0140	152	154	NS	X139238	139238	1	G	W	27.67	44.61	3.76	0.2838	0.22	0.18	2.65	0.98	0.04	0.111	1.06	0.082	0.55	5.62	0.42	6.59	20872	3.3966	17.09316	-13.69656	NAF
NS0140	178	180	NS	X139252	139252	1	G	W	24.23	46.81	4.85	0.3354	0.26	0.227	3.07	1.1	0.039	0.174	1.18	0.072	0.6	6.13	0.67	7.4	20885	5.3244	19.1862	-13.8618	NAF
NS0140	218	220	NS	X139272	139272	1	G	W	25.37	45.51	4.43	0.3354	0.26	0.215	3.04	1.05	0.095	0.14	1.18	0.077	0.57	6.41	0.51	7.49	20905	4.284	18.3141	-14.0301	NAF
NS0140	130	132	NS	X139225	139225	1	G	W	26.19	46.32	3.62	0.3354	0.26	0.17	2.69	1.44	0.091	0.349	0.81	0.082	0.48	5.22	0.95	6.65	20861	10.6794	25.11648	-14.43708	NAF
NS0140	144	146	NS	X139232	139232	1	G	W	25.68	46.12	4.16	0.3225	0.25	0.201	2.79	1.08	0.078	0.141	1.01	0.096	0.59	6.13	0.46	7.18	20868	4.3146	18.83736	-14.52276	NAF
NS0140	210	212	NS	X139268	139268	1	G	W	27.78	41.89	4.01	0.4128	0.32	0.192	2.95	1.08	0.088	0.14	1.1	0.092	0.66	7.09	0.42	8.17	20901	4.284	18.83736	-14.55336	NAF
NS0140	136	138	NS	X139228	139228	1	G	W	26.64	44.3	3.99	0.3225	0.25	0.19	3.08	1.53	0.089	0.39	0.682	0.094	0.53	5.51	0.98	7.02	20864	11.934	26.68626	-14.75226	NAF
NS0140	166	168	NS	X139246	139246	1	G	W	24.41	47.89	4.72	0.2838	0.22	0.224	2.87	1.12	0.051	0.156	1.19	0.05	0.59	5.22	0.62	6.43	20879	4.7736	19.53504	-14.76144	NAF
NS0140	96	98	NS	X139208	139208	1	G	W	28.9	44.25	3.02	0.2967	0.23	0.144	2.61	1.03	0.084	0.096	0.275	0.065	0.61	5.8	0.26	6.67	20844	2.9376	17.96526	-15.02766	NAF
NS0140	126	128	NS	X139223	139223	1	G	W	24.37	47.53	3.87	0.3354	0.26	0.185	2.72	1.41	0.113	0.3	0.967	0.067	0.54	5.6	0.8	6.94	20859	9.18	24.59322	-15.41322	NAF
NS0140	106	108	NS	X139213	139213	1	G	W	29.71	44.07	2.4	0.3741	0.29	0.116	2.29	1.07	0.072	0.104	0.285	0.052	0.47	5.8	0.26	6.53	20849	3.1824	18.66294	-15.48054	NAF
NS0140	4	6	NS	X139162	139162	1	G	D	16.19	64.73	5.52	0.0258	0.02	0.253	0.24	0.94	0.012	0.013	0.026	0.024	2.52	2.03	0.43	4.98	20798	0.3978	16.39548	-15.99768	NAF
NS0140	212	214	NS	X139269	139269	1	G	W	27.57	41.37	3.66	0.5031	0.39	0.174	2.88	1.16	0.123	0.132	1.22	0.076	0.68	7.77	0.35	8.8	20902	4.0392	20.23272	-16.19352	NAF
NS0140	182	184	NS	X139254	139254	1	G	W	24.76	44.3	4.69	0.4386	0.34	0.222	3.27	1.21	0.087	0.153	1.12	0.113	0.7	7.53	0.63	8.86	20887	4.6818	21.10482	-16.42302	NAF
NS0140	180	182	NS	X139253	139253	1	G	W	26.46	43.86	4.09	0.3999	0.31	0.192	2.88	1.13	0.07	0.107	1.06	0.097	0.66	6.94	0.5	8.1	20886	3.2742	19.70946	-16.43526	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0140	122	124	NS	X139221	139221	1	G	W	23.85	46.22	3.6	0.3483	0.27	0.17	2.85	2.51	0.138	0.891	0.839	0.066	0.47	5.04	1.87	7.38	20857	27.2646	43.77942	-16.51482	NAF
NS0140	118	120	NS	X139219	139219	1	G	W	26	47.08	3.25	0.3741	0.29	0.153	2.55	1.16	0.123	0.114	0.698	0.072	0.53	6.12	0.31	6.96	20855	3.4884	20.23272	-16.74432	NAF
NS0140	124	126	NS	X139222	139222	1	G	W	24.36	49.77	3.8	0.2838	0.22	0.18	2.69	1.18	0.041	0.121	0.752	0.061	0.57	4.87	0.58	6.02	20858	3.7026	20.58156	-16.87896	NAF
NS0140	98	100	NS	X139209	139209	1	G	W	28.45	44.92	2.69	0.3225	0.25	0.123	2.52	1.13	0.102	0.091	0.212	0.052	0.54	6.2	0.27	7.01	20845	2.7846	19.70946	-16.92486	NAF
NS0140	208	210	NS	X139267	139267	1	G	W	26.95	43.12	3.69	0.4257	0.33	0.172	2.93	1.16	0.095	0.106	0.977	0.1	0.61	7.39	0.45	8.45	20900	3.2436	20.23272	-16.98912	NAF
NS0140	128	130	NS	X139224	139224	1	G	W	25.31	47.3	3.42	0.3096	0.24	0.17	2.63	1.4	0.102	0.237	0.804	0.087	0.48	5.46	0.68	6.62	20860	7.2522	24.4188	-17.1666	NAF
NS0140	184	186	NS	X139255	139255	1	G	W	25.94	46.44	4.21	0.2967	0.23	0.2	2.76	1.2	0.027	0.12	0.982	0.074	0.45	5.43	0.64	6.52	20888	3.672	20.9304	-17.2584	NAF
NS0140	242	244	NS	X139285	139285	1	G	W	27.47	44.56	3.77	0.2967	0.23	0.19	2.9	1.39	0.088	0.222	0.636	0.068	0.43	5.38	0.73	6.54	20917	6.7932	24.24438	-17.45118	NAF
NS0140	132	134	NS	X139226	139226	1	G	W	25.96	46.17	3.98	0.2967	0.23	0.189	2.82	1.47	0.082	0.267	0.917	0.116	0.6	5.07	0.84	6.51	20862	8.1702	25.63974	-17.46954	NAF
NS0140	146	148	NS	X139233	139233	1	G	W	24.75	45.45	4.75	0.3483	0.27	0.228	3.07	1.28	0.071	0.146	1.28	0.133	0.64	6.35	0.73	7.72	20869	4.4676	22.32576	-17.85816	NAF
NS0140	154	156	NS	X139239	139239	1	G	W	25.34	45.49	4.89	0.2709	0.21	0.234	3.01	1.33	0.078	0.165	1.45	0.101	0.57	5.35	0.74	6.66	20873	5.049	23.19786	-18.14886	NAF
NS0140	206	208	NS	X139266	139266	1	G	W	24.85	45.92	4.19	0.387	0.3	0.197	2.84	1.32	0.078	0.155	1.29	0.1	0.63	6.56	0.65	7.84	20899	4.743	23.02344	-18.28044	NAF
NS0140	238	240	NS	X139282	139282	1	G	W	27.93	45.29	3.63	0.2451	0.19	0.174	2.72	1.3	0.043	0.129	0.655	0.06	0.35	4.72	0.62	5.69	20915	3.9474	22.6746	-18.7272	NAF
NS0140	162	164	NS	X139243	139243	1	G	W	23.98	47.21	4.63	0.3225	0.25	0.221	3.11	1.38	0.092	0.165	1.15	0.079	0.56	5.92	0.76	7.24	20877	5.049	24.06996	-19.02096	NAF
NS0140	224	226	NS	X139275	139275	1	G	W	25.58	45.75	3.6	0.4257	0.33	0.167	2.6	1.28	0.086	0.107	1.38	0.083	0.46	6.77	0.59	7.82	20908	3.2742	22.32576	-19.05156	NAF
NS0140	204	206	NS	X139265	139265	1	G	W	26.55	42.91	3.92	0.4128	0.32	0.184	2.99	1.43	0.082	0.147	1.07	0.096	0.64	7.23	0.73	8.6	20898	4.4982	24.94206	-20.44386	NAF
NS0140	250	252	NS	X139289	139289	1	G	W	25.7	44.57	3.79	0.3741	0.29	0.18	2.96	1.43	0.154	0.142	0.829	0.082	0.58	6.89	0.54	8.01	20921	4.3452	24.94206	-20.59686	NAF
NS0140	172	174	NS	X139249	139249	1	G	W	22.14	46.99	5.15	0.3741	0.29	0.246	3.44	1.5	0.12	0.178	1.15	0.07	0.63	6.83	0.85	8.31	20882	5.4468	26.163	-20.7162	NAF
NS0140	188	190	NS	X139257	139257	1	G	W	24.41	45.99	4.3	0.3741	0.29	0.202	3.07	1.47	0.101	0.144	0.981	0.094	0.62	6.56	0.71	7.89	20890	4.4064	25.63974	-21.23334	NAF
NS0140	148	150	NS	X139235	139235	1	G	W	26.25	43.42	3.98	0.4128	0.32	0.188	2.92	1.46	0.072	0.135	1.14	0.099	0.59	7.07	0.8	8.46	20870	4.131	25.46532	-21.33432	NAF
NS0140	220	222	NS	X139273	139273	1	G	W	26.61	45.51	3.56	0.3225	0.25	0.169	2.54	1.41	0.055	0.103	1.13	0.062	0.37	5.92	0.7	6.99	20906	3.1518	24.59322	-21.44142	NAF
NS0140	156	158	NS	X139240	139240	1	G	W	24.66	45.17	4.5	0.3741	0.29	0.215	2.98	1.64	0.094	0.221	1.36	0.101	0.71	5.92	1	7.63	20874	6.7626	28.60488	-21.84228	NAF
NS0140	186	188	NS	X139256	139256	1	G	W	25.07	45.78	4.47	0.3483	0.27	0.217	3.02	1.57	0.082	0.142	0.978	0.082	0.52	5.89	0.9	7.31	20889	4.3452	27.38394	-23.03874	NAF
NS0140	174	176	NS	X139250	139250	1	G	W	25.78	44.25	4.27	0.3741	0.29	0.207	3.07	1.54	0.106	0.122	0.892	0.087	0.58	6.53	0.78	7.89	20883	3.7332	26.86068	-23.12748	NAF
NS0140	176	178	NS	X139251	139251	1	G	W	25.84	43.4	3.98	0.4644	0.36	0.188	3.06	1.57	0.151	0.122	0.953	0.099	0.65	7.55	0.63	8.83	20884	3.7332	27.38394	-23.65074	NAF
NS0140	244	246	NS	X139286	139286	1	G	W	23.91	46.2	4.48	0.2967	0.23	0.217	3.13	1.98	0.167	0.339	1.03	0.075	0.39	5.35	1.18	6.92	20918	10.3734	34.53516	-24.16176	NAF
NS0140	196	198	NS	X139261	139261	1	G	W	23.02	46.26	5.26	0.3483	0.27	0.25	3.26	1.72	0.083	0.17	1.51	0.117	0.63	6.23	1.07	7.93	20894	5.202	30.00024	-24.79824	NAF
NS0140	202	204	NS	X139264	139264	1	G	W	25.4	44.16	4.1	0.3999	0.31	0.197	3.04	1.68	0.099	0.141	1.18	0.114	0.68	6.8	0.91	8.39	20897	4.3146	29.30256	-24.98796	NAF
NS0140	200	202	NS	X139263	139263	1	G	W	23.64	44.09	5.41	0.3612	0.28	0.257	3.46	1.82	0.079	0.218	1.51	0.126	0.66	6.1	1.31	8.07	20896	6.6708	31.74444	-25.07364	NAF
NS0140	160	162	NS	X139242	139242	1	G	W	25.6	43.98	4.24	0.3999	0.31	0.197	2.9	1.74	0.099	0.169	1.3	0.08	0.54	6.62	0.99	8.15	20876	5.1714	30.34908	-25.17768	NAF
NS0140	240	242	NS	X139284	139284	1	G	W	26.78	46.44	3.76	0.2451	0.19	0.184	2.69	1.71	0.038	0.121	0.793	0.061	0.34	4.25	0.96	5.55	20916	3.7026	29.82582	-26.12322	NAF
NS0140	192	194	NS	X139259	139259	1	G	W	24.54	47.84	4.49	0.2322	0.18	0.213	2.7	1.71	0.054	0.111	1.21	0.074	0.53	4.57	1.06	6.16	20892	3.3966	29.82582	-26.42922	NAF
NS0140	234	236	NS	X139280	139280	1	G	W	27.01	45.44	3.74	0.258	0.2	0.186	2.81	1.77	0.152	0.143	0.694	0.062	0.37	4.76	0.8	5.93	20913	4.3758	30.87234	-26.49654	NAF
NS0140	150	152	NS	X139236	139236	1	G	W	24.47	47.37	3.68	0.3612	0.28	0.173	2.59	1.88	0.063	0.137	1.23	0.075	0.53	5.62	1.24	7.39	20871	4.1922	32.79096	-28.59876	NAF
NS0140	134	136	NS	X139227	139227	1	G	W	25.5	44.85	4.14	0.3096	0.24	0.195	3.07	2.35	0.13	0.375	0.843	0.09	0.54	5.27	1.39	7.2	20863	11.475	40.9887	-29.5137	NAF
NS0140	228	230	NS	X139277	139277	1	G	W	25.94	43.65	4.15	0.3612	0.28	0.198	3.12	1.97	0.247	0.14	0.95	0.088	0.51	6.41	0.76	7.68	20910	4.284	34.36074	-30.07674	NAC
NS0140	236	238	NS	X139281	139281	1	G	W	26.22	44.75	3.74	0.2967	0.23	0.18	2.97	2.05	0.16	0.164	0.742	0.081	0.46	5.62	1.04	7.12	20914	5.0184	35.7561	-30.7377	NAC
NS0140	198	200	NS	X139262	139262	1	G	W	20.99	48.29	5.05	0.2967	0.23	0.242	3.12	2.32	0.058	0.281	1.63	0.091	0.52	5.58	1.76	7.86	20895	8.5986	40.46544	-31.86684	NAC
NS0140	246	248	NS	X139287	139287	1	G	W	26.21	44.01	4.2	0.3225	0.25	0.205	3.07	2.16	0.245	0.16	0.812	0.071	0.43	5.52	0.94	6.89	20919	4.896	37.67472	-32.77872	NAC
NS0140	232	234	NS	X139279	139279	1	G	W	26.75	43.66	3.81	0.3354	0.26	0.186	2.99	2.25	0.129	0.134	0.739	0.067	0.4	5.51	1.37	7.28	20912	4.1004	39.2445	-35.1441	NAC
NS0140	164	166	NS	X139245	139245	1	G	W	24.06	43.94	4.75	0.4257	0.33	0.225	3.42	2.37	0.143	0.193	1.22	0.083	0.64	6.5	1.53	8.67	20878	5.9058	41.33754	-35.43174	NAC
NS0140	230	232	NS	X139278	139278	1	G	W	25.11	43.51	4.67	0.3354	0.26	0.223	3.36	2.5	0.263	0.237	1.01	0.092	0.5	5.8	1.25	7.55	20911	7.2522	43.605	-36.3528	NAC
NS0140	194	196	NS	X139260	139260	1	G	W	22.71	46.71	4.8	0.3612	0.28	0.23	3	2.43	0.086	0.146	1.48	0.094	0.71	5.69	1.59	7.99	20893	4.4676	42.38406	-37.91646	NAC
NS0140	190	192	NS	X139258	139258	1	G	W	22.82	47.89	3.32	0.3999	0.31	0.156	2.64	2.77	0.146	0.121	0.922	0.077	0.55	5.92	1.77	8.24	20891	3.7026	48.31434	-44.61174	NAC
NS0141	292	294	NS	X139438	139438	1	G	W	26.54	35.27	5.8	0.2709	0.21	0.252	2.82	0.12	0.018	14.1	1.28	0.155	0.98	11	4.26	16.24	21068	431.46	2.09304	429.36696	PAF(HC)
NS0141	294	296	NS	X139439	139439	1	G	W	26.68	35.82	3.07	0.6579	0.51	0.138	2.64	0.41	0.077	8.34	0.715	0.102	0.37	11.95	4.67	16.99	21069	255.204	7.15122	248.05278	PAF(HC)
NS0141	290	292	NS	X139437	139437	1	G	W	12.25	55.92	12.33	0.0774	0.06	0.525	2.62	0.06	0.008	1.5	5.91	0.053	0.15	2.52	0.99	3.66	21067	45.9	1.04652	44.85348	PAF(HC)
NS0141	296	298	NS	X139440	139440	1	G	W	19.11	50.23	8.86	0.2322	0.18	0.382	3.22	0.2	0.015	0.702	2.16	0.026	0.38	5.09	1.26	6.73	21070	21.4812	3.4884	17.9928	PAF(HC)
NS0141	284	286	NS	X139434	139434	1	G	W	27.67	43.59	2.56	0.3354	0.26	0.116	3.04	1.15	0.078	1.19	0.045	0.024	0.14	6.2	1.51	7.85	21064	36.414	20.0583	16.3557	PAF(HC)
NS0141	298	300	NS	X139441	139441	1	G	W	28.85	42.78	2.88	0.3999	0.31	0.126	2.17	1.05	0.02	0.952	0.495	0.019	0.39	5.61	1.69	7.69	21071	29.1312	18.3141	10.8171	PAF(HC)
NS0141	46	48	NS	X139313	139313	1	G	D	12.86	60.02	11.17	0.1677	0.13	0.49	0.47	0.03	0.007	0.111	5.83	0.094	0.76	1.38	0.49	2.63	20945	3.3966	0.52326	2.87334	PAF(LC)
NS0141	128	130	NS	X139354	139354	1	G	W	35.06	37.79	1.43	0.4515	0.35	0.068	1.88	0.64	0.041	0.455	0.375	0.065	0.08	5.64	0.69	6.41	20986	13.923	11.16288	2.76012	PAF(LC)
NS0141	226	228	NS	X139404	139404	1	G	W	28.71	40.84	2.97	0.4257	0.33	0.136	2.59	0.4	0.053	0.263	0.582	0.006	0.77	8.82	0.47	10.06	21035	8.0478	6.9768	1.071	PAF(LC)
NS0141	64	66	NS	X139322	139322	1	G	D	36.58	42.72	1.72	0.2967	0.23	0.087	0.13	0.01	0.012	0.036	0.439	0.033	0.97	0.54	0.31	1.82	20954	1.1016	0.17442	0.92718	PAF(LC)
NS0141	62	64	NS	X139321	139321	1	G	D	36.22	44.21	1.58	0.2322	0.18	0.078	0.11	0.02	0.025	0.029	0.371	0.039	0.88	0.51	0.28	1.67	20953	0.8874	0.34884	0.53856	PAF(LC)
NS0141	50	52	NS	X139315	139315	1	G	D	35.24	44.42	2.45	0.2967	0.23	0.115	0.12	0.02	0.015	0.019	0.473	0.012	0.91	0.64	0.24	1.79	20947	0.5814	0.34884	0.23256	PAF(LC)
NS0141	42	44	NS	X139311	139311	1	G	D	29.12	55.25	1.42	0.1161	0.09	0.064	0.04	0.02	0.017	0.017	0.099	0.033	0.66	0.45	0.17	1.28	20943	0.5202	0.34884	0.17136	PAF(LC)
NS0141	36	38	NS	X139308	139308	1	G	D	26.28	58.47	1.41	0.4773	0.37	0.065	0.07	0.02	0.024	0.016	0.458	0.038	0.79	0.32	0.14	1.25	20940	0.4896	0.34884	0.14076	PAF(LC)
NS0141	28	30	NS	X139304	139304	1	G	D	31.58	50.49	2.49	0.0387	0.03	0.108	0.04	0.02	0.013	0.013	0.183	0.028	0.95	0.66	0.12	1.73	20936	0.3978	0.34884	0.04896	PAF(LC)
NS0141	52	54	NS	X139316	139316	1	G	D	32.08	49.17	2.73	0.1419	0.11	0.125	0.15	0.01	0.019	0.007	0.59	0.036	0.72	0.56	0.26	1.54	20948	0.2142	0.17442	0.03978	PAF(LC)
NS0141	54	56	NS	X139317	139317	1	G	D	27.68	56.59	1.92	0.0645	0.05	0.09	0.08	0.01	0.01	0.006	0.402	0.025	0.38	0.42	0.22	1.02	20949	0.1836	0.17442	0.00918	PAF(LC)
NS0141	72	74	NS	X139326	139326	1	G	D	33.49	45.54	2.11	0.4902	0.38	0.096	0.15	0.02	0.022	0.009	0.392	0.015	2.13	0.73	0.24	3.1	20958	0.2754	0.34884	-0.07344	NAF
NS0141	56	58	NS	X139318	139318	1	G	D	29.31	53.76	2.44	0.0645	0.05	0.114	0.11	0.01	0.023	0.003	0.516	0.04	0.56	0.48	0.17	1.21	20950	0.0918	0.17442	-0.08262	NAF
NS0141	20	22	NS	X139300	139300	1	G	D	24.24	60	2.68	0.00645	0.005	0.115	0.03	0.02	0.01	0.008	0.092	0.04	0.81	0.82	0.15	1.78	20932	0.2448	0.34884	-0.10404	NAF
NS0141	22	24	NS	X139301	139301	1	G	D	29.5	53.56	2.33	0.00645	0.005	0.113	0.02	0.02	0.009	0.007	0.059	0.036	0.69	0.71	0.15	1.55	20933	0.2142	0.34884	-0.13464	NAF
NS0141	24	26	NS	X139302	139302	1	G	D	24.12	62.15	1.56	0.00645	0.005	0.07	0.03	0.02	0.007	0.007	0.043	0.034	0.5	0.48	0.15	1.13	20934	0.2142	0.34884	-0.13464	NAF
NS0141	30	32	NS	X139305	139305	1	G	D	32.63	47.5	2.42	0.0903	0.07	0.107	0.07	0.02	0.061	0.007	0.291	0.028	1.61	0.66	0.15	2.42	20937	0.2142	0.34884	-0.13464	NAF
NS0141	26	28	NS	X139303	139303	1	G	D	29.25	54.8	1.99	0.00645	0.005	0.093	0.02	0.02	0.011	0.006	0.061	0.027	0.56	0.58	0.13	1.27	20935	0.1836	0.34884	-0.16524	NAF
NS0141	38	40	NS	X139309	139309	1	G	D	35.14	45.58	1.72	0.4128	0.32	0.081	0.1	0.02	0.01	0.006	0.306	0.03	0.92	0.47	0.13	1.52	20941	0.1836	0.34884	-0.16524	NAF
NS0141	34	36	NS	X139307	139307	1	G	D	29.14	54.68	1.69	0.2451	0.19	0.078	0.07	0.02	0.011	0.005	0.452	0.025	0.83	0.38	0.05	1.26	20939	0.153	0.34884	-0.19584	NAF
NS0141	68	70	NS	X139324	139324	1	G	D	30.79	49.38	1.88	0.4257	0.33	0.085	0.22	0.02	0.043	0.005	0.54	0.017	2.16	0.54	0.18	2.88	20956	0.153	0.34884	-0.19584	NAF
NS0141	58	60	NS	X139319	139319	1	G	D	36.4	43.13	1.68	0.2838	0.22	0.083	0.14	0.04	0.096	0.016	0.353	0.026	0.75	0.5	0.21	1.46	20951	0.4896	0.69768	-0.20808	NAF
NS0141	66	68	NS	X139323	139323	1	G	D	30.91	51.05	1.82	0.2322	0.18	0.08	0.1	0.03	0.051	0.01	0.489	0.022	0.97	0.46	0.17	1.6	20955	0.306	0.52326	-0.21726	NAF
NS0141	70	72	NS	X139325	139325	1	G	D	29.61	49.56	3.28	0.2838	0.22	0.145	0.3	0.02	0.02	0.004	0.556	0.01	2.15	0.91	0.24	3.3	20957	0.1224	0.34884	-0.22644	NAF
NS0141	10	12	NS	X139295	139295	1	G	D	23.18	63.69	1.8	0.00645	0.005	0.082	0.04	0.02	0.018	0.003	0.078	0.026	0.4	0.58	0.13	1.11	20927	0.0918	0.34884	-0.25704	NAF
NS0141	224	226	NS	X139403	139403	1	G	W	28.25	39.96	2.97	0.5289	0.41	0.128	2.67	0.48	0.104	0.265	0.214	0.0005	0.54	11.25	0.45	12.24	21034	8.109	8.37216	-0.26316	NAF
NS0141	32	34	NS	X139306	139306	1	G	D	39.05	38.89	2.44	0.1548	0.12	0.109	0.09	0.03	0.024	0.007	0.229	0.03	1.28	0.75	0.19	2.22	20938	0.2142	0.52326	-0.30906	NAF
NS0141	48	50	NS	X139314	139314	1	G	D	28.16	50.65	4.22	0.6321	0.49	0.186	0.18	0.03	0.013	0.007	0.889	0.041	1.56	1.06	0.22	2.84	20946	0.2142	0.52326	-0.30906	NAF
NS0141	40	42	NS	X139310	139310	1	G	D	33.31	45.67	3.08	0.4128	0.32	0.144	0.15	0.03	0.035	0.006	0.896	0.045	1.26	0.67	0.17	2.1	20942	0.1836	0.52326	-0.33966	NAF
NS0141	60	62	NS	X139320	139320	1	G	D	35.96	43.59	1.95	0.2064	0.16	0.09	0.14	0.05	0.071	0.016	0.535	0.036	0.8	0.5	0.21	1.51	20952	0.4896	0.8721	-0.3825	NAF
NS0141	8	10	NS	X139294	139294	1	G	D	18.9	70	1.59	0.00645	0.005	0.068	0.04	0.03	0.016	0.004	0.057	0.043	0.47	0.48	0.07	1.02	20926	0.1224	0.52326	-0.40086	NAF
NS0141	76	78	NS	X139328	139328	1	G	D	31.87	48.23	1.55	0.2193	0.17	0.072	0.2	0.03	0.04	0.004	0.209	0.032	2.67	0.69	0.13	3.49	20960	0.1224	0.52326	-0.40086	NAF
NS0141	74	76	NS	X139327	139327	1	G	D	34.58	44.47	1.32	0.2838	0.22	0.064	0.21	0.03	0.049	0.003	0.348	0.026	3	0.56	0.13	3.69	20959	0.0918	0.52326	-0.43146	NAF
NS0141	44	46	NS	X139312	139312	1	G	D	37.24	35.92	3.73	1.5609	1.21	0.176	0.27	0.04	0.015	0.008	1.08	0.058	2.18	1.09	0.35	3.62	20944	0.2448	0.69768	-0.45288	NAF
NS0141	168	170	NS	X139375	139375	1	G	W	33.71	38.38	1.87	0.6708	0.52	0.089	1.84	0.8	0.135	0.438	0.827	0.129	0.07	4.75	0.77	5.59	21006	13.4028	13.9536	-0.5508	NAF
NS0141	80	82	NS	X139330	139330	1	G	D	33.17	46.98	1.59	0.3741	0.29	0.078	0.18	0.04	0.022	0.003	0.234	0.026	2.1	0.7	0.15	2.95	20962	0.0918	0.69768	-0.60588	NAF
NS0141	88	90	NS	X139334	139334	1	G	D	20.59	64.75	1.25	0.2193	0.17	0.046	0.28	0.04	0.055	0.003	0.048	0.024	2.99	0.56	0.13	3.68	20966	0.0918	0.69768	-0.60588	NAF
NS0141	90	92	NS	X139335	139335	1	G	D	30.48	47.6	1.91	0.5547	0.43	0.084	0.38	0.04	0.055	0.003	0.064	0.011	4.21	0.97	0.19	5.37	20967	0.0918	0.69768	-0.60588	NAF
NS0141	78	80	NS	X139329	139329	1	G	D	26.14	56.01	1.89	0.2709	0.21	0.085	0.34	0.05	0.046	0.004	0.125	0.023	3.07	0.8	0.15	4.02	20961	0.1224	0.8721	-0.7497	NAF
NS0141	82	84	NS	X139331	139331	1	G	D	30.12	50.1	2.1	0.5031	0.39	0.096	0.22	0.05	0.035	0.004	0.12	0.028	2.32	0.88	0.16	3.36	20963	0.1224	0.8721	-0.7497	NAF
NS0141	16	18	NS	X139298	139298	1	G	D	14.11	68.93	5.74	0.00645	0.005	0.257	0.11	0.08	0.031	0.017	0.363	0.054	1.97	1.64	0.28	3.89	20930	0.5202	1.39536	-0.87516	NAF
NS0141	86	88	NS	X139333	139333	1	G	D	36.57	40.55	2.24	0.3741	0.29	0.099	0.24	0.06	0.024	0.003	0.225	0.019	2.56	0.93	0.2	3.69	20965	0.0918	1.04652	-0.95472	NAF
NS0141	84	86	NS	X139332	139332	1	G	D	33.66	45.6	2.05	0.5031	0.39	0.094	0.23	0.06	0.017	0.002	0.227	0.023	1.87	0.76	0.15	2.78	20964	0.0612	1.04652	-0.98532	NAF
NS0141	14	16	NS	X139297	139297	1	G	D	23.57	59.7	3.9	0.00645	0.005	0.152	0.09	0.08	0.018	0.005	0.224	0.047	0.72	1.15	0.22	2.09	20929	0.153	1.39536	-1.24236	NAF
NS0141	192	194	NS	X139387	139387	1	G	W	35.24	37.6	2.39	0.5547	0.43	0.108	2.05	0.34	0.057	0.134	1.23	0.028	0.06	5.02	-0.12	4.96	21018	4.1004	5.93028	-1.82988	NAF
NS0141	6	8	NS	X139293	139293	1	G	D	19.66	67.62	2.13	0.00645	0.005	0.094	0.08	0.15	0.019	0.008	0.073	0.037	0.82	0.73	0.1	1.65	20925	0.2448	2.6163	-2.3715	NAF
NS0141	220	222	NS	X139401	139401	1	G	W	25.13	36.62	5.31	0.5031	0.39	0.232	4.84	0.91	0.243	0.44	0.108	0.0005	0.56	12.28	0.99	13.83	21032	13.464	15.87222	-2.40822	NAF
NS0141	92	94	NS	X139336	139336	1	G	D	29.31	40.67	3.16	0.2838	0.22	0.14	1.97	0.16	0.04	0.012	0.049	0.02	1.46	9.78	0.07	11.31	20968	0.3672	2.79072	-2.42352	NAF
NS0141	0	2	NS	X139290	139290	1	G	D	13.36	73.93	3.62	0.0258	0.02	0.165	0.28	0.18	0.035	0.021	0.175	0.062	1.25	1.41	0.14	2.8	20922	0.6426	3.13956	-2.49696	NAF
NS0141	4	6	NS	X139292	139292	1	G	D	11.73	77.55	2.92	0.00645	0.005	0.123	0.11	0.16	0.019	0.009	0.121	0.057	1.07	0.97	0.15	2.19	20924	0.2754	2.79072	-2.51532	NAF
NS0141	100	102	NS	X139340	139340	1	G	D	33.37	36.49	1.18	0.5547	0.43	0.052	1.32	0.33	0.063	0.1	0.219	0.027	2.99	8.54	0.28	11.81	20972	3.06	5.75586	-2.69586	NAF
NS0141	180	182	NS	X139381	139381	1	G	W	36.88	36.02	1.61	0.6837	0.53	0.082	1.9	0.26	0.042	0.032	0.787	0.059	0.15	5.58	-0.22	5.51	21012	0.9792	4.53492	-3.55572	NAF
NS0141	18	20	NS	X139299	139299	1	G	D	13.24	68.07	7.01	0.00645	0.005	0.315	0.17	0.28	0.024	0.025	0.27	0.08	2.31	2.18	0.25	4.74	20931	0.765	4.88376	-4.11876	NAF
NS0141	12	14	NS	X139296	139296	1	G	D	15.14	72.4	2.7	0.00645	0.005	0.12	0.09	0.28	0.026	0.014	0.157	0.044	1.54	0.91	0.11	2.56	20928	0.4284	4.88376	-4.45536	NAF
NS0141	164	166	NS	X139373	139373	1	G	W	35.22	38.23	1.68	0.6837	0.53	0.078	1.55	0.31	0.049	0.031	1.06	0.1	0.25	5.07	-0.14	5.18	21004	0.9486	5.40702	-4.45842	NAF
NS0141	2	4	NS	X139291	139291	1	G	D	16.88	70.19	2.23	0.00645	0.005	0.099	0.13	0.3	0.032	0.015	0.165	0.035	1.4	0.87	0.15	2.42	20923	0.459	5.2326	-4.7736	NAF
NS0141	288	290	NS	X139436	139436	1	G	W	31.04	38.48	1.63	0.645	0.5	0.072	2.39	0.59	0.053	0.166	0.083	0.008	0.38	9.94	0.28	10.6	21066	5.0796	10.29078	-5.21118	NAF
NS0141	186	188	NS	X139384	139384	1	G	W	31.88	46.13	1.35	0.4644	0.36	0.063	1.4	0.38	0.02	0.045	0.658	0.036	0.02	3.8	-0.19	3.63	21015	1.377	6.62796	-5.25096	NAF
NS0141	98	100	NS	X139339	139339	1	G	D	28.4	43.35	1.02	0.6063	0.47	0.047	1.35	0.33	0.045	0.003	0.367	0.011	1.36	10.53	-0.04	11.85	20971	0.0918	5.75586	-5.66406	NAF
NS0141	160	162	NS	X139371	139371	1	G	W	35.72	39.59	1.62	0.5289	0.41	0.08	1.58	0.42	0.03	0.046	0.583	0.077	0.14	4.49	-0.48	4.15	21002	1.4076	7.32564	-5.91804	NAF
NS0141	218	220	NS	X139400	139400	1	G	W	35.05	33.56	2.16	0.5676	0.44	0.1	2.59	0.48	0.016	0.065	0.351	0.022	0.34	9.78	-0.38	9.74	21031	1.989	8.37216	-6.38316	NAF
NS0141	286	288	NS	X139435	139435	1	G	W	33.41	38.41	1.52	0.5031	0.39	0.071	2.24	0.62	0.049	0.119	0.057	0.026	0.71	7.29	-0.02	7.98	21065	3.6414	10.81404	-7.17264	NAF
NS0141	188	190	NS	X139385	139385	1	G	W	35.94	38.69	1.63	0.5547	0.43	0.077	1.8	0.52	0.04	0.033	0.679	0.054	0.22	4.42	-0.05	4.59	21016	1.0098	9.06984	-8.06004	NAF
NS0141	96	98	NS	X139338	139338	1	G	D	30.7	37.57	1.4	0.5934	0.46	0.064	1.62	0.48	0.039	0.003	0.59	0.015	0.98	12.6	-0.05	13.53	20970	0.0918	8.37216	-8.28036	NAF
NS0141	172	174	NS	X139377	139377	1	G	W	36.64	37.89	1.77	0.5418	0.42	0.083	1.62	0.58	0.066	0.046	0.777	0.1	0.03	4.05	-0.18	3.9	21008	1.4076	10.11636	-8.70876	NAF
NS0141	174	176	NS	X139378	139378	1	G	W	33.27	42.58	1.4	0.5805	0.45	0.068	1.59	0.56	0.043	0.034	0.563	0.108	0.06	4.56	0.02	4.64	21009	1.0404	9.76752	-8.72712	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0141	106	108	NS	X139343	139343	1	G	W	29.68	45.9	1.11	0.3354	0.26	0.05	1.31	0.54	0.057	0.02	0.239	0.008	0.52	7.32	0.1	7.94	20975	0.612	9.41868	-8.80668	NAF
NS0141	132	134	NS	X139357	139357	1	G	W	31.66	42.89	1.29	0.5031	0.39	0.056	1.98	0.59	0.051	0.046	0.449	0.07	0.13	6.75	0.02	6.9	20988	1.4076	10.29078	-8.88318	NAF
NS0141	94	96	NS	X139337	139337	1	G	D	28.95	40.2	1.38	0.516	0.4	0.061	1.65	0.57	0.064	0.009	0.374	0.003	1.21	12.35	-0.02	13.54	20969	0.2754	9.94194	-9.66654	NAF
NS0141	246	248	NS	X139414	139414	1	G	W	37.69	33.96	1.5	0.6579	0.51	0.073	2.39	0.65	0.05	0.048	0.4	0.017	0.39	5.81	-0.18	6.02	21045	1.4688	11.3373	-9.8685	NAF
NS0141	136	138	NS	X139359	139359	1	G	W	17.34	66.78	0.65	0.3741	0.29	0.032	1.17	1.14	0.1	0.325	0.228	0.087	0.09	3.48	0.81	4.38	20990	9.945	19.88388	-9.93888	NAF
NS0141	166	168	NS	X139374	139374	1	G	W	32.87	43.1	1.63	0.516	0.4	0.074	1.52	0.64	0.043	0.03	0.833	0.061	0.06	4.15	0.12	4.33	21005	0.918	11.16288	-10.24488	NAF
NS0141	130	132	NS	X139356	139356	1	G	W	34.13	40.01	1.29	0.4644	0.36	0.059	1.82	0.64	0.058	0.029	0.448	0.046	0.27	5.8	-0.06	6.01	20987	0.8874	11.16288	-10.27548	NAF
NS0141	102	104	NS	X139341	139341	1	G	D	27.55	42.51	1.23	0.4773	0.37	0.053	1.78	0.7	0.079	0.039	0.291	0.028	0.94	12.02	0.12	13.08	20973	1.1934	12.2094	-11.016	NAF
NS0141	116	118	NS	X139348	139348	1	G	W	33.83	38.65	1.29	0.4386	0.34	0.067	1.9	0.7	0.042	0.029	0.317	0.055	0.18	7.52	0.18	7.88	20980	0.8874	12.2094	-11.322	NAF
NS0141	176	178	NS	X139379	139379	1	G	W	35.18	39.26	1.28	0.6321	0.49	0.061	1.63	0.74	0.118	0.048	0.498	0.119	0.21	4.76	-0.03	4.94	21010	1.4688	12.90708	-11.43828	NAF
NS0141	150	152	NS	X139366	139366	1	G	W	35.72	39.23	1.21	0.645	0.5	0.057	1.46	0.72	0.093	0.026	0.612	0.122	0.09	4.63	-0.01	4.71	20997	0.7956	12.55824	-11.76264	NAF
NS0141	228	230	NS	X139405	139405	1	G	W	30.4	42.79	1.39	0.5289	0.41	0.061	2.23	0.8	0.07	0.067	0.165	0.014	0.32	7.83	-0.03	8.12	21036	2.0502	13.9536	-11.9034	NAF
NS0141	122	124	NS	X139351	139351	1	G	W	35.55	38.05	1.45	0.4386	0.34	0.073	1.78	0.74	0.018	0.028	0.506	0.051	0.1	5.4	0.23	5.73	20983	0.8568	12.90708	-12.05028	NAF
NS0141	104	106	NS	X139342	139342	1	G	D	30.68	45.1	1.17	0.3741	0.29	0.052	1.43	0.73	0.065	0.022	0.249	0.026	0.43	6.22	-0.04	6.61	20974	0.6732	12.73266	-12.05946	NAF
NS0141	140	142	NS	X139361	139361	1	G	W	29.04	48.55	1.19	0.4644	0.36	0.053	1.41	0.81	0.064	0.063	0.509	0.081	0.07	4.32	0.2	4.59	20992	1.9278	14.12802	-12.20022	NAF
NS0141	114	116	NS	X139347	139347	1	G	W	32.55	39.05	1.65	0.3999	0.31	0.082	1.86	1.19	0.113	0.277	0.476	0.077	0.3	7.48	0.51	8.29	20979	8.4762	20.75598	-12.27978	NAF
NS0141	110	112	NS	X139345	139345	1	G	W	31.04	43.52	1.06	0.387	0.3	0.047	1.49	0.75	0.064	0.019	0.203	0.023	0.41	7.2	0.13	7.74	20977	0.5814	13.0815	-12.5001	NAF
NS0141	118	120	NS	X139349	139349	1	G	W	35.21	35.39	2.02	0.4902	0.38	0.09	2.14	0.85	0.049	0.074	0.633	0.086	0.34	7.34	0.18	7.86	20981	2.2644	14.8257	-12.5613	NAF
NS0141	208	210	NS	X139395	139395	1	G	W	29.41	39.15	2.4	0.5676	0.44	0.107	3.5	1.16	0.153	0.247	0.14	0.0005	0.28	9.75	0.37	10.4	21026	7.5582	20.23272	-12.67452	NAF
NS0141	170	172	NS	X139376	139376	1	G	W	32.94	42.37	1.69	0.5547	0.43	0.084	1.71	0.82	0.073	0.053	0.695	0.081	0.07	4.37	0.15	4.59	21007	1.6218	14.30244	-12.68064	NAF
NS0141	134	136	NS	X139358	139358	1	G	W	33.16	38.89	1.32	0.6837	0.53	0.059	1.98	0.93	0.128	0.112	0.444	0.186	0.31	7.03	0.08	7.42	20989	3.4272	16.22106	-12.79386	NAF
NS0141	146	148	NS	X139364	139364	1	G	W	35.16	39.17	1.05	0.7224	0.56	0.054	1.6	0.79	0.078	0.024	0.66	0.066	0.1	5.13	0.08	5.31	20995	0.7344	13.77918	-13.04478	NAF
NS0141	138	140	NS	X139360	139360	1	G	W	23.8	56.77	0.74	0.4386	0.34	0.035	1.23	0.94	0.103	0.108	0.183	0.126	0.15	4.3	0.28	4.73	20991	3.3048	16.39548	-13.09068	NAF
NS0141	230	232	NS	X139406	139406	1	G	W	25.82	47.49	3.17	0.3741	0.29	0.144	2.97	1.08	0.062	0.186	0.252	0.012	0.23	6	0.36	6.59	21037	5.6916	18.83736	-13.14576	NAF
NS0141	108	110	NS	X139344	139344	1	G	W	30.52	45.99	1.08	0.3354	0.26	0.051	1.29	0.79	0.112	0.02	0.211	0.015	1.19	5.06	-0.1	6.15	20976	0.612	13.77918	-13.16718	NAF
NS0141	216	218	NS	X139399	139399	1	G	W	31.8	42.2	1.49	0.4902	0.38	0.066	2.04	0.87	0.055	0.065	0.134	0.043	0.33	6.45	0.05	6.83	21030	1.989	15.17454	-13.18554	NAF
NS0141	204	206	NS	X139393	139393	1	G	W	31.84	45.04	1.3	0.387	0.3	0.062	1.8	0.86	0.038	0.059	0.125	0.021	0.11	4.32	0.13	4.56	21024	1.8054	15.00012	-13.19472	NAF
NS0141	210	212	NS	X139396	139396	1	G	W	34.34	35.74	1.78	0.5934	0.46	0.083	2.44	0.92	0.062	0.089	0.431	0.028	0.56	7.92	0.07	8.55	21027	2.7234	16.04664	-13.32324	NAF
NS0141	156	158	NS	X139369	139369	1	G	W	34.67	40.56	1.13	0.6837	0.53	0.056	1.4	0.81	0.077	0.025	0.554	0.159	0.09	4.38	0.15	4.62	21000	0.765	14.12802	-13.36302	NAF
NS0141	144	146	NS	X139363	139363	1	G	W	37.72	35.37	1.13	0.6192	0.48	0.056	1.55	0.83	0.04	0.029	0.647	0.077	0.32	4.71	0.17	5.2	20994	0.8874	14.47686	-13.58946	NAF
NS0141	182	184	NS	X139382	139382	1	G	W	29.75	45.4	1.58	0.5805	0.45	0.074	1.84	1	0.136	0.113	0.679	0.124	0.08	5.1	0.18	5.36	21013	3.4578	17.442	-13.9842	NAF
NS0141	206	208	NS	X139394	139394	1	G	W	35.71	36.61	1.39	0.5031	0.39	0.066	2.3	0.88	0.04	0.038	0.058	0.0005	0.18	6.26	-0.04	6.4	21025	1.1628	15.34896	-14.18616	NAF
NS0141	234	236	NS	X139408	139408	1	G	W	29.12	41.98	3.22	0.3741	0.29	0.149	3.29	1.17	0.08	0.203	0.178	0.012	0.58	6.37	0.57	7.52	21039	6.2118	20.40714	-14.19534	NAF
NS0141	142	144	NS	X139362	139362	1	G	W	29.01	48.81	0.71	0.5547	0.43	0.036	1.36	0.86	0.068	0.026	0.344	0.057	0.18	4.66	0.32	5.16	20993	0.7956	15.00012	-14.20452	NAF
NS0141	196	198	NS	X139389	139389	1	G	W	30.84	45.25	1.41	0.4644	0.36	0.066	1.83	0.94	0.066	0.067	0.357	0.009	0.11	4.51	0.16	4.78	21020	2.0502	16.39548	-14.34528	NAF
NS0141	222	224	NS	X139402	139402	1	G	W	28.84	42.51	2.52	0.5031	0.39	0.115	2.61	1.15	0.187	0.184	0.35	0.05	0.62	7.34	0.4	8.36	21033	5.6304	20.0583	-14.4279	NAF
NS0141	162	164	NS	X139372	139372	1	G	W	33.42	41.66	1.75	0.4902	0.38	0.086	1.46	0.95	0.092	0.054	0.671	0.084	0.2	3.99	0.36	4.55	21003	1.6524	16.5699	-14.9175	NAF
NS0141	112	114	NS	X139346	139346	1	G	W	30.64	42.97	1.35	0.3999	0.31	0.064	1.64	1.13	0.098	0.148	0.324	0.039	0.41	6.99	0.4	7.8	20978	4.5288	19.70946	-15.18066	NAF
NS0141	152	154	NS	X139367	139367	1	G	W	36.06	38.59	1.22	0.6063	0.47	0.055	1.36	0.94	0.069	0.021	0.649	0.122	0.01	3.94	0.34	4.29	20998	0.6426	16.39548	-15.75288	NAF
NS0141	178	180	NS	X139380	139380	1	G	W	32.6	44.12	1.22	0.5418	0.42	0.061	1.52	0.96	0.093	0.028	0.395	0.108	0.06	4.03	0.28	4.37	21011	0.8568	16.74432	-15.88752	NAF
NS0141	272	274	NS	X139428	139428	1	G	W	29.88	42.55	2.34	0.4515	0.35	0.104	2.88	1.15	0.056	0.124	0.081	0.015	0.43	5.9	0.46	6.79	21058	3.7944	20.0583	-16.2639	NAF
NS0141	232	234	NS	X139407	139407	1	G	W	29.3	48.24	1	0.4386	0.34	0.046	1.73	1.01	0.042	0.026	0.018	0.009	0.13	4.8	0.35	5.28	21038	0.7956	17.61642	-16.82082	NAF
NS0141	248	250	NS	X139415	139415	1	G	W	32.33	44.12	1.19	0.4644	0.36	0.051	1.88	1.06	0.043	0.032	0.341	0.043	0.14	3.97	0.2	4.31	21046	0.9792	18.48852	-17.50932	NAF
NS0141	154	156	NS	X139368	139368	1	G	W	34.47	40.18	1.32	0.6321	0.49	0.061	1.51	1.06	0.11	0.028	0.597	0.196	0.06	4.24	0.34	4.64	20999	0.8568	18.48852	-17.63172	NAF
NS0141	280	282	NS	X139432	139432	1	G	W	27.56	43.12	3.68	0.3741	0.29	0.162	3.83	1.28	0.068	0.15	0.059	0.025	0.39	6.16	0.58	7.13	21062	4.59	22.32576	-17.73576	NAF
NS0141	250	252	NS	X139416	139416	1	G	W	34.68	39.71	1.26	0.5418	0.42	0.06	2.12	1.08	0.041	0.029	0.352	0.019	0.05	4.52	0.31	4.88	21047	0.8874	18.83736	-17.94996	NAF
NS0141	200	202	NS	X139391	139391	1	G	W	31.24	41.64	1.58	0.5031	0.39	0.072	2.45	1.26	0.107	0.122	0.157	0.01	0.16	6.12	0.35	6.63	21022	3.7332	21.97692	-18.24372	NAF
NS0141	238	240	NS	X139410	139410	1	G	W	34.23	36.52	2.06	0.4644	0.36	0.092	2.8	1.2	0.07	0.076	0.059	0.003	0.53	6.3	0.2	7.03	21041	2.3256	20.9304	-18.6048	NAF
NS0141	120	122	NS	X139350	139350	1	G	W	36.01	33.53	1.74	0.5547	0.43	0.083	2.21	1.22	0.14	0.074	0.597	0.067	0.44	7.41	0.23	8.08	20982	2.2644	21.27924	-19.01484	NAF
NS0141	124	126	NS	X139352	139352	1	G	W	34.08	38.22	1.31	0.5031	0.39	0.058	1.9	1.14	0.07	0.026	0.494	0.059	0.13	6.14	0.54	6.81	20984	0.7956	19.88388	-19.08828	NAF
NS0141	274	276	NS	X139429	139429	1	G	W	26.59	43.84	4.03	0.3741	0.29	0.179	4.12	1.44	0.025	0.186	0.06	0.002	0.75	6.03	0.84	7.62	21059	5.6916	25.11648	-19.42488	NAF
NS0141	184	186	NS	X139383	139383	1	G	W	27.29	39.41	2.84	0.9933	0.77	0.121	3.02	1.57	0.325	0.257	1.4	0.303	0.15	9.72	0.39	10.26	21014	7.8642	27.38394	-19.51974	NAF
NS0141	198	200	NS	X139390	139390	1	G	W	31.86	45.68	0.99	0.4128	0.32	0.049	1.55	1.19	0.057	0.028	0.162	0.009	0.22	3.67	0.25	4.14	21021	0.8568	20.75598	-19.89918	NAF
NS0141	242	244	NS	X139412	139412	1	G	W	32.07	43.69	1.42	0.3999	0.31	0.066	2.11	1.51	0.075	0.198	0.146	0.017	0.08	3.79	0.47	4.34	21043	6.0588	26.33742	-20.27862	NAF
NS0141	270	272	NS	X139427	139427	1	G	W	29.65	44.38	1.52	0.4515	0.35	0.071	2.13	1.35	0.079	0.097	0.133	0.024	1.3	5.28	0.4	6.98	21057	2.9682	23.5467	-20.5785	NAF
NS0141	276	278	NS	X139430	139430	1	G	W	28.75	43.43	2.88	0.4257	0.33	0.128	3.18	1.4	0.067	0.122	0.095	0.015	0.23	5.48	0.75	6.46	21060	3.7332	24.4188	-20.6856	NAF
NS0141	282	284	NS	X139433	139433	1	G	W	28.21	45.03	2.34	0.4515	0.35	0.105	2.92	1.45	0.099	0.125	0.08	0.019	0.29	6.05	0.55	6.89	21063	3.825	25.2909	-21.4659	NAF
NS0141	190	192	NS	X139386	139386	1	G	W	29.58	48.7	1.04	0.3741	0.29	0.054	1.55	1.33	0.05	0.029	0.207	0.034	0.13	3.13	0.76	4.02	21017	0.8874	23.19786	-22.31046	NAF
NS0141	244	246	NS	X139413	139413	1	G	W	31.62	45.66	1.07	0.4257	0.33	0.05	1.64	1.36	0.042	0.029	0.389	0.013	0.05	3.24	0.84	4.13	21044	0.8874	23.72112	-22.83372	NAF
NS0141	262	264	NS	X139423	139423	1	G	W	30.54	43.67	1.71	0.4644	0.36	0.081	2.43	1.45	0.056	0.075	0.22	0.025	0.56	4.84	0.58	5.98	21053	2.295	25.2909	-22.9959	NAF
NS0141	240	242	NS	X139411	139411	1	G	W	29.67	43.4	2.51	0.3354	0.26	0.116	2.8	1.61	0.082	0.165	0.081	0.018	0.15	4.59	0.86	5.6	21042	5.049	28.08162	-23.03262	NAF
NS0141	236	238	NS	X139409	139409	1	G	W	26.33	48	2.11	0.4128	0.32	0.097	2.64	1.48	0.038	0.081	0.155	0.013	0.25	5.65	0.91	6.81	21040	2.4786	25.81416	-23.33556	NAF
NS0141	258	260	NS	X139421	139421	1	G	W	36.14	35.43	1.47	0.5934	0.46	0.069	2.42	1.41	0.054	0.033	0.458	0.016	0.08	5	0.69	5.77	21051	1.0098	24.59322	-23.58342	NAF
NS0141	278	280	NS	X139431	139431	1	G	W	32.29	40.14	1.83	0.4644	0.36	0.083	2.66	1.55	0.073	0.064	0.051	0.022	0.27	5.44	0.64	6.35	21061	1.9584	27.0351	-25.0767	NAF
NS0141	212	214	NS	X139397	139397	1	G	W	28.61	42.8	3.17	0.387	0.3	0.138	2.93	2.23	0.031	0.449	0.262	0.0005	0.3	5.15	1.49	6.94	21028	13.7394	38.89566	-25.15626	NAF
NS0141	148	150	NS	X139365	139365	1	G	W	32.94	39.81	1.57	0.5934	0.46	0.067	1.79	1.58	0.177	0.069	0.777	0.158	0.11	4.87	0.75	5.73	20996	2.1114	27.55836	-25.44696	NAF
NS0141	194	196	NS	X139388	139388	1	G	W	26.07	47.74	2.53	0.516	0.4	0.112	2.02	1.92	0.398	0.197	1.35	0.057	0.07	5.01	0.3	5.38	21019	6.0282	33.48864	-27.46044	NAF
NS0141	268	270	NS	X139426	139426	1	G	W	33.77	39.77	1.12	0.5676	0.44	0.057	2	1.77	0.054	0.032	0.162	0.015	0.09	4.66	1.09	5.84	21056	0.9792	30.87234	-29.89314	NAF
NS0141	264	266	NS	X139424	139424	1	G	W	32.69	41.12	1.27	0.4773	0.37	0.061	2.16	1.92	0.041	0.033	0.116	0.0005	0.14	4.15	1.24	5.53	21054	1.0098	33.48864	-32.47884	NAC
NS0141	126	128	NS	X139353	139353	1	G	W	27.01	48.25	1.08	0.4644	0.36	0.054	1.57	1.95	0.141	0.029	0.425	0.041	0.19	5.23	1.19	6.61	20985	0.8874	34.0119	-33.1245	NAC
NS0141	256	258	NS	X139420	139420	1	G	W	34.37	41.41	1.07	0.3741	0.29	0.052	1.71	1.98	0.038	0.025	0.449	0.021	0	2.3	1.42	3.72	21050	0.765	34.53516	-33.77016	NAC
NS0141	254	256	NS	X139419	139419	1	G	W	36.94	37.28	1.14	0.3999	0.31	0.058	1.79	2.03	0.029	0.026	0.529	0.108	0.02	2.63	1.3	3.95	21049	0.7956	35.40726	-34.61166	NAC
NS0141	202	204	NS	X139392	139392	1	G	W	27.62	42.92	2.67	0.4128	0.32	0.124	3.11	2.39	0.246	0.198	0.218	0.015	0.49	5.92	0.96	7.37	21023	6.0588	41.68638	-35.62758	NAC
NS0141	158	160	NS	X139370	139370	1	G	W	30.62	37.15	2.69	0.774	0.6	0.125	2.38	2.39	0.51	0.173	1.16	0.255	0.14	6.99	0.64	7.77	21001	5.2938	41.68638	-36.39258	NAC
NS0141	214	216	NS	X139398	139398	1	G	W	20.04	59.65	1.05	0.3354	0.26	0.05	1.69	2.27	0.02	0.058	0.073	0.0005	0.14	3.84	1.99	5.97	21029	1.7748	39.59334	-37.81854	NAC
NS0141	260	262	NS	X139422	139422	1	G	W	34.11	39.66	0.87	0.5289	0.41	0.045	1.79	2.22	0.087	0.024	0.225	0.028	0.05	3.57	1.57	5.19	21052	0.7344	38.72124	-37.98684	NAC
NS0141	252	254	NS	X139418	139418	1	G	W	29.3	46.87	1.05	0.3741	0.29	0.058	1.59	2.36	0.062	0.047	0.407	0.031	0.1	2.6	2.05	4.75	21048	1.4382	41.16312	-39.72492	NAC
NS0141	266	268	NS	X139425	139425	1	G	W	27.22	48.48	0.86	0.4773	0.37	0.043	1.73	3.13	0.097	0.023	0.205	0.019	0.18	3.63	1.95	5.76	21055	0.7038	54.59346	-53.88966	NAC
NS0142	258	260	NS	X122572	122572	1	G	W	20.8	50.33	6.78	0.3483	0.27	0.287	2.92	0.6	0.071	1.08	3.05	0.047	0.33	3.43	1.78	5.54	19723	33.048	10.4652	22.5828	PAF(HC)
NS0142	58	60	NS	X139471	139471	1	G	D	26.66	43.96	4.37	0.2838	0.22	0.201	2.46	0.29	0.061	0.273	0.273	0.04	1.6	7.65	0.63	9.88	21076	8.3538	5.05818	3.29562	PAF(LC)
NS0142	272	274	NS	X122579	122579	1	G	W	22.15	54.48	3.63	0.3483	0.27	0.163	2.17	0.39	0.077	0.281	0.234	0.035	1.47	4.27	0.64	6.38	19730	8.5986	6.80238	1.79622	PAF(LC)
NS0142	60	62	NS	X139472	139472	1	G	D	23.49	47.12	4.88	0.2838	0.22	0.23	2.76	0.47	0.122	0.303	0.435	0.065	1.47	7.27	0.8	9.54	21077	9.2718	8.19774	1.07406	PAF(LC)
NS0142	158	160	NS	X122521	122521	1	G	W	26.3	46.75	3.49	0.4257	0.33	0.166	2.82	0.43	0.111	0.273	0.432	0.014	0.46	6.54	0.41	7.41	19673	8.3538	7.50006	0.85374	PAF(LC)
NS0142	74	76	NS	X139479	139479	1	G	W	22.28	49.12	4.88	0.3225	0.25	0.226	2.54	0.42	0.105	0.265	0.476	0.051	1.17	7.71	0.69	9.57	21084	8.109	7.32564	0.78336	PAF(LC)
NS0142	82	84	NS	X139483	139483	1	G	W	25.07	46.66	7.43	0.3741	0.29	0.332	1.27	0.13	0.094	0.094	1.83	0.025	2.07	3.25	0.39	5.71	21088	2.8764	2.26746	0.60894	PAF(LC)
NS0142	178	180	NS	X122531	122531	1	G	W	24.64	46.75	5.06	0.4128	0.32	0.227	3.43	0.41	0.085	0.23	0.62	0.009	0.42	6.36	0.49	7.27	19683	7.038	7.15122	-0.11322	NAF
NS0142	176	178	NS	X122530	122530	1	G	W	25.07	46.6	4.24	0.4644	0.36	0.188	3.2	0.5	0.086	0.28	0.43	0.019	0.56	6.87	0.65	8.08	19682	8.568	8.721	-0.153	NAF
NS0142	62	64	NS	X139473	139473	1	G	D	26.02	52.86	3.69	0.2838	0.22	0.176	0.78	0.1	0.076	0.044	0.152	0.019	2.47	1.69	0.27	4.43	21078	1.3464	1.7442	-0.3978	NAF
NS0142	86	88	NS	X139485	139485	1	G	W	27.99	45.98	5.13	0.6321	0.49	0.235	1.11	0.11	0.087	0.045	0.869	0.019	3.03	2.2	0.26	5.49	21090	1.377	1.91862	-0.54162	NAF
NS0142	64	66	NS	X139474	139474	1	G	D	28.04	47.15	3.82	0.2838	0.22	0.18	1.27	0.22	0.098	0.104	0.387	0.019	2.84	3.05	0.37	6.26	21079	3.1824	3.83724	-0.65484	NAF
NS0142	144	146	NS	X122514	122514	1	G	W	25.42	47.88	4.83	0.4515	0.35	0.227	2.49	0.2	0.048	0.086	0.241	0.018	1.26	5.19	0.2	6.65	19666	2.6316	3.4884	-0.8568	NAF
NS0142	146	148	NS	X122515	122515	1	G	W	28.41	46.39	4.15	0.387	0.3	0.19	2.11	0.15	0.033	0.053	0.075	0.005	1.2	4.14	0.16	5.5	19667	1.6218	2.6163	-0.9945	NAF
NS0142	138	140	NS	X122511	122511	1	G	W	23.37	44.44	6.7	0.4515	0.35	0.298	3.15	0.45	0.111	0.22	2.22	0.031	0.57	7.04	0.49	8.1	19663	6.732	7.8489	-1.1169	NAF
NS0142	54	56	NS	X139469	139469	1	G	D	29.18	51.01	1.9	0.2064	0.16	0.088	0.37	0.08	0.076	0.007	0.216	0.008	3.32	0.83	0.1	4.25	21074	0.2142	1.39536	-1.18116	NAF
NS0142	52	54	NS	X139468	139468	1	G	D	33.38	41.67	2.28	0.5805	0.45	0.105	0.78	0.13	0.067	0.035	0.15	0.01	3.19	2.91	0.15	6.25	21073	1.071	2.26746	-1.19646	NAF
NS0142	84	86	NS	X139484	139484	1	G	W	27.66	45.81	5.78	0.6837	0.53	0.266	0.72	0.11	0.076	0.019	0.83	0.015	2.95	2.3	0.29	5.54	21089	0.5814	1.91862	-1.33722	NAF
NS0142	172	174	NS	X122528	122528	1	G	W	26.41	45.85	4.3	0.3999	0.31	0.192	3.2	0.35	0.063	0.147	0.374	0.016	0.4	6.68	0.22	7.3	19680	4.4982	6.1047	-1.6065	NAF
NS0142	142	144	NS	X122513	122513	1	G	W	28.05	43.63	4.84	0.4515	0.35	0.216	2.73	0.24	0.05	0.081	0.693	0.013	0.64	6.39	-0.03	7	19665	2.4786	4.18608	-1.70748	NAF
NS0142	76	78	NS	X139480	139480	1	G	W	24.88	46.63	4.01	0.3354	0.26	0.192	2.23	0.42	0.114	0.178	0.397	0.046	1.47	7.5	0.41	9.38	21085	5.4468	7.32564	-1.87884	NAF
NS0142	262	264	NS	X122574	122574	1	G	W	20.19	47.76	7.68	0.4257	0.33	0.323	3.71	0.55	0.072	0.243	2.76	0.024	0.46	5.63	0.69	6.78	19725	7.4358	9.5931	-2.1573	NAF
NS0142	66	68	NS	X139475	139475	1	G	D	27.17	49.82	3.61	0.2451	0.19	0.173	1.02	0.18	0.126	0.024	0.186	0.012	2.8	2.38	0.15	5.33	21080	0.7344	3.13956	-2.40516	NAF
NS0142	78	80	NS	X139481	139481	1	G	W	25.48	46.36	4	0.3483	0.27	0.19	2.4	0.47	0.124	0.183	0.449	0.033	1.26	7.26	0.38	8.9	21086	5.5998	8.19774	-2.59794	NAF
NS0142	160	162	NS	X122522	122522	1	G	W	29.79	43.97	2.79	0.5031	0.39	0.128	2.49	0.33	0.077	0.098	0.173	0.01	0.65	6.4	-0.01	7.04	19674	2.9988	5.75586	-2.75706	NAF
NS0142	156	158	NS	X122520	122520	1	G	W	27.61	45.48	3.89	0.3999	0.31	0.187	2.86	0.42	0.103	0.137	0.565	0.014	0.52	5.99	0.12	6.63	19672	4.1922	7.32564	-3.13344	NAF
NS0142	56	58	NS	X139470	139470	1	G	D	28.7	46.89	3	0.1935	0.15	0.143	1.25	0.29	0.137	0.059	0.146	0.019	2.49	3.68	0.13	6.3	21075	1.8054	5.05818	-3.25278	NAF
NS0142	72	74	NS	X139478	139478	1	G	W	25.51	46.52	3.27	0.3225	0.25	0.157	2.15	0.46	0.108	0.155	0.247	0.038	1.64	7.99	0.35	9.98	21083	4.743	8.02332	-3.28032	NAF
NS0142	88	90	NS	X139486	139486	1	G	W	24.88	43.93	5.52	0.4515	0.35	0.249	3	0.39	0.061	0.111	1.49	0.044	1.07	7.29	0.27	8.63	21091	3.3966	6.80238	-3.40578	NAF
NS0142	162	164	NS	X122523	122523	1	G	W	26.95	46.02	3.82	0.4515	0.35	0.178	2.88	0.42	0.079	0.125	0.579	0.017	0.42	6.11	0.09	6.62	19675	3.825	7.32564	-3.50064	NAF
NS0142	174	176	NS	X122529	122529	1	G	W	26.8	44.8	3.9	0.4386	0.34	0.177	3.16	0.46	0.094	0.137	0.192	0.008	0.55	7.41	0.21	8.17	19681	4.1922	8.02332	-3.83112	NAF
NS0142	80	82	NS	X139482	139482	1	G	W	25.35	44.31	5.54	0.4128	0.32	0.249	2.54	0.41	0.108	0.103	1.33	0.028	0.87	7	0.19	8.06	21087	3.1518	7.15122	-3.99942	NAF
NS0142	124	126	NS	X122504	122504	1	G	W	28.38	41.95	4.43	0.4257	0.33	0.202	2.75	0.39	0.055	0.085	0.974	0.042	0.54	7.12	-0.06	7.6	19656	2.601	6.80238	-4.20138	NAF
NS0142	270	272	NS	X122578	122578	1	G	W	26.59	46.64	4.5	0.3225	0.25	0.203	3	0.44	0.041	0.109	0.312	0.018	1.44	4.6	0.27	6.31	19729	3.3354	7.67448	-4.33908	NAF
NS0142	148	150	NS	X122516	122516	1	G	W	31.03	42.45	3.42	0.4257	0.33	0.154	2.25	0.36	0.043	0.063	0.711	0.002	0.46	4.78	-0.13	5.11	19668	1.9278	6.27912	-4.35132	NAF
NS0142	128	130	NS	X122506	122506	1	G	W	24.94	46.05	5.29	0.4644	0.36	0.235	2.99	0.41	0.063	0.09	1.43	0.038	0.57	6.99	0.06	7.62	19658	2.754	7.15122	-4.39722	NAF
NS0142	90	92	NS	X139487	139487	1	G	W	27.15	44.78	4.37	0.3999	0.31	0.196	2.42	0.5	0.079	0.106	1.2	0.058	0.88	5.94	0.13	6.95	21092	3.2436	8.721	-5.4774	NAF
NS0142	132	134	NS	X122508	122508	1	G	W	26.53	45.02	4.77	0.4386	0.34	0.212	2.79	0.46	0.033	0.083	1.08	0.034	0.53	6.48	0.05	7.06	19660	2.5398	8.02332	-5.48352	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0142	50	52	NS	X139467	139467	1	G	D	30.74	41.25	1.84	0.4128	0.32	0.085	1.73	0.41	0.065	0.053	0.187	0.027	1.14	8.4	-0.08	9.46	21072	1.6218	7.15122	-5.52942	NAF
NS0142	166	168	NS	X122525	122525	1	G	W	25.15	46.84	3.93	0.4515	0.35	0.172	3.19	0.65	0.084	0.171	0.539	0.028	0.6	6.78	0.28	7.66	19677	5.2326	11.3373	-6.1047	NAF
NS0142	180	182	NS	X122532	122532	1	G	W	25.68	51.55	2.08	0.4128	0.32	0.099	2.15	0.56	0.055	0.106	0.198	0.019	0.47	5.5	0.14	6.11	19684	3.2436	9.76752	-6.52392	NAF
NS0142	136	138	NS	X122510	122510	1	G	W	28.11	43.12	4.64	0.4257	0.33	0.214	2.74	0.57	0.094	0.098	1.08	0.026	0.59	6.35	0.04	6.98	19662	2.9988	9.94194	-6.94314	NAF
NS0142	274	276	NS	X122580	122580	1	G	W	28.14	47.77	2.89	0.3999	0.31	0.133	1.97	0.55	0.064	0.083	0.223	0.028	1.16	4.12	0.06	5.34	19731	2.5398	9.5931	-7.0533	NAF
NS0142	284	286	NS	X122585	122585	1	G	W	27.49	49.11	2.32	0.3741	0.29	0.103	2.1	0.63	0.084	0.125	0.13	0.02	0.51	4.55	0.24	5.3	19736	3.825	10.98846	-7.16346	NAF
NS0142	70	72	NS	X139477	139477	1	G	W	27.54	45.74	2.97	0.258	0.2	0.138	1.94	0.59	0.122	0.093	0.178	0.031	1.25	6.86	0.03	8.14	21082	2.8458	10.29078	-7.44498	NAF
NS0142	68	70	NS	X139476	139476	1	G	D	27.41	44.46	2.56	0.3225	0.25	0.12	1.77	0.6	0.134	0.087	0.13	0.026	1.85	8.43	0.1	10.38	21081	2.6622	10.4652	-7.803	NAF
NS0142	200	202	NS	X122543	122543	1	G	W	22.29	46.2	5.33	0.5676	0.44	0.22	3.55	1.3	0.1	0.485	1.74	0.065	0.3	6.45	1.23	7.98	19694	14.841	22.6746	-7.8336	NAF
NS0142	150	152	NS	X122517	122517	1	G	W	33.16	40.5	2.35	0.5547	0.43	0.109	2.21	0.53	0.047	0.046	0.753	0.056	0.39	5.11	-0.14	5.36	19669	1.4076	9.24426	-7.83666	NAF
NS0142	224	226	NS	X122555	122555	1	G	W	22.73	46.67	5.91	0.4773	0.37	0.254	4.21	1.12	0.084	0.376	0.922	0.074	0.43	5.98	1.07	7.48	19706	11.5056	19.53504	-8.02944	NAF
NS0142	134	136	NS	X122509	122509	1	G	W	25.65	43.91	5.6	0.4128	0.32	0.257	2.89	0.82	0.098	0.202	1.55	0.039	0.68	5.93	0.48	7.09	19661	6.1812	14.30244	-8.12124	NAF
NS0142	140	142	NS	X122512	122512	1	G	W	20.49	47.25	7.81	0.3612	0.28	0.353	3.05	0.94	0.185	0.262	3.12	0.034	0.57	5.69	0.7	6.96	19664	8.0172	16.39548	-8.37828	NAF
NS0142	188	190	NS	X122536	122536	1	G	W	27.08	44.6	3.84	0.4902	0.38	0.177	3.1	0.85	0.074	0.187	0.4	0.028	0.45	6.31	0.46	7.22	19688	5.7222	14.8257	-9.1035	NAF
NS0142	164	166	NS	X122524	122524	1	G	W	29.09	43.03	3.04	0.5418	0.42	0.137	2.72	0.75	0.147	0.124	0.562	0.042	0.44	6.96	0.05	7.45	19676	3.7944	13.0815	-9.2871	NAF
NS0142	96	98	NS	X139490	139490	1	G	W	26.35	43.85	4.98	0.4644	0.36	0.22	2.82	0.67	0.053	0.078	1.37	0.055	0.66	6.52	0.12	7.3	21095	2.3868	11.68614	-9.29934	NAF
NS0142	106	108	NS	X139495	139495	1	G	W	26.65	44.24	5.21	0.4128	0.32	0.235	2.83	0.7	0.028	0.081	1.33	0.053	0.52	5.58	0.15	6.25	21100	2.4786	12.2094	-9.7308	NAF
NS0142	116	118	NS	X139500	139500	1	G	W	25.3	45.58	5.18	0.3354	0.26	0.24	2.9	0.72	0.101	0.085	0.873	0.043	0.66	6.33	0.1	7.09	21105	2.601	12.55824	-9.95724	NAF
NS0142	182	184	NS	X122533	122533	1	G	W	29.38	45.03	2.79	0.4128	0.32	0.123	2.39	0.75	0.129	0.095	0.313	0.062	0.36	5.03	0	5.39	19685	2.907	13.0815	-10.1745	NAF
NS0142	122	124	NS	X122503	122503	1	G	W	28.38	41.59	4.42	0.4773	0.37	0.202	2.82	0.73	0.07	0.074	0.824	0.041	0.54	6.8	0.11	7.45	19655	2.2644	12.73266	-10.46826	NAF
NS0142	112	114	NS	X139498	139498	1	G	W	28.25	42.11	4.51	0.4773	0.37	0.207	2.7	0.77	0.094	0.083	0.891	0.139	0.6	6.17	0.05	6.82	21103	2.5398	13.43034	-10.89054	NAF
NS0142	260	262	NS	X122573	122573	1	G	W	30.57	44.24	2.27	0.5289	0.41	0.1	2.4	0.73	0.039	0.053	0.193	0.022	0.49	4.77	0.1	5.36	19724	1.6218	12.73266	-11.11086	NAF
NS0142	118	120	NS	X122501	122501	1	G	W	24.92	47.08	5.5	0.2838	0.22	0.256	2.83	0.8	0.111	0.085	0.963	0.039	0.65	5.45	0.17	6.27	19653	2.601	13.9536	-11.3526	NAF
NS0142	108	110	NS	X139496	139496	1	G	W	27.08	44.53	4.93	0.387	0.3	0.231	2.78	0.79	0.054	0.077	1.1	0.045	0.64	5.35	0.2	6.19	21101	2.3562	13.77918	-11.42298	NAF
NS0142	104	106	NS	X139494	139494	1	G	W	26.38	44.59	4.69	0.4644	0.36	0.216	2.82	0.85	0.062	0.078	1.2	0.067	0.5	6.25	0.27	7.02	21099	2.3868	14.8257	-12.4389	NAF
NS0142	168	170	NS	X122526	122526	1	G	W	28.27	40.62	4.44	0.4644	0.36	0.202	3.49	0.99	0.172	0.157	0.476	0.059	0.4	7.11	0.21	7.72	19678	4.8042	17.26758	-12.46338	NAF
NS0142	98	100	NS	X139491	139491	1	G	W	25.92	45.32	4.91	0.4257	0.33	0.219	2.76	0.88	0.074	0.086	1.38	0.052	0.57	5.87	0.24	6.68	21096	2.6316	15.34896	-12.71736	NAF
NS0142	126	128	NS	X122505	122505	1	G	W	23.14	48.67	4.63	0.4257	0.33	0.205	2.67	0.88	0.127	0.079	1.29	0.037	0.56	6.59	0.19	7.34	19657	2.4174	15.34896	-12.93156	NAF
NS0142	120	122	NS	X122502	122502	1	G	W	25.51	45.58	4.97	0.3999	0.31	0.23	2.94	0.91	0.088	0.093	0.846	0.05	0.68	6.14	0.26	7.08	19654	2.8458	15.87222	-13.02642	NAF
NS0142	152	154	NS	X122518	122518	1	G	W	31.15	43.05	2.67	0.4644	0.36	0.121	2.22	0.9	0.114	0.072	0.78	0.02	0.32	4.64	0	4.96	19670	2.2032	15.6978	-13.4946	NAF
NS0142	154	156	NS	X122519	122519	1	G	W	31.51	41.66	2.77	0.5031	0.39	0.128	2.33	0.89	0.121	0.06	0.457	0.008	0.37	5.43	-0.01	5.79	19671	1.836	15.52338	-13.68738	NAF
NS0142	94	96	NS	X139489	139489	1	G	W	24.58	45.09	5.58	0.4128	0.32	0.246	2.97	0.98	0.154	0.11	1.64	0.076	0.63	6.27	0.26	7.16	21094	3.366	17.09316	-13.72716	NAF
NS0142	170	172	NS	X122527	122527	1	G	W	28.58	43.99	3.6	0.3741	0.29	0.157	2.89	1.02	0.2	0.122	0.361	0.024	0.54	5.71	0.16	6.41	19679	3.7332	17.79084	-14.05764	NAF
NS0142	100	102	NS	X139492	139492	1	G	W	25.35	45.12	5.19	0.4515	0.35	0.234	2.78	1.02	0.166	0.121	1.59	0.057	0.6	6.02	0.26	6.88	21097	3.7026	17.79084	-14.08824	NAF
NS0142	92	94	NS	X139488	139488	1	G	W	23.53	45.2	6.39	0.3999	0.31	0.283	3.17	1.04	0.177	0.128	2	0.082	0.78	6	0.33	7.11	21093	3.9168	18.13968	-14.22288	NAF
NS0142	102	104	NS	X139493	139493	1	G	W	25.12	45.8	5.43	0.3741	0.29	0.236	2.78	0.97	0.119	0.077	1.59	0.071	0.69	5.44	0.21	6.34	21098	2.3562	16.91874	-14.56254	NAF
NS0142	184	186	NS	X122534	122534	1	G	W	29.81	42.1	3.03	0.4515	0.35	0.134	2.9	1.11	0.107	0.147	0.168	0.017	0.43	6.3	0.3	7.03	19686	4.4982	19.36062	-14.86242	NAF
NS0142	114	116	NS	X139499	139499	1	G	W	23.74	46.66	5.09	0.4644	0.36	0.231	3.07	1.03	0.089	0.092	1.01	0.045	0.58	6.75	0.41	7.74	21104	2.8152	17.96526	-15.15006	NAF
NS0142	286	288	NS	X122586	122586	1	G	W	31.52	42.64	2.62	0.4902	0.38	0.119	2.35	0.98	0.074	0.056	0.289	0.067	0.36	4.53	0.22	5.11	19737	1.7136	17.09316	-15.37956	NAF
NS0142	292	294	NS	X122589	122589	1	G	W	27.27	49.73	2.97	0.3483	0.27	0.144	1.74	1.08	0.124	0.085	0.434	0.05	0.58	2.98	0.28	3.84	19740	2.601	18.83736	-16.23636	NAF
NS0142	130	132	NS	X122507	122507	1	G	W	25.1	44.32	5.26	0.4515	0.35	0.232	2.92	1.15	0.234	0.116	1.32	0.034	0.73	6.62	0.2	7.55	19659	3.5496	20.0583	-16.5087	NAF
NS0142	232	234	NS	X122559	122559	1	G	W	31.16	42.9	2.39	0.5031	0.39	0.104	2.6	1.03	0.062	0.036	0.278	0.11	0.26	4.11	0.44	4.81	19710	1.1016	17.96526	-16.86366	NAF
NS0142	186	188	NS	X122535	122535	1	G	W	29.32	43.98	3.1	0.387	0.3	0.144	2.62	1.19	0.082	0.125	0.308	0.021	0.43	5.17	0.4	6	19687	3.825	20.75598	-16.93098	NAF
NS0142	222	224	NS	X122554	122554	1	G	W	27.85	44.02	3.32	0.5418	0.42	0.15	2.84	1.38	0.095	0.182	0.557	0.083	0.31	5.6	0.62	6.53	19705	5.5692	24.06996	-18.50076	NAF
NS0142	298	300	NS	X122592	122592	1	G	W	28.94	47.54	2.75	0.3612	0.28	0.143	1.69	1.14	0.034	0.035	0.229	0.11	0.64	3.33	0.39	4.36	19743	1.071	19.88388	-18.81288	NAF
NS0142	268	270	NS	X122577	122577	1	G	W	28.17	47.79	3.02	0.3483	0.27	0.153	2.28	1.34	0.053	0.142	0.393	0.022	0.5	3.46	0.63	4.59	19728	4.3452	23.37228	-19.02708	NAF
NS0142	202	204	NS	X122544	122544	1	G	W	28.48	42.51	3.18	0.6063	0.47	0.132	2.84	1.2	0.146	0.061	0.612	0.049	0.38	6.49	0.22	7.09	19695	1.8666	20.9304	-19.0638	NAF
NS0142	226	228	NS	X122556	122556	1	G	W	29.66	43.35	3.18	0.4128	0.32	0.133	3.05	1.21	0.042	0.064	0.238	0.02	0.3	4.44	0.61	5.35	19707	1.9584	21.10482	-19.14642	NAF
NS0142	234	236	NS	X122560	122560	1	G	W	29.87	44.82	2.69	0.4386	0.34	0.119	2.02	1.22	0.059	0.052	0.323	0.083	0.9	3.64	0.45	4.99	19711	1.5912	21.27924	-19.68804	NAF
NS0142	290	292	NS	X122588	122588	1	G	W	31.67	43.63	2.2	0.4515	0.35	0.118	1.91	1.2	0.054	0.036	0.315	0.046	0.38	3.5	0.55	4.43	19739	1.1016	20.9304	-19.8288	NAF
NS0142	110	112	NS	X139497	139497	1	G	W	25.47	45.28	5.36	0.387	0.3	0.243	2.9	1.3	0.13	0.093	1.15	0.055	0.52	5.11	0.49	6.12	21102	2.8458	22.6746	-19.8288	NAF
NS0142	276	278	NS	X122581	122581	1	G	W	27.44	50.04	2.18	0.3612	0.28	0.104	1.62	1.22	0.044	0.041	0.156	0.023	0.74	3.29	0.49	4.52	19732	1.2546	21.27924	-20.02464	NAF
NS0142	278	280	NS	X122582	122582	1	G	W	28.49	45.26	3.53	0.4257	0.33	0.157	2.48	1.37	0.048	0.114	0.589	0.049	0.55	3.93	0.52	5	19733	3.4884	23.89554	-20.40714	NAF
NS0142	288	290	NS	X122587	122587	1	G	W	31.59	42.93	2.33	0.4515	0.35	0.119	2.08	1.3	0.065	0.046	0.226	0.063	0.49	3.93	0.47	4.89	19738	1.4076	22.6746	-21.267	NAF
NS0142	264	266	NS	X122575	122575	1	G	W	28.15	43.87	3.23	0.5547	0.43	0.148	2.7	1.72	0.076	0.282	0.749	0.067	0.31	4.85	1.05	6.21	19726	8.6292	30.00024	-21.37104	NAF
NS0142	250	252	NS	X122568	122568	1	G	W	32.27	42.79	1.86	0.5547	0.43	0.082	2.1	1.28	0.062	0.025	0.397	0.078	0.17	3.64	0.55	4.36	19719	0.765	22.32576	-21.56076	NAF
NS0142	206	208	NS	X122546	122546	1	G	W	31.52	39.07	2.4	0.5289	0.41	0.104	2.88	1.31	0.076	0.037	0.413	0.067	0.33	6.81	0.54	7.68	19697	1.1322	22.84902	-21.71682	NAF
NS0142	266	268	NS	X122576	122576	1	G	W	32.75	39.93	2.86	0.4773	0.37	0.13	2.57	1.42	0.046	0.076	0.449	0.042	0.26	3.98	0.58	4.82	19727	2.3256	24.76764	-22.44204	NAF
NS0142	228	230	NS	X122557	122557	1	G	W	29.13	44.89	2.56	0.4644	0.36	0.119	2.49	1.47	0.089	0.096	0.325	0.069	0.3	4.29	0.72	5.31	19708	2.9376	25.63974	-22.70214	NAF
NS0142	218	220	NS	X122552	122552	1	G	W	33.13	39.77	2.14	0.5805	0.45	0.094	2.19	1.38	0.077	0.03	0.294	0.169	0.27	4.78	0.46	5.51	19703	0.918	24.06996	-23.15196	NAF
NS0142	256	258	NS	X122571	122571	1	G	W	29.96	42.77	3.4	0.3741	0.29	0.144	3.16	1.41	0.049	0.047	0.258	0.017	0.32	4.13	0.69	5.14	19722	1.4382	24.59322	-23.15502	NAF
NS0142	204	206	NS	X122545	122545	1	G	W	27.65	46.36	2.62	0.4257	0.33	0.121	2.54	1.53	0.092	0.06	0.324	0.029	0.34	4.88	0.68	5.9	19696	1.836	26.68626	-24.85026	NAF
NS0142	214	216	NS	X122550	122550	1	G	W	29.66	41.58	2.89	0.5547	0.43	0.128	2.84	1.56	0.055	0.075	0.38	0.061	0.39	6.08	0.81	7.28	19701	2.295	27.20952	-24.91452	NAF
NS0142	210	212	NS	X122548	122548	1	G	W	29.62	42.77	1.84	0.4773	0.37	0.081	2.55	1.53	0.083	0.044	0.271	0.065	0.33	6.44	0.75	7.52	19699	1.3464	26.68626	-25.33986	NAF
NS0142	220	222	NS	X122553	122553	1	G	W	25.69	45.85	2.95	0.645	0.5	0.128	2.87	1.72	0.103	0.146	0.571	0.091	0.3	6.45	0.9	7.65	19704	4.4676	30.00024	-25.53264	NAF
NS0142	254	256	NS	X122570	122570	1	G	W	30.44	43.73	2.17	0.4773	0.37	0.097	2.49	1.58	0.066	0.036	0.296	0.046	0.3	4.04	0.81	5.15	19721	1.1016	27.55836	-26.45676	NAF
NS0142	294	296	NS	X122590	122590	1	G	W	31.85	43.4	2.42	0.4128	0.32	0.129	1.89	1.63	0.124	0.053	0.395	0.088	0.31	3.19	0.55	4.05	19741	1.6218	28.43046	-26.80866	NAF
NS0142	212	214	NS	X122549	122549	1	G	W	28.65	44.13	2.31	0.5031	0.39	0.097	2.7	1.62	0.068	0.038	0.22	0.044	0.3	5.98	0.89	7.17	19700	1.1628	28.25604	-27.09324	NAF
NS0142	244	246	NS	X122565	122565	1	G	W	31.93	42.27	1.71	0.5031	0.39	0.08	2.23	1.7	0.077	0.037	0.172	0.057	0.42	3.96	0.92	5.3	19716	1.1322	29.6514	-28.5192	NAF
NS0142	208	210	NS	X122547	122547	1	G	W	26.62	42.76	2.89	0.4515	0.35	0.123	3.28	1.94	0.059	0.138	0.799	0.097	0.39	7.19	1.33	8.91	19698	4.2228	33.83748	-29.61468	NAF
NS0142	242	244	NS	X122564	122564	1	G	W	32.85	39.69	2.33	0.5676	0.44	0.107	2.44	1.8	0.079	0.046	0.602	0.101	0.45	3.89	0.98	5.32	19715	1.4076	31.3956	-29.988	NAF
NS0142	252	254	NS	X122569	122569	1	G	W	31.53	40.69	2.62	0.5418	0.42	0.123	2.69	1.91	0.146	0.089	0.512	0.087	0.28	3.91	0.92	5.11	19720	2.7234	33.31422	-30.59082	NAC
NS0142	282	284	NS	X122584	122584	1	G	W	25.8	47.43	3.07	0.4128	0.32	0.136	2.63	1.98	0.098	0.114	0.211	0.019	0.4	4.58	1.29	6.27	19735	3.4884	34.53516	-31.04676	NAC
NS0142	198	200	NS	X122542	122542	1	G	W	32.9	40.09	2.09	0.5289	0.41	0.099	2.14	1.89	0.097	0.038	0.408	0.118	0.32	4.06	1.01	5.39	19693	1.1628	32.96538	-31.80258	NAC
NS0142	216	218	NS	X122551	122551	1	G	W	31.76	40.59	2.12	0.5418	0.42	0.096	2.37	1.91	0.067	0.038	0.248	0.116	0.24	4.94	1.19	6.37	19702	1.1628	33.31422	-32.15142	NAC
NS0142	190	192	NS	X122538	122538	1	G	W	29.46	43.08	3.06	0.3741	0.29	0.134	2.64	2.06	0.021	0.11	0.342	0.07	0.2	3.87	1.55	5.62	19689	3.366	35.93052	-32.56452	NAC
NS0142	248	250	NS	X122567	122567	1	G	W	31.58	41.79	2.12	0.5031	0.39	0.095	2.36	2.02	0.057	0.037	0.391	0.053	0.26	3.51	1.19	4.96	19718	1.1322	35.23284	-34.10064	NAC
NS0142	192	194	NS	X122539	122539	1	G	W	31.2	40.69	2.99	0.4515	0.35	0.141	2.68	2.1	0.046	0.076	0.43	0.123	0.24	3.95	1.38	5.57	19690	2.3256	36.6282	-34.3026	NAC
NS0142	230	232	NS	X122558	122558	1	G	W	29.98	44.85	1.67	0.4773	0.37	0.078	2.16	2.09	0.061	0.028	0.254	0.051	0.16	3.27	1.65	5.08	19709	0.8568	36.45378	-35.59698	NAC
NS0142	296	298	NS	X122591	122591	1	G	W	30.17	41.89	2.69	0.5031	0.39	0.129	2.18	2.23	0.076	0.061	0.334	0.159	0.39	4.03	1.45	5.87	19742	1.8666	38.89566	-37.02906	NAC
NS0142	280	282	NS	X122583	122583	1	G	W	28.41	43.25	3.12	0.4902	0.38	0.146	2.62	2.48	0.092	0.122	0.456	0.052	0.38	4.33	1.54	6.25	19734	3.7332	43.25616	-39.52296	NAC
NS0142	196	198	NS	X122541	122541	1	G	W	30.52	42.06	2.25	0.5031	0.39	0.1	2.24	2.36	0.051	0.042	0.521	0.111	0.16	3.63	1.77	5.56	19692	1.2852	41.16312	-39.87792	NAC
NS0142	240	242	NS	X122563	122563	1	G	W	30.77	40.4	1.98	0.6321	0.49	0.094	2.32	2.41	0.1	0.055	0.485	0.119	1.32	3.9	1.74	6.96	19714	1.683	42.03522	-40.35222	NAC
NS0142	194	196	NS	X122540	122540	1	G	W	30.24	41.15	2.5	0.5418	0.42	0.109	2.51	2.52	0.099	0.051	0.464	0.102	0.25	4.03	1.83	6.11	19691	1.5606	43.95384	-42.39324	NAC
NS0142	238	240	NS	X122562	122562	1	G	W	31.48	41.6	1.97	0.5805	0.45	0.087	2.2	2.56	0.076	0.03	0.578	0.091	0.22	3.17	1.87	5.26	19713	0.918	44.65152	-43.73352	NAC
NS0142	236	238	NS	X122561	122561	1	G	W	32.1	40.08	1.84	0.6321	0.49	0.085	2.23	2.57	0.057	0.026	0.611	0.091	0.13	3.36	2.1	5.59	19712	0.7956	44.82594	-44.03034	NAC
NS0142	246	248	NS	X122566	122566	1	G	W	30.17	43	1.67	0.4773	0.37	0.081	2.25	2.94	0.09	0.038	0.22	0.059	0.33	3.17	2.41	5.91	19717	1.1628	51.27948	-50.11668	NAC
NS0143	40	42	NS	X067712	067712	1	G	W	27.92	36.27	2.1	0.6966	0.54	0.089	2.26	0.47	0.042	1.29	0.037	0.017	0.62	14.62	2.97	18.21	12362	39.474	8.19774	31.27626	PAF(HC)
NS0143	214	216	NS	X067800	067800	1	G	W	25.61	42.81	7.45	0.2322	0.18	0.338	6.02	0.04	0.008	0.546	0.876	0.282	0.96	2.78	0.94	4.68	12449	16.7076	0.69768	16.00992	PAF(HC)
NS0143	72	74	NS	X067728	067728	1	G	W	24.56	41.73	2.68	0.5934	0.46	0.12	3.23	0.48	0.052	0.728	0.079	0.071	0.51	13.88	1.6	15.99	12378	22.2768	8.37216	13.90464	PAF(HC)
NS0143	204	206	NS	X067795	067795	1	G	W	26.97	40.32	5.38	0.4257	0.33	0.246	4.32	0.48	0.131	0.489	0.523	0.165	0.86	6.97	0.88	8.71	12444	14.9634	8.37216	6.59124	PAF(LC)
NS0143	42	44	NS	X067713	067713	1	G	W	29.32	39.59	1.77	0.4773	0.37	0.08	1.7	0.68	0.04	0.522	0.159	0.017	0.64	12.04	0.91	13.59	12363	15.9732	11.86056	4.11264	PAF(LC)
NS0143	44	46	NS	X067714	067714	1	G	W	27.89	38.89	2.28	0.5934	0.46	0.103	1.91	0.56	0.055	0.431	0.144	0.016	0.92	13.51	0.87	15.3	12364	13.1886	9.76752	3.42108	PAF(LC)
NS0143	190	192	NS	X067788	067788	1	G	W	30.37	29.3	2.97	0.6192	0.48	0.136	4.57	0.55	0.081	0.414	0.808	0.237	1.07	15.28	1	17.35	12437	12.6684	9.5931	3.0753	PAF(LC)
NS0143	202	204	NS	X067794	067794	1	G	W	23.56	46.13	5.8	0.3354	0.26	0.257	4.46	0.44	0.123	0.328	0.631	0.203	0.87	5.97	0.76	7.6	12443	10.0368	7.67448	2.36232	PAF(LC)
NS0143	208	210	NS	X067797	067797	1	G	W	27.44	42.07	4.92	0.4644	0.36	0.218	4.13	0.45	0.123	0.331	0.534	0.167	0.79	6.01	0.59	7.39	12446	10.1286	7.8489	2.2797	PAF(LC)
NS0143	46	48	NS	X067715	067715	1	G	W	25.27	41.73	4.17	0.5676	0.44	0.182	3.02	0.51	0.096	0.345	0.081	0.015	1.07	11.83	0.73	13.63	12365	10.557	8.89542	1.66158	PAF(LC)
NS0143	152	154	NS	X067768	067768	1	G	W	33.55	36.96	2.56	0.7611	0.59	0.117	3.57	0.53	0.153	0.331	0.668	0.135	0.49	5.19	0.29	5.97	12418	10.1286	9.24426	0.88434	PAF(LC)
NS0143	74	76	NS	X067729	067729	1	G	W	25.37	41.81	3.7	0.4644	0.36	0.163	3.79	0.58	0.065	0.358	0.054	0.025	0.47	11.57	0.8	12.84	12379	10.9548	10.11636	0.83844	PAF(LC)
NS0143	200	202	NS	X067793	067793	1	G	W	29.45	40.61	3.45	0.5289	0.41	0.154	3.85	0.23	0.04	0.152	0.64	0.205	0.9	6.9	0.22	8.02	12442	4.6512	4.01166	0.63954	PAF(LC)
NS0143	8	10	NS	X067696	067696	1	G	D	11.26	75.2	5.47	0.0258	0.02	0.196	0.06	0.005	0.022	0.009	0.148	0.033	0.8	1.73	0.19	2.72	12346	0.2754	0.08721	0.18819	PAF(LC)
NS0143	10	12	NS	X067697	067697	1	G	D	12.11	77.41	3.02	0.0516	0.04	0.113	0.06	0.005	0.019	0.005	0.114	0.03	0.51	0.95	0.15	1.61	12347	0.153	0.08721	0.06579	PAF(LC)
NS0143	166	168	NS	X067775	067775	1	G	W	32.7	36.42	3.52	0.7095	0.55	0.157	4.46	0.41	0.093	0.234	0.525	0.163	0.68	5.12	0.35	6.15	12425	7.1604	7.15122	0.00918	PAF(LC)
NS0143	12	14	NS	X067698	067698	1	G	D	13.85	66.91	7.47	0.00645	0.005	0.326	0.45	0.02	0.025	0.009	0.301	0.042	1.65	2.34	0.26	4.25	12348	0.2754	0.34884	-0.07344	NAF
NS0143	6	8	NS	X067695	067695	1	G	D	19.34	66.55	3.39	0.00645	0.005	0.122	0.06	0.02	0.021	0.005	0.235	0.03	0.47	0.98	0.2	1.65	12345	0.153	0.34884	-0.19584	NAF
NS0143	4	6	NS	X067694	067694	1	G	D	25.49	57.88	3.53	0.00645	0.005	0.139	0.06	0.02	0.016	0.003	0.226	0.027	0.28	1.04	0.19	1.51	12344	0.0918	0.34884	-0.25704	NAF
NS0143	14	16	NS	X067699	067699	1	G	D	19.89	65.93	3	0.1161	0.09	0.12	0.1	0.02	0.017	0.003	0.475	0.037	0.42	0.75	0.27	1.44	12349	0.0918	0.34884	-0.25704	NAF
NS0143	16	18	NS	X067700	067700	1	G	M	18.39	64.59	4.61	0.387	0.3	0.185	0.22	0.04	0.034	0.004	0.521	0.033	1.35	1.25	0.28	2.88	12350	0.1224	0.69768	-0.57528	NAF
NS0143	20	22	NS	X067702	067702	1	G	M	24.31	58.54	1.72	1.0062	0.78	0.06	0.2	0.04	0.049	0.004	0.158	0.05	2.7	0.75	0.23	3.68	12352	0.1224	0.69768	-0.57528	NAF
NS0143	2	4	NS	X067693	067693	1	G	D	18.14	65.85	4.85	0.00645	0.005	0.163	0.12	0.05	0.017	0.005	0.169	0.051	0.54	1.64	0.21	2.39	12343	0.153	0.8721	-0.7191	NAF
NS0143	18	20	NS	X067701	067701	1	G	M	13.66	72.99	3.06	0.4644	0.36	0.113	0.17	0.05	0.087	0.005	0.473	0.035	1.65	0.8	0.3	2.75	12351	0.153	0.8721	-0.7191	NAF
NS0143	22	24	NS	X067703	067703	1	G	M	35.49	37.86	3.24	1.7028	1.32	0.138	0.32	0.06	0.06	0.006	0.18	0.029	3.3	1.42	0.38	5.1	12353	0.1836	1.04652	-0.86292	NAF
NS0143	56	58	NS	X067720	067720	1	G	W	23.25	44.1	4.16	0.5031	0.39	0.182	2.99	0.4	0.049	0.197	0.007	0.018	1.3	12.37	0.55	14.22	12370	6.0282	6.9768	-0.9486	NAF
NS0143	148	150	NS	X067766	067766	1	G	W	33.12	39.56	2.22	0.645	0.5	0.1	3.25	0.38	0.081	0.172	0.601	0.122	0.41	4.48	0.13	5.02	12416	5.2632	6.62796	-1.36476	NAF
NS0143	34	36	NS	X067709	067709	1	G	W	24.97	40.63	7.35	0.4902	0.38	0.332	2.85	0.39	0.062	0.174	0.172	0.024	1.11	10.45	0.33	11.89	12359	5.3244	6.80238	-1.47798	NAF
NS0143	52	54	NS	X067718	067718	1	G	W	27.12	40.24	1.67	0.4515	0.35	0.074	2.16	0.56	0.06	0.263	0.05	0.011	1.02	14.13	0.49	15.64	12368	8.0478	9.76752	-1.71972	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0143	210	212	NS	X067798	067798	1	G	W	30.48	40.82	3.03	0.5934	0.46	0.14	3.5	0.49	0.141	0.211	0.563	0.173	0.79	5.44	0.36	6.59	12447	6.4566	8.54658	-2.08998	NAF
NS0143	216	218	NS	X067801	067801	1	G	W	30.09	39.49	3.68	0.6966	0.54	0.157	4.19	0.48	0.067	0.205	0.622	0.189	0.8	5.53	0.41	6.74	12450	6.273	8.37216	-2.09916	NAF
NS0143	206	208	NS	X067796	067796	1	G	W	28.34	38.81	4.51	0.6708	0.52	0.203	4.19	0.54	0.148	0.239	0.576	0.19	0.96	8.17	0.58	9.71	12445	7.3134	9.41868	-2.10528	NAF
NS0143	24	26	NS	X067704	067704	1	G	M	35.25	42.13	1.18	0.2322	0.18	0.05	0.6	0.13	0.075	0.004	0.064	0.013	1.8	2.98	0.1	4.88	12354	0.1224	2.26746	-2.14506	NAF
NS0143	0	2	NS	X067692	067692	1	G	D	24.24	57.01	3.71	0.0516	0.04	0.182	0.22	0.16	0.032	0.013	0.2	0.045	1.78	1.4	0.18	3.36	12342	0.3978	2.79072	-2.39292	NAF
NS0143	140	142	NS	X067762	067762	1	G	W	34.79	37.29	2.21	0.7095	0.55	0.101	3.28	0.4	0.077	0.137	0.895	0.106	0.29	4.53	0.05	4.87	12412	4.1922	6.9768	-2.7846	NAF
NS0143	212	214	NS	X067799	067799	1	G	W	30.64	41.35	3.12	0.5418	0.42	0.142	3.44	0.58	0.099	0.21	0.467	0.146	0.65	4.86	0.33	5.84	12448	6.426	10.11636	-3.69036	NAF
NS0143	188	190	NS	X067787	067787	1	G	W	20.83	53.27	1.85	0.5031	0.39	0.09	2.64	0.43	0.079	0.12	0.614	0.185	0.93	9.16	0.45	10.54	12436	3.672	7.50006	-3.82806	NAF
NS0143	150	152	NS	X067767	067767	1	G	W	33.41	39.4	1.87	0.7224	0.56	0.09	3.15	0.41	0.083	0.099	0.452	0.114	0.41	5.25	-0.08	5.58	12417	3.0294	7.15122	-4.12182	NAF
NS0143	154	156	NS	X067769	067769	1	G	W	33.44	38.21	1.98	0.7482	0.58	0.089	3.23	0.64	0.14	0.178	0.489	0.111	0.41	5.26	0.12	5.79	12419	5.4468	11.16288	-5.71608	NAF
NS0143	90	92	NS	X067737	067737	1	G	W	35.28	36.57	2.12	0.7482	0.58	0.1	2.36	0.54	0.1	0.119	0.844	0.022	0.15	5.96	-0.22	5.89	12387	3.6414	9.41868	-5.77728	NAF
NS0143	58	60	NS	X067721	067721	1	G	W	21.72	48.01	2.03	0.5805	0.45	0.088	2.51	0.57	0.103	0.123	0.008	0.019	1.1	13.56	0.33	14.99	12371	3.7638	9.94194	-6.17814	NAF
NS0143	186	188	NS	X067786	067786	1	G	W	36.71	32.98	1.46	0.7224	0.56	0.066	2.79	0.5	0.096	0.079	0.332	0.112	0.54	7.85	-0.22	8.17	12435	2.4174	8.721	-6.3036	NAF
NS0143	86	88	NS	X067735	067735	1	G	W	32.58	38.71	2.04	0.6837	0.53	0.092	2.57	0.48	0.086	0.064	0.144	0.018	0.34	7.81	-0.32	7.83	12385	1.9584	8.37216	-6.41376	NAF
NS0143	38	40	NS	X067711	067711	1	G	W	28.55	38.84	2.85	0.4257	0.33	0.125	2.03	0.5	0.027	0.07	0.203	0.019	1.29	12.74	0.07	14.1	12361	2.142	8.721	-6.579	NAF
NS0143	98	100	NS	X067741	067741	1	G	W	36.27	36.71	1.49	0.7869	0.61	0.072	1.95	0.51	0.099	0.075	0.983	0.068	0.03	5.07	-0.35	4.75	12391	2.295	8.89542	-6.60042	NAF
NS0143	50	52	NS	X067717	067717	1	G	W	26	40.59	1.98	0.5805	0.45	0.088	2.35	0.59	0.07	0.117	0.059	0.011	1.54	14.47	0.21	16.22	12367	3.5802	10.29078	-6.71058	NAF
NS0143	70	72	NS	X067727	067727	1	G	W	26.74	38.67	3.31	0.516	0.4	0.142	3.25	0.64	0.091	0.141	0.092	0.017	1.05	13.65	0.29	14.99	12377	4.3146	11.16288	-6.84828	NAF
NS0143	54	56	NS	X067719	067719	1	G	W	23.18	44.36	2.14	0.645	0.5	0.087	2.72	0.62	0.106	0.129	0.009	0.016	1.04	14.78	0.35	16.17	12369	3.9474	10.81404	-6.86664	NAF
NS0143	106	108	NS	X067745	067745	1	G	W	36.04	34.26	1.36	0.7998	0.62	0.063	2.45	0.48	0.077	0.045	1.09	0.019	0.21	7.43	-0.34	7.3	12395	1.377	8.37216	-6.99516	NAF
NS0143	60	62	NS	X067722	067722	1	G	W	21.82	51.42	0.78	0.3999	0.31	0.04	1.69	0.48	0.064	0.044	0.024	0.027	1.47	12.12	0.07	13.66	12372	1.3464	8.37216	-7.02576	NAF
NS0143	68	70	NS	X067726	067726	1	G	W	26.71	36.89	4.26	0.5547	0.43	0.182	3.74	0.68	0.104	0.158	0.067	0.026	0.99	13.84	0.34	15.17	12376	4.8348	11.86056	-7.02576	NAF
NS0143	64	66	NS	X067724	067724	1	G	W	25.54	39.49	2.42	0.5934	0.46	0.107	3.05	0.64	0.089	0.126	0.118	0.043	0.87	15.55	0.26	16.68	12374	3.8556	11.16288	-7.30728	NAF
NS0143	182	184	NS	X067784	067784	1	G	W	36	35.06	1.14	0.9288	0.72	0.052	2.94	0.47	0.075	0.025	0.257	0.084	0.4	7.65	-0.36	7.69	12433	0.765	8.19774	-7.43274	NAF
NS0143	104	106	NS	X067744	067744	1	G	W	35.27	34.23	2.03	0.8256	0.64	0.09	2.66	0.64	0.118	0.121	1.24	0.026	0.15	7.3	-0.15	7.3	12394	3.7026	11.16288	-7.46028	NAF
NS0143	176	178	NS	X067781	067781	1	G	W	36.3	35.12	1.24	0.8514	0.66	0.059	2.94	0.48	0.099	0.029	0.314	0.109	0.4	6.26	-0.34	6.32	12430	0.8874	8.37216	-7.48476	NAF
NS0143	80	82	NS	X067732	067732	1	G	W	25.15	46.66	1.76	0.3612	0.28	0.078	2.7	0.59	0.051	0.081	0.088	0.031	0.4	11.22	0.08	11.7	12382	2.4786	10.29078	-7.81218	NAF
NS0143	172	174	NS	X067779	067779	1	G	W	36.01	36.42	1.25	0.7353	0.57	0.057	2.72	0.51	0.094	0.027	0.321	0.104	0.39	5.59	-0.28	5.7	12428	0.8262	8.89542	-8.06922	NAF
NS0143	76	78	NS	X067730	067730	1	G	W	28.79	43.62	2.14	0.3999	0.31	0.097	2.59	0.75	0.077	0.159	0.189	0.024	0.45	8.09	0.15	8.69	12380	4.8654	13.0815	-8.2161	NAF
NS0143	84	86	NS	X067734	067734	1	G	W	31.14	43	1.62	0.5289	0.41	0.073	2.2	0.58	0.084	0.061	0.084	0.025	0.34	6.82	-0.19	6.97	12384	1.8666	10.11636	-8.24976	NAF
NS0143	192	194	NS	X067789	067789	1	G	W	30.11	39.94	1.59	0.516	0.4	0.074	3.11	0.65	0.082	0.09	0.338	0.116	0.66	9.54	0.05	10.25	12438	2.754	11.3373	-8.5833	NAF
NS0143	62	64	NS	X067723	067723	1	G	W	26.97	41.43	3.34	0.3225	0.25	0.144	2.71	0.67	0.053	0.099	0.214	0.025	1.01	11.52	0.07	12.6	12373	3.0294	11.68614	-8.65674	NAF
NS0143	100	102	NS	X067742	067742	1	G	W	33.96	40.1	1.48	0.7353	0.57	0.071	2.02	0.6	0.1	0.056	1.04	0.055	0.09	4.99	-0.17	4.91	12392	1.7136	10.4652	-8.7516	NAF
NS0143	196	198	NS	X067791	067791	1	G	W	32.07	39.49	1.71	0.5934	0.46	0.08	2.94	0.66	0.088	0.09	0.323	0.103	0.45	7.4	-0.15	7.7	12440	2.754	11.51172	-8.75772	NAF
NS0143	26	28	NS	X067705	067705	1	G	M	29.28	45.2	0.76	0.4257	0.33	0.037	1.4	0.51	0.063	0.004	0.087	0.015	0.67	8.8	0.05	9.52	12355	0.1224	8.89542	-8.77302	NAF
NS0143	92	94	NS	X067738	067738	1	G	W	33.26	37.57	2.75	0.7482	0.58	0.126	2.87	0.85	0.156	0.196	0.877	0.029	0.13	5.91	0.04	6.08	12388	5.9976	14.8257	-8.8281	NAF
NS0143	178	180	NS	X067782	067782	1	G	W	36.22	34.72	1.28	0.8772	0.68	0.056	2.97	0.58	0.133	0.036	0.305	0.104	0.39	6.41	-0.32	6.48	12431	1.1016	10.11636	-9.01476	NAF
NS0143	78	80	NS	X067731	067731	1	G	W	27.01	46.08	1.86	0.3741	0.29	0.085	2.51	0.71	0.06	0.109	0.139	0.016	0.4	8.57	0.11	9.08	12381	3.3354	12.38382	-9.04842	NAF
NS0143	134	136	NS	X067759	067759	1	G	W	34.53	36.83	2.32	0.7869	0.61	0.102	3.32	0.78	0.144	0.127	1.14	0.111	0.22	4.36	0.12	4.7	12409	3.8862	13.60476	-9.71856	NAF
NS0143	114	116	NS	X067749	067749	1	G	W	34.75	39.21	1.06	0.8385	0.65	0.049	2.25	0.6	0.087	0.022	0.854	0.037	0.04	5.11	-0.19	4.96	12399	0.6732	10.4652	-9.792	NAF
NS0143	88	90	NS	X067736	067736	1	G	W	35.09	38.4	1.54	0.7095	0.55	0.07	1.97	0.63	0.081	0.039	0.51	0.019	0.21	5.59	-0.33	5.47	12386	1.1934	10.98846	-9.79506	NAF
NS0143	32	34	NS	X067708	067708	1	G	W	29.54	34.02	2.06	0.6579	0.51	0.093	2.48	0.69	0.098	0.07	0.179	0.019	1.23	16.13	0.11	17.47	12358	2.142	12.03498	-9.89298	NAF
NS0143	156	158	NS	X067770	067770	1	G	W	34.4	39.79	1.38	0.7224	0.56	0.065	2.63	0.7	0.079	0.07	0.199	0.072	0.27	4.76	-0.13	4.9	12420	2.142	12.2094	-10.0674	NAF
NS0143	184	186	NS	X067785	067785	1	G	W	33.69	38.09	1.05	0.8901	0.69	0.046	2.72	0.65	0.076	0.026	0.204	0.075	0.35	7.38	-0.13	7.6	12434	0.7956	11.3373	-10.5417	NAF
NS0143	48	50	NS	X067716	067716	1	G	W	26.25	41.37	2.11	0.516	0.4	0.098	2.87	0.86	0.06	0.144	0.065	0.021	0.71	13.43	0.25	14.39	12366	4.4064	15.00012	-10.59372	NAF
NS0143	116	118	NS	X067750	067750	1	G	W	37.24	34.71	1.27	0.7869	0.61	0.057	2.66	0.65	0.097	0.024	0.965	0.036	0.08	5.35	-0.25	5.18	12400	0.7344	11.3373	-10.6029	NAF
NS0143	82	84	NS	X067733	067733	1	G	W	27.33	45.27	1.9	0.387	0.3	0.084	2.63	0.78	0.067	0.088	0.075	0.033	0.46	8.44	0.09	8.99	12383	2.6928	13.60476	-10.91196	NAF
NS0143	66	68	NS	X067725	067725	1	G	W	25.78	39.08	1.91	0.6579	0.51	0.085	3.05	0.77	0.113	0.082	0.108	0.041	1.21	15.94	0.19	17.34	12375	2.5092	13.43034	-10.92114	NAF
NS0143	30	32	NS	X067707	067707	1	G	W	29.61	37.06	1.6	0.516	0.4	0.071	2.13	0.66	0.054	0.015	0.336	0.024	1.5	13.65	0.09	15.24	12357	0.459	11.51172	-11.05272	NAF
NS0143	160	162	NS	X067772	067772	1	G	W	36.35	36	1.12	0.8901	0.69	0.057	2.75	0.71	0.094	0.028	0.255	0.081	0.29	5.76	-0.17	5.88	12422	0.8568	12.38382	-11.52702	NAF
NS0143	28	30	NS	X067706	067706	1	G	M	30.89	33.33	2.87	0.5934	0.46	0.131	2.56	0.8	0.139	0.079	0.15	0.048	1.07	14.04	0.1	15.21	12356	2.4174	13.9536	-11.5362	NAF
NS0143	180	182	NS	X067783	067783	1	G	W	36.92	36.56	1.22	0.6579	0.51	0.057	2.55	0.72	0.12	0.031	0.261	0.1	0.33	4.81	-0.28	4.86	12432	0.9486	12.55824	-11.60964	NAF
NS0143	108	110	NS	X067746	067746	1	G	W	36.09	36.27	1.07	0.7869	0.61	0.051	2.34	0.73	0.095	0.031	0.8	0.016	0.06	5.93	-0.14	5.85	12396	0.9486	12.73266	-11.78406	NAF
NS0143	132	134	NS	X067758	067758	1	G	W	34.17	39.62	1.2	0.9159	0.71	0.057	2.55	0.77	0.091	0.047	0.727	0.053	0.1	4.68	-0.03	4.75	12408	1.4382	13.43034	-11.99214	NAF
NS0143	162	164	NS	X067773	067773	1	G	W	35.8	37.54	1	0.8772	0.68	0.049	2.52	0.74	0.109	0.025	0.248	0.083	0.28	5.32	-0.21	5.39	12423	0.765	12.90708	-12.14208	NAF
NS0143	224	226	NS	X067805	067805	1	G	W	31.95	39.82	2.68	0.7353	0.57	0.126	3.43	0.94	0.103	0.134	0.478	0.157	0.63	4.83	0.35	5.81	12454	4.1004	16.39548	-12.29508	NAF
NS0143	124	126	NS	X067754	067754	1	G	W	35.68	37.97	1.11	0.774	0.6	0.053	2.61	0.76	0.085	0.026	0.68	0.035	0.06	4.39	-0.06	4.39	12404	0.7956	13.25592	-12.46032	NAF
NS0143	36	38	NS	X067710	067710	1	G	W	30.36	36.63	1.05	0.516	0.4	0.048	1.93	0.75	0.05	0.016	0.227	0.018	1.04	14.36	0.09	15.49	12360	0.4896	13.0815	-12.5919	NAF
NS0143	174	176	NS	X067780	067780	1	G	W	35.95	38.14	1.05	0.6966	0.54	0.047	2.38	0.77	0.112	0.025	0.23	0.083	0.28	4.78	-0.23	4.83	12429	0.765	13.43034	-12.66534	NAF
NS0143	120	122	NS	X067752	067752	1	G	W	36.05	37.71	1.33	0.645	0.5	0.06	2.45	0.8	0.096	0.029	0.497	0.041	0.21	4.1	-0.04	4.27	12402	0.8874	13.9536	-13.0662	NAF
NS0143	198	200	NS	X067792	067792	1	G	W	30.13	42.73	1.02	0.6837	0.53	0.048	2.58	0.82	0.087	0.038	0.326	0.107	0.51	7.49	0.07	8.07	12441	1.1628	14.30244	-13.13964	NAF
NS0143	112	114	NS	X067748	067748	1	G	W	35.83	37.58	1.06	0.8127	0.63	0.049	2.2	0.8	0.099	0.026	0.818	0.032	0.05	4.9	-0.1	4.85	12398	0.7956	13.9536	-13.158	NAF
NS0143	170	172	NS	X067778	067778	1	G	W	35.82	37.64	0.95	0.774	0.6	0.044	2.41	0.8	0.092	0.024	0.28	0.092	0.32	5.13	-0.1	5.35	12427	0.7344	13.9536	-13.2192	NAF
NS0143	168	170	NS	X067777	067777	1	G	W	34.47	38.84	1.24	0.7869	0.61	0.055	2.61	0.82	0.109	0.034	0.234	0.072	0.34	5.15	-0.05	5.44	12426	1.0404	14.30244	-13.26204	NAF
NS0143	102	104	NS	X067743	067743	1	G	W	31.42	43.42	1.08	0.774	0.6	0.051	2.01	0.8	0.081	0.021	0.836	0.058	0.09	5.53	0.11	5.73	12393	0.6426	13.9536	-13.311	NAF
NS0143	218	220	NS	X067802	067802	1	G	W	33.14	39.51	2	0.6321	0.49	0.086	2.91	0.86	0.093	0.05	0.468	0.149	0.56	4.67	0.1	5.33	12451	1.53	15.00012	-13.47012	NAF
NS0143	142	144	NS	X067763	067763	1	G	W	35.83	37.86	1.08	0.8643	0.67	0.051	2.47	0.82	0.087	0.026	0.375	0.085	0.11	4.56	-0.01	4.66	12413	0.7956	14.30244	-13.50684	NAF
NS0143	126	128	NS	X067755	067755	1	G	W	34.69	38.82	1.22	0.7998	0.62	0.056	2.62	0.83	0.1	0.025	0.897	0.039	0.03	4.29	0.04	4.36	12405	0.765	14.47686	-13.71186	NAF
NS0143	146	148	NS	X067765	067765	1	G	W	35.21	38.97	1.41	0.7095	0.55	0.065	2.71	0.88	0.093	0.048	0.344	0.068	0.2	4.28	0.01	4.49	12415	1.4688	15.34896	-13.88016	NAF
NS0143	130	132	NS	X067757	067757	1	G	W	35.52	37.69	1.41	0.7482	0.58	0.063	2.67	0.88	0.095	0.043	0.935	0.05	0.06	3.95	0.08	4.09	12407	1.3158	15.34896	-14.03316	NAF
NS0143	122	124	NS	X067753	067753	1	G	W	36.69	35.95	1.27	0.6966	0.54	0.06	2.78	0.87	0.095	0.025	0.555	0.047	0.11	4.62	0.06	4.79	12403	0.765	15.17454	-14.40954	NAF
NS0143	220	222	NS	X067803	067803	1	G	W	31.93	39.12	2.56	0.6708	0.52	0.115	3.37	1.07	0.162	0.136	0.483	0.149	0.57	4.94	0.24	5.75	12452	4.1616	18.66294	-14.50134	NAF
NS0143	110	112	NS	X067747	067747	1	G	W	37.89	35.03	1.28	0.6579	0.51	0.057	2.29	0.89	0.095	0.032	0.707	0.015	0	4.34	-0.09	4.25	12397	0.9792	15.52338	-14.54418	NAF
NS0143	94	96	NS	X067739	067739	1	G	W	37.48	35.99	1.45	0.7224	0.56	0.067	1.81	0.92	0.087	0.036	0.991	0.017	0.01	4.06	-0.01	4.06	12389	1.1016	16.04664	-14.94504	NAF
NS0143	138	140	NS	X067761	067761	1	G	W	36.66	37.1	1.36	0.6579	0.51	0.059	2.51	0.92	0.078	0.03	0.584	0.051	0.07	3.51	0.14	3.72	12411	0.918	16.04664	-15.12864	NAF
NS0143	128	130	NS	X067756	067756	1	G	W	36.93	36.67	1.09	0.7353	0.57	0.051	2.41	0.91	0.084	0.02	0.828	0.033	0.03	3.71	0.07	3.81	12406	0.612	15.87222	-15.26022	NAF
NS0143	230	232	NS	X067808	067808	1	G	W	35.07	37.17	2.07	0.7353	0.57	0.099	3.01	1.03	0.106	0.069	0.392	0.126	0.48	4.43	0.16	5.07	12457	2.1114	17.96526	-15.85386	NAF
NS0143	96	98	NS	X067740	067740	1	G	W	36.23	38.25	1.07	0.8256	0.64	0.059	1.61	0.95	0.105	0.021	0.842	0.02	0.01	4.07	0.02	4.1	12390	0.6426	16.5699	-15.9273	NAF
NS0143	194	196	NS	X067790	067790	1	G	W	32.73	38.18	0.96	0.6192	0.48	0.044	2.75	0.96	0.113	0.026	0.103	0.043	0.38	8.85	-0.01	9.22	12439	0.7956	16.74432	-15.94872	NAF
NS0143	222	224	NS	X067804	067804	1	G	W	33.64	39.12	2.03	0.645	0.5	0.092	2.89	1.07	0.082	0.082	0.405	0.129	0.49	4.27	0.31	5.07	12453	2.5092	18.66294	-16.15374	NAF
NS0143	118	120	NS	X067751	067751	1	G	W	36.74	36.42	1.17	0.7353	0.57	0.053	2.45	0.98	0.096	0.029	0.718	0.031	0.02	4.36	0.13	4.51	12401	0.8874	17.09316	-16.20576	NAF
NS0143	164	166	NS	X067774	067774	1	G	W	31.88	42.22	0.81	0.903	0.7	0.039	2.46	0.99	0.104	0.021	0.243	0.064	0.27	5.78	0.14	6.19	12424	0.6426	17.26758	-16.62498	NAF
NS0143	136	138	NS	X067760	067760	1	G	W	34.25	39.7	1.09	0.8772	0.68	0.049	2.42	1.04	0.095	0.027	0.628	0.045	0.08	4.33	0.22	4.63	12410	0.8262	18.13968	-17.31348	NAF
NS0143	232	234	NS	X067809	067809	1	G	W	30.23	39.7	3.45	0.6837	0.53	0.156	4	1.37	0.335	0.17	0.484	0.161	0.58	4.66	0.36	5.6	12458	5.202	23.89554	-18.69354	NAF
NS0143	158	160	NS	X067771	067771	1	G	W	33.59	39.74	1.06	0.8256	0.64	0.048	2.62	1.13	0.101	0.03	0.195	0.065	0.21	5.35	0.24	5.8	12421	0.918	19.70946	-18.79146	NAF
NS0143	228	230	NS	X067807	067807	1	G	W	34.91	37.8	1.96	0.645	0.5	0.095	2.79	1.24	0.148	0.084	0.389	0.132	0.43	3.93	0.21	4.57	12456	2.5704	21.62808	-19.05768	NAF
NS0143	144	146	NS	X067764	067764	1	G	W	33.24	39.57	1.06	0.9546	0.74	0.048	2.75	1.15	0.087	0.028	0.449	0.063	0.2	5.12	0.42	5.74	12414	0.8568	20.0583	-19.2015	NAF
NS0143	234	236	NS	X067810	067810	1	G	W	36.45	36.85	1.47	0.6837	0.53	0.071	2.53	1.24	0.069	0.034	0.253	0.082	0.28	3.71	0.48	4.47	12459	1.0404	21.62808	-20.58768	NAF
NS0143	226	228	NS	X067806	067806	1	G	W	35.72	36.54	1.17	0.8256	0.64	0.054	2.45	1.26	0.086	0.025	0.279	0.097	0.31	5.06	0.41	5.78	12455	0.765	21.97692	-21.21192	NAF
NS0143	236	238	NS	X067811	067811	1	G	W	36.22	36.99	1.15	0.7869	0.61	0.052	2.4	1.45	0.106	0.03	0.212	0.065	0.27	3.84	0.51	4.62	12460	0.918	25.2909	-24.3729	NAF
NS0143	238	240	NS	X067812	067812	1	G	W	35.65	38.05	1.14	0.8127	0.63	0.053	2.43	1.57	0.09	0.033	0.295	0.07	0.17	3.43	0.82	4.42	12461	1.0098	27.38394	-26.37414	NAF
NS0145	124	126	NS	X122655	122655	1	G	W	35.51	39.99	1.13	0.129	0.1	0.048	0.65	0.13	0.176	0.355	0.022	0.025	2.06	3.95	0.86	6.87	19806	10.863	2.26746	8.59554	PAF(LC)
NS0145	96	98	NS	X122641	122641	1	G	D	28.18	35.19	1.48	0.4644	0.36	0.06	2.4	0.65	0.072	0.393	0.152	0.01	1.4	16.23	0.74	18.37	19792	12.0258	11.3373	0.6885	PAF(LC)
NS0145	52	54	NS	X122619	122619	1	G	D	35.91	43.04	1.97	0.4644	0.36	0.092	0.04	0.02	0.06	0.013	1.2	0.021	0.73	0.37	0.19	1.29	19770	0.3978	0.34884	0.04896	PAF(LC)
NS0145	46	48	NS	X122616	122616	1	G	D	36.24	42.94	2.1	0.3741	0.29	0.102	0.05	0.02	0.052	0.009	1.19	0.024	0.76	0.38	0.19	1.33	19767	0.2754	0.34884	-0.07344	NAF
NS0145	48	50	NS	X122617	122617	1	G	D	36.58	41.77	1.9	0.7353	0.57	0.084	0.06	0.03	0.108	0.013	0.98	0.023	1.28	0.46	0.2	1.94	19768	0.3978	0.52326	-0.12546	NAF
NS0145	50	52	NS	X122618	122618	1	G	D	32.97	45.71	2.15	1.2513	0.97	0.096	0.07	0.03	0.07	0.013	1.03	0.022	1.24	0.56	0.23	2.03	19769	0.3978	0.52326	-0.12546	NAF
NS0145	44	46	NS	X122615	122615	1	G	D	38.53	40.89	1.65	0.1935	0.15	0.073	0.03	0.02	0.056	0.007	1.09	0.026	0.6	0.32	0.17	1.09	19766	0.2142	0.34884	-0.13464	NAF
NS0145	22	24	NS	X122604	122604	1	G	D	35.37	44.81	1.35	0.3741	0.29	0.061	0.08	0.04	0.087	0.017	0.729	0.027	1.17	0.35	0.18	1.7	19755	0.5202	0.69768	-0.17748	NAF
NS0145	64	66	NS	X122625	122625	1	G	D	33.98	43.53	2.5	0.2064	0.16	0.114	0.24	0.03	0.041	0.011	1.08	0.023	3.01	0.68	0.19	3.88	19776	0.3366	0.52326	-0.18666	NAF
NS0145	54	56	NS	X122620	122620	1	G	D	33.54	44.01	2.83	0.6321	0.49	0.13	0.11	0.03	0.093	0.009	1.77	0.022	1.58	0.41	0.19	2.18	19771	0.2754	0.52326	-0.24786	NAF
NS0145	24	26	NS	X122605	122605	1	G	D	36.21	42.7	1.25	0.5547	0.43	0.06	0.12	0.04	0.068	0.014	0.503	0.027	1.99	0.42	0.17	2.58	19756	0.4284	0.69768	-0.26928	NAF
NS0145	40	42	NS	X122613	122613	1	G	D	36.22	42.6	1.52	0.8514	0.66	0.068	0.04	0.03	0.067	0.008	0.933	0.025	1.08	0.38	0.21	1.67	19764	0.2448	0.52326	-0.27846	NAF
NS0145	18	20	NS	X122602	122602	1	G	D	35.17	45.24	1.47	0.258	0.2	0.068	0.09	0.04	0.065	0.013	0.682	0.023	1.36	0.38	0.17	1.91	19753	0.3978	0.69768	-0.29988	NAF
NS0145	20	22	NS	X122603	122603	1	G	D	35.42	44.43	1.25	0.2967	0.23	0.058	0.09	0.04	0.082	0.013	0.623	0.025	1.61	0.39	0.17	2.17	19754	0.3978	0.69768	-0.29988	NAF
NS0145	42	44	NS	X122614	122614	1	G	D	35.73	45.34	1.34	0.3741	0.29	0.063	0.03	0.03	0.062	0.007	0.823	0.024	0.69	0.29	0.13	1.11	19765	0.2142	0.52326	-0.30906	NAF
NS0145	58	60	NS	X122622	122622	1	G	D	33.86	41.47	2.52	0.7998	0.62	0.124	0.31	0.03	0.083	0.006	1.09	0.028	4.19	0.74	0.27	5.2	19773	0.1836	0.52326	-0.33966	NAF
NS0145	36	38	NS	X122611	122611	1	G	D	34.3	43.75	1.54	1.032	0.8	0.067	0.18	0.04	0.077	0.011	0.688	0.04	2.56	0.6	0.2	3.36	19762	0.3366	0.69768	-0.36108	NAF
NS0145	56	58	NS	X122621	122621	1	G	D	37.37	38.87	2	0.7611	0.59	0.092	0.12	0.03	0.082	0.005	1.33	0.015	2.81	0.39	0.11	3.31	19772	0.153	0.52326	-0.37026	NAF
NS0145	26	28	NS	X122606	122606	1	G	D	36.52	39.97	1.34	0.7611	0.59	0.06	0.35	0.04	0.08	0.009	0.442	0.026	3.8	0.63	0.22	4.65	19757	0.2754	0.69768	-0.42228	NAF
NS0145	28	30	NS	X122607	122607	1	G	D	34.31	43.67	1.57	0.6837	0.53	0.071	0.25	0.04	0.063	0.009	0.998	0.034	2.84	0.43	0.13	3.4	19758	0.2754	0.69768	-0.42228	NAF
NS0145	62	64	NS	X122624	122624	1	G	D	32.94	41.05	3.86	0.7095	0.55	0.209	0.31	0.04	0.054	0.009	1.13	0.027	4.04	0.99	0.34	5.37	19775	0.2754	0.69768	-0.42228	NAF
NS0145	30	32	NS	X122608	122608	1	G	D	35.03	44.34	1.48	0.5289	0.41	0.066	0.1	0.04	0.062	0.008	0.998	0.02	1.78	0.31	0.11	2.2	19759	0.2448	0.69768	-0.45288	NAF
NS0145	38	40	NS	X122612	122612	1	G	D	35.44	44.28	1.46	0.6708	0.52	0.073	0.06	0.04	0.081	0.008	0.747	0.026	1.37	0.41	0.17	1.95	19763	0.2448	0.69768	-0.45288	NAF
NS0145	2	4	NS	X122594	122594	1	G	D	7.89	76.75	7.22	0.00645	0.005	0.231	0.1	0.04	0.01	0.007	0.109	0.032	1.56	2.23	0.17	3.96	19745	0.2142	0.69768	-0.48348	NAF
NS0145	32	34	NS	X122609	122609	1	G	D	34.23	44.2	1.58	0.8385	0.65	0.069	0.11	0.04	0.076	0.007	1.05	0.028	1.98	0.39	0.11	2.48	19760	0.2142	0.69768	-0.48348	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0145	34	36	NS	X122610	122610	1	G	D	34.64	42.98	1.47	0.774	0.6	0.065	0.3	0.04	0.074	0.007	0.869	0.031	3.14	0.5	0.12	3.76	19761	0.2142	0.69768	-0.48348	NAF
NS0145	68	70	NS	X122627	122627	1	G	D	32.78	44.39	2.26	0.6708	0.52	0.104	0.23	0.04	0.052	0.006	1.2	0.018	3.41	0.69	0.18	4.28	19778	0.1836	0.69768	-0.51408	NAF
NS0145	60	62	NS	X122623	122623	1	G	D	34.01	42.21	2.11	0.774	0.6	0.097	0.22	0.04	0.062	0.005	1.3	0.03	3.65	0.59	0.2	4.44	19774	0.153	0.69768	-0.54468	NAF
NS0145	66	68	NS	X122626	122626	1	G	D	32.94	44.18	2.89	0.2967	0.23	0.132	0.25	0.04	0.05	0.005	1.05	0.02	3.01	0.83	0.16	4	19777	0.153	0.69768	-0.54468	NAF
NS0145	74	76	NS	X122630	122630	1	G	D	30.83	47.09	1.62	0.516	0.4	0.072	0.35	0.04	0.064	0.005	0.614	0.02	4.53	0.8	0.17	5.5	19781	0.153	0.69768	-0.54468	NAF
NS0145	6	8	NS	X122596	122596	1	G	D	3.72	89.32	2.95	0.00645	0.005	0.086	0.04	0.04	0.006	0.004	0.028	0.05	0.87	1.05	0.16	2.08	19747	0.1224	0.69768	-0.57528	NAF
NS0145	76	78	NS	X122631	122631	1	G	D	35.24	39.8	3.04	0.4128	0.32	0.134	0.26	0.05	0.092	0.005	1.18	0.019	3.48	0.85	0.27	4.6	19782	0.153	0.8721	-0.7191	NAF
NS0145	14	16	NS	X122600	122600	1	G	D	33.5	45.99	1.42	0.2322	0.18	0.065	0.21	0.06	0.056	0.009	0.383	0.016	2.93	0.52	0.17	3.62	19751	0.2754	1.04652	-0.77112	NAF
NS0145	12	14	NS	X122599	122599	1	G	D	25.97	55.48	2.33	0.1419	0.11	0.085	0.21	0.07	0.045	0.007	0.186	0.03	3.26	0.94	0.19	4.39	19750	0.2142	1.22094	-1.00674	NAF
NS0145	0	2	NS	X122593	122593	1	G	D	20.28	57.99	7.25	0.0774	0.06	0.372	0.16	0.08	0.022	0.011	0.137	0.033	2.06	2.28	0.2	4.54	19744	0.3366	1.39536	-1.05876	NAF
NS0145	10	12	NS	X122598	122598	1	G	D	15.51	70.61	3.11	0.0387	0.03	0.134	0.13	0.08	0.019	0.007	0.152	0.06	1.87	1.09	0.18	3.14	19749	0.2142	1.39536	-1.18116	NAF
NS0145	82	84	NS	X122634	122634	1	G	D	30.37	38.52	2.04	0.3354	0.26	0.09	1.61	0.39	0.067	0.166	1.12	0.041	1.04	10.92	0.15	12.11	19785	5.0796	6.80238	-1.72278	NAF
NS0145	94	96	NS	X122640	122640	1	G	D	26.22	54.71	0.93	0.129	0.1	0.045	0.36	0.12	0.095	0.012	0.104	0.014	3.47	1.96	0.19	5.62	19791	0.3672	2.09304	-1.72584	NAF
NS0145	70	72	NS	X122628	122628	1	G	D	33.36	39.43	2.27	0.5418	0.42	0.098	1.09	0.16	0.065	0.031	0.596	0.012	3.56	4.47	0.21	8.24	19779	0.9486	2.79072	-1.84212	NAF
NS0145	8	10	NS	X122597	122597	1	G	D	6.61	79.89	5.94	0.00645	0.005	0.157	0.15	0.13	0.01	0.006	0.098	0.074	1.49	1.98	0.29	3.76	19748	0.1836	2.26746	-2.08386	NAF
NS0145	72	74	NS	X122629	122629	1	G	D	28.51	47.41	4.33	0.4128	0.32	0.194	0.99	0.16	0.085	0.007	0.198	0.024	3.14	1.81	0.23	5.18	19780	0.2142	2.79072	-2.57652	NAF
NS0145	208	210	NS	X122697	122697	1	G	W	31.19	35.43	1.89	0.4257	0.33	0.082	2.4	0.54	0.091	0.222	0.746	0.03	1.07	11.8	0.48	13.35	19848	6.7932	9.41868	-2.62548	NAF
NS0145	92	94	NS	X122639	122639	1	G	D	28.55	48.2	2.09	0.1548	0.12	0.098	0.75	0.17	0.055	0.009	0.098	0.008	3.39	3.55	0.12	7.06	19790	0.2754	2.96514	-2.68974	NAF
NS0145	16	18	NS	X122601	122601	1	G	D	24.52	58.46	2.61	0.1161	0.09	0.09	0.16	0.2	0.042	0.012	0.457	0.038	1.62	0.88	0.16	2.66	19752	0.3672	3.4884	-3.1212	NAF
NS0145	4	6	NS	X122595	122595	1	G	D	3.94	83.26	6.71	0.00645	0.005	0.2	0.13	0.26	0.009	0.005	0.077	0.059	0.89	2.37	0.21	3.47	19746	0.153	4.53492	-4.38192	NAF
NS0145	78	80	NS	X122632	122632	1	G	D	31.26	38.5	1.58	0.4386	0.34	0.069	1.46	0.32	0.05	0.01	1.08	0.05	1.09	10.57	-0.2	11.46	19783	0.306	5.58144	-5.27544	NAF
NS0145	206	208	NS	X122696	122696	1	G	W	25.03	42.39	1.56	0.5805	0.45	0.064	2.26	0.9	0.174	0.339	0.304	0.082	0.79	13.27	0.73	14.79	19847	10.3734	15.6978	-5.3244	NAF
NS0145	184	186	NS	X122685	122685	1	G	W	33.21	39.19	1.39	0.4257	0.33	0.061	1.62	0.34	0.062	0.014	0.801	0.024	0.48	8.14	-0.02	8.6	19836	0.4284	5.93028	-5.50188	NAF
NS0145	176	178	NS	X122681	122681	1	G	W	36.36	35.24	1.47	0.4257	0.33	0.06	1.37	0.33	0.072	0.005	0.746	0.028	0.47	8.04	-0.15	8.36	19832	0.153	5.75586	-5.60286	NAF
NS0145	116	118	NS	X122651	122651	1	G	W	29.62	39.27	0.96	0.3741	0.29	0.04	1.47	0.38	0.051	0.014	0.03	0.011	1.95	12.6	0.05	14.6	19802	0.4284	6.62796	-6.19956	NAF
NS0145	128	130	NS	X122657	122657	1	G	W	27.15	36.81	1.02	0.4257	0.33	0.042	2.46	0.37	0.02	0.007	0.009	0.007	1.36	18.36	0.02	19.74	19808	0.2142	6.45354	-6.23934	NAF
NS0145	222	224	NS	X122704	122704	1	G	W	34.01	38.33	1.38	0.4515	0.35	0.062	1.57	0.37	0.066	0.007	0.567	0.021	0.29	8.22	-0.04	8.47	19855	0.2142	6.45354	-6.23934	NAF
NS0145	218	220	NS	X122702	122702	1	G	W	33.08	38.75	1.91	0.4386	0.34	0.092	1.76	0.38	0.072	0.008	0.787	0.023	0.49	8.15	-0.02	8.62	19853	0.2448	6.62796	-6.38316	NAF
NS0145	170	172	NS	X122678	122678	1	G	W	29.21	38.2	0.95	0.5547	0.43	0.039	1.39	0.4	0.036	0.017	0.423	0.038	1.61	14.47	0	16.08	19829	0.5202	6.9768	-6.4566	NAF
NS0145	246	248	NS	X122716	122716	1	G	W	32.71	38.83	1.12	0.6063	0.47	0.051	1.61	0.39	0.067	0.009	0.356	0.045	0.38	9.53	-0.31	9.6	19867	0.2754	6.80238	-6.52698	NAF
NS0145	80	82	NS	X122633	122633	1	G	D	30.4	40.04	1.4	0.3741	0.29	0.063	1.5	0.4	0.069	0.009	1.02	0.044	0.62	11.1	-0.27	11.45	19784	0.2754	6.9768	-6.7014	NAF
NS0145	108	110	NS	X122647	122647	1	G	W	23.06	47.09	0.98	0.4257	0.33	0.043	1.92	0.41	0.058	0.009	0.035	0.027	1.67	14.1	0.02	15.79	19798	0.2754	7.15122	-6.87582	NAF
NS0145	114	116	NS	X122650	122650	1	G	W	27.2	39.71	1.07	0.4257	0.33	0.046	2.02	0.42	0.034	0.014	0.045	0.007	2.47	14.75	0.05	17.27	19801	0.4284	7.32564	-6.89724	NAF
NS0145	182	184	NS	X122684	122684	1	G	W	33.4	37.09	1.62	0.4128	0.32	0.069	1.81	0.41	0.065	0.006	1.02	0.022	0.49	8.7	0	9.19	19835	0.1836	7.15122	-6.96762	NAF
NS0145	152	154	NS	X122669	122669	1	G	W	28.79	34.79	0.98	0.5289	0.41	0.041	2.49	0.44	0.024	0.008	0.35	0.053	1.1	17.96	0.04	19.1	19820	0.2448	7.67448	-7.42968	NAF
NS0145	126	128	NS	X122656	122656	1	G	W	28.04	35.51	1.35	0.4773	0.37	0.053	2.41	0.47	0.032	0.024	0.014	0.004	2.34	16.96	0.05	19.35	19807	0.7344	8.19774	-7.46334	NAF
NS0145	178	180	NS	X122682	122682	1	G	W	32.89	37.77	1.31	0.4902	0.38	0.057	1.64	0.44	0.091	0.006	0.442	0.121	0.63	10.15	-0.11	10.67	19833	0.1836	7.67448	-7.49088	NAF
NS0145	104	106	NS	X122645	122645	1	G	W	30.14	30.13	1.45	0.6063	0.47	0.06	2.7	0.45	0.023	0.007	0.044	0.004	2.08	19.53	0.03	21.64	19796	0.2142	7.8489	-7.6347	NAF
NS0145	156	158	NS	X122671	122671	1	G	W	29.87	32.21	0.9	0.5805	0.45	0.035	1.81	0.47	0.087	0.018	0.31	0.021	1.58	18.76	0.07	20.41	19822	0.5508	8.19774	-7.64694	NAF
NS0145	174	176	NS	X122680	122680	1	G	W	32.51	37.75	1.35	0.3999	0.31	0.058	1.69	0.46	0.083	0.007	0.573	0.035	0.44	10.38	-0.1	10.72	19831	0.2142	8.02332	-7.80912	NAF
NS0145	154	156	NS	X122670	122670	1	G	W	28.6	34.37	1.04	0.5676	0.44	0.041	2.15	0.5	0.081	0.023	0.18	0.002	1.3	18.33	0.07	19.7	19821	0.7038	8.721	-8.0172	NAF
NS0145	196	198	NS	X122691	122691	1	G	W	31.83	41.09	0.99	0.5676	0.44	0.048	1.51	0.48	0.086	0.011	0.207	0.24	0.34	8.62	-0.16	8.8	19842	0.3366	8.37216	-8.03556	NAF
NS0145	106	108	NS	X122646	122646	1	G	W	28.37	34.18	1.38	0.5031	0.39	0.056	2.75	0.48	0.043	0.006	0.018	0.021	1.38	18.63	0	20.01	19797	0.1836	8.37216	-8.18856	NAF
NS0145	172	174	NS	X122679	122679	1	G	W	29.02	38.74	0.95	0.516	0.4	0.039	1.61	0.48	0.07	0.006	0.428	0.078	1.57	14.1	-0.03	15.64	19830	0.1836	8.37216	-8.18856	NAF
NS0145	220	222	NS	X122703	122703	1	G	W	33.69	38.62	1.17	0.4515	0.35	0.051	1.63	0.48	0.095	0.005	0.448	0.031	0.36	8.1	-0.05	8.41	19854	0.153	8.37216	-8.21916	NAF
NS0145	148	150	NS	X122667	122667	1	G	W	25.11	41.03	0.86	0.4644	0.36	0.037	2.22	0.51	0.042	0.016	0.254	0.008	1.1	17.22	0.11	18.43	19818	0.4896	8.89542	-8.40582	NAF
NS0145	100	102	NS	X122643	122643	1	G	W	29.84	31.1	1.31	0.5547	0.43	0.056	2.34	0.75	0.043	0.147	0.32	0.007	1.46	18.89	0.27	20.62	19794	4.4982	13.0815	-8.5833	NAF
NS0145	130	132	NS	X122658	122658	1	G	W	24.59	42.78	1.02	0.387	0.3	0.043	2.28	0.51	0.02	0.006	0.009	0.016	1.56	15.78	0.13	17.47	19809	0.1836	8.89542	-8.71182	NAF
NS0145	194	196	NS	X122690	122690	1	G	W	31.59	37.43	2.2	0.4644	0.36	0.098	2.02	0.54	0.089	0.019	0.74	0.106	0.74	10.26	-0.03	10.97	19841	0.5814	9.41868	-8.83728	NAF
NS0145	202	204	NS	X122694	122694	1	G	W	31.19	38.24	1.9	0.5031	0.39	0.091	2.12	0.58	0.089	0.041	0.616	0.162	0.59	10.66	0	11.25	19845	1.2546	10.11636	-8.86176	NAF
NS0145	180	182	NS	X122683	122683	1	G	W	31.02	38.76	1.25	0.4644	0.36	0.055	2.05	0.53	0.07	0.011	0.622	0.06	0.42	11.46	0.05	11.93	19834	0.3366	9.24426	-8.90766	NAF
NS0145	210	212	NS	X122698	122698	1	G	W	29.99	39.08	1.33	0.5031	0.39	0.055	2.18	0.54	0.076	0.015	0.484	0.048	0.53	12	-0.04	12.49	19849	0.459	9.41868	-8.95968	NAF
NS0145	98	100	NS	X122642	122642	1	G	W	29.9	30.19	1.48	0.5547	0.43	0.063	2.66	0.62	0.037	0.059	0.131	0.008	1.67	19.72	0.11	21.5	19793	1.8054	10.81404	-9.00864	NAF
NS0145	146	148	NS	X122666	122666	1	G	W	27.37	35.35	0.88	0.5547	0.43	0.035	2.49	0.54	0.053	0.011	0.249	0.007	1.9	18.54	0.08	20.52	19817	0.3366	9.41868	-9.08208	NAF
NS0145	236	238	NS	X122711	122711	1	G	W	31.07	42.07	1.1	0.516	0.4	0.052	1.64	0.54	0.052	0.007	0.476	0.028	0.34	8.15	0.15	8.64	19862	0.2142	9.41868	-9.20448	NAF
NS0145	102	104	NS	X122644	122644	1	G	W	29.69	33.17	1.66	0.5676	0.44	0.071	2.25	0.71	0.108	0.098	0.256	0.01	1.59	16.59	0.13	18.31	19795	2.9988	12.38382	-9.38502	NAF
NS0145	120	122	NS	X122653	122653	1	G	W	29.63	36.99	1.26	0.5031	0.39	0.053	1.82	0.59	0.058	0.026	0.321	0.01	1.92	14.1	0.1	16.12	19804	0.7956	10.29078	-9.49518	NAF
NS0145	162	164	NS	X122674	122674	1	G	W	30.61	32.58	1.19	0.5934	0.46	0.051	1.85	0.58	0.075	0.017	0.328	0.094	1.17	17.81	0.09	19.07	19825	0.5202	10.11636	-9.59616	NAF
NS0145	132	134	NS	X122659	122659	1	G	W	28.62	33.43	0.95	0.5031	0.39	0.04	2.71	0.57	0.038	0.007	0.011	0.004	1.96	19.02	0.07	21.05	19810	0.2142	9.94194	-9.72774	NAF
NS0145	238	240	NS	X122712	122712	1	G	W	32.59	39.98	1.13	0.4644	0.36	0.054	1.65	0.58	0.069	0.006	0.442	0.025	0.35	8.52	0.12	8.99	19863	0.1836	10.11636	-9.93276	NAF
NS0145	168	170	NS	X122677	122677	1	G	W	29.9	36.07	1.04	0.6192	0.48	0.043	1.57	0.59	0.047	0.01	0.349	0.037	1.91	14.73	0.12	16.76	19828	0.306	10.29078	-9.98478	NAF
NS0145	84	86	NS	X122636	122636	1	G	D	28.6	36.41	1.65	0.3741	0.29	0.07	2.24	0.64	0.068	0.037	0.766	0.037	0.97	15.8	0.11	16.88	19787	1.1322	11.16288	-10.03068	NAF
NS0145	192	194	NS	X122689	122689	1	G	W	29.41	39.55	2.03	0.4515	0.35	0.095	2.16	0.64	0.079	0.027	0.501	0.076	0.67	11.55	0.1	12.32	19840	0.8262	11.16288	-10.33668	NAF
NS0145	90	92	NS	X122638	122638	1	G	D	26.67	38.98	1.15	0.3741	0.29	0.05	2.07	0.66	0.044	0.02	0.251	0.019	1.43	16.16	0.2	17.79	19789	0.612	11.51172	-10.89972	NAF
NS0145	134	136	NS	X122660	122660	1	G	W	28.1	34.49	0.95	0.5289	0.41	0.038	2.56	0.64	0.053	0.007	0.018	0.003	1.24	18.94	0.1	20.28	19811	0.2142	11.16288	-10.94868	NAF
NS0145	234	236	NS	X122710	122710	1	G	W	32.46	40.44	1.41	0.4644	0.36	0.066	1.64	0.65	0.064	0.007	0.596	0.024	0.27	7.8	0.32	8.39	19861	0.2142	11.3373	-11.1231	NAF
NS0145	160	162	NS	X122673	122673	1	G	W	29.32	33.88	0.97	0.5934	0.46	0.04	1.68	0.66	0.052	0.008	0.283	0.07	1.37	17.9	0.25	19.52	19824	0.2448	11.51172	-11.26692	NAF
NS0145	204	206	NS	X122695	122695	1	G	W	29.36	41.27	0.86	0.5934	0.46	0.039	1.8	0.67	0.077	0.012	0.211	0.183	0.43	11.43	0.01	11.87	19846	0.3672	11.68614	-11.31894	NAF
NS0145	224	226	NS	X122705	122705	1	G	W	28.46	37.98	3	0.4644	0.36	0.135	2.72	0.81	0.086	0.088	0.845	0.099	0.44	12.03	0.44	12.91	19856	2.6928	14.12802	-11.43522	NAF
NS0145	216	218	NS	X122701	122701	1	G	W	31.09	37.67	2.39	0.4386	0.34	0.113	2.22	0.74	0.093	0.044	1.01	0.086	0.37	9.54	0.27	10.18	19852	1.3464	12.90708	-11.56068	NAF
NS0145	232	234	NS	X122709	122709	1	G	W	32.6	39.55	1.32	0.4257	0.33	0.058	1.7	0.68	0.071	0.006	0.558	0.026	0.36	7.88	0.25	8.49	19860	0.1836	11.86056	-11.67696	NAF
NS0145	110	112	NS	X122648	122648	1	G	W	28.39	34.25	0.91	0.5547	0.43	0.037	2.42	0.7	0.026	0.012	0.015	0.008	1.19	19.05	0.17	20.41	19799	0.3672	12.2094	-11.8422	NAF
NS0145	164	166	NS	X122675	122675	1	G	W	30.83	30.42	1.21	0.5289	0.41	0.05	2.54	0.7	0.07	0.009	0.296	0.136	1.3	18.47	0.14	19.91	19826	0.2754	12.2094	-11.934	NAF
NS0145	142	144	NS	X122664	122664	1	G	W	29.25	34.88	1.01	0.4902	0.38	0.041	2.4	0.71	0.073	0.007	0.747	0.069	1.35	16.45	0.06	17.86	19815	0.2142	12.38382	-12.16962	NAF
NS0145	150	152	NS	X122668	122668	1	G	W	28.16	34.32	1.21	0.4773	0.37	0.048	2.45	0.72	0.051	0.012	0.239	0.1	0.79	18.97	0.22	19.98	19819	0.3672	12.55824	-12.19104	NAF
NS0145	140	142	NS	X122663	122663	1	G	W	29.74	38.49	1.03	0.5031	0.39	0.043	1.88	0.72	0.079	0.008	0.793	0.066	1.42	12.08	-0.07	13.43	19814	0.2448	12.55824	-12.31344	NAF
NS0145	190	192	NS	X122688	122688	1	G	W	29.49	34.04	1.26	0.5805	0.45	0.053	2.46	0.73	0.061	0.012	0.317	0.114	1.31	16.73	0.26	18.3	19839	0.3672	12.73266	-12.36546	NAF
NS0145	212	214	NS	X122699	122699	1	G	W	29.71	35.98	1.61	0.4644	0.36	0.067	2.79	0.72	0.068	0.006	0.586	0.069	0.89	13.91	0.19	14.99	19850	0.1836	12.55824	-12.37464	NAF
NS0145	228	230	NS	X122707	122707	1	G	W	32.37	37.93	1.16	0.4515	0.35	0.051	2.04	0.72	0.065	0.006	0.39	0.056	0.28	10.06	0.36	10.7	19858	0.1836	12.55824	-12.37464	NAF
NS0145	250	252	NS	X122718	122718	1	G	W	29.94	40.28	1.3	0.5676	0.44	0.058	1.45	0.73	0.119	0.011	0.302	0.064	0.7	11.38	-0.09	11.99	19869	0.3366	12.73266	-12.39606	NAF
NS0145	166	168	NS	X122676	122676	1	G	W	30.03	34.74	1.01	0.5547	0.43	0.042	2	0.74	0.12	0.016	0.255	0.128	1.12	16.28	0.09	17.49	19827	0.4896	12.90708	-12.41748	NAF
NS0145	112	114	NS	X122649	122649	1	G	W	28.59	33.28	1.17	0.4773	0.37	0.047	2.6	0.73	0.052	0.01	0.024	0.008	1.57	18.71	0.13	20.41	19800	0.306	12.73266	-12.42666	NAF
NS0145	230	232	NS	X122708	122708	1	G	W	31.5	40.04	1.25	0.4386	0.34	0.054	1.95	0.74	0.067	0.006	0.469	0.03	0.37	9.22	0.32	9.91	19859	0.1836	12.90708	-12.72348	NAF
NS0145	186	188	NS	X122686	122686	1	G	W	28.42	43.05	1.05	0.4515	0.35	0.05	1.99	0.75	0.058	0.005	0.409	0.107	0.31	10.38	0.38	11.07	19837	0.153	13.0815	-12.9285	NAF
NS0145	248	250	NS	X122717	122717	1	G	W	26.08	45.74	1.03	0.5805	0.45	0.045	1.54	0.76	0.119	0.008	0.195	0.1	0.52	11.96	0.05	12.53	19868	0.2448	13.25592	-13.01112	NAF
NS0145	144	146	NS	X122665	122665	1	G	W	28.79	32.62	0.96	0.5031	0.39	0.039	2.51	0.77	0.056	0.011	0.272	0.023	1.46	19.05	0.2	20.71	19816	0.3366	13.43034	-13.09374	NAF
NS0145	122	124	NS	X122654	122654	1	G	W	28.26	35.22	0.88	0.516	0.4	0.035	2.21	0.85	0.13	0.056	0.07	0.002	1.38	18	0.08	19.46	19805	1.7136	14.8257	-13.1121	NAF
NS0145	88	90	NS	X122637	122637	1	G	D	26.36	40.24	1.12	0.3741	0.29	0.048	1.76	0.81	0.065	0.033	0.197	0.011	1.59	15.5	0.23	17.32	19788	1.0098	14.12802	-13.11822	NAF
NS0145	86	88	NS	X122635	122635	1	G	D	23.4	46.42	1.06	0.3741	0.29	0.044	1.68	0.8	0.094	0.023	0.313	0.005	1.51	13.81	0.22	15.54	19786	0.7038	13.9536	-13.2498	NAF
NS0145	244	246	NS	X122715	122715	1	G	W	32.82	37.17	1.44	0.5547	0.43	0.061	1.84	0.79	0.085	0.012	0.326	0.212	0.38	9.55	0.14	10.07	19866	0.3672	13.77918	-13.41198	NAF
NS0145	118	120	NS	X122652	122652	1	G	W	27.24	36.57	1.03	0.4902	0.38	0.044	2.32	0.81	0.04	0.023	0.089	0.011	1.51	18.12	0.25	19.88	19803	0.7038	14.12802	-13.42422	NAF
NS0145	242	244	NS	X122714	122714	1	G	W	34.81	34.41	1.39	0.5031	0.39	0.061	1.95	0.8	0.073	0.013	0.294	0.111	0.44	10.08	0.17	10.69	19865	0.3978	13.9536	-13.5558	NAF
NS0145	188	190	NS	X122687	122687	1	G	W	29	36.33	1.18	0.4902	0.38	0.05	2.59	0.81	0.079	0.009	0.376	0.105	0.81	15.65	0.26	16.72	19838	0.2754	14.12802	-13.85262	NAF
NS0145	198	200	NS	X122692	122692	1	G	W	31.54	37.14	2.22	0.4902	0.38	0.096	2.15	0.92	0.178	0.065	0.673	0.185	0.45	9.99	0.08	10.52	19843	1.989	16.04664	-14.05764	NAF
NS0145	240	242	NS	X122713	122713	1	G	W	29.07	40.81	1.03	0.5547	0.43	0.049	1.94	0.83	0.075	0.007	0.157	0.061	0.36	11.89	0.32	12.57	19864	0.2142	14.47686	-14.26266	NAF
NS0145	200	202	NS	X122693	122693	1	G	W	33.57	35.32	1.64	0.5289	0.41	0.109	2.03	0.9	0.218	0.015	0.518	0.215	0.57	9.82	-0.12	10.27	19844	0.459	15.6978	-15.2388	NAF
NS0145	138	140	NS	X122662	122662	1	G	W	28.33	37.19	1	0.5547	0.43	0.041	2.17	0.96	0.116	0.011	0.722	0.084	0.94	15.31	0.14	16.39	19813	0.3366	16.74432	-16.40772	NAF
NS0145	226	228	NS	X122706	122706	1	G	W	29.71	36.94	1.13	0.516	0.4	0.047	2.4	0.99	0.077	0.014	0.258	0.105	0.49	13.65	0.52	14.66	19857	0.4284	17.26758	-16.83918	NAF
NS0145	214	216	NS	X122700	122700	1	G	W	28.02	38.14	2.54	0.5031	0.39	0.119	2.73	1	0.146	0.019	0.944	0.13	0.57	12.39	0.39	13.35	19851	0.5814	17.442	-16.8606	NAF
NS0145	136	138	NS	X122661	122661	1	G	W	28.28	33.72	1.06	0.5031	0.39	0.044	2.53	1.08	0.095	0.011	0.227	0.007	1.41	18.67	0.35	20.43	19812	0.3366	18.83736	-18.50076	NAF
NS0145	158	160	NS	X122672	122672	1	G	W	29.53	32.18	0.88	0.5805	0.45	0.035	1.92	1.33	0.09	0.008	0.226	0.027	1.38	18.71	0.6	20.69	19823	0.2448	23.19786	-22.95306	NAF
NS0146	80	82	NS	X067886	067886	1	G	W	11.01	60.77	9.75	0.1161	0.09	0.424	2.01	0.39	0.017	1.27	6.51	0.095	0.31	1.26	1.35	2.92	12502	38.862	6.80238	32.05962	PAF(HC)
NS0146	78	80	NS	X067885	067885	1	G	W	11.2	60.98	9.65	0.1161	0.09	0.421	2.09	0.78	0.014	1.44	6.49	0.104	0.29	1.02	1.55	2.86	12501	44.064	13.60476	30.45924	PAF(HC)
NS0146	82	84	NS	X067887	067887	1	G	W	20.74	50.1	4.95	0.3096	0.24	0.231	3.82	1.65	0.258	1.4	1.48	0.265	0.9	3	2.05	5.95	12503	42.84	28.7793	14.0607	PAF(HC)
NS0146	122	124	NS	X067908	067908	1	G	W	9.14	59.09	11.83	0.1161	0.09	0.503	2.21	1.04	0.01	0.817	7.8	0.072	0.36	1.66	1.2	3.22	12523	25.0002	18.13968	6.86052	PAF(LC)
NS0146	120	122	NS	X067907	067907	1	G	W	18.05	48.86	8.43	0.2967	0.23	0.377	2.72	1.2	0.049	0.805	4.66	0.075	1.09	3.7	1.43	6.22	12522	24.633	20.9304	3.7026	PAF(LC)
NS0146	6	8	NS	X067849	067849	1	G	D	36.38	42.68	1.87	0.0645	0.05	0.089	0.07	0.03	0.067	0.009	0.014	0.016	2.33	0.67	0.06	3.06	12465	0.2754	0.52326	-0.24786	NAF
NS0146	8	10	NS	X067850	067850	1	G	D	27.01	56.93	1.8	0.0387	0.03	0.074	0.07	0.04	0.038	0.01	0.014	0.004	1.22	0.65	0.06	1.93	12466	0.306	0.69768	-0.39168	NAF
NS0146	10	12	NS	X067851	067851	1	G	D	28.63	52.61	2.88	0.0516	0.04	0.125	0.06	0.04	0.062	0.01	0.013	0.013	1.75	1.06	0.11	2.92	12467	0.306	0.69768	-0.39168	NAF
NS0146	2	4	NS	X067847	067847	1	G	D	34.42	46.17	1.72	0.0645	0.05	0.089	0.07	0.04	0.036	0.009	0.021	0.027	1.84	0.6	0.07	2.51	12463	0.2754	0.69768	-0.42228	NAF
NS0146	4	6	NS	X067848	067848	1	G	D	33.92	46.18	1.72	0.129	0.1	0.094	0.1	0.04	0.024	0.008	0.017	0.03	2.18	0.63	0.09	2.9	12464	0.2448	0.69768	-0.45288	NAF
NS0146	12	14	NS	X067852	067852	1	G	D	27.43	44.28	10.47	0.1677	0.13	0.393	0.1	0.05	0.026	0.009	0.017	0.025	1.5	3.64	0.27	5.41	12468	0.2754	0.8721	-0.5967	NAF
NS0146	14	16	NS	X067853	067853	1	G	D	28.58	45.94	5.53	1.0449	0.81	0.209	0.22	0.05	0.112	0.008	0.127	0.017	3.23	1.99	0.29	5.51	12469	0.2448	0.8721	-0.6273	NAF
NS0146	16	18	NS	X067854	067854	1	G	D	32.33	44.76	2.99	1.1352	0.88	0.118	0.29	0.07	0.057	0.007	0.273	0.014	2.18	1.11	0.26	3.55	12470	0.2142	1.22094	-1.00674	NAF
NS0146	84	86	NS	X067888	067888	1	G	W	23.53	47.24	4.7	0.387	0.3	0.221	3.45	1.09	0.079	0.587	1.15	0.131	0.62	5.34	1.07	7.03	12504	17.9622	19.01178	-1.04958	NAF
NS0146	20	22	NS	X067856	067856	1	G	D	36.29	41.7	2.08	0.5418	0.42	0.087	0.55	0.08	0.056	0.006	0.535	0.021	1.47	0.62	0.12	2.21	12472	0.1836	1.39536	-1.21176	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0146	0	2	NS	X067846	067846	1	G	D	36.89	39.42	3.07	0.1032	0.08	0.147	0.18	0.1	0.038	0.013	0.066	0.017	2.98	1.09	0.15	4.22	12462	0.3978	1.7442	-1.3464	NAF
NS0146	18	20	NS	X067855	067855	1	G	D	34.19	41.6	2.55	1.8834	1.46	0.109	0.39	0.09	0.074	0.005	0.688	0.049	2.01	0.82	0.33	3.16	12471	0.153	1.56978	-1.41678	NAF
NS0146	26	28	NS	X067859	067859	1	G	D	35.21	40.25	1.94	0.5031	0.39	0.085	1.61	0.18	0.087	0.035	0.182	0.024	1.37	3.23	0.13	4.73	12475	1.071	3.13956	-2.06856	NAF
NS0146	28	30	NS	X067860	067860	1	G	D	34.18	39.6	2.03	0.6837	0.53	0.087	1.71	0.2	0.077	0.026	0.222	0.025	2.02	3.93	0.11	6.06	12476	0.7956	3.4884	-2.6928	NAF
NS0146	114	116	NS	X067904	067904	1	G	W	21.89	46.26	7.18	0.3741	0.29	0.31	2.98	0.83	0.082	0.38	3.39	0.079	0.46	5.56	0.84	6.86	12519	11.628	14.47686	-2.84886	NAF
NS0146	40	42	NS	X067866	067866	1	G	W	29.2	46.61	2.09	0.4386	0.34	0.097	2.21	0.79	0.104	0.346	0.329	0.017	0.3	3.76	0.52	4.58	12482	10.5876	13.77918	-3.19158	NAF
NS0146	32	34	NS	X067862	067862	1	G	D	35.01	42.21	1.94	0.4773	0.37	0.086	1.38	0.22	0.089	0.018	0.203	0.033	1.05	2.25	0.07	3.37	12478	0.5508	3.83724	-3.28644	NAF
NS0146	112	114	NS	X067903	067903	1	G	W	9.75	59.14	11.52	0.1419	0.11	0.492	2.6	0.89	0.013	0.396	7.08	0.062	0.38	2.16	1.05	3.59	12518	12.1176	15.52338	-3.40578	NAF
NS0146	88	90	NS	X067890	067890	1	G	W	21.36	46.55	7.36	0.3741	0.29	0.322	3.64	0.62	0.017	0.221	3.02	0.131	0.61	5.37	0.67	6.65	12506	6.7626	10.81404	-4.05144	NAF
NS0146	30	32	NS	X067861	067861	1	G	D	32.5	44.12	1.8	0.6708	0.52	0.078	1.71	0.3	0.082	0.038	0.189	0.008	0.65	3.95	-0.05	4.55	12477	1.1628	5.2326	-4.0698	NAF
NS0146	22	24	NS	X067857	067857	1	G	D	36.13	41.53	2.13	0.6837	0.53	0.098	0.65	0.27	0.107	0.006	0.365	0.031	1.36	0.72	0.19	2.27	12473	0.1836	4.70934	-4.52574	NAF
NS0146	34	36	NS	X067863	067863	1	G	D	36.38	40.07	1.87	0.903	0.7	0.082	1.22	0.31	0.132	0.015	0.221	0.02	1.41	1.74	0.05	3.2	12479	0.459	5.40702	-4.94802	NAF
NS0146	56	58	NS	X067874	067874	1	G	W	34.18	41	2.15	0.7611	0.59	0.098	1.62	0.37	0.071	0.034	0.681	0.01	0.67	3.65	-0.06	4.26	12490	1.0404	6.45354	-5.41314	NAF
NS0146	24	26	NS	X067858	067858	1	G	D	30.69	49.62	1.97	0.5031	0.39	0.092	0.78	0.37	0.11	0.028	0.313	0.033	1.3	0.87	0.15	2.32	12474	0.8568	6.45354	-5.59674	NAF
NS0146	124	126	NS	X067909	067909	1	G	W	20.86	46.47	7.05	0.4128	0.32	0.313	3.04	1.4	0.072	0.608	3.43	0.099	0.54	4.88	1.36	6.78	12524	18.6048	24.4188	-5.814	NAF
NS0146	50	52	NS	X067871	067871	1	G	W	34.32	40.52	2.08	0.516	0.4	0.091	1.92	0.43	0.098	0.052	0.586	0.012	0.29	4.27	-0.23	4.33	12487	1.5912	7.50006	-5.90886	NAF
NS0146	54	56	NS	X067873	067873	1	G	W	34.37	40.71	2.11	0.645	0.5	0.097	1.62	0.45	0.107	0.05	0.755	0.017	0.58	3.62	-0.09	4.11	12489	1.53	7.8489	-6.3189	NAF
NS0146	90	92	NS	X067891	067891	1	G	W	25.77	41.19	5.43	0.5676	0.44	0.239	3.77	0.64	0.02	0.158	1.48	0.096	0.69	7.88	0.49	9.06	12507	4.8348	11.16288	-6.32808	NAF
NS0146	58	60	NS	X067875	067875	1	G	W	23.13	49.11	6.35	0.3354	0.26	0.19	3.2	0.79	0.053	0.184	2.57	0.053	0.5	2.75	0.59	3.84	12491	5.6304	13.77918	-8.14878	NAF
NS0146	86	88	NS	X067889	067889	1	G	W	26.4	42.71	5.61	0.3741	0.29	0.257	3.2	0.86	0.05	0.222	2	0.093	0.55	5.39	0.58	6.52	12505	6.7932	15.00012	-8.20692	NAF
NS0146	48	50	NS	X067870	067870	1	G	W	33.55	42.33	1.73	0.5547	0.43	0.081	2.03	0.57	0.076	0.036	0.488	0.02	0.16	4.3	-0.22	4.24	12486	1.1016	9.94194	-8.84034	NAF
NS0146	36	38	NS	X067864	067864	1	G	D	31.58	43.89	1.93	0.5805	0.45	0.087	1.94	0.6	0.171	0.036	0.215	0.02	0.57	4.33	-0.1	4.8	12480	1.1016	10.4652	-9.3636	NAF
NS0146	38	40	NS	X067865	067865	1	G	D	32.21	41.65	2.36	0.5031	0.39	0.102	2.55	0.83	0.088	0.06	0.266	0.025	0.39	4.8	0.1	5.29	12481	1.836	14.47686	-12.64086	NAF
NS0146	74	76	NS	X067883	067883	1	G	W	30.77	39.81	3.17	0.5676	0.44	0.146	3.11	0.96	0.089	0.129	0.729	0.103	0.56	5.98	0.32	6.86	12499	3.9474	16.74432	-12.79692	NAF
NS0146	52	54	NS	X067872	067872	1	G	W	34.24	39.39	2.03	0.6063	0.47	0.091	2.13	0.82	0.08	0.048	0.787	0.014	0.19	4.69	-0.04	4.84	12488	1.4688	14.30244	-12.83364	NAF
NS0146	118	120	NS	X067906	067906	1	G	W	26.79	46.38	4	0.387	0.3	0.181	2.82	0.88	0.037	0.074	0.858	0.079	0.58	5.01	0.37	5.96	12521	2.2644	15.34896	-13.08456	NAF
NS0146	128	130	NS	X067911	067911	1	G	W	25.78	42.66	5.82	0.4386	0.34	0.261	3.41	1.01	0.062	0.131	1.44	0.117	0.66	5.85	0.55	7.06	12526	4.0086	17.61642	-13.60782	NAF
NS0146	92	94	NS	X067892	067892	1	G	W	25.64	43.79	5.14	0.4515	0.35	0.227	3.4	1.04	0.084	0.11	1.43	0.094	0.56	6.08	0.48	7.12	12508	3.366	18.13968	-14.77368	NAF
NS0146	126	128	NS	X067910	067910	1	G	W	27.24	40.49	4.61	0.5676	0.44	0.217	3.45	1.23	0.121	0.218	0.945	0.12	0.65	7.21	0.67	8.53	12525	6.6708	21.45366	-14.78286	NAF
NS0146	76	78	NS	X067884	067884	1	G	W	25.24	43.06	3.94	0.5676	0.44	0.185	3.49	2.03	0.149	0.664	1.29	0.117	0.59	5.57	1.63	7.79	12500	20.3184	35.40726	-15.08886	NAF
NS0146	110	112	NS	X067902	067902	1	G	W	29.22	39.83	4.11	0.5547	0.43	0.187	3.24	1.08	0.144	0.117	0.846	0.097	0.49	7.09	0.26	7.84	12517	3.5802	18.83736	-15.25716	NAF
NS0146	44	46	NS	X067868	067868	1	G	W	33.93	39.17	1.99	0.6063	0.47	0.092	2.4	1	0.12	0.058	0.57	0.037	0.3	5.07	0.05	5.42	12484	1.7748	17.442	-15.6672	NAF
NS0146	62	64	NS	X067877	067877	1	G	W	31.49	41.59	3.11	0.5031	0.39	0.143	2.45	1.06	0.099	0.091	1.2	0.048	0.36	4.03	0.3	4.69	12493	2.7846	18.48852	-15.70392	NAF
NS0146	178	180	NS	X067936	067936	1	G	W	27.89	42.53	4.22	0.4644	0.36	0.187	3.17	1.06	0.096	0.074	0.666	0.08	0.56	6.12	0.42	7.1	12551	2.2644	18.48852	-16.22412	NAF
NS0146	42	44	NS	X067867	067867	1	G	W	32.77	41.01	1.63	0.6192	0.48	0.075	2.33	1.04	0.128	0.044	0.364	0.027	0.18	5.44	0.12	5.74	12483	1.3464	18.13968	-16.79328	NAF
NS0146	116	118	NS	X067905	067905	1	G	W	25.96	44.97	4.64	0.4128	0.32	0.208	3.13	1.22	0.243	0.076	0.975	0.122	0.6	5.74	0.17	6.51	12520	2.3256	21.27924	-18.95364	NAF
NS0146	166	168	NS	X067930	067930	1	G	W	26.89	43.9	4.1	0.4386	0.34	0.188	2.98	1.23	0.045	0.068	0.611	0.072	0.61	5.9	0.75	7.26	12545	2.0808	21.45366	-19.37286	NAF
NS0146	130	132	NS	X067912	067912	1	G	W	29.53	41.05	3.99	0.387	0.3	0.181	2.9	1.28	0.125	0.083	0.795	0.127	0.5	5.2	0.47	6.17	12527	2.5398	22.32576	-19.78596	NAF
NS0146	156	158	NS	X067925	067925	1	G	W	28.15	43.95	4.02	0.3096	0.24	0.187	2.81	1.37	0.029	0.081	0.618	0.077	0.54	4.28	0.9	5.72	12540	2.4786	23.89554	-21.41694	NAF
NS0146	46	48	NS	X067869	067869	1	G	W	33.28	40.35	1.84	0.5805	0.45	0.085	2.22	1.3	0.111	0.039	0.559	0.024	0.16	4.4	0.42	4.98	12485	1.1934	22.6746	-21.4812	NAF
NS0146	146	148	NS	X067920	067920	1	G	W	28.14	42.54	4.11	0.4257	0.33	0.186	2.95	1.51	0.062	0.134	0.773	0.064	0.61	5.18	0.87	6.66	12535	4.1004	26.33742	-22.23702	NAF
NS0146	164	166	NS	X067929	067929	1	G	W	24.88	46.25	5.26	0.3483	0.27	0.242	3.21	1.46	0.066	0.084	0.827	0.107	0.68	4.65	1.01	6.34	12544	2.5704	25.46532	-22.89492	NAF
NS0146	98	100	NS	X067896	067896	1	G	W	26.33	45.58	4.71	0.3354	0.26	0.218	3.03	1.51	0.064	0.1	1.22	0.09	0.44	3.98	0.95	5.37	12511	3.06	26.33742	-23.27742	NAF
NS0146	158	160	NS	X067926	067926	1	G	W	29.36	41.87	3.86	0.3741	0.29	0.175	2.83	1.46	0.04	0.069	0.602	0.08	0.62	5	0.89	6.51	12541	2.1114	25.46532	-23.35392	NAF
NS0146	102	104	NS	X067898	067898	1	G	W	28.89	43.35	3.79	0.3741	0.29	0.168	2.78	1.47	0.05	0.062	0.817	0.083	0.49	3.96	0.89	5.34	12513	1.8972	25.63974	-23.74254	NAF
NS0146	60	62	NS	X067876	067876	1	G	W	30.94	41.39	2.81	0.5934	0.46	0.102	2.44	1.43	0.079	0.034	1.08	0.026	0.33	4.55	0.78	5.66	12492	1.0404	24.94206	-23.90166	NAF
NS0146	174	176	NS	X067934	067934	1	G	W	25.3	44.82	5.56	0.387	0.3	0.252	3.3	1.58	0.071	0.118	0.785	0.065	0.69	5.01	0.95	6.65	12549	3.6108	27.55836	-23.94756	NAF
NS0146	66	68	NS	X067879	067879	1	G	W	31.79	40.72	1.8	0.6192	0.48	0.08	2.35	1.43	0.087	0.031	0.715	0.029	0.37	5.22	0.62	6.21	12495	0.9486	24.94206	-23.99346	NAF
NS0146	64	66	NS	X067878	067878	1	G	W	31.73	41.09	2.15	0.5805	0.45	0.101	2.27	1.51	0.103	0.076	0.8	0.039	0.45	4.53	0.63	5.61	12494	2.3256	26.33742	-24.01182	NAF
NS0146	142	144	NS	X067918	067918	1	G	W	30.02	42	3.68	0.3741	0.29	0.166	2.62	1.53	0.123	0.057	0.649	0.098	0.5	4.4	0.61	5.51	12533	1.7442	26.68626	-24.94206	NAF
NS0146	162	164	NS	X067928	067928	1	G	W	24.69	44.81	5.32	0.4128	0.32	0.242	3.19	1.71	0.097	0.155	0.957	0.088	0.8	5.44	0.99	7.23	12543	4.743	29.82582	-25.08282	NAF
NS0146	108	110	NS	X067901	067901	1	G	W	30.01	41	3.59	0.4644	0.36	0.165	2.77	1.55	0.083	0.057	0.823	0.094	0.48	4.62	0.84	5.94	12516	1.7442	27.0351	-25.2909	NAF
NS0146	140	142	NS	X067917	067917	1	G	W	28.19	41.63	4.15	0.4644	0.36	0.186	2.97	1.61	0.138	0.073	0.801	0.11	0.56	5.57	0.76	6.89	12532	2.2338	28.08162	-25.84782	NAF
NS0146	154	156	NS	X067924	067924	1	G	W	29.36	43.31	3.68	0.2967	0.23	0.167	2.66	1.63	0.045	0.059	0.517	0.066	0.52	3.97	1.03	5.52	12539	1.8054	28.43046	-26.62506	NAF
NS0146	94	96	NS	X067894	067894	1	G	W	30.55	41.7	3.3	0.387	0.3	0.149	2.68	1.65	0.122	0.062	0.702	0.086	0.44	4.35	0.78	5.57	12509	1.8972	28.7793	-26.8821	NAF
NS0146	170	172	NS	X067932	067932	1	G	W	26.36	44.85	4.34	0.387	0.3	0.194	3.05	1.72	0.05	0.089	0.723	0.106	0.62	4.66	1.29	6.57	12547	2.7234	30.00024	-27.27684	NAF
NS0146	168	170	NS	X067931	067931	1	G	W	28.29	42.09	3.82	0.4257	0.33	0.174	2.94	1.78	0.045	0.062	0.548	0.076	0.58	5.35	1.26	7.19	12546	1.8972	31.04676	-29.14956	NAF
NS0146	100	102	NS	X067897	067897	1	G	W	27.12	43.56	4.57	0.3741	0.29	0.21	3	1.84	0.081	0.096	1.25	0.078	0.4	4	1.3	5.7	12512	2.9376	32.09328	-29.15568	NAF
NS0146	72	74	NS	X067882	067882	1	G	W	29.92	41.37	2.46	0.5547	0.43	0.116	2.69	1.82	0.178	0.072	0.553	0.067	0.43	5.5	0.85	6.78	12498	2.2032	31.74444	-29.54124	NAF
NS0146	68	70	NS	X067880	067880	1	G	W	32.77	39.44	2.74	0.4257	0.33	0.125	2.63	1.79	0.097	0.053	0.91	0.064	0.33	3.65	0.99	4.97	12496	1.6218	31.22118	-29.59938	NAF
NS0146	104	106	NS	X067899	067899	1	G	W	28.71	42.38	4.07	0.4128	0.32	0.183	2.75	1.88	0.151	0.067	1.06	0.072	0.44	3.93	0.92	5.29	12514	2.0502	32.79096	-30.74076	NAC
NS0146	70	72	NS	X067881	067881	1	G	W	29.99	41.69	3.29	0.4257	0.33	0.141	2.83	1.88	0.08	0.054	1.09	0.079	0.38	3.69	1.33	5.4	12497	1.6524	32.79096	-31.13856	NAC
NS0146	132	134	NS	X067913	067913	1	G	W	24.71	42.79	5.92	0.4128	0.32	0.271	3.35	2.1	0.153	0.162	1.81	0.139	0.75	5.01	1.26	7.02	12528	4.9572	36.6282	-31.671	NAC
NS0146	148	150	NS	X067921	067921	1	G	W	24.37	45.3	5.81	0.3354	0.26	0.259	3.17	2.06	0.049	0.136	1.53	0.052	0.53	4.06	1.68	6.27	12536	4.1616	35.93052	-31.76892	NAC
NS0146	134	136	NS	X067914	067914	1	G	W	25.05	45.12	4.61	0.4128	0.32	0.202	2.94	2.03	0.055	0.096	1.35	0.127	0.52	4.58	1.46	6.56	12529	2.9376	35.40726	-32.46966	NAC
NS0146	150	152	NS	X067922	067922	1	G	W	27.27	43.07	4.67	0.4128	0.32	0.211	2.7	2.05	0.151	0.094	0.963	0.075	0.82	4.03	1.43	6.28	12537	2.8764	35.7561	-32.8797	NAC
NS0146	144	146	NS	X067919	067919	1	G	W	25.48	43.21	5.58	0.3483	0.27	0.253	3.08	2.32	0.155	0.227	1.41	0.058	0.55	4.05	1.47	6.07	12534	6.9462	40.46544	-33.51924	NAC
NS0146	96	98	NS	X067895	067895	1	G	W	27.28	43.24	4.09	0.3999	0.31	0.183	2.91	2.09	0.162	0.091	1.08	0.064	0.43	4.4	1.2	6.03	12510	2.7846	36.45378	-33.66918	NAC
NS0146	160	162	NS	X067927	067927	1	G	W	19.59	49	7.27	0.2838	0.22	0.329	3.29	2.34	0.073	0.224	2.39	0.104	0.62	3.78	1.92	6.32	12542	6.8544	40.81428	-33.95988	NAC
NS0146	138	140	NS	X067916	067916	1	G	W	24.99	43.91	5.22	0.3999	0.31	0.239	3.16	2.29	0.124	0.114	1.33	0.115	0.84	4.46	1.58	6.88	12531	3.4884	39.94218	-36.45378	NAC
NS0146	176	178	NS	X067935	067935	1	G	W	24	44.99	5.46	0.3999	0.31	0.248	3.51	2.28	0.159	0.098	0.87	0.086	0.61	4.92	1.6	7.13	12550	2.9988	39.76776	-36.76896	NAC
NS0146	106	108	NS	X067900	067900	1	G	W	27.41	43.51	3.88	0.4515	0.35	0.175	2.87	2.24	0.107	0.074	0.992	0.087	0.48	4.19	1.44	6.11	12515	2.2644	39.07008	-36.80568	NAC
NS0146	172	174	NS	X067933	067933	1	G	W	27.49	42.14	4.26	0.4257	0.33	0.194	3.06	2.4	0.112	0.067	0.611	0.082	0.56	4.82	1.72	7.1	12548	2.0502	41.8608	-39.8106	NAC
NS0146	152	154	NS	X067923	067923	1	G	W	25.25	43.06	5.15	0.387	0.3	0.231	3.17	2.8	0.212	0.137	1.32	0.084	0.59	4.59	1.89	7.07	12538	4.1922	48.8376	-44.6454	NAC
NS0146	136	138	NS	X067915	067915	1	G	W	23.44	45.98	5.09	0.3741	0.29	0.239	3.06	2.85	0.035	0.083	1.56	0.105	0.5	3.85	2.51	6.86	12530	2.5398	49.7097	-47.1699	NAC
NS0147	46	48	NS	X122742	122742	2	G	W	15.05	55.49	10.1	0.2064	0.16	0.439	2.5	0.09	0.036	1.67	3.55	0.066	0.89	3.09	1.47	5.45	19893	51.102	1.56978	49.53222	PAF(HC)
NS0147	82	84	NS	X122760	122760	2	G	W	13.87	54.51	10.69	0.1419	0.11	0.467	2.59	0.29	0.09	1.03	5.85	0.091	1.51	1.74	1.65	4.9	19911	31.518	5.05818	26.45982	PAF(HC)
NS0147	146	148	NS	X122793	122793	2	G	W	21.28	48.21	7.4	0.4515	0.35	0.311	3.07	0.14	0.023	0.59	2.03	0.043	0.4	6.32	0.97	7.69	19943	18.054	2.44188	15.61212	PAF(HC)
NS0147	152	154	NS	X122796	122796	2	G	W	26.7	39.01	5.07	0.5934	0.46	0.217	3.75	1.2	0.109	1.19	1.16	0.034	0.16	7.54	1.95	9.65	19946	36.414	20.9304	15.4836	PAF(HC)
NS0147	144	146	NS	X122792	122792	2	G	W	23.01	44.5	4.57	0.774	0.6	0.19	3.31	0.49	0.118	0.68	0.712	0.031	0.54	10.14	1.36	12.04	19942	20.808	8.54658	12.26142	PAF(HC)
NS0147	44	46	NS	X122741	122741	2	G	W	14.21	57.66	11.1	0.2322	0.18	0.475	1.99	0.06	0.041	0.297	3.71	0.05	1.53	1.83	0.8	4.16	19892	9.0882	1.04652	8.04168	PAF(LC)
NS0147	48	50	NS	X122743	122743	2	G	W	18.29	52.44	7.5	0.4257	0.33	0.339	3.02	0.42	0.12	0.455	1.5	0.055	3.24	3.42	1.25	7.91	19894	13.923	7.32564	6.59736	PAF(LC)
NS0147	140	142	NS	X122790	122790	2	G	W	25.3	44.7	5.03	0.6063	0.47	0.21	3.14	0.34	0.074	0.398	0.603	0.02	0.49	7.68	0.71	8.88	19940	12.1788	5.93028	6.24852	PAF(LC)
NS0147	142	144	NS	X122791	122791	2	G	W	24.24	44.74	5.23	0.5934	0.46	0.217	3.14	0.3	0.059	0.322	1.01	0.026	0.57	8.18	0.68	9.43	19941	9.8532	5.2326	4.6206	PAF(LC)
NS0147	138	140	NS	X122789	122789	2	G	W	27.37	43.26	4.11	0.6063	0.47	0.173	3.22	0.5	0.127	0.366	0.459	0.027	0.28	7.14	0.54	7.96	19939	11.1996	8.721	2.4786	PAF(LC)
NS0147	50	52	NS	X122744	122744	2	G	W	24.06	44.59	6.2	0.4644	0.36	0.282	2.96	0.44	0.118	0.28	1.63	0.046	4.7	3.28	0.69	8.67	19895	8.568	7.67448	0.89352	PAF(LC)
NS0147	96	98	NS	X122767	122767	2	G	W	29.63	43.41	3.94	0.4902	0.38	0.184	2.25	0.34	0.116	0.223	0.862	0.029	2.77	2.15	0.52	5.44	19918	6.8238	5.93028	0.89352	PAF(LC)
NS0147	0	2	NS	X122719	122719	2	G	D																	19870	0	0	0	PAF(LC)
NS0147	2	4	NS	X122720	122720	2	G	D																	19871	0	0	0	PAF(LC)
NS0147	4	6	NS	X122721	122721	2	G	D																	19872	0	0	0	PAF(LC)
NS0147	6	8	NS	X122722	122722	2	G	D																	19873	0	0	0	PAF(LC)
NS0147	8	10	NS	X122723	122723	2	G	D																	19874	0	0	0	PAF(LC)
NS0147	10	12	NS	X122724	122724	2	G	D																	19875	0	0	0	PAF(LC)
NS0147	12	14	NS	X122725	122725	2	G	D																	19876	0	0	0	PAF(LC)
NS0147	14	16	NS	X122726	122726	2	G	D																	19877	0	0	0	PAF(LC)
NS0147	16	18	NS	X122727	122727	2	G	D																	19878	0	0	0	PAF(LC)
NS0147	18	20	NS	X122728	122728	2	G	D																	19879	0	0	0	PAF(LC)
NS0147	20	22	NS	X122729	122729	2	G	D																	19880	0	0	0	PAF(LC)
NS0147	22	24	NS	X122730	122730	2	G	D																	19881	0	0	0	PAF(LC)
NS0147	24	26	NS	X122731	122731	2	G	D																	19882	0	0	0	PAF(LC)
NS0147	26	28	NS	X122732	122732	2	G	D																	19883	0	0	0	PAF(LC)
NS0147	28	30	NS	X122733	122733	2	G	D																	19884	0	0	0	PAF(LC)
NS0147	30	32	NS	X122734	122734	2	G	D																	19885	0	0	0	PAF(LC)
NS0147	32	34	NS	X122735	122735	2	G	D																	19886	0	0	0	PAF(LC)
NS0147	34	36	NS	X122736	122736	2	G	W																	19887	0	0	0	PAF(LC)
NS0147	36	38	NS	X122737	122737	2	G	W																	19888	0	0	0	PAF(LC)
NS0147	38	40	NS	X122738	122738	2	G	W																	19889	0	0	0	PAF(LC)
NS0147	40	42	NS	X122739	122739	2	G	W																	19890	0	0	0	PAF(LC)
NS0147	42	44	NS	X122740	122740	2	G	W																	19891	0	0	0	PAF(LC)
NS0147	182	184	NS	X122811	122811	2	G	W																	19961	0	0	0	PAF(LC)
NS0147	70	72	NS	X122754	122754	2	G	W	28.86	43.64	4.54	0.4257	0.33	0.205	2.39	0.25	0.065	0.134	1.39	0.026	3.21	1.92	0.12	5.25	19905	4.1004	4.3605	-0.2601	NAF
NS0147	92	94	NS	X122765	122765	2	G	W	33.93	42.82	3.17	1.032	0.8	0.148	0.67	0.08	0.084	0.015	0.372	0.019	1.65	0.92	0.22	2.79	19916	0.459	1.39536	-0.93636	NAF
NS0147	56	58	NS	X122747	122747	2	G	W	26.05	44.78	5.11	0.4644	0.36	0.222	2.69	0.24	0.059	0.103	1.39	0.033	4.03	3.14	0.18	7.35	19898	3.1518	4.18608	-1.03428	NAF
NS0147	128	130	NS	X122784	122784	2	G	W	29.63	42.63	3.98	0.4902	0.38	0.165	2.77	0.38	0.079	0.182	0.935	0.038	0.34	4.97	0.26	5.57	19934	5.5692	6.62796	-1.05876	NAF
NS0147	72	74	NS	X122755	122755	2	G	W	34.25	41.18	3.69	0.1935	0.15	0.174	1.37	0.14	0.124	0.04	0.883	0.027	2.03	0.92	0.14	3.09	19906	1.224	2.44188	-1.21788	NAF
NS0147	52	54	NS	X122745	122745	2	G	W	27	41.89	4.76	0.4902	0.38	0.208	2.8	0.37	0.091	0.158	1.08	0.036	4.61	4.07	0.27	8.95	19896	4.8348	6.45354	-1.61874	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0147	80	82	NS	X122759	122759	2	G	W	26.19	43.75	5.28	0.4644	0.36	0.233	2.68	0.27	0.084	0.093	1.43	0.032	4.86	2.95	0.27	8.08	19910	2.8458	4.70934	-1.86354	NAF
NS0147	54	56	NS	X122746	122746	2	G	W	27.62	42.34	4.94	0.4644	0.36	0.223	2.77	0.3	0.074	0.11	1.19	0.029	4.85	2.92	0.19	7.96	19897	3.366	5.2326	-1.8666	NAF
NS0147	100	102	NS	X122769	122769	2	G	W	28.93	45.99	3.25	0.4773	0.37	0.148	1.89	0.3	0.124	0.105	0.289	0.024	2.88	2.49	0.36	5.73	19920	3.213	5.2326	-2.0196	NAF
NS0147	134	136	NS	X122787	122787	2	G	W	27.07	46.23	3.26	0.5289	0.41	0.138	2.81	0.38	0.072	0.136	0.579	0.019	0.3	6.15	0.12	6.57	19937	4.1616	6.62796	-2.46636	NAF
NS0147	84	86	NS	X122761	122761	2	G	W	29.89	39.91	3.01	0.7095	0.55	0.144	2.66	0.38	0.092	0.133	0.563	0.014	5.32	3.98	0.18	9.48	19912	4.0698	6.62796	-2.55816	NAF
NS0147	86	88	NS	X122762	122762	2	G	W	29.39	44.12	4	0.4515	0.35	0.186	2.41	0.4	0.13	0.14	0.837	0.024	2.94	1.94	0.29	5.17	19913	4.284	6.9768	-2.6928	NAF
NS0147	78	80	NS	X122758	122758	2	G	W	29.96	40.91	4.5	0.4515	0.35	0.199	2.79	0.35	0.093	0.103	0.794	0.031	3.91	2.83	0.04	6.78	19909	3.1518	6.1047	-2.9529	NAF
NS0147	66	68	NS	X122752	122752	2	G	W	31.39	40.73	4.12	0.4902	0.38	0.187	2.38	0.27	0.075	0.057	1.11	0.04	3.65	2.15	-0.02	5.78	19903	1.7442	4.70934	-2.96514	NAF
NS0147	58	60	NS	X122748	122748	2	G	W	28.74	43.67	4.42	0.4902	0.38	0.203	2.36	0.32	0.099	0.085	1.28	0.039	3.73	2.28	0.06	6.07	19899	2.601	5.58144	-2.98044	NAF
NS0147	68	70	NS	X122753	122753	2	G	W	25.79	45.62	4.35	0.5547	0.43	0.196	2.43	0.42	0.125	0.134	1.51	0.025	4.22	2.86	0.28	7.36	19904	4.1004	7.32564	-3.22524	NAF
NS0147	76	78	NS	X122757	122757	2	G	W	28.3	42.04	4.52	0.5934	0.46	0.201	2.7	0.36	0.093	0.096	1.3	0.03	4.14	3.46	0.1	7.7	19908	2.9376	6.27912	-3.34152	NAF
NS0147	98	100	NS	X122768	122768	2	G	W	31.83	41.88	3.02	0.4902	0.38	0.138	2.3	0.39	0.117	0.109	0.525	0.026	2.97	2.33	0.14	5.44	19919	3.3354	6.80238	-3.46698	NAF
NS0147	90	92	NS	X122764	122764	2	G	W	33.58	41.59	2.38	0.4515	0.35	0.112	1.73	0.31	0.104	0.051	0.429	0.023	3.09	1.57	0.01	4.67	19915	1.5606	5.40702	-3.84642	NAF
NS0147	74	76	NS	X122756	122756	2	G	W	29.13	43.18	4.37	0.4644	0.36	0.199	2.38	0.41	0.116	0.104	1.32	0.039	3.22	2.3	0.05	5.57	19907	3.1824	7.15122	-3.96882	NAF
NS0147	122	124	NS	X122780	122780	2	G	W	29.47	40.17	3.16	0.7611	0.59	0.135	3.13	0.52	0.134	0.166	0.386	0.02	0.42	8.02	0.22	8.66	19931	5.0796	9.06984	-3.99024	NAF
NS0147	64	66	NS	X122751	122751	2	G	W	31.36	40.32	4.05	0.4773	0.37	0.182	2.27	0.36	0.101	0.068	1.36	0.024	3.34	2.38	-0.09	5.63	19902	2.0808	6.27912	-4.19832	NAF
NS0147	136	138	NS	X122788	122788	2	G	W	30.03	45.57	2.56	0.4515	0.35	0.117	2.35	0.31	0.078	0.034	0.124	0.026	0.26	5.24	-0.22	5.28	19938	1.0404	5.40702	-4.36662	NAF
NS0147	94	96	NS	X122766	122766	2	G	W	32.73	40.26	2.64	0.6579	0.51	0.127	2.07	0.33	0.084	0.044	0.386	0.016	4.01	2.42	0.01	6.44	19917	1.3464	5.75586	-4.40946	NAF
NS0147	60	62	NS	X122749	122749	2	G	W	30.37	41.32	3.98	0.5418	0.42	0.177	2.27	0.4	0.12	0.073	1.18	0.019	3.7	2.5	-0.02	6.18	19900	2.2338	6.9768	-4.743	NAF
NS0147	106	108	NS	X122772	122772	2	G	W	35.17	39.35	2.35	0.5547	0.43	0.106	2.18	0.34	0.052	0.036	0.423	0.172	1.98	2.55	-0.19	4.34	19923	1.1016	5.93028	-4.82868	NAF
NS0147	104	106	NS	X122771	122771	2	G	W	34.96	39.9	2.13	0.5547	0.43	0.095	1.99	0.35	0.072	0.031	0.361	0.132	2.16	2.49	-0.21	4.44	19922	0.9486	6.1047	-5.1561	NAF
NS0147	102	104	NS	X122770	122770	2	G	W	30.43	43.56	2.42	0.5805	0.45	0.109	2.27	0.44	0.111	0.076	0.328	0.039	3.16	2.96	0.06	6.18	19921	2.3256	7.67448	-5.34888	NAF
NS0147	88	90	NS	X122763	122763	2	G	W	32.77	40.46	2.79	0.5547	0.43	0.136	2.18	0.41	0.11	0.054	0.799	0.021	3.1	2.36	-0.15	5.31	19914	1.6524	7.15122	-5.49882	NAF
NS0147	62	64	NS	X122750	122750	2	G	W	31.1	40.3	4.3	0.4902	0.38	0.192	2.35	0.46	0.131	0.068	1.45	0.037	3.55	2.3	-0.06	5.79	19901	2.0808	8.02332	-5.94252	NAF
NS0147	246	248	NS	X122843	122843	2	G	W	35.85	38.11	1.93	0.6063	0.47	0.09	1.94	0.56	0.082	0.031	0.254	0.177	0.22	4.29	-0.1	4.41	19993	0.9486	9.76752	-8.81892	NAF
NS0147	286	288	NS	X122864	122864	2	G	W	32.41	42.02	1.95	0.645	0.5	0.086	2.08	0.58	0.116	0.038	0.278	0.183	0.23	5.15	-0.1	5.28	20013	1.1628	10.11636	-8.95356	NAF
NS0147	250	252	NS	X122846	122846	2	G	W	33.65	39.8	2.25	0.6579	0.51	0.103	2.17	0.59	0.093	0.041	0.376	0.181	0.22	5.18	0	5.4	19995	1.2546	10.29078	-9.03618	NAF
NS0147	244	246	NS	X122842	122842	2	G	W	34.32	38.81	2.44	0.6192	0.48	0.111	2.29	0.67	0.129	0.065	0.377	0.17	0.2	4.73	0	4.93	19992	1.989	11.68614	-9.69714	NAF
NS0147	150	152	NS	X122795	122795	2	G	W	29.09	39.29	2.65	0.7869	0.61	0.122	2.99	1.44	0.135	0.491	0.242	0.018	0.39	8.64	1.09	10.12	19945	15.0246	25.11648	-10.09188	NAF
NS0147	278	280	NS	X122860	122860	2	G	W	30.46	42.85	2.97	0.5031	0.39	0.131	2.53	0.85	0.111	0.15	0.535	0.103	0.24	4.5	0.33	5.07	20009	4.59	14.8257	-10.2357	NAF
NS0147	274	276	NS	X122858	122858	2	G	W	33.56	40.41	1.99	0.6063	0.47	0.09	2.08	0.67	0.082	0.034	0.329	0.142	0.22	4.74	0.04	5	20007	1.0404	11.68614	-10.64574	NAF
NS0147	108	110	NS	X122773	122773	2	G	W	32.17	42.5	2.2	0.5676	0.44	0.102	2.22	0.69	0.081	0.041	0.455	0.168	1.71	3.11	0.04	4.86	19924	1.2546	12.03498	-10.78038	NAF
NS0147	254	256	NS	X122848	122848	2	G	W	33.58	40.07	2.16	0.5805	0.45	0.1	2.24	0.72	0.083	0.052	0.281	0.142	0.4	4.81	0.12	5.33	19997	1.5912	12.55824	-10.96704	NAF
NS0147	256	258	NS	X122849	122849	2	G	W	33.37	39.32	2.37	0.5934	0.46	0.104	2.39	0.8	0.09	0.096	0.294	0.155	0.41	5.32	0.2	5.93	19998	2.9376	13.9536	-11.016	NAF
NS0147	248	250	NS	X122844	122844	2	G	W	32.56	42.98	1.81	0.5805	0.45	0.079	1.88	0.7	0.12	0.031	0.222	0.156	0.18	4.28	0	4.46	19994	0.9486	12.2094	-11.2608	NAF
NS0147	252	254	NS	X122847	122847	2	G	W	33.87	40.13	1.82	0.6192	0.48	0.077	1.97	0.73	0.08	0.039	0.253	0.167	0.25	4.72	0.11	5.08	19996	1.1934	12.73266	-11.53926	NAF
NS0147	258	260	NS	X122850	122850	2	G	W	32.99	42	2	0.516	0.4	0.091	2.17	0.79	0.078	0.035	0.192	0.075	0.3	4.65	0.14	5.09	19999	1.071	13.77918	-12.70818	NAF
NS0147	272	274	NS	X122857	122857	2	G	W	33.64	39.91	2.55	0.5805	0.45	0.113	2.26	0.81	0.065	0.044	0.476	0.179	0.25	4.48	0.25	4.98	20006	1.3464	14.12802	-12.78162	NAF
NS0147	132	134	NS	X122786	122786	2	G	W	29.04	46.02	1.92	0.5418	0.42	0.086	2.32	0.82	0.075	0.047	0.131	0.017	0.27	5.62	0.11	6	19936	1.4382	14.30244	-12.86424	NAF
NS0147	242	244	NS	X122841	122841	2	G	W	34.37	40.16	2.07	0.5934	0.46	0.099	1.91	0.82	0.086	0.039	0.492	0.132	0.15	3.91	0.09	4.15	19991	1.1934	14.30244	-13.10904	NAF
NS0147	110	112	NS	X122774	122774	2	G	W	31.31	44.05	1.95	0.516	0.4	0.092	2.08	0.81	0.078	0.031	0.344	0.145	1.84	2.55	0.13	4.52	19925	0.9486	14.12802	-13.17942	NAF
NS0147	190	192	NS	X122815	122815	2	G	W	34.3	40.4	2.11	0.6192	0.48	0.098	2.04	0.83	0.083	0.034	0.498	0.14	0.12	3.44	0.22	3.78	19965	1.0404	14.47686	-13.43646	NAF
NS0147	284	286	NS	X122863	122863	2	G	W	33.15	40.14	2.21	0.6063	0.47	0.102	2.25	0.89	0.12	0.061	0.345	0.162	0.23	5.07	0.2	5.5	20012	1.8666	15.52338	-13.65678	NAF
NS0147	130	132	NS	X122785	122785	2	G	W	27.64	42.52	4.05	0.5031	0.39	0.166	3.35	1.38	0.071	0.312	0.801	0.04	0.28	5.59	0.87	6.74	19935	9.5472	24.06996	-14.52276	NAF
NS0147	124	126	NS	X122781	122781	2	G	W	33.02	40.23	2.36	0.5676	0.44	0.106	2.36	0.95	0.104	0.04	0.356	0.033	0.26	5.21	0.01	5.48	19932	1.224	16.5699	-15.3459	NAF
NS0147	148	150	NS	X122794	122794	2	G	W	30.72	39.36	2.47	0.7353	0.57	0.109	2.71	1.17	0.062	0.149	0.186	0.022	0.47	8.34	0.36	9.17	19944	4.5594	20.40714	-15.84774	NAF
NS0147	118	120	NS	X122778	122778	2	G	W	34.94	38.34	2.26	0.5418	0.42	0.102	2.35	0.98	0.059	0.04	0.313	0.107	0.14	4.31	0.25	4.7	19929	1.224	17.09316	-15.86916	NAF
NS0147	206	208	NS	X122823	122823	2	G	W	35.6	38.12	2.01	0.6837	0.53	0.091	2.16	1.05	0.083	0.038	0.334	0.173	0.2	3.76	0.39	4.35	19973	1.1628	18.3141	-17.1513	NAF
NS0147	112	114	NS	X122775	122775	2	G	W	31.39	42.02	2.32	0.5676	0.44	0.107	2.37	1.12	0.076	0.076	0.44	0.176	1.69	3.11	0.43	5.23	19926	2.3256	19.53504	-17.20944	NAF
NS0147	276	278	NS	X122859	122859	2	G	W	33.56	40.29	1.99	0.5934	0.46	0.089	2.07	1.08	0.123	0.048	0.349	0.103	0.22	4.45	0.23	4.9	20008	1.4688	18.83736	-17.36856	NAF
NS0147	260	262	NS	X122851	122851	2	G	W	31.77	41.51	2.07	0.516	0.4	0.094	2.42	1.11	0.063	0.061	0.132	0.073	0.33	5.14	0.54	6.01	20000	1.8666	19.36062	-17.49402	NAF
NS0147	158	160	NS	X122799	122799	2	G	W	29.24	45.35	2.24	0.5547	0.43	0.093	2.46	1.14	0.07	0.047	0.237	0.023	0.25	5.23	0.24	5.72	19949	1.4382	19.88388	-18.44568	NAF
NS0147	280	282	NS	X122861	122861	2	G	W	32.71	40.89	2.29	0.5547	0.43	0.105	2.19	1.15	0.155	0.043	0.385	0.146	0.23	4.57	0.23	5.03	20010	1.3158	20.0583	-18.7425	NAF
NS0147	240	242	NS	X122840	122840	2	G	W	33.48	41.57	1.72	0.5934	0.46	0.077	1.8	1.13	0.1	0.03	0.282	0.182	0.12	3.7	0.43	4.25	19990	0.918	19.70946	-18.79146	NAF
NS0147	238	240	NS	X122839	122839	2	G	W	35.28	38.27	2.2	0.5547	0.43	0.099	2.03	1.16	0.085	0.035	0.562	0.124	0.12	3.46	0.51	4.09	19989	1.071	20.23272	-19.16172	NAF
NS0147	204	206	NS	X122822	122822	2	G	W	35.32	38.42	2.04	0.5934	0.46	0.101	2.04	1.22	0.103	0.058	0.43	0.156	0.15	3.51	0.48	4.14	19972	1.7748	21.27924	-19.50444	NAF
NS0147	168	170	NS	X122804	122804	2	G	W	31.91	42.06	2.21	0.6063	0.47	0.103	2.34	1.26	0.087	0.056	0.449	0.124	0.18	4.14	0.56	4.88	19954	1.7136	21.97692	-20.26332	NAF
NS0147	226	228	NS	X122833	122833	2	G	W	34.91	38.12	2.13	0.5934	0.46	0.098	2.02	1.25	0.07	0.039	0.668	0.126	0.16	3.53	0.68	4.37	19983	1.1934	21.8025	-20.6091	NAF
NS0147	188	190	NS	X122814	122814	2	G	W	33.59	41.59	1.69	0.645	0.5	0.08	1.86	1.25	0.089	0.027	0.376	0.143	0.14	3.37	0.52	4.03	19964	0.8262	21.8025	-20.9763	NAF
NS0147	120	122	NS	X122779	122779	2	G	W	30.35	40.95	2.77	0.5934	0.46	0.127	2.88	1.34	0.104	0.072	0.484	0.034	0.2	5.88	0.56	6.64	19930	2.2032	23.37228	-21.16908	NAF
NS0147	270	272	NS	X122856	122856	2	G	W	33.48	40.48	1.94	0.5805	0.45	0.088	1.88	1.27	0.083	0.031	0.528	0.093	0.14	3.82	0.67	4.63	20005	0.9486	22.15134	-21.20274	NAF
NS0147	216	218	NS	X122828	122828	2	G	W	34.49	39.91	2.07	0.5676	0.44	0.095	2.07	1.28	0.061	0.035	0.527	0.106	0.14	3.21	0.8	4.15	19978	1.071	22.32576	-21.25476	NAF
NS0147	196	198	NS	X122818	122818	2	G	W	33.62	40.19	2.17	0.5934	0.46	0.104	2.22	1.31	0.09	0.035	0.52	0.096	0.17	3.24	0.72	4.13	19968	1.071	22.84902	-21.77802	NAF
NS0147	208	210	NS	X122824	122824	2	G	W	34.67	39.21	1.83	0.6708	0.52	0.084	1.99	1.32	0.084	0.032	0.425	0.103	0.14	3.48	0.76	4.38	19974	0.9792	23.02344	-22.04424	NAF
NS0147	228	230	NS	X122834	122834	2	G	W	34.15	39.32	2.1	0.6321	0.49	0.096	2.12	1.35	0.074	0.04	0.566	0.13	0.13	3.7	0.8	4.63	19984	1.224	23.5467	-22.3227	NAF
NS0147	220	222	NS	X122830	122830	2	G	W	34.15	40.54	1.83	0.6063	0.47	0.079	1.94	1.34	0.097	0.032	0.422	0.112	0.14	3.37	0.72	4.23	19980	0.9792	23.37228	-22.39308	NAF
NS0147	186	188	NS	X122813	122813	2	G	W	33.45	40.72	2.44	0.5547	0.43	0.112	2.15	1.38	0.155	0.053	0.625	0.177	0.14	3.16	0.42	3.72	19963	1.6218	24.06996	-22.44816	NAF
NS0147	170	172	NS	X122805	122805	2	G	W	32.31	42.06	2.42	0.5418	0.42	0.106	2.3	1.42	0.067	0.075	0.623	0.084	0.16	3.5	0.63	4.29	19955	2.295	24.76764	-22.47264	NAF
NS0147	202	204	NS	X122821	122821	2	G	W	33.31	39.98	2.55	0.5805	0.45	0.121	2.38	1.42	0.103	0.053	0.525	0.163	0.19	3.22	0.83	4.24	19971	1.6218	24.76764	-23.14584	NAF
NS0147	126	128	NS	X122783	122783	2	G	W	33.42	38.36	2.55	0.5547	0.43	0.118	2.71	1.42	0.079	0.045	0.184	0.039	0.23	5.3	0.62	6.15	19933	1.377	24.76764	-23.39064	NAF
NS0147	192	194	NS	X122816	122816	2	G	W	31.85	43.29	1.75	0.6837	0.53	0.079	2.02	1.42	0.096	0.039	0.378	0.168	0.19	3.63	0.85	4.67	19966	1.1934	24.76764	-23.57424	NAF
NS0147	262	264	NS	X122852	122852	2	G	W	30.33	40.98	3.57	0.5289	0.41	0.156	2.91	1.66	0.155	0.173	0.517	0.096	0.24	4.58	0.87	5.69	20001	5.2938	28.95372	-23.65992	NAF
NS0147	114	116	NS	X122776	122776	2	G	W	32.25	38.24	2.87	0.5676	0.44	0.133	2.86	1.61	0.094	0.144	0.412	0.273	1.6	3.36	0.86	5.82	19927	4.4064	28.08162	-23.67522	NAF
NS0147	210	212	NS	X122825	122825	2	G	W	34.45	38.65	1.88	0.6708	0.52	0.09	2.01	1.49	0.095	0.033	0.542	0.093	0.19	3.78	0.9	4.87	19975	1.0098	25.98858	-24.97878	NAF
NS0147	282	284	NS	X122862	122862	2	G	W	31.4	41.78	2.18	0.5676	0.44	0.105	2.35	1.51	0.147	0.043	0.233	0.195	0.2	4.86	0.76	5.82	20011	1.3158	26.33742	-25.02162	NAF
NS0147	268	270	NS	X122855	122855	2	G	W	33.63	39.46	2.15	0.5934	0.46	0.097	2.16	1.52	0.05	0.033	0.534	0.108	0.2	3.97	0.95	5.12	20004	1.0098	26.51184	-25.50204	NAF
NS0147	218	220	NS	X122829	122829	2	G	W	34.1	38.93	2.43	0.5547	0.43	0.109	2.29	1.59	0.109	0.044	0.562	0.115	0.17	3.16	1.03	4.36	19979	1.3464	27.73278	-26.38638	NAF
NS0147	178	180	NS	X122809	122809	2	G	W	34.45	38.66	2.1	0.5934	0.46	0.093	2.18	1.59	0.091	0.042	0.551	0.09	0.17	3.52	0.72	4.41	19959	1.2852	27.73278	-26.44758	NAF
NS0147	224	226	NS	X122832	122832	2	G	W	34.55	38.02	2.22	0.645	0.5	0.101	2.24	1.62	0.082	0.045	0.529	0.17	0.15	3.65	1.09	4.89	19982	1.377	28.25604	-26.87904	NAF
NS0147	116	118	NS	X122777	122777	2	G	W	32.82	39.89	1.97	0.5676	0.44	0.089	2.4	1.62	0.062	0.037	0.281	0.107	0.15	4.34	1.01	5.5	19928	1.1322	28.25604	-27.12384	NAF
NS0147	184	186	NS	X122812	122812	2	G	W	32.99	41.78	1.76	0.6192	0.48	0.081	2.06	1.65	0.112	0.032	0.429	0.106	0.15	3.41	0.79	4.35	19962	0.9792	28.7793	-27.8001	NAF
NS0147	198	200	NS	X122819	122819	2	G	W	33.52	38.83	2.66	0.5934	0.46	0.128	2.46	1.69	0.104	0.054	0.66	0.125	0.16	3.21	1.13	4.5	19969	1.6524	29.47698	-27.82458	NAF
NS0147	194	196	NS	X122817	122817	2	G	W	33.45	41.23	1.62	0.645	0.5	0.072	1.83	1.68	0.1	0.025	0.474	0.098	0.07	3	1.13	4.2	19967	0.765	29.30256	-28.53756	NAF
NS0147	160	162	NS	X122800	122800	2	G	W	31.29	42.94	1.98	0.5418	0.42	0.092	2.27	1.71	0.123	0.041	0.301	0.04	0.14	4.03	0.75	4.92	19950	1.2546	29.82582	-28.57122	NAF
NS0147	156	158	NS	X122798	122798	2	G	W	27.18	46.1	2.72	0.5031	0.39	0.118	2.48	1.9	0.099	0.114	0.543	0.026	0.21	4.9	0.98	6.09	19948	3.4884	33.1398	-29.6514	NAF
NS0147	174	176	NS	X122807	122807	2	G	W	31.23	43.27	1.94	0.5805	0.45	0.085	2.12	1.82	0.068	0.064	0.473	0.103	0.23	3.65	1.05	4.93	19957	1.9584	31.74444	-29.78604	NAF
NS0147	264	266	NS	X122853	122853	2	G	W	32.18	40.02	1.97	0.6063	0.47	0.088	2.31	1.78	0.069	0.036	0.179	0.147	0.21	4.68	1.37	6.26	20002	1.1016	31.04676	-29.94516	NAF
NS0147	230	232	NS	X122835	122835	2	G	W	32.67	41.13	1.83	0.5934	0.46	0.082	1.9	1.78	0.069	0.032	0.561	0.123	0.15	3.31	1.23	4.69	19985	0.9792	31.04676	-30.06756	NAC
NS0147	266	268	NS	X122854	122854	2	G	W	31.39	41.75	2.01	0.6192	0.48	0.087	2.24	1.86	0.119	0.041	0.24	0.193	0.17	4.37	1.25	5.79	20003	1.2546	32.44212	-31.18752	NAC
NS0147	200	202	NS	X122820	122820	2	G	W	32.63	40.61	2.15	0.645	0.5	0.093	2.16	1.89	0.112	0.04	0.646	0.128	0.15	3.24	1.34	4.73	19970	1.224	32.96538	-31.74138	NAC
NS0147	222	224	NS	X122831	122831	2	G	W	32.35	41.16	1.89	0.6321	0.49	0.093	2.13	1.91	0.086	0.037	0.459	0.135	0.15	3.53	1.54	5.22	19981	1.1322	33.31422	-32.18202	NAC
NS0147	166	168	NS	X122803	122803	2	G	W	32.19	41.23	2.02	0.5805	0.45	0.094	2.26	1.95	0.077	0.037	0.43	0.096	0.15	3.63	1.2	4.98	19953	1.1322	34.0119	-32.8797	NAC
NS0147	164	166	NS	X122802	122802	2	G	W	32.86	39.69	2.29	0.6321	0.49	0.104	2.33	1.99	0.131	0.055	0.67	0.101	0.11	3.91	1	5.02	19952	1.683	34.70958	-33.02658	NAC
NS0147	214	216	NS	X122827	122827	2	G	W	32.62	41.99	1.61	0.6063	0.47	0.075	1.85	1.95	0.078	0.029	0.439	0.081	0.17	2.91	1.37	4.45	19977	0.8874	34.0119	-33.1245	NAC
NS0147	236	238	NS	X122838	122838	2	G	W	33.76	40.22	1.73	0.6063	0.47	0.078	1.76	1.99	0.09	0.026	0.65	0.091	0.07	2.93	1.42	4.42	19988	0.7956	34.70958	-33.91398	NAC
NS0147	232	234	NS	X122836	122836	2	G	W	33.71	39.39	1.69	0.6321	0.49	0.074	2	2.01	0.094	0.028	0.324	0.161	0.1	3.29	1.52	4.91	19986	0.8568	35.05842	-34.20162	NAC
NS0147	212	214	NS	X122826	122826	2	G	W	33.7	39.18	2.21	0.6063	0.47	0.1	2.17	2.05	0.078	0.034	0.667	0.096	0.13	3.02	1.62	4.77	19976	1.0404	35.7561	-34.7157	NAC
NS0147	162	164	NS	X122801	122801	2	G	W	30.68	42.54	1.98	0.5418	0.42	0.09	2.24	2.12	0.099	0.057	0.384	0.034	0.21	4.06	1.15	5.42	19951	1.7442	36.97704	-35.23284	NAC
NS0147	172	174	NS	X122806	122806	2	G	W	32.77	40.32	2.04	0.5547	0.43	0.096	2.21	2.09	0.106	0.038	0.521	0.092	0.1	3.24	1.37	4.71	19956	1.1628	36.45378	-35.29098	NAC
NS0147	176	178	NS	X122808	122808	2	G	W	31.27	41.29	2.24	0.5805	0.45	0.104	2.35	2.31	0.144	0.137	0.612	0.101	0.18	3.52	1.2	4.9	19958	4.1922	40.29102	-36.09882	NAC
NS0147	180	182	NS	X122810	122810	2	G	W	32	40.96	1.97	0.5934	0.46	0.09	2.04	2.16	0.116	0.049	0.646	0.084	0.12	3.36	1.33	4.81	19960	1.4994	37.67472	-36.17532	NAC
NS0147	154	156	NS	X122797	122797	2	G	W	29.59	43.54	1.85	0.5031	0.39	0.081	2.24	2.31	0.073	0.056	0.197	0.012	0.23	4.85	1.37	6.45	19947	1.7136	40.29102	-38.57742	NAC
NS0147	234	236	NS	X122837	122837	2	G	W	32.89	40.17	1.59	0.645	0.5	0.07	1.87	2.35	0.132	0.026	0.408	0.144	0.12	3.13	1.83	5.08	19987	0.7956	40.9887	-40.1931	NAC
NS0148	120	122	NS	X122925	122925	1	G	W	21.33	47.28	9.04	0.2709	0.21	0.374	2.5	0.28	0.03	0.955	1.37	0.028	0.71	5.57	1.54	7.82	20146	29.223	4.88376	24.33924	PAF(HC)
NS0148	122	124	NS	X122926	122926	1	G	W	23.15	44.82	4.53	0.6579	0.51	0.188	2.47	0.36	0.049	0.579	0.443	0.013	1.03	10.8	1.38	13.21	20147	17.7174	6.27912	11.43828	PAF(HC)
NS0148	104	106	NS	X122917	122917	1	G	W	24.27	43.68	4.88	0.4515	0.35	0.199	3.16	0.71	0.059	0.628	0.557	0.031	0.93	9.15	1.35	11.43	20120	19.2168	12.38382	6.83298	PAF(LC)
NS0148	92	94	NS	X122911	122911	1	G	W	27.29	44.13	5.06	0.3483	0.27	0.221	2.26	0.36	0.132	0.261	0.535	0.019	1	5.32	0.74	7.06	20114	7.9866	6.27912	1.70748	PAF(LC)
NS0148	90	92	NS	X122910	122910	1	G	W	32.1	44.51	4.58	0.1032	0.08	0.197	0.56	0.06	0.145	0.069	0.243	0.016	1.47	1.38	0.31	3.16	20113	2.1114	1.04652	1.06488	PAF(LC)
NS0148	12	14	NS	X122871	122871	1	G	D	20.45	60.42	6.17	0.00645	0.005	0.222	0.06	0.05	0.01	0.018	0.021	0.073	1.83	1.4	0.21	3.44	20038	0.5508	0.8721	-0.3213	NAF
NS0148	20	22	NS	X122875	122875	1	G	D	25.58	57.8	2.99	0.0387	0.03	0.128	0.05	0.04	0.019	0.012	0.011	0.024	1.22	0.78	0.12	2.12	20042	0.3672	0.69768	-0.33048	NAF
NS0148	24	26	NS	X122877	122877	1	G	D	33.57	47.07	2.51	0.0258	0.02	0.102	0.03	0.04	0.059	0.009	0.006	0.017	1.16	0.63	0.1	1.89	20044	0.2754	0.69768	-0.42228	NAF
NS0148	18	20	NS	X122874	122874	1	G	D	29.21	51.67	3.92	0.0258	0.02	0.171	0.04	0.04	0.007	0.008	0.016	0.02	1.17	0.96	0.16	2.29	20041	0.2448	0.69768	-0.45288	NAF
NS0148	22	24	NS	X122876	122876	1	G	D	29.43	52.51	3.03	0.0129	0.01	0.113	0.03	0.04	0.031	0.008	0.007	0.023	1.02	0.87	0.17	2.06	20043	0.2448	0.69768	-0.45288	NAF
NS0148	10	12	NS	X122870	122870	1	G	D	20.31	60.22	6.75	0.00645	0.005	0.183	0.05	0.04	0.006	0.007	0.019	0.104	1.04	1.95	0.22	3.21	20037	0.2142	0.69768	-0.48348	NAF
NS0148	30	32	NS	X122880	122880	1	G	D	34.95	44.28	2.88	0.1419	0.11	0.111	0.08	0.05	0.091	0.012	0.02	0.023	1.47	0.78	-0.01	2.24	20047	0.3672	0.8721	-0.5049	NAF
NS0148	14	16	NS	X122872	122872	1	G	D	17.3	64.32	7.07	0.00645	0.005	0.262	0.05	0.05	0.006	0.01	0.016	0.047	1.02	1.97	0.15	3.14	20039	0.306	0.8721	-0.5661	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0148	16	18	NS	X122873	122873	1	G	D	22.95	59.57	4.69	0.00645	0.005	0.174	0.04	0.05	0.008	0.01	0.016	0.03	1.02	1.28	0.13	2.43	20040	0.306	0.8721	-0.5661	NAF
NS0148	60	62	NS	X122895	122895	1	G	D	23.45	58.48	3.85	0.5547	0.43	0.156	0.07	0.04	0.051	0.004	0.073	0.022	1.5	1.11	0.1	2.71	20080	0.1224	0.69768	-0.57528	NAF
NS0148	62	64	NS	X122896	122896	1	G	D	31.41	47.54	3.65	0.4386	0.34	0.163	0.13	0.05	0.05	0.007	0.12	0.016	1.35	1.05	0.13	2.53	20081	0.2142	0.8721	-0.6579	NAF
NS0148	8	10	NS	X122869	122869	1	G	D	3.12	73.52	15.09	0.00645	0.005	0.243	0.07	0.05	0.006	0.006	0.022	0.101	1.45	4.25	0.3	6	20036	0.1836	0.8721	-0.6885	NAF
NS0148	64	66	NS	X122897	122897	1	G	D	32.67	47.24	2.57	0.3999	0.31	0.11	0.18	0.06	0.073	0.009	0.102	0.016	1.15	0.75	0.13	2.03	20082	0.2754	1.04652	-0.77112	NAF
NS0148	58	60	NS	X122894	122894	1	G	D	26.96	52.74	3.95	0.5418	0.42	0.17	0.16	0.06	0.027	0.008	0.079	0.021	2.05	1.15	0.18	3.38	20079	0.2448	1.04652	-0.80172	NAF
NS0148	66	68	NS	X122898	122898	1	G	D	33.79	44.75	2.74	0.8385	0.65	0.121	0.44	0.06	0.046	0.008	0.121	0.023	1.22	0.82	0.12	2.16	20083	0.2448	1.04652	-0.80172	NAF
NS0148	28	30	NS	X122879	122879	1	G	D	33.86	46.02	2.83	0.258	0.2	0.117	0.15	0.06	0.072	0.007	0.107	0.016	1.18	0.73	-0.06	1.85	20046	0.2142	1.04652	-0.83232	NAF
NS0148	56	58	NS	X122893	122893	1	G	D	26.17	54.8	3.62	0.6579	0.51	0.144	0.09	0.06	0.02	0.006	0.059	0.02	1.7	1.11	0.16	2.97	20078	0.1836	1.04652	-0.86292	NAF
NS0148	46	48	NS	X122888	122888	1	G	D	31.03	46.5	3.47	0.3741	0.29	0.181	1.4	0.06	0.05	0.005	0.195	0.024	1.75	1.1	0.07	2.92	20073	0.153	1.04652	-0.89352	NAF
NS0148	54	56	NS	X122892	122892	1	G	D	27.88	53.32	2.33	0.3225	0.25	0.097	0.23	0.06	0.133	0.004	0.058	0.02	2.73	0.85	0.12	3.7	20077	0.1224	1.04652	-0.92412	NAF
NS0148	0	2	NS	X122865	122865	1	G	D	19.26	62.09	5.52	0.0387	0.03	0.207	0.17	0.1	0.098	0.02	0.087	0.051	2.19	1.58	0.16	3.93	20014	0.612	1.7442	-1.1322	NAF
NS0148	6	8	NS	X122868	122868	1	G	D	26.47	50.71	7.37	0.00645	0.005	0.159	0.06	0.09	0.008	0.009	0.018	0.075	1.12	2.12	0.2	3.44	20035	0.2754	1.56978	-1.29438	NAF
NS0148	26	28	NS	X122878	122878	1	G	D	34.76	45.44	2.44	0.1935	0.15	0.104	0.17	0.09	0.099	0.006	0.144	0.023	1.19	0.47	0.01	1.67	20045	0.1836	1.56978	-1.38618	NAF
NS0148	94	96	NS	X122912	122912	1	G	W	27.09	46.15	4.2	0.3741	0.29	0.18	2.19	0.36	0.095	0.156	0.458	0.017	0.94	5.7	0.39	7.03	20115	4.7736	6.27912	-1.50552	NAF
NS0148	32	34	NS	X122881	122881	1	G	D	26.04	54.8	3.19	0.6708	0.52	0.136	0.4	0.1	0.066	0.007	0.201	0.021	1.75	0.95	0.05	2.75	20048	0.2142	1.7442	-1.53	NAF
NS0148	44	46	NS	X122887	122887	1	G	D	30.32	47.37	3.82	0.3354	0.26	0.167	1.06	0.11	0.068	0.009	0.458	0.021	1.43	1.14	0.13	2.7	20072	0.2754	1.91862	-1.64322	NAF
NS0148	124	126	NS	X122927	122927	1	G	W	21.87	45.8	5.21	0.6837	0.53	0.217	2.39	0.61	0.138	0.291	0.856	0.016	0.99	10.69	0.78	12.46	20148	8.9046	10.63962	-1.73502	NAF
NS0148	48	50	NS	X122889	122889	1	G	D	29.7	49.44	3.05	0.3354	0.26	0.167	1.23	0.11	0.069	0.006	0.188	0.022	1.47	1.03	0.05	2.55	20074	0.1836	1.91862	-1.73502	NAF
NS0148	36	38	NS	X122883	122883	1	G	D	34.54	44.76	2.12	0.4128	0.32	0.094	0.72	0.12	0.045	0.007	0.236	0.022	1.24	0.67	-0.08	1.83	20050	0.2142	2.09304	-1.87884	NAF
NS0148	86	88	NS	X122908	122908	1	G	W	28.27	44.77	2.46	0.5676	0.44	0.103	2.32	0.28	0.069	0.096	0.269	0.02	0.87	7.29	0.34	8.5	20111	2.9376	4.88376	-1.94616	NAF
NS0148	68	70	NS	X122899	122899	1	G	D	33.31	42.96	1.96	0.4515	0.35	0.09	1.44	0.16	0.072	0.026	0.304	0.032	1.04	3.67	0.18	4.89	20084	0.7956	2.79072	-1.99512	NAF
NS0148	38	40	NS	X122884	122884	1	G	D	30.96	46.23	4.01	0.4386	0.34	0.173	1.41	0.14	0.06	0.006	0.534	0.031	1.56	1.14	0.15	2.85	20051	0.1836	2.44188	-2.25828	NAF
NS0148	2	4	NS	X122866	122866	1	G	D	26.91	52.62	4.38	0.00645	0.005	0.155	0.1	0.17	0.053	0.018	0.031	0.046	2.23	1.3	0.17	3.7	20015	0.5508	2.96514	-2.41434	NAF
NS0148	40	42	NS	X122885	122885	1	G	D	28.93	48.52	4.26	0.387	0.3	0.183	1.46	0.15	0.064	0.006	0.467	0.025	1.37	1.31	0.11	2.79	20052	0.1836	2.6163	-2.4327	NAF
NS0148	72	74	NS	X122901	122901	1	G	D	31.31	42	2.61	0.5805	0.45	0.116	2.18	0.24	0.066	0.054	0.409	0.123	0.73	5.88	0.16	6.77	20086	1.6524	4.18608	-2.53368	NAF
NS0148	50	52	NS	X122890	122890	1	G	D	29.48	49.76	3.01	0.387	0.3	0.134	0.96	0.16	0.085	0.007	0.246	0.02	1.6	0.87	0.12	2.59	20075	0.2142	2.79072	-2.57652	NAF
NS0148	118	120	NS	X122924	122924	1	G	W	25.73	41.57	2.52	0.6579	0.51	0.105	2.18	0.62	0.097	0.255	0.639	0.015	1.25	12.62	0.65	14.52	20145	7.803	10.81404	-3.01104	NAF
NS0148	42	44	NS	X122886	122886	1	G	D	29.7	49.48	3.04	0.5031	0.39	0.134	0.84	0.2	0.098	0.009	0.286	0.02	1.62	0.82	0.1	2.54	20071	0.2754	3.4884	-3.213	NAF
NS0148	52	54	NS	X122891	122891	1	G	D	29.48	46.74	4.17	0.645	0.5	0.185	1.1	0.21	0.095	0.005	0.453	0.034	2.4	1.43	0.18	4.01	20076	0.153	3.66282	-3.50982	NAF
NS0148	34	36	NS	X122882	122882	1	G	D	32.56	43.8	3.92	0.6192	0.48	0.173	1.06	0.23	0.098	0.007	0.411	0.024	1.7	1.13	0.05	2.88	20049	0.2142	4.01166	-3.79746	NAF
NS0148	82	84	NS	X122906	122906	1	G	W	30.9	44.02	2.48	0.4515	0.35	0.105	2.05	0.34	0.092	0.042	0.254	0.057	0.69	4.85	0.05	5.59	20109	1.2852	5.93028	-4.64508	NAF
NS0148	84	86	NS	X122907	122907	1	G	W	29.1	44.41	3.09	0.4515	0.35	0.135	2.47	0.42	0.112	0.081	0.311	0.035	0.69	5.81	0.22	6.72	20110	2.4786	7.32564	-4.84704	NAF
NS0148	4	6	NS	X122867	122867	1	G	D	24.99	57.95	3.46	0.00645	0.005	0.116	0.07	0.3	0.02	0.007	0.013	0.048	0.87	1.15	0.12	2.14	20016	0.2142	5.2326	-5.0184	NAF
NS0148	74	76	NS	X122902	122902	1	G	W	31.33	43.08	2.3	0.5547	0.43	0.103	2.04	0.35	0.094	0.033	0.363	0.105	0.7	5.28	0.04	6.02	20087	1.0098	6.1047	-5.0949	NAF
NS0148	110	112	NS	X122920	122920	1	G	W	25.6	45.54	2.24	0.6192	0.48	0.095	1.84	0.49	0.087	0.112	0.534	0.051	0.99	10.5	0.28	11.77	20123	3.4272	8.54658	-5.11938	NAF
NS0148	108	110	NS	X122919	122919	1	G	W	27.92	38.32	2.07	0.7611	0.59	0.085	2.31	0.58	0.089	0.16	0.608	0.027	1.12	13.46	0.33	14.91	20122	4.896	10.11636	-5.22036	NAF
NS0148	88	90	NS	X122909	122909	1	G	W	28.61	42.51	3.71	0.4902	0.38	0.165	2.52	0.57	0.174	0.148	0.365	0.014	0.81	6.97	0.43	8.21	20112	4.5288	9.94194	-5.41314	NAF
NS0148	70	72	NS	X122900	122900	1	G	D	31.62	42.89	2.31	0.5031	0.39	0.108	1.89	0.4	0.125	0.048	0.461	0.084	0.77	4.86	0.15	5.78	20085	1.4688	6.9768	-5.508	NAF
NS0148	76	78	NS	X122903	122903	1	G	W	29	43.18	3.13	0.6192	0.48	0.138	2.63	0.43	0.115	0.064	0.421	0.162	0.56	6.86	0.11	7.53	20088	1.9584	7.50006	-5.54166	NAF
NS0148	96	98	NS	X122913	122913	1	G	W	26.83	44.16	3.47	0.5289	0.41	0.149	2.64	0.58	0.075	0.137	0.326	0.042	0.76	8.02	0.36	9.14	20116	4.1922	10.11636	-5.92416	NAF
NS0148	78	80	NS	X122904	122904	1	G	W	28.57	42.02	4.23	0.5289	0.41	0.187	2.85	0.6	0.176	0.144	0.67	0.154	0.77	6.17	0.36	7.3	20107	4.4064	10.4652	-6.0588	NAF
NS0148	116	118	NS	X122923	122923	1	G	W	30.67	37.79	2.62	0.4902	0.38	0.111	2.11	0.5	0.101	0.065	0.616	0.03	1.15	10.3	0.06	11.51	20144	1.989	8.721	-6.732	NAF
NS0148	80	82	NS	X122905	122905	1	G	W	29.64	43.21	2.9	0.5031	0.39	0.119	2.33	0.53	0.154	0.082	0.303	0.067	0.98	5.5	0.2	6.68	20108	2.5092	9.24426	-6.73506	NAF
NS0148	102	104	NS	X122916	122916	1	G	W	29.86	40.44	2.93	0.4773	0.37	0.126	2.47	0.58	0.086	0.092	0.337	0.015	0.79	8.63	0.2	9.62	20119	2.8152	10.11636	-7.30116	NAF
NS0148	100	102	NS	X122915	122915	1	G	W	28.63	44.03	3.26	0.4257	0.33	0.142	2.25	0.61	0.136	0.092	0.468	0.013	0.65	6.45	0.18	7.28	20118	2.8152	10.63962	-7.82442	NAF
NS0148	114	116	NS	X122922	122922	1	G	W	29.01	40.37	2.57	0.4644	0.36	0.107	2.04	0.7	0.084	0.043	0.659	0.039	0.74	10.37	0.01	11.12	20143	1.3158	12.2094	-10.8936	NAF
NS0148	106	108	NS	X122918	122918	1	G	W	28.02	39.53	2.48	0.6192	0.48	0.104	2.4	0.84	0.125	0.113	0.35	0.107	1.28	11.58	0.23	13.09	20121	3.4578	14.65128	-11.19348	NAF
NS0148	112	114	NS	X122921	122921	1	G	W	31.54	38.84	2.1	0.4386	0.34	0.086	1.71	0.84	0.165	0.038	0.731	0.051	0.75	8.97	-0.09	9.63	20124	1.1628	14.65128	-13.48848	NAF
NS0148	98	100	NS	X122914	122914	1	G	W	28	43.49	3.8	0.4128	0.32	0.162	2.46	1.1	0.251	0.086	0.514	0.036	0.75	6.41	0.16	7.32	20117	2.6316	19.1862	-16.5546	NAF
NS0149	106	108	NS	X142568	142568	1	G	W	28.91	39.31	2.98	0.4644	0.36	0.139	2.72	0.58	0.078	1.73	0.902	0.273	0.98	6.97	2.45	10.4	22188	52.938	10.11636	42.82164	PAF(HC)
NS0149	84	86	NS	X142557	142557	1	G	W	29.34	38.76	3.52	0.4515	0.35	0.159	3.1	0.9	0.15	1.33	1.12	0.34	1.02	6.15	1.84	9.01	22177	40.698	15.6978	25.0002	PAF(HC)
NS0149	86	88	NS	X142558	142558	1	G	W	27.65	40.14	5.37	0.3225	0.25	0.247	3.65	0.74	0.186	0.844	1.32	0.395	1.34	4.82	1.28	7.44	22178	25.8264	12.90708	12.91932	PAF(HC)
NS0149	110	112	NS	X142570	142570	1	G	W	24.84	46	3.92	0.4257	0.33	0.182	2.99	0.62	0.114	0.639	1.08	0.328	1.15	5.64	1.26	8.05	22190	19.5534	10.81404	8.73936	PAF(LC)
NS0149	52	54	NS	X142541	142541	1	G	W	26.42	43	4.66	0.3354	0.26	0.219	3.41	0.33	0.047	0.258	1.34	0.365	1.57	6.25	0.78	8.6	22143	7.8948	5.75586	2.13894	PAF(LC)
NS0149	48	50	NS	X142539	142539	1	G	D	26.37	42.98	5.59	0.3483	0.27	0.295	3.23	0.59	0.098	0.372	0.771	0.18	1.26	6.03	0.93	8.22	22141	11.3832	10.29078	1.09242	PAF(LC)
NS0149	50	52	NS	X142540	142540	1	G	W	23.94	47.16	5.29	0.3225	0.25	0.245	3.37	0.71	0.137	0.405	1.35	0.305	1.29	4.1	1	6.39	22142	12.393	12.38382	0.00918	PAF(LC)
NS0149	38	40	NS	BX143534	X143534	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3397	-0.0306	-0.01744	-0.013158	NAF
NS0149	48	52	NS	BX143539-BX143540	X143539	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3400	-0.0306	-0.01744	-0.013158	NAF
NS0149	274	276	NS	X142655	142655	1	G	W	34.7	37.8	2.08	0.7353	0.57	0.087	2.45	1.12	0.087	0.631	0.909	0.121	0.21	2.68	0.92	3.81	22164	19.3086	19.53504	-0.22644	NAF
NS0149	14	16	NS	X142522	142522	1	G	D	28.47	48.9	3.84	0.0258	0.02	0.124	0.07	0.04	0.031	0.015	0.005	0.059	4.57	1.13	0.18	5.88	22106	0.459	0.69768	-0.23868	NAF
NS0149	18	20	NS	X142524	142524	1	G	D	35.22	41.01	2.59	0.0258	0.02	0.096	0.11	0.05	0.082	0.016	0.003	0.051	4.52	0.86	0.15	5.53	22108	0.4896	0.8721	-0.3825	NAF
NS0149	84	88	NS	BX143557-BX143558	X143557	2			68.53	4.311	0.264	0.052	0.03744	0.052	0.313	0.078	0.013	0.027	0.062	0.109	-0.01	-0.01	-0.01	-0.03	3409	0.8262	1.360476	-0.534276	NAF
NS0149	10	12	NS	X142520	142520	1	G	D	38.26	34.69	2.59	0.0258	0.02	0.098	0.07	0.05	0.035	0.01	0.006	0.045	6.6	0.84	0.19	7.63	22104	0.306	0.8721	-0.5661	NAF
NS0149	8	10	NS	X142519	142519	1	G	D	42.3	28.96	2.52	0.0258	0.02	0.097	0.07	0.05	0.037	0.009	0.006	0.039	6.35	0.83	0.17	7.35	22103	0.2754	0.8721	-0.5967	NAF
NS0149	40	44	NS	BX143535-BX143536	X143535	2			68.13	3.637	0.171	0.043	0.03096	0.043	0.148	0.038	0.013	0.002	0.024	0.083	0.15	-0.01	-0.01	0.13	3398	0.0612	0.662796	-0.601596	NAF
NS0149	44	48	NS	BX143537-BX143538	X143537	2			66.69	3.665	0.17	0.041	0.02952	0.041	0.149	0.039	0.012	0.002	0.024	0.09	0.16	-0.01	-0.01	0.14	3399	0.0612	0.680238	-0.619038	NAF
NS0149	16	18	NS	X142523	142523	1	G	D	33.79	40.2	4.14	0.0258	0.02	0.212	0.1	0.07	0.046	0.018	0.005	0.066	5.3	1.09	0.22	6.61	22107	0.5508	1.22094	-0.67014	NAF
NS0149	68	72	NS	BX143549-BX143550	X143549	2			70.23	2.204	0.22	0.062	0.04464	0.062	0.254	0.065	0.008	0.012	0.054	0.103	-0.01	-0.01	-0.01	-0.03	3405	0.3672	1.13373	-0.76653	NAF
NS0149	20	22	NS	X142525	142525	1	G	D	38.6	35.1	2.49	0.0258	0.02	0.102	0.1	0.08	0.091	0.02	0.003	0.053	5.27	0.83	0.19	6.29	22109	0.612	1.39536	-0.78336	NAF
NS0149	6	8	NS	X142518	142518	1	G	D	34.18	39.75	3.61	0.0258	0.02	0.148	0.08	0.07	0.026	0.014	0.014	0.058	5.84	1.24	0.23	7.31	22102	0.4284	1.22094	-0.79254	NAF
NS0149	100	104	NS	BX143565-BX143566	X143565	2			69.81	3.304	0.167	0.043	0.03096	0.043	0.214	0.069	0.012	0.01	0.039	0.097	-0.01	-0.01	-0.01	-0.03	3413	0.306	1.203498	-0.897498	NAF
NS0149	12	14	NS	X142521	142521	1	G	D	27.96	50.89	2.87	0.0258	0.02	0.217	0.11	0.08	0.033	0.013	0.005	0.063	4.8	0.95	0.16	5.91	22105	0.3978	1.39536	-0.99756	NAF
NS0149	104	108	NS	BX143567-BX143568	X143567	2			66.23	5.823	0.243	0.05	0.036	0.05	0.332	0.088	0.014	0.017	0.073	0.087	-0.01	-0.01	-0.01	-0.03	3414	0.5202	1.534896	-1.014696	NAF
NS0149	64	68	NS	BX143547-BX143548	X143547	2			67.68	4.574	0.263	0.052	0.03744	0.052	0.312	0.081	0.011	0.012	0.065	0.103	-0.01	-0.01	-0.01	-0.03	3404	0.3672	1.412802	-1.045602	NAF
NS0149	56	60	NS	BX143543-BX143544	X143543	2			68.17	3.978	0.203	0.042	0.03024	0.042	0.269	0.087	0.014	0.01	0.057	0.083	-0.01	-0.01	-0.01	-0.03	3402	0.306	1.517454	-1.211454	NAF
NS0149	60	64	NS	BX143545-BX143546	X143545	2			66.71	5.494	0.257	0.039	0.02808	0.039	0.343	0.091	0.013	0.012	0.08	0.091	-0.01	-0.01	-0.01	-0.03	3403	0.3672	1.587222	-1.220022	NAF
NS0149	108	112	NS	BX143569-BX143570	X143569	2			60.69	11.376	0.631	0.052	0.03744	0.052	0.659	0.114	0.015	0.024	0.205	0.122	-0.01	0.2	-0.01	0.18	3415	0.7344	1.988388	-1.253988	NAF
NS0149	88	90	NS	BX143559	X143559	2			69.23	3.641	0.16	0.028	0.02016	0.028	0.254	0.09	0.015	0.009	0.051	0.085	-0.01	-0.01	-0.01	-0.03	3410	0.2754	1.56978	-1.29438	NAF
NS0149	294	298	NS	BX143665-BX143666	X143665	2			66.01	8.596	0.295	0.025	0.018	0.025	0.435	0.106	0.023	0.018	0.09	0.086	-0.01	-0.01	-0.01	-0.03	3463	0.5508	1.848852	-1.298052	NAF
NS0149	298	300	NS	BX143667	X143667	2			65.49	7.456	0.228	0.02	0.0144	0.02	0.385	0.142	0.035	0.038	0.081	0.075	-0.01	-0.01	-0.01	-0.03	3464	1.1628	2.476764	-1.313964	NAF
NS0149	4	6	NS	X142517	142517	1	G	D	16.5	65.77	4.63	0.00645	0.005	0.717	0.1	0.1	0.016	0.011	0.035	0.1	3.25	1.47	0.17	4.89	22101	0.3366	1.7442	-1.4076	NAF
NS0149	274	278	NS	BX143655-BX143656	X143655	2			65.85	7.366	0.266	0.017	0.01224	0.017	0.348	0.101	0.021	0.011	0.131	0.083	-0.01	-0.01	-0.01	-0.03	3458	0.3366	1.761642	-1.425042	NAF
NS0149	76	80	NS	BX143553-BX143554	X143553	2			66.74	6.211	0.29	0.032	0.02304	0.032	0.37	0.106	0.014	0.01	0.098	0.092	-0.01	-0.01	-0.01	-0.03	3407	0.306	1.848852	-1.542852	NAF
NS0149	170	172	NS	BX143602	X143602	2			63.73	9.606	0.399	0.031	0.02232	0.031	0.562	0.128	0.016	0.021	0.123	0.089	-0.01	-0.01	-0.01	-0.03	3431	0.6426	2.232576	-1.589976	NAF
NS0149	116	120	NS	BX143573-BX143574	X143573	2			62.54	10.187	0.512	0.035	0.0252	0.035	0.572	0.127	0.014	0.018	0.138	0.099	-0.01	-0.01	-0.01	-0.03	3417	0.5508	2.215134	-1.664334	NAF
NS0149	270	274	NS	BX143653-BX143654	X143653	2			65.21	8.855	0.32	0.024	0.01728	0.024	0.415	0.117	0.023	0.012	0.159	0.085	-0.01	-0.01	-0.01	-0.03	3457	0.3672	2.040714	-1.673514	NAF
NS0149	256	260	NS	BX143645-BX143646	X143645	2			65.59	8.438	0.335	0.026	0.01872	0.026	0.405	0.119	0.019	0.012	0.197	0.085	-0.01	-0.01	-0.01	-0.03	3453	0.3672	2.075598	-1.708398	NAF
NS0149	286	290	NS	BX143661-BX143662	X143661	2			67.07	6.472	0.166	0.012	0.00864	0.012	0.274	0.106	0.021	0.004	0.101	0.086	-0.01	-0.01	-0.01	-0.03	3461	0.1224	1.848852	-1.726452	NAF
NS0149	278	282	NS	BX143657-BX143658	X143657	2			67.03	6.671	0.182	0.016	0.01152	0.016	0.311	0.109	0.022	0.005	0.077	0.077	-0.01	-0.01	-0.01	-0.03	3459	0.153	1.901178	-1.748178	NAF
NS0149	264	268	NS	BX143649-BX143650	X143649	2			67.43	6.324	0.201	0.017	0.01224	0.017	0.286	0.114	0.021	0.007	0.129	0.075	-0.01	-0.01	-0.01	-0.03	3455	0.2142	1.988388	-1.774188	NAF
NS0149	290	294	NS	BX143663-BX143664	X143663	2			66.62	7.624	0.172	0.015	0.0108	0.015	0.31	0.121	0.024	0.01	0.092	0.085	-0.01	-0.01	-0.01	-0.03	3462	0.306	2.110482	-1.804482	NAF
NS0149	80	84	NS	BX143555-BX143556	X143555	2			64.21	7.907	0.302	0.028	0.02016	0.028	0.409	0.119	0.015	0.008	0.112	0.089	-0.01	-0.01	-0.01	-0.03	3408	0.2448	2.075598	-1.830798	NAF
NS0149	282	284	NS	BX143659	X143659	2			65.85	6.958	0.19	0.015	0.0108	0.015	0.317	0.114	0.023	0.005	0.097	0.084	-0.01	-0.01	-0.01	-0.03	3460	0.153	1.988388	-1.835388	NAF
NS0149	158	162	NS	BX143595-BX143596	X143595	2			65.62	7.344	0.299	0.023	0.01656	0.023	0.451	0.125	0.023	0.011	0.098	0.089	-0.01	-0.01	-0.01	-0.03	3428	0.3366	2.18025	-1.84365	NAF
NS0149	146	148	NS	BX143589	X143589	2			66.99	6.937	0.245	0.022	0.01584	0.022	0.37	0.122	0.016	0.008	0.08	0.07	-0.01	-0.01	-0.01	-0.03	3425	0.2448	2.127924	-1.883124	NAF
NS0149	72	76	NS	BX143551-BX143552	X143551	2			63.96	8.282	0.267	0.029	0.02088	0.029	0.401	0.126	0.016	0.01	0.093	0.086	-0.01	-0.01	-0.01	-0.03	3406	0.306	2.197692	-1.891692	NAF
NS0149	268	270	NS	BX143652	X143652	2			65.2	8.886	0.28	0.023	0.01656	0.023	0.388	0.144	0.023	0.02	0.144	0.074	-0.01	-0.01	-0.01	-0.03	3456	0.612	2.511648	-1.899648	NAF
NS0149	252	256	NS	BX143643-BX143644	X143643	2			67.31	6.098	0.27	0.025	0.018	0.025	0.308	0.125	0.013	0.009	0.173	0.069	-0.01	-0.01	-0.01	-0.03	3452	0.2754	2.18025	-1.90485	NAF
NS0149	52	56	NS	BX143541-BX143542	X143541	2			61.47	10.967	0.443	0.039	0.02808	0.039	0.537	0.137	0.021	0.014	0.141	0.108	-0.01	-0.01	-0.01	-0.03	3401	0.4284	2.389554	-1.961154	NAF
NS0149	166	170	NS	BX143599-BX143600	X143599	2			64.87	8.738	0.324	0.028	0.02016	0.028	0.47	0.136	0.019	0.013	0.096	0.093	-0.01	-0.01	-0.01	-0.03	3430	0.3978	2.372112	-1.974312	NAF
NS0149	172	176	NS	BX143603-BX143604	X143603	2			64.09	8.556	0.353	0.03	0.0216	0.03	0.497	0.139	0.017	0.014	0.115	0.089	-0.01	-0.01	-0.01	-0.03	3432	0.4284	2.424438	-1.996038	NAF
NS0149	260	264	NS	BX143647-BX143648	X143647	2			66.83	6.963	0.214	0.016	0.01152	0.016	0.281	0.122	0.024	0.004	0.144	0.067	-0.01	-0.01	-0.01	-0.03	3454	0.1224	2.127924	-2.005524	NAF
NS0149	162	166	NS	BX143597-BX143598	X143597	2			65.33	8.09	0.309	0.026	0.01872	0.026	0.445	0.14	0.021	0.012	0.097	0.083	-0.01	-0.01	-0.01	-0.03	3429	0.3672	2.44188	-2.07468	NAF
NS0149	120	124	NS	BX143575-BX143576	X143575	2			61.19	11.522	0.594	0.043	0.03096	0.043	0.655	0.16	0.02	0.022	0.175	0.096	-0.01	-0.01	-0.01	-0.03	3418	0.6732	2.79072	-2.11752	NAF
NS0149	136	140	NS	BX143583-BX143584	X143583	2			66.33	7.175	0.293	0.029	0.02088	0.029	0.367	0.162	0.014	0.015	0.081	0.084	-0.01	-0.01	-0.01	-0.03	3422	0.459	2.825604	-2.366604	NAF
NS0149	96	100	NS	BX143563-BX143564	X143563	2			65.59	6.29	0.23	0.028	0.02016	0.028	0.361	0.16	0.017	0.013	0.078	0.097	-0.01	-0.01	-0.01	-0.03	3412	0.3978	2.79072	-2.39292	NAF
NS0149	112	116	NS	BX143571-BX143572	X143571	2			60.75	11.568	0.513	0.036	0.02592	0.036	0.631	0.163	0.026	0.014	0.173	0.136	-0.01	-0.01	-0.01	-0.03	3416	0.4284	2.843046	-2.414646	NAF
NS0149	140	142	NS	BX143585	X143585	2			65.05	8.851	0.295	0.022	0.01584	0.022	0.442	0.155	0.019	0.009	0.095	0.083	-0.01	-0.01	-0.01	-0.03	3423	0.2754	2.70351	-2.42811	NAF
NS0149	244	248	NS	BX143639-BX143640	X143639	2			66.91	6.72	0.294	0.017	0.01224	0.017	0.325	0.154	0.021	0.008	0.211	0.103	-0.01	-0.01	-0.01	-0.03	3450	0.2448	2.686068	-2.441268	NAF
NS0149	200	204	NS	BX143617-BX143618	X143617	2			65.51	8.09	0.367	0.03	0.0216	0.03	0.487	0.174	0.017	0.019	0.1	0.085	-0.01	-0.01	-0.01	-0.03	3439	0.5814	3.034908	-2.453508	NAF
NS0149	142	146	NS	BX143587-BX143588	X143587	2			67.35	6	0.19	0.022	0.01584	0.022	0.305	0.164	0.012	0.013	0.056	0.081	-0.01	-0.01	-0.01	-0.03	3424	0.3978	2.860488	-2.462688	NAF
NS0149	240	244	NS	BX143637-BX143638	X143637	2			64.62	9.433	0.375	0.024	0.01728	0.024	0.388	0.157	0.023	0.008	0.257	0.075	-0.01	-0.01	-0.01	-0.03	3449	0.2448	2.738394	-2.493594	NAF
NS0149	0	2	NS	X142515	142515	1	G	D	41.51	19.46	12.1	0.0387	0.03	1.287	0.09	0.18	0.025	0.021	0.085	0.062	3.77	3.05	0.32	7.14	22099	0.6426	3.13956	-2.49696	NAF
NS0149	154	158	NS	BX143593-BX143594	X143593	2			65.01	7.592	0.261	0.022	0.01584	0.022	0.406	0.17	0.019	0.009	0.089	0.09	-0.01	-0.01	-0.01	-0.03	3427	0.2754	2.96514	-2.68974	NAF
NS0149	248	252	NS	BX143641-BX143642	X143641	2			63.56	10.758	0.514	0.037	0.02664	0.037	0.486	0.182	0.021	0.012	0.348	0.08	-0.01	-0.01	-0.01	-0.03	3451	0.3672	3.174444	-2.807244	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0149	228	232	NS	BX143631-BX143632	X143631	2			65.09	8.008	0.348	0.028	0.02016	0.028	0.439	0.188	0.017	0.013	0.139	0.094	-0.01	-0.01	-0.01	-0.03	3446	0.3978	3.279096	-2.881296	NAF
NS0149	124	128	NS	BX143577-BX143578	X143577	2			66.04	7.804	0.289	0.027	0.01944	0.027	0.393	0.19	0.017	0.014	0.084	0.088	-0.01	-0.01	-0.01	-0.03	3419	0.4284	3.31398	-2.88558	NAF
NS0149	224	226	NS	BX143629	X143629	2			65.72	8.168	0.297	0.025	0.018	0.025	0.401	0.181	0.02	0.008	0.114	0.084	-0.01	-0.01	-0.01	-0.03	3445	0.2448	3.157002	-2.912202	NAF
NS0149	150	154	NS	BX143591-BX143592	X143591	2			64.29	9.034	0.333	0.023	0.01656	0.023	0.481	0.185	0.019	0.01	0.098	0.086	-0.01	-0.01	-0.01	-0.03	3426	0.306	3.22677	-2.92077	NAF
NS0149	184	188	NS	BX143609-BX143610	X143609	2			63.21	9.337	0.433	0.035	0.0252	0.035	0.528	0.191	0.018	0.012	0.109	0.095	-0.01	-0.01	-0.01	-0.03	3435	0.3672	3.331422	-2.964222	NAF
NS0149	216	220	NS	BX143625-BX143626	X143625	2			64.9	8.201	0.334	0.028	0.02016	0.028	0.411	0.203	0.017	0.017	0.133	0.101	-0.01	-0.01	-0.01	-0.03	3443	0.5202	3.540726	-3.020526	NAF
NS0149	212	216	NS	BX143623-BX143624	X143623	2			65.23	8.647	0.292	0.023	0.01656	0.023	0.4	0.192	0.014	0.01	0.114	0.084	-0.01	-0.01	-0.01	-0.03	3442	0.306	3.348864	-3.042864	NAF
NS0149	180	184	NS	BX143607-BX143608	X143607	2			64.82	8.724	0.351	0.024	0.01728	0.024	0.486	0.193	0.024	0.01	0.106	0.088	-0.01	-0.01	-0.01	-0.03	3434	0.306	3.366306	-3.060306	NAF
NS0149	188	192	NS	BX143611-BX143612	X143611	2			63.87	9.495	0.405	0.029	0.02088	0.029	0.516	0.211	0.022	0.017	0.113	0.087	-0.01	-0.01	-0.01	-0.03	3436	0.5202	3.680262	-3.160062	NAF
NS0149	80	82	NS	X142555	142555	1	G	W	28.97	39.42	3.52	0.4644	0.36	0.158	3.28	0.56	0.091	0.215	1.43	0.393	1.49	7.11	0.73	9.33	22157	6.579	9.76752	-3.18852	NAF
NS0149	128	132	NS	BX143579-BX143580	X143579	2			64.25	8.444	0.342	0.027	0.01944	0.027	0.433	0.21	0.019	0.013	0.095	0.08	-0.01	-0.01	-0.01	-0.03	3420	0.3978	3.66282	-3.26502	NAF
NS0149	176	180	NS	BX143605-BX143606	X143605	2			63.57	9.538	0.422	0.028	0.02016	0.028	0.503	0.212	0.019	0.012	0.13	0.095	-0.01	-0.01	-0.01	-0.03	3433	0.3672	3.697704	-3.330504	NAF
NS0149	192	196	NS	BX143613-BX143614	X143613	2			64.63	7.931	0.26	0.02	0.0144	0.02	0.391	0.209	0.013	0.01	0.082	0.072	-0.01	-0.01	-0.01	-0.03	3437	0.306	3.645378	-3.339378	NAF
NS0149	32	34	NS	X142531	142531	1	G	D	32.34	44.84	1.87	0.1032	0.08	0.072	0.49	0.21	0.066	0.007	0.028	0.076	4.59	1.03	0.09	5.71	22115	0.2142	3.66282	-3.44862	NAF
NS0149	232	236	NS	BX143633-BX143634	X143633	2			64.65	9.273	0.332	0.026	0.01872	0.026	0.394	0.212	0.019	0.008	0.187	0.08	-0.01	-0.01	-0.01	-0.03	3447	0.2448	3.697704	-3.452904	NAF
NS0149	24	26	NS	X142527	142527	1	G	D	37.65	38.04	1.88	0.1032	0.08	0.081	0.42	0.22	0.056	0.012	0.03	0.092	3.8	0.93	0.04	4.77	22111	0.3672	3.83724	-3.47004	NAF
NS0149	236	240	NS	BX143635-BX143636	X143635	2			64.17	9.644	0.286	0.02	0.0144	0.02	0.32	0.211	0.024	0.005	0.209	0.071	-0.01	-0.01	-0.01	-0.03	3448	0.153	3.680262	-3.527262	NAF
NS0149	132	136	NS	BX143581-BX143582	X143581	2			65.12	8.396	0.383	0.026	0.01872	0.026	0.495	0.228	0.024	0.014	0.118	0.101	-0.01	-0.01	-0.01	-0.03	3421	0.4284	3.976776	-3.548376	NAF
NS0149	26	28	NS	X142528	142528	1	G	D	39.92	35.51	1.59	0.0645	0.05	0.069	0.38	0.22	0.089	0.008	0.005	0.094	4	0.83	0.05	4.88	22112	0.2448	3.83724	-3.59244	NAF
NS0149	28	30	NS	X142529	142529	1	G	D	35.39	41.89	1.65	0.0387	0.03	0.073	0.4	0.22	0.068	0.007	0.006	0.079	3.79	0.87	0.09	4.75	22113	0.2142	3.83724	-3.62304	NAF
NS0149	204	208	NS	BX143619-BX143620	X143619	2			65.22	8.642	0.391	0.033	0.02376	0.033	0.467	0.242	0.025	0.018	0.115	0.085	-0.01	-0.01	-0.01	-0.03	3440	0.5508	4.220964	-3.670164	NAF
NS0149	40	42	NS	X142535	142535	1	G	D	28.58	48.58	2.34	0.4644	0.36	0.101	0.84	0.24	0.05	0.006	0.202	0.094	4.8	1.31	0.16	6.27	22119	0.1836	4.18608	-4.00248	NAF
NS0149	92	96	NS	BX143561-BX143562	X143561	2			63.4	9.306	0.43	0.03	0.0216	0.03	0.595	0.263	0.021	0.016	0.155	0.235	-0.01	-0.01	-0.01	-0.03	3411	0.4896	4.587246	-4.097646	NAF
NS0149	22	24	NS	X142526	142526	1	G	D	35.89	38.74	2.46	0.0516	0.04	0.128	0.45	0.26	0.06	0.011	0.013	0.101	4.73	1.1	0.15	5.98	22110	0.3366	4.53492	-4.19832	NAF
NS0149	196	200	NS	BX143615-BX143616	X143615	2			65.05	7.96	0.328	0.027	0.01944	0.027	0.427	0.272	0.019	0.014	0.105	0.081	-0.01	-0.01	-0.01	-0.03	3438	0.4284	4.744224	-4.315824	NAF
NS0149	220	224	NS	BX143627-BX143628	X143627	2			65.08	8.999	0.289	0.022	0.01584	0.022	0.404	0.265	0.023	0.008	0.115	0.072	-0.01	-0.01	-0.01	-0.03	3444	0.2448	4.62213	-4.37733	NAF
NS0149	34	36	NS	X142532	142532	1	G	D	36.75	36.03	2.17	0.7998	0.62	0.092	0.72	0.27	0.066	0.008	0.1	0.09	5.45	1.34	0.18	6.97	22116	0.2448	4.70934	-4.46454	NAF
NS0149	42	44	NS	X142536	142536	1	G	D	31.55	40.7	3.81	0.3612	0.28	0.237	1.48	0.27	0.05	0.007	0.721	0.199	4.66	1.91	0.12	6.69	22120	0.2142	4.70934	-4.49514	NAF
NS0149	208	212	NS	BX143621-BX143622	X143621	2			64.83	7.733	0.288	0.023	0.01656	0.023	0.379	0.273	0.017	0.008	0.105	0.075	-0.01	-0.01	-0.01	-0.03	3441	0.2448	4.761666	-4.516866	NAF
NS0149	36	38	NS	X142533	142533	1	G	D	25.52	50.05	3.49	0.6063	0.47	0.157	1.18	0.35	0.056	0.009	0.424	0.187	4.65	1.76	0.24	6.65	22117	0.2754	6.1047	-5.8293	NAF
NS0149	66	68	NS	X142548	142548	1	G	W	27.02	41.9	3.39	0.4773	0.37	0.157	3.11	0.7	0.086	0.208	0.961	0.298	1.31	8.25	0.62	10.18	22150	6.3648	12.2094	-5.8446	NAF
NS0149	30	32	NS	X142530	142530	1	G	D	34.3	38.53	3.4	0.0774	0.06	0.168	0.81	0.36	0.089	0.008	0.065	0.102	5.19	1.59	0.17	6.95	22114	0.2448	6.27912	-6.03432	NAF
NS0149	38	40	NS	X142534	142534	1	G	D	23.43	50.47	5.78	0.2838	0.22	0.267	1.63	0.39	0.058	0.006	0.709	0.187	4.2	2.27	0.26	6.73	22118	0.1836	6.80238	-6.61878	NAF
NS0149	46	48	NS	X142538	142538	1	G	D	32.67	41.07	2.37	0.3612	0.28	0.108	1.09	0.48	0.115	0.054	0.343	0.111	3.86	3.09	0.24	7.19	22122	1.6524	8.37216	-6.71976	NAF
NS0149	44	46	NS	X142537	142537	1	G	D	32.29	40.38	3.48	0.3354	0.26	0.17	1.21	0.4	0.061	0.004	0.537	0.162	4.89	1.84	0.15	6.88	22121	0.1224	6.9768	-6.8544	NAF
NS0149	2	4	NS	X142516	142516	1	G	D	31.08	38.24	7.67	0.00645	0.005	0.712	0.1	0.5	0.022	0.015	0.029	0.07	5.22	2.32	0.29	7.83	22100	0.459	8.721	-8.262	NAF
NS0149	172	174	NS	X142603	142603	1	G	W	33.53	38.34	1.52	0.6579	0.51	0.068	2.3	0.57	0.089	0.047	0.543	0.181	0.6	7.13	-0.16	7.57	22221	1.4382	9.94194	-8.50374	NAF
NS0149	100	102	NS	X142565	142565	1	G	W	27.79	40.55	3.41	0.4257	0.33	0.15	3.23	0.74	0.14	0.137	1.23	0.365	1.41	7.62	0.5	9.53	22185	4.1922	12.90708	-8.71488	NAF
NS0149	160	162	NS	X142596	142596	1	G	W	34.46	38.08	1.53	0.6192	0.48	0.065	2.22	0.62	0.093	0.062	0.574	0.192	0.57	5.91	-0.11	6.37	22215	1.8972	10.81404	-8.91684	NAF
NS0149	118	120	NS	X142574	142574	1	G	W	28.7	42.61	3.97	0.3741	0.29	0.184	3.31	1	0.137	0.272	0.903	0.295	0.92	3.92	0.76	5.6	22194	8.3232	17.442	-9.1188	NAF
NS0149	166	168	NS	X142599	142599	1	G	W	35.8	37.03	1.34	0.6321	0.49	0.062	2.02	0.59	0.118	0.03	0.487	0.166	0.5	6.01	-0.32	6.19	22218	0.918	10.29078	-9.37278	NAF
NS0149	88	90	NS	X142559	142559	1	G	W	32.72	36.13	2.29	0.4257	0.33	0.105	2.5	0.94	0.109	0.217	0.886	0.272	1.06	7.28	0.54	8.88	22179	6.6402	16.39548	-9.75528	NAF
NS0149	54	56	NS	X142542	142542	1	G	W	30.28	38.58	1.94	0.5031	0.39	0.085	2.33	0.75	0.071	0.108	0.736	0.227	0.94	10.18	0.08	11.2	22144	3.3048	13.0815	-9.7767	NAF
NS0149	108	110	NS	X142569	142569	1	G	W	31.88	37.24	1.86	0.5547	0.43	0.081	2.34	0.72	0.059	0.065	0.757	0.236	1.11	9.46	0.04	10.61	22189	1.989	12.55824	-10.56924	NAF
NS0149	294	296	NS	X142665	142665	1	G	W	35.72	37.79	2.25	0.5547	0.43	0.1	2.66	0.92	0.149	0.179	0.639	0.148	0.32	2.41	0.2	2.93	22174	5.4774	16.04664	-10.56924	NAF
NS0149	98	100	NS	X142564	142564	1	G	W	30.22	37.44	3.07	0.3354	0.26	0.139	3.15	1.36	0.333	0.41	1.12	0.342	1.22	7.33	0.97	9.52	22184	12.546	23.72112	-11.17512	NAF
NS0149	64	66	NS	X142547	142547	1	G	W	27.08	41.81	3.23	0.4644	0.36	0.148	3.05	1.01	0.105	0.204	1.08	0.324	1.26	7.79	0.7	9.75	22149	6.2424	17.61642	-11.37402	NAF
NS0149	170	172	NS	X142602	142602	1	G	W	32.97	38.29	1.71	0.645	0.5	0.075	2.39	0.84	0.132	0.105	0.591	0.192	0.61	6.69	0	7.3	22220	3.213	14.65128	-11.43828	NAF
NS0149	60	62	NS	X142545	142545	1	G	W	31.2	37.49	2.09	0.4902	0.38	0.092	2.54	0.81	0.081	0.067	0.853	0.236	1.06	9.52	0.18	10.76	22147	2.0502	14.12802	-12.07782	NAF
NS0149	120	122	NS	X142575	142575	1	G	W	30.97	40.68	2.8	0.4902	0.38	0.13	2.84	0.95	0.103	0.144	0.866	0.271	0.92	5.02	0.46	6.4	22195	4.4064	16.5699	-12.1635	NAF
NS0149	68	70	NS	X142549	142549	1	G	W	30.37	37.11	3.69	0.3741	0.29	0.169	3.46	1.01	0.135	0.177	1.34	0.389	1.34	6.57	0.63	8.54	22151	5.4162	17.61642	-12.20022	NAF
NS0149	58	60	NS	X142544	142544	1	G	W	29.56	41.14	3.62	0.2838	0.22	0.159	2.95	1.07	0.088	0.198	1.29	0.309	1.17	4.18	0.73	6.08	22146	6.0588	18.66294	-12.60414	NAF
NS0149	168	170	NS	X142600	142600	1	G	W	34.25	37.21	2.01	0.5547	0.43	0.09	2.41	1.01	0.088	0.163	0.603	0.192	0.59	5.34	0.31	6.24	22219	4.9878	17.61642	-12.62862	NAF
NS0149	104	106	NS	X142567	142567	1	G	W	27.27	42.02	2.85	0.4644	0.36	0.128	2.85	0.95	0.187	0.116	1.14	0.349	1.26	8.24	0.4	9.9	22187	3.5496	16.5699	-13.0203	NAF
NS0149	164	166	NS	X142598	142598	1	G	W	33.02	39.49	1.59	0.5805	0.45	0.07	2.26	0.86	0.14	0.056	0.537	0.177	0.56	6.25	-0.07	6.74	22217	1.7136	15.00012	-13.28652	NAF
NS0149	102	104	NS	X142566	142566	1	G	W	28.96	37.9	2.55	0.4773	0.37	0.114	2.8	0.95	0.21	0.099	1.03	0.324	2.71	9.04	0.34	12.09	22186	3.0294	16.5699	-13.5405	NAF
NS0149	158	160	NS	X142595	142595	1	G	W	35.64	36.34	1.74	0.5547	0.43	0.074	2.28	0.89	0.154	0.056	0.62	0.198	0.59	5.27	-0.1	5.76	22214	1.7136	15.52338	-13.80978	NAF
NS0149	148	150	NS	X142590	142590	1	G	W	33.42	39.03	1.81	0.6321	0.49	0.078	2.36	0.93	0.075	0.061	0.612	0.188	0.58	5.15	0.21	5.94	22209	1.8666	16.22106	-14.35446	NAF
NS0149	76	78	NS	X142553	142553	1	G	W	32.77	38.49	2.4	0.3741	0.29	0.107	2.43	0.98	0.062	0.076	0.985	0.286	0.96	5.3	0.42	6.68	22155	2.3256	17.09316	-14.76756	NAF
NS0149	114	116	NS	X142572	142572	1	G	W	32.21	39.58	1.97	0.516	0.4	0.087	2.4	0.96	0.097	0.047	0.706	0.229	0.78	5.89	0.23	6.9	22192	1.4382	16.74432	-15.30612	NAF
NS0149	112	114	NS	X142571	142571	1	G	W	33.4	37.12	1.99	0.5418	0.42	0.091	2.47	0.99	0.151	0.054	0.756	0.244	0.83	6.81	0.14	7.78	22191	1.6524	17.26758	-15.61518	NAF
NS0149	82	84	NS	X142556	142556	1	G	W	34.62	34.55	1.51	0.5934	0.46	0.066	2.13	0.96	0.074	0.036	0.63	0.196	0.84	8.85	0.04	9.73	22158	1.1016	16.74432	-15.64272	NAF
NS0149	56	58	NS	X142543	142543	1	G	W	29.85	41.73	2.01	0.3612	0.28	0.092	2.2	1.22	0.078	0.144	0.755	0.252	0.91	7.14	0.45	8.5	22145	4.4064	21.27924	-16.87284	NAF
NS0149	298	300	NS	X142667	142667	1	G	W	35.77	37.56	1.38	0.774	0.6	0.06	2.28	1.25	0.138	0.156	0.513	0.12	0.26	3.67	0.32	4.25	22176	4.7736	21.8025	-17.0289	NAF
NS0149	74	76	NS	X142552	142552	1	G	W	32.75	35.45	1.97	0.5676	0.44	0.086	2.52	1.19	0.106	0.098	0.706	0.217	0.86	8.68	0.33	9.87	22154	2.9988	20.75598	-17.75718	NAF
NS0149	70	72	NS	X142550	142550	1	G	W	31.2	37.92	2.24	0.4386	0.34	0.101	2.58	1.23	0.102	0.116	0.88	0.256	1.05	8.05	0.45	9.55	22152	3.5496	21.45366	-17.90406	NAF
NS0149	116	118	NS	X142573	142573	1	G	W	33.43	38.46	1.73	0.516	0.4	0.075	2.27	1.11	0.076	0.042	0.591	0.196	0.68	5.73	0.3	6.71	22193	1.2852	19.36062	-18.07542	NAF
NS0149	162	164	NS	X142597	142597	1	G	W	33.09	39.54	1.71	0.5547	0.43	0.075	2.31	1.14	0.071	0.055	0.601	0.188	0.55	4.98	0.43	5.96	22216	1.683	19.88388	-18.20088	NAF
NS0149	78	80	NS	X142554	142554	1	G	W	31.75	37.54	1.44	0.6063	0.47	0.062	2.28	1.16	0.079	0.053	0.596	0.198	0.86	9.48	0.37	10.71	22156	1.6218	20.23272	-18.61092	NAF
NS0149	62	64	NS	X142546	142546	1	G	W	28.8	42.02	2.15	0.387	0.3	0.095	2.36	1.27	0.049	0.106	0.83	0.242	0.86	7.81	0.56	9.23	22148	3.2436	22.15134	-18.90774	NAF
NS0149	156	158	NS	X142594	142594	1	G	W	35.81	37.41	1.6	0.4902	0.38	0.074	2.17	1.19	0.07	0.042	0.581	0.193	0.56	3.93	0.47	4.96	22213	1.2852	20.75598	-19.47078	NAF
NS0149	254	256	NS	X142644	142644	1	G	W	32.48	39.74	2.6	0.7353	0.57	0.116	2.73	1.32	0.053	0.116	1.45	0.131	0.28	3.57	0.7	4.55	22136	3.5496	23.02344	-19.47384	NAF
NS0149	248	250	NS	X142641	142641	1	G	W	34.36	38.53	2.05	0.6579	0.51	0.095	2.33	1.24	0.117	0.063	1.35	0.123	0.2	3.18	0.4	3.78	22133	1.9278	21.62808	-19.70028	NAF
NS0149	256	258	NS	X142645	142645	1	G	W	32.06	40.32	2.26	0.645	0.5	0.099	2.58	1.66	0.188	0.27	1.2	0.139	0.29	3.12	0.75	4.16	22137	8.262	28.95372	-20.69172	NAF
NS0149	272	274	NS	X142654	142654	1	G	W	31.95	41.11	2.44	0.6579	0.51	0.113	2.89	1.57	0.105	0.206	0.81	0.144	0.32	2.68	0.8	3.8	22163	6.3036	27.38394	-21.08034	NAF
NS0149	90	92	NS	X142560	142560	1	G	W	28.8	41.73	3.13	0.3096	0.24	0.142	3.03	1.41	0.118	0.106	1.25	0.366	1.18	4.92	0.81	6.91	22180	3.2436	24.59322	-21.34962	NAF
NS0149	140	142	NS	X142585	142585	1	G	W	34.28	39.19	1.48	0.5805	0.45	0.067	2.08	1.35	0.077	0.044	0.512	0.166	0.49	4.22	0.47	5.18	22205	1.3464	23.5467	-22.2003	NAF
NS0149	242	244	NS	X142638	142638	1	G	W	35.22	38.43	1.63	0.6579	0.51	0.073	2.09	1.34	0.113	0.033	1.13	0.095	0.15	2.97	0.47	3.59	22130	1.0098	23.37228	-22.36248	NAF
NS0149	270	272	NS	X142653	142653	1	G	W	35.45	38.18	1.52	0.7482	0.58	0.067	2.19	1.41	0.084	0.042	0.821	0.117	0.2	2.85	0.64	3.69	22162	1.2852	24.59322	-23.30802	NAF
NS0149	72	74	NS	X142551	142551	1	G	W	27.82	43.1	1.26	0.5547	0.43	0.055	2.05	1.44	0.054	0.039	0.525	0.175	0.89	9.49	0.57	10.95	22153	1.1934	25.11648	-23.92308	NAF
NS0149	174	176	NS	X142604	142604	1	G	W	25.92	50.91	1.35	0.4644	0.36	0.06	1.94	1.54	0.068	0.087	0.47	0.151	0.42	4.39	0.88	5.69	22222	2.6622	26.86068	-24.19848	NAF
NS0149	122	124	NS	X142576	142576	1	G	W	31.06	39.85	2.27	0.5418	0.42	0.102	2.65	1.54	0.163	0.078	0.772	0.25	0.79	5.36	0.58	6.73	22196	2.3868	26.86068	-24.47388	NAF
NS0149	258	260	NS	X142646	142646	1	G	W	30.54	44.84	1.44	0.6837	0.53	0.063	2.01	1.68	0.081	0.153	0.797	0.104	0.18	2.89	0.9	3.97	22138	4.6818	29.30256	-24.62076	NAF
NS0149	246	248	NS	X142640	142640	1	G	W	33.41	40.09	1.92	0.5676	0.44	0.082	2.24	1.52	0.087	0.057	1.3	0.116	0.25	2.66	0.81	3.72	22132	1.7442	26.51184	-24.76764	NAF
NS0149	146	148	NS	X142589	142589	1	G	W	33.13	40.12	1.69	0.516	0.4	0.076	2.2	1.5	0.096	0.044	0.537	0.174	0.47	3.98	0.77	5.22	22208	1.3464	26.163	-24.8166	NAF
NS0149	150	152	NS	X142591	142591	1	G	W	33.87	38.75	1.57	0.5934	0.46	0.07	2.31	1.57	0.096	0.06	0.527	0.18	0.58	4.69	0.72	5.99	22210	1.836	27.38394	-25.54794	NAF
NS0149	186	188	NS	X142610	142610	1	G	W	29.03	42.69	2.37	0.4902	0.38	0.102	2.75	1.65	0.133	0.085	0.615	0.2	0.63	5.28	0.91	6.82	22228	2.601	28.7793	-26.1783	NAF
NS0149	290	292	NS	X142663	142663	1	G	W	36.99	36.11	1.04	0.8256	0.64	0.043	2.06	1.55	0.099	0.022	0.577	0.105	0.21	3.27	0.79	4.27	22172	0.6732	27.0351	-26.3619	NAF
NS0149	296	298	NS	X142666	142666	1	G	W	33.23	39.95	1.61	0.7482	0.58	0.065	2.5	1.73	0.077	0.102	0.572	0.122	0.29	3.24	0.97	4.5	22175	3.1212	30.17466	-27.05346	NAF
NS0149	178	180	NS	X142606	142606	1	G	W	32.87	38.7	1.79	0.5418	0.42	0.075	2.37	1.66	0.101	0.044	0.588	0.173	0.56	5.1	0.84	6.5	22224	1.3464	28.95372	-27.60732	NAF
NS0149	176	178	NS	X142605	142605	1	G	W	32.95	39.13	1.8	0.5418	0.42	0.078	2.24	1.68	0.061	0.045	0.635	0.178	0.53	4.58	0.99	6.1	22223	1.377	29.30256	-27.92556	NAF
NS0149	264	266	NS	X142649	142649	1	G	W	36.16	37.37	1.26	0.7482	0.58	0.054	1.97	1.67	0.1	0.031	0.785	0.089	0.14	2.75	0.94	3.83	22159	0.9486	29.12814	-28.17954	NAF
NS0149	276	278	NS	X142656	142656	1	G	W	36.11	37.2	1.49	0.7095	0.55	0.062	2.01	1.74	0.12	0.045	0.748	0.109	0.23	2.46	0.86	3.55	22165	1.377	30.34908	-28.97208	NAF
NS0149	124	126	NS	X142577	142577	1	G	W	31.53	40.25	2.24	0.4386	0.34	0.101	2.57	2	0.146	0.168	0.652	0.217	0.66	3.88	0.99	5.53	22197	5.1408	34.884	-29.7432	NAF
NS0149	240	242	NS	X142637	142637	1	G	W	32.89	39.19	2.13	0.774	0.6	0.097	2.48	1.91	0.109	0.114	1.31	0.103	0.18	3.31	1.15	4.64	22129	3.4884	33.31422	-29.82582	NAF
NS0149	288	290	NS	X142662	142662	1	G	W	34.65	39.41	1.01	0.8256	0.64	0.039	1.97	1.76	0.1	0.022	0.579	0.108	0.19	3.14	1.01	4.34	22171	0.6732	30.69792	-30.02472	NAC
NS0149	286	288	NS	X142661	142661	1	G	W	34.45	39.76	0.98	0.8256	0.64	0.037	1.95	1.77	0.103	0.024	0.573	0.107	0.17	3.22	0.93	4.32	22170	0.7344	30.87234	-30.13794	NAC
NS0149	278	280	NS	X142657	142657	1	G	W	32.42	42.31	1.49	0.645	0.5	0.061	2.11	1.87	0.104	0.067	0.627	0.114	0.2	2.35	1.07	3.62	22166	2.0502	32.61654	-30.56634	NAC
NS0149	134	136	NS	X142582	142582	1	G	W	33.66	39.11	1.67	0.5805	0.45	0.074	2.22	1.84	0.094	0.045	0.558	0.171	0.51	3.81	0.93	5.25	22202	1.377	32.09328	-30.71628	NAC
NS0149	202	204	NS	X142618	142618	1	G	W	29.95	40.49	2.25	0.5934	0.46	0.099	2.84	2.01	0.128	0.122	0.671	0.183	0.6	5.64	1.21	7.45	22236	3.7332	35.05842	-31.32522	NAC
NS0149	96	98	NS	X142563	142563	1	G	W	30.97	38.44	1.42	0.5676	0.44	0.063	2.3	1.93	0.077	0.071	0.591	0.194	0.75	8.06	1.09	9.9	22183	2.1726	33.66306	-31.49046	NAC
NS0149	244	246	NS	X142639	142639	1	G	W	33.78	39.1	1.75	0.645	0.5	0.076	2.13	1.89	0.131	0.046	1.22	0.091	0.13	2.83	1.06	4.02	22131	1.4076	32.96538	-31.55778	NAC
NS0149	188	190	NS	X142611	142611	1	G	W	32.73	38.25	1.96	0.4902	0.38	0.086	2.49	2.1	0.106	0.163	0.543	0.178	0.49	4.43	1.26	6.18	22229	4.9878	36.6282	-31.6404	NAC
NS0149	184	186	NS	X142609	142609	1	G	W	31.58	39.49	1.7	0.6063	0.47	0.075	2.48	1.94	0.096	0.042	0.565	0.178	0.54	5.7	1.28	7.52	22227	1.2852	33.83748	-32.55228	NAC
NS0149	282	284	NS	X142659	142659	1	G	W	34.56	38.48	1.21	0.8385	0.65	0.052	2.23	1.95	0.101	0.045	0.588	0.116	0.24	3.28	1.22	4.74	22168	1.377	34.0119	-32.6349	NAC
NS0149	128	130	NS	X142579	142579	1	G	W	32.09	39.96	2.23	0.5031	0.39	0.103	2.52	2.07	0.111	0.107	0.623	0.205	0.62	3.56	1.28	5.46	22199	3.2742	36.10494	-32.83074	NAC
NS0149	230	232	NS	X142632	142632	1	G	W	34.78	37.71	1.47	0.645	0.5	0.067	2.08	1.97	0.117	0.048	0.634	0.113	0.25	3.64	1.08	4.97	22124	1.4688	34.36074	-32.89194	NAC
NS0149	190	192	NS	X142612	142612	1	G	W	35.1	35.57	1.39	0.6579	0.51	0.06	2.26	1.96	0.094	0.041	0.487	0.139	0.37	5.41	1.11	6.89	22230	1.2546	34.18632	-32.93172	NAC
NS0149	280	282	NS	X142658	142658	1	G	W	36.09	37.17	1.07	0.7998	0.62	0.044	2.03	1.99	0.096	0.047	0.493	0.093	0.18	3.01	1.19	4.38	22167	1.4382	34.70958	-33.27138	NAC
NS0149	252	254	NS	X142643	142643	1	G	W	32.39	40.78	1.87	0.6063	0.47	0.087	2.17	2.03	0.08	0.057	1.29	0.116	0.27	2.42	1.49	4.18	22135	1.7442	35.40726	-33.66306	NAC
NS0149	284	286	NS	X142660	142660	1	G	W	33.19	40.94	0.92	0.8385	0.65	0.037	1.99	2	0.093	0.023	0.512	0.102	0.19	3.3	1.29	4.78	22169	0.7038	34.884	-34.1802	NAC
NS0149	180	182	NS	X142607	142607	1	G	W	30.69	42.38	1.47	0.5418	0.42	0.063	2.23	2.07	0.122	0.038	0.498	0.169	0.47	4.83	1.32	6.62	22225	1.1628	36.10494	-34.94214	NAC
NS0149	262	264	NS	X142648	142648	1	G	W	35.22	38.75	1.08	0.7611	0.59	0.045	1.84	2.06	0.092	0.022	0.661	0.09	0.13	2.58	1.3	4.01	22140	0.6732	35.93052	-35.25732	NAC
NS0149	292	294	NS	X142664	142664	1	G	W	35.31	38.52	0.85	0.8514	0.66	0.035	1.91	2.06	0.099	0.021	0.421	0.098	0.17	3.09	1.27	4.53	22173	0.6426	35.93052	-35.28792	NAC
NS0149	192	194	NS	X142613	142613	1	G	W	34.79	37.18	1.22	0.6063	0.47	0.051	2.02	2.07	0.07	0.025	0.425	0.127	0.31	4.52	1.33	6.16	22231	0.765	36.10494	-35.33994	NAC
NS0149	132	134	NS	X142581	142581	1	G	W	34.01	39	1.63	0.5547	0.43	0.068	2.09	2.13	0.103	0.048	0.579	0.173	0.48	3.02	1.29	4.79	22201	1.4688	37.15146	-35.68266	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0149	92	94	NS	X142561	142561	1	G	W	32.53	37.73	1.34	0.5805	0.45	0.056	2.16	2.11	0.084	0.033	0.563	0.182	0.65	6.47	1.2	8.32	22181	1.0098	36.80262	-35.79282	NAC
NS0149	138	140	NS	X142584	142584	1	G	W	33.84	38.82	2.08	0.4257	0.33	0.092	2.32	2.24	0.142	0.099	0.592	0.17	0.45	2.64	1.33	4.42	22204	3.0294	39.07008	-36.04068	NAC
NS0149	152	154	NS	X142592	142592	1	G	W	34.21	36.95	1.63	0.5418	0.42	0.073	2.44	2.15	0.154	0.045	0.535	0.18	0.51	4.17	1.25	5.93	22211	1.377	37.5003	-36.1233	NAC
NS0149	224	226	NS	X142629	142629	1	G	W	31.59	42.41	1.34	0.5547	0.43	0.063	2.01	2.18	0.112	0.037	0.563	0.127	0.28	3.5	1.47	5.25	22247	1.1322	38.02356	-36.89136	NAC
NS0149	268	270	NS	X142652	142652	1	G	W	31.55	40.88	1.59	0.8127	0.63	0.069	2.47	2.35	0.101	0.128	0.78	0.124	0.24	3.13	1.63	5	22161	3.9168	40.9887	-37.0719	NAC
NS0149	260	262	NS	X142647	142647	1	G	W	35.04	38.34	1.06	0.774	0.6	0.043	1.82	2.22	0.124	0.04	0.674	0.089	0.11	2.66	1.44	4.21	22139	1.224	38.72124	-37.49724	NAC
NS0149	228	230	NS	X142631	142631	1	G	W	28.64	44.65	1.93	0.516	0.4	0.086	2.5	2.31	0.109	0.083	0.731	0.159	0.42	3.47	1.67	5.56	22123	2.5398	40.29102	-37.75122	NAC
NS0149	234	236	NS	X142634	142634	1	G	W	33.32	39.87	1.46	0.6192	0.48	0.064	1.94	2.24	0.116	0.043	0.868	0.102	0.19	2.76	1.5	4.45	22126	1.3158	39.07008	-37.75428	NAC
NS0149	236	238	NS	X142635	142635	1	G	W	34.51	38.5	1.43	0.6966	0.54	0.065	1.9	2.23	0.162	0.034	0.954	0.09	0.12	2.71	1.25	4.08	22127	1.0404	38.89566	-37.85526	NAC
NS0149	214	216	NS	X142624	142624	1	G	W	31.76	42.82	1.25	0.4644	0.36	0.056	1.92	2.31	0.078	0.033	0.493	0.124	0.24	2.97	1.64	4.85	22242	1.0098	40.29102	-39.28122	NAC
NS0149	200	202	NS	X142617	142617	1	G	W	32.53	38.84	1.69	0.5289	0.41	0.073	2.36	2.42	0.124	0.076	0.506	0.144	0.39	4.19	1.63	6.21	22235	2.3256	42.20964	-39.88404	NAC
NS0149	212	214	NS	X142623	142623	1	G	W	27.88	47.66	1.3	0.4773	0.37	0.059	1.9	2.39	0.101	0.048	0.528	0.115	0.24	3.14	1.74	5.12	22241	1.4688	41.68638	-40.21758	NAC
NS0149	154	156	NS	X142593	142593	1	G	W	33.23	38.2	1.49	0.5418	0.42	0.065	2.31	2.44	0.22	0.048	0.561	0.18	0.49	4.17	1.36	6.02	22212	1.4688	42.55848	-41.08968	NAC
NS0149	266	268	NS	X142650	142650	1	G	W	33.48	38.64	1.57	0.774	0.6	0.067	2.25	2.53	0.148	0.094	0.853	0.111	0.2	2.6	1.76	4.56	22160	2.8764	44.12826	-41.25186	NAC
NS0149	136	138	NS	X142583	142583	1	G	W	32.57	40.28	1.76	0.4773	0.37	0.077	2.24	2.48	0.062	0.057	0.56	0.164	0.42	2.83	1.84	5.09	22203	1.7442	43.25616	-41.51196	NAC
NS0149	206	208	NS	X142620	142620	1	G	W	33.96	36.92	1.81	0.5289	0.41	0.082	2.37	2.53	0.111	0.083	0.581	0.146	0.41	3.98	1.62	6.01	22238	2.5398	44.12826	-41.58846	NAC
NS0149	238	240	NS	X142636	142636	1	G	W	34.87	38.23	1.34	0.7353	0.57	0.058	1.9	2.47	0.101	0.028	0.927	0.082	0.07	2.53	1.74	4.34	22128	0.8568	43.08174	-42.22494	NAC
NS0149	232	234	NS	X142633	142633	1	G	W	32.34	39.41	1.87	0.5934	0.46	0.087	2.31	2.54	0.11	0.056	0.945	0.122	0.27	3.02	1.83	5.12	22125	1.7136	44.30268	-42.58908	NAC
NS0149	130	132	NS	X142580	142580	1	G	W	34.15	38.1	1.69	0.4902	0.38	0.075	2.13	2.53	0.11	0.046	0.517	0.166	0.46	3	1.53	4.99	22200	1.4076	44.12826	-42.72066	NAC
NS0149	226	228	NS	X142630	142630	1	G	W	32.35	37.51	1.8	0.645	0.5	0.08	2.63	2.65	0.37	0.102	0.719	0.165	0.47	5.01	1.03	6.51	22248	3.1212	46.2213	-43.1001	NAC
NS0149	144	146	NS	X142588	142588	1	G	W	34.05	36.66	1.88	0.4902	0.38	0.087	2.46	2.76	0.161	0.162	0.553	0.186	0.51	3.23	1.65	5.39	22207	4.9572	48.13992	-43.18272	NAC
NS0149	250	252	NS	X142642	142642	1	G	W	26.88	44.78	2.8	0.5676	0.44	0.133	2.85	2.63	0.257	0.074	1.87	0.172	0.34	2.53	1.76	4.63	22134	2.2644	45.87246	-43.60806	NAC
NS0149	182	184	NS	X142608	142608	1	G	W	30.58	40.63	1.62	0.5934	0.46	0.069	2.35	2.59	0.141	0.042	0.559	0.167	0.47	4.94	1.87	7.28	22226	1.2852	45.17478	-43.88958	NAC
NS0149	222	224	NS	X142628	142628	1	G	W	35.38	36.43	1.41	0.5418	0.42	0.065	2.02	2.6	0.163	0.036	0.543	0.118	0.3	3.05	1.6	4.95	22246	1.1016	45.3492	-44.2476	NAC
NS0149	220	222	NS	X142627	142627	1	G	W	32.72	39.41	1.33	0.5934	0.46	0.058	2.09	2.62	0.074	0.045	0.533	0.121	0.28	3.63	2.05	5.96	22245	1.377	45.69804	-44.32104	NAC
NS0149	142	144	NS	X142587	142587	1	G	W	33.61	40.57	1.33	0.4128	0.32	0.061	1.88	2.63	0.072	0.045	0.44	0.136	0.28	2.14	1.98	4.4	22206	1.377	45.87246	-44.49546	NAC
NS0149	126	128	NS	X142578	142578	1	G	W	33.09	38.88	1.65	0.516	0.4	0.075	2.26	2.66	0.098	0.049	0.535	0.177	0.54	3.46	1.7	5.7	22198	1.4994	46.39572	-44.89632	NAC
NS0149	218	220	NS	X142626	142626	1	G	W	32.53	39.93	1.42	0.5805	0.45	0.064	2.1	2.7	0.117	0.051	0.595	0.119	0.27	3.3	1.99	5.56	22244	1.5606	47.0934	-45.5328	NAC
NS0149	204	206	NS	X142619	142619	1	G	W	29.64	40.13	2.33	0.5547	0.43	0.104	2.81	2.91	0.225	0.123	0.721	0.197	0.55	4.47	1.92	6.94	22237	3.7638	50.75622	-46.99242	NAC
NS0149	216	218	NS	X142625	142625	1	G	W	28.44	42.54	1.99	0.6579	0.51	0.089	2.6	2.94	0.157	0.125	0.757	0.162	0.49	4.46	2.19	7.14	22243	3.825	51.27948	-47.45448	NAC
NS0149	198	200	NS	X142616	142616	1	G	W	34.43	35.54	1.6	0.6063	0.47	0.072	2.33	2.83	0.172	0.049	0.583	0.142	0.39	4.37	1.9	6.66	22234	1.4994	49.36086	-47.86146	NAC
NS0149	94	96	NS	X142562	142562	1	G	W	30.96	36.42	2.41	0.4128	0.32	0.106	3	3.08	0.281	0.115	0.981	0.303	0.93	5.69	1.69	8.31	22182	3.519	53.72136	-50.20236	NAC
NS0149	208	210	NS	X142621	142621	1	G	W	34.08	36.42	1.62	0.516	0.4	0.07	2.23	3.15	0.109	0.041	0.545	0.131	0.33	3.21	2.42	5.96	22239	1.2546	54.9423	-53.6877	NAC
NS0149	194	196	NS	X142614	142614	1	G	W	31.29	36.6	1.74	0.6966	0.54	0.076	2.67	3.43	0.197	0.14	0.548	0.148	0.44	5.31	2.51	8.26	22232	4.284	59.82606	-55.54206	NAC
NS0149	210	212	NS	X142622	142622	1	G	W	32.6	38.77	1.43	0.5418	0.42	0.067	2.13	3.29	0.09	0.051	0.556	0.13	0.29	2.86	2.74	5.89	22240	1.5606	57.38418	-55.82358	NAC
NS0149	196	198	NS	X142615	142615	1	G	W	30.12	38.1	2.06	0.645	0.5	0.093	2.73	3.51	0.124	0.082	0.754	0.169	0.48	4.67	2.97	8.12	22233	2.5092	61.22142	-58.71222	NAC
NS0151	168	170	NS	X072187	072187	1	G	W	21.86	47.22	2.48	0.3741	0.29	0.112	2.08	0.39	0.058	5.23	0.144	0.013	0.24	11.05	4.13	15.42	15303	160.038	6.80238	153.23562	PAF(HC)
NS0151	160	162	NS	X072183	072183	1	G	W	24.75	45.05	3.33	0.4257	0.33	0.142	2	0.34	0.061	0.657	0.017	0.011	0.42	11.39	1.47	13.28	15299	20.1042	5.93028	14.17392	PAF(HC)
NS0151	146	148	NS	X072176	072176	1	G	W	20.57	47.58	10.22	0.3612	0.28	0.438	2.56	0.21	0.038	0.456	0.388	0.046	0.48	6.93	1.02	8.43	15292	13.9536	3.66282	10.29078	PAF(HC)
NS0151	8	10	NS	X072106	072106	1	G	M	35.14	30	11.02	-0.0129	-0.01	0.359	0.08	0.03	0.013	0.043	0.07	0.036	4.49	3.17	0.4	8.06	15258	1.3158	0.52326	0.79254	PAF(LC)
NS0151	52	54	NS	X072128	072128	1	G	M	11.66	70.8	7.85	0.0516	0.04	0.349	0.09	0.005	0.021	0.027	0.67	0.062	0.66	1.97	0.37	3	15244	0.8262	0.08721	0.73899	PAF(LC)
NS0151	0	2	NS	X072102	072102	1	G	M	47.42	11.76	9.48	0.0258	0.02	1.127	0.07	0.04	0.027	0.042	0.072	0.009	6.93	2.18	0.36	9.47	15254	1.2852	0.69768	0.58752	PAF(LC)
NS0151	6	8	NS	X072105	072105	1	G	M	44.1	21.5	7.12	-0.0129	-0.01	0.579	0.05	0.02	0.021	0.029	0.038	0.005	5.31	1.82	0.32	7.45	15257	0.8874	0.34884	0.53856	PAF(LC)
NS0151	40	42	NS	X072122	072122	1	G	M	7.6	74.63	8.95	0.3354	0.26	0.386	0.07	0.005	0.031	0.017	0.065	0.055	1.29	2.74	0.25	4.28	15238	0.5202	0.08721	0.43299	PAF(LC)
NS0151	42	44	NS	X072123	072123	1	G	M	11.66	67.59	10.01	0.1032	0.08	0.412	0.31	0.005	0.025	0.017	0.189	0.076	1.24	3	0.29	4.53	15239	0.5202	0.08721	0.43299	PAF(LC)
NS0151	4	6	NS	X072104	072104	1	G	M	49.82	10.41	8.27	-0.0129	-0.01	0.683	0.08	0.03	0.018	0.031	0.106	0.017	6.15	2.21	0.36	8.72	15256	0.9486	0.52326	0.42534	PAF(LC)
NS0151	46	48	NS	X072125	072125	1	G	M	11.67	72.04	7.03	0.0258	0.02	0.328	0.17	0.005	0.018	0.014	0.308	0.057	0.92	1.95	0.23	3.1	15241	0.4284	0.08721	0.34119	PAF(LC)
NS0151	10	12	NS	X072107	072107	1	G	M	28.74	40.62	10.8	-0.0129	-0.01	0.279	0.11	0.03	0.011	0.028	0.146	0.051	3.19	3.21	0.37	6.77	15259	0.8568	0.52326	0.33354	PAF(LC)
NS0151	2	4	NS	X072103	072103	1	G	M	45.6	13.4	10.83	-0.0129	-0.01	0.889	0.09	0.04	0.022	0.033	0.1	0.023	6.15	2.7	0.37	9.22	15255	1.0098	0.69768	0.31212	PAF(LC)
NS0151	48	50	NS	X072126	072126	1	G	M	11.8	72.73	6.6	0.0516	0.04	0.264	0.09	0.005	0.017	0.012	0.639	0.049	0.65	1.65	0.23	2.53	15242	0.3672	0.08721	0.27999	PAF(LC)
NS0151	38	40	NS	X072121	072121	1	G	M	15.25	66.06	6.18	1.0965	0.85	0.159	0.07	0.005	0.054	0.011	0.166	0.056	1.61	1.96	0.29	3.86	15237	0.3366	0.08721	0.24939	PAF(LC)
NS0151	24	26	NS	X072114	072114	1	G	M	25.87	56.55	3.21	0.0258	0.02	0.131	0.1	0.005	0.017	0.009	0.174	0.025	1.83	0.93	0.15	2.91	15230	0.2754	0.08721	0.18819	PAF(LC)
NS0151	50	52	NS	X072127	072127	1	G	M	11.75	76.57	4.03	0.0516	0.04	0.158	0.07	0.005	0.023	0.009	0.356	0.037	0.6	1.04	0.17	1.81	15243	0.2754	0.08721	0.18819	PAF(LC)
NS0151	44	46	NS	X072124	072124	1	G	M	15.07	73.77	3.05	0.0258	0.02	0.119	0.04	0.005	0.016	0.006	0.116	0.029	0.44	0.85	0.08	1.37	15240	0.1836	0.08721	0.09639	PAF(LC)
NS0151	28	30	NS	X072116	072116	1	G	M	16.61	70.94	3.45	0.1032	0.08	0.144	0.04	0.005	0.008	0.005	0.244	0.018	0.42	0.87	0.1	1.39	15232	0.153	0.08721	0.06579	PAF(LC)
NS0151	36	38	NS	X072120	072120	1	G	M	14.31	71.54	4.23	1.0836	0.84	0.134	0.05	0.005	0.009	0.005	0.191	0.05	0.38	1.29	0.19	1.86	15236	0.153	0.08721	0.06579	PAF(LC)
NS0151	26	28	NS	X072115	072115	1	G	M	22.57	64.58	1.48	0.0774	0.06	0.078	0.03	0.005	0.024	0.004	0.208	0.01	0.66	0.35	0.08	1.09	15231	0.1224	0.08721	0.03519	PAF(LC)
NS0151	32	34	NS	X072118	072118	1	G	M	20.72	66.3	2.44	0.2064	0.16	0.086	0.03	0.005	0.006	0.004	0.142	0.02	0.28	0.67	0.08	1.03	15234	0.1224	0.08721	0.03519	PAF(LC)
NS0151	34	36	NS	X072119	072119	1	G	M	20.37	67.07	2.22	0.2709	0.21	0.075	0.04	0.005	0.006	0.004	0.187	0.028	0.3	0.57	0.09	0.96	15235	0.1224	0.08721	0.03519	PAF(LC)
NS0151	30	32	NS	X072117	072117	1	G	M	24.61	61.56	1.79	0.2322	0.18	0.067	0.03	0.005	0.006	0.003	0.149	0.017	0.21	0.49	0.08	0.78	15233	0.0918	0.08721	0.00459	PAF(LC)
NS0151	22	24	NS	X072113	072113	1	G	M	8.19	69.59	12.27	-0.0129	-0.01	0.468	0.23	0.02	0.014	0.011	0.882	0.063	1.09	3.24	0.31	4.64	15229	0.3366	0.34884	-0.01224	NAF
NS0151	124	128	NS	BX066665-BX066666	X066665	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1	-0.0306	-0.01744	-0.013158	NAF
NS0151	168	170	NS	BX066687	X066687	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	12	-0.0306	-0.01744	-0.013158	NAF
NS0151	12	14	NS	X072108	072108	1	G	M	20.18	52.4	11.3	-0.0129	-0.01	0.358	0.09	0.03	0.011	0.016	0.118	0.034	2.89	3.42	0.33	6.64	15260	0.4896	0.52326	-0.03366	NAF
NS0151	16	18	NS	X072110	072110	1	G	M	20.29	61.59	4.9	-0.0129	-0.01	0.172	0.08	0.02	0.033	0.008	0.215	0.03	2.03	1.45	0.16	3.64	15262	0.2448	0.34884	-0.10404	NAF
NS0151	20	22	NS	X072112	072112	1	G	M	2.5	84.36	7.9	-0.0129	-0.01	0.259	0.14	0.02	0.007	0.006	0.359	0.039	0.5	2.27	0.19	2.96	15264	0.1836	0.34884	-0.16524	NAF
NS0151	14	16	NS	X072109	072109	1	G	M	19.41	54.35	10.62	-0.0129	-0.01	0.296	0.13	0.03	0.021	0.011	0.145	0.045	2.75	3.23	0.31	6.29	15261	0.3366	0.52326	-0.18666	NAF
NS0151	18	20	NS	X072111	072111	1	G	M	3.08	80.69	9.94	-0.0129	-0.01	0.433	0.16	0.02	0.006	0.005	0.827	0.057	0.63	2.49	0.24	3.36	15263	0.153	0.34884	-0.19584	NAF
NS0151	166	168	NS	X072186	072186	1	G	W	27.78	43.52	0.42	0.4515	0.35	0.016	1.56	0.41	0.088	0.225	0.008	0.004	2.53	10.41	0.61	13.55	15302	6.885	7.15122	-0.26622	NAF
NS0151	140	144	NS	BX066673-BX066674	X066673	2			70.03	2.612	0.099	0.009	0.00648	0.009	0.147	0.04	0.01	0.003	0.011	0.076	-0.01	-0.01	-0.01	-0.03	5	0.0918	0.69768	-0.60588	NAF
NS0151	132	136	NS	BX066669-BX066670	X066669	2			69.99	2.418	0.092	0.007	0.00504	0.007	0.158	0.044	0.008	0.005	0.012	0.142	-0.01	-0.01	-0.01	-0.03	3	0.153	0.767448	-0.614448	NAF
NS0151	144	148	NS	BX066675-BX066676	X066675	2			69.55	3.644	0.16	0.008	0.00576	0.008	0.171	0.054	0.011	0.008	0.044	0.108	-0.01	-0.01	-0.01	-0.03	6	0.2448	0.941868	-0.697068	NAF
NS0151	136	140	NS	BX066671-BX066672	X066671	2			70.22	2.915	0.131	0.01	0.0072	0.01	0.178	0.047	0.007	0.003	0.013	0.088	-0.01	-0.01	-0.01	-0.03	4	0.0918	0.819774	-0.727974	NAF
NS0151	152	156	NS	BX066679-BX066680	X066679	2			70.77	2.597	0.056	0.004	0.00288	0.004	0.161	0.051	0.009	0.005	0.008	0.086	0.06	-0.01	-0.01	0.04	8	0.153	0.889542	-0.736542	NAF
NS0151	148	152	NS	BX066677-BX066678	X066677	2			70.19	2.538	0.065	0.005	0.0036	0.005	0.158	0.046	0.008	0.002	0.021	0.09	-0.01	-0.01	-0.01	-0.03	7	0.0612	0.802332	-0.741132	NAF
NS0151	128	132	NS	BX066667-BX066668	X066667	2			70	3.26	0.073	0.01	0.0072	0.01	0.186	0.052	0.007	0.002	0.019	0.111	-0.01	-0.01	-0.01	-0.03	2	0.0612	0.906984	-0.845784	NAF
NS0151	156	160	NS	BX066681-BX066682	X066681	2			70.09	3.111	0.045	0.008	0.00576	0.008	0.169	0.057	0.011	0.001	0.007	0.08	-0.01	-0.01	-0.01	-0.03	9	0.0306	0.994194	-0.963594	NAF
NS0151	164	168	NS	BX066685-BX066686	X066685	2			67	4.506	0.031	0.001	0.00072	0.001	0.198	0.104	0.021	0.024	0.007	0.15	-0.01	-0.01	-0.01	-0.03	11	0.7344	1.813968	-1.079568	NAF
NS0151	160	164	NS	BX066683-BX066684	X066683	2			68.32	4.449	0.099	0.016	0.01152	0.016	0.243	0.099	0.018	0.012	0.005	0.1	-0.01	-0.01	-0.01	-0.03	10	0.3672	1.726758	-1.359558	NAF
NS0151	140	142	NS	X072173	072173	1	G	W	30.87	46.2	1.13	0.2967	0.23	0.048	0.83	0.17	0.024	0.02	0.274	0.007	0.56	6.13	-0.02	6.67	15289	0.612	2.96514	-2.35314	NAF
NS0151	142	144	NS	X072174	072174	1	G	W	27.73	49.9	0.93	0.1677	0.13	0.04	0.8	0.19	0.038	0.03	0.059	0.006	1.76	6.03	0.13	7.92	15290	0.918	3.31398	-2.39598	NAF
NS0151	132	134	NS	X072169	072169	1	G	W	30.99	43.21	1.43	0.3612	0.28	0.062	0.96	0.25	0.043	0.042	0.151	0.026	1.08	7.83	0.09	9	15285	1.2852	4.3605	-3.0753	NAF
NS0151	126	128	NS	X072166	072166	1	G	W	26.9	39.05	2.03	0.4515	0.35	0.084	1.85	0.46	0.056	0.157	0.151	0.069	0.8	15.69	0.39	16.88	15246	4.8042	8.02332	-3.21912	NAF
NS0151	136	138	NS	X072171	072171	1	G	W	26.37	41.53	3.34	0.4386	0.34	0.145	1.87	0.52	0.089	0.136	0.127	0.013	0.73	12.66	0.3	13.69	15287	4.1616	9.06984	-4.90824	NAF
NS0151	164	166	NS	X072185	072185	1	G	W	28.37	39.58	0.36	0.3999	0.31	0.009	1.98	0.48	0.078	0.096	0.047	0.017	0.67	15.36	0.11	16.14	15301	2.9376	8.37216	-5.43456	NAF
NS0151	124	126	NS	X072165	072165	1	G	W	29.78	34.98	1.05	0.5418	0.42	0.04	1.77	0.36	0.027	0.024	0.047	0.004	1.59	16.53	0.09	18.21	15245	0.7344	6.27912	-5.54472	NAF
NS0151	144	146	NS	X072175	072175	1	G	W	28.74	47.19	0.83	0.3483	0.27	0.036	1.09	0.42	0.083	0.028	0.281	0.016	0.5	8.3	-0.12	8.68	15291	0.8568	7.32564	-6.46884	NAF
NS0151	148	150	NS	X072177	072177	1	G	W	31.92	36.97	0.73	0.5031	0.39	0.03	1.51	0.43	0.057	0.03	0.21	0.064	0.51	12.93	-0.13	13.31	15293	0.918	7.50006	-6.58206	NAF
NS0151	128	130	NS	X072167	072167	1	G	W	31.05	39.25	0.99	0.4386	0.34	0.041	1.54	0.44	0.04	0.032	0.149	0.146	0.57	11.78	-0.03	12.32	15283	0.9792	7.67448	-6.69528	NAF
NS0151	134	136	NS	X072170	072170	1	G	W	29.15	38.75	2.07	0.5547	0.43	0.089	1.63	0.59	0.091	0.092	0.203	0.056	0.75	13.11	0.14	14	15286	2.8152	10.29078	-7.47558	NAF
NS0151	138	140	NS	X072172	072172	1	G	W	30.12	39.9	1.76	0.3225	0.25	0.073	1.48	0.5	0.093	0.037	0.244	0.063	0.84	11.66	-0.03	12.47	15288	1.1322	8.721	-7.5888	NAF
NS0151	158	160	NS	X072182	072182	1	G	W	34.01	37.71	0.88	0.5547	0.43	0.035	1.45	0.56	0.113	0.014	0.148	0.168	0.28	9.58	-0.37	9.49	15298	0.4284	9.76752	-9.33912	NAF
NS0151	150	152	NS	X072178	072178	1	G	W	32.65	35.87	1.86	0.5805	0.45	0.08	1.41	0.66	0.133	0.071	0.183	0.34	0.51	11.25	-0.17	11.59	15294	2.1726	11.51172	-9.33912	NAF
NS0151	162	164	NS	X072184	072184	1	G	W	28.1	36.73	1.46	0.6063	0.47	0.063	2.18	0.72	0.132	0.085	0.033	0.016	0.68	16.35	0.21	17.24	15300	2.601	12.55824	-9.95724	NAF
NS0151	156	158	NS	X072181	072181	1	G	W	34.94	35.39	0.9	0.5547	0.43	0.037	1.78	0.6	0.089	0.009	0.115	0.384	0.25	9.99	-0.22	10.02	15297	0.2754	10.4652	-10.1898	NAF
NS0151	130	132	NS	X072168	072168	1	G	W	36.68	32.79	1.15	0.5547	0.43	0.048	1.47	0.63	0.048	0.012	0.248	0.195	0.44	9.96	-0.12	10.28	15284	0.3672	10.98846	-10.62126	NAF
NS0151	152	154	NS	X072179	072179	1	G	W	31.42	38.14	1.81	0.5547	0.43	0.078	1.38	0.8	0.169	0.077	0.195	0.602	0.41	10.47	-0.08	10.8	15295	2.3562	13.9536	-11.5974	NAF
NS0151	154	156	NS	X072180	072180	1	G	W	33.13	34.93	0.8	0.6579	0.51	0.031	1.81	0.75	0.097	0.023	0.094	0.377	0.34	12.38	-0.05	12.67	15296	0.7038	13.0815	-12.3777	NAF
NS0152	66	68	NS	X072245	072245	1	G	W	18.77	50.64	9.64	0.1806	0.14	0.46	3.39	1.33	0.071	1.71	0.198	0.016	0.48	3.82	1.61	5.91	15355	52.326	23.19786	29.12814	PAF(HC)
NS0152	64	66	NS	X072244	072244	1	G	W	17.67	54.3	8.41	0.1677	0.13	0.404	2.97	1.31	0.026	1.21	0.519	0.02	0.62	3.29	1.42	5.33	15354	37.026	22.84902	14.17698	PAF(HC)
NS0152	70	72	NS	X072247	072247	1	G	W	18.44	52.71	7.24	0.2451	0.19	0.342	3.31	1.12	0.03	1.07	0.051	0.021	0.56	5.64	1.62	7.82	15357	32.742	19.53504	13.20696	PAF(HC)
NS0152	78	80	NS	X072252	072252	1	G	W	21.35	46.39	7.53	0.2451	0.19	0.351	3.77	0.51	0.062	0.58	0.036	0.015	0.49	8.17	1.13	9.79	15361	17.748	8.89542	8.85258	PAF(LC)
NS0152	68	70	NS	X072246	072246	1	G	W	17.46	51.54	10.43	0.1548	0.12	0.507	3.46	1.51	0.043	1.13	0.905	0.024	0.52	3.33	1.51	5.36	15356	34.578	26.33742	8.24058	PAF(LC)
NS0152	86	88	NS	X072256	072256	1	G	W	18.56	53.33	8.06	0.1677	0.13	0.379	3.28	0.88	0.05	0.762	0.07	0.029	0.52	4.75	1.21	6.48	15365	23.3172	15.34896	7.96824	PAF(LC)
NS0152	52	54	NS	X072238	072238	1	G	W	24.29	40.11	6.68	0.2838	0.22	0.312	3.8	0.55	0.08	0.531	0.048	0.011	0.75	10.67	1.13	12.55	15348	16.2486	9.5931	6.6555	PAF(LC)
NS0152	76	78	NS	X072251	072251	1	G	W	23.8	41.99	3.28	0.3999	0.31	0.145	3.08	0.99	0.17	0.767	0.037	0.009	0.18	13.44	1.35	14.97	15360	23.4702	17.26758	6.20262	PAF(LC)
NS0152	54	56	NS	X072239	072239	1	G	W	25.33	38.06	7	0.3096	0.24	0.328	3.96	0.58	0.103	0.526	0.033	0.015	0.61	11.39	1.12	13.12	15349	16.0956	10.11636	5.97924	PAF(LC)
NS0152	84	86	NS	X072255	072255	1	G	W	21.24	47.19	7.05	0.3354	0.26	0.326	3.39	1.01	0.084	0.762	0.132	0.046	0.55	7.22	1.59	9.36	15364	23.3172	17.61642	5.70078	PAF(LC)
NS0152	58	60	NS	X072241	072241	1	G	W	21.36	44.69	7	0.3999	0.31	0.334	3.26	1.43	0.093	0.986	0.651	0.009	0.54	7.83	2.01	10.38	15351	30.1716	24.94206	5.22954	PAF(LC)
NS0152	80	82	NS	X072253	072253	1	G	W	20.37	47.27	9.34	0.2193	0.17	0.434	3.77	0.91	0.061	0.686	0.035	0.014	0.47	5.72	1.17	7.36	15362	20.9916	15.87222	5.11938	PAF(LC)
NS0152	82	84	NS	X072254	072254	1	G	W	20.54	46.66	9.47	0.2322	0.18	0.452	3.81	1.33	0.079	0.886	0.046	0.021	0.46	5.59	1.32	7.37	15363	27.1116	23.19786	3.91374	PAF(LC)
NS0152	94	96	NS	X072260	072260	1	G	W	22.47	45.73	8.61	0.1548	0.12	0.383	4.33	0.91	0.044	0.617	1.26	0.31	1.08	2.67	1.31	5.06	15369	18.8802	15.87222	3.00798	PAF(LC)
NS0152	74	76	NS	X072249	072249	1	G	W	24.66	39.23	4.09	0.4257	0.33	0.184	3.34	1.03	0.194	0.662	0.032	0.006	0.57	13.28	1.44	15.29	15359	20.2572	17.96526	2.29194	PAF(LC)
NS0152	44	46	NS	X072234	072234	1	G	W	24.33	44.59	5.41	0.1548	0.12	0.257	3.06	0.32	0.051	0.253	0.389	0.102	0.88	9.13	0.69	10.7	15344	7.7418	5.58144	2.16036	PAF(LC)
NS0152	90	92	NS	X072258	072258	1	G	W	26.53	37.49	4.11	0.2838	0.22	0.186	3.18	0.41	0.054	0.297	0.147	0.045	0.76	13.92	0.75	15.43	15367	9.0882	7.15122	1.93698	PAF(LC)
NS0152	62	64	NS	X072243	072243	1	G	W	16.13	55.53	9.55	0.1419	0.11	0.457	3.22	1.32	0.033	0.802	0.761	0.019	0.46	3.26	1.22	4.94	15353	24.5412	23.02344	1.51776	PAF(LC)

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0152	224	226	NS	X072325	072325	1	G	W	22.39	46.63	7.16	0.2838	0.22	0.335	3.56	0.8	0.072	0.501	0.651	0.194	0.87	5.38	1.09	7.34	15452	15.3306	13.9536	1.377	PAF(LC)
NS0152	60	62	NS	X072242	072242	1	G	W	16.26	54.73	9.82	0.129	0.1	0.476	2.94	1.06	0.039	0.648	1.83	0.023	0.66	2.91	1.16	4.73	15352	19.8288	18.48852	1.34028	PAF(LC)
NS0152	232	234	NS	X072329	072329	1	G	W	22.79	46.82	6.66	0.2967	0.23	0.324	3.41	0.94	0.072	0.579	1.12	0.281	1.03	4.4	1.39	6.82	15456	17.7174	16.39548	1.32192	PAF(LC)
NS0152	88	90	NS	X072257	072257	1	G	W	22.86	44.21	5.5	0.3225	0.25	0.253	3.54	0.71	0.098	0.429	0.173	0.056	0.66	10.23	0.9	11.79	15366	13.1274	12.38382	0.74358	PAF(LC)
NS0152	234	236	NS	X072330	072330	1	G	W	26.41	42.12	4.43	0.3354	0.26	0.2	3.13	0.56	0.062	0.341	1.06	0.299	1.29	7.2	0.85	9.34	15457	10.4346	9.76752	0.66708	PAF(LC)
NS0152	278	280	NS	X072352	072352	1	G	W	26.44	43.01	4.02	0.4257	0.33	0.177	3.38	0.58	0.098	0.349	1.1	0.318	1.12	6.79	0.92	8.83	15479	10.6794	10.11636	0.56304	PAF(LC)
NS0152	72	74	NS	X072248	072248	1	G	W	23.18	42.42	3.51	0.4257	0.33	0.162	3.09	1.16	0.211	0.662	0.036	0.018	0.64	12.7	1.43	14.77	15358	20.2572	20.23272	0.02448	PAF(LC)
NS0152	78	82	NS	BX066752-BX066753	X066752	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	13	-0.0306	-0.01744	-0.013158	NAF
NS0152	82	86	NS	BX066754-BX066755	X066754	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	14	-0.0306	-0.01744	-0.013158	NAF
NS0152	86	90	NS	BX066756-BX066757	X066756	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	15	-0.0306	-0.01744	-0.013158	NAF
NS0152	232	234	NS	BX066829	X066829	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	51	-0.0306	-0.01744	-0.013158	NAF
NS0152	0	2	NS	X072212	072212	1	G	D	38.75	20.89	12.21	-0.0129	-0.01	0.701	0.07	0.05	0.031	0.025	0.149	0.026	6.79	3.04	0.37	10.2	15304	0.765	0.8721	-0.1071	NAF
NS0152	56	58	NS	X072240	072240	1	G	W	19.72	48.67	7.44	0.2451	0.19	0.354	3.36	0.82	0.066	0.458	0.748	0.016	0.52	7.86	1.06	9.44	15350	14.0148	14.30244	-0.28764	NAF
NS0152	280	282	NS	X072353	072353	1	G	W	28.85	40	3.14	0.5031	0.39	0.143	3.03	1.14	0.112	0.637	0.835	0.232	0.85	6.41	1.38	8.64	15480	19.4922	19.88388	-0.39168	NAF
NS0152	280	282	NS	BX066853	X066853	2			63.05	9.593	0.904	0.088	0.06336	0.088	0.757	0.156	0.02	0.076	0.197	0.109	-0.01	-0.01	-0.01	-0.03	63	2.3256	2.720952	-0.395352	NAF
NS0152	8	10	NS	X072216	072216	1	G	D	34.58	40.06	4.49	0.0258	0.02	0.546	0.08	0.05	0.027	0.014	0.026	0.016	3.45	1.24	0.16	4.85	15308	0.4284	0.8721	-0.4437	NAF
NS0152	6	8	NS	X072215	072215	1	G	D	38.71	35.03	4.05	0.0258	0.02	0.647	0.04	0.05	0.035	0.011	0.016	0.005	3.44	0.9	0.16	4.5	15307	0.3366	0.8721	-0.5355	NAF
NS0152	276	280	NS	BX066851-BX066852	X066851	2			68.09	3.118	0.251	0.048	0.03456	0.048	0.27	0.069	0.012	0.019	0.053	0.112	-0.01	-0.01	-0.01	-0.03	62	0.5814	1.203498	-0.622098	NAF
NS0152	90	94	NS	BX066758-BX066759	X066758	2			66.31	6.473	0.306	0.041	0.02952	0.041	0.284	0.095	0.017	0.032	0.047	0.105	-0.01	-0.01	-0.01	-0.03	16	0.9792	1.65699	-0.67779	NAF
NS0152	4	6	NS	X072214	072214	1	G	D	32.64	43.33	4.17	-0.0129	-0.01	0.25	0.09	0.07	0.042	0.01	0.059	0.019	3.61	1.14	0.16	4.91	15306	0.306	1.22094	-0.91494	NAF
NS0152	268	272	NS	BX066847-BX066848	X066847	2			71.04	2.163	0.167	0.051	0.03672	0.051	0.195	0.079	0.011	0.012	0.034	0.088	-0.01	-0.01	-0.01	-0.03	60	0.3672	1.377918	-1.010718	NAF
NS0152	272	276	NS	BX066849-BX066850	X066849	2			67.31	5.013	0.339	0.04	0.0288	0.04	0.402	0.1	0.014	0.022	0.099	0.113	-0.01	-0.01	-0.01	-0.03	61	0.6732	1.7442	-1.071	NAF
NS0152	208	212	NS	BX066817-BX066818	X066817	2			69.84	2.948	0.202	0.022	0.01584	0.022	0.283	0.079	0.011	0.01	0.073	0.096	-0.01	-0.01	-0.01	-0.03	45	0.306	1.377918	-1.071918	NAF
NS0152	46	48	NS	X072235	072235	1	G	W	23.15	45.81	5.41	0.2838	0.22	0.251	3.03	0.56	0.103	0.283	0.288	0.07	0.83	9.11	0.71	10.65	15345	8.6598	9.76752	-1.10772	NAF
NS0152	228	232	NS	BX066827-BX066828	X066827	2			69.79	3.375	0.166	0.036	0.02592	0.036	0.24	0.083	0.014	0.009	0.049	0.097	-0.01	-0.01	-0.01	-0.03	50	0.2754	1.447686	-1.172286	NAF
NS0152	244	248	NS	BX066835-BX066836	X066835	2			69.42	3.033	0.161	0.038	0.02736	0.038	0.209	0.087	0.009	0.011	0.043	0.108	-0.01	-0.01	-0.01	-0.03	54	0.3366	1.517454	-1.180854	NAF
NS0152	224	228	NS	BX066825-BX066826	X066825	2			67.31	4.528	0.252	0.039	0.02808	0.039	0.313	0.093	0.014	0.013	0.066	0.099	-0.01	-0.01	-0.01	-0.03	49	0.3978	1.622106	-1.224306	NAF
NS0152	112	116	NS	BX066769-BX066770	X066769	2			64.83	8.217	0.573	0.046	0.03312	0.046	0.537	0.115	0.014	0.025	0.221	0.093	-0.01	-0.01	-0.01	-0.03	21	0.765	2.00583	-1.24083	NAF
NS0152	220	224	NS	BX066823-BX066824	X066823	2			69.2	3.171	0.176	0.02	0.0144	0.02	0.264	0.093	0.014	0.011	0.05	0.095	-0.01	-0.01	-0.01	-0.03	48	0.3366	1.622106	-1.285506	NAF
NS0152	240	244	NS	BX066833-BX066834	X066833	2			66.96	5.543	0.32	0.05	0.036	0.05	0.348	0.104	0.014	0.017	0.089	0.1	-0.01	-0.01	-0.01	-0.03	53	0.5202	1.813968	-1.293768	NAF
NS0152	2	4	NS	X072213	072213	1	G	D	37.55	29.77	6.94	-0.0129	-0.01	0.202	0.1	0.1	0.025	0.014	0.071	0.027	7.01	1.82	0.26	9.09	15305	0.4284	1.7442	-1.3158	NAF
NS0152	168	172	NS	BX066797-BX066798	X066797	2			69.65	3.895	0.153	0.019	0.01368	0.019	0.227	0.093	0.013	0.01	0.054	0.104	-0.01	-0.01	-0.01	-0.03	35	0.306	1.622106	-1.316106	NAF
NS0152	184	188	NS	BX066805-BX066806	X066805	2			68.16	4.987	0.255	0.027	0.01944	0.027	0.318	0.099	0.014	0.013	0.101	0.092	-0.01	-0.01	-0.01	-0.03	39	0.3978	1.726758	-1.328958	NAF
NS0152	256	260	NS	BX066841-BX066842	X066841	2			69.5	3.304	0.204	0.028	0.02016	0.028	0.25	0.101	0.013	0.013	0.056	0.084	-0.01	-0.01	-0.01	-0.03	57	0.3978	1.761642	-1.363842	NAF
NS0152	216	220	NS	BX066821-BX066822	X066821	2			69.61	4.088	0.187	0.021	0.01512	0.021	0.272	0.095	0.014	0.009	0.065	0.084	-0.01	-0.01	-0.01	-0.03	47	0.2754	1.65699	-1.38159	NAF
NS0152	180	184	NS	BX066803-BX066804	X066803	2			68.1	5.429	0.273	0.027	0.01944	0.027	0.338	0.104	0.015	0.014	0.11	0.082	-0.01	-0.01	-0.01	-0.03	38	0.4284	1.813968	-1.385568	NAF
NS0152	100	104	NS	BX066763-BX066764	X066763	2			70.5	2.715	0.148	0.032	0.02304	0.032	0.188	0.099	0.014	0.011	0.037	0.078	-0.01	-0.01	-0.01	-0.03	18	0.3366	1.726758	-1.390158	NAF
NS0152	172	176	NS	BX066799-BX066800	X066799	2			68.02	5.385	0.335	0.029	0.02088	0.029	0.355	0.109	0.013	0.016	0.114	0.101	-0.01	-0.01	-0.01	-0.03	36	0.4896	1.901178	-1.411578	NAF
NS0152	136	140	NS	BX066781-BX066782	X066781	2			68.4	4.432	0.175	0.021	0.01512	0.021	0.251	0.096	0.013	0.008	0.076	0.069	-0.01	-0.01	-0.01	-0.03	27	0.2448	1.674432	-1.429632	NAF
NS0152	140	144	NS	BX066783-BX066784	X066783	2			68.79	4.218	0.267	0.031	0.02232	0.031	0.27	0.114	0.013	0.018	0.119	0.105	-0.01	-0.01	-0.01	-0.03	28	0.5508	1.988388	-1.437588	NAF
NS0152	212	216	NS	BX066819-BX066820	X066819	2			68.47	4.819	0.191	0.03	0.0216	0.03	0.297	0.098	0.014	0.007	0.068	0.087	-0.01	-0.01	-0.01	-0.03	46	0.2142	1.709316	-1.495116	NAF
NS0152	164	168	NS	BX066795-BX066796	X066795	2			68.63	4.849	0.206	0.021	0.01512	0.021	0.281	0.1	0.013	0.008	0.079	0.081	-0.01	-0.01	-0.01	-0.03	34	0.2448	1.7442	-1.4994	NAF
NS0152	200	204	NS	BX066813-BX066814	X066813	2			68.47	4.56	0.208	0.02	0.0144	0.02	0.29	0.104	0.017	0.009	0.07	0.091	-0.01	-0.01	-0.01	-0.03	43	0.2754	1.813968	-1.538568	NAF
NS0152	120	124	NS	BX066773-BX066774	X066773	2			66.87	5.786	0.292	0.026	0.01872	0.026	0.327	0.121	0.014	0.018	0.123	0.106	-0.01	-0.01	-0.01	-0.03	23	0.5508	2.110482	-1.559682	NAF
NS0152	148	152	NS	BX066787-BX066788	X066787	2			69.22	4.114	0.302	0.033	0.02376	0.033	0.29	0.119	0.01	0.014	0.117	0.072	-0.01	-0.01	-0.01	-0.03	30	0.4284	2.075598	-1.647198	NAF
NS0152	116	120	NS	BX066771-BX066772	X066771	2			66.95	6.433	0.208	0.018	0.01296	0.018	0.309	0.109	0.014	0.008	0.084	0.078	-0.01	-0.01	-0.01	-0.03	22	0.2448	1.901178	-1.656378	NAF
NS0152	124	128	NS	BX066775-BX066776	X066775	2			68.9	3.777	0.165	0.021	0.01512	0.021	0.216	0.113	0.014	0.01	0.069	0.086	-0.01	-0.01	-0.01	-0.03	24	0.306	1.970946	-1.664946	NAF
NS0152	128	132	NS	BX066777-BX066778	X066777	2			69.71	3.916	0.227	0.028	0.02016	0.028	0.25	0.124	0.014	0.016	0.092	0.082	-0.01	-0.01	-0.01	-0.03	25	0.4896	2.162808	-1.673208	NAF
NS0152	12	14	NS	X072218	072218	1	G	D	37.15	40.7	1.37	0.0516	0.04	0.071	0.25	0.12	0.044	0.01	0.024	0.019	2.96	0.89	-0.09	3.76	15310	0.306	2.09304	-1.78704	NAF
NS0152	252	256	NS	BX066839-BX066840	X066839	2			66.86	5.491	0.301	0.031	0.02232	0.031	0.346	0.132	0.014	0.016	0.084	0.109	-0.01	-0.01	-0.01	-0.03	56	0.4896	2.302344	-1.812744	NAF
NS0152	260	264	NS	BX066843-BX066844	X066843	2			67.46	5.955	0.292	0.028	0.02016	0.028	0.356	0.127	0.016	0.012	0.081	0.092	-0.01	-0.01	-0.01	-0.03	58	0.3672	2.215134	-1.847934	NAF
NS0152	196	200	NS	BX066811-BX066812	X066811	2			67.38	5.938	0.344	0.032	0.02304	0.032	0.346	0.138	0.015	0.018	0.137	0.093	-0.01	-0.01	-0.01	-0.03	42	0.5508	2.406996	-1.856196	NAF
NS0152	96	100	NS	BX066761-BX066762	X066761	2			68.04	4.073	0.167	0.021	0.01512	0.021	0.245	0.131	0.018	0.014	0.045	0.083	-0.01	-0.01	-0.01	-0.03	17	0.4284	2.284902	-1.856502	NAF
NS0152	160	164	NS	BX066793-BX066794	X066793	2			65.43	7.749	0.377	0.028	0.02016	0.028	0.405	0.131	0.016	0.014	0.195	0.103	-0.01	-0.01	-0.01	-0.03	33	0.4284	2.284902	-1.856502	NAF
NS0152	176	180	NS	BX066801-BX066802	X066801	2			67.25	5.234	0.306	0.029	0.02088	0.029	0.339	0.135	0.014	0.016	0.118	0.086	-0.01	-0.01	-0.01	-0.03	37	0.4896	2.35467	-1.86507	NAF
NS0152	248	252	NS	BX066837-BX066838	X066837	2			67.99	5.667	0.241	0.027	0.01944	0.027	0.332	0.127	0.012	0.011	0.074	0.103	-0.01	-0.01	-0.01	-0.03	55	0.3366	2.215134	-1.878534	NAF
NS0152	236	240	NS	BX066831-BX066832	X066831	2			64.82	7.453	0.286	0.029	0.02088	0.029	0.384	0.13	0.016	0.012	0.1	0.097	-0.01	-0.01	-0.01	-0.03	52	0.3672	2.26746	-1.90026	NAF
NS0152	108	112	NS	BX066767-BX066768	X066767	2			68.19	5.122	0.291	0.032	0.02304	0.032	0.307	0.137	0.012	0.015	0.134	0.073	-0.01	-0.01	-0.01	-0.03	20	0.459	2.389554	-1.930554	NAF
NS0152	264	268	NS	BX066845-BX066846	X066845	2			66.22	6.064	0.358	0.031	0.02232	0.031	0.4	0.14	0.016	0.016	0.087	0.122	-0.01	-0.01	-0.01	-0.03	59	0.4896	2.44188	-1.95228	NAF
NS0152	132	136	NS	BX066779-BX066780	X066779	2			68.17	5.022	0.297	0.034	0.02448	0.034	0.314	0.144	0.014	0.018	0.119	0.091	-0.01	-0.01	-0.01	-0.03	26	0.5508	2.511648	-1.960848	NAF
NS0152	204	208	NS	BX066815-BX066816	X066815	2			68.72	4.289	0.272	0.024	0.01728	0.024	0.322	0.136	0.014	0.013	0.087	0.089	-0.01	-0.01	-0.01	-0.03	44	0.3978	2.372112	-1.974312	NAF
NS0152	192	196	NS	BX066809-BX066810	X066809	2			68.8	4.855	0.163	0.018	0.01296	0.018	0.267	0.128	0.015	0.008	0.075	0.084	-0.01	-0.01	-0.01	-0.03	41	0.2448	2.232576	-1.987776	NAF
NS0152	152	154	NS	BX066789	X066789	2			67.36	6.046	0.323	0.029	0.02088	0.029	0.358	0.144	0.014	0.017	0.12	0.096	-0.01	-0.01	-0.01	-0.03	31	0.5202	2.511648	-1.991448	NAF
NS0152	188	192	NS	BX066807-BX066808	X066807	2			66.29	6.583	0.367	0.035	0.0252	0.035	0.406	0.149	0.015	0.019	0.152	0.089	-0.01	-0.01	-0.01	-0.03	40	0.5814	2.598858	-2.017458	NAF
NS0152	50	52	NS	X072237	072237	1	G	W	21.95	45.53	5.38	0.3096	0.24	0.255	3.35	0.88	0.068	0.435	0.142	0.041	0.75	9.56	1.25	11.56	15347	13.311	15.34896	-2.03796	NAF
NS0152	144	148	NS	BX066785-BX066786	X066785	2			67.93	5.774	0.201	0.019	0.01368	0.019	0.269	0.139	0.015	0.012	0.108	0.097	-0.01	-0.01	-0.01	-0.03	29	0.3672	2.424438	-2.057238	NAF
NS0152	104	108	NS	BX066765-BX066766	X066765	2			67.37	5.294	0.258	0.03	0.0216	0.03	0.29	0.144	0.02	0.012	0.08	0.082	-0.01	-0.01	-0.01	-0.03	19	0.3672	2.511648	-2.144448	NAF
NS0152	156	160	NS	BX066791-BX066792	X066791	2			67.24	6.06	0.344	0.031	0.02232	0.031	0.346	0.155	0.012	0.017	0.167	0.082	-0.01	-0.01	-0.01	-0.03	32	0.5202	2.70351	-2.18331	NAF
NS0152	10	12	NS	X072217	072217	1	G	D	37.37	39.6	2.27	0.0645	0.05	0.107	0.32	0.15	0.033	0.006	0.028	0.03	3.21	0.86	0	4.07	15309	0.1836	2.6163	-2.4327	NAF
NS0152	14	16	NS	X072219	072219	1	G	D	36.81	40.96	1.75	0.0387	0.03	0.09	0.41	0.18	0.034	0.01	0.028	0.035	2.95	0.84	-0.06	3.73	15311	0.306	3.13956	-2.83356	NAF
NS0152	24	26	NS	X072224	072224	1	G	D	37.72	39.39	1.69	0.3741	0.29	0.078	0.4	0.17	0.041	0.004	0.355	0.031	2.84	0.75	-0.1	3.49	15316	0.1224	2.96514	-2.84274	NAF
NS0152	18	20	NS	X072221	072221	1	G	D	36.53	40.32	2.12	0.1161	0.09	0.099	0.44	0.18	0.042	0.007	0.125	0.053	3.19	1.05	-0.1	4.14	15313	0.2142	3.13956	-2.92536	NAF
NS0152	32	34	NS	X072228	072228	1	G	D	33.15	46.51	1.51	0.3354	0.26	0.068	0.4	0.19	0.035	0.004	0.306	0.028	2.4	0.72	-0.1	3.02	15338	0.1224	3.31398	-3.19158	NAF
NS0152	16	18	NS	X072220	072220	1	G	D	37.25	39.61	1.93	0.0516	0.04	0.107	0.5	0.2	0.034	0.006	0.045	0.041	3.15	0.92	-0.06	4.01	15312	0.1836	3.4884	-3.3048	NAF
NS0152	28	30	NS	X072226	072226	1	G	D	37.82	38.03	1.92	0.4128	0.32	0.087	0.51	0.2	0.033	0.005	0.461	0.032	3.05	0.86	-0.11	3.8	15318	0.153	3.4884	-3.3354	NAF
NS0152	26	28	NS	X072225	072225	1	G	D	34.03	44.12	2.05	0.3354	0.26	0.094	0.57	0.2	0.023	0.004	0.643	0.042	2.58	0.79	-0.18	3.19	15317	0.1224	3.4884	-3.366	NAF
NS0152	30	32	NS	X072227	072227	1	G	D	36.23	39.97	2.18	0.3354	0.26	0.101	0.62	0.21	0.045	0.005	0.643	0.046	2.9	0.93	-0.11	3.72	15337	0.153	3.66282	-3.50982	NAF
NS0152	40	42	NS	X072232	072232	1	G	W	24.58	41.74	5.45	0.3096	0.24	0.245	3.72	0.97	0.058	0.415	0.646	0.097	0.96	8.22	1.06	10.24	15342	12.699	16.91874	-4.21974	NAF
NS0152	20	22	NS	X072222	072222	1	G	D	34.52	39.84	3.3	0.5547	0.43	0.137	0.7	0.26	0.045	0.005	0.742	0.062	3.22	1.26	0.02	4.5	15314	0.153	4.53492	-4.38192	NAF
NS0152	22	24	NS	X072223	072223	1	G	D	34.57	39.59	3.09	0.5547	0.43	0.137	0.81	0.3	0.051	0.006	0.617	0.06	3.56	1.33	0.07	4.96	15315	0.1836	5.2326	-5.049	NAF
NS0152	226	228	NS	X072326	072326	1	G	W	27.52	40.38	2.85	0.4386	0.34	0.131	2.78	0.64	0.083	0.199	0.797	0.223	1.02	10.19	0.49	11.7	15453	6.0894	11.16288	-5.07348	NAF
NS0152	42	44	NS	X072233	072233	1	G	W	26.06	41.32	3.28	0.3225	0.25	0.151	2.77	0.59	0.115	0.164	0.577	0.118	1.04	11.52	0.46	13.02	15343	5.0184	10.29078	-5.27238	NAF
NS0152	48	50	NS	X072236	072236	1	G	W	21.43	47.42	6.02	0.2967	0.23	0.284	3.27	0.97	0.086	0.357	0.214	0.058	0.71	8.12	1.07	9.9	15346	10.9242	16.91874	-5.99454	NAF
NS0152	276	278	NS	X072351	072351	1	G	W	27.72	43.59	2.64	0.4386	0.34	0.117	2.71	0.71	0.091	0.156	0.867	0.248	0.85	6.42	1.39	8.66	15478	4.7736	12.38382	-7.61022	NAF
NS0152	36	38	NS	X072230	072230	1	G	D	33.97	41.7	1.25	0.2838	0.22	0.056	0.94	0.54	0.081	0.026	0.349	0.048	2	4.1	-0.12	5.98	15340	0.7956	9.41868	-8.62308	NAF
NS0152	230	232	NS	X072328	072328	1	G	W	30.15	36.9	2.44	0.3999	0.31	0.108	2.6	0.75	0.073	0.142	0.809	0.233	1.01	10.8	0.34	12.15	15455	4.3452	13.0815	-8.7363	NAF
NS0152	274	276	NS	X072350	072350	1	G	W	32.05	37.12	1.67	0.5031	0.39	0.072	2.2	0.64	0.096	0.073	0.601	0.171	0.83	9.73	0.05	10.61	15477	2.2338	11.16288	-8.92908	NAF
NS0152	92	94	NS	X072259	072259	1	G	W	30.84	36.09	1.89	0.3225	0.25	0.084	2.03	0.85	0.111	0.16	0.417	0.123	0.73	12.12	0.25	13.1	15368	4.896	14.8257	-9.9297	NAF
NS0152	240	242	NS	X072333	072333	1	G	W	28.78	37.72	3.58	0.4644	0.36	0.167	3.29	1.12	0.13	0.311	1.05	0.29	1.32	8.1	0.94	10.36	15460	9.5166	19.53504	-10.01844	NAF
NS0152	236	238	NS	X072331	072331	1	G	W	30.42	37.54	2.04	0.4386	0.34	0.09	2.37	0.79	0.08	0.109	0.73	0.216	0.99	10.74	0.19	11.92	15458	3.3354	13.77918	-10.44378	NAF
NS0152	140	142	NS	X072283	072283	1	G	W	26.5	44.69	3.99	0.3225	0.25	0.185	3.05	1.49	0.09	0.452	1.82	0.268	0.79	3.6	1.31	5.7	15410	13.8312	25.98858	-12.15738	NAF
NS0152	38	40	NS	X072231	072231	1	G	W	33.2	38.69	1.43	0.3096	0.24	0.064	1.49	0.82	0.065	0.07	0.446	0.06	1.09	7.67	0.06	8.82	15341	2.142	14.30244	-12.16044	NAF
NS0152	114	116	NS	X072270	072270	1	G	W	30.27	39.71	3.72	0.3225	0.25	0.173	2.98	1.37	0.123	0.28	1.75	0.29	0.87	3.54	0.97	5.38	15397	8.568	23.89554	-15.32754	NAF
NS0152	96	98	NS	X072261	072261	1	G	W	18.73	52.79	5.81	0.1806	0.14	0.268	3.11	1.69	0.05	0.454	1.23	0.2	1.95	3.19	1.55	6.69	15370	13.8924	29.47698	-15.58458	NAF
NS0152	238	240	NS	X072332	072332	1	G	W	34.29	35.16	1.52	0.5031	0.39	0.067	2.06	1.04	0.088	0.065	0.623	0.175	0.73	8.49	0.15	9.37	15459	1.989	18.13968	-16.15068	NAF
NS0152	266	268	NS	X072346	072346	1	G	W	32.57	36.7	3.42	0.3483	0.27	0.154	2.91	1.44	0.071	0.251	0.877	0.234	0.79	4.43	1	6.22	15473	7.6806	25.11648	-17.43588	NAF
NS0152	138	140	NS	X072282	072282	1	G	W	37.77	35.19	1.06	0.5031	0.39	0.046	1.48	1.08	0.08	0.033	0.581	0.092	0.27	5.13	0.18	5.58	15409	1.0098	18.83736	-17.82756	NAF
NS0152	242	244	NS	X072334	072334	1	G	W	31.14	38.45	2.36	0.387	0.3	0.104	2.41	1.3	0.085	0.134	0.849	0.244	0.91	6.99	0.63	8.53	15461	4.1004	22.6746	-18.5742	NAF
NS0152	222	224	NS	X072324	072324	1	G	W	30.59	37.77	2.56	0.5547	0.43	0.117	2.59	1.44	0.103	0.185	0.66	0.19	0.83	8.32	0.66	9.81	15451	5.661	25.11648	-19.45548	NAF
NS0152	162	164	NS	X072294	072294	1	G	W	37.96	33.64	1.19	0.5934	0.46	0.053	1.83	1.18	0.091	0.029	0.684	0.088	0.29	5.83	0.22	6.34	15421	0.8874	20.58156	-19.69416	NAF
NS0152	182	184	NS	X072304	072304	1	G	W	37.61	34.69	1.34	0.5031	0.39	0.059	1.95	1.22	0.085	0.047	0.674	0.134	0.37	5.04	0.29	5.7	15431	1.4382	21.27924	-19.84104	NAF
NS0152	102	104	NS	X072264	072264	1	G	W	27.43	42.13	3.96	0.258	0.2	0.182	2.95	1.74	0.121	0.338	1.31	0.297	1.01	4.4	1.31	6.72	15391	10.3428	30.34908	-20.00628	NAF
NS0152	272	274	NS	X072349	072349	1	G	W	30.45	37.84	2.65	0.3741	0.29	0.118	2.66	1.78	0.123	0.354	0.902	0.252	0.97	7.17	1.22	9.36	15476	10.8324	31.04676	-20.21436	NAF
NS0152	112	114	NS	X072269	072269	1	G	W	30.62	39.57	3.43	0.3096	0.24	0.16	2.93	1.54	0.11	0.215	1.49	0.277	0.82	3.5	1	5.32	15396	6.579	26.86068	-20.28168	NAF
NS0152	160	162	NS	X072293	072293	1	G	W	28.54	42.34	3.3	0.3612	0.28	0.154	2.91	1.5	0.075	0.182	1.62	0.257	0.76	3.97	1.06	5.79	15420	5.5692	26.163	-20.5938	NAF
NS0152	210	212	NS	X072318	072318	1	G	W	33.92	39.41	1.95	0.4128	0.32	0.088	2.31	1.32	0.104	0.078	0.812	0.216	0.69	3.21	0.61	4.51	15445	2.3868	23.02344	-20.63664	NAF
NS0152	174	176	NS	X072300	072300	1	G	W	29.29	44.3	1.99	0.4257	0.33	0.089	2.29	1.42	0.102	0.125	0.902	0.17	0.54	4.42	0.75	5.71	15427	3.825	24.76764	-20.94264	NAF
NS0152	34	36	NS	X072229	072229	1	G	D	35.15	36.51	1.61	0.3999	0.31	0.072	1.46	1.42	0.174	0.048	0.593	0.076	1.47	4.88	0.33	6.68	15339	1.4688	24.76764	-23.29884	NAF
NS0152	200	202	NS	X072313	072313	1	G	W	32.97	39.52	1.97	0.3741	0.29	0.088	2.4	1.52	0.107	0.089	0.798	0.19	0.62	3.92	0.77	5.31	15440	2.7234	26.51184	-23.78844	NAF
NS0152	116	118	NS	X072271	072271	1	G	W	32.57	40.37	1.48	0.4515	0.35	0.067	1.91	1.46	0.069	0.045	0.741	0.139	0.44	5.12	0.62	6.18	15398	1.377	25.46532	-24.08832	NAF
NS0152	122	124	NS	X072274	072274	1	G	W	32.72	38.43	2.11	0.4257	0.33	0.097	2.13	1.6	0.087	0.123	1.08	0.139	0.51	5.16	0.77	6.44	15401	3.7638	27.9072	-24.1434	NAF
NS0152	146	148	NS	X072286	072286	1	G	W	32.89	42.39	0.93	0.3741	0.29	0.038	1.54	1.49	0.098	0.05	0.462	0.09	0.24	4.11	0.66	5.01	15413	1.53	25.98858	-24.45858	NAF
NS0152	258	260	NS	X072342	072342	1	G	W	29.93	40.62	3.56	0.3741	0.29	0.163	2.75	1.86	0.154	0.259	1.08	0.277	0.88	3.54	1.16	5.58	15469	7.9254	32.44212	-24.51672	NAF
NS0152	180	182	NS	X072303	072303	1	G	W	31.8	42.72	1.95	0.3354	0.26	0.09	2.08	1.62	0.113	0.11	0.802	0.157	0.44	2.87	0.8	4.11	15430	3.366	28.25604	-24.89004	NAF
NS0152	252	254	NS	X072339	072339	1	G	W	31.35	40.29	2.57	0.4257	0.33	0.115	2.54	1.7	0.106	0.155	0.783	0.241	0.76	3.77	1.02	5.55	15466	4.743	29.6514	-24.9084	NAF
NS0152	192	194	NS	X072309	072309	1	G	W	34.97	38.25	1.15	0.4386	0.34	0.052	1.79	1.5	0.098	0.04	0.557	0.125	0.36	4.77	0.65	5.78	15436	1.224	26.163	-24.939	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0152	120	122	NS	X072273	072273	1	G	W	33.03	41.28	1.56	0.2838	0.22	0.071	1.74	1.64	0.085	0.108	0.718	0.148	0.41	3.39	0.79	4.59	15400	3.3048	28.60488	-25.30008	NAF
NS0152	196	198	NS	X072311	072311	1	G	W	33.35	38.12	2.4	0.387	0.3	0.111	2.43	1.71	0.131	0.143	1.06	0.204	0.61	4.02	0.85	5.48	15438	4.3758	29.82582	-25.45002	NAF
NS0152	166	168	NS	X072296	072296	1	G	W	36.19	34.15	1.71	0.4773	0.37	0.079	2.29	1.59	0.085	0.066	0.805	0.141	0.47	5.43	0.75	6.65	15423	2.0196	27.73278	-25.71318	NAF
NS0152	268	270	NS	X072347	072347	1	G	W	26.74	42.42	3.79	0.3999	0.31	0.168	2.87	2.09	0.111	0.348	0.943	0.264	0.9	4.97	1.55	7.42	15474	10.6488	36.45378	-25.80498	NAF
NS0152	250	252	NS	X072338	072338	1	G	W	33.87	36.07	2.06	0.4515	0.35	0.093	2.65	1.69	0.081	0.115	0.794	0.234	0.77	4.89	1.03	6.69	15465	3.519	29.47698	-25.95798	NAF
NS0152	246	248	NS	X072336	072336	1	G	W	29.63	39.5	3.26	0.3999	0.31	0.148	2.96	1.81	0.088	0.18	0.984	0.283	1.02	5.14	1.23	7.39	15463	5.508	31.57002	-26.06202	NAF
NS0152	202	204	NS	X072314	072314	1	G	W	35.89	37.22	1.63	0.3741	0.29	0.072	2.05	1.64	0.085	0.068	0.648	0.16	0.44	3.24	0.79	4.47	15441	2.0808	28.60488	-26.52408	NAF
NS0152	214	216	NS	X072320	072320	1	G	W	35.94	37.42	1.62	0.4128	0.32	0.105	2.12	1.68	0.089	0.078	0.624	0.168	0.48	2.56	0.9	3.94	15447	2.3868	29.30256	-26.91576	NAF
NS0152	118	120	NS	X072272	072272	1	G	W	35.25	37.41	1.18	0.4515	0.35	0.053	1.69	1.63	0.084	0.039	0.588	0.105	0.32	5.09	0.74	6.15	15399	1.1934	28.43046	-27.23706	NAF
NS0152	190	192	NS	X072308	072308	1	G	W	36.46	33.46	2.25	0.3741	0.29	0.103	2.34	1.78	0.061	0.112	1.09	0.174	0.48	4.23	1.04	5.75	15435	3.4272	31.04676	-27.61956	NAF
NS0152	184	186	NS	X072305	072305	1	G	W	32.07	40.78	2.27	0.3225	0.25	0.1	2.41	1.86	0.101	0.145	0.936	0.212	0.56	2.94	1.09	4.59	15432	4.437	32.44212	-28.00512	NAF
NS0152	216	218	NS	X072321	072321	1	G	W	35.34	38.26	1.34	0.4128	0.32	0.06	2.05	1.73	0.113	0.052	0.542	0.158	0.48	3.05	0.95	4.48	15448	1.5912	30.17466	-28.58346	NAF
NS0152	270	272	NS	X072348	072348	1	G	W	28.71	39.69	3.06	0.3741	0.29	0.134	2.72	1.98	0.163	0.193	0.99	0.286	1.21	6.43	1.2	8.84	15475	5.9058	34.53516	-28.62936	NAF
NS0152	104	106	NS	X072265	072265	1	G	W	32.84	39.22	1.75	0.2709	0.21	0.077	1.8	1.78	0.11	0.078	0.633	0.174	0.62	5.65	0.72	6.99	15392	2.3868	31.04676	-28.65996	NAF
NS0152	164	166	NS	X072295	072295	1	G	W	34.08	40.56	1.27	0.3741	0.29	0.058	1.59	1.74	0.094	0.04	0.668	0.087	0.25	3.11	0.89	4.25	15422	1.224	30.34908	-29.12508	NAF
NS0152	264	266	NS	X072345	072345	1	G	W	34.63	36.95	1.53	0.5934	0.46	0.069	2.17	1.79	0.072	0.065	0.506	0.147	0.55	4.96	1.05	6.56	15472	1.989	31.22118	-29.23218	NAF
NS0152	262	264	NS	X072344	072344	1	G	W	33.02	39.86	1.48	0.5418	0.42	0.064	2.13	1.75	0.064	0.04	0.533	0.156	0.52	4.44	0.98	5.94	15471	1.224	30.5235	-29.2995	NAF
NS0152	220	222	NS	X072323	072323	1	G	W	33.42	37.66	1.67	0.3354	0.26	0.072	2.28	1.87	0.111	0.107	0.637	0.184	0.62	5.23	0.96	6.81	15450	3.2742	32.61654	-29.34234	NAF
NS0152	152	154	NS	X072289	072289	1	G	W	34.79	37.71	1.75	0.3612	0.28	0.086	2.08	1.86	0.113	0.094	0.838	0.161	0.43	3.94	0.99	5.36	15416	2.8764	32.44212	-29.56572	NAF
NS0152	158	160	NS	X072292	072292	1	G	W	38.42	32.57	1.37	0.5031	0.39	0.065	1.82	1.79	0.067	0.052	0.812	0.108	0.26	4.26	0.94	5.46	15419	1.5912	31.22118	-29.62998	NAF
NS0152	172	174	NS	X072299	072299	1	G	W	32.03	39.38	2.02	0.4257	0.33	0.096	2.28	1.87	0.071	0.097	0.984	0.156	0.49	4.45	1.21	6.15	15426	2.9682	32.61654	-29.64834	NAF
NS0152	110	112	NS	X072268	072268	1	G	W	34.27	39.66	1.5	0.2838	0.22	0.067	1.91	1.8	0.135	0.052	0.644	0.17	0.44	3.32	0.84	4.6	15395	1.5912	31.3956	-29.8044	NAF
NS0152	260	262	NS	X072343	072343	1	G	W	31.18	41.09	2.61	0.3741	0.29	0.12	2.54	1.96	0.147	0.142	0.755	0.223	0.68	3.45	1.13	5.26	15470	4.3452	34.18632	-29.84112	NAF
NS0152	108	110	NS	X072267	072267	1	G	W	34.61	39.43	1.29	0.3096	0.24	0.057	1.69	1.82	0.112	0.059	0.536	0.154	0.38	3.17	0.94	4.49	15394	1.8054	31.74444	-29.93904	NAF
NS0152	128	130	NS	X072277	072277	1	G	W	33.86	38.06	2.05	0.3096	0.24	0.093	2.13	2.03	0.105	0.174	0.919	0.169	0.47	3.88	1.08	5.43	15404	5.3244	35.40726	-30.08286	NAC
NS0152	136	138	NS	X072281	072281	1	G	W	33	36.73	2.32	0.387	0.3	0.101	2.58	1.92	0.124	0.11	1.06	0.217	0.65	4.99	1.14	6.78	15408	3.366	33.48864	-30.12264	NAC
NS0152	204	206	NS	X072315	072315	1	G	W	32.45	40.69	1.78	0.4773	0.37	0.082	2.1	1.92	0.132	0.107	0.746	0.179	0.48	3.77	0.99	5.24	15442	3.2742	33.48864	-30.21444	NAC
NS0152	186	188	NS	X072306	072306	1	G	W	32.18	37.6	3.02	0.3354	0.26	0.137	2.82	2.2	0.175	0.265	1.43	0.238	0.69	3.11	1.36	5.16	15433	8.109	38.3724	-30.2634	NAC
NS0152	256	258	NS	X072341	072341	1	G	W	30.58	38.99	2.3	0.4644	0.36	0.102	2.53	2.34	0.079	0.323	0.783	0.23	0.76	4.76	1.66	7.18	15468	9.8838	40.81428	-30.93048	NAC
NS0152	206	208	NS	X072316	072316	1	G	W	31.65	41.36	1.82	0.387	0.3	0.085	2.05	1.97	0.093	0.112	0.606	0.147	0.45	3.92	1.11	5.48	15443	3.4272	34.36074	-30.93354	NAC
NS0152	228	230	NS	X072327	072327	1	G	W	31.06	36.21	2.61	0.3354	0.26	0.126	2.68	1.99	0.14	0.123	0.913	0.274	1	7.5	1.2	9.7	15454	3.7638	34.70958	-30.94578	NAC
NS0152	254	256	NS	X072340	072340	1	G	W	33.06	37.59	2.25	0.4644	0.36	0.103	2.4	2.06	0.108	0.154	0.72	0.209	0.72	4.54	1.24	6.5	15467	4.7124	35.93052	-31.21812	NAC
NS0152	168	170	NS	X072297	072297	1	G	W	30.21	43.3	2	0.3999	0.31	0.092	2.08	1.97	0.069	0.096	1.01	0.142	0.47	3.65	1.42	5.54	15424	2.9376	34.36074	-31.42314	NAC
NS0152	212	214	NS	X072319	072319	1	G	W	35.19	35.83	1.55	0.5418	0.42	0.073	2.41	1.89	0.111	0.05	0.637	0.179	0.58	4.3	1.12	6	15446	1.53	32.96538	-31.43538	NAC
NS0152	142	144	NS	X072284	072284	1	G	W	26.58	49.6	1.15	0.4386	0.34	0.049	1.63	1.9	0.075	0.053	0.643	0.08	0.28	4.51	1.25	6.04	15411	1.6218	33.1398	-31.518	NAC
NS0152	176	178	NS	X072301	072301	1	G	W	29.58	42.41	2.06	0.4644	0.36	0.096	2.47	2.13	0.101	0.124	0.936	0.192	0.57	4.38	1.4	6.35	15428	3.7944	37.15146	-33.35706	NAC
NS0152	178	180	NS	X072302	072302	1	G	W	31.64	40.26	2.18	0.4257	0.33	0.097	2.4	2.12	0.095	0.1	1.01	0.183	0.49	3.59	1.42	5.5	15429	3.06	36.97704	-33.91704	NAC
NS0152	248	250	NS	X072337	072337	1	G	W	33.73	36.59	1.87	0.5418	0.42	0.086	2.29	2.14	0.11	0.108	0.621	0.184	0.61	5.01	1.29	6.91	15464	3.3048	37.32588	-34.02108	NAC
NS0152	218	220	NS	X072322	072322	1	G	W	30.2	41.91	2.4	0.3999	0.31	0.111	2.47	2.25	0.14	0.162	0.805	0.223	0.69	3.41	1.45	5.55	15449	4.9572	39.2445	-34.2873	NAC
NS0152	134	136	NS	X072280	072280	1	G	W	33.82	36.54	2.57	0.2709	0.21	0.116	2.4	2.2	0.137	0.128	1.25	0.209	0.61	3.22	1.26	5.09	15407	3.9168	38.3724	-34.4556	NAC
NS0152	106	108	NS	X072266	072266	1	G	W	32.25	40.2	1.83	0.2967	0.23	0.078	2.18	2.1	0.061	0.062	0.737	0.205	0.62	3.71	1.48	5.81	15393	1.8972	36.6282	-34.731	NAC
NS0152	156	158	NS	X072291	072291	1	G	W	29.15	41.37	3.09	0.3612	0.28	0.14	2.68	2.43	0.106	0.242	1.6	0.222	0.69	3.55	1.75	5.99	15418	7.4052	42.38406	-34.97886	NAC
NS0152	194	196	NS	X072310	072310	1	G	W	35.3	37.42	1.29	0.4257	0.33	0.062	1.83	2.11	0.093	0.055	0.631	0.128	0.35	3.99	1.23	5.57	15437	1.683	36.80262	-35.11962	NAC
NS0152	188	190	NS	X072307	072307	1	G	W	32.29	40.01	1.92	0.4257	0.33	0.088	2.13	2.2	0.11	0.093	0.964	0.152	0.39	3.63	1.39	5.41	15434	2.8458	38.3724	-35.5266	NAC
NS0152	148	150	NS	X072287	072287	1	G	W	30.83	38.81	3.08	0.2967	0.23	0.142	2.7	2.42	0.222	0.206	1.42	0.239	0.66	3.58	1.26	5.5	15414	6.3036	42.20964	-35.90604	NAC
NS0152	154	156	NS	X072290	072290	1	G	W	30.8	44.19	1.32	0.3612	0.28	0.058	1.67	2.18	0.091	0.063	0.737	0.108	0.28	3.47	1.38	5.13	15417	1.9278	38.02356	-36.09576	NAC
NS0152	98	100	NS	X072262	072262	1	G	W	34.74	34.21	1.16	0.4644	0.36	0.05	1.72	2.17	0.096	0.05	0.415	0.107	0.49	8.07	0.74	9.3	15371	1.53	37.84914	-36.31914	NAC
NS0152	124	126	NS	X072275	072275	1	G	W	32.72	39	2.16	0.3354	0.26	0.101	2	2.28	0.161	0.093	1.06	0.174	0.48	3.68	1.21	5.37	15402	2.8458	39.76776	-36.92196	NAC
NS0152	132	134	NS	X072279	072279	1	G	W	31.81	40.71	2.01	0.2967	0.23	0.088	2.03	2.48	0.081	0.188	1.02	0.165	0.46	3.15	1.6	5.21	15406	5.7528	43.25616	-37.50336	NAC
NS0152	198	200	NS	X072312	072312	1	G	W	34.53	38.78	1.35	0.3999	0.31	0.056	1.73	2.25	0.096	0.048	0.726	0.119	0.25	3	1.51	4.76	15439	1.4688	39.2445	-37.7757	NAC
NS0152	208	210	NS	X072317	072317	1	G	W	33.38	39.12	1.72	0.5418	0.42	0.079	1.97	2.3	0.089	0.076	0.804	0.173	0.43	3.07	1.45	4.95	15444	2.3256	40.1166	-37.791	NAC
NS0152	144	146	NS	X072285	072285	1	G	W	26.77	48.41	1.32	0.4515	0.35	0.06	1.75	2.31	0.064	0.072	0.731	0.103	0.31	4.19	1.66	6.16	15412	2.2032	40.29102	-38.08782	NAC
NS0152	100	102	NS	X072263	072263	1	G	W	29.02	40.39	2.92	0.2838	0.22	0.137	2.44	2.73	0.114	0.264	0.917	0.231	0.81	4.8	1.77	7.38	15372	8.0784	47.61666	-39.53826	NAC
NS0152	170	172	NS	X072298	072298	1	G	W	32.63	39.17	2.03	0.3612	0.28	0.095	2.28	2.58	0.103	0.125	0.99	0.162	0.46	3.21	1.84	5.51	15425	3.825	45.00036	-41.17536	NAC
NS0152	126	128	NS	X072276	072276	1	G	W	31.34	41.31	1.95	0.2838	0.22	0.09	1.97	2.7	0.188	0.108	0.901	0.173	0.29	2.87	1.61	4.77	15403	3.3048	47.0934	-43.7886	NAC
NS0152	130	132	NS	X072278	072278	1	G	W	37.39	33.75	1.64	0.2838	0.22	0.078	1.78	2.89	0.146	0.085	0.878	0.131	0.28	2.39	1.9	4.57	15405	2.601	50.40738	-47.80638	NAC
NS0152	150	152	NS	X072288	072288	1	G	W	21.57	55.35	2.32	0.2064	0.16	0.106	2.04	3	0.033	0.092	1.17	0.175	0.46	1.48	2.69	4.63	15415	2.8152	52.326	-49.5108	NAC
NS0152	244	246	NS	X072335	072335	1	G	W	27.88	40.64	2.06	0.4386	0.34	0.093	2.19	3.42	0.047	0.105	0.745	0.205	0.78	7.19	2.19	10.16	15462	3.213	59.65164	-56.43864	NAC
NS0153	74	76	NS	X072391	072391	1	G	D	29.45	40.85	5.54	0.0903	0.07	0.223	0.89	0.12	0.071	7.25	0.084	0.045	2.92	5.9	1.12	9.94	15518	221.85	2.09304	219.75696	PAF(HC)
NS0153	202	204	NS	X072456	072456	1	G	W	9.48	59.95	12.82	0.0903	0.07	0.546	1.46	0.04	0.011	4.48	3.66	0.054	0.19	5.36	1.74	7.29	15582	137.088	0.69768	136.39032	PAF(HC)
NS0153	200	202	NS	X072455	072455	1	G	W	9.37	63.14	10.43	0.1032	0.08	0.437	1.32	0.1	0.027	4.24	2.94	0.066	0.15	5.26	1.67	7.08	15581	129.744	1.7442	127.9998	PAF(HC)
NS0153	194	196	NS	X072452	072452	1	G	W	10.86	55.57	13.33	0.1419	0.11	0.545	1.59	0.06	0.011	4.1	4	0.04	0.19	5.8	2.55	8.54	15578	125.46	1.04652	124.41348	PAF(HC)
NS0153	212	214	NS	X072461	072461	1	G	W	10.58	58.11	12.78	0.129	0.1	0.532	1.81	0.06	0.012	3.93	3.5	0.059	0.2	5.48	2.07	7.75	15587	120.258	1.04652	119.21148	PAF(HC)
NS0153	210	212	NS	X072460	072460	1	G	W	8.63	63.78	11.98	0.0387	0.03	0.505	1.62	0.03	0.008	3.89	3.05	0.057	0.15	4.12	1.38	5.65	15586	119.034	0.52326	118.51074	PAF(HC)
NS0153	196	198	NS	X072453	072453	1	G	W	9.46	59.68	12.96	0.1161	0.09	0.535	1.53	0.06	0.014	3.69	3.68	0.067	0.15	5.12	1.88	7.15	15579	112.914	1.04652	111.86748	PAF(HC)
NS0153	208	210	NS	X072459	072459	1	G	W	8.1	61.91	12.97	0.0903	0.07	0.628	1.39	0.11	0.033	3.56	3.86	0.062	0.16	4.45	1.84	6.45	15585	108.936	1.91862	107.01738	PAF(HC)
NS0153	218	220	NS	X072464	072464	1	G	W	14.22	54	11.45	0.2451	0.19	0.518	2.53	0.44	0.133	3.47	2.06	0.068	0.26	5.61	1.97	7.84	15590	106.182	7.67448	98.50752	PAF(HC)
NS0153	216	218	NS	X072463	072463	1	G	W	9.5	61.48	12.53	0.0645	0.05	0.547	1.99	0.05	0.012	3.03	3.01	0.058	0.18	4.28	1.58	6.04	15589	92.718	0.8721	91.8459	PAF(HC)
NS0153	214	216	NS	X072462	072462	1	G	W	11	58.38	12.17	0.1548	0.12	0.521	2.08	0.07	0.016	2.96	3.01	0.056	0.23	5.24	1.98	7.45	15588	90.576	1.22094	89.35506	PAF(HC)
NS0153	198	200	NS	X072454	072454	1	G	W	9.26	59.05	13.49	0.1161	0.09	0.573	1.61	0.09	0.023	2.88	3.9	0.073	0.22	4.69	2	6.91	15580	88.128	1.56978	86.55822	PAF(HC)
NS0153	204	206	NS	X072457	072457	1	G	W	9.08	63.62	11.31	0.1161	0.09	0.483	1.67	0.07	0.017	2.44	2.83	0.066	0.22	4.33	1.47	6.02	15583	74.664	1.22094	73.44306	PAF(HC)
NS0153	206	208	NS	X072458	072458	1	G	W	9.29	63.68	11.51	0.0903	0.07	0.495	1.91	0.06	0.017	1.94	2.61	0.057	0.18	3.63	1.65	5.46	15584	59.364	1.04652	58.31748	PAF(HC)
NS0153	192	194	NS	X072451	072451	1	G	W	20.85	47.34	3.26	0.3741	0.29	0.127	2.74	0.58	0.117	1.2	0.59	0.009	0.39	11.83	2.8	15.02	15577	36.72	10.11636	26.60364	PAF(HC)
NS0153	148	150	NS	X072429	072429	1	G	W	23.68	42.95	4.77	0.6837	0.53	0.207	3.45	0.66	0.153	0.631	0.232	0.082	0.56	10.53	1.58	12.67	15555	19.3086	11.51172	7.79688	PAF(LC)
NS0153	220	222	NS	X072465	072465	1	G	W	20.08	46.27	5.42	0.4773	0.37	0.234	2.39	2.2	0.682	1.48	0.485	0.06	0.28	9.09	2.76	12.13	15591	45.288	38.3724	6.9156	PAF(LC)
NS0153	84	86	NS	X072396	072396	1	G	D	34.57	44.65	1.01	0.1548	0.12	0.041	0.27	0.07	0.099	0.194	0.061	0.005	2.48	0.72	0.54	3.74	15523	5.9364	1.22094	4.71546	PAF(LC)
NS0153	78	80	NS	X072393	072393	1	G	D	33.53	46.64	0.91	1.0965	0.85	0.037	0.21	0.06	0.075	0.043	0.093	0.0005	1.96	0.43	0.27	2.66	15520	1.3158	1.04652	0.26928	PAF(LC)
NS0153	76	78	NS	X072392	072392	1	G	D	27.49	50.74	2.65	0.2451	0.19	0.109	0.38	0.1	0.1	0.057	0.197	0.016	4.45	0.87	0.41	5.73	15519	1.7442	1.7442	0	PAF(LC)
NS0153	98	102	NS	BX066904-BX066905	X066904	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	64	-0.0306	-0.01744	-0.013158	NAF
NS0153	146	150	NS	BX066928-BX066929	X066928	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	76	-0.0306	-0.01744	-0.013158	NAF
NS0153	188	192	NS	BX066949-BX066950	X066949	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	86	-0.0306	-0.01744	-0.013158	NAF
NS0153	192	196	NS	BX066951-BX066952	X066951	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	87	-0.0306	-0.01744	-0.013158	NAF
NS0153	196	200	NS	BX066953-BX066954	X066953	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	88	-0.0306	-0.01744	-0.013158	NAF
NS0153	200	204	NS	BX066955-BX066956	X066955	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	89	-0.0306	-0.01744	-0.013158	NAF
NS0153	204	208	NS	BX066957-BX066958	X066957	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	90	-0.0306	-0.01744	-0.013158	NAF
NS0153	208	210	NS	BX066959	X066959	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	91	-0.0306	-0.01744	-0.013158	NAF
NS0153	212	216	NS	BX066961-BX066962	X066961	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	92	-0.0306	-0.01744	-0.013158	NAF
NS0153	216	220	NS	BX066963-BX066964	X066963	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	93	-0.0306	-0.01744	-0.013158	NAF
NS0153	220	224	NS	BX066965-BX066966	X066965	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	94	-0.0306	-0.01744	-0.013158	NAF
NS0153	224	228	NS	BX066967-BX066968	X066967	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	95	-0.0306	-0.01744	-0.013158	NAF
NS0153	228	232	NS	BX066969-BX066970	X066969	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	96	-0.0306	-0.01744	-0.013158	NAF
NS0153	88	90	NS	X072398	072398	1	G	W	25.57	49.07	4.19	0.3741	0.29	0.182	1.86	0.23	0.059	0.129	0.091	0.009	1.44	5.47	0.39	7.3	15525	3.9474	4.01166	-0.06426	NAF
NS0153	18	20	NS	X072363	072363	1	G	D	37.03	41.62	1.49	0.1548	0.12	0.064	0.16	0.03	0.01	0.015	0.005	0.009	2.53	0.63	0.19	3.35	15490	0.459	0.52326	-0.06426	NAF
NS0153	26	28	NS	X072367	072367	1	G	D	28.55	55.6	1.42	0.0645	0.05	0.058	0.04	0.02	0.035	0.004	0.01	0.005	0.99	0.54	0.14	1.67	15494	0.1224	0.34884	-0.22644	NAF
NS0153	28	30	NS	X072368	072368	1	G	D	25.14	59.62	2.49	0.0645	0.05	0.098	0.04	0.02	0.022	0.004	0.013	0.002	0.69	0.79	0.1	1.58	15495	0.1224	0.34884	-0.22644	NAF
NS0153	8	10	NS	X072358	072358	1	G	D	18.74	59.33	7.93	-0.0129	-0.01	0.242	0.05	0.05	0.006	0.02	0.016	0.035	2.93	2.46	0.26	5.65	15485	0.612	0.8721	-0.2601	NAF
NS0153	20	22	NS	X072364	072364	1	G	D	32.48	47.82	1.35	0.1032	0.08	0.048	0.09	0.03	0.038	0.008	0.007	0.019	2.98	0.61	0.16	3.75	15491	0.2448	0.52326	-0.27846	NAF
NS0153	16	18	NS	X072362	072362	1	G	D	35.41	43.3	1.73	0.1935	0.15	0.069	0.15	0.05	0.015	0.018	0.01	0.014	2.57	0.75	0.22	3.54	15489	0.5508	0.8721	-0.3213	NAF
NS0153	14	16	NS	X072361	072361	1	G	D	36.45	42.77	1.59	0.0774	0.06	0.066	0.07	0.04	0.02	0.012	0.005	0.005	2.38	0.62	0.13	3.13	15488	0.3672	0.69768	-0.33048	NAF
NS0153	22	24	NS	X072365	072365	1	G	D	35.59	44.33	1.2	0.1161	0.09	0.05	0.09	0.03	0.03	0.006	0.007	0.0005	2.38	0.52	0.19	3.09	15492	0.1836	0.52326	-0.33966	NAF
NS0153	24	26	NS	X072366	072366	1	G	D	34.84	44.95	1.58	0.1032	0.08	0.067	0.09	0.03	0.047	0.006	0.009	0.019	2.24	0.64	0.17	3.05	15493	0.1836	0.52326	-0.33966	NAF
NS0153	102	106	NS	BX066906-BX066907	X066906	2			69.38	2.665	0.121	0.008	0.00576	0.008	0.12	0.037	0.022	0.009	0.011	0.08	-0.01	-0.01	-0.01	-0.03	65	0.2754	0.645354	-0.369954	NAF
NS0153	36	38	NS	X072372	072372	1	G	D	33.47	46.57	1.51	0.6837	0.53	0.065	0.16	0.03	0.023	0.005	0.015	0.0005	2.18	0.63	0.07	2.88	15499	0.153	0.52326	-0.37026	NAF
NS0153	30	32	NS	X072369	072369	1	G	D	29.82	53.88	1.36	0.1548	0.12	0.06	0.08	0.03	0.012	0.004	0.008	0.009	1.25	0.49	0.03	1.77	15496	0.1224	0.52326	-0.40086	NAF
NS0153	32	34	NS	X072370	072370	1	G	D	26.6	57.94	1.17	0.3225	0.25	0.051	0.11	0.03	0.016	0.004	0.011	0.007	1.48	0.47	0.05	2	15497	0.1224	0.52326	-0.40086	NAF
NS0153	34	36	NS	X072371	072371	1	G	D	30.68	48.74	3.35	0.5805	0.45	0.141	0.15	0.03	0.03	0.004	0.014	0.01	1.96	1.18	0.12	3.26	15498	0.1224	0.52326	-0.40086	NAF
NS0153	38	40	NS	X072373	072373	1	G	D	37.68	41.37	1.32	0.4386	0.34	0.056	0.12	0.03	0.045	0.003	0.014	0.0005	1.89	0.52	0.04	2.45	15500	0.0918	0.52326	-0.43146	NAF
NS0153	4	6	NS	X072356	072356	1	G	D	30.57	44.16	5.68	0.0387	0.03	0.247	0.08	0.08	0.014	0.03	0.014	0.019	4.21	1.63	0.15	5.99	15483	0.918	1.39536	-0.47736	NAF
NS0153	244	248	NS	BX066977-BX066978	X066977	2			69.74	2.939	0.168	0.011	0.00792	0.011	0.205	0.051	0.01	0.011	0.009	0.075	-0.01	-0.01	-0.01	-0.03	100	0.3366	0.889542	-0.552942	NAF
NS0153	110	114	NS	BX066910-BX066911	X066910	2			69.49	2.287	0.079	0.007	0.00504	0.007	0.15	0.041	0.012	0.004	0.012	0.067	-0.01	-0.01	-0.01	-0.03	67	0.1224	0.715122	-0.592722	NAF
NS0153	106	110	NS	BX066908-BX066909	X066908	2			69.22	3.295	0.127	0.011	0.00792	0.011	0.213	0.047	0.011	0.007	0.02	0.067	-0.01	-0.01	-0.01	-0.03	66	0.2142	0.819774	-0.605574	NAF
NS0153	40	42	NS	X072374	072374	1	G	D	35.55	43.33	1.24	0.9675	0.75	0.053	0.16	0.04	0.06	0.003	0.055	0.01	2.17	0.51	0.08	2.76	15501	0.0918	0.69768	-0.60588	NAF
NS0153	42	44	NS	X072375	072375	1	G	D	35.72	44	0.93	0.8127	0.63	0.037	0.2	0.04	0.068	0.002	0.064	0.011	1.98	0.41	0.01	2.4	15502	0.0612	0.69768	-0.63648	NAF
NS0153	46	48	NS	X072377	072377	1	G	D	39.13	39.37	1.09	0.8256	0.64	0.048	0.28	0.04	0.065	0.002	0.151	0.009	1.89	0.36	-0.11	2.14	15504	0.0612	0.69768	-0.63648	NAF
NS0153	10	12	NS	X072359	072359	1	G	D	29.5	45.65	6.14	0.0774	0.06	0.266	0.11	0.07	0.011	0.019	0.012	0.047	3.35	1.91	0.26	5.52	15486	0.5814	1.22094	-0.63954	NAF
NS0153	118	122	NS	BX066914-BX066915	X066914	2			67.86	2.91	0.158	0.004	0.00288	0.004	0.236	0.05	0.007	0.007	0.004	0.109	-0.01	-0.01	-0.01	-0.03	69	0.2142	0.8721	-0.6579	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0153	72	74	NS	X072390	072390	1	G	D	33.59	45.55	1.52	0.2838	0.22	0.056	0.3	0.08	0.068	0.023	0.108	0.005	2.71	0.57	0.28	3.56	15517	0.7038	1.39536	-0.69156	NAF
NS0153	114	118	NS	BX066912-BX066913	X066912	2			69.08	2.749	0.123	0.012	0.00864	0.012	0.229	0.057	0.01	0.009	0.027	0.095	-0.01	-0.01	-0.01	-0.03	68	0.2754	0.994194	-0.718794	NAF
NS0153	252	256	NS	BX066981-BX066982	X066981	2			69.67	2.324	0.084	0.001	0.00072	0.001	0.178	0.047	0.008	0.002	0.003	0.066	-0.01	-0.01	-0.01	-0.03	102	0.0612	0.819774	-0.758574	NAF
NS0153	156	160	NS	BX066933-BX066934	X066933	2			69.54	2.383	0.103	0.011	0.00792	0.011	0.226	0.06	0.009	0.009	0.004	0.076	-0.01	-0.01	-0.01	-0.03	78	0.2754	1.04652	-0.77112	NAF
NS0153	90	92	NS	X072399	072399	1	G	D	34.82	46.72	1.02	0.0387	0.03	0.048	0.25	0.06	0.062	0.008	0.276	0.007	1	0.36	0.13	1.49	15526	0.2448	1.04652	-0.80172	NAF
NS0153	6	8	NS	X072357	072357	1	G	D	29.79	45.22	4.5	0.0258	0.02	0.341	0.08	0.09	0.012	0.025	0.02	0.017	5.28	1.37	0.26	6.91	15484	0.765	1.56978	-0.80478	NAF
NS0153	240	244	NS	BX066975-BX066976	X066975	2			69.69	2.868	0.047	0.01	0.0072	0.01	0.185	0.055	0.012	0.004	0.008	0.074	-0.01	-0.01	-0.01	-0.03	99	0.1224	0.95931	-0.83691	NAF
NS0153	142	146	NS	BX066926-BX066927	X066926	2			70.94	1.388	0.074	0.01	0.0072	0.01	0.217	0.063	0.011	0.008	0.004	0.082	-0.01	-0.01	-0.01	-0.03	75	0.2448	1.098846	-0.854046	NAF
NS0153	130	134	NS	BX066920-BX066921	X066920	2			67.48	3.023	0.156	0.002	0.00144	0.002	0.249	0.072	0.011	0.013	0.006	0.119	-0.01	-0.01	-0.01	-0.03	72	0.3978	1.255824	-0.858024	NAF
NS0153	80	82	NS	X072394	072394	1	G	D	33.88	46.04	1.38	0.7998	0.62	0.064	0.34	0.08	0.044	0.017	0.153	0.007	1.81	0.54	0.2	2.55	15521	0.5202	1.39536	-0.87516	NAF
NS0153	126	130	NS	BX066918-BX066919	X066918	2			70.07	2.455	0.099	0.009	0.00648	0.009	0.192	0.061	0.013	0.006	0.004	0.082	-0.01	-0.01	-0.01	-0.03	71	0.1836	1.063962	-0.880362	NAF
NS0153	248	252	NS	BX066979-BX066980	X066979	2			70.01	2.538	0.094	0.013	0.00936	0.013	0.203	0.059	0.011	0.004	0.005	0.081	-0.01	-0.01	-0.01	-0.03	101	0.1224	1.029078	-0.906678	NAF
NS0153	164	168	NS	BX066937-BX066938	X066937	2			68.82	3.332	0.183	0.014	0.01008	0.014	0.227	0.07	0.011	0.01	0.009	0.071	-0.01	-0.01	-0.01	-0.03	80	0.306	1.22094	-0.91494	NAF
NS0153	172	176	NS	BX066941-BX066942	X066941	2			70.2	3.384	0.074	0.01	0.0072	0.01	0.175	0.056	0.01	0.002	0.029	0.079	-0.01	-0.01	-0.01	-0.03	82	0.0612	0.976752	-0.915552	NAF
NS0153	0	2	NS	X072354	072354	1	G	D	34.26	34.6	7.66	0.0645	0.05	0.399	0.2	0.14	0.019	0.048	0.096	0.028	5.19	2.04	0.39	7.62	15481	1.4688	2.44188	-0.97308	NAF
NS0153	48	50	NS	X072378	072378	1	G	D	35.58	43.97	1.14	0.9933	0.77	0.05	0.3	0.06	0.053	0.002	0.184	0.002	1.96	0.41	0.01	2.38	15505	0.0612	1.04652	-0.98532	NAF
NS0153	12	14	NS	X072360	072360	1	G	D	31.69	44.2	4.14	0.1032	0.08	0.172	0.12	0.09	0.026	0.019	0.007	0.042	3.72	1.44	0.25	5.41	15487	0.5814	1.56978	-0.98838	NAF
NS0153	52	54	NS	X072380	072380	1	G	D	33.3	48	1.09	0.4386	0.34	0.046	0.25	0.06	0.046	0.001	0.243	0.006	1.61	0.36	0.1	2.07	15507	0.0306	1.04652	-1.01592	NAF
NS0153	168	172	NS	BX066939-BX066940	X066939	2			69.64	3.345	0.105	0.01	0.0072	0.01	0.182	0.067	0.011	0.004	0.021	0.077	-0.01	-0.01	-0.01	-0.03	81	0.1224	1.168614	-1.046214	NAF
NS0153	180	184	NS	BX066945-BX066946	X066945	2			71.2	1.41	0.06	0.009	0.00648	0.009	0.19	0.068	0.012	0.003	0.003	0.062	-0.01	-0.01	-0.01	-0.03	84	0.0918	1.186056	-1.094256	NAF
NS0153	184	188	NS	BX066947-BX066948	X066947	2			70.12	2.329	0.116	0.011	0.00792	0.011	0.213	0.07	0.011	0.004	0.007	0.067	-0.01	-0.01	-0.01	-0.03	85	0.1224	1.22094	-1.09854	NAF
NS0153	236	240	NS	BX066973-BX066974	X066973	2			71.02	2.576	0.069	0.012	0.00864	0.012	0.226	0.078	0.016	0.008	0.003	0.083	-0.01	-0.01	-0.01	-0.03	98	0.2448	1.360476	-1.115676	NAF
NS0153	2	4	NS	X072355	072355	1	G	D	28.21	44.19	8.1	-0.0129	-0.01	0.375	0.08	0.1	0.013	0.02	0.032	0.045	4.38	2.27	0.28	6.93	15482	0.612	1.7442	-1.1322	NAF
NS0153	44	46	NS	X072376	072376	1	G	D	37.3	39.54	2.25	0.8772	0.68	0.099	0.26	0.07	0.08	0.002	0.159	0.008	2.53	0.76	0.12	3.41	15503	0.0612	1.22094	-1.15974	NAF
NS0153	50	52	NS	X072379	072379	1	G	D	30.12	52.28	1.09	0.5934	0.46	0.048	0.27	0.07	0.035	0.002	0.193	0.011	1.51	0.37	0.12	2	15506	0.0612	1.22094	-1.15974	NAF
NS0153	176	180	NS	BX066943-BX066944	X066943	2			69.1	3.817	0.125	0.008	0.00576	0.008	0.228	0.08	0.015	0.005	0.012	0.072	-0.01	-0.01	-0.01	-0.03	83	0.153	1.39536	-1.24236	NAF
NS0153	160	164	NS	BX066935-BX066936	X066935	2			70.19	2.993	0.083	0.01	0.0072	0.01	0.227	0.081	0.015	0.004	0.007	0.067	-0.01	-0.01	-0.01	-0.03	79	0.1224	1.412802	-1.290402	NAF
NS0153	152	156	NS	BX066931-BX066932	X066931	2			68.33	3.525	0.18	0.014	0.01008	0.014	0.314	0.097	0.01	0.013	0.009	0.074	-0.01	-0.01	-0.01	-0.03	77	0.3978	1.691874	-1.294074	NAF
NS0153	138	142	NS	BX066924-BX066925	X066924	2			69.17	3.038	0.109	0.013	0.00936	0.013	0.273	0.09	0.017	0.009	0.006	0.091	-0.01	-0.01	-0.01	-0.03	74	0.2754	1.56978	-1.29438	NAF
NS0153	68	70	NS	X072388	072388	1	G	D	28.25	52.83	1.5	0.7353	0.57	0.065	0.43	0.08	0.047	0.003	0.192	0.019	2.88	0.68	0.18	3.74	15515	0.0918	1.39536	-1.30356	NAF
NS0153	256	258	NS	BX066983	X066983	2			66.87	4.518	0.279	0.016	0.01152	0.016	0.361	0.082	0.01	0.004	0.021	0.102	-0.01	0.45	-0.01	0.43	103	0.1224	1.430244	-1.307844	NAF
NS0153	56	58	NS	X072382	072382	1	G	D	35.49	43.73	1.51	0.4773	0.37	0.067	0.37	0.08	0.045	0.002	0.377	0.012	2.06	0.5	0.1	2.66	15509	0.0612	1.39536	-1.33416	NAF
NS0153	54	56	NS	X072381	072381	1	G	D	34.98	44.15	1.65	0.6063	0.47	0.074	0.41	0.08	0.039	0.001	0.375	0.016	1.79	0.51	0.2	2.5	15508	0.0306	1.39536	-1.36476	NAF
NS0153	122	126	NS	BX066916-BX066917	X066916	2			65.37	4.439	0.183	0.004	0.00288	0.004	0.315	0.094	0.015	0.008	0.008	0.127	-0.01	-0.01	-0.01	-0.03	70	0.2448	1.639548	-1.394748	NAF
NS0153	82	84	NS	X072395	072395	1	G	D	28.37	49.52	3.05	0.9288	0.72	0.139	0.8	0.11	0.048	0.01	0.303	0.016	2.74	1.08	0.29	4.11	15522	0.306	1.91862	-1.61262	NAF
NS0153	92	94	NS	X072401	072401	1	G	W	38.76	37.59	1.51	0.0903	0.07	0.067	0.34	0.11	0.104	0.007	0.309	0.003	3.49	0.6	0.17	4.26	15527	0.2142	1.91862	-1.70442	NAF
NS0153	96	98	NS	X072403	072403	1	G	D	38.64	37.87	1.01	0.2322	0.18	0.044	0.35	0.11	0.104	0.007	0.044	0.002	4.17	0.66	0.18	5.01	15529	0.2142	1.91862	-1.70442	NAF
NS0153	108	110	NS	X072409	072409	1	G	M	27.06	39.04	4.5	0.5547	0.43	0.195	3.26	0.44	0.092	0.195	0.2	0.025	0.64	11.55	0.43	12.62	15535	5.967	7.67448	-1.70748	NAF
NS0153	134	138	NS	BX066922-BX066923	X066922	2			66.7	3.636	0.154	0.001	0.00072	0.001	0.332	0.13	0.023	0.014	0.001	0.11	-0.01	-0.01	-0.01	-0.03	73	0.4284	2.26746	-1.83906	NAF
NS0153	94	96	NS	X072402	072402	1	G	W	36.95	38.97	2.16	0.2967	0.23	0.097	0.54	0.17	0.11	0.03	0.157	0.025	3.46	0.83	0.26	4.55	15528	0.918	2.96514	-2.04714	NAF
NS0153	70	72	NS	X072389	072389	1	G	D	27.11	50.57	2.78	1.0449	0.81	0.102	0.54	0.13	0.099	0.005	0.24	0.024	4.05	1.11	0.28	5.44	15516	0.153	2.26746	-2.11446	NAF
NS0153	62	64	NS	X072385	072385	1	G	D	28.51	51.47	1.98	0.6063	0.47	0.088	0.62	0.13	0.045	0.002	0.261	0.02	2.86	0.82	0.16	3.84	15512	0.0612	2.26746	-2.20626	NAF
NS0153	64	66	NS	X072386	072386	1	G	D	30.31	45.74	2.8	0.8127	0.63	0.123	0.82	0.13	0.065	0.001	0.393	0.022	4.04	1.13	0.19	5.36	15513	0.0306	2.26746	-2.23686	NAF
NS0153	232	236	NS	BX066971-BX066972	X066971	2			69.36	2.379	0.065	0.011	0.00792	0.011	0.244	0.141	0.032	0.003	0.004	0.075	-0.01	-0.01	-0.01	-0.03	97	0.0918	2.459322	-2.367522	NAF
NS0153	102	104	NS	X072406	072406	1	G	D	36.35	41.49	0.85	0.1935	0.15	0.04	0.39	0.16	0.105	0.008	0.161	0.013	3.15	1.27	0.13	4.55	15532	0.2448	2.79072	-2.54592	NAF
NS0153	246	248	NS	X072478	072478	1	G	W	27.97	35.18	2.83	0.5289	0.41	0.125	2.59	0.48	0.085	0.177	0.015	0.008	0.77	16.52	0.56	17.85	15604	5.4162	8.37216	-2.95596	NAF
NS0153	98	100	NS	X072404	072404	1	G	D	32.3	42.83	1.02	0.2838	0.22	0.04	0.71	0.31	0.133	0.073	0.043	0.01	4.56	3.06	0.33	7.95	15530	2.2338	5.40702	-3.17322	NAF
NS0153	66	68	NS	X072387	072387	1	G	D	26.87	50.62	2.95	0.8901	0.69	0.128	0.9	0.2	0.062	0.003	0.294	0.031	4.06	1.22	0.26	5.54	15514	0.0918	3.4884	-3.3966	NAF
NS0153	58	60	NS	X072383	072383	1	G	D	27.02	46.87	5.54	0.4644	0.36	0.243	1.29	0.21	0.056	0.002	0.526	0.033	3.62	1.82	0.25	5.69	15510	0.0612	3.66282	-3.60162	NAF
NS0153	164	166	NS	X072437	072437	1	G	W	29.09	36.06	4.52	0.5547	0.43	0.198	3.28	0.79	0.192	0.324	0.186	0.064	0.58	11.32	0.72	12.62	15563	9.9144	13.77918	-3.86478	NAF
NS0153	176	178	NS	X072443	072443	1	G	W	32.23	36.9	2.15	0.6192	0.48	0.096	2.08	0.59	0.118	0.209	0.214	0.052	0.44	9.86	0.36	10.66	15569	6.3954	10.29078	-3.89538	NAF
NS0153	110	112	NS	X072410	072410	1	G	D	31.7	42.03	1.48	0.5031	0.39	0.063	1.5	0.35	0.088	0.064	0.183	0.014	1.08	7.08	0.01	8.17	15536	1.9584	6.1047	-4.1463	NAF
NS0153	104	106	NS	X072407	072407	1	G	D	30.48	47.66	0.64	0.3999	0.31	0.026	0.71	0.27	0.107	0.014	0.223	0.011	1.15	4.61	0.12	5.88	15533	0.4284	4.70934	-4.28094	NAF
NS0153	116	118	NS	X072413	072413	1	G	W	30.85	36.59	1.22	0.645	0.5	0.047	1.69	0.35	0.065	0.047	0.117	0.0005	2.04	12.73	0.13	14.9	15539	1.4382	6.1047	-4.6665	NAF
NS0153	106	108	NS	X072408	072408	1	G	D	31.19	43.47	0.91	0.4773	0.37	0.036	1.12	0.32	0.089	0.029	0.25	0.011	1.42	6.8	0.02	8.24	15534	0.8874	5.58144	-4.69404	NAF
NS0153	126	128	NS	X072418	072418	1	G	W	31.45	38.49	1.69	0.5805	0.45	0.071	1.66	0.46	0.097	0.108	0.06	0.007	1.25	9.93	0.29	11.47	15544	3.3048	8.02332	-4.71852	NAF
NS0153	112	114	NS	X072411	072411	1	G	D	35.33	36.57	1.1	0.516	0.4	0.046	1.55	0.32	0.076	0.026	0.288	0.007	1.1	8.11	-0.1	9.11	15537	0.7956	5.58144	-4.78584	NAF
NS0153	244	246	NS	X072477	072477	1	G	W	34.26	39.12	0.96	0.6063	0.47	0.042	1.52	0.36	0.068	0.045	0.119	0.077	0.34	7.7	-0.22	7.82	15603	1.377	6.27912	-4.90212	NAF
NS0153	118	120	NS	X072414	072414	1	G	W	31.11	37.3	1.37	0.5805	0.45	0.056	1.66	0.41	0.093	0.064	0.123	0.014	2.36	11.12	0.19	13.67	15540	1.9584	7.15122	-5.19282	NAF
NS0153	120	122	NS	X072415	072415	1	G	W	30.7	34.37	1.15	0.6192	0.48	0.049	2.11	0.41	0.053	0.062	0.051	0.0005	1.14	15.71	0.12	16.97	15541	1.8972	7.15122	-5.25402	NAF
NS0153	60	62	NS	X072384	072384	1	G	D	26.68	47.52	5.48	0.2838	0.22	0.235	1.56	0.31	0.069	0.002	0.556	0.022	3.32	1.81	0.29	5.42	15511	0.0612	5.40702	-5.34582	NAF
NS0153	162	164	NS	X072436	072436	1	G	W	32.81	32.93	2.14	0.6063	0.47	0.091	2.67	0.54	0.092	0.133	0.129	0.027	0.5	12.81	0.23	13.54	15562	4.0698	9.41868	-5.34888	NAF
NS0153	86	88	NS	X072397	072397	1	G	D	29.05	34.65	3.46	0.9288	0.72	0.143	2.73	0.66	0.153	0.197	0.026	0.011	0.84	13.76	0.59	15.19	15524	6.0282	11.51172	-5.48352	NAF
NS0153	186	188	NS	X072448	072448	1	G	W	29.89	34.1	2.17	0.5676	0.44	0.091	2.68	0.63	0.099	0.156	0.019	0.0005	0.62	15.68	0.35	16.65	15574	4.7736	10.98846	-6.21486	NAF
NS0153	256	258	NS	X072483	072483	1	G	W	28.2	39.16	3.17	0.5418	0.42	0.135	2.78	0.57	0.085	0.12	0.072	0.147	0.5	11.94	0.17	12.61	15609	3.672	9.94194	-6.26994	NAF
NS0153	188	190	NS	X072449	072449	1	G	W	29.34	31.83	1.32	0.4773	0.37	0.055	2.7	0.74	0.098	0.211	0.004	0.007	0.68	19.24	0.54	20.46	15575	6.4566	12.90708	-6.45048	NAF
NS0153	114	116	NS	X072412	072412	1	G	W	30.68	33.48	0.96	0.6708	0.52	0.04	2.21	0.49	0.072	0.067	0.336	0.004	1.06	16.36	0.11	17.53	15538	2.0502	8.54658	-6.49638	NAF
NS0153	130	132	NS	X072420	072420	1	G	W	30.52	32.35	2.2	0.5547	0.43	0.093	2.58	0.6	0.103	0.128	0.027	0.009	0.82	16.46	0.33	17.61	15546	3.9168	10.4652	-6.5484	NAF
NS0153	140	142	NS	X072425	072425	1	G	W	31.06	33.2	1.47	0.6192	0.48	0.061	2.54	0.64	0.095	0.15	0.14	0.019	0.57	15.46	0.44	16.47	15551	4.59	11.16288	-6.57288	NAF
NS0153	134	136	NS	X072422	072422	1	G	W	29.4	31.08	1.58	0.7611	0.59	0.065	2.81	0.69	0.11	0.167	0.055	0.006	0.67	19.12	0.56	20.35	15548	5.1102	12.03498	-6.92478	NAF
NS0153	138	140	NS	X072424	072424	1	G	W	32.18	35.74	0.94	0.6063	0.47	0.04	1.9	0.5	0.083	0.042	0.05	0.013	0.56	13.02	0.15	13.73	15550	1.2852	8.721	-7.4358	NAF
NS0153	242	244	NS	X072476	072476	1	G	W	35.95	36.85	0.88	0.6063	0.47	0.039	1.64	0.49	0.112	0.027	0.189	0.205	0.28	7.22	-0.29	7.21	15602	0.8262	8.54658	-7.72038	NAF
NS0153	170	172	NS	X072440	072440	1	G	W	34.51	38.17	1.21	0.6063	0.47	0.051	1.61	0.54	0.103	0.054	0.228	0.03	0.32	7.99	-0.19	8.12	15566	1.6524	9.41868	-7.76628	NAF
NS0153	180	182	NS	X072445	072445	1	G	W	34.56	35.58	1.62	0.5934	0.46	0.071	1.96	0.6	0.08	0.087	0.131	0.027	0.41	9.17	-0.15	9.43	15571	2.6622	10.4652	-7.803	NAF
NS0153	172	174	NS	X072441	072441	1	G	W	32.21	34.62	2.23	0.6837	0.53	0.099	2.51	0.81	0.159	0.2	0.687	0.099	0.52	10.73	0.38	11.63	15567	6.12	14.12802	-8.00802	NAF
NS0153	128	130	NS	X072419	072419	1	G	W	32.8	36.64	1.08	0.5547	0.43	0.048	1.74	0.52	0.093	0.023	0.074	0.007	0.72	11.28	-0.09	11.91	15545	0.7038	9.06984	-8.36604	NAF
NS0153	190	192	NS	X072450	072450	1	G	W	28.46	33.09	0.82	0.3999	0.31	0.03	3.03	0.57	0.062	0.046	0.028	0.0005	0.91	19.78	0.22	20.91	15576	1.4076	9.94194	-8.53434	NAF
NS0153	146	148	NS	X072428	072428	1	G	W	28.6	35.91	1.56	0.7353	0.57	0.064	2.67	0.77	0.137	0.158	0.094	0.034	0.53	15.68	0.54	16.75	15554	4.8348	13.43034	-8.59554	NAF
NS0153	144	146	NS	X072427	072427	1	G	W	31.85	33.63	1.1	0.645	0.5	0.049	2.4	0.65	0.086	0.088	0.078	0.024	0.57	14.58	0.27	15.42	15553	2.6928	11.3373	-8.6445	NAF
NS0153	226	228	NS	X072468	072468	1	G	W	28.39	35.22	0.69	0.4644	0.36	0.028	2.41	0.54	0.057	0.025	0.013	0.0005	0.93	18.96	0.16	20.05	15594	0.765	9.41868	-8.65368	NAF
NS0153	224	226	NS	X072467	072467	1	G	W	25.32	40.96	0.83	0.5031	0.39	0.031	2.41	0.58	0.086	0.046	0.018	0.003	0.88	16.9	0.24	18.02	15593	1.4076	10.11636	-8.70876	NAF
NS0153	248	250	NS	X072479	072479	1	G	W	30.17	42.39	0.96	0.3999	0.31	0.043	1.43	0.56	0.071	0.033	0.061	0.015	0.45	10.29	-0.11	10.63	15605	1.0098	9.76752	-8.75772	NAF
NS0153	238	240	NS	X072474	072474	1	G	W	32.63	34.78	0.72	0.5418	0.42	0.03	1.94	0.58	0.098	0.043	0.03	0.103	0.71	13.9	-0.05	14.56	15600	1.3158	10.11636	-8.80056	NAF
NS0153	124	126	NS	X072417	072417	1	G	W	26.55	40.38	1.59	0.645	0.5	0.068	2.08	0.62	0.123	0.058	0.028	0.0005	1.19	14.7	0.15	16.04	15543	1.7748	10.81404	-9.03924	NAF
NS0153	132	134	NS	X072421	072421	1	G	W	27.58	39.46	1.22	0.5934	0.46	0.053	2.15	0.75	0.16	0.129	0.063	0.014	1.13	14.41	0.35	15.89	15547	3.9474	13.0815	-9.1341	NAF
NS0153	100	102	NS	X072405	072405	1	G	D	26.83	40.45	3.46	0.7998	0.62	0.161	2.25	0.82	0.214	0.167	0.099	0.032	1.65	10.82	0.52	12.99	15531	5.1102	14.30244	-9.19224	NAF
NS0153	122	124	NS	X072416	072416	1	G	W	31.34	29.14	1.31	0.7611	0.59	0.051	2.47	0.59	0.088	0.032	0.018	0.0005	1.18	19.11	0.12	20.41	15542	0.9792	10.29078	-9.31158	NAF
NS0153	174	176	NS	X072442	072442	1	G	W	35.64	40.97	0.76	0.6063	0.47	0.036	1.1	0.58	0.089	0.01	0.329	0.018	0.16	4.56	-0.26	4.46	15568	0.306	10.11636	-9.81036	NAF
NS0153	156	158	NS	X072433	072433	1	G	W	27.65	44.2	1.27	0.5547	0.43	0.05	2.03	0.85	0.104	0.163	0.073	0.026	0.43	9.92	0.31	10.66	15559	4.9878	14.8257	-9.8379	NAF
NS0153	254	256	NS	X072482	072482	1	G	W	30.49	38.67	1.01	0.5934	0.46	0.042	2.1	0.61	0.083	0.017	0.068	0.237	0.53	12.32	-0.14	12.71	15608	0.5202	10.63962	-10.11942	NAF
NS0153	136	138	NS	X072423	072423	1	G	W	30.79	30.5	1.49	0.7224	0.56	0.063	2.72	0.77	0.137	0.106	0.061	0.018	0.64	18.38	0.38	19.4	15549	3.2436	13.43034	-10.18674	NAF
NS0153	228	230	NS	X072469	072469	1	G	W	30.9	29.62	0.77	0.5031	0.39	0.03	2.25	0.63	0.089	0.023	0.011	0.0005	1.15	20.27	0.15	21.57	15595	0.7038	10.98846	-10.28466	NAF
NS0153	150	152	NS	X072430	072430	1	G	W	27.09	45.5	1.73	0.5547	0.43	0.073	1.95	0.94	0.112	0.199	0.094	0.023	0.42	8.75	0.58	9.75	15556	6.0894	16.39548	-10.30608	NAF
NS0153	240	242	NS	X072475	072475	1	G	W	32.76	34.97	0.82	0.5676	0.44	0.036	2.15	0.74	0.148	0.079	0.079	0.321	0.51	12.5	-0.02	12.99	15601	2.4174	12.90708	-10.48968	NAF
NS0153	166	168	NS	X072438	072438	1	G	W	33.56	34.62	1.87	0.6192	0.48	0.078	2.3	0.78	0.07	0.098	0.161	0.048	0.43	10.73	0.07	11.23	15564	2.9988	13.60476	-10.60596	NAF
NS0153	230	232	NS	X072470	072470	1	G	W	31.17	30.87	0.71	0.5031	0.39	0.027	1.97	0.73	0.084	0.048	0.013	0.013	0.94	18.95	0.13	20.02	15596	1.4688	12.73266	-11.26386	NAF
NS0153	232	234	NS	X072471	072471	1	G	W	30.3	35.17	0.73	0.5418	0.42	0.03	2.06	0.71	0.094	0.03	0.041	0.024	0.71	16.48	0.02	17.21	15597	0.918	12.38382	-11.46582	NAF
NS0153	184	186	NS	X072447	072447	1	G	W	34.9	37.24	0.96	0.6321	0.49	0.041	1.53	0.71	0.08	0.029	0.125	0.031	0.36	8.29	-0.23	8.42	15573	0.8874	12.38382	-11.49642	NAF
NS0153	250	252	NS	X072480	072480	1	G	W	31.15	35.42	1.31	0.645	0.5	0.056	2.3	0.74	0.129	0.039	0.052	0.027	0.51	14.26	-0.08	14.69	15606	1.1934	12.90708	-11.71368	NAF
NS0153	142	144	NS	X072426	072426	1	G	W	26.5	43.24	0.55	0.5418	0.42	0.022	2.05	0.7	0.11	0.016	0.094	0.027	0.62	13.6	0.25	14.47	15552	0.4896	12.2094	-11.7198	NAF
NS0153	252	254	NS	X072481	072481	1	G	W	31.67	32	1.29	0.7482	0.58	0.056	2.39	0.76	0.114	0.029	0.064	0.021	0.63	16.19	-0.04	16.78	15607	0.8874	13.25592	-12.36852	NAF
NS0153	236	238	NS	X072473	072473	1	G	W	27.85	36.16	0.83	0.4644	0.36	0.033	2.2	0.8	0.158	0.044	0.006	0.0005	1.08	17.97	0.19	19.24	15599	1.3464	13.9536	-12.6072	NAF
NS0153	178	180	NS	X072444	072444	1	G	W	34.52	36.05	1.01	0.7611	0.59	0.043	1.69	0.82	0.113	0.042	0.128	0.047	0.42	9.56	-0.12	9.86	15570	1.2852	14.30244	-13.01724	NAF
NS0153	234	236	NS	X072472	072472	1	G	W	29.97	37.31	0.77	0.5805	0.45	0.031	1.71	0.8	0.113	0.03	0.073	0.026	1.73	13.61	-0.1	15.24	15598	0.918	13.9536	-13.0356	NAF
NS0153	152	154	NS	X072431	072431	1	G	W	30.67	44.21	1.08	0.5418	0.42	0.045	1.49	0.87	0.076	0.054	0.104	0.047	0.32	7.07	0.08	7.47	15557	1.6524	15.17454	-13.52214	NAF
NS0153	158	160	NS	X072434	072434	1	G	W	35.87	30.64	1.42	0.6837	0.53	0.059	2.46	0.99	0.103	0.031	0.173	0.058	0.45	11.47	0	11.92	15560	0.9486	17.26758	-16.31898	NAF
NS0153	154	156	NS	X072432	072432	1	G	W	35.77	27.88	1.89	0.7611	0.59	0.086	2.71	1.17	0.175	0.102	0.14	0.047	0.46	13.04	0.07	13.57	15558	3.1212	20.40714	-17.28594	NAF
NS0153	182	184	NS	X072446	072446	1	G	W	35.75	33.64	1.05	0.6837	0.53	0.047	1.99	1.16	0.124	0.083	0.136	0.035	0.39	9.36	0.05	9.8	15572	2.5398	20.23272	-17.69292	NAF
NS0153	160	162	NS	X072435	072435	1	G	W	34.37	38.37	0.78	0.6063	0.47	0.034	1.8	1.07	0.135	0.022	0.109	0.023	0.33	7.65	-0.01	7.97	15561	0.6732	18.66294	-17.98974	NAF
NS0153	168	170	NS	X072439	072439	1	G	W	36.21	36.79	1.11	0.6063	0.47	0.05	1.36	1.1	0.14	0.037	0.244	0.053	0.32	6.45	-0.03	6.74	15565	1.1322	19.1862	-18.054	NAF
NS0153	222	224	NS	X072466	072466	1	G	W	26.42	36.38	1.32	0.7224	0.56	0.059	2.35	1.71	0.485	0.328	0.05	0.017	0.63	16.97	0.95	18.55	15592	10.0368	29.82582	-19.78902	NAF
NS0154	200	204	NS	BX079585-BX079586	X079585	2			56.19	7.885	0.347	0.001	0.00072	0.001	0.382	0.133	0.018	18.996	0.088	0.205	-0.01	-0.01	-0.01	-0.03	1304	581.278	2.319786	578.95781	PAF(HC)
NS0154	216	220	NS	BX079593-BX079594	X079593	2			65.95	3.841	0.306	0.015	0.0108	0.015	0.235	0.046	0.017	1.981	0.029	0.119	-0.01	-0.01	-0.01	-0.03	1308	60.6186	0.802332	59.816268	PAF(HC)
NS0154	238	242	NS	BX079605-BX079606	X079605	2			60.53	12.69	0.442	0.058	0.04176	0.058	0.504	0.135	0.021	1.676	0.137	0.106	-0.01	-0.01	-0.01	-0.03	1314	51.2856	2.35467	48.93093	PAF(HC)
NS0154	220	222	NS	X072595	072595	1	G	W	25.65	41.36	3.6	0.4644	0.36	0.165	3.59	1.12	0.07	1.62	1.04	0.305	0.98	7.22	2.76	10.96	15720	49.572	19.53504	30.03696	PAF(HC)
NS0154	196	200	NS	BX079583-BX079584	X079583	2			67.29	5.874	0.203	0.03	0.0216	0.03	0.322	0.095	0.019	0.662	0.066	0.095	-0.01	-0.01	-0.01	-0.03	1303	20.2572	1.65699	18.60021	PAF(HC)

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0154	202	204	NS	X072586	072586	1	G	W	26.77	40.49	7.38	0.1935	0.15	0.34	4.71	0.3	0.057	0.721	1.41	0.429	1.49	2.51	1.48	5.48	15711	22.0626	5.2326	16.83	PAF(HC)
NS0154	232	234	NS	X072602	072602	1	G	W	26.95	37.66	3.86	0.5547	0.43	0.184	3.98	1.57	0.097	1.24	1.05	0.301	1.09	8.57	2.2	11.86	15726	37.944	27.38394	10.56006	PAF(HC)
NS0154	204	206	NS	X072587	072587	1	G	W	22.73	49.04	5.62	0.2451	0.19	0.266	3.39	0.73	0.121	0.575	1.14	0.338	1.16	3.68	1.26	6.1	15712	17.595	12.73266	4.86234	PAF(LC)
NS0154	126	128	NS	X072547	072547	1	G	W	24.21	47.01	3.97	0.387	0.3	0.177	3.41	0.56	0.117	0.44	1.35	0.38	1.36	5.13	1.17	7.66	15673	13.464	9.76752	3.69648	PAF(LC)
NS0154	88	90	NS	X072528	072528	1	G	W	26.89	44.36	3.16	0.4257	0.33	0.145	3.09	0.43	0.085	0.354	0.769	0.23	0.98	6.79	0.77	8.54	15654	10.8324	7.50006	3.33234	PAF(LC)
NS0154	216	218	NS	X072593	072593	1	G	W	26.21	45.52	6.09	0.1548	0.12	0.29	3.4	0.3	0.052	0.235	0.799	0.231	1.34	3.4	0.79	5.53	15718	7.191	5.2326	1.9584	PAF(LC)
NS0154	206	208	NS	X072588	072588	1	G	W	21.52	50.18	6.82	0.2193	0.17	0.328	3.46	0.8	0.072	0.505	0.849	0.262	0.99	3.48	1.18	5.65	15713	15.453	13.9536	1.4994	PAF(LC)
NS0154	236	238	NS	X072604	072604	1	G	W	26.02	40.93	3.36	0.4515	0.35	0.157	3.21	1.35	0.061	0.795	1.1	0.287	1.23	8.39	1.58	11.2	15728	24.327	23.5467	0.7803	PAF(LC)
NS0154	126	130	NS	BX079547-BX079548	X079547	2			69.46	3.594	0.202	0.059	0.04248	0.059	0.256	0.069	0.012	0.055	0.058	0.178	-0.01	-0.01	-0.01	-0.03	1429	1.683	1.203498	0.479502	PAF(LC)
NS0154	218	220	NS	X072594	072594	1	G	W	24.98	43.41	6.57	0.1935	0.15	0.311	4.25	0.49	0.114	0.293	1.04	0.295	1.25	5	1	7.25	15719	8.9658	8.54658	0.41922	PAF(LC)
NS0154	138	140	NS	X072554	072554	1	G	W	27.74	40.98	3.82	0.4128	0.32	0.176	3.37	0.71	0.11	0.417	1.42	0.424	1.45	5.55	1.17	8.17	15679	12.7602	12.38382	0.37638	PAF(LC)
NS0154	200	202	NS	X072585	072585	1	G	W	27.45	39.39	2.39	0.3096	0.24	0.113	3.07	0.49	0.076	0.289	0.793	0.231	1.27	11.45	0.79	13.51	15710	8.8434	8.54658	0.29682	PAF(LC)
NS0154	112	114	NS	X072540	072540	1	G	W	25.66	42.84	5.12	0.4257	0.33	0.237	3.52	1.25	0.099	0.715	1.1	0.329	1.09	4.43	1.72	7.24	15666	21.879	21.8025	0.0765	PAF(LC)
NS0154	164	168	NS	BX079567-BX079568	X079567	2			67.78	4.582	0.224	0.034	0.02448	0.034	0.329	0.088	0.014	0.052	0.06	0.09	-0.01	-0.01	-0.01	-0.03	1439	1.5912	1.534896	0.056304	PAF(LC)
NS0154	204	208	NS	BX079587-BX079588	X079587	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1305	-0.0306	-0.01744	-0.013158	NAF
NS0154	208	210	NS	BX079589	X079589	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1306	-0.0306	-0.01744	-0.013158	NAF
NS0154	212	216	NS	BX079591-BX079592	X079591	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1307	-0.0306	-0.01744	-0.013158	NAF
NS0154	220	224	NS	BX079595-BX079596	X079595	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1309	-0.0306	-0.01744	-0.013158	NAF
NS0154	224	228	NS	BX079597-BX079598	X079597	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1310	-0.0306	-0.01744	-0.013158	NAF
NS0154	228	230	NS	BX079599	X079599	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1311	-0.0306	-0.01744	-0.013158	NAF
NS0154	230	234	NS	BX079601-BX079602	X079601	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1312	-0.0306	-0.01744	-0.013158	NAF
NS0154	234	238	NS	BX079603-BX079604	X079603	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1313	-0.0306	-0.01744	-0.013158	NAF
NS0154	250	254	NS	BX079611-BX079612	X079611	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1317	-0.0306	-0.01744	-0.013158	NAF
NS0154	254	258	NS	BX079613-BX079614	X079613	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1318	-0.0306	-0.01744	-0.013158	NAF
NS0154	262	264	NS	BX079617	X079617	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1320	-0.0306	-0.01744	-0.013158	NAF
NS0154	278	280	NS	BX079625	X079625	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1323	-0.0306	-0.01744	-0.013158	NAF
NS0154	6	8	NS	X072487	072487	1	G	D	39.89	36.17	2.33	0.0645	0.05	0.107	0.08	0.02	0.024	0.01	0.01	0.011	3.25	0.68	0	3.93	15613	0.306	0.34884	-0.04284	NAF
NS0154	8	10	NS	X072488	072488	1	G	D	40.74	36.46	1.69	0.0774	0.06	0.091	0.07	0.02	0.034	0.009	0.006	0.015	2.74	0.53	-0.08	3.19	15614	0.2754	0.34884	-0.07344	NAF
NS0154	168	172	NS	BX079569-BX079570	X079569	2			69.21	3.852	0.144	0.033	0.02376	0.033	0.255	0.08	0.014	0.043	0.053	0.091	-0.01	-0.01	-0.01	-0.03	1440	1.3158	1.39536	-0.07956	NAF
NS0154	160	164	NS	BX079565-BX079566	X079565	2			68.33	3.98	0.174	0.033	0.02376	0.033	0.272	0.091	0.016	0.048	0.062	0.082	-0.01	-0.01	-0.01	-0.03	1438	1.4688	1.587222	-0.118422	NAF
NS0154	10	12	NS	X072489	072489	1	G	D	37.65	39.44	2.38	0.1161	0.09	0.139	0.12	0.02	0.065	0.006	0.01	0.029	2.7	0.78	-0.03	3.45	15615	0.1836	0.34884	-0.16524	NAF
NS0154	12	14	NS	X072490	072490	1	G	D	38.54	40.12	1.32	0.4773	0.37	0.069	0.16	0.02	0.081	0.006	0.035	0.018	1.94	0.47	-0.09	2.32	15616	0.1836	0.34884	-0.16524	NAF
NS0154	0	2	NS	X072484	072484	1	G	D	35.38	39.69	3.59	0.0387	0.03	0.508	0.06	0.04	0.043	0.016	0.014	0.026	4.06	0.99	0.12	5.17	15610	0.4896	0.69768	-0.20808	NAF
NS0154	2	4	NS	X072485	072485	1	G	D	12.65	77.14	1.62	0.0258	0.02	0.69	0.05	0.03	0.015	0.01	0.017	0.029	1.61	0.44	0.09	2.14	15611	0.306	0.52326	-0.21726	NAF
NS0154	192	196	NS	BX079581-BX079582	X079581	2			69.8	3.406	0.136	0.028	0.02016	0.028	0.229	0.065	0.011	0.026	0.046	0.241	-0.01	-0.01	-0.01	-0.03	1302	0.7956	1.13373	-0.33813	NAF
NS0154	4	6	NS	X072486	072486	1	G	D	31.55	46.89	3.3	0.0387	0.03	0.206	0.06	0.03	0.039	0.006	0.01	0.02	3	1.03	0.03	4.06	15612	0.1836	0.52326	-0.33966	NAF
NS0154	22	26	NS	BX066995-BX066996	X066995	2			66.89	3.208	0.06	0.02	0.0144	0.02	0.118	0.025	0.016	0.003	0.012	0.071	0.22	0.28	0.22	0.72	105	0.0918	0.43605	-0.34425	NAF
NS0154	14	16	NS	X072491	072491	1	G	D	38.07	40.77	1.2	0.6192	0.48	0.056	0.12	0.03	0.076	0.005	0.101	0.018	1.78	0.43	-0.03	2.18	15617	0.153	0.52326	-0.37026	NAF
NS0154	16	18	NS	X072492	072492	1	G	D	35.99	43.53	1.26	0.6966	0.54	0.062	0.1	0.03	0.063	0.005	0.162	0.018	1.69	0.45	0.02	2.16	15618	0.153	0.52326	-0.37026	NAF
NS0154	130	134	NS	BX079549-BX079550	X079549	2			69.18	2.824	0.128	0.057	0.04104	0.057	0.196	0.056	0.01	0.019	0.037	0.076	-0.01	-0.01	-0.01	-0.03	1430	0.5814	0.976752	-0.395352	NAF
NS0154	18	22	NS	BX066993-BX066994	X066993	2			67.16	3.445	0.088	0.011	0.00792	0.011	0.125	0.025	0.016	0.001	0.009	0.074	0.3	0.41	0.34	1.05	104	0.0306	0.43605	-0.40545	NAF
NS0154	118	122	NS	BX079543-BX079544	X079543	2			66.52	4.811	0.364	0.052	0.03744	0.052	0.371	0.093	0.014	0.036	0.081	0.11	-0.01	-0.01	-0.01	-0.03	1427	1.1016	1.622106	-0.520506	NAF
NS0154	26	30	NS	BX066997-BX066998	X066997	2			66.92	3.313	0.071	0.008	0.00576	0.008	0.135	0.035	0.023	0.001	0.02	0.068	0.11	0.01	-0.01	0.11	106	0.0306	0.61047	-0.57987	NAF
NS0154	134	138	NS	BX079551-BX079552	X079551	2			67.04	5.24	0.262	0.055	0.0396	0.055	0.34	0.077	0.012	0.024	0.075	0.103	-0.01	-0.01	-0.01	-0.03	1431	0.7344	1.343034	-0.608634	NAF
NS0154	138	140	NS	BX079554	X079554	2			67.52	3.197	0.239	0.086	0.06192	0.086	0.256	0.065	0.009	0.017	0.06	0.096	-0.01	-0.01	-0.01	-0.03	1432	0.5202	1.13373	-0.61353	NAF
NS0154	166	168	NS	X072568	072568	1	G	W	27.47	43.14	2.91	0.3483	0.27	0.137	2.65	0.53	0.061	0.282	0.946	0.297	1.26	7.44	0.75	9.45	15693	8.6292	9.24426	-0.61506	NAF
NS0154	258	262	NS	BX079615-BX079616	X079615	2			64.95	7.572	0.565	0.106	0.07632	0.106	0.423	0.14	0.016	0.057	0.156	0.106	-0.01	-0.01	-0.01	-0.03	1319	1.7442	2.44188	-0.69768	NAF
NS0154	20	22	NS	X072494	072494	1	G	D	37.97	41.01	1.11	0.6708	0.52	0.055	0.2	0.06	0.042	0.005	0.395	0.026	1.39	0.39	0.08	1.86	15620	0.153	1.04652	-0.89352	NAF
NS0154	22	24	NS	X072495	072495	1	G	D	38.15	40.34	1.16	0.8643	0.67	0.058	0.19	0.06	0.04	0.005	0.48	0.023	1.37	0.37	0.11	1.85	15621	0.153	1.04652	-0.89352	NAF
NS0154	172	176	NS	BX079571-BX079572	X079571	2			68.96	4.332	0.157	0.024	0.01728	0.024	0.283	0.083	0.014	0.018	0.056	0.1	-0.01	-0.01	-0.01	-0.03	1297	0.5508	1.447686	-0.896886	NAF
NS0154	24	26	NS	X072496	072496	1	G	D	38.67	39.76	1.02	1.0191	0.79	0.05	0.15	0.06	0.046	0.004	0.464	0.015	1.42	0.32	0.03	1.77	15622	0.1224	1.04652	-0.92412	NAF
NS0154	270	274	NS	BX079621-BX079622	X079621	2			61.9	10.668	0.794	0.108	0.07776	0.108	0.561	0.144	0.019	0.05	0.232	0.119	-0.01	-0.01	-0.01	-0.03	1321	1.53	2.511648	-0.981648	NAF
NS0154	42	46	NS	BX079505-BX079506	X079505	2			68.12	4.683	0.215	0.023	0.01656	0.023	0.242	0.08	0.014	0.013	0.118	0.079	-0.01	-0.01	-0.01	-0.03	1408	0.3978	1.39536	-0.99756	NAF
NS0154	156	160	NS	BX079563-BX079564	X079563	2			67.68	4.15	0.135	0.026	0.01872	0.026	0.255	0.082	0.015	0.014	0.054	0.093	-0.01	-0.01	-0.01	-0.03	1437	0.4284	1.430244	-1.001844	NAF
NS0154	30	34	NS	BX066999-BX067000	X066999	2			66.86	4.787	0.13	0.014	0.01008	0.014	0.244	0.076	0.019	0.01	0.071	0.068	-0.01	-0.01	-0.01	-0.03	107	0.306	1.325592	-1.019592	NAF
NS0154	34	38	NS	BX079501-BX079502	X079501	2			68.4	3.597	0.096	0.011	0.00792	0.011	0.197	0.088	0.02	0.016	0.06	0.07	-0.01	-0.01	-0.01	-0.03	1406	0.4896	1.534896	-1.045296	NAF
NS0154	38	42	NS	BX079503-BX079504	X079503	2			68.77	4.266	0.19	0.019	0.01368	0.019	0.261	0.074	0.015	0.007	0.098	0.084	-0.01	-0.01	-0.01	-0.03	1407	0.2142	1.290708	-1.076508	NAF
NS0154	54	58	NS	BX079511-BX079512	X079511	2			69.02	4.542	0.164	0.019	0.01368	0.019	0.276	0.09	0.02	0.016	0.062	0.078	-0.01	-0.01	-0.01	-0.03	1411	0.4896	1.56978	-1.08018	NAF
NS0154	188	192	NS	BX079579-BX079580	X079579	2			68.82	3.836	0.144	0.024	0.01728	0.024	0.271	0.092	0.017	0.017	0.053	0.089	-0.01	-0.01	-0.01	-0.03	1301	0.5202	1.604664	-1.084464	NAF
NS0154	246	250	NS	BX079609-BX079610	X079609	2			64.08	8.129	0.52	0.068	0.04896	0.068	0.468	0.129	0.02	0.037	0.139	0.145	-0.01	-0.01	-0.01	-0.03	1316	1.1322	2.250018	-1.117818	NAF
NS0154	180	184	NS	BX079575-BX079576	X079575	2			68.81	4.526	0.136	0.023	0.01656	0.023	0.293	0.088	0.017	0.011	0.057	0.088	-0.01	-0.01	-0.01	-0.03	1299	0.3366	1.534896	-1.198296	NAF
NS0154	152	156	NS	BX079561-BX079562	X079561	2			66.34	5.434	0.205	0.03	0.0216	0.03	0.326	0.089	0.014	0.011	0.074	0.1	-0.01	-0.01	-0.01	-0.03	1436	0.3366	1.552338	-1.215738	NAF
NS0154	46	50	NS	BX079507-BX079508	X079507	2			68.38	3.656	0.108	0.012	0.00864	0.012	0.202	0.083	0.014	0.006	0.061	0.075	-0.01	-0.01	-0.01	-0.03	1409	0.1836	1.447686	-1.264086	NAF
NS0154	50	54	NS	BX079509-BX079510	X079509	2			67.69	5.28	0.202	0.022	0.01584	0.022	0.3	0.09	0.017	0.008	0.095	0.075	-0.01	-0.01	-0.01	-0.03	1410	0.2448	1.56978	-1.32498	NAF
NS0154	114	118	NS	BX079541-BX079542	X079541	2			68.67	4.145	0.231	0.034	0.02448	0.034	0.301	0.108	0.017	0.018	0.09	0.137	-0.01	-0.01	-0.01	-0.03	1426	0.5508	1.883736	-1.332936	NAF
NS0154	120	122	NS	X072544	072544	1	G	W	28.5	39.98	2.65	0.6063	0.47	0.119	2.8	0.58	0.075	0.287	0.888	0.261	1.05	9.23	0.74	11.02	15670	8.7822	10.11636	-1.33416	NAF
NS0154	58	62	NS	BX079513-BX079514	X079513	2			68.5	4.671	0.136	0.017	0.01224	0.017	0.252	0.086	0.015	0.005	0.036	0.079	-0.01	-0.01	-0.01	-0.03	1412	0.153	1.500012	-1.347012	NAF
NS0154	86	90	NS	BX079527-BX079528	X079527	2			65.7	6.86	0.298	0.038	0.02736	0.038	0.417	0.108	0.017	0.017	0.086	0.135	-0.01	-0.01	-0.01	-0.03	1419	0.5202	1.883736	-1.363536	NAF
NS0154	18	20	NS	X072493	072493	1	G	D	38.9	38.68	1.62	0.7353	0.57	0.078	0.3	0.09	0.044	0.005	0.386	0.031	1.59	0.55	0.03	2.17	15619	0.153	1.56978	-1.41678	NAF
NS0154	26	28	NS	X072497	072497	1	G	D	37.08	41.98	1.07	0.8385	0.65	0.05	0.18	0.09	0.06	0.004	0.418	0.029	1.54	0.39	0.03	1.96	15623	0.1224	1.56978	-1.44738	NAF
NS0154	184	188	NS	BX079577-BX079578	X079577	2			68.3	4.679	0.17	0.026	0.01872	0.026	0.321	0.112	0.018	0.016	0.068	0.092	-0.01	-0.01	-0.01	-0.03	1300	0.4896	1.953504	-1.463904	NAF
NS0154	144	148	NS	BX079557-BX079558	X079557	2			65.05	7.496	0.305	0.031	0.02232	0.031	0.429	0.107	0.015	0.012	0.113	0.115	-0.01	-0.01	-0.01	-0.03	1434	0.3672	1.866294	-1.499094	NAF
NS0154	148	150	NS	BX079559	X079559	2			65.74	6.075	0.277	0.031	0.02232	0.031	0.392	0.109	0.012	0.011	0.107	0.105	-0.01	-0.01	-0.01	-0.03	1435	0.3366	1.901178	-1.564578	NAF
NS0154	74	78	NS	BX079521-BX079522	X079521	2			65.51	7.515	0.24	0.023	0.01656	0.023	0.428	0.107	0.019	0.009	0.067	0.09	-0.01	-0.01	-0.01	-0.03	1416	0.2754	1.866294	-1.590894	NAF
NS0154	176	180	NS	BX079573-BX079574	X079573	2			67.61	5.59	0.179	0.025	0.018	0.025	0.353	0.118	0.02	0.014	0.07	0.088	-0.01	-0.01	-0.01	-0.03	1298	0.4284	2.058156	-1.629756	NAF
NS0154	82	86	NS	BX079525-BX079526	X079525	2			65.16	7.447	0.262	0.03	0.0216	0.03	0.417	0.119	0.021	0.014	0.071	0.089	-0.01	-0.01	-0.01	-0.03	1418	0.4284	2.075598	-1.647198	NAF
NS0154	122	126	NS	BX079545-BX079546	X079545	2			66.08	6.47	0.291	0.034	0.02448	0.034	0.401	0.124	0.017	0.014	0.103	0.101	-0.01	-0.01	-0.01	-0.03	1428	0.4284	2.162808	-1.734408	NAF
NS0154	140	144	NS	BX079555-BX079556	X079555	2			63.32	9.103	0.392	0.039	0.02808	0.039	0.519	0.143	0.017	0.023	0.136	0.111	-0.01	-0.01	-0.01	-0.03	1433	0.7038	2.494206	-1.790406	NAF
NS0154	78	82	NS	BX079523-BX079524	X079523	2			64.75	8.832	0.331	0.03	0.0216	0.03	0.518	0.128	0.025	0.013	0.097	0.089	-0.01	-0.01	-0.01	-0.03	1417	0.3978	2.232576	-1.834776	NAF
NS0154	66	70	NS	BX079517-BX079518	X079517	2			67.31	7.197	0.192	0.02	0.0144	0.02	0.344	0.12	0.026	0.008	0.045	0.088	-0.01	-0.01	-0.01	-0.03	1414	0.2448	2.09304	-1.84824	NAF
NS0154	168	170	NS	X072569	072569	1	G	W	28.14	40.68	2.59	0.4773	0.37	0.117	2.67	0.59	0.112	0.272	1.04	0.312	1.37	8.53	0.71	10.61	15694	8.3232	10.29078	-1.96758	NAF
NS0154	242	246	NS	BX079607-BX079608	X079607	2			61.83	10.504	0.575	0.05	0.036	0.05	0.572	0.173	0.015	0.032	0.199	0.109	0.06	-0.01	-0.01	0.04	1315	0.9792	3.017466	-2.038266	NAF
NS0154	62	66	NS	BX079515-BX079516	X079515	2			68.62	5.251	0.138	0.018	0.01296	0.018	0.267	0.136	0.031	0.01	0.033	0.271	-0.01	-0.01	-0.01	-0.03	1413	0.306	2.372112	-2.066112	NAF
NS0154	70	74	NS	BX079519-BX079520	X079519	2			65.44	7.25	0.246	0.023	0.01656	0.023	0.395	0.14	0.03	0.01	0.068	0.103	-0.01	-0.01	-0.01	-0.03	1415	0.306	2.44188	-2.13588	NAF
NS0154	98	102	NS	BX079533-BX079534	X079533	2			66.34	6.682	0.24	0.02	0.0144	0.02	0.338	0.142	0.013	0.01	0.064	0.081	-0.01	-0.01	-0.01	-0.03	1422	0.306	2.476764	-2.170764	NAF
NS0154	102	106	NS	BX079535-BX079536	X079535	2			65.46	7.766	0.328	0.026	0.01872	0.026	0.379	0.194	0.017	0.036	0.089	0.091	-0.01	-0.01	-0.01	-0.03	1423	1.1016	3.383748	-2.282148	NAF
NS0154	106	110	NS	BX079537-BX079538	X079537	2			64.58	8.071	0.398	0.033	0.02376	0.033	0.418	0.158	0.014	0.013	0.101	0.1	-0.01	-0.01	-0.01	-0.03	1424	0.3978	2.755836	-2.358036	NAF
NS0154	110	114	NS	BX079539-BX079540	X079539	2			65.3	8.145	0.42	0.037	0.02664	0.037	0.454	0.18	0.019	0.022	0.107	0.115	-0.01	-0.01	-0.01	-0.03	1425	0.6732	3.13956	-2.46636	NAF
NS0154	274	276	NS	BX079623	X079623	2			61.03	11.474	0.767	0.064	0.04608	0.064	0.641	0.2	0.019	0.032	0.285	0.132	-0.01	-0.01	-0.01	-0.03	1322	0.9792	3.4884	-2.5092	NAF
NS0154	90	92	NS	BX079529	X079529	2			63.6	9.308	0.42	0.037	0.02664	0.037	0.527	0.172	0.018	0.016	0.118	0.103	-0.01	-0.01	-0.01	-0.03	1420	0.4896	3.000024	-2.510424	NAF
NS0154	238	240	NS	X072605	072605	1	G	W	26.67	40.56	4.93	0.3483	0.27	0.233	3.86	0.85	0.12	0.397	1.27	0.335	1.31	6.5	1.17	8.98	15729	12.1482	14.8257	-2.6775	NAF
NS0154	234	236	NS	X072603	072603	1	G	W	25.53	41.21	3.64	0.5547	0.43	0.177	3.4	1.57	0.129	0.797	1.02	0.275	1.14	8.1	1.85	11.09	15727	24.3882	27.38394	-2.99574	NAF
NS0154	94	98	NS	BX079531-BX079532	X079531	2			63.91	8.325	0.347	0.031	0.02232	0.031	0.462	0.199	0.018	0.015	0.092	0.1	-0.01	-0.01	-0.01	-0.03	1421	0.459	3.470958	-3.011958	NAF
NS0154	266	268	NS	X072619	072619	1	G	W	22.26	46.75	5.52	0.2838	0.22	0.27	3.23	1.25	0.119	0.605	1.4	0.273	1.01	5.38	1.52	7.91	15743	18.513	21.8025	-3.2895	NAF
NS0154	118	120	NS	X072543	072543	1	G	W	28.43	40.3	3.26	0.5547	0.43	0.145	2.86	0.71	0.084	0.292	0.932	0.279	1.12	8.04	0.75	9.91	15669	8.9352	12.38382	-3.44862	NAF
NS0154	188	190	NS	X072579	072579	1	G	W	29.58	40.76	3.43	0.2709	0.21	0.164	3.4	0.78	0.104	0.306	1.33	0.389	1.27	3.92	0.8	5.99	15704	9.3636	13.60476	-4.24116	NAF
NS0154	212	214	NS	X072591	072591	1	G	W	21.12	50.17	7.2	0.1806	0.14	0.348	3.75	0.78	0.075	0.298	0.663	0.192	0.98	4.07	1.01	6.06	15716	9.1188	13.60476	-4.48596	NAF
NS0154	198	200	NS	X072584	072584	1	G	W	28.33	39.67	2.46	0.3096	0.24	0.117	3	0.59	0.113	0.189	0.877	0.258	1.21	9.86	0.55	11.62	15709	5.7834	10.29078	-4.50738	NAF
NS0154	164	166	NS	X072567	072567	1	G	W	29.26	40.28	1.88	0.4257	0.33	0.09	2.45	0.58	0.08	0.171	0.795	0.231	1.2	9.59	0.32	11.11	15692	5.2326	10.11636	-4.88376	NAF
NS0154	130	132	NS	X072549	072549	1	G	W	30.03	43.5	2.22	0.2967	0.23	0.101	2.27	0.44	0.082	0.086	0.936	0.275	0.95	5.72	0.15	6.82	15675	2.6316	7.67448	-5.04288	NAF
NS0154	28	30	NS	X072498	072498	1	G	D	37.13	40.29	0.83	0.7482	0.58	0.038	0.84	0.33	0.103	0.009	0.369	0.028	0.83	2.29	-0.17	2.95	15624	0.2754	5.75586	-5.48046	NAF
NS0154	30	32	NS	X072499	072499	1	G	D	34.75	39.27	1.19	0.8514	0.66	0.053	2.18	0.51	0.128	0.087	0.539	0.042	0.2	4.93	-0.08	5.05	15625	2.6622	8.89542	-6.23322	NAF
NS0154	74	76	NS	X072521	072521	1	G	W	34.08	38.21	1.66	0.5934	0.46	0.076	2.64	0.61	0.087	0.12	0.488	0.149	0.55	5.39	0.12	6.06	15647	3.672	10.63962	-6.96762	NAF
NS0154	196	198	NS	X072583	072583	1	G	W	28.88	41.13	3.27	0.2451	0.19	0.155	3.07	0.69	0.096	0.139	0.822	0.233	1.03	7.34	0.38	8.75	15708	4.2534	12.03498	-7.78158	NAF
NS0154	140	142	NS	X072555	072555	1	G	W	28.04	37.54	3.09	0.6192	0.48	0.148	3.34	1.19	0.241	0.421	1.13	0.344	1.33	9.56	1.04	11.93	15680	12.8826	20.75598	-7.87338	NAF
NS0154	224	226	NS	X072597	072597	1	G	W	24.26	42.4	4.99	0.2451	0.19	0.239	4.73	1.48	0.048	0.578	1.01	0.298	1.21	6.25	1.79	9.25	15722	17.6868	25.81416	-8.12736	NAF
NS0154	208	210	NS	X072589	072589	1	G	W	23.23	47.19	4.15	0.3354	0.26	0.198	3.2	0.91	0.142	0.241	1.05	0.313	1.29	6.49	0.8	8.58	15714	7.3746	15.87222	-8.49762	NAF
NS0154	192	194	NS	X072581	072581	1	G	W	29.13	40.49	2.52	0.3354	0.26	0.123	3	0.71	0.126	0.124	1.1	0.307	1.24	7.34	0.4	8.98	15706	3.7944	12.38382	-8.58942	NAF
NS0154	134	136	NS	X072551	072551	1	G	W	28.63	39.32	2.95	0.4902	0.38	0.135	3.1	0.8	0.167	0.173	1.19	0.34	1.32	8.22	0.56	10.1	15677	5.2938	13.9536	-8.6598	NAF
NS0154	172	174	NS	X072571	072571	1	G	W	30.31	41.25	1.63	0.3483	0.27	0.073	2.31	0.64	0.068	0.076	0.668	0.189	0.89	8.15	0.05	9.09	15696	2.3256	11.16288	-8.83728	NAF
NS0154	136	138	NS	X072552	072552	1	G	W	29.65	37.34	2.44	0.4644	0.36	0.111	2.69	0.8	0.184	0.148	0.942	0.275	1.25	10.34	0.39	11.98	15678	4.5288	13.9536	-9.4248	NAF
NS0154	154	156	NS	X072562	072562	1	G	W	28.58	41.75	2.55	0.3999	0.31	0.119	2.78	0.78	0.1	0.134	1.02	0.31	1.19	7.61	0.37	9.17	15687	4.1004	13.60476	-9.50436	NAF
NS0154	116	118	NS	X072542	072542	1	G	W	34.95	33.35	1.66	0.5289	0.41	0.077	2.24	0.75	0.138	0.101	0.657	0.212	0.85	9.31	0.02	10.18	15668	3.0906	13.0815	-9.9909	NAF
NS0154	34	36	NS	X072501	072501	1	G	D	33.74	40.55	1.34	0.7611	0.59	0.061	2.39	0.75	0.094	0.094	0.52	0.038	0.21	4.62	0.07	4.9	15627	2.8764	13.0815	-10.2051	NAF
NS0154	158	160	NS	X072564	072564	1	G	W	32.68	38.28	1.48	0.4386	0.34	0.069	2.07	0.73	0.097	0.072	0.647	0.196	0.81	8.18	-0.07	8.92	15689	2.2032	12.73266	-10.52946	NAF
NS0154	262	264	NS	X072617	072617	1	G	W	21.84	48.04	5.12	0.3741	0.29	0.253	2.99	1.33	0.076	0.407	1.47	0.277	1.09	6.01	1.33	8.43	15741	12.4542	23.19786	-10.74366	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0154	184	186	NS	X072577	072577	1	G	W	30.96	41.21	2.58	0.2838	0.22	0.127	3.06	0.95	0.108	0.188	1.2	0.348	1.15	3.82	0.56	5.53	15702	5.7528	16.5699	-10.8171	NAF
NS0154	170	172	NS	X072570	072570	1	G	W	29.12	39.08	1.43	0.5031	0.39	0.065	2.48	0.75	0.087	0.071	0.631	0.191	1.02	12.16	0.03	13.21	15695	2.1726	13.0815	-10.9089	NAF
NS0154	128	130	NS	X072548	072548	1	G	W	26.46	45.91	2.67	0.4128	0.32	0.126	2.69	0.8	0.16	0.094	1.1	0.305	1.13	6.32	0.35	7.8	15674	2.8764	13.9536	-11.0772	NAF
NS0154	210	212	NS	X072590	072590	1	G	W	22.23	48.13	4.52	0.3354	0.26	0.216	3.28	1.14	0.087	0.28	0.705	0.209	1.09	7.27	0.89	9.25	15715	8.568	19.88388	-11.31588	NAF
NS0154	214	216	NS	X072592	072592	1	G	W	23.03	47.74	4.36	0.3354	0.26	0.206	3.33	1.14	0.142	0.275	1.13	0.328	1.28	5.83	0.95	8.06	15717	8.415	19.88388	-11.46888	NAF
NS0154	180	182	NS	X072575	072575	1	G	W	32.67	36.45	1.67	0.4773	0.37	0.076	2.69	0.84	0.11	0.104	0.748	0.229	0.98	8.53	0.1	9.61	15700	3.1824	14.65128	-11.46888	NAF
NS0154	78	80	NS	X072523	072523	1	G	W	32.45	39.72	1.97	0.5418	0.42	0.092	2.88	0.77	0.109	0.062	0.575	0.177	0.65	5.69	0.11	6.45	15649	1.8972	13.43034	-11.53314	NAF
NS0154	150	152	NS	X072560	072560	1	G	W	29.27	40.38	3.18	0.3612	0.28	0.15	3.14	1.09	0.12	0.235	1.08	0.322	1.12	6.01	0.61	7.74	15685	7.191	19.01178	-11.82078	NAF
NS0154	146	148	NS	X072558	072558	1	G	W	30.97	38.4	2.08	0.4773	0.37	0.095	2.42	1.13	0.164	0.246	0.906	0.276	1.1	7.33	0.55	8.98	15683	7.5276	19.70946	-12.18186	NAF
NS0154	256	258	NS	X072614	072614	1	G	W	21.61	49.3	5.84	0.2451	0.19	0.281	3.52	1.23	0.088	0.278	1.37	0.333	1.17	4.12	1.11	6.4	15738	8.5068	21.45366	-12.94686	NAF
NS0154	162	164	NS	X072566	072566	1	G	W	31.69	38.17	2.72	0.258	0.2	0.135	2.72	0.96	0.081	0.124	1.11	0.318	1.29	6.16	0.35	7.8	15691	3.7944	16.74432	-12.94992	NAF
NS0154	152	154	NS	X072561	072561	1	G	W	30.57	39.36	1.84	0.516	0.4	0.085	2.48	0.91	0.1	0.087	0.776	0.223	0.94	8.93	0.07	9.94	15686	2.6622	15.87222	-13.21002	NAF
NS0154	122	124	NS	X072545	072545	1	G	W	29.9	40.18	1.96	0.4773	0.37	0.09	2.47	0.97	0.091	0.113	0.797	0.231	0.9	8.46	0.35	9.71	15671	3.4578	16.91874	-13.46094	NAF
NS0154	132	134	NS	X072550	072550	1	G	W	29.91	40.1	2.54	0.3999	0.31	0.116	2.63	0.99	0.223	0.119	1.01	0.288	1.1	7.21	0.25	8.56	15676	3.6414	17.26758	-13.62618	NAF
NS0154	250	252	NS	X072611	072611	1	G	W	23.55	45.94	4.48	0.3483	0.27	0.217	3.1	1.27	0.085	0.26	1.22	0.301	1.27	6.58	0.94	8.79	15735	7.956	22.15134	-14.19534	NAF
NS0154	124	126	NS	X072546	072546	1	G	W	30.25	39.1	2.81	0.3612	0.28	0.13	2.81	1.22	0.197	0.23	1.18	0.352	1.2	5.96	0.69	7.85	15672	7.038	21.27924	-14.24124	NAF
NS0154	86	88	NS	X072527	072527	1	G	W	32.12	38.6	1.31	0.645	0.5	0.063	2.43	1.01	0.157	0.098	0.482	0.144	0.61	8.26	0.09	8.96	15653	2.9988	17.61642	-14.61762	NAF
NS0154	142	144	NS	X072556	072556	1	G	W	32.27	37.22	1.76	0.516	0.4	0.08	2.37	1.03	0.106	0.106	0.751	0.234	0.95	8.58	0.16	9.69	15681	3.2436	17.96526	-14.72166	NAF
NS0154	84	86	NS	X072526	072526	1	G	W	33.03	37.56	1.74	0.5547	0.43	0.08	2.82	1.02	0.151	0.064	0.554	0.162	0.67	6.97	0.14	7.78	15652	1.9584	17.79084	-15.83244	NAF
NS0154	40	42	NS	X072504	072504	1	G	D	35.55	38.16	1.49	0.7611	0.59	0.066	2.28	1.02	0.124	0.06	0.736	0.026	0.11	4	0.11	4.22	15630	1.836	17.79084	-15.95484	NAF
NS0154	190	192	NS	X072580	072580	1	G	W	29.46	41.75	2	0.3096	0.24	0.097	2.56	1.24	0.111	0.156	0.897	0.264	0.99	6.58	0.49	8.06	15705	4.7736	21.62808	-16.85448	NAF
NS0154	194	196	NS	X072582	072582	1	G	W	30	41.48	2.21	0.2838	0.22	0.104	2.77	1.14	0.088	0.09	0.939	0.26	0.97	6.28	0.4	7.65	15707	2.754	19.88388	-17.12988	NAF
NS0154	178	180	NS	X072574	072574	1	G	W	28.35	41.16	3.76	0.3354	0.26	0.177	3.72	1.32	0.178	0.185	1.2	0.341	1.15	4.46	0.68	6.29	15699	5.661	23.02344	-17.36244	NAF
NS0154	56	58	NS	X072512	072512	1	G	W	33.5	40.53	1.61	0.6063	0.47	0.077	2.55	1.44	0.098	0.23	0.453	0.073	0.23	3.35	0.66	4.24	15638	7.038	25.11648	-18.07848	NAF
NS0154	272	274	NS	X072622	072622	1	G	W	25.22	45.93	4.25	0.2193	0.17	0.193	2.8	1.35	0.077	0.169	1.49	0.277	1.1	4.96	0.86	6.92	15746	5.1714	23.5467	-18.3753	NAF
NS0154	32	34	NS	X072500	072500	1	G	D	33.33	41.05	0.99	0.7869	0.61	0.045	2.12	1.18	0.114	0.069	0.428	0.045	0.14	4.38	0.37	4.89	15626	2.1114	20.58156	-18.47016	NAF
NS0154	260	262	NS	X072616	072616	1	G	W	25.38	44.55	4.09	0.258	0.2	0.197	2.97	1.41	0.133	0.2	1.08	0.282	1.08	6.59	0.85	8.52	15740	6.12	24.59322	-18.47322	NAF
NS0154	174	176	NS	X072572	072572	1	G	W	31.22	40.92	1.58	0.3225	0.25	0.072	2.2	1.18	0.123	0.066	0.706	0.212	0.87	6.39	0.18	7.44	15697	2.0196	20.58156	-18.56196	NAF
NS0154	176	178	NS	X072573	072573	1	G	W	31.91	38.93	1.27	0.4773	0.37	0.059	2.31	1.17	0.109	0.06	0.569	0.174	0.75	8.39	0.18	9.32	15698	1.836	20.40714	-18.57114	NAF
NS0154	76	78	NS	X072522	072522	1	G	W	33.73	37.54	1.39	0.645	0.5	0.065	2.63	1.15	0.123	0.046	0.438	0.125	0.47	6.28	0.33	7.08	15648	1.4076	20.0583	-18.6507	NAF
NS0154	64	66	NS	X072516	072516	1	G	W	34.87	38.71	1.29	0.7611	0.59	0.059	2.17	1.26	0.115	0.102	0.302	0.079	0.33	4.23	0.35	4.91	15642	3.1212	21.97692	-18.85572	NAF
NS0154	90	92	NS	X072529	072529	1	G	W	32.11	39.67	1.98	0.5547	0.43	0.09	2.48	1.21	0.092	0.071	0.601	0.188	0.66	5.8	0.46	6.92	15655	2.1726	21.10482	-18.93222	NAF
NS0154	156	158	NS	X072563	072563	1	G	W	30.06	41.61	2.19	0.3225	0.25	0.103	2.43	1.26	0.121	0.099	0.973	0.277	0.99	5.88	0.39	7.26	15688	3.0294	21.97692	-18.94752	NAF
NS0154	228	230	NS	X072599	072599	1	G	W	27.96	35.04	1.87	0.3483	0.27	0.084	3.58	1.31	0.111	0.122	0.673	0.2	1.06	15.17	0.44	16.67	15724	3.7332	22.84902	-19.11582	NAF
NS0154	278	280	NS	X072625	072625	1	G	W	24.52	45.83	4.51	0.3225	0.25	0.221	3.16	1.59	0.08	0.281	1.83	0.293	1.04	4.44	1.24	6.72	15749	8.5986	27.73278	-19.13418	NAF
NS0154	254	256	NS	X072613	072613	1	G	W	20.36	52.56	4.57	0.2838	0.22	0.223	3.02	1.59	0.224	0.272	1.22	0.329	1.07	4.41	0.93	6.41	15737	8.3232	27.73278	-19.40958	NAF
NS0154	80	82	NS	X072524	072524	1	G	W	32.86	38.48	1.49	0.6579	0.51	0.068	2.61	1.22	0.181	0.06	0.48	0.15	0.54	6.62	0.18	7.34	15650	1.836	21.27924	-19.44324	NAF
NS0154	252	254	NS	X072612	072612	1	G	W	16.33	54.32	8.43	0.1935	0.15	0.408	3.31	1.65	0.042	0.304	2.49	0.204	0.73	2.67	1.5	4.9	15736	9.3024	28.7793	-19.4769	NAF
NS0154	270	272	NS	X072621	072621	1	G	W	24.1	45.33	4.45	0.3096	0.24	0.218	2.94	1.48	0.098	0.201	1.48	0.296	1.15	6.22	0.98	8.35	15745	6.1506	25.81416	-19.66356	NAF
NS0154	144	146	NS	X072557	072557	1	G	W	31.55	38.18	2.05	0.3999	0.31	0.095	2.42	1.35	0.135	0.113	0.874	0.261	1	7.43	0.37	8.8	15682	3.4578	23.5467	-20.0889	NAF
NS0154	72	74	NS	X072520	072520	1	G	W	34.74	37.45	1.38	0.7998	0.62	0.065	2.47	1.26	0.135	0.061	0.441	0.142	0.46	5.07	0.4	5.93	15646	1.8666	21.97692	-20.11032	NAF
NS0154	160	162	NS	X072565	072565	1	G	W	32.18	38.07	2.48	0.2838	0.22	0.114	2.55	1.32	0.296	0.088	1.07	0.307	1.12	5.36	0.16	6.64	15690	2.6928	23.02344	-20.33064	NAF
NS0154	268	270	NS	X072620	072620	1	G	W	26.93	42.89	3.13	0.2838	0.22	0.152	2.38	1.47	0.063	0.167	0.941	0.241	1.03	7.79	0.71	9.53	15744	5.1102	25.63974	-20.52954	NAF
NS0154	38	40	NS	X072503	072503	1	G	D	32.4	41.99	1.96	0.5676	0.44	0.09	2.74	1.3	0.09	0.057	0.578	0.04	0.21	3.23	0.65	4.09	15629	1.7442	22.6746	-20.9304	NAF
NS0154	70	72	NS	X072519	072519	1	G	W	32.99	40.04	1.35	0.774	0.6	0.063	2.43	1.32	0.106	0.041	0.398	0.122	0.42	4.88	0.51	5.81	15645	1.2546	23.02344	-21.76884	NAF
NS0154	52	54	NS	X072510	072510	1	G	W	34.5	39.58	1.3	0.7482	0.58	0.063	2.16	1.35	0.099	0.043	0.594	0.044	0.23	3.43	0.65	4.31	15636	1.3158	23.5467	-22.2309	NAF
NS0154	114	116	NS	X072541	072541	1	G	W	29.77	40.61	1.69	0.4902	0.38	0.081	2.06	2.11	0.086	0.469	0.675	0.201	0.76	6.35	1.52	8.63	15667	14.3514	36.80262	-22.45122	NAF
NS0154	246	248	NS	X072609	072609	1	G	W	25.86	43.5	4.08	0.3225	0.25	0.194	3.09	1.77	0.132	0.269	1.21	0.329	1.18	5.57	1.01	7.76	15733	8.2314	30.87234	-22.64094	NAF
NS0154	82	84	NS	X072525	072525	1	G	W	32.56	39.9	1.33	0.5547	0.43	0.065	2.46	1.38	0.154	0.046	0.41	0.123	0.46	5.92	0.48	6.86	15651	1.4076	24.06996	-22.66236	NAF
NS0154	108	110	NS	X072538	072538	1	G	W	32.2	40.95	2.07	0.5547	0.43	0.097	2.09	1.44	0.107	0.058	0.621	0.178	0.6	4.04	0.7	5.34	15664	1.7748	25.11648	-23.34168	NAF
NS0154	264	266	NS	X072618	072618	1	G	W	22.82	45.3	4.55	0.3354	0.26	0.223	2.92	1.98	0.08	0.34	1.26	0.262	1.12	7.47	1.38	9.97	15742	10.404	34.53516	-24.13116	NAF
NS0154	274	276	NS	X072623	072623	1	G	W	26.73	44.73	3.35	0.2451	0.19	0.166	2.88	1.65	0.064	0.136	1.42	0.297	1.03	4.22	1.09	6.34	15747	4.1616	28.7793	-24.6177	NAF
NS0154	100	102	NS	X072534	072534	1	G	W	34.58	39.33	1.8	0.4644	0.36	0.087	1.99	1.61	0.053	0.113	0.461	0.13	0.33	2.71	0.88	3.92	15660	3.4578	28.08162	-24.62382	NAF
NS0154	148	150	NS	X072559	072559	1	G	W	28.62	40.94	2.54	0.3999	0.31	0.12	2.97	1.6	0.16	0.105	1.13	0.335	1.18	6.33	0.67	8.18	15684	3.213	27.9072	-24.6942	NAF
NS0154	68	70	NS	X072518	072518	1	G	W	34.55	38.67	1.13	0.7611	0.59	0.051	2.2	1.49	0.126	0.034	0.311	0.096	0.3	4.3	0.58	5.18	15644	1.0404	25.98858	-24.94818	NAF
NS0154	66	68	NS	X072517	072517	1	G	W	34.75	38.49	1.39	0.7353	0.57	0.067	2.3	1.6	0.117	0.069	0.324	0.109	0.34	3.69	0.7	4.73	15643	2.1114	27.9072	-25.7958	NAF
NS0154	54	56	NS	X072511	072511	1	G	W	35.6	38.79	1.28	0.7353	0.57	0.056	2.16	1.59	0.106	0.044	0.491	0.051	-0.59	3.21	0.81	3.43	15637	1.3464	27.73278	-26.38638	NAF
NS0154	106	108	NS	X072537	072537	1	G	W	31.24	42.06	2.53	0.4773	0.37	0.118	2.36	1.75	0.116	0.133	0.635	0.186	0.59	3.06	0.92	4.57	15663	4.0698	30.5235	-26.4537	NAF
NS0154	102	104	NS	X072535	072535	1	G	W	33.89	40.03	1.74	0.5547	0.43	0.078	2	1.63	0.102	0.059	0.484	0.127	0.4	3.27	0.81	4.48	15661	1.8054	28.43046	-26.62506	NAF
NS0154	42	44	NS	X072505	072505	1	G	D	33.11	39.5	1.37	0.8901	0.69	0.057	2.42	1.62	0.118	0.042	0.73	0.033	0.11	4.46	0.87	5.44	15631	1.2852	28.25604	-26.97084	NAF
NS0154	44	46	NS	X072506	072506	1	G	D	33.58	39.63	1.55	0.7353	0.57	0.091	2.18	1.63	0.103	0.046	0.642	0.032	0.35	3.67	0.95	4.97	15632	1.4076	28.43046	-27.02286	NAF
NS0154	182	184	NS	X072576	072576	1	G	W	32.26	39.92	1.56	0.3741	0.29	0.072	2.4	1.66	0.119	0.059	0.716	0.211	0.76	4.9	0.67	6.33	15701	1.8054	28.95372	-27.14832	NAF
NS0154	50	52	NS	X072509	072509	1	G	W	34.71	37.48	1.53	0.7224	0.56	0.074	2.57	1.72	0.094	0.086	0.664	0.058	0.21	3.49	1.05	4.75	15635	2.6316	30.00024	-27.36864	NAF
NS0154	244	246	NS	X072608	072608	1	G	W	29.53	41.42	2.39	0.2451	0.19	0.115	2.49	1.72	0.06	0.081	0.956	0.272	0.95	5.59	1.19	7.73	15732	2.4786	30.00024	-27.52164	NAF
NS0154	48	50	NS	X072508	072508	1	G	W	36.26	36.24	1.42	0.6837	0.53	0.065	2.37	1.69	0.11	0.039	0.587	0.043	0.22	3.13	0.97	4.32	15634	1.1934	29.47698	-28.28358	NAF
NS0154	222	224	NS	X072596	072596	1	G	W	25.81	39.57	1.89	0.4515	0.35	0.086	3	1.85	0.08	0.13	0.695	0.192	1.04	13.01	1	15.05	15721	3.978	32.2677	-28.2897	NAF
NS0154	110	112	NS	X072539	072539	1	G	W	26.68	46.82	2.52	0.4515	0.35	0.117	2.33	2.05	0.125	0.165	0.677	0.197	0.67	3.92	1.35	5.94	15665	5.049	35.7561	-30.7071	NAC
NS0154	248	250	NS	X072610	072610	1	G	W	28.22	41.35	2.33	0.3225	0.25	0.112	2.23	2.01	0.148	0.107	0.826	0.218	0.84	7.81	0.79	9.44	15734	3.2742	35.05842	-31.78422	NAC
NS0154	280	282	NS	X072626	072626	1	G	W	27.81	44.9	2.53	0.2451	0.19	0.123	2.29	2.05	0.116	0.111	1.04	0.244	0.85	4.15	1.17	6.17	15750	3.3966	35.7561	-32.3595	NAC
NS0154	58	60	NS	X072513	072513	1	G	W	33.34	38.7	1.68	0.7353	0.57	0.078	2.7	1.98	0.107	0.068	0.527	0.088	0.31	3.63	1.37	5.31	15639	2.0808	34.53516	-32.45436	NAC
NS0154	186	188	NS	X072578	072578	1	G	W	31.99	38.67	1.77	0.3483	0.27	0.081	2.67	2	0.169	0.073	0.792	0.239	0.83	5.59	0.8	7.22	15703	2.2338	34.884	-32.6502	NAC
NS0154	62	64	NS	X072515	072515	1	G	W	35.71	37.4	1.31	0.7095	0.55	0.064	2.2	1.96	0.116	0.048	0.357	0.069	0.22	3	1.15	4.37	15641	1.4688	34.18632	-32.71752	NAC
NS0154	230	232	NS	X072601	072601	1	G	W	27.15	36.09	1.46	0.5934	0.46	0.067	2.8	2.1	0.088	0.073	0.508	0.133	0.87	15.46	0.79	17.12	15725	2.2338	36.6282	-34.3944	NAC
NS0154	276	278	NS	X072624	072624	1	G	W	28.31	42.51	2.81	0.2967	0.23	0.14	2.61	2.31	0.092	0.117	1.19	0.287	0.99	4.46	1.67	7.12	15748	3.5802	40.29102	-36.71082	NAC
NS0154	36	38	NS	X072502	072502	1	G	D	34.04	38.7	1.02	0.7869	0.61	0.045	2.11	2.16	0.105	0.031	0.48	0.019	0.17	3.69	1.58	5.44	15628	0.9486	37.67472	-36.72612	NAC
NS0154	46	48	NS	X072507	072507	1	G	D	32.63	40	1.29	0.8127	0.63	0.053	2.38	2.24	0.113	0.052	0.653	0.044	0.16	3.5	1.66	5.32	15633	1.5912	39.07008	-37.47888	NAC
NS0154	96	98	NS	X072532	072532	1	G	W	32.74	39.65	1.64	0.6192	0.48	0.078	2.19	2.29	0.058	0.058	0.439	0.121	0.42	3.91	1.58	5.91	15658	1.7748	39.94218	-38.16738	NAC
NS0154	240	242	NS	X072606	072606	1	G	W	27.04	41.72	1.97	0.2709	0.21	0.094	2.31	2.44	0.111	0.111	0.74	0.196	0.88	9.32	1.04	11.24	15730	3.3966	42.55848	-39.16188	NAC
NS0154	242	244	NS	X072607	072607	1	G	W	28.46	38.21	2.77	0.3354	0.26	0.134	3.08	2.42	0.126	0.098	1.08	0.292	1.18	7.94	1.39	10.51	15731	2.9988	42.20964	-39.21084	NAC
NS0154	98	100	NS	X072533	072533	1	G	W	34.11	38.29	1.71	0.5547	0.43	0.081	2.11	2.43	0.131	0.095	0.443	0.123	0.36	3.05	1.54	4.95	15659	2.907	42.38406	-39.47706	NAC
NS0154	94	96	NS	X072531	072531	1	G	W	33.17	38.05	1.84	0.5934	0.46	0.082	2.37	2.5	0.127	0.065	0.49	0.142	0.49	3.93	1.68	6.1	15657	1.989	43.605	-41.616	NAC
NS0154	258	260	NS	X072615	072615	1	G	W	22.01	47.38	3.78	0.3354	0.26	0.182	2.72	2.77	0.08	0.208	0.813	0.209	0.83	7.29	1.79	9.91	15739	6.3648	48.31434	-41.94954	NAC
NS0154	92	94	NS	X072530	072530	1	G	W	32.94	38.71	1.76	0.5547	0.43	0.083	2.24	2.55	0.071	0.047	0.451	0.138	0.43	3.74	1.92	6.09	15656	1.4382	44.4771	-43.0389	NAC
NS0154	60	62	NS	X072514	072514	1	G	W	33.58	39.37	1.12	0.7353	0.57	0.051	2.12	2.57	0.099	0.033	0.283	0.061	0.19	2.8	1.95	4.94	15640	1.0098	44.82594	-43.81614	NAC
NS0154	226	228	NS	X072598	072598	1	G	W	23.35	41.53	1.13	0.4644	0.36	0.05	3.03	2.87	0.09	0.102	0.401	0.114	0.73	14.09	1.81	16.63	15723	3.1212	50.05854	-46.93734	NAC
NS0154	104	106	NS	X072536	072536	1	G	W	32.09	40.65	1.61	0.5031	0.39	0.077	1.98	3.04	0.133	0.058	0.482	0.122	0.34	2.33	2.26	4.93	15662	1.7748	53.02368	-51.24888	NAC
NS0155	116	120	NS	BX079685-BX079686	X079685	2			64.09	8.647	0.374	0.038	0.02736	0.038	0.482	0.102	0.018	1.07	0.114	0.124	-0.01	-0.01	-0.01	-0.03	1328	32.742	1.779084	30.962916	PAF(HC)
NS0155	74	76	NS	X072664	072664	1	G	W	24.21	39.89	4.17	0.6063	0.47	0.184	3.39	2.27	0.061	2.3	0.397	0.064	0.59	8.55	3.51	12.65	15788	70.38	39.59334	30.78666	PAF(HC)
NS0155	80	82	NS	X072667	072667	1	G	W	21.97	47.08	7.14	0.2838	0.22	0.347	3.5	0.73	0.081	1.15	0.129	0.044	0.48	6.04	2.07	8.59	15791	35.19	12.73266	22.45734	PAF(HC)
NS0155	82	84	NS	X072668	072668	1	G	W	19.6	51.64	8.98	0.129	0.1	0.417	3.61	0.88	0.071	1.21	0.118	0.048	0.45	3.14	1.58	5.17	15792	37.026	15.34896	21.67704	PAF(HC)
NS0155	110	112	NS	X072682	072682	1	G	W	26.68	39.31	1.43	0.3999	0.31	0.065	3.29	1.03	0.107	1.1	0.561	0.153	0.86	12.47	2.2	15.53	15806	33.66	17.96526	15.69474	PAF(HC)
NS0155	96	98	NS	X072675	072675	1	G	W	19.87	53.48	8.02	0.1161	0.09	0.386	3.5	0.49	0.038	0.783	0.515	0.145	0.65	2.48	1.16	4.29	15799	23.9598	8.54658	15.41322	PAF(HC)
NS0155	58	60	NS	X072656	072656	1	G	W	24.89	40.39	4.09	0.4257	0.33	0.193	3.29	1.1	0.077	1.09	0.327	0.07	0.96	10.53	2.01	13.5	15780	33.354	19.1862	14.1678	PAF(HC)
NS0155	70	72	NS	X072662	072662	1	G	W	21.84	44.79	4.72	0.4257	0.33	0.212	3.26	2.43	0.069	1.84	0.397	0.077	0.59	7.36	2.78	10.73	15786	56.304	42.38406	13.91994	PAF(HC)
NS0155	56	58	NS	X072655	072655	1	G	D	25.04	42.51	3.47	0.4644	0.36	0.161	3.07	0.57	0.079	0.716	0.361	0.069	1.06	10.67	1.52	13.25	15779	21.9096	9.94194	11.96766	PAF(HC)
NS0155	120	124	NS	BX079687-BX079688	X079687	2			66.29	6.361	0.226	0.029	0.02088	0.029	0.362	0.095	0.016	0.333	0.069	0.084	-0.01	-0.01	-0.01	-0.03	1329	10.1898	1.65699	8.53281	PAF(LC)
NS0155	250	252	NS	X072753	072753	1	G	W	18.55	53.98	9.51	0.1548	0.12	0.43	3.69	0.49	0.053	0.554	0.265	0.067	0.45	3.1	0.75	4.3	15876	16.9524	8.54658	8.40582	PAF(LC)
NS0155	104	106	NS	X072679	072679	1	G	W	22.42	48.92	7.84	0.1677	0.13	0.358	4.08	0.5	0.037	0.382	0.943	0.253	1.04	2.57	1.01	4.62	15803	11.6892	8.721	2.9682	PAF(LC)
NS0155	64	66	NS	X072659	072659	1	G	W	22.32	43.36	3.36	0.5031	0.39	0.151	3.02	2.8	0.062	1.68	0.414	0.088	0.59	8.73	2.62	11.94	15783	51.408	48.8376	2.5704	PAF(LC)
NS0155	78	80	NS	X072666	072666	1	G	W	23.33	45.01	3.43	0.5031	0.39	0.166	2.91	1	0.088	0.632	0.417	0.094	0.75	10.02	1.52	12.29	15790	19.3392	17.442	1.8972	PAF(LC)
NS0155	4	6	NS	X072629	072629	1	G	D	36.64	32.24	6.23	0.0258	0.02	0.278	0.05	0.01	0.021	0.037	0.016	0.008	6.78	1.76	0.34	8.88	15753	1.1322	0.17442	0.95778	PAF(LC)
NS0155	10	12	NS	X072632	072632	1	G	D	40.98	27.34	4.84	-0.0129	-0.01	0.367	0.04	0.01	0.019	0.026	0.007	0.008	6.99	1.36	0.3	8.65	15756	0.7956	0.17442	0.62118	PAF(LC)
NS0155	62	64	NS	X072658	072658	1	G	W	22.4	44.43	4.4	0.4128	0.32	0.204	3.22	2.23	0.066	1.29	0.416	0.088	0.76	8.22	2.2	11.18	15782	39.474	38.89566	0.57834	PAF(LC)
NS0155	14	16	NS	X072634	072634	1	G	D	38.48	31.06	5.85	0.0258	0.02	0.503	0.1	0.02	0.036	0.03	0.011	0.02	5.31	1.64	0.31	7.26	15758	0.918	0.34884	0.56916	PAF(LC)
NS0155	16	18	NS	X072635	072635	1	G	D	32.78	43.55	3.14	0.0258	0.02	0.151	0.07	0.02	0.036	0.03	0.01	0.015	4.88	1	0.25	6.13	15759	0.918	0.34884	0.56916	PAF(LC)
NS0155	18	20	NS	X072636	072636	1	G	D	31.96	43.6	3.72	0.0258	0.02	0.203	0.07	0.02	0.046	0.029	0.011	0.01	5.09	1.2	0.26	6.55	15760	0.8874	0.34884	0.53856	PAF(LC)
NS0155	2	4	NS	X072628	072628	1	G	D	34.94	34.08	6.81	-0.0129	-0.01	0.338	0.05	0.02	0.019	0.028	0.023	0.015	6.62	1.92	0.3	8.84	15752	0.8568	0.34884	0.50796	PAF(LC)
NS0155	8	10	NS	X072631	072631	1	G	D	42.4	24.41	5.62	0.0258	0.02	0.416	0.07	0.02	0.015	0.028	0.016	0.014	7.08	1.57	0.31	8.96	15755	0.8568	0.34884	0.50796	PAF(LC)
NS0155	12	14	NS	X072633	072633	1	G	D	39.48	31.13	5.23	0.0258	0.02	0.401	0.09	0.02	0.031	0.028	0.008	0.014	5.02	1.47	0.29	6.78	15757	0.8568	0.34884	0.50796	PAF(LC)
NS0155	6	8	NS	X072630	072630	1	G	D	43.36	21.81	5.81	0.0258	0.02	0.168	0.09	0.04	0.016	0.038	0.041	0.018	8.01	1.75	0.35	10.11	15754	1.1628	0.69768	0.46512	PAF(LC)
NS0155	100	104	NS	BX079677-BX079678	X079677	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1324	-0.0306	-0.01744	-0.013158	NAF
NS0155	104	108	NS	BX079679-BX079680	X079679	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1325	-0.0306	-0.01744	-0.013158	NAF
NS0155	108	112	NS	BX079681-BX079682	X079681	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1326	-0.0306	-0.01744	-0.013158	NAF
NS0155	112	116	NS	BX079683-BX079684	X079683	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1327	-0.0306	-0.01744	-0.013158	NAF
NS0155	246	250	NS	BX079751-BX079752	X079751	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1469	-0.0306	-0.01744	-0.013158	NAF
NS0155	124	126	NS	BX079689	X079689	2			69.29	3.961	0.14	0.025	0.018	0.025	0.235	0.094	0.019	0.044	0.044	0.08	-0.01	-0.01	-0.01	-0.03	1330	1.3464	1.639548	-0.293148	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0155	0	2	NS	X072627	072627	1	G	D	32.23	33.08	11.08	0.0258	0.02	0.572	0.15	0.07	0.027	0.027	0.101	0.03	5.51	3.03	0.34	8.88	15751	0.8262	1.22094	-0.39474	NAF
NS0155	158	162	NS	BX079707-BX079708	X079707	2			68.92	4.119	0.232	0.034	0.02448	0.034	0.318	0.085	0.017	0.031	0.085	0.084	-0.01	-0.01	-0.01	-0.03	1447	0.9486	1.48257	-0.53397	NAF
NS0155	254	258	NS	BX079755-BX079756	X079755	2			68.81	3.753	0.359	0.032	0.02304	0.032	0.302	0.078	0.012	0.026	0.041	0.078	-0.01	-0.01	-0.01	-0.03	1471	0.7956	1.360476	-0.564876	NAF
NS0155	182	186	NS	BX079719-BX079720	X079719	2			69.43	3.916	0.189	0.031	0.02232	0.031	0.299	0.074	0.015	0.022	0.075	0.073	-0.01	-0.01	-0.01	-0.03	1453	0.6732	1.290708	-0.617508	NAF
NS0155	140	144	NS	BX079697-BX079698	X079697	2			69.14	4.318	0.159	0.026	0.01872	0.026	0.292	0.081	0.014	0.025	0.057	0.078	-0.01	-0.01	-0.01	-0.03	1442	0.765	1.412802	-0.647802	NAF
NS0155	106	108	NS	X072680	072680	1	G	W	24.48	44.37	4.96	0.3354	0.26	0.229	3.84	0.98	0.128	0.536	1.07	0.285	1.1	5.8	1.43	8.33	15804	16.4016	17.09316	-0.69156	NAF
NS0155	128	132	NS	BX079691-BX079692	X079691	2			69.46	3.999	0.129	0.026	0.01872	0.026	0.264	0.084	0.017	0.025	0.047	0.075	-0.01	-0.01	-0.01	-0.03	1331	0.765	1.465128	-0.700128	NAF
NS0155	258	262	NS	BX079757-BX079758	X079757	2			69.95	3.279	0.332	0.037	0.02664	0.037	0.292	0.074	0.011	0.018	0.047	0.076	-0.01	-0.01	-0.01	-0.03	1472	0.5508	1.290708	-0.739908	NAF
NS0155	250	254	NS	BX079753-BX079754	X079753	2			70.11	3.445	0.376	0.04	0.0288	0.04	0.3	0.071	0.011	0.015	0.05	0.075	-0.01	-0.01	-0.01	-0.03	1470	0.459	1.238382	-0.779382	NAF
NS0155	174	178	NS	BX079715-BX079716	X079715	2			69.11	4.272	0.137	0.02	0.0144	0.02	0.279	0.073	0.01	0.015	0.051	0.079	-0.01	-0.01	-0.01	-0.03	1451	0.459	1.273266	-0.814266	NAF
NS0155	136	140	NS	BX079695-BX079696	X079695	2			70.39	3.082	0.113	0.028	0.02016	0.028	0.209	0.066	0.014	0.011	0.039	0.074	-0.01	-0.01	-0.01	-0.03	1441	0.3366	1.151172	-0.814572	NAF
NS0155	144	146	NS	BX079699	X079699	2			69.81	3.476	0.093	0.021	0.01512	0.021	0.208	0.073	0.014	0.014	0.037	0.071	-0.01	-0.01	-0.01	-0.03	1443	0.4284	1.273266	-0.844866	NAF
NS0155	132	136	NS	BX079693-BX079694	X079693	2			70.06	2.973	0.072	0.023	0.01656	0.023	0.199	0.07	0.014	0.012	0.027	0.071	-0.01	-0.01	-0.01	-0.03	1332	0.3672	1.22094	-0.85374	NAF
NS0155	166	170	NS	BX079711-BX079712	X079711	2			68.26	4.511	0.212	0.029	0.02088	0.029	0.308	0.087	0.017	0.018	0.083	0.104	-0.01	-0.01	-0.01	-0.03	1449	0.5508	1.517454	-0.966654	NAF
NS0155	154	158	NS	BX079705-BX079706	X079705	2			68.77	4.047	0.1	0.018	0.01296	0.018	0.26	0.091	0.016	0.02	0.045	0.08	-0.01	-0.01	-0.01	-0.03	1446	0.612	1.587222	-0.975222	NAF
NS0155	170	174	NS	BX079713-BX079714	X079713	2			67.69	4.785	0.205	0.026	0.01872	0.026	0.319	0.076	0.014	0.011	0.077	0.085	-0.01	-0.01	-0.01	-0.03	1450	0.3366	1.325592	-0.988992	NAF
NS0155	246	248	NS	X072751	072751	1	G	W	21.95	49.71	7.25	0.2451	0.19	0.34	3.82	0.91	0.092	0.486	0.938	0.266	0.9	2.37	0.96	4.23	15874	14.8716	15.87222	-1.00062	NAF
NS0155	178	182	NS	BX079717-BX079718	X079717	2			65.82	7.378	0.325	0.035	0.0252	0.035	0.503	0.113	0.021	0.031	0.126	0.11	-0.01	-0.01	-0.01	-0.03	1452	0.9486	1.970946	-1.022346	NAF
NS0155	20	22	NS	X072637	072637	1	G	D	23.68	51.8	6.61	0.0516	0.04	0.333	0.42	0.08	0.05	0.011	0.105	0.019	4.31	2.18	0.28	6.77	15761	0.3366	1.39536	-1.05876	NAF
NS0155	214	218	NS	BX079735-BX079736	X079735	2			67.19	5.502	0.319	0.037	0.02664	0.037	0.398	0.088	0.014	0.014	0.122	0.101	-0.01	-0.01	-0.01	-0.03	1461	0.4284	1.534896	-1.106496	NAF
NS0155	202	204	NS	BX079729	X079729	2			67.67	5.214	0.302	0.033	0.02376	0.033	0.369	0.087	0.019	0.013	0.114	0.09	-0.01	-0.01	-0.01	-0.03	1458	0.3978	1.517454	-1.119654	NAF
NS0155	262	264	NS	BX079759	X079759	2			66.24	6.796	0.285	0.025	0.018	0.025	0.43	0.083	0.013	0.01	0.092	0.086	-0.01	-0.01	-0.01	-0.03	1473	0.306	1.447686	-1.141686	NAF
NS0155	230	234	NS	BX079743-BX079744	X079743	2			67.32	4.899	0.255	0.024	0.01728	0.024	0.377	0.091	0.016	0.014	0.098	0.084	-0.01	-0.01	-0.01	-0.03	1465	0.4284	1.587222	-1.158822	NAF
NS0155	162	166	NS	BX079709-BX079710	X079709	2			64.95	8.091	0.244	0.028	0.02016	0.028	0.468	0.114	0.018	0.023	0.098	0.099	-0.01	-0.01	-0.01	-0.03	1448	0.7038	1.988388	-1.284588	NAF
NS0155	222	226	NS	BX079739-BX079740	X079739	2			67.05	6.035	0.254	0.029	0.02088	0.029	0.393	0.093	0.014	0.01	0.098	0.083	-0.01	-0.01	-0.01	-0.03	1463	0.306	1.622106	-1.316106	NAF
NS0155	146	150	NS	BX079701-BX079702	X079701	2			68.37	5.042	0.156	0.023	0.01656	0.023	0.331	0.093	0.017	0.008	0.062	0.07	-0.01	-0.01	-0.01	-0.03	1444	0.2448	1.622106	-1.377306	NAF
NS0155	150	154	NS	BX079703-BX079704	X079703	2			69.07	3.872	0.111	0.02	0.0144	0.02	0.262	0.093	0.019	0.008	0.046	0.075	-0.01	-0.01	-0.01	-0.03	1445	0.2448	1.622106	-1.377306	NAF
NS0155	186	190	NS	BX079721-BX079722	X079721	2			69.58	4.173	0.147	0.025	0.018	0.025	0.294	0.094	0.016	0.007	0.063	0.075	-0.01	-0.01	-0.01	-0.03	1454	0.2142	1.639548	-1.425348	NAF
NS0155	24	26	NS	X072639	072639	1	G	D	34.35	42.22	1.88	0.0645	0.05	0.089	0.31	0.1	0.06	0.01	0.012	0.017	4.88	0.92	0.16	5.96	15763	0.306	1.7442	-1.4382	NAF
NS0155	218	222	NS	BX079737-BX079738	X079737	2			66.23	6.356	0.302	0.033	0.02376	0.033	0.41	0.11	0.018	0.013	0.113	0.091	-0.01	-0.01	-0.01	-0.03	1462	0.3978	1.91862	-1.52082	NAF
NS0155	278	282	NS	BX079767-BX079768	X079767	2			67.42	6.025	0.235	0.019	0.01368	0.019	0.325	0.1	0.014	0.007	0.062	0.062	-0.01	-0.01	-0.01	-0.03	1477	0.2142	1.7442	-1.53	NAF
NS0155	72	74	NS	X072663	072663	1	G	W	23.99	39.97	3.34	0.6321	0.49	0.149	3.4	2.44	0.057	1.34	0.416	0.083	0.65	10.84	2.35	13.84	15787	41.004	42.55848	-1.55448	NAF
NS0155	190	194	NS	BX079723-BX079724	X079723	2			66.6	5.901	0.18	0.022	0.01584	0.022	0.358	0.105	0.017	0.009	0.073	0.076	-0.01	-0.01	-0.01	-0.03	1455	0.2754	1.83141	-1.55601	NAF
NS0155	194	198	NS	BX079725-BX079726	X079725	2			68.11	4.083	0.175	0.027	0.01944	0.027	0.303	0.106	0.02	0.009	0.062	0.081	-0.01	-0.01	-0.01	-0.03	1456	0.2754	1.848852	-1.573452	NAF
NS0155	210	214	NS	BX079733-BX079734	X079733	2			67.27	5.939	0.244	0.028	0.02016	0.028	0.395	0.112	0.015	0.008	0.099	0.081	-0.01	-0.01	-0.01	-0.03	1460	0.2448	1.953504	-1.708704	NAF
NS0155	198	202	NS	BX079727-BX079728	X079727	2			67.29	6.015	0.224	0.027	0.01944	0.027	0.387	0.109	0.021	0.006	0.09	0.09	-0.01	-0.01	-0.01	-0.03	1457	0.1836	1.901178	-1.717578	NAF
NS0155	206	210	NS	BX079731-BX079732	X079731	2			68.2	4.333	0.181	0.026	0.01872	0.026	0.285	0.114	0.018	0.008	0.071	0.075	-0.01	-0.01	-0.01	-0.03	1459	0.2448	1.988388	-1.743588	NAF
NS0155	226	230	NS	BX079741-BX079742	X079741	2			64.64	8.717	0.432	0.035	0.0252	0.035	0.491	0.129	0.017	0.015	0.127	0.125	-0.01	-0.01	-0.01	-0.03	1464	0.459	2.250018	-1.791018	NAF
NS0155	234	238	NS	BX079745-BX079746	X079745	2			68.12	5.504	0.195	0.018	0.01296	0.018	0.363	0.115	0.016	0.007	0.075	0.194	-0.01	-0.01	-0.01	-0.03	1466	0.2142	2.00583	-1.79163	NAF
NS0155	98	100	NS	X072676	072676	1	G	W	29	35.38	3.06	0.2838	0.22	0.139	3.35	0.55	0.07	0.252	0.84	0.223	1.17	12.42	0.79	14.38	15800	7.7112	9.5931	-1.8819	NAF
NS0155	266	270	NS	BX079761-BX079762	X079761	2			67.59	4.618	0.217	0.021	0.01512	0.021	0.281	0.122	0.014	0.008	0.061	0.076	-0.01	-0.01	-0.01	-0.03	1474	0.2448	2.127924	-1.883124	NAF
NS0155	26	28	NS	X072640	072640	1	G	D	32.74	42.29	2.4	0.0645	0.05	0.132	0.45	0.15	0.064	0.014	0.023	0.023	5.44	1.46	0.17	7.07	15764	0.4284	2.6163	-2.1879	NAF
NS0155	60	62	NS	X072657	072657	1	G	W	24.2	40.68	3.61	0.4515	0.35	0.163	3.33	2.11	0.077	1.12	0.449	0.088	0.79	10.23	2.07	13.09	15781	34.272	36.80262	-2.53062	NAF
NS0155	238	242	NS	BX079747-BX079748	X079747	2			68.67	5.169	0.137	0.019	0.01368	0.019	0.307	0.16	0.016	0.006	0.054	0.079	-0.01	-0.01	-0.01	-0.03	1467	0.1836	2.79072	-2.60712	NAF
NS0155	34	36	NS	X072644	072644	1	G	D	29.03	48.31	2.01	0.0903	0.07	0.079	0.54	0.18	0.067	0.011	0.028	0.033	5.33	1.2	0.19	6.72	15768	0.3366	3.13956	-2.80296	NAF
NS0155	274	278	NS	BX079765-BX079766	X079765	2			66.52	6.551	0.43	0.038	0.02736	0.038	0.399	0.193	0.026	0.017	0.091	0.082	-0.01	-0.01	-0.01	-0.03	1476	0.5202	3.366306	-2.846106	NAF
NS0155	114	116	NS	X072684	072684	1	G	W	27.51	40.99	3.66	0.2193	0.17	0.171	3.68	0.51	0.108	0.194	1.34	0.336	1.41	7.3	0.73	9.44	15808	5.9364	8.89542	-2.95902	NAF
NS0155	248	250	NS	X072752	072752	1	G	W	20.4	51.65	6.1	0.4128	0.32	0.271	3.53	1.44	0.147	0.722	1.11	0.312	1	2.82	1.44	5.26	15875	22.0932	25.11648	-3.02328	NAF
NS0155	44	46	NS	X072649	072649	1	G	D	28.32	50.53	1.86	0.2322	0.18	0.082	0.49	0.2	0.093	0.012	0.049	0.033	4.63	1.18	0.18	5.99	15773	0.3672	3.4884	-3.1212	NAF
NS0155	22	24	NS	X072638	072638	1	G	D	28.88	45.61	4.22	0.0774	0.06	0.203	0.63	0.2	0.054	0.01	0.041	0.029	5.09	1.78	0.26	7.13	15762	0.306	3.4884	-3.1824	NAF
NS0155	46	48	NS	X072650	072650	1	G	D	27.47	51.49	1.87	0.258	0.2	0.085	0.61	0.21	0.08	0.007	0.065	0.032	4.59	1.16	0.2	5.95	15774	0.2142	3.66282	-3.44862	NAF
NS0155	108	110	NS	X072681	072681	1	G	W	27.77	36.73	1.17	0.4128	0.32	0.051	3.06	0.87	0.088	0.379	0.487	0.129	0.88	15.22	1.03	17.13	15805	11.5974	15.17454	-3.57714	NAF
NS0155	32	34	NS	X072643	072643	1	G	D	31.24	43.55	2.51	0.2322	0.18	0.108	0.68	0.23	0.053	0.006	0.046	0.034	5.79	1.37	0.23	7.39	15767	0.1836	4.01166	-3.82806	NAF
NS0155	28	30	NS	X072641	072641	1	G	D	29.75	45.37	3.11	0.0645	0.05	0.143	0.74	0.25	0.062	0.007	0.033	0.031	5.44	1.62	0.23	7.29	15765	0.2142	4.3605	-4.1463	NAF
NS0155	242	246	NS	BX079749-BX079750	X079749	2			68.3	5.475	0.198	0.029	0.02088	0.029	0.321	0.251	0.053	0.007	0.064	0.079	-0.01	-0.01	-0.01	-0.03	1468	0.2142	4.377942	-4.163742	NAF
NS0155	270	274	NS	BX079763-BX079764	X079763	2			66.87	6.366	0.452	0.045	0.0324	0.045	0.431	0.267	0.051	0.014	0.093	0.08	-0.01	-0.01	-0.01	-0.03	1475	0.4284	4.657014	-4.228614	NAF
NS0155	228	230	NS	X072742	072742	1	G	W	29.2	40.89	4.58	0.3096	0.24	0.216	3.67	0.82	0.157	0.313	1.45	0.387	1.23	2.68	0.81	4.72	15865	9.5778	14.30244	-4.72464	NAF
NS0155	36	38	NS	X072645	072645	1	G	D	30.56	44.37	2.93	0.1161	0.09	0.13	0.85	0.31	0.091	0.017	0.057	0.04	4.97	1.65	0.26	6.88	15769	0.5202	5.40702	-4.88682	NAF
NS0155	38	40	NS	X072646	072646	1	G	D	28.2	47.65	2.6	0.5289	0.41	0.122	0.81	0.3	0.066	0.009	0.059	0.036	5.19	1.53	0.27	6.99	15770	0.2754	5.2326	-4.9572	NAF
NS0155	158	160	NS	X072707	072707	1	G	W	34.74	36.64	2.26	0.3225	0.25	0.102	2.75	0.78	0.162	0.279	1.05	0.289	1.01	4.4	0.53	5.94	15830	8.5374	13.60476	-5.06736	NAF
NS0155	102	104	NS	X072678	072678	1	G	W	21.59	48.79	7.67	0.1806	0.14	0.356	4.01	0.91	0.082	0.353	0.85	0.223	0.99	2.78	1.17	4.94	15802	10.8018	15.87222	-5.07042	NAF
NS0155	172	174	NS	X072714	072714	1	G	W	31.84	40.81	2.87	0.2451	0.19	0.136	2.88	0.66	0.159	0.205	1.31	0.357	1.16	3.23	0.53	4.92	15837	6.273	11.51172	-5.23872	NAF
NS0155	84	86	NS	X072669	072669	1	G	W	20.12	48.91	7.7	0.2451	0.19	0.356	3.64	1.86	0.065	0.886	0.177	0.057	0.51	4.53	1.94	6.98	15793	27.1116	32.44212	-5.33052	NAF
NS0155	256	258	NS	X072756	072756	1	G	W	17.2	57.92	6.62	0.2451	0.19	0.302	2.82	1.44	0.08	0.642	0.255	0.071	0.44	3.12	1.22	4.78	15879	19.6452	25.11648	-5.47128	NAF
NS0155	120	122	NS	X072687	072687	1	G	W	30.68	38.43	1.72	0.3225	0.25	0.079	2.66	0.55	0.078	0.132	0.661	0.163	0.88	10.11	0.34	11.33	15811	4.0392	9.5931	-5.5539	NAF
NS0155	30	32	NS	X072642	072642	1	G	D	28.91	45.77	3.47	0.1161	0.09	0.149	0.89	0.33	0.055	0.006	0.049	0.037	5.43	1.81	0.24	7.48	15766	0.1836	5.75586	-5.57226	NAF
NS0155	118	120	NS	X072686	072686	1	G	W	29.6	40.16	2.34	0.2451	0.19	0.107	2.79	0.58	0.127	0.134	0.834	0.206	0.95	8.52	0.35	9.82	15810	4.1004	10.11636	-6.01596	NAF
NS0155	136	138	NS	X072695	072695	1	G	W	30.69	41.45	2.33	0.258	0.2	0.111	2.63	0.6	0.115	0.143	0.882	0.226	0.91	6.02	0.33	7.26	15819	4.3758	10.4652	-6.0894	NAF
NS0155	48	50	NS	X072651	072651	1	G	D	27.46	48.04	3.21	0.5418	0.42	0.151	1.06	0.36	0.1	0.004	0.126	0.039	4.93	1.67	0.29	6.89	15775	0.1224	6.27912	-6.15672	NAF
NS0155	42	44	NS	X072648	072648	1	G	D	28.93	45.11	3.07	0.6321	0.49	0.142	1.13	0.38	0.045	0.005	0.119	0.044	5.6	1.84	0.32	7.76	15772	0.153	6.62796	-6.47496	NAF
NS0155	258	260	NS	X072757	072757	1	G	W	19.4	53.25	7.26	0.2838	0.22	0.337	3.12	1.22	0.045	0.474	0.301	0.06	0.46	4.09	1.12	5.67	15880	14.5044	21.27924	-6.77484	NAF
NS0155	40	42	NS	X072647	072647	1	G	D	31.14	41.38	3.21	0.5805	0.45	0.152	1.09	0.4	0.082	0.006	0.117	0.041	5.91	1.88	0.3	8.09	15771	0.1836	6.9768	-6.7932	NAF
NS0155	76	78	NS	X072665	072665	1	G	W	24.81	39.32	3.11	0.6837	0.53	0.139	3.37	2.13	0.064	0.992	0.489	0.12	0.69	11.09	1.89	13.67	15789	30.3552	37.15146	-6.79626	NAF
NS0155	52	54	NS	X072653	072653	1	G	D	26.08	43.33	4.84	0.2064	0.16	0.22	2.27	0.94	0.17	0.309	0.184	0.06	2.52	6.59	0.97	10.08	15777	9.4554	16.39548	-6.94008	NAF
NS0155	54	56	NS	X072654	072654	1	G	D	27.92	36.53	2.37	0.6063	0.47	0.099	3.03	0.68	0.085	0.157	0.518	0.103	1.43	13.66	0.46	15.55	15778	4.8042	11.86056	-7.05636	NAF
NS0155	116	118	NS	X072685	072685	1	G	W	26.33	41.75	1.84	0.3096	0.24	0.086	3.09	0.61	0.126	0.113	0.751	0.198	0.93	11.85	0.39	13.17	15809	3.4578	10.63962	-7.18182	NAF
NS0155	254	256	NS	X072755	072755	1	G	W	22.19	50.89	5.31	0.3741	0.29	0.243	2.74	1.18	0.04	0.413	0.338	0.09	0.45	4.78	0.97	6.2	15878	12.6378	20.58156	-7.94376	NAF
NS0155	112	114	NS	X072683	072683	1	G	W	24.94	42.26	1.04	0.4257	0.33	0.043	2.96	0.82	0.096	0.206	0.425	0.111	0.91	14.24	0.54	15.69	15807	6.3036	14.30244	-7.99884	NAF
NS0155	202	204	NS	X072729	072729	1	G	W	34.28	37.45	2.5	0.258	0.2	0.122	2.69	0.88	0.223	0.227	1.16	0.321	1.05	3.6	0.48	5.13	15852	6.9462	15.34896	-8.40276	NAF
NS0155	130	132	NS	X072692	072692	1	G	W	35	36.73	2.52	0.2193	0.17	0.117	2.66	0.68	0.162	0.107	1.05	0.27	0.97	4.46	0.26	5.69	15816	3.2742	11.86056	-8.58636	NAF
NS0155	180	182	NS	X072718	072718	1	G	W	31.15	40.24	3.31	0.2451	0.19	0.152	3.41	0.74	0.151	0.136	1.43	0.371	1.28	3.48	0.52	5.28	15841	4.1616	12.90708	-8.74548	NAF
NS0155	166	168	NS	X072711	072711	1	G	W	33.65	38.86	2.51	0.2709	0.21	0.12	2.81	0.61	0.11	0.058	1.2	0.315	1.02	3.59	0.18	4.79	15834	1.7748	10.63962	-8.86482	NAF
NS0155	50	52	NS	X072652	072652	1	G	D	28.65	41.88	5.26	0.6966	0.54	0.239	1.51	0.52	0.078	0.003	0.103	0.042	5.43	2.32	0.36	8.11	15776	0.0918	9.06984	-8.97804	NAF
NS0155	128	130	NS	X072691	072691	1	G	W	33.03	37.06	0.99	0.4515	0.35	0.046	2.28	0.66	0.08	0.072	0.363	0.094	0.58	10.19	-0.04	10.73	15815	2.2032	11.51172	-9.30852	NAF
NS0155	176	178	NS	X072716	072716	1	G	W	31.28	39.27	1.54	0.4773	0.37	0.07	2.58	0.7	0.108	0.089	0.716	0.196	0.9	8.61	0.08	9.59	15839	2.7234	12.2094	-9.486	NAF
NS0155	134	136	NS	X072694	072694	1	G	W	30.26	40.57	2.4	0.2709	0.21	0.117	2.78	0.79	0.164	0.139	1.02	0.266	1.1	6.33	0.44	7.87	15818	4.2534	13.77918	-9.52578	NAF
NS0155	262	264	NS	X072759	072759	1	G	W	27.14	47.63	1.59	0.4257	0.33	0.072	2.09	0.67	0.049	0.07	0.594	0.156	0.66	6.86	0.14	7.66	15882	2.142	11.68614	-9.54414	NAF
NS0155	92	94	NS	X072673	072673	1	G	W	24.82	41.62	4.52	0.3741	0.29	0.216	3.42	1.26	0.135	0.402	0.689	0.185	1.02	8.84	1.29	11.15	15797	12.3012	21.97692	-9.67572	NAF
NS0155	94	96	NS	X072674	072674	1	G	W	20.52	49.86	6.89	0.2451	0.19	0.342	3.51	1.79	0.101	0.681	0.519	0.152	0.74	3.93	1.74	6.41	15798	20.8386	31.22118	-10.38258	NAF
NS0155	168	170	NS	X072712	072712	1	G	W	29.78	43.82	1.66	0.3741	0.29	0.076	2.34	0.69	0.083	0.053	0.782	0.211	0.83	5.9	0.14	6.87	15835	1.6218	12.03498	-10.41318	NAF
NS0155	86	88	NS	X072670	072670	1	G	W	23.61	43.98	4.24	0.3483	0.27	0.197	3.35	1.24	0.092	0.356	0.62	0.168	0.87	8.61	1.19	10.67	15794	10.8936	21.62808	-10.73448	NAF
NS0155	186	188	NS	X072721	072721	1	G	W	32.14	39.3	2.32	0.3483	0.27	0.107	2.89	0.75	0.091	0.075	1.09	0.298	1.05	5.33	0.26	6.64	15844	2.295	13.0815	-10.7865	NAF
NS0155	216	218	NS	X072736	072736	1	G	W	26.39	46.7	2.09	0.4257	0.33	0.092	2.62	0.82	0.04	0.109	0.94	0.253	0.98	7.01	0.45	8.44	15859	3.3354	14.30244	-10.96704	NAF
NS0155	140	142	NS	X072697	072697	1	G	W	31.44	38.85	2.14	0.3612	0.28	0.098	2.76	0.93	0.091	0.163	0.865	0.234	0.96	7.08	0.5	8.54	15821	4.9878	16.22106	-11.23326	NAF
NS0155	260	262	NS	X072758	072758	1	G	W	30.67	39.05	2.87	0.4515	0.35	0.129	2.7	1.15	0.169	0.286	0.938	0.259	1.01	6.46	0.71	8.18	15881	8.7516	20.0583	-11.3067	NAF
NS0155	100	102	NS	X072677	072677	1	G	W	25.94	40	4.01	0.3999	0.31	0.186	3.63	1.21	0.109	0.32	0.901	0.247	1.13	9.28	1.06	11.47	15801	9.792	21.10482	-11.31282	NAF
NS0155	252	254	NS	X072754	072754	1	G	W	28.25	43.14	2.94	0.4128	0.32	0.133	2.67	1.01	0.071	0.204	0.97	0.266	1	5.64	0.71	7.35	15877	6.2424	17.61642	-11.37402	NAF
NS0155	222	224	NS	X072739	072739	1	G	W	32.87	36.88	1.33	0.6063	0.47	0.057	2.34	0.76	0.073	0.038	0.59	0.171	0.77	9.61	0.06	10.44	15862	1.1628	13.25592	-12.09312	NAF
NS0155	150	152	NS	X072703	072703	1	G	W	34.91	34.77	1.74	0.4257	0.33	0.079	2.7	0.85	0.13	0.076	0.778	0.21	0.9	7.41	0.18	8.49	15826	2.3256	14.8257	-12.5001	NAF
NS0155	132	134	NS	X072693	072693	1	G	W	32.92	36.63	1.09	0.3999	0.31	0.047	2.4	0.83	0.091	0.062	0.411	0.116	0.69	10.18	0.11	10.98	15817	1.8972	14.47686	-12.57966	NAF
NS0155	218	220	NS	X072737	072737	1	G	W	32.76	37.94	1.68	0.4773	0.37	0.077	2.36	0.9	0.109	0.084	0.751	0.207	0.83	7.41	0.17	8.41	15860	2.5704	15.6978	-13.1274	NAF
NS0155	126	128	NS	X072690	072690	1	G	W	29.54	38.98	3.2	0.3225	0.25	0.147	3.47	1.15	0.122	0.223	0.921	0.247	0.95	6.81	0.79	8.55	15814	6.8238	20.0583	-13.2345	NAF
NS0155	214	216	NS	X072735	072735	1	G	W	34.11	36.11	2.26	0.3483	0.27	0.103	2.56	1.02	0.174	0.137	1.04	0.282	0.99	5.58	0.29	6.86	15858	4.1922	17.79084	-13.59864	NAF
NS0155	162	164	NS	X072709	072709	1	G	W	33.45	36.15	1.07	0.5547	0.43	0.048	2.26	0.9	0.075	0.066	0.497	0.137	0.7	9.82	0.09	10.61	15832	2.0196	15.6978	-13.6782	NAF
NS0155	182	184	NS	X072719	072719	1	G	W	33.6	38.56	2.53	0.258	0.2	0.117	2.93	0.97	0.091	0.076	1.19	0.324	1.05	3.43	0.45	4.93	15842	2.3256	16.91874	-14.59314	NAF
NS0155	170	172	NS	X072713	072713	1	G	W	33.62	38.41	1.5	0.3612	0.28	0.07	2.28	0.96	0.135	0.07	0.706	0.199	0.77	6.14	0.16	7.07	15836	2.142	16.74432	-14.60232	NAF
NS0155	174	176	NS	X072715	072715	1	G	W	30.93	40.9	0.98	0.5289	0.41	0.041	2.26	0.94	0.053	0.033	0.458	0.134	0.58	8.87	0.26	9.71	15838	1.0098	16.39548	-15.38568	NAF
NS0155	278	280	NS	X072767	072767	1	G	W	34.31	37.58	1.93	0.3612	0.28	0.086	2.3	1.05	0.092	0.078	0.588	0.154	0.6	6.05	0.2	6.85	15890	2.3868	18.3141	-15.9273	NAF
NS0155	210	212	NS	X072733	072733	1	G	W	30.25	40.77	2.25	0.3741	0.29	0.101	2.63	1.13	0.099	0.119	1.01	0.272	1.03	6.03	0.5	7.56	15856	3.6414	19.70946	-16.06806	NAF
NS0155	160	162	NS	X072708	072708	1	G	W	27.91	44.07	3.86	0.1935	0.15	0.174	3.5	1.09	0.115	0.089	1.52	0.39	1.31	2.66	0.72	4.69	15831	2.7234	19.01178	-16.28838	NAF
NS0155	264	266	NS	X072760	072760	1	G	W	34.34	37.51	1.29	0.4515	0.35	0.058	1.98	1.03	0.088	0.049	0.502	0.14	0.52	6.99	0.14	7.65	15883	1.4994	17.96526	-16.46586	NAF
NS0155	138	140	NS	X072696	072696	1	G	W	30.65	41.4	1.4	0.3483	0.27	0.06	2.18	1.09	0.101	0.073	0.644	0.175	0.73	7.65	0.27	8.65	15820	2.2338	19.01178	-16.77798	NAF
NS0155	142	144	NS	X072698	072698	1	G	W	31.26	39.01	1.69	0.3999	0.31	0.076	2.66	1.11	0.08	0.078	0.749	0.196	0.89	8.11	0.4	9.4	15822	2.3868	19.36062	-16.97382	NAF
NS0155	224	226	NS	X072740	072740	1	G	W	32.49	41.3	2.09	0.3612	0.28	0.099	2.3	1.15	0.102	0.098	0.932	0.267	0.78	3.61	0.44	4.83	15863	2.9988	20.0583	-17.0595	NAF
NS0155	184	186	NS	X072720	072720	1	G	W	31.82	39.55	2.44	0.3354	0.26	0.114	3.02	1.16	0.134	0.103	1.15	0.316	1.06	4.63	0.52	6.21	15843	3.1518	20.23272	-17.08092	NAF
NS0155	90	92	NS	X072672	072672	1	G	W	23.16	44.86	4.77	0.3225	0.25	0.232	3.4	1.63	0.177	0.353	0.632	0.17	0.9	7.79	1.26	9.95	15796	10.8018	28.43046	-17.62866	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0155	212	214	NS	X072734	072734	1	G	W	32.08	37.57	1.2	0.5031	0.39	0.051	2.3	1.05	0.062	0.018	0.539	0.153	0.67	9.62	0.32	10.61	15857	0.5508	18.3141	-17.7633	NAF
NS0155	206	208	NS	X072731	072731	1	G	W	32.02	39.49	2.28	0.3483	0.27	0.107	2.58	1.25	0.142	0.125	0.987	0.271	0.95	5.23	0.46	6.64	15854	3.825	21.8025	-17.9775	NAF
NS0155	226	228	NS	X072741	072741	1	G	W	35.48	36.44	1.18	0.6063	0.47	0.051	1.99	1.08	0.077	0.028	0.531	0.157	0.54	6.27	0.21	7.02	15864	0.8568	18.83736	-17.98056	NAF
NS0155	190	192	NS	X072723	072723	1	G	W	33.91	38.84	2.29	0.258	0.2	0.106	2.56	1.19	0.111	0.09	1.05	0.278	0.88	3.16	0.49	4.53	15846	2.754	20.75598	-18.00198	NAF
NS0155	146	148	NS	X072701	072701	1	G	W	31.24	39.35	1.8	0.3483	0.27	0.083	2.65	1.21	0.109	0.096	0.806	0.22	0.92	6.9	0.52	8.34	15824	2.9376	21.10482	-18.16722	NAF
NS0155	194	196	NS	X072725	072725	1	G	W	29.21	41.71	3.57	0.2838	0.22	0.169	3.47	1.36	0.257	0.168	1.33	0.337	1.12	3.74	0.68	5.54	15848	5.1408	23.72112	-18.58032	NAF
NS0155	220	222	NS	X072738	072738	1	G	W	32.43	39.5	2.18	0.387	0.3	0.103	2.48	1.25	0.121	0.104	0.957	0.263	0.9	4.72	0.53	6.15	15861	3.1824	21.8025	-18.6201	NAF
NS0155	198	200	NS	X072727	072727	1	G	W	31.72	37.96	1.9	0.4257	0.33	0.089	2.74	1.26	0.085	0.089	0.868	0.24	0.95	7.33	0.62	8.9	15850	2.7234	21.97692	-19.25352	NAF
NS0155	230	232	NS	X072743	072743	1	G	W	34.49	37.04	2.02	0.4515	0.35	0.091	2.57	1.23	0.175	0.065	0.903	0.256	0.8	4.56	0.29	5.65	15866	1.989	21.45366	-19.46466	NAF
NS0155	148	150	NS	X072702	072702	1	G	W	36.12	32.88	1.1	0.4902	0.38	0.047	2.38	1.19	0.094	0.038	0.476	0.136	0.64	8.78	0.25	9.67	15825	1.1628	20.75598	-19.59318	NAF
NS0155	164	166	NS	X072710	072710	1	G	W	28.02	41.72	1.41	0.5031	0.39	0.064	2.53	1.32	0.1	0.104	0.647	0.172	0.8	9.79	0.65	11.24	15833	3.1824	23.02344	-19.84104	NAF
NS0155	178	180	NS	X072717	072717	1	G	W	29.92	38.9	1.25	0.5289	0.41	0.056	2.65	1.33	0.107	0.105	0.573	0.164	0.8	9.99	0.47	11.26	15840	3.213	23.19786	-19.98486	NAF
NS0155	144	146	NS	X072699	072699	1	G	W	31.94	40.09	1.5	0.3354	0.26	0.07	2.26	1.32	0.142	0.088	0.652	0.193	0.8	6.4	0.35	7.55	15823	2.6928	23.02344	-20.33064	NAF
NS0155	156	158	NS	X072706	072706	1	G	W	32.29	37.15	1.27	0.4773	0.37	0.058	2.47	1.32	0.071	0.088	0.562	0.152	0.91	8.62	0.55	10.08	15829	2.6928	23.02344	-20.33064	NAF
NS0155	280	282	NS	X072768	072768	1	G	W	31.42	42.75	1.78	0.3354	0.26	0.08	2.05	1.29	0.1	0.056	0.531	0.146	0.55	5.15	0.4	6.1	15891	1.7136	22.50018	-20.78658	NAF
NS0155	192	194	NS	X072724	072724	1	G	W	34.13	34.23	1.02	0.6837	0.53	0.043	2.47	1.28	0.052	0.039	0.477	0.143	0.72	9.83	0.47	11.02	15847	1.1934	22.32576	-21.13236	NAF
NS0155	88	90	NS	X072671	072671	1	G	W	19.91	51.28	6.48	0.2064	0.16	0.308	3.55	1.7	0.076	0.251	0.536	0.146	0.77	4.65	1.42	6.84	15795	7.6806	29.6514	-21.9708	NAF
NS0155	124	126	NS	X072689	072689	1	G	W	33.44	36.9	1.51	0.2838	0.22	0.069	2.35	1.52	0.11	0.138	0.619	0.157	0.68	6.97	0.57	8.22	15813	4.2228	26.51184	-22.28904	NAF
NS0155	196	198	NS	X072726	072726	1	G	W	33.95	37.23	1.44	0.3741	0.29	0.065	2.38	1.37	0.12	0.04	0.67	0.191	0.7	6.09	0.45	7.24	15849	1.224	23.89554	-22.67154	NAF
NS0155	152	154	NS	X072704	072704	1	G	W	35.22	37.92	1.13	0.2967	0.23	0.052	1.98	1.39	0.123	0.042	0.524	0.156	0.52	5.02	0.44	5.98	15827	1.2852	24.24438	-22.95918	NAF
NS0155	270	272	NS	X072763	072763	1	G	W	33.72	36.98	3.12	0.3096	0.24	0.19	2.81	1.6	0.155	0.146	0.802	0.221	0.72	3.75	0.69	5.16	15886	4.4676	27.9072	-23.4396	NAF
NS0155	154	156	NS	X072705	072705	1	G	W	34.78	36.69	1.11	0.3741	0.29	0.05	2.15	1.43	0.106	0.045	0.505	0.155	0.57	6.7	0.58	7.85	15828	1.377	24.94206	-23.56506	NAF
NS0155	208	210	NS	X072732	072732	1	G	W	32.61	40.04	1.65	0.3225	0.25	0.077	2.16	1.55	0.098	0.093	0.753	0.209	0.71	4.66	0.69	6.06	15855	2.8458	27.0351	-24.1893	NAF
NS0155	204	206	NS	X072730	072730	1	G	W	26.85	45.52	1.75	0.3999	0.31	0.074	2.44	1.54	0.077	0.066	0.806	0.216	0.8	6.56	0.96	8.32	15853	2.0196	26.86068	-24.84108	NAF
NS0155	234	236	NS	X072745	072745	1	G	W	36.95	35.41	1.68	0.4386	0.34	0.078	2.57	1.5	0.092	0.043	0.736	0.207	0.53	3.3	0.75	4.58	15868	1.3158	26.163	-24.8472	NAF
NS0155	232	234	NS	X072744	072744	1	G	W	27.95	48.26	1.74	0.3741	0.29	0.084	2.35	1.82	0.142	0.183	0.754	0.216	0.59	2.5	0.98	4.07	15867	5.5998	31.74444	-26.14464	NAF
NS0155	200	202	NS	X072728	072728	1	G	W	33.99	37.64	1.24	0.4128	0.32	0.058	2.19	1.69	0.125	0.042	0.577	0.16	0.6	6.04	0.71	7.35	15851	1.2852	29.47698	-28.19178	NAF
NS0155	122	124	NS	X072688	072688	1	G	W	29.13	41.56	1.22	0.3741	0.29	0.056	2.21	1.74	0.067	0.04	0.392	0.099	0.6	9.36	0.61	10.57	15812	1.224	30.34908	-29.12508	NAF
NS0155	68	70	NS	X072661	072661	1	G	W	17.5	52.66	9.05	0.1677	0.13	0.494	3.49	2.17	0.047	0.262	0.04	0.024	0.52	3.64	2.02	6.18	15785	8.0172	37.84914	-29.83194	NAF
NS0155	66	68	NS	X072660	072660	1	G	W	21.92	44.69	3.4	0.5031	0.39	0.155	3.22	2.87	0.06	0.656	0.407	0.083	0.63	9.53	2.23	12.39	15784	20.0736	50.05854	-29.98494	NAF
NS0155	188	190	NS	X072722	072722	1	G	W	33.61	37.44	1.29	0.4128	0.32	0.059	2.32	1.85	0.091	0.049	0.602	0.17	0.62	5.71	1.06	7.39	15845	1.4994	32.2677	-30.7683	NAC
NS0155	244	246	NS	X072750	072750	1	G	W	30.74	43.44	1.92	0.5031	0.39	0.091	2.02	2.14	0.114	0.131	0.54	0.147	0.43	3.65	1.13	5.21	15873	4.0086	37.32588	-33.31728	NAC
NS0155	268	270	NS	X072762	072762	1	G	W	29.66	41.77	2.75	0.3741	0.29	0.125	2.53	2.25	0.118	0.189	0.86	0.195	0.67	4.08	1.43	6.18	15885	5.7834	39.2445	-33.4611	NAC
NS0155	236	238	NS	X072746	072746	1	G	W	35.58	37.22	1.12	0.5418	0.42	0.052	2.25	2.01	0.071	0.032	0.502	0.146	0.4	3.61	1.31	5.32	15869	0.9792	35.05842	-34.07922	NAC
NS0155	274	276	NS	X072765	072765	1	G	W	33.12	37.98	3.05	0.2451	0.19	0.184	2.68	2.21	0.128	0.114	0.815	0.215	0.64	2.7	1.4	4.74	15888	3.4884	38.54682	-35.05842	NAC
NS0155	276	278	NS	X072766	072766	1	G	W	33.04	39.39	2.65	0.2064	0.16	0.126	2.3	2.29	0.113	0.153	0.731	0.174	0.53	2.41	1.37	4.31	15889	4.6818	39.94218	-35.26038	NAC
NS0155	272	274	NS	X072764	072764	1	G	W	33.86	37.13	2.87	0.258	0.2	0.158	2.58	2.31	0.233	0.153	0.751	0.2	0.62	2.9	1.09	4.61	15887	4.6818	40.29102	-35.60922	NAC
NS0155	242	244	NS	X072749	072749	1	G	W	35.48	36.28	1.17	0.4902	0.38	0.068	2.13	2.22	0.133	0.032	0.503	0.147	0.45	4.45	1.25	6.15	15872	0.9792	38.72124	-37.74204	NAC
NS0155	266	268	NS	X072761	072761	1	G	W	35.83	34.15	1.71	0.3741	0.29	0.079	2.08	2.5	0.164	0.066	0.617	0.149	0.5	4.67	1.42	6.59	15884	2.0196	43.605	-41.5854	NAC
NS0155	238	240	NS	X072747	072747	1	G	W	34.34	38.15	0.93	0.5289	0.41	0.043	2.15	2.84	0.076	0.024	0.409	0.119	0.3	3.29	2.21	5.8	15870	0.7344	49.53528	-48.80088	NAC
NS0155	240	242	NS	X072748	072748	1	G	W	32.81	40.18	1.63	0.3483	0.27	0.077	2.42	2.98	0.177	0.087	0.679	0.192	0.51	1.96	2.03	4.5	15871	2.6622	51.97716	-49.31496	NAC
NS0156	52	54	NS	X072795	072795	2	G	W	27.34	39.22	2.2	0.3612	0.28	0.092	2.2	0.45	0.061	0.374	0.568	0.137	1.38	12.32	0.89	14.59	15990	11.4444	7.8489	3.5955	PAF(LC)
NS0156	2	4	NS	X072770	072770	2	G	D	35.38	31.78	7.64	0.00645	0.005	0.458	0.04	0.03	0.016	0.022	0.013	0.018	6.7	2.21	0.3	9.21	15893	0.6732	0.52326	0.14994	PAF(LC)
NS0156	4	6	NS	X072771	072771	2	G	D	11.94	68.11	8.77	0.00645	0.005	0.453	0.09	0.05	0.013	0.006	0.048	0.038	2.34	2.73	0.2	5.27	15894	0.1836	0.8721	-0.6885	NAF
NS0156	6	8	NS	X072772	072772	2	G	D	13.5	65.25	8.33	0.00645	0.005	0.384	0.16	0.09	0.018	0.014	0.023	0.054	2.79	2.71	0.29	5.79	15931	0.4284	1.56978	-1.14138	NAF
NS0156	18	20	NS	X072778	072778	2	G	D	13.92	64.86	8.05	0.0258	0.02	0.351	0.3	0.12	0.04	0.01	0.096	0.045	2.8	2.75	0.27	5.82	15937	0.306	2.09304	-1.78704	NAF
NS0156	8	10	NS	X072773	072773	2	G	D	6.98	77.34	7.15	0.00645	0.005	0.243	0.18	0.13	0.019	0.014	0.018	0.066	1.66	2.36	0.28	4.3	15932	0.4284	2.26746	-1.83906	NAF
NS0156	22	24	NS	X072780	072780	2	G	D	26.64	49.62	4.19	0.0516	0.04	0.181	0.4	0.14	0.038	0.015	0.163	0.042	4.95	1.6	0.23	6.78	15939	0.459	2.44188	-1.98288	NAF
NS0156	10	12	NS	X072774	072774	2	G	D	9.88	73.85	6.09	0.00645	0.005	0.222	0.25	0.15	0.042	0.02	0.024	0.086	2.3	2.06	0.28	4.64	15933	0.612	2.6163	-2.0043	NAF
NS0156	0	2	NS	X072769	072769	2	G	D	40.41	22.52	8.21	0.0258	0.02	0.417	0.17	0.18	0.025	0.025	0.055	0.016	7.36	2.53	0.29	10.18	15892	0.765	3.13956	-2.37456	NAF
NS0156	12	14	NS	X072775	072775	2	G	D	9.86	73.57	6.19	0.00645	0.005	0.248	0.43	0.19	0.016	0.013	0.088	0.099	2.24	2.15	0.27	4.66	15934	0.3978	3.31398	-2.91618	NAF
NS0156	24	26	NS	X072781	072781	2	G	D	28.4	47.82	3.17	0.0774	0.06	0.131	0.48	0.19	0.058	0.012	0.044	0.039	5.39	1.37	0.21	6.97	15940	0.3672	3.31398	-2.94678	NAF
NS0156	14	16	NS	X072776	072776	2	G	D	13.06	66.4	7.53	0.0258	0.02	0.329	0.52	0.21	0.024	0.011	0.133	0.08	2.7	2.55	0.27	5.52	15935	0.3366	3.66282	-3.32622	NAF
NS0156	20	22	NS	X072779	072779	2	G	D	16.09	58.34	9.68	0.0258	0.02	0.443	0.93	0.22	0.015	0.008	0.583	0.063	2.77	3.17	0.31	6.25	15938	0.2448	3.83724	-3.59244	NAF
NS0156	16	18	NS	X072777	072777	2	G	D	14.38	61.43	10.05	0.0258	0.02	0.446	0.62	0.23	0.019	0.009	0.174	0.063	2.82	3.32	0.29	6.43	15936	0.2754	4.01166	-3.73626	NAF
NS0156	50	52	NS	X072794	072794	2	G	D	29.73	42.45	3.52	0.4644	0.36	0.153	1.18	0.48	0.188	0.133	0.275	0.08	4.59	3.19	0.53	8.31	15989	4.0698	8.37216	-4.30236	NAF
NS0156	38	40	NS	X072788	072788	2	G	D	30.94	43.13	2.73	0.3741	0.29	0.118	0.92	0.26	0.104	0.003	0.127	0.029	6.01	1.38	0.24	7.63	15947	0.0918	4.53492	-4.44312	NAF
NS0156	40	42	NS	X072789	072789	2	G	D	30.96	42.65	2.91	0.4257	0.33	0.127	1.01	0.28	0.096	0.004	0.153	0.033	6.04	1.49	0.25	7.78	15948	0.1224	4.88376	-4.76136	NAF
NS0156	54	56	NS	X072796	072796	2	G	W	27.38	39.85	2.85	0.3741	0.29	0.124	2.47	0.59	0.076	0.175	0.704	0.167	1.48	11.32	0.49	13.29	15991	5.355	10.29078	-4.93578	NAF
NS0156	32	34	NS	X072785	072785	2	G	D	31	41.8	3.4	0.4515	0.35	0.148	0.98	0.29	0.08	0.002	0.126	0.042	5.97	1.56	0.29	7.82	15944	0.0612	5.05818	-4.99698	NAF
NS0156	48	50	NS	X072793	072793	2	G	D	30.06	43.92	3.21	0.4257	0.33	0.143	0.89	0.32	0.104	0.002	0.128	0.038	5.71	1.61	0.23	7.55	15988	0.0612	5.58144	-5.52024	NAF
NS0156	26	28	NS	X072782	072782	2	G	D	26.43	46.99	4.82	0.5418	0.42	0.207	0.98	0.34	0.072	0.005	0.133	0.056	5.24	1.93	0.31	7.48	15941	0.153	5.93028	-5.77728	NAF
NS0156	56	58	NS	X072797	072797	2	G	W	26.74	41.44	3.31	0.2967	0.23	0.147	2.67	0.81	0.106	0.244	0.867	0.203	1.42	9.35	0.7	11.47	15992	7.4664	14.12802	-6.66162	NAF
NS0156	34	36	NS	X072786	072786	2	G	D	28.95	42.98	4.27	0.5676	0.44	0.19	1.38	0.42	0.065	0.002	0.193	0.051	5.67	1.91	0.34	7.92	15945	0.0612	7.32564	-7.26444	NAF
NS0156	30	32	NS	X072784	072784	2	G	D	26.84	46.61	4.71	0.0903	0.07	0.204	1.28	0.43	0.065	0.003	0.15	0.056	5.3	2.01	0.28	7.59	15943	0.0918	7.50006	-7.40826	NAF
NS0156	36	38	NS	X072787	072787	2	G	D	25.11	47.38	5.38	0.5547	0.43	0.243	1.79	0.49	0.066	0.001	0.182	0.056	5.22	2.1	0.39	7.71	15946	0.0306	8.54658	-8.51598	NAF
NS0156	28	30	NS	X072783	072783	2	G	D	25.22	45.62	7.18	0.0516	0.04	0.321	1.57	0.52	0.057	0.002	0.193	0.072	5.1	2.7	0.34	8.14	15942	0.0612	9.06984	-9.00864	NAF
NS0156	44	46	NS	X072791	072791	2	G	D	25.19	45.51	6.47	0.2838	0.22	0.293	2.01	0.53	0.065	0.002	0.353	0.062	5.22	2.54	0.37	8.13	15986	0.0612	9.24426	-9.18306	NAF
NS0156	46	48	NS	X072792	072792	2	G	D	25.45	45.03	6.46	0.258	0.2	0.295	1.97	0.54	0.072	0.002	0.458	0.082	5.15	2.62	0.33	8.1	15987	0.0612	9.41868	-9.35748	NAF
NS0156	58	60	NS	X072798	072798	2	G	W	25.4	42.11	4.45	0.3225	0.25	0.198	3.56	0.93	0.135	0.16	1.13	0.287	1.38	7.5	0.65	9.53	15993	4.896	16.22106	-11.32506	NAF
NS0156	42	44	NS	X072790	072790	2	G	D	23.44	46.82	7.06	0.1548	0.12	0.328	2.14	0.86	0.168	0.001	0.505	0.104	4.75	2.76	0.36	7.87	15985	0.0306	15.00012	-14.96952	NAF
NS0157	162	164	NS	X072937	072937	1	G	W	27.85	36.37	4.16	0.129	0.1	0.193	1.54	0.11	0.011	14.1	0.028	0.015	0.19	14.95	2.17	17.31	16075	431.46	1.91862	429.54138	PAF(HC)
NS0157	160	162	NS	X072936	072936	1	G	W	26.82	39.19	3.03	0.1935	0.15	0.139	1.33	0.14	0.014	12.4	0.04	0.009	0.17	14.65	2.28	17.1	16074	379.44	2.44188	376.99812	PAF(HC)
NS0157	176	178	NS	X072944	072944	1	G	W	28.63	35.52	1.97	0.4644	0.36	0.092	1.31	0.15	0.023	6.45	0.024	0.012	0.27	16.32	2.43	19.02	16082	197.37	2.6163	194.7537	PAF(HC)
NS0157	178	180	NS	X072945	072945	1	G	W	27.99	33.74	2.92	0.5418	0.42	0.126	2.15	0.33	0.022	1.61	0.403	0.015	0.32	15.38	3.82	19.52	16083	49.266	5.75586	43.51014	PAF(HC)
NS0157	170	172	NS	X072941	072941	1	G	W	26.55	32.63	6.48	0.4515	0.35	0.278	1.87	0.28	0.032	1.43	1.44	0.023	0.36	14.64	3.25	18.25	16079	43.758	4.88376	38.87424	PAF(HC)
NS0157	168	170	NS	X072940	072940	1	G	W	29.3	28.11	7.32	0.4773	0.37	0.308	1.87	0.19	0.02	1.37	1.06	0.021	0.46	15.15	2.71	18.32	16078	41.922	3.31398	38.60802	PAF(HC)
NS0157	164	166	NS	X072938	072938	1	G	W	23.43	46.1	2.14	0.5547	0.43	0.089	1.61	0.24	0.015	1.2	0.057	0.014	0.36	12.17	3.01	15.54	16076	36.72	4.18608	32.53392	PAF(HC)
NS0157	132	134	NS	X072922	072922	1	G	W	29.55	31.38	6.86	0.4902	0.38	0.295	1.71	0.33	0.041	0.679	0.742	1.07	0.68	12.19	1.5	14.37	16060	20.7774	5.75586	15.02154	PAF(HC)
NS0157	158	160	NS	X072935	072935	1	G	W	18.72	57.03	0.56	0.3999	0.31	0.024	1.58	0.31	0.017	0.62	0.009	0.016	0.36	11.04	1.84	13.24	16073	18.972	5.40702	13.56498	PAF(HC)
NS0157	84	86	NS	X072897	072897	1	G	D	26.95	37.17	10.37	0.2709	0.21	0.457	2.76	0.15	0.026	0.473	0.01	0.016	0.82	8.02	0.88	9.72	16036	14.4738	2.6163	11.8575	PAF(HC)
NS0157	174	176	NS	X072943	072943	1	G	W	29.97	31.15	3.4	0.6837	0.53	0.144	1.89	0.34	0.051	0.515	0.027	0.015	0.76	16.59	1.5	18.85	16081	15.759	5.93028	9.82872	PAF(LC)
NS0157	148	150	NS	X072930	072930	1	G	W	30.75	31.54	1.07	0.6063	0.47	0.047	2.07	0.36	0.024	0.427	0.007	0.016	0.7	18.4	1.12	20.22	16068	13.0662	6.27912	6.78708	PAF(LC)
NS0157	88	90	NS	X072899	072899	1	G	W	26.43	39.71	6.64	0.3999	0.31	0.292	2.21	0.26	0.036	0.354	0.026	0.017	1.13	10.27	0.85	12.25	16038	10.8324	4.53492	6.29748	PAF(LC)
NS0157	42	44	NS	X072876	072876	1	G	D	18.92	54.18	10.79	0.0774	0.06	0.486	2.7	0.02	0.013	0.188	0.022	0.022	0.79	3.01	0.39	4.19	16015	5.7528	0.34884	5.40396	PAF(LC)
NS0157	166	168	NS	X072939	072939	1	G	W	30.02	31.58	1.91	0.5547	0.43	0.083	2.18	0.26	0.017	0.271	0.01	0.008	0.96	18.23	0.96	20.15	16077	8.2926	4.53492	3.75768	PAF(LC)
NS0157	124	126	NS	X072918	072918	1	G	W	32.7	30.19	2.38	0.5031	0.39	0.106	1.83	0.32	0.026	0.228	0.005	0.018	1.05	16.03	0.49	17.57	16056	6.9768	5.58144	1.39536	PAF(LC)
NS0157	8	10	NS	X072859	072859	1	G	D	14.51	66.68	7.64	-0.0129	-0.01	0.318	0.06	0.03	0.016	0.032	0.011	0.041	1.77	2.34	0.26	4.37	15998	0.9792	0.52326	0.45594	PAF(LC)
NS0157	10	12	NS	X072860	072860	1	G	D	8.03	73.84	8.97	-0.0129	-0.01	0.404	0.06	0.02	0.009	0.014	0.012	0.04	1.79	2.82	0.23	4.84	15999	0.4284	0.34884	0.07956	PAF(LC)
NS0157	118	122	NS	BX079915-BX079916	X079915	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1480	-0.0306	-0.01744	-0.013158	NAF
NS0157	146	148	NS	BX079929	X079929	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	1487	-0.0306	-0.01744	-0.013158	NAF
NS0157	18	20	NS	X072864	072864	1	G	D	14.77	74.93	1.74	0.0387	0.03	0.065	0.05	0.02	0.032	0.008	0.009	0.045	1.02	0.6	0.08	1.7	16003	0.2448	0.34884	-0.10404	NAF
NS0157	0	2	NS	X072855	072855	1	G	D	30.47	44.33	6.09	-0.0129	-0.01	0.248	0.05	0.04	0.047	0.018	0.061	0.034	3.26	1.77	0.22	5.25	15994	0.5508	0.69768	-0.14688	NAF
NS0157	110	112	NS	X072911	072911	1	G	W	28.12	37.6	4.09	0.3741	0.29	0.177	1.89	0.28	0.03	0.154	0.007	0.006	0.85	13.87	0.33	15.05	16049	4.7124	4.88376	-0.17136	NAF
NS0157	12	14	NS	X072861	072861	1	G	D	7.21	77.63	7.5	-0.0129	-0.01	0.295	0.06	0.03	0.009	0.011	0.011	0.045	1.49	2.38	0.18	4.05	16000	0.3366	0.52326	-0.18666	NAF
NS0157	16	18	NS	X072863	072863	1	G	D	20.61	66.63	1.25	0.0903	0.07	0.049	0.07	0.03	0.038	0.011	0.007	0.027	1.57	0.43	0.07	2.07	16002	0.3366	0.52326	-0.18666	NAF
NS0157	44	46	NS	X072877	072877	1	G	D	32.26	43.95	2.73	0.6708	0.52	0.123	0.62	0.08	0.113	0.039	0.037	0.021	3.91	1.09	0.26	5.26	16016	1.1934	1.39536	-0.20196	NAF
NS0157	2	4	NS	X072856	072856	1	G	D	30.67	42.72	5.78	-0.0129	-0.01	0.219	0.05	0.06	0.042	0.024	0.029	0.031	4.51	1.94	0.23	6.68	15995	0.7344	1.04652	-0.31212	NAF
NS0157	56	58	NS	X072883	072883	1	G	D	17.73	56.83	10.85	0.1806	0.14	0.48	0.22	0.05	0.026	0.018	0.027	0.038	1.79	3.42	0.3	5.51	16022	0.5508	0.8721	-0.3213	NAF
NS0157	14	16	NS	X072862	072862	1	G	D	3.17	87.24	5.14	-0.0129	-0.01	0.098	0.04	0.03	0.006	0.005	0.01	0.048	0.68	1.66	0.13	2.47	16001	0.153	0.52326	-0.37026	NAF
NS0157	24	26	NS	X072867	072867	1	G	D	34.59	46.51	1.28	0.1806	0.14	0.046	0.17	0.04	0.058	0.01	0.045	0.039	1.44	0.45	0.02	1.91	16006	0.306	0.69768	-0.39168	NAF
NS0157	32	34	NS	X072871	072871	1	G	D	29.25	54.76	0.94	0.2838	0.22	0.041	0.14	0.04	0.046	0.008	0.071	0.022	1.17	0.34	-0.03	1.48	16010	0.2448	0.69768	-0.45288	NAF
NS0157	72	74	NS	X072891	072891	1	G	D	30.29	44.82	4.42	0.9546	0.74	0.198	0.52	0.05	0.053	0.013	0.058	0.026	3.11	1.73	0.27	5.11	16030	0.3978	0.8721	-0.4743	NAF
NS0157	70	72	NS	X072890	072890	1	G	D	30.7	46.22	3.81	0.5805	0.45	0.172	0.31	0.05	0.053	0.012	0.059	0.023	2.84	1.48	0.24	4.56	16029	0.3672	0.8721	-0.5049	NAF
NS0157	130	134	NS	BX079921-BX079922	X079921	2			70.92	1.983	0.092	0.009	0.00648	0.009	0.134	0.035	0.004	0.003	0.013	0.062	-0.01	-0.01	-0.01	-0.03	1483	0.0918	0.61047	-0.51867	NAF
NS0157	74	76	NS	X072892	072892	1	G	D	36.21	41.3	0.93	0.6966	0.54	0.043	0.22	0.04	0.044	0.005	0.035	0.014	3.81	0.67	0.17	4.65	16031	0.153	0.69768	-0.54468	NAF
NS0157	64	66	NS	X072887	072887	1	G	D	36.13	42.52	1.41	0.7224	0.56	0.063	0.19	0.04	0.029	0.004	0.231	0.024	2.14	0.61	0.08	2.83	16026	0.1224	0.69768	-0.57528	NAF
NS0157	110	114	NS	BX079911-BX079912	X079911	2			66.43	2.768	0.156	0.021	0.01512	0.021	0.168	0.04	0.004	0.004	0.008	0.074	-0.01	-0.01	-0.01	-0.03	1478	0.1224	0.69768	-0.57528	NAF
NS0157	114	118	NS	BX079913-BX079914	X079913	2			68.66	3.549	0.174	0.028	0.02016	0.028	0.178	0.043	0.006	0.005	0.006	0.089	-0.01	-0.01	-0.01	-0.03	1479	0.153	0.750006	-0.597006	NAF
NS0157	66	68	NS	X072888	072888	1	G	D	31.75	49.2	1.07	0.1935	0.15	0.047	0.14	0.04	0.053	0.003	0.045	0.017	2.88	0.53	0.09	3.5	16027	0.0918	0.69768	-0.60588	NAF
NS0157	126	130	NS	BX079919-BX079920	X079919	2			70.58	2.176	0.078	0.01	0.0072	0.01	0.136	0.037	0.004	0.001	0.019	0.063	0.05	-0.01	-0.01	0.03	1482	0.0306	0.645354	-0.614754	NAF
NS0157	20	22	NS	X072865	072865	1	G	D	19.59	69.55	0.68	0.1032	0.08	0.023	0.1	0.05	0.032	0.008	0.014	0.029	0.98	0.27	0.04	1.29	16004	0.2448	0.8721	-0.6273	NAF
NS0157	142	146	NS	BX079927-BX079928	X079927	2			69.16	1.934	0.069	0.007	0.00504	0.007	0.173	0.041	0.004	0.002	0.001	0.068	-0.01	-0.01	-0.01	-0.03	1486	0.0612	0.715122	-0.653922	NAF
NS0157	50	52	NS	X072880	072880	1	G	D	36.02	39.76	1.18	0.7998	0.62	0.05	0.46	0.05	0.07	0.007	0.053	0.022	4.77	0.88	0.21	5.86	16019	0.2142	0.8721	-0.6579	NAF
NS0157	26	28	NS	X072868	072868	1	G	D	29.46	55.16	0.61	0.258	0.2	0.026	0.17	0.05	0.061	0.006	0.05	0.026	1.2	0.19	-0.11	1.28	16007	0.1836	0.8721	-0.6885	NAF
NS0157	122	126	NS	BX079917-BX079918	X079917	2			68.46	3.921	0.123	0.024	0.01728	0.024	0.205	0.05	0.006	0.006	0.004	0.085	-0.01	-0.01	-0.01	-0.03	1481	0.1836	0.8721	-0.6885	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0157	22	24	NS	X072866	072866	1	G	D	38.98	39.54	1.38	0.2451	0.19	0.049	0.18	0.06	0.058	0.011	0.016	0.048	1.84	0.48	-0.04	2.28	16005	0.3366	1.04652	-0.70992	NAF
NS0157	134	138	NS	BX079923-BX079924	X079923	2			70.82	2.093	0.05	0.007	0.00504	0.007	0.166	0.046	0.003	0.003	0.011	0.092	-0.01	-0.01	-0.01	-0.03	1484	0.0918	0.802332	-0.710532	NAF
NS0157	62	64	NS	X072886	072886	1	G	D	34.93	38.98	4.58	0.6837	0.53	0.202	0.23	0.05	0.04	0.005	0.212	0.024	3	1.55	0.15	4.7	16025	0.153	0.8721	-0.7191	NAF
NS0157	138	142	NS	BX079925-BX079926	X079925	2			70.37	2.151	0.041	0.006	0.00432	0.006	0.176	0.043	0.003	0.001	0.002	0.066	-0.01	-0.01	-0.01	-0.03	1485	0.0306	0.750006	-0.719406	NAF
NS0157	34	36	NS	X072872	072872	1	G	D	32.64	49.38	1.1	0.4257	0.33	0.048	0.23	0.05	0.062	0.004	0.096	0.024	1.37	0.4	-0.1	1.67	16011	0.1224	0.8721	-0.7497	NAF
NS0157	36	38	NS	X072873	072873	1	G	D	22.81	63.06	0.83	0.5031	0.39	0.028	0.18	0.05	0.065	0.003	0.054	0.026	2.04	0.38	-0.03	2.39	16012	0.0918	0.8721	-0.7803	NAF
NS0157	68	70	NS	X072889	072889	1	G	D	35.08	42.44	1.46	0.4644	0.36	0.067	0.21	0.05	0.069	0.003	0.064	0.016	3.85	0.69	0.12	4.66	16028	0.0918	0.8721	-0.7803	NAF
NS0157	150	152	NS	BX079931	X079931	2			68.36	3.517	0.089	0.012	0.00864	0.012	0.247	0.059	0.004	0.005	0.005	0.089	-0.01	-0.01	-0.01	-0.03	1488	0.153	1.029078	-0.876078	NAF
NS0157	58	60	NS	X072884	072884	1	G	D	35.9	39.13	2.99	0.6708	0.52	0.136	0.46	0.07	0.061	0.011	0.07	0.029	3.57	1.15	0.06	4.78	16023	0.3366	1.22094	-0.88434	NAF
NS0157	40	42	NS	X072875	072875	1	G	D	20.29	56.91	6.71	0.4644	0.36	0.299	1.33	0.13	0.095	0.045	0.137	0.03	2.22	2.07	0.28	4.57	16014	1.377	2.26746	-0.89046	NAF
NS0157	6	8	NS	X072858	072858	1	G	D	9.61	65.63	13.24	-0.0129	-0.01	0.415	0.09	0.08	0.011	0.016	0.015	0.068	2.14	4.25	0.31	6.7	15997	0.4896	1.39536	-0.90576	NAF
NS0157	52	54	NS	X072881	072881	1	G	D	36.79	36.22	2.92	0.903	0.7	0.128	0.64	0.09	0.076	0.017	0.061	0.03	4.42	1.32	0.27	6.01	16020	0.5202	1.56978	-1.04958	NAF
NS0157	30	32	NS	X072870	072870	1	G	D	26.49	55.08	2.93	0.3612	0.28	0.126	0.28	0.07	0.045	0.005	0.063	0.033	1.6	1.06	0.12	2.78	16009	0.153	1.22094	-1.06794	NAF
NS0157	48	50	NS	X072879	072879	1	G	D	44.78	25.73	1.35	1.2642	0.98	0.053	0.32	0.07	0.147	0.005	0.063	0.021	5.04	1.05	0.27	6.36	16018	0.153	1.22094	-1.06794	NAF
NS0157	60	62	NS	X072885	072885	1	G	D	36.03	40.05	1.94	0.6579	0.51	0.093	0.4	0.08	0.078	0.004	0.145	0.023	3.85	0.86	0.06	4.77	16024	0.1224	1.39536	-1.27296	NAF
NS0157	28	30	NS	X072869	072869	1	G	D	30.76	45.25	4.14	0.645	0.5	0.187	0.47	0.09	0.06	0.006	0.207	0.045	2.89	1.44	0.12	4.45	16008	0.1836	1.56978	-1.38618	NAF
NS0157	38	40	NS	X072874	072874	1	G	D	31.69	46.11	2.59	0.5289	0.41	0.113	0.36	0.09	0.054	0.004	0.141	0.033	3.05	1.04	0.11	4.2	16013	0.1224	1.56978	-1.44738	NAF
NS0157	54	56	NS	X072882	072882	1	G	D	35.68	37.6	2.6	0.8256	0.64	0.114	0.69	0.09	0.077	0.004	0.073	0.031	4.91	1.25	0.22	6.38	16021	0.1224	1.56978	-1.44738	NAF
NS0157	46	48	NS	X072878	072878	1	G	D	32.35	40.02	5.12	0.6837	0.53	0.23	0.61	0.15	0.109	0.027	0.099	0.027	4.22	1.81	0.3	6.33	16017	0.8262	2.6163	-1.7901	NAF
NS0157	108	110	NS	X072910	072910	1	G	W	32.34	28.7	1.05	0.6708	0.52	0.047	1.72	0.34	0.032	0.11	0.005	0.008	0.89	19.95	0.27	21.11	16048	3.366	5.93028	-2.56428	NAF
NS0157	102	104	NS	X072907	072907	1	G	W	30.23	34.52	1.12	0.5676	0.44	0.051	1.51	0.28	0.025	0.07	0.01	0.007	1.52	17	0.16	18.68	16045	2.142	4.88376	-2.74176	NAF
NS0157	154	156	NS	X072933	072933	1	G	W	21.6	50.41	0.59	0.5805	0.45	0.027	1.66	0.3	0.016	0.077	0.005	0.007	0.7	14.11	0.37	15.18	16071	2.3562	5.2326	-2.8764	NAF
NS0157	4	6	NS	X072857	072857	1	G	D	13.86	66	7.91	-0.0129	-0.01	0.337	0.13	0.19	0.012	0.012	0.044	0.043	2.62	2.42	0.19	5.23	15996	0.3672	3.31398	-2.94678	NAF
NS0157	104	106	NS	X072908	072908	1	G	W	31.24	33.98	2.06	0.645	0.5	0.091	1.59	0.37	0.035	0.109	0.045	0.016	0.82	15.34	0.14	16.3	16046	3.3354	6.45354	-3.11814	NAF
NS0157	126	128	NS	X072919	072919	1	G	W	32.72	36.17	0.94	0.6837	0.53	0.041	1.17	0.29	0.03	0.063	0.007	0.013	1.19	12.54	-0.08	13.65	16057	1.9278	5.05818	-3.13038	NAF
NS0157	120	122	NS	X072916	072916	1	G	W	25.94	46.13	0.68	0.3354	0.26	0.029	1.28	0.29	0.044	0.061	0.012	0.013	0.9	12.82	0.09	13.81	16054	1.8666	5.05818	-3.19158	NAF
NS0157	114	116	NS	X072913	072913	1	G	W	19.37	58.73	1.29	0.2064	0.16	0.057	1.08	0.22	0.022	0.017	0.021	0.017	0.71	9.82	0.04	10.57	16051	0.5202	3.83724	-3.31704	NAF
NS0157	116	118	NS	X072914	072914	1	G	W	28.92	42.23	1.11	0.3612	0.28	0.05	1.07	0.22	0.027	0.016	0.009	0.012	1.25	12.14	-0.02	13.37	16052	0.4896	3.83724	-3.34764	NAF
NS0157	150	152	NS	X072931	072931	1	G	W	29.02	37.91	0.35	0.516	0.4	0.016	1.46	0.26	0.021	0.033	0.017	0.016	0.97	16.53	0.18	17.68	16069	1.0098	4.53492	-3.52512	NAF
NS0157	128	130	NS	X072920	072920	1	G	W	37.47	32.93	1.25	0.645	0.5	0.053	0.84	0.28	0.04	0.027	0.365	0.075	0.7	9.23	-0.47	9.46	16058	0.8262	4.88376	-4.05756	NAF
NS0157	122	124	NS	X072917	072917	1	G	W	26.64	40.83	1.1	0.3096	0.24	0.048	1.91	0.36	0.021	0.062	0.006	0.012	1.04	15.87	0.17	17.08	16055	1.8972	6.27912	-4.38192	NAF
NS0157	138	140	NS	X072925	072925	1	G	W	22.46	54.04	0.49	0.4902	0.38	0.022	1.15	0.28	0.022	0.015	0.054	0.086	0.72	10.6	-0.1	11.22	16063	0.459	4.88376	-4.42476	NAF
NS0157	152	154	NS	X072932	072932	1	G	W	29.5	35.98	0.26	0.4257	0.33	0.009	1.8	0.33	0.022	0.038	0.016	0.012	0.88	17.82	0.21	18.91	16070	1.1628	5.75586	-4.59306	NAF
NS0157	130	132	NS	X072921	072921	1	G	W	36.38	35.56	0.73	0.5805	0.45	0.033	1.02	0.3	0.044	0.017	0.194	0.059	0.69	8.67	-0.36	9	16059	0.5202	5.2326	-4.7124	NAF
NS0157	106	108	NS	X072909	072909	1	G	W	28.52	38.51	0.91	0.5031	0.39	0.038	1.52	0.33	0.032	0.029	0.023	0.013	1.2	15.79	0.03	17.02	16047	0.8874	5.75586	-4.86846	NAF
NS0157	156	158	NS	X072934	072934	1	G	W	23.13	47.29	0.54	0.4902	0.38	0.025	1.85	0.35	0.014	0.039	0.006	0.009	0.93	15.08	0.28	16.29	16072	1.1934	6.1047	-4.9113	NAF
NS0157	78	80	NS	X072894	072894	1	G	D	30.91	33.89	1	0.4902	0.38	0.043	1.93	0.31	0.031	0.012	0.016	0.008	1.55	16.69	0.06	18.3	16033	0.3672	5.40702	-5.03982	NAF
NS0157	90	92	NS	X072901	072901	1	G	W	30.58	31.66	2.29	0.645	0.5	0.1	1.91	0.4	0.029	0.063	0.011	0.007	1.36	17.54	0.22	19.12	16039	1.9278	6.9768	-5.049	NAF
NS0157	100	102	NS	X072906	072906	1	G	W	30.74	32.69	0.9	0.645	0.5	0.04	1.7	0.32	0.035	0.011	0.011	0.009	1.68	17.73	0.07	19.48	16044	0.3366	5.58144	-5.24484	NAF
NS0157	112	114	NS	X072912	072912	1	G	W	33.07	33.44	1.59	0.3354	0.26	0.071	1.71	0.42	0.019	0.066	0.044	0.015	0.76	14.4	-0.05	15.11	16050	2.0196	7.32564	-5.30604	NAF
NS0157	118	120	NS	X072915	072915	1	G	W	29.58	32.29	3.06	0.5547	0.43	0.136	2.37	0.42	0.053	0.066	0.005	0.01	0.97	17.64	0.17	18.78	16053	2.0196	7.32564	-5.30604	NAF
NS0157	142	144	NS	X072927	072927	1	G	W	30.36	37.49	0.75	0.5031	0.39	0.032	1.61	0.33	0.023	0.013	0.067	0.048	0.64	15.09	-0.03	15.7	16065	0.3978	5.75586	-5.35806	NAF
NS0157	134	136	NS	X072923	072923	1	G	W	26.97	47.1	0.78	0.4773	0.37	0.032	1.25	0.38	0.028	0.034	0.136	0.107	0.79	10.25	-0.13	10.91	16061	1.0404	6.62796	-5.58756	NAF
NS0157	140	142	NS	X072926	072926	1	G	W	30.9	38.44	0.64	0.5547	0.43	0.028	1.47	0.34	0.026	0.009	0.053	0.073	1.16	13.08	-0.18	14.06	16064	0.2754	5.93028	-5.65488	NAF
NS0157	172	174	NS	X072942	072942	1	G	W	33.18	24.76	1.27	0.6579	0.51	0.054	2.18	0.47	0.031	0.081	0.042	0.012	0.9	21.66	0.43	22.99	16080	2.4786	8.19774	-5.71914	NAF
NS0157	146	148	NS	X072929	072929	1	G	W	33.06	26.65	1.25	0.5805	0.45	0.054	1.92	0.4	0.035	0.034	0.006	0.01	1.01	20.67	0.27	21.95	16067	1.0404	6.9768	-5.9364	NAF
NS0157	96	98	NS	X072904	072904	1	G	W	33.44	27.02	1.53	0.7224	0.56	0.068	1.7	0.4	0.029	0.029	0.02	0.011	1.38	19.37	0.07	20.82	16042	0.8874	6.9768	-6.0894	NAF
NS0157	144	146	NS	X072928	072928	1	G	W	30.16	35.46	0.78	0.5031	0.39	0.036	1.7	0.43	0.03	0.041	0.015	0.013	0.6	16.96	0.16	17.72	16066	1.2546	7.50006	-6.24546	NAF
NS0157	136	138	NS	X072924	072924	1	G	W	26.93	47.53	0.56	0.5289	0.41	0.023	1.18	0.38	0.03	0.012	0.07	0.096	0.84	10.29	-0.21	10.92	16062	0.3672	6.62796	-6.26076	NAF
NS0157	86	88	NS	X072898	072898	1	G	D	31.93	28.9	1.48	0.7353	0.57	0.065	2.02	0.46	0.038	0.056	0.009	0.013	1.18	19.36	0.19	20.73	16037	1.7136	8.02332	-6.30972	NAF
NS0157	98	100	NS	X072905	072905	1	G	W	34.51	29.05	1.34	0.6321	0.49	0.059	1.37	0.38	0.028	0.008	0.02	0.013	1.25	16.51	-0.12	17.64	16043	0.2448	6.62796	-6.38316	NAF
NS0157	92	94	NS	X072902	072902	1	G	W	33.02	26.03	2.59	0.7095	0.55	0.108	2.23	0.48	0.03	0.061	0.028	0.016	1.32	19.02	0.18	20.52	16040	1.8666	8.37216	-6.50556	NAF
NS0157	80	82	NS	X072895	072895	1	G	D	30.03	34.89	0.84	0.4644	0.36	0.037	1.92	0.39	0.05	0.009	0.034	0.012	1	17.21	0	18.21	16034	0.2754	6.80238	-6.52698	NAF
NS0157	76	78	NS	X072893	072893	1	G	D	34.29	39.25	1	0.4644	0.36	0.036	0.67	0.39	0.236	0.006	0.024	0.015	3.77	4.32	0.16	8.25	16032	0.1836	6.80238	-6.61878	NAF
NS0157	94	96	NS	X072903	072903	1	G	W	34.48	24.32	1.25	0.7482	0.58	0.054	2.03	0.43	0.024	0.013	0.009	0.009	1.28	20.69	0.07	22.04	16041	0.3978	7.50006	-7.10226	NAF
NS0157	82	84	NS	X072896	072896	1	G	D	32.46	26.47	0.99	0.7095	0.55	0.05	2.72	0.51	0.044	0.007	0.009	0.008	1.08	21.11	0.09	22.28	16035	0.2142	8.89542	-8.68122	NAF
NS0158	66	68	NS	X141514	141514	1	G	D	22.87	42.66	4.95	0.8385	0.65	0.221	4.13	0.84	0.037	1.55	0.672	0.157	0.55	8.86	2.75	12.16	21118	47.43	14.65128	32.77872	PAF(HC)
NS0158	0	2	NS	X072980	072980	1	G	D	34.22	24.93	15.73	0.0258	0.02	0.589	0.17	0.07	0.023	0.199	0.377	0.066	3.36	4.72	0.82	8.9	16084	6.0894	1.22094	4.86846	PAF(LC)
NS0158	62	64	NS	X141512	141512	1	G	D	17.8	52.61	5.27	0.5805	0.45	0.239	3.65	1.31	0.014	0.873	0.805	0.057	0.44	7.1	1.56	9.1	21116	26.7138	22.84902	3.86478	PAF(LC)
NS0158	4	6	NS	X072982	072982	1	G	D	21.11	52.8	10	-0.0129	-0.01	0.343	0.04	0.05	0.017	0.047	0.033	0.085	2.4	3.18	0.42	6	16086	1.4382	0.8721	0.5661	PAF(LC)
NS0158	64	66	NS	X141513	141513	1	G	D	18.36	52.37	4.91	0.6966	0.54	0.216	3.57	0.94	0.035	0.553	0.985	0.134	0.55	7.33	1.39	9.27	21117	16.9218	16.39548	0.52632	PAF(LC)
NS0158	18	20	NS	X072989	072989	1	G	D	11.34	75.68	4.52	0.0258	0.02	0.177	0.04	0.04	0.031	0.031	0.027	0.022	1.54	1.42	0.17	3.13	16093	0.9486	0.69768	0.25092	PAF(LC)
NS0158	62	66	NS	BX139512-BX139513	X139512	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2822	-0.0306	-0.01744	-0.013158	NAF
NS0158	6	8	NS	X072983	072983	1	G	D	22.62	52.98	8.53	-0.0129	-0.01	0.244	0.03	0.05	0.017	0.028	0.02	0.046	2.56	2.63	0.3	5.49	16087	0.8568	0.8721	-0.0153	NAF
NS0158	20	22	NS	X072990	072990	1	G	D	11.27	69.93	8.61	-0.0129	-0.01	0.367	0.02	0.03	0.031	0.016	0.016	0.03	1.78	2.58	0.21	4.57	16094	0.4896	0.52326	-0.03366	NAF
NS0158	22	24	NS	X072991	072991	1	G	D	12.99	72.04	5.36	0.0258	0.02	0.222	0.03	0.03	0.04	0.013	0.011	0.024	1.49	1.58	0.15	3.22	16095	0.3978	0.52326	-0.12546	NAF
NS0158	34	36	NS	X072997	072997	1	G	D	31.57	44.92	4.52	0.1806	0.14	0.173	0.22	0.04	0.062	0.016	0.099	0.021	2.55	1.44	0.14	4.13	16101	0.4896	0.69768	-0.20808	NAF
NS0158	24	26	NS	X072992	072992	1	G	D	19.09	66.03	3.25	0.0387	0.03	0.133	0.03	0.03	0.044	0.009	0.008	0.027	1.67	0.96	0.12	2.75	16096	0.2754	0.52326	-0.24786	NAF
NS0158	30	32	NS	X072995	072995	1	G	D	31.73	47.74	3.37	0.129	0.1	0.134	0.02	0.03	0.021	0.009	0.008	0.015	1.74	1.05	0.14	2.93	16099	0.2754	0.52326	-0.24786	NAF
NS0158	14	16	NS	X072987	072987	1	G	D	27.87	51.37	4.32	0.0903	0.07	0.183	0.05	0.04	0.023	0.014	0.008	0.02	2.14	1.42	0.21	3.77	16091	0.4284	0.69768	-0.26928	NAF
NS0158	16	18	NS	X072988	072988	1	G	D	27.4	52.7	3.86	0.0774	0.06	0.155	0.04	0.04	0.031	0.014	0.008	0.016	2.28	1.27	0.19	3.74	16092	0.4284	0.69768	-0.26928	NAF
NS0158	28	30	NS	X072994	072994	1	G	D	26.26	56.1	3.38	0.0387	0.03	0.142	0.03	0.03	0.013	0.008	0.007	0.024	1.43	1.01	0.11	2.55	16098	0.2448	0.52326	-0.27846	NAF
NS0158	12	14	NS	X072986	072986	1	G	D	20.56	64.09	3.5	-0.0129	-0.01	0.153	0.02	0.04	0.009	0.013	0.017	0.015	1.16	1.24	0.18	2.58	16090	0.3978	0.69768	-0.29988	NAF
NS0158	32	34	NS	X072996	072996	1	G	D	13.58	68.18	7.59	0.1419	0.11	0.295	0.03	0.04	0.034	0.012	0.016	0.031	1.32	2.39	0.2	3.91	16100	0.3672	0.69768	-0.33048	NAF
NS0158	26	28	NS	X072993	072993	1	G	D	29.98	50.23	2.86	0.1161	0.09	0.119	0.05	0.04	0.044	0.011	0.006	0.031	2.24	1.01	0.13	3.38	16097	0.3366	0.69768	-0.36108	NAF
NS0158	38	42	NS	BX079999-BX080000	X079999	2			68.26	2.877	0.227	0.027	0.01944	0.027	0.139	0.032	0.014	0.006	0.036	0.114	-0.01	-0.01	-0.01	-0.03	1489	0.1836	0.558144	-0.374544	NAF
NS0158	8	10	NS	X072984	072984	1	G	D	17.97	65.22	5.11	-0.0129	-0.01	0.18	0.04	0.05	0.012	0.015	0.018	0.035	1.49	1.63	0.2	3.32	16088	0.459	0.8721	-0.4131	NAF
NS0158	10	12	NS	X072985	072985	1	G	D	17.52	69.22	3.25	-0.0129	-0.01	0.133	0.03	0.04	0.008	0.009	0.018	0.028	0.72	1.05	0.15	1.92	16089	0.2754	0.69768	-0.42228	NAF
NS0158	42	46	NS	BX139502-BX139503	X139502	2			65.93	4.033	0.3	0.031	0.02232	0.031	0.167	0.036	0.019	0.006	0.064	0.167	-0.01	-0.01	-0.01	-0.03	2817	0.1836	0.627912	-0.444312	NAF
NS0158	50	54	NS	BX139506-BX139507	X139506	2			67.16	3.067	0.159	0.01	0.0072	0.01	0.142	0.044	0.009	0.005	0.039	0.164	-0.01	-0.01	-0.01	-0.03	2819	0.153	0.767448	-0.614448	NAF
NS0158	158	162	NS	BX139561-BX139562	X139561	2			67.8	6.277	0.275	0.019	0.01368	0.019	0.3	0.069	0.011	0.006	0.12	0.11	-0.01	-0.01	-0.01	-0.03	2847	0.1836	1.203498	-1.019898	NAF
NS0158	150	154	NS	BX139557-BX139558	X139557	2			66.45	6.962	0.277	0.013	0.00936	0.013	0.29	0.062	0.009	0.002	0.141	0.072	-0.01	-0.01	-0.01	-0.03	2845	0.0612	1.081404	-1.020204	NAF
NS0158	146	150	NS	BX139555-BX139556	X139555	2			66.26	7.016	0.237	0.01	0.0072	0.01	0.274	0.063	0.01	0.002	0.116	0.07	-0.01	-0.01	-0.01	-0.03	2844	0.0612	1.098846	-1.037646	NAF
NS0158	198	202	NS	BX139581-BX139582	X139581	2			66.84	6.271	0.417	0.03	0.0216	0.03	0.407	0.08	0.01	0.01	0.096	0.085	0.07	-0.01	-0.01	0.05	2857	0.306	1.39536	-1.08936	NAF
NS0158	118	122	NS	BX139540-BX139541	X139540	2			66.7	6.983	0.405	0.023	0.01656	0.023	0.279	0.072	0.007	0.005	0.234	0.079	-0.01	-0.01	-0.01	-0.03	2836	0.153	1.255824	-1.102824	NAF
NS0158	162	166	NS	BX139563-BX139564	X139563	2			68.43	5.895	0.195	0.01	0.0072	0.01	0.253	0.069	0.014	0.003	0.097	0.081	-0.01	-0.01	-0.01	-0.03	2848	0.0918	1.203498	-1.111698	NAF
NS0158	140	142	NS	BX139552	X139552	2			67.47	6.575	0.379	0.019	0.01368	0.019	0.299	0.075	0.009	0.006	0.208	0.086	-0.01	-0.01	-0.01	-0.03	2842	0.1836	1.30815	-1.12455	NAF
NS0158	36	38	NS	X072998	072998	1	G	D	26.8	48.06	5.14	0.9417	0.73	0.208	0.59	0.09	0.09	0.014	0.53	0.035	3.51	1.65	0.29	5.45	16102	0.4284	1.56978	-1.14138	NAF
NS0158	46	50	NS	BX139504-BX139505	X139504	2			68.36	3.792	0.263	0.022	0.01584	0.022	0.24	0.083	0.01	0.01	0.084	0.13	-0.01	-0.01	-0.01	-0.03	2818	0.306	1.447686	-1.141686	NAF
NS0158	130	134	NS	BX139546-BX139547	X139546	2			67.83	6.084	0.261	0.014	0.01008	0.014	0.264	0.072	0.01	0.003	0.139	0.08	-0.01	-0.01	-0.01	-0.03	2839	0.0918	1.255824	-1.164024	NAF
NS0158	126	130	NS	BX139544-BX139545	X139544	2			68.87	2.418	0.045	0.002	0.00144	0.002	0.249	0.087	0.009	0.01	0.004	0.167	-0.01	-0.01	-0.01	-0.03	2838	0.306	1.517454	-1.211454	NAF
NS0158	202	204	NS	BX139583	X139583	2			66.76	6.348	0.351	0.02	0.0144	0.02	0.279	0.08	0.007	0.006	0.177	0.076	-0.01	-0.01	-0.01	-0.03	2858	0.1836	1.39536	-1.21176	NAF
NS0158	170	174	NS	BX139567-BX139568	X139567	2			66.9	7.397	0.193	0.013	0.00936	0.013	0.276	0.073	0.011	0.002	0.086	0.081	-0.01	-0.01	-0.01	-0.03	2850	0.0612	1.273266	-1.212066	NAF
NS0158	154	156	NS	BX139559	X139559	2			66.96	7.08	0.352	0.018	0.01296	0.018	0.328	0.075	0.01	0.003	0.182	0.074	-0.01	-0.01	-0.01	-0.03	2846	0.0918	1.30815	-1.21635	NAF
NS0158	186	190	NS	BX139575-BX139576	X139575	2			66.81	7.196	0.428	0.029	0.02088	0.029	0.384	0.082	0.01	0.006	0.147	0.076	0.02	-0.01	-0.01	0	2854	0.1836	1.430244	-1.246644	NAF
NS0158	138	140	NS	BX139550	X139550	2			67.45	6.884	0.23	0.012	0.00864	0.012	0.277	0.075	0.01	0.002	0.122	0.073	-0.01	-0.01	-0.01	-0.03	2841	0.0612	1.30815	-1.24695	NAF
NS0158	190	194	NS	BX139577-BX139578	X139577	2			68.65	5.018	0.35	0.027	0.01944	0.027	0.297	0.088	0.009	0.009	0.129	0.078	0.02	-0.01	-0.01	0	2855	0.2754	1.534896	-1.259496	NAF
NS0158	114	118	NS	BX139538-BX139539	X139538	2			67.05	6.817	0.467	0.027	0.01944	0.027	0.33	0.083	0.009	0.006	0.232	0.073	-0.01	-0.01	-0.01	-0.03	2835	0.1836	1.447686	-1.264086	NAF
NS0158	122	126	NS	BX139542-BX139543	X139542	2			66.06	6.569	0.475	0.025	0.018	0.025	0.341	0.086	0.007	0.007	0.241	0.085	-0.01	-0.01	-0.01	-0.03	2837	0.2142	1.500012	-1.285812	NAF
NS0158	90	94	NS	BX139526-BX139527	X139526	2			67.37	6.533	0.518	0.04	0.0288	0.04	0.343	0.093	0.005	0.01	0.219	0.071	-0.01	-0.01	-0.01	-0.03	2829	0.306	1.622106	-1.316106	NAF
NS0158	38	40	NS	X072999	072999	1	G	D	30.44	47.16	3.3	0.7611	0.59	0.138	0.44	0.09	0.07	0.007	0.491	0.028	2.59	0.99	0.12	3.7	16103	0.2142	1.56978	-1.35558	NAF
NS0158	134	138	NS	BX139548-BX139549	X139548	2			68.23	5.676	0.269	0.015	0.0108	0.015	0.246	0.091	0.012	0.005	0.147	0.076	-0.01	-0.01	-0.01	-0.03	2840	0.153	1.587222	-1.434222	NAF
NS0158	110	114	NS	BX139536-BX139537	X139536	2			66.63	6.925	0.424	0.028	0.02016	0.028	0.352	0.098	0.013	0.008	0.169	0.083	-0.01	-0.01	-0.01	-0.03	2834	0.2448	1.709316	-1.464516	NAF
NS0158	106	110	NS	BX139534-BX139535	X139534	2			66.05	7.12	0.451	0.026	0.01872	0.026	0.362	0.098	0.01	0.007	0.183	0.086	-0.01	-0.01	-0.01	-0.03	2833	0.2142	1.709316	-1.495116	NAF
NS0158	178	182	NS	BX139571-BX139572	X139571	2			66.97	7.235	0.255	0.016	0.01152	0.016	0.286	0.094	0.012	0.004	0.12	0.075	-0.01	-0.01	-0.01	-0.03	2852	0.1224	1.639548	-1.517148	NAF
NS0158	94	98	NS	BX139528-BX139529	X139528	2			65.95	7.2	0.394	0.027	0.01944	0.027	0.3	0.098	0.01	0.006	0.179	0.064	-0.01	-0.01	-0.01	-0.03	2830	0.1836	1.709316	-1.525716	NAF
NS0158	142	146	NS	BX139553-BX139554	X139553	2			65.87	8.095	0.281	0.014	0.01008	0.014	0.333	0.096	0.014	0.004	0.122	0.085	-0.01	-0.01	-0.01	-0.03	2843	0.1224	1.674432	-1.552032	NAF
NS0158	102	106	NS	BX139532-BX139533	X139532	2			66.61	6.21	0.243	0.014	0.01008	0.014	0.241	0.094	0.009	0.002	0.143	0.087	-0.01	-0.01	-0.01	-0.03	2832	0.0612	1.639548	-1.578348	NAF
NS0158	194	198	NS	BX139579-BX139580	X139579	2			67.29	6.483	0.302	0.017	0.01224	0.017	0.32	0.099	0.012	0.004	0.104	0.076	0.02	-0.01	-0.01	0	2856	0.1224	1.726758	-1.604358	NAF
NS0158	166	170	NS	BX139565-BX139566	X139565	2			66.82	6.748	0.222	0.013	0.00936	0.013	0.264	0.098	0.015	0.002	0.126	0.073	-0.01	-0.01	-0.01	-0.03	2849	0.0612	1.709316	-1.648116	NAF
NS0158	86	90	NS	BX139524-BX139525	X139524	2			65.28	7.447	0.683	0.048	0.03456	0.048	0.457	0.128	0.011	0.018	0.248	0.077	-0.01	-0.01	-0.01	-0.03	2828	0.5508	2.232576	-1.681776	NAF
NS0158	174	178	NS	BX139569-BX139570	X139569	2			65.87	8.648	0.265	0.019	0.01368	0.019	0.32	0.105	0.015	0.004	0.113	0.103	-0.01	-0.01	-0.01	-0.03	2851	0.1224	1.83141	-1.70901	NAF
NS0158	66	70	NS	BX139514-BX139515	X139514	2			67.1	4.423	0.358	0.024	0.01728	0.024	0.378	0.141	0.013	0.022	0.04	0.147	-0.01	-0.01	-0.01	-0.03	2823	0.6732	2.459322	-1.786122	NAF
NS0158	78	82	NS	BX139520-BX139521	X139520	2			67.92	5.329	0.35	0.022	0.01584	0.022	0.301	0.114	0.01	0.006	0.133	0.077	-0.01	-0.01	-0.01	-0.03	2826	0.1836	1.988388	-1.804788	NAF
NS0158	54	58	NS	BX139508-BX139509	X139508	2			66.29	6.093	0.445	0.03	0.0216	0.03	0.381	0.123	0.01	0.008	0.148	0.074	-0.01	-0.01	-0.01	-0.03	2820	0.2448	2.145366	-1.900566	NAF
NS0158	82	86	NS	BX139522-BX139523	X139522	2			66.84	6.239	0.398	0.023	0.01656	0.023	0.348	0.123	0.008	0.008	0.155	0.074	-0.01	-0.01	-0.01	-0.03	2827	0.2448	2.145366	-1.900566	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0158	182	186	NS	BX139573-BX139574	X139573	2			66.9	7.335	0.248	0.016	0.01152	0.016	0.341	0.121	0.015	0.003	0.08	0.082	-0.01	-0.01	-0.01	-0.03	2853	0.0918	2.110482	-2.018682	NAF
NS0158	100	102	NS	BX139531	X139531	2			67.07	6.116	0.345	0.018	0.01296	0.018	0.289	0.138	0.011	0.005	0.185	0.077	-0.01	-0.01	-0.01	-0.03	2831	0.153	2.406996	-2.253996	NAF
NS0158	74	78	NS	BX139518-BX139519	X139518	2			67.79	5.496	0.366	0.026	0.01872	0.026	0.354	0.145	0.006	0.007	0.092	0.078	-0.01	-0.01	-0.01	-0.03	2825	0.2142	2.52909	-2.31489	NAF
NS0158	2	4	NS	X072981	072981	1	G	D	30.55	42.16	7.86	-0.0129	-0.01	0.327	0.15	0.24	0.02	0.06	0.071	0.136	2.18	2.59	0.48	5.25	16085	1.836	4.18608	-2.35008	NAF
NS0158	70	74	NS	BX139516-BX139517	X139516	2			68.44	4.28	0.211	0.018	0.01296	0.018	0.25	0.15	0.006	0.006	0.043	0.078	-0.01	-0.01	-0.01	-0.03	2824	0.1836	2.6163	-2.4327	NAF
NS0158	40	42	NS	X073000	073000	1	G	D	32.82	44.01	3.2	0.4257	0.33	0.152	0.65	0.18	0.053	0.004	0.64	0.041	2.4	0.98	0.04	3.42	16104	0.1224	3.13956	-3.01716	NAF
NS0158	58	62	NS	BX139510-BX139511	X139510	2			65.89	6.572	0.542	0.04	0.0288	0.04	0.452	0.205	0.006	0.012	0.061	0.094	-0.01	-0.01	-0.01	-0.03	2821	0.3672	3.57561	-3.20841	NAF
NS0158	44	46	NS	X141503	141503	1	G	D	30.16	46.34	3.75	0.3483	0.27	0.158	0.92	0.19	0.04	0.003	0.814	0.048	2.59	1.13	0.17	3.89	21107	0.0918	3.31398	-3.22218	NAF
NS0158	42	44	NS	X141502	141502	1	G	D	28.44	48.46	4.01	0.3225	0.25	0.202	0.96	0.24	0.067	0.004	0.647	0.047	2.55	1.24	0.16	3.95	21106	0.1224	4.18608	-4.06368	NAF
NS0158	46	48	NS	X141504	141504	1	G	D	25.56	51.67	4.24	0.3741	0.29	0.179	1.29	0.36	0.067	0.006	0.792	0.045	2.45	1.3	0.21	3.96	21108	0.1836	6.27912	-6.09552	NAF
NS0158	52	54	NS	X141507	141507	1	G	D	35.98	40.53	2.34	0.3225	0.25	0.101	0.88	0.38	0.088	0.011	0.589	0.032	1.69	1.22	0.11	3.02	21111	0.3366	6.62796	-6.29136	NAF
NS0158	200	202	NS	X141582	141582	1	G	D	27.77	44.88	3.69	0.4515	0.35	0.17	3.48	0.71	0.091	0.184	0.504	0.02	0.23	5.39	0.39	6.01	21185	5.6304	12.38382	-6.75342	NAF
NS0158	148	150	NS	X141556	141556	1	G	D	34.17	42.29	1.59	0.6579	0.51	0.07	1.72	0.44	0.106	0.026	0.574	0.014	0.1	3.42	-0.14	3.38	21159	0.7956	7.67448	-6.87888	NAF
NS0158	50	52	NS	X141506	141506	1	G	D	29.78	47.78	2.81	0.3999	0.31	0.119	1.07	0.55	0.129	0.006	0.596	0.032	2.18	1.06	0.17	3.41	21110	0.1836	9.5931	-9.4095	NAF
NS0158	132	134	NS	X141547	141547	1	G	D	34.97	40.6	1.88	0.5934	0.46	0.091	1.87	0.63	0.076	0.028	0.695	0.04	0.08	3.38	-0.03	3.43	21151	0.8568	10.98846	-10.13166	NAF
NS0158	162	164	NS	X141563	141563	1	G	D	35.18	39.28	1.63	0.6966	0.54	0.073	2.01	0.84	0.124	0.023	0.617	0.099	0.01	3.76	0.06	3.83	21166	0.7038	14.65128	-13.94748	NAF
NS0158	152	154	NS	X141558	141558	1	G	D	36.6	37.36	1.98	0.5805	0.45	0.082	2.1	0.87	0.075	0.025	0.74	0.085	0.01	3.05	0.18	3.24	21161	0.765	15.17454	-14.40954	NAF
NS0158	150	152	NS	X141557	141557	1	G	D	34.75	39.1	2.02	0.5934	0.46	0.089	2.19	1.02	0.054	0.031	0.822	0.1	0.05	3.27	0.55	3.87	21160	0.9486	17.79084	-16.84224	NAF
NS0158	120	122	NS	X141541	141541	1	G	D	32.43	41.6	2.75	0.4644	0.36	0.113	2.19	1.07	0.078	0.045	1.21	0.098	0.09	3.2	0.44	3.73	21145	1.377	18.66294	-17.28594	NAF
NS0158	146	148	NS	X141555	141555	1	G	D	35.84	38.31	1.95	0.5547	0.43	0.089	2.21	1.05	0.079	0.026	0.7	0.063	0.03	2.99	0.41	3.43	21158	0.7956	18.3141	-17.5185	NAF
NS0158	48	50	NS	X141505	141505	1	G	D	28.82	43.89	2.85	0.387	0.3	0.119	2.49	1.27	0.18	0.132	0.655	0.059	0.52	5.61	0.31	6.44	21109	4.0392	22.15134	-18.11214	NAF
NS0158	160	162	NS	X141562	141562	1	G	D	33.25	40.7	1.9	0.645	0.5	0.087	2.42	1.1	0.124	0.034	0.554	0.085	0.07	3.84	0.37	4.28	21165	1.0404	19.1862	-18.1458	NAF
NS0158	118	120	NS	X141540	141540	1	G	D	30.38	43.6	3.01	0.4386	0.34	0.127	2.38	1.15	0.075	0.05	1.24	0.079	0.07	3.31	0.54	3.92	21144	1.53	20.0583	-18.5283	NAF
NS0158	68	70	NS	X141515	141515	1	G	D	30.27	38.09	2.25	0.774	0.6	0.094	2.83	1.25	0.081	0.092	0.236	0.047	0.42	10.23	0.41	11.06	21119	2.8152	21.8025	-18.9873	NAF
NS0158	92	94	NS	X141527	141527	1	G	D	27.92	43.69	3.84	0.4644	0.36	0.167	3.02	1.29	0.1	0.098	1.27	0.042	0.23	4.86	0.57	5.66	21131	2.9988	22.50018	-19.50138	NAF
NS0158	158	160	NS	X141561	141561	1	G	D	33.44	40.73	1.84	0.6063	0.47	0.085	2.35	1.19	0.106	0.035	0.55	0.057	0.05	3.64	0.48	4.17	21164	1.071	20.75598	-19.68498	NAF
NS0158	198	200	NS	X141581	141581	1	G	D	31.84	41.26	2.39	0.4902	0.38	0.107	2.79	1.23	0.094	0.056	0.403	0.014	0.15	4.68	0.42	5.25	21184	1.7136	21.45366	-19.74006	NAF
NS0158	194	196	NS	X141579	141579	1	G	D	31.57	41.27	2.28	0.5805	0.45	0.1	2.68	1.28	0.112	0.078	0.534	0.018	0.15	5	0.39	5.54	21182	2.3868	22.32576	-19.93896	NAF
NS0158	108	110	NS	X141535	141535	1	G	D	28.01	43.72	4.05	0.4386	0.34	0.183	3.24	1.38	0.112	0.126	1.21	0.177	0.22	3.79	0.74	4.75	21139	3.8556	24.06996	-20.21436	NAF
NS0158	164	166	NS	X141564	141564	1	G	D	34.86	39.04	1.75	0.6192	0.48	0.081	2.16	1.23	0.132	0.035	0.575	0.086	0.04	3.32	0.45	3.81	21167	1.071	21.45366	-20.38266	NAF
NS0158	138	140	NS	X141550	141550	1	G	D	34.69	38.9	1.69	0.6708	0.52	0.08	2.31	1.23	0.086	0.026	0.6	0.109	0.05	3.77	0.73	4.55	21154	0.7956	21.45366	-20.65806	NAF
NS0158	106	108	NS	X141534	141534	1	G	D	33.98	40.55	2.1	0.4386	0.34	0.092	2.18	1.25	0.06	0.025	0.71	0.103	0.05	2.99	0.68	3.72	21138	0.765	21.8025	-21.0375	NAF
NS0158	54	56	NS	X141508	141508	1	G	D	31.4	39.53	3.11	0.4386	0.34	0.129	2.7	1.31	0.093	0.058	0.905	0.074	0.62	5.34	0.61	6.57	21112	1.7748	22.84902	-21.07422	NAF
NS0158	156	158	NS	X141560	141560	1	G	D	32.9	40.45	2.18	0.5676	0.44	0.102	2.53	1.35	0.084	0.069	0.747	0.052	0.03	3.53	0.77	4.33	21163	2.1114	23.5467	-21.4353	NAF
NS0158	142	144	NS	X141553	141553	1	G	D	34.9	38.82	1.82	0.5934	0.46	0.084	2.36	1.28	0.097	0.029	0.496	0.116	0.04	3.33	0.68	4.05	21156	0.8874	22.32576	-21.43836	NAF
NS0158	140	142	NS	X141552	141552	1	G	D	31.72	41.21	2.7	0.5805	0.45	0.115	2.55	1.34	0.065	0.045	1.15	0.124	0.1	3.5	0.82	4.42	21155	1.377	23.37228	-21.99528	NAF
NS0158	116	118	NS	X141539	141539	1	G	D	31.72	41.82	2.63	0.4773	0.37	0.115	2.41	1.39	0.135	0.068	0.965	0.088	0.07	3.47	0.49	4.03	21143	2.0808	24.24438	-22.16358	NAF
NS0158	144	146	NS	X141554	141554	1	G	D	34.18	39.3	1.83	0.6321	0.49	0.084	2.38	1.35	0.085	0.029	0.577	0.101	0.07	3.47	0.78	4.32	21157	0.8874	23.5467	-22.6593	NAF
NS0158	124	126	NS	X141543	141543	1	G	D	32.05	40.75	2.8	0.516	0.4	0.123	2.68	1.41	0.089	0.059	0.941	0.134	0.09	3.69	0.81	4.59	21147	1.8054	24.59322	-22.78782	NAF
NS0158	110	112	NS	X141536	141536	1	G	D	33.04	41.77	2.02	0.4644	0.36	0.089	2.24	1.37	0.068	0.022	0.534	0.087	0.07	3.12	0.71	3.9	21140	0.6732	23.89554	-23.22234	NAF
NS0158	126	128	NS	X141544	141544	1	G	D	27.64	42.86	4.14	0.5418	0.42	0.178	3.51	1.63	0.291	0.167	1.32	0.177	0.2	4.51	0.61	5.32	21148	5.1102	28.43046	-23.32026	NAF
NS0158	112	114	NS	X141537	141537	1	G	D	25.33	44.31	4.44	0.5805	0.45	0.193	3.73	1.79	0.232	0.254	1.43	0.189	0.21	5.16	0.91	6.28	21141	7.7724	31.22118	-23.44878	NAF
NS0158	154	156	NS	X141559	141559	1	G	D	34.11	39.05	2.03	0.6192	0.48	0.088	2.45	1.4	0.082	0.031	0.683	0.071	0.05	3.51	0.84	4.4	21162	0.9486	24.4188	-23.4702	NAF
NS0158	170	172	NS	X141567	141567	1	G	D	34.91	39.57	1.51	0.6063	0.47	0.07	2.11	1.38	0.084	0.019	0.584	0.061	0.03	3.17	0.73	3.93	21170	0.5814	24.06996	-23.48856	NAF
NS0158	86	88	NS	X141524	141524	1	G	D	28.06	41.86	3.2	0.5805	0.45	0.136	3.07	1.82	0.138	0.249	0.985	0.059	0.37	6.11	0.99	7.47	21128	7.6194	31.74444	-24.12504	NAF
NS0158	94	96	NS	X141528	141528	1	G	D	28.52	44.46	2.95	0.4644	0.36	0.127	2.76	1.52	0.112	0.078	0.873	0.034	0.15	4.56	0.8	5.51	21132	2.3868	26.51184	-24.12504	NAF
NS0158	178	180	NS	X141571	141571	1	G	D	33.9	39.61	1.76	0.6321	0.49	0.085	2.43	1.47	0.123	0.036	0.61	0.086	0.04	3.54	0.69	4.27	21174	1.1016	25.63974	-24.53814	NAF
NS0158	122	124	NS	X141542	141542	1	G	D	32.27	40.05	2.28	0.645	0.5	0.104	2.53	1.47	0.078	0.03	0.945	0.135	0.12	4.24	0.83	5.19	21146	0.918	25.63974	-24.72174	NAF
NS0158	88	90	NS	X141525	141525	1	G	D	26.66	43.81	4.24	0.4128	0.32	0.176	3.43	1.74	0.126	0.163	0.937	0.043	0.25	4.87	0.96	6.08	21129	4.9878	30.34908	-25.36128	NAF
NS0158	196	198	NS	X141580	141580	1	G	D	32.76	40.75	1.99	0.5547	0.43	0.086	2.4	1.52	0.065	0.032	0.474	0.009	0.08	3.99	0.87	4.94	21183	0.9792	26.51184	-25.53264	NAF
NS0158	172	174	NS	X141568	141568	1	G	D	34.86	39.15	1.6	0.6063	0.47	0.067	2.26	1.54	0.069	0.02	0.488	0.087	0.03	3.04	1	4.07	21171	0.612	26.86068	-26.24868	NAF
NS0158	60	62	NS	X141511	141511	1	G	D	21.76	50.05	4	0.3741	0.29	0.175	3.32	2.01	0.017	0.282	0.417	0.045	0.39	6.06	1.58	8.03	21115	8.6292	35.05842	-26.42922	NAF
NS0158	186	188	NS	X141575	141575	1	G	D	29.76	45.38	1.99	0.4902	0.38	0.084	2.64	1.59	0.05	0.031	0.428	0.032	0.06	3.36	1.14	4.56	21178	0.9486	27.73278	-26.78418	NAF
NS0158	114	116	NS	X141538	141538	1	G	D	28.08	43.55	3.49	0.5289	0.41	0.156	3.06	1.72	0.227	0.104	1.08	0.142	0.21	4.41	0.74	5.36	21142	3.1824	30.00024	-26.81784	NAF
NS0158	104	106	NS	X141533	141533	1	G	D	32.57	41.32	2.13	0.4644	0.36	0.094	2.26	1.61	0.091	0.03	0.766	0.123	0.07	3.16	0.97	4.2	21137	0.918	28.08162	-27.16362	NAF
NS0158	192	194	NS	X141578	141578	1	G	D	26.64	43.91	3.16	0.5676	0.44	0.14	3.2	2.01	0.085	0.251	0.898	0.012	0.12	5.73	1.31	7.16	21181	7.6806	35.05842	-27.37782	NAF
NS0158	202	204	NS	X141583	141583	1	G	D	31.91	41.48	2.01	0.5031	0.39	0.093	2.37	1.69	0.064	0.062	0.655	0.033	0.08	3.91	1.11	5.1	21186	1.8972	29.47698	-27.57978	NAF
NS0158	136	138	NS	X141549	141549	1	G	D	31.91	41.62	1.98	0.5805	0.45	0.099	2.37	1.67	0.125	0.048	0.736	0.093	0.05	3.45	1.01	4.51	21153	1.4688	29.12814	-27.65934	NAF
NS0158	102	104	NS	X141532	141532	1	G	D	33.28	41.07	1.88	0.4644	0.36	0.082	1.98	1.65	0.074	0.023	0.875	0.088	0.07	2.86	0.97	3.9	21136	0.7038	28.7793	-28.0755	NAF
NS0158	188	190	NS	X141576	141576	1	G	D	29.45	41.57	3.61	0.4515	0.35	0.157	3.48	1.79	0.185	0.101	0.93	0.061	0.12	3.98	0.89	4.99	21179	3.0906	31.22118	-28.13058	NAF
NS0158	174	176	NS	X141569	141569	1	G	D	34.47	38.95	1.78	0.5676	0.44	0.084	2.38	1.68	0.102	0.03	0.564	0.083	0.02	3.05	1.1	4.17	21172	0.918	29.30256	-28.38456	NAF
NS0158	58	60	NS	X141510	141510	1	G	D	23.09	48.84	3.23	0.5289	0.41	0.143	3.08	1.98	0.101	0.197	0.466	0.065	0.54	6.23	1.35	8.12	21114	6.0282	34.53516	-28.50696	NAF
NS0158	166	168	NS	X141565	141565	1	G	D	35.25	37.8	1.71	0.645	0.5	0.077	2.25	1.72	0.163	0.022	0.654	0.098	0.01	3.3	0.9	4.21	21168	0.6732	30.00024	-29.32704	NAF
NS0158	78	80	NS	X141520	141520	1	G	D	30.83	41.39	2.8	0.3999	0.31	0.118	2.61	1.82	0.112	0.076	0.8	0.045	0.2	4.21	1	5.41	21124	2.3256	31.74444	-29.41884	NAF
NS0158	168	170	NS	X141566	141566	1	G	D	34.57	39.13	1.53	0.5934	0.46	0.068	2.05	1.81	0.108	0.023	0.663	0.096	-0.01	2.83	1.21	4.03	21169	0.7038	31.57002	-30.86622	NAC
NS0158	90	92	NS	X141526	141526	1	G	D	27.68	43.72	3.64	0.4257	0.33	0.161	3.05	2.02	0.124	0.128	0.951	0.045	0.23	4.25	1.29	5.77	21130	3.9168	35.23284	-31.31604	NAC
NS0158	56	58	NS	X141509	141509	1	G	D	28.33	43.58	3	0.3741	0.29	0.129	2.8	2.02	0.127	0.123	0.529	0.044	0.37	4.92	1.08	6.37	21113	3.7638	35.23284	-31.46904	NAC
NS0158	130	132	NS	X141546	141546	1	G	D	32.95	39.72	1.85	0.6321	0.49	0.087	2.39	1.91	0.079	0.035	0.641	0.105	0.07	3.48	1.45	5	21150	1.071	33.31422	-32.24322	NAC
NS0158	184	186	NS	X141574	141574	1	G	D	32.5	40.28	1.91	0.5676	0.44	0.092	2.85	1.92	0.085	0.025	0.378	0.055	0.04	3.69	1.42	5.15	21177	0.765	33.48864	-32.72364	NAC
NS0158	72	74	NS	X141517	141517	1	G	D	26.69	46.12	2.14	0.5547	0.43	0.09	2.47	2.27	0.05	0.209	0.389	0.05	0.33	5.22	1.62	7.17	21121	6.3954	39.59334	-33.19794	NAC
NS0158	96	98	NS	X141529	141529	1	G	D	29.57	45.33	2.27	0.387	0.3	0.099	2.08	1.99	0.134	0.038	0.819	0.023	0.12	2.76	1.14	4.02	21133	1.1628	34.70958	-33.54678	NAC
NS0158	74	76	NS	X141518	141518	1	G	D	30.45	41.37	2.26	0.5418	0.42	0.095	2.59	2.13	0.066	0.092	0.342	0.056	0.29	5.35	1.41	7.05	21122	2.8152	37.15146	-34.33626	NAC
NS0158	82	84	NS	X141522	141522	1	G	D	31.08	40.77	2.26	0.4644	0.36	0.094	2.59	2.08	0.081	0.059	0.694	0.045	0.27	4.84	1.42	6.53	21126	1.8054	36.27936	-34.47396	NAC
NS0158	80	82	NS	X141521	141521	1	G	D	28.26	46.86	1.79	0.3741	0.29	0.079	2.11	2.04	0.106	0.033	0.543	0.045	0.15	3.74	1.41	5.3	21125	1.0098	35.58168	-34.57188	NAC
NS0158	176	178	NS	X141570	141570	1	G	D	31.59	42.71	1.54	0.5934	0.46	0.07	2.39	2.04	0.088	0.026	0.444	0.103	0.02	3.06	1.55	4.63	21173	0.7956	35.58168	-34.78608	NAC
NS0158	84	86	NS	X141523	141523	1	G	D	31.19	40.17	2.43	0.4257	0.33	0.105	2.83	2.22	0.084	0.066	0.482	0.039	0.23	4.44	1.58	6.25	21127	2.0196	38.72124	-36.70164	NAC
NS0158	134	136	NS	X141548	141548	1	G	D	30.78	43.51	1.75	0.5289	0.41	0.087	2.16	2.22	0.095	0.038	0.707	0.089	0.02	2.66	1.75	4.43	21152	1.1628	38.72124	-37.55844	NAC
NS0158	128	130	NS	X141545	141545	1	G	D	31.2	41.67	1.98	0.645	0.5	0.085	2.44	2.23	0.14	0.033	0.725	0.127	0.07	3.6	1.68	5.35	21149	1.0098	38.89566	-37.88586	NAC
NS0158	180	182	NS	X141572	141572	1	G	D	30.97	41.87	2	0.5934	0.46	0.087	2.53	2.34	0.076	0.065	0.739	0.073	0.07	3.12	1.87	5.06	21175	1.989	40.81428	-38.82528	NAC
NS0158	76	78	NS	X141519	141519	1	G	D	28.26	42.67	2.8	0.4644	0.36	0.113	2.9	2.45	0.086	0.067	0.592	0.059	0.35	4.89	1.91	7.15	21123	2.0502	42.7329	-40.6827	NAC
NS0158	100	102	NS	X141531	141531	1	G	D	29.78	41.31	2.58	0.5289	0.41	0.11	2.74	2.61	0.116	0.045	1.05	0.107	0.13	3.54	2.09	5.76	21135	1.377	45.52362	-44.14662	NAC
NS0158	70	72	NS	X141516	141516	1	G	D	27.71	44.28	1.64	0.5805	0.45	0.071	2.27	2.95	0.081	0.054	0.265	0.054	0.27	5.61	2.29	8.17	21120	1.6524	51.4539	-49.8015	NAC
NS0158	98	100	NS	X141530	141530	1	G	D	29	44.27	1.94	0.4644	0.36	0.084	2.29	2.98	0.129	0.033	0.78	0.041	0.09	2.84	2.42	5.35	21134	1.0098	51.97716	-50.96736	NAC
NS0158	182	184	NS	X141573	141573	1	G	D	30.45	41.62	1.49	0.6579	0.51	0.066	2.69	2.99	0.131	0.017	0.328	0.074	0.08	3.36	2.55	5.99	21176	0.5202	52.15158	-51.63138	NAC
NS0158	190	192	NS	X141577	141577	1	G	D	28.12	43.86	1.42	0.5805	0.45	0.059	2.66	3.72	0.102	0.027	0.149	0.008	0.14	3.68	3.28	7.1	21180	0.8262	64.88424	-64.05804	NAC
NS0159	146	148	NS	X141659	141659	1	G	D	25.38	42.07	5.75	0.3483	0.27	0.26	5.02	0.31	0.076	0.678	0.967	0.29	1.09	5.85	1.44	8.38	21260	20.7468	5.40702	15.33978	PAF(HC)
NS0159	144	146	NS	X141658	141658	1	G	D	23.59	48.87	2.25	0.5547	0.43	0.109	3.11	0.45	0.104	0.57	0.638	0.208	0.94	7.52	1.31	9.77	21259	17.442	7.8489	9.5931	PAF(LC)
NS0159	150	152	NS	X141661	141661	1	G	D	30.09	39.33	3.95	0.4386	0.34	0.175	4.47	0.13	0.018	0.154	1.13	0.323	1.11	5.15	0.39	6.65	21262	4.7124	2.26746	2.44494	PAF(LC)
NS0159	2	4	NS	X141585	141585	1	G	D	23.9	54.1	5.59	0.0258	0.02	0.227	0.1	0.05	0.027	0.049	0.043	0.019	3.97	1.51	0.26	5.74	21188	1.4994	0.8721	0.6273	PAF(LC)
NS0159	4	6	NS	X141586	141586	1	G	D	26.24	50.66	5.02	0.00645	0.005	0.203	0.07	0.05	0.019	0.04	0.013	0.033	4.42	1.38	0.25	6.05	21189	1.224	0.8721	0.3519	PAF(LC)
NS0159	14	16	NS	X141591	141591	1	G	D	22.46	53.79	7.11	0.0258	0.02	0.214	0.07	0.03	0.02	0.023	0.007	0.065	4.19	1.99	0.25	6.43	21194	0.7038	0.52326	0.18054	PAF(LC)
NS0159	142	146	NS	BX139657-BX139658	X139657	2			68.5	4.5	0.22	0.037	0.02664	0.037	0.332	0.056	0.009	0.036	0.053	0.123	-0.01	-0.01	-0.01	-0.03	2881	1.1016	0.976752	0.124848	PAF(LC)
NS0159	16	18	NS	X141592	141592	1	G	D	36.32	38.44	2.92	0.1161	0.09	0.117	0.08	0.05	0.02	0.032	0.008	0.042	4.9	0.84	0.22	5.96	21195	0.9792	0.8721	0.1071	PAF(LC)
NS0159	6	8	NS	X141587	141587	1	G	D	24.08	54.49	5.37	0.0258	0.02	0.247	0.07	0.04	0.015	0.026	0.014	0.026	3.81	1.54	0.22	5.57	21190	0.7956	0.69768	0.09792	PAF(LC)
NS0159	20	22	NS	X141594	141594	1	G	D	36.63	39.53	2.84	0.1419	0.11	0.125	0.06	0.03	0.017	0.018	0.011	0.032	3.34	1.06	0.2	4.6	21197	0.5508	0.52326	0.02754	PAF(LC)
NS0159	96	98	NS	X141633	141633	1	G	D																	21235	0	0	0	PAF(LC)
NS0159	58	60	NS	BX139614	X139614	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2859	-0.0306	-0.01744	-0.013158	NAF
NS0159	132	134	NS	BX139652	X139652	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2878	-0.0306	-0.01744	-0.013158	NAF
NS0159	134	138	NS	BX139653-BX139654	X139653	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2879	-0.0306	-0.01744	-0.013158	NAF
NS0159	18	20	NS	X141593	141593	1	G	D	37.7	38.58	2.38	0.1677	0.13	0.107	0.06	0.04	0.016	0.022	0.007	0.03	3.59	0.87	0.18	4.64	21196	0.6732	0.69768	-0.02448	NAF
NS0159	8	10	NS	X141588	141588	1	G	D	26.62	50.08	5.77	0.0387	0.03	0.24	0.08	0.05	0.022	0.026	0.013	0.035	3.67	1.71	0.24	5.62	21191	0.7956	0.8721	-0.0765	NAF
NS0159	146	148	NS	BX139659	X139659	2			65.94	5.981	0.435	0.043	0.03096	0.043	0.567	0.052	0.006	0.025	0.079	0.091	-0.01	-0.01	-0.01	-0.03	2882	0.765	0.906984	-0.141984	NAF
NS0159	24	26	NS	X141596	141596	1	G	D	36.2	40.94	2.68	0.3354	0.26	0.126	0.14	0.04	0.011	0.018	0.012	0.036	2.5	1.07	0.16	3.73	21199	0.5508	0.69768	-0.14688	NAF
NS0159	22	24	NS	X141595	141595	1	G	D	36.67	40.51	2.42	0.3096	0.24	0.108	0.07	0.04	0.031	0.015	0.009	0.03	2.65	0.92	0.12	3.69	21198	0.459	0.69768	-0.23868	NAF
NS0159	26	28	NS	X141597	141597	1	G	D	33.86	43.91	2.77	0.2709	0.21	0.119	0.19	0.04	0.014	0.015	0.012	0.021	2.92	1.06	0.16	4.14	21200	0.459	0.69768	-0.23868	NAF
NS0159	84	86	NS	X141627	141627	1	G	D	25.13	49.45	2.52	0.5547	0.43	0.111	3.26	0.27	0.059	0.146	0.64	0.167	0.76	5.62	0.35	6.73	21229	4.4676	4.70934	-0.24174	NAF
NS0159	64	68	NS	BX139617-BX139618	X139617	2			65.56	4.408	0.192	0.015	0.0108	0.015	0.133	0.028	0.021	0.001	0.009	0.066	0.56	0.78	0.77	2.11	2861	0.0306	0.488376	-0.457776	NAF
NS0159	28	30	NS	X141598	141598	1	G	D	37.52	38.66	2.19	0.1548	0.12	0.104	0.21	0.06	0.014	0.018	0.006	0.01	3.85	0.84	0.16	4.85	21201	0.5508	1.04652	-0.49572	NAF
NS0159	62	64	NS	X141616	141616	1	G	D	27.58	54.29	2.23	0.1161	0.09	0.094	0.13	0.05	0.044	0.01	0.021	0.016	2.4	0.87	0.17	3.44	21218	0.306	0.8721	-0.5661	NAF
NS0159	12	14	NS	X141590	141590	1	G	D	8.07	75.23	7.97	0.00645	0.005	0.712	0.09	0.06	0.007	0.015	0.013	0.058	1.58	2.48	0.18	4.24	21193	0.459	1.04652	-0.58752	NAF
NS0159	60	64	NS	BX139615-BX139616	X139615	2			63.05	3.661	0.264	0.001	0.00072	0.001	0.064	0.036	0.014	0.001	0.001	0.09	-0.01	-0.01	-0.01	-0.03	2860	0.0306	0.627912	-0.597312	NAF
NS0159	104	108	NS	BX139637-BX139638	X139637	2			65.41	6.706	0.305	0.022	0.01584	0.022	0.473	0.077	0.017	0.022	0.088	0.084	-0.01	-0.01	-0.01	-0.03	2871	0.6732	1.343034	-0.669834	NAF
NS0159	252	256	NS	BX139713-BX139714	X139713	2			65.81	7.73	0.216	0.021	0.01512	0.021	0.426	0.069	0.01	0.016	0.072	0.087	-0.01	-0.01	-0.01	-0.03	2909	0.4896	1.203498	-0.713898	NAF
NS0159	60	62	NS	X141615	141615	1	G	D	33.34	45.05	1.54	0.1677	0.13	0.071	0.27	0.05	0.038	0.005	0.043	0.0005	3.87	0.74	0.12	4.73	21217	0.153	0.8721	-0.7191	NAF
NS0159	84	88	NS	BX139627-BX139628	X139627	2			63.89	8.219	0.543	0.035	0.0252	0.035	0.675	0.078	0.016	0.02	0.116	0.087	0.03	-0.01	-0.01	0.01	2866	0.612	1.360476	-0.748476	NAF
NS0159	150	154	NS	BX139661-BX139662	X139661	2			65.14	7.356	0.371	0.025	0.018	0.025	0.543	0.061	0.013	0.01	0.11	0.088	-0.01	-0.01	-0.01	-0.03	2883	0.306	1.063962	-0.757962	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0159	182	186	NS	BX139677-BX139678	X139677	2			65.64	7.719	0.25	0.017	0.01224	0.017	0.506	0.063	0.013	0.011	0.097	0.091	-0.01	-0.01	-0.01	-0.03	2891	0.3366	1.098846	-0.762246	NAF
NS0159	72	76	NS	BX139621-BX139622	X139621	2			64.07	8.374	0.262	0.019	0.01368	0.019	0.474	0.083	0.018	0.022	0.072	0.074	-0.01	-0.01	-0.01	-0.03	2863	0.6732	1.447686	-0.774486	NAF
NS0159	10	12	NS	X141589	141589	1	G	D	23.84	50.29	8.13	0.0258	0.02	0.76	0.11	0.09	0.015	0.025	0.019	0.073	3.74	2.36	0.27	6.37	21192	0.765	1.56978	-0.80478	NAF
NS0159	230	232	NS	BX139702	X139702	2			65.97	6.368	0.198	0.013	0.00936	0.013	0.411	0.055	0.011	0.005	0.074	0.078	-0.01	-0.01	-0.01	-0.03	2903	0.153	0.95931	-0.80631	NAF
NS0159	244	248	NS	BX139709-BX139710	X139709	2			66.88	5.976	0.204	0.017	0.01224	0.017	0.42	0.058	0.007	0.006	0.076	0.09	-0.01	-0.01	-0.01	-0.03	2907	0.1836	1.011636	-0.828036	NAF
NS0159	38	40	NS	X141604	141604	1	G	D	37.49	38.15	1.85	0.7998	0.62	0.083	0.24	0.06	0.025	0.007	0.034	0.02	3.59	0.88	0.52	4.99	21206	0.2142	1.04652	-0.83232	NAF
NS0159	186	190	NS	BX139679-BX139680	X139679	2			65.4	7.687	0.252	0.019	0.01368	0.019	0.49	0.064	0.013	0.009	0.094	0.105	-0.01	-0.01	-0.01	-0.03	2892	0.2754	1.116288	-0.840888	NAF
NS0159	256	260	NS	BX139715-BX139716	X139715	2			64.7	8.586	0.321	0.023	0.01656	0.023	0.603	0.063	0.009	0.008	0.108	0.097	-0.01	-0.01	-0.01	-0.03	2910	0.2448	1.098846	-0.854046	NAF
NS0159	190	194	NS	BX139681-BX139682	X139681	2			66.09	7.425	0.197	0.016	0.01152	0.016	0.432	0.061	0.011	0.006	0.076	0.1	-0.01	-0.01	-0.01	-0.03	2893	0.1836	1.063962	-0.880362	NAF
NS0159	232	236	NS	BX139703-BX139704	X139703	2			66.41	6.135	0.184	0.014	0.01008	0.014	0.421	0.06	0.012	0.005	0.069	0.084	-0.01	-0.01	-0.01	-0.03	2904	0.153	1.04652	-0.89352	NAF
NS0159	210	214	NS	BX139691-BX139692	X139691	2			65.27	7.581	0.247	0.016	0.01152	0.016	0.473	0.062	0.012	0.006	0.093	0.094	-0.01	-0.01	-0.01	-0.03	2898	0.1836	1.081404	-0.897804	NAF
NS0159	68	72	NS	BX139619-BX139620	X139619	2			65.34	5.653	0.147	0.014	0.01008	0.014	0.235	0.055	0.024	0.002	0.025	0.065	0.23	0.23	-0.01	0.45	2862	0.0612	0.95931	-0.89811	NAF
NS0159	226	230	NS	BX139699-BX139700	X139699	2			67	6.457	0.206	0.016	0.01152	0.016	0.414	0.064	0.013	0.006	0.071	0.083	-0.01	-0.01	-0.01	-0.03	2902	0.1836	1.116288	-0.932688	NAF
NS0159	80	84	NS	BX139625-BX139626	X139625	2			64.42	8.587	0.304	0.023	0.01656	0.023	0.601	0.07	0.015	0.009	0.102	0.1	-0.01	-0.01	-0.01	-0.03	2865	0.2754	1.22094	-0.94554	NAF
NS0159	128	132	NS	BX139649-BX139650	X139649	2			66.05	7.058	0.304	0.022	0.01584	0.022	0.53	0.069	0.013	0.008	0.086	0.084	-0.01	-0.01	-0.01	-0.03	2877	0.2448	1.203498	-0.958698	NAF
NS0159	178	182	NS	BX139675-BX139676	X139675	2			67.03	6.443	0.174	0.013	0.00936	0.013	0.392	0.064	0.014	0.005	0.069	0.087	-0.01	-0.01	-0.01	-0.03	2890	0.153	1.116288	-0.963288	NAF
NS0159	202	206	NS	BX139687-BX139688	X139687	2			67.93	6.13	0.191	0.015	0.0108	0.015	0.381	0.066	0.014	0.006	0.071	0.098	-0.01	-0.01	-0.01	-0.03	2896	0.1836	1.151172	-0.967572	NAF
NS0159	222	226	NS	BX139697-BX139698	X139697	2			66.46	6.854	0.179	0.014	0.01008	0.014	0.403	0.066	0.013	0.006	0.069	0.101	-0.01	-0.01	-0.01	-0.03	2901	0.1836	1.151172	-0.967572	NAF
NS0159	198	202	NS	BX139685-BX139686	X139685	2			66.15	6.523	0.182	0.016	0.01152	0.016	0.39	0.073	0.017	0.009	0.072	0.08	-0.01	-0.01	-0.01	-0.03	2895	0.2754	1.273266	-0.997866	NAF
NS0159	292	296	NS	BX139733-BX139734	X139733	2			66.3	7.869	0.255	0.021	0.01512	0.021	0.509	0.07	0.01	0.007	0.085	0.094	-0.01	-0.01	-0.01	-0.03	2919	0.2142	1.22094	-1.00674	NAF
NS0159	154	158	NS	BX139663-BX139664	X139663	2			67.27	5.957	0.237	0.019	0.01368	0.019	0.414	0.072	0.016	0.008	0.079	0.126	-0.01	-0.01	-0.01	-0.03	2884	0.2448	1.255824	-1.011024	NAF
NS0159	158	162	NS	BX139665-BX139666	X139665	2			67.6	6.443	0.157	0.015	0.0108	0.015	0.379	0.065	0.014	0.004	0.059	0.107	-0.01	-0.01	-0.01	-0.03	2885	0.1224	1.13373	-1.01133	NAF
NS0159	98	100	NS	BX139634	X139634	2			66.6	5.378	0.211	0.019	0.01368	0.019	0.374	0.076	0.017	0.01	0.066	0.076	-0.01	-0.01	-0.01	-0.03	2869	0.306	1.325592	-1.019592	NAF
NS0159	100	104	NS	BX139635-BX139636	X139635	2			66.17	5.71	0.23	0.017	0.01224	0.017	0.396	0.08	0.018	0.012	0.072	0.083	-0.01	-0.01	-0.01	-0.03	2870	0.3672	1.39536	-1.02816	NAF
NS0159	236	240	NS	BX139705-BX139706	X139705	2			66.29	6.746	0.214	0.015	0.0108	0.015	0.453	0.072	0.016	0.007	0.075	0.102	-0.01	-0.01	-0.01	-0.03	2905	0.2142	1.255824	-1.041624	NAF
NS0159	276	280	NS	BX139725-BX139726	X139725	2			66.21	6.957	0.248	0.022	0.01584	0.022	0.429	0.073	0.016	0.007	0.064	0.077	-0.01	-0.01	-0.01	-0.03	2915	0.2142	1.273266	-1.059066	NAF
NS0159	88	90	NS	BX139629	X139629	2			64.69	7.806	0.394	0.026	0.01872	0.026	0.583	0.075	0.016	0.008	0.107	0.082	0.01	-0.01	-0.01	-0.01	2867	0.2448	1.30815	-1.06335	NAF
NS0159	280	284	NS	BX139727-BX139728	X139727	2			65.22	7.896	0.233	0.018	0.01296	0.018	0.516	0.073	0.016	0.006	0.086	0.089	-0.01	-0.01	-0.01	-0.03	2916	0.1836	1.273266	-1.089666	NAF
NS0159	248	252	NS	BX139711-BX139712	X139711	2			67.28	5.953	0.178	0.016	0.01152	0.016	0.389	0.081	0.011	0.01	0.065	0.08	-0.01	-0.01	-0.01	-0.03	2908	0.306	1.412802	-1.106802	NAF
NS0159	92	96	NS	BX139631-BX139632	X139631	2			63.87	8.316	0.357	0.024	0.01728	0.024	0.555	0.083	0.018	0.011	0.105	0.087	-0.01	-0.01	-0.01	-0.03	2868	0.3366	1.447686	-1.111086	NAF
NS0159	240	244	NS	BX139707-BX139708	X139707	2			64.39	8.631	0.363	0.023	0.01656	0.023	0.648	0.092	0.018	0.016	0.113	0.105	-0.01	-0.01	-0.01	-0.03	2906	0.4896	1.604664	-1.115064	NAF
NS0159	272	276	NS	BX139723-BX139724	X139723	2			65.72	7.039	0.197	0.016	0.01152	0.016	0.453	0.073	0.017	0.005	0.078	0.084	-0.01	-0.01	-0.01	-0.03	2914	0.153	1.273266	-1.120266	NAF
NS0159	304	308	NS	BX139739-BX139740	X139739	2			65.75	7.796	0.313	0.022	0.01584	0.022	0.522	0.103	0.022	0.022	0.096	0.089	-0.01	-0.01	-0.01	-0.03	2922	0.6732	1.796526	-1.123326	NAF
NS0159	214	218	NS	BX139693-BX139694	X139693	2			65.13	7.605	0.212	0.015	0.0108	0.015	0.433	0.075	0.016	0.006	0.082	0.097	-0.01	-0.01	-0.01	-0.03	2899	0.1836	1.30815	-1.12455	NAF
NS0159	218	222	NS	BX139695-BX139696	X139695	2			65.6	7.71	0.215	0.017	0.01224	0.017	0.425	0.074	0.016	0.005	0.08	0.092	-0.01	-0.01	-0.01	-0.03	2900	0.153	1.290708	-1.137708	NAF
NS0159	138	142	NS	BX139655-BX139656	X139655	2			66.11	7.108	0.212	0.02	0.0144	0.02	0.404	0.076	0.017	0.006	0.072	0.09	-0.01	-0.01	-0.01	-0.03	2880	0.1836	1.325592	-1.141992	NAF
NS0159	166	170	NS	BX139669-BX139670	X139669	2			67.38	5.148	0.141	0.014	0.01008	0.014	0.351	0.075	0.017	0.005	0.053	0.082	-0.01	-0.01	-0.01	-0.03	2887	0.153	1.30815	-1.15515	NAF
NS0159	194	198	NS	BX139683-BX139684	X139683	2			67.11	6.566	0.183	0.013	0.00936	0.013	0.389	0.077	0.017	0.006	0.067	0.099	-0.01	-0.01	-0.01	-0.03	2894	0.1836	1.343034	-1.159434	NAF
NS0159	284	286	NS	BX139729	X139729	2			65.12	7.752	0.294	0.019	0.01368	0.019	0.593	0.077	0.016	0.006	0.111	0.092	-0.01	-0.01	-0.01	-0.03	2917	0.1836	1.343034	-1.159434	NAF
NS0159	206	208	NS	BX139689	X139689	2			66.14	7.175	0.198	0.014	0.01008	0.014	0.399	0.08	0.012	0.007	0.075	0.095	-0.01	-0.01	-0.01	-0.03	2897	0.2142	1.39536	-1.18116	NAF
NS0159	120	124	NS	BX139645-BX139646	X139645	2			66.91	6.467	0.24	0.021	0.01512	0.021	0.43	0.085	0.019	0.009	0.074	0.078	-0.01	-0.01	-0.01	-0.03	2875	0.2754	1.48257	-1.20717	NAF
NS0159	260	264	NS	BX139717-BX139718	X139717	2			64.84	8.427	0.296	0.022	0.01584	0.022	0.585	0.084	0.017	0.008	0.102	0.105	-0.01	-0.01	-0.01	-0.03	2911	0.2448	1.465128	-1.220328	NAF
NS0159	162	166	NS	BX139667-BX139668	X139667	2			68.02	5.425	0.149	0.012	0.00864	0.012	0.348	0.079	0.019	0.005	0.051	0.089	-0.01	-0.01	-0.01	-0.03	2886	0.153	1.377918	-1.224918	NAF
NS0159	312	316	NS	BX139743-BX139744	X139743	2			66.9	5.128	0.196	0.018	0.01296	0.018	0.518	0.109	0.021	0.021	0.062	0.075	-0.01	-0.01	-0.01	-0.03	2924	0.6426	1.901178	-1.258578	NAF
NS0159	174	178	NS	BX139673-BX139674	X139673	2			66.76	6.994	0.216	0.016	0.01152	0.016	0.472	0.083	0.018	0.006	0.081	0.086	-0.01	-0.01	-0.01	-0.03	2889	0.1836	1.447686	-1.264086	NAF
NS0159	76	80	NS	BX139623-BX139624	X139623	2			66.28	6.923	0.215	0.018	0.01296	0.018	0.403	0.082	0.018	0.005	0.062	0.087	-0.01	-0.01	-0.01	-0.03	2864	0.153	1.430244	-1.277244	NAF
NS0159	170	174	NS	BX139671-BX139672	X139671	2			66.88	6.878	0.249	0.019	0.01368	0.019	0.504	0.09	0.021	0.008	0.088	0.088	-0.01	-0.01	-0.01	-0.03	2888	0.2448	1.56978	-1.32498	NAF
NS0159	264	268	NS	BX139719-BX139720	X139719	2			66.04	7.136	0.209	0.019	0.01368	0.019	0.59	0.092	0.021	0.006	0.082	0.093	-0.01	-0.01	-0.01	-0.03	2912	0.1836	1.604664	-1.421064	NAF
NS0159	288	292	NS	BX139731-BX139732	X139731	2			63.36	9.858	0.334	0.024	0.01728	0.024	0.635	0.1	0.015	0.009	0.103	0.097	-0.01	-0.01	-0.01	-0.03	2918	0.2754	1.7442	-1.4688	NAF
NS0159	268	272	NS	BX139721-BX139722	X139721	2			65.54	7.578	0.192	0.019	0.01368	0.019	0.51	0.097	0.024	0.005	0.079	0.09	-0.01	-0.01	-0.01	-0.03	2913	0.153	1.691874	-1.538874	NAF
NS0159	296	300	NS	BX139735-BX139736	X139735	2			66.58	7.214	0.212	0.018	0.01296	0.018	0.524	0.098	0.021	0.004	0.087	0.076	-0.01	-0.01	-0.01	-0.03	2920	0.1224	1.709316	-1.586916	NAF
NS0159	116	120	NS	BX139643-BX139644	X139643	2			65.36	7.75	0.203	0.014	0.01008	0.014	0.454	0.103	0.012	0.004	0.095	0.097	-0.01	-0.01	-0.01	-0.03	2874	0.1224	1.796526	-1.674126	NAF
NS0159	300	304	NS	BX139737-BX139738	X139737	2			67.21	6.867	0.154	0.013	0.00936	0.013	0.404	0.104	0.012	0.003	0.067	0.079	-0.01	-0.01	-0.01	-0.03	2921	0.0918	1.813968	-1.722168	NAF
NS0159	32	34	NS	X141600	141600	1	G	D	29.99	49	2.32	0.1677	0.13	0.105	0.37	0.12	0.019	0.011	0.078	0.018	3.74	0.97	0.14	4.85	21203	0.3366	2.09304	-1.75644	NAF
NS0159	316	318	NS	BX139745	X139745	2			65.12	7.252	0.259	0.015	0.0108	0.015	0.54	0.131	0.022	0.005	0.111	0.098	-0.01	-0.01	-0.01	-0.03	2925	0.153	2.284902	-2.131902	NAF
NS0159	64	66	NS	X141617	141617	1	G	D	33.58	42.59	1.81	1.032	0.8	0.082	0.45	0.13	0.07	0.004	0.117	0.0005	4.13	0.92	0.21	5.26	21219	0.1224	2.26746	-2.14506	NAF
NS0159	66	68	NS	X141618	141618	1	G	D	34.68	43.57	1.15	0.8772	0.68	0.052	0.4	0.13	0.072	0.004	0.085	0.016	2.98	0.68	0.08	3.74	21220	0.1224	2.26746	-2.14506	NAF
NS0159	30	32	NS	X141599	141599	1	G	D	36.31	40.93	1.84	0.2451	0.19	0.087	0.34	0.14	0.017	0.009	0.035	0.028	3.29	0.79	0.12	4.2	21202	0.2754	2.44188	-2.16648	NAF
NS0159	36	38	NS	X141603	141603	1	G	D	37.54	37.47	2.02	0.8127	0.63	0.092	0.47	0.14	0.029	0.007	0.054	0.034	3.72	0.93	0.19	4.84	21205	0.2142	2.44188	-2.22768	NAF
NS0159	108	112	NS	BX139639-BX139640	X139639	2			65.53	8.368	0.249	0.015	0.0108	0.015	0.561	0.138	0.016	0.004	0.096	0.093	-0.01	-0.01	-0.01	-0.03	2872	0.1224	2.406996	-2.284596	NAF
NS0159	308	312	NS	BX139741-BX139742	X139741	2			65.46	7.357	0.224	0.014	0.01008	0.014	0.49	0.163	0.018	0.004	0.097	0.086	-0.01	-0.01	-0.01	-0.03	2923	0.1224	2.843046	-2.720646	NAF
NS0159	88	90	NS	X141629	141629	1	G	D	32	38.4	2.69	0.5676	0.44	0.116	3.61	0.32	0.067	0.093	0.83	0.218	0.85	5.97	0.13	6.95	21231	2.8458	5.58144	-2.73564	NAF
NS0159	68	70	NS	X141619	141619	1	G	D	38.57	37.83	1.33	0.774	0.6	0.061	0.34	0.17	0.092	0.006	0.091	0.01	2.84	0.74	0.13	3.71	21221	0.1836	2.96514	-2.78154	NAF
NS0159	112	116	NS	BX139641-BX139642	X139641	2			65.46	7.252	0.287	0.023	0.01656	0.023	0.507	0.287	0.08	0.068	0.088	0.087	-0.01	-0.01	-0.01	-0.03	2873	2.0808	5.005854	-2.925054	NAF
NS0159	124	128	NS	BX139647-BX139648	X139647	2			65.22	7.183	0.29	0.04	0.0288	0.04	0.486	0.209	0.058	0.011	0.091	0.082	-0.01	-0.01	-0.01	-0.03	2876	0.3366	3.645378	-3.308778	NAF
NS0159	46	48	NS	X141608	141608	1	G	D	35.33	39.49	2.28	0.6966	0.54	0.104	0.81	0.23	0.062	0.004	0.205	0.033	3.95	1.05	0.16	5.16	21210	0.1224	4.01166	-3.88926	NAF
NS0159	138	140	NS	X141655	141655	1	G	D	33.74	37.45	1.63	0.5547	0.43	0.074	3.13	0.3	0.063	0.035	0.682	0.192	0.73	6.98	-0.11	7.6	21256	1.071	5.2326	-4.1616	NAF
NS0159	50	52	NS	X141610	141610	1	G	D	35.1	38.49	2.49	0.8901	0.69	0.113	0.93	0.25	0.051	0.004	0.176	0.032	4.56	1.17	0.22	5.95	21212	0.1224	4.3605	-4.2381	NAF
NS0159	52	54	NS	X141611	141611	1	G	D	35.25	40.9	2.18	0.5031	0.39	0.099	0.72	0.25	0.051	0.004	0.171	0.026	3.48	1	0.16	4.64	21213	0.1224	4.3605	-4.2381	NAF
NS0159	54	56	NS	X141612	141612	1	G	D	26.38	51.88	2.7	0.774	0.6	0.12	0.94	0.26	0.042	0.004	0.259	0.043	3.62	1.21	0.19	5.02	21214	0.1224	4.53492	-4.41252	NAF
NS0159	206	208	NS	X141689	141689	1	G	D	32.62	40.94	1.12	0.6579	0.51	0.048	2.51	0.3	0.062	0.026	0.48	0.132	0.52	6.59	-0.33	6.78	21290	0.7956	5.2326	-4.437	NAF
NS0159	272	274	NS	X141723	141723	1	G	D	36.63	35.61	1.16	0.8901	0.69	0.049	2.9	0.31	0.07	0.029	0.49	0.135	0.48	5.65	-0.24	5.89	21323	0.8874	5.40702	-4.51962	NAF
NS0159	86	88	NS	X141628	141628	1	G	D	33.3	37.73	2.1	0.6321	0.49	0.095	3.13	0.43	0.105	0.096	0.615	0.162	0.7	6.36	0.03	7.09	21230	2.9376	7.50006	-4.56246	NAF
NS0159	148	150	NS	X141660	141660	1	G	D	31.04	38.15	3.49	0.4386	0.34	0.185	4.12	0.52	0.144	0.147	1.09	0.32	1.12	5.24	0.39	6.75	21261	4.4982	9.06984	-4.57164	NAF
NS0159	40	42	NS	X141605	141605	1	G	D	33.97	42.08	2.49	0.4902	0.38	0.117	0.84	0.28	0.06	0.006	0.179	0.043	3.5	1.13	0.07	4.7	21207	0.1836	4.88376	-4.70016	NAF
NS0159	106	108	NS	X141638	141638	1	G	D	31.41	38.9	2.93	0.4773	0.37	0.127	3.75	0.74	0.086	0.264	0.831	0.249	0.8	4.7	0.56	6.06	21240	8.0784	12.90708	-4.82868	NAF
NS0159	94	96	NS	X141632	141632	1	G	D	33.85	38.26	2.08	0.5547	0.43	0.091	3.11	0.45	0.079	0.098	0.683	0.178	0.68	5.31	0	5.99	21234	2.9988	7.8489	-4.8501	NAF
NS0159	34	36	NS	X141602	141602	1	G	D	28.89	46.6	3.78	0.5934	0.46	0.163	1.04	0.29	0.044	0.006	0.346	0.056	3.92	1.49	0.22	5.63	21204	0.1836	5.05818	-4.87458	NAF
NS0159	152	154	NS	X141662	141662	1	G	D	36.07	37.63	1.09	0.5805	0.45	0.045	2.44	0.33	0.084	0.024	0.455	0.125	0.43	5.26	-0.39	5.3	21263	0.7344	5.75586	-5.02146	NAF
NS0159	134	136	NS	X141653	141653	1	G	D	33.54	37.95	1.64	0.5805	0.45	0.072	3.16	0.37	0.071	0.045	0.652	0.193	0.74	6.71	-0.15	7.3	21254	1.377	6.45354	-5.07654	NAF
NS0159	186	188	NS	X141679	141679	1	G	D	31.4	41.62	1.96	0.5289	0.41	0.088	3.51	0.41	0.048	0.064	0.769	0.227	0.75	5.21	0.1	6.06	21280	1.9584	7.15122	-5.19282	NAF
NS0159	0	2	NS	X141584	141584	1	G	D	35.51	29.46	9.43	0.0774	0.06	0.483	0.53	0.42	0.062	0.069	0.224	0.058	4.42	3.08	0.36	7.86	21187	2.1114	7.32564	-5.21424	NAF
NS0159	48	50	NS	X141609	141609	1	G	D	28.39	48.12	3.45	0.5418	0.42	0.165	1.07	0.31	0.07	0.006	0.148	0.035	3.68	1.33	0.21	5.22	21211	0.1836	5.40702	-5.22342	NAF
NS0159	58	60	NS	X141614	141614	1	G	D	22.27	48.35	9.03	0.5031	0.39	0.405	1.27	0.31	0.044	0.006	0.34	0.043	4.45	2.83	0.36	7.64	21216	0.1836	5.40702	-5.22342	NAF
NS0159	184	186	NS	X141678	141678	1	G	D	31.95	44.15	1.5	0.3483	0.27	0.068	2.71	0.37	0.05	0.039	0.636	0.182	0.55	3.46	-0.06	3.95	21279	1.1934	6.45354	-5.26014	NAF
NS0159	274	276	NS	X141724	141724	1	G	D	33.08	41.63	1.31	0.774	0.6	0.054	2.84	0.38	0.087	0.035	0.569	0.133	0.45	4.71	-0.16	5	21324	1.071	6.62796	-5.55696	NAF
NS0159	182	184	NS	X141677	141677	1	G	D	34.19	34.53	1.41	0.8643	0.67	0.061	3.57	0.39	0.087	0.038	0.607	0.176	0.72	8.38	-0.12	8.98	21278	1.1628	6.80238	-5.63958	NAF
NS0159	210	212	NS	X141691	141691	1	G	D	33.47	39.68	1.31	0.645	0.5	0.059	2.62	0.38	0.072	0.028	0.558	0.159	0.6	5.93	-0.25	6.28	21292	0.8568	6.62796	-5.77116	NAF
NS0159	92	94	NS	X141631	141631	1	G	D	30.61	40.15	3.25	0.4515	0.35	0.138	3.9	0.59	0.153	0.147	1	0.266	0.92	4.67	0.3	5.89	21233	4.4982	10.29078	-5.79258	NAF
NS0159	108	110	NS	X141639	141639	1	G	D	35.72	35.07	1.85	0.5676	0.44	0.081	3.07	0.69	0.122	0.199	0.622	0.181	0.66	5.33	0.29	6.28	21241	6.0894	12.03498	-5.94558	NAF
NS0159	56	58	NS	X141613	141613	1	G	D	28.87	45.93	3.88	0.387	0.3	0.175	1.25	0.35	0.045	0.004	0.437	0.051	4.26	1.61	0.22	6.09	21215	0.1224	6.1047	-5.9823	NAF
NS0159	266	268	NS	X141720	141720	1	G	D	38.2	31.86	1.18	1.0707	0.83	0.048	3.21	0.42	0.094	0.041	0.522	0.145	0.54	5.97	-0.2	6.31	21320	1.2546	7.32564	-6.07104	NAF
NS0159	208	210	NS	X141690	141690	1	G	D	31.42	41.28	1.04	0.7998	0.62	0.044	2.72	0.4	0.09	0.026	0.434	0.129	0.56	7.74	-0.24	8.06	21291	0.7956	6.9768	-6.1812	NAF
NS0159	42	44	NS	X141606	141606	1	G	D	32.72	42.03	2.97	0.5547	0.43	0.139	0.96	0.37	0.078	0.007	0.171	0.051	3.7	1.44	0.82	5.96	21208	0.2142	6.45354	-6.23934	NAF
NS0159	202	204	NS	X141687	141687	1	G	D	36.58	35.02	1.41	0.6063	0.47	0.06	2.75	0.41	0.093	0.029	0.6	0.184	0.66	5.96	-0.33	6.29	21288	0.8874	7.15122	-6.26382	NAF
NS0159	154	156	NS	X141663	141663	1	G	D	33.31	38.27	1.99	0.5805	0.45	0.091	3.26	0.47	0.11	0.063	0.71	0.199	0.7	5.75	-0.04	6.41	21264	1.9278	8.19774	-6.26994	NAF
NS0159	270	272	NS	X141722	141722	1	G	D	37.34	34.82	1.11	0.903	0.7	0.048	2.88	0.42	0.103	0.028	0.487	0.139	0.46	5.18	-0.31	5.33	21322	0.8568	7.32564	-6.46884	NAF
NS0159	116	118	NS	X141643	141643	1	G	D	31.37	32	1.53	0.8643	0.67	0.067	4.19	0.85	0.051	0.268	0.591	0.177	0.91	12.69	0.64	14.24	21245	8.2008	14.8257	-6.6249	NAF
NS0159	132	134	NS	X141652	141652	1	G	D	30.97	41.13	1.82	0.516	0.4	0.078	3.1	0.64	0.123	0.148	0.675	0.182	0.7	6.04	0.25	6.99	21253	4.5288	11.16288	-6.63408	NAF
NS0159	164	166	NS	X141668	141668	1	G	D	29.88	42.73	0.81	1.0062	0.78	0.031	2.99	0.42	0.061	0.02	0.347	0.106	0.51	8.4	-0.14	8.77	21269	0.612	7.32564	-6.71364	NAF
NS0159	70	72	NS	X141620	141620	1	G	D	34.23	38.62	1.23	0.6837	0.53	0.053	2.14	0.44	0.093	0.03	0.3	0.072	0.51	6.82	-0.29	7.04	21222	0.918	7.67448	-6.75648	NAF
NS0159	198	200	NS	X141685	141685	1	G	D	32.86	38.29	1.12	0.8514	0.66	0.047	2.93	0.43	0.095	0.024	0.466	0.145	0.56	8.18	-0.24	8.5	21286	0.7344	7.50006	-6.76566	NAF
NS0159	268	270	NS	X141721	141721	1	G	D	38.15	34.28	1.14	0.8643	0.67	0.05	2.8	0.45	0.113	0.035	0.508	0.151	0.49	4.64	-0.29	4.84	21321	1.071	7.8489	-6.7779	NAF
NS0159	230	232	NS	X141702	141702	1	G	D	36.49	36.14	1.37	0.645	0.5	0.058	2.79	0.44	0.081	0.029	0.571	0.166	0.56	4.82	-0.2	5.18	21302	0.8874	7.67448	-6.78708	NAF
NS0159	278	280	NS	X141726	141726	1	G	D	32.62	42.8	1.72	0.4257	0.33	0.075	3.15	0.47	0.063	0.044	0.572	0.155	0.47	3.01	0	3.48	21326	1.3464	8.19774	-6.85134	NAF
NS0159	232	234	NS	X141703	141703	1	G	D	36.23	37.74	1.41	0.5418	0.42	0.062	2.61	0.45	0.072	0.03	0.571	0.171	0.52	3.79	-0.16	4.15	21303	0.918	7.8489	-6.9309	NAF
NS0159	44	46	NS	X141607	141607	1	G	D	31.16	43.02	3.73	0.4515	0.35	0.172	1.25	0.41	0.066	0.006	0.331	0.061	3.87	1.67	0.22	5.76	21209	0.1836	7.15122	-6.96762	NAF
NS0159	234	236	NS	X141704	141704	1	G	D	35.02	35.93	1.27	0.8127	0.63	0.052	3.13	0.46	0.103	0.034	0.552	0.148	0.6	6.48	-0.15	6.93	21304	1.0404	8.02332	-6.98292	NAF
NS0159	204	206	NS	X141688	141688	1	G	D	31.32	41.66	1.2	0.6837	0.53	0.051	2.68	0.45	0.083	0.028	0.513	0.135	0.6	6.93	-0.19	7.34	21289	0.8568	7.8489	-6.9921	NAF
NS0159	264	266	NS	X141719	141719	1	G	D	35.6	33.53	1.44	1.1352	0.88	0.06	3.79	0.46	0.11	0.033	0.626	0.189	0.71	6.82	-0.09	7.44	21319	1.0098	8.02332	-7.01352	NAF
NS0159	130	132	NS	X141650	141650	1	G	D	30.78	40.64	1.09	0.8127	0.63	0.047	2.89	0.45	0.083	0.027	0.469	0.12	0.7	8.5	-0.18	9.02	21252	0.8262	7.8489	-7.0227	NAF
NS0159	74	76	NS	X141622	141622	1	G	D	32.23	40.58	1.56	0.5934	0.46	0.07	2.66	0.82	0.168	0.236	0.508	0.111	0.55	5.62	0.36	6.53	21224	7.2216	14.30244	-7.08084	NAF
NS0159	236	238	NS	X141705	141705	1	G	D	37.03	36.11	1.39	0.5934	0.46	0.06	2.74	0.47	0.107	0.033	0.56	0.157	0.51	4.24	-0.25	4.5	21305	1.0098	8.19774	-7.18794	NAF
NS0159	82	84	NS	X141626	141626	1	G	D	30.05	43.28	1.01	0.774	0.6	0.044	2.65	0.46	0.068	0.027	0.334	0.088	0.44	7.98	-0.11	8.31	21228	0.8262	8.02332	-7.19712	NAF
NS0159	140	142	NS	X141656	141656	1	G	D	33.1	39.59	0.98	0.5547	0.43	0.041	2.43	0.46	0.118	0.027	0.397	0.12	0.52	7.53	-0.28	7.77	21257	0.8262	8.02332	-7.19712	NAF
NS0159	180	182	NS	X141676	141676	1	G	D	35.12	38.08	1.17	0.6708	0.52	0.05	2.68	0.47	0.092	0.031	0.499	0.144	0.48	5.28	-0.2	5.56	21277	0.9486	8.19774	-7.24914	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0159	166	168	NS	X141669	141669	1	G	D	32.99	38.1	0.97	0.9546	0.74	0.04	3.03	0.46	0.074	0.025	0.407	0.137	0.51	7.81	-0.15	8.17	21270	0.765	8.02332	-7.25832	NAF
NS0159	200	202	NS	X141686	141686	1	G	D	32.76	40.07	1.13	0.6708	0.52	0.047	2.63	0.47	0.079	0.03	0.477	0.133	0.51	6.73	-0.24	7	21287	0.918	8.19774	-7.27974	NAF
NS0159	228	230	NS	X141701	141701	1	G	D	33.89	39.69	1.64	0.5934	0.46	0.073	2.91	0.5	0.079	0.037	0.636	0.181	0.57	4.72	-0.1	5.19	21301	1.1322	8.721	-7.5888	NAF
NS0159	214	216	NS	X141693	141693	1	G	D	36.37	36.89	1.39	0.5547	0.43	0.062	2.55	0.49	0.103	0.028	0.574	0.164	0.58	4.6	-0.27	4.91	21294	0.8568	8.54658	-7.68978	NAF
NS0159	80	82	NS	X141625	141625	1	G	D	32.46	39.89	2.1	0.5547	0.43	0.093	3.06	0.6	0.087	0.078	0.617	0.152	0.62	5.38	0.06	6.06	21227	2.3868	10.4652	-8.0784	NAF
NS0159	170	172	NS	X141671	141671	1	G	D	33.1	36.29	2.57	0.6192	0.48	0.11	4	0.71	0.187	0.128	0.879	0.258	0.74	5.42	0.16	6.32	21272	3.9168	12.38382	-8.46702	NAF
NS0159	114	116	NS	X141642	141642	1	G	D	34.4	34.78	1.69	0.645	0.5	0.076	3.24	0.97	0.076	0.275	0.587	0.183	0.64	6.94	0.53	8.11	21244	8.415	16.91874	-8.50374	NAF
NS0159	160	162	NS	X141666	141666	1	G	D	36.12	36.12	1.17	0.7224	0.56	0.05	2.84	0.55	0.074	0.03	0.51	0.131	0.5	5.69	-0.11	6.08	21267	0.918	9.5931	-8.6751	NAF
NS0159	298	300	NS	X141736	141736	1	G	D	39.38	32.56	1.16	0.903	0.7	0.053	2.83	0.55	0.099	0.027	0.53	0.148	0.42	4.26	-0.22	4.46	21336	0.8262	9.5931	-8.7669	NAF
NS0159	90	92	NS	X141630	141630	1	G	D	33.12	39.37	1.6	0.6321	0.49	0.071	2.62	0.59	0.104	0.038	0.455	0.117	0.58	6.37	-0.25	6.7	21232	1.1628	10.29078	-9.12798	NAF
NS0159	142	144	NS	X141657	141657	1	G	D	31.79	38.59	1.8	0.5418	0.42	0.078	3.04	0.62	0.166	0.053	0.684	0.211	0.89	7.82	-0.08	8.63	21258	1.6218	10.81404	-9.19224	NAF
NS0159	194	196	NS	X141683	141683	1	G	D	34.71	38.06	1.14	0.645	0.5	0.047	2.62	0.58	0.1	0.027	0.481	0.139	0.55	5.79	-0.23	6.11	21284	0.8262	10.11636	-9.29016	NAF
NS0159	196	198	NS	X141684	141684	1	G	D	32.46	41.48	0.91	0.6966	0.54	0.037	2.46	0.58	0.106	0.023	0.386	0.115	0.47	6.31	-0.27	6.51	21285	0.7038	10.11636	-9.41256	NAF
NS0159	112	114	NS	X141641	141641	1	G	D	35.35	36.18	1.55	0.5031	0.39	0.071	2.7	1.09	0.185	0.31	0.549	0.158	0.53	4.99	0.4	5.92	21243	9.486	19.01178	-9.52578	NAF
NS0159	98	100	NS	X141634	141634	1	G	D	33.29	39.7	1.49	0.5547	0.43	0.064	2.69	0.67	0.082	0.066	0.531	0.149	0.68	5.4	0.05	6.13	21236	2.0196	11.68614	-9.66654	NAF
NS0159	78	80	NS	X141624	141624	1	G	D	35.65	36.84	1.35	0.6063	0.47	0.06	2.48	0.61	0.102	0.029	0.467	0.099	0.54	5.61	-0.23	5.92	21226	0.8874	10.63962	-9.75222	NAF
NS0159	124	126	NS	X141647	141647	1	G	D	32.43	37.2	2.35	0.6321	0.49	0.113	3.59	0.71	0.094	0.076	0.743	0.199	0.81	6.92	0.12	7.85	21249	2.3256	12.38382	-10.05822	NAF
NS0159	162	164	NS	X141667	141667	1	G	D	36.88	35.5	1.54	0.5289	0.41	0.068	2.74	0.64	0.176	0.033	0.571	0.175	0.53	4.5	-0.28	4.75	21268	1.0098	11.16288	-10.15308	NAF
NS0159	128	130	NS	X141649	141649	1	G	D	31.96	36.71	2.85	0.645	0.5	0.125	3.87	0.75	0.147	0.09	0.773	0.216	0.88	6.55	0.19	7.62	21251	2.754	13.0815	-10.3275	NAF
NS0159	188	190	NS	X141680	141680	1	G	D	35.8	36.85	1.15	0.6321	0.49	0.049	2.66	0.65	0.082	0.026	0.481	0.14	0.48	5.62	-0.1	6	21281	0.7956	11.3373	-10.5417	NAF
NS0159	122	124	NS	X141646	141646	1	G	D	31.51	39.27	2.68	0.5031	0.39	0.121	3.66	0.84	0.065	0.134	0.792	0.233	0.81	5.32	0.44	6.57	21248	4.1004	14.65128	-10.55088	NAF
NS0159	192	194	NS	X141682	141682	1	G	D	29.93	44.16	0.97	0.6837	0.53	0.039	2.57	0.66	0.057	0.029	0.402	0.121	0.52	6.59	0.04	7.15	21283	0.8874	11.51172	-10.62432	NAF
NS0159	240	242	NS	X141707	141707	1	G	D	26.15	46.4	2.89	0.4515	0.35	0.127	4.48	1.14	0.104	0.292	0.904	0.26	0.82	3.53	1.07	5.42	21307	8.9352	19.88388	-10.94868	NAF
NS0159	126	128	NS	X141648	141648	1	G	D	34.91	37.84	1.07	0.645	0.5	0.049	2.42	0.68	0.08	0.025	0.44	0.1	0.55	6.1	-0.1	6.55	21250	0.765	11.86056	-11.09556	NAF
NS0159	284	286	NS	X141729	141729	1	G	D	38.29	35.03	1.35	0.5676	0.44	0.059	2.8	0.7	0.07	0.035	0.565	0.155	0.43	3.07	0	3.5	21329	1.071	12.2094	-11.1384	NAF
NS0159	280	282	NS	X141727	141727	1	G	D	32.21	42.74	1.62	0.4902	0.38	0.074	3.14	0.72	0.065	0.043	0.566	0.156	0.46	3.26	0.22	3.94	21327	1.3158	12.55824	-11.24244	NAF
NS0159	104	106	NS	X141637	141637	1	G	D	36.06	36.27	1.48	0.5547	0.43	0.062	2.68	0.78	0.096	0.077	0.498	0.133	0.51	5.13	-0.03	5.61	21239	2.3562	13.60476	-11.24856	NAF
NS0159	212	214	NS	X141692	141692	1	G	D	34.43	37.42	1.37	0.6579	0.51	0.06	2.83	0.71	0.08	0.035	0.578	0.16	0.63	5.84	0.01	6.48	21293	1.071	12.38382	-11.31282	NAF
NS0159	172	174	NS	X141672	141672	1	G	D	35.56	37.21	1.14	0.6708	0.52	0.049	2.78	0.71	0.101	0.03	0.487	0.14	0.5	5.14	-0.04	5.6	21273	0.918	12.38382	-11.46582	NAF
NS0159	190	192	NS	X141681	141681	1	G	D	32.83	39.88	1.02	0.6837	0.53	0.042	2.66	0.72	0.068	0.034	0.425	0.112	0.51	6.53	0	7.04	21282	1.0404	12.55824	-11.51784	NAF
NS0159	220	222	NS	X141696	141696	1	G	D	30.1	45.28	0.99	0.6708	0.52	0.041	2.37	0.71	0.058	0.028	0.416	0.11	0.42	5.57	0.1	6.09	21297	0.8568	12.38382	-11.52702	NAF
NS0159	76	78	NS	X141623	141623	1	G	D	30.58	43.54	1.14	0.645	0.5	0.051	2.4	0.72	0.11	0.033	0.386	0.076	0.48	6.2	0.03	6.71	21225	1.0098	12.55824	-11.54844	NAF
NS0159	178	180	NS	X141675	141675	1	G	D	35.88	37.55	1.29	0.5805	0.45	0.055	2.71	0.72	0.079	0.03	0.53	0.154	0.46	4.43	-0.02	4.87	21276	0.918	12.55824	-11.64024	NAF
NS0159	156	158	NS	X141664	141664	1	G	D	36.15	36.55	1.13	0.5934	0.46	0.047	2.6	0.72	0.077	0.029	0.473	0.138	0.47	5.16	-0.07	5.56	21265	0.8874	12.55824	-11.67084	NAF
NS0159	224	226	NS	X141698	141698	1	G	D	33.64	40.18	1.14	0.6708	0.52	0.047	2.52	0.72	0.096	0.026	0.48	0.132	0.47	5.1	-0.05	5.52	21299	0.7956	12.55824	-11.76264	NAF
NS0159	282	284	NS	X141728	141728	1	G	D	32.3	42.88	0.97	0.7353	0.57	0.038	2.67	0.72	0.085	0.025	0.426	0.116	0.36	4.41	0.1	4.87	21328	0.765	12.55824	-11.79324	NAF
NS0159	222	224	NS	X141697	141697	1	G	D	34.74	39.76	1.08	0.5547	0.43	0.049	2.29	0.73	0.07	0.026	0.449	0.137	0.45	4.46	-0.03	4.88	21298	0.7956	12.73266	-11.93706	NAF
NS0159	238	240	NS	X141706	141706	1	G	D	34.29	38.59	1.43	0.6708	0.52	0.058	3.01	0.79	0.128	0.052	0.558	0.142	0.48	4.96	-0.02	5.42	21306	1.5912	13.77918	-12.18798	NAF
NS0159	72	74	NS	X141621	141621	1	G	D	33.4	40.52	1.19	0.5805	0.45	0.052	2.27	0.79	0.097	0.049	0.389	0.087	0.44	5.53	0	5.97	21223	1.4994	13.77918	-12.27978	NAF
NS0159	174	176	NS	X141673	141673	1	G	D	33.91	38.54	1.12	0.774	0.6	0.047	2.93	0.77	0.088	0.03	0.482	0.135	0.52	5.86	0.04	6.42	21274	0.918	13.43034	-12.51234	NAF
NS0159	246	248	NS	X141710	141710	1	G	D	34.11	40.27	1.97	0.3225	0.25	0.09	3.17	0.82	0.04	0.053	0.733	0.2	0.92	1.9	0.31	3.13	21310	1.6218	14.30244	-12.68064	NAF
NS0159	218	220	NS	X141695	141695	1	G	D	33.14	40.62	1.13	0.6192	0.48	0.047	2.47	0.79	0.088	0.031	0.481	0.134	0.48	5.34	0.05	5.87	21296	0.9486	13.77918	-12.83058	NAF
NS0159	226	228	NS	X141699	141699	1	G	D	30.36	44.39	1.18	0.6708	0.52	0.049	2.66	0.8	0.085	0.032	0.482	0.142	0.47	5.24	0.17	5.88	21300	0.9792	13.9536	-12.9744	NAF
NS0159	262	264	NS	X141718	141718	1	G	D	25.46	53.49	1.01	0.6837	0.53	0.04	2.48	0.81	0.094	0.036	0.412	0.118	0.4	3.86	0.21	4.47	21318	1.1016	14.12802	-13.02642	NAF
NS0159	276	278	NS	X141725	141725	1	G	D	30.08	46.23	1.45	0.4644	0.36	0.063	2.93	0.84	0.157	0.053	0.566	0.155	0.45	3.13	0.11	3.69	21325	1.6218	14.65128	-13.02948	NAF
NS0159	176	178	NS	X141674	141674	1	G	D	35.39	36.38	1.36	0.6837	0.53	0.058	3.07	0.81	0.097	0.034	0.548	0.166	0.52	5.44	0.02	5.98	21275	1.0404	14.12802	-13.08762	NAF
NS0159	168	170	NS	X141670	141670	1	G	D	36.45	34.77	1.59	0.6192	0.48	0.071	3.02	0.85	0.243	0.038	0.611	0.196	0.56	5.15	-0.19	5.52	21271	1.1628	14.8257	-13.6629	NAF
NS0159	102	104	NS	X141636	141636	1	G	D	34.45	36.47	2.04	0.5676	0.44	0.092	3.22	1	0.177	0.122	0.717	0.193	0.72	5.25	0.19	6.16	21238	3.7332	17.442	-13.7088	NAF
NS0159	158	160	NS	X141665	141665	1	G	D	36.05	36.89	0.97	0.6708	0.52	0.04	2.55	0.85	0.086	0.022	0.409	0.116	0.38	5.49	0.01	5.88	21266	0.6732	14.8257	-14.1525	NAF
NS0159	110	112	NS	X141640	141640	1	G	D	31.3	40.58	1.89	0.5547	0.43	0.083	3.2	1.09	0.086	0.153	0.617	0.179	0.65	5.66	0.52	6.83	21242	4.6818	19.01178	-14.32998	NAF
NS0159	242	244	NS	X141708	141708	1	G	D	32.6	41.18	1.78	0.4644	0.36	0.082	3.3	0.92	0.144	0.051	0.684	0.21	0.57	3.65	0.23	4.45	21308	1.5606	16.04664	-14.48604	NAF
NS0159	296	298	NS	X141735	141735	1	G	D	35.86	36.69	1.14	0.8901	0.69	0.052	2.83	0.9	0.098	0.03	0.521	0.125	0.4	4.46	0.14	5	21335	0.918	15.6978	-14.7798	NAF
NS0159	260	262	NS	X141717	141717	1	G	D	31.83	44.34	1.81	0.3354	0.26	0.079	3.03	0.94	0.048	0.051	0.62	0.162	0.47	1.85	0.42	2.74	21317	1.5606	16.39548	-14.83488	NAF
NS0159	294	296	NS	X141734	141734	1	G	D	33.03	43.13	1.58	0.3483	0.27	0.069	2.88	0.93	0.041	0.038	0.578	0.162	0.41	2.35	0.45	3.21	21334	1.1628	16.22106	-15.05826	NAF
NS0159	120	122	NS	X141645	141645	1	G	D	34.44	34.92	1.1	0.6708	0.52	0.048	3.04	0.95	0.098	0.031	0.46	0.13	0.6	8.27	0.11	8.98	21247	0.9486	16.5699	-15.6213	NAF
NS0159	216	218	NS	X141694	141694	1	G	D	32.35	41.4	1.25	0.5934	0.46	0.05	2.56	0.97	0.143	0.027	0.531	0.156	0.57	5.17	0.08	5.82	21295	0.8262	16.91874	-16.09254	NAF
NS0159	304	306	NS	X141739	141739	1	G	D	38.27	35.37	1.33	0.6321	0.49	0.055	2.79	0.99	0.077	0.024	0.581	0.136	0.37	2.58	0.28	3.23	21339	0.7344	17.26758	-16.53318	NAF
NS0159	316	318	NS	X141745	141745	1	G	D	37.24	34.92	1.58	0.7095	0.55	0.067	3.04	1.04	0.109	0.031	0.717	0.143	0.4	3.34	0.31	4.05	21345	0.9486	18.13968	-17.19108	NAF
NS0159	258	260	NS	X141716	141716	1	G	D	32.69	42.84	1.78	0.3354	0.26	0.077	3.15	1.12	0.044	0.051	0.648	0.185	0.47	1.8	0.7	2.97	21316	1.5606	19.53504	-17.97444	NAF
NS0159	100	102	NS	X141635	141635	1	G	D	35.25	38	1.35	0.4902	0.38	0.059	2.45	1.16	0.168	0.058	0.485	0.125	0.45	4.48	0.1	5.03	21237	1.7748	20.23272	-18.45792	NAF
NS0159	136	138	NS	X141654	141654	1	G	D	28.11	43.24	2.39	0.5031	0.39	0.107	3.66	1.24	0.35	0.084	0.923	0.28	0.96	5.62	0.28	6.86	21255	2.5704	21.62808	-19.05768	NAF
NS0159	300	302	NS	X141737	141737	1	G	D	26.24	52.89	0.8	0.7095	0.55	0.035	2.19	1.3	0.044	0.027	0.375	0.084	0.24	3	0.97	4.21	21337	0.8262	22.6746	-21.8484	NAF
NS0159	248	250	NS	X141711	141711	1	G	D	33.1	42.4	1.46	0.3741	0.29	0.064	2.76	1.33	0.066	0.038	0.572	0.159	0.58	1.89	0.8	3.27	21311	1.1628	23.19786	-22.03506	NAF
NS0159	290	292	NS	X141732	141732	1	G	D	31.63	43.1	1.69	0.387	0.3	0.077	3.33	1.36	0.072	0.055	0.572	0.164	0.46	2.54	0.91	3.91	21332	1.683	23.72112	-22.03812	NAF
NS0159	254	256	NS	X141714	141714	1	G	D	29.87	48	1.47	0.2838	0.22	0.067	2.62	1.42	0.039	0.088	0.476	0.138	0.32	1.33	0.97	2.62	21314	2.6928	24.76764	-22.07484	NAF
NS0159	286	288	NS	X141730	141730	1	G	D	31.94	43.05	0.97	0.6837	0.53	0.044	2.75	1.32	0.081	0.031	0.409	0.112	0.37	3.93	0.68	4.98	21330	0.9486	23.02344	-22.07484	NAF
NS0159	288	290	NS	X141731	141731	1	G	D	30.47	45.53	1.55	0.3741	0.29	0.073	2.94	1.38	0.144	0.048	0.578	0.168	0.44	2.04	0.69	3.17	21331	1.4688	24.06996	-22.60116	NAF
NS0159	256	258	NS	X141715	141715	1	G	D	31.62	45.17	1.71	0.258	0.2	0.075	2.86	1.39	0.035	0.049	0.544	0.144	0.37	1.15	0.98	2.5	21315	1.4994	24.24438	-22.74498	NAF
NS0159	312	314	NS	X141743	141743	1	G	D	36.99	37.29	1.1	0.645	0.5	0.048	2.37	1.35	0.069	0.022	0.564	0.123	0.23	2.16	0.7	3.09	21343	0.6732	23.5467	-22.8735	NAF
NS0159	292	294	NS	X141733	141733	1	G	D	31.15	45.01	1.52	0.3354	0.26	0.067	2.93	1.45	0.045	0.043	0.54	0.144	0.37	1.91	1.07	3.35	21333	1.3158	25.2909	-23.9751	NAF
NS0159	118	120	NS	X141644	141644	1	G	D	29.53	31.76	0.81	0.9546	0.74	0.033	4.26	1.47	0.102	0.039	0.337	0.106	0.78	16.01	0.72	17.51	21246	1.1934	25.63974	-24.44634	NAF
NS0159	314	316	NS	X141744	141744	1	G	D	35.39	38.67	1.25	0.645	0.5	0.056	2.65	1.5	0.054	0.022	0.595	0.118	0.32	2.33	0.9	3.55	21344	0.6732	26.163	-25.4898	NAF
NS0159	308	310	NS	X141741	141741	1	G	D	37.81	34.19	1.28	0.6708	0.52	0.058	2.79	1.51	0.14	0.026	0.594	0.152	0.44	3.12	0.96	4.52	21341	0.7956	26.33742	-25.54182	NAF
NS0159	310	312	NS	X141742	141742	1	G	D	34.54	39.59	1.09	0.6837	0.53	0.049	2.52	1.74	0.06	0.026	0.55	0.103	0.27	2.28	1.2	3.75	21342	0.7956	30.34908	-29.55348	NAF
NS0159	306	308	NS	X141740	141740	1	G	D	33.28	41.13	1.16	0.6063	0.47	0.05	2.73	1.75	0.085	0.028	0.494	0.126	0.32	2.42	1.15	3.89	21340	0.8568	30.5235	-29.6667	NAF
NS0159	252	254	NS	X141713	141713	1	G	D	26.59	51.99	1.28	0.3354	0.26	0.056	2.5	1.93	0.055	0.08	0.461	0.137	0.33	1.4	1.54	3.27	21313	2.448	33.66306	-31.21506	NAC
NS0159	244	246	NS	X141709	141709	1	G	D	28.58	47.82	1.18	0.3612	0.28	0.051	2.61	1.87	0.044	0.039	0.455	0.116	0.34	2.34	1.54	4.22	21309	1.1934	32.61654	-31.42314	NAC
NS0159	250	252	NS	X141712	141712	1	G	D	27.61	48.82	1.37	0.3612	0.28	0.06	2.76	2.31	0.055	0.066	0.504	0.138	0.37	1.49	2	3.86	21312	2.0196	40.29102	-38.27142	NAC
NS0159	302	304	NS	X141738	141738	1	G	D	26.4	48.1	0.78	0.8256	0.64	0.034	2.63	3.11	0.056	0.023	0.367	0.066	0.25	2.95	3	6.2	21338	0.7038	54.24462	-53.54082	NAC
NS0160	84	86	NS	X141789	141789	1	G	D	24.18	46.85	7.4	0.1032	0.08	0.346	4.05	0.23	0.057	0.477	1.27	0.342	1.2	2.37	0.95	4.52	21388	14.5962	4.01166	10.58454	PAF(HC)
NS0160	74	76	NS	X141784	141784	1	G	D	24.56	46.28	7.29	0.0516	0.04	0.338	4.48	0.29	0.079	0.501	1.34	0.348	1.24	2.11	0.89	4.24	21383	15.3306	5.05818	10.27242	PAF(HC)
NS0160	76	78	NS	X141785	141785	1	G	D	24.56	46.07	7.48	0.0387	0.03	0.352	4.61	0.2	0.051	0.432	1.33	0.351	1.24	2.05	0.85	4.14	21384	13.2192	3.4884	9.7308	PAF(LC)
NS0160	64	66	NS	X141779	141779	1	G	D	22.05	50.08	5.69	0.2451	0.19	0.257	3.55	0.5	0.132	0.498	0.952	0.211	1.01	4.39	1.16	6.56	21378	15.2388	8.721	6.5178	PAF(LC)
NS0160	78	82	NS	BX139786-BX139787	X139786	2			64.17	8.265	0.309	0.046	0.03312	0.046	0.422	0.123	0.024	0.273	0.093	0.149	-0.01	-0.01	-0.01	-0.03	2931	8.3538	2.145366	6.208434	PAF(LC)
NS0160	174	176	NS	X141835	141835	1	G	D	28.76	40.18	5.19	0.2838	0.22	0.24	3.84	0.55	0.051	0.509	1.36	0.365	1.24	4.34	1.08	6.66	21433	15.5754	9.5931	5.9823	PAF(LC)
NS0160	234	236	NS	X141866	141866	1	G	D	24.29	46.71	5.89	0.1935	0.15	0.272	3.93	0.42	0.086	0.423	1.52	0.407	1.29	3.08	1.01	5.38	21463	12.9438	7.32564	5.61816	PAF(LC)
NS0160	106	108	NS	X141801	141801	1	G	D	22.14	50.19	6.97	0.1161	0.09	0.32	4.09	0.53	0.095	0.48	1.29	0.36	1.18	1.81	0.89	3.88	21399	14.688	9.24426	5.44374	PAF(LC)
NS0160	82	84	NS	X141788	141788	1	G	D	25.4	44.74	5.14	0.2709	0.21	0.241	3.57	0.38	0.086	0.39	1.37	0.355	1.34	4.78	1.08	7.2	21387	11.934	6.62796	5.30604	PAF(LC)
NS0160	144	146	NS	X141820	141820	1	G	D	20.71	49.92	8.95	0.0645	0.05	0.417	4.85	0.4	0.016	0.336	0.793	0.249	0.87	2.68	0.75	4.3	21418	10.2816	6.9768	3.3048	PAF(LC)
NS0160	242	244	NS	X141870	141870	1	G	D	27.94	40.37	4.1	0.3096	0.24	0.193	3.3	0.53	0.081	0.402	1.36	0.371	1.4	6.44	1.1	8.94	21467	12.3012	9.24426	3.05694	PAF(LC)
NS0160	266	268	NS	X141882	141882	1	G	D	29.32	36.83	5.42	0.3225	0.25	0.259	4.11	0.38	0.081	0.314	1.53	0.391	1.41	6.15	0.91	8.47	21479	9.6084	6.62796	2.98044	PAF(LC)
NS0160	88	90	NS	BX139791	X139791	2			68.56	4.981	0.233	0.035	0.0252	0.035	0.317	0.112	0.021	0.155	0.066	0.106	-0.01	-0.01	-0.01	-0.03	2933	4.743	1.953504	2.789496	PAF(LC)
NS0160	262	266	NS	BX139880-BX139881	X139880	2			61.82	9.069	0.69	0.067	0.04824	0.067	0.647	0.136	0.022	0.162	0.192	0.154	-0.01	-0.01	-0.01	-0.03	2978	4.9572	2.372112	2.585088	PAF(LC)
NS0160	104	106	NS	X141799	141799	1	G	D	28.64	37.35	3.59	0.4644	0.36	0.165	3.18	0.58	0.061	0.409	1.15	0.33	1.48	9.28	1.05	11.81	21398	12.5154	10.11636	2.39904	PAF(LC)
NS0160	244	246	NS	X141871	141871	1	G	D	27.96	41.88	4.54	0.2451	0.19	0.213	3.48	0.34	0.07	0.271	1.57	0.399	1.35	4.81	0.78	6.94	21468	8.2926	5.93028	2.36232	PAF(LC)
NS0160	72	74	NS	X141783	141783	1	G	D	24.57	44.32	5.7	0.1548	0.12	0.252	3.86	0.43	0.105	0.321	0.98	0.252	1.2	5.5	0.97	7.67	21382	9.8226	7.50006	2.32254	PAF(LC)
NS0160	56	58	NS	X141775	141775	1	G	D	22.36	53.54	3.12	0.3096	0.24	0.141	1.61	0.7	0.171	0.42	0.234	0.057	2.62	4.05	1.17	7.84	21374	12.852	12.2094	0.6426	PAF(LC)
NS0160	274	278	NS	BX139886-BX139887	X139886	2			64.39	7.839	0.393	0.044	0.03168	0.044	0.475	0.123	0.02	0.091	0.125	0.101	-0.01	-0.01	-0.01	-0.03	2981	2.7846	2.145366	0.639234	PAF(LC)
NS0160	198	200	NS	X141847	141847	1	G	D	26.46	42.56	5.43	0.2322	0.18	0.249	4.36	0.85	0.126	0.503	1.62	0.456	1.38	3.02	1.19	5.59	21445	15.3918	14.8257	0.5661	PAF(LC)
NS0160	108	110	NS	X141802	141802	1	G	D	22.99	47.96	6.95	0.1548	0.12	0.325	4.1	0.77	0.103	0.446	1.36	0.375	1.25	2.06	1.03	4.34	21400	13.6476	13.43034	0.21726	PAF(LC)
NS0160	180	182	NS	X141838	141838	1	G	D	27.07	40.94	4.54	0.2838	0.22	0.213	3.98	0.85	0.164	0.489	1.59	0.428	1.48	5.13	1.18	7.79	21436	14.9634	14.8257	0.1377	PAF(LC)
NS0160	16	18	NS	X141755	141755	1	G	D	27.05	47.25	5.95	0.0258	0.02	0.261	0.05	0.03	0.045	0.02	0.01	0.024	5.09	1.89	0.25	7.23	21354	0.612	0.52326	0.08874	PAF(LC)
NS0160	14	16	NS	X141754	141754	1	G	D	23.26	52.56	6.46	0.0258	0.02	0.319	0.07	0.03	0.017	0.018	0.013	0.042	4.48	2.09	0.26	6.83	21353	0.5508	0.52326	0.02754	PAF(LC)
NS0160	12	14	NS	X141753	141753	1	G	D	32.9	43.55	2.89	0.0645	0.05	0.125	0.09	0.02	0.034	0.011	0.012	0.036	4.79	0.91	0.18	5.88	21352	0.3366	0.34884	-0.01224	NAF
NS0160	62	66	NS	BX139778-BX139779	X139778	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2927	-0.0306	-0.01744	-0.013158	NAF
NS0160	66	70	NS	BX139780-BX139781	X139780	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2928	-0.0306	-0.01744	-0.013158	NAF
NS0160	70	74	NS	BX139782-BX139783	X139782	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2929	-0.0306	-0.01744	-0.013158	NAF
NS0160	74	78	NS	BX139784-BX139785	X139784	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2930	-0.0306	-0.01744	-0.013158	NAF
NS0160	106	108	NS	BX139801	X139801	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2938	-0.0306	-0.01744	-0.013158	NAF
NS0160	108	112	NS	BX139802-BX139803	X139802	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2939	-0.0306	-0.01744	-0.013158	NAF
NS0160	140	144	NS	BX139818-BX139819	X139818	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2947	-0.0306	-0.01744	-0.013158	NAF
NS0160	226	230	NS	BX139862-BX139863	X139862	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2969	-0.0306	-0.01744	-0.013158	NAF
NS0160	266	270	NS	BX139882-BX139883	X139882	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2979	-0.0306	-0.01744	-0.013158	NAF
NS0160	20	22	NS	X141757	141757	1	G	D	27.67	46.54	5.91	0.0258	0.02	0.303	0.11	0.04	0.028	0.02	0.01	0.046	5.17	1.88	0.26	7.31	21356	0.612	0.69768	-0.08568	NAF
NS0160	222	224	NS	X141860	141860	1	G	D	27.92	40.48	3.79	0.2838	0.22	0.175	3.24	0.5	0.036	0.281	1.47	0.39	1.47	7.18	0.92	9.57	21457	8.5986	8.721	-0.1224	NAF
NS0160	2	4	NS	X141747	141747	1	G	D	44.41	12.44	12.07	0.0258	0.02	1.341	0.09	0.06	0.035	0.03	0.036	0.018	6.6	2.81	0.36	9.77	21347	0.918	1.04652	-0.12852	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0160	18	20	NS	X141756	141756	1	G	D	25.29	53.23	3.66	0.0387	0.03	0.149	0.06	0.05	0.041	0.023	0.007	0.03	4.72	1.18	0.23	6.13	21355	0.7038	0.8721	-0.1683	NAF
NS0160	6	8	NS	X141749	141749	1	G	D	35.52	38.54	3.83	0.0516	0.04	0.192	0.14	0.04	0.06	0.017	0.013	0.016	4.98	1.1	0.14	6.22	21349	0.5202	0.69768	-0.17748	NAF
NS0160	8	10	NS	X141751	141751	1	G	D	35.64	36.19	4.58	0.0258	0.02	0.191	0.12	0.03	0.016	0.011	0.019	0.019	6.01	1.27	0.22	7.5	21350	0.3366	0.52326	-0.18666	NAF
NS0160	10	12	NS	X141752	141752	1	G	D	33.4	43.77	2.54	0.0645	0.05	0.11	0.09	0.03	0.02	0.009	0.011	0.028	4.81	0.79	0.15	5.75	21351	0.2754	0.52326	-0.24786	NAF
NS0160	4	6	NS	X141748	141748	1	G	D	15.88	67.02	5.06	-0.0129	-0.01	0.214	0.09	0.04	0.036	0.014	0.037	0.027	2.8	1.57	0.16	4.53	21348	0.4284	0.69768	-0.26928	NAF
NS0160	66	68	NS	X141780	141780	1	G	D	23.53	45.06	3.94	0.4128	0.32	0.181	3.48	0.83	0.204	0.462	0.726	0.168	0.94	8.56	1.14	10.64	21379	14.1372	14.47686	-0.33966	NAF
NS0160	82	86	NS	BX139788-BX139789	X139788	2			66.57	5.806	0.186	0.026	0.01872	0.026	0.317	0.117	0.019	0.055	0.059	0.113	-0.01	-0.01	-0.01	-0.03	2932	1.683	2.040714	-0.357714	NAF
NS0160	216	218	NS	X141857	141857	1	G	D	27.62	40.85	5.24	0.2064	0.16	0.246	3.61	0.49	0.076	0.266	1.5	0.416	1.41	5.22	0.8	7.43	21454	8.1396	8.54658	-0.40698	NAF
NS0160	80	82	NS	X141787	141787	1	G	D	26.07	44.18	2.94	0.2709	0.21	0.135	2.63	0.38	0.068	0.2	0.708	0.205	1.04	9.07	0.49	10.6	21386	6.12	6.62796	-0.50796	NAF
NS0160	102	106	NS	BX139798-BX139799	X139798	2			67.54	4.532	0.172	0.039	0.02808	0.039	0.286	0.09	0.016	0.028	0.054	0.106	-0.01	-0.01	-0.01	-0.03	2937	0.8568	1.56978	-0.71298	NAF
NS0160	270	274	NS	BX139884-BX139885	X139884	2			67.68	4.819	0.211	0.033	0.02376	0.033	0.286	0.084	0.015	0.023	0.069	0.094	-0.01	-0.01	-0.01	-0.03	2980	0.7038	1.465128	-0.761328	NAF
NS0160	22	24	NS	X141758	141758	1	G	D	26.38	49.42	5.13	0.0516	0.04	0.25	0.23	0.07	0.034	0.014	0.028	0.052	5.01	1.72	0.23	6.96	21357	0.4284	1.22094	-0.79254	NAF
NS0160	0	2	NS	X141746	141746	1	G	D	33.72	24.74	15.37	0.0258	0.02	0.856	0.17	0.09	0.026	0.022	0.095	0.036	5.32	4.4	0.37	10.09	21346	0.6732	1.56978	-0.89658	NAF
NS0160	242	246	NS	BX139870-BX139871	X139870	2			67.05	5.137	0.465	0.076	0.05472	0.076	0.423	0.097	0.02	0.024	0.115	0.108	-0.01	-0.01	-0.01	-0.03	2973	0.7344	1.691874	-0.957474	NAF
NS0160	192	196	NS	BX139844-BX139845	X139844	2			66.71	5.801	0.376	0.048	0.03456	0.048	0.38	0.103	0.014	0.026	0.1	0.125	-0.01	-0.01	-0.01	-0.03	2960	0.7956	1.796526	-1.000926	NAF
NS0160	166	168	NS	BX139831	X139831	2			66.81	5.867	0.292	0.035	0.0252	0.035	0.354	0.13	0.02	0.041	0.075	0.119	-0.01	-0.01	-0.01	-0.03	2953	1.2546	2.26746	-1.01286	NAF
NS0160	172	176	NS	BX139834-BX139835	X139834	2			68.8	4.193	0.313	0.068	0.04896	0.068	0.323	0.092	0.017	0.019	0.07	0.085	-0.01	-0.01	-0.01	-0.03	2955	0.5814	1.604664	-1.023264	NAF
NS0160	180	184	NS	BX139838-BX139839	X139838	2			67.11	5.011	0.32	0.044	0.03168	0.044	0.397	0.104	0.02	0.021	0.092	0.13	-0.01	-0.01	-0.01	-0.03	2957	0.6426	1.813968	-1.171368	NAF
NS0160	210	214	NS	BX139854-BX139855	X139854	2			66.57	5.564	0.352	0.046	0.03312	0.046	0.385	0.093	0.014	0.014	0.094	0.117	-0.01	-0.01	-0.01	-0.03	2965	0.4284	1.622106	-1.193706	NAF
NS0160	246	250	NS	BX139872-BX139873	X139872	2			68.5	4.858	0.207	0.035	0.0252	0.035	0.277	0.086	0.016	0.009	0.067	0.088	-0.01	-0.01	-0.01	-0.03	2974	0.2754	1.500012	-1.224612	NAF
NS0160	214	218	NS	BX139856-BX139857	X139856	2			64.47	6.96	0.418	0.05	0.036	0.05	0.469	0.109	0.018	0.022	0.113	0.102	-0.01	-0.01	-0.01	-0.03	2966	0.6732	1.901178	-1.227978	NAF
NS0160	90	94	NS	BX139792-BX139793	X139792	2			69.69	3.561	0.106	0.026	0.01872	0.026	0.194	0.099	0.019	0.016	0.032	0.081	-0.01	-0.01	-0.01	-0.03	2934	0.4896	1.726758	-1.237158	NAF
NS0160	152	156	NS	BX139824-BX139825	X139824	2			68.65	4.071	0.216	0.039	0.02808	0.039	0.29	0.099	0.016	0.016	0.06	0.087	-0.01	-0.01	-0.01	-0.03	2950	0.4896	1.726758	-1.237158	NAF
NS0160	132	136	NS	BX139814-BX139815	X139814	2			65.9	5.746	0.324	0.028	0.02016	0.028	0.33	0.127	0.022	0.031	0.074	0.143	-0.01	-0.01	-0.01	-0.03	2945	0.9486	2.215134	-1.266534	NAF
NS0160	298	300	NS	BX139898	X139898	2			68.18	4.449	0.216	0.035	0.0252	0.035	0.321	0.099	0.018	0.015	0.069	0.084	-0.01	-0.01	-0.01	-0.03	2987	0.459	1.726758	-1.267758	NAF
NS0160	250	254	NS	BX139874-BX139875	X139874	2			64.2	8.769	0.364	0.036	0.02592	0.036	0.432	0.103	0.017	0.017	0.123	0.093	-0.01	-0.01	-0.01	-0.03	2975	0.5202	1.796526	-1.276326	NAF
NS0160	184	188	NS	BX139840-BX139841	X139840	2			68.85	3.712	0.202	0.032	0.02304	0.032	0.26	0.096	0.016	0.013	0.059	0.102	-0.01	-0.01	-0.01	-0.03	2958	0.3978	1.674432	-1.276632	NAF
NS0160	284	286	NS	BX139891	X139891	2			69.32	4.194	0.16	0.027	0.01944	0.027	0.271	0.124	0.019	0.028	0.059	0.087	-0.01	-0.01	-0.01	-0.03	2983	0.8568	2.162808	-1.306008	NAF
NS0160	148	152	NS	BX139822-BX139823	X139822	2			67.88	4.909	0.226	0.03	0.0216	0.03	0.32	0.096	0.017	0.011	0.065	0.097	-0.01	-0.01	-0.01	-0.03	2949	0.3366	1.674432	-1.337832	NAF
NS0160	58	62	NS	BX139776-BX139777	X139776	2			68.69	4.058	0.187	0.027	0.01944	0.027	0.262	0.112	0.022	0.02	0.051	0.105	-0.01	-0.01	-0.01	-0.03	2926	0.612	1.953504	-1.341504	NAF
NS0160	156	160	NS	BX139826-BX139827	X139826	2			68.44	4.792	0.297	0.053	0.03816	0.053	0.339	0.107	0.017	0.017	0.074	0.089	-0.01	-0.01	-0.01	-0.03	2951	0.5202	1.866294	-1.346094	NAF
NS0160	234	238	NS	BX139866-BX139867	X139866	2			65.93	6.127	0.5	0.065	0.0468	0.065	0.467	0.12	0.025	0.024	0.116	0.126	-0.01	-0.01	-0.01	-0.03	2971	0.7344	2.09304	-1.35864	NAF
NS0160	30	32	NS	X141762	141762	1	G	D	19.09	60.53	5.13	0.0516	0.04	0.241	0.51	0.1	0.035	0.012	0.281	0.041	3.46	1.7	0.18	5.34	21361	0.3672	1.7442	-1.377	NAF
NS0160	224	226	NS	BX139861	X139861	2			66.93	6.506	0.232	0.031	0.02232	0.031	0.336	0.098	0.017	0.01	0.078	0.082	-0.01	-0.01	-0.01	-0.03	2968	0.306	1.709316	-1.403316	NAF
NS0160	212	214	NS	X141855	141855	1	G	D	30.38	36.45	3.03	0.3741	0.29	0.143	3.01	0.41	0.054	0.187	1.16	0.307	1.25	8.99	0.55	10.79	21452	5.7222	7.15122	-1.42902	NAF
NS0160	254	258	NS	BX139876-BX139877	X139876	2			70.47	3.265	0.104	0.022	0.01584	0.022	0.203	0.097	0.02	0.008	0.037	0.088	-0.01	-0.01	-0.01	-0.03	2976	0.2448	1.691874	-1.447074	NAF
NS0160	128	132	NS	BX139812-BX139813	X139812	2			67.07	5.249	0.311	0.044	0.03168	0.044	0.344	0.134	0.026	0.028	0.065	0.109	-0.01	-0.01	-0.01	-0.03	2944	0.8568	2.337228	-1.480428	NAF
NS0160	98	102	NS	BX139796-BX139797	X139796	2			65.51	6.565	0.366	0.053	0.03816	0.053	0.412	0.113	0.021	0.016	0.104	0.109	-0.01	-0.01	-0.01	-0.03	2936	0.4896	1.970946	-1.481346	NAF
NS0160	94	98	NS	BX139794-BX139795	X139794	2			65.87	6.543	0.246	0.043	0.03096	0.043	0.372	0.103	0.018	0.01	0.08	0.111	-0.01	-0.01	-0.01	-0.03	2935	0.306	1.796526	-1.490526	NAF
NS0160	168	172	NS	BX139832-BX139833	X139832	2			69.5	3.739	0.141	0.033	0.02376	0.033	0.238	0.103	0.02	0.009	0.044	0.092	-0.01	-0.01	-0.01	-0.03	2954	0.2754	1.796526	-1.521126	NAF
NS0160	258	262	NS	BX139878-BX139879	X139878	2			69	4.546	0.161	0.026	0.01872	0.026	0.247	0.105	0.022	0.01	0.056	0.096	-0.01	-0.01	-0.01	-0.03	2977	0.306	1.83141	-1.52541	NAF
NS0160	290	294	NS	BX139894-BX139895	X139894	2			67.36	5.893	0.228	0.035	0.0252	0.035	0.372	0.098	0.015	0.006	0.072	0.078	-0.01	-0.01	-0.01	-0.03	2985	0.1836	1.709316	-1.525716	NAF
NS0160	24	26	NS	X141759	141759	1	G	D	23.68	50.02	7.56	0.0258	0.02	0.361	0.43	0.11	0.03	0.012	0.113	0.069	4.4	2.53	0.24	7.17	21358	0.3672	1.91862	-1.55142	NAF
NS0160	144	148	NS	BX139820-BX139821	X139820	2			68.43	5.003	0.357	0.035	0.0252	0.035	0.327	0.112	0.019	0.013	0.06	0.114	-0.01	-0.01	-0.01	-0.03	2948	0.3978	1.953504	-1.555704	NAF
NS0160	206	210	NS	BX139852-BX139853	X139852	2			66.05	6.418	0.235	0.029	0.02088	0.029	0.362	0.106	0.018	0.009	0.081	0.092	-0.01	-0.01	-0.01	-0.03	2964	0.2754	1.848852	-1.573452	NAF
NS0160	200	204	NS	BX139848-BX139849	X139848	2			65.91	6.055	0.28	0.029	0.02088	0.029	0.367	0.121	0.02	0.017	0.094	0.105	-0.01	-0.01	-0.01	-0.03	2962	0.5202	2.110482	-1.590282	NAF
NS0160	294	298	NS	BX139896-BX139897	X139896	2			67.93	5.156	0.252	0.042	0.03024	0.042	0.348	0.109	0.02	0.01	0.082	0.098	-0.01	-0.01	-0.01	-0.03	2986	0.306	1.901178	-1.595178	NAF
NS0160	136	140	NS	BX139816-BX139817	X139816	2			67.12	5.864	0.285	0.055	0.0396	0.055	0.342	0.152	0.025	0.034	0.082	0.104	-0.01	-0.01	-0.01	-0.03	2946	1.0404	2.651184	-1.610784	NAF
NS0160	112	116	NS	BX139804-BX139805	X139804	2			61.92	8.104	0.414	0.062	0.04464	0.062	0.516	0.149	0.029	0.028	0.1	0.113	-0.01	-0.01	-0.01	-0.03	2940	0.8568	2.598858	-1.742058	NAF
NS0160	176	180	NS	BX139836-BX139837	X139836	2			68.91	4.104	0.149	0.029	0.02088	0.029	0.242	0.114	0.022	0.008	0.052	0.081	-0.01	-0.01	-0.01	-0.03	2956	0.2448	1.988388	-1.743588	NAF
NS0160	188	192	NS	BX139842-BX139843	X139842	2			69.16	4.018	0.11	0.023	0.01656	0.023	0.227	0.112	0.016	0.006	0.039	0.077	-0.01	-0.01	-0.01	-0.03	2959	0.1836	1.953504	-1.769904	NAF
NS0160	120	124	NS	BX139808-BX139809	X139808	2			68.36	3.821	0.168	0.031	0.02232	0.031	0.238	0.123	0.024	0.012	0.042	0.102	-0.01	-0.01	-0.01	-0.03	2942	0.3672	2.145366	-1.778166	NAF
NS0160	60	62	NS	X141777	141777	1	G	D	25.37	40.17	5.57	0.4128	0.32	0.258	4	0.77	0.148	0.378	0.633	0.127	1.01	8.88	1.16	11.05	21376	11.5668	13.43034	-1.86354	NAF
NS0160	204	206	NS	BX139851	X139851	2			69.24	3.838	0.177	0.025	0.018	0.025	0.241	0.116	0.021	0.005	0.06	0.076	-0.01	-0.01	-0.01	-0.03	2963	0.153	2.023272	-1.870272	NAF
NS0160	230	234	NS	BX139864-BX139865	X139864	2			68.35	4.209	0.164	0.03	0.0216	0.03	0.273	0.129	0.028	0.012	0.056	0.098	-0.01	-0.01	-0.01	-0.03	2970	0.3672	2.250018	-1.882818	NAF
NS0160	124	128	NS	BX139810-BX139811	X139810	2			68.33	3.732	0.106	0.03	0.0216	0.03	0.23	0.131	0.027	0.013	0.037	0.089	-0.01	-0.01	-0.01	-0.03	2943	0.3978	2.284902	-1.887102	NAF
NS0160	116	120	NS	BX139806-BX139807	X139806	2			67.03	5.263	0.293	0.049	0.03528	0.049	0.374	0.149	0.028	0.023	0.075	0.123	-0.01	-0.01	-0.01	-0.03	2941	0.7038	2.598858	-1.895058	NAF
NS0160	88	90	NS	X141791	141791	1	G	D	29.47	39.29	3.19	0.3225	0.25	0.149	2.72	0.55	0.11	0.251	0.961	0.238	1.07	8.55	0.65	10.27	21390	7.6806	9.5931	-1.9125	NAF
NS0160	62	64	NS	X141778	141778	1	G	D	25.92	38.79	4.38	0.5031	0.39	0.199	3.74	1.07	0.265	0.546	0.594	0.123	0.97	10.47	1.35	12.79	21377	16.7076	18.66294	-1.95534	NAF
NS0160	286	290	NS	BX139892-BX139893	X139892	2			69.49	3.429	0.092	0.025	0.018	0.025	0.204	0.125	0.02	0.007	0.036	0.093	-0.01	-0.01	-0.01	-0.03	2984	0.2142	2.18025	-1.96605	NAF
NS0160	232	234	NS	X141865	141865	1	G	D	32.12	35.72	2.41	0.4386	0.34	0.108	2.62	0.56	0.098	0.253	0.975	0.256	1.06	8.71	0.49	10.26	21462	7.7418	9.76752	-2.02572	NAF
NS0160	160	164	NS	BX139828-BX139829	X139828	2			67.41	5.577	0.228	0.025	0.018	0.025	0.328	0.132	0.021	0.009	0.078	0.09	-0.01	-0.01	-0.01	-0.03	2952	0.2754	2.302344	-2.026944	NAF
NS0160	278	282	NS	BX139888-BX139889	X139888	2			66.49	6.599	0.23	0.028	0.02016	0.028	0.378	0.153	0.017	0.02	0.079	0.083	-0.01	-0.01	-0.01	-0.03	2982	0.612	2.668626	-2.056626	NAF
NS0160	218	222	NS	BX139858-BX139859	X139858	2			61.45	9.298	0.527	0.054	0.03888	0.054	0.648	0.147	0.024	0.015	0.171	0.124	-0.01	-0.01	-0.01	-0.03	2967	0.459	2.563974	-2.104974	NAF
NS0160	28	30	NS	X141761	141761	1	G	D	19.77	53.94	8.75	0.0258	0.02	0.399	0.8	0.14	0.028	0.01	0.568	0.076	3.61	2.72	0.24	6.57	21360	0.306	2.44188	-2.13588	NAF
NS0160	200	202	NS	X141848	141848	1	G	D	28.68	41.98	3.6	0.3354	0.26	0.166	3.32	0.76	0.061	0.362	1.19	0.333	1.11	5.11	0.91	7.13	21446	11.0772	13.25592	-2.17872	NAF
NS0160	26	28	NS	X141760	141760	1	G	D	24.78	50	6.07	0.0774	0.06	0.298	0.56	0.15	0.036	0.013	0.1	0.075	4.67	2.08	0.22	6.97	21359	0.3978	2.6163	-2.2185	NAF
NS0160	238	242	NS	BX139868-BX139869	X139868	2			61.31	10.15	0.374	0.039	0.02808	0.039	0.544	0.155	0.029	0.013	0.129	0.09	-0.01	0.64	-0.01	0.62	2972	0.3978	2.70351	-2.30571	NAF
NS0160	100	102	NS	X141797	141797	1	G	D	26.69	42.74	3.39	0.2838	0.22	0.154	2.91	0.77	0.161	0.359	1.14	0.315	1.18	7.27	1.01	9.46	21396	10.9854	13.43034	-2.44494	NAF
NS0160	36	38	NS	X141765	141765	1	G	D	19.22	56.51	7.38	0.0258	0.02	0.35	0.89	0.16	0.033	0.01	0.404	0.049	3.58	2.48	0.24	6.3	21364	0.306	2.79072	-2.48472	NAF
NS0160	38	40	NS	X141766	141766	1	G	D	22.51	50.08	8.22	0.1032	0.08	0.385	0.92	0.18	0.046	0.013	0.281	0.046	4.23	2.82	0.29	7.34	21365	0.3978	3.13956	-2.74176	NAF
NS0160	196	200	NS	BX139846-BX139847	X139846	2			66.78	5.837	0.597	0.084	0.06048	0.084	0.474	0.226	0.017	0.038	0.125	0.158	-0.01	-0.01	-0.01	-0.03	2961	1.1628	3.941892	-2.779092	NAF
NS0160	32	34	NS	X141763	141763	1	G	D	20.74	52.93	8.47	0.0387	0.03	0.393	0.84	0.19	0.026	0.011	0.247	0.059	3.94	2.8	0.25	6.99	21362	0.3366	3.31398	-2.97738	NAF
NS0160	228	230	NS	X141863	141863	1	G	D	26.95	41.77	3.74	0.3354	0.26	0.174	3.23	0.61	0.112	0.249	1.33	0.345	1.32	7.29	0.75	9.36	21460	7.6194	10.63962	-3.02022	NAF
NS0160	34	36	NS	X141764	141764	1	G	D	23.47	46.93	9.19	0.0387	0.03	0.438	0.95	0.2	0.04	0.011	0.294	0.064	4.36	3.13	0.31	7.8	21363	0.3366	3.4884	-3.1518	NAF
NS0160	40	42	NS	X141767	141767	1	G	D	22.11	50.76	8.02	0.2838	0.22	0.396	1.02	0.2	0.049	0.009	0.283	0.05	4.05	2.83	0.31	7.19	21366	0.2754	3.4884	-3.213	NAF
NS0160	42	44	NS	X141768	141768	1	G	D	24.29	50.21	5.04	1.0449	0.81	0.233	0.95	0.2	0.077	0.008	0.194	0.04	4.56	1.96	0.33	6.85	21367	0.2448	3.4884	-3.2436	NAF
NS0160	114	116	NS	X141805	141805	1	G	D	29.56	35.92	3.12	0.4128	0.32	0.146	3.05	0.58	0.066	0.215	0.914	0.255	1.19	10.9	0.59	12.68	21403	6.579	10.11636	-3.53736	NAF
NS0160	252	254	NS	X141875	141875	1	G	D	31.75	35.29	3.06	0.2967	0.23	0.146	2.81	0.55	0.095	0.197	1.27	0.362	1.32	8.5	0.5	10.32	21472	6.0282	9.5931	-3.5649	NAF
NS0160	58	60	NS	X141776	141776	1	G	D	21.98	47.03	4.62	0.4257	0.33	0.23	3.5	1.05	0.08	0.48	0.486	0.099	0.75	7.98	1.45	10.18	21375	14.688	18.3141	-3.6261	NAF
NS0160	214	216	NS	X141856	141856	1	G	D	29.11	39.16	2.51	0.4257	0.33	0.114	2.59	0.48	0.048	0.147	0.907	0.244	1.04	10.16	0.36	11.56	21453	4.4982	8.37216	-3.87396	NAF
NS0160	236	238	NS	X141867	141867	1	G	D	27.76	40.98	3.81	0.3096	0.24	0.179	3.37	0.55	0.073	0.179	1.31	0.35	1.29	6.95	0.62	8.86	21464	5.4774	9.5931	-4.1157	NAF
NS0160	44	46	NS	X141769	141769	1	G	D	27.69	43.51	6.02	0.4128	0.32	0.284	1.19	0.26	0.077	0.006	0.224	0.047	5.21	2.28	0.3	7.79	21368	0.1836	4.53492	-4.35132	NAF
NS0160	48	50	NS	X141771	141771	1	G	D	18.78	57.2	6.8	0.2064	0.16	0.325	1.45	0.27	0.048	0.006	0.405	0.037	3.51	2.28	0.26	6.05	21370	0.1836	4.70934	-4.52574	NAF
NS0160	78	80	NS	X141786	141786	1	G	D	30.36	34.5	1.81	0.4257	0.33	0.079	2.5	0.57	0.099	0.175	0.489	0.125	0.95	14.1	0.38	15.43	21385	5.355	9.94194	-4.58694	NAF
NS0160	46	48	NS	X141770	141770	1	G	D	20.9	51.43	8.05	0.1548	0.12	0.394	1.66	0.29	0.058	0.006	0.552	0.052	3.94	2.68	0.3	6.92	21369	0.1836	5.05818	-4.87458	NAF
NS0160	52	54	NS	X141773	141773	1	G	D	18.51	55.31	8.23	0.1161	0.09	0.39	1.8	0.31	0.044	0.006	0.723	0.038	3.37	2.64	0.31	6.32	21372	0.1836	5.40702	-5.22342	NAF
NS0160	68	70	NS	X141781	141781	1	G	D	29.84	33.08	1.5	0.3354	0.26	0.065	2.66	0.55	0.079	0.134	0.453	0.101	1.05	16.81	0.33	18.19	21380	4.1004	9.5931	-5.4927	NAF
NS0160	54	56	NS	X141774	141774	1	G	D	19.62	52.61	8.6	0.129	0.1	0.414	2.03	0.33	0.057	0.006	1	0.053	3.42	2.98	0.32	6.72	21373	0.1836	5.75586	-5.57226	NAF
NS0160	238	240	NS	X141868	141868	1	G	D	31.84	37.57	2	0.4386	0.34	0.089	2.37	0.51	0.064	0.108	0.807	0.228	1.07	9.11	0.08	10.26	21465	3.3048	8.89542	-5.59062	NAF
NS0160	50	52	NS	X141772	141772	1	G	D	22.05	49.7	7.86	0.1677	0.13	0.388	1.83	0.34	0.062	0.006	0.552	0.043	4.09	2.67	0.34	7.1	21371	0.1836	5.93028	-5.74668	NAF
NS0160	270	272	NS	X141884	141884	1	G	D	29.35	41.42	2.45	0.3741	0.29	0.113	2.55	0.56	0.069	0.127	0.975	0.263	1.03	7.53	0.3	8.86	21481	3.8862	9.76752	-5.88132	NAF
NS0160	218	220	NS	X141858	141858	1	G	D	32.87	32.07	2.11	0.4257	0.33	0.094	2.48	0.53	0.059	0.107	0.877	0.242	1.11	12.41	0.21	13.73	21455	3.2742	9.24426	-5.97006	NAF
NS0160	70	72	NS	X141782	141782	1	G	D	29.18	35.08	1.51	0.2838	0.22	0.065	2.48	0.58	0.097	0.122	0.521	0.128	1.02	15.82	0.31	17.15	21381	3.7332	10.11636	-6.38316	NAF
NS0160	260	262	NS	X141879	141879	1	G	D	32.74	37	2.56	0.2451	0.19	0.122	2.36	0.84	0.143	0.269	1.08	0.309	1.12	6.72	0.55	8.39	21476	8.2314	14.65128	-6.41988	NAF
NS0160	154	156	NS	X141825	141825	1	G	D	29.87	37.68	4.09	0.3612	0.28	0.19	3.87	0.95	0.096	0.307	1.33	0.368	1.26	6.11	1	8.37	21423	9.3942	16.5699	-7.1757	NAF
NS0160	206	208	NS	X141852	141852	1	G	D	29.47	39.78	1.87	0.4128	0.32	0.083	2.34	0.66	0.07	0.14	0.784	0.223	0.97	9.85	0.26	11.08	21449	4.284	11.51172	-7.22772	NAF
NS0160	264	266	NS	X141881	141881	1	G	D	28.38	38.35	3.13	0.4644	0.36	0.145	3.04	0.77	0.157	0.195	1.16	0.306	1.21	9.21	0.62	11.04	21478	5.967	13.43034	-7.46334	NAF
NS0160	98	100	NS	X141796	141796	1	G	D	26.89	42.82	4.23	0.2064	0.16	0.199	3.37	0.86	0.169	0.234	1.53	0.421	1.56	4.97	0.84	7.37	21395	7.1604	15.00012	-7.83972	NAF
NS0160	298	300	NS	X141898	141898	1	G	D	32.78	34.39	2.38	0.4773	0.37	0.108	2.82	0.63	0.076	0.097	0.967	0.258	1.05	9.7	0.19	10.94	21495	2.9682	10.98846	-8.02026	NAF
NS0160	220	222	NS	X141859	141859	1	G	D	27.46	40.45	1.61	0.4257	0.33	0.07	2.18	0.66	0.112	0.095	0.653	0.19	0.97	12.82	0.19	13.98	21456	2.907	11.51172	-8.60472	NAF
NS0160	248	250	NS	X141873	141873	1	G	D	27.2	45.11	3.3	0.2709	0.21	0.155	2.8	0.79	0.112	0.166	1.26	0.339	1.16	4.8	0.56	6.52	21470	5.0796	13.77918	-8.69958	NAF
NS0160	268	270	NS	X141883	141883	1	G	D	25.53	46.38	2.63	0.3999	0.31	0.121	2.63	0.8	0.064	0.164	0.901	0.217	0.93	7.59	0.53	9.05	21480	5.0184	13.9536	-8.9352	NAF
NS0160	240	242	NS	X141869	141869	1	G	D	30.26	38.71	1.28	0.5031	0.39	0.055	1.96	0.62	0.077	0.055	0.541	0.165	1.09	11.38	0.01	12.48	21466	1.683	10.81404	-9.13104	NAF
NS0160	116	118	NS	X141806	141806	1	G	D	29.91	34.75	2.99	0.4515	0.35	0.136	3.09	0.88	0.071	0.199	0.912	0.26	1.19	11.57	0.52	13.28	21404	6.0894	15.34896	-9.25956	NAF
NS0160	262	264	NS	X141880	141880	1	G	D	30.62	35.88	2.99	0.3225	0.25	0.141	2.77	0.87	0.21	0.183	1.21	0.33	1.32	9.01	0.5	10.83	21477	5.5998	15.17454	-9.57474	NAF
NS0160	226	228	NS	X141862	141862	1	G	D	29.02	37.07	4.12	0.3225	0.25	0.19	3.71	0.93	0.174	0.214	1.58	0.429	1.54	7.21	0.8	9.55	21459	6.5484	16.22106	-9.67266	NAF
NS0160	130	132	NS	X141813	141813	1	G	D	23.58	46.95	4.97	0.258	0.2	0.235	3.41	1.68	0.144	0.637	0.933	0.277	0.93	4.45	1.42	6.8	21411	19.4922	29.30256	-9.81036	NAF
NS0160	224	226	NS	X141861	141861	1	G	D	30.14	39.36	1.26	0.4257	0.33	0.054	1.9	0.71	0.067	0.057	0.542	0.148	0.73	11.47	0.07	12.27	21458	1.7442	12.38382	-10.63962	NAF
NS0160	96	98	NS	X141795	141795	1	G	D	30.02	40.37	2.31	0.2838	0.22	0.11	2.44	0.75	0.063	0.078	0.902	0.243	1.02	8.32	0.22	9.56	21394	2.3868	13.0815	-10.6947	NAF
NS0160	86	88	NS	X141790	141790	1	G	D	25.27	43.93	1.47	0.4515	0.35	0.063	2	0.95	0.083	0.19	0.47	0.124	0.86	12.62	0.49	13.97	21389	5.814	16.5699	-10.7559	NAF
NS0160	102	104	NS	X141798	141798	1	G	D	30.62	38.22	1.28	0.2967	0.23	0.056	1.86	0.73	0.081	0.063	0.504	0.141	0.77	11.69	-0.01	12.45	21397	1.9278	12.73266	-10.80486	NAF
NS0160	184	186	NS	X141840	141840	1	G	D	29.37	43.69	1.94	0.3096	0.24	0.089	2.32	0.88	0.066	0.145	0.743	0.212	0.79	6.31	0.37	7.47	21438	4.437	15.34896	-10.91196	NAF
NS0160	90	92	NS	X141792	141792	1	G	D	33.52	32.49	1.04	0.3741	0.29	0.045	1.82	0.74	0.086	0.065	0.402	0.1	0.64	14.06	-0.04	14.66	21391	1.989	12.90708	-10.91808	NAF
NS0160	292	294	NS	X141895	141895	1	G	D	34.8	30.28	1.25	0.5805	0.45	0.055	2.49	0.69	0.077	0.033	0.542	0.142	0.76	13.11	-0.12	13.75	21492	1.0098	12.03498	-11.02518	NAF
NS0160	246	248	NS	X141872	141872	1	G	D	31.11	40.26	2.77	0.258	0.2	0.131	2.59	0.82	0.103	0.106	1.16	0.323	1.08	5.43	0.3	6.81	21469	3.2436	14.30244	-11.05884	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0160	142	144	NS	X141819	141819	1	G	D	19.54	50.82	8.49	0.0774	0.06	0.401	4.56	1.27	0.075	0.355	0.69	0.218	0.82	2.79	1.08	4.69	21417	10.863	22.15134	-11.28834	NAF
NS0160	110	112	NS	X141803	141803	1	G	D	28.5	36.46	3.82	0.4257	0.33	0.176	3.44	1.12	0.056	0.269	1.05	0.299	1.24	9.98	0.89	12.11	21401	8.2314	19.53504	-11.30364	NAF
NS0160	94	96	NS	X141794	141794	1	G	D	28.11	41.03	1.43	0.3354	0.26	0.065	2.04	0.84	0.082	0.085	0.528	0.129	0.81	11.98	0.21	13	21393	2.601	14.65128	-12.05028	NAF
NS0160	274	276	NS	X141886	141886	1	G	D	28.53	41.39	2.44	0.4902	0.38	0.11	2.66	0.91	0.1	0.124	0.961	0.25	0.96	7.76	0.39	9.11	21483	3.7944	15.87222	-12.07782	NAF
NS0160	166	168	NS	X141831	141831	1	G	D	26.1	42.72	5.66	0.258	0.2	0.265	3.73	1.43	0.079	0.396	1.16	0.339	1.07	3.81	1.23	6.11	21429	12.1176	24.94206	-12.82446	NAF
NS0160	112	114	NS	X141804	141804	1	G	D	30.48	33.18	2.67	0.4644	0.36	0.123	3.05	1.03	0.081	0.168	0.832	0.227	1.11	12.72	0.54	14.37	21402	5.1408	17.96526	-12.82446	NAF
NS0160	194	196	NS	X141845	141845	1	G	D	26.78	42.23	2.95	0.5289	0.41	0.131	3.18	1.38	0.058	0.366	1.07	0.302	1.13	6.7	1.2	9.03	21443	11.1996	24.06996	-12.87036	NAF
NS0160	210	212	NS	X141854	141854	1	G	D	30.95	37.66	3.59	0.2709	0.21	0.168	3.19	1.03	0.14	0.164	1.45	0.399	1.34	5.62	0.61	7.57	21451	5.0184	17.96526	-12.94686	NAF
NS0160	192	194	NS	X141844	141844	1	G	D	26.19	43.8	4.6	0.2709	0.21	0.218	3.69	1.53	0.171	0.428	1.53	0.428	1.29	3.13	1.32	5.74	21442	13.0968	26.68626	-13.58946	NAF
NS0160	208	210	NS	X141853	141853	1	G	D	34.86	32.97	1.17	0.4644	0.36	0.05	2.02	0.86	0.078	0.04	0.51	0.144	0.71	11.19	-0.07	11.83	21450	1.224	15.00012	-13.77612	NAF
NS0160	272	274	NS	X141885	141885	1	G	D	30.52	39.88	2.24	0.3999	0.31	0.1	2.36	1.02	0.084	0.125	0.864	0.229	0.86	7.35	0.34	8.55	21482	3.825	17.79084	-13.96584	NAF
NS0160	294	296	NS	X141896	141896	1	G	D	31.03	37.08	3.24	0.3354	0.26	0.157	3.19	1.17	0.138	0.189	1.12	0.3	1.09	6.61	0.64	8.34	21493	5.7834	20.40714	-14.62374	NAF
NS0160	134	136	NS	X141815	141815	1	G	D	20.98	49.12	6.81	0.129	0.1	0.315	4.11	1.79	0.099	0.54	1.04	0.323	1.03	2.71	1.49	5.23	21413	16.524	31.22118	-14.69718	NAF
NS0160	136	138	NS	X141816	141816	1	G	D	31.58	35.96	2.88	0.3741	0.29	0.136	2.76	2.2	0.166	0.767	1.09	0.315	1.03	5.55	1.75	8.33	21414	23.4702	38.3724	-14.9022	NAF
NS0160	196	198	NS	X141846	141846	1	G	D	26.44	43.03	4.15	0.3483	0.27	0.192	3.7	1.45	0.101	0.323	1.39	0.386	1.26	4.49	1.22	6.97	21444	9.8838	25.2909	-15.4071	NAF
NS0160	250	252	NS	X141874	141874	1	G	D	30.16	41.92	0.97	0.4128	0.32	0.042	1.62	0.95	0.057	0.037	0.416	0.125	0.57	9.3	0.02	9.89	21471	1.1322	16.5699	-15.4377	NAF
NS0160	164	166	NS	X141830	141830	1	G	D	29.24	41.25	3.92	0.2709	0.21	0.182	3.01	1.52	0.083	0.348	1.12	0.303	0.98	3.75	1.13	5.86	21428	10.6488	26.51184	-15.86304	NAF
NS0160	170	172	NS	X141833	141833	1	G	D	31.4	38.4	3.36	0.258	0.2	0.161	2.94	1.36	0.164	0.24	1.08	0.311	0.98	4.63	0.76	6.37	21431	7.344	23.72112	-16.37712	NAF
NS0160	150	152	NS	X141823	141823	1	G	D	29.78	41.75	2.94	0.2322	0.18	0.138	2.84	1.21	0.137	0.153	1.03	0.292	0.99	5.12	0.54	6.65	21421	4.6818	21.10482	-16.42302	NAF
NS0160	230	232	NS	X141864	141864	1	G	D	30.12	39.54	1.09	0.3999	0.31	0.047	1.94	1.01	0.086	0.037	0.476	0.134	0.67	11.14	0.12	11.93	21461	1.1322	17.61642	-16.48422	NAF
NS0160	290	292	NS	X141894	141894	1	G	D	30.18	37.91	3.57	0.3354	0.26	0.165	3.7	1.29	0.091	0.193	1.21	0.344	1.16	5.88	0.9	7.94	21491	5.9058	22.50018	-16.59438	NAF
NS0160	148	150	NS	X141822	141822	1	G	D	33.67	36.28	1.14	0.3741	0.29	0.051	1.99	1.12	0.075	0.061	0.485	0.141	0.66	9.22	0.12	10	21420	1.8666	19.53504	-17.66844	NAF
NS0160	128	130	NS	X141812	141812	1	G	D	32	35.16	2.31	0.3741	0.29	0.107	2.62	1.48	0.174	0.262	0.938	0.262	1	8.38	0.71	10.09	21410	8.0172	25.81416	-17.79696	NAF
NS0160	186	188	NS	X141841	141841	1	G	D	30.17	38.65	4.12	0.2322	0.18	0.189	3.53	1.53	0.086	0.277	1.47	0.402	1.26	3.43	1.22	5.91	21439	8.4762	26.68626	-18.21006	NAF
NS0160	158	160	NS	X141827	141827	1	G	D	27.23	41.26	4.87	0.3354	0.26	0.229	3.76	1.59	0.122	0.293	1.36	0.343	1.19	4.42	1.16	6.77	21425	8.9658	27.73278	-18.76698	NAF
NS0160	254	256	NS	X141876	141876	1	G	D	30.58	40.45	1.35	0.3612	0.28	0.06	1.85	1.26	0.096	0.049	0.57	0.16	0.66	9.12	0.25	10.03	21473	1.4994	21.97692	-20.47752	NAF
NS0160	172	174	NS	X141834	141834	1	G	D	28.88	39.88	4.26	0.2322	0.18	0.198	3.44	1.62	0.191	0.248	1.39	0.386	1.23	3.74	1.03	6	21432	7.5888	28.25604	-20.66724	NAF
NS0160	258	260	NS	X141878	141878	1	G	D	28.33	45.87	0.84	0.3612	0.28	0.036	1.48	1.23	0.1	0.019	0.374	0.105	0.45	8.08	0.13	8.66	21475	0.5814	21.45366	-20.87226	NAF
NS0160	202	204	NS	X141849	141849	1	G	D	34.05	38.61	1.7	0.2709	0.21	0.077	1.97	1.43	0.097	0.084	0.748	0.22	0.68	4.97	0.47	6.12	21447	2.5704	24.94206	-22.37166	NAF
NS0160	182	184	NS	X141839	141839	1	G	D	30.4	38.24	2.45	0.3741	0.29	0.114	2.73	1.62	0.095	0.187	0.881	0.253	0.93	7.77	0.74	9.44	21437	5.7222	28.25604	-22.53384	NAF
NS0160	152	154	NS	X141824	141824	1	G	D	30.54	38.87	2.38	0.3225	0.25	0.108	2.66	1.51	0.121	0.121	0.915	0.25	0.95	7	0.63	8.58	21422	3.7026	26.33742	-22.63482	NAF
NS0160	146	148	NS	X141821	141821	1	G	D	30.11	39.88	2.62	0.2451	0.19	0.119	2.78	1.61	0.079	0.148	1	0.273	0.96	6.11	0.88	7.95	21419	4.5288	28.08162	-23.55282	NAF
NS0160	92	94	NS	X141793	141793	1	G	D	31.84	36.74	1.03	0.3096	0.24	0.046	1.61	1.47	0.078	0.04	0.408	0.12	0.61	11.47	0.28	12.36	21392	1.224	25.63974	-24.41574	NAF
NS0160	204	206	NS	X141851	141851	1	G	D	35.49	33.37	2.49	0.2322	0.18	0.11	2.54	1.75	0.281	0.172	1.04	0.295	0.94	4.82	0.55	6.31	21448	5.2632	30.5235	-25.2603	NAF
NS0160	256	258	NS	X141877	141877	1	G	D	34.94	34.43	1.52	0.3354	0.26	0.063	2	1.54	0.232	0.044	0.67	0.191	0.73	7.79	0.1	8.62	21474	1.3464	26.86068	-25.51428	NAF
NS0160	176	178	NS	X141836	141836	1	G	D	29.95	41.65	1.8	0.3354	0.26	0.082	2.1	1.75	0.106	0.138	0.683	0.177	0.67	6.31	0.69	7.67	21434	4.2228	30.5235	-26.3007	NAF
NS0160	132	134	NS	X141814	141814	1	G	D	24.08	46.97	3.31	0.2451	0.19	0.152	2.72	2.07	0.069	0.319	0.99	0.27	1.03	5.72	1.31	8.06	21412	9.7614	36.10494	-26.34354	NAF
NS0160	118	120	NS	X141807	141807	1	G	D	29.94	39.86	1.56	0.2967	0.23	0.074	1.97	1.67	0.075	0.087	0.583	0.148	0.67	9.47	0.57	10.71	21405	2.6622	29.12814	-26.46594	NAF
NS0160	278	280	NS	X141888	141888	1	G	D	31.61	37.82	2.33	0.4644	0.36	0.109	3.03	1.81	0.068	0.09	0.947	0.248	0.84	5.59	1.19	7.62	21485	2.754	31.57002	-28.81602	NAF
NS0160	276	278	NS	X141887	141887	1	G	D	24.78	48.72	2.12	0.4128	0.32	0.099	2.61	1.8	0.052	0.078	0.885	0.241	0.85	5.5	1.12	7.47	21484	2.3868	31.3956	-29.0088	NAF
NS0160	188	190	NS	X141842	141842	1	G	D	29.88	40.52	1.95	0.4257	0.33	0.089	2.29	1.98	0.065	0.117	0.763	0.217	0.75	6.81	0.94	8.5	21440	3.5802	34.53516	-30.95496	NAC
NS0160	156	158	NS	X141826	141826	1	G	D	26.52	44.13	4.14	0.2451	0.19	0.198	3.06	2.1	0.078	0.173	1.08	0.285	0.97	4.13	1.18	6.28	21424	5.2938	36.6282	-31.3344	NAC
NS0160	296	298	NS	X141897	141897	1	G	D	28.99	39.46	3.12	0.3096	0.24	0.149	3.05	2.15	0.174	0.199	1.19	0.321	1.08	5.53	1.24	7.85	21494	6.0894	37.5003	-31.4109	NAC
NS0160	178	180	NS	X141837	141837	1	G	D	28.21	44.89	2.42	0.2193	0.17	0.108	2.4	2.08	0.177	0.15	0.982	0.27	0.86	3.8	1	5.66	21435	4.59	36.27936	-31.68936	NAC
NS0160	120	122	NS	X141808	141808	1	G	D	30.08	41.36	1.05	0.2838	0.22	0.046	1.6	1.96	0.076	0.049	0.426	0.107	0.47	8.63	0.66	9.76	21406	1.4994	34.18632	-32.68692	NAC
NS0160	160	162	NS	X141828	141828	1	G	D	34.59	33.61	1.62	0.4257	0.33	0.075	2.24	2.05	0.094	0.058	0.702	0.197	0.75	7.43	0.93	9.11	21426	1.7748	35.7561	-33.9813	NAC
NS0160	122	124	NS	X141809	141809	1	G	D	30.34	41.1	1.18	0.2838	0.22	0.054	1.66	2.13	0.078	0.057	0.474	0.14	0.56	7.9	0.8	9.26	21407	1.7442	37.15146	-35.40726	NAC
NS0160	284	286	NS	X141891	141891	1	G	D	33.72	34.89	1.84	0.3741	0.29	0.088	2.66	2.3	0.189	0.131	0.823	0.234	0.75	5.76	1.16	7.67	21488	4.0086	40.1166	-36.108	NAC
NS0160	162	164	NS	X141829	141829	1	G	D	32.32	41.77	1.14	0.2838	0.22	0.051	1.5	2.21	0.086	0.062	0.494	0.144	0.43	4.44	1	5.87	21427	1.8972	38.54682	-36.64962	NAC
NS0160	168	170	NS	X141832	141832	1	G	D	33.6	36.33	0.92	0.4515	0.35	0.04	1.57	2.42	0.074	0.068	0.402	0.113	0.49	8.2	0.83	9.52	21430	2.0808	42.20964	-40.12884	NAC
NS0160	140	142	NS	X141818	141818	1	G	D	20.3	49.62	3.82	0.3096	0.24	0.173	3.07	3.33	0.243	0.582	0.965	0.283	0.96	4.66	2	7.62	21416	17.8092	58.08186	-40.27266	NAC
NS0160	124	126	NS	X141810	141810	1	G	D	27.99	41.9	0.83	0.3354	0.26	0.038	1.58	2.43	0.083	0.053	0.343	0.101	0.48	10.45	1.04	11.97	21408	1.6218	42.38406	-40.76226	NAC
NS0160	282	284	NS	X141890	141890	1	G	D	29.79	42.73	1.41	0.4257	0.33	0.08	2.29	2.46	0.083	0.055	0.595	0.168	0.54	4.86	1.77	7.17	21487	1.683	42.90732	-41.22432	NAC
NS0160	280	282	NS	X141889	141889	1	G	D	32.22	37.67	1.65	0.4515	0.35	0.1	2.54	2.75	0.115	0.066	0.639	0.181	0.59	4.81	1.87	7.27	21486	2.0196	47.9655	-45.9459	NAC
NS0160	286	288	NS	X141892	141892	1	G	D	29.85	36.01	2.08	0.4644	0.36	0.096	3.18	3.09	0.28	0.216	0.925	0.257	0.92	7.39	1.79	10.1	21489	6.6096	53.89578	-47.28618	NAC
NS0160	190	192	NS	X141843	141843	1	G	D	31.37	37.86	2.36	0.4128	0.32	0.112	2.45	3.03	0.073	0.15	0.832	0.232	0.75	4.74	1.88	7.37	21441	4.59	52.84926	-48.25926	NAC
NS0160	126	128	NS	X141811	141811	1	G	D	27.62	42.53	0.9	0.3225	0.25	0.04	1.54	2.89	0.08	0.061	0.372	0.101	0.49	9.7	1.25	11.44	21409	1.8666	50.40738	-48.54078	NAC
NS0160	138	140	NS	X141817	141817	1	G	D	23.67	45.39	3.57	0.2838	0.22	0.168	2.86	3.51	0.177	0.377	0.975	0.276	0.96	4.83	2.08	7.87	21415	11.5362	61.22142	-49.68522	NAC
NS0160	288	290	NS	X141893	141893	1	G	D	30.69	42.02	0.92	0.2838	0.22	0.042	1.85	3.81	0.096	0.032	0.404	0.109	0.31	2.71	3.23	6.25	21490	0.9792	66.45402	-65.47482	NAC
NS0161	68	70	NS	X141934	141934	1	G	W	24	48.79	4.1	0.1935	0.15	0.195	4.37	0.83	0.086	1.55	1.14	0.255	0.91	2.05	1.82	4.78	21530	47.43	14.47686	32.95314	PAF(HC)
NS0161	278	280	NS	X142041	142041	1	G	W	26.55	39.73	8.61	0.0645	0.05	0.416	6.03	0.05	0.01	0.308	1.57	0.458	1.48	2.38	0.8	4.66	21635	9.4248	0.8721	8.5527	PAF(LC)
NS0161	268	270	NS	X142036	142036	1	G	W	28.5	41.37	4.49	0.2709	0.21	0.214	3.93	0.49	0.101	0.405	1.49	0.392	1.34	3.86	0.95	6.15	21630	12.393	8.54658	3.84642	PAF(LC)
NS0161	0	2	NS	X141899	141899	1	G	D	39.09	17.73		0.0516	0.04	0.79	0.29		0.026	0.055	0.13	0.033	5.7	4.09	0.44	10.23	21496	1.683	0	1.683	PAF(LC)
NS0161	274	276	NS	X142039	142039	1	G	W	30.35	38.87	4.56	0.258	0.2	0.211	4.07	0.44	0.086	0.273	1.32	0.361	1.26	4.23	0.69	6.18	21633	8.3538	7.67448	0.67932	PAF(LC)
NS0161	2	4	NS	X141901	141901	1	G	D	40.03	24.34	8.26	-0.0129	-0.01	0.537	0.07	0.03	0.024	0.033	0.042	0.014	7	2.16	0.31	9.47	21497	1.0098	0.52326	0.48654	PAF(LC)
NS0161	4	6	NS	X141902	141902	1	G	D	35.15	36.13	5.39	-0.0129	-0.01	0.367	0.06	0.02	0.021	0.019	0.029	0.011	5.96	1.33	0.23	7.52	21498	0.5814	0.34884	0.23256	PAF(LC)
NS0161	228	230	NS	X142016	142016	1	G	W																	21610	0	0	0	PAF(LC)
NS0161	38	42	NS	BX139919-BX139920	X139919	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2988	-0.0306	-0.01744	-0.013158	NAF
NS0161	42	46	NS	BX139921-BX139922	X139921	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2989	-0.0306	-0.01744	-0.013158	NAF
NS0161	104	108	NS	BX139953-BX139954	X139953	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3005	-0.0306	-0.01744	-0.013158	NAF
NS0161	144	148	NS	BX139973-BX139974	X139973	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3015	-0.0306	-0.01744	-0.013158	NAF
NS0161	180	184	NS	BX139991-BX139992	X139991	2			67.14	4.861	0.537	0.049	0.03528	0.049	0.545	0.071	0.014	0.033	0.102	0.108	-0.01	-0.01	-0.01	-0.03	3024	1.0098	1.238382	-0.228582	NAF
NS0161	140	144	NS	BX139971-BX139972	X139971	2			68.02	4.575	0.424	0.096	0.06912	0.096	0.37	0.067	0.012	0.02	0.093	0.109	-0.01	-0.01	-0.01	-0.03	3014	0.612	1.168614	-0.556614	NAF
NS0161	278	282	NS	BX143041-BX143042	X143041	2			70.46	2.51	0.148	0.026	0.01872	0.026	0.216	0.05	0.01	0.01	0.036	0.151	-0.01	-0.01	-0.01	-0.03	3174	0.306	0.8721	-0.5661	NAF
NS0161	70	74	NS	BX139935-BX139936	X139935	2			64.92	8.976	0.24	0.031	0.02232	0.031	0.391	0.061	0.01	0.015	0.083	0.084	-0.01	-0.01	-0.01	-0.03	2996	0.459	1.063962	-0.604962	NAF
NS0161	270	274	NS	BX143037-BX143038	X143037	2			71.13	1.772	0.12	0.027	0.01944	0.027	0.21	0.051	0.01	0.009	0.039	0.091	-0.01	-0.01	-0.01	-0.03	3172	0.2754	0.889542	-0.614142	NAF
NS0161	282	286	NS	BX143043-BX143044	X143043	2			70.85	2.832	0.094	0.022	0.01584	0.022	0.197	0.048	0.008	0.007	0.034	0.096	-0.01	-0.01	-0.01	-0.03	3175	0.2142	0.837216	-0.623016	NAF
NS0161	230	234	NS	BX143017-BX143018	X143017	2			67.63	5.317	0.415	0.044	0.03168	0.044	0.52	0.071	0.013	0.02	0.135	0.106	-0.01	-0.01	-0.01	-0.03	3162	0.612	1.238382	-0.626382	NAF
NS0161	148	152	NS	BX139975-BX139976	X139975	2			56.6	13.693	1.407	0.148	0.10656	0.148	1.049	0.11	0.008	0.042	0.311	0.167	-0.01	-0.01	-0.01	-0.03	3016	1.2852	1.91862	-0.63342	NAF
NS0161	222	226	NS	BX143013-BX143014	X143013	2			68.91	3.956	0.2	0.027	0.01944	0.027	0.354	0.056	0.01	0.01	0.066	0.091	-0.01	-0.01	-0.01	-0.03	3160	0.306	0.976752	-0.670752	NAF
NS0161	218	222	NS	BX143011-BX143012	X143011	2			69.99	3.346	0.195	0.029	0.02088	0.029	0.271	0.062	0.013	0.008	0.047	0.086	-0.01	-0.01	-0.01	-0.03	3159	0.2448	1.081404	-0.836604	NAF
NS0161	234	238	NS	BX143019-BX143020	X143019	2			67.06	5.831	0.295	0.032	0.02304	0.032	0.45	0.083	0.018	0.018	0.088	0.096	-0.01	-0.01	-0.01	-0.03	3163	0.5508	1.447686	-0.896886	NAF
NS0161	266	270	NS	BX143035-BX143036	X143035	2			66.11	7.579	0.364	0.033	0.02376	0.033	0.466	0.069	0.013	0.01	0.124	0.088	-0.01	-0.01	-0.01	-0.03	3171	0.306	1.203498	-0.897498	NAF
NS0161	274	278	NS	BX143039-BX143040	X143039	2			70.56	2.829	0.1	0.021	0.01512	0.021	0.212	0.072	0.017	0.01	0.039	0.074	-0.01	-0.01	-0.01	-0.03	3173	0.306	1.255824	-0.949824	NAF
NS0161	254	256	NS	BX143029	X143029	2			67.54	5.634	0.195	0.023	0.01656	0.023	0.402	0.069	0.01	0.008	0.076	0.088	-0.01	-0.01	-0.01	-0.03	3168	0.2448	1.203498	-0.958698	NAF
NS0161	198	202	NS	BX143001-BX143002	X143001	2			70.21	3.119	0.234	0.035	0.0252	0.035	0.28	0.076	0.016	0.011	0.055	0.097	-0.01	-0.01	-0.01	-0.03	3154	0.3366	1.325592	-0.988992	NAF
NS0161	290	294	NS	BX143047-BX143048	X143047	2			67.28	5.683	0.286	0.038	0.02736	0.038	0.433	0.082	0.017	0.014	0.099	0.099	-0.01	-0.01	-0.01	-0.03	3177	0.4284	1.430244	-1.001844	NAF
NS0161	50	54	NS	BX139925-BX139926	X139925	2			60.83	12.829	0.656	0.055	0.0396	0.055	0.707	0.1	0.013	0.024	0.213	0.116	0.19	-0.01	-0.01	0.17	2991	0.7344	1.7442	-1.0098	NAF
NS0161	258	262	NS	BX143031-BX143032	X143031	2			68.4	4.842	0.261	0.031	0.02232	0.031	0.363	0.088	0.021	0.017	0.1	0.115	-0.01	-0.01	-0.01	-0.03	3169	0.5202	1.534896	-1.014696	NAF
NS0161	196	198	NS	BX139999	X139999	2			71.07	2.297	0.133	0.025	0.018	0.025	0.188	0.071	0.015	0.007	0.026	0.11	-0.01	-0.01	-0.01	-0.03	3028	0.2142	1.238382	-1.024182	NAF
NS0161	238	242	NS	BX143021-BX143022	X143021	2			68.36	4.493	0.21	0.022	0.01584	0.022	0.352	0.08	0.017	0.012	0.074	0.138	-0.01	-0.01	-0.01	-0.03	3164	0.3672	1.39536	-1.02816	NAF
NS0161	74	78	NS	BX139937-BX139938	X139937	2			62.37	11.695	0.563	0.05	0.036	0.05	0.722	0.112	0.01	0.029	0.187	0.109	0.08	-0.01	-0.01	0.06	2997	0.8874	1.953504	-1.066104	NAF
NS0161	210	214	NS	BX143007-BX143008	X143007	2			69.61	3.46	0.171	0.021	0.01512	0.021	0.271	0.08	0.014	0.01	0.058	0.103	-0.01	-0.01	-0.01	-0.03	3157	0.306	1.39536	-1.08936	NAF
NS0161	206	210	NS	BX143005-BX143006	X143005	2			70.03	2.967	0.084	0.014	0.01008	0.014	0.21	0.07	0.013	0.004	0.032	0.079	-0.01	-0.01	-0.01	-0.03	3156	0.1224	1.22094	-1.09854	NAF
NS0161	262	266	NS	BX143033-BX143034	X143033	2			66.45	6.599	0.244	0.025	0.018	0.025	0.43	0.075	0.013	0.006	0.096	0.087	-0.01	-0.01	-0.01	-0.03	3170	0.1836	1.30815	-1.12455	NAF
NS0161	246	250	NS	BX143025-BX143026	X143025	2			66.4	7.119	0.217	0.02	0.0144	0.02	0.386	0.074	0.012	0.005	0.081	0.072	-0.01	-0.01	-0.01	-0.03	3166	0.153	1.290708	-1.137708	NAF
NS0161	100	104	NS	BX139951-BX139952	X139951	2			64.13	8.377	0.372	0.037	0.02664	0.037	0.552	0.13	0.018	0.036	0.125	0.099	0.36	-0.01	-0.01	0.34	3004	1.1016	2.26746	-1.16586	NAF
NS0161	250	254	NS	BX143027-BX143028	X143027	2			67.28	6.309	0.308	0.032	0.02304	0.032	0.451	0.094	0.019	0.015	0.115	0.111	-0.01	-0.01	-0.01	-0.03	3167	0.459	1.639548	-1.180548	NAF
NS0161	226	230	NS	BX143015-BX142016	X143015	2			66.66	6.171	0.303	0.033	0.02376	0.033	0.479	0.087	0.018	0.011	0.098	0.101	-0.01	-0.01	-0.01	-0.03	3161	0.3366	1.517454	-1.180854	NAF
NS0161	242	246	NS	BX143023-BX143024	X143023	2			67.13	5.878	0.247	0.026	0.01872	0.026	0.449	0.093	0.018	0.014	0.103	0.328	-0.01	-0.01	-0.01	-0.03	3165	0.4284	1.622106	-1.193706	NAF
NS0161	214	218	NS	BX143009-BX143010	X143009	2			68.57	5.11	0.223	0.025	0.018	0.025	0.377	0.09	0.019	0.012	0.083	0.089	-0.01	-0.01	-0.01	-0.03	3158	0.3672	1.56978	-1.20258	NAF
NS0161	176	178	NS	BX139989	X139989	2			69.38	3.218	0.472	0.054	0.03888	0.054	0.443	0.109	0.02	0.021	0.078	0.11	-0.01	-0.01	-0.01	-0.03	3023	0.6426	1.901178	-1.258578	NAF
NS0161	168	172	NS	BX139985-BX139986	X139985	2			67.93	5.83	0.217	0.023	0.01656	0.023	0.319	0.089	0.006	0.008	0.066	0.108	-0.01	-0.01	-0.01	-0.03	3021	0.2448	1.552338	-1.307538	NAF
NS0161	286	290	NS	BX143045-BX143046	X143045	2			67.77	4.64	0.28	0.046	0.03312	0.046	0.313	0.093	0.022	0.01	0.074	0.079	-0.01	-0.01	-0.01	-0.03	3176	0.306	1.622106	-1.316106	NAF
NS0161	202	206	NS	BX143003-BX143004	X143003	2			70.46	2.484	0.167	0.026	0.01872	0.026	0.243	0.087	0.019	0.006	0.044	0.065	-0.01	-0.01	-0.01	-0.03	3155	0.1836	1.517454	-1.333854	NAF
NS0161	188	192	NS	BX139995-BX139996	X139995	2			70.87	2.519	0.072	0.016	0.01152	0.016	0.163	0.09	0.02	0.004	0.022	0.077	-0.01	-0.01	-0.01	-0.03	3026	0.1224	1.56978	-1.44738	NAF
NS0161	66	70	NS	BX139933-BX139934	X139933	2			64.24	10.497	0.442	0.046	0.03312	0.046	0.566	0.13	0.014	0.025	0.145	0.1	-0.01	-0.01	-0.01	-0.03	2995	0.765	2.26746	-1.50246	NAF
NS0161	160	164	NS	BX139981-BX139982	X139981	2			66.59	6.522	0.256	0.027	0.01944	0.027	0.347	0.129	0.009	0.023	0.077	0.094	-0.01	-0.01	-0.01	-0.03	3019	0.7038	2.250018	-1.546218	NAF
NS0161	180	182	NS	X141991	141991	1	G	W	28.19	41.96	5.03	0.2709	0.21	0.235	4.94	0.86	0.042	0.439	1.15	0.32	1	2.1	1.06	4.16	21586	13.4334	15.00012	-1.56672	NAF
NS0161	184	188	NS	BX139993-BX139994	X139993	2			71.35	2.263	0.049	0.014	0.01008	0.014	0.159	0.094	0.018	0.002	0.019	0.062	-0.01	-0.01	-0.01	-0.03	3025	0.0612	1.639548	-1.578348	NAF
NS0161	46	50	NS	BX139923-BX139924	X139923	2			52.49	19.077	1.452	0.132	0.09504	0.132	0.844	0.098	0.024	0.004	0.419	0.211	-0.01	-0.01	-0.01	-0.03	2990	0.1224	1.709316	-1.586916	NAF
NS0161	108	112	NS	BX139955-BX139956	X139955	2			57.11	14.76	0.831	0.076	0.05472	0.076	0.972	0.156	0.026	0.033	0.239	0.148	-0.01	-0.01	-0.01	-0.03	3006	1.0098	2.720952	-1.711152	NAF
NS0161	152	156	NS	BX139977-BX139978	X139977	2			62.22	10.282	0.822	0.075	0.054	0.075	0.727	0.144	0.014	0.023	0.24	0.127	-0.01	-0.01	-0.01	-0.03	3017	0.7038	2.511648	-1.807848	NAF
NS0161	164	168	NS	BX139983-BX139984	X139983	2			67.08	6.342	0.201	0.021	0.01512	0.021	0.307	0.116	0.009	0.006	0.065	0.08	-0.01	-0.01	-0.01	-0.03	3020	0.1836	2.023272	-1.839672	NAF
NS0161	112	116	NS	BX139957-BX139958	X139957	2			56.78	16.137	0.664	0.046	0.03312	0.046	0.85	0.144	0.019	0.02	0.236	0.12	0.57	0.93	0.31	1.81	3007	0.612	2.511648	-1.899648	NAF
NS0161	142	144	NS	X141972	141972	1	G	W	24.25	47.27	5.57	0.3354	0.26	0.267	3.72	0.59	0.053	0.274	1.41	0.363	1.26	3.08	0.89	5.23	21567	8.3844	10.29078	-1.90638	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0161	136	140	NS	BX139969-BX139970	X139969	2			66.25	6.904	0.382	0.076	0.05472	0.076	0.453	0.144	0.024	0.018	0.106	0.146	-0.01	-0.01	-0.01	-0.03	3013	0.5508	2.511648	-1.960848	NAF
NS0161	132	136	NS	BX139967-BX139968	X139967	2			62.53	10.096	0.829	0.094	0.06768	0.094	0.649	0.136	0.014	0.013	0.176	0.119	0.4	0.3	-0.01	0.69	3012	0.3978	2.372112	-1.974312	NAF
NS0161	78	82	NS	BX139939-BX139940	X139939	2			64.24	10.786	0.333	0.036	0.02592	0.036	0.459	0.149	0.016	0.018	0.126	0.11	-0.01	-0.01	-0.01	-0.03	2998	0.5508	2.598858	-2.048058	NAF
NS0161	150	152	NS	X141976	141976	1	G	W	27.62	41.52	5.6	0.3612	0.28	0.29	3.84	0.68	0.02	0.316	1.23	0.33	1.35	3.76	0.98	6.09	21571	9.6696	11.86056	-2.19096	NAF
NS0161	82	86	NS	BX139941-BX139942	X139941	2			65.23	9.437	0.284	0.03	0.0216	0.03	0.406	0.151	0.019	0.012	0.112	0.097	0.01	-0.01	-0.01	-0.01	2999	0.3672	2.633742	-2.266542	NAF
NS0161	222	224	NS	X142013	142013	1	G	W	39.83	27.15	1.55	0.5934	0.46	0.076	2.77	0.31	0.047	0.101	0.6	0.18	1.07	8.63	-0.16	9.54	21607	3.0906	5.40702	-2.31642	NAF
NS0161	182	184	NS	X141992	141992	1	G	W	28.89	41.31	5.04	0.258	0.2	0.255	4.76	0.76	0.044	0.357	1.21	0.337	1.27	1.63	0.94	3.84	21587	10.9242	13.25592	-2.33172	NAF
NS0161	116	118	NS	BX139959	X139959	2			56.82	16.657	0.76	0.052	0.03744	0.052	1.036	0.174	0.028	0.02	0.28	0.135	0.57	1.08	0.68	2.33	3008	0.612	3.034908	-2.422908	NAF
NS0161	192	196	NS	BX139997-BX139998	X139997	2			68.65	2.95	0.169	0.022	0.01584	0.022	0.239	0.156	0.015	0.009	0.041	0.107	-0.01	-0.01	-0.01	-0.03	3027	0.2754	2.720952	-2.445552	NAF
NS0161	124	128	NS	BX139963-BX139964	X139963	2			53.74	17.523	1.317	0.095	0.0684	0.095	1.451	0.172	0.016	0.018	0.468	0.173	0.56	1.19	1.22	2.97	3010	0.5508	3.000024	-2.449224	NAF
NS0161	140	142	NS	X141971	141971	1	G	W	26.26	45.78	4.17	0.387	0.3	0.2	3.16	0.44	0.11	0.17	1.45	0.371	1.33	4.06	0.58	5.97	21566	5.202	7.67448	-2.47248	NAF
NS0161	106	108	NS	X141954	141954	1	G	W	24.95	44.11	2.8	0.3354	0.26	0.13	3.46	0.54	0.103	0.225	0.866	0.23	1.14	9.56	0.67	11.37	21549	6.885	9.41868	-2.53368	NAF
NS0161	62	66	NS	BX139931-BX139932	X139931	2			62.51	11.617	0.479	0.042	0.03024	0.042	0.623	0.192	0.013	0.025	0.187	0.119	-0.01	-0.01	-0.01	-0.03	2994	0.765	3.348864	-2.583864	NAF
NS0161	54	58	NS	BX139927-BX139928	X139927	2			60.68	13.61	0.707	0.05	0.036	0.05	0.829	0.173	0.023	0.014	0.263	0.127	0.12	-0.01	-0.01	0.1	2992	0.4284	3.017466	-2.589066	NAF
NS0161	120	124	NS	BX139961-BX139962	X139961	2			49.76	21.242	1.81	0.114	0.08208	0.114	1.974	0.2	0.025	0.027	0.66	0.198	0.93	1.57	1.96	4.46	3009	0.8262	3.4884	-2.6622	NAF
NS0161	58	60	NS	BX139929	X139929	2			60.39	13.438	0.816	0.055	0.0396	0.055	0.972	0.183	0.016	0.017	0.307	0.136	0.05	-0.01	-0.01	0.03	2993	0.5202	3.191886	-2.671686	NAF
NS0161	98	100	NS	BX139949	X139949	2			66.41	6.63	0.232	0.024	0.01728	0.024	0.403	0.177	0.014	0.004	0.092	0.085	-0.01	-0.01	-0.01	-0.03	3003	0.1224	3.087234	-2.964834	NAF
NS0161	148	150	NS	X141975	141975	1	G	W	27.89	40.24	2.96	0.6837	0.53	0.137	3.08	0.35	0.026	0.101	1.2	0.319	1.36	8.74	0.39	10.49	21570	3.0906	6.1047	-3.0141	NAF
NS0161	70	72	NS	X141935	141935	1	G	W	25.45	52.47	1.59	0.3741	0.29	0.072	2.34	0.37	0.034	0.112	0.707	0.141	0.66	4.57	0.26	5.49	21531	3.4272	6.45354	-3.02634	NAF
NS0161	104	106	NS	X141953	141953	1	G	W	24.2	45.76	2.97	0.3225	0.25	0.138	3.61	0.53	0.098	0.192	0.96	0.243	1.12	8.87	0.64	10.63	21548	5.8752	9.24426	-3.36906	NAF
NS0161	172	176	NS	BX139987-BX139988	X139987	2			67.99	4.821	0.139	0.02	0.0144	0.02	0.271	0.207	0.041	0.006	0.05	0.085	-0.01	-0.01	-0.01	-0.03	3022	0.1836	3.610494	-3.426894	NAF
NS0161	94	98	NS	BX139947-BX139948	X139947	2			65	8.385	0.309	0.03	0.0216	0.03	0.464	0.211	0.015	0.007	0.124	0.086	-0.01	-0.01	-0.01	-0.03	3002	0.2142	3.680262	-3.466062	NAF
NS0161	108	110	NS	X141955	141955	1	G	W	26.04	42.37	2.84	0.3354	0.26	0.133	3.4	0.53	0.11	0.188	0.934	0.246	1.22	9.63	0.59	11.44	21550	5.7528	9.24426	-3.49146	NAF
NS0161	128	132	NS	BX139965-BX139966	X139965	2			56.48	13.819	1.336	0.117	0.08424	0.117	1.484	0.279	0.051	0.044	0.436	0.173	-0.01	-0.01	-0.01	-0.03	3011	1.3464	4.866318	-3.519918	NAF
NS0161	292	294	NS	X142048	142048	1	G	W	34.6	34.98	2.15	0.3999	0.31	0.106	2.84	0.39	0.076	0.1	0.865	0.23	0.99	7.06	0.02	8.07	21642	3.06	6.80238	-3.74238	NAF
NS0161	90	94	NS	BX139945-BX139946	X139945	2			65.24	8.979	0.332	0.028	0.02016	0.028	0.493	0.237	0.011	0.01	0.132	0.104	-0.01	-0.01	-0.01	-0.03	3001	0.306	4.133754	-3.827754	NAF
NS0161	256	258	NS	X142030	142030	1	G	W	34.59	38.83	2.23	0.2193	0.17	0.103	2.57	0.45	0.066	0.131	1	0.276	0.89	3.24	0.16	4.29	21624	4.0086	7.8489	-3.8403	NAF
NS0161	276	278	NS	X142040	142040	1	G	W	30.91	42.27	2.38	0.2451	0.19	0.114	2.71	0.45	0.1	0.13	1.01	0.27	0.98	4.41	0.23	5.62	21634	3.978	7.8489	-3.8709	NAF
NS0161	156	160	NS	BX139979-BX139980	X139979	2			60	12.556	0.925	0.073	0.05256	0.073	0.908	0.29	0.027	0.032	0.311	0.139	0.3	-0.01	-0.01	0.28	3018	0.9792	5.05818	-4.07898	NAF
NS0161	44	46	NS	X141922	141922	1	G	D	28.62	43.89	3.8	0.516	0.4	0.182	1.82	0.27	0.042	0.008	0.883	0.151	4.75	2.07	0.24	7.06	21518	0.2448	4.70934	-4.46454	NAF
NS0161	40	42	NS	X141920	141920	1	G	D	17.17	57.53	8.08	0.1161	0.09	0.434	2.04	0.28	0.031	0.006	0.873	0.084	2.65	2.68	0.26	5.59	21516	0.1836	4.88376	-4.70016	NAF
NS0161	218	220	NS	X142011	142011	1	G	W	38.8	29.91	1.85	0.4644	0.36	0.095	2.47	0.31	0.057	0.022	0.525	0.14	1.74	7.22	-0.15	8.81	21605	0.6732	5.40702	-4.73382	NAF
NS0161	280	282	NS	X142042	142042	1	G	W	32.55	38.13	2.43	0.3354	0.26	0.12	3.02	0.64	0.145	0.205	1.05	0.277	1.01	5.29	0.48	6.78	21636	6.273	11.16288	-4.88988	NAF
NS0161	72	74	NS	X141936	141936	1	G	W	27.11	49.68	1.31	0.4386	0.34	0.056	2.1	0.42	0.078	0.076	0.576	0.106	0.57	5.73	0.06	6.36	21532	2.3256	7.32564	-5.00004	NAF
NS0161	42	44	NS	X141921	141921	1	G	D	20.69	56.58	4.4	0.4257	0.33	0.215	1.53	0.3	0.029	0.005	0.666	0.111	3.7	2.04	0.21	5.95	21517	0.153	5.2326	-5.0796	NAF
NS0161	102	104	NS	X141952	141952	1	G	W	26.1	41.36	3.53	0.3612	0.28	0.162	4.11	0.71	0.101	0.234	1.09	0.267	1.26	8.36	0.85	10.47	21547	7.1604	12.38382	-5.22342	NAF
NS0161	48	50	NS	X141924	141924	1	G	D	27.56	47.99	3.15	0.5031	0.39	0.145	1.61	0.32	0.054	0.004	0.769	0.132	4.13	1.87	0.17	6.17	21520	0.1224	5.58144	-5.45904	NAF
NS0161	20	22	NS	X141910	141910	1	G	D	19.95	56.15	6.73	0.0258	0.02	0.315	0.83	0.33	0.038	0.007	0.094	0.049	3.72	2.57	0.29	6.58	21506	0.2142	5.75586	-5.54166	NAF
NS0161	6	8	NS	X141903	141903	1	G	D	28.39	43.96	6.02	0.0516	0.04	0.286	0.63	0.34	0.034	0.01	0.031	0.049	5	2.3	0.28	7.58	21499	0.306	5.93028	-5.62428	NAF
NS0161	12	14	NS	X141906	141906	1	G	D	25.79	50.33	4.09	0.0258	0.02	0.219	0.61	0.34	0.031	0.009	0.039	0.055	4.76	1.91	0.28	6.95	21502	0.2754	5.93028	-5.65488	NAF
NS0161	22	24	NS	X141911	141911	1	G	D	31.8	41.87	3.05	0.0516	0.04	0.148	0.7	0.35	0.066	0.007	0.041	0.042	5.92	1.69	0.23	7.84	21507	0.2142	6.1047	-5.8905	NAF
NS0161	46	48	NS	X141923	141923	1	G	D	24.34	46.94	5.82	0.1806	0.14	0.282	2.81	0.35	0.063	0.006	1.39	0.219	4.1	2.68	0.3	7.08	21519	0.1836	6.1047	-5.9211	NAF
NS0161	16	18	NS	X141908	141908	1	G	D	30.64	42.96	3.65	0.0774	0.06	0.182	0.69	0.38	0.028	0.011	0.043	0.053	5.69	1.86	0.27	7.82	21504	0.3366	6.62796	-6.29136	NAF
NS0161	18	20	NS	X141909	141909	1	G	D	27.52	45.92	5.25	0.0645	0.05	0.239	0.83	0.38	0.058	0.009	0.046	0.044	5.03	2.32	0.29	7.64	21505	0.2754	6.62796	-6.35256	NAF
NS0161	10	12	NS	X141905	141905	1	G	D	26.34	50.78	3.02	0.0645	0.05	0.133	0.57	0.38	0.057	0.007	0.025	0.058	5	1.57	0.26	6.83	21501	0.2142	6.62796	-6.41376	NAF
NS0161	118	120	NS	X141960	141960	1	G	W	30.11	38.67	3.74	0.1677	0.13	0.177	4.19	0.54	0.075	0.097	1.52	0.421	1.48	4.95	0.49	6.92	21555	2.9682	9.41868	-6.45048	NAF
NS0161	50	52	NS	X141925	141925	1	G	D	25.82	52.3	2.52	0.2322	0.18	0.116	2.22	0.51	0.021	0.078	0.935	0.151	1.34	2.36	0.29	3.99	21521	2.3868	8.89542	-6.50862	NAF
NS0161	110	112	NS	X141956	141956	1	G	W	30.13	36.54	2.07	0.2838	0.22	0.095	3.19	0.54	0.084	0.086	0.788	0.208	1.14	11.4	0.14	12.68	21551	2.6316	9.41868	-6.78708	NAF
NS0161	238	240	NS	X142021	142021	1	G	W	33.64	37.15	2.39	0.3354	0.26	0.107	3.21	0.64	0.108	0.14	1.04	0.281	1.05	4.69	0.32	6.06	21615	4.284	11.16288	-6.87888	NAF
NS0161	234	236	NS	X142019	142019	1	G	W	33.03	37.96	2.42	0.3612	0.28	0.132	2.15	0.47	0.075	0.043	0.545	0.148	2.48	5.56	0	8.04	21613	1.3158	8.19774	-6.88194	NAF
NS0161	38	40	NS	X141919	141919	1	G	D	19.35	54.31	7.36	0.1548	0.12	0.436	1.91	0.41	0.034	0.004	0.891	0.136	3.41	2.67	0.28	6.36	21515	0.1224	7.15122	-7.02882	NAF
NS0161	146	148	NS	X141974	141974	1	G	W	23.24	46.42	5.68	0.4386	0.34	0.268	3.56	1.15	0.063	0.421	1.01	0.281	1.07	4.83	1.32	7.22	21569	12.8826	20.0583	-7.1757	NAF
NS0161	14	16	NS	X141907	141907	1	G	D	28.85	44.69	4.32	0.0516	0.04	0.22	0.76	0.43	0.027	0.01	0.045	0.055	5.4	2.05	0.28	7.73	21503	0.306	7.50006	-7.19406	NAF
NS0161	138	140	NS	X141970	141970	1	G	W	25.74	45.38	4.93	0.258	0.2	0.235	3.72	0.79	0.118	0.214	1.48	0.397	1.34	3.17	0.8	5.31	21565	6.5484	13.77918	-7.23078	NAF
NS0161	86	90	NS	BX139943-BX139944	X139943	2			63.22	9.957	0.352	0.042	0.03024	0.042	0.482	0.444	0.09	0.011	0.137	0.121	0.06	-0.01	-0.01	0.04	3000	0.3366	7.744248	-7.407648	NAF
NS0161	286	288	NS	X142045	142045	1	G	W	33.28	38.91	1.43	0.387	0.3	0.064	2.29	0.5	0.094	0.038	0.63	0.17	0.69	7.27	-0.12	7.84	21639	1.1628	8.721	-7.5582	NAF
NS0161	30	32	NS	X141915	141915	1	G	D	28.42	46.17	3.26	0.3354	0.26	0.163	0.95	0.45	0.078	0.006	0.097	0.044	5.25	1.81	0.25	7.31	21511	0.1836	7.8489	-7.6653	NAF
NS0161	290	292	NS	X142047	142047	1	G	W	31.74	38.84	2.08	0.3612	0.28	0.093	2.87	0.6	0.056	0.091	0.87	0.227	0.87	6.86	0.13	7.86	21641	2.7846	10.4652	-7.6806	NAF
NS0161	178	180	NS	X141990	141990	1	G	W	30.74	40.63	3.48	0.3354	0.26	0.159	3.85	1.07	0.097	0.358	0.968	0.274	0.84	2.59	0.9	4.33	21585	10.9548	18.66294	-7.70814	NAF
NS0161	8	10	NS	X141904	141904	1	G	D	26.23	48.98	4.19	0.1161	0.09	0.187	0.77	0.47	0.03	0.008	0.038	0.057	4.99	1.99	0.29	7.27	21500	0.2448	8.19774	-7.95294	NAF
NS0161	226	228	NS	X142015	142015	1	G	W	30.45	42.31	1.71	0.4128	0.32	0.08	2.7	0.56	0.065	0.055	0.74	0.201	0.84	6.41	0.06	7.31	21609	1.683	9.76752	-8.08452	NAF
NS0161	32	34	NS	X141916	141916	1	G	D	28.86	45.33	3.32	0.2709	0.21	0.156	1.01	0.49	0.048	0.007	0.157	0.069	5.19	1.91	0.24	7.34	21512	0.2142	8.54658	-8.33238	NAF
NS0161	36	38	NS	X141918	141918	1	G	D	29.91	40.82	4.41	0.3741	0.29	0.209	1.51	0.51	0.053	0.007	0.695	0.203	5.4	2.48	0.27	8.15	21514	0.2142	8.89542	-8.68122	NAF
NS0161	24	26	NS	X141912	141912	1	G	D	29.14	44.13	4.02	0.1548	0.12	0.197	0.99	0.52	0.046	0.008	0.074	0.046	5.4	2.1	0.26	7.76	21508	0.2448	9.06984	-8.82504	NAF
NS0161	220	222	NS	X142012	142012	1	G	W	31.25	42.22	2.09	0.3354	0.26	0.104	2.41	0.7	0.112	0.106	0.71	0.197	1.3	4.49	0.19	5.98	21606	3.2436	12.2094	-8.9658	NAF
NS0161	34	36	NS	X141917	141917	1	G	D	30.78	41.22	3.85	0.3096	0.24	0.192	1.26	0.53	0.057	0.007	0.362	0.124	5.11	2.16	0.23	7.5	21513	0.2142	9.24426	-9.03006	NAF
NS0161	224	226	NS	X142014	142014	1	G	W	33.96	39.21	2.5	0.258	0.2	0.113	2.95	0.72	0.078	0.102	1.05	0.29	0.92	2.91	0.32	4.15	21608	3.1212	12.55824	-9.43704	NAF
NS0161	262	264	NS	X142033	142033	1	G	W	33.87	35.16	1.62	0.5934	0.46	0.07	2.78	0.63	0.103	0.048	0.723	0.197	0.83	8.73	-0.11	9.45	21627	1.4688	10.98846	-9.51966	NAF
NS0161	236	238	NS	X142020	142020	1	G	W	35.37	35.98	1.73	0.4128	0.32	0.079	2.67	0.72	0.095	0.098	0.742	0.2	0.84	5.62	0.07	6.53	21614	2.9988	12.55824	-9.55944	NAF
NS0161	28	30	NS	X141914	141914	1	G	D	27.39	45.12	4.79	0.4644	0.36	0.225	1.32	0.56	0.056	0.006	0.144	0.054	5.15	2.34	0.32	7.81	21510	0.1836	9.76752	-9.58392	NAF
NS0161	288	290	NS	X142046	142046	1	G	W	33.11	39.4	1.81	0.3354	0.26	0.105	2.11	0.63	0.095	0.044	0.617	0.158	1.19	5.77	-0.02	6.94	21640	1.3464	10.98846	-9.64206	NAF
NS0161	26	28	NS	X141913	141913	1	G	D	29	42.16	5.38	0.3483	0.27	0.247	1.33	0.58	0.042	0.006	0.117	0.056	5.4	2.55	0.33	8.28	21509	0.1836	10.11636	-9.93276	NAF
NS0161	282	284	NS	X142043	142043	1	G	W	32.2	45.14	1.17	0.2193	0.17	0.053	1.65	0.63	0.108	0.032	0.512	0.144	0.5	3.63	-0.14	3.99	21637	0.9792	10.98846	-10.00926	NAF
NS0161	246	248	NS	X142025	142025	1	G	W	36.7	35.89	1.22	0.4515	0.35	0.051	2.18	0.63	0.069	0.029	0.552	0.147	0.57	5.46	-0.17	5.86	21619	0.8874	10.98846	-10.10106	NAF
NS0161	270	272	NS	X142037	142037	1	G	W	31.01	43.37	1.06	0.4257	0.33	0.049	2.05	0.68	0.14	0.053	0.478	0.134	0.52	6.44	-0.18	6.78	21631	1.6218	11.86056	-10.23876	NAF
NS0161	266	268	NS	X142035	142035	1	G	W	35.74	36.93	1.36	0.4644	0.36	0.06	2.19	0.63	0.068	0.02	0.613	0.165	0.6	6	-0.14	6.46	21629	0.612	10.98846	-10.37646	NAF
NS0161	144	146	NS	X141973	141973	1	G	W	18.08	54.91	7.63	0.1935	0.15	0.359	3.54	1.06	0.023	0.263	0.403	0.12	0.66	3.39	0.96	5.01	21568	8.0478	18.48852	-10.44072	NAF
NS0161	272	274	NS	X142038	142038	1	G	W	36.67	33.41	1.72	0.3741	0.29	0.084	2.6	0.86	0.234	0.147	0.767	0.217	0.77	6.03	0.11	6.91	21632	4.4982	15.00012	-10.50192	NAF
NS0161	240	242	NS	X142022	142022	1	G	W	30.24	43.32	1.97	0.3612	0.28	0.093	2.59	0.84	0.061	0.125	0.733	0.21	1.14	4.8	0.42	6.36	21616	3.825	14.65128	-10.82628	NAF
NS0161	252	254	NS	X142028	142028	1	G	W	29.93	41.06	2.04	0.4515	0.35	0.096	2.88	0.85	0.146	0.114	0.87	0.231	0.99	6.44	0.27	7.7	21622	3.4884	14.8257	-11.3373	NAF
NS0161	284	286	NS	X142044	142044	1	G	W	29.89	40.82	2.11	0.3741	0.29	0.1	2.87	0.86	0.178	0.092	0.939	0.25	1	7.23	0.18	8.41	21638	2.8152	15.00012	-12.18492	NAF
NS0161	52	54	NS	X141926	141926	1	G	D	32.36	39.54	2.31	0.4257	0.33	0.105	2.71	0.82	0.08	0.067	1.03	0.141	0.89	5.25	0.2	6.34	21522	2.0502	14.30244	-12.25224	NAF
NS0161	132	134	NS	X141967	141967	1	G	W	31.97	34.58	2.91	0.3225	0.25	0.178	3.4	0.82	0.046	0.059	0.992	0.274	1.46	8.57	0.5	10.53	21562	1.8054	14.30244	-12.49704	NAF
NS0161	214	216	NS	X142009	142009	1	G	W	34.82	38.29	1.69	0.4386	0.34	0.075	2.65	0.88	0.099	0.068	0.684	0.191	0.62	4.3	0.18	5.1	21603	2.0808	15.34896	-13.26816	NAF
NS0161	122	124	NS	X141962	141962	1	G	W	30.24	36.14	2.74	0.3225	0.25	0.125	3.95	0.9	0.126	0.079	1.15	0.329	1.27	8.63	0.43	10.33	21557	2.4174	15.6978	-13.2804	NAF
NS0161	198	200	NS	X142001	142001	1	G	W	29.45	44.59	3.14	0.2967	0.23	0.15	3.4	1.29	0.19	0.294	1.01	0.287	0.89	1.18	0.78	2.85	21595	8.9964	22.50018	-13.50378	NAF
NS0161	250	252	NS	X142027	142027	1	G	W	33.69	36.6	1.78	0.4386	0.34	0.082	2.88	0.93	0.109	0.084	0.797	0.205	0.78	6.56	0.25	7.59	21621	2.5704	16.22106	-13.65066	NAF
NS0161	76	78	NS	X141938	141938	1	G	W	22.12	53.27	2.4	0.3225	0.25	0.114	3.23	1.62	0.067	0.477	0.852	0.21	0.76	3.03	1.35	5.14	21534	14.5962	28.25604	-13.65984	NAF
NS0161	232	234	NS	X142018	142018	1	G	W	31.05	38.1	3.4	0.2838	0.22	0.166	3.6	1.13	0.254	0.197	1.32	0.362	1.48	4.31	0.64	6.43	21612	6.0282	19.70946	-13.68126	NAF
NS0161	120	122	NS	X141961	141961	1	G	W	30.07	36.63	3.24	0.2838	0.22	0.152	4.14	0.97	0.137	0.093	1.32	0.37	1.43	7.49	0.56	9.48	21556	2.8458	16.91874	-14.07294	NAF
NS0161	124	126	NS	X141963	141963	1	G	W	30.7	34.35	3.28	0.3225	0.25	0.152	4.31	1.02	0.2	0.101	1.33	0.375	1.4	7.95	0.53	9.88	21558	3.0906	17.79084	-14.70024	NAF
NS0161	258	260	NS	X142031	142031	1	G	W	33.43	39.02	1.79	0.3483	0.27	0.082	2.37	0.96	0.241	0.062	0.75	0.209	0.97	5.06	-0.03	6	21625	1.8972	16.74432	-14.84712	NAF
NS0161	152	154	NS	X141977	141977	1	G	W	25.84	43.19	4.57	0.5031	0.39	0.212	3.79	1.24	0.041	0.219	1.24	0.329	1.2	5.09	1.1	7.39	21572	6.7014	21.62808	-14.92668	NAF
NS0161	194	196	NS	X141998	141998	1	G	W	31.99	40.34	3.05	0.3741	0.29	0.147	3.41	1.15	0.119	0.166	0.906	0.26	0.93	2.5	0.7	4.13	21593	5.0796	20.0583	-14.9787	NAF
NS0161	264	266	NS	X142034	142034	1	G	W	33.85	38.52	1.25	0.4644	0.36	0.055	2.2	0.9	0.085	0.023	0.562	0.153	0.62	6.43	0.11	7.16	21628	0.7038	15.6978	-14.994	NAF
NS0161	196	198	NS	X141999	141999	1	G	W	37.55	36.7	1.85	0.3096	0.24	0.092	2.24	0.97	0.091	0.049	0.633	0.173	0.89	1.9	0.28	3.07	21594	1.4994	16.91874	-15.41934	NAF
NS0161	112	114	NS	X141957	141957	1	G	W	29.12	41.95	1.49	0.258	0.2	0.067	2.48	1.02	0.069	0.066	0.631	0.171	0.79	8.91	0.41	10.11	21552	2.0196	17.79084	-15.77124	NAF
NS0161	60	62	NS	X141930	141930	1	G	W	27.07	47.36	3.52	0.2064	0.16	0.168	4.01	1.03	0.066	0.071	1.34	0.327	1.07	1.51	0.73	3.31	21526	2.1726	17.96526	-15.79266	NAF
NS0161	74	76	NS	X141937	141937	1	G	W	26.33	49.97	1.6	0.3483	0.27	0.071	2.44	1.11	0.037	0.116	0.727	0.141	0.69	4.19	0.71	5.59	21533	3.5496	19.36062	-15.81102	NAF
NS0161	176	178	NS	X141989	141989	1	G	W	29.23	40.29	4.18	0.3999	0.31	0.197	4.6	1.43	0.105	0.298	1.03	0.301	0.99	2.83	1.25	5.07	21584	9.1188	24.94206	-15.82326	NAF
NS0161	126	128	NS	X141964	141964	1	G	W	31.81	33.07	2.52	0.4257	0.33	0.125	3.83	1.01	0.098	0.057	1.02	0.292	1.27	10.17	0.42	11.86	21559	1.7442	17.61642	-15.87222	NAF
NS0161	216	218	NS	X142010	142010	1	G	W	32.73	41.99	2.01	0.2709	0.21	0.092	2.65	1.17	0.103	0.134	0.81	0.224	0.69	2.42	0.56	3.67	21604	4.1004	20.40714	-16.30674	NAF
NS0161	56	58	NS	X141928	141928	1	G	W	30.22	45.02	2.46	0.2451	0.19	0.112	2.95	1.05	0.078	0.056	1.12	0.285	0.88	1.87	0.55	3.3	21524	1.7136	18.3141	-16.6005	NAF
NS0161	210	212	NS	X142007	142007	1	G	W	36.24	37.76	2.18	0.2709	0.21	0.101	2.54	1.06	0.08	0.054	0.88	0.245	0.68	1.97	0.44	3.09	21601	1.6524	18.48852	-16.83612	NAF
NS0161	154	156	NS	X141978	141978	1	G	W	28.56	43.24	3.76	0.3741	0.29	0.178	3.25	1.18	0.069	0.117	1.29	0.34	1.14	3.09	0.81	5.04	21573	3.5802	20.58156	-17.00136	NAF
NS0161	58	60	NS	X141929	141929	1	G	W	28.83	45.26	2.8	0.2451	0.19	0.13	3.42	1.15	0.064	0.07	1.21	0.303	0.97	1.79	0.82	3.58	21525	2.142	20.0583	-17.9163	NAF
NS0161	254	256	NS	X142029	142029	1	G	W	33	37.46	1.3	0.516	0.4	0.061	2.61	1.09	0.068	0.035	0.585	0.166	0.66	7.99	0.4	9.05	21623	1.071	19.01178	-17.94078	NAF
NS0161	134	136	NS	X141968	141968	1	G	W	31.04	38.94	1.49	0.3741	0.29	0.072	2.37	1.1	0.07	0.038	0.585	0.161	0.82	8.95	0.4	10.17	21563	1.1628	19.1862	-18.0234	NAF
NS0161	100	102	NS	X141951	141951	1	G	W	31.78	35.12	1.49	0.6708	0.52	0.065	3.03	1.19	0.086	0.089	0.611	0.157	0.82	10.16	0.43	11.41	21546	2.7234	20.75598	-18.03258	NAF
NS0161	114	116	NS	X141958	141958	1	G	W	22.16	55.55	0.95	0.2322	0.18	0.041	1.84	1.1	0.061	0.03	0.41	0.11	0.53	6.48	0.56	7.57	21553	0.918	19.1862	-18.2682	NAF
NS0161	66	68	NS	X141933	141933	1	G	W	29.56	45.98	1.95	0.2322	0.18	0.088	2.66	1.85	0.061	0.453	0.788	0.182	0.61	1.68	1.3	3.59	21529	13.8618	32.2677	-18.4059	NAF
NS0161	242	244	NS	X142023	142023	1	G	W	33.29	35.43	1.78	0.5031	0.39	0.079	3.13	1.22	0.145	0.09	0.78	0.213	0.83	7.43	0.43	8.69	21617	2.754	21.27924	-18.52524	NAF
NS0161	260	262	NS	X142032	142032	1	G	W	32.61	37.3	3.07	0.2838	0.22	0.148	3.25	1.34	0.415	0.148	1.36	0.378	1.18	3.6	0.34	5.12	21626	4.5288	23.37228	-18.84348	NAF
NS0161	212	214	NS	X142008	142008	1	G	W	36.95	37.55	1.95	0.2709	0.21	0.093	2.34	1.17	0.103	0.049	0.713	0.188	0.59	1.57	0.42	2.58	21602	1.4994	20.40714	-18.90774	NAF
NS0161	62	64	NS	X141931	141931	1	G	W	28.64	45.55	2.6	0.258	0.2	0.118	3.24	1.41	0.05	0.173	1.18	0.262	0.92	1.82	0.98	3.72	21527	5.2938	24.59322	-19.29942	NAF
NS0161	128	130	NS	X141965	141965	1	G	W	30.55	33.1	3.45	0.3483	0.27	0.16	4.35	1.44	0.296	0.177	1.39	0.394	1.51	8.29	0.74	10.54	21560	5.4162	25.11648	-19.70028	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0161	136	138	NS	X141969	141969	1	G	W	27.23	42.36	1.86	0.3741	0.29	0.083	2.71	1.29	0.126	0.074	0.692	0.19	0.9	9.45	0.47	10.82	21564	2.2644	22.50018	-20.23578	NAF
NS0161	248	250	NS	X142026	142026	1	G	W	34.82	36.52	1.25	0.4773	0.37	0.055	2.41	1.26	0.072	0.036	0.565	0.148	0.57	5.87	0.52	6.96	21620	1.1016	21.97692	-20.87532	NAF
NS0161	116	118	NS	X141959	141959	1	G	W	29.2	40.19	2.01	0.2451	0.19	0.091	3.04	1.41	0.176	0.096	0.859	0.238	0.96	7.82	0.55	9.33	21554	2.9376	24.59322	-21.65562	NAF
NS0161	190	192	NS	X141996	141996	1	G	W	39.72	37.51	1.2	0.1677	0.13	0.057	1.57	1.31	0.142	0.037	0.466	0.132	0.17	0.21	0.26	0.64	21591	1.1322	22.84902	-21.71682	NAF
NS0161	244	246	NS	X142024	142024	1	G	W	28.83	44.63	2.33	0.2451	0.19	0.111	2.86	1.53	0.163	0.16	1.03	0.28	0.89	3.14	0.85	4.88	21618	4.896	26.68626	-21.79026	NAF
NS0161	54	56	NS	X141927	141927	1	G	W	30.5	43.01	2.28	0.3741	0.29	0.104	2.78	1.41	0.071	0.071	1	0.223	0.95	3.25	0.79	4.99	21523	2.1726	24.59322	-22.42062	NAF
NS0161	230	232	NS	X142017	142017	1	G	W	31.21	38.56	2.72	0.3354	0.26	0.124	3.38	1.62	0.29	0.173	1.11	0.317	1.15	4.49	0.69	6.33	21611	5.2938	28.25604	-22.96224	NAF
NS0161	204	206	NS	X142004	142004	1	G	W	33.91	41.2	1.62	0.3354	0.26	0.074	2.31	1.48	0.1	0.045	0.642	0.183	0.49	2.06	0.69	3.24	21598	1.377	25.81416	-24.43716	NAF
NS0161	156	158	NS	X141979	141979	1	G	W	29.25	40.5	3.43	0.4515	0.35	0.158	3.43	1.61	0.058	0.109	1.35	0.358	1.44	3.77	1.27	6.48	21574	3.3354	28.08162	-24.74622	NAF
NS0161	188	190	NS	X141995	141995	1	G	W	38.57	37.22	1.53	0.1935	0.15	0.077	1.75	1.52	0.122	0.057	0.503	0.14	0.52	0.46	0.45	1.43	21590	1.7442	26.51184	-24.76764	NAF
NS0161	208	210	NS	X142006	142006	1	G	W	34.4	40.68	1.28	0.3483	0.27	0.058	1.96	1.58	0.087	0.062	0.52	0.138	0.39	2.61	0.81	3.81	21600	1.8972	27.55836	-25.66116	NAF
NS0161	206	208	NS	X142005	142005	1	G	W	37.96	36.87	1.21	0.3354	0.26	0.059	1.86	1.55	0.103	0.037	0.448	0.135	0.34	2.03	0.64	3.01	21599	1.1322	27.0351	-25.9029	NAF
NS0161	200	202	NS	X142002	142002	1	G	W	28.74	46.88	2.25	0.2838	0.22	0.11	2.47	1.89	0.173	0.198	0.702	0.193	0.91	1.24	1.08	3.23	21596	6.0588	32.96538	-26.90658	NAF
NS0161	78	80	NS	X141939	141939	1	G	W	23.85	54.1	1.54	0.2967	0.23	0.068	2.25	2.05	0.107	0.27	0.648	0.161	0.55	2.42	1.37	4.34	21535	8.262	35.7561	-27.4941	NAF
NS0161	130	132	NS	X141966	141966	1	G	W	30.71	30.55	2.85	0.4515	0.35	0.13	4.3	1.83	0.356	0.116	1.18	0.335	1.41	11.15	0.56	13.12	21561	3.5496	31.91886	-28.36926	NAF
NS0161	82	84	NS	X141941	141941	1	G	W	30.39	45.74	1.44	0.2838	0.22	0.066	2.06	1.89	0.07	0.074	0.648	0.177	0.51	1.73	1.26	3.5	21537	2.2644	32.96538	-30.70098	NAC
NS0161	170	172	NS	X141986	141986	1	G	W	32.11	44.07	1.76	0.1935	0.15	0.077	2.37	1.9	0.021	0.046	0.605	0.168	0.45	0.66	1.46	2.57	21581	1.4076	33.1398	-31.7322	NAC
NS0161	202	204	NS	X142003	142003	1	G	W	30.97	44.59	1.59	0.3225	0.25	0.077	2.12	1.96	0.096	0.068	0.558	0.152	0.69	1.71	1.29	3.69	21597	2.0808	34.18632	-32.10552	NAC
NS0161	168	170	NS	X141985	141985	1	G	W	31.23	45.53	1.72	0.1806	0.14	0.079	2.28	1.99	0.04	0.046	0.572	0.155	0.44	0.71	1.46	2.61	21580	1.4076	34.70958	-33.30198	NAC
NS0161	186	188	NS	X141994	141994	1	G	W	37.03	38.82	1.1	0.2451	0.19	0.052	1.73	2.01	0.13	0.031	0.451	0.124	0.2	0.61	1.14	1.95	21589	0.9486	35.05842	-34.10982	NAC
NS0161	172	174	NS	X141987	141987	1	G	W	33.01	42.23	1.77	0.2322	0.18	0.081	2.48	2.28	0.135	0.045	0.625	0.176	0.46	0.7	1.45	2.61	21582	1.377	39.76776	-38.39076	NAC
NS0161	164	166	NS	X141983	141983	1	G	W	30.69	45.01	1.83	0.1935	0.15	0.079	2.43	2.32	0.052	0.049	0.625	0.174	0.48	0.94	1.69	3.11	21578	1.4994	40.46544	-38.96604	NAC
NS0161	80	82	NS	X141940	141940	1	G	W	27.54	48.52	1.26	0.3354	0.26	0.055	2.1	2.36	0.054	0.039	0.562	0.139	0.48	2.25	1.94	4.67	21536	1.1934	41.16312	-39.96972	NAC
NS0161	98	100	NS	X141949	141949	1	G	W	35.39	32.35	1.37	0.7224	0.56	0.062	2.6	2.46	0.085	0.032	0.61	0.167	0.66	6.4	1.84	8.9	21545	0.9792	42.90732	-41.92812	NAC
NS0161	84	86	NS	X141942	141942	1	G	W	28.32	47.96	1.34	0.3225	0.25	0.061	2.09	2.52	0.058	0.045	0.598	0.158	0.5	1.74	2.01	4.25	21538	1.377	43.95384	-42.57684	NAC
NS0161	94	96	NS	X141947	141947	1	G	W	33.69	37.05	1.7	0.516	0.4	0.078	2.67	2.6	0.058	0.048	0.758	0.206	0.69	3.31	1.97	5.97	21543	1.4688	45.3492	-43.8804	NAC
NS0161	86	88	NS	X141943	141943	1	G	W	29.34	45.67	1.53	0.3096	0.24	0.087	2.24	2.61	0.119	0.046	0.689	0.195	0.54	1.56	2.06	4.16	21539	1.4076	45.52362	-44.11602	NAC
NS0161	162	164	NS	X141982	141982	1	G	W	30.85	43.7	1.74	0.2322	0.18	0.077	2.48	2.66	0.045	0.066	0.652	0.194	0.51	0.79	2.33	3.63	21577	2.0196	46.39572	-44.37612	NAC
NS0161	64	66	NS	X141932	141932	1	G	W	28.4	45.97	1.45	0.3096	0.24	0.066	2.41	2.68	0.054	0.059	0.685	0.146	0.57	2.47	2.05	5.09	21528	1.8054	46.74456	-44.93916	NAC
NS0161	158	160	NS	X141980	141980	1	G	W	25.88	42.61	3.81	0.4257	0.33	0.181	3.85	2.89	0.135	0.148	1.41	0.375	1.21	2.79	2.49	6.49	21575	4.5288	50.40738	-45.87858	NAC
NS0161	166	168	NS	X141984	141984	1	G	W	29.18	45.66	1.8	0.2193	0.17	0.082	2.49	2.82	0.052	0.043	0.606	0.163	0.47	0.96	2.46	3.89	21579	1.3158	49.18644	-47.87064	NAC
NS0161	90	92	NS	X141945	141945	1	G	W	31.42	40.75	1.56	0.4515	0.35	0.069	2.54	2.86	0.044	0.05	0.698	0.193	0.6	2.64	2.48	5.72	21541	1.53	49.88412	-48.35412	NAC
NS0161	192	194	NS	X141997	141997	1	G	W	30.12	44.17	1.59	0.3354	0.26	0.071	2.43	2.87	0.16	0.053	0.597	0.16	0.4	1.3	2.17	3.87	21592	1.6218	50.05854	-48.43674	NAC
NS0161	184	186	NS	X141993	141993	1	G	W	33.76	40	1.23	0.3096	0.24	0.055	2.17	3.02	0.113	0.04	0.501	0.131	0.29	0.96	2.44	3.69	21588	1.224	52.67484	-51.45084	NAC
NS0161	92	94	NS	X141946	141946	1	G	W	31.96	38.56	1.63	0.516	0.4	0.074	2.71	3.29	0.062	0.053	0.726	0.199	0.64	2.83	2.91	6.38	21542	1.6218	57.38418	-55.76238	NAC
NS0161	96	98	NS	X141948	141948	1	G	W	25.96	46.92	1.3	0.5031	0.39	0.058	2.37	3.49	0.051	0.042	0.563	0.156	0.56	2.84	3.51	6.91	21544	1.2852	60.87258	-59.58738	NAC
NS0161	88	90	NS	X141944	141944	1	G	W	29.47	42.14	1.32	0.4773	0.37	0.058	2.48	3.63	0.058	0.051	0.588	0.167	0.5	2.2	3.65	6.35	21540	1.5606	63.31446	-61.75386	NAC
NS0161	174	176	NS	X141988	141988	1	G	W	31.67	38.17	1.4	0.4773	0.37	0.061	2.86	3.85	0.256	0.067	0.57	0.155	0.52	2.66	2.85	6.03	21583	2.0502	67.1517	-65.1015	NAC
NS0161	160	162	NS	X141981	141981	1	G	W	18.3	55.24	1.09	0.4386	0.34	0.052	2.43	5.78	0.11	0.248	0.37	0.1	0.33	1.54	5.72	7.59	21576	7.5888	100.8148	-93.22596	NAC
NS0162	48	50	NS	X142074	142074	1	G	W	23.42	47.17	5.9	0.258	0.2	0.291	3.13	0.64	0.052	0.757	1.02	0.265	1.04	4.45	1.34	6.83	21685	23.1642	11.16288	12.00132	PAF(HC)
NS0162	50	52	NS	X142075	142075	1	G	W	22.98	47.38	5.81	0.2451	0.19	0.285	3.08	0.69	0.043	0.681	1	0.261	1.02	4.47	1.29	6.78	21686	20.8386	12.03498	8.80362	PAF(LC)
NS0162	52	54	NS	X142076	142076	1	G	W	23.65	46.98	6.67	0.2451	0.19	0.363	3.29	0.89	0.075	0.786	0.996	0.27	0.97	3.87	1.45	6.29	21687	24.0516	15.52338	8.52822	PAF(LC)
NS0162	180	182	NS	X142141	142141	1	G	W	19.71	51.56	7.78	0.3612	0.28	0.356	3.16	0.96	0.042	0.822	0.459	0.094	0.62	4.49	1.49	6.6	21823	25.1532	16.74432	8.40888	PAF(LC)
NS0162	248	250	NS	X142176	142176	1	G	W	27.63	49.99	1.39	0.2193	0.17	0.067	1.98	1.03	0.068	0.742	0.305	0.105	0.22	3.57	0.81	4.6	21659	22.7052	17.96526	4.73994	PAF(LC)
NS0162	168	170	NS	X142135	142135	1	G	W	30.13	38.02	2.77	0.3741	0.29	0.122	2.29	1.75	0.075	1.12	1.24	0.219	0.68	6.65	1.72	9.05	21817	34.272	30.5235	3.7485	PAF(LC)
NS0162	46	48	NS	X142073	142073	1	G	W	22.87	47.79	6.87	0.2064	0.16	0.349	3.3	0.99	0.065	0.642	0.95	0.243	1	3.78	1.31	6.09	21684	19.6452	17.26758	2.37762	PAF(LC)
NS0162	2	4	NS	X142051	142051	1	G	D	44.35	19.66	7.73	0.0387	0.03	0.583	0.05	0.04	0.036	0.024	0.016	0.02	6.27	1.62	0.26	8.15	21644	0.7344	0.69768	0.03672	PAF(LC)
NS0162	16	18	NS	X142058	142058	1	G	D																	21651	0	0	0	PAF(LC)
NS0162	184	186	NS	X142143	142143	1	G	W																	21825	0	0	0	PAF(LC)
NS0162	0	2	NS	BX143049	X143049	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3178	-0.0306	-0.01744	-0.013158	NAF
NS0162	2	6	NS	BX143051-BX143052	X143051	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3179	-0.0306	-0.01744	-0.013158	NAF
NS0162	6	10	NS	BX143053-BX143054	X143053	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3180	-0.0306	-0.01744	-0.013158	NAF
NS0162	46	50	NS	BX143073-BX143074	X143073	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3190	-0.0306	-0.01744	-0.013158	NAF
NS0162	50	54	NS	BX143075-BX143076	X143075	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3191	-0.0306	-0.01744	-0.013158	NAF
NS0162	54	58	NS	BX143077-BX143078	X143077	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3192	-0.0306	-0.01744	-0.013158	NAF
NS0162	58	62	NS	BX143079-BX143080	X143079	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3193	-0.0306	-0.01744	-0.013158	NAF
NS0162	62	66	NS	BX143081-BX143082	X143081	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3194	-0.0306	-0.01744	-0.013158	NAF
NS0162	66	70	NS	BX143083-BX143084	X143083	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3195	-0.0306	-0.01744	-0.013158	NAF
NS0162	70	74	NS	BX143085-BX143086	X143085	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3196	-0.0306	-0.01744	-0.013158	NAF
NS0162	6	8	NS	X142053	142053	1	G	D	36.96	35.09	3.83	0.0258	0.02	0.202	0.04	0.04	0.021	0.016	0.004	0.009	6.42	1.05	0.2	7.67	21646	0.4896	0.69768	-0.20808	NAF
NS0162	8	10	NS	X142054	142054	1	G	D	34.23	37.33	4.97	0.00645	0.005	0.23	0.05	0.04	0.014	0.015	0.006	0.005	6.4	1.48	0.22	8.1	21647	0.459	0.69768	-0.23868	NAF
NS0162	4	6	NS	X142052	142052	1	G	D	30.14	47.44	3.02	0.0258	0.02	0.12	0.04	0.03	0.016	0.009	0.005	0.003	5.06	0.83	0.11	6	21645	0.2754	0.52326	-0.24786	NAF
NS0162	10	12	NS	X142055	142055	1	G	D	33.94	42.37	2.9	0.0258	0.02	0.118	0.06	0.04	0.04	0.014	0.005	0.019	4.83	0.89	0.16	5.88	21648	0.4284	0.69768	-0.26928	NAF
NS0162	82	86	NS	BX143091-BX143092	X143091	2			68.61	3.766	0.518	0.095	0.0684	0.095	0.329	0.07	0.007	0.031	0.117	0.096	-0.01	-0.01	-0.01	-0.03	3199	0.9486	1.22094	-0.27234	NAF
NS0162	10	14	NS	BX143055-BX143056	X143055	2			67.91	3.042	0.219	0.02	0.0144	0.02	0.089	0.027	0.019	0.002	0.004	0.072	-0.01	-0.01	-0.01	-0.03	3181	0.0612	0.470934	-0.409734	NAF
NS0162	14	18	NS	BX143057-BX143058	X143057	2			68.39	2.257	0.146	0.018	0.01296	0.018	0.088	0.027	0.021	0.001	0.009	0.064	-0.01	-0.01	-0.01	-0.03	3182	0.0306	0.470934	-0.440334	NAF
NS0162	0	2	NS	X142049	142049	1	G	D	39.44	30.38	4.78	0.0258	0.02	0.264	0.06	0.07	0.023	0.024	0.017	0.018	6.31	1.09	0.18	7.58	21643	0.7344	1.22094	-0.48654	NAF
NS0162	30	34	NS	BX143065-BX143066	X143065	2			68.43	2.643	0.177	0.036	0.02592	0.036	0.119	0.03	0.008	0.001	0.025	0.062	-0.01	-0.01	-0.01	-0.03	3186	0.0306	0.52326	-0.49266	NAF
NS0162	18	20	NS	BX143059	X143059	2			67.71	3.043	0.293	0.039	0.02808	0.039	0.122	0.031	0.014	0.001	0.028	0.077	0.59	0.49	0.07	1.15	3183	0.0306	0.540702	-0.510102	NAF
NS0162	22	26	NS	BX143061-BX143062	X143061	2			67.39	3.03	0.209	0.048	0.03456	0.048	0.108	0.031	0.015	0.001	0.012	0.057	-0.01	-0.01	-0.01	-0.03	3184	0.0306	0.540702	-0.510102	NAF
NS0162	26	30	NS	BX143063-BX143064	X143063	2			68.32	2.795	0.27	0.066	0.04752	0.066	0.133	0.033	0.012	0.001	0.035	0.064	0.51	0.47	-0.01	0.97	3185	0.0306	0.575586	-0.544986	NAF
NS0162	34	38	NS	BX143067-BX143068	X143067	2			68.3	3.522	0.381	0.077	0.05544	0.077	0.131	0.033	0.015	0.001	0.163	0.073	0.37	0.29	-0.01	0.65	3187	0.0306	0.575586	-0.544986	NAF
NS0162	74	78	NS	BX143087-BX143088	X143087	2			66.92	3.237	0.323	0.079	0.05688	0.079	0.267	0.065	0.008	0.018	0.058	0.104	-0.01	-0.01	-0.01	-0.03	3197	0.5508	1.13373	-0.58293	NAF
NS0162	246	250	NS	BX143175-BX143176	X143175	2			69.48	3.825	0.166	0.04	0.0288	0.04	0.259	0.058	0.008	0.014	0.036	0.074	-0.01	-0.01	-0.01	-0.03	3241	0.4284	1.011636	-0.583236	NAF
NS0162	12	14	NS	X142056	142056	1	G	D	36.68	38.93	2.68	0.0645	0.05	0.109	0.09	0.06	0.092	0.013	0.005	0.016	4.07	0.93	0.05	5.05	21649	0.3978	1.04652	-0.64872	NAF
NS0162	38	42	NS	BX143069-BX143070	X143069	2			65.68	5.304	0.38	0.046	0.03312	0.046	0.206	0.05	0.019	0.007	0.106	0.081	-0.01	-0.01	-0.01	-0.03	3188	0.2142	0.8721	-0.6579	NAF
NS0162	14	16	NS	X142057	142057	1	G	D	35.69	43.16	1.37	0.0516	0.04	0.052	0.09	0.06	0.077	0.011	0.027	0.025	3.14	0.5	0.07	3.71	21650	0.3366	1.04652	-0.70992	NAF
NS0162	136	140	NS	BX143119-BX143120	X143119	2			68.84	4.598	0.564	0.067	0.04824	0.067	0.355	0.097	0.01	0.031	0.212	0.094	-0.01	-0.01	-0.01	-0.03	3213	0.9486	1.691874	-0.743274	NAF
NS0162	78	80	NS	BX143089	X143089	2			70.26	2.614	0.233	0.054	0.03888	0.054	0.237	0.059	0.008	0.009	0.052	0.084	-0.01	-0.01	-0.01	-0.03	3198	0.2754	1.029078	-0.753678	NAF
NS0162	42	46	NS	BX143071-BX143072	X143071	2			68.32	4.019	0.303	0.055	0.0396	0.055	0.343	0.089	0.012	0.022	0.071	0.106	-0.01	-0.01	-0.01	-0.03	3189	0.6732	1.552338	-0.879138	NAF
NS0162	160	164	NS	BX143131-BX143132	X143131	2			69.06	3.695	0.428	0.063	0.04536	0.063	0.298	0.105	0.011	0.027	0.144	0.087	0.05	-0.01	-0.01	0.03	3219	0.8262	1.83141	-1.00521	NAF
NS0162	266	270	NS	BX143185-BX143186	X143185	2			63.4	9.054	0.518	0.039	0.02808	0.039	0.555	0.112	0.023	0.029	0.173	0.076	0.07	-0.01	-0.01	0.05	3246	0.8874	1.953504	-1.066104	NAF
NS0162	156	158	NS	BX143129	X143129	2			66.66	5.468	0.72	0.073	0.05256	0.073	0.471	0.144	0.014	0.047	0.184	0.091	-0.01	-0.01	-0.01	-0.03	3218	1.4382	2.511648	-1.073448	NAF
NS0162	68	70	NS	X142084	142084	1	G	W	26.33	40.4	5.6	0.3741	0.29	0.272	3.36	1.11	0.078	0.596	1.14	0.32	1.17	6.83	1.27	9.27	21713	18.2376	19.36062	-1.12302	NAF
NS0162	132	136	NS	BX143117-BX143118	X143117	2			67.86	5.207	0.367	0.036	0.02592	0.036	0.334	0.095	0.014	0.016	0.128	0.085	-0.01	-0.01	-0.01	-0.03	3212	0.4896	1.65699	-1.16739	NAF
NS0162	128	132	NS	BX143115-BX143116	X143115	2			65.07	7.579	0.576	0.046	0.03312	0.046	0.46	0.15	0.016	0.045	0.231	0.087	0.02	-0.01	-0.01	0	3211	1.377	2.6163	-1.2393	NAF
NS0162	176	180	NS	BX143139-BX143140	X143139	2			68.57	4.248	0.428	0.051	0.03672	0.051	0.317	0.109	0.011	0.019	0.146	0.078	0.02	-0.01	-0.01	0	3223	0.5814	1.901178	-1.319778	NAF
NS0162	120	124	NS	BX143111-BX143112	X143111	2			64.67	6.535	0.79	0.083	0.05976	0.083	0.521	0.153	0.013	0.042	0.309	0.094	0.28	-0.01	-0.01	0.26	3209	1.2852	2.668626	-1.383426	NAF
NS0162	38	40	NS	X142069	142069	1	G	D	35.7	39.93	2.28	0.2967	0.23	0.106	0.28	0.1	0.086	0.006	0.733	0.02	4.04	0.8	0.06	4.9	21680	0.1836	1.7442	-1.5606	NAF
NS0162	180	184	NS	BX143141-BX143142	X143141	2			67.41	4.358	0.325	0.04	0.0288	0.04	0.344	0.148	0.008	0.03	0.07	0.083	-0.01	-0.01	-0.01	-0.03	3224	0.918	2.581416	-1.663416	NAF
NS0162	172	176	NS	BX143137-BX143138	X143137	2			67.83	4.821	0.479	0.048	0.03456	0.048	0.377	0.131	0.011	0.02	0.162	0.087	0.05	-0.01	-0.01	0.03	3222	0.612	2.284902	-1.672902	NAF
NS0162	140	144	NS	BX143121-BX143122	X143121	2			66.91	5.77	0.248	0.022	0.01584	0.022	0.289	0.114	0.017	0.009	0.105	0.077	-0.01	-0.01	-0.01	-0.03	3214	0.2754	1.988388	-1.712988	NAF
NS0162	254	258	NS	BX143179-BX143180	X143179	2			65.64	6.869	0.271	0.024	0.01728	0.024	0.437	0.118	0.014	0.01	0.082	0.072	0.05	-0.01	-0.01	0.03	3243	0.306	2.058156	-1.752156	NAF
NS0162	108	112	NS	BX143105-BX143106	X143105	2			65.09	7.305	0.496	0.059	0.04248	0.059	0.441	0.14	0.01	0.021	0.177	0.091	0.09	-0.01	-0.01	0.07	3206	0.6426	2.44188	-1.79928	NAF
NS0162	262	266	NS	BX143183-BX143184	X143183	2			64.84	9.155	0.328	0.024	0.01728	0.024	0.435	0.124	0.018	0.008	0.143	0.077	0.01	-0.01	-0.01	-0.01	3245	0.2448	2.162808	-1.918008	NAF
NS0162	104	108	NS	BX143103-BX143104	X143103	2			66.53	6.419	0.333	0.034	0.02448	0.034	0.355	0.132	0.016	0.012	0.116	0.086	-0.01	-0.01	-0.01	-0.03	3205	0.3672	2.302344	-1.935144	NAF
NS0162	164	168	NS	BX143133-BX143134	X143133	2			67.68	4.337	0.347	0.035	0.0252	0.035	0.308	0.138	0.011	0.015	0.128	0.066	-0.01	-0.01	-0.01	-0.03	3220	0.459	2.406996	-1.947996	NAF
NS0162	270	274	NS	BX143187-BX143188	X143187	2			66.28	7.916	0.276	0.021	0.01512	0.021	0.369	0.132	0.025	0.008	0.141	0.078	-0.01	-0.01	-0.01	-0.03	3247	0.2448	2.302344	-2.057544	NAF
NS0162	144	148	NS	BX143123-BX143124	X143123	2			68.01	5.948	0.254	0.024	0.01728	0.024	0.298	0.136	0.016	0.009	0.096	0.078	-0.01	-0.01	-0.01	-0.03	3215	0.2754	2.372112	-2.096712	NAF
NS0162	206	210	NS	BX143155-BX143156	X143155	2			66.81	6.919	0.286	0.024	0.01728	0.024	0.358	0.137	0.017	0.009	0.135	0.075	-0.01	-0.01	-0.01	-0.03	3231	0.2754	2.389554	-2.114154	NAF
NS0162	94	98	NS	BX143097-BX143098	X143097	2			66.43	6.879	0.28	0.024	0.01728	0.024	0.319	0.142	0.019	0.011	0.069	0.07	-0.01	-0.01	-0.01	-0.03	3202	0.3366	2.476764	-2.140164	NAF
NS0162	250	254	NS	BX143177-BX143178	X143177	2			66.58	7.011	0.252	0.027	0.01944	0.027	0.406	0.15	0.021	0.014	0.058	0.081	-0.01	-0.01	-0.01	-0.03	3242	0.4284	2.6163	-2.1879	NAF
NS0162	124	128	NS	BX143113-BX143114	X143113	2			66.83	6.226	0.333	0.03	0.0216	0.03	0.342	0.156	0.017	0.016	0.124	0.07	0.14	-0.01	-0.01	0.12	3210	0.4896	2.720952	-2.231352	NAF
NS0162	258	262	NS	BX143181-BX143182	X143181	2			67.23	6.661	0.218	0.02	0.0144	0.02	0.339	0.143	0.017	0.007	0.072	0.075	0.09	-0.01	-0.01	0.07	3244	0.2142	2.494206	-2.280006	NAF
NS0162	242	246	NS	BX143173-BX143174	X143173	2			61.71	11.276	0.657	0.049	0.03528	0.049	0.694	0.173	0.019	0.024	0.139	0.201	0.03	-0.01	-0.01	0.01	3240	0.7344	3.017466	-2.283066	NAF
NS0162	226	230	NS	BX143165-BX143166	X143165	2			67.1	6.545	0.247	0.021	0.01512	0.021	0.346	0.149	0.017	0.01	0.091	0.073	-0.01	-0.01	-0.01	-0.03	3236	0.306	2.598858	-2.292858	NAF
NS0162	152	156	NS	BX143127-BX143128	X143127	2			66.36	7.212	0.335	0.025	0.018	0.025	0.391	0.155	0.013	0.011	0.141	0.082	-0.01	-0.01	-0.01	-0.03	3217	0.3366	2.70351	-2.36691	NAF
NS0162	90	94	NS	BX143095-BX143096	X143095	2			67.26	5.005	0.325	0.034	0.02448	0.034	0.304	0.163	0.014	0.014	0.123	0.071	-0.01	-0.01	-0.01	-0.03	3201	0.4284	2.843046	-2.414646	NAF
NS0162	222	226	NS	BX143163-BX143164	X143163	2			65.83	7.844	0.348	0.03	0.0216	0.03	0.4	0.164	0.017	0.014	0.161	0.079	-0.01	-0.01	-0.01	-0.03	3235	0.4284	2.860488	-2.432088	NAF
NS0162	116	120	NS	BX143109-BX143110	X143109	2			64.08	7.29	0.673	0.063	0.04536	0.063	0.522	0.184	0.011	0.024	0.25	0.087	0.14	-0.01	-0.01	0.12	3208	0.7344	3.209328	-2.474928	NAF
NS0162	148	152	NS	BX143125-BX143126	X143125	2			65.6	8.216	0.434	0.027	0.01944	0.027	0.463	0.163	0.014	0.012	0.121	0.084	0.03	-0.01	-0.01	0.01	3216	0.3672	2.843046	-2.475846	NAF
NS0162	168	172	NS	BX143135-BX143136	X143135	2			65.07	7.144	0.38	0.032	0.02304	0.032	0.378	0.186	0.017	0.024	0.162	0.093	0.11	-0.01	-0.01	0.09	3221	0.7344	3.244212	-2.509812	NAF
NS0162	234	238	NS	BX143169-BX143170	X143169	2			62.93	9.546	0.401	0.032	0.02304	0.032	0.538	0.173	0.024	0.016	0.097	0.09	0.04	-0.01	-0.01	0.02	3238	0.4896	3.017466	-2.527866	NAF
NS0162	274	276	NS	BX143189	X143189	2			65.44	7.855	0.242	0.015	0.0108	0.015	0.313	0.153	0.024	0.004	0.136	0.071	0.09	-0.01	-0.01	0.07	3248	0.1224	2.668626	-2.546226	NAF
NS0162	244	246	NS	X142174	142174	1	G	W	25.59	42.02	4.27	0.5031	0.39	0.189	3.76	0.85	0.149	0.401	0.846	0.23	0.92	7.95	0.9	9.77	21657	12.2706	14.8257	-2.5551	NAF
NS0162	198	202	NS	BX143151-BX143152	X143151	2			65.61	8.146	0.368	0.025	0.018	0.025	0.373	0.167	0.018	0.01	0.188	0.081	-0.01	-0.01	-0.01	-0.03	3229	0.306	2.912814	-2.606814	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0162	230	234	NS	BX143167-BX143168	X143167	2			64.32	9.085	0.285	0.027	0.01944	0.027	0.444	0.177	0.02	0.009	0.084	0.076	-0.01	-0.01	-0.01	-0.03	3237	0.2754	3.087234	-2.811834	NAF
NS0162	218	222	NS	BX143161-BX143162	X143161	2			64.69	8.285	0.294	0.021	0.01512	0.021	0.371	0.178	0.023	0.008	0.165	0.076	-0.01	-0.01	-0.01	-0.03	3234	0.2448	3.104676	-2.859876	NAF
NS0162	184	188	NS	BX143143-BX143144	X143143	2			66.16	6.679	0.364	0.026	0.01872	0.026	0.406	0.189	0.014	0.013	0.113	0.082	0.05	-0.01	-0.01	0.03	3225	0.3978	3.296538	-2.898738	NAF
NS0162	188	192	NS	BX143145-BX143146	X143145	2			63.7	9.224	0.433	0.028	0.02016	0.028	0.468	0.189	0.015	0.011	0.225	0.083	0.07	-0.01	-0.01	0.05	3226	0.3366	3.296538	-2.959938	NAF
NS0162	202	206	NS	BX143153-BX143154	X143153	2			65.2	8.267	0.258	0.018	0.01296	0.018	0.324	0.187	0.018	0.007	0.163	0.084	-0.01	-0.01	-0.01	-0.03	3230	0.2142	3.261654	-3.047454	NAF
NS0162	98	100	NS	BX143099	X143099	2			64.16	8.445	0.347	0.026	0.01872	0.026	0.38	0.198	0.023	0.013	0.105	0.076	-0.01	-0.01	-0.01	-0.03	3203	0.3978	3.453516	-3.055716	NAF
NS0162	278	282	NS	BX143191-BX143192	X143191	2			66.07	7.455	0.233	0.019	0.01368	0.019	0.307	0.192	0.035	0.005	0.134	0.061	-0.01	-0.01	-0.01	-0.03	3249	0.153	3.348864	-3.195864	NAF
NS0162	238	242	NS	BX143171-BX143172	X143171	2			64.06	9.307	0.476	0.034	0.02448	0.034	0.524	0.21	0.014	0.014	0.089	0.094	0.07	-0.01	-0.01	0.05	3239	0.4284	3.66282	-3.23442	NAF
NS0162	210	214	NS	BX143157-BX143158	X143157	2			64.37	9.067	0.388	0.028	0.02016	0.028	0.417	0.22	0.017	0.016	0.224	0.075	-0.01	-0.01	-0.01	-0.03	3232	0.4896	3.83724	-3.34764	NAF
NS0162	18	20	NS	X142059	142059	1	G	D	35.77	39.59	3.18	0.0645	0.05	0.144	0.53	0.21	0.04	0.008	0.255	0.08	3.17	1.22	0.01	4.4	21652	0.2448	3.66282	-3.41802	NAF
NS0162	56	58	NS	X142078	142078	1	G	W	21.32	50.42	7.1	0.1548	0.12	0.359	3.24	1.39	0.027	0.679	0.968	0.255	0.98	2.56	1.37	4.91	21689	20.7774	24.24438	-3.46698	NAF
NS0162	20	22	NS	X142060	142060	1	G	D	36.16	38.87	2.86	0.0516	0.04	0.141	0.5	0.22	0.053	0.011	0.201	0.082	3.89	1.16	0.09	5.14	21653	0.3366	3.83724	-3.50064	NAF
NS0162	86	90	NS	BX143093-BX143094	X143093	2			60.07	11.547	1.308	0.099	0.07128	0.099	0.768	0.325	0.02	0.07	0.54	0.116	0.23	-0.01	-0.01	0.21	3200	2.142	5.66865	-3.52665	NAF
NS0162	22	24	NS	X142061	142061	1	G	D	33.89	41.62	3.3	0.0645	0.05	0.172	0.47	0.23	0.057	0.011	0.092	0.085	3.82	1.3	0.1	5.22	21654	0.3366	4.01166	-3.67506	NAF
NS0162	112	116	NS	BX143107-BX143108	X143107	2			61.02	9.695	1.333	0.127	0.09144	0.127	0.798	0.316	0.026	0.06	0.538	0.117	0.37	-0.01	-0.01	0.35	3207	1.836	5.511672	-3.675672	NAF
NS0162	214	216	NS	BX143159	X143159	2			64.87	9.342	0.358	0.024	0.01728	0.024	0.397	0.231	0.021	0.01	0.214	0.077	-0.01	-0.01	-0.01	-0.03	3233	0.306	4.029102	-3.723102	NAF
NS0162	100	104	NS	BX143101-BX143102	X143101	2			64.48	9.182	0.332	0.023	0.01656	0.023	0.367	0.233	0.024	0.008	0.142	0.083	-0.01	-0.01	-0.01	-0.03	3204	0.2448	4.063986	-3.819186	NAF
NS0162	192	196	NS	BX143147-BX143148	X143147	2			63.94	9.893	0.358	0.023	0.01656	0.023	0.407	0.24	0.017	0.011	0.198	0.083	-0.01	-0.01	-0.01	-0.03	3227	0.3366	4.18608	-3.84948	NAF
NS0162	62	64	NS	X142081	142081	1	G	W	22.89	46.49	6.7	0.3225	0.25	0.341	3.33	1.19	0.063	0.55	0.926	0.249	0.94	4.64	1.36	6.94	21710	16.83	20.75598	-3.92598	NAF
NS0162	196	198	NS	BX143149	X143149	2			64.73	8.374	0.427	0.032	0.02304	0.032	0.411	0.254	0.017	0.012	0.247	0.067	-0.01	-0.01	-0.01	-0.03	3228	0.3672	4.430268	-4.063068	NAF
NS0162	26	28	NS	X142063	142063	1	G	D	35.67	38.96	2.91	0.1548	0.12	0.12	0.56	0.27	0.061	0.009	0.33	0.052	3.84	1.22	0.04	5.1	21674	0.2754	4.70934	-4.43394	NAF
NS0162	32	34	NS	X142066	142066	1	G	D	35.41	38.8	2.69	0.4386	0.34	0.126	0.81	0.28	0.029	0.005	0.315	0.034	4	1.25	0.19	5.44	21677	0.153	4.88376	-4.73076	NAF
NS0162	30	32	NS	X142065	142065	1	G	D	28.62	46.71	3.85	0.5031	0.39	0.191	0.81	0.3	0.029	0.005	0.907	0.04	3.74	1.37	0.19	5.3	21676	0.153	5.2326	-5.0796	NAF
NS0162	266	268	NS	X142185	142185	1	G	W	26.36	43.92	4.07	0.4515	0.35	0.202	3.8	1.58	0.316	0.715	1.11	0.189	0.57	4.01	0.94	5.52	21668	21.879	27.55836	-5.67936	NAF
NS0162	24	26	NS	X142062	142062	1	G	D	26.35	47.6	5.53	0.0645	0.05	0.285	0.85	0.36	0.056	0.011	0.202	0.102	4.67	2.19	0.26	7.12	21673	0.3366	6.27912	-5.94252	NAF
NS0162	34	36	NS	X142067	142067	1	G	D	32.24	40.65	4.6	0.3096	0.24	0.318	0.98	0.35	0.04	0.005	1.25	0.052	3.53	1.54	0.1	5.17	21678	0.153	6.1047	-5.9517	NAF
NS0162	40	42	NS	X142070	142070	1	G	D	29.61	39.67	3.39	0.5805	0.45	0.168	1.89	0.81	0.093	0.262	0.725	0.075	2.4	6.39	0.85	9.64	21681	8.0172	14.12802	-6.11082	NAF
NS0162	36	38	NS	X142068	142068	1	G	D	29.45	42.15	5.48	0.2838	0.22	0.397	1.16	0.37	0.057	0.005	1.63	0.039	3.82	1.77	0.18	5.77	21679	0.153	6.45354	-6.30054	NAF
NS0162	132	134	NS	X142117	142117	1	G	W	30.14	44.22	1.59	0.4644	0.36	0.072	1.78	0.47	0.067	0.049	0.699	0.14	0.56	7.03	-0.11	7.48	21781	1.4994	8.19774	-6.69834	NAF
NS0162	54	56	NS	X142077	142077	1	G	W	21.44	49.93	6.63	0.1935	0.15	0.313	3.15	1.59	0.038	0.685	0.987	0.267	0.99	2.95	1.51	5.45	21688	20.961	27.73278	-6.77178	NAF
NS0162	76	78	NS	X142088	142088	1	G	W	26.12	42.72	3.71	0.3741	0.29	0.176	2.58	0.9	0.084	0.281	0.948	0.174	0.77	9.26	0.76	10.79	21717	8.5986	15.6978	-7.0992	NAF
NS0162	74	76	NS	X142087	142087	1	G	W	26.63	38.78	4.02	0.4515	0.35	0.184	2.87	1.19	0.117	0.441	0.918	0.232	0.96	9.74	1.17	11.87	21716	13.4946	20.75598	-7.26138	NAF
NS0162	70	72	NS	X142085	142085	1	G	W	21.02	50.97	5.07	0.2967	0.23	0.261	2.8	1.48	0.091	0.588	1.05	0.268	0.97	4.46	1.47	6.9	21714	17.9928	25.81416	-7.82136	NAF
NS0162	28	30	NS	X142064	142064	1	G	D	27.45	40.86	8.02	0.2064	0.16	0.368	1.38	0.48	0.061	0.008	1.79	0.093	4.29	2.55	0.28	7.12	21675	0.2448	8.37216	-8.12736	NAF
NS0162	176	178	NS	X142139	142139	1	G	W	28.11	38.76	3.97	0.4257	0.33	0.176	3.01	1.15	0.131	0.389	1.65	0.22	0.98	7.72	1.01	9.71	21821	11.9034	20.0583	-8.1549	NAF
NS0162	130	132	NS	X142116	142116	1	G	W	28.85	39.63	3.34	0.4902	0.38	0.149	2.51	1.26	0.07	0.449	1.62	0.184	0.65	6.27	1.06	7.98	21762	13.7394	21.97692	-8.23752	NAF
NS0162	60	62	NS	X142080	142080	1	G	W	24.11	43.29	5.08	0.4644	0.36	0.245	3.22	1.29	0.049	0.435	0.722	0.188	0.87	7.84	1.32	10.03	21709	13.311	22.50018	-9.18918	NAF
NS0162	138	140	NS	X142120	142120	1	G	W	23.06	46.42	5.8	0.3354	0.26	0.263	3.19	1.59	0.107	0.603	2.35	0.291	0.88	3.84	1.46	6.18	21784	18.4518	27.73278	-9.28098	NAF
NS0162	246	248	NS	X142175	142175	1	G	W	29.05	44.28	2.34	0.3354	0.26	0.112	2.72	0.77	0.056	0.09	0.583	0.156	0.61	6.09	0.23	6.93	21658	2.754	13.43034	-10.67634	NAF
NS0162	250	252	NS	X142177	142177	1	G	W	28.82	41	2.47	0.4128	0.32	0.121	3.42	1.24	0.113	0.355	0.658	0.186	0.72	7.22	0.62	8.56	21660	10.863	21.62808	-10.76508	NAF
NS0162	78	80	NS	X142089	142089	1	G	W	30.2	36.19	3.41	0.4257	0.33	0.157	2.58	0.98	0.069	0.206	1.06	0.162	0.8	9.9	0.53	11.23	21718	6.3036	17.09316	-10.78956	NAF
NS0162	158	160	NS	X142130	142130	1	G	W	32.46	37.98	3.34	0.3354	0.26	0.153	2.62	0.93	0.058	0.174	1.07	0.186	0.67	5.39	0.47	6.53	21794	5.3244	16.22106	-10.89666	NAF
NS0162	72	74	NS	X142086	142086	1	G	W	22.72	46.73	6.67	0.2193	0.17	0.394	3.16	1.59	0.084	0.509	1.18	0.271	1.04	4.03	1.42	6.49	21715	15.5754	27.73278	-12.15738	NAF
NS0162	82	84	NS	X142091	142091	1	G	W	19.47	53.5	6.19	0.129	0.1	0.282	2.98	1.57	0.162	0.495	1.38	0.239	0.83	3.15	1.24	5.22	21720	15.147	27.38394	-12.23694	NAF
NS0162	80	82	NS	X142090	142090	1	G	W	25.22	41.05	3.58	0.4644	0.36	0.167	2.59	1.31	0.139	0.339	1.21	0.18	0.88	10.44	0.86	12.18	21719	10.3734	22.84902	-12.47562	NAF
NS0162	42	44	NS	X142071	142071	1	G	W	28.25	34.09	2.59	0.8772	0.68	0.124	2.56	1.22	0.079	0.282	0.582	0.076	0.65	15.38	0.72	16.75	21682	8.6292	21.27924	-12.65004	NAF
NS0162	58	60	NS	X142079	142079	1	G	W	23.96	44.33	4.51	0.4515	0.35	0.219	2.94	1.47	0.098	0.407	0.799	0.208	0.92	7.76	1.22	9.9	21690	12.4542	25.63974	-13.18554	NAF
NS0162	84	86	NS	X142092	142092	1	G	W	24.81	44.2	4.92	0.3096	0.24	0.232	2.77	1.36	0.017	0.336	1.71	0.208	0.82	6.29	1.03	8.14	21721	10.2816	23.72112	-13.43952	NAF
NS0162	156	158	NS	X142129	142129	1	G	W	22.81	48.5	5.4	0.1935	0.15	0.247	3.19	2	0.108	0.673	1.65	0.217	0.69	2.64	1.66	4.99	21793	20.5938	34.884	-14.2902	NAF
NS0162	140	142	NS	X142121	142121	1	G	W	28.07	48.13	1.48	0.4644	0.36	0.068	1.63	1.05	0.071	0.117	0.716	0.101	0.37	5.17	0.28	5.82	21785	3.5802	18.3141	-14.7339	NAF
NS0162	110	112	NS	X142106	142106	1	G	W	30.53	40.59	2.44	0.4644	0.36	0.113	2.27	1	0.034	0.088	1.05	0.199	0.73	6.79	0.43	7.95	21752	2.6928	17.442	-14.7492	NAF
NS0162	44	46	NS	X142072	142072	1	G	W	27.59	37.64	3.22	0.6321	0.49	0.149	2.61	1.41	0.124	0.321	0.586	0.126	0.79	11.32	0.77	12.88	21683	9.8226	24.59322	-14.77062	NAF
NS0162	118	120	NS	X142110	142110	1	G	W	31.45	38.03	2.24	0.5031	0.39	0.102	2.28	0.98	0.06	0.072	0.941	0.214	0.75	8.39	0.31	9.45	21756	2.2032	17.09316	-14.88996	NAF
NS0162	96	98	NS	X142098	142098	1	G	W	36.79	33.26	1.88	0.4644	0.36	0.083	2.17	0.99	0.059	0.062	0.586	0.141	0.53	6.75	0.2	7.48	21745	1.8972	17.26758	-15.37038	NAF
NS0162	186	188	NS	X142144	142144	1	G	W	30.62	40.11	2.76	0.4644	0.36	0.125	2.55	1.19	0.099	0.15	0.925	0.173	0.64	6.22	0.46	7.32	21826	4.59	20.75598	-16.16598	NAF
NS0162	188	190	NS	X142145	142145	1	G	W	34.55	35.72	1.65	0.6579	0.51	0.071	2.05	1	0.08	0.041	0.909	0.103	0.46	7.24	0.08	7.78	21827	1.2546	17.442	-16.1874	NAF
NS0162	120	122	NS	X142111	142111	1	G	W	28.07	39.62	3.88	0.4386	0.34	0.182	2.9	1.37	0.082	0.248	1.74	0.256	0.97	6.79	0.96	8.72	21757	7.5888	23.89554	-16.30674	NAF
NS0162	268	270	NS	X142186	142186	1	G	W	34.38	37.94	1.72	0.645	0.5	0.085	2.33	1.09	0.119	0.087	0.812	0.096	0.35	5.01	0.24	5.6	21669	2.6622	19.01178	-16.34958	NAF
NS0162	272	274	NS	X142188	142188	1	G	W	35.54	37.5	1.69	0.6192	0.48	0.079	2.18	1.1	0.113	0.072	0.919	0.104	0.29	4.17	0.17	4.63	21671	2.2032	19.1862	-16.983	NAF
NS0162	236	238	NS	X142170	142170	1	G	W	33.31	36.78	1.81	0.6063	0.47	0.083	2.62	1.19	0.117	0.105	0.541	0.149	0.55	6.99	0.29	7.83	21869	3.213	20.75598	-17.54298	NAF
NS0162	160	162	NS	X142131	142131	1	G	W	25.1	44.99	3.87	0.4386	0.34	0.181	2.48	1.95	0.148	0.532	1.6	0.214	0.72	5.33	1.4	7.45	21795	16.2792	34.0119	-17.7327	NAF
NS0162	164	166	NS	X142133	142133	1	G	W	27.15	43.84	3.15	0.3483	0.27	0.142	2.37	1.34	0.123	0.158	1.26	0.216	0.69	6.53	0.56	7.78	21797	4.8348	23.37228	-18.53748	NAF
NS0162	174	176	NS	X142138	142138	1	G	W	28.85	39.21	3.03	0.4257	0.33	0.137	2.54	1.33	0.115	0.146	1.27	0.204	0.78	8.18	0.6	9.56	21820	4.4676	23.19786	-18.73026	NAF
NS0162	122	124	NS	X142112	142112	1	G	W	25.97	40.66	5.04	0.4128	0.32	0.237	3.27	1.56	0.083	0.276	2.33	0.249	0.92	6.22	1.24	8.38	21758	8.4456	27.20952	-18.76392	NAF
NS0162	108	110	NS	X142105	142105	1	G	W	27.29	40.36	3.47	0.5547	0.43	0.16	2.82	1.46	0.043	0.209	1.48	0.223	0.84	7.8	1.03	9.67	21751	6.3954	25.46532	-19.06992	NAF
NS0162	136	138	NS	X142119	142119	1	G	W	27.08	41.88	4.63	0.3741	0.29	0.209	2.83	1.65	0.271	0.303	2.23	0.25	0.75	4.3	0.92	5.97	21783	9.2718	28.7793	-19.5075	NAF
NS0162	178	180	NS	X142140	142140	1	G	W	24.54	46.49	3.78	0.4128	0.32	0.173	2.33	1.78	0.038	0.354	0.821	0.123	0.63	6.71	1.21	8.55	21822	10.8324	31.04676	-20.21436	NAF
NS0162	242	244	NS	X142173	142173	1	G	W	30.89	40.13	2.09	0.4644	0.36	0.094	2.71	1.27	0.068	0.054	0.567	0.155	0.62	6.56	0.55	7.73	21656	1.6524	22.15134	-20.49894	NAF
NS0162	182	184	NS	X142142	142142	1	G	W	26.66	40.03	2.75	0.7482	0.58	0.121	2.5	1.92	0.14	0.422	0.698	0.175	0.75	9.81	1.02	11.58	21824	12.9132	33.48864	-20.57544	NAF
NS0162	142	144	NS	X142122	142122	1	G	W	33.3	39.84	2.37	0.3354	0.26	0.108	2	1.38	0.081	0.087	1.05	0.108	0.37	3.8	0.48	4.65	21786	2.6622	24.06996	-21.40776	NAF
NS0162	112	114	NS	X142107	142107	1	G	W	27.03	39.52	4.61	0.4257	0.33	0.214	3.27	1.79	0.104	0.301	1.84	0.256	0.88	6.07	1.31	8.26	21753	9.2106	31.22118	-22.01058	NAF
NS0162	270	272	NS	X142187	142187	1	G	W	34.84	38.33	1.42	0.6192	0.48	0.067	2.02	1.36	0.12	0.05	0.748	0.094	0.26	4.4	0.38	5.04	21670	1.53	23.72112	-22.19112	NAF
NS0162	128	130	NS	X142115	142115	1	G	W	29.56	41.91	2.78	0.4128	0.32	0.128	2.25	1.74	0.12	0.264	1.27	0.161	0.55	4.82	1	6.37	21761	8.0784	30.34908	-22.27068	NAF
NS0162	234	236	NS	X142169	142169	1	G	W	29.76	44.92	1.51	0.4386	0.34	0.068	2.13	1.37	0.15	0.049	0.417	0.117	0.41	5.27	0.4	6.08	21868	1.4994	23.89554	-22.39614	NAF
NS0162	220	222	NS	X142162	142162	1	G	W	33.16	39.08	1.48	0.5547	0.43	0.072	1.86	1.37	0.101	0.046	0.816	0.101	1.2	4.94	0.49	6.63	21861	1.4076	23.89554	-22.48794	NAF
NS0162	232	234	NS	X142168	142168	1	G	W	33.75	39.3	1.49	0.4902	0.38	0.068	2.13	1.42	0.074	0.044	0.427	0.124	0.4	4.98	0.58	5.96	21867	1.3464	24.76764	-23.42124	NAF
NS0162	134	136	NS	X142118	142118	1	G	W	28.18	41.92	4.16	0.3225	0.25	0.193	2.63	2.2	0.186	0.481	1.64	0.206	0.63	3.59	1.36	5.58	21782	14.7186	38.3724	-23.6538	NAF
NS0162	264	266	NS	X142184	142184	1	G	W	31.26	42.72	1.88	0.4773	0.37	0.088	2.32	1.45	0.074	0.045	0.828	0.108	0.31	3.96	0.68	4.95	21667	1.377	25.2909	-23.9139	NAF
NS0162	124	126	NS	X142113	142113	1	G	W	33.82	37.72	1.62	0.4902	0.38	0.073	1.95	1.49	0.077	0.063	0.593	0.15	0.39	6.09	0.57	7.05	21759	1.9278	25.98858	-24.06078	NAF
NS0162	146	148	NS	X142124	142124	1	G	W	34.3	38.9	1.66	0.4386	0.34	0.072	1.82	1.48	0.102	0.049	0.619	0.098	0.33	4.28	0.58	5.19	21788	1.4994	25.81416	-24.31476	NAF
NS0162	94	96	NS	X142097	142097	1	G	W	35.6	36.8	1.67	0.387	0.3	0.079	1.73	1.53	0.073	0.068	0.539	0.132	0.37	4.8	0.6	5.77	21726	2.0808	26.68626	-24.60546	NAF
NS0162	208	210	NS	X142156	142156	1	G	W	34.84	36.95	2.11	0.4515	0.35	0.096	2.26	1.51	0.115	0.055	1.03	0.119	0.33	4.17	0.62	5.12	21855	1.683	26.33742	-24.65442	NAF
NS0162	92	94	NS	X142096	142096	1	G	W	32.64	37.58	1.95	0.5289	0.41	0.088	2.14	1.61	0.078	0.074	0.835	0.136	0.48	6.7	0.79	7.97	21725	2.2644	28.08162	-25.81722	NAF
NS0162	230	232	NS	X142167	142167	1	G	W	33.95	37.97	1.47	0.5934	0.46	0.067	2.2	1.59	0.123	0.048	0.54	0.163	0.43	5.13	0.59	6.15	21866	1.4688	27.73278	-26.26398	NAF
NS0162	144	146	NS	X142123	142123	1	G	W	30.28	44.73	1.74	0.3741	0.29	0.078	1.83	1.66	0.08	0.082	0.768	0.111	0.38	3.94	0.86	5.18	21787	2.5092	28.95372	-26.44452	NAF
NS0162	148	150	NS	X142125	142125	1	G	W	33.56	37.69	2.04	0.4257	0.33	0.087	2.32	1.62	0.057	0.059	0.736	0.137	0.45	5.13	0.94	6.52	21789	1.8054	28.25604	-26.45064	NAF
NS0162	170	172	NS	X142136	142136	1	G	W	29.98	41.76	1.77	0.4902	0.38	0.08	1.81	1.68	0.079	0.081	0.741	0.117	0.49	7.38	0.72	8.59	21818	2.4786	29.30256	-26.82396	NAF
NS0162	152	154	NS	X142127	142127	1	G	W	34.03	37.44	1.67	0.5805	0.45	0.074	2.05	1.62	0.067	0.044	0.815	0.105	0.38	5.47	0.79	6.64	21791	1.3464	28.25604	-26.90964	NAF
NS0162	162	164	NS	X142132	142132	1	G	W	27.36	41.23	3.59	0.4128	0.32	0.162	2.56	1.84	0.227	0.163	1.5	0.273	0.88	6.61	0.86	8.35	21796	4.9878	32.09328	-27.10548	NAF
NS0162	190	192	NS	X142146	142146	1	G	W	30.64	41.09	2.05	0.5289	0.41	0.091	2.15	1.67	0.12	0.065	1.02	0.154	0.41	5.66	0.84	6.91	21828	1.989	29.12814	-27.13914	NAF
NS0162	276	278	NS	X142190	142190	1	G	W	36.24	37.22	1.44	0.6063	0.47	0.068	1.76	1.63	0.206	0.041	0.846	0.1	0.15	3.28	0.38	3.81	21727	1.2546	28.43046	-27.17586	NAF
NS0162	194	196	NS	X142148	142148	1	G	W	33.21	40.39	1.5	0.516	0.4	0.066	1.77	1.62	0.057	0.035	0.797	0.066	0.21	4.34	0.84	5.39	21830	1.071	28.25604	-27.18504	NAF
NS0162	210	212	NS	X142157	142157	1	G	W	33.53	39.09	1.89	0.4386	0.34	0.085	2.08	1.69	0.096	0.058	1.06	0.132	0.28	3.73	0.86	4.87	21856	1.7748	29.47698	-27.70218	NAF
NS0162	274	276	NS	X142189	142189	1	G	W	36.01	37.69	1.34	0.5934	0.46	0.059	1.79	1.65	0.13	0.034	0.71	0.057	0.14	3.27	0.59	4	21672	1.0404	28.7793	-27.7389	NAF
NS0162	254	256	NS	X142179	142179	1	G	W	31.92	38.79	1.95	0.516	0.4	0.086	3	1.84	0.125	0.137	0.606	0.174	0.54	5.5	0.94	6.98	21662	4.1922	32.09328	-27.90108	NAF
NS0162	172	174	NS	X142137	142137	1	G	W	27.22	41.15	3.96	0.3741	0.29	0.179	2.97	2.03	0.179	0.236	1.33	0.24	0.8	6.36	1.1	8.26	21819	7.2216	35.40726	-28.18566	NAF
NS0162	204	206	NS	X142154	142154	1	G	W	34.03	40.17	1.22	0.5418	0.42	0.056	1.69	1.69	0.094	0.03	0.734	0.062	0.19	4	0.8	4.99	21853	0.918	29.47698	-28.55898	NAF
NS0162	256	258	NS	X142180	142180	1	G	W	32.96	38.12	1.41	0.5934	0.46	0.066	2.62	1.76	0.132	0.06	0.485	0.109	0.43	5.91	0.87	7.21	21663	1.836	30.69792	-28.86192	NAF
NS0162	200	202	NS	X142152	142152	1	G	W	33.34	39.1	1.69	0.5547	0.43	0.077	1.95	1.74	0.099	0.043	0.936	0.089	0.27	4.44	0.83	5.54	21833	1.3158	30.34908	-29.03328	NAF
NS0162	228	230	NS	X142166	142166	1	G	W	33.63	38.66	1.46	0.5934	0.46	0.067	2.07	1.81	0.111	0.036	0.582	0.12	0.39	4.63	0.91	5.93	21865	1.1016	31.57002	-30.46842	NAC
NS0162	86	88	NS	X142093	142093	1	G	W	27.61	39.89	4.64	0.2838	0.22	0.214	2.84	2.31	0.242	0.313	1.75	0.231	0.79	5.09	1.23	7.11	21722	9.5778	40.29102	-30.71322	NAC
NS0162	126	128	NS	X142114	142114	1	G	W	32.92	36.11	2.66	0.4257	0.33	0.123	2.33	2.16	0.163	0.223	0.944	0.149	1.36	4.5	1.05	6.91	21760	6.8238	37.67472	-30.85092	NAC
NS0162	116	118	NS	X142109	142109	1	G	W	26.18	40.33	5.06	0.3354	0.26	0.241	3.58	2.12	0.049	0.198	2.05	0.28	0.93	5.52	1.73	8.18	21755	6.0588	36.97704	-30.91824	NAC
NS0162	150	152	NS	X142126	142126	1	G	W	34.46	35.77	2.2	0.4128	0.32	0.1	2.43	1.93	0.089	0.08	0.646	0.143	0.5	4.73	1.15	6.38	21790	2.448	33.66306	-31.21506	NAC
NS0162	226	228	NS	X142165	142165	1	G	W	31.61	40.41	2.1	0.5031	0.39	0.097	2.32	1.99	0.144	0.113	0.824	0.134	0.37	4.02	1.07	5.46	21864	3.4578	34.70958	-31.25178	NAC
NS0162	104	106	NS	X142103	142103	1	G	W	32.53	39.77	1.6	0.4644	0.36	0.075	1.92	1.89	0.08	0.054	0.574	0.118	0.44	5.24	1	6.68	21749	1.6524	32.96538	-31.31298	NAC
NS0162	262	264	NS	X142183	142183	1	G	W	34.9	38.07	1.12	0.6063	0.47	0.052	1.88	1.86	0.105	0.035	0.559	0.079	0.22	4.13	0.92	5.27	21666	1.071	32.44212	-31.37112	NAC
NS0162	88	90	NS	X142094	142094	1	G	W	27.64	41.29	3.61	0.3612	0.28	0.165	2.47	2.05	0.064	0.139	1.59	0.218	0.79	6.26	1.3	8.35	21723	4.2534	35.7561	-31.5027	NAC
NS0162	222	224	NS	X142163	142163	1	G	W	32.33	41.27	1.77	0.4644	0.36	0.079	2.05	1.93	0.149	0.065	0.823	0.097	0.31	3.66	0.95	4.92	21862	1.989	33.66306	-31.67406	NAC
NS0162	66	68	NS	X142083	142083	1	G	W	24.25	41.67	4.06	0.3741	0.29	0.194	2.72	2.62	0.065	0.454	0.93	0.218	0.95	8.99	1.64	11.58	21712	13.8924	45.69804	-31.80564	NAC
NS0162	238	240	NS	X142171	142171	1	G	W	30.93	40.05	2.05	0.516	0.4	0.095	2.66	2.07	0.093	0.101	0.499	0.133	0.52	5.37	1.22	7.11	21870	3.0906	36.10494	-33.01434	NAC
NS0162	280	282	NS	X142192	142192	1	G	W	35.51	37.65	1.16	0.6579	0.51	0.053	1.82	1.96	0.13	0.027	0.676	0.048	0.11	3.42	0.95	4.48	21729	0.8262	34.18632	-33.36012	NAC
NS0162	216	218	NS	X142160	142160	1	G	W	33.43	39.4	1.69	0.5418	0.42	0.076	2.05	2.01	0.12	0.055	0.876	0.091	0.27	3.62	1.14	5.03	21859	1.683	35.05842	-33.37542	NAC
NS0162	218	220	NS	X142161	142161	1	G	W	33.66	39.36	1.43	0.6837	0.53	0.063	1.85	1.99	0.128	0.034	0.873	0.083	0.24	3.99	1.06	5.29	21860	1.0404	34.70958	-33.66918	NAC
NS0162	102	104	NS	X142102	142102	1	G	W	31.96	40.56	1.48	0.5805	0.45	0.07	1.86	2.02	0.095	0.043	0.636	0.108	0.37	5.37	1.07	6.81	21748	1.3158	35.23284	-33.91704	NAC
NS0162	278	280	NS	X142191	142191	1	G	W	33.55	39.07	2.07	0.5676	0.44	0.095	2.04	2.05	0.252	0.06	1.22	0.09	0.21	3.16	0.75	4.12	21728	1.836	35.7561	-33.9201	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0162	224	226	NS	X142164	142164	1	G	W	30.98	41.47	2.05	0.5289	0.41	0.092	2.21	2.15	0.179	0.105	1.06	0.124	0.37	4.11	1.04	5.52	21863	3.213	37.5003	-34.2873	NAC
NS0162	166	168	NS	X142134	142134	1	G	W	30.89	39.41	2.12	0.3741	0.29	0.097	1.98	2.11	0.116	0.081	0.796	0.163	0.61	6.83	1.03	8.47	21798	2.4786	36.80262	-34.32402	NAC
NS0162	212	214	NS	X142158	142158	1	G	W	31.57	40.97	1.89	0.5031	0.39	0.084	2.07	2.11	0.094	0.08	1.17	0.096	0.3	3.85	1.2	5.35	21857	2.448	36.80262	-34.35462	NAC
NS0162	202	204	NS	X142153	142153	1	G	W	32.3	41.24	1.5	0.5676	0.44	0.068	1.9	2.04	0.104	0.038	0.876	0.084	0.23	4.11	1.17	5.51	21834	1.1628	35.58168	-34.41888	NAC
NS0162	214	216	NS	X142159	142159	1	G	W	31.39	41.97	1.77	0.5547	0.43	0.08	2.01	2.09	0.094	0.059	1.07	0.094	0.27	3.91	1.25	5.43	21858	1.8054	36.45378	-34.64838	NAC
NS0162	198	200	NS	X142151	142151	1	G	W	29.85	40.97	2.94	0.4515	0.35	0.135	2.48	2.29	0.187	0.132	1.6	0.161	0.4	4.14	1.22	5.76	21832	4.0392	39.94218	-35.90298	NAC
NS0162	258	260	NS	X142181	142181	1	G	W	32.7	40.93	1.15	0.5031	0.39	0.055	2.08	2.14	0.093	0.042	0.392	0.085	0.28	3.85	1.35	5.48	21664	1.2852	37.32588	-36.04068	NAC
NS0162	106	108	NS	X142104	142104	1	G	W	29.57	39.16	2.49	0.516	0.4	0.12	2.41	2.35	0.142	0.135	0.791	0.197	0.73	6.73	1.45	8.91	21750	4.131	40.9887	-36.8577	NAC
NS0162	114	116	NS	X142108	142108	1	G	W	24.74	40.88	5.51	0.2838	0.22	0.267	3.51	2.68	0.253	0.313	2.44	0.287	0.97	4.56	1.75	7.28	21754	9.5778	46.74456	-37.16676	NAC
NS0162	240	242	NS	X142172	142172	1	G	W	31.13	39.34	2.11	0.5547	0.43	0.092	2.76	2.28	0.072	0.069	0.567	0.171	0.6	5.39	1.52	7.51	21655	2.1114	39.76776	-37.65636	NAC
NS0162	154	156	NS	X142128	142128	1	G	W	27.67	46.39	1.44	0.5418	0.42	0.063	1.79	2.38	0.069	0.062	0.718	0.084	0.35	5.13	1.58	7.06	21792	1.8972	41.51196	-39.61476	NAC
NS0162	206	208	NS	X142155	142155	1	G	W	31.19	40.68	1.89	0.516	0.4	0.083	2.16	2.57	0.263	0.133	1.05	0.111	0.31	4.09	1.21	5.61	21854	4.0698	44.82594	-40.75614	NAC
NS0162	260	262	NS	X142182	142182	1	G	W	31.3	41.38	1.25	0.516	0.4	0.057	2.21	2.8	0.128	0.092	0.541	0.094	0.32	3.76	1.8	5.88	21665	2.8152	48.8376	-46.0224	NAC
NS0162	90	92	NS	X142095	142095	1	G	W	27.42	44.61	2.65	0.2709	0.21	0.123	1.97	2.88	0.064	0.131	1.16	0.152	0.51	3.74	2.02	6.27	21724	4.0086	50.23296	-46.22436	NAC
NS0162	192	194	NS	X142147	142147	1	G	W	30.23	41.44	1.83	0.4902	0.38	0.083	2.08	2.78	0.101	0.049	1	0.096	0.31	4.32	2.01	6.64	21829	1.4994	48.48876	-46.98936	NAC
NS0162	196	198	NS	X142149	142149	1	G	W	29.92	39.86	2.47	0.516	0.4	0.109	2.3	2.93	0.226	0.099	1.43	0.135	0.39	4.37	1.76	6.52	21831	3.0294	51.10506	-48.07566	NAC
NS0162	98	100	NS	X142099	142099	1	G	W	30.05	41.39	2.44	0.3225	0.25	0.116	2.05	3.16	0.07	0.178	0.932	0.14	0.39	3.15	2.4	5.94	21746	5.4468	55.11672	-49.66992	NAC
NS0162	252	254	NS	X142178	142178	1	G	W	30.18	42.22	0.91	0.4644	0.36	0.042	2.23	3.07	0.115	0.042	0.298	0.074	0.3	4.54	2.17	7.01	21661	1.2852	53.54694	-52.26174	NAC
NS0162	100	102	NS	X142101	142101	1	G	W	30.01	41.99	1.28	0.5934	0.46	0.063	1.62	3.15	0.101	0.038	0.612	0.089	0.29	4.66	2.08	7.03	21747	1.1628	54.9423	-53.7795	NAC
NS0162	64	66	NS	X142082	142082	1	G	W	24.23	38.77	3.57	0.4902	0.38	0.168	2.76	4.35	0.098	0.541	0.886	0.235	0.99	9.36	2.52	12.87	21711	16.5546	75.8727	-59.3181	NAC
NS0163	214	216	NS	X142303	142303	1	G	W	14.61	51.96	8.64	0.1806	0.14	0.378	1.81	1.39	0.053	6.81	2.4	0.039	0.17	7.56	4.42	12.15	21891	208.386	24.24438	184.14162	PAF(HC)
NS0163	288	290	NS	X142340	142340	1	G	W	10.09	55.63	12.22	0.1161	0.09	0.869	3.01	0.93	0.019	5.03	3.1	0.051	0.18	4.46	3.65	8.29	21928	153.918	16.22106	137.69694	PAF(HC)
NS0163	262	264	NS	X142327	142327	1	G	W	10.09	54.56	12.76	0.1677	0.13	0.515	2.43	1.13	0.012	5.11	3.82	0.047	0.15	5.17	4.19	9.51	21915	156.366	19.70946	136.65654	PAF(HC)
NS0163	290	292	NS	X142341	142341	1	G	W	10.6	55.78	10.15	0.1806	0.14	0.549	3.31	1.95	0.014	5.06	2.48	0.028	0.18	4.24	4.68	9.1	21929	154.836	34.0119	120.8241	PAF(HC)
NS0163	212	214	NS	X142302	142302	1	G	W	18.75	45.23	7.59	0.2451	0.19	0.331	2.32	0.37	0.056	4.02	2.1	0.042	0.12	10.56	4.4	15.08	21890	123.012	6.45354	116.55846	PAF(HC)
NS0163	256	258	NS	X142324	142324	1	G	W	10.83	54.19	12.12	0.1677	0.13	0.503	3.05	1.17	0.015	4.34	3.26	0.036	0.14	5.09	3.84	9.07	21912	132.804	20.40714	112.39686	PAF(HC)
NS0163	246	248	NS	X142319	142319	1	G	W	8.84	57.8	13.59	0.129	0.1	0.536	1.93	0.06	0.011	3.57	4.36	0.041	0.14	5.68	2.81	8.63	21907	109.242	1.04652	108.19548	PAF(HC)
NS0163	236	238	NS	X142314	142314	1	G	W	14.99	50.53	9.37	0.3225	0.25	0.401	1.92	0.31	0.03	3.62	2.91	0.033	0.19	8.67	4.09	12.95	21902	110.772	5.40702	105.36498	PAF(HC)
NS0163	258	260	NS	X142325	142325	1	G	W	10.25	55.23	12.34	0.1548	0.12	0.509	2.95	1.18	0.016	4.11	3.42	0.044	0.15	4.8	3.91	8.86	21913	125.766	20.58156	105.18444	PAF(HC)
NS0163	252	254	NS	X142322	142322	1	G	W	10.45	54.26	12.08	0.1935	0.15	0.482	3.11	1.24	0.014	3.8	3.34	0.045	0.15	4.96	4.19	9.3	21910	116.28	21.62808	94.65192	PAF(HC)
NS0163	248	250	NS	X142320	142320	1	G	W	8.36	61.2	12.26	0.129	0.1	0.479	2.09	0.19	0.011	3.18	3.73	0.043	0.16	4.85	2.86	7.87	21908	97.308	3.31398	93.99402	PAF(HC)
NS0163	284	286	NS	X142338	142338	1	G	W	8.51	53.85	14.98	0.0774	0.06	1.406	3.3	1.15	0.03	3.48	4.02	0.082	0.17	3.8	3.37	7.34	21926	106.488	20.0583	86.4297	PAF(HC)
NS0163	250	252	NS	X142321	142321	1	G	W	8.96	56.91	12.74	0.1548	0.12	0.508	2.71	1.11	0.013	3.27	3.74	0.041	0.19	4.53	3.75	8.47	21909	100.062	19.36062	80.70138	PAF(HC)
NS0163	268	270	NS	X142330	142330	1	G	W	10.12	53.54	12.81	0.1935	0.15	0.522	3.47	1.27	0.011	3.31	3.5	0.041	0.15	4.5	4.43	9.08	21918	101.286	22.15134	79.13466	PAF(HC)
NS0163	302	304	NS	X142347	142347	1	G	W	10.15	56.87	13.16	0.1161	0.09	0.567	4.08	0.8	0.012	2.99	2.64	0.033	0.23	3.92	2.86	7.01	21935	91.494	13.9536	77.5404	PAF(HC)
NS0163	266	268	NS	X142329	142329	1	G	W	11.63	50.26	12.26	0.2451	0.19	0.494	3.82	1.61	0.017	3.45	3.28	0.031	0.12	5.36	4.82	10.3	21917	105.57	28.08162	77.48838	PAF(HC)
NS0163	280	282	NS	X142336	142336	1	G	W	11.85	55.08	10.25	0.2967	0.23	0.452	3.59	0.55	0.028	2.69	2.58	0.036	0.13	5.92	4.13	10.18	21924	82.314	9.5931	72.7209	PAF(HC)
NS0163	270	272	NS	X142331	142331	1	G	W	11.49	53.39	11.22	0.2451	0.19	0.464	3.69	1.29	0.013	2.98	2.82	0.034	0.17	5.24	4.27	9.68	21919	91.188	22.50018	68.68782	PAF(HC)
NS0163	286	288	NS	X142339	142339	1	G	W	7.68	57.33	14.94	0.0645	0.05	1.246	3.13	0.67	0.024	2.53	3.95	0.068	0.18	3.42	2.81	6.41	21927	77.418	11.68614	65.73186	PAF(HC)
NS0163	254	256	NS	X142323	142323	1	G	W	10.19	53.61	12.01	0.2322	0.18	0.48	3.33	1.77	0.014	3.15	3.33	0.048	0.2	4.87	4.32	9.39	21911	96.39	30.87234	65.51766	PAF(HC)
NS0163	274	276	NS	X142333	142333	1	G	W	10.01	53.17	12.2	0.2064	0.16	0.561	3.67	1.93	0.025	3.24	3.28	0.041	0.19	4.62	4.69	9.5	21921	99.144	33.66306	65.48094	PAF(HC)
NS0163	278	280	NS	X142335	142335	1	G	W	9.22	58.22	12.69	0.1419	0.11	0.589	3.28	0.87	0.013	2.57	3.13	0.036	0.16	3.94	3.41	7.51	21923	78.642	15.17454	63.46746	PAF(HC)
NS0163	272	274	NS	X142332	142332	1	G	W	10.97	54.47	11.66	0.2322	0.18	0.485	3.7	1.15	0.012	2.63	2.86	0.044	0.16	4.99	3.85	9	21920	80.478	20.0583	60.4197	PAF(HC)
NS0163	300	302	NS	X142346	142346	1	G	W	10.6	56.62	12.43	0.1935	0.15	0.548	4.38	0.97	0.015	2.39	2.27	0.031	0.21	3.92	2.98	7.11	21934	73.134	16.91874	56.21526	PAF(HC)
NS0163	310	312	NS	X142352	142352	1	G	W	12.21	52.44	10.8	0.2967	0.23	0.462	4.74	1.96	0.02	2.92	1.72	0.025	0.2	4.26	3.9	8.36	21939	89.352	34.18632	55.16568	PAF(HC)
NS0163	304	306	NS	X142348	142348	1	G	W	8.19	58.35	15.34	0.0903	0.07	0.512	3.63	0.43	0.036	1.95	3.64	0.049	0.22	3.61	2.26	6.09	21936	59.67	7.50006	52.16994	PAF(HC)
NS0163	220	222	NS	X142306	142306	1	G	W	23.01	42.56	1.24	0.6966	0.54	0.051	3.01	0.76	0.107	1.92	0.361	0.011	0.25	13.73	4.46	18.44	21894	58.752	13.25592	45.49608	PAF(HC)
NS0163	292	294	NS	X142342	142342	1	G	W	11.54	50.58	8.86	0.3741	0.29	0.415	4.49	3.19	0.019	3.3	2.29	0.028	0.15	5.62	5.39	11.16	21930	100.98	55.63998	45.34002	PAF(HC)
NS0163	276	278	NS	X142334	142334	1	G	W	9.21	56.78	13.07	0.1677	0.13	0.667	3.49	1.04	0.014	2.03	3.24	0.036	0.19	4.06	3.51	7.76	21922	62.118	18.13968	43.97832	PAF(HC)
NS0163	298	300	NS	X142345	142345	1	G	W	10.48	56.12	12.36	0.1935	0.15	0.545	4.49	1.17	0.014	2.1	2.19	0.029	0.25	4.21	2.71	7.17	21933	64.26	20.40714	43.85286	PAF(HC)
NS0163	316	318	NS	X142355	142355	1	G	W	13.69	51.35	12.1	0.2451	0.19	0.544	4.81	1.05	0.018	1.67	1.62	0.029	0.27	5.54	2.54	8.35	21942	51.102	18.3141	32.7879	PAF(HC)
NS0163	216	218	NS	X142304	142304	1	G	W	20.88	45.48	3.01	0.6192	0.48	0.128	2.67	0.74	0.087	1.42	0.898	0.017	0.21	13.13	3.38	16.72	21892	43.452	12.90708	30.54492	PAF(HC)
NS0163	306	308	NS	X142349	142349	1	G	W	9.26	54.98	14	0.1548	0.12	0.535	4.4	1.7	0.023	1.95	3.01	0.037	0.21	3.85	2.81	6.87	21937	59.67	29.6514	30.0186	PAF(HC)
NS0163	294	296	NS	X142343	142343	1	G	W	10.28	56.86	12.69	0.1677	0.13	0.569	4.44	1.17	0.017	1.61	2.17	0.038	0.29	4.2	2.37	6.86	21931	49.266	20.40714	28.85886	PAF(HC)
NS0163	318	320	NS	X142356	142356	1	G	W	17.31	46.01	6.2	0.6063	0.47	0.266	5.08	2.51	0.023	2.05	0.478	0.017	0.2	9.08	3.17	12.45	21943	62.73	43.77942	18.95058	PAF(HC)
NS0163	222	224	NS	X142307	142307	1	G	W	24.56	37.31	1.57	0.7095	0.55	0.066	3.79	0.9	0.128	1.06	0.451	0.016	0.31	17.14	2.72	20.17	21895	32.436	15.6978	16.7382	PAF(HC)
NS0163	150	152	NS	X142270	142270	1	G	W	23.55	43.12	5.33	0.4257	0.33	0.227	4.06	0.42	0.051	0.778	0.086	0.05	0.47	10.77	1.43	12.67	21877	23.8068	7.32564	16.48116	PAF(HC)
NS0163	314	316	NS	X142354	142354	1	G	W	15.3	47.75	10.79	0.4128	0.32	0.474	5.25	1.54	0.024	1.38	1.3	0.027	0.3	7.07	2.62	9.99	21941	42.228	26.86068	15.36732	PAF(HC)
NS0163	296	298	NS	X142344	142344	1	G	W	11.05	52.94	11.7	0.2967	0.23	0.508	4.95	2.25	0.017	1.67	1.98	0.028	0.27	4.97	2.93	8.17	21932	51.102	39.2445	11.8575	PAF(HC)
NS0163	234	236	NS	X142313	142313	1	G	W	16.32	55.81	2.81	0.4515	0.35	0.118	2.73	0.64	0.07	0.709	0.801	0.013	0.2	11.34	1.96	13.5	21901	21.6954	11.16288	10.53252	PAF(HC)
NS0163	232	234	NS	X142312	142312	1	G	W	22.12	42.87	1.75	0.645	0.5	0.067	3.41	0.9	0.102	0.784	0.528	0.018	0.33	15.86	2.1	18.29	21900	23.9904	15.6978	8.2926	PAF(LC)
NS0163	244	246	NS	X142318	142318	1	G	W	18.75	51.03	2.5	0.258	0.2	0.1	3.28	0.49	0.064	0.515	0.54	0.02	0.36	13.21	1.58	15.15	21906	15.759	8.54658	7.21242	PAF(LC)
NS0163	326	328	NS	X142360	142360	1	G	W	14.4	50.18	12.71	0.2064	0.16	0.573	4.93	1.3	0.025	0.976	1.19	0.024	0.33	5.08	1.96	7.37	21947	29.8656	22.6746	7.191	PAF(LC)
NS0163	68	70	NS	X142228	142228	1	G	D	27	42.55	4.79	0.4386	0.34	0.207	2.35	0.37	0.103	0.442	0.05	0.014	1.45	8.21	1.02	10.68	21800	13.5252	6.45354	7.07166	PAF(LC)
NS0163	282	284	NS	X142337	142337	1	G	W	8.92	52.49	13.2	0.2322	0.18	0.653	4.05	2.34	0.021	1.52	3.64	0.049	0.17	4.57	4.11	8.85	21925	46.512	40.81428	5.69772	PAF(LC)
NS0163	328	330	NS	X142361	142361	1	G	W	15.03	51.02	9.22	0.3225	0.25	0.415	4.77	2.31	0.026	1.45	0.526	0.019	0.31	5.71	2.54	8.56	21948	44.37	40.29102	4.07898	PAF(LC)
NS0163	320	322	NS	X142357	142357	1	G	W	16.09	47.62	7.53	0.5031	0.39	0.331	5.11	2.68	0.024	1.66	0.608	0.015	0.28	7.81	2.96	11.05	21944	50.796	46.74456	4.05144	PAF(LC)
NS0163	76	78	NS	X142232	142232	1	G	D	33.31	45.44	2.51	0.1548	0.12	0.111	0.38	0.04	0.097	0.07	0.039	0.012	1.88	0.91	0.27	3.06	21804	2.142	0.69768	1.44432	PAF(LC)
NS0163	260	262	NS	X142326	142326	1	G	W	10.97	51.4	11.06	0.2451	0.19	0.448	3.56	2.5	0.023	1.44	3.14	0.043	0.14	4.93	5.22	10.29	21914	44.064	43.605	0.459	PAF(LC)
NS0163	18	20	NS	X142203	142203	1	G	D	29.83	51.68	2.07	0.0258	0.02	0.087	0.04	0.01	0.065	0.014	0.062	0.016	2.37	0.66	0.11	3.14	21739	0.4284	0.17442	0.25398	PAF(LC)
NS0163	44	46	NS	X142216	142216	1	G	D	38.76	36.4	2.42	1.0449	0.81	0.098	0.13	0.01	0.098	0.01	0.594	0.022	2.44	0.78	0.23	3.45	21770	0.306	0.17442	0.13158	PAF(LC)
NS0163	28	30	NS	X142208	142208	1	G	D	31.68	50.53	0.91	0.1419	0.11	0.039	0.09	0.005	0.069	0.007	0.139	0.022	2.12	0.4	0.07	2.59	21744	0.2142	0.08721	0.12699	PAF(LC)
NS0163	22	24	NS	X142205	142205	1	G	D	28.63	52.24	2.4	0.0774	0.06	0.1	0.1	0.01	0.086	0.009	0.131	0.014	2.54	0.75	0.1	3.39	21741	0.2754	0.17442	0.10098	PAF(LC)
NS0163	2	4	NS	X142194	142194	1	G	D	29.64	53.11	0.94	0.0387	0.03	0.051	0.04	0.01	0.113	0.008	0.049	0.015	2.66	0.37	0.02	3.05	21731	0.2448	0.17442	0.07038	PAF(LC)
NS0163	4	6	NS	X142195	142195	1	G	D	35.19	44.9	0.88	0.129	0.1	0.042	0.1	0.01	0.056	0.008	0.067	0.021	2.71	0.43	0.02	3.16	21732	0.2448	0.17442	0.07038	PAF(LC)
NS0163	20	22	NS	X142204	142204	1	G	D	24	62.1	0.73	0.0516	0.04	0.03	0.08	0.005	0.086	0.005	0.046	0.017	2.15	0.31	0.02	2.48	21740	0.153	0.08721	0.06579	PAF(LC)
NS0163	34	36	NS	X142211	142211	1	G	D	38.39	42.36	0.72	0.1806	0.14	0.032	0.04	0.005	0.07	0.005	0.069	0.018	1.23	0.35	0.06	1.64	21765	0.153	0.08721	0.06579	PAF(LC)
NS0163	24	26	NS	X142206	142206	1	G	D	34.4	43.67	2.39	0.1935	0.15	0.101	0.17	0.01	0.1	0.007	0.157	0.014	2.88	0.77	0.06	3.71	21742	0.2142	0.17442	0.03978	PAF(LC)
NS0163	8	10	NS	X142197	142197	1	G	D	30.64	51.61	1.05	0.1548	0.12	0.043	0.14	0.01	0.063	0.006	0.056	0.013	2.14	0.44	0.06	2.64	21734	0.1836	0.17442	0.00918	PAF(LC)
NS0163	10	12	NS	X142198	142198	1	G	D	34.44	39.87	4.19	0.1419	0.11	0.172	0.19	0.01	0.106	0.006	0.044	0.021	4.21	1.44	0.17	5.82	21735	0.1836	0.17442	0.00918	PAF(LC)
NS0163	26	28	NS	X142207	142207	1	G	D	31.14	49.41	1.62	0.1806	0.14	0.072	0.14	0.01	0.071	0.006	0.072	0.019	2.86	0.64	0.1	3.6	21743	0.1836	0.17442	0.00918	PAF(LC)
NS0163	30	32	NS	X142209	142209	1	G	D	35.68	44.51	0.9	0.1161	0.09	0.037	0.07	0.01	0.078	0.006	0.165	0.012	2.1	0.4	0.09	2.59	21763	0.1836	0.17442	0.00918	PAF(LC)
NS0163	38	40	NS	X142213	142213	1	G	D	41.51	35.9	0.85	0.8256	0.64	0.037	0.07	0.01	0.09	0.006	0.143	0.021	1.82	0.48	0.13	2.43	21767	0.1836	0.17442	0.00918	PAF(LC)
NS0163	42	44	NS	X142215	142215	1	G	D	40.5	34.43	1.61	1.1352	0.88	0.066	0.11	0.01	0.089	0.006	0.391	0.018	2.91	0.66	0.16	3.73	21769	0.1836	0.17442	0.00918	PAF(LC)
NS0163	46	48	NS	X142217	142217	1	G	D	32.43	49.07	0.72	0.5031	0.39	0.028	0.12	0.01	0.08	0.006	0.098	0.014	2.32	0.45	0.12	2.89	21771	0.1836	0.17442	0.00918	PAF(LC)
NS0163	48	52	NS	BX143218-BX143219	X143218	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3263	-0.0306	-0.01744	-0.013158	NAF
NS0163	184	188	NS	BX143287-BX143288	X143287	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3297	-0.0306	-0.01744	-0.013158	NAF
NS0163	188	190	NS	BX143289	X143289	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3298	-0.0306	-0.01744	-0.013158	NAF
NS0163	208	210	NS	BX143299	X143299	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3303	-0.0306	-0.01744	-0.013158	NAF
NS0163	210	214	NS	BX143301-BX143302	X143301	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3304	-0.0306	-0.01744	-0.013158	NAF
NS0163	214	218	NS	BX143303-BX143304	X143303	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3305	-0.0306	-0.01744	-0.013158	NAF
NS0163	218	222	NS	BX143305-BX143306	X143305	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3306	-0.0306	-0.01744	-0.013158	NAF
NS0163	222	226	NS	BX143307-BX143308	X143307	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3307	-0.0306	-0.01744	-0.013158	NAF
NS0163	226	230	NS	BX143309-BX143310	X143309	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3308	-0.0306	-0.01744	-0.013158	NAF
NS0163	230	234	NS	BX143311-BX143312	X143311	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3309	-0.0306	-0.01744	-0.013158	NAF
NS0163	234	238	NS	BX143313-BX143314	X143313	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3310	-0.0306	-0.01744	-0.013158	NAF
NS0163	238	242	NS	BX143315-BX143316	X143315	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3311	-0.0306	-0.01744	-0.013158	NAF
NS0163	242	246	NS	BX143317-BX143318	X143317	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3312	-0.0306	-0.01744	-0.013158	NAF
NS0163	246	250	NS	BX143319-BX143320	X143319	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3313	-0.0306	-0.01744	-0.013158	NAF
NS0163	250	254	NS	BX143321-BX143322	X143321	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3314	-0.0306	-0.01744	-0.013158	NAF
NS0163	254	258	NS	BX143323-BX143324	X143323	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3315	-0.0306	-0.01744	-0.013158	NAF
NS0163	258	262	NS	BX143325-BX143326	X143325	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3316	-0.0306	-0.01744	-0.013158	NAF
NS0163	262	266	NS	BX143327-BX143328	X143327	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3317	-0.0306	-0.01744	-0.013158	NAF
NS0163	266	268	NS	BX143329	X143329	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3318	-0.0306	-0.01744	-0.013158	NAF
NS0163	270	274	NS	BX143331-BX143332	X143331	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3319	-0.0306	-0.01744	-0.013158	NAF
NS0163	274	278	NS	BX143333-BX143334	X143333	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3320	-0.0306	-0.01744	-0.013158	NAF
NS0163	278	282	NS	BX143335-BX143336	X143335	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3321	-0.0306	-0.01744	-0.013158	NAF
NS0163	282	286	NS	BX143337-BX143338	X143337	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3322	-0.0306	-0.01744	-0.013158	NAF
NS0163	286	290	NS	BX143339-BX143340	X143339	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3323	-0.0306	-0.01744	-0.013158	NAF
NS0163	290	294	NS	BX143341-BX143342	X143341	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3324	-0.0306	-0.01744	-0.013158	NAF
NS0163	294	298	NS	BX143343-BX143344	X143343	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3325	-0.0306	-0.01744	-0.013158	NAF
NS0163	298	302	NS	BX143345-BX143346	X143345	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3326	-0.0306	-0.01744	-0.013158	NAF
NS0163	302	306	NS	BX143347-BX143348	X143347	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3327	-0.0306	-0.01744	-0.013158	NAF
NS0163	306	308	NS	BX143349	X143349	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3328	-0.0306	-0.01744	-0.013158	NAF
NS0163	308	312	NS	BX143351-BX143352	X143351	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3329	-0.0306	-0.01744	-0.013158	NAF
NS0163	312	316	NS	BX143353-BX143354	X143353	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3330	-0.0306	-0.01744	-0.013158	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0163	316	320	NS	BX143355-BX143356	X143355	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3331	-0.0306	-0.01744	-0.013158	NAF
NS0163	320	324	NS	BX143357-BX143358	X143357	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3332	-0.0306	-0.01744	-0.013158	NAF
NS0163	324	326	NS	BX143359	X143359	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3333	-0.0306	-0.01744	-0.013158	NAF
NS0163	328	330	NS	BX143361	X143361	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3334	-0.0306	-0.01744	-0.013158	NAF
NS0163	12	14	NS	X142199	142199	1	G	D	27.41	56.87	0.77	0.0903	0.07	0.037	0.09	0.01	0.048	0.005	0.035	0.011	2.09	0.35	0.02	2.46	21736	0.153	0.17442	-0.02142	NAF
NS0163	14	16	NS	X142201	142201	1	G	D	32.67	47.83	1.55	0.0903	0.07	0.067	0.13	0.01	0.065	0.005	0.041	0.017	2.38	0.59	0.01	2.98	21737	0.153	0.17442	-0.02142	NAF
NS0163	40	42	NS	X142214	142214	1	G	D	34.75	43.88	1.26	0.4515	0.35	0.052	0.1	0.01	0.115	0.005	0.187	0.024	3.31	0.62	0.12	4.05	21768	0.153	0.17442	-0.02142	NAF
NS0163	52	54	NS	X142220	142220	1	G	D	22.32	62.04	1.79	1.0836	0.84	0.077	0.12	0.01	0.058	0.005	0.117	0.019	2.01	0.67	0.21	2.89	21774	0.153	0.17442	-0.02142	NAF
NS0163	32	34	NS	X142210	142210	1	G	D	37.28	43.05	0.79	0.2193	0.17	0.033	0.09	0.01	0.058	0.004	0.081	0.015	1.77	0.42	0.1	2.29	21764	0.1224	0.17442	-0.05202	NAF
NS0163	36	38	NS	X142212	142212	1	G	D	36.18	44.14	0.78	0.2838	0.22	0.031	0.06	0.01	0.087	0.004	0.085	0.014	1.88	0.38	0.06	2.32	21766	0.1224	0.17442	-0.05202	NAF
NS0163	48	50	NS	X142218	142218	1	G	D	27.41	54.87	0.47	0.3612	0.28	0.018	0.16	0.01	0.128	0.004	0.04	0.013	4.08	0.5	0.1	4.68	21772	0.1224	0.17442	-0.05202	NAF
NS0163	16	18	NS	X142202	142202	1	G	D	35.71	37.56	5.41	0.0774	0.06	0.239	0.08	0.02	0.081	0.009	0.107	0.018	3.56	1.61	0.18	5.35	21738	0.2754	0.34884	-0.07344	NAF
NS0163	50	52	NS	X142219	142219	1	G	D	28.98	51.19	0.7	0.9288	0.72	0.029	0.28	0.01	0.125	0.003	0.074	0.015	4.25	0.63	0.16	5.04	21773	0.0918	0.17442	-0.08262	NAF
NS0163	0	2	NS	X142193	142193	1	G	D	23.73	60.11	2.63	0.0258	0.02	0.177	0.05	0.03	0.024	0.013	0.054	0.023	2.39	0.72	0.05	3.16	21730	0.3978	0.52326	-0.12546	NAF
NS0163	8	12	NS	BX143197-BX143198	X143197	2			69.21	2.115	0.181	0.012	0.00864	0.012	0.101	0.021	0.019	0.007	0.008	0.118	-0.01	-0.01	-0.01	-0.03	3252	0.2142	0.366282	-0.152082	NAF
NS0163	0	4	NS	BX143193-BX143194	X143193	2			67.94	3.093	0.211	0.012	0.00864	0.012	0.099	0.03	0.021	0.012	0.02	0.095	-0.01	-0.01	-0.01	-0.03	3250	0.3672	0.52326	-0.15606	NAF
NS0163	44	48	NS	BX143216-BX143217	X143216	2			67.68	2.309	0.085	0.001	0.00072	0.001	0.053	0.014	0.028	0.002	0.006	0.072	-0.01	-0.01	-0.01	-0.03	3262	0.0612	0.244188	-0.182988	NAF
NS0163	60	62	NS	X142224	142224	1	G	D	31.19	48.11	1.65	0.2064	0.16	0.075	0.19	0.03	0.079	0.011	0.076	0.009	3.59	0.77	0.11	4.47	21778	0.3366	0.52326	-0.18666	NAF
NS0163	40	44	NS	BX143214-BX143215	X143214	2			68.23	2.44	0.085	0.009	0.00648	0.009	0.084	0.021	0.024	0.005	0.013	0.087	-0.01	-0.01	-0.01	-0.03	3261	0.153	0.366282	-0.213282	NAF
NS0163	54	56	NS	X142221	142221	1	G	D	27.77	51.01	3.49	0.3225	0.25	0.154	0.2	0.02	0.073	0.004	0.094	0.016	3.26	1.28	0.15	4.69	21775	0.1224	0.34884	-0.22644	NAF
NS0163	56	58	NS	X142222	142222	1	G	D	22.81	62.28	1.67	0.2193	0.17	0.076	0.17	0.02	0.066	0.004	0.104	0.021	2.23	0.63	0.08	2.94	21776	0.1224	0.34884	-0.22644	NAF
NS0163	16	20	NS	BX143202-BX143203	X143202	2			69.39	1.917	0.209	0.017	0.01224	0.017	0.092	0.02	0.025	0.003	0.006	0.075	-0.01	-0.01	-0.01	-0.03	3255	0.0918	0.34884	-0.25704	NAF
NS0163	28	32	NS	BX143208-BX143209	X143208	2			68.32	2.662	0.08	0.001	0.00072	0.001	0.083	0.021	0.021	0.003	0.007	0.068	-0.01	-0.01	-0.01	-0.03	3258	0.0918	0.366282	-0.274482	NAF
NS0163	24	28	NS	BX143206-BX143207	X143206	2			70.25	1.469	0.143	0.008	0.00576	0.008	0.094	0.022	0.023	0.003	0.007	0.102	-0.01	-0.01	-0.01	-0.03	3257	0.0918	0.383724	-0.291924	NAF
NS0163	58	60	NS	X142223	142223	1	G	D	31.09	47.17	3.81	0.3741	0.29	0.166	0.17	0.03	0.06	0.007	0.053	0.019	2.18	1.33	0.17	3.68	21777	0.2142	0.52326	-0.30906	NAF
NS0163	12	14	NS	BX143199	X143199	2			70.14	1.552	0.102	0.005	0.0036	0.005	0.092	0.02	0.014	0.001	0.006	0.068	0.11	-0.01	-0.01	0.09	3253	0.0306	0.34884	-0.31824	NAF
NS0163	14	16	NS	BX143201	X143201	2			69.1	1.889	0.14	0.012	0.00864	0.012	0.091	0.02	0.02	0.001	0.004	0.065	0.16	-0.01	-0.01	0.14	3254	0.0306	0.34884	-0.31824	NAF
NS0163	36	40	NS	BX143212-BX143213	X143212	2			68.08	2.825	0.087	0.001	0.00072	0.001	0.074	0.022	0.03	0.002	0.003	0.079	-0.01	-0.01	-0.01	-0.03	3260	0.0612	0.383724	-0.322524	NAF
NS0163	56	60	NS	BX143222-BX143223	X143222	2			65.71	4.34	0.134	0.001	0.00072	0.001	0.03	0.026	0.014	0.003	0.005	0.05	-0.01	-0.01	-0.01	-0.03	3265	0.0918	0.453492	-0.361692	NAF
NS0163	32	36	NS	BX143210-BX143211	X143210	2			66.75	2.775	0.087	0.001	0.00072	0.001	0.043	0.023	0.025	0.001	0.001	0.091	-0.01	-0.01	-0.01	-0.03	3259	0.0306	0.401166	-0.370566	NAF
NS0163	64	68	NS	BX143226-BX143227	X143226	2			69.32	1.832	0.096	0.01	0.0072	0.01	0.075	0.029	0.02	0.004	0.002	0.045	0.03	-0.01	-0.01	0.01	3267	0.1224	0.505818	-0.383418	NAF
NS0163	20	24	NS	BX143204-BX143205	X143204	2			67.21	2.741	0.08	0.001	0.00072	0.001	0.032	0.026	0.018	0.002	0.001	0.113	-0.01	-0.01	-0.01	-0.03	3256	0.0612	0.453492	-0.392292	NAF
NS0163	60	64	NS	BX143224-BX143225	X143224	2			66.17	2.879	0.165	0.006	0.00432	0.006	0.036	0.026	0.015	0.002	0.005	0.04	-0.01	-0.01	-0.01	-0.03	3266	0.0612	0.453492	-0.392292	NAF
NS0163	74	78	NS	BX143231-BX143232	X143231	2			68.42	2.289	0.121	0.009	0.00648	0.009	0.084	0.033	0.022	0.005	0.004	0.049	-0.01	-0.01	-0.01	-0.03	3269	0.153	0.575586	-0.422586	NAF
NS0163	4	8	NS	BX143195-BX143196	X143195	2			73.97	2.608	0.236	0.021	0.01512	0.021	0.109	0.035	0.018	0.005	0.011	0.085	-0.01	-0.01	-0.01	-0.03	3251	0.153	0.61047	-0.45747	NAF
NS0163	90	94	NS	BX143239-BX143240	X143239	2			68.57	3.238	0.226	0.017	0.01224	0.017	0.278	0.059	0.01	0.018	0.031	0.063	-0.01	-0.01	-0.01	-0.03	3273	0.5508	1.029078	-0.478278	NAF
NS0163	102	106	NS	BX143245-BX143246	X143245	2			70.7	2.181	0.088	0.007	0.00504	0.007	0.129	0.049	0.009	0.011	0.014	0.05	-0.01	-0.01	-0.01	-0.03	3276	0.3366	0.854658	-0.518058	NAF
NS0163	128	130	NS	BX143259	X143259	2			69.38	2.973	0.213	0.018	0.01296	0.018	0.241	0.06	0.011	0.017	0.018	0.04	-0.01	-0.01	-0.01	-0.03	3283	0.5202	1.04652	-0.52632	NAF
NS0163	62	64	NS	X142225	142225	1	G	D	25.7	55.49	2.83	0.7224	0.56	0.125	0.21	0.04	0.075	0.004	0.139	0.019	2.34	1.07	0.15	3.56	21779	0.1224	0.69768	-0.57528	NAF
NS0163	68	72	NS	BX143228-BX143229	X143228	2			66.73	4.092	0.188	0.011	0.00792	0.011	0.235	0.05	0.011	0.008	0.019	0.045	0.13	-0.01	-0.01	0.11	3268	0.2448	0.8721	-0.6273	NAF
NS0163	94	98	NS	BX143241-BX143242	X143241	2			71.11	1.733	0.045	0.006	0.00432	0.006	0.122	0.043	0.009	0.004	0.016	0.07	-0.01	-0.01	-0.01	-0.03	3274	0.1224	0.750006	-0.627606	NAF
NS0163	78	82	NS	BX143233-BX143234	X143233	2			69.13	2.491	0.076	0.01	0.0072	0.01	0.12	0.048	0.017	0.006	0.01	0.051	-0.01	-0.01	-0.01	-0.03	3270	0.1836	0.837216	-0.653616	NAF
NS0163	86	90	NS	BX143237-BX143238	X143237	2			70.66	1.834	0.047	0.004	0.00288	0.004	0.116	0.048	0.01	0.004	0.01	0.041	-0.01	-0.01	-0.01	-0.03	3272	0.1224	0.837216	-0.714816	NAF
NS0163	98	102	NS	BX143243-BX143244	X143243	2			70.69	1.487	0.029	0.01	0.0072	0.01	0.1	0.048	0.01	0.004	0.008	0.041	-0.01	-0.01	-0.01	-0.03	3275	0.1224	0.837216	-0.714816	NAF
NS0163	82	86	NS	BX143235-BX143236	X143235	2			70.16	2.722	0.078	0.009	0.00648	0.009	0.131	0.051	0.01	0.005	0.021	0.041	-0.01	-0.01	-0.01	-0.03	3271	0.153	0.889542	-0.736542	NAF
NS0163	64	66	NS	X142226	142226	1	G	D	37.6	41.11	1.14	0.1935	0.15	0.052	0.3	0.06	0.156	0.009	0.047	0.016	1.87	0.64	0.02	2.53	21780	0.2754	1.04652	-0.77112	NAF
NS0163	112	116	NS	BX143251-BX143252	X143251	2			69.5	2.895	0.079	0.01	0.0072	0.01	0.181	0.054	0.01	0.004	0.009	0.03	-0.01	-0.01	-0.01	-0.03	3279	0.1224	0.941868	-0.819468	NAF
NS0163	124	128	NS	BX143257-BX143258	X143257	2			69.75	2.971	0.082	0.01	0.0072	0.01	0.198	0.053	0.01	0.003	0.004	0.045	-0.01	-0.01	-0.01	-0.03	3282	0.0918	0.924426	-0.832626	NAF
NS0163	110	112	NS	BX143249	X143249	2			69.99	2.701	0.046	0.01	0.0072	0.01	0.134	0.058	0.012	0.004	0.003	0.049	-0.01	-0.01	-0.01	-0.03	3278	0.1224	1.011636	-0.889236	NAF
NS0163	132	136	NS	BX143261-BX143262	X143261	2			70.23	2.488	0.091	0.021	0.01512	0.021	0.187	0.069	0.011	0.01	0.008	0.043	-0.01	-0.01	-0.01	-0.03	3284	0.306	1.203498	-0.897498	NAF
NS0163	200	204	NS	BX143295-BX143296	X143295	2			70.07	1.617	0.006	0.001	0.00072	0.001	0.132	0.059	0.008	0.004	0.003	0.054	-0.01	-0.01	-0.01	-0.03	3301	0.1224	1.029078	-0.906678	NAF
NS0163	148	152	NS	BX143269-BX143270	X143269	2			67.71	4.783	0.166	0.014	0.01008	0.014	0.28	0.075	0.008	0.012	0.014	0.062	-0.01	-0.01	-0.01	-0.03	3288	0.3672	1.30815	-0.94095	NAF
NS0163	168	172	NS	BX143279-BX143280	X143279	2			69.64	2.889	0.029	0.001	0.00072	0.001	0.149	0.056	0.008	0.001	0.018	0.052	-0.01	-0.01	-0.01	-0.03	3293	0.0306	0.976752	-0.946152	NAF
NS0163	180	184	NS	BX143285-BX143286	X143285	2			69.96	2.835	0.043	0.003	0.00216	0.003	0.144	0.058	0.01	0.002	0.02	0.073	-0.01	-0.01	-0.01	-0.03	3296	0.0612	1.011636	-0.950436	NAF
NS0163	204	208	NS	BX143297-BX143298	X143297	2			69.84	2.666	0.026	0.001	0.00072	0.001	0.166	0.064	0.01	0.005	0.002	0.049	-0.01	-0.01	-0.01	-0.03	3302	0.153	1.116288	-0.963288	NAF
NS0163	164	168	NS	BX143277-BX143278	X143277	2			69.86	2.55	0.024	0.001	0.00072	0.001	0.145	0.057	0.007	0.001	0.017	0.051	-0.01	-0.01	-0.01	-0.03	3292	0.0306	0.994194	-0.963594	NAF
NS0163	176	180	NS	BX143283-BX143284	X143283	2			69.86	3.005	0.064	0.006	0.00432	0.006	0.148	0.065	0.013	0.004	0.021	0.053	-0.01	-0.01	-0.01	-0.03	3295	0.1224	1.13373	-1.01133	NAF
NS0163	172	176	NS	BX143281-BX143282	X143281	2			67.71	4.369	0.064	0.001	0.00072	0.001	0.159	0.06	0.011	0.001	0.039	0.052	-0.01	-0.01	-0.01	-0.03	3294	0.0306	1.04652	-1.01592	NAF
NS0163	116	120	NS	BX143253-BX143254	X143253	2			69.95	2.696	0.06	0.009	0.00648	0.009	0.138	0.065	0.012	0.003	0.005	0.048	-0.01	-0.01	-0.01	-0.03	3280	0.0918	1.13373	-1.04193	NAF
NS0163	120	124	NS	BX143255-BX143256	X143255	2			70.75	2.693	0.055	0.007	0.00504	0.007	0.141	0.071	0.013	0.004	0.001	0.035	-0.01	-0.01	-0.01	-0.03	3281	0.1224	1.238382	-1.115982	NAF
NS0163	152	156	NS	BX143271-BX143272	X143271	2			68.31	4.231	0.077	0.005	0.0036	0.005	0.123	0.071	0.013	0.003	0.057	0.043	-0.01	-0.01	-0.01	-0.03	3289	0.0918	1.238382	-1.146582	NAF
NS0163	144	148	NS	BX143267-BX143268	X143267	2			69.65	3.319	0.069	0.009	0.00648	0.009	0.166	0.077	0.015	0.005	0.01	0.054	-0.01	-0.01	-0.01	-0.03	3287	0.153	1.343034	-1.190034	NAF
NS0163	6	8	NS	X142196	142196	1	G	D	28.39	52.72	1.11	0.0903	0.07	0.096	0.07	0.09	0.063	0.011	0.065	0.017	4.04	0.89	0.16	5.09	21733	0.3366	1.56978	-1.23318	NAF
NS0163	156	160	NS	BX143273-BX143274	X143273	2			66.82	5.454	0.118	0.008	0.00576	0.008	0.213	0.079	0.012	0.004	0.076	0.064	-0.01	-0.01	-0.01	-0.03	3290	0.1224	1.377918	-1.255518	NAF
NS0163	106	110	NS	BX143247-BX143248	X143247	2			70.23	2.487	0.092	0.014	0.01008	0.014	0.199	0.081	0.015	0.005	0.008	0.037	-0.01	-0.01	-0.01	-0.03	3277	0.153	1.412802	-1.259802	NAF
NS0163	136	140	NS	BX143263-BX143264	X143263	2			69.98	2.15	0.033	0.011	0.00792	0.011	0.147	0.091	0.02	0.007	0.004	0.049	-0.01	-0.01	-0.01	-0.03	3285	0.2142	1.587222	-1.373022	NAF
NS0163	160	164	NS	BX143275-BX143276	X143275	2			67.86	5.391	0.092	0.003	0.00216	0.003	0.19	0.085	0.014	0.003	0.064	0.058	-0.01	-0.01	-0.01	-0.03	3291	0.0918	1.48257	-1.39077	NAF
NS0163	192	196	NS	BX143291-BX143292	X143291	2			67.07	3.896	0.002	0.001	0.00072	0.001	0.137	0.085	0.013	0.001	0.001	0.031	-0.01	-0.01	-0.01	-0.03	3299	0.0306	1.48257	-1.45197	NAF
NS0163	196	200	NS	BX143293-BX143294	X143293	2			68.31	2.111	0.027	0.002	0.00144	0.002	0.206	0.091	0.014	0.004	0.007	0.064	-0.01	-0.01	-0.01	-0.03	3300	0.1224	1.587222	-1.464822	NAF
NS0163	52	56	NS	BX143220-BX143221	X143220	2			67.48	3.383	0.116	0.005	0.0036	0.005	0.195	0.1	0.024	0.009	0.009	0.075	-0.01	-0.01	-0.01	-0.03	3264	0.2754	1.7442	-1.4688	NAF
NS0163	140	144	NS	BX143265-BX143266	X143265	2			70.45	2.418	0.049	0.012	0.00864	0.012	0.171	0.1	0.022	0.004	0.003	0.038	-0.01	-0.01	-0.01	-0.03	3286	0.1224	1.7442	-1.6218	NAF
NS0163	308	310	NS	X142351	142351	1	G	W	9.19	53.62	13.13	0.1935	0.15	0.476	4.72	2.79	0.03	1.53	2.76	0.034	0.25	3.91	3.34	7.5	21938	46.818	48.66318	-1.84518	NAF
NS0163	66	68	NS	X142227	142227	1	G	D	30.8	40.65	1.64	0.5031	0.39	0.072	1.71	0.32	0.086	0.12	0.048	0.008	1.77	8.82	0.26	10.85	21799	3.672	5.58144	-1.90944	NAF
NS0163	74	76	NS	X142231	142231	1	G	D	28.13	48.95	0.87	0.3354	0.26	0.038	1.41	0.33	0.081	0.116	0.081	0.014	0.53	6.61	0.26	7.4	21803	3.5496	5.75586	-2.20626	NAF
NS0163	242	244	NS	X142317	142317	1	G	W	21.17	45.39	1.76	0.2064	0.16	0.073	3.66	0.7	0.104	0.309	0.503	0.012	0.42	15.96	1.16	17.54	21905	9.4554	12.2094	-2.754	NAF
NS0163	72	74	NS	X142230	142230	1	G	D	29.52	42.84	1.59	0.4515	0.35	0.069	2.15	0.41	0.089	0.119	0.104	0.011	0.54	9.53	0.13	10.2	21802	3.6414	7.15122	-3.50982	NAF
NS0163	70	72	NS	X142229	142229	1	G	D	26.22	48.55	1.15	0.387	0.3	0.052	1.79	0.32	0.065	0.049	0.227	0.016	0.69	9.22	0.02	9.93	21801	1.4994	5.58144	-4.08204	NAF
NS0163	78	80	NS	X142233	142233	1	G	D	30.11	47.77	1.04	0.2064	0.16	0.047	1.58	0.33	0.093	0.033	0.15	0.016	0.5	5.1	0.05	5.65	21805	1.0098	5.75586	-4.74606	NAF
NS0163	90	92	NS	X142239	142239	1	G	W	29	46.84	1.22	0.2967	0.23	0.054	2.3	0.49	0.1	0.101	0.186	0.017	0.25	6.74	0.07	7.06	21811	3.0906	8.54658	-5.45598	NAF
NS0163	80	82	NS	X142234	142234	1	G	D	27.38	55.1	0.68	0.1548	0.12	0.029	1.17	0.38	0.101	0.019	0.116	0.02	0.15	3.13	-0.13	3.15	21806	0.5814	6.62796	-6.04656	NAF
NS0163	94	96	NS	X142241	142241	1	G	W	31.33	45.31	0.76	0.2967	0.23	0.033	1.84	0.46	0.086	0.052	0.246	0.015	0.18	5.81	-0.14	5.85	21813	1.5912	8.02332	-6.43212	NAF
NS0163	106	108	NS	X142247	142247	1	G	W	30.53	39.14	3.43	0.3225	0.25	0.146	3.78	0.82	0.198	0.255	0.301	0.033	0.35	7.56	0.34	8.25	21837	7.803	14.30244	-6.49944	NAF
NS0163	124	126	NS	X142257	142257	1	G	W	37.64	33.8	0.99	0.6321	0.49	0.042	2.43	0.44	0.034	0.016	0.066	0.031	0.28	7.93	-0.3	7.91	21846	0.4896	7.67448	-7.18488	NAF
NS0163	96	98	NS	X142242	142242	1	G	W	27.84	48.81	0.72	0.1806	0.14	0.032	2.12	0.48	0.093	0.021	0.205	0.015	0.3	7.57	-0.21	7.66	21814	0.6426	8.37216	-7.72956	NAF
NS0163	98	100	NS	X142243	142243	1	G	W	26.62	50.92	0.61	0.1935	0.15	0.026	2.07	0.47	0.078	0.013	0.128	0.009	0.36	7.08	-0.11	7.33	21815	0.3978	8.19774	-7.79994	NAF
NS0163	104	106	NS	X142246	142246	1	G	W	30.08	44.69	1.28	0.3354	0.26	0.055	2.32	0.56	0.109	0.053	0.132	0.024	0.43	7.11	-0.11	7.43	21836	1.6218	9.76752	-8.14572	NAF
NS0163	82	84	NS	X142235	142235	1	G	D	33.03	43.88	1.11	0.1935	0.15	0.048	1.77	0.54	0.099	0.039	0.161	0.028	0.14	4.66	-0.15	4.65	21807	1.1934	9.41868	-8.22528	NAF
NS0163	174	176	NS	X142282	142282	1	G	W	32.09	43	0.69	0.5805	0.45	0.03	1.5	0.5	0.1	0.014	0.279	0.193	0.16	7.13	-0.17	7.12	21691	0.4284	8.721	-8.2926	NAF
NS0163	206	208	NS	X142298	142298	1	G	W	31.57	36.15	0.67	0.4644	0.36	0.029	2.03	0.71	0.115	0.117	0.035	0.109	0.96	13.57	0.09	14.62	21707	3.5802	12.38382	-8.80362	NAF
NS0163	176	178	NS	X142283	142283	1	G	W	26.96	41.75	1.11	0.516	0.4	0.045	2.6	0.66	0.074	0.084	0.391	0.353	0.52	13.17	0.14	13.83	21692	2.5704	11.51172	-8.94132	NAF
NS0163	86	88	NS	X142237	142237	1	G	W	26.42	56.11	0.55	0.1548	0.12	0.024	1.26	0.55	0.072	0.011	0.134	0.015	0.02	3.02	-0.01	3.03	21809	0.3366	9.5931	-9.2565	NAF
NS0163	112	114	NS	X142251	142251	1	G	W	29.97	48.6	0.87	0.2967	0.23	0.039	1.66	0.78	0.043	0.122	0.053	0.015	0.13	4.23	0.15	4.51	21840	3.7332	13.60476	-9.87156	NAF
NS0163	130	132	NS	X142260	142260	1	G	W	27.45	43.36	1.2	0.4386	0.34	0.05	2.96	0.85	0.105	0.158	0.135	0.062	0.51	10.88	0.34	11.73	21849	4.8348	14.8257	-9.9909	NAF
NS0163	88	90	NS	X142238	142238	1	G	W	26.68	55.6	0.65	0.1419	0.11	0.031	1.37	0.62	0.111	0.016	0.164	0.014	0.05	3.27	-0.03	3.29	21810	0.4896	10.81404	-10.32444	NAF
NS0163	172	174	NS	X142281	142281	1	G	W	33.69	38.92	0.71	0.6192	0.48	0.032	1.68	0.62	0.119	0.016	0.239	0.22	0.29	8.24	-0.07	8.46	21888	0.4896	10.81404	-10.32444	NAF
NS0163	240	242	NS	X142316	142316	1	G	W	25.44	35.33	1.53	0.2451	0.19	0.066	4.3	0.85	0.101	0.135	0.404	0.017	0.61	19.69	0.73	21.03	21904	4.131	14.8257	-10.6947	NAF
NS0163	154	156	NS	X142272	142272	1	G	W	34.3	38.54	0.95	0.6837	0.53	0.043	1.62	0.72	0.128	0.059	0.571	0.137	0.17	7.56	-0.21	7.52	21879	1.8054	12.55824	-10.75284	NAF
NS0163	118	120	NS	X142254	142254	1	G	W	34.18	39.32	1.58	0.4644	0.36	0.068	2.49	0.81	0.049	0.105	0.103	0.022	0.22	5.89	0.13	6.24	21843	3.213	14.12802	-10.91502	NAF
NS0163	84	86	NS	X142236	142236	1	G	W	24.97	58.7	0.57	0.1548	0.12	0.025	1.1	0.66	0.082	0.016	0.141	0.015	0.03	2.57	0.09	2.69	21808	0.4896	11.51172	-11.02212	NAF
NS0163	120	122	NS	X142255	142255	1	G	W	37.94	35.03	0.94	0.516	0.4	0.041	2.09	0.69	0.148	0.033	0.035	0.02	0.26	6.29	-0.28	6.27	21844	1.0098	12.03498	-11.02518	NAF
NS0163	210	212	NS	X142301	142301	1	G	W	25.99	37.95	0.65	0.5934	0.46	0.026	2.9	0.87	0.11	0.134	0.105	0.013	0.92	18.57	0.4	19.89	21889	4.1004	15.17454	-11.07414	NAF
NS0163	224	226	NS	X142308	142308	1	G	W	27.58	31.75	0.95	0.3483	0.27	0.036	4.3	0.75	0.093	0.062	0.168	0.017	0.88	20.93	0.42	22.23	21896	1.8972	13.0815	-11.1843	NAF
NS0163	188	190	NS	X142289	142289	1	G	W	26.34	40.26	0.62	0.4128	0.32	0.024	2.27	0.73	0.134	0.049	0.026	0.017	0.9	16.79	0.13	17.82	21698	1.4994	12.73266	-11.23326	NAF
NS0163	194	196	NS	X142292	142292	1	G	W	27.62	37.53	1.22	0.5418	0.42	0.052	2.79	0.67	0.1	0.013	0.008	0.015	0.67	16.92	-0.01	17.58	21701	0.3978	11.68614	-11.28834	NAF
NS0163	148	150	NS	X142269	142269	1	G	W	27.91	42.03	1.05	0.5289	0.41	0.045	2.63	0.72	0.113	0.041	0.108	0.049	0.55	12.44	-0.01	12.98	21876	1.2546	12.55824	-11.30364	NAF
NS0163	144	146	NS	X142267	142267	1	G	W	32.66	38.5	1.39	0.3741	0.29	0.062	2.77	0.81	0.144	0.091	0.221	0.095	0.5	8.61	-0.07	9.04	21874	2.7846	14.12802	-11.34342	NAF
NS0163	186	188	NS	X142288	142288	1	G	W	27.77	35.74	0.52	0.5031	0.39	0.022	2.56	0.77	0.155	0.065	0.013	0.016	1.12	18.59	0.18	19.89	21697	1.989	13.43034	-11.44134	NAF
NS0163	92	94	NS	X142240	142240	1	G	W	28.23	36.28	4.29	0.3483	0.27	0.188	4.86	1.31	0.271	0.371	0.261	0.021	0.37	10.59	0.85	11.81	21812	11.3526	22.84902	-11.49642	NAF
NS0163	226	228	NS	X142309	142309	1	G	W	27.22	29.41	1.35	0.6321	0.49	0.056	4.84	0.99	0.136	0.188	0.343	0.02	0.62	21.83	0.73	23.18	21897	5.7528	17.26758	-11.51478	NAF
NS0163	160	162	NS	X142275	142275	1	G	W	34.75	37.63	0.54	0.6321	0.49	0.023	1.48	0.67	0.078	0.004	0.312	0.09	0.22	8.18	0.03	8.43	21882	0.1224	11.68614	-11.56374	NAF
NS0163	198	200	NS	X142294	142294	1	G	W	30.3	39.9	0.33	0.4773	0.37	0.012	2.16	0.73	0.097	0.034	0.07	0.11	0.6	12.42	-0.1	12.92	21703	1.0404	12.73266	-11.69226	NAF
NS0163	218	220	NS	X142305	142305	1	G	W	24.21	40.21	0.73	0.7353	0.57	0.029	3.27	0.91	0.109	0.134	0.187	0.015	0.57	18.24	0.58	19.39	21893	4.1004	15.87222	-11.77182	NAF
NS0163	114	116	NS	X142252	142252	1	G	W	35.43	33.84	1.29	0.6966	0.54	0.058	2.79	0.77	0.159	0.051	0.09	0.025	0.41	9.15	-0.23	9.33	21841	1.5606	13.43034	-11.86974	NAF
NS0163	200	202	NS	X142295	142295	1	G	W	31.56	35.16	0.41	0.5805	0.45	0.016	2.54	0.79	0.113	0.052	0.092	0.14	0.65	14.6	-0.06	15.19	21704	1.5912	13.77918	-12.18798	NAF
NS0163	312	314	NS	X142353	142353	1	G	W	12.52	50.18	9	0.4386	0.34	0.381	5.22	3.44	0.024	1.55	1.4	0.02	0.23	6.42	3.43	10.08	21940	47.43	60.00048	-12.57048	NAF
NS0163	152	154	NS	X142271	142271	1	G	W	31.09	42.68	0.62	0.6192	0.48	0.027	1.57	0.78	0.099	0.03	0.375	0.049	0.3	8.73	-0.1	8.93	21878	0.918	13.60476	-12.68676	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0163	170	172	NS	X142280	142280	1	G	W	30.73	36.38	0.52	0.5031	0.39	0.021	2.02	0.74	0.084	0.007	0.191	0.149	0.78	14.77	0	15.55	21887	0.2142	12.90708	-12.69288	NAF
NS0163	208	210	NS	X142299	142299	1	G	W	32.71	27.1	0.42	0.5031	0.39	0.016	2.66	0.9	0.129	0.095	0.03	0.004	1.23	19.98	0.24	21.45	21708	2.907	15.6978	-12.7908	NAF
NS0163	238	240	NS	X142315	142315	1	G	W	26.72	34.06	0.9	0.6063	0.47	0.036	3.46	0.87	0.103	0.076	0.274	0.013	0.67	20.07	0.57	21.31	21903	2.3256	15.17454	-12.84894	NAF
NS0163	204	206	NS	X142297	142297	1	G	W	32.73	35.7	0.27	0.5031	0.39	0.01	2.33	0.77	0.089	0.004	0.017	0.131	0.56	12.49	0	13.05	21706	0.1224	13.43034	-13.30794	NAF
NS0163	196	198	NS	X142293	142293	1	G	W	29.91	32.24	0.61	0.645	0.5	0.024	3	0.99	0.156	0.127	0.021	0.033	0.73	18.76	0.21	19.7	21702	3.8862	17.26758	-13.38138	NAF
NS0163	190	192	NS	X142290	142290	1	G	W	29.02	42.33	0.82	0.3741	0.29	0.035	1.87	0.79	0.102	0.01	0.093	0.041	0.71	11.48	-0.1	12.09	21699	0.306	13.77918	-13.47318	NAF
NS0163	166	168	NS	X142278	142278	1	G	W	32.92	33.65	0.61	0.5289	0.41	0.027	2.12	0.8	0.098	0.012	0.236	0.173	0.61	13.99	-0.01	14.59	21885	0.3672	13.9536	-13.5864	NAF
NS0163	228	230	NS	X142310	142310	1	G	W	26.69	32.93	0.96	0.4644	0.36	0.039	4.42	0.87	0.086	0.051	0.185	0.014	0.72	20.96	0.36	22.04	21898	1.5606	15.17454	-13.61394	NAF
NS0163	136	138	NS	X142263	142263	1	G	W	28.13	43.11	0.42	0.2193	0.17	0.018	2.45	0.9	0.125	0.066	0.092	0.04	0.53	11.88	0.02	12.43	21852	2.0196	15.6978	-13.6782	NAF
NS0163	142	144	NS	X142266	142266	1	G	W	32.84	39.97	0.86	0.3354	0.26	0.038	2.3	0.82	0.1	0.016	0.097	0.041	0.42	8.13	-0.05	8.5	21873	0.4896	14.30244	-13.81284	NAF
NS0163	140	142	NS	X142265	142265	1	G	W	32.77	37.21	0.75	0.4128	0.32	0.032	2.59	0.82	0.131	0.014	0.059	0.025	0.5	10.35	-0.14	10.71	21872	0.4284	14.30244	-13.87404	NAF
NS0163	164	166	NS	X142277	142277	1	G	W	30.52	37.43	0.63	0.4515	0.35	0.028	2.1	0.81	0.07	0.006	0.162	0.19	0.47	13.85	0.13	14.45	21884	0.1836	14.12802	-13.94442	NAF
NS0163	102	104	NS	X142245	142245	1	G	W	23.79	60.63	0.36	0.1548	0.12	0.017	0.99	0.83	0.091	0.016	0.061	0.013	-0.01	2.85	0.16	3	21835	0.4896	14.47686	-13.98726	NAF
NS0163	156	158	NS	X142273	142273	1	G	W	33.16	38.26	1.04	0.5547	0.43	0.045	2.1	0.91	0.182	0.056	0.577	0.166	0.27	8.48	-0.04	8.71	21880	1.7136	15.87222	-14.15862	NAF
NS0163	180	182	NS	X142285	142285	1	G	W	31.14	39.74	0.72	0.4902	0.38	0.031	2.09	0.99	0.09	0.098	0.308	0.197	0.32	9.63	0.29	10.24	21694	2.9988	17.26758	-14.26878	NAF
NS0163	324	326	NS	X142359	142359	1	G	W	15.74	48.15	10.65	0.3612	0.28	0.442	5.18	2.25	0.03	0.815	0.876	0.022	0.33	6.54	2.34	9.21	21946	24.939	39.2445	-14.3055	NAF
NS0163	230	232	NS	X142311	142311	1	G	W	27.32	31.42	1.25	0.3612	0.28	0.048	4.43	1.04	0.107	0.122	0.216	0.018	0.66	21.08	0.52	22.26	21899	3.7332	18.13968	-14.40648	NAF
NS0163	108	110	NS	X142248	142248	1	G	W	31.32	45.62	0.78	0.2451	0.19	0.035	1.89	0.86	0.07	0.019	0.022	0.01	0.19	4.99	0.15	5.33	21838	0.5814	15.00012	-14.41872	NAF
NS0163	168	170	NS	X142279	142279	1	G	W	32.13	34.25	0.83	0.645	0.5	0.034	2.02	0.84	0.103	0.005	0.268	0.25	0.52	14.3	0	14.82	21886	0.153	14.65128	-14.49828	NAF
NS0163	146	148	NS	X142268	142268	1	G	W	30.34	46.92	0.56	0.3612	0.28	0.027	1.69	0.87	0.092	0.014	0.075	0.041	0.18	5.97	0	6.15	21875	0.4284	15.17454	-14.74614	NAF
NS0163	192	194	NS	X142291	142291	1	G	W	25.88	39.8	0.99	0.6708	0.52	0.042	2.6	0.92	0.151	0.041	0.008	0.012	0.73	17.06	0.1	17.89	21700	1.2546	16.04664	-14.79204	NAF
NS0163	134	136	NS	X142262	142262	1	G	W	24.79	50.49	0.59	0.2322	0.18	0.026	2.21	1.01	0.083	0.067	0.083	0.038	0.42	9.24	0.3	9.96	21851	2.0502	17.61642	-15.56622	NAF
NS0163	122	124	NS	X142256	142256	1	G	W	31.94	45.72	0.77	0.3354	0.26	0.033	1.67	0.96	0.076	0.037	0.031	0.023	0.11	4.15	0.15	4.41	21845	1.1322	16.74432	-15.61212	NAF
NS0163	110	112	NS	X142249	142249	1	G	W	29.62	48.63	0.69	0.2451	0.19	0.03	1.73	0.97	0.089	0.019	0.021	0.015	0.11	4.58	0.22	4.91	21839	0.5814	16.91874	-16.33734	NAF
NS0163	202	204	NS	X142296	142296	1	G	W	31.79	34.34	0.4	0.5676	0.44	0.014	2.64	1.1	0.157	0.086	0.106	0.129	0.66	14.13	0.07	14.86	21705	2.6316	19.1862	-16.5546	NAF
NS0163	100	102	NS	X142244	142244	1	G	W	26.86	51.14	0.59	0.2064	0.16	0.026	1.86	1	0.186	0.018	0.129	0.015	0.22	6.15	-0.01	6.36	21816	0.5508	17.442	-16.8912	NAF
NS0163	178	180	NS	X142284	142284	1	G	W	32.07	41.08	0.77	0.5031	0.39	0.031	2.06	1.02	0.115	0.024	0.189	0.295	0.22	7.84	0.16	8.22	21693	0.7344	17.79084	-17.05644	NAF
NS0163	128	130	NS	X142259	142259	1	G	W	32.64	39.05	1.32	0.3999	0.31	0.059	2.57	1.16	0.081	0.084	0.136	0.063	0.33	7.66	0.42	8.41	21848	2.5704	20.23272	-17.66232	NAF
NS0163	132	134	NS	X142261	142261	1	G	W	28.29	42.39	1.03	0.3096	0.24	0.047	2.77	1.15	0.153	0.071	0.131	0.061	0.59	10.88	0.2	11.67	21850	2.1726	20.0583	-17.8857	NAF
NS0163	126	128	NS	X142258	142258	1	G	W	35.66	36.25	1.07	0.516	0.4	0.046	2.38	1.1	0.137	0.037	0.06	0.031	0.3	6.77	0.12	7.19	21847	1.1322	19.1862	-18.054	NAF
NS0163	184	186	NS	X142287	142287	1	G	W	30.06	34.74	0.58	0.5676	0.44	0.026	2.46	1.11	0.159	0.036	0.132	0.099	0.74	16.25	0.09	17.08	21696	1.1016	19.36062	-18.25902	NAF
NS0163	162	164	NS	X142276	142276	1	G	W	29.05	37.48	1.71	0.5934	0.46	0.075	2.77	1.26	0.165	0.102	0.468	0.191	0.46	12.9	0.39	13.75	21883	3.1212	21.97692	-18.85572	NAF
NS0163	138	140	NS	X142264	142264	1	G	W	29.55	42.63	0.52	0.2451	0.19	0.023	2.57	1.31	0.096	0.035	0.036	0.021	0.46	9.45	0.44	10.35	21871	1.071	22.84902	-21.77802	NAF
NS0163	182	184	NS	X142286	142286	1	G	W	31.44	37.71	0.65	0.4644	0.36	0.028	2.44	1.36	0.097	0.018	0.177	0.241	0.31	11.23	0.55	12.09	21695	0.5508	23.72112	-23.17032	NAF
NS0163	116	118	NS	X142253	142253	1	G	W	32.46	44.1	0.88	0.387	0.3	0.04	1.69	1.6	0.168	0.032	0.063	0.011	0.01	3.51	0.57	4.09	21842	0.9792	27.9072	-26.928	NAF
NS0163	322	324	NS	X142358	142358	1	G	W	17.31	44.8	7.37	0.5676	0.44	0.328	5.35	3.42	0.08	1.02	0.343	0.012	0.34	8.87	3.02	12.23	21945	31.212	59.65164	-28.43964	NAF
NS0163	158	160	NS	X142274	142274	1	G	W	29.87	33.35	1.32	0.6192	0.48	0.056	3.05	1.81	0.235	0.058	0.635	0.305	0.46	14.68	0.64	15.78	21881	1.7748	31.57002	-29.79522	NAF
NS0163	264	266	NS	X142328	142328	1	G	W	15.77	42.24	7.09	0.4902	0.38	0.275	5.18	3.7	0.079	0.9	1.73	0.022	0.19	11.58	3.38	15.15	21916	27.54	64.5354	-36.9954	NAC
NS0164	24	26	NS	X142374	142374	1	G	D	27.56	52.41	2.15	0.4773	0.37	0.09	0.25	0.005	0.043	0.184	0.268	0.008	3.48	0.6	0.55	4.63	21961	5.6304	0.08721	5.54319	PAF(LC)
NS0164	88	90	NS	X142407	142407	1	G	W	27.95	43.46	2.58	0.5547	0.43	0.106	2.47	0.49	0.069	0.411	1.38	0.045	0.23	7.57	0.75	8.55	21993	12.5766	8.54658	4.03002	PAF(LC)
NS0164	244	246	NS	X142486	142486	1	G	W	23.5	44.1	6.06	0.2838	0.22	0.287	3.49	0.95	0.093	0.563	2.37	0.314	1.22	4.95	1.44	7.61	22071	17.2278	16.5699	0.6579	PAF(LC)
NS0164	8	10	NS	X142366	142366	1	G	D	50.92	12.92	5.64	0.0258	0.02	0.825	0.005	0.005	0.041	0.023	0.039	0.005	6.28	1.28	0.28	7.84	21953	0.7038	0.08721	0.61659	PAF(LC)
NS0164	2	4	NS	X142363	142363	1	G	D	27.45	51.28	3.19	0.0645	0.05	0.282	0.04	0.005	0.073	0.018	0.15	0.016	4.17	0.94	0.18	5.29	21950	0.5508	0.08721	0.46359	PAF(LC)
NS0164	0	2	NS	X142362	142362	1	G	D	32.62	38.42	5.96	0.0258	0.02	0.527	0.1	0.03	0.022	0.032	0.047	0.036	5.75	1.78	0.27	7.8	21949	0.9792	0.52326	0.45594	PAF(LC)
NS0164	62	64	NS	X142393	142393	1	G	D	36.76	44.09	0.91	0.1935	0.15	0.046	0.16	0.06	0.085	0.046	0.284	0.019	0.95	0.73	0.13	1.81	21980	1.4076	1.04652	0.36108	PAF(LC)
NS0164	14	16	NS	X142369	142369	1	G	D	35.62	43.15	1.28	0.1419	0.11	0.055	0.07	0.005	0.079	0.013	0.336	0.022	2.79	0.52	0.16	3.47	21956	0.3978	0.08721	0.31059	PAF(LC)
NS0164	58	60	NS	X142391	142391	1	G	D	33.74	45.11	1.66	0.7095	0.55	0.074	0.17	0.02	0.087	0.021	0.624	0.006	1.9	0.6	0.24	2.74	21978	0.6426	0.34884	0.29376	PAF(LC)
NS0164	50	52	NS	X142387	142387	1	G	D	35.59	44.44	1.5	0.3096	0.24	0.066	0.07	0.005	0.109	0.01	0.428	0.01	1.41	0.43	0.17	2.01	21974	0.306	0.08721	0.21879	PAF(LC)
NS0164	48	50	NS	X142386	142386	1	G	D	27.44	55.14	1.73	0.4515	0.35	0.082	0.06	0.01	0.085	0.012	0.298	0.015	1.84	0.57	0.13	2.54	21973	0.3672	0.17442	0.19278	PAF(LC)
NS0164	4	6	NS	X142364	142364	1	G	D	28.39	50.25	2.87	0.0645	0.05	0.085	0.06	0.005	0.032	0.009	0.062	0.01	4.36	1.01	0.14	5.51	21951	0.2754	0.08721	0.18819	PAF(LC)
NS0164	22	24	NS	X142373	142373	1	G	D	36.56	43.78	0.64	0.1161	0.09	0.028	0.06	0.005	0.107	0.009	0.123	0.012	2.47	0.44	0.13	3.04	21960	0.2754	0.08721	0.18819	PAF(LC)
NS0164	46	48	NS	X142385	142385	1	G	D	22.09	64.09	1.23	0.645	0.5	0.055	0.04	0.01	0.066	0.011	0.152	0.016	1.2	0.4	0.11	1.71	21972	0.3366	0.17442	0.16218	PAF(LC)
NS0164	20	22	NS	X142372	142372	1	G	D	41.06	35.79	0.91	0.1032	0.08	0.035	0.07	0.005	0.134	0.008	0.205	0.019	3.35	0.53	0.14	4.02	21959	0.2448	0.08721	0.15759	PAF(LC)
NS0164	26	28	NS	X142375	142375	1	G	D	38.47	36.3	1.81	0.6321	0.49	0.078	0.18	0.01	0.088	0.009	0.076	0.018	4.44	1.01	0.22	5.67	21962	0.2754	0.17442	0.10098	PAF(LC)
NS0164	12	14	NS	X142368	142368	1	G	D	36.7	44.64	0.72	0.1548	0.12	0.036	0.03	0.005	0.052	0.006	0.13	0.018	1.31	0.33	0.09	1.73	21955	0.1836	0.08721	0.09639	PAF(LC)
NS0164	42	44	NS	X142383	142383	1	G	D	31.21	47.7	1.23	1.2384	0.96	0.057	0.13	0.005	0.135	0.006	0.368	0.012	3.28	0.55	0.23	4.06	21970	0.1836	0.08721	0.09639	PAF(LC)
NS0164	52	54	NS	X142388	142388	1	G	D	31.38	50.99	1.25	0.2451	0.19	0.055	0.05	0.005	0.089	0.006	0.323	0.015	1.45	0.36	0.11	1.92	21975	0.1836	0.08721	0.09639	PAF(LC)
NS0164	40	42	NS	X142382	142382	1	G	D	32.23	43.68	1.31	3.0186	2.34	0.055	0.11	0.01	0.124	0.008	0.36	0.018	3.49	0.8	0.37	4.66	21969	0.2448	0.17442	0.07038	PAF(LC)
NS0164	60	62	NS	X142392	142392	1	G	D	36.07	44.64	0.83	0.3741	0.29	0.04	0.05	0.01	0.078	0.008	0.184	0.007	1.45	0.4	0.1	1.95	21979	0.2448	0.17442	0.07038	PAF(LC)
NS0164	16	18	NS	X142370	142370	1	G	D	37.22	42.61	0.68	0.0645	0.05	0.032	0.04	0.005	0.088	0.005	0.145	0.006	2.46	0.36	0.07	2.89	21957	0.153	0.08721	0.06579	PAF(LC)
NS0164	18	20	NS	X142371	142371	1	G	D	36.21	45.29	0.65	0.129	0.1	0.031	0.04	0.005	0.086	0.005	0.13	0.014	1.69	0.33	0.1	2.12	21958	0.153	0.08721	0.06579	PAF(LC)
NS0164	30	32	NS	X142377	142377	1	G	D	36.17	42.61	0.73	0.1677	0.13	0.031	0.07	0.005	0.077	0.005	0.192	0.016	3.32	0.46	0.11	3.89	21964	0.153	0.08721	0.06579	PAF(LC)
NS0164	28	30	NS	X142376	142376	1	G	D	36.7	36.78	3.16	0.7869	0.61	0.141	0.15	0.01	0.079	0.007	0.277	0.016	4.23	1.23	0.29	5.75	21963	0.2142	0.17442	0.03978	PAF(LC)
NS0164	32	34	NS	X142378	142378	1	G	D	33.93	44.55	1.19	0.516	0.4	0.049	0.14	0.01	0.107	0.007	0.338	0.017	3.35	0.56	0.18	4.09	21965	0.2142	0.17442	0.03978	PAF(LC)
NS0164	10	12	NS	X142367	142367	1	G	D	38.55	40.99	0.94	0.0645	0.05	0.059	0.03	0.005	0.069	0.004	0.16	0.009	2.14	0.35	0.07	2.56	21954	0.1224	0.08721	0.03519	PAF(LC)
NS0164	34	36	NS	X142379	142379	1	G	D	34.37	46.41	0.73	0.2709	0.21	0.032	0.07	0.005	0.084	0.003	0.201	0.017	2.32	0.39	0.12	2.83	21966	0.0918	0.08721	0.00459	PAF(LC)
NS0164	44	46	NS	X142384	142384	1	G	D	16.48	71.77	1.51	0.7353	0.57	0.063	0.06	0.005	0.051	0.003	0.278	0.023	0.84	0.44	0.17	1.45	21971	0.0918	0.08721	0.00459	PAF(LC)
NS0164	56	58	NS	X142390	142390	1	G	D	36.06	45.65	0.67	0.3354	0.26	0.032	0.03	0.005	0.069	0.003	0.25	0.016	0.81	0.24	0.05	1.1	21977	0.0918	0.08721	0.00459	PAF(LC)
NS0164	258	262	NS	BX143493-BX143494	X143493	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3386	-0.0306	-0.01744	-0.013158	NAF
NS0164	262	266	NS	BX143495-BX143496	X143495	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3387	-0.0306	-0.01744	-0.013158	NAF
NS0164	266	270	NS	BX143497-BX143498	X143497	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3388	-0.0306	-0.01744	-0.013158	NAF
NS0164	270	272	NS	BX143499	X143499	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3389	-0.0306	-0.01744	-0.013158	NAF
NS0164	286	290	NS	BX143508-BX143509	X143508	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3393	-0.0306	-0.01744	-0.013158	NAF
NS0164	290	294	NS	BX143510-BX143511	X143510	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3394	-0.0306	-0.01744	-0.013158	NAF
NS0164	294	298	NS	BX143512-BX143513	X143512	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3395	-0.0306	-0.01744	-0.013158	NAF
NS0164	298	300	NS	BX143514	X143514	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	3396	-0.0306	-0.01744	-0.013158	NAF
NS0164	36	38	NS	X142380	142380	1	G	D	34.77	41.93	1.56	0.645	0.5	0.068	0.18	0.01	0.106	0.005	0.403	0.012	4.01	0.66	0.18	4.85	21967	0.153	0.17442	-0.02142	NAF
NS0164	38	40	NS	X142381	142381	1	G	D	35.05	41.65	1.9	0.6063	0.47	0.081	0.15	0.01	0.138	0.004	0.201	0.002	3.76	0.82	0.15	4.73	21968	0.1224	0.17442	-0.05202	NAF
NS0164	54	56	NS	X142389	142389	1	G	D	33	48.04	1.49	0.1161	0.09	0.069	0.07	0.01	0.112	0.003	0.49	0.016	1.82	0.38	0.13	2.33	21976	0.0918	0.17442	-0.08262	NAF
NS0164	54	56	NS	BX143389	X143389	2			65.95	4.549	0.153	0.001	0.00072	0.001	0.048	0.034	0.028	0.016	0.033	0.05	-0.01	-0.01	-0.01	-0.03	3335	0.4896	0.593028	-0.103428	NAF
NS0164	6	8	NS	X142365	142365	1	G	D	48.15	13.9	4.71	0.0258	0.02	0.826	0.005	0.08	0.052	0.04	0.014	0.016	8.99	2.19	0.52	11.7	21952	1.224	1.39536	-0.17136	NAF
NS0164	58	62	NS	BX143391-BX143392	X143391	2			67.76	3.416	0.119	0.004	0.00288	0.004	0.073	0.025	0.025	0.008	0.018	0.039	-0.01	-0.01	-0.01	-0.03	3336	0.2448	0.43605	-0.19125	NAF
NS0164	76	80	NS	BX143401-BX143402	X143401	2			67.45	4.831	0.493	0.03	0.0216	0.03	0.205	0.065	0.012	0.028	0.304	0.054	-0.01	-0.01	-0.01	-0.03	3341	0.8568	1.13373	-0.27693	NAF
NS0164	66	70	NS	BX143395-BX143396	X143395	2			69.03	4.042	0.255	0.019	0.01368	0.019	0.148	0.046	0.009	0.015	0.157	0.061	-0.01	-0.01	-0.01	-0.03	3338	0.459	0.802332	-0.343332	NAF
NS0164	108	112	NS	BX143417-BX143418	X143417	2			67.7	5.349	0.196	0.019	0.01368	0.019	0.204	0.065	0.011	0.021	0.09	0.055	-0.01	-0.01	-0.01	-0.03	3349	0.6426	1.13373	-0.49113	NAF
NS0164	62	66	NS	BX143393-BX143394	X143393	2			67.36	4.845	0.182	0.01	0.0072	0.01	0.133	0.041	0.015	0.006	0.081	0.056	-0.01	-0.01	-0.01	-0.03	3337	0.1836	0.715122	-0.531522	NAF
NS0164	100	104	NS	BX143413-BX143414	X143413	2			68.57	5.544	0.219	0.03	0.0216	0.03	0.212	0.056	0.009	0.013	0.133	0.046	-0.01	-0.01	-0.01	-0.03	3347	0.3978	0.976752	-0.578952	NAF
NS0164	156	160	NS	BX143441-BX143442	X143441	2			68.72	5.28	0.3	0.018	0.01296	0.018	0.139	0.065	0.013	0.018	0.222	0.067	-0.01	-0.01	-0.01	-0.03	3361	0.5508	1.13373	-0.58293	NAF
NS0164	70	74	NS	BX143397-BX143398	X143397	2			70	3.667	0.147	0.015	0.0108	0.015	0.142	0.054	0.011	0.009	0.05	0.052	-0.01	-0.01	-0.01	-0.03	3339	0.2754	0.941868	-0.666468	NAF
NS0164	88	92	NS	BX143407-BX143408	X143407	2			68.67	3.531	0.153	0.014	0.01008	0.014	0.151	0.055	0.01	0.009	0.079	0.041	-0.01	-0.01	-0.01	-0.03	3344	0.2754	0.95931	-0.68391	NAF
NS0164	74	76	NS	BX143399	X143399	2			70.31	3.03	0.138	0.013	0.00936	0.013	0.162	0.064	0.012	0.011	0.04	0.043	-0.01	-0.01	-0.01	-0.03	3340	0.3366	1.116288	-0.779688	NAF
NS0164	288	290	NS	X142509	142509	1	G	W	22.77	46.97	7.14	0.1935	0.15	0.344	3.73	0.88	0.057	0.476	1.03	0.261	1.09	4.25	1.33	6.67	22093	14.5656	15.34896	-0.78336	NAF
NS0164	128	132	NS	BX143427-BX143428	X143427	2			66.39	6.807	0.343	0.02	0.0144	0.02	0.201	0.076	0.012	0.017	0.26	0.063	-0.01	-0.01	-0.01	-0.03	3354	0.5202	1.325592	-0.805392	NAF
NS0164	92	96	NS	BX143409-BX143410	X143409	2			69.56	4.097	0.11	0.022	0.01584	0.022	0.171	0.06	0.012	0.007	0.037	0.057	-0.01	-0.01	-0.01	-0.03	3345	0.2142	1.04652	-0.83232	NAF
NS0164	124	128	NS	BX143425-BX143426	X143425	2			68.57	5.378	0.195	0.01	0.0072	0.01	0.16	0.064	0.009	0.009	0.137	0.055	-0.01	-0.01	-0.01	-0.03	3353	0.2754	1.116288	-0.840888	NAF
NS0164	84	88	NS	BX143405-BX143406	X143405	2			70.14	2.894	0.075	0.009	0.00648	0.009	0.124	0.065	0.015	0.008	0.045	0.07	-0.01	-0.01	-0.01	-0.03	3343	0.2448	1.13373	-0.88893	NAF
NS0164	194	198	NS	BX143461-BX143462	X143461	2			66.65	5.755	0.505	0.067	0.04824	0.067	0.347	0.104	0.014	0.03	0.222	0.097	-0.01	-0.01	-0.01	-0.03	3370	0.918	1.813968	-0.895968	NAF
NS0164	80	84	NS	BX143403-BX143404	X143403	2			68.45	4.772	0.141	0.013	0.00936	0.013	0.169	0.071	0.013	0.011	0.084	0.068	-0.01	-0.01	-0.01	-0.03	3342	0.3366	1.238382	-0.901782	NAF
NS0164	96	100	NS	BX143411-BX143412	X143411	2			69.34	3.742	0.085	0.012	0.00864	0.012	0.148	0.064	0.012	0.006	0.029	0.043	-0.01	-0.01	-0.01	-0.03	3346	0.1836	1.116288	-0.932688	NAF
NS0164	132	134	NS	BX143429	X143429	2			68.47	5.409	0.172	0.01	0.0072	0.01	0.142	0.062	0.012	0.003	0.159	0.055	-0.01	-0.01	-0.01	-0.03	3355	0.0918	1.081404	-0.989604	NAF
NS0164	246	248	NS	X142487	142487	1	G	W	24.16	43.7	5.3	0.2451	0.19	0.254	3.62	0.68	0.094	0.355	1.46	0.25	1.17	6.97	1.03	9.17	22072	10.863	11.86056	-0.99756	NAF
NS0164	160	164	NS	BX143443-BX143444	X143443	2			69.83	4.108	0.192	0.018	0.01296	0.018	0.13	0.073	0.015	0.009	0.171	0.053	-0.01	-0.01	-0.01	-0.03	3362	0.2754	1.273266	-0.997866	NAF
NS0164	148	152	NS	BX143437-BX143438	X143437	2			69.8	4.391	0.131	0.009	0.00648	0.009	0.113	0.061	0.013	0.002	0.12	0.052	-0.01	-0.01	-0.01	-0.03	3359	0.0612	1.063962	-1.002762	NAF
NS0164	214	218	NS	BX143471-BX143472	X143471	2			68.15	4.164	0.363	0.088	0.06336	0.088	0.306	0.102	0.013	0.024	0.071	0.085	-0.01	-0.01	-0.01	-0.03	3375	0.7344	1.779084	-1.044684	NAF
NS0164	168	172	NS	BX143447-BX143448	X143447	2			69.33	3.813	0.137	0.009	0.00648	0.009	0.116	0.076	0.016	0.009	0.114	0.081	-0.01	-0.01	-0.01	-0.03	3364	0.2754	1.325592	-1.050192	NAF
NS0164	140	144	NS	BX143433-BX143434	X143433	2			68.19	6.12	0.146	0.009	0.00648	0.009	0.143	0.068	0.014	0.004	0.138	0.065	-0.01	-0.01	-0.01	-0.03	3357	0.1224	1.186056	-1.063656	NAF
NS0164	104	108	NS	BX143415-BX143416	X143415	2			67.27	6.064	0.183	0.013	0.00936	0.013	0.205	0.074	0.012	0.007	0.096	0.059	-0.01	-0.01	-0.01	-0.03	3348	0.2142	1.290708	-1.076508	NAF
NS0164	164	168	NS	BX143445-BX143446	X143445	2			68.9	4.094	0.216	0.016	0.01152	0.016	0.158	0.08	0.017	0.01	0.151	0.083	-0.01	-0.01	-0.01	-0.03	3363	0.306	1.39536	-1.08936	NAF
NS0164	136	140	NS	BX143431-BX143432	X143431	2			67.33	6.355	0.215	0.012	0.00864	0.012	0.155	0.072	0.014	0.005	0.172	0.055	-0.01	-0.01	-0.01	-0.03	3356	0.153	1.255824	-1.102824	NAF
NS0164	196	198	NS	X142462	142462	1	G	W	15.41	53.47	9	0.2322	0.18	0.415	2.78	1.12	0.03	0.602	5.6	0.194	0.75	2.66	1.53	4.94	22047	18.4212	19.53504	-1.11384	NAF
NS0164	218	222	NS	BX143473-BX143474	X143473	2			64.92	6.037	0.417	0.083	0.05976	0.083	0.319	0.108	0.014	0.025	0.085	0.104	-0.01	-0.01	-0.01	-0.03	3376	0.765	1.883736	-1.118736	NAF
NS0164	144	148	NS	BX143435-BX143436	X143435	2			69.29	4.557	0.143	0.015	0.0108	0.015	0.14	0.079	0.017	0.007	0.127	0.06	-0.01	-0.01	-0.01	-0.03	3358	0.2142	1.377918	-1.163718	NAF
NS0164	202	206	NS	BX143465-BX143466	X143465	2			68.51	4.861	0.292	0.037	0.02664	0.037	0.293	0.106	0.019	0.022	0.107	0.073	0.18	-0.01	-0.01	0.16	3372	0.6732	1.848852	-1.175652	NAF
NS0164	172	174	NS	BX143449	X143449	2			68.38	5.504	0.25	0.016	0.01152	0.016	0.154	0.087	0.021	0.011	0.204	0.067	-0.01	-0.01	-0.01	-0.03	3365	0.3366	1.517454	-1.180854	NAF
NS0164	222	226	NS	BX143475-BX143476	X143475	2			63.22	7.678	0.443	0.087	0.06264	0.087	0.423	0.143	0.019	0.042	0.09	0.157	-0.01	-0.01	-0.01	-0.03	3377	1.2852	2.494206	-1.209006	NAF
NS0164	152	156	NS	BX143439-BX143440	X143439	2			68.98	4.183	0.115	0.009	0.00648	0.009	0.104	0.073	0.014	0.002	0.11	0.044	-0.01	-0.01	-0.01	-0.03	3360	0.0612	1.273266	-1.212066	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0164	274	278	NS	BX143502-BX143503	X143502	2			59.89	10.962	0.706	0.148	0.10656	0.148	0.508	0.152	0.021	0.047	0.136	0.135	-0.01	-0.01	-0.01	-0.03	3390	1.4382	2.651184	-1.212984	NAF
NS0164	184	188	NS	BX143456-BX143457	X143456	2			66.48	7.081	0.389	0.032	0.02304	0.032	0.325	0.111	0.017	0.021	0.209	0.074	0.09	-0.01	-0.01	0.07	3368	0.6426	1.936062	-1.293462	NAF
NS0164	176	180	NS	BX143452-BX143453	X143452	2			67.74	6.005	0.275	0.026	0.01872	0.026	0.279	0.111	0.02	0.02	0.148	0.096	-0.01	-0.01	-0.01	-0.03	3366	0.612	1.936062	-1.324062	NAF
NS0164	120	124	NS	BX143423-BX143424	X143423	2			67.55	6.382	0.196	0.01	0.0072	0.01	0.154	0.083	0.009	0.004	0.17	0.044	-0.01	-0.01	-0.01	-0.03	3352	0.1224	1.447686	-1.325286	NAF
NS0164	112	116	NS	BX143419-BX143420	X143419	2			67.41	5.938	0.322	0.032	0.02304	0.032	0.299	0.137	0.012	0.032	0.116	0.104	-0.01	-0.01	-0.01	-0.03	3350	0.9792	2.389554	-1.410354	NAF
NS0164	230	234	NS	BX143479-BX143480	X143479	2			68.24	4.49	0.294	0.047	0.03384	0.047	0.26	0.113	0.017	0.017	0.084	0.059	0.19	-0.01	-0.01	0.17	3379	0.5202	1.970946	-1.450746	NAF
NS0164	246	250	NS	BX143487-BX143488	X143487	2			66.65	6.264	0.444	0.054	0.03888	0.054	0.402	0.145	0.024	0.032	0.094	0.142	-0.01	-0.01	-0.01	-0.03	3383	0.9792	2.52909	-1.54989	NAF
NS0164	116	120	NS	BX143421-BX143422	X143421	2			67.13	6.991	0.406	0.025	0.018	0.025	0.224	0.118	0.01	0.016	0.238	0.059	-0.01	-0.01	-0.01	-0.03	3351	0.4896	2.058156	-1.568556	NAF
NS0164	238	242	NS	BX143483-BX143484	X143483	2			68.85	3.614	0.278	0.043	0.03096	0.043	0.252	0.12	0.021	0.017	0.081	0.071	0.08	-0.01	-0.01	0.06	3381	0.5202	2.09304	-1.57284	NAF
NS0164	180	184	NS	BX143454-BX143455	X143454	2			66.64	6.426	0.288	0.034	0.02448	0.034	0.304	0.134	0.017	0.016	0.152	0.073	-0.01	-0.01	-0.01	-0.03	3367	0.4896	2.337228	-1.847628	NAF
NS0164	198	202	NS	BX143463-BX143464	X143463	2			66.21	6.092	0.321	0.028	0.02016	0.028	0.34	0.133	0.017	0.015	0.106	0.069	0.24	-0.01	-0.01	0.22	3371	0.459	2.319786	-1.860786	NAF
NS0164	278	282	NS	BX143504-BX143505	X143504	2			62.77	10.156	0.625	0.099	0.07128	0.099	0.468	0.184	0.032	0.042	0.128	0.104	-0.01	-0.01	-0.01	-0.03	3391	1.2852	3.209328	-1.924128	NAF
NS0164	188	192	NS	BX143458-BX143459	X143458	2			66.45	6.916	0.262	0.024	0.01728	0.024	0.267	0.128	0.018	0.01	0.141	0.062	0.15	-0.01	-0.01	0.13	3369	0.306	2.232576	-1.926576	NAF
NS0164	254	258	NS	BX143491-BX143492	X143491	2			67.38	5.5	0.387	0.056	0.04032	0.056	0.296	0.156	0.024	0.025	0.079	0.082	0.25	-0.01	-0.01	0.23	3385	0.765	2.720952	-1.955952	NAF
NS0164	206	210	NS	BX143467-BX143468	X143467	2			66.35	7.025	0.274	0.025	0.018	0.025	0.27	0.131	0.016	0.01	0.131	0.059	0.11	-0.01	-0.01	0.09	3373	0.306	2.284902	-1.978902	NAF
NS0164	234	238	NS	BX143481-BX143482	X143481	2			67.93	4.708	0.325	0.045	0.0324	0.045	0.262	0.147	0.019	0.018	0.09	0.066	0.13	-0.01	-0.01	0.11	3380	0.5508	2.563974	-2.013174	NAF
NS0164	242	246	NS	BX143485-BX143486	X143485	2			69.04	3.377	0.312	0.05	0.036	0.05	0.239	0.147	0.03	0.017	0.079	0.067	-0.01	-0.01	-0.01	-0.03	3382	0.5202	2.563974	-2.043774	NAF
NS0164	282	286	NS	BX143506-BX143507	X143506	2			61	12.655	0.57	0.068	0.04896	0.068	0.459	0.188	0.024	0.034	0.152	0.101	-0.01	-0.01	-0.01	-0.03	3392	1.0404	3.279096	-2.238696	NAF
NS0164	226	230	NS	BX143477-BX143478	X143477	2			67.18	5.937	0.294	0.028	0.02016	0.028	0.273	0.154	0.016	0.013	0.091	0.085	0.12	-0.01	-0.01	0.1	3378	0.3978	2.686068	-2.288268	NAF
NS0164	224	226	NS	X142476	142476	1	G	W	22.19	45.62	6.13	0.3741	0.29	0.281	3.05	1.12	0.069	0.562	2.21	0.275	1.05	5.76	1.46	8.27	22061	17.1972	19.53504	-2.33784	NAF
NS0164	210	214	NS	BX143469-BX143470	X143469	2			67.25	5.895	0.293	0.032	0.02304	0.032	0.265	0.169	0.017	0.017	0.132	0.061	-0.01	-0.01	-0.01	-0.03	3374	0.5202	2.947698	-2.427498	NAF
NS0164	250	252	NS	BX143489	X143489	2			66.65	6.387	0.294	0.032	0.02304	0.032	0.282	0.188	0.028	0.013	0.091	0.063	0.09	-0.01	-0.01	0.07	3384	0.3978	3.279096	-2.881296	NAF
NS0164	66	68	NS	X142395	142395	1	G	W	31.68	42.39	1.15	0.5934	0.46	0.049	1.48	0.38	0.086	0.094	0.341	0.043	0.47	7.02	0.06	7.55	21982	2.8764	6.62796	-3.75156	NAF
NS0164	64	66	NS	X142394	142394	1	G	W	36.37	37.17	1.08	0.5547	0.43	0.046	1.33	0.34	0.09	0.054	0.424	0.081	0.42	5.91	0.03	6.36	21981	1.6524	5.93028	-4.27788	NAF
NS0164	68	70	NS	X142396	142396	1	G	W	33.31	35.17	1.81	0.6708	0.52	0.08	2.13	0.55	0.103	0.129	0.873	0.049	0.5	9.6	0	10.1	21983	3.9474	9.5931	-5.6457	NAF
NS0164	194	196	NS	X142461	142461	1	G	W	26.66	40.23	3.24	0.516	0.4	0.142	2.99	0.74	0.115	0.237	1.66	0.153	0.82	10.38	0.6	11.8	22046	7.2522	12.90708	-5.65488	NAF
NS0164	294	296	NS	X142512	142512	1	G	W	23.7	43.44	4.9	0.2838	0.22	0.236	3.37	0.84	0.071	0.293	0.601	0.159	0.93	9.32	0.91	11.16	22096	8.9658	14.65128	-5.68548	NAF
NS0164	76	78	NS	X142401	142401	1	G	W	27.95	40.18	3.04	0.5934	0.46	0.131	2.72	0.82	0.118	0.272	1.37	0.032	0.37	9.6	0.5	10.47	21987	8.3232	14.30244	-5.97924	NAF
NS0164	268	270	NS	X142498	142498	1	G	W	22.62	45.84	4.71	0.2838	0.22	0.23	3.15	1.01	0.073	0.35	0.724	0.166	1.06	8.21	1.19	10.46	22083	10.71	17.61642	-6.90642	NAF
NS0164	128	130	NS	X142427	142427	1	G	W	26.99	45.43	2.25	0.7353	0.57	0.099	2.52	1.45	0.091	0.574	1.59	0.094	0.19	4.51	1.31	6.01	22013	17.5644	25.2909	-7.7265	NAF
NS0164	262	264	NS	X142495	142495	1	G	W	22.19	47.03	4.81	0.2967	0.23	0.233	3.18	0.98	0.11	0.302	0.75	0.178	0.97	7.96	1.01	9.94	22080	9.2412	17.09316	-7.85196	NAF
NS0164	260	262	NS	X142494	142494	1	G	W	22.6	45.88	5.79	0.2838	0.22	0.284	3.59	1.07	0.091	0.347	1.16	0.257	1.15	5.95	1.23	8.33	22079	10.6182	18.66294	-8.04474	NAF
NS0164	72	74	NS	X142398	142398	1	G	W	34.52	37.94	1.01	0.645	0.5	0.041	1.82	0.54	0.07	0.041	0.306	0.01	0.29	7.8	-0.23	7.86	21985	1.2546	9.41868	-8.16408	NAF
NS0164	218	220	NS	X142473	142473	1	G	W	22.3	47.74	4.94	0.3354	0.26	0.234	3.11	1.2	0.071	0.407	1.52	0.309	1.17	5.63	1.29	8.09	22058	12.4542	20.9304	-8.4762	NAF
NS0164	84	86	NS	X142405	142405	1	G	W	33.69	39.08	0.77	0.5676	0.44	0.033	1.66	0.54	0.086	0.022	0.408	0.019	0.35	8.17	-0.29	8.23	21991	0.6732	9.41868	-8.74548	NAF
NS0164	264	266	NS	X142496	142496	1	G	W	23.36	44.54	5.34	0.3483	0.27	0.28	3.47	1.13	0.111	0.348	1.09	0.254	1.2	6.69	1.16	9.05	22081	10.6488	19.70946	-9.06066	NAF
NS0164	70	72	NS	X142397	142397	1	G	W	31.09	41.15	1.86	0.5418	0.42	0.083	2.07	0.82	0.134	0.161	0.434	0.049	0.28	7.4	0.12	7.8	21984	4.9266	14.30244	-9.37584	NAF
NS0164	232	234	NS	X142480	142480	1	G	W	27.94	40.3	3.88	0.4515	0.35	0.18	2.7	1.24	0.092	0.369	1.45	0.246	0.92	6.76	0.96	8.64	22065	11.2914	21.62808	-10.33668	NAF
NS0164	258	260	NS	X142493	142493	1	G	W	23.82	42.94	5.13	0.3483	0.27	0.256	3.52	1.21	0.12	0.334	1.09	0.236	1.1	7.78	1.1	9.98	22078	10.2204	21.10482	-10.88442	NAF
NS0164	266	268	NS	X142497	142497	1	G	W	22.39	46.13	5.72	0.3354	0.26	0.276	3.62	1.31	0.095	0.387	0.971	0.232	1.14	6.13	1.4	8.67	22082	11.8422	22.84902	-11.00682	NAF
NS0164	86	88	NS	X142406	142406	1	G	W	33.46	36.24	0.81	0.6708	0.52	0.032	2.07	0.68	0.099	0.025	0.454	0.02	0.49	10.21	-0.14	10.56	21992	0.765	11.86056	-11.09556	NAF
NS0164	274	276	NS	X142502	142502	1	G	W	23.93	43.91	5.09	0.3483	0.27	0.246	3.29	1.29	0.096	0.364	1.12	0.257	1.17	6.9	1.27	9.34	22086	11.1384	22.50018	-11.36178	NAF
NS0164	296	298	NS	X142513	142513	1	G	W	19.3	49.95	8.19	0.1935	0.15	0.396	4.18	1.38	0.052	0.415	0.528	0.127	0.67	4.08	1.48	6.23	22097	12.699	24.06996	-11.37096	NAF
NS0164	156	158	NS	X142441	142441	1	G	W	33.85	39.62	1.63	0.6837	0.53	0.069	2.08	1.3	0.097	0.363	1.37	0.033	-0.05	3.38	0.86	4.19	22027	11.1078	22.6746	-11.5668	NAF
NS0164	270	272	NS	X142499	142499	1	G	W	23.72	44.5	4.19	0.2193	0.17	0.207	2.9	1.13	0.054	0.261	0.676	0.174	0.99	9.29	0.95	11.23	22084	7.9866	19.70946	-11.72286	NAF
NS0164	290	292	NS	X142510	142510	1	G	W	24.83	41.64	3.01	0.3741	0.29	0.143	2.64	1.21	0.084	0.283	0.456	0.119	0.81	12.42	0.8	14.03	22094	8.6598	21.10482	-12.44502	NAF
NS0164	100	102	NS	X142413	142413	1	G	W	26.28	46.6	1.26	0.7611	0.59	0.057	2.74	1.37	0.05	0.311	0.588	0.059	0.26	7.06	0.9	8.22	21999	9.5166	23.89554	-14.37894	NAF
NS0164	90	92	NS	X142408	142408	1	G	W	32.05	43.1	0.83	0.5289	0.41	0.039	1.95	0.93	0.081	0.053	0.176	0.025	0.19	6.02	0.09	6.3	21994	1.6218	16.22106	-14.59926	NAF
NS0164	222	224	NS	X142475	142475	1	G	W	26.12	40.3	3.31	0.4257	0.33	0.148	2.56	1.39	0.064	0.305	0.923	0.174	0.98	10.85	0.9	12.73	22060	9.333	24.24438	-14.91138	NAF
NS0164	78	80	NS	X142402	142402	1	G	W	32.49	36.99	2.02	0.5547	0.43	0.086	2.54	1.18	0.08	0.174	0.602	0.021	0.34	8.1	0.42	8.86	21988	5.3244	20.58156	-15.25716	NAF
NS0164	284	286	NS	X142507	142507	1	G	W	25.26	41.84	3.65	0.2967	0.23	0.175	2.99	1.3	0.065	0.217	0.76	0.206	0.95	9.98	0.86	11.79	22091	6.6402	22.6746	-16.0344	NAF
NS0164	216	218	NS	X142472	142472	1	G	W	23.77	45.57	3.32	0.3741	0.29	0.152	2.56	1.37	0.07	0.248	0.832	0.184	0.97	9.17	0.83	10.97	22057	7.5888	23.89554	-16.30674	NAF
NS0164	80	82	NS	X142403	142403	1	G	W	32.32	39.31	0.95	0.5676	0.44	0.042	2.04	1.01	0.077	0.04	0.441	0.024	0.3	8.48	0.21	8.99	21989	1.224	17.61642	-16.39242	NAF
NS0164	184	186	NS	X142456	142456	1	G	W	30.04	39.3	3.59	0.4386	0.34	0.162	3.17	1.49	0.109	0.312	1.84	0.181	0.62	4.5	0.99	6.11	22041	9.5472	25.98858	-16.44138	NAF
NS0164	96	98	NS	X142411	142411	1	G	W	34.27	38.2	1.27	0.7095	0.55	0.058	2.39	1.21	0.107	0.139	0.308	0.037	0.17	6.03	0.3	6.5	21997	4.2534	21.10482	-16.85142	NAF
NS0164	94	96	NS	X142410	142410	1	G	W	29.2	45.03	1.1	0.5934	0.46	0.049	2.34	1.12	0.094	0.079	0.307	0.041	0.24	6.57	0.34	7.15	21996	2.4174	19.53504	-17.11764	NAF
NS0164	204	206	NS	X142466	142466	1	G	W	25.83	46.33	2.63	0.4644	0.36	0.124	2.6	1.49	0.178	0.265	1.1	0.178	0.77	5.64	0.86	7.27	22051	8.109	25.98858	-17.87958	NAF
NS0164	298	300	NS	X142514	142514	1	G	W	18.53	50.47	8.1	0.2193	0.17	0.384	4.16	1.82	0.057	0.446	0.494	0.12	0.68	3.77	1.81	6.26	22098	13.6476	31.74444	-18.09684	NAF
NS0164	272	274	NS	X142501	142501	1	G	W	24.28	43.69	3.51	0.1935	0.15	0.165	2.67	1.36	0.037	0.179	0.428	0.111	0.91	11.12	0.79	12.82	22085	5.4774	23.72112	-18.24372	NAF
NS0164	112	114	NS	X142419	142419	1	G	W	28.52	40.94	1.3	0.6579	0.51	0.055	3.03	1.42	0.094	0.213	0.393	0.064	0.39	9.46	0.72	10.57	22005	6.5178	24.76764	-18.24984	NAF
NS0164	74	76	NS	X142399	142399	1	G	W	29.91	40.48	1.15	0.5934	0.46	0.05	2.47	1.19	0.073	0.051	0.206	0.017	0.35	9.75	0.52	10.62	21986	1.5606	20.75598	-19.19538	NAF
NS0164	116	118	NS	X142421	142421	1	G	W	30.83	38.08	2.98	0.6966	0.54	0.127	2.78	1.49	0.078	0.218	1.27	0.064	0.33	6.52	0.77	7.62	22007	6.6708	25.98858	-19.31778	NAF
NS0164	248	250	NS	X142488	142488	1	G	W	28.26	40.51	2.64	0.3354	0.26	0.124	2.49	1.44	0.107	0.182	0.798	0.153	0.83	8.86	0.68	10.37	22073	5.5692	25.11648	-19.54728	NAF
NS0164	108	110	NS	X142417	142417	1	G	W	31.95	39.85	1.44	0.6837	0.53	0.064	2.39	2.06	0.098	0.528	0.625	0.054	0.14	4.04	1.28	5.46	22003	16.1568	35.93052	-19.77372	NAF
NS0164	178	180	NS	X142453	142453	1	G	W	31.21	38.74	2.41	0.5289	0.41	0.113	3.18	1.41	0.102	0.147	1.07	0.165	0.56	6.02	0.78	7.36	22038	4.4982	24.59322	-20.09502	NAF
NS0164	136	138	NS	X142431	142431	1	G	W	37.8	36.43	1.1	0.8385	0.65	0.052	1.72	1.22	0.093	0.037	0.882	0.048	-0.06	3.15	0.38	3.47	22017	1.1322	21.27924	-20.14704	NAF
NS0164	158	160	NS	X142442	142442	1	G	W	35.25	37.79	1.37	0.7353	0.57	0.058	2	1.35	0.093	0.108	1.13	0.033	0.03	3.95	0.54	4.52	22028	3.3048	23.5467	-20.2419	NAF
NS0164	134	136	NS	X142430	142430	1	G	W	38.27	36.4	1.02	0.8256	0.64	0.045	1.65	1.22	0.082	0.022	0.866	0.026	-0.09	3.03	0.37	3.31	22016	0.6732	21.27924	-20.60604	NAF
NS0164	200	202	NS	X142464	142464	1	G	W	31.08	39.53	1.89	0.4644	0.36	0.087	2.62	1.38	0.105	0.092	0.7	0.133	0.56	7.29	0.53	8.38	22049	2.8152	24.06996	-21.25476	NAF
NS0164	82	84	NS	X142404	142404	1	G	W	28.85	42.06	1.01	0.5031	0.39	0.045	2.26	1.31	0.054	0.041	0.413	0.031	0.43	9.63	0.72	10.78	21990	1.2546	22.84902	-21.59442	NAF
NS0164	238	240	NS	X142483	142483	1	G	W	27.42	41.84	2.97	0.4257	0.33	0.143	2.78	1.51	0.08	0.154	1.06	0.212	0.9	7.11	0.89	8.9	22068	4.7124	26.33742	-21.62502	NAF
NS0164	114	116	NS	X142420	142420	1	G	W	29.89	36.34	2.76	0.7611	0.59	0.121	3.49	2.06	0.077	0.464	0.636	0.08	0.41	7.79	1.49	9.69	22006	14.1984	35.93052	-21.73212	NAF
NS0164	110	112	NS	X142418	142418	1	G	W	34.09	38.91	1.12	0.6579	0.51	0.053	2.21	1.41	0.097	0.092	0.448	0.055	0.21	5.06	0.48	5.75	22004	2.8152	24.59322	-21.77802	NAF
NS0164	132	134	NS	X142429	142429	1	G	W	35.89	37.58	1.21	0.8385	0.65	0.056	1.81	1.4	0.123	0.069	0.994	0.029	-0.01	3.44	0.53	3.96	22015	2.1114	24.4188	-22.3074	NAF
NS0164	160	162	NS	X142443	142443	1	G	W	36.1	36.43	1.32	0.7611	0.59	0.062	2.03	1.38	0.112	0.051	1.06	0.039	0.08	4.02	0.47	4.57	22029	1.5606	24.06996	-22.50936	NAF
NS0164	148	150	NS	X142437	142437	1	G	W	34.71	38.78	1.25	0.7611	0.59	0.057	2.19	1.46	0.109	0.092	1.04	0.041	0.03	3.89	0.68	4.6	22023	2.8152	25.46532	-22.65012	NAF
NS0164	146	148	NS	X142436	142436	1	G	W	34.26	39.46	1.47	0.6063	0.47	0.069	2.22	1.45	0.13	0.067	1.12	0.09	0	3.52	0.6	4.12	22022	2.0502	25.2909	-23.2407	NAF
NS0164	152	154	NS	X142439	142439	1	G	W	35.96	38.21	0.98	0.8256	0.64	0.042	1.8	1.41	0.088	0.024	0.84	0.019	-0.01	3.49	0.61	4.09	22025	0.7344	24.59322	-23.85882	NAF
NS0164	130	132	NS	X142428	142428	1	G	W	35.45	39.28	1.08	0.774	0.6	0.045	1.6	1.43	0.091	0.03	0.881	0.021	-0.02	3.06	0.6	3.64	22014	0.918	24.94206	-24.02406	NAF
NS0164	202	204	NS	X142465	142465	1	G	W	30.02	41.54	1.79	0.387	0.3	0.084	2.65	1.52	0.105	0.069	0.542	0.13	0.56	6.46	0.69	7.71	22050	2.1114	26.51184	-24.40044	NAF
NS0164	166	168	NS	X142446	142446	1	G	W	33.84	39.58	1.52	0.6708	0.52	0.069	2.04	1.58	0.108	0.098	1.09	0.061	0.15	3.47	0.7	4.32	22032	2.9988	27.55836	-24.55956	NAF
NS0164	208	210	NS	X142468	142468	1	G	W	33.03	39.9	1.72	0.5031	0.39	0.079	1.99	1.52	0.089	0.063	0.774	0.125	0.42	4.71	0.61	5.74	22053	1.9278	26.51184	-24.58404	NAF
NS0164	212	214	NS	X142470	142470	1	G	W	27.7	38.33	3.48	0.5031	0.39	0.158	2.73	1.94	0.111	0.285	1.69	0.19	0.92	7.85	1.27	10.04	22055	8.721	33.83748	-25.11648	NAF
NS0164	124	126	NS	X142425	142425	1	G	W	36.58	36.85	1.22	0.8514	0.66	0.051	1.76	1.52	0.08	0.043	0.943	0.035	-0.01	3.5	0.71	4.2	22011	1.3158	26.51184	-25.19604	NAF
NS0164	102	104	NS	X142414	142414	1	G	W	32.49	39.16	1.83	0.6837	0.53	0.083	2.7	1.61	0.161	0.093	0.885	0.068	0.2	5.14	0.67	6.01	22000	2.8458	28.08162	-25.23582	NAF
NS0164	230	232	NS	X142479	142479	1	G	W	27.05	41.62	3.93	0.3741	0.29	0.181	2.57	1.94	0.081	0.279	1.55	0.235	0.93	6.08	1.23	8.24	22064	8.5374	33.83748	-25.30008	NAF
NS0164	170	172	NS	X142448	142448	1	G	W	36.24	37.15	1.14	0.8256	0.64	0.052	1.86	1.53	0.106	0.045	0.877	0.042	0.09	3.53	0.6	4.22	22034	1.377	26.68626	-25.30926	NAF
NS0164	144	146	NS	X142435	142435	1	G	W	26.29	52.75	0.85	0.6321	0.49	0.039	1.45	1.58	0.1	0.061	0.694	0.026	0.02	2.69	0.98	3.69	22021	1.8666	27.55836	-25.69176	NAF
NS0164	138	140	NS	X142432	142432	1	G	W	35.96	39.08	1.13	0.7353	0.57	0.05	1.7	1.53	0.097	0.03	0.847	0.053	-0.02	2.78	0.67	3.43	22018	0.918	26.68626	-25.76826	NAF
NS0164	106	108	NS	X142416	142416	1	G	W	31.53	40.91	1.72	0.6708	0.52	0.072	2.61	1.72	0.14	0.138	0.617	0.067	0.23	4.71	0.79	5.73	22002	4.2228	30.00024	-25.77744	NAF
NS0164	154	156	NS	X142440	142440	1	G	W	37.16	36.22	1.1	0.8256	0.64	0.047	1.75	1.54	0.1	0.027	0.939	0.018	-0.04	3.33	0.75	4.04	22026	0.8262	26.86068	-26.03448	NAF
NS0164	256	258	NS	X142492	142492	1	G	W	30	38.37	2.25	0.3741	0.29	0.103	2.38	1.7	0.126	0.107	0.62	0.159	0.75	8.78	0.69	10.22	22077	3.2742	29.6514	-26.3772	NAF
NS0164	214	216	NS	X142471	142471	1	G	W	24.3	42.49	3.02	0.4902	0.38	0.135	2.8	1.97	0.083	0.256	0.86	0.171	0.86	10.33	1.12	12.31	22056	7.8336	34.36074	-26.52714	NAF
NS0164	126	128	NS	X142426	142426	1	G	W	37.45	36.23	0.96	0.8256	0.64	0.042	1.61	1.56	0.08	0.022	0.749	0.028	0.01	3.55	0.63	4.19	22012	0.6732	27.20952	-26.53632	NAF
NS0164	140	142	NS	X142433	142433	1	G	W	36.12	38.37	0.91	0.8256	0.64	0.042	1.62	1.59	0.092	0.023	0.75	0.025	-0.05	2.78	0.83	3.56	22019	0.7038	27.73278	-27.02898	NAF
NS0164	172	174	NS	X142449	142449	1	G	W	35.04	38.03	1.36	0.7869	0.61	0.058	1.85	1.66	0.136	0.061	1.03	0.055	0.11	3.5	0.67	4.28	22035	1.8666	28.95372	-27.08712	NAF
NS0164	104	106	NS	X142415	142415	1	G	W	33.16	40.78	1.24	0.645	0.5	0.054	2.21	1.61	0.103	0.023	0.684	0.044	0.1	4.16	0.82	5.08	22001	0.7038	28.08162	-27.37782	NAF
NS0164	162	164	NS	X142444	142444	1	G	W	33.44	38.55	1.75	0.7095	0.55	0.073	2.15	1.72	0.102	0.077	1.43	0.043	0.09	3.96	0.91	4.96	22030	2.3562	30.00024	-27.64404	NAF
NS0164	292	294	NS	X142511	142511	1	G	W	26.74	36.79	2.79	0.3096	0.24	0.134	2.78	1.85	0.19	0.151	0.514	0.146	0.84	14.03	0.6	15.47	22095	4.6206	32.2677	-27.6471	NAF
NS0164	234	236	NS	X142481	142481	1	G	W	26.11	41.74	4.83	0.3483	0.27	0.225	3.07	2.09	0.113	0.285	1.72	0.259	0.95	4.5	1.5	6.95	22066	8.721	36.45378	-27.73278	NAF
NS0164	142	144	NS	X142434	142434	1	G	W	36.72	36.01	1.3	0.8256	0.64	0.059	1.93	1.66	0.1	0.035	1	0.062	-0.01	3.27	0.88	4.14	22020	1.071	28.95372	-27.88272	NAF
NS0164	118	120	NS	X142422	142422	1	G	W	35.28	37.4	1.32	0.7998	0.62	0.056	1.71	1.65	0.086	0.029	0.8	0.03	0.17	4.63	0.62	5.42	22008	0.8874	28.7793	-27.8919	NAF
NS0164	198	200	NS	X142463	142463	1	G	W	27.62	45.98	1.62	0.3741	0.29	0.073	1.96	1.75	0.089	0.085	0.725	0.114	0.52	6.03	0.82	7.37	22048	2.601	30.5235	-27.9225	NAF
NS0164	120	122	NS	X142423	142423	1	G	W	34.1	39.99	1.33	0.7482	0.58	0.053	1.63	1.7	0.072	0.033	1.02	0.021	0.03	3.33	1	4.36	22009	1.0098	29.6514	-28.6416	NAF
NS0164	122	124	NS	X142424	142424	1	G	W	33.64	38.82	1.62	0.8127	0.63	0.068	2.05	1.72	0.094	0.038	1.31	0.039	0.03	3.95	0.97	4.95	22010	1.1628	30.00024	-28.83744	NAF
NS0164	150	152	NS	X142438	142438	1	G	W	35.75	38.21	0.94	0.8256	0.64	0.044	1.75	1.7	0.09	0.016	0.805	0.015	0	3.21	0.98	4.19	22024	0.4896	29.6514	-29.1618	NAF
NS0164	164	166	NS	X142445	142445	1	G	W	34.6	37.25	1.66	0.6966	0.54	0.072	2.1	1.82	0.127	0.084	1.31	0.053	0.09	3.7	0.91	4.7	22031	2.5704	31.74444	-29.17404	NAF
NS0164	92	94	NS	X142409	142409	1	G	W	33.36	41.47	0.98	0.4515	0.35	0.042	2.12	1.74	0.083	0.03	0.076	0.029	0.08	4.33	1	5.41	21995	0.918	30.34908	-29.43108	NAF
NS0164	240	242	NS	X142484	142484	1	G	W	24.88	42.68	4.51	0.3096	0.24	0.202	2.89	2.32	0.116	0.36	1.91	0.202	0.85	5.97	1.53	8.35	22069	11.016	40.46544	-29.44944	NAF
NS0164	206	208	NS	X142467	142467	1	G	W	32.26	40.59	1.65	0.5031	0.39	0.073	2.05	1.83	0.096	0.053	0.715	0.123	0.43	4.68	0.87	5.98	22052	1.6218	31.91886	-30.29706	NAC
NS0164	254	256	NS	X142491	142491	1	G	W	26.46	44.89	2.87	0.2838	0.22	0.134	2.46	2.1	0.108	0.195	0.854	0.194	0.78	5.4	1.23	7.41	22076	5.967	36.6282	-30.6612	NAC
NS0164	226	228	NS	X142477	142477	1	G	W	29.18	37.71	2.75	0.4128	0.32	0.125	2.41	2.07	0.161	0.176	0.93	0.191	0.83	8.79	0.87	10.49	22062	5.3856	36.10494	-30.71934	NAC
NS0164	190	192	NS	X142459	142459	1	G	W	30.96	41.69	1.84	0.4773	0.37	0.082	2.25	1.9	0.077	0.059	0.942	0.115	0.4	4.47	1.11	5.98	22044	1.8054	33.1398	-31.3344	NAC
NS0164	168	170	NS	X142447	142447	1	G	W	35.31	38.62	0.99	0.774	0.6	0.045	1.78	1.85	0.107	0.029	0.788	0.034	0.04	3.2	0.94	4.18	22033	0.8874	32.2677	-31.3803	NAC
NS0164	278	280	NS	X142504	142504	1	G	W	23.43	44.77	4.65	0.2709	0.21	0.226	3.09	2.31	0.097	0.282	1.03	0.245	1.13	6.71	1.42	9.26	22088	8.6292	40.29102	-31.66182	NAC
NS0164	180	182	NS	X142454	142454	1	G	W	32.62	37.11	2.32	0.4515	0.35	0.106	2.8	1.98	0.131	0.084	1.14	0.131	0.55	4.93	1.11	6.59	22039	2.5704	34.53516	-31.96476	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0164	280	282	NS	X142505	142505	1	G	W	26.79	41.47	2.84	0.2838	0.22	0.135	2.5	2.11	0.117	0.15	0.689	0.179	0.9	8.84	0.89	10.63	22089	4.59	36.80262	-32.21262	NAC
NS0164	176	178	NS	X142452	142452	1	G	W	33.27	37.41	1.79	0.7353	0.57	0.081	2.38	2.11	0.116	0.141	1.14	0.168	0.32	4.27	1.2	5.79	22037	4.3146	36.80262	-32.48802	NAC
NS0164	192	194	NS	X142460	142460	1	G	W	30.86	41.04	1.7	0.4386	0.34	0.078	2.27	1.98	0.081	0.048	0.807	0.121	0.44	5.42	1.19	7.05	22045	1.4688	34.53516	-33.06636	NAC
NS0164	252	254	NS	X142490	142490	1	G	W	26.72	43.47	3.44	0.258	0.2	0.159	2.71	2.22	0.153	0.182	1.05	0.226	0.99	5.09	1.29	7.37	22075	5.5692	38.72124	-33.15204	NAC
NS0164	220	222	NS	X142474	142474	1	G	W	23.98	43.6	2.72	0.3741	0.29	0.125	2.25	2.56	0.066	0.374	0.61	0.139	0.78	10.08	1.43	12.29	22059	11.4444	44.65152	-33.20712	NAC
NS0164	286	288	NS	X142508	142508	1	G	W	22.04	46.65	4.79	0.2451	0.19	0.229	3.05	2.53	0.069	0.321	0.983	0.259	1.07	5.72	1.75	8.54	22092	9.8226	44.12826	-34.30566	NAC
NS0164	242	244	NS	X142485	142485	1	G	W	31.88	36.99	2.29	0.3741	0.29	0.118	2.3	2.15	0.104	0.103	0.694	0.148	0.61	7.18	1.04	8.83	22070	3.1518	37.5003	-34.3485	NAC
NS0164	174	176	NS	X142451	142451	1	G	W	35.88	36.28	1.05	0.7869	0.61	0.047	1.93	2.2	0.098	0.03	0.724	0.058	0.16	3.4	1.41	4.97	22036	0.918	38.3724	-37.4544	NAC
NS0164	228	230	NS	X142478	142478	1	G	W	30.85	39.13	2.39	0.4128	0.32	0.112	2.36	2.31	0.107	0.092	0.845	0.201	0.8	5.35	1.36	7.51	22063	2.8152	40.29102	-37.47582	NAC
NS0164	250	252	NS	X142489	142489	1	G	W	30.82	40.63	1.84	0.2967	0.23	0.087	2.08	2.37	0.126	0.078	0.66	0.162	0.65	5.48	1.44	7.57	22074	2.3868	41.33754	-38.95074	NAC
NS0164	188	190	NS	X142458	142458	1	G	W	29.78	41.69	2.11	0.516	0.4	0.096	2.4	2.36	0.127	0.064	1.18	0.121	0.47	4.32	1.42	6.21	22043	1.9584	41.16312	-39.20472	NAC
NS0164	210	212	NS	X142469	142469	1	G	W	31.53	38.34	2.15	0.5547	0.43	0.101	2.31	2.45	0.111	0.113	0.946	0.141	0.5	5.02	1.5	7.02	22054	3.4578	42.7329	-39.2751	NAC
NS0164	282	284	NS	X142506	142506	1	G	W	27.85	41.56	1.83	0.2193	0.17	0.087	1.85	2.42	0.125	0.09	0.6	0.165	0.79	9.24	0.85	10.88	22090	2.754	42.20964	-39.45564	NAC
NS0164	98	100	NS	X142412	142412	1	G	W	34.08	39.03	0.94	0.5805	0.45	0.042	2.14	2.33	0.076	0.029	0.17	0.028	0.06	3.72	1.67	5.45	21998	0.8874	40.63986	-39.75246	NAC
NS0164	236	238	NS	X142482	142482	1	G	W	27.39	40.4	3.49	0.4257	0.33	0.164	2.82	2.74	0.078	0.222	1.14	0.218	0.87	5.95	1.66	8.48	22067	6.7932	47.79108	-40.99788	NAC
NS0164	276	278	NS	X142503	142503	1	G	W	25.09	41.93	3.33	0.3483	0.27	0.159	2.58	2.76	0.079	0.215	0.825	0.209	0.97	8.43	1.51	10.91	22087	6.579	48.13992	-41.56092	NAC
NS0164	186	188	NS	X142457	142457	1	G	W	29.12	42.22	2.17	0.4257	0.33	0.097	2.47	2.59	0.292	0.066	1.19	0.148	0.49	4.19	1.27	5.95	22042	2.0196	45.17478	-43.15518	NAC
NS0164	182	184	NS	X142455	142455	1	G	W	27.89	44.37	1.71	0.4515	0.35	0.078	2.31	2.73	0.156	0.065	0.979	0.11	0.35	4.52	1.81	6.68	22040	1.989	47.61666	-45.62766	NAC
NS0165	206	208	NS	X121106	121106	1	G	D	24.11	37.38	2.77	0.3483	0.27	0.115	3.48	0.69	0.055	1.95	0.743	0.017	0.37	14.89	4.27	19.53	18531	59.67	12.03498	47.63502	PAF(HC)
NS0165	102	104	NS	X121053	121053	1	G	D	24.77	50.4	0.95	0.2451	0.19	0.048	2.21	0.69	0.049	1.58	0.129	0.053	0.04	6.23	2.8	9.07	18425	48.348	12.03498	36.31302	PAF(HC)
NS0165	202	204	NS	X121104	121104	1	G	D	22.32	42.89	5.32	0.2838	0.22	0.216	3.93	0.45	0.088	1.31	0.051	0.034	0.42	11.37	2.47	14.26	18529	40.086	7.8489	32.2371	PAF(HC)
NS0165	176	178	NS	X121090	121090	1	G	D	22.26	40.86	8.44	0.1548	0.12	0.362	6.53	0.49	0.03	1.03	0.22	0.147	0.65	7.77	1.64	10.06	18498	31.518	8.54658	22.97142	PAF(HC)
NS0165	200	202	NS	X121103	121103	1	G	D	20.62	45.9	2.13	0.3999	0.31	0.093	3.57	0.66	0.073	1.05	0.223	0.014	0.34	13.5	2.41	16.25	18528	32.13	11.51172	20.61828	PAF(HC)
NS0165	60	62	NS	X121031	121031	1	G	D	34.18	45.1	1.7	0.2709	0.21	0.075	0.73	0.13	0.072	0.116	0.057	0.013	1.67	0.61	0.44	2.72	18386	3.5496	2.26746	1.28214	PAF(LC)
NS0165	178	182	NS	BX123091-BX123092	X123091	2			68.6	3.472	0.114	0.018	0.01296	0.018	0.292	0.079	0.013	0.084	0.022	0.078	-0.01	-0.01	-0.01	-0.03	2391	2.5704	1.377918	1.192482	PAF(LC)
NS0165	114	116	NS	X121059	121059	1	G	D	21.28	50.25	0.87	0.7095	0.55	0.036	2.16	0.44	0.046	0.262	0.382	0.052	0.53	12.73	0.64	13.9	18431	8.0172	7.67448	0.34272	PAF(LC)
NS0165	24	26	NS	X121013	121013	1	G	D	31.35	42.75	5.99	0.3354	0.26	0.258	0.13	0.03	0.037	0.022	0.012	0.03	3.2	2.29	0.16	5.65	18350	0.6732	0.52326	0.14994	PAF(LC)
NS0165	4	6	NS	X121003	121003	1	G	D	34.83	38.42	3.86	0.0258	0.02	0.217	0.04	0.02	0.016	0.016	0.015	0.025	5.96	1.14	0.21	7.31	18322	0.4896	0.34884	0.14076	PAF(LC)
NS0165	0	2	NS	X121001	121001	1	G	D	30.66	42.09	5.1	0.9675	0.75	0.511	0.09	0.05	0.026	0.031	0.1	0.028	5.05	1.49	0.32	6.86	18320	0.9486	0.8721	0.0765	PAF(LC)
NS0165	20	22	NS	X121011	121011	1	G	D	33.58	48.1	1.42	0.0903	0.07	0.054	0.05	0.02	0.04	0.012	0.007	0.009	1.52	0.5	0.03	2.05	18348	0.3672	0.34884	0.01836	PAF(LC)
NS0165	26	28	NS	X121014	121014	1	G	D	35.52	46.12	0.82	0.1935	0.15	0.035	0.08	0.02	0.05	0.01	0.012	0.015	1.59	0.3	-0.03	1.86	18351	0.306	0.34884	-0.04284	NAF
NS0165	186	190	NS	BX123095-BX123096	X123095	2			69.23	3.13	0.272	0.049	0.03528	0.049	0.29	0.077	0.01	0.042	0.029	0.102	-0.01	-0.01	-0.01	-0.03	2393	1.2852	1.343034	-0.057834	NAF
NS0165	6	8	NS	X121004	121004	1	G	D	35.78	39.02	3.72	0.0516	0.04	0.345	0.05	0.03	0.017	0.013	0.02	0.013	4.06	0.98	0.19	5.23	18323	0.3978	0.52326	-0.12546	NAF
NS0165	8	10	NS	X121005	121005	1	G	D	34.64	39.82	3.27	0.0258	0.02	0.273	0.04	0.03	0.017	0.013	0.013	0.0005	5.68	1.04	0.2	6.92	18324	0.3978	0.52326	-0.12546	NAF
NS0165	14	16	NS	X121008	121008	1	G	D	32.59	48.26	1.53	0.0903	0.07	0.058	0.04	0.03	0.042	0.012	0.006	0.028	2.25	0.6	0.13	2.98	18345	0.3672	0.52326	-0.15606	NAF
NS0165	174	176	NS	BX123089	X123089	2			69.04	3.799	0.152	0.025	0.018	0.025	0.322	0.065	0.009	0.031	0.036	0.169	-0.01	-0.01	-0.01	-0.03	2390	0.9486	1.13373	-0.18513	NAF
NS0165	12	14	NS	X121007	121007	1	G	D	26.11	56.48	2.55	0.0258	0.02	0.119	0.03	0.03	0.031	0.011	0.01	0.024	2.22	0.89	0.12	3.23	18344	0.3366	0.52326	-0.18666	NAF
NS0165	16	18	NS	X121009	121009	1	G	D	29.06	52.62	1.84	0.129	0.1	0.08	0.1	0.03	0.049	0.011	0.007	0.003	2.68	0.71	0.12	3.51	18346	0.3366	0.52326	-0.18666	NAF
NS0165	22	24	NS	X121012	121012	1	G	D	30.48	43.9	6.99	0.1032	0.08	0.301	0.14	0.03	0.027	0.011	0.012	0.025	2.17	2.22	0.13	4.52	18349	0.3366	0.52326	-0.18666	NAF
NS0165	10	12	NS	X121006	121006	1	G	D	28.49	52.76	2.02	0.0258	0.02	0.082	0.03	0.03	0.02	0.01	0.008	0.013	3.25	0.66	0.12	4.03	18343	0.306	0.52326	-0.21726	NAF
NS0165	18	20	NS	X121010	121010	1	G	D	34.04	45.45	1.8	0.1419	0.11	0.076	0.06	0.03	0.095	0.009	0.008	0.02	2.71	0.69	0.07	3.47	18347	0.2754	0.52326	-0.24786	NAF
NS0165	30	32	NS	X121016	121016	1	G	D	37.67	40.87	0.84	0.6708	0.52	0.036	0.17	0.04	0.044	0.011	0.048	0.028	2.39	0.43	0.06	2.88	18353	0.3366	0.69768	-0.36108	NAF
NS0165	2	4	NS	X121002	121002	1	G	D	33.54	41.42	3.74	0.1419	0.11	0.451	0.06	0.08	0.021	0.03	0.04	0.005	4.65	1.03	0.2	5.88	18321	0.918	1.39536	-0.47736	NAF
NS0165	28	30	NS	X121015	121015	1	G	D	31.17	52.32	0.82	0.3225	0.25	0.029	0.12	0.04	0.036	0.006	0.053	0.027	1.16	0.3	0.02	1.48	18352	0.1836	0.69768	-0.51408	NAF
NS0165	112	116	NS	BX123058-BX123059	X123058	2			70.56	2.55	0.078	0.015	0.0108	0.015	0.245	0.061	0.009	0.016	0.031	0.101	-0.01	-0.01	-0.01	-0.03	2375	0.4896	1.063962	-0.574362	NAF
NS0165	64	68	NS	BX123033-BX123034	X123033	2			68.96	2.2	0.106	0.022	0.01584	0.022	0.169	0.049	0.014	0.008	0.007	0.089	0.06	-0.01	-0.01	0.04	2363	0.2448	0.854658	-0.609858	NAF
NS0165	96	100	NS	BX123049-BX123050	X123049	2			70.99	0.959	0.019	0.014	0.01008	0.014	0.129	0.047	0.008	0.005	0.009	0.086	-0.01	-0.01	-0.01	-0.03	2371	0.153	0.819774	-0.666774	NAF
NS0165	60	64	NS	BX123031-BX123032	X123031	2			69.52	2.551	0.075	0.015	0.0108	0.015	0.152	0.051	0.013	0.007	0.008	0.089	-0.01	-0.01	-0.01	-0.03	2362	0.2142	0.889542	-0.675342	NAF
NS0165	68	72	NS	BX123035-BX123036	X123035	2			69.54	2.437	0.06	0.017	0.01224	0.017	0.172	0.053	0.011	0.007	0.009	0.099	-0.01	-0.01	-0.01	-0.03	2364	0.2142	0.924426	-0.710226	NAF
NS0165	100	104	NS	BX123052-BX123053	X123052	2			71.59	1.287	0.028	0.013	0.00936	0.013	0.137	0.06	0.012	0.01	0.008	0.077	-0.01	-0.01	-0.01	-0.03	2372	0.306	1.04652	-0.74052	NAF
NS0165	76	80	NS	BX123039-BX123040	X123039	2			69.7	2.644	0.119	0.016	0.01152	0.016	0.244	0.057	0.012	0.008	0.028	0.085	-0.01	-0.01	-0.01	-0.03	2366	0.2448	0.994194	-0.749394	NAF
NS0165	92	96	NS	BX123047-BX123048	X123047	2			69.6	2.492	0.099	0.014	0.01008	0.014	0.232	0.056	0.01	0.007	0.031	0.087	-0.01	-0.01	-0.01	-0.03	2370	0.2142	0.976752	-0.762552	NAF
NS0165	56	58	NS	BX123029	X123029	2			66.04	2.461	0.115	0.012	0.00864	0.012	0.118	0.051	0.014	0.004	0.012	0.145	-0.01	-0.01	-0.01	-0.03	2361	0.1224	0.889542	-0.767142	NAF
NS0165	88	92	NS	BX123045-BX123046	X123045	2			69.48	3.192	0.157	0.015	0.0108	0.015	0.292	0.06	0.011	0.009	0.057	0.093	-0.01	-0.01	-0.01	-0.03	2369	0.2754	1.04652	-0.77112	NAF
NS0165	118	122	NS	BX123061-BX123062	X123061	2			69.95	3.055	0.036	0.017	0.01224	0.017	0.236	0.052	0.008	0.004	0.032	0.086	-0.01	-0.01	-0.01	-0.03	2376	0.1224	0.906984	-0.784584	NAF
NS0165	84	88	NS	BX123043-BX123044	X123043	2			67.95	2.724	0.105	0.001	0.00072	0.001	0.225	0.058	0.009	0.007	0.043	0.083	-0.01	-0.01	-0.01	-0.03	2368	0.2142	1.011636	-0.797436	NAF
NS0165	80	84	NS	BX123041-BX123042	X123041	2			69.49	2.858	0.114	0.013	0.00936	0.013	0.231	0.062	0.012	0.009	0.031	0.156	-0.01	-0.01	-0.01	-0.03	2367	0.2754	1.081404	-0.806004	NAF
NS0165	72	76	NS	BX123037-BX123038	X123037	2			69.48	3.068	0.146	0.018	0.01296	0.018	0.252	0.064	0.014	0.008	0.024	0.074	-0.01	-0.01	-0.01	-0.03	2365	0.2448	1.116288	-0.871488	NAF
NS0165	190	194	NS	BX123097-BX123098	X123097	2			70.12	2.068	0.03	0.015	0.0108	0.015	0.18	0.065	0.01	0.008	0.006	0.081	-0.01	-0.01	-0.01	-0.03	2394	0.2448	1.13373	-0.88893	NAF
NS0165	126	130	NS	BX123065-BX123066	X123065	2			69.63	3.684	0.052	0.007	0.00504	0.007	0.196	0.058	0.011	0.004	0.05	0.11	-0.01	-0.01	-0.01	-0.03	2378	0.1224	1.011636	-0.889236	NAF
NS0165	186	188	NS	X121095	121095	1	G	D	30.41	42.89	1.54	0.4644	0.36	0.164	1.92	1.01	0.123	0.546	0.151	0.092	0.6	5.05	1.1	6.75	18503	16.7076	17.61642	-0.90882	NAF
NS0165	194	196	NS	BX123099	X123099	2			69.8	2.347	0.011	0.007	0.00504	0.007	0.194	0.063	0.008	0.006	0.003	0.076	-0.01	-0.01	-0.01	-0.03	2395	0.1836	1.098846	-0.915246	NAF
NS0165	130	134	NS	BX123067-BX123068	X123067	2			69.36	3.653	0.038	0.006	0.00432	0.006	0.199	0.057	0.01	0.001	0.035	0.071	-0.01	-0.01	-0.01	-0.03	2379	0.0306	0.994194	-0.963594	NAF
NS0165	142	146	NS	BX123073-BX123074	X123073	2			69.66	3.487	0.105	0.012	0.00864	0.012	0.233	0.066	0.009	0.006	0.049	0.073	-0.01	-0.01	-0.01	-0.03	2382	0.1836	1.151172	-0.967572	NAF
NS0165	122	126	NS	BX123063-BX123064	X123063	2			68.15	5.568	0.088	0.012	0.00864	0.012	0.227	0.058	0.011	0.001	0.073	0.093	-0.01	-0.01	-0.01	-0.03	2377	0.0306	1.011636	-0.981036	NAF
NS0165	104	108	NS	BX123054-BX123055	X123054	2			69.31	2.867	0.104	0.012	0.00864	0.012	0.301	0.079	0.012	0.011	0.028	0.108	-0.01	-0.01	-0.01	-0.03	2373	0.3366	1.377918	-1.041318	NAF
NS0165	134	138	NS	BX123069-BX123070	X123069	2			69.98	3.118	0.039	0.007	0.00504	0.007	0.199	0.062	0.01	0.001	0.031	0.072	-0.01	-0.01	-0.01	-0.03	2380	0.0306	1.081404	-1.050804	NAF
NS0165	170	174	NS	BX123087-BX123088	X123087	2			68.64	4.677	0.062	0.012	0.00864	0.012	0.291	0.071	0.01	0.006	0.025	0.102	-0.01	-0.01	-0.01	-0.03	2389	0.1836	1.238382	-1.054782	NAF
NS0165	108	112	NS	BX123056-BX123057	X123056	2			70.2	2.903	0.082	0.01	0.0072	0.01	0.265	0.072	0.011	0.006	0.026	0.088	-0.01	-0.01	-0.01	-0.03	2374	0.1836	1.255824	-1.072224	NAF
NS0165	146	150	NS	BX123075-BX123076	X123075	2			70.09	3.64	0.042	0.011	0.00792	0.011	0.219	0.068	0.008	0.001	0.013	0.073	-0.01	-0.01	-0.01	-0.03	2383	0.0306	1.186056	-1.155456	NAF
NS0165	150	154	NS	BX123077-BX123078	X123077	2			69.77	3.81	0.046	0.009	0.00648	0.009	0.218	0.07	0.01	0.002	0.017	0.11	-0.01	-0.01	-0.01	-0.03	2384	0.0612	1.22094	-1.15974	NAF
NS0165	44	46	NS	X121023	121023	1	G	D	30.09	53.99	0.67	0.2322	0.18	0.033	0.17	0.08	0.026	0.004	0.054	0.005	1.09	0.29	0.08	1.46	18360	0.1224	1.39536	-1.27296	NAF
NS0165	128	130	NS	X121066	121066	1	G	D	31	43.41	0.77	0.5031	0.39	0.026	1.99	0.59	0.121	0.294	0.539	0.086	0.15	6.64	0.43	7.22	18456	8.9964	10.29078	-1.29438	NAF
NS0165	182	186	NS	BX123093-BX123094	X123093	2			69.82	2.925	0.051	0.012	0.00864	0.012	0.208	0.11	0.018	0.02	0.014	0.077	-0.01	-0.01	-0.01	-0.03	2392	0.612	1.91862	-1.30662	NAF
NS0165	112	114	NS	X121058	121058	1	G	D	26.24	41.29	2.12	0.4902	0.38	0.089	2.97	0.67	0.093	0.339	0.679	0.11	0.69	12.17	0.83	13.69	18430	10.3734	11.68614	-1.31274	NAF
NS0165	154	158	NS	BX123079-BX123080	X123079	2			68.71	4.262	0.08	0.009	0.00648	0.009	0.235	0.086	0.014	0.003	0.024	0.09	-0.01	-0.01	-0.01	-0.03	2385	0.0918	1.500012	-1.408212	NAF
NS0165	162	166	NS	BX123083-BX123084	X123083	2			68.41	5.002	0.071	0.012	0.00864	0.012	0.26	0.091	0.014	0.005	0.022	0.089	-0.01	-0.01	-0.01	-0.03	2387	0.153	1.587222	-1.434222	NAF
NS0165	42	44	NS	X121022	121022	1	G	D	31.85	50.92	0.86	0.2967	0.23	0.04	0.2	0.09	0.031	0.004	0.054	0.0005	1.47	0.37	0.09	1.93	18359	0.1224	1.56978	-1.44738	NAF
NS0165	180	182	NS	X121092	121092	1	G	D	28.46	40.36	1.33	0.6579	0.51	0.055	2.85	0.75	0.178	0.377	0.242	0.129	0.62	10.56	0.71	11.89	18500	11.5362	13.0815	-1.5453	NAF
NS0165	166	170	NS	BX123085-BX123086	X123085	2			68.74	4.812	0.056	0.015	0.0108	0.015	0.25	0.097	0.01	0.002	0.019	0.078	-0.01	-0.01	-0.01	-0.03	2388	0.0612	1.691874	-1.630674	NAF
NS0165	46	48	NS	X121024	121024	1	G	D	29.41	53.06	1.34	0.2322	0.18	0.063	0.37	0.11	0.04	0.004	0.164	0.011	1.84	0.55	0.07	2.46	18379	0.1224	1.91862	-1.79622	NAF
NS0165	158	162	NS	BX123081-BX123082	X123081	2			67.74	5.62	0.063	0.012	0.00864	0.012	0.283	0.11	0.014	0.003	0.022	0.102	-0.01	-0.01	-0.01	-0.03	2386	0.0918	1.91862	-1.82682	NAF
NS0165	138	142	NS	BX123071-BX123072	X123071	2			68.73	4.293	0.066	0.007	0.00504	0.007	0.215	0.115	0.01	0.001	0.051	0.082	-0.01	-0.01	-0.01	-0.03	2381	0.0306	2.00583	-1.97523	NAF
NS0165	52	54	NS	X121027	121027	1	G	D	32.95	50.1	0.78	0.1548	0.12	0.037	0.23	0.14	0.043	0.004	0.126	0.005	0.83	0.27	-0.01	1.09	18382	0.1224	2.44188	-2.31948	NAF
NS0165	54	56	NS	X121028	121028	1	G	D	29.4	53.9	1.01	0.2838	0.22	0.047	0.31	0.15	0.046	0.005	0.094	0.018	1.25	0.45	0.08	1.78	18383	0.153	2.6163	-2.4633	NAF
NS0165	32	34	NS	X121017	121017	1	G	D	31.06	43.24	4.23	1.7157	1.33	0.194	0.41	0.15	0.053	0.004	0.18	0.024	3.09	1.58	0.28	4.95	18354	0.1224	2.6163	-2.4939	NAF
NS0165	178	180	NS	X121091	121091	1	G	D	33.54	31.03	1.76	0.7482	0.58	0.074	3.27	0.41	0.068	0.141	0.286	0.148	0.83	12.61	0.13	13.57	18499	4.3146	7.15122	-2.83662	NAF
NS0165	34	36	NS	X121018	121018	1	G	D	29.72	46.2	3.78	0.4644	0.36	0.163	0.73	0.18	0.076	0.005	0.405	0.039	3.44	1.41	0.18	5.03	18355	0.153	3.13956	-2.98656	NAF
NS0165	38	40	NS	X121020	121020	1	G	D	29.15	49.72	2.65	0.3999	0.31	0.114	0.59	0.18	0.036	0.005	0.207	0.024	2.89	1	0.16	4.05	18357	0.153	3.13956	-2.98656	NAF
NS0165	58	60	NS	X121030	121030	1	G	D	23.5	59.13	1.96	0.7095	0.55	0.085	0.63	0.22	0.049	0.005	0.149	0.028	2.16	0.73	0.13	3.02	18385	0.153	3.83724	-3.68424	NAF
NS0165	76	78	NS	X121039	121039	1	G	D	36.22	35.93	1.16	0.4386	0.34	0.051	2.45	0.29	0.062	0.039	0.298	0.06	0.29	6.78	-0.21	6.86	18394	1.1934	5.05818	-3.86478	NAF
NS0165	50	52	NS	X121026	121026	1	G	D	31.44	44.88	3.42	0.1935	0.15	0.146	1.02	0.24	0.058	0.005	0.335	0.026	3.13	1.2	0.19	4.52	18381	0.153	4.18608	-4.03308	NAF
NS0165	70	72	NS	X121036	121036	1	G	D	23.09	61.38	0.56	0.1677	0.13	0.027	1.05	0.3	0.073	0.033	0.097	0.015	0.22	2.98	-0.01	3.19	18391	1.0098	5.2326	-4.2228	NAF
NS0165	36	38	NS	X121019	121019	1	G	D	24.3	54.38	3.54	0.6192	0.48	0.151	0.77	0.26	0.084	0.006	0.333	0.028	3.11	1.36	0.19	4.66	18356	0.1836	4.53492	-4.35132	NAF
NS0165	40	42	NS	X121021	121021	1	G	D	29.78	46.47	3.89	0.5031	0.39	0.167	0.96	0.26	0.063	0.005	0.244	0.027	2.97	1.35	0.2	4.52	18358	0.153	4.53492	-4.38192	NAF
NS0165	48	50	NS	X121025	121025	1	G	D	28.72	45.9	4.46	0.5805	0.45	0.199	1.25	0.26	0.064	0.004	0.495	0.032	3.49	1.58	0.28	5.35	18380	0.1224	4.53492	-4.41252	NAF
NS0165	68	70	NS	X121035	121035	1	G	D	31.34	49.62	0.59	0.1935	0.15	0.031	1.09	0.29	0.05	0.02	0.026	0.028	0.22	3.06	-0.05	3.23	18390	0.612	5.05818	-4.44618	NAF
NS0165	78	80	NS	X121040	121040	1	G	D	29.12	44.52	2.07	0.3096	0.24	0.091	3.03	0.52	0.074	0.15	0.386	0.16	0.42	5.58	0.33	6.33	18395	4.59	9.06984	-4.47984	NAF
NS0165	198	200	NS	X121102	121102	1	G	D	28.88	33.72	0.33	0.4773	0.37	0.014	2.98	0.77	0.099	0.283	0.007	0.013	0.83	17.93	0.58	19.34	18527	8.6598	13.43034	-4.77054	NAF
NS0165	64	66	NS	X121033	121033	1	G	D	30.7	35.66	3.36	0.5418	0.42	0.151	3.73	0.62	0.129	0.185	0.17	0.093	0.94	9.36	0.45	10.75	18388	5.661	10.81404	-5.15304	NAF
NS0165	62	64	NS	X121032	121032	1	G	D	27.69	53	1.45	0.1806	0.14	0.065	1.19	0.46	0.109	0.067	0.058	0.035	0.54	2.91	0.1	3.55	18387	2.0502	8.02332	-5.97312	NAF
NS0165	72	74	NS	X121037	121037	1	G	D	34.61	38.4	1.63	0.3096	0.24	0.071	2.43	0.53	0.129	0.106	0.212	0.046	0.46	5.52	0.12	6.1	18392	3.2436	9.24426	-6.00066	NAF
NS0165	86	88	NS	X121044	121044	1	G	D	30.31	46.56	0.87	0.3096	0.24	0.043	1.89	0.67	0.083	0.146	0.295	0.049	0.2	5.1	0.18	5.48	18417	4.4676	11.68614	-7.21854	NAF
NS0165	174	176	NS	X121089	121089	1	G	D	27.78	44.14	1.26	0.4773	0.37	0.052	2.98	0.68	0.166	0.137	0.289	0.165	0.56	8.53	0.2	9.29	18497	4.1922	11.86056	-7.66836	NAF
NS0165	84	86	NS	X121043	121043	1	G	D	32.36	38.73	1.92	0.4773	0.37	0.083	3.02	0.72	0.125	0.158	0.545	0.109	0.43	6.98	0.28	7.69	18416	4.8348	12.55824	-7.72344	NAF
NS0165	66	68	NS	X121034	121034	1	G	D	24.74	60.65	0.64	0.1032	0.08	0.029	0.64	0.51	0.043	0.036	0.035	0.011	0.2	1.65	0.02	1.87	18389	1.1016	8.89542	-7.79382	NAF
NS0165	218	220	NS	X121112	121112	1	G	D	22.81	41.45	0.62	0.4773	0.37	0.028	4.27	0.61	0.083	0.074	0.074	0.0005	0.81	18.27	0.26	19.34	18537	2.2644	10.63962	-8.37522	NAF
NS0165	182	184	NS	X121093	121093	1	G	D	21.99	59.27	0.7	0.3741	0.29	0.038	1.58	0.86	0.073	0.214	0.165	0.087	0.27	4	0.45	4.72	18501	6.5484	15.00012	-8.45172	NAF
NS0165	74	76	NS	X121038	121038	1	G	D	31.99	39.09	2.62	0.3225	0.25	0.114	3.2	0.77	0.203	0.162	0.361	0.089	0.51	5.62	0.29	6.42	18393	4.9572	13.43034	-8.47314	NAF
NS0165	80	82	NS	X121041	121041	1	G	D	27.24	48.95	0.59	0.3225	0.25	0.025	1.92	0.54	0.093	0.016	0.164	0.029	0.43	7.74	-0.09	8.08	18396	0.4896	9.41868	-8.92908	NAF
NS0165	132	134	NS	X121068	121068	1	G	D	28.06	41.43	0.66	0.5547	0.43	0.022	3.19	0.56	0.112	0.015	0.416	0.07	0.4	12.47	-0.08	12.79	18458	0.459	9.76752	-9.30852	NAF
NS0165	130	132	NS	X121067	121067	1	G	D	31.12	44.81	0.59	0.4773	0.37	0.026	1.94	0.56	0.072	0.014	0.441	0.035	0.17	6.31	-0.11	6.37	18457	0.4284	9.76752	-9.33912	NAF
NS0165	120	122	NS	X121062	121062	1	G	D	22.48	56.92	0.43	0.5418	0.42	0.017	1.32	0.57	0.066	0.013	0.327	0.017	0.26	6.9	0	7.16	18452	0.3978	9.94194	-9.54414	NAF
NS0165	116	118	NS	X121060	121060	1	G	D	29.34	40.5	0.8	0.5547	0.43	0.032	2.04	0.73	0.119	0.1	0.586	0.038	0.54	11.83	0.06	12.43	18432	3.06	12.73266	-9.67266	NAF
NS0165	82	84	NS	X121042	121042	1	G	D	32.39	44.35	0.84	0.2322	0.18	0.04	1.92	0.62	0.09	0.028	0.184	0.039	0.23	4.75	-0.07	4.91	18415	0.8568	10.81404	-9.95724	NAF
NS0165	122	124	NS	X121063	121063	1	G	D	31.81	42.64	0.77	0.7224	0.56	0.031	1.71	0.6	0.104	0.015	0.577	0.02	0.21	7.28	-0.22	7.27	18453	0.459	10.4652	-10.0062	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0165	210	212	NS	X121108	121108	1	G	D	24.13	39.29	1.55	0.4257	0.33	0.063	3.33	0.82	0.11	0.135	0.369	0.0005	0.78	18.08	0.4	19.26	18533	4.131	14.30244	-10.17144	NAF
NS0165	96	98	NS	X121049	121049	1	G	D	26.58	49.08	0.39	0.1419	0.11	0.019	1.75	0.71	0.073	0.056	0.131	0.022	0.43	8.78	0.05	9.26	18422	1.7136	12.38382	-10.67022	NAF
NS0165	216	218	NS	X121111	121111	1	G	D	24.91	43.36	1.08	0.2838	0.22	0.131	2.93	0.72	0.113	0.058	0.027	0.005	1.06	14.27	0.14	15.47	18536	1.7748	12.55824	-10.78344	NAF
NS0165	90	92	NS	X121046	121046	1	G	D	28.2	48.19	1.01	0.3225	0.25	0.046	1.92	0.75	0.097	0.068	0.103	0.048	0.36	6.28	0.07	6.71	18419	2.0808	13.0815	-11.0007	NAF
NS0165	104	106	NS	X121054	121054	1	G	D	33.85	33.7	1.37	0.4902	0.38	0.057	2.69	0.84	0.172	0.119	0.31	0.05	0.55	10.56	-0.03	11.08	18426	3.6414	14.65128	-11.00988	NAF
NS0165	192	194	NS	X121098	121098	1	G	D	28.71	42.25	0.36	0.5289	0.41	0.015	2.67	0.86	0.112	0.126	0.103	0.054	0.56	11.05	0.16	11.77	18524	3.8556	15.00012	-11.14452	NAF
NS0165	108	110	NS	X121056	121056	1	G	D	24.51	53.76	0.43	0.2193	0.17	0.017	1.7	0.7	0.059	0.031	0.107	0.019	0.87	6.58	0.11	7.56	18428	0.9486	12.2094	-11.2608	NAF
NS0165	118	120	NS	X121061	121061	1	G	D	25.07	50.77	0.43	0.4386	0.34	0.019	1.63	0.68	0.087	0.015	0.304	0.02	0.48	9.01	-0.02	9.47	18451	0.459	11.86056	-11.40156	NAF
NS0165	214	216	NS	X121110	121110	1	G	D	27.02	30.11	1.59	0.3999	0.31	0.063	4.45	0.96	0.099	0.148	0.338	0.0005	0.7	21.42	0.5	22.62	18535	4.5288	16.74432	-12.21552	NAF
NS0165	92	94	NS	X121047	121047	1	G	D	26.97	42.4	1.42	0.3999	0.31	0.061	2.77	0.87	0.151	0.096	0.214	0.056	0.63	11.73	0.16	12.52	18420	2.9376	15.17454	-12.23694	NAF
NS0165	204	206	NS	X121105	121105	1	G	D	24.84	38.99	0.81	0.2709	0.21	0.031	3.61	0.8	0.097	0.032	0.051	0.004	0.88	18.58	0.09	19.55	18530	0.9792	13.9536	-12.9744	NAF
NS0165	56	58	NS	X121029	121029	1	G	D	24.43	43.09	9.92	0.0387	0.03	0.439	2.71	0.75	0.025	0.002	0.114	0.035	3.73	3.29	0.48	7.5	18384	0.0612	13.0815	-13.0203	NAF
NS0165	146	148	NS	X121075	121075	1	G	D	31.89	37.63	0.62	0.5676	0.44	0.024	2.82	0.77	0.051	0.012	0.259	0.095	0.48	10.8	0.11	11.39	18465	0.3672	13.43034	-13.06314	NAF
NS0165	100	102	NS	X121052	121052	1	G	D	30.04	43.3	0.68	0.1806	0.14	0.031	2.18	0.81	0.079	0.02	0.26	0.059	0.49	8.72	0.01	9.22	18424	0.612	14.12802	-13.51602	NAF
NS0165	98	100	NS	X121050	121050	1	G	D	28.46	44.16	0.43	0.1419	0.11	0.021	2.07	0.83	0.081	0.027	0.25	0.054	0.54	10.52	0.03	11.09	18423	0.8262	14.47686	-13.65066	NAF
NS0165	94	96	NS	X121048	121048	1	G	D	26.34	43.78	0.88	0.2709	0.21	0.038	2.48	0.97	0.171	0.105	0.206	0.067	0.66	11.9	0.19	12.75	18421	3.213	16.91874	-13.70574	NAF
NS0165	188	190	NS	X121096	121096	1	G	D	28.31	44.17	0.64	0.5934	0.46	0.03	2.66	1.34	0.124	0.307	0.17	0.11	0.38	7.39	0.74	8.51	18504	9.3942	23.37228	-13.97808	NAF
NS0165	194	196	NS	X121099	121099	1	G	D	31	42.96	0.24	0.5418	0.42	0.009	2.16	0.98	0.098	0.093	0.045	0.031	0.39	7.53	0.12	8.04	18525	2.8458	17.09316	-14.24736	NAF
NS0165	212	214	NS	X121109	121109	1	G	D	25.33	36.33	0.71	0.4257	0.33	0.027	3.94	0.89	0.077	0.032	0.103	0.01	0.83	19.9	0.16	20.89	18534	0.9792	15.52338	-14.54418	NAF
NS0165	196	198	NS	X121100	121100	1	G	D	30.35	42.45	0.26	0.4902	0.38	0.012	2.35	0.96	0.082	0.045	0.035	0.017	0.44	9.19	0.11	9.74	18526	1.377	16.74432	-15.36732	NAF
NS0165	110	112	NS	X121057	121057	1	G	D	31.67	41.13	0.78	0.5676	0.44	0.031	2.05	0.93	0.115	0.019	0.278	0.042	0.35	8.47	0	8.82	18429	0.5814	16.22106	-15.63966	NAF
NS0165	88	90	NS	X121045	121045	1	G	D	31.84	36.69	1.67	0.5418	0.42	0.071	3.07	1.08	0.252	0.086	0.59	0.08	0.39	9.04	0.03	9.46	18418	2.6316	18.83736	-16.20576	NAF
NS0165	124	126	NS	X121064	121064	1	G	D	33.92	40.79	0.85	0.4773	0.37	0.036	1.78	0.98	0.099	0.015	0.596	0.048	0.08	5.2	0.18	5.46	18454	0.459	17.09316	-16.63416	NAF
NS0165	106	108	NS	X121055	121055	1	G	D	25.26	46.92	0.89	0.5289	0.41	0.038	2.4	1.03	0.168	0.025	0.323	0.047	0.56	10.35	0.12	11.03	18427	0.765	17.96526	-17.20026	NAF
NS0165	190	192	NS	X121097	121097	1	G	D	30.59	42.52	0.31	0.5805	0.45	0.013	2.31	1.06	0.124	0.04	0.092	0.064	0.36	8.76	0.13	9.25	18523	1.224	18.48852	-17.26452	NAF
NS0165	172	174	NS	X121088	121088	1	G	D	33.98	38.86	0.84	0.4386	0.34	0.04	2.91	1.11	0.091	0.032	0.213	0.141	0.35	6.19	0.32	6.86	18496	0.9792	19.36062	-18.38142	NAF
NS0165	208	210	NS	X121107	121107	1	G	D	27.52	30.12	0.91	0.4128	0.32	0.032	4.57	1.16	0.101	0.03	0.112	0.002	0.81	21.99	0.13	22.93	18532	0.918	20.23272	-19.31472	NAF
NS0165	184	186	NS	X121094	121094	1	G	D	29.48	48.21	0.36	0.3999	0.31	0.019	1.77	1.35	0.119	0.112	0.114	0.06	0.2	4.51	0.44	5.15	18502	3.4272	23.5467	-20.1195	NAF
NS0165	126	128	NS	X121065	121065	1	G	D	29.81	49.31	0.5	0.2709	0.21	0.026	1.45	1.25	0.06	0.017	0.182	0.063	0.03	3.34	0.56	3.93	18455	0.5202	21.8025	-21.2823	NAF
NS0165	136	138	NS	X121070	121070	1	G	D	31.25	47.05	0.55	0.2838	0.22	0.024	1.77	1.25	0.069	0.014	0.269	0.074	0.02	2.89	0.61	3.52	18460	0.4284	21.8025	-21.3741	NAF
NS0165	134	136	NS	X121069	121069	1	G	D	31.63	41.29	0.75	0.5031	0.39	0.034	2.5	1.32	0.133	0.016	0.436	0.103	0.11	6.68	0.55	7.34	18459	0.4896	23.02344	-22.53384	NAF
NS0165	156	158	NS	X121080	121080	1	G	D	36.4	38.78	0.69	0.3999	0.31	0.03	2.06	1.43	0.118	0.024	0.186	0.106	0.17	3.2	0.49	3.86	18488	0.7344	24.94206	-24.20766	NAF
NS0165	148	150	NS	X121076	121076	1	G	D	37.04	35	0.7	0.5418	0.42	0.032	2.54	1.42	0.103	0.013	0.122	0.076	0.18	5.41	0.46	6.05	18466	0.3978	24.76764	-24.36984	NAF
NS0165	154	156	NS	X121079	121079	1	G	D	31.77	45.68	0.67	0.387	0.3	0.032	1.81	1.43	0.11	0.015	0.212	0.08	0.13	3	0.57	3.7	18487	0.459	24.94206	-24.48306	NAF
NS0165	150	152	NS	X121077	121077	1	G	D	26.31	52.12	0.57	0.4257	0.33	0.026	2.13	1.43	0.097	0.013	0.118	0.065	0.2	4.43	0.71	5.34	18467	0.3978	24.94206	-24.54426	NAF
NS0165	144	146	NS	X121074	121074	1	G	D	34.64	31.89	2.51	0.5031	0.39	0.101	3.59	1.78	0.419	0.206	0.784	0.218	0.59	6.68	0.42	7.69	18464	6.3036	31.04676	-24.74316	NAF
NS0165	164	166	NS	X121084	121084	1	G	D	35.79	39.5	0.66	0.3483	0.27	0.029	2.14	1.6	0.103	0.019	0.176	0.112	0.12	2.75	0.8	3.67	18492	0.5814	27.9072	-27.3258	NAF
NS0165	158	160	NS	X121081	121081	1	G	D	37.08	36.75	0.69	0.4257	0.33	0.03	2.29	1.65	0.105	0.034	0.177	0.102	0.15	3.46	0.74	4.35	18489	1.0404	28.7793	-27.7389	NAF
NS0165	152	154	NS	X121078	121078	1	G	D	31.74	44.1	0.69	0.4257	0.33	0.029	2.17	1.73	0.087	0.012	0.208	0.089	0.16	3.8	0.92	4.88	18468	0.3672	30.17466	-29.80746	NAF
NS0165	162	164	NS	X121083	121083	1	G	D	30.05	47.03	0.6	0.3096	0.24	0.029	2.13	2.03	0.077	0.064	0.149	0.092	0.11	2.41	1.46	3.98	18491	1.9584	35.40726	-33.44886	NAC
NS0165	142	144	NS	X121073	121073	1	G	D	35.19	35.72	0.87	0.7095	0.55	0.035	2.3	2.15	0.178	0.036	0.474	0.05	0.18	5.66	0.95	6.79	18463	1.1016	37.5003	-36.3987	NAC
NS0165	170	172	NS	X121087	121087	1	G	D	32.22	39.24	0.79	0.4902	0.38	0.032	3.03	2.25	0.208	0.043	0.21	0.132	0.32	5.7	1.1	7.12	18495	1.3158	39.2445	-37.9287	NAC
NS0165	166	168	NS	X121085	121085	1	G	D	36.89	35.89	0.77	0.4257	0.33	0.035	2.46	2.29	0.103	0.02	0.189	0.109	0.17	3.15	1.48	4.8	18493	0.612	39.94218	-39.33018	NAC
NS0165	160	162	NS	X121082	121082	1	G	D	35.02	38.57	0.59	0.4515	0.35	0.028	2.35	2.33	0.118	0.014	0.147	0.08	0.14	3.37	1.49	5	18490	0.4284	40.63986	-40.21146	NAC
NS0165	140	142	NS	X121072	121072	1	G	D	32.39	40.95	0.69	0.5934	0.46	0.026	2.05	2.34	0.107	0.011	0.431	0.04	0.12	4.46	1.54	6.12	18462	0.3366	40.81428	-40.47768	NAC
NS0165	138	140	NS	X121071	121071	1	G	D	34.11	38.12	0.71	0.4902	0.38	0.031	2.27	2.46	0.099	0.015	0.385	0.057	0.15	4.27	1.62	6.04	18461	0.459	42.90732	-42.44832	NAC
NS0165	168	170	NS	X121086	121086	1	G	D	30.56	42.91	0.64	0.4515	0.35	0.026	2.61	2.72	0.118	0.022	0.159	0.098	0.23	3.97	2.04	6.24	18494	0.6732	47.44224	-46.76904	NAC
NS0166	28	32	NS	BX123167-BX123168	X123167	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2396	-0.0306	-0.01744	-0.013158	NAF
NS0166	32	36	NS	BX123169-BX123170	X123169	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2397	-0.0306	-0.01744	-0.013158	NAF
NS0166	40	44	NS	BX123173-BX123174	X123173	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2399	-0.0306	-0.01744	-0.013158	NAF
NS0166	2	4	NS	X121154	121154	1	G	D	36.66	33	6.37	0.0516	0.04	0.548	0.08	0.04	0.029	0.012	0.058	0.012	5.15	1.65	0.2	7	18539	0.3672	0.69768	-0.33048	NAF
NS0166	0	2	NS	X121153	121153	1	G	D	34.64	36.19	6.2	0.0258	0.02	0.637	0.1	0.06	0.028	0.021	0.116	0.013	4.85	1.63	0.23	6.71	18538	0.6426	1.04652	-0.40392	NAF
NS0166	12	14	NS	X121159	121159	1	G	D	32.62	44.75	3.03	0.0387	0.03	0.255	0.1	0.07	0.055	0.014	0.028	0.012	3.5	0.97	0.11	4.58	18544	0.4284	1.22094	-0.79254	NAF
NS0166	276	280	NS	BX123293-BX123294	X123293	2			66.27	7.738	0.463	0.025	0.018	0.025	0.218	0.082	0.013	0.019	0.405	0.065	-0.01	-0.01	-0.01	-0.03	2459	0.5814	1.430244	-0.848844	NAF
NS0166	240	244	NS	BX123275-BX123276	X123275	2			67.67	5.47	0.41	0.029	0.02088	0.029	0.196	0.075	0.009	0.015	0.36	0.058	-0.01	-0.01	-0.01	-0.03	2450	0.459	1.30815	-0.84915	NAF
NS0166	14	16	NS	X121160	121160	1	G	D	34.05	44.08	2.02	0.0516	0.04	0.095	0.08	0.07	0.055	0.011	0.024	0.013	3.83	0.69	0.11	4.63	18545	0.3366	1.22094	-0.88434	NAF
NS0166	36	40	NS	BX123171-BX123172	X123171	2			65.83	6.062	0.224	0.022	0.01584	0.022	0.281	0.064	0.016	0.006	0.047	0.073	0.34	0.72	-0.01	1.05	2398	0.1836	1.116288	-0.932688	NAF
NS0166	256	260	NS	BX123283-BX123284	X123283	2			67.12	5.247	0.32	0.021	0.01512	0.021	0.232	0.075	0.011	0.011	0.236	0.07	-0.01	-0.01	-0.01	-0.03	2454	0.3366	1.30815	-0.97155	NAF
NS0166	280	282	NS	BX123295	X123295	2			67.39	5.989	0.202	0.013	0.00936	0.013	0.152	0.069	0.014	0.007	0.188	0.066	-0.01	-0.01	-0.01	-0.03	2460	0.2142	1.203498	-0.989298	NAF
NS0166	260	264	NS	BX123285-BX123286	X123285	2			67.88	4.958	0.266	0.02	0.0144	0.02	0.21	0.072	0.01	0.008	0.203	0.059	-0.01	-0.01	-0.01	-0.03	2455	0.2448	1.255824	-1.011024	NAF
NS0166	8	10	NS	X121157	121157	1	G	D	39.5	34.81	2.54	0.0258	0.02	0.107	0.1	0.09	0.05	0.015	0.029	0.02	4.66	0.76	0.14	5.56	18542	0.459	1.56978	-1.11078	NAF
NS0166	178	182	NS	BX123243-BX123244	X123243	2			63.26	8.358	0.532	0.042	0.03024	0.042	0.547	0.129	0.022	0.034	0.204	0.098	-0.01	-0.01	-0.01	-0.03	2434	1.0404	2.250018	-1.209618	NAF
NS0166	240	242	NS	X121275	121275	1	G	W	32.58	39.63	3.38	0.5031	0.39	0.164	2.59	0.76	0.063	0.393	2.82	0.082	0.04	2.85	0.59	3.48	18478	12.0258	13.25592	-1.23012	NAF
NS0166	6	8	NS	X121156	121156	1	G	D	35.63	38.29	3.23	-0.0129	-0.01	0.097	0.09	0.09	0.024	0.011	0.024	0.015	5.75	1.02	0.16	6.93	18541	0.3366	1.56978	-1.23318	NAF
NS0166	252	256	NS	BX123281-BX123282	X123281	2			68.8	4.822	0.211	0.015	0.0108	0.015	0.154	0.081	0.012	0.003	0.17	0.046	-0.01	-0.01	-0.01	-0.03	2453	0.0918	1.412802	-1.321002	NAF
NS0166	272	276	NS	BX123291-BX123292	X123291	2			68.64	5.309	0.165	0.009	0.00648	0.009	0.149	0.083	0.014	0.003	0.157	0.103	-0.01	-0.01	-0.01	-0.03	2458	0.0918	1.447686	-1.355886	NAF
NS0166	22	24	NS	X121164	121164	1	G	D	33.31	44.37	1.87	0.0516	0.04	0.117	0.21	0.1	0.072	0.012	0.047	0.021	4.12	0.83	0.12	5.07	18549	0.3672	1.7442	-1.377	NAF
NS0166	228	232	NS	BX123269-BX123270	X123269	2			68.26	4.37	0.139	0.01	0.0072	0.01	0.128	0.09	0.013	0.003	0.134	0.059	-0.01	-0.01	-0.01	-0.03	2447	0.0918	1.56978	-1.47798	NAF
NS0166	236	240	NS	BX123273-BX123274	X123273	2			67.41	6.112	0.386	0.027	0.01944	0.027	0.195	0.108	0.017	0.012	0.298	0.065	-0.01	-0.01	-0.01	-0.03	2449	0.3672	1.883736	-1.516536	NAF
NS0166	264	268	NS	BX123287-BX123288	X123287	2			68.85	3.917	0.136	0.008	0.00576	0.008	0.144	0.089	0.02	0.001	0.127	0.045	-0.01	-0.01	-0.01	-0.03	2456	0.0306	1.552338	-1.521738	NAF
NS0166	232	236	NS	BX123271-BX123272	X123271	2			69.45	3.758	0.13	0.009	0.00648	0.009	0.119	0.091	0.015	0.002	0.129	0.061	-0.01	-0.01	-0.01	-0.03	2448	0.0612	1.587222	-1.526022	NAF
NS0166	146	150	NS	BX123227-BX123228	X123227	2			65.23	7.587	0.262	0.025	0.018	0.025	0.412	0.107	0.019	0.011	0.087	0.085	-0.01	-0.01	-0.01	-0.03	2426	0.3366	1.866294	-1.529694	NAF
NS0166	192	196	NS	BX123251-BX123252	X123251	2			65.23	7.03	0.384	0.036	0.02592	0.036	0.463	0.149	0.025	0.028	0.138	0.077	-0.01	-0.01	-0.01	-0.03	2438	0.8568	2.598858	-1.742058	NAF
NS0166	248	252	NS	BX123279-BX123280	X123279	2			67.37	6.289	0.319	0.02	0.0144	0.02	0.191	0.114	0.021	0.008	0.252	0.082	-0.01	-0.01	-0.01	-0.03	2452	0.2448	1.988388	-1.743588	NAF
NS0166	126	130	NS	BX123217-BX123218	X123217	2			65.77	7.076	0.363	0.037	0.02664	0.037	0.495	0.136	0.022	0.02	0.112	0.088	-0.01	-0.01	-0.01	-0.03	2421	0.612	2.372112	-1.760112	NAF
NS0166	72	74	NS	BX123189	X123189	2			64.18	8.704	0.51	0.042	0.03024	0.042	0.554	0.157	0.024	0.031	0.157	0.089	0.02	-0.01	-0.01	0	2407	0.9486	2.738394	-1.789794	NAF
NS0166	216	220	NS	BX123263-BX123264	X123263	2			68.12	4.35	0.201	0.018	0.01296	0.018	0.152	0.111	0.015	0.004	0.178	0.056	-0.01	-0.01	-0.01	-0.03	2444	0.1224	1.936062	-1.813662	NAF
NS0166	190	192	NS	BX123249	X123249	2			64.07	8.425	0.394	0.031	0.02232	0.031	0.461	0.141	0.018	0.021	0.186	0.08	-0.01	-0.01	-0.01	-0.03	2437	0.6426	2.459322	-1.816722	NAF
NS0166	56	60	NS	BX123181-BX123182	X123181	2			64.54	7.517	0.306	0.023	0.01656	0.023	0.442	0.125	0.015	0.011	0.101	0.085	-0.01	-0.01	-0.01	-0.03	2403	0.3366	2.18025	-1.84365	NAF
NS0166	224	228	NS	BX123267-BX123268	X123267	2			68.3	5.538	0.234	0.015	0.0108	0.015	0.161	0.115	0.021	0.005	0.217	0.06	-0.01	-0.01	-0.01	-0.03	2446	0.153	2.00583	-1.85283	NAF
NS0166	244	248	NS	BX123277-BX123278	X123277	2			66.95	6.622	0.312	0.018	0.01296	0.018	0.196	0.121	0.021	0.008	0.272	0.056	-0.01	-0.01	-0.01	-0.03	2451	0.2448	2.110482	-1.865682	NAF
NS0166	268	270	NS	BX123289	X123289	2			68.27	4.725	0.2	0.012	0.00864	0.012	0.163	0.112	0.023	0.002	0.164	0.062	-0.01	-0.01	-0.01	-0.03	2457	0.0612	1.953504	-1.892304	NAF
NS0166	60	64	NS	BX123183-BX123184	X123183	2			61.61	11.733	0.702	0.05	0.036	0.05	0.742	0.164	0.021	0.031	0.215	0.118	0.3	0.5	-0.01	0.79	2404	0.9486	2.860488	-1.911888	NAF
NS0166	174	178	NS	BX123241-BX123242	X123241	2			65.02	7.734	0.321	0.029	0.02088	0.029	0.419	0.136	0.023	0.015	0.134	0.077	-0.01	-0.01	-0.01	-0.03	2433	0.459	2.372112	-1.913112	NAF
NS0166	76	80	NS	BX123191-BX123192	X123191	2			64.16	8.547	0.339	0.029	0.02088	0.029	0.481	0.147	0.015	0.02	0.126	0.099	-0.01	-0.01	-0.01	-0.03	2408	0.612	2.563974	-1.951974	NAF
NS0166	10	12	NS	X121158	121158	1	G	D	27.61	50.44	4.36	0.0258	0.02	0.211	0.2	0.14	0.049	0.016	0.046	0.019	3.4	1.42	0.17	4.99	18543	0.4896	2.44188	-1.95228	NAF
NS0166	208	210	NS	BX123259	X123259	2			65.97	6.771	0.255	0.02	0.0144	0.02	0.274	0.142	0.025	0.017	0.171	0.061	-0.01	-0.01	-0.01	-0.03	2442	0.5202	2.476764	-1.956564	NAF
NS0166	138	142	NS	BX123223-BX123224	X123223	2			67.52	6.383	0.209	0.04	0.0288	0.04	0.327	0.137	0.021	0.012	0.063	0.071	-0.01	-0.01	-0.01	-0.03	2424	0.3672	2.389554	-2.022354	NAF
NS0166	220	224	NS	BX123265-BX123266	X123265	2			67.45	6.077	0.229	0.016	0.01152	0.016	0.163	0.13	0.019	0.008	0.215	0.076	-0.01	-0.01	-0.01	-0.03	2445	0.2448	2.26746	-2.02266	NAF
NS0166	142	146	NS	BX123225-BX123226	X123225	2			64.9	7.513	0.339	0.031	0.02232	0.031	0.458	0.163	0.022	0.024	0.111	0.121	-0.01	-0.01	-0.01	-0.03	2425	0.7344	2.843046	-2.108646	NAF
NS0166	154	158	NS	BX123231-BX123232	X123231	2			63.39	8.478	0.392	0.032	0.02304	0.032	0.541	0.158	0.027	0.021	0.115	0.093	-0.01	-0.01	-0.01	-0.03	2428	0.6426	2.755836	-2.113236	NAF
NS0166	162	166	NS	BX123235-BX123236	X123235	2			65.36	7.768	0.274	0.023	0.01656	0.023	0.432	0.146	0.014	0.014	0.096	0.082	-0.01	-0.01	-0.01	-0.03	2430	0.4284	2.546532	-2.118132	NAF
NS0166	130	134	NS	BX123219-BX123220	X123219	2			68.25	5.378	0.146	0.02	0.0144	0.02	0.286	0.134	0.019	0.006	0.049	0.08	-0.01	-0.01	-0.01	-0.03	2422	0.1836	2.337228	-2.153628	NAF
NS0166	122	126	NS	BX123215-BX123216	X123215	2			61.67	10.554	0.522	0.041	0.02952	0.041	0.628	0.169	0.017	0.024	0.156	0.1	-0.01	-0.01	-0.01	-0.03	2420	0.7344	2.947698	-2.213298	NAF
NS0166	150	152	NS	BX123229	X123229	2			67.47	6.277	0.18	0.019	0.01368	0.019	0.311	0.139	0.018	0.005	0.061	0.066	-0.01	-0.01	-0.01	-0.03	2427	0.153	2.424438	-2.271438	NAF
NS0166	170	174	NS	BX123239-BX123240	X123239	2			68.25	5.218	0.174	0.02	0.0144	0.02	0.277	0.144	0.023	0.007	0.08	0.08	-0.01	-0.01	-0.01	-0.03	2432	0.2142	2.511648	-2.297448	NAF
NS0166	24	26	NS	X121165	121165	1	G	D	36.59	37.45	2.35	0.0774	0.06	0.103	0.38	0.15	0.088	0.01	0.05	0.042	5.17	1.18	0.13	6.48	18550	0.306	2.6163	-2.3103	NAF
NS0166	80	84	NS	BX123193-BX123194	X123193	2			64.98	8.063	0.354	0.028	0.02016	0.028	0.493	0.161	0.014	0.016	0.122	0.092	0.14	-0.01	-0.01	0.12	2409	0.4896	2.808162	-2.318562	NAF
NS0166	204	208	NS	BX123257-BX123258	X123257	2			63.28	8.263	0.433	0.04	0.0288	0.04	0.458	0.183	0.022	0.026	0.209	0.068	-0.01	-0.01	-0.01	-0.03	2441	0.7956	3.191886	-2.396286	NAF
NS0166	158	162	NS	BX123233-BX123234	X123233	2			64.77	8.354	0.286	0.022	0.01584	0.022	0.453	0.163	0.021	0.014	0.095	0.079	-0.01	-0.01	-0.01	-0.03	2429	0.4284	2.843046	-2.414646	NAF
NS0166	212	216	NS	BX123261-BX123262	X123261	2			65.86	7.053	0.322	0.022	0.01584	0.022	0.243	0.159	0.023	0.011	0.242	0.072	-0.01	-0.01	-0.01	-0.03	2443	0.3366	2.773278	-2.436678	NAF
NS0166	106	110	NS	BX123207-BX123208	X123207	2			63.06	10.114	0.396	0.032	0.02304	0.032	0.539	0.174	0.02	0.017	0.144	0.082	-0.01	0.27	-0.01	0.25	2416	0.5202	3.034908	-2.514708	NAF
NS0166	64	68	NS	BX123185-BX123186	X123185	2			65.58	7.95	0.335	0.026	0.01872	0.026	0.464	0.165	0.021	0.01	0.114	0.087	0.1	-0.01	-0.01	0.08	2405	0.306	2.87793	-2.57193	NAF
NS0166	110	114	NS	BX123209-BX123210	X123209	2			64.6	8.041	0.432	0.033	0.02376	0.033	0.503	0.192	0.018	0.022	0.131	0.105	-0.01	-0.01	-0.01	-0.03	2417	0.6732	3.348864	-2.675664	NAF
NS0166	166	170	NS	BX123237-BX123238	X123237	2			66.37	6.75	0.22	0.022	0.01584	0.022	0.342	0.171	0.018	0.009	0.094	0.071	-0.01	-0.01	-0.01	-0.03	2431	0.2754	2.982582	-2.707182	NAF
NS0166	68	72	NS	BX123187-BX123188	X123187	2			63.44	9.783	0.372	0.026	0.01872	0.026	0.576	0.175	0.02	0.01	0.136	0.085	0.02	0.59	-0.01	0.6	2406	0.306	3.05235	-2.74635	NAF
NS0166	20	22	NS	X121163	121163	1	G	D	33.74	41.38	2.92	0.0516	0.04	0.162	0.38	0.18	0.062	0.011	0.075	0.023	4.86	1.27	0.15	6.28	18548	0.3366	3.13956	-2.80296	NAF
NS0166	186	190	NS	BX123247-BX123248	X123247	2			66.1	6.824	0.216	0.02	0.0144	0.02	0.31	0.175	0.027	0.007	0.113	0.075	-0.01	-0.01	-0.01	-0.03	2436	0.2142	3.05235	-2.83815	NAF
NS0166	196	200	NS	BX123253-BX123254	X123253	2			65.6	6.89	0.219	0.021	0.01512	0.021	0.318	0.192	0.018	0.011	0.117	0.07	-0.01	-0.01	-0.01	-0.03	2439	0.3366	3.348864	-3.012264	NAF
NS0166	118	122	NS	BX123213-BX123214	X123213	2			60.44	12.872	0.689	0.05	0.036	0.05	0.759	0.229	0.014	0.03	0.205	0.136	0.06	0.25	-0.01	0.3	2419	0.918	3.994218	-3.076218	NAF
NS0166	88	92	NS	BX123197-BX123198	X123197	2			64.29	9.608	0.372	0.03	0.0216	0.03	0.526	0.217	0.017	0.023	0.133	0.092	0.05	0.06	-0.01	0.1	2411	0.7038	3.784914	-3.081114	NAF
NS0166	200	204	NS	BX123255-BX123256	X123255	2			65.07	8.122	0.261	0.022	0.01584	0.022	0.315	0.196	0.021	0.01	0.149	0.327	-0.01	-0.01	-0.01	-0.03	2440	0.306	3.418632	-3.112632	NAF
NS0166	182	186	NS	BX123245-BX123246	X123245	2			64.35	8.708	0.361	0.033	0.02376	0.033	0.439	0.214	0.03	0.02	0.145	0.067	-0.01	-0.01	-0.01	-0.03	2435	0.612	3.732588	-3.120588	NAF
NS0166	34	36	NS	X121170	121170	1	G	D	33.94	42.7	2.04	0.4386	0.34	0.096	0.44	0.19	0.086	0.004	0.099	0.03	3.93	1.06	0.11	5.1	18555	0.1224	3.31398	-3.19158	NAF
NS0166	44	48	NS	BX123175-BX123176	X123175	2			65.12	7.64	0.422	0.036	0.02592	0.036	0.483	0.215	0.021	0.018	0.12	0.087	0.04	-0.01	-0.01	0.02	2400	0.5508	3.75003	-3.19923	NAF
NS0166	84	88	NS	BX123195-BX123196	X123195	2			64.72	8.037	0.319	0.028	0.02016	0.028	0.481	0.222	0.014	0.021	0.113	0.085	-0.01	-0.01	-0.01	-0.03	2410	0.6426	3.872124	-3.229524	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0166	26	28	NS	X121166	121166	1	G	D	28.22	46.61	4.73	0.1032	0.08	0.184	0.67	0.2	0.07	0.007	0.135	0.04	4.68	1.94	0.2	6.82	18551	0.2142	3.4884	-3.2742	NAF
NS0166	18	20	NS	X121162	121162	1	G	D	30.33	45.22	3.82	0.0645	0.05	0.182	0.48	0.21	0.047	0.009	0.135	0.022	4.63	1.51	0.19	6.33	18547	0.2754	3.66282	-3.38742	NAF
NS0166	98	102	NS	BX123203-BX123204	X123203	2			65.03	7.754	0.235	0.02	0.0144	0.02	0.388	0.215	0.018	0.01	0.091	0.078	-0.01	-0.01	-0.01	-0.03	2414	0.306	3.75003	-3.44403	NAF
NS0166	16	18	NS	X121161	121161	1	G	D	32.89	42.82	3.02	0.0774	0.06	0.145	0.42	0.22	0.04	0.012	0.065	0.013	4.47	1.22	0.09	5.78	18546	0.3672	3.83724	-3.47004	NAF
NS0166	134	138	NS	BX123221-BX123222	X123221	2			66.34	7.126	0.177	0.02	0.0144	0.02	0.321	0.209	0.026	0.005	0.061	0.149	-0.01	-0.01	-0.01	-0.03	2423	0.153	3.645378	-3.492378	NAF
NS0166	32	34	NS	X121169	121169	1	G	D	35.14	38.55	2.39	0.5289	0.41	0.113	0.64	0.21	0.063	0.005	0.08	0.033	5.45	1.33	0.17	6.95	18554	0.153	3.66282	-3.50982	NAF
NS0166	114	118	NS	BX123211-BX123212	X123211	2			67.11	6.324	0.181	0.022	0.01584	0.022	0.314	0.215	0.017	0.007	0.059	0.075	-0.01	-0.01	-0.01	-0.03	2418	0.2142	3.75003	-3.53583	NAF
NS0166	102	106	NS	BX123205-BX123206	X123205	2			64.1	9.546	0.346	0.03	0.0216	0.03	0.502	0.232	0.016	0.016	0.128	0.091	-0.01	-0.01	-0.01	-0.03	2415	0.4896	4.046544	-3.556944	NAF
NS0166	48	52	NS	BX123177-BX123178	X123177	2			65.82	7.386	0.349	0.028	0.02016	0.028	0.426	0.226	0.017	0.012	0.097	0.084	-0.01	-0.01	-0.01	-0.03	2401	0.3672	3.941892	-3.574692	NAF
NS0166	52	56	NS	BX123179-BX123180	X123179	2			63.61	9.194	0.499	0.04	0.0288	0.04	0.583	0.263	0.017	0.027	0.154	0.095	-0.01	-0.01	-0.01	-0.03	2402	0.8262	4.587246	-3.761046	NAF
NS0166	36	38	NS	X121171	121171	1	G	D	35.46	41.13	1.64	0.4773	0.37	0.074	0.46	0.23	0.065	0.004	0.038	0.018	3.51	0.97	0.14	4.62	18556	0.1224	4.01166	-3.88926	NAF
NS0166	60	62	NS	X121183	121183	1	G	W	29.09	40.79	4.07	0.3741	0.29	0.184	3.53	0.9	0.152	0.385	1.38	0.386	1.26	3.99	0.89	6.14	18568	11.781	15.6978	-3.9168	NAF
NS0166	94	98	NS	BX123201-BX123202	X123201	2			64.67	9.215	0.3	0.024	0.01728	0.024	0.475	0.261	0.021	0.011	0.111	0.082	-0.01	-0.01	-0.01	-0.03	2413	0.3366	4.552362	-4.215762	NAF
NS0166	92	94	NS	BX123199	X123199	2			64.64	8.295	0.252	0.02	0.0144	0.02	0.454	0.26	0.017	0.008	0.092	0.085	-0.01	-0.01	-0.01	-0.03	2412	0.2448	4.53492	-4.29012	NAF
NS0166	40	42	NS	X121173	121173	1	G	W	29.76	41.41	5.4	0.3999	0.31	0.253	2.2	0.72	0.112	0.27	0.72	0.129	2.98	2.46	0.8	6.24	18558	8.262	12.55824	-4.29624	NAF
NS0166	30	32	NS	X121168	121168	1	G	D	29.8	44.33	3.47	0.9417	0.73	0.16	0.84	0.27	0.07	0.005	0.151	0.042	4.75	1.78	0.23	6.76	18553	0.153	4.70934	-4.55634	NAF
NS0166	28	30	NS	X121167	121167	1	G	D	24.51	48.35	5.91	0.8256	0.64	0.257	1	0.31	0.072	0.004	0.248	0.067	4.52	2.49	0.34	7.35	18552	0.1224	5.40702	-5.28462	NAF
NS0166	38	40	NS	X121172	121172	1	G	D	32.92	41.39	1.47	0.4257	0.33	0.068	1.46	0.42	0.084	0.034	0.412	0.09	1.11	5.67	-0.17	6.61	18557	1.0404	7.32564	-6.28524	NAF
NS0166	4	6	NS	X121155	121155	1	G	D	28.94	46.14	4.72	0.0258	0.02	0.235	0.18	0.39	0.014	0.008	0.076	0.033	5.35	1.53	0.21	7.09	18540	0.2448	6.80238	-6.55758	NAF
NS0166	110	112	NS	X121209	121209	1	G	W	28.97	41.46	3.77	0.4386	0.34	0.17	3.23	1.17	0.127	0.428	1.19	0.283	1.06	4.48	1	6.54	18341	13.0968	20.40714	-7.31034	NAF
NS0166	42	44	NS	X121174	121174	1	G	W	32.66	39.24	1.93	0.5676	0.44	0.089	2.12	0.61	0.065	0.063	0.67	0.102	0.77	6.78	-0.02	7.53	18559	1.9278	10.63962	-8.71182	NAF
NS0166	142	144	NS	X121225	121225	1	G	W	32.68	41.18	1.45	0.516	0.4	0.066	2.18	0.83	0.111	0.123	0.574	0.153	0.56	5.35	0.15	6.06	18375	3.7638	14.47686	-10.71306	NAF
NS0166	74	76	NS	X121190	121190	1	G	W	33.85	37.82	1.64	0.5934	0.46	0.072	2.24	0.69	0.081	0.036	0.692	0.205	0.74	6.31	0.02	7.07	18575	1.1016	12.03498	-10.93338	NAF
NS0166	180	182	NS	X121244	121244	1	G	W	31.6	41.5	2.18	0.5289	0.41	0.092	2.5	1.04	0.1	0.221	0.932	0.152	0.49	4.32	0.48	5.29	18412	6.7626	18.13968	-11.37708	NAF
NS0166	144	146	NS	X121226	121226	1	G	W	29.91	43.99	1.39	0.5418	0.42	0.057	2.18	0.82	0.154	0.09	0.554	0.151	0.55	6.07	0.04	6.66	18376	2.754	14.30244	-11.54844	NAF
NS0166	148	150	NS	X121228	121228	1	G	W	34.92	35.3	1.28	0.6966	0.54	0.055	2.4	0.76	0.13	0.046	0.514	0.134	0.62	7.92	-0.05	8.49	18378	1.4076	13.25592	-11.84832	NAF
NS0166	124	126	NS	X121216	121216	1	G	W	31.15	41.18	2.41	0.3741	0.29	0.111	2.76	0.81	0.053	0.051	0.754	0.185	0.76	5.32	0.26	6.34	18366	1.5606	14.12802	-12.56742	NAF
NS0166	58	60	NS	X121182	121182	1	G	W	32.95	39.82	1.28	0.5934	0.46	0.054	2	0.79	0.086	0.028	0.532	0.146	0.62	6.65	0	7.27	18567	0.8568	13.77918	-12.92238	NAF
NS0166	278	280	NS	X121294	121294	1	G	W	32.15	41.67	2.51	0.5547	0.43	0.111	2.24	1.13	0.087	0.217	2.1	0.042	-0.01	2.75	0.46	3.2	18515	6.6402	19.70946	-13.06926	NAF
NS0166	76	78	NS	X121191	121191	1	G	W	32.02	40.54	1.64	0.5031	0.39	0.073	2.27	0.88	0.065	0.05	0.693	0.185	0.71	6.02	0.29	7.02	18576	1.53	15.34896	-13.81896	NAF
NS0166	146	148	NS	X121227	121227	1	G	W	31.73	40.42	1.15	0.6321	0.49	0.047	2.18	0.91	0.181	0.05	0.468	0.131	0.55	7.29	0	7.84	18377	1.53	15.87222	-14.34222	NAF
NS0166	70	72	NS	X121188	121188	1	G	W	33.78	37.67	1.52	0.5934	0.46	0.063	2.36	0.91	0.066	0.032	0.647	0.193	0.69	6.52	0.21	7.42	18573	0.9792	15.87222	-14.89302	NAF
NS0166	178	180	NS	X121243	121243	1	G	W	32.68	39.94	2.1	0.5418	0.42	0.092	2.53	1.12	0.108	0.131	0.916	0.17	0.52	4.58	0.38	5.48	18411	4.0086	19.53504	-15.52644	NAF
NS0166	156	158	NS	X121232	121232	1	G	W	35.35	36.59	1.78	0.516	0.4	0.079	2.61	1.03	0.107	0.068	0.616	0.178	0.54	5.05	0.24	5.83	18400	2.0808	17.96526	-15.88446	NAF
NS0166	176	178	NS	X121242	121242	1	G	W	32.54	40.74	1.81	0.5418	0.42	0.07	2.38	1.08	0.088	0.092	0.788	0.123	0.43	4.8	0.38	5.61	18410	2.8152	18.83736	-16.02216	NAF
NS0166	104	106	NS	X121206	121206	1	G	W	32.4	39.72	2.1	0.4257	0.33	0.095	2.55	1.07	0.058	0.085	0.908	0.233	0.83	4.77	0.48	6.08	18338	2.601	18.66294	-16.06194	NAF
NS0166	62	64	NS	X121184	121184	1	G	W	30.67	42.65	1.46	0.5547	0.43	0.063	2.21	1	0.081	0.033	0.623	0.17	0.67	6.32	0.3	7.29	18569	1.0098	17.442	-16.4322	NAF
NS0166	118	120	NS	X121213	121213	1	G	W	28.69	41.36	3.04	0.4128	0.32	0.137	3.2	1.55	0.096	0.346	1.01	0.256	0.86	4.67	1.11	6.64	18363	10.5876	27.0351	-16.4475	NAF
NS0166	262	264	NS	X121286	121286	1	G	W	33.62	38.59	1.8	0.7869	0.61	0.081	2.22	1.31	0.127	0.209	1.28	0.067	0.28	4.48	0.46	5.22	18507	6.3954	22.84902	-16.45362	NAF
NS0166	78	80	NS	X121192	121192	1	G	W	31.97	38.92	2.1	0.4515	0.35	0.094	2.66	1.35	0.169	0.191	0.886	0.242	0.88	5.18	0.64	6.7	18325	5.8446	23.5467	-17.7021	NAF
NS0166	258	260	NS	X121284	121284	1	G	W	32.35	39.92	2.14	0.6579	0.51	0.093	2.39	1.28	0.097	0.149	1.41	0.089	0.85	4.33	0.44	5.62	18505	4.5594	22.32576	-17.76636	NAF
NS0166	238	240	NS	X121274	121274	1	G	W	31.2	43.18	2.25	0.5547	0.43	0.101	2.25	1.22	0.127	0.105	1.87	0.059	0.03	3.13	0.46	3.62	18477	3.213	21.27924	-18.06624	NAF
NS0166	44	46	NS	X121175	121175	1	G	W	28.79	40.98	3.62	0.4257	0.33	0.16	3.13	1.38	0.178	0.182	1.21	0.245	1.13	4.68	0.78	6.59	18560	5.5692	24.06996	-18.50076	NAF
NS0166	194	196	NS	X121252	121252	1	G	W	31.65	38.96	2.91	0.5031	0.39	0.136	3.07	1.35	0.131	0.162	1.17	0.176	0.63	4.83	0.66	6.12	18437	4.9572	23.5467	-18.5895	NAF
NS0166	80	82	NS	X121193	121193	1	G	W	33.3	37.37	1.93	0.4773	0.37	0.083	2.64	1.3	0.045	0.116	0.799	0.216	0.76	5.43	0.75	6.94	18326	3.5496	22.6746	-19.125	NAF
NS0166	190	192	NS	X121249	121249	1	G	W	32.04	39.2	2.1	0.6063	0.47	0.088	2.56	1.42	0.188	0.181	1.03	0.154	0.43	5.66	0.46	6.55	18435	5.5386	24.76764	-19.22904	NAF
NS0166	106	108	NS	X121207	121207	1	G	W	32.16	39.09	2.1	0.4515	0.35	0.094	2.56	1.23	0.12	0.066	0.863	0.217	0.79	5.69	0.48	6.96	18339	2.0196	21.45366	-19.43406	NAF
NS0166	64	66	NS	X121185	121185	1	G	W	32.67	37.71	2.02	0.5031	0.39	0.09	2.7	1.23	0.074	0.055	0.828	0.233	1.07	5.88	0.58	7.53	18570	1.683	21.45366	-19.77066	NAF
NS0166	254	256	NS	X121282	121282	1	G	W	35.47	39.2	1.39	0.6063	0.47	0.062	1.7	1.21	0.078	0.038	1.13	0.037	-0.02	2.89	0.46	3.33	18485	1.1628	21.10482	-19.94202	NAF
NS0166	210	212	NS	X121260	121260	1	G	W	32.63	39.24	2.68	0.4902	0.38	0.114	2.5	1.53	0.106	0.209	1.68	0.131	0.47	3.35	0.74	4.56	18445	6.3954	26.68626	-20.29086	NAF
NS0166	256	258	NS	X121283	121283	1	G	W	34.43	40.11	1.77	0.5805	0.45	0.074	1.87	1.31	0.09	0.077	1.39	0.057	0.04	2.98	0.5	3.52	18486	2.3562	22.84902	-20.49282	NAF
NS0166	56	58	NS	X121181	121181	1	G	W	33.3	38.02	1.58	0.5031	0.39	0.069	2.32	1.29	0.102	0.053	0.664	0.176	0.72	6.26	0.43	7.41	18566	1.6218	22.50018	-20.87838	NAF
NS0166	82	84	NS	X121194	121194	1	G	W	30.42	42.26	1.96	0.4128	0.32	0.084	2.49	1.32	0.058	0.063	0.81	0.201	0.71	5.12	0.88	6.71	18327	1.9278	23.02344	-21.09564	NAF
NS0166	68	70	NS	X121187	121187	1	G	W	33.02	38.56	1.46	0.6063	0.47	0.063	2.28	1.29	0.087	0.035	0.621	0.177	0.66	6.11	0.5	7.27	18572	1.071	22.50018	-21.42918	NAF
NS0166	126	128	NS	X121217	121217	1	G	W	30.11	37.96	2.4	0.5289	0.41	0.108	3.26	1.46	0.266	0.117	0.901	0.257	0.92	7.55	0.42	8.89	18367	3.5802	25.46532	-21.88512	NAF
NS0166	66	68	NS	X121186	121186	1	G	W	33.77	36.65	1.69	0.5547	0.43	0.075	2.49	1.37	0.13	0.05	0.724	0.206	0.75	6.03	0.54	7.32	18571	1.53	23.89554	-22.36554	NAF
NS0166	246	248	NS	X121278	121278	1	G	W	36.59	36.43	1.66	0.7095	0.55	0.075	1.87	1.41	0.128	0.066	1.37	0.042	-0.03	3.14	0.42	3.53	18481	2.0196	24.59322	-22.57362	NAF
NS0166	108	110	NS	X121208	121208	1	G	W	30.1	42.77	1.75	0.4644	0.36	0.072	2.17	1.47	0.147	0.083	0.696	0.17	0.79	5.47	0.62	6.88	18340	2.5398	25.63974	-23.09994	NAF
NS0166	140	142	NS	X121224	121224	1	G	W	29.04	46.56	1.52	0.387	0.3	0.069	2.15	1.53	0.107	0.114	0.598	0.16	0.48	3.59	0.82	4.89	18374	3.4884	26.68626	-23.19786	NAF
NS0166	162	164	NS	X121235	121235	1	G	W	35.37	35.91	1.48	0.5676	0.44	0.064	2.49	1.51	0.074	0.102	0.593	0.157	0.51	4.79	0.74	6.04	18403	3.1212	26.33742	-23.21622	NAF
NS0166	182	184	NS	X121245	121245	1	G	W	34.05	36.04	2.33	0.5289	0.41	0.103	2.58	1.84	0.244	0.289	0.997	0.175	0.49	4.29	0.7	5.48	18413	8.8434	32.09328	-23.24988	NAF
NS0166	204	206	NS	X121257	121257	1	G	W	32.59	40.24	1.9	0.4773	0.37	0.08	2.38	1.64	0.124	0.171	0.878	0.127	0.37	3.82	0.77	4.96	18442	5.2326	28.60488	-23.37228	NAF
NS0166	260	262	NS	X121285	121285	1	G	W	33.75	38.2	1.79	0.7353	0.57	0.08	2.2	1.52	0.111	0.1	1.27	0.071	0.28	4.2	0.67	5.15	18506	3.06	26.51184	-23.45184	NAF
NS0166	274	276	NS	X121292	121292	1	G	W	38.18	35.57	1.01	0.8514	0.66	0.045	1.63	1.38	0.087	0.014	0.876	0.012	-0.05	2.94	0.64	3.53	18513	0.4284	24.06996	-23.64156	NAF
NS0166	154	156	NS	X121231	121231	1	G	W	34	37.54	1.77	0.5289	0.41	0.08	2.52	1.57	0.143	0.121	0.611	0.177	0.52	4.65	0.66	5.83	18399	3.7026	27.38394	-23.68134	NAF
NS0166	226	228	NS	X121268	121268	1	G	W	35.43	37.87	1.69	0.5934	0.46	0.073	1.86	1.51	0.114	0.084	1.43	0.031	-0.01	3	0.55	3.54	18471	2.5704	26.33742	-23.76702	NAF
NS0166	276	278	NS	X121293	121293	1	G	W	34.75	39.86	1.44	0.7353	0.57	0.065	1.8	1.5	0.106	0.061	1.22	0.018	-0.02	2.79	0.72	3.49	18514	1.8666	26.163	-24.2964	NAF
NS0166	252	254	NS	X121281	121281	1	G	W	33.51	42.08	1.52	0.5031	0.39	0.069	1.81	1.47	0.081	0.034	1.2	0.055	0	2.34	0.81	3.15	18484	1.0404	25.63974	-24.59934	NAF
NS0166	224	226	NS	X121267	121267	1	G	W	37.48	37	1.24	0.6192	0.48	0.058	1.55	1.47	0.117	0.028	1.05	0.035	-0.06	2.72	0.51	3.17	18470	0.8568	25.63974	-24.78294	NAF
NS0166	248	250	NS	X121279	121279	1	G	W	35.78	37.51	1.58	0.774	0.6	0.069	1.79	1.57	0.195	0.077	1.28	0.053	0.02	3.32	0.37	3.71	18482	2.3562	27.38394	-25.02774	NAF
NS0166	280	282	NS	X121295	121295	1	G	W	36.71	36.71	1.22	0.8127	0.63	0.053	1.8	1.53	0.192	0.052	1.04	0.034	-0.06	3.13	0.39	3.46	18516	1.5912	26.68626	-25.09506	NAF
NS0166	84	86	NS	X121195	121195	1	G	W	32.72	39.02	1.53	0.5934	0.46	0.065	2.33	1.52	0.094	0.041	0.641	0.171	0.64	5.57	0.79	7	18328	1.2546	26.51184	-25.25724	NAF
NS0166	232	234	NS	X121271	121271	1	G	W	35.64	38.36	1.47	0.645	0.5	0.066	1.7	1.53	0.158	0.033	1.26	0.021	-0.06	2.9	0.47	3.31	18474	1.0098	26.68626	-25.67646	NAF
NS0166	244	246	NS	X121277	121277	1	G	W	32.22	41.71	1.96	0.6708	0.52	0.082	1.97	1.65	0.178	0.097	1.63	0.038	0.02	2.93	0.65	3.6	18480	2.9682	28.7793	-25.8111	NAF
NS0166	120	122	NS	X121214	121214	1	G	W	29.41	41.5	2.54	0.4386	0.34	0.117	2.94	1.66	0.065	0.101	0.854	0.237	0.78	5.25	1.16	7.19	18364	3.0906	28.95372	-25.86312	NAF
NS0166	174	176	NS	X121241	121241	1	G	W	34.36	38.45	1.4	0.5934	0.46	0.062	2.11	1.57	0.114	0.047	0.677	0.125	0.37	4.12	0.8	5.29	18409	1.4382	27.38394	-25.94574	NAF
NS0166	230	232	NS	X121270	121270	1	G	W	35.02	41.15	1.13	0.645	0.5	0.049	1.44	1.57	0.07	0.019	0.952	0.009	-0.09	2.33	0.84	3.08	18473	0.5814	27.38394	-26.80254	NAF
NS0166	242	244	NS	X121276	121276	1	G	W	35	37.86	2.11	0.645	0.5	0.091	1.78	1.64	0.082	0.052	1.81	0.026	-0.06	2.77	0.9	3.61	18479	1.5912	28.60488	-27.01368	NAF
NS0166	228	230	NS	X121269	121269	1	G	W	34.76	39.51	1.4	0.6708	0.52	0.06	1.61	1.64	0.122	0.045	1.19	0.027	0	2.64	0.81	3.45	18472	1.377	28.60488	-27.22788	NAF
NS0166	160	162	NS	X121234	121234	1	G	W	33.91	39.8	1.31	0.4644	0.36	0.058	2.12	1.75	0.062	0.107	0.51	0.11	0.41	3.67	0.96	5.04	18402	3.2742	30.5235	-27.2493	NAF
NS0166	54	56	NS	X121180	121180	1	G	W	28.96	40.19	3.46	0.387	0.3	0.159	3.37	2.07	0.173	0.284	1.18	0.289	1.03	4.33	1.33	6.69	18565	8.6904	36.10494	-27.41454	NAF
NS0166	150	152	NS	X121229	121229	1	G	W	31.17	43.69	0.99	0.5418	0.42	0.04	1.88	1.62	0.101	0.026	0.404	0.12	0.36	4.65	0.97	5.98	18397	0.7956	28.25604	-27.46044	NAF
NS0166	272	274	NS	X121291	121291	1	G	W	36.06	37.96	0.99	0.8385	0.65	0.046	1.67	1.63	0.098	0.019	0.838	0.017	-0.03	3.01	0.94	3.92	18512	0.5814	28.43046	-27.84906	NAF
NS0166	88	90	NS	X121197	121197	1	G	W	31.08	38.55	2.47	0.5418	0.42	0.117	2.86	2.07	0.24	0.269	0.981	0.295	0.95	4.47	1.08	6.5	18330	8.2314	36.10494	-27.87354	NAF
NS0166	236	238	NS	X121273	121273	1	G	W	33.64	38.48	2.29	0.5934	0.46	0.105	2.07	1.87	0.082	0.149	1.92	0.03	-0.01	2.72	1.08	3.79	18476	4.5594	32.61654	-28.05714	NAF
NS0166	72	74	NS	X121189	121189	1	G	W	31.09	37.87	2.92	0.4386	0.34	0.136	3.05	2.05	0.415	0.244	1.15	0.346	1.09	4.5	0.71	6.3	18574	7.4664	35.7561	-28.2897	NAF
NS0166	264	266	NS	X121287	121287	1	G	W	36.78	35.1	1.17	0.8901	0.69	0.047	1.94	1.68	0.113	0.03	0.926	0.024	0.06	4.23	0.94	5.23	18508	0.918	29.30256	-28.38456	NAF
NS0166	266	268	NS	X121288	121288	1	G	W	37.76	34.24	1.04	0.8901	0.69	0.044	1.77	1.67	0.116	0.023	0.85	0.03	0.02	4	0.85	4.87	18509	0.7038	29.12814	-28.42434	NAF
NS0166	208	210	NS	X121259	121259	1	G	W	35.72	36.56	1.39	0.645	0.5	0.056	1.87	1.96	0.105	0.179	0.913	0.074	0.14	3.71	1	4.85	18444	5.4774	34.18632	-28.70892	NAF
NS0166	48	50	NS	X121177	121177	1	G	W	32.09	38.24	1.95	0.516	0.4	0.088	2.46	1.78	0.131	0.062	0.691	0.191	0.74	5.89	1.01	7.64	18562	1.8972	31.04676	-29.14956	NAF
NS0166	152	154	NS	X121230	121230	1	G	W	33.05	40.44	1.25	0.5031	0.39	0.056	2.03	1.76	0.148	0.041	0.479	0.13	0.36	4.02	0.92	5.3	18398	1.2546	30.69792	-29.44332	NAF
NS0166	216	218	NS	X121263	121263	1	G	W	30.35	45.01	1.64	0.5676	0.44	0.067	1.78	1.79	0.096	0.052	1.24	0.065	0.16	2.72	1.11	3.99	18448	1.5912	31.22118	-29.62998	NAF
NS0166	212	214	NS	X121261	121261	1	G	W	31.94	41.26	1.9	0.6063	0.47	0.079	2.03	1.88	0.176	0.098	1.36	0.083	0.17	3.73	0.83	4.73	18446	2.9988	32.79096	-29.79216	NAF
NS0166	250	252	NS	X121280	121280	1	G	W	34.41	38.93	1.57	0.6579	0.51	0.066	1.85	1.77	0.107	0.035	1.27	0.038	0.02	2.98	0.93	3.93	18483	1.071	30.87234	-29.80134	NAF
NS0166	222	224	NS	X121266	121266	1	G	W	32.51	42.23	1.38	0.6192	0.48	0.058	1.78	1.78	0.108	0.036	1.12	0.034	0	2.9	1.08	3.98	18469	1.1016	31.04676	-29.94516	NAF
NS0166	128	130	NS	X121218	121218	1	G	W	31.22	39.6	1.97	0.4644	0.36	0.088	2.78	2.02	0.201	0.163	0.722	0.193	0.64	4.82	1	6.46	18368	4.9878	35.23284	-30.24504	NAC
NS0166	158	160	NS	X121233	121233	1	G	W	34.05	37.66	1.39	0.5418	0.42	0.06	2.31	1.83	0.142	0.053	0.544	0.162	0.44	4.64	0.94	6.02	18401	1.6218	31.91886	-30.29706	NAC
NS0166	220	222	NS	X121265	121265	1	G	W	35.09	39.36	1.33	0.6192	0.48	0.058	1.62	1.85	0.12	0.064	1.09	0.035	-0.03	2.5	1.01	3.48	18450	1.9584	32.2677	-30.3093	NAC
NS0166	186	188	NS	X121247	121247	1	G	W	34.48	38.43	1.41	0.5418	0.42	0.06	2.07	1.84	0.11	0.034	0.666	0.106	0.38	3.79	1.17	5.34	18433	1.0404	32.09328	-31.05288	NAC
NS0166	192	194	NS	X121251	121251	1	G	W	27.65	47.78	1.17	0.5547	0.43	0.048	1.88	1.93	0.22	0.084	0.596	0.09	0.34	4.41	0.85	5.6	18436	2.5704	33.66306	-31.09266	NAC
NS0166	102	104	NS	X121205	121205	1	G	W	29.28	43.73	1.76	0.4773	0.37	0.086	2.33	2.05	0.106	0.142	0.75	0.199	0.73	4.38	1.26	6.37	18337	4.3452	35.7561	-31.4109	NAC
NS0166	122	124	NS	X121215	121215	1	G	W	25.69	47.08	1.98	0.4386	0.34	0.087	2.68	2.04	0.098	0.121	0.751	0.198	0.72	5.31	1.42	7.45	18365	3.7026	35.58168	-31.87908	NAC
NS0166	234	236	NS	X121272	121272	1	G	W	35.62	37.98	1.31	0.6966	0.54	0.055	1.64	1.91	0.127	0.031	1.11	0.027	0.04	2.64	1.12	3.8	18475	0.9486	33.31422	-32.36562	NAC
NS0166	100	102	NS	X121204	121204	1	G	W	33.81	37.21	1.51	0.5676	0.44	0.064	2.25	1.95	0.098	0.052	0.639	0.165	0.64	4.89	1.19	6.72	18336	1.5912	34.0119	-32.4207	NAC
NS0166	112	114	NS	X121210	121210	1	G	W	30.49	38.53	2.89	0.4386	0.34	0.132	3	2.26	0.199	0.225	1.06	0.269	0.92	4.59	1.35	6.86	18342	6.885	39.41892	-32.53392	NAC
NS0166	268	270	NS	X121289	121289	1	G	W	38.05	33.35	1.05	0.9159	0.71	0.045	1.8	1.91	0.131	0.023	0.864	0.021	-0.01	3.97	1.07	5.03	18510	0.7038	33.31422	-32.61042	NAC
NS0166	202	204	NS	X121256	121256	1	G	W	31.66	42.43	1.57	0.4644	0.36	0.068	2.05	2	0.099	0.069	0.809	0.099	0.25	3.36	1.34	4.95	18441	2.1114	34.884	-32.7726	NAC
NS0166	96	98	NS	X121202	121202	1	G	W	33.3	38.12	1.54	0.5418	0.42	0.068	2.4	2.05	0.134	0.044	0.657	0.188	0.61	4.57	1.23	6.41	18334	1.3464	35.7561	-34.4097	NAC
NS0166	214	216	NS	X121262	121262	1	G	W	33.69	39.67	1.65	0.5547	0.43	0.071	1.8	2.08	0.164	0.05	1.29	0.048	0.05	2.92	1.1	4.07	18447	1.53	36.27936	-34.74936	NAC
NS0166	218	220	NS	X121264	121264	1	G	W	35.06	37.31	1.75	0.7095	0.55	0.077	1.8	2.08	0.128	0.05	1.43	0.051	0.04	3.17	1.25	4.46	18449	1.53	36.27936	-34.74936	NAC
NS0166	86	88	NS	X121196	121196	1	G	W	32.16	35.63	2.33	0.6063	0.47	0.106	3.03	2.36	0.153	0.194	0.957	0.241	0.93	5.76	1.51	8.2	18329	5.9364	41.16312	-35.22672	NAC
NS0166	138	140	NS	X121223	121223	1	G	W	35.94	35.92	1.33	0.4257	0.33	0.06	2.11	2.13	0.177	0.058	0.486	0.127	0.4	3.74	1.12	5.26	18373	1.7748	37.15146	-35.37666	NAC
NS0166	90	92	NS	X121198	121198	1	G	W	32.79	38.52	1.47	0.6063	0.47	0.062	2.42	2.15	0.081	0.052	0.622	0.177	0.64	4.86	1.59	7.09	18331	1.5912	37.5003	-35.9091	NAC
NS0166	98	100	NS	X121203	121203	1	G	W	32.81	38.94	1.53	0.4644	0.36	0.07	2.31	2.21	0.076	0.068	0.657	0.179	0.56	3.88	1.69	6.13	18335	2.0808	38.54682	-36.46602	NAC
NS0166	130	132	NS	X121219	121219	1	G	W	32.91	39.89	1.09	0.4644	0.36	0.05	2.12	2.16	0.095	0.035	0.414	0.114	0.36	4.18	1.5	6.04	18369	1.071	37.67472	-36.60372	NAC
NS0166	188	190	NS	X121248	121248	1	G	W	31.23	43.31	1.31	0.4644	0.36	0.052	1.81	2.19	0.133	0.036	0.714	0.092	0.21	3.18	1.43	4.82	18434	1.1016	38.19798	-37.09638	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0166	50	52	NS	X121178	121178	1	G	W	31.24	40.05	1.77	0.516	0.4	0.079	2.3	2.24	0.096	0.054	0.639	0.154	0.68	5.1	1.5	7.28	18563	1.6524	39.07008	-37.41768	NAC
NS0166	46	48	NS	X121176	121176	1	G	W	31.9	37.85	2.1	0.4902	0.38	0.096	2.42	2.36	0.282	0.087	0.751	0.195	0.81	5.32	1.05	7.18	18561	2.6622	41.16312	-38.50092	NAC
NS0166	116	118	NS	X121212	121212	1	G	W	33.57	38.54	1.27	0.5031	0.39	0.057	2.04	2.27	0.098	0.035	0.509	0.138	0.41	4.32	1.54	6.27	18362	1.071	39.59334	-38.52234	NAC
NS0166	166	168	NS	X121237	121237	1	G	W	33.83	36.6	1.71	0.5676	0.44	0.076	2.57	2.33	0.183	0.067	0.8	0.148	0.45	4.32	1.45	6.22	18405	2.0502	40.63986	-38.58966	NAC
NS0166	164	166	NS	X121236	121236	1	G	W	32.74	37.87	1.66	0.5676	0.44	0.071	2.59	2.44	0.171	0.083	0.674	0.146	0.4	4.36	1.67	6.43	18404	2.5398	42.55848	-40.01868	NAC
NS0166	206	208	NS	X121258	121258	1	G	W	28.86	41.96	2.06	0.645	0.5	0.088	2.59	2.45	0.148	0.088	1.19	0.12	0.4	4.94	1.62	6.96	18443	2.6928	42.7329	-40.0401	NAC
NS0166	196	198	NS	X121253	121253	1	G	W	29.62	43.19	1.65	0.5031	0.39	0.067	2.14	2.45	0.233	0.082	0.92	0.106	0.33	4.04	1.34	5.71	18438	2.5092	42.7329	-40.2237	NAC
NS0166	170	172	NS	X121239	121239	1	G	W	33.63	38.87	1.53	0.5031	0.39	0.069	2.18	2.47	0.252	0.052	0.723	0.138	0.29	3.37	1.31	4.97	18407	1.5912	43.08174	-41.49054	NAC
NS0166	184	186	NS	X121246	121246	1	G	W	33.17	40.48	0.94	0.5418	0.42	0.043	1.78	2.44	0.083	0.032	0.461	0.059	0.19	3.28	1.75	5.22	18414	0.9792	42.55848	-41.57928	NAC
NS0166	270	272	NS	X121290	121290	1	G	W	32.84	41.63	0.87	0.6837	0.53	0.038	1.7	2.44	0.123	0.023	0.687	0.019	0	2.31	1.91	4.22	18511	0.7038	42.55848	-41.85468	NAC
NS0166	52	54	NS	X121179	121179	1	G	W	31.88	38.37	1.93	0.4902	0.38	0.088	2.38	2.54	0.075	0.068	0.762	0.183	0.67	4.37	2.02	7.06	18564	2.0808	44.30268	-42.22188	NAC
NS0166	136	138	NS	X121222	121222	1	G	W	36.45	34.59	0.95	0.5934	0.46	0.043	2.03	2.52	0.154	0.032	0.37	0.101	0.34	4.51	1.4	6.25	18372	0.9792	43.95384	-42.97464	NAC
NS0166	200	202	NS	X121255	121255	1	G	W	34.59	38.85	1.27	0.4128	0.32	0.055	1.64	2.51	0.085	0.022	0.77	0.07	0.1	2.3	1.92	4.32	18440	0.6732	43.77942	-43.10622	NAC
NS0166	172	174	NS	X121240	121240	1	G	W	32.8	41.15	1.16	0.4644	0.36	0.055	1.99	2.53	0.081	0.033	0.48	0.089	0.24	2.72	1.87	4.83	18408	1.0098	44.12826	-43.11846	NAC
NS0166	134	136	NS	X121221	121221	1	G	W	35.22	35.43	1.11	0.5676	0.44	0.053	2.25	2.66	0.111	0.035	0.423	0.108	0.35	4.42	1.92	6.69	18371	1.071	46.39572	-45.32472	NAC
NS0166	198	200	NS	X121254	121254	1	G	W	31.19	43.86	1.12	0.4386	0.34	0.047	1.75	2.65	0.08	0.029	0.607	0.066	0.26	2.48	2.19	4.93	18439	0.8874	46.2213	-45.3339	NAC
NS0166	168	170	NS	X121238	121238	1	G	W	32.6	39.55	1.4	0.5418	0.42	0.061	2.28	2.67	0.097	0.036	0.605	0.093	0.3	3.33	2.24	5.87	18406	1.1016	46.57014	-45.46854	NAC
NS0166	132	134	NS	X121220	121220	1	G	W	31.51	40.95	1.34	0.387	0.3	0.058	2.37	2.72	0.102	0.049	0.556	0.143	0.44	3.28	2.27	5.99	18370	1.4994	47.44224	-45.94284	NAC
NS0166	92	94	NS	X121199	121199	1	G	W	30.55	40.59	1.32	0.6063	0.47	0.059	2.4	2.77	0.097	0.032	0.565	0.155	0.56	4.68	2.27	7.51	18332	0.9792	48.31434	-47.33514	NAC
NS0166	94	96	NS	X121201	121201	1	G	W	31.43	38.2	1.84	0.5031	0.39	0.083	2.72	3.07	0.176	0.096	0.778	0.215	0.69	3.84	2.32	6.85	18333	2.9376	53.54694	-50.60934	NAC
NS0166	114	116	NS	X121211	121211	1	G	W	29.84	40.46	1.82	0.4644	0.36	0.079	2.46	3.13	0.191	0.06	0.72	0.166	0.65	4.41	2.33	7.39	18361	1.836	54.59346	-52.75746	NAC
NS0167	182	184	NS	X121389	121389	1	G	W	10.19	60.1	10.7	0.1677	0.13	0.479	3.14	0.33	0.072	1.92	4.71	0.071	0.28	2.16	1.94	4.38	18598	58.752	5.75586	52.99614	PAF(HC)
NS0167	178	180	NS	X121387	121387	1	G	W	17.16	50.03	9.54	0.3354	0.26	0.446	4	0.51	0.048	1.84	2.29	0.046	0.37	4.78	2.57	7.72	18596	56.304	8.89542	47.40858	PAF(HC)
NS0167	222	224	NS	X121410	121410	1	G	W	14.35	51.96	9.77	0.2838	0.22	0.456	3.22	1.16	0.026	1.47	5.69	0.182	0.6	2.93	2.43	5.96	18618	44.982	20.23272	24.74928	PAF(HC)
NS0167	260	262	NS	X121429	121429	1	G	W	23.98	41.9	5.28	0.5805	0.45	0.242	3.36	0.5	0.077	0.728	2.57	0.189	0.73	8.35	1.45	10.53	18637	22.2768	8.721	13.5558	PAF(HC)
NS0167	250	252	NS	X121424	121424	1	G	W	16.25	51.49	8.35	0.3354	0.26	0.38	3.49	0.52	0.074	0.615	3.91	0.171	0.57	5.37	1.3	7.24	18632	18.819	9.06984	9.74916	PAF(LC)
NS0167	180	182	NS	X121388	121388	1	G	W	14.78	53.58	10.19	0.4128	0.32	0.45	4.01	0.42	0.06	0.466	2.75	0.051	0.36	4.86	1.16	6.38	18597	14.2596	7.32564	6.93396	PAF(LC)
NS0167	252	254	NS	X121425	121425	1	G	W	10.88	60.15	9.91	0.1935	0.15	0.469	3.28	0.63	0.018	0.505	5.13	0.13	0.48	2.33	1.2	4.01	18633	15.453	10.98846	4.46454	PAF(LC)
NS0167	184	186	NS	X121390	121390	1	G	W	20.64	47.69	6.36	0.5031	0.39	0.307	3.99	0.4	0.09	0.368	0.296	0.047	0.53	9.09	1	10.62	18599	11.2608	6.9768	4.284	PAF(LC)
NS0167	254	256	NS	X121426	121426	1	G	W	12.72	55.33	10.34	0.258	0.2	0.478	3.9	0.59	0.035	0.457	4.72	0.138	0.49	3.47	1.22	5.18	18634	13.9842	10.29078	3.69342	PAF(LC)
NS0167	174	176	NS	X121385	121385	1	G	W	10.7	62.78	9.76	0.1548	0.12	0.5	3.85	0.33	0.023	0.307	3	0.038	0.37	2.71	0.83	3.91	18594	9.3942	5.75586	3.63834	PAF(LC)
NS0167	258	260	NS	X121428	121428	1	G	W	13.63	56.55	7.68	0.3225	0.25	0.383	3.5	1.15	0.042	0.741	3.47	0.182	0.6	3.82	1.69	6.11	18636	22.6746	20.0583	2.6163	PAF(LC)
NS0167	316	318	NS	X121457	121457	1	G	W	17.52	48.65	8.43	0.4386	0.34	0.409	4.45	0.47	0.083	0.35	3.93	0.268	0.92	5.09	1.08	7.09	18665	10.71	8.19774	2.51226	PAF(LC)
NS0167	132	134	NS	X121364	121364	1	G	W	19.13	50.81	8.02	0.2322	0.18	0.39	3	0.38	0.052	0.298	2.11	0.118	1.47	4.35	1.02	6.84	18519	9.1188	6.62796	2.49084	PAF(LC)
NS0167	256	258	NS	X121427	121427	1	G	W	21.02	44.47	6.67	0.5676	0.44	0.321	4.48	0.42	0.085	0.262	1.71	0.2	0.78	8.97	0.84	10.59	18635	8.0172	7.32564	0.69156	PAF(LC)
NS0167	176	178	NS	X121386	121386	1	G	W	18.81	48.58	7.69	0.4386	0.34	0.365	4.08	0.47	0.097	0.288	1.3	0.05	0.55	8.28	0.82	9.65	18595	8.8128	8.19774	0.61506	PAF(LC)
NS0167	128	130	NS	BX123362	X123362	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2461	-0.0306	-0.01744	-0.013158	NAF
NS0167	130	134	NS	BX123363-BX123364	X123363	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2462	-0.0306	-0.01744	-0.013158	NAF
NS0167	134	138	NS	BX123365-BX123366	X123365	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2463	-0.0306	-0.01744	-0.013158	NAF
NS0167	138	142	NS	BX123367-BX123368	X123367	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2464	-0.0306	-0.01744	-0.013158	NAF
NS0167	146	150	NS	BX123371-BX123372	X123371	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2466	-0.0306	-0.01744	-0.013158	NAF
NS0167	150	154	NS	BX123373-BX123374	X123373	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2467	-0.0306	-0.01744	-0.013158	NAF
NS0167	166	170	NS	BX123381-BX123382	X123381	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2471	-0.0306	-0.01744	-0.013158	NAF
NS0167	170	174	NS	BX123383-BX123384	X123383	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2472	-0.0306	-0.01744	-0.013158	NAF
NS0167	174	178	NS	BX123385-BX123386	X123385	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2473	-0.0306	-0.01744	-0.013158	NAF
NS0167	182	184	NS	BX123389	X123389	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2475	-0.0306	-0.01744	-0.013158	NAF
NS0167	198	202	NS	BX123397-BX123398	X123397	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2479	-0.0306	-0.01744	-0.013158	NAF
NS0167	252	256	NS	BX123425-BX123426	X123425	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2493	-0.0306	-0.01744	-0.013158	NAF
NS0167	256	260	NS	BX123427-BX123428	X123427	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2494	-0.0306	-0.01744	-0.013158	NAF
NS0167	248	252	NS	BX123423-BX123424	X123423	2			65.76	6.633	1.027	0.093	0.06696	0.093	0.524	0.058	0.006	0.025	0.326	0.121	-0.01	-0.01	-0.01	-0.03	2492	0.765	1.011636	-0.246636	NAF
NS0167	314	316	NS	X121456	121456	1	G	W	19.55	49.46	7.32	0.3999	0.31	0.35	3.63	0.67	0.063	0.37	3.82	0.204	0.56	4.27	0.92	5.75	18664	11.322	11.68614	-0.36414	NAF
NS0167	168	170	NS	X121382	121382	1	G	W	18.05	49.75	7.87	0.4515	0.35	0.381	4.01	0.45	0.059	0.241	1.55	0.033	0.57	7.75	0.83	9.15	18591	7.3746	7.8489	-0.4743	NAF
NS0167	260	262	NS	BX123429	X123429	2			65.37	6.199	0.646	0.052	0.03744	0.052	0.426	0.058	0.009	0.016	0.3	0.083	-0.01	-0.01	-0.01	-0.03	2495	0.4896	1.011636	-0.522036	NAF
NS0167	272	276	NS	BX123435-BX123436	X123435	2			65.37	7.67	0.772	0.044	0.03168	0.044	0.413	0.075	0.009	0.018	0.503	0.078	-0.01	-0.01	-0.01	-0.03	2498	0.5508	1.30815	-0.75735	NAF
NS0167	316	320	NS	BX123457-BX123458	X123457	2			63.13	5.985	0.854	0.116	0.08352	0.116	0.445	0.086	0.009	0.023	0.21	0.144	-0.01	-0.01	-0.01	-0.03	2509	0.7038	1.500012	-0.796212	NAF
NS0167	320	322	NS	BX123459	X123459	2			66.78	6.176	0.456	0.033	0.02376	0.033	0.382	0.058	0.008	0.006	0.193	0.081	-0.01	-0.01	-0.01	-0.03	2510	0.1836	1.011636	-0.828036	NAF
NS0167	312	316	NS	BX123455-BX123456	X123455	2			68.68	3.909	0.244	0.027	0.01944	0.027	0.197	0.061	0.008	0.006	0.11	0.074	-0.01	-0.01	-0.01	-0.03	2508	0.1836	1.063962	-0.880362	NAF
NS0167	300	304	NS	BX123449-BX123450	X123449	2			66.97	5.734	0.382	0.027	0.01944	0.027	0.267	0.069	0.01	0.008	0.262	0.092	-0.01	-0.01	-0.01	-0.03	2505	0.2448	1.203498	-0.958698	NAF
NS0167	276	280	NS	BX123437-BX123438	X123437	2			68.37	5.264	0.263	0.012	0.00864	0.012	0.189	0.07	0.01	0.003	0.218	0.08	-0.01	-0.01	-0.01	-0.03	2499	0.0918	1.22094	-1.12914	NAF
NS0167	236	240	NS	BX123417-BX123418	X123417	2			65.1	6.612	0.794	0.058	0.04176	0.058	0.426	0.093	0.01	0.016	0.354	0.116	0.12	-0.01	-0.01	0.1	2489	0.4896	1.622106	-1.132506	NAF
NS0167	244	248	NS	BX123421-BX123422	X123421	2			64.74	7.598	0.85	0.058	0.04176	0.058	0.521	0.09	0.009	0.014	0.282	0.097	0.14	-0.01	-0.01	0.12	2491	0.4284	1.56978	-1.14138	NAF
NS0167	284	288	NS	BX123441-BX123442	X123441	2			66.93	6.358	0.461	0.043	0.03096	0.043	0.247	0.084	0.014	0.01	0.261	0.065	-0.01	-0.01	-0.01	-0.03	2501	0.306	1.465128	-1.159128	NAF
NS0167	130	132	NS	X121363	121363	1	G	W	10.06	59.26	12.38	0.0645	0.05	0.571	3.79	0.18	0.018	0.064	5.55	0.055	0.43	2.57	0.49	3.49	18518	1.9584	3.13956	-1.18116	NAF
NS0167	304	308	NS	BX123451-BX123452	X123451	2			66.67	5.901	0.411	0.026	0.01872	0.026	0.244	0.079	0.011	0.006	0.299	0.079	-0.01	-0.01	-0.01	-0.03	2506	0.1836	1.377918	-1.194318	NAF
NS0167	324	326	NS	BX123462	X123462	2			67.47	5.62	0.413	0.038	0.02736	0.038	0.252	0.079	0.007	0.005	0.201	0.074	-0.01	-0.01	-0.01	-0.03	2511	0.153	1.377918	-1.224918	NAF
NS0167	288	292	NS	BX123443-BX123444	X123443	2			67.04	6.335	0.223	0.015	0.0108	0.015	0.228	0.08	0.014	0.005	0.18	0.105	-0.01	-0.01	-0.01	-0.03	2502	0.153	1.39536	-1.24236	NAF
NS0167	292	296	NS	BX123445-BX123446	X123445	2			67.07	6.53	0.199	0.014	0.01008	0.014	0.233	0.076	0.014	0.002	0.17	0.07	-0.01	-0.01	-0.01	-0.03	2503	0.0612	1.325592	-1.264392	NAF
NS0167	264	268	NS	BX123431-BX123432	X123431	2			65.85	7.171	0.558	0.032	0.02304	0.032	0.305	0.108	0.017	0.02	0.324	0.095	-0.01	-0.01	-0.01	-0.03	2496	0.612	1.883736	-1.271736	NAF
NS0167	280	284	NS	BX123439-BX123440	X123439	2			66.41	5.754	0.395	0.024	0.01728	0.024	0.237	0.088	0.011	0.008	0.314	0.085	-0.01	-0.01	-0.01	-0.03	2500	0.2448	1.534896	-1.290096	NAF
NS0167	308	312	NS	BX123453-BX123454	X123453	2			67.39	5.978	0.412	0.026	0.01872	0.026	0.26	0.085	0.011	0.006	0.255	0.064	-0.01	-0.01	-0.01	-0.03	2507	0.1836	1.48257	-1.29897	NAF
NS0167	232	236	NS	BX123415-BX123416	X123415	2			65.47	6.046	0.491	0.038	0.02736	0.038	0.344	0.091	0.011	0.009	0.215	0.081	0.03	-0.01	-0.01	0.01	2488	0.2754	1.587222	-1.311822	NAF
NS0167	224	228	NS	BX123411-BX123412	X123411	2			63.84	8.417	0.769	0.055	0.0396	0.055	0.486	0.102	0.013	0.014	0.341	0.091	0.06	-0.01	-0.01	0.04	2486	0.4284	1.779084	-1.350684	NAF
NS0167	216	220	NS	BX123407-BX123408	X123407	2			66.97	5.713	0.366	0.027	0.01944	0.027	0.262	0.094	0.013	0.008	0.181	0.084	-0.01	-0.01	-0.01	-0.03	2484	0.2448	1.639548	-1.394748	NAF
NS0167	326	330	NS	BX123463-BX123464	X123463	2			68.49	5.304	0.246	0.02	0.0144	0.02	0.181	0.086	0.012	0.003	0.155	0.062	-0.01	-0.01	-0.01	-0.03	2512	0.0918	1.500012	-1.408212	NAF
NS0167	212	216	NS	BX123405-BX123406	X123405	2			67.53	5.043	0.473	0.035	0.0252	0.035	0.262	0.099	0.011	0.01	0.247	0.072	-0.01	-0.01	-0.01	-0.03	2483	0.306	1.726758	-1.420758	NAF
NS0167	186	188	NS	X121391	121391	1	G	W	28.03	36.4	3.4	0.5547	0.43	0.165	3.55	0.61	0.1	0.301	0.316	0.12	0.92	12.55	0.72	14.19	18600	9.2106	10.63962	-1.42902	NAF
NS0167	248	250	NS	X121423	121423	1	G	W	25.28	40.62	5.26	0.4773	0.37	0.242	3.49	0.37	0.065	0.164	2.05	0.218	0.94	9.16	0.46	10.56	18631	5.0184	6.45354	-1.43514	NAF
NS0167	268	272	NS	BX123433-BX123434	X123433	2			66.78	6.893	0.601	0.022	0.01584	0.022	0.265	0.093	0.011	0.006	0.276	0.098	-0.01	-0.01	-0.01	-0.03	2497	0.1836	1.622106	-1.438506	NAF
NS0167	170	172	NS	X121383	121383	1	G	W	12.35	58.25	10	0.2451	0.19	0.499	4.28	0.63	0.033	0.312	2.91	0.039	0.35	3.7	1.01	5.06	18592	9.5472	10.98846	-1.44126	NAF
NS0167	240	244	NS	BX123419-BX123420	X123419	2			66.4	6.2	0.594	0.044	0.03168	0.044	0.384	0.111	0.012	0.015	0.202	0.088	0.12	-0.01	-0.01	0.1	2490	0.459	1.936062	-1.477062	NAF
NS0167	296	300	NS	BX123447-BX123448	X123447	2			67.39	6.094	0.258	0.021	0.01512	0.021	0.225	0.091	0.014	0.002	0.183	0.058	-0.01	-0.01	-0.01	-0.03	2504	0.0612	1.587222	-1.526022	NAF
NS0167	178	182	NS	BX123387-BX123388	X123387	2			67.64	5.251	0.44	0.036	0.02592	0.036	0.303	0.11	0.01	0.012	0.204	0.083	-0.01	-0.01	-0.01	-0.03	2474	0.3672	1.91862	-1.55142	NAF
NS0167	162	166	NS	BX123379-BX123380	X123379	2			64.69	8.14	0.663	0.054	0.03888	0.054	0.418	0.111	0.01	0.012	0.264	0.098	0.1	-0.01	-0.01	0.08	2470	0.3672	1.936062	-1.568862	NAF
NS0167	228	232	NS	BX123413-BX123414	X123413	2			61.4	10.521	1.007	0.065	0.0468	0.065	0.597	0.129	0.019	0.019	0.5	0.088	0.05	-0.01	-0.01	0.03	2487	0.5814	2.250018	-1.668618	NAF
NS0167	220	224	NS	BX123409-BX123410	X123409	2			68.34	4.771	0.295	0.022	0.01584	0.022	0.223	0.114	0.015	0.008	0.15	0.061	-0.01	-0.01	-0.01	-0.03	2485	0.2448	1.988388	-1.743588	NAF
NS0167	208	212	NS	BX123403-BX123404	X123403	2			66.97	5.626	0.628	0.04	0.0288	0.04	0.295	0.136	0.017	0.014	0.239	0.129	-0.01	-0.01	-0.01	-0.03	2482	0.4284	2.372112	-1.943712	NAF
NS0167	202	204	NS	BX123399	X123399	2			66.28	6.622	0.505	0.038	0.02736	0.038	0.328	0.141	0.017	0.013	0.243	0.095	-0.01	-0.01	-0.01	-0.03	2480	0.3978	2.459322	-2.061522	NAF
NS0167	154	158	NS	BX123375-BX123376	X123375	2			64.15	9.192	0.605	0.048	0.03456	0.048	0.484	0.144	0.014	0.012	0.199	0.1	-0.01	-0.01	-0.01	-0.03	2468	0.3672	2.511648	-2.144448	NAF
NS0167	158	162	NS	BX123377-BX123378	X123377	2			64.86	8.449	0.643	0.044	0.03168	0.044	0.444	0.149	0.015	0.01	0.26	0.102	0.03	-0.01	-0.01	0.01	2469	0.306	2.598858	-2.292858	NAF
NS0167	194	198	NS	BX123395-BX123396	X123395	2			66.17	6.234	0.447	0.047	0.03384	0.047	0.333	0.151	0.014	0.011	0.185	0.07	-0.01	-0.01	-0.01	-0.03	2478	0.3366	2.633742	-2.297142	NAF
NS0167	142	146	NS	BX123369-BX123370	X123369	2			58.55	13.758	1.096	0.069	0.04968	0.069	0.725	0.17	0.024	0.018	0.441	0.139	-0.01	-0.01	-0.01	-0.03	2465	0.5508	2.96514	-2.41434	NAF
NS0167	190	194	NS	BX123393-BX123394	X123393	2			67.34	6.305	0.345	0.031	0.02232	0.031	0.323	0.156	0.014	0.009	0.09	0.079	-0.01	-0.01	-0.01	-0.03	2477	0.2754	2.720952	-2.445552	NAF
NS0167	204	208	NS	BX123401-BX123402	X123401	2			67.06	6.079	0.371	0.026	0.01872	0.026	0.24	0.154	0.026	0.006	0.194	0.086	-0.01	-0.01	-0.01	-0.03	2481	0.1836	2.686068	-2.502468	NAF
NS0167	186	190	NS	BX123391-BX123392	X123391	2			64.63	8.382	0.404	0.038	0.02736	0.038	0.407	0.183	0.022	0.014	0.076	0.106	-0.01	-0.01	-0.01	-0.03	2476	0.4284	3.191886	-2.763486	NAF
NS0167	224	226	NS	X121411	121411	1	G	W	26.51	43.99	4.86	0.4773	0.37	0.231	2.88	0.55	0.093	0.207	2.16	0.249	0.76	4.96	0.5	6.22	18619	6.3342	9.5931	-3.2589	NAF
NS0167	150	152	NS	X121373	121373	1	G	W	20.7	47.1	7.52	0.4257	0.33	0.357	3.9	0.76	0.079	0.315	1.66	0.215	0.87	6.05	1.05	7.97	18582	9.639	13.25592	-3.61692	NAF
NS0167	318	320	NS	X121458	121458	1	G	W	12.37	56.75	9.42	0.2451	0.19	0.451	3.71	0.77	0.027	0.3	5.29	0.211	0.63	3.09	1.07	4.79	18666	9.18	13.43034	-4.25034	NAF
NS0167	172	174	NS	X121384	121384	1	G	W	7.88	64.73	9.96	0.1677	0.13	0.515	3.54	0.85	0.015	0.34	4.44	0.041	0.33	2.38	1.06	3.77	18593	10.404	14.8257	-4.4217	NAF
NS0167	166	168	NS	X121381	121381	1	G	W	23.08	43.39	5.73	0.3741	0.29	0.259	3.07	1.04	0.111	0.381	1.54	0.166	0.88	8.74	1.06	10.68	18590	11.6586	18.13968	-6.48108	NAF
NS0167	320	322	NS	X121459	121459	1	G	W	29.22	42.71	4.14	0.3741	0.29	0.206	3.12	0.55	0.094	0.094	1.53	0.164	0.54	4.3	0.16	5	18667	2.8764	9.5931	-6.7167	NAF
NS0167	128	130	NS	X121362	121362	1	G	W	26	41.33	3.68	0.387	0.3	0.166	2.95	0.82	0.171	0.214	0.945	0.309	1.47	9.38	0.72	11.57	18517	6.5484	14.30244	-7.75404	NAF
NS0167	138	140	NS	X121367	121367	1	G	W	24.22	42.05	5.25	0.4257	0.33	0.235	3.53	0.81	0.07	0.189	1.91	0.306	1.25	8.38	0.78	10.41	18522	5.7834	14.12802	-8.34462	NAF
NS0167	246	248	NS	X121422	121422	1	G	W	24.12	44.6	6	0.3483	0.27	0.277	3.65	0.8	0.102	0.153	2.03	0.287	0.9	5.59	0.54	7.03	18630	4.6818	13.9536	-9.2718	NAF
NS0167	238	240	NS	X121418	121418	1	G	W	28.34	41.55	4.56	0.4128	0.32	0.196	2.81	0.77	0.054	0.135	1.95	0.173	0.58	5.36	0.39	6.33	18626	4.131	13.43034	-9.29934	NAF
NS0167	136	138	NS	X121366	121366	1	G	W	25.67	41.14	4.21	0.4644	0.36	0.185	3.05	0.71	0.077	0.09	1.43	0.353	1.47	9.04	0.46	10.97	18521	2.754	12.38382	-9.62982	NAF
NS0167	134	136	NS	X121365	121365	1	G	W	24.03	44.71	4.88	0.3354	0.26	0.226	3.14	0.86	0.101	0.173	1.2	0.316	1.41	7.35	0.7	9.46	18520	5.2938	15.00012	-9.70632	NAF
NS0167	274	276	NS	X121436	121436	1	G	W	23.86	44.6	6.44	0.4515	0.35	0.289	3.14	1.11	0.064	0.312	4.32	0.196	0.47	3.55	0.93	4.95	18644	9.5472	19.36062	-9.81342	NAF
NS0167	230	232	NS	X121414	121414	1	G	W	24.61	44.63	5.52	0.5289	0.41	0.245	3.05	0.89	0.041	0.139	2.81	0.21	0.7	5.29	0.61	6.6	18622	4.2534	15.52338	-11.26998	NAF
NS0167	140	142	NS	X121368	121368	1	G	W	24.58	40.06	4.94	0.645	0.5	0.216	3.78	0.98	0.089	0.179	1.9	0.307	1.35	9.48	0.78	11.61	18577	5.4774	17.09316	-11.61576	NAF
NS0167	264	266	NS	X121431	121431	1	G	W	29.94	41.3	3.13	0.5547	0.43	0.137	2.4	1.89	0.103	0.651	1.63	0.115	0.28	3.5	1.52	5.3	18639	19.9206	32.96538	-13.04478	NAF
NS0167	152	154	NS	X121374	121374	1	G	W	19.06	50.45	7.83	0.3483	0.27	0.373	4.11	1.16	0.097	0.165	1.39	0.201	0.86	4.55	0.98	6.39	18583	5.049	20.23272	-15.18372	NAF
NS0167	240	242	NS	X121419	121419	1	G	W	27.6	42.85	4.79	0.2838	0.22	0.215	3.02	1.16	0.119	0.159	1.57	0.234	0.83	4.08	0.59	5.5	18627	4.8654	20.23272	-15.36732	NAF
NS0167	286	288	NS	X121442	121442	1	G	W	25.12	45.66	4.03	0.516	0.4	0.172	3.14	1.59	0.098	0.4	2.52	0.164	0.48	4.09	1.34	5.91	18650	12.24	27.73278	-15.49278	NAF
NS0167	262	264	NS	X121430	121430	1	G	W	28.28	41.19	4.61	0.5676	0.44	0.204	2.9	1.11	0.117	0.111	2.1	0.158	0.6	5.37	0.4	6.37	18638	3.3966	19.36062	-15.96402	NAF
NS0167	244	246	NS	X121421	121421	1	G	W	29.75	39.97	3.79	0.5031	0.39	0.166	2.89	1.08	0.077	0.08	1.41	0.239	0.82	5.65	0.37	6.84	18629	2.448	18.83736	-16.38936	NAF
NS0167	154	156	NS	X121375	121375	1	G	W	18.79	50.83	8.02	0.2838	0.22	0.386	4.24	1.24	0.018	0.168	1.55	0.23	0.88	4.02	1.21	6.11	18584	5.1408	21.62808	-16.48728	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0167	236	238	NS	X121417	121417	1	G	W	15.92	51.37	9.29	0.1935	0.15	0.415	3.31	1.66	0.054	0.377	5.08	0.205	0.57	2.94	1.48	4.99	18625	11.5362	28.95372	-17.41752	NAF
NS0167	144	146	NS	X121370	121370	1	G	W	22.45	44.46	5.86	0.387	0.3	0.264	3.51	1.26	0.121	0.139	2.78	0.323	1.3	6.39	0.9	8.59	18579	4.2534	21.97692	-17.72352	NAF
NS0167	302	304	NS	X121450	121450	1	G	W	28.9	41.84	3.84	0.5934	0.46	0.178	2.73	1.25	0.108	0.128	2.47	0.159	0.41	4.1	0.61	5.12	18658	3.9168	21.8025	-17.8857	NAF
NS0167	146	148	NS	X121371	121371	1	G	W	18.56	49.07	8.16	0.3741	0.29	0.386	4.31	1.42	0.181	0.222	2.16	0.237	0.87	4.55	1.12	6.54	18580	6.7932	24.76764	-17.97444	NAF
NS0167	272	274	NS	X121435	121435	1	G	W	30.15	40.64	3.39	0.6837	0.53	0.154	2.81	1.18	0.074	0.071	2.23	0.143	0.44	4.43	0.55	5.42	18643	2.1726	20.58156	-18.40896	NAF
NS0167	304	306	NS	X121451	121451	1	G	W	30.21	42.82	3.07	0.5289	0.41	0.142	2.4	1.19	0.055	0.067	2.05	0.115	0.27	3.4	0.6	4.27	18659	2.0502	20.75598	-18.70578	NAF
NS0167	162	164	NS	X121379	121379	1	G	W	27.24	42.9	4.45	0.3612	0.28	0.199	2.63	1.25	0.058	0.096	2.19	0.288	1.04	4.8	0.64	6.48	18588	2.9376	21.8025	-18.8649	NAF
NS0167	228	230	NS	X121413	121413	1	G	W	27.97	42.44	3.93	0.6579	0.51	0.179	2.69	1.22	0.073	0.076	1.8	0.185	0.58	5.36	0.55	6.49	18621	2.3256	21.27924	-18.95364	NAF
NS0167	292	294	NS	X121445	121445	1	G	W	36.32	37.4	1.13	0.7095	0.55	0.051	2.04	1.15	0.092	0.017	0.874	0.045	0.06	3.93	0.33	4.32	18653	0.5202	20.0583	-19.5381	NAF
NS0167	158	160	NS	X121377	121377	1	G	W	26.66	42.63	4.75	0.4257	0.33	0.21	3.11	1.32	0.088	0.095	2.23	0.331	1.05	4.66	0.8	6.51	18586	2.907	23.02344	-20.11644	NAF
NS0167	218	220	NS	X121408	121408	1	G	W	33.1	39.89	2.5	0.4644	0.36	0.12	2.12	1.32	0.086	0.076	1.1	0.137	0.34	3.85	0.5	4.69	18616	2.3256	23.02344	-20.69784	NAF
NS0167	198	200	NS	X121397	121397	1	G	W	30.23	41.36	3.78	0.4257	0.33	0.18	2.75	1.44	0.104	0.132	1.45	0.19	0.53	3.43	0.69	4.65	18606	4.0392	25.11648	-21.07728	NAF
NS0167	148	150	NS	X121372	121372	1	G	W	17.26	50.5	8.93	0.2967	0.23	0.429	4.08	1.58	0.111	0.195	2.37	0.191	0.79	4.09	1.31	6.19	18581	5.967	27.55836	-21.59136	NAF
NS0167	294	296	NS	X121446	121446	1	G	W	34.5	39.26	1.47	0.6192	0.48	0.062	2.18	1.29	0.114	0.024	1.08	0.062	0.1	3.48	0.45	4.03	18654	0.7344	22.50018	-21.76578	NAF
NS0167	202	204	NS	X121399	121399	1	G	W	32.34	40.59	2.61	0.4773	0.37	0.118	2.2	1.39	0.1	0.07	1.12	0.142	0.42	3.49	0.51	4.42	18608	2.142	24.24438	-22.10238	NAF
NS0167	326	328	NS	X121463	121463	1	G	W	34.7	38.8	2.14	0.4386	0.34	0.112	1.93	1.34	0.083	0.04	1.21	0.077	0.25	3.16	0.54	3.95	18670	1.224	23.37228	-22.14828	NAF
NS0167	300	302	NS	X121449	121449	1	G	W	32.32	40.19	2.21	0.6321	0.49	0.103	2.2	1.4	0.097	0.061	1.46	0.089	0.24	4	0.65	4.89	18657	1.8666	24.4188	-22.5522	NAF
NS0167	206	208	NS	X121402	121402	1	G	W	34.31	39.69	1.83	0.5031	0.39	0.087	1.84	1.37	0.131	0.032	0.726	0.098	0.3	3.77	0.31	4.38	18610	0.9792	23.89554	-22.91634	NAF
NS0167	312	314	NS	X121455	121455	1	G	W	33.57	40.35	1.52	0.5676	0.44	0.076	1.95	1.39	0.107	0.037	0.758	0.069	0.25	4.12	0.51	4.88	18663	1.1322	24.24438	-23.11218	NAF
NS0167	296	298	NS	X121447	121447	1	G	W	35.9	37.23	1.4	0.6837	0.53	0.065	2.26	1.38	0.119	0.024	1.04	0.062	0.06	3.77	0.56	4.39	18655	0.7344	24.06996	-23.33556	NAF
NS0167	290	292	NS	X121444	121444	1	G	W	33.86	39	1.58	0.6321	0.49	0.077	2.4	1.43	0.146	0.049	1.1	0.081	0.14	3.98	0.5	4.62	18652	1.4994	24.94206	-23.44266	NAF
NS0167	324	326	NS	X121462	121462	1	G	W	32.79	39.68	2.42	0.5031	0.39	0.113	2.41	1.43	0.101	0.039	1.41	0.098	0.27	3.88	0.67	4.82	18669	1.1934	24.94206	-23.74866	NAF
NS0167	210	212	NS	X121404	121404	1	G	W	32.69	41.19	1.98	0.5031	0.39	0.096	1.83	1.43	0.076	0.038	0.906	0.094	0.28	3.81	0.58	4.67	18612	1.1628	24.94206	-23.77926	NAF
NS0167	214	216	NS	X121406	121406	1	G	W	26.05	42.79	4.74	0.4773	0.37	0.215	2.99	1.78	0.11	0.228	2.2	0.201	0.62	4.57	1.15	6.34	18614	6.9768	31.04676	-24.06996	NAF
NS0167	232	234	NS	X121415	121415	1	G	W	28.76	40.86	3.84	0.5934	0.46	0.176	2.92	1.51	0.09	0.067	1.57	0.203	0.67	5.27	0.77	6.71	18623	2.0502	26.33742	-24.28722	NAF
NS0167	208	210	NS	X121403	121403	1	G	W	32.17	40.76	2.63	0.4644	0.36	0.125	2.23	1.52	0.118	0.062	1.02	0.14	0.37	3.59	0.61	4.57	18611	1.8972	26.51184	-24.61464	NAF
NS0167	278	280	NS	X121438	121438	1	G	W	34.88	38.44	1.86	0.5676	0.44	0.081	1.93	1.48	0.116	0.028	1.36	0.071	0.12	3.45	0.5	4.07	18646	0.8568	25.81416	-24.95736	NAF
NS0167	280	282	NS	X121439	121439	1	G	W	28.83	40.51	4.33	0.5031	0.39	0.2	2.92	1.67	0.165	0.133	3.04	0.176	0.36	3.44	0.9	4.7	18647	4.0698	29.12814	-25.05834	NAF
NS0167	276	278	NS	X121437	121437	1	G	W	34.06	38.61	1.86	0.6579	0.51	0.086	2.05	1.5	0.081	0.031	1.31	0.082	0.18	3.86	0.77	4.81	18645	0.9486	26.163	-25.2144	NAF
NS0167	322	324	NS	X121460	121460	1	G	W	36.03	37.48	1.97	0.4386	0.34	0.153	1.65	1.5	0.087	0.024	0.794	0.062	0.41	3.06	0.62	4.09	18668	0.7344	26.163	-25.4286	NAF
NS0167	266	268	NS	X121432	121432	1	G	W	30.12	41.61	3.16	0.5289	0.41	0.148	2.51	1.65	0.071	0.094	1.78	0.125	0.31	3.5	0.95	4.76	18640	2.8764	28.7793	-25.9029	NAF
NS0167	284	286	NS	X121441	121441	1	G	W	34.22	39.03	1.86	0.5031	0.39	0.106	1.96	1.54	0.093	0.03	0.972	0.067	0.45	3.36	0.78	4.59	18649	0.918	26.86068	-25.94268	NAF
NS0167	270	272	NS	X121434	121434	1	G	W	31.97	40.06	2.48	0.5676	0.44	0.115	2.52	1.58	0.064	0.051	1.59	0.121	0.26	3.88	0.88	5.02	18642	1.5606	27.55836	-25.99776	NAF
NS0167	310	312	NS	X121454	121454	1	G	W	30.24	42.11	2.77	0.5031	0.39	0.128	2.4	1.71	0.172	0.117	1.4	0.12	0.28	3.67	0.75	4.7	18662	3.5802	29.82582	-26.24562	NAF
NS0167	234	236	NS	X121416	121416	1	G	W	24.01	45.34	5.51	0.3225	0.25	0.246	3.14	1.88	0.215	0.192	2.24	0.247	0.72	3.88	1.01	5.61	18624	5.8752	32.79096	-26.91576	NAF
NS0167	308	310	NS	X121453	121453	1	G	W	30.37	40.15	3.61	0.4773	0.37	0.16	2.69	1.77	0.195	0.126	2.08	0.17	0.31	3.41	0.84	4.56	18661	3.8556	30.87234	-27.01674	NAF
NS0167	164	166	NS	X121380	121380	1	G	W	25.94	43.13	4.89	0.2967	0.23	0.214	2.84	1.76	0.069	0.107	2.35	0.298	1.03	4.61	1.09	6.73	18589	3.2742	30.69792	-27.42372	NAF
NS0167	156	158	NS	X121376	121376	1	G	W	31.44	38.24	2.87	0.5289	0.41	0.128	2.42	1.71	0.085	0.058	1.1	0.28	0.97	5.69	0.79	7.45	18585	1.7748	29.82582	-28.05102	NAF
NS0167	216	218	NS	X121407	121407	1	G	W	29.77	42	3.14	0.4515	0.35	0.149	2.33	1.78	0.124	0.093	1.43	0.17	0.46	3.71	0.91	5.08	18615	2.8458	31.04676	-28.20096	NAF
NS0167	212	214	NS	X121405	121405	1	G	W	31.58	39.91	2.81	0.516	0.4	0.13	2.25	1.73	0.102	0.06	1.3	0.125	0.4	4.09	0.84	5.33	18613	1.836	30.17466	-28.33866	NAF
NS0167	142	144	NS	X121369	121369	1	G	W	28.91	42.06	2.62	0.4515	0.35	0.116	2.19	1.73	0.117	0.05	1.1	0.289	1.08	5.9	0.77	7.75	18578	1.53	30.17466	-28.64466	NAF
NS0167	298	300	NS	X121448	121448	1	G	W	32.3	40.45	2.54	0.516	0.4	0.137	2.01	1.76	0.102	0.063	1.38	0.085	0.43	2.99	1.03	4.45	18656	1.9278	30.69792	-28.77012	NAF
NS0167	268	270	NS	X121433	121433	1	G	W	32.05	40.14	2.38	0.5805	0.45	0.1	2.38	1.72	0.076	0.037	1.42	0.098	0.27	3.78	0.89	4.94	18641	1.1322	30.00024	-28.86804	NAF
NS0167	328	330	NS	X121464	121464	1	G	W	33.63	41.98	1.49	0.4644	0.36	0.088	1.5	1.69	0.131	0.019	0.851	0.055	0.22	2.79	0.66	3.67	18671	0.5814	29.47698	-28.89558	NAF
NS0167	226	228	NS	X121412	121412	1	G	W	25.76	43.29	4.7	0.5547	0.43	0.209	3.06	1.84	0.093	0.088	1.96	0.221	0.66	4.66	1.18	6.5	18620	2.6928	32.09328	-29.40048	NAF
NS0167	282	284	NS	X121440	121440	1	G	W	29.85	43.33	2.48	0.5031	0.39	0.118	2.34	1.8	0.086	0.062	1.67	0.103	0.22	3.42	1.08	4.72	18648	1.8972	31.3956	-29.4984	NAF
NS0167	306	308	NS	X121452	121452	1	G	W	30.32	40.29	3.08	0.5805	0.45	0.138	2.54	1.94	0.288	0.123	2.03	0.158	0.29	3.91	0.74	4.94	18660	3.7638	33.83748	-30.07368	NAC
NS0167	196	198	NS	X121396	121396	1	G	W	29.81	41.42	3.4	0.4644	0.36	0.162	2.55	1.95	0.109	0.096	1.29	0.171	0.54	3.58	1.1	5.22	18605	2.9376	34.0119	-31.0743	NAC
NS0167	160	162	NS	X121378	121378	1	G	W	30.14	39.79	3.13	0.5418	0.42	0.141	2.45	2.01	0.118	0.065	1.37	0.282	0.92	4.61	1.16	6.69	18587	1.989	35.05842	-33.06942	NAC
NS0167	220	222	NS	X121409	121409	1	G	W	33.21	39.06	1.98	0.4644	0.36	0.094	2.04	1.98	0.11	0.044	0.877	0.123	0.37	3.99	0.99	5.35	18617	1.3464	34.53516	-33.18876	NAC
NS0167	200	202	NS	X121398	121398	1	G	W	31.89	39.9	2.96	0.4773	0.37	0.141	2.25	2.04	0.057	0.071	1.43	0.128	0.36	3.22	1.36	4.94	18607	2.1726	35.58168	-33.40908	NAC
NS0167	192	194	NS	X121394	121394	1	G	W	31	40.55	2.44	0.516	0.4	0.115	2.65	2.05	0.068	0.071	0.626	0.178	0.61	4.27	1.18	6.06	18603	2.1726	35.7561	-33.5835	NAC
NS0167	188	190	NS	X121392	121392	1	G	W	30.23	40.02	2.66	0.5418	0.42	0.13	2.67	2.13	0.1	0.104	0.478	0.188	0.73	5.51	1.16	7.4	18601	3.1824	37.15146	-33.96906	NAC
NS0167	288	290	NS	X121443	121443	1	G	W	31.59	42.71	1.18	0.5289	0.41	0.054	2.19	2.06	0.109	0.024	0.713	0.09	0.14	3.37	1.37	4.88	18651	0.7344	35.93052	-35.19612	NAC
NS0167	204	206	NS	X121401	121401	1	G	W	31.74	40.78	2.27	0.5289	0.41	0.109	2.13	2.12	0.129	0.04	1.1	0.13	0.41	3.78	1.09	5.28	18609	1.224	36.97704	-35.75304	NAC
NS0167	194	196	NS	X121395	121395	1	G	W	30.28	39.51	3.5	0.5676	0.44	0.167	2.96	2.2	0.081	0.084	1.08	0.189	0.59	4.14	1.48	6.21	18604	2.5704	38.3724	-35.802	NAC
NS0167	242	244	NS	X121420	121420	1	G	W	24.25	44.56	4.41	0.4257	0.33	0.193	3.23	2.69	0.111	0.179	1.52	0.199	0.72	4.69	1.95	7.36	18628	5.4774	46.91898	-41.44158	NAC
NS0167	190	192	NS	X121393	121393	1	G	W	31.16	39.26	2.65	0.5031	0.39	0.126	2.77	2.6	0.138	0.074	0.486	0.176	0.54	4.21	1.75	6.5	18602	2.2644	45.3492	-43.0848	NAC
NS0168	232	234	NS	X121583	121583	1	G	W	18.88	53.59	7.31	0.1806	0.14	0.343	2.63	1.02	0.057	1.5	0.18	0.044	0.44	4.44	1.69	6.57	18788	45.9	17.79084	28.10916	PAF(HC)
NS0168	200	204	NS	BX123567-BX123568	X123567	2			69.32	3.243	0.139	0.033	0.02376	0.033	0.242	0.086	0.016	0.85	0.037	0.076	-0.01	-0.01	-0.01	-0.03	2558	26.01	1.500012	24.509988	PAF(HC)
NS0168	148	150	NS	X121540	121540	1	G	W	20.55	51.79	8.51	0.1548	0.12	0.371	3.72	0.21	0.05	0.853	0.551	0.155	0.8	2.6	0.91	4.31	18746	26.1018	3.66282	22.43898	PAF(HC)
NS0168	208	212	NS	BX123571-BX123572	X123571	2			61.39	9.267	0.345	0.01	0.0072	0.01	0.452	0.171	0.015	0.457	0.107	0.132	-0.01	-0.01	-0.01	-0.03	2560	13.9842	2.982582	11.001618	PAF(HC)
NS0168	174	178	NS	BX123554-BX123555	X123554	2			69.74	3.759	0.25	0.034	0.02448	0.034	0.263	0.1	0.022	0.263	0.069	0.089	-0.01	-0.01	-0.01	-0.03	2552	8.0478	1.7442	6.3036	PAF(LC)
NS0168	86	88	NS	X121509	121509	1	G	W	28.27	42.25	3.62	0.7353	0.57	0.171	3.96	0.57	0.13	0.424	0.549	0.15	0.57	5.6	0.84	7.01	18715	12.9744	9.94194	3.03246	PAF(LC)
NS0168	212	216	NS	BX123573-BX123574	X123573	2			57.69	14.902	0.714	0.053	0.03816	0.053	0.775	0.156	0.017	0.168	0.248	0.118	-0.01	0.23	0.28	0.5	2561	5.1408	2.720952	2.419848	PAF(LC)
NS0168	162	166	NS	BX123547-BX123548	X123547	2			63.02	8.684	0.37	0.04	0.0288	0.04	0.49	0.11	0.019	0.137	0.145	0.084	-0.01	-0.01	-0.01	-0.03	2549	4.1922	1.91862	2.27358	PAF(LC)
NS0168	174	176	NS	X121554	121554	1	G	W	26.62	46.25	3.84	0.2838	0.22	0.178	3.01	0.72	0.119	0.478	1.2	0.309	1.02	3.53	0.98	5.53	18759	14.6268	12.55824	2.06856	PAF(LC)
NS0168	216	218	NS	X121575	121575	1	G	W	25.59	43.43	2.86	0.258	0.2	0.139	2.53	0.64	0.134	0.423	0.78	0.202	1.16	9.71	1.08	11.95	18780	12.9438	11.16288	1.78092	PAF(LC)
NS0168	2	4	NS	X121466	121466	1	G	D	38.97	34.49	2.73	0.0258	0.02	0.182	0.03	0.01	0.026	0.017	0.003	0.0005	5.97	0.73	0.18	6.88	18673	0.5202	0.17442	0.34578	PAF(LC)
NS0168	8	10	NS	X121469	121469	1	G	D	41.11	30.16	3.15	0.0258	0.02	0.124	0.03	0.01	0.03	0.013	0.004	0.007	6.6	1.01	0.2	7.81	18676	0.3978	0.17442	0.22338	PAF(LC)
NS0168	4	6	NS	X121467	121467	1	G	D	40.52	34.25	2.34	0.0516	0.04	0.143	0.04	0.01	0.041	0.012	0.005	0.003	4.4	0.59	0.07	5.06	18674	0.3672	0.17442	0.19278	PAF(LC)
NS0168	0	2	NS	X121465	121465	1	G	D	33.93	40.41	4.83	0.0645	0.05	0.359	0.06	0.02	0.029	0.017	0.023	0.008	4.27	1.08	0.16	5.51	18672	0.5202	0.34884	0.17136	PAF(LC)
NS0168	12	14	NS	X121471	121471	1	G	D	37.97	37.38	2.45	0.0645	0.05	0.114	0.06	0.02	0.102	0.016	0.002	0.008	4.56	0.81	0.14	5.51	18678	0.4896	0.34884	0.14076	PAF(LC)
NS0168	104	106	NS	X121518	121518	1	G	W	26.72	46.38	2.84	0.4128	0.32	0.13	3.34	0.63	0.081	0.36	1.03	0.274	0.86	4.62	0.89	6.37	18724	11.016	10.98846	0.02754	PAF(LC)
NS0168	6	8	NS	X121468	121468	1	G	D	41.85	28.9	2.66	0.0258	0.02	0.103	0.03	0.02	0.027	0.012	0.002	0.006	6.89	0.95	0.19	8.03	18675	0.3672	0.34884	0.01836	PAF(LC)
NS0168	150	154	NS	BX123541-BX123542	X123541	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2546	-0.0306	-0.01744	-0.013158	NAF
NS0168	204	208	NS	BX123569-BX123570	X123569	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2559	-0.0306	-0.01744	-0.013158	NAF
NS0168	216	220	NS	BX123575-BX123576	X123575	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2562	-0.0306	-0.01744	-0.013158	NAF
NS0168	220	224	NS	BX123577-BX123578	X123577	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2563	-0.0306	-0.01744	-0.013158	NAF
NS0168	224	228	NS	BX123579-BX123580	X123579	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2564	-0.0306	-0.01744	-0.013158	NAF
NS0168	228	232	NS	BX123581-BX123582	X123581	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2565	-0.0306	-0.01744	-0.013158	NAF
NS0168	232	236	NS	BX123583-BX123584	X123583	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2566	-0.0306	-0.01744	-0.013158	NAF
NS0168	10	12	NS	X121470	121470	1	G	D	39.04	37.16	2.08	0.0774	0.06	0.087	0.06	0.02	0.054	0.009	0.004	0.003	3.86	0.62	0.11	4.59	18677	0.2754	0.34884	-0.07344	NAF
NS0168	236	240	NS	BX123585-BX123586	X123585	2			63.4	8.844	0.465	0.044	0.03168	0.044	0.588	0.102	0.007	0.05	0.146	0.097	-0.01	-0.01	-0.01	-0.03	2567	1.53	1.779084	-0.249084	NAF
NS0168	196	200	NS	BX123565-BX123566	X123565	2			68.77	3.873	0.172	0.025	0.018	0.025	0.273	0.09	0.017	0.037	0.058	0.078	-0.01	-0.01	-0.01	-0.03	2557	1.1322	1.56978	-0.43758	NAF
NS0168	166	170	NS	BX123549-BX123550	X123549	2			66.18	6.381	0.315	0.042	0.03024	0.042	0.423	0.089	0.013	0.035	0.107	0.091	-0.01	-0.01	-0.01	-0.03	2550	1.071	1.552338	-0.481338	NAF
NS0168	20	24	NS	BX123475-BX123476	X123475	2			66.47	5.058	0.271	0.036	0.02592	0.036	0.14	0.033	0.023	0.001	0.017	0.094	0.3	0.47	0.32	1.09	2514	0.0306	0.575586	-0.544986	NAF
NS0168	16	20	NS	BX123473-BX123474	X123473	2			64.44	6.727	0.301	0.027	0.01944	0.027	0.121	0.035	0.027	0.002	0.021	0.085	0.13	0.45	1.85	2.43	2513	0.0612	0.61047	-0.54927	NAF
NS0168	24	28	NS	BX123477-BX123478	X123477	2			65.9	4.871	0.308	0.025	0.018	0.025	0.14	0.034	0.02	0.001	0.022	0.079	0.34	0.55	0.51	1.4	2515	0.0306	0.593028	-0.562428	NAF
NS0168	134	138	NS	BX123533-BX123534	X123533	2			62.61	9.893	0.534	0.05	0.036	0.05	0.619	0.087	0.011	0.029	0.197	0.092	-0.01	-0.01	-0.01	-0.03	2542	0.8874	1.517454	-0.630054	NAF
NS0168	28	32	NS	BX123479-BX123480	X123479	2			65.31	5.758	0.267	0.033	0.02376	0.033	0.163	0.046	0.025	0.001	0.027	0.088	0.32	0.52	0.25	1.09	2516	0.0306	0.802332	-0.771732	NAF
NS0168	84	88	NS	BX123508-BX123509	X123508	2			65.93	7.481	0.443	0.039	0.02808	0.039	0.539	0.083	0.017	0.022	0.082	0.085	-0.01	-0.01	-0.01	-0.03	2530	0.6732	1.447686	-0.774486	NAF
NS0168	158	162	NS	BX123545-BX123546	X123545	2			64.57	7.349	0.316	0.031	0.02232	0.031	0.442	0.102	0.016	0.032	0.123	0.095	-0.01	-0.01	-0.01	-0.03	2548	0.9792	1.779084	-0.799884	NAF
NS0168	14	16	NS	X121472	121472	1	G	D	37.4	39.35	2.11	0.0387	0.03	0.106	0.09	0.06	0.069	0.007	0.002	0.045	3.97	0.76	0.13	4.86	18679	0.2142	1.04652	-0.83232	NAF
NS0168	40	44	NS	BX123485-BX123486	X123485	2			66.51	6.046	0.271	0.025	0.018	0.025	0.396	0.07	0.012	0.01	0.076	0.078	-0.01	-0.01	-0.01	-0.03	2519	0.306	1.22094	-0.91494	NAF
NS0168	102	104	NS	X121517	121517	1	G	W	30.11	40.38	3.34	0.4515	0.35	0.16	3.68	0.8	0.096	0.426	1.01	0.262	0.83	4.5	1.01	6.34	18723	13.0356	13.9536	-0.918	NAF
NS0168	182	186	NS	BX123558-BX123559	X123558	2			68.56	4.291	0.222	0.026	0.01872	0.026	0.277	0.091	0.015	0.021	0.061	0.078	-0.01	-0.01	-0.01	-0.03	2554	0.6426	1.587222	-0.944622	NAF
NS0168	116	120	NS	BX123524-BX123525	X123524	2			65.12	7.203	0.287	0.029	0.02088	0.029	0.422	0.077	0.01	0.013	0.113	0.08	-0.01	-0.01	-0.01	-0.03	2538	0.3978	1.343034	-0.945234	NAF
NS0168	64	68	NS	BX123497-BX123498	X123497	2			64.57	8.282	0.346	0.034	0.02448	0.034	0.498	0.086	0.012	0.013	0.114	0.076	-0.01	-0.01	-0.01	-0.03	2525	0.3978	1.500012	-1.102212	NAF
NS0168	138	142	NS	BX123535-BX123536	X123535	2			63.81	8.765	0.488	0.046	0.03312	0.046	0.551	0.104	0.015	0.021	0.174	0.093	-0.01	-0.01	-0.01	-0.03	2543	0.6426	1.813968	-1.171368	NAF
NS0168	192	196	NS	BX123563-BX123564	X123563	2			68.49	4.672	0.196	0.029	0.02088	0.029	0.295	0.094	0.019	0.015	0.075	0.076	-0.01	-0.01	-0.01	-0.03	2556	0.459	1.639548	-1.180548	NAF
NS0168	188	192	NS	BX123561-BX123562	X123561	2			67.48	4.934	0.171	0.022	0.01584	0.022	0.297	0.098	0.018	0.017	0.069	0.074	-0.01	-0.01	-0.01	-0.03	2555	0.5202	1.709316	-1.189116	NAF
NS0168	68	72	NS	BX123499-BX123500	X123499	2			65.32	8.276	0.384	0.035	0.0252	0.035	0.538	0.095	0.016	0.014	0.124	0.085	-0.01	-0.01	-0.01	-0.03	2526	0.4284	1.65699	-1.22859	NAF
NS0168	170	174	NS	BX123552-BX123553	X123552	2			68.23	4.571	0.171	0.03	0.0216	0.03	0.287	0.103	0.021	0.018	0.069	0.083	-0.01	-0.01	-0.01	-0.03	2551	0.5508	1.796526	-1.245726	NAF
NS0168	16	18	NS	X121473	121473	1	G	D	34.76	42.16	2.35	0.0258	0.02	0.093	0.13	0.09	0.061	0.01	0.004	0.072	4.4	0.91	0.17	5.48	18680	0.306	1.56978	-1.26378	NAF
NS0168	154	158	NS	BX123543-BX123544	X123543	2			64.71	8.272	0.481	0.041	0.02952	0.041	0.484	0.112	0.019	0.022	0.126	0.082	-0.01	-0.01	-0.01	-0.03	2547	0.6732	1.953504	-1.280304	NAF
NS0168	100	104	NS	BX123516-BX123517	X123516	2			65.54	7.634	0.447	0.036	0.02592	0.036	0.53	0.099	0.017	0.013	0.131	0.095	-0.01	-0.01	-0.01	-0.03	2534	0.3978	1.726758	-1.328958	NAF
NS0168	104	108	NS	BX123518-BX123519	X123518	2			65.24	7.931	0.692	0.06	0.0432	0.06	0.524	0.109	0.013	0.018	0.141	0.092	-0.01	-0.01	-0.01	-0.03	2535	0.5508	1.901178	-1.350378	NAF
NS0168	130	134	NS	BX123531-BX123532	X123531	2			64.44	8.455	0.427	0.038	0.02736	0.038	0.534	0.111	0.016	0.018	0.163	0.089	-0.01	-0.01	-0.01	-0.03	2541	0.5508	1.936062	-1.385262	NAF
NS0168	256	260	NS	BX123595-BX123596	X123595	2			66.06	5.975	0.452	0.061	0.04392	0.061	0.38	0.115	0.01	0.02	0.131	0.082	-0.01	-0.01	-0.01	-0.03	2572	0.612	2.00583	-1.39383	NAF
NS0168	44	48	NS	BX123487-BX123488	X123487	2			66.91	6.946	0.305	0.029	0.02088	0.029	0.446	0.099	0.014	0.01	0.101	0.143	-0.01	-0.01	-0.01	-0.03	2520	0.306	1.726758	-1.420758	NAF
NS0168	96	100	NS	BX123514-BX123515	X123514	2			65.43	7.414	0.32	0.028	0.02016	0.028	0.47	0.101	0.02	0.01	0.096	0.082	-0.01	-0.01	-0.01	-0.03	2533	0.306	1.761642	-1.455642	NAF
NS0168	56	60	NS	BX123493-BX123494	X123493	2			64.66	9.069	0.4	0.034	0.02448	0.034	0.558	0.11	0.014	0.015	0.134	0.095	-0.01	-0.01	-0.01	-0.03	2523	0.459	1.91862	-1.45962	NAF
NS0168	88	92	NS	BX123510-BX123511	X123510	2			64.76	8.631	0.373	0.031	0.02232	0.031	0.536	0.102	0.018	0.01	0.105	0.081	-0.01	-0.01	-0.01	-0.03	2531	0.306	1.779084	-1.473084	NAF
NS0168	146	150	NS	BX123539-BX123540	X123539	2			64.48	7.997	0.442	0.034	0.02448	0.034	0.469	0.126	0.021	0.022	0.124	0.091	0.02	-0.01	-0.01	0	2545	0.6732	2.197692	-1.524492	NAF
NS0168	72	76	NS	BX123502-BX123503	X123502	2			66.29	7.704	0.294	0.03	0.0216	0.03	0.463	0.105	0.02	0.01	0.081	0.069	-0.01	-0.01	-0.01	-0.03	2527	0.306	1.83141	-1.52541	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0168	32	36	NS	BX123481-BX123482	X123481	2			63.62	9.634	0.831	0.04	0.0288	0.04	0.561	0.116	0.02	0.014	0.105	0.103	-0.01	-0.01	-0.01	-0.03	2517	0.4284	2.023272	-1.594872	NAF
NS0168	178	182	NS	BX123556-BX123557	X123556	2			69.35	3.706	0.112	0.021	0.01512	0.021	0.226	0.116	0.023	0.014	0.044	0.066	-0.01	-0.01	-0.01	-0.03	2553	0.4284	2.023272	-1.594872	NAF
NS0168	272	276	NS	BX123604-BX123605	X123604	2			64.92	7.88	0.419	0.049	0.03528	0.049	0.401	0.122	0.017	0.016	0.136	0.082	-0.01	-0.01	-0.01	-0.03	2576	0.4896	2.127924	-1.638324	NAF
NS0168	112	116	NS	BX123522-BX123523	X123522	2			62.95	10.144	0.444	0.031	0.02232	0.031	0.6	0.116	0.015	0.012	0.159	0.092	-0.01	-0.01	-0.01	-0.03	2537	0.3672	2.023272	-1.656072	NAF
NS0168	48	50	NS	BX123489	X123489	2			64.81	8.675	0.368	0.029	0.02088	0.029	0.474	0.118	0.017	0.013	0.106	0.091	-0.01	-0.01	-0.01	-0.03	2521	0.3978	2.058156	-1.660356	NAF
NS0168	92	96	NS	BX123512-BX123513	X123512	2			66.11	8.204	0.332	0.027	0.01944	0.027	0.437	0.12	0.019	0.008	0.081	0.085	-0.01	-0.01	-0.01	-0.03	2532	0.2448	2.09304	-1.84824	NAF
NS0168	60	64	NS	BX123495-BX123496	X123495	2			61.53	11.045	0.489	0.036	0.02592	0.036	0.643	0.133	0.016	0.015	0.166	0.099	-0.01	-0.01	-0.01	-0.03	2524	0.459	2.319786	-1.860786	NAF
NS0168	264	268	NS	BX123599-BX123600	X123599	2			65.16	6.831	0.441	0.059	0.04248	0.059	0.394	0.142	0.016	0.02	0.131	0.092	-0.01	-0.01	-0.01	-0.03	2574	0.612	2.476764	-1.864764	NAF
NS0168	120	124	NS	BX123526-BX123527	X123526	2			64.68	8.338	0.401	0.032	0.02304	0.032	0.586	0.135	0.019	0.016	0.16	0.102	-0.01	-0.01	-0.01	-0.03	2539	0.4896	2.35467	-1.86507	NAF
NS0168	18	20	NS	X121474	121474	1	G	D	33.52	44.92	2.04	0.0387	0.03	0.099	0.22	0.12	0.049	0.006	0.024	0.061	3.37	0.83	0.12	4.32	18681	0.1836	2.09304	-1.90944	NAF
NS0168	142	146	NS	BX123537-BX123538	X123537	2			61.75	10.571	0.478	0.039	0.02808	0.039	0.604	0.145	0.024	0.015	0.189	0.104	-0.01	0.2	-0.01	0.18	2544	0.459	2.52909	-2.07009	NAF
NS0168	36	40	NS	BX123483-BX123484	X123483	2			65.17	6.988	0.283	0.027	0.01944	0.027	0.396	0.139	0.017	0.011	0.07	0.084	-0.01	-0.01	-0.01	-0.03	2518	0.3366	2.424438	-2.087838	NAF
NS0168	260	264	NS	BX123597-BX123598	X123597	2			61.84	9.502	0.591	0.053	0.03816	0.053	0.499	0.161	0.014	0.022	0.203	0.104	-0.01	-0.01	-0.01	-0.03	2573	0.6732	2.808162	-2.134962	NAF
NS0168	240	244	NS	BX123587-BX123588	X123587	2			63.53	9.344	0.401	0.032	0.02304	0.032	0.498	0.14	0.012	0.01	0.146	0.101	-0.01	-0.01	-0.01	-0.03	2568	0.306	2.44188	-2.13588	NAF
NS0168	124	128	NS	BX123528-BX123529	X123528	2			64.76	7.959	0.314	0.025	0.018	0.025	0.444	0.136	0.018	0.006	0.126	0.081	-0.01	-0.01	-0.01	-0.03	2540	0.1836	2.372112	-2.188512	NAF
NS0168	66	68	NS	X121498	121498	1	G	W	26.98	45.8	2.3	0.5676	0.44	0.108	2.91	0.71	0.068	0.333	0.712	0.183	0.76	5.91	0.67	7.34	18705	10.1898	12.38382	-2.19402	NAF
NS0168	64	66	NS	X121497	121497	1	G	W	28.67	43.1	2.7	0.4902	0.38	0.12	3.28	0.49	0.067	0.206	0.884	0.229	0.91	6.33	0.49	7.73	18704	6.3036	8.54658	-2.24298	NAF
NS0168	108	112	NS	BX123520-BX123521	X123520	2			62.81	10.255	0.494	0.041	0.02952	0.041	0.657	0.157	0.018	0.016	0.192	0.099	-0.01	-0.01	-0.01	-0.03	2536	0.4896	2.738394	-2.248794	NAF
NS0168	150	152	NS	X121541	121541	1	G	W	25.41	47.01	3.57	0.4644	0.36	0.142	2.13	0.35	0.064	0.122	0.836	0.215	1.95	6.33	0.46	8.74	18747	3.7332	6.1047	-2.3715	NAF
NS0168	168	170	NS	X121550	121550	1	G	W	28.45	40.83	4.74	0.258	0.2	0.227	3.74	0.63	0.113	0.281	1.53	0.383	1.32	3.66	0.87	5.85	18756	8.5986	10.98846	-2.38986	NAF
NS0168	76	80	NS	BX123504-BX123505	X123504	2			66.51	6.795	0.229	0.022	0.01584	0.022	0.372	0.151	0.021	0.006	0.055	0.074	-0.01	-0.01	-0.01	-0.03	2528	0.1836	2.633742	-2.450142	NAF
NS0168	80	84	NS	BX123506-BX123507	X123506	2			66.95	6.189	0.22	0.023	0.01656	0.023	0.375	0.156	0.021	0.008	0.056	0.062	-0.01	-0.01	-0.01	-0.03	2529	0.2448	2.720952	-2.476152	NAF
NS0168	136	138	NS	X121534	121534	1	G	W	29.91	41.22	3.02	0.4773	0.37	0.136	3.06	0.5	0.084	0.203	1.22	0.306	1.06	4.98	0.57	6.61	18740	6.2118	8.721	-2.5092	NAF
NS0168	244	246	NS	BX123589	X123589	2			64.9	8.588	0.272	0.033	0.02376	0.033	0.357	0.171	0.032	0.007	0.104	0.075	-0.01	-0.01	-0.01	-0.03	2569	0.2142	2.982582	-2.768382	NAF
NS0168	206	208	NS	X121570	121570	1	G	W	21.28	51.76	7.17	0.1548	0.12	0.331	3.07	0.61	0.075	0.251	0.727	0.202	0.85	3.61	0.76	5.22	18775	7.6806	10.63962	-2.95902	NAF
NS0168	268	272	NS	BX123602-BX123603	X123602	2			64.44	8.592	0.393	0.038	0.02736	0.038	0.394	0.202	0.017	0.015	0.14	0.099	-0.01	-0.01	-0.01	-0.03	2575	0.459	3.523284	-3.064284	NAF
NS0168	280	282	NS	BX123608	X123608	2			57.86	14.525	0.793	0.06	0.0432	0.06	0.729	0.215	0.023	0.022	0.28	0.126	0.1	-0.01	-0.01	0.08	2578	0.6732	3.75003	-3.07683	NAF
NS0168	276	280	NS	BX123606-BX123607	X123606	2			58.56	13.104	0.744	0.054	0.03888	0.054	0.689	0.221	0.019	0.022	0.269	0.108	0.07	-0.01	-0.01	0.05	2577	0.6732	3.854682	-3.181482	NAF
NS0168	22	24	NS	X121476	121476	1	G	D	37.62	40.6	1.39	0.3354	0.26	0.07	0.41	0.19	0.067	0.003	0.05	0.042	2.52	0.69	-0.02	3.19	18683	0.0918	3.31398	-3.22218	NAF
NS0168	152	154	NS	X121542	121542	1	G	W	27.01	43.59	3.51	0.4515	0.35	0.158	3.13	0.46	0.085	0.154	1.33	0.331	1.32	6.25	0.59	8.16	18748	4.7124	8.02332	-3.31092	NAF
NS0168	252	256	NS	BX123593-BX123594	X123593	2			64.87	8.266	0.507	0.047	0.03384	0.047	0.513	0.23	0.016	0.015	0.175	0.096	-0.01	-0.01	-0.01	-0.03	2571	0.459	4.01166	-3.55266	NAF
NS0168	248	252	NS	BX123591-BX123592	X123591	2			62.19	9.147	0.437	0.033	0.02376	0.033	0.491	0.223	0.017	0.011	0.162	0.108	0.23	-0.01	-0.01	0.21	2570	0.3366	3.889566	-3.552966	NAF
NS0168	26	28	NS	X121478	121478	1	G	D	37.53	39.16	1.58	0.5676	0.44	0.078	0.52	0.21	0.053	0.002	0.127	0.022	2.77	0.77	0.02	3.56	18685	0.0612	3.66282	-3.60162	NAF
NS0168	132	134	NS	X121532	121532	1	G	W	31.97	40.03	2.47	0.5031	0.39	0.112	2.75	0.43	0.057	0.12	1.09	0.264	0.92	5.36	0.25	6.53	18738	3.672	7.50006	-3.82806	NAF
NS0168	236	238	NS	X121585	121585	1	G	W	26.98	37.14	2.43	0.5031	0.39	0.11	3.46	1.14	0.072	0.517	0.563	0.146	0.85	13.48	1.25	15.58	18790	15.8202	19.88388	-4.06368	NAF
NS0168	52	56	NS	BX123491-BX123492	X123491	2			62.15	12.132	0.465	0.035	0.0252	0.035	0.639	0.279	0.02	0.015	0.172	0.087	-0.01	-0.01	-0.01	-0.03	2522	0.459	4.866318	-4.407318	NAF
NS0168	24	26	NS	X121477	121477	1	G	D	36.21	40.65	1.71	0.9288	0.72	0.086	0.62	0.26	0.053	0.002	0.119	0.034	2.49	0.89	0.05	3.43	18684	0.0612	4.53492	-4.47372	NAF
NS0168	28	30	NS	X121479	121479	1	G	D	34.06	44.46	1.49	0.5031	0.39	0.073	0.6	0.29	0.062	0.002	0.089	0.032	2.67	0.87	-0.06	3.48	18686	0.0612	5.05818	-4.99698	NAF
NS0168	20	22	NS	X121475	121475	1	G	D	35.07	40.5	3.05	0.0903	0.07	0.175	0.78	0.3	0.085	0.003	0.189	0.064	2.83	1.3	-0.02	4.11	18682	0.0918	5.2326	-5.1408	NAF
NS0168	170	172	NS	X121552	121552	1	G	W	33.37	38.7	1.92	0.3225	0.25	0.087	2.36	0.48	0.087	0.105	0.87	0.227	0.84	5.91	0.12	6.87	18757	3.213	8.37216	-5.15916	NAF
NS0168	30	32	NS	X121480	121480	1	G	D	30.63	47.68	1.97	0.4773	0.37	0.098	0.75	0.32	0.081	0.002	0.25	0.049	3.18	1.11	0.03	4.32	18687	0.0612	5.58144	-5.52024	NAF
NS0168	208	210	NS	X121571	121571	1	G	W	26.99	38.84	1.64	0.3999	0.31	0.072	2.58	0.49	0.047	0.081	0.289	0.078	0.99	15.66	0.17	16.82	18776	2.4786	8.54658	-6.06798	NAF
NS0168	116	118	NS	X121524	121524	1	G	W	32.15	40.51	1.84	0.516	0.4	0.087	2.62	0.54	0.055	0.083	0.829	0.216	0.73	5.65	0.13	6.51	18730	2.5398	9.41868	-6.87888	NAF
NS0168	44	46	NS	X121487	121487	1	G	W	32.25	40.44	2.24	0.4773	0.37	0.105	2.96	0.52	0.083	0.059	0.833	0.178	0.79	4.94	0.04	5.77	18694	1.8054	9.06984	-7.26444	NAF
NS0168	118	120	NS	X121525	121525	1	G	W	32.2	38.69	2.12	0.5934	0.46	0.094	2.82	0.57	0.109	0.085	0.956	0.265	0.91	6.38	0.15	7.44	18731	2.601	9.94194	-7.34094	NAF
NS0168	160	162	NS	X121546	121546	1	G	W	32.31	36.09	2	0.4644	0.36	0.094	2.67	0.72	0.065	0.163	0.906	0.223	0.96	8.72	0.39	10.07	18752	4.9878	12.55824	-7.57044	NAF
NS0168	200	202	NS	X121567	121567	1	G	W	27.74	43.13	2.02	0.2838	0.22	0.092	2.43	0.64	0.076	0.116	0.787	0.184	0.96	9.08	0.32	10.36	18772	3.5496	11.16288	-7.61328	NAF
NS0168	88	90	NS	X121510	121510	1	G	W	32.56	41.14	1.89	0.6579	0.51	0.086	2.81	0.53	0.081	0.049	0.607	0.159	0.54	4.54	-0.01	5.07	18716	1.4994	9.24426	-7.74486	NAF
NS0168	32	34	NS	X121481	121481	1	G	D	32.77	42.86	2.34	0.3483	0.27	0.111	1.47	0.49	0.071	0.024	0.374	0.114	2.48	2.05	0	4.53	18688	0.7344	8.54658	-7.81218	NAF
NS0168	120	122	NS	X121526	121526	1	G	W	32.66	37.36	2.44	0.5547	0.43	0.109	2.97	0.95	0.2	0.283	1.08	0.285	0.93	4.82	0.63	6.38	18732	8.6598	16.5699	-7.9101	NAF
NS0168	226	228	NS	X121580	121580	1	G	W	20.27	50.28	5.42	0.2709	0.21	0.252	3.12	1.42	0.067	0.543	0.406	0.107	0.7	6.62	1.36	8.68	18785	16.6158	24.76764	-8.15184	NAF
NS0168	38	40	NS	X121484	121484	1	G	W	34.74	39.77	1.87	0.774	0.6	0.084	1.49	0.52	0.11	0.029	0.324	0.076	2.19	2.6	0.04	4.83	18691	0.8874	9.06984	-8.18244	NAF
NS0168	230	232	NS	X121582	121582	1	G	W	24.14	41.33	3.36	0.2967	0.23	0.157	3.19	1.31	0.1	0.472	0.253	0.07	0.8	12.39	1.11	14.3	18787	14.4432	22.84902	-8.40582	NAF
NS0168	40	42	NS	X121485	121485	1	G	W	34.2	38.27	1.87	0.5934	0.46	0.088	2.5	0.58	0.097	0.055	0.622	0.133	1.1	5.26	-0.02	6.34	18692	1.683	10.11636	-8.43336	NAF
NS0168	36	38	NS	X121483	121483	1	G	D	34.22	40.61	1.89	0.6321	0.49	0.084	1.79	0.56	0.094	0.036	0.413	0.094	1.91	3.14	0.04	5.09	18690	1.1016	9.76752	-8.66592	NAF
NS0168	34	36	NS	X121482	121482	1	G	D	30.71	41.26	1.99	0.5676	0.44	0.092	2.95	0.63	0.136	0.074	0.71	0.165	0.74	6.3	0.1	7.14	18689	2.2644	10.98846	-8.72406	NAF
NS0168	134	136	NS	X121533	121533	1	G	W	32	39.44	2.25	0.5289	0.41	0.104	2.63	0.71	0.13	0.117	0.974	0.246	0.89	5.74	0.23	6.86	18739	3.5802	12.38382	-8.80362	NAF
NS0168	42	44	NS	X121486	121486	1	G	W	34.76	37.25	1.76	0.5805	0.45	0.08	2.66	0.58	0.069	0.04	0.68	0.141	0.87	5.58	0	6.45	18693	1.224	10.11636	-8.89236	NAF
NS0168	274	276	NS	X121605	121605	1	G	W	29.45	41.58	3.65	0.2838	0.22	0.169	2.8	0.75	0.073	0.119	1.26	0.3	1.12	5.38	0.44	6.94	18809	3.6414	13.0815	-9.4401	NAF
NS0168	204	206	NS	X121569	121569	1	G	W	32.04	27.51	1.63	0.3999	0.31	0.074	3.19	0.83	0.079	0.144	0.525	0.133	0.95	18.29	0.23	19.47	18774	4.4064	14.47686	-10.07046	NAF
NS0168	138	140	NS	X121535	121535	1	G	W	31.32	41.27	1.79	0.5289	0.41	0.082	2.33	0.73	0.061	0.086	0.768	0.202	0.81	6.62	0.18	7.61	18741	2.6316	12.73266	-10.10106	NAF
NS0168	156	158	NS	X121544	121544	1	G	W	33.12	36.36	1.82	0.4902	0.38	0.082	2.5	0.71	0.067	0.07	0.797	0.2	0.9	8.44	0.12	9.46	18750	2.142	12.38382	-10.24182	NAF
NS0168	162	164	NS	X121547	121547	1	G	W	31.29	38.77	1.84	0.5547	0.43	0.084	2.35	1.05	0.088	0.257	0.823	0.199	0.84	7.96	0.53	9.33	18753	7.8642	18.3141	-10.4499	NAF
NS0168	140	142	NS	X121536	121536	1	G	W	31.43	38.68	2.87	0.4515	0.35	0.132	2.97	0.77	0.106	0.097	1.24	0.338	1.15	5.63	0.33	7.11	18742	2.9682	13.43034	-10.46214	NAF
NS0168	228	230	NS	X121581	121581	1	G	W	21.17	47.77	4.49	0.3354	0.26	0.21	3.19	1.65	0.089	0.595	0.389	0.105	0.69	8.27	1.36	10.32	18786	18.207	28.7793	-10.5723	NAF
NS0168	112	114	NS	X121522	121522	1	G	W	33.92	37.71	1.64	0.5934	0.46	0.077	2.63	0.71	0.079	0.05	0.744	0.207	0.71	6.26	0.1	7.07	18728	1.53	12.38382	-10.85382	NAF
NS0168	176	178	NS	X121555	121555	1	G	W	30.98	38.35	2.62	0.3483	0.27	0.125	2.84	1.08	0.169	0.253	1.11	0.289	1.06	6.29	0.73	8.08	18760	7.7418	18.83736	-11.09556	NAF
NS0168	158	160	NS	X121545	121545	1	G	W	32.09	37.05	2.08	0.4386	0.34	0.093	2.78	0.91	0.088	0.145	0.897	0.227	0.95	8.33	0.39	9.67	18751	4.437	15.87222	-11.43522	NAF
NS0168	96	98	NS	X121514	121514	1	G	W	30.58	43.81	2.21	0.5547	0.43	0.097	2.76	0.9	0.111	0.134	0.71	0.184	0.56	3.45	0.37	4.38	18720	4.1004	15.6978	-11.5974	NAF
NS0168	142	144	NS	X121537	121537	1	G	W	31.49	39.72	2.25	0.4644	0.36	0.105	2.51	0.83	0.073	0.087	0.991	0.255	0.95	6.69	0.32	7.96	18743	2.6622	14.47686	-11.81466	NAF
NS0168	84	86	NS	X121508	121508	1	G	W	32.06	41.35	2.12	0.6321	0.49	0.097	3	0.91	0.121	0.127	0.573	0.156	0.46	4.13	0.23	4.82	18714	3.8862	15.87222	-11.98602	NAF
NS0168	184	186	NS	X121559	121559	1	G	W	27.99	42.39	4.21	0.258	0.2	0.2	3.59	0.94	0.168	0.143	1.57	0.37	1.34	3.67	0.7	5.71	18764	4.3758	16.39548	-12.01968	NAF
NS0168	210	212	NS	X121572	121572	1	G	W	27.53	37.89	2.02	0.4773	0.37	0.091	2.73	1.05	0.11	0.195	0.601	0.16	1.06	13.65	0.38	15.09	18777	5.967	18.3141	-12.3471	NAF
NS0168	190	192	NS	X121562	121562	1	G	W	34.48	34.93	1.31	0.5547	0.43	0.059	2.26	0.86	0.121	0.08	0.59	0.151	0.69	8.61	0	9.3	18767	2.448	15.00012	-12.55212	NAF
NS0168	192	194	NS	X121563	121563	1	G	W	31.6	40	2.22	0.3354	0.26	0.115	2.52	0.88	0.119	0.085	1.02	0.253	0.96	5.52	0.29	6.77	18768	2.601	15.34896	-12.74796	NAF
NS0168	202	204	NS	X121568	121568	1	G	W	28.81	38.98	1.24	0.258	0.2	0.055	2.32	0.87	0.08	0.066	0.515	0.124	0.81	13.04	0.12	13.97	18773	2.0196	15.17454	-13.15494	NAF
NS0168	146	148	NS	X121539	121539	1	G	W	35.28	34.46	1.63	0.4773	0.37	0.075	2.11	0.91	0.081	0.083	0.725	0.181	0.81	7.97	0.08	8.86	18745	2.5398	15.87222	-13.33242	NAF
NS0168	114	116	NS	X121523	121523	1	G	W	32.77	38.75	1.72	0.5031	0.39	0.077	2.71	0.84	0.073	0.039	0.776	0.208	0.75	6.01	0.24	7	18729	1.1934	14.65128	-13.45788	NAF
NS0168	58	60	NS	X121494	121494	1	G	W	33.02	39.4	1.82	0.5289	0.41	0.085	2.85	0.87	0.071	0.054	0.739	0.183	0.65	5.53	0.2	6.38	18701	1.6524	15.17454	-13.52214	NAF
NS0168	198	200	NS	X121566	121566	1	G	W	29.06	40.3	1.61	0.3612	0.28	0.072	2.26	0.85	0.098	0.035	0.741	0.178	0.88	10.59	0.19	11.66	18771	1.071	14.8257	-13.7547	NAF
NS0168	90	92	NS	X121511	121511	1	G	W	32.67	39.91	2.17	0.6708	0.52	0.097	2.97	0.95	0.093	0.079	0.577	0.147	0.56	4.43	0.3	5.29	18717	2.4174	16.5699	-14.1525	NAF
NS0168	72	74	NS	X121502	121502	1	G	W	30.55	40.23	1.82	0.6837	0.53	0.079	3.09	0.93	0.142	0.064	0.598	0.162	0.66	7.22	0.14	8.02	18708	1.9584	16.22106	-14.26266	NAF
NS0168	56	58	NS	X121493	121493	1	G	W	30.95	40.31	2.35	0.5289	0.41	0.109	3.27	1.02	0.125	0.106	0.786	0.214	0.75	5.89	0.34	6.98	18700	3.2436	17.79084	-14.54724	NAF
NS0168	214	216	NS	X121574	121574	1	G	W	28.57	39.01	1.68	0.387	0.3	0.078	2.23	1.04	0.061	0.117	0.481	0.116	0.79	12.44	0.28	13.51	18779	3.5802	18.13968	-14.55948	NAF
NS0168	128	130	NS	X121530	121530	1	G	W	29.7	44.72	1.59	0.4644	0.36	0.07	2.19	0.93	0.09	0.053	0.72	0.203	0.68	5.34	0.27	6.29	18736	1.6218	16.22106	-14.59926	NAF
NS0168	154	156	NS	X121543	121543	1	G	W	27.92	41.89	2.46	0.5031	0.39	0.109	2.75	1.09	0.194	0.142	1.09	0.274	1.16	7.64	0.47	9.27	18749	4.3452	19.01178	-14.66658	NAF
NS0168	68	70	NS	X121499	121499	1	G	W	32.14	38.36	1.84	0.5934	0.46	0.084	3.01	0.99	0.147	0.078	0.689	0.185	0.94	6.78	0.12	7.84	18706	2.3868	17.26758	-14.88078	NAF
NS0168	172	174	NS	X121553	121553	1	G	W	32.31	37.62	1.91	0.3741	0.29	0.094	2.4	1.11	0.122	0.145	0.835	0.211	0.85	7.66	0.31	8.82	18758	4.437	19.36062	-14.92362	NAF
NS0168	126	128	NS	X121529	121529	1	G	W	33.71	38.8	2.19	0.4515	0.35	0.102	2.54	0.96	0.078	0.059	0.995	0.271	0.86	4.02	0.38	5.26	18735	1.8054	16.74432	-14.93892	NAF
NS0168	110	112	NS	X121521	121521	1	G	W	31.82	39.67	1.77	0.5547	0.43	0.082	2.75	0.95	0.092	0.05	0.791	0.211	0.77	6.22	0.29	7.28	18727	1.53	16.5699	-15.0399	NAF
NS0168	144	146	NS	X121538	121538	1	G	W	35.27	34.42	1.6	0.4902	0.38	0.073	2.16	0.99	0.119	0.039	0.723	0.192	0.78	7.95	0	8.73	18744	1.1934	17.26758	-16.07418	NAF
NS0168	100	102	NS	X121516	121516	1	G	W	33.71	39.23	1.77	0.4773	0.37	0.083	2.71	1.01	0.121	0.049	0.742	0.194	0.58	4.32	0.25	5.15	18722	1.4994	17.61642	-16.11702	NAF
NS0168	196	198	NS	X121565	121565	1	G	W	32.49	39.57	1.64	0.3354	0.26	0.076	2.17	1.16	0.152	0.111	0.751	0.19	0.7	6.14	0.25	7.09	18770	3.3966	20.23272	-16.83612	NAF
NS0168	260	262	NS	X121597	121597	1	G	W	29	45.13	2.87	0.2064	0.16	0.134	2.37	1.1	0.058	0.073	1.16	0.272	0.95	3.76	0.52	5.23	18802	2.2338	19.1862	-16.9524	NAF
NS0168	222	224	NS	X121578	121578	1	G	W	21.17	46.79	6.28	0.2967	0.23	0.3	3.32	1.69	0.084	0.408	0.252	0.07	0.62	7.59	1.3	9.51	18783	12.4848	29.47698	-16.99218	NAF
NS0168	124	126	NS	X121528	121528	1	G	W	34.08	38.45	1.63	0.5547	0.43	0.073	2.31	1.06	0.103	0.046	0.738	0.202	0.67	5.25	0.28	6.2	18734	1.4076	18.48852	-17.08092	NAF
NS0168	50	52	NS	X121490	121490	1	G	W	33.7	38.24	1.85	0.5676	0.44	0.086	2.74	1.09	0.09	0.06	0.691	0.165	0.65	4.86	0.36	5.87	18697	1.836	19.01178	-17.17578	NAF
NS0168	130	132	NS	X121531	121531	1	G	W	33.59	37.55	1.96	0.5289	0.41	0.094	2.42	1.06	0.13	0.042	0.901	0.221	0.76	5.78	0.23	6.77	18737	1.2852	18.48852	-17.20332	NAF
NS0168	98	100	NS	X121515	121515	1	G	W	36.25	37.91	1.52	0.5418	0.42	0.07	2.28	1.07	0.085	0.041	0.496	0.125	0.39	3.58	0.23	4.2	18721	1.2546	18.66294	-17.40834	NAF
NS0168	188	190	NS	X121561	121561	1	G	W	34.58	34.44	1.28	0.5418	0.42	0.058	2.41	1.09	0.077	0.052	0.567	0.143	0.71	9.11	0.2	10.02	18766	1.5912	19.01178	-17.42058	NAF
NS0168	218	220	NS	X121576	121576	1	G	W	28.1	33.89	4.18	0.3225	0.25	0.192	3.95	1.38	0.196	0.213	0.782	0.208	0.92	12.16	0.72	13.8	18781	6.5178	24.06996	-17.55216	NAF
NS0168	238	240	NS	X121586	121586	1	G	W	29.98	37.96	2.01	0.4257	0.33	0.09	2.88	1.29	0.08	0.16	0.788	0.193	0.99	9.28	0.61	10.88	18791	4.896	22.50018	-17.60418	NAF
NS0168	178	180	NS	X121556	121556	1	G	W	34.45	36.54	1.37	0.3612	0.28	0.064	2.18	1.19	0.092	0.089	0.624	0.156	0.71	7.02	0.31	8.04	18761	2.7234	20.75598	-18.03258	NAF
NS0168	266	268	NS	X121600	121600	1	G	W	28.42	41.05	4.14	0.2709	0.21	0.196	3.28	1.27	0.049	0.129	1.37	0.311	1.14	5.15	0.86	7.15	18805	3.9474	22.15134	-18.20394	NAF
NS0168	194	196	NS	X121564	121564	1	G	W	32.11	39.74	1.49	0.387	0.3	0.072	2.16	1.21	0.117	0.084	0.677	0.169	0.67	6.79	0.32	7.78	18769	2.5704	21.10482	-18.53442	NAF
NS0168	62	64	NS	X121496	121496	1	G	W	31.65	39.07	2.02	0.5418	0.42	0.092	3.09	1.18	0.097	0.063	0.774	0.2	0.76	6.28	0.44	7.48	18703	1.9278	20.58156	-18.65376	NAF
NS0168	74	76	NS	X121503	121503	1	G	W	32.51	39.63	2.03	0.6063	0.47	0.097	3.01	1.23	0.211	0.079	0.57	0.143	0.57	5.05	0.2	5.82	18709	2.4174	21.45366	-19.03626	NAF
NS0168	234	236	NS	X121584	121584	1	G	W	26.78	36.45	3.54	0.3741	0.29	0.168	3.36	1.5	0.109	0.229	0.594	0.149	1.05	12.45	0.83	14.33	18789	7.0074	26.163	-19.1556	NAF
NS0168	122	124	NS	X121527	121527	1	G	W	34.45	37.8	1.64	0.5934	0.46	0.075	2.42	1.17	0.078	0.039	0.74	0.205	0.63	5.19	0.43	6.25	18733	1.1934	20.40714	-19.21374	NAF
NS0168	48	50	NS	X121489	121489	1	G	W	32.9	38.84	1.68	0.5676	0.44	0.079	2.72	1.2	0.13	0.056	0.64	0.153	0.65	5.4	0.37	6.42	18696	1.7136	20.9304	-19.2168	NAF
NS0168	186	188	NS	X121560	121560	1	G	W	29.15	42.15	2.36	0.3741	0.29	0.117	2.77	1.3	0.089	0.106	1.07	0.264	1.06	5.53	0.76	7.35	18765	3.2436	22.6746	-19.431	NAF
NS0168	272	274	NS	X121604	121604	1	G	W	32.26	38.98	1.99	0.3354	0.26	0.092	2.1	1.25	0.067	0.073	0.804	0.194	0.78	6.76	0.37	7.91	18808	2.2338	21.8025	-19.5687	NAF
NS0168	240	242	NS	X121587	121587	1	G	W	29.85	41	2.6	0.2967	0.23	0.118	3.05	1.51	0.038	0.216	0.935	0.227	0.9	5.03	1.08	7.01	18792	6.6096	26.33742	-19.72782	NAF
NS0168	92	94	NS	X121512	121512	1	G	W	33.63	40.26	1.71	0.5805	0.45	0.077	2.52	1.21	0.102	0.041	0.546	0.145	0.42	3.44	0.42	4.28	18718	1.2546	21.10482	-19.85022	NAF
NS0168	70	72	NS	X121500	121500	1	G	W	31.79	41.14	1.81	0.4515	0.35	0.084	2.82	1.24	0.087	0.047	0.708	0.185	0.67	4.5	0.6	5.77	18707	1.4382	21.62808	-20.18988	NAF
NS0168	212	214	NS	X121573	121573	1	G	W	31.03	38.22	2.03	0.3354	0.26	0.093	2.51	1.28	0.121	0.063	0.833	0.211	0.95	8.49	0.27	9.71	18778	1.9278	22.32576	-20.39796	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0168	82	84	NS	X121507	121507	1	G	W	33.27	39.86	2.05	0.5547	0.43	0.096	2.87	1.3	0.103	0.067	0.527	0.139	0.43	3.38	0.59	4.4	18713	2.0502	22.6746	-20.6244	NAF
NS0168	76	78	NS	X121504	121504	1	G	W	33.79	38.84	2.06	0.5805	0.45	0.093	2.87	1.4	0.157	0.119	0.498	0.134	0.41	3.61	0.48	4.5	18710	3.6414	24.4188	-20.7774	NAF
NS0168	54	56	NS	X121492	121492	1	G	W	29.47	43.25	2.46	0.4257	0.33	0.114	3.2	1.43	0.146	0.088	0.775	0.197	0.7	4.41	0.64	5.75	18699	2.6928	24.94206	-22.24926	NAF
NS0168	166	168	NS	X121549	121549	1	G	W	31.77	38.14	1.45	0.5031	0.39	0.065	2.37	1.41	0.072	0.067	0.657	0.164	0.76	8.56	0.43	9.75	18755	2.0502	24.59322	-22.54302	NAF
NS0168	180	182	NS	X121557	121557	1	G	W	32.64	39.31	1.59	0.3483	0.27	0.091	2.25	1.43	0.082	0.072	0.719	0.18	0.67	5.62	0.58	6.87	18762	2.2032	24.94206	-22.73886	NAF
NS0168	280	282	NS	X121608	121608	1	G	W	30.43	39.97	2.28	0.2709	0.21	0.11	2.57	1.42	0.093	0.066	0.915	0.228	0.9	6.62	0.7	8.22	18812	2.0196	24.76764	-22.74804	NAF
NS0168	106	108	NS	X121519	121519	1	G	W	31.19	39.66	2.02	0.5031	0.39	0.096	2.97	1.5	0.083	0.078	0.88	0.232	0.77	5.38	0.78	6.93	18725	2.3868	26.163	-23.7762	NAF
NS0168	46	48	NS	X121488	121488	1	G	W	32	40.87	1.65	0.5418	0.42	0.076	2.62	1.45	0.094	0.039	0.66	0.149	0.63	4.67	0.68	5.98	18695	1.1934	25.2909	-24.0975	NAF
NS0168	258	260	NS	X121596	121596	1	G	W	27.14	41.46	4.56	0.3999	0.31	0.217	3.35	1.9	0.048	0.293	1.37	0.286	1.07	4.21	1.57	6.85	18801	8.9658	33.1398	-24.174	NAF
NS0168	220	222	NS	X121577	121577	1	G	W	23.34	43.9	4.09	0.3999	0.31	0.199	3.35	1.99	0.057	0.332	0.801	0.203	0.99	8.12	1.67	10.78	18782	10.1592	34.70958	-24.55038	NAF
NS0168	164	166	NS	X121548	121548	1	G	W	31.92	38.09	1.74	0.4644	0.36	0.079	2.54	1.61	0.097	0.107	0.792	0.197	0.76	6.89	0.7	8.35	18754	3.2742	28.08162	-24.80742	NAF
NS0168	52	54	NS	X121491	121491	1	G	W	33.31	39.04	1.73	0.516	0.4	0.08	2.61	1.57	0.075	0.048	0.619	0.153	0.64	4.19	0.83	5.66	18698	1.4688	27.38394	-25.91514	NAF
NS0168	224	226	NS	X121579	121579	1	G	W	18.96	51.31	5.41	0.2451	0.19	0.258	3.11	2.16	0.076	0.327	0.307	0.08	0.62	6.52	1.68	8.82	18784	10.0062	37.67472	-27.66852	NAF
NS0168	276	278	NS	X121606	121606	1	G	W	29.96	41.43	2.53	0.3354	0.26	0.12	2.4	1.73	0.074	0.081	1.01	0.234	0.92	5.03	1.02	6.97	18810	2.4786	30.17466	-27.69606	NAF
NS0168	242	244	NS	X121588	121588	1	G	W	32.73	36.99	1.79	0.6063	0.47	0.08	2.55	1.78	0.083	0.057	0.701	0.18	0.66	6.53	0.94	8.13	18793	1.7442	31.04676	-29.30256	NAF
NS0168	80	82	NS	X121506	121506	1	G	W	33.13	39.08	1.79	0.5547	0.43	0.081	2.65	1.77	0.131	0.05	0.473	0.118	1.33	3.3	0.88	5.51	18712	1.53	30.87234	-29.34234	NAF
NS0168	278	280	NS	X121607	121607	1	G	W	26.86	45.24	2.18	0.3096	0.24	0.102	2.42	1.84	0.092	0.073	0.891	0.211	0.84	6.01	1.04	7.89	18811	2.2338	32.09328	-29.85948	NAF
NS0168	254	256	NS	X121594	121594	1	G	W	29.15	38.76	2.98	0.5934	0.46	0.136	2.9	1.93	0.055	0.106	1.14	0.264	1	6.92	1.32	9.24	18799	3.2436	33.66306	-30.41946	NAC
NS0168	246	248	NS	X121590	121590	1	G	W	28.32	45.27	1.94	0.387	0.3	0.088	2.55	1.93	0.062	0.079	0.822	0.203	0.7	3.73	1.41	5.84	18795	2.4174	33.66306	-31.24566	NAC
NS0168	78	80	NS	X121505	121505	1	G	W	36.05	37.08	1.37	0.6966	0.54	0.063	2.32	1.88	0.116	0.033	0.342	0.09	0.24	3.26	1.04	4.54	18711	1.0098	32.79096	-31.78116	NAC
NS0168	60	62	NS	X121495	121495	1	G	W	28.43	42.02	2.07	0.5418	0.42	0.096	3.16	2.03	0.164	0.078	0.77	0.201	0.77	5.68	1.23	7.68	18702	2.3868	35.40726	-33.02046	NAC
NS0168	244	246	NS	X121589	121589	1	G	W	30.07	43.66	1.41	0.3741	0.29	0.07	2.14	1.98	0.078	0.045	0.601	0.143	0.53	4.58	1.17	6.28	18794	1.377	34.53516	-33.15816	NAC
NS0168	256	258	NS	X121595	121595	1	G	W	25.37	45.39	2.94	0.4644	0.36	0.15	2.69	2.21	0.072	0.125	1.1	0.246	0.92	5.52	1.46	7.9	18800	3.825	38.54682	-34.72182	NAC
NS0168	248	250	NS	X121591	121591	1	G	W	34.28	36.1	1.9	0.5031	0.39	0.087	2.57	2.18	0.124	0.102	0.789	0.195	0.65	4.5	1.16	6.31	18796	3.1212	38.02356	-34.90236	NAC
NS0168	264	266	NS	X121599	121599	1	G	W	29.56	41.06	1.87	0.3354	0.26	0.087	2.15	2.21	0.203	0.094	0.769	0.185	0.77	6.71	0.91	8.39	18804	2.8764	38.54682	-35.67042	NAC
NS0168	108	110	NS	X121520	121520	1	G	W	30.61	39.02	2.04	0.516	0.4	0.092	3.01	2.19	0.219	0.082	0.897	0.238	0.83	5.47	1.08	7.38	18726	2.5092	38.19798	-35.68878	NAC
NS0168	94	96	NS	X121513	121513	1	G	W	32.72	40.54	1.26	0.7353	0.57	0.058	2.33	2.15	0.112	0.03	0.408	0.11	0.33	3.75	1.43	5.51	18719	0.918	37.5003	-36.5823	NAC
NS0168	262	264	NS	X121598	121598	1	G	W	26.6	42.98	2.66	0.4257	0.33	0.126	2.59	2.43	0.197	0.152	1.04	0.245	0.95	6.52	1.14	8.61	18803	4.6512	42.38406	-37.73286	NAC
NS0168	182	184	NS	X121558	121558	1	G	W	31.34	41.14	1.5	0.3354	0.26	0.068	2.17	2.27	0.111	0.054	0.706	0.186	0.61	4.89	1.28	6.78	18763	1.6524	39.59334	-37.94094	NAC
NS0168	250	252	NS	X121592	121592	1	G	W	27.71	47.63	2	0.2709	0.21	0.096	2.16	2.46	0.046	0.064	0.816	0.197	0.62	2	1.84	4.46	18797	1.9584	42.90732	-40.94892	NAC
NS0168	252	254	NS	X121593	121593	1	G	W	31.78	40.07	2.03	0.3741	0.29	0.095	2.38	2.47	0.084	0.062	0.828	0.201	0.7	3.52	1.71	5.93	18798	1.8972	43.08174	-41.18454	NAC
NS0168	270	272	NS	X121603	121603	1	G	W	29.55	43.39	1.68	0.3225	0.25	0.078	1.79	2.56	0.092	0.076	0.671	0.156	0.57	4.5	1.48	6.55	18807	2.3256	44.65152	-42.32592	NAC
NS0168	268	270	NS	X121602	121602	1	G	W	30.72	39.8	1.97	0.3741	0.29	0.093	2.04	2.7	0.109	0.073	0.789	0.186	0.7	5.82	1.38	7.9	18806	2.2338	47.0934	-44.8596	NAC
NS0169	102	106	NS	BX123661-BX123662	X123661	2			55.99	16.915	0.949	0.071	0.05112	0.071	0.993	0.134	0.016	0.394	0.295	0.126	-0.01	-0.01	-0.01	-0.03	2598	12.0564	2.337228	9.719172	PAF(LC)
NS0169	96	98	NS	X121658	121658	1	G	W	25.1	45.36	4.16	0.2967	0.23	0.201	3.06	0.72	0.062	0.66	1.29	0.384	1.22	4.78	1.52	7.52	18933	20.196	12.55824	7.63776	PAF(LC)
NS0169	186	188	NS	X121703	121703	1	G	W	25.74	41.46	6.63	0.3096	0.24	0.319	4.77	0.56	0.11	0.332	1.33	0.375	1.36	4.09	1.08	6.53	18906	10.1592	9.76752	0.39168	PAF(LC)
NS0169	4	6	NS	X121611	121611	1	G	D	37.39	31.6	5.91	0.00645	0.005	0.279	0.02	0.02	0.013	0.013	0.006	0.026	6.4	1.6	0.24	8.24	18815	0.3978	0.34884	0.04896	PAF(LC)
NS0169	2	4	NS	X121610	121610	1	G	D	39.48	29.14	5.47	0.00645	0.005	0.387	0.02	0.03	0.016	0.017	0.013	0.033	6.68	1.44	0.26	8.38	18814	0.5202	0.52326	-0.00306	NAF
NS0169	94	98	NS	BX123657-BX123658	X123657	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2596	-0.0306	-0.01744	-0.013158	NAF
NS0169	106	110	NS	BX123663-BX123664	X123663	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2599	-0.0306	-0.01744	-0.013158	NAF
NS0169	6	8	NS	X121612	121612	1	G	D	40.55	30.38	4.73	0.0258	0.02	0.421	0.03	0.03	0.025	0.015	0.006	0.025	4.75	1.14	0.19	6.08	18816	0.459	0.52326	-0.06426	NAF
NS0169	8	10	NS	X121613	121613	1	G	D	38.63	35.65	3.66	0.0258	0.02	0.402	0.04	0.03	0.029	0.015	0.003	0.033	3.56	0.85	0.14	4.55	18817	0.459	0.52326	-0.06426	NAF
NS0169	0	2	NS	X121609	121609	1	G	D	34.56	36.14	5.96	0.00645	0.005	0.454	0.04	0.05	0.017	0.018	0.053	0.043	5.86	1.43	0.23	7.52	18813	0.5508	0.8721	-0.3213	NAF
NS0169	110	112	NS	X121665	121665	1	G	W	22.52	47.69	6.25	0.2967	0.23	0.296	3.77	0.8	0.102	0.445	1.03	0.315	1.08	4.23	1.08	6.39	18976	13.617	13.9536	-0.3366	NAF
NS0169	40	42	NS	BX123629	X123629	2			67.59	3.079	0.111	0.02	0.0144	0.02	0.116	0.03	0.014	0.001	0.009	0.075	0.19	0.29	-0.01	0.47	2582	0.0306	0.52326	-0.49266	NAF
NS0169	28	32	NS	BX123623-BX123624	X123623	2			66.82	3.99	0.153	0.017	0.01224	0.017	0.132	0.034	0.02	0.001	0.014	0.083	0.28	0.59	0.47	1.34	2579	0.0306	0.593028	-0.562428	NAF
NS0169	36	40	NS	BX123627-BX123628	X123627	2			68.01	3.374	0.141	0.024	0.01728	0.024	0.128	0.034	0.018	0.001	0.017	0.081	0.19	0.26	-0.01	0.44	2581	0.0306	0.593028	-0.562428	NAF
NS0169	10	12	NS	X121614	121614	1	G	D	33.24	42.31	3.65	0.00645	0.005	0.286	0.09	0.05	0.019	0.009	0.004	0.065	4.28	1.13	0.17	5.58	18818	0.2754	0.8721	-0.5967	NAF
NS0169	32	36	NS	BX123625-BX123626	X123625	2			67.09	4.224	0.204	0.028	0.02016	0.028	0.147	0.038	0.017	0.001	0.017	0.079	0.25	0.36	-0.01	0.6	2580	0.0306	0.662796	-0.632196	NAF
NS0169	48	52	NS	BX123633-BX123634	X123633	2			68.54	3.652	0.166	0.023	0.01656	0.023	0.274	0.054	0.009	0.01	0.046	0.081	-0.01	-0.01	-0.01	-0.03	2584	0.306	0.941868	-0.635868	NAF
NS0169	188	190	NS	X121704	121704	1	G	W	26.42	41.63	4.09	0.2838	0.22	0.194	3.48	0.37	0.052	0.186	0.98	0.276	1.17	8.72	0.6	10.49	18907	5.6916	6.45354	-0.76194	NAF
NS0169	60	64	NS	BX123639-BX123640	X123639	2			67.51	4.864	0.226	0.025	0.018	0.025	0.361	0.074	0.012	0.017	0.084	0.095	-0.01	-0.01	-0.01	-0.03	2587	0.5202	1.290708	-0.770508	NAF
NS0169	52	56	NS	BX123635-BX123636	X123635	2			69.98	2.842	0.078	0.019	0.01368	0.019	0.189	0.053	0.01	0.005	0.029	0.066	-0.01	-0.01	-0.01	-0.03	2585	0.153	0.924426	-0.771426	NAF
NS0169	14	16	NS	X121616	121616	1	G	D	27.24	54.57	1.96	0.0258	0.02	0.081	0.1	0.06	0.041	0.007	0.01	0.052	3.04	0.7	0.08	3.82	18820	0.2142	1.04652	-0.83232	NAF
NS0169	68	72	NS	BX123643-BX123644	X123643	2			68.59	4.158	0.216	0.03	0.0216	0.03	0.313	0.067	0.012	0.01	0.073	0.078	-0.01	-0.01	-0.01	-0.03	2589	0.306	1.168614	-0.862614	NAF
NS0169	56	60	NS	BX123637-BX123638	X123637	2			68.67	4.425	0.214	0.035	0.0252	0.035	0.372	0.075	0.012	0.014	0.07	0.094	-0.01	-0.01	-0.01	-0.03	2586	0.4284	1.30815	-0.87975	NAF
NS0169	44	48	NS	BX123631-BX123632	X123631	2			67.88	4.775	0.186	0.025	0.018	0.025	0.333	0.072	0.014	0.012	0.06	0.07	-0.01	-0.01	-0.01	-0.03	2583	0.3672	1.255824	-0.888624	NAF
NS0169	76	80	NS	BX123647-BX123648	X123647	2			65.95	5.888	0.242	0.027	0.01944	0.027	0.399	0.082	0.014	0.015	0.091	0.093	-0.01	-0.01	-0.01	-0.03	2591	0.459	1.430244	-0.971244	NAF
NS0169	64	68	NS	BX123641-BX123642	X123641	2			67.26	5.346	0.275	0.029	0.02088	0.029	0.405	0.081	0.016	0.013	0.094	0.087	-0.01	-0.01	-0.01	-0.03	2588	0.3978	1.412802	-1.015002	NAF
NS0169	16	18	NS	X121617	121617	1	G	D	33.2	45.65	2.44	0.0258	0.02	0.097	0.18	0.07	0.056	0.006	0.006	0.039	2.63	0.87	0.1	3.6	18821	0.1836	1.22094	-1.03734	NAF
NS0169	98	100	NS	BX123659	X123659	2			67.25	6.3	0.292	0.055	0.0396	0.055	0.323	0.098	0.013	0.02	0.082	0.087	-0.01	-0.01	-0.01	-0.03	2597	0.612	1.709316	-1.097316	NAF
NS0169	72	76	NS	BX123645-BX123646	X123645	2			65.86	6.202	0.319	0.029	0.02088	0.029	0.439	0.086	0.013	0.013	0.118	0.095	-0.01	-0.01	-0.01	-0.03	2590	0.3978	1.500012	-1.102212	NAF
NS0169	136	138	NS	X121678	121678	1	G	W	26.25	38.93	5.8	0.4128	0.32	0.269	4.25	0.68	0.077	0.348	0.927	0.277	1.25	7.8	1.15	10.2	18989	10.6488	11.86056	-1.21176	NAF
NS0169	12	14	NS	X121615	121615	1	G	D	22.91	57.93	3.31	0.00645	0.005	0.165	0.14	0.09	0.013	0.009	0.005	0.1	3.62	1.32	0.19	5.13	18819	0.2754	1.56978	-1.29438	NAF
NS0169	80	84	NS	BX123649-BX123650	X123649	2			69.6	3.844	0.135	0.023	0.01656	0.023	0.285	0.112	0.018	0.01	0.055	0.088	-0.01	-0.01	-0.01	-0.03	2592	0.306	1.953504	-1.647504	NAF
NS0169	18	20	NS	X121618	121618	1	G	D	34.02	44.31	1.96	0.0258	0.02	0.096	0.27	0.12	0.058	0.007	0.02	0.046	2.9	0.93	0.13	3.96	18822	0.2142	2.09304	-1.87884	NAF
NS0169	84	88	NS	BX123651-BX123652	X123651	2			67.25	5.52	0.23	0.029	0.02088	0.029	0.337	0.13	0.018	0.01	0.083	0.105	-0.01	-0.01	-0.01	-0.03	2593	0.306	2.26746	-1.96146	NAF
NS0169	92	94	NS	BX123656	X123656	2			61.46	11.929	0.748	0.059	0.04248	0.059	0.719	0.165	0.011	0.014	0.278	0.128	-0.01	-0.01	-0.01	-0.03	2595	0.4284	2.87793	-2.44953	NAF
NS0169	20	22	NS	X121619	121619	1	G	D	36.34	40.71	2.27	0.0387	0.03	0.114	0.57	0.15	0.048	0.004	0.132	0.044	2.68	0.96	0.05	3.69	18823	0.1224	2.6163	-2.4939	NAF
NS0169	28	30	NS	X121623	121623	1	G	D	36.7	40.45	1.4	0.8643	0.67	0.067	0.53	0.18	0.044	0.003	0.046	0.054	2.46	0.79	0.12	3.37	18827	0.0918	3.13956	-3.04776	NAF
NS0169	62	64	NS	X121640	121640	1	G	W	32.85	36.99	1.54	0.4515	0.35	0.072	2.63	0.61	0.104	0.247	0.688	0.163	0.72	8.04	0.38	9.14	18880	7.5582	10.63962	-3.08142	NAF
NS0169	24	26	NS	X121621	121621	1	G	D	33.18	45.99	1.99	0.0645	0.05	0.102	0.62	0.19	0.042	0.005	0.144	0.046	2.17	0.92	-0.07	3.02	18825	0.153	3.31398	-3.16098	NAF
NS0169	42	44	NS	X121630	121630	1	G	D	37.07	38.5	1.49	0.4257	0.33	0.068	0.61	0.19	0.071	0.005	0.069	0.043	3.86	1.2	0.1	5.16	18870	0.153	3.31398	-3.16098	NAF
NS0169	22	24	NS	X121620	121620	1	G	D	34.91	43.36	2.06	0.0516	0.04	0.102	0.6	0.19	0.043	0.004	0.147	0.047	2.18	0.89	0.03	3.1	18824	0.1224	3.31398	-3.19158	NAF
NS0169	182	184	NS	X121701	121701	1	G	W	23.58	45.1	5.7	0.4644	0.36	0.266	4.21	1.01	0.128	0.471	1.36	0.387	1.23	3.76	1.23	6.22	18904	14.4126	17.61642	-3.20382	NAF
NS0169	112	114	NS	X121666	121666	1	G	W	22.97	47.27	5.49	0.3096	0.24	0.257	3.67	0.83	0.106	0.367	1.27	0.365	1.24	4.03	1.1	6.37	18977	11.2302	14.47686	-3.24666	NAF
NS0169	36	38	NS	X121627	121627	1	G	D	34.99	42.44	1.56	0.387	0.3	0.075	0.69	0.23	0.053	0.004	0.077	0.058	3.09	1.02	-0.08	4.03	18867	0.1224	4.01166	-3.88926	NAF
NS0169	38	40	NS	X121628	121628	1	G	D	34.6	42.1	1.94	0.3354	0.26	0.093	0.81	0.23	0.078	0.004	0.19	0.072	3.16	1.18	0.06	4.4	18868	0.1224	4.01166	-3.88926	NAF
NS0169	26	28	NS	X121622	121622	1	G	D	35.69	41.59	1.88	0.5418	0.42	0.093	0.7	0.23	0.043	0.003	0.115	0.06	2.26	0.95	-0.02	3.19	18826	0.0918	4.01166	-3.91986	NAF
NS0169	150	152	NS	X121685	121685	1	G	W	23.98	44.66	3.26	0.4773	0.37	0.156	3.16	0.61	0.061	0.215	0.661	0.222	1.12	10.36	0.67	12.15	18852	6.579	10.63962	-4.06062	NAF
NS0169	118	120	NS	X121669	121669	1	G	W	24.3	44.73	5.29	0.387	0.3	0.249	4.05	0.69	0.086	0.259	1.33	0.361	1.28	4.96	0.94	7.18	18980	7.9254	12.03498	-4.10958	NAF
NS0169	88	92	NS	BX123653-BX123654	X123653	2			63.25	9.941	0.478	0.04	0.0288	0.04	0.54	0.271	0.016	0.02	0.195	0.163	-0.01	-0.01	-0.01	-0.03	2594	0.612	4.726782	-4.114782	NAF
NS0169	30	32	NS	X121624	121624	1	G	D	34.15	42.74	1.82	0.5289	0.41	0.088	0.67	0.25	0.057	0.004	0.061	0.059	3.23	1.1	0.12	4.45	18828	0.1224	4.3605	-4.2381	NAF
NS0169	158	160	NS	X121689	121689	1	G	W	23.33	43.7	6.31	0.3741	0.29	0.292	3.94	0.92	0.059	0.382	0.603	0.201	0.89	7.18	1.27	9.34	18856	11.6892	16.04664	-4.35744	NAF
NS0169	40	42	NS	X121629	121629	1	G	D	35.5	40.03	2.05	0.387	0.3	0.102	0.86	0.26	0.052	0.003	0.112	0.059	3.65	1.29	0.09	5.03	18869	0.0918	4.53492	-4.44312	NAF
NS0169	106	108	NS	X121663	121663	1	G	W	25.81	42.66	3.65	0.3612	0.28	0.175	3.54	0.54	0.09	0.16	1.15	0.319	1.28	8.01	0.63	9.92	18974	4.896	9.41868	-4.52268	NAF
NS0169	34	36	NS	X121626	121626	1	G	D	34.53	41.77	1.84	0.5031	0.39	0.088	0.8	0.27	0.064	0.004	0.091	0.055	3.57	1.13	-0.02	4.68	18866	0.1224	4.70934	-4.58694	NAF
NS0169	190	192	NS	X121706	121706	1	G	W	26.93	40.56	3.09	0.2967	0.23	0.146	3	0.44	0.052	0.1	0.778	0.232	1.08	11.37	0.36	12.81	18908	3.06	7.67448	-4.61448	NAF
NS0169	32	34	NS	X121625	121625	1	G	D	32.44	44.16	2.14	0.4515	0.35	0.1	0.79	0.29	0.073	0.003	0.044	0.061	3.78	1.21	0.14	5.13	18865	0.0918	5.05818	-4.96638	NAF
NS0169	104	106	NS	X121662	121662	1	G	W	25.45	43.46	3.4	0.2967	0.23	0.159	3.47	0.62	0.102	0.186	0.95	0.293	1.21	8.58	0.58	10.37	18973	5.6916	10.81404	-5.12244	NAF
NS0169	108	110	NS	X121664	121664	1	G	W	26.09	41.13	3.77	0.3999	0.31	0.179	3.5	0.66	0.096	0.206	1.02	0.3	1.25	9.21	0.68	11.14	18975	6.3036	11.51172	-5.20812	NAF
NS0169	48	50	NS	X121633	121633	1	G	W	30.37	41.33	1.95	0.3612	0.28	0.094	2.73	0.54	0.113	0.135	0.816	0.139	0.87	6.77	0.24	7.88	18873	4.131	9.41868	-5.28768	NAF
NS0169	168	170	NS	X121694	121694	1	G	W	25.16	43.42	4.23	0.3741	0.29	0.24	3.49	0.9	0.094	0.338	0.811	0.246	1.16	7.07	1.05	9.28	18861	10.3428	15.6978	-5.355	NAF
NS0169	50	52	NS	X121634	121634	1	G	W	29.59	41.39	1.78	0.3483	0.27	0.085	2.77	0.53	0.124	0.116	0.793	0.139	0.81	8.2	0.19	9.2	18874	3.5496	9.24426	-5.69466	NAF
NS0169	162	164	NS	X121691	121691	1	G	W	26.02	40.64	5.27	0.3741	0.29	0.279	3.77	0.82	0.087	0.269	0.705	0.224	1.1	7.89	0.83	9.82	18858	8.2314	14.30244	-6.07104	NAF
NS0169	138	140	NS	X121679	121679	1	G	W	24.19	42.01	6.72	0.3354	0.26	0.309	4.13	1.09	0.069	0.421	0.857	0.262	1.02	5.84	1.35	8.21	18990	12.8826	19.01178	-6.12918	NAF
NS0169	60	62	NS	X121639	121639	1	G	W	32.35	37.58	1.54	0.3741	0.29	0.073	2.72	0.47	0.077	0.063	0.681	0.164	0.8	8.7	-0.04	9.46	18879	1.9278	8.19774	-6.26994	NAF
NS0169	170	172	NS	X121695	121695	1	G	W	25.49	41.61	3.13	0.3483	0.27	0.151	3.56	0.72	0.075	0.203	0.882	0.259	1.2	10.5	0.62	12.32	18862	6.2118	12.55824	-6.34644	NAF
NS0169	196	198	NS	X121709	121709	1	G	W	20.86	49.52	7.04	0.258	0.2	0.331	3.76	1.22	0.085	0.485	1.01	0.295	0.98	2.85	1.28	5.11	18911	14.841	21.27924	-6.43824	NAF
NS0169	54	56	NS	X121636	121636	1	G	W	31.93	38.67	1.55	0.3354	0.26	0.074	2.66	0.53	0.122	0.087	0.683	0.138	0.78	8.35	0.05	9.18	18876	2.6622	9.24426	-6.58206	NAF
NS0169	52	54	NS	X121635	121635	1	G	W	30.1	40.71	1.58	0.3483	0.27	0.072	2.64	0.54	0.123	0.075	0.708	0.14	0.7	8.54	0.12	9.36	18875	2.295	9.41868	-7.12368	NAF
NS0169	126	128	NS	X121673	121673	1	G	W	25.15	41.99	3.22	0.3741	0.29	0.153	3.8	0.66	0.083	0.142	0.928	0.27	1.13	10.41	0.53	12.07	18984	4.3452	11.51172	-7.16652	NAF
NS0169	66	68	NS	X121642	121642	1	G	W	33.7	37.31	1.96	0.3612	0.28	0.091	2.7	0.58	0.13	0.086	0.856	0.192	0.83	6.06	0.1	6.99	18882	2.6316	10.11636	-7.48476	NAF
NS0169	128	130	NS	X121674	121674	1	G	W	25.34	41.6	3.37	0.3999	0.31	0.163	3.93	0.73	0.065	0.169	0.993	0.295	1.14	10.11	0.59	11.84	18985	5.1714	12.73266	-7.56126	NAF
NS0169	44	46	NS	X121631	121631	1	G	W	32.94	37.09	1.66	0.4386	0.34	0.077	2.61	0.67	0.162	0.133	0.65	0.141	0.8	7.67	0.14	8.61	18871	4.0698	11.68614	-7.61634	NAF
NS0169	160	162	NS	X121690	121690	1	G	W	24.76	41.97	4.36	0.3483	0.27	0.205	3.65	0.98	0.1	0.306	0.757	0.24	1.03	9.38	0.98	11.39	18857	9.3636	17.09316	-7.72956	NAF
NS0169	114	116	NS	X121667	121667	1	G	W	25.77	42	3.61	0.3096	0.24	0.172	3.37	0.71	0.091	0.145	0.984	0.296	1.21	9.28	0.53	11.02	18978	4.437	12.38382	-7.94682	NAF
NS0169	142	144	NS	X121681	121681	1	G	W	21.56	47.89	7.43	0.2451	0.19	0.343	4.15	0.97	0.059	0.293	0.633	0.215	0.85	4.9	1.18	6.93	18848	8.9658	16.91874	-7.95294	NAF
NS0169	152	154	NS	X121686	121686	1	G	W	22.76	46.58	3.05	0.5031	0.39	0.144	3.02	0.93	0.087	0.264	0.548	0.196	0.87	10.39	0.67	11.93	18853	8.0784	16.22106	-8.14266	NAF
NS0169	192	194	NS	X121707	121707	1	G	W	24.83	43.14	3.71	0.3999	0.31	0.173	3.48	0.94	0.11	0.267	1.14	0.325	1.25	7.94	0.95	10.14	18909	8.1702	16.39548	-8.22528	NAF
NS0169	46	48	NS	X121632	121632	1	G	W	32.54	38.5	1.84	0.3741	0.29	0.086	2.73	0.64	0.118	0.085	0.813	0.135	0.77	6.75	0.08	7.6	18872	2.601	11.16288	-8.56188	NAF
NS0169	132	134	NS	X121676	121676	1	G	W	24.08	43.19	5.17	0.3999	0.31	0.248	4.04	1.1	0.078	0.347	0.942	0.287	1.1	7.16	1.26	9.52	18987	10.6182	19.1862	-8.568	NAF
NS0169	200	202	NS	X121711	121711	1	G	W	19.74	52	7.67	0.1548	0.12	0.349	3.76	1.04	0.071	0.31	0.821	0.255	0.89	2.75	0.99	4.63	18913	9.486	18.13968	-8.65368	NAF
NS0169	56	58	NS	X121637	121637	1	G	W	32.97	32.94	1.73	0.4773	0.37	0.082	3.14	0.64	0.128	0.077	0.76	0.146	0.88	11.3	0.07	12.25	18877	2.3562	11.16288	-8.80668	NAF
NS0169	68	70	NS	X121643	121643	1	G	W	31.95	38.95	2.43	0.3354	0.26	0.111	3.03	0.82	0.19	0.173	1.07	0.245	0.98	5	0.41	6.39	18919	5.2938	14.30244	-9.00864	NAF
NS0169	94	96	NS	X121657	121657	1	G	W	21.54	49.83	5.64	0.3096	0.24	0.268	3.29	1.4	0.041	0.501	1.03	0.327	1.06	3.47	1.35	5.88	18932	15.3306	24.4188	-9.0882	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0169	130	132	NS	X121675	121675	1	G	W	23.68	44.46	3.66	0.4128	0.32	0.18	3.74	0.95	0.095	0.243	0.777	0.244	1.01	9.44	0.8	11.25	18986	7.4358	16.5699	-9.1341	NAF
NS0169	116	118	NS	X121668	121668	1	G	W	26.52	40.17	3.23	0.3483	0.27	0.152	3.2	0.77	0.065	0.135	0.962	0.282	1.17	10.55	0.48	12.2	18979	4.131	13.43034	-9.29934	NAF
NS0169	120	122	NS	X121670	121670	1	G	W	26.02	40.34	2.13	0.5031	0.39	0.099	3.17	0.75	0.116	0.123	0.761	0.23	1.08	12.79	0.33	14.2	18981	3.7638	13.0815	-9.3177	NAF
NS0169	144	146	NS	X121682	121682	1	G	W	21.62	47.73	5.82	0.3354	0.26	0.272	3.72	1.14	0.074	0.34	0.632	0.21	0.97	6.28	1.32	8.57	18849	10.404	19.88388	-9.47988	NAF
NS0169	166	168	NS	X121693	121693	1	G	W	25.15	42.19	3.53	0.3741	0.29	0.171	3.73	0.91	0.106	0.207	0.993	0.289	1.15	9.61	0.72	11.48	18860	6.3342	15.87222	-9.53802	NAF
NS0169	100	102	NS	X121660	121660	1	G	W	29.22	37.11	2.35	0.3999	0.31	0.109	3.19	0.8	0.131	0.141	0.812	0.242	1.12	11.2	0.3	12.62	18935	4.3146	13.9536	-9.639	NAF
NS0169	202	204	NS	X121712	121712	1	G	W	25.07	42.82	3.67	0.4128	0.32	0.173	3.46	0.91	0.116	0.202	1.12	0.307	1.22	8.44	0.73	10.39	18914	6.1812	15.87222	-9.69102	NAF
NS0169	172	174	NS	X121696	121696	1	G	W	27.33	38.17	2.86	0.3354	0.26	0.134	3.58	0.84	0.08	0.152	0.66	0.207	0.92	12.31	0.46	13.69	18863	4.6512	14.65128	-10.00008	NAF
NS0169	178	180	NS	X121699	121699	1	G	W	24.35	44.09	3.13	0.516	0.4	0.147	3.49	0.87	0.104	0.164	1.11	0.32	1.17	8.68	0.71	10.56	18902	5.0184	15.17454	-10.15614	NAF
NS0169	140	142	NS	X121680	121680	1	G	W	21.83	47.16	4.91	0.4257	0.33	0.23	3.56	1.13	0.082	0.311	0.586	0.201	0.83	7.81	1.04	9.68	18847	9.5166	19.70946	-10.19286	NAF
NS0169	146	148	NS	X121683	121683	1	G	W	24.65	42.02	4.24	0.387	0.3	0.202	3.72	1	0.102	0.236	0.805	0.251	1.06	9.31	0.87	11.24	18850	7.2216	17.442	-10.2204	NAF
NS0169	76	78	NS	X121647	121647	1	G	W	33.5	38.04	1.88	0.3612	0.28	0.089	2.67	0.76	0.13	0.09	0.861	0.247	0.78	5.45	0.18	6.41	18923	2.754	13.25592	-10.50192	NAF
NS0169	180	182	NS	X121700	121700	1	G	W	21.23	48.98	5.95	0.3612	0.28	0.28	4.1	1.36	0.104	0.432	1.11	0.335	1.08	3.21	1.31	5.6	18903	13.2192	23.72112	-10.50192	NAF
NS0169	64	66	NS	X121641	121641	1	G	W	31.62	38.17	1.76	0.4257	0.33	0.083	2.94	0.8	0.089	0.111	0.798	0.197	0.82	7.83	0.29	8.94	18881	3.3966	13.9536	-10.557	NAF
NS0169	184	186	NS	X121702	121702	1	G	W	20.89	49.85	7.3	0.2709	0.21	0.349	4.39	1.29	0.062	0.376	0.95	0.293	1.04	2.78	1.23	5.05	18905	11.5056	22.50018	-10.99458	NAF
NS0169	74	76	NS	X121646	121646	1	G	W	31.73	40.51	2.4	0.3354	0.26	0.109	2.94	0.81	0.102	0.099	1.07	0.284	0.9	4.37	0.35	5.62	18922	3.0294	14.12802	-11.09862	NAF
NS0169	194	196	NS	X121708	121708	1	G	W	25.11	42.28	3.59	0.3999	0.31	0.165	3.49	1.09	0.093	0.25	1.13	0.316	1.19	8.51	1.01	10.71	18910	7.65	19.01178	-11.36178	NAF
NS0169	80	82	NS	X121649	121649	1	G	W	31.76	38.55	1.2	0.5547	0.43	0.057	2.61	0.76	0.111	0.044	0.547	0.177	0.68	8.73	0.06	9.47	18925	1.3464	13.25592	-11.90952	NAF
NS0169	58	60	NS	X121638	121638	1	G	W	31.45	37.99	1.54	0.4128	0.32	0.074	2.79	0.85	0.113	0.082	0.701	0.144	0.83	9.23	0.2	10.26	18878	2.5092	14.8257	-12.3165	NAF
NS0169	124	126	NS	X121672	121672	1	G	W	26.56	40.56	1.94	0.2838	0.22	0.091	3.16	0.87	0.176	0.074	0.576	0.191	0.95	12.49	0.18	13.62	18983	2.2644	15.17454	-12.91014	NAF
NS0169	174	176	NS	X121697	121697	1	G	W	26.48	42.06	2.96	0.2838	0.22	0.155	3.33	1.02	0.094	0.157	0.746	0.216	1.09	9.16	0.54	10.79	18864	4.8042	17.79084	-12.98664	NAF
NS0169	156	158	NS	X121688	121688	1	G	W	23.44	42.89	4.4	0.5031	0.39	0.212	3.53	1.4	0.098	0.369	0.514	0.182	0.86	9.66	1.21	11.73	18855	11.2914	24.4188	-13.1274	NAF
NS0169	164	166	NS	X121692	121692	1	G	W	23.47	43.61	3.97	0.4515	0.35	0.189	3.74	1.24	0.065	0.277	0.833	0.255	1.04	8.89	1.05	10.98	18859	8.4762	21.62808	-13.15188	NAF
NS0169	72	74	NS	X121645	121645	1	G	W	29.5	43.28	2.08	0.3741	0.29	0.097	2.84	0.9	0.043	0.076	0.927	0.237	0.81	5.29	0.51	6.61	18921	2.3256	15.6978	-13.3722	NAF
NS0169	70	72	NS	X121644	121644	1	G	W	29.71	42.11	2.21	0.3612	0.28	0.104	2.95	1.07	0.099	0.152	0.999	0.251	0.9	5.2	0.56	6.66	18920	4.6512	18.66294	-14.01174	NAF
NS0169	154	156	NS	X121687	121687	1	G	W	22.64	44.09	4.71	0.4644	0.36	0.22	3.65	1.47	0.129	0.372	0.572	0.198	0.9	8.73	1.23	10.86	18854	11.3832	25.63974	-14.25654	NAF
NS0169	122	124	NS	X121671	121671	1	G	W	25.53	41.96	2.44	0.3354	0.26	0.112	3.35	1.08	0.109	0.136	0.764	0.241	1.02	11.02	0.52	12.56	18982	4.1616	18.83736	-14.67576	NAF
NS0169	176	178	NS	X121698	121698	1	G	W	27.37	39.21	2.99	0.3741	0.29	0.143	3.54	1.02	0.09	0.093	0.934	0.24	1.07	10.32	0.44	11.83	18901	2.8458	17.79084	-14.94504	NAF
NS0169	198	200	NS	X121710	121710	1	G	W	20.85	49.96	7.95	0.1677	0.13	0.367	4.11	1.38	0.094	0.281	0.959	0.293	0.99	2.47	0.94	4.4	18912	8.5986	24.06996	-15.47136	NAF
NS0169	78	80	NS	X121648	121648	1	G	W	30.43	42.96	1.62	0.3354	0.26	0.077	2.48	1.04	0.109	0.079	0.72	0.229	0.78	5.38	0.4	6.56	18924	2.4174	18.13968	-15.72228	NAF
NS0169	98	100	NS	X121659	121659	1	G	W	25.42	45.72	2.9	0.2967	0.23	0.135	2.9	1.26	0.096	0.189	1.04	0.295	1.04	6.48	0.75	8.27	18934	5.7834	21.97692	-16.19352	NAF
NS0169	82	84	NS	X121650	121650	1	G	W	34.31	38.11	2.03	0.2838	0.22	0.095	2.7	1.47	0.176	0.173	0.917	0.261	0.69	2.84	0.65	4.18	18926	5.2938	25.63974	-20.34594	NAF
NS0169	148	150	NS	X121684	121684	1	G	W	21.37	48.46	3.46	0.3741	0.29	0.165	3.18	1.5	0.104	0.175	0.658	0.233	0.91	8.66	0.88	10.45	18851	5.355	26.163	-20.808	NAF
NS0169	102	104	NS	X121661	121661	1	G	W	27.28	41.86	1.7	0.2838	0.22	0.08	2.62	1.36	0.203	0.069	0.661	0.21	0.9	10.42	0.25	11.57	18936	2.1114	23.72112	-21.60972	NAF
NS0169	92	94	NS	X121656	121656	1	G	W	27.96	42.7	2.94	0.4902	0.38	0.135	3.05	1.72	0.062	0.124	1.19	0.318	1.05	4.69	1.23	6.97	18931	3.7944	30.00024	-26.20584	NAC
NS0169	134	136	NS	X121677	121677	1	G	W	21.63	47.11	2.19	0.4257	0.33	0.1	2.83	2.33	0.305	0.258	0.684	0.212	1	10.08	1.02	12.1	18988	7.8948	40.63986	-32.74506	NAC
NS0169	86	88	NS	X121652	121652	1	G	W	32.23	40.24	2	0.387	0.3	0.097	2.83	2.12	0.126	0.099	0.86	0.256	0.67	2.33	1.49	4.49	18928	3.0294	36.97704	-33.94764	NAC
NS0169	88	90	NS	X121653	121653	1	G	W	28.54	45.94	2.15	0.2709	0.21	0.103	2.64	2.57	0.069	0.156	0.851	0.259	0.68	1.03	2.01	3.72	18929	4.7736	44.82594	-40.05234	NAC
NS0169	84	86	NS	X121651	121651	1	G	W	29.86	41.87	2.21	0.3612	0.28	0.104	3.03	2.66	0.09	0.075	0.845	0.258	0.72	2.43	2.29	5.44	18927	2.295	46.39572	-44.10072	NAC
NS0169	90	92	NS	X121654	121654	1	G	W	28.43	42.38	2.33	0.5031	0.39	0.105	2.84	2.93	0.13	0.079	0.994	0.288	0.9	3.06	2.42	6.38	18930	2.4174	51.10506	-48.68766	NAC
NS0170	94	96	NS	X121761	121761	1	G	W	21.42	45.45	7.15	0.4644	0.36	0.343	3.42	0.45	0.07	0.855	3.16	0.308	1.03	5.11	1.58	7.72	18998	26.163	7.8489	18.3141	PAF(HC)
NS0170	42	44	NS	X121734	121734	1	G	W	19.27	50.27	6.9	0.3612	0.28	0.325	3.16	1.11	0.061	1.08	2.8	0.199	0.83	3.82	2.07	6.72	18954	33.048	19.36062	13.68738	PAF(HC)
NS0170	88	90	NS	X121758	121758	1	G	W	19.77	48.4	7.87	0.3096	0.24	0.376	3.19	0.55	0.045	0.603	3.97	0.303	1	3.9	1.4	6.3	18995	18.4518	9.5931	8.8587	PAF(LC)
NS0170	92	94	NS	X121760	121760	1	G	W	16.41	52.4	9.28	0.258	0.2	0.446	3.1	0.83	0.115	0.759	5.04	0.292	0.8	2.27	1.38	4.45	18997	23.2254	14.47686	8.74854	PAF(LC)
NS0170	40	42	NS	X121733	121733	1	G	D	19.87	49.55	6.37	0.4257	0.33	0.297	2.94	0.9	0.086	0.743	2.45	0.139	1.52	4.62	1.67	7.81	18953	22.7358	15.6978	7.038	PAF(LC)
NS0170	44	46	NS	X121735	121735	1	G	W	26.3	38.41	3.06	0.6708	0.52	0.138	2.9	0.78	0.137	0.658	0.892	0.14	0.99	12.24	1.52	14.75	18955	20.1348	13.60476	6.53004	PAF(LC)
NS0170	96	98	NS	X121762	121762	1	G	W	26.88	40.68	2.99	0.5031	0.39	0.143	2.64	0.51	0.048	0.393	1.18	0.269	1.24	9.73	0.96	11.93	18999	12.0258	8.89542	3.13038	PAF(LC)
NS0170	90	92	NS	BX123759	X123759	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2608	-0.0306	-0.01744	-0.013158	NAF
NS0170	94	98	NS	BX123761-BX123762	X123761	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2609	-0.0306	-0.01744	-0.013158	NAF
NS0170	158	162	NS	BX123793-BX123794	X123793	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2625	-0.0306	-0.01744	-0.013158	NAF
NS0170	162	166	NS	BX123795-BX123796	X123795	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2626	-0.0306	-0.01744	-0.013158	NAF
NS0170	166	170	NS	BX123797-BX123798	X123797	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2627	-0.0306	-0.01744	-0.013158	NAF
NS0170	184	188	NS	BX123807-BX123808	X123807	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2632	-0.0306	-0.01744	-0.013158	NAF
NS0170	188	192	NS	BX123809-BX123810	X123809	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2633	-0.0306	-0.01744	-0.013158	NAF
NS0170	192	196	NS	BX123811-BX123812	X123811	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2634	-0.0306	-0.01744	-0.013158	NAF
NS0170	196	200	NS	BX123813-BX123814	X123813	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2635	-0.0306	-0.01744	-0.013158	NAF
NS0170	200	204	NS	BX123815-BX123816	X123815	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2636	-0.0306	-0.01744	-0.013158	NAF
NS0170	204	208	NS	BX123817-BX123818	X123817	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2637	-0.0306	-0.01744	-0.013158	NAF
NS0170	208	212	NS	BX123819-BX123820	X123819	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2638	-0.0306	-0.01744	-0.013158	NAF
NS0170	212	216	NS	BX123821-BX123822	X123821	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2639	-0.0306	-0.01744	-0.013158	NAF
NS0170	216	220	NS	BX123823-BX123824	X123823	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2640	-0.0306	-0.01744	-0.013158	NAF
NS0170	220	224	NS	BX123825-BX123826	X123825	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2641	-0.0306	-0.01744	-0.013158	NAF
NS0170	16	18	NS	X121721	121721	1	G	D	30.91	43.57	3.71	0.0645	0.05	0.218	0.6	0.13	0.048	0.011	0.07	0.052	5.42	1.44	0.25	7.11	18941	0.3366	2.26746	-1.93086	NAF
NS0170	12	14	NS	X121719	121719	1	G	D	27.61	45.37	6.25	0.0516	0.04	0.314	0.52	0.13	0.047	0.01	0.066	0.048	5.03	2.14	0.29	7.46	18939	0.306	2.26746	-1.96146	NAF
NS0170	252	256	NS	BX123841-BX123842	X123841	2			63.34	9.5	0.408	0.045	0.0324	0.045	0.336	0.148	0.021	0.017	0.139	0.095	-0.01	-0.01	-0.01	-0.03	2649	0.5202	2.581416	-2.061216	NAF
NS0170	78	82	NS	BX123753-BX123754	X123753	2			62.94	9.909	0.906	0.105	0.0756	0.105	0.623	0.195	0.02	0.036	0.33	0.099	-0.01	-0.01	-0.01	-0.03	2605	1.1016	3.40119	-2.29959	NAF
NS0170	34	36	NS	X121730	121730	1	G	D	32.8	42.1	2.22	0.4386	0.34	0.113	0.83	0.16	0.039	0.006	0.159	0.031	5.22	1.21	0.19	6.62	18950	0.1836	2.79072	-2.60712	NAF
NS0170	118	122	NS	BX123773-BX123774	X123773	2			64.17	9.568	0.397	0.033	0.02376	0.033	0.374	0.179	0.019	0.014	0.189	0.085	-0.01	-0.01	-0.01	-0.03	2615	0.4284	3.122118	-2.693718	NAF
NS0170	122	126	NS	BX123775-BX123776	X123775	2			62.49	10.213	0.445	0.034	0.02448	0.034	0.393	0.183	0.019	0.015	0.219	0.079	-0.01	-0.01	-0.01	-0.03	2616	0.459	3.191886	-2.732886	NAF
NS0170	110	114	NS	BX123769-BX123770	X123769	2			65.04	7.976	0.439	0.043	0.03096	0.043	0.366	0.207	0.02	0.024	0.204	0.082	-0.01	-0.01	-0.01	-0.03	2613	0.7344	3.610494	-2.876094	NAF
NS0170	106	110	NS	BX123767-BX123768	X123767	2			61.84	11.91	0.712	0.06	0.0432	0.06	0.527	0.217	0.02	0.029	0.301	0.106	-0.01	-0.01	-0.01	-0.03	2612	0.8874	3.784914	-2.897514	NAF
NS0170	24	26	NS	X121725	121725	1	G	D	33.16	41.99	2.66	0.1161	0.09	0.145	0.71	0.19	0.066	0.01	0.107	0.058	4.65	1.29	0.18	6.12	18945	0.306	3.31398	-3.00798	NAF
NS0170	76	78	NS	BX123752	X123752	2			65.18	8.077	0.575	0.063	0.04536	0.063	0.407	0.224	0.024	0.028	0.226	0.101	-0.01	-0.01	-0.01	-0.03	2604	0.8568	3.907008	-3.050208	NAF
NS0170	114	118	NS	BX123771-BX123772	X123771	2			61.66	10.006	0.915	0.082	0.05904	0.082	0.561	0.259	0.026	0.046	0.463	0.111	-0.01	-0.01	-0.01	-0.03	2614	1.4076	4.517478	-3.109878	NAF
NS0170	126	130	NS	BX123777-BX123778	X123777	2			63.44	10.373	0.43	0.035	0.0252	0.035	0.405	0.205	0.02	0.015	0.207	0.084	-0.01	-0.01	-0.01	-0.03	2617	0.459	3.57561	-3.11661	NAF
NS0170	22	24	NS	X121724	121724	1	G	D	31.25	44.77	2.84	0.0903	0.07	0.158	0.74	0.2	0.074	0.012	0.097	0.068	4.41	1.35	0.2	5.96	18944	0.3672	3.4884	-3.1212	NAF
NS0170	130	134	NS	BX123779-BX123780	X123779	2			63.85	9.986	0.431	0.036	0.02592	0.036	0.402	0.22	0.019	0.017	0.198	0.089	-0.01	-0.01	-0.01	-0.03	2618	0.5202	3.83724	-3.31704	NAF
NS0170	14	16	NS	X121720	121720	1	G	D	28.23	41.86	7.51	0.0387	0.03	0.4	1.03	0.21	0.046	0.009	0.107	0.064	5.08	2.61	0.32	8.01	18940	0.2754	3.66282	-3.38742	NAF
NS0170	138	142	NS	BX123783-BX123784	X123783	2			64.54	8.941	0.551	0.053	0.03816	0.053	0.398	0.244	0.014	0.024	0.255	0.091	0.05	-0.01	-0.01	0.03	2620	0.7344	4.255848	-3.521448	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0170	20	22	NS	X121723	121723	1	G	D	30.97	42.69	3.87	0.1032	0.08	0.246	0.92	0.23	0.061	0.015	0.136	0.074	5.08	1.72	0.27	7.07	18943	0.459	4.01166	-3.55266	NAF
NS0170	46	48	NS	X121736	121736	1	G	W	27.19	42	3.31	0.3225	0.25	0.158	2.55	0.72	0.076	0.289	1.09	0.254	1.15	8.68	0.74	10.57	18956	8.8434	12.55824	-3.71484	NAF
NS0170	36	38	NS	X121731	121731	1	G	D	21.9	56.79	3.38	0.3354	0.26	0.174	1.01	0.23	0.034	0.008	0.409	0.057	3.98	1.59	0.22	5.79	18951	0.2448	4.01166	-3.76686	NAF
NS0170	28	30	NS	X121727	121727	1	G	D	26.98	47.95	3.94	0.4644	0.36	0.187	1.01	0.23	0.041	0.003	0.173	0.056	4.94	1.74	0.28	6.96	18947	0.0918	4.01166	-3.91986	NAF
NS0170	278	280	NS	X121855	121855	1	G	W	22.89	46.02	5.88	0.3612	0.28	0.289	3.42	0.88	0.1	0.37	1.37	0.263	1.09	6.01	1.14	8.24	19054	11.322	15.34896	-4.02696	NAF
NS0170	26	28	NS	X121726	121726	1	G	D	26.71	49.17	3.64	0.3096	0.24	0.179	0.93	0.25	0.041	0.006	0.134	0.062	4.83	1.69	0.27	6.79	18946	0.1836	4.3605	-4.1769	NAF
NS0170	194	196	NS	X121812	121812	1	G	W	23.03	45.73	5.89	0.2967	0.23	0.282	3.55	0.73	0.077	0.272	2.46	0.315	1.21	5.04	0.91	7.16	19012	8.3232	12.73266	-4.40946	NAF
NS0170	134	138	NS	BX123781-BX123782	X123781	2			63.41	9.85	0.644	0.056	0.04032	0.056	0.474	0.299	0.017	0.025	0.322	0.084	-0.01	-0.01	-0.01	-0.03	2619	0.765	5.215158	-4.450158	NAF
NS0170	38	40	NS	X121732	121732	1	G	D	17.5	56.93	7.21	0.1935	0.15	0.373	1.5	0.28	0.044	0.003	2.25	0.085	3.14	2.12	0.25	5.51	18952	0.0918	4.88376	-4.79196	NAF
NS0170	158	160	NS	X121793	121793	1	G	W	22.09	47.21	6.35	0.258	0.2	0.303	3.59	0.93	0.074	0.357	2.88	0.36	1.36	3.66	1.14	6.16	18886	10.9242	16.22106	-5.29686	NAF
NS0170	32	34	NS	X121729	121729	1	G	D	26.24	45.68	5.84	0.2838	0.22	0.296	1.56	0.32	0.042	0.004	0.464	0.061	4.72	2.35	0.33	7.4	18949	0.1224	5.58144	-5.45904	NAF
NS0170	164	166	NS	X121796	121796	1	G	W	22.75	47.42	5.08	0.3096	0.24	0.239	3.03	0.73	0.081	0.226	2.28	0.312	1.28	5.71	0.8	7.79	18889	6.9156	12.73266	-5.81706	NAF
NS0170	30	32	NS	X121728	121728	1	G	D	26.14	44.25	6.92	0.3483	0.27	0.333	1.69	0.34	0.044	0.002	0.452	0.069	4.81	2.69	0.35	7.85	18948	0.0612	5.93028	-5.86908	NAF
NS0170	186	188	NS	X121808	121808	1	G	W	22.51	46.04	5.99	0.3096	0.24	0.291	3.49	1.09	0.099	0.387	2.67	0.307	1.18	4.87	1.15	7.2	18900	11.8422	19.01178	-7.16958	NAF
NS0170	4	6	NS	X121715	121715	1	G	D	8.63	69.18	10.92	0.0258	0.02	0.452	0.15	0.43	0.021	0.007	0.044	0.053	1.92	3.69	0.31	5.92	18917	0.2142	7.50006	-7.28586	NAF
NS0170	162	164	NS	X121795	121795	1	G	W	22.75	46.82	5.21	0.3096	0.24	0.25	3.1	0.89	0.077	0.245	2.28	0.321	1.28	5.49	0.89	7.66	18888	7.497	15.52338	-8.02638	NAF
NS0170	48	50	NS	X121737	121737	1	G	W	25.5	43.22	3.76	0.387	0.3	0.178	2.95	1.03	0.097	0.319	1.15	0.221	1.19	7.95	0.89	10.03	18957	9.7614	17.96526	-8.20386	NAF
NS0170	174	176	NS	X121802	121802	1	G	W	23.39	44.63	6.1	0.258	0.2	0.296	3.34	1	0.095	0.301	2.83	0.329	1.33	4.34	1.07	6.74	18894	9.2106	17.442	-8.2314	NAF
NS0170	98	100	NS	X121763	121763	1	G	W	30.18	41.33	3.12	0.2451	0.19	0.149	2.34	0.68	0.073	0.117	1.35	0.271	0.96	5.77	0.27	7	19000	3.5802	11.86056	-8.28036	NAF
NS0170	242	244	NS	X121836	121836	1	G	W	24	44.94	4.76	0.3354	0.26	0.227	2.97	0.83	0.111	0.2	1.86	0.297	1.18	6.92	0.73	8.83	19036	6.12	14.47686	-8.35686	NAF
NS0170	210	212	NS	X121820	121820	1	G	W	22.45	47.24	5.13	0.3225	0.25	0.242	3.12	0.97	0.101	0.256	2.1	0.315	1.31	5.46	0.86	7.63	19020	7.8336	16.91874	-9.08514	NAF
NS0170	50	52	NS	X121738	121738	1	G	W	25.66	44.46	3.7	0.3354	0.26	0.175	2.85	1.06	0.089	0.263	1.25	0.258	1.08	6.75	0.72	8.55	18958	8.0478	18.48852	-10.44072	NAF
NS0170	86	88	NS	X121757	121757	1	G	W	27.74	41.89	3.26	0.3354	0.26	0.158	2.63	0.96	0.069	0.197	1.33	0.274	1.2	7.21	0.67	9.08	18994	6.0282	16.74432	-10.71612	NAF
NS0170	212	214	NS	X121821	121821	1	G	W	22.84	46.25	5.09	0.3483	0.27	0.244	3.14	1.25	0.075	0.361	2.05	0.29	1.21	5.79	1.23	8.23	19021	11.0466	21.8025	-10.7559	NAF
NS0170	204	206	NS	X121817	121817	1	G	W	22.41	47.78	4.99	0.3225	0.25	0.236	2.99	1.03	0.1	0.206	2.15	0.32	1.32	5.45	0.88	7.65	19017	6.3036	17.96526	-11.66166	NAF
NS0170	172	174	NS	X121800	121800	1	G	W	24.32	47.32	3.77	0.3096	0.24	0.179	2.47	1.01	0.064	0.179	1.79	0.259	1.11	5.88	0.65	7.64	18893	5.4774	17.61642	-12.13902	NAF
NS0170	188	190	NS	X121809	121809	1	G	W	22.6	45.93	5.3	0.3483	0.27	0.255	3.32	1.27	0.12	0.327	2.35	0.298	1.15	5.76	1.16	8.07	19009	10.0062	22.15134	-12.14514	NAF
NS0170	104	106	NS	X121766	121766	1	G	W	26.79	45.71	3.26	0.2838	0.22	0.157	2.68	1.07	0.062	0.21	1.41	0.262	0.9	4.73	0.75	6.38	19003	6.426	18.66294	-12.23694	NAF
NS0170	276	278	NS	X121854	121854	1	G	W	21.71	49.22	4.86	0.3354	0.26	0.236	2.96	1.31	0.091	0.334	1.16	0.244	0.96	5.91	1.12	7.99	19053	10.2204	22.84902	-12.62862	NAF
NS0170	62	64	NS	X121744	121744	1	G	W	24.47	46.62	4.09	0.2451	0.19	0.196	2.87	1.32	0.145	0.311	1.68	0.3	1.1	4.99	1	7.09	18964	9.5166	23.02344	-13.50684	NAF
NS0170	244	246	NS	X121837	121837	1	G	W	21.43	48.63	5.13	0.2838	0.22	0.243	3.09	1.39	0.063	0.343	1.86	0.277	1.01	5.55	1.21	7.77	19037	10.4958	24.24438	-13.74858	NAF
NS0170	102	104	NS	X121765	121765	1	G	W	24.31	46.38	4.98	0.2193	0.17	0.244	3.3	1.32	0.134	0.299	2.19	0.316	0.99	3.56	1.03	5.58	19002	9.1494	23.02344	-13.87404	NAF
NS0170	72	74	NS	X121749	121749	1	G	W	24.35	47.54	3.95	0.2967	0.23	0.19	2.86	1.25	0.098	0.255	1.7	0.282	1.02	4.67	0.93	6.62	18969	7.803	21.8025	-13.9995	NAF
NS0170	184	186	NS	X121807	121807	1	G	W	22.37	45.5	5.47	0.3483	0.27	0.259	3.29	1.35	0.101	0.305	2.39	0.301	1.22	5.48	1.16	7.86	18899	9.333	23.5467	-14.2137	NAF
NS0170	142	144	NS	X121785	121785	1	G	W	28.34	43.22	3.18	0.3741	0.29	0.16	2.47	1.25	0.081	0.242	1.66	0.252	1.59	4.11	0.83	6.53	18842	7.4052	21.8025	-14.3973	NAF
NS0170	196	198	NS	X121813	121813	1	G	W	21.57	48.6	4.43	0.3483	0.27	0.217	2.99	1.36	0.117	0.304	1.83	0.266	1.09	6.08	1.08	8.25	19013	9.3024	23.72112	-14.41872	NAF
NS0170	54	56	NS	X121740	121740	1	G	W	23.28	46.31	5.37	0.2322	0.18	0.256	3.38	1.42	0.142	0.338	1.8	0.293	2.48	2.9	1.13	6.51	18960	10.3428	24.76764	-14.42484	NAF
NS0170	60	62	NS	X121743	121743	1	G	W	26.24	45.41	3.33	0.258	0.2	0.158	2.57	1.19	0.081	0.19	1.32	0.266	1.09	5.67	0.68	7.44	18963	5.814	20.75598	-14.94198	NAF
NS0170	100	102	NS	X121764	121764	1	G	W	24.49	46.38	4.06	0.2838	0.22	0.195	2.76	1.29	0.11	0.225	1.79	0.261	0.98	5.04	0.9	6.92	19001	6.885	22.50018	-15.61518	NAF
NS0170	166	168	NS	X121797	121797	1	G	W	23.34	45.46	4.61	0.3612	0.28	0.22	2.9	1.27	0.114	0.204	2.06	0.283	1.22	6.54	0.91	8.67	18890	6.2424	22.15134	-15.90894	NAF
NS0170	202	204	NS	X121816	121816	1	G	W	23.08	46.21	4.69	0.3612	0.28	0.228	3.01	1.28	0.129	0.209	2.03	0.319	1.28	6.02	0.91	8.21	19016	6.3954	22.32576	-15.93036	NAF
NS0170	274	276	NS	X121853	121853	1	G	W	16.82	53.26	9.58	0.1548	0.12	0.455	3.48	1.35	0.034	0.237	2.02	0.124	0.6	3.26	1.23	5.09	19052	7.2522	23.5467	-16.2945	NAF
NS0170	148	150	NS	X121788	121788	1	G	W	28.28	46.1	2.61	0.2451	0.19	0.126	2.03	1.18	0.041	0.126	1.23	0.247	0.9	3.77	0.63	5.3	18845	3.8556	20.58156	-16.72596	NAF
NS0170	52	54	NS	X121739	121739	1	G	W	23.57	45.85	4.55	0.258	0.2	0.219	3.11	1.62	0.13	0.376	1.57	0.278	1.05	5.3	1.13	7.48	18959	11.5056	28.25604	-16.75044	NAF
NS0170	154	156	NS	X121791	121791	1	G	W	25.12	44.7	4.28	0.3096	0.24	0.203	2.81	1.33	0.083	0.208	2.09	0.301	1.2	5.18	0.91	7.29	18884	6.3648	23.19786	-16.83306	NAF
NS0170	216	218	NS	X121823	121823	1	G	W	29.51	40.72	2.57	0.2967	0.23	0.121	2.23	1.17	0.053	0.116	1.1	0.232	0.96	7.37	0.5	8.83	19023	3.5496	20.40714	-16.85754	NAF
NS0170	200	202	NS	X121815	121815	1	G	W	23.76	44.99	4.43	0.3741	0.29	0.217	2.94	1.33	0.155	0.205	1.82	0.307	1.24	6.58	0.84	8.66	19015	6.273	23.19786	-16.92486	NAF
NS0170	192	194	NS	X121811	121811	1	G	W	21.82	47.78	4.9	0.3354	0.26	0.239	3.11	1.5	0.106	0.301	2.15	0.272	1.12	5.74	1.16	8.02	19011	9.2106	26.163	-16.9524	NAF
NS0170	270	272	NS	X121850	121850	1	G	W	24.79	44.12	3.44	0.2451	0.19	0.161	2.5	1.34	0.094	0.201	0.846	0.201	0.99	9.12	0.69	10.8	19050	6.1506	23.37228	-17.22168	NAF
NS0170	64	66	NS	X121745	121745	1	G	W	23.04	45.23	4.99	0.3354	0.26	0.238	3.16	1.71	0.053	0.387	2.16	0.289	1.1	5.39	1.32	7.81	18965	11.8422	29.82582	-17.98362	NAF
NS0170	106	108	NS	X121767	121767	1	G	W	27.2	45.28	2.87	0.2838	0.22	0.133	2.45	1.29	0.061	0.146	1.3	0.252	0.96	4.94	0.76	6.66	19004	4.4676	22.50018	-18.03258	NAF
NS0170	56	58	NS	X121741	121741	1	G	W	23.44	46.75	5.11	0.2451	0.19	0.247	3.42	1.46	0.106	0.237	1.76	0.299	1.1	4.62	1.06	6.78	18961	7.2522	25.46532	-18.21312	NAF
NS0170	232	234	NS	X121831	121831	1	G	W	30.15	43.59	2.37	0.2451	0.19	0.113	1.97	1.22	0.063	0.091	1.06	0.219	0.78	4.63	0.5	5.91	19031	2.7846	21.27924	-18.49464	NAF
NS0170	234	236	NS	X121832	121832	1	G	W	29.53	42.44	2.84	0.2709	0.21	0.133	2.21	1.25	0.087	0.106	1.3	0.238	0.89	4.77	0.61	6.27	19032	3.2436	21.8025	-18.5589	NAF
NS0170	156	158	NS	X121792	121792	1	G	W	22.91	46.69	4.77	0.3483	0.27	0.233	3.06	1.61	0.096	0.311	2.2	0.307	1.23	5.6	1.29	8.12	18885	9.5166	28.08162	-18.56502	NAF
NS0170	214	216	NS	X121822	121822	1	G	W	28.95	43.2	2.63	0.258	0.2	0.126	2.1	1.36	0.066	0.164	1.08	0.217	0.97	5.7	0.58	7.25	19022	5.0184	23.72112	-18.70272	NAF
NS0170	238	240	NS	X121834	121834	1	G	W	23.77	45.14	4.81	0.3225	0.25	0.234	3.04	1.54	0.097	0.262	2.02	0.295	1.04	5.94	1.13	8.11	19034	8.0172	26.86068	-18.84348	NAF
NS0170	256	258	NS	X121843	121843	1	G	W	20.23	51.95	5.08	0.3096	0.24	0.244	2.84	1.59	0.062	0.284	1.88	0.291	1.01	4.38	1.18	6.57	19043	8.6904	27.73278	-19.04238	NAF
NS0170	258	260	NS	X121844	121844	1	G	W	21.88	48.1	5.11	0.3096	0.24	0.248	2.81	1.79	0.159	0.375	1.85	0.272	1.08	5.13	1.27	7.48	19044	11.475	31.22118	-19.74618	NAF
NS0170	236	238	NS	X121833	121833	1	G	W	27.75	45.58	3.02	0.2322	0.18	0.146	2.14	1.35	0.074	0.12	1.45	0.246	0.83	4.3	0.71	5.84	19033	3.672	23.5467	-19.8747	NAF
NS0170	190	192	NS	X121810	121810	1	G	W	22.21	46.22	4.82	0.3612	0.28	0.231	3.13	1.65	0.123	0.283	2.09	0.281	1.12	6.42	1.22	8.76	19010	8.6598	28.7793	-20.1195	NAF
NS0170	230	232	NS	X121830	121830	1	G	W	25.19	43.35	4.58	0.3741	0.29	0.215	3.19	1.65	0.178	0.266	2.18	0.295	1.02	5.25	1.09	7.36	19030	8.1396	28.7793	-20.6397	NAF
NS0170	280	282	NS	X121856	121856	1	G	W	21.79	48.6	3.68	0.3612	0.28	0.178	2.73	1.5	0.077	0.18	0.748	0.168	0.82	8.68	0.85	10.35	19055	5.508	26.163	-20.655	NAF
NS0170	70	72	NS	X121748	121748	1	G	W	23.96	44.9	3.95	0.4257	0.33	0.189	2.8	1.65	0.141	0.265	1.8	0.3	1.28	6.65	0.99	8.92	18968	8.109	28.7793	-20.6703	NAF
NS0170	68	70	NS	X121747	121747	1	G	W	24.15	43.53	4.05	0.4128	0.32	0.193	2.85	1.68	0.097	0.281	1.91	0.256	1.12	7.67	1.1	9.89	18967	8.5986	29.30256	-20.70396	NAF
NS0170	222	224	NS	X121826	121826	1	G	W	26.25	43.8	4.13	0.3225	0.25	0.199	2.92	1.6	0.093	0.231	1.95	0.259	0.91	4.9	1.09	6.9	19026	7.0686	27.9072	-20.8386	NAF
NS0170	150	152	NS	X121789	121789	1	G	W	28.18	46.1	2.73	0.2193	0.17	0.134	2	1.45	0.045	0.141	1.34	0.253	0.91	3.31	0.85	5.07	18846	4.3146	25.2909	-20.9763	NAF
NS0170	126	128	NS	X121777	121777	1	G	W	31.06	42.21	1.99	0.3096	0.24	0.092	2.17	1.37	0.1	0.084	0.941	0.205	0.72	4.26	0.65	5.63	18834	2.5704	23.89554	-21.32514	NAF
NS0170	198	200	NS	X121814	121814	1	G	W	24.29	44.22	4.12	0.3741	0.29	0.203	2.84	1.59	0.117	0.199	1.8	0.266	1.17	6.84	0.9	8.91	19014	6.0894	27.73278	-21.64338	NAF
NS0170	84	86	NS	X121756	121756	1	G	W	26.16	46.81	2.75	0.2838	0.22	0.132	2.28	1.47	0.1	0.13	1.18	0.24	0.99	5.14	0.74	6.87	18993	3.978	25.63974	-21.66174	NAF
NS0170	260	262	NS	X121845	121845	1	G	W	23.05	47.14	4.05	0.2838	0.22	0.194	2.49	1.66	0.145	0.231	1.38	0.253	0.99	6.75	0.96	8.7	19045	7.0686	28.95372	-21.88512	NAF
NS0170	124	126	NS	X121776	121776	1	G	W	31.51	41.5	2.08	0.3096	0.24	0.097	2.23	1.43	0.097	0.083	1	0.22	0.71	4.27	0.69	5.67	18833	2.5398	24.94206	-22.40226	NAF
NS0170	228	230	NS	X121829	121829	1	G	W	25.45	42.67	4.22	0.4386	0.34	0.19	3.04	1.66	0.162	0.214	2.04	0.259	1.07	6.11	1.03	8.21	19029	6.5484	28.95372	-22.40532	NAF
NS0170	120	122	NS	X121774	121774	1	G	W	31.25	42.62	2.03	0.3225	0.25	0.099	2.13	1.45	0.095	0.086	0.957	0.209	0.73	3.72	0.67	5.12	18831	2.6316	25.2909	-22.6593	NAF
NS0170	78	80	NS	X121753	121753	1	G	W	25.21	45.11	3.92	0.2709	0.21	0.188	3.14	1.66	0.141	0.186	1.59	0.314	1.09	4.6	1.12	6.81	18972	5.6916	28.95372	-23.26212	NAF
NS0170	170	172	NS	X121799	121799	1	G	W	24.36	45.38	3.55	0.387	0.3	0.168	2.52	1.66	0.09	0.163	1.71	0.253	1.13	6.8	0.96	8.89	18892	4.9878	28.95372	-23.96592	NAF
NS0170	132	134	NS	X121780	121780	1	G	W	31.5	41.5	2.15	0.3225	0.25	0.101	2.33	1.52	0.062	0.081	0.99	0.225	0.75	4.2	0.89	5.84	18837	2.4786	26.51184	-24.03324	NAF
NS0170	218	220	NS	X121824	121824	1	G	W	26.54	43.07	3.29	0.3096	0.24	0.16	2.42	1.65	0.097	0.153	1.42	0.241	0.97	6.82	0.87	8.66	19024	4.6818	28.7793	-24.0975	NAF
NS0170	268	270	NS	X121849	121849	1	G	W	27.48	41.91	2.67	0.2193	0.17	0.125	2.15	1.63	0.07	0.136	0.901	0.221	0.93	8.7	0.71	10.34	19049	4.1616	28.43046	-24.26886	NAF
NS0170	122	124	NS	X121775	121775	1	G	W	31.55	41.22	2.07	0.3225	0.25	0.101	2.27	1.55	0.103	0.086	1.02	0.218	0.68	4.33	0.84	5.85	18832	2.6316	27.0351	-24.4035	NAF
NS0170	114	116	NS	X121771	121771	1	G	W	24.15	43.65	5.03	0.258	0.2	0.245	3.5	2.27	0.213	0.455	2.81	0.303	0.95	3.54	1.55	6.04	19008	13.923	39.59334	-25.67034	NAF
NS0170	224	226	NS	X121827	121827	1	G	W	24.8	45.06	4.14	0.3741	0.29	0.185	2.87	1.83	0.13	0.186	1.95	0.249	0.95	5.14	1.2	7.29	19027	5.6916	31.91886	-26.22726	NAF
NS0170	80	82	NS	X121754	121754	1	G	W	27.49	42.43	3.54	0.2967	0.23	0.169	2.84	1.77	0.079	0.149	1.45	0.264	0.95	5.3	1.11	7.36	18991	4.5594	30.87234	-26.31294	NAF
NS0170	246	248	NS	X121838	121838	1	G	W	21.65	46.49	5.16	0.3483	0.27	0.246	3.03	2.26	0.052	0.408	1.85	0.264	0.95	6.09	1.52	8.56	19038	12.4848	39.41892	-26.93412	NAF
NS0170	74	76	NS	X121750	121750	1	G	W	28.44	41.65	3.13	0.3096	0.24	0.147	2.59	1.83	0.098	0.162	1.32	0.266	0.94	4.93	1.2	7.07	18970	4.9572	31.91886	-26.96166	NAF
NS0170	58	60	NS	X121742	121742	1	G	W	25.69	42.87	4.11	0.3225	0.25	0.196	3.15	1.92	0.15	0.208	1.52	0.289	1.18	5.79	1.11	8.08	18962	6.3648	33.48864	-27.12384	NAF
NS0170	272	274	NS	X121852	121852	1	G	W	17.25	51.27	8.61	0.2322	0.18	0.413	3.4	2.15	0.035	0.339	2.3	0.144	0.61	3.63	1.94	6.18	19051	10.3734	37.5003	-27.1269	NAF
NS0170	240	242	NS	X121835	121835	1	G	W	24.6	43.54	3.45	0.4257	0.33	0.164	2.64	1.88	0.148	0.17	1.35	0.244	1.01	8.18	0.9	10.09	19035	5.202	32.79096	-27.58896	NAF
NS0170	160	162	NS	X121794	121794	1	G	W	23.23	45.3	4.19	0.387	0.3	0.204	2.82	1.98	0.126	0.226	1.84	0.284	1.14	6.78	1.15	9.07	18887	6.9156	34.53516	-27.61956	NAF
NS0170	208	210	NS	X121819	121819	1	G	W	24.82	44.51	3.6	0.3225	0.25	0.171	2.54	2.22	0.124	0.362	1.42	0.232	1.09	6.17	1.41	8.67	19019	11.0772	38.72124	-27.64404	NAF
NS0170	178	180	NS	X121804	121804	1	G	W	24.78	42.04	4.29	0.4644	0.36	0.205	2.93	1.95	0.126	0.208	2.11	0.3	1.24	7.12	1.21	9.57	18896	6.3648	34.0119	-27.6471	NAF
NS0170	206	208	NS	X121818	121818	1	G	W	21.54	48.44	4.51	0.3354	0.26	0.212	2.95	2.01	0.102	0.238	1.74	0.285	1.16	5.6	1.22	7.98	19018	7.2828	35.05842	-27.77562	NAF
NS0170	140	142	NS	X121784	121784	1	G	W	28.7	42.71	3.01	0.3354	0.26	0.144	2.38	1.95	0.059	0.164	1.53	0.251	1.61	3.43	1.27	6.31	18841	5.0184	34.0119	-28.9935	NAF
NS0170	144	146	NS	X121786	121786	1	G	W	27	43.78	3.26	0.387	0.3	0.15	2.49	2	0.114	0.192	1.74	0.249	0.83	4.72	1.25	6.8	18843	5.8752	34.884	-29.0088	NAF
NS0170	226	228	NS	X121828	121828	1	G	W	25.69	42.44	4.37	0.387	0.3	0.203	3.13	2.03	0.181	0.204	2.03	0.3	1.02	5.3	1.29	7.61	19028	6.2424	35.40726	-29.16486	NAF
NS0170	118	120	NS	X121773	121773	1	G	W	28.65	46.4	1.78	0.3096	0.24	0.082	2.06	1.81	0.075	0.074	0.844	0.178	0.65	3.68	1.11	5.44	18830	2.2644	31.57002	-29.30562	NAF
NS0170	180	182	NS	X121805	121805	1	G	W	25.08	41.47	3.88	0.4773	0.37	0.186	2.81	2.05	0.123	0.205	1.84	0.284	1.3	7.69	1.24	10.23	18897	6.273	35.7561	-29.4831	NAF
NS0170	116	118	NS	X121772	121772	1	G	W	26.87	43.01	3.45	0.3483	0.27	0.164	2.83	2.04	0.243	0.199	1.88	0.281	1.61	3.8	1.04	6.45	18829	6.0894	35.58168	-29.49228	NAF
NS0170	262	264	NS	X121846	121846	1	G	W	24.15	45.64	3.06	0.3354	0.26	0.148	2.31	2.15	0.155	0.248	1.03	0.24	0.94	7.72	1.06	9.72	19046	7.5888	37.5003	-29.9115	NAF
NS0170	112	114	NS	X121770	121770	1	G	W	26.59	44.34	3.24	0.2838	0.22	0.155	2.7	2.07	0.123	0.19	1.68	0.238	0.84	4.02	1.35	6.21	19007	5.814	36.10494	-30.29094	NAC
NS0170	176	178	NS	X121803	121803	1	G	W	24.5	48.7	2.77	0.2838	0.22	0.133	2.05	2.01	0.096	0.148	1.28	0.211	0.92	4.7	1.05	6.67	18895	4.5288	35.05842	-30.52962	NAC
NS0170	66	68	NS	X121746	121746	1	G	W	22.65	45.08	4.46	0.4773	0.37	0.216	2.95	2.28	0.135	0.29	2.07	0.291	2.2	5.75	1.32	9.27	18966	8.874	39.76776	-30.89376	NAC
NS0170	168	170	NS	X121798	121798	1	G	W	23.74	44.15	3.85	0.4257	0.33	0.184	2.78	2.15	0.154	0.198	1.75	0.274	1.17	7.23	1.25	9.65	18891	6.0588	37.5003	-31.4415	NAC
NS0170	250	252	NS	X121840	121840	1	G	W	28.64	41.28	2.52	0.2838	0.22	0.116	2.03	2.08	0.074	0.158	0.995	0.201	0.83	7.06	0.95	8.84	19040	4.8348	36.27936	-31.44456	NAC
NS0170	76	78	NS	X121752	121752	1	G	W	26.87	44.76	2.94	0.2709	0.21	0.141	2.44	2.07	0.139	0.15	1.26	0.258	0.98	4.59	1.25	6.82	18971	4.59	36.10494	-31.51494	NAC
NS0170	152	154	NS	X121790	121790	1	G	W	26.24	44.23	3.56	0.2838	0.22	0.167	2.5	2.1	0.119	0.148	1.76	0.278	1.06	4.42	1.4	6.88	18883	4.5288	36.6282	-32.0994	NAC
NS0170	146	148	NS	X121787	121787	1	G	W	25.08	43.98	4.17	0.3741	0.29	0.199	2.89	2.25	0.205	0.209	2.25	0.294	1.1	4.47	1.42	6.99	18844	6.3954	39.2445	-32.8491	NAC
NS0170	110	112	NS	X121769	121769	1	G	W	31.09	41.48	2.33	0.258	0.2	0.115	2.19	2.09	0.11	0.106	1.04	0.224	0.91	3.26	1.31	5.48	19006	3.2436	36.45378	-33.21018	NAC
NS0170	252	254	NS	X121841	121841	1	G	W	28.41	43.14	1.92	0.2838	0.22	0.09	1.74	2.13	0.084	0.117	0.763	0.173	0.74	6.92	0.92	8.58	19041	3.5802	37.15146	-33.57126	NAC
NS0170	128	130	NS	X121778	121778	1	G	W	29.94	42	2.05	0.3096	0.24	0.1	2.31	2.11	0.126	0.086	0.975	0.208	0.68	4.22	1.33	6.23	18835	2.6316	36.80262	-34.17102	NAC
NS0170	182	184	NS	X121806	121806	1	G	W	22.87	47.28	3.81	0.3096	0.24	0.182	2.49	2.35	0.059	0.214	1.72	0.234	0.98	5.81	1.46	8.25	18898	6.5484	40.9887	-34.4403	NAC
NS0170	136	138	NS	X121782	121782	1	G	W	28.04	44.44	2.71	0.2451	0.19	0.136	2.45	2.25	0.069	0.109	1.34	0.26	0.83	2.98	1.68	5.49	18839	3.3354	39.2445	-35.9091	NAC
NS0170	108	110	NS	X121768	121768	1	G	W	27.94	43.69	2.58	0.2709	0.21	0.126	2.3	2.32	0.099	0.125	1.18	0.249	0.86	4.14	1.61	6.61	19005	3.825	40.46544	-36.64044	NAC
NS0170	130	132	NS	X121779	121779	1	G	W	29.89	43.13	1.94	0.2838	0.22	0.089	2.13	2.29	0.15	0.085	0.912	0.201	2.52	1.57	1.32	5.41	18836	2.601	39.94218	-37.34118	NAC
NS0170	254	256	NS	X121842	121842	1	G	W	29.35	40.86	2.19	0.2322	0.18	0.107	1.86	2.32	0.072	0.096	0.88	0.192	0.81	7.03	0.99	8.83	19042	2.9376	40.46544	-37.52784	NAC
NS0170	82	84	NS	X121755	121755	1	G	W	26.98	42.62	3.23	0.3096	0.24	0.156	2.64	2.43	0.115	0.15	1.31	0.269	0.93	5.16	1.58	7.67	18992	4.59	42.38406	-37.79406	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0170	220	222	NS	X121825	121825	1	G	W	24.33	44.83	4.03	0.3225	0.25	0.195	2.9	2.58	0.195	0.197	1.85	0.299	1	4.87	1.57	7.44	19025	6.0282	45.00036	-38.97216	NAC
NS0170	138	140	NS	X121783	121783	1	G	W	28.03	44.22	2.56	0.2967	0.23	0.124	2.31	2.54	0.1	0.112	1.25	0.246	0.76	3.48	1.79	6.03	18840	3.4272	44.30268	-40.87548	NAC
NS0170	264	266	NS	X121847	121847	1	G	W	24.15	40.69	4.42	0.4515	0.35	0.209	3.31	3	0.183	0.309	1.23	0.248	0.99	7.9	1.73	10.62	19047	9.4554	52.326	-42.8706	NAC
NS0170	248	250	NS	X121839	121839	1	G	W	23.41	44.65	3.94	0.3354	0.26	0.191	2.69	3.07	0.207	0.313	1.45	0.287	1.01	6.47	1.62	9.1	19039	9.5778	53.54694	-43.96914	NAC
NS0170	266	268	NS	X121848	121848	1	G	W	25.9	42.52	2.21	0.2838	0.22	0.101	1.91	2.86	0.096	0.111	0.73	0.174	0.8	9.26	1.3	11.36	19048	3.3966	49.88412	-46.48752	NAC
NS0170	134	136	NS	X121781	121781	1	G	W	27.39	41.39	2.81	0.3354	0.26	0.138	2.74	3.79	0.236	0.121	1.45	0.254	0.82	3.62	2.85	7.29	18838	3.7026	66.10518	-62.40258	NAC
NS0171	214	216	NS	X121966	121966	1	G	W	20.73	48.34	7.85	0.3612	0.28	0.368	3.5	0.56	0.099	0.666	2.9	0.369	1.13	2.8	1.34	5.27	19128	20.3796	9.76752	10.61208	PAF(HC)
NS0171	82	84	NS	X121898	121898	1	G	W	21.85	45.28	6.61	0.4644	0.36	0.326	4.15	0.77	0.08	0.7	1.2	0.161	0.84	6.51	1.42	8.77	19097	21.42	13.43034	7.98966	PAF(LC)
NS0171	216	218	NS	X121967	121967	1	G	W	24.59	44.44	4	0.4902	0.38	0.183	2.72	0.39	0.041	0.431	1.44	0.275	1.19	8.44	1.12	10.75	19129	13.1886	6.80238	6.38622	PAF(LC)
NS0171	92	94	NS	X121904	121904	1	G	W	20.53	49.78	7.07	0.2838	0.22	0.345	4.08	0.51	0.063	0.499	1.22	0.216	0.84	4.79	1.02	6.65	19102	15.2694	8.89542	6.37398	PAF(LC)
NS0171	280	282	NS	X121999	121999	1	G	W	19.23	50.81	7.64	0.3354	0.26	0.356	3.16	0.88	0.096	0.707	3.15	0.367	1.09	2.27	1.36	4.72	19161	21.6342	15.34896	6.28524	PAF(LC)
NS0171	212	214	NS	X121965	121965	1	G	W	19.92	50.54	6.68	0.4644	0.36	0.316	3.15	0.65	0.059	0.542	2.51	0.311	1.03	3.86	1.32	6.21	19127	16.5852	11.3373	5.2479	PAF(LC)
NS0171	80	82	NS	X121897	121897	1	G	W	17.38	50.38	9.51	0.2193	0.17	0.476	4.7	1.16	0.047	0.8	1.4	0.107	0.59	3.77	1.5	5.86	19096	24.48	20.23272	4.24728	PAF(LC)
NS0171	224	226	NS	X121971	121971	1	G	W	24.15	44.77	6.23	0.2322	0.18	0.297	3.98	0.66	0.086	0.423	1.52	0.364	1.25	4.34	1.21	6.8	19133	12.9438	11.51172	1.43208	PAF(LC)
NS0171	4	6	NS	X121859	121859	1	G	D	44.84	17.04	7.6	-0.0129	-0.01	0.312	0.03	0.03	0.083	0.048	0.021	0.011	8.13	2.08	0.36	10.57	19058	1.4688	0.52326	0.94554	PAF(LC)
NS0171	84	86	NS	X121899	121899	1	G	W	20.97	49.23	6.07	0.3225	0.25	0.302	3.76	0.78	0.081	0.465	1.15	0.2	0.87	5.72	1.17	7.76	19098	14.229	13.60476	0.62424	PAF(LC)
NS0171	12	14	NS	X121863	121863	1	G	D	34.23	39.83	3.21	0.1161	0.09	0.111	0.16	0.04	0.027	0.04	0.004	0.031	5.75	1.26	0.28	7.29	19062	1.224	0.69768	0.52632	PAF(LC)
NS0171	0	2	NS	X121857	121857	1	G	D	43.64	12.74	12.08	0.0258	0.02	0.491	0.12	0.06	0.122	0.049	0.065	0.033	7.8	3.17	0.38	11.35	19056	1.4994	1.04652	0.45288	PAF(LC)
NS0171	74	76	NS	X121894	121894	1	G	W	12.53	57.07	10.07	0.1677	0.13	0.51	3.6	0.96	0.036	0.56	3.5	0.057	0.49	3.15	1.29	4.93	19093	17.136	16.74432	0.39168	PAF(LC)
NS0171	10	12	NS	X121862	121862	1	G	D	24	50.17	7.45	0.0258	0.02	0.31	0.07	0.04	0.018	0.035	0.024	0.068	4.62	2.25	0.3	7.17	19061	1.071	0.69768	0.37332	PAF(LC)
NS0171	14	16	NS	X121864	121864	1	G	D	25.54	48.86	6.83	0.0516	0.04	0.298	0.04	0.04	0.033	0.03	0.019	0.06	4.6	2.12	0.3	7.02	19063	0.918	0.69768	0.22032	PAF(LC)
NS0171	6	8	NS	X121860	121860	1	G	D	13.66	67.05	7.55	-0.0129	-0.01	0.249	0.04	0.03	0.016	0.02	0.03	0.053	2.67	2.47	0.26	5.4	19059	0.612	0.52326	0.08874	PAF(LC)
NS0171	2	4	NS	X121858	121858	1	G	D	44.03	13.25	11.23	0.0258	0.02	0.499	0.13	0.09	0.099	0.053	0.076	0.028	7.54	3.21	0.4	11.15	19057	1.6218	1.56978	0.05202	PAF(LC)
NS0171	96	98	NS	X121906	121906	1	G	W	15.33	54.35	9.67	0.1548	0.12	0.477	3.99	1.02	0.037	0.583	2.23	0.091	0.56	3.39	1.24	5.19	19104	17.8398	17.79084	0.04896	PAF(LC)
NS0171	192	196	NS	BX123955-BX123956	X123955	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2658	-0.0306	-0.01744	-0.013158	NAF
NS0171	196	200	NS	BX123957-BX123958	X123957	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2659	-0.0306	-0.01744	-0.013158	NAF
NS0171	212	216	NS	BX123965-BX123966	X123965	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2663	-0.0306	-0.01744	-0.013158	NAF
NS0171	216	220	NS	BX123967-BX123968	X123967	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2664	-0.0306	-0.01744	-0.013158	NAF
NS0171	220	224	NS	BX123969-BX123970	X123969	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2665	-0.0306	-0.01744	-0.013158	NAF
NS0171	224	228	NS	BX123971-BX123972	X123971	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2666	-0.0306	-0.01744	-0.013158	NAF
NS0171	248	252	NS	BX123983-BX123984	X123983	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2672	-0.0306	-0.01744	-0.013158	NAF
NS0171	280	282	NS	BX123999	X123999	2			-0.01	-0.001	-0.001	-0.001	-0.00072	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.01	-0.01	-0.01	-0.03	2680	-0.0306	-0.01744	-0.013158	NAF
NS0171	8	10	NS	X121861	121861	1	G	D	8.44	75.63	7.39	-0.0129	-0.01	0.311	0.06	0.03	0.012	0.013	0.029	0.058	1.7	2.35	0.21	4.26	19060	0.3978	0.52326	-0.12546	NAF
NS0171	208	212	NS	BX123963-BX123964	X123963	2			60.54	12.006	0.667	0.055	0.0396	0.055	0.487	0.11	0.013	0.058	0.2	0.164	-0.01	-0.01	-0.01	-0.03	2662	1.7748	1.91862	-0.14382	NAF
NS0171	88	90	NS	X121902	121902	1	G	W	21.21	48.26	5.08	0.3354	0.26	0.249	3.46	0.7	0.048	0.394	0.787	0.148	0.83	7.94	1.05	9.82	19100	12.0564	12.2094	-0.153	NAF
NS0171	190	192	NS	BX123954	X123954	2			69.18	3.201	0.143	0.011	0.00792	0.011	0.156	0.063	0.014	0.02	0.049	0.065	0.03	-0.01	-0.01	0.01	2657	0.612	1.098846	-0.486846	NAF
NS0171	70	72	NS	X121892	121892	1	G	W	25.56	41.44	3.75	0.2967	0.23	0.176	2.77	0.56	0.095	0.303	0.744	0.138	1.23	10.62	0.79	12.64	19091	9.2718	9.76752	-0.49572	NAF
NS0171	16	18	NS	X121865	121865	1	G	D	17.05	59.32	9.45	0.0258	0.02	0.437	0.06	0.06	0.035	0.017	0.035	0.073	2.48	2.94	0.29	5.71	19064	0.5202	1.04652	-0.52632	NAF
NS0171	204	208	NS	BX123961-BX123962	X123961	2			62.92	10.057	0.618	0.065	0.0468	0.065	0.471	0.107	0.011	0.032	0.192	0.112	-0.01	-0.01	-0.01	-0.03	2661	0.9792	1.866294	-0.887094	NAF
NS0171	18	20	NS	X121866	121866	1	G	D	20.94	52.16	9.81	0.1161	0.09	0.478	0.26	0.1	0.018	0.024	0.234	0.082	2.96	3.19	0.33	6.48	19065	0.7344	1.7442	-1.0098	NAF
NS0171	240	244	NS	BX123979-BX123980	X123979	2			65.3	8.366	0.565	0.072	0.05184	0.072	0.431	0.149	0.017	0.034	0.156	0.102	-0.01	-0.01	-0.01	-0.03	2670	1.0404	2.598858	-1.558458	NAF
NS0171	276	280	NS	BX123997-BX123998	X123997	2			65.13	8.328	0.472	0.051	0.03672	0.051	0.377	0.165	0.031	0.038	0.159	0.14	-0.01	-0.01	-0.01	-0.03	2679	1.1628	2.87793	-1.71513	NAF
NS0171	94	96	NS	X121905	121905	1	G	W	17.33	51.32	8.75	0.2451	0.19	0.415	3.98	0.94	0.08	0.479	2.08	0.139	0.62	4.41	1.19	6.22	19103	14.6574	16.39548	-1.73808	NAF
NS0171	86	88	NS	X121900	121900	1	G	W	22.28	46.62	5.44	0.2967	0.23	0.268	3.49	0.75	0.112	0.37	0.898	0.189	0.8	7.53	1.07	9.4	19099	11.322	13.0815	-1.7595	NAF
NS0171	20	22	NS	X121867	121867	1	G	D	20.48	53.56	8.84	0.1548	0.12	0.436	0.49	0.14	0.017	0.019	0.758	0.088	3.13	2.62	0.3	6.05	19066	0.5814	2.44188	-1.86048	NAF
NS0171	228	232	NS	BX123973-BX123974	X123973	2			60.45	13.183	0.591	0.053	0.03816	0.053	0.49	0.154	0.022	0.025	0.209	0.121	0.46	-0.01	-0.01	0.44	2667	0.765	2.686068	-1.921068	NAF
NS0171	256	260	NS	BX123987-BX123988	X123987	2			63.47	10.318	0.597	0.065	0.0468	0.065	0.462	0.159	0.018	0.027	0.186	0.093	0.15	-0.01	-0.01	0.13	2674	0.8262	2.773278	-1.947078	NAF
NS0171	260	262	NS	BX123989	X123989	2			63.58	10.183	0.602	0.066	0.04752	0.066	0.474	0.187	0.024	0.034	0.182	0.107	0.19	-0.01	-0.01	0.17	2675	1.0404	3.261654	-2.221254	NAF
NS0171	264	268	NS	BX123991-BX123992	X123991	2			65.1	8.108	0.481	0.063	0.04536	0.063	0.355	0.179	0.025	0.026	0.142	0.098	-0.01	-0.01	-0.01	-0.03	2676	0.7956	3.122118	-2.326518	NAF
NS0171	272	276	NS	BX123995-BX123996	X123995	2			62.13	11.321	0.602	0.055	0.0396	0.055	0.489	0.183	0.028	0.027	0.206	0.109	0.16	-0.01	-0.01	0.14	2678	0.8262	3.191886	-2.365686	NAF
NS0171	200	202	NS	BX123959	X123959	2			62.03	12.291	0.68	0.06	0.0432	0.06	0.537	0.196	0.032	0.032	0.233	0.114	0.43	-0.01	-0.01	0.41	2660	0.9792	3.418632	-2.439432	NAF
NS0171	24	26	NS	X121869	121869	1	G	D	18.59	54.74	9.37	0.2967	0.23	0.457	0.82	0.17	0.013	0.016	1.43	0.073	2.99	2.62	0.32	5.93	19068	0.4896	2.96514	-2.47554	NAF
NS0171	22	24	NS	X121868	121868	1	G	D	19.6	56.03	8.02	0.2064	0.16	0.382	0.51	0.17	0.015	0.015	0.348	0.086	2.96	2.52	0.31	5.79	19067	0.459	2.96514	-2.50614	NAF
NS0171	90	92	NS	X121903	121903	1	G	W	19.42	51.4	5.69	0.3612	0.28	0.269	3.7	0.94	0.077	0.446	1.08	0.194	0.85	5.38	1.32	7.55	19101	13.6476	16.39548	-2.74788	NAF
NS0171	210	212	NS	X121964	121964	1	G	W	23.79	45.14	4.92	0.4257	0.33	0.227	3.02	0.85	0.174	0.388	1.62	0.336	1.25	5.84	0.98	8.07	19126	11.8728	14.8257	-2.9529	NAF
NS0171	66	68	NS	X121890	121890	1	G	W	24.58	44.14	4.19	0.2838	0.22	0.202	2.74	0.55	0.091	0.211	1.11	0.161	1.28	8.61	0.64	10.53	19089	6.4566	9.5931	-3.1365	NAF
NS0171	268	272	NS	BX123993-BX123994	X123993	2			63.44	9.742	0.452	0.048	0.03456	0.048	0.378	0.224	0.025	0.025	0.151	0.117	-0.01	-0.01	-0.01	-0.03	2677	0.765	3.907008	-3.142008	NAF
NS0171	220	222	NS	X121969	121969	1	G	W	28.19	40.07	3.13	0.258	0.2	0.146	2.58	0.54	0.11	0.203	0.93	0.256	1.15	9.61	0.54	11.3	19131	6.2118	9.41868	-3.20688	NAF
NS0171	56	58	NS	X121885	121885	1	G	D	20.81	52.8	6.76	0.2193	0.17	0.33	2.07	0.46	0.1	0.152	1.22	0.118	2.54	2.59	0.64	5.77	19084	4.6512	8.02332	-3.37212	NAF
NS0171	252	256	NS	BX123985-BX123986	X123985	2			62.33	11.91	0.525	0.045	0.0324	0.045	0.479	0.229	0.027	0.019	0.192	0.088	0.11	-0.01	-0.01	0.09	2673	0.5814	3.994218	-3.412818	NAF
NS0171	236	240	NS	BX123977-BX123978	X123977	2			62.82	10.482	0.51	0.046	0.03312	0.046	0.406	0.242	0.021	0.02	0.181	0.078	0.03	-0.01	-0.01	0.01	2669	0.612	4.220964	-3.608964	NAF
NS0171	244	248	NS	BX123981-BX123982	X123981	2			62.77	11.21	0.497	0.043	0.03096	0.043	0.421	0.26	0.023	0.021	0.179	0.088	-0.01	-0.01	-0.01	-0.03	2671	0.6426	4.53492	-3.89232	NAF
NS0171	34	36	NS	X121874	121874	1	G	D	16.45	56.82	9.1	0.129	0.1	0.45	1.36	0.24	0.06	0.009	2.56	0.083	2.85	2.24	0.28	5.37	19073	0.2754	4.18608	-3.91068	NAF
NS0171	52	54	NS	X121883	121883	1	G	D	28.37	46.67	3.46	0.3354	0.26	0.168	0.95	0.24	0.051	0.005	0.344	0.029	5.12	1.47	0.23	6.82	19082	0.153	4.18608	-4.03308	NAF
NS0171	32	34	NS	X121873	121873	1	G	D	17.15	54.54	9.65	0.3096	0.24	0.477	1.29	0.25	0.052	0.009	2.86	0.081	2.98	2.3	0.31	5.59	19072	0.2754	4.3605	-4.0851	NAF
NS0171	26	28	NS	X121870	121870	1	G	D	20.27	52.22	8.48	0.2967	0.23	0.407	1.09	0.26	0.038	0.013	1.13	0.085	3.71	2.51	0.31	6.53	19069	0.3978	4.53492	-4.13712	NAF
NS0171	184	186	NS	X121950	121950	1	G	W	26.04	42.27	3.59	0.3225	0.25	0.168	2.68	0.73	0.129	0.28	0.872	0.253	1.21	9.31	0.71	11.23	19113	8.568	12.73266	-4.16466	NAF
NS0171	232	236	NS	BX123975-BX123976	X123975	2			62.57	11.255	0.427	0.041	0.02952	0.041	0.395	0.295	0.024	0.02	0.157	0.094	-0.01	-0.01	-0.01	-0.03	2668	0.612	5.14539	-4.53339	NAF
NS0171	42	44	NS	X121878	121878	1	G	D	29	45.03	3.73	0.3741	0.29	0.176	0.97	0.28	0.087	0.008	0.202	0.051	5.45	1.55	0.26	7.26	19077	0.2448	4.88376	-4.63896	NAF
NS0171	218	220	NS	X121968	121968	1	G	W	28.58	39.78	2.32	0.2967	0.23	0.108	2.21	0.54	0.087	0.154	0.788	0.229	1.11	10.78	0.36	12.25	19130	4.7124	9.41868	-4.70628	NAF
NS0171	76	78	NS	X121895	121895	1	G	W	11.19	59.63	9.57	0.1548	0.12	0.496	3.59	1.36	0.021	0.617	3.24	0.044	0.41	2.6	1.45	4.46	19094	18.8802	23.72112	-4.84092	NAF
NS0171	50	52	NS	X121882	121882	1	G	D	30.07	42.83	3.66	0.5031	0.39	0.173	1.12	0.29	0.058	0.007	0.248	0.04	5.64	1.63	0.27	7.54	19081	0.2142	5.05818	-4.84398	NAF
NS0171	72	74	NS	X121893	121893	1	G	W	20.58	46.81	6.12	0.4644	0.36	0.303	3.82	1.32	0.115	0.594	1.36	0.132	0.76	6.8	1.55	9.11	19092	18.1764	23.02344	-4.84704	NAF
NS0171	36	38	NS	X121875	121875	1	G	D	23.74	48.49	6.58	0.3741	0.29	0.332	1.29	0.31	0.076	0.009	1.37	0.074	4.27	1.97	0.3	6.54	19074	0.2754	5.40702	-5.13162	NAF
NS0171	240	242	NS	X121979	121979	1	G	W	25	41.33	7.56	0.1548	0.12	0.357	4.79	1.29	0.068	0.563	2.1	0.393	1.21	2.76	1.43	5.4	19141	17.2278	22.50018	-5.27238	NAF
NS0171	58	60	NS	X121886	121886	1	G	W	21.83	47.44	7.05	0.2322	0.18	0.334	3.61	0.85	0.095	0.306	1.82	0.221	1.3	4.08	1.06	6.44	19085	9.3636	14.8257	-5.4621	NAF
NS0171	28	30	NS	X121871	121871	1	G	D	27.11	45.95	5.68	0.2967	0.23	0.281	0.93	0.34	0.059	0.015	0.412	0.088	4.64	1.98	0.28	6.9	19070	0.459	5.93028	-5.47128	NAF
NS0171	40	42	NS	X121877	121877	1	G	D	25.62	47.6	5.43	0.2838	0.22	0.273	1.3	0.34	0.07	0.007	0.486	0.072	4.91	1.95	0.29	7.15	19076	0.2142	5.93028	-5.71608	NAF
NS0171	44	46	NS	X121879	121879	1	G	D	28.65	44.08	4.56	0.4386	0.34	0.222	1.11	0.35	0.083	0.011	0.346	0.051	5.37	1.87	0.29	7.53	19078	0.3366	6.1047	-5.7681	NAF
NS0171	30	32	NS	X121872	121872	1	G	D	22.34	50.83	7.09	0.3999	0.31	0.351	1.23	0.36	0.044	0.012	0.887	0.088	4.01	2.27	0.3	6.58	19071	0.3672	6.27912	-5.91192	NAF
NS0171	98	100	NS	X121907	121907	1	G	W	20.18	48.27	6.22	0.3354	0.26	0.305	3.95	1.41	0.111	0.603	1.41	0.225	0.91	5.32	1.6	7.83	19105	18.4518	24.59322	-6.14142	NAF
NS0171	186	188	NS	X121952	121952	1	G	W	26.69	41.72	3.63	0.258	0.2	0.169	2.69	0.77	0.122	0.23	1.01	0.275	1.27	8.49	0.64	10.4	19114	7.038	13.43034	-6.39234	NAF
NS0171	182	184	NS	X121949	121949	1	G	W	23.64	45.9	4.85	0.258	0.2	0.229	3.22	0.92	0.169	0.314	0.991	0.29	1.14	6.61	0.97	8.72	19112	9.6084	16.04664	-6.43824	NAF
NS0171	38	40	NS	X121876	121876	1	G	D	18.4	54.96	7.89	0.1419	0.11	0.402	1.68	0.39	0.062	0.007	1.38	0.083	3.53	2.33	0.32	6.18	19075	0.2142	6.80238	-6.58818	NAF
NS0171	48	50	NS	X121881	121881	1	G	D	29.08	42.89	4.83	0.3354	0.26	0.231	1.31	0.39	0.065	0.007	0.349	0.054	5.46	2.04	0.28	7.78	19080	0.2142	6.80238	-6.58818	NAF
NS0171	180	182	NS	X121948	121948	1	G	W	26.83	41.9	2.41	0.258	0.2	0.111	2.11	0.64	0.061	0.134	0.672	0.199	1.04	11.68	0.32	13.04	19111	4.1004	11.16288	-7.06248	NAF
NS0171	46	48	NS	X121880	121880	1	G	D	23.71	47.69	6.8	0.3612	0.28	0.34	1.73	0.43	0.07	0.005	0.894	0.067	4.6	2.28	0.33	7.21	19079	0.153	7.50006	-7.34706	NAF
NS0171	54	56	NS	X121884	121884	1	G	D	20.63	51.03	7.87	0.2064	0.16	0.371	1.77	0.46	0.077	0.006	1.69	0.066	3.97	2.39	0.3	6.66	19083	0.1836	8.02332	-7.83972	NAF
NS0171	174	176	NS	X121945	121945	1	G	W	24.56	44.62	4.51	0.2322	0.18	0.212	3.15	0.8	0.107	0.187	1.06	0.303	1.3	7.51	0.6	9.41	19108	5.7222	13.9536	-8.2314	NAF
NS0171	68	70	NS	X121891	121891	1	G	W	24.35	43.87	4.64	0.2322	0.18	0.216	3.01	0.83	0.141	0.198	1.03	0.165	1.2	8.39	0.65	10.24	19090	6.0588	14.47686	-8.41806	NAF
NS0171	226	228	NS	X121972	121972	1	G	W	24.58	43.73	4.67	0.3354	0.26	0.218	3.38	1.01	0.148	0.296	1.28	0.321	1.13	6.84	0.95	8.92	19134	9.0576	17.61642	-8.55882	NAF
NS0171	60	62	NS	X121887	121887	1	G	W	21.11	48.73	6.44	0.3096	0.24	0.305	3.29	1.15	0.159	0.375	1.99	0.219	1.13	4.39	1.13	6.65	19086	11.475	20.0583	-8.5833	NAF
NS0171	228	230	NS	X121973	121973	1	G	W	28.31	42.36	2.65	0.2838	0.22	0.123	2.39	0.75	0.105	0.144	0.951	0.262	1.15	7.98	0.29	9.42	19135	4.4064	13.0815	-8.6751	NAF
NS0171	222	224	NS	X121970	121970	1	G	W	24.74	43.66	4.16	0.3225	0.25	0.193	3.1	0.97	0.204	0.26	1.15	0.304	1.28	7.48	0.82	9.58	19132	7.956	16.91874	-8.96274	NAF
NS0171	62	64	NS	X121888	121888	1	G	W	18.71	51.04	7.48	0.2451	0.19	0.354	3.24	1.11	0.121	0.33	2.29	0.142	1.06	4.29	1.08	6.43	19087	10.098	19.36062	-9.26262	NAF
NS0171	278	280	NS	X121998	121998	1	G	W	29.71	35.55	2.79	0.3741	0.29	0.133	2.5	0.98	0.208	0.242	0.964	0.225	1.22	11.47	0.55	13.24	19160	7.4052	17.09316	-9.68796	NAF
NS0171	208	210	NS	X121963	121963	1	G	W	28.42	42.09	2.49	0.2709	0.21	0.116	2.14	0.9	0.038	0.143	0.866	0.245	0.99	8.53	0.39	9.91	19125	4.3758	15.6978	-11.322	NAF
NS0171	276	278	NS	X121997	121997	1	G	W	26.69	42.78	3.4	0.2838	0.22	0.159	2.82	0.99	0.067	0.191	1.1	0.278	1.15	7.31	0.65	9.11	19159	5.8446	17.26758	-11.42298	NAF
NS0171	188	190	NS	X121953	121953	1	G	W	25.63	44.93	2.87	0.2838	0.22	0.133	2.4	1	0.115	0.168	0.961	0.267	1.2	8.19	0.54	9.93	19115	5.1408	17.442	-12.3012	NAF
NS0171	230	232	NS	X121974	121974	1	G	W	31.12	40.49	1.72	0.2838	0.22	0.079	1.92	1	0.092	0.071	0.706	0.212	0.78	7.49	0.19	8.46	19136	2.1726	17.442	-15.2694	NAF
NS0171	206	208	NS	X121962	121962	1	G	W	27.55	43.16	3.13	0.2451	0.19	0.149	2.5	1.25	0.048	0.2	1.07	0.298	1.11	6.54	0.77	8.42	19124	6.12	21.8025	-15.6825	NAF
NS0171	172	174	NS	X121944	121944	1	G	W	23.7	46.39	2.82	0.2967	0.23	0.13	2.35	1.4	0.069	0.229	0.791	0.215	0.95	9.01	0.82	10.78	19107	7.0074	24.4188	-17.4114	NAF
NS0171	78	80	NS	X121896	121896	1	G	W	13.39	55.72	9.32	0.1935	0.15	0.462	4.17	1.86	0.035	0.403	2.07	0.056	0.46	3.19	1.77	5.42	19095	12.3318	32.44212	-20.11032	NAF
NS0171	64	66	NS	X121889	121889	1	G	W	21.95	47.31	5.84	0.258	0.2	0.282	3.26	1.59	0.115	0.232	1.61	0.225	1.36	4.91	1.11	7.38	19088	7.0992	27.73278	-20.63358	NAF
NS0171	194	196	NS	X121956	121956	1	G	W	25.34	43.45	4.19	0.2838	0.22	0.2	2.91	1.66	0.16	0.239	1.21	0.318	1.18	6.52	0.99	8.69	19118	7.3134	28.95372	-21.64032	NAF
NS0171	242	244	NS	X121980	121980	1	G	W	24.8	46.33	4.45	0.2967	0.23	0.209	2.99	1.94	0.127	0.398	1.73	0.32	0.98	3.13	1.5	5.61	19142	12.1788	33.83748	-21.65868	NAF
NS0171	192	194	NS	X121955	121955	1	G	W	23.3	47.33	4.42	0.1935	0.15	0.207	3	1.71	0.059	0.237	1.1	0.275	1.02	5.54	1.14	7.7	19117	7.2522	29.82582	-22.57362	NAF
NS0171	176	178	NS	X121946	121946	1	G	W	24.66	42.92	2.46	0.2838	0.22	0.114	2.47	1.63	0.073	0.162	0.669	0.205	0.89	11.46	0.79	13.14	19109	4.9572	28.43046	-23.47326	NAF
NS0171	274	276	NS	X121996	121996	1	G	W	29.14	43.05	2.02	0.258	0.2	0.092	2.04	1.62	0.08	0.117	0.757	0.212	0.74	6.47	0.66	7.87	19158	3.5802	28.25604	-24.67584	NAF
NS0171	272	274	NS	X121995	121995	1	G	W	32.26	38.54	2.19	0.2709	0.21	0.103	2.18	1.68	0.09	0.101	0.875	0.236	0.83	5.88	0.69	7.4	19157	3.0906	29.30256	-26.21196	NAF
NS0171	198	200	NS	X121958	121958	1	G	W	24.75	46.57	3.14	0.3225	0.25	0.149	2.51	1.88	0.076	0.199	0.991	0.26	1.02	6.3	1.06	8.38	19120	6.0894	32.79096	-26.70156	NAF
NS0171	178	180	NS	X121947	121947	1	G	W	24.72	43.23	2.49	0.2451	0.19	0.118	2.29	1.85	0.073	0.164	0.664	0.199	0.94	11.17	0.89	13	19110	5.0184	32.2677	-27.2493	NAF
NS0171	190	192	NS	X121954	121954	1	G	W	25.36	44.65	3.85	0.2193	0.17	0.178	2.63	2.02	0.069	0.258	1.04	0.268	1	6.14	1.18	8.32	19116	7.8948	35.23284	-27.33804	NAF
NS0171	252	254	NS	X121985	121985	1	G	W	29.94	42.58	1.97	0.2709	0.21	0.089	2.15	1.76	0.084	0.082	0.811	0.206	0.74	5.07	1.07	6.88	19147	2.5092	30.69792	-28.18872	NAF
NS0171	232	234	NS	X121975	121975	1	G	W	31.68	40.92	1.77	0.258	0.2	0.083	1.93	1.8	0.099	0.076	0.723	0.195	0.64	5.15	0.93	6.72	19137	2.3256	31.3956	-29.07	NAF
NS0171	254	256	NS	X121986	121986	1	G	W	28.83	44.22	1.98	0.2838	0.22	0.09	2.07	1.85	0.182	0.083	0.796	0.218	0.71	4.97	0.71	6.39	19148	2.5398	32.2677	-29.7279	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0171	200	202	NS	X121959	121959	1	G	W	29.72	40.55	2.21	0.3096	0.24	0.102	2.15	1.96	0.1	0.115	0.866	0.239	0.83	6.79	0.85	8.47	19121	3.519	34.18632	-30.66732	NAC
NS0171	248	250	NS	X121983	121983	1	G	W	31.57	38.68	1.96	0.3354	0.26	0.09	2.38	1.95	0.113	0.082	0.825	0.234	0.8	5.95	1.15	7.9	19145	2.5092	34.0119	-31.5027	NAC
NS0171	250	252	NS	X121984	121984	1	G	W	30.62	40.95	1.89	0.2838	0.22	0.086	2.25	2.02	0.091	0.08	0.786	0.225	0.77	5.29	1.25	7.31	19146	2.448	35.23284	-32.78484	NAC
NS0171	260	262	NS	X121989	121989	1	G	W	29.26	42.11	2.07	0.258	0.2	0.097	2.28	2.07	0.115	0.094	0.823	0.237	0.78	5.58	1.27	7.63	19151	2.8764	36.10494	-33.22854	NAC
NS0171	244	246	NS	X121981	121981	1	G	W	25.83	43.72	3.87	0.3096	0.24	0.18	2.98	2.38	0.137	0.248	1.33	0.304	0.97	4.35	1.49	6.81	19143	7.5888	41.51196	-33.92316	NAC
NS0171	256	258	NS	X121987	121987	1	G	W	28.12	42.06	3.12	0.2709	0.21	0.145	2.72	2.27	0.179	0.167	1.01	0.293	0.92	4.73	1.25	6.9	19149	5.1102	39.59334	-34.48314	NAC
NS0171	258	260	NS	X121988	121988	1	G	W	27.53	43.62	2.9	0.2838	0.22	0.137	2.61	2.3	0.136	0.156	0.974	0.266	0.86	4.99	1.33	7.18	19150	4.7736	40.1166	-35.343	NAC
NS0171	170	172	NS	X121943	121943	1	G	W	23.74	44.18	3.62	0.3096	0.24	0.17	2.71	2.48	0.122	0.167	0.88	0.238	1.02	8.39	1.24	10.65	19106	5.1102	43.25616	-38.14596	NAC
NS0171	268	270	NS	X121993	121993	1	G	W	28.34	40.76	3.44	0.2451	0.19	0.16	2.89	2.84	0.169	0.25	1.07	0.279	0.88	3.97	1.68	6.53	19155	7.65	49.53528	-41.88528	NAC
NS0171	238	240	NS	X121978	121978	1	G	W	27.61	40.45	4.38	0.2451	0.19	0.204	3.32	2.93	0.146	0.265	1.29	0.306	0.96	3.49	1.96	6.41	19140	8.109	51.10506	-42.99606	NAC
NS0171	202	204	NS	X121960	121960	1	G	W	27.32	42.82	2.57	0.2838	0.22	0.123	2.32	2.72	0.089	0.131	0.941	0.251	0.93	5.91	1.46	8.3	19122	4.0086	47.44224	-43.43364	NAC
NS0171	236	238	NS	X121977	121977	1	G	W	28.95	43.5	1.95	0.2064	0.16	0.092	2.07	2.68	0.078	0.095	0.801	0.237	0.73	3.89	2.01	6.63	19139	2.907	46.74456	-43.83756	NAC
NS0171	234	236	NS	X121976	121976	1	G	W	29.88	42.16	1.69	0.2451	0.19	0.076	1.84	2.86	0.093	0.072	0.69	0.19	0.64	4.35	2.01	7	19138	2.2032	49.88412	-47.68092	NAC
NS0171	262	264	NS	X121990	121990	1	G	W	24.97	45.37	3.4	0.2451	0.19	0.16	2.77	3.1	0.101	0.181	1.05	0.273	0.92	4.28	2.09	7.29	19152	5.5386	54.0702	-48.5316	NAC
NS0171	204	206	NS	X121961	121961	1	G	W	26.84	38.79	3.61	0.3741	0.29	0.17	2.99	3.35	0.195	0.154	1.13	0.303	1.14	6.92	1.82	9.88	19123	4.7124	58.4307	-53.7183	NAC
NS0171	270	272	NS	X121994	121994	1	G	W	25.97	43.42	3.49	0.2193	0.17	0.164	2.87	3.56	0.224	0.234	1.08	0.279	0.89	3.71	2.06	6.66	19156	7.1604	62.09352	-54.93312	NAC
NS0171	264	266	NS	X121991	121991	1	G	W	24.54	46.12	3.69	0.2064	0.16	0.174	2.79	3.64	0.129	0.206	1.12	0.281	0.88	3.09	2.42	6.39	19153	6.3036	63.48888	-57.18528	NAC
NS0171	246	248	NS	X121982	121982	1	G	W	27.7	42.51	2.51	0.2838	0.22	0.118	2.34	3.59	0.084	0.15	0.952	0.242	0.8	3.71	2.65	7.16	19144	4.59	62.61678	-58.02678	NAC
NS0171	266	268	NS	X121992	121992	1	G	W	27.14	42.15	3.4	0.1935	0.15	0.161	2.82	3.9	0.453	0.197	1.09	0.284	0.85	2.8	1.91	5.56	19154	6.0282	68.0238	-61.9956	NAC
NS0171	196	198	NS	X121957	121957	1	G	W	18.98	45.15	5.16	0.4257	0.33	0.244	2.84	5.76	0.055	0.404	1.87	0.276	0.97	5.12	3.61	9.7	19119	12.3624	100.4659	-88.10352	NAC
NS0172	290	292	NS	X122148	122148	1	G	W	28.1	44.92	1.45	0.5547	0.43	0.106	2.32	1.07	0.07	2.15	0.143	0.087	0.24	4.58	3.12	7.94	19307	65.79	18.66294	47.12706	PAF(HC)
NS0172	164	166	NS	X122084	122084	1	G	W	27.49	38.29	6.66	0.5031	0.39	0.289	6.6	0.16	0.011	0.815	0.82	0.718	0.17	4.88	1.3	6.35	19244	24.939	2.79072	22.14828	PAF(HC)
NS0172	154	156	NS	X122079	122079	1	G	W	25.72	43.02	6.16	0.4644	0.36	0.27	5.23	0.18	0.037	0.679	1.55	0.447	0.47	3.84	1.32	5.63	19239	20.7774	3.13956	17.63784	PAF(HC)
NS0172	214	216	NS	X122110	122110	1	G	W	30.04	42.92	3.31	0.5934	0.46	0.179	3.53	0.72	0.074	0.728	0.527	0.172	0.08	3.58	0.98	4.64	19269	22.2768	12.55824	9.71856	PAF(LC)
NS0172	236	238	NS	X122121	122121	1	G	W	26.62	40.77	6.91	0.4644	0.36	0.31	6.19	0.45	0.091	0.498	0.534	0.137	0.17	5.41	0.71	6.29	19280	15.2388	7.8489	7.3899	PAF(LC)
NS0172	166	168	NS	X122085	122085	1	G	W	34.6	36.97	2.63	0.5934	0.46	0.125	3.48	0.45	0.046	0.389	0.397	0.246	0.15	3.84	0.46	4.45	19245	11.9034	7.8489	4.0545	PAF(LC)
NS0172	162	166	NS	BX124083-BX124084	X124083	2			62.96	10.303	1.08	0.073	0.05256	0.073	0.93	0.041	0.006	0.072	0.225	0.177	-0.01	-0.01	-0.01	-0.03	2706	2.2032	0.715122	1.488078	PAF(LC)
NS0172	264	266	NS	X122135	122135	1	G	W	26.56	40.61	4.74	0.774	0.6	0.208	5.06	0.44	0.089	0.267	0.456	0.155	0.51	7.93	0.58	9.02	19294	8.1702	7.67448	0.49572	PAF(LC)
NS0172	264	268	NS	BX124135-BX124136	X124135	2			61.72	11.035	0.863	0.069	0.04968	0.069	0.918	0.076	0.015	0.053	0.129	0.083	0.06	0.05	-0.01	0.1	2731	1.6218	1.325592	0.296208	PAF(LC)
NS0172	2	4	NS	X122002	122002	1	G	D	33.49	39.13	5.65	0.0258	0.02	0.365	0.08	0.04	0.029	0.023	0.05	0.03	4.81	1.47	0.24	6.52	19163	0.7038	0.69768	0.00612	PAF(LC)
NS0172	18	20	NS	X122010	122010	1	G	D	28.57	51.89	1.99	0.1548	0.12	0.076	0.18	0.02	0.094	0.01	0.024	0.035	3.26	0.89	0.18	4.33	19171	0.306	0.34884	-0.04284	NAF
NS0172	8	10	NS	X122005	122005	1	G	D	28.38	50.18	2.92	0.1419	0.11	0.122	0.12	0.03	0.093	0.015	0.008	0.03	4.15	1.08	0.2	5.43	19166	0.459	0.52326	-0.06426	NAF
NS0172	6	8	NS	X122004	122004	1	G	D	16.97	65.26	4.89	0.2451	0.19	0.223	0.11	0.05	0.027	0.026	0.075	0.038	2.86	1.55	0.23	4.64	19165	0.7956	0.8721	-0.0765	NAF
NS0172	154	158	NS	BX124079-BX124080	X124079	2			66.56	7.14	0.548	0.037	0.02664	0.037	0.507	0.057	0.012	0.029	0.199	0.12	-0.01	-0.01	-0.01	-0.03	2704	0.8874	0.994194	-0.106794	NAF
NS0172	24	26	NS	X122013	122013	1	G	D	26	52.87	3.06	0.0516	0.04	0.113	0.09	0.02	0.263	0.007	0.015	0.057	4.7	1.13	0.16	5.99	19174	0.2142	0.34884	-0.13464	NAF
NS0172	22	24	NS	X122012	122012	1	G	D	26.73	54.8	1.58	0.2451	0.19	0.091	0.25	0.02	0.071	0.006	0.023	0.039	3.55	0.81	0.18	4.54	19173	0.1836	0.34884	-0.16524	NAF
NS0172	32	34	NS	X122017	122017	1	G	D	29.35	50.77	1.1	0.3483	0.27	0.044	0.12	0.02	0.164	0.005	0.021	0.024	4.26	0.64	0.14	5.04	19178	0.153	0.34884	-0.19584	NAF
NS0172	34	36	NS	X122018	122018	1	G	D	39.16	35.67	1.27	0.5805	0.45	0.058	0.33	0.02	0.115	0.005	0.094	0.028	4.58	0.8	0.19	5.57	19179	0.153	0.34884	-0.19584	NAF
NS0172	36	38	NS	X122019	122019	1	G	D	42.26	30.16	1.33	0.9159	0.71	0.057	0.38	0.02	0.102	0.005	0.116	0.021	4.91	0.9	0.22	6.03	19180	0.153	0.34884	-0.19584	NAF
NS0172	274	276	NS	X122140	122140	1	G	W	22.91	46.49	5.13	0.516	0.4	0.226	5.29	0.48	0.103	0.267	0.17	0.094	0.36	7.27	0.6	8.23	19299	8.1702	8.37216	-0.20196	NAF
NS0172	10	12	NS	X122006	122006	1	G	D	28.86	45.19	7.92	-0.0129	-0.01	0.845	0.05	0.04	0.023	0.016	0.011	0.043	1.73	2.07	0.27	4.07	19167	0.4896	0.69768	-0.20808	NAF
NS0172	14	16	NS	X122008	122008	1	G	D	15.03	68.72	4.74	0.0774	0.06	0.274	0.14	0.03	0.059	0.01	0.01	0.044	2.27	1.66	0.21	4.14	19169	0.306	0.52326	-0.21726	NAF
NS0172	38	40	NS	X122020	122020	1	G	D	25.02	58.31	0.5	0.7482	0.58	0.022	0.18	0.02	0.071	0.004	0.071	0.015	3.34	0.48	0.14	3.96	19181	0.1224	0.34884	-0.22644	NAF
NS0172	40	42	NS	X122021	122021	1	G	D	34.22	43.67	0.98	0.7353	0.57	0.04	0.19	0.02	0.134	0.004	0.098	0.017	4.09	0.65	0.16	4.9	19182	0.1224	0.34884	-0.22644	NAF
NS0172	42	44	NS	X122022	122022	1	G	D	37.54	37.66	1.06	0.7353	0.57	0.046	0.25	0.02	0.133	0.004	0.089	0.016	5.05	0.74	0.16	5.95	19183	0.1224	0.34884	-0.22644	NAF
NS0172	234	238	NS	BX124120-BX124121	X124120	2			64.87	8.143	0.668	0.05	0.036	0.05	0.676	0.068	0.014	0.031	0.105	0.085	-0.01	-0.01	-0.01	-0.03	2724	0.9486	1.186056	-0.237456	NAF
NS0172	44	46	NS	X122023	122023	1	G	D	36.63	39.74	0.99	0.7224	0.56	0.044	0.27	0.02	0.098	0.003	0.106	0.038	4.51	0.7	0.17	5.38	19184	0.0918	0.34884	-0.25704	NAF
NS0172	28	30	NS	X122015	122015	1	G	D	31.94	47.21	1.33	0.5676	0.44	0.056	0.21	0.03	0.101	0.008	0.045	0.035	3.52	0.81	0.19	4.52	19176	0.2448	0.52326	-0.27846	NAF
NS0172	50	52	NS	X122026	122026	1	G	D	33.65	44.08	0.87	0.7224	0.56	0.04	0.23	0.02	0.07	0.002	0.123	0.021	4.48	0.65	0.15	5.28	19187	0.0612	0.34884	-0.28764	NAF
NS0172	16	18	NS	X122009	122009	1	G	D	3.75	84.88	5.96	-0.0129	-0.01	0.259	0.16	0.03	0.011	0.007	0.012	0.067	0.96	1.99	0.19	3.14	19170	0.2142	0.52326	-0.30906	NAF
NS0172	26	28	NS	X122014	122014	1	G	D	16.62	69.7	1.89	0.0903	0.07	0.078	0.07	0.03	0.119	0.007	0.016	0.048	2.71	0.81	0.18	3.7	19175	0.2142	0.52326	-0.30906	NAF
NS0172	4	6	NS	X122003	122003	1	G	D	25.38	48.8	7.33	0.1935	0.15	0.569	0.13	0.04	0.013	0.012	0.031	0.03	3.85	2.09	0.26	6.2	19164	0.3672	0.69768	-0.33048	NAF
NS0172	12	14	NS	X122007	122007	1	G	D	19.69	59.49	7.1	0.0258	0.02	0.55	0.09	0.04	0.026	0.012	0.01	0.041	2.15	2.06	0.23	4.44	19168	0.3672	0.69768	-0.33048	NAF
NS0172	20	22	NS	X122011	122011	1	G	D	32.46	45.28	1.41	0.3612	0.28	0.058	0.35	0.03	0.098	0.006	0.032	0.04	4.67	0.81	0.19	5.67	19172	0.1836	0.52326	-0.33966	NAF
NS0172	30	32	NS	X122016	122016	1	G	D	37.98	36.66	1.12	0.9933	0.77	0.049	0.37	0.03	0.092	0.006	0.045	0.029	5.25	0.84	0.22	6.31	19177	0.1836	0.52326	-0.33966	NAF
NS0172	72	76	NS	BX124037-BX124038	X124037	2			66.14	3.008	0.11	0.001	0.00072	0.001	0.062	0.024	0.029	0.001	0.009	0.128	0.25	0.21	0.01	0.47	2684	0.0306	0.418608	-0.388008	NAF
NS0172	76	80	NS	BX124039-BX124040	X124039	2			66.63	4.243	0.125	0.01	0.0072	0.01	0.13	0.026	0.025	0.002	0.009	0.067	0.2	0.14	-0.01	0.33	2685	0.0612	0.453492	-0.392292	NAF
NS0172	46	48	NS	X122024	122024	1	G	D	34.59	42.98	0.9	0.7224	0.56	0.04	0.21	0.03	0.122	0.003	0.155	0.016	4.37	0.64	0.15	5.16	19185	0.0918	0.52326	-0.43146	NAF
NS0172	48	50	NS	X122025	122025	1	G	D	37.93	37.12	1.18	0.6063	0.47	0.06	0.3	0.03	0.111	0.003	0.132	0.016	4.98	0.76	0.18	5.92	19186	0.0918	0.52326	-0.43146	NAF
NS0172	54	56	NS	X122028	122028	1	G	D	38.6	35.23	0.97	0.9417	0.73	0.044	0.3	0.03	0.101	0.003	0.127	0.014	5.58	0.76	0.19	6.53	19189	0.0918	0.52326	-0.43146	NAF
NS0172	60	62	NS	X122031	122031	1	G	D	37.81	38.6	1.07	0.8385	0.65	0.049	0.31	0.03	0.09	0.003	0.618	0.019	3.44	0.48	0.13	4.05	19192	0.0918	0.52326	-0.43146	NAF
NS0172	62	64	NS	X122032	122032	1	G	D	35.87	40.7	1.18	0.7869	0.61	0.054	0.27	0.03	0.085	0.003	0.504	0.023	3.96	0.59	0.13	4.68	19193	0.0918	0.52326	-0.43146	NAF
NS0172	84	88	NS	BX124043-BX124044	X124043	2			67.98	4.725	0.192	0.021	0.01512	0.021	0.295	0.04	0.008	0.008	0.096	0.08	-0.01	-0.01	-0.01	-0.03	2687	0.2448	0.69768	-0.45288	NAF
NS0172	52	54	NS	X122027	122027	1	G	D	33.71	43.42	0.78	0.8772	0.68	0.035	0.25	0.03	0.104	0.002	0.094	0.014	5.18	0.67	0.15	6	19188	0.0612	0.52326	-0.46206	NAF
NS0172	60	64	NS	BX124031-BX124032	X124031	2			67.53	4.776	0.097	0.013	0.00936	0.013	0.123	0.03	0.027	0.002	0.028	0.087	-0.01	-0.01	-0.01	-0.03	2681	0.0612	0.52326	-0.46206	NAF
NS0172	64	66	NS	X122033	122033	1	G	D	36.63	40.93	1.07	0.8643	0.67	0.048	0.27	0.03	0.086	0.002	0.606	0.019	2.85	0.43	0.04	3.32	19194	0.0612	0.52326	-0.46206	NAF
NS0172	300	304	NS	BX124154-BX124155	X124154	2			69.42	3.145	0.174	0.024	0.01728	0.024	0.295	0.045	0.007	0.01	0.012	0.06	-0.01	-0.01	-0.01	-0.03	2740	0.306	0.78489	-0.47889	NAF
NS0172	80	84	NS	BX124041-BX124042	X124041	2			68.35	3.386	0.099	0.01	0.0072	0.01	0.181	0.032	0.015	0.002	0.015	0.065	0.06	-0.01	-0.01	0.04	2686	0.0612	0.558144	-0.496944	NAF
NS0172	230	234	NS	BX124118-BX124119	X124118	2			65.83	8.501	0.385	0.038	0.02736	0.038	0.474	0.086	0.017	0.032	0.11	0.086	-0.01	-0.01	-0.01	-0.03	2723	0.9792	1.500012	-0.520812	NAF
NS0172	272	276	NS	BX124139-BX124140	X124139	2			64.54	7.838	0.544	0.045	0.0324	0.045	0.608	0.067	0.014	0.021	0.034	0.066	-0.01	-0.01	-0.01	-0.03	2733	0.6426	1.168614	-0.526014	NAF
NS0172	292	296	NS	BX124149-BX124150	X124149	2			67.93	4.714	0.24	0.037	0.02664	0.037	0.312	0.048	0.007	0.01	0.021	0.073	-0.01	-0.01	-0.01	-0.03	2738	0.306	0.837216	-0.531216	NAF
NS0172	74	76	NS	X122038	122038	1	G	D	37.24	43.26	0.8	0.1548	0.12	0.041	0.12	0.04	0.102	0.005	0.286	0.016	1.59	0.33	0.05	1.97	19199	0.153	0.69768	-0.54468	NAF
NS0172	68	72	NS	BX124035-BX124036	X124035	2			70.29	2.295	0.044	0.008	0.00576	0.008	0.158	0.042	0.017	0.006	0.011	0.109	-0.01	-0.01	-0.01	-0.03	2683	0.1836	0.732564	-0.548964	NAF
NS0172	88	92	NS	BX124045-BX124046	X124045	2			67.85	6.463	0.225	0.018	0.01296	0.018	0.354	0.053	0.01	0.012	0.068	0.083	-0.01	-0.01	-0.01	-0.03	2688	0.3672	0.924426	-0.557226	NAF
NS0172	64	68	NS	BX124033-BX124034	X124033	2			68.77	3.315	0.106	0.011	0.00792	0.011	0.173	0.039	0.025	0.002	0.021	0.073	0.17	0.12	-0.01	0.28	2682	0.0612	0.680238	-0.619038	NAF
NS0172	58	60	NS	X122030	122030	1	G	D	37.82	37.18	1.22	0.8772	0.68	0.051	0.32	0.04	0.097	0.002	0.199	0.018	4.62	0.78	0.17	5.57	19191	0.0612	0.69768	-0.63648	NAF
NS0172	166	170	NS	BX124085-BX124086	X124085	2			68.22	5.122	0.137	0.01	0.0072	0.01	0.252	0.043	0.007	0.002	0.073	0.064	-0.01	-0.01	-0.01	-0.03	2707	0.0612	0.750006	-0.688806	NAF
NS0172	318	322	NS	BX124163-BX124164	X124163	2			67.84	3.871	0.485	0.102	0.07344	0.102	0.227	0.056	0.011	0.009	0.044	0.071	-0.01	-0.01	-0.01	-0.03	2744	0.2754	0.976752	-0.701352	NAF
NS0172	226	230	NS	BX124116-BX124117	X124116	2			64.67	8.71	0.488	0.042	0.03024	0.042	0.57	0.084	0.014	0.024	0.044	0.074	-0.01	-0.01	-0.01	-0.03	2722	0.7344	1.465128	-0.730728	NAF
NS0172	72	74	NS	X122037	122037	1	G	D	38.63	37.88	1.13	0.6579	0.51	0.054	0.3	0.06	0.133	0.01	0.396	0.023	2.38	1.24	0.1	3.72	19198	0.306	1.04652	-0.74052	NAF
NS0172	260	264	NS	BX124133-BX124134	X124133	2			62.76	10.811	0.593	0.05	0.036	0.05	0.639	0.077	0.009	0.019	0.145	0.095	-0.01	-0.01	-0.01	-0.03	2730	0.5814	1.343034	-0.761634	NAF
NS0172	304	308	NS	BX124156-BX124157	X124156	2			68.72	3.353	0.582	0.145	0.1044	0.145	0.248	0.06	0.011	0.009	0.012	0.074	0.02	-0.01	-0.01	0	2741	0.2754	1.04652	-0.77112	NAF
NS0172	268	272	NS	BX124137-BX124138	X124137	2			64.83	8.836	0.414	0.033	0.02376	0.033	0.544	0.073	0.016	0.016	0.079	0.099	-0.01	-0.01	-0.01	-0.03	2732	0.4896	1.273266	-0.783666	NAF
NS0172	76	78	NS	X122039	122039	1	G	D	39.02	38.81	1	0.387	0.3	0.045	0.41	0.06	0.104	0.008	0.36	0.016	1.49	1.03	0.05	2.57	19200	0.2448	1.04652	-0.80172	NAF
NS0172	326	330	NS	BX124167-BX124168	X124167	2			67.74	4.863	0.251	0.025	0.018	0.025	0.261	0.068	0.013	0.012	0.047	0.084	-0.01	-0.01	-0.01	-0.03	2746	0.3672	1.186056	-0.818856	NAF
NS0172	296	300	NS	BX124152-BX124153	X124152	2			69.57	3.979	0.123	0.015	0.0108	0.015	0.237	0.054	0.01	0.004	0.012	0.067	-0.01	-0.01	-0.01	-0.03	2739	0.1224	0.941868	-0.819468	NAF
NS0172	314	318	NS	BX124161-BX124162	X124161	2			69.05	3.611	0.138	0.02	0.0144	0.02	0.24	0.055	0.011	0.004	0.027	0.069	-0.01	-0.01	-0.01	-0.03	2743	0.1224	0.95931	-0.83691	NAF
NS0172	92	96	NS	BX124047-BX124048	X124047	2			69.24	4.62	0.127	0.013	0.00936	0.013	0.247	0.052	0.01	0.002	0.068	0.065	-0.01	-0.01	-0.01	-0.03	2689	0.0612	0.906984	-0.845784	NAF
NS0172	276	280	NS	BX124141-BX124142	X124141	2			66.42	6.651	0.388	0.074	0.05328	0.074	0.31	0.061	0.011	0.007	0.032	0.07	-0.01	-0.01	-0.01	-0.03	2734	0.2142	1.063962	-0.849762	NAF
NS0172	322	326	NS	BX124165-BX124166	X124165	2			68.3	4.571	0.395	0.076	0.05472	0.076	0.223	0.061	0.012	0.006	0.059	0.074	-0.01	-0.01	-0.01	-0.03	2745	0.1836	1.063962	-0.880362	NAF
NS0172	122	126	NS	BX124063-BX124064	X124063	2			67.07	6.138	0.212	0.016	0.01152	0.016	0.252	0.054	0.008	0.002	0.102	0.083	-0.01	-0.01	-0.01	-0.03	2696	0.0612	0.941868	-0.880668	NAF
NS0172	288	292	NS	BX124147-BX124148	X124147	2			68.46	4.838	0.334	0.068	0.04896	0.068	0.254	0.088	0.013	0.021	0.034	0.071	-0.01	-0.01	-0.01	-0.03	2737	0.6426	1.534896	-0.892296	NAF
NS0172	126	130	NS	BX124065-BX124066	X124065	2			69.03	5.213	0.113	0.012	0.00864	0.012	0.218	0.053	0.01	0.001	0.066	0.092	-0.01	-0.01	-0.01	-0.03	2697	0.0306	0.924426	-0.893826	NAF
NS0172	308	312	NS	BX124158-BX124159	X124158	2			68.35	4.433	0.436	0.093	0.06696	0.093	0.302	0.064	0.013	0.007	0.026	0.064	-0.01	-0.01	-0.01	-0.03	2742	0.2142	1.116288	-0.902088	NAF
NS0172	198	202	NS	BX124102-BX124103	X124102	2			65.37	7.813	0.284	0.021	0.01512	0.021	0.398	0.08	0.013	0.014	0.089	0.115	-0.01	-0.01	-0.01	-0.03	2715	0.4284	1.39536	-0.96696	NAF
NS0172	182	186	NS	BX124093-BX124094	X124093	2			67.62	5.867	0.175	0.017	0.01224	0.017	0.276	0.062	0.014	0.002	0.076	0.106	-0.01	-0.01	-0.01	-0.03	2711	0.0612	1.081404	-1.020204	NAF
NS0172	190	194	NS	BX124097-BX124098	X124097	2			66.74	5.995	0.19	0.01	0.0072	0.01	0.256	0.064	0.013	0.003	0.092	0.105	-0.01	-0.01	-0.01	-0.03	2713	0.0918	1.116288	-1.024488	NAF
NS0172	150	154	NS	BX124077-BX124078	X124077	2			66.72	6.504	0.258	0.023	0.01656	0.023	0.359	0.08	0.019	0.012	0.089	0.088	-0.01	-0.01	-0.01	-0.03	2703	0.3672	1.39536	-1.02816	NAF
NS0172	104	108	NS	BX124054-BX124055	X124054	2			67.71	5.289	0.092	0.01	0.0072	0.01	0.219	0.064	0.011	0.002	0.045	0.079	-0.01	-0.01	-0.01	-0.03	2692	0.0612	1.116288	-1.055088	NAF
NS0172	96	100	NS	BX124049-BX124050	X124049	2			69.61	4.475	0.074	0.01	0.0072	0.01	0.207	0.066	0.012	0.002	0.037	0.071	-0.01	-0.01	-0.01	-0.03	2690	0.0612	1.151172	-1.089972	NAF
NS0172	108	112	NS	BX124056-BX124057	X124056	2			67.42	5.826	0.18	0.014	0.01008	0.014	0.273	0.066	0.012	0.002	0.087	0.085	-0.01	-0.01	-0.01	-0.03	2693	0.0612	1.151172	-1.089972	NAF
NS0172	186	190	NS	BX124095-BX124096	X124095	2			65.87	6.49	0.177	0.009	0.00648	0.009	0.272	0.065	0.014	0.001	0.079	0.09	-0.01	-0.01	-0.01	-0.03	2712	0.0306	1.13373	-1.10313	NAF
NS0172	158	162	NS	BX124081-BX124082	X124081	2			67.29	6.244	0.14	0.01	0.0072	0.01	0.288	0.071	0.015	0.004	0.044	0.102	-0.01	-0.01	-0.01	-0.03	2705	0.1224	1.238382	-1.115982	NAF
NS0172	118	122	NS	BX124061-BX124062	X124061	2			67.19	6.301	0.12	0.01	0.0072	0.01	0.213	0.066	0.012	0.001	0.072	0.076	-0.01	-0.01	-0.01	-0.03	2695	0.0306	1.151172	-1.120572	NAF
NS0172	194	198	NS	BX124099-BX124100	X124099	2			67.22	6.385	0.184	0.012	0.00864	0.012	0.289	0.074	0.014	0.004	0.081	0.096	-0.01	-0.01	-0.01	-0.03	2714	0.1224	1.290708	-1.168308	NAF
NS0172	130	134	NS	BX124067-BX124068	X124067	2			68.2	6.072	0.13	0.009	0.00648	0.009	0.249	0.07	0.012	0.001	0.073	0.082	-0.01	-0.01	-0.01	-0.03	2698	0.0306	1.22094	-1.19034	NAF
NS0172	174	176	NS	BX124089	X124089	2			67.22	6.587	0.137	0.009	0.00648	0.009	0.264	0.07	0.015	0.001	0.077	0.098	-0.01	-0.01	-0.01	-0.03	2709	0.0306	1.22094	-1.19034	NAF
NS0172	214	218	NS	BX124110-BX124111	X124110	2			64.99	9.326	0.346	0.03	0.0216	0.03	0.446	0.116	0.016	0.027	0.088	0.085	-0.01	-0.01	-0.01	-0.03	2719	0.8262	2.023272	-1.197072	NAF
NS0172	222	226	NS	BX124114-BX124115	X124114	2			66.47	6.886	0.173	0.018	0.01296	0.018	0.313	0.078	0.014	0.005	0.039	0.083	-0.01	-0.01	-0.01	-0.03	2721	0.153	1.360476	-1.207476	NAF
NS0172	178	182	NS	BX124091-BX124092	X124091	2			67.4	6.348	0.165	0.011	0.00792	0.011	0.291	0.073	0.015	0.002	0.063	0.094	-0.01	-0.01	-0.01	-0.03	2710	0.0612	1.273266	-1.212066	NAF
NS0172	170	174	NS	BX124087-BX124088	X124087	2			66.71	7.355	0.214	0.014	0.01008	0.014	0.303	0.074	0.017	0.002	0.106	0.088	-0.01	-0.01	-0.01	-0.03	2708	0.0612	1.290708	-1.229508	NAF
NS0172	0	2	NS	X122000	122000	1	G	D	24.7	54.67	3.45	0.0516	0.04	0.183	0.14	0.1	0.036	0.016	0.051	0.023	4.8	1.05	0.2	6.05	19162	0.4896	1.7442	-1.2546	NAF
NS0172	238	242	NS	BX124122-BX124123	X124122	2			68.32	5.649	0.22	0.021	0.01512	0.021	0.315	0.09	0.012	0.01	0.061	0.085	-0.01	-0.01	-0.01	-0.03	2725	0.306	1.56978	-1.26378	NAF
NS0172	134	138	NS	BX124069-BX124070	X124069	2			67.74	6.484	0.168	0.011	0.00792	0.011	0.271	0.078	0.012	0.001	0.073	0.08	-0.01	-0.01	-0.01	-0.03	2699	0.0306	1.360476	-1.329876	NAF
NS0172	304	306	NS	X122156	122156	1	G	W	26.86	43.01	4.07	0.3741	0.29	0.187	3.85	0.48	0.067	0.229	0.202	0.131	0.54	7.85	0.47	8.86	19314	7.0074	8.37216	-1.36476	NAF
NS0172	148	148	NS	BX124075-BX124076	X124075	2			65.84	7.82	0.175	0.012	0.00864	0.012	0.327	0.086	0.016	0.002	0.059	0.089	-0.01	-0.01	-0.01	-0.03	2702	0.0612	1.500012	-1.438812	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0172	112	116	NS	BX124058-BX124059	X124058	2			68.93	5.147	0.153	0.013	0.00936	0.013	0.256	0.089	0.017	0.003	0.068	0.092	-0.01	-0.01	-0.01	-0.03	2694	0.0918	1.552338	-1.460538	NAF
NS0172	100	104	NS	BX124052-BX124053	X124052	2			67.62	6.464	0.106	0.009	0.00648	0.009	0.246	0.089	0.017	0.002	0.061	0.126	-0.01	-0.01	-0.01	-0.03	2691	0.0612	1.552338	-1.491138	NAF
NS0172	206	210	NS	BX124106-BX124107	X124106	2			68.1	6.089	0.213	0.015	0.0108	0.015	0.264	0.093	0.017	0.004	0.086	0.083	-0.01	-0.01	-0.01	-0.03	2717	0.1224	1.622106	-1.499706	NAF
NS0172	284	288	NS	BX124145-BX124146	X124145	2			68.96	5.213	0.186	0.031	0.02232	0.031	0.215	0.095	0.012	0.004	0.032	0.069	-0.01	-0.01	-0.01	-0.03	2736	0.1224	1.65699	-1.53459	NAF
NS0172	250	254	NS	BX124128-BX124129	X124128	2			67.28	6.738	0.183	0.015	0.0108	0.015	0.326	0.105	0.011	0.004	0.05	0.082	-0.01	-0.01	-0.01	-0.03	2728	0.1224	1.83141	-1.70901	NAF
NS0172	56	58	NS	X122029	122029	1	G	D	34.84	38.72	2.99	0.7482	0.58	0.135	0.59	0.11	0.125	0.006	0.402	0.021	4.45	1.22	0.24	5.91	19190	0.1836	1.91862	-1.73502	NAF
NS0172	280	284	NS	BX124143-BX124144	X124143	2			67.94	6.196	0.22	0.034	0.02448	0.034	0.251	0.106	0.017	0.003	0.04	0.07	-0.01	-0.01	-0.01	-0.03	2735	0.0918	1.848852	-1.757052	NAF
NS0172	210	214	NS	BX124108-BX124109	X124108	2			67.73	5.733	0.165	0.013	0.00936	0.013	0.286	0.11	0.018	0.004	0.069	0.084	-0.01	-0.01	-0.01	-0.03	2718	0.1224	1.91862	-1.79622	NAF
NS0172	242	246	NS	BX124124-BX124125	X124124	2			67.64	6.486	0.189	0.017	0.01224	0.017	0.299	0.114	0.012	0.004	0.063	0.094	-0.01	-0.01	-0.01	-0.03	2726	0.1224	1.988388	-1.865988	NAF
NS0172	142	146	NS	BX124073-BX124074	X124073	2			66.84	7.379	0.18	0.012	0.00864	0.012	0.331	0.109	0.018	0.001	0.061	0.087	-0.01	-0.01	-0.01	-0.03	2701	0.0306	1.901178	-1.870578	NAF
NS0172	202	206	NS	BX124104-BX124105	X124104	2			68.33	6.081	0.125	0.012	0.00864	0.012	0.268	0.113	0.017	0.003	0.038	0.076	-0.01	-0.01	-0.01	-0.03	2716	0.0918	1.970946	-1.879146	NAF
NS0172	78	80	NS	X122040	122040	1	G	D	36.65	39.84	0.96	0.5031	0.39	0.048	0.99	0.14	0.105	0.018	0.155	0.015	1.28	3.19	0	4.47	19201	0.5508	2.44188	-1.89108	NAF
NS0172	138	142	NS	BX124071-BX124072	X124071	2			66.48	7.849	0.134	0.01	0.0072	0.01	0.3	0.111	0.017	0.001	0.056	0.086	-0.01	-0.01	-0.01	-0.03	2700	0.0306	1.936062	-1.905462	NAF
NS0172	256	260	NS	BX124131-BX124132	X124131	2			66.05	8.175	0.271	0.022	0.01584	0.022	0.393	0.124	0.014	0.006	0.081	0.074	0.02	-0.01	-0.01	0	2729	0.1836	2.162808	-1.979208	NAF
NS0172	218	222	NS	BX124112-BX124113	X124112	2			66.26	7.012	0.226	0.021	0.01512	0.021	0.375	0.155	0.02	0.009	0.066	0.081	-0.01	-0.01	-0.01	-0.03	2720	0.2754	2.70351	-2.42811	NAF
NS0172	246	250	NS	BX124126-BX124127	X124126	2			64.21	8.591	0.409	0.027	0.01944	0.027	0.449	0.154	0.013	0.006	0.143	0.083	-0.01	-0.01	-0.01	-0.03	2727	0.1836	2.686068	-2.502468	NAF
NS0172	80	82	NS	X122041	122041	1	G	D	36.41	36.82	1.32	0.8127	0.63	0.056	1.84	0.2	0.075	0.02	0.459	0.017	0.64	5.45	0	6.09	19202	0.612	3.4884	-2.8764	NAF
NS0172	162	164	NS	X122083	122083	1	G	W	38.64	34.09	1.63	0.6579	0.51	0.07	2.88	0.35	0.042	0.094	0.346	0.133	0.07	4.58	-0.26	4.39	19243	2.8764	6.1047	-3.2283	NAF
NS0172	270	272	NS	X122138	122138	1	G	W	25.4	46.5	3.14	0.645	0.5	0.132	3.93	0.6	0.133	0.236	0.317	0.14	0.42	6.75	0.51	7.68	19297	7.2216	10.4652	-3.2436	NAF
NS0172	234	236	NS	X122120	122120	1	G	W	36.29	38.49	1.6	0.516	0.4	0.077	2.48	0.3	0.054	0.061	0.286	0.125	0.19	4.03	-0.24	3.98	19279	1.8666	5.2326	-3.366	NAF
NS0172	88	90	NS	X122045	122045	1	G	W	35.92	39.08	1.02	0.6966	0.54	0.043	2.06	0.24	0.05	0.022	0.379	0.03	0.19	5.06	-0.37	4.88	19206	0.6732	4.18608	-3.51288	NAF
NS0172	68	70	NS	X122035	122035	1	G	D	33.8	39.46	0.85	0.3354	0.26	0.038	1.07	0.33	0.22	0.071	0.129	0.006	2.79	5.74	0.22	8.75	19196	2.1726	5.75586	-3.58326	NAF
NS0172	84	86	NS	X122043	122043	1	G	D	34.21	39.5	1.15	0.8256	0.64	0.054	2.24	0.29	0.075	0.028	0.41	0.057	0.29	6.28	-0.18	6.39	19204	0.8568	5.05818	-4.20138	NAF
NS0172	232	234	NS	X122119	122119	1	G	W	27.77	45.04	2.4	0.6579	0.51	0.116	2.98	0.72	0.105	0.272	0.527	0.147	0.41	5.69	0.59	6.69	19278	8.3232	12.55824	-4.23504	NAF
NS0172	82	84	NS	X122042	122042	1	G	D	36.35	37	1.19	0.774	0.6	0.053	1.87	0.27	0.087	0.014	0.438	0.018	0.63	5.32	0.01	5.96	19203	0.4284	4.70934	-4.28094	NAF
NS0172	224	226	NS	X122115	122115	1	G	W	34.1	41.81	1.61	0.5547	0.43	0.083	2.48	0.34	0.034	0.046	0.162	0.063	0.14	3.91	-0.25	3.8	19274	1.4076	5.93028	-4.52268	NAF
NS0172	198	200	NS	X122102	122102	1	G	W	31.11	42.02	2.77	0.5547	0.43	0.134	3.55	0.6	0.062	0.188	0.534	0.259	0.13	3.89	0.17	4.19	19261	5.7528	10.4652	-4.7124	NAF
NS0172	168	170	NS	X122086	122086	1	G	W	39.27	33	1.34	0.7998	0.62	0.053	2.6	0.33	0.057	0.024	0.387	0.192	0.08	5.02	-0.5	4.6	19246	0.7344	5.75586	-5.02146	NAF
NS0172	226	228	NS	X122116	122116	1	G	W	25.69	40.9	6.33	0.4515	0.35	0.291	6.13	1.13	0.351	0.472	0.215	0.188	0.27	5.46	0.83	6.56	19275	14.4432	19.70946	-5.26626	NAF
NS0172	300	302	NS	X122154	122154	1	G	W	28.25	44.6	2.1	0.5418	0.42	0.1	2.94	0.49	0.093	0.107	0.154	0.096	0.53	7.65	0.09	8.27	19312	3.2742	8.54658	-5.27238	NAF
NS0172	70	72	NS	X122036	122036	1	G	D	29.57	41.33	0.72	0.7482	0.58	0.034	2.05	0.36	0.127	0.024	0.212	0.023	1.84	10.13	0.08	12.05	19197	0.7344	6.27912	-5.54472	NAF
NS0172	298	300	NS	X122153	122153	1	G	W	30.67	41.07	2.36	0.4902	0.38	0.107	3.06	0.55	0.085	0.124	0.123	0.07	0.34	7.1	0.04	7.48	19311	3.7944	9.5931	-5.7987	NAF
NS0172	266	268	NS	X122136	122136	1	G	W	29.65	41.31	3.07	0.6837	0.53	0.132	3.76	0.57	0.11	0.105	0.412	0.149	0.37	6.64	0.12	7.13	19295	3.213	9.94194	-6.72894	NAF
NS0172	66	68	NS	X122034	122034	1	G	D	33.24	34.37	0.97	0.7869	0.61	0.046	2.34	0.44	0.103	0.021	0.271	0.03	1.87	11.31	0.01	13.19	19195	0.6426	7.67448	-7.03188	NAF
NS0172	92	94	NS	X122047	122047	1	G	W	37.71	35.35	1.34	0.7998	0.62	0.057	2.35	0.48	0.084	0.027	0.495	0.051	-0.03	5.23	-0.57	4.63	19208	0.8262	8.37216	-7.54596	NAF
NS0172	156	158	NS	X122080	122080	1	G	W	32.38	42.26	1.3	0.8256	0.64	0.051	2.6	0.52	0.099	0.044	0.409	0.196	0.11	5.2	-0.13	5.18	19240	1.3464	9.06984	-7.72344	NAF
NS0172	322	324	NS	X122165	122165	1	G	W	32.73	40.28	1.99	0.5031	0.39	0.139	2.04	0.59	0.083	0.056	0.324	0.094	0.5	6.62	-0.2	6.92	19323	1.7136	10.29078	-8.57718	NAF
NS0172	302	304	NS	X122155	122155	1	G	W	31.88	36.87	1.39	0.645	0.5	0.061	2.98	0.69	0.14	0.107	0.208	0.139	0.61	10.45	-0.02	11.04	19313	3.2742	12.03498	-8.76078	NAF
NS0172	268	270	NS	X122137	122137	1	G	W	29.12	44.33	2.29	0.5934	0.46	0.105	3.22	0.59	0.139	0.048	0.385	0.148	0.36	5.96	-0.1	6.22	19296	1.4688	10.29078	-8.82198	NAF
NS0172	86	88	NS	X122044	122044	1	G	W	35.15	33.78	1.89	0.9288	0.72	0.09	3.07	0.63	0.176	0.067	0.578	0.237	0.27	7.91	-0.17	8.01	19205	2.0502	10.98846	-8.93826	NAF
NS0172	276	278	NS	X122141	122141	1	G	W	29.99	47.17	1.57	0.4386	0.34	0.106	2.1	0.58	0.054	0.038	0.148	0.074	0.28	4.27	-0.03	4.52	19300	1.1628	10.11636	-8.95356	NAF
NS0172	230	232	NS	X122118	122118	1	G	W	30.75	41.42	2.04	0.7353	0.57	0.085	3.03	1.07	0.136	0.308	0.479	0.175	0.22	5.32	0.61	6.15	19277	9.4248	18.66294	-9.23814	NAF
NS0172	182	184	NS	X122093	122093	1	G	W	35.73	38.98	1.16	0.7482	0.58	0.046	2.25	0.56	0.075	0.013	0.468	0.3	0.01	4.21	-0.18	4.04	19253	0.3978	9.76752	-9.36972	NAF
NS0172	90	92	NS	X122046	122046	1	G	W	36.17	38.58	1.08	0.7224	0.56	0.047	2.18	0.6	0.069	0.024	0.398	0.026	0.07	4.53	-0.25	4.35	19207	0.7344	10.4652	-9.7308	NAF
NS0172	158	160	NS	X122081	122081	1	G	W	35.14	39.93	1.16	0.7353	0.57	0.047	2.37	0.62	0.076	0.035	0.219	0.118	0.07	4.31	-0.14	4.24	19241	1.071	10.81404	-9.74304	NAF
NS0172	108	110	NS	X122056	122056	1	G	W	38.22	35.29	1.33	0.7998	0.62	0.056	2.3	0.6	0.081	0.015	0.502	0.189	0.05	4.29	-0.26	4.08	19216	0.459	10.4652	-10.0062	NAF
NS0172	310	312	NS	X122159	122159	1	G	W	31.61	38.94	1.78	0.5418	0.42	0.118	2.73	0.72	0.113	0.074	0.186	0.115	0.54	9.03	-0.03	9.54	19317	2.2644	12.55824	-10.29384	NAF
NS0172	186	188	NS	X122095	122095	1	G	W	37.78	36.3	1.03	0.774	0.6	0.043	2.21	0.62	0.122	0.013	0.399	0.226	0.01	4.03	-0.32	3.72	19255	0.3978	10.81404	-10.41624	NAF
NS0172	262	264	NS	X122134	122134	1	G	W	29.52	43.55	2.2	0.7095	0.55	0.102	3.08	0.75	0.051	0.087	0.306	0.11	0.36	6.12	0.2	6.68	19293	2.6622	13.0815	-10.4193	NAF
NS0172	294	296	NS	X122150	122150	1	G	W	31.13	40.77	2.11	0.5805	0.45	0.108	2.97	0.76	0.122	0.092	0.18	0.113	0.48	6.72	-0.05	7.15	19309	2.8152	13.25592	-10.44072	NAF
NS0172	110	112	NS	X122057	122057	1	G	W	38.05	35.05	1.38	0.8256	0.64	0.062	2.51	0.66	0.079	0.017	0.452	0.179	0.08	4.43	-0.16	4.35	19217	0.5202	11.51172	-10.99152	NAF
NS0172	326	328	NS	X122167	122167	1	G	W	28.18	45.22	1.98	0.5934	0.46	0.094	2.34	0.85	0.092	0.119	0.246	0.055	0.33	7.6	0.1	8.03	19325	3.6414	14.8257	-11.1843	NAF
NS0172	318	320	NS	X122163	122163	1	G	W	27.34	43.53	2.28	0.5547	0.43	0.134	2.6	0.85	0.141	0.115	0.519	0.167	0.5	9.18	0.12	9.8	19321	3.519	14.8257	-11.3067	NAF
NS0172	178	180	NS	X122091	122091	1	G	W	36.35	38.06	1.21	0.7611	0.59	0.05	2.39	0.7	0.076	0.015	0.351	0.195	0.08	3.88	-0.05	3.91	19251	0.459	12.2094	-11.7504	NAF
NS0172	296	298	NS	X122152	122152	1	G	W	30.96	46.27	1.06	0.3999	0.31	0.049	1.95	0.78	0.08	0.051	0.12	0.074	0.18	4.38	0.02	4.58	19310	1.5606	13.60476	-12.04416	NAF
NS0172	316	318	NS	X122162	122162	1	G	W	29.05	42.82	1.38	0.5805	0.45	0.064	2.54	0.8	0.124	0.061	0.292	0.138	0.37	9.01	-0.02	9.36	19320	1.8666	13.9536	-12.087	NAF
NS0172	188	190	NS	X122096	122096	1	G	W	36.18	38.13	1.11	0.774	0.6	0.044	2.32	0.72	0.091	0.015	0.435	0.208	0.04	4.21	-0.09	4.16	19256	0.459	12.55824	-12.09924	NAF
NS0172	126	128	NS	X122065	122065	1	G	W	34.94	39.26	1.06	0.903	0.7	0.042	2.19	0.72	0.089	0.007	0.458	0.271	0.02	4.56	-0.02	4.56	19225	0.2142	12.55824	-12.34404	NAF
NS0172	324	326	NS	X122166	122166	1	G	W	32.63	40.43	2.22	0.5031	0.39	0.203	1.81	0.79	0.081	0.042	0.262	0.074	0.72	5.76	0.01	6.49	19324	1.2852	13.77918	-12.49398	NAF
NS0172	272	274	NS	X122139	122139	1	G	W	32.45	39.54	1.52	0.8385	0.65	0.07	2.93	0.81	0.159	0.052	0.215	0.088	0.24	7.12	-0.18	7.18	19298	1.5912	14.12802	-12.53682	NAF
NS0172	292	294	NS	X122149	122149	1	G	W	30.98	42.22	1.62	0.5934	0.46	0.085	2.62	0.92	0.108	0.11	0.191	0.118	0.4	6.17	0.16	6.73	19308	3.366	16.04664	-12.68064	NAF
NS0172	134	136	NS	X122069	122069	1	G	W	37.85	36.54	1.04	0.7998	0.62	0.041	2.04	0.74	0.107	0.007	0.437	0.123	-0.01	3.74	-0.2	3.53	19229	0.2142	12.90708	-12.69288	NAF
NS0172	190	192	NS	X122097	122097	1	G	W	32.13	42.26	1.1	0.903	0.7	0.042	2.55	0.78	0.1	0.015	0.45	0.241	0.05	5.17	0.06	5.28	19257	0.459	13.60476	-13.14576	NAF
NS0172	194	196	NS	X122099	122099	1	G	W	30.29	44.14	1.32	0.9546	0.74	0.05	2.59	0.83	0.121	0.042	0.479	0.388	0.08	5.48	0.1	5.66	19259	1.2852	14.47686	-13.19166	NAF
NS0172	192	194	NS	X122098	122098	1	G	W	34.92	38.89	1.07	0.8385	0.65	0.047	2.39	0.8	0.08	0.021	0.419	0.209	0.2	4.81	-0.05	4.96	19258	0.6426	13.9536	-13.311	NAF
NS0172	148	150	NS	X122076	122076	1	G	W	37.59	36.04	1.21	0.7611	0.59	0.051	2.36	0.79	0.118	0.015	0.313	0.181	0.05	4.01	-0.15	3.91	19236	0.459	13.77918	-13.32018	NAF
NS0172	132	134	NS	X122068	122068	1	G	W	37.4	37.17	0.96	0.8385	0.65	0.043	2.08	0.79	0.088	0.009	0.439	0.115	0	3.99	-0.11	3.88	19228	0.2754	13.77918	-13.50378	NAF
NS0172	306	308	NS	X122157	122157	1	G	W	30.39	45.67	1.24	0.387	0.3	0.113	1.7	0.81	0.074	0.019	0.062	0.038	0.37	5.74	0.07	6.18	19315	0.5814	14.12802	-13.54662	NAF
NS0172	184	186	NS	X122094	122094	1	G	W	35.28	38.85	0.92	0.8772	0.68	0.041	2.26	0.82	0.11	0.018	0.473	0.187	0.03	4.52	-0.04	4.51	19254	0.5508	14.30244	-13.75164	NAF
NS0172	96	98	NS	X122049	122049	1	G	W	36.02	37.72	0.92	0.8256	0.64	0.041	2.14	0.84	0.122	0.02	0.346	0.035	0.21	4.84	-0.06	4.99	19210	0.612	14.65128	-14.03928	NAF
NS0172	176	178	NS	X122090	122090	1	G	W	35.32	39.41	1	0.8256	0.64	0.044	2.28	0.84	0.09	0.013	0.411	0.171	0.03	4.1	0.06	4.19	19250	0.3978	14.65128	-14.25348	NAF
NS0172	174	176	NS	X122089	122089	1	G	W	34.84	40.08	1.01	0.8256	0.64	0.045	2.3	0.84	0.1	0.01	0.504	0.157	0.04	4.25	0.05	4.34	19249	0.306	14.65128	-14.34528	NAF
NS0172	106	108	NS	X122055	122055	1	G	W	34.83	39.97	0.92	0.8385	0.65	0.04	2.22	0.85	0.083	0.015	0.303	0.105	0.01	4.33	0.08	4.42	19215	0.459	14.8257	-14.3667	NAF
NS0172	94	96	NS	X122048	122048	1	G	W	35.6	37.47	0.97	0.8772	0.68	0.044	2.36	0.86	0.113	0.02	0.365	0.057	0.06	5.37	-0.02	5.41	19209	0.612	15.00012	-14.38812	NAF
NS0172	196	198	NS	X122100	122100	1	G	W	33.28	41.68	1.17	0.7482	0.58	0.046	2.31	0.9	0.127	0.02	0.358	0.2	0.03	4.31	-0.02	4.32	19260	0.612	15.6978	-15.0858	NAF
NS0172	146	148	NS	X122075	122075	1	G	W	37.34	35.92	1.31	0.7482	0.58	0.056	2.6	0.9	0.102	0.017	0.292	0.135	0.09	3.95	0.02	4.06	19235	0.5202	15.6978	-15.1776	NAF
NS0172	150	152	NS	X122077	122077	1	G	W	31.93	45.19	0.94	0.6837	0.53	0.044	2.07	0.91	0.099	0.022	0.243	0.075	0.06	3.68	0.15	3.89	19237	0.6732	15.87222	-15.19902	NAF
NS0172	128	130	NS	X122066	122066	1	G	W	35.31	39.27	0.86	0.903	0.7	0.037	2.15	0.91	0.09	0.014	0.331	0.222	-0.03	4.47	0.02	4.46	19226	0.4284	15.87222	-15.44382	NAF
NS0172	320	322	NS	X122164	122164	1	G	W	31.82	41.79	1.59	0.4257	0.33	0.135	1.94	0.96	0.071	0.038	0.171	0.05	0.57	6.36	0.2	7.13	19322	1.1628	16.74432	-15.58152	NAF
NS0172	228	230	NS	X122117	122117	1	G	W	32.02	40.82	1.81	0.774	0.6	0.084	2.96	1.26	0.071	0.193	0.205	0.083	0.17	4.9	0.56	5.63	19276	5.9058	21.97692	-16.07112	NAF
NS0172	172	174	NS	X122088	122088	1	G	W	34.25	40.24	1.05	0.8256	0.64	0.044	2.31	0.96	0.091	0.011	0.515	0.133	0.05	4.25	0.22	4.52	19248	0.3366	16.74432	-16.40772	NAF
NS0172	138	140	NS	X122071	122071	1	G	W	37.66	36.46	0.99	0.7869	0.61	0.045	2.12	0.98	0.109	0.008	0.313	0.174	0	3.72	0.04	3.76	19231	0.2448	17.09316	-16.84836	NAF
NS0172	328	330	NS	X122168	122168	1	G	W	30.39	44.16	1.02	0.5547	0.43	0.047	1.86	1.05	0.091	0.046	0.217	0.09	0.22	6.43	0.25	6.9	19326	1.4076	18.3141	-16.9065	NAF
NS0172	308	310	NS	X122158	122158	1	G	W	30.49	38.52	1.53	0.5805	0.45	0.108	2.8	1.05	0.138	0.031	0.196	0.088	0.57	10.44	0.17	11.18	19316	0.9486	18.3141	-17.3655	NAF
NS0172	180	182	NS	X122092	122092	1	G	W	32.86	42.29	0.91	0.8643	0.67	0.038	2.27	1.05	0.116	0.019	0.371	0.18	0.06	4.31	0.23	4.6	19252	0.5814	18.3141	-17.7327	NAF
NS0172	98	100	NS	X122050	122050	1	G	W	37.26	36.98	0.9	0.7353	0.57	0.042	2.03	1.05	0.126	0.018	0.344	0.033	0.16	4.11	-0.02	4.25	19211	0.5508	18.3141	-17.7633	NAF
NS0172	314	316	NS	X122161	122161	1	G	W	34.21	39.21	1.12	0.5676	0.44	0.067	2	1.06	0.156	0.02	0.17	0.087	0.16	6.09	-0.03	6.22	19319	0.612	18.48852	-17.87652	NAF
NS0172	222	224	NS	X122114	122114	1	G	W	33.76	40.52	1.35	0.7353	0.57	0.064	2.3	1.09	0.132	0.03	0.299	0.08	0.18	4.4	0.18	4.76	19273	0.918	19.01178	-18.09378	NAF
NS0172	170	172	NS	X122087	122087	1	G	W	36.94	35.94	1.2	0.774	0.6	0.047	2.42	1.09	0.081	0.017	0.44	0.193	0.06	4.39	0.24	4.69	19247	0.5202	19.01178	-18.49158	NAF
NS0172	144	146	NS	X122074	122074	1	G	W	38.49	34.48	1.4	0.6708	0.52	0.057	2.54	1.09	0.109	0.016	0.288	0.147	0.1	3.51	0.19	3.8	19234	0.4896	19.01178	-18.52218	NAF
NS0172	208	210	NS	X122107	122107	1	G	W	34.55	38.04	1.54	0.8643	0.67	0.054	2.48	1.13	0.132	0.028	0.596	0.218	0.06	4.87	0.17	5.1	19266	0.8568	19.70946	-18.85266	NAF
NS0172	252	254	NS	X122129	122129	1	G	W	39.16	33.85	1.42	0.7353	0.57	0.064	2.26	1.13	0.064	0.026	0.19	0.04	0.04	3.77	0.21	4.02	19288	0.7956	19.70946	-18.91386	NAF
NS0172	130	132	NS	X122067	122067	1	G	W	37.05	37.22	1.04	0.7482	0.58	0.042	2.05	1.11	0.116	0.011	0.429	0.138	-0.02	3.46	0.17	3.61	19227	0.3366	19.36062	-19.02402	NAF
NS0172	312	314	NS	X122160	122160	1	G	W	33.15	42.07	0.97	0.5031	0.39	0.053	1.91	1.13	0.075	0.022	0.079	0.049	0.2	4.82	0.4	5.42	19318	0.6732	19.70946	-19.03626	NAF
NS0172	210	212	NS	X122108	122108	1	G	W	35.14	37.36	1.49	0.8772	0.68	0.055	2.59	1.14	0.113	0.027	0.545	0.238	0.08	4.9	0.28	5.26	19267	0.8262	19.88388	-19.05768	NAF
NS0172	100	102	NS	X122052	122052	1	G	W	34.72	39.88	0.86	0.8127	0.63	0.037	2.07	1.13	0.128	0.016	0.432	0.04	0.08	4.36	0.21	4.65	19212	0.4896	19.70946	-19.21986	NAF
NS0172	104	106	NS	X122054	122054	1	G	W	34.39	39.91	0.81	0.9159	0.71	0.042	2.33	1.16	0.114	0.019	0.315	0.072	0.08	4.84	0.27	5.19	19214	0.5814	20.23272	-19.65132	NAF
NS0172	124	126	NS	X122064	122064	1	G	W	32.12	40.04	2.43	0.6837	0.53	0.097	3.23	1.26	0.064	0.032	0.859	0.32	0.09	4.02	0.73	4.84	19224	0.9792	21.97692	-20.99772	NAF
NS0172	112	114	NS	X122058	122058	1	G	W	38.01	35.07	1.33	0.6837	0.53	0.057	2.42	1.26	0.078	0.016	0.39	0.099	0.02	3.43	0.48	3.93	19218	0.4896	21.97692	-21.48732	NAF
NS0172	206	208	NS	X122106	122106	1	G	W	30.97	43.57	1.14	0.8901	0.69	0.042	2.39	1.28	0.076	0.027	0.311	0.167	0.09	4.76	0.54	5.39	19265	0.8262	22.32576	-21.49956	NAF
NS0172	136	138	NS	X122070	122070	1	G	W	36.36	36.17	1.02	0.9417	0.73	0.044	2.41	1.25	0.096	0.009	0.401	0.205	-0.04	4.52	0.45	4.93	19230	0.2754	21.8025	-21.5271	NAF
NS0172	286	288	NS	X122146	122146	1	G	W	32.35	42.87	2.26	0.4386	0.34	0.134	1.72	1.29	0.051	0.028	0.18	0.045	0.55	3.19	0.57	4.31	19305	0.8568	22.50018	-21.64338	NAF
NS0172	102	104	NS	X122053	122053	1	G	W	33.01	41.85	0.79	0.8643	0.67	0.039	2.18	1.28	0.118	0.017	0.349	0.041	0.06	4.56	0.38	5	19213	0.5202	22.32576	-21.80556	NAF
NS0172	120	122	NS	X122062	122062	1	G	W	36.83	37.39	1.13	0.7224	0.56	0.043	2.02	1.33	0.086	0.013	0.56	0.092	-0.02	3.24	0.54	3.76	19222	0.3978	23.19786	-22.80006	NAF
NS0172	256	258	NS	X122131	122131	1	G	W	35.11	37.1	1.56	0.774	0.6	0.071	2.68	1.37	0.077	0.031	0.268	0.062	0.12	4.78	0.63	5.53	19290	0.9486	23.89554	-22.94694	NAF
NS0172	278	280	NS	X122142	122142	1	G	W	27.9	49.2	1.32	0.5031	0.39	0.086	1.98	1.38	0.087	0.022	0.165	0.051	0.24	4.19	0.77	5.2	19301	0.6732	24.06996	-23.39676	NAF
NS0172	140	142	NS	X122072	122072	1	G	W	32.72	41.82	0.85	0.8901	0.69	0.038	2.31	1.39	0.102	0.021	0.274	0.125	0	4.3	0.64	4.94	19232	0.6426	24.24438	-23.60178	NAF
NS0172	152	154	NS	X122078	122078	1	G	W	33.44	35.12	1.84	1.032	0.8	0.076	3.6	1.51	0.431	0.083	0.525	0.37	0.17	7.02	-0.03	7.16	19238	2.5398	26.33742	-23.79762	NAF
NS0172	160	162	NS	X122082	122082	1	G	W	29.88	45.88	0.8	0.8127	0.63	0.032	2.29	1.4	0.092	0.019	0.174	0.104	0.07	4.54	0.72	5.33	19242	0.5814	24.4188	-23.8374	NAF
NS0172	142	144	NS	X122073	122073	1	G	W	34.79	38.38	0.98	0.9546	0.74	0.041	2.54	1.43	0.097	0.01	0.263	0.227	0.04	4.74	0.67	5.45	19233	0.306	24.94206	-24.63606	NAF
NS0172	260	262	NS	X122133	122133	1	G	W	28.32	44.06	2.32	0.6966	0.54	0.115	3.27	1.61	0.127	0.077	0.404	0.119	0.33	5.3	0.92	6.55	19292	2.3562	28.08162	-25.72542	NAF
NS0172	122	124	NS	X122063	122063	1	G	W	32.88	41.08	1.36	0.7353	0.57	0.057	2.43	1.52	0.062	0.019	0.562	0.164	0.05	3.63	0.94	4.62	19223	0.5814	26.51184	-25.93044	NAF
NS0172	200	202	NS	X122103	122103	1	G	W	32.8	39.72	1.39	0.903	0.7	0.053	2.69	1.54	0.109	0.03	0.382	0.187	0.09	4.83	0.78	5.7	19262	0.918	26.86068	-25.94268	NAF
NS0172	204	206	NS	X122105	122105	1	G	W	34	40.94	1	0.7353	0.57	0.046	2.05	1.55	0.133	0.031	0.216	0.066	0.05	3.42	0.66	4.13	19264	0.9486	27.0351	-26.0865	NAF
NS0172	254	256	NS	X122130	122130	1	G	W	35	38.51	1.08	0.8256	0.64	0.051	2.4	1.54	0.078	0.021	0.112	0.062	0.08	4.42	0.77	5.27	19289	0.6426	26.86068	-26.21808	NAF
NS0172	216	218	NS	X122111	122111	1	G	W	33.3	39.21	1.83	0.6966	0.54	0.079	2.74	1.71	0.112	0.081	0.446	0.111	0.13	4.12	0.9	5.15	19270	2.4786	29.82582	-27.34722	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0172	242	244	NS	X122124	122124	1	G	W	34.9	38.66	1.25	0.7998	0.62	0.052	2.23	1.65	0.08	0.021	0.282	0.1	0.03	3.62	0.95	4.6	19283	0.6426	28.7793	-28.1367	NAF
NS0172	240	242	NS	X122123	122123	1	G	W	33.09	39.64	1.47	0.8643	0.67	0.061	2.53	1.76	0.072	0.054	0.312	0.186	0.07	4.17	1.18	5.42	19282	1.6524	30.69792	-29.04552	NAF
NS0172	212	214	NS	X122109	122109	1	G	W	33.76	39.51	1.12	0.8385	0.65	0.046	2.3	1.81	0.169	0.029	0.367	0.076	0.02	4.32	0.81	5.15	19268	0.8874	31.57002	-30.68262	NAC
NS0172	220	222	NS	X122113	122113	1	G	W	31.53	39.77	2.05	0.774	0.6	0.092	3	1.97	0.096	0.058	0.398	0.109	0.21	4.54	1.44	6.19	19272	1.7748	34.36074	-32.58594	NAC
NS0172	202	204	NS	X122104	122104	1	G	W	28.39	47.26	0.88	0.8643	0.67	0.038	2.23	1.97	0.087	0.034	0.256	0.093	0.09	4.11	1.37	5.57	19263	1.0404	34.36074	-33.32034	NAC
NS0172	282	284	NS	X122144	122144	1	G	W	30.09	46.32	1.25	0.4386	0.34	0.071	1.78	1.96	0.092	0.022	0.159	0.042	0.27	2.89	1.28	4.44	19303	0.6732	34.18632	-33.51312	NAC
NS0172	114	116	NS	X122059	122059	1	G	W	36.4	34.4	1.17	0.9546	0.74	0.047	2.57	2.02	0.241	0.04	0.426	0.18	0.11	4.6	0.75	5.46	19219	1.224	35.23284	-34.00884	NAC
NS0172	238	240	NS	X122122	122122	1	G	W	30.18	41.93	1.81	0.8514	0.66	0.084	2.95	2.13	0.126	0.083	0.385	0.187	0.14	4.38	1.41	5.93	19281	2.5398	37.15146	-34.61166	NAC
NS0172	250	252	NS	X122128	122128	1	G	W	32.61	40.93	1.09	0.8643	0.67	0.044	2.26	2.04	0.085	0.027	0.246	0.057	0.06	3.89	1.4	5.35	19287	0.8262	35.58168	-34.75548	NAC
NS0172	280	282	NS	X122143	122143	1	G	W	29.8	45.97	1.45	0.4515	0.35	0.082	1.98	2.04	0.104	0.027	0.276	0.05	0.26	3.13	1.26	4.65	19302	0.8262	35.58168	-34.75548	NAC
NS0172	118	120	NS	X122061	122061	1	G	W	34.14	38.68	0.85	0.8901	0.69	0.039	2.41	2.13	0.104	0.016	0.296	0.088	0.07	4.03	1.34	5.44	19221	0.4896	37.15146	-36.66186	NAC
NS0172	258	260	NS	X122132	122132	1	G	W	31.47	41.16	1.47	0.7353	0.57	0.065	2.63	2.25	0.066	0.031	0.287	0.056	0.23	4.28	1.67	6.18	19291	0.9486	39.2445	-38.2959	NAC
NS0172	246	248	NS	X122126	122126	1	G	W	30.25	39.32	3.04	0.7095	0.55	0.124	3.67	2.4	0.131	0.044	0.794	0.218	0.19	4.07	1.86	6.12	19285	1.3464	41.8608	-40.5144	NAC
NS0172	248	250	NS	X122127	122127	1	G	W	30.67	42.02	1.29	0.8643	0.67	0.05	2.48	2.43	0.086	0.028	0.422	0.081	0.06	3.98	1.98	6.02	19286	0.8568	42.38406	-41.52726	NAC
NS0172	288	290	NS	X122147	122147	1	G	W	26.85	45.86	1.52	0.6321	0.49	0.065	2.8	2.59	0.112	0.108	0.303	0.104	0.25	4.95	2.06	7.26	19306	3.3048	45.17478	-41.86998	NAC
NS0172	116	118	NS	X122060	122060	1	G	W	34.17	37.71	0.91	0.8901	0.69	0.041	2.45	2.49	0.128	0.018	0.345	0.092	0.07	3.89	1.72	5.68	19220	0.5508	43.43058	-42.87978	NAC
NS0172	218	220	NS	X122112	122112	1	G	W	33.63	35.46	1.63	0.903	0.7	0.077	3.09	2.73	0.148	0.045	0.328	0.105	0.21	4.99	2.01	7.21	19271	1.377	47.61666	-46.23966	NAC
NS0172	284	286	NS	X122145	122145	1	G	W	27.15	49.08	0.96	0.5289	0.41	0.048	1.94	2.72	0.071	0.017	0.21	0.04	0.13	3.07	2.29	5.49	19304	0.5202	47.44224	-46.92204	NAC
NS0172	244	246	NS	X122125	122125	1	G	W	31.06	39.27	1.28	0.9546	0.74	0.05	2.83	3.29	0.105	0.032	0.359	0.127	0.14	4.29	2.79	7.22	19284	0.9792	57.38418	-56.40498	NAC
NS0173	268	270	NS	X122306	122306	1	G	W	27.62	45.53	4	0.3225	0.25	0.19	3.91	0.33	0.028	0.262	0.457	0.155	0.51	3.7	0.42	4.63	19461	8.0172	5.75586	2.26134	PAF(LC)
NS0173	170	172	NS	X122256	122256	1	G	W	29.58	38.94	4.12	0.6837	0.53	0.187	4.58	0.82	0.174	0.54	0.619	0.206	0.58	5.16	0.89	6.63	19412	16.524	14.30244	2.22156	PAF(LC)
NS0173	264	266	NS	X122304	122304	1	G	W	27.1	42.86	5.52	0.2838	0.22	0.267	4.97	0.76	0.07	0.477	0.602	0.239	0.65	3.22	0.92	4.79	19459	14.5962	13.25592	1.34028	PAF(LC)
NS0173	20	22	NS	X122179	122179	1	G	D	38.9	32.41	3.2	0.903	0.7	0.122	0.07	0.005	0.123	0.038	0.025	0.029	5.42	1.11	0.3	6.83	19337	1.1628	0.08721	1.07559	PAF(LC)
NS0173	22	24	NS	X122180	122180	1	G	D	32.39	45.82	1.36	1.1739	0.91	0.06	0.06	0.005	0.113	0.017	0.049	0.015	3.7	0.63	0.24	4.57	19338	0.5202	0.08721	0.43299	PAF(LC)
NS0173	24	26	NS	X122181	122181	1	G	D	34.63	42.78	2.07	0.7224	0.56	0.092	0.05	0.005	0.137	0.016	0.03	0.027	3.36	0.84	0.2	4.4	19339	0.4896	0.08721	0.40239	PAF(LC)
NS0173	26	28	NS	X122182	122182	1	G	D	36.75	39.14	3	0.3741	0.29	0.124	0.04	0.005	0.124	0.01	0.025	0.016	2.97	1.01	0.18	4.16	19340	0.306	0.08721	0.21879	PAF(LC)
NS0173	290	294	NS	BX124317-BX124318	X124317	2			61.3	11.154	0.769	0.073	0.05256	0.073	0.858	0.096	0.019	0.06	0.099	0.096	-0.01	-0.01	-0.01	-0.03	2811	1.836	1.674432	0.161568	PAF(LC)
NS0173	18	20	NS	X122178	122178	1	G	D	27.68	53.04	1.46	0.3483	0.27	0.063	0.11	0.03	0.063	0.02	0.021	0.021	3.96	0.73	0.21	4.9	19336	0.612	0.52326	0.08874	PAF(LC)
NS0173	10	12	NS	X122174	122174	1	G	D	28.16	49.61	4.73	0.0516	0.04	0.2	0.06	0.04	0.025	0.016	0.007	0.062	3.13	1.61	0.16	4.9	19332	0.4896	0.69768	-0.20808	NAF
NS0173	16	18	NS	X122177	122177	1	G	D	29.22	49.36	2.31	0.4257	0.33	0.102	0.14	0.04	0.043	0.015	0.016	0.037	4.16	0.97	0.22	5.35	19335	0.459	0.69768	-0.23868	NAF
NS0173	6	8	NS	X122172	122172	1	G	D	36.82	41.47	1.47	0.2064	0.16	0.058	0.06	0.04	0.053	0.014	0.012	0.029	3.11	0.43	0.04	3.58	19330	0.4284	0.69768	-0.26928	NAF
NS0173	4	6	NS	X122171	122171	1	G	D	42.26	33.52	1.67	0.0774	0.06	0.08	0.07	0.04	0.047	0.013	0.01	0.019	3.29	0.46	-0.03	3.72	19329	0.3978	0.69768	-0.29988	NAF
NS0173	14	16	NS	X122176	122176	1	G	D	31.32	47.73	1.97	0.3999	0.31	0.086	0.1	0.04	0.014	0.011	0.012	0.038	3.37	0.91	0.13	4.41	19334	0.3366	0.69768	-0.36108	NAF
NS0173	44	48	NS	BX124191-BX124192	X124191	2			67.36	3.31	0.061	0.012	0.00864	0.012	0.122	0.023	0.024	0.001	0.01	0.098	0.22	0.33	0.4	0.95	2748	0.0306	0.401166	-0.370566	NAF
NS0173	8	10	NS	X122173	122173	1	G	D	40.59	35.89	1.51	0.1419	0.11	0.071	0.06	0.05	0.063	0.016	0.01	0.036	3.23	0.49	0.03	3.75	19331	0.4896	0.8721	-0.3825	NAF
NS0173	38	42	NS	BX124188-BX124189	X124188	2			65.98	4.249	0.073	0.011	0.00792	0.011	0.13	0.024	0.017	0.001	0.007	0.098	0.27	0.38	0.31	0.96	2747	0.0306	0.418608	-0.388008	NAF
NS0173	48	52	NS	BX124193-BX124194	X124193	2			66.61	3.32	0.066	0.011	0.00792	0.011	0.123	0.024	0.024	0.001	0.008	0.09	0.3	0.4	0.48	1.18	2749	0.0306	0.418608	-0.388008	NAF
NS0173	2	4	NS	X122170	122170	1	G	D	40.37	37.38	1.4	0.0774	0.06	0.064	0.05	0.04	0.056	0.01	0.011	0.026	2.73	0.4	-0.06	3.07	19328	0.306	0.69768	-0.39168	NAF
NS0173	12	14	NS	X122175	122175	1	G	D	36.67	41.47	1.88	0.129	0.1	0.079	0.1	0.04	0.037	0.01	0.006	0.037	2.78	0.76	0.05	3.59	19333	0.306	0.69768	-0.39168	NAF
NS0173	286	290	NS	BX124315-BX124316	X124315	2			62.78	9.623	0.551	0.046	0.03312	0.046	0.739	0.091	0.019	0.03	0.097	0.089	-0.01	-0.01	-0.01	-0.03	2810	0.918	1.587222	-0.669222	NAF
NS0173	176	178	NS	BX124259	X124259	2			67.3	6.4	0.329	0.024	0.01728	0.024	0.315	0.07	0.012	0.018	0.153	0.067	-0.01	-0.01	-0.01	-0.03	2782	0.5508	1.22094	-0.67014	NAF
NS0173	282	286	NS	BX124313-BX124314	X124313	2			63.2	9.106	0.572	0.048	0.03456	0.048	0.721	0.094	0.02	0.031	0.09	0.077	-0.01	-0.01	-0.01	-0.03	2809	0.9486	1.639548	-0.690948	NAF
NS0173	192	196	NS	BX124267-BX124268	X124267	2			67.86	6.264	0.284	0.029	0.02088	0.029	0.393	0.068	0.01	0.016	0.072	0.098	-0.01	-0.01	-0.01	-0.03	2786	0.4896	1.186056	-0.696456	NAF
NS0173	196	200	NS	BX124269-BX124270	X124269	2			68.79	5.048	0.109	0.013	0.00936	0.013	0.203	0.048	0.008	0.004	0.039	0.056	-0.01	-0.01	-0.01	-0.03	2787	0.1224	0.837216	-0.714816	NAF
NS0173	278	282	NS	BX124311-BX124312	X124311	2			64.03	9.072	0.473	0.039	0.02808	0.039	0.616	0.098	0.015	0.032	0.068	0.084	-0.01	-0.01	-0.01	-0.03	2808	0.9792	1.709316	-0.730116	NAF
NS0173	184	188	NS	BX124263-BX124264	X124263	2			67.75	4.955	0.332	0.029	0.02088	0.029	0.404	0.072	0.011	0.017	0.088	0.104	-0.01	-0.01	-0.01	-0.03	2784	0.5202	1.255824	-0.735624	NAF
NS0173	70	74	NS	BX124205-BX124206	X124205	2			67.12	5.06	0.165	0.017	0.01224	0.017	0.388	0.084	0.019	0.021	0.042	0.089	-0.01	-0.01	-0.01	-0.03	2755	0.6426	1.465128	-0.822528	NAF
NS0173	154	158	NS	BX124247-BX124248	X124247	2			68.56	5.239	0.136	0.018	0.01296	0.018	0.256	0.059	0.011	0.005	0.027	0.062	-0.01	-0.01	-0.01	-0.03	2776	0.153	1.029078	-0.876078	NAF
NS0173	168	172	NS	BX124255-BX124256	X124255	2			65.51	6.661	0.416	0.036	0.02592	0.036	0.58	0.103	0.023	0.03	0.065	0.101	-0.01	-0.01	-0.01	-0.03	2780	0.918	1.796526	-0.878526	NAF
NS0173	0	2	NS	X122169	122169	1	G	D	39.69	37.38	1.74	0.0516	0.04	0.083	0.06	0.07	0.052	0.011	0.021	0.024	2.99	0.49	-0.02	3.46	19327	0.3366	1.22094	-0.88434	NAF
NS0173	126	130	NS	BX124233-BX124234	X124233	2			69.15	5.118	0.092	0.014	0.01008	0.014	0.243	0.057	0.008	0.003	0.039	0.083	-0.01	-0.01	-0.01	-0.03	2769	0.0918	0.994194	-0.902394	NAF
NS0173	98	102	NS	BX124219-BX124220	X124219	2			65.98	7.285	0.268	0.03	0.0216	0.03	0.493	0.08	0.016	0.016	0.06	0.095	-0.01	-0.01	-0.01	-0.03	2762	0.4896	1.39536	-0.90576	NAF
NS0173	60	64	NS	BX124199-BX124200	X124199	2			69.4	4.6	0.062	0.015	0.0108	0.015	0.275	0.063	0.014	0.006	0.016	0.111	-0.01	-0.01	-0.01	-0.03	2752	0.1836	1.098846	-0.915246	NAF
NS0173	56	60	NS	BX124197-BX124198	X124197	2			67.8	5.203	0.043	0.012	0.00864	0.012	0.278	0.058	0.012	0.003	0.017	0.088	-0.01	-0.01	-0.01	-0.03	2751	0.0918	1.011636	-0.919836	NAF
NS0173	252	256	NS	BX124297-BX124298	X124297	2			66.46	7.102	0.256	0.025	0.018	0.025	0.433	0.074	0.01	0.012	0.049	0.08	-0.01	-0.01	-0.01	-0.03	2801	0.3672	1.290708	-0.923508	NAF
NS0173	158	162	NS	BX124249-BX124250	X124249	2			68.65	5.465	0.129	0.019	0.01368	0.019	0.315	0.067	0.01	0.008	0.034	0.115	-0.01	-0.01	-0.01	-0.03	2777	0.2448	1.168614	-0.923814	NAF
NS0173	302	306	NS	BX124323-BX124324	X124323	2			67.52	6.141	0.239	0.025	0.018	0.025	0.356	0.071	0.01	0.01	0.031	0.074	-0.01	-0.01	-0.01	-0.03	2814	0.306	1.238382	-0.932382	NAF
NS0173	36	38	NS	X122187	122187	1	G	D	36.87	41.24	1.14	0.5934	0.46	0.053	0.33	0.06	0.07	0.003	0.155	0.025	2.37	0.86	0.05	3.28	19345	0.0918	1.04652	-0.95472	NAF
NS0173	40	42	NS	X122189	122189	1	G	D	37.51	39.58	1.15	0.903	0.7	0.051	0.33	0.06	0.073	0.003	0.15	0.02	2.53	0.95	0.12	3.6	19347	0.0918	1.04652	-0.95472	NAF
NS0173	42	44	NS	X122190	122190	1	G	D	38.26	39.8	1.01	0.6063	0.47	0.047	0.32	0.06	0.062	0.003	0.156	0.016	2.03	0.83	0.12	2.98	19348	0.0918	1.04652	-0.95472	NAF
NS0173	200	204	NS	BX124271-BX124272	X124271	2			67.52	6.3	0.19	0.017	0.01224	0.017	0.293	0.067	0.011	0.006	0.064	0.06	-0.01	-0.01	-0.01	-0.03	2788	0.1836	1.168614	-0.985014	NAF
NS0173	66	70	NS	BX124203-BX124204	X124203	2			68.97	4.82	0.062	0.012	0.00864	0.012	0.273	0.067	0.014	0.005	0.02	0.1	-0.01	-0.01	-0.01	-0.03	2754	0.153	1.168614	-1.015614	NAF
NS0173	90	94	NS	BX124215-BX124216	X124215	2			67.55	6.2	0.189	0.02	0.0144	0.02	0.378	0.078	0.016	0.01	0.048	0.098	-0.01	-0.01	-0.01	-0.03	2760	0.306	1.360476	-1.054476	NAF
NS0173	180	184	NS	BX124261-BX124262	X124261	2			68.45	5.635	0.186	0.021	0.01512	0.021	0.297	0.071	0.012	0.006	0.071	0.091	-0.01	-0.01	-0.01	-0.03	2783	0.1836	1.238382	-1.054782	NAF
NS0173	298	302	NS	BX124321-BX124322	X124321	2			67.92	5.813	0.245	0.023	0.01656	0.023	0.362	0.077	0.016	0.009	0.05	0.08	-0.01	-0.01	-0.01	-0.03	2813	0.2754	1.343034	-1.067634	NAF
NS0173	64	66	NS	BX124202	X124202	2			67.18	6.004	0.066	0.011	0.00792	0.011	0.301	0.07	0.016	0.005	0.021	0.104	-0.01	-0.01	-0.01	-0.03	2753	0.153	1.22094	-1.06794	NAF
NS0173	294	298	NS	BX124319-BX124320	X124319	2			69.13	4.568	0.113	0.013	0.00936	0.013	0.208	0.067	0.014	0.003	0.025	0.062	-0.01	-0.01	-0.01	-0.03	2812	0.0918	1.168614	-1.076814	NAF
NS0173	52	56	NS	BX124195-BX124196	X124195	2			67.58	5.262	0.062	0.011	0.00792	0.011	0.3	0.069	0.016	0.004	0.018	0.086	-0.01	-0.01	-0.01	-0.03	2750	0.1224	1.203498	-1.081098	NAF
NS0173	266	270	NS	BX124305-BX124306	X124305	2			62.6	11.39	0.539	0.045	0.0324	0.045	0.722	0.122	0.02	0.034	0.078	0.084	-0.01	-0.01	-0.01	-0.03	2805	1.0404	2.127924	-1.087524	NAF
NS0173	162	164	NS	BX124252	X124252	2			69.9	3.875	0.112	0.015	0.0108	0.015	0.256	0.07	0.014	0.004	0.024	0.084	-0.01	-0.01	-0.01	-0.03	2778	0.1224	1.22094	-1.09854	NAF
NS0173	94	98	NS	BX124217-BX124218	X124217	2			66.59	6.993	0.3	0.026	0.01872	0.026	0.487	0.097	0.016	0.019	0.071	0.111	-0.01	-0.01	-0.01	-0.03	2761	0.5814	1.691874	-1.110474	NAF
NS0173	306	310	NS	BX124325-BX124326	X124325	2			67.93	4.772	0.104	0.013	0.00936	0.013	0.251	0.071	0.013	0.004	0.021	0.078	-0.01	-0.01	-0.01	-0.03	2815	0.1224	1.238382	-1.115982	NAF
NS0173	274	278	NS	BX124309-BX124310	X124309	2			65.08	7.797	0.434	0.041	0.02952	0.041	0.554	0.115	0.017	0.029	0.066	0.134	-0.01	-0.01	-0.01	-0.03	2807	0.8874	2.00583	-1.11843	NAF
NS0173	310	314	NS	BX124327-BX124328	X124327	2			68.73	4.481	0.106	0.015	0.0108	0.015	0.242	0.073	0.011	0.005	0.017	0.075	-0.01	-0.01	-0.01	-0.03	2816	0.153	1.273266	-1.120266	NAF
NS0173	38	40	NS	X122188	122188	1	G	D	36.12	42.86	0.91	0.5805	0.45	0.041	0.23	0.07	0.065	0.003	0.09	0.016	2.27	0.88	0.08	3.23	19346	0.0918	1.22094	-1.12914	NAF
NS0173	44	46	NS	X122191	122191	1	G	D	38.25	39.52	1.05	0.8514	0.66	0.052	0.25	0.07	0.11	0.003	0.157	0.041	1.95	0.85	0.14	2.94	19349	0.0918	1.22094	-1.12914	NAF
NS0173	188	192	NS	BX124265-BX124266	X124265	2			67.02	6.242	0.23	0.024	0.01728	0.024	0.306	0.084	0.014	0.01	0.078	0.074	-0.01	-0.01	-0.01	-0.03	2785	0.306	1.465128	-1.159128	NAF
NS0173	204	208	NS	BX124273-BX124274	X124273	2			67.89	6.349	0.167	0.017	0.01224	0.017	0.289	0.08	0.015	0.007	0.048	0.068	-0.01	-0.01	-0.01	-0.03	2789	0.2142	1.39536	-1.18116	NAF
NS0173	260	262	NS	BX124302	X124302	2			67.64	6.113	0.161	0.016	0.01152	0.016	0.326	0.081	0.012	0.007	0.036	0.063	-0.01	-0.01	-0.01	-0.03	2803	0.2142	1.412802	-1.198602	NAF
NS0173	102	106	NS	BX124221-BX124222	X124221	2			67.7	5.927	0.143	0.016	0.01152	0.016	0.257	0.078	0.016	0.005	0.03	0.064	-0.01	-0.01	-0.01	-0.03	2763	0.153	1.360476	-1.207476	NAF
NS0173	142	146	NS	BX124241-BX124242	X124241	2			67.8	6.358	0.12	0.014	0.01008	0.014	0.309	0.082	0.012	0.007	0.044	0.105	-0.01	-0.01	-0.01	-0.03	2773	0.2142	1.430244	-1.216044	NAF
NS0173	292	294	NS	X122318	122318	1	G	W	24.09	49.88	2.03	0.645	0.5	0.09	3.03	0.48	0.1	0.233	0.306	0.133	0.46	7.44	0.48	8.38	19473	7.1298	8.37216	-1.24236	NAF
NS0173	284	286	NS	X122314	122314	1	G	W	30.53	38.21	4.32	0.4386	0.34	0.217	4.27	1.01	0.299	0.535	0.532	0.216	0.58	4.92	0.89	6.39	19469	16.371	17.61642	-1.24542	NAF
NS0173	150	154	NS	BX124245-BX124246	X124245	2			68.53	5.278	0.12	0.015	0.0108	0.015	0.325	0.079	0.016	0.004	0.027	0.086	-0.01	-0.01	-0.01	-0.03	2775	0.1224	1.377918	-1.255518	NAF
NS0173	106	110	NS	BX124223-BX124224	X124223	2			67.45	6.453	0.209	0.021	0.01512	0.021	0.384	0.094	0.016	0.012	0.047	0.097	-0.01	-0.01	-0.01	-0.03	2764	0.3672	1.639548	-1.272348	NAF
NS0173	212	216	NS	BX124277-BX124278	X124277	2			66.35	7.323	0.187	0.017	0.01224	0.017	0.346	0.084	0.015	0.006	0.052	0.08	-0.01	-0.01	-0.01	-0.03	2791	0.1836	1.465128	-1.281528	NAF
NS0173	34	36	NS	X122186	122186	1	G	D	36.17	40.28	1.39	0.8514	0.66	0.068	0.35	0.08	0.111	0.003	0.186	0.032	3.62	0.7	0.12	4.44	19344	0.0918	1.39536	-1.30356	NAF
NS0173	48	50	NS	X122193	122193	1	G	D	35.21	43.81	0.74	1.0836	0.84	0.036	0.21	0.08	0.076	0.003	0.105	0.019	2.18	0.83	0.17	3.18	19351	0.0918	1.39536	-1.30356	NAF
NS0173	146	150	NS	BX124243-BX124244	X124243	2			67.77	5.583	0.145	0.016	0.01152	0.016	0.297	0.085	0.015	0.005	0.033	0.067	-0.01	-0.01	-0.01	-0.03	2774	0.153	1.48257	-1.32957	NAF
NS0173	244	248	NS	BX124293-BX124294	X124293	2			63.89	9.168	0.4	0.03	0.0216	0.03	0.56	0.109	0.015	0.018	0.061	0.074	-0.01	-0.01	-0.01	-0.03	2799	0.5508	1.901178	-1.350378	NAF
NS0173	248	252	NS	BX124295-BX124296	X124295	2			66.15	7.363	0.242	0.021	0.01512	0.021	0.403	0.096	0.014	0.009	0.05	0.083	-0.01	-0.01	-0.01	-0.03	2800	0.2754	1.674432	-1.399032	NAF
NS0173	164	168	NS	BX124253-BX124254	X124253	2			66.56	6.239	0.146	0.02	0.0144	0.02	0.31	0.088	0.02	0.004	0.04	0.085	-0.01	-0.01	-0.01	-0.03	2779	0.1224	1.534896	-1.412496	NAF
NS0173	122	126	NS	BX124231-BX124232	X124231	2			67.73	6.375	0.131	0.015	0.0108	0.015	0.298	0.09	0.015	0.005	0.053	0.104	-0.01	-0.01	-0.01	-0.03	2768	0.153	1.56978	-1.41678	NAF
NS0173	82	86	NS	BX124211-BX124212	X124211	2			68.51	5.163	0.115	0.012	0.00864	0.012	0.363	0.091	0.02	0.005	0.03	0.086	-0.01	-0.01	-0.01	-0.03	2758	0.153	1.587222	-1.434222	NAF
NS0173	130	134	NS	BX124235-BX124236	X124235	2			69.06	4.492	0.103	0.012	0.00864	0.012	0.181	0.087	0.016	0.002	0.042	0.086	-0.01	-0.01	-0.01	-0.03	2770	0.0612	1.517454	-1.456254	NAF
NS0173	134	138	NS	BX124237-BX124238	X124237	2			67.65	6.032	0.11	0.013	0.00936	0.013	0.261	0.094	0.016	0.004	0.041	0.083	-0.01	-0.01	-0.01	-0.03	2771	0.1224	1.639548	-1.517148	NAF
NS0173	220	224	NS	BX124281-BX124282	X124281	2			65.98	7.299	0.206	0.022	0.01584	0.022	0.374	0.105	0.017	0.009	0.049	0.119	-0.01	-0.01	-0.01	-0.03	2793	0.2754	1.83141	-1.55601	NAF
NS0173	256	260	NS	BX124299-BX124300	X124299	2			68.13	4.796	0.103	0.014	0.01008	0.014	0.258	0.1	0.011	0.006	0.026	0.065	-0.01	-0.01	-0.01	-0.03	2802	0.1836	1.7442	-1.5606	NAF
NS0173	114	118	NS	BX124227-BX124228	X124227	2			68.56	5.459	0.129	0.014	0.01008	0.014	0.235	0.094	0.018	0.002	0.043	0.06	-0.01	-0.01	-0.01	-0.03	2766	0.0612	1.639548	-1.578348	NAF
NS0173	172	176	NS	BX124257-BX124258	X124257	2			69.25	4.546	0.138	0.016	0.01152	0.016	0.231	0.1	0.018	0.005	0.057	0.091	-0.01	-0.01	-0.01	-0.03	2781	0.153	1.7442	-1.5912	NAF
NS0173	236	238	NS	BX124289	X124289	2			66.72	6.54	0.125	0.014	0.01008	0.014	0.289	0.096	0.013	0.002	0.031	0.062	-0.01	-0.01	-0.01	-0.03	2797	0.0612	1.674432	-1.613232	NAF
NS0173	86	90	NS	BX124213-BX124214	X124213	2			67.14	6.237	0.13	0.016	0.01152	0.016	0.367	0.109	0.021	0.008	0.039	0.104	-0.01	-0.01	-0.01	-0.03	2759	0.2448	1.901178	-1.656378	NAF
NS0173	74	78	NS	BX124207-BX124208	X124207	2			67.78	5.295	0.137	0.014	0.01008	0.014	0.434	0.108	0.026	0.005	0.035	0.08	-0.01	-0.01	-0.01	-0.03	2756	0.153	1.883736	-1.730736	NAF
NS0173	78	82	NS	BX124209-BX124210	X124209	2			67.94	5.397	0.16	0.014	0.01008	0.014	0.469	0.111	0.027	0.006	0.039	0.092	-0.01	-0.01	-0.01	-0.03	2757	0.1836	1.936062	-1.752462	NAF
NS0173	138	142	NS	BX124239-BX124240	X124239	2			68.34	5.307	0.081	0.012	0.00864	0.012	0.246	0.106	0.01	0.003	0.034	0.082	-0.01	-0.01	-0.01	-0.03	2772	0.0918	1.848852	-1.757052	NAF
NS0173	208	212	NS	BX124275-BX124276	X124275	2			68.22	5.726	0.131	0.017	0.01224	0.017	0.284	0.112	0.013	0.004	0.027	0.083	-0.01	-0.01	-0.01	-0.03	2790	0.1224	1.953504	-1.831104	NAF
NS0173	28	30	NS	X122183	122183	1	G	D	42.21	26.98	3.95	1.1223	0.87	0.184	0.18	0.12	0.183	0.008	0.073	0.026	4.57	1.46	0.29	6.32	19341	0.2448	2.09304	-1.84824	NAF
NS0173	216	220	NS	BX124279-BX124280	X124279	2			66.64	6.87	0.17	0.015	0.0108	0.015	0.325	0.117	0.019	0.004	0.055	0.079	-0.01	-0.01	-0.01	-0.03	2792	0.1224	2.040714	-1.918314	NAF
NS0173	110	114	NS	BX124225-BX124226	X124225	2			67.52	6.314	0.14	0.017	0.01224	0.017	0.322	0.121	0.015	0.006	0.054	0.093	-0.01	-0.01	-0.01	-0.03	2765	0.1836	2.110482	-1.926882	NAF
NS0173	240	244	NS	BX124291-BX124292	X124291	2			66.09	7.233	0.157	0.016	0.01152	0.016	0.345	0.122	0.015	0.004	0.042	0.068	-0.01	-0.01	-0.01	-0.03	2798	0.1224	2.127924	-2.005524	NAF
NS0173	232	236	NS	BX124287-BX124288	X124287	2			66.86	7.176	0.182	0.021	0.01512	0.021	0.329	0.13	0.017	0.008	0.045	0.069	-0.01	-0.01	-0.01	-0.03	2796	0.2448	2.26746	-2.02266	NAF
NS0173	224	228	NS	BX124283-BX124284	X124283	2			64.98	7.588	0.253	0.021	0.01512	0.021	0.418	0.136	0.021	0.011	0.044	0.086	-0.01	-0.01	-0.01	-0.03	2794	0.3366	2.372112	-2.035512	NAF
NS0173	262	266	NS	BX124303-BX124304	X124303	2			62.25	10.901	0.655	0.052	0.03744	0.052	0.764	0.202	0.021	0.047	0.104	0.088	-0.01	-0.01	-0.01	-0.03	2804	1.4382	3.523284	-2.085084	NAF
NS0173	32	34	NS	X122185	122185	1	G	D	39.3	31.87	3.94	0.8127	0.63	0.176	0.63	0.13	0.145	0.004	0.376	0.039	4	1.44	0.23	5.67	19343	0.1224	2.26746	-2.14506	NAF
NS0173	118	120	NS	BX124229	X124229	2			67.39	5.243	0.098	0.013	0.00936	0.013	0.267	0.132	0.028	0.003	0.043	0.09	-0.01	-0.01	-0.01	-0.03	2767	0.0918	2.302344	-2.210544	NAF
NS0173	270	274	NS	BX124307-BX124308	X124307	2			67.09	6.548	0.21	0.019	0.01368	0.019	0.38	0.141	0.02	0.008	0.033	0.071	-0.01	-0.01	-0.01	-0.03	2806	0.2448	2.459322	-2.214522	NAF

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0173	46	48	NS	X122192	122192	1	G	D	34.03	44.4	1.43	1.1997	0.93	0.064	0.3	0.14	0.091	0.002	0.136	0.029	2.05	1.03	0.17	3.25	19350	0.0612	2.44188	-2.38068	NAF
NS0173	228	232	NS	BX124285-BX124286	X124285	2			66.43	6.766	0.185	0.018	0.01296	0.018	0.327	0.152	0.017	0.006	0.049	0.091	-0.01	-0.01	-0.01	-0.03	2795	0.1836	2.651184	-2.467584	NAF
NS0173	282	284	NS	X122313	122313	1	G	W	30.32	42.13	2.27	0.5805	0.45	0.111	3.08	0.58	0.104	0.232	0.389	0.152	0.45	5.89	0.38	6.72	19468	7.0992	10.11636	-3.01716	NAF
NS0173	290	292	NS	X122317	122317	1	G	W	28.5	38.47	4.17	0.645	0.5	0.196	4.57	0.65	0.17	0.25	0.525	0.218	0.53	7.95	0.46	8.94	19472	7.65	11.3373	-3.6873	NAF
NS0173	50	52	NS	X122194	122194	1	G	D	33.99	44.34	0.92	0.774	0.6	0.043	0.59	0.24	0.117	0.01	0.078	0.022	1.2	2.41	0.05	3.66	19352	0.306	4.18608	-3.88008	NAF
NS0173	30	32	NS	X122184	122184	1	G	D	20.55	46.81	14.3	0.0258	0.02	0.44	0.55	0.36	0.123	0.005	0.027	0.103	2.14	4.87	0.38	7.39	19342	0.153	6.27912	-6.12612	NAF
NS0173	288	290	NS	X122316	122316	1	G	W	28.44	43.13	2.25	0.6579	0.51	0.107	3.31	0.6	0.133	0.134	0.417	0.17	0.54	7.37	0.19	8.1	19471	4.1004	10.4652	-6.3648	NAF
NS0173	52	54	NS	X122195	122195	1	G	D	27.52	49.08	0.74	0.6708	0.52	0.036	2.2	0.43	0.084	0.023	0.147	0.042	0.33	6.93	-0.13	7.13	19353	0.7038	7.50006	-6.79626	NAF
NS0173	70	72	NS	X122205	122205	1	G	W	31.74	37.68	2.29	0.645	0.5	0.099	3.82	1.16	0.194	0.421	0.496	0.151	0.51	6.16	0.77	7.44	19362	12.8826	20.23272	-7.35012	NAF
NS0173	80	82	NS	X122210	122210	1	G	W	36.75	33.15	1.56	0.8127	0.63	0.064	3.17	0.51	0.11	0.036	0.286	0.114	0.37	7.41	-0.36	7.42	19367	1.1016	8.89542	-7.79382	NAF
NS0173	276	278	NS	X122310	122310	1	G	W	32.26	37.07	2.68	0.6063	0.47	0.127	3.51	1.25	0.265	0.452	0.373	0.148	0.42	5.95	0.72	7.09	19465	13.8312	21.8025	-7.9713	NAF
NS0173	60	62	NS	X122199	122199	1	G	W	33.36	38.01	1.47	0.645	0.5	0.057	3.1	0.52	0.069	0.033	0.267	0.054	0	8.05	-0.14	7.91	19357	1.0098	9.06984	-8.06004	NAF
NS0173	78	80	NS	X122209	122209	1	G	W	37.24	33.03	1.46	0.7482	0.58	0.062	2.99	0.53	0.117	0.033	0.296	0.11	0.35	6.78	-0.33	6.8	19366	1.0098	9.24426	-8.23446	NAF
NS0173	56	58	NS	X122197	122197	1	G	W	35.03	37.46	0.9	0.6708	0.52	0.043	2.64	0.52	0.113	0.024	0.249	0.064	0.05	7.25	-0.3	7	19355	0.7344	9.06984	-8.33544	NAF
NS0173	74	76	NS	X122207	122207	1	G	W	36.45	33.98	1.4	0.7869	0.61	0.061	3.06	0.54	0.118	0.033	0.305	0.11	0.42	7.32	-0.27	7.47	19364	1.0098	9.41868	-8.40888	NAF
NS0173	96	98	NS	X122218	122218	1	G	W	31.48	37.24	3.1	0.645	0.5	0.142	3.99	1.02	0.097	0.302	0.569	0.218	0.65	5.89	0.68	7.22	19375	9.2412	17.79084	-8.54964	NAF
NS0173	76	78	NS	X122208	122208	1	G	W	37.03	33.18	1.39	0.8127	0.63	0.057	3.1	0.55	0.119	0.031	0.303	0.107	0.4	7.38	-0.28	7.5	19365	0.9486	9.5931	-8.6445	NAF
NS0173	72	74	NS	X122206	122206	1	G	W	33.69	37.72	1.3	0.7482	0.58	0.054	2.99	0.57	0.091	0.034	0.337	0.117	0.42	7.2	-0.13	7.49	19363	1.0404	9.94194	-8.90154	NAF
NS0173	54	56	NS	X122196	122196	1	G	W	33.3	38.99	0.79	0.774	0.6	0.038	2.7	0.57	0.104	0.021	0.217	0.066	0.05	8.18	-0.2	8.03	19354	0.6426	9.94194	-9.29934	NAF
NS0173	98	100	NS	X122219	122219	1	G	W	33.29	38.5	2.14	0.645	0.5	0.097	3.18	0.72	0.091	0.099	0.4	0.155	0.44	5.69	0.08	6.21	19376	3.0294	12.55824	-9.52884	NAF
NS0173	62	64	NS	X122200	122200	1	G	W	32.7	40.11	1.08	0.645	0.5	0.047	2.8	0.64	0.103	0.028	0.238	0.056	-0.02	7.53	-0.1	7.41	19358	0.8568	11.16288	-10.30608	NAF
NS0173	150	152	NS	X122245	122245	1	G	W	36.59	36.13	1.43	0.8127	0.63	0.066	2.59	0.66	0.102	0.029	0.276	0.098	0.3	5.1	-0.2	5.2	19402	0.8874	11.51172	-10.62432	NAF
NS0173	152	154	NS	X122246	122246	1	G	W	36.18	35.8	1.74	0.7869	0.61	0.078	2.78	0.69	0.132	0.039	0.403	0.126	0.37	4.99	-0.19	5.17	19403	1.1934	12.03498	-10.84158	NAF
NS0173	278	280	NS	X122311	122311	1	G	W	27.02	40.09	4.77	0.5418	0.42	0.216	4.99	1.17	0.231	0.31	0.514	0.215	0.65	6.62	0.82	8.09	19466	9.486	20.40714	-10.92114	NAF
NS0173	186	188	NS	X122264	122264	1	G	W	31.8	37.82	4.22	0.4773	0.37	0.185	3.97	1.15	0.231	0.281	0.99	0.217	0.57	3.52	0.54	4.63	19420	8.5986	20.0583	-11.4597	NAF
NS0173	198	200	NS	X122270	122270	1	G	W	36.41	38.68	1.33	0.5676	0.44	0.06	2.07	0.73	0.056	0.041	0.379	0.089	0.17	3.63	-0.06	3.74	19426	1.2546	12.73266	-11.47806	NAF
NS0173	100	102	NS	X122220	122220	1	G	W	33.86	37.38	1.69	0.774	0.6	0.081	3	0.79	0.147	0.069	0.368	0.131	0.38	6.44	-0.05	6.77	19377	2.1114	13.77918	-11.66778	NAF
NS0173	162	164	NS	X122252	122252	1	G	W	39.08	32.94	1.57	0.6966	0.54	0.073	2.44	0.74	0.12	0.033	0.327	0.099	0.27	4.59	-0.28	4.58	19408	1.0098	12.90708	-11.89728	NAF
NS0173	286	288	NS	X122315	122315	1	G	W	30.92	37.63	3.37	0.5289	0.41	0.163	3.9	1.27	0.379	0.325	0.491	0.207	0.57	5.78	0.57	6.92	19470	9.945	22.15134	-12.20634	NAF
NS0173	154	156	NS	X122247	122247	1	G	W	36.05	37.9	1.48	0.6966	0.54	0.069	2.4	0.76	0.078	0.032	0.273	0.081	0.23	4.49	-0.14	4.58	19404	0.9792	13.25592	-12.27672	NAF
NS0173	280	282	NS	X122312	122312	1	G	W	26.67	48.83	1.15	0.6579	0.51	0.051	2.52	0.81	0.04	0.046	0.236	0.101	0.35	6.75	0.27	7.37	19467	1.4076	14.12802	-12.72042	NAF
NS0173	266	268	NS	X122305	122305	1	G	W	34	37.55	1.83	0.5934	0.46	0.082	3.13	0.87	0.123	0.078	0.328	0.12	0.38	5.98	0	6.36	19460	2.3868	15.17454	-12.78774	NAF
NS0173	156	158	NS	X122248	122248	1	G	W	34.99	39.53	1.44	0.645	0.5	0.071	2.43	0.8	0.029	0.034	0.215	0.085	0.21	4.38	0.15	4.74	19405	1.0404	13.9536	-12.9132	NAF
NS0173	164	166	NS	X122253	122253	1	G	W	33.58	38.2	1.45	0.903	0.7	0.063	2.62	0.81	0.101	0.028	0.41	0.088	0.35	7.14	-0.07	7.42	19409	0.8568	14.12802	-13.27122	NAF
NS0173	176	178	NS	X122259	122259	1	G	W	33.26	39.27	2.37	0.6321	0.49	0.095	2.7	0.99	0.086	0.129	1.02	0.136	0.32	4.06	0.29	4.67	19415	3.9474	17.26758	-13.32018	NAF
NS0173	302	304	NS	X122323	122323	1	G	W	29.27	42.33	2.91	0.5289	0.41	0.122	3.65	0.95	0.075	0.102	0.403	0.161	0.51	5.94	0.41	6.86	19478	3.1212	16.5699	-13.4487	NAF
NS0173	82	84	NS	X122211	122211	1	G	W	34.18	36.17	1.29	0.8514	0.66	0.055	3.13	0.82	0.107	0.026	0.275	0.1	0.38	7.51	0.05	7.94	19368	0.7956	14.30244	-13.50684	NAF
NS0173	252	254	NS	X122297	122297	1	G	W	36.36	35.84	2.2	0.6063	0.47	0.096	2.94	0.94	0.143	0.085	0.397	0.125	0.3	3.96	0.01	4.27	19453	2.601	16.39548	-13.79448	NAF
NS0173	254	256	NS	X122298	122298	1	G	W	37.74	33.83	1.98	0.6192	0.48	0.089	2.94	0.94	0.078	0.067	0.386	0.121	0.31	4.07	0.12	4.5	19454	2.0502	16.39548	-14.34528	NAF
NS0173	192	194	NS	X122267	122267	1	G	W	31.6	41.01	2.76	0.5031	0.39	0.128	3.19	1.05	0.064	0.121	0.759	0.182	0.46	3.43	0.49	4.38	19423	3.7026	18.3141	-14.6115	NAF
NS0173	300	302	NS	X122322	122322	1	G	W	33.02	39.22	1.82	0.5547	0.43	0.083	2.93	0.96	0.093	0.06	0.327	0.13	0.28	5.89	0.21	6.38	19477	1.836	16.74432	-14.90832	NAF
NS0173	166	168	NS	X122254	122254	1	G	W	35.85	36.76	1.71	0.7353	0.57	0.077	2.5	0.92	0.148	0.036	0.429	0.1	0.27	4.57	-0.12	4.72	19410	1.1016	16.04664	-14.94504	NAF
NS0173	168	170	NS	X122255	122255	1	G	W	32.89	38.22	2.53	0.6321	0.49	0.118	3.3	1.24	0.167	0.185	0.36	0.132	0.42	4.46	0.36	5.24	19411	5.661	21.62808	-15.96708	NAF
NS0173	90	92	NS	X122215	122215	1	G	W	30.83	39.9	1.92	0.6837	0.53	0.092	3.3	1.13	0.154	0.121	0.428	0.159	0.49	6.44	0.33	7.26	19372	3.7026	19.70946	-16.00686	NAF
NS0173	294	296	NS	X122319	122319	1	G	W	32.55	39.42	0.96	0.7998	0.62	0.041	2.47	0.96	0.093	0.021	0.205	0.072	0.32	7.78	0.1	8.2	19474	0.6426	16.74432	-16.10172	NAF
NS0173	66	68	NS	X122203	122203	1	G	W	33.3	37.89	1.03	0.6837	0.53	0.049	3.05	0.97	0.08	0.025	0.247	0.074	0.01	8.1	0.28	8.39	19360	0.765	16.91874	-16.15374	NAF
NS0173	64	66	NS	X122202	122202	1	G	W	31.59	40.11	0.95	0.6708	0.52	0.042	2.95	0.98	0.101	0.024	0.224	0.066	0.01	8.07	0.24	8.32	19359	0.7344	17.09316	-16.35876	NAF
NS0173	68	70	NS	X122204	122204	1	G	W	28.8	45.24	0.92	0.6579	0.51	0.04	2.76	0.98	0.095	0.024	0.242	0.082	0	7.34	0.27	7.61	19361	0.7344	17.09316	-16.35876	NAF
NS0173	144	146	NS	X122242	122242	1	G	W	37.1	35.77	1.38	0.774	0.6	0.062	2.37	1	0.12	0.03	0.346	0.099	0.25	4.21	0.05	4.51	19399	0.918	17.442	-16.524	NAF
NS0173	84	86	NS	X122212	122212	1	G	W	33.25	38.13	1.2	0.774	0.6	0.056	2.92	1.01	0.115	0.032	0.287	0.108	0.38	6.92	0.2	7.5	19369	0.9792	17.61642	-16.63722	NAF
NS0173	102	104	NS	X122221	122221	1	G	W	35.77	37.83	1.12	0.6966	0.54	0.052	2.18	1.06	0.079	0.036	0.201	0.07	0.17	4.64	0.17	4.98	19378	1.1016	18.48852	-17.38692	NAF
NS0173	86	88	NS	X122213	122213	1	G	W	33.68	38.15	1.16	0.7353	0.57	0.053	2.73	1.08	0.097	0.028	0.265	0.1	0.33	6.28	0.31	6.92	19370	0.8568	18.83736	-17.98056	NAF
NS0173	298	300	NS	X122321	122321	1	G	W	32.92	41.06	1.08	0.6063	0.47	0.049	2.22	1.07	0.095	0.019	0.261	0.069	0.25	5.55	0.25	6.05	19476	0.5814	18.66294	-18.08154	NAF
NS0173	148	150	NS	X122244	122244	1	G	W	34.28	38.37	1.36	0.8385	0.65	0.062	2.64	1.11	0.073	0.03	0.264	0.097	0.28	5.13	0.37	5.78	19401	0.918	19.36062	-18.44262	NAF
NS0173	312	314	NS	X122328	122328	1	G	W	32.85	39.77	1.19	0.7095	0.55	0.054	2.49	1.12	0.139	0.03	0.192	0.092	0.27	6.22	0.22	6.71	19483	0.918	19.53504	-18.61704	NAF
NS0173	92	94	NS	X122216	122216	1	G	W	36.26	36.86	1.49	0.5676	0.44	0.065	2.42	1.17	0.099	0.041	0.328	0.108	0.29	4.13	0.29	4.71	19373	1.2546	20.40714	-19.15254	NAF
NS0173	184	186	NS	X122263	122263	1	G	W	35.29	37.43	1.59	0.6708	0.52	0.075	2.54	1.28	0.105	0.096	0.453	0.105	0.29	4.3	0.36	4.95	19419	2.9376	22.32576	-19.38816	NAF
NS0173	244	246	NS	X122293	122293	1	G	W	30.7	38.84	3.75	0.5031	0.39	0.168	4.2	1.6	0.41	0.278	0.495	0.187	0.49	4.03	0.54	5.06	19449	8.5068	27.9072	-19.4004	NAF
NS0173	306	308	NS	X122325	122325	1	G	W	33.53	40.68	1.39	0.5547	0.43	0.058	2.26	1.2	0.168	0.036	0.248	0.085	0.21	4.78	0.13	5.12	19480	1.1016	20.9304	-19.8288	NAF
NS0173	104	106	NS	X122222	122222	1	G	W	36.5	36.25	1.84	0.5676	0.44	0.086	2.59	1.26	0.137	0.059	0.406	0.128	0.28	3.48	0.23	3.99	19379	1.8054	21.97692	-20.17152	NAF
NS0173	110	112	NS	X122225	122225	1	G	W	34.74	36.06	1.98	0.774	0.6	0.093	3.11	1.46	0.14	0.167	0.473	0.127	0.36	4.81	0.53	5.7	19382	5.1102	25.46532	-20.35512	NAF
NS0173	146	148	NS	X122243	122243	1	G	W	34.8	37.86	1.33	0.8385	0.65	0.057	2.55	1.23	0.085	0.028	0.319	0.104	0.27	4.68	0.48	5.43	19400	0.8568	21.45366	-20.59686	NAF
NS0173	200	202	NS	X122271	122271	1	G	W	34.67	37.02	1.5	0.7353	0.57	0.068	2.67	1.29	0.099	0.047	0.492	0.113	0.29	4.91	0.56	5.76	19427	1.4382	22.50018	-21.06198	NAF
NS0173	296	298	NS	X122320	122320	1	G	W	35.49	36.59	1.07	0.6966	0.54	0.046	2.26	1.25	0.105	0.018	0.23	0.055	0.25	6.15	0.32	6.72	19475	0.5508	21.8025	-21.2517	NAF
NS0173	202	204	NS	X122272	122272	1	G	W	33.88	38.23	1.54	0.7353	0.57	0.067	2.67	1.33	0.153	0.062	0.409	0.101	0.26	5.09	0.4	5.75	19428	1.8972	23.19786	-21.30066	NAF
NS0173	88	90	NS	X122214	122214	1	G	W	33.05	39.17	1.25	0.6966	0.54	0.058	2.81	1.3	0.091	0.039	0.294	0.109	0.35	6.11	0.56	7.02	19371	1.1934	22.6746	-21.4812	NAF
NS0173	180	182	NS	X122261	122261	1	G	W	32.22	41.45	1.22	0.7353	0.57	0.054	2.51	1.3	0.099	0.031	0.424	0.109	0.3	4.82	0.64	5.76	19417	0.9486	22.6746	-21.726	NAF
NS0173	196	198	NS	X122269	122269	1	G	W	35.04	40.06	1.19	0.5676	0.44	0.055	2.03	1.32	0.071	0.026	0.277	0.063	0.14	3.32	0.56	4.02	19425	0.7956	23.02344	-22.22784	NAF
NS0173	216	218	NS	X122279	122279	1	G	W	36.63	36.85	1.45	0.5934	0.46	0.064	2.25	1.36	0.132	0.044	0.242	0.065	0.29	3.59	0.3	4.18	19435	1.3464	23.72112	-22.37472	NAF
NS0173	310	312	NS	X122327	122327	1	G	W	32.87	40.49	1.06	0.6966	0.54	0.044	2.31	1.35	0.09	0.022	0.149	0.046	0.14	5.76	0.57	6.47	19482	0.6732	23.5467	-22.8735	NAF
NS0173	58	60	NS	X122198	122198	1	G	W	30.77	42.25	0.71	0.6321	0.49	0.035	2.64	1.36	0.069	0.02	0.188	0.047	-0.06	7.24	0.74	7.92	19356	0.612	23.72112	-23.10912	NAF
NS0173	304	306	NS	X122324	122324	1	G	W	32.15	41.43	1	0.6837	0.53	0.045	2.36	1.37	0.08	0.024	0.122	0.053	0.23	6.15	0.64	7.02	19479	0.7344	23.89554	-23.16114	NAF
NS0173	94	96	NS	X122217	122217	1	G	W	33.99	39.09	1.36	0.6579	0.51	0.059	2.42	1.42	0.104	0.032	0.316	0.106	0.29	4.61	0.54	5.44	19374	0.9792	24.76764	-23.78844	NAF
NS0173	218	220	NS	X122280	122280	1	G	W	34.8	36.88	1.81	0.7095	0.55	0.078	2.77	1.46	0.077	0.054	0.442	0.087	0.26	4.43	0.73	5.42	19436	1.6524	25.46532	-23.81292	NAF
NS0173	160	162	NS	X122250	122250	1	G	W	31.9	41.74	1.16	0.7611	0.59	0.054	2.57	1.41	0.053	0.025	0.269	0.095	0.25	5.04	0.84	6.13	19407	0.765	24.59322	-23.82822	NAF
NS0173	260	262	NS	X122302	122302	1	G	W	34.7	38.08	1.25	0.6837	0.53	0.057	2.37	1.45	0.069	0.043	0.272	0.085	0.36	4.72	0.69	5.77	19457	1.3158	25.2909	-23.9751	NAF
NS0173	238	240	NS	X122290	122290	1	G	W	34.63	37.56	1.67	0.6579	0.51	0.074	2.83	1.48	0.063	0.057	0.389	0.118	0.27	4.07	0.87	5.21	19446	1.7442	25.81416	-24.06996	NAF
NS0173	246	248	NS	X122294	122294	1	G	W	35.28	38.33	1.36	0.5934	0.46	0.06	2.41	1.5	0.072	0.049	0.228	0.09	0.23	3.5	0.7	4.43	19450	1.4994	26.163	-24.6636	NAF
NS0173	322	324	NS	X122333	122333	1	G	W	33.84	37.45	1.21	0.8127	0.63	0.052	2.7	1.47	0.125	0.023	0.14	0.052	0.25	6.59	0.49	7.33	19488	0.7038	25.63974	-24.93594	NAF
NS0173	134	136	NS	X122237	122237	1	G	W	39.85	33.3	1.14	0.6837	0.53	0.05	1.89	1.49	0.119	0.028	0.341	0.067	0.14	2.88	0.36	3.38	19394	0.8568	25.98858	-25.13178	NAF
NS0173	116	118	NS	X122228	122228	1	G	W	39.58	33.71	1.19	0.645	0.5	0.052	2.02	1.48	0.127	0.022	0.356	0.079	0.14	2.81	0.4	3.35	19385	0.6732	25.81416	-25.14096	NAF
NS0173	178	180	NS	X122260	122260	1	G	W	31.28	42.02	0.94	0.8643	0.67	0.041	2.37	1.49	0.099	0.017	0.38	0.08	0.23	5.58	0.79	6.6	19416	0.5202	25.98858	-25.46838	NAF
NS0173	114	116	NS	X122227	122227	1	G	W	39.06	34.2	1.18	0.6837	0.53	0.054	2.14	1.5	0.12	0.022	0.374	0.092	0.19	3.09	0.47	3.75	19384	0.6732	26.163	-25.4898	NAF
NS0173	314	316	NS	X122329	122329	1	G	W	33.12	38.46	1.2	0.7869	0.61	0.053	2.67	1.54	0.106	0.043	0.213	0.082	0.31	6.44	0.69	7.44	19484	1.3158	26.86068	-25.54488	NAF
NS0173	194	196	NS	X122268	122268	1	G	W	32.11	41.23	1.68	0.5934	0.46	0.084	2.72	1.59	0.098	0.069	0.394	0.121	0.31	4.04	0.86	5.21	19424	2.1114	27.73278	-25.62138	NAF
NS0173	172	174	NS	X122257	122257	1	G	W	29.22	43.78	1.57	0.8127	0.63	0.067	2.79	1.59	0.073	0.067	0.441	0.107	0.32	5.02	1.04	6.38	19413	2.0502	27.73278	-25.68258	NAF
NS0173	308	310	NS	X122326	122326	1	G	W	32.09	41.88	0.92	0.6708	0.52	0.041	2.2	1.53	0.116	0.023	0.157	0.057	0.18	5.48	0.64	6.3	19481	0.7038	26.68626	-25.98246	NAF
NS0173	208	210	NS	X122275	122275	1	G	W	32.51	39.81	1.21	0.7353	0.57	0.057	2.67	1.58	0.12	0.036	0.248	0.085	0.28	5.56	0.75	6.59	19431	1.1016	27.55836	-26.45676	NAF
NS0173	220	222	NS	X122281	122281	1	G	W	35.56	35.86	2.06	0.6321	0.49	0.088	2.93	1.66	0.104	0.08	0.419	0.114	0.31	3.91	0.86	5.08	19437	2.448	28.95372	-26.50572	NAF
NS0173	126	128	NS	X122233	122233	1	G	W	36.98	35.84	1.26	0.774	0.6	0.053	2.3	1.58	0.059	0.027	0.41	0.084	0.2	3.36	0.89	4.45	19390	0.8262	27.55836	-26.73216	NAF
NS0173	206	208	NS	X122274	122274	1	G	W	34.04	39.24	1.45	0.5934	0.46	0.067	2.38	1.67	0.107	0.074	0.401	0.09	0.22	3.99	0.78	4.99	19430	2.2644	29.12814	-26.86374	NAF
NS0173	270	272	NS	X122307	122307	1	G	W	30.87	40.27	1.96	0.6321	0.49	0.084	3.15	1.74	0.105	0.103	0.281	0.109	0.34	5.5	0.97	6.81	19462	3.1518	30.34908	-27.19728	NAF
NS0173	222	224	NS	X122282	122282	1	G	W	35.72	36.53	1.68	0.5934	0.46	0.072	2.6	1.68	0.131	0.065	0.273	0.077	0.21	3.63	0.76	4.6	19438	1.989	29.30256	-27.31356	NAF
NS0173	204	206	NS	X122273	122273	1	G	W	32.29	40.23	1.43	0.7095	0.55	0.06	2.57	1.71	0.118	0.074	0.41	0.095	0.27	4.64	0.95	5.86	19429	2.2644	29.82582	-27.56142	NAF
NS0173	158	160	NS	X122249	122249	1	G	W	31.64	41.72	1.15	0.7998	0.62	0.056	2.62	1.63	0.053	0.028	0.268	0.087	0.23	5	1.11	6.34	19406	0.8568	28.43046	-27.57366	NAF
NS0173	214	216	NS	X122278	122278	1	G	W	34.56	39.17	1.14	0.6837	0.53	0.05	2.1	1.64	0.11	0.028	0.31	0.061	0.18	3.96	0.76	4.9	19434	0.8568	28.60488	-27.74808	NAF
NS0173	120	122	NS	X122230	122230	1	G	W	37.26	35.34	1.27	0.7611	0.59	0.055	2.31	1.66	0.096	0.027	0.436	0.095	0.16	3.2	0.92	4.28	19387	0.8262	28.95372	-28.12752	NAF
NS0173	242	244	NS	X122292	122292	1	G	W	35.66	37.54	1.05	0.7482	0.58	0.044	2.19	1.68	0.093	0.019	0.284	0.061	0.13	3.97	0.86	4.96	19448	0.5814	29.30256	-28.72116	NAF
NS0173	106	108	NS	X122223	122223	1	G	W	35.68	35.78	1.67	0.6966	0.54	0.073	2.75	1.82	0.116	0.09	0.329	0.105	0.27	3.86	0.93	5.06	19380	2.754	31.74444	-28.99044	NAF
NS0173	272	274	NS	X122308	122308	1	G	W	34.05	37.63	1.66	0.6837	0.53	0.074	2.77	1.75	0.101	0.042	0.242	0.098	0.28	5.15	0.94	6.37	19463	1.2852	30.5235	-29.2383	NAF
NS0173	262	264	NS	X122303	122303	1	G	W	30.79	40.46	2.05	0.6063	0.47	0.105	3.09	2.23	0.112	0.285	0.424	0.128	0.36	4.5	1.4	6.26	19458	8.721	38.89566	-30.17466	NAC
NS0173	108	110	NS	X122224	122224	1	G	W	35.66	38.12	0.98	0.6966	0.54	0.044	2.01	1.78	0.096	0.023	0.242	0.058	0.13	3.36	1.02	4.51	19381	0.7038	31.04676	-30.34296	NAC
NS0173	142	144	NS	X122241	122241	1	G	W	36.87	36.32	1.17	0.7353	0.57	0.054	2.18	1.8	0.103	0.032	0.308	0.08	0.16	3.43	0.91	4.5	19398	0.9792	31.3956	-30.4164	NAC
NS0173	256	258	NS	X122299	122299	1	G	W	34.24	38.3	1.19	0.7224	0.56	0.052	2.44	1.86	0.073	0.03	0.235	0.065	0.18	4.13	1.23	5.54	19455	0.918	32.44212	-31.52412	NAC
NS0173	128	130	NS	X122234	122234	1	G	W	36.18	36.97	1.18	0.7611	0.59	0.05	2.25	1.86	0.055	0.024	0.361	0.078	0.16	3.16	1.19	4.51	19391	0.7344	32.44212	-31.70772	NAC
NS0173	236	238	NS	X122289	122289	1	G	W	33.71	39.74	0.98	0.774	0.6	0.044	2.22	1.88	0.075	0.021	0.219	0.046	0.14	4.02	1.26	5.42	19445	0.6426	32.79096	-32.14836	NAC
NS0173	234	236	NS	X122288	122288	1	G	W	34.99	37.73	1.17	0.7224	0.56	0.052	2.35	1.9	0.096	0.029	0.263	0.072	0.18	3.81	1.2	5.19	19444	0.8874	33.1398	-32.2524	NAC
NS0173	182	184	NS	X122262	122262	1	G	W	31.22	40.99	1.46	0.7869	0.61	0.062	2.72	1.92	0.135	0.035	0.57	0.113	0.28	4.98	1.23	6.49	19418	1.071	33.48864	-32.41764	NAC
NS0173	250	252	NS	X122296	122296	1	G	W	32.42	37.24	2.6	0.7353	0.57	0.112	3.4	2.09	0.487	0.106	0.662	0.167	0.4	4.87	0.31	5.58	19452	3.2436	36.45378	-33.21018	NAC
NS0173	140	142	NS	X122240	122240	1	G	W	35.57	37.14	1	0.8514	0.66	0.046	2.29	1.95	0.06	0.02	0.271	0.077	0.18	3.93	1.36	5.47	19397	0.612	34.0119	-33.3999	NAC
NS0173	240	242	NS	X122291	122291	1	G	W	34.14	39.43	1.02	0.7353	0.57	0.047	2.27	1.96	0.078	0.018	0.236	0.074	0.14	3.75	1.41	5.3	19447	0.5508	34.18632	-33.63552	NAC
NS0173	122	124	NS	X122231	122231	1	G	W	35.09	37.83	1.21	0.774	0.6	0.051	2.33	1.98	0.064	0.025	0.35	0.076	0.15	3.28	1.35	4.78	19388	0.765	34.53516	-33.77016	NAC
NS0173	212	214	NS	X122277	122277	1	G	W	33.05	40.23	1.04	0.7353	0.57	0.048	2.19	2.04	0.102	0.027	0.263	0.057	0.16	4.17	1.28	5.61	19433	0.8262	35.58168	-34.75548	NAC
NS0173	188	190	NS	X122265	122265	1	G	W	32.32	39.19	1.55	0.7482	0.58	0.064	2.8	2.07	0.083	0.024	0.433	0.109	0.29	4.56	1.57	6.42	19421	0.7344	36.10494	-35.37054	NAC
NS0173	190	192	NS	X122266	122266	1	G	W	32.84	38.56	1.66	0.7095	0.55	0.071	2.74	2.12	0.141	0.049	0.577	0.127	0.3	4.17	1.4	5.87	19422	1.4994	36.97704	-35.47764	NAC
NS0173	132	134	NS	X122236	122236	1	G	W	38.26	33.97	1.15	0.7353	0.57	0.053	2.1	2.21	0.147	0.027	0.357	0.073	0.15	2.83	1.28	4.26	19393	0.8262	38.54682	-37.72062	NAC

HOLEID	SAMPFROM	SAMPTO	PROJECTCODE	SAMPLEID	Abbreviated ID	PRIORITY	Quality	Moisture	Fe_XRF_pct	SiO2_XRF_pct	Al2O3_XRF_pct	MnO_XRF_pct	Mn_XRF_pct	TiO2_XRF_pct	MgO_XRF_pct	CaO_XRF_pct	P_XRF_pct	S_XRF_pct	K2O_XRF_pct	Na2O_XRF_pct	LOI_371_pct	LOI_650_pct	LOI_1000_pct	LOI_Total	MAPINFO_ID	MPA	ANC	NAPP	NAPP_Class
NS0173	316	318	NS	X122330	122330	1	G	W	35.2	35.68	1.14	0.7224	0.56	0.053	2.56	2.22	0.175	0.03	0.187	0.078	0.27	5.4	1.15	6.82	19485	0.918	38.72124	-37.80324	NAC
NS0173	174	176	NS	X122258	122258	1	G	W	28.6	43.92	1.11	0.9417	0.73	0.042	2.5	2.23	0.132	0.021	0.571	0.089	0.26	5.41	1.69	7.36	19414	0.6426	38.89566	-38.25306	NAC
NS0173	210	212	NS	X122276	122276	1	G	W	31.72	41.39	1.16	0.6837	0.53	0.051	2.34	2.26	0.094	0.036	0.326	0.073	0.2	4	1.7	5.9	19432	1.1016	39.41892	-38.31732	NAC
NS0173	136	138	NS	X122238	122238	1	G	W	35.44	36.48	1.02	0.8514	0.66	0.045	2.23	2.37	0.079	0.022	0.303	0.131	0.17	3.58	1.73	5.48	19395	0.6732	41.33754	-40.66434	NAC
NS0173	320	322	NS	X122332	122332	1	G	W	27.5	47.03	0.78	0.7224	0.56	0.036	2.32	2.4	0.09	0.019	0.107	0.047	0.14	5.01	1.92	7.07	19487	0.5814	41.8608	-41.2794	NAC
NS0173	258	260	NS	X122300	122300	1	G	W	31.81	40.7	0.92	0.7224	0.56	0.041	2.15	2.46	0.063	0.037	0.22	0.061	1.19	3.72	1.9	6.81	19456	1.1322	42.90732	-41.77512	NAC
NS0173	228	230	NS	X122285	122285	1	G	W	33.68	38.85	1.13	0.7224	0.56	0.051	2.28	2.51	0.096	0.027	0.211	0.068	0.14	3.59	1.91	5.64	19441	0.8262	43.77942	-42.95322	NAC
NS0173	318	320	NS	X122331	122331	1	G	W	32.07	39.71	0.93	0.6966	0.54	0.04	2.4	2.56	0.16	0.023	0.123	0.049	0.15	4.98	1.74	6.87	19486	0.7038	44.65152	-43.94772	NAC
NS0173	232	234	NS	X122287	122287	1	G	W	34.35	37.74	1.03	0.6708	0.52	0.049	2.29	2.65	0.095	0.034	0.192	0.067	0.15	3.43	2.01	5.59	19443	1.0404	46.2213	-45.1809	NAC
NS0173	124	126	NS	X122232	122232	1	G	W	34.24	36.66	1.21	0.8643	0.67	0.049	2.54	2.64	0.085	0.026	0.459	0.086	0.2	3.54	2.11	5.85	19389	0.7956	46.04688	-45.25128	NAC
NS0173	224	226	NS	X122283	122283	1	G	W	32.16	40.33	1.17	0.7224	0.56	0.053	2.38	2.66	0.101	0.033	0.259	0.054	0.17	3.72	2.01	5.9	19439	1.0098	46.39572	-45.38592	NAC
NS0173	118	120	NS	X122229	122229	1	G	W	35.79	36.15	1.05	0.7869	0.61	0.048	2.28	2.69	0.142	0.023	0.373	0.076	0.17	3.11	1.77	5.05	19386	0.7038	46.91898	-46.21518	NAC
NS0173	248	250	NS	X122295	122295	1	G	W	33.09	38.99	0.88	0.8256	0.64	0.04	2.39	2.69	0.096	0.022	0.202	0.068	0.13	4.06	2.13	6.32	19451	0.6732	46.91898	-46.24578	NAC
NS0173	230	232	NS	X122286	122286	1	G	W	33.44	38.64	1.02	0.7482	0.58	0.048	2.44	2.77	0.071	0.027	0.194	0.058	0.16	3.95	2.27	6.38	19442	0.8262	48.31434	-47.48814	NAC
NS0173	112	114	NS	X122226	122226	1	G	W	35.36	36.04	1.09	0.7482	0.58	0.049	2.35	2.78	0.104	0.025	0.354	0.07	0.18	3.07	2.21	5.46	19383	0.765	48.48876	-47.72376	NAC
NS0173	274	276	NS	X122309	122309	1	G	W	26.75	43.99	1.57	0.6708	0.52	0.07	3.02	3.56	0.151	0.049	0.306	0.11	0.33	4.73	3.06	8.12	19464	1.4994	62.09352	-60.59412	NAC
NS0173	130	132	NS	X122235	122235	1	G	W	26.67	46.91	0.86	0.7998	0.62	0.037	2.18	3.86	0.083	0.018	0.32	0.052	0.13	2.53	3.75	6.41	19392	0.5508	67.32612	-66.77532	NAC
NS0173	226	228	NS	X122284	122284	1	G	W	28.98	42.04	1.05	0.8256	0.64	0.046	2.53	3.95	0.085	0.035	0.272	0.055	0.18	3.59	3.79	7.56	19440	1.071	68.8959	-67.8249	NAC
NS0173	138	140	NS	X122239	122239	1	G	W	28.56	42.83	0.86	0.8772	0.68	0.036	2.39	4.01	0.057	0.02	0.303	0.063	0.18	3.12	4.03	7.33	19396	0.612	69.94242	-69.33042	NAC
NS0174	46	48	NS	X122951	122951	1	G	D	16.52	56.17	8.29	0.1419	0.11	0.376	2.2	0.15	0.035	2.65	2.86	0.084	0.71	3.1	1.53	5.34	20190	81.09	2.6163	78.4737	PAF(HC)
NS0174	40	42	NS	X122948	122948	1	G	D	20.98	54.19	6.92	0.3999	0.31	0.319	0.95	0.07	0.036	1.31	2.14	0.069	1.69	1.62	1.05	4.36	20187	40.086	1.22094	38.86506	PAF(HC)
NS0174	42	44	NS	X122949	122949	1	G	D	23.55	51.81	6.79	0.3483	0.27	0.317	1.33	0.04	0.064	0.791	1.37	0.072	1.34	1.47	1.03	3.84	20188	24.2046	0.69768	23.50692	PAF(HC)
NS0174	38	40	NS	X122947	122947	1	G	D	21.71	52.91	6.67	0.1806	0.14	0.309	1.6	0.09	0.067	0.773	2.01	0.077	1.46	2.09	1.08	4.63	20186	23.6538	1.56978	22.08402	PAF(HC)
NS0174	36	38	NS	X122946	122946	1	G	D	21.71	52.8	6.62	0.1806	0.14	0.305	1.57	0.09	0.067	0.749	1.98	0.044	1.86	1.65	0.29	3.8	20185	22.9194	1.56978	21.34962	PAF(HC)
NS0174	48	50	NS	X122952	122952	1	G	D	25.2	50.22	5.85	0.4515	0.35	0.277	0.88	0.08	0.077	0.663	1.36	0.042	1.73	1.31	0.99	4.03	20191	20.2878	1.39536	18.89244	PAF(HC)
NS0174	50	52	NS	X122953	122953	1	G	D	23.4	50.93	6.2	0.3741	0.29	0.289	1.62	0.17	0.106	0.669	0.872	0.04	1.31	2.36	1.16	4.83	20192	20.4714	2.96514	17.50626	PAF(HC)
NS0174	52	54	NS	X122954	122954	1	G	D	24.03	49.34	6.01	0.3225	0.25	0.275	2.18	0.19	0.075	0.403	0.714	0.04	0.81	4.23	0.77	5.81	20193	12.3318	3.31398	9.01782	PAF(LC)
NS0174	54	56	NS	X122955	122955	1	G	W	22.99	44.21	5.63	0.5031	0.39	0.259	3.04	0.22	0.041	0.241	0.882	0.027	0.94	9.77	0.66	11.37	20194	7.3746	3.83724	3.53736	PAF(LC)
NS0174	44	46	NS	X122950	122950	1	G	D	25.23	47.59	4.4	0.6192	0.48	0.208	2.05	0.18	0.069	0.176	0.502	0.038	1.19	5.94	0.61	7.74	20189	5.3856	3.13956	2.24604	PAF(LC)
NS0174	56	58	NS	X122956	122956	1	G	W	26.17	44.6	5.28	0.645	0.5	0.243	1.89	0.18	0.087	0.173	0.817	0.032	2.8	5.2	0.61	8.61	20195	5.2938	3.13956	2.15424	PAF(LC)
NS0174	14	16	NS	X122935	122935	1	G	D	25.51	53.09	6.18	0.0258	0.02	0.245	0.07	0.03	0.073	0.016	0.048	0.058	1.21	1.93	0.23	3.37	20156	0.4896	0.52326	-0.03366	NAF
NS0174	10	12	NS	X122933	122933	1	G	D	27.38	54.19	4.16	0.0258	0.02	0.212	0.06	0.02	0.021	0.007	0.047	0.045	0.6	1.31	0.13	2.04	20154	0.2142	0.34884	-0.13464	NAF
NS0174	12	14	NS	X122934	122934	1	G	D	27.32	52.71	5.09	0.0258	0.02	0.24	0.06	0.03	0.018	0.01	0.051	0.059	0.71	1.65	0.16	2.52	20155	0.306	0.52326	-0.21726	NAF
NS0174	8	10	NS	X122932	122932	1	G	D	29.77	52.02	3.46	0.00645	0.005	0.17	0.05	0.03	0.015	0.007	0.036	0.041	0.43	1.1	0.15	1.68	20153	0.2142	0.52326	-0.30906	NAF
NS0174	24	26	NS	X122940	122940	1	G	D	33.02	45.16	4.79	0.2967	0.23	0.182	0.09	0.03	0.014	0.006	0.024	0.041	0.7	1.48	-0.05	2.13	20179	0.1836	0.52326	-0.33966	NAF
NS0174	0	2	NS	X122928	122928	1	G	D	26.36	53.94	4.75	0.00645	0.005	0.24	0.12	0.05	0.033	0.017	0.153	0.062	0.83	1.55	0.24	2.62	20149	0.5202	0.8721	-0.3519	NAF
NS0174	16	18	NS	X122936	122936	1	G	D	32.49	45.5	4.41	0.0516	0.04	0.194	0.08	0.04	0.051	0.009	0.037	0.039	1.28	1.39	0.13	2.8	20157	0.2754	0.69768	-0.42228	NAF
NS0174	18	20	NS	X122937	122937	1	G	D	33.5	45.53	3.58	0.1161	0.09	0.159	0.09	0.04	0.034	0.007	0.035	0.041	1.06	1.15	-0.04	2.17	20158	0.2142	0.69768	-0.48348	NAF
NS0174	20	22	NS	X122938	122938	1	G	D	34.43	44.49	3.59	0.1548	0.12	0.149	0.09	0.04	0.014	0.007	0.025	0.05	0.78	1.14	-0.05	1.87	20159	0.2142	0.69768	-0.48348	NAF
NS0174	22	24	NS	X122939	122939	1	G	D	34.07	44.95	3.92	0.2064	0.16	0.17	0.09	0.04	0.015	0.007	0.028	0.051	0.74	1.27	-0.05	1.96	20160	0.2142	0.69768	-0.48348	NAF
NS0174	26	28	NS	X122941	122941	1	G	D	33.53	44.1	4.26	0.9933	0.77	0.203	0.1	0.04	0.012	0.005	0.07	0.05	0.79	1.42	0.07	2.28	20180	0.153	0.69768	-0.54468	NAF
NS0174	32	34	NS	X122944	122944	1	G	D	31.39	45.52	4.13	0.6192	0.48	0.214	1.03	0.06	0.025	0.004	0.687	0.033	0.99	1.22	0.11	2.32	20183	0.1224	1.04652	-0.92412	NAF
NS0174	30	32	NS	X122943	122943	1	G	D	32.7	45.41	3.47	0.6837	0.53	0.184	0.79	0.08	0.025	0.005	0.693	0.046	0.83	0.97	0.17	1.97	20182	0.153	1.39536	-1.24236	NAF
NS0174	34	36	NS	X122945	122945	1	G	D	32.26	45.56	3.35	0.7224	0.56	0.173	0.87	0.08	0.06	0.005	0.424	0.038	1.27	1.12	0.14	2.53	20184	0.153	1.39536	-1.24236	NAF
NS0174	28	30	NS	X122942	122942	1	G	D	31.53	47.09	3.78	0.7353	0.57	0.197	0.47	0.08	0.013	0.004	0.474	0.043	0.8	1.1	0.11	2.01	20181	0.1224	1.39536	-1.27296	NAF
NS0174	2	4	NS	X122929	122929	1	G	D	26.82	53.73	4.75	0.00645	0.005	0.232	0.12	0.11	0.017	0.008	0.097	0.032	0.69	1.49	0.16	2.34	20150	0.2448	1.91862	-1.67382	NAF
NS0174	6	8	NS	X122931	122931	1	G	D	27.73	54.28	3.43	0.00645	0.005	0.173	0.07	0.11	0.009	0.006	0.048	0.038	0.45	1.2	0.14	1.79	20152	0.1836	1.91862	-1.73502	NAF
NS0174	76	78	NS	X122966	122966	1	G	W	18.83	46.96	8.19	0.4257	0.33	0.359	3.68	1.34	0.084	0.577	2.91	0.103	0.44	5.8	1.28	7.52	20223	17.6562	23.37228	-5.71608	NAF
NS0174	142	144	NS	X122999	122999	1	G	W	28.09	42.69	4.68	0.5547	0.43	0.221	2.72	0.55	0.028	0.066	1.78	0.047	0.41	6.1	0.01	6.52	20292	2.0196	9.5931	-7.5735	NAF
NS0174	134	136	NS	X122995	122995	1	G	W	25.91	43.05	5.07	0.5547	0.43	0.233	3.21	0.57	0.031	0.073	1.72	0.061	0.42	7.4	0.12	7.94	20288	2.2338	9.94194	-7.70814	NAF
NS0174	110	112	NS	X122983	122983	1	G	W	24.44	44.98	5.7	0.4902	0.38	0.26	3.3	0.63	0.023	0.086	2.02	0.085	0.53	6.64	0.3	7.47	20258	2.6316	10.98846	-8.35686	NAF
NS0174	58	60	NS	X122957	122957	1	G	W	23.28	43.01	6.01	0.5934	0.46	0.27	3.02	0.89	0.105	0.189	1.53	0.042	1.17	8.79	0.59	10.55	20196	5.7834	15.52338	-9.73998	NAF
NS0174	112	114	NS	X122984	122984	1	G	W	26.05	41.55	6.11	0.4644	0.36	0.28	3.32	0.73	0.017	0.089	2.26	0.066	0.39	6.65	0.35	7.39	20259	2.7234	12.73266	-10.00926	NAF
NS0174	100	102	NS	X122978	122978	1	G	W	22.22	45.68	7.63	0.4257	0.33	0.342	3.27	0.77	0.013	0.107	3.3	0.072	0.32	5.94	0.48	6.74	20253	3.2742	13.43034	-10.15614	NAF
NS0174	98	100	NS	X122977	122977	1	G	W	28.4	41.01	5.28	0.4257	0.33	0.24	2.81	0.72	0.061	0.076	1.8	0.064	0.43	6.07	0.05	6.55	20252	2.3256	12.55824	-10.23264	NAF
NS0174	108	110	NS	X122982	122982	1	G	W	27.38	42.2	5.14	0.4644	0.36	0.245	2.92	0.75	0.051	0.07	1.78	0.06	0.39	6.07	0.12	6.58	20257	2.142	13.0815	-10.9395	NAF
NS0174	88	90	NS	X122972	122972	1	G	W	24.71	44.04	5.65	0.5031	0.39	0.248	2.87	0.81	0.017	0.103	2.14	0.074	0.4	7.01	0.4	7.81	20229	3.1518	14.12802	-10.97622	NAF
NS0174	102	104	NS	X122979	122979	1	G	W	26.54	42.88	5.3	0.4644	0.36	0.239	3.06	0.79	0.046	0.071	1.79	0.06	0.41	6.57	0.22	7.2	20254	2.1726	13.77918	-11.60658	NAF
NS0174	82	84	NS	X122969	122969	1	G	W	21.13	45.04	7.11	0.5289	0.41	0.31	3.55	0.9	0.052	0.117	2.58	0.085	0.6	7.88	0.54	9.02	20226	3.5802	15.6978	-12.1176	NAF
NS0174	118	120	NS	X122987	122987	1	G	W	26.54	43.21	5.33	0.4644	0.36	0.25	3.12	0.83	0.03	0.076	1.79	0.053	0.47	6.23	0.32	7.02	20262	2.3256	14.47686	-12.15126	NAF
NS0174	130	132	NS	X122993	122993	1	G	W	28.62	41.18	5.31	0.4515	0.35	0.246	2.76	0.84	0.067	0.074	2.01	0.048	0.41	5.43	0.09	5.93	20268	2.2644	14.65128	-12.38688	NAF
NS0174	4	6	NS	X122930	122930	1	G	D	26.53	52.16	5.33	0.00645	0.005	0.253	0.21	0.75	0.014	0.014	0.079	0.065	0.96	2.02	0.43	3.41	20151	0.4284	13.0815	-12.6531	NAF
NS0174	128	130	NS	X122992	122992	1	G	W	28.51	40.76	5.21	0.4644	0.36	0.234	2.86	0.96	0.057	0.071	1.91	0.052	0.37	5.62	0.31	6.3	20267	2.1726	16.74432	-14.57172	NAF
NS0174	70	72	NS	X122963	122963	1	G	W	22.71	44.47	6.89	0.4128	0.32	0.307	3.26	1.2	0.135	0.197	2.36	0.068	0.41	6.75	0.55	7.71	20220	6.0282	20.9304	-14.9022	NAF
NS0174	132	134	NS	X122994	122994	1	G	W	27.51	41.87	5.3	0.4644	0.36	0.243	2.91	1	0.083	0.068	2.05	0.063	0.32	5.97	0.28	6.57	20287	2.0808	17.442	-15.3612	NAF
NS0174	86	88	NS	X122971	122971	1	G	W	18.72	48.94	7.6	0.4644	0.36	0.336	3.3	1.1	0.072	0.114	3.06	0.088	0.56	6.32	0.72	7.6	20228	3.4884	19.1862	-15.6978	NAF
NS0174	106	108	NS	X122981	122981	1	G	W	23.86	45.46	6.17	0.3741	0.29	0.282	3.1	1.06	0.078	0.081	2.26	0.071	0.41	5.37	0.46	6.24	20256	2.4786	18.48852	-16.00992	NAF
NS0174	96	98	NS	X122976	122976	1	G	W	28.61	41.31	4.95	0.387	0.3	0.226	2.84	1.06	0.079	0.064	1.49	0.059	0.3	5.54	0.29	6.13	20251	1.9584	18.48852	-16.53012	NAF
NS0174	72	74	NS	X122964	122964	1	G	W	22.57	45.16	6.51	0.4644	0.36	0.296	3.39	1.24	0.084	0.122	1.94	0.074	0.46	6.94	0.76	8.16	20221	3.7332	21.62808	-17.89488	NAF
NS0174	104	106	NS	X122980	122980	1	G	W	22.33	45.79	6.82	0.3999	0.31	0.309	3.24	1.22	0.069	0.11	2.72	0.071	0.36	5.55	0.76	6.67	20255	3.366	21.27924	-17.91324	NAF
NS0174	68	70	NS	X122962	122962	1	G	W	28.3	41.62	5.14	0.3999	0.31	0.231	2.82	1.16	0.063	0.073	1.49	0.054	0.3	5.66	0.44	6.4	20219	2.2338	20.23272	-17.99892	NAF
NS0174	122	124	NS	X122989	122989	1	G	W	26.73	41.84	5.5	0.4257	0.33	0.251	2.96	1.19	0.089	0.09	2.05	0.057	0.46	5.76	0.42	6.64	20264	2.754	20.75598	-18.00198	NAF
NS0174	138	140	NS	X122997	122997	1	G	W	28.33	40.96	4.88	0.4773	0.37	0.226	2.81	1.16	0.11	0.069	1.79	0.054	0.4	5.66	0.35	6.41	20290	2.1114	20.23272	-18.12132	NAF
NS0174	60	62	NS	X122958	122958	1	G	W	25.47	41.22	5.62	0.5547	0.43	0.253	3.22	1.21	0.034	0.096	1.62	0.044	0.48	8.22	0.72	9.42	20215	2.9376	21.10482	-18.16722	NAF
NS0174	140	142	NS	X122998	122998	1	G	W	28.09	42.48	4.91	0.4515	0.35	0.229	2.71	1.16	0.075	0.067	1.92	0.057	0.43	5.15	0.35	5.93	20291	2.0502	20.23272	-18.18252	NAF
NS0174	144	146	NS	X123000	123000	1	G	W	25.29	43.06	5.62	0.516	0.4	0.254	3.07	1.24	0.077	0.083	2.34	0.065	0.5	5.9	0.59	6.99	20293	2.5398	21.62808	-19.08828	NAF
NS0174	126	128	NS	X122991	122991	1	G	W	24.47	43.89	5.97	0.4644	0.36	0.272	3.18	1.28	0.113	0.097	2.28	0.1	0.46	5.94	0.57	6.97	20266	2.9682	22.32576	-19.35756	NAF
NS0174	90	92	NS	X122973	122973	1	G	W	23.81	44.38	6.44	0.4257	0.33	0.292	3.03	1.33	0.12	0.103	2.47	0.069	0.49	5.82	0.54	6.85	20230	3.1518	23.19786	-20.04606	NAF
NS0174	84	86	NS	X122970	122970	1	G	W	24.07	43.66	5.22	0.5934	0.46	0.231	3	1.37	0.249	0.124	1.76	0.062	0.43	8.09	0.23	8.75	20227	3.7944	23.89554	-20.10114	NAF
NS0174	78	80	NS	X122967	122967	1	G	W	24.36	45.2	5.66	0.3483	0.27	0.263	3.01	1.39	0.036	0.105	1.64	0.06	0.49	5.67	0.88	7.04	20224	3.213	24.24438	-21.03138	NAF
NS0174	94	96	NS	X122975	122975	1	G	W	26.84	42.42	5.36	0.3999	0.31	0.232	2.82	1.34	0.168	0.069	1.84	0.065	0.44	5.47	0.36	6.27	20232	2.1114	23.37228	-21.26088	NAF
NS0174	92	94	NS	X122974	122974	1	G	W	28.71	40.5	5.03	0.4257	0.33	0.228	2.73	1.34	0.133	0.065	1.75	0.064	0.31	5.46	0.44	6.21	20231	1.989	23.37228	-21.38328	NAF
NS0174	74	76	NS	X122965	122965	1	G	W	23.67	47.22	5.59	0.2967	0.23	0.256	2.96	1.38	0.03	0.08	1.45	0.051	0.4	5.19	1	6.59	20222	2.448	24.06996	-21.62196	NAF
NS0174	66	68	NS	X122961	122961	1	G	W	25.41	43.5	5.87	0.3999	0.31	0.265	2.98	1.4	0.125	0.085	1.91	0.064	0.4	5.77	0.46	6.63	20218	2.601	24.4188	-21.8178	NAF
NS0174	80	82	NS	X122968	122968	1	G	W	16.35	50	9	0.2709	0.21	0.394	3.42	2.02	0.21	0.435	3.79	0.104	0.43	4.01	1.43	5.87	20225	13.311	35.23284	-21.92184	NAF
NS0174	124	126	NS	X122990	122990	1	G	W	21.56	42.6	6.58	0.6837	0.53	0.299	3.72	1.87	0.17	0.175	2.89	0.108	0.52	7.81	1.14	9.47	20265	5.355	32.61654	-27.26154	NAF
NS0174	116	118	NS	X122986	122986	1	G	W	25.56	42.42	5.38	0.4644	0.36	0.252	2.89	1.87	0.142	0.108	2.26	0.063	0.32	5.7	1.08	7.1	20261	3.3048	32.61654	-29.31174	NAF
NS0174	136	138	NS	X122996	122996	1	G	W	22	44.64	5.91	0.6063	0.47	0.275	3.33	1.99	0.144	0.166	2.7	0.087	0.51	7.03	1.12	8.66	20289	5.0796	34.70958	-29.62998	NAF
NS0174	64	66	NS	X122960	122960	1	G	W	24.32	43.16	5.56	0.5031	0.39	0.259	3.17	1.89	0.19	0.077	1.67	0.07	0.34	6.7	0.95	7.99	20217	2.3562	32.96538	-30.60918	NAC
NS0174	62	64	NS	X122959	122959	1	G	W	24.74	42.01	5.43	0.5031	0.39	0.247	3.12	2.09	0.056	0.088	1.79	0.068	0.47	6.58	1.6	8.65	20216	2.6928	36.45378	-33.76098	NAC
NS0174	114	116	NS	X122985	122985	1	G	W	22.94	43.89	6.15	0.4644	0.36	0.285	3.27	2.42	0.343	0.093	2.45	0.09	0.44	5.76	1.09	7.29	20260	2.8458	42.20964	-39.36384	NAC
NS0174	120	122	NS	X122988	122988	1	G	W	21.81	44.52	5.91	0.5031	0.39	0.266	3.21	2.7	0.404	0.087	2.39	0.073	0.39	6.2	1.18	7.77	20263	2.6622	47.0934	-44.4312	NAC

Appendix F

Summary results from detailed test work programme

Estimated NAPP derived from Calcium and Sulfur assay data
Only includes samples for which pHox and Estimated NAPP could be determined

Detailed Testwork and Waste Classification											
Sample Name	Hole	Depth	Lithology	Estimated NAPP	pHox	Lab NAPP	NAG pH 4.5	NAG pH 7.0	Ecox	PAF Categorisation - pHox < 4.5	PAF Categorisation - Estimated NAPP > 10
Mean				-12.50	9.61	-33.33			162.28		
Minimum				-78.35	2.00	-77.40			11.00		
Maximum				128.03	763.00	80.10			4100.00		
Count				712.00	712.00	93.00			241.00		
PAF										11	25
NAF										701	673
PAF %										1.54%	3.51%
EP1201378014	NS0077	178	south	78.453	3.4		3.2	15.3		PAF	PAF
EP1201528043	NS0084	158	hangingwall	20.5884	3.4		11.8	22		PAF	PAF
PE065687.081	NS0096	230	south	16.0524	4.2		0.8	5.4	550	PAF	PAF
PE065688.043	NS0097	40	south	48.879	3.5		3.8	11	500	PAF	PAF
EP1201384039	NS0107	120	hangingwall	93.0546	2.3	80.1	45.7	60.8		PAF	PAF
EP1201384031	NS0107	128	hangingwall	78.0912	2.5	69.3	38.9	52.2		PAF	PAF
EP1201384035	NS0107	140	hangingwall	48.042	2.6	18.9	17.8	24.7		PAF	PAF
EP1201384033	NS0107	148	hangingwall	57.4056	2.6	41.1	30.2	40.8		PAF	PAF
EP1201384028	NS0107	160	hangingwall	48.7458	2.5	31.4	40.2	53.8		PAF	PAF
EP1201384029	NS0107	170	hangingwall	37.1178	3	15.3	11	18.1		PAF	PAF
PE065686.028	NS0153	200	hangingwall	128.034	2		86	99	4100	PAF	PAF
EP1201381008	NS0077	0	oxide	-1.269	7.2	-1.7	<0.1	<0.1		NAF	NAF
EP1201381007	NS0077	8	oxide	-0.1584	7.3	-3.2	<0.1	<0.1		NAF	NAF
EP1201378041	NS0077	20	oxide	-1.1358	7.7		<0.1	<0.1		NAF	NAF
EP1201378042	NS0077	28	oxide	-1.3068	7.8		<0.1	<0.1		NAF	NAF
EP1201378022	NS0077	40	south	-2.664	8.7		<0.1	<0.1		NAF	NAF
EP1201378021	NS0077	48	south	-19.6254	8.4		<0.1	<0.1		NAF	NAF
EP1201378024	NS0077	60	south	-26.1126	8.8		<0.1	<0.1		NAF	NAF
EP1201378023	NS0077	68	south	-18.8964	8.8		<0.1	<0.1		NAF	NAF
EP1201378011	NS0077	80	south	-24.273	8.4		<0.1	<0.1		NAF	NAF
EP1201378010	NS0077	88	south	-16.2702	8.5		<0.1	<0.1		NAF	NAF
EP1201378026	NS0077	108	south	-12.1878	8.8		<0.1	<0.1		NAF	NAF
EP1201378025	NS0077	120	south	-8.4762	8.8		<0.1	<0.1		NAF	NAF
EP1201378044	NS0077	128	south	-19.5048	8.3		<0.1	<0.1		NAF	NAF
EP1201378043	NS0077	140	south	-16.2054	7.9		<0.1	<0.1		NAF	NAF
EP1201378017	NS0077	148	south	-19.6218	8.7		<0.1	<0.1		NAF	NAF
EP1201378016	NS0077	158	south	-2.8314	8.7		<0.1	<0.1		NAF	NAF
EP1201378015	NS0077	170	south	-15.2046	8.7		<0.1	<0.1		NAF	NAF
EP1201378047	NS0077	190	south	-4.8798	8.7		<0.1	<0.1		NAF	NAF
EP1201378048	NS0077	198	south	-18.045	8.5		<0.1	<0.1		NAF	NAF
EP1201378013	NS0077	210	south	-38.5956	8.8		<0.1	<0.1		NAF	NAF
EP1201378012	NS0077	214	south	-48.2742	8.8		<0.1	<0.1		NAF	NAF
EP1201378040	NS0077	218	south	-24.2316	8.9		<0.1	<0.1		NAF	NAF
EP1201378039	NS0077	230	south	-25.9776	9		<0.1	<0.1		NAF	NAF
EP1201378045	NS0077	238	south	-28.1394	8.8		<0.1	<0.1		NAF	NAF
EP1201378046	NS0077	250	south	-17.1468	8.8		<0.1	<0.1		NAF	NAF
EP1201378020	NS0077	258	south	-18.0558	8.8		<0.1	<0.1		NAF	NAF
EP1201378019	NS0077	270	south	-37.2762	8.8		<0.1	<0.1		NAF	NAF
EP1201378018	NS0077	278	south	-22.356	8.8		<0.1	<0.1		NAF	NAF
EP1201380010	NS0078	0	oxide	0.4176	7.3		<0.1	<0.1		NAF	NAF
EP1201380011	NS0078	8	oxide	-0.1818	6.7		<0.1	0.6		NAF	NAF
EP1201381048	NS0078	20	oxide	-6.7356	6.8	-4.4	<0.1	0.2		NAF	NAF
EP1201381045	NS0078	28	oxide	-5.319	7.4	-3.3	<0.1	<0.1		NAF	NAF
EP1201379003	NS0078	48	footwall	-14.7096	7.7		<0.1	<0.1		NAF	NAF
EP1201381003	NS0078	60	footwall	-8.865	8.8	-55	<0.1	<0.1		NAF	NAF
EP1201381005	NS0078	68	footwall	-14.7888	8.8	-35.4	<0.1	<0.1		NAF	NAF
EP1201380028	NS0078	80	footwall	26.109	8.7		<0.1	<0.1		NAF	PAF
EP1201380027	NS0078	88	footwall	-13.2138	8.8		<0.1	<0.1		NAF	NAF
EP1201380009	NS0078	108	footwall	-16.443	8.5		<0.1	<0.1		NAF	NAF
EP1201378009	NS0078	120	footwall	-5.9202	8.6		<0.1	<0.1		NAF	NAF
EP1201378005	NS0078	128	footwall	-10.0242	8.6		<0.1	<0.1		NAF	NAF
EP1201378006	NS0078	140	footwall	-8.9532	8.6		<0.1	<0.1		NAF	NAF
EP1201378004	NS0078	148	footwall	-13.8834	8.6		<0.1	<0.1		NAF	NAF
EP1201379020	NS0078	168	footwall	-2.016	8.8		<0.1	<0.1		NAF	NAF
EP1201379021	NS0078	180	footwall	-12.7242	7.3		<0.1	<0.1		NAF	NAF
EP1201379022	NS0078	188	footwall	-10.071	7.9		<0.1	<0.1		NAF	NAF
EP1201379023	NS0078	200	footwall	-9.5544	7.8		<0.1	<0.1		NAF	NAF
EP1201380007	NS0078	208	footwall	-19.8738	8.7		<0.1	<0.1		NAF	NAF
EP1201380033	NS0078	220	footwall	-8.4672	8.7		<0.1	<0.1		NAF	NAF
EP1201380032	NS0078	228	footwall	-10.242	8.8		<0.1	<0.1		NAF	NAF
EP1201380031	NS0078	232	footwall	-25.965	8.5		<0.1	<0.1		NAF	NAF
EP1201380013	NS0078	240	footwall	-8.8398	8.2		<0.1	<0.1		NAF	NAF
EP1201380012	NS0078	248	footwall	-13.1706	8.7		<0.1	<0.1		NAF	NAF
EP1201379007	NS0078	260	footwall	-3.2364	8.4		<0.1	<0.1		NAF	NAF
EP1201380030	NS0078	276	footwall	21.6756	7.4		<0.1	<0.1		NAF	PAF
EP1201381038	NS0079	0	oxide	-2.997	7.3	-2.9	<0.1	<0.1		NAF	NAF
EP1201381042	NS0079	20	oxide	-0.2502	7.8	-2.1	<0.1	<0.1		NAF	NAF

Detailed Testwork and Waste Classification											
Sample Name	Hole	Depth	Lithology	Estimated NAPP	pHox	Lab NAPP	NAG pH 4.5	NAG pH 7.0	Ecox	PAF Categorisation - pHox < 4.5	PAF Categorisation - Estimated NAPP > 10
Mean				-12.50	9.61	-33.33			162.28		
Minimum				-78.35	2.00	-77.40			11.00		
Maximum				128.03	763.00	80.10			4100.00		
Count				712.00	712.00	93.00			241.00		
PAF										11	25
NAF										701	673
PAF %										1.54%	3.51%
EP1201381039	NS0079	28	oxide	-0.6228	8	-6.2	<0.1	<0.1		NAF	NAF
EP1201381043	NS0079	40	oxide	-1.8558	8.2	-28.4	<0.1	<0.1		NAF	NAF
EP1201381041	NS0079	48	south	-2.0826	8.6	-45.5	<0.1	<0.1		NAF	NAF
EP1201382028	NS0079	70	south	-6.2532	8.6		<0.1	<0.1		NAF	NAF
EP1201382029	NS0079	78	south	-9.873	8.8		<0.1	<0.1		NAF	NAF
EP1201382030	NS0079	90	south	-12.1644	9		<0.1	<0.1		NAF	NAF
EP1201382031	NS0079	94	south	24.948	7.5		<0.1	<0.1		NAF	PAF
EP1201382032	NS0079	98	south	-8.9712	9		<0.1	<0.1		NAF	NAF
EP1201382033	NS0079	110	south	-8.1	9		<0.1	<0.1		NAF	NAF
EP1201381040	NS0079	128	south	-15.327	8.9	-31.3	<0.1	<0.1		NAF	NAF
EP1201380040	NS0083	0	oxide	-1.5804	7.7		<0.1	<0.1		NAF	NAF
EP1201380039	NS0083	8	oxide	-0.4266	7.6		<0.1	<0.1		NAF	NAF
EP1201381002	NS0083	20	oxide	-4.293	7	-3.8	<0.1	<0.1		NAF	NAF
EP1201381001	NS0083	28	oxide	-6.7356	7.1	-2	<0.1	<0.1		NAF	NAF
EP1201379002	NS0083	40	oxide	-5.661	7.7		<0.1	<0.1		NAF	NAF
EP1201379029	NS0083	58	oxide	-5.958	7.8		<0.1	<0.1		NAF	NAF
EP1201379031	NS0083	68	footwall	-14.6808	7.9		<0.1	<0.1		NAF	NAF
EP1201379036	NS0083	80	footwall	-4.8258	8.2		<0.1	<0.1		NAF	NAF
EP1201379038	NS0083	88	footwall	-26.9586	8.1		<0.1	<0.1		NAF	NAF
EP1201379034	NS0083	110	footwall	-1.4148	8.5		<0.1	<0.1		NAF	NAF
EP1201379035	NS0083	118	footwall	0.4302	8.1		<0.1	<0.1		NAF	NAF
EP1201380043	NS0083	130	footwall	7.0686	8.4		<0.1	<0.1		NAF	PAF
EP1201380042	NS0083	138	footwall	-3.7206	9		<0.1	<0.1		NAF	NAF
EP1201380044	NS0083	150	footwall	-8.4546	8.9		<0.1	<0.1		NAF	NAF
EP1201379047	NS0083	158	footwall	-3.429	8.7		<0.1	<0.1		NAF	NAF
EP1201379050	NS0083	170	footwall	-14.7762	8.9		<0.1	<0.1		NAF	NAF
EP1201379048	NS0083	178	footwall	-10.6722	8.7		<0.1	<0.1		NAF	NAF
EP1201380003	NS0083	190	footwall	-5.0652	8.4		<0.1	<0.1		NAF	NAF
EP1201380001	NS0083	198	footwall	-11.2914	8.2		<0.1	<0.1		NAF	NAF
EP1201380002	NS0083	210	footwall	-18.2952	8.8		<0.1	<0.1		NAF	NAF
EP1201380005	NS0083	218	footwall	-21.1428	8.7		<0.1	<0.1		NAF	NAF
EP1201380006	NS0083	230	footwall	-24.1146	8.4		<0.1	<0.1		NAF	NAF
EP1201380004	NS0083	238	footwall	-31.8528	8.8		<0.1	<0.1		NAF	NAF
EP1201531009	NS0083	250	footwall	-16.1496	8.8		<0.1	<0.1		NAF	NAF
EP1201531010	NS0083	268	footwall	-11.4174	8.8		<0.1	<0.1		NAF	NAF
EP1201531011	NS0083	280	footwall	-17.559	8.6		<0.1	<0.1		NAF	NAF
PE065689.086	NS0084	30	oxide	-1.1358	7.8		<0.5	<0.5	76	NAF	NAF
EP1201528036	NS0084	70	hangingwall	-7.8894	8.9		<0.1	<0.1		NAF	NAF
EP1201528032	NS0084	78	hangingwall	-3.0798	8.7		<0.1	<0.1		NAF	NAF
EP1201528034	NS0084	90	hangingwall	8.4474	8.8		<0.1	<0.1		NAF	PAF
EP1201528035	NS0084	120	hangingwall	-1.2348	8.7		<0.1	<0.1		NAF	NAF
EP1201528033	NS0084	128	hangingwall	-1.7388	8.7		<0.1	<0.1		NAF	NAF
EP1201527006	NS0084	140	hangingwall	15.507	8.2		<0.1	<0.1		NAF	PAF
EP1201527009	NS0084	150	hangingwall	-2.0664	8.3		<0.1	<0.1		NAF	NAF
EP1201528045	NS0084	170	hangingwall	-7.6248	9.2		<0.1	<0.1		NAF	NAF
EP1201527005	NS0084	180	hangingwall	-30.5334	8.5		<0.1	<0.1		NAF	NAF
EP1201527007	NS0084	190	hangingwall	-6.6276	8.2		<0.1	<0.1		NAF	NAF
EP1201527008	NS0084	198	hangingwall	-17.0568	8.2		<0.1	<0.1		NAF	NAF
EP1201528008	NS0084	210	hangingwall	-7.776	8.9		<0.1	<0.1		NAF	NAF
EP1201528044	NS0084	214	hangingwall	-19.8018	9.3		<0.1	<0.1		NAF	NAF
EP1201528011	NS0084	228	hangingwall	-31.4748	9		<0.1	<0.1		NAF	NAF
EP1201528042	NS0084	248	hangingwall	-23.2416	9.2		<0.1	<0.1		NAF	NAF
EP1201528007	NS0084	258	hangingwall	-6.2694	8.9		<0.1	<0.1		NAF	NAF
PE065689.087	NS0084	270	hangingwall	-5.4126	8.4		<0.5	<0.5	260	NAF	NAF
EP1201528009	NS0084	280	hangingwall	-10.7154	9.1		<0.1	<0.1		NAF	NAF
EP1201383010	NS0085	0	oxide	-1.0926	7.8		<0.1	<0.1		NAF	NAF
EP1201383012	NS0085	10	oxide	-0.531	6.9		<0.1	<0.1		NAF	NAF
EP1201383011	NS0085	18	oxide	-1.044	7.5		<0.1	<0.1		NAF	NAF
EP1201384006	NS0085	30	oxide	-1.6488	8.2	-7.3	<0.1	<0.1		NAF	NAF
EP1201384007	NS0085	38	south	-7.8876	8.7	-41.8	<0.1	<0.1		NAF	NAF
EP1201384008	NS0085	50	south	-33.507	8.5	-52.2	<0.1	<0.1		NAF	NAF
EP1201384005	NS0085	58	south	-22.3812	8.5	-57.4	<0.1	<0.1		NAF	NAF
EP1201384013	NS0085	70	south	-17.1054	8.7	-48	<0.1	<0.1		NAF	NAF
EP1201384014	NS0085	78	south	-7.0416	8.7	-42	<0.1	<0.1		NAF	NAF
EP1201384015	NS0085	90	south	-31.7682	8.6	-64.9	<0.1	<0.1		NAF	NAF
EP1201384016	NS0085	98	south	-34.9074	8.6	-63.3	<0.1	<0.1		NAF	NAF
EP1201383042	NS0085	110	south	-37.7532	8.3		<0.1	<0.1		NAF	NAF
EP1201383041	NS0085	118	south	-13.0914	8.1		<0.1	<0.1		NAF	NAF
EP1201383039	NS0085	130	south	-34.2288	9		<0.1	<0.1		NAF	NAF
EP1201383040	NS0085	140	south	-9.1044	9		<0.1	<0.1		NAF	NAF

Detailed Testwork and Waste Classification											
Sample Name	Hole	Depth	Lithology	Estimated NAPP	pHox	Lab NAPP	NAG pH 4.5	NAG pH 7.0	Ecox	PAF Categorisation - pHox < 4.5	PAF Categorisation - Estimated NAPP > 10
Mean				-12.50	9.61	-33.33			162.28		
Minimum				-78.35	2.00	-77.40			11.00		
Maximum				128.03	763.00	80.10			4100.00		
Count				712.00	712.00	93.00			241.00		
PAF										11	25
NAF										701	673
PAF %										1.54%	3.51%
EP1201384010	NS0085	148	south	-16.0236	8.5	-52.9	<0.1	<0.1		NAF	NAF
EP1201384009	NS0085	160	south	-17.667	8.5	-43.6	<0.1	<0.1		NAF	NAF
EP1201384011	NS0085	168	south	-18.6426	8.7	-55.8	<0.1	<0.1		NAF	NAF
EP1201384012	NS0085	180	south	-24.0534	8.6	-55.5	<0.1	<0.1		NAF	NAF
EP1201384004	NS0085	200	south	-2.0952	8	-34.4	<0.1	<0.1		NAF	NAF
EP1201384003	NS0085	208	south	-11.016	8.6	-52.9	<0.1	<0.1		NAF	NAF
EP1201384002	NS0085	230	south	-19.4868	8.4	-59.6	<0.1	<0.1		NAF	NAF
EP1201384018	NS0085	238	south	-8.9946	8.8	-51.6	<0.1	<0.1		NAF	NAF
EP1201384019	NS0085	250	south	-7.2324	8.8	-40	<0.1	<0.1		NAF	NAF
EP1201384017	NS0085	258	south	-9.5688	8.6	-43.3	<0.1	<0.1		NAF	NAF
EP1201384020	NS0085	270	south	-6.714	8.6	-40	<0.1	<0.1		NAF	NAF
EP1201383045	NS0086	8	oxide	0.7101	6.2		<0.1	1.1		NAF	NAF
EP1201383044	NS0086	20	oxide	-2.3994	7.1		<0.1	<0.1		NAF	NAF
EP1201383046	NS0086	28	oxide	-2.6928	6.5		<0.1	1.3		NAF	NAF
EP1201383043	NS0086	40	oxide	-3.9078	7.6		<0.1	<0.1		NAF	NAF
EP1201383001	NS0086	48		-2.7882	8.4		<0.1	<0.1		NAF	NAF
EP1201383004	NS0086	60	footwall	-9.2358	8.6		<0.1	<0.1		NAF	NAF
EP1201383003	NS0086	68	footwall	-42.5016	8.8		<0.1	<0.1		NAF	NAF
EP1201383002	NS0086	80	footwall	-6.1686	8.7		<0.1	<0.1		NAF	NAF
EP1201385002	NS0086	88	footwall	0.0378	8.6	-24.3	<0.1	<0.1		NAF	NAF
EP1201385001	NS0086	110	footwall	-12.2094	8	-20	<0.1	<0.1		NAF	NAF
EP1201385004	NS0086	118	footwall	-11.3778	8.5	-27.4	<0.1	<0.1		NAF	NAF
EP1201385003	NS0086	128	footwall	-5.4288	8.7	-32	<0.1	<0.1		NAF	NAF
EP1201385008	NS0086	140	footwall	-17.928	8.6	-38.7	<0.1	<0.1		NAF	NAF
EP1201385006	NS0086	148	footwall	-25.443	8.9	-38.4	<0.1	<0.1		NAF	NAF
EP1201385007	NS0086	160	footwall	-25.8606	8.6	-44.3	<0.1	<0.1		NAF	NAF
EP1201385005	NS0086	168	footwall	-6.9498	8.7	-24.4	<0.1	<0.1		NAF	NAF
EP1201384041	NS0086	180	footwall	-9.7416	8.9	-42.2	<0.1	<0.1		NAF	NAF
EP1201384042	NS0086	188	footwall	-15.3288	9	-45.2	<0.1	<0.1		NAF	NAF
EP1201384044	NS0086	200	footwall	-9.4104	9	-43.2	<0.1	<0.1		NAF	NAF
EP1201384043	NS0086	208	footwall	-34.5906	9.2	-62.9	<0.1	<0.1		NAF	NAF
EP1201384048	NS0086	220	footwall	-25.4142	9.3	-47.1	<0.1	<0.1		NAF	NAF
EP1201384049	NS0086	228	footwall	-25.8282	9.2	-42.6	<0.1	<0.1		NAF	NAF
EP1201384045	NS0086	248	footwall	-48.9456	9.2	-58.4	<0.1	<0.1		NAF	NAF
EP1201384050	NS0086	260	footwall	3.618	9.3	-35.8	<0.1	<0.1		NAF	PAF
EP1201384046	NS0086	268	footwall	-21.195	9.1	-22.5	<0.1	<0.1		NAF	NAF
EP1201384047	NS0086	280	footwall	-10.9422	9.2	-47.4	<0.1	<0.1		NAF	NAF
EP1201527028	NS0087	8	oxide	0.234	7		<0.1	<0.1		NAF	NAF
EP1201527035	NS0087	30	oxide	-7.542	8.1		<0.1	<0.1		NAF	NAF
EP1201527030	NS0087	50	footwall	-36.7794	9		<0.1	<0.1		NAF	NAF
EP1201527033	NS0087	60	footwall	-54.2232	8.9		<0.1	<0.1		NAF	NAF
EP1201527031	NS0087	84	footwall	-10.674	8.3		<0.1	<0.1		NAF	NAF
EP1201527032	NS0087	88	footwall	10.1286	8.8		<0.1	<0.1		NAF	PAF
EP1201527029	NS0087	98	south	-14.337	9		<0.1	<0.1		NAF	NAF
EP1201527034	NS0087	110	south	-32.1948	8.9		<0.1	<0.1		NAF	NAF
EP1201381019	NS0087	118	south	-18.6606	8.8	-48.3	<0.1	<0.1		NAF	NAF
EP1201381020	NS0087	130	south	-10.4832	8.7	-32.8	<0.1	<0.1		NAF	NAF
EP1201381018	NS0087	138	south	-21.6846	8.8	-48.9	<0.1	<0.1		NAF	NAF
EP1201381017	NS0087	148	south	-31.2354	8.8	-50	<0.1	<0.1		NAF	NAF
EP1201381016	NS0087	160	south	-32.4486	8.9	-44.8	<0.1	<0.1		NAF	NAF
EP1201381009	NS0087	168	south	-32.463	8.9	-43.6	<0.1	<0.1		NAF	NAF
EP1201381015	NS0087	180	south	-17.6904	8.9	-44.4	<0.1	<0.1		NAF	NAF
EP1201381037	NS0087	188	south	-19.4544	8.9	-34.8	<0.1	<0.1		NAF	NAF
EP1201381032	NS0087	198	south	-17.9568	8.9	-47.5	<0.1	<0.1		NAF	NAF
EP1201381036	NS0087	210	south	-4.653	8.9	-37.6	<0.1	<0.1		NAF	NAF
EP1201527037	NS0087	218	south	-12.735	9.1		<0.1	<0.1		NAF	NAF
EP1201381033	NS0087	230	south	-43.4106	9	-51.3	<0.1	<0.1		NAF	NAF
EP1201381030	NS0087	240	south	-22.4298	8.9	-45	<0.1	<0.1		NAF	NAF
EP1201381034	NS0087	248	south	-19.9836	8.9	-35.2	<0.1	<0.1		NAF	NAF
EP1201381031	NS0087	260	south	-19.4004	8.8	-48.5	<0.1	<0.1		NAF	NAF
EP1201381035	NS0087	268	south	-13.1184	8.7	-28.2	<0.1	<0.1		NAF	NAF
EP1201381026	NS0087	280	south	-5.7078	8.9	-38.1	<0.1	<0.1		NAF	NAF
EP1201381027	NS0087	300	south	-6.4836	9	-34.8	<0.1	<0.1		NAF	NAF
EP1201527038	NS0087	308	south	-13.1832	9.1		<0.1	<0.1		NAF	NAF
EP1201381028	NS0087	320	south	-33.5376	8.9	-43.2	<0.1	<0.1		NAF	NAF
EP1201381029	NS0087	330	south	-20.286	8.9	-43.3	<0.1	<0.1		NAF	NAF
EP1201381021	NS0087	338	south	-17.109	8.9	-49.6	<0.1	<0.1		NAF	NAF
EP1201527036	NS0087	350	south	-39.7908	9.1		<0.1	<0.1		NAF	NAF
EP1201381014	NS0087	358	south	-27.621	8.9	-52.6	<0.1	<0.1		NAF	NAF
EP1201381011	NS0087	368	south	-36.72	8.9	-72.6	<0.1	<0.1		NAF	NAF

Detailed Testwork and Waste Classification											
Sample Name	Hole	Depth	Lithology	Estimated NAPP	pHox	Lab NAPP	NAG pH 4.5	NAG pH 7.0	Ecox	PAF Categorisation - pHox < 4.5	PAF Categorisation - Estimated NAPP > 10
Mean				-12.50	9.61	-33.33			162.28		
Minimum				-78.35	2.00	-77.40			11.00		
Maximum				128.03	763.00	80.10			4100.00		
Count				712.00	712.00	93.00			241.00		
PAF										11	25
NAF										701	673
PAF %										1.54%	3.51%
EP1201381013	NS0087	380	south	-27.261	8.9	-59.3	<0.1	<0.1		NAF	NAF
EP1201381012	NS0087	388	south	-47.2428	8.9	-77.4	<0.1	<0.1		NAF	NAF
EP1201381010	NS0087	396	south	-25.1964	8.9	-65.8	<0.1	<0.1		NAF	NAF
EP1201382020	NS0088	0	oxide	-0.072	6.8		<0.1	0.5		NAF	NAF
EP1201382016	NS0088	8	oxide	0.1287	6.5		<0.1	2.3		NAF	NAF
EP1201382017	NS0088	20	oxide	0.1899	8.2		<0.1	<0.1		NAF	NAF
EP1201382022	NS0088	30	oxide	0.0558	9.7		<0.1	<0.1		NAF	NAF
EP1201382015	NS0088	38	oxide	-0.036	8.4		<0.1	<0.1		NAF	NAF
EP1201382023	NS0088	50	oxide	-0.0666	8.9		<0.1	<0.1		NAF	NAF
EP1201382013	NS0088	60	oxide	-2.3922	8.7		<0.1	<0.1		NAF	NAF
EP1201382011	NS0088	68	oxide	-9.8424	8.6		<0.1	<0.1		NAF	NAF
EP1201382012	NS0088	80	oxide	-5.9274	8.8		<0.1	<0.1		NAF	NAF
EP1201382021	NS0088	88	footwall	-11.2518	9.8		<0.1	<0.1		NAF	NAF
EP1201382018	NS0088	100	footwall	-10.017	8.7		<0.1	<0.1		NAF	NAF
EP1201382019	NS0088	108	north	-7.4592	8.7		<0.1	<0.1		NAF	NAF
EP1201382014	NS0088	120	north	-7.7022	8.9		<0.1	<0.1		NAF	NAF
EP1201382043	NS0088	130	north	-9.0684	8.9		<0.1	<0.1		NAF	NAF
EP1201382038	NS0088	138	north	-14.2722	8.8		<0.1	<0.1		NAF	NAF
EP1201382041	NS0088	150	north	8.7912	7.7		<0.1	<0.1		NAF	PAF
EP1201382036	NS0088	170	north	-9.6552	8.9		<0.1	<0.1		NAF	NAF
EP1201382035	NS0088	178	north	-10.3266	8.7		<0.1	<0.1		NAF	NAF
EP1201382037	NS0088	190	north	-9.6552	9		<0.1	<0.1		NAF	NAF
EP1201382039	NS0088	198	north	-7.6446	8.8		<0.1	<0.1		NAF	NAF
EP1201382040	NS0088	210	north	-15.2856	8.9		<0.1	<0.1		NAF	NAF
EP1201382042	NS0088	228	north	-15.7806	8.6		<0.1	<0.1		NAF	NAF
EP1201382006	NS0088	240	north	-11.0034	8.8		<0.1	<0.1		NAF	NAF
EP1201382003	NS0088	248	north	-15.5052	8.7		<0.1	<0.1		NAF	NAF
EP1201382008	NS0088	260	north	4.221	8.5		<0.1	<0.1		NAF	PAF
EP1201382002	NS0088	268	north	-15.8436	8.8		<0.1	<0.1		NAF	NAF
EP1201382001	NS0088	280	north	-9.1908	8.6		<0.1	<0.1		NAF	NAF
EP1201382004	NS0088	288	north	0.6714	8.8		<0.1	<0.1		NAF	NAF
EP1201382005	NS0088	300	north	-6.1902	8.9		<0.1	<0.1		NAF	NAF
EP1201382007	NS0088	308	north	-8.811	8.7		<0.1	<0.1		NAF	NAF
EP1201526001	NS0088	318	north	-12.6828	8.9		<0.1	<0.1		NAF	NAF
EP1201382009	NS0088	330	north	-8.4006	8.9		<0.1	<0.1		NAF	NAF
EP1201526002	NS0088	338	north	-12.4254	9.1		<0.1	<0.1		NAF	NAF
EP1201382010	NS0088	346	north	-4.8582	8.9		<0.1	<0.1		NAF	NAF
EP1201528017	NS0089	68	oxide	-2.4966	8.4		<0.1	<0.1		NAF	NAF
EP1201528017	NS0089	68	oxide	-2.4966	8.4		<0.1	<0.1		NAF	NAF
EP1201528019	NS0089	80	north	-1.062	8.7		<0.1	<0.1		NAF	NAF
EP1201528001	NS0089	88	north	-15.6492	8.8		<0.1	<0.1		NAF	NAF
EP1201528020	NS0089	100	north	-9.333	8.9		<0.1	<0.1		NAF	NAF
EP1201528021	NS0089	108	north	-1.4202	8		<0.1	<0.1		NAF	NAF
EP1201529038	NS0089	120	north	0.495	8.4		<0.1	<0.1		NAF	NAF
EP1201529040	NS0089	128	north	17.6436	8.3		<0.1	<0.1		NAF	PAF
EP1201529039	NS0089	140	north	-8.3754	9.2		<0.1	<0.1		NAF	NAF
EP1201529051	NS0089	144	north	-5.1876	8.8		<0.1	<0.1		NAF	NAF
EP1201529043	NS0089	148	north	-7.0722	9.3		<0.1	<0.1		NAF	NAF
EP1201529046	NS0089	160	north	-2.0196	9		<0.1	<0.1		NAF	NAF
EP1201529041	NS0089	170	north	-6.3792	8.9		<0.1	<0.1		NAF	NAF
EP1201529045	NS0089	178	north	36.45	7.6		<0.1	<0.1		NAF	PAF
EP1201529047	NS0089	190	north	-6.966	9.1		<0.1	<0.1		NAF	NAF
EP1201529042	NS0089	198	north	-7.3602	9.2		<0.1	<0.1		NAF	NAF
EP1201529050	NS0089	210	north	-10.107	8.9		<0.1	<0.1		NAF	NAF
EP1201529049	NS0089	218	north	-4.635	8.4		<0.1	<0.1		NAF	NAF
EP1201529048	NS0089	230	north	-7.8624	8.7		<0.1	<0.1		NAF	NAF
EP1201529044	NS0089	250	north	-13.9896	9.2		<0.1	<0.1		NAF	NAF
EP1201527001	NS0089	260	north	-9.3726	7.5		<0.1	<0.1		NAF	NAF
EP1201526049	NS0089	268	north	-7.8822	9.2		<0.1	<0.1		NAF	NAF
PE065686.013	NS0089	280	north	-10.4184	8.5		<0.5	<0.5	210	NAF	NAF
PE065686.012	NS0089	288	north	-8.9766	7.8		<0.5	<0.5	210	NAF	NAF
PE065686.014	NS0089	300	north	-2.6244	7.6		<0.5	<0.5	160	NAF	NAF
EP1201526048	NS0089	308	north	-19.5894	9.3		<0.1	<0.1		NAF	NAF
PE065686.011	NS0089	320	north	-6.723	8.2		<0.5	<0.5	210	NAF	NAF
EP1201527002	NS0089	320	north	-6.723	8.3		<0.1	<0.1		NAF	NAF
EP1201527003	NS0089	328	north	-10.386	8.4		<0.1	<0.1		NAF	NAF
EP1201526047	NS0089	348	north	-10.7532	9.3		<0.1	<0.1		NAF	NAF
PE065689.080	NS0089	360	north	-12.3408	8.8		<0.5	<0.5	320	NAF	NAF
PE065689.079	NS0089	368	north	-7.6878	8.3		<0.5	<0.5	190	NAF	NAF
EP1201529016	NS0090	0	oxide	0.1602	6.4		<0.1	1.5		NAF	NAF

Detailed Testwork and Waste Classification											
Sample Name	Hole	Depth	Lithology	Estimated NAPP	pHox	Lab NAPP	NAG pH 4.5	NAG pH 7.0	Ecox	PAF Categorisation - pHox < 4.5	PAF Categorisation - Estimated NAPP > 10
Mean				-12.50	9.61	-33.33			162.28		
Minimum				-78.35	2.00	-77.40			11.00		
Maximum				128.03	763.00	80.10			4100.00		
Count				712.00	712.00	93.00			241.00		
PAF										11	25
NAF										701	673
PAF %										1.54%	3.51%
EP1201529015	NS0090	8	oxide	0.0252	6.5		<0.1	4		NAF	NAF
EP1201529017	NS0090	20	oxide	-0.189	6.6		<0.1	4		NAF	NAF
EP1201529019	NS0090	28	oxide	-0.4212	8		<0.1	<0.1		NAF	NAF
EP1201529018	NS0090	40	oxide	-1.8198	8.5		<0.1	<0.1		NAF	NAF
EP1201530005	NS0090	48	oxide	-0.8316	8.1		<0.1	<0.1		NAF	NAF
EP1201530006	NS0090	60	south	-5.0976	8		<0.1	<0.1		NAF	NAF
EP1201530002	NS0090	68	south	-7.9308	8.7		<0.1	<0.1		NAF	NAF
EP1201531002	NS0090	76	south	-7.4538	8.8		<0.1	<0.1		NAF	NAF
EP1201530003	NS0090	88	south	-8.829	8.7		<0.1	<0.1		NAF	NAF
EP1201530004	NS0090	100	south	-2.313	8.6		<0.1	<0.1		NAF	NAF
EP1201530001	NS0090	108	south	-5.5458	8		<0.1	<0.1		NAF	NAF
EP1201530049	NS0090	120	south	-7.9308	9		<0.1	<0.1		NAF	NAF
EP1201531004	NS0090	128	south	-20.4264	8.7		<0.1	<0.1		NAF	NAF
EP1201530046	NS0090	140	south	-8.2242	8.8		<0.1	<0.1		NAF	NAF
EP1201530045	NS0090	148	south	3.6936	8.5		<0.1	<0.1		NAF	PAF
EP1201530048	NS0090	158	south	-3.4002	8.2		<0.1	<0.1		NAF	NAF
EP1201530047	NS0090	170	south	-3.9708	8.9		<0.1	<0.1		NAF	NAF
EP1201530044	NS0090	178	south	-3.0636	8.9		<0.1	<0.1		NAF	NAF
EP1201529008	NS0090	190	south	-11.709	9.3		<0.1	<0.1		NAF	NAF
EP1201529007	NS0090	198	south	-5.3334	9.1		<0.1	<0.1		NAF	NAF
EP1201531003	NS0090	210	footwall	1.782	7.9		<0.1	<0.1		NAF	NAF
EP1201529010	NS0090	218	footwall	-14.9364	9.2		<0.1	<0.1		NAF	NAF
EP1201529013	NS0090	230	footwall	-11.3994	8.9		<0.1	<0.1		NAF	NAF
EP1201529009	NS0090	238	footwall	-10.395	9.3		<0.1	<0.1		NAF	NAF
EP1201529012	NS0090	250	north	-10.3626	8.8		<0.1	<0.1		NAF	NAF
EP1201529014	NS0090	260	north	-4.9554	9		<0.1	<0.1		NAF	NAF
EP1201531001	NS0090	268	north	-9.1836	8.1		<0.1	<0.1		NAF	NAF
EP1201529011	NS0090	280	north	-0.3906	8.6		<0.1	<0.1		NAF	NAF
EP1201383022	NS0091	60	oxide	-1.4778	8		<0.1	<0.1		NAF	NAF
EP1201383019	NS0091	68	oxide	-1.746	7.8		<0.1	<0.1		NAF	NAF
EP1201383021	NS0091	80	hangingwall	-7.236	8.4		<0.1	<0.1		NAF	NAF
EP1201383020	NS0091	90	hangingwall	2.0952	8.4		<0.1	<0.1		NAF	NAF
EP1201383036	NS0091	100	hangingwall	-4.5198	8.8		<0.1	<0.1		NAF	NAF
EP1201383037	NS0091	108	hangingwall	-11.7828	9		<0.1	<0.1		NAF	NAF
EP1201383035	NS0091	120	hangingwall	-22.9554	8.4		<0.1	<0.1		NAF	NAF
EP1201383038	NS0091	128	hangingwall	1.9188	8.9		<0.1	<0.1		NAF	NAF
EP1201385010	NS0091	150	hangingwall	-12.9834	8.7	-34.8	<0.1	<0.1		NAF	NAF
EP1201385011	NS0091	160	hangingwall	-13.482	9	-50.9	<0.1	<0.1		NAF	NAF
EP1201385009	NS0091	160	hangingwall	-13.482	8.8	-35.3	<0.1	<0.1		NAF	NAF
EP1201385012	NS0091	170	hangingwall	-11.9268	8.8	-38.1	<0.1	<0.1		NAF	NAF
EP1201383050	NS0091	178	hangingwall	-15.741	8.8		<0.1	<0.1		NAF	NAF
EP1201383047	NS0091	190	hangingwall	-1.4076	8.6		<0.1	<0.1		NAF	NAF
EP1201383048	NS0091	198	hangingwall	-10.773	8.9		<0.1	<0.1		NAF	NAF
EP1201383049	NS0091	210	hangingwall	-15.9084	8.8		<0.1	<0.1		NAF	NAF
EP1201383027	NS0091	218	hangingwall	-15.9822	8.9		<0.1	<0.1		NAF	NAF
EP1201383028	NS0091	230	hangingwall	-6.7608	8.8		<0.1	<0.1		NAF	NAF
EP1201383030	NS0091	238	hangingwall	-13.014	8.9		<0.1	<0.1		NAF	NAF
EP1201383029	NS0091	250	hangingwall	-17.1774	8.8		<0.1	<0.1		NAF	NAF
EP1201382048	NS0091	258	hangingwall	-11.8368	9		<0.1	<0.1		NAF	NAF
EP1201382049	NS0091	268	hangingwall	-8.3502	8.6		<0.1	<0.1		NAF	NAF
EP1201382050	NS0091	280	hangingwall	-7.8876	9.1		<0.1	<0.1		NAF	NAF
EP1201383007	NS0092	40	footwall	-7.695	8.8		<0.1	<0.1		NAF	NAF
EP1201383006	NS0092	48	footwall	-25.4628	8.9		<0.1	<0.1		NAF	NAF
EP1201383008	NS0092	60	footwall	-16.092	8.8		<0.1	<0.1		NAF	NAF
EP1201382027	NS0092	68	south	-18.7956	8.8		<0.1	<0.1		NAF	NAF
EP1201382026	NS0092	80	south	-10.8252	8.8		<0.1	<0.1		NAF	NAF
EP1201382024	NS0092	90	south	-14.3892	9		<0.1	<0.1		NAF	NAF
EP1201382025	NS0092	98	south	-13.3902	9		<0.1	<0.1		NAF	NAF
EP1201382044	NS0092	110	south	-6.1272	8.8		<0.1	<0.1		NAF	NAF
EP1201382047	NS0092	118	south	-3.2058	8.8		<0.1	<0.1		NAF	NAF
EP1201382045	NS0092	130	south	-10.2276	8.7		<0.1	<0.1		NAF	NAF
EP1201382046	NS0092	150	south	-22.9554	8.8		<0.1	<0.1		NAF	NAF
EP1201383026	NS0092	158	south	-20.493	8.9		<0.1	<0.1		NAF	NAF
EP1201383023	NS0092	170	south	-37.8936	9		<0.1	<0.1		NAF	NAF
EP1201383025	NS0092	178	south	-26.586	9		<0.1	<0.1		NAF	NAF
EP1201383024	NS0092	188	south	-19.6434	8.9		<0.1	<0.1		NAF	NAF
EP1201383031	NS0092	200	south	-6.6204	9		<0.1	<0.1		NAF	NAF
EP1201383032	NS0092	208	south	-33.1164	8.1		<0.1	<0.1		NAF	NAF
EP1201383033	NS0092	228	south	-37.1052	8.3		<0.1	<0.1		NAF	NAF
EP1201383017	NS0092	240	south	-36.0432	9		<0.1	<0.1		NAF	NAF

Detailed Testwork and Waste Classification											
Sample Name	Hole	Depth	Lithology	Estimated NAPP	pHox	Lab NAPP	NAG pH 4.5	NAG pH 7.0	Ecox	PAF Categorisation - pHox < 4.5	PAF Categorisation - Estimated NAPP > 10
Mean				-12.50	9.61	-33.33			162.28		
Minimum				-78.35	2.00	-77.40			11.00		
Maximum				128.03	763.00	80.10			4100.00		
Count				712.00	712.00	93.00			241.00		
PAF										11	25
NAF										701	673
PAF %										1.54%	3.51%
EP1201383013	NS0092	248	south	-30.8826	8.9		<0.1	<0.1		NAF	NAF
EP1201383015	NS0092	260	south	-21.6306	8.9		<0.1	<0.1		NAF	NAF
EP1201383016	NS0092	268	south	-27.5598	8.9		<0.1	<0.1		NAF	NAF
EP1201383014	NS0092	280	south	-28.9044	9		<0.1	<0.1		NAF	NAF
EP1201379008	NS0093	40	oxide	-0.5922	7.7		<0.1	<0.1		NAF	NAF
EP1201379011	NS0093	48	oxide	-4.7196	8.3		<0.1	<0.1		NAF	NAF
EP1201379012	NS0093	58	oxide	-0.8604	8.1		<0.1	<0.1		NAF	NAF
EP1201379014	NS0093	70	south	-9.9936	8.9		<0.1	<0.1		NAF	NAF
EP1201379018	NS0093	78	south	-21.9636	9.3		<0.1	<0.1		NAF	NAF
EP1201379015	NS0093	90	south	-23.3028	9.1		<0.1	<0.1		NAF	NAF
EP1201378028	NS0093	98	south	-29.4408	8.8		<0.1	<0.1		NAF	NAF
EP1201379016	NS0093	108	south	-17.9388	9		<0.1	<0.1		NAF	NAF
EP1201379017	NS0093	120	south	-32.5854	8.9		<0.1	<0.1		NAF	NAF
EP1201378001	NS0093	128	south	-34.7058	7.6		<0.1	<0.1		NAF	NAF
EP1201379019	NS0093	140	south	-5.4396	9		<0.1	<0.1		NAF	NAF
EP1201379009	NS0093	148	south	-3.3786	8.9		<0.1	<0.1		NAF	NAF
EP1201379010	NS0093	156	south	-31.6422	8.7		<0.1	<0.1		NAF	NAF
EP1201378037	NS0093	160	south	-26.3628	8.8		<0.1	<0.1		NAF	NAF
EP1201378033	NS0093	170	south	-36.4932	8.8		<0.1	<0.1		NAF	NAF
EP1201378036	NS0093	178	south	-20.7054	8.7		<0.1	<0.1		NAF	NAF
EP1201378027	NS0093	190	south	-21.8196	8.8		<0.1	<0.1		NAF	NAF
EP1201378034	NS0093	210	south	-13.5054	8.8		<0.1	<0.1		NAF	NAF
EP1201379013	NS0093	216	south	-21.4524	9		<0.1	<0.1		NAF	NAF
EP1201378038	NS0093	224	south	-25.4862	8.8		<0.1	<0.1		NAF	NAF
EP1201378032	NS0093	240	south	-8.8236	8.8		<0.1	<0.1		NAF	NAF
EP1201378031	NS0093	260	south	-13.4892	8.8		<0.1	<0.1		NAF	NAF
EP1201378029	NS0093	268	south	-10.7172	8.8		<0.1	<0.1		NAF	NAF
EP1201378030	NS0093	280	south	-12.384	8.8		<0.1	<0.1		NAF	NAF
PE065688.026	NS0094	28	oxide	-2.1006	7.9		<0.5	<0.5	17	NAF	NAF
PE065688.027	NS0094	40	south	-11.3022	8.4		<0.5	<0.5	120	NAF	NAF
PE065688.025	NS0094	60	south	-28.9332	8.5		<0.5	<0.5	110	NAF	NAF
PE065688.101	NS0094	68	south	-30.6054	9.1		<0.5	<0.5	74	NAF	NAF
EP1201527020	NS0094	80	south	-15.642	8.9		<0.1	<0.1		NAF	NAF
EP1201527021	NS0094	90	south	-39.303	8.9		<0.1	<0.1		NAF	NAF
PE065689.085	NS0094	98	south	-16.4736	9.1		<0.5	<0.5	170	NAF	NAF
EP1201527019	NS0094	110	south	-14.8518	8.9		<0.1	<0.1		NAF	NAF
PE065688.023	NS0094	120	south	-14.2038	8.6		<0.5	<0.5	120	NAF	NAF
EP1201527018	NS0094	128	south	-16.6338	8.8		<0.1	<0.1		NAF	NAF
EP1201530031	NS0094	140	south	-34.596	8.9		<0.1	<0.1		NAF	NAF
PE065688.024	NS0094	144	south	-59.9832	8.8		<0.5	<0.5	91	NAF	NAF
EP1201530033	NS0094	148	south	-30.168	9.1		<0.1	<0.1		NAF	NAF
EP1201530029	NS0094	160	south	-26.3448	8.8		<0.1	<0.1		NAF	NAF
EP1201526019	NS0094	168	south	-44.9532	9		<0.1	<0.1		NAF	NAF
EP1201526020	NS0094	180	south	-33.3432	8.9		<0.1	<0.1		NAF	NAF
EP1201530032	NS0094	188	south	-24.6834	9.1		<0.1	<0.1		NAF	NAF
EP1201530030	NS0094	200	south	-34.2414	9		<0.1	<0.1		NAF	NAF
EP1201528029	NS0094	208	south	-43.3224	8.9		<0.1	<0.1		NAF	NAF
EP1201528028	NS0094	218	south	-19.755	8.3		<0.1	<0.1		NAF	NAF
EP1201528030	NS0094	230	south	-31.1634	8.6		<0.1	<0.1		NAF	NAF
EP1201528031	NS0094	238	south	-33.435	8.8		<0.1	<0.1		NAF	NAF
EP1201528027	NS0094	250	south	-11.2788	8.2		<0.1	<0.1		NAF	NAF
EP1201530015	NS0094	278	south	-17.6364	8.9		<0.1	<0.1		NAF	NAF
PE065688.007	NS0095	30	oxide	-1.0746	7.6		<0.5	<0.5	13	NAF	NAF
PE065688.008	NS0095	38	oxide	-3.1644	7.8		<0.5	<0.5	23	NAF	NAF
PE065688.005	NS0095	50	south	-15.6816	8.4		<0.5	<0.5	90	NAF	NAF
PE065688.001	NS0095	58	south	-18.783	8.6		<0.5	<0.5	93	NAF	NAF
PE065688.006	NS0095	70	south	-33.696	8.5		<0.5	<0.5	140	NAF	NAF
PE065688.004	NS0095	90	south	-29.3292	8.5		<0.5	<0.5	160	NAF	NAF
PE065688.020	NS0095	98	south	-22.599	8.5		<0.5	<0.5	160	NAF	NAF
PE065688.003	NS0095	110	footwall	-14.5764	8.6		<0.5	<0.5	120	NAF	NAF
PE065688.019	NS0095	118	footwall	-12.8538	8.6		<0.5	<0.5	110	NAF	NAF
PE065688.018	NS0095	130	footwall	-12.6792	8.4		<0.5	<0.5	180	NAF	NAF
PE065688.002	NS0095	140	footwall	-15.3936	8.3		<0.5	<0.5	230	NAF	NAF
PE065688.016	NS0095	148	footwall	-8.3916	8.4		<0.5	<0.5	170	NAF	NAF
PE065688.013	NS0095	160	footwall	-26.9244	8.9		<0.5	<0.5	110	NAF	NAF
PE065688.014	NS0095	168	footwall	-6.3288	8.2		<0.5	<0.5	210	NAF	NAF
PE065688.015	NS0095	180	footwall	-18.4554	8.6		<0.5	<0.5	110	NAF	NAF
PE065688.011	NS0095	188	footwall	-36.1602	8.9		<0.5	<0.5	120	NAF	NAF
PE065688.010	NS0095	200	footwall	-22.68	8.5		<0.5	<0.5	200	NAF	NAF
PE065688.009	NS0095	208	footwall	-35.973	8.9		<0.5	<0.5	110	NAF	NAF

Detailed Testwork and Waste Classification											
Sample Name	Hole	Depth	Lithology	Estimated NAPP	pHox	Lab NAPP	NAG pH 4.5	NAG pH 7.0	Ecox	PAF Categorisation - pHox < 4.5	PAF Categorisation - Estimated NAPP > 10
Mean				-12.50	9.61	-33.33			162.28		
Minimum				-78.35	2.00	-77.40			11.00		
Maximum				128.03	763.00	80.10			4100.00		
Count				712.00	712.00	93.00			241.00		
PAF										11	25
NAF										701	673
PAF %										1.54%	3.51%
PE065688.017	NS0095	218	footwall	-6.3828	7.8		<0.5	<0.5	190	NAF	NAF
PE065688.012	NS0095	230	footwall	-10.2564	8.8		<0.5	<0.5	120	NAF	NAF
PE065688.022	NS0095	250	footwall	-1.5678	8.4		<0.5	<0.5	210	NAF	NAF
PE065687.088	NS0096	20	oxide	-0.7632	7.9		<0.5	<0.5	13	NAF	NAF
PE065687.089	NS0096	30		-0.6228	7.9		<0.5	<0.5	13	NAF	NAF
PE065687.090	NS0096	38	oxide	-0.8244	8		<0.5	<0.5	12	NAF	NAF
PE065687.091	NS0096	50	south	-6.8688	8.9		<0.5	<0.5	87	NAF	NAF
PE065687.092	NS0096	58	south	-18.8208	9.1		<0.5	<0.5	120	NAF	NAF
PE065687.085	NS0096	62	south	-12.384	8.9		<0.5	<0.5	110	NAF	NAF
PE065687.093	NS0096	70	south	-22.4604	9.3		<0.5	<0.5	75	NAF	NAF
PE065687.094	NS0096	78	south	-22.4604	9.4		<0.5	<0.5	62	NAF	NAF
PE065687.095	NS0096	90	south	-28.2438	9.4		<0.5	<0.5	64	NAF	NAF
PE065687.096	NS0096	100	south	-25.9578	9.3		<0.5	<0.5	76	NAF	NAF
PE065687.097	NS0096	108	south	-28.9026	9.2		<0.5	<0.5	69	NAF	NAF
PE065687.086	NS0096	120	south	-9.873	9.2		<0.5	<0.5	90	NAF	NAF
PE065687.087	NS0096	128	south	-21.1644	9.4		<0.5	<0.5	64	NAF	NAF
PE065687.101	NS0096	140	south	-31.7916	9.4		<0.5	<0.5	67	NAF	NAF
PE065687.100	NS0096	148	south	-33.291	9.1		<0.5	<0.5	110	NAF	NAF
PE065687.075	NS0096	160	south	-14.5242	9		<0.5	<0.5	100	NAF	NAF
PE065687.076	NS0096	170	south	-6.7446	9.1		<0.5	<0.5	180	NAF	NAF
PE065687.079	NS0096	178	south	-33.3864	9.3		<0.5	<0.5	80	NAF	NAF
PE065687.078	NS0096	190	south	-11.7792	8.8		<0.5	<0.5	150	NAF	NAF
PE065687.077	NS0096	198	south	-20.4876	9		<0.5	<0.5	110	NAF	NAF
PE065687.084	NS0096	234	south	-7.6176	8.9		<0.5	<0.5	110	NAF	NAF
PE065687.082	NS0096	238	south	-18.9846	9.2		<0.5	<0.5	110	NAF	NAF
PE065687.103	NS0096	250	south	-41.7942	9.3		<0.5	<0.5	64	NAF	NAF
PE065687.083	NS0096	254	south	-48.4524	9.3		<0.5	<0.5	59	NAF	NAF
PE065687.098	NS0096	260	south	-20.6784	9.4		<0.5	<0.5	72	NAF	NAF
PE065687.099	NS0096	268	south	-32.9094	9.4		<0.5	<0.5	64	NAF	NAF
PE065687.102	NS0096	280	south	-24.975	9.3		<0.5	<0.5	70	NAF	NAF
PE065688.042	NS0097	28	oxide	-1.2456	7.9		<0.5	<0.5	23	NAF	NAF
PE065688.044	NS0097	48	south	-26.298	8.7		<0.5	<0.5	81	NAF	NAF
PE065688.045	NS0097	58	south	-33.4044	8.6		<0.5	<0.5	110	NAF	NAF
PE065688.029	NS0097	70	south	-20.0808	8.9		<0.5	<0.5	75	NAF	NAF
PE065688.030	NS0097	80	south	-27.5166	8.7		<0.5	<0.5	91	NAF	NAF
PE065688.031	NS0097	88	south	-31.5054	8.8		<0.5	<0.5	71	NAF	NAF
PE065688.032	NS0097	100	south	-23.9238	8.5		<0.5	<0.5	120	NAF	NAF
PE065688.033	NS0097	108	south	-33.3432	8.6		<0.5	<0.5	84	NAF	NAF
PE065688.046	NS0097	120	south	-17.3916	8.6		<0.5	<0.5	81	NAF	NAF
PE065688.047	NS0097	128	south	-39.1698	8.7		<0.5	<0.5	91	NAF	NAF
PE065688.048	NS0097	140	south	-23.823	8.9		<0.5	<0.5	71	NAF	NAF
PE065688.049	NS0097	148	south	21.996	6.4		<0.5	<0.5	450	NAF	PAF
PE065688.050	NS0097	160	south	-24.318	9		<0.5	<0.5	63	NAF	NAF
PE065688.034	NS0097	168	south	-28.5732	8.7		<0.5	<0.5	88	NAF	NAF
PE065688.102	NS0097	178	south	-31.9158	9		<0.5	<0.5	65	NAF	NAF
PE065688.051	NS0097	190	south	-27.7128	8.7		<0.5	<0.5	89	NAF	NAF
PE065688.036	NS0097	198	south	-19.926	8.6		<0.5	<0.5	77	NAF	NAF
PE065688.037	NS0097	210	south	-17.703	8.5		<0.5	<0.5	110	NAF	NAF
PE065688.038	NS0097	218	south	-35.3466	8.6		<0.5	<0.5	80	NAF	NAF
PE065688.039	NS0097	230	south	-11.8026	8.5		<0.5	<0.5	110	NAF	NAF
PE065688.040	NS0097	238	south	-29.1168	8.7		<0.5	<0.5	74	NAF	NAF
PE065688.052	NS0097	250	south	-15.4008	8.6		<0.5	<0.5	78	NAF	NAF
PE065688.041	NS0097	258	south	-30.9276	8.5		<0.5	<0.5	120	NAF	NAF
PE065688.053	NS0097	270	south	-27.3438	8.8		<0.5	<0.5	76	NAF	NAF
PE065688.054	NS0097	280	south	0.8532	8.1		<0.5	<0.5	200	NAF	NAF
PE065687.058	NS0098	0	oxide	-0.7992	6.7		<0.5	0.6	15	NAF	NAF
PE065687.055	NS0098	8	oxide	-0.7812	7.5		<0.5	<0.5	13	NAF	NAF
PE065687.056	NS0098	20	oxide	-0.5004	6.3		<0.5	1.4	12	NAF	NAF
PE065687.054	NS0098	28	oxide	-0.3294	8		<0.5	<0.5	12	NAF	NAF
PE065687.059	NS0098	40	oxide	-1.1844	7.9		<0.5	<0.5	13	NAF	NAF
PE065687.057	NS0098	50	oxide	6.7446	6.4		<0.5	<0.5	220	NAF	PAF
PE065687.060	NS0098	58	hangingwall	6.9894	6.7		<0.5	<0.5	300	NAF	PAF
PE065687.066	NS0098	70	hangingwall	-3.978	8		<0.5	<0.5	30	NAF	NAF
PE065687.061	NS0098	78	hangingwall	-3.24	7.9		<0.5	<0.5	140	NAF	NAF
PE065687.063	NS0098	88	hangingwall	6.4908	8.1		<0.5	<0.5	180	NAF	PAF
PE065687.062	NS0098	100	hangingwall	-12.1608	9.1		<0.5	<0.5	160	NAF	NAF
PE065687.067	NS0098	108	hangingwall	-11.088	9.1		<0.5	<0.5	110	NAF	NAF
PE065687.064	NS0098	120	hangingwall	-14.8572	9		<0.5	<0.5	210	NAF	NAF
PE065687.069	NS0098	128	hangingwall	-9.6066	8.4		<0.5	<0.5	180	NAF	NAF
PE065687.073	NS0098	140	hangingwall	-7.785	8.9		<0.5	<0.5	130	NAF	NAF

Detailed Testwork and Waste Classification											
Sample Name	Hole	Depth	Lithology	Estimated NAPP	pHox	Lab NAPP	NAG pH 4.5	NAG pH 7.0	Ecox	PAF Categorisation - pHox < 4.5	PAF Categorisation - Estimated NAPP > 10
Mean				-12.50	9.61	-33.33			162.28		
Minimum				-78.35	2.00	-77.40			11.00		
Maximum				128.03	763.00	80.10			4100.00		
Count				712.00	712.00	93.00			241.00		
PAF										11	25
NAF										701	673
PAF %										1.54%	3.51%
EP1201526024	NS0098	148	hangingwall	-9.5076	9		<0.1	<0.1		NAF	NAF
PE065687.074	NS0098	160	hangingwall	-13.8978	8.9		<0.5	<0.5	140	NAF	NAF
PE065687.068	NS0098	168	hangingwall	-12.3768	8.5		<0.5	<0.5	190	NAF	NAF
PE065687.065	NS0098	180	hangingwall	14.6952	8.4		<0.5	<0.5	210	NAF	PAF
PE065687.070	NS0098	190	hangingwall	2.817	8.6		<0.5	<0.5	240	NAF	NAF
PE065687.071	NS0098	198	hangingwall	-11.736	9		<0.5	<0.5	170	NAF	NAF
PE065687.072	NS0098	210	hangingwall	-2.3832	8		<0.5	<0.5	280	NAF	NAF
EP1201380024	NS0100	28	oxide	-3.6396	8.2		<0.1	<0.1		NAF	NAF
EP1201380019	NS0100	38	oxide	-3.4992	7.8		<0.1	<0.1		NAF	NAF
EP1201380020	NS0100	50	south	-2.295	8.3		<0.1	<0.1		NAF	NAF
EP1201380022	NS0100	58	south	-22.0626	8.4		<0.1	<0.1		NAF	NAF
EP1201380037	NS0100	70	south	-7.8264	8.7		<0.1	<0.1		NAF	NAF
EP1201380025	NS0100	78	south	11.9682	8.3		<0.1	<0.1		NAF	PAF
EP1201380021	NS0100	110	south	-22.3992	8.3		<0.1	<0.1		NAF	NAF
EP1201380036	NS0100	120	south	-5.6124	8.9		<0.1	<0.1		NAF	NAF
EP1201380035	NS0100	140	south	-6.6906	8.5		<0.1	<0.1		NAF	NAF
EP1201380023	NS0100	148	south	-3.9834	8.4		<0.1	<0.1		NAF	NAF
EP1201380038	NS0100	176	south	-6.9966	9		<0.1	<0.1		NAF	NAF
EP1201380049	NS0106	20	oxide	0.063	8.3		<0.1	<0.1		NAF	NAF
EP1201530008	NS0106	28	oxide	-0.7938	8.4		<0.1	<0.1		NAF	NAF
EP1201530039	NS0106	40	south	-26.3556	8.5		<0.1	<0.1		NAF	NAF
EP1201530010	NS0106	48	south	-28.989	8.9		<0.1	<0.1		NAF	NAF
EP1201380045	NS0106	60	south	-26.2044	9.2		<0.1	<0.1		NAF	NAF
EP1201530011	NS0106	68	south	-26.6436	8.9		<0.1	<0.1		NAF	NAF
EP1201530013	NS0106	80	south	-20.9988	8.7		<0.1	<0.1		NAF	NAF
EP1201380047	NS0106	88	south	-14.8608	9		<0.1	<0.1		NAF	NAF
EP1201380050	NS0106	92	south	12.6612	8.7		<0.1	<0.1		NAF	PAF
EP1201530037	NS0106	100	south	-14.526	8.5		<0.1	<0.1		NAF	NAF
EP1201380048	NS0106	108	south	-41.3928	9		<0.1	<0.1		NAF	NAF
EP1201531007	NS0106	138	south	-34.1676	8.8		<0.1	<0.1		NAF	NAF
EP1201530009	NS0106	150	south	-22.3326	8.9		<0.1	<0.1		NAF	NAF
EP1201530035	NS0106	158	south	-19.9872	8.4		<0.1	<0.1		NAF	NAF
EP1201530042	NS0106	170	south	-37.008	8.9		<0.1	<0.1		NAF	NAF
EP1201531006	NS0106	178	south	-44.5374	9.1		<0.1	<0.1		NAF	NAF
EP1201531005	NS0106	190	south	-29.7954	8.6		<0.1	<0.1		NAF	NAF
EP1201531008	NS0106	198	south	-28.953	9.2		<0.1	<0.1		NAF	NAF
EP1201530041	NS0106	210	south	-18.711	8.5		<0.1	<0.1		NAF	NAF
EP1201530007	NS0106	218	south	-17.838	8.6		<0.1	<0.1		NAF	NAF
EP1201530036	NS0106	230	south	-17.6238	8.5		<0.1	<0.1		NAF	NAF
EP1201530040	NS0106	260	south	-29.5632	8.6		<0.1	<0.1		NAF	NAF
EP1201530038	NS0106	268	south	-30.3084	8.9		<0.1	<0.1		NAF	NAF
EP1201530043	NS0106	276	south	-32.067	9		<0.1	<0.1		NAF	NAF
EP1201530025	NS0108	0	oxide	-36.7938	7.8		<0.1	<0.1		NAF	NAF
EP1201529020	NS0108	8	oxide	-4.2192	7.1		<0.1	<0.1		NAF	NAF
EP1201529021	NS0108	20	oxide	-0.0846	7.4		<0.1	<0.1		NAF	NAF
EP1201529036	NS0108	30	oxide	0.2034	8.7		<0.1	<0.1		NAF	NAF
EP1201529022	NS0108	34	oxide	4.6404	7.7		<0.1	<0.1		NAF	PAF
EP1201529024	NS0108	38	oxide	-0.0972	8.4		<0.1	<0.1		NAF	NAF
EP1201528014	NS0108	50	oxide	-0.2196	8.8		<0.1	<0.1		NAF	NAF
EP1201529023	NS0108	58	oxide	-0.207	8.3		<0.1	<0.1		NAF	NAF
EP1201529002	NS0108	70	oxide	-1.0746	9.3		<0.1	<0.1		NAF	NAF
EP1201529034	NS0108	78	south	-4.599	9		<0.1	<0.1		NAF	NAF
EP1201529037	NS0108	86	south	-4.6458	9.1		<0.1	<0.1		NAF	NAF
EP1201529004	NS0108	90	south	-3.5892	9.2		<0.1	<0.1		NAF	NAF
EP1201528038	NS0108	100	south	-2.9538	8.9		<0.1	<0.1		NAF	NAF
EP1201530024	NS0108	108	south	-6.5214	9.1		<0.1	<0.1		NAF	NAF
EP1201528039	NS0108	120	south	-12.1482	9.2		<0.1	<0.1		NAF	NAF
EP1201529033	NS0108	128	south	-22.6188	9.2		<0.1	<0.1		NAF	NAF
EP1201528015	NS0108	140	south	-1.4004	9.4		<0.1	<0.1		NAF	NAF
EP1201528016	NS0108	148	south	-7.803	9.4		<0.1	<0.1		NAF	NAF
EP1201529005	NS0108	160	south	-17.8164	9.2		<0.1	<0.1		NAF	NAF
EP1201528040	NS0108	168	south	-9.9486	9		<0.1	<0.1		NAF	NAF
EP1201530028	NS0108	176	south	20.5218	8.1		<0.1	<0.1		NAF	PAF
EP1201529035	NS0108	180	south	-9.1512	9.2		<0.1	<0.1		NAF	NAF
EP1201529006	NS0108	188	south	-14.9976	9.2		<0.1	<0.1		NAF	NAF
EP1201528037	NS0108	200	south	-18.8316	9.1		<0.1	<0.1		NAF	NAF
EP1201529003	NS0108	208	south	-7.1748	9.1		<0.1	<0.1		NAF	NAF
EP1201528013	NS0108	230	south	-9.5796	9.3		<0.1	<0.1		NAF	NAF
EP1201528012	NS0108	238	south	-13.1166	9.4		<0.1	<0.1		NAF	NAF
EP1201528041	NS0108	250	south	-11.6784	8.4		<0.1	<0.1		NAF	NAF

Detailed Testwork and Waste Classification											
Sample Name	Hole	Depth	Lithology	Estimated NAPP	pHox	Lab NAPP	NAG pH 4.5	NAG pH 7.0	Ecox	PAF Categorisation - pHox < 4.5	PAF Categorisation - Estimated NAPP > 10
Mean				-12.50	9.61	-33.33			162.28		
Minimum				-78.35	2.00	-77.40			11.00		
Maximum				128.03	763.00	80.10			4100.00		
Count				712.00	712.00	93.00			241.00		
PAF										11	25
NAF										701	673
PAF %										1.54%	3.51%
EP1201530026	NS0108	258	south	-9.531	8.9		<0.1	<0.1		NAF	NAF
EP1201530027	NS0108	270	south	-13.4838	8.9		<0.1	<0.1		NAF	NAF
EP1201529032	NS0108	278	hangingwall	-10.9098	9.2		<0.1	<0.1		NAF	NAF
EP1201530016	NS0111	48	oxide	0.4041	8.4		<0.1	<0.1		NAF	NAF
EP1201385014	NS0111	60	oxide	0.1287	8.3	<0.5	<0.1	<0.1		NAF	NAF
EP1201385020	NS0111	70	oxide	0.0981	7.8	1.8	<0.1	<0.1		NAF	NAF
EP1201529025	NS0111	90	south	-5.0364	8.4		<0.1	<0.1		NAF	NAF
EP1201529027	NS0111	98	south	0.7596	8.8		<0.1	<0.1		NAF	NAF
EP1201385018	NS0111	118	south	-6.0192	9	-16.1	<0.1	<0.1		NAF	NAF
EP1201529031	NS0111	130	south	-9.693	9.1		<0.1	<0.1		NAF	NAF
EP1201529028	NS0111	150	south	-10.233	8.7		<0.1	<0.1		NAF	NAF
EP1201530018	NS0111	158	south	-15.66	8.8		<0.1	<0.1		NAF	NAF
EP1201529026	NS0111	168	south	-8.676	8.9		<0.1	<0.1		NAF	NAF
EP1201530023	NS0111	180	south	-10.467	8.9		<0.1	<0.1		NAF	NAF
EP1201385015	NS0111	188	south	-7.8408	8.4	-35.5	<0.1	<0.1		NAF	NAF
EP1201530021	NS0111	200	south	-9.6606	8.6		<0.1	<0.1		NAF	NAF
EP1201530020	NS0111	208	south	-3.8088	9		<0.1	<0.1		NAF	NAF
EP1201529030	NS0111	220	south	-11.6514	9		<0.1	<0.1		NAF	NAF
EP1201530017	NS0111	228	south	-1.4094	8.8		<0.1	<0.1		NAF	NAF
EP1201530022	NS0111	236	south	-22.581	8.9		<0.1	<0.1		NAF	NAF
EP1201385017	NS0111	240	south	-10.665	9	-38.4	<0.1	<0.1		NAF	NAF
EP1201385013	NS0111	248	south	-17.955	9.1	-35.7	<0.1	<0.1		NAF	NAF
EP1201385019	NS0111	260	south	-9.8424	8.6	-25.6	<0.1	<0.1		NAF	NAF
EP1201529029	NS0111	270	south	-6.8346	9		<0.1	<0.1		NAF	NAF
EP1201530019	NS0111	278	south	-11.817	9		<0.1	<0.1		NAF	NAF
EP1201385016	NS0111	290	hangingwall	-9.2718	8.6	-41.5	<0.1	<0.1		NAF	NAF
PE065689.004	NS0115	58	oxide	-0.2988	7.4		<0.5	<0.5	11	NAF	NAF
PE065688.096	NS0115	70	oxide	-0.1278	7.5		<0.5	<0.5	12	NAF	NAF
PE065688.089	NS0115	86	south	4.7268	7.5		<0.5	<0.5	92	NAF	PAF
PE065689.001	NS0115	90	south	-1.7118	7.9		<0.5	<0.5	130	NAF	NAF
PE065688.100	NS0115	98	south	-6.2388	7.6		<0.5	<0.5	120	NAF	NAF
PE065689.003	NS0115	108	south	-0.3006	7.5		<0.5	<0.5	120	NAF	NAF
PE065689.002	NS0115	120	south	-6.1776	8.1		<0.5	<0.5	120	NAF	NAF
PE065688.099	NS0115	140	south	-7.0398	7.7		<0.5	<0.5	120	NAF	NAF
PE065688.098	NS0115	148	south	-4.5468	7.7		<0.5	<0.5	100	NAF	NAF
PE065688.088	NS0115	160	south	-5.751	8		<0.5	<0.5	110	NAF	NAF
PE065688.097	NS0115	168	south	-5.0508	7.6		<0.5	<0.5	110	NAF	NAF
PE065689.006	NS0115	180	south	-5.7636	8.8		<0.5	<0.5	160	NAF	NAF
PE065688.095	NS0115	188	south	-9.5076	8.4		<0.5	<0.5	140	NAF	NAF
PE065688.091	NS0115	200	south	-7.3908	8.4		<0.5	<0.5	140	NAF	NAF
PE065688.093	NS0115	210	south	21.4434	6.4		<0.5	<0.5	320	NAF	PAF
PE065688.092	NS0115	218	south	-7.3944	8.5		<0.5	<0.5	110	NAF	NAF
PE065688.094	NS0115	228	south	-2.556	8.2		<0.5	<0.5	160	NAF	NAF
PE065688.090	NS0115	240	south	-6.8814	8.5		<0.5	<0.5	130	NAF	NAF
PE065689.008	NS0115	248	south	-7.8894	8.5		<0.5	<0.5	90	NAF	NAF
PE065689.010	NS0115	260	south	-12.6468	8.6		<0.5	<0.5	92	NAF	NAF
PE065689.005	NS0115	268	south	-6.5178	8.6		<0.5	<0.5	150	NAF	NAF
PE065689.009	NS0115	272	hangingwall	-5.4864	7.9		<0.5	<0.5	190	NAF	NAF
PE065688.087	NS0118	100	oxide	-8.1198	8.3		<0.5	<0.5	170	NAF	NAF
PE065688.081	NS0118	108	hangingwall	-5.5116	8		<0.5	<0.5	260	NAF	NAF
PE065688.084	NS0118	112	hangingwall	-10.4904	8		<0.5	<0.5	180	NAF	NAF
PE065688.085	NS0118	120	hangingwall	-6.2226	7.7		<0.5	<0.5	200	NAF	NAF
PE065688.086	NS0118	128	hangingwall	-3.2328	8		<0.5	<0.5	130	NAF	NAF
PE065688.082	NS0118	140	hangingwall	-0.1224	6.8		<0.5	<0.5	270	NAF	NAF
PE065688.083	NS0118	150	hangingwall	-15.2658	8		<0.5	<0.5	220	NAF	NAF
PE065687.031	NS0124	50	oxide	-4.5126	8.2		<0.5	<0.5	20	NAF	NAF
PE065687.008	NS0124	58	footwall	-9.1296	9.1		<0.5	<0.5	120	NAF	NAF
PE065687.010	NS0124	78	footwall	-20.5182	9.4		<0.5	<0.5	130	NAF	NAF
PE065687.011	NS0124	90	footwall	-4.6692	9		<0.5	<0.5	160	NAF	NAF
PE065687.104	NS0124	98	footwall	-38.6334	9.4		<0.5	<0.5	97	NAF	NAF
PE065687.012	NS0124	102	footwall	-38.907	10.3		<0.5	<0.5	110	NAF	NAF
PE065687.016	NS0124	110	footwall	-46.449	10.3		<0.5	<0.5	98	NAF	NAF
PE065687.013	NS0124	118	footwall	-34.1892	10		<0.5	<0.5	93	NAF	NAF
PE065687.014	NS0124	130	footwall	8.5176	5.4		<0.5	0.8	350	NAF	PAF
PE065687.017	NS0124	140	footwall	-8.9658	8.5		<0.5	<0.5	200	NAF	NAF
PE065687.018	NS0124	148	footwall	-0.9738	8.4		<0.5	<0.5	240	NAF	NAF
PE065687.020	NS0124	160	footwall	-3.3372	10.7		<0.5	<0.5	210	NAF	NAF
PE065687.019	NS0124	164	footwall	-78.3504	8.9		<0.5	<0.5	120	NAF	NAF
PE065687.021	NS0124	168	footwall	-21.0888	9.4		<0.5	<0.5	110	NAF	NAF
PE065687.022	NS0124	180	footwall	-8.541	9.2		<0.5	<0.5	120	NAF	NAF

Detailed Testwork and Waste Classification											
Sample Name	Hole	Depth	Lithology	Estimated NAPP	pHox	Lab NAPP	NAG pH 4.5	NAG pH 7.0	Ecox	PAF Categorisation - pHox < 4.5	PAF Categorisation - Estimated NAPP > 10
Mean				-12.50	9.61	-33.33			162.28		
Minimum				-78.35	2.00	-77.40			11.00		
Maximum				128.03	763.00	80.10			4100.00		
Count				712.00	712.00	93.00			241.00		
PAF										11	25
NAF										701	673
PAF %										1.54%	3.51%
PE065687.023	NS0124	200	footwall	-8.235	8.7		<0.5	<0.5	180	NAF	NAF
PE065687.026	NS0124	208	footwall	-6.462	8.3		<0.5	<0.5	270	NAF	NAF
PE065687.034	NS0124	220	footwall	-9.8658	8.1		<0.5	<0.5	200	NAF	NAF
PE065687.027	NS0124	228	footwall	-1.4094	8.8		<0.5	<0.5	140	NAF	NAF
PE065687.028	NS0124	240	footwall	-1.1844	9		<0.5	<0.5	180	NAF	NAF
PE065687.030	NS0124	250	footwall	-30.2832	9.5		<0.5	<0.5	72	NAF	NAF
PE065687.015	NS0124	260	footwall	-35.3862	10.9		<0.5	<0.5	200	NAF	NAF
PE065687.024	NS0124	268	footwall	-40.2768	10.8		<0.5	<0.5	170	NAF	NAF
PE065687.025	NS0124	288	footwall	-8.478	8.4		<0.5	<0.5	270	NAF	NAF
PE065687.033	NS0124	296	footwall	-10.4994	8.5		<0.5	<0.5	220	NAF	NAF
PE065686.003	NS0152	78	footwall	9.027	6		<0.5	0.6	340	NAF	PAF
PE065686.004	NS0152	90	footwall	2.0772	8.3		<0.5	<0.5	200	NAF	NAF
PE065686.005	NS0152	100	footwall	-38.6046	9.6		<0.5	<0.5	110	NAF	NAF
PE065686.006	NS0152	108	footwall	-29.3166	9.4		<0.5	<0.5	86	NAF	NAF
PE065686.007	NS0152	120	footwall	-24.7392	9.3		<0.5	<0.5	100	NAF	NAF
PE065686.008	NS0152	128	footwall	-29.3886	9.3		<0.5	<0.5	100	NAF	NAF
PE065686.009	NS0152	140	footwall	-11.6478	9.1		<0.5	<0.5	110	NAF	NAF
PE065685.089	NS0152	148	footwall	-35.0784	11.5		<0.5	<0.5	410	NAF	NAF
PE065685.090	NS0152	160	footwall	-20.0808	9.5		<0.5	<0.5	110	NAF	NAF
PE065686.010	NS0152	168	footwall	-30.7494	9.5		<0.5	<0.5	96	NAF	NAF
PE065685.091	NS0152	180	footwall	-24.336	10.1		<0.5	<0.5	97	NAF	NAF
PE065685.092	NS0152	188	footwall	-34.7742	9.4		<0.5	<0.5	97	NAF	NAF
PE065685.093	NS0152	200	footwall	-23.2686	10.5		<0.5	<0.5	110	NAF	NAF
PE065685.094	NS0152	208	footwall	-37.0044	10.2		<0.5	<0.5	94	NAF	NAF
PE065685.095	NS0152	220	footwall	-28.7028	10		<0.5	<0.5	130	NAF	NAF
PE065685.096	NS0152	228	footwall	-30.2652	8.9		<0.5	<0.5	150	NAF	NAF
PE065685.097	NS0152	240	footwall	-9.6354	9.7		<0.5	<0.5	140	NAF	NAF
PE065685.098	NS0152	244	footwall	-55.269	11.2		<0.5	<0.5	230	NAF	NAF
PE065685.099	NS0152	248	footwall	-33.2892	10.6		<0.5	<0.5	140	NAF	NAF
PE065685.100	NS0152	260	footwall	-29.1708	10.5		<0.5	<0.5	110	NAF	NAF
PE065686.001	NS0152	268	footwall	-25.0902	8.9		<0.5	<0.5	180	NAF	NAF
PE065686.002	NS0152	280	south	-0.0018	8.4		<0.5	<0.5	260	NAF	NAF
PE065686.021	NS0153	98	oxide	-3.0672	7.5		<0.5	<0.5	200	NAF	NAF
PE065686.022	NS0153	110	hangingwall	-4.0266	7.9		<0.5	<0.5	130	NAF	NAF
PE065686.019	NS0153	118	hangingwall	-5.0526	7.8		<0.5	<0.5	140	NAF	NAF
PE065686.023	NS0153	130	hangingwall	-6.3432	7.7		<0.5	<0.5	180	NAF	NAF
PE065686.024	NS0153	138	hangingwall	-7.2648	7.9		<0.5	<0.5	190	NAF	NAF
PE065686.025	NS0153	160	hangingwall	-17.6238	8.6		<0.5	<0.5	140	NAF	NAF
PE065686.020	NS0153	168	hangingwall	-17.6778	8.3		<0.5	<0.5	180	NAF	NAF
PE065686.026	NS0153	180	hangingwall	-7.5978	7.7		<0.5	<0.5	230	NAF	NAF
PE065686.027	NS0153	188	hangingwall	-6.1974	7.8		<0.5	<0.5	260	NAF	NAF
PE065686.032	NS0153	220	hangingwall	7.668	6		<0.5	1.9	430	NAF	PAF
PE065686.029	NS0153	228	hangingwall	-10.0692	7.7		<0.5	<0.5	210	NAF	NAF
PE065686.031	NS0153	248	hangingwall	-8.5662	8.1		<0.5	<0.5	220	NAF	NAF
PE065685.059	NS0158	38	oxide	-1.3248	8.7		<0.5	<0.5	15	NAF	NAF
PE065685.049	NS0158	50	footwall	-9.2214	8.4		<0.5	<0.5	19	NAF	NAF
PE065685.060	NS0158	54	footwall	-20.6262	9.5		<0.5	<0.5	75	NAF	NAF
PE065685.056	NS0158	58	footwall	-27.8298	9.9		<0.5	<0.5	91	NAF	NAF
PE065685.065	NS0158	66	footwall	33.066	8.7		<0.5	<0.5	210	NAF	PAF
PE065685.051	NS0158	78	north	-28.7964	10.9		<0.5	<0.5	130	NAF	NAF
PE065685.055	NS0158	90	north	-30.6252	10.5		<0.5	<0.5	110	NAF	NAF
PE065685.062	NS0158	100	north	-43.254	10.6		<0.5	<0.5	100	NAF	NAF
PE065685.064	NS0158	110	north	-22.7538	10.2		<0.5	<0.5	79	NAF	NAF
PE065685.061	NS0158	118	north	-18.135	10.4		<0.5	<0.5	180	NAF	NAF
PE065685.063	NS0158	130	north	-31.59	10.4		<0.5	<0.5	85	NAF	NAF
PE065685.058	NS0158	140	north	-21.537	10.4		<0.5	<0.5	80	NAF	NAF
PE065685.057	NS0158	150	north	-16.4934	10.4		<0.5	<0.5	77	NAF	NAF
PE065685.054	NS0158	158	north	-19.278	10.5		<0.5	<0.5	88	NAF	NAF
PE065685.050	NS0158	178	north	-24.0354	11		<0.5	<0.5	140	NAF	NAF
PE065685.053	NS0158	190	north	-62.7858	10.8		<0.5	<0.5	140	NAF	NAF
PE065685.052	NS0158	198	north	-19.3194	9.4		<0.5	<0.5	83	NAF	NAF
PE065686.068	NS0160	58	footwall	-3.267	8		<0.5	<0.5	290	NAF	NAF
PE065686.065	NS0160	70	footwall	-6.1848	763		<0.5	<0.5	280	NAF	NAF
PE065686.070	NS0160	78	footwall	-4.392	7.7		<0.5	<0.5	270	NAF	NAF
PE065686.073	NS0160	90	footwall	-10.665	8.2		<0.5	<0.5	290	NAF	NAF
PE065686.071	NS0160	98	footwall	-7.5456	8.2		<0.5	<0.5	260	NAF	NAF
PE065686.075	NS0160	108	footwall	0.4806	9.1		<0.5	<0.5	140	NAF	NAF
PE065686.074	NS0160	120	footwall	-32.0166	8.4		<0.5	<0.5	200	NAF	NAF
PE065686.072	NS0160	128	footwall	-17.2908	8.7		<0.5	<0.5	150	NAF	NAF
PE065686.081	NS0160	140	footwall	-39.1338	9.4		<0.5	<0.5	150	NAF	NAF

Detailed Testwork and Waste Classification											
Sample Name	Hole	Depth	Lithology	Estimated NAPP	pHox	Lab NAPP	NAG pH 4.5	NAG pH 7.0	Ecox	PAF Categorisation - pHox < 4.5	PAF Categorisation - Estimated NAPP > 10
Mean				-12.50	9.61	-33.33			162.28		
Minimum				-78.35	2.00	-77.40			11.00		
Maximum				128.03	763.00	80.10			4100.00		
Count				712.00	712.00	93.00			241.00		
PAF										11	25
NAF										701	673
PAF %										1.54%	3.51%
PE065686.076	NS0160	148	footwall	-17.2854	8.6		<0.5	<0.5	220	NAF	NAF
PE065686.078	NS0160	160	footwall	-33.2802	8.7		<0.5	<0.5	160	NAF	NAF
PE065686.079	NS0160	168	footwall	-39.3012	8.7		<0.5	<0.5	160	NAF	NAF
PE065686.062	NS0160	180	footwall	0.4284	8.5		<0.5	<0.5	190	NAF	NAF
PE065686.067	NS0160	188	footwall	-30.2778	8.8		<0.5	<0.5	130	NAF	NAF
PE065686.069	NS0160	200	footwall	-1.9188	8.7		<0.5	<0.5	170	NAF	NAF
PE065686.064	NS0160	210	footwall	-12.5946	8.6		<0.5	<0.5	220	NAF	NAF
PE065686.066	NS0160	218	footwall	-5.7888	8.1		<0.5	<0.5	260	NAF	NAF
PE065686.077	NS0160	230	footwall	-16.1388	8.4		<0.5	<0.5	270	NAF	NAF
PE065686.080	NS0160	238	footwall	-5.4162	8.1		<0.5	<0.5	240	NAF	NAF
PE065686.058	NS0160	250	footwall	-15.1128	8.6		<0.5	<0.5	290	NAF	NAF
PE065686.059	NS0160	258	footwall	-20.4516	8.6		<0.5	<0.5	230	NAF	NAF
PE065686.061	NS0160	270	footwall	-5.6898	8.9		<0.5	<0.5	250	NAF	NAF
PE065686.063	NS0160	278	footwall	-28.197	8.9		<0.5	<0.5	120	NAF	NAF
PE065686.060	NS0160	290	footwall	-16.1532	8.8		<0.5	<0.5	230	NAF	NAF

Sample Number	pHox	NAG pH 45	NAG pH 70	Lab NAPP	Ecox	HOLEID	AO AREA	SAMPFROM	SAMPTO	CaO_XRF_pct	S_XRF_pct	modelgeo	mineraleralised	MPA	ANC	NAPP	Categorisation	Hole IDs match?
X066667	8.1	<0.5	<0.5		210	NS0151	NS	128	130	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X066673	7.5	<0.5	<0.5		130	NS0151	NS	140	142	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X066675	8.3	<0.5	<0.5		240	NS0151	NS	144	146	0	0	hangingwall	mineralised	0	0	0		FALSE
X066677	7.2	<0.5	<0.5		160	NS0151	NS	148	150	0	0	hangingwall	mineralised	0	0	0		TRUE
X066683	7.5	<0.5	<0.5		180	NS0151	NS	160	162	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X066993	9.1	<0.5	<0.5		40	NS0154	NS	18	20	0	0	oxide	non_mineralised	0	0	0		TRUE
X066999	8.7	<0.5	<0.5		150	NS0154	NS	30	32	0	0	south	mineralised	0	0	0		TRUE
X077269	6.6	<0.1	2.4			NS0089	NS	0	2	0	0	oxide	non_mineralised	0	0	0		TRUE
X077273	8.1	<0.1	<0.1			NS0089	NS	8	10	0	0	oxide	non_mineralised	0	0	0		TRUE
X077279	7.6	<0.5	<0.5		77	NS0089	NS	20	22	0	0	oxide	non_mineralised	0	0	0		TRUE
X077283	8	<0.1	<0.1			NS0089	NS	28	30	0	0	oxide	non_mineralised	0	0	0		TRUE
X077289	7.7	<0.1	<0.1			NS0089	NS	40	42	0	0	oxide	non_mineralised	0	0	0		TRUE
X077293	7.6	<0.1	<0.1			NS0089	NS	48	50	0	0	oxide	non_mineralised	0	0	0		TRUE
X077299	8	<0.1	<0.1			NS0089	NS	60	62	0	0	oxide	non_mineralised	0	0	0		TRUE
X077461	8.4	<0.5	<0.5		230	NS0089	NS	380	382	0	0	north	non_mineralised	0	0	0		TRUE
X077465	8.5	<0.1	<0.1			NS0089	NS	388	390	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X077471	9.4	<0.1	<0.1			NS0089	NS	398	400	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X078765	8.1	<0.1	<0.1			NS0099	NS	30	32	0	0	oxide	non_mineralised	0	0	0		FALSE
X078769	8.5	<0.1	<0.1			NS0099	NS	38	40	0	0	oxide	non_mineralised	0	0	0		FALSE
X078775	8	<0.1	<0.1			NS0099	NS	50	52	0	0	oxide	non_mineralised	0	0	0		FALSE
X078779	8.1	<0.1	<0.1			NS0099	NS	58	60	0	0	south	mineralised	0	0	0		FALSE
X078785	8.8	<0.1	<0.1			NS0099	NS	70	72	0	0	south	mineralised	0	0	0		FALSE
X078795	8.4	<0.1	<0.1			NS0099	NS	90	92	0	0	south	mineralised	0	0	0		FALSE
X078801	9	<0.1	<0.1	-57.3		NS0099	NS	100	102	0	0	south	mineralised	0	0	0		FALSE
X078811	9	<0.1	<0.1	-62.4		NS0099	NS	120	122	0	0	south	mineralised	0	0	0		FALSE
X078821	9	<0.1	<0.1	-58		NS0099	NS	140	142	0	0	south	mineralised	0	0	0		FALSE
X078825	9	<0.1	<0.1	-63.2		NS0099	NS	148	150	0	0	south	mineralised	0	0	0		FALSE
X078831	8.4	<0.1	<0.1			NS0099	NS	160	162	0	0	south	mineralised	0	0	0		TRUE
X078835	8.4	<0.1	<0.1			NS0099	NS	168	170	0	0	south	mineralised	0	0	0		TRUE
X078841	8.6	<0.1	<0.1			NS0099	NS	180	182	0	0	south	mineralised	0	0	0		TRUE
X078845	8.3	<0.1	<0.1			NS0099	NS	188	190	0	0	south	mineralised	0	0	0		TRUE
X078851	8.3	<0.1	<0.1			NS0099	NS	198	200	0	0	south	mineralised	0	0	0		TRUE
X078867	8.6	<0.1	<0.1			NS0099	NS	230	232	0	0	south	mineralised	0	0	0		FALSE
X078871	8.2	<0.1	<0.1			NS0099	NS	238	240	0	0	south	mineralised	0	0	0		FALSE
X078877	8.2	<0.1	<0.1			NS0099	NS	250	252	0	0	south	mineralised	0	0	0		FALSE
X078881	8	<0.1	<0.1			NS0099	NS	258	260	0	0	south	mineralised	0	0	0		FALSE
X078887	8.2	<0.1	<0.1			NS0099	NS	270	272	0	0	south	mineralised	0	0	0		FALSE
X079503	9.1	<0.5	<0.5		110	NS0154	NS	38	40	0	0	south	mineralised	0	0	0		TRUE
X079509	9.6	<0.5	<0.5		86	NS0154	NS	50	52	0	0	south	mineralised	0	0	0		TRUE
X079513	9.5	<0.5	<0.5		95	NS0154	NS	58	60	0	0	south	mineralised	0	0	0		TRUE
X079519	8.9	<0.5	<0.5		100	NS0154	NS	70	72	0	0	south	mineralised	0	0	0		TRUE
X079523	8.9	<0.5	<0.5		190	NS0154	NS	78	80	0	0	south	mineralised	0	0	0		TRUE
X079527	7.9	<0.5	<0.5		290	NS0154	NS	86	88	0	0	south	mineralised	0	0	0		TRUE
X079529	8.4	<0.5	<0.5		250	NS0154	NS	90	92	0	0	south	mineralised	0	0	0		TRUE
X079533	9.7	<0.5	<0.5		95	NS0154	NS	98	100	0	0	south	mineralised	0	0	0		TRUE
X079539	8.9	<0.5	<0.5		210	NS0154	NS	110	112	0	0	footwall	mineralised	0	0	0		TRUE
X079543	8.2	<0.5	<0.5		300	NS0154	NS	118	120	0	0	footwall	non_mineralised	0	0	0		TRUE
X079549	8.9	<0.5	<0.5		200	NS0154	NS	130	132	0	0	footwall	non_mineralised	0	0	0		TRUE
X079555	8.9	<0.5	<0.5		220	NS0154	NS	140	142	0	0	footwall	non_mineralised	0	0	0		TRUE
X079565	9.1	<0.5	<0.5		160	NS0154	NS	160	162	0	0	footwall	mineralised	0	0	0		TRUE
X079569	8.3	<0.5	<0.5		310	NS0154	NS	168	170	0	0	footwall	non_mineralised	0	0	0		TRUE
X079575	8.9	<0.5	<0.5		240	NS0154	NS	180	182	0	0	footwall	mineralised	0	0	0		TRUE
X079579	8.9	<0.5	<0.5		250	NS0154	NS	188	190	0	0	footwall	mineralised	0	0	0		TRUE
X079585	7.7	<0.5	<0.5		430	NS0154	NS	200	202	0	0	footwall	non_mineralised	0	0	0		TRUE
X079595	8.5	<0.5	<0.5		360	NS0154	NS	220	222	0	0	footwall	non_mineralised	0	0	0		TRUE
X079601	8.5	<0.5	<0.5		290	NS0154	NS	230	232	0	0	footwall	non_mineralised	0	0	0		TRUE
X079605	8.5	<0.5	<0.5		280	NS0154	NS	238	240	0	0	footwall	non_mineralised	0	0	0		TRUE
X079611	10	<0.5	<0.5		140	NS0154	NS	250	252	0	0	footwall	non_mineralised	0	0	0		TRUE
X079615	9.1	<0.5	<0.5		150	NS0154	NS	258	260	0	0	footwall	non_mineralised	0	0	0		TRUE
X079621	9.7	<0.5	<0.5		160	NS0154	NS	270	272	0	0	footwall	non_mineralised	0	0	0		TRUE
X079677	8.5	<0.5	<0.5		260	NS0155	NS	100	102	0	0	footwall	non_mineralised	0	0	0		TRUE
X079681	6.6	<0.5	0.6		430	NS0155	NS	108	110	0	0	footwall	non_mineralised	0	0	0		TRUE
X079687	9.3	<0.5	<0.5		110	NS0155	NS	120	122	0	0	footwall	non_mineralised	0	0	0		TRUE
X079691	8.4	<0.5	<0.5		190	NS0155	NS	128	130	0	0	footwall	mineralised	0	0	0		TRUE
X079697	9.1	<0.5	<0.5		130	NS0155	NS	140	142	0	0	footwall	mineralised	0	0	0		TRUE
X079703	9	<0.5	<0.5		150	NS0155	NS	150	152	0	0	footwall	mineralised	0	0	0		TRUE
X079707	9.5	<0.5	<0.5		140	NS0155	NS	158	160	0	0	footwall	mineralised	0	0	0		TRUE
X079713	8.9	<0.5	<0.5		160	NS0155	NS	170	172	0	0	footwall	mineralised	0	0	0		TRUE
X079717	9.2	<0.5	<0.5		140	NS0155	NS	178	180	0	0	footwall	non_mineralised	0	0	0		TRUE
X079723	9.7	<0.5	<0.5		90	NS0155	NS	190	192	0	0	footwall	mineralised	0	0	0		TRUE
X079727	9.9	<0.5	<0.5		88	NS0155	NS	198	200	0	0	footwall	mineralised	0	0	0		TRUE
X079733	9	<0.5	<0.5		110	NS0155	NS	210	212	0	0	footwall	mineralised	0	0	0		TRUE
X079737	9.3	<0.5	<0.5		130	NS0155	NS	218	220	0	0	footwall	non_mineralised	0	0	0		TRUE
X079743	9.4	<0.5	<0.5		110	NS0155	NS	230	232	0	0	footwall	mineralised	0	0	0		TRUE
X079747	10.5	<0.5	<0.5		95	NS0155	NS	238	240	0	0	footwall	mineralised	0	0	0		TRUE
X079753	8.7	<0.5	<0.5		200	NS0155	NS	250	252	0	0	footwall	non_mineralised	0	0	0		TRUE
X079757	8.7	<0.5	<0.5		190	NS0155	NS	258	260	0	0	footwall	non_mineralised	0	0	0		TRUE
X079763	9.9	<0.5	<0.5		100	NS0155	NS	270	272	0	0	footwall	mineralised	0	0	0		TRUE
X079767	9	<0.5	<0.5		110	NS0155	NS	278	280	0	0	footwall	mineralised	0	0	0		TRUE
X079911	7.8	<0.5	<0.5		150	NS0157	NS	110	112	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X079917	7.5	<0.5	<0.5		170	NS0157	NS	122	124	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X079919	7.8	<0.5	<0.5		110	NS0157	NS	126	128	0	0	hangingwall	mineralised	0	0	0		TRUE
X079921	7.2	<0.5	<0.5		150	NS0157	NS	130	132	0	0	hangingwall	mineralised	0	0	0		TRUE
X079925	7.7	<0.5	<0.5		130	NS0157	NS	138	140	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X079931	7.5	<0.5	<0.5		110	NS0157	NS	150	152	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X080006	8.1	<0.1	<0.1			NS0106	NS	8	10	0	0	oxide	non_mineralised	0	0	0		TRUE
X080145	7.3	<0.1	<0.1	<0.5		NS0107	NS	0	2	0	0	oxide	non_mineralised	0	0	0		TRUE
X080149	7.1	<0.1	<0.1	<0.5		NS0107	NS	8	10	0	0	oxide	non_mineralised	0	0	0		TRUE
X080155	7.9	<0.1	<0.1	<0.5		NS0107	NS	20	22	0	0	oxide	non_mineralised	0	0	0		TRUE
X080165	8.2	<0.1	<0.1	-2.6		NS0107	NS	40	42	0	0	oxide	non_mineralised	0	0	0		TRUE
X080169	7.9	<0.1	<0.1	-4.2		NS0107	NS	48	50	0	0	oxide	non_mineralised	0	0	0		TRUE
X080175	8	<0.1	<0.1	-18.9		NS0107	NS	60	62	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X080179	8.7	<0.1	<0.1	-40.5		NS0107	NS	68	70	0	0	hangingwall	mineralised	0	0	0		TRUE
X080185	8.8	<0.1	<0.1	-39		NS0107	NS	80	82	0	0	hangingwall	mineralised	0	0	0		TRUE
X080200	7.9	<0.1	<0.1	-5.6		NS0107	NS	108	110	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X078634	6	<0.1	3.5											0	0	0		FALSE
X078633	7.8	<0.1	<0.1			NS0098	NS	54	56	0.23	5.83	hangingwall	non_mineralised	178.398	3.933	174.465	PAF HC	FALSE
X080214	8.3	<0.1	<0.1	-64.2		NS0107	NS	136	138	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X080226	2.5	40.2	53.8	31.4		NS0107	NS	160	162	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X080231	3	11	18.1	15.3		NS0107	NS	170	172	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X080210	2.5	38.9	52.2	69.3		NS0107	NS	128	130	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X080220	2.6	30.2	40.8	41.1		NS0107	NS	148	150	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X080216	2.6	17.8	24.7	18.9		NS0107	NS	140	142	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X080241	7.4	<0.1	<0.1	6.3		NS0107	NS	190	192	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X080247	8.1	<0.1	<0.1	-22		NS0107	NS	200	202	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X080802	8.1	<0.1	<0.1			NS0112	NS	60	62	0	0	oxide	non_mineralised	0	0	0		TRUE
X080806	7.4	<0.5	<0.5		15	NS0112	NS	68	70	0	0	oxide	non_mineralised	0	0	0		TRUE
X080812	8.5	<0.1	<0.1			NS0112	NS	80	82	0	0		mineralised	0	0	0		TRUE
X080822	8.3	<0.5	<0.5		120	NS0112	NS	100	102	0	0		non_mineralised	0	0	0		TRUE
X080826	9	<0.1	<0.1			NS0112	NS	108	110	0	0		non_mineralised	0	0	0		TRUE
X080832	9.2	<0.1	<0.1			NS0112	NS	120	122	0	0		non_mineralised	0	0	0		TRUE
X080836	8.5	<0.5	<0.5		110	NS0112	NS	128	130	0	0		non_mineralised	0	0	0		TRUE
X080842	8.5	<0.1	<0.1			NS0112	NS	140	142	0	0		mineralised	0	0	0		TRUE
X080846	8.6	<0.1	<0.1			NS0112	NS	148	150	0	0		non_mineralised	0	0	0		TRUE
X080846	8.6	<0.1	<0.1			NS0112	NS	148	150	0	0		non_mineralised	0	0	0		TRUE
X080852	9.2	<0.1	<0.1			NS0112	NS	158	160	0	0		non_mineralised	0	0	0		TRUE
X080858	8.6	<0.5	<0.5		150	NS0112	NS	170	172	0	0		mineralised	0	0	0		TRUE
X080862	9.1	<0.1	<0.1			NS0112	NS	178	180	0	0		non_mineralised	0	0	0		TRUE
X080868	9.2	<0.1	<0.1			NS0112	NS	190	192	0	0		mineralised	0	0	0		TRUE
X080872	8.6	<0.5	<0.5		110	NS0112	NS	198	200	0	0		mineralised	0	0	0		TRUE
X080878	8.4	<0.5	<0.5		120	NS0112	NS	210	212	0	0		mineralised	0	0	0		TRUE
X080888	9.1	<0.1	<0.1			NS0112	NS	230	232	0	0		non_mineralised	0	0	0		TRUE
X080904	9.1	<0.1	<0.1			NS0112	NS	260	262	0	0	south	mineralised	0	0	0		TRUE
X080908	9.1	<0.1	<0.1			NS0112	NS	268	270	0	0	south	mineralised	0	0	0		TRUE
X080914	8.7	<0.1	<0.1			NS0112	NS	280	282	0	0	south	mineralised	0	0	0		TRUE
X080918	8.6	<0.1	<0.1			NS0112	NS	288	290	0	0	south	mineralised	0	0	0		TRUE
X080922	9.2	<0.1	<0.1			NS0112	NS	296	298	0	0	south	mineralised	0	0	0		TRUE
X080964	7.6	<0.5	<0.5		53	NS0113	NS	80	82	0	0	footwall	non_mineralised	0	0	0		TRUE
X080968	8.1	<0.5	<0.5		160	NS0113	NS	88	90	0	0	footwall	non_mineralised	0	0	0		TRUE
X080974	7.7	<0.5	<0.5		110	NS0113	NS	100	102	0	0	footwall	non_mineralised	0	0	0		TRUE
X080978	6	<0.5	<0.5		220	NS0113	NS	108	110	0	0	footwall	non_mineralised	0	0	0		TRUE

Sample Number	pHox	NAG pH 45	NAG pH 70	Lab NAPP	Ecox	HOLEID	AO AREA	SAMPFROM	SAMPTO	CaO_XRF_pct	S_XRF_pct	modelgeo	mineraleralised	MPA	ANC	NAPP	Categorisation	Hole IDs match?
X080984	8.4	<0.5	<0.5		150	NS0113	NS	120	122	0	0	footwall	mineralised	0	0	0		TRUE
X080988	8.2	<0.5	<0.5		180	NS0113	NS	128	130	0	0	footwall	mineralised	0	0	0		TRUE
X080994	5.9	<0.5	1.8		310	NS0113	NS	140	142	0	0	footwall	non_mineralised	0	0	0		TRUE
X080998	8.1	<0.5	<0.5		130	NS0113	NS	148	150	0	0	footwall	non_mineralised	0	0	0		TRUE
X081004	5.6	<0.5	1.2		290	NS0113	NS	158	160	0	0	footwall	non_mineralised	0	0	0		TRUE
X081010	8.1	<0.5	<0.5		170	NS0113	NS	170	172	0	0	footwall	non_mineralised	0	0	0		TRUE
X081014	8	<0.5	<0.5		170	NS0113	NS	178	180	0	0	footwall	non_mineralised	0	0	0		TRUE
X081020	8.5	<0.5	<0.5		260	NS0113	NS	190	192	0	0	footwall	mineralised	0	0	0		TRUE
X081024	8.3	<0.5	<0.5		290	NS0113	NS	198	200	0	0	footwall	non_mineralised	0	0	0		TRUE
X081034	7.9	<0.5	<0.5		190	NS0113	NS	218	220	0	0	footwall	non_mineralised	0	0	0		TRUE
X081050	8.1	<0.5	<0.5		190	NS0113	NS	250	252	0	0	footwall	non_mineralised	0	0	0		TRUE
X081056	7.7	<0.5	<0.5		150	NS0113	NS	260	262	0	0	footwall	non_mineralised	0	0	0		TRUE
X081061	8	<0.5	<0.5		150	NS0113	NS	270	272	0	0	footwall	mineralised	0	0	0		TRUE
X081066	8.2	<0.5	<0.5		160	NS0113	NS	280	282	0	0	footwall	mineralised	0	0	0		TRUE
X081070	8.3	<0.5	<0.5		150	NS0113	NS	288	290	0	0	footwall	mineralised	0	0	0		TRUE
X081333	8.2	<0.5	<0.5		260	NS0116	NS	80	82	0	0	footwall	non_mineralised	0	0	0		TRUE
X081337	8.7	<0.5	<0.5		140	NS0116	NS	88	90	0	0	footwall	non_mineralised	0	0	0		TRUE
X081343	8.5	<0.5	<0.5		230	NS0116	NS	100	102	0	0	footwall	non_mineralised	0	0	0		TRUE
X081347	5	<0.5	2.0		420	NS0116	NS	108	110	0	0	footwall	non_mineralised	0	0	0		TRUE
X081353	8.5	<0.5	<0.5		240	NS0116	NS	118	120	0	0	footwall	non_mineralised	0	0	0		TRUE
X081359	8.2	<0.5	<0.5		350	NS0116	NS	130	132	0	0	footwall	non_mineralised	0	0	0		TRUE
X081363	8.4	<0.5	<0.5		310	NS0116	NS	138	140	0	0	footwall	non_mineralised	0	0	0		TRUE
X081369	8.7	<0.5	<0.5		150	NS0116	NS	150	152	0	0	footwall	mineralised	0	0	0		TRUE
X081373	8.7	<0.5	<0.5		190	NS0116	NS	158	160	0	0	footwall	mineralised	0	0	0		TRUE
X081379	9.1	<0.5	<0.5		150	NS0116	NS	170	172	0	0	footwall	mineralised	0	0	0		TRUE
X081383	8.8	<0.5	<0.5		170	NS0116	NS	178	180	0	0	footwall	mineralised	0	0	0		TRUE
X081389	9.3	<0.5	<0.5		110	NS0116	NS	190	192	0	0	footwall	mineralised	0	0	0		TRUE
X081393	8.5	<0.5	<0.5		250	NS0116	NS	198	200	0	0	footwall	non_mineralised	0	0	0		TRUE
X081399	8.9	<0.5	<0.5		150	NS0116	NS	210	212	0	0	footwall	non_mineralised	0	0	0		TRUE
X081405	8.6	<0.5	<0.5		180	NS0116	NS	220	222	0	0	footwall	mineralised	0	0	0		TRUE
X081409	8.9	<0.5	<0.5		140	NS0116	NS	228	230	0	0	south	mineralised	0	0	0		TRUE
X081415	8.8	<0.5	<0.5		140	NS0116	NS	240	242	0	0	south	mineralised	0	0	0		TRUE
X081419	7.9	<0.5	<0.5		180	NS0116	NS	248	250	0	0	south	mineralised	0	0	0		TRUE
X081425	8.4	<0.5	<0.5		180	NS0116	NS	260	262	0	0	south	mineralised	0	0	0		TRUE
X081522	8.9	<0.5	<0.5		120	NS0117	NS	170	172	0	0	footwall	non_mineralised	0	0	0		TRUE
X081526	9	<0.5	<0.5		120	NS0117	NS	178	180	0	0	footwall	non_mineralised	0	0	0		TRUE
X081528	8.5	<0.5	<0.5		140	NS0117	NS	182	184	0	0	footwall	mineralised	0	0	0		FALSE
X081528	9.1	<0.5	<0.5		80	NS0117	NS	182	184	0	0	footwall	mineralised	0	0	0		TRUE
X081532	8.8	<0.5	<0.5		160	NS0117	NS	190	192	0	0	footwall	mineralised	0	0	0		TRUE
X081536	8.6	<0.5	<0.5		190	NS0117	NS	198	200	0	0	footwall	mineralised	0	0	0		TRUE
X081538	8.6	<0.5	<0.5		210	NS0117	NS	202	204	0	0	footwall	mineralised	0	0	0		TRUE
X081542	8.2	<0.5	<0.5		160	NS0117	NS	210	212	0	0	footwall	mineralised	0	0	0		TRUE
X081546	7.9	<0.5	<0.5		190	NS0117	NS	218	220	0	0	footwall	non_mineralised	0	0	0		TRUE
X081552	8.3	<0.5	<0.5		120	NS0117	NS	228	230	0	0	footwall	mineralised	0	0	0		TRUE
X081558	7.8	<0.5	<0.5		190	NS0117	NS	240	242	0	0	footwall	non_mineralised	0	0	0		TRUE
X081562	8.3	<0.5	<0.5		140	NS0117	NS	248	250	0	0	south	mineralised	0	0	0		TRUE
X081568	8.4	<0.5	<0.5		110	NS0117	NS	260	262	0	0	south	mineralised	0	0	0		TRUE
X081572	8.3	<0.5	<0.5		99	NS0117	NS	268	270	0	0	south	mineralised	0	0	0		TRUE
X081574	8.4	<0.5	<0.5		100	NS0117	NS	272	274	0	0	south	mineralised	0	0	0		TRUE
X081806	9.3	<0.5	<0.5		90	NS0120	NS	90	92	0	0	south	non_mineralised	0	0	0		TRUE
X081810	8.5	<0.5	<0.5		170	NS0120	NS	98	100	0	0	south	non_mineralised	0	0	0		TRUE
X081816	9.2	<0.5	<0.5		95	NS0120	NS	110	112	0	0	south	non_mineralised	0	0	0		TRUE
X081822	8.7	<0.5	<0.5		130	NS0120	NS	120	122	0	0	south	non_mineralised	0	0	0		TRUE
X081826	9.3	<0.5	<0.5		110	NS0120	NS	128	130	0	0	south	non_mineralised	0	0	0		TRUE
X081832	9.2	<0.5	<0.5		120	NS0120	NS	140	142	0	0	south	non_mineralised	0	0	0		TRUE
X081836	9.3	<0.5	<0.5		96	NS0120	NS	148	150	0	0	south	non_mineralised	0	0	0		TRUE
X081842	9	<0.5	<0.5		120	NS0120	NS	160	162	0	0	south	non_mineralised	0	0	0		TRUE
X081846	8.6	<0.5	<0.5		200	NS0120	NS	168	170	0	0	south	non_mineralised	0	0	0		TRUE
X081852	8.5	<0.5	<0.5		190	NS0120	NS	178	180	0	0	south	non_mineralised	0	0	0		TRUE
X081858	8.5	<0.5	<0.5		210	NS0120	NS	190	192	0	0	south	non_mineralised	0	0	0		TRUE
X081862	7.4	<0.5	<0.5		230	NS0120	NS	198	200	0	0	south	non_mineralised	0	0	0		TRUE
X081866	3.2	6.4	12		670	NS0120	NS	206	208	0	0	south	non_mineralised	0	0	0		TRUE
X081872	9	<0.5	<0.5		97	NS0120	NS	218	220	0	0	south	mineralised	0	0	0		TRUE
X081878	8.9	<0.5	<0.5		110	NS0120	NS	230	232	0	0	south	non_mineralised	0	0	0		TRUE
X081882	6.8	<0.5	<0.5		220	NS0120	NS	238	240	0	0	south	non_mineralised	0	0	0		TRUE
X081888	8.1	<0.5	<0.5		170	NS0120	NS	250	252	0	0	south	mineralised	0	0	0		TRUE
X081892	7.4	<0.5	<0.5		200	NS0120	NS	258	260	0	0	south	non_mineralised	0	0	0		TRUE
X081898	7.9	<0.5	<0.5		130	NS0120	NS	270	272	0	0	hangingwall	mineralised	0	0	0		TRUE
X082077	9.4	<0.5	<0.5		94	NS0122	NS	58	60	0	0	oxide	non_mineralised	0	0	0		TRUE
X082083	8.8	<0.5	<0.5		200	NS0122	NS	70	72	0	0	footwall	non_mineralised	0	0	0		TRUE
X082087	9.5	<0.5	<0.5		110	NS0122	NS	78	80	0	0	footwall	non_mineralised	0	0	0		TRUE
X082093	9.5	<0.5	<0.5		78	NS0122	NS	90	92	0	0	footwall	mineralised	0	0	0		TRUE
X082097	9.1	<0.5	<0.5		170	NS0122	NS	98	100	0	0	footwall	non_mineralised	0	0	0		TRUE
X082104	9.6	<0.5	<0.5		84	NS0122	NS	110	112	0	0	footwall	mineralised	0	0	0		TRUE
X082108	9.2	<0.5	<0.5		180	NS0122	NS	118	120	0	0	footwall	mineralised	0	0	0		TRUE
X082114	9.2	<0.5	<0.5		140	NS0122	NS	130	132	0	0	footwall	non_mineralised	0	0	0		TRUE
X082118	9.3	<0.5	<0.5		130	NS0122	NS	138	140	0	0	footwall	non_mineralised	0	0	0		TRUE
X082124	9.4	<0.5	<0.5		120	NS0122	NS	150	152	0	0	footwall	non_mineralised	0	0	0		TRUE
X082128	9.3	<0.5	<0.5		120	NS0122	NS	158	160	0	0	footwall	mineralised	0	0	0		TRUE
X082133	9.2	<0.5	<0.5		160	NS0122	NS	168	170	0	0	footwall	non_mineralised	0	0	0		TRUE
X082139	9.3	<0.5	<0.5		130	NS0122	NS	180	182	0	0	footwall	mineralised	0	0	0		TRUE
X082143	8.3	<0.5	<0.5		210	NS0122	NS	188	190	0	0	footwall	mineralised	0	0	0		TRUE
X082149	9.5	<0.5	<0.5		130	NS0122	NS	200	202	0	0	footwall	mineralised	0	0	0		TRUE
X082154	9	<0.5	<0.5		160	NS0122	NS	208	210	0	0	footwall	non_mineralised	0	0	0		TRUE
X082165	10	<0.5	<0.5		120	NS0122	NS	230	232	0	0	footwall	mineralised	0	0	0		TRUE
X082169	9.4	<0.5	<0.5		79	NS0122	NS	238	240	0	0	footwall	mineralised	0	0	0		TRUE
X082175	9.3	<0.5	<0.5		110	NS0122	NS	250	252	0	0	footwall	non_mineralised	0	0	0		TRUE
X082179	10.1	<0.5	<0.5		120	NS0122	NS	258	260	0	0	footwall	non_mineralised	0	0	0		TRUE
X082185	9	<0.5	<0.5		120	NS0122	NS	270	272	0	0	footwall	mineralised	0	0	0		TRUE
X082189	9.2	<0.5	<0.5		120	NS0122	NS	278	280	0	0	footwall	non_mineralised	0	0	0		TRUE
X123031	7.8	<0.5	<0.5		110	NS0165	NS	60	62	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X123035	8.6	<0.5	<0.5		110	NS0165	NS	68	70	0	0	hangingwall	mineralised	0	0	0		TRUE
X123041	8.5	<0.5	<0.5		200	NS0165	NS	80	82	0	0	hangingwall	mineralised	0	0	0		TRUE
X123045	8.4	<0.5	<0.5		220	NS0165	NS	88	90	0	0	hangingwall	mineralised	0	0	0		TRUE
X123052	6.4	<0.5	0.8		570	NS0165	NS	100	102	0	0	hangingwall	mineralised	0	0	0		TRUE
X123056	8.7	<0.5	<0.5		190	NS0165	NS	108	110	0	0	hangingwall	mineralised	0	0	0		TRUE
X123061	8.6	<0.5	<0.5		260	NS0165	NS	118	120	0	0	hangingwall	mineralised	0	0	0		TRUE
X123067	8.1	<0.5	<0.5		190	NS0165	NS	130	132	0	0	hangingwall	mineralised	0	0	0		TRUE
X123071	8.8	<0.5	<0.5		140	NS0165	NS	138	140	0	0	hangingwall	mineralised	0	0	0		TRUE
X123077	9	<0.5	<0.5		76	NS0165	NS	150	152	0	0	hangingwall	mineralised	0	0	0		TRUE
X123081	9.2	<0.5	<0.5		74	NS0165	NS	158	160	0	0	hangingwall	mineralised	0	0	0		TRUE
X123087	8.7	<0.5	<0.5		160	NS0165	NS	170	172	0	0	hangingwall	mineralised	0	0	0		TRUE
X123091	7.5	<0.5	<0.5		250	NS0165	NS	178	180	0	0	hangingwall	mineralised	0	0	0		TRUE
X123099	8.6	<0.5	<0.5		220	NS0165	NS	194	196	0	0	hangingwall	mineralised	0	0	0		TRUE
X139615	7.2	<0.5	<0.5		30	NS0159	NS	60	62	0	0	oxide	non_mineralised	0	0	0		TRUE
X139619	8	<0.5	<0.5		25	NS0159	NS	68	70	0	0	oxide	non_mineralised	0	0	0		TRUE
X139621	8.1	<0.5	<0.5		200	NS0159	NS	72	74	0	0	footwall	mineralised	0	0	0		TRUE
X139625	8.1	<0.5	<0.5		180	NS0159	NS	80	82	0	0	footwall	mineralised	0	0	0		TRUE
X139631	8.4	<0.5	<0.5		150	NS0159	NS	92	94	0	0	footwall	non_mineralised	0	0	0		TRUE
X139635	8.9	<0.5	<0.5		170	NS0159	NS	100	102	0	0	footwall	mineralised	0	0	0		TRUE
X139639	8.8	<0.5	<0.5		220	NS0159	NS	108	110	0	0	north	mineralised	0	0	0		TRUE
X139643	8.2	<0.5	<0.5		280	NS0159	NS	116	118	0	0	north	non_mineralised	0	0	0		TRUE
X139645	8.5	<0.5	<0.5		130	NS0159	NS	120	122	0	0	north	mineralised	0	0	0		TRUE
X139645	8.9	<0.5	<0.5		110	NS0159	NS	120	122	0	0	north	mineralised	0	0	0		TRUE
X139649	8.6	<0.5	<0.5		150	NS0159	NS	128	130	0	0	north	mineralised	0	0	0		TRUE
X139655	7.9	<0.5	<0.5		160	NS0159	NS	138	140	0	0	north	mineralised	0	0	0		TRUE
X139661	8.4	<0.5	<0.5		160	NS0159	NS	150	152	0	0	north	non_mineralised	0	0	0		TRUE
X139665	8.6	<0.5	<0.5		130	NS0159	NS	158	160	0	0	north	mineralised	0	0	0		TRUE
X139671	8.7	<0.5	<0.5		130	NS0159	NS	170	172	0	0	north	mineralised	0	0	0		TRUE
X139681	8.5	<0.5	<0.5		170	NS0159	NS	190	192	0	0	north	mineralised	0	0	0		TRUE
X139685	8.3	<0.5	<0.5		120	NS0159	NS	198	200	0	0	north	mineralised	0	0	0		TRUE
X139691	8.1	<0.5	<0.5		160	NS0159	NS	210	212	0	0	north	mineralised	0	0	0		TRUE
X139695	8.6	<0.5	<0.5		110	NS0159	NS	218	220	0	0	north	mineralised	0	0	0		TRUE
X139702	8.6	<0.5	<0.5		120	NS0159	NS	230	232	0	0	north	mineralised	0	0	0		TRUE
X139711	9.5	<0.5	<0.5		96	NS0159	NS	248	250	0	0	north	mineralised	0	0	0		TRUE
X139717	8.9	<0.5	<0.5		78	NS0159	NS	260	262	0	0	north	mineralised	0	0	0		TRUE
X139721	8.3	<0.5	<0.5		120	NS0159	NS	268	270	0	0	north	mineralised	0	0	0		TRUE
X139727	9	<0.5	<0.5		110	NS0159	NS	280	282	0	0	north	mineralised	0	0	0		TRUE
X139737	11	<0.5	<0.5		160	NS0159	NS	300	302	0	0	north	mineralised	0	0	0		TRUE
X139741	9.2	<0.5	<0.5		83	NS0159	NS	308	310	0	0	north	mineralised	0	0	0		TRUE
X082417	8.9	<0.5	<0.5		120	NS0124	NS	164	166	4.7	0.066	footwall	non_mineralised	2.0196	80.37	-78.3504	NAC	TRUE

Sample Number	pHox	NAG pH 45	NAG pH 70	Lab NAPP	Ecox	HOLEID	AO AREA	SAMPFROM	SAMPTO	CaO_XRF_pct	S_XRF_pct	modelgeo	mineraleralised	MPA	ANC	NAPP	Categorisation	Hole IDs match?
X139577	10.8	<0.5	<0.5		140	NS0158	NS	190	192	3.72	0.027	north	mineralised	0.8262	63.612	-62.7858	NAC	TRUE
X078119	8.8	<0.5	<0.5		91	NS0094	NS	144	146	3.54	0.018	south	mineralised	0.5508	60.534	-59.9832	NAC	TRUE
X066835	11.2	<0.5	<0.5		230	NS0152	NS	244	246	3.42	0.105	footwall	non_mineralised	3.213	58.482	-55.269	NAC	TRUE
X076911	8.9	<0.1	<0.1			NS0087	NS	60	62	3.23	0.033	footwall	mineralised	1.0098	55.233	-54.2232	NAC	TRUE
X076863	9.2	<0.1	<0.1	-58.4		NS0086	NS	248	250	2.95	0.049	footwall	mineralised	1.4994	50.445	-48.9456	NAF	TRUE
X078447	9.3	<0.5	<0.5		59	NS0096	NS	254	256	2.88	0.026	south	mineralised	0.7956	49.248	-48.4524	NAF	TRUE
X159609	8.8	<0.1	<0.1			NS0077	NS	214	216	2.9	0.043	south	mineralised	1.3158	49.59	-48.2742	NAF	TRUE
X078125	9	<0.5	<0.5		110	NS0094	NS	156	158	2.8	0.013	south	mineralised	0.3978	47.88	-47.4822	NAF	FALSE
X077083	8.9	<0.1	<0.1	-77.4		NS0087	NS	388	390	2.82	0.032	south	mineralised	0.9792	48.222	-47.2428	NAF	TRUE
X082389	10.3	<0.5	<0.5		98	NS0124	NS	110	112	2.94	0.125	footwall	non_mineralised	3.825	50.274	-46.449	NAF	TRUE
X078131	9	<0.1	<0.1			NS0094	NS	168	170	2.67	0.023	south	mineralised	0.7038	45.657	-44.9532	NAF	TRUE
X080093	9.1	<0.1	<0.1			NS0106	NS	178	180	2.66	0.031	south	mineralised	0.9486	45.486	-44.5374	NAF	TRUE
X076999	9	<0.1	<0.1	-51.3		NS0087	NS	230	232	2.68	0.079	south	mineralised	2.4174	45.828	-43.4106	NAF	TRUE
X078151	8.9	<0.1	<0.1			NS0094	NS	208	210	2.58	0.026	south	mineralised	0.7956	44.118	-43.3224	NAF	TRUE
X139531	10.6	<0.5	<0.5		100	NS0158	NS	100	102	2.61	0.045	north	mineralised	1.377	44.631	-43.254	NAF	TRUE
X076771	8.8	<0.1	<0.1			NS0086	NS	68	70	2.6	0.064	footwall	mineralised	1.9584	44.46	-42.5016	NAF	TRUE
X078445	9.3	<0.5	<0.5		64	NS0096	NS	250	252	2.53	0.048	south	mineralised	1.4688	43.263	-41.7942	NAF	TRUE
X080058	9	<0.1	<0.1			NS0106	NS	108	110	2.46	0.022	south	mineralised	0.6732	42.066	-41.3928	NAF	TRUE
X082470	10.8	<0.5	<0.5		170	NS0124	NS	268	270	2.52	0.092	footwall	mineralised	2.8152	43.092	-40.2768	NAF	TRUE
X077063	9.1	<0.1	<0.1			NS0087	NS	350	352	2.42	0.052	south	mineralised	1.5912	41.382	-39.7908	NAF	TRUE
X078091	8.9	<0.1	<0.1			NS0094	NS	90	92	2.37	0.04	south	mineralised	1.224	40.527	-39.303	NAF	TRUE
X139832	8.7	<0.5	<0.5		160	NS0160	NS	168	170	2.42	0.068	footwall	mineralised	2.0808	41.382	-39.3012	NAF	TRUE
X078527	8.7	<0.5	<0.5		91	NS0097	NS	128	130	2.33	0.022	south	mineralised	0.6732	39.843	-39.1698	NAF	TRUE
X139818	9.4	<0.5	<0.5		150	NS0160	NS	140	142	3.33	0.582	footwall	non_mineralised	17.8092	56.943	-39.1338	NAF	TRUE
X082385	10.3	<0.5	<0.5		110	NS0124	NS	102	104	2.49	0.12	footwall	non_mineralised	3.672	42.579	-38.907	NAF	TRUE
X082383	9.4	<0.5	<0.5		97	NS0124	NS	98	100	2.44	0.101	footwall	mineralised	3.0906	41.724	-38.6334	NAF	TRUE
X066763	9.6	<0.5	<0.5		110	NS0152	NS	100	102	2.73	0.264	footwall	mineralised	8.0784	46.683	-38.6046	NAF	TRUE
X159607	8.8	<0.1	<0.1			NS0077	NS	210	212	2.3	0.024	south	mineralised	0.7344	39.33	-38.5956	NAF	TRUE
X077845	9	<0.1	<0.1			NS0092	NS	170	172	2.25	0.019	south	mineralised	0.5814	38.475	-37.8936	NAF	TRUE
X076648	8.3	<0.1	<0.1			NS0085	NS	110	112	2.24	0.018	south	mineralised	0.5508	38.304	-37.7532	NAF	TRUE
X159637	8.8	<0.1	<0.1			NS0077	NS	270	272	2.23	0.028	south	mineralised	0.8568	38.133	-37.2762	NAF	TRUE
X077875	8.3	<0.1	<0.1			NS0092	NS	228	230	2.22	0.028	south	mineralised	0.8568	37.962	-37.1052	NAF	TRUE
X080089	8.9	<0.1	<0.1			NS0106	NS	170	172	2.2	0.02	south	mineralised	0.612	37.62	-37.008	NAF	TRUE
X066817	10.2	<0.5	<0.5		94	NS0152	NS	208	210	2.3	0.076	footwall	mineralised	2.3256	39.33	-37.0044	NAF	TRUE
X080248	7.8	<0.1	<0.1			NS0108	NS	0	2	2.2	0.027	oxide	non_mineralised	0.8262	37.62	-36.7938	NAF	TRUE
X076905	9	<0.1	<0.1			NS0087	NS	50	52	2.26	0.061	footwall	mineralised	1.8666	38.646	-36.7794	NAF	TRUE
X077073	8.9	<0.1	<0.1	-72.6		NS0087	NS	368	370	2.21	0.035	south	mineralised	1.071	37.791	-36.72	NAF	TRUE
X077989	8.8	<0.1	<0.1			NS0093	NS	170	172	2.22	0.048	south	mineralised	1.4688	37.962	-36.4932	NAF	TRUE
X078285	8.9	<0.5	<0.5		120	NS0095	NS	188	190	2.29	0.098	footwall	mineralised	2.9988	39.159	-36.1602	NAF	TRUE
X077881	9	<0.1	<0.1			NS0092	NS	240	242	2.14	0.018	south	mineralised	0.5508	36.594	-36.0432	NAF	TRUE
X078295	8.9	<0.5	<0.5		110	NS0095	NS	208	210	2.39	0.16	footwall	mineralised	4.896	40.869	-35.973	NAF	TRUE
X082466	10.9	<0.5	<0.5		200	NS0124	NS	260	262	2.37	0.168	footwall	non_mineralised	5.1408	40.527	-35.3862	NAF	TRUE
X078573	8.6	<0.5	<0.5		80	NS0097	NS	218	220	2.11	0.024	south	mineralised	0.7344	36.081	-35.3466	NAF	TRUE
X066787	11.5	<0.5	<0.5		410	NS0152	NS	148	150	2.42	0.206	footwall	mineralised	6.3036	41.382	-35.0784	NAF	TRUE
X076642	8.6	<0.1	<0.1	-63.3		NS0085	NS	98	100	2.07	0.016	south	mineralised	0.4896	35.397	-34.9074	NAF	TRUE
X066807	9.4	<0.5	<0.5		97	NS0152	NS	188	190	2.2	0.093	footwall	mineralised	2.8458	37.62	-34.7742	NAF	TRUE
X077967	7.6	<0.1	<0.1			NS0093	NS	128	130	2.23	0.112	south	mineralised	3.4272	38.133	-34.7058	NAF	TRUE
X078117	8.9	<0.1	<0.1			NS0094	NS	140	142	2.05	0.015	south	mineralised	0.459	35.055	-34.596	NAF	TRUE
X076843	9.2	<0.1	<0.1	-62.9		NS0086	NS	208	210	2.2	0.099	footwall	non_mineralised	3.0294	37.62	-34.5906	NAF	TRUE
X078147	9	<0.1	<0.1			NS0094	NS	200	202	2.04	0.021	south	mineralised	0.6426	34.884	-34.2414	NAF	TRUE
X076659	9	<0.1	<0.1			NS0085	NS	130	132	2.05	0.027	south	mineralised	0.8262	35.055	-34.2288	NAF	TRUE
X082393	10	<0.5	<0.5		93	NS0124	NS	118	120	2.13	0.073	footwall	mineralised	2.2338	36.423	-34.1892	NAF	TRUE
X080073	8.8	<0.1	<0.1			NS0106	NS	138	140	2.05	0.029	south	mineralised	0.8874	35.055	-34.1676	NAF	TRUE
X078225	8.5	<0.5	<0.5		140	NS0095	NS	70	72	2.06	0.05	south	mineralised	1.53	35.226	-33.696	NAF	TRUE
X077047	8.9	<0.1	<0.1	-43.2		NS0087	NS	320	322	2.04	0.044	south	mineralised	1.3464	34.884	-33.5376	NAF	TRUE
X076617	8.5	<0.1	<0.1	-52.2		NS0085	NS	50	52	2.04	0.045	south	mineralised	1.377	34.884	-33.507	NAF	TRUE
X078167	8.8	<0.1	<0.1			NS0094	NS	238	240	2	0.025	south	mineralised	0.765	34.2	-33.435	NAF	TRUE
X078491	8.6	<0.5	<0.5		110	NS0097	NS	58	60	2	0.026	south	mineralised	0.7956	34.2	-33.4044	NAF	TRUE
X078409	9.3	<0.5	<0.5		80	NS0096	NS	178	180	1.99	0.021	south	mineralised	0.6426	34.029	-33.3864	NAF	TRUE
X078137	8.9	<0.1	<0.1			NS0094	NS	180	182	2	0.028	south	mineralised	0.8568	34.2	-33.3432	NAF	TRUE
X078517	8.6	<0.5	<0.5		84	NS0097	NS	108	110	2	0.028	south	mineralised	0.8568	34.2	-33.3432	NAF	TRUE
X078393	9.1	<0.5	<0.5		110	NS0096	NS	148	150	2.09	0.08	south	mineralised	2.448	35.739	-33.291	NAF	TRUE
X066837	10.6	<0.5	<0.5		140	NS0152	NS	248	250	2.14	0.108	footwall	mineralised	3.3048	36.594	-33.2892	NAF	TRUE
X139828	8.7	<0.5	<0.5		160	NS0160	NS	160	162	2.05	0.058	footwall	mineralised	1.7748	35.055	-33.2802	NAF	TRUE
X077865	8.1	<0.1	<0.1			NS0092	NS	208	210	2.01	0.041	south	mineralised	1.2546	34.371	-33.1164	NAF	TRUE
X078455	9.4	<0.5	<0.5		64	NS0096	NS	268	270	1.98	0.031	south	mineralised	0.9486	33.858	-32.9094	NAF	TRUE
X077963	8.9	<0.1	<0.1			NS0093	NS	120	122	2.14	0.131	south	mineralised	4.0086	36.594	-32.5854	NAF	TRUE
X076967	8.9	<0.1	<0.1	-43.6		NS0087	NS	168	170	1.97	0.04	south	mineralised	1.224	33.687	-32.463	NAF	TRUE
X076963	8.9	<0.1	<0.1	-44.8		NS0087	NS	160	162	2.03	0.074	south	mineralised	2.2644	34.713	-32.4486	NAF	TRUE
X076937	8.9	<0.1	<0.1			NS0087	NS	110	112	1.94	0.032	south	mineralised	0.9792	33.174	-32.1948	NAF	TRUE
X080143	9	<0.1	<0.1			NS0106	NS	276	278	1.92	0.025	south	mineralised	0.765	32.832	-32.067	NAF	TRUE
X139808	8.4	<0.5	<0.5		200	NS0160	NS	120	122	1.96	0.049	footwall	mineralised	1.4994	33.516	-32.0166	NAF	TRUE
X078553	9	<0.5	<0.5		65	NS0097	NS	178	180	1.87	0.002	south	mineralised	0.0612	31.977	-31.9158	NAF	TRUE
X076420	8.8	<0.1	<0.1			NS0083	NS	238	240	2.43	0.317	footwall	non_mineralised	9.7002	41.553	-31.8528	NAF	TRUE
X078389	9.4	<0.5	<0.5		67	NS0096	NS	140	142	1.92	0.034	south	mineralised	1.0404	32.832	-31.7916	NAF	TRUE
X076638	8.6	<0.1	<0.1	-64.9		NS0085	NS	90	92	1.89	0.018	south	mineralised	0.5508	32.319	-31.7682	NAF	TRUE
X077981	8.7	<0.1	<0.1			NS0093	NS	156	158	1.99	0.078	south	mineralised	2.3868	34.029	-31.6422	NAF	TRUE
X139546	10.4	<0.5	<0.5		85	NS0158	NS	130	132	1.91	0.035	north	mineralised	1.071	32.661	-31.59	NAF	TRUE
X078507	8.8	<0.5	<0.5		71	NS0097	NS	88	90	1.88	0.021	south	mineralised	0.6426	32.148	-31.5054	NAF	TRUE
X076564	9	<0.1	<0.1			NS0084	NS	228	230	1.88	0.022	hangingwall	mineralised	0.6732	32.148	-31.4748	NAF	TRUE
X076957	8.8	<0.1	<0.1	-50		NS0087	NS	148	150	1.9	0.041	south	mineralised	1.2546	32.49	-31.2354	NAF	TRUE
X078163	8.6	<0.1	<0.1			NS0094	NS	230	232	1.86	0.021	south	mineralised	0.6426	31.806	-31.1634	NAF	TRUE
X078593	8.5	<0.5	<0.5		120	NS0097	NS	258	260	1.95	0.079	south	mineralised	2.4174	33.345	-30.9276	NAF	TRUE
X077885	8.9	<0.1	<0.1			NS0092	NS	248	250	1.84	0.019	south	mineralised	0.5814	31.464	-30.8826	NAF	TRUE
X066797	9.5	<0.5	<0.5		96	NS0152	NS	168	170	1.97	0.096	footwall	mineralised	2.9376	33.687	-30.7494	NAF	TRUE
X139526	10.5	<0.5	<0.5		110	NS0158	NS	90	92	2.02	0.128	north	mineralised	3.9168	34.542	-30.6252	NAF	TRUE
X078081	9.1	<0.5	<0.5		74	NS0094	NS	68	70	1.89	0.056	south	mineralised	1.7136	32.319	-30.6054	NAF	TRUE
X076539	8.5	<0.1	<0.1			NS0084	NS	180	182	1.85	0.036	hangingwall	mineralised	1.1016	31.635	-30.5334	NAF	TRUE
X080139	8.9	<0.1	<0.1			NS0106	NS	268	270	1.81	0.021	south	mineralised	0.6426	30.951	-30.3084	NAF	TRUE
X082461	9.5	<0.5	<0.5		72	NS0124	NS	250	252	1.83	0.033	footwall	non_mineralised	1.0098	31.293	-30.2832	NAF	TRUE
X139842	8.8	<0.5	<0.5		130	NS0160	NS	188	190	1.98	0.117	footwall	mineralised	3.5802	33.858	-30.2778	NAF	TRUE
X066827	8.9	<0.5	<0.5		150	NS0152	NS	228	230	1.99	0.123	footwall	mineralised	3.7638	34.029	-30.2652	NAF	TRUE
X078121	9.1	<0.1	<0.1			NS0094	NS	148	150	1.8	0.02	south	mineralised	0.612	30.78	-30.168	NAF	TRUE
X080099	8.6	<0.1	<0.1			NS0106	NS	190	192	1.78	0.021	south	mineralised	0.6426	30.438	-29.7954	NAF	TRUE
X080135	8.6	<0.1	<0.1			NS0106	NS	260	262	1.77	0.023	south	mineralised	0.7038	30.267	-29.5632	NAF	TRUE
X077951	8.8	<0.1	<0.1			NS0093	NS	98	100	1.77	0.027	south	mineralised	0.8262	30.267	-29.4408	NAF	TRUE
X066777	9.3	<0.5	<0.5		100	NS0152	NS	128	130	2.03	0.174	footwall	mineralised	5.3244	34.713	-29.3886	NAF	TRUE
X078235	8.5	<0.5	<0.5		160	NS0095	NS	90	92	1.81	0.053	south	mineralised	1.6218	30.951	-29.3292	NAF	TRUE
X066767	9.4	<0.5	<0.5		86	NS0152	NS	108	110	1.82	0.059	footwall	mineralised	1.8054	31.122	-29.3166	NAF	TRUE
X066843	10.5	<0.5	<0.5		110	NS0152	NS	260	262	1.96	0.142	footwall	mineralised	4.3452	33.516	-29.1708	NAF	TRUE
X078583	8.7	<0.5	<0.5		74	NS0097	NS	238	240	1.76	0.032	south	mineralised	0.9792	30.096	-29.1168	NAF	TRUE
X080027	8.9	<0.1	<0.1			NS0106	NS	48	50	1.74	0.025	south	mineralised	0.765	29.754	-28.989	NAF	TRUE
X080104	9.2	<0.1	<0.1			NS0106	NS	198	200	1.72	0.015	south	mineralised	0.459	29.412	-28.953	NAF	TRUE
X078077	8.5	<0.5	<0.5		110	NS0094	NS	60	62	1.76	0.038	south	mineralised	1.1628	30.096	-28.9332	NAF	TRUE
X077901	9	<0.1	<0.1			NS0092	NS	280	282	1.71	0.011	south	mineralised	0.3366	29.241	-28.9044	NAF	TRUE
X078373	9.2	<0.5	<0.5		69	NS0096	NS	108	110	1.76	0.039	south	mineralised	1.1934	30.096	-28.9026	NAF	TRUE
X139520	10.9	<0.5	<0.5		130	NS0158	NS	78	80	1.82	0.076	north	mineralised	2.3256	31.122	-28.7964	NAF	TRUE
X066823	10	<0.5	<0.5		130	NS0152	NS	220	222	1.87	0.107	footwall	mineralised	3.2742	31.977	-28.7028	NAF	TRUE
X078547	8.7	<0.5	<0.5		88	NS0097	NS	168	170	1.73	0.033	south	mineralised	1.0098	29.583	-28.5732	NAF	TRUE
X078363	9.4	<0.5	<0.5		64	NS0096	NS	90	92	1.7	0.027	south	mineralised	0.8262	29.07	-28.2438	NAF	TRUE
X139888	8.9	<0.5	<0.5		120	NS0160	NS	278	280	1.81	0.09	footwall	mineralised	2.754	30.951	-28.197	NAF	TRUE
X159621	8.8	<0.1	<0.1			NS0077	NS	238	240	1.71	0.036	south	mineralised	1.1016	29.241	-28.1394	NAF	TRUE
X139510	9.9	<0.5	<0.5		91	NS0158	NS	58	60	1.98	0.197	footwall	non_mineralised	6.0282	33.858	-27.8298	NAF	TRUE
X078559	8.7	<0.5	<0.5		89	NS0097	NS	190	192	1.66	0.022	south	mineralised	0.6732	28.386	-27.7128	NAF	TRUE
X077067	8.9	<0.1	<0.1	-52.6		NS0087	NS	358	360	1.66	0.025	south	mineralised	0.765	28.386	-27.621	NAF	TRUE
X077895	8.9	<0.1	<0.1			NS0092	NS	268	270	1.66	0.027	south	mineralised	0.8262	28.386	-27.5598	NAF	TRUE
X078503	8.7	<0.5	<0.5		91	NS0097	NS	80	82	1.67	0.034	south	mineralised	1.0404	28.557	-27.5166	NAF	TRUE
X078599	8.8	<0.5	<0.5		76	NS0097	NS	270	272	1.71	0.062	south	mineralised	1.8972	29.241	-27.3438	NAF	TRUE
X077079	8.9	<0.1	<0.1	-59.3		NS0087	NS	380	382	1.63	0.02	south	mineralised	0.612	27.873	-27.261	NAF	TRUE
X076342	8.1	<0.1	<0.1			NS0083	NS	88	90	2.04	0.259	footwall	non_mineralised	7.9254	34.884	-26.9586	NAF	TRUE
X078271	8.9	<0.5	<0.5		110	NS0095	NS	160	162	2.14	0.316	footwall	mineralised	9.6696	36.594	-26.9244	NAF	TRUE
X080037	8.9	<0.1	<0.1			NS0106	NS	68	70	1.61	0.029	south	mineralised	0.8874	27.531	-26.6436	NAF	TRUE
X077849	9	<0.1	<0.1			NS0092	NS	178	180	1.68	0.07	south	mineralised	2.142	28.728	-26.586	NAF	TRUE
X077983	8.8	<0.1	<0.1			NS0093	NS	160	162	1.59	0.027	south	mineralised	0.8262	27.189	-26.3628	NAF	TRUE
X080022	8.5	<0.1	<0.1			NS0106	NS	40	42	1.62	0.044	south	mineralised	1.3464	27.702	-26.3556	NAF	TRUE
X078127	8.8	<0.1	<0.1			NS0094	NS	160	162	1.58	0.022	south	mineralised	0.6732	27.018	-26.3448	NAF	TRUE
X078486	8.7	<0.5	<0.5		81	NS0097	NS	48	50	1.69	0.085	south	mineralised	2.601	28.899	-26.298	NAF	TRUE
X139575	8.8	<0.5	<0.5		190	NS0158	NS	186	188	1.59	0.031	north	mineralised	0.9486	27.189	-26.2404	NAF	FALSE
X080033	9.2	<0.1	<0.1			NS0106	NS	60	62	1.57	0.021	south	mineralised	0.6426	26.847	-26.2044	NAF	TRUE
X159531	8.8	<0.1	<0.1			NS0077	NS	60	62	1.57	0.024	south	mineralised	0.7344	26.847	-26.1126	NAF	TRUE
X159617	9	<0.1	<0.1			NS0077	NS	230	232	1.58	0.034	south	mineralised	1.0404	27.018	-25.9776	NAF	TRUE

Sample Number	pHox	NAG pH 45	NAG pH 70	Lab NAPP	Ecox	HOLEID	AO AREA	SAMPFROM	SAMPTO	CaO_XRF_pct	S_XRF_pct	modelgeo	mineraleralised	MPA	ANC	NAPP	Categorisation	Hole IDs match?
X159759	8.5	<0.1	<0.1			NS0078	NS	232	234	1.76	0.135	footwall	non_mineralised	4.131	30.096	-25.965	NAF	TRUE
X078369	9.3	<0.5	<0.5		76	NS0096	NS	100	102	1.79	0.152	south	mineralised	4.6512	30.609	-25.9578	NAF	TRUE
X076819	8.6	<0.1	<0.1	-44.3		NS0086	NS	160	162	1.6	0.049	footwall	mineralised	1.4994	27.36	-25.8606	NAF	TRUE
X076853	9.2	<0.1	<0.1	-42.6		NS0086	NS	228	230	1.65	0.078	footwall	mineralised	2.3868	28.215	-25.8282	NAF	TRUE
X078017	8.8	<0.1	<0.1			NS0093	NS	224	226	1.8	0.173	south	non_mineralised	5.2938	30.78	-25.4862	NAF	TRUE
X077783	8.9	<0.1	<0.1			NS0092	NS	48	50	1.6	0.062	footwall	non_mineralised	1.8972	27.36	-25.4628	NAF	TRUE
X076813	8.9	<0.1	<0.1	-38.4		NS0086	NS	148	150	1.64	0.085	footwall	mineralised	2.601	28.044	-25.443	NAF	TRUE
X076849	9.3	<0.1	<0.1	-47.1		NS0086	NS	220	222	1.59	0.058	footwall	mineralised	1.7748	27.189	-25.4142	NAF	TRUE
X077087	8.9	<0.1	<0.1	-65.8		NS0087	NS	396	398	1.52	0.026	south	mineralised	0.7956	25.992	-25.1964	NAF	TRUE
X066847	8.9	<0.5	<0.5		180	NS0152	NS	268	270	2.09	0.348	footwall	non_mineralised	10.6488	35.739	-25.0902	NAF	TRUE
X078461	9.3	<0.5	<0.5		70	NS0096	NS	280	282	1.55	0.05	south	mineralised	1.53	26.505	-24.975	NAF	TRUE
X066773	9.3	<0.5	<0.5		100	NS0152	NS	120	122	1.64	0.108	footwall	mineralised	3.3048	28.044	-24.7392	NAF	TRUE
X078141	9.1	<0.1	<0.1			NS0094	NS	188	190	1.49	0.026	south	mineralised	0.7956	25.479	-24.6834	NAF	TRUE
X066803	10.1	<0.5	<0.5		97	NS0152	NS	180	182	1.62	0.11	footwall	mineralised	3.366	27.702	-24.336	NAF	TRUE
X078543	9	<0.5	<0.5		63	NS0097	NS	160	162	1.44	0.01	south	mineralised	0.306	24.624	-24.318	NAF	TRUE
X159541	8.4	<0.1	<0.1			NS0077	NS	80	82	1.5	0.045	south	mineralised	1.377	25.65	-24.273	NAF	TRUE
X159611	8.9	<0.1	<0.1			NS0077	NS	218	220	1.46	0.024	south	mineralised	0.7344	24.966	-24.2316	NAF	TRUE
X076416	8.4	<0.1	<0.1			NS0083	NS	230	232	1.82	0.229	footwall	non_mineralised	7.0074	31.122	-24.1146	NAF	TRUE
X076685	8.6	<0.1	<0.1	-55.5		NS0085	NS	180	182	1.48	0.041	south	mineralised	1.2546	25.308	-24.0534	NAF	TRUE
X139571	11	<0.5	<0.5		140	NS0158	NS	178	180	1.47	0.036	north	mineralised	1.1016	25.137	-24.0354	NAF	TRUE
X078513	8.5	<0.5	<0.5		120	NS0097	NS	100	102	1.51	0.062	south	mineralised	1.8972	25.821	-23.9238	NAF	TRUE
X078533	8.9	<0.5	<0.5		71	NS0097	NS	140	142	1.59	0.11	south	mineralised	3.366	27.189	-23.823	NAF	TRUE
X077947	9.1	<0.1	<0.1			NS0093	NS	90	92	1.42	0.032	south	mineralised	0.9792	24.282	-23.3028	NAF	TRUE
X066813	10.5	<0.5	<0.5		110	NS0152	NS	200	202	1.52	0.089	footwall	mineralised	2.7234	25.992	-23.2686	NAF	TRUE
X076574	9.2	<0.1	<0.1			NS0084	NS	248	250	1.42	0.034	hangingwall	mineralised	1.0404	24.282	-23.2416	NAF	TRUE
X077676	8.4	<0.1	<0.1			NS0091	NS	120	122	1.38	0.021	hangingwall	mineralised	0.6426	23.598	-22.9554	NAF	TRUE
X077835	8.8	<0.1	<0.1			NS0092	NS	150	152	1.38	0.021	south	mineralised	0.6426	23.598	-22.9554	NAF	TRUE
X139536	10.2	<0.5	<0.5		79	NS0158	NS	110	112	1.37	0.022	north	mineralised	0.6732	23.427	-22.7538	NAF	TRUE
X078291	8.5	<0.5	<0.5		200	NS0095	NS	200	202	1.89	0.315	footwall	non_mineralised	9.639	32.319	-22.68	NAF	TRUE
X080313	9.2	<0.1	<0.1			NS0108	NS	128	130	1.38	0.032	south	mineralised	0.9792	23.598	-22.6188	NAF	TRUE
X078239	8.5	<0.5	<0.5		160	NS0095	NS	98	100	1.42	0.055	south	mineralised	1.683	24.282	-22.599	NAF	TRUE
X080739	8.9	<0.1	<0.1			NS0111	NS	236	238	1.41	0.05	south	mineralised	1.53	24.111	-22.581	NAF	TRUE
X078353	9.3	<0.5	<0.5		75	NS0096	NS	70	72	1.36	0.026	south	mineralised	0.7956	23.256	-22.4604	NAF	TRUE
X078357	9.4	<0.5	<0.5		62	NS0096	NS	78	80	1.36	0.026	south	mineralised	0.7956	23.256	-22.4604	NAF	TRUE
X077005	8.9	<0.1	<0.1	-45		NS0087	NS	240	242	1.36	0.027	south	mineralised	0.8262	23.256	-22.4298	NAF	TRUE
X078949	8.3	<0.1	<0.1			NS0100	NS	110	112	1.36	0.028	south	mineralised	0.8568	23.256	-22.3992	NAF	TRUE
X076621	8.5	<0.1	<0.1	-57.4		NS0085	NS	58	60	1.35	0.023	south	mineralised	0.7038	23.085	-22.3812	NAF	TRUE
X159641	8.8	<0.1	<0.1			NS0077	NS	278	280	1.54	0.13	south	mineralised	3.978	26.334	-22.356	NAF	TRUE
X080079	8.9	<0.1	<0.1			NS0106	NS	150	152	1.34	0.019	south	mineralised	0.5814	22.914	-22.3326	NAF	TRUE
X078923	8.4	<0.1	<0.1			NS0100	NS	58	60	1.36	0.039	south	mineralised	1.1934	23.256	-22.0626	NAF	TRUE
X077941	9.3	<0.1	<0.1			NS0093	NS	78	80	1.39	0.059	south	mineralised	1.8054	23.769	-21.9636	NAF	TRUE
X077999	8.8	<0.1	<0.1			NS0093	NS	190	192	1.31	0.019	south	mineralised	0.5814	22.401	-21.8196	NAF	TRUE
X077031	8.7	<0.1	<0.1			NS0087	NS	290	292	1.33	0.032	south	mineralised	0.9792	22.743	-21.7638	NAF	FALSE
X076951	8.8	<0.1	<0.1	-48.9		NS0087	NS	138	140	1.32	0.029	south	mineralised	0.8874	22.572	-21.6846	NAF	TRUE
X077891	8.9	<0.1	<0.1			NS0092	NS	260	262	1.29	0.014	south	mineralised	0.4284	22.059	-21.6306	NAF	TRUE
X139552	10.4	<0.5	<0.5		80	NS0158	NS	140	142	1.34	0.045	north	mineralised	1.377	22.914	-21.537	NAF	TRUE
X078013	9	<0.1	<0.1			NS0093	NS	216	218	1.31	0.031	south	mineralised	0.9486	22.401	-21.4524	NAF	TRUE
X076873	9.1	<0.1	<0.1	-22.5		NS0086	NS	268	270	1.49	0.14	footwall	mineralised	4.284	25.479	-21.195	NAF	TRUE
X078383	9.4	<0.5	<0.5		64	NS0096	NS	128	130	1.32	0.046	south	mineralised	1.4076	22.572	-21.1644	NAF	TRUE
X076410	8.7	<0.1	<0.1			NS0083	NS	218	220	1.75	0.287	footwall	non_mineralised	8.7822	29.925	-21.1428	NAF	TRUE
X082419	9.4	<0.5	<0.5		110	NS0124	NS	168	170	1.38	0.082	footwall	non_mineralised	2.5092	23.598	-21.0888	NAF	TRUE
X080043	8.7	<0.1	<0.1			NS0106	NS	80	82	1.33	0.057	south	mineralised	1.7442	22.743	-20.9988	NAF	TRUE
X077993	8.7	<0.1	<0.1			NS0093	NS	178	180	1.32	0.061	south	mineralised	1.8666	22.572	-20.7054	NAF	TRUE
X078451	9.4	<0.5	<0.5		72	NS0096	NS	260	262	1.56	0.196	south	mineralised	5.9976	26.676	-20.6784	NAF	TRUE
X139508	9.5	<0.5	<0.5		75	NS0158	NS	54	56	1.31	0.058	footwall	non_mineralised	1.7748	22.401	-20.6262	NAF	TRUE
X082373	9.4	<0.5	<0.5		130	NS0124	NS	78	80	1.76	0.313	footwall	non_mineralised	9.5778	30.096	-20.5182	NAF	TRUE
X077839	8.9	<0.1	<0.1			NS0092	NS	158	160	1.27	0.04	south	mineralised	1.224	21.717	-20.493	NAF	TRUE
X078419	9	<0.5	<0.5		110	NS0096	NS	198	200	1.25	0.029	south	mineralised	0.8874	21.375	-20.4876	NAF	TRUE
X139878	8.6	<0.5	<0.5		230	NS0160	NS	258	260	1.23	0.019	footwall	mineralised	0.5814	21.033	-20.4516	NAF	TRUE
X077537	8.7	<0.1	<0.1			NS0090	NS	128	130	1.25	0.031	south	mineralised	0.9486	21.375	-20.4264	NAF	TRUE
X077053	8.9	<0.1	<0.1	-43.3		NS0087	NS	330	332	1.24	0.03	south	mineralised	0.918	21.204	-20.286	NAF	TRUE
X066793	9.5	<0.5	<0.5		110	NS0152	NS	160	162	1.5	0.182	footwall	mineralised	5.5692	25.65	-20.0808	NAF	TRUE
X078497	8.9	<0.5	<0.5		75	NS0097	NS	70	72	1.33	0.087	south	mineralised	2.6622	22.743	-20.0808	NAF	TRUE
X080083	8.4	<0.1	<0.1			NS0106	NS	158	160	1.21	0.023	south	mineralised	0.7038	20.691	-19.9872	NAF	TRUE
X077009	8.9	<0.1	<0.1	-35.2		NS0087	NS	248	250	1.31	0.079	south	mineralised	2.4174	22.401	-19.9836	NAF	TRUE
X078563	8.6	<0.5	<0.5		77	NS0097	NS	198	200	1.21	0.025	south	mineralised	0.765	20.691	-19.926	NAF	TRUE
X159747	8.7	<0.1	<0.1			NS0078	NS	208	210	1.3	0.077	footwall	mineralised	2.3562	22.23	-19.8738	NAF	TRUE
X076556	9.3	<0.1	<0.1			NS0084	NS	214	216	1.43	0.152	hangingwall	mineralised	4.6512	24.453	-19.8018	NAF	TRUE
X078157	8.3	<0.1	<0.1			NS0094	NS	218	220	1.2	0.025	south	mineralised	0.765	20.52	-19.755	NAF	TRUE
X077855	8.9	<0.1	<0.1			NS0092	NS	188	190	1.24	0.051	south	mineralised	1.5606	21.204	-19.6434	NAF	TRUE
X159525	8.4	<0.1	<0.1			NS0077	NS	48	50	1.23	0.046	south	mineralised	1.4076	21.033	-19.6254	NAF	TRUE
X159575	8.7	<0.1	<0.1			NS0077	NS	148	150	1.5	0.197	south	mineralised	6.0282	25.65	-19.6218	NAF	TRUE
X077425	9.3	<0.1	<0.1			NS0089	NS	308	310	1.21	0.036	north	non_mineralised	1.1016	20.691	-19.5894	NAF	TRUE
X159565	8.3	<0.1	<0.1			NS0077	NS	128	130	1.18	0.022	south	mineralised	0.6732	20.178	-19.5048	NAF	TRUE
X076711	8.4	<0.1	<0.1	-59.6		NS0085	NS	230	232	1.34	0.112	south	mineralised	3.4272	22.914	-19.4868	NAF	TRUE
X076977	8.9	<0.1	<0.1	-34.8		NS0087	NS	188	190	1.22	0.046	south	mineralised	1.4076	20.862	-19.4544	NAF	TRUE
X077015	8.8	<0.1	<0.1	-48.5		NS0087	NS	260	262	1.19	0.031	south	mineralised	0.9486	20.349	-19.4004	NAF	TRUE
X139581	9.4	<0.5	<0.5		83	NS0158	NS	198	200	1.23	0.056	north	mineralised	1.7136	21.033	-19.3194	NAF	TRUE
X139561	10.5	<0.5	<0.5		88	NS0158	NS	158	160	1.19	0.035	north	mineralised	1.071	20.349	-19.278	NAF	TRUE
X078439	9.2	<0.5	<0.5		110	NS0096	NS	238	240	1.18	0.039	south	mineralised	1.1934	20.178	-18.9846	NAF	TRUE
X159535	8.8	<0.1	<0.1			NS0077	NS	68	70	1.25	0.081	south	mineralised	2.4786	21.375	-18.8964	NAF	TRUE
X080350	9.1	<0.1	<0.1			NS0108	NS	200	202	1.35	0.139	south	mineralised	4.2534	23.085	-18.8316	NAF	TRUE
X078347	9.1	<0.5	<0.5		120	NS0096	NS	58	60	1.14	0.022	south	mineralised	0.6732	19.494	-18.8208	NAF	TRUE
X077793	8.8	<0.1	<0.1			NS0092	NS	68	70	1.16	0.034	south	mineralised	1.0404	19.836	-18.7956	NAF	TRUE
X078219	8.6	<0.5	<0.5		93	NS0095	NS	58	60	1.17	0.04	south	mineralised	1.224	20.007	-18.783	NAF	TRUE
X080110	8.5	<0.1	<0.1			NS0106	NS	210	212	1.13	0.02	south	mineralised	0.612	19.323	-18.711	NAF	TRUE
X076941	8.8	<0.1	<0.1	-48.3		NS0087	NS	118	120	1.17	0.044	south	mineralised	1.3464	20.007	-18.6606	NAF	TRUE
X076679	8.7	<0.1	<0.1	-55.8		NS0085	NS	168	170	1.16	0.039	south	mineralised	1.1934	19.836	-18.6426	NAF	TRUE
X078281	8.6	<0.5	<0.5		110	NS0095	NS	180	182	1.26	0.101	footwall	mineralised	3.0906	21.546	-18.4554	NAF	TRUE
X076406	8.8	<0.1	<0.1			NS0083	NS	210	212	1.29	0.123	footwall	non_mineralised	3.7638	22.059	-18.2952	NAF	TRUE
X139540	10.4	<0.5	<0.5		180	NS0158	NS	118	120	1.15	0.05	north	mineralised	1.53	19.665	-18.135	NAF	TRUE
X159631	8.8	<0.1	<0.1			NS0077	NS	258	260	1.14	0.047	south	mineralised	1.4382	19.494	-18.0558	NAF	TRUE
X159601	8.5	<0.1	<0.1			NS0077	NS	198	200	1.1	0.025	south	mineralised	0.765	18.81	-18.045	NAF	TRUE
X076983	8.9	<0.1	<0.1	-47.5		NS0087	NS	198	200	1.17	0.067	south	mineralised	2.0502	20.007	-17.9568	NAF	TRUE
X080745	9.1	<0.1	<0.1	-35.7		NS0111	NS	248	250	1.22	0.095	south	mineralised	2.907	20.862	-17.955	NAF	TRUE
X077957	9	<0.1	<0.1			NS0093	NS	108	110	1.16	0.062	south	non_mineralised	1.8972	19.836	-17.9388	NAF	TRUE
X076809	8.6	<0.1	<0.1	-38.7		NS0086	NS	140	142	1.12	0.04	footwall	mineralised	1.224	19.152	-17.928	NAF	TRUE
X080114	8.6	<0.1	<0.1			NS0106	NS	218	220	1.07	0.015	south	mineralised	0.459	18.297	-17.838	NAF	TRUE
X080329	9.2	<0.1	<0.1			NS0108	NS	160	162	1.33	0.161	south	mineralised	4.9266	22.743	-17.8164	NAF	TRUE
X078569	8.5	<0.5	<0.5		110	NS0097	NS	210	212	1.08	0.025	south	mineralised	0.765	18.468	-17.703	NAF	TRUE
X076973	8.9	<0.1	<0.1	-44.4		NS0087	NS	180	182	1.09	0.031	south	mineralised	0.9486	18.639	-17.6904	NAF	TRUE
X066939	8.3	<0.5	<0.5		180	NS0153	NS	168	170	1.1	0.037	hangingwall	mineralised	1.1322	18.81	-17.6778	NAF	TRUE
X076675	8.5	<0.1	<0.1	-43.6		NS0085	NS	160	162	1.06	0.015	south	mineralised	0.459	18.126	-17.667	NAF	TRUE
X078187	8.9	<0.1	<0.1			NS0094	NS	278	280	1.06	0.016	south	mineralised	0.4896	18.126	-17.6364	NAF	TRUE
X066935	8.6	<0.5	<0.5		140	NS0153	NS	160	162	1.07	0.022	hangingwall	mineralised	0.6732	18.297	-17.6238	NAF	TRUE
X080120	8.5	<0.1	<0.1			NS0106	NS	230	232	1.07	0.022	south	mineralised	0.6732	18.297	-17.6238	NAF	TRUE
X076444	8.6	<0.1	<0.1			NS0083	NS	280	282	1.34	0.175	footwall	non_mineralised	5.355	22.914	-17.559	NAF	TRUE
X078523	8.6	<0.5	<0.5		81	NS0097	NS	120	122	1.06	0.024	south	mineralised	0.7344	18.126	-17.3916	NAF	TRUE
X139812	8.7	<0.5	<0.5		150	NS0160	NS	128	130	1.48	0.262	footwall	non_mineralised	8.0172	25.308	-17.2908	NAF	TRUE
X139822	8.6	<0.5	<0.5		220	NS0160	NS	148	150	1.12	0.061	footwall	mineralised	1.8666	19.152	-17.2854	NAF	TRUE
X077742	8.8	<0.1	<0.1			NS0091	NS	250	252	1.06	0.031	hangingwall	non_mineralised	0.9486	18.126	-17.1774	NAF	TRUE
X159627	8.8	<0.1	<0.1			NS0077	NS	250	252	1.06	0.032	south	mineralised	0.9792	18.126	-17.1468	NAF	TRUE
X077057	8.9	<0.1	<0.1	-49.6		NS0087	NS	338	340	1.09	0.05	south	mineralised	1.53	18.639	-17.109	NAF	TRUE
X076627	8.7	<0.1	<0.1	-48		NS0085	NS	70	72	1.19	0.106	south	mineralised	3.2436	20.349	-17.1054	NAF	TRUE
X076548	8.2	<0.1	<0.1			NS0084	NS	198	200	1.18	0.102	hangingwall	non_mineralised	3.1212	20.178	-17.0568	NAF	TRUE
X078111	8.8	<0.1	<0.1			NS0094	NS	128	130	1.03	0.032	south	mineralised	0.9792	17.613	-16.6338	NAF	TRUE
X139557	10.4	<0.5	<0.5		77	NS0158	NS	150	152	1.02	0.031	north	mineralised	0.9486	17.442	-16.4934	NAF	TRUE
X078095	9.1	<0.5	<0.5		170	NS0094	NS	98	100	1.06	0.054	south	mineralised	1.6524	18.126	-16.4736	NAF	TRUE
X159697	8.5	<0.1	<0.1			NS0078	NS	108	110	1.23	0.15	footwall	non_mineralised	4.59	21.033	-16.443	NAF	TRUE
X077171	8.6	<0.1	<0.1			NS0088	NS	158	160	0.96	0.004	north	non_mineralised	0.1224	16.416	-16.2936	NAF	FALSE
X159545	8.5	<0.1	<0.1			NS0077	NS	88	90	1.27	0.178	south	mineralised	5.4468	21.717	-16.2702	NAF	TRUE
X159571	7.9	<0.1	<0.1			NS0077	NS	140	142	1.03	0.046	south	mineralised	1.4076	17.613	-16.2054	NAF	TRUE
X139894	8.8	<0.5	<0.5		230	NS0160	NS	290	292	1.29	0.193	footwall	non_mineralised	5.9058	22.059	-16.1532	NAF	TRUE
X076426	8.8	<0.1	<0.1			NS0083	NS	250	252	1.56	0.344	footwall	non_mineralised	10.5264	26.676	-16.1496	NAF	TRUE
X139864	8.4	<0.5	<0.5		270	NS0160	NS	230	232	1.01	0.037	footwall	mineralised	1.1322	17.271	-16.1388	NAF	TRUE
X077789	8.8	<0.1	<0.1			NS0092	NS	60	62	1.12	0.1	footwall	mineralised	3.06	19.152	-16.092	NAF	TRUE
X076669	8.5	<0.1	<0.1	-52.9		NS0085	NS	148	150	0.98	0.024	south	mineralised	0.7344	16.758	-16.0236	NAF	TRUE
X077726	8.9	<0.1	<0.1			NS0091	NS	218	220	0.94	0.003	hangingwall	mineralised	0.0918	16.074	-15.9822	NAF	TRUE
X077722	8.8	<0.1	<0.1			NS0091	NS	210	212	0.95	0.011	hangingwall	non_mineralised	0.3366	16.245	-15.9084	NAF	TRUE
X077227	8.8	<0.1	<0.1			NS0088	NS	268	270	1.05	0.069	north	non_mineralised	2.1114	17.955	-15.8436	NAF	TRUE
X077207	8.6	<0.1	<0.1			NS0088	NS	228	230	0.93	0.004	north	mineralised	0.1224	15.903	-15.7806	NAF	TRUE

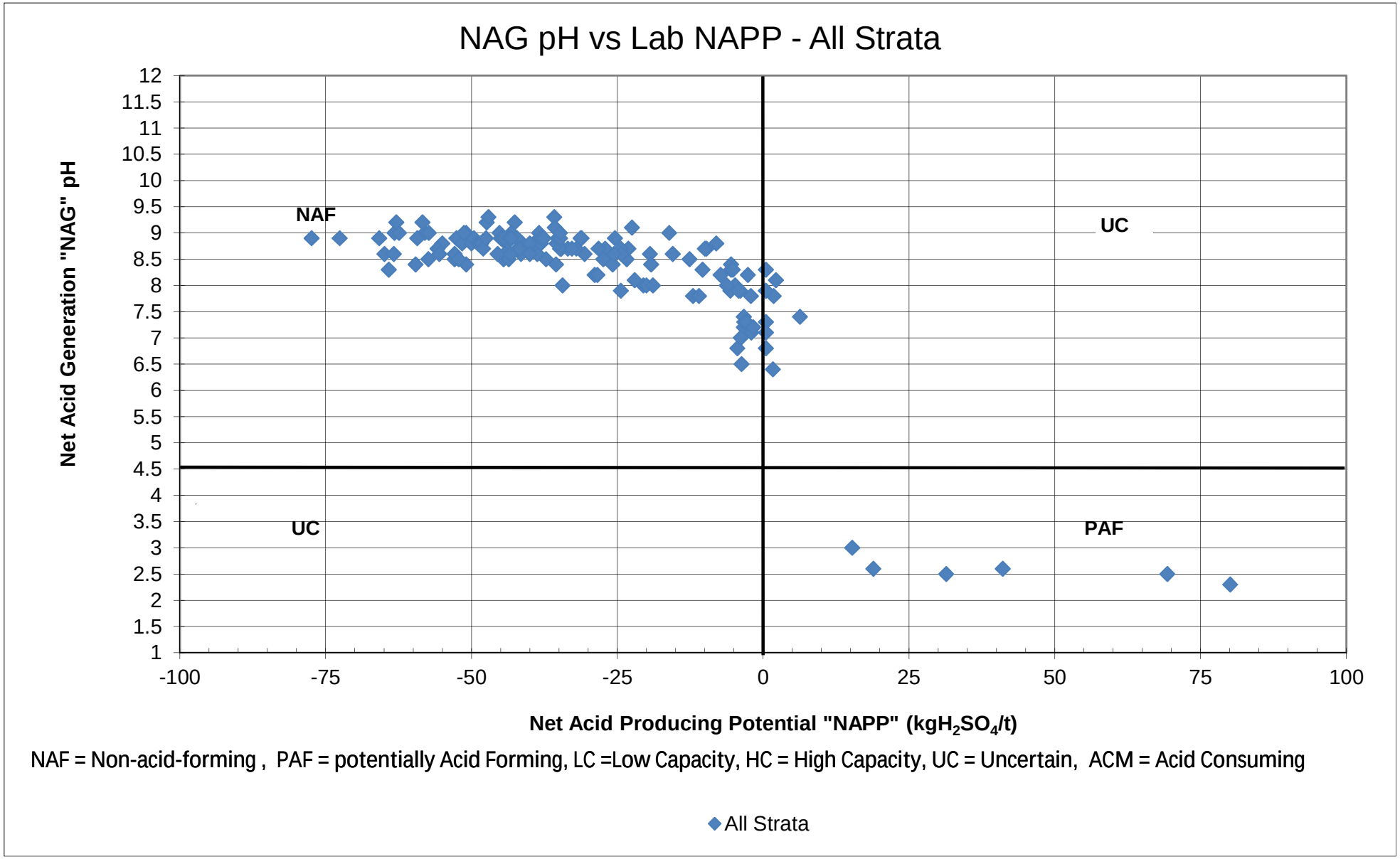
Sample Number	pHox	NAG pH 45	NAG pH 70	Lab NAPP	Ecox	HOLEID	AO AREA	SAMPFROM	SAMPTO	CaO_XRF_pct	S_XRF_pct	modelgeo	mineraleralised	MPA	ANC	NAPP	Categorisation	Hole IDs match?
X077706	8.8	<0.1	<0.1			NS0091	NS	178	180	1.01	0.05	hangingwall	non_mineralised	1.53	17.271	-15.741	NAF	TRUE
X078215	8.4	<0.5	<0.5		90	NS0095	NS	50	52	0.96	0.024	south	mineralised	0.7344	16.416	-15.6816	NAF	TRUE
X080699	8.8	<0.1	<0.1			NS0111	NS	158	160	1.22	0.17	south	mineralised	5.202	20.862	-15.66	NAF	TRUE
X077313	8.8	<0.1	<0.1			NS0089	NS	88	90	1.35	0.243	north	non_mineralised	7.4358	23.085	-15.6492	NAF	TRUE
X078087	8.9	<0.1	<0.1			NS0094	NS	80	82	1.89	0.545	south	mineralised	16.677	32.319	-15.642	NAF	TRUE
X077217	8.7	<0.1	<0.1			NS0088	NS	248	250	0.93	0.013	north	non_mineralised	0.3978	15.903	-15.5052	NAF	TRUE
X078589	8.6	<0.5	<0.5		78	NS0097	NS	250	252	0.94	0.022	south	mineralised	0.6732	16.074	-15.4008	NAF	TRUE
X078261	8.3	<0.5	<0.5		230	NS0095	NS	140	142	1.31	0.229	footwall	mineralised	7.0074	22.401	-15.3936	NAF	TRUE
X076833	9	<0.1	<0.1	-45.2		NS0086	NS	188	190	1.07	0.097	footwall	mineralised	2.9682	18.297	-15.3288	NAF	TRUE
X159851	8.9	<0.1	<0.1	-31.3		NS0079	NS	128	130	0.95	0.03	south	mineralised	0.918	16.245	-15.327	NAF	TRUE
X077197	8.9	<0.1	<0.1			NS0088	NS	210	212	0.91	0.009	north	mineralised	0.2754	15.561	-15.2856	NAF	TRUE
X081655	8	<0.5	<0.5		220	NS0118	NS	150	152	0.95	0.032	hangingwall	mineralised	0.9792	16.245	-15.2658	NAF	TRUE
X159587	8.7	<0.1	<0.1			NS0077	NS	170	172	0.95	0.034	south	mineralised	1.0404	16.245	-15.2046	NAF	TRUE
X139874	8.6	<0.5	<0.5		290	NS0160	NS	250	252	0.95	0.037	footwall	mineralised	1.1322	16.245	-15.1128	NAF	TRUE
X080343	9.2	<0.1	<0.1			NS0108	NS	188	190	0.92	0.024	south	mineralised	0.7344	15.732	-14.9976	NAF	TRUE
X077583	9.2	<0.1	<0.1			NS0090	NS	218	220	0.92	0.026	footwall	mineralised	0.7956	15.732	-14.9364	NAF	TRUE
X080047	9	<0.1	<0.1			NS0106	NS	88	90	0.98	0.062	south	mineralised	1.8972	16.758	-14.8608	NAF	TRUE
X078667	9	<0.5	<0.5		210	NS0098	NS	120	122	1.08	0.118	hangingwall	mineralised	3.6108	18.468	-14.8572	NAF	TRUE
X078102	8.9	<0.1	<0.1			NS0094	NS	110	112	1.06	0.107	south	mineralised	3.2742	18.126	-14.8518	NAF	TRUE
X159677	8.8	<0.1	<0.1	-35.4		NS0078	NS	68	70	0.94	0.042	footwall	mineralised	1.2852	16.074	-14.7888	NAF	TRUE
X076384	8.9	<0.1	<0.1			NS0083	NS	170	172	1.46	0.333	footwall	non_mineralised	10.1898	24.966	-14.7762	NAF	TRUE
X159667	7.7	<0.1	<0.1			NS0078	NS	48	50	0.93	0.039	footwall	non_mineralised	1.1934	15.903	-14.7096	NAF	TRUE
X076332	7.9	<0.1	<0.1			NS0083	NS	68	70	1.22	0.202	footwall	non_mineralised	6.1812	20.862	-14.6808	NAF	TRUE
X078245	8.6	<0.5	<0.5		120	NS0095	NS	110	112	1.23	0.211	footwall	mineralised	6.4566	21.033	-14.5764	NAF	TRUE
X080054	8.5	<0.1	<0.1			NS0106	NS	100	102	0.93	0.045	south	mineralised	1.377	15.903	-14.526	NAF	TRUE
X078399	9	<0.5	<0.5		100	NS0096	NS	160	162	0.98	0.073	south	mineralised	2.2338	16.758	-14.5242	NAF	TRUE
X077805	9	<0.1	<0.1			NS0092	NS	90	92	0.99	0.083	south	mineralised	2.5398	16.929	-14.3892	NAF	TRUE
X076931	9	<0.1	<0.1			NS0087	NS	98	100	1.25	0.23	south	mineralised	7.038	21.375	-14.337	NAF	TRUE
X077161	8.8	<0.1	<0.1			NS0088	NS	138	140	0.84	0.003	north	non_mineralised	0.0918	14.364	-14.2722	NAF	TRUE
X078107	8.6	<0.5	<0.5		120	NS0094	NS	120	122	0.87	0.022	south	mineralised	0.6732	14.877	-14.2038	NAF	TRUE
X077395	9.2	<0.1	<0.1			NS0089	NS	250	252	0.87	0.029	north	mineralised	0.8874	14.877	-13.9896	NAF	TRUE
X078687	8.9	<0.5	<0.5		140	NS0098	NS	160	162	0.87	0.032	hangingwall	mineralised	0.9792	14.877	-13.8978	NAF	TRUE
X159717	8.6	<0.1	<0.1			NS0078	NS	148	150	0.93	0.066	footwall	non_mineralised	2.0196	15.903	-13.8834	NAF	TRUE
X078009	8.8	<0.1	<0.1			NS0093	NS	210	212	0.89	0.056	south	mineralised	1.7136	15.219	-13.5054	NAF	TRUE
X078035	8.8	<0.1	<0.1			NS0093	NS	260	262	0.83	0.023	south	mineralised	0.7038	14.193	-13.4892	NAF	TRUE
X080385	8.9	<0.1	<0.1			NS0108	NS	270	272	0.81	0.012	south	mineralised	0.3672	13.851	-13.4838	NAF	TRUE
X077696	9	<0.1	<0.1	-50.9		NS0091	NS	160	162	1.03	0.135	hangingwall	non_mineralised	4.131	17.613	-13.482	NAF	TRUE
X077696	8.8	<0.1	<0.1	-35.3		NS0091	NS	160	162	1.03	0.135	hangingwall	non_mineralised	4.131	17.613	-13.482	NAF	TRUE
X076921	8.6	<0.5	<0.5		330	NS0087	NS	80	82	0.84	0.03	footwall	mineralised	0.918	14.364	-13.446	NAF	FALSE
X077809	9	<0.1	<0.1			NS0092	NS	98	100	0.86	0.043	south	mineralised	1.3158	14.706	-13.3902	NAF	TRUE
X159687	8.8	<0.1	<0.1			NS0078	NS	88	90	0.83	0.032	footwall	mineralised	0.9792	14.193	-13.2138	NAF	TRUE
X077041	9.1	<0.1	<0.1			NS0087	NS	308	310	0.83	0.033	south	mineralised	1.0098	14.193	-13.1832	NAF	TRUE
X159767	8.7	<0.1	<0.1			NS0078	NS	248	250	0.84	0.039	footwall	mineralised	1.1934	14.364	-13.1706	NAF	TRUE
X077019	8.7	<0.1	<0.1	-28.2		NS0087	NS	268	270	1.27	0.281	south	mineralised	8.5986	21.717	-13.1184	NAF	TRUE
X080369	9.4	<0.1	<0.1			NS0108	NS	238	240	0.81	0.024	south	mineralised	0.7344	13.851	-13.1166	NAF	TRUE
X076501	8.9	<0.1	<0.1			NS0084	NS	108	110	0.84	0.041	hangingwall	mineralised	1.2546	14.364	-13.1094	NAF	FALSE
X076653	8.1	<0.1	<0.1			NS0085	NS	118	120	0.83	0.036	south	mineralised	1.1016	14.193	-13.0914	NAF	TRUE
X077736	8.9	<0.1	<0.1			NS0091	NS	238	240	0.77	0.005	hangingwall	non_mineralised	0.153	13.167	-13.014	NAF	TRUE
X077691	8.7	<0.1	<0.1	-34.8		NS0091	NS	150	152	0.94	0.101	hangingwall	non_mineralised	3.0906	16.074	-12.9834	NAF	TRUE
X078249	8.6	<0.5	<0.5		110	NS0095	NS	118	120	0.97	0.122	footwall	mineralised	3.7332	16.587	-12.8538	NAF	TRUE
X076993	9.1	<0.1	<0.1			NS0087	NS	218	220	0.87	0.07	south	mineralised	2.142	14.877	-12.735	NAF	TRUE
X159733	7.3	<0.1	<0.1			NS0078	NS	180	182	0.83	0.048	footwall	mineralised	1.4688	14.193	-12.7242	NAF	TRUE
X077253	8.9	<0.1	<0.1			NS0088	NS	318	320	0.79	0.027	north	mineralised	0.8262	13.509	-12.6828	NAF	TRUE
X078256	8.4	<0.5	<0.5		180	NS0095	NS	130	132	0.89	0.083	footwall	mineralised	2.5398	15.219	-12.6792	NAF	TRUE
X081282	8.6	<0.5	<0.5		92	NS0115	NS	260	262	0.77	0.017	south	mineralised	0.5202	13.167	-12.6468	NAF	TRUE
X159723	8.7	<0.1	<0.1	-34.6		NS0078	NS	160	162	0.92	0.102	footwall	non_mineralised	3.1212	15.732	-12.6108	NAF	FALSE
X139854	8.6	<0.5	<0.5		220	NS0160	NS	210	212	1.03	0.164	footwall	non_mineralised	5.0184	17.613	-12.5946	NAF	TRUE
X077263	9.1	<0.1	<0.1			NS0088	NS	338	340	0.8	0.041	north	mineralised	1.2546	13.68	-12.4254	NAF	TRUE
X078349	8.9	<0.5	<0.5		110	NS0096	NS	62	64	1.1	0.21	south	non_mineralised	6.426	18.81	-12.384	NAF	TRUE
X078045	8.8	<0.1	<0.1			NS0093	NS	280	282	0.76	0.02	south	mineralised	0.612	12.996	-12.384	NAF	TRUE
X078691	8.5	<0.5	<0.5		190	NS0098	NS	168	170	0.79	0.037	hangingwall	non_mineralised	1.1322	13.509	-12.3768	NAF	TRUE
X077451	8.8	<0.5	<0.5		320	NS0089	NS	360	362	0.77	0.027	north	non_mineralised	0.8262	13.167	-12.3408	NAF	TRUE
X076793	8	<0.1	<0.1	-20		NS0086	NS	110	112	1.53	0.456	footwall	non_mineralised	13.9536	26.163	-12.2094	NAF	TRUE
X159555	8.8	<0.1	<0.1			NS0077	NS	108	110	0.77	0.032	south	mineralised	0.9792	13.167	-12.1878	NAF	TRUE
X159831	9	<0.1	<0.1			NS0079	NS	90	92	0.74	0.016	south	mineralised	0.4896	12.654	-12.1644	NAF	TRUE
X078657	9.1	<0.5	<0.5		160	NS0098	NS	100	102	0.84	0.072	hangingwall	mineralised	2.2032	14.364	-12.1608	NAF	TRUE
X080309	9.2	<0.1	<0.1			NS0108	NS	120	122	0.85	0.078	south	mineralised	2.3868	14.535	-12.1482	NAF	TRUE
X077702	8.8	<0.1	<0.1	-38.1		NS0091	NS	170	172	0.88	0.102	hangingwall	non_mineralised	3.1212	15.048	-11.9268	NAF	TRUE
X077746	9	<0.1	<0.1			NS0091	NS	258	260	0.83	0.077	hangingwall	non_mineralised	2.3562	14.193	-11.8368	NAF	TRUE
X080761	9	<0.1	<0.1			NS0111	NS	278	280	0.87	0.1	south	mineralised	3.06	14.877	-11.817	NAF	TRUE
X078579	8.5	<0.5	<0.5		110	NS0097	NS	230	232	0.76	0.039	south	mineralised	1.1934	12.996	-11.8026	NAF	TRUE
X077670	9	<0.1	<0.1			NS0091	NS	108	110	0.8	0.062	hangingwall	mineralised	1.8972	13.68	-11.7828	NAF	TRUE
X078415	8.8	<0.5	<0.5		150	NS0096	NS	190	192	0.73	0.023	south	mineralised	0.7038	12.483	-11.7792	NAF	TRUE
X078707	9	<0.5	<0.5		170	NS0098	NS	198	200	0.74	0.03	hangingwall	mineralised	0.918	12.654	-11.736	NAF	TRUE
X077569	9.3	<0.1	<0.1			NS0090	NS	190	192	0.81	0.07	south	mineralised	2.142	13.851	-11.709	NAF	TRUE
X080375	8.4	<0.1	<0.1			NS0108	NS	250	252	0.81	0.071	south	mineralised	2.1726	13.851	-11.6784	NAF	TRUE
X080731	9	<0.1	<0.1			NS0111	NS	220	222	0.88	0.111	south	non_mineralised	3.3966	15.048	-11.6514	NAF	TRUE
X066783	9.1	<0.5	<0.5		110	NS0152	NS	140	142	1.49	0.452	footwall	mineralised	13.8312	25.479	-11.6478	NAF	TRUE
X076438	8.8	<0.1	<0.1			NS0083	NS	268	270	1.09	0.236	footwall	non_mineralised	7.2216	18.639	-11.4174	NAF	TRUE
X077589	8.9	<0.1	<0.1			NS0090	NS	230	232	0.74	0.041	footwall	mineralised	1.2546	12.654	-11.3994	NAF	TRUE
X076797	8.5	<0.1	<0.1	-27.4		NS0086	NS	118	120	1.17	0.282	footwall	non_mineralised	8.6292	20.007	-11.3778	NAF	TRUE
X078067	8.4	<0.5	<0.5		120	NS0094	NS	40	42	0.72	0.033	south	mineralised	1.0098	12.312	-11.3022	NAF	TRUE
X076398	8.2	<0.1	<0.1			NS0083	NS	198	200	1.7	0.581	footwall	non_mineralised	17.7786	29.07	-11.2914	NAF	TRUE
X078173	8.2	<0.1	<0.1			NS0094	NS	250	252	0.69	0.017	south	mineralised	0.5202	11.799	-11.2788	NAF	TRUE
X077135	9.8	<0.1	<0.1			NS0088	NS	88	90	0.76	0.057	footwall	non_mineralised	1.7442	12.996	-11.2518	NAF	TRUE
X078661	9.1	<0.5	<0.5		110	NS0098	NS	108	110	0.72	0.04	hangingwall	mineralised	1.224	12.312	-11.088	NAF	TRUE
X076699	8.6	<0.1	<0.1	-52.9		NS0085	NS	208	210	0.68	0.02	south	mineralised	0.612	11.628	-11.016	NAF	TRUE
X077213	8.8	<0.1	<0.1			NS0088	NS	240	242	0.69	0.026	north	non_mineralised	0.7956	11.799	-11.0034	NAF	TRUE
X076879	9.2	<0.1	<0.1	-47.4		NS0086	NS	280	282	0.86	0.123	footwall	non_mineralised	3.7638	14.706	-10.9422	NAF	TRUE
X080389	9.2	<0.1	<0.1			NS0108	NS	278	280	0.74	0.057	hangingwall	non_mineralised	1.7442	12.654	-10.9098	NAF	TRUE
X077799	8.8	<0.1	<0.1			NS0092	NS	80	82	0.88	0.138	south	non_mineralised	4.2228	15.048	-10.8252	NAF	TRUE
X077716	8.9	<0.1	<0.1			NS0091	NS	198	200	0.8	0.095	hangingwall	mineralised	2.907	13.68	-10.773	NAF	TRUE
X077445	9.3	<0.1	<0.1			NS0089	NS	348	350	0.67	0.023	north	mineralised	0.7038	11.457	-10.7532	NAF	TRUE
X078039	8.8	<0.1	<0.1			NS0093	NS	268	270	0.65	0.013	south	mineralised	0.3978	11.115	-10.7172	NAF	TRUE
X076591	9.1	<0.1	<0.1			NS0084	NS	280	282	0.7	0.041	hangingwall	non_mineralised	1.2546	11.97	-10.7154	NAF	TRUE
X076923	8.3	<0.1	<0.1			NS0087	NS	84	86	0.83	0.115	footwall	mineralised	3.519	14.193	-10.674	NAF	TRUE
X076388	8.7	<0.1	<0.1			NS0083	NS	178	180	1.05	0.238	footwall	non_mineralised	7.2828	17.955	-10.6722	NAF	TRUE
X080741	9	<0.1	<0.1	-38.4		NS0111	NS	240	242	0.74	0.065	south	mineralised	1.989	12.654	-10.665	NAF	TRUE
X139792	8.2	<0.5	<0.5		290	NS0160	NS	90	92	0.74	0.065	footwall	non_mineralised	1.989	12.654	-10.665	NAF	TRUE
X082484	8.5	<0.5	<0.5		220	NS0124	NS	296	298	0.92	0.171	footwall	non_mineralised	5.2326	15.732	-10.4994	NAF	TRUE
X081635	8	<0.5	<0.5		180	NS0118	NS	112	114	0.66	0.026	hangingwall	mineralised	0.7956	11.286	-10.4904	NAF	TRUE
X076947	8.7	<0.1	<0.1	-32.8		NS0087	NS	130	132	0.69	0.043	south	mineralised	1.3158	11.799	-10.4832	NAF	TRUE
X080711	8.9	<0.1	<0.1			NS0111	NS	180	182	0.63	0.01	south	non_mineralised	0.306	10.773	-10.467	NAF	TRUE
X077411	8.5	<0.5	<0.5		210	NS0089	NS	280	282	0.62	0.006	north	non_mineralised	0.1836	10.602	-10.4184	NAF	TRUE
X077593	9.3	<0.1	<0.1			NS0090	NS	238	240	0.76	0.085	footwall	mineralised	2.601	12.996	-10.395	NAF	TRUE
X077435	8.4	<0.1	<0.1			NS0089	NS	328	330	0.67	0.035	north	mineralised	1.071	11.457	-10.386	NAF	TRUE
X077599	8.8	<0.1	<0.1			NS0090	NS	250	252	0.64	0.019	north	mineralised	0.5814	10.944	-10.3626	NAF	TRUE
X077181	8.7	<0.1	<0.1			NS0088	NS	178	180	0.62	0.009	north	non_mineralised	0.2754	10.602	-10.3266	NAF	TRUE
X078307	8.8	<0.5	<0.5		120	NS0095	NS	230	232	0.87	0.151	footwall	non_mineralised	4.6206	14.877	-10.2564	NAF	TRUE
X159757	8.8	<0.1	<0.1			NS0078	NS	228	230	0.76	0.09	footwall	non_mineralised	2.754	12.996	-10.242	NAF	TRUE
X080695	8.7	<0.1	<0.1			NS0111	NS	150	152	1.01	0.23	south	mineralised	7.038	17.271	-10.233	NAF	TRUE
X077825	8.7	<0.1	<0.1			NS0092	NS	130	132	0.82	0.124	south	mineralised	3.7944	14.022	-10.2276	NAF	TRUE
X077375	8.9	<0.1	<0.1			NS0089	NS	210	212	0.6	0.005	north	mineralised	0.153	10.26	-10.107	NAF	TRUE
X159737	7.9	<0.1	<0.1			NS0078	NS	188	190	0.75	0.09	footwall	non_mineralised	2.754	12.825	-10.071	NAF	TRUE
X066969	7.7	<0.5	<0.5		210	NS0153	NS	228	230	0.63	0.023	hangingwall	non_mineralised	0.7038	10.773	-10.0692	NAF	TRUE
X159707	8.6	<0.1	<0.1			NS0078	NS	128	130	0.69	0.058	footwall	non_mineralised	1.7748	11.799	-10.0242	NAF	TRUE
X077141	8.7	<0.1	<0.1			NS0088	NS	100	102	0.72	0.075	footwall	non_mineralised	2.295	12.312	-10.017	NAF	TRUE
X077937	8.9	<0.1	<0.1			NS0093	NS	70	72	0.69	0.059	south	mineralised	1.8054	11.799	-9.9936	NAF	TRUE
X080333	9	<0.1	<0.1			NS0108	NS	168	170	0.75	0.094	south	mineralised	2.8764	12.825	-9.9486	NAF	TRUE
X078379	9.2	<0.5	<0.5		90	NS0096	NS	120	122	0.81	0.13	south	mineralised	3.978	13.851	-9.873	NAF	TRUE
X159825	8.8	<0.1	<0.1			NS0079	NS	78	80	0.64	0.035	south	mineralised	1.071	10.944	-9.873	NAF	TRUE
X082445	8.1	<0.5	<0.5		200	NS0124	NS	220	222	0.67	0.052	footwall	non_mineralised	1.5912	11.457	-9.8658	NAF	TRUE
X077125	8.6	<0.1	<0.1			NS0088	NS	68	70	0.64	0.036	oxide	mineralised	1.1016	10.944	-9.8424	NAF	TRUE
X080752	8.6	<0.1	<0.1	-25.6		NS0111	NS	260	262	1.15	0.321	south	non_mineralised	9.8226	19.665	-9.8424	NAF	TRUE
X076829	8.9	<0.1	<0.1	-42.2		NS0086	NS	180	182	0.72	0.084	footwall	mineralised	2.5704	12.312	-9.7416	NAF	TRUE
X080685	9.1	<0.1	<0.1			NS0111	NS	130	132	0.71	0.08	south	mineralised	2.448	12.141	-9.693	NAF	TRUE
X080721	8.6	<0.1	<0.1			NS0111	NS	200	202	0.59	0.014	south	non_mineralised	0.4284	10.089	-9.6606	NAF	TRUE
X077177	8.9	<0.1	<0.1			NS0088	NS	170	172	0.57	0.003	north	mineralised	0.0918	9.747	-9.6552	NAF	TRUE
X077187	9	<0.1	<0.1			NS0088	NS	190	192	0.57	0.003	north	mineralised	0.0918	9.747	-9.6552	NAF	TRUE
X066833	9.7	<0.5	<0.5		140	NS0152	NS	240	242	1.12	0.311	footwall	non_mineralised	9.5166	19.152	-9.6354	NAF	TRUE
X078671	8.4	<0.5	<0.5		180	NS0098	NS	128	130	0.73	0.094	hangingwall	mineralised	2.8764	12.483	-9.6066	NAF	TRUE

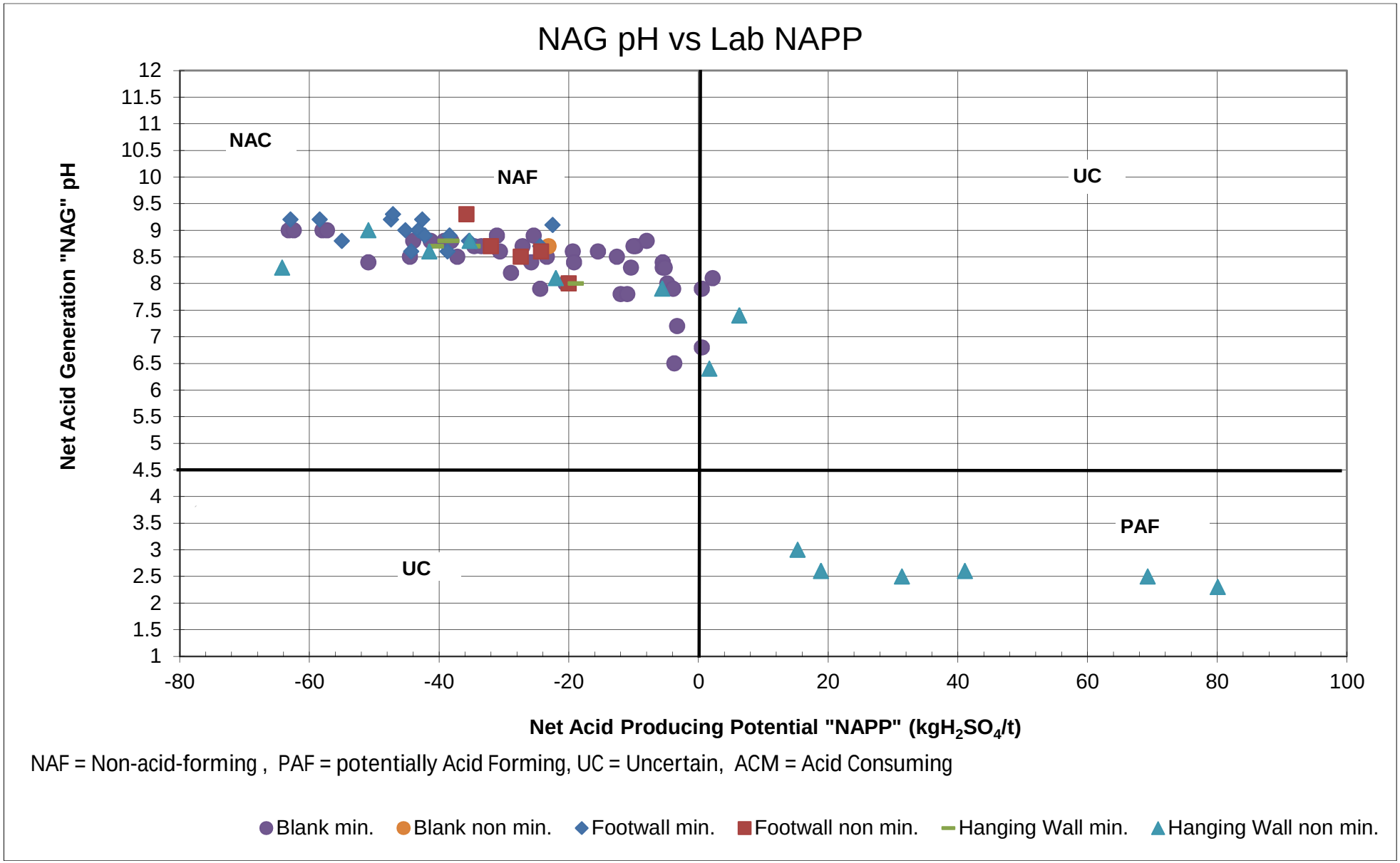
Sample Number	pHox	NAG pH 45	NAG pH 70	Lab NAPP	Ecox	HOLEID	AO AREA	SAMPFROM	SAMPTO	CaO_XRF_pct	S_XRF_pct	modelgeo	mineraleralised	MPA	ANC	NAPP	Categorisation	Hole IDs match?
X080365	9.3	<0.1	<0.1			NS0108	NS	230	232	0.63	0.039	south	mineralised	1.1934	10.773	-9.5796	NAF	TRUE
X076725	8.6	<0.1	<0.1	-43.3		NS0085	NS	258	260	0.59	0.017	south	mineralised	0.5202	10.089	-9.5688	NAF	TRUE
X159743	7.8	<0.1	<0.1			NS0078	NS	200	202	0.65	0.051	footwall	mineralised	1.5606	11.115	-9.5544	NAF	TRUE
X080379	8.9	<0.1	<0.1			NS0108	NS	258	260	0.62	0.035	south	mineralised	1.071	10.602	-9.531	NAF	TRUE
X078681	9	<0.1	<0.1			NS0098	NS	148	150	0.59	0.019	hangingwall	mineralised	0.5814	10.089	-9.5076	NAF	TRUE
X081245	8.4	<0.5	<0.5		140	NS0115	NS	188	190	0.59	0.019	south	non_mineralised	0.5814	10.089	-9.5076	NAF	TRUE
X076839	9	<0.1	<0.1	-43.2		NS0086	NS	200	202	0.74	0.106	footwall	mineralised	3.2436	12.654	-9.4104	NAF	TRUE
X077401	7.5	<0.1	<0.1			NS0089	NS	260	262	0.6	0.029	north	non_mineralised	0.8874	10.26	-9.3726	NAF	TRUE
X077319	8.9	<0.1	<0.1			NS0089	NS	100	102	0.68	0.075	north	mineralised	2.295	11.628	-9.333	NAF	TRUE
X080767	8.6	<0.1	<0.1	-41.5		NS0111	NS	290	292	1.02	0.267	hangingwall	non_mineralised	8.1702	17.442	-9.2718	NAF	TRUE
X076767	8.6	<0.1	<0.1			NS0086	NS	60	62	0.66	0.067	footwall	non_mineralised	2.0502	11.286	-9.2358	NAF	TRUE
X139506	8.4	<0.5	<0.5		19	NS0158	NS	50	52	0.55	0.006	footwall	non_mineralised	0.1836	9.405	-9.2214	NAF	TRUE
X077233	8.6	<0.1	<0.1			NS0088	NS	280	282	0.72	0.102	north	non_mineralised	3.1212	12.312	-9.1908	NAF	TRUE
X077609	8.1	<0.1	<0.1			NS0090	NS	268	270	0.58	0.024	north	mineralised	0.7344	9.918	-9.1836	NAF	TRUE
X080339	9.2	<0.1	<0.1			NS0108	NS	180	182	0.63	0.053	south	mineralised	1.6218	10.773	-9.1512	NAF	TRUE
X082363	9.1	<0.5	<0.5		120	NS0124	NS	58	60	0.72	0.104	footwall	non_mineralised	3.1824	12.312	-9.1296	NAF	TRUE
X076665	9	<0.1	<0.1			NS0085	NS	140	142	0.57	0.021	south	mineralised	0.6426	9.747	-9.1044	NAF	TRUE
X077157	8.9	<0.1	<0.1			NS0088	NS	130	132	0.55	0.011	north	mineralised	0.3366	9.405	-9.0684	NAF	TRUE
X076715	8.8	<0.1	<0.1	-51.6		NS0085	NS	238	240	0.56	0.019	south	mineralised	0.5814	9.576	-8.9946	NAF	TRUE
X077415	7.8	<0.5	<0.5		210	NS0089	NS	288	290	0.72	0.109	north	non_mineralised	3.3354	12.312	-8.9766	NAF	TRUE
X159835	9	<0.1	<0.1			NS0079	NS	98	100	0.7	0.098	south	mineralised	2.9988	11.97	-8.9712	NAF	TRUE
X159815	8.5	<0.1	<0.1			NS0079	NS	60	62	0.58	0.031	south	mineralised	0.9486	9.918	-8.9694	NAF	FALSE
X082405	8.5	<0.5	<0.5		200	NS0124	NS	140	142	0.68	0.087	footwall	non_mineralised	2.6622	11.628	-8.9658	NAF	TRUE
X159713	8.6	<0.1	<0.1			NS0078	NS	140	142	0.69	0.093	footwall	non_mineralised	2.8458	11.799	-8.9532	NAF	TRUE
X159673	8.8	<0.1	<0.1	-55		NS0078	NS	60	62	0.59	0.04	footwall	mineralised	1.224	10.089	-8.865	NAF	TRUE
X159763	8.2	<0.1	<0.1			NS0078	NS	240	242	0.61	0.052	footwall	mineralised	1.5912	10.431	-8.8398	NAF	TRUE
X077517	8.7	<0.1	<0.1			NS0090	NS	88	90	0.57	0.03	south	mineralised	0.918	9.747	-8.829	NAF	TRUE
X078025	8.8	<0.1	<0.1			NS0093	NS	240	242	0.55	0.019	south	mineralised	0.5814	9.405	-8.8236	NAF	TRUE
X077247	8.7	<0.1	<0.1			NS0088	NS	308	310	0.73	0.12	north	mineralised	3.672	12.483	-8.811	NAF	TRUE
X080705	8.9	<0.1	<0.1			NS0111	NS	168	170	0.74	0.13	south	non_mineralised	3.978	12.654	-8.676	NAF	TRUE
X066979	8.1	<0.5	<0.5		220	NS0153	NS	248	250	0.56	0.033	hangingwall	mineralised	1.0098	9.576	-8.5662	NAF	TRUE
X082425	9.2	<0.5	<0.5		120	NS0124	NS	180	182	0.75	0.14	footwall	non_mineralised	4.284	12.825	-8.541	NAF	TRUE
X082480	8.4	<0.5	<0.5		270	NS0124	NS	288	290	0.97	0.265	footwall	non_mineralised	8.109	16.587	-8.478	NAF	TRUE
X159561	8.8	<0.1	<0.1			NS0077	NS	120	122	0.68	0.103	south	mineralised	3.1518	11.628	-8.4762	NAF	TRUE
X159753	8.7	<0.1	<0.1			NS0078	NS	220	222	0.59	0.053	footwall	mineralised	1.6218	10.089	-8.4672	NAF	TRUE
X076374	8.9	<0.1	<0.1			NS0083	NS	150	152	1.11	0.344	footwall	non_mineralised	10.5264	18.981	-8.4546	NAF	TRUE
X077259	8.9	<0.1	<0.1			NS0088	NS	330	332	0.57	0.044	north	mineralised	1.3464	9.747	-8.4006	NAF	TRUE
X078265	8.4	<0.5	<0.5		170	NS0095	NS	148	150	1.67	0.659	footwall	mineralised	20.1654	28.557	-8.3916	NAF	TRUE
X077339	9.2	<0.1	<0.1			NS0089	NS	140	142	0.59	0.056	north	mineralised	1.7136	10.089	-8.3754	NAF	TRUE
X077752	8.6	<0.1	<0.1			NS0091	NS	268	270	0.78	0.163	hangingwall	non_mineralised	4.9878	13.338	-8.3502	NAF	TRUE
X082435	8.7	<0.5	<0.5		180	NS0124	NS	200	202	0.75	0.15	footwall	non_mineralised	4.59	12.825	-8.235	NAF	TRUE
X077543	8.8	<0.1	<0.1			NS0090	NS	140	142	0.88	0.223	south	mineralised	6.8238	15.048	-8.2242	NAF	TRUE
X081629	8.3	<0.5	<0.5		170	NS0118	NS	100	102	0.55	0.042	oxide	non_mineralised	1.2852	9.405	-8.1198	NAF	TRUE
X159841	9	<0.1	<0.1			NS0079	NS	110	112	0.59	0.065	south	mineralised	1.989	10.089	-8.1	NAF	TRUE
X077507	8.7	<0.1	<0.1			NS0090	NS	68	70	0.53	0.037	south	mineralised	1.1322	9.063	-7.9308	NAF	TRUE
X077533	9	<0.1	<0.1			NS0090	NS	120	122	0.53	0.037	south	mineralised	1.1322	9.063	-7.9308	NAF	TRUE
X076481	8.9	<0.1	<0.1			NS0084	NS	70	72	0.66	0.111	hangingwall	non_mineralised	3.3966	11.286	-7.8894	NAF	TRUE
X081276	8.5	<0.5	<0.5		90	NS0115	NS	248	250	0.49	0.016	south	mineralised	0.4896	8.379	-7.8894	NAF	TRUE
X076611	8.7	<0.1	<0.1	-41.8		NS0085	NS	38	40	0.54	0.044	south	mineralised	1.3464	9.234	-7.8876	NAF	TRUE
X077758	9.1	<0.1	<0.1			NS0091	NS	280	282	0.54	0.044	hangingwall	non_mineralised	1.3464	9.234	-7.8876	NAF	TRUE
X077405	9.2	<0.1	<0.1			NS0089	NS	268	270	0.52	0.033	north	mineralised	1.0098	8.892	-7.8822	NAF	TRUE
X077385	8.7	<0.1	<0.1			NS0089	NS	230	232	0.56	0.056	north	mineralised	1.7136	9.576	-7.8624	NAF	TRUE
X080715	8.4	<0.1	<0.1	-35.5		NS0111	NS	188	190	0.48	0.012	south	non_mineralised	0.3672	8.208	-7.8408	NAF	TRUE
X078929	8.7	<0.1	<0.1			NS0100	NS	70	72	0.54	0.046	south	mineralised	1.4076	9.234	-7.8264	NAF	TRUE
X080323	9.4	<0.1	<0.1			NS0108	NS	148	150	0.51	0.03	south	mineralised	0.918	8.721	-7.803	NAF	TRUE
X078677	8.9	<0.5	<0.5		130	NS0098	NS	140	142	0.5	0.025	hangingwall	mineralised	0.765	8.55	-7.785	NAF	TRUE
X076554	8.9	<0.1	<0.1			NS0084	NS	210	212	0.92	0.26	hangingwall	non_mineralised	7.956	15.732	-7.776	NAF	TRUE
X159857	8.8	<0.1	<0.1			NS0079	NS	140	142	0.55	0.054	south	mineralised	1.6524	9.405	-7.7526	NAF	FALSE
X077152	8.9	<0.1	<0.1			NS0088	NS	120	122	0.59	0.078	north	mineralised	2.3868	10.089	-7.7022	NAF	TRUE
X077779	8.8	<0.1	<0.1			NS0092	NS	40	42	0.96	0.285	footwall	non_mineralised	8.721	16.416	-7.695	NAF	TRUE
X077455	8.3	<0.5	<0.5		190	NS0089	NS	368	370	0.48	0.017	north	non_mineralised	0.5202	8.208	-7.6878	NAF	TRUE
X077191	8.8	<0.1	<0.1			NS0088	NS	198	200	0.66	0.119	north	mineralised	3.6414	11.286	-7.6446	NAF	TRUE
X076533	9.2	<0.1	<0.1			NS0084	NS	170	172	0.53	0.047	hangingwall	mineralised	1.4382	9.063	-7.6248	NAF	TRUE
X078437	8.9	<0.5	<0.5		110	NS0096	NS	234	236	0.56	0.064	south	mineralised	1.9584	9.576	-7.6176	NAF	TRUE
X066945	7.7	<0.5	<0.5		230	NS0153	NS	180	182	0.6	0.087	hangingwall	mineralised	2.6622	10.26	-7.5978	NAF	TRUE
X139796	8.2	<0.5	<0.5		260	NS0160	NS	98	100	0.86	0.234	footwall	non_mineralised	7.1604	14.706	-7.5456	NAF	TRUE
X076895	8.1	<0.1	<0.1			NS0087	NS	30	32	0.45	0.005	oxide	non_mineralised	0.153	7.695	-7.542	NAF	TRUE
X077145	8.7	<0.1	<0.1			NS0088	NS	108	110	0.54	0.058	north	non_mineralised	1.7748	9.234	-7.4592	NAF	TRUE
X077511	8.8	<0.1	<0.1			NS0090	NS	76	78	0.69	0.142	south	non_mineralised	4.3452	11.799	-7.4538	NAF	TRUE
X081261	8.5	<0.5	<0.5		110	NS0115	NS	218	220	0.47	0.021	south	mineralised	0.6426	8.037	-7.3944	NAF	TRUE
X081252	8.4	<0.5	<0.5		140	NS0115	NS	200	202	0.57	0.077	south	mineralised	2.3562	9.747	-7.3908	NAF	TRUE
X077369	9.2	<0.1	<0.1			NS0089	NS	198	200	0.57	0.078	north	mineralised	2.3868	9.747	-7.3602	NAF	TRUE
X066924	7.9	<0.5	<0.5		190	NS0153	NS	138	140	0.5	0.042	hangingwall	non_mineralised	1.2852	8.55	-7.2648	NAF	TRUE
X077656	8.4	<0.1	<0.1			NS0091	NS	80	82	0.96	0.3	hangingwall	non_mineralised	9.18	16.416	-7.236	NAF	TRUE
X076475	9	<0.1	<0.1			NS0084	NS	58	60	0.5	0.043	hangingwall	mineralised	1.3158	8.55	-7.2342	NAF	FALSE
X076721	8.8	<0.1	<0.1	-40		NS0085	NS	250	252	0.55	0.071	south	mineralised	2.1726	9.405	-7.2324	NAF	TRUE
X080354	9.1	<0.1	<0.1			NS0108	NS	208	210	0.79	0.207	south	mineralised	6.3342	13.509	-7.1748	NAF	TRUE
X077343	9.3	<0.1	<0.1			NS0089	NS	148	150	0.58	0.093	north	mineralised	2.8458	9.918	-7.0722	NAF	TRUE
X076632	8.7	<0.1	<0.1	-42		NS0085	NS	78	80	0.75	0.189	south	mineralised	5.7834	12.825	-7.0416	NAF	TRUE
X081221	7.7	<0.5	<0.5		120	NS0115	NS	140	142	0.46	0.027	south	mineralised	0.8262	7.866	-7.0398	NAF	TRUE
X078983	9	<0.1	<0.1			NS0100	NS	176	178	0.47	0.034	south	mineralised	1.0404	8.037	-6.9966	NAF	TRUE
X077365	9.1	<0.1	<0.1			NS0089	NS	190	192	0.64	0.13	north	mineralised	3.978	10.944	-6.966	NAF	TRUE
X076823	8.7	<0.1	<0.1	-24.4		NS0086	NS	168	170	0.75	0.192	footwall	non_mineralised	5.8752	12.825	-6.9498	NAF	TRUE
X081272	8.5	<0.5	<0.5		130	NS0115	NS	240	242	0.44	0.021	south	mineralised	0.6426	7.524	-6.8814	NAF	TRUE
X078343	8.9	<0.5	<0.5		87	NS0096	NS	50	52	0.45	0.027	south	mineralised	0.8262	7.695	-6.8688	NAF	TRUE
X080757	9	<0.1	<0.1			NS0111	NS	270	272	0.72	0.179	south	non_mineralised	5.4774	12.312	-6.8346	NAF	TRUE
X077732	8.8	<0.1	<0.1			NS0091	NS	230	232	0.56	0.092	hangingwall	mineralised	2.8152	9.576	-6.7608	NAF	TRUE
X078405	9.1	<0.5	<0.5		180	NS0096	NS	170	172	0.5	0.059	south	mineralised	1.8054	8.55	-6.7446	NAF	TRUE
X076310	7.1	<0.1	<0.1	-2		NS0083	NS	28	30	0.41	0.009	oxide	non_mineralised	0.2754	7.011	-6.7356	NAF	TRUE
X159653	6.8	<0.1	0.2	-4.4		NS0078	NS	20	22	0.41	0.009	oxide	non_mineralised	0.2754	7.011	-6.7356	NAF	TRUE
X077431	8.2	<0.5	<0.5		210	NS0089	NS	320	322	0.42	0.015	north	non_mineralised	0.459	7.182	-6.723	NAF	TRUE
X077431	8.3	<0.1	<0.1			NS0089	NS	320	322	0.42	0.015	north	non_mineralised	0.459	7.182	-6.723	NAF	TRUE
X076731	8.6	<0.1	<0.1	-40		NS0085	NS	270	272	0.84	0.25	south	mineralised	7.65	14.364	-6.714	NAF	TRUE
X078965	8.5	<0.1	<0.1			NS0100	NS	140	142	0.47	0.044	south	mineralised	1.3464	8.037	-6.6906	NAF	TRUE
X076544	8.2	<0.1	<0.1			NS0084	NS	190	192	1.03	0.359	hangingwall	mineralised	10.9854	17.613	-6.6276	NAF	TRUE
X077861	9	<0.1	<0.1			NS0092	NS	200	202	1.06	0.376	south	mineralised	11.5056	18.126	-6.6204	NAF	TRUE
X080303	9.1	<0.1	<0.1			NS0108	NS	108	110	0.41	0.016	south	mineralised	0.4896	7.011	-6.5214	NAF	TRUE
X081286	8.6	<0.5	<0.5		150	NS0115	NS	268	270	0.68	0.167	south	mineralised	5.1102	11.628	-6.5178	NAF	TRUE
X077037	9	<0.1	<0.1	-34.8		NS0087	NS	300	302	0.44	0.034	south	mineralised	1.0404	7.524	-6.4836	NAF	TRUE
X082439	8.3	<0.5	<0.5		270	NS0124	NS	208	210	0.53	0.085	footwall	non_mineralised	2.601	9.063	-6.462	NAF	TRUE
X078301	7.8	<0.5	<0.5		190	NS0095	NS	218	220	0.69	0.177	footwall	non_mineralised	5.4162	11.799	-6.3828	NAF	TRUE
X077355	8.9	<0.1	<0.1			NS0089	NS	170	172	0.79	0.233	north	non_mineralised	7.1298	13.509	-6.3792	NAF	TRUE
X066920	7.7	<0.5	<0.5		180	NS0153	NS	130	132	0.6	0.128	hangingwall	non_mineralised	3.9168	10.26	-6.3432	NAF	TRUE
X078275	8.2	<0.5	<0.5		210	NS0095	NS	168	170	0.66	0.162	footwall	non_mineralised	4.9572	11.286	-6.3288	NAF	TRUE
X076580	8.9	<0.1	<0.1			NS0084	NS	258	260	0.78	0.231	hangingwall	non_mineralised	7.0686	13.338	-6.2694	NAF	TRUE
X159821	8.6	<0.1	<0.1			NS0079	NS	70	72	0.55	0.103	south	mineralised	3.1518	9.405	-6.2532	NAF	TRUE
X081199	7.6	<0.5	<0.5		120	NS0115	NS	98	100	0.44	0.042	south	mineralised	1.2852	7.524	-6.2388	NAF	TRUE
X081639	7.7	<0.5	<0.5		200	NS0118	NS	120	122	0.38	0.009	hangingwall	mineralised	0.2754	6.498	-6.2226	NAF	TRUE
X066949	7.8	<0.5	<0.5		260	NS0153	NS	188	190	0.74	0.211	hangingwall	non_mineralised	6.4566	12.654	-6.1974	NAF	TRUE
X077243	8.9	<0.1	<0.1			NS0088	NS	300	302	0.43	0.038	north	mineralised	1.1628	7.353	-6.1902	NAF	TRUE
X139782	763	<0.5	<0.5		280	NS0160	NS	70	72	0.58	0.122	footwall	non_mineralised	3.7332	9.918	-6.1848	NAF	TRUE
X081211	8.1	<0.5	<0.5		120	NS0115	NS	120	122	0.44	0.044	south	mineralised	1.3464	7.524	-6.1776	NAF	TRUE
X076777	8.7	<0.1	<0.1			NS0086	NS	80	82	0.52	0.089	footwall	non_mineralised	2.7234	8.892	-6.1686	NAF	TRUE
X077815	8.8	<0.1	<0.1			NS0092	NS	110	112	0.48	0.068	south	mineralised	2.0808	8.208	-6.1272	NAF	TRUE
X080679	9	<0.1	<0.1	-16.1		NS0111	NS	118	120	0.42	0.038	south	mineralised	1.1628	7.182	-6.0192	NAF	TRUE
X076326	7.8	<0.1	<0.1			NS0083	NS	58	60	0.42	0.04	oxide	non_mineralised	1.224	7.182	-5.958	NAF	TRUE
X077131	8.8	<0.1	<0.1			NS0088	NS	80	82	0.59	0.136	oxide	mineralised	4.1616	10.089	-5.9274	NAF	TRUE
X159703	8.6	<0.1	<0.1			NS0078	NS	120	122	0.62	0.153	footwall	mineralised	4.6818	10.602	-5.9202	NAF	TRUE
X139858	8.1	<0.5	<0.5		260	NS0160	NS	218	220	0.53	0.107	footwall	non_mineralised	3.2742	9.063	-5.7888	NAF	TRUE
X081241	8.8	<0.5	<0.5		160	NS0115	NS	180	182	0.55	0.119	south	non_mineralised	3.6414	9.405	-5.7636	NAF	TRUE
X081231	8	<0.5	<0.5		110	NS0115	NS	160	162	0.39	0.03	south	mineralised	0.918	6.669	-5.751	NAF	TRUE
X077025	8.9	<0.1	<0.1	-38.1		NS0087	NS	280	282	0.74	0.227	south	mineralised	6.9462	12.654	-5.7078	NAF	TRUE
X139884	8.9	<0.5	<0.5		250	NS0160	NS	270	272	0.56	0.127	footwall	non_mineralised	3.8862	9.576	-5.6898	NAF	TRUE
X076316	7.7	<0.1	<0.1			NS0083	NS	40	42	0.34	0.005	oxide	non_mineralised	0.153	5.814	-5.661	NAF	TRUE
X078955	8.9	<0.1	<0.1			NS0100	NS	120	122	0.67	0.191	south	mineralised	5.8446	11.457	-5.6124	NAF	TRUE
X077527	8	<0.1	<0.1			NS0090	NS	108	110	0.65	0.182	south	mineralised	5.5692	11.115	-5.5458	NAF	TRUE
X081633	8	<0.5	<0.5		260	NS0118	NS	108	110	1.09	0.429	hangingwall	non_mineralised	13.1274	18.639	-5.5116	NAF	TRUE
X081288	7.9	<0.5	<0.5		190	NS0115	NS	272	274	0.6	0.156	hangingwall	mineralised	4.7736	10.26	-5.4864	NAF	TRUE
X077973	9	<0.1	<0.1			NS0093	NS	140	142	0.54	0.124	south	mineralised	3.7944	9.234	-5.4396	NAF	TRUE
X076803	8.7	<0.1	<0.1	-32		NS0086	NS	128	130	1.01	0.387	footwall	non_mineralised	11.8422	17.271	-5.4288	NAF	TRUE
X139868	8.1	<0.5	<0.5		240	NS0160	NS	238	240	0.51	0.108	footwall	mineralised	3.3048	8.721	-5.4162	NAF	TRUE

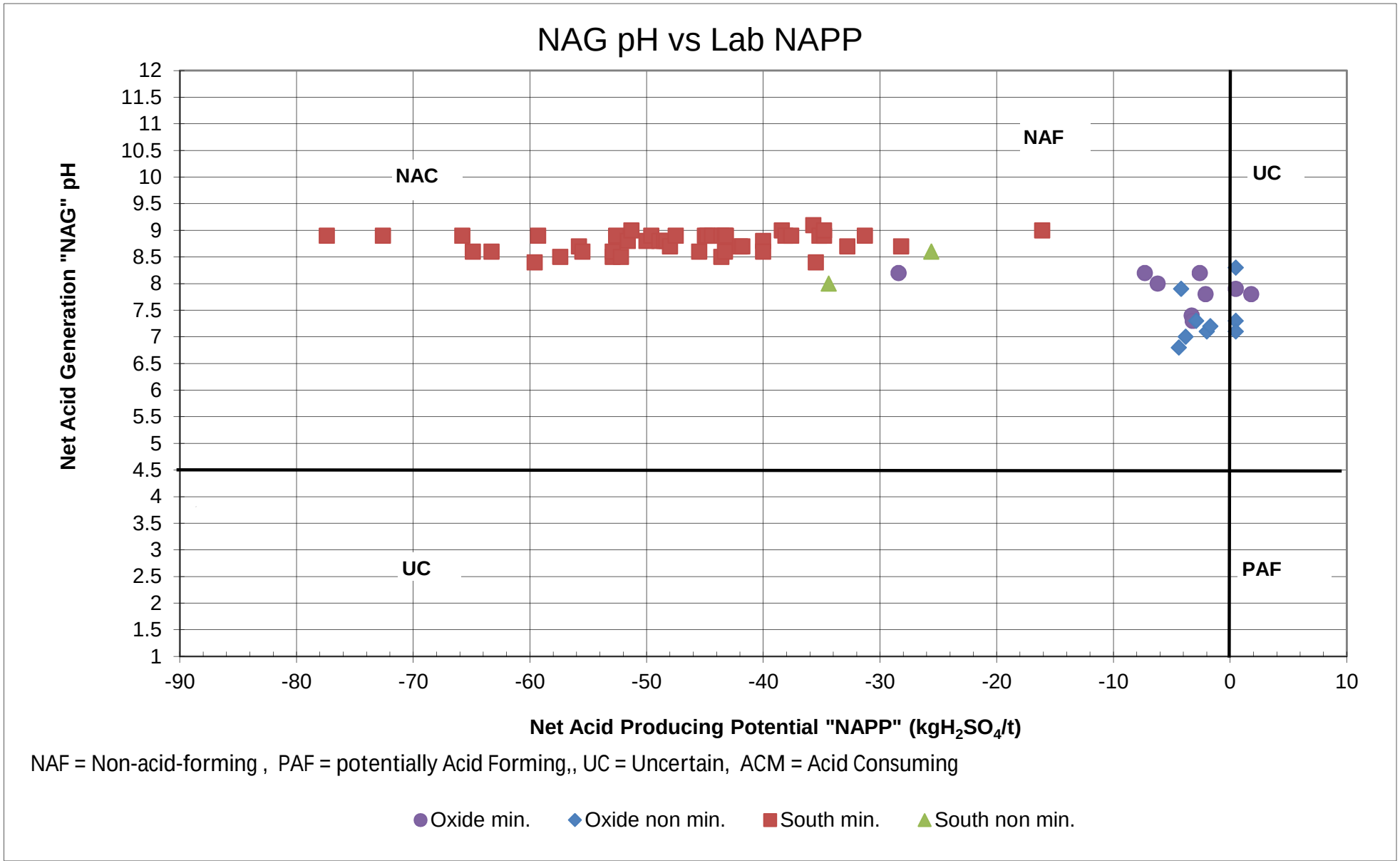
Sample Number	pHox	NAG pH 45	NAG pH 70	Lab NAPP	Ecox	HOLEID	AO AREA	SAMPFROM	SAMPTO	CaO_XRF_pct	S_XRF_pct	modelgeo	mineraleralised	MPA	ANC	NAPP	Categorisation	Hole IDs match?
X076586	8.4	<0.5	<0.5		260	NS0084	NS	270	272	0.78	0.259	hangingwall	non_mineralised	7.9254	13.338	-5.4126	NAF	TRUE
X077573	9.1	<0.1	<0.1			NS0090	NS	198	200	0.6	0.161	south	non_mineralised	4.9266	10.26	-5.3334	NAF	TRUE
X159657	7.4	<0.1	<0.1	-3.3		NS0078	NS	28	30	0.32	0.005	oxide	non_mineralised	0.153	5.472	-5.319	NAF	TRUE
X077341	8.8	<0.1	<0.1			NS0089	NS	144	146	0.57	0.149	north	mineralised	4.5594	9.747	-5.1876	NAF	TRUE
X077503	8	<0.1	<0.1			NS0090	NS	60	62	0.35	0.029	south	mineralised	0.8874	5.985	-5.0976	NAF	TRUE
X076394	8.4	<0.1	<0.1			NS0083	NS	190	192	1.25	0.533	footwall	non_mineralised	16.3098	21.375	-5.0652	NAF	TRUE
X066914	7.8	<0.5	<0.5		140	NS0153	NS	118	120	0.41	0.064	hangingwall	non_mineralised	1.9584	7.011	-5.0526	NAF	TRUE
X081235	7.6	<0.5	<0.5		110	NS0115	NS	168	170	0.46	0.092	south	non_mineralised	2.8152	7.866	-5.0508	NAF	TRUE
X080665	8.4	<0.1	<0.1			NS0111	NS	90	92	0.35	0.031	south	mineralised	0.9486	5.985	-5.0364	NAF	TRUE
X077605	9	<0.1	<0.1			NS0090	NS	260	262	0.56	0.151	north	mineralised	4.6206	9.576	-4.9554	NAF	TRUE
X159597	8.7	<0.1	<0.1			NS0077	NS	190	192	0.45	0.092	south	mineralised	2.8152	7.695	-4.8798	NAF	TRUE
X077267	8.9	<0.1	<0.1			NS0088	NS	346	348	0.54	0.143	north	mineralised	4.3758	9.234	-4.8582	NAF	TRUE
X076338	8.2	<0.1	<0.1			NS0083	NS	80	82	1.44	0.647	footwall	non_mineralised	19.7982	24.624	-4.8258	NAF	TRUE
X077926	8.3	<0.1	<0.1			NS0093	NS	48	50	0.31	0.019	oxide	mineralised	0.5814	5.301	-4.7196	NAF	TRUE
X082379	9	<0.5	<0.5		160	NS0124	NS	90	92	1.03	0.423	footwall	non_mineralised	12.9438	17.613	-4.6692	NAF	TRUE
X076989	8.9	<0.1	<0.1	-37.6		NS0087	NS	210	212	0.46	0.105	south	mineralised	3.213	7.866	-4.653	NAF	TRUE
X080291	9.1	<0.1	<0.1			NS0108	NS	86	88	0.32	0.027	south	non_mineralised	0.8262	5.472	-4.6458	NAF	TRUE
X077379	8.4	<0.1	<0.1			NS0089	NS	218	220	0.45	0.1	north	non_mineralised	3.06	7.695	-4.635	NAF	TRUE
X080287	9	<0.1	<0.1			NS0108	NS	78	80	0.43	0.09	south	mineralised	2.754	7.353	-4.599	NAF	TRUE
X081225	7.7	<0.5	<0.5		100	NS0115	NS	148	150	0.35	0.047	south	mineralised	1.4382	5.985	-4.5468	NAF	TRUE
X077666	8.8	<0.1	<0.1			NS0091	NS	100	102	0.59	0.182	hangingwall	non_mineralised	5.5692	10.089	-4.5198	NAF	TRUE
X082359	8.2	<0.5	<0.5		20	NS0124	NS	50	52	0.28	0.009	oxide	non_mineralised	0.2754	4.788	-4.5126	NAF	TRUE
X139786	7.7	<0.5	<0.5		270	NS0160	NS	78	80	0.57	0.175	footwall	non_mineralised	5.355	9.747	-4.392	NAF	TRUE
X076306	7	<0.1	<0.1	-3.8		NS0083	NS	20	22	0.26	0.005	oxide	non_mineralised	0.153	4.446	-4.293	NAF	TRUE
X080252	7.1	<0.1	<0.1			NS0108	NS	8	10	0.27	0.013	oxide	non_mineralised	0.3978	4.617	-4.2192	NAF	TRUE
X066910	7.9	<0.5	<0.5		130	NS0153	NS	110	112	0.35	0.064	hangingwall	non_mineralised	1.9584	5.985	-4.0266	NAF	TRUE
X078969	8.4	<0.1	<0.1			NS0100	NS	148	150	0.36	0.071	south	non_mineralised	2.1726	6.156	-3.9834	NAF	TRUE
X078641	8	<0.5	<0.5		30	NS0098	NS	70	72	0.34	0.06	hangingwall	non_mineralised	1.836	5.814	-3.978	NAF	TRUE
X077559	8.9	<0.1	<0.1			NS0090	NS	170	172	0.37	0.077	south	mineralised	2.3562	6.327	-3.9708	NAF	TRUE
X076471	8.9	<0.1	<0.1			NS0084	NS	50	52	0.32	0.05	hangingwall	mineralised	1.53	5.472	-3.942	NAF	FALSE
X076757	7.6	<0.1	<0.1			NS0086	NS	40	42	0.25	0.012	oxide	non_mineralised	0.3672	4.275	-3.9078	NAF	TRUE
X080725	9	<0.1	<0.1			NS0111	NS	208	210	0.45	0.127	south	mineralised	3.8862	7.695	-3.8088	NAF	TRUE
X076368	9	<0.1	<0.1			NS0083	NS	138	140	0.86	0.359	footwall	non_mineralised	10.9854	14.706	-3.7206	NAF	TRUE
X078907	8.2	<0.1	<0.1			NS0100	NS	28	30	0.22	0.004	oxide	non_mineralised	0.1224	3.762	-3.6396	NAF	TRUE
X080293	9.2	<0.1	<0.1			NS0108	NS	90	92	0.26	0.028	south	non_mineralised	0.8568	4.446	-3.5892	NAF	TRUE
X078913	7.8	<0.1	<0.1			NS0100	NS	38	40	0.21	0.003	oxide	non_mineralised	0.0918	3.591	-3.4992	NAF	TRUE
X076378	8.7	<0.1	<0.1			NS0083	NS	158	160	0.97	0.43	footwall	non_mineralised	13.158	16.587	-3.429	NAF	TRUE
X077553	8.2	<0.1	<0.1			NS0090	NS	158	160	0.75	0.308	south	mineralised	9.4248	12.825	-3.4002	NAF	TRUE
X077977	8.9	<0.1	<0.1			NS0093	NS	148	150	0.67	0.264	south	non_mineralised	8.0784	11.457	-3.3786	NAF	TRUE
X082415	10.7	<0.5	<0.5		210	NS0124	NS	160	162	1.14	0.528	footwall	non_mineralised	16.1568	19.494	-3.3372	NAF	TRUE
X139776	8	<0.5	<0.5		290	NS0160	NS	58	60	1.05	0.48	footwall	non_mineralised	14.688	17.955	-3.267	NAF	TRUE
X078645	7.9	<0.5	<0.5		140	NS0098	NS	78	80	0.44	0.14	hangingwall	non_mineralised	4.284	7.524	-3.24	NAF	TRUE
X159773	8.4	<0.1	<0.1			NS0078	NS	260	262	0.54	0.196	footwall	non_mineralised	5.9976	9.234	-3.2364	NAF	TRUE
X081643	8	<0.5	<0.5		130	NS0118	NS	128	130	0.3	0.062	hangingwall	non_mineralised	1.8972	5.13	-3.2328	NAF	TRUE
X077819	8.8	<0.1	<0.1			NS0092	NS	118	120	0.37	0.102	south	mineralised	3.1212	6.327	-3.2058	NAF	TRUE
X078209	7.8	<0.5	<0.5		23	NS0095	NS	38	40	0.33	0.081	oxide	non_mineralised	2.4786	5.643	-3.1644	NAF	TRUE
X076485	8.7	<0.1	<0.1			NS0084	NS	78	80	0.3	0.067	hangingwall	non_mineralised	2.0502	5.13	-3.0798	NAF	TRUE
X066904	7.5	<0.5	<0.5		200	NS0153	NS	98	100	0.31	0.073	oxide	non_mineralised	2.2338	5.301	-3.0672	NAF	TRUE
X077563	8.9	<0.1	<0.1			NS0090	NS	178	180	0.58	0.224	south	mineralised	6.8544	9.918	-3.0636	NAF	TRUE
X159785	7.3	<0.1	<0.1	-2.9		NS0079	NS	0	2	0.22	0.025	oxide	non_mineralised	0.765	3.762	-2.997	NAF	TRUE
X080299	8.9	<0.1	<0.1			NS0108	NS	100	102	0.4	0.127	south	mineralised	3.8862	6.84	-2.9538	NAF	TRUE
X076465	8.1	<0.1	<0.1			NS0084	NS	38	40	0.36	0.105	hangingwall	non_mineralised	3.213	6.156	-2.943	NAF	FALSE
X159581	8.7	<0.1	<0.1			NS0077	NS	158	160	0.4	0.131	south	mineralised	4.0086	6.84	-2.8314	NAF	TRUE
X076761	8.4	<0.1	<0.1			NS0086	NS	48	50	0.92	0.423		non_mineralised	12.9438	15.732	-2.7882	NAF	TRUE
X076751	6.5	<0.1	1.3			NS0086	NS	28	30	0.17	0.007	oxide	non_mineralised	0.2142	2.907	-2.6928	NAF	TRUE
X159521	8.7	<0.1	<0.1			NS0077	NS	40	42	0.29	0.075	south	mineralised	2.295	4.959	-2.664	NAF	TRUE
X077421	7.6	<0.5	<0.5		160	NS0089	NS	300	302	0.2	0.026	north	non_mineralised	0.7956	3.42	-2.6244	NAF	TRUE
X081266	8.2	<0.5	<0.5		160	NS0115	NS	228	230	0.57	0.235	south	mineralised	7.191	9.747	-2.556	NAF	TRUE
X077303	8.4	<0.1	<0.1			NS0089	NS	68	70	0.18	0.019	oxide	non_mineralised	0.5814	3.078	-2.4966	NAF	TRUE
X077303	8.4	<0.1	<0.1			NS0089	NS	68	70	0.18	0.019	oxide	non_mineralised	0.5814	3.078	-2.4966	NAF	TRUE
X076747	7.1	<0.1	<0.1			NS0086	NS	20	22	0.16	0.011	oxide	non_mineralised	0.3366	2.736	-2.3994	NAF	TRUE
X077121	8.7	<0.1	<0.1			NS0088	NS	60	62	0.19	0.028	oxide	non_mineralised	0.8568	3.249	-2.3922	NAF	TRUE
X078713	8	<0.5	<0.5		280	NS0098	NS	210	212	0.78	0.358	hangingwall	non_mineralised	10.9548	13.338	-2.3832	NAF	TRUE
X077523	8.6	<0.1	<0.1			NS0090	NS	100	102	0.52	0.215	south	mineralised	6.579	8.892	-2.313	NAF	TRUE
X078919	8.3	<0.1	<0.1			NS0100	NS	50	52	0.34	0.115	south	non_mineralised	3.519	5.814	-2.295	NAF	TRUE
X078061	7.9	<0.5	<0.5		17	NS0094	NS	28	30	0.13	0.004	oxide	non_mineralised	0.1224	2.223	-2.1006	NAF	TRUE
X076695	8	<0.1	<0.1	-34.4		NS0085	NS	200	202	0.45	0.183	south	non_mineralised	5.5998	7.695	-2.0952	NAF	TRUE
X159809	8.6	<0.1	<0.1	-45.5		NS0079	NS	48	50	0.46	0.189	south	non_mineralised	5.7834	7.866	-2.0826	NAF	TRUE
X076523	8.3	<0.1	<0.1			NS0084	NS	150	152	0.4	0.156	hangingwall	non_mineralised	4.7736	6.84	-2.0664	NAF	TRUE
X077349	9	<0.1	<0.1			NS0089	NS	160	162	0.34	0.124	north	mineralised	3.7944	5.814	-2.0196	NAF	TRUE
X159727	8.8	<0.1	<0.1			NS0078	NS	168	170	0.27	0.085	footwall	non_mineralised	2.601	4.617	-2.016	NAF	TRUE
X139848	8.7	<0.5	<0.5		170	NS0160	NS	200	202	0.76	0.362	footwall	non_mineralised	11.0772	12.996	-1.9188	NAF	TRUE
X159805	8.2	<0.1	<0.1	-28.4		NS0079	NS	40	42	0.13	0.012	oxide	mineralised	0.3672	2.223	-1.8558	NAF	TRUE
X077493	8.5	<0.1	<0.1			NS0090	NS	40	42	0.11	0.002	oxide	non_mineralised	0.0612	1.881	-1.8198	NAF	TRUE
X077650	7.8	<0.1	<0.1			NS0091	NS	68	70	0.12	0.01	oxide	non_mineralised	0.306	2.052	-1.746	NAF	TRUE
X076511	8.7	<0.1	<0.1			NS0084	NS	128	130	0.32	0.122	hangingwall	non_mineralised	3.7332	5.472	-1.7388	NAF	TRUE
X139791	8.9	<0.5	<0.5		120	NS0160	NS	88	90	0.55	0.251	footwall	non_mineralised	7.6806	9.405	-1.7244	NAF	FALSE
X081195	7.9	<0.5	<0.5		130	NS0115	NS	90	92	0.56	0.257	south	non_mineralised	7.8642	9.576	-1.7118	NAF	TRUE
X076607	8.2	<0.1	<0.1	-7.3		NS0085	NS	30	32	0.1	0.002	oxide	non_mineralised	0.0612	1.71	-1.6488	NAF	TRUE
X076296	7.7	<0.1	<0.1			NS0083	NS	0	2	0.13	0.021	oxide	non_mineralised	0.6426	2.223	-1.5804	NAF	TRUE
X078317	8.4	<0.5	<0.5		210	NS0095	NS	250	252	0.82	0.407	footwall	non_mineralised	12.4542	14.022	-1.5678	NAF	TRUE
X077646	8	<0.1	<0.1			NS0091	NS	60	62	0.09	0.002	oxide	non_mineralised	0.0612	1.539	-1.4778	NAF	TRUE
X077323	8	<0.1	<0.1			NS0089	NS	108	110	0.5	0.233	north	non_mineralised	7.1298	8.55	-1.4202	NAF	TRUE
X076354	8.5	<0.1	<0.1			NS0083	NS	110	112	0.65	0.317	footwall	non_mineralised	9.7002	11.115	-1.4148	NAF	TRUE
X080735	8.8	<0.1	<0.1			NS0111	NS	228	230	0.63	0.306	south	mineralised	9.3636	10.773	-1.4094	NAF	TRUE
X082449	8.8	<0.5	<0.5		140	NS0124	NS	228	230	0.46	0.211	footwall	non_mineralised	6.4566	7.866	-1.4094	NAF	TRUE
X077712	8.6	<0.1	<0.1			NS0091	NS	190	192	0.34	0.144	hangingwall	mineralised	4.4064	5.814	-1.4076	NAF	TRUE
X080319	9.4	<0.1	<0.1			NS0108	NS	140	142	0.37	0.161	south	mineralised	4.9266	6.327	-1.4004	NAF	TRUE
X079999	8.7	<0.5	<0.5		15	NS0158	NS	38	40	0.09	0.007	oxide	non_mineralised	0.2142	1.539	-1.3248	NAF	TRUE
X159515	7.8	<0.1	<0.1			NS0077	NS	28	30	0.08	0.002	oxide	non_mineralised	0.0612	1.368	-1.3068	NAF	TRUE
X159501	7.2	<0.1	<0.1	-1.7		NS0077	NS	0	2	0.11	0.02	oxide	non_mineralised	0.612	1.881	-1.269	NAF	TRUE
X078476	7.9	<0.5	<0.5		23	NS0097	NS	28	30	0.08	0.004	oxide	non_mineralised	0.1224	1.368	-1.2456	NAF	TRUE
X076507	8.7	<0.1	<0.1			NS0084	NS	120	122	0.38	0.172	hangingwall	non_mineralised	5.2632	6.498	-1.2348	NAF	TRUE
X078626	7.9	<0.5	<0.5		13	NS0098	NS	40	42	0.08	0.006	oxide	non_mineralised	0.1836	1.368	-1.1844	NAF	TRUE
X082456	9	<0.5	<0.5		180	NS0124	NS	240	242	0.59	0.291	footwall	non_mineralised	8.9046	10.089	-1.1844	NAF	TRUE
X076461	7.8	<0.5	<0.5		76	NS0084	NS	30	32	0.07	0.002	oxide	non_mineralised	0.0612	1.197	-1.1358	NAF	TRUE
X159511	7.7	<0.1	<0.1			NS0077	NS	20	22	0.07	0.002	oxide	non_mineralised	0.0612	1.197	-1.1358	NAF	TRUE
X076592	7.8	<0.1	<0.1			NS0085	NS	0	2	0.08	0.009	oxide	non_mineralised	0.2754	1.368	-1.0926	NAF	TRUE
X078205	7.6	<0.5	<0.5		13	NS0095	NS	30	32	0.07	0.004	oxide	non_mineralised	0.1224	1.197	-1.0746	NAF	TRUE
X080283	9.3	<0.1	<0.1			NS0108	NS	70	72	0.07	0.004	oxide	non_mineralised	0.1224	1.197	-1.0746	NAF	TRUE
X077309	8.7	<0.1	<0.1			NS0089	NS	80	82	0.42	0.2	north	non_mineralised	6.12	7.182	-1.062	NAF	TRUE
X076601	7.5	<0.1	<0.1			NS0085	NS	18	20	0.07	0.005	oxide	non_mineralised	0.153	1.197	-1.044	NAF	TRUE
X082409	8.4	<0.5	<0.5		240	NS0124	NS	148	150	0.49	0.242	footwall	non_mineralised	7.4052	8.379	-0.9738	NAF	TRUE
X076455	8	<0.1	<0.1			NS0084	NS	18	20	0.06	0.005	oxide	non_mineralised	0.153	1.026	-0.873	NAF	FALSE
X077931	8.1	<0.1	<0.1			NS0093	NS	58	60	0.07	0.011	oxide	non_mineralised	0.3366	1.197	-0.8604	NAF	TRUE
X077497	8.1	<0.1	<0.1			NS0090	NS	48	50	0.36	0.174	oxide	non_mineralised	5.3244	6.156	-0.8316	NAF	TRUE
X078337	8	<0.5	<0.5		12	NS0096	NS	38	40	0.05	0.001	oxide	non_mineralised	0.0306	0.855	-0.8244	NAF	TRUE
X078606	6.7	<0.5	0.6		15	NS0098	NS	0	2	0.07	0.013	oxide	non_mineralised	0.3978	1.197	-0.7992	NAF	TRUE
X080016	8.4	<0.1	<0.1			NS0106	NS	28	30	0.05	0.002	oxide	non_mineralised	0.0612	0.855	-0.7938	NAF	TRUE
X078610	7.5	<0.5	<0.5		13	NS0098	NS	8	10	0.06	0.008	oxide	non_mineralised	0.2448	1.026	-0.7812	NAF	TRUE
X078328	7.9	<0.5	<0.5		13	NS0096	NS	20	22	0.05	0.003	oxide	non_mineralised	0.0918	0.855	-0.7632	NAF	TRUE
X076451	8.2	<0.1	<0.1			NS0084	NS	10	12	0.06	0.009	oxide	non_mineralised	0.2754	1.026	-0.7506	NAF	FALSE
X078333	7.9	<0.5	<0.5		13	NS0096	NS	30	32	0.04	0.002		non_mineralised	0.0612	0.684	-0.6228	NAF	TRUE
X159799	8	<0.1	<0.1	-6.2		NS0079	NS	28	30	0.04	0.002	oxide	non_mineralised	0.0612	0.684	-0.6228	NAF	TRUE
X077922	7.7	<0.1	<0.1			NS0093	NS	40	42	0.04	0.003	oxide	non_mineralised	0.0918	0.684	-0.5922	NAF	TRUE
X076597	6.9	<0.1	<0.1			NS0085	NS	10	12	0.04	0.005	oxide	non_mineralised	0.153	0.684	-0.531	NAF	TRUE
X078616	6.3	<0.5	1.4		12	NS0098	NS	20	22	0.04	0.006	oxide	non_mineralised	0.1836	0.684	-0.5004	NAF	TRUE
X076300	7.6	<0.1	<0.1			NS0083	NS	8	10	0.05	0.014	oxide	non_mineralised	0.4284	0.855	-0.4266	NAF	TRUE
X077487	8	<0.1	<0.1			NS0090	NS	28	30	0.03	0.003	oxide	non_mineralised	0.0918	0.513	-0.4212	NAF	TRUE
X077615	8.6	<0.1	<0.1			NS0090	NS	280	282	0.37	0.194	north	mineralised	5.9364	6.327	-0.3906	NAF	TRUE
X078620	8	<0.5	<0.5		12	NS0098	NS	28	30	0.03	0.006	oxide	non_mineralised	0.1836	0.513	-0.3294	NAF	TRUE
X081205	7.5	<0.5	<0.5		120	NS0115	NS	108	110	0.49	0.264	south	non_mineralised	8.0784	8.379	-0.3006	NAF	TRUE
X081179	7.4	<0.5	<0.5		11	NS0115	NS	58	60	0.03	0.007	oxide	non_mineralised	0.2142	0.513	-0.2988	NAF	TRUE
X159795	7.8	<0.1	<0.1	-2.1		NS0079	NS	20	22	0.02	0.003	oxide	non_mineralised	0.0918	0.342	-0.2502	NAF	TRUE
X080273	8.8	<0.1	<0.1			NS0108	NS	50	52	0.02	0.004	oxide	non_mineralised	0.1224	0.342	-0.2196	NAF	TRUE
X080277	8.3	<0.1	<0.1			NS0108	NS	58	60	0.03	0.01	oxide	non_mineralised	0.306	0.513	-0.207	NAF	TRUE
X077483	6.6	<0.1	4.0			NS0090	NS	20	22	0.02	0.005	oxide	mineralised	0.153	0.342	-0.189	NAF	TRUE
X159647	6.7	<0.1	0.6			NS0078	NS	8	10	0.05	0.022	oxide	non_mineralised	0.6732	0.855	-0.1818	NAF	TRUE
X159505	7.3	<0.1	<0.1	-3.2		NS0077	NS	8	10	0.02	0.006	oxide	non_mineralised	0.1836	0.342	-0.1584	NAF	TRUE
X081185	7.5	<0.5	<0.5		12	NS0115	NS	70	72	0.02	0.007	oxide	non_mineralised	0.2142	0.342	-0.1278	NAF	TRUE
X081649	6.8	<0.5	<0.5		270	NS0118	NS	140	142	0.85	0.471	hangingwall	non_mineralised	14.4126	14.535	-0.1224	NAF	TRUE

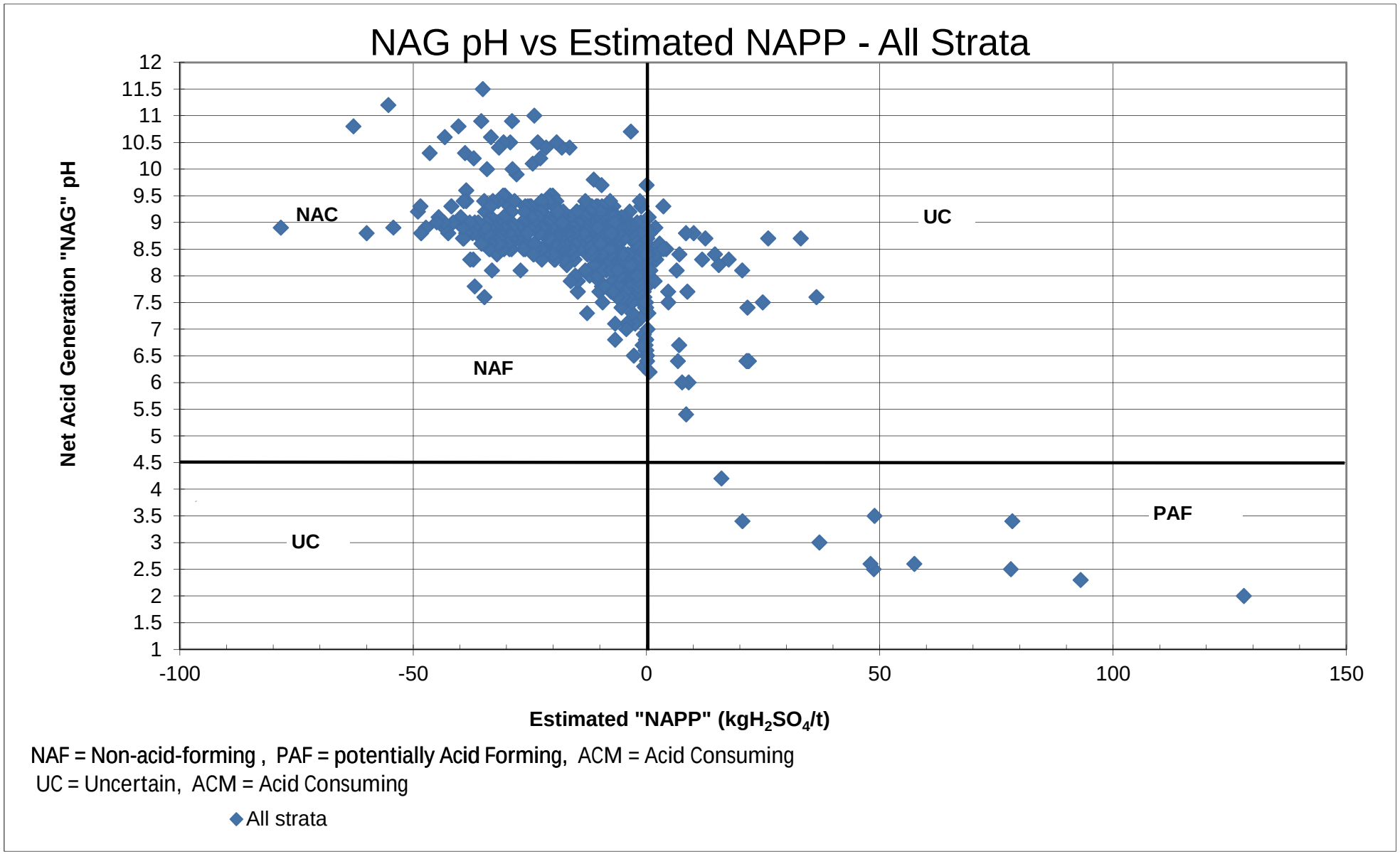
Sample Number	pHox	NAG pH 45	NAG pH 70	Lab NAPP	Ecox	HOLEID	AO AREA	SAMPFROM	SAMPTO	CaO_XRF_pct	S_XRF_pct	modelgeo	mineraleralised	MPA	ANC	NAPP	Categorisation	Hole IDs match?
X080267	8.4	<0.1	<0.1			NS0108	NS	38	40	0.02	0.008	oxide	non_mineralised	0.2448	0.342	-0.0972	NAF	TRUE
X080258	7.4	<0.1	<0.1			NS0108	NS	20	22	0.03	0.014	oxide	non_mineralised	0.4284	0.513	-0.0846	NAF	TRUE
X077089	6.8	<0.1	0.5			NS0088	NS	0	2	0.04	0.02	oxide	non_mineralised	0.612	0.684	-0.072	NAF	TRUE
X077115	8.9	<0.1	<0.1			NS0088	NS	50	52	0.02	0.009	oxide	non_mineralised	0.2754	0.342	-0.0666	NAF	TRUE
X077109	8.4	<0.1	<0.1			NS0088	NS	38	40	0.02	0.01	oxide	non_mineralised	0.306	0.342	-0.036	NAF	TRUE
X066853	8.4	<0.5	<0.5		260	NS0152	NS	280	282	1.14	0.637	south	mineralised	19.4922	19.494	-0.0018	NAF	TRUE
X077477	6.5	<0.1	4.0			NS0090	NS	8	10	0.02	0.012	oxide	non_mineralised	0.3672	0.342	0.0252	PAH LC	TRUE
X076781	8.6	<0.1	<0.1	-24.3		NS0086	NS	88	90	0.88	0.493	footwall	non_mineralised	15.0858	15.048	0.0378	PAH LC	TRUE
X159777	8.7	<0.1	<0.1	-23.1		NS0078	NS	268	270	0.47	0.264	footwall	non_mineralised	8.0784	8.037	0.0414	PAH LC	FALSE
X077105	9.7	<0.1	<0.1			NS0088	NS	30	32	0.02	0.013	oxide	non_mineralised	0.3978	0.342	0.0558	PAH LC	TRUE
X080012	8.3	<0.1	<0.1			NS0106	NS	20	22	0.05	0.03	oxide	non_mineralised	0.918	0.855	0.063	PAH LC	TRUE
X080655	7.8	<0.1	<0.1	1.8		NS0111	NS	70	72	0.005	0.006	oxide	non_mineralised	0.1836	0.0855	0.0981	PAH LC	TRUE
X077093	6.5	<0.1	2.3			NS0088	NS	8	10	0.005	0.007	oxide	non_mineralised	0.2142	0.0855	0.1287	PAH LC	TRUE
X080649	8.3	<0.1	<0.1	<0.5		NS0111	NS	60	62	0.005	0.007	oxide	non_mineralised	0.2142	0.0855	0.1287	PAH LC	TRUE
X077473	6.4	<0.1	1.5			NS0090	NS	0	2	0.03	0.022	oxide	non_mineralised	0.6732	0.513	0.1602	PAH LC	TRUE
X077099	8.2	<0.1	<0.1			NS0088	NS	20	22	0.005	0.009	oxide	non_mineralised	0.2754	0.0855	0.1899	PAH LC	TRUE
X080263	8.7	<0.1	<0.1			NS0108	NS	30	32	0.04	0.029	oxide	non_mineralised	0.8874	0.684	0.2034	PAH LC	TRUE
X076884	7	<0.1	<0.1			NS0087	NS	8	10	0.04	0.03	oxide	non_mineralised	0.918	0.684	0.234	PAH LC	TRUE
X076880	7.1	<0.5	<0.5		67	NS0087	NS	0	2	0.04	0.031	oxide	non_mineralised	0.9486	0.684	0.2646	PAH LC	FALSE
X080643	8.4	<0.1	<0.1			NS0111	NS	48	50	0.005	0.016	oxide	non_mineralised	0.4896	0.0855	0.4041	PAH LC	TRUE
X159643	7.3	<0.1	<0.1			NS0078	NS	0	2	0.04	0.036	oxide	non_mineralised	1.1016	0.684	0.4176	PAH LC	TRUE
X139838	8.5	<0.5	<0.5		190	NS0160	NS	180	182	0.85	0.489	footwall	non_mineralised	14.9634	14.535	0.4284	PAH LC	TRUE
X076358	8.1	<0.1	<0.1			NS0083	NS	118	120	0.56	0.327	footwall	non_mineralised	10.0062	9.576	0.4302	PAH LC	TRUE
X139802	9.1	<0.5	<0.5		140	NS0160	NS	108	110	0.77	0.446	footwall	non_mineralised	13.6476	13.167	0.4806	PAH LC	TRUE
X077329	8.4	<0.1	<0.1			NS0089	NS	120	122	0.66	0.385	north	non_mineralised	11.781	11.286	0.495	PAH LC	TRUE
X077237	8.8	<0.1	<0.1			NS0088	NS	288	290	0.63	0.374	north	non_mineralised	11.4444	10.773	0.6714	PAH LC	TRUE
X076741	6.2	<0.1	1.1			NS0086	NS	8	10	0.005	0.026	oxide	non_mineralised	0.7956	0.0855	0.7101	PAH LC	TRUE
X080669	8.8	<0.1	<0.1			NS0111	NS	98	100	0.19	0.131	south	mineralised	4.0086	3.249	0.7596	PAH LC	TRUE
X080669	9.1	<0.1	<0.1			NS0111	NS	98	100	0.19	0.131	south	mineralised	4.0086	3.249	0.7596	PAH LC	FALSE
X078605	8.1	<0.5	<0.5		200	NS0097	NS	280	282	0.41	0.257	south	non_mineralised	7.8642	7.011	0.8532	PAH LC	TRUE
X077579	7.9	<0.1	<0.1			NS0090	NS	210	212	0.37	0.265	footwall	non_mineralised	8.109	6.327	1.782	PAH LC	TRUE
X077680	8.9	<0.1	<0.1			NS0091	NS	128	130	0.43	0.303	hangingwall	non_mineralised	9.2718	7.353	1.9188	PAH LC	TRUE
X066758	8.3	<0.5	<0.5		200	NS0152	NS	90	92	0.41	0.297	footwall	non_mineralised	9.0882	7.011	2.0772	PAH LC	TRUE
X077661	8.4	<0.1	<0.1			NS0091	NS	90	92	0.23	0.197	hangingwall	non_mineralised	6.0282	3.933	2.0952	PAH LC	TRUE
X078703	8.6	<0.5	<0.5		240	NS0098	NS	190	192	0.73	0.5	hangingwall	non_mineralised	15.3	12.483	2.817	PAH LC	TRUE
X076869	9.3	<0.1	<0.1	-35.8		NS0086	NS	260	262	0.54	0.42	footwall	non_mineralised	12.852	9.234	3.618	PAH LC	TRUE
X077547	8.5	<0.1	<0.1			NS0090	NS	148	150	0.43	0.361	south	mineralised	11.0466	7.353	3.6936	PAH LC	TRUE
X077223	8.5	<0.1	<0.1			NS0088	NS	260	262	0.8	0.585	north	non_mineralised	17.901	13.68	4.221	PAH LC	TRUE
X080265	7.7	<0.1	<0.1			NS0108	NS	34	36	0.04	0.174	oxide	mineralised	5.3244	0.684	4.6404	PAH LC	TRUE
X081193	7.5	<0.5	<0.5		92	NS0115	NS	86	88	0.4	0.378	south	non_mineralised	11.5668	6.84	4.7268	PAH LC	TRUE
X078651	8.1	<0.5	<0.5		180	NS0098	NS	88	90	0.44	0.458	hangingwall	mineralised	14.0148	7.524	6.4908	PAH LC	TRUE
X078631	6.4	<0.5	<0.5		220	NS0098	NS	50	52	0.18	0.321	oxide	non_mineralised	9.8226	3.078	6.7446	PAH LC	TRUE
X078635	6.7	<0.5	<0.5		300	NS0098	NS	58	60	0.52	0.519	hangingwall	mineralised	15.8814	8.892	6.9894	PAH LC	TRUE
X076364	8.4	<0.1	<0.1			NS0083	NS	130	132	0.34	0.421	footwall	non_mineralised	12.8826	5.814	7.0686	PAH LC	TRUE
X066965	6	<0.5	1.9		430	NS0153	NS	220	222	2.2	1.48	hangingwall	non_mineralised	45.288	37.62	7.668	PAH LC	TRUE
X076492	8.8	<0.1	<0.1			NS0084	NS	90	92	0.22	0.399	hangingwall	non_mineralised	12.2094	3.762	8.4474	PAH LC	TRUE
X082399	5.4	<0.5	0.8		350	NS0124	NS	130	132	0.3	0.446	footwall	non_mineralised	13.6476	5.13	8.5176	PAH LC	TRUE
X077167	7.7	<0.1	<0.1			NS0088	NS	150	152	0.42	0.522	north	non_mineralised	15.9732	7.182	8.7912	PAH LC	TRUE
X066752	6	<0.5	0.6		340	NS0152	NS	78	80	0.51	0.58	footwall	non_mineralised	17.748	8.721	9.027	PAH LC	TRUE
X076925	8.8	<0.1	<0.1			NS0087	NS	88	90	0.51	0.616	footwall	non_mineralised	18.8496	8.721	10.1286	PAF HC	TRUE
X078933	8.3	<0.1	<0.1			NS0100	NS	78	80	0.1	0.447	south	mineralised	13.6782	1.71	11.9682	PAF HC	TRUE
X080235	6.4	<0.1	0.8	1.7		NS0107	NS	178	180	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X080049	8.7	<0.1	<0.1			NS0106	NS	92	94	0.99	0.967	south	mineralised	29.5902	16.929	12.6612	PAF HC	TRUE
X078697	8.4	<0.5	<0.5		210	NS0098	NS	180	182	0.71	0.877	hangingwall	mineralised	26.8362	12.141	14.6952	PAF HC	TRUE
X076517	8.2	<0.1	<0.1			NS0084	NS	140	142	0.65	0.87	hangingwall	non_mineralised	26.622	11.115	15.507	PAF HC	TRUE
X078435	4.2	0.8	5.4		550	NS0096	NS	230	232	0.33	0.709	south	mineralised	21.6954	5.643	16.0524	PAF HC	TRUE
X077333	8.3	<0.1	<0.1			NS0089	NS	128	130	0.33	0.761	north	non_mineralised	23.2866	5.643	17.6436	PAF HC	TRUE
X080337	8.1	<0.1	<0.1			NS0108	NS	176	178	0.55	0.978	south	mineralised	29.9268	9.405	20.5218	PAF HC	TRUE
X080206	2.3	45.7	60.8	80.1		NS0107	NS	120	122	0	0	hangingwall	non_mineralised	0	0	0		TRUE
X081257	6.4	<0.5	<0.5		320	NS0115	NS	210	212	0.31	0.874	south	mineralised	26.7444	5.301	21.4434	PAF HC	TRUE
X159781	7.4	<0.1	<0.1			NS0078	NS	276	278	0.3	0.876	footwall	non_mineralised	26.8056	5.13	21.6756	PAF HC	TRUE
X078537	6.4	<0.5	<0.5		450	NS0097	NS	148	150	0.7	1.11	south	mineralised	33.966	11.97	21.996	PAF HC	TRUE
X159833	7.5	<0.1	<0.1			NS0079	NS	94	96	0.42	1.05	south	non_mineralised	32.13	7.182	24.948	PAF HC	TRUE
X159683	8.7	<0.1	<0.1			NS0078	NS	80	82	0.37	1.06	footwall	non_mineralised	32.436	6.327	26.109	PAF HC	TRUE
X139514	8.7	<0.5	<0.5		210	NS0158	NS	66	68	0.84	1.55	footwall	non_mineralised	47.43	14.364	33.066	PAF HC	TRUE
X077359	7.6	<0.1	<0.1			NS0089	NS	178	180	0.32	1.37	north	non_mineralised	41.922	5.472	36.45	PAF HC	TRUE
X078482	3.5	3.8	11		500	NS0097	NS	40	42	0.13	1.67	south	non_mineralised	51.102	2.223	48.879	PAF HC	TRUE
X159591	3.4	3.2	15.3			NS0077	NS	178	180	0.19	2.67	south	mineralised	81.702	3.249	78.453	PAF HC	TRUE
X066955	2	86	99		4100	NS0153	NS	200	202	0.1	4.24	hangingwall	non_mineralised	129.744	1.71	128.034	PAF HC	TRUE
X076497	7.8	<0.1	<0.1			NS0084	NS	100	102	0.35	0.59	hangingwall	non_mineralised	18.054	5.985	12.069	PAF HC	FALSE
X016322	7.3	<0.1	<0.1											0	0	0		FALSE
X076311	7.5	<0.1	<0.1											0	0	0		FALSE
X076317	7.2	<0.1	<0.1											0	0	0		FALSE
X076327	8.2	<0.1	<0.1											0	0	0		FALSE
X076339	8.2	<0.1	<0.1											0	0	0		FALSE
X076349	8.1	<0.1	<0.1											0	0	0		FALSE
X076355	7.7	<0.1	<0.1											0	0	0		FALSE
X076359	8.5	<0.1	<0.1											0	0	0		FALSE
X076385	8.9	<0.1	<0.1											0	0	0		FALSE
X076446	8.1	<0.1	<0.1											0	0	0		FALSE
X076598	8.4	<0.1	<0.1											0	0	0		FALSE
X076708	8.5	<0.1	<0.1	-37.2										0	0	0		FALSE
X077032	8.7	<0.1	<0.1											0	0	0		FALSE
X077172	8.5	<0.1	<0.1											0	0	0		FALSE
X077774	8	<0.1	<0.1											0	0	0		FALSE
X077872	8.5	<0.1	<0.1											0	0	0		FALSE
X077882	9	<0.1	<0.1											0	0	0		FALSE
X078312	8.5	<0.5	<0.5		170									0	0	0		FALSE
X078473	7.7	<0.5	<0.5		17									0	0	0		FALSE
X076527	3.4	11.8	22			NS0084	NS	158	160	0.02	0.684	hangingwall	non_mineralised	20.9304	0.342	20.5884	PAF HC	TRUE
X078682	9	<0.1	<0.1											0	0	0		FALSE
X07879-	8.5	<0.1	<0.1											0	0	0		FALSE
X078899	7.7	<0.5	<0.5		70									0	0	0		FALSE
X079071	8.5	<0.5	<0.5		120									0	0	0		FALSE
X079570	9.1	<0.1	<0.1											0	0	0		FALSE
X080003	6.4	<0.1	1.6											0	0	0		FALSE
X080197	7.9	<0.1	<0.1	<0.5										0	0	0		FALSE
X080284	8.6	<0.1	<0.1											0	0	0		FALSE
X080847	9	<0.1	<0.1											0	0	0		FALSE
X081216	8.2	<0.5	<0.5		96									0	0	0		FALSE
X081869	3.6	2.9	9.7		550									0	0	0		FALSE
X082084	8.9	<0.5	<0.5		200									0	0	0		FALSE
X082098	8.9	<0.5	<0.5		160									0	0	0		FALSE
X082109	9.4	<0.5	<0.5		140									0	0	0		FALSE
X082170	8.6	<0.5	<0.5		150									0	0	0		FALSE
X082370	10.1	<0.5	<0.5		160									0	0	0		FALSE
X082477	9.4	<0.5	<0.5		200									0	0	0		FALSE
X082500	8.6	<0.1	<0.1	-30.6										0	0	0		FALSE
X082505	7.6	<0.5	<0.5		180									0	0	0		FALSE
X082511	9.8	<0.5	<0.5		80									0	0	0		FALSE
X082515	8.5	<0.1	<0.1	-44.5										0	0	0		FALSE
X082521	8.8	<0.1	<0.1	-44										0	0	0		FALSE
X082525	8.4	<0.1	<0.1	-50.9										0	0	0		FALSE
X082531	8.7	<0.5	<0.5		150									0	0	0		FALSE
X082535	8.8	<0.1	<0.1	-39.2										0	0	0		FALSE
X082541	8.8	<0.1	<0.1											0	0	0		FALSE
X082545	8.7	<0.1	<0.1											0	0	0		FALSE
X082552	8.8	<0.1	<0.1											0	0	0		FALSE
X082557	8.9	<0.1	<0.1											0	0	0		FALSE
X082561	8.8	<0.1	<0.1											0	0	0		FALSE
X082567	9.2	<0.5	<0.5		65									0	0	0		FALSE
X082571	9.1	<0.1	<0.1											0	0	0		FALSE
X082577	9.2	<0.1	<0.1											0	0	0		FALSE
X082581	9.2	<0.1	<0.1											0	0	0		FALSE
X082591	9	<0.5	<0.5		110									0	0	0		FALSE
X082597	8.7	<0.5	<0.5		110									0	0	0		FALSE
X082603	8.9	<0.1	<0.1											0	0	0		FALSE
X082607	9	<0.5	<0.5		75									0	0	0		FALSE
X082635	8.2	<0.1	<0.1											0	0	0		FALSE
X082639	8.3	<0.5	<0.5		160									0	0	0		FALSE
X082645	8.4	<0.1	<0.1											0	0	0		FALSE

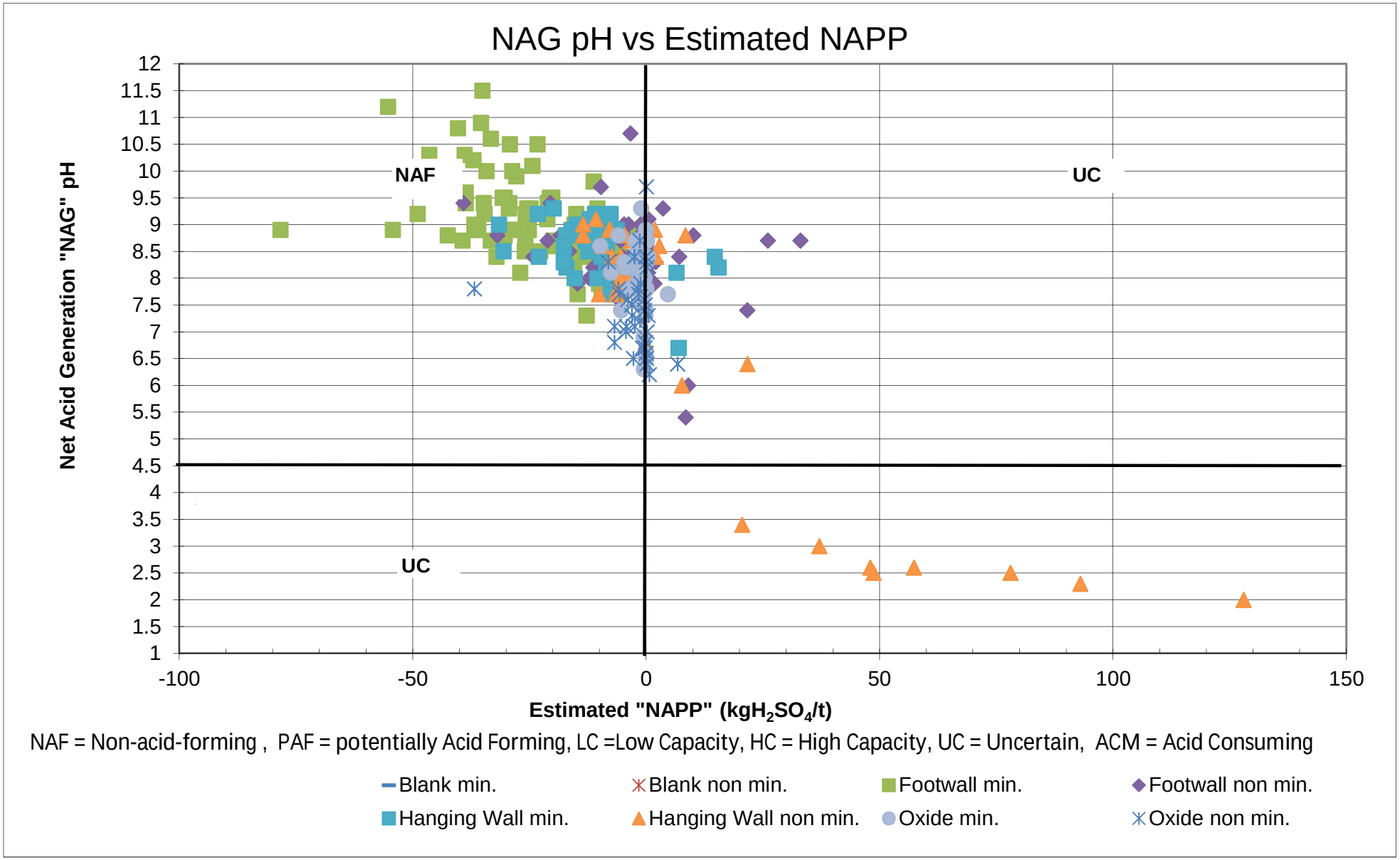
Sample Number	pHox	NAG pH 45	NAG pH 70	Lab NAPP	Ecox	HOLEID	AO AREA	SAMPFROM	SAMPTO	CaO_XRF_pct	S_XRF_pct	modelgeo	mineraleralised	MPA	ANC	NAPP	Categorisation	Hole IDs match?
X082649	8.9	<0.5	<0.5		150									0	0	0		FALSE
X082655	8.8	<0.1	<0.1											0	0	0		FALSE
X082661	10.6	<0.5	<0.5		150									0	0	0		FALSE
X082665	8.6	<0.5	<0.5		180									0	0	0		FALSE
X082672	8.6	<0.5	<0.5		210									0	0	0		FALSE
X082675	9.2	<0.5	<0.5		160									0	0	0		FALSE
X082681	10.8	<0.5	<0.5		130									0	0	0		FALSE
X082685	8.8	<0.1	<0.1											0	0	0		FALSE
X082691	8.8	<0.1	<0.1											0	0	0		FALSE
X082695	7.8	<0.5	<0.5		250									0	0	0		FALSE
X082702	8.5	<0.1	<0.1	-12.6										0	0	0		FALSE
X082702	10.6	<0.5	<0.5		100									0	0	0		FALSE
X082703	8.4	<0.1	<0.1	-19.2										0	0	0		FALSE
X082707	10.1	<0.5	<0.5		91									0	0	0		FALSE
X082708	8.9	<0.1	<0.1	-25.4										0	0	0		FALSE
X082709	8.2	<0.1	<0.1	-28.9										0	0	0		FALSE
X082711	8.4	<0.1	<0.1											0	0	0		FALSE
X082712	8.4	<0.1	<0.1	-5.5										0	0	0		FALSE
X082713	8.1	<0.1	<0.1	2.2										0	0	0		FALSE
X082717	10.1	<0.5	<0.5		68									0	0	0		FALSE
X082718	8.7	<0.1	<0.1	-27.1										0	0	0		FALSE
X082719	7.9	<0.1	<0.1	-24.4										0	0	0		FALSE
X082721	10.5	<0.5	<0.5		98									0	0	0		FALSE
X082722	8.3	<0.1	<0.1	-10.4										0	0	0		FALSE
X082725	8	<0.1	<0.1	-4.8										0	0	0		FALSE
X082727	8.4	<0.1	<0.1											0	0	0		FALSE
X082728	8.6	<0.1	<0.1	-15.5										0	0	0		FALSE
X082729	8.7	<0.1	<0.1	-10										0	0	0		FALSE
X082731	9.1	<0.5	<0.5		120									0	0	0		FALSE
X082732	8.7	<0.1	<0.1											0	0	0		FALSE
X082733	9.1	<0.1	<0.1											0	0	0		FALSE
X082737	9.3	<0.5	<0.5		120									0	0	0		FALSE
X082738	9	<0.1	<0.1											0	0	0		FALSE
X082741	8.5	<0.1	<0.1											0	0	0		FALSE
X082742	9.4	<0.1	<0.1											0	0	0		FALSE
X082747	9.2	<0.5	<0.5		120									0	0	0		FALSE
X082748	9.3	<0.1	<0.1											0	0	0		FALSE
X082753	6.8	<0.1	<0.1	<0.5										0	0	0		FALSE
X082754	9.2	<0.1	<0.1											0	0	0		FALSE
X082758	8.3	<0.1	<0.1	-5.5										0	0	0		FALSE
X082758	9.2	<0.1	<0.1											0	0	0		FALSE
X082759	8.3	<0.1	<0.1	-5.2										0	0	0		FALSE
X082762	7.9	<0.1	<0.1	-3.9										0	0	0		FALSE
X082764	9.2	<0.1	<0.1											0	0	0		FALSE
X082768	9.3	<0.1	<0.1											0	0	0		FALSE
X082772	7.8	<0.1	<0.1	-11										0	0	0		FALSE
X082774	8	<0.1	<0.1											0	0	0		FALSE
X082778	8	<0.1	<0.1	-20.5										0	0	0		FALSE
X082782	8.4	<0.1	<0.1	-25.8										0	0	0		FALSE
X082788	8.6	<0.1	<0.1	-19.4										0	0	0		FALSE
X082789	8.7	<0.1	<0.1	-9.7										0	0	0		FALSE
X082792	8.8	<0.1	<0.1	-8										0	0	0		FALSE
X082793	8.7	<0.1	<0.1	-33.5										0	0	0		FALSE
X082798	7.8	<0.1	<0.1	-12										0	0	0		FALSE
X082799	8.5	<0.1	<0.1	-23.4										0	0	0		FALSE
X082887	9.9	<0.5	<0.5		60									0	0	0		FALSE
X139644	8.3	<0.5	<0.5		260									0	0	0		FALSE
X140035	9.2	<0.5	<0.5		140									0	0	0		FALSE
X140039	9	<0.5	<0.5		100									0	0	0		FALSE
X140045	8.5	<0.5	<0.5		130									0	0	0		FALSE
X140049	9.2	<0.5	<0.5		130									0	0	0		FALSE
X140055	9.1	<0.5	<0.5		150									0	0	0		FALSE
X140061	9.1	<0.5	<0.5		110									0	0	0		FALSE
X140065	8.9	<0.5	<0.5		200									0	0	0		FALSE
X140071	5.2	<0.5	1.6		330									0	0	0		FALSE
X140075	8	<0.5	<0.5		180									0	0	0		FALSE
X140081	8.7	<0.5	<0.5		66									0	0	0		FALSE
X140085	8.9	<0.5	<0.5		77									0	0	0		FALSE
X140091	8.2	<0.5	<0.5		210									0	0	0		FALSE
X140095	7.2	<0.5	<0.5		280									0	0	0		FALSE
X143517	9.2	<0.1	<0.1											0	0	0		FALSE
X143518	8.9	<0.1	<0.1											0	0	0		FALSE
X143535	7.8	<0.1	<0.1											0	0	0		FALSE
X143539	8.3	<0.1	<0.1											0	0	0		FALSE
X143545	9.1	<0.1	<0.1											0	0	0		FALSE
X143549	8.8	<0.1	<0.1											0	0	0		FALSE
X143555	9	<0.1	<0.1											0	0	0		FALSE
X143565	8.9	<0.1	<0.1											0	0	0		FALSE
X143569	9	<0.1	<0.1											0	0	0		FALSE
X143575	9.1	<0.1	<0.1											0	0	0		FALSE
X143579	9.2	<0.1	<0.1											0	0	0		FALSE
X143585	9.2	<0.1	<0.1											0	0	0		FALSE
X143591	9.3	<0.1	<0.1											0	0	0		FALSE
X143595	9.2	<0.1	<0.1											0	0	0		FALSE
X143602	9.1	<0.1	<0.1											0	0	0		FALSE
X143607	9.2	<0.1	<0.1											0	0	0		FALSE
X143611	9.2	<0.1	<0.1											0	0	0		FALSE
X143621	9.3	<0.1	<0.1											0	0	0		FALSE
X143627	8.5	<0.1	<0.1											0	0	0		FALSE
X14363	9.2	<0.1	<0.1											0	0	0		FALSE
X143631	9.2	<0.1	<0.1											0	0	0		FALSE
X143637	9.3	<0.1	<0.1											0	0	0		FALSE
X14364	9.1	<0.1	<0.1											0	0	0		FALSE
X143641	9.1	<0.1	<0.1											0	0	0		FALSE
X143647	8.9	<0.1	<0.1											0	0	0		FALSE
X143653	8.9	<0.1	<0.1											0	0	0		FALSE
X143657	8.9	<0.1	<0.1											0	0	0		FALSE
X143658	9.3	<0.1	<0.1											0	0	0		FALSE
X159487	8.9	<0.1	<0.1	-31.1										0	0	0		FALSE
X159654	6.5	<0.1	<0.1	-3.7										0	0	0		FALSE
X159658	7.2	<0.1	<0.1	-3.3										0	0	0		FALSE
X159664	7.5	<0.1	<0.1											0	0	0		FALSE
X159664	7	<0.1	<0.1											0	0	0		FALSE
X159668	8.7	<0.1	<0.1											0	0	0		FALSE
X159674	8.8	<0.1	<0.1	-38.1										0	0	0		FALSE
X159678	8.8	<0.1	<0.1	-41.3										0	0	0		FALSE
X159684	8.3	<0.1	<0.1											0	0	0		FALSE
X159688	8.7	<0.1	<0.1											0	0	0		FALSE
X159698	8.4	<0.1	<0.1											0	0	0		FALSE
X159704	8.2	<0.1	<0.1											0	0	0		FALSE
X159708	8.7	<0.1	<0.1											0	0	0		FALSE
X159714	8.3	<0.1	<0.1											0	0	0		FALSE
X159718	8.4	<0.1	<0.1											0	0	0		FALSE
X159816	8.5	<0.1	<0.1											0	0	0		FALSE
X159842	8.9	<0.1	<0.1											0	0	0		FALSE
X159858	8.8	<0.1	<0.1											0	0	0		FALSE

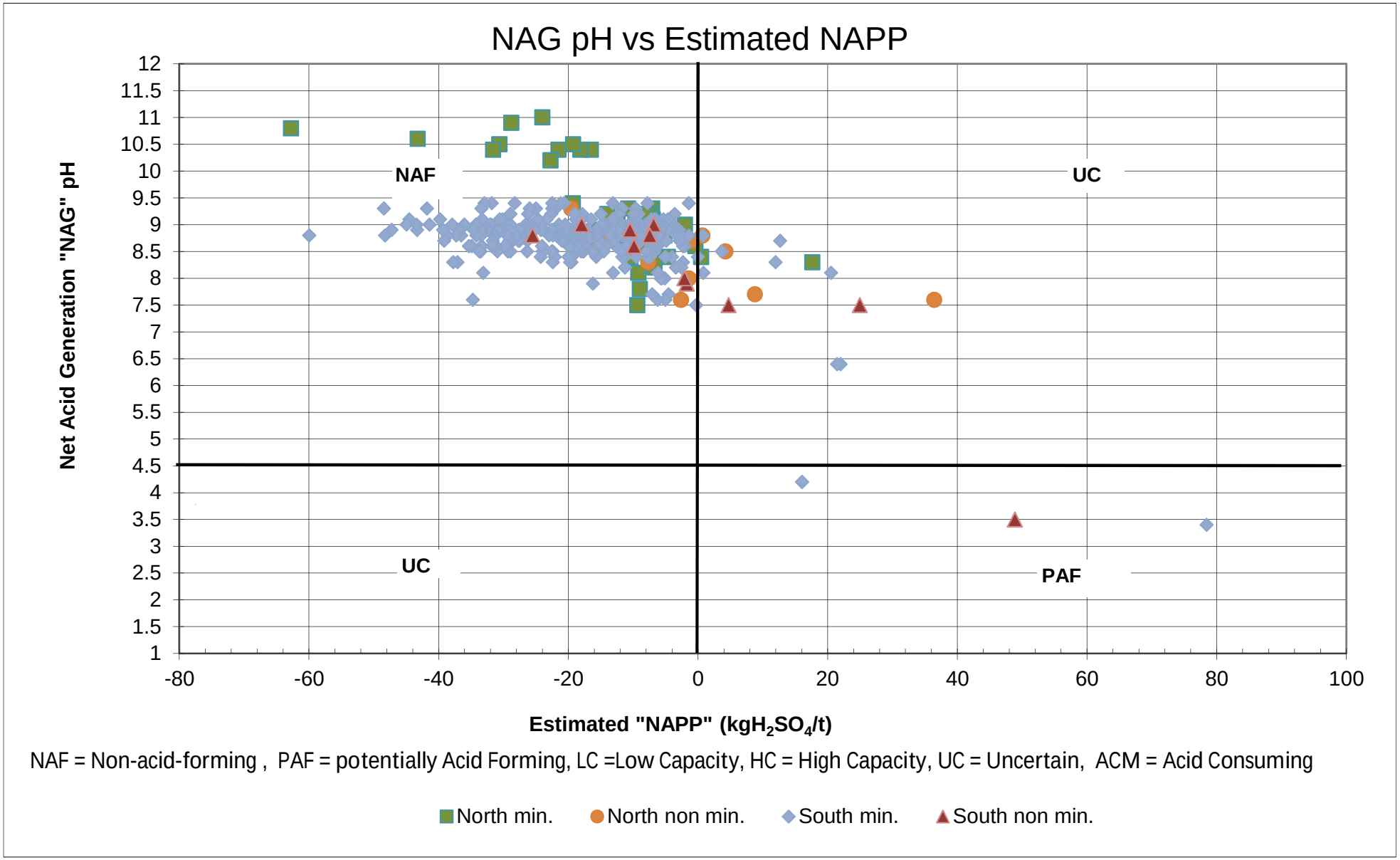

NAG pH vs Lab NAPP - All Strata
Net Acid Generation "NAG" pH
12
11.5
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
NAF
UC
UC
PAF
-100
-75
-50
-25
0
25
50
75
100
Net Acid Producing Potential "NAPP" (kgH2SO4/t)
NAF = Non-acid-forming , PAF = potentially Acid Forming, LC =Low Capacity, HC = High Capacity, UC = Uncertain, ACM = Acid Consuming
All Strata

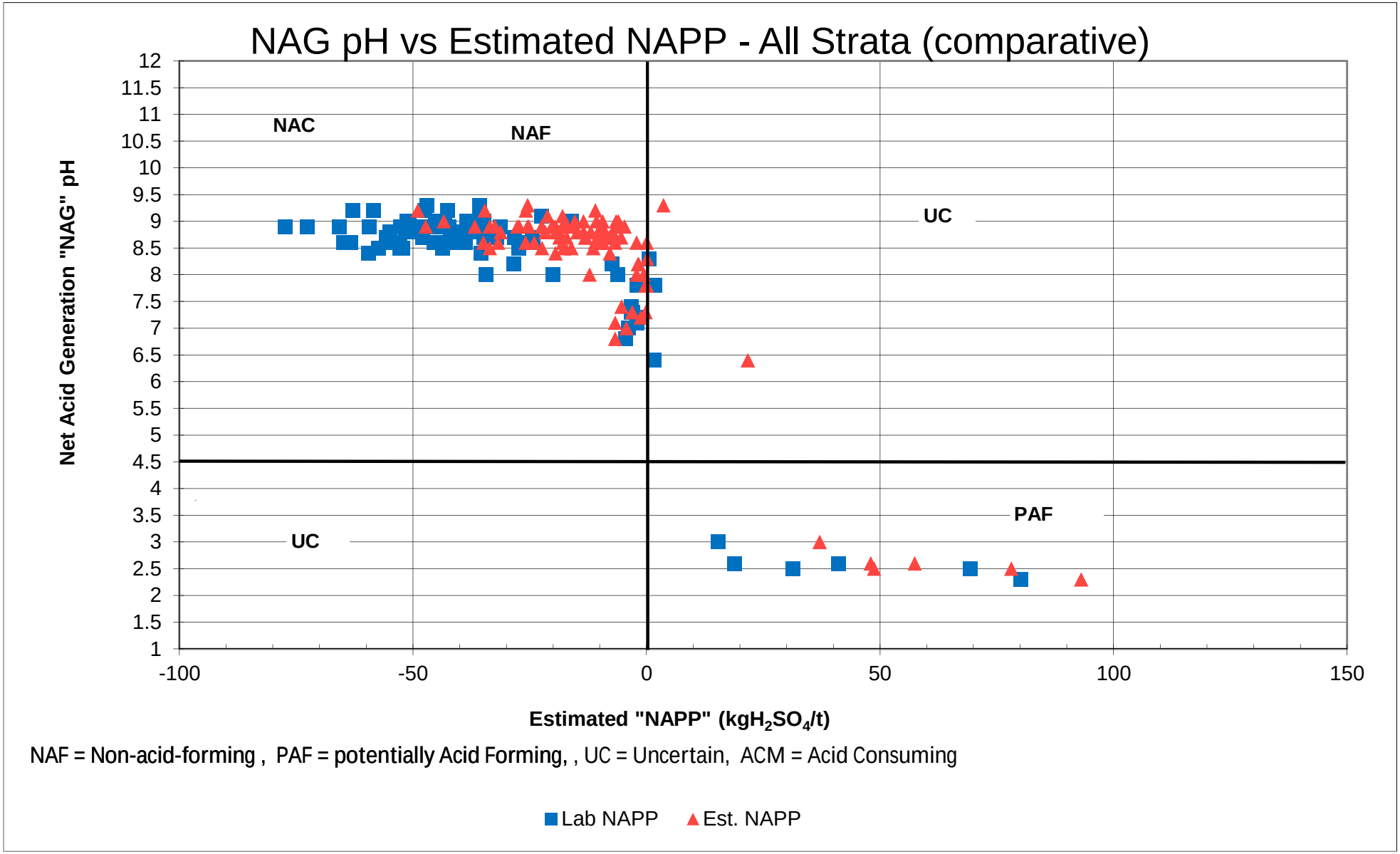

NAG pH vs Lab NAPP
Net Acid Generation "NAG" pH
12
11.5
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
NAC
NAF
UC
UC
PAF
-80
-60
-40
-20
0
20
40
60
80
100
Net Acid Producing Potential "NAPP" (kgH2SO4/t)
NAF = Non-acid-forming , PAF = potentially Acid Forming, UC = Uncertain, ACM = Acid Consuming
Blank min.
Blank non min.
Footwall min.
Footwall non min.
Hanging Wall min.
Hanging Wall non min.

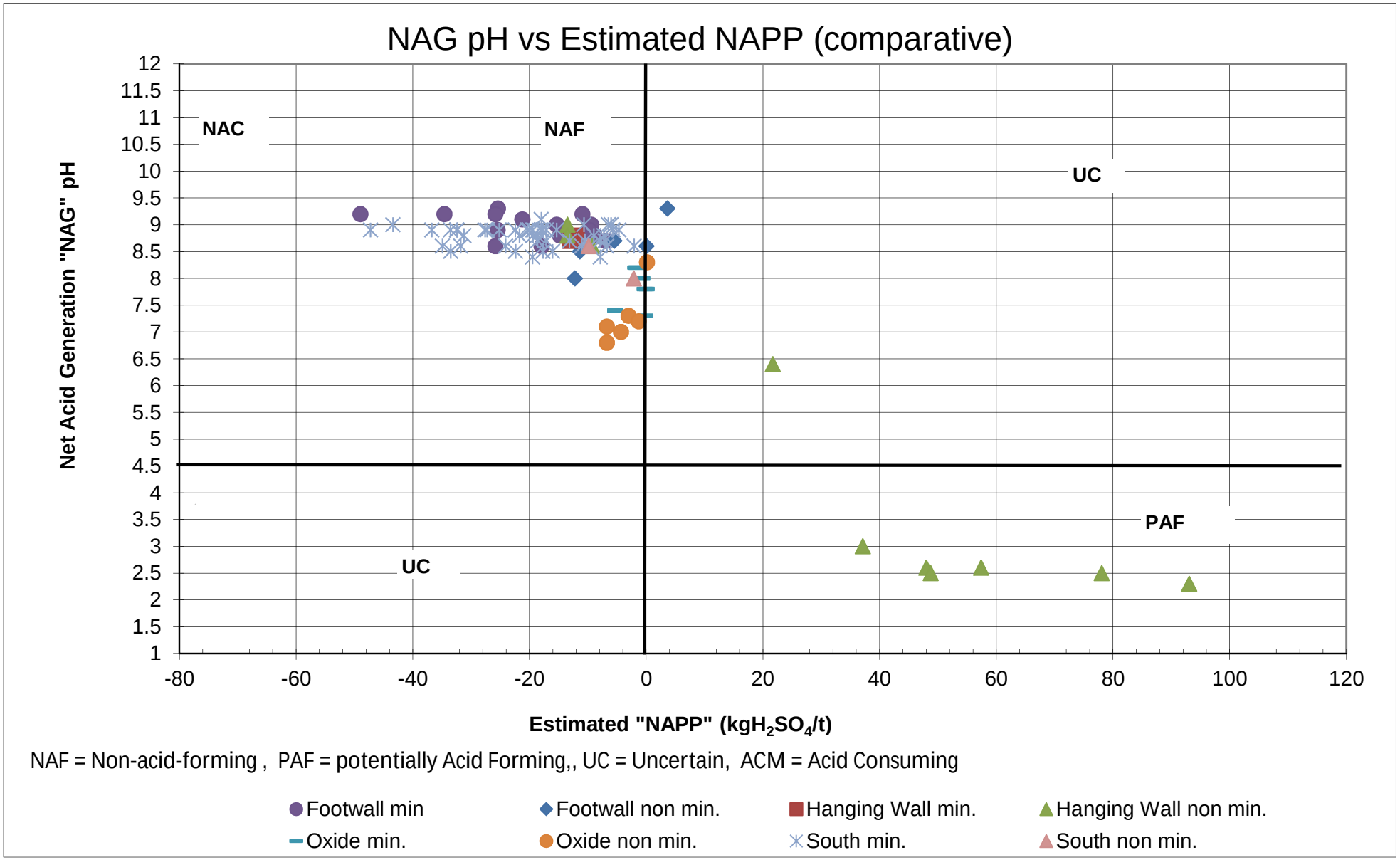

NAG pH vs Lab NAPP
Net Acid Generation "NAG" pH
12
11.5
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
NAC
NAF
UC
UC
PAF
-90
-80
-70
-60
-50
-40
-30
-20
-10
0
10
Net Acid Producing Potential "NAPP" (kgH2SO4/t)
NAF = Non-acid-forming , PAF = potentially Acid Forming,, UC = Uncertain, ACM = Acid Consuming
Oxide min.
Oxide non min.
South min.
South non min.

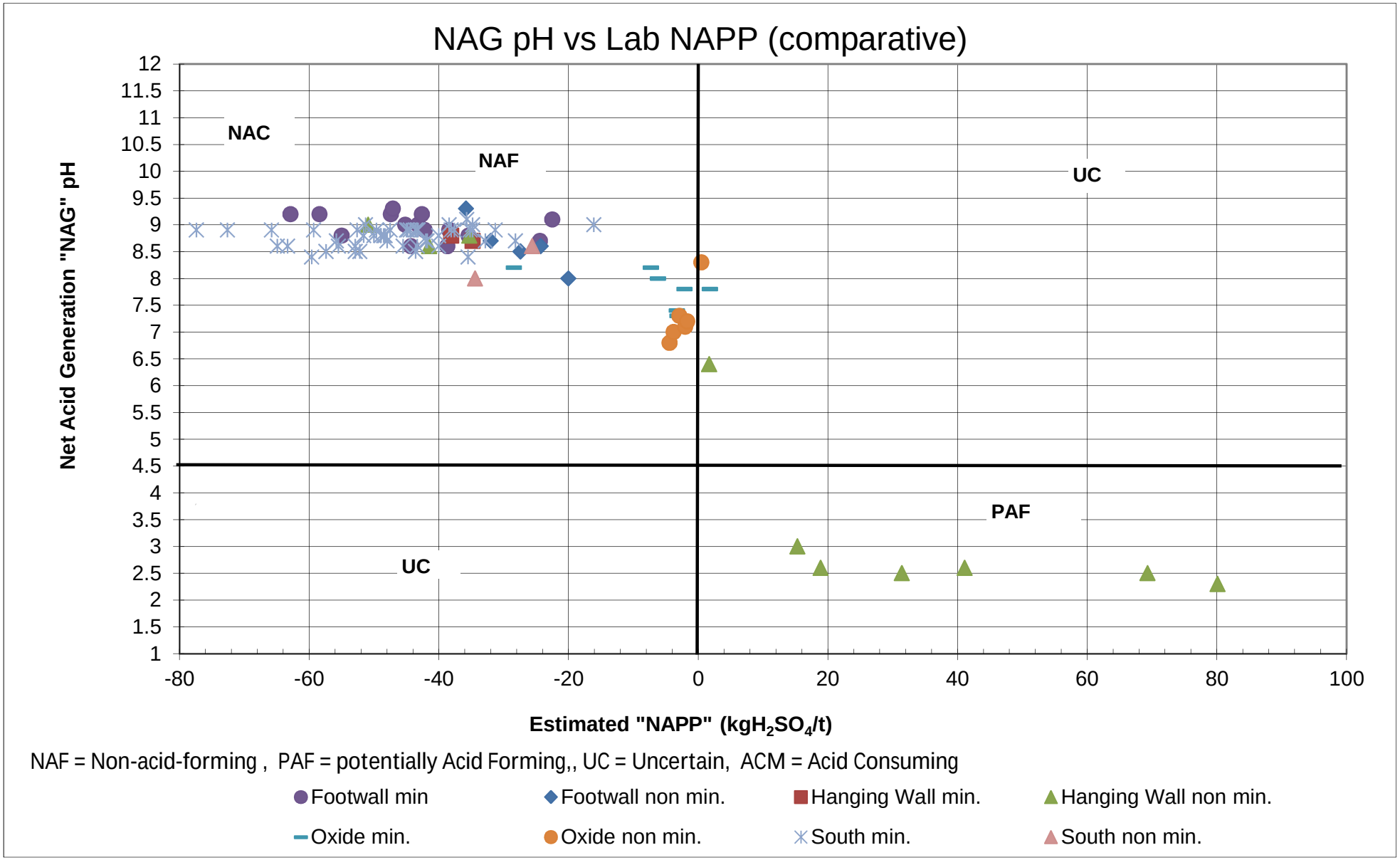

NAG pH vs Estimated NAPP - All Strata
Net Acid Generation "NAG" pH
Estimated "NAPP" (kgH2SO4/t)
NAC
UC
NAF
UC
PAF
12
11.5
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
-100
-50
0
50
100
150
NAF = Non-acid-forming , PAF = potentially Acid Forming, ACM = Acid Consuming
UC = Uncertain, ACM = Acid Consuming
All strata

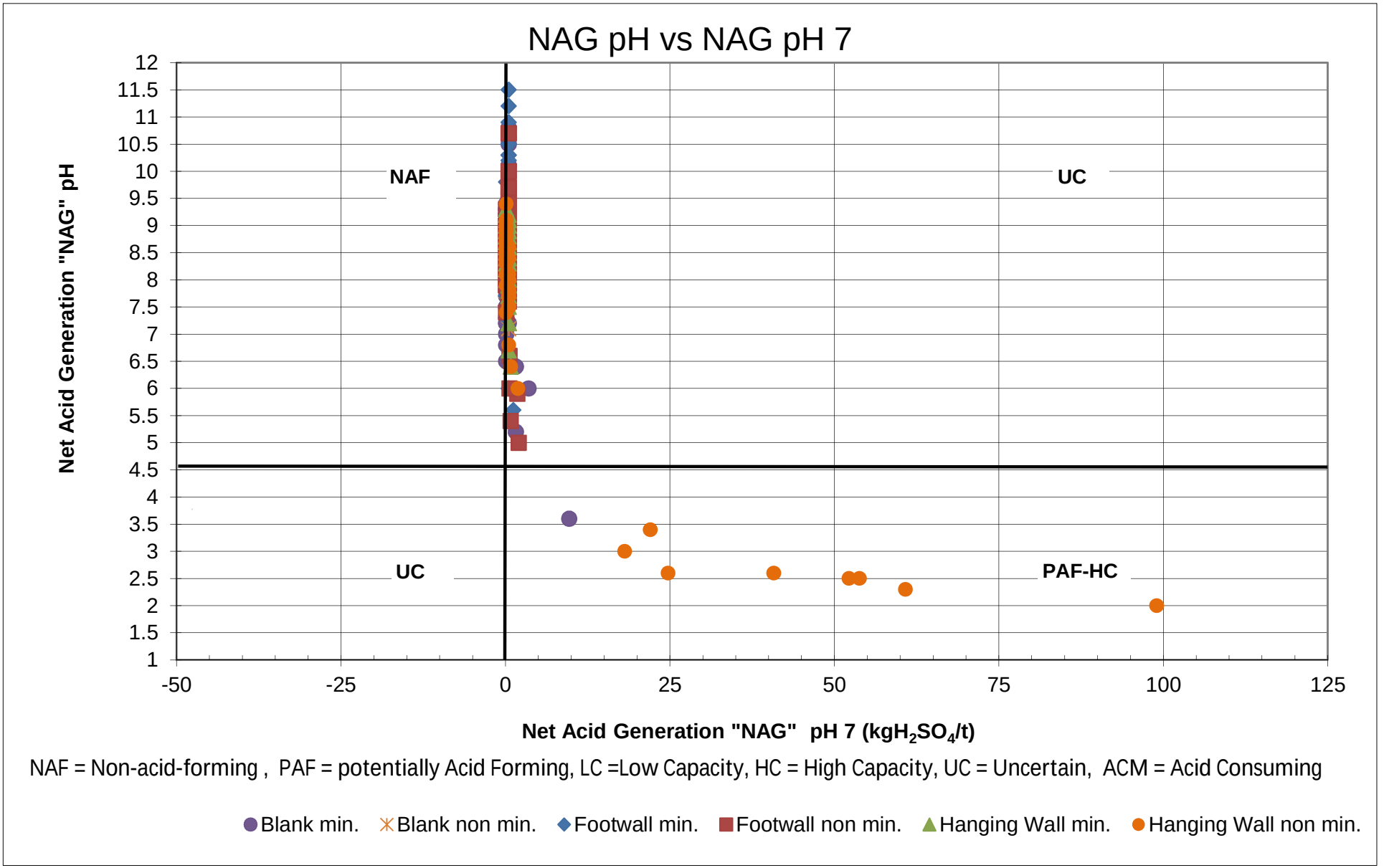

NAG pH vs Estimated NAPP
Net Acid Generation "NAG" pH
Estimated "NAPP" (kgH2SO4/t)
NAF
UC
UC
12
11.5
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
-100
-50
0
50
100
150
NAF = Non-acid-forming , PAF = potentially Acid Forming, LC =Low Capacity, HC = High Capacity, UC = Uncertain, ACM = Acid Consuming
Blank min.
Blank non min.
Footwall min.
Footwall non min.
Hanging Wall min.
Hanging Wall non min.
Oxide min.
Oxide non min.

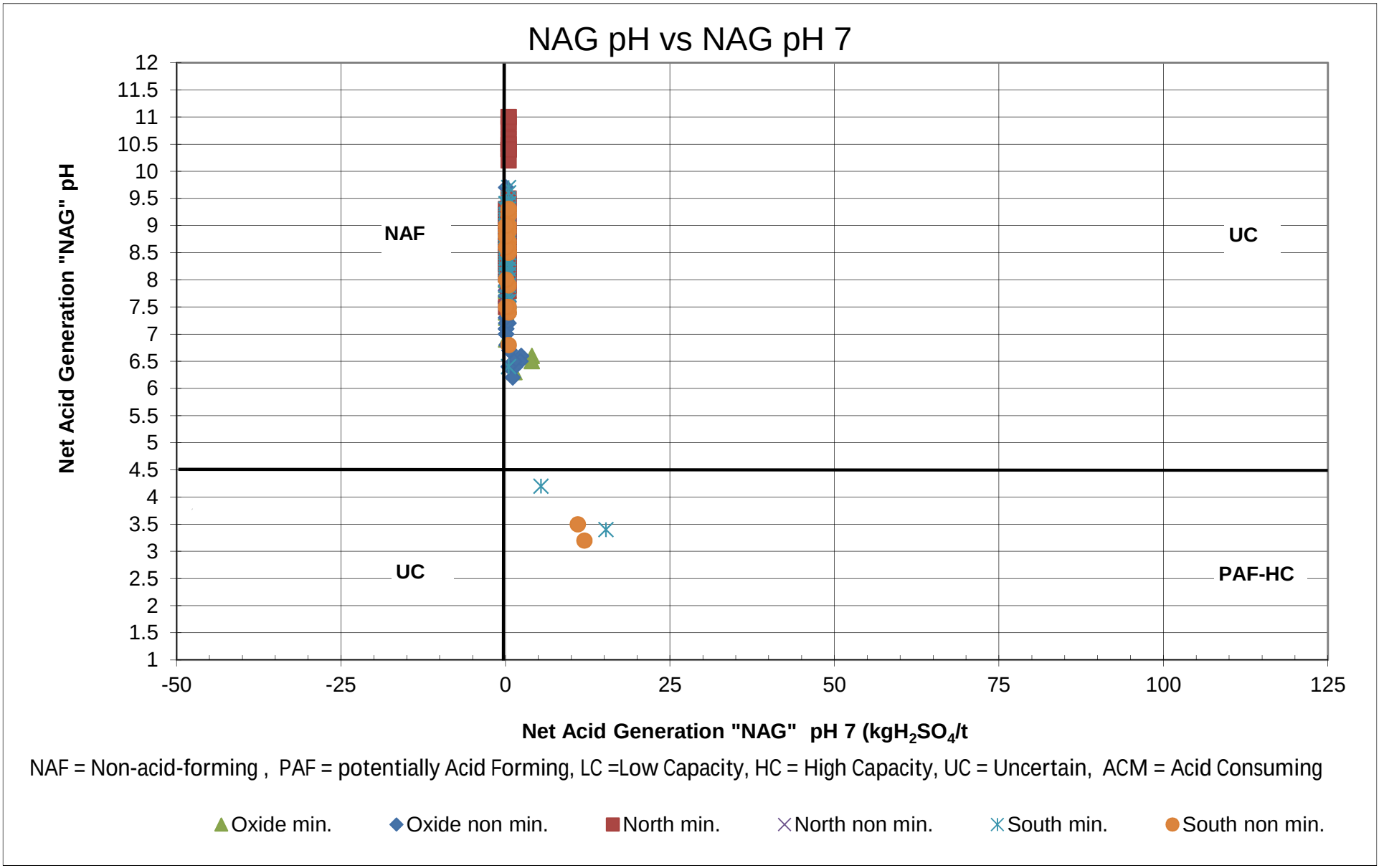

NAG pH vs Estimated NAPP
Net Acid Generation "NAG" pH
12
11.5
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
NAF
UC
UC
PAF
-80
-60
-40
-20
0
20
40
60
80
100
Estimated "NAPP" (kgH2SO4/t)
NAF = Non-acid-forming , PAF = potentially Acid Forming, LC =Low Capacity, HC = High Capacity, UC = Uncertain, ACM = Acid Consuming
North min.
North non min.
South min.
South non min.

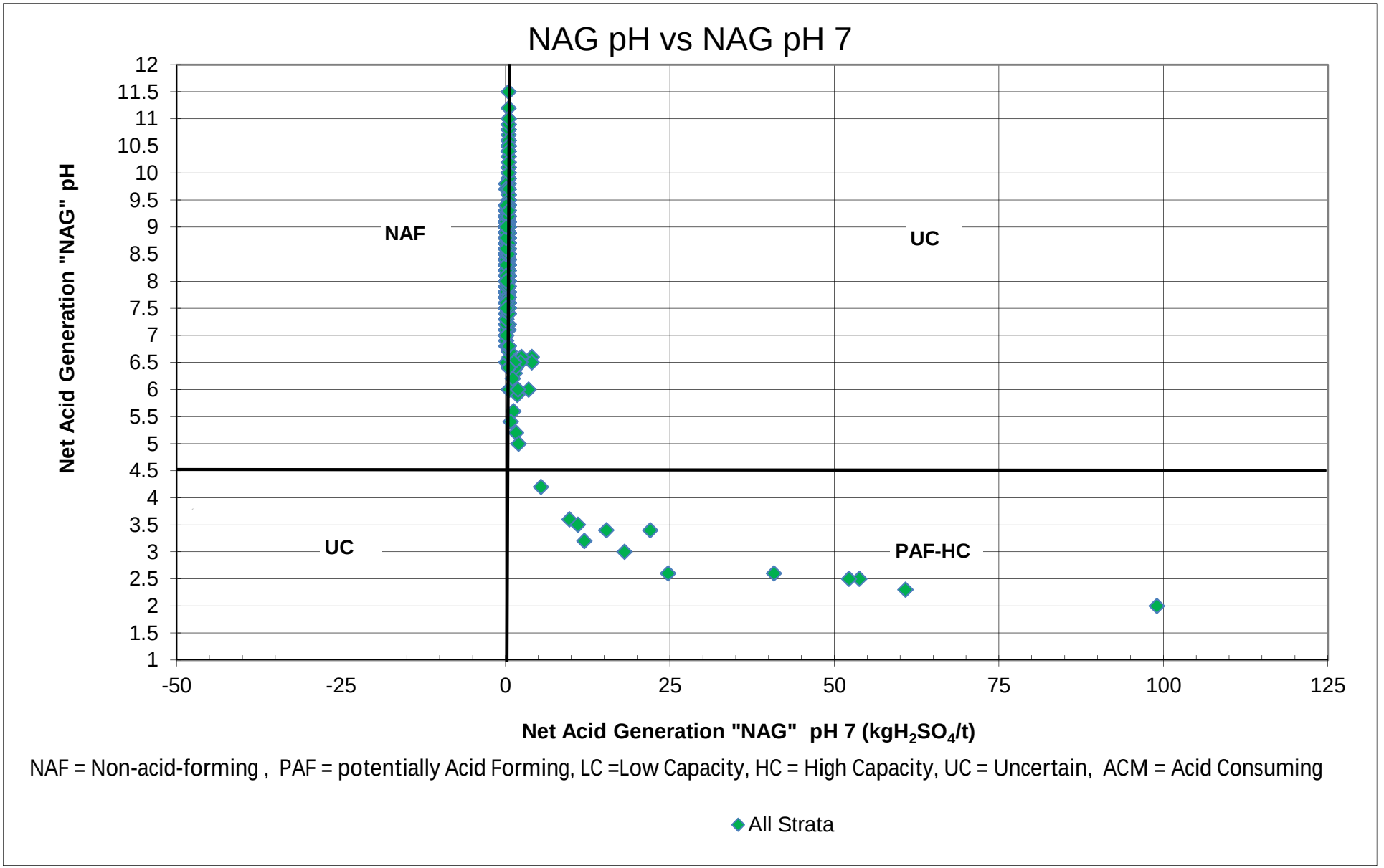

NAG pH vs Estimated NAPP - All Strata (comparative)
Net Acid Generation "NAG" pH
Estimated "NAPP" (kgH2SO4/t)
NAC
NAF
UC
UC
PAF
12
11.5
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
-100
-50
0
50
100
150
NAF = Non-acid-forming , PAF = potentially Acid Forming, , UC = Uncertain, ACM = Acid Consuming
Lab NAPP
Est. NAPP

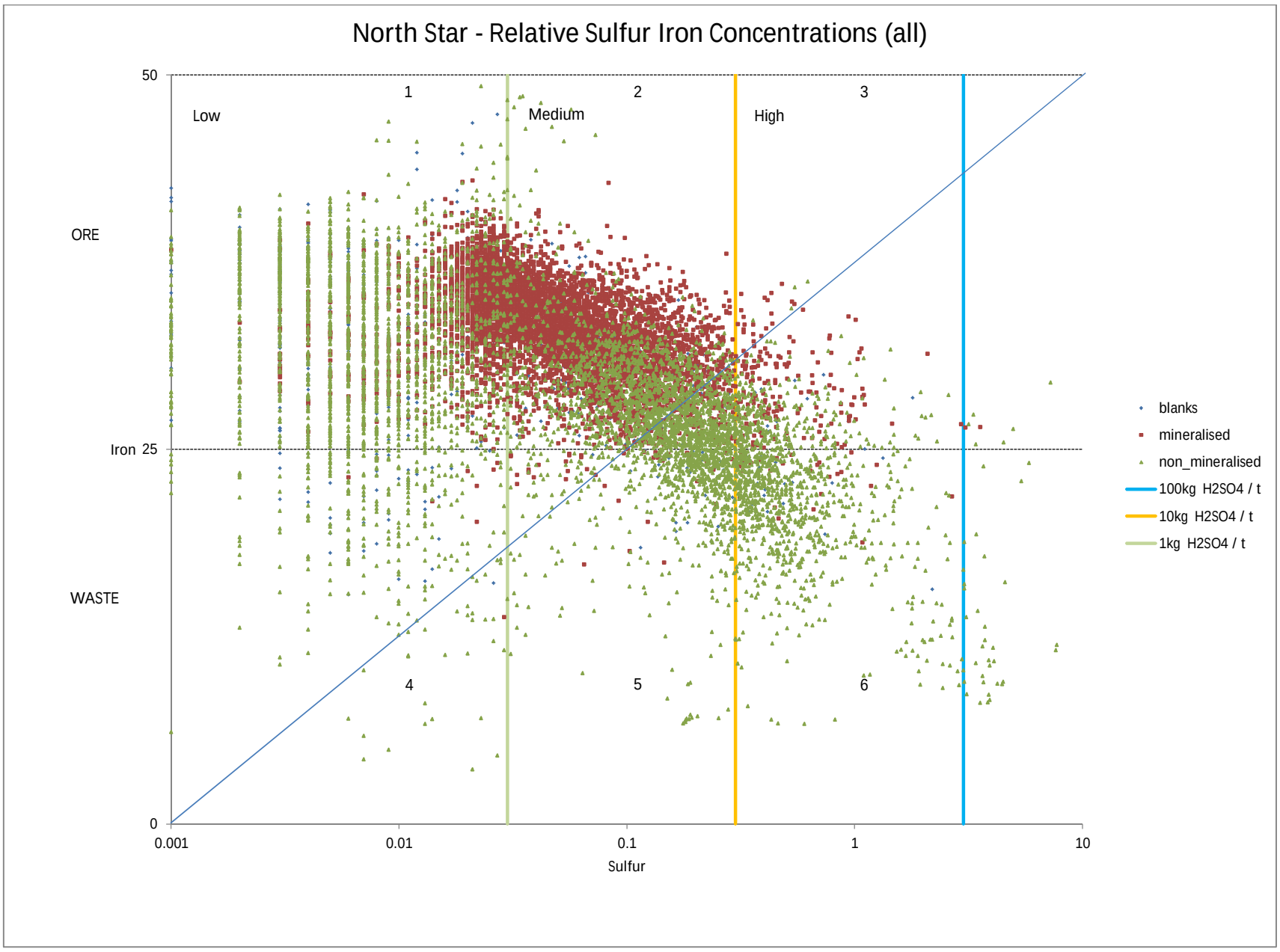

NAG pH vs Estimated NAPP (comparative)
Net Acid Generation "NAG" pH
Estimated "NAPP" (kgH2SO4/t)
NAC
NAF
UC
PAF
UC
12
11.5
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
-80
-60
-40
-20
0
20
40
60
80
100
120
NAF = Non-acid-forming , PAF = potentially Acid Forming,, UC = Uncertain, ACM = Acid Consuming
Footwall min
Footwall non min.
Hanging Wall min.
Hanging Wall non min.
Oxide min.
Oxide non min.
South min.
South non min.

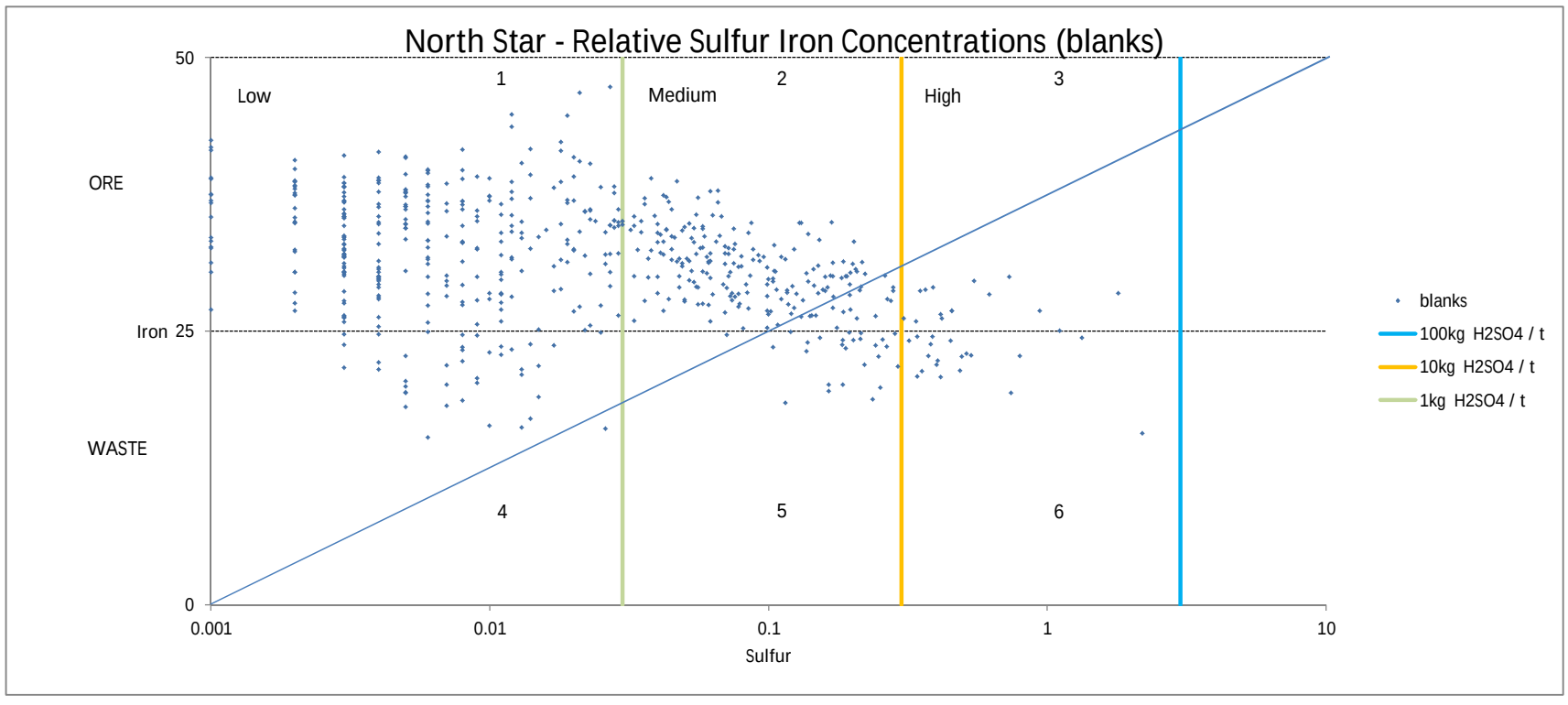

NAG pH vs Lab NAPP (comparative)
Net Acid Generation "NAG" pH
Estimated "NAPP" (kgH2SO4/t)
NAC
NAF
UC
PAF
UC
12
11.5
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
-80
-60
-40
-20
0
20
40
60
80
100
NAF = Non-acid-forming , PAF = potentially Acid Forming,, UC = Uncertain, ACM = Acid Consuming
Footwall min
Footwall non min.
Hanging Wall min.
Hanging Wall non min.
Oxide min.
Oxide non min.
South min.
South non min.

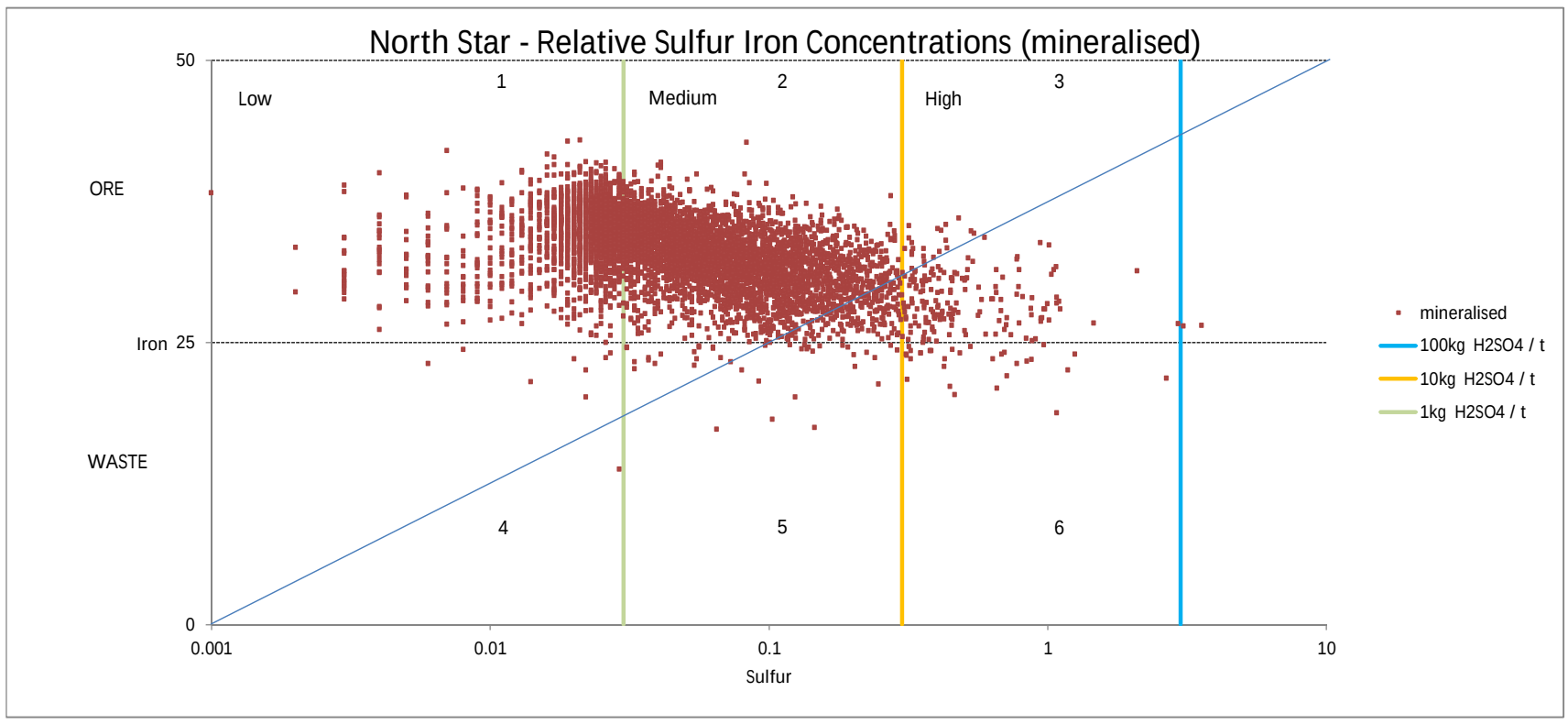

NAG pH vs NAG pH 7
Net Acid Generation "NAG" pH
12
11.5
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
NAF
UC
UC
PAF-HC
-50
-25
0
25
50
75
100
125
Net Acid Generation "NAG" pH 7 (kgH2SO4/t)
NAF = Non-acid-forming , PAF = potentially Acid Forming, LC =Low Capacity, HC = High Capacity, UC = Uncertain, ACM = Acid Consuming
Blank min.
Blank non min.
Footwall min.
Footwall non min.
Hanging Wall min.
Hanging Wall non min.

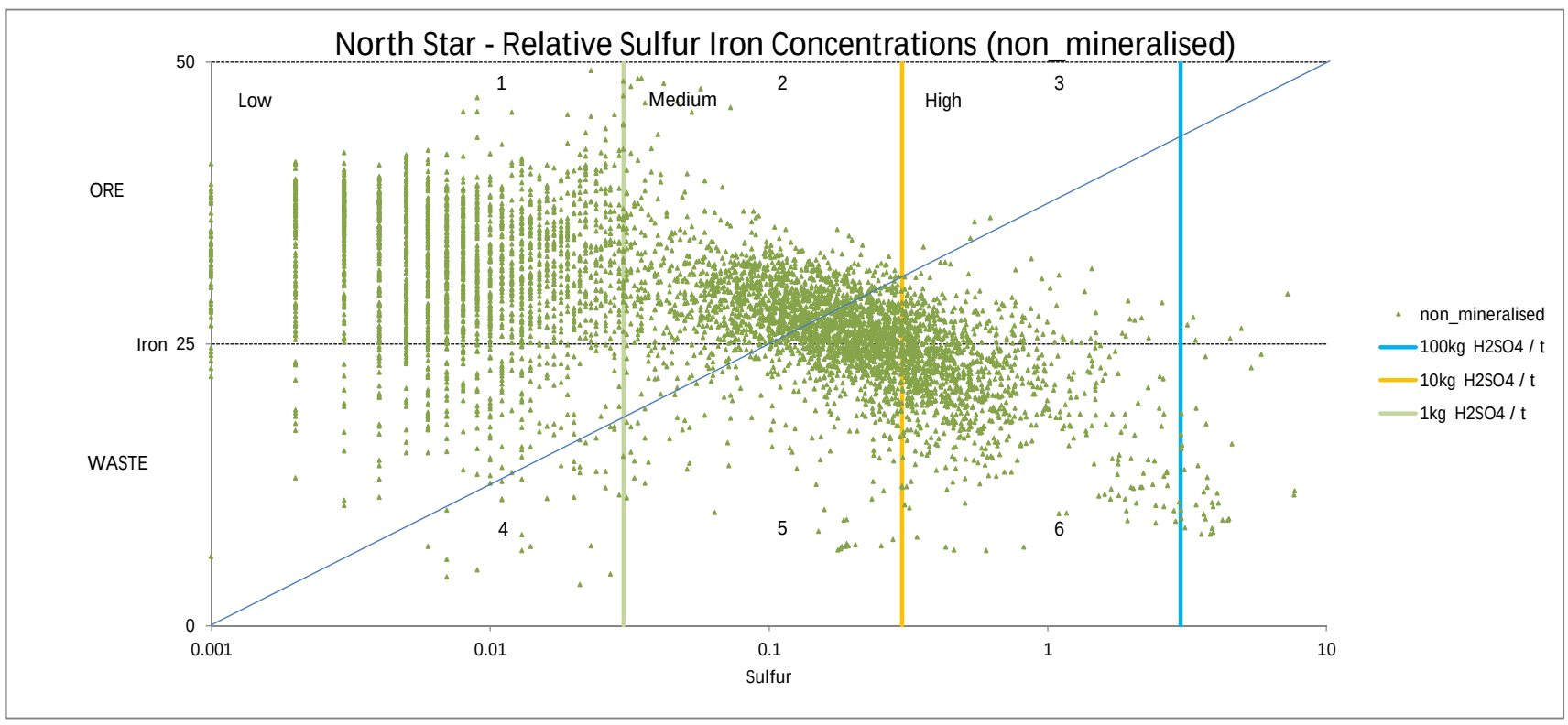

NAG pH vs NAG pH 7
Net Acid Generation "NAG" pH
12
11.5
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
NAF
UC
UC
PAF-HC
-50
-25
0
25
50
75
100
125
Net Acid Generation "NAG" pH 7 (kgH2SO4/t
NAF = Non-acid-forming , PAF = potentially Acid Forming, LC =Low Capacity, HC = High Capacity, UC = Uncertain, ACM = Acid Consuming
Oxide min.
Oxide non min.
North min.
North non min.
South min.
South non min.

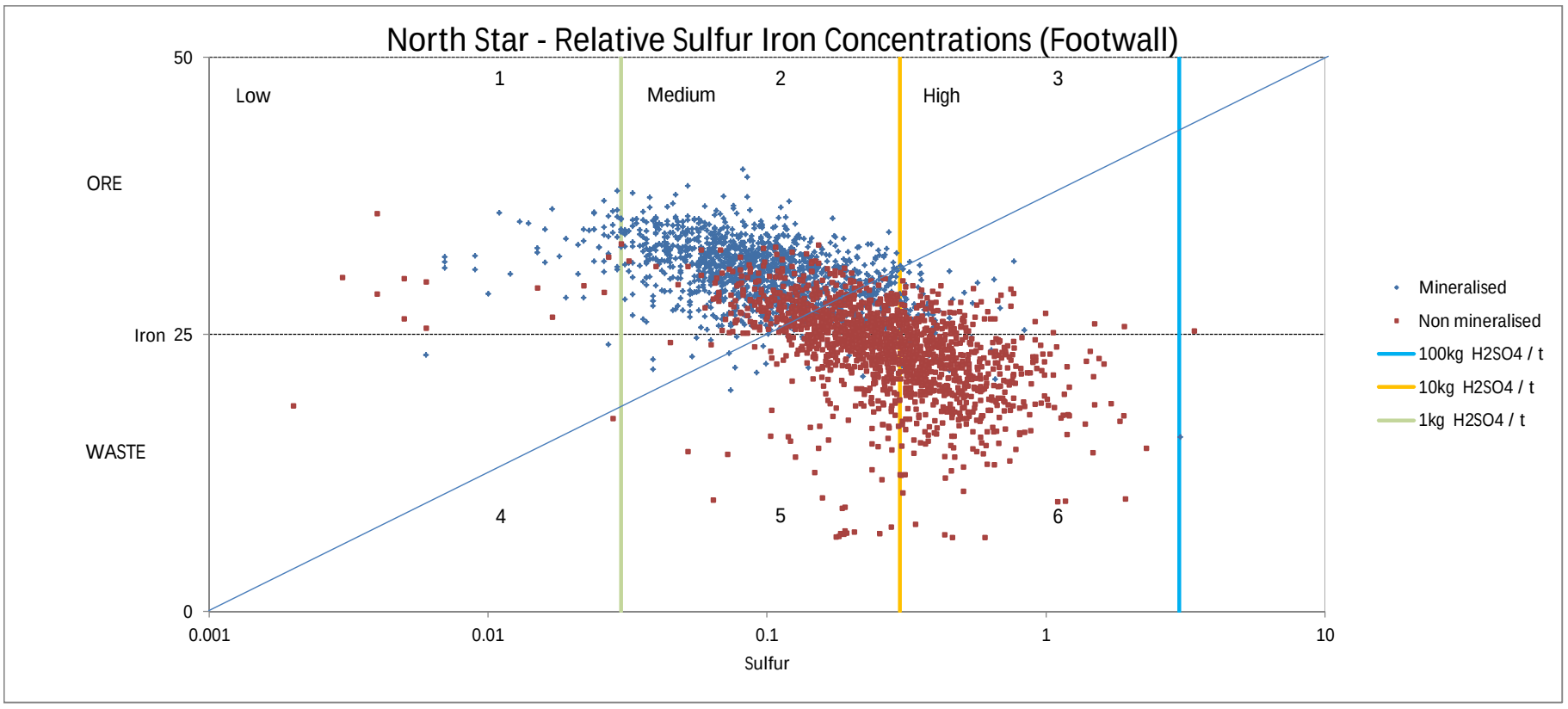

NAG pH vs NAG pH 7
Net Acid Generation "NAG" pH
12
11.5
11
10.5
10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
NAF
UC
UC
PAF-HC
-50
-25
0
25
50
75
100
125
Net Acid Generation "NAG" pH 7 (kgH2SO4/t)
NAF = Non-acid-forming , PAF = potentially Acid Forming, LC =Low Capacity, HC = High Capacity, UC = Uncertain, ACM = Acid Consuming
All Strata

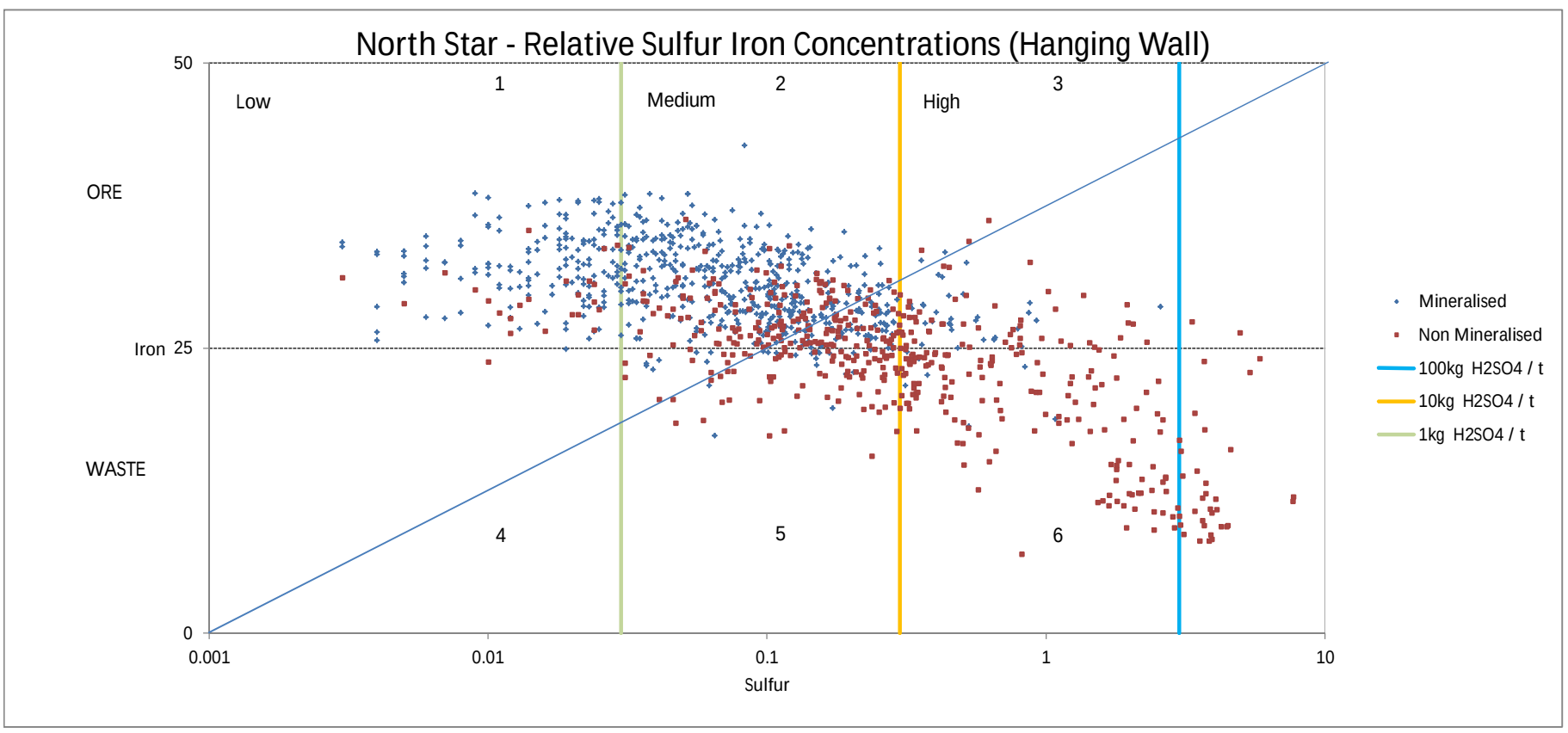

North Star - Relative Sulfur Iron Concentrations (all)
50
Iron 25
0
ORE
WASTE
1
2
3
4
5
6
Low
Medium
High
0.001
0.01
0.1
1
10
Sulfur
blanks
mineralised
non_mineralised
100kg H2SO4 / t
10kg H2SO4 / t
1kg H2SO4 / t

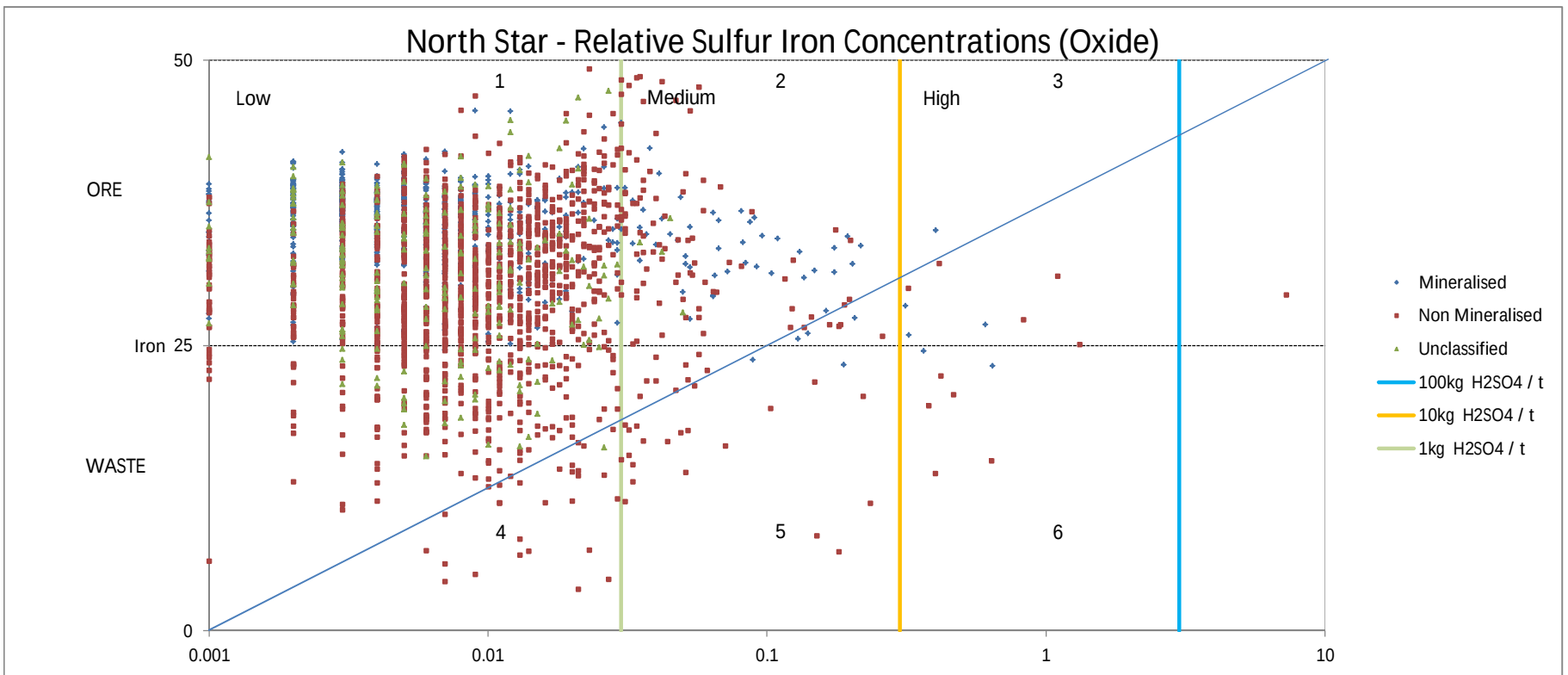

North Star - Relative Sulfur Iron Concentrations (blanks)
50
Iron 25
0
ORE
WASTE
Low
Medium
High
1
2
3
4
5
6
0.001
0.01
0.1
1
10
Sulfur
blanks
100kg H2SO4 / t
10kg H2SO4 / t
1kg H2SO4 / t

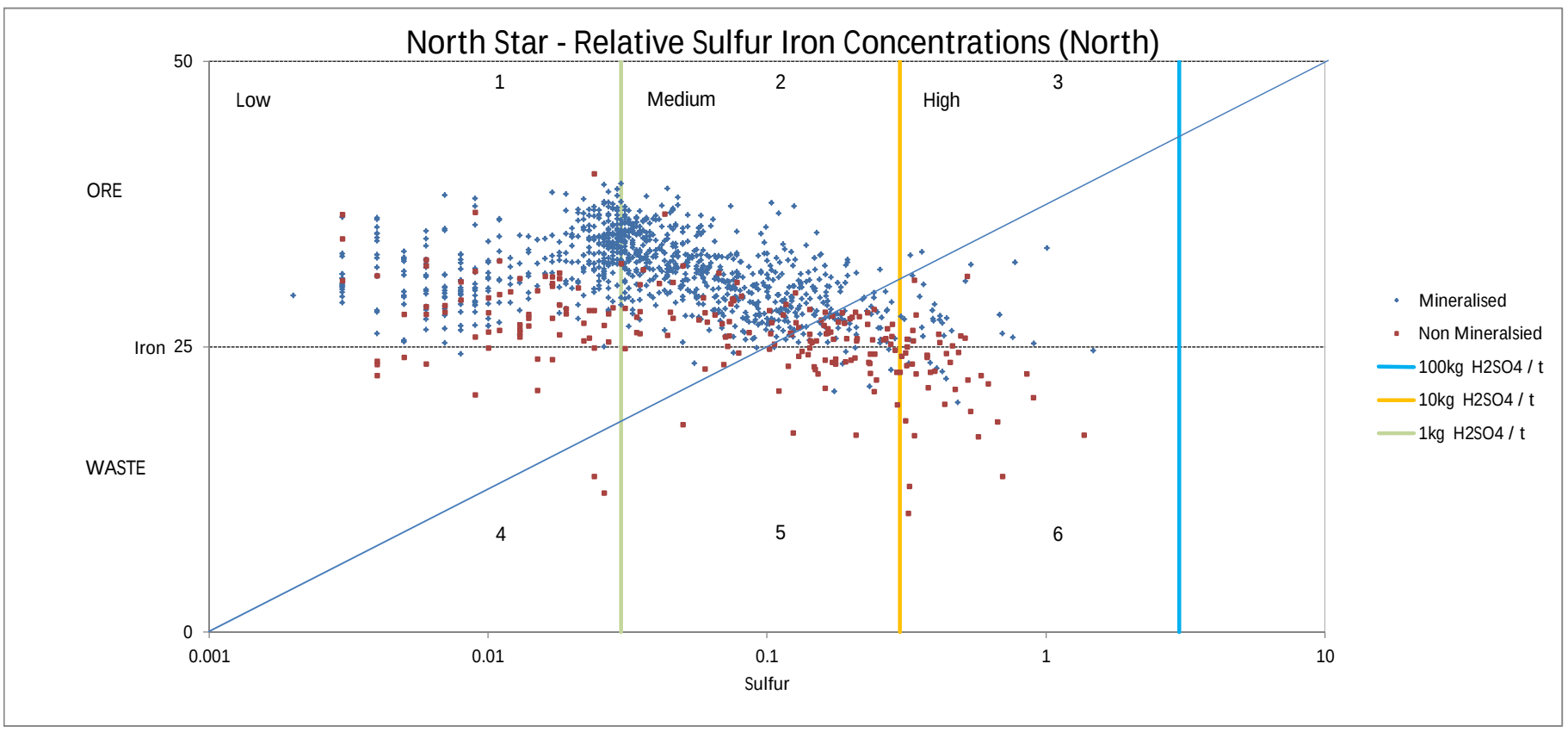

North Star - Relative Sulfur Iron Concentrations (mineralised)
50
Low
1
Medium
2
High
3
ORE
Iron 25
WASTE
4
5
6
0
0.001
0.01
0.1
1
10
Sulfur
mineralised
100kg H2SO4 / t
10kg H2SO4 / t
1kg H2SO4 / t

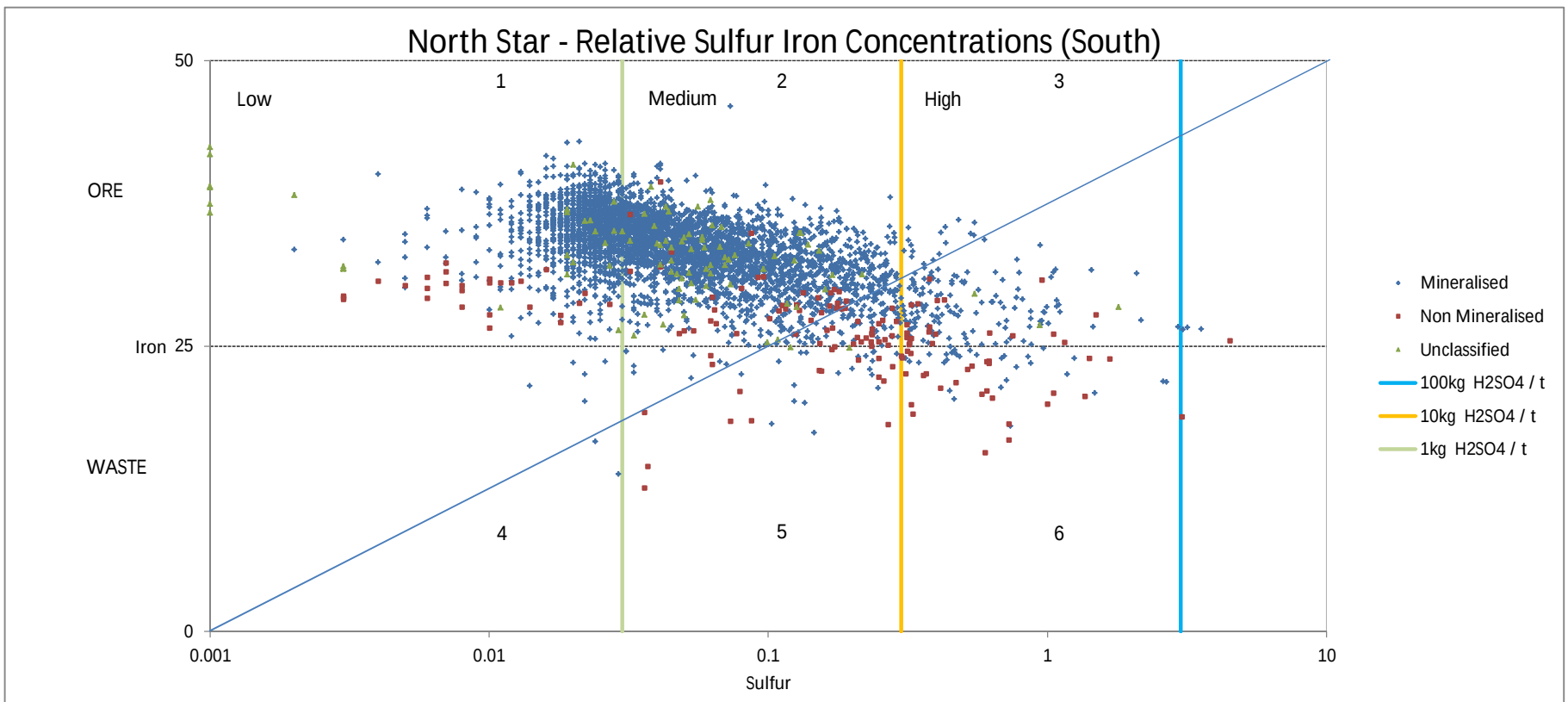

North Star - Relative Sulfur Iron Concentrations (non_mineralised)
50
Low
1
Medium
2
High
3
ORE
Iron 25
WASTE
4
5
6
0
0.001
0.01
0.1
1
10
Sulfur
non_mineralised
100kg H2SO4 / t
10kg H2SO4 / t
1kg H2SO4 / t

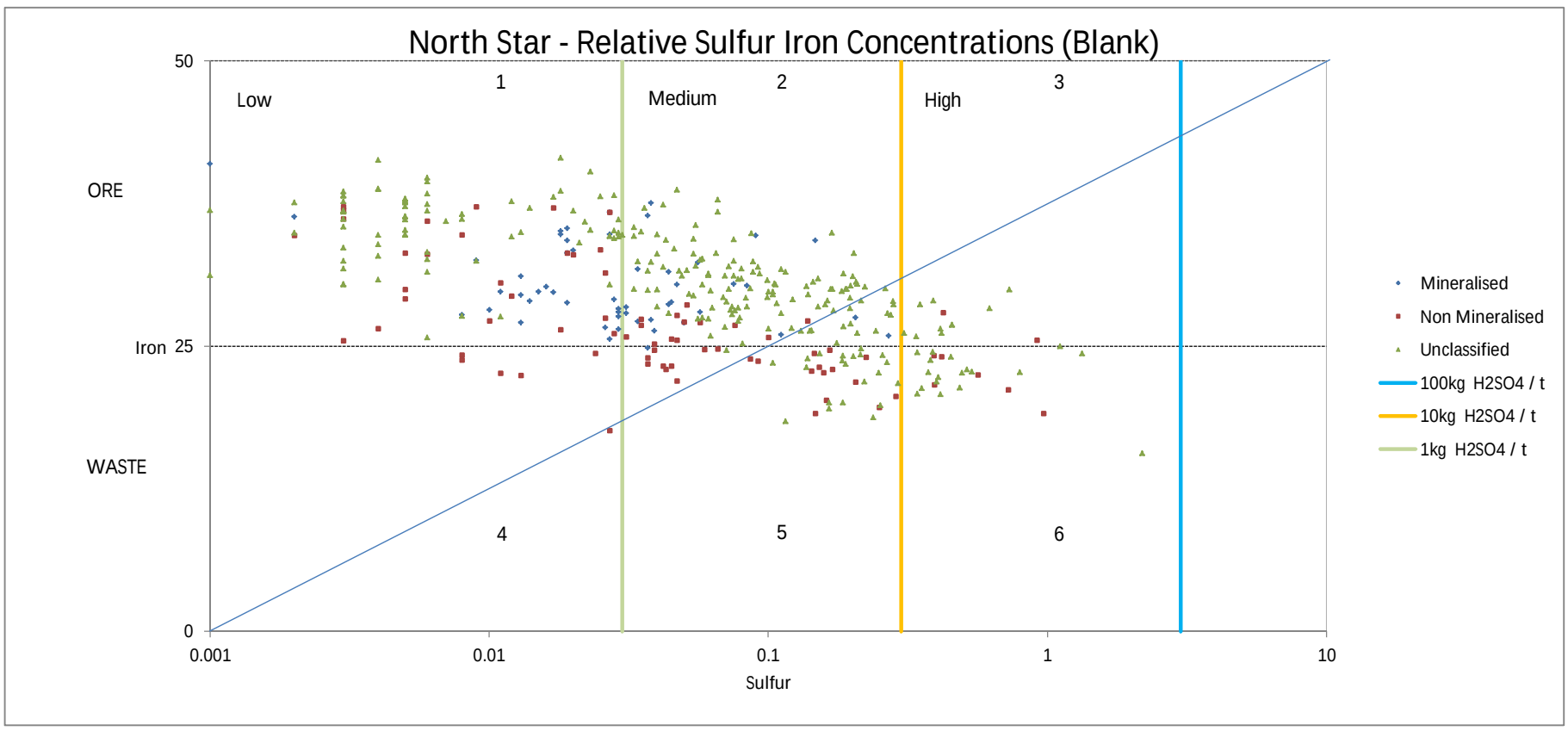

North Star - Relative Sulfur Iron Concentrations (Footwall)
50
Low
1
Medium
2
High
3
ORE
Iron 25
WASTE
4
5
6
0
0.001
0.01
0.1
1
10
Sulfur
Mineralised
Non mineralised
100kg H2SO4 / t
10kg H2SO4 / t
1kg H2SO4 / t


North Star - Relative Sulfur Iron Concentrations (Hanging Wall)
50
Low
1
Medium
2
High
3
ORE
Iron 25
WASTE
4
5
6
0
0.001
0.01
0.1
1
10
Sulfur
Mineralised
Non Mineralised
100kg H2SO4 / t
10kg H2SO4 / t
1kg H2SO4 / t

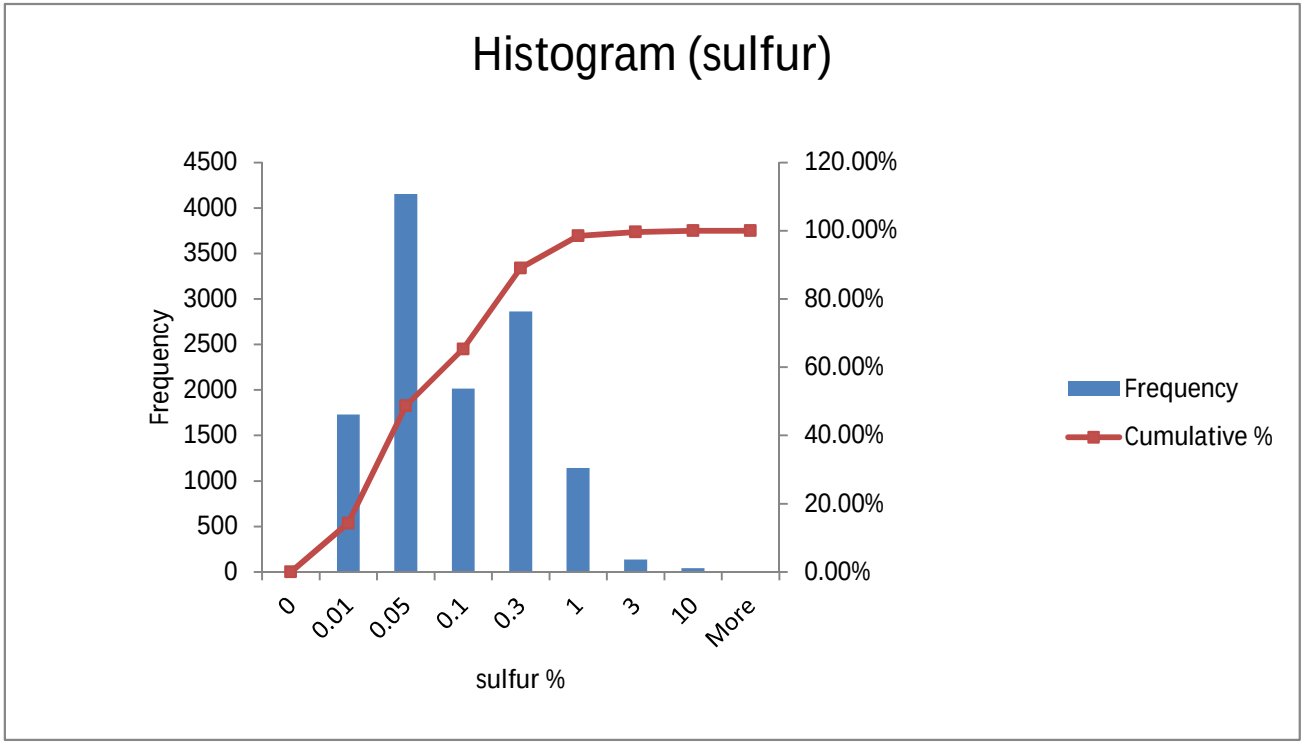

North Star - Relative Sulfur Iron Concentrations (Oxide)
50
ORE
Iron 25
WASTE
0
0.001
0.01
0.1
1
10
Sulfur
Low
Medium
High
1
2
3
4
5
6
Mineralised
Non Mineralised
Unclassified
100kg H2SO4 / t
10kg H2SO4 / t
1kg H2SO4 / t


North Star - Relative Sulfur Iron Concentrations (North)
50
ORE
Iron 25
WASTE
0
0.001
0.01
0.1
1
10
Sulfur
Low
Medium
High
1
2
3
4
5
6
Mineralised
Non Mineralsied
100kg H2SO4 / t
10kg H2SO4 / t
1kg H2SO4 / t


North Star - Relative Sulfur Iron Concentrations (South)
50
ORE
Iron 25
WASTE
0
0.001
0.01
0.1
1
10
Sulfur
Low
Medium
High
1
2
3
4
5
6
Mineralised
Non Mineralised
Unclassified
100kg H2SO4 / t
10kg H2SO4 / t
1kg H2SO4 / t


North Star - Relative Sulfur Iron Concentrations (Blank)
50
ORE
Iron 25
WASTE
0
0.001
0.01
0.1
1
10
Sulfur
Low
Medium
High
1
2
3
4
5
6
Mineralised
Non Mineralised
Unclassified
100kg H2SO4 / t
10kg H2SO4 / t
1kg H2SO4 / t

Bin	*Frequency*	*Cumulative %*
0	0	0.00%
0.01	1731	14.32%
0.05	4155	48.70%
0.1	2016	65.38%
0.3	2865	89.08%
1	1143	98.54%
3	135	99.65%
10	42	100.00%
More	0	100.00%



	Client sample ID (2nd):	SO42-	Cl-	Ca	Mg	Na	K	Al	As	Ba	Be	Cd	Cr	Co	Cu	Mn	Pb	Ni	Se	V	Zn	Fe	Hg
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
		1	1	1	1	1	1	0.1	0.005	0.1	0.001	0.001	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.05	0.001
Fresh waters (ANZECC & ARMCANZ 2000) mg/L		-	-					0.055	0.024	-	-	0.0002	-	-	0.0014	1.9	0.003	0.011	0.005	-	0.008	0.3	0.00006
Acetic acid leach	(3283 Tails) 1-Acetic Acid	3	11	199	40	1450	99	0	0	1.3	0.005	0.001	0	0.02	0.04	11.6	0	0.03	0	0	0.7	9.83	0
	(3283 Tails) 2-Acetic Acid	3	11	193	38	1460	101	0	0	1.3	0.005	0.001	0	0.02	0.05	10.9	0	0.03	0	0	0.7	11.8	0
	(3283 - Year 1-7 Tailings)-Acetic Acid	5	12	224	65	1410	71	0	0	1.3	0.003	0	0	0.01	0.03	22.2	0	0.02	0	0	0.3	3.67	0
Di Water Leach	(3283 Tails) 1-Di Water	4	0	3	0	24	1	0.29	0.002	0.233	0	0	0	0	0	0.011	0	0	0	0	0.019	0.46	0
	(3283 Tails) 2-Di Water	4	0	4	0	25	2	0.31	0.005	0.309	0	0	0	0	0	0.013	0.001	0.005	0	0	0.031	0.56	0
	(3283 - Year 1-7 Tailings)-Di Water	5	1	6	3	13	0	0.03	0.012	0.227	0	0	0	0	0	0.004	0	0	0	0	0.012	0.1	0
Soil	(3283 Tails) 1-Soil	0	0	11800	0	0	0	5800	6	50	1	2	48	9	62	4280	0	46	0	13	28	112000	0.2
	(3283 Tails) 2-Soil	0	0	12100	0	0	0	5840	6	50	1	2	48	9	58	4230	6	47	0	13	30	112000	0.2
	(3283 - Year 1-7 Tailings)-Soil	0	0	13900	0	0	0	4430	7	50	1	2	17	8	24	6580	0	24	0	0	20	110000	0.1
Water	(3283 Tails) 1-Water	12	3	4	2	21	4	0.04	0	0.004	0	0	0.008	0	0	0.011	0	0	0	0	0	0	0
	(3283 Tails) 2-Water	13	2	6	1	16	4	0.02	0	0.005	0	0	0	0	0	0.006	0	0	0	0	0	0	0
	(3283 - Year 1-7 Tailings)-Water	5	0	6	3	10	2	0.01	0	0.002	0	0	0	0	0	0.015	0	0	0	0	0	0	0

	Client sample ID (2nd):	SO42-	Cl	Ca	Mg	Na	K	Al	As	Ba	Be	Cd	Co	Cr	Cu	Pb	Mn	Ni	Se	V	Zn	Fe	Hg
	Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	LOR	1	1	1	1	1	1	0.1	0.005	0.1	0.001	0.001	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.1	0.05	0.001
Fresh water (ANZECC & ARMCANZ 2000) mg/L								0.055	0.024			0.0002			0.0014	0.003	1.9	0.011	0.005		0.008	0.3	0.00006
Di Water Leach	(3283 Tails) 1	4	<1	3	<1	24	1	0.29	0.002	<0.001	0.233	<0.0001	<0.001	<0.001	<0.001	<0.001	0.011	<0.001	<0.01	<0.01	0.019	0.46	<0.0001
	(3283 Tails) 2	4	<1	4	<1	25	2	0.31	0.005	<0.001	0.309	<0.0001	<0.001	<0.001	<0.001	0.001	0.013	0.005	<0.01	<0.01	0.031	0.56	<0.0001
	(3283 - Year 1-7 Tailings)	5	1	6	3	13	<1	0.03	0.012	<0.001	0.227	<0.0001	<0.001	<0.001	<0.001	<0.001	0.004	<0.001	<0.01	<0.01	0.012	0.1	<0.0001
Water	(3283 Tails) 1	12	3	4	2	21	4	0.04	<0.001	<0.001	0.004	<0.0001	<0.001	0.008	<0.001	<0.001	0.011	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
	(3283 Tails) 2	13	2	6	1	16	4	0.02	<0.001	<0.001	0.005	<0.0001	<0.001	<0.001	<0.001	<0.001	0.006	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
	(3283 - Year 1-7 Tailings)	5	<1	6	3	10	2	0.01	<0.001	<0.001	0.002	<0.0001	<0.001	<0.001	<0.001	<0.001	0.015	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
Soil	(3283 Tails) 1	0	0	11800	0	0	0	5800	6	50	1	2	48	9	62	<5	4280	46	<5	13	28	112000	0.2
	(3283 Tails) 2	0	0	12100	0	0	0	5840	6	50	1	2	48	9	58	6	4230	47	<5	13	30	112000	0.2
	(3283 - Year 1-7 Tailings)	0	0	13900	0	0	0	4430	7	50	1	2	17	8	24	<5	6580	24	<5	<5	20	110000	0.1

ID		Unit	(3283 Tails) 1	(3283 Tails) 2	(3283 - Year 1-7 Tailings)
Lithology					
Composition			Quartz, siderite, stilpnomelane, chamosite, ankerite, illite	Quartz, siderite, stilpnomelane, ankerite, chamosite	Quartz, siderite, stilpnomelane, ankerite, chamosite
Available ANC	(ABCC curve data)	kg/t H2SO4	42	8.2	19.6
LAB ANC		kg/t H2SO4	59.47	55.08	73.52
Estimated ANC		kg/t H2SO4	20.178	20.691	23.769
Salinity (anions/cations)	NAG liquor	mg/L	0	0	0
	Deion Water leach	mg/L	0	0	0
NAG pH			8.9	9.4	9.2
NAG pH4.5		kg/t H2SO4	<0.1	<0.1	<0.1
NAG pH7		kg/t H2SO4	<0.1	<0.1	<0.1
Metals (> EIL)	Soils	mg/kg	Mn	Mn	Mn
Metals Leaching (> ANZECC)	NAG liquor	mg/L	-	-	-
	Acetic Acid leachate	mg/L	Cd, Cu, Mn, Ni, Zn, Fe	Cd, Cu, Mn, Ni, Zn, Fe	Cu, Mn, Ni, Zn, Fe
	Di Water leachate	mg/L	Al, Zn, Fe	Al, Zn,Fe	Zn

						ED037P: Alkalinity by PC Titrator				ED038A: Acidity	ED041G: Sulfate (Turbidimetric) as SO4 2- by DA	ED045G: Chloride Discrete analyser	ED093F: Dissolved Major Cations					EG020W: Water Leachable Metals by ICP-MS															EG035W: Water Leachable Mercury by FIMS	EN055: Ionic Balance	
Matrix:	Workgroup:	Project name/ number:			Analyte grouping/ Analyte	Hydroxide Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Bicarbonate Alkalinity as CaCO3	Total Alkalinity as CaCO3	Acidity as CaCO3	SO4 - Turbidimetric	Cl-	Ca	Mg	Na	K	SUM	Al	As	Be	Ba	Cd	Cr	Co	Cu	Pb	Mn	Ni	Se	V	Zn	Fe	Hg	Total Anions	Total Cations
DI WATER LEACHATE	EP1202701	7391 North Star			CAS Number	DMO-210-001	3812-32-6	71-52-3			14808-79-8	16887-00-6	7440-70-2	7439-95-4	7440-23-5	7440-09-7		7429-90-5	7440-38-2	7440-41-7	7440-39-3	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-92-1	7439-96-5	7440-02-0	7782-49-2	7440-62-2	7440-66-6	7439-89-6	7439-97-6		
					Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L
					LOR	1	1	1	1	1	1	1	1	1	1	1		0.01	0.001	0.001	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.01	0.01	0.005	0.05	0.0001	0.01	0.01
Sample Type:	ALS Sample number:	Sample date:	Client sample ID (1st):	Client sample ID (2nd):	Fresh waters ANZECC & ARMCANZ (2000)													0.055	0.024			0.0002	0.001		0.0014	0.003	1.9	0.01	0.005		0.008	0.3	0.00006		
REG	EP1202701001	12/04/2012	12_286_02	(3283 Tails) 1		<1	29	23	52	<1	4	<1	3	<1	24	1	32	0.29	0.002	<0.001	0.233	<0.0001	<0.001	<0.001	<0.001	<0.001	0.011	<0.001	<0.01	<0.01	0.019	0.46	<0.0001	1.12	1.22
REG	EP1202701002	12/04/2012	12_286_02	(3283 Tails) 2		<1	30	22	53	<1	4	<1	4	<1	25	2	35	0.31	0.005	<0.001	0.309	<0.0001	<0.001	<0.001	<0.001	0.001	0.013	0.005	<0.01	<0.01	0.031	0.56	<0.0001	1.14	1.34
REG	EP1202701003	12/04/2012	12_168_01	(3283 - Year 1-7 Tailings)		<1	15	30	46	<1	5	1	6	3	13	<1	28	0.03	0.012	<0.001	0.227	<0.0001	<0.001	<0.001	<0.001	<0.001	0.004	<0.001	<0.01	<0.01	0.012	0.1	<0.0001	1.05	1.11

						EA009: Nett Acid Production Potential	EA011: Net Acid Generation			EA031: pH (saturated paste)	EA055: Moisture Content	ED042T: Total Sulfur by LECO	EG005T: Total Metals by ICP-AES																		EG035T: Total Recoverable Mercury by FIMS	EN60: ASLP Leaching Procedure				EN60: Bottle Leaching Procedure					
Matrix:	Workgroup:	Project name/number:		Analyte grouping/ Analyte	Net Acid Production Potential	pH (OX)	NAG (pH 4.5)	NAG (pH 7.0)	pH (Saturated Paste)	Moisture Content (dried @ 103°C)	Sulfur - Total as S (LECO)	Al	As	Ba	Be	Cd	Cr	Co	Cu	Fe	Pb	Mn	Ni	Se	V	Zn	Ca	Ca	Hg	Initial pH	After HCl pH	Extraction Fluid pH	Final pH	Final pH	ANC	MPA	Est NAPP	lab ANC	Actual NAPP
SOIL	EP1202701	6127391 North Star		CAS Number								7429-90-5	7440-38-2	7440-39-3	7440-41-7	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-89-6	7439-92-1	7439-96-5	7440-02-0	7782-49-2	7440-62-2	7440-66-6	7440-70-2		7439-97-6										
				Units	kg H2SO4/t	pH Unit	kg H2SO4/t	kg H2SO4/t	pH Unit	%	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	pH Unit	pH Unit	pH Unit	pH Unit	pH Unit					
				LOR	0.5	0.1	0.1	0.1	0.1	1	0.01	50	5	10	1	1	2	2	5	50	5	5	2	5	5	5	50		0.1	0.1	0.1	0.1	0.1	0.1					
Sample Type:	ALS Sample number:	Sample date:	Client sample ID (1st):	Client sample ID (2nd):	EIL								20	300		3	400	50	100		600	500	60		50	200		1										
REG	EP1202701001	11/04/2012	12_286_02	(3283 Tails) 1		-59.3	8.9	<0.1	<0.1	9.5	<1.0	0.17	5800	6	50	1	2	48	9	62	112000	<5	4280	46	<5	13	28	11800	1.18	0.2					9.7	20.178	5.202	-14.976	-59.470	36.798
REG	EP1202701002	11/04/2012	12_286_02	(3283 Tails) 2		-54.9	9.4	<0.1	<0.1	9.4	<1.0	0.18	5840	6	50	1	2	48	9	58	112000	6	4230	47	<5	13	30	12100	1.21	0.2					9.8	20.691	5.508	-15.183	-55.080	2.692
REG	EP1202701003	11/04/2012	12_168_01	(3283 - Year 1-7 Tailings)		-73.4	9.2	<0.1	<0.1	8.9	<1.0	0.12	4430	7	50	1	2	17	8	24	110000	<5	6580	24	<5	<5	20	13900	1.39	0.1					9.4	23.769	3.672	-20.097	-73.520	15.928
REG	EP1202701004	11/04/2012	12_286_02	(3283 Tails) 1																										9.4	1.9	4.9	5.4						
REG	EP1202701005	11/04/2012	12_286_02	(3283 Tails) 2																										9.4	1.9	4.9	5.4						
REG	EP1202701006	11/04/2012	12_168_01	(3283 - Year 1-7 Tailings)																										9.2	2	4.9	5.4						

				ED037P: Alkalinity by PC Titrator				ED038A: Acidity	ED041G: Sulfate (Turbidimetric) as SO4 2- by DA	ED045G: Chloride Discrete analyser	ED093F: Dissolved Major Cations						EG020T: Total Metals by ICP-MS															EG035T: Total Recoverable Mercury by FIMS	EN055: Ionic Balance	
Matrix:	Workgroup:	Project name/ number:	Analyte grouping/Analyte	Hydroxide Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Bicarbonate Alkalinity as CaCO3	Total Alkalinity as CaCO3	Acidity as CaCO3	SO4 - Turbidimetric	Cl-	Ca	Mg	Na	K	SUM cat/an	Al	As	Be	Ba	Cd	Cr	Co	Cu	Pb	Mn	Ni	Se	V	Zn	Fe	Hg	Total Anions	Total Cations
WATER	EP1202701	6127391 North Star	CAS Number	DMO-210-001	3812-32-6	71-52-3			14808-79-8	16887-00-6	7440-70-2	7439-95-4	7440-23-5	7440-09-7		7429-90-5	7440-38-2	7440-41-7	7440-39-3	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-92-1	7439-96-5	7440-02-0	7782-49-2	7440-62-2	7440-66-6	7439-89-6	7439-97-6		
			Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L
			LOR	1	1	1	1	1	1	1	1	1	1	1		0.01	0.001	0.001	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.01	0.01	0.005	0.05	0.0001	0.01	0.01
Sample Type:	ALS Sample number:	Sample date:	Client sample ID (1st):	Client sample ID (2nd):	Fresh waters ANZECC & ARMCANZ (2000)											0.055	0.024			0.0002			0.0014	0.0034	1.9	0.01	0.005		0.008	0.3	0.00006		
REG	EP1202701007	11/04/2012	12_286_02 (NAG Liquor)	(3283 Tails) 1		<1	8	51	59	<1	12	3	4	2	21	4	46	0.04	<0.001	<0.001	0.004	<0.0001	0.008	<0.001	<0.001	<0.001	0.011	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001	1.51	1.38
REG	EP1202701008	11/04/2012	12_286_02 (NAG Liquor)	(3283 Tails) 2		<1	18	44	62	<1	13	2	6	1	16	4	42	0.02	<0.001	<0.001	0.005	<0.0001	<0.001	<0.001	<0.001	<0.001	0.006	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001	1.57	1.18
REG	EP1202701009	11/04/2012	12_168_01 (NAG Liquor)	(3283 - Year 1-7 Tailings)		<1	11	41	52	<1	5	<1	6	3	10	2	26	0.01	<0.001	<0.001	0.002	<0.0001	<0.001	<0.001	<0.001	<0.001	0.015	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001	1.14	1.03

Appendix G

Laboratory results from detailed test work programme

							Job Number	PE065689A	PE065689A	PE065689A		PE065685	PE065685	PE065685	PE065685	PE065685	PE065685					
							Method Name	Total Recoverable Metals in Soil by ICPOES		Moisture Content	EA009: Nett Acid Production Potential	Single Addition Net Acid Generation (NAG)						Calculations				
							Analyte Name	Ca	S	% Moisture	NAPP	ECox (NAG Conductivity)	pHox (NAG pH)	NAG as kg H_2SO_4/tonne to pH 4.5	NAG as kg H_2SO_4/tonne to pH 7	NAG as kg $CaCO_3$/tonne to pH 4.5	NAG as kg $CaCO_3$/tonne to pH 7	Lab ANC	ANC	MPA	NAPP	Classification
							Units	%	%	%	kg H2SO4/t	µS/cm	pH unit	kg H2SO4/T	kg H2SO4/T	kg CaCO3/T	kg CaCO3/T				kg H2SO4/t	
Description	**Sample Date**	**Sample Name**	**Hole ID**	**From**	**To**	**Mineralisation**	**Lithology**	**10**	**10**	**0.5**	**0.5**	**1**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**					
X159501-X159502	22/02/2012	EP1201381008	NS0077	0	4	non_mineralised	oxide				-1.7		7.2	0.25	0.25			-1.7	0	0	0	NC
X159505-X159506	22/02/2012	EP1201381007	NS0077	8	12	non_mineralised	oxide				-3.2		7.3	0.25	0.25			-3.2	0	0	0	NC
X159511-X159512	21/02/2012	EP1201378041	NS0077	20	24	non_mineralised	oxide						7.7	0.25	0.25			0	0	0	0	NC
X159515-X159516	21/02/2012	EP1201378042	NS0077	28	32	non_mineralised	oxide						7.8	0.25	0.25			0	0	0	0	NC
X159521-X159522	21/02/2012	EP1201378022	NS0077	40	44	mineralised	south						8.7	0.25	0.25			0	0	0	0	NC
X159525-X159526	21/02/2012	EP1201378021	NS0077	48	52	mineralised	south						8.4	0.25	0.25			0	0	0	0	NC
X159531-X159532	21/02/2012	EP1201378024	NS0077	60	64	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X159535-X159536	21/02/2012	EP1201378023	NS0077	68	72	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X159541-X159542	21/02/2012	EP1201378011	NS0077	80	84	mineralised	south						8.4	0.25	0.25			0	0	0	0	NC
X159545-X159546	21/02/2012	EP1201378010	NS0077	88	92	mineralised	south						8.5	0.25	0.25			0	0	0	0	NC
X159555-X159556	21/02/2012	EP1201378026	NS0077	108	112	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X159561-X159562	21/02/2012	EP1201378025	NS0077	120	124	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X159565-X159566	21/02/2012	EP1201378044	NS0077	128	132	mineralised	south						8.3	0.25	0.25			0	0	0	0	NC
X159571-X159572	21/02/2012	EP1201378043	NS0077	140	144	mineralised	south						7.9	0.25	0.25			0	0	0	0	NC
X159575-X159576	21/02/2012	EP1201378017	NS0077	148	152	mineralised	south						8.7	0.25	0.25			0	0	0	0	NC
X159581-X159582	21/02/2012	EP1201378016	NS0077	158	162	mineralised	south						8.7	0.25	0.25			0	0	0	0	NC
X159587-X159588	21/02/2012	EP1201378015	NS0077	170	174	mineralised	south						8.7	0.25	0.25			0	0	0	0	NC
X159591-X159592	21/02/2012	EP1201378014	NS0077	178	182	mineralised	south	0.009	1.6				3.4	3.2	15.3			-1.6	0.1539	48.96	48.8061	PAF HC
X159597-X159598	21/02/2012	EP1201378047	NS0077	190	194	mineralised	south						8.7	0.25	0.25			0	0	0	0	NC
X159601-X159602	21/02/2012	EP1201378048	NS0077	198	202	mineralised	south						8.5	0.25	0.25			0	0	0	0	NC
X159607-X159608	21/02/2012	EP1201378013	NS0077	210	214	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X159609-X159610	21/02/2012	EP1201378012	NS0077	214	218	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X159611-X159612	21/02/2012	EP1201378040	NS0077	218	222	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X159617-X159618	21/02/2012	EP1201378039	NS0077	230	234	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X159621-X159622	21/02/2012	EP1201378045	NS0077	238	242	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X159627-X159628	21/02/2012	EP1201378046	NS0077	250	254	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X159631-X159632	21/02/2012	EP1201378020	NS0077	258	262	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X159637-X159638	21/02/2012	EP1201378019	NS0077	270	274	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X159641-X159642	21/02/2012	EP1201378018	NS0077	278	282	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X016322-23	21/02/2012	EP1201378049	NS0077										7.3	0.25	0.25			0	0	0	0	NC
X076317	21/02/2012	EP1201378050	NS0077										7.2	0.25	0.25			0	0	0	0	NC
X159643-644	22/02/2012	EP1201380010	NS0078	0	4	non_mineralised	oxide						7.3	0.25	0.25			0	0	0	0	NC
X159647-648	22/02/2012	EP1201380011	NS0078	8	12	non_mineralised	oxide						6.7	0.25	0.6			0	0	0	0	NC
X159653	22/02/2012	EP1201381048	NS0078	20	24	non_mineralised	oxide				-4.4		6.8	0.25	0.2			-4.4	0	0	0	NC
X159657	22/02/2012	EP1201381045	NS0078	28	32	non_mineralised	oxide				-3.3		7.4	0.25	0.25			-3.3	0	0	0	NC
X159673	22/02/2012	EP1201381003	NS0078	60	64	mineralised	footwall				-55		8.8	0.25	0.25			-55	0	0	0	NC
X159677	22/02/2012	EP1201381005	NS0078	68	72	mineralised	footwall				-35.4		8.8	0.25	0.25			-35.4	0	0	0	NC
X159683	22/02/2012	EP1201380028	NS0078	80	84	non_mineralised	footwall						8.7	0.25	0.25			0	0	0	0	NC
X159687	22/02/2012	EP1201380027	NS0078	88	92	mineralised	footwall						8.8	0.25	0.25			0	0	0	0	NC
X159697	22/02/2012	EP1201380009	NS0078	108	112	non_mineralised	footwall						8.5	0.25	0.25			0	0	0	0	NC
X159703	21/02/2012	EP1201378009	NS0078	120	124	mineralised	footwall						8.6	0.25	0.25			0	0	0	0	NC
X159707	21/02/2012	EP1201378005	NS0078	128	132	non_mineralised	footwall						8.6	0.25	0.25			0	0	0	0	NC
X159713	21/02/2012	EP1201378006	NS0078	140	144	non_mineralised	footwall						8.6	0.25	0.25			0	0	0	0	NC
X159717	21/02/2012	EP1201378004	NS0078	148	152	non_mineralised	footwall						8.6	0.25	0.25			0	0	0	0	NC
X159747-748	22/02/2012	EP1201380007	NS0078	208	212	mineralised	footwall						8.7	0.25	0.25			0	0	0	0	NC
X159753-754	22/02/2012	EP1201380033	NS0078	220	224	mineralised	footwall						8.7	0.25	0.25			0	0	0	0	NC
X159757	22/02/2012	EP1201380032	NS0078	228	232	non_mineralised	footwall						8.8	0.25	0.25			0	0	0	0	NC
X159759	22/02/2012	EP1201380031	NS0078	232	234	non_mineralised	footwall						8.5	0.25	0.25			0	0	0	0	NC
X159763-734	22/02/2012	EP1201380013	NS0078	240	244	mineralised	footwall						8.2	0.25	0.25			0	0	0	0	NC
X159767-768	22/02/2012	EP1201380012	NS0078	248	252	mineralised	footwall						8.7	0.25	0.25			0	0	0	0	NC
X159781-782	22/02/2012	EP1201380030	NS0078	276	280	non_mineralised	footwall						7.4	0.25	0.25			0	0	0	0	NC
X159704 1.250	21/02/2012	EP1201378002	NS0078										8.2	0.25	0.25			0	0	0	0	NC
X159718	21/02/2012	EP1201378003	NS0078										8.4	0.25	0.25			0	0	0	0	NC
X159708	21/02/2012	EP1201378007	NS0078										8.7	0.25	0.25			0	0	0	0	NC
X159714	21/02/2012	EP1201378008	NS0078										8.3	0.25	0.25			0	0	0	0	NC
X159698	22/02/2012	EP1201380008	NS0078										8.4	0.25	0.25			0	0	0	0	NC
X159688	22/02/2012	EP1201380026	NS0078										8.7	0.25	0.25			0	0	0	0	NC
X159684	22/02/2012	EP1201380029	NS0078										8.3	0.25	0.25			0	0	0	0	NC
X159674	22/02/2012	EP1201381004	NS0078								-38.1		8.8	0.25	0.25			-38.1	0	0	0	NC
X159678	22/02/2012	EP1201381006	NS0078								-41.3		8.8	0.25	0.25			-41.3	0	0	0	NC
X159658	22/02/2012	EP1201381046	NS0078								-3.3		7.2	0.25	0.25			-3.3	0	0	0	NC
X159654	22/02/2012	EP1201381047	NS0078					0.0005	0.005		-3.7		6.5	0.25	0.25			-3.705	0.0086	0.153	0.14445	PAF LC
X159785-86	22/02/2012	EP1201381038	NS0079	0	4	non_mineralised	oxide				-2.9		7.3	0.25	0.25			-2.9	0	0	0	NC
X159795-96	22/02/2012	EP1201381042	NS0079	20	24	non_mineralised	oxide				-2.1		7.8	0.25	0.25			-2.1	0	0	0	NC
X159799-800	22/02/2012	EP1201381039	NS0079	28	32	non_mineralised	oxide				-6.2		8	0.25	0.25			-6.2	0	0	0	NC
X159805-06	22/02/2012	EP1201381043	NS0079	40	44	mineralised	south				-28.4		8.2	0.25	0.25			-28.4	0	0	0	NC
X159809-10	22/02/2012	EP1201381041	NS0079	48	52	non_mineralised	south				-45.5		8.6	0.25	0.25			-45.5	0	0	0	NC
X159821-822	22/02/2012	EP1201382028	NS0079	70	74	mineralised	south						8.6	0.25	0.25			0	0	0	0	NC
X159825-826	22/02/2012	EP1201382029	NS0079	78	82	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X159831-832	22/02/2012	EP1201382030	NS0079	90	94	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X159833-X159834	22/02/2012	EP1201382031	NS0079	94	98	non_mineralised	south						7.5	0.25	0.25			0	0	0	0	NC
X159835-836	22/02/2012	EP1201382032	NS0079	98	102	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X159841	22/02/2012	EP1201382033	NS0079	110	114	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X159851-52	22/02/2012	EP1201381040	NS0079	128	132	mineralised	south				-31.3		8.9	0.25	0.25			-31.3	0	0	0	NC
X159723-724	22/02/2012	EP1201381049	NS0079	160	164						-34.6		8.7	0.25	0.25			-34.6	0	0	0	NC
X159777-778	22/02/2012	EP1201381050	NS0079	268	272			0.0005	0.21		-23.1		8.7	0.25	0.25			-23.31	0.0086	6.426	6.41745	PAF LC
X159842	22/02/2012	EP1201382034	NS0079										8.9	0.25	0.25			0	0	0	0	NC

							Job Number	PE065689A	PE065689A	PE065689A		PE065685	PE065685	PE065685	PE065685	PE065685	PE065685					
							Method Name	**Total Recoverable Metals in Soil by ICPOES**		**Moisture Content**	**EA009: Nett Acid Production Potential**	**Single Addition Net Acid Generation (NAG)**						**Calculations**				
							Analyte Name	**Ca**	**S**	**% Moisture**	**NAPP**	**ECox (NAG Conductivity)**	**pHox (NAG pH)**	**NAG as kg H_2SO_4/tonne to pH 4.5**	**NAG as kg H_2SO_4/tonne to pH 7**	**NAG as kg CaCO3/tonne to pH 4.5**	**NAG as kg CaCO3/tonne to pH 7**	**Lab ANC**	**ANC**	**MPA**	**NAPP**	**Classification**
							Units	**%**	**%**	**%**	**kg H2SO4/t**	**µS/cm**	**pH unit**	**kg H2SO4/T**	**kg H2SO4/T**	**kg CaCO3/T**	**kg CaCO3/T**				**kg H2SO4/t**	
Description	**Sample Date**	**Sample Name**	**Hole ID**	**From**	**To**	**Mineralisation**	**Lithology**	**10**	**10**	**0.5**	**0.5**	**1**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**					
X159487-48	22/02/2012	EP1201381044	NS0079								-31.1		8.9	0.25	0.25			-31.1	0	0	0	NC
X076296-X076297	22/02/2012	EP1201380040	NS0083	0	4	non_mineralised	oxide						7.7	0.25	0.25			0	0	0	0	NC
X076300-301	22/02/2012	EP1201380039	NS0083	8	12	non_mineralised	oxide						7.6	0.25	0.25			0	0	0	0	NC
X076306-307	22/02/2012	EP1201381002	NS0083	20	24	non_mineralised	oxide				-3.8		7	0.25	0.25			-3.8	0	0	0	NC
X076310	22/02/2012	EP1201381001	NS0083	28	32	non_mineralised	oxide				-2		7.1	0.25	0.25			-2	0	0	0	NC
X076364-65	22/02/2012	EP1201380043	NS0083	130	134	non_mineralised	footwall						8.4	0.25	0.25			0	0	0	0	NC
X076368-69	22/02/2012	EP1201380042	NS0083	138	142	non_mineralised	footwall						9	0.25	0.25			0	0	0	0	NC
X076374-X076375	22/02/2012	EP1201380044	NS0083	150	154	non_mineralised	footwall						8.9	0.25	0.25			0	0	0	0	NC
X076394-395	22/02/2012	EP1201380003	NS0083	190	194	non_mineralised	footwall						8.4	0.25	0.25			0	0	0	0	NC
X076398-399	22/02/2012	EP1201380001	NS0083	198	202	non_mineralised	footwall						8.2	0.25	0.25			0	0	0	0	NC
X076406-407	22/02/2012	EP1201380002	NS0083	210	214	non_mineralised	footwall						8.8	0.25	0.25			0	0	0	0	NC
X076410-411	22/02/2012	EP1201380005	NS0083	218	222	non_mineralised	footwall						8.7	0.25	0.25			0	0	0	0	NC
X076416-417	22/02/2012	EP1201380006	NS0083	230	234	non_mineralised	footwall						8.4	0.25	0.25			0	0	0	0	NC
X076420-421	22/02/2012	EP1201380004	NS0083	238	242	non_mineralised	footwall						8.8	0.25	0.25			0	0	0	0	NC
X076426-427	28/02/2012	EP1201531009	NS0083	250	254	non_mineralised	footwall						8.8	0.25	0.25			0	0	0	0	NC
X076438-439	28/02/2012	EP1201531010	NS0083	268	272	non_mineralised	footwall						8.8	0.25	0.25			0	0	0	0	NC
X076444	28/02/2012	EP1201531011	NS0083	280	282	non_mineralised	footwall						8.6	0.25	0.25			0	0	0	0	NC
X076359	22/02/2012	EP1201380041	NS0083										8.5	0.25	0.25			0	0	0	0	NC
NS0084 X076461-X076462		PE065689.086	NS0084	30	34	non_mineralised	oxide					**76**	**7.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X076481-82	28/02/2012	EP1201528036	NS0084	70	74	non_mineralised	hangingwall						8.9	0.25	0.25			0	0	0	0	NC
X076485-86	28/02/2012	EP1201528032	NS0084	78	82	non_mineralised	hangingwall						8.7	0.25	0.25			0	0	0	0	NC
X076492	28/02/2012	EP1201528034	NS0084	90	92	non_mineralised	hangingwall						8.8	0.25	0.25			0	0	0	0	NC
X076507-08	28/02/2012	EP1201528035	NS0084	120	124	non_mineralised	hangingwall						8.7	0.25	0.25			0	0	0	0	NC
X076511-12	28/02/2012	EP1201528033	NS0084	128	132	non_mineralised	hangingwall						8.7	0.25	0.25			0	0	0	0	NC
X076517-18	28/02/2012	EP1201527006	NS0084	140	144	non_mineralised	hangingwall						8.2	0.25	0.25			0	0	0	0	NC
X076523-24	28/02/2012	EP1201527009	NS0084	150	154	non_mineralised	hangingwall						8.3	0.25	0.25			0	0	0	0	NC
X076527-28	28/02/2012	EP1201528043	NS0084	158	162	non_mineralised	hangingwall	0.004	0.77				3.4	11.8	22			-0.77	0.0684	23.562	23.4936	PAF HC
X076533-34	28/02/2012	EP1201528045	NS0084	170	174	mineralised	hangingwall						9.2	0.25	0.25			0	0	0	0	NC
X076539	28/02/2012	EP1201527005	NS0084	180	182	mineralised	hangingwall						8.5	0.25	0.25			0	0	0	0	NC
X076544-45	28/02/2012	EP1201527007	NS0084	190	194	mineralised	hangingwall						8.2	0.25	0.25			0	0	0	0	NC
X076548-49	28/02/2012	EP1201527008	NS0084	198	202	non_mineralised	hangingwall						8.2	0.25	0.25			0	0	0	0	NC
X076554-55	28/02/2012	EP1201528008	NS0084	210	214	non_mineralised	hangingwall						8.9	0.25	0.25			0	0	0	0	NC
X076556-57	28/02/2012	EP1201528044	NS0084	214	218	mineralised	hangingwall						9.3	0.25	0.25			0	0	0	0	NC
X076564-65	28/02/2012	EP1201528011	NS0084	228	232	mineralised	hangingwall						9	0.25	0.25			0	0	0	0	NC
X076574-75	28/02/2012	EP1201528042	NS0084	248	252	mineralised	hangingwall						9.2	0.25	0.25			0	0	0	0	NC
X076580-581	28/02/2012	EP1201528007	NS0084	258	262	non_mineralised	hangingwall						8.9	0.25	0.25			0	0	0	0	NC
NS0084 X076586-X076857		PE065689.087	NS0084	270	274	non_mineralised	hangingwall					**260**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X076591	28/02/2012	EP1201528009	NS0084	280	282	non_mineralised	hangingwall						9.1	0.25	0.25			0	0	0	0	NC
X079570-71	28/02/2012	EP1201528010	NS0084										9.1	0.25	0.25			0	0	0	0	NC
X076592	22/02/2012	EP1201383010	NS0085	0	2	non_mineralised	oxide						7.8	0.25	0.25			0	0	0	0	NC
X076597	22/02/2012	EP1201383012	NS0085	10	14	non_mineralised	oxide						6.9	0.25	0.25			0	0	0	0	NC
X076601-602	22/02/2012	EP1201383011	NS0085	18	22	non_mineralised	oxide						7.5	0.25	0.25			0	0	0	0	NC
X076607-608	22/02/2012	EP1201384006	NS0085	30	34	non_mineralised	oxide				-7.3		8.2	0.25	0.25			-7.3	0	0	0	NC
X076611-612	22/02/2012	EP1201384007	NS0085	38	42	mineralised	south				-41.8		8.7	0.25	0.25			-41.8	0	0	0	NC
X076617-618	22/02/2012	EP1201384008	NS0085	50	54	mineralised	south				-52.2		8.5	0.25	0.25			-52.2	0	0	0	NC
X076621-622	22/02/2012	EP1201384005	NS0085	58	62	mineralised	south				-57.4		8.5	0.25	0.25			-57.4	0	0	0	NC
X076627-628	22/02/2012	EP1201384013	NS0085	70	74	mineralised	south				-48		8.7	0.25	0.25			-48	0	0	0	NC
X076632-633	22/02/2012	EP1201384014	NS0085	78	82	mineralised	south				-42		8.7	0.25	0.25			-42	0	0	0	NC
X076638-639	22/02/2012	EP1201384015	NS0085	90	94	mineralised	south				-64.9		8.6	0.25	0.25			-64.9	0	0	0	NC
X076642-643	22/02/2012	EP1201384016	NS0085	98	102	mineralised	south				-63.3		8.6	0.25	0.25			-63.3	0	0	0	NC
X076648	22/02/2012	EP1201383042	NS0085	110	112	mineralised	south						8.3	0.25	0.25			0	0	0	0	NC
X076653-654	22/02/2012	EP1201383041	NS0085	118	122	mineralised	south						8.1	0.25	0.25			0	0	0	0	NC
X076659	22/02/2012	EP1201383039	NS0085	130	132	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X076665-666	22/02/2012	EP1201383040	NS0085	140	144	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X076669-670	22/02/2012	EP1201384010	NS0085	148	152	mineralised	south				-52.9		8.5	0.25	0.25			-52.9	0	0	0	NC
X076675-676	22/02/2012	EP1201384009	NS0085	160	164	mineralised	south				-43.6		8.5	0.25	0.25			-43.6	0	0	0	NC
X076679-680	22/02/2012	EP1201384011	NS0085	168	172	mineralised	south				-55.8		8.7	0.25	0.25			-55.8	0	0	0	NC
X076685-686	22/02/2012	EP1201384012	NS0085	180	184	mineralised	south				-55.5		8.6	0.25	0.25			-55.5	0	0	0	NC
X076695-696	22/02/2012	EP1201384004	NS0085	200	204	non_mineralised	south				-34.4		8	0.25	0.25			-34.4	0	0	0	NC
X076699	22/02/2012	EP1201384003	NS0085	208	212	mineralised	south				-52.9		8.6	0.25	0.25			-52.9	0	0	0	NC
X076711-X076712	22/02/2012	EP1201384002	NS0085	230	234	mineralised	south				-59.6		8.4	0.25	0.25			-59.6	0	0	0	NC
X076715-716	22/02/2012	EP1201384018	NS0085	238	242	mineralised	south				-51.6		8.8	0.25	0.25			-51.6	0	0	0	NC
X076721-722	22/02/2012	EP1201384019	NS0085	250	254	mineralised	south				-40		8.8	0.25	0.25			-40	0	0	0	NC
X076725-726	22/02/2012	EP1201384017	NS0085	258	262	mineralised	south				-43.3		8.6	0.25	0.25			-43.3	0	0	0	NC
X076731-732	22/02/2012	EP1201384020	NS0085	270	274	mineralised	south				-40		8.6	0.25	0.25			-40	0	0	0	NC
X076598	22/02/2012	EP1201383009	NS0085										8.4	0.25	0.25			0	0	0	0	NC
X076708-706	22/02/2012	EP1201384001	NS0085								-37.2		8.5	0.25	0.25			-37.2	0	0	0	NC
X076741-742	22/02/2012	EP1201383045	NS0086	8	12	non_mineralised	oxide	0.0005	0.01				6.2	0.25	1.1			-0.01	0.0086	0.306	0.29745	PAF LC
X076747-748	22/02/2012	EP1201383044	NS0086	20	24	non_mineralised	oxide						7.1	0.25	0.25			0	0	0	0	NC
X076751-752	22/02/2012	EP1201383046	NS0086	28	32	non_mineralised	oxide	0.0005	0.005				6.5	0.25	1.3			-0.005	0.0086	0.153	0.14445	PAF LC
X076757-758	22/02/2012	EP1201383043	NS0086	40	44	non_mineralised	oxide						7.6	0.25	0.25			0	0	0	0	NC
X076761-762	22/02/2012	EP1201383001	NS0086	48	52	non_mineralised	footwall						8.4	0.25	0.25			0	0	0	0	NC
X076767-768	22/02/2012	EP1201383004	NS0086	60	64	non_mineralised	footwall						8.6	0.25	0.25			0	0	0	0	NC
X076771-772	22/02/2012	EP1201383003	NS0086	68	72	mineralised	footwall						8.8	0.25	0.25			0	0	0	0	NC
X076777-778	22/02/2012	EP1201383002	NS0086	80	84	non_mineralised	footwall						8.7	0.25	0.25			0	0	0	0	NC
X076781-782	22/02/2012	EP1201385002	NS0086	88	92	non_mineralised	footwall				-24.3		8.6	0.25	0.25			-24.3	0	0	0	NC
X076793-794	22/02/2012	EP1201385001	NS0086	110	114	non_mineralised	footwall				-20		8	0.25	0.25			-20	0	0	0	NC
X076797-798	22/02/2012	EP1201385004	NS0086	118	122	non_mineralised	footwall				-27.4		8.5	0.25	0.25			-27.4	0	0	0	NC
X076803-804	22/02/2012	EP1201385003	NS0086	128	132	non_mineralised	footwall				-32		8.7	0.25	0.25			-32	0	0	0	NC
X076809-810	22/02/2012	EP1201385008	NS0086	140	144	mineralised	footwall				-38.7		8.6	0.25	0.25			-38.7	0	0	0	NC
X076813-814	22/02/2012	EP1201385006	NS0086	148	152	mineralised	footwall				-38.4		8.9	0.25	0.25			-38.4	0	0	0	NC

							Job Number	PE065689A	PE065689A	PE065689A		PE065685	PE065685	PE065685	PE065685	PE065685	PE065685					
							Method Name	Total Recoverable Metals in Soil by ICPOES		Moisture Content	EA009: Nett Acid Production Potential	Single Addition Net Acid Generation (NAG)						Calculations				
							Analyte Name	Ca	S	% Moisture	NAPP	ECox (NAG Conductivity)	pHox (NAG pH)	NAG as kg H_2SO_4/tonne to pH 4.5	NAG as kg H_2SO_4/tonne to pH 7	NAG as kg $CaCO_3$/tonne to pH 4.5	NAG as kg $CaCO_3$/tonne to pH 7	Lab ANC	ANC	MPA	NAPP	Classification
							Units	%	%	%	kg H2SO4/t	µS/cm	pH unit	kg H2SO4/T	kg H2SO4/T	kg CaCO3/T	kg CaCO3/T				kg H2SO4/t	
Description	**Sample Date**	**Sample Name**	**Hole ID**	**From**	**To**	**Mineralisation**	**Lithology**	**10**	**10**	**0.5**	**0.5**	**1**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**					
X076819-820	22/02/2012	EP1201385007	NS0086	160	164	mineralised	footwall				-44.3		8.6	0.25	0.25			-44.3	0	0	0	NC
X076823-824	22/02/2012	EP1201385005	NS0086	168	172	non_mineralised	footwall				-24.4		8.7	0.25	0.25			-24.4	0	0	0	NC
X076829	22/02/2012	EP1201384041	NS0086	180	182	mineralised	footwall				-42.2		8.9	0.25	0.25			-42.2	0	0	0	NC
X076833-834	22/02/2012	EP1201384042	NS0086	188	192	mineralised	footwall				-45.2		9	0.25	0.25			-45.2	0	0	0	NC
X076839-840	22/02/2012	EP1201384044	NS0086	200	204	mineralised	footwall				-43.2		9	0.25	0.25			-43.2	0	0	0	NC
X076843-844	22/02/2012	EP1201384043	NS0086	208	212	non_mineralised	footwall				-62.9		9.2	0.25	0.25			-62.9	0	0	0	NC
X076849-850	22/02/2012	EP1201384048	NS0086	220	224	mineralised	footwall				-47.1		9.3	0.25	0.25			-47.1	0	0	0	NC
X076853-854	22/02/2012	EP1201384049	NS0086	228	232	mineralised	footwall				-42.6		9.2	0.25	0.25			-42.6	0	0	0	NC
X076863-864	22/02/2012	EP1201384045	NS0086	248	252	mineralised	footwall				-58.4		9.2	0.25	0.25			-58.4	0	0	0	NC
X076869-870	22/02/2012	EP1201384050	NS0086	260	264	non_mineralised	footwall				-35.8		9.3	0.25	0.25			-35.8	0	0	0	NC
X076873-874	22/02/2012	EP1201384046	NS0086	268	272	mineralised	footwall				-22.5		9.1	0.25	0.25			-22.5	0	0	0	NC
X076879	22/02/2012	EP1201384047	NS0086	280	282	non_mineralised	footwall				-47.4		9.2	0.25	0.25			-47.4	0	0	0	NC
X076884-85	28/02/2012	EP1201527028	NS0087	8	12	non_mineralised	oxide						7	0.25	0.25			0	0	0	0	NC
X076895-96	28/02/2012	EP1201527035	NS0087	30	34	non_mineralised	oxide						8.1	0.25	0.25			0	0	0	0	NC
X076905-06	28/02/2012	EP1201527030	NS0087	50	54	mineralised	footwall						9	0.25	0.25			0	0	0	0	NC
X076911-12	28/02/2012	EP1201527033	NS0087	60	64	mineralised	footwall						8.9	0.25	0.25			0	0	0	0	NC
X076923-24	28/02/2012	EP1201527031	NS0087	84	88	mineralised	footwall						8.3	0.25	0.25			0	0	0	0	NC
X076925-26	28/02/2012	EP1201527032	NS0087	88	92	non_mineralised	footwall						8.8	0.25	0.25			0	0	0	0	NC
X076931-32	28/02/2012	EP1201527029	NS0087	98	102	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X076937-38	28/02/2012	EP1201527034	NS0087	110	114	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X076941-42	22/02/2012	EP1201381019	NS0087	118	122	mineralised	south				-48.3		8.8	0.25	0.25			-48.3	0	0	0	NC
X076947-48	22/02/2012	EP1201381020	NS0087	130	134	mineralised	south				-32.8		8.7	0.25	0.25			-32.8	0	0	0	NC
X076951-52	22/02/2012	EP1201381018	NS0087	138	142	mineralised	south				-48.9		8.8	0.25	0.25			-48.9	0	0	0	NC
X076957-58	22/02/2012	EP1201381017	NS0087	148	152	mineralised	south				-50		8.8	0.25	0.25			-50	0	0	0	NC
X076963-64	22/02/2012	EP1201381016	NS0087	160	164	mineralised	south				-44.8		8.9	0.25	0.25			-44.8	0	0	0	NC
X076967-68	22/02/2012	EP1201381009	NS0087	168	172	mineralised	south				-43.6		8.9	0.25	0.25			-43.6	0	0	0	NC
X076973-74	22/02/2012	EP1201381015	NS0087	180	184	mineralised	south				-44.4		8.9	0.25	0.25			-44.4	0	0	0	NC
X076977-78	22/02/2012	EP1201381037	NS0087	188	192	mineralised	south				-34.8		8.9	0.25	0.25			-34.8	0	0	0	NC
X076983-84	22/02/2012	EP1201381032	NS0087	198	202	mineralised	south				-47.5		8.9	0.25	0.25			-47.5	0	0	0	NC
X076989	22/02/2012	EP1201381036	NS0087	210	212	mineralised	south				-37.6		8.9	0.25	0.25			-37.6	0	0	0	NC
X076993-94	28/02/2012	EP1201527037	NS0087	218	222	mineralised	south						9.1	0.25	0.25			0	0	0	0	NC
X076999-X077000	22/02/2012	EP1201381033	NS0087	230	234	mineralised	south				-51.3		9	0.25	0.25			-51.3	0	0	0	NC
X077005-06	22/02/2012	EP1201381030	NS0087	240	244	mineralised	south				-45		8.9	0.25	0.25			-45	0	0	0	NC
X077009-10	22/02/2012	EP1201381034	NS0087	248	252	mineralised	south				-35.2		8.9	0.25	0.25			-35.2	0	0	0	NC
X077015-16	22/02/2012	EP1201381031	NS0087	260	264	mineralised	south				-48.5		8.8	0.25	0.25			-48.5	0	0	0	NC
X077019-20	22/02/2012	EP1201381035	NS0087	268	272	mineralised	south				-28.2		8.7	0.25	0.25			-28.2	0	0	0	NC
X077025-26	22/02/2012	EP1201381026	NS0087	280	284	mineralised	south				-38.1		8.9	0.25	0.25			-38.1	0	0	0	NC
X077037-38	22/02/2012	EP1201381027	NS0087	300	304	mineralised	south				-34.8		9	0.25	0.25			-34.8	0	0	0	NC
X077041-42	28/02/2012	EP1201527038	NS0087	308	312	mineralised	south						9.1	0.25	0.25			0	0	0	0	NC
X077047-48	22/02/2012	EP1201381028	NS0087	320	324	mineralised	south				-43.2		8.9	0.25	0.25			-43.2	0	0	0	NC
X077053-54	22/02/2012	EP1201381029	NS0087	330	334	mineralised	south				-43.3		8.9	0.25	0.25			-43.3	0	0	0	NC
X077057-58	22/02/2012	EP1201381021	NS0087	338	342	mineralised	south				-49.6		8.9	0.25	0.25			-49.6	0	0	0	NC
X077063-64	28/02/2012	EP1201527036	NS0087	350	354	mineralised	south						9.1	0.25	0.25			0	0	0	0	NC
X077067-68	22/02/2012	EP1201381014	NS0087	358	362	mineralised	south				-52.6		8.9	0.25	0.25			-52.6	0	0	0	NC
X077073-74	22/02/2012	EP1201381011	NS0087	368	372	mineralised	south				-72.6		8.9	0.25	0.25			-72.6	0	0	0	NC
X077079-80	22/02/2012	EP1201381013	NS0087	380	384	mineralised	south				-59.3		8.9	0.25	0.25			-59.3	0	0	0	NC
X077083-84	22/02/2012	EP1201381012	NS0087	388	392	mineralised	south				-77.4		8.9	0.25	0.25			-77.4	0	0	0	NC
X077087-88	22/02/2012	EP1201381010	NS0087	396	400	mineralised	south				-65.8		8.9	0.25	0.25			-65.8	0	0	0	NC
X077089	22/02/2012	EP1201382020	NS0088	0	2	non_mineralised	oxide						6.8	0.25	0.5			0	0	0	0	NC
X077093-94	22/02/2012	EP1201382016	NS0088	8	12	non_mineralised	oxide	0.0005	0.005				6.5	0.25	2.3			-0.005	0.0086	0.153	0.14445	PAF LC
X077099-100	22/02/2012	EP1201382017	NS0088	20	24	non_mineralised	oxide						8.2	0.25	0.25			0	0	0	0	NC
X077105-06	22/02/2012	EP1201382022	NS0088	30	34	non_mineralised	oxide						9.7	0.25	0.25			0	0	0	0	NC
X077109-10	22/02/2012	EP1201382015	NS0088	38	42	non_mineralised	oxide						8.4	0.25	0.25			0	0	0	0	NC
X077115-16	22/02/2012	EP1201382023	NS0088	50	54	non_mineralised	oxide						8.9	0.25	0.25			0	0	0	0	NC
X077121-22	22/02/2012	EP1201382013	NS0088	60	64	non_mineralised	oxide						8.7	0.25	0.25			0	0	0	0	NC
X077125-26	22/02/2012	EP1201382011	NS0088	68	72	mineralised	oxide						8.6	0.25	0.25			0	0	0	0	NC
X077131-32	22/02/2012	EP1201382012	NS0088	80	84	mineralised	oxide						8.8	0.25	0.25			0	0	0	0	NC
X077135-36	22/02/2012	EP1201382021	NS0088	88	92	non_mineralised	footwall						9.8	0.25	0.25			0	0	0	0	NC
X077141-42	22/02/2012	EP1201382018	NS0088	100	104	non_mineralised	north						8.7	0.25	0.25			0	0	0	0	NC
X077145-46	22/02/2012	EP1201382019	NS0088	108	112	non_mineralised	north						8.7	0.25	0.25			0	0	0	0	NC
X077152	22/02/2012	EP1201382014	NS0088	120	122	mineralised	north						8.9	0.25	0.25			0	0	0	0	NC
X077157-58	22/02/2012	EP1201382043	NS0088	130	134	mineralised	north						8.9	0.25	0.25			0	0	0	0	NC
X077161-62	22/02/2012	EP1201382038	NS0088	138	142	non_mineralised	north						8.8	0.25	0.25			0	0	0	0	NC
X077167-68	22/02/2012	EP1201382041	NS0088	150	154	non_mineralised	north						7.7	0.25	0.25			0	0	0	0	NC
X077177-78	22/02/2012	EP1201382036	NS0088	170	174	mineralised	north						8.9	0.25	0.25			0	0	0	0	NC
X077181-82	22/02/2012	EP1201382035	NS0088	178	182	non_mineralised	north						8.7	0.25	0.25			0	0	0	0	NC
X077187-88	22/02/2012	EP1201382037	NS0088	190	194	mineralised	north						9	0.25	0.25			0	0	0	0	NC
X077191-92	22/02/2012	EP1201382039	NS0088	198	202	mineralised	north						8.8	0.25	0.25			0	0	0	0	NC
X077197-98	22/02/2012	EP1201382040	NS0088	210	214	mineralised	north						8.9	0.25	0.25			0	0	0	0	NC
X077207-08	22/02/2012	EP1201382042	NS0088	228	232	mineralised	north						8.6	0.25	0.25			0	0	0	0	NC
X077213-14	22/02/2012	EP1201382006	NS0088	240	244	non_mineralised	north						8.8	0.25	0.25			0	0	0	0	NC
X077217-18	22/02/2012	EP1201382003	NS0088	248	252	non_mineralised	north						8.7	0.25	0.25			0	0	0	0	NC
X077223-24	22/02/2012	EP1201382008	NS0088	260	264	non_mineralised	north						8.5	0.25	0.25			0	0	0	0	NC
X077227-28	22/02/2012	EP1201382002	NS0088	268	272	non_mineralised	north						8.8	0.25	0.25			0	0	0	0	NC
X077233-34	22/02/2012	EP1201382001	NS0088	280	284	non_mineralised	north						8.6	0.25	0.25			0	0	0	0	NC
X077237-38	22/02/2012	EP1201382004	NS0088	288	292	non_mineralised	north						8.8	0.25	0.25			0	0	0	0	NC
X077243-44	22/02/2012	EP1201382005	NS0088	300	304	mineralised	north						8.9	0.25	0.25			0	0	0	0	NC
X077247-48	22/02/2012	EP1201382007	NS0088	308	312	mineralised	north						8.7	0.25	0.25			0	0	0	0	NC
X077253-54	28/02/2012	EP1201526001	NS0088	318	322	mineralised	north						8.9	0.25	0.25			0	0	0	0	NC

							Job Number	PE065689A	PE065689A	PE065689A		PE065685	PE065685	PE065685	PE065685	PE065685	PE065685					
							Method Name	**Total Recoverable Metals in Soil by ICPOES**		**Moisture Content**	**EA009: Nett Acid Production Potential**	**Single Addition Net Acid Generation (NAG)**						**Calculations**				
							Analyte Name	**Ca**	**S**	**% Moisture**	**NAPP**	**ECox (NAG Conductivity)**	**pHox (NAG pH)**	**NAG as kg H_2SO_4/tonne to pH 4.5**	**NAG as kg H_2SO_4/tonne to pH 7**	**NAG as kg CaCO3/tonne to pH 4.5**	**NAG as kg CaCO3/tonne to pH 7**	**Lab ANC**	**ANC**	**MPA**	**NAPP**	**Classification**
							Units	**%**	**%**	**%**	**kg H2SO4/t**	**µS/cm**	**pH unit**	**kg H2SO4/T**	**kg H2SO4/T**	**kg CaCO3/T**	**kg CaCO3/T**				**kg H2SO4/t**	
Description	**Sample Date**	**Sample Name**	**Hole ID**	**From**	**To**	**Mineralisation**	**Lithology**	**10**	**10**	**0.5**	**0.5**	**1**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**					
X077259	22/02/2012	EP1201382009	NS0088	330	332	mineralised	north						8.9	0.25	0.25			0	0	0	0	NC
X077263-64	28/02/2012	EP1201526002	NS0088	338	342	mineralised	north						9.1	0.25	0.25			0	0	0	0	NC
X077267-68	22/02/2012	EP1201382010	NS0088	346	350	mineralised	north						8.9	0.25	0.25			0	0	0	0	NC
X077269-70	28/02/2012	EP1201528018	NS0089	0	4	non_mineralised	oxide	0.052	0.02				6.6	0.25	2.4			-0.02	0.8892	0.612	-0.2772	NAF
NS0089 X076880-X076881		PE065689.082	NS0089	0	4	non_mineralised	oxide	**0.02**	**0.01**	0.25		**67**	**7.1**	0.25	0.25	0.25	0.25	-0.0058	0.3933	0.1775	-0.2158	NAF
X077273-74	28/02/2012	EP1201528002	NS0089	8	12	non_mineralised	oxide						8.1	0.25	0.25			0	0	0	0	NC
X076455-56	28/02/2012	EP1201527022	NS0089	18	22	non_mineralised	oxide						8	0.25	0.25			0	0	0	0	NC
NS0089 X077279-X077280		PE065689.078	NS0089	20	24	non_mineralised	oxide					**77**	**7.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X077283-84	28/02/2012	EP1201528004	NS0089	28	32	non_mineralised	oxide						8	0.25	0.25			0	0	0	0	NC
X076465-66	28/02/2012	EP1201527027	NS0089	38	42	non_mineralised	oxide						8.1	0.25	0.25			0	0	0	0	NC
X077289	28/02/2012	EP1201528006	NS0089	40	42	non_mineralised	oxide						7.7	0.25	0.25			0	0	0	0	NC
X077293-94	28/02/2012	EP1201528005	NS0089	48	52	non_mineralised	oxide						7.6	0.25	0.25			0	0	0	0	NC
X076471-72	28/02/2012	EP1201527024	NS0089	50	54	non_mineralised	oxide						8.9	0.25	0.25			0	0	0	0	NC
X076475-76	28/02/2012	EP1201527026	NS0089	58	62	non_mineralised	oxide						9	0.25	0.25			0	0	0	0	NC
X077299-X077300	28/02/2012	EP1201528003	NS0089	60	64	non_mineralised	oxide						8	0.25	0.25			0	0	0	0	NC
X077303-04	28/02/2012	EP1201528017	NS0089	68	72	non_mineralised	north						8.4	0.25	0.25			0	0	0	0	NC
NS0089 X076921-X076922		PE065689.083	NS0089	80	84	non_mineralised	north					**330**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X077309-10	28/02/2012	EP1201528019	NS0089	80	84	non_mineralised	north						8.7	0.25	0.25			0	0	0	0	NC
X077313-X077314	28/02/2012	EP1201528001	NS0089	88	92	non_mineralised	north						8.8	0.25	0.25			0	0	0	0	NC
X076497-98	28/02/2012	EP1201527025	NS0089	100	104	mineralised	north	0.275	0.44				7.8	0.25	0.25			-0.44	4.7025	13.464	8.7615	PAF LC
X077319-320	28/02/2012	EP1201528020	NS0089	100	104	mineralised	north						8.9	0.25	0.25			0	0	0	0	NC
X076501-502	28/02/2012	EP1201527023	NS0089	108	112	non_mineralised	north						8.9	0.25	0.25			0	0	0	0	NC
X077323-24	28/02/2012	EP1201528021	NS0089	108	112	non_mineralised	north						8	0.25	0.25			0	0	0	0	NC
X077329	28/02/2012	EP1201529038	NS0089	120	122	non_mineralised	north						8.4	0.25	0.25			0	0	0	0	NC
X077333-34	28/02/2012	EP1201529040	NS0089	128	132	non_mineralised	north						8.3	0.25	0.25			0	0	0	0	NC
X077339-40	28/02/2012	EP1201529039	NS0089	140	144	mineralised	north						9.2	0.25	0.25			0	0	0	0	NC
X077341-42	28/02/2012	EP1201529051	NS0089	144	148	mineralised	north						8.8	0.25	0.25			0	0	0	0	NC
X077343-44	28/02/2012	EP1201529043	NS0089	148	152	mineralised	north						9.3	0.25	0.25			0	0	0	0	NC
X077349	28/02/2012	EP1201529046	NS0089	160	162	mineralised	north						9	0.25	0.25			0	0	0	0	NC
X077355-56	28/02/2012	EP1201529041	NS0089	170	174	non_mineralised	north						8.9	0.25	0.25			0	0	0	0	NC
X077359	28/02/2012	EP1201529045	NS0089	178	180	non_mineralised	north						7.6	0.25	0.25			0	0	0	0	NC
X077365-66	28/02/2012	EP1201529047	NS0089	190	194	mineralised	north						9.1	0.25	0.25			0	0	0	0	NC
X077369-70	28/02/2012	EP1201529042	NS0089	198	202	mineralised	north						9.2	0.25	0.25			0	0	0	0	NC
X077375-76	28/02/2012	EP1201529050	NS0089	210	214	mineralised	north						8.9	0.25	0.25			0	0	0	0	NC
X077379-80	28/02/2012	EP1201529049	NS0089	218	222	non_mineralised	north						8.4	0.25	0.25			0	0	0	0	NC
X077385-86	28/02/2012	EP1201529048	NS0089	230	234	mineralised	north						8.7	0.25	0.25			0	0	0	0	NC
X077395-96	28/02/2012	EP1201529044	NS0089	250	254	mineralised	north						9.2	0.25	0.25			0	0	0	0	NC
X077401-02	28/02/2012	EP1201527001	NS0089	260	264	non_mineralised	north						7.5	0.25	0.25			0	0	0	0	NC
X077405-06	28/02/2012	EP1201526049	NS0089	268	272	mineralised	north						9.2	0.25	0.25			0	0	0	0	NC
NS0089 X077411-X077412		PE065686.013	NS0089	280	284	non_mineralised	north					**210**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0089 X077415-X077416		PE065686.012	NS0089	288	292	non_mineralised	north					**210**	**7.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0089 X077421-X077422		PE065686.014	NS0089	300	304	non_mineralised	north					**160**	**7.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X077425-26	28/02/2012	EP1201526048	NS0089	308	312	non_mineralised	north						9.3	0.25	0.25			0	0	0	0	NC
NS0089 X077431-X077432		PE065686.011	NS0089	320	324	non_mineralised	north					**210**	**8.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X077431-32	28/02/2012	EP1201527002	NS0089	320	324	non_mineralised	north						8.3	0.25	0.25			0	0	0	0	NC
X077435-36	28/02/2012	EP1201527003	NS0089	328	332	mineralised	north						8.4	0.25	0.25			0	0	0	0	NC
X077445-46	28/02/2012	EP1201526047	NS0089	348	352	mineralised	north						9.3	0.25	0.25			0	0	0	0	NC
NS0089 X077451-X077452		PE065689.080	NS0089	360	364	non_mineralised	north					**320**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0089 X077455-X077456		PE065689.079	NS0089	368	372	non_mineralised	north					**190**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0089 X077461-X077462		PE065689.081	NS0089	380	384	non_mineralised	north					**230**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X077465-66	28/02/2012	EP1201527004	NS0089	388	392	non_mineralised	hangingwall						8.5	0.25	0.25			0	0	0	0	NC
X077471-72	28/02/2012	EP1201526050	NS0089	398	402	non_mineralised	hangingwall						9.4	0.25	0.25			0	0	0	0	NC
NS0089 X078899-X078900		PE065689.084	NS0089									**70**	**7.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X077473-474	28/02/2012	EP1201529016	NS0090	0	4	non_mineralised	oxide	0.0005	0.01				6.4	0.25	1.5			-0.01	0.0086	0.306	0.29745	PAF LC
X077477-478	28/02/2012	EP1201529015	NS0090	8	12	non_mineralised	oxide	0.0005	0.005				6.5	0.25	4			-0.005	0.0086	0.153	0.14445	PAF LC
X077483-X077484	28/02/2012	EP1201529017	NS0090	20	24	mineralised	oxide						6.6	0.25	4			0	0	0	0	NC
X077487-488	28/02/2012	EP1201529019	NS0090	28	32	non_mineralised	oxide						8	0.25	0.25			0	0	0	0	NC
X077493-494	28/02/2012	EP1201529018	NS0090	40	44	non_mineralised	oxide						8.5	0.25	0.25			0	0	0	0	NC
X077497-498	28/02/2012	EP1201530005	NS0090	48	52	non_mineralised	south						8.1	0.25	0.25			0	0	0	0	NC
X077503-504	28/02/2012	EP1201530006	NS0090	60	64	mineralised	south						8	0.25	0.25			0	0	0	0	NC
X077507-508	28/02/2012	EP1201530002	NS0090	68	72	mineralised	south						8.7	0.25	0.25			0	0	0	0	NC
X077511-512	28/02/2012	EP1201531002	NS0090	76	80	non_mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X077517-518	28/02/2012	EP1201530003	NS0090	88	92	mineralised	south						8.7	0.25	0.25			0	0	0	0	NC
X077523-524	28/02/2012	EP1201530004	NS0090	100	104	mineralised	south						8.6	0.25	0.25			0	0	0	0	NC
X077527-528	28/02/2012	EP1201530001	NS0090	108	112	mineralised	south						8	0.25	0.25			0	0	0	0	NC
X077533-534	28/02/2012	EP1201530049	NS0090	120	124	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X077537-538	28/02/2012	EP1201531004	NS0090	128	132	mineralised	south						8.7	0.25	0.25			0	0	0	0	NC
X077543-544	28/02/2012	EP1201530046	NS0090	140	144	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X077547-548	28/02/2012	EP1201530045	NS0090	148	152	mineralised	south						8.5	0.25	0.25			0	0	0	0	NC
X077553-554	28/02/2012	EP1201530048	NS0090	158	162	mineralised	south						8.2	0.25	0.25			0	0	0	0	NC
X077559	28/02/2012	EP1201530047	NS0090	170	172	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X077563-564	28/02/2012	EP1201530044	NS0090	178	182	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X077569-570	28/02/2012	EP1201529008	NS0090	190	194	mineralised	south						9.3	0.25	0.25			0	0	0	0	NC
X077573-574	28/02/2012	EP1201529007	NS0090	198	202	non_mineralised	south						9.1	0.25	0.25			0	0	0	0	NC
X077579-580	28/02/2012	EP1201531003	NS0090	210	214	non_mineralised	footwall						7.9	0.25	0.25			0	0	0	0	NC
X077583-584	28/02/2012	EP1201529010	NS0090	218	222	mineralised	footwall						9.2	0.25	0.25			0	0	0	0	NC
X077589	28/02/2012	EP1201529013	NS0090	230	232	mineralised	footwall						8.9	0.25	0.25			0	0	0	0	NC
X077593-594	28/02/2012	EP1201529009	NS0090	238	242	mineralised	footwall						9.3	0.25	0.25			0	0	0	0	NC
X077599-600	28/02/2012	EP1201529012	NS0090	250	254	mineralised	north						8.8	0.25	0.25			0	0	0	0	NC
X077605-606	28/02/2012	EP1201529014	NS0090	260	264	mineralised	north						9	0.25	0.25			0	0	0	0	NC
X077609-610	28/02/2012	EP1201531001	NS0090	268	272	mineralised	north						8.1	0.25	0.25			0	0	0	0	NC
X077615	28/02/2012	EP1201529011	NS0090	280	282	mineralised	north						8.6	0.25	0.25			0	0	0	0	NC
X077646-647	22/02/2012	EP1201383022	NS0091	60	64	non_mineralised	oxide						8	0.25	0.25			0	0	0	0	NC
X077650-651	22/02/2012	EP1201383019	NS0091	68	72	non_mineralised	oxide						7.8	0.25	0.25			0	0	0	0	NC
X077656-657	22/02/2012	EP1201383021	NS0091	80	84	non_mineralised	hangingwall						8.4	0.25	0.25			0	0	0	0	NC

							Job Number	PE065689A	PE065689A	PE065689A		PE065685	PE065685	PE065685	PE065685	PE065685	PE065685						
							Method Name	**Total Recoverable Metals in Soil by ICPOES**		**Moisture Content**	**EA009: Nett Acid Production Potential**	**Single Addition Net Acid Generation (NAG)**						**Calculations**				
							Analyte Name	**Ca**	**S**	**% Moisture**	**NAPP**	**ECox (NAG Conductivity)**	**pHox (NAG pH)**	**NAG as kg H_2SO_4/tonne to pH 4.5**	**NAG as kg H_2SO_4/tonne to pH 7**	**NAG as kg CaCO3/tonne to pH 4.5**	**NAG as kg CaCO3/tonne to pH 7**	**Lab ANC**	**ANC**	**MPA**	**NAPP**	**Classification**
							Units	**%**	**%**	**%**	**kg H2SO4/t**	**µS/cm**	**pH unit**	**kg H2SO4/T**	**kg H2SO4/T**	**kg CaCO3/T**	**kg CaCO3/T**				**kg H2SO4/t**	
Description	**Sample Date**	**Sample Name**	**Hole ID**	**From**	**To**	**Mineralisation**	**Lithology**	**10**	**10**	**0.5**	**0.5**	**1**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**					
X077661	22/02/2012	EP1201383020	NS0091	90	92	non_mineralised	hangingwall						8.4	0.25	0.25			0	0	0	0	NC
X078801-X078802	22/02/2012	EP1201381024	NS0091	100	104	non_mineralised	hangingwall				-57.3		9	0.25	0.25			-57.3	0	0	0	NC
X077666-667	22/02/2012	EP1201383036	NS0091	100	104	non_mineralised	hangingwall						8.8	0.25	0.25			0	0	0	0	NC
X077670-671	22/02/2012	EP1201383037	NS0091	108	112	mineralised	hangingwall						9	0.25	0.25			0	0	0	0	NC
X078811-X078812	22/02/2012	EP1201381023	NS0091	120	124	mineralised	hangingwall				-62.4		9	0.25	0.25			-62.4	0	0	0	NC
X077676-677	22/02/2012	EP1201383035	NS0091	120	124	mineralised	hangingwall						8.4	0.25	0.25			0	0	0	0	NC
X077680-681	22/02/2012	EP1201383038	NS0091	128	132	non_mineralised	hangingwall						8.9	0.25	0.25			0	0	0	0	NC
X078821-X078822	22/02/2012	EP1201381025	NS0091	140	144	mineralised	hangingwall				-58		9	0.25	0.25			-58	0	0	0	NC
X078825-X078826	22/02/2012	EP1201381022	NS0091	148	152	mineralised	hangingwall				-63.2		9	0.25	0.25			-63.2	0	0	0	NC
X077691	22/02/2012	EP1201385010	NS0091	150	152	non_mineralised	hangingwall				-34.8		8.7	0.25	0.25			-34.8	0	0	0	NC
X077696-697	22/02/2012	EP1201385009	NS0091	160	164	non_mineralised	hangingwall				-35.3		8.8	0.25	0.25			-35.3	0	0	0	NC
X077696-687	22/02/2012	EP1201385011	NS0091	160	164	non_mineralised	hangingwall				-50.9		9	0.25	0.25			-50.9	0	0	0	NC
X077702-703	22/02/2012	EP1201385012	NS0091	170	174	non_mineralised	hangingwall				-38.1		8.8	0.25	0.25			-38.1	0	0	0	NC
X077706-707	22/02/2012	EP1201383050	NS0091	178	182	non_mineralised	hangingwall						8.8	0.25	0.25			0	0	0	0	NC
X077712-713	22/02/2012	EP1201383047	NS0091	190	194	mineralised	hangingwall						8.6	0.25	0.25			0	0	0	0	NC
X077716-717	22/02/2012	EP1201383048	NS0091	198	202	mineralised	hangingwall						8.9	0.25	0.25			0	0	0	0	NC
X077722-723	22/02/2012	EP1201383049	NS0091	210	214	non_mineralised	hangingwall						8.8	0.25	0.25			0	0	0	0	NC
X077726-727	22/02/2012	EP1201383027	NS0091	218	222	mineralised	hangingwall						8.9	0.25	0.25			0	0	0	0	NC
X077732-733	22/02/2012	EP1201383028	NS0091	230	234	mineralised	hangingwall						8.8	0.25	0.25			0	0	0	0	NC
X077736-737	22/02/2012	EP1201383030	NS0091	238	242	non_mineralised	hangingwall						8.9	0.25	0.25			0	0	0	0	NC
X077742-743	22/02/2012	EP1201383029	NS0091	250	254	non_mineralised	hangingwall						8.8	0.25	0.25			0	0	0	0	NC
X077746-747	22/02/2012	EP1201382048	NS0091	258	262	non_mineralised	hangingwall						9	0.25	0.25			0	0	0	0	NC
X077752-753	22/02/2012	EP1201382049	NS0091	268	272	non_mineralised	hangingwall						8.6	0.25	0.25			0	0	0	0	NC
X077758	22/02/2012	EP1201382050	NS0091	280	282	non_mineralised	hangingwall						9.1	0.25	0.25			0	0	0	0	NC
X078634	22/03/2012	EP1202237002	NS0091					0.013	0.94									-0.94	0.2223	28.764		NC
X077779-780	22/02/2012	EP1201383007	NS0092	40	44	non_mineralised	footwall						8.8	0.25	0.25			0	0	0	0	NC
X077783-784	22/02/2012	EP1201383006	NS0092	48	52	non_mineralised	footwall						8.9	0.25	0.25			0	0	0	0	NC
X077789	22/02/2012	EP1201383008	NS0092	60	62	mineralised	footwall						8.8	0.25	0.25			0	0	0	0	NC
X077793-94	22/02/2012	EP1201382027	NS0092	68	72	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X077799	22/02/2012	EP1201382026	NS0092	80	82	non_mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X077805-806	22/02/2012	EP1201382024	NS0092	90	94	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X077809-810	22/02/2012	EP1201382025	NS0092	98	102	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X077815-816	22/02/2012	EP1201382044	NS0092	110	114	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X077819-820	22/02/2012	EP1201382047	NS0092	118	122	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X077825-826	22/02/2012	EP1201382045	NS0092	130	134	mineralised	south						8.7	0.25	0.25			0	0	0	0	NC
X077835-836	22/02/2012	EP1201382046	NS0092	150	154	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X077839-840	22/02/2012	EP1201383026	NS0092	158	162	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X077845-846	22/02/2012	EP1201383023	NS0092	170	174	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X077849-850	22/02/2012	EP1201383025	NS0092	178	182	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X077855-856	22/02/2012	EP1201383024	NS0092	188	192	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X077861-862	22/02/2012	EP1201383031	NS0092	200	204	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X077865-866	22/02/2012	EP1201383032	NS0092	208	212	mineralised	south						8.1	0.25	0.25			0	0	0	0	NC
X077875-876	22/02/2012	EP1201383033	NS0092	228	232	mineralised	south						8.3	0.25	0.25			0	0	0	0	NC
X077881	22/02/2012	EP1201383017	NS0092	240	244	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X077885-886	22/02/2012	EP1201383013	NS0092	248	252	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X077891-892	22/02/2012	EP1201383015	NS0092	260	264	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X077895-896	22/02/2012	EP1201383016	NS0092	268	272	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X077901	22/02/2012	EP1201383014	NS0092	280	282	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X077774	22/02/2012	EP1201383005	NS0092										8	0.25	0.25			0	0	0	0	NC
X077882	22/02/2012	EP1201383018	NS0092										9	0.25	0.25			0	0	0	0	NC
X077872	22/02/2012	EP1201383034	NS0092										8.5	0.25	0.25			0	0	0	0	NC
X077951-X077952	21/02/2012	EP1201378028	NS0093	98	102	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X077967-968	21/02/2012	EP1201378001	NS0093	128	132	mineralised	south						7.6	0.25	0.25			0	0	0	0	NC
X077983	21/02/2012	EP1201378037	NS0093	160	162	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X077989	21/02/2012	EP1201378033	NS0093	170	172	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X077993-994	21/02/2012	EP1201378036	NS0093	178	182	mineralised	south						8.7	0.25	0.25			0	0	0	0	NC
X077999-X078000	21/02/2012	EP1201378027	NS0093	190	194	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X078009-010	21/02/2012	EP1201378034	NS0093	210	214	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X078017-018	21/02/2012	EP1201378038	NS0093	224	228	non_mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X078025-026	21/02/2012	EP1201378032	NS0093	240	244	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X078035-036	21/02/2012	EP1201378031	NS0093	260	264	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X078039-X078040	21/02/2012	EP1201378029	NS0093	268	272	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X078045	21/02/2012	EP1201378030	NS0093	280	282	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
NS0094 X078061-X078062		PE065688.026	NS0094	28	32	non_mineralised	oxide					**17**	**7.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0094 X078067-X078068		PE065688.027	NS0094	40	44	non_mineralised	south					**120**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0094 X078077-X078078		PE065688.025	NS0094	60	64	mineralised	south					**110**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0094 X078081-X078082		PE065688.101	NS0094	68	72	mineralised	south					**74**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X078087-088	28/02/2012	EP1201527020	NS0094	80	84	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X078091-092	28/02/2012	EP1201527021	NS0094	90	94	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
NS0094 X078095-X078096		PE065689.085	NS0094	98	102	mineralised	south					**170**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X078102	28/02/2012	EP1201527019	NS0094	110	112	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
NS0094 X078107-X078108		PE065688.023	NS0094	120	124	mineralised	south					**120**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X078111-112	28/02/2012	EP1201527018	NS0094	128	132	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X078117	28/02/2012	EP1201530031	NS0094	140	144	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
NS0094 X078119-X078120		PE065688.024	NS0094	144	148	mineralised	south					**91**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X078121-122	28/02/2012	EP1201530033	NS0094	148	152	mineralised	south						9.1	0.25	0.25			0	0	0	0	NC
X078127-128	28/02/2012	EP1201530029	NS0094	160	164	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X078131-132	28/02/2012	EP1201526019	NS0094	168	172	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X078137-138	28/02/2012	EP1201526020	NS0094	180	184	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC

							Job Number	PE065689A	PE065689A	PE065689A		PE065685	PE065685	PE065685	PE065685	PE065685	PE065685					
							Method Name	Total Recoverable Metals in Soil by ICPOES		Moisture Content	EA009: Nett Acid Production Potential	Single Addition Net Acid Generation (NAG)						Calculations				
							Analyte Name	Ca	S	% Moisture	NAPP	ECox (NAG Conductivity)	pHox (NAG pH)	NAG as kg H_2SO_4/tonne to pH 4.5	NAG as kg H_2SO_4/tonne to pH 7	NAG as kg $CaCO_3$/tonne to pH 4.5	NAG as kg $CaCO_3$/tonne to pH 7	Lab ANC	ANC	MPA	NAPP	Classification
							Units	%	%	%	kg H2SO4/t	µS/cm	pH unit	kg H2SO4/T	kg H2SO4/T	kg CaCO3/T	kg CaCO3/T				kg H2SO4/t	
Description	Sample Date	Sample Name	Hole ID	From	To	Mineralisation	Lithology	10	10	0.5	0.5	1	0.1	0.5	0.5	0.5	0.5					
X078141-142	28/02/2012	EP1201530032	NS0094	188	192	mineralised	south						9.1	0.25	0.25			0	0	0	0	NC
X078147-148	28/02/2012	EP1201530030	NS0094	200	204	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X078151-152	28/02/2012	EP1201528029	NS0094	208	212	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X078157-158	28/02/2012	EP1201528028	NS0094	218	222	mineralised	south						8.3	0.25	0.25			0	0	0	0	NC
X078163	28/02/2012	EP1201528030	NS0094	230	232	mineralised	south						8.6	0.25	0.25			0	0	0	0	NC
X078167-168	28/02/2012	EP1201528031	NS0094	238	242	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X078173-174	28/02/2012	EP1201528027	NS0094	250	254	mineralised	south						8.2	0.25	0.25			0	0	0	0	NC
X078187-188	28/02/2012	EP1201530015	NS0094	278	282	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
NS0094 X079071-X078072		PE065688.028	NS0094									**120**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078312		PE065688.021	NS0095									**170**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078205-X078206		PE065688.007	NS0095	30	34	non_mineralised	oxide					**13**	**7.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078209-X078210		PE065688.008	NS0095	38	42	non_mineralised	oxide					**23**	**7.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078215-X078216		PE065688.005	NS0095	50	54	mineralised	south					**90**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078219-X078220		PE065688.001	NS0095	58	62	mineralised	south					**93**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078225-X078226		PE065688.006	NS0095	70	74	mineralised	south					**140**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078235-X078236		PE065688.004	NS0095	90	94	mineralised	south					**160**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078239-X078240		PE065688.020	NS0095	98	102	mineralised	south					**160**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078245-X078246		PE065688.003	NS0095	110	114	mineralised	footwall					**120**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078249-X078250		PE065688.019	NS0095	118	122	mineralised	footwall					**110**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078256-X078257		PE065688.018	NS0095	130	134	mineralised	footwall					**180**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078261-X078262		PE065688.002	NS0095	140	144	mineralised	footwall					**230**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078265-X078266		PE065688.016	NS0095	148	152	mineralised	footwall					**170**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078271-X078272		PE065688.013	NS0095	160	164	mineralised	footwall					**110**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078275-X078276		PE065688.014	NS0095	168	172	non_mineralised	footwall					**210**	**8.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078281-X078282		PE065688.015	NS0095	180	184	mineralised	footwall					**110**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078285-X078286		PE065688.011	NS0095	188	192	mineralised	footwall					**120**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078291-X078292		PE065688.010	NS0095	200	204	non_mineralised	footwall					**200**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078295-X078296		PE065688.009	NS0095	208	212	mineralised	footwall					**110**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078301-X078302		PE065688.017	NS0095	218	222	non_mineralised	footwall					**190**	**7.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078307-X078308		PE065688.012	NS0095	230	234	non_mineralised	footwall					**120**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0095 X078317		PE065688.022	NS0095	250	252	non_mineralised	footwall					**210**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078328-X078329		PE065687.088	NS0096	20	24	non_mineralised	oxide					**13**	**7.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078333-X078334		PE065687.089	NS0096	30	34	non_mineralised	oxide					**13**	**7.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078337-X078338		PE065687.090	NS0096	38	42	non_mineralised	oxide					**12**	**8.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078343-X078344		PE065687.091	NS0096	50	54	mineralised	south					**87**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078347-X078348		PE065687.092	NS0096	58	62	mineralised	south					**120**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078349-X078350		PE065687.085	NS0096	62	66	non_mineralised	south					**110**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078353-X078354		PE065687.093	NS0096	70	74	mineralised	south					**75**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078357-X078358		PE065687.094	NS0096	78	82	mineralised	south					**62**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078363-X078364		PE065687.095	NS0096	90	94	mineralised	south					**64**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078369-X078370		PE065687.096	NS0096	100	104	mineralised	south					**76**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078373-X078374		PE065687.097	NS0096	108	112	mineralised	south					**69**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078379-X078380		PE065687.086	NS0096	120	124	mineralised	south					**90**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078383-X078384		PE065687.087	NS0096	128	132	mineralised	south					**64**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078389		PE065687.101	NS0096	140	142	mineralised	south					**67**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078393		PE065687.100	NS0096	148	152	mineralised	south					**110**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078125-X078126		PE065687.080	NS0096	156	160	mineralised	south					**110**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078399-X078400		PE065687.075	NS0096	160	164	mineralised	south					**100**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078405-X078406		PE065687.076	NS0096	170	174	mineralised	south					**180**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078409-X078410		PE065687.079	NS0096	178	182	mineralised	south					**80**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078415-X078416		PE065687.078	NS0096	190	194	mineralised	south					**150**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078419-X078420		PE065687.077	NS0096	198	202	mineralised	south					**110**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078435-X078436		PE065687.081	NS0096	230	234	mineralised	south	**0.32**	**0.98**			**550**	**4.2**	**0.8**	**5.4**	**0.8**	**5.6**	-0.98	5.472	29.988	24.516	PAF HC
NS0096 X078437-X078438		PE065687.084	NS0096	234	238	mineralised	south					**110**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078439-X078440		PE065687.082	NS0096	238	242	mineralised	south					**110**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078445		PE065687.103	NS0096	250	254	mineralised	south					**64**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078447-X078448		PE065687.083	NS0096	254	258	mineralised	south					**59**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078451-X078452		PE065687.098	NS0096	260	264	mineralised	south					**72**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078455-X078456		PE065687.099	NS0096	268	272	mineralised	south					**64**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0096 X078461		PE065687.102	NS0096	280	282	mineralised	south					**70**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078476-X078477		PE065688.042	NS0097	28	32	non_mineralised	oxide					**23**	**7.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078482-X078483		PE065688.043	NS0097	40	44	non_mineralised	south	**1.20**	**0.04**	0.25		**500**	**3.5**	**3.8**	**11**	**3.9**	**11**	-0.041	20.52	1.2546	-19.265	NAF
NS0097 X078486-X078487		PE065688.044	NS0097	48	52	mineralised	south					**81**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078491-X078492		PE065688.045	NS0097	58	62	mineralised	south					**110**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078497-X078498		PE065688.029	NS0097	70	74	mineralised	south					**75**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078503-X078504		PE065688.030	NS0097	80	84	mineralised	south					**91**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078507-X078508		PE065688.031	NS0097	88	92	mineralised	south					**71**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078513-X078514		PE065688.032	NS0097	100	104	mineralised	south					**120**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078517-X078518		PE065688.033	NS0097	108	112	mineralised	south					**84**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078523-X078524		PE065688.046	NS0097	120	124	mineralised	south					**81**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078527-X078528		PE065688.047	NS0097	128	132	mineralised	south					**91**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078533-X078534		PE065688.048	NS0097	140	144	mineralised	south					**71**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078537-X078538		PE065688.049	NS0097 X07	148	152	mineralised	south	**1.10**	**0.01**	0.25		**450**	**6.4**	0.25	0.25	0.25	0.25	-0.012	18.81	0.3672	-18.443	NAF
NS0097 X078543-X078544		PE065688.050	NS0097	160	164	mineralised	south					**63**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078547-X078548		PE065688.034	NS0097	168	172	mineralised	south					**88**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC

							Job Number	PE065689A	PE065689A	PE065689A		PE065685	PE065685	PE065685	PE065685	PE065685	PE065685					
							Method Name	**Total Recoverable Metals in Soil by ICPOES**		**Moisture Content**	**EA009: Nett Acid Production Potential**	**Single Addition Net Acid Generation (NAG)**						**Calculations**				
							Analyte Name	**Ca**	**S**	**% Moisture**	**NAPP**	**ECox (NAG Conductivity)**	**pHox (NAG pH)**	**NAG as kg H_2SO_4/tonne to pH 4.5**	**NAG as kg H_2SO_4/tonne to pH 7**	**NAG as kg CaCO3/tonne to pH 4.5**	**NAG as kg CaCO3/tonne to pH 7**	**Lab ANC**	**ANC**	**MPA**	**NAPP**	**Classification**
							Units	**%**	**%**	**%**	**kg H2SO4/t**	**µS/cm**	**pH unit**	**kg H2SO4/T**	**kg H2SO4/T**	**kg CaCO3/T**	**kg CaCO3/T**				**kg H2SO4/t**	
Description	**Sample Date**	**Sample Name**	**Hole ID**	**From**	**To**	**Mineralisation**	**Lithology**	**10**	**10**	**0.5**	**0.5**	**1**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**					
NS0097 X078553-X078554		PE065688.102	NS0097	178	182	mineralised	south					**65**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078559		PE065688.051	NS0097	190	192	mineralised	south					**89**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078563-X078564		PE065688.036	NS0097	198	202	mineralised	south					**77**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078569-X078570		PE065688.037	NS0097	210	214	mineralised	south					**110**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078573-X078574		PE065688.038	NS0097	218	222	mineralised	south					**80**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078579-X078580		PE065688.039	NS0097	230	234	mineralised	south					**110**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078583-X078584		PE065688.040	NS0097	238	242	mineralised	south					**74**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078589		PE065688.052	NS0097	250	252	mineralised	south					**78**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078593-X078594		PE065688.041	NS0097	258	262	mineralised	south					**120**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078599		PE065688.053	NS0097	270	272	mineralised	south					**76**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078605		PE065688.054	NS0097	280	282	non_mineralised	south					**200**	**8.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0097 X078473		PE065688.055	NS0097									**17**	**7.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0098 X078606-X078607		PE065687.058	NS0098	0	4	non_mineralised	oxide					**15**	**6.7**	0.25	**0.6**	0.25	**0.6**	0	0	0	0	NC
NS0098 X078610-X078611		PE065687.055	NS0098	8	12	non_mineralised	oxide					**13**	**7.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X076451	28/02/2012	EP1201526030	NS0098	10	14	non_mineralised	oxide						8.2	0.25	0.25			0	0	0	0	NC
NS0098 X078616-X078617		PE065687.056	NS0098 X07	20	24	non_mineralised	oxide	**0.01**	**0.00**			**12**	**6.3**	0.25	**1.4**	0.25	**1.4**	-0.0036	0.2223	0.1102	-0.1121	NAF
NS0098 X078620-X078621		PE065687.054	NS0098	28	32	non_mineralised	oxide					**12**	**8.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0098 X078626-X078627		PE065687.059	NS0098	40	44	non_mineralised	oxide					**13**	**7.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0098 X078631-X078632		PE065687.057	NS0098 X07	50	54	non_mineralised	hangingwall	**0.13**	**0.23**			**220**	**6.4**	0.25	0.25	0.25	0.25	-0.23	2.223	7.038	4.815	PAF LC
NS0098 X078635-X078636		PE065687.060	NS0098	58	62	mineralised	hangingwall					**300**	**6.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X159815	28/02/2012	EP1201526022	NS0098	60	64	mineralised	hangingwall						8.5	0.25	0.25			0	0	0	0	NC
NS0098 X078641-X078642		PE065687.066	NS0098	70	74	non_mineralised	hangingwall					**30**	**8.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0098 X078645-X078646		PE065687.061	NS0098	78	82	non_mineralised	hangingwall					**140**	**7.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0098 X078651-X078652		PE065687.063	NS0098	88	92	mineralised	hangingwall					**180**	**8.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0098 X078657-X078658		PE065687.062	NS0098	100	104	mineralised	hangingwall					**160**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0098 X078661-X078662		PE065687.067	NS0098	108	112	mineralised	hangingwall					**110**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0098 X078667-X078668		PE065687.064	NS0098	120	124	mineralised	hangingwall					**210**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0098 X078671-X078672		PE065687.069	NS0098	128	132	mineralised	hangingwall					**180**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0098 X078677-X078678		PE065687.073	NS0098	140	144	mineralised	hangingwall					**130**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X159857	28/02/2012	EP1201526032	NS0098	140	144	mineralised	hangingwall						8.8	0.25	0.25			0	0	0	0	NC
X078681	28/02/2012	EP1201526024	NS0098	148	152	mineralised	hangingwall						9	0.25	0.25			0	0	0	0	NC
X077171	28/02/2012	EP1201526025	NS0098	158	162	mineralised	hangingwall						8.6	0.25	0.25			0	0	0	0	NC
NS0098 X078687-X078688		PE065687.074	NS0098	160	164	mineralised	hangingwall					**140**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0098 X078691-X078692		PE065687.068	NS0098	168	172	non_mineralised	hangingwall					**190**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0098 X078697-X078698		PE065687.065	NS0098	180	184	mineralised	hangingwall					**210**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0098 X078703-X078704		PE065687.070	NS0098	190	194	non_mineralised	hangingwall					**240**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0098 X078707-X078708		PE065687.071	NS0098	198	202	mineralised	hangingwall					**170**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0098 X078713-X078714		PE065687.072	NS0098	210	214	non_mineralised	hangingwall					**280**	**8.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X077031	28/02/2012	EP1201526027	NS0098	290	294		hangingwall						8.7	0.25	0.25			0	0	0	0	NC
X159816	28/02/2012	EP1201526021	NS0098										8.5	0.25	0.25			0	0	0	0	NC
X078682	28/02/2012	EP1201526023	NS0098										9	0.25	0.25			0	0	0	0	NC
X077172	28/02/2012	EP1201526026	NS0098										8.5	0.25	0.25			0	0	0	0	NC
X076446	28/02/2012	EP1201526028	NS0098										8.1	0.25	0.25			0	0	0	0	NC
X077032	28/02/2012	EP1201526029	NS0098										8.7	0.25	0.25			0	0	0	0	NC
X159858	28/02/2012	EP1201526031	NS0098										8.8	0.25	0.25			0	0	0	0	NC
X078831-X078832	22/02/2012	EP1201380014	NS0099	160	164	mineralised	south						8.4	0.25	0.25			0	0	0	0	NC
X078835-X078836	22/02/2012	EP1201380016	NS0099	168	172	mineralised	south						8.4	0.25	0.25			0	0	0	0	NC
X078841-X078842	22/02/2012	EP1201380015	NS0099	180	184	mineralised	south						8.6	0.25	0.25			0	0	0	0	NC
X078845-X078846	22/02/2012	EP1201380017	NS0099	188	192	mineralised	south						8.3	0.25	0.25			0	0	0	0	NC
X078851-X078852	22/02/2012	EP1201380018	NS0099	198	202	mineralised	south						8.3	0.25	0.25			0	0	0	0	NC
X078907-X078908	22/02/2012	EP1201380024	NS0100	28	32	non_mineralised	oxide						8.2	0.25	0.25			0	0	0	0	NC
X078913-X078914	22/02/2012	EP1201380019	NS0100	38	42	non_mineralised	oxide						7.8	0.25	0.25			0	0	0	0	NC
X078919-920	22/02/2012	EP1201380020	NS0100	50	54	non_mineralised	south						8.3	0.25	0.25			0	0	0	0	NC
X078923-924	22/02/2012	EP1201380022	NS0100	58	62	mineralised	south						8.4	0.25	0.25			0	0	0	0	NC
X078929	22/02/2012	EP1201380037	NS0100	70	72	mineralised	south						8.7	0.25	0.25			0	0	0	0	NC
X078933-934	22/02/2012	EP1201380025	NS0100	78	82	mineralised	south						8.3	0.25	0.25			0	0	0	0	NC
X078949	22/02/2012	EP1201380021	NS0100	110	112	mineralised	south						8.3	0.25	0.25			0	0	0	0	NC
X078955-956	22/02/2012	EP1201380036	NS0100	120	124	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X078965-966	22/02/2012	EP1201380035	NS0100	140	144	mineralised	south						8.5	0.25	0.25			0	0	0	0	NC
X078969-970	22/02/2012	EP1201380023	NS0100	148	152	non_mineralised	south						8.4	0.25	0.25			0	0	0	0	NC
X078983-984	22/02/2012	EP1201380038	NS0100	176	180	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X07879-880	22/02/2012	EP1201380034	NS0100										8.5	0.25	0.25			0	0	0	0	NC
X080006-007	28/02/2012	EP1201530012	NS0106	8	12	non_mineralised	oxide						8.1	0.25	0.25			0	0	0	0	NC
X080012-13	22/02/2012	EP1201380049	NS0106	20	24	non_mineralised	oxide						8.3	0.25	0.25			0	0	0	0	NC
X080016-17	28/02/2012	EP1201530008	NS0106	28	32	non_mineralised	oxide						8.4	0.25	0.25			0	0	0	0	NC
X080022-23	28/02/2012	EP1201530039	NS0106	40	44	mineralised	south						8.5	0.25	0.25			0	0	0	0	NC
X080027-28	28/02/2012	EP1201530010	NS0106	48	52	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X080033-34	22/02/2012	EP1201380045	NS0106	60	64	mineralised	south						9.2	0.25	0.25			0	0	0	0	NC
X080037-38	28/02/2012	EP1201530011	NS0106	68	72	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X080043-44	28/02/2012	EP1201530013	NS0106	80	84	mineralised	south						8.7	0.25	0.25			0	0	0	0	NC
X080047-48	22/02/2012	EP1201380047	NS0106	88	92	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X080049-50	22/02/2012	EP1201380050	NS0106	92	96	mineralised	south						8.7	0.25	0.25			0	0	0	0	NC
X080669-70	28/02/2012	EP1201530034	NS0106	98	102	mineralised	south	0.006	0.02				9.1	0.25	0.25			-0.02	0.1026	0.612	0.5094	PAF LC
X080054-55	28/02/2012	EP1201530037	NS0106	100	104	mineralised	south						8.5	0.25	0.25			0	0	0	0	NC
X080058-59	22/02/2012	EP1201380048	NS0106	108	112	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X080073-74	28/02/2012	EP1201531007	NS0106	138	142	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC

							Job Number	PE065689A	PE065689A	PE065689A		PE065685	PE065685	PE065685	PE065685	PE065685	PE065685					
							Method Name	**Total Recoverable Metals in Soil by ICPOES**		**Moisture Content**	**EA009: Nett Acid Production Potential**	**Single Addition Net Acid Generation (NAG)**						**Calculations**				
							Analyte Name	**Ca**	**S**	**% Moisture**	**NAPP**	**ECox (NAG Conductivity)**	**pHox (NAG pH)**	**NAG as kg H_2SO_4/tonne to pH 4.5**	**NAG as kg H_2SO_4/tonne to pH 7**	**NAG as kg CaCO3/tonne to pH 4.5**	**NAG as kg CaCO3/tonne to pH 7**	**Lab ANC**	**ANC**	**MPA**	**NAPP**	**Classification**
							Units	**%**	**%**	**%**	**kg H2SO4/t**	**µS/cm**	**pH unit**	**kg H2SO4/T**	**kg H2SO4/T**	**kg CaCO3/T**	**kg CaCO3/T**				**kg H2SO4/t**	
Description	**Sample Date**	**Sample Name**	**Hole ID**	**From**	**To**	**Mineralisation**	**Lithology**	**10**	**10**	**0.5**	**0.5**	**1**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**					
X080079-80	28/02/2012	EP1201530009	NS0106	150	154	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X080083-84	28/02/2012	EP1201530035	NS0106	158	162	mineralised	south						8.4	0.25	0.25			0	0	0	0	NC
X080089	28/02/2012	EP1201530042	NS0106	170	172	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X080093-94	28/02/2012	EP1201531006	NS0106	178	182	mineralised	south						9.1	0.25	0.25			0	0	0	0	NC
X080099-100	28/02/2012	EP1201531005	NS0106	190	194	mineralised	south						8.6	0.25	0.25			0	0	0	0	NC
X080104-105	28/02/2012	EP1201531008	NS0106	198	202	mineralised	south						9.2	0.25	0.25			0	0	0	0	NC
X080110-111	28/02/2012	EP1201530041	NS0106	210	214	mineralised	south						8.5	0.25	0.25			0	0	0	0	NC
X080114-115	28/02/2012	EP1201530007	NS0106	218	222	mineralised	south						8.6	0.25	0.25			0	0	0	0	NC
X080120-121	28/02/2012	EP1201530036	NS0106	230	234	mineralised	south						8.5	0.25	0.25			0	0	0	0	NC
X080135-36	28/02/2012	EP1201530040	NS0106	260	264	mineralised	south						8.6	0.25	0.25			0	0	0	0	NC
X080139-40	28/02/2012	EP1201530038	NS0106	268	272	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X080143-144	28/02/2012	EP1201530043	NS0106	276	280	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X080003	22/02/2012	EP1201380046	NS0106					0.001	0.02				6.4	0.25	1.6			-0.02	0.0171	0.612	0.5949	PAF LC
X080145-146	22/02/2012	EP1201384040	NS0107	0	4	non_mineralised	oxide				0.25		7.3	0.25	0.25			0.25	0	0	0	NC
X080149-150	22/02/2012	EP1201384021	NS0107	8	12	non_mineralised	oxide				0.25		7.1	0.25	0.25			0.25	0	0	0	NC
X080155	22/02/2012	EP1201384037	NS0107	20	24	non_mineralised	oxide				0.25		7.9	0.25	0.25			0.25	0	0	0	NC
X080165-166	22/02/2012	EP1201384022	NS0107	40	44	non_mineralised	oxide				-2.6		8.2	0.25	0.25			-2.6	0	0	0	NC
X080169-170	22/02/2012	EP1201384024	NS0107	48	52	non_mineralised	oxide				-4.2		7.9	0.25	0.25			-4.2	0	0	0	NC
X080175-176	22/02/2012	EP1201384025	NS0107	60	64	non_mineralised	hangingwall				-18.9		8	0.25	0.25			-18.9	0	0	0	NC
X080179-180	22/02/2012	EP1201384038	NS0107	68	72	mineralised	hangingwall				-40.5		8.7	0.25	0.25			-40.5	0	0	0	NC
X080185-186	22/02/2012	EP1201384027	NS0107	80	84	mineralised	hangingwall				-39		8.8	0.25	0.25			-39	0	0	0	NC
X080200-201	22/02/2012	EP1201384026	NS0107	108	112	non_mineralised	hangingwall				-5.6		7.9	0.25	0.25			-5.6	0	0	0	NC
X080206-207	22/02/2012	EP1201384039	NS0107	120	124	non_mineralised	hangingwall	0.049	3.09		80.1		2.3	45.7	60.8			77.01	0.8379	94.554	93.7161	PAF HC
X080210-211	22/02/2012	EP1201384031	NS0107	128	132	non_mineralised	hangingwall	0.028	2.58		69.3		2.5	38.9	52.2			66.72	0.4788	78.948	78.4692	PAF HC
X080214-215	22/02/2012	EP1201384034	NS0107	136	140	non_mineralised	hangingwall				-64.2		8.3	0.25	0.25			-64.2	0	0	0	NC
X080216	22/02/2012	EP1201384035	NS0107	140	144	non_mineralised	hangingwall	0.32	1.89		18.9		2.6	17.8	24.7			17.01	5.472	57.834	52.362	PAF HC
X080220-221	22/02/2012	EP1201384033	NS0107	148	152	non_mineralised	hangingwall	0.034	1.91		41.1		2.6	30.2	40.8			39.19	0.5814	58.446	57.8646	PAF HC
X080226-227	22/02/2012	EP1201384028	NS0107	160	164	non_mineralised	hangingwall	0.037	1.63		31.4		2.5	40.2	53.8			29.77	0.6327	49.878	49.2453	PAF HC
X080231-232	22/02/2012	EP1201384029	NS0107	170	174	non_mineralised		0.647	1.86		15.3		3	11	18.1			13.44	11.064	56.916	45.8523	PAF HC
X080235-236	22/02/2012	EP1201384036	NS0107	178	182	non_mineralised		1.4	2.11		1.7		6.4	0.25	0.8			-0.41	23.94	64.566	40.626	PAF HC
X080241-242	22/02/2012	EP1201384032	NS0107	190	194	non_mineralised					6.3		7.4	0.25	0.25			6.3	0	0	0	NC
X080247	22/02/2012	EP1201384030	NS0107	200	202	non_mineralised					-22		8.1	0.25	0.25			-22	0	0	0	NC
X080197	22/02/2012	EP1201384023	NS0107								0.25		7.9	0.25	0.25			0.25	0	0	0	NC
X080248-249	28/02/2012	EP1201530025	NS0108	0	4	non_mineralised	oxide						7.8	0.25	0.25			0	0	0	0	NC
X080252-253	28/02/2012	EP1201529020	NS0108	8	12	non_mineralised	oxide						7.1	0.25	0.25			0	0	0	0	NC
X080258-259	28/02/2012	EP1201529021	NS0108	20	24	non_mineralised	oxide						7.4	0.25	0.25			0	0	0	0	NC
X080263-264	28/02/2012	EP1201529036	NS0108	30	34	non_mineralised	oxide						8.7	0.25	0.25			0	0	0	0	NC
X080265-266	28/02/2012	EP1201529022	NS0108	34	38	mineralised	oxide						7.7	0.25	0.25			0	0	0	0	NC
X080267-268	28/02/2012	EP1201529024	NS0108	38	42	non_mineralised	oxide						8.4	0.25	0.25			0	0	0	0	NC
X080273-274	28/02/2012	EP1201528014	NS0108	50	54	non_mineralised	oxide						8.8	0.25	0.25			0	0	0	0	NC
X080277-278	28/02/2012	EP1201529023	NS0108	58	62	non_mineralised	oxide						8.3	0.25	0.25			0	0	0	0	NC
X080283	28/02/2012	EP1201529002	NS0108	70	74	non_mineralised	oxide						9.3	0.25	0.25			0	0	0	0	NC
X080287 (No Sample X080288)	28/02/2012	EP1201529034	NS0108	78	82	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X080291 (No Sample X080292)	28/02/2012	EP1201529037	NS0108	86	90	non_mineralised	south						9.1	0.25	0.25			0	0	0	0	NC
X080293-294	28/02/2012	EP1201529004	NS0108	90	94	non_mineralised	south						9.2	0.25	0.25			0	0	0	0	NC
X080299-300	28/02/2012	EP1201528038	NS0108	100	104	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X080303-304	28/02/2012	EP1201530024	NS0108	108	112	mineralised	south						9.1	0.25	0.25			0	0	0	0	NC
X080309-310	28/02/2012	EP1201528039	NS0108	120	124	mineralised	south						9.2	0.25	0.25			0	0	0	0	NC
X080313-314	28/02/2012	EP1201529033	NS0108	128	132	mineralised	south						9.2	0.25	0.25			0	0	0	0	NC
X080319-320	28/02/2012	EP1201528015	NS0108	140	144	mineralised	south						9.4	0.25	0.25			0	0	0	0	NC
X080323-324	28/02/2012	EP1201528016	NS0108	148	152	mineralised	south						9.4	0.25	0.25			0	0	0	0	NC
X080329	28/02/2012	EP1201529005	NS0108	160	162	mineralised	south						9.2	0.25	0.25			0	0	0	0	NC
X080333-334	28/02/2012	EP1201528040	NS0108	168	172	mineralised	south						9	0.25	0.25			0	0	0	0	NC
X080337 (No Sample X080338)	28/02/2012	EP1201530028	NS0108	176	180	mineralised	south						8.1	0.25	0.25			0	0	0	0	NC
X080339-340	28/02/2012	EP1201529035	NS0108	180	184	mineralised	south						9.2	0.25	0.25			0	0	0	0	NC
X080343-344	28/02/2012	EP1201529006	NS0108	188	192	mineralised	south						9.2	0.25	0.25			0	0	0	0	NC
X080350	28/02/2012	EP1201528037	NS0108	200	204	mineralised	south						9.1	0.25	0.25			0	0	0	0	NC
X080354-355	28/02/2012	EP1201529003	NS0108	208	212	mineralised	south						9.1	0.25	0.25			0	0	0	0	NC
X080365-366	28/02/2012	EP1201528013	NS0108	230	234	mineralised	south						9.3	0.25	0.25			0	0	0	0	NC
X080369-370	28/02/2012	EP1201528012	NS0108	238	242	mineralised	south						9.4	0.25	0.25			0	0	0	0	NC
X080375-376	28/02/2012	EP1201528041	NS0108	250	254	mineralised	south						8.4	0.25	0.25			0	0	0	0	NC
X080379-380	28/02/2012	EP1201530026	NS0108	258	262	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X080385-386	28/02/2012	EP1201530027	NS0108	270	274	mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X080389	28/02/2012	EP1201529032	NS0108	278	280								9.2	0.25	0.25			0	0	0	0	NC
X080284	28/02/2012	EP1201529001	NS0108										8.6	0.25	0.25			0	0	0	0	NC
X080643-X080644	28/02/2012	EP1201530016	NS0111	48	52	non_mineralised	oxide						8.4	0.25	0.25			0	0	0	0	NC
X080649	22/02/2012	EP1201385014	NS0111	60	62	non_mineralised	oxide				0.25		8.3	0.25	0.25			0.25	0	0	0	NC
X080655-X080656	22/02/2012	EP1201385020	NS0111	70	74	non_mineralised	oxide				1.8		7.8	0.25	0.25			1.8	0	0	0	NC
X080665-X080666	28/02/2012	EP1201529025	NS0111	90	94	mineralised	south						8.4	0.25	0.25			0	0	0	0	NC
X080669-X080670	28/02/2012	EP1201529027	NS0111	98	102	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X080679-X080680	22/02/2012	EP1201385018	NS0111	118	122	mineralised	south				-16.1		9	0.25	0.25			-16.1	0	0	0	NC
X080685-X080686	28/02/2012	EP1201529031	NS0111	130	134	mineralised	south						9.1	0.25	0.25			0	0	0	0	NC
X080695-X080696	28/02/2012	EP1201529028	NS0111	150	154	mineralised	south						8.7	0.25	0.25			0	0	0	0	NC
X080699-X080700	28/02/2012	EP1201530018	NS0111	158	162	mineralised	south						8.8	0.25	0.25			0	0	0	0	NC
X080705-X080706	28/02/2012	EP1201529026	NS0111	168	172	non_mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X080711-X080712	28/02/2012	EP1201530023	NS0111	180	184	non_mineralised	south						8.9	0.25	0.25			0	0	0	0	NC
X080715-X080716	22/02/2012	EP1201385015	NS0111	188	192	non_mineralised	south				-35.5		8.4	0.25	0.25			-35.5	0	0	0	NC
X080721-X080722	28/02/2012	EP1201530021	NS0111	200	204								8.6	0.25	0.25			0	0	0	0	NC
X080725-X080726	28/02/2012	EP1201530020	NS0111	208	212								9	0.25	0.25			0	0	0	0	NC
X080731-X080732	28/02/2012	EP1201529030	NS0111	220	224								9	0.25	0.25			0	0	0	0	NC
X080735-X080736	28/02/2012	EP1201530017	NS0111	228	232								8.8	0.25	0.25			0	0	0	0	NC
X080739-X080740	28/02/2012	EP1201530022	NS0111	236	240								8.9	0.25	0.25			0	0	0	0	NC
X080741-X080742	22/02/2012	EP1201385017	NS0111	240	244						-38.4		9	0.25	0.25			-38.4	0	0	0	NC
X080745-X080746	22/02/2012	EP1201385013	NS0111	248	252						-35.7		9.1	0.25	0.25			-35.7	0	0	0	NC

							Job Number	PE065689A	PE065689A	PE065689A		PE065685	PE065685	PE065685	PE065685	PE065685	PE065685					
							Method Name	**Total Recoverable Metals in Soil by ICPOES**		**Moisture Content**	**EA009: Nett Acid Production Potential**	**Single Addition Net Acid Generation (NAG)**						**Calculations**				
							Analyte Name	**Ca**	**S**	**% Moisture**	**NAPP**	**ECox (NAG Conductivity)**	**pHox (NAG pH)**	**NAG as kg H_2SO_4/tonne to pH 4.5**	**NAG as kg H_2SO_4/tonne to pH 7**	**NAG as kg CaCO3/tonne to pH 4.5**	**NAG as kg CaCO3/tonne to pH 7**	**Lab ANC**	**ANC**	**MPA**	**NAPP**	**Classification**
							Units	**%**	**%**	**%**	**kg H2SO4/t**	**µS/cm**	**pH unit**	**kg H2SO4/T**	**kg H2SO4/T**	**kg CaCO3/T**	**kg CaCO3/T**				**kg H2SO4/t**	
Description	**Sample Date**	**Sample Name**	**Hole ID**	**From**	**To**	**Mineralisation**	**Lithology**	**10**	**10**	**0.5**	**0.5**	**1**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**					
X080752	22/02/2012	EP1201385019	NS0111	260	262						-25.6		8.6	0.25	0.25			-25.6	0	0	0	NC
X080757-X080758	28/02/2012	EP1201529029	NS0111	270	274								9	0.25	0.25			0	0	0	0	NC
X080761-X080762	28/02/2012	EP1201530019	NS0111	278	282								9	0.25	0.25			0	0	0	0	NC
X080767-X080768	22/02/2012	EP1201385016	NS0111	290	294						-41.5		8.6	0.25	0.25			-41.5	0	0	0	NC
X080802-X080803	28/02/2012	EP1201528051	NS0112	60	64	non_mineralised	oxide						8.1	0.25	0.25			0	0	0	0	NC
NS0112 X080806-X080807		PE065688.058	NS0112	68	72	non_mineralised	oxide					**15**	**7.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X080812-X080813	28/02/2012	EP1201531019	NS0112	80	84	mineralised							8.5	0.25	0.25			0	0	0	0	NC
NS0112 X080822-X080823		PE065688.057	NS0112	100	104	non_mineralised						**120**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X080826-X080827	28/02/2012	EP1201531018	NS0112	108	112	non_mineralised							9	0.25	0.25			0	0	0	0	NC
X080832-X080833	28/02/2012	EP1201528048	NS0112	120	124	non_mineralised							9.2	0.25	0.25			0	0	0	0	NC
NS0112 X080836-X080837		PE065688.060	NS0112	128	132	non_mineralised						**110**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X080842-X080843	28/02/2012	EP1201528049	NS0112	140	144	mineralised							8.5	0.25	0.25			0	0	0	0	NC
X080846	28/02/2012	EP1201528052	NS0112	148	152	non_mineralised							8.6	0.25	0.25			0	0	0	0	NC
X080852-X080853	28/02/2012	EP1201531017	NS0112	158	162	non_mineralised							9.2	0.25	0.25			0	0	0	0	NC
NS0112 X080858-X080859		PE065688.056	NS0112	170	174	mineralised						**150**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X080862-X080863	28/02/2012	EP1201531014	NS0112	178	182	non_mineralised							9.1	0.25	0.25			0	0	0	0	NC
X080868-X080869	28/02/2012	EP1201531020	NS0112	190	194	mineralised							9.2	0.25	0.25			0	0	0	0	NC
NS0112 X080872-X080873		PE065688.061	NS0112	198	202	mineralised						**110**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0112 X080878-X080879		PE065688.059	NS0112	210	214	mineralised						**120**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X080888	28/02/2012	EP1201528046	NS0112	230	234	non_mineralised							9.1	0.25	0.25			0	0	0	0	NC
X080904-X080905	28/02/2012	EP1201531016	NS0112	260	264	mineralised	south						9.1	0.25	0.25			0	0	0	0	NC
X080908-X080909	28/02/2012	EP1201531015	NS0112	268	272								9.1	0.25	0.25			0	0	0	0	NC
X080914-X080915	28/02/2012	EP1201531013	NS0112	280	284								8.7	0.25	0.25			0	0	0	0	NC
X080918-X080919	28/02/2012	EP1201531012	NS0112	288	292								8.6	0.25	0.25			0	0	0	0	NC
X080922	28/02/2012	EP1201528047	NS0112	296	298								9.2	0.25	0.25			0	0	0	0	NC
X080847	28/02/2012	EP1201528050	NS0112										9	0.25	0.25			0	0	0	0	NC
NS0113 X080964-X080965		PE065688.062	NS0113	80	84	non_mineralised	footwall					**53**	**7.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0113 X080968-X080969		PE065688.063	NS0113	88	92	non_mineralised	footwall					**160**	**8.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0113 X080974-X080975		PE065688.064	NS0113	100	104	non_mineralised	footwall					**110**	**7.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0113 X080978-X080979		PE065688.065	NS0113	108	112	non_mineralised	footwall	**0.21**	**0.36**	0.25		**220**	**6.0**	0.25	0.25	0.25	0.25	-0.36	3.591	11.016	7.425	PAF LC
NS0113 X080984-X080652		PE065688.077	NS0113	120	124	mineralised	footwall					**150**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0113 X080988-X080989		PE065688.078	NS0113	128	132	mineralised	footwall					**180**	**8.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0113 X080994		PE065688.079	NS0113	140	142	non_mineralised	footwall	**0.26**	**0.15**	0.25		**310**	**5.9**	0.25	**1.8**	0.25	**1.8**	-0.15	4.446	4.59	0.144	PAF LC
NS0113 X081004-X081005		PE065688.066	NS0113	158	162	non_mineralised	footwall	**0.29**	**0.16**	0.25		**290**	**5.6**	0.25	**1.2**	0.25	**1.2**	-0.16	4.959	4.896	-0.063	NAF
NS0113 X081010-X081011		PE065688.067	NS0113	170	174	non_mineralised	footwall					**170**	**8.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0113 X081014-X081015		PE065688.068	NS0113	178	182	non_mineralised	footwall					**170**	**8.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0113 X081020-X081021		PE065688.069	NS0113	190	194	mineralised	footwall					**260**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0113 X081024-X081025		PE065688.070	NS0113	198	202	non_mineralised	footwall					**290**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0113 X081034-X081035		PE065688.071	NS0113	218	222	non_mineralised	footwall					**190**	**7.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0113 X081050		PE065688.072	NS0113	250	252							**190**	**8.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0113 X081056-X081057		PE065688.073	NS0113	260	264							**150**	**7.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0113 X081061		PE065688.074	NS0113	270	272							**150**	**8.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0113 X081066-X081067		PE065688.075	NS0113	280	284							**160**	**8.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0113 X081070-X081071		PE065688.076	NS0113	288	292							**150**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081179-X081180		PE065689.004	NS0115	58	62							**11**	**7.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081185-X081186		PE065688.096	NS0115	70	74							**12**	**7.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081193-X081194		PE065688.089	NS0115	86	90							**92**	**7.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081195-X081196		PE065689.001	NS0115	90	94							**130**	**7.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081199-X081200		PE065688.100	NS0115	98	102							**120**	**7.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081205-X081206		PE065689.003	NS0115	108	112							**120**	**7.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081211-X081212		PE065689.002	NS0115	120	124							**120**	**8.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081221-X081222		PE065688.099	NS0115	140	144							**120**	**7.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081225-X081226		PE065688.098	NS0115	148	152							**100**	**7.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081231-X081232		PE065688.088	NS0115	160	164							**110**	**8.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081235-X081236		PE065688.097	NS0115	168	172							**110**	**7.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081241		PE065689.006	NS0115	180	184							**160**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081245-X081246		PE065688.095	NS0115	188	192							**140**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081252-X081253		PE065688.091	NS0115	200	202							**140**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081257-X081258		PE065688.093	NS0115	210	214			**0.39**	**0.12**	0.25		**320**	**6.4**	0.25	0.25	0.25	0.25	-0.12	6.669	3.672	-2.997	NAF
NS0115 X081261-X081262		PE065688.092	NS0115	218	222							**110**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081266-X081267		PE065688.094	NS0115	228	232							**160**	**8.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081272-X081273		PE065688.090	NS0115	240	244							**130**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081276-X081277		PE065689.008	NS0115	248	252							**90**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081282-X081283		PE065689.010	NS0115	260	264							**92**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081286-X081287		PE065689.005	NS0115	268	272							**150**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081288-X081289		PE065689.009	NS0115	272	276							**190**	**7.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0115 X081216		PE065689.007	NS0115									**96**	**8.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081333-X081334		PE065689.054	NS0116	80	84	non_mineralised	footwall					**260**	**8.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081337-X081338		PE065689.058	NS0116	88	92	non_mineralised	footwall					**140**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081363-X081364		PE065689.046	NS0116	138	142	non_mineralised	footwall					**310**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081379-X081380		PE065689.062	NS0116	170	174	mineralised	footwall					**150**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081343-X081344		PE065689.055	NS0116	100	104	non_mineralised	footwall					**230**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081347-X081348		PE065689.057	NS0116 X08	108	112	non_mineralised	footwall	**0.30**	**0.55**	0.25		**420**	**5.0**	0.25	**2.0**	0.25	**2.0**	-0.55	5.13	16.83	11.7	PAF HC
NS0116 X081353-X081354		PE065689.053	NS0116	118	122	non_mineralised	footwall					**240**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081359		PE065689.063	NS0116	130	132	non_mineralised	footwall					**350**	**8.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081369-X081370		PE065689.056	NS0116	150	154	mineralised	footwall					**150**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081373-X081374		PE065689.049	NS0116	158	162	mineralised	footwall					**190**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081383-X081384		PE065689.061	NS0116	178	182	mineralised	footwall					**170**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081528-X081529		PE065689.051	NS0116	182	186	non_mineralised	footwall					**140**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081389		PE065689.064	NS0116	190	192	mineralised	footwall					**110**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081393-X081394		PE065689.060	NS0116	198	202	non_mineralised	footwall					**250**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081399-X081400		PE065689.059	NS0116	210	214	non_mineralised	footwall					**150**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081405-X081406		PE065689.048	NS0116	220	224	mineralised	footwall					**180**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081409-X081410		PE065689.050	NS0116	228	232	mineralised	south					**140**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC

							Job Number	PE065689A	PE065689A	PE065689A		PE065685	PE065685	PE065685	PE065685	PE065685	PE065685					
							Method Name	**Total Recoverable Metals in Soil by ICPOES**		**Moisture Content**	**EA009: Nett Acid Production Potential**	**Single Addition Net Acid Generation (NAG)**						**Calculations**				
							Analyte Name	**Ca**	**S**	**% Moisture**	**NAPP**	**ECox (NAG Conductivity)**	**pHox (NAG pH)**	**NAG as kg H_2SO_4/tonne to pH 4.5**	**NAG as kg H_2SO_4/tonne to pH 7**	**NAG as kg CaCO3/tonne to pH 4.5**	**NAG as kg CaCO3/tonne to pH 7**	**Lab ANC**	**ANC**	**MPA**	**NAPP**	**Classification**
							Units	**%**	**%**	**%**	**kg H2SO4/t**	**µS/cm**	**pH unit**	**kg H2SO4/T**	**kg H2SO4/T**	**kg CaCO3/T**	**kg CaCO3/T**				**kg H2SO4/t**	
Description	**Sample Date**	**Sample Name**	**Hole ID**	**From**	**To**	**Mineralisation**	**Lithology**	**10**	**10**	**0.5**	**0.5**	**1**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**					
NS0116 X081415-X081416		PE065689.052	NS0116	240	244	mineralised	south					**140**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081419-X081420		PE065689.047	NS0116	248	252	mineralised	south					**180**	**7.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0116 X081425-X081426		PE065689.045	NS0116	260	264	mineralised	south					**180**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0117 X081522-X081523		PE065689.040	NS0117	170	174	non_mineralised	footwall					**120**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0117 X081526-X081527		PE065689.043	NS0117	178	182	non_mineralised	footwall					**120**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0117 X081528-X081529		PE065689.038	NS0117	182	186	mineralised	footwall					**80**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0117 X081532-X081533		PE065689.041	NS0117	190	194	mineralised	footwall					**160**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0117 X081536-X081537		PE065689.042	NS0117	198	202	mineralised	footwall					**190**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0117 X081538-X081539		PE065689.044	NS0117	202	206	mineralised	footwall					**210**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0117 X081542-X081543		PE065689.031	NS0117	210	214	mineralised	footwall					**160**	**8.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0117 X081546-X081547		PE065689.032	NS0117	218	222	non_mineralised	footwall					**190**	**7.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0117 X081552-X081553		PE065689.033	NS0117	228	232							**120**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0117 X081558-X081559		PE065689.036	NS0117	240	244							**190**	**7.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0117 X081562-X081563		PE065689.039	NS0117	248	252							**140**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0117 X081568-X081569		PE065689.034	NS0117	260	264							**110**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0117 X081572-X081573		PE065689.037	NS0117	268	272							**99**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0117 X081574-X081575		PE065689.035	NS0117	272	276							**100**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0118 X081629		PE065688.087	NS0118	100	102	non_mineralised	hangingwall					**170**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0118 X081633-X081634		PE065688.081	NS0118	108	112	non_mineralised	hangingwall					**260**	**8.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0118 X081635-X081636		PE065688.084	NS0118	112	116	mineralised	hangingwall					**180**	**8.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0118 X081639-X081640		PE065688.085	NS0118	120	124	mineralised	hangingwall					**200**	**7.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0118 X081643-X081644		PE065688.086	NS0118	128	132	non_mineralised	hangingwall					**130**	**8.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0118 X081649-X081650		PE065688.082	NS0118	140	144	non_mineralised	hangingwall					**270**	**6.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0118 X081655-X081656		PE065688.083	NS0118	150	154	mineralised	hangingwall					**220**	**8.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081806-X081807		PE065689.021	NS0120	90	94	non_mineralised	south					**90**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081810-X081811		PE065689.023	NS0120	98	102	non_mineralised	south					**170**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081816		PE065689.015	NS0120	110	114	non_mineralised	south					**95**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081822-X081823		PE065689.020	NS0120	120	124	non_mineralised	south					**130**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081826-X081827		PE065689.030	NS0120	128	132	non_mineralised	south					**110**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081832-X081833		PE065689.029	NS0120	140	144	non_mineralised	south					**120**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081836-X081837		PE065689.022	NS0120	148	152	non_mineralised	south					**96**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081842-X081843		PE065689.018	NS0120	160	164	non_mineralised	south					**120**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081846-X081847		PE065689.025	NS0120	168	172							**200**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081852-X081853		PE065689.028	NS0120	178	182							**190**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081858-X081859		PE065689.026	NS0120	190	194							**210**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081862-X081863		PE065689.027	NS0120	198	202							**230**	**7.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081866-X081867		PE065689.019	NS0120	206	210	non_mineralised	South	**0.14**	**1.00**	0.25		**670**	**3.2**	**6.4**	**12**	**6.5**	**12**	-1	2.394	30.6	28.206	PAF HC
NS0120 X081872-X081873		PE065689.013	NS0120	218	222							**97**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081878-X081879		PE065689.011	NS0120	230	234							**110**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081882-X081883		PE065689.014	NS0120	238	242							**220**	**6.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081888-X081889		PE065689.016	NS0120	250	254							**170**	**8.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081892-X081893		PE065689.017	NS0120	258	262							**200**	**7.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081898-X081899		PE065689.024	NS0120	270	274							**130**	**7.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0120 X081869		PE065689.012	NS0120					**0.12**	**0.95**	0.25		**550**	**3.6**	**2.9**	**9.7**	**3.0**	**9.9**	-0.95	2.052	29.07	27.018	PAF HC
NS0122 X082077-X082078		PE065686.100	NS0122	58	62	non_mineralised	oxide					**94**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082083		PE065687.003	NS0122	70	74	non_mineralised	footwall					**200**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082087-X082088		PE065687.001	NS0122	78	82	non_mineralised	footwall					**110**	**9.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082093-X082094		PE065686.099	NS0122	90	94	mineralised	footwall					**78**	**9.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082097		PE065687.007	NS0122	98	102	non_mineralised	footwall					**170**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082104-X082105		PE065686.098	NS0122	110	114	mineralised	footwall					**84**	**9.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082108		PE065687.004	NS0122	118	122	mineralised	footwall					**180**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082114-X082115		PE065686.082	NS0122	130	134	non_mineralised	footwall					**140**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082118-X082119		PE065686.083	NS0122	138	142	non_mineralised	footwall					**130**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082124-X082125		PE065686.084	NS0122	150	154	non_mineralised	footwall					**120**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082128-X082129		PE065686.085	NS0122	158	162	mineralised	footwall					**120**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082133-X082134		PE065686.088	NS0122	168	172	non_mineralised	footwall					**160**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082139-X082140		PE065686.089	NS0122	180	184	mineralised	footwall					**130**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082143-X082144		PE065686.091	NS0122	188	192	mineralised	footwall					**210**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082149-X082150		PE065686.090	NS0122	200	204	mineralised	footwall					**130**	**9.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082154-X082155		PE065686.087	NS0122	208	212	non_mineralised	footwall					**160**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082165-X082166		PE065686.086	NS0122	230	234	mineralised	footwall					**120**	**10.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082169		PE065686.093	NS0122	238	242	mineralised	footwall					**79**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082175-X082176		PE065686.097	NS0122	250	254	non_mineralised	footwall					**110**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082179-X082180		PE065686.095	NS0122	258	262	non_mineralised	footwall					**120**	**10.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082185-X082186		PE065686.094	NS0122	270	274	mineralised	footwall					**120**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082189		PE065686.096	NS0122	278	280	non_mineralised	footwall					**120**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082084		PE065687.002	NS0122									**200**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082098		PE065687.005	NS0122									**160**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082109		PE065687.006	NS0122									**140**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0122 X082170		PE065686.092	NS0122									**150**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0124 X082359		PE065687.031	NS0124	50	52	non_mineralised	oxide					**20**	**8.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0124 X082363-X082364		PE065687.008	NS0124	58	62	non_mineralised	footwall					**120**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0124 X082373-X082374		PE065687.010	NS0124	78	82	non_mineralised	footwall					**130**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0124 X082379-X082380		PE065687.011	NS0124	90	94	non_mineralised	footwall					**160**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0124 X082383		PE065687.104	NS0124	98	102	mineralised	footwall					**97**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0124 X082385-X082386		PE065687.012	NS0124	102	106	non_mineralised	footwall					**110**	**10.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0124 X082389		PE065687.016	NS0124	110	112	non_mineralised	footwall					**98**	**10.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0124 X082393-X082394		PE065687.013	NS0124	118	122	mineralised	footwall					**93**	**10.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0124 X082399-X082400		PE065687.014	NS0124	130	134	non_mineralised	footwall	**0.15**	**0.42**			**350**	**5.4**	0.25	**0.8**	0.25	**0.8**	-0.42	2.565	12.852	10.287	PAF HC
NS0124 X082405-X082406		PE065687.017	NS0124	140	144	non_mineralised	footwall					**200**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0124 X082409-X082410		PE065687.018	NS0124	148	152	non_mineralised	footwall					**240**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0124 X082415-X082416		PE065687.020	NS0124	160	164	non_mineralised	footwall					**210**	**10.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0124 X082417-X082418		PE065687.019	NS0124	164	168	non_mineralised	footwall					**120**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0124 X082419-X082420		PE065687.021	NS0124	168	172	non_mineralised	footwall					**110**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0124 X082425-X082426		PE065687.022	NS0124	180	184	non_mineralised	footwall					**120**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC

							Job Number	PE065689A	PE065689A	PE065689A		PE065685	PE065685	PE065685	PE065685	PE065685	PE065685						
							Method Name	**Total Recoverable Metals in Soil by ICPOES**		**Moisture Content**	**EA009: Nett Acid Production Potential**	**Single Addition Net Acid Generation (NAG)**						**Calculations**					
							Analyte Name	**Ca**	**S**	**% Moisture**	**NAPP**	**ECox (NAG Conductivity)**	**pHox (NAG pH)**	**NAG as kg H_2SO_4/tonne to pH 4.5**	**NAG as kg H_2SO_4/tonne to pH 7**	**NAG as kg CaCO3/tonne to pH 4.5**	**NAG as kg CaCO3/tonne to pH 7**	**Lab ANC**	**ANC**	**MPA**	**NAPP**	**Classification**	
							Units	**%**	**%**	**%**	**kg H2SO4/t**	**µS/cm**	**pH unit**	**kg H2SO4/T**	**kg H2SO4/T**	**kg CaCO3/T**	**kg CaCO3/T**				**kg H2SO4/t**		
Description	**Sample Date**	**Sample Name**	**Hole ID**	**From**	**To**	**Mineralisation**	**Lithology**	**10**	**10**	**0.5**	**0.5**	**1**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**						
NS0124 X082435-X082436		PE065687.023	NS0124	200	204	mineralised	footwall					**180**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0124 X082439-X082440		PE065687.026	NS0124	208	212	non_mineralised	footwall					**270**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0124 X082445		PE065687.034	NS0124	220	224	non_mineralised	footwall					**200**	**8.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0124 X082449-X082450		PE065687.027	NS0124	228	232	non_mineralised	footwall					**140**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0124 X082456-X082457		PE065687.028	NS0124	240	244	non_mineralised	footwall					**180**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0124 X082461		PE065687.030	NS0124	250	252	non_mineralised	footwall					**72**	**9.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0124 X082466-X082467		PE065687.015	NS0124	260	264	non_mineralised	footwall					**200**	**10.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0124 X082470-X082471		PE065687.024	NS0124	268	272	mineralised	footwall					**170**	**10.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0124 X082480-X082481		PE065687.025	NS0124	288	292	non_mineralised	footwall					**270**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0124 X082484		PE065687.033	NS0124	296	298	non_mineralised	footwall					**220**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0124 X082370		PE065687.009	NS0124									**160**	**10.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0124 X082477		PE065687.032	NS0124									**200**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
X082500	22/02/2012	EP1201385046	NS0125	30	32						-30.6		8.6	0.25	0.25			-30.6	0	0	0	NC	
NS0125 X082505-X082506		PE065685.071	NS0125	38	42							**180**	**7.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0125 X082511-X082512		PE065685.073	NS0125	50	54							**80**	**9.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
X082515-2516	22/02/2012	EP1201385049	NS0125	58	62						-44.5		8.5	0.25	0.25			-44.5	0	0	0	NC	
X082521-2522	22/02/2012	EP1201385047	NS0125	70	74						-44		8.8	0.25	0.25			-44	0	0	0	NC	
X082525-2526	22/02/2012	EP1201385050	NS0125	78	82						-50.9		8.4	0.25	0.25			-50.9	0	0	0	NC	
NS0125 X082531-X082532		PE065685.072	NS0125	90	94							**150**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
X082535-2536	22/02/2012	EP1201385048	NS0125	98	102						-39.2		8.8	0.25	0.25			-39.2	0	0	0	NC	
X082541-2542	28/02/2012	EP1201527016	NS0125	110	114								8.8	0.25	0.25			0	0	0	0	NC	
X082545-2546	28/02/2012	EP1201527015	NS0125	118	122								8.7	0.25	0.25			0	0	0	0	NC	
X082552	28/02/2012	EP1201527013	NS0125	130	132								8.8	0.25	0.25			0	0	0	0	NC	
X082557-2558	28/02/2012	EP1201527017	NS0125	140	144								8.9	0.25	0.25			0	0	0	0	NC	
X082561-2562	28/02/2012	EP1201527014	NS0125	148	152								8.8	0.25	0.25			0	0	0	0	NC	
NS0125 X082567-X082568		PE065685.069	NS0125	160	164							**65**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
X082571-2572	28/02/2012	EP1201526044	NS0125	168	172								9.1	0.25	0.25			0	0	0	0	NC	
X082577-2578	28/02/2012	EP1201526046	NS0125	180	184								9.2	0.25	0.25			0	0	0	0	NC	
X082581-2582	28/02/2012	EP1201526045	NS0125	188	192								9.2	0.25	0.25			0	0	0	0	NC	
NS0125 X082591-X082592		PE065685.066	NS0125	208	212							**110**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0125 X082597-X082598		PE065685.068	NS0125	220	224							**110**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
X082603-2604	28/02/2012	EP1201526043	NS0125	230	234								8.9	0.25	0.25			0	0	0	0	NC	
NS0125 X082607-X082608		PE065685.067	NS0125	238	242							**75**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0125 X082887-X082888		PE065685.070	NS0125									**60**	**9.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
X082635-X082636	28/02/2012	EP1201528026	NS0126	50	54								8.2	0.25	0.25			0	0	0	0	NC	
NS0126 X082639		PE065685.086	NS0126	58	62							**160**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
X082645-X082646	28/02/2012	EP1201528022	NS0126	70	74								8.4	0.25	0.25			0	0	0	0	NC	
NS0126 X082649-X072650		PE065685.087	NS0126	78	82							**150**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
X082655-X082656	28/02/2012	EP1201528024	NS0126	88	92								8.8	0.25	0.25			0	0	0	0	NC	
NS0126 X082661-X082662		PE065685.083	NS0126	100	104							**150**	**10.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0126 X082665-X082666		PE065685.085	NS0126	108	112							**180**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0126 X082675-X082676		PE065685.082	NS0126	128	132							**160**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0126 X082681-X082682		PE065685.081	NS0126	140	144							**130**	**10.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
X082685-X082686	28/02/2012	EP1201528023	NS0126	148	152								8.8	0.25	0.25			0	0	0	0	NC	
X082691-X082692	28/02/2012	EP1201528025	NS0126	160	164								8.8	0.25	0.25			0	0	0	0	NC	
NS0126 X082695-X082696		PE065685.084	NS0126	168	172							**250**	**7.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0126 X082702		PE065685.075	NS0126	180	182							**100**	**10.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0126 X082707-X082708		PE065685.074	NS0126	190	194							**91**	**10.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
X082711-X082712	28/02/2012	EP1201527012	NS0126	198	202								8.4	0.25	0.25			0	0	0	0	NC	
NS0126 X082717-X082718		PE065685.078	NS0126	210	214							**68**	**10.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0126 X082721-X082722		PE065685.076	NS0126	218	222							**98**	**10.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
X082727-X082728	28/02/2012	EP1201527011	NS0126	230	234								8.4	0.25	0.25			0	0	0	0	NC	
NS0126 X082731-X082732		PE065685.080	NS0126	238	242							**120**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0126 X082737-X082738		PE065685.079	NS0126	250	254							**120**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
X082741-X082742	28/02/2012	EP1201527010	NS0126	258	262								8.5	0.25	0.25			0	0	0	0	NC	
NS0126 X082747-X082748		PE065685.077	NS0126	270	274							**120**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
NS0126 X082672		PE065685.088	NS0126									**210**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC	
X082753	22/02/2012	EP1201385034	NS0127	0	2						0.25		6.8	0.25	0.25			0.25	0	0	0	NC	
X082754-2755	28/02/2012	EP1201526034	NS0127	2	6								9.2	0.25	0.25			0	0	0	0	NC	
X082758-2759	28/02/2012	EP1201526036	NS0127	10	14								9.2	0.25	0.25			0	0	0	0	NC	
X082758	22/02/2012	EP1201385031	NS0127	10	14						-5.5		8.3	0.25	0.25			-5.5	0	0	0	NC	
X082762-2763	22/02/2012	EP1201385029	NS0127	18	22						-3.9		7.9	0.25	0.25			-3.9	0	0	0	NC	
X082764-2765	28/02/2012	EP1201526038	NS0127	22	26								9.2	0.25	0.25			0	0	0	0	NC	
X082768-2769	28/02/2012	EP1201526033	NS0127	30	34								9.3	0.25	0.25			0	0	0	0	NC	
X082772-2773	22/02/2012	EP1201385030	NS0127	38	42						-11		7.8	0.25	0.25			-11	0	0	0	NC	
X082774-2775	28/02/2012	EP1201526035	NS0127	42	46								8	0.25	0.25			0	0	0	0	NC	
X082778-2779	22/02/2012	EP1201385028	NS0127	50	54						-20.5		8	0.25	0.25			-20.5	0	0	0	NC	
X082782-2783	22/02/2012	EP1201385027	NS0127	58	62						-25.8		8.4	0.25	0.25			-25.8	0	0	0	NC	
X082788	22/02/2012	EP1201385026	NS0127	70	74						-19.4		8.6	0.25	0.25			-19.4	0	0	0	NC	
X082792	22/02/2012	EP1201385024	NS0127	78	82						-8		8.8	0.25	0.25			-8	0	0	0	NC	
X082798	22/02/2012	EP1201385021	NS0127	90	94						-12		7.8	0.25	0.25			-12	0	0	0	NC	
X082702	22/02/2012	EP1201385036	NS0127	180	182						-12.6		8.5	0.25	0.25			-12.6	0	0	0	NC	
X082703	22/02/2012	EP1201385033	NS0127	182	186						-19.2		8.4	0.25	0.25			-19.2	0	0	0	NC	
X082709	22/02/2012	EP1201385043	NS0127	194	198						-28.9		8.2	0.25	0.25			-28.9	0	0	0	NC	
X082713	22/02/2012	EP1201385035	NS0127	202	206						2.2		8.1	0.25	0.25			2.2	0	0	0	NC	
X082719	22/02/2012	EP1201385042	NS0127	214	218						-24.4		7.9	0.25	0.25			-24.4	0	0	0	NC	
X082725	22/02/2012	EP1201385037	NS0127	226	230						-4.8		8	0.25	0.25			-4.8	0	0	0	NC	
X082729	22/02/2012	EP1201385041	NS0127	234	236						-10		8.7	0.25	0.25			-10	0	0	0	NC	
X082733	28/02/2012	EP1201526041	NS0127	242	246								9.1	0.25	0.25			0	0	0	0	NC	
X082748-2749	28/02/2012	EP1201526037	NS0127										9.3	0.25	0.25			0	0	0	0	NC	
X082742-2743	28/02/2012	EP1201526039	NS0127										9.4	0.25	0.25			0	0	0	0	NC	
X082738-2739	28/02/2012	EP1201526040	NS0127										9	0.25	0.25			0	0	0	0	NC	
X082732	28/02/2012	EP1201526042	NS0127										8.7	0.25	0.25			0	0	0	0	NC	
X082799	22/02/2012	EP1201385022	NS0127								-23.4		8.5	0.25	0.25			-23.4	0	0	0	NC	
X082793	22/02/2012	EP1201385023	NS0127								-33.5		8.7	0.25	0.25			-33.5	0	0	0	NC	

							Job Number	PE065689A	PE065689A	PE065689A		PE065685	PE065685	PE065685	PE065685	PE065685	PE065685					
							Method Name	**Total Recoverable Metals in Soil by ICPOES**		**Moisture Content**	**EA009: Nett Acid Production Potential**	**Single Addition Net Acid Generation (NAG)**						**Calculations**				
							Analyte Name	**Ca**	**S**	**% Moisture**	**NAPP**	**ECox (NAG Conductivity)**	**pHox (NAG pH)**	**NAG as kg H_2SO_4/tonne to pH 4.5**	**NAG as kg H_2SO_4/tonne to pH 7**	**NAG as kg CaCO3/tonne to pH 4.5**	**NAG as kg CaCO3/tonne to pH 7**	**Lab ANC**	**ANC**	**MPA**	**NAPP**	**Classification**
							Units	**%**	**%**	**%**	**kg H2SO4/t**	**µS/cm**	**pH unit**	**kg H2SO4/T**	**kg H2SO4/T**	**kg CaCO3/T**	**kg CaCO3/T**				**kg H2SO4/t**	
Description	**Sample Date**	**Sample Name**	**Hole ID**	**From**	**To**	**Mineralisation**	**Lithology**	**10**	**10**	**0.5**	**0.5**	**1**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**					
X082789	22/02/2012	EP1201385025	NS0127								-9.7		8.7	0.25	0.25			-9.7	0	0	0	NC
X082759	22/02/2012	EP1201385032	NS0127								-5.2		8.3	0.25	0.25			-5.2	0	0	0	NC
X082712	22/02/2012	EP1201385038	NS0127								-5.5		8.4	0.25	0.25			-5.5	0	0	0	NC
X082722	22/02/2012	EP1201385039	NS0127								-10.4		8.3	0.25	0.25			-10.4	0	0	0	NC
X082728	22/02/2012	EP1201385040	NS0127								-15.5		8.6	0.25	0.25			-15.5	0	0	0	NC
X082718	22/02/2012	EP1201385044	NS0127								-27.1		8.7	0.25	0.25			-27.1	0	0	0	NC
X082708	22/02/2012	EP1201385045	NS0127								-25.4		8.9	0.25	0.25			-25.4	0	0	0	NC
NS0128 X140035-X140036		PE065689.070	NS0128	80	84	NA	Hangingwall?					**140**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0128 X140039-X140040		PE065689.071	NS0128	88	92	NA	Hangingwall?					**100**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0128 X140045-X140046		PE065689.065	NS0128	100	104	NA	Hangingwall?					**130**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0128 X140049-X140050		PE065689.066	NS0128	108	112	NA	Hangingwall?					**130**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0128 X140055-X140056		PE065689.067	NS0128	118	122	NA	Hangingwall?					**150**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0128 X140061-X140062		PE065689.068	NS0128	130	134	NA	Hangingwall?					**110**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0128 X140065-X140066		PE065689.069	NS0128	138	142	NA	Hangingwall?					**200**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0128 X140071-X140072		PE065689.072	NS0128	150	154	NA	Hangingwall?	**0.24**	**0.48**	0.25		**330**	**5.2**	0.25	**1.6**	0.25	**1.6**	-0.48	4.104	14.688	10.584	PAF HC
NS0128 X140075-X140076		PE065689.073	NS0128	158	162	NA	Hangingwall?					**180**	**8.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0128 X140081-X140072		PE065689.074	NS0128	170	174	NA	Hangingwall?					**66**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0128 X140085-X140086		PE065689.075	NS0128	178	182	NA	Hangingwall?					**77**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0128 X140091-X140092		PE065689.076	NS0128	190	194	NA	Hangingwall?					**210**	**8.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0128 X140095-X140096		PE065689.077	NS0128	198	202	NA	Hangingwall?					**280**	**7.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
X143535-X143536	28/02/2012	EP1201527043	NS0147	40	44								7.8	0.25	0.25			0	0	0	0	NC
X143539-X143540	28/02/2012	EP1201527039	NS0147	48	52								8.3	0.25	0.25			0	0	0	0	NC
X143545-3546	28/02/2012	EP1201527040	NS0147	60	64								9.1	0.25	0.25			0	0	0	0	NC
X143549-X143550	28/02/2012	EP1201527042	NS0147	68	72								8.8	0.25	0.25			0	0	0	0	NC
X143555-X143556	28/02/2012	EP1201527041	NS0147	80	84								9	0.25	0.25			0	0	0	0	NC
X143565-X143566	28/02/2012	EP1201526008	NS0149	100	104								8.9	0.25	0.25			0	0	0	0	NC
X143569-X143570	28/02/2012	EP1201526005	NS0149	108	112								9	0.25	0.25			0	0	0	0	NC
X143575-X143576	28/02/2012	EP1201526003	NS0149	120	124								9.1	0.25	0.25			0	0	0	0	NC
X143579-X143580	28/02/2012	EP1201526004	NS0149	128	132								9.2	0.25	0.25			0	0	0	0	NC
X143585	28/02/2012	EP1201526006	NS0149	140	142								9.2	0.25	0.25			0	0	0	0	NC
X143591-X143592	28/02/2012	EP1201527046	NS0149	150	154								9.3	0.25	0.25			0	0	0	0	NC
X143595-X143596	28/02/2012	EP1201527047	NS0149	158	162								9.2	0.25	0.25			0	0	0	0	NC
X143602	28/02/2012	EP1201527050	NS0149	170	172								9.1	0.25	0.25			0	0	0	0	NC
X143607-X143608	28/02/2012	EP1201527051	NS0149	180	184								9.2	0.25	0.25			0	0	0	0	NC
X143611-X143612	28/02/2012	EP1201527048	NS0149	188	192								9.2	0.25	0.25			0	0	0	0	NC
X143621-X143622	28/02/2012	EP1201527049	NS0149	208	212								9.3	0.25	0.25			0	0	0	0	NC
X143627-X143628	28/02/2012	EP1201526011	NS0149	220	224								8.5	0.25	0.25			0	0	0	0	NC
X143631-X143632	28/02/2012	EP1201526015	NS0149	228	232								9.2	0.25	0.25			0	0	0	0	NC
X143637-X143638	28/02/2012	EP1201526014	NS0149	240	244								9.3	0.25	0.25			0	0	0	0	NC
X143641-X143642	28/02/2012	EP1201526018	NS0149	248	252								9.1	0.25	0.25			0	0	0	0	NC
X143647-X143648	28/02/2012	EP1201526013	NS0149	260	264								8.9	0.25	0.25			0	0	0	0	NC
X143653-X143654	28/02/2012	EP1201526009	NS0149	270	274								8.9	0.25	0.25			0	0	0	0	NC
X143657	28/02/2012	EP1201526010	NS0149	278	282								8.9	0.25	0.25			0	0	0	0	NC
X143658	28/02/2012	EP1201526007	NS0149										9.3	0.25	0.25			0	0	0	0	NC
X14363	28/02/2012	EP1201526016	NS0149										9.2	0.25	0.25			0	0	0	0	NC
X14364	28/02/2012	EP1201526017	NS0149										9.1	0.25	0.25			0	0	0	0	NC
X143518	28/02/2012	EP1201527044	NS0149										8.9	0.25	0.25			0	0	0	0	NC
X143517	28/02/2012	EP1201527045	NS0149										9.2	0.25	0.25			0	0	0	0	NC
NS0151 X066667-X066668		PE065686.015	NS0151	128	132	non_mineralised	hangingwall					**210**	**8.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0151 X066673-X066674		PE065686.016	NS0151	140	144	non_mineralised	hangingwall					**130**	**7.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0151 X066677-X066678		PE065686.017	NS0151	148	152	mineralised	hangingwall					**160**	**7.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0151 X066683-X066684		PE065686.018	NS0151	160	164	non_mineralised	hangingwall					**180**	**7.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066752-X066753		PE065686.003	NS0152	78	82	non_mineralised	footwall	**0.43**	**0.55**	0.25		**340**	**6.0**	0.25	**0.6**	0.25	**0.6**	-0.55	7.353	16.83	9.477	PAF LC
NS0152 X066758-X066759		PE065686.004	NS0152	90	94	non_mineralised	footwall					**200**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066763-X066764		PE065686.005	NS0152	100	104	mineralised	footwall					**110**	**9.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066767-X066768		PE065686.006	NS0152	108	112	mineralised	footwall					**86**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066773-X066774		PE065686.007	NS0152	120	124	mineralised	footwall					**100**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066777-X066778		PE065686.008	NS0152	128	132	mineralised	footwall					**100**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066783-X066784		PE065686.009	NS0152	140	144	mineralised	footwall					**110**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066787-X066788		PE065685.089	NS0152	148	152	mineralised	footwall					**410**	**11.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066793-X066794		PE065685.090	NS0152	160	164	mineralised	footwall					**110**	**9.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066797-X066798		PE065686.010	NS0152	168	172	mineralised	footwall					**96**	**9.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066803-X066804		PE065685.091	NS0152	180	184	mineralised	footwall					**97**	**10.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066807-X066808		PE065685.092	NS0152	188	192	mineralised	footwall					**97**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066813-X066814		PE065685.093	NS0152	200	204	mineralised	footwall					**110**	**10.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066817-X066818		PE065685.094	NS0152	208	212	mineralised	footwall					**94**	**10.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066823-X066824		PE065685.095	NS0152	220	224	mineralised	footwall					**130**	**10.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066827-X066828		PE065685.096	NS0152	228	232	mineralised	footwall					**150**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066833-X066834		PE065685.097	NS0152	240	244	non_mineralised	footwall					**140**	**9.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066835-X066836		PE065685.098	NS0152	244	248	non_mineralised	footwall					**230**	**11.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066837-X066838		PE065685.099	NS0152	248	252	mineralised	footwall					**140**	**10.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066843-X066844		PE065685.100	NS0152	260	264	mineralised	footwall					**110**	**10.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066847-X066848		PE065686.001	NS0152	268	272	non_mineralised	footwall					**180**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0152 X066853		PE065686.002	NS0152	280	282	mineralised	south					**260**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0153 X066904-X066905		PE065686.021	NS0153	98	102	non_mineralised	oxide					**200**	**7.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0153 X066910-X066911		PE065686.022	NS0153	110	114	non_mineralised	hangingwall					**130**	**7.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0153 X066914-X066915		PE065686.019	NS0153	118	122	non_mineralised	hangingwall					**140**	**7.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0153 X066920-X066921		PE065686.023	NS0153	130	134	non_mineralised	hangingwall					**180**	**7.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0153 X066924-X066925		PE065686.024	NS0153	138	142	non_mineralised	hangingwall					**190**	**7.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0153 X066675-X066976		PE065686.030	NS0153	144	148	non_mineralised	hangingwall					**240**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0153 X066935-X066936		PE065686.025	NS0153	160	164	mineralised	hangingwall					**140**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0153 X066939-X066940		PE065686.020	NS0153	168	172	mineralised	hangingwall					**180**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0153 X066945-X066946		PE065686.026	NS0153	180	184	mineralised	hangingwall					**230**	**7.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0153 X066949-X066950		PE065686.027	NS0153	188	192	non_mineralised	hangingwall					**260**	**7.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC

							Job Number	PE065689A	PE065689A	PE065689A		PE065685	PE065685	PE065685	PE065685	PE065685	PE065685					
							Method Name	**Total Recoverable Metals in Soil by ICPOES**		**Moisture Content**	**EA009: Nett Acid Production Potential**	**Single Addition Net Acid Generation (NAG)**						**Calculations**				
							Analyte Name	**Ca**	**S**	**% Moisture**	**NAPP**	**ECox (NAG Conductivity)**	**pHox (NAG pH)**	**NAG as kg H_2SO_4/tonne to pH 4.5**	**NAG as kg H_2SO_4/tonne to pH 7**	**NAG as kg CaCO3/tonne to pH 4.5**	**NAG as kg CaCO3/tonne to pH 7**	**Lab ANC**	**ANC**	**MPA**	**NAPP**	**Classification**
							Units	**%**	**%**	**%**	**kg H2SO4/t**	**µS/cm**	**pH unit**	**kg H2SO4/T**	**kg H2SO4/T**	**kg CaCO3/T**	**kg CaCO3/T**				**kg H2SO4/t**	
Description	**Sample Date**	**Sample Name**	**Hole ID**	**From**	**To**	**Mineralisation**	**Lithology**	**10**	**10**	**0.5**	**0.5**	**1**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**					
NS0153 X066955-X066956		PE065686.028	NS0153	200	204	non_mineralised	hangingwall	**0.04**	**3.40**	0.25		**4100**	**2.0**	**86**	**99**	**88**	**100**	-3.4	0.7182	104.04	103.322	PAF HC
NS0153 X066965-X066966		PE065686.032	NS0153	220	224	non_mineralised	hangingwall	**0.96**	**0.63**	0.25		**430**	**6.0**	0.25	**1.9**	0.25	**2.0**	-0.63	16.416	19.278	2.862	PAF LC
NS0153 X066969-X066970		PE065686.029	NS0153	228	232	non_mineralised	hangingwall					**210**	**7.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0153 X066979-X066980		PE065686.031	NS0153	248	252	mineralised	hangingwall					**220**	**8.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X066993-X066994		PE065686.040	NS0154	18	22	non_mineralised	oxide					**40**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X066999-X067000		PE065686.037	NS0154	30	34	mineralised	south					**150**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079503-X079504		PE065686.035	NS0154	38	42	mineralised	south					**110**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079509-X079510		PE065686.039	NS0154	50	54	mineralised	south					**86**	**9.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079513-X079514		PE065686.048	NS0154	58	62	mineralised	south					**95**	**9.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079519-X079520		PE065686.101	NS0154	70	74	mineralised	south					**100**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079523-X079524		PE065686.047	NS0154	78	82	mineralised	south					**190**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079527-X079528		PE065686.038	NS0154	86	90	mineralised	south					**290**	**7.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079529		PE065686.044	NS0154	90	92	mineralised	south					**250**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079533-X079534		PE065686.042	NS0154	98	102	mineralised	south					**95**	**9.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079539-X079540		PE065686.041	NS0154	110	114	mineralised	footwall					**210**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079543-X079544		PE065686.045	NS0154	118	122	non_mineralised	footwall					**300**	**8.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079549-X079550		PE065686.046	NS0154	130	134	non_mineralised	footwall					**200**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079555-X079556		PE065686.036	NS0154	140	144	non_mineralised	footwall					**220**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079565-X076566		PE065686.043	NS0154	160	164	mineralised	footwall					**160**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079569-X079570		PE065686.049	NS0154	168	172	non_mineralised	footwall					**310**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079575-X079576		PE065686.056	NS0154	180	184	mineralised	footwall					**240**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079579-X079580		PE065686.057	NS0154	188	192	mineralised	footwall					**250**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079585-X079586		PE065686.054	NS0154	200	204	non_mineralised	footwall					**430**	**7.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079595-X079596		PE065686.034	NS0154	220	224	non_mineralised	footwall					**360**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079601-X079602		PE065686.053	NS0154	230	234	non_mineralised	footwall					**290**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079605-X079606		PE065686.055	NS0154	238	242	non_mineralised	footwall					**280**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079611-X079612		PE065686.050	NS0154	250	254	non_mineralised	footwall					**140**	**10.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079615-X079616		PE065686.051	NS0154	258	262	non_mineralised	footwall					**150**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0154 X079621-X079622		PE065686.052	NS0154	270	274	non_mineralised	footwall					**160**	**9.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079677-X079678		PE065687.035	NS0155	100	104	non_mineralised	footwall					**260**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079681-X079682		PE065687.036	NS0155	108	112	non_mineralised	footwall					**430**	**6.6**	0.25	**0.6**	0.25	**0.6**	0	0	0	0	NC
NS0155 X079687-X079688		PE065687.037	NS0155	120	124	non_mineralised	footwall					**110**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079691-X079692		PE065687.038	NS0155	128	132	mineralised	footwall					**190**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079697-X079698		PE065687.039	NS0155	140	144	mineralised	footwall					**130**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079703-X079704		PE065687.040	NS0155	150	154	mineralised	footwall					**150**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079707-X079708		PE065687.041	NS0155	158	162	mineralised	footwall					**140**	**9.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079713-X079714		PE065687.042	NS0155	170	174	mineralised	footwall					**160**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079717-X079718		PE065687.044	NS0155	178	182	non_mineralised	footwall					**140**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079723-X079724		PE065687.045	NS0155	190	194	mineralised	footwall					**90**	**9.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079727-X079728		PE065687.046	NS0155	198	202	mineralised	footwall					**88**	**9.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079733-X079734		PE065687.047	NS0155	210	214	mineralised	footwall					**110**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079737-X079738		PE065687.048	NS0155	218	222	non_mineralised	footwall					**130**	**9.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079743-X079744		PE065687.049	NS0155	230	234	mineralised	footwall					**110**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079747-X079748		PE065687.050	NS0155	238	242	mineralised	footwall					**95**	**10.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079753-X079754		PE065687.051	NS0155	250	254	non_mineralised	footwall					**200**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079757-X079758		PE065687.052	NS0155	258	262	non_mineralised	footwall					**190**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079763-X079764		PE065687.043	NS0155	270	274	mineralised	footwall					**100**	**9.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0155 X079767-X079768		PE065687.053	NS0155	278	282	mineralised	footwall					**110**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0157 X079911-X079912		PE065685.101	NS0157	110	114	non_mineralised	hangingwall					**150**	**7.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0157 X079917-X079916		PE065685.047	NS0157	122	126	non_mineralised	hangingwall					**170**	**7.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0157 X079919-X079920		PE065685.048	NS0157	126	130	mineralised	hangingwall					**110**	**7.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0157 X079921-X079922		PE065685.046	NS0157	130	134	mineralised	hangingwall					**150**	**7.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0157 X079925-X079926		PE065685.045	NS0157	138	142	non_mineralised	hangingwall					**130**	**7.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0157 X079931		PE065685.044	NS0157	150	152	non_mineralised	hangingwall					**110**	**7.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X139506-X139507		PE065685.049	NS0158	50	54	non_mineralised	footwall					**19**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X139508-X139509		PE065685.060	NS0158	54	58	non_mineralised	footwall					**75**	**9.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X139510-X139511		PE065685.056	NS0158	58	62	non_mineralised	footwall					**91**	**9.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X139514-X139515		PE065685.065	NS0158	66	70	non_mineralised	footwall					**210**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X139520-X139521		PE065685.051	NS0158	78	82	mineralised	north					**130**	**10.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X139526-X139527		PE065685.055	NS0158	90	94	mineralised	north					**110**	**10.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X139531		PE065685.062	NS0158	100	102	mineralised	north					**100**	**10.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X139536-X139537		PE065685.064	NS0158	110	114	mineralised	north					**79**	**10.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X139540-X139541		PE065685.061	NS0158	118	122	mineralised	north					**180**	**10.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X139546-X139547		PE065685.063	NS0158	130	134	mineralised	north					**85**	**10.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X139552		PE065685.058	NS0158	140	142	mineralised	north					**80**	**10.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X139557-X139558		PE065685.057	NS0158	150	154	mineralised	north					**77**	**10.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X139561-X139562		PE065685.054	NS0158	158	162	mineralised	north					**88**	**10.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X139571-X139572		PE065685.050	NS0158	178	182	mineralised	north					**140**	**11.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X139577-X139578		PE065685.053	NS0158	190	194	mineralised	north					**140**	**10.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X139581-X139582		PE065685.052	NS0158	198	202	mineralised	north					**83**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0158 X07999-X080000		PE065685.059	NS0158									**15**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139615-X139616		PE065685.039	NS0159	60	64	non_mineralised	oxide					**30**	**7.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139619-X139620		PE065685.041	NS0159	68	72	non_mineralised	footwall					**25**	**8.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139621-X123922		PE065685.014	NS0159	72	76	mineralised	footwall					**200**	**8.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139625-X139626		PE065685.034	NS0159	80	84	mineralised	footwall					**180**	**8.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139791-X139732		PE065685.032	NS0159	88	90	mineralised	footwall					**120**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139631-X139632		PE065685.017	NS0159	92	96	non_mineralised	footwall					**150**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139635-X139636		PE065685.037	NS0159	100	104	mineralised	footwall					**170**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139639-X139640		PE065685.036	NS0159	108	112	mineralised	north					**220**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139643		PE065685.029	NS0159	116	120	non_mineralised	north					**280**	**8.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139645		PE065685.038	NS0159	120	124	mineralised	north					**110**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139645-X139646		PE065685.021	NS0159	120	124	mineralised	north					**130**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC

							Job Number	PE065689A	PE065689A	PE065689A		PE065685	PE065685	PE065685	PE065685	PE065685	PE065685					
							Method Name	Total Recoverable Metals in Soil by ICPOES		Moisture Content	EA009: Nett Acid Production Potential	Single Addition Net Acid Generation (NAG)						Calculations				
							Analyte Name	Ca	S	% Moisture	NAPP	ECox (NAG Conductivity)	pHox (NAG pH)	NAG as kg H_2SO_4/tonne to pH 4.5	NAG as kg H_2SO_4/tonne to pH 7	NAG as kg CaCO3/tonne to pH 4.5	NAG as kg CaCO3/tonne to pH 7	Lab ANC	ANC	MPA	NAPP	Classification
							Units	%	%	%	kg H2SO4/t	µS/cm	pH unit	kg H2SO4/T	kg H2SO4/T	kg CaCO3/T	kg CaCO3/T				kg H2SO4/t	
Description	Sample Date	Sample Name	Hole ID	From	To	Mineralisation	Lithology	10	10	0.5	0.5	1	0.1	0.5	0.5	0.5	0.5					
NS0159 X139649-X139650		PE065685.019	NS0159	128	132	mineralised	north					**150**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139655-X139656		PE065685.022	NS0159	138	142	mineralised	north					**160**	**7.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139661-X139662		PE065685.020	NS0159	150	154	non_mineralised	north					**160**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139665-X139666		PE065685.016	NS0159	158	162	mineralised	north					**130**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139671-X139672		PE065685.015	NS0159	170	174	mineralised	north					**130**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139575-X139576		PE065685.018	NS0159	186	190	mineralised	north					**190**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139681-X139682		PE065685.024	NS0159	190	194	mineralised	north					**170**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139685-X139686		PE065685.023	NS0159	198	202	mineralised	north					**120**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139691		PE065685.030	NS0159	210	214	mineralised	north					**160**	**8.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139695-X139696		PE065685.027	NS0159	218	222	mineralised	north					**110**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139702		PE065685.028	NS0159	230	232	mineralised	north					**120**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139711-X139712		PE065685.033	NS0159	248	252	mineralised	north					**96**	**9.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139717-X139718		PE065685.025	NS0159	260	264	mineralised	north					**78**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139721-X139722		PE065685.026	NS0159	268	272	mineralised	north					**120**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139727-X139728		PE065685.040	NS0159	280	284	mineralised	north					**110**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139737-X139738		PE065685.042	NS0159	300	304	mineralised	north					**160**	**11.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139741-X139742		PE065685.035	NS0159	308	312	mineralised	north					**83**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0159 X139644		PE065685.031	NS0159									**260**	**8.3**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139776-X139777		PE065686.068	NS0160	58	62	non_mineralised	footwall					**290**	**8.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139782-X139783		PE065686.065	NS0160	70	74	non_mineralised	footwall					**280**	**763.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139786-X139787		PE065686.070	NS0160	78	82	non_mineralised	footwall					**270**	**7.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139792-X139793		PE065686.073	NS0160	90	94	non_mineralised	footwall					**290**	**8.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139796-X139797		PE065686.071	NS0160	98	102	non_mineralised	footwall					**260**	**8.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139802-X139803		PE065686.075	NS0160	108	112	non_mineralised	footwall					**140**	**9.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139808-X139809		PE065686.074	NS0160	120	124	mineralised	footwall					**200**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139812-X139813		PE065686.072	NS0160	128	132	non_mineralised	footwall					**150**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139818-X139819		PE065686.081	NS0160	140	144	non_mineralised	footwall					**150**	**9.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139822-X139823		PE065686.076	NS0160	148	152	mineralised	footwall					**220**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139828-X139829		PE065686.078	NS0160	160	164	mineralised	footwall					**160**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139832-X139833		PE065686.079	NS0160	168	172	mineralised	footwall					**160**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139838-X139839		PE065686.062	NS0160	180	184	non_mineralised	footwall					**190**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139842-X139853		PE065686.067	NS0160	188	192	mineralised	footwall					**130**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139848-X139849		PE065686.069	NS0160	200	204	non_mineralised	footwall					**170**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139854-X139855		PE065686.064	NS0160	210	214	non_mineralised	footwall					**220**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139858-X139859		PE065686.066	NS0160	218	222	non_mineralised	footwall					**260**	**8.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139864-X139865		PE065686.077	NS0160	230	234	mineralised	footwall					**270**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139868-X139869		PE065686.080	NS0160	238	242	mineralised	footwall					**240**	**8.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139874-X139875		PE065686.058	NS0160	250	254	mineralised	footwall					**290**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139878-X139879		PE065686.059	NS0160	258	262	mineralised	footwall					**230**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139884-X139885		PE065686.061	NS0160	270	274	non_mineralised	footwall					**250**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139888-X139889		PE065686.063	NS0160	278	282	mineralised	footwall					**120**	**8.9**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0160 X139894-X139895		PE065686.060	NS0160	290	294	non_mineralised	footwall					**230**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0165 X123031-X123032		PE065685.010	NS0165	60	64	non_mineralised	hangingwall					**110**	**7.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0165 X123035-X123036		PE065685.043	NS0165	68	72	mineralised	hangingwall					**110**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0165 X123041-X123042		PE065685.008	NS0165	80	84	mineralised	hangingwall					**200**	**8.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0165 X123045-X123046		PE065685.009	NS0165	88	92	mineralised	hangingwall					**220**	**8.4**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0165 X123052-X123053		PE065685.007	NS0165	100	104	mineralised	hangingwall	**0.45**	**0.83**			**570**	**6.4**	0.25	**0.8**	0.25	**0.8**	-0.83	7.695	25.398	17.703	PAF HC
NS0165 X123056-X123057		PE065685.005	NS0165	108	112	mineralised	hangingwall					**190**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0165 X123061-X123062		PE065685.006	NS0165	118	122	mineralised	hangingwall					**260**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0165 X123067-X123068		PE065685.013	NS0165	130	134	mineralised	hangingwall					**190**	**8.1**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0165 X123071-X123072		PE065685.004	NS0165	138	142	mineralised	hangingwall					**140**	**8.8**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0165 X123077-X123078		PE065685.001	NS0165	150	154	mineralised	hangingwall					**76**	**9.0**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0165 X123081-X123082		PE065685.003	NS0165	158	162	mineralised	hangingwall					**74**	**9.2**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0165 X123087-X123088		PE065685.002	NS0165	170	174	mineralised	hangingwall					**160**	**8.7**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0165 X123091-X123092		PE065685.011	NS0165	178	182	mineralised	hangingwall					**250**	**7.5**	0.25	0.25	0.25	0.25	0	0	0	0	NC
NS0165 X123099		PE065685.012	NS0165	194	196	mineralised	hangingwall					**220**	**8.6**	0.25	0.25	0.25	0.25	0	0	0	0	NC

											7440-70-2	7429-90-5	7440-38-2	7440-41-7	7440-39-3	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-92-1	7439-96-5	7440-02-0	7782-49-2	7440-62-2	7440-66-6	7439-89-6	7439-97-6
								EA055: Moisture Content	ED042T: Total Sulfur by LECO	ED093T: Total Major Cations	EG020W: Water Leachable Metals by ICP-MS															EG035T: Total Recoverable Mercury by FIMS
Workgroup:	**Project name/number:**							**Moisture Content (dried @ 103°C)**	**Sulfur - Total as S (LECO)**	**Calcium**	**Al**	**As**	**Be**	**Ba**	**Cd**	**Cr**	**Co**	**Cu**	**Pb**	**Mn**	**Ni**	**Se**	**V**	**Zn**	**Fe**	**Hg**
EP1202066	**Ex EP1201379 1384 1527 1528**							**%**	**%**	**mg/kg**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**1**	**0.01**	**10**	**0.01**	**0.001**	**0.001**	**0.001**	**0.0001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.01**	**0.01**	**0.005**	**0.05**	**0.1**
ANZECC freshwater Guidelines											**55**	**24**			**0.2**			**1.4**	**3.4**	**1900**	**11**	**5**		**8**	**300**	**0.06**
EP1204006016	21/02/2012	EP1201381008	NS0077	0	2	oxide	non mineralised	<1.0		290	4500	<5	<10	<1	2	49	<2	<5	<5	36	13	<5	12	<5	111000	<0.1
EP1204006015	21/02/2012	EP1201381007	NS0077	8	10	oxide	non mineralised	<1.0		230	3630	<5	10	1	1	45	<2	<5	<5	85	16	<5	10	<5	93800	<0.1
EP1204006002	21/02/2012	EP1201378041	NS0077	20	22	oxide	non mineralised	<1.0	<0.01	490	2390	<5	290	<1	<1	12	15	<5	<5	4840	18	<5	<5	8	38700	<0.1
EP1204006003	21/02/2012	EP1201378042	NS0077	28	30	oxide	non mineralised	<1.0	<0.01	1000	3320	<5	120	<1	<1	9	7	<5	<5	7830	30	<5	<5	11	38000	<0.1
EP1204006001	21/02/2012	EP1201378014	NS0077	178	180	south	mineralised	<1.0		2630	15500	35	60	1	2	177	25	28	<5	3540	119	<5	38	32	131000	0.6
EP1204006007	21/02/2012	EP1201380010	NS0078	0	2	oxide	non mineralised	<1.0	0.02	140	4990	<5	20	<1	1	54	<2	<5	<5	59	16	<5	11	<5	98500	<0.1
EP1204006008	21/02/2012	EP1201380011	NS0078	8	10	oxide	non mineralised	<1.0	0.02	120	2770	<5	<10	<1	<1	60	<2	<5	<5	34	8	<5	15	<5	63900	<0.1
EP1204006019	21/02/2012	EP1201381048	NS0078	20	22	oxide	non mineralised	3.6		3610	11900	<5	90	1	1	94	5	7	<5	142	45	<5	18	9	84400	<0.1
EP1204006018	21/02/2012	EP1201381045	NS0078	28	30	oxide	non mineralised	2.1		3150	10500	<5	60	<1	<1	94	6	6	<5	186	55	<5	10	14	66500	<0.1
EP1204006010	21/02/2012	EP1201380028	NS0078	80	82	footwall	non mineralised	<1.0	0.05	3720	2340	<5	20	<1	2	14	<2	6	<5	1810	16	<5	<5	7	93700	0.2
EP1204006011	21/02/2012	EP1201380030	NS0078	276	278	footwall	non mineralised	<1.0	0.61	2040	11500	18	70	2	2	137	13	19	<5	2940	72	<5	32	25	132000	0.6
EP1204006022	21/02/2012	EP1201382031	NS0079	94	96	south	non mineralised	<1.0		3130	8220	16	40	1	4	82	12	16	<5	3800	56	<5	20	15	219000	0.4
EP1204006006	21/02/2012	EP1201379047	NS0083	158	160	footwall	non mineralised	<1.0	0.31	7920	15300	6	60	2	2	332	19	36	<5	1320	121	<5	56	45	123000	0.1
EP1204009016	21/02/2012	EP1201527006	NS0084	140	142	hangingwall	non mineralised	6.7	0.74	3860	6030	15	60	1	2	28	13	12	<5	2810	44	<5	11	11	116000	0.4
EP1204009025	21/02/2012	EP1201528043	NS0084	158	160	hangingwall	non mineralised	<1.0	0.02	510	33100	22	<10	1	2	401	28	31	<5	1050	194	<5	92	55	123000	0.4
EP1204009017	21/02/2012	EP1201527007	NS0084	190	192	hangingwall	mineralised	6.7	0.2	7150	4990	<5	30	<1	1	21	6	8	<5	4700	28	<5	7	10	102000	<0.1
EP1204010044	21/02/2012	PE065689.087	NS0084	270	272	hangingwall	non mineralised	<1.0	0.44	4200	12400	8	50	1	2	66	14	24	<5	3890	70	<5	26	26	141000	0.2
EP1204006025	21/02/2012	EP1201383010	NS0085	0	2	oxide	non mineralised	<1.0	0.01	300	5430	<5	30	<1	2	143	2	7	<5	253	8	<5	49	<5	110000	<0.1
EP1204006027	21/02/2012	EP1201383012	NS0085	10	12	oxide	non mineralised	<1.0		70	1170	<5	<10	<1	<1	14	<2	<5	<5	92	4	<5	<5	<5	37200	<0.1
EP1204006026	21/02/2012	EP1201383011	NS0085	18	20	oxide	non mineralised	<1.0	<0.01	260	1340	<5	110	<1	<1	12	3	<5	<5	1370	7	<5	<5	<5	35600	<0.1
EP1204009004	21/02/2012	EP1201384006	NS0085	30	32	oxide	non mineralised	<1.0		770	2750	<5	80	<1	<1	10	9	<5	<5	4690	21	<5	<5	10	43500	<0.1
EP1204009003	21/02/2012	EP1201384005	NS0085	58	60	south	mineralised	<1.0		12500	3980	6	10	<1	1	20	9	8	<5	4680	26	<5	6	12	89700	0.1
EP1204009005	21/02/2012	EP1201384015	NS0085	90	92	south	mineralised	<1.0		12800	1580	<5	<10	<1	<1	8	3	<5	<5	4640	10	<5	<5	6	76100	<0.1
EP1204009002	21/02/2012	EP1201384003	NS0085	208	210	south	mineralised	<1.0		4580	2600	<5	50	<1	2	14	3	<5	<5	4830	13	<5	<5	8	127000	<0.1
EP1204006029	21/02/2012	EP1201383045	NS0086	8	10	oxide	non mineralised	<1.0	0.01	60	3390	<5	<10	<1	<1	156	<2	<5	<5	10	6	<5	27	<5	78300	<0.1
EP1204009001	21/02/2012	EP1201383046	NS0086	28	30	oxide	non mineralised	<1.0		1480	6040	<5	20	<1	<1	35	<2	<5	<5	45	20	<5	6	<5	47900	<0.1
EP1204009018	21/02/2012	EP1201527028	NS0087	8	10	oxide	non mineralised	1.7		120	1360	<5	<10	<1	<1	22	<2	<5	<5	24	3	<5	<5	<5	36700	<0.1
EP1204009019	21/02/2012	EP1201527031	NS0087	84	86	footwall	mineralised	5.5	0.17	3040	7890	<5	410	2	<1	16	28	<5	<5	4820	49	<5	<5	14	54500	<0.1
EP1204009020	21/02/2012	EP1201527032	NS0087	88	90	footwall	non mineralised	<1.0	0.22	7710	4760	8	60	1	1	35	7	10	<5	2290	30	<5	11	11	102000	0.3
EP1204006017	21/02/2012	EP1201381013	NS0087	380	382	south	mineralised	<1.0		9470	1290	<5	10	<1	2	9	3	<5	<5	6110	10	<5	<5	6	95400	<0.1
EP1204006021	21/02/2012	EP1201382020	NS0088	0	2	oxide	non mineralised	<1.0		370	3530	<5	<10	<1	<1	57	<2	<5	<5	177	8	<5	16	<5	70000	<0.1
EP1204006020	21/02/2012	EP1201382016	NS0088	8	10	oxide	non mineralised	<1.0		<50	790	<5	<10	<1	<1	19	<2	<5	<5	96	5	<5	<5	<5	38300	<0.1
EP1204006030	21/02/2012	EP1201382019	NS0088	108	110	north	non mineralised	<1.0		3100	1750	<5	<10	1	3	13	4	6	<5	3860	18	<5	<5	10	173000	<0.1
EP1204006031	21/02/2012	EP1201382041	NS0088	150	152	north	non mineralised	<1.0		2640	15400	6	<10	1	5	171	12	8	<5	3100	65	<5	38	19	252000	0.1
EP1204006033	21/02/2012	EP1201382001	NS0088	280	282	north	non mineralised	<1.0		4560	7890	<5	<10	<1	3	34	8	9	<5	3000	42	<5	13	21	196000	<0.1
EP1204006034	21/02/2012	EP1201382010	NS0088	346	348	north	mineralised	<1.0		5030	4020	<5	<10	<1	3	24	6	8	<5	4000	28	<5	8	12	169000	<0.1
EP1204009024	21/02/2012	EP1201528018	NS0089	0	2	oxide	non mineralised	1.1	0.02	360	2050	<5	60	<1	<1	113	<2	6	<5	76	8	<5	20	<5	40900	<0.1
EP1204009023	21/02/2012	EP1201528003	NS0089	60	62	oxide	non mineralised	<1.0	<0.01	460	6020	<5	20	<1	<1	36	7	6	<5	2320	102	<5	12	27	42800	<0.1
EP1204009022	21/02/2012	EP1201528001	NS0089	88	90	north	non mineralised	<1.0	0.17	6950	10600	<5	10	1	4	83	10	13	<5	2780	61	<5	26	30	168000	<0.1
EP1204009030	21/02/2012	EP1201529040	NS0089	128	130	north	non mineralised	<1.0	0.04	3450	7340	6	<10	<1	2	115	13	14	<5	2900	73	<5	22	23	149000	0.2
EP1204009031	21/02/2012	EP1201529045	NS0089	178	180	north	non mineralised	<1.0	0.01	3490	3950	7	<10	<1	2	74	18	21	<5	3150	72	<5	16	23	148000	0.2
EP1204006035	21/02/2012	EP1201529050	NS0089	210	212	north	mineralised	<1.0	0.01	4350	910	<5	<10	<1	3	12	5	6	<5	4000	24	<5	<5	12	177000	<0.1
EP1204006036	21/02/2012	EP1201526049	NS0089	268	270	north	mineralised	<1.0	0.03	3170	1890	<5	<10	<1	3	10	4	<5	<5	3790	18	<5	<5	12	180000	<0.1
EP1204010043	21/02/2012	PE065689.080	NS0089	360	362	north	non mineralised	2.5		6810	2040	<5	<10	1	5	12	3	<5	<5	4620	24	<5	<5	16	221000	<0.1
EP1204009028	21/02/2012	EP1201529016	NS0090	0	2	oxide	non mineralised	11.3		100	4390	<5	<10	<1	<1	102	<2	<5	<5	21	7	<5	21	<5	71600	<0.1
EP1204009027	21/02/2012	EP1201529015	NS0090	8	10	oxide	non mineralised	8.6	<0.01	80	890	<5	<10	<1	<1	13	<2	<5	<5	37	6	<5	<5	<5	27100	<0.1
EP1204009029	21/02/2012	EP1201529017	NS0090	20	22	oxide	mineralised	9.4	<0.01	<50	790	<5	20	<1	<1	10	<2	<5	<5	628	5	<5	<5	<5	36000	<0.1
EP1204009026	21/02/2012	EP1201529008	NS0090	190	192	south	mineralised	1.4	0.06	4710	5640	<5	<10	<1	2	26	10	10	<5	3640	36	<5	9	17	116000	<0.1
EP1204009038	21/02/2012	EP1201531001	NS0090	268	270	north	mineralised	6.5	0.02	6760	280	<5	<10	<1	3	9	3	<5	<5	4380	14	<5	<5	9	156000	<0.1
EP1204006005	21/02/2012	EP1201379046	NS0091					<1.0		2260	2810	12	20	<1	2	25	5	10	<5	4380	23	<5	5	11	114000	0.2
EP1204006024	21/02/2012	EP1201383007	NS0092	40	42	footwall	non mineralised	<1.0	0.18	5970	3950	<5	90	1	2	16	6	17	<5	4550	23	<5	6	10	161000	0.2
EP1204006023	21/02/2012	EP1201383006	NS0092	48	50	footwall	non mineralised	<1.0	0.04	10300	4150	<5	90	1	2	18	5	14	<5	3680	21	<5	6	10	152000	<0.1
EP1204006028	21/02/2012	EP1201383026	NS0092	158	160	south	mineralised	<1.0	0.02	9590	2150	<5	30	<1	2	11	4	<5	<5	4690	11	<5	<5	6	103000	<0.1
EP1204006004	21/02/2012	EP1201379013	NS0093	216	218	south	mineralised	<1.0	0.03	8880	1870	<5	50	2	6	12	2	<5	<5	3710	14	<5	<5	6	269000	<0.1
EP1204010031	21/02/2012	PE065688.026	NS0094	28	30	oxide	non mineralised	2.4	<0.01	1180	5840	<5	340	1	<1	17	17	6	<5	5330	43	<5	<5	16	54900	<0.1
EP1204009036	21/02/2012	EP1201530029	NS0094	160	162	south	mineralised	5.7	0.02	18800	950	7	20	<1	1	9	4	<5	<5	5750	9	<5	<5	6	98500	<0.1
EP1204010029	21/02/2012	PE065688.007	NS0095	30	32	oxide	non mineralised	<1.0	<0.01	370	1320	<5	170	1	<1	18	10	<5	<5	6770	22	<5	<5	11	53000	<0.1
EP1204010030	21/02/2012	PE065688.008	NS0095	38	40	oxide	non mineralised	<1.0	0.03	1040	970	<5	<10	<1	<1	14	4	<5	<5	4940	20	<5	<5	7	46200	<0.1
EP1204010027	21/02/2012	PE065687.088	NS0096	20	22	oxide	non mineralised	<1.0	<0.01	390	1950	<5	180	<1	<1	11	3	<5	<5	2760	9	<5	<5	<5	44000	<0.1
EP1204010028	21/02/2012	PE065687.093	NS0096	70	72	south	mineralised	<1.0	0.05	9010	2580	<5	80	<1	1	11	4	8	<5	4790	12	<5	<5	7	102000	<0.1
EP1204010026	21/02/2012	PE065687.086	NS0096	120	122	south	mineralised	3.6	0.08	7120	4910	6	40	<1	<1	21	8	12	<5	4130	30	<5	8	12	98700	<0.1
EP1204010025	21/02/2012	PE065687.081	NS0096	230	232	south	mineralised	<1.0	1.21	3900	13800	24	70	<1	1	87	18	20	<5	3900	90	<5	27	25	104000	0.2
EP1204010032	21/02/2012	PE065688.042	NS0097	28	30	oxide	non mineralised	7.9	<0.01	360	1660	<5	150	<1	<1	17	9	<5	<5	4680	39	<5	<5	12	47900	<0.1
EP1204010033	21/02/2012	PE065688.043	NS0097	40	42	south	non mineralised	4.4		980	23500	20	20	1	<1	278	24	31	<5	1870	182	<5	50	67	82300	0.3
EP1204010022	21/02/2012	PE065687.058	NS0098	0	2	oxide	non mineralised	<1.0	<0.01	320	3150	<5	20	<1	<1	77	<2	7	<5	48	5	<5	23	<5	58200	<0.1
EP1204010021	21/02/2012	PE065687.056	NS0098	20	22	oxide	non mineralised	<1.0	<0.01	100	530	<5	<10	<1	<1	12	<2	<5	<5	48	3	<5	<5	<5	38100	<0.1
EP1204010023	21/02/2012	PE065687.060	NS0098	58	60	hangingwall	mineralised	<1.0	0.42	3150	2250	7	20	<1	1	23	5	11	<5	5780	23	<5	5	14	118000	0.1
EP1204010024	21/02/2012	PE065687.065	NS0098	180	182	hangingwall	mineralised	<1.0	0.22	4530	2420	5	20	<1	1	14	3	<5	<5	2390	13	<5	<5	6	128000	0.1
EP1204006009	21/02/2012	EP1201380025	NS0100	78	80	south	mineralised	<1.0	0.14	3350	15000	5	80	2	2	119	8	10	<5	1880	66	<5	36	19	111000	0.3
EP1204009033	21/02/2012	EP1201530010	NS0106	48	50	south	mineralised	2.2	0.03	14200	1320	6	20	<1	<1	8	7	5	<5	5920	11	<5	<5	8	76200	0.1
EP1204006014	21/02/2012	EP1201380050	NS0106	92	94	south	mineralised	<1.0	0.72	5000	6890	22	60	<1	2	42	10	14	<5	3530	54	<5	8	13	98800	0.4
EP1204009037	21/02/2012	EP1201530042	NS0106	170	172	south	mineralised	<1.0	0.02	15700	540	<5	<10	<1	<1	12	<2	<5	<5	5880	5	<5	<5	7	65900	<0.1
EP1204006012	21/02/2012	EP1201380046	NS0106					<1.0		340	2460	<5	10	<1	<1	161	<2	<5	<5	90	4	<5	42	<5	48700	<0.1
EP1204009014	21/02/2012	EP1201384039	NS0107	120	122	hangingwall	non mineralised	<1.0		360	16300	37	10	<1	1	276	44	60	6	1850	281	<5	35	83	92300	1.5

											7440-70-2	7429-90-5	7440-38-2	7440-41-7	7440-39-3	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-92-1	7439-96-5	7440-02-0	7782-49-2	7440-62-2	7440-66-6	7439-89-6	7439-97-6
								EA055: Moisture Content	ED042T: Total Sulfur by LECO	ED093T: Total Major Cations	EG020W: Water Leachable Metals by ICP-MS															EG035T: Total Recoverable Mercury by FIMS
Workgroup:	**Project name/number:**							**Moisture Content (dried @ 103°C)**	**Sulfur - Total as S (LECO)**	**Calcium**	**Al**	**As**	**Be**	**Ba**	**Cd**	**Cr**	**Co**	**Cu**	**Pb**	**Mn**	**Ni**	**Se**	**V**	**Zn**	**Fe**	**Hg**
EP1202066	**Ex EP1201379 1384 1527 1528**							**%**	**%**	**mg/kg**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**1**	**0.01**	**10**	**0.01**	**0.001**	**0.001**	**0.001**	**0.0001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.01**	**0.01**	**0.005**	**0.05**	**0.1**
ANZECC freshwater Guidelines											**55**	**24**			**0.2**			**1.4**	**3.4**	**1900**	**11**	**5**		**8**	**300**	**0.06**
EP1204009010	21/02/2012	EP1201384031	NS0107	128	130	hangingwall	non mineralised	<1.0		290	14800	17	<10	<10	<1	<1	285	46	49	5	1080	236	<5	35	45	67700	0.8
EP1204009012	21/02/2012	EP1201384035	NS0107	140	142	hangingwall	non mineralised	<1.0		3370	17600	12	<10	<1	<1	<1	370	66	97	7	2440	254	<5	51	86	51000	1
EP1204009011	21/02/2012	EP1201384033	NS0107	148	150	hangingwall	non mineralised	<1.0		270	18400	14	<10	<1	<1	<1	394	63	72	7	346	347	<5	42	65	45400	1.4
EP1204009008	21/02/2012	EP1201384028	NS0107	160	162	hangingwall	non mineralised	<1.0		300	18600	12	<10	<1	<1	<1	436	67	83	8	1280	311	<5	46	81	48700	1
EP1204009009	21/02/2012	EP1201384029	NS0107	170	172			<1.0		10400	19400	12	10	<1	<1	<1	439	65	91	8	1120	326	<5	48	84	52900	1
EP1204009035	21/02/2012	EP1201530028	NS0108	176	178	south	mineralised	6.7	0.99	3880	7490	<5	<10	<1	3	73	9	12	<5	5160	51	<5	11	22	169000	0.2
EP1204010036	21/02/2012	PE065688.079	NS0113	140	142	footwall	non mineralised	<1.0		2260	9880	6	40	1	2	164	18	23	<5	3090	88	<5	39	34	158000	0.3
EP1204010034	21/02/2012	PE065688.066	NS0113	158	160	footwall	non mineralised	<1.0	0.45	3020	15600	6	<10	1	3	250	16	28	<5	2230	104	<5	50	44	163000	0.1
EP1204010035	21/02/2012	PE065688.070	NS0113	198	200	footwall	non mineralised	<1.0	0.68	3610	4280	<5	20	1	2	56	12	19	<5	2860	60	<5	17	30	168000	0.1
EP1204010040	21/02/2012	PE065689.057	NS0116	108	110	footwall	non mineralised	<1.0		4250	17000	8	40	2	2	254	18	28	<5	1860	103	<5	50	46	151000	0.4
EP1204010041	21/02/2012	PE065689.063	NS0116	130	132	footwall	non mineralised	<1.0		6570	19800	9	30	2	2	313	18	31	<5	1860	113	<5	62	54	146000	0.3
EP1204010039	21/02/2012	PE065689.041	NS0117	190	192	footwall	mineralised	1.4		12100	11200	6	40	2	3	128	14	20	<5	2260	66	<5	30	32	170000	0.2
EP1204010037	21/02/2012	PE065688.082	NS0118	140	142	hangingwall	non mineralised	<1.0	0.42	4200	4530	30	<10	1	3	59	12	31	<5	3020	43	<5	14	13	191000	0.7
EP1204010038	21/02/2012	PE065689.019	NS0120	206	208			<1.0		1790	15800	6	30	1	1	317	19	24	9	1870	121	<5	50	55	120000	0.1
EP1204010018	21/02/2012	PE065687.014	NS0124	130	132	footwall	non mineralised	2.3	0.51	1940	26000	21	100	2	1	441	33	30	6	355	160	<5	82	73	119000	0.4
EP1204010042	21/02/2012	PE065689.072	NS0128					<1.0		3240	24300	10	<10	2	3	307	29	38	<5	2860	175	<5	66	49	178000	0.4
EP1204010007	21/02/2012	PE065686.003	NS0152	78	80	footwall	non mineralised	<1.0	0.66	5220	33200	15	<10	1	2	570	33	54	<5	1370	211	<5	101	94	146000	0.2
EP1204010008	21/02/2012	PE065686.007	NS0152	120	122	footwall	mineralised	<1.0	0.14	12000	4150	<5	30	1	1	32	9	14	<5	2400	35	<5	11	14	109000	0.2
EP1204010006	21/02/2012	PE065685.098	NS0152	244	246	footwall		<1.0	0.13	24200	5760	6	50	2	2	42	9	15	<5	2860	38	<5	14	14	119000	0.2
EP1204010010	21/02/2012	PE065686.021	NS0153	98	100	oxide		<1.0	0.14	6350	5810	14	30	<1	3	82	6	9	<5	5050	35	<5	17	15	160000	0.3
EP1204010009	21/02/2012	PE065686.020	NS0153	168	170	hangingwall		<1.0	0.08	4450	4430	<5	20	<1	2	41	5	<5	<5	3900	30	<5	13	12	147000	<0.1
EP1204010011	21/02/2012	PE065686.028	NS0153	200	202	hangingwall		<1.0	4.17	400	5420	86	<10	<1	<1	97	75	57	17	584	439	<5	11	88	81300	1.9
EP1204010012	21/02/2012	PE065686.032	NS0153	220	222	hangingwall		<1.0		9740	5680	7	<10	<1	4	76	11	10	<5	4020	56	<5	16	16	195000	0.2
EP1204010015	21/02/2012	PE065686.040	NS0154	18	20	oxide		<1.0	<0.01	470	2030	<5	270	<1	<1	9	10	<5	<5	5640	19	<5	<5	7	40600	<0.1
EP1204010014	21/02/2012	PE065686.037	NS0154	30	32	south		<1.0	0.08	4700	1910	<5	10	<1	1	10	4	6	<5	5940	14	<5	<5	9	110000	<0.1
EP1204010013	21/02/2012	PE065686.035	NS0154	38	40	south		<1.0	0.08	8760	4390	<5	10	<1	<1	20	7	8	<5	4190	28	<5	7	13	90800	<0.1
EP1204010016	21/02/2012	PE065686.054	NS0154	200	202	footwall		1.1	0.65	5820	9470	6	60	2	3	161	10	19	<5	2190	58	<5	29	37	164000	0.3
EP1204010019	21/02/2012	PE065687.035	NS0155	100	102	footwall		1.2	0.36	8480	17100	13	60	2	2	278	17	22	<5	1970	105	<5	54	59	142000	0.4
EP1204010020	21/02/2012	PE065687.036	NS0155	108	110	footwall		<1.0		6490	3430	<5	40	2	4	46	4	14	<5	2630	29	<5	11	17	190000	0.2
EP1204010002	21/02/2012	PE065685.046	NS0157	130	132	hangingwall		<1.0	0.26	2050	7620	<5	<10	1	3	81	11	10	<5	3750	50	<5	29	15	186000	0.1
EP1204010005	21/02/2012	PE065685.065	NS0158	66	68	footwall		<1.0	0.46	8810	7700	<5	30	<1	2	72	8	10	<5	5200	46	<5	13	15	146000	0.2
EP1204010004	21/02/2012	PE065685.064	NS0158	110	112	north		<1.0	0.08	10100	5260	<5	<10	<1	<1	36	9	14	<5	3320	42	<5	10	12	87800	0.1
EP1204010003	21/02/2012	PE065685.050	NS0158	178	180	north		<1.0	0.03	17100	2160	<5	<10	<1	<1	15	4	<5	<5	4110	15	<5	<5	7	75700	<0.1
EP1204010017	21/02/2012	PE065686.068	NS0160	58	60	footwall		<1.0	0.39	7920	19400	<5	110	2	3	306	20	24	<5	2940	161	<5	60	67	158000	0.3
EP1204010001	21/02/2012	PE065685.007	NS0165	100	102	hangingwall		<1.0	0.98	4340	1610	<5	<10	<1	1	10	3	<5	<5	1480	12	<5	<5	<5	126000	0.3

NAG liquor

Sample	From	To	Lithology	Mineralised	Time to maximum temperature (mins)	Maximum temperature (C)
NS0077	178	180	south	mineralised	320	26.5
NS0077	178	180	south	mineralised	360	27
NS0084	158	160	hanging wall	non mineralised	70	20.8
NS0084	158	160	hanging wall	non mineralised	120	20.8
NS0096	230	232	south	mineralised	70	22
NS0096	230	232	south	mineralised	70	21.5
NS0107	120	122	hanging wall	non mineralised	40	64
NS0107	120	122	hanging wall	non mineralised	40	64
NS0107	128	130	hanging wall	non mineralised	65	61
NS0107	128	130	hanging wall	non mineralised	60	61
NS0107	140	142	hanging wall	non mineralised	100	62.5
NS0107	140	142	hanging wall	non mineralised	100	62.5
NS0107	140	142	hanging wall	non mineralised	100	62.5
NS0107	148	150	hanging wall	non mineralised	100	51
NS0107	148	150	hanging wall	non mineralised	100	50
NS0107	160	162	hanging wall	non mineralised	120	52.5
NS0107	160	162	hanging wall	non mineralised	120	53
NS0107	170	172	hanging wall	non mineralised	150	55
NS0107	170	172	hanging wall	non mineralised	150	54
NS0120	206	208			315	30.8
NS0120	206	208			315	30.8
NS0120-check	206	208			315	30
NS0120-check	206	208			315	30.5
NS0153	200	202	hanging wall	non mineralised	30	75
NS0153	200	202	hanging wall	non mineralised	35	74

Metals (magnetite)

										EA055: Moisture Content	ED093T: Total Major Cations	EG005T: Total Metals by ICP-AES															EG035T: Total Recoverable Mercury by FIMS	EN60: Bottle Leaching Procedure
Matrix:	Workgroup:	Project name/number:								Moisture Content (dried @ 103°C)	Ca	Al	As		Ba	Be	Cd	Cr	Co	Cu	Fe	Pb	Mn	Ni	Se	V	Zn	Hg	Final pH
SOIL	EP1204009	Ex EP1201383 1384 1526 1527 1528 1529 1530 & 1531 612739100									7440-70-2	7429-90-5	7440-38-2		7440-39-3	7440-41-7	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-89-6	7439-92-1	7439-96-5	7440-02-0	7782-49-2	7440-62-2	7440-66-6	7439-97-6	
										%	mg/kg	mg/kg	mg/kg		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	pH Unit
Sample Type:	ALS Sample number:	Sample date:	Client sample ID (1st):							1	50	50	5		10	1	1	2	2	5	50	5	5	2	5	5	5	0.1	0.1
				EIL									20		300		3	400	50	100		600	500	60		50	200	1	
				Client sample ID (2nd):	Hole ID	From	To	Lithology	Mineralisation																				
REG	EP1204006003	21/02/2012	EP1201378042	NS0077 28-30	NS0077	28	30	oxide	non_mineralised	0.5	1000	3320	2.5		120	0.5	0.5	9	7	2.5	38000	2.5	7830	30	2.5	2.5	11	0.05	7.9
REG	EP1204006001	21/02/2012	EP1201378014	NS0077 178-180	NS0077	178	180	south	mineralised	0.5	2630	15500	35		60	1	2	177	25	28	131000	2.5	3540	119	2.5	38	32	0.6	7.5
REG	EP1204011006	21/02/2012	EP1201381003	NS0078 60-62	NS0078	60	62	footwall	mineralised	0.5	11000	2640	2.5		30	0.5	2	16	3	9	107000	2.5	2320	19	2.5	2.5	7	0.3	
REG	EP1204006010	21/02/2012	EP1201380028	NS0078 80-82	NS0078	80	82	footwall	non_mineralised	0.5	3720	2340	2.5		20	0.5	2	14	1	6	93700	2.5	1810	16	2.5	2.5	7	0.2	8.3
REG	EP1204011003	21/02/2012	EP1201380009	NS0078 108-110	NS0078	108	110	footwall	non_mineralised	0.5	6110	1130	2.5		10	1	3	12	1	2.5	154000	2.5	2300	10	2.5	2.5	6	0.3	
REG	EP1204006011	21/02/2012	EP1201380030	NS0078 276-278	NS0078	276	278	footwall	non_mineralised	0.5	2040	11500	18		70	2	2	137	13	19	132000	2.5	2940	72	2.5	32	25	0.6	8.2
REG	EP1204011010	21/02/2012	EP1201381041	NS0079 48-50	NS0079	48	50	south	non_mineralised	0.5	3610	12200	7		20	1	5	78	12	13	184000	2.5	3980	69	2.5	26	24	0.2	
REG	EP1204006022	21/02/2012	EP1201382031	NS0079 94-96	NS0079	94	96	south	non_mineralised	0.5	3130	8220	16		40	1	4	82	12	16	219000	2.5	3800	56	2.5	20	15	0.4	7.7
REG	EP1204011011	21/02/2012	EP1201381049	NS0079 160-162	NS0079	160	162			0.5	4620	3120	13		40	1	2	28	7	24	121000	2.5	2210	23	2.5	9	10	0.4	
REG	EP1204011005	21/02/2012	EP1201381001	NS0083 28-30	NS0083	28	30	oxide	non_mineralised	0.5	3130	9710	2.5		30	0.5	0.5	243	6	14	52600	2.5	73	72	2.5	21	23	0.05	
REG	EP1204011002	21/02/2012	EP1201379038	NS0083 88-90	NS0083	88	90	footwall	non_mineralised	0.5	13800	9160	8		60	2	2	158	14	23	110000	2.5	1700	80	2.5	32	36	0.1	
REG	EP1204011004	21/02/2012	EP1201380043	NS0083 130-132	NS0083	130	132	footwall	non_mineralised	0.5	3030	12800	7		70	2	2	272	17	26	117000	2.5	1760	106	2.5	50	50	0.1	
REG	EP1204006006	21/02/2012	EP1201379047	NS0083 158-160	NS0083	158	160	footwall	non_mineralised	0.5	7920	15300	6		60	2	2	332	19	36	123000	2.5	1320	121	2.5	56	45	0.1	8.8
REG	EP1204009016	21/02/2012	EP1201527006	NS0084 140-142	NS0084	140	142	hanging wall	non_mineralised	6.7	3860	6030	15		60	1	2	28	13	12	116000	2.5	2810	44	2.5	11	11	0.4	7.6
REG	EP1204009025	21/02/2012	EP1201528043	NS0084 158-160	NS0084	158	160	hanging wall	non_mineralised	0.5	510	33100	22		0.5	1	2	401	28	31	123000	2.5	1050	194	2.5	92	55	0.4	6.8
REG	EP1204009017	21/02/2012	EP1201527007	NS0084 190-192	NS0084	190	192	hanging wall	mineralised	6.7	7150	4990	2.5		30	0.5	1	21	6	8	102000	2.5	4700	28	2.5	7	10	0.05	8.7
REG	EP1204010044	21/02/2012	PE065689.087	NS0084 270-272	NS0084	270	272	hanging wall	non_mineralised	0.5	4200	12400	8		50	1	2	66	14	24	141000	2.5	3890	70	2.5	26	26	0.2	8.8
REG	EP1204009003	21/02/2012	EP1201384005	NS0085 58-60	NS0085	58	60	south	mineralised	0.5	12500	3980	6		10	0.5	1	20	9	8	89700	2.5	4680	26	2.5	6	12	0.1	8.6
REG	EP1204009005	21/02/2012	EP1201384015	NS0085 90-92	NS0085	90	92	south	mineralised	0.5	12800	1580	2.5		0.5	0.5	0.5	8	3	2.5	76100	2.5	4640	10	2.5	2.5	6	0.05	8.8
REG	EP1204009002	21/02/2012	EP1201384003	NS0085 208-210	NS0085	208	210	south	mineralised	0.5	4580	2600	2.5		50	0.5	2	14	3	2.5	127000	2.5	4830	13	2.5	2.5	8	0.05	8.3
REG	EP1204006029	21/02/2012	EP1201383045	NS0086 8-10	NS0086	8	10	oxide	non_mineralised	0.5	60	3390	2.5		0.5	0.5	0.5	156	1	2.5	78300	2.5	10	6	2.5	27	2.5	0.05	7.4
REG	EP1204009001	21/02/2012	EP1201383046	NS0086 28-30	NS0086	28	30	oxide	non_mineralised	0.5	1480	6040	2.5		20	0.5	0.5	35	1	2.5	47900	2.5	45	20	2.5	6	2.5	0.05	6.8
REG	EP1204011014	21/02/2012	EP1201384043	NS0086 208-210	NS0086	208	210	footwall	non_mineralised	0.5	17000	1370	2.5		20	1	2	12	2	9	113000	2.5	2580	11	2.5	2.5	2.5	0.3	
REG	EP1204011015	21/02/2012	EP1201384045	NS0086 248-250	NS0086	248	250	footwall	mineralised	0.5	14600	2790	7		40	2	2	21	4	15	107000	2.5	1940	16	2.5	10	2.5	0.2	
REG	EP1204009019	21/02/2012	EP1201527031	NS0087 84-86	NS0087	84	86	footwall	mineralised	5.5	3040	7890	2.5		410	2	0.5	16	28	2.5	54500	2.5	4820	49	2.5	2.5	14	0.05	7.4
REG	EP1204009020	21/02/2012	EP1201527032	NS0087 88-90	NS0087	88	90	footwall	non_mineralised	0.5	7710	4760	8		60	1	1	35	7	10	102000	2.5	2290	30	2.5	11	11	0.3	9.2
REG	EP1204011007	21/02/2012	EP1201381009	NS0087 168-170	NS0087	168	170	south	mineralised	0.5	10500	2980	2.5		70	0.5	2	14	5	8	103000	2.5	3030	17	2.5	2.5	9	0.1	
REG	EP1204011009	21/02/2012	EP1201381033	NS0087 230-232	NS0087	230	232	south	mineralised	0.5	13100	3200	2.5		40	0.5	1	12	4	8	79400	2.5	3710	14	2.5	2.5	5	0.05	
REG	EP1204006017	21/02/2012	EP1201381013	NS0087 380-382	NS0087	380	382	south	mineralised	0.5	9470	1290	2.5		10	0.5	2	9	3	2.5	95400	2.5	6110	10	2.5	2.5	6	0.05	8.7
REG	EP1204011008	21/02/2012	EP1201381012	NS0087 388-390	NS0087	388	390	south	mineralised	0.5	13400	1990	2.5		20	0.5	2	9	4	2.5	94600	2.5	5020	10	2.5	2.5	6	0.05	
REG	EP1204006021	21/02/2012	EP1201382020	NS0088 0-2	NS0088	0	2	oxide	non_mineralised	0.5	370	3530	2.5		0.5	0.5	0.5	57	1	2.5	70000	2.5	177	8	2.5	16	2.5	0.05	7.7
REG	EP1204006020	21/02/2012	EP1201382016	NS0088 8-10	NS0088	8	10	oxide	non_mineralised	0.5	2.5	790	2.5		0.5	0.5	0.5	19	1	2.5	38300	2.5	96	5	2.5	2.5	2.5	0.05	7.8
REG	EP1204006030	21/02/2012	EP1201382019	NS0088 108-110	NS0088	108	110	north	non_mineralised	0.5	3100	1750	2.5		0.5	1	3	13	4	6	173000	2.5	3860	18	2.5	2.5	10	0.05	7.3
REG	EP1204006031	21/02/2012	EP1201382041	NS0088 150-152	NS0088	150	152	north	non_mineralised	0.5	2640	15400	6		0.5	1	5	171	12	8	252000	2.5	3100	65	2.5	38	19	0.1	7.3
REG	EP1204006033	21/02/2012	EP1201382001	NS0088 280-282	NS0088	280	282	north	non_mineralised	0.5	4560	7890	2.5		0.5	0.5	3	34	8	9	196000	2.5	3000	42	2.5	13	21	0.05	7.5
REG	EP1204006034	21/02/2012	EP1201382010	NS0088 346-348	NS0088	346	348	north	mineralised	0.5	5030	4020	2.5		0.5	0.5	3	24	6	8	169000	2.5	4000	28	2.5	8	12	0.05	7.1
REG	EP1204009024	21/02/2012	EP1201528018	NS0089 0-2	NS0089	0	2	oxide	non_mineralised	1.1	360	2050	2.5		60	0.5	0.5	113	1	6	40900	2.5	76	8	2.5	20	2.5	0.05	7
REG	EP1204009023	21/02/2012	EP1201528003	NS0089 60-62	NS0089	60	62	oxide	non_mineralised	0.5	460	6020	2.5		20	0.5	0.5	36	7	6	42800	2.5	2320	102	2.5	12	27	0.05	7.1
REG	EP1204009022	21/02/2012	EP1201528001	NS0089 88-90	NS0089	88	90	north	non_mineralised	0.5	6950	10600	2.5		10	1	4	83	10	13	168000	2.5	2780	61	2.5	26	30	0.05	7.7
REG	EP1204009030	21/02/2012	EP1201529040	NS0089 128-130	NS0089	128	130	north	non_mineralised	0.5	3450	7340	6		0.5	0.5	2	115	13	14	149000	2.5	2900	73	2.5	22	23	0.2	7.6
REG	EP1204009031	21/02/2012	EP1201529045	NS0089 178-180	NS0089	178	180	north	non_mineralised	0.5	3490	3950	7		0.5	0.5	2	74	18	21	148000	2.5	3150	72	2.5	16	23	0.2	7.6
REG	EP1204006035	21/02/2012	EP1201529050	NS0089 210-212	NS0089	210	212	north	mineralised	0.5	4350	910	2.5		0.5	0.5	3	12	5	6	177000	2.5	4000	24	2.5	2.5	12	0.05	7.4
REG	EP1204006036	21/02/2012	EP1201526049	NS0089 268-270	NS0089	268	270	north	mineralised	0.5	3170	1890	2.5		0.5	0.5	3	10	4	2.5	180000	2.5	3790	18	2.5	2.5	12	0.05	7.5
REG	EP1204010043	21/02/2012	PE065689.080	NS0089 360-362	NS0089	360	362	north	non_mineralised	2.5	6810	2040	2.5		0.5	1	5	12	3	2.5	221000	2.5	4620	24	2.5	2.5	16	0.05	8
REG	EP1204009028	21/02/2012	EP1201529016	NS0090 0-2	NS0090	0	2	oxide	non_mineralised	11.3	100	4390	2.5		0.5	0.5	0.5	102	1	2.5	71600	2.5	21	7	2.5	21	2.5	0.05	7.1
REG	EP1204009027	21/02/2012	EP1201529015	NS0090 8-10	NS0090	8	10	oxide	non_mineralised	8.6	80	890	2.5		0.5	0.5	0.5	13	1	2.5	27100	2.5	37	6	2.5	2.5	2.5	0.05	7.6
REG	EP1204009029	21/02/2012	EP1201529017	NS0090 20-22	NS0090	20	22	oxide	mineralised	9.4	2.5	790	2.5		20	0.5	0.5	10	1	2.5	36000	2.5	628	5	2.5	2.5	2.5	0.05	7
REG	EP1204011022	21/02/2012	EP1201531004	NS0090 128-130	NS0090	128	130	south	mineralised	7.4	10700	810	2.5		0.5	0.5	1	11	4	7	83900	2.5	4700	11	2.5	2.5	6	0.05	
REG	EP1204009026	21/02/2012	EP1201529008	NS0090 190-192	NS0090	190	192	south	mineralised	1.4	4710	5640	2.5		0.5	0.5	2	26	10	10	116000	2.5	3640	36	2.5	9	17	0.05	7.5
REG	EP1204009038	21/02/2012	EP1201531001	NS0090 268-270	NS0090	268	270	north	mineralised	6.5	6760	280	2.5		0.5	0.5	3	9	3	2.5	156000	2.5	4380	14	2.5	2.5	9	0.05	8.2
REG	EP1204011016	21/02/2012	EP1201385011	NS0091 160-162	NS0091	160	162	hanging wall	non_mineralised	0.5	6020	450	2.5		0.5	0.5	3	10	3	2.5	149000	2.5	2410	15	2.5	2.5	5	0.05	
REG	EP1204011012	21/02/2012	EP1201383048	NS0091 198-200	NS0091	198	200	hanging wall	mineralised	0.5	5090	3400	2.5		0.5	2	3	50	5	7	244000	2.5	3830	37	2.5	12	15	0.05	
REG	EP1204006005	21/02/2012	EP1201379046	NS0091	NS0091					0.5	2260	2810	12		20	0.5	2	25	5	10	114000	2.5	4380	23	2.5	5	11	0.2	7.5
REG	EP1204006023	21/02/2012	EP1201383006	NS0092 48-50	NS0092	48	50	footwall	non_mineralised	0.5	10300	4150	2.5		90	1	2	18	5	14	152000	2.5	3680	21	2.5	6	10	0.05	8.8
REG	EP1204006028	21/02/2012	EP1201383026	NS0092 158-160	NS0092	158	160	south	mineralised	0.5	9590	2150	2.5		30	0.5	2	11	4	2.5	103000	2.5	4690	11	2.5	2.5	6	0.05	9.1
REG	EP1204011001	21/02/2012	EP1201379015	NS0093 90-92	NS0093	90	92	south	mineralised	0.5	11400	2740	2.5		60	0.5	2	11	5	2.5	122000	2.5	5740	13	2.5	2.5	8	0.05	
REG	EP1204006004	21/02/2012	EP1201379013	NS0093 216-218	NS0093	216	218	south	mineralised	0.5	8880	1870	2.5		50	2	6	12	2	2.5	269000	2.5	3710	14	2.5	2.5	6	0.05	8.1
REG	EP1204011021	21/02/2012	EP1201530033	NS0094 148-150	NS0094	148	150	south	mineralised	7	14400	660	2.5		20	0.5	2	8	2	2.5	87600	2.5	5280	8	2.5	2.5	2.5	0.05	
REG	EP1204009036	21/02/2012	EP1201530029	NS0094 160-162	NS0094	160	162	south	mineralised	5.7	18800	950	7		20	0.5	1	9	4	2.5	98500	2.5	5750	9	2.5	2.5	6	0.05	9.2
REG	EP1204010028	21/02/2012	PE065687.093	NS0096 70-72	NS0096	70	72	south	mineralised	0.5	9010	2580	2.5		80	0.5	1	11	4	8	102000	2.5	4790	12	2.5	2.5	7	0.05	9.2
REG	EP1204010026	21/02/2012	PE065687.086	NS0096 120-122	NS0096	120	122	south	mineralised	3.6	7120	4910	6		40	0.5	0.5	21	8	12	98700	2.5	4130	30	2.5	8	12	0.05	9.2
REG	EP1204010025	21/02/2012	PE065687.081	NS0096 230-232	NS0096	230	232	south	mineralised	0.5	3900	13800	24		70	0.5	1	87	18	20	104000	2.5	3900	90	2.5	27	25	0.2	8.7
REG	EP1204011029	21/02/2012	PE065687.083	NS0096 254-256	NS0096	254	256	south	mineralised	0.5	16800	1940	2.5		20	0.5	2	10	4	6	93800	2.5	5660	11	2.5	2.5	8	0.05	
REG	EP1204010021	21/02/2012	PE065687.056	NS0098 20-22	NS0098	20	22	oxide	non_mineralised	0.5	100	530	2.5		0.5	0.5	0.5	12	1	2.5	38100	2.5	48	8	2.5	2.5	2.5	0.05	7.4
REG	EP1204010023	21/02/2012	PE065687.060	NS0098 58-60	NS0098	58	60	hanging wall	mineralised	0.5	3150	2250	7		20	0.5	1	23	5	11	118000	2.5	5780	23	2.5	5	14	0.1	7.3
REG	EP1204011028	21/02/2012	PE065687.067	NS0098 108-110	NS0098	108	110	hanging wall	mineralised	0.5	4770	250	2.5		0.5	0.5	2	9	3	2.5	103000	2.5	3680	8	2.5	2.5	2.5	0.05	
REG	EP1204010024	21/02/2012	PE065687.065	NS0098 180-182	NS0098	180	182	hanging wall	mineralised	0.5	4530	2420	5		20	0.5	1	14	3	2.5	128000	2.5	2390	13	2.5	2.5	5	0.1	8.1
REG	EP1204006009	21/02/2012	EP1201380025	NS0100 78-80	NS0100	78	80	south	mineralised	0.5	3350	15000	5		80	2	2	119	8	10	111000	2.5	1880	56	2.5	36	19	0.3	8.4
REG	EP1204009033	21/02/2012	EP1201530010	NS0106 48-50	NS0106	48	50	south	mineralised	2.2	14200	1320	6		20	0.5	0.5	8	7	5	76200	2.5	5920	11	2.5	2.5	8	0.1	8.8
REG	EP1204006014	21/02/2012	EP1201380050	NS0106 92-94	NS0106	92	94	south	mineralised	0.5	5000	5890	22		60	0.5	2	42	10	14	98800	2.5	3530	54	2.5	8	13	0.4	7.7
REG	EP1204009037	21/02/2012	EP1201530042	NS0106 170-172	NS0106	170	172	south	mineralised	0.5	15700	540	2.5		0.5	0.5	0.5	12	1	2.5	95900	2.5	5880	6	2.5	2.5	7	0.05	9
REG	EP1204006012	21/02/2012	EP1201380046	NS0106	NS0106					0.5	840	2460	2.5		10	0.5	0.5	161	1	2.5	48700	2.5	90	4	2.5	42	2.5	0.05	8
REG	EP1204009014	21/02/2012	EP1201384039	NS0107 120-122	NS0107	120	122	hanging wall	non_mineralised	0.5	360	16300	37		10	0.5	1	276	44	50	92300	3	1850	281	2.5	35	33	1.5	6.5
REG	EP1204009010	21/02/2012	EP1201384031	NS0107 128-130	NS0107	128	130	hanging wall	non_mineralised	0.5	290	14800	17		0.5	0.5	0.5	285	46	49	97700	3	1080	236	2.5	35	45	0.8	6.4
REG	EP1204009012	21/02/2012	EP1201384035	NS0107 140-142	NS0107	140	142	hanging wall	non_mineralised	0.5	8370	17600	12		0.5	0.5	0.5	370	36	97	51000	7	2440	254	2.5	51	86	1	7.3
REG	EP1204009011	21/02/2012	EP1201384033	NS0107 148-150	NS0107	148	150	hanging wall	non_mineralised	0.5	270	18400	14		0.5	0.5	0.5	394	53	72	45400	7	846	347	2.5	42	65	1.4	6.3
REG	EP1204009008	21/02/2012	EP1201384028	NS0107 160-162	NS0107	160	162	hanging wall	non_mineralised	0.5	800	18600	12		0.5	0.5	0.5	436	57	83	48700	8	1280	311	2.5	46	81	1	7.1
REG	EP1204009009	21/02/2012	EP1201384029	NS0107 170-172	NS0107	170	172			0.5	10400	19400	12		10	0.5	0.5	439	55	91	52900	8	1120	326	2.5	48	84	1	7.5
REG	EP1204011020	21/02/2012	EP1201529005	NS0108 160-162	NS0108	160	162	south	mineralised	0.5	7020	4280	9		10	0.5	2	16	10	11	95600	2.5	4240	86	2.5	2.5	14	0.05	
REG	EP1204009035	21/02/2012	EP1201530028	NS0108 176-178	NS0108	176	178	south	mineralised	5.7	8880	7490	2.5		0.5	0.5	3	73	9	12	169000	2.5	5160	51	2.5	11	22	0.2	7.7
REG	EP1204011017	21/02/2012	EP1201385015	NS0111 188-190	NS0111	188	190	south	non_mineralised	0.5	8460	1430	2.5		0.5	0.5	2	84	8	2.5	118000	2.5	1110	17	2.5	2.5	10	0.05	
REG	EP1204011019	21/02/2012	EP1201385017	NS0111 240-242	NS0111	240	242			0.5	5030	100	2.5		0.5	0.5	2	14	1	2.5	108000	2.5	2660	6	2.5	2.5	2.5	0.05	
REG	EP1204011018	21/02/2012	EP1201385016	NS0111 290-292	NS0111	290	292			0.5	5430	1000	2.5		0.5	2	7	24	1	2.5	207000	2.5	2950	14	2.5	5	13	0.1	
REG	EP1204011030	21/02/2012	PE065688.078	NS0113 128-130	NS0113	128	130	footwall	mineralised	1.5	4220	7240	2.5		20	1	3	73	10	15	142000	2.5	2220	48	2.5	18	24	0.2	
REG	EP1204010036	21/02/2012	PE065688.079	NS0113 140-142	NS0113	140	142	footwall	non_mineralised	0.5	2260	9880	6		40	1	2	164	18	23	158000	2.5	3090	88	2.5	39	84	0.3	7.8
REG	EP1204010034	21/02/2012	PE065688.066	NS0113 158-160	NS0113	158	160	footwall	non_mineralised	0.5	3020	15600	6		0.5	1	3	250	16	28	163000	2.5	2230	104	2.5	50	44	0.1	7.6
REG	EP1204010035	21/02/2012	PE065688.070	NS0113 198-200	NS0113	198	200	footwall	non_mineralised	0.5	3610	4280	2.5		20	1	2	66	12	19	168000	2.5	2860	50	2.5	17	30	0.1	8
REG	EP1204010040	21/02/2012	PE065689.057	NS0116 108-110	NS0116	108	110	footwall	non_mineralised	0.5	4250	17000	8		40	2	2	254	18	28	151000	2.5	1860	103	2.5	50	46	0.4	7.6

Metals (magnetite)

										EA055: Moisture Content	ED093T: Total Major Cations	EG005T: Total Metals by ICP-AES																EG035T: Total Recoverable Mercury by FIMS	EN60: Bottle Leaching Procedure
Matrix:	Workgroup:	Project name/number:								Moisture Content (dried @ 103°C)	Ca	Al	As		Ba	Be	Cd	Cr	Co	Cu	Fe	Pb	Mn	Ni	Se	V	Zn	Hg	Final pH
SOIL	EP1204009	Ex EP1201383 1384 1526 1527 1528 1529 1530 & 1531 612739100									7440-70-2	7429-90-5	7440-38-2		7440-39-3	7440-41-7	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-89-6	7439-92-1	7439-96-5	7440-02-0	7782-49-2	7440-62-2	7440-66-6	7439-97-6	
										%	mg/kg	mg/kg	mg/kg		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	pH Unit
Sample Type:	ALS Sample number:	Sample date:	Client sample ID (1st):							1	50	50	5		10	1	1	2	2	5	50	5	5	2	5	5	5	0.1	0.1
				EIL									20		300		3	400	50	100		600	500	60		50	200	1	
				Client sample ID (2nd):	Hole ID	From	To	Lithology	Mineralisation																					
REG	EP1204010041	21/02/2012	PE065689.063	NS0116 130-132	NS0116	130	132	footwall	non_mineralised	0.5	6570	19800	9		30	2	2	313	18	31	146000	2.5	1860	113	2.5	62	54	0.3	8
REG	EP1204010039	21/02/2012	PE065689.041	NS0117 190-192	NS0117	190	192	footwall	mineralised	1.4	12100	11200	6		40	2	3	128	14	20	170000	2.5	2260	66	2.5	30	32	0.2	9.1
REG	EP1204010037	21/02/2012	PE065688.082	NS0118 140-142	NS0118	140	142	hanging wall	non_mineralised	0.5	4200	4530	30		0.5	1	3	59	12	31	191000	2.5	3020	43	2.5	14	13	0.7	7.4
REG	EP1204010038	21/02/2012	PE065689.019	NS0120 206-208	NS0120	206	208			0.5	1790	15800	6		30	1	1	317	19	24	120000	9	1870	121	2.5	50	55	0.1	8.2
REG	EP1204011025	21/02/2012	PE065686.084	NS0122 150-152	NS0122	150	152	footwall	non_mineralised	0.5	8630	7640	5		50	1	2	74	11	36	111000	2.5	1490	56	2.5	22	20	0.2	
REG	EP1204011026	21/02/2012	PE065687.013	NS0124 118-120	NS0124	118	120	footwall	mineralised	0.5	14900	1690	2.5		20	1	3	20	3	8	129000	2.5	1730	14	2.5	2.5	6	0.05	
REG	EP1204010018	21/02/2012	PE065687.014	NS0124 130-132	NS0124	130	132	footwall	non_mineralised	2.3	1940	26000	21		100	2	1	441	33	30	119000	6	355	160	2.5	82	73	0.4	9.6
REG	EP1204010042	21/02/2012	PE065689.072	NS0128	NS0128					0.5	3240	24300	10		0.5	2	3	307	29	38	178000	2.5	2860	175	2.5	66	49	0.4	7.6
REG	EP1204010007	21/02/2012	PE065686.003	NS0152 78-80	NS0152	78	80	footwall	non_mineralised	0.5	5220	33200	15		0.5	1	2	570	33	54	146000	2.5	1370	211	2.5	101	94	0.2	8.3
REG	EP1204010008	21/02/2012	PE065686.007	NS0152 120-122	NS0152	120	122	footwall	mineralised	0.5	12000	4150	2.5		30	1	1	32	9	14	109000	2.5	2400	35	2.5	11	14	0.2	9.4
REG	EP1204011024	21/02/2012	PE065685.089	NS0152 148-150	NS0152	148	150	footwall	mineralised	0.5	28900	4610	7		30	0.5	2	36	7	12	80400	2.5	1500	32	2.5	11	13	0.2	
REG	EP1204010006	21/02/2012	PE065685.098	NS0152 244-246	NS0152	244	246	footwall	non_mineralised	0.5	24200	5760	6		50	2	2	42	9	15	119000	2.5	2860	38	2.5	14	14	0.2	9.4
REG	EP1204010010	21/02/2012	PE065686.021	NS0153 98-100	NS0153	98	100	oxide	non_mineralised	0.5	6350	5810	14		30	0.5	3	82	6	9	160000	2.5	5050	35	2.5	17	15	0.3	8.2
REG	EP1204010009	21/02/2012	PE065686.020	NS0153 168-170	NS0153	168	170	hanging wall	mineralised	0.5	4450	4430	2.5		20	0.5	2	41	5	2.5	147000	2.5	3900	30	2.5	13	12	0.05	8.4
REG	EP1204010011	21/02/2012	PE065686.028	NS0153 200-202	NS0153	200	202	hanging wall	non_mineralised	0.5	400	5420	86		0.5	0.5	0.5	97	75	57	81300	17	584	439	2.5	11	88	1.9	5
REG	EP1204010012	21/02/2012	PE065686.032	NS0153 220-222	NS0153	220	222	hanging wall	non_mineralised	0.5	9740	5680	7		0.5	0.5	4	76	11	10	195000	2.5	4020	56	2.5	16	16	0.2	6.8
REG	EP1204010016	21/02/2012	PE065686.054	NS0154 200-202	NS0154	200	202	footwall	non_mineralised	1.1	5820	9470	6		60	2	3	161	10	19	164000	2.5	2190	58	2.5	29	37	0.3	9.3
REG	EP1204010019	21/02/2012	PE065687.035	NS0155 100-102	NS0155	100	102	footwall	non_mineralised	1.2	8480	17100	13		60	2	2	278	17	22	142000	2.5	1970	105	2.5	54	59	0.4	9.8
REG	EP1204010020	21/02/2012	PE065687.036	NS0155 108-110	NS0155	108	110	footwall	non_mineralised	0.5	6490	3430	2.5		40	2	4	46	4	14	190000	2.5	2630	29	2.5	11	17	0.2	9.1
REG	EP1204011027	21/02/2012	PE065687.047	NS0155 210-212	NS0155	210	212	footwall	mineralised	0.5	9380	2960	2.5		40	2	2	23	5	9	118000	2.5	2280	20	2.5	6	8	0.1	
REG	EP1204010002	21/02/2012	PE065685.046	NS0157 130-132	NS0157	130	132	hanging wall	mineralised	0.5	2050	7620	2.5		0.5	1	3	81	11	10	186000	2.5	3750	50	2.5	29	15	0.1	8
REG	EP1204010005	21/02/2012	PE065685.065	NS0158 66-68	NS0158	66	68	footwall	non_mineralised	0.5	8810	7700	2.5		30	0.5	2	72	8	10	146000	2.5	5200	46	2.5	13	15	0.2	8.5
REG	EP1204010004	21/02/2012	PE065685.064	NS0158 110-112	NS0158	110	112	north	mineralised	0.5	10100	5260	2.5		0.5	0.5	0.5	36	9	14	87800	2.5	3320	42	2.5	10	12	0.1	8.6
REG	EP1204010003	21/02/2012	PE065685.050	NS0158 178-180	NS0158	178	180	north	mineralised	0.5	17100	2160	2.5		0.5	0.5	0.5	15	4	2.5	75700	2.5	4110	15	2.5	2.5	7	0.05	7.8
REG	EP1204011023	21/02/2012	PE065685.029	NS0159 116-118	NS0159	116	118	north	non_mineralised	0.5	4340	2280	8		40	1	4	12	8	6	142000	2.5	4470	18	2.5	2.5	7	0.7	
REG	EP1204010017	21/02/2012	PE065686.068	NS0160 58-60	NS0160	58	60	footwall	non_mineralised	0.5	7920	19400	2.5		110	2	3	306	20	24	158000	2.5	2940	161	2.5	60	67	0.3	8.6
REG	EP1204010001	21/02/2012	PE065685.007	NS0165 100-102	NS0165	100	102	hanging wall	mineralised	0.5	4340	1610	2.5		0.5	0.5	1	10	3	2.5	126000	2.5	1480	12	2.5	2.5	2.5	0.3	7.7

Geochemical Abundance Index Calculation
GAI >3 = enriched

Max					**-1.11**	**3.62**	**-0.71**	**-1.15**	**-1.96**	**3.98**	**-0.50**	**1.34**	**-1.27**	**1.51**	**3.31**	**0.71**	**-2.98**	**4.98**	**-1.21**	**-1.01**	**2.25**
Mean					**-4.93**	**0.40**	**-6.18**	**-2.65**	**-5.16**	**2.07**	**-3.15**	**-2.08**	**-3.80**	**0.10**	**0.41**	**-2.31**	**-2.98**	**4.98**	**-4.66**	**-3.66**	**-0.50**
Median					**-5.04**	**-0.19**	**-5.07**	**-3.15**	**-4.39**	**2.66**	**-2.98**	**-2.22**	**-3.86**	**0.22**	**1.71**	**-2.50**	**-2.98**	**4.98**	**-4.41**	**-3.47**	**-1.34**
Min					**-7.36**	**-0.19**	**-10.39**	**-3.15**	**-14.70**	**0.66**	**-5.30**	**-4.30**	**-5.12**	**-1.31**	**-6.30**	**-5.30**	**-2.98**	**4.98**	**-6.41**	**-5.47**	**-1.34**
Avg Crust (ppm)					8	1.8	425	2.8	3.64	0.2	25	100	55	5.6	500	75	12.5	0.05	135	70	0.08
Element					Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	Mn	Ni	Pb	Se	V	Zn	Hg
										0.05		10									
Sample ID	SAMPFROM	SAMPTO	modelgeo	mineralised	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
NS0077	0	2	oxide	non_mineralised	-4.85	-0.19	-10.39	-3.15	-7.84	2.66	-5.30	-1.69	-5.12	0.33	-4.46	-3.19	-2.98	4.98	-4.15	-5.47	-1.34
NS0077	8	10	oxide	non_mineralised	-5.16	-0.19	-6.07	-2.15	-8.17	1.66	-5.30	-1.81	-5.12	0.08	-3.22	-2.89	-2.98	4.98	-4.41	-5.47	-1.34
NS0077	20	22	oxide	non_mineralised	-5.77	-0.19	-1.21	-3.15	-7.08	0.66	-1.40	-3.72	-5.12	-1.19	2.62	-2.72	-2.98	4.98	-6.41	-3.79	-1.34
NS0077	28	30	oxide	non_mineralised	-5.29	-0.19	-2.48	-3.15	-6.05	0.66	-2.50	-4.13	-5.12	-1.22	3.31	-1.98	-2.98	4.98	-6.41	-3.33	-1.34
NS0077	178	180	south	mineralised	-3.07	3.62	-3.48	-2.15	-4.66	2.66	-0.66	0.16	-1.63	0.57	2.16	0.01	-2.98	4.98	-2.49	-1.79	2.25
NS0078	0	2	oxide	non_mineralised	-4.70	-0.19	-5.07	-3.15	-8.89	1.66	-5.30	-1.55	-5.12	0.15	-3.74	-2.89	-2.98	4.98	-4.28	-5.47	-1.34
NS0078	8	10	oxide	non_mineralised	-5.55	-0.19	-10.39	-3.15	-9.11	0.66	-5.30	-1.40	-5.12	-0.47	-4.54	-3.89	-2.98	4.98	-3.83	-5.47	-1.34
NS0078	20	22	oxide	non_mineralised	-3.45	-0.19	-2.90	-2.15	-4.20	1.66	-2.98	-0.75	-3.63	-0.07	-2.48	-1.40	-2.98	4.98	-3.57	-3.62	-1.34
NS0078	28	30	oxide	non_mineralised	-3.63	-0.19	-3.48	-3.15	-4.40	0.66	-2.72	-0.75	-3.86	-0.41	-2.09	-1.11	-2.98	4.98	-4.41	-2.98	-1.34
NS0078	60	62	footwall	mineralised	-5.62	-0.19	-4.48	-3.15	-2.59	2.66	-3.72	-3.30	-3.27	0.27	1.55	-2.64	-2.98	4.98	-6.41	-3.98	1.25
NS0078	80	82	footwall	non_mineralised	-5.80	-0.19	-5.07	-3.15	-4.16	2.66	-5.30	-3.50	-3.86	0.08	1.20	-2.89	-2.98	4.98	-6.41	-3.98	0.66
NS0078	108	110	footwall	non_mineralised	-6.85	-0.19	-6.07	-2.15	-3.44	3.25	-5.30	-3.72	-5.12	0.80	1.54	-3.57	-2.98	4.98	-6.41	-4.20	1.25
NS0078	276	278	footwall	non_mineralised	-3.50	2.66	-3.26	-1.15	-5.02	2.66	-1.60	-0.21	-2.19	0.58	1.90	-0.72	-2.98	4.98	-2.74	-2.15	2.25
NS0079	48	50	south	non_mineralised	-3.41	1.30	-5.07	-2.15	-4.20	3.98	-1.72	-1.02	-2.74	1.06	2.33	-0.78	-2.98	4.98	-3.04	-2.20	0.66
NS0079	94	96	south	non_mineralised	-3.98	2.49	-4.07	-2.15	-4.41	3.66	-1.72	-0.95	-2.44	1.31	2.27	-1.08	-2.98	4.98	-3.41	-2.88	1.66
NS0079	160	162			-5.38	2.19	-4.07	-2.15	-3.84	2.66	-2.50	-2.50	-1.86	0.45	1.48	-2.37	-2.98	4.98	-4.57	-3.47	1.66
NS0083	28	30	oxide	non_mineralised	-3.74	-0.19	-4.48	-3.15	-4.41	0.66	-2.72	0.62	-2.63	-0.75	-3.44	-0.72	-2.98	4.98	-3.34	-2.27	-1.34
NS0083	88	90	footwall	non_mineralised	-3.83	1.49	-3.48	-1.15	-2.27	2.66	-1.50	0.00	-1.92	0.31	1.11	-0.57	-2.98	4.98	-2.74	-1.62	-0.34
NS0083	130	132	footwall	non_mineralised	-3.34	1.30	-3.26	-1.15	-4.45	2.66	-1.22	0.78	-1.74	0.40	1.16	-0.16	-2.98	4.98	-2.09	-1.15	-0.34
NS0083	158	160	footwall	non_mineralised	-3.09	1.08	-3.48	-1.15	-3.07	2.66	-1.06	1.07	-1.27	0.48	0.74	0.03	-2.98	4.98	-1.93	-1.30	-0.34
NS0084	140	142	hanging wall	non_mineralised	-1.11	2.40	-3.48	-2.15	-4.10	2.66	-1.60	-2.50	-2.86	0.39	1.83	-1.43	-2.98	4.98	-4.28	-3.33	1.66
NS0084	158	160	hanging wall	non_mineralised	-1.97	2.95	-10.39	-2.15	-7.02	2.66	-0.50	1.34	-1.49	0.48	0.41	0.71	-2.98	4.98	-1.21	-1.01	1.66
NS0084	190	192	hanging wall	mineralised	-4.70	-0.19	-4.48	-3.15	-3.21	1.66	-2.72	-2.91	-3.44	0.21	2.57	-2.08	-2.98	4.98	-4.93	-3.47	-1.34
NS0084	270	272	hanging wall	non_mineralised	-3.39	1.49	-3.75	-2.15	-3.98	2.66	-1.50	-1.26	-1.86	0.67	2.30	-0.76	-2.98	4.98	-3.04	-2.09	0.66
NS0085	0	2	oxide	non_mineralised	-4.58	-0.19	-4.48	-3.15	-7.79	2.66	-4.30	-0.14	-3.63	0.31	-1.64	-3.89	-2.98	4.98	-2.12	-5.47	-1.34
NS0085	10	12	oxide	non_mineralised	-6.80	-0.19	-10.39	-3.15	-9.89	0.66	-5.30	-3.50	-5.12	-1.25	-3.10	-4.89	-2.98	4.98	-6.41	-5.47	-1.34
NS0085	18	20	oxide	non_mineralised	-6.60	-0.19	-2.61	-3.15	-8.00	0.66	-3.72	-3.72	-5.12	-1.31	0.79	-4.08	-2.98	4.98	-6.41	-5.47	-1.34
NS0085	30	32	oxide	non_mineralised	-5.56	-0.19	-3.07	-3.15	-6.43	0.66	-2.13	-3.98	-5.12	-1.02	2.57	-2.50	-2.98	4.98	-6.41	-3.47	-1.34
NS0085	58	60	south	mineralised	-5.03	1.08	-6.07	-3.15	-2.41	1.66	-2.13	-2.98	-3.44	0.02	2.57	-2.19	-2.98	4.98	-5.15	-3.20	-0.34
NS0085	90	92	south	mineralised	-6.36	-0.19	-10.39	-3.15	-2.37	0.66	-3.72	-4.30	-5.12	-0.22	2.55	-3.57	-2.98	4.98	-6.41	-4.20	-1.34
NS0085	208	210	south	mineralised	-5.64	-0.19	-3.75	-3.15	-3.86	2.66	-3.72	-3.50	-5.12	0.52	2.61	-3.19	-2.98	4.98	-6.41	-3.79	-1.34
NS0086	8	10	oxide	non_mineralised	-5.26	-0.19	-10.39	-3.15	-10.11	0.66	-5.30	-0.02	-5.12	-0.18	-6.30	-4.30	-2.98	4.98	-2.98	-5.47	-1.34
NS0086	28	30	oxide	non_mineralised	-4.43	-0.19	-5.07	-3.15	-5.49	0.66	-5.30	-2.17	-5.12	-0.89	-4.13	-2.57	-2.98	4.98	-5.15	-5.47	-1.34
NS0086	208	210	footwall	non_mineralised	-6.57	-0.19	-5.07	-2.15	-1.96	2.66	-4.30	-3.72	-3.27	0.35	1.71	-3.43	-2.98	4.98	-6.41	-5.47	1.25
NS0086	248	250	footwall	mineralised	-5.54	1.30	-4.07	-1.15	-2.18	2.66	-3.30	-2.91	-2.53	0.27	1.30	-2.89	-2.98	4.98	-4.41	-5.47	0.66
NS0087	8	10	oxide	non_mineralised	-6.58	-0.19	-10.39	-3.15	-9.11	0.66	-5.30	-2.84	-5.12	-1.27	-5.04	-5.30	-2.98	4.98	-6.41	-5.47	-1.34
NS0087	84	86	footwall	mineralised	-4.04	-0.19	-0.71	-1.15	-4.45	0.66	-0.50	-3.30	-5.12	-0.70	2.61	-1.27	-2.98	4.98	-6.41	-2.98	-1.34
NS0087	88	90	footwall	non_mineralised	-4.77	1.49	-3.48	-2.15	-3.11	1.66	-2.50	-2.17	-3.12	0.21	1.54	-1.98	-2.98	4.98	-4.28	-3.33	1.25
NS0087	168	170	south	mineralised	-5.45	-0.19	-3.26	-3.15	-2.66	2.66	-2.98	-3.50	-3.44	0.22	1.94	-2.80	-2.98	4.98	-6.41	-3.62	-0.34
NS0087	230	232	south	mineralised	-5.34	-0.19	-4.07	-3.15	-2.34	1.66	-3.30	-3.72	-3.44	-0.16	2.23	-3.08	-2.98	4.98	-6.41	-4.47	-1.34
NS0087	380	382	south	mineralised	-6.66	-0.19	-6.07	-3.15	-2.81	2.66	-3.72	-4.13	-5.12	0.11	2.95	-3.57	-2.98	4.98	-6.41	-4.20	-1.34
NS0087	388	390	south	mineralised	-6.03	-0.19	-5.07	-3.15	-2.31	2.66	-3.30	-4.13	-5.12	0.10	2.67	-3.57	-2.98	4.98	-6.41	-4.20	-1.34
NS0088	0	2	oxide	non_mineralised	-5.20	-0.19	-10.39	-3.15	-7.49	0.66	-5.30	-1.47	-5.12	-0.34	-2.16	-3.89	-2.98	4.98	-3.74	-5.47	-1.34
NS0088	8	10	oxide	non_mineralised	-7.36	-0.19	-10.39	-3.15	-14.70	0.66	-5.30	-3.06	-5.12	-1.21	-3.04	-4.57	-2.98	4.98	-6.41	-5.47	-1.34
NS0088	108	110	north	non_mineralised	-6.22	-0.19	-10.39	-2.15	-4.42	3.25	-3.30	-3.60	-3.86	0.97	2.29	-2.72	-2.98	4.98	-6.41	-3.47	-1.34
NS0088	150	152	north	non_mineralised	-3.08	1.08	-10.39	-2.15	-4.65	3.98	-1.72	0.11	-3.44	1.51	1.97	-0.87	-2.98	4.98	-2.49	-2.54	-0.34
NS0088	280	282	north	non_mineralised	-4.04	-0.19	-10.39	-3.15	-3.86	3.25	-2.30	-2.22	-3.27	1.15	1.93	-1.50	-2.98	4.98	-4.04	-2.40	-1.34
NS0088	346	348	north	mineralised	-5.02	-0.19	-10.39	-3.15	-3.72	3.25	-2.72	-2.72	-3.44	0.93	2.34	-2.08	-2.98	4.98	-4.74	-3.20	-1.34
NS0089	0	2	oxide	non_mineralised	-5.99	-0.19	-3.48	-3.15	-7.53	0.66	-5.30	-0.48	-3.86	-1.11	-3.38	-3.89	-2.98	4.98	-3.41	-5.47	-1.34
NS0089	60	62	oxide	non_mineralised	-4.43	-0.19	-5.07	-3.15	-7.17	0.66	-2.50	-2.13	-3.86	-1.05	1.55	-0.22	-2.98	4.98	-4.15	-2.03	-1.34
NS0089	88	90	north	non_mineralised	-3.62	-0.19	-6.07	-2.15	-3.26	3.66	-1.98	-0.93	-2.74	0.93	1.82	-0.96	-2.98	4.98	-3.04	-1.88	-1.34
NS0089	128	130	north	non_mineralised	-4.15	1.08	-10.39	-3.15	-4.27	2.66	-1.60	-0.46	-2.63	0.75	1.88	-0.70	-2.98	4.98	-3.28	-2.27	0.66

Geochemical Abundance Index Calculation
GAI >3 = enriched

Max					**-1.11**	**3.62**	**-0.71**	**-1.15**	**-1.96**	**3.98**	**-0.50**	**1.34**	**-1.27**	**1.51**	**3.31**	**0.71**	**-2.98**	**4.98**	**-1.21**	**-1.01**	**2.25**
Mean					**-4.93**	**0.40**	**-6.18**	**-2.65**	**-5.16**	**2.07**	**-3.15**	**-2.08**	**-3.80**	**0.10**	**0.41**	**-2.31**	**-2.98**	**4.98**	**-4.66**	**-3.66**	**-0.50**
Median					**-5.04**	**-0.19**	**-5.07**	**-3.15**	**-4.39**	**2.66**	**-2.98**	**-2.22**	**-3.86**	**0.22**	**1.71**	**-2.50**	**-2.98**	**4.98**	**-4.41**	**-3.47**	**-1.34**
Min					**-7.36**	**-0.19**	**-10.39**	**-3.15**	**-14.70**	**0.66**	**-5.30**	**-4.30**	**-5.12**	**-1.31**	**-6.30**	**-5.30**	**-2.98**	**4.98**	**-6.41**	**-5.47**	**-1.34**
Avg Crust (ppm)					8	1.8	425	2.8	3.64	0.2	25	100	55	5.6	500	75	12.5	0.05	135	70	0.08
Element					Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	Mn	Ni	Pb	Se	V	Zn	Hg
										0.05		10									
Sample ID	SAMPFROM	SAMPTO	modelgeo	mineralised	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
NS0089	178	180	north	non_mineralised	-5.04	1.30	-10.39	-3.15	-4.25	2.66	-1.13	-1.09	-2.05	0.74	2.00	-0.72	-2.98	4.98	-3.74	-2.27	0.66
NS0089	210	212	north	mineralised	-7.16	-0.19	-10.39	-3.15	-3.93	3.25	-2.98	-3.72	-3.86	1.00	2.34	-2.30	-2.98	4.98	-6.41	-3.20	-1.34
NS0089	268	270	north	mineralised	-6.10	-0.19	-10.39	-3.15	-4.39	3.25	-3.30	-3.98	-5.12	1.02	2.26	-2.72	-2.98	4.98	-6.41	-3.20	-1.34
NS0089	360	362	north	non_mineralised	-5.99	-0.19	-10.39	-2.15	-3.28	3.98	-3.72	-3.72	-5.12	1.32	2.55	-2.30	-2.98	4.98	-6.41	-2.79	-1.34
NS0090	0	2	oxide	non_mineralised	-4.89	-0.19	-10.39	-3.15	-9.37	0.66	-5.30	-0.63	-5.12	-0.31	-5.23	-4.08	-2.98	4.98	-3.34	-5.47	-1.34
NS0090	8	10	oxide	non_mineralised	-7.19	-0.19	-10.39	-3.15	-9.70	0.66	-5.30	-3.60	-5.12	-1.71	-4.42	-4.30	-2.98	4.98	-6.41	-5.47	-1.34
NS0090	20	22	oxide	mineralised	-7.36	-0.19	-5.07	-3.15	-14.70	0.66	-5.30	-3.98	-5.12	-1.30	-0.33	-4.57	-2.98	4.98	-6.41	-5.47	-1.34
NS0090	128	130	south	mineralised	-7.33	-0.19	-10.39	-3.15	-2.63	1.66	-3.30	-3.84	-3.63	-0.08	2.57	-3.43	-2.98	4.98	-6.41	-4.20	-1.34
NS0090	190	192	south	mineralised	-4.53	-0.19	-10.39	-3.15	-3.82	2.66	-1.98	-2.60	-3.12	0.39	2.20	-1.72	-2.98	4.98	-4.57	-2.70	-1.34
NS0090	268	270	north	mineralised	-8.86	-0.19	-10.39	-3.15	-3.30	3.25	-3.72	-4.13	-5.12	0.82	2.47	-3.08	-2.98	4.98	-6.41	-3.62	-1.34
NS0091	160	162	hanging wall	non_mineralised	-8.17	-0.19	-10.39	-3.15	-3.46	3.25	-3.72	-3.98	-5.12	0.75	1.61	-2.98	-2.98	4.98	-6.41	-4.47	-1.34
NS0091	198	200	hanging wall	mineralised	-5.26	-0.19	-10.39	-1.15	-3.70	4.66	-2.98	-1.66	-3.63	1.46	2.28	-1.68	-2.98	4.98	-4.15	-2.88	-1.34
NS0091					-5.53	2.08	-5.07	-3.15	-4.88	2.66	-2.98	-2.66	-3.12	0.37	2.47	-2.37	-2.98	4.98	-5.41	-3.33	0.66
NS0092	40	42	footwall	non_mineralised	-5.04	-0.19	-2.90	-2.15	-3.47	2.66	-2.72	-3.30	-2.35	0.86	2.53	-2.37	-2.98	4.98	-5.15	-3.47	0.66
NS0092	48	50	footwall	non_mineralised	-4.97	-0.19	-2.90	-2.15	-2.69	2.66	-2.98	-3.13	-2.63	0.78	2.22	-2.50	-2.98	4.98	-5.15	-3.47	-1.34
NS0092	158	160	south	mineralised	-5.92	-0.19	-4.48	-3.15	-2.79	2.66	-3.30	-3.84	-5.12	0.22	2.57	-3.43	-2.98	4.98	-6.41	-4.20	-1.34
NS0093	90	92	south	mineralised	-5.57	-0.19	-3.48	-3.15	-2.54	2.66	-2.98	-3.84	-5.12	0.46	2.86	-3.19	-2.98	4.98	-6.41	-3.79	-1.34
NS0093	216	218	south	mineralised	-6.12	-0.19	-3.75	-1.15	-2.90	4.25	-4.30	-3.72	-5.12	1.60	2.23	-3.08	-2.98	4.98	-6.41	-4.20	-1.34
NS0094	28	30	oxide	non_mineralised	-4.48	-0.19	-0.98	-2.15	-5.81	0.66	-1.22	-3.22	-3.86	-0.69	2.75	-1.46	-2.98	4.98	-6.41	-2.79	-1.34
NS0094	148	150	south	mineralised	-7.62	-0.19	-5.07	-3.15	-2.20	2.66	-4.30	-4.30	-5.12	-0.01	2.74	-3.89	-2.98	4.98	-6.41	-5.47	-1.34
NS0094	160	162	south	mineralised	-7.10	1.30	-5.07	-3.15	-1.82	1.66	-3.30	-4.13	-5.12	0.15	2.86	-3.72	-2.98	4.98	-6.41	-4.20	-1.34
NS0095	30	32	oxide	non_mineralised	-6.62	-0.19	-1.98	-2.15	-7.49	0.66	-1.98	-3.13	-5.12	-0.74	3.10	-2.43	-2.98	4.98	-6.41	-3.33	-1.34
NS0095	38	40	oxide	non_mineralised	-7.07	-0.19	-10.39	-3.15	-6.00	0.66	-3.30	-3.50	-5.12	-0.94	2.64	-2.57	-2.98	4.98	-6.41	-3.98	-1.34
NS0096	20	22	oxide	non_mineralised	-6.06	-0.19	-1.90	-3.15	-7.41	0.66	-3.72	-3.84	-5.12	-1.01	1.80	-3.72	-2.98	4.98	-6.41	-5.47	-1.34
NS0096	70	72	south	mineralised	-5.66	-0.19	-3.07	-3.15	-2.88	1.66	-3.30	-3.84	-3.44	0.21	2.60	-3.30	-2.98	4.98	-6.41	-3.98	-1.34
NS0096	120	122	south	mineralised	-4.73	1.08	-4.07	-3.15	-3.22	0.66	-2.30	-2.91	-2.86	0.16	2.39	-1.98	-2.98	4.98	-4.74	-3.20	-1.34
NS0096	230	232	south	mineralised	-3.24	3.08	-3.26	-3.15	-4.09	1.66	-1.13	-0.86	-2.12	0.23	2.30	-0.40	-2.98	4.98	-2.98	-2.15	0.66
NS0096	254	256	south	mineralised	-6.07	-0.19	-5.07	-3.15	-1.98	2.66	-3.30	-3.98	-3.86	0.08	2.84	-3.43	-2.98	4.98	-6.41	-3.79	-1.34
NS0097	28	30	oxide	non_mineralised	-6.29	-0.19	-2.16	-3.15	-7.53	0.66	-2.13	-3.22	-5.12	-0.89	2.57	-1.60	-2.98	4.98	-6.41	-3.20	-1.34
NS0097	40	42	south	non_mineralised	-2.47	2.81	-5.07	-2.15	-6.08	0.66	-0.72	0.82	-1.49	-0.10	1.24	0.62	-2.98	4.98	-2.09	-0.72	1.25
NS0098	0	2	oxide	non_mineralised	-5.37	-0.19	-5.07	-3.15	-7.70	0.66	-5.30	-1.04	-3.63	-0.60	-4.04	-4.57	-2.98	4.98	-3.21	-5.47	-1.34
NS0098	20	22	oxide	non_mineralised	-7.94	-0.19	-10.39	-3.15	-9.37	0.66	-5.30	-3.72	-5.12	-1.22	-4.04	-5.30	-2.98	4.98	-6.41	-5.47	-1.34
NS0098	58	60	hanging wall	mineralised	-5.85	1.30	-5.07	-3.15	-4.40	1.66	-2.98	-2.78	-2.98	0.42	2.87	-2.37	-2.98	4.98	-5.41	-2.98	-0.34
NS0098	108	110	hanging wall	mineralised	-9.02	-0.19	-10.39	-3.15	-3.80	2.66	-3.72	-4.13	-5.12	0.22	2.22	-3.89	-2.98	4.98	-6.41	-5.47	-1.34
NS0098	180	182	hanging wall	mineralised	-5.75	0.81	-5.07	-3.15	-3.87	1.66	-3.72	-3.50	-5.12	0.53	1.60	-3.19	-2.98	4.98	-6.41	-4.20	-0.34
NS0100	78	80	south	mineralised	-3.12	0.81	-3.07	-1.15	-4.31	2.66	-2.30	-0.41	-3.12	0.33	1.25	-0.84	-2.98	4.98	-2.57	-2.54	1.25
NS0106	8	10	oxide	non_mineralised	-7.76	-0.19	-2.90	-3.15	-14.70	0.66	-5.30	-4.50	-5.12	-2.29	0.70	-5.30	-2.98	4.98	-6.41	-4.47	-1.34
NS0106	20	22	oxide	non_mineralised	-6.08	-0.19	-1.55	-3.15	-8.30	0.66	-1.50	-3.84	-5.12	-0.99	2.92	-2.24	-2.98	4.98	-6.41	-2.62	-1.34
NS0106	28	30	oxide	non_mineralised	-5.94	-0.19	-2.90	-3.15	-5.77	0.66	-2.72	-3.60	-3.63	-0.63	2.88	-2.50	-2.98	4.98	-6.41	-2.79	-1.34
NS0106	48	50	south	mineralised	-6.62	1.08	-5.07	-3.15	-2.22	0.66	-2.50	-4.30	-4.12	-0.22	2.91	-3.43	-2.98	4.98	-6.41	-3.79	-0.34
NS0106	92	94	south	mineralised	-4.24	2.95	-3.48	-3.15	-3.73	2.66	-1.98	-1.91	-2.63	0.16	2.16	-1.13	-2.98	4.98	-4.74	-3.09	1.66
NS0106	170	172	south	mineralised	-7.91	-0.19	-10.39	-3.15	-2.08	0.66	-5.30	-3.72	-5.12	-0.43	2.90	-4.57	-2.98	4.98	-6.41	-3.98	-1.34
NS0106					-5.72	-0.19	-6.07	-3.15	-7.61	0.66	-5.30	0.03	-5.12	-0.86	-3.13	-4.89	-2.98	4.98	-2.34	-5.47	-1.34
NS0107	120	122	hanging wall	non_mineralised	-3.00	3.70	-6.07	-3.15	-7.53	1.66	0.16	0.80	-0.53	0.06	1.23	1.25	-1.72	4.98	-2.61	-0.41	3.57
NS0107	128	130	hanging wall	non_mineralised	-3.14	2.58	-10.39	-3.15	-7.84	0.66	0.22	0.85	-0.83	-0.39	0.45	0.99	-1.98	4.98	-2.61	-1.30	2.66
NS0107	140	142	hanging wall	non_mineralised	-2.89	2.08	-10.39	-3.15	-4.30	0.66	0.74	1.23	0.16	-0.79	1.63	1.10	-1.50	4.98	-2.06	-0.36	2.98
NS0107	148	150	hanging wall	non_mineralised	-2.82	2.30	-10.39	-3.15	-7.94	0.66	0.67	1.32	-0.27	-0.96	-1.19	1.55	-1.50	4.98	-2.34	-0.77	3.47
NS0107	160	162	hanging wall	non_mineralised	-2.81	2.08	-10.39	-3.15	-7.79	0.66	0.76	1.46	-0.07	-0.86	0.70	1.39	-1.30	4.98	-2.21	-0.45	2.98
NS0107	170	172			-2.74	2.08	-6.07	-3.15	-2.67	0.66	0.72	1.47	0.07	-0.74	0.50	1.46	-1.30	4.98	-2.15	-0.40	2.98
NS0108	160	162	south	mineralised	-4.93	1.66	-6.07	-3.15	-3.24	2.66	-1.98	-3.30	-2.98	0.11	2.42	-1.72	-2.98	4.98	-6.41	-2.98	-1.34
NS0108	176	178	south	mineralised	-4.12	-0.19	-10.39	-3.15	-4.10	3.25	-2.13	-1.11	-2.86	0.93	2.71	-1.22	-2.98	4.98	-4.28	-2.33	0.66
NS0111	188	190	south	non_mineralised	-6.51	-0.19	-10.39	-3.15	-4.26	2.66	-3.72	-2.22	-5.12	0.42	0.49	-2.80	-2.98	4.98	-6.41	-3.47	-1.34

Geochemical Abundance Index Calculation
GAI >3 = enriched

Max					**-1.11**	**3.62**	**-0.71**	**-1.15**	**-1.96**	**3.98**	**-0.50**	**1.34**	**-1.27**	**1.51**	**3.31**	**0.71**	**-2.98**	**4.98**	**-1.21**	**-1.01**	**2.25**
Mean					**-4.93**	**0.40**	**-6.18**	**-2.65**	**-5.16**	**2.07**	**-3.15**	**-2.08**	**-3.80**	**0.10**	**0.41**	**-2.31**	**-2.98**	**4.98**	**-4.66**	**-3.66**	**-0.50**
Median					**-5.04**	**-0.19**	**-5.07**	**-3.15**	**-4.39**	**2.66**	**-2.98**	**-2.22**	**-3.86**	**0.22**	**1.71**	**-2.50**	**-2.98**	**4.98**	**-4.41**	**-3.47**	**-1.34**
Min					**-7.36**	**-0.19**	**-10.39**	**-3.15**	**-14.70**	**0.66**	**-5.30**	**-4.30**	**-5.12**	**-1.31**	**-6.30**	**-5.30**	**-2.98**	**4.98**	**-6.41**	**-5.47**	**-1.34**
Avg Crust (ppm)					8	1.8	425	2.8	3.64	0.2	25	100	55	5.6	500	75	12.5	0.05	135	70	0.08
Element					Al	As	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe	Mn	Ni	Pb	Se	V	Zn	Hg
										0.05		10									
Sample ID	SAMPFROM	SAMPTO	modelgeo	mineralised	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
NS0111	240	242			-10.34	-0.19	-10.39	-3.15	-3.72	2.66	-5.30	-3.50	-5.12	0.29	1.75	-4.30	-2.98	4.98	-6.41	-5.47	-1.34
NS0111	290	292			-7.02	-0.19	-10.39	-1.15	-3.37	4.47	-5.30	-2.72	-5.12	1.23	1.90	-3.08	-2.98	4.98	-5.15	-3.09	-0.34
NS0113	128	130	footwall	mineralised	-4.17	-0.19	-5.07	-2.15	-3.97	3.25	-1.98	-1.11	-2.53	0.68	1.49	-1.30	-2.98	4.98	-3.57	-2.20	0.66
NS0113	140	142	footwall	non_mineralised	-3.72	1.08	-4.07	-2.15	-4.88	2.66	-1.13	0.05	-1.92	0.84	1.97	-0.43	-2.98	4.98	-2.45	-1.70	1.25
NS0113	158	160	footwall	non_mineralised	-3.06	1.08	-10.39	-2.15	-4.46	3.25	-1.30	0.66	-1.63	0.88	1.50	-0.19	-2.98	4.98	-2.09	-1.33	-0.34
NS0113	198	200	footwall	non_mineralised	-4.93	-0.19	-5.07	-2.15	-4.20	2.66	-1.72	-1.50	-2.19	0.93	1.86	-0.98	-2.98	4.98	-3.65	-1.88	-0.34
NS0116	108	110	footwall	non_mineralised	-2.94	1.49	-4.07	-1.15	-3.96	2.66	-1.13	0.68	-1.63	0.77	1.24	-0.20	-2.98	4.98	-2.09	-1.27	1.66
NS0116	130	132	footwall	non_mineralised	-2.72	1.66	-4.48	-1.15	-3.34	2.66	-1.13	0.99	-1.49	0.72	1.24	-0.07	-2.98	4.98	-1.78	-1.03	1.25
NS0117	190	192	footwall	mineralised	-3.54	1.08	-4.07	-1.15	-2.46	3.25	-1.50	-0.30	-2.12	0.94	1.52	-0.84	-2.98	4.98	-2.83	-1.79	0.66
NS0118	140	142	hanging wall	non_mineralised	-4.84	3.40	-10.39	-2.15	-3.98	3.25	-1.72	-1.42	-1.49	1.11	1.93	-1.46	-2.98	4.98	-3.93	-3.09	2.47
NS0120	206	208			-3.04	1.08	-4.48	-2.15	-5.21	1.66	-1.06	1.00	-1.86	0.44	1.24	0.03	-1.13	4.98	-2.09	-1.01	-0.34
NS0122	150	152	footwall	non_mineralised	-4.09	0.81	-3.75	-2.15	-2.94	2.66	-1.84	-1.09	-1.27	0.33	0.92	-1.08	-2.98	4.98	-3.28	-2.47	0.66
NS0124	118	120	footwall	mineralised	-6.27	-0.19	-5.07	-2.15	-2.16	3.25	-3.72	-2.98	-3.44	0.54	1.13	-3.08	-2.98	4.98	-6.41	-4.20	-1.34
NS0124	130	132	footwall	non_mineralised	-2.32	2.88	-2.75	-1.15	-5.10	1.66	-0.26	1.48	-1.53	0.43	-1.15	0.43	-1.72	4.98	-1.38	-0.60	1.66
NS0128					-2.42	1.81	-10.39	-1.15	-4.36	3.25	-0.45	0.96	-1.19	1.01	1.86	0.56	-2.98	4.98	-1.69	-1.17	1.66
NS0152	78	80	footwall	non_mineralised	-1.97	2.40	-10.39	-2.15	-3.67	2.66	-0.26	1.85	-0.69	0.72	0.79	0.83	-2.98	4.98	-1.08	-0.23	0.66
NS0152	120	122	footwall	mineralised	-4.97	-0.19	-4.48	-2.15	-2.47	1.66	-2.13	-2.30	-2.63	0.30	1.60	-1.76	-2.98	4.98	-4.28	-2.98	0.66
NS0152	148	150	footwall	mineralised	-4.82	1.30	-4.48	-3.15	-1.20	2.66	-2.50	-2.13	-2.86	-0.14	0.93	-1.89	-2.98	4.98	-4.28	-3.09	0.66
NS0152	244	246	footwall	non_mineralised	-4.50	1.08	-3.75	-1.15	-1.46	2.66	-2.13	-1.91	-2.53	0.43	1.86	-1.64	-2.98	4.98	-3.93	-2.98	0.66
NS0153	98	100	oxide	non_mineralised	-4.48	2.30	-4.48	-3.15	-3.39	3.25	-2.72	-0.95	-3.27	0.85	2.68	-1.76	-2.98	4.98	-3.65	-2.88	1.25
NS0153	168	170	hanging wall	mineralised	-4.88	-0.19	-5.07	-3.15	-3.90	2.66	-2.98	-1.95	-5.12	0.73	2.30	-1.98	-2.98	4.98	-4.04	-3.20	-1.34
NS0153	200	202	hanging wall	non_mineralised	-4.58	4.92	-10.39	-3.15	-7.37	0.66	0.93	-0.70	-0.61	-0.12	-0.44	1.89	-0.22	4.98	-4.28	-0.33	3.91
NS0153	220	222	hanging wall	non_mineralised	-4.52	1.30	-10.39	-3.15	-2.77	3.66	-1.84	-1.06	-3.12	1.14	2.35	-1.08	-2.98	4.98	-3.74	-2.79	0.66
NS0154	18	20	oxide	non_mineralised	-6.00	-0.19	-1.31	-3.15	-7.14	0.66	-1.98	-4.13	-5.12	-1.12	2.84	-2.64	-2.98	4.98	-6.41	-3.98	-1.34
NS0154	30	32	south	mineralised	-6.17	-0.19	-6.07	-3.15	-3.82	1.66	-3.30	-3.98	-3.86	0.31	2.91	-3.08	-2.98	4.98	-6.41	-3.62	-1.34
NS0154	38	40	south	mineralised	-4.89	-0.19	-6.07	-3.15	-2.92	0.66	-2.50	-2.98	-3.44	0.04	2.41	-2.08	-2.98	4.98	-4.93	-3.09	-1.34
NS0154	200	202	footwall	non_mineralised	-3.78	1.08	-3.48	-1.15	-3.51	3.25	-1.98	0.03	-2.19	0.89	1.47	-1.03	-2.98	4.98	-2.88	-1.58	1.25
NS0155	100	102	footwall	non_mineralised	-2.93	2.19	-3.48	-1.15	-2.97	2.66	-1.22	0.82	-1.98	0.68	1.32	-0.17	-2.98	4.98	-1.98	-0.91	1.66
NS0155	108	110	footwall	non_mineralised	-5.24	-0.19	-4.07	-1.15	-3.35	3.66	-3.30	-1.78	-2.63	1.10	1.74	-2.03	-2.98	4.98	-4.28	-2.70	0.66
NS0155	210	212	footwall	mineralised	-5.46	-0.19	-4.07	-1.15	-2.82	2.66	-2.98	-2.78	-3.27	0.42	1.53	-2.57	-2.98	4.98	-5.15	-3.79	-0.34
NS0157	130	132	hanging wall	mineralised	-4.09	-0.19	-10.39	-2.15	-5.02	3.25	-1.84	-0.96	-3.12	1.07	2.25	-1.24	-2.98	4.98	-2.88	-2.88	-0.34
NS0158	66	68	footwall	non_mineralised	-4.08	-0.19	-4.48	-3.15	-2.91	2.66	-2.30	-1.13	-3.12	0.72	2.72	-1.37	-2.98	4.98	-4.04	-2.88	0.66
NS0158	110	112	north	mineralised	-4.63	-0.19	-10.39	-3.15	-2.72	0.66	-2.13	-2.13	-2.63	-0.01	2.07	-1.50	-2.98	4.98	-4.41	-3.20	-0.34
NS0158	178	180	north	mineralised	-5.91	-0.19	-10.39	-3.15	-1.96	0.66	-3.30	-3.40	-5.12	-0.23	2.38	-2.98	-2.98	4.98	-6.41	-3.98	-1.34
NS0159	116	118	north	non_mineralised	-5.83	1.49	-4.07	-2.15	-3.93	3.66	-2.30	-3.72	-3.86	0.68	2.50	-2.72	-2.98	4.98	-6.41	-3.98	2.47
NS0160	58	60	footwall	non_mineralised	-2.74	-0.19	-2.61	-1.15	-3.07	3.25	-0.98	0.95	-1.86	0.84	1.90	0.44	-2.98	4.98	-1.83	-0.72	1.25
NS0165	100	102	hanging wall	mineralised	-6.34	-0.19	-10.39	-3.15	-3.93	1.66	-3.72	-3.98	-5.12	0.51	0.91	-3.30	-2.98	4.98	-6.41	-5.47	1.25

ANC

Job Number										
Method Name							EA013: Acid Neutralising Capacity			
Analyte Name							ANC as H2SO4	ANC as CaCO3	Fizz Rating	
Units							kg H2SO4 equiv./t	% CaCO3	Fizz Unit	
Description	Sample Date	Sample Name	Hole ID	From	To	Mineralisation	Lithology	0.5	0.1	0
EP1204029013	21/02/2012	EP1201527028	NS0087	8	10			1.8	0.2	0
EP1204029014	21/02/2012	EP1201528001	NS0089	88	90			22	2.2	1
EP1204029012	21/02/2012	EP1201526047	NS0089	348	350			25.6	2.6	1
EP1204029022	21/02/2012	EP1201531004	NS0090	128	130			50.2	5.1	2
EP1204029016	21/02/2012	EP1201529008	NS0090	190	192			25.6	2.6	1
EP1204029001	21/02/2012	EP1201383048	NS0091	198	200			23.6	2.4	1
EP1204029020	21/02/2012	EP1201530033	NS0094	148	150			75.6	7.7	2
EP1204029019	21/02/2012	EP1201530029	NS0094	160	162			73.4	7.5	2
EP1204029017	21/02/2012	EP1201530008	NS0106	28	30			7.9	0.8	0
EP1204029018	21/02/2012	EP1201530010	NS0106	48	50			54.7	5.6	2
EP1204029021	21/02/2012	EP1201530042	NS0106	170	172			74.8	7.6	2

Hole	Depth	Lithology	Mineralised	Mineral Phase	%	Probability
NS0078	008-010	oxide	non-mineralised	Quartz, syn (Si O2)	Major	good
				Goethite, aluminian, syn (Fe0.93 Al0.07 O (O H))	Minor	good
				Stilbite-Na ((Na2 , Ca) Al2 Si6 O16 ·6 H2 O)	Minor	medium
NS0078	108-110	footwall	non-mineralised	Quartz, syn (Si O2)	Major	good
				Stilbite-Na ((Na2 , Ca) Al2 Si6 O16 ·6 H2 O)	Minor	medium
				Magnetite, syn (Fe2.93 O4)	Minor	good
				Stilpnomelane (Fe2 Si3 O7 (O H)2)	Minor	medium
				Kaolinite (Al2 Si2 O5 (O H)4)	Trace	medium
				Siderite (Fe (C O3))	Trace	low
NS0083	130-132	footwall	non-mineralised	Quartz, syn (Si O2)	Major	good
				Kaolinite (Al2 Si2 O5 (O H)4)	Minor	good
				Stilpnomelane (Fe2 Si3 O7 (O H)2)	Minor	medium
				Siderite (Fe (C O3))	Trace	medium
				Stilbite-Na ((Na2 , Ca) Al2 Si6 O16 ·6 H2 O)	Trace	low
NS0084	158-160	hangingwall	non-mineralised	Quartz, syn (Si O2)	Major	good
				Clinochlore-1MIIb, ferroan ((Mg , Fe)6 (Si , Al)4 O10 (O H)8)	Minor	good
				Stilpnomelane ((Fe , Mg)6 (Si , Al)8 O19 (O H)9)	Trace	low
NS0085	010-012	oxide	non-mineralised	Quartz, syn (Si O2)	Major	good
				Goethite (Fe +3 O (O H))	Minor	good
				Iron Oxide (Fe5.34 O8)	Trace	minor
NS0085	058-060	south	mineralised	Quartz, syn (Si O2)	Major	good
				Magnetite, syn (Fe2.9 O4)	Minor	good
				Chamosite-1MIIb ((Mg5.036 Fe4.964) Al2.724 (Si5.70 Al2.30 O20) (O H)16)	Minor	medium
				Siderite (Fe (C O3))	Trace	medium
				Dolomite (Ca1.13 Mg0.87 (C O3)2)	Trace	low
				Stilpnomelane (Fe2 (Si3 O9))	Trace	low
NS0085	090-092	south	mineralised	Quartz, syn (Si O2)	Major	good
				Iron Oxide (Fe3 O4)	Minor	medium
				Siderite (Fe (C O3))	Trace	medium
				Dolomite (Ca1.13 Mg0.87 (C O3)2)	Trace	low
				Stilpnomelane (Fe2 (Si3 O9))	Trace	low
NS0085	208-210	south	mineralised	Quartz, syn (Si O2)	Major	good
				Iron Oxide (Fe3 O4)	Minor	medium
				Magnetite, syn (Fe2.9 O4)	Minor	medium
				Siderite (Fe (C O3))	Trace	low
				Stilpnomelane (Fe2 (Si3 O9))	Trace	low
NS0086	208-210	footwall	non-mineralised	Quartz, syn (Si O2)	Major	good
				Stilpnomelane (Fe2 (Si3 O9))	Minor	good
				Magnetite, syn (Fe2.9 O4)	Minor	good
				Siderite (Fe (C O3))	Minor	good
NS0087	008-010	oxide	non-mineralised	Goethite (Fe +3 O (O H))	Major	good
				Quartz low, syn (Si O2)	Minor	good
NS0089	088-090	north	non-mineralised	Quartz, syn (Si O2)	Major	good
				Clinochlore-1MIIb, ferroan ((Mg,Fe)6(Si,Al)4O10(OH)8)	Minor	good
				Siderite (Fe (C O3))	Minor	good
				Stilpnomelane ((Fe,Mg)6(Si,Al)8O19(OH)9)	Trace	low
NS0089	268-270	north	mineralised	Quartz, syn (Si O2)	Major	good
				Chamosite-IIb ((Fe , Al , Mg)6 (Si Al)4 O10 (O H)8)	Minor	medium
				Magnetite (Fe3 O4)	Minor	good
				Hematite, syn (Fe2 O3)	Trace	medium
				Siderite (Fe (C O3))	Trace	low
NS0089	348-350	north	mineralised	Quartz, syn (Si O2)	Major	good
				Magnetite, syn (Fe2.9 O4)	Minor	good
				Siderite (Fe (C O3))	Minor	good
				Kaolinite (Al2 Si2 O5 (O H)4)	Trace	low
NS0090	000-002	oxide	non-mineralised	Quartz, syn (Si O2)	Major	good
				Goethite (Fe +3 O (O H))	Minor	good
				Clinochlore-2MIIb (Mg5 Al (Si3 Al) O10 (O H)8)	Trace	medium
NS0090	190-192	south	mineralised	Quartz, syn (Si O2)	Major	good
				Clinochlore-1MIIb, ferroan ((Mg , Fe)6 (Si , Al)4 O10 (O H)8)	Minor	good
				Siderite (Fe C O3)	Minor	medium
				Microcline, inter (K Al Si3 O8)	Minor	low
				Magnetite, syn (Fe3 O4)	Trace	medium
NS0091	198-200	hangingwall	mineralised	Quartz, syn (Si O2)	Major	good
				Siderite (Fe (C O3))	Minor	medium
				Chamosite-IIb ((Fe , Al , Mg)6 (Si Al)4 O10 (O H)8)	Minor	medium
				Hematite, syn (Fe2 O3)	Trace	medium
NS0092	040-042	footwall	non-mineralised	Quartz, syn (Si O2)	Major	good
				Siderite (Fe C O3)	Minor	good
				Stilpnomelane (Fe2 (Si3 O9))	Minor	medium
				Magnetite (Fe2.929 O4)	Minor	medium
NS0092	048-050	footwall	non-mineralised	Quartz, syn (Si O2)	Major	good
				Siderite (Fe C O3)	Minor	good
				Stilpnomelane (Fe2 (Si3 O9))	Minor	medium
				Magnetite (Fe2.929 O4)	Minor	medium
				Hematite (Fe2 O3)	Trace	good
NS0092	158-160	south	mineralised	Quartz, syn (Si O2)	Major	good
				Magnetite (Fe3 O4)	Minor	good
				Dolomite (Ca1.17 Mg0.83 (C O3)2)	Trace	low
				Siderite (Fe (C O3))	Trace	low
				Stilpnomelane (Fe2 (Si3 O9))	Trace	low
NS0093	090-092	south	mineralised	Quartz, syn (Si O2)	Major	good
				Magnetite, syn (Fe2.93 O4)	Minor	good
				Siderite (Fe (C O3))	Trace	low

Hole	Depth	Lithology	Mineralised	Mineral Phase	%	Probability
				Kaolinite (Al2 Si2 O5 (O H)4)	Trace	medium
				Stilpnomelane (Fe2 Si3 O7 (O H)2)	Trace	medium
NS0094	028-030	oxide	non-mineralised	Quartz, syn (Si O2)	Major	good
				Goethite (Fe +3 O (O H))	Minor	good
				Hematite, syn (Fe1.987 O3)	Minor	good
NS0095	030-032	oxide	non-mineralised	Quartz, syn (Si O2)	Major	good
				Goethite (Fe +3 O (O H))	Minor	good
				Hematite, syn (Fe1.987 O3)	Minor	good
NS0095	038-040	oxide	non-mineralised	Quartz, syn (Si O2)	Major	good
				Goethite (Fe +3 O (O H))	Minor	good
				Hematite, syn (Fe1.987 O3)	Minor	good
NS0096	070-072	south	mineralised	Quartz, syn (Si O2)	Major	good
				Hydroxylapatite (Na0.4 Ca4.2 (P O4)1.8 (C O3)1.2 (O H))	Minor	medium
				Stilpnomelane ((K , Na , Ca)0.5 (Fe , Mg , Mn , Al)6.8 Si8 O20 (O H , O)6.1 ·2.8 H2 O)	Minor	medium
				Magnetite, syn (Fe3 O4)	Minor	good
				Dolomite (Ca1.17 Mg0.83 (C O3)2)	Trace	medium
				Kaolinite-1Ad (Al2 Si2 O5 (O H)4)	Trace	medium
NS0097	028-030	oxide	non-mineralised	Quartz, syn (Si O2)	Major	good
				Goethite (Fe +3 O (O H))	Minor	good
				Hematite, syn (Fe1.987 O3)	Minor	good
NS0098	000-002	oxide	non-mineralised	Quartz, syn (Si O2)	Major	good
				Goethite (Fe +3 O (O H))	Minor	good
				Kaolinite-1Ad (Al2 Si2 O5 (O H)4)	Trace	medium
				Hematite, syn (Fe1.984 O3)	Trace	medium
NS0098	058-060	hangingwall	mineralised	Quartz, syn (Si O2)	Major	good
				Hydroxylapatite (Na0.4 Ca4.2 (P O4)1.8 (C O3)1.2 (O H))	Minor	medium
				Magnetite, syn (Fe3 O4)	Trace	medium
				Kaolinite-1Ad (Al2 Si2 O5 (O H)4)	Trace	medium
				Hematite, syn (Fe1.984 O3)	Trace	medium
NS0106	028-030	oxide	non-mineralised	Quartz, syn (Si O2)	Major	good
				Hematite, syn (Fe2 O3)	Minor	good
				Stilpnomelane ((K , Na , Ca)0.5 (Fe , Mg , Mn , Al)6.8 Si8 O20 (O H , O)6.1 ·2.8 H2 O)	Trace	medium
				Clinochlore-2MIIb (Mg5 Al (Si3 Al) O10 (O H)8)	Trace	medium
				Goethite (Fe2 O3 · H2 O)	Trace	low
				Magnetite, syn (Fe2.93 O4)	Trace	low
NS0106	048-050	south	mineralised	Quartz, syn (Si O2)	Major	good
				Magnetite (Fe3 O4)	Major	good
				Stilpnomelane ((K , Na , Ca)0.5 (Fe , Mg , Mn , Al)6.8 Si8 O20 (O H , O)6.1 ·2.8 H2 O)	Trace	low
				Dolomite (Ca1.17 Mg0.83 (C O3)2)	Trace	low
NS0106	170-172	south	mineralised	Quartz, syn (Si O2)	Major	good
				Stilpnomelane ((K , Na , Ca)0.5 (Fe , Mg , Mn , Al)6.8 Si8 O20 (O H , O)6.1 ·2.8 H2 O)	Minor	medium
				Carbonatehydroxylapatite, syn (NR) (Ca10 (P O4)3 (C O3)3 (O H)2)	Minor	low
				Magnetite, syn (Fe2.93 O4)	Minor	medium
				Dolomite, ferroan (Ca (Mg , Fe) (C O3)2)	Minor	medium
NS0106				Quartz, syn (Si O2)	Major	good
				Hematite (Fe2 O3)	Minor	good
NS0107	040-042	oxide	non-mineralised	Quartz, syn (Si O2)	Major	good
				Hematite (Fe2 O3)	Minor	medium
				Hematite (Fe2 O3)	Minor	medium
NS0107	120-122	hangingwall	non-mineralised	Quartz, syn (Si O2)	Major	good
				Muscovite-2M1 (K Al2 (Si , Al)4 O10 (O H)2)	Major	good
				Clinochlore-1MIIb ((Mg , Al , Fe)6 (Si , Al)4 O10 (OH)8)	Minor	good
NS0107	148-150	hangingwall	non-mineralised	Quartz, syn (Si O2)	Major	good
				Muscovite-2M1 (K Al2 (Si , Al)4 O10 (O H)2)	Major	good
				Clinochlore-1MIIb ((Mg , Al , Fe)6 (Si , Al)4 O10 (OH)8)	Minor	good
NS0107	160-162	hangingwall	non-mineralised	Quartz, syn (Si O2)	Major	good
				Muscovite-2M1 (K Al2 (Si , Al)4 O10 (O H)2)	Major	good
				Clinochlore-1MIIb ((Mg , Al , Fe)6 (Si , Al)4 O10 (OH)8)	Minor	good
NS0113	128-130	footwall	mineralised	Quartz, syn (Si O2)	Major	good

Hole	Depth	Lithology	Mineralised	Mineral Phase	%	Probability
				Magnesioferrite, disordered, syn (Mg Fe2 +3 O4)	Minor	medium
				Siderite (Fe C O3)	Minor	medium
				chamosite (Mg1.78 Mn0.08 Fe2.72 Al2.44 Si2.88 O10 (O H)8)	Minor	low
				Stilpnomelane (Ca4 Fe47 Si72 O180 (O H)36 ·x H2 O)	Minor	medium
NS0122	150-152	footwall	non-mineralised	Ekmanite (NR) (K (Fe +2 , Mg +2 , Mn +2)20 Si32 O76 (O H)16)	Major	medium
				Quartz, syn (Si O2)	Minor	good
				Dickite-2M1 (Al2 Si2 O5 (O H)4)	Trace	medium
				Siderite (Fe (C O3))	Trace	good
				Magnetite, syn (Fe2.93 O4)	Trace	good
NS0128	150-154			Quartz, syn (Si O2)	Major	good
				Siderite (Fe C O3)	Minor	medium
				chamosite (Mg1.78 Mn0.08 Fe2.72 Al2.44 Si2.88 O10 (O H)8)	Minor	medium
				Phlogopite-1M, ferroan (K Mg2.1 Ti0.3 Fe0.5 Al1.1 Si2.9 O10.4 (O H)1.1 F0.5)	Minor	medium
NS0152	244-246	footwall	non-mineralised	Quartz, syn (Si O2)	Major	good
				Stilpnomelane (Fe2 (Si3 O9))	Minor	medium
				Magnesioferrite, syn (Mg Fe2 O4)	Minor	medium
				Clinochlore-1MIIb ((Mg , Al)6 (Si , Al)4 O10 (O H)8)	Minor	medium
				Dolomite (Ca1.13 Mg0.87 (C O3)2)	Trace	medium
				Cryptohalite, syn ((N H4)2 Si F6)	Trace	low
				Siderite (Fe (C O3))	Trace	low
NS0153	098-100	oxide	non-mineralised	Quartz, syn (Si O2)	Major	good
				Siderite (Fe C O3)	Minor	good
				Stilpnomelane (Fe2 (Si3 O9))	Minor	medium
				Clinochlore-1MIIb ((Mg , Al)6 (Si , Al)4 O10 (O H)8)	Minor	medium
				Goethite, syn (Fe O (O H))	Trace	good
NS0153	168-170	hangingwall	mineralised	Quartz, syn (Si O2)	Major	good
				Siderite (Fe C O3)	Minor	medium
				Stilpnomelane (Fe2 (Si3 O9))	Minor	medium
				Magnesioferrite, syn (Mg Fe2 O4)	Minor	medium
				Clinochlore-1MIIb ((Mg , Al)6 (Si , Al)4 O10 (O H)8)	Minor	medium
				Dolomite (Ca1.13 Mg0.87 (C O3)2)	Trace	low
				Cryptohalite, syn ((N H4)2 Si F6)	Trace	low
NS0153	200-202	hangingwall	non-mineralised	Quartz, syn (Si O2)	Major	good
				Muscovite-3T ((K , Na) (Al , Mg , Fe)2 (Si3.1 Al0.9) O10 (O H)2)	Minor	good
				Muscovite-2M1 (K Al2 (Si , Al)4 O10 (O H)2)	Minor	medium
				Chlorite-serpentine ((Mg , Al)6 (Si , Al)4 O10 (O H)8)	Minor	medium
				Ganterite ((Ba0.5 (Na , K)0.5) Al2 (Si2.5 Al1.5 O10) (O H)2)	Trace	good
				Pyrite (Fe S2)	Trace	good
NS0154	038-040	south	mineralised	Quartz, syn (Si O2)	Major	good
				Chlorite-serpentine (NR) ((Mg , Al)6 (Si , Al)4 O10 (O H)8)	Minor	medium
				Dolomite, ferroan (Ca (Mg , Fe) (C O3)2)	Minor	medium
				Magnetite, syn (Fe2.9 O4)	Minor	medium
				Pyrophanite, syn (Ti Mn O3)	Trace	low
				Cryptohalite, syn ((N H4)2 Si F6)	Trace	low
				Hematite, syn (Fe2 O3)	Trace	low
				Stilpnomelane (Fe2 (Si3 O9))	Trace	low
NS0154	200-202	footwall	non-mineralised	Ekmanite (NR) (K (Fe +2 , Mg +2 , Mn +2)20 Si32 O76 (O H)16)	Major	medium
				Quartz, syn (Si O2)	Major	good
				Dickite-2M1 (Al2 Si2 O5 (O H)4)	Trace	medium
				Siderite (Fe (C O3))	Trace	low
				stilpnomelane (Fe2 Si3 O7 (O H)2)	Trace	medium
NS0155	210-212	footwall	mineralised	Ekmanite (NR) (K (Fe +2 , Mg +2 , Mn +2)20 Si32 O76 (O H)16)	Major	medium
				Quartz, syn (Si O2)	Minor	good
				Siderite (Fe (C O3))	Trace	medium
				Ankerite (Ca (Fe +2 , Mg) (C O3)2)	Trace	medium
				Magnetite, syn (Fe2.93 O4)	Trace	good
NS0158	110-112	north	mineralised	Quartz, syn (Si O2)	Major	good
				chamosite (Mg1.78 Mn0.08 Fe2.72 Al2.44 Si2.88 O10 (O H)8)	Minor	medium
				Microcline (K0.96 Na0.04 Al Si3 O8)	Minor	medium
				Magnesioferrite, syn (Mg1.06 Fe1.94 O3.97)	Minor	medium
				Hydroxyapatite (Ca10 (O H)2 (P O4)6)	Trace	low
				Dolomite (Ca1.13 Mg0.87 (C O3)2)	Trace	medium
				Hematite (Fe1.98 H0.06 O3)	Trace	medium
				Stilpnomelane (Ca4 Fe47 Si72 O180 (O H)36 ·x H2 O)	Trace	low
				Siderite (Fe (C O3))	Trace	low
NS0158	178-180	north	mineralised	Quartz, syn (Si O2)	Major	good
				Chamosite (Mg1.78 Mn0.08 Fe2.72 Al2.44 Si2.88 O10 (O H)8)	Minor	medium
				Magnesioferrite, syn (Mg1.06 Fe1.94 O3.97)	Minor	medium
				Magnetite, syn (Fe2.93 O4)	Minor	good
				Hydroxyapatite (Ca10 (O H)2 (P O4)6)	Trace	low
				Dolomite (Ca1.13 Mg0.87 (C O3)2)	Trace	medium
				Silicon Oxide (Si O2)	Trace	low

Hole	Depth	Lithology	Mineralised	Mineral Phase	%	Probability
				Hematite (Fe1.98 H0.06 O3)	Trace	medium
				Stilpnomelane (Ca4 Fe47 Si72 O180 (O H)36 ·x H2 O)	Trace	low
				Siderite (Fe (C O3))	Trace	low
NS094	160-162			Quartz, syn (Si O2)	Major	good
				Magnetite (Fe3 O4)	Major	good
				Stilpnomelane ((K , Na , Ca)0.5 (Fe , Mg , Mn , Al)6.8 Si8 O20 (O H , O)6.1 ·2.8 H2 O)	Trace	low
				Dolomite (Ca1.17 Mg0.83 (C O3)2)	Trace	low

ABCC results

Sample	From	To	Lithology	Mineralisation	Buffering capacity (kg/t H2So4) at pH 6.5	Buffering capacity (kg/t H2So4) at pH 4.5	Total ANC	% ANC liberated pH 6.5	% ANC liberated pH 4.5	Estimated ANC	Total ANC/Estimated ANC	% Estimated ANC liberated at pH 4.5
NS0078	108	110	footwall	non mineralised	5	18	31.6	15.8	57.0	21	1.5	85.7
NS0083	88	90	footwall	non mineralised	12	19	45.1	26.6	42.1	34	1.3	55.9
NS0083	130	132	footwall	non mineralised	1	2.5	19.4	5.2	12.9	5.8	3.3	43.1
NS0086	208	210	footwall	non mineralised	32	49	64.4	49.7	76.1	37.6	1.7	130.3
NS0086	248	250	footwall	mineralised	19.5	36	59.6	32.7	60.4	50.5	1.2	71.3
NS0092	40	42	footwall	non mineralised	5	15	47.9	10.4	31.3	16.4	2.9	91.5
NS0092	48	50	footwall	non mineralised	8	22	51	15.7	43.1	27.4	1.9	80.3
NS0113	128	130	footwall	mineralised	2.5	5	4.6	54.3	108.7	/		
NS0124	118	120	footwall	mineralised	12	23	51.7	23.2	44.5	36.4	1.4	63.2
NS0152	120	122	footwall	mineralised	4	35	61.4	6.5	57.0	28	2.2	125.0
NS0152	148	150	footwall	mineralised	5	52	79.4	6.3	65.5	41.4	1.9	125.6
NS0152	244	246	footwall	non mineralised	10	38	75.4	13.3	50.4	58.5	1.3	65.0
NS0154	200	202	footwall	non mineralised	2	4.5	29.5	6.8	15.3	/		
NS0155	210	212	footwall	mineralised	5	20	46.5	10.8	43.0	/		
				Average	9.1	24.5	47.8	20.5	51.1	32.5	1.9	85.2
NS0091	198	200	hanging wall	mineralised	1.5	4.9	23.7	6.3	20.7	13.7	1.7	35.8
NS0098	58	60	hanging wall	mineralised	1	2	19.7	5.1	10.2	8.9	2.2	22.5
NS0098	108	110	hanging wall	mineralised	2	12	29.5	6.8	40.7	12.3	2.4	97.6
NS0107	80	82	hanging wall	mineralised	1.5	3.5	40.5	3.7	8.6	/		
NS0153	168	170	hanging wall	mineralised	3	10	25.4	11.8	39.4	18.8	1.4	53.2
				Average	1.8	6.5	27.8	6.7	23.9	13.4	1.9	52.2
NS0089	88	90	north	non mineralised	1.5	5.2	22.1	6.8	23.5	23	1.0	22.6
NS0089	348	350	north	mineralised	1.5	11	25.6	5.9	43.0	11.5	2.2	95.7
NS0158	178	180	north	mineralised	3	49	59.6	5.0	82.2	25.1	2.4	195.2
NS0159	116	118	north	non mineralised	4	17	34.8	11.5	48.9	/		
				Average	2.0	21.7	35.8	5.9	49.6	19.9	1.9	104.5
NS0078	8	10	oxide	non mineralised	0.1	0.7	2.9	3.4	24.1	0.9	3.2	77.8
NS0085	10	12	oxide	non mineralised	0	0.5	0.9	0.0	55.6	0.7	1.3	71.4
NS0087	8	10	oxide	non mineralised	0.1	0.7	1.8	5.6	38.9	0.7	2.6	100.0
NS0094	28	30	oxide	non mineralised	0.4	2.5	6.6	6.1	37.9	2.2	3.0	113.6
NS0095	30	32	oxide	non mineralised	0.1	0.8	4.5	2.2	17.8	1.2	3.8	66.7
NS0095	38	40	oxide	non mineralised	0.5	1.5	8.2	6.1	18.3	5.6	1.5	26.8
NS0097	28	30	oxide	non mineralised	0.3	2	7.1	4.2	28.2	1.4	5.1	142.9
NS0098	0	2	oxide	non mineralised	0.1	1.8	2.2	4.5	81.8	1.2	1.8	150.0
NS0106	28	30	oxide	non mineralised	1	2.5	7.9	12.7	31.6	0.9	8.8	277.8
NS0107	40	42	oxide	non mineralised	1	3	2.8	35.7	107.1	/		
NS0153	98	100	oxide	non mineralised	0.3	1.8	16.7	1.8	10.8	5.3	3.2	34.0
NS0154	18	20	oxide	non mineralised	0.3	1.5	7.1	4.2	21.1	/		
				Average	0.4	1.6	5.6	7.5	41.1	2.0	3.4	106.1
NS0085	90	92	south	mineralised	18	59	65.5	27.5	90.1	32.3	2.0	182.7
NS0085	208	210	south	mineralised	6	20.5	53.8	11.2	38.1	11.6	4.6	176.7
NS0090	128	130	south	mineralised	10	33	50.2	19.9	65.7	21.4	2.3	154.2
NS0090	190	192	south	mineralised	1.5	6.5	25.6	5.9	25.4	13.9	1.8	46.8
NS0092	158	160	south	mineralised	25	42	39.2	63.8	107.1	21.7	1.8	193.5
NS0093	90	92	south	mineralised	10	39	67.3	14.9	57.9	24.3	2.8	160.5
NS0094	148	150	south	mineralised	10	48	75.6	13.2	63.5	30.8	2.5	155.8
NS0094	160	162	south	mineralised	8	47	73.4	10.9	64.0	27	2.7	174.1
NS0096	70	72	south	mineralised	3	23	37.5	8.0	61.3	23.3	1.6	98.7
NS0096	254	256	south	mineralised	12	58	80.4	14.9	72.1	49.3	1.6	117.6
NS0106	48	50	south	mineralised	10	57	54.7	18.3	104.2	29.8	1.8	191.3
NS0106	170	172	south	mineralised	27	64	74.8	36.1	85.6	37.6	2.0	170.2
NS0154	38	40	south	mineralised	8	32	66	12.1	48.5	/		
				Average	11.4	40.7	58.8	19.7	68.0	26.9	2.3	151.8

										7440-70-2	DMO-210-001	3812-32-6	71-52-3			14808-79-8
								EA055: Moisture Content	ED042T: Total Sulfur by LECO	ED093T: Total Major Cations	ED037P: Alkalinity by PC Titrator				ED038A: Acidity	ED041G: Sulfate (Turbidimetric) as SO4 2- by DA
Workgroup:	**Project name/number:**							**Moisture Content (dried @ 103°C)**	**Sulfur - Total as S (LECO)**	**Calcium**	**Hydroxide Alkalinity as CaCO3**	**Carbonate Alkalinity as CaCO3**	**Bicarbonate Alkalinity as CaCO3**	**Total Alkalinity as CaCO3**	**Acidity as CaCO3**	**Sulfate as SO4 - Turbidimetric**
EP1202066	**Ex EP1201379 1384 1527 1528**							**%**	**%**	**mg/kg**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**1**	**0.01**	**10**	**1**	**1**	**1**	**1**	**1**	**1**
ANZECC freshwater Guidelines																
EP1204006016	23/05/2012	EP1201381008	NS0077	0	2	oxide	non mineralised				<1	<1	11	11	3	4
EP1204006015	23/05/2012	EP1201381007	NS0077	8	10	oxide	non mineralised				<1	<1	5	5	3	1
EP1204006002	23/05/2012	EP1201378041	NS0077	20	22	oxide	non mineralised				<1	<1	5	5	4	<1
EP1204006003	23/05/2012	EP1201378042	NS0077	28	30	oxide	non mineralised				<1	<1	7	7	3	1
EP1204006001	23/05/2012	EP1201378014	NS0077	178	180	south	mineralised				<1	<1	15	15	9	124
EP1204006007	23/05/2012	EP1201380010	NS0078	0	2	oxide	non mineralised				<1	<1	6	6	3	3
EP1204006008	23/05/2012	EP1201380011	NS0078	8	10	oxide	non mineralised				<1	<1	6	6	4	2
EP1204006019	23/05/2012	EP1201381048	NS0078	20	22	oxide	non mineralised				<1	<1	8	8	3	1
EP1204006018	23/05/2012	EP1201381045	NS0078	28	30	oxide	non mineralised				<1	<1	10	10	6	1
EP1204006010	23/05/2012	EP1201380028	NS0078	80	82	footwall	non mineralised				<1	<1	12	12	2	<1
EP1204006011	23/05/2012	EP1201380030	NS0078	276	278	footwall	non mineralised				<1	<1	24	24	3	54
EP1204006022	23/05/2012	EP1201382031	NS0079	94	96	south	non mineralised				<1	<1	33	33	6	32
EP1204006006	23/05/2012	EP1201379047	NS0083	158	160	footwall	non mineralised				<1	<1	40	40	<1	56
EP1204009016	24/05/2012	EP1201527006	NS0084	140	142	hangingwall	non mineralised				<1	<1	31	31	<1	16
EP1204009025	24/05/2012	EP1201528043	NS0084	158	160	hangingwall	non mineralised				<1	<1	3	3	3	62
EP1204009017	24/05/2012	EP1201527007	NS0084	190	192	hangingwall	mineralised				<1	2	30	33	<1	5
EP1204010044	29/05/2012	PE065689.087	NS0084	270	272	hangingwall	non mineralised		0.31		<1	2	37	39	<1	15
EP1204006025	23/05/2012	EP1201383010	NS0085	0	2	oxide	non mineralised				<1	<1	4	4	4	1
EP1204006027	23/05/2012	EP1201383012	NS0085	10	12	oxide	non mineralised				<1	<1	3	3	3	<1
EP1204006026	23/05/2012	EP1201383011	NS0085	18	20	oxide	non mineralised				<1	<1	4	4	3	1
EP1204009004	24/05/2012	EP1201384006	NS0085	30	32	oxide	non mineralised				<1	<1	7	7	2	1
EP1204009003	24/05/2012	EP1201384005	NS0085	58	60	south	mineralised				<1	<1	29	29	<1	8
EP1204009005	24/05/2012	EP1201384015	NS0085	90	92	south	mineralised				<1	<1	29	29	<1	<1
EP1204009002	24/05/2012	EP1201384003	NS0085	208	210	south	mineralised				<1	<1	36	36	<1	3
EP1204015017	21/02/2012	EP1201383045	NS0086	8	10	oxide	non mineralised				<1	<1	2	2	59	2
EP1204009001	24/05/2012	EP1201383046	NS0086	28	30	oxide	non mineralised				<1	<1	6	6	10	2
EP1204009018	24/05/2012	EP1201527028	NS0087	8	10	oxide	non mineralised				<1	<1	5	5	4	1
EP1204009019	24/05/2012	EP1201527031	NS0087	84	86	footwall	mineralised				<1	<1	7	7	4	<1
EP1204009020	24/05/2012	EP1201527032	NS0087	88	90	footwall	non mineralised				<1	8	28	36	<1	7
EP1204006017	23/05/2012	EP1201381013	NS0087	380	382	south	mineralised				<1	<1	34	34	<1	1
EP1204006021	23/05/2012	EP1201382020	NS0088	0	2	oxide	non mineralised				<1	<1	9	9	3	3
EP1204006020	23/05/2012	EP1201382016	NS0088	8	10	oxide	non mineralised				<1	<1	3	3	4	<1
EP1204006030	23/05/2012	EP1201382019	NS0088	108	110	north	non mineralised				<1	<1	44	44	4	3
EP1204006031	23/05/2012	EP1201382041	NS0088	150	152	north	non mineralised				<1	<1	28	28	6	10
EP1204006033	23/05/2012	EP1201382001	NS0088	280	282	north	non mineralised				<1	<1	38	38	2	4
EP1204006034	23/05/2012	EP1201382010	NS0088	346	348	north	mineralised				<1	<1	37	37	2	6
EP1204009024	24/05/2012	EP1201528018	NS0089	0	2	oxide	non mineralised				<1	<1	4	4	<1	3
EP1204009023	24/05/2012	EP1201528003	NS0089	60	62	oxide	non mineralised				<1	<1	4	4	2	<1
EP1204009022	24/05/2012	EP1201528001	NS0089	88	90	north	non mineralised				<1	<1	24	24	3	15

										7440-70-2	DMO-210-001	3812-32-6	71-52-3			14808-79-8
								EA055: Moisture Content	ED042T: Total Sulfur by LECO	ED093T: Total Major Cations	ED037P: Alkalinity by PC Titrator				ED038A: Acidity	ED041G: Sulfate (Turbidimetric) as SO4 2- by DA
Workgroup:	Project name/number:							Moisture Content (dried @ 103°C)	Sulfur - Total as S (LECO)	Calcium	Hydroxide Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Bicarbonate Alkalinity as CaCO3	Total Alkalinity as CaCO3	Acidity as CaCO3	Sulfate as SO4 - Turbidimetric
EP1202066	Ex EP1201379 1384 1527 1528							%	%	mg/kg	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ALS Sample number:	Sample date:	Client sample ID (1st):	Client sample ID (2nd):	From	To	Lithology	Mineralisation	1	0.01	10	1	1	1	1	1	1
ANZECC freshwater Guidelines																
EP1204009030	24/05/2012	EP1201529040	NS0089	128	130	north	non mineralised				<1	<1	26	26	3	22
EP1204015035	21/02/2012	EP1201529045	NS0089	178	180	north	non mineralised				<1	<1	7	7	15	188
EP1204006035	23/05/2012	EP1201529050	NS0089	210	212	north	mineralised				<1	<1	39	39	3	1
EP1204006036	23/05/2012	EP1201526049	NS0089	268	270	north	mineralised				<1	<1	34	34	6	4
EP1204010043	29/05/2012	PE065689.080	NS0089	360	362	north	non mineralised		0.02		<1	<1	64	64	<1	4
EP1204009028	24/05/2012	EP1201529016	NS0090	0	2	oxide	non mineralised				<1	<1	3	3	3	2
EP1204009027	24/05/2012	EP1201529015	NS0090	8	10	oxide	non mineralised				<1	<1	3	3	4	1
EP1204009029	24/05/2012	EP1201529017	NS0090	20	22	oxide	mineralised				<1	<1	2	2	3	2
EP1204009026	24/05/2012	EP1201529008	NS0090	190	192	south	mineralised				<1	<1	22	22	<1	4
EP1204009038	24/05/2012	EP1201531001	NS0090	268	270	north	mineralised				<1	<1	29	29	<1	10
EP1204006005	23/05/2012	EP1201379046	NS0091								<1	<1	11	11	3	39
EP1204006024	23/05/2012	EP1201383007	NS0092	40	42	footwall	non mineralised				<1	<1	48	48	2	4
EP1204006023	23/05/2012	EP1201383006	NS0092	48	50	footwall	non mineralised				<1	<1	39	39	<1	<1
EP1204006028	23/05/2012	EP1201383026	NS0092	158	160	south	mineralised				<1	3	33	35	<1	<1
EP1204006004	23/05/2012	EP1201379013	NS0093	216	218	south	mineralised				<1	<1	48	48	2	2
EP1204010031	29/05/2012	PE065688.026	NS0094	28	30	oxide	non mineralised				<1	<1	5	5	6	<5
EP1204009036	24/05/2012	EP1201530029	NS0094	160	162	south	mineralised				<1	2	30	32	<1	4
EP1204010029	29/05/2012	PE065688.007	NS0095	30	32	oxide	non mineralised				<1	<1	4	4	2	1
EP1204010030	29/05/2012	PE065688.008	NS0095	38	40	oxide	non mineralised				<1	<1	4	4	2	4
EP1204010027	29/05/2012	PE065687.088	NS0096	20	22	oxide	non mineralised				<1	<1	4	4	6	<1
EP1204010028	29/05/2012	PE065687.093	NS0096	70	72	south	mineralised				<1	4	31	35	<1	1
EP1204010026	29/05/2012	PE065687.086	NS0096	120	122	south	mineralised				<1	<1	27	27	<1	16
EP1204010025	29/05/2012	PE065687.081	NS0096	230	232	south	mineralised				<1	<1	23	23	<1	31
EP1204010032	29/05/2012	PE065688.042	NS0097	28	30	oxide	non mineralised				<1	<1	4	4	3	3
EP1204010033	29/05/2012	PE065688.043	NS0097	40	42	south	non mineralised				<1	<1	<1	<1	3	192
EP1204010022	29/05/2012	PE065687.058	NS0098	0	2	oxide	non mineralised				<1	<1	4	4	5	1
EP1204010021	29/05/2012	PE065687.056	NS0098	20	22	oxide	non mineralised				<1	<1	3	3	5	<1
EP1204010023	29/05/2012	PE065687.060	NS0098	58	60	hangingwall	mineralised				<1	<1	14	14	2	18
EP1204010023	21/02/2012	PE065687.060	NS0098	58	60	hangingwall	mineralised	<1.0	0.42	3150						
EP1204010024	29/05/2012	PE065687.065	NS0098	180	182	hangingwall	mineralised				<1	<1	30	30	3	7
EP1204006009	23/05/2012	EP1201380025	NS0100	78	80	south	mineralised				<1	<1	35	35	<1	2
EP1204009034	24/05/2012	EP1201530012	NS0106	8	10	oxide	non mineralised				<1	<1	4	4	3	<1
EP1204006013	23/05/2012	EP1201380049	NS0106	20	22	oxide	non mineralised				<1	<1	6	6	3	1
EP1204009032	24/05/2012	EP1201530008	NS0106	28	30	oxide	non mineralised				<1	<1	5	5	<1	1
EP1204009033	24/05/2012	EP1201530010	NS0106	48	50	south	mineralised				<1	<1	28	28	<1	2
EP1204006014	23/05/2012	EP1201380050	NS0106	92	94	south	mineralised				<1	<1	24	24	3	24
EP1204009037	24/05/2012	EP1201530042	NS0106	170	172	south	mineralised				<1	2	24	26	<1	3
EP1204015007	21/02/2012	EP1201380046	NS0106								<1	<1	13	13	53	1
EP1204009014	24/05/2012	EP1201384039	NS0107	120	122	hangingwall	non mineralised				<1	<1	2	2	8	291

										7440-70-2	DMO-210-001	3812-32-6	71-52-3			14808-79-8
								EA055: Moisture Content	ED042T: Total Sulfur by LECO	ED093T: Total Major Cations	ED037P: Alkalinity by PC Titrator				ED038A: Acidity	ED041G: Sulfate (Turbidimetric) as SO4 2- by DA
Workgroup:	**Project name/number:**							**Moisture Content (dried @ 103°C)**	**Sulfur - Total as S (LECO)**	**Calcium**	**Hydroxide Alkalinity as CaCO3**	**Carbonate Alkalinity as CaCO3**	**Bicarbonate Alkalinity as CaCO3**	**Total Alkalinity as CaCO3**	**Acidity as CaCO3**	**Sulfate as SO4 - Turbidimetric**
EP1202066	**Ex EP1201379 1384 1527 1528**							**%**	**%**	**mg/kg**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**1**	**0.01**	**10**	**1**	**1**	**1**	**1**	**1**	**1**
ANZECC freshwater Guidelines																
EP1204009010	24/05/2012	EP1201384031	NS0107	128	130	hangingwall	non mineralised				<1	<1	2	2	17	154
EP1204009012	24/05/2012	EP1201384035	NS0107	140	142	hangingwall	non mineralised				<1	<1	16	16	2	76
EP1204009011	24/05/2012	EP1201384033	NS0107	148	150	hangingwall	non mineralised				<1	<1	<1	<1	55	105
EP1204009008	24/05/2012	EP1201384028	NS0107	160	162	hangingwall	non mineralised				<1	<1	2	2	7	83
EP1204009009	24/05/2012	EP1201384029	NS0107	170	172						<1	<1	16	16	2	75
EP1204009035	24/05/2012	EP1201530028	NS0108	176	178	south	mineralised				<1	<1	24	24	3	24
EP1204010036	29/05/2012	PE065688.079	NS0113	140	142	footwall	non mineralised				<1	<1	11	11	3	45
EP1204010034	29/05/2012	PE065688.066	NS0113	158	160	footwall	non mineralised				<1	<1	12	12	3	27
EP1204010035	29/05/2012	PE065688.070	NS0113	198	200	footwall	non mineralised				<1	<1	32	32	2	16
EP1204010040	29/05/2012	PE065689.057	NS0116	108	110	footwall	non mineralised		0.72		<1	<1	20	20	3	26
EP1204010041	29/05/2012	PE065689.063	NS0116	130	132	footwall	non mineralised		0.49		<1	<1	30	30	2	22
EP1204010039	29/05/2012	PE065689.041	NS0117	190	192	footwall	mineralised		0.21		<1	<1	36	37	<1	31
EP1204010037	29/05/2012	PE065688.082	NS0118	140	142	hangingwall	non mineralised				<1	<1	28	28	2	20
EP1204010038	29/05/2012	PE065689.019	NS0120	206	208				1.28		<1	<1	20	20	2	16
EP1204010018	29/05/2012	PE065687.014	NS0124	130	132	footwall	non mineralised				<1	22	23	44	<1	41
EP1204010042	29/05/2012	PE065689.072	NS0128						0.65		<1	<1	16	16	8	25
EP1204010007	29/05/2012	PE065686.003	NS0152	78	80	footwall	non mineralised				<1	<1	29	29	<1	30
EP1204010008	29/05/2012	PE065686.007	NS0152	120	122	footwall	mineralised				<1	13	27	41	<1	8
EP1204010006	29/05/2012	PE065685.098	NS0152	244	246	footwall					<1	14	28	42	<1	19
EP1204010010	29/05/2012	PE065686.021	NS0153	98	100	oxide					<1	<1	14	14	2	3
EP1204010009	29/05/2012	PE065686.020	NS0153	168	170	hangingwall					<1	<1	34	34	<1	2
EP1204010011	29/05/2012	PE065686.028	NS0153	200	202	hangingwall					<1	<1	<1	<1	34	197
EP1204010012	29/05/2012	PE065686.032	NS0153	220	222	hangingwall					<1	<1	24	24	3	12
EP1204010015	29/05/2012	PE065686.040	NS0154	18	20	oxide					<1	<1	5	5	5	<1
EP1204010014	29/05/2012	PE065686.037	NS0154	30	32	south					<1	<1	30	30	<1	1
EP1204010013	29/05/2012	PE065686.035	NS0154	38	40	south					<1	3	34	37	<1	2
EP1204010016	29/05/2012	PE065686.054	NS0154	200	202	footwall					<1	10	34	43	<1	6
EP1204010019	29/05/2012	PE065687.035	NS0155	100	102	footwall					<1	17	31	48	<1	8
EP1204010020	29/05/2012	PE065687.036	NS0155	108	110	footwall					<1	4	33	37	<1	12
EP1204010002	29/05/2012	PE065685.046	NS0157	130	132	hangingwall					<1	<1	21	21	2	5
EP1204010005	29/05/2012	PE065685.065	NS0158	66	68	footwall					<1	<1	36	36	<1	6
EP1204010004	29/05/2012	PE065685.064	NS0158	110	112	north					<1	2	28	29	<1	3
EP1204010003	29/05/2012	PE065685.050	NS0158	178	180	north					<1	<1	30	30	3	4
EP1204010017	29/05/2012	PE065686.068	NS0160	58	60	footwall					<1	<1	38	38	<1	6
EP1204010001	29/05/2012	PE065685.007	NS0165	100	102	hangingwall					<1	<1	26	26	2	7

								16887-00-6	7440-70-2	7439-95-4	7440-23-5	7440-09-7	7429-90-5	7440-38-2	7440-41-7	7440-39-3	7440-43-9
								ED045G: Chloride Discrete analyser	ED093F: Dissolved Major Cations				EG020W: Water Leachable Metals by ICP-MS				
Workgroup:	**Project name/number:**							**Cl**	**Ca**	**Mg**	**Na**	**K**	**Al**	**As**	**Be**	**Ba**	**Cd**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**1**	**1**	**1**	**1**	**1**	**0.01**	**0.001**	**0.001**	**0.001**	**0.0001**
ANZECC freshwater Guidelines													**55**	**24**			**0.2**
EP1204006016	23/05/2012	EP1201381008	NS0077	0	2	oxide	non mineralised	1	6	2	11	<1	0.04	<0.001	<0.001	<0.001	<0.0001
EP1204006015	23/05/2012	EP1201381007	NS0077	8	10	oxide	non mineralised	1	<1	<1	4	<1	0.03	<0.001	<0.001	0.001	<0.0001
EP1204006002	23/05/2012	EP1201378041	NS0077	20	22	oxide	non mineralised	<1	<1	<1	6	<1	0.07	<0.001	<0.001	<0.001	<0.0001
EP1204006003	23/05/2012	EP1201378042	NS0077	28	30	oxide	non mineralised	<1	2	<1	9	<1	0.13	<0.001	<0.001	<0.001	<0.0001
EP1204006001	23/05/2012	EP1201378014	NS0077	178	180	south	mineralised	2	5	15	35	10	0.14	<0.001	<0.001	0.006	<0.0001
EP1204006007	23/05/2012	EP1201380010	NS0078	0	2	oxide	non mineralised	1	3	<1	9	<1	0.19	0.001	<0.001	0.002	<0.0001
EP1204006008	23/05/2012	EP1201380011	NS0078	8	10	oxide	non mineralised	7	2	<1	11	<1	0.15	<0.001	<0.001	<0.001	<0.0001
EP1204006019	23/05/2012	EP1201381048	NS0078	20	22	oxide	non mineralised	2	3	<1	16	<1	0.13	<0.001	<0.001	0.001	<0.0001
EP1204006018	23/05/2012	EP1201381045	NS0078	28	30	oxide	non mineralised	1	2	<1	16	<1	0.06	<0.001	<0.001	0.008	<0.0001
EP1204006010	23/05/2012	EP1201380028	NS0078	80	82	footwall	non mineralised	<1	3	1	15	<1	0.03	<0.001	<0.001	0.003	<0.0001
EP1204006011	23/05/2012	EP1201380030	NS0078	276	278	footwall	non mineralised	1	1	2	36	2	0.68	<0.001	0.003	<0.001	0.0025
EP1204006022	23/05/2012	EP1201382031	NS0079	94	96	south	non mineralised	3	5	5	22	<1	<0.01	<0.001	<0.001	<0.001	<0.0001
EP1204006006	23/05/2012	EP1201379047	NS0083	158	160	footwall	non mineralised	2	6	1	44	2	0.05	0.001	<0.001	0.006	<0.0001
EP1204009016	24/05/2012	EP1201527006	NS0084	140	142	hangingwall	non mineralised	2	4	3	19	<1	0.04	<0.001	<0.001	0.002	<0.0001
EP1204009025	24/05/2012	EP1201528043	NS0084	158	160	hangingwall	non mineralised	1	5	10	14	<1	0.03	<0.001	<0.001	<0.001	<0.0001
EP1204009017	24/05/2012	EP1201527007	NS0084	190	192	hangingwall	mineralised	1	4	2	13	<1	0.20	<0.001	<0.001	0.002	<0.0001
EP1204010044	29/05/2012	PE065689.087	NS0084	270	272	hangingwall	non mineralised	<1	3	2	25	<1	0.16	<0.001	<0.001	0.014	<0.0001
EP1204006025	23/05/2012	EP1201383010	NS0085	0	2	oxide	non mineralised	<1	2	<1	8	<1	0.54	0.002	<0.001	0.007	<0.0001
EP1204006027	23/05/2012	EP1201383012	NS0085	10	12	oxide	non mineralised	<1	<1	<1	4	<1	0.27	<0.001	<0.001	0.002	<0.0001
EP1204006026	23/05/2012	EP1201383011	NS0085	18	20	oxide	non mineralised	1	1	<1	10	<1	0.06	<0.001	<0.001	0.001	<0.0001
EP1204009004	24/05/2012	EP1201384006	NS0085	30	32	oxide	non mineralised	2	1	<1	10	<1	0.03	<0.001	<0.001	<0.001	<0.0001
EP1204009003	24/05/2012	EP1201384005	NS0085	58	60	south	mineralised	<1	7	3	12	<1	0.09	<0.001	<0.001	0.001	<0.0001
EP1204009005	24/05/2012	EP1201384015	NS0085	90	92	south	mineralised	1	6	2	10	<1	<0.01	<0.001	<0.001	0.012	<0.0001
EP1204009002	24/05/2012	EP1201384003	NS0085	208	210	south	mineralised	2	4	4	13	<1	0.04	<0.001	<0.001	0.004	<0.0001
EP1204015017	21/02/2012	EP1201383045	NS0086	8	10	oxide	non mineralised	2	<1	<1	1	<1	0.26	0.001	<0.001	0.012	<0.0001
EP1204009001	24/05/2012	EP1201383046	NS0086	28	30	oxide	non mineralised	1	2	<1	13	<1	0.18	0.001	<0.001	0.011	<0.0001
EP1204009018	24/05/2012	EP1201527028	NS0087	8	10	oxide	non mineralised	<1	1	<1	7	<1	0.07	<0.001	<0.001	0.004	<0.0001
EP1204009019	24/05/2012	EP1201527031	NS0087	84	86	footwall	mineralised	<1	2	<1	11	<1					
EP1204009020	24/05/2012	EP1201527032	NS0087	88	90	footwall	non mineralised	<1	4	1	18	<1	0.06	0.001	<0.001	0.013	<0.0001
EP1204006017	23/05/2012	EP1201381013	NS0087	380	382	south	mineralised	<1	6	3	13	<1	0.02	<0.001	<0.001	<0.001	<0.0001
EP1204006021	23/05/2012	EP1201382020	NS0088	0	2	oxide	non mineralised	<1	4	1	8	<1	0.13	<0.001	<0.001	0.003	<0.0001
EP1204006020	23/05/2012	EP1201382016	NS0088	8	10	oxide	non mineralised	<1	1	<1	7	<1	0.03	<0.001	<0.001	0.002	<0.0001
EP1204006030	23/05/2012	EP1201382019	NS0088	108	110	north	non mineralised	<1	8	6	8	<1	0.06	<0.001	<0.001	0.018	<0.0001
EP1204006031	23/05/2012	EP1201382041	NS0088	150	152	north	non mineralised	<1	6	4	4	<1					
EP1204006033	23/05/2012	EP1201382001	NS0088	280	282	north	non mineralised	<1	8	5	8	<1	0.02	<0.001	<0.001	<0.001	<0.0001
EP1204006034	23/05/2012	EP1201382010	NS0088	346	348	north	mineralised	<1	7	4	12	<1					
EP1204009024	24/05/2012	EP1201528018	NS0089	0	2	oxide	non mineralised	2	2	<1	9	<1	0.03	<0.001	<0.001	0.004	<0.0001
EP1204009023	24/05/2012	EP1201528003	NS0089	60	62	oxide	non mineralised	<1	1	<1	6	<1	0.08	<0.001	<0.001	0.004	<0.0001
EP1204009022	24/05/2012	EP1201528001	NS0089	88	90	north	non mineralised	1	6	4	10	<1	<0.01	<0.001	<0.001	0.002	<0.0001

								16887-00-6	7440-70-2	7439-95-4	7440-23-5	7440-09-7	7429-90-5	7440-38-2	7440-41-7	7440-39-3	7440-43-9
								ED045G: Chloride Discrete analyser	ED093F: Dissolved Major Cations				EG020W: Water Leachable Metals by ICP-MS				
Workgroup:	**Project name/number:**							**Cl**	**Ca**	**Mg**	**Na**	**K**	**Al**	**As**	**Be**	**Ba**	**Cd**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**1**	**1**	**1**	**1**	**1**	**0.01**	**0.001**	**0.001**	**0.001**	**0.0001**
ANZECC freshwater Guidelines													**55**	**24**			**0.2**
EP1204009030	24/05/2012	EP1201529040	NS0089	128	130	north	non mineralised	1	8	7	8	<1	0.19	<0.001	<0.001	0.005	<0.0001
EP1204015035	21/02/2012	EP1201529045	NS0089	178	180	north	non mineralised	2	11	38	1	5	0.21	<0.001	<0.001	0.008	<0.0001
EP1204006035	23/05/2012	EP1201529050	NS0089	210	212	north	mineralised	<1	8	5	9	<1	0.10	<0.001	<0.001	0.007	<0.0001
EP1204006036	23/05/2012	EP1201526049	NS0089	268	270	north	mineralised	2	7	5	10	<1	0.24	<0.001	<0.001	0.002	<0.0001
EP1204010043	29/05/2012	PE065689.080	NS0089	360	362	north	non mineralised	<1	10	9	7	<1	0.01	<0.001	<0.001	<0.001	<0.0001
EP1204009028	24/05/2012	EP1201529016	NS0090	0	2	oxide	non mineralised	2	3	<1	8	<1	0.20	<0.001	<0.001	0.003	<0.0001
EP1204009027	24/05/2012	EP1201529015	NS0090	8	10	oxide	non mineralised	1	1	<1	6	<1	<0.01	<0.001	<0.001	0.061	<0.0001
EP1204009029	24/05/2012	EP1201529017	NS0090	20	22	oxide	mineralised	4	<1	<1	5	<1	0.08	<0.001	<0.001	0.002	<0.0001
EP1204009026	24/05/2012	EP1201529008	NS0090	190	192	south	mineralised	2	4	3	7	<1	0.08	<0.001	<0.001	<0.001	<0.0001
EP1204009038	24/05/2012	EP1201531001	NS0090	268	270	north	mineralised	3	6	4	8	<1	0.05	<0.001	<0.001	0.008	<0.0001
EP1204006005	23/05/2012	EP1201379046	NS0091					1	7	7	14	<1	<0.01	<0.001	<0.001	0.042	<0.0001
EP1204006024	23/05/2012	EP1201383007	NS0092	40	42	footwall	non mineralised	<1	6	2	16	<1	0.42	<0.001	<0.001	0.005	<0.0001
EP1204006023	23/05/2012	EP1201383006	NS0092	48	50	footwall	non mineralised	<1	6	2	15	<1	<0.01	<0.001	<0.001	0.051	<0.0001
EP1204006028	23/05/2012	EP1201383026	NS0092	158	160	south	mineralised	<1	6	2	12	<1	0.02	<0.001	<0.001	<0.001	<0.0001
EP1204006004	23/05/2012	EP1201379013	NS0093	216	218	south	mineralised	2	7	4	14	<1	0.24	<0.001	<0.001	0.003	<0.0001
EP1204010031	29/05/2012	PE065688.026	NS0094	28	30	oxide	non mineralised	<1	2	<1	11	<1	0.04	<0.001	<0.001	<0.001	<0.0001
EP1204009036	24/05/2012	EP1201530029	NS0094	160	162	south	mineralised	2	5	2	13	<1	0.15	0.002	<0.001	0.002	<0.0001
EP1204010029	29/05/2012	PE065688.007	NS0095	30	32	oxide	non mineralised	2	2	<1	9	<1	1.26	<0.001	<0.001	0.003	<0.0001
EP1204010030	29/05/2012	PE065688.008	NS0095	38	40	oxide	non mineralised	1	2	<1	7	<1	0.08	<0.001	<0.001	0.002	<0.0001
EP1204010027	29/05/2012	PE065687.088	NS0096	20	22	oxide	non mineralised	4	2	<1	12	<1	0.05	<0.001	<0.001	<0.001	0.0014
EP1204010028	29/05/2012	PE065687.093	NS0096	70	72	south	mineralised	1	5	2	17	<1	0.03	<0.001	<0.001	0.002	<0.0001
EP1204010026	29/05/2012	PE065687.086	NS0096	120	122	south	mineralised	<1	4	3	16	<1	<0.01	<0.001	<0.001	0.014	<0.0001
EP1204010025	29/05/2012	PE065687.081	NS0096	230	232	south	mineralised	2	3	2	26	<1	0.04	<0.001	<0.001	0.002	<0.0001
EP1204010032	29/05/2012	PE065688.042	NS0097	28	30	oxide	non mineralised	4	3	1	12	<1	0.35	<0.001	<0.001	1.13	<0.0001
EP1204010033	29/05/2012	PE065688.043	NS0097	40	42	south	non mineralised	2	12	32	12	<1	0.43	<0.001	<0.001	1.36	<0.0001
EP1204010022	29/05/2012	PE065687.058	NS0098	0	2	oxide	non mineralised	2	2	<1	6	<1	0.03	<0.001	<0.001	1.24	<0.0001
EP1204010021	29/05/2012	PE065687.056	NS0098	20	22	oxide	non mineralised	2	2	<1	8	<1	0.01	<0.001	<0.001	0.004	<0.0001
EP1204010023	29/05/2012	PE065687.060	NS0098	58	60	hangingwall	mineralised	1	5	4	8	<1	0.04	<0.001	<0.001	0.011	<0.0001
EP1204010023	21/02/2012	PE065687.060	NS0098	58	60	hangingwall	mineralised						0.04	<0.001	<0.001	0.011	<0.0001
EP1204010024	29/05/2012	PE065687.065	NS0098	180	182	hangingwall	mineralised	2	6	4	12	<1	0.11	<0.001	<0.001	0.009	<0.0001
EP1204006009	23/05/2012	EP1201380025	NS0100	78	80	south	mineralised	<1	5	1	26	<1	0.02	<0.001	<0.001	0.027	<0.0001
EP1204009034	24/05/2012	EP1201530012	NS0106	8	10	oxide	non mineralised	<1	1	<1	6	<1	0.28	<0.001	<0.001	<0.001	<0.0001
EP1204006013	23/05/2012	EP1201380049	NS0106	20	22	oxide	non mineralised	<1	1	<1	11	<1	0.11	<0.001	<0.001	<0.001	<0.0001
EP1204009032	24/05/2012	EP1201530008	NS0106	28	30	oxide	non mineralised	<1	2	<1	8	<1	0.14	<0.001	<0.001	<0.001	<0.0001
EP1204009033	24/05/2012	EP1201530010	NS0106	48	50	south	mineralised	2	5	2	10	<1	<0.01	<0.001	<0.001	<0.001	<0.0001
EP1204006014	23/05/2012	EP1201380050	NS0106	92	94	south	mineralised	<1	6	3	21	<1	0.04	<0.001	<0.001	<0.001	<0.0001
EP1204009037	24/05/2012	EP1201530042	NS0106	170	172	south	mineralised	<1	6	3	9	<1					
EP1204015007	21/02/2012	EP1201380046	NS0106					4	<1	<1	4	<1					
EP1204009014	24/05/2012	EP1201384039	NS0107	120	122	hangingwall	non mineralised	<1	6	55	7	<1	0.10	<0.001	<0.001	<0.001	<0.0001

								16887-00-6	7440-70-2	7439-95-4	7440-23-5	7440-09-7	7429-90-5	7440-38-2	7440-41-7	7440-39-3	7440-43-9
								ED045G: Chloride Discrete analyser	ED093F: Dissolved Major Cations				EG020W: Water Leachable Metals by ICP-MS				
Workgroup:	**Project name/number:**							**Cl**	**Ca**	**Mg**	**Na**	**K**	**Al**	**As**	**Be**	**Ba**	**Cd**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**1**	**1**	**1**	**1**	**1**	**0.01**	**0.001**	**0.001**	**0.001**	**0.0001**
ANZECC freshwater Guidelines													**55**	**24**			**0.2**
EP1204009010	24/05/2012	EP1201384031	NS0107	128	130	hangingwall	non mineralised	<1	5	26	8	<1	0.11	<0.001	<0.001	<0.001	<0.0001
EP1204009012	24/05/2012	EP1201384035	NS0107	140	142	hangingwall	non mineralised	1	24	8	6	<1	0.01	<0.001	<0.001	<0.001	<0.0001
EP1204009011	24/05/2012	EP1201384033	NS0107	148	150	hangingwall	non mineralised	<1	10	17	11	<1	0.13	0.002	<0.001	<0.001	<0.0001
EP1204009008	24/05/2012	EP1201384028	NS0107	160	162	hangingwall	non mineralised	<1	5	14	7	<1	0.04	0.001	<0.001	0.010	<0.0001
EP1204009009	24/05/2012	EP1201384029	NS0107	170	172			2	21	8	7	<1	0.08	0.002	<0.001	0.002	<0.0001
EP1204009035	24/05/2012	EP1201530028	NS0108	176	178	south	mineralised	3	6	6	9	<1	0.08	<0.001	<0.001	0.003	<0.0001
EP1204010036	29/05/2012	PE065688.079	NS0113	140	142	footwall	non mineralised	2	4	6	20	2	0.11	<0.001	<0.001	<0.001	0.0014
EP1204010034	29/05/2012	PE065688.066	NS0113	158	160	footwall	non mineralised	1	4	7	9	<1	0.07	<0.001	<0.001	<0.001	<0.0001
EP1204010035	29/05/2012	PE065688.070	NS0113	198	200	footwall	non mineralised	2	7	6	10	<1	0.05	<0.001	<0.001	<0.001	0.0008
EP1204010040	29/05/2012	PE065689.057	NS0116	108	110	footwall	non mineralised	2	4	2	18	1	0.44	<0.001	<0.001	<0.001	0.0013
EP1204010041	29/05/2012	PE065689.063	NS0116	130	132	footwall	non mineralised	2	6	2	21	1	0.06	<0.001	<0.001	<0.001	<0.0001
EP1204010039	29/05/2012	PE065689.041	NS0117	190	192	footwall	mineralised	3	7	3	21	1	0.12	<0.001	<0.001	0.001	<0.0001
EP1204010037	29/05/2012	PE065688.082	NS0118	140	142	hangingwall	non mineralised	2	5	8	7	<1	0.13	<0.001	<0.001	0.023	<0.0001
EP1204010038	29/05/2012	PE065689.019	NS0120	206	208			4	5	2	16	<1	0.15	<0.001	<0.001	0.008	<0.0001
EP1204010018	29/05/2012	PE065687.014	NS0124	130	132	footwall	non mineralised	1	3	1	38	2	0.14	<0.001	<0.001	0.002	<0.0001
EP1204010042	29/05/2012	PE065689.072	NS0128					2	5	7	8	<1	0.04	<0.001	<0.001	<0.001	<0.0001
EP1204010007	29/05/2012	PE065686.003	NS0152	78	80	footwall	non mineralised	1	13	5	8	<1	0.41	<0.001	<0.001	0.002	<0.0001
EP1204010008	29/05/2012	PE065686.007	NS0152	120	122	footwall	mineralised	<1	5	2	21	<1	0.09	0.003	<0.001	0.003	<0.0001
EP1204010006	29/05/2012	PE065685.098	NS0152	244	246	footwall		<1	6	1	28	<1	0.11	0.002	<0.001	0.002	<0.0001
EP1204010010	29/05/2012	PE065686.021	NS0153	98	100	oxide		3	4	2	11	<1	0.05	<0.001	<0.001	0.002	<0.0001
EP1204010009	29/05/2012	PE065686.020	NS0153	168	170	hangingwall		1	7	3	10	<1	0.05	0.001	<0.001	<0.001	<0.0001
EP1204010011	29/05/2012	PE065686.028	NS0153	200	202	hangingwall		<1	6	32	11	1	0.10	<0.001	<0.001	0.007	<0.0001
EP1204010012	29/05/2012	PE065686.032	NS0153	220	222	hangingwall		1	6	5	8	2	<0.01	0.001	<0.001	0.006	<0.0001
EP1204010015	29/05/2012	PE065686.040	NS0154	18	20	oxide		<1	2	<1	9	<1	0.09	<0.001	<0.001	<0.001	<0.0001
EP1204010014	29/05/2012	PE065686.037	NS0154	30	32	south		<1	4	2	15	<1	0.01	0.001	<0.001	<0.001	<0.0001
EP1204010013	29/05/2012	PE065686.035	NS0154	38	40	south		1	5	2	16	1	0.06	0.002	<0.001	0.005	<0.0001
EP1204010016	29/05/2012	PE065686.054	NS0154	200	202	footwall		2	3	1	25	<1	0.11	<0.001	<0.001	0.002	<0.0001
EP1204010019	29/05/2012	PE065687.035	NS0155	100	102	footwall		1	3	<1	25	<1	0.01	<0.001	<0.001	<0.001	<0.0001
EP1204010020	29/05/2012	PE065687.036	NS0155	108	110	footwall		2	4	2	21	<1	<0.01	<0.001	<0.001	<0.001	<0.0001
EP1204010002	29/05/2012	PE065685.046	NS0157	130	132	hangingwall		1	4	2	9	<1	0.09	0.002	<0.001	0.008	<0.0001
EP1204010005	29/05/2012	PE065685.065	NS0158	66	68	footwall		2	7	3	15	<1	<0.01	<0.001	<0.001	<0.001	<0.0001
EP1204010004	29/05/2012	PE065685.064	NS0158	110	112	north		1	8	3	6	<1	0.22	<0.001	<0.001	<0.001	<0.0001
EP1204010003	29/05/2012	PE065685.050	NS0158	178	180	north		<1	7	3	6	<1	0.07	0.003	<0.001	0.002	<0.0001
EP1204010017	29/05/2012	PE065686.068	NS0160	58	60	footwall		<1	4	2	21	<1	0.05	0.002	<0.001	<0.001	<0.0001
EP1204010001	29/05/2012	PE065685.007	NS0165	100	102	hangingwall		1	6	3	5	<1	0.01	<0.001	<0.001	<0.001	<0.0001

								7440-47-3	7440-48-4	7440-50-8	7439-92-1	7439-96-5	7440-02-0	7782-49-2	7440-62-2	7440-66-6	7439-89-6
Workgroup:	**Project name/number:**							**Cr**	**Co**	**Cu**	**Pb**	**Mn**	**Ni**	**Se**	**V**	**Zn**	**Fe**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.01**	**0.01**	**0.005**	**0.05**
ANZECC freshwater Guidelines										**1.4**	**3.4**	**1900**	**11**	**5**		**8**	**300**
EP1204006016	23/05/2012	EP1201381008	NS0077	0	2	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006015	23/05/2012	EP1201381007	NS0077	8	10	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.012	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006002	23/05/2012	EP1201378041	NS0077	20	22	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.006	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006003	23/05/2012	EP1201378042	NS0077	28	30	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.006	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006001	23/05/2012	EP1201378014	NS0077	178	180	south	mineralised	<0.001	<0.001	<0.001	<0.001	0.005	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006007	23/05/2012	EP1201380010	NS0078	0	2	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006008	23/05/2012	EP1201380011	NS0078	8	10	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.005	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006019	23/05/2012	EP1201381048	NS0078	20	22	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	0.05
EP1204006018	23/05/2012	EP1201381045	NS0078	28	30	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.010	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006010	23/05/2012	EP1201380028	NS0078	80	82	footwall	non mineralised	<0.001	<0.001	<0.001	<0.001	0.012	<0.001	<0.01	<0.01	<0.005	0.11
EP1204006011	23/05/2012	EP1201380030	NS0078	276	278	footwall	non mineralised	<0.001	0.091	0.012	<0.001	5.37	1.38	<0.01	<0.01	0.137	4.19
EP1204006022	23/05/2012	EP1201382031	NS0079	94	96	south	non mineralised	<0.001	<0.001	<0.001	<0.001	0.080	0.001	<0.01	<0.01	<0.005	<0.05
EP1204006006	23/05/2012	EP1201379047	NS0083	158	160	footwall	non mineralised	<0.001	<0.001	<0.001	<0.001	0.007	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204009016	24/05/2012	EP1201527006	NS0084	140	142	hangingwall	non mineralised	<0.001	<0.001	<0.001	<0.001	0.008	<0.001	<0.01	<0.01	<0.005	0.07
EP1204009025	24/05/2012	EP1201528043	NS0084	158	160	hangingwall	non mineralised	<0.001	<0.001	<0.001	<0.001	0.011	<0.001	<0.01	<0.01	<0.005	0.12
EP1204009017	24/05/2012	EP1201527007	NS0084	190	192	hangingwall	mineralised	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	0.22
EP1204010044	29/05/2012	PE065689.087	NS0084	270	272	hangingwall	non mineralised	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.01	<0.01	<0.005	0.09
EP1204006025	23/05/2012	EP1201383010	NS0085	0	2	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.01	<0.01	<0.005	0.27
EP1204006027	23/05/2012	EP1201383012	NS0085	10	12	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.01	<0.01	<0.005	0.10
EP1204006026	23/05/2012	EP1201383011	NS0085	18	20	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	0.10
EP1204009004	24/05/2012	EP1201384006	NS0085	30	32	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	0.07
EP1204009003	24/05/2012	EP1201384005	NS0085	58	60	south	mineralised	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204009005	24/05/2012	EP1201384015	NS0085	90	92	south	mineralised	<0.001	<0.001	<0.001	<0.001	0.191	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204009002	24/05/2012	EP1201384003	NS0085	208	210	south	mineralised	<0.001	<0.001	<0.001	<0.001	0.005	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204015017	21/02/2012	EP1201383045	NS0086	8	10	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.01	<0.01	<0.005	0.08
EP1204009001	24/05/2012	EP1201383046	NS0086	28	30	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.009	<0.001	<0.01	<0.01	<0.005	0.07
EP1204009018	24/05/2012	EP1201527028	NS0087	8	10	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.036	<0.001	<0.01	<0.01	<0.005	0.17
EP1204009019	24/05/2012	EP1201527031	NS0087	84	86	footwall	mineralised										
EP1204009020	24/05/2012	EP1201527032	NS0087	88	90	footwall	non mineralised	<0.001	<0.001	<0.001	<0.001	0.004	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006017	23/05/2012	EP1201381013	NS0087	380	382	south	mineralised	<0.001	<0.001	<0.001	<0.001	0.022	<0.001	<0.01	<0.01	<0.005	0.16
EP1204006021	23/05/2012	EP1201382020	NS0088	0	2	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.042	<0.001	<0.01	<0.01	<0.005	0.44
EP1204006020	23/05/2012	EP1201382016	NS0088	8	10	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.034	0.001	<0.01	<0.01	<0.005	0.27
EP1204006030	23/05/2012	EP1201382019	NS0088	108	110	north	non mineralised	<0.001	0.051	0.007	<0.001	5.20	0.105	<0.01	<0.01	0.019	0.20
EP1204006031	23/05/2012	EP1201382041	NS0088	150	152	north	non mineralised										
EP1204006033	23/05/2012	EP1201382001	NS0088	280	282	north	non mineralised	<0.001	<0.001	<0.001	<0.001	0.014	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006034	23/05/2012	EP1201382010	NS0088	346	348	north	mineralised										
EP1204009024	24/05/2012	EP1201528018	NS0089	0	2	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.008	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204009023	24/05/2012	EP1201528003	NS0089	60	62	oxide	non mineralised	<0.001	<0.001	0.001	<0.001	0.005	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204009022	24/05/2012	EP1201528001	NS0089	88	90	north	non mineralised	<0.001	0.002	0.001	<0.001	0.379	0.004	<0.01	<0.01	<0.005	<0.05

								7440-47-3	7440-48-4	7440-50-8	7439-92-1	7439-96-5	7440-02-0	7782-49-2	7440-62-2	7440-66-6	7439-89-6
Workgroup:	**Project name/number:**							**Cr**	**Co**	**Cu**	**Pb**	**Mn**	**Ni**	**Se**	**V**	**Zn**	**Fe**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.01**	**0.01**	**0.005**	**0.05**
ANZECC freshwater Guidelines										**1.4**	**3.4**	**1900**	**11**	**5**		**8**	**300**
EP1204009030	24/05/2012	EP1201529040	NS0089	128	130	north	non mineralised	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	0.06
EP1204015035	21/02/2012	EP1201529045	NS0089	178	180	north	non mineralised	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006035	23/05/2012	EP1201529050	NS0089	210	212	north	mineralised	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006036	23/05/2012	EP1201526049	NS0089	268	270	north	mineralised	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010043	29/05/2012	PE065689.080	NS0089	360	362	north	non mineralised	<0.001	<0.001	<0.001	<0.001	0.036	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204009028	24/05/2012	EP1201529016	NS0090	0	2	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	0.05
EP1204009027	24/05/2012	EP1201529015	NS0090	8	10	oxide	non mineralised	<0.001	<0.001	0.001	<0.001	0.716	0.004	<0.01	<0.01	<0.005	<0.05
EP1204009029	24/05/2012	EP1201529017	NS0090	20	22	oxide	mineralised	<0.001	<0.001	<0.001	<0.001	0.017	<0.001	<0.01	<0.01	<0.005	0.39
EP1204009026	24/05/2012	EP1201529008	NS0090	190	192	south	mineralised	<0.001	<0.001	<0.001	<0.001	0.038	<0.001	<0.01	<0.01	<0.005	0.64
EP1204009038	24/05/2012	EP1201531001	NS0090	268	270	north	mineralised	<0.001	<0.001	<0.001	<0.001	0.004	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006005	23/05/2012	EP1201379046	NS0091					<0.001	<0.001	<0.001	<0.001	0.379	0.001	<0.01	<0.01	<0.005	<0.05
EP1204006024	23/05/2012	EP1201383007	NS0092	40	42	footwall	non mineralised	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006023	23/05/2012	EP1201383006	NS0092	48	50	footwall	non mineralised	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006028	23/05/2012	EP1201383026	NS0092	158	160	south	mineralised	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006004	23/05/2012	EP1201379013	NS0093	216	218	south	mineralised	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	0.18
EP1204010031	29/05/2012	PE065688.026	NS0094	28	30	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.01	<0.01	<0.005	0.13
EP1204009036	24/05/2012	EP1201530029	NS0094	160	162	south	mineralised	<0.001	<0.001	<0.001	<0.001	0.023	<0.001	<0.01	<0.01	<0.005	1.18
EP1204010029	29/05/2012	PE065688.007	NS0095	30	32	oxide	non mineralised	0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	0.59
EP1204010030	29/05/2012	PE065688.008	NS0095	38	40	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.037	<0.001	<0.01	<0.01	<0.005	0.47
EP1204010027	29/05/2012	PE065687.088	NS0096	20	22	oxide	non mineralised	<0.001	0.032	<0.001	<0.001	9.40	0.257	<0.01	<0.01	0.011	1.30
EP1204010028	29/05/2012	PE065687.093	NS0096	70	72	south	mineralised	<0.001	<0.001	<0.001	<0.001	0.012	<0.001	<0.01	<0.01	<0.005	0.07
EP1204010026	29/05/2012	PE065687.086	NS0096	120	122	south	mineralised	<0.001	<0.001	<0.001	<0.001	0.006	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010025	29/05/2012	PE065687.081	NS0096	230	232	south	mineralised	<0.001	<0.001	<0.001	<0.001	0.007	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010032	29/05/2012	PE065688.042	NS0097	28	30	oxide	non mineralised	0.002	<0.001	0.092	<0.001	0.003	0.002	<0.01	<0.01	0.409	1.37
EP1204010033	29/05/2012	PE065688.043	NS0097	40	42	south	non mineralised	0.002	<0.001	0.063	<0.001	0.004	0.001	<0.01	<0.01	0.595	1.81
EP1204010022	29/05/2012	PE065687.058	NS0098	0	2	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.01	<0.01	0.436	0.21
EP1204010021	29/05/2012	PE065687.056	NS0098	20	22	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.025	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010023	29/05/2012	PE065687.060	NS0098	58	60	hangingwall	mineralised	<0.001	<0.001	<0.001	<0.001	0.014	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010023	21/02/2012	PE065687.060	NS0098	58	60	hangingwall	mineralised	<0.001	<0.001	<0.001	<0.001	0.014	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010024	29/05/2012	PE065687.065	NS0098	180	182	hangingwall	mineralised	<0.001	<0.001	<0.001	<0.001	0.004	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006009	23/05/2012	EP1201380025	NS0100	78	80	south	mineralised	<0.001	<0.001	<0.001	<0.001	0.015	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204009034	24/05/2012	EP1201530012	NS0106	8	10	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	0.031	<0.001	<0.01	<0.01	<0.005	0.20
EP1204006013	23/05/2012	EP1201380049	NS0106	20	22	oxide	non mineralised	<0.001	<0.001	0.001	<0.001	0.006	<0.001	<0.01	<0.01	<0.005	0.47
EP1204009032	24/05/2012	EP1201530008	NS0106	28	30	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	0.35
EP1204009033	24/05/2012	EP1201530010	NS0106	48	50	south	mineralised	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204006014	23/05/2012	EP1201380050	NS0106	92	94	south	mineralised	<0.001	<0.001	<0.001	<0.001	0.004	<0.001	<0.01	<0.01	<0.005	0.48
EP1204009037	24/05/2012	EP1201530042	NS0106	170	172	south	mineralised										
EP1204015007	21/02/2012	EP1201380046	NS0106														
EP1204009014	24/05/2012	EP1201384039	NS0107	120	122	hangingwall	non mineralised	<0.001	<0.001	<0.001	<0.001	0.004	<0.001	<0.01	<0.01	<0.005	<0.05

								7440-47-3	7440-48-4	7440-50-8	7439-92-1	7439-96-5	7440-02-0	7782-49-2	7440-62-2	7440-66-6	7439-89-6
Workgroup:	**Project name/number:**							**Cr**	**Co**	**Cu**	**Pb**	**Mn**	**Ni**	**Se**	**V**	**Zn**	**Fe**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.01**	**0.01**	**0.005**	**0.05**
ANZECC freshwater Guidelines										**1.4**	**3.4**	**1900**	**11**	**5**		**8**	**300**
EP1204009010	24/05/2012	EP1201384031	NS0107	128	130	hangingwall	non mineralised	<0.001	<0.001	<0.001	<0.001	0.006	<0.001	<0.01	<0.01	<0.005	0.15
EP1204009012	24/05/2012	EP1201384035	NS0107	140	142	hangingwall	non mineralised	<0.001	<0.001	<0.001	<0.001	0.028	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204009011	24/05/2012	EP1201384033	NS0107	148	150	hangingwall	non mineralised	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	0.44
EP1204009008	24/05/2012	EP1201384028	NS0107	160	162	hangingwall	non mineralised	<0.001	<0.001	<0.001	<0.001	0.006	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204009009	24/05/2012	EP1201384029	NS0107	170	172			<0.001	<0.001	<0.001	<0.001	0.009	<0.001	<0.01	<0.01	0.008	<0.05
EP1204009035	24/05/2012	EP1201530028	NS0108	176	178	south	mineralised	<0.001	<0.001	<0.001	<0.001	0.007	<0.001	<0.01	<0.01	0.020	0.24
EP1204010036	29/05/2012	PE065688.079	NS0113	140	142	footwall	non mineralised	<0.001	0.169	0.145	<0.001	3.13	0.394	<0.01	<0.01	0.165	0.94
EP1204010034	29/05/2012	PE065688.066	NS0113	158	160	footwall	non mineralised	<0.001	<0.001	<0.001	<0.001	0.071	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010035	29/05/2012	PE065688.070	NS0113	198	200	footwall	non mineralised	<0.001	0.119	<0.001	<0.001	5.00	0.418	<0.01	<0.01	0.059	4.71
EP1204010040	29/05/2012	PE065689.057	NS0116	108	110	footwall	non mineralised	<0.001	0.184	0.204	<0.001	1.42	0.474	<0.01	<0.01	0.161	1.21
EP1204010041	29/05/2012	PE065689.063	NS0116	130	132	footwall	non mineralised	<0.001	<0.001	<0.001	<0.001	0.091	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010039	29/05/2012	PE065689.041	NS0117	190	192	footwall	mineralised	<0.001	<0.001	<0.001	<0.001	0.015	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010037	29/05/2012	PE065688.082	NS0118	140	142	hangingwall	non mineralised	<0.001	<0.001	<0.001	<0.001	0.005	<0.001	<0.01	<0.01	<0.005	0.08
EP1204010038	29/05/2012	PE065689.019	NS0120	206	208			<0.001	<0.001	<0.001	<0.001	0.004	<0.001	<0.01	<0.01	<0.005	0.13
EP1204010018	29/05/2012	PE065687.014	NS0124	130	132	footwall	non mineralised	<0.001	<0.001	<0.001	<0.001	0.008	<0.001	<0.01	<0.01	<0.005	0.14
EP1204010042	29/05/2012	PE065689.072	NS0128					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	0.12
EP1204010007	29/05/2012	PE065686.003	NS0152	78	80	footwall	non mineralised	<0.001	<0.001	<0.001	<0.001	0.010	<0.001	<0.01	<0.01	<0.005	0.86
EP1204010008	29/05/2012	PE065686.007	NS0152	120	122	footwall	mineralised	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010006	29/05/2012	PE065685.098	NS0152	244	246	footwall		<0.001	<0.001	<0.001	<0.001	0.010	<0.001	<0.01	<0.01	<0.005	0.56
EP1204010010	29/05/2012	PE065686.021	NS0153	98	100	oxide		<0.001	<0.001	<0.001	<0.001	0.005	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010009	29/05/2012	PE065686.020	NS0153	168	170	hangingwall		<0.001	<0.001	<0.001	<0.001	0.005	<0.001	<0.01	<0.01	<0.005	0.17
EP1204010011	29/05/2012	PE065686.028	NS0153	200	202	hangingwall		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	0.10
EP1204010012	29/05/2012	PE065686.032	NS0153	220	222	hangingwall		<0.001	0.012	<0.001	<0.001	0.613	0.015	<0.01	<0.01	<0.005	0.06
EP1204010015	29/05/2012	PE065686.040	NS0154	18	20	oxide		<0.001	<0.001	<0.001	<0.001	0.012	<0.001	<0.01	<0.01	<0.005	0.12
EP1204010014	29/05/2012	PE065686.037	NS0154	30	32	south		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010013	29/05/2012	PE065686.035	NS0154	38	40	south		<0.001	<0.001	<0.001	<0.001	0.006	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010016	29/05/2012	PE065686.054	NS0154	200	202	footwall		<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010019	29/05/2012	PE065687.035	NS0155	100	102	footwall		<0.001	<0.001	<0.001	<0.001	0.014	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010020	29/05/2012	PE065687.036	NS0155	108	110	footwall		<0.001	<0.001	<0.001	<0.001	0.041	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010002	29/05/2012	PE065685.046	NS0157	130	132	hangingwall		<0.001	<0.001	<0.001	<0.001	0.022	<0.001	<0.01	<0.01	<0.005	0.14
EP1204010005	29/05/2012	PE065685.065	NS0158	66	68	footwall		<0.001	<0.001	<0.001	<0.001	0.047	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010004	29/05/2012	PE065685.064	NS0158	110	112	north		<0.001	<0.001	<0.001	<0.001	0.031	<0.001	<0.01	<0.01	0.027	<0.05
EP1204010003	29/05/2012	PE065685.050	NS0158	178	180	north		<0.001	<0.001	0.001	<0.001	0.017	<0.001	<0.01	<0.01	<0.005	0.10
EP1204010017	29/05/2012	PE065686.068	NS0160	58	60	footwall		<0.001	<0.001	<0.001	<0.001	0.010	<0.001	<0.01	<0.01	<0.005	<0.05
EP1204010001	29/05/2012	PE065685.007	NS0165	100	102	hangingwall		<0.001	<0.001	<0.001	<0.001	0.037	<0.001	<0.01	<0.01	<0.005	<0.05

								7439-97-6	
								EG035T: Total Recoverable Mercury by FIMS	EN60: Bottle Leaching Procedure
Workgroup:	**Project name/number:**							**Hg**	**Final pH**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/kg**	**pH Unit**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**0.1**	**0.1**
ANZECC freshwater Guidelines								**0.06**	
EP1204006016	23/05/2012	EP1201381008	NS0077	0	2	oxide	non mineralised	<0.0001	7.4
EP1204006015	23/05/2012	EP1201381007	NS0077	8	10	oxide	non mineralised	<0.0001	7.7
EP1204006002	23/05/2012	EP1201378041	NS0077	20	22	oxide	non mineralised	<0.0001	8
EP1204006003	23/05/2012	EP1201378042	NS0077	28	30	oxide	non mineralised	<0.0001	7.9
EP1204006001	23/05/2012	EP1201378014	NS0077	178	180	south	mineralised	<0.0001	7.5
EP1204006007	23/05/2012	EP1201380010	NS0078	0	2	oxide	non mineralised	<0.0001	7.8
EP1204006008	23/05/2012	EP1201380011	NS0078	8	10	oxide	non mineralised	<0.0001	7.7
EP1204006019	23/05/2012	EP1201381048	NS0078	20	22	oxide	non mineralised	<0.0001	8
EP1204006018	23/05/2012	EP1201381045	NS0078	28	30	oxide	non mineralised	<0.0001	8.1
EP1204006010	23/05/2012	EP1201380028	NS0078	80	82	footwall	non mineralised	<0.0001	8.3
EP1204006011	23/05/2012	EP1201380030	NS0078	276	278	footwall	non mineralised	<0.0001	8.2
EP1204006022	23/05/2012	EP1201382031	NS0079	94	96	south	non mineralised	<0.0001	7.7
EP1204006006	23/05/2012	EP1201379047	NS0083	158	160	footwall	non mineralised	<0.0001	8.8
EP1204009016	24/05/2012	EP1201527006	NS0084	140	142	hangingwall	non mineralised	<0.0001	7.6
EP1204009025	24/05/2012	EP1201528043	NS0084	158	160	hangingwall	non mineralised	<0.0001	6.8
EP1204009017	24/05/2012	EP1201527007	NS0084	190	192	hangingwall	mineralised	<0.0001	8.7
EP1204010044	29/05/2012	PE065689.087	NS0084	270	272	hangingwall	non mineralised	<0.0001	8.8
EP1204006025	23/05/2012	EP1201383010	NS0085	0	2	oxide	non mineralised	<0.0001	8.2
EP1204006027	23/05/2012	EP1201383012	NS0085	10	12	oxide	non mineralised	<0.0001	7.6
EP1204006026	23/05/2012	EP1201383011	NS0085	18	20	oxide	non mineralised	<0.0001	7.8
EP1204009004	24/05/2012	EP1201384006	NS0085	30	32	oxide	non mineralised	<0.0001	7.6
EP1204009003	24/05/2012	EP1201384005	NS0085	58	60	south	mineralised	<0.0001	8.6
EP1204009005	24/05/2012	EP1201384015	NS0085	90	92	south	mineralised	<0.0001	8.8
EP1204009002	24/05/2012	EP1201384003	NS0085	208	210	south	mineralised	<0.0001	8.3
EP1204015017	21/02/2012	EP1201383045	NS0086	8	10	oxide	non mineralised	<0.0001	7.4
EP1204009001	24/05/2012	EP1201383046	NS0086	28	30	oxide	non mineralised	<0.0001	6.8
EP1204009018	24/05/2012	EP1201527028	NS0087	8	10	oxide	non mineralised	<0.0001	7.6
EP1204009019	24/05/2012	EP1201527031	NS0087	84	86	footwall	mineralised		7.4
EP1204009020	24/05/2012	EP1201527032	NS0087	88	90	footwall	non mineralised	<0.0001	9.2
EP1204006017	23/05/2012	EP1201381013	NS0087	380	382	south	mineralised	<0.0001	8.7
EP1204006021	23/05/2012	EP1201382020	NS0088	0	2	oxide	non mineralised	<0.0001	7.7
EP1204006020	23/05/2012	EP1201382016	NS0088	8	10	oxide	non mineralised	<0.0001	7.8
EP1204006030	23/05/2012	EP1201382019	NS0088	108	110	north	non mineralised	<0.0001	7.3
EP1204006031	23/05/2012	EP1201382041	NS0088	150	152	north	non mineralised		7.3
EP1204006033	23/05/2012	EP1201382001	NS0088	280	282	north	non mineralised	<0.0001	7.5
EP1204006034	23/05/2012	EP1201382010	NS0088	346	348	north	mineralised		7.1
EP1204009024	24/05/2012	EP1201528018	NS0089	0	2	oxide	non mineralised	<0.0001	7
EP1204009023	24/05/2012	EP1201528003	NS0089	60	62	oxide	non mineralised	<0.0001	7.1
EP1204009022	24/05/2012	EP1201528001	NS0089	88	90	north	non mineralised	<0.0001	7.7

								7439-97-6	
								EG035T: Total Recoverable Mercury by FIMS	EN60: Bottle Leaching Procedure
Workgroup:	**Project name/number:**							**Hg**	**Final pH**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/kg**	**pH Unit**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**0.1**	**0.1**
ANZECC freshwater Guidelines								**0.06**	
EP1204009030	24/05/2012	EP1201529040	NS0089	128	130	north	non mineralised	<0.0001	7.6
EP1204015035	21/02/2012	EP1201529045	NS0089	178	180	north	non mineralised	<0.0001	7.6
EP1204006035	23/05/2012	EP1201529050	NS0089	210	212	north	mineralised	<0.0001	7.4
EP1204006036	23/05/2012	EP1201526049	NS0089	268	270	north	mineralised	<0.0001	7.5
EP1204010043	29/05/2012	PE065689.080	NS0089	360	362	north	non mineralised	<0.0001	8
EP1204009028	24/05/2012	EP1201529016	NS0090	0	2	oxide	non mineralised	<0.0001	7.1
EP1204009027	24/05/2012	EP1201529015	NS0090	8	10	oxide	non mineralised	<0.0001	7.6
EP1204009029	24/05/2012	EP1201529017	NS0090	20	22	oxide	mineralised	<0.0001	7
EP1204009026	24/05/2012	EP1201529008	NS0090	190	192	south	mineralised	<0.0001	7.5
EP1204009038	24/05/2012	EP1201531001	NS0090	268	270	north	mineralised	<0.0001	8.2
EP1204006005	23/05/2012	EP1201379046	NS0091					<0.0001	7.5
EP1204006024	23/05/2012	EP1201383007	NS0092	40	42	footwall	non mineralised	<0.0001	8.4
EP1204006023	23/05/2012	EP1201383006	NS0092	48	50	footwall	non mineralised	<0.0001	8.8
EP1204006028	23/05/2012	EP1201383026	NS0092	158	160	south	mineralised	<0.0001	9.1
EP1204006004	23/05/2012	EP1201379013	NS0093	216	218	south	mineralised	<0.0001	8.1
EP1204010031	29/05/2012	PE065688.026	NS0094	28	30	oxide	non mineralised	<0.0001	7.8
EP1204009036	24/05/2012	EP1201530029	NS0094	160	162	south	mineralised	<0.0001	9.2
EP1204010029	29/05/2012	PE065688.007	NS0095	30	32	oxide	non mineralised	<0.0001	7.9
EP1204010030	29/05/2012	PE065688.008	NS0095	38	40	oxide	non mineralised	<0.0001	8.1
EP1204010027	29/05/2012	PE065687.088	NS0096	20	22	oxide	non mineralised	<0.0001	7.9
EP1204010028	29/05/2012	PE065687.093	NS0096	70	72	south	mineralised	<0.0001	9.2
EP1204010026	29/05/2012	PE065687.086	NS0096	120	122	south	mineralised	<0.0001	9.2
EP1204010025	29/05/2012	PE065687.081	NS0096	230	232	south	mineralised	<0.0001	8.7
EP1204010032	29/05/2012	PE065688.042	NS0097	28	30	oxide	non mineralised	<0.0001	7.6
EP1204010033	29/05/2012	PE065688.043	NS0097	40	42	south	non mineralised	<0.0001	7
EP1204010022	29/05/2012	PE065687.058	NS0098	0	2	oxide	non mineralised	<0.0001	7.5
EP1204010021	29/05/2012	PE065687.056	NS0098	20	22	oxide	non mineralised	<0.0001	7.4
EP1204010023	29/05/2012	PE065687.060	NS0098	58	60	hangingwall	mineralised	<0.0001	7.3
EP1204010023	21/02/2012	PE065687.060	NS0098	58	60	hangingwall	mineralised	<0.0001	7.3
EP1204010024	29/05/2012	PE065687.065	NS0098	180	182	hangingwall	mineralised	<0.0001	8.1
EP1204006009	23/05/2012	EP1201380025	NS0100	78	80	south	mineralised	<0.0001	8.4
EP1204009034	24/05/2012	EP1201530012	NS0106	8	10	oxide	non mineralised	<0.0001	7.9
EP1204006013	23/05/2012	EP1201380049	NS0106	20	22	oxide	non mineralised	<0.0001	5.6
EP1204009032	24/05/2012	EP1201530008	NS0106	28	30	oxide	non mineralised	<0.0001	7.5
EP1204009033	24/05/2012	EP1201530010	NS0106	48	50	south	mineralised	<0.0001	8.8
EP1204006014	23/05/2012	EP1201380050	NS0106	92	94	south	mineralised	<0.0001	7.7
EP1204009037	24/05/2012	EP1201530042	NS0106	170	172	south	mineralised		9
EP1204015007	21/02/2012	EP1201380046	NS0106						8
EP1204009014	24/05/2012	EP1201384039	NS0107	120	122	hangingwall	non mineralised	<0.0001	6.5

								7439-97-6	
								EG035T: Total Recoverable Mercury by FIMS	EN60: Bottle Leaching Procedure
Workgroup:	**Project name/number:**							**Hg**	**Final pH**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/kg**	**pH Unit**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**0.1**	**0.1**
ANZECC freshwater Guidelines								**0.06**	
EP1204009010	24/05/2012	EP1201384031	NS0107	128	130	hangingwall	non mineralised	<0.0001	6.4
EP1204009012	24/05/2012	EP1201384035	NS0107	140	142	hangingwall	non mineralised	<0.0001	7.3
EP1204009011	24/05/2012	EP1201384033	NS0107	148	150	hangingwall	non mineralised	<0.0001	6.3
EP1204009008	24/05/2012	EP1201384028	NS0107	160	162	hangingwall	non mineralised	<0.0001	7.1
EP1204009009	24/05/2012	EP1201384029	NS0107	170	172			<0.0001	7.5
EP1204009035	24/05/2012	EP1201530028	NS0108	176	178	south	mineralised	<0.0001	7.7
EP1204010036	29/05/2012	PE065688.079	NS0113	140	142	footwall	non mineralised	<0.0001	7.8
EP1204010034	29/05/2012	PE065688.066	NS0113	158	160	footwall	non mineralised	<0.0001	7.6
EP1204010035	29/05/2012	PE065688.070	NS0113	198	200	footwall	non mineralised	<0.0001	8
EP1204010040	29/05/2012	PE065689.057	NS0116	108	110	footwall	non mineralised	<0.0001	7.6
EP1204010041	29/05/2012	PE065689.063	NS0116	130	132	footwall	non mineralised	<0.0001	8
EP1204010039	29/05/2012	PE065689.041	NS0117	190	192	footwall	mineralised	<0.0001	9.1
EP1204010037	29/05/2012	PE065688.082	NS0118	140	142	hangingwall	non mineralised	<0.0001	7.4
EP1204010038	29/05/2012	PE065689.019	NS0120	206	208			<0.0001	8.2
EP1204010018	29/05/2012	PE065687.014	NS0124	130	132	footwall	non mineralised	<0.0001	9.6
EP1204010042	29/05/2012	PE065689.072	NS0128					<0.0001	7.6
EP1204010007	29/05/2012	PE065686.003	NS0152	78	80	footwall	non mineralised	<0.0001	8.3
EP1204010008	29/05/2012	PE065686.007	NS0152	120	122	footwall	mineralised	<0.0001	9.4
EP1204010006	29/05/2012	PE065685.098	NS0152	244	246	footwall		<0.0001	9.4
EP1204010010	29/05/2012	PE065686.021	NS0153	98	100	oxide		<0.0001	8.2
EP1204010009	29/05/2012	PE065686.020	NS0153	168	170	hangingwall		<0.0001	8.4
EP1204010011	29/05/2012	PE065686.028	NS0153	200	202	hangingwall		<0.0001	5
EP1204010012	29/05/2012	PE065686.032	NS0153	220	222	hangingwall		<0.0001	6.8
EP1204010015	29/05/2012	PE065686.040	NS0154	18	20	oxide		<0.0001	7.4
EP1204010014	29/05/2012	PE065686.037	NS0154	30	32	south		<0.0001	8.6
EP1204010013	29/05/2012	PE065686.035	NS0154	38	40	south		<0.0001	9
EP1204010016	29/05/2012	PE065686.054	NS0154	200	202	footwall		<0.0001	9.3
EP1204010019	29/05/2012	PE065687.035	NS0155	100	102	footwall		<0.0001	9.8
EP1204010020	29/05/2012	PE065687.036	NS0155	108	110	footwall		<0.0001	9.1
EP1204010002	29/05/2012	PE065685.046	NS0157	130	132	hangingwall		<0.0001	8
EP1204010005	29/05/2012	PE065685.065	NS0158	66	68	footwall		<0.0001	8.5
EP1204010004	29/05/2012	PE065685.064	NS0158	110	112	north		<0.0001	8.6
EP1204010003	29/05/2012	PE065685.050	NS0158	178	180	north		<0.0001	7.8
EP1204010017	29/05/2012	PE065686.068	NS0160	58	60	footwall		<0.0001	8.6
EP1204010001	29/05/2012	PE065685.007	NS0165	100	102	hangingwall		<0.0001	7.7

											7440-70-2	DMO-210-0	3812-32-6	71-52-3			14808-79-8	16887-00-6
								EA055: Moisture Content	ED042T: Total Sulfur by LECO	ED093T: Total Major Cations	ED037P: Alkalinity by PC Titrator					ED038A: Acidity	ED041G: Sulfate (Turbidimetric) as SO4 2- by DA	ED045G: Chloride Discrete analyser
Workgroup:	**Project name/number:**							**Moisture Content (dried @ 103°C)**	**Sulfur - Total as S (LECO)**	**Calcium**	**Hydroxide Alkalinity as CaCO3**	**Carbonate Alkalinity as CaCO3**	**Bicarbonate Alkalinity as CaCO3**	**Total Alkalinity as CaCO3**		**Acidity as CaCO3**	**Sulfate as SO4 - Turbidimetric**	**Cl**
EP1202066	**Ex EP1201379 1384 1527 1528**							**%**	**%**	**mg/kg**	**mg/L**	**mg/L**	**mg/L**	**mg/L**		**mg/L**	**mg/L**	**mg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**1**	**0.01**	**10**	**1**	**1**	**1**	**1**		**1**	**1**	**1**
ANZECC freshwater Guidelines																		
EP1207918016	21/09/2012	EP1201381008	NS0077	0	2	oxide	non mineralised	<1.0		290								
EP1207918015	21/09/2012	EP1201381007	NS0077	8	10	oxide	non mineralised	<1.0		230								
EP1207918002	21/09/2012	EP1201378041	NS0077	20	22	oxide	non mineralised	<1.0	<0.01	490								
EP1207918003	21/09/2012	EP1201378042	NS0077	28	30	oxide	non mineralised	<1.0	<0.01	1000								
EP1207918001	21/09/2012	EP1201378014	NS0077	178	180	south	mineralised	<1.0		2630								
EP1207918007	21/09/2012	EP1201380010	NS0078	0	2	oxide	non mineralised	<1.0	0.02	140								
EP1207918008	21/09/2012	EP1201380011	NS0078	8	10	oxide	non mineralised				<1	<1	12	12		47	3	3
EP1207918019	21/09/2012	EP1201381048	NS0078	20	22	oxide	non mineralised	3.6		3610								
EP1207918018	21/09/2012	EP1201381045	NS0078	28	30	oxide	non mineralised	2.1		3150								
EP1207918010	21/09/2012	EP1201380028	NS0078	80	82	footwall	non mineralised	<1.0	0.05	3720								
EP1207918011	21/09/2012	EP1201380030	NS0078	276	278	footwall	non mineralised				<1	<1	9	9		10	114	2
EP1207918022	21/09/2012	EP1201382031	NS0079	94	96	south	non mineralised	<1.0		3130								
EP1207918006	21/09/2012	EP1201379047	NS0083	158	160	footwall	non mineralised	<1.0	0.31	7920								
EP1207919012	21/09/2012	EP1201527006	NS0084	140	142	hangingwall	non mineralised				<1	<1	52	52		<1	91	2
EP1207919020	21/09/2012	EP1201528043	NS0084	158	160	hangingwall	non mineralised	<1.0	0.02	510	<1	<1	<1	<1		140	189	2
EP1207919013	21/09/2012	EP1201527007	NS0084	190	192	hangingwall	mineralised	6.7	0.2	7150								
EP1207897044	29/05/2012	PE065689.087	NS0084	270	272	hangingwall	non mineralised		0.31		<1	2	37	39		<1	15	<1
EP1207918025	21/09/2012	EP1201383010	NS0085	0	2	oxide	non mineralised	<1.0	0.01	300								
EP1207918027	21/09/2012	EP1201383012	NS0085	10	12	oxide	non mineralised	<1.0		70								
EP1207918026	21/09/2012	EP1201383011	NS0085	18	20	oxide	non mineralised	<1.0	<0.01	260								
EP1207919004	21/09/2012	EP1201384006	NS0085	30	32	oxide	non mineralised	<1.0		770								
EP1207919003	21/09/2012	EP1201384005	NS0085	58	60	south	mineralised	<1.0		12500								
EP1207919005	21/09/2012	EP1201384015	NS0085	90	92	south	mineralised	<1.0		12800								
EP1207919002	21/09/2012	EP1201384003	NS0085	208	210	south	mineralised	<1.0		4580								
EP1207918029	21/09/2012	EP1201383045	NS0086	8	10	oxide	non mineralised				<1	<1	2	2		59	2	2
EP1207919001	21/09/2012	EP1201383046	NS0086	28	30	oxide	non mineralised				<1	<1	8	8		36	1	2
EP1207919014	21/09/2012	EP1201527028	NS0087	8	10	oxide	non mineralised	1.7		120								
EP1207919016	21/09/2012	EP1201527032	NS0087	88	90	footwall	non mineralised		0.01		<1	5	50	54		<1	22	2
EP1207918017	21/09/2012	EP1201381013	NS0087	380	382	south	mineralised	<1.0		9470								
EP1207919038	21/09/2012	EP1201527035	NS0087															
EP1207918021	21/09/2012	EP1201382020	NS0088	0	2	oxide	non mineralised	<1.0		370								
EP1207918020	21/09/2012	EP1201382016	NS0088	8	10	oxide	non mineralised	<1.0		<50								

										7440-70-2	DMO-210-0	3812-32-6	71-52-3			14808-79-8	16887-00-6
								EA055: Moisture Content	ED042T: Total Sulfur by LECO	ED093T: Total Major Cations	ED037P: Alkalinity by PC Titrator				ED038A: Acidity	ED041G: Sulfate (Turbidimetric) as SO4 2- by DA	ED045G: Chloride Discrete analyser
Workgroup:	Project name/number:							Moisture Content (dried @ 103°C)	Sulfur - Total as S (LECO)	Calcium	Hydroxide Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Bicarbonate Alkalinity as CaCO3	Total Alkalinity as CaCO3	Acidity as CaCO3	Sulfate as SO4 - Turbidimetric	Cl
EP1202066	Ex EP1201379 1384 1527 1528							%	%	mg/kg	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ALS Sample number:	Sample date:	Client sample ID (1st):	Client sample ID (2nd):	From	To	Lithology	Mineralisation	1	0.01	10	1	1	1	1	1	1	1
ANZECC freshwater Guidelines																	
EP1207918030	21/09/2012	EP1201382019	NS0088	108	110	north	non mineralised	<1.0		3100							
EP1207918032	21/09/2012	EP1201382001	NS0088	280	282	north	non mineralised	<1.0		4560							
EP1207919019	21/09/2012	EP1201528018	NS0089	0	2	oxide	non mineralised				<1	<1	9	9	225	2	7
EP1207919018	21/09/2012	EP1201528003	NS0089	60	62	oxide	non mineralised	1.1	0.02	360							
EP1207919017	21/09/2012	EP1201528001	NS0089	88	90	oxide	non mineralised	<1.0	<0.01	460							
EP1207919025	21/09/2012	EP1201529040	NS0089	128	130	north	non mineralised	<1.0	0.17	6950	<1	<1	10	10	8	109	2
EP1207919026	21/09/2012	EP1201529045	NS0089	178	180	north	non mineralised	<1.0	0.04	3450	<1	<1	7	7	15	188	2
EP1207918034	21/09/2012	EP1201529050	NS0089	210	212	north	non mineralised	<1.0	0.01	3490							
EP1207918035	21/09/2012	EP1201526049	NS0089	268	270	north	mineralised	<1.0	0.01	4350							
EP1207897043	29/05/2012	PE065689.080	NS0089	360	362	north	mineralised	<1.0	0.03	3170	<1	<1	64	64	<1	4	<1
EP1207919037	21/09/2012	EP1201526047	NS0089			north	non mineralised	2.5		6810							
EP1207919023	21/09/2012	EP1201529016	NS0090	0	2	oxide	non mineralised				<1	<1	2	2	60	3	2
EP1207919022	21/09/2012	EP1201529015	NS0090	8	10	oxide	non mineralised	11.3		100	<1	<1	5	5	178	3	6
EP1207919024	21/09/2012	EP1201529017	NS0090	20	22	oxide	non mineralised	8.6	<0.01	80	<1	<1	4	4	198	<1	10
EP1207919021	21/09/2012	EP1201529008	NS0090	190	192	oxide	mineralised	9.4	<0.01	<50							
EP1207919033	21/09/2012	EP1201531001	NS0090	268	270	south	mineralised	1.4	0.06	4710							
EP1207918005	21/09/2012	EP1201379046	NS0091								<1	<1	<1	<1	100	331	<1
EP1207918024	21/09/2012	EP1201383007	NS0092	40	42	footwall	non mineralised				<1	10	69	80	<1	13	2
EP1207918023	21/09/2012	EP1201383006	NS0092	48	50	footwall	non mineralised	<1.0	0.04	10300							
EP1207918028	21/09/2012	EP1201383026	NS0092	158	160	south	mineralised	<1.0	0.02	9590							
EP1207918004	21/09/2012	EP1201379013	NS0093	216	218	south	mineralised	<1.0	0.03	8880							
EP1207897031	29/05/2012	PE065688.026	NS0094	28	30	oxide	non mineralised				<1	<1	5	5	6	<5	<1
EP1207919031	21/09/2012	EP1201530029	NS0094	160	162	south	mineralised	5.7	0.02	18800							
EP1207897029	29/05/2012	PE065688.007	NS0095	30	32	oxide	non mineralised				<1	<1	4	4	2	1	2
EP1207897030	29/05/2012	PE065688.008	NS0095	38	40	oxide	non mineralised				<1	<1	4	4	2	4	1
EP1207897027	29/05/2012	PE065687.088	NS0096	20	22	oxide	non mineralised				<1	<1	4	4	6	<1	4
EP1207897028	29/05/2012	PE065687.093	NS0096	70	72	south	mineralised				<1	4	31	35	<1	1	1
EP1207897026	29/05/2012	PE065687.086	NS0096	120	122	south	mineralised				<1	<1	27	27	<1	16	<1
EP1207897025	29/05/2012	PE065687.081	NS0096	230	232	south	mineralised				<1	<1	23	23	<1	31	2
EP1207897032	29/05/2012	PE065688.042	NS0097	28	30	oxide	non mineralised				<1	<1	4	4	3	3	4
EP1207897033	29/05/2012	PE065688.043	NS0097	40	42	south	non mineralised				<1	<1	<1	<1	3	192	2
EP1207897022	29/05/2012	PE065687.058	NS0098	0	2	oxide	non mineralised				<1	<1	4	4	5	1	2

										7440-70-2	DMO-210-0	3812-32-6	71-52-3			14808-79-8	16887-00-6
								EA055: Moisture Content	ED042T: Total Sulfur by LECO	ED093T: Total Major Cations	ED037P: Alkalinity by PC Titrator				ED038A: Acidity	ED041G: Sulfate (Turbidimetric) as SO4 2- by DA	ED045G: Chloride Discrete analyser
Workgroup:	**Project name/number:**							**Moisture Content (dried @ 103°C)**	**Sulfur - Total as S (LECO)**	**Calcium**	**Hydroxide Alkalinity as CaCO3**	**Carbonate Alkalinity as CaCO3**	**Bicarbonate Alkalinity as CaCO3**	**Total Alkalinity as CaCO3**	**Acidity as CaCO3**	**Sulfate as SO4 - Turbidimetric**	**Cl**
EP1202066	**Ex EP1201379 1384 1527 1528**							**%**	**%**	**mg/kg**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**1**	**0.01**	**10**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
ANZECC freshwater Guidelines																	
EP1207897021	29/05/2012	PE065687.056	NS0098	20	22	oxide	non mineralised				<1	<1	3	3	5	<1	2
EP1207897023	29/05/2012	PE065687.060	NS0098	58	60	hangingwall	mineralised				<1	<1	14	14	2	18	1
EP1207897024	29/05/2012	PE065687.065	NS0098	180	182	hangingwall	mineralised				<1	<1	30	30	3	7	2
EP1207918009	21/09/2012	EP1201380025	NS0100	78	80	south	mineralised				<1	<1	45	45	2	19	2
EP1207919029	21/09/2012	EP1201530012	NS0106	8	10	oxide	non mineralised	3.6	<0.01	<50							
EP1207918013	21/09/2012	EP1201380049	NS0106	20	22	oxide	non mineralised	<1.0	<0.01	210							
EP1207919027	21/09/2012	EP1201530008	NS0106	28	30	oxide	non mineralised	<1.0	0.02	1220							
EP1207919028	21/09/2012	EP1201530010	NS0106	48	50	south	mineralised	2.2	0.03	14200							
EP1207918014	21/09/2012	EP1201380050	NS0106	92	94	south	mineralised				<1	<1	41	41	<1	74	3
EP1207918012	21/09/2012	EP1201380046	NS0106								<1	<1	13	13	53	1	4
EP1207919011	21/09/2012	EP1201384039	NS0107	120	122	hangingwall	non mineralised	<1.0		360	<1	<1	<1	<1	276	306	2
EP1207919008	21/09/2012	EP1201384031	NS0107	128	130	hangingwall	non mineralised	<1.0		290	<1	<1	<1	<1	176	195	2
EP1207919010	21/09/2012	EP1201384035	NS0107	140	142	hangingwall	non mineralised	<1.0		3370	<1	<1	<1	<1	163	286	2
EP1207919009	21/09/2012	EP1201384033	NS0107	148	150	hangingwall	non mineralised	<1.0		270	<1	<1	<1	<1	273	274	2
EP1207919006	21/09/2012	EP1201384028	NS0107	160	162	hangingwall	non mineralised	<1.0		300	<1	<1	<1	<1	209	227	2
EP1207919007	21/09/2012	EP1201384029	NS0107	170	172			<1.0		10400	<1	<1	<1	<1	93	219	2
EP1207919034	21/09/2012	EP1201384022	NS0107														
EP1207919035	21/09/2012	EP1201384025	NS0107														
EP1207919036	21/09/2012	EP1201384036	NS0107														
EP1207919030	21/09/2012	EP1201530028	NS0108	176	178	south	mineralised	6.7	0.99	3880							
EP1207897036	29/05/2012	PE065688.079	NS0113	140	142	footwall	non mineralised				<1	<1	11	11	3	45	2
EP1207897034	29/05/2012	PE065688.066	NS0113	158	160	footwall	non mineralised				<1	<1	12	12	3	27	1
EP1207897035	29/05/2012	PE065688.070	NS0113	198	200	footwall	non mineralised				<1	<1	32	32	2	16	2
EP1207897040	29/05/2012	PE065689.057	NS0116	108	110	footwall	non mineralised		0.72		<1	<1	20	20	3	26	2
EP1207897041	29/05/2012	PE065689.063	NS0116	130	132	footwall	non mineralised		0.49		<1	<1	30	30	2	22	2
EP1207897039	29/05/2012	PE065689.041	NS0117	190	192	footwall	mineralised		0.21		<1	<1	36	37	<1	31	3
EP1207897037	29/05/2012	PE065688.082	NS0118	140	142	hangingwall	non mineralised				<1	<1	28	28	2	20	2
EP1207897038	29/05/2012	PE065689.019	NS0120	206	208				1.28		<1	<1	20	20	2	16	4
EP1207897018	29/05/2012	PE065687.014	NS0124	130	132	footwall	non mineralised	2.3	0.51	1940	<1	22	23	44	<1	41	1
EP1207897042	29/05/2012	PE065689.072	NS0128						0.65		<1	<1	16	16	8	25	2
EP1207897007	29/05/2012	PE065686.003	NS0152	78	80	footwall	non mineralised	<1.0	0.66	5220	<1	<1	29	29	<1	30	1

										7440-70-2	DMO-210-0	3812-32-6	71-52-3			14808-79-8	16887-00-6
								EA055: Moisture Content	ED042T: Total Sulfur by LECO	ED093T: Total Major Cations	ED037P: Alkalinity by PC Titrator				ED038A: Acidity	ED041G: Sulfate (Turbidimetric) as SO4 2- by DA	ED045G: Chloride Discrete analyser
Workgroup:	**Project name/number:**							**Moisture Content (dried @ 103°C)**	**Sulfur - Total as S (LECO)**	**Calcium**	**Hydroxide Alkalinity as CaCO3**	**Carbonate Alkalinity as CaCO3**	**Bicarbonate Alkalinity as CaCO3**	**Total Alkalinity as CaCO3**	**Acidity as CaCO3**	**Sulfate as SO4 - Turbidimetric**	**Cl**
EP1202066	**Ex EP1201379 1384 1527 1528**							**%**	**%**	**mg/kg**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**1**	**0.01**	**10**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
ANZECC freshwater Guidelines																	
EP1207897008	29/05/2012	PE065686.007	NS0152	120	122	footwall	mineralised	<1.0	0.14	12000	<1	13	27	41	<1	8	<1
EP1207897006	29/05/2012	PE065685.098	NS0152	244	246	footwall		<1.0	0.13	24200	<1	14	28	42	<1	19	<1
EP1207897010	29/05/2012	PE065686.021	NS0153	98	100	oxide		<1.0	0.14	6350	<1	<1	14	14	2	3	3
EP1207897009	29/05/2012	PE065686.020	NS0153	168	170	hangingwall		<1.0	0.08	4450	<1	<1	34	34	<1	2	1
EP1207897011	29/05/2012	PE065686.028	NS0153	200	202	hangingwall		<1.0	4.17	400	<1	<1	<1	<1	34	197	<1
EP1207897012	29/05/2012	PE065686.032	NS0153	220	222	hangingwall		<1.0		9740	<1	<1	24	24	3	12	1
EP1207897015	29/05/2012	PE065686.040	NS0154	18	20	oxide		<1.0	<0.01	470	<1	<1	5	5	5	<1	<1
EP1207897014	29/05/2012	PE065686.037	NS0154	30	32	south		<1.0	0.08	4700	<1	<1	30	30	<1	1	<1
EP1207897013	29/05/2012	PE065686.035	NS0154	38	40	south		<1.0	0.08	8760	<1	3	34	37	<1	2	1
EP1207897016	29/05/2012	PE065686.054	NS0154	200	202	footwall		1.1	0.65	5820	<1	10	34	43	<1	6	2
EP1207897019	29/05/2012	PE065687.035	NS0155	100	102	footwall		1.2	0.36	8480	<1	17	31	48	<1	8	1
EP1207897020	29/05/2012	PE065687.036	NS0155	108	110	footwall		<1.0		6490	<1	4	33	37	<1	12	2
EP1207897002	29/05/2012	PE065685.046	NS0157	130	132	hangingwall		<1.0	0.26	2050	<1	<1	21	21	2	5	1
EP1207897005	29/05/2012	PE065685.065	NS0158	66	68	footwall		<1.0	0.46	8810	<1	<1	36	36	<1	6	2
EP1207897004	29/05/2012	PE065685.064	NS0158	110	112	north		<1.0	0.08	10100	<1	2	28	29	<1	3	1
EP1207897003	29/05/2012	PE065685.050	NS0158	178	180	north		<1.0	0.03	17100	<1	<1	30	30	3	4	<1
EP1207897017	29/05/2012	PE065686.068	NS0160	58	60	footwall		<1.0	0.39	7920	<1	<1	38	38	<1	6	<1
EP1207897001	29/05/2012	PE065685.007	NS0165	100	102	hangingwall		<1.0	0.98	4340	<1	<1	26	26	2	7	1

								7440-70-2	7439-95-4	7440-23-5	7440-09-7	7429-90-5	7440-38-2	7440-41-7	7440-39-3	7440-43-9	7440-47-3
								ED093F: Dissolved Major Cations									
Workgroup:	**Project name/number:**							**Ca**	**Mg**	**Na**	**K**	**Al**	**As**	**Be**	**Ba**	**Cd**	**Cr**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**1**	**1**	**1**	**1**	**0.01**	**0.001**	**0.001**	**0.001**	**0.0001**	**0.001**
ANZECC freshwater Guidelines												**55**	**24**			**0.2**	
EP1207918016	21/09/2012	EP1201381008	NS0077	0	2	oxide	non mineralised					0.04	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207918015	21/09/2012	EP1201381007	NS0077	8	10	oxide	non mineralised					0.03	<0.001	<0.001	0.001	<0.0001	<0.001
EP1207918002	21/09/2012	EP1201378041	NS0077	20	22	oxide	non mineralised					0.07	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207918003	21/09/2012	EP1201378042	NS0077	28	30	oxide	non mineralised					0.13	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207918001	21/09/2012	EP1201378014	NS0077	178	180	south	mineralised					0.14	<0.001	<0.001	0.006	<0.0001	<0.001
EP1207918007	21/09/2012	EP1201380010	NS0078	0	2	oxide	non mineralised					0.19	0.001	<0.001	0.002	<0.0001	<0.001
EP1207918008	21/09/2012	EP1201380011	NS0078	8	10	oxide	non mineralised	<1	<1	4	<1	0.15	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207918019	21/09/2012	EP1201381048	NS0078	20	22	oxide	non mineralised					0.13	<0.001	<0.001	0.001	<0.0001	<0.001
EP1207918018	21/09/2012	EP1201381045	NS0078	28	30	oxide	non mineralised					0.06	<0.001	<0.001	0.008	<0.0001	<0.001
EP1207918010	21/09/2012	EP1201380028	NS0078	80	82	footwall	non mineralised					0.03	<0.001	<0.001	0.003	<0.0001	<0.001
EP1207918011	21/09/2012	EP1201380030	NS0078	276	278	footwall	non mineralised	4	16	18	10	0.68	<0.001	0.003	<0.001	0.0025	<0.001
EP1207918022	21/09/2012	EP1201382031	NS0079	94	96	south	non mineralised					<0.01	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207918006	21/09/2012	EP1201379047	NS0083	158	160	footwall	non mineralised					0.05	0.001	<0.001	0.006	<0.0001	<0.001
EP1207919012	21/09/2012	EP1201527006	NS0084	140	142	hangingwall	non mineralised	15	22	11	<1	0.04	<0.001	<0.001	0.002	<0.0001	<0.001
EP1207919020	21/09/2012	EP1201528043	NS0084	158	160	hangingwall	non mineralised	15	24	2	4	0.03	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919013	21/09/2012	EP1201527007	NS0084	190	192	hangingwall	mineralised					0.20	<0.001	<0.001	0.002	<0.0001	<0.001
EP1207897044	29/05/2012	PE065689.087	NS0084	270	272	hangingwall	non mineralised	3	2	25	<1	0.16	<0.001	<0.001	0.014	<0.0001	<0.001
EP1207918025	21/09/2012	EP1201383010	NS0085	0	2	oxide	non mineralised					0.54	0.002	<0.001	0.007	<0.0001	<0.001
EP1207918027	21/09/2012	EP1201383012	NS0085	10	12	oxide	non mineralised					0.27	<0.001	<0.001	0.002	<0.0001	<0.001
EP1207918026	21/09/2012	EP1201383011	NS0085	18	20	oxide	non mineralised					0.06	<0.001	<0.001	0.001	<0.0001	<0.001
EP1207919004	21/09/2012	EP1201384006	NS0085	30	32	oxide	non mineralised					0.03	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919003	21/09/2012	EP1201384005	NS0085	58	60	south	mineralised					0.09	<0.001	<0.001	0.001	<0.0001	<0.001
EP1207919005	21/09/2012	EP1201384015	NS0085	90	92	south	mineralised					<0.01	<0.001	<0.001	0.012	<0.0001	<0.001
EP1207919002	21/09/2012	EP1201384003	NS0085	208	210	south	mineralised					0.04	<0.001	<0.001	0.004	<0.0001	<0.001
EP1207918029	21/09/2012	EP1201383045	NS0086	8	10	oxide	non mineralised	<1	<1	1	<1	0.26	0.001	<0.001	0.012	<0.0001	<0.001
EP1207919001	21/09/2012	EP1201383046	NS0086	28	30	oxide	non mineralised	<1	<1	3	<1	0.18	0.001	<0.001	0.011	<0.0001	<0.001
EP1207919014	21/09/2012	EP1201527028	NS0087	8	10	oxide	non mineralised					0.07	<0.001	<0.001	0.004	<0.0001	<0.001
EP1207919016	21/09/2012	EP1201527032	NS0087	88	90	footwall	non mineralised	9	8	10	2	0.06	0.001	<0.001	0.013	<0.0001	<0.001
EP1207918017	21/09/2012	EP1201381013	NS0087	380	382	south	mineralised					0.02	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919038	21/09/2012	EP1201527035	NS0087									0.02	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207918021	21/09/2012	EP1201382020	NS0088	0	2	oxide	non mineralised					0.13	<0.001	<0.001	0.003	<0.0001	<0.001
EP1207918020	21/09/2012	EP1201382016	NS0088	8	10	oxide	non mineralised					0.03	<0.001	<0.001	0.002	<0.0001	<0.001

								7440-70-2	7439-95-4	7440-23-5	7440-09-7	7429-90-5	7440-38-2	7440-41-7	7440-39-3	7440-43-9	7440-47-3
								ED093F: Dissolved Major Cations									
Workgroup:	**Project name/number:**							**Ca**	**Mg**	**Na**	**K**	**Al**	**As**	**Be**	**Ba**	**Cd**	**Cr**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**1**	**1**	**1**	**1**	**0.01**	**0.001**	**0.001**	**0.001**	**0.0001**	**0.001**
ANZECC freshwater Guidelines												**55**	**24**			**0.2**	
EP1207918030	21/09/2012	EP1201382019	NS0088	108	110	north	non mineralised					0.06	<0.001	<0.001	0.018	<0.0001	<0.001
EP1207918032	21/09/2012	EP1201382001	NS0088	280	282	north	non mineralised					0.02	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919019	21/09/2012	EP1201528018	NS0089	0	2	oxide	non mineralised	1	2	2	<1	0.03	<0.001	<0.001	0.004	<0.0001	<0.001
EP1207919018	21/09/2012	EP1201528003	NS0089	60	62	oxide	non mineralised					0.08	<0.001	<0.001	0.004	<0.0001	<0.001
EP1207919017	21/09/2012	EP1201528001	NS0089	88	90	oxide	non mineralised					<0.01	<0.001	<0.001	0.002	<0.0001	<0.001
EP1207919025	21/09/2012	EP1201529040	NS0089	128	130	north	non mineralised	10	23	1	1	0.19	<0.001	<0.001	0.005	<0.0001	<0.001
EP1207919026	21/09/2012	EP1201529045	NS0089	178	180	north	non mineralised	11	38	1	5	0.21	<0.001	<0.001	0.008	<0.0001	<0.001
EP1207918034	21/09/2012	EP1201529050	NS0089	210	212	north	non mineralised					0.10	<0.001	<0.001	0.007	<0.0001	<0.001
EP1207918035	21/09/2012	EP1201526049	NS0089	268	270	north	mineralised					0.24	<0.001	<0.001	0.002	<0.0001	<0.001
EP1207897043	29/05/2012	PE065689.080	NS0089	360	362	north	mineralised	10	9	7	<1	0.01	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919037	21/09/2012	EP1201526047	NS0089			north	non mineralised					<0.01	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919023	21/09/2012	EP1201529016	NS0090	0	2	oxide	non mineralised	<1	<1	1	<1	0.20	<0.001	<0.001	0.003	<0.0001	<0.001
EP1207919022	21/09/2012	EP1201529015	NS0090	8	10	oxide	non mineralised	<1	<1	2	<1	<0.01	<0.001	<0.001	0.061	<0.0001	<0.001
EP1207919024	21/09/2012	EP1201529017	NS0090	20	22	oxide	non mineralised	<1	<1	1	<1	0.08	<0.001	<0.001	0.002	<0.0001	<0.001
EP1207919021	21/09/2012	EP1201529008	NS0090	190	192	oxide	mineralised					0.08	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919033	21/09/2012	EP1201531001	NS0090	268	270	south	mineralised					0.05	<0.001	<0.001	0.008	<0.0001	<0.001
EP1207918005	21/09/2012	EP1201379046	NS0091					19	57	4	4	<0.01	<0.001	<0.001	0.042	<0.0001	<0.001
EP1207918024	21/09/2012	EP1201383007	NS0092	40	42	footwall	non mineralised	11	12	4	2	0.42	<0.001	<0.001	0.005	<0.0001	<0.001
EP1207918023	21/09/2012	EP1201383006	NS0092	48	50	footwall	non mineralised					<0.01	<0.001	<0.001	0.051	<0.0001	<0.001
EP1207918028	21/09/2012	EP1201383026	NS0092	158	160	south	mineralised					0.02	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207918004	21/09/2012	EP1201379013	NS0093	216	218	south	mineralised					0.24	<0.001	<0.001	0.003	<0.0001	<0.001
EP1207897031	29/05/2012	PE065688.026	NS0094	28	30	oxide	non mineralised	2	<1	11	<1	0.04	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919031	21/09/2012	EP1201530029	NS0094	160	162	south	mineralised					0.15	0.002	<0.001	0.002	<0.0001	<0.001
EP1207897029	29/05/2012	PE065688.007	NS0095	30	32	oxide	non mineralised	2	<1	9	<1	1.26	<0.001	<0.001	0.003	<0.0001	0.001
EP1207897030	29/05/2012	PE065688.008	NS0095	38	40	oxide	non mineralised	2	<1	7	<1	0.08	<0.001	<0.001	0.002	<0.0001	<0.001
EP1207897027	29/05/2012	PE065687.088	NS0096	20	22	oxide	non mineralised	2	<1	12	<1	0.05	<0.001	<0.001	<0.001	0.0014	<0.001
EP1207897028	29/05/2012	PE065687.093	NS0096	70	72	south	mineralised	5	2	17	<1	0.03	<0.001	<0.001	0.002	<0.0001	<0.001
EP1207897026	29/05/2012	PE065687.086	NS0096	120	122	south	mineralised	4	3	16	<1	<0.01	<0.001	<0.001	0.014	<0.0001	<0.001
EP1207897025	29/05/2012	PE065687.081	NS0096	230	232	south	mineralised	3	2	26	<1	0.04	<0.001	<0.001	0.002	<0.0001	<0.001
EP1207897032	29/05/2012	PE065688.042	NS0097	28	30	oxide	non mineralised	3	1	12	<1	0.35	<0.001	<0.001	1.13	<0.0001	0.002
EP1207897033	29/05/2012	PE065688.043	NS0097	40	42	south	non mineralised	12	32	12	<1	0.43	<0.001	<0.001	1.36	<0.0001	0.002
EP1207897022	29/05/2012	PE065687.058	NS0098	0	2	oxide	non mineralised	2	<1	6	<1	0.03	<0.001	<0.001	1.24	<0.0001	<0.001

								7440-70-2	7439-95-4	7440-23-5	7440-09-7	7429-90-5	7440-38-2	7440-41-7	7440-39-3	7440-43-9	7440-47-3
								ED093F: Dissolved Major Cations									
Workgroup:	**Project name/number:**							**Ca**	**Mg**	**Na**	**K**	**Al**	**As**	**Be**	**Ba**	**Cd**	**Cr**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**1**	**1**	**1**	**1**	**0.01**	**0.001**	**0.001**	**0.001**	**0.0001**	**0.001**
ANZECC freshwater Guidelines												**55**	**24**			**0.2**	
EP1207897021	29/05/2012	PE065687.056	NS0098	20	22	oxide	non mineralised	2	<1	8	<1	0.01	<0.001	<0.001	0.004	<0.0001	<0.001
EP1207897023	29/05/2012	PE065687.060	NS0098	58	60	hangingwall	mineralised	5	4	8	<1	0.04	<0.001	<0.001	0.011	<0.0001	<0.001
EP1207897024	29/05/2012	PE065687.065	NS0098	180	182	hangingwall	mineralised	6	4	12	<1	0.11	<0.001	<0.001	0.009	<0.0001	<0.001
EP1207918009	21/09/2012	EP1201380025	NS0100	78	80	south	mineralised	3	8	11	3	0.02	<0.001	<0.001	0.027	<0.0001	<0.001
EP1207919029	21/09/2012	EP1201530012	NS0106	8	10	oxide	non mineralised					0.28	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207918013	21/09/2012	EP1201380049	NS0106	20	22	oxide	non mineralised					0.11	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919027	21/09/2012	EP1201530008	NS0106	28	30	oxide	non mineralised					0.14	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919028	21/09/2012	EP1201530010	NS0106	48	50	south	mineralised					<0.01	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207918014	21/09/2012	EP1201380050	NS0106	92	94	south	mineralised	9	19	6	2	0.04	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207918012	21/09/2012	EP1201380046	NS0106					<1	<1	4	<1	<0.01	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919011	21/09/2012	EP1201384039	NS0107	120	122	hangingwall	non mineralised	2	17	1	<1	0.10	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919008	21/09/2012	EP1201384031	NS0107	128	130	hangingwall	non mineralised	<1	8	1	<1	0.11	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919010	21/09/2012	EP1201384035	NS0107	140	142	hangingwall	non mineralised	30	17	1	1	0.01	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919009	21/09/2012	EP1201384033	NS0107	148	150	hangingwall	non mineralised	2	6	1	<1	0.13	0.002	<0.001	<0.001	<0.0001	<0.001
EP1207919006	21/09/2012	EP1201384028	NS0107	160	162	hangingwall	non mineralised	2	6	1	<1	0.04	0.001	<0.001	0.010	<0.0001	<0.001
EP1207919007	21/09/2012	EP1201384029	NS0107	170	172			30	15	1	1	0.08	0.002	<0.001	0.002	<0.0001	<0.001
EP1207919034	21/09/2012	EP1201384022	NS0107									0.04	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919035	21/09/2012	EP1201384025	NS0107									0.04	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919036	21/09/2012	EP1201384036	NS0107									0.04	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207919030	21/09/2012	EP1201530028	NS0108	176	178	south	mineralised					0.08	<0.001	<0.001	0.003	<0.0001	<0.001
EP1207897036	29/05/2012	PE065688.079	NS0113	140	142	footwall	non mineralised	4	6	20	2	0.11	<0.001	<0.001	<0.001	0.0014	<0.001
EP1207897034	29/05/2012	PE065688.066	NS0113	158	160	footwall	non mineralised	4	7	9	<1	0.07	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207897035	29/05/2012	PE065688.070	NS0113	198	200	footwall	non mineralised	7	6	10	<1	0.05	<0.001	<0.001	<0.001	0.0008	<0.001
EP1207897040	29/05/2012	PE065689.057	NS0116	108	110	footwall	non mineralised	4	2	18	1	0.44	<0.001	<0.001	<0.001	0.0013	<0.001
EP1207897041	29/05/2012	PE065689.063	NS0116	130	132	footwall	non mineralised	6	2	21	1	0.06	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207897039	29/05/2012	PE065689.041	NS0117	190	192	footwall	mineralised	7	3	21	1	0.12	<0.001	<0.001	0.001	<0.0001	<0.001
EP1207897037	29/05/2012	PE065688.082	NS0118	140	142	hangingwall	non mineralised	5	8	7	<1	0.13	<0.001	<0.001	0.023	<0.0001	<0.001
EP1207897038	29/05/2012	PE065689.019	NS0120	206	208			5	2	16	<1	0.15	<0.001	<0.001	0.008	<0.0001	<0.001
EP1207897018	29/05/2012	PE065687.014	NS0124	130	132	footwall	non mineralised	3	1	38	2	0.14	<0.001	<0.001	0.002	<0.0001	<0.001
EP1207897042	29/05/2012	PE065689.072	NS0128					5	7	8	<1	0.04	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207897007	29/05/2012	PE065686.003	NS0152	78	80	footwall	non mineralised	13	5	8	<1	0.41	<0.001	<0.001	0.002	<0.0001	<0.001

								7440-70-2	7439-95-4	7440-23-5	7440-09-7	7429-90-5	7440-38-2	7440-41-7	7440-39-3	7440-43-9	7440-47-3
								ED093F: Dissolved Major Cations									
Workgroup:	**Project name/number:**							**Ca**	**Mg**	**Na**	**K**	**Al**	**As**	**Be**	**Ba**	**Cd**	**Cr**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**1**	**1**	**1**	**1**	**0.01**	**0.001**	**0.001**	**0.001**	**0.0001**	**0.001**
ANZECC freshwater Guidelines												**55**	**24**			**0.2**	
EP1207897008	29/05/2012	PE065686.007	NS0152	120	122	footwall	mineralised	5	2	21	<1	0.09	0.003	<0.001	0.003	<0.0001	<0.001
EP1207897006	29/05/2012	PE065685.098	NS0152	244	246	footwall		6	1	28	<1	0.11	0.002	<0.001	0.002	<0.0001	<0.001
EP1207897010	29/05/2012	PE065686.021	NS0153	98	100	oxide		4	2	11	<1	0.05	<0.001	<0.001	0.002	<0.0001	<0.001
EP1207897009	29/05/2012	PE065686.020	NS0153	168	170	hangingwall		7	3	10	<1	0.05	0.001	<0.001	<0.001	<0.0001	<0.001
EP1207897011	29/05/2012	PE065686.028	NS0153	200	202	hangingwall		6	32	11	1	0.10	<0.001	<0.001	0.007	<0.0001	<0.001
EP1207897012	29/05/2012	PE065686.032	NS0153	220	222	hangingwall		6	5	8	2	<0.01	0.001	<0.001	0.006	<0.0001	<0.001
EP1207897015	29/05/2012	PE065686.040	NS0154	18	20	oxide		2	<1	9	<1	0.09	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207897014	29/05/2012	PE065686.037	NS0154	30	32	south		4	2	15	<1	0.01	0.001	<0.001	<0.001	<0.0001	<0.001
EP1207897013	29/05/2012	PE065686.035	NS0154	38	40	south		5	2	16	1	0.06	0.002	<0.001	0.005	<0.0001	<0.001
EP1207897016	29/05/2012	PE065686.054	NS0154	200	202	footwall		3	1	25	<1	0.11	<0.001	<0.001	0.002	<0.0001	<0.001
EP1207897019	29/05/2012	PE065687.035	NS0155	100	102	footwall		3	<1	25	<1	0.01	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207897020	29/05/2012	PE065687.036	NS0155	108	110	footwall		4	2	21	<1	<0.01	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207897002	29/05/2012	PE065685.046	NS0157	130	132	hangingwall		4	2	9	<1	0.09	0.002	<0.001	0.008	<0.0001	<0.001
EP1207897005	29/05/2012	PE065685.065	NS0158	66	68	footwall		7	3	15	<1	<0.01	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207897004	29/05/2012	PE065685.064	NS0158	110	112	north		8	3	6	<1	0.22	<0.001	<0.001	<0.001	<0.0001	<0.001
EP1207897003	29/05/2012	PE065685.050	NS0158	178	180	north		7	3	6	<1	0.07	0.003	<0.001	0.002	<0.0001	<0.001
EP1207897017	29/05/2012	PE065686.068	NS0160	58	60	footwall		4	2	21	<1	0.05	0.002	<0.001	<0.001	<0.0001	<0.001
EP1207897001	29/05/2012	PE065685.007	NS0165	100	102	hangingwall		6	3	5	<1	0.01	<0.001	<0.001	<0.001	<0.0001	<0.001

								7440-48-4	7440-50-8	7439-92-1	7439-96-5	7440-02-0	7782-49-2	7440-62-2	7440-66-6	7439-89-6	7439-97-6
									EG020W: Water Leachable Metals by ICP MS								EG035T: Total Recoverable Mercury by FIMS
Workgroup:	**Project name/number:**							**Co**	**Cu**	**Pb**	**Mn**	**Ni**	**Se**	**V**	**Zn**	**Fe**	**Hg**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/kg**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.01**	**0.01**	**0.005**	**0.05**	**0.1**
ANZECC freshwater Guidelines									**1.4**	**3.4**	**1900**	**11**	**5**		**8**	**300**	**0.06**
EP1207918016	21/09/2012	EP1201381008	NS0077	0	2	oxide	non mineralised	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918015	21/09/2012	EP1201381007	NS0077	8	10	oxide	non mineralised	<0.001	<0.001	<0.001	0.012	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918002	21/09/2012	EP1201378041	NS0077	20	22	oxide	non mineralised	<0.001	<0.001	<0.001	0.006	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918003	21/09/2012	EP1201378042	NS0077	28	30	oxide	non mineralised	<0.001	<0.001	<0.001	0.006	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918001	21/09/2012	EP1201378014	NS0077	178	180	south	mineralised	<0.001	<0.001	<0.001	0.005	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918007	21/09/2012	EP1201380010	NS0078	0	2	oxide	non mineralised	<0.001	<0.001	<0.001	0.001	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918008	21/09/2012	EP1201380011	NS0078	8	10	oxide	non mineralised	<0.001	<0.001	<0.001	0.005	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918019	21/09/2012	EP1201381048	NS0078	20	22	oxide	non mineralised	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	0.05	<0.0001
EP1207918018	21/09/2012	EP1201381045	NS0078	28	30	oxide	non mineralised	<0.001	<0.001	<0.001	0.010	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918010	21/09/2012	EP1201380028	NS0078	80	82	footwall	non mineralised	<0.001	<0.001	<0.001	0.012	<0.001	<0.01	<0.01	<0.005	0.11	<0.0001
EP1207918011	21/09/2012	EP1201380030	NS0078	276	278	footwall	non mineralised	0.091	0.012	<0.001	5.37	1.38	<0.01	<0.01	0.137	4.19	<0.0001
EP1207918022	21/09/2012	EP1201382031	NS0079	94	96	south	non mineralised	<0.001	<0.001	<0.001	0.080	0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918006	21/09/2012	EP1201379047	NS0083	158	160	footwall	non mineralised	<0.001	<0.001	<0.001	0.007	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207919012	21/09/2012	EP1201527006	NS0084	140	142	hangingwall	non mineralised	<0.001	<0.001	<0.001	0.008	<0.001	<0.01	<0.01	<0.005	0.07	<0.0001
EP1207919020	21/09/2012	EP1201528043	NS0084	158	160	hangingwall	non mineralised	<0.001	<0.001	<0.001	0.011	<0.001	<0.01	<0.01	<0.005	0.12	<0.0001
EP1207919013	21/09/2012	EP1201527007	NS0084	190	192	hangingwall	mineralised	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	0.22	<0.0001
EP1207897044	29/05/2012	PE065689.087	NS0084	270	272	hangingwall	non mineralised	<0.001	<0.001	<0.001	0.003	<0.001	<0.01	<0.01	<0.005	0.09	<0.0001
EP1207918025	21/09/2012	EP1201383010	NS0085	0	2	oxide	non mineralised	<0.001	<0.001	<0.001	0.001	<0.001	<0.01	<0.01	<0.005	0.27	<0.0001
EP1207918027	21/09/2012	EP1201383012	NS0085	10	12	oxide	non mineralised	<0.001	<0.001	<0.001	0.001	<0.001	<0.01	<0.01	<0.005	0.10	<0.0001
EP1207918026	21/09/2012	EP1201383011	NS0085	18	20	oxide	non mineralised	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	0.10	<0.0001
EP1207919004	21/09/2012	EP1201384006	NS0085	30	32	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	0.07	<0.0001
EP1207919003	21/09/2012	EP1201384005	NS0085	58	60	south	mineralised	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207919005	21/09/2012	EP1201384015	NS0085	90	92	south	mineralised	<0.001	<0.001	<0.001	0.191	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207919002	21/09/2012	EP1201384003	NS0085	208	210	south	mineralised	<0.001	<0.001	<0.001	0.005	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918029	21/09/2012	EP1201383045	NS0086	8	10	oxide	non mineralised	<0.001	<0.001	<0.001	0.003	<0.001	<0.01	<0.01	<0.005	0.08	<0.0001
EP1207919001	21/09/2012	EP1201383046	NS0086	28	30	oxide	non mineralised	<0.001	<0.001	<0.001	0.009	<0.001	<0.01	<0.01	<0.005	0.07	<0.0001
EP1207919014	21/09/2012	EP1201527028	NS0087	8	10	oxide	non mineralised	<0.001	<0.001	<0.001	0.036	<0.001	<0.01	<0.01	<0.005	0.17	<0.0001
EP1207919016	21/09/2012	EP1201527032	NS0087	88	90	footwall	non mineralised	<0.001	<0.001	<0.001	0.004	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918017	21/09/2012	EP1201381013	NS0087	380	382	south	mineralised	<0.001	<0.001	<0.001	0.022	<0.001	<0.01	<0.01	<0.005	0.16	<0.0001
EP1207919038	21/09/2012	EP1201527035	NS0087					<0.001	<0.001	<0.001	0.028	<0.001	<0.01	<0.01	<0.005	0.23	<0.0001
EP1207918021	21/09/2012	EP1201382020	NS0088	0	2	oxide	non mineralised	<0.001	<0.001	<0.001	0.042	<0.001	<0.01	<0.01	<0.005	0.44	<0.0001
EP1207918020	21/09/2012	EP1201382016	NS0088	8	10	oxide	non mineralised	<0.001	<0.001	<0.001	0.034	0.001	<0.01	<0.01	<0.005	0.27	<0.0001

								7440-48-4	7440-50-8	7439-92-1	7439-96-5	7440-02-0	7782-49-2	7440-62-2	7440-66-6	7439-89-6	7439-97-6
									EG020W: Water Leachable Metals by ICP MS								EG035T: Total Recoverable Mercury by FIMS
Workgroup:	**Project name/number:**							**Co**	**Cu**	**Pb**	**Mn**	**Ni**	**Se**	**V**	**Zn**	**Fe**	**Hg**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/kg**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.01**	**0.01**	**0.005**	**0.05**	**0.1**
ANZECC freshwater Guidelines									**1.4**	**3.4**	**1900**	**11**	**5**		**8**	**300**	**0.06**
EP1207918030	21/09/2012	EP1201382019	NS0088	108	110	north	non mineralised	0.051	0.007	<0.001	5.20	0.105	<0.01	<0.01	0.019	0.20	<0.0001
EP1207918032	21/09/2012	EP1201382001	NS0088	280	282	north	non mineralised	<0.001	<0.001	<0.001	0.014	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207919019	21/09/2012	EP1201528018	NS0089	0	2	oxide	non mineralised	<0.001	<0.001	<0.001	0.008	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207919018	21/09/2012	EP1201528003	NS0089	60	62	oxide	non mineralised	<0.001	0.001	<0.001	0.005	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207919017	21/09/2012	EP1201528001	NS0089	88	90	oxide	non mineralised	0.002	0.001	<0.001	0.379	0.004	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207919025	21/09/2012	EP1201529040	NS0089	128	130	north	non mineralised	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	0.06	<0.0001
EP1207919026	21/09/2012	EP1201529045	NS0089	178	180	north	non mineralised	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918034	21/09/2012	EP1201529050	NS0089	210	212	north	non mineralised	<0.001	<0.001	<0.001	0.003	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918035	21/09/2012	EP1201526049	NS0089	268	270	north	mineralised	<0.001	<0.001	<0.001	0.001	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897043	29/05/2012	PE065689.080	NS0089	360	362	north	mineralised	<0.001	<0.001	<0.001	0.036	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207919037	21/09/2012	EP1201526047	NS0089			north	non mineralised	<0.001	<0.001	<0.001	0.054	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207919023	21/09/2012	EP1201529016	NS0090	0	2	oxide	non mineralised	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	0.05	<0.0001
EP1207919022	21/09/2012	EP1201529015	NS0090	8	10	oxide	non mineralised	<0.001	0.001	<0.001	0.716	0.004	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207919024	21/09/2012	EP1201529017	NS0090	20	22	oxide	non mineralised	<0.001	<0.001	<0.001	0.017	<0.001	<0.01	<0.01	<0.005	0.39	<0.0001
EP1207919021	21/09/2012	EP1201529008	NS0090	190	192	oxide	mineralised	<0.001	<0.001	<0.001	0.038	<0.001	<0.01	<0.01	<0.005	0.64	<0.0001
EP1207919033	21/09/2012	EP1201531001	NS0090	268	270	south	mineralised	<0.001	<0.001	<0.001	0.004	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918005	21/09/2012	EP1201379046	NS0091					<0.001	<0.001	<0.001	0.379	0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918024	21/09/2012	EP1201383007	NS0092	40	42	footwall	non mineralised	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918023	21/09/2012	EP1201383006	NS0092	48	50	footwall	non mineralised	<0.001	<0.001	<0.001	0.001	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918028	21/09/2012	EP1201383026	NS0092	158	160	south	mineralised	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918004	21/09/2012	EP1201379013	NS0093	216	218	south	mineralised	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	0.18	<0.0001
EP1207897031	29/05/2012	PE065688.026	NS0094	28	30	oxide	non mineralised	<0.001	<0.001	<0.001	0.003	<0.001	<0.01	<0.01	<0.005	0.13	<0.0001
EP1207919031	21/09/2012	EP1201530029	NS0094	160	162	south	mineralised	<0.001	<0.001	<0.001	0.023	<0.001	<0.01	<0.01	<0.005	1.18	<0.0001
EP1207897029	29/05/2012	PE065688.007	NS0095	30	32	oxide	non mineralised	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	0.59	<0.0001
EP1207897030	29/05/2012	PE065688.008	NS0095	38	40	oxide	non mineralised	<0.001	<0.001	<0.001	0.037	<0.001	<0.01	<0.01	<0.005	0.47	<0.0001
EP1207897027	29/05/2012	PE065687.088	NS0096	20	22	oxide	non mineralised	0.032	<0.001	<0.001	9.40	0.257	<0.01	<0.01	0.011	1.30	<0.0001
EP1207897028	29/05/2012	PE065687.093	NS0096	70	72	south	mineralised	<0.001	<0.001	<0.001	0.012	<0.001	<0.01	<0.01	<0.005	0.07	<0.0001
EP1207897026	29/05/2012	PE065687.086	NS0096	120	122	south	mineralised	<0.001	<0.001	<0.001	0.006	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897025	29/05/2012	PE065687.081	NS0096	230	232	south	mineralised	<0.001	<0.001	<0.001	0.007	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897032	29/05/2012	PE065688.042	NS0097	28	30	oxide	non mineralised	<0.001	0.092	<0.001	0.003	0.002	<0.01	<0.01	0.409	1.37	<0.0001
EP1207897033	29/05/2012	PE065688.043	NS0097	40	42	south	non mineralised	<0.001	0.063	<0.001	0.004	0.001	<0.01	<0.01	0.595	1.81	<0.0001
EP1207897022	29/05/2012	PE065687.058	NS0098	0	2	oxide	non mineralised	<0.001	<0.001	<0.001	0.001	<0.001	<0.01	<0.01	0.436	0.21	<0.0001

								7440-48-4	7440-50-8	7439-92-1	7439-96-5	7440-02-0	7782-49-2	7440-62-2	7440-66-6	7439-89-6	7439-97-6
									EG020W: Water Leachable Metals by ICP MS								EG035T: Total Recoverable Mercury by FIMS
Workgroup:	**Project name/number:**							**Co**	**Cu**	**Pb**	**Mn**	**Ni**	**Se**	**V**	**Zn**	**Fe**	**Hg**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/kg**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.01**	**0.01**	**0.005**	**0.05**	**0.1**
ANZECC freshwater Guidelines									**1.4**	**3.4**	**1900**	**11**	**5**		**8**	**300**	**0.06**
EP1207897021	29/05/2012	PE065687.056	NS0098	20	22	oxide	non mineralised	<0.001	<0.001	<0.001	0.025	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897023	29/05/2012	PE065687.060	NS0098	58	60	hangingwall	mineralised	<0.001	<0.001	<0.001	0.014	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897024	29/05/2012	PE065687.065	NS0098	180	182	hangingwall	mineralised	<0.001	<0.001	<0.001	0.004	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918009	21/09/2012	EP1201380025	NS0100	78	80	south	mineralised	<0.001	<0.001	<0.001	0.015	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207919029	21/09/2012	EP1201530012	NS0106	8	10	oxide	non mineralised	<0.001	<0.001	<0.001	0.031	<0.001	<0.01	<0.01	<0.005	0.20	<0.0001
EP1207918013	21/09/2012	EP1201380049	NS0106	20	22	oxide	non mineralised	<0.001	0.001	<0.001	0.006	<0.001	<0.01	<0.01	<0.005	0.47	<0.0001
EP1207919027	21/09/2012	EP1201530008	NS0106	28	30	oxide	non mineralised	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	0.35	<0.0001
EP1207919028	21/09/2012	EP1201530010	NS0106	48	50	south	mineralised	<0.001	<0.001	<0.001	0.002	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207918014	21/09/2012	EP1201380050	NS0106	92	94	south	mineralised	<0.001	<0.001	<0.001	0.004	<0.001	<0.01	<0.01	<0.005	0.48	<0.0001
EP1207918012	21/09/2012	EP1201380046	NS0106					<0.001	<0.001	<0.001	0.069	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207919011	21/09/2012	EP1201384039	NS0107	120	122	hangingwall	non mineralised	<0.001	<0.001	<0.001	0.004	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207919008	21/09/2012	EP1201384031	NS0107	128	130	hangingwall	non mineralised	<0.001	<0.001	<0.001	0.006	<0.001	<0.01	<0.01	<0.005	0.15	<0.0001
EP1207919010	21/09/2012	EP1201384035	NS0107	140	142	hangingwall	non mineralised	<0.001	<0.001	<0.001	0.028	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207919009	21/09/2012	EP1201384033	NS0107	148	150	hangingwall	non mineralised	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	0.44	<0.0001
EP1207919006	21/09/2012	EP1201384028	NS0107	160	162	hangingwall	non mineralised	<0.001	<0.001	<0.001	0.006	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207919007	21/09/2012	EP1201384029	NS0107	170	172			<0.001	<0.001	<0.001	0.009	<0.001	<0.01	<0.01	0.008	<0.05	<0.0001
EP1207919034	21/09/2012	EP1201384022	NS0107					<0.001	<0.001	<0.001	0.025	<0.001	<0.01	<0.01	<0.005	0.14	<0.0001
EP1207919035	21/09/2012	EP1201384025	NS0107					<0.001	<0.001	<0.001	0.007	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207919036	21/09/2012	EP1201384036	NS0107					<0.001	<0.001	<0.001	0.012	<0.001	<0.01	<0.01	<0.005	0.21	<0.0001
EP1207919030	21/09/2012	EP1201530028	NS0108	176	178	south	mineralised	<0.001	<0.001	<0.001	0.007	<0.001	<0.01	<0.01	0.020	0.24	<0.0001
EP1207897036	29/05/2012	PE065688.079	NS0113	140	142	footwall	non mineralised	0.169	0.145	<0.001	3.13	0.394	<0.01	<0.01	0.165	0.94	<0.0001
EP1207897034	29/05/2012	PE065688.066	NS0113	158	160	footwall	non mineralised	<0.001	<0.001	<0.001	0.071	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897035	29/05/2012	PE065688.070	NS0113	198	200	footwall	non mineralised	0.119	<0.001	<0.001	5.00	0.418	<0.01	<0.01	0.059	4.71	<0.0001
EP1207897040	29/05/2012	PE065689.057	NS0116	108	110	footwall	non mineralised	0.184	0.204	<0.001	1.42	0.474	<0.01	<0.01	0.161	1.21	<0.0001
EP1207897041	29/05/2012	PE065689.063	NS0116	130	132	footwall	non mineralised	<0.001	<0.001	<0.001	0.091	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897039	29/05/2012	PE065689.041	NS0117	190	192	footwall	mineralised	<0.001	<0.001	<0.001	0.015	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897037	29/05/2012	PE065688.082	NS0118	140	142	hangingwall	non mineralised	<0.001	<0.001	<0.001	0.005	<0.001	<0.01	<0.01	<0.005	0.08	<0.0001
EP1207897038	29/05/2012	PE065689.019	NS0120	206	208			<0.001	<0.001	<0.001	0.004	<0.001	<0.01	<0.01	<0.005	0.13	<0.0001
EP1207897018	29/05/2012	PE065687.014	NS0124	130	132	footwall	non mineralised	<0.001	<0.001	<0.001	0.008	<0.001	<0.01	<0.01	<0.005	0.14	<0.0001
EP1207897042	29/05/2012	PE065689.072	NS0128					<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	0.12	<0.0001
EP1207897007	29/05/2012	PE065686.003	NS0152	78	80	footwall	non mineralised	<0.001	<0.001	<0.001	0.010	<0.001	<0.01	<0.01	<0.005	0.86	<0.0001

								7440-48-4	7440-50-8	7439-92-1	7439-96-5	7440-02-0	7782-49-2	7440-62-2	7440-66-6	7439-89-6	7439-97-6
									EG020W: Water Leachable Metals by ICP MS								EG035T: Total Recoverable Mercury by FIMS
Workgroup:	**Project name/number:**							**Co**	**Cu**	**Pb**	**Mn**	**Ni**	**Se**	**V**	**Zn**	**Fe**	**Hg**
EP1202066	**Ex EP1201379 1384 1527 1528**							**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/kg**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.01**	**0.01**	**0.005**	**0.05**	**0.1**
ANZECC freshwater Guidelines									**1.4**	**3.4**	**1900**	**11**	**5**		**8**	**300**	**0.06**
EP1207897008	29/05/2012	PE065686.007	NS0152	120	122	footwall	mineralised	<0.001	<0.001	<0.001	0.001	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897006	29/05/2012	PE065685.098	NS0152	244	246	footwall		<0.001	<0.001	<0.001	0.010	<0.001	<0.01	<0.01	<0.005	0.56	<0.0001
EP1207897010	29/05/2012	PE065686.021	NS0153	98	100	oxide		<0.001	<0.001	<0.001	0.005	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897009	29/05/2012	PE065686.020	NS0153	168	170	hangingwall		<0.001	<0.001	<0.001	0.005	<0.001	<0.01	<0.01	<0.005	0.17	<0.0001
EP1207897011	29/05/2012	PE065686.028	NS0153	200	202	hangingwall		<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	0.10	<0.0001
EP1207897012	29/05/2012	PE065686.032	NS0153	220	222	hangingwall		0.012	<0.001	<0.001	0.613	0.015	<0.01	<0.01	<0.005	0.06	<0.0001
EP1207897015	29/05/2012	PE065686.040	NS0154	18	20	oxide		<0.001	<0.001	<0.001	0.012	<0.001	<0.01	<0.01	<0.005	0.12	<0.0001
EP1207897014	29/05/2012	PE065686.037	NS0154	30	32	south		<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897013	29/05/2012	PE065686.035	NS0154	38	40	south		<0.001	<0.001	<0.001	0.006	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897016	29/05/2012	PE065686.054	NS0154	200	202	footwall		<0.001	<0.001	<0.001	0.003	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897019	29/05/2012	PE065687.035	NS0155	100	102	footwall		<0.001	<0.001	<0.001	0.014	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897020	29/05/2012	PE065687.036	NS0155	108	110	footwall		<0.001	<0.001	<0.001	0.041	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897002	29/05/2012	PE065685.046	NS0157	130	132	hangingwall		<0.001	<0.001	<0.001	0.022	<0.001	<0.01	<0.01	<0.005	0.14	<0.0001
EP1207897005	29/05/2012	PE065685.065	NS0158	66	68	footwall		<0.001	<0.001	<0.001	0.047	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897004	29/05/2012	PE065685.064	NS0158	110	112	north		<0.001	<0.001	<0.001	0.031	<0.001	<0.01	<0.01	0.027	<0.05	<0.0001
EP1207897003	29/05/2012	PE065685.050	NS0158	178	180	north		<0.001	0.001	<0.001	0.017	<0.001	<0.01	<0.01	<0.005	0.10	<0.0001
EP1207897017	29/05/2012	PE065686.068	NS0160	58	60	footwall		<0.001	<0.001	<0.001	0.010	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001
EP1207897001	29/05/2012	PE065685.007	NS0165	100	102	hangingwall		<0.001	<0.001	<0.001	0.037	<0.001	<0.01	<0.01	<0.005	<0.05	<0.0001

								EN60: Bottle Leaching Procedure
Workgroup:	**Project name/number:**							**Final pH**
EP1202066	**Ex EP1201379 1384 1527 1528**							**pH Unit**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**0.1**
ANZECC freshwater Guidelines								
EP1207918016	21/09/2012	EP1201381008	NS0077	0	2	oxide	non mineralised	8.5
EP1207918015	21/09/2012	EP1201381007	NS0077	8	10	oxide	non mineralised	8.1
EP1207918002	21/09/2012	EP1201378041	NS0077	20	22	oxide	non mineralised	9.2
EP1207918003	21/09/2012	EP1201378042	NS0077	28	30	oxide	non mineralised	9.4
EP1207918001	21/09/2012	EP1201378014	NS0077	178	180	south	mineralised	9.2
EP1207918007	21/09/2012	EP1201380010	NS0078	0	2	oxide	non mineralised	9.7
EP1207918008	21/09/2012	EP1201380011	NS0078	8	10	oxide	non mineralised	8.7
EP1207918019	21/09/2012	EP1201381048	NS0078	20	22	oxide	non mineralised	9.6
EP1207918018	21/09/2012	EP1201381045	NS0078	28	30	oxide	non mineralised	8.9
EP1207918010	21/09/2012	EP1201380028	NS0078	80	82	footwall	non mineralised	8.9
EP1207918011	21/09/2012	EP1201380030	NS0078	276	278	footwall	non mineralised	4.0
EP1207918022	21/09/2012	EP1201382031	NS0079	94	96	south	non mineralised	6.4
EP1207918006	21/09/2012	EP1201379047	NS0083	158	160	footwall	non mineralised	9.4
EP1207919012	21/09/2012	EP1201527006	NS0084	140	142	hangingwall	non mineralised	8.8
EP1207919020	21/09/2012	EP1201528043	NS0084	158	160	hangingwall	non mineralised	8.2
EP1207919013	21/09/2012	EP1201527007	NS0084	190	192	hangingwall	mineralised	9.4
EP1207897044	29/05/2012	PE065689.087	NS0084	270	272	hangingwall	non mineralised	9.1
EP1207918025	21/09/2012	EP1201383010	NS0085	0	2	oxide	non mineralised	9.7
EP1207918027	21/09/2012	EP1201383012	NS0085	10	12	oxide	non mineralised	9.7
EP1207918026	21/09/2012	EP1201383011	NS0085	18	20	oxide	non mineralised	9.3
EP1207919004	21/09/2012	EP1201384006	NS0085	30	32	oxide	non mineralised	8.8
EP1207919003	21/09/2012	EP1201384005	NS0085	58	60	south	mineralised	8.1
EP1207919005	21/09/2012	EP1201384015	NS0085	90	92	south	mineralised	7.8
EP1207919002	21/09/2012	EP1201384003	NS0085	208	210	south	mineralised	8.0
EP1207918029	21/09/2012	EP1201383045	NS0086	8	10	oxide	non mineralised	9.4
EP1207919001	21/09/2012	EP1201383046	NS0086	28	30	oxide	non mineralised	9.4
EP1207919014	21/09/2012	EP1201527028	NS0087	8	10	oxide	non mineralised	8.4
EP1207919016	21/09/2012	EP1201527032	NS0087	88	90	footwall	non mineralised	9.6
EP1207918017	21/09/2012	EP1201381013	NS0087	380	382	south	mineralised	8.5
EP1207919038	21/09/2012	EP1201527035	NS0087					8.2
EP1207918021	21/09/2012	EP1201382020	NS0088	0	2	oxide	non mineralised	7.9
EP1207918020	21/09/2012	EP1201382016	NS0088	8	10	oxide	non mineralised	7.8

								EN60: Bottle Leaching Procedure
Workgroup:	**Project name/number:**							**Final pH**
EP1202066	**Ex EP1201379 1384 1527 1528**							**pH Unit**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**0.1**
ANZECC freshwater Guidelines								
EP1207918030	21/09/2012	EP1201382019	NS0088	108	110	north	non mineralised	4.9
EP1207918032	21/09/2012	EP1201382001	NS0088	280	282	north	non mineralised	6.7
EP1207919019	21/09/2012	EP1201528018	NS0089	0	2	oxide	non mineralised	7.7
EP1207919018	21/09/2012	EP1201528003	NS0089	60	62	oxide	non mineralised	8.2
EP1207919017	21/09/2012	EP1201528001	NS0089	88	90	oxide	non mineralised	7.5
EP1207919025	21/09/2012	EP1201529040	NS0089	128	130	north	non mineralised	8.5
EP1207919026	21/09/2012	EP1201529045	NS0089	178	180	north	non mineralised	8.2
EP1207918034	21/09/2012	EP1201529050	NS0089	210	212	north	non mineralised	9.0
EP1207918035	21/09/2012	EP1201526049	NS0089	268	270	north	mineralised	9.2
EP1207897043	29/05/2012	PE065689.080	NS0089	360	362	north	mineralised	8.3
EP1207919037	21/09/2012	EP1201526047	NS0089			north	non mineralised	8.0
EP1207919023	21/09/2012	EP1201529016	NS0090	0	2	oxide	non mineralised	9.4
EP1207919022	21/09/2012	EP1201529015	NS0090	8	10	oxide	non mineralised	6.6
EP1207919024	21/09/2012	EP1201529017	NS0090	20	22	oxide	non mineralised	5.9
EP1207919021	21/09/2012	EP1201529008	NS0090	190	192	oxide	mineralised	6.1
EP1207919033	21/09/2012	EP1201531001	NS0090	268	270	south	mineralised	8.5
EP1207918005	21/09/2012	EP1201379046	NS0091					7.1
EP1207918024	21/09/2012	EP1201383007	NS0092	40	42	footwall	non mineralised	9.4
EP1207918023	21/09/2012	EP1201383006	NS0092	48	50	footwall	non mineralised	7.0
EP1207918028	21/09/2012	EP1201383026	NS0092	158	160	south	mineralised	7.0
EP1207918004	21/09/2012	EP1201379013	NS0093	216	218	south	mineralised	9.1
EP1207897031	29/05/2012	PE065688.026	NS0094	28	30	oxide	non mineralised	8.7
EP1207919031	21/09/2012	EP1201530029	NS0094	160	162	south	mineralised	7.7
EP1207897029	29/05/2012	PE065688.007	NS0095	30	32	oxide	non mineralised	7.2
EP1207897030	29/05/2012	PE065688.008	NS0095	38	40	oxide	non mineralised	7.2
EP1207897027	29/05/2012	PE065687.088	NS0096	20	22	oxide	non mineralised	4.6
EP1207897028	29/05/2012	PE065687.093	NS0096	70	72	south	mineralised	6.1
EP1207897026	29/05/2012	PE065687.086	NS0096	120	122	south	mineralised	6.6
EP1207897025	29/05/2012	PE065687.081	NS0096	230	232	south	mineralised	9.1
EP1207897032	29/05/2012	PE065688.042	NS0097	28	30	oxide	non mineralised	7.8
EP1207897033	29/05/2012	PE065688.043	NS0097	40	42	south	non mineralised	7.9
EP1207897022	29/05/2012	PE065687.058	NS0098	0	2	oxide	non mineralised	7.3

								EN60: Bottle Leaching Procedure
Workgroup:	**Project name/number:**							**Final pH**
EP1202066	**Ex EP1201379 1384 1527 1528**							**pH Unit**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**0.1**
ANZECC freshwater Guidelines								
EP1207897021	29/05/2012	PE065687.056	NS0098	20	22	oxide	non mineralised	7.5
EP1207897023	29/05/2012	PE065687.060	NS0098	58	60	hangingwall	mineralised	7.6
EP1207897024	29/05/2012	PE065687.065	NS0098	180	182	hangingwall	mineralised	9.2
EP1207918009	21/09/2012	EP1201380025	NS0100	78	80	south	mineralised	8.6
EP1207919029	21/09/2012	EP1201530012	NS0106	8	10	oxide	non mineralised	6.8
EP1207918013	21/09/2012	EP1201380049	NS0106	20	22	oxide	non mineralised	6.8
EP1207919027	21/09/2012	EP1201530008	NS0106	28	30	oxide	non mineralised	6.6
EP1207919028	21/09/2012	EP1201530010	NS0106	48	50	south	mineralised	6.4
EP1207918014	21/09/2012	EP1201380050	NS0106	92	94	south	mineralised	6.3
EP1207918012	21/09/2012	EP1201380046	NS0106					7.5
EP1207919011	21/09/2012	EP1201384039	NS0107	120	122	hangingwall	non mineralised	8.6
EP1207919008	21/09/2012	EP1201384031	NS0107	128	130	hangingwall	non mineralised	6.6
EP1207919010	21/09/2012	EP1201384035	NS0107	140	142	hangingwall	non mineralised	7.8
EP1207919009	21/09/2012	EP1201384033	NS0107	148	150	hangingwall	non mineralised	6.1
EP1207919006	21/09/2012	EP1201384028	NS0107	160	162	hangingwall	non mineralised	8.9
EP1207919007	21/09/2012	EP1201384029	NS0107	170	172			9.1
EP1207919034	21/09/2012	EP1201384022	NS0107					6.3
EP1207919035	21/09/2012	EP1201384025	NS0107					9.1
EP1207919036	21/09/2012	EP1201384036	NS0107					7.0
EP1207919030	21/09/2012	EP1201530028	NS0108	176	178	south	mineralised	6.9
EP1207897036	29/05/2012	PE065688.079	NS0113	140	142	footwall	non mineralised	4.8
EP1207897034	29/05/2012	PE065688.066	NS0113	158	160	footwall	non mineralised	7.3
EP1207897035	29/05/2012	PE065688.070	NS0113	198	200	footwall	non mineralised	4.8
EP1207897040	29/05/2012	PE065689.057	NS0116	108	110	footwall	non mineralised	4.4
EP1207897041	29/05/2012	PE065689.063	NS0116	130	132	footwall	non mineralised	7.1
EP1207897039	29/05/2012	PE065689.041	NS0117	190	192	footwall	mineralised	8.1
EP1207897037	29/05/2012	PE065688.082	NS0118	140	142	hangingwall	non mineralised	8.9
EP1207897038	29/05/2012	PE065689.019	NS0120	206	208			9.3
EP1207897018	29/05/2012	PE065687.014	NS0124	130	132	footwall	non mineralised	9.3
EP1207897042	29/05/2012	PE065689.072	NS0128					6.9
EP1207897007	29/05/2012	PE065686.003	NS0152	78	80	footwall	non mineralised	7.4

								EN60: Bottle Leaching Procedure
Workgroup:	**Project name/number:**							**Final pH**
EP1202066	**Ex EP1201379 1384 1527 1528**							**pH Unit**
ALS Sample number:	**Sample date:**	**Client sample ID (1st):**	**Client sample ID (2nd):**	**From**	**To**	**Lithology**	**Mineralisation**	**0.1**
ANZECC freshwater Guidelines								
EP1207897008	29/05/2012	PE065686.007	NS0152	120	122	footwall	mineralised	9.2
EP1207897006	29/05/2012	PE065685.098	NS0152	244	246	footwall		8.1
EP1207897010	29/05/2012	PE065686.021	NS0153	98	100	oxide		7.6
EP1207897009	29/05/2012	PE065686.020	NS0153	168	170	hangingwall		7.8
EP1207897011	29/05/2012	PE065686.028	NS0153	200	202	hangingwall		7.5
EP1207897012	29/05/2012	PE065686.032	NS0153	220	222	hangingwall		6.6
EP1207897015	29/05/2012	PE065686.040	NS0154	18	20	oxide		7.2
EP1207897014	29/05/2012	PE065686.037	NS0154	30	32	south		7.7
EP1207897013	29/05/2012	PE065686.035	NS0154	38	40	south		9.2
EP1207897016	29/05/2012	PE065686.054	NS0154	200	202	footwall		7.8
EP1207897019	29/05/2012	PE065687.035	NS0155	100	102	footwall		7.7
EP1207897020	29/05/2012	PE065687.036	NS0155	108	110	footwall		7.6
EP1207897002	29/05/2012	PE065685.046	NS0157	130	132	hangingwall		9.3
EP1207897005	29/05/2012	PE065685.065	NS0158	66	68	footwall		8.2
EP1207897004	29/05/2012	PE065685.064	NS0158	110	112	north		8.2
EP1207897003	29/05/2012	PE065685.050	NS0158	178	180	north		9.4
EP1207897017	29/05/2012	PE065686.068	NS0160	58	60	footwall		9.3
EP1207897001	29/05/2012	PE065685.007	NS0165	100	102	hangingwall		8.6

Appendix H

Detailed test work sampling plan

Exploration Geology
87 Adelaide Terrace WA 6004
Phone: 08 6218 8888

Destination Address:
ALS Environmental Division
10 Hod Way, Malaga, WA, 6090

CLIENT: Fortescue Metals Group Ltd

CONTACT: Steven Pearce GHD, David Morgan GHD **PHONE NO:** Steven Pearce GHD (08) 6222 8811 or David Morgan GHD 08 6222 8133

PROJECT: MA Job No.: GHD_FMG_AMD_NorthStar

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david.morgan@ghd.com

INVOICE TO: Fortescue Metals Group Ltd.
Attn Glen Neeves
87 Adelaide Tce
Perth 6004 WA

Page Number: **Page 1/1**

SAMPLE IDENTIFICATION Sample Number	Hole ID	From	To	DATE SAMPLED	TIME SAMPLED	DISPATCH DATE	Strata		ANALYSIS REQUIRED: NAG Liquor	Kinetic NAG	ASLP Leach - Deionised	ALSP Leach - Weak acid	XRD	Metals Suite	ABCC Curve	Comments
PE065685.007	NS0165	100	102	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
PE065685.029	NS0159	116	118	Sample at lab	Sample at lab	Sample at lab	G						x	x	x	
PE065685.046	NS0157	130	132	Sample at lab	Sample at lab	Sample at lab	G				x			x		
PE065685.050	NS0158	178	180	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
PE065685.064	NS0158	110	112	Sample at lab	Sample at lab	Sample at lab	G				x		x	x		
PE065685.065	NS0158	66	68	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
PE065685.089	NS0152	148	150	Sample at lab	Sample at lab	Sample at lab	G							x	x	
PE065685.098	NS0152	244	246	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
PE065686.003	NS0152	78	80	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
PE065686.007	NS0152	120	122	Sample at lab	Sample at lab	Sample at lab	G				x			x	x	
PE065686.020	NS0153	168	170	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
PE065686.021	NS0153	98	100	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
PE065686.028	NS0153	200	202	Sample at lab	Sample at lab	Sample at lab	G		x	x	x		x	x		
PE065686.032	NS0153	220	222	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
PE065686.035	NS0154	38	40	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x	x	
PE065686.037	NS0154	30	32	Sample at lab	Sample at lab	Sample at lab	G				x			x		
PE065686.040	NS0154	18	20	Sample at lab	Sample at lab	Sample at lab	G				x			x	x	
PE065686.054	NS0154	200	202	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x	x	
PE065686.068	NS0160	58	60	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
PE065686.084	NS0122	150	152	Sample at lab	Sample at lab	Sample at lab	G						x	x		
PE065687.013	NS0124	118	120	Sample at lab	Sample at lab	Sample at lab	G							x	x	
PE065687.014	NS0124	130	132	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
PE065687.035	NS0155	100	102	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
PE065687.036	NS0155	108	110	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x		
PE065687.047	NS0155	210	212	Sample at lab	Sample at lab	Sample at lab	G						x	x	x	
PE065687.056	NS0098	20	22	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
PE065687.058	NS0098	0	2	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x	x	
PE065687.060	NS0098	58	60	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x	x	
PE065687.065	NS0098	180	182	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
PE065687.067	NS0098	108	110	Sample at lab	Sample at lab	Sample at lab	G							x	x	
PE065687.081	NS0096	230	232	Sample at lab	Sample at lab	Sample at lab	G		x	x	x			x		
PE065687.083	NS0096	254	256	Sample at lab	Sample at lab	Sample at lab	G							x	x	
PE065687.086	NS0096	120	122	Sample at lab	Sample at lab	Sample at lab	G				x			x		
PE065687.088	NS0096	20	22	Sample at lab	Sample at lab	Sample at lab	G				x			x		
PE065687.093	NS0096	70	72	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
PE065688.007	NS0095	30	32	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x	x	
PE065688.008	NS0095	38	40	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x	x	
PE065688.026	NS0094	28	30	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x	x	
PE065688.042	NS0097	28	30	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x	x	
PE065688.043	NS0097	40	42	Sample at lab	Sample at lab	Sample at lab	G		x	x	x			x		
PE065688.066	NS0113	158	160	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
PE065688.070	NS0113	198	200	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
PE065688.078	NS0113	128	130	Sample at lab	Sample at lab	Sample at lab	G						x	x	x	
PE065688.079	NS0113	140	142	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x		
PE065688.082	NS0118	140	142	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
PE065689.019	NS0120	206	208	Sample at lab	Sample at lab	Sample at lab	G		x	x	x			x		
PE065689.041	NS0117	190	192	Sample at lab	Sample at lab	Sample at lab	G				x			x		
PE065689.057	NS0116	108	110	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
PE065689.063	NS0116	130	132	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
PE065689.072	NS0128	-	-	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x		
PE065689.080	NS0089	360	362	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
PE065689.087	NS0084	270	272	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
PE065689.080	NS0089	360	362	Sample at lab	Sample at lab	Sample at lab					x		x	x	x	

Relinquished by: (1)	Date	Time	Received By:
Sample stored at lab	13-Apr-12		
Relinquished by: (2)	**Date**	**Time**	**Received By:**
Relinquished by: (3)	**Date**	**Time**	**Received By:**

Special Instructions:

Please sub sample from primary sample for intial analytical tests. Keep remainder of samples to allow follow up analysis. Please do not pulverise and oven dry all of sample!

Contact Steven Pearce GHD for

Technical queries on testwork

Phone: +61 (0)8 6222 8811

Email: steven.pearce@ghd.com

Exploration Geology
87 Adelaide Terrace WA 6004
Phone: 08 6218 8888

Destination Address:
ALS Environmental Division
10 Hod Way, Malaga, WA, 6090

CLIENT: Fortescue Metals Group Ltd

CONTACT: Steven Pearce GHD, David Morgan GHD

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Perth 6004 WA

ANALYSIS REQUIRED

Page Number:

Page 1/2

SAMPLE IDENTIFICATION Sample Number	Hole ID	From	To	DATE SAMPLED	TIME SAMPLED	DISPATCH DATE	Strata		NAG Liquor	Kinetic NAG	ASLP Leach - Deionised	ALSP Leach - Weak acid	XRD	Metals Suite	ABCC Curve	Comments
EP1201378014	NS0077	178	180	Sample at lab	Sample at lab	Sample at lab	G		x	x	x			x		
EP1201378041	NS0077	20	22	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201378042	NS0077	28	30	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201379013	NS0093	216	218	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201379015	NS0093	90	92	Sample at lab	Sample at lab	Sample at lab	G						x	x	x	
EP1201379038	NS0083	88	90	Sample at lab	Sample at lab	Sample at lab	G							x	x	
EP1201379046	NS0091	-	-	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201379047	NS0083	158	160	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201380009	NS0078	108	110	Sample at lab	Sample at lab	Sample at lab	G						x	x	x	
EP1201380010	NS0078	0	2	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201380011	NS0078	8	10	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x	x	
EP1201380025	NS0100	78	80	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201380028	NS0078	80	82	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201380030	NS0078	276	278	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201380043	NS0083	130	132	Sample at lab	Sample at lab	Sample at lab	G						x	x	x	
EP1201380046	NS0106	-	-	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x		
EP1201380049	NS0106	20	22	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201380050	NS0106	92	94	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201381001	NS0083	28	30	Sample at lab	Sample at lab	Sample at lab	G						x	x	x	
EP1201381003	NS0078	60	62	Sample at lab	Sample at lab	Sample at lab	G							x	x	
EP1201381007	NS0077	8	10	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x	x	
EP1201381008	NS0077	0	2	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201381009	NS0087	168	170	Sample at lab	Sample at lab	Sample at lab	G						x	x		
EP1201381012	NS0087	388	390	Sample at lab	Sample at lab	Sample at lab	G							x	x	
EP1201381013	NS0087	380	382	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201381033	NS0087	230	232	Sample at lab	Sample at lab	Sample at lab	G							x	x	
EP1201381041	NS0079	48	50	Sample at lab	Sample at lab	Sample at lab	G							x	x	
EP1201381045	NS0078	28	30	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201381048	NS0078	20	22	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x	x	
EP1201381049	NS0079	160	162	Sample at lab	Sample at lab	Sample at lab	G							x	x	
EP1201382016	NS0088	8	10	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x		
EP1201382020	NS0088	0	2	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201382031	NS0079	94	96	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201383006	NS0092	48	50	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x	x	
EP1201383007	NS0092	40	42	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x	x	
EP1201383010	NS0085	0	2	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201383011	NS0085	18	20	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201383012	NS0085	10	12	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x	x	
EP1201383026	NS0092	158	160	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
EP1201383045	NS0086	8	10	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201382019	NS0088	108	110	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201382041	NS0088	150	152	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
EP1201382040	NS0088	210	212	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201382001	NS0088	280	282	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201382010	NS0088	346	348	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
EP1201529050	NS0089	210	212	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201526049	NS0089	268	270	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	

Relinquished by: (1)	Date	Time	Received By:
Sample stored at lab	13-Apr-12		
Relinquished by: (2)	**Date**	**Time**	**Received By:**
Relinquished by: (3)	**Date**	**Time**	**Received By:**

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Perth 6004 WA

ANALYSIS REQUIRED

Page Number:
Page 2/2

SAMPLE IDENTIFICATION Sample Number	Hole ID	From	To	DATE SAMPLED	TIME SAMPLED	DISPATCH DATE	Strata		NAG Liquor	Kinetic NAG	ASLP Leach - Deionised	ALSP Leach - Weak acid	XRD	Metals Suite	ABCC Curve	**Comments**
EP1201383046	NS0086	28	30	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201383048	NS0091	198	200	Sample at lab	Sample at lab	Sample at lab	G						x	x	x	
EP1201384003	NS0085	208	210	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
EP1201384005	NS0085	58	60	Sample at lab	Sample at lab	Sample at lab	G				x		x	x		
EP1201384006	NS0085	30	32	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201384015	NS0085	90	92	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
EP1201384022	NS0107	40	42	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
EP1201384025	NS0107	60	62	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201384027	NS0107	80	82	Sample at lab	Sample at lab	Sample at lab	G							x	x	
EP1201384028	NS0107	160	162	Sample at lab	Sample at lab	Sample at lab	G		x	x	x		x	x		
EP1201384029	NS0107	170	172	Sample at lab	Sample at lab	Sample at lab	G		x	x	x			x		
EP1201384031	NS0107	128	130	Sample at lab	Sample at lab	Sample at lab	G		x	x	x			x		
EP1201384033	NS0107	148	150	Sample at lab	Sample at lab	Sample at lab	G		x	x	x		x	x		
EP1201384035	NS0107	140	142	Sample at lab	Sample at lab	Sample at lab	G		x	x	x			x		
EP1201384036	NS0107	178	180	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201384039	NS0107	120	122	Sample at lab	Sample at lab	Sample at lab	G		x	x	x		x	x		
EP1201384043	NS0086	208	210	Sample at lab	Sample at lab	Sample at lab	G						x	x	x	
EP1201384045	NS0086	248	250	Sample at lab	Sample at lab	Sample at lab	G							x	x	
EP1201385011	NS0091	160	162	Sample at lab	Sample at lab	Sample at lab	G						x	x	x	
EP1201385015	NS0111	188	190	Sample at lab	Sample at lab	Sample at lab	G						x	x	x	
EP1201385016	NS0111	290	292	Sample at lab	Sample at lab	Sample at lab	G							x	x	
EP1201385017	NS0111	240	242	Sample at lab	Sample at lab	Sample at lab	G						x	x	x	
EP1201526047	NS0089	348	350	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
EP1201527006	NS0084	140	142	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201527007	NS0084	190	192	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201527028	NS0087	8	10	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x	x	
EP1201527031	NS0087	84	86	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201527032	NS0087	88	90	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201527035	NS0087	30	32	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201528001	NS0089	88	90	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
EP1201528003	NS0089	60	62	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201528018	NS0089	0	2	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201528043	NS0084	158	160	Sample at lab	Sample at lab	Sample at lab	G		x	x	x		x	x		
EP1201529005	NS0108	160	162	Sample at lab	Sample at lab	Sample at lab	G						x	x	x	
EP1201529008	NS0090	190	192	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
EP1201529015	NS0090	8	10	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201529016	NS0090	0	2	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x		
EP1201529017	NS0090	20	22	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201529040	NS0089	128	130	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201529045	NS0089	178	180	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201530008	NS0106	28	30	Sample at lab	Sample at lab	Sample at lab	G		x		x		x	x	x	
EP1201530010	NS0106	48	50	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
EP1201530012	NS0106	8	10	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201530028	NS0108	176	178	Sample at lab	Sample at lab	Sample at lab	G		x		x			x		
EP1201530029	NS0094	160	162	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
EP1201530033	NS0094	148	150	Sample at lab	Sample at lab	Sample at lab	G							x	x	
EP1201530042	NS0106	170	172	Sample at lab	Sample at lab	Sample at lab	G				x		x	x	x	
EP1201531001	NS0090	268	270	Sample at lab	Sample at lab	Sample at lab	G				x			x		
EP1201531004	NS0090	128	130	Sample at lab	Sample at lab	Sample at lab	G							x	x	

Relinquished by: (1)	Date	Time	Received By:
Sample stored at lab	13-Apr-12		
Relinquished by: (2)	**Date**	**Time**	**Received By:**
Relinquished by: (3)	**Date**	**Time**	**Received By:**

Special Instructions:

Please sub sample from primary sample for intial analytical tests. Keep remainder of samples to allow follow up analysis. Please do not pulverise and oven dry all of sample!

Contact Steven Pearce GHD for
Technical queries on testwork
Phone: +61 (0)8 6222 8811
Email: steven.pearce@ghd.com

Appendix I

Laboratory Certificates

CERTIFICATE OF ANALYSIS

Work Order	: **EP1201378**	Page	: 1 of 12
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: FMG	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 07-MAR-2012
Sampler	: ----	Issue Date	: 14-MAR-2012
Site	: ----		
		No. of samples received	: 49
Quote number	: EP/164/12 V2	No. of samples analysed	: 49

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Leanne Cooper	Acid Sulfate Soils Supervisor	Perth ASS

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0093 X077967-968	NS0078 X159704 1.250	NS0078 X159718	NS0078 X159717	NS0078 X159707
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1201378-001	EP1201378-002	EP1201378-003	EP1201378-004	EP1201378-005
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**7.6**	**8.2**	**8.4**	**8.6**	**8.6**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0078 X159713	NS0078 X159708	NS0078 X159714	NS0078 X159703	NS0077 X159545-X159546
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1201378-006	EP1201378-007	EP1201378-008	EP1201378-009	EP1201378-010
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.6**	**8.7**	**8.3**	**8.6**	**8.5**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0077 X159541-X159542	NS0077 X159609-X159610	NS0077 X159607-X159608	NS0077 X159591-X159592	NS0077 X159587-X159588
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1201378-011	EP1201378-012	EP1201378-013	EP1201378-014	EP1201378-015
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.4**	**8.8**	**8.8**	**3.4**	**8.7**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	**3.2**	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	**15.3**	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0077 X159581-X159582	NS0077 X159575-X159576	NS0077 X159641-X159642	NS0077 X159637-X159638	NS0077 X159631-X159632
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1201378-016	EP1201378-017	EP1201378-018	EP1201378-019	EP1201378-020
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.7**	**8.7**	**8.8**	**8.8**	**8.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0077 X159525-X159526	NS0077 X159521-X159522	NS0077 X159535-X159536	NS0077 X159531-X159532	NS0077 X159561-X159562
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1201378-021	EP1201378-022	EP1201378-023	EP1201378-024	EP1201378-025
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.4**	**8.7**	**8.8**	**8.8**	**8.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0077 X159555-X159556	NS0093 X077999-X078000	NS0093 X077951-X077952	NS0093 X078039-X078040	NS0093 X078045
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1201378-026	EP1201378-027	EP1201378-028	EP1201378-029	EP1201378-030
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.8**	**8.8**	**8.8**	**8.8**	**8.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: SOIL	Client sample ID	NS0093 X078035-036	NS0093 X078025-026	NS0093 X077989	NS0093 X078009-010	NS0093 X077993-994
	Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
Compound / CAS Number	LOR / Unit	EP1201378-031	EP1201378-032	EP1201378-033	EP1201378-034	EP1201378-036
EA011: Net Acid Generation						
pH (OX) ----	0.1 pH Unit	**8.8**	**8.8**	**8.8**	**8.8**	**8.7**
NAG (pH 4.5) ----	0.1 kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0) ----	0.1 kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0093 X077983	NS0093 X078017-018	NS0077 X159617-X159618	NS0077 X159611-X159612	NS0077 X159511-X159512
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1201378-037	EP1201378-038	EP1201378-039	EP1201378-040	EP1201378-041
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.8**	**8.8**	**9.0**	**8.9**	**7.7**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0077 X159515-X159516	NS0077 X159571-X159572	NS0077 X159565-X159566	NS0077 X159621-X159622	NS0077 X159627-X159628
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1201378-042	EP1201378-043	EP1201378-044	EP1201378-045	EP1201378-046
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**7.8**	**7.9**	**8.3**	**8.8**	**8.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0077 X159597-X159598	NS0077 X159601-X159602	NS0077 X016322-23	NS0077 X076317	----
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	----
					EP1201378-047	EP1201378-048	EP1201378-049	EP1201378-050	----
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.7**	**8.5**	**7.3**	**7.2**	----
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	----
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	----

CERTIFICATE OF ANALYSIS

Work Order	: **EP1201379**	Page	: 1 of 12
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: FMG	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 22-FEB-2012
Sampler	: ----	Issue Date	: 08-MAR-2012
Site	: ----		
		No. of samples received	: 50
Quote number	: EP/164/12 V2	No. of samples analysed	: 50

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Leanne Cooper	Acid Sulfate Soils Supervisor	Perth ASS

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0083 X076311	NS0083 X076316	NS0078 X159667	NS0078 X159668	NS0078 X159664
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201379-001	EP1201379-002	EP1201379-003	EP1201379-004	EP1201379-005
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**7.5**	**7.7**	**7.7**	**8.7**	**7.5**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0078 X159663	NS0078 X159773-774	NS0093 X077922-923	NS0093 X077977-978	NS0093 X077981-982
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201379-006	EP1201379-007	EP1201379-008	EP1201379-009	EP1201379-010
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**7.0**	**8.4**	**7.7**	**8.9**	**8.7**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0093 X077926-927	NS0093 X077931-932	NS0093 X078013-014	NS0093 X077937-938	NS0093 X077947-948
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201379-011	EP1201379-012	EP1201379-013	EP1201379-014	EP1201379-015
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.3**	**8.1**	**9.0**	**8.9**	**9.1**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0093 X077957-958	NS0093 X077963-964	NS0093 X077941-942	NS0093 X077973-974	NS0078 X159727-728
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201379-016	EP1201379-017	EP1201379-018	EP1201379-019	EP1201379-020
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**9.0**	**8.9**	**9.3**	**9.0**	**8.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0078 X159733-734	NS0078 X159737-738	NS0078 X159743-744	NS0091 X078881-X078882	NS0091 X078887-X078888
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201379-021	EP1201379-022	EP1201379-023	EP1201379-024	EP1201379-025
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**7.3**	**7.9**	**7.8**	**8.0**	**8.2**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0091 X078877-X078878	NS0091 X078871-X078872	NS0091 X078867-X078868	NS0083 X076326	NS0083 X076327
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201379-026	EP1201379-027	EP1201379-028	EP1201379-029	EP1201379-030
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.2**	**8.2**	**8.6**	**7.8**	**8.2**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0083 X076332-33	NS0083 X076355	NS0083 X076349	NS0083 X076354	NS0083 X076358
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201379-031	EP1201379-032	EP1201379-033	EP1201379-034	EP1201379-035
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**7.9**	**7.7**	**8.1**	**8.5**	**8.1**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0083 X076338	NS0083 X076339	NS0083 X076342-43	NS0091 X078779-X078780	NS0091 X078765-X078766
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201379-036	EP1201379-037	EP1201379-038	EP1201379-039	EP1201379-040
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.2**	**8.2**	**8.1**	**8.1**	**8.1**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0091 X078795-X078796	NS0091 X078775-X078776	NS0091 X078769-X078770	NS0091 X078785-X078786	NS0091 X078633
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201379-041	EP1201379-042	EP1201379-043	EP1201379-044	EP1201379-045
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.4**	**8.0**	**8.5**	**8.8**	**7.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0091 X078634	NS0083 X076378-79	NS0083 X076388-89	NS0083 X076385	NS0083 X076384
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201379-046	EP1201379-047	EP1201379-048	EP1201379-049	EP1201379-050
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**6.0**	**8.7**	**8.7**	**8.9**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		**3.5**	<0.1	<0.1	<0.1	<0.1

CERTIFICATE OF ANALYSIS

Work Order	: **EP1201380**	Page	: 1 of 12
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: FMG	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 07-MAR-2012
Sampler	: ----	Issue Date	: 15-MAR-2012
Site	: ----		
		No. of samples received	: 50
Quote number	: EP/164/12 V2	No. of samples analysed	: 50

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Leanne Cooper	Acid Sulfate Soils Supervisor	Perth ASS

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0083 X076398-399	NS0083 X076406-407	NS0083 X076394-395	NS0083 X076420-421	NS0083 X076410-411
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201380-001	EP1201380-002	EP1201380-003	EP1201380-004	EP1201380-005
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.2**	**8.8**	**8.4**	**8.8**	**8.7**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: SOIL	Client sample ID	NS0083 X076416-417	NS0078 X159747-748	NS0078 X159698	NS0078 X159697	NS0078 X159643-644
	Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
Compound	CAS Number / LOR / Unit	EP1201380-006	EP1201380-007	EP1201380-008	EP1201380-009	EP1201380-010
EA011: Net Acid Generation						
pH (OX)	---- 0.1 pH Unit	**8.4**	**8.7**	**8.4**	**8.5**	**7.3**
NAG (pH 4.5)	---- 0.1 kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	---- 0.1 kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0078 X159647-648	NS0078 X159767-768	NS0078 X159763-734	NS0099 X078831-X078832	NS0099 X078841-X078842
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201380-011	EP1201380-012	EP1201380-013	EP1201380-014	EP1201380-015
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**6.7**	**8.7**	**8.2**	**8.4**	**8.6**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		**0.6**	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0099 X078835-X078836	NS0099 X078845-X078846	NS0099 X078851-X078852	NS0100 X078913-X078914	NS0100 X078919-920
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201380-016	EP1201380-017	EP1201380-018	EP1201380-019	EP1201380-020
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.4**	**8.3**	**8.3**	**7.8**	**8.3**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0100 X078949	NS0100 X078923-924	NS0100 X078969-970	NS0100 X078907-X078908	NS0100 X078933-934
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201380-021	EP1201380-022	EP1201380-023	EP1201380-024	EP1201380-025
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.3**	**8.4**	**8.4**	**8.2**	**8.3**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0078 X159688	NS0078 X159687	NS0078 X159683	NS0078 X159684	NS0078 X159781-782
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201380-026	EP1201380-027	EP1201380-028	EP1201380-029	EP1201380-030
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.7**	**8.8**	**8.7**	**8.3**	**7.4**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0078 X159759	NS0078 X159757	NS0078 X159753-754	NS0100 X07879-880	NS0100 X078965-966
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201380-031	EP1201380-032	EP1201380-033	EP1201380-034	EP1201380-035
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.5**	**8.8**	**8.7**	**8.5**	**8.5**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0100 X078955-956	NS0100 X078929	NS0100 X078983-984	NS0083 X076300-301	NS0083 X076296-X076297
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201380-036	EP1201380-037	EP1201380-038	EP1201380-039	EP1201380-040
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.9**	**8.7**	**9.0**	**7.6**	**7.7**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0083 X076359	NS0083 X076368-69	NS0083 X076364-65	NS0083 X076374-X076375	NS0106 X080033-34
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201380-041	EP1201380-042	EP1201380-043	EP1201380-044	EP1201380-045
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.5**	**9.0**	**8.4**	**8.9**	**9.2**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: SOIL	Client sample ID	NS0106 X080003	NS0106 X080047-48	NS0106 X080058-59	NS0106 X080012-13	NS0106 X080049-50
	Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
Compound	CAS Number / LOR / Unit	EP1201380-046	EP1201380-047	EP1201380-048	EP1201380-049	EP1201380-050
EA011: Net Acid Generation						
pH (OX)	---- 0.1 pH Unit	**6.4**	**9.0**	**9.0**	**8.3**	**8.7**
NAG (pH 4.5)	---- 0.1 kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	---- 0.1 kg H2SO4/t	**1.6**	<0.1	<0.1	<0.1	<0.1

CERTIFICATE OF ANALYSIS

Work Order	: **EP1201381**	Page	: 1 of 12
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: FMG	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 28-FEB-2012
Sampler	: ----	Issue Date	: 06-MAR-2012
Site	: ----		
		No. of samples received	: 50
Quote number	: EP/164/12 V2	No. of samples analysed	: 50

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- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Leanne Cooper	Acid Sulfate Soils Supervisor	Perth ASS

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LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0083 X076310	NS0083 X076306-307	NS0078 X159673	NS0078 X159674	NS0078 X159677
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201381-001	EP1201381-002	EP1201381-003	EP1201381-004	EP1201381-005
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-2.0**	**-3.8**	**-55.0**	**-38.1**	**-35.4**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**7.1**	**7.0**	**8.8**	**8.8**	**8.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0078 X159678	NS0077 X159505-X159506	NS0077 X159501-X159502	NS0087 X076967-68	NS0087 X077087-88
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201381-006	EP1201381-007	EP1201381-008	EP1201381-009	EP1201381-010
EA009: Nett Acid Production Potential									
Net Acid Production Potential	----	0.5	kg H2SO4/t		**-41.3**	**-3.2**	**-1.7**	**-43.6**	**-65.8**
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.8**	**7.3**	**7.2**	**8.9**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0087 X077073-74	NS0087 X077083-84	NS0087 X077079-80	NS0087 X077067-68	NS0087 X076973-74
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201381-011	EP1201381-012	EP1201381-013	EP1201381-014	EP1201381-015
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-72.6**	**-77.4**	**-59.3**	**-52.6**	**-44.4**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.9**	**8.9**	**8.9**	**8.9**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: SOIL	Client sample ID	NS0087 X076963-64	NS0087 X076957-58	NS0087 X076951-52	NS0087 X076941-42	NS0087 X076947-48
	Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
Compound	CAS Number / LOR / Unit	EP1201381-016	EP1201381-017	EP1201381-018	EP1201381-019	EP1201381-020
EA009: Nett Acid Production Potential						
Net Acid Production Potential	---- / 0.5 / kg H2SO4/t	**-44.8**	**-50.0**	**-48.9**	**-48.3**	**-32.8**
EA011: Net Acid Generation						
pH (OX)	---- / 0.1 / pH Unit	**8.9**	**8.8**	**8.8**	**8.8**	**8.7**
NAG (pH 4.5)	---- / 0.1 / kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	---- / 0.1 / kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0087 X077057-58	NS0091 X078825-X078826	NS0091 X078811-X078812	NS0091 X078801-X078802	NS0091 X078821-X078822
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201381-021	EP1201381-022	EP1201381-023	EP1201381-024	EP1201381-025
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-49.6**	**-63.2**	**-62.4**	**-57.3**	**-58.0**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.9**	**9.0**	**9.0**	**9.0**	**9.0**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0087 X077025-26	NS0087 X077037-38	NS0087 X077047-48	NS0087 X077053-54	NS0087 X077005-06
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201381-026	EP1201381-027	EP1201381-028	EP1201381-029	EP1201381-030
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-38.1**	**-34.8**	**-43.2**	**-43.3**	**-45.0**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.9**	**9.0**	**8.9**	**8.9**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: SOIL				Client sample ID	NS0087 X077015-16	NS0087 X076983-84	NS0087 X076999-X077000	NS0087 X077009-10	NS0087 X077019-20
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
Compound	CAS Number	LOR	Unit		EP1201381-031	EP1201381-032	EP1201381-033	EP1201381-034	EP1201381-035
EA009: Nett Acid Production Potential									
Net Acid Production Potential	----	0.5	kg H2SO4/t		**-48.5**	**-47.5**	**-51.3**	**-35.2**	**-28.2**
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.8**	**8.9**	**9.0**	**8.9**	**8.7**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0087 X076989	NS0087 X076977-78	NS0079 X159785-86	NS0079 X159799-800	NS0079 X159851-52
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201381-036	EP1201381-037	EP1201381-038	EP1201381-039	EP1201381-040
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-37.6**	**-34.8**	**-2.9**	**-6.2**	**-31.3**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.9**	**8.9**	**7.3**	**8.0**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0079 X159809-10	NS0079 X159795-96	NS0079 X159805-06	NS0079 X159487-48	NS0078 X159657
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201381-041	EP1201381-042	EP1201381-043	EP1201381-044	EP1201381-045
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-45.5**	**-2.1**	**-28.4**	**-31.1**	**-3.3**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.6**	**7.8**	**8.2**	**8.9**	**7.4**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0078 X159658	NS0078 X159654	NS0078 X159653	NS0079 X159723-724	NS0079 X159777-778
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201381-046	EP1201381-047	EP1201381-048	EP1201381-049	EP1201381-050
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-3.3**	**-3.7**	**-4.4**	**-34.6**	**-23.1**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**7.2**	**6.5**	**6.8**	**8.7**	**8.7**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	**0.2**	<0.1	<0.1

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **EP1201382**	Page	: 1 of 12
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: FMG	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 29-FEB-2012
Sampler	: ----	Issue Date	: 06-MAR-2012
Site	: ----		
		No. of samples received	: 50
Quote number	: EP/164/12 V2	No. of samples analysed	: 50

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Leanne Cooper	Acid Sulfate Soils Supervisor	Perth ASS

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0088 X077233-34	NS0088 X077227-28	NS0088 X077217-18	NS0088 X077237-38	NS0088 X077243-44
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201382-001	EP1201382-002	EP1201382-003	EP1201382-004	EP1201382-005
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.6**	**8.8**	**8.7**	**8.8**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0088 X077213-14	NS0088 X077247-48	NS0088 X077223-24	NS0088 X077259	NS0088 X077267-68
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201382-006	EP1201382-007	EP1201382-008	EP1201382-009	EP1201382-010
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.8**	**8.7**	**8.5**	**8.9**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0088 X077125-26	NS0088 X077131-32	NS0088 X077121-22	NS0088 X077152	NS0088 X077109-10
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201382-011	EP1201382-012	EP1201382-013	EP1201382-014	EP1201382-015
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.6**	**8.8**	**8.7**	**8.9**	**8.4**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0088 X077093-94	NS0088 X077099-100	NS0088 X077141-42	NS0088 X077145-46	NS0088 X077089
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201382-016	EP1201382-017	EP1201382-018	EP1201382-019	EP1201382-020
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**6.5**	**8.2**	**8.7**	**8.7**	**6.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		**2.3**	<0.1	<0.1	<0.1	**0.5**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0088 X077135-36	NS0088 X077105-06	NS0088 X077115-16	NS0092 X077805-806	NS0092 X077809-810
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201382-021	EP1201382-022	EP1201382-023	EP1201382-024	EP1201382-025
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**9.8**	**9.7**	**8.9**	**9.0**	**9.0**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0092 X077799	NS0092 X077793-94	NS0079 X159821-822	NS0079 X159825-826	NS0079 X159831-832
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201382-026	EP1201382-027	EP1201382-028	EP1201382-029	EP1201382-030
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.8**	**8.8**	**8.6**	**8.8**	**9.0**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0079 X159833-X159834	NS0079 X159835-836	NS0079 X159841	NS0079 X159842	NS0088 X077181-82
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201382-031	EP1201382-032	EP1201382-033	EP1201382-034	EP1201382-035
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**7.5**	**9.0**	**9.0**	**8.9**	**8.7**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0088 X077177-78	NS0088 X077187-88	NS0088 X077161-62	NS0088 X077191-92	NS0088 X077197-98
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201382-036	EP1201382-037	EP1201382-038	EP1201382-039	EP1201382-040
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.9**	**9.0**	**8.8**	**8.8**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0088 X077167-68	NS0088 X077207-08	NS0088 X077157-58	NS0092 X077815-816	NS0092 X077825-826
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201382-041	EP1201382-042	EP1201382-043	EP1201382-044	EP1201382-045
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**7.7**	**8.6**	**8.9**	**8.8**	**8.7**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0092 X077835-836	NS0092 X077819-820	NS0091 X077746-747	NS0091 X077752-753	NS0091 X077758
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201382-046	EP1201382-047	EP1201382-048	EP1201382-049	EP1201382-050
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.8**	**8.8**	**9.0**	**8.6**	**9.1**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

CERTIFICATE OF ANALYSIS

Work Order	: **EP1201383**	Page	: 1 of 12
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: FMG	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 29-FEB-2012
Sampler	: ----	Issue Date	: 07-MAR-2012
Site	: ----		
		No. of samples received	: 50
Quote number	: EP/164/12 V2	No. of samples analysed	: 50

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

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- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Leanne Cooper	Acid Sulfate Soils Supervisor	Perth ASS

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Where moisture determination has been performed, results are reported on a dry weight basis.

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Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

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LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0086 X076761-762	NS0086 X076777-778	NS0086 X076771-772	NS0086 X076767-768	NS0092 X077774
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201383-001	EP1201383-002	EP1201383-003	EP1201383-004	EP1201383-005
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.4**	**8.7**	**8.8**	**8.6**	**8.0**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0092 X077783-784	NS0092 X077779-780	NS0092 X077789	NS0085 X076598	NS0085 X076592
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201383-006	EP1201383-007	EP1201383-008	EP1201383-009	EP1201383-010
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.9**	**8.8**	**8.8**	**8.4**	**7.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0085 X076601-602	NS0085 X076597	NS0092 X077885-886	NS0092 X077901	NS0092 X077891-892
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201383-011	EP1201383-012	EP1201383-013	EP1201383-014	EP1201383-015
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**7.5**	**6.9**	**8.9**	**9.0**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0092 X077895-896	NS0092 X077881	NS0092 X077882	NS0091 X077650-651	NS0091 X077661
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201383-016	EP1201383-017	EP1201383-018	EP1201383-019	EP1201383-020
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.9**	**9.0**	**9.0**	**7.8**	**8.4**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0091 X077656-657	NS0091 X077646-647	NS0092 X077845-846	NS0092 X077855-856	NS0092 X077849-850
				Client sampling date / time: [22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201383-021	EP1201383-022	EP1201383-023	EP1201383-024	EP1201383-025
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.4**	**8.0**	**9.0**	**8.9**	**9.0**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0092 X077839-840	NS0091 X077726-727	NS0091 X077732-733	NS0091 X077742-743	NS0091 X077736-737
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201383-026	EP1201383-027	EP1201383-028	EP1201383-029	EP1201383-030
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.9**	**8.9**	**8.8**	**8.8**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0092 X077861-862	NS0092 X077865-866	NS0092 X077875-876	NS0092 X077872	NS0091 X077676-677
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201383-031	EP1201383-032	EP1201383-033	EP1201383-034	EP1201383-035
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**9.0**	**8.1**	**8.3**	**8.5**	**8.4**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0091 X077666-667	NS0091 X077670-671	NS0091 X077680-681	NS0085 X076659	NS0085 X076665-666
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201383-036	EP1201383-037	EP1201383-038	EP1201383-039	EP1201383-040
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.8**	**9.0**	**8.9**	**9.0**	**9.0**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0085 X076653-654	NS0085 X076648	NS0086 X076757-758	NS0086 X076747-748	NS0086 X076741-742
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201383-041	EP1201383-042	EP1201383-043	EP1201383-044	EP1201383-045
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.1**	**8.3**	**7.6**	**7.1**	**6.2**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	**1.1**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0086 X076751-752	NS0091 X077712-713	NS0091 X077716-717	NS0091 X077722-723	NS0091 X077706-707
				Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
					EP1201383-046	EP1201383-047	EP1201383-048	EP1201383-049	EP1201383-050
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**6.5**	**8.6**	**8.9**	**8.8**	**8.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		**1.3**	<0.1	<0.1	<0.1	<0.1

CERTIFICATE OF ANALYSIS

Work Order	: **EP1201384**	Page	: 1 of 12
Amendment	: **1**		
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: FMG	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 28-FEB-2012
Sampler	: ----	Issue Date	: 09-MAR-2012
Site	: ----		
		No. of samples received	: 50
Quote number	: EP/164/12 V2	No. of samples analysed	: 50

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This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Leanne Cooper	Acid Sulfate Soils Supervisor	Perth ASS

General Comments

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Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0085 X076708-706	NS0085 X076711-X076712	NS0085 X076699	NS0085 X076695-696	NS0085 X076621-622
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201384-001	EP1201384-002	EP1201384-003	EP1201384-004	EP1201384-005
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-37.2**	**-59.6**	**-52.9**	**-34.4**	**-57.4**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.5**	**8.4**	**8.6**	**8.0**	**8.5**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0085 X076607-608	NS0085 X076611-612	NS0085 X076617-618	NS0085 X076675-676	NS0085 X076669-670
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201384-006	EP1201384-007	EP1201384-008	EP1201384-009	EP1201384-010
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-7.3**	**-41.8**	**-52.2**	**-43.6**	**-52.9**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.2**	**8.7**	**8.5**	**8.5**	**8.5**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: SOIL	Client sample ID	NS0085 X076679-680	NS0085 X076685-686	NS0085 X076627-628	NS0085 X076632-633	NS0085 X076638-639
	Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
Compound / CAS Number	LOR / Unit	EP1201384-011	EP1201384-012	EP1201384-013	EP1201384-014	EP1201384-015
EA009: Nett Acid Production Potential						
Net Acid Production Potential ----	0.5 kg H2SO4/t	**-55.8**	**-55.5**	**-48.0**	**-42.0**	**-64.9**
EA011: Net Acid Generation						
pH (OX) ----	0.1 pH Unit	**8.7**	**8.6**	**8.7**	**8.7**	**8.6**
NAG (pH 4.5) ----	0.1 kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0) ----	0.1 kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0085 X076642-643	NS0085 X076725-726	NS0085 X076715-716	NS0085 X076721-722	NS0085 X076731-732
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201384-016	EP1201384-017	EP1201384-018	EP1201384-019	EP1201384-020
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-63.3**	**-43.3**	**-51.6**	**-40.0**	**-40.0**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.6**	**8.6**	**8.8**	**8.8**	**8.6**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0107 X080149-150	NS0107 X080165-166	NS0107 X080197	NS0107 X080169-170	NS0107 X080175-176
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201384-021	EP1201384-022	EP1201384-023	EP1201384-024	EP1201384-025
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	<0.5	**-2.6**	<0.5	**-4.2**	**-18.9**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**7.1**	**8.2**	**7.9**	**7.9**	**8.0**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0107 X080200-201	NS0107 X080185-186	NS0107 X080226-227	NS0107 X080231-232	NS0107 X080247
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201384-026	EP1201384-027	EP1201384-028	EP1201384-029	EP1201384-030
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-5.6**	**-39.0**	**31.4**	**15.3**	**-22.0**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**7.9**	**8.8**	**2.5**	**3.0**	**8.1**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	**40.2**	**11.0**	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	**53.8**	**18.1**	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0107 X080210-211	NS0107 X080241-242	NS0107 X080220-221	NS0107 X080214-215	NS0107 X080216
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201384-031	EP1201384-032	EP1201384-033	EP1201384-034	EP1201384-035
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**69.3**	**6.3**	**41.1**	**-64.2**	**18.9**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**2.5**	**7.4**	**2.6**	**8.3**	**2.6**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	**38.9**	<0.1	**30.2**	<0.1	**17.8**
NAG (pH 7.0)	----	0.1	kg H2SO4/t	**52.2**	<0.1	**40.8**	<0.1	**24.7**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0107 X080235-236	NS0107 X080155	NS0107 X080179-180	NS0107 X080206-207	NS0107 X080145-146
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201384-036	EP1201384-037	EP1201384-038	EP1201384-039	EP1201384-040
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**1.7**	<0.5	**-40.5**	**80.1**	<0.5
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**6.4**	**7.9**	**8.7**	**2.3**	**7.3**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	**45.7**	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	**0.8**	<0.1	<0.1	**60.8**	<0.1

Analytical Results

Sub-Matrix: SOIL	Client sample ID	NS0086 X076829	NS0086 X076833-834	NS0086 X076843-844	NS0086 X076839-840	NS0086 X076863-864
	Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
Compound	CAS Number / LOR / Unit	EP1201384-041	EP1201384-042	EP1201384-043	EP1201384-044	EP1201384-045
EA009: Nett Acid Production Potential						
Net Acid Production Potential	---- / 0.5 / kg H2SO4/t	**-42.2**	**-45.2**	**-62.9**	**-43.2**	**-58.4**
EA011: Net Acid Generation						
pH (OX)	---- / 0.1 / pH Unit	**8.9**	**9.0**	**9.2**	**9.0**	**9.2**
NAG (pH 4.5)	---- / 0.1 / kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	---- / 0.1 / kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0086 X076873-874	NS0086 X076879	NS0086 X076849-850	NS0086 X076853-854	NS0086 X076869-870
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201384-046	EP1201384-047	EP1201384-048	EP1201384-049	EP1201384-050
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-22.5**	**-47.4**	**-47.1**	**-42.6**	**-35.8**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**9.1**	**9.2**	**9.3**	**9.2**	**9.3**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

CERTIFICATE OF ANALYSIS

Work Order	: **EP1201385**	Page	: 1 of 12
Amendment	: **1**		
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: FMG	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 28-FEB-2012
Sampler	: ----	Issue Date	: 09-MAR-2012
Site	: ----		
		No. of samples received	: 50
Quote number	: EP/164/12 V2	No. of samples analysed	: 50

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NATA Accredited Laboratory 825

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Leanne Cooper	Acid Sulfate Soils Supervisor	Perth ASS

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- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0086 X076793-794	NS0086 X076781-782	NS0086 X076803-804	NS0086 X076797-798	NS0086 X076823-824
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201385-001	EP1201385-002	EP1201385-003	EP1201385-004	EP1201385-005
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-20.0**	**-24.3**	**-32.0**	**-27.4**	**-24.4**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.0**	**8.6**	**8.7**	**8.5**	**8.7**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0086 X076813-814	NS0086 X076819-820	NS0086 X076809-810	NS0091 X077696-697	NS0091 X077691
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201385-006	EP1201385-007	EP1201385-008	EP1201385-009	EP1201385-010
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-38.4**	**-44.3**	**-38.7**	**-35.3**	**-34.8**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.9**	**8.6**	**8.6**	**8.8**	**8.7**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0091 X077696-687	NS0091 X077702-703	NS0111 X080745-X080746	NS0111 X080649	NS0111 X080715-X080716
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201385-011	EP1201385-012	EP1201385-013	EP1201385-014	EP1201385-015
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-50.9**	**-38.1**	**-35.7**	<0.5	**-35.5**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**9.0**	**8.8**	**9.1**	**8.3**	**8.4**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0111 X080767-X080768	NS0111 X080741-X080742	NS0111 X080679-X080680	NS0111 X080752	NS0111 X080655-X080656
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201385-016	EP1201385-017	EP1201385-018	EP1201385-019	EP1201385-020
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-41.5**	**-38.4**	**-16.1**	**-25.6**	**1.8**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.6**	**9.0**	**9.0**	**8.6**	**7.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0127 X082798	NS0127 X082799	NS0127 X082793	NS0127 X082792	NS0127 X082789
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201385-021	EP1201385-022	EP1201385-023	EP1201385-024	EP1201385-025
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-12.0**	**-23.4**	**-33.5**	**-8.0**	**-9.7**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**7.8**	**8.5**	**8.7**	**8.8**	**8.7**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0127 X082788	NS0127 X082782-2783	NS0127 X082778-2779	NS0127 X082762-2763	NS0127 X082772-2773
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201385-026	EP1201385-027	EP1201385-028	EP1201385-029	EP1201385-030
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-19.4**	**-25.8**	**-20.5**	**-3.9**	**-11.0**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.6**	**8.4**	**8.0**	**7.9**	**7.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0127 X082758	NS0127 X082759	NS0127 X082703	NS0127 X082753	NS0127 X082713
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201385-031	EP1201385-032	EP1201385-033	EP1201385-034	EP1201385-035
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-5.5**	**-5.2**	**-19.2**	<0.5	**2.2**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.3**	**8.3**	**8.4**	**6.8**	**8.1**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0127 X082702	NS0127 X082725	NS0127 X082712	NS0127 X082722	NS0127 X082728
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201385-036	EP1201385-037	EP1201385-038	EP1201385-039	EP1201385-040
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-12.6**	**-4.8**	**-5.5**	**-10.4**	**-15.5**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.5**	**8.0**	**8.4**	**8.3**	**8.6**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0127 X082729	NS0127 X082719	NS0127 X082709	NS0127 X082718	NS0127 X082708
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201385-041	EP1201385-042	EP1201385-043	EP1201385-044	EP1201385-045
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-10.0**	**-24.4**	**-28.9**	**-27.1**	**-25.4**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.7**	**7.9**	**8.2**	**8.7**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0125 X082500	NS0125 X082521-2522	NS0125 X082535-2536	NS0125 X082515-2516	NS0125 X082525-2526
			Client sampling date / time	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]	[22-FEB-2012]
				EP1201385-046	EP1201385-047	EP1201385-048	EP1201385-049	EP1201385-050
EA009: Nett Acid Production Potential								
Net Acid Production Potential	----	0.5	kg H2SO4/t	**-30.6**	**-44.0**	**-39.2**	**-44.5**	**-50.9**
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.6**	**8.8**	**8.8**	**8.5**	**8.4**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

CERTIFICATE OF ANALYSIS

Work Order	: **EP1201526**	Page	: 1 of 12
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: FMG	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 06-MAR-2012
Sampler	: ----	Issue Date	: 09-MAR-2012
Site	: ----		
		No. of samples received	: 49
Quote number	: EP/164/12 V2	No. of samples analysed	: 49

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Leanne Cooper	Acid Sulfate Soils Supervisor	Perth ASS

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0088 X077253-54	NS0088 X077263-64	NS0149 X143575-X143576	NS0149 X143579-X143580	NS0149 X143569-X143570
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201526-001	EP1201526-002	EP1201526-003	EP1201526-004	EP1201526-005
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.9**	**9.1**	**9.1**	**9.2**	**9.0**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0149 X143585	NS0149 X143658	NS0149 X143565-X143566	NS0149 X143653-X143654	NS0149 X143657
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201526-006	EP1201526-007	EP1201526-008	EP1201526-009	EP1201526-010
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**9.2**	**9.3**	**8.9**	**8.9**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0149 X143627-X143628	NS0149 X143647-X143648	NS0149 X143637-X143638	NS0149 X143631-X143632	NS0149 X14363
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201526-011	EP1201526-013	EP1201526-014	EP1201526-015	EP1201526-016
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.5**	**8.9**	**9.3**	**9.2**	**9.2**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0149 X14364	NS0149 X143641-X143642	NS0094 X078131-132	NS0094 X078137-138	NS0098 X159816
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201526-017	EP1201526-018	EP1201526-019	EP1201526-020	EP1201526-021
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**9.1**	**9.1**	**9.0**	**8.9**	**8.5**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0098 X159815	NS0098 X078682	NS0098 X078681	NS0098 X077171	NS0098 X077172
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201526-022	EP1201526-023	EP1201526-024	EP1201526-025	EP1201526-026
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.5**	**9.0**	**9.0**	**8.6**	**8.5**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0098 X077031	NS0098 X076446	NS0098 X077032	NS0098 X076451	NS0098 X159858
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201526-027	EP1201526-028	EP1201526-029	EP1201526-030	EP1201526-031
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.7**	**8.1**	**8.7**	**8.2**	**8.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0098 X159857	NS0127 X082768-2769	NS0127 X082754-2755	NS0127 X082774-2775	NS0127 X082758-2759
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201526-032	EP1201526-033	EP1201526-034	EP1201526-035	EP1201526-036
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.8**	**9.3**	**9.2**	**8.0**	**9.2**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0127 X082748-2749	NS0127 X082764-2765	NS0127 X082742-2743	NS0127 X082738-2739	NS0127 X082733
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201526-037	EP1201526-038	EP1201526-039	EP1201526-040	EP1201526-041
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**9.3**	**9.2**	**9.4**	**9.0**	**9.1**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0127 X082732	NS0125 X082603-2604	NS0125 X082571-2572	NS0125 X082581-2582	NS0125 X082577-2578
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201526-042	EP1201526-043	EP1201526-044	EP1201526-045	EP1201526-046
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.7**	**8.9**	**9.1**	**9.2**	**9.2**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: SOIL	Client sample ID	NS0089 X077445-46	NS0089 X077425-26	NS0089 X077405-06	NS0089 X077471-72	----
	Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	----
Compound	CAS Number / LOR / Unit	EP1201526-047	EP1201526-048	EP1201526-049	EP1201526-050	----
EA011: Net Acid Generation						
pH (OX)	---- / 0.1 / pH Unit	**9.3**	**9.3**	**9.2**	**9.4**	----
NAG (pH 4.5)	---- / 0.1 / kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	----
NAG (pH 7.0)	---- / 0.1 / kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	----

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **EP1201527**	Page	: 1 of 13
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: FMG	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 06-MAR-2012
Sampler	: ----	Issue Date	: 09-MAR-2012
Site	: ----		
		No. of samples received	: 51
Quote number	: EP/164/12 V2	No. of samples analysed	: 51

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Leanne Cooper	Acid Sulfate Soils Supervisor	Perth ASS

General Comments

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Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0089 X077401-02	NS0089 X077431-32	NS0089 X077435-36	NS0089 X077465-66	NS0084 X076539
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201527-001	EP1201527-002	EP1201527-003	EP1201527-004	EP1201527-005
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**7.5**	**8.3**	**8.4**	**8.5**	**8.5**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: SOIL	Client sample ID	NS0084 X076517-18	NS0084 X076544-45	NS0084 X076548-49	NS0084 X076523-24	NS0126 X082741-X082742
	Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
Compound	CAS Number / LOR / Unit	EP1201527-006	EP1201527-007	EP1201527-008	EP1201527-009	EP1201527-010
EA011: Net Acid Generation						
pH (OX)	---- 0.1 pH Unit	**8.2**	**8.2**	**8.2**	**8.3**	**8.5**
NAG (pH 4.5)	---- 0.1 kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	---- 0.1 kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0126 X082727-X082728	NS0126 X082711-X082712	NS0125 X082552	NS0125 X082561-2562	NS0125 X082545-2546
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201527-011	EP1201527-012	EP1201527-013	EP1201527-014	EP1201527-015
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.4**	**8.4**	**8.8**	**8.8**	**8.7**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0125 X082541-2542	NS0125 X082557-2558	NS0094 X078111-112	NS0094 X078102	NS0094 X078087-088
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201527-016	EP1201527-017	EP1201527-018	EP1201527-019	EP1201527-020
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.8**	**8.9**	**8.8**	**8.9**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0094 X078091-092	NS0089 X076455-56	NS0089 X076501-502	NS0089 X076471-72	NS0089 X076497-98
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201527-021	EP1201527-022	EP1201527-023	EP1201527-024	EP1201527-025
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.9**	**8.0**	**8.9**	**8.9**	**7.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0089 X076475-76	NS0089 X076465-66	NS0087 X076884-85	NS0087 X076931-32	NS0087 X076905-06
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201527-026	EP1201527-027	EP1201527-028	EP1201527-029	EP1201527-030
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**9.0**	**8.1**	**7.0**	**9.0**	**9.0**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0087 X076923-24	NS0087 X076925-26	NS0087 X076911-12	NS0087 X076937-38	NS0087 X076895-96
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201527-031	EP1201527-032	EP1201527-033	EP1201527-034	EP1201527-035
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.3**	**8.8**	**8.9**	**8.9**	**8.1**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0087 X077063-64	NS0087 X076993-94	NS0087 X077041-42	NS0147 X143539-X143540	NS0147 X143545-3546
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201527-036	EP1201527-037	EP1201527-038	EP1201527-039	EP1201527-040
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**9.1**	**9.1**	**9.1**	**8.3**	**9.1**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0147 X143555-X143556	NS0147 X143549-X143550	NS0147 X143535-X143536	NS0149 X143518	NS0149 X143517
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201527-041	EP1201527-042	EP1201527-043	EP1201527-044	EP1201527-045
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**9.0**	**8.8**	**7.8**	**8.9**	**9.2**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0149 X143591-X143592	NS0149 X143595-X143596	NS0149 X143611-X143612	NS0149 X143621-X143622	NS0149 X143602
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201527-046	EP1201527-047	EP1201527-048	EP1201527-049	EP1201527-050
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**9.3**	**9.2**	**9.2**	**9.3**	**9.1**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: SOIL	Client sample ID	NS0149 X143607-X143608	----	----	----	----
	Client sampling date / time	[28-FEB-2012]	----	----	----	----
Compound	CAS Number	LOR	Unit	EP1201527-051	----	----	----	----
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**9.2**	----	----	----	----
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	----	----	----	----
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	----	----	----	----

CERTIFICATE OF ANALYSIS

Work Order	: **EP1201528**	Page	: 1 of 13
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: FMG	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 06-MAR-2012
Sampler	: ----	Issue Date	: 12-MAR-2012
Site	: ----		
		No. of samples received	: 52
Quote number	: EP/164/12 V2	No. of samples analysed	: 52

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Leanne Cooper	Acid Sulfate Soils Supervisor	Perth ASS

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0089 X077313-X077314	NS0089 X077273-74	NS0089 X077299-X077300	NS0089 X077283-84	NS0089 X077293-94
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201528-001	EP1201528-002	EP1201528-003	EP1201528-004	EP1201528-005
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.8**	**8.1**	**8.0**	**8.0**	**7.6**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0089 X077289	NS0084 X076580-581	NS0084 X076554-55	NS0084 X076591	NS0084 X079570-71
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201528-006	EP1201528-007	EP1201528-008	EP1201528-009	EP1201528-010
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**7.7**	**8.9**	**8.9**	**9.1**	**9.1**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0084 X076564-65	NS0108 X080369-370	NS0108 X080365-366	NS0108 X080273-274	NS0108 X080319-320
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201528-011	EP1201528-012	EP1201528-013	EP1201528-014	EP1201528-015
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**9.0**	**9.4**	**9.3**	**8.8**	**9.4**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0108 X080323-324	NS0089 X077303-04	NS0089 X077269-70	NS0089 X077309-10	NS0089 X077319-320
			Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
				EP1201528-016	EP1201528-017	EP1201528-018	EP1201528-019	EP1201528-020
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**9.4**	**8.4**	**6.6**	**8.7**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	**2.4**	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0089 X077323-24	NS0126 X082645-X082646	NS0126 X082685-X082686	NS0126 X082655-X082656	NS0126 X082691-X082692
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201528-021	EP1201528-022	EP1201528-023	EP1201528-024	EP1201528-025
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.0**	**8.4**	**8.8**	**8.8**	**8.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0126 X082635-X082636	NS0094 X078173-174	NS0094 X078157-158	NS0094 X078151-152	NS0094 X078163
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201528-026	EP1201528-027	EP1201528-028	EP1201528-029	EP1201528-030
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.2**	**8.2**	**8.3**	**8.9**	**8.6**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0094 X078167-168	NS0084 X076485-86	NS0084 X076511-12	NS0084 X076492	NS0084 X076507-08
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201528-031	EP1201528-032	EP1201528-033	EP1201528-034	EP1201528-035
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.8**	**8.7**	**8.7**	**8.8**	**8.7**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0084 X076481-82	NS0108 X080350	NS0108 X080299-300	NS0108 X080309-310	NS0108 X080333-334
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201528-036	EP1201528-037	EP1201528-038	EP1201528-039	EP1201528-040
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.9**	**9.1**	**8.9**	**9.2**	**9.0**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0108 X080375-376	NS0084 X076574-75	NS0084 X076527-28	NS0084 X076556-57	NS0084 X076533-34
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201528-041	EP1201528-042	EP1201528-043	EP1201528-044	EP1201528-045
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.4**	**9.2**	**3.4**	**9.3**	**9.2**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	**11.8**	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	**22.0**	<0.1	<0.1

Analytical Results

Sub-Matrix: SOIL	Client sample ID	NS0112 X080888	NS0112 X080922	NS0112 X080832-X080833	NS0112 X080842-X080843	NS0112 X080847
	Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
Compound	CAS Number / LOR / Unit	EP1201528-046	EP1201528-047	EP1201528-048	EP1201528-049	EP1201528-050
EA011: Net Acid Generation						
pH (OX)	---- 0.1 pH Unit	**9.1**	**9.2**	**9.2**	**8.5**	**9.0**
NAG (pH 4.5)	---- 0.1 kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	---- 0.1 kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: SOIL	Client sample ID	NS0112 X080802-X080803	NS0112 X080846	-----	-----	-----
	Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	----	----	----
Compound	CAS Number / LOR / Unit	EP1201528-051	EP1201528-052	----	----	----
EA011: Net Acid Generation						
pH (OX)	---- 0.1 pH Unit	**8.1**	**8.6**	----	----	----
NAG (pH 4.5)	---- 0.1 kg H2SO4/t	<0.1	<0.1	----	----	----
NAG (pH 7.0)	---- 0.1 kg H2SO4/t	<0.1	<0.1	----	----	----

CERTIFICATE OF ANALYSIS

Work Order	: **EP1201529**	Page	: 1 of 13
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: FMG	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 06-MAR-2012
Sampler	: ----	Issue Date	: 12-MAR-2012
Site	: ----		
		No. of samples received	: 51
Quote number	: EP/164/12 V2	No. of samples analysed	: 51

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Leanne Cooper	Acid Sulfate Soils Supervisor	Perth ASS

General Comments

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When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0108 X080284	NS0108 X080283	NS0108 X080354-355	NS0108 X080293-294	NS0108 X080329
				Client sampling date / time: [28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
				EP1201529-001	EP1201529-002	EP1201529-003	EP1201529-004	EP1201529-005
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.6**	**9.3**	**9.1**	**9.2**	**9.2**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0108 X080343-344	NS0090 X077573-574	NS0090 X077569-570	NS0090 X077593-594	NS0090 X077583-584
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201529-006	EP1201529-007	EP1201529-008	EP1201529-009	EP1201529-010
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**9.2**	**9.1**	**9.3**	**9.3**	**9.2**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0090 X077615	NS0090 X077599-600	NS0090 X077589	NS0090 X077605-606	NS0090 X077477-478
			Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
				EP1201529-011	EP1201529-012	EP1201529-013	EP1201529-014	EP1201529-015
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.6**	**8.8**	**8.9**	**9.0**	**6.5**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	**4.0**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0090 X077473-474	NS0090 X077483-X077484	NS0090 X077493-494	NS0090 X077487-488	NS0108 X080252-253
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201529-016	EP1201529-017	EP1201529-018	EP1201529-019	EP1201529-020
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**6.4**	**6.6**	**8.5**	**8.0**	**7.1**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		**1.5**	**4.0**	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0108 X080258-259	NS0108 X080265-266	NS0108 X080277-278	NS0108 X080267-268	NS0111 X080665-X080666
				Client sampling date / time: [28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
				EP1201529-021	EP1201529-022	EP1201529-023	EP1201529-024	EP1201529-025
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**7.4**	**7.7**	**8.3**	**8.4**	**8.4**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0111 X080705-X080706	NS0111 X080669-X080670	NS0111 X080695-X080696	NS0111 X080757-X080758	NS0111 X080731-X080732
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201529-026	EP1201529-027	EP1201529-028	EP1201529-029	EP1201529-030
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.9**	**8.8**	**8.7**	**9.0**	**9.0**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0111 X080685-X080686	NS0108 X080389	NS0108 X080313-314	NS0108 X080287 (No Sample X080288)	NS0108 X080339-340
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201529-031	EP1201529-032	EP1201529-033	EP1201529-034	EP1201529-035
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**9.1**	**9.2**	**9.2**	**9.0**	**9.2**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0108 X080263-264	NS0108 X080291 (No Sample X080292)	NS0089 X077329	NS0089 X077339-40	NS0089 X077333-34
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201529-036	EP1201529-037	EP1201529-038	EP1201529-039	EP1201529-040
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.7**	**9.1**	**8.4**	**9.2**	**8.3**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0089 X077355-56	NS0089 X077369-70	NS0089 X077343-44	NS0089 X077395-96	NS0089 X077359
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201529-041	EP1201529-042	EP1201529-043	EP1201529-044	EP1201529-045
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.9**	**9.2**	**9.3**	**9.2**	**7.6**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0089 X077349	NS0089 X077365-66	NS0089 X077385-86	NS0089 X077379-80	NS0089 X077375-76
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201529-046	EP1201529-047	EP1201529-048	EP1201529-049	EP1201529-050
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**9.0**	**9.1**	**8.7**	**8.4**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: SOIL	Client sample ID	NS0089 X077341-42	----	----	----	----
	Client sampling date / time	[28-FEB-2012]	----	----	----	----
Compound	CAS Number / LOR / Unit	EP1201529-051	----	----	----	----
EA011: Net Acid Generation						
pH (OX)	---- 0.1 pH Unit	**8.8**	----	----	----	----
NAG (pH 4.5)	---- 0.1 kg H2SO4/t	<0.1	----	----	----	----
NAG (pH 7.0)	---- 0.1 kg H2SO4/t	<0.1	----	----	----	----

CERTIFICATE OF ANALYSIS

Work Order	: **EP1201530**	Page	: 1 of 12
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: FMG	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 06-MAR-2012
Sampler	: ----	Issue Date	: 13-MAR-2012
Site	: ----		
		No. of samples received	: 49
Quote number	: EP/164/12 V2	No. of samples analysed	: 48

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Leanne Cooper	Acid Sulfate Soils Supervisor	Perth ASS

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

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LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0090 X077527-528	NS0090 X077507-508	NS0090 X077517-518	NS0090 X077523-524	NS0090 X077497-498
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201530-001	EP1201530-002	EP1201530-003	EP1201530-004	EP1201530-005
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.0**	**8.7**	**8.7**	**8.6**	**8.1**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0090 X077503-504	NS0106 X080114-115	NS0106 X080016-17	NS0106 X080079-80	NS0106 X080027-28
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201530-006	EP1201530-007	EP1201530-008	EP1201530-009	EP1201530-010
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.0**	**8.6**	**8.4**	**8.9**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0106 X080037-38	NS0106 X080006-007	NS0106 X080043-44	NS0094 X078187-188	NS0111 X080643-X080644
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201530-011	EP1201530-012	EP1201530-013	EP1201530-015	EP1201530-016
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.9**	**8.1**	**8.7**	**8.9**	**8.4**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0111 X080735-X080736	NS0111 X080699-X080700	NS0111 X080761-X080762	NS0111 X080725-X080726	NS0111 X080721-X080722
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201530-017	EP1201530-018	EP1201530-019	EP1201530-020	EP1201530-021
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.8**	**8.8**	**9.0**	**9.0**	**8.6**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0111 X080739-X080740	NS0111 X080711-X080712	NS0108 X080303-304	NS0108 X080248-249	NS0108 X080379-380
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201530-022	EP1201530-023	EP1201530-024	EP1201530-025	EP1201530-026
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.9**	**8.9**	**9.1**	**7.8**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0108 X080385-386	NS0108 X080337 (No Sample X080338)	NS0094 X078127-128	NS0094 X078147-148	NS0094 X078117
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201530-027	EP1201530-028	EP1201530-029	EP1201530-030	EP1201530-031
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.9**	**8.1**	**8.8**	**9.0**	**8.9**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0094 X078141-142	NS0094 X078121-122	NS0106 X080669-70	NS0106 X080083-84	NS0106 X080120-121
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201530-032	EP1201530-033	EP1201530-034	EP1201530-035	EP1201530-036
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**9.1**	**9.1**	**9.1**	**8.4**	**8.5**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0106 X080054-55	NS0106 X080139-40	NS0106 X080022-23	NS0106 X080135-36	NS0106 X080110-111
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201530-037	EP1201530-038	EP1201530-039	EP1201530-040	EP1201530-041
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.5**	**8.9**	**8.5**	**8.6**	**8.5**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0106 X080089	NS0106 X080143-144	NS0090 X077563-564	NS0090 X077547-548	NS0090 X077543-544
				Client sampling date / time: [28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
				EP1201530-042	EP1201530-043	EP1201530-044	EP1201530-045	EP1201530-046
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.9**	**9.0**	**8.9**	**8.5**	**8.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: SOIL	Client sample ID	NS0090 X077559	NS0090 X077553-554	NS0090 X077533-534	----	----
	Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	----	----
Compound	CAS Number / LOR / Unit	EP1201530-047	EP1201530-048	EP1201530-049	----	----
EA011: Net Acid Generation						
pH (OX)	---- 0.1 pH Unit	**8.9**	**8.2**	**9.0**	----	----
NAG (pH 4.5)	---- 0.1 kg H2SO4/t	<0.1	<0.1	<0.1	----	----
NAG (pH 7.0)	---- 0.1 kg H2SO4/t	<0.1	<0.1	<0.1	----	----

CERTIFICATE OF ANALYSIS

Work Order	: **EP1201531**	Page	: 1 of 6
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: FMG	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 06-MAR-2012
Sampler	: ----	Issue Date	: 14-MAR-2012
Site	: ----		
		No. of samples received	: 20
Quote number	: EP/164/12 V2	No. of samples analysed	: 20

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Leanne Cooper	Acid Sulfate Soils Supervisor	Perth ASS

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Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: NS0090 X077609-610	NS0090 X077511-512	NS0090 X077579-580	NS0090 X077537-538	NS0106 X080099-100
				Client sampling date / time: [28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
				EP1201531-001	EP1201531-002	EP1201531-003	EP1201531-004	EP1201531-005
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	**8.1**	**8.8**	**7.9**	**8.7**	**8.6**
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0106 X080093-94	NS0106 X080073-74	NS0106 X080104-105	NS0083 X076426-427	NS0083 X076438-439
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201531-006	EP1201531-007	EP1201531-008	EP1201531-009	EP1201531-010
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**9.1**	**8.8**	**9.2**	**8.8**	**8.8**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	NS0083 X076444	NS0112 X080918-X080919	NS0112 X080914-X080915	NS0112 X080862-X080863	NS0112 X080908-X080909
				Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
					EP1201531-011	EP1201531-012	EP1201531-013	EP1201531-014	EP1201531-015
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.6**	**8.6**	**8.7**	**9.1**	**9.1**
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: SOIL	Client sample ID	NS0112 X080904-X080905	NS0112 X080852-X080853	NS0112 X080826-X080827	NS0112 X080812-X080813	NS0112 X080868-X080869
	Client sampling date / time	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]	[28-FEB-2012]
Compound / CAS Number / LOR / Unit		EP1201531-016	EP1201531-017	EP1201531-018	EP1201531-019	EP1201531-020
EA011: Net Acid Generation						
pH (OX) ---- 0.1 pH Unit		**9.1**	**9.2**	**9.0**	**8.5**	**9.2**
NAG (pH 4.5) ---- 0.1 kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1
NAG (pH 7.0) ---- 0.1 kg H2SO4/t		<0.1	<0.1	<0.1	<0.1	<0.1

CERTIFICATE OF ANALYSIS

Work Order	: **EP1202066**	Page	: 1 of 4
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Tracy Presland
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: Tracy.Presland@alsglobal.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7604
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201379 1384 1527 1528	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 16-MAR-2012
Sampler	: ----	Issue Date	: 26-MAR-2012
Site	: ----		
		No. of samples received	: 10
Quote number	: EN/005/10	No. of samples analysed	: 10

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Canhuang Ke	Metals Instrument Chemist	Perth Inorganics
Rassem Ayoubi	Senior Organic Chemist	Perth Inorganics
Stephen Hislop	Senior Inorganic Chemist	Stafford Minerals - AY

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: X078633	X080226	X080231	X080210	X080220
				Client sampling date / time: 22-FEB-2012 15:00	28-FEB-2012 15:00	28-FEB-2012 15:00	28-FEB-2012 15:00	28-FEB-2012 15:00
				EP1202066-001	EP1202066-002	EP1202066-003	EP1202066-004	EP1202066-005
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	<1.0	<1.0	<1.0
ED042T: Total Sulfur by LECO								
Sulfur - Total as S (LECO)	----	0.01	%	**0.31**	**1.63**	**1.86**	**2.58**	**1.91**
ED093T: Total Major Cations								
Calcium	7440-70-2	10	mg/kg	**2940**	**370**	**6470**	**280**	**340**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: X080216	X080235	X080206	X076497	X077269
				Client sampling date / time: 28-FEB-2012 15:00	28-FEB-2012 15:00	28-FEB-2012 15:00	28-FEB-2012 15:00	28-FEB-2012 15:00
				EP1202066-006	EP1202066-007	EP1202066-008	EP1202066-009	EP1202066-010
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	**1.2**	**1.0**	**1.5**
ED042T: Total Sulfur by LECO								
Sulfur - Total as S (LECO)	----	0.01	%	**1.89**	**2.11**	**3.09**	**0.44**	**0.02**
ED093T: Total Major Cations								
Calcium	7440-70-2	10	mg/kg	**3200**	**14000**	**490**	**2750**	**520**

CERTIFICATE OF ANALYSIS

Work Order	: **EP1202237**	Page	: 1 of 5
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: FMG Ex EP1201380 378 529 528 382 381	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 22-MAR-2012
Sampler	: SP	Issue Date	: 29-MAR-2012
Site	: FMG		
		No. of samples received	: 12
Quote number	: EP/164/12 V2	No. of samples analysed	: 12

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Canhuang Ke	Metals Instrument Chemist	Perth Inorganics
Stephen Hislop	Senior Inorganic Chemist	Stafford Minerals - AY

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

Analytical Results

Sub-Matrix: **SOIL**

				Client sample ID	X159591 NS0077	X078634 NS0091	X080003 NS0106	X159654 NS0078	X077093 NS0088
				Client sampling date / time	22-MAR-2012 15:00	22-MAR-2012 15:00	22-MAR-2012 15:00	22-MAR-2012 15:00	22-MAR-2012 15:00
Compound	*CAS Number*	*LOR*	*Unit*		EP1202237-001	EP1202237-002	EP1202237-003	EP1202237-004	EP1202237-005
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		<1.0	<1.0	<1.0	<1.0	<1.0
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%		**1.60**	**0.94**	**0.02**	<0.01	<0.01
ED093S: Soluble Major Cations									
Calcium	7440-70-2	10	mg/kg		**90**	**130**	**10**	<10	<10

Analytical Results

Sub-Matrix: **SOIL**

				Client sample ID	X076741 NS0086	X076751 NS0086	X076527 NS0084	X077477 NS0090	X077473 NS0090
				Client sampling date / time	22-MAR-2012 15:00	22-MAR-2012 15:00	22-MAR-2012 15:00	22-MAR-2012 15:00	22-MAR-2012 15:00
Compound	CAS Number	LOR	Unit		EP1202237-006	EP1202237-007	EP1202237-008	EP1202237-009	EP1202237-010
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		<1.0	<1.0	<1.0	<1.0	<1.0
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%		**0.01**	<0.01	**0.77**	<0.01	**0.01**
ED093S: Soluble Major Cations									
Calcium	7440-70-2	10	mg/kg		<10	<10	**40**	<10	<10

Analytical Results

Sub-Matrix: SOIL	Client sample ID	X159777 NS0079	X0800669 NS0106	----	----	----
	Client sampling date / time	22-MAR-2012 15:00	22-MAR-2012 15:00	----	----	----
Compound	CAS Number	LOR	Unit	EP1202237-011	EP1202237-012	----	----	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	----	----	----
ED042T: Total Sulfur by LECO								
Sulfur - Total as S (LECO)	----	0.01	%	**0.21**	**0.02**	----	----	----
ED093S: Soluble Major Cations								
Calcium	7440-70-2	10	mg/kg	<10	**60**	----	----	----

ALS Environmental

Acid Buffering Characteristic Curve (ABCC) REPORT

Batch: EP1202701

CONTACT:	Steven Pearce	LABORATORY:	Brisbane
CLIENT:	GHD PTY LTD	DATE SAMPLED:	11/04/2012
ADDRESS:	239 ADELAIDE TERRACE	DATE RECEIVED:	11/04/2012
	PERTH, WA 6004	DATE COMPLETED:	26/04/2012
		SAMPLE TYPE:	Soil
		No. of SAMPLES:	3

COMMENTS

EA046 : NATA accreditation does not cover performance of this service.
EA046 : ANCs and ABCCs have been rerun and confirmed for sample EP1202701 002 (12_286_02_(3283 Tails) 2)

ISSUING LABORATORY: ALS BRISBANE

Address:	32 Shand Street	Telephone:	07 3243 7222
	STAFFORD QLD 4053	Facsimile:	07 3243 7218
	AUSTRALIA	E-mail:	Myles.Clark@alsenviro.com

Signatory

Work Order :	EP1202701	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			12_286_02
	Client Sample Identification 2			(3283 Tails) 1
	Sample Date			11/04/2012
Method	Analyte	Units	LOR	

	1
	EP1202701

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**64.5**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.62				
1	0.2	2.45	7.76				
2	0.4	4.9	6.94				
3	0.6	7.35	6.65				
4	0.8	9.8	6.46				
5	1	12.25	6.27				
6	1.2	14.7	6.06				
7	1.4	17.15	5.84				
8	1.6	19.6	5.66				
9	1.8	22.05	5.51				
10	2	24.5	5.38				
11	2.2	26.95	5.26				
12	2.4	29.4	5.16				
13	2.6	31.85	5.05				
14	2.8	34.3	4.94				
15	3	36.75	4.82				
16	3.2	39.2	4.69				
17	3.4	41.65	4.55				
18	3.6	44.1	4.40				
19	3.8	46.55	4.26				
20	4	49	4.09				
21	4.2	51.45	3.92				
22	4.4	53.9	3.74				
23	4.6	56.35	3.57				
24	4.8	58.8	3.40				
25	5	61.25	3.24				
26	5.2	63.7	3.10				
27	5.4	66.15	2.98				
28	5.6	68.6	2.87				
29	5.8	71.05	2.78				
30	6	73.5	2.70				
31	6.2	75.95	2.62				
32	6.4	78.4	2.56				
33	6.6	80.85	2.50				
34	6.8	83.3	2.45				
35	7	85.75	2.40				

Work Order :	EP1202701	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			12_286_02
	Client Sample Identification 2			(3283 Tails) 1
	Sample Date			11/04/2012
Method	Analyte	Units	LOR	

	1	Check
	EP1202701	

EA046 - A Titration information

HCl Molarity:		**M**	**0.5**
Increments:		**mL**	**0.2**
Weight		**(g)**	**2**
ANC		**kgH2SO4/t**	**64.5**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.62	36	7.2	88.2	2.43
1	0.2	2.45	7.98	37	7.4	90.65	2.38
2	0.4	4.9	7.17				
3	0.6	7.35	6.81				
4	0.8	9.8	6.51				
5	1	12.25	6.24				
6	1.2	14.7	5.98				
7	1.4	17.15	5.78				
8	1.6	19.6	5.62				
9	1.8	22.05	5.49				
10	2	24.5	5.37				
11	2.2	26.95	5.27				
12	2.4	29.4	5.18				
13	2.6	31.85	5.08				
14	2.8	34.3	4.99				
15	3	36.75	4.90				
16	3.2	39.2	4.79				
17	3.4	41.65	4.69				
18	3.6	44.1	4.57				
19	3.8	46.55	4.45				
20	4	49	4.32				
21	4.2	51.45	4.17				
22	4.4	53.9	4.01				
23	4.6	56.35	3.85				
24	4.8	58.8	3.67				
25	5	61.25	3.50				
26	5.2	63.7	3.33				
27	5.4	66.15	3.18				
28	5.6	68.6	3.05				
29	5.8	71.05	2.94				
30	6	73.5	2.84				
31	6.2	75.95	2.75				
32	6.4	78.4	2.67				
33	6.6	80.85	2.60				
34	6.8	83.3	2.54				
35	7	85.75	2.48				

Work Order :	EP1202701	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			12_286_02
	Client Sample Identification 2			(3283 Tails) 2
	Sample Date			11/04/2012
Method	Analyte	Units	LOR	

	2
	EP1202701

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**60.4**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.81				
1	0.2	2.45	6.73				
2	0.4	4.9	5.85				
3	0.6	7.35	5.25				
4	0.8	9.8	4.16				
5	1	12.25	3.42				
6	1.2	14.7	3.07				
7	1.4	17.15	2.87				
8	1.6	19.6	2.73				
9	1.8	22.05	2.61				
10	2	24.5	2.52				
11	2.2	26.95	2.44				
12	2.4	29.4	2.38				

Work Order :	EP1202701	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			12_168_01
	Client Sample Identification 2			3283 - Year 1-7 Tailings)
	Sample Date			11/04/2012
Method	Analyte	Units	LOR	

	3
	EP1202701

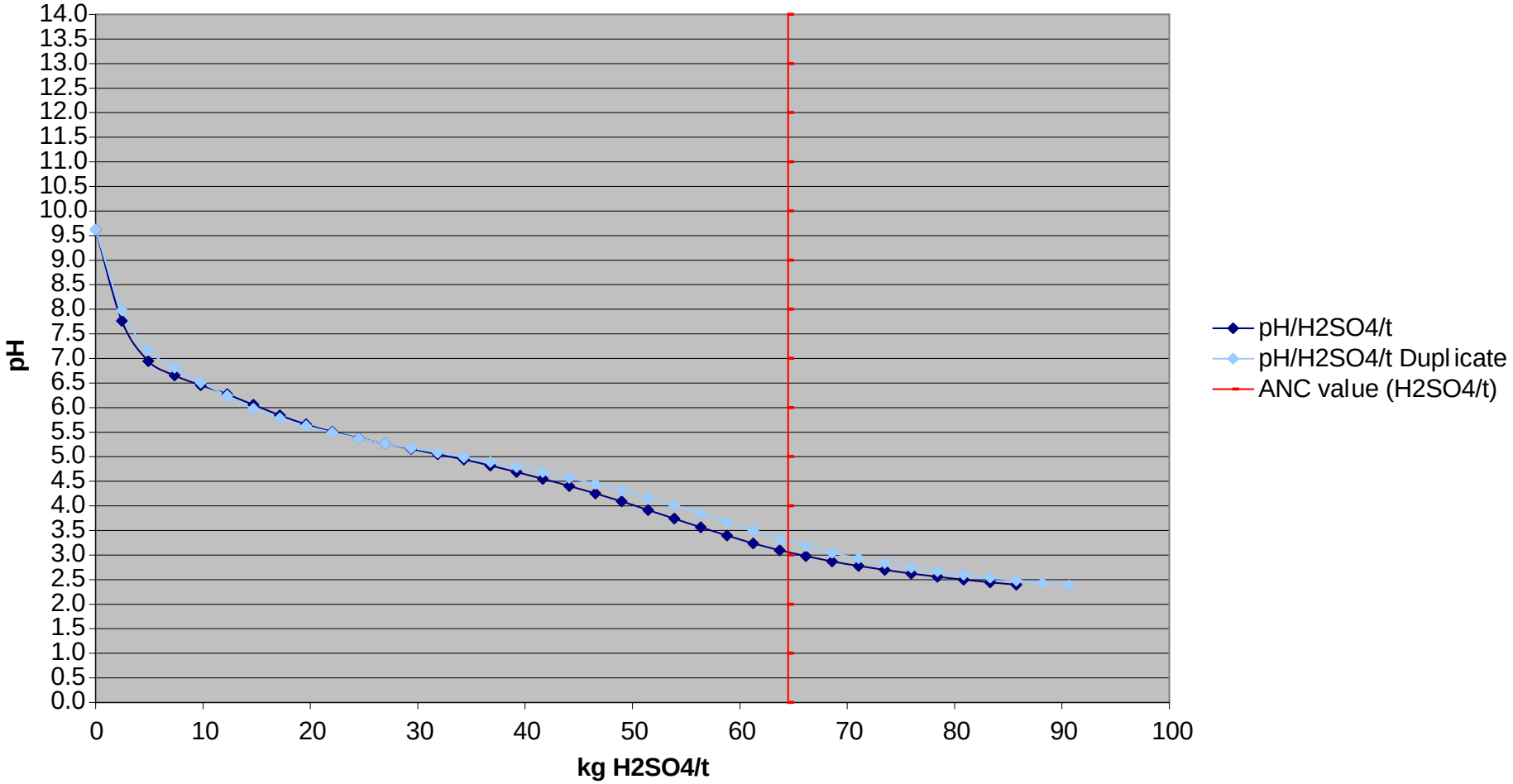
EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**77.1**

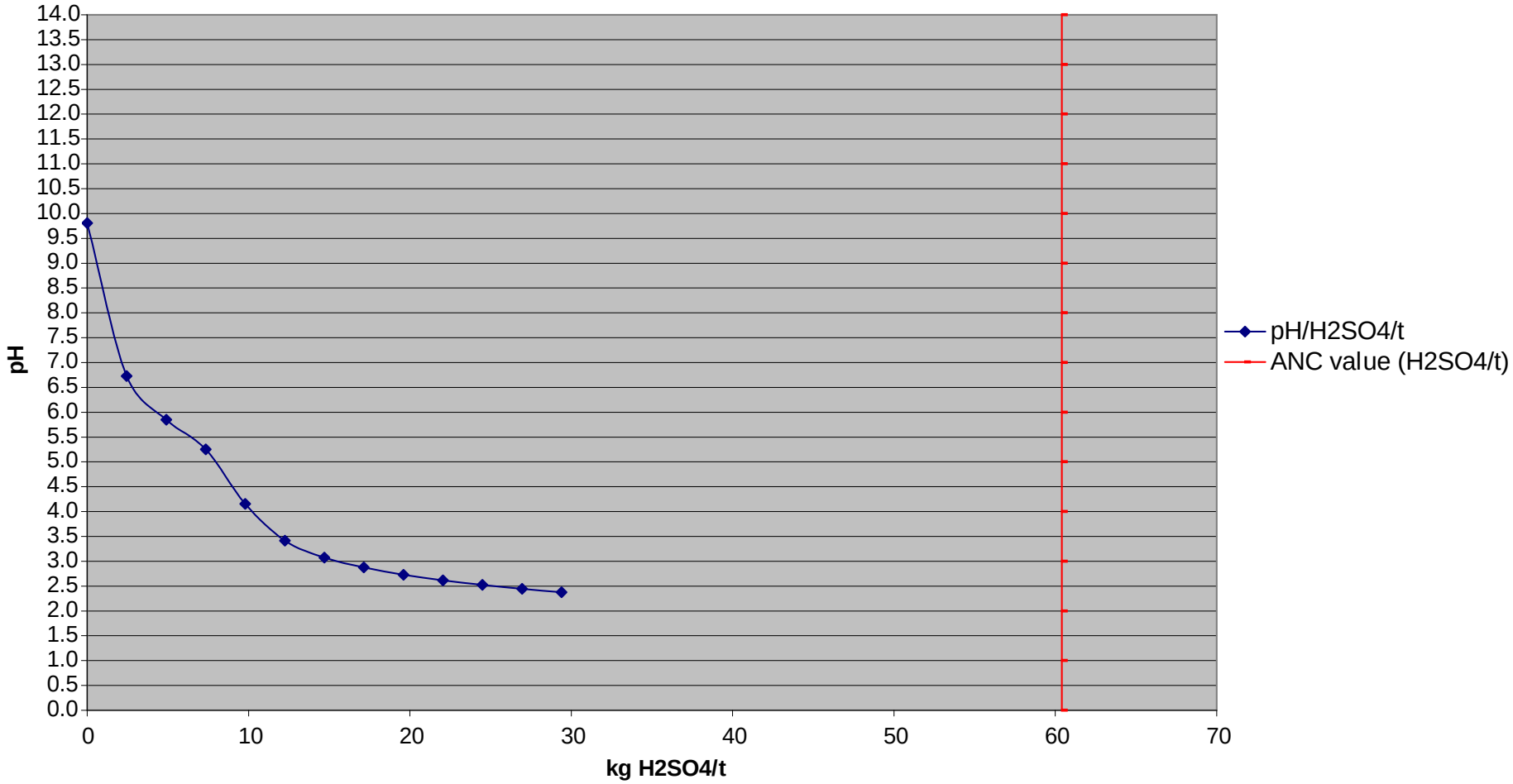
EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.54				
1	0.2	2.45	6.90				
2	0.4	4.9	6.31				
3	0.6	7.35	5.94				
4	0.8	9.8	5.68				
5	1	12.25	5.45				
6	1.2	14.7	5.20				
7	1.4	17.15	4.91				
8	1.6	19.6	4.44				
9	1.8	22.05	3.86				
10	2	24.5	3.48				
11	2.2	26.95	3.23				
12	2.4	29.4	3.07				
13	2.6	31.85	2.95				
14	2.8	34.3	2.85				
15	3	36.75	2.80				
16	3.2	39.2	2.77				
17	3.4	41.65	2.74				
18	3.6	44.1	2.73				
19	3.8	46.55	2.72				
20	4	49	2.71				
21	4.2	51.45	2.68				
22	4.4	53.9	2.65				
23	4.6	56.35	2.61				
24	4.8	58.8	2.57				
25	5	61.25	2.53				
26	5.2	63.7	2.50				
27	5.4	66.15	2.47				
28	5.6	68.6	2.43				
29	5.8	71.05	2.40				

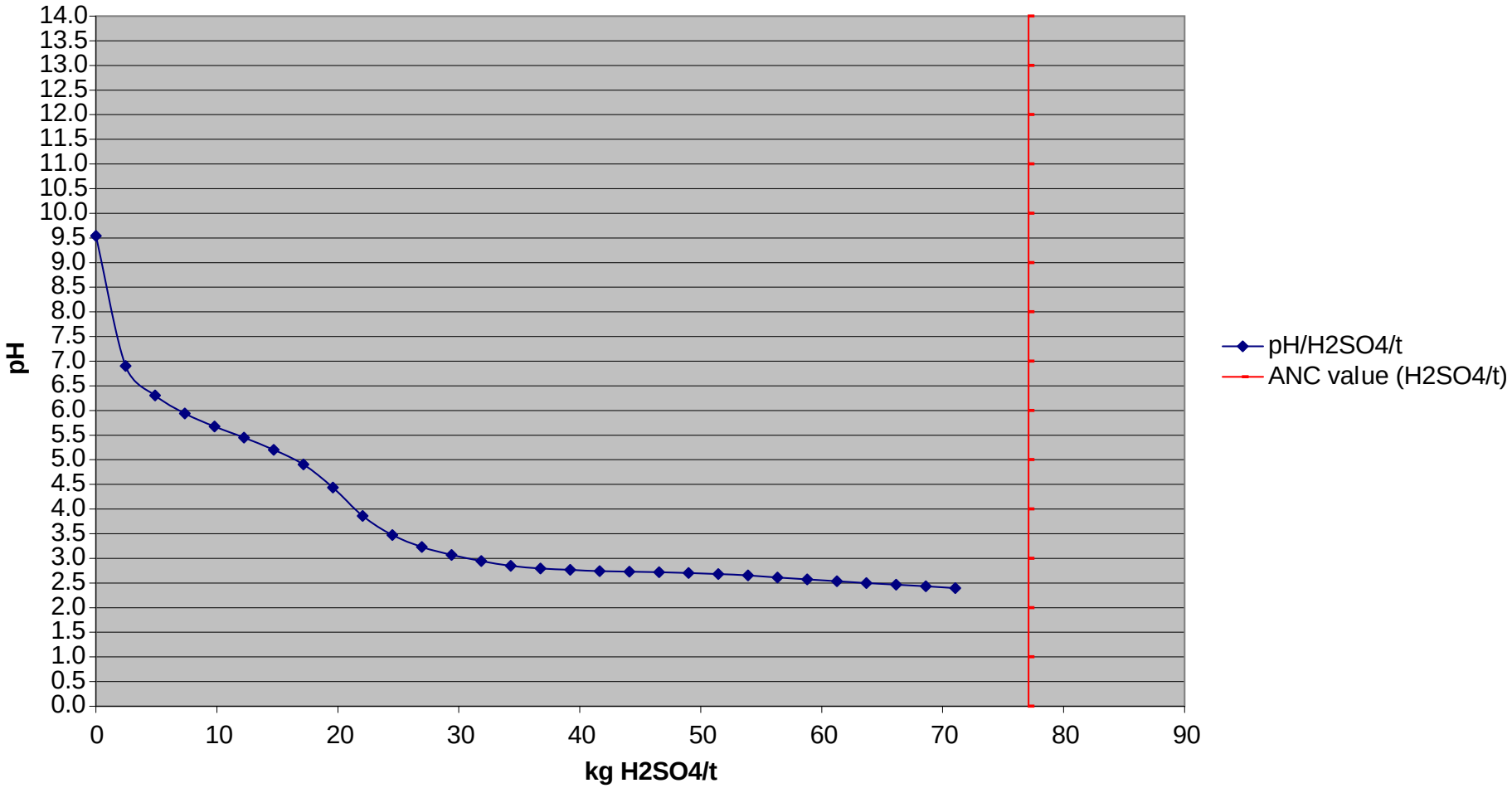
EP1202701 001 (12_286_02_(3283 Tails) 1)
Acid Buffering Characteristic Curve
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



EP1202701 002 (12_286_02_(3283 Tails) 2)
Acid Buffering Characteristic Curve
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



EP1202701 003 (12_168_01_3283 - Year 1-7 Tailings))
Acid Buffering Characteristic Curve
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



CERTIFICATE OF ANALYSIS

Work Order	: **EP1202701**	Page	: 1 of 10
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
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E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
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Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: 6127391 North Star	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 11-APR-2012
Sampler	: TP Geology	Issue Date	: 01-MAY-2012
Site	: North Star		
		No. of samples received	: 9
Quote number	: EP/164/12 V2	No. of samples analysed	: 9

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Canhuang Ke	Metals Instrument Chemist	Perth Inorganics
Chas Tucker	Inorganic Chemist	Perth Inorganics
Cicelia Bartels	Metals Instrument Chemist	Perth Inorganics
Leanne Cooper	Acid Sulfate Soils Supervisor	Perth ASS
Matthew Goodwin	Laboratory Coordinator	Stafford Minerals - AY
Rassem Ayoubi	Senior Organic Chemist	Perth Inorganics
Raymond Commodor	Instrument Chemist	Sydney Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **(ADD METHOD): NATA accreditation does not cover performance of this service.**
- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **ACETIC ACID LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	12_286_02 (3283 Tails) 1	12_286_02 (3283 Tails) 2	12_168_01 (3283 - Year 1-7 Tailings)	----	----
				Client sampling date / time	12-APR-2012 12:00	12-APR-2012 12:00	12-APR-2012 12:00	----	----
					EP1202701-004	EP1202701-005	EP1202701-006	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**3**	**3**	**5**	----	----
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		**11**	**11**	**12**	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**199**	**193**	**224**	----	----
Magnesium	7439-95-4	1	mg/L		**40**	**38**	**65**	----	----
Sodium	7440-23-5	1	mg/L		**1450**	**1460**	**1410**	----	----
Potassium	7440-09-7	1	mg/L		**99**	**101**	**71**	----	----
EG020C: Leachable Metals by ICPMS									
Aluminium	7429-90-5	0.1	mg/L		<0.1	<0.1	<0.1	----	----
Arsenic	7440-38-2	0.005	mg/L		<0.005	<0.005	<0.005	----	----
Barium	7440-39-3	0.1	mg/L		**1.3**	**1.3**	**1.3**	----	----
Beryllium	7440-41-7	0.001	mg/L		**0.005**	**0.005**	**0.003**	----	----
Cadmium	7440-43-9	0.001	mg/L		**0.001**	**0.001**	<0.001	----	----
Cobalt	7440-48-4	0.01	mg/L		**0.02**	**0.02**	**0.01**	----	----
Chromium	7440-47-3	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Copper	7440-50-8	0.01	mg/L		**0.04**	**0.05**	**0.03**	----	----
Manganese	7439-96-5	0.01	mg/L		**11.6**	**10.9**	**22.2**	----	----
Nickel	7440-02-0	0.01	mg/L		**0.03**	**0.03**	**0.02**	----	----
Lead	7439-92-1	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Zinc	7440-66-6	0.1	mg/L		**0.7**	**0.7**	**0.3**	----	----
Iron	7439-89-6	0.05	mg/L		**9.83**	**11.8**	**3.67**	----	----
EG035C: Leachable Mercury by FIMS									
Mercury	7439-97-6	0.0010	mg/L		<0.0010	<0.0010	<0.0010	----	----

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	12_286_02 (3283 Tails) 1	12_286_02 (3283 Tails) 2	12_168_01 (3283 - Year 1-7 Tailings)	----	----
				Client sampling date / time	12-APR-2012 12:00	12-APR-2012 12:00	12-APR-2012 12:00	----	----
					EP1202701-001	EP1202701-002	EP1202701-003	----	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		**29**	**30**	**15**	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**23**	**22**	**30**	----	----
Total Alkalinity as CaCO3	----	1	mg/L		**52**	**53**	**46**	----	----
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		<1	<1	<1	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**4**	**4**	**5**	----	----
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		<1	<1	**1**	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**3**	**4**	**6**	----	----
Magnesium	7439-95-4	1	mg/L		<1	<1	**3**	----	----
Sodium	7440-23-5	1	mg/L		**24**	**25**	**13**	----	----
Potassium	7440-09-7	1	mg/L		**1**	**2**	<1	----	----
EG020W: Water Leachable Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.29**	**0.31**	**0.03**	----	----
Arsenic	7440-38-2	0.001	mg/L		**0.002**	**0.005**	**0.012**	----	----
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Barium	7440-39-3	0.001	mg/L		**0.233**	**0.309**	**0.227**	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	**0.001**	<0.001	----	----
Manganese	7439-96-5	0.001	mg/L		**0.011**	**0.013**	**0.004**	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	**0.005**	<0.001	----	----
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Zinc	7440-66-6	0.005	mg/L		**0.019**	**0.031**	**0.012**	----	----
Iron	7439-89-6	0.05	mg/L		**0.46**	**0.56**	**0.10**	----	----
EG035W: Water Leachable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	----	----
EN055: Ionic Balance									
Total Anions	----	0.01	meq/L		**1.12**	**1.14**	**1.05**	----	----

Analytical Results

Sub-Matrix: DI WATER LEACHATE			Client sample ID	12_286_02 (3283 Tails) 1	12_286_02 (3283 Tails) 2	12_168_01 (3283 - Year 1-7 Tailings)	----	----
			Client sampling date / time	12-APR-2012 12:00	12-APR-2012 12:00	12-APR-2012 12:00	----	----
Compound	CAS Number	LOR	Unit	EP1202701-001	EP1202701-002	EP1202701-003	----	----
EN055: Ionic Balance - Continued								
Total Cations	----	0.01	meq/L	**1.22**	**1.34**	**1.11**	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	12_286_02 (3283 Tails) 1	12_286_02 (3283 Tails) 2	12_168_01 (3283 - Year 1-7 Tailings)	12_286_02 (3283 Tails) 1	12_286_02 (3283 Tails) 2
				Client sampling date / time	11-APR-2012 11:23	11-APR-2012 11:23	11-APR-2012 11:23	11-APR-2012 11:23	11-APR-2012 11:23
					EP1202701-001	EP1202701-002	EP1202701-003	EP1202701-004	EP1202701-005
EA009: Nett Acid Production Potential									
Net Acid Production Potential	----	0.5	kg H2SO4/t		**-59.3**	**-54.9**	**-73.4**	----	----
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit		**8.9**	**9.4**	**9.2**	----	----
NAG (pH 4.5)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	----	----
NAG (pH 7.0)	----	0.1	kg H2SO4/t		<0.1	<0.1	<0.1	----	----
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit		**9.5**	**9.4**	**8.9**	----	----
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		<1.0	<1.0	<1.0	----	----
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%		**0.17**	**0.18**	**0.12**	----	----
EG005T: Total Metals by ICP-AES									
Aluminium	7429-90-5	50	mg/kg		**5800**	**5840**	**4430**	----	----
Arsenic	7440-38-2	5	mg/kg		**6**	**6**	**7**	----	----
Barium	7440-39-3	10	mg/kg		**50**	**50**	**50**	----	----
Beryllium	7440-41-7	1	mg/kg		**1**	**1**	**1**	----	----
Cadmium	7440-43-9	1	mg/kg		**2**	**2**	**2**	----	----
Chromium	7440-47-3	2	mg/kg		**48**	**48**	**17**	----	----
Cobalt	7440-48-4	2	mg/kg		**9**	**9**	**8**	----	----
Copper	7440-50-8	5	mg/kg		**62**	**58**	**24**	----	----
Iron	7439-89-6	50	mg/kg		**112000**	**112000**	**110000**	----	----
Lead	7439-92-1	5	mg/kg		<5	**6**	<5	----	----
Manganese	7439-96-5	5	mg/kg		**4280**	**4230**	**6580**	----	----
Nickel	7440-02-0	2	mg/kg		**46**	**47**	**24**	----	----
Selenium	7782-49-2	5	mg/kg		<5	<5	<5	----	----
Vanadium	7440-62-2	5	mg/kg		**13**	**13**	<5	----	----
Zinc	7440-66-6	5	mg/kg		**28**	**30**	**20**	----	----
Calcium	7440-70-2	50	mg/kg		**11800**	**12100**	**13900**	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		**0.2**	**0.2**	**0.1**	----	----
EN60: ASLP Leaching Procedure									
Initial pH	----	0.1	pH Unit		----	----	----	**9.4**	**9.4**
After HCl pH	----	0.1	pH Unit		----	----	----	**1.9**	**1.9**
Extraction Fluid pH	----	0.1	pH Unit		----	----	----	**4.9**	**4.9**
Final pH	----	0.1	pH Unit		----	----	----	**5.4**	**5.4**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	12_286_02 (3283 Tails) 1	12_286_02 (3283 Tails) 2	12_168_01 (3283 - Year 1-7 Tailings)	12_286_02 (3283 Tails) 1	12_286_02 (3283 Tails) 2
	Client sampling date / time	11-APR-2012 11:23	11-APR-2012 11:23	11-APR-2012 11:23	11-APR-2012 11:23	11-APR-2012 11:23
Compound / CAS Number	LOR / Unit	EP1202701-001	EP1202701-002	EP1202701-003	EP1202701-004	EP1202701-005
EN60: Bottle Leaching Procedure						
Final pH ----	0.1 pH Unit	**9.7**	**9.8**	**9.4**	----	----

Analytical Results

Sub-Matrix: SOIL			Client sample ID	12_168_01 (3283 - Year 1-7 Tailings)	----	----	----	----
			Client sampling date / time	11-APR-2012 11:23	----	----	----	----
Compound	CAS Number	LOR	Unit	EP1202701-006	----	----	----	----
EN60: ASLP Leaching Procedure								
Initial pH	----	0.1	pH Unit	**9.2**	----	----	----	----
After HCl pH	----	0.1	pH Unit	**2.0**	----	----	----	----
Extraction Fluid pH	----	0.1	pH Unit	**4.9**	----	----	----	----
Final pH	----	0.1	pH Unit	**5.4**	----	----	----	----

Analytical Results

Sub-Matrix: WATER				Client sample ID	12_286_02 (NAG Liquor) (3283 Tails) 1	12_286_02 (NAG Liquor) (3283 Tails) 2	12_168_01 (NAG Liquor) (3283 - Year 1-7 Tailings)	----	----
				Client sampling date / time	11-APR-2012 11:23	11-APR-2012 11:23	11-APR-2012 11:23	----	----
Compound	CAS Number	LOR	Unit		EP1202701-007	EP1202701-008	EP1202701-009	----	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		**8**	**18**	**11**	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**51**	**44**	**41**	----	----
Total Alkalinity as CaCO3	----	1	mg/L		**59**	**62**	**52**	----	----
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		<1	<1	<1	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**12**	**13**	**5**	----	----
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		**3**	**2**	<1	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**4**	**6**	**6**	----	----
Magnesium	7439-95-4	1	mg/L		**2**	**1**	**3**	----	----
Sodium	7440-23-5	1	mg/L		**21**	**16**	**10**	----	----
Potassium	7440-09-7	1	mg/L		**4**	**4**	**2**	----	----
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.04**	**0.02**	**0.01**	----	----
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Barium	7440-39-3	0.001	mg/L		**0.004**	**0.005**	**0.002**	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	----	----
Chromium	7440-47-3	0.001	mg/L		**0.008**	<0.001	<0.001	----	----
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Manganese	7439-96-5	0.001	mg/L		**0.011**	**0.006**	**0.015**	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	----	----
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	----	----
EN055: Ionic Balance									

Analytical Results

Sub-Matrix: WATER	Client sample ID	12_286_02 (NAG Liquor) (3283 Tails) 1	12_286_02 (NAG Liquor) (3283 Tails) 2	12_168_01 (NAG Liquor) (3283 - Year 1-7 Tailings)	----	----
	Client sampling date / time	11-APR-2012 11:23	11-APR-2012 11:23	11-APR-2012 11:23	----	----
Compound / CAS Number / LOR / Unit		EP1202701-007	EP1202701-008	EP1202701-009	----	----
EN055: Ionic Balance - Continued						
Total Anions ---- 0.01 meq/L		**1.51**	**1.57**	**1.14**	----	----
Total Cations ---- 0.01 meq/L		**1.38**	**1.18**	**1.03**	----	----

QUALITY CONTROL REPORT

Work Order	: **EP1202701**	Page	: 1 of 13
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
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Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: 6127391 North Star	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: North Star		
C-O-C number	: ----	Date Samples Received	: 11-APR-2012
Sampler	: TP Geology	Issue Date	: 01-MAY-2012
Order number	: ----		
		No. of samples received	: 9
Quote number	: EP/164/12 V2	No. of samples analysed	: 9

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Canhuang Ke	Metals Instrument Chemist	Perth Inorganics
Chas Tucker	Inorganic Chemist	Perth Inorganics
Cicelia Bartels	Metals Instrument Chemist	Perth Inorganics
Leanne Cooper	Acid Sulfate Soils Supervisor	Perth ASS
Matthew Goodwin	Laboratory Coordinator	Stafford Minerals - AY
Rassem Ayoubi	Senior Organic Chemist	Perth Inorganics
Raymond Commodor	Instrument Chemist	Sydney Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EA011: Net Acid Generation (QC Lot: 2252512)									
EP1202701-001	12_286_02 (3283 Tails) 1	EA011: NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	0.0	No Limit
		EA011: NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	<0.1	0.0	No Limit
		EA011: pH (OX)	----	0.1	pH Unit	8.9	9.0	0.0	0% - 20%
EA031: pH (saturated paste) (QC Lot: 2271751)									
EP1202701-001	12_286_02 (3283 Tails) 1	EA031: pH (Saturated Paste)	----	0.1	pH Unit	9.5	9.6	1.4	0% - 20%
EA055: Moisture Content (QC Lot: 2256363)									
EP1202701-001	12_286_02 (3283 Tails) 1	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	0.0	No Limit
EP1202752-005	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	4.9	3.6	31.0	No Limit
ED042T: Total Sulfur by LECO (QC Lot: 2270301)									
EP1202701-001	12_286_02 (3283 Tails) 1	ED042T: Sulfur - Total as S (LECO)	----	0.01	%	0.17	0.18	0.0	0% - 50%
EG005T: Total Metals by ICP-AES (QC Lot: 2255503)									
EP1202701-001	12_286_02 (3283 Tails) 1	EG005T: Beryllium	7440-41-7	1	mg/kg	1	1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	2	2	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	50	50	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	48	52	8.3	0% - 20%
		EG005T: Cobalt	7440-48-4	2	mg/kg	9	9	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	46	46	0.0	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	7	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	62	60	3.4	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	4280	4200	1.9	0% - 20%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	13	13	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	28	36	22.9	No Limit
		EG005T: Aluminium	7429-90-5	50	mg/kg	5800	5850	0.9	0% - 20%
		EG005T: Iron	7439-89-6	50	mg/kg	112000	112000	0.2	0% - 20%
		EG005T: Calcium	7440-70-2	50	mg/kg	11800	11600	1.5	0% - 20%
EP1202745-008	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	<10	<10	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	3	3	0.0	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG005T: Total Metals by ICP-AES (QC Lot: 2255503) - continued									
EP1202745-008	Anonymous	EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Aluminium	7429-90-5	50	mg/kg	1160	1310	12.1	0% - 20%
		EG005T: Iron	7439-89-6	50	mg/kg	1290	1400	8.7	0% - 20%
		EG005T: Calcium	7440-70-2	50	mg/kg	24800	25800	4.0	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2255504)									
EP1202701-001	12_286_02 (3283 Tails) 1	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.2	0.2	0.0	No Limit
EP1202745-008	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
ED037P: Alkalinity by PC Titrator (QC Lot: 2255887)									
EP1202698-001	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	17	17	0.0	0% - 50%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	17	17	0.0	0% - 50%
EP1202701-005	12_286_02 (3283 Tails) 2	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	2090	2080	0.4	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	2090	2080	0.4	0% - 20%
ED038A: Acidity (QC Lot: 2269289)									
EP1202951-002	Anonymous	ED038: Acidity as CaCO3	----	1	mg/L	38	39	4.9	0% - 20%
EP1202939-001	Anonymous	ED038: Acidity as CaCO3	----	1	mg/L	214	212	0.9	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 2259445)									
EP1202689-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	2690	2630	2.3	0% - 20%
EP1202701-003	12_168_01 (3283 - Year 1-7 Tailings)	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	5	5	0.0	No Limit
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 2259467)									
EP1202716-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	1220	1240	2.1	0% - 20%
EP1202806-003	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	17	17	0.0	0% - 50%
ED045G: Chloride Discrete analyser (QC Lot: 2259444)									
EP1202689-001	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	10600	10400	1.9	0% - 20%
EP1202701-003	12_168_01 (3283 - Year 1-7 Tailings)	ED045G: Chloride	16887-00-6	1	mg/L	1	1	0.0	No Limit
ED045G: Chloride Discrete analyser (QC Lot: 2259466)									
EP1202694-001	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	401	409	2.1	0% - 20%

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
ED045G: Chloride Discrete analyser (QC Lot: 2259466) - continued									
EP1202784-002	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	916	918	0.2	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 2259443)									
EP1202689-001	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	389	401	3.1	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	564	578	2.5	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	6470	6630	2.5	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	536	557	3.9	0% - 20%
EP1202701-003	12_168_01 (3283 - Year 1-7 Tailings)	ED093F: Calcium	7440-70-2	1	mg/L	6	6	0.0	No Limit
		ED093F: Magnesium	7439-95-4	1	mg/L	3	3	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	13	13	0.0	0% - 50%
		ED093F: Potassium	7440-09-7	1	mg/L	<1	<1	0.0	No Limit
ED093F: Dissolved Major Cations (QC Lot: 2259465)									
EP1202694-001	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	60	60	0.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	46	46	0.0	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	212	213	0.0	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	12	12	0.0	0% - 50%
EP1202806-004	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	496	521	4.8	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	773	806	4.2	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	4220	4420	4.6	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	59	60	3.2	0% - 20%
EG020C: Leachable Metals by ICPMS (QC Lot: 2267155)									
EP1202701-004	12_286_02 (3283 Tails) 1	EG020A-C: Beryllium	7440-41-7	0.001	mg/L	0.005	0.005	0.0	No Limit
		EG020A-C: Cadmium	7440-43-9	0.001	mg/L	0.001	0.002	0.0	No Limit
		EG020A-C: Arsenic	7440-38-2	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-C: Cobalt	7440-48-4	0.01	mg/L	0.02	0.02	0.0	No Limit
		EG020A-C: Chromium	7440-47-3	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-C: Copper	7440-50-8	0.01	mg/L	0.04	0.04	0.0	No Limit
		EG020A-C: Manganese	7439-96-5	0.01	mg/L	11.6	11.7	0.6	0% - 20%
		EG020A-C: Nickel	7440-02-0	0.01	mg/L	0.03	0.03	0.0	No Limit
		EG020A-C: Lead	7439-92-1	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-C: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-C: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-C: Iron	7439-89-6	0.05	mg/L	9.83	9.99	1.6	0% - 20%
		EG020A-C: Aluminium	7429-90-5	0.1	mg/L	<0.1	<0.1	0.0	No Limit
		EG020A-C: Barium	7440-39-3	0.1	mg/L	1.3	1.3	0.0	0% - 50%
		EG020A-C: Zinc	7440-66-6	0.1	mg/L	0.7	0.7	0.0	No Limit
EG020T: Total Metals by ICP-MS (QC Lot: 2270881)									
EP1202701-007	12_286_02 (NAG Liquor) (3283 Tails) 1	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG020T: Total Metals by ICP-MS (QC Lot: 2270881) - continued									
EP1202701-007	12_286_02 (NAG Liquor) (3283 Tails) 1	EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Barium	7440-39-3	0.001	mg/L	0.004	0.004	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.008	0.008	0.0	No Limit
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.011	0.010	0.0	0% - 50%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-T: Aluminium	7429-90-5	0.01	mg/L	0.04	0.02	40.6	No Limit
		EG020A-T: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-T: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-T: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.0	No Limit
EP1203028-002	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Barium	7440-39-3	0.001	mg/L	0.055	0.054	0.0	0% - 20%
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.004	0.004	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.009	0.008	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-T: Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-T: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-T: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-T: Iron	7439-89-6	0.05	mg/L	4.00	3.91	2.4	0% - 20%
EG020W: Water Leachable Metals by ICP-MS (QC Lot: 2267148)									
EP1202701-001	12_286_02 (3283 Tails) 1	EG020A-W: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-W: Arsenic	7440-38-2	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-W: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-W: Barium	7440-39-3	0.001	mg/L	0.233	0.242	4.0	0% - 20%
		EG020A-W: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-W: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-W: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-W: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-W: Manganese	7439-96-5	0.001	mg/L	0.011	0.012	0.0	0% - 50%

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG020W: Water Leachable Metals by ICP-MS (QC Lot: 2267148) - continued									
EP1202701-001	12_286_02 (3283 Tails) 1	EG020A-W: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-W: Zinc	7440-66-6	0.005	mg/L	0.019	0.020	0.0	No Limit
		EG020A-W: Aluminium	7429-90-5	0.01	mg/L	0.29	0.30	0.0	0% - 20%
		EG020A-W: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-W: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-W: Iron	7439-89-6	0.05	mg/L	0.46	0.48	3.1	No Limit
EG035C: Leachable Mercury by FIMS (QC Lot: 2267162)									
EP1202701-004	12_286_02 (3283 Tails) 1	EG035C: Mercury	7439-97-6	0.0010	mg/L	<0.0010	<0.0010	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2270940)									
EP1202701-007	12_286_02 (NAG Liquor) (3283 Tails) 1	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP1203066-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG035W: Water Leachable Mercury by FIMS (QC Lot: 2267156)									
EP1202701-001	12_286_02 (3283 Tails) 1	EG035W: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP1202919-043	Anonymous	EG035W: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit

Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EA011: Net Acid Generation (QCLot: 2252512)								
EA011: NAG (pH 7.0)	----	0.1	kg H2SO4/t	----	22.52 kg H2SO4/t	90.8	90	114
EA031: pH (saturated paste) (QCLot: 2271751)								
EA031: pH (Saturated Paste)	----	0.1	pH Unit	----	7.00 pH Unit	101	70	130
ED042T: Total Sulfur by LECO (QCLot: 2270301)								
ED042T: Sulfur - Total as S (LECO)	----	0.01	%	<0.01	100 %	98.4	70	130
EG005T: Total Metals by ICP-AES (QCLot: 2255503)								
EG005T: Aluminium	7429-90-5	50	mg/kg	<50	----	----	----	----
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.75 mg/kg	95.0	85.5	116
EG005T: Barium	7440-39-3	10	mg/kg	<10	143 mg/kg	100	87.6	114
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	----	----	----	----
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.82 mg/kg	103	82.2	112
EG005T: Chromium	7440-47-3	2	mg/kg	<2	61.6 mg/kg	103	90	112
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	----	----	----	----
EG005T: Copper	7440-50-8	5	mg/kg	<5	54.7 mg/kg	101	93	115
EG005T: Iron	7439-89-6	50	mg/kg	<50	----	----	----	----
EG005T: Lead	7439-92-1	5	mg/kg	<5	55.5 mg/kg	103	88.8	111
EG005T: Manganese	7439-96-5	5	mg/kg	<5	----	----	----	----
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.1 mg/kg	99.0	91	115
EG005T: Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	----	----	----	----
EG005T: Zinc	7440-66-6	5	mg/kg	<5	105 mg/kg	103	86.6	113
EG005T: Calcium	7440-70-2	50	mg/kg	<50	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2255504)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	1.36 mg/kg	112	75.4	121

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
ED037P: Alkalinity by PC Titrator (QCLot: 2255887)								
ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<1	----	----	----	----
ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	<1	200 mg/L	108	87	109

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
ED038A: Acidity (QCLot: 2269289)								
ED038: Acidity as CaCO3	----	1	mg/L	----	20 mg/L	98.7	85	119
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 2259445)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	104	85	130
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 2259467)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	98.9	85	130
ED045G: Chloride Discrete analyser (QCLot: 2259444)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	1000 mg/L	99.5	78	130
ED045G: Chloride Discrete analyser (QCLot: 2259466)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	1000 mg/L	97.7	78	130
ED093F: Dissolved Major Cations (QCLot: 2259443)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	97.7	88	112
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	102	88	112
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	103	85	111
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	101	84	114
ED093F: Dissolved Major Cations (QCLot: 2259465)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	100	88	112
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	99.7	88	112
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	100	85	111
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	101	84	114
EG020C: Leachable Metals by ICPMS (QCLot: 2267155)								
EG020A-C: Aluminium	7429-90-5	0.1	mg/L	<0.1	0.5 mg/L	94.4	70	130
EG020A-C: Arsenic	7440-38-2	0.005	mg/L	<0.005	0.100 mg/L	104	70	130
EG020A-C: Barium	7440-39-3	0.1	mg/L	<0.1	0.1 mg/L	# Not Determined	70	130
EG020A-C: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.100 mg/L	92.3	70	130
EG020A-C: Cadmium	7440-43-9	0.001	mg/L	<0.001	0.100 mg/L	96.7	70	130
EG020A-C: Cobalt	7440-48-4	0.01	mg/L	<0.01	0.10 mg/L	97.8	70	130
EG020A-C: Chromium	7440-47-3	0.01	mg/L	<0.01	0.10 mg/L	97.3	70	130
EG020A-C: Copper	7440-50-8	0.01	mg/L	<0.01	0.10 mg/L	97.7	70	130
EG020A-C: Manganese	7439-96-5	0.01	mg/L	<0.01	0.10 mg/L	97.6	70	130
EG020A-C: Nickel	7440-02-0	0.01	mg/L	<0.01	0.10 mg/L	92.1	70	130
EG020A-C: Lead	7439-92-1	0.01	mg/L	<0.01	0.10 mg/L	80.6	70	130
EG020A-C: Selenium	7782-49-2	0.01	mg/L	<0.01	0.10 mg/L	101	70	130
EG020A-C: Vanadium	7440-62-2	0.01	mg/L	<0.01	0.10 mg/L	97.4	70	130
EG020A-C: Zinc	7440-66-6	0.1	mg/L	<0.1	0.1 mg/L	# Not Determined	70	130
EG020A-C: Iron	7439-89-6	0.05	mg/L	<0.05	0.50 mg/L	96.8	70	130
EG020T: Total Metals by ICP-MS (QCLot: 2270881)								
EG020A-T: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	94.6	78	116
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	96.4	77	109

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 2270881) - continued								
EG020A-T: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.1 mg/L	93.6	71	119
EG020A-T: Barium	7440-39-3	0.001	mg/L	<0.001	0.1 mg/L	96.7	80	112
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	92.6	78	108
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	93.5	80	112
EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	93.9	80	112
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	96.6	79	111
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	95.2	81	109
EG020A-T: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	93.9	80	112
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	94.6	80	112
EG020A-T: Selenium	7782-49-2	0.01	mg/L	<0.01	0.1 mg/L	97.1	75	107
EG020A-T: Vanadium	7440-62-2	0.01	mg/L	<0.01	0.1 mg/L	96.3	78	112
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	94.9	74	108
EG020A-T: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	93.1	75	115
EG020W: Water Leachable Metals by ICP-MS (QCLot: 2267148)								
EG020A-W: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	86.5	70	130
EG020A-W: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	89.8	70	130
EG020A-W: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.1 mg/L	86.0	70	130
EG020A-W: Barium	7440-39-3	0.001	mg/L	<0.001	0.1 mg/L	88.9	70	130
EG020A-W: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	90.2	70	130
EG020A-W: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	91.9	70	130
EG020A-W: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	88.7	70	130
EG020A-W: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	85.8	70	130
EG020A-W: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	89.2	70	130
EG020A-W: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	90.9	70	130
EG020A-W: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	89.9	70	130
EG020A-W: Selenium	7782-49-2	0.01	mg/L	<0.01	0.1 mg/L	88.9	70	130
EG020A-W: Vanadium	7440-62-2	0.01	mg/L	<0.01	0.1 mg/L	92.4	70	130
EG020A-W: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	83.2	70	130
EG020A-W: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	94.3	70	130
EG035C: Leachable Mercury by FIMS (QCLot: 2267162)								
EG035C: Mercury	7439-97-6	0.001	mg/L	<0.0010	0.0100 mg/L	100	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270940)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.0100 mg/L	115	82.3	118
EG035W: Water Leachable Mercury by FIMS (QCLot: 2267156)								
EG035W: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.0100 mg/L	97.3	76	126

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2255503)							
EP1202701-002	12_286_02 (3283 Tails) 2	EG005T: Aluminium	7429-90-5	50 mg/kg	# Not Determined	70	130
		EG005T: Arsenic	7440-38-2	50 mg/kg	103	70	130
		EG005T: Barium	7440-39-3	50 mg/kg	103	70	130
		EG005T: Beryllium	7440-41-7	10 mg/kg	107	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	94.7	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	96.0	70	130
		EG005T: Copper	7440-50-8	50 mg/kg	114	70	130
		EG005T: Iron	7439-89-6	50 mg/kg	# Not Determined	70	130
		EG005T: Lead	7439-92-1	50 mg/kg	88.3	70	130
		EG005T: Manganese	7439-96-5	50 mg/kg	# Not Determined	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	84.7	70	130
		EG005T: Selenium	7782-49-2	10 mg/kg	92.1	70	130
		EG005T: Vanadium	7440-62-2	50 mg/kg	98.3	70	130
		EG005T: Zinc	7440-66-6	50 mg/kg	105	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2255504)							
EP1202701-002	12_286_02 (3283 Tails) 2	EG035T: Mercury	7439-97-6	10 mg/kg	102	70	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 2259445)							
EP1202689-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	100 mg/L	# Not Determined	70	130
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 2259467)							
EP1202716-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	100 mg/L	# Not Determined	70	130
ED045G: Chloride Discrete analyser (QCLot: 2259444)							
EP1202689-001	Anonymous	ED045G: Chloride	16887-00-6	250 mg/L	# Not Determined	70	130
ED045G: Chloride Discrete analyser (QCLot: 2259466)							
EP1202694-001	Anonymous	ED045G: Chloride	16887-00-6	250 mg/L	95.6	70	130
EG020C: Leachable Metals by ICPMS (QCLot: 2267155)							
EP1202701-005	12_286_02 (3283 Tails) 2	EG020A-C: Arsenic	7440-38-2	1.000 mg/L	121	70	130
		EG020A-C: Barium	7440-39-3	1.000 mg/L	103	70	130
		EG020A-C: Beryllium	7440-41-7	1.000 mg/L	89.6	70	130
		EG020A-C: Cadmium	7440-43-9	0.250 mg/L	102	70	130
		EG020A-C: Cobalt	7440-48-4	1.00 mg/L	104	70	130

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
				Concentration	MS	Low	High
EG020C: Leachable Metals by ICPMS (QCLot: 2267155) - continued							
EP1202701-005	12_286_02 (3283 Tails) 2	EG020A-C: Chromium	7440-47-3	1.00 mg/L	97.3	70	130
		EG020A-C: Copper	7440-50-8	1.00 mg/L	99.6	70	130
		EG020A-C: Manganese	7439-96-5	1.00 mg/L	# Not Determined	70	130
		EG020A-C: Nickel	7440-02-0	1.00 mg/L	105	70	130
		EG020A-C: Lead	7439-92-1	1.00 mg/L	91.1	70	130
		EG020A-C: Vanadium	7440-62-2	1.00 mg/L	102	70	130
		EG020A-C: Zinc	7440-66-6	1.0 mg/L	103	70	130
EG020T: Total Metals by ICP-MS (QCLot: 2270881)							
EP1202701-008	12_286_02 (NAG Liquor) (3283 Tails) 2	EG020A-T: Arsenic	7440-38-2	1.00 mg/L	96.0	70	130
		EG020A-T: Beryllium	7440-41-7	1.00 mg/L	94.7	70	130
		EG020A-T: Barium	7440-39-3	1.00 mg/L	96.6	70	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	93.4	70	130
		EG020A-T: Chromium	7440-47-3	1.00 mg/L	93.0	70	130
		EG020A-T: Cobalt	7440-48-4	1.00 mg/L	96.5	70	130
		EG020A-T: Copper	7440-50-8	1.00 mg/L	94.3	70	130
		EG020A-T: Lead	7439-92-1	1.00 mg/L	89.9	70	130
		EG020A-T: Manganese	7439-96-5	1.00 mg/L	92.7	70	130
		EG020A-T: Nickel	7440-02-0	1.00 mg/L	94.6	70	130
		EG020A-T: Vanadium	7440-62-2	1.00 mg/L	96.3	70	130
		EG020A-T: Zinc	7440-66-6	1.00 mg/L	93.2	70	130
EG020W: Water Leachable Metals by ICP-MS (QCLot: 2267148)							
EP1202701-002	12_286_02 (3283 Tails) 2	EG020A-W: Arsenic	7440-38-2	1.000 mg/L	94.6	70	130
		EG020A-W: Beryllium	7440-41-7	1.000 mg/L	93.0	70	130
		EG020A-W: Barium	7440-39-3	1.000 mg/L	97.0	70	130
		EG020A-W: Cadmium	7440-43-9	0.2500 mg/L	97.5	70	130
		EG020A-W: Chromium	7440-47-3	1.000 mg/L	95.6	70	130
		EG020A-W: Cobalt	7440-48-4	1.000 mg/L	94.8	70	130
		EG020A-W: Copper	7440-50-8	1.000 mg/L	93.5	70	130
		EG020A-W: Lead	7439-92-1	1.000 mg/L	93.0	70	130
		EG020A-W: Manganese	7439-96-5	1.000 mg/L	95.7	70	130
		EG020A-W: Nickel	7440-02-0	1.000 mg/L	97.1	70	130
		EG020A-W: Vanadium	7440-62-2	1.00 mg/L	98.0	70	130
		EG020A-W: Zinc	7440-66-6	1.000 mg/L	89.9	70	130
EG035C: Leachable Mercury by FIMS (QCLot: 2267162)							
EP1202701-005	12_286_02 (3283 Tails) 2	EG035C: Mercury	7439-97-6	0.0100 mg/L	95.9	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2270940)							
EP1202701-008	12_286_02 (NAG Liquor) (3283 Tails) 2	EG035T: Mercury	7439-97-6	0.0100 mg/L	74.4	70	130
EG035W: Water Leachable Mercury by FIMS (QCLot: 2267156)							

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EG035W: Water Leachable Mercury by FIMS (QCLot: 2267156) - continued							
EP1202701-002	12_286_02 (3283 Tails) 2	EG035W: Mercury	7439-97-6	0.0100 mg/L	98.2	70	130

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **EP1202701**	Page	: 1 of 11
Client	: GHD PTY LTD	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
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Project	: 6127391 North Star	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: North Star		
C-O-C number	: ----	Date Samples Received	: 11-APR-2012
Sampler	: TP Geology	Issue Date	: 01-MAY-2012
Order number	: ----		
		No. of samples received	: 9
Quote number	: EP/164/12 V2	No. of samples analysed	: 9

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA011: Net Acid Generation							
Pulp Bag 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**11-APR-2012**	**11-APR-2012**	11-APR-2013	✓	**20-APR-2012**	08-OCT-2012	✓
EA031: pH (saturated paste)							
Pulp Bag 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**11-APR-2012**	**----**	----	----	**27-APR-2012**	08-OCT-2012	✓
EA055: Moisture Content							
Pulp Bag 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**11-APR-2012**	**----**	----	----	**13-APR-2012**	25-APR-2012	✓
ED037P: Alkalinity by PC Titrator							
Clear Plastic Bottle - Natural 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**12-APR-2012**	**---**	26-APR-2012	----	**13-APR-2012**	26-APR-2012	✓
ED038A: Acidity							
Clear Plastic Bottle - Natural 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**12-APR-2012**	**----**	----	----	**23-APR-2012**	26-APR-2012	✓
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA							
Clear Plastic Bottle - Natural 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings), 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**12-APR-2012**	**---**	10-MAY-2012	----	**16-APR-2012**	10-MAY-2012	✓
ED042T: Total Sulfur by LECO							
Pulp Bag 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**11-APR-2012**	**23-APR-2012**	08-OCT-2012	✓	**23-APR-2012**	08-OCT-2012	✓
ED045G: Chloride Discrete analyser							
Clear Plastic Bottle - Natural 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings), 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**12-APR-2012**	**---**	10-MAY-2012	----	**16-APR-2012**	10-MAY-2012	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED093F: Dissolved Major Cations							
Clear Plastic Bottle - Natural 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings), 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**12-APR-2012**	**---**	19-APR-2012	----	**17-APR-2012**	19-APR-2012	✓
EG005T: Total Metals by ICP-AES							
Pulp Bag 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**11-APR-2012**	**16-APR-2012**	08-OCT-2012	✓	**16-APR-2012**	08-OCT-2012	✓
EG020C: Leachable Metals by ICPMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**12-APR-2012**	**20-APR-2012**	09-OCT-2012	✓	**20-APR-2012**	09-OCT-2012	✓
EG020W: Water Leachable Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Unfiltered 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**12-APR-2012**	**20-APR-2012**	09-OCT-2012	✓	**20-APR-2012**	09-OCT-2012	✓
EG035C: Leachable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**12-APR-2012**	**----**	----	----	**20-APR-2012**	10-MAY-2012	✓
EG035T: Total Recoverable Mercury by FIMS							
Pulp Bag 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**11-APR-2012**	**16-APR-2012**	09-MAY-2012	✓	**16-APR-2012**	09-MAY-2012	✓
EG035W: Water Leachable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**12-APR-2012**	**----**	----	----	**20-APR-2012**	10-MAY-2012	✓
EN60: ASLP Leaching Procedure							
Lab Split : Leach for Hg, Cr(VI) and other metal 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**11-APR-2012**	**---**	09-MAY-2012	----	**13-APR-2012**	09-MAY-2012	✓
EN60: Bottle Leaching Procedure							
Lab Split : Leach for Hg, Cr(VI) and other metal 12_286_02 - (3283 Tails) 1, 12_286_02 - (3283 Tails) 2, 12_168_01 - (3283 - Year 1-7 Tailings)	**11-APR-2012**	**---**	09-MAY-2012	----	**13-APR-2012**	09-MAY-2012	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED037P: Alkalinity by PC Titrator								
Clear Plastic Bottle - Natural								
12_286_02 (NAG Liquor) - (3283 Tails) 1, 12_168_01 (NAG Liquor) - (3283 - Year 1-7 Tailings)	12_286_02 (NAG Liquor) - (3283 Tails) 2,	**11-APR-2012**	**---**	25-APR-2012	----	**20-APR-2012**	25-APR-2012	✓
ED038A: Acidity								
Clear Plastic Bottle - Natural								
12_286_02 (NAG Liquor) - (3283 Tails) 1, 12_168_01 (NAG Liquor) - (3283 - Year 1-7 Tailings)	12_286_02 (NAG Liquor) - (3283 Tails) 2,	**11-APR-2012**	**----**	----	----	**23-APR-2012**	25-APR-2012	✓
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Clear Plastic Bottle - Natural								
12_286_02 (NAG Liquor) - (3283 Tails) 1, 12_168_01 (NAG Liquor) - (3283 - Year 1-7 Tailings)	12_286_02 (NAG Liquor) - (3283 Tails) 2,	**11-APR-2012**	**---**	09-MAY-2012	----	**17-APR-2012**	09-MAY-2012	✓
ED045G: Chloride Discrete analyser								
Clear Plastic Bottle - Natural								
12_286_02 (NAG Liquor) - (3283 Tails) 1, 12_168_01 (NAG Liquor) - (3283 - Year 1-7 Tailings)	12_286_02 (NAG Liquor) - (3283 Tails) 2,	**11-APR-2012**	**---**	09-MAY-2012	----	**17-APR-2012**	09-MAY-2012	✓
ED093F: Dissolved Major Cations								
Clear Plastic Bottle - Natural								
12_286_02 (NAG Liquor) - (3283 Tails) 1, 12_168_01 (NAG Liquor) - (3283 - Year 1-7 Tailings)	12_286_02 (NAG Liquor) - (3283 Tails) 2,	**11-APR-2012**	**---**	18-APR-2012	----	**18-APR-2012**	18-APR-2012	✓
EG020T: Total Metals by ICP-MS								
Clear Plastic Bottle - Nitric Acid; Unfiltered								
12_286_02 (NAG Liquor) - (3283 Tails) 1, 12_168_01 (NAG Liquor) - (3283 - Year 1-7 Tailings)	12_286_02 (NAG Liquor) - (3283 Tails) 2,	**11-APR-2012**	**24-APR-2012**	08-OCT-2012	✓	**24-APR-2012**	08-OCT-2012	✓
EG035T: Total Recoverable Mercury by FIMS								
Clear Plastic Bottle - Nitric Acid; Unfiltered								
12_286_02 (NAG Liquor) - (3283 Tails) 1, 12_168_01 (NAG Liquor) - (3283 - Year 1-7 Tailings)	12_286_02 (NAG Liquor) - (3283 Tails) 2,	**11-APR-2012**	**----**	----	----	**24-APR-2012**	09-MAY-2012	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	2	16	**12.5**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Net Acid Generation	EA011	1	3	**33.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
pH (Saturated Paste)	EA031	1	4	**25.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Sulfur - Total as S (LECO)	ED042T	1	3	**33.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	13	**15.4**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	2	13	**15.4**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Net Acid Generation	EA011	1	3	**33.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
pH (Saturated Paste)	EA031	2	4	**50.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Sulfur - Total as S (LECO)	ED042T	1	3	**33.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	13	**7.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	13	**7.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Sulfur - Total as S (LECO)	ED042T	1	3	**33.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	13	**7.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	13	**7.7**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	13	**7.7**	**5.0**	✓	ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	1	13	**7.7**	**5.0**	✓	ALS QCS3 requirement

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Acidity as Calcium Carbonate	ED038	4	11	**36.4**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Alkalinity by PC Titrator	ED037-P	4	17	**23.5**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	4	39	**10.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Leachable Mercury by FIMS	EG035C	1	3	**33.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Leachable Metals by ICPMS - Suite A	EG020A-C	1	3	**33.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Cations - Dissolved	ED093F	4	39	**10.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	4	39	**10.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	19	**10.5**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	2	20	**10.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Water Leachable Mercury by FIMS	EG035W	2	11	**18.2**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Water Leachable Metals by ICP-MS - Suite A	EG020A-W	1	3	**33.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Acidity as Calcium Carbonate	ED038	2	11	**18.2**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Alkalinity by PC Titrator	ED037-P	2	17	**11.8**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	4	39	**10.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Control Samples (LCS) - Continued							
Leachable Mercury by FIMS	EG035C	1	3	**33.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Leachable Metals by ICPMS - Suite A	EG020A-C	1	3	**33.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Cations - Dissolved	ED093F	2	39	**5.1**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	4	39	**10.3**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	19	**5.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Water Leachable Mercury by FIMS	EG035W	1	11	**9.1**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Water Leachable Metals by ICP-MS - Suite A	EG020A-W	1	3	**33.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Alkalinity by PC Titrator	ED037-P	2	17	**11.8**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	2	39	**5.1**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Leachable Mercury by FIMS	EG035C	1	3	**33.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Leachable Metals by ICPMS - Suite A	EG020A-C	1	3	**33.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Cations - Dissolved	ED093F	2	39	**5.1**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	39	**5.1**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	19	**5.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Water Leachable Mercury by FIMS	EG035W	1	11	**9.1**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Water Leachable Metals by ICP-MS - Suite A	EG020A-W	1	3	**33.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Chloride by Discrete Analyser	ED045G	2	39	**5.1**	**5.0**	✓	ALS QCS3 requirement
Leachable Mercury by FIMS	EG035C	1	3	**33.3**	**5.0**	✓	ALS QCS3 requirement
Leachable Metals by ICPMS - Suite A	EG020A-C	1	3	**33.3**	**5.0**	✓	ALS QCS3 requirement
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	39	**5.1**	**5.0**	✓	ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	19	**5.3**	**5.0**	✓	ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	**5.0**	**5.0**	✓	ALS QCS3 requirement
Water Leachable Mercury by FIMS	EG035W	1	11	**9.1**	**5.0**	✓	ALS QCS3 requirement
Water Leachable Metals by ICP-MS - Suite A	EG020A-W	1	3	**33.3**	**5.0**	✓	ALS QCS3 requirement

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Net Acid Production Potential	EA009	SOIL	Coastech Research (Canada)(Mod.). NAPP = Acid Production Potential (APP or MAP- Maximum Acid Potential) minus Neutralising Capacity (ANC). NAPP may be +ve, zero or -ve.
Net Acid Generation	EA011	SOIL	Miller (1998) Titremetric procedure determines net acidity in a soil following peroxide oxidation. Titrations to both pH 4.5 and pH 7 are reported.
Acid Neutralising Capacity (ANC)	EA013	SOIL	USEPA 600/2-78-054, I. Miller (2000). A fizz test is done to semiquanititatively estimate the likely reactivity. The soil is then reacted with an known excess quanitity of an appropriate acid. Titration determines the acid remaining, and the ANC can be calculated from comparison with a blank titration.
pH (Saturated Paste)	EA031	SOIL	USEPA 600/2 - 78 - 054 - pH determined on a saturated paste by ISE.
Acid Buffering Characterisation Curves (ABCC's)	EA046	SOIL	Miller and Jeffery (1995) Determine the portion of an ANC value of a particular sample is readily available for acid neutralisation.
Moisture Content	EA055-103	SOIL	A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (2010 Draft) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Alkalinity by PC Titrator	ED037-P	SOIL	APHA 21st ed., 2320 B This procedure determines alkalinity by automated measurement (e.g. PC Titrate) using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Acidity as Calcium Carbonate	ED038	SOIL	APHA 21st ed., 2310 B Acidity is determined by titration with a standardised alkali to an end-point pH of 8.3. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	SOIL	APHA 21st ed., 4500-SO4 Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Sulfur - Total as S (LECO)	ED042T	SOIL	In-house. Dried and pulverised sample is combusted in a LECO furnace at 1350C in the presence of strong oxidants / catalysts. The evolved S (as SO2) is measured by infra-red detector
Chloride by Discrete Analyser	ED045G	SOIL	APHA 21st ed., 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride.in the presence of ferric ions the librated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm APHA 21st edition seal method 2 017-1-L april 2003
Major Cations - Dissolved	ED093F	SOIL	Major Cations is determined based on APHA 21st ed., 3120; USEPA SW 846 - 6010 The ICPAES technique ionises the 0.45um filtered sample atoms emitting a characteristic spectrum. This spectrum is then compared against matrix matched standards for quantification. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2) Sodium Absorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2) Total Hardness is calculated based on APHA 21st ed., 2340 B. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)

Analytical Methods	Method	Matrix	Method Descriptions
Total Metals by ICP-AES	EG005T	SOIL	(APHA 21st ed., 3120; USEPA SW 846 - 6010) (ICPAES) Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (1999) Schedule B(3)
Leachable Metals by ICPMS - Suite A	EG020A-C	SOIL	(APHA 21st ed., 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020): The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Water Leachable Metals by ICP-MS - Suite A	EG020A-W	SOIL	(APHA 21st ed., 3125; USEPA SW846 - 6020, AS 4439.3, ALS QWI-EN/EG020): The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Leachable Mercury by FIMS	EG035C	SOIL	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the TCLP solution. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Mercury by FIMS	EG035T	SOIL	AS 3550, APHA 21st ed., 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3)
Water Leachable Mercury by FIMS	EG035W	SOIL	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the TCLP solution. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Ionic Balance by PCT DA and Turbi SO4 DA	EN055 - PG	SOIL	APHA 21st Ed. 1030F. The Ionic Balance is calculated based on the major Anions and Cations. The major anions include Alkalinity, Chloride and Sulfate which determined by PCT and DA. The Cations are determined by Turbi SO4 by DA. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Miscellaneous Subcontracted Analysis	MIS-SOL	SOIL	Miscellaneous Subcontracted Analysis conducted by Subcontracting Laboratory
Alkalinity by PC Titrator	ED037-P	WATER	APHA 21st ed., 2320 B This procedure determines alkalinity by automated measurement (e.g. PC Titrate) using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Acidity as Calcium Carbonate	ED038	WATER	APHA 21st ed., 2310 B Acidity is determined by titration with a standardised alkali to an end-point pH of 8.3. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	APHA 21st ed., 4500-SO4 Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Chloride by Discrete Analyser	ED045G	WATER	APHA 21st ed., 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride.in the presence of ferric ions the librated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm APHA 21st edition seal method 2 017-1-L april 2003

Analytical Methods	Method	Matrix	Method Descriptions
Major Cations - Dissolved	ED093F	WATER	Major Cations is determined based on APHA 21st ed., 3120; USEPA SW 846 - 6010 The ICPAES technique ionises the 0.45um filtered sample atoms emitting a characteristic spectrum. This spectrum is then compared against matrix matched standards for quantification. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2) Sodium Absorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2) Total Hardness is calculated based on APHA 21st ed., 2340 B. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	(APHA 21st ed., 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020): The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Ionic Balance by PCT DA and Turbi SO4 DA	EN055 - PG	WATER	APHA 21st Ed. 1030F. The Ionic Balance is calculated based on the major Anions and Cations. The major anions include Alkalinity, Chloride and Sulfate which determined by PCT and DA. The Cations are determined by Turbi SO4 by DA. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)

Preparation Methods	Method	Matrix	Method Descriptions
Drying at 85 degrees, bagging and labelling (ASS)	EN020PR	SOIL	In house
Digestion for Total Recoverable Metals in TCLP Leachate	EN25C	SOIL	USEPA SW846-3005 Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Digestion for Total Recoverable Metals in DI Water Leachate	EN25W	SOIL	USEPA SW846-3005 Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
ASLP for Non & Semivolatile Analytes	EN60a	SOIL	AS4439.3 Preparation of Leachates
Deionised Water Leach	EN60-DIa	SOIL	AS4439.3 Preparation of Leachates
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	USEPA 200.2 Mod. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (1999) Schedule B(3) (Method 202)
Digestion for Total Recoverable Metals	EN25	WATER	USEPA SW846-3005 Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EG005T: Total Metals by ICP-AES	EP1202701-002	12_286_02 (3283 Tails) 2	**Aluminium**	7429-90-5	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EG005T: Total Metals by ICP-AES	EP1202701-002	12_286_02 (3283 Tails) 2	**Iron**	7439-89-6	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EG005T: Total Metals by ICP-AES	EP1202701-002	12_286_02 (3283 Tails) 2	**Manganese**	7439-96-5	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
EG020C: Leachable Metals by ICPMS	2685214-002	----	**Barium**	7440-39-3	Not Determined	----	**Standard recovery not determined, result less than LOR**
EG020C: Leachable Metals by ICPMS	2685214-002	----	**Zinc**	7440-66-6	Not Determined	----	**Standard recovery not determined, result less than LOR**
Matrix Spike (MS) Recoveries							
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA	EP1202689-001	Anonymous	**Sulfate as SO4 - Turbidimetric**	14808-79-8	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA	EP1202716-001	Anonymous	**Sulfate as SO4 - Turbidimetric**	14808-79-8	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
ED045G: Chloride Discrete analyser	EP1202689-001	Anonymous	**Chloride**	16887-00-6	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EG020C: Leachable Metals by ICPMS	EP1202701-005	12_286_02 (3283 Tails) 2	**Manganese**	7439-96-5	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**

- **For all matrices, no Method Blank value outliers occur.**
- **For all matrices, no Duplicate outliers occur.**

Regular Sample Surrogates

- **For all regular sample matrices, no surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

- **No Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- **No Quality Control Sample Frequency Outliers exist.**

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order	: **EP1202701**		
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: 6127391 North Star	Page	: 1 of 3
Order number	: ----		
C-O-C number	: ----	Quote number	: EP2012GHDSER0537 (EP/164/12 V2)
Site	: North Star		
Sampler	: TP Geology	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 11-APR-2012	Issue Date	: 11-APR-2012 13:51
Client Requested Due Date	: 25-APR-2012	Scheduled Reporting Date	: **25-APR-2012**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: Ambient
No. of coolers/boxes	: NIL	No. of samples received	: 9
Security Seal	: Intact.	No. of samples analysed	: 9

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- Sample containers do not comply to pretreatment / preservation standards (AS, APHA, USEPA). Please refer to the Sample Container(s)/Preservation Non-Compliance Log at the end of this report for details.
- Please see scanned COC for sample discrepencies: extra samples , samples not received etc.
- **Sample containers do not comply to pretreatment / preservation standards (AS, APHA, USEPA). Please refer to the Sample Container(s)/Preservation Non-Compliance Log at the end of this report for details.**
- **pH analysis should be conducted within 6 hours of sampling.**
- Analytical work for this work order will be conducted at ALS Environmental Perth.
- Please direct any turnaround / technical queries to the laboratory contact designated above.
- Please direct any queries related to sample condition / numbering / breakages to Sample Receipt (SamplesPerth@alsenviro.com)
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of Work Order.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

Method *Client sample ID*	Sample Container Received	Preferred Sample Container for Analysis
EA055-103 : Moisture Content		
12_286_02 (3283 Tails) 1	- Pulp Bag	- Lab Split: Managed Moisture for Dry Weight Det.
12_286_02 (3283 Tails) 2	- Pulp Bag	- Lab Split: Managed Moisture for Dry Weight Det.
12_168_01 (3283 - Year 1-7 Tailings)	- Pulp Bag	- Lab Split: Managed Moisture for Dry Weight Det.

Any sample identifications that cannot be displayed entirely in the analysis summary table will be listed below.

EP1202701-001	: 11-APR-2012 15:00	: 12_286_02 - (3283 Tails) 1
EP1202701-002	: 11-APR-2012 15:00	: 12_286_02 - (3283 Tails) 2
EP1202701-003	: 11-APR-2012 15:00	: 12_168_01 - (3283 - Year 1-7 Tailings)
EP1202701-004	: 11-APR-2012 15:00	: 12_286_02 - (3283 Tails) 1
EP1202701-005	: 11-APR-2012 15:00	: 12_286_02 - (3283 Tails) 2
EP1202701-006	: 11-APR-2012 15:00	: 12_168_01 - (3283 - Year 1-7 Tailings)
EP1202701-007	: 11-APR-2012 11:23	: 12_286_02 (NAG Liquor) - (3283 Tails) 1
EP1202701-008	: 11-APR-2012 11:23	: 12_286_02 (NAG Liquor) - (3283 Tails) 2
EP1202701-009	: 11-APR-2012 11:23	: 12_168_01 (NAG Liquor) - (3283 - Year 1-7 Tailings)

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process neccessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default to 15:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory for processing purposes and will be shown bracketed without a time component.

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	SOIL - Balance Suite Balance Suite with DA Chloride	SOIL - EA009 Net Acid Production Potential (NAPP)	SOIL - EA011 Net Acid Generation (NAG)	SOIL - EA031 pH (Saturated Paste)	SOIL - EG005T (solids) Total Metals by ICP-AES	SOIL - EG020C Leachable Metals by ICPMS	SOIL - EG020W Water Leachable Metals by ICPMS	SOIL - EG035C Leachable Mercury by FIMS
EP1202701-001	11-APR-2012 11:23	12_286_02 (3283 Tai...		✓	✓	✓	✓			
	11-APR-2012 15:00	12_286_02 (3283 Tai...	✓						✓	
EP1202701-002	11-APR-2012 11:23	12_286_02 (3283 Tai...		✓	✓	✓	✓			
	11-APR-2012 15:00	12_286_02 (3283 Tai...	✓						✓	
EP1202701-003	11-APR-2012 11:23	12_168_01 (3283 - Y...		✓	✓	✓	✓			
	11-APR-2012 15:00	12_168_01 (3283 - Y...	✓						✓	
EP1202701-004	11-APR-2012 15:00	12_286_02 (3283 Tai...	✓					✓		✓
EP1202701-005	11-APR-2012 15:00	12_286_02 (3283 Tai...	✓					✓		✓
EP1202701-006	11-APR-2012 15:00	12_168_01 (3283 - Y...	✓					✓		✓

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	SOIL - EG035W Water Leachable Mercury by FIMS	SOIL - EN60 Suite Bottle Leaching Procedure	SOIL - EN60-DI Suite Deionised Water Leach	SOIL - MIS-SOL (Subcontracted) Miscellaneous Subcontracted Analysis (Solid)	SOIL - S-03 13 Metals (NEPM Suite - incl. Digestion)
EP1202701-001	11-APR-2012 11:23	12_286_02 (3283 Tai...			✓	✓	✓
	11-APR-2012 15:00	12_286_02 (3283 Tai...	✓				
EP1202701-002	11-APR-2012 11:23	12_286_02 (3283 Tai...			✓	✓	✓
	11-APR-2012 15:00	12_286_02 (3283 Tai...	✓				
EP1202701-003	11-APR-2012 11:23	12_168_01 (3283 - Y...			✓	✓	✓
	11-APR-2012 15:00	12_168_01 (3283 - Y...	✓				
EP1202701-004	11-APR-2012 11:23	12_286_02 (3283 Tai...		✓			
EP1202701-005	11-APR-2012 11:23	12_286_02 (3283 Tai...		✓			
EP1202701-006	11-APR-2012 11:23	12_168_01 (3283 - Y...		✓			

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - Balance Suite Balance Suite with DA Chloride	WATER - ED038 CaCO3 Acidity as CaCO3 only	WATER - EG020T Total Recoverable Metals by ICPMS	WATER - EG035T Total Mercury by FIMS
EP1202701-007	11-APR-2012 11:23	12_286_02 (NAG Liquo...	✓	✓	✓	✓
EP1202701-008	11-APR-2012 11:23	12_286_02 (NAG Liquo...	✓	✓	✓	✓
EP1202701-009	11-APR-2012 11:23	12_168_01 (NAG Liquo...	✓	✓	✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)	Email	perth.accountspayable@ghd.com.au

MR DAVID MORGAN

- *AU Certificate of Analysis - NATA (COA)	Email	david.morgan@ghd.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	david.morgan@ghd.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	david.morgan@ghd.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	david.morgan@ghd.com
- Attachment - Report (SUBCO)	Email	david.morgan@ghd.com
- Chain of Custody (CoC) (COC)	Email	david.morgan@ghd.com
- EDI Format - ENMRG (ENMRG)	Email	david.morgan@ghd.com
- EDI Format - ESDAT (ESDAT)	Email	david.morgan@ghd.com
- EDI Format - XTab (XTAB)	Email	david.morgan@ghd.com

CERTIFICATE OF ANALYSIS

Work Order	: **EP1204006**	Page	: 1 of 16
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201378 1379 1380 1381 1382 1383 1382 1526 & 1529 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 21-MAY-2012
Sampler	: ----	Issue Date	: 30-MAY-2012
Site	: Northstar		
		No. of samples received	: 36
Quote number	: EP/406/12	No. of samples analysed	: 35

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Canhuang Ke	Metals Instrument Chemist	Perth Inorganics
Chas Tucker	Inorganic Chemist	Perth Inorganics
Cicelia Bartels	Metals Instrument Chemist	Perth Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **EG005T: Poor metals matrix spike recoveries due to matrix effects.**

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

				Client sample ID	EP1201378014 NS0077 178-180	EP1201378041 NS0077 20-22	EP1201378042 NS0077 28-30	EP1201379013 NS0093 216-218	EP1201379046 NS0091
				Client sampling date / time	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00
Compound	CAS Number	LOR	Unit		EP1204006-001	EP1204006-002	EP1204006-003	EP1204006-004	EP1204006-005
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		15	5	7	48	11
Total Alkalinity as CaCO3	----	1	mg/L		15	5	7	48	11
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		9	4	3	2	3
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		124	<1	1	2	39
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		2	<1	<1	2	1
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		5	<1	2	7	7
Magnesium	7439-95-4	1	mg/L		15	<1	<1	4	7
Sodium	7440-23-5	1	mg/L		35	6	9	14	14
Potassium	7440-09-7	1	mg/L		10	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		0.02	0.58	0.67	0.02	0.02
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		1.24	0.519	1.09	1.38	1.76
Cadmium	7440-43-9	0.0001	mg/L		0.0002	<0.0001	0.0002	0.0001	0.0002
Chromium	7440-47-3	0.001	mg/L		<0.001	0.001	0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L		0.001	0.001	0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	0.002	0.002	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		1.50	0.368	0.576	0.011	0.613
Nickel	7440-02-0	0.001	mg/L		0.009	0.003	0.005	0.001	0.004
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		0.517	0.158	0.326	0.312	0.470
Iron	7439-89-6	0.05	mg/L		<0.05	4.11	4.83	<0.05	<0.05
EG035W: Water Leachable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance									
Total Anions	----	0.01	meq/L		2.94	0.10	0.16	1.06	1.06
Total Cations	----	0.01	meq/L		3.26	0.26	0.49	1.29	1.53

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201379047 NS0083 158-160	EP1201380010 NS0078 0-2	EP1201380011 NS0078 8-10	EP1201380025 NS0100 78-80	EP1201380028 NS0078 80-82
				Client sampling date / time: 23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00
				EP1204006-006	EP1204006-007	EP1204006-008	EP1204006-009	EP1204006-010
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**40**	**6**	**6**	**35**	**12**
Total Alkalinity as CaCO3	----	1	mg/L	**40**	**6**	**6**	**35**	**12**
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	<1	**3**	**4**	<1	**2**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**56**	**3**	**2**	**2**	<1
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	**2**	**1**	**7**	<1	<1
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**6**	**3**	**2**	**5**	**3**
Magnesium	7439-95-4	1	mg/L	**1**	<1	<1	**1**	**1**
Sodium	7440-23-5	1	mg/L	**44**	**9**	**11**	**26**	**15**
Potassium	7440-09-7	1	mg/L	**2**	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.47**	**0.01**	**2.89**	**1.59**	**0.44**
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	**0.002**	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	**1.72**	**1.24**	**1.52**	**2.58**	**1.25**
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	**0.0001**	**0.0002**	<0.0001
Chromium	7440-47-3	0.001	mg/L	**0.008**	<0.001	**0.012**	**0.015**	**0.002**
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.002**	<0.001	<0.001	**0.003**	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.028**	**0.006**	**0.008**	**0.128**	**0.099**
Nickel	7440-02-0	0.001	mg/L	**0.004**	<0.001	**0.004**	**0.011**	**0.004**
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.341**	**0.231**	**0.522**	**0.548**	**0.281**
Iron	7439-89-6	0.05	mg/L	**1.88**	<0.05	**9.62**	**9.68**	**6.94**
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	**2.02**	**0.21**	**0.36**	**0.74**	**0.24**
Total Cations	----	0.01	meq/L	**2.35**	**0.54**	**0.58**	**1.46**	**0.88**

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201380030 NS0078 276-278	EP1201380046 NS0106	EP1201380049 NS0106 20-22	EP1201380050 NS0106 92-94	EP1201381007 NS0077 8-10
				Client sampling date / time: 23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00
				EP1204006-011	EP1204006-012	EP1204006-013	EP1204006-014	EP1204006-015
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**24**	**8**	**6**	**24**	**5**
Total Alkalinity as CaCO3	----	1	mg/L	**24**	**8**	**6**	**24**	**5**
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	**3**	**8**	**3**	**3**	**3**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**54**	**3**	**1**	**24**	**1**
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	**1**	**1**	<1	<1	**1**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**1**	**2**	**1**	**6**	<1
Magnesium	7439-95-4	1	mg/L	**2**	<1	<1	**3**	<1
Sodium	7440-23-5	1	mg/L	**36**	**11**	**11**	**21**	**4**
Potassium	7440-09-7	1	mg/L	**2**	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**1.14**	**9.07**	**0.73**	**0.16**	**0.03**
Arsenic	7440-38-2	0.001	mg/L	**0.005**	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	**0.626**	**0.890**	**1.08**	**1.70**	**0.660**
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	**0.017**	**0.022**	**0.001**	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	**0.002**	<0.001	**0.002**	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.004**	**0.004**	**0.001**	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	**0.002**	**0.002**	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.163**	**0.019**	**0.603**	**0.028**	**0.003**
Nickel	7440-02-0	0.001	mg/L	**0.010**	**0.006**	**0.005**	**0.002**	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.242**	**0.482**	**0.356**	**0.270**	**0.166**
Iron	7439-89-6	0.05	mg/L	**11.0**	**6.53**	**5.10**	**0.70**	<0.05
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	**0.0001**	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	**1.63**	**0.25**	**0.14**	**0.98**	**0.15**
Total Cations	----	0.01	meq/L	**1.83**	**0.58**	**0.53**	**1.46**	**0.17**

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201381008 NS0077 0-2	EP1201381013 NS0087 380-382	EP1201381045 NS0078 28-30	EP1201381048 NS0078 20-22	EP1201382016 NS0088 8-10
				Client sampling date / time: 23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00
				EP1204006-016	EP1204006-017	EP1204006-018	EP1204006-019	EP1204006-020
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**11**	**34**	**10**	**8**	**3**
Total Alkalinity as CaCO3	----	1	mg/L	**11**	**34**	**10**	**8**	**3**
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	**3**	<1	**6**	**3**	**4**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**4**	**1**	**1**	**1**	<1
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	**1**	<1	**1**	**2**	<1
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**6**	**6**	**2**	**3**	**1**
Magnesium	7439-95-4	1	mg/L	**2**	**3**	<1	<1	<1
Sodium	7440-23-5	1	mg/L	**11**	**13**	**16**	**16**	**7**
Potassium	7440-09-7	1	mg/L	<1	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.03**	**0.04**	**1.00**	**1.10**	**0.95**
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	**1.77**	**1.66**	**1.53**	**1.90**	**0.840**
Cadmium	7440-43-9	0.0001	mg/L	**0.0001**	<0.0001	<0.0001	**0.0002**	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	**0.011**	**0.010**	**0.004**
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	**0.002**	**0.002**	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.009**	**0.004**	**0.009**	**0.013**	**0.021**
Nickel	7440-02-0	0.001	mg/L	**0.001**	<0.001	**0.007**	**0.006**	**0.003**
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.388**	**0.341**	**0.452**	**0.618**	**0.269**
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	**5.69**	**6.78**	**13.3**
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	**0.33**	**0.70**	**0.25**	**0.24**	**0.06**
Total Cations	----	0.01	meq/L	**0.94**	**1.11**	**0.80**	**0.85**	**0.35**

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201382020 NS0088 0-2	EP1201382031 NS0079 94-96	EP1201383006 NS0092 48-50	EP1201383007 NS0092 40-42	EP1201383010 NS0085 0-2
				Client sampling date / time	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00
					EP1204006-021	EP1204006-022	EP1204006-023	EP1204006-024	EP1204006-025
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		9	33	39	48	4
Total Alkalinity as CaCO3	----	1	mg/L		9	33	39	48	4
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		3	6	<1	2	4
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		3	32	<1	4	1
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		<1	3	<1	<1	<1
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		4	5	6	6	2
Magnesium	7439-95-4	1	mg/L		1	5	2	2	<1
Sodium	7440-23-5	1	mg/L		8	22	15	16	8
Potassium	7440-09-7	1	mg/L		<1	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		0.05	<0.01	0.17	0.15	2.65
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		1.13	1.37	0.836	0.607	0.926
Cadmium	7440-43-9	0.0001	mg/L		0.0002	0.0002	0.0003	0.0001	0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	0.002	<0.001	0.005
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	0.002	0.002	0.002	0.002
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		0.029	0.025	0.046	0.062	0.035
Nickel	7440-02-0	0.001	mg/L		0.001	0.001	0.002	0.001	0.003
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		0.228	0.375	0.125	0.129	0.263
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	1.68	1.35	2.86
EG035W: Water Leachable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance									
Total Anions	----	0.01	meq/L		0.24	1.41	0.78	1.04	0.10
Total Cations	----	0.01	meq/L		0.63	1.62	1.12	1.16	0.45

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201383011 NS0085 18-20	EP1201383012 NS0085 10-12	EP1201383026 NS0092 158-160	EP1201383045 NS0086 8-10	EP1201382019 NS0088 108-110
				Client sampling date / time	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00
					EP1204006-026	EP1204006-027	EP1204006-028	EP1204006-029	EP1204006-030
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	3	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		4	3	33	4	44
Total Alkalinity as CaCO3	----	1	mg/L		4	3	35	4	44
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		3	3	<1	8	4
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		1	<1	<1	<1	3
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		1	<1	<1	2	<1
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		1	<1	6	2	8
Magnesium	7439-95-4	1	mg/L		<1	<1	2	<1	6
Sodium	7440-23-5	1	mg/L		10	4	12	9	8
Potassium	7440-09-7	1	mg/L		<1	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		0.79	2.42	0.03	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	0.002	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		0.670	0.220	1.07	1.34	1.43
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	0.0002	0.0002
Chromium	7440-47-3	0.001	mg/L		0.003	0.012	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		0.013	0.002	<0.001	<0.001	0.002
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		0.171	0.042	0.005	0.004	0.112
Nickel	7440-02-0	0.001	mg/L		0.002	0.003	<0.001	0.001	0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		0.244	0.168	0.164	0.312	0.388
Iron	7439-89-6	0.05	mg/L		4.80	18.7	<0.05	<0.05	<0.05
EG035W: Water Leachable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance									
Total Anions	----	0.01	meq/L		0.13	0.06	0.70	0.14	0.94
Total Cations	----	0.01	meq/L		0.48	0.17	0.99	0.49	1.24

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201382041 NS0088 150-152	EP1201382001 NS0088 280-282	EP1201382010 NS0088 346-348	EP1201529050 NS0089 210-212	EP1201526049 NS0089 268-270
				Client sampling date / time: 23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00	23-MAY-2012 12:00
				EP1204006-031	EP1204006-033	EP1204006-034	EP1204006-035	EP1204006-036
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	28	38	37	39	34
Total Alkalinity as CaCO3	----	1	mg/L	28	38	37	39	34
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	6	2	2	3	6
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	10	4	6	1	4
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	<1	<1	<1	<1	2
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	6	8	7	8	7
Magnesium	7439-95-4	1	mg/L	4	5	4	5	5
Sodium	7440-23-5	1	mg/L	4	8	12	9	10
Potassium	7440-09-7	1	mg/L	<1	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	0.02
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	0.821	1.23	1.38	1.48	1.55
Cadmium	7440-43-9	0.0001	mg/L	0.0001	0.0002	0.0002	0.0002	0.0002
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	0.002	0.002	0.002	0.001	0.002
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	0.077	0.021	0.028	0.048	0.047
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.002	0.001	0.002
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	0.249	0.275	0.350	0.351	0.366
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	0.09
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	0.77	0.84	0.86	0.80	0.82
Total Cations	----	0.01	meq/L	0.80	1.16	1.20	1.20	1.20

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201378014 NS0077 178-180	EP1201378041 NS0077 20-22	EP1201378042 NS0077 28-30	EP1201379013 NS0093 216-218	EP1201379046 NS0091
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204006-001	EP1204006-002	EP1204006-003	EP1204006-004	EP1204006-005
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**2630**	**490**	**1000**	**8880**	**2260**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**15500**	**2390**	**3320**	**1870**	**2810**
Arsenic	7440-38-2	5	mg/kg	**35**	<5	<5	<5	**12**
Barium	7440-39-3	10	mg/kg	**60**	**290**	**120**	**50**	**20**
Beryllium	7440-41-7	1	mg/kg	**1**	<1	<1	**2**	<1
Cadmium	7440-43-9	1	mg/kg	**2**	<1	<1	**6**	**2**
Chromium	7440-47-3	2	mg/kg	**177**	**12**	**9**	**12**	**25**
Cobalt	7440-48-4	2	mg/kg	**25**	**15**	**7**	**2**	**5**
Copper	7440-50-8	5	mg/kg	**28**	<5	<5	<5	**10**
Iron	7439-89-6	50	mg/kg	**131000**	**38700**	**38000**	**269000**	**114000**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**3540**	**4840**	**7830**	**3710**	**4380**
Nickel	7440-02-0	2	mg/kg	**119**	**18**	**30**	**14**	**23**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	**38**	<5	<5	<5	**5**
Zinc	7440-66-6	5	mg/kg	**32**	**8**	**11**	**6**	**11**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.6**	<0.1	<0.1	<0.1	**0.2**
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**7.5**	**8.0**	**7.9**	**8.1**	**7.5**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201379047 NS0083 158-160	EP1201380010 NS0078 0-2	EP1201380011 NS0078 8-10	EP1201380025 NS0100 78-80	EP1201380028 NS0078 80-82
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204006-006	EP1204006-007	EP1204006-008	EP1204006-009	EP1204006-010
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**7920**	**140**	**120**	**3350**	**3720**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**15300**	**4990**	**2770**	**15000**	**2340**
Arsenic	7440-38-2	5	mg/kg	**6**	<5	<5	**5**	<5
Barium	7440-39-3	10	mg/kg	**60**	**20**	<10	**80**	**20**
Beryllium	7440-41-7	1	mg/kg	**2**	<1	<1	**2**	<1
Cadmium	7440-43-9	1	mg/kg	**2**	**1**	<1	**2**	**2**
Chromium	7440-47-3	2	mg/kg	**332**	**54**	**60**	**119**	**14**
Cobalt	7440-48-4	2	mg/kg	**19**	<2	<2	**8**	<2
Copper	7440-50-8	5	mg/kg	**36**	<5	<5	**10**	**6**
Iron	7439-89-6	50	mg/kg	**123000**	**98500**	**63900**	**111000**	**93700**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**1320**	**59**	**34**	**1880**	**1810**
Nickel	7440-02-0	2	mg/kg	**121**	**16**	**8**	**66**	**16**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	**56**	**11**	**15**	**36**	<5
Zinc	7440-66-6	5	mg/kg	**45**	<5	<5	**19**	**7**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.1**	<0.1	<0.1	**0.3**	**0.2**
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**8.8**	**7.8**	**7.7**	**8.4**	**8.3**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201380030 NS0078 276-278	EP1201380046 NS0106	EP1201380049 NS0106 20-22	EP1201380050 NS0106 92-94	EP1201381007 NS0077 8-10
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204006-011	EP1204006-012	EP1204006-013	EP1204006-014	EP1204006-015
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**2040**	**340**	**210**	**5000**	**230**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**11500**	**2460**	**1920**	**6890**	**3630**
Arsenic	7440-38-2	5	mg/kg	**18**	<5	<5	**22**	<5
Barium	7440-39-3	10	mg/kg	**70**	**10**	**230**	**60**	**10**
Beryllium	7440-41-7	1	mg/kg	**2**	<1	<1	<1	**1**
Cadmium	7440-43-9	1	mg/kg	**2**	<1	<1	**2**	**1**
Chromium	7440-47-3	2	mg/kg	**137**	**161**	**11**	**42**	**45**
Cobalt	7440-48-4	2	mg/kg	**13**	<2	**14**	**10**	<2
Copper	7440-50-8	5	mg/kg	**19**	<5	<5	**14**	<5
Iron	7439-89-6	50	mg/kg	**132000**	**48700**	**44400**	**98800**	**93800**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**2940**	**90**	**5980**	**3530**	**85**
Nickel	7440-02-0	2	mg/kg	**72**	**4**	**25**	**54**	**16**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	**32**	**42**	<5	**8**	**10**
Zinc	7440-66-6	5	mg/kg	**25**	<5	**18**	**13**	<5
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.6**	<0.1	<0.1	**0.4**	<0.1
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**8.2**	**8.0**	**5.6**	**7.7**	**7.7**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201381008 NS0077 0-2	EP1201381013 NS0087 380-382	EP1201381045 NS0078 28-30	EP1201381048 NS0078 20-22	EP1201382016 NS0088 8-10
Client sampling date / time				21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204006-016	EP1204006-017	EP1204006-018	EP1204006-019	EP1204006-020
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	**2.1**	**3.6**	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**290**	**9470**	**3150**	**3610**	<50
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**4500**	**1290**	**10500**	**11900**	**790**
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg	<10	**10**	**60**	**90**	<10
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	**1**	<1
Cadmium	7440-43-9	1	mg/kg	**2**	**2**	<1	**1**	<1
Chromium	7440-47-3	2	mg/kg	**49**	**9**	**94**	**94**	**19**
Cobalt	7440-48-4	2	mg/kg	<2	**3**	**6**	**5**	<2
Copper	7440-50-8	5	mg/kg	<5	<5	**6**	**7**	<5
Iron	7439-89-6	50	mg/kg	**111000**	**95400**	**66500**	**84400**	**38300**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**36**	**6110**	**186**	**142**	**96**
Nickel	7440-02-0	2	mg/kg	**13**	**10**	**55**	**45**	**5**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	**12**	<5	**10**	**18**	<5
Zinc	7440-66-6	5	mg/kg	<5	**6**	**14**	**9**	<5
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**7.4**	**8.7**	**8.1**	**8.0**	**7.8**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201382020 NS0088 0-2 Client sampling date / time: 21-FEB-2012 15:00 EP1204006-021	Client sample ID: EP1201382031 NS0079 94-96 Client sampling date / time: 21-FEB-2012 15:00 EP1204006-022	Client sample ID: EP1201383006 NS0092 48-50 Client sampling date / time: 21-FEB-2012 15:00 EP1204006-023	Client sample ID: EP1201383007 NS0092 40-42 Client sampling date / time: 21-FEB-2012 15:00 EP1204006-024	Client sample ID: EP1201383010 NS0085 0-2 Client sampling date / time: 21-FEB-2012 15:00 EP1204006-025
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**370**	**3130**	**10300**	**5970**	**300**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**3530**	**8220**	**4150**	**3950**	**5430**
Arsenic	7440-38-2	5	mg/kg	<5	**16**	<5	<5	<5
Barium	7440-39-3	10	mg/kg	<10	**40**	**90**	**90**	**30**
Beryllium	7440-41-7	1	mg/kg	<1	**1**	**1**	**1**	<1
Cadmium	7440-43-9	1	mg/kg	<1	**4**	**2**	**2**	**2**
Chromium	7440-47-3	2	mg/kg	**57**	**82**	**18**	**16**	**143**
Cobalt	7440-48-4	2	mg/kg	<2	**12**	**5**	**6**	**2**
Copper	7440-50-8	5	mg/kg	<5	**16**	**14**	**17**	**7**
Iron	7439-89-6	50	mg/kg	**70000**	**219000**	**152000**	**161000**	**110000**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**177**	**3800**	**3680**	**4550**	**253**
Nickel	7440-02-0	2	mg/kg	**8**	**56**	**21**	**23**	**8**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	**16**	**20**	**6**	**6**	**49**
Zinc	7440-66-6	5	mg/kg	<5	**15**	**10**	**10**	<5
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	**0.4**	<0.1	**0.2**	<0.1
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**7.7**	**7.7**	**8.8**	**8.4**	**8.2**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201383011 NS0085 18-20	EP1201383012 NS0085 10-12	EP1201383026 NS0092 158-160	EP1201383045 NS0086 8-10	EP1201382019 NS0088 108-110
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204006-026	EP1204006-027	EP1204006-028	EP1204006-029	EP1204006-030
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**260**	**70**	**9590**	**60**	**3100**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**1340**	**1170**	**2150**	**3390**	**1750**
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg	**110**	<10	**30**	<10	<10
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	<1	**1**
Cadmium	7440-43-9	1	mg/kg	<1	<1	**2**	<1	**3**
Chromium	7440-47-3	2	mg/kg	**12**	**14**	**11**	**156**	**13**
Cobalt	7440-48-4	2	mg/kg	**3**	<2	**4**	<2	**4**
Copper	7440-50-8	5	mg/kg	<5	<5	<5	<5	**6**
Iron	7439-89-6	50	mg/kg	**35600**	**37200**	**103000**	**78300**	**173000**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**1370**	**92**	**4690**	**10**	**3860**
Nickel	7440-02-0	2	mg/kg	**7**	**4**	**11**	**6**	**18**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	<5	<5	<5	**27**	<5
Zinc	7440-66-6	5	mg/kg	<5	<5	**6**	<5	**10**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**7.8**	**7.6**	**9.1**	**7.4**	**7.3**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201382041 NS0088 150-152	EP1201382001 NS0088 280-282	EP1201382010 NS0088 346-348	EP1201529050 NS0089 210-212	EP1201526049 NS0089 268-270
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204006-031	EP1204006-033	EP1204006-034	EP1204006-035	EP1204006-036
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**2640**	**4560**	**5030**	**4350**	**3170**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**15400**	**7890**	**4020**	**910**	**1890**
Arsenic	7440-38-2	5	mg/kg	**6**	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg	<10	<10	<10	<10	<10
Beryllium	7440-41-7	1	mg/kg	**1**	<1	<1	<1	<1
Cadmium	7440-43-9	1	mg/kg	**5**	**3**	**3**	**3**	**3**
Chromium	7440-47-3	2	mg/kg	**171**	**34**	**24**	**12**	**10**
Cobalt	7440-48-4	2	mg/kg	**12**	**8**	**6**	**5**	**4**
Copper	7440-50-8	5	mg/kg	**8**	**9**	**8**	**6**	<5
Iron	7439-89-6	50	mg/kg	**252000**	**196000**	**169000**	**177000**	**180000**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**3100**	**3000**	**4000**	**4000**	**3790**
Nickel	7440-02-0	2	mg/kg	**65**	**42**	**28**	**24**	**18**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	**38**	**13**	**8**	<5	<5
Zinc	7440-66-6	5	mg/kg	**19**	**21**	**12**	**12**	**12**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.1**	<0.1	<0.1	<0.1	<0.1
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**7.3**	**7.5**	**7.1**	**7.4**	**7.5**

CERTIFICATE OF ANALYSIS

Work Order	: **EP1204009**	Page	: 1 of 17
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201383 1384 1526 1527 1528 1529 1530 & 1531 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 21-MAY-2012
Sampler	: ----	Issue Date	: 31-MAY-2012
Site	: Northstar		
		No. of samples received	: 38
Quote number	: EP/406/12	No. of samples analysed	: 33

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Canhuang Ke	Metals Instrument Chemist	Perth Inorganics
Chas Tucker	Inorganic Chemist	Perth Inorganics
Cicelia Bartels	Metals Instrument Chemist	Perth Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **EG005T: Poor matrix spike recovery for selenium due to matrix effects.**

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201383046 NS0086 28-30	EP1201384003 NS0085 208-210	EP1201384005 NS0085 58-60	EP1201384006 NS0085 30-32	EP1201384015 NS0085 90-92
				Client sampling date / time: 24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00
				EP1204009-001	EP1204009-002	EP1204009-003	EP1204009-004	EP1204009-005
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**6**	**36**	**29**	**7**	**29**
Total Alkalinity as CaCO3	----	1	mg/L	**6**	**36**	**29**	**7**	**29**
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	**10**	<1	<1	**2**	<1
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**2**	**3**	**8**	**1**	<1
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	**1**	**2**	<1	**2**	**1**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**2**	**4**	**7**	**1**	**6**
Magnesium	7439-95-4	1	mg/L	<1	**4**	**3**	<1	**2**
Sodium	7440-23-5	1	mg/L	**13**	**13**	**12**	**10**	**10**
Potassium	7440-09-7	1	mg/L	<1	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.78**	**0.02**	**0.15**	**0.55**	**0.03**
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	**0.002**	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	**0.519**	**1.12**	**1.48**	**0.732**	**1.39**
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	**0.0001**	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	**0.005**	<0.001	<0.001	**0.001**	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.002**	**0.001**	**0.002**	**0.002**	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.006**	**0.008**	**0.022**	**0.323**	**0.005**
Nickel	7440-02-0	0.001	mg/L	**0.004**	<0.001	**0.002**	**0.003**	**0.001**
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.279**	**0.209**	**0.245**	**0.224**	**0.267**
Iron	7439-89-6	0.05	mg/L	**3.93**	**0.10**	**0.44**	**3.18**	<0.05
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	**0.19**	**0.84**	**0.75**	**0.22**	**0.61**
Total Cations	----	0.01	meq/L	**0.67**	**1.09**	**1.12**	**0.48**	**0.90**

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201384028 NS0107 160-162	EP1201384029 NS0107 170-172	EP1201384031 NS0107 128-130	EP1201384033 NS0107 148-150	EP1201384035 NS0107 140-142
				Client sampling date / time: 24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00
				EP1204009-008	EP1204009-009	EP1204009-010	EP1204009-011	EP1204009-012
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	2	16	2	<1	16
Total Alkalinity as CaCO3	----	1	mg/L	2	16	2	<1	16
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	7	2	17	55	2
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	83	75	154	105	76
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	<1	2	<1	<1	1
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	5	21	5	10	24
Magnesium	7439-95-4	1	mg/L	14	8	26	17	8
Sodium	7440-23-5	1	mg/L	7	7	8	11	6
Potassium	7440-09-7	1	mg/L	<1	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	1.28	1.06	1.26	1.80	1.01
Cadmium	7440-43-9	0.0001	mg/L	0.0019	0.0001	0.0012	0.0024	0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	0.246	0.002	0.191	0.287	0.003
Copper	7440-50-8	0.001	mg/L	0.002	0.001	<0.001	0.014	0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	5.75	0.108	8.67	2.65	0.196
Nickel	7440-02-0	0.001	mg/L	0.576	0.006	0.651	0.738	0.008
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	0.804	0.231	1.13	1.40	0.243
Iron	7439-89-6	0.05	mg/L	0.47	<0.05	5.85	0.89	<0.05
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	1.77	1.94	3.25	2.19	1.93
Total Cations	----	0.01	meq/L	1.71	2.01	2.74	2.38	2.12

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201384039 NS0107 120-122	EP1201527006 NS0084 140-142	EP1201527007 NS0084 190-192	EP1201527028 NS0087 8-10	EP1201527031 NS0087 84-86
				Client sampling date / time: 24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00
				EP1204009-014	EP1204009-016	EP1204009-017	EP1204009-018	EP1204009-019
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	2	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	2	31	30	5	7
Total Alkalinity as CaCO3	----	1	mg/L	2	31	33	5	7
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	8	<1	<1	4	4
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	291	16	5	1	<1
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	<1	2	1	<1	<1
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	6	4	4	1	2
Magnesium	7439-95-4	1	mg/L	55	3	2	<1	<1
Sodium	7440-23-5	1	mg/L	7	19	13	7	11
Potassium	7440-09-7	1	mg/L	<1	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	0.02	0.32	0.54	1.73	0.98
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	0.994	1.54	1.06	0.853	1.56
Cadmium	7440-43-9	0.0001	mg/L	0.0018	0.0002	<0.0001	<0.0001	0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	0.001	0.002	0.009	0.003
Cobalt	7440-48-4	0.001	mg/L	0.042	<0.001	<0.001	<0.001	0.001
Copper	7440-50-8	0.001	mg/L	<0.001	0.002	0.002	0.003	0.003
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	17.1	0.196	0.173	0.018	0.111
Nickel	7440-02-0	0.001	mg/L	0.345	0.006	0.004	0.003	0.007
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	0.514	0.238	0.141	0.327	0.425
Iron	7439-89-6	0.05	mg/L	0.72	3.16	4.64	11.2	6.44
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	6.10	1.01	0.79	0.12	0.14
Total Cations	----	0.01	meq/L	5.13	1.27	0.93	0.35	0.58

Analytical Results

Sub-Matrix: DI WATER LEACHATE				Client sample ID	EP1201384039 NS0107 120-122	EP1201527006 NS0084 140-142	EP1201527007 NS0084 190-192	EP1201527028 NS0087 8-10	EP1201527031 NS0087 84-86
				Client sampling date / time	24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00
Compound	CAS Number	LOR	Unit		EP1204009-014	EP1204009-016	EP1204009-017	EP1204009-018	EP1204009-019
EN055: Ionic Balance - Continued									
Ionic Balance	----	0.01	%		**8.65**	----	----	----	----

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201527032 NS0087 88-90	EP1201528001 NS0089 88-90	EP1201528003 NS0089 60-62	EP1201528018 NS0089 0-2	EP1201528043 NS0084 158-160
				Client sampling date / time: 24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00
				EP1204009-020	EP1204009-022	EP1204009-023	EP1204009-024	EP1204009-025
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	**8**	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**28**	**24**	**4**	**4**	**3**
Total Alkalinity as CaCO3	----	1	mg/L	**36**	**24**	**4**	**4**	**3**
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	<1	**3**	**2**	<1	**3**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**7**	**15**	<1	**3**	**62**
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	<1	**1**	<1	**2**	**1**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**4**	**6**	**1**	**2**	**5**
Magnesium	7439-95-4	1	mg/L	**1**	**4**	<1	<1	**10**
Sodium	7440-23-5	1	mg/L	**18**	**10**	**6**	**9**	**14**
Potassium	7440-09-7	1	mg/L	<1	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.26**	**0.03**	**0.90**	**2.02**	**0.03**
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	**1.10**	**1.43**	**0.818**	**1.09**	**1.49**
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	**0.0001**	<0.0001	<0.0001	**0.0002**
Chromium	7440-47-3	0.001	mg/L	**0.002**	<0.001	**0.005**	**0.014**	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	**0.008**
Copper	7440-50-8	0.001	mg/L	**0.002**	**0.002**	**0.002**	**0.004**	**0.002**
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	**0.001**	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.031**	**0.015**	**0.186**	**0.013**	**0.787**
Nickel	7440-02-0	0.001	mg/L	**0.002**	**0.001**	**0.014**	**0.004**	**0.018**
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.148**	**0.254**	**0.219**	**0.334**	**0.369**
Iron	7439-89-6	0.05	mg/L	**2.10**	**0.07**	**4.91**	**4.45**	**0.07**
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	**0.87**	**0.82**	**0.08**	**0.20**	**1.38**
Total Cations	----	0.01	meq/L	**1.06**	**1.06**	**0.31**	**0.49**	**1.68**

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201529008 NS0090 190-192	EP1201529015 NS0090 8-10	EP1201529016 NS0090 0-2	EP1201529017 NS0090 20-22	EP1201529040 NS0089 128-130
				Client sampling date / time: 24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00
				EP1204009-026	EP1204009-027	EP1204009-028	EP1204009-029	EP1204009-030
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	22	3	3	2	26
Total Alkalinity as CaCO3	----	1	mg/L	22	3	3	2	26
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	<1	4	3	3	3
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	4	1	2	2	22
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	2	1	2	4	1
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	4	1	3	<1	8
Magnesium	7439-95-4	1	mg/L	3	<1	<1	<1	7
Sodium	7440-23-5	1	mg/L	7	6	8	5	8
Potassium	7440-09-7	1	mg/L	<1	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	0.31	1.81	0.20	0.81	0.04
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	1.01	0.683	1.30	0.086	1.62
Cadmium	7440-43-9	0.0001	mg/L	0.0002	<0.0001	<0.0001	<0.0001	0.0002
Chromium	7440-47-3	0.001	mg/L	0.001	0.008	<0.001	0.004	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	0.002	0.003	<0.001	0.002	0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	0.109	0.010	0.003	0.072	0.039
Nickel	7440-02-0	0.001	mg/L	0.003	0.004	0.001	0.003	0.002
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	0.191	0.304	0.268	0.116	0.350
Iron	7439-89-6	0.05	mg/L	2.75	6.56	0.28	8.16	0.33
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	0.58	0.11	0.16	0.19	1.01
Total Cations	----	0.01	meq/L	0.75	0.31	0.50	0.22	1.32

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201529045 NS0089 178-180	EP1201530008 NS0106 28-30	EP1201530010 NS0106 48-50	EP1201530012 NS0106 8-10	EP1201530028 NS0108 176-178
Client sampling date / time				24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00
				EP1204009-031	EP1204009-032	EP1204009-033	EP1204009-034	EP1204009-035
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**24**	**5**	**28**	**4**	**24**
Total Alkalinity as CaCO3	----	1	mg/L	**24**	**5**	**28**	**4**	**24**
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	**3**	<1	<1	**3**	**3**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**16**	**1**	**2**	<1	**24**
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	**1**	<1	**2**	<1	**3**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**6**	**2**	**5**	**1**	**6**
Magnesium	7439-95-4	1	mg/L	**5**	<1	**2**	<1	**6**
Sodium	7440-23-5	1	mg/L	**5**	**8**	**10**	**6**	**9**
Potassium	7440-09-7	1	mg/L	<1	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	**0.78**	**0.46**	**1.78**	**0.03**
Arsenic	7440-38-2	0.001	mg/L	<0.001	**0.001**	**0.004**	**0.001**	**0.001**
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	**0.673**	**1.14**	**0.885**	**0.803**	**1.14**
Cadmium	7440-43-9	0.0001	mg/L	**0.0001**	**0.0001**	**0.0001**	**0.0001**	**0.0002**
Chromium	7440-47-3	0.001	mg/L	<0.001	**0.003**	**0.002**	**0.004**	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	**0.002**	**0.001**	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.001**	**0.005**	**0.004**	**0.005**	**0.002**
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	**0.004**	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.058**	**0.609**	**0.315**	**0.328**	**0.051**
Nickel	7440-02-0	0.001	mg/L	<0.001	**0.006**	**0.003**	**0.003**	**0.003**
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.176**	**0.337**	**0.172**	**0.302**	**0.291**
Iron	7439-89-6	0.05	mg/L	<0.05	**6.08**	**3.67**	**6.12**	**0.18**
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	**0.84**	**0.12**	**0.66**	**0.08**	**1.06**
Total Cations	----	0.01	meq/L	**0.93**	**0.45**	**0.85**	**0.31**	**1.18**

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201530029 NS0094 160-162	EP1201530042 NS0106 170-172	EP1201531001 NS0090 268-270	----	----
				Client sampling date / time	24-MAY-2012 12:00	24-MAY-2012 12:00	24-MAY-2012 12:00	----	----
					EP1204009-036	EP1204009-037	EP1204009-038	----	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		**2**	**2**	<1	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**30**	**24**	**29**	----	----
Total Alkalinity as CaCO3	----	1	mg/L		**32**	**26**	**29**	----	----
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		<1	<1	<1	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**4**	**3**	**10**	----	----
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		**2**	<1	**3**	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**5**	**6**	**6**	----	----
Magnesium	7439-95-4	1	mg/L		**2**	**3**	**4**	----	----
Sodium	7440-23-5	1	mg/L		**13**	**9**	**8**	----	----
Potassium	7440-09-7	1	mg/L		<1	<1	<1	----	----
EG020W: Water Leachable Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.28**	**0.03**	**0.07**	----	----
Arsenic	7440-38-2	0.001	mg/L		**0.007**	**0.003**	**0.002**	----	----
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Barium	7440-39-3	0.001	mg/L		**0.827**	**1.15**	**0.733**	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	**0.0001**	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Cobalt	7440-48-4	0.001	mg/L		**0.001**	<0.001	<0.001	----	----
Copper	7440-50-8	0.001	mg/L		**0.002**	**0.002**	**0.003**	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Manganese	7439-96-5	0.001	mg/L		**0.321**	**0.009**	**0.082**	----	----
Nickel	7440-02-0	0.001	mg/L		**0.002**	**0.001**	**0.001**	----	----
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Zinc	7440-66-6	0.005	mg/L		**0.151**	**0.198**	**0.193**	----	----
Iron	7439-89-6	0.05	mg/L		**3.38**	**0.08**	**1.73**	----	----
EG035W: Water Leachable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	----	----
EN055: Ionic Balance									
Total Anions	----	0.01	meq/L		**0.78**	**0.58**	**0.87**	----	----
Total Cations	----	0.01	meq/L		**0.98**	**0.94**	**0.98**	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201383046 NS0086 28-30	EP1201384003 NS0085 208-210	EP1201384005 NS0085 58-60	EP1201384006 NS0085 30-32	EP1201384015 NS0085 90-92
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204009-001	EP1204009-002	EP1204009-003	EP1204009-004	EP1204009-005
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**1480**	**4580**	**12500**	**770**	**12800**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**6040**	**2600**	**3980**	**2750**	**1580**
Arsenic	7440-38-2	5	mg/kg	<5	<5	**6**	<5	<5
Barium	7440-39-3	10	mg/kg	**20**	**50**	**10**	**80**	<10
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	<1	<1
Cadmium	7440-43-9	1	mg/kg	<1	**2**	**1**	<1	<1
Chromium	7440-47-3	2	mg/kg	**35**	**14**	**20**	**10**	**8**
Cobalt	7440-48-4	2	mg/kg	<2	**3**	**9**	**9**	**3**
Copper	7440-50-8	5	mg/kg	<5	<5	**8**	<5	<5
Iron	7439-89-6	50	mg/kg	**47900**	**127000**	**89700**	**43500**	**76100**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**45**	**4830**	**4680**	**4690**	**4640**
Nickel	7440-02-0	2	mg/kg	**20**	**13**	**26**	**21**	**10**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	**6**	<5	**6**	<5	<5
Zinc	7440-66-6	5	mg/kg	<5	**8**	**12**	**10**	**6**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	**0.1**	<0.1	<0.1
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**6.8**	**8.3**	**8.6**	**7.6**	**8.8**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201384028 NS0107 160-162	EP1201384029 NS0107 170-172	EP1201384031 NS0107 128-130	EP1201384033 NS0107 148-150	EP1201384035 NS0107 140-142
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204009-008	EP1204009-009	EP1204009-010	EP1204009-011	EP1204009-012
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		<1.0	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations									
Calcium	7440-70-2	50	mg/kg		**300**	**10400**	**290**	**270**	**3370**
EG005T: Total Metals by ICP-AES									
Aluminium	7429-90-5	50	mg/kg		**18600**	**19400**	**14800**	**18400**	**17600**
Arsenic	7440-38-2	5	mg/kg		**12**	**12**	**17**	**14**	**12**
Barium	7440-39-3	10	mg/kg		<10	**10**	<10	<10	<10
Beryllium	7440-41-7	1	mg/kg		<1	<1	<1	<1	<1
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**436**	**439**	**285**	**394**	**370**
Cobalt	7440-48-4	2	mg/kg		**67**	**65**	**46**	**63**	**66**
Copper	7440-50-8	5	mg/kg		**83**	**91**	**49**	**72**	**97**
Iron	7439-89-6	50	mg/kg		**48700**	**52900**	**67700**	**45400**	**51000**
Lead	7439-92-1	5	mg/kg		**8**	**8**	**5**	**7**	**7**
Manganese	7439-96-5	5	mg/kg		**1280**	**1120**	**1080**	**346**	**2440**
Nickel	7440-02-0	2	mg/kg		**311**	**326**	**236**	**347**	**254**
Selenium	7782-49-2	5	mg/kg		<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg		**46**	**48**	**35**	**42**	**51**
Zinc	7440-66-6	5	mg/kg		**81**	**84**	**45**	**65**	**86**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		**1.0**	**1.0**	**0.8**	**1.4**	**1.0**
EN60: Bottle Leaching Procedure									
Final pH	----	0.1	pH Unit		**7.1**	**7.5**	**6.4**	**6.3**	**7.3**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201384039 NS0107 120-122	EP1201527006 NS0084 140-142	EP1201527007 NS0084 190-192	EP1201527028 NS0087 8-10	EP1201527031 NS0087 84-86
Client sampling date / time				21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204009-014	EP1204009-016	EP1204009-017	EP1204009-018	EP1204009-019
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	**6.7**	**6.7**	**1.7**	**5.5**
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**360**	**3860**	**7150**	**120**	**3040**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**16300**	**6030**	**4990**	**1360**	**7890**
Arsenic	7440-38-2	5	mg/kg	**37**	**15**	<5	<5	<5
Barium	7440-39-3	10	mg/kg	**10**	**60**	**30**	<10	**410**
Beryllium	7440-41-7	1	mg/kg	<1	**1**	<1	<1	**2**
Cadmium	7440-43-9	1	mg/kg	**1**	**2**	**1**	<1	<1
Chromium	7440-47-3	2	mg/kg	**276**	**28**	**21**	**22**	**16**
Cobalt	7440-48-4	2	mg/kg	**44**	**13**	**6**	<2	**28**
Copper	7440-50-8	5	mg/kg	**60**	**12**	**8**	<5	<5
Iron	7439-89-6	50	mg/kg	**92300**	**116000**	**102000**	**36700**	**54500**
Lead	7439-92-1	5	mg/kg	**6**	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**1850**	**2810**	**4700**	**24**	**4820**
Nickel	7440-02-0	2	mg/kg	**281**	**44**	**28**	**3**	**49**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	**35**	**11**	**7**	<5	<5
Zinc	7440-66-6	5	mg/kg	**83**	**11**	**10**	<5	**14**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**1.5**	**0.4**	<0.1	<0.1	<0.1
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**6.5**	**7.6**	**8.7**	**7.6**	**7.4**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201527032 NS0087 88-90	EP1201528001 NS0089 88-90	EP1201528003 NS0089 60-62	EP1201528018 NS0089 0-2	EP1201528043 NS0084 158-160
Client sampling date / time				21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204009-020	EP1204009-022	EP1204009-023	EP1204009-024	EP1204009-025
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	<1.0	**1.1**	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**7710**	**6950**	**460**	**360**	**510**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**4760**	**10600**	**6020**	**2050**	**33100**
Arsenic	7440-38-2	5	mg/kg	**8**	<5	<5	<5	**22**
Barium	7440-39-3	10	mg/kg	**60**	**10**	**20**	**60**	<10
Beryllium	7440-41-7	1	mg/kg	**1**	**1**	<1	<1	**1**
Cadmium	7440-43-9	1	mg/kg	**1**	**4**	<1	<1	**2**
Chromium	7440-47-3	2	mg/kg	**35**	**83**	**36**	**113**	**401**
Cobalt	7440-48-4	2	mg/kg	**7**	**10**	**7**	<2	**28**
Copper	7440-50-8	5	mg/kg	**10**	**13**	**6**	**6**	**31**
Iron	7439-89-6	50	mg/kg	**102000**	**168000**	**42800**	**40900**	**123000**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**2290**	**2780**	**2320**	**76**	**1050**
Nickel	7440-02-0	2	mg/kg	**30**	**61**	**102**	**8**	**194**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	**11**	**26**	**12**	**20**	**92**
Zinc	7440-66-6	5	mg/kg	**11**	**30**	**27**	<5	**55**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.3**	<0.1	<0.1	<0.1	**0.4**
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**9.2**	**7.7**	**7.1**	**7.0**	**6.8**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201529008 NS0090 190-192	EP1201529015 NS0090 8-10	EP1201529016 NS0090 0-2	EP1201529017 NS0090 20-22	EP1201529040 NS0089 128-130
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204009-026	EP1204009-027	EP1204009-028	EP1204009-029	EP1204009-030
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**1.4**	**8.6**	**11.3**	**9.4**	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**4710**	**80**	**100**	<50	**3450**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**5640**	**890**	**4390**	**790**	**7340**
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	**6**
Barium	7440-39-3	10	mg/kg	<10	<10	<10	**20**	<10
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	<1	<1
Cadmium	7440-43-9	1	mg/kg	**2**	<1	<1	<1	**2**
Chromium	7440-47-3	2	mg/kg	**26**	**13**	**102**	**10**	**115**
Cobalt	7440-48-4	2	mg/kg	**10**	<2	<2	<2	**13**
Copper	7440-50-8	5	mg/kg	**10**	<5	<5	<5	**14**
Iron	7439-89-6	50	mg/kg	**116000**	**27100**	**71600**	**36000**	**149000**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**3640**	**37**	**21**	**628**	**2900**
Nickel	7440-02-0	2	mg/kg	**36**	**6**	**7**	**5**	**73**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	**9**	<5	**21**	<5	**22**
Zinc	7440-66-6	5	mg/kg	**17**	<5	<5	<5	**23**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	**0.2**
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**7.5**	**7.6**	**7.1**	**7.0**	**7.6**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201529045 NS0089 178-180	EP1201530008 NS0106 28-30	EP1201530010 NS0106 48-50	EP1201530012 NS0106 8-10	EP1201530028 NS0108 176-178
Client sampling date / time				21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204009-031	EP1204009-032	EP1204009-033	EP1204009-034	EP1204009-035
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	**2.2**	**3.6**	**6.7**
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**3490**	**1220**	**14200**	<50	**3880**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**3950**	**2120**	**1320**	**600**	**7490**
Arsenic	7440-38-2	5	mg/kg	**7**	<5	**6**	<5	<5
Barium	7440-39-3	10	mg/kg	<10	**90**	**20**	**90**	<10
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	<1	<1
Cadmium	7440-43-9	1	mg/kg	**2**	<1	<1	<1	**3**
Chromium	7440-47-3	2	mg/kg	**74**	**13**	**8**	**7**	**73**
Cobalt	7440-48-4	2	mg/kg	**18**	**6**	**7**	<2	**9**
Copper	7440-50-8	5	mg/kg	**21**	**7**	**5**	<5	**12**
Iron	7439-89-6	50	mg/kg	**148000**	**57300**	**76200**	**18100**	**169000**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**3150**	**5820**	**5920**	**1280**	**5160**
Nickel	7440-02-0	2	mg/kg	**72**	**21**	**11**	**3**	**51**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	**16**	<5	<5	<5	**11**
Zinc	7440-66-6	5	mg/kg	**23**	**16**	**8**	**5**	**22**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.2**	<0.1	**0.1**	<0.1	**0.2**
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**7.6**	**7.5**	**8.8**	**7.9**	**7.7**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201530029 NS0094 160-162	EP1201530042 NS0106 170-172	EP1201531001 NS0090 268-270	----	----
Client sampling date / time				21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	----	----
				EP1204009-036	**EP1204009-037**	**EP1204009-038**	**----**	**----**
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**5.7**	<1.0	**6.5**	----	----
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**18800**	**15700**	**6760**	----	----
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**950**	**540**	**280**	----	----
Arsenic	7440-38-2	5	mg/kg	**7**	<5	<5	----	----
Barium	7440-39-3	10	mg/kg	**20**	<10	<10	----	----
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	----	----
Cadmium	7440-43-9	1	mg/kg	**1**	<1	**3**	----	----
Chromium	7440-47-3	2	mg/kg	**9**	**12**	**9**	----	----
Cobalt	7440-48-4	2	mg/kg	**4**	<2	**3**	----	----
Copper	7440-50-8	5	mg/kg	<5	<5	<5	----	----
Iron	7439-89-6	50	mg/kg	**98500**	**65900**	**156000**	----	----
Lead	7439-92-1	5	mg/kg	<5	<5	<5	----	----
Manganese	7439-96-5	5	mg/kg	**5750**	**5880**	**4380**	----	----
Nickel	7440-02-0	2	mg/kg	**9**	**5**	**14**	----	----
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	----	----
Vanadium	7440-62-2	5	mg/kg	<5	<5	<5	----	----
Zinc	7440-66-6	5	mg/kg	**6**	**7**	**9**	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	----	----
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**9.2**	**9.0**	**8.2**	----	----

CERTIFICATE OF ANALYSIS

Work Order	: **EP1204010**	Page	: 1 of 22
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex SGS Batch PE065685 686 687 688 689 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 21-MAY-2012
Sampler	: ----	Issue Date	: 05-JUN-2012
Site	: Northstar		
		No. of samples received	: 44
Quote number	: EP/406/12	No. of samples analysed	: 44

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Canhuang Ke	Metals Instrument Chemist	Perth Inorganics
Chas Tucker	Inorganic Chemist	Perth Inorganics
Cicelia Bartels	Metals Instrument Chemist	Perth Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **EG005T: Poor metals matrix spike recoveries due to matrix effects.**

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065685.007 NS0165 100-102	PE065685.046 NS0157 130-132	PE065685.050 NS0158 178-180	PE065685.064 NS0158 110-112	PE065685.065 NS0158 66-68
				Client sampling date / time: 29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00
				EP1204010-001	EP1204010-002	EP1204010-003	EP1204010-004	EP1204010-005
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	2	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	26	21	30	28	36
Total Alkalinity as CaCO3	----	1	mg/L	26	21	30	29	36
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	2	2	3	<1	<1
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	7	5	4	3	6
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	1	1	<1	1	2
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	6	4	7	8	7
Magnesium	7439-95-4	1	mg/L	3	2	3	3	3
Sodium	7440-23-5	1	mg/L	5	9	6	6	15
Potassium	7440-09-7	1	mg/L	<1	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	0.04	0.13	0.27	0.17	0.05
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.002	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	0.387	0.728	1.56	0.902	1.34
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0003	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	0.001	<0.001	0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	0.006	0.016	0.006	0.003	0.006
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.002	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	0.052	0.127	0.173	0.116	0.128
Iron	7439-89-6	0.05	mg/L	0.21	0.16	<0.05	<0.05	<0.05
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	0.69	0.55	0.68	0.67	0.90
Total Cations	----	0.01	meq/L	0.76	0.76	0.86	0.91	1.25

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065685.098 NS0152 244-246	PE065686.003 NS0152 78-80	PE065686.007 NS0152 120-122	PE065686.020 NS0153 168-170	PE065686.021 NS0153 98-100
				Client sampling date / time: 29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00
				EP1204010-006	EP1204010-007	EP1204010-008	EP1204010-009	EP1204010-010
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	**14**	<1	**13**	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**28**	**29**	**27**	**34**	**14**
Total Alkalinity as CaCO3	----	1	mg/L	**42**	**29**	**41**	**34**	**14**
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	<1	<1	<1	<1	**2**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**19**	**30**	**8**	**2**	**3**
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	<1	**1**	<1	**1**	**3**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**6**	**13**	**5**	**7**	**4**
Magnesium	7439-95-4	1	mg/L	**1**	**5**	**2**	**3**	**2**
Sodium	7440-23-5	1	mg/L	**28**	**8**	**21**	**10**	**11**
Potassium	7440-09-7	1	mg/L	<1	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.33**	**0.01**	**0.12**	**0.02**	**0.50**
Arsenic	7440-38-2	0.001	mg/L	**0.003**	<0.001	**0.001**	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	**1.45**	**1.14**	**1.14**	**1.27**	**1.52**
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	**0.0001**	<0.0001	<0.0001	**0.0001**
Chromium	7440-47-3	0.001	mg/L	**0.002**	<0.001	<0.001	<0.001	**0.006**
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.002**	<0.001	<0.001	<0.001	**0.002**
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.040**	**0.009**	**0.013**	**0.016**	**0.125**
Nickel	7440-02-0	0.001	mg/L	**0.003**	<0.001	<0.001	<0.001	**0.003**
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.232**	**0.181**	**0.174**	**0.147**	**0.364**
Iron	7439-89-6	0.05	mg/L	**2.56**	<0.05	**0.62**	<0.05	**6.33**
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	**1.23**	**1.23**	**0.99**	**0.75**	**0.43**
Total Cations	----	0.01	meq/L	**1.60**	**1.41**	**1.33**	**1.03**	**0.84**

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065686.028 NS0153 200-202	PE065686.032 NS0153 220-222	PE065686.035 NS0154 38-40	PE065686.037 NS0154 30-32	PE065686.040 NS0154 18-20
				Client sampling date / time: 29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00
				EP1204010-011	EP1204010-012	EP1204010-013	EP1204010-014	EP1204010-015
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	3	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<1	24	34	30	5
Total Alkalinity as CaCO3	----	1	mg/L	<1	24	37	30	5
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	34	3	<1	<1	5
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	197	12	2	1	<1
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	<1	1	1	<1	<1
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	6	6	5	4	2
Magnesium	7439-95-4	1	mg/L	32	5	2	2	<1
Sodium	7440-23-5	1	mg/L	11	8	16	15	9
Potassium	7440-09-7	1	mg/L	1	2	1	<1	<1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	0.47	0.01	0.12	0.35	0.60
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.002	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	0.003	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	1.24	1.23	0.958	1.44	0.937
Cadmium	7440-43-9	0.0001	mg/L	0.0055	0.0002	<0.0001	0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	0.007	<0.001	<0.001	<0.001	0.001
Cobalt	7440-48-4	0.001	mg/L	0.182	0.002	<0.001	<0.001	0.001
Copper	7440-50-8	0.001	mg/L	0.079	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	11.3	0.254	0.032	0.235	0.524
Nickel	7440-02-0	0.001	mg/L	2.78	0.028	0.003	0.003	0.003
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	2.24	0.281	0.148	0.260	0.240
Iron	7439-89-6	0.05	mg/L	11.5	0.09	0.67	3.60	4.30
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	4.10	0.76	0.81	0.62	0.10
Total Cations	----	0.01	meq/L	3.44	1.11	1.14	1.02	0.49

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065686.028 NS0153 200-202	PE065686.032 NS0153 220-222	PE065686.035 NS0154 38-40	PE065686.037 NS0154 30-32	PE065686.040 NS0154 18-20
				Client sampling date / time	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00
					EP1204010-011	EP1204010-012	EP1204010-013	EP1204010-014	EP1204010-015
EN055: Ionic Balance - Continued									
Ionic Balance	----	0.01	%		**8.84**	----	----	----	----

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065686.054 NS0154 200-202	PE065686.068 NS0160 58-60	PE065687.014 NS0124 130-132	PE065687.035 NS0155 100-102	PE065687.036 NS0155 108-110
				Client sampling date / time	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00
					EP1204010-016	EP1204010-017	EP1204010-018	EP1204010-019	EP1204010-020
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		**10**	<1	**22**	**17**	**4**
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**34**	**38**	**23**	**31**	**33**
Total Alkalinity as CaCO3	----	1	mg/L		**43**	**38**	**44**	**48**	**37**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		<1	<1	<1	<1	<1
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**6**	**6**	**41**	**8**	**12**
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		**2**	<1	**1**	**1**	**2**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**3**	**4**	**3**	**3**	**4**
Magnesium	7439-95-4	1	mg/L		**1**	**2**	**1**	<1	**2**
Sodium	7440-23-5	1	mg/L		**25**	**21**	**38**	**25**	**21**
Potassium	7440-09-7	1	mg/L		<1	<1	**2**	<1	<1
EG020W: Water Leachable Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.68**	**0.84**	**2.71**	**0.48**	**0.08**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	**0.005**	**0.001**	<0.001
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		**1.44**	**1.19**	**1.34**	**1.08**	**1.31**
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	**0.0001**	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		**0.012**	**0.016**	**0.051**	**0.005**	<0.001
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	**0.002**	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		**0.001**	**0.001**	**0.007**	<0.001	**0.001**
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	**0.002**	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		**0.074**	**0.053**	**0.048**	**0.016**	**0.020**
Nickel	7440-02-0	0.001	mg/L		**0.003**	**0.007**	**0.018**	**0.002**	**0.001**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	**0.01**	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.260**	**0.200**	**0.267**	**0.147**	**0.204**
Iron	7439-89-6	0.05	mg/L		**6.99**	**4.66**	**12.6**	**1.67**	**1.47**
EG035W: Water Leachable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		**0.0002**	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance									
Total Anions	----	0.01	meq/L		**1.04**	**0.88**	**1.76**	**1.15**	**1.05**
Total Cations	----	0.01	meq/L		**1.32**	**1.28**	**1.94**	**1.24**	**1.28**

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065687.056 NS0098 20-22	PE065687.058 NS0098 0-2	PE065687.060 NS0098 58-60	PE065687.065 NS0098 180-182	PE065687.081 NS0096 230-232
				Client sampling date / time: 29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00
				EP1204010-021	EP1204010-022	EP1204010-023	EP1204010-024	EP1204010-025
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	3	4	14	30	23
Total Alkalinity as CaCO3	----	1	mg/L	3	4	14	30	23
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	5	5	2	3	<1
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	1	18	7	31
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	2	2	1	2	2
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	2	2	5	6	3
Magnesium	7439-95-4	1	mg/L	<1	<1	4	4	2
Sodium	7440-23-5	1	mg/L	8	6	8	12	26
Potassium	7440-09-7	1	mg/L	<1	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	0.48	5.98	0.04	0.04	0.47
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.001	<0.001	0.002
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	0.556	0.678	0.980	1.08	1.19
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0002	0.0002	0.0001
Chromium	7440-47-3	0.001	mg/L	0.003	0.016	<0.001	<0.001	0.003
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	0.003	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	0.010	0.011	0.391	0.015	0.056
Nickel	7440-02-0	0.001	mg/L	0.001	0.005	0.002	0.001	0.003
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	0.163	0.265	0.203	0.180	0.218
Iron	7439-89-6	0.05	mg/L	5.12	8.34	0.19	0.06	2.34
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	0.12	0.16	0.68	0.80	1.16
Total Cations	----	0.01	meq/L	0.45	0.36	0.93	1.15	1.45

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065687.086 NS0096 120-122	PE065687.088 NS0096 20-22	PE065687.093 NS0096 70-72	PE065688.007 NS0095 30-32	PE065688.008 NS0095 38-40
				Client sampling date / time: 29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00
				EP1204010-026	EP1204010-027	EP1204010-028	EP1204010-029	EP1204010-030
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	4	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	27	4	31	4	4
Total Alkalinity as CaCO3	----	1	mg/L	27	4	35	4	4
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	<1	6	<1	2	2
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	16	<1	1	1	4
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	<1	4	1	2	1
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	4	2	5	2	2
Magnesium	7439-95-4	1	mg/L	3	<1	2	<1	<1
Sodium	7440-23-5	1	mg/L	16	12	17	9	7
Potassium	7440-09-7	1	mg/L	<1	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	0.29	0.95	0.09	0.83	1.18
Arsenic	7440-38-2	0.001	mg/L	0.004	<0.001	0.002	0.002	0.002
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	0.685	1.02	1.49	0.962	0.708
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.0001	0.0001	0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	0.002	<0.001	0.003	0.006
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	0.002	0.002
Copper	7440-50-8	0.001	mg/L	0.002	0.002	<0.001	0.002	0.004
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	0.088	0.742	0.020	1.09	1.23
Nickel	7440-02-0	0.001	mg/L	0.002	0.003	0.001	0.006	0.010
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	0.093	0.281	0.252	0.286	0.247
Iron	7439-89-6	0.05	mg/L	2.23	5.03	0.38	9.61	17.1
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	0.87	0.19	0.75	0.16	0.19
Total Cations	----	0.01	meq/L	1.14	0.62	1.15	0.49	0.40

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065688.026 NS0094 28-30	PE065688.042 NS0097 28-30	PE065688.043 NS0097 40-42	PE065688.066 NS0113 158-160	PE065688.070 NS0113 198-200
				Client sampling date / time: 29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00
				EP1204010-031	EP1204010-032	EP1204010-033	EP1204010-034	EP1204010-035
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**5**	**4**	<1	**12**	**32**
Total Alkalinity as CaCO3	----	1	mg/L	**5**	**4**	<1	**12**	**32**
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	**6**	**3**	**3**	**3**	**2**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<5	**3**	**192**	**27**	**16**
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	<1	**4**	**2**	**1**	**2**
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**2**	**3**	**12**	**4**	**7**
Magnesium	7439-95-4	1	mg/L	<1	**1**	**32**	**7**	**6**
Sodium	7440-23-5	1	mg/L	**11**	**12**	**12**	**9**	**10**
Potassium	7440-09-7	1	mg/L	<1	<1	<1	<1	<1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.96**	**1.71**	**0.03**	<0.01	**0.02**
Arsenic	7440-38-2	0.001	mg/L	<0.001	**0.001**	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	**1.34**	**0.921**	**0.820**	**0.993**	**0.834**
Cadmium	7440-43-9	0.0001	mg/L	**0.0001**	**0.0001**	**0.0003**	**0.0001**	<0.0001
Chromium	7440-47-3	0.001	mg/L	**0.002**	**0.008**	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	**0.001**	**0.003**	**0.084**	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.003**	**0.004**	<0.001	<0.001	**0.001**
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.402**	**1.41**	**8.77**	**0.112**	**0.030**
Nickel	7440-02-0	0.001	mg/L	**0.006**	**0.028**	**0.168**	**0.003**	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	**0.01**	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.349**	**0.277**	**0.530**	**0.191**	**0.173**
Iron	7439-89-6	0.05	mg/L	**5.56**	**16.4**	**0.41**	<0.05	<0.05
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	**0.10**	**0.26**	**4.05**	**0.83**	**1.03**
Total Cations	----	0.01	meq/L	**0.58**	**0.75**	**3.75**	**1.17**	**1.28**

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065688.026 NS0094 28-30	PE065688.042 NS0097 28-30	PE065688.043 NS0097 40-42	PE065688.066 NS0113 158-160	PE065688.070 NS0113 198-200
				Client sampling date / time	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00
					EP1204010-031	EP1204010-032	EP1204010-033	EP1204010-034	EP1204010-035
EN055: Ionic Balance - Continued									
Ionic Balance	----	0.01	%		----	----	**3.85**	----	----

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065688.079 NS0113 140-142	PE065688.082 NS0118 140-142	PE065689.019 NS0120 206-208	PE065689.041 NS0117 190-192	PE065689.057 NS0116 108-110
				Client sampling date / time: 29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00
				EP1204010-036	EP1204010-037	EP1204010-038	EP1204010-039	EP1204010-040
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	11	28	20	36	20
Total Alkalinity as CaCO3	----	1	mg/L	11	28	20	37	20
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	3	2	2	<1	3
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	45	20	16	31	26
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	2	2	4	3	2
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	4	5	5	7	4
Magnesium	7439-95-4	1	mg/L	6	8	2	3	2
Sodium	7440-23-5	1	mg/L	20	7	16	21	18
Potassium	7440-09-7	1	mg/L	2	<1	<1	1	1
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	0.02	<0.01	0.11	0.09	0.15
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	1.17	1.02	0.894	0.821	0.895
Cadmium	7440-43-9	0.0001	mg/L	0.0001	0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.002	<0.001	0.002
Cobalt	7440-48-4	0.001	mg/L	<0.001	0.003	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	0.023	0.624	0.016	0.004	0.013
Nickel	7440-02-0	0.001	mg/L	0.001	0.008	0.001	<0.001	0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	0.198	0.235	0.101	0.100	0.156
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.46	<0.05	0.70
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	1.21	1.03	0.85	1.47	1.00
Total Cations	----	0.01	meq/L	1.61	1.21	1.11	1.54	1.17

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065689.063 NS0116 130-132	PE065689.072 NS0128	PE065689.080 NS0089 360-362	PE065689.087 NS0084 270-272	----
				Client sampling date / time: 29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	29-MAY-2012 12:00	----
				EP1204010-041	EP1204010-042	EP1204010-043	EP1204010-044	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	2	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	30	16	64	37	----
Total Alkalinity as CaCO3	----	1	mg/L	30	16	64	39	----
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	2	8	<1	<1	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	22	25	4	15	----
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	2	2	<1	<1	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	6	5	10	3	----
Magnesium	7439-95-4	1	mg/L	2	7	9	2	----
Sodium	7440-23-5	1	mg/L	21	8	7	25	----
Potassium	7440-09-7	1	mg/L	1	<1	<1	<1	----
EG020W: Water Leachable Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	0.20	0.01	<0.01	0.16	----
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	0.002	----
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Barium	7440-39-3	0.001	mg/L	0.959	1.22	0.937	0.937	----
Cadmium	7440-43-9	0.0001	mg/L	0.0002	0.0002	0.0003	0.0002	----
Chromium	7440-47-3	0.001	mg/L	0.002	<0.001	<0.001	<0.001	----
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Copper	7440-50-8	0.001	mg/L	0.002	0.001	0.003	0.002	----
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Manganese	7439-96-5	0.001	mg/L	0.006	0.060	0.050	0.008	----
Nickel	7440-02-0	0.001	mg/L	0.001	0.001	0.001	<0.001	----
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	----
Zinc	7440-66-6	0.005	mg/L	0.135	0.246	0.296	0.116	----
Iron	7439-89-6	0.05	mg/L	0.62	<0.05	<0.05	0.35	----
EG035W: Water Leachable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	----
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	1.11	0.90	1.36	1.09	----
Total Cations	----	0.01	meq/L	1.40	1.17	1.54	1.40	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065685.007 NS0165 100-102	PE065685.046 NS0157 130-132	PE065685.050 NS0158 178-180	PE065685.064 NS0158 110-112	PE065685.065 NS0158 66-68
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204010-001	EP1204010-002	EP1204010-003	EP1204010-004	EP1204010-005
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**4340**	**2050**	**17100**	**10100**	**8810**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**1610**	**7620**	**2160**	**5260**	**7700**
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg	<10	<10	<10	<10	**30**
Beryllium	7440-41-7	1	mg/kg	<1	**1**	<1	<1	<1
Cadmium	7440-43-9	1	mg/kg	**1**	**3**	<1	<1	**2**
Chromium	7440-47-3	2	mg/kg	**10**	**81**	**15**	**36**	**72**
Cobalt	7440-48-4	2	mg/kg	**3**	**11**	**4**	**9**	**8**
Copper	7440-50-8	5	mg/kg	<5	**10**	<5	**14**	**10**
Iron	7439-89-6	50	mg/kg	**126000**	**186000**	**75700**	**87800**	**146000**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**1480**	**3750**	**4110**	**3320**	**5200**
Nickel	7440-02-0	2	mg/kg	**12**	**50**	**15**	**42**	**46**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	<5	**29**	<5	**10**	**13**
Zinc	7440-66-6	5	mg/kg	<5	**15**	**7**	**12**	**15**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.3**	**0.1**	<0.1	**0.1**	**0.2**
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**7.7**	**8.0**	**7.8**	**8.6**	**8.5**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065685.098 NS0152 244-246	PE065686.003 NS0152 78-80	PE065686.007 NS0152 120-122	PE065686.020 NS0153 168-170	PE065686.021 NS0153 98-100
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204010-006	EP1204010-007	EP1204010-008	EP1204010-009	EP1204010-010
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		<1.0	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations									
Calcium	7440-70-2	50	mg/kg		**24200**	**5220**	**12000**	**4450**	**6350**
EG005T: Total Metals by ICP-AES									
Aluminium	7429-90-5	50	mg/kg		**5760**	**33200**	**4150**	**4430**	**5810**
Arsenic	7440-38-2	5	mg/kg		**6**	**15**	<5	<5	**14**
Barium	7440-39-3	10	mg/kg		**50**	<10	**30**	**20**	**30**
Beryllium	7440-41-7	1	mg/kg		**2**	**1**	**1**	<1	<1
Cadmium	7440-43-9	1	mg/kg		**2**	**2**	**1**	**2**	**3**
Chromium	7440-47-3	2	mg/kg		**42**	**570**	**32**	**41**	**82**
Cobalt	7440-48-4	2	mg/kg		**9**	**33**	**9**	**5**	**6**
Copper	7440-50-8	5	mg/kg		**15**	**54**	**14**	<5	**9**
Iron	7439-89-6	50	mg/kg		**119000**	**146000**	**109000**	**147000**	**160000**
Lead	7439-92-1	5	mg/kg		<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg		**2860**	**1370**	**2400**	**3900**	**5050**
Nickel	7440-02-0	2	mg/kg		**38**	**211**	**35**	**30**	**35**
Selenium	7782-49-2	5	mg/kg		<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg		**14**	**101**	**11**	**13**	**17**
Zinc	7440-66-6	5	mg/kg		**14**	**94**	**14**	**12**	**15**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		**0.2**	**0.2**	**0.2**	<0.1	**0.3**
EN60: Bottle Leaching Procedure									
Final pH	----	0.1	pH Unit		**9.4**	**8.3**	**9.4**	**8.4**	**8.2**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065686.028 NS0153 200-202	PE065686.032 NS0153 220-222	PE065686.035 NS0154 38-40	PE065686.037 NS0154 30-32	PE065686.040 NS0154 18-20
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204010-011	EP1204010-012	EP1204010-013	EP1204010-014	EP1204010-015
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**400**	**9740**	**8760**	**4700**	**470**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**5420**	**5680**	**4390**	**1910**	**2030**
Arsenic	7440-38-2	5	mg/kg	**86**	**7**	<5	<5	<5
Barium	7440-39-3	10	mg/kg	<10	<10	**10**	**10**	**270**
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	<1	<1
Cadmium	7440-43-9	1	mg/kg	<1	**4**	<1	**1**	<1
Chromium	7440-47-3	2	mg/kg	**97**	**76**	**20**	**10**	**9**
Cobalt	7440-48-4	2	mg/kg	**75**	**11**	**7**	**4**	**10**
Copper	7440-50-8	5	mg/kg	**57**	**10**	**8**	**6**	<5
Iron	7439-89-6	50	mg/kg	**81300**	**195000**	**90800**	**110000**	**40600**
Lead	7439-92-1	5	mg/kg	**17**	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**584**	**4020**	**4190**	**5940**	**5640**
Nickel	7440-02-0	2	mg/kg	**439**	**56**	**28**	**14**	**19**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	**11**	**16**	**7**	<5	<5
Zinc	7440-66-6	5	mg/kg	**88**	**16**	**13**	**9**	**7**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**1.9**	**0.2**	<0.1	<0.1	<0.1
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**5.0**	**6.8**	**9.0**	**8.6**	**7.4**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065686.054 NS0154 200-202	PE065686.068 NS0160 58-60	PE065687.014 NS0124 130-132	PE065687.035 NS0155 100-102	PE065687.036 NS0155 108-110
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204010-016	EP1204010-017	EP1204010-018	EP1204010-019	EP1204010-020
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**1.1**	<1.0	**2.3**	**1.2**	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**5820**	**7920**	**1940**	**8480**	**6490**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**9470**	**19400**	**26000**	**17100**	**3430**
Arsenic	7440-38-2	5	mg/kg	**6**	<5	**21**	**13**	<5
Barium	7440-39-3	10	mg/kg	**60**	**110**	**100**	**60**	**40**
Beryllium	7440-41-7	1	mg/kg	**2**	**2**	**2**	**2**	**2**
Cadmium	7440-43-9	1	mg/kg	**3**	**3**	**1**	**2**	**4**
Chromium	7440-47-3	2	mg/kg	**161**	**306**	**441**	**278**	**46**
Cobalt	7440-48-4	2	mg/kg	**10**	**20**	**33**	**17**	**4**
Copper	7440-50-8	5	mg/kg	**19**	**24**	**30**	**22**	**14**
Iron	7439-89-6	50	mg/kg	**164000**	**158000**	**119000**	**142000**	**190000**
Lead	7439-92-1	5	mg/kg	<5	<5	**6**	<5	<5
Manganese	7439-96-5	5	mg/kg	**2190**	**2940**	**355**	**1970**	**2630**
Nickel	7440-02-0	2	mg/kg	**58**	**161**	**160**	**105**	**29**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	**29**	**60**	**82**	**54**	**11**
Zinc	7440-66-6	5	mg/kg	**37**	**67**	**73**	**59**	**17**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.3**	**0.3**	**0.4**	**0.4**	**0.2**
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**9.3**	**8.6**	**9.6**	**9.8**	**9.1**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065687.056 NS0098 20-22	PE065687.058 NS0098 0-2	PE065687.060 NS0098 58-60	PE065687.065 NS0098 180-182	PE065687.081 NS0096 230-232
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204010-021	EP1204010-022	EP1204010-023	EP1204010-024	EP1204010-025
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**100**	**320**	**3150**	**4530**	**3900**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**530**	**3150**	**2250**	**2420**	**13800**
Arsenic	7440-38-2	5	mg/kg	<5	<5	**7**	**5**	**24**
Barium	7440-39-3	10	mg/kg	<10	**20**	**20**	**20**	**70**
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	<1	<1
Cadmium	7440-43-9	1	mg/kg	<1	<1	**1**	**1**	**1**
Chromium	7440-47-3	2	mg/kg	**12**	**77**	**23**	**14**	**87**
Cobalt	7440-48-4	2	mg/kg	<2	<2	**5**	**3**	**18**
Copper	7440-50-8	5	mg/kg	<5	**7**	**11**	<5	**20**
Iron	7439-89-6	50	mg/kg	**38100**	**58200**	**118000**	**128000**	**104000**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**48**	**48**	**5780**	**2390**	**3900**
Nickel	7440-02-0	2	mg/kg	**3**	**5**	**23**	**13**	**90**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	<5	**23**	**5**	<5	**27**
Zinc	7440-66-6	5	mg/kg	<5	<5	**14**	**6**	**25**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	**0.1**	**0.1**	**0.2**
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**7.4**	**7.5**	**7.3**	**8.1**	**8.7**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065687.086 NS0096 120-122	PE065687.088 NS0096 20-22	PE065687.093 NS0096 70-72	PE065688.007 NS0095 30-32	PE065688.008 NS0095 38-40
Client sampling date / time				21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204010-026	EP1204010-027	EP1204010-028	EP1204010-029	EP1204010-030
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**3.6**	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**7120**	**390**	**9010**	**370**	**1040**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**4910**	**1950**	**2580**	**1320**	**970**
Arsenic	7440-38-2	5	mg/kg	**6**	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg	**40**	**180**	**80**	**170**	<10
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	**1**	<1
Cadmium	7440-43-9	1	mg/kg	<1	<1	**1**	<1	<1
Chromium	7440-47-3	2	mg/kg	**21**	**11**	**11**	**18**	**14**
Cobalt	7440-48-4	2	mg/kg	**8**	**3**	**4**	**10**	**4**
Copper	7440-50-8	5	mg/kg	**12**	<5	**8**	<5	<5
Iron	7439-89-6	50	mg/kg	**98700**	**44000**	**102000**	**53000**	**46200**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**4130**	**2760**	**4790**	**6770**	**4940**
Nickel	7440-02-0	2	mg/kg	**30**	**9**	**12**	**22**	**20**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	**8**	<5	<5	<5	<5
Zinc	7440-66-6	5	mg/kg	**12**	<5	**7**	**11**	**7**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**9.2**	**7.9**	**9.2**	**7.9**	**8.1**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065688.026 NS0094 28-30	PE065688.042 NS0097 28-30	PE065688.043 NS0097 40-42	PE065688.066 NS0113 158-160	PE065688.070 NS0113 198-200
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204010-031	EP1204010-032	EP1204010-033	EP1204010-034	EP1204010-035
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**2.4**	**7.9**	**4.4**	<1.0	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**1180**	**360**	**980**	**3020**	**3610**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**5840**	**1660**	**23500**	**15600**	**4280**
Arsenic	7440-38-2	5	mg/kg	<5	<5	**20**	**6**	<5
Barium	7440-39-3	10	mg/kg	**340**	**150**	**20**	<10	**20**
Beryllium	7440-41-7	1	mg/kg	**1**	<1	**1**	**1**	**1**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	**3**	**2**
Chromium	7440-47-3	2	mg/kg	**17**	**17**	**278**	**250**	**56**
Cobalt	7440-48-4	2	mg/kg	**17**	**9**	**24**	**16**	**12**
Copper	7440-50-8	5	mg/kg	**6**	<5	**31**	**28**	**19**
Iron	7439-89-6	50	mg/kg	**54900**	**47900**	**82300**	**163000**	**168000**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**5330**	**4680**	**1870**	**2230**	**2860**
Nickel	7440-02-0	2	mg/kg	**43**	**39**	**182**	**104**	**60**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	<5	<5	**50**	**50**	**17**
Zinc	7440-66-6	5	mg/kg	**16**	**12**	**67**	**44**	**30**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	**0.3**	**0.1**	**0.1**
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**7.8**	**7.6**	**7.0**	**7.6**	**8.0**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065688.079 NS0113 140-142	PE065688.082 NS0118 140-142	PE065689.019 NS0120 206-208	PE065689.041 NS0117 190-192	PE065689.057 NS0116 108-110
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204010-036	EP1204010-037	EP1204010-038	EP1204010-039	EP1204010-040
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		<1.0	<1.0	<1.0	**1.4**	<1.0
ED093T: Total Major Cations									
Calcium	7440-70-2	50	mg/kg		**2260**	**4200**	**1790**	**12100**	**4250**
EG005T: Total Metals by ICP-AES									
Aluminium	7429-90-5	50	mg/kg		**9880**	**4530**	**15800**	**11200**	**17000**
Arsenic	7440-38-2	5	mg/kg		**6**	**30**	**6**	**6**	**8**
Barium	7440-39-3	10	mg/kg		**40**	<10	**30**	**40**	**40**
Beryllium	7440-41-7	1	mg/kg		**1**	**1**	**1**	**2**	**2**
Cadmium	7440-43-9	1	mg/kg		**2**	**3**	**1**	**3**	**2**
Chromium	7440-47-3	2	mg/kg		**164**	**59**	**317**	**128**	**254**
Cobalt	7440-48-4	2	mg/kg		**18**	**12**	**19**	**14**	**18**
Copper	7440-50-8	5	mg/kg		**23**	**31**	**24**	**20**	**28**
Iron	7439-89-6	50	mg/kg		**158000**	**191000**	**120000**	**170000**	**151000**
Lead	7439-92-1	5	mg/kg		<5	<5	**9**	<5	<5
Manganese	7439-96-5	5	mg/kg		**3090**	**3020**	**1870**	**2260**	**1860**
Nickel	7440-02-0	2	mg/kg		**88**	**43**	**121**	**66**	**103**
Selenium	7782-49-2	5	mg/kg		<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg		**39**	**14**	**50**	**30**	**50**
Zinc	7440-66-6	5	mg/kg		**34**	**13**	**55**	**32**	**46**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		**0.3**	**0.7**	**0.1**	**0.2**	**0.4**
EN60: Bottle Leaching Procedure									
Final pH	----	0.1	pH Unit		**7.8**	**7.4**	**8.2**	**9.1**	**7.6**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065689.063 NS0116 130-132	PE065689.072 NS0128	PE065689.080 NS0089 360-362	PE065689.087 NS0084 270-272	----
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	----
					EP1204010-041	EP1204010-042	EP1204010-043	EP1204010-044	----
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		<1.0	<1.0	**2.5**	<1.0	----
ED093T: Total Major Cations									
Calcium	7440-70-2	50	mg/kg		**6570**	**3240**	**6810**	**4200**	----
EG005T: Total Metals by ICP-AES									
Aluminium	7429-90-5	50	mg/kg		**19800**	**24300**	**2040**	**12400**	----
Arsenic	7440-38-2	5	mg/kg		**9**	**10**	<5	**8**	----
Barium	7440-39-3	10	mg/kg		**30**	<10	<10	**50**	----
Beryllium	7440-41-7	1	mg/kg		**2**	**2**	**1**	**1**	----
Cadmium	7440-43-9	1	mg/kg		**2**	**3**	**5**	**2**	----
Chromium	7440-47-3	2	mg/kg		**313**	**307**	**12**	**66**	----
Cobalt	7440-48-4	2	mg/kg		**18**	**29**	**3**	**14**	----
Copper	7440-50-8	5	mg/kg		**31**	**38**	<5	**24**	----
Iron	7439-89-6	50	mg/kg		**146000**	**178000**	**221000**	**141000**	----
Lead	7439-92-1	5	mg/kg		<5	<5	<5	<5	----
Manganese	7439-96-5	5	mg/kg		**1860**	**2860**	**4620**	**3890**	----
Nickel	7440-02-0	2	mg/kg		**113**	**175**	**24**	**70**	----
Selenium	7782-49-2	5	mg/kg		<5	<5	<5	<5	----
Vanadium	7440-62-2	5	mg/kg		**62**	**66**	<5	**26**	----
Zinc	7440-66-6	5	mg/kg		**54**	**49**	**16**	**26**	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		**0.3**	**0.4**	<0.1	**0.2**	----
EN60: Bottle Leaching Procedure									
Final pH	----	0.1	pH Unit		**8.0**	**7.6**	**8.0**	**8.8**	----

CERTIFICATE OF ANALYSIS

Work Order	: **EP1204011**	Page	: 1 of 8
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201379 1380 1381 1383 1384 1385 1529 1530 1531&SGS Batch PE065685 686 687 688 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 21-MAY-2012
Sampler	: ----	Issue Date	: 05-JUN-2012
Site	: Northstar		
		No. of samples received	: 30
Quote number	: EP/406/12	No. of samples analysed	: 29

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Canhuang Ke	Metals Instrument Chemist	Perth Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201379015 NS0093 90-92	EP1201379038 NS0083 88-90	EP1201380009 NS0078 108-110	EP1201380043 NS0083 130-132	EP1201381001 NS0083 28-30
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204011-001	EP1204011-002	EP1204011-003	EP1204011-004	EP1204011-005
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**11400**	**13800**	**6110**	**3030**	**3130**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**2740**	**9160**	**1130**	**12800**	**9710**
Arsenic	7440-38-2	5	mg/kg	<5	**8**	<5	**7**	<5
Barium	7440-39-3	10	mg/kg	**60**	**60**	**10**	**70**	**30**
Beryllium	7440-41-7	1	mg/kg	<1	**2**	**1**	**2**	<1
Cadmium	7440-43-9	1	mg/kg	**2**	**2**	**3**	**2**	<1
Chromium	7440-47-3	2	mg/kg	**11**	**158**	**12**	**272**	**243**
Cobalt	7440-48-4	2	mg/kg	**5**	**14**	<2	**17**	**6**
Copper	7440-50-8	5	mg/kg	<5	**23**	<5	**26**	**14**
Iron	7439-89-6	50	mg/kg	**122000**	**110000**	**154000**	**117000**	**52600**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**5740**	**1700**	**2300**	**1760**	**73**
Nickel	7440-02-0	2	mg/kg	**13**	**80**	**10**	**106**	**72**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	<5	**32**	<5	**50**	**21**
Zinc	7440-66-6	5	mg/kg	**8**	**36**	**6**	**50**	**23**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	**0.1**	**0.3**	**0.1**	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201381003 NS0078 60-62	EP1201381009 NS0087 168-170	EP1201381012 NS0087 388-390	EP1201381033 NS0087 230-232	EP1201381041 NS0079 48-50
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204011-006	EP1204011-007	EP1204011-008	EP1204011-009	EP1204011-010
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**11000**	**10500**	**13400**	**13100**	**3610**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**2640**	**2980**	**1990**	**3200**	**12200**
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	**7**
Barium	7440-39-3	10	mg/kg	**30**	**70**	**20**	**40**	**20**
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	<1	**1**
Cadmium	7440-43-9	1	mg/kg	**2**	**2**	**2**	**1**	**5**
Chromium	7440-47-3	2	mg/kg	**16**	**14**	**9**	**12**	**78**
Cobalt	7440-48-4	2	mg/kg	**3**	**5**	**4**	**4**	**12**
Copper	7440-50-8	5	mg/kg	**9**	**8**	<5	**8**	**13**
Iron	7439-89-6	50	mg/kg	**107000**	**103000**	**94600**	**79400**	**184000**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**2320**	**3030**	**5020**	**3710**	**3980**
Nickel	7440-02-0	2	mg/kg	**19**	**17**	**10**	**14**	**69**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	<5	<5	<5	<5	**26**
Zinc	7440-66-6	5	mg/kg	**7**	**9**	**6**	**5**	**24**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.3**	**0.1**	<0.1	<0.1	**0.2**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201381049 NS0079 160-162	EP1201383048 NS0091 198-200	EP1201384043 NS0086 208-210	EP1201384045 NS0086 248-250	EP1201385011 NS0091 160-162
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204011-011	EP1204011-012	EP1204011-014	EP1204011-015	EP1204011-016
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		<1.0	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations									
Calcium	7440-70-2	50	mg/kg		**4620**	**5090**	**17000**	**14600**	**6020**
EG005T: Total Metals by ICP-AES									
Aluminium	7429-90-5	50	mg/kg		**3120**	**3400**	**1370**	**2790**	**450**
Arsenic	7440-38-2	5	mg/kg		**13**	<5	<5	**7**	<5
Barium	7440-39-3	10	mg/kg		**40**	<10	**20**	**40**	<10
Beryllium	7440-41-7	1	mg/kg		**1**	**2**	**1**	**2**	<1
Cadmium	7440-43-9	1	mg/kg		**2**	**8**	**2**	**2**	**3**
Chromium	7440-47-3	2	mg/kg		**28**	**50**	**12**	**21**	**10**
Cobalt	7440-48-4	2	mg/kg		**7**	**5**	**2**	**4**	**3**
Copper	7440-50-8	5	mg/kg		**24**	**7**	**9**	**15**	<5
Iron	7439-89-6	50	mg/kg		**121000**	**244000**	**113000**	**107000**	**149000**
Lead	7439-92-1	5	mg/kg		<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg		**2210**	**3830**	**2580**	**1940**	**2410**
Nickel	7440-02-0	2	mg/kg		**23**	**37**	**11**	**16**	**15**
Selenium	7782-49-2	5	mg/kg		<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg		**9**	**12**	<5	**10**	<5
Zinc	7440-66-6	5	mg/kg		**10**	**15**	<5	<5	**5**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		**0.4**	<0.1	**0.3**	**0.2**	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201385015 NS0111 188-190	EP1201385016 NS0111 290-292	EP1201385017 NS0111 240-242	EP1201529005 NS0108 160-162	EP1201530033 NS0094 148-150
Client sampling date / time				21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204011-017	EP1204011-018	EP1204011-019	EP1204011-020	EP1204011-021
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	<1.0	<1.0	**7.0**
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**3460**	**6430**	**5030**	**7020**	**14400**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**1430**	**1000**	**100**	**4280**	**660**
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	**9**	<5
Barium	7440-39-3	10	mg/kg	<10	<10	<10	**10**	**20**
Beryllium	7440-41-7	1	mg/kg	<1	**2**	<1	<1	<1
Cadmium	7440-43-9	1	mg/kg	**2**	**7**	**2**	**2**	**2**
Chromium	7440-47-3	2	mg/kg	**34**	**24**	**14**	**16**	**8**
Cobalt	7440-48-4	2	mg/kg	**3**	<2	<2	**10**	**2**
Copper	7440-50-8	5	mg/kg	<5	<5	<5	**11**	<5
Iron	7439-89-6	50	mg/kg	**118000**	**207000**	**108000**	**95600**	**87600**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**1110**	**2950**	**2660**	**4240**	**5280**
Nickel	7440-02-0	2	mg/kg	**17**	**14**	**6**	**36**	**8**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	<5	**6**	<5	<5	<5
Zinc	7440-66-6	5	mg/kg	**10**	**13**	<5	**14**	<5
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	**0.1**	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201531004 NS0090 128-130	PE065685.029 NS0159 116-118	PE065685.089 NS0152 148-150	PE065686.084 NS0122 150-152	PE065687.013 NS0124 118-120
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204011-022	EP1204011-023	EP1204011-024	EP1204011-025	EP1204011-026
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	**7.4**	<1.0	<1.0	<1.0	<1.0
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**10700**	**4340**	**28900**	**8630**	**14900**
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**810**	**2280**	**4610**	**7640**	**1690**
Arsenic	7440-38-2	5	mg/kg	<5	**8**	**7**	**5**	<5
Barium	7440-39-3	10	mg/kg	<10	**40**	**30**	**50**	**20**
Beryllium	7440-41-7	1	mg/kg	<1	**1**	<1	**1**	**1**
Cadmium	7440-43-9	1	mg/kg	**1**	**4**	**2**	**2**	**3**
Chromium	7440-47-3	2	mg/kg	**11**	**12**	**36**	**74**	**20**
Cobalt	7440-48-4	2	mg/kg	**4**	**8**	**7**	**11**	**3**
Copper	7440-50-8	5	mg/kg	**7**	**6**	**12**	**36**	**8**
Iron	7439-89-6	50	mg/kg	**83900**	**142000**	**80400**	**111000**	**129000**
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	<5
Manganese	7439-96-5	5	mg/kg	**4700**	**4470**	**1500**	**1490**	**1730**
Nickel	7440-02-0	2	mg/kg	**11**	**18**	**32**	**56**	**14**
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	<5	<5	**11**	**22**	<5
Zinc	7440-66-6	5	mg/kg	**6**	**7**	**13**	**20**	**6**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	**0.7**	**0.2**	**0.2**	<0.1

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065687.047 NS0155 210-212	PE065687.067 NS0098 108-110	PE065687.083 NS0096 254-256	PE065688.078 NS0113 128-130	----
			Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	----
				EP1204011-027	EP1204011-028	EP1204011-029	EP1204011-030	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	<1.0	**1.5**	----
ED093T: Total Major Cations								
Calcium	7440-70-2	50	mg/kg	**9380**	**4770**	**16800**	**4220**	----
EG005T: Total Metals by ICP-AES								
Aluminium	7429-90-5	50	mg/kg	**2960**	**250**	**1940**	**7240**	----
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	----
Barium	7440-39-3	10	mg/kg	**40**	<10	**20**	**20**	----
Beryllium	7440-41-7	1	mg/kg	**2**	<1	<1	**1**	----
Cadmium	7440-43-9	1	mg/kg	**2**	**2**	**2**	**3**	----
Chromium	7440-47-3	2	mg/kg	**23**	**9**	**10**	**73**	----
Cobalt	7440-48-4	2	mg/kg	**5**	**3**	**4**	**10**	----
Copper	7440-50-8	5	mg/kg	**9**	<5	**6**	**15**	----
Iron	7439-89-6	50	mg/kg	**118000**	**103000**	**93800**	**142000**	----
Lead	7439-92-1	5	mg/kg	<5	<5	<5	<5	----
Manganese	7439-96-5	5	mg/kg	**2280**	**3680**	**5660**	**2220**	----
Nickel	7440-02-0	2	mg/kg	**20**	**8**	**11**	**48**	----
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	----
Vanadium	7440-62-2	5	mg/kg	**6**	<5	<5	**18**	----
Zinc	7440-66-6	5	mg/kg	**8**	<5	**8**	**24**	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.1**	<0.1	<0.1	**0.2**	----

CERTIFICATE OF ANALYSIS

Work Order	: **EP1204012**	Page	: 1 of 12
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201379 1380 1381 1383 1384 1385 1529 1530 1531&SGS Batch PE065685 686 687 688 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 21-MAY-2012
Sampler	: ----	Issue Date	: 07-JUN-2012
Site	: Northstar		
		No. of samples received	: 59
Quote number	: EP/406/12	No. of samples analysed	: 46

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Kim McCabe	Senior Inorganic Chemist	Stafford Minerals - AY

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201378041 NS0077 20-22	EP1201378042 NS0077 28-30	EP1201379013 NS0093 216-218	EP1201379015 NS0093 90-92	EP1201379038 NS0083 88-90
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204012-001	EP1204012-002	EP1204012-003	EP1204012-004	EP1204012-005
ED042T: Total Sulfur by LECO								
Sulfur - Total as S (LECO)	----	0.01	%	<0.01	<0.01	**0.03**	**0.02**	**0.28**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201379047 NS0083 158-160	EP1201380010 NS0078 0-2	EP1201380011 NS0078 8-10	EP1201380025 NS0100 78-80	EP1201380028 NS0078 80-82
			Client sampling date / time:	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204012-006	EP1204012-008	EP1204012-009	EP1204012-010	EP1204012-011
ED042T: Total Sulfur by LECO								
Sulfur - Total as S (LECO)	----	0.01	%	**0.31**	**0.02**	**0.02**	**0.14**	**0.05**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201380030 NS0078 276-278	EP1201380043 NS0083 130-132	EP1201380049 NS0106 20-22	EP1201380050 NS0106 92-94	EP1201383006 NS0092 48-50
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204012-012	EP1204012-013	EP1204012-014	EP1204012-015	EP1204012-018
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%		**0.61**	**0.36**	<0.01	**0.72**	**0.04**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201383007 NS0092 40-42	EP1201383010 NS0085 0-2	EP1201383011 NS0085 18-20	EP1201383026 NS0092 158-160	EP1201383045 NS0086 8-10
	Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
Compound / CAS Number	LOR / Unit	EP1204012-019	EP1204012-020	EP1204012-021	EP1204012-023	EP1204012-024
ED042T: Total Sulfur by LECO						
Sulfur - Total as S (LECO) ----	0.01 %	**0.18**	**0.01**	<0.01	**0.02**	**0.01**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201529050 NS0089 210-212	EP1201526049 NS0089 268-270	EP1201383048 NS0091 198-200	EP1201527006 NS0084 140-142	EP1201527007 NS0084 190-192
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204012-030	EP1204012-031	EP1204012-032	EP1204012-034	EP1204012-035
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%		**0.01**	**0.03**	**0.16**	**0.74**	**0.20**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201527031 NS0087 84-86	EP1201527032 NS0087 88-90	EP1201527035 NS0087 30-32	EP1201528001 NS0089 88-90	EP1201528003 NS0089 60-62
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204012-037	EP1204012-038	EP1204012-039	EP1204012-040	EP1204012-041
ED042T: Total Sulfur by LECO								
Sulfur - Total as S (LECO)	----	0.01	%	**0.17**	**0.22**	**0.01**	**0.17**	<0.01

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201528018 NS0089 0-2	EP1201528043 NS0084 158-160	EP1201529008 NS0090 190-192	EP1201529015 NS0090 8-10	EP1201529017 NS0090 20-22
			Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204012-042	EP1204012-043	EP1204012-045	EP1204012-046	EP1204012-048
ED042T: Total Sulfur by LECO								
Sulfur - Total as S (LECO)	----	0.01	%	**0.02**	**0.02**	**0.06**	<0.01	<0.01

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201529040 NS0089 128-130	EP1201529045 NS0089 178-180	EP1201530008 NS0106 28-30	EP1201530010 NS0106 48-50	EP1201530012 NS0106 8-10
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204012-049	EP1204012-050	EP1204012-051	EP1204012-052	EP1204012-053
ED042T: Total Sulfur by LECO								
Sulfur - Total as S (LECO)	----	0.01	%	**0.04**	**0.01**	**0.02**	**0.03**	<0.01

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201530028 NS0108 176-178	EP1201530029 NS0094 160-162	EP1201530033 NS0094 148-150	EP1201530042 NS0106 170-172	EP1201531001 NS0090 268-270
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204012-054	EP1204012-055	EP1204012-056	EP1204012-057	EP1204012-058
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%		**0.99**	**0.02**	**0.01**	**0.02**	**0.02**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201531004 NS0090 128-130	----	----	----	----
	Client sampling date / time	21-FEB-2012 15:00	----	----	----	----
Compound / CAS Number / LOR / Unit		EP1204012-059	----	----	----	----
ED042T: Total Sulfur by LECO						
Sulfur - Total as S (LECO) ---- 0.01 %		**0.03**	----	----	----	----

CERTIFICATE OF ANALYSIS

Work Order	: **EP1204013**	Page	: 1 of 12
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: SGS Batch # PE065685 686 687 688 689 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 21-FEB-2012
Sampler	: ----	Issue Date	: 07-JUN-2012
Site	: Northstar		
		No. of samples received	: 52
Quote number	: EP/406/12	No. of samples analysed	: 48

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Kim McCabe	Senior Inorganic Chemist	Stafford Minerals - AY

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065685.007 NS0165 100-102	PE065685.029 NS0159 116-118	PE065685.046 NS0157 130-132	PE065685.050 NS0158 178-180	PE065685.064 NS0158 110-112
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204013-001	EP1204013-002	EP1204013-003	EP1204013-004	EP1204013-005
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%		**0.98**	**0.30**	**0.26**	**0.03**	**0.08**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065685.065 NS0158 66-68	PE065685.089 NS0152 148-150	PE065685.098 NS0152 244-246	PE065686.003 NS0152 78-80	PE065686.007 NS0152 120-122
	Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
Compound / CAS Number	LOR / Unit	EP1204013-006	EP1204013-007	EP1204013-008	EP1204013-009	EP1204013-010
ED042T: Total Sulfur by LECO						
Sulfur - Total as S (LECO) ----	0.01 %	**0.46**	**0.11**	**0.13**	**0.66**	**0.14**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065686.020 NS0153 168-170	PE065686.021 NS0153 98-100	PE065686.028 NS0153 200-202	PE065686.035 NS0154 38-40	PE065686.037 NS0154 30-32
	Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
Compound / CAS Number	LOR / Unit	EP1204013-011	EP1204013-012	EP1204013-013	EP1204013-015	EP1204013-016
ED042T: Total Sulfur by LECO						
Sulfur - Total as S (LECO) ----	0.01 %	**0.08**	**0.14**	**4.17**	**0.08**	**0.08**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065686.040 NS0154 18-20	PE065686.054 NS0154 200-202	PE065686.068 NS0160 58-60	PE065686.084 NS0122 150-152	PE065687.013 NS0124 118-120
	Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
Compound / CAS Number / LOR / Unit		EP1204013-017	EP1204013-018	EP1204013-019	EP1204013-020	EP1204013-021
ED042T: Total Sulfur by LECO						
Sulfur - Total as S (LECO) ---- 0.01 %		<0.01	**0.65**	**0.39**	**0.17**	**0.07**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065687.014 NS0124 130-132	PE065687.035 NS0155 100-102	PE065687.047 NS0155 210-212	PE065687.056 NS0098 20-22	PE065687.058 NS0098 0-2
	Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
Compound / CAS Number	LOR / Unit	EP1204013-022	EP1204013-023	EP1204013-025	EP1204013-026	EP1204013-027
ED042T: Total Sulfur by LECO						
Sulfur - Total as S (LECO) ----	0.01 %	**0.51**	**0.36**	**0.04**	<0.01	<0.01

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065687.060 NS0098 58-60	PE065687.065 NS0098 180-182	PE065687.067 NS0098 108-110	PE065687.081 NS0096 230-232	PE065687.083 NS0096 254-256
	Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
Compound / CAS Number	LOR / Unit	EP1204013-028	EP1204013-029	EP1204013-030	EP1204013-031	EP1204013-032
ED042T: Total Sulfur by LECO						
Sulfur - Total as S (LECO) ----	0.01 %	**0.42**	**0.22**	**0.02**	**1.21**	**0.02**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065687.086 NS0096 120-122	PE065687.088 NS0096 20-22	PE065687.093 NS0096 70-72	PE065688.007 NS0095 30-32	PE065688.008 NS0095 38-40
	Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
Compound / CAS Number	LOR / Unit	EP1204013-033	EP1204013-034	EP1204013-035	EP1204013-036	EP1204013-037
ED042T: Total Sulfur by LECO						
Sulfur - Total as S (LECO) ----	0.01 %	**0.08**	<0.01	**0.05**	<0.01	**0.03**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065688.026 NS0094 28-30	PE065688.042 NS0097 28-30	PE065688.066 NS0113 158-160	PE065688.070 NS0113 198-200	PE065688.078 NS0113 128-130
	Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
Compound / CAS Number	LOR / Unit	EP1204013-038	EP1204013-039	EP1204013-041	EP1204013-042	EP1204013-043
ED042T: Total Sulfur by LECO						
Sulfur - Total as S (LECO) ----	0.01 %	<0.01	<0.01	**0.45**	**0.68**	**0.21**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065688.082 NS0118 140-142	PE065689.019 NS0120 206-208	PE065689.041 NS0117 190-192	PE065689.057 NS0116 108-110	PE065689.063 NS0116 130-132
	Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
Compound / CAS Number	LOR / Unit	EP1204013-045	EP1204013-046	EP1204013-047	EP1204013-048	EP1204013-049
ED042T: Total Sulfur by LECO						
Sulfur - Total as S (LECO) ----	0.01 %	**0.42**	**1.28**	**0.21**	**0.72**	**0.49**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065689.072 NS0128	PE065689.080 NS0089 360-362	PE065689.087 NS0084 270-272	----	----
	Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	----	----
Compound	CAS Number / LOR / Unit	EP1204013-050	EP1204013-051	EP1204013-052	----	----
ED042T: Total Sulfur by LECO						
Sulfur - Total as S (LECO)	---- / 0.01 / %	**0.65**	**0.02**	**0.31**	----	----

CERTIFICATE OF ANALYSIS

Work Order	: **EP1204015**	Page	: 1 of 10
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201378 1379 1380 1381 1382 1383 1384 1527 1528 1529 1530 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 21-MAY-2012
Sampler	: ----	Issue Date	: 04-JUN-2012
Site	: Northstar		
		No. of samples received	: 37
Quote number	: EP/406/12	No. of samples analysed	: 24

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Canhuang Ke	Metals Instrument Chemist	Perth Inorganics
Chas Tucker	Inorganic Chemist	Perth Inorganics
Cicelia Bartels	Metals Instrument Chemist	Perth Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **EG035T: Poor mercury matrix spike recoveries due to matrix effects. Confirmed by re-extraction and re-analysis.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201379046 NS0091	EP1201380011 NS0078 8-10	EP1201380025 NS0100 78-80	EP1201380030 NS0078 276-278	EP1201380046 NS0106
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204015-002	EP1204015-003	EP1204015-004	EP1204015-006	EP1204015-007
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		<1	**12**	**45**	**9**	**13**
Total Alkalinity as CaCO3	----	1	mg/L		<1	**12**	**45**	**9**	**13**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**100**	**47**	**2**	**10**	**53**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**331**	**3**	**19**	**114**	**1**
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		<1	**3**	**2**	**2**	**4**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**19**	<1	**3**	**4**	<1
Magnesium	7439-95-4	1	mg/L		**57**	<1	**8**	**16**	<1
Sodium	7440-23-5	1	mg/L		**4**	**4**	**11**	**18**	**4**
Potassium	7440-09-7	1	mg/L		**4**	<1	**3**	**10**	<1
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	**0.04**	**0.03**	**0.02**	**0.11**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	**0.001**	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		**0.063**	**0.001**	**0.004**	**0.032**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		**0.0002**	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.096**	**0.026**	<0.001	**0.068**
Cobalt	7440-48-4	0.001	mg/L		**0.007**	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		**21.6**	**0.043**	**0.006**	**0.638**	**0.004**
Nickel	7440-02-0	0.001	mg/L		**0.026**	<0.001	<0.001	**0.002**	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		<0.01	**0.04**	<0.01	<0.01	**0.02**
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L		**0.18**	**0.22**	<0.05	**0.09**	**0.72**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance									
Total Anions	----	0.01	meq/L		**6.89**	**0.39**	**1.35**	**2.61**	**0.39**
Total Cations	----	0.01	meq/L		**5.92**	**0.17**	**1.36**	**2.56**	**0.17**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201379046 NS0091	EP1201380011 NS0078 8-10	EP1201380025 NS0100 78-80	EP1201380030 NS0078 276-278	EP1201380046 NS0106
	Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
Compound / CAS Number	LOR / Unit	EP1204015-002	EP1204015-003	EP1204015-004	EP1204015-006	EP1204015-007
EN055: Ionic Balance - Continued						
Ionic Balance ----	0.01 %	**7.63**	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201380050 NS0106 92-94	EP1201383007 NS0092 40-42	EP1201383045 NS0086 8-10	EP1201383046 NS0086 28-30	EP1201384028 NS0107 160-162
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204015-008	EP1204015-015	EP1204015-017	EP1204015-018	EP1204015-019
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	**10**	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**41**	**69**	**2**	**8**	<1
Total Alkalinity as CaCO3	----	1	mg/L		**41**	**80**	**2**	**8**	<1
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		<1	<1	**59**	**36**	**209**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**74**	**13**	**2**	**1**	**227**
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		**3**	**2**	**2**	**2**	**2**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**9**	**11**	<1	<1	**2**
Magnesium	7439-95-4	1	mg/L		**19**	**12**	<1	<1	**6**
Sodium	7440-23-5	1	mg/L		**6**	**4**	**1**	**3**	**1**
Potassium	7440-09-7	1	mg/L		**2**	**2**	<1	<1	<1
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.06**	**0.03**	<0.01	**0.08**	**3.06**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	**0.001**
Barium	7440-39-3	0.001	mg/L		**0.008**	**0.002**	**0.002**	<0.001	**0.008**
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	**0.0025**
Chromium	7440-47-3	0.001	mg/L		**0.016**	**0.009**	**0.223**	**0.066**	**0.038**
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	**0.331**
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	**0.320**
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	**0.007**
Manganese	7439-96-5	0.001	mg/L		**0.013**	**0.007**	**0.012**	<0.001	**8.10**
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	**0.577**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	**0.03**	**0.02**	<0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	**0.274**
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	**0.58**	**14.9**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance									
Total Anions	----	0.01	meq/L		**2.44**	**1.93**	**0.14**	**0.24**	**4.78**
Total Cations	----	0.01	meq/L		**2.33**	**1.76**	**0.04**	**0.13**	**0.64**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201384029 NS0107 170-172	EP1201384031 NS0107 128-130	EP1201384033 NS0107 148-150	EP1201384035 NS0107 140-142	EP1201384039 NS0107 120-122
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204015-020	EP1204015-021	EP1204015-022	EP1204015-023	EP1204015-025
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		<1	<1	<1	<1	<1
Total Alkalinity as CaCO3	----	1	mg/L		<1	<1	<1	<1	<1
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**93**	**176**	**273**	**163**	**276**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**219**	**195**	**274**	**286**	**306**
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		**2**	**2**	**2**	**2**	**2**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**30**	<1	**2**	**30**	**2**
Magnesium	7439-95-4	1	mg/L		**15**	**8**	**6**	**17**	**17**
Sodium	7440-23-5	1	mg/L		**1**	**1**	**1**	**1**	**1**
Potassium	7440-09-7	1	mg/L		**1**	<1	<1	**1**	<1
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**2.23**	**2.25**	**4.17**	**2.84**	**2.76**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L		**0.001**	<0.001	**0.001**	**0.001**	**0.002**
Barium	7440-39-3	0.001	mg/L		**0.011**	**0.004**	**0.007**	**0.011**	**0.006**
Cadmium	7440-43-9	0.0001	mg/L		**0.0020**	**0.0003**	**0.0019**	**0.0019**	**0.0023**
Chromium	7440-47-3	0.001	mg/L		**0.036**	**0.036**	**0.056**	**0.027**	**0.034**
Cobalt	7440-48-4	0.001	mg/L		**0.288**	**0.168**	**0.337**	**0.414**	**0.171**
Copper	7440-50-8	0.001	mg/L		**0.334**	**0.082**	**0.340**	**0.541**	**0.077**
Lead	7439-92-1	0.001	mg/L		**0.013**	**0.010**	**0.005**	**0.015**	**0.005**
Manganese	7439-96-5	0.001	mg/L		**2.57**	**2.07**	**1.60**	**9.62**	**5.93**
Nickel	7440-02-0	0.001	mg/L		**0.521**	**0.426**	**0.731**	**0.688**	**0.584**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	**0.01**	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		**0.256**	**0.081**	**0.176**	**0.291**	**0.250**
Iron	7439-89-6	0.05	mg/L		**1.26**	**5.06**	**11.6**	**10.9**	**23.0**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance									
Total Anions	----	0.01	meq/L		**4.62**	**4.12**	**5.76**	**6.01**	**6.43**
Total Cations	----	0.01	meq/L		**2.80**	**0.70**	**0.64**	**2.97**	**1.54**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201527006 NS0084 140-142	EP1201527032 NS0087 88-90	EP1201528018 NS0089 0-2	EP1201528043 NS0084 158-160	EP1201529015 NS0090 8-10
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204015-026	EP1204015-028	EP1204015-029	EP1204015-030	EP1204015-031
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	5	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	52	50	9	<1	5
Total Alkalinity as CaCO3	----	1	mg/L	52	54	9	<1	5
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	<1	<1	225	140	178
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	91	22	2	189	3
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	2	2	7	2	6
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	15	9	1	15	<1
Magnesium	7439-95-4	1	mg/L	22	8	2	24	<1
Sodium	7440-23-5	1	mg/L	11	10	2	2	2
Potassium	7440-09-7	1	mg/L	<1	2	<1	4	<1
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	0.02	0.02	0.01	5.44	0.04
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	0.002	<0.001
Barium	7440-39-3	0.001	mg/L	0.004	0.003	0.031	0.052	0.023
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	0.0003	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	0.008	0.126	0.049	0.027
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	0.197	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	0.077	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	0.036	0.008	0.098	2.43	0.041
Nickel	7440-02-0	0.001	mg/L	0.002	<0.001	<0.001	0.296	0.002
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.04	0.05	<0.01
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	<0.005	0.085	<0.005
Iron	7439-89-6	0.05	mg/L	0.14	<0.05	<0.05	0.06	<0.05
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	0.0002	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	2.99	1.59	0.42	3.99	0.33
Total Cations	----	0.01	meq/L	3.04	1.59	0.30	2.91	0.09

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201527006 NS0084 140-142	EP1201527032 NS0087 88-90	EP1201528018 NS0089 0-2	EP1201528043 NS0084 158-160	EP1201529015 NS0090 8-10
	Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
Compound / CAS Number	LOR / Unit	EP1204015-026	EP1204015-028	EP1204015-029	EP1204015-030	EP1204015-031
EN055: Ionic Balance - Continued						
Ionic Balance ----	0.01 %	**0.77**	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201529016 NS0090 0-2	EP1201529017 NS0090 20-22	EP1201529040 NS0089 128-130	EP1201529045 NS0089 178-180	----
			Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	----
				EP1204015-032	EP1204015-033	EP1204015-034	EP1204015-035	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**2**	**4**	**10**	**7**	----
Total Alkalinity as CaCO3	----	1	mg/L	**2**	**4**	**10**	**7**	----
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	**60**	**198**	**8**	**15**	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**3**	<1	**109**	**188**	----
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	**2**	**10**	**2**	**2**	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	<1	<1	**10**	**11**	----
Magnesium	7439-95-4	1	mg/L	<1	<1	**23**	**38**	----
Sodium	7440-23-5	1	mg/L	**1**	**1**	**1**	**1**	----
Potassium	7440-09-7	1	mg/L	<1	<1	**1**	**5**	----
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	----
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Barium	7440-39-3	0.001	mg/L	**0.003**	**0.011**	**0.003**	**0.018**	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	**0.0002**	**0.0002**	----
Chromium	7440-47-3	0.001	mg/L	**0.104**	**0.009**	<0.001	<0.001	----
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	**0.001**	**0.003**	----
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	**0.001**	<0.001	----
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Manganese	7439-96-5	0.001	mg/L	**0.012**	**0.307**	**1.28**	**4.45**	----
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	**0.003**	**0.018**	----
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	----
Vanadium	7440-62-2	0.01	mg/L	**0.02**	<0.01	<0.01	<0.01	----
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	<0.005	<0.005	----
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	----
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	**0.16**	**0.36**	**2.53**	**4.11**	----
Total Cations	----	0.01	meq/L	**0.04**	**0.04**	**2.46**	**3.85**	----

Analytical Results

Sub-Matrix: SOIL			Client sample ID	EP1201529016 NS0090 0-2	EP1201529017 NS0090 20-22	EP1201529040 NS0089 128-130	EP1201529045 NS0089 178-180	----
			Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	----
Compound	CAS Number	LOR	Unit	EP1204015-032	EP1204015-033	EP1204015-034	EP1204015-035	----
EN055: Ionic Balance - Continued								
Ionic Balance	----	0.01	%	----	----	----	**3.31**	----

CERTIFICATE OF ANALYSIS

Work Order	: **EP1204022**	Page	: 1 of 13
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: SGS Batch # PE65685 686 687 688 689 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 21-MAY-2012
Sampler	: ----	Issue Date	: 05-JUN-2012
Site	: Northstar		
		No. of samples received	: 31
Quote number	: EP/406/12	No. of samples analysed	: 27

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Canhuang Ke	Metals Instrument Chemist	Perth Inorganics
Chas Tucker	Inorganic Chemist	Perth Inorganics
Cicelia Bartels	Metals Instrument Chemist	Perth Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **Ionic Balance out of acceptable limits for sample 'PE065686.028: NS0153 200-202' due to analytes not quantified in this report.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065685.007 NS0165 100-102	PE065685.065 NS0158 66-68	PE065686.003 NS0152 78-80	PE065686.028 NS0153 200-202	PE065686.035 NS0154 38-40
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204022-001	EP1204022-002	EP1204022-003	EP1204022-004	EP1204022-006
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		8	49	<1	<1	37
Total Alkalinity as CaCO3	----	1	mg/L		8	49	<1	<1	37
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		21	2	41	1040	<1
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		241	49	184	1010	7
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		<1	3	2	2	2
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		34	17	38	4	9
Magnesium	7439-95-4	1	mg/L		53	12	23	18	3
Sodium	7440-23-5	1	mg/L		2	5	2	2	4
Potassium	7440-09-7	1	mg/L		2	<1	1	4	3
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	<0.01	15.6	0.08
Arsenic	7440-38-2	0.001	mg/L		0.002	0.002	0.002	0.004	0.002
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	0.004	<0.001
Barium	7440-39-3	0.001	mg/L		0.009	0.002	0.011	0.001	0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	0.0012	0.0036	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	0.025	0.214	<0.001
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	0.146	0.672	0.002
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	0.002	0.455	0.002
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		1.66	0.031	3.59	6.21	0.043
Nickel	7440-02-0	0.001	mg/L		0.001	<0.001	0.638	3.92	0.013
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	0.01	0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	0.080	0.571	<0.005
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	172	1.04
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance									
Total Anions	----	0.01	meq/L		5.18	2.08	3.89	21.1	0.94
Total Cations	----	0.01	meq/L		6.20	2.05	3.90	1.87	0.95

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065685.007 NS0165 100-102	PE065685.065 NS0158 66-68	PE065686.003 NS0152 78-80	PE065686.028 NS0153 200-202	PE065686.035 NS0154 38-40
	Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
Compound / CAS Number	LOR / Unit	EP1204022-001	EP1204022-002	EP1204022-003	EP1204022-004	EP1204022-006
EN055: Ionic Balance - Continued						
Ionic Balance ----	0.01 %	**8.96**	----	**0.20**	**83.7**	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065686.054 NS0154 200-202	PE065686.068 NS0160 58-60	PE065687.014 NS0124 130-132	PE065687.035 NS0155 100-102	PE065687.056 NS0098 20-22
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204022-007	EP1204022-008	EP1204022-009	EP1204022-010	EP1204022-012
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**15**	**38**	<1	**45**	**6**
Total Alkalinity as CaCO3	----	1	mg/L		**15**	**38**	<1	**45**	**6**
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		**15**	<1	**28**	<1	**219**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**151**	**61**	**130**	**61**	<1
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		**2**	**2**	**2**	**3**	<1
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**17**	**18**	**7**	**18**	<1
Magnesium	7439-95-4	1	mg/L		**23**	**10**	**8**	**10**	<1
Sodium	7440-23-5	1	mg/L		**18**	**7**	**23**	**14**	**2**
Potassium	7440-09-7	1	mg/L		**8**	**3**	**32**	**3**	<1
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.01**	**0.02**	**0.03**	**0.02**	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	**0.004**
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		**0.023**	**0.014**	**0.268**	**0.006**	**0.008**
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	**0.0004**	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	**0.104**	**0.001**	**0.036**
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	**0.071**	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	**0.002**	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		**0.339**	**0.021**	**0.457**	**0.010**	**0.043**
Nickel	7440-02-0	0.001	mg/L		**0.004**	**0.001**	**0.056**	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	**0.02**
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	**0.04**	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	**0.042**	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L		**0.13**	<0.05	<0.05	<0.05	<0.05
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance									
Total Anions	----	0.01	meq/L		**3.50**	**2.09**	**2.76**	**2.25**	**0.12**
Total Cations	----	0.01	meq/L		**3.73**	**2.10**	**2.83**	**2.41**	**0.09**

Analytical Results

Sub-Matrix: SOIL			Client sample ID	PE065686.054 NS0154 200-202	PE065686.068 NS0160 58-60	PE065687.014 NS0124 130-132	PE065687.035 NS0155 100-102	PE065687.056 NS0098 20-22
			Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
Compound	CAS Number	LOR	Unit	EP1204022-007	EP1204022-008	EP1204022-009	EP1204022-010	EP1204022-012
EN055: Ionic Balance - Continued								
Ionic Balance	----	0.01	%	**3.16**	----	----	----	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065687.058 NS0098 0-2	PE065687.060 NS0098 58-60	PE065687.065 NS0098 180-182	PE065687.081 NS0096 230-232	PE065688.007 NS0095 30-32
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204022-013	EP1204022-014	EP1204022-015	EP1204022-016	EP1204022-017
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	3	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		8	5	50	<1	8
Total Alkalinity as CaCO3	----	1	mg/L		8	5	53	<1	8
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		229	10	<1	114	2
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		<1	92	31	278	<1
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		7	2	2	2	2
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		1	9	10	15	<1
Magnesium	7439-95-4	1	mg/L		<1	17	12	45	<1
Sodium	7440-23-5	1	mg/L		2	2	3	14	2
Potassium	7440-09-7	1	mg/L		<1	2	<1	20	2
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	<0.01	0.02	0.50	0.16
Arsenic	7440-38-2	0.001	mg/L		0.007	0.007	0.007	0.006	0.008
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	0.001	<0.001
Barium	7440-39-3	0.001	mg/L		0.013	0.010	<0.001	0.121	0.014
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		0.072	<0.001	<0.001	0.003	<0.001
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	0.305	0.002
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	0.007	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		0.017	5.54	0.036	24.9	0.270
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	0.492	0.002
Selenium	7782-49-2	0.01	mg/L		0.03	0.04	0.03	0.07	0.04
Vanadium	7440-62-2	0.01	mg/L		0.05	<0.01	<0.01	0.02	<0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	0.050	<0.005
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	0.60	<0.05	2.80
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	0.0002	<0.0001
EN055: Ionic Balance									
Total Anions	----	0.01	meq/L		Not Authorised	2.07	1.76	5.84	0.22
Total Cations	----	0.01	meq/L		Not Authorised	1.99	1.62	5.57	0.14

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065687.058 NS0098 0-2	PE065687.060 NS0098 58-60	PE065687.065 NS0098 180-182	PE065687.081 NS0096 230-232	PE065688.007 NS0095 30-32
	Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
Compound / CAS Number	LOR / Unit	EP1204022-013	EP1204022-014	EP1204022-015	EP1204022-016	EP1204022-017
EN055: Ionic Balance - Continued						
Ionic Balance ----	0.01 %	----	----	----	**2.39**	----

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065688.008 NS0095 38-40	PE065688.026 NS0094 28-30	PE065688.042 NS0097 28-30	PE065688.066 NS0113 158-160	PE065688.070 NS0113 198-200
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204022-018	EP1204022-019	EP1204022-020	EP1204022-022	EP1204022-023
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		12	15	13	8	13
Total Alkalinity as CaCO3	----	1	mg/L		12	15	13	8	13
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		2	3	3	15	10
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		2	<1	<1	123	165
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		3	2	<1	2	<1
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		<1	<1	<1	7	21
Magnesium	7439-95-4	1	mg/L		<1	<1	<1	28	32
Sodium	7440-23-5	1	mg/L		2	4	2	2	3
Potassium	7440-09-7	1	mg/L		3	1	2	2	5
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		0.24	0.16	0.13	<0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		0.010	0.007	0.008	0.006	0.007
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		0.002	0.006	0.022	0.004	0.003
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	0.003	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		0.293	0.055	0.096	2.20	0.631
Nickel	7440-02-0	0.001	mg/L		0.002	<0.001	0.001	0.009	<0.001
Selenium	7782-49-2	0.01	mg/L		0.03	0.03	0.04	0.03	0.03
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L		3.57	0.88	1.25	<0.05	<0.05
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance									
Total Anions	----	0.01	meq/L		0.37	0.36	0.26	2.78	3.70
Total Cations	----	0.01	meq/L		0.16	0.20	0.14	2.79	3.94

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065688.008 NS0095 38-40	PE065688.026 NS0094 28-30	PE065688.042 NS0097 28-30	PE065688.066 NS0113 158-160	PE065688.070 NS0113 198-200
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204022-018	EP1204022-019	EP1204022-020	EP1204022-022	EP1204022-023
EN055: Ionic Balance - Continued									
Ionic Balance	----	0.01	%		----	----	----	----	**3.20**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065688.082 NS0118 140-142	PE065689.019 NS0120 206-208	PE065689.057 NS0116 108-110	PE065689.063 NS0116 130-132	PE065689.072 NS0128
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204022-025	EP1204022-026	EP1204022-027	EP1204022-028	EP1204022-029
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		14	<1	<1	40	6
Total Alkalinity as CaCO3	----	1	mg/L		14	<1	<1	40	6
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		13	91	29	<1	5
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		112	238	170	58	171
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		1	<1	1	1	1
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		10	11	16	21	7
Magnesium	7439-95-4	1	mg/L		29	41	26	9	40
Sodium	7440-23-5	1	mg/L		2	8	6	8	2
Potassium	7440-09-7	1	mg/L		<1	17	14	3	2
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		<0.01	2.76	<0.01	0.01	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L		<0.001	0.006	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		0.002	0.196	0.120	0.003	0.003
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	0.0009	0.0006	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	0.016	0.005	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L		<0.001	0.174	0.063	<0.001	0.005
Copper	7440-50-8	0.001	mg/L		<0.001	0.012	0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	0.003	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		0.434	14.1	5.49	0.027	3.82
Nickel	7440-02-0	0.001	mg/L		<0.001	0.909	0.113	<0.001	0.009
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		<0.01	0.02	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	0.262	0.006	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L		<0.05	0.23	<0.05	<0.05	<0.05
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance									
Total Anions	----	0.01	meq/L		2.64	4.96	3.57	2.03	3.71
Total Cations	----	0.01	meq/L		2.97	4.71	3.56	2.21	3.78

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065688.082 NS0118 140-142	PE065689.019 NS0120 206-208	PE065689.057 NS0116 108-110	PE065689.063 NS0116 130-132	PE065689.072 NS0128
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204022-025	EP1204022-026	EP1204022-027	EP1204022-028	EP1204022-029
EN055: Ionic Balance - Continued								
Ionic Balance	----	0.01	%	----	**2.59**	**0.14**	----	**0.93**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065689.080 NS0089 360-362	PE065689.087 NS0084 270-272	----	----	----
			Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	----	----	----
				EP1204022-030	EP1204022-031	----	----	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	**3**	**3**	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**36**	**40**	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	**40**	**42**	----	----	----
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	<1	<1	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**2**	**44**	----	----	----
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	<1	**1**	----	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**8**	**10**	----	----	----
Magnesium	7439-95-4	1	mg/L	**8**	**10**	----	----	----
Sodium	7440-23-5	1	mg/L	**2**	**10**	----	----	----
Potassium	7440-09-7	1	mg/L	<1	<1	----	----	----
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	----	----	----
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	----	----	----
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	----	----	----
Barium	7440-39-3	0.001	mg/L	<0.001	**0.002**	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	----	----	----
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	----	----	----
Manganese	7439-96-5	0.001	mg/L	**0.015**	**0.004**	----	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	----	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	----	----	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	----	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	----	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	----	----	----
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	**0.84**	**1.78**	----	----	----
Total Cations	----	0.01	meq/L	**1.14**	**1.76**	----	----	----

ALS Environmental

Kinetic Net Acid Generation (NAG) Report

Batch: EP1204023

CONTACT:	David Morgan	LABORATORY:	Brisbane
CLIENT:	GHD PTY LTD	DATE SAMPLED:	21/02/2012
ADDRESS:	239 ADELAIDE TERRACE	DATE RECEIVED:	21/05/2012
	PERTH, WA 6004	DATE COMPLETED:	7/06/2012
		SAMPLE TYPE:	Soil
		No. of SAMPLES:	11

COMMENTS

EA011K: This method is not NATA accredited

ISSUING LABORATORY: ALS BRISBANE

Address:	32 Shand Street	Telephone:	07 3243 7222
	STAFFORD QLD 4053	Facsimile:	07 3243 7218
	AUSTRALIA	E-mail:	Myles.Clark@alsenviro.com

Signatory

Work Order :	EP1204023	Client ID:	GHD PTY LTD

Sub Matrix	Soil	Soil	Soil
Client Sample Identification 1	EP1201378014	EP1201378014	EP1201384028
Client Sample Identification 2	NS0077 178-180	NS0077 178-180	NS0107 160-162
Sample Date	21/02/2012	21/02/2012	21/02/2012

	EP1204023 1		EP1204023 1 Check		EP1204023 2	
Time (mins)	pH	Temp	pH	Temp	pH	Temp
0	5.95	17.2	6.00	17.1	4.89	17.0
10	6.16	17.9	6.17	17.9	4.01	17.1
20	6.13	18.7	6.16	18.7	3.24	17.5
30	6.06	19.4	6.09	19.5	2.77	18.2
40	5.88	20.0	5.90	20.0	2.51	19.1
50	5.58	19.7	5.66	20.2	2.39	20.1
60	4.96	19.4	5.06	20.1	2.30	21.6
70	4.32	19.4	4.36	20.3	2.29	24.0
80	4.00	19.4	4.03	20.4	2.30	27.5
90	3.81	19.6	3.80	20.5	2.32	32.5
100	3.68	19.8	3.63	20.5	2.37	41.7
110	3.62	19.8	3.55	20.4	2.37	50.6
120	3.54	20.1	3.43	20.7	2.40	52.4
130	3.46	20.2	3.31	20.9	2.30	46.3
140	3.40	20.4	3.22	21.2	2.44	39.9
150	3.37	20.4	3.16	21.3	2.42	34.7
160	3.29	20.5	3.08	21.9	2.44	30.9
170	3.22	20.5	2.99	21.9	2.43	27.9
180	3.16	20.5	2.92	21.9	2.42	25.7
190	3.10	20.5	2.86	21.7	2.42	24.0
200	3.04	20.5	2.78	21.7	2.41	22.7
210	2.96	20.4	2.70	21.7	2.41	21.6
220	2.90	20.3	2.64	21.8	2.41	20.8
230	2.81	20.3	2.55	22.3	2.41	20.1
240	2.70	20.5	2.48	22.9	2.38	19.1
250	2.59	20.7	2.45	23.7	2.39	18.7
260	2.53	21.0	2.44	24.5	2.40	18.6
270	2.49	21.6	2.46	25.1	2.40	18.5
280	2.46	22.4	2.46	25.5	2.39	18.4
290	2.45	23.1	2.47	25.9	2.39	18.3
300	2.45	23.8	2.48	26.2	2.39	18.3
310	2.46	24.6	2.50	26.5	2.39	18.3
320	2.46	25.1	2.51	26.6	2.40	18.3
330	2.48	25.7	2.52	26.5	2.39	18.4
340	2.48	26.3	2.53	26.3	2.39	18.6
350	2.49	26.8	2.53	26.3	2.39	18.7
360	2.50	27.2	2.54	25.9	2.39	18.6

EA011-K: (A) Titration information

Work Order :	EP1204023	Client ID:	GHD PTY LTD

Sub Matrix	Soil	Soil	Soil
Client Sample Identification 1	EP1201384029	EP1201384031	EP1201384033
Client Sample Identification 2	NS0107 170-172	NS0107 128-130	NS0107 148-150
Sample Date	21/02/2012	21/02/2012	21/02/2012

	EP1204023 3		EP1204023 4		EP1204023 5	

EA011-K: (A) Titration information

Time (mins)	pH	Temp	pH	Temp	pH	Temp
0	5.54	17.0	4.01	17.0	4.44	17.0
10	5.59	16.9	2.61	17.8	3.31	17.3
20	5.30	17.0	2.29	19.9	2.78	18.0
30	4.39	17.3	2.23	24.1	2.48	19.1
40	3.57	17.5	2.25	30.9	2.34	20.4
50	3.17	17.5	2.27	54.3	2.16	22.4
60	2.91	17.9	2.30	60.7	2.11	25.3
70	2.73	18.5	2.29	43.4	2.22	28.7
80	2.56	19.4	2.25	35.3	2.29	34.1
90	2.45	20.8	2.23	30.1	2.33	42.8
100	2.36	22.7	2.20	26.8	2.37	50.4
110	2.30	25.9	2.20	24.5	2.40	49.8
120	2.18	32.1	2.18	22.6	2.42	45.2
130	2.36	40.3	2.15	21.9	2.43	40.0
140	2.36	53.1	2.07	21.1	2.37	35.1
150	2.49	54.9	2.11	20.8	2.40	31.6
160	2.55	49.8	2.14	20.4	2.40	28.9
170	2.59	42.8	2.18	19.9	2.40	26.8
180	2.59	37.3	2.20	19.7	2.41	25.1
190	2.58	32.8	2.23	19.2	2.41	23.7
200	2.58	29.5	2.24	19.0	2.41	22.7
210	2.58	27.0	2.25	18.5	2.41	21.6
220	2.58	25.5	2.26	18.3	2.42	21.0
230	2.57	23.5	2.25	18.0	2.42	20.4
240	2.57	21.5	2.25	17.6	2.39	19.4
250	2.58	20.6	2.29	17.5	2.41	19.2
260	2.58	20.1	2.27	17.4	2.41	19.0
270	2.58	19.7	2.27	17.4	2.42	18.9
280	2.58	19.4	2.27	17.4	2.42	18.8
290	2.59	19.5	2.27	17.4	2.42	18.7
300	2.59	19.0	2.27	17.4	2.42	18.7
310	2.59	18.9	2.28	17.4	2.43	18.7
320	2.59	18.8	2.28	17.5	2.43	18.7
330	2.60	18.8	2.27	17.5	2.43	18.7
340	2.60	18.8	2.27	17.8	2.43	18.7
350	2.59	18.7	2.27	17.8	2.43	18.7
360	2.60	18.8	2.27	17.8	2.42	18.7

Work Order :	EP1204023	Client ID:	GHD PTY LTD

Sub Matrix	Soil	Soil	Soil
Client Sample Identification 1	EP1201384035	EP1201384039	EP1201528043
Client Sample Identification 2	NS0107 140-142	NS0107 120-122	NS0084 158-160
Sample Date	21/02/2012	21/02/2012	21/02/2012

	EP1204023 6		EP1204023 7		EP1204023 8	

EA011-K: (A) Titration information

Time (mins)	pH	Temp	pH	Temp	pH	Temp
0	5.20	18.5	4.07	18.6	5.72	18.6
10	5.03	18.8	2.63	19.9	5.86	19.0
20	3.70	19.0	2.23	22.9	5.82	19.0
30	3.07	19.4	2.17	28.9	5.55	19.2
40	2.71	20.2	2.20	63.9	5.45	19.7
50	2.51	21.9	2.22	55.6	4.81	20.1
60	2.32	24.4	2.23	41.9	4.16	20.3
70	2.29	29.0	2.18	35.7	3.95	20.8
80	2.29	36.5	2.14	30.6	3.89	20.2
90	2.31	53.7	2.05	27.0	3.79	20.2
100	2.30	61.6	1.93	24.9	3.48	20.5
110	2.39	52.8	2.01	23.4	3.68	20.8
120	2.41	43.1	2.03	22.4	3.70	20.9
130	2.39	36.3	2.05	21.2	3.72	20.8
140	2.40	31.6	2.07	20.5	3.70	20.6
150	2.41	28.3	2.09	19.8	3.68	20.5
160	2.40	25.9	2.10	19.5	3.67	20.5
170	2.40	24.1	2.10	19.1	3.67	20.3
180	2.41	22.4	2.12	18.7	3.67	20.1
190	2.41	21.9	2.12	18.4	3.66	20.1
200	2.42	21.0	2.13	18.3	3.66	20.0
210	2.42	20.1	2.13	18.2	3.64	20.1
220	2.43	20.1	2.15	18.2	3.61	20.1
230	2.43	19.8	2.14	18.0	3.60	20.0
240	2.44	19.6	2.16	18.1	3.61	20.0
250	2.44	19.4	2.14	17.9	3.65	20.0
260	2.43	19.3	2.17	17.9	3.64	20.0
270	2.44	19.2	2.17	17.9	3.64	20.0
280	2.44	19.0	2.18	17.9	3.65	20.1
290	2.45	19.0	2.16	17.9	3.63	20.1
300	2.44	19.0	2.17	17.9	3.62	20.2
310	2.44	18.9	2.17	17.9	3.62	20.2
320	2.45	18.9	2.19	17.9	3.60	20.3
330	2.46	18.9	2.16	17.9	3.62	20.4
340	2.45	19.0	2.17	18.0	3.63	20.5
350	2.46	19.0	2.19	18.0	3.63	20.6
360	2.46	19.0	2.19	18.0	3.63	2.6

Work Order :	EP1204023	Client ID:	GHD PTY LTD

Sub Matrix	Soil	Soil	Soil
Client Sample Identification 1	**PE065686.028**	**PE065687.081**	**PE065689.019**
Client Sample Identification 2	**NS0153 200-202**	**NS0096 230-232**	**NS0120 206-208**
Sample Date	21/02/2012	21/02/2012	21/02/2012

	EP1204023 9		**EP1204023 10**		**EP1204023 12**	

EA011-K: (A) Titration information

Time (mins)	**pH**	**Temp**	**pH**	**Temp**	**pH**	**Temp**
0	3.90	18.7	6.09	18.6	5.90	18.6
10	2.42	20.8	6.31	19.4	5.92	19.2
20	2.08	29.1	6.34	19.7	6.00	19.3
30	2.06	74.5	5.70	20.8	5.89	19.5
40	2.10	47.6	6.15	20.8	5.90	19.7
50	2.07	36.5	6.07	20.9	5.85	19.9
60	2.04	30.8	5.99	21.4	5.48	20.5
70	2.02	27.9	5.99	21.9	4.90	20.7
80	2.01	24.7	5.86	21.9	4.52	20.6
90	1.99	22.4	5.54	21.7	3.79	20.7
100	1.93	21.1	5.17	21.6	3.49	20.5
110	1.96	20.3	4.72	21.4	3.29	20.3
120	1.96	19.6	4.37	21.3	3.15	20.2
130	1.99	19.0	4.27	21.1	3.02	20.1
140	1.99	18.6	4.13	20.9	2.91	20.1
150	2.00	18.3	4.05	20.7	2.83	20.1
160	1.99	18.1	4.00	20.6	2.74	20.2
170	2.00	17.9	3.97	20.5	2.68	20.4
180	2.02	17.9	3.90	20.4	2.61	20.7
190	2.02	17.9	3.86	20.3	2.54	21.1
200	2.02	17.8	3.88	20.2	2.50	21.5
210	2.03	17.7	3.83	20.3	2.45	22.2
220	2.04	17.7	3.82	20.3	2.43	23.0
230	2.05	17.7	3.80	20.3	2.42	23.8
240	2.05	17.5	3.77	20.4	2.40	24.9
250	2.05	17.7	3.79	20.5	2.41	25.9
260	2.05	17.8	3.77	20.5	2.42	27.0
270	2.06	17.8	3.76	20.7	2.44	28.0
280	2.06	17.9	3.76	20.8	2.45	29.2
290	2.07	17.9	3.74	20.8	2.46	30.1
300	2.06	17.9	3.73	20.9	2.46	30.8
310	2.06	17.9	3.72	21.0	2.48	30.9
320	2.07	18.1	3.70	21.2	2.50	30.9
330	2.08	18.0	3.71	21.2	2.51	30.8
340	2.09	18.3	3.70	21.3	2.51	30.5
350	2.08	18.4	3.68	21.5	2.54	29.9
360	2.09	18.5	3.68	21.5	2.56	29.2

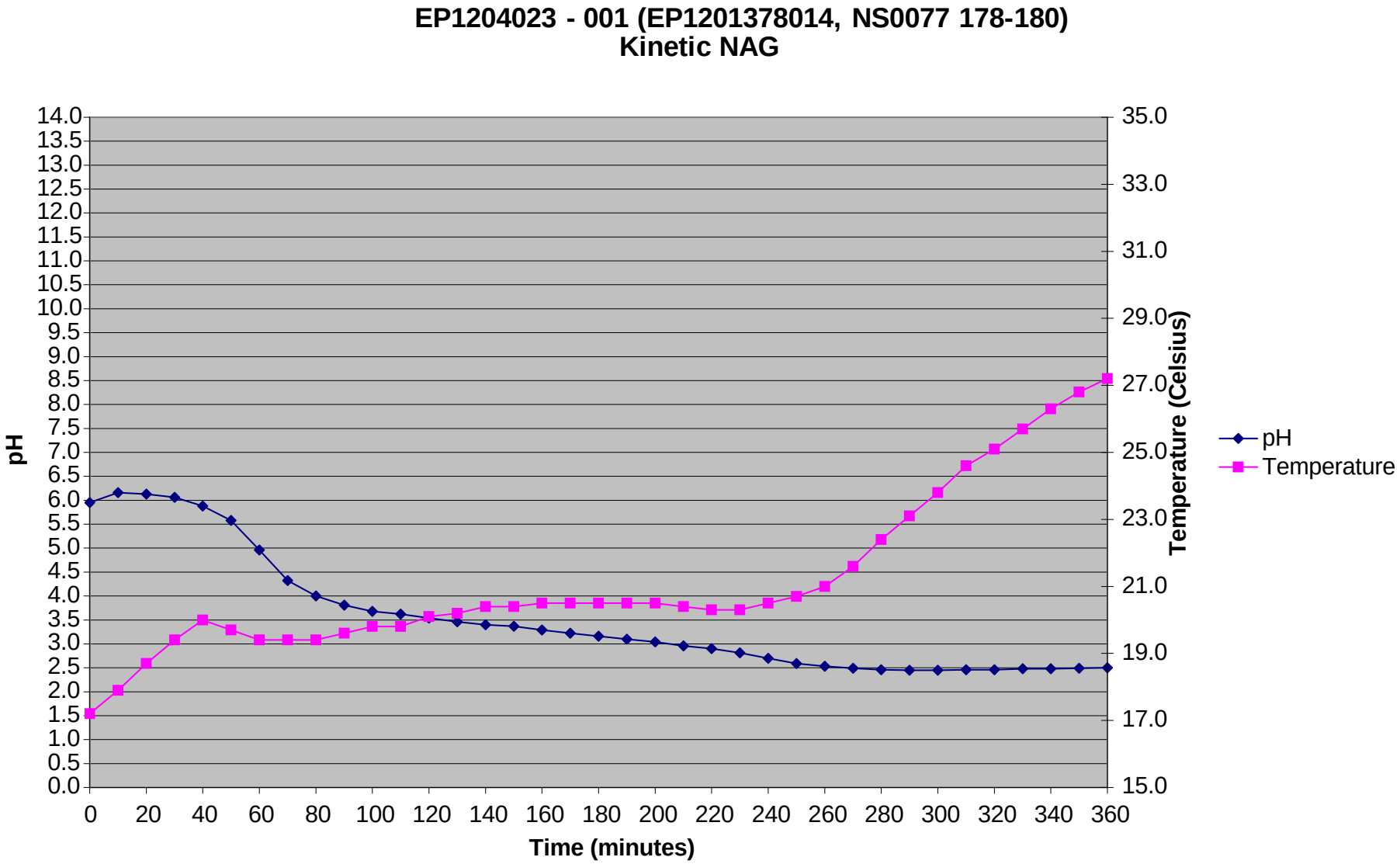
Work Order :	EP1204023	Client ID:	GHD PTY LTD

Sub Matrix	Soil
Client Sample Identification 1	**PE065689.019**
Client Sample Identification 2	**NS0120 206-208**
Sample Date	21/02/2012

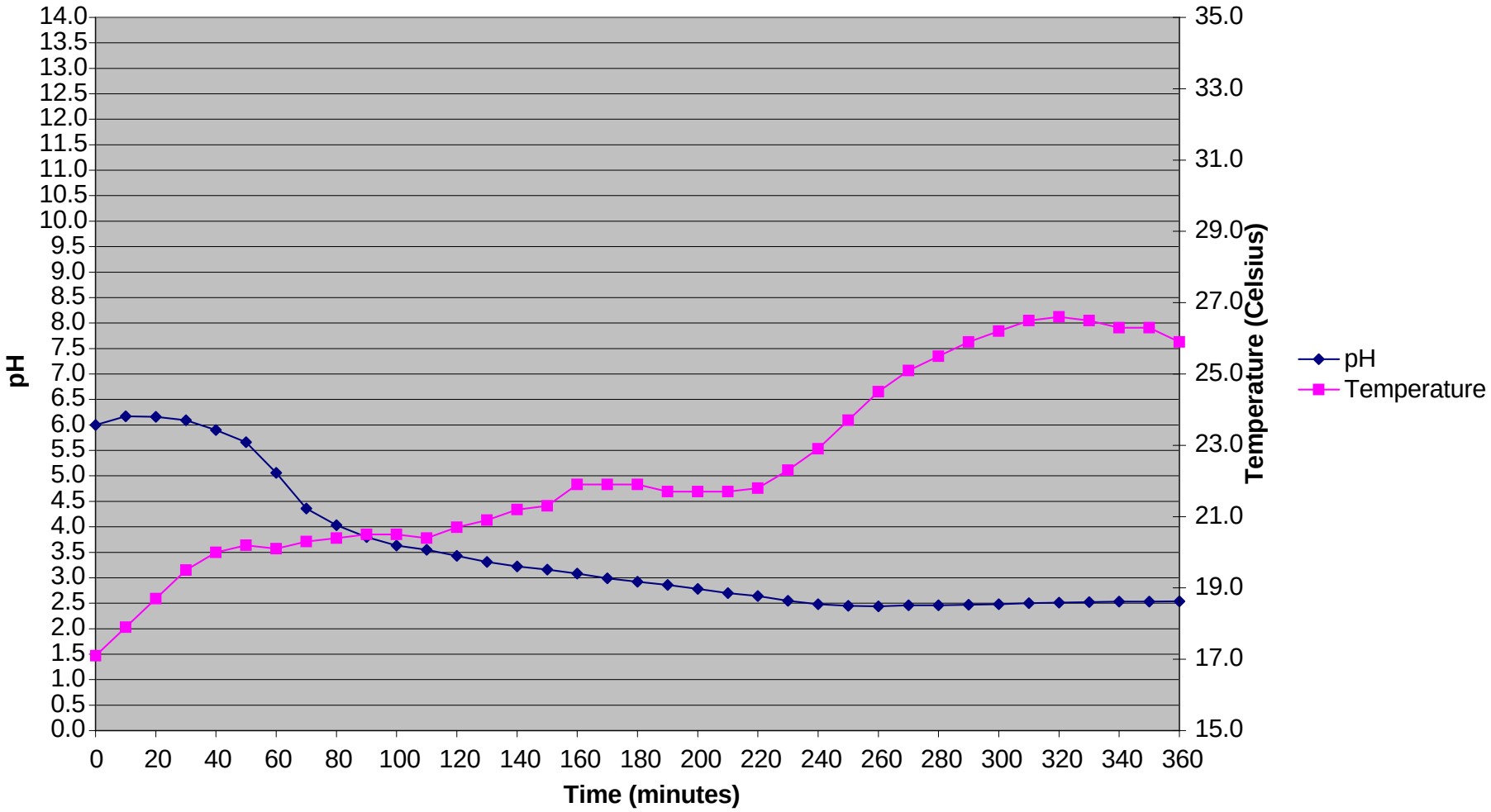
	EP1204023 12 Check

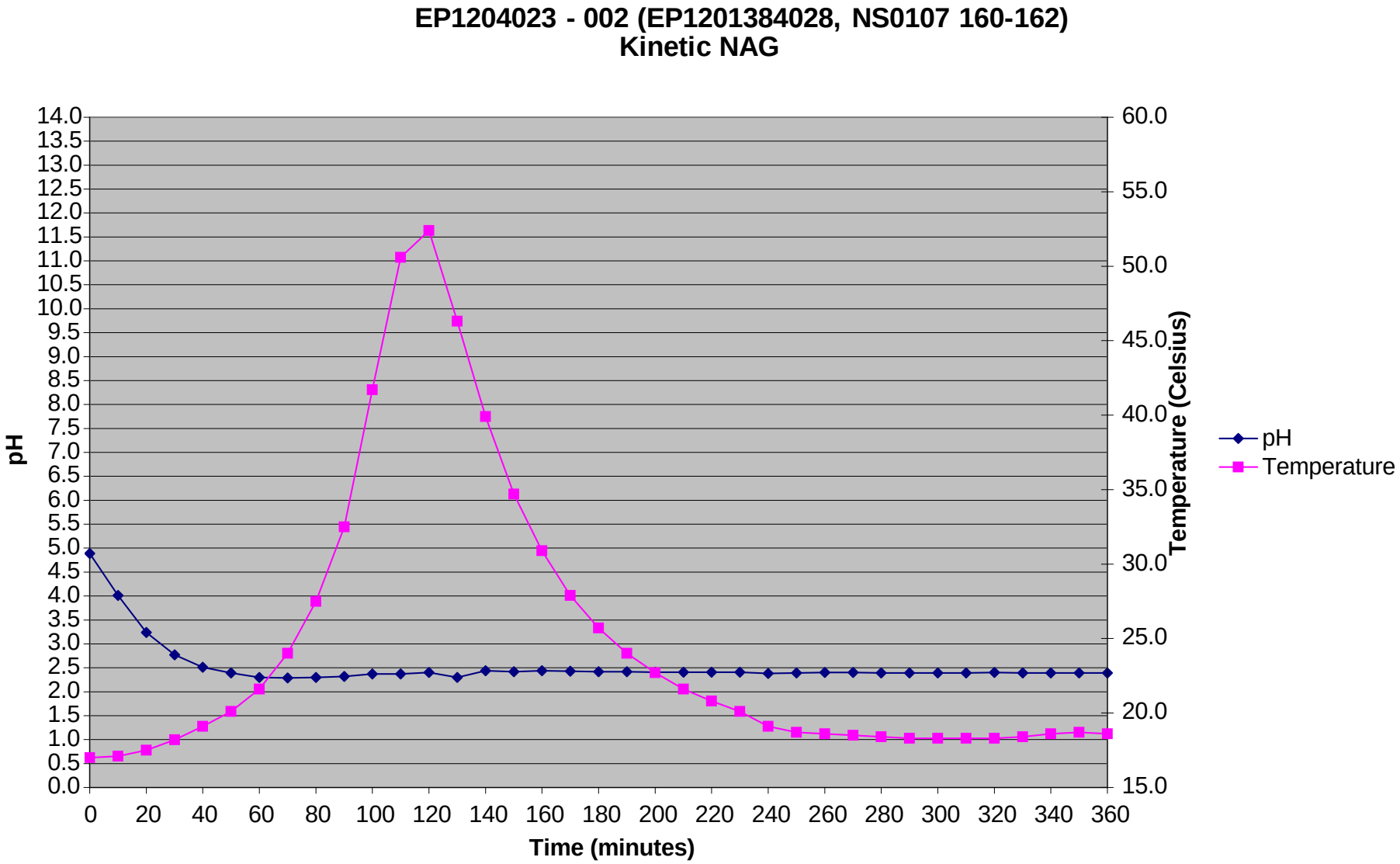
EA011-K: (A) Titration information

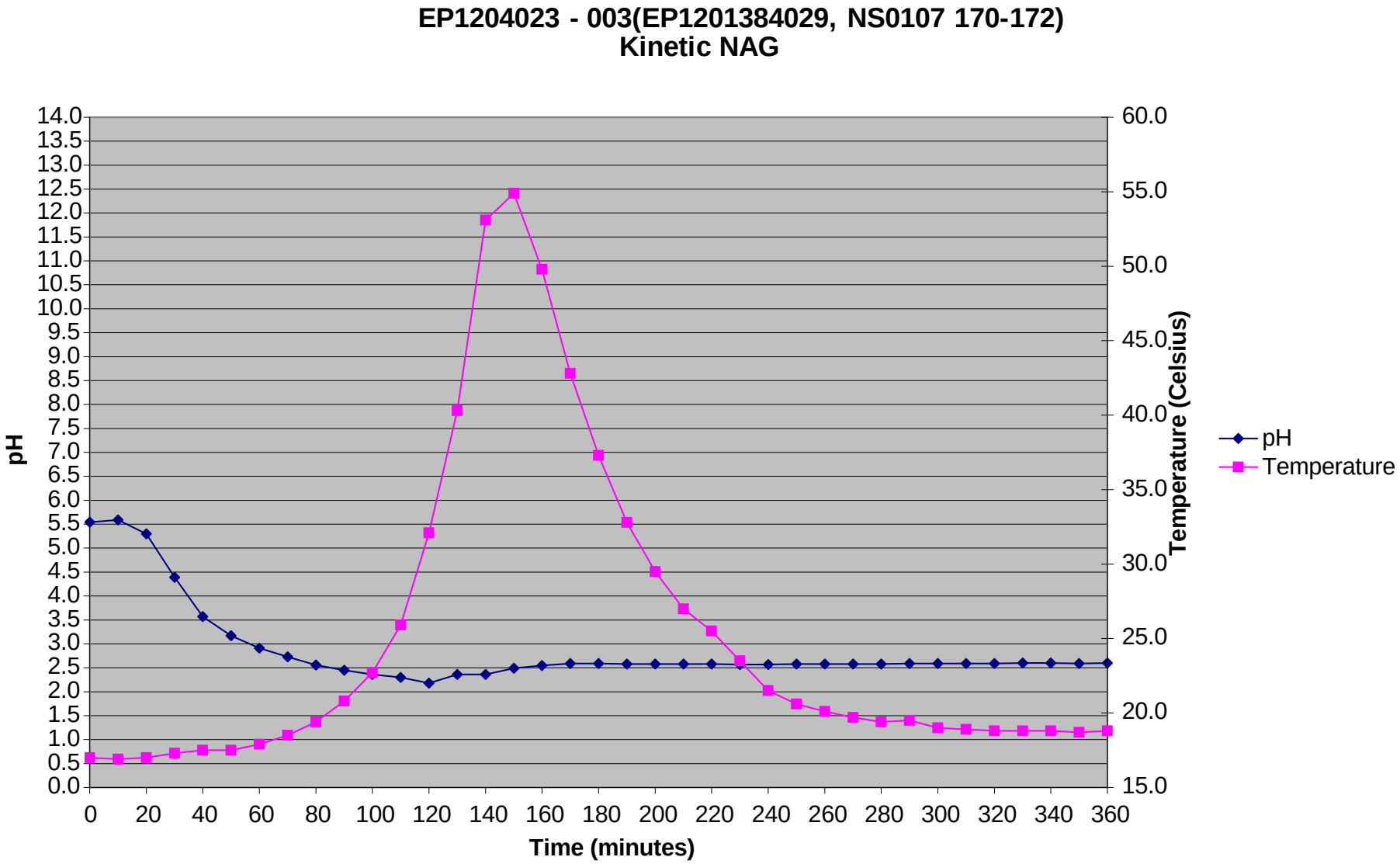
Time (mins)	pH	Temp
0	5.92	18.6
10	5.96	19.2
20	5.96	19.5
30	5.77	20.1
40	5.63	20.5
50	5.10	20.7
60	3.99	20.9
70	3.90	20.8
80	3.66	20.6
90	3.36	20.5
100	3.19	20.4
110	3.08	20.3
120	2.97	20.2
130	2.87	20.2
140	2.81	20.4
150	2.74	20.5
160	2.67	20.5
170	2.61	20.8
180	2.55	21.3
190	2.50	21.8
200	2.46	22.4
210	2.42	23.1
220	2.41	23.7
230	2.41	24.6
240	2.40	25.5
250	2.40	26.4
260	2.41	27.3
270	2.43	28.1
280	2.44	28.9
290	2.45	29.5
300	2.46	30.0
310	2.48	30.3
320	2.48	30.2
330	2.50	30.1
340	2.51	29.8
350	2.53	29.5
360	2.54	29.1


EP1204023 - 001 (EP1201378014, NS0077 178-180)
Kinetic NAG
pH
Temperature (Celsius)
Time (minutes)
pH
Temperature
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
10.0
10.5
11.0
11.5
12.0
12.5
13.0
13.5
14.0
15.0
17.0
19.0
21.0
23.0
25.0
27.0
29.0
31.0
33.0
35.0
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360

EP1204023 - 001 check (EP1201378014, NS0077 178-180)
Kinetic NAG




EP1204023 - 002 (EP1201384028, NS0107 160-162)
Kinetic NAG
pH
Temperature (Celsius)
Time (minutes)
pH
Temperature
14.0
13.5
13.0
12.5
12.0
11.5
11.0
10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360


EP1204023 - 003(EP1201384029, NS0107 170-172)
Kinetic NAG
pH
Temperature (Celsius)
Time (minutes)
pH
Temperature
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
10.0
10.5
11.0
11.5
12.0
12.5
13.0
13.5
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35.0
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45.0
50.0
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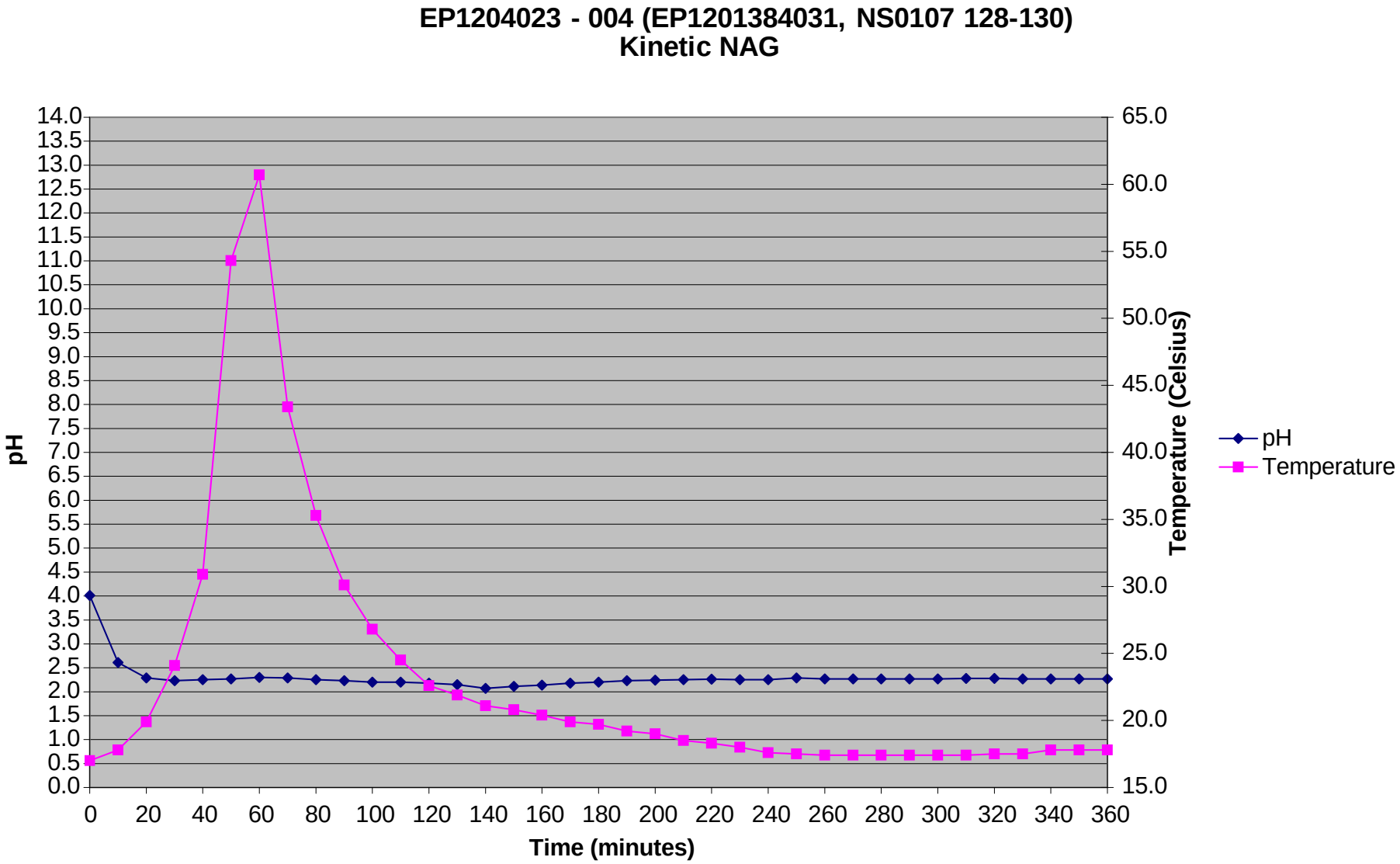
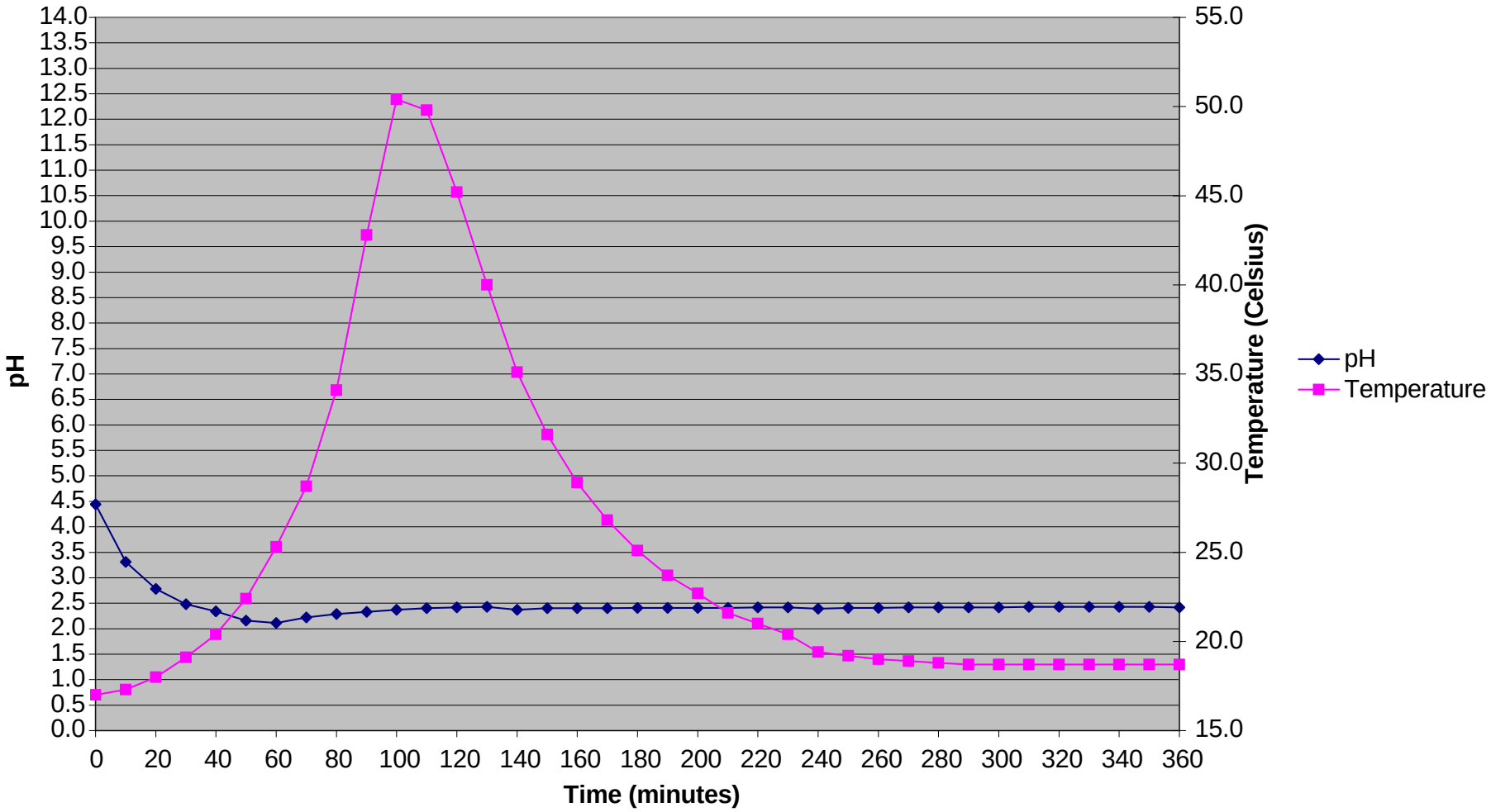
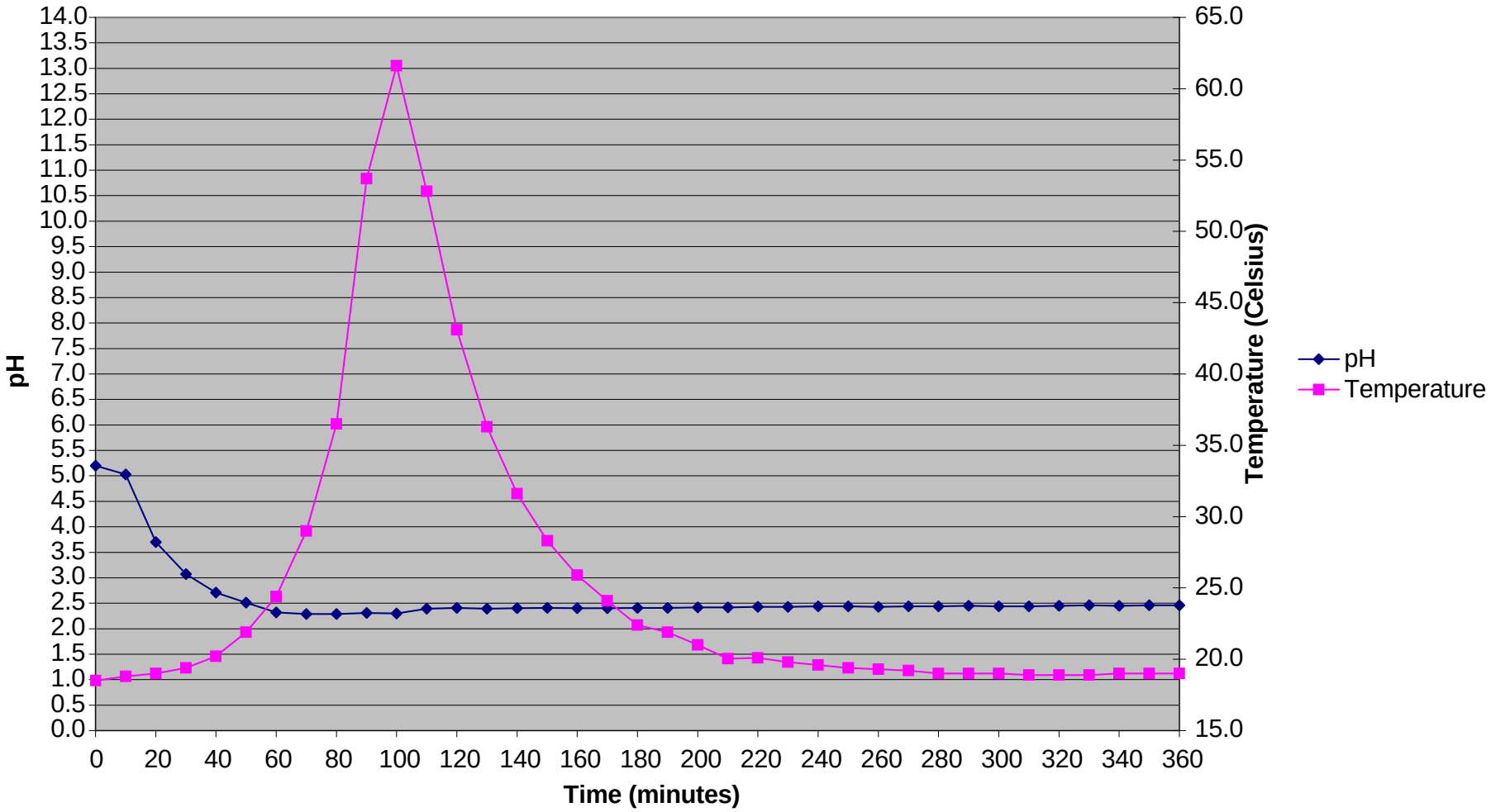
60.0

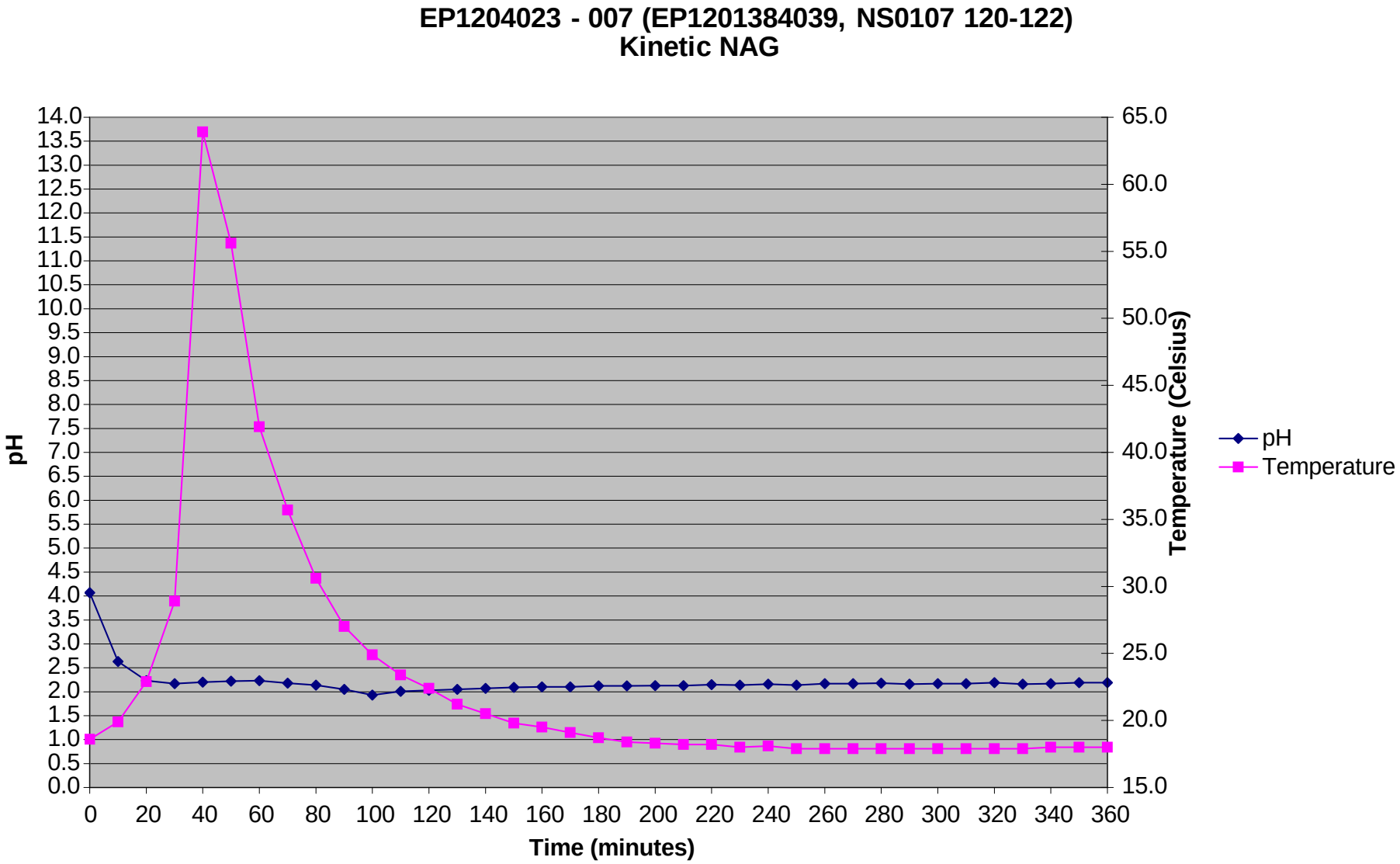

EP1204023 - 004 (EP1201384031, NS0107 128-130)
Kinetic NAG
pH
Temperature (Celsius)
Time (minutes)
pH
Temperature
14.0
13.5
13.0
12.5
12.0
11.5
11.0
10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
65.0
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360

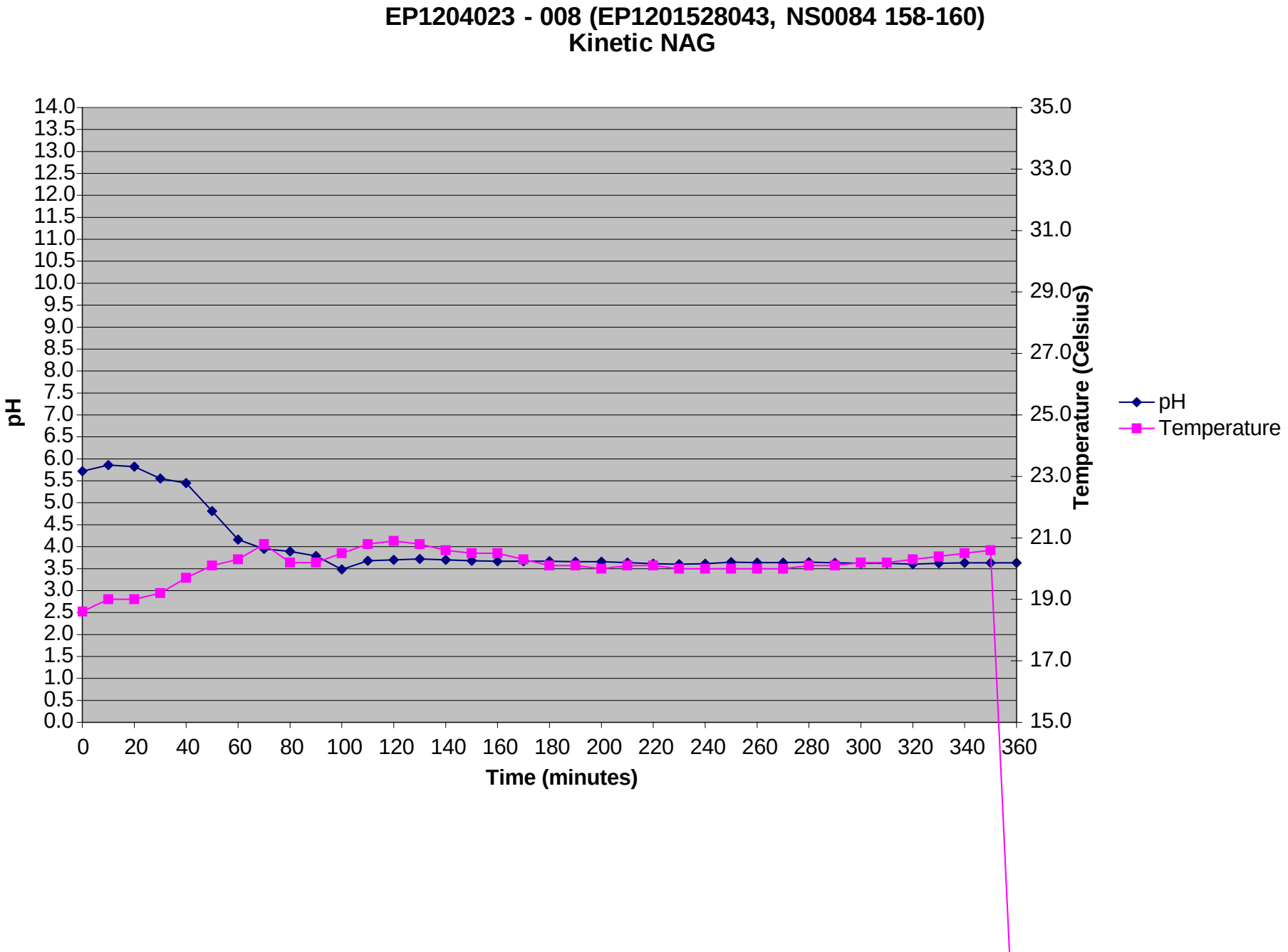
EP1204023 - 005 (EP1201384033, NS0107 148-150)
Kinetic NAG



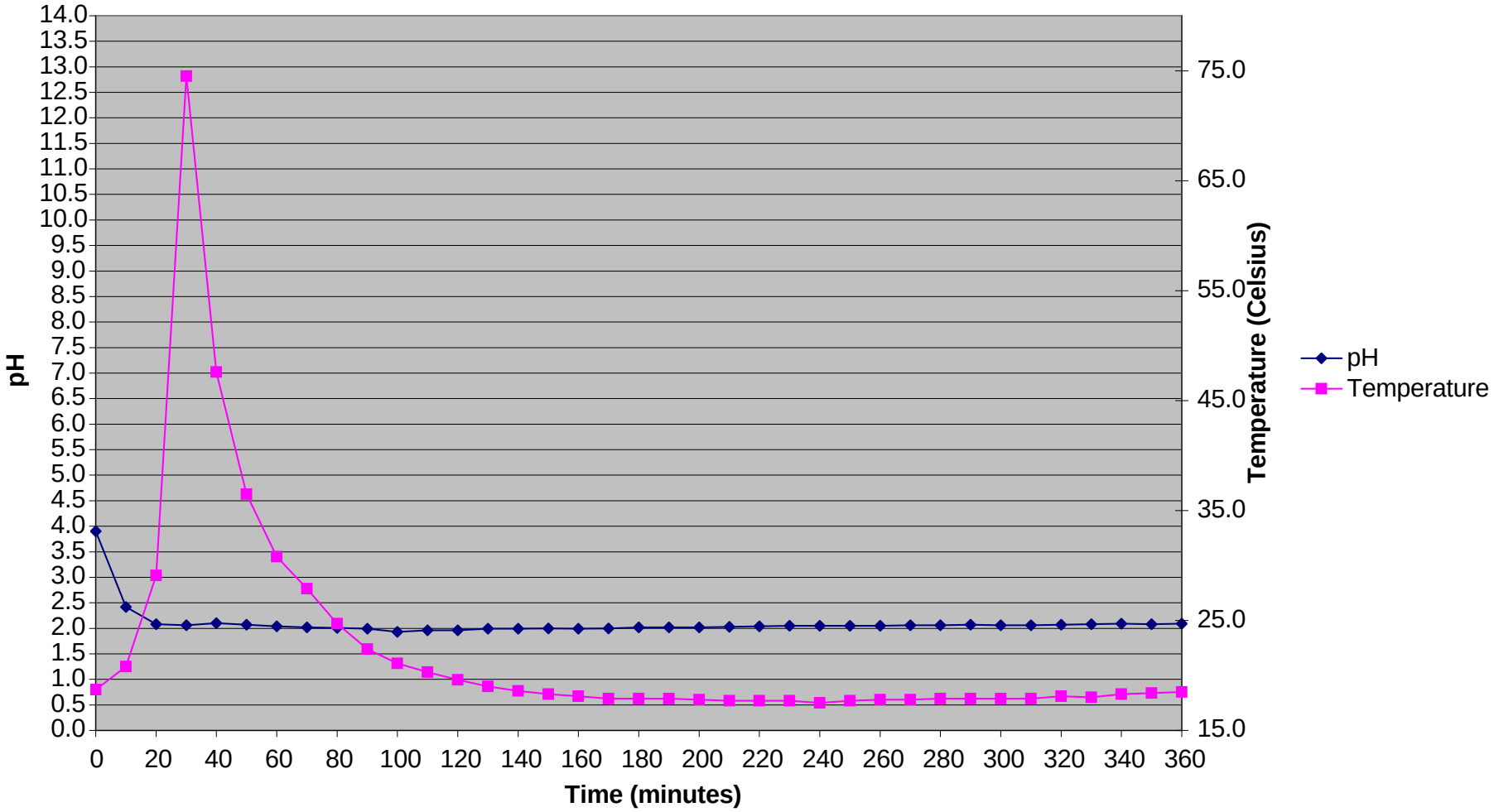
EP1204023 - 006 (EP1201384035, NS0107 140-142)
Kinetic NAG

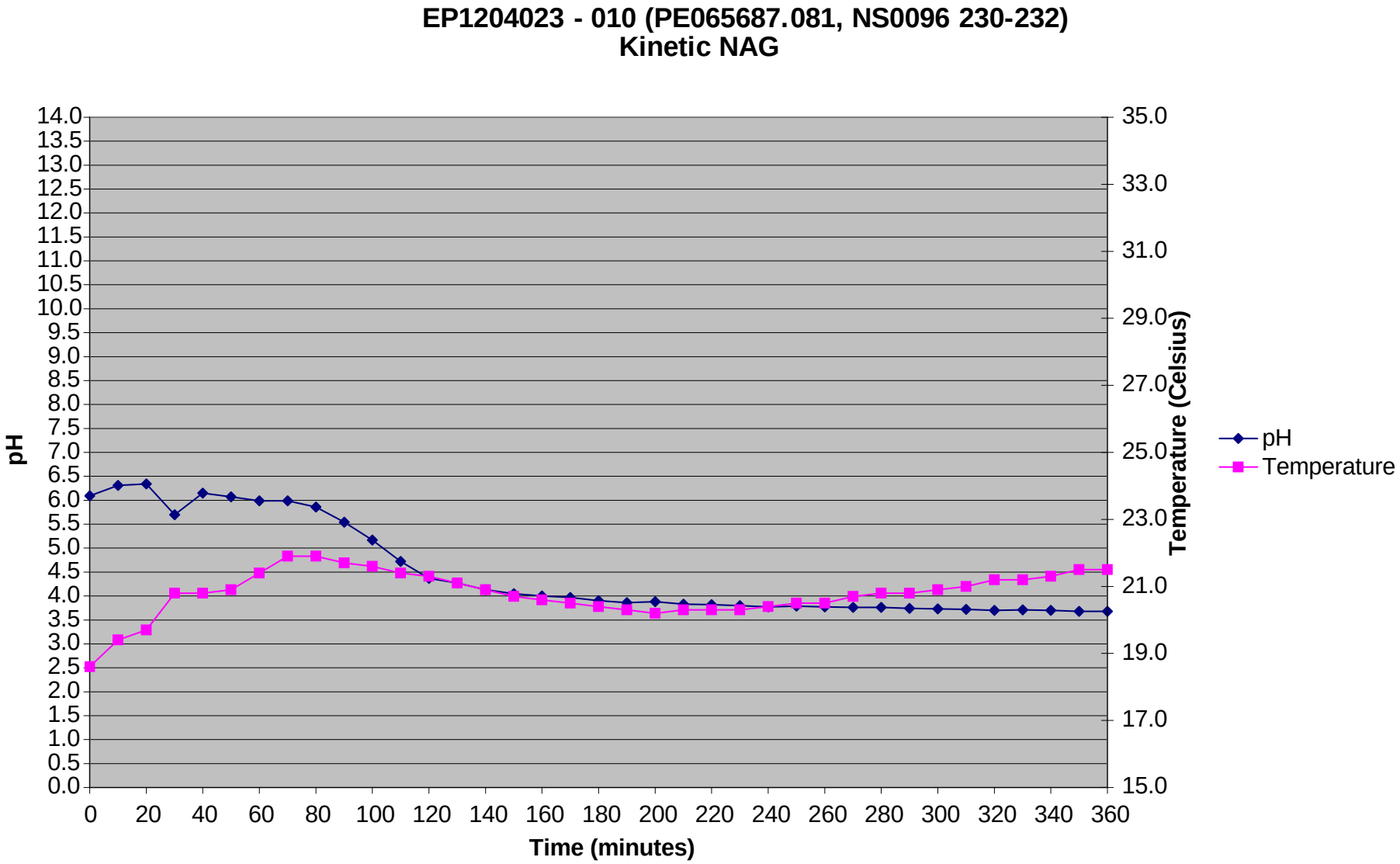


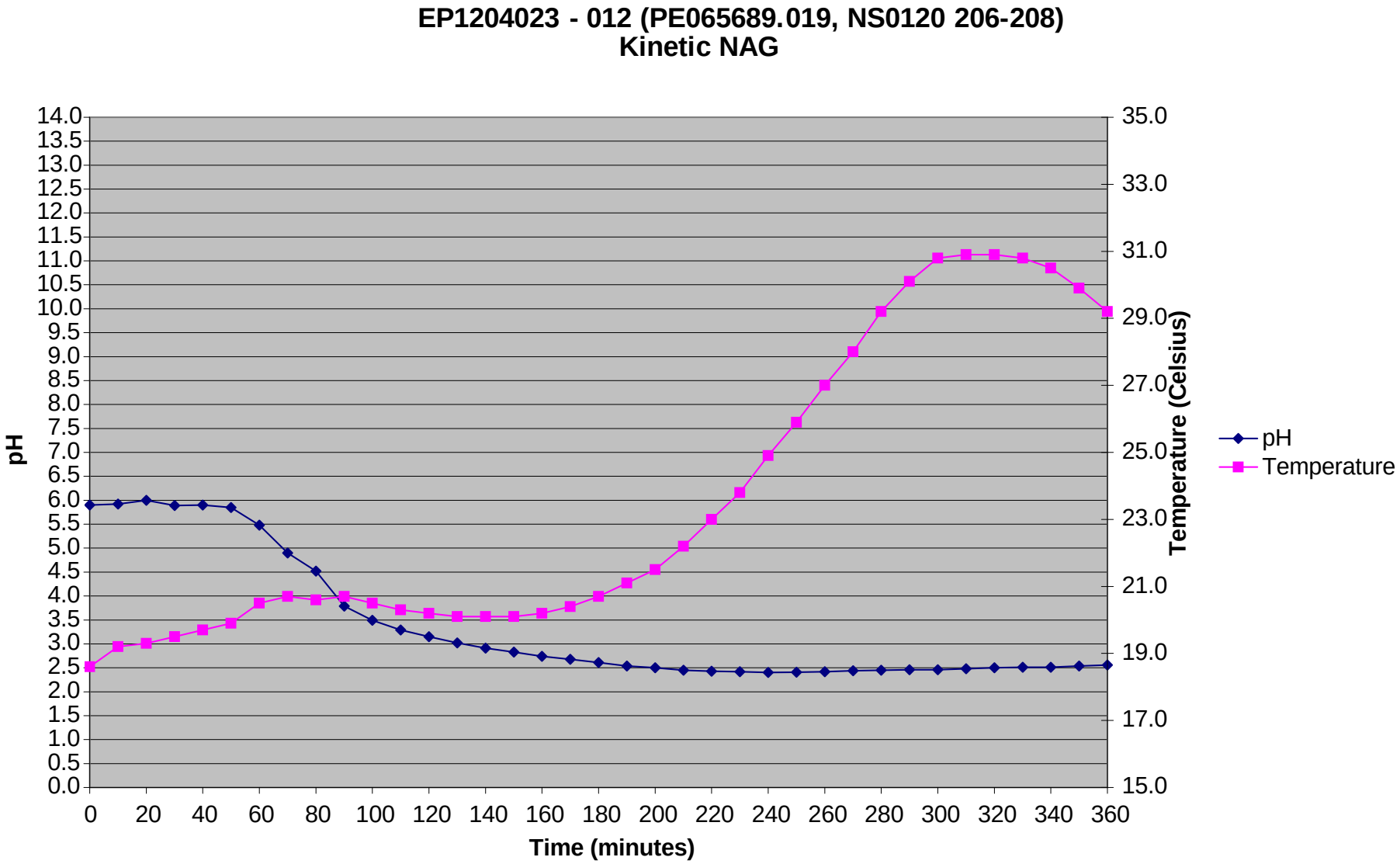

EP1204023 - 007 (EP1201384039, NS0107 120-122)
Kinetic NAG
pH
Temperature (Celsius)
Time (minutes)
pH
Temperature
14.0
13.5
13.0
12.5
12.0
11.5
11.0
10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
65.0
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360

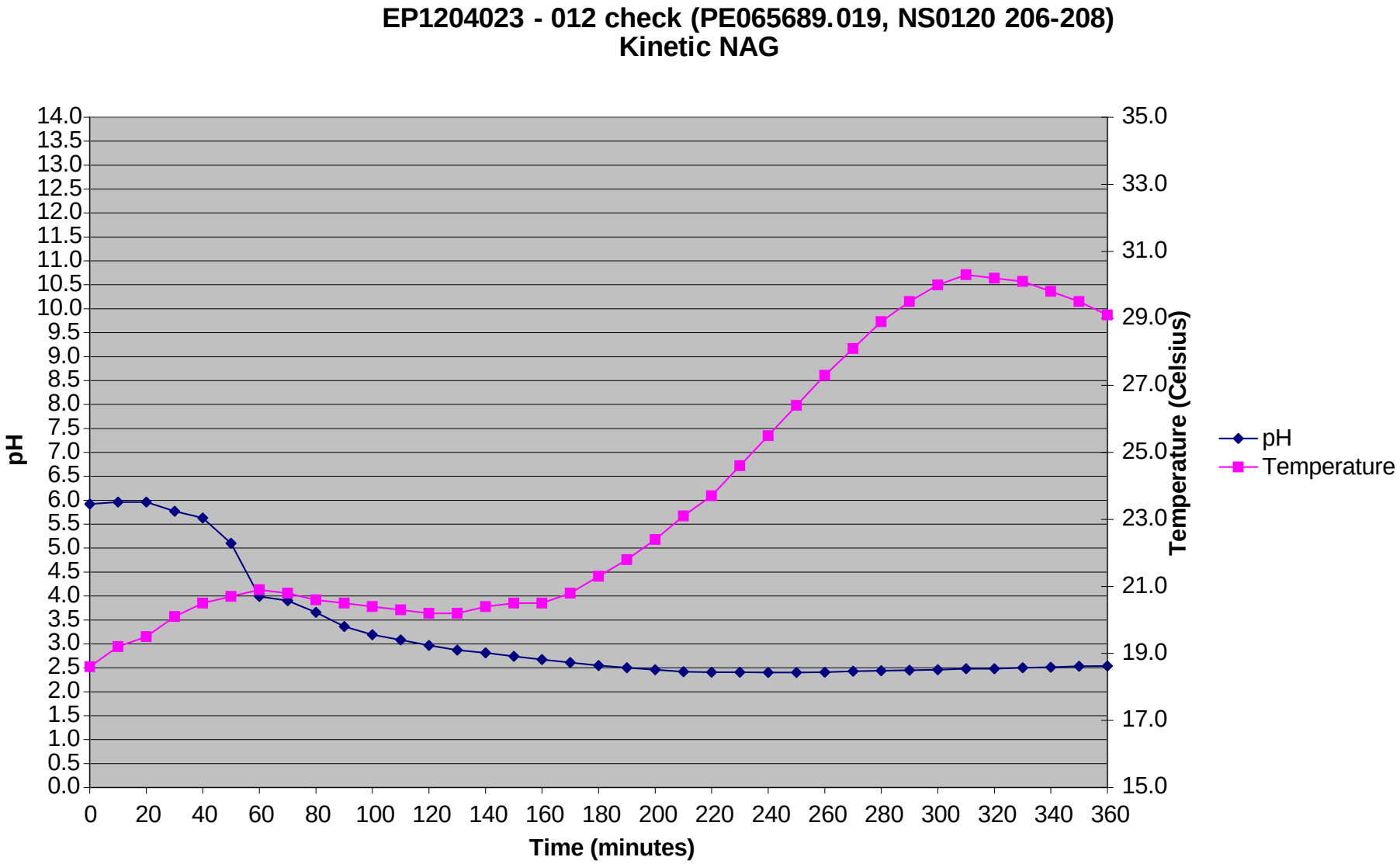

EP1204023 - 008 (EP1201528043, NS0084 158-160)
Kinetic NAG
pH
Temperature (Celsius)
Time (minutes)
pH
Temperature
14.0
13.5
13.0
12.5
12.0
11.5
11.0
10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
35.0
33.0
31.0
29.0
27.0
25.0
23.0
21.0
19.0
17.0
15.0
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360

EP1204023 - 009 (PE065686.028, NS0153 200-202)
Kinetic NAG




EP1204023 - 010 (PE065687.081, NS0096 230-232)
Kinetic NAG
pH
Temperature (Celsius)
Time (minutes)
pH
Temperature
14.0
13.5
13.0
12.5
12.0
11.5
11.0
10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
35.0
33.0
31.0
29.0
27.0
25.0
23.0
21.0
19.0
17.0
15.0
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360


EP1204023 - 012 (PE065689.019, NS0120 206-208)
Kinetic NAG
pH
Temperature (Celsius)
Time (minutes)
pH
Temperature
14.0
13.5
13.0
12.5
12.0
11.5
11.0
10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
35.0
33.0
31.0
29.0
27.0
25.0
23.0
21.0
19.0
17.0
15.0
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360


EP1204023 - 012 check (PE065689.019, NS0120 206-208)
Kinetic NAG
pH
Temperature (Celsius)
Time (minutes)
pH
Temperature
14.0
13.5
13.0
12.5
12.0
11.5
11.0
10.5
10.0
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35.0
33.0
31.0
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21.0
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40
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120
140
160
180
200
220
240
260
280
300
320
340
360

CERTIFICATE OF ANALYSIS

Work Order	: **EP1204023**	Page	: 1 of 3
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: EP1201378 1384 1528 SGS Batch # PE065686 687 688 689 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 21-MAY-2012
Sampler	: ----	Issue Date	: 07-JUN-2012
Site	: Northstar		
		No. of samples received	: 12
Quote number	: EP/406/12	No. of samples analysed	: 0

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **(ADD METHOD): NATA accreditation does not cover performance of this service.**

Analytical Results

Sub-Matrix:			Client sample ID	----	----	----	----	----
			Client sampling date / time	----	----	----	----	----
Compound	CAS Number	LOR	Unit	----	----	----	----	----
----	----	-	-	----	----	----	----	----

ALS Environmental

Acid Buffering Characteristic Curve (ABCC) REPORT

Batch: EP1204028

CONTACT:	David Morgan	LABORATORY:	Brisbane
CLIENT:	GHD PTY LTD	DATE SAMPLED:	21/02/2012
ADDRESS:	239 ADELAIDE TERRACE	DATE RECEIVED:	21/05/2012
	PERTH, WA 6004	DATE COMPLETED:	17/07/2012
		SAMPLE TYPE:	Soil
		No. of SAMPLES:	9

COMMENTS

EA046 : NATA accreditation does not cover performance of this service.

ISSUING LABORATORY: ALS BRISBANE

Address:	32 Shand Street	Telephone:	07 3243 7222
	STAFFORD QLD 4053	Facsimile:	07 3243 7218
	AUSTRALIA	E-mail:	Myles.Clark@alsenviro.com

Signatory

Work Order :	EP1204028	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201379015
	Client Sample Identification 2			NS0093 90-92
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	1
	EP1204028

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**67.3**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.50	36	7.2	88.2	2.54
1	0.2	2.45	7.77	37	7.4	90.65	2.50
2	0.4	4.9	6.98	38	7.6	93.1	2.46
3	0.6	7.35	6.66	39	7.8	95.55	2.42
4	0.8	9.8	6.43	40	8	98	2.38
5	1	12.25	6.27				
6	1.2	14.7	6.14				
7	1.4	17.15	6.04				
8	1.6	19.6	5.99				
9	1.8	22.05	5.91				
10	2	24.5	5.81				
11	2.2	26.95	5.70				
12	2.4	29.4	5.54				
13	2.6	31.85	5.36				
14	2.8	34.3	5.09				
15	3	36.75	4.78				
16	3.2	39.2	4.50				
17	3.4	41.65	4.26				
18	3.6	44.1	4.04				
19	3.8	46.55	3.83				
20	4	49	3.65				
21	4.2	51.45	3.49				
22	4.4	53.9	3.37				
23	4.6	56.35	3.27				
24	4.8	58.8	3.18				
25	5	61.25	3.11				
26	5.2	63.7	3.04				
27	5.4	66.15	2.98				
28	5.6	68.6	2.92				
29	5.8	71.05	2.86				
30	6	73.5	2.81				
31	6.2	75.95	2.76				
32	6.4	78.4	2.71				
33	6.6	80.85	2.66				
34	6.8	83.3	2.62				
35	7	85.75	2.58				

Work Order :	EP1204028	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201379015
	Client Sample Identification 2			NS0093 90-92
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	1	Check
	EP1204028	

EA046 - A Titration information

HCl Molarity:		**M**	**0.5**
Increments:		**mL**	**0.2**
Weight		**(g)**	**2**
ANC		**kgH2SO4/t**	**67.3**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.33	36	7.2	88.2	2.55
1	0.2	2.45	7.69	37	7.4	90.65	2.51
2	0.4	4.9	7.02	38	7.6	93.1	2.48
3	0.6	7.35	6.70	39	7.8	95.55	2.44
4	0.8	9.8	6.49	40	8	98	2.40
5	1	12.25	6.35	41	8.2	100.45	2.36
6	1.2	14.7	6.22				
7	1.4	17.15	6.12				
8	1.6	19.6	6.02				
9	1.8	22.05	5.90				
10	2	24.5	5.78				
11	2.2	26.95	5.64				
12	2.4	29.4	5.49				
13	2.6	31.85	5.31				
14	2.8	34.3	5.07				
15	3	36.75	4.82				
16	3.2	39.2	4.56				
17	3.4	41.65	4.32				
18	3.6	44.1	4.06				
19	3.8	46.55	3.80				
20	4	49	3.61				
21	4.2	51.45	3.46				
22	4.4	53.9	3.34				
23	4.6	56.35	3.25				
24	4.8	58.8	3.16				
25	5	61.25	3.10				
26	5.2	63.7	3.03				
27	5.4	66.15	2.97				
28	5.6	68.6	2.92				
29	5.8	71.05	2.86				
30	6	73.5	2.81				
31	6.2	75.95	2.76				
32	6.4	78.4	2.72				
33	6.6	80.85	2.67				
34	6.8	83.3	2.63				
35	7	85.75	2.59				

Work Order :	EP1204028	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201379038
	Client Sample Identification 2			NS0083 88-90
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	2
	EP1204028

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**45.1**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.85	36	18	44.1	2.86
1	0.5	1.225	8.91	37	18.5	45.325	2.85
2	1	2.45	8.35	38	19	46.55	2.83
3	1.5	3.675	7.97	39	19.5	47.775	2.82
4	2	4.9	7.69	40	20	49	2.82
5	2.5	6.125	7.45	41	20.5	50.225	2.85
6	3	7.35	7.22	42	21	51.45	2.84
7	3.5	8.575	7.00	43	21.5	52.675	2.83
8	4	9.8	6.78	44	22	53.9	2.80
9	4.5	11.025	6.58	45	22.5	55.125	2.76
10	5	12.25	6.38	46	23	56.35	2.72
11	5.5	13.475	6.17	47	23.5	57.575	2.69
12	6	14.7	5.90	48	24	58.8	2.66
13	6.5	15.925	5.56	49	24.5	60.025	2.63
14	7	17.15	5.18	50	25	61.25	2.60
15	7.5	18.375	4.78	51	25.5	62.475	2.57
16	8	19.6	4.36	52	26	63.7	2.55
17	8.5	20.825	4.15	53	26.5	64.925	2.52
18	9	22.05	3.95	54	27	66.15	2.49
19	9.5	23.275	3.88	55	27.5	67.375	2.47
20	10	24.5	3.86	56	28	68.6	2.45
21	10.5	25.725	3.89				
22	11	26.95	4.07				
23	11.5	28.175	4.02				
24	12	29.4	3.88				
25	12.5	30.625	3.80				
26	13	31.85	3.59				
27	13.5	33.075	3.42				
28	14	34.3	3.30				
29	14.5	35.525	3.21				
30	15	36.75	3.13				
31	15.5	37.975	3.06				
32	16	39.2	3.01				
33	16.5	40.425	2.96				
34	17	41.65	2.91				
35	17.5	42.875	2.87				

Work Order :	EP1204028	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201380009
	Client Sample Identification 2			NS0078 108-110
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	3
	EP1204028

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**31.6**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.51	36	18	44.1	3.12
1	0.5	1.225	8.01	37	18.5	45.325	3.09
2	1	2.45	7.30	38	19	46.55	3.06
3	1.5	3.675	6.98	39	19.5	47.775	3.04
4	2	4.9	6.78	40	20	49	3.02
5	2.5	6.125	6.62	41	20.5	50.225	3.00
6	3	7.35	6.47	42	21	51.45	2.98
7	3.5	8.575	6.32	43	21.5	52.675	2.95
8	4	9.8	6.13	44	22	53.9	2.94
9	4.5	11.025	5.89	45	22.5	55.125	2.92
10	5	12.25	5.59	46	23	56.35	2.90
11	5.5	13.475	5.29	47	23.5	57.575	2.89
12	6	14.7	5.02	48	24	58.8	2.87
13	6.5	15.925	4.77	49	24.5	60.025	2.85
14	7	17.15	4.54	50	25	61.25	2.84
15	7.5	18.375	4.34	51	25.5	62.475	2.83
16	8	19.6	4.16	52	26	63.7	2.81
17	8.5	20.825	4.00	53	26.5	64.925	2.80
18	9	22.05	3.87	54	27	66.15	2.78
19	9.5	23.275	3.80	55	27.5	67.375	2.77
20	10	24.5	3.85	56	28	68.6	2.76
21	10.5	25.725	3.90	57	28.5	69.825	2.75
22	11	26.95	3.86	58	29	71.05	2.74
23	11.5	28.175	3.78	59	29.5	72.275	2.73
24	12	29.4	3.70	60	30	73.5	2.72
25	12.5	30.625	3.62	61	30.5	74.725	2.71
26	13	31.85	3.55	62	31	75.95	2.71
27	13.5	33.075	3.49	63	31.5	77.175	2.70
28	14	34.3	3.43	64	32	78.4	2.69
29	14.5	35.525	3.38	65	32.5	79.625	2.68
30	15	36.75	3.33	66	33	80.85	2.68
31	15.5	37.975	3.29	67	33.5	82.075	2.67
32	16	39.2	3.25	68	34	83.3	2.66
33	16.5	40.425	3.21	69	34.5	84.525	2.66
34	17	41.65	3.18	70	35	85.75	2.65
35	17.5	42.875	3.14	71	35.5	86.975	2.65

Work Order :	EP1204028	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201380009
	Client Sample Identification 2			NS0078 108-110
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	3
	EP1204028

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**31.6**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
72	36	88.2	2.64				
73	36.5	89.425	2.64				
74	37	90.65	2.63				
75	37.5	91.875	2.63				
76	38	93.1	2.63				
77	38.5	94.325	2.62				
78	39	95.55	2.62				
79	39.5	96.775	2.61				
80	40	98	2.61				
81	40.5	99.225	2.60				
82	41	100.45	2.60				
83	41.5	101.675	2.59				
84	42	102.9	2.59				
85	42.5	104.125	2.58				
86	43	105.35	2.58				
87	43.5	106.575	2.57				
88	44	107.8	2.57				
89	44.5	109.025	2.56				
90	45	110.25	2.56				
91	45.5	111.475	2.55				
92	46	112.7	2.54				
93	46.5	113.925	2.54				
94	47	115.15	2.53				
95	47.5	116.375	2.52				
96	48	117.6	2.52				
97	48.5	118.825	2.51				
98	49	120.05	2.50				
99	49.5	121.275	2.49				
100	50	122.5	2.49				
101	50.5	123.725	2.48				

Work Order :	EP1204028	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201380011
	Client Sample Identification 2			NS0078 8-10
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	4
	EP1204028

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**2.9**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	6.94	36	3.6	8.82	2.76
1	0.1	0.245	5.61	37	3.7	9.065	2.74
2	0.2	0.49	4.77	38	3.8	9.31	2.73
3	0.3	0.735	4.37	39	3.9	9.555	2.72
4	0.4	0.98	4.13	40	4	9.8	2.70
5	0.5	1.225	3.98	41	4.1	10.045	2.69
6	0.6	1.47	3.85	42	4.2	10.29	2.68
7	0.7	1.715	3.74	43	4.3	10.535	2.67
8	0.8	1.96	3.64	44	4.4	10.78	2.66
9	0.9	2.205	3.56	45	4.5	11.025	2.64
10	1	2.45	3.49	46	4.6	11.27	2.63
11	1.1	2.695	3.43	47	4.7	11.515	2.62
12	1.2	2.94	3.37	48	4.8	11.76	2.61
13	1.3	3.185	3.32	49	4.9	12.005	2.60
14	1.4	3.43	3.28	50	5	12.25	2.59
15	1.5	3.675	3.24	51	5.1	12.495	2.58
16	1.6	3.92	3.20	52	5.2	12.74	2.57
17	1.7	4.165	3.16	53	5.3	12.985	2.57
18	1.8	4.41	3.13	54	5.4	13.23	2.56
19	1.9	4.655	3.10	55	5.5	13.475	2.55
20	2	4.9	3.07	56	5.6	13.72	2.54
21	2.1	5.145	3.04	57	5.7	13.965	2.53
22	2.2	5.39	3.01	58	5.8	14.21	2.53
23	2.3	5.635	2.99	59	5.9	14.455	2.52
24	2.4	5.88	2.97	60	6	14.7	2.51
25	2.5	6.125	2.94	61	6.1	14.945	2.50
26	2.6	6.37	2.92	62	6.2	15.19	2.50
27	2.7	6.615	2.90	63	6.3	15.435	2.49
28	2.8	6.86	2.88	64	6.4	15.68	2.48
29	2.9	7.105	2.87				
30	3	7.35	2.85				
31	3.1	7.595	2.83				
32	3.2	7.84	2.82				
33	3.3	8.085	2.80				
34	3.4	8.33	2.78				
35	3.5	8.575	2.77				

Work Order :	EP1204028	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201380043
	Client Sample Identification 2			NS0083 130-132
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	5
	EP1204028

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**19.4**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.24	36	7.2	17.64	2.78
1	0.2	0.49	7.43	37	7.4	18.13	2.76
2	0.4	0.98	6.49	38	7.6	18.62	2.74
3	0.6	1.47	5.76	39	7.8	19.11	2.72
4	0.8	1.96	5.15	40	8	19.6	2.70
5	1	2.45	4.74	41	8.2	20.09	2.69
6	1.2	2.94	4.46	42	8.4	20.58	2.67
7	1.4	3.43	4.26	43	8.6	21.07	2.66
8	1.6	3.92	4.09	44	8.8	21.56	2.64
9	1.8	4.41	3.93	45	9	22.05	2.63
10	2	4.9	3.81	46	9.2	22.54	2.62
11	2.2	5.39	3.70	47	9.4	23.03	2.61
12	2.4	5.88	3.60	48	9.6	23.52	2.61
13	2.6	6.37	3.51	49	9.8	24.01	2.60
14	2.8	6.86	3.44	50	10	24.5	2.59
15	3	7.35	3.37	51	10.2	24.99	2.58
16	3.2	7.84	3.33	52	10.4	25.48	2.58
17	3.4	8.33	3.29	53	10.6	25.97	2.57
18	3.6	8.82	3.25	54	10.8	26.46	2.56
19	3.8	9.31	3.21	55	11	26.95	2.56
20	4	9.8	3.17	56	11.2	27.44	2.55
21	4.2	10.29	3.14	57	11.4	27.93	2.55
22	4.4	10.78	3.11	58	11.6	28.42	2.54
23	4.6	11.27	3.08	59	11.8	28.91	2.54
24	4.8	11.76	3.05	60	12	29.4	2.53
25	5	12.25	3.02	61	12.2	29.89	2.53
26	5.2	12.74	3.00	62	12.4	30.38	2.52
27	5.4	13.23	2.98	63	12.6	30.87	2.51
28	5.6	13.72	2.96	64	12.8	31.36	2.51
29	5.8	14.21	2.94	65	13	31.85	2.50
30	6	14.7	2.92	66	13.2	32.34	2.49
31	6.2	15.19	2.89	67	13.4	32.83	2.48
32	6.4	15.68	2.87				
33	6.6	16.17	2.84				
34	6.8	16.66	2.82				
35	7	17.15	2.80				

Work Order :	EP1204028	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201383006
	Client Sample Identification 2			NS0092 48-50
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	14
	EP1204028

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**51**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.74				
1	0.2	2.45	7.53				
2	0.4	4.9	6.74				
3	0.6	7.35	6.35				
4	0.8	9.8	6.05				
5	1	12.25	5.79				
6	1.2	14.7	5.52				
7	1.4	17.15	5.25				
8	1.6	19.6	4.93				
9	1.8	22.05	4.56				
10	2	24.5	4.18				
11	2.2	26.95	3.89				
12	2.4	29.4	3.64				
13	2.6	31.85	3.41				
14	2.8	34.3	3.24				
15	3	36.75	3.12				
16	3.2	39.2	3.02				
17	3.4	41.65	2.94				
18	3.6	44.1	2.88				
19	3.8	46.55	2.82				
20	4	49	2.78				
21	4.2	51.45	2.73				
22	4.4	53.9	2.70				
23	4.6	56.35	2.67				
24	4.8	58.8	2.64				
25	5	61.25	2.62				
26	5.2	63.7	2.60				
27	5.4	66.15	2.57				
28	5.6	68.6	2.55				
29	5.8	71.05	2.53				
30	6	73.5	2.51				
31	6.2	75.95	2.49				
32	6.4	78.4	2.47				
33	6.6	80.85	2.45				

Work Order :	EP1204028	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201383007
	Client Sample Identification 2			NS0092 40-42
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	15
	EP1204028

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**47.9**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.36	36	18	44.1	2.63
1	0.5	1.225	7.74	37	18.5	45.325	2.61
2	1	2.45	7.04	38	19	46.55	2.59
3	1.5	3.675	6.68	39	19.5	47.775	2.57
4	2	4.9	6.44	40	20	49	2.55
5	2.5	6.125	6.23	41	20.5	50.225	2.53
6	3	7.35	6.03	42	21	51.45	2.52
7	3.5	8.575	5.81	43	21.5	52.675	2.50
8	4	9.8	5.57	44	22	53.9	2.48
9	4.5	11.025	5.31	45	22.5	55.125	2.46
10	5	12.25	5.03				
11	5.5	13.475	4.74				
12	6	14.7	4.48				
13	6.5	15.925	4.24				
14	7	17.15	4.01				
15	7.5	18.375	3.81				
16	8	19.6	3.64				
17	8.5	20.825	3.50				
18	9	22.05	3.39				
19	9.5	23.275	3.29				
20	10	24.5	3.21				
21	10.5	25.725	3.13				
22	11	26.95	3.07				
23	11.5	28.175	3.02				
24	12	29.4	2.97				
25	12.5	30.625	2.93				
26	13	31.85	2.89				
27	13.5	33.075	2.85				
28	14	34.3	2.82				
29	14.5	35.525	2.79				
30	15	36.75	2.76				
31	15.5	37.975	2.74				
32	16	39.2	2.71				
33	16.5	40.425	2.69				
34	17	41.65	2.67				
35	17.5	42.875	2.65				

Work Order :	EP1204028	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201383012
	Client Sample Identification 2			NS0085 10-12
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	16
	EP1204028

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**0.9**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	6.52	36	3.6	8.82	2.89
1	0.1	0.245	5.40	37	3.7	9.065	2.88
2	0.2	0.49	4.69	38	3.8	9.31	2.86
3	0.3	0.735	4.44	39	3.9	9.555	2.85
4	0.4	0.98	4.28	40	4	9.8	2.84
5	0.5	1.225	4.16	41	4.1	10.045	2.82
6	0.6	1.47	4.06	42	4.2	10.29	2.81
7	0.7	1.715	3.97	43	4.3	10.535	2.80
8	0.8	1.96	3.90	44	4.4	10.78	2.79
9	0.9	2.205	3.83	45	4.5	11.025	2.78
10	1	2.45	3.76	46	4.6	11.27	2.77
11	1.1	2.695	3.69	47	4.7	11.515	2.76
12	1.2	2.94	3.63	48	4.8	11.76	2.76
13	1.3	3.185	3.58	49	4.9	12.005	2.75
14	1.4	3.43	3.53	50	5	12.25	2.74
15	1.5	3.675	3.47	51	5.1	12.495	2.73
16	1.6	3.92	3.43	52	5.2	12.74	2.72
17	1.7	4.165	3.38	53	5.3	12.985	2.72
18	1.8	4.41	3.34	54	5.4	13.23	2.71
19	1.9	4.655	3.31	55	5.5	13.475	2.70
20	2	4.9	3.27	56	5.6	13.72	2.70
21	2.1	5.145	3.24	57	5.7	13.965	2.69
22	2.2	5.39	3.20	58	5.8	14.21	2.68
23	2.3	5.635	3.18	59	5.9	14.455	2.68
24	2.4	5.88	3.15	60	6	14.7	2.67
25	2.5	6.125	3.12	61	6.1	14.945	2.66
26	2.6	6.37	3.10	62	6.2	15.19	2.65
27	2.7	6.615	3.07	63	6.3	15.435	2.65
28	2.8	6.86	3.05	64	6.4	15.68	2.64
29	2.9	7.105	3.03	65	6.5	15.925	2.63
30	3	7.35	3.01	66	6.6	16.17	2.62
31	3.1	7.595	2.98	67	6.7	16.415	2.61
32	3.2	7.84	2.96	68	6.8	16.66	2.61
33	3.3	8.085	2.95	69	6.9	16.905	2.60
34	3.4	8.33	2.93	70	7	17.15	2.59
35	3.5	8.575	2.91	71	7.1	17.395	2.58

Work Order :	EP1204028	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201383012
	Client Sample Identification 2			NS0085 10-12
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	16
	EP1204028

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**0.9**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
72	7.2	17.64	2.58				
73	7.3	17.885	2.57				
74	7.4	18.13	2.56				
75	7.5	18.375	2.56				
76	7.6	18.62	2.55				
77	7.7	18.865	2.54				
78	7.8	19.11	2.54				
79	7.9	19.355	2.53				
80	8	19.6	2.53				
81	8.1	19.845	2.52				
82	8.2	20.09	2.51				
83	8.3	20.335	2.51				
84	8.4	20.58	2.50				
85	8.5	20.825	2.50				
86	8.6	21.07	2.49				
87	8.7	21.315	2.48				

Work Order :	EP1204028	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201383026
	Client Sample Identification 2			NS0092 158-160
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	17
	EP1204028

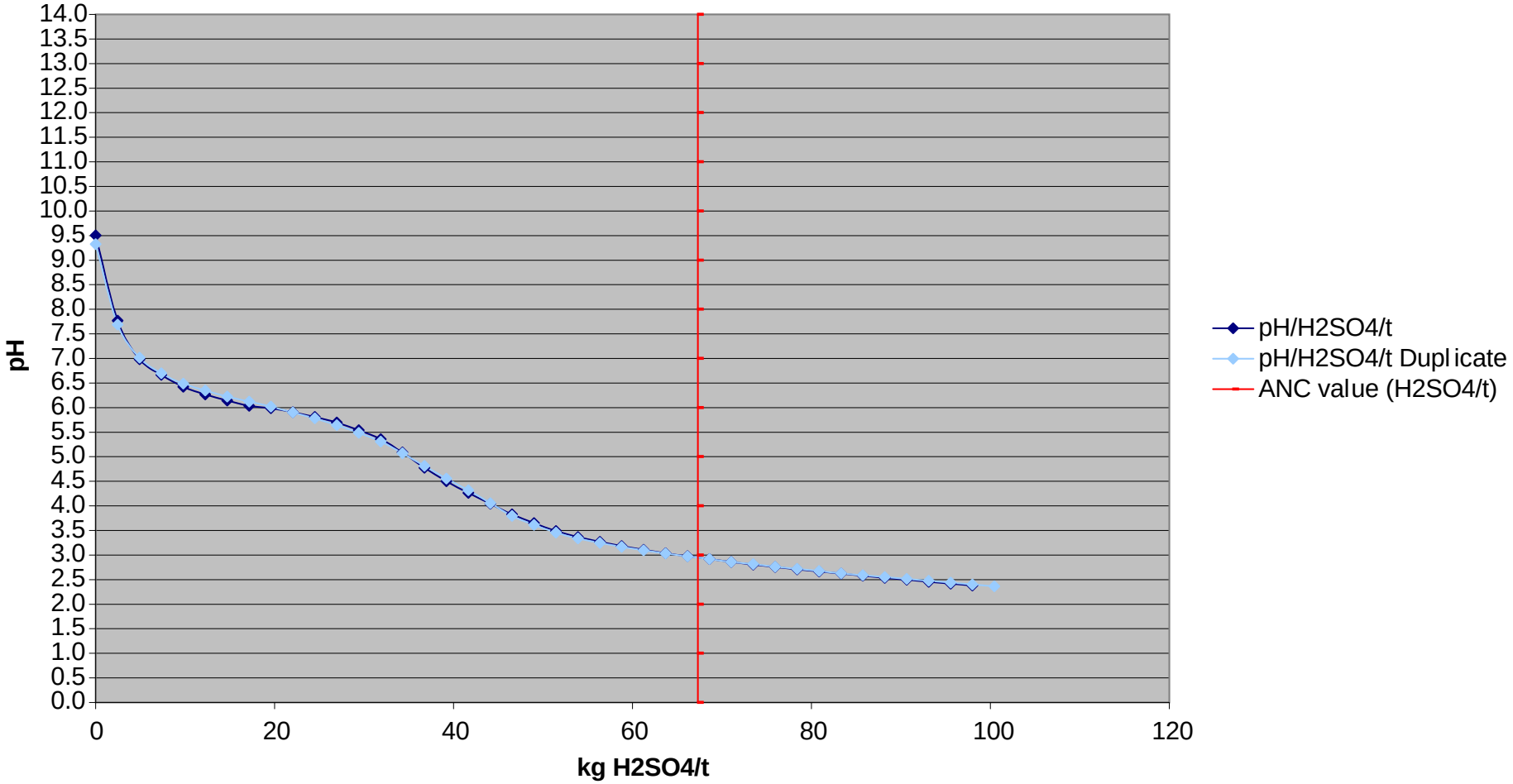
EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**39.2**

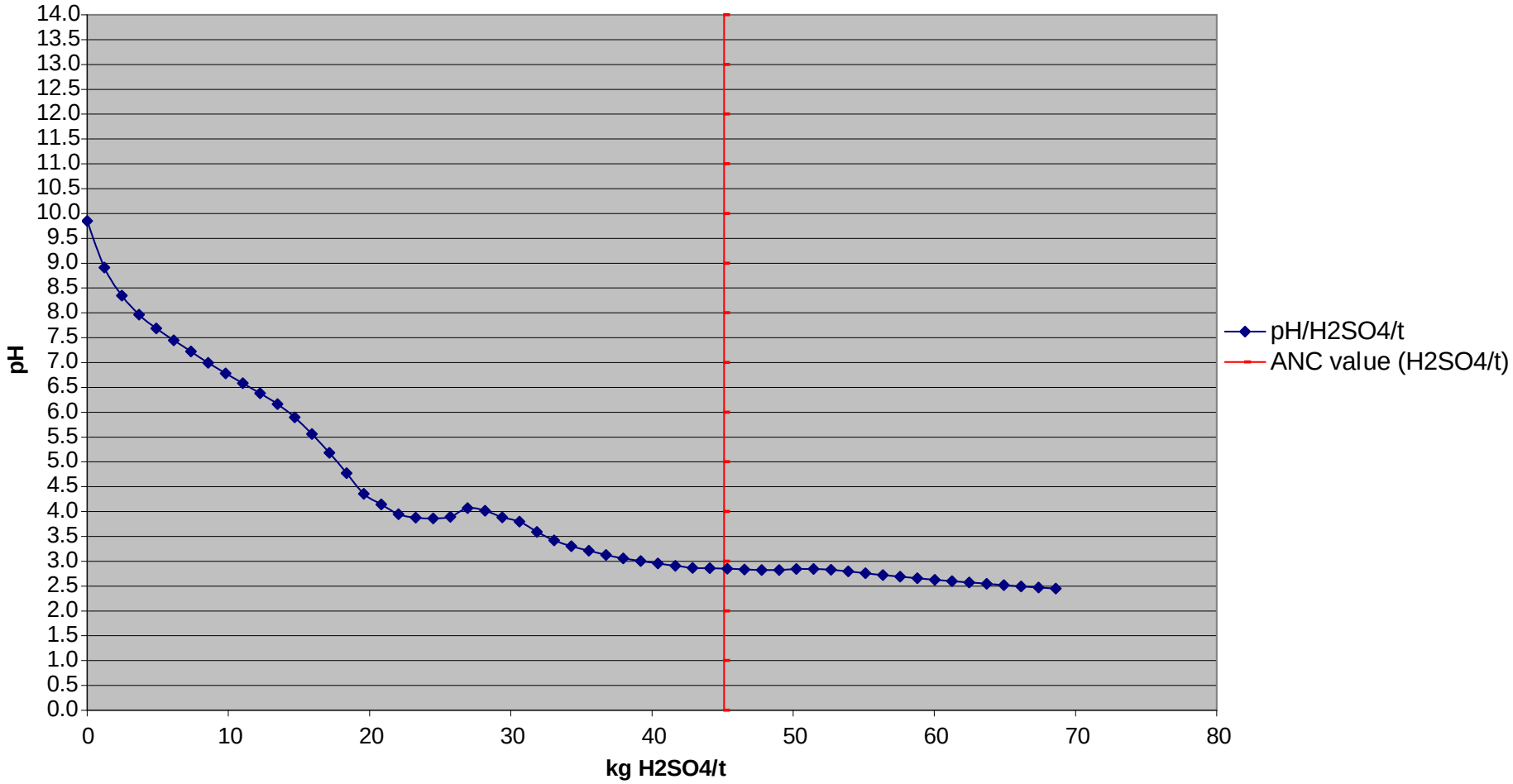
EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.71	36	18	44.1	4.33
1	0.5	1.225	8.51	37	18.5	45.325	4.14
2	1	2.45	7.92	38	19	46.55	3.96
3	1.5	3.675	7.68	39	19.5	47.775	3.82
4	2	4.9	7.53	40	20	49	3.69
5	2.5	6.125	7.43	41	20.5	50.225	3.58
6	3	7.35	7.35	42	21	51.45	3.49
7	3.5	8.575	7.26	43	21.5	52.675	3.41
8	4	9.8	7.20	44	22	53.9	3.35
9	4.5	11.025	7.15	45	22.5	55.125	3.29
10	5	12.25	7.08	46	23	56.35	3.24
11	5.5	13.475	7.03	47	23.5	57.575	3.19
12	6	14.7	6.99	48	24	58.8	3.14
13	6.5	15.925	6.94	49	24.5	60.025	3.10
14	7	17.15	6.90	50	25	61.25	3.05
15	7.5	18.375	6.82	51	25.5	62.475	3.01
16	8	19.6	6.77	52	26	63.7	2.98
17	8.5	20.825	6.72	53	26.5	64.925	2.94
18	9	22.05	6.66	54	27	66.15	2.91
19	9.5	23.275	6.59	55	27.5	67.375	2.88
20	10	24.5	6.52	56	28	68.6	2.85
21	10.5	25.725	6.45	57	28.5	69.825	2.82
22	11	26.95	6.35	58	29	71.05	2.79
23	11.5	28.175	6.24	59	29.5	72.275	2.76
24	12	29.4	6.12	60	30	73.5	2.73
25	12.5	30.625	5.98	61	30.5	74.725	2.70
26	13	31.85	5.84	62	31	75.95	2.68
27	13.5	33.075	5.71	63	31.5	77.175	2.65
28	14	34.3	5.57	64	32	78.4	2.63
29	14.5	35.525	5.43	65	32.5	79.625	2.60
30	15	36.75	5.29	66	33	80.85	2.58
31	15.5	37.975	5.14	67	33.5	82.075	2.55
32	16	39.2	4.98	68	34	83.3	2.53
33	16.5	40.425	4.82	69	34.5	84.525	2.51
34	17	41.65	4.67	70	35	85.75	2.49
35	17.5	42.875	4.50	71	35.5	86.975	2.47

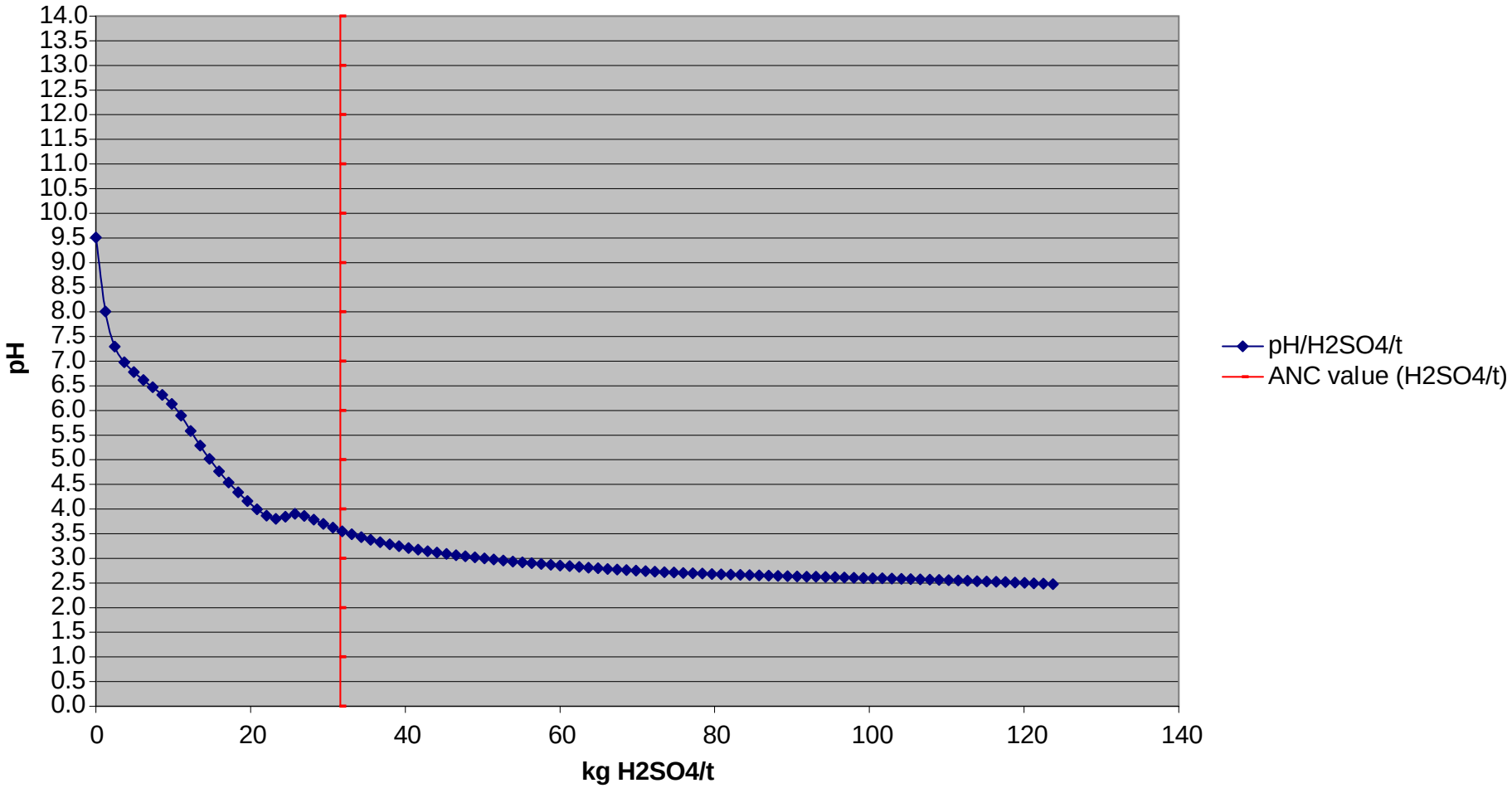
EP1204028 001(EP1201379015, NS0093 90-92)
Acid Buffering Characteristic Curve
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



EP1204028 002(EP1201379038, NS0083 88-90)
Acid Buffering Characteristic Curve
Titrating with 0.1M HCl, in increments of 0.5 mLs every 1000 seconds



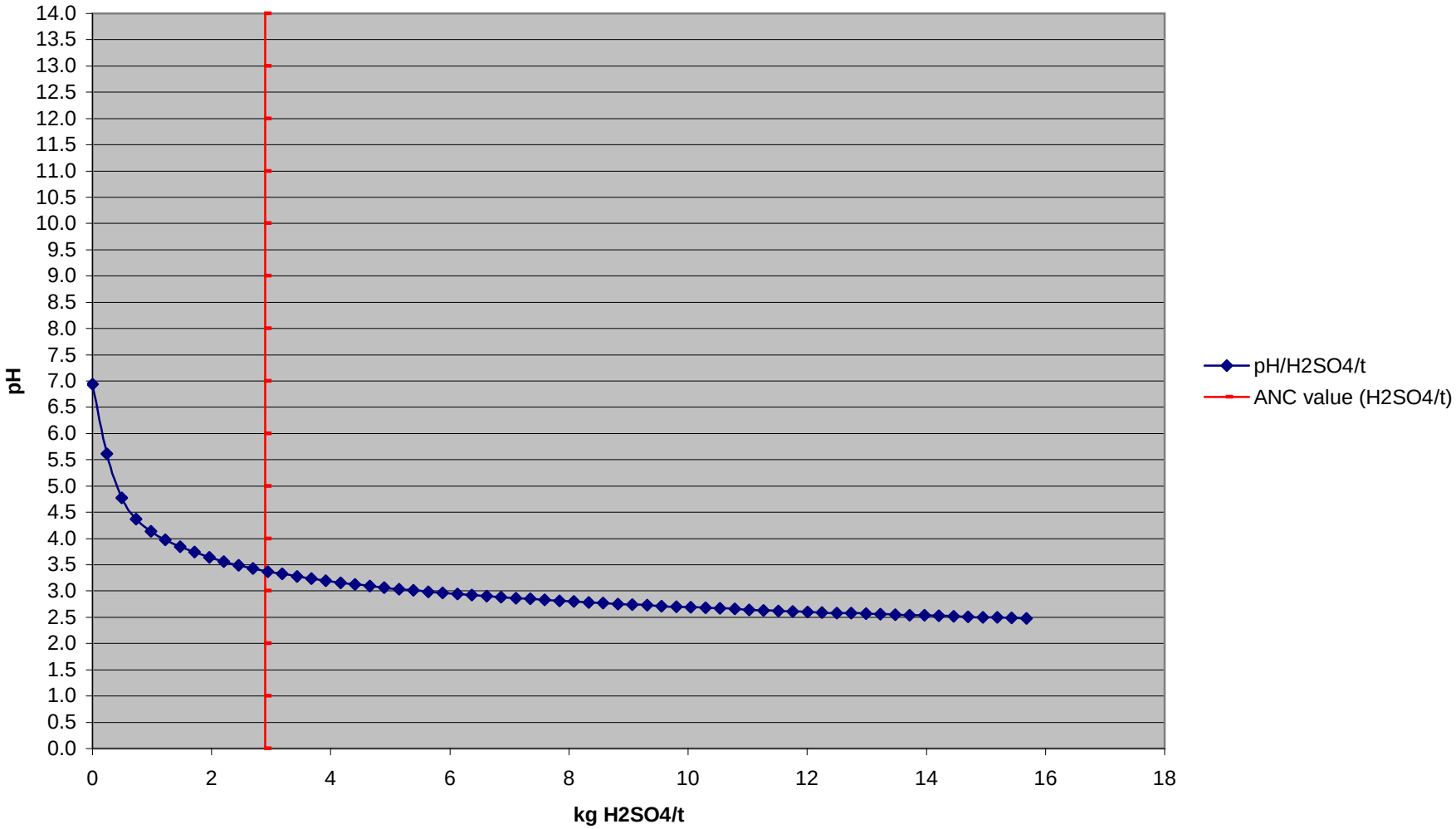
EP1204028 003(EP1201380009, NS0078 108-110)
Acid Buffering Characteristic Curve
Titrating with 0.1M HCl, in increments of 0.5 mLs every 1000 seconds



EP1204028 004(EP1201380011, NS0078 8-10)

Acid Buffering Characteristic Curve

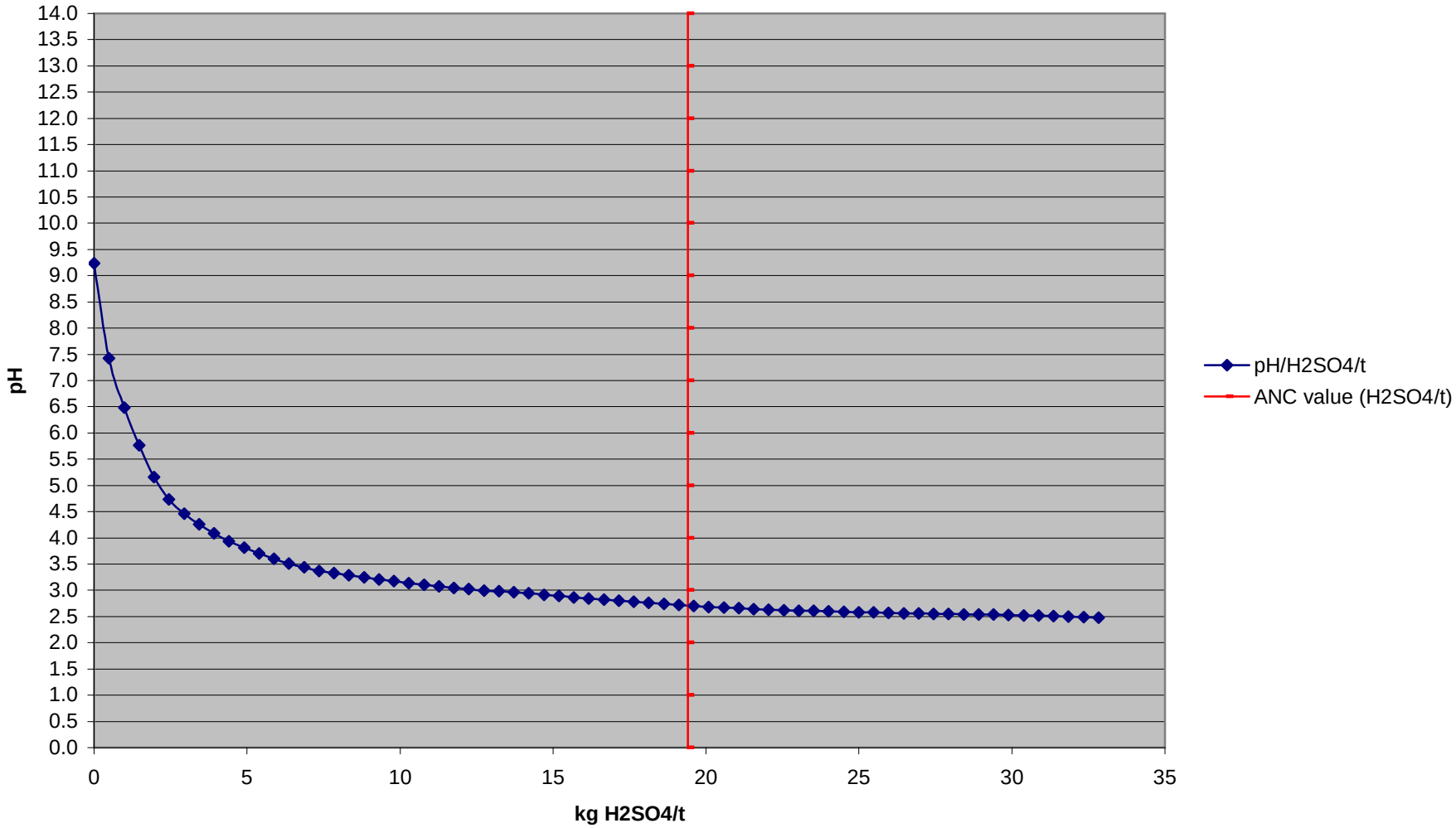
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



EP1204028 005(EP1201380043, NS0083 130-132)

Acid Buffering Characteristic Curve

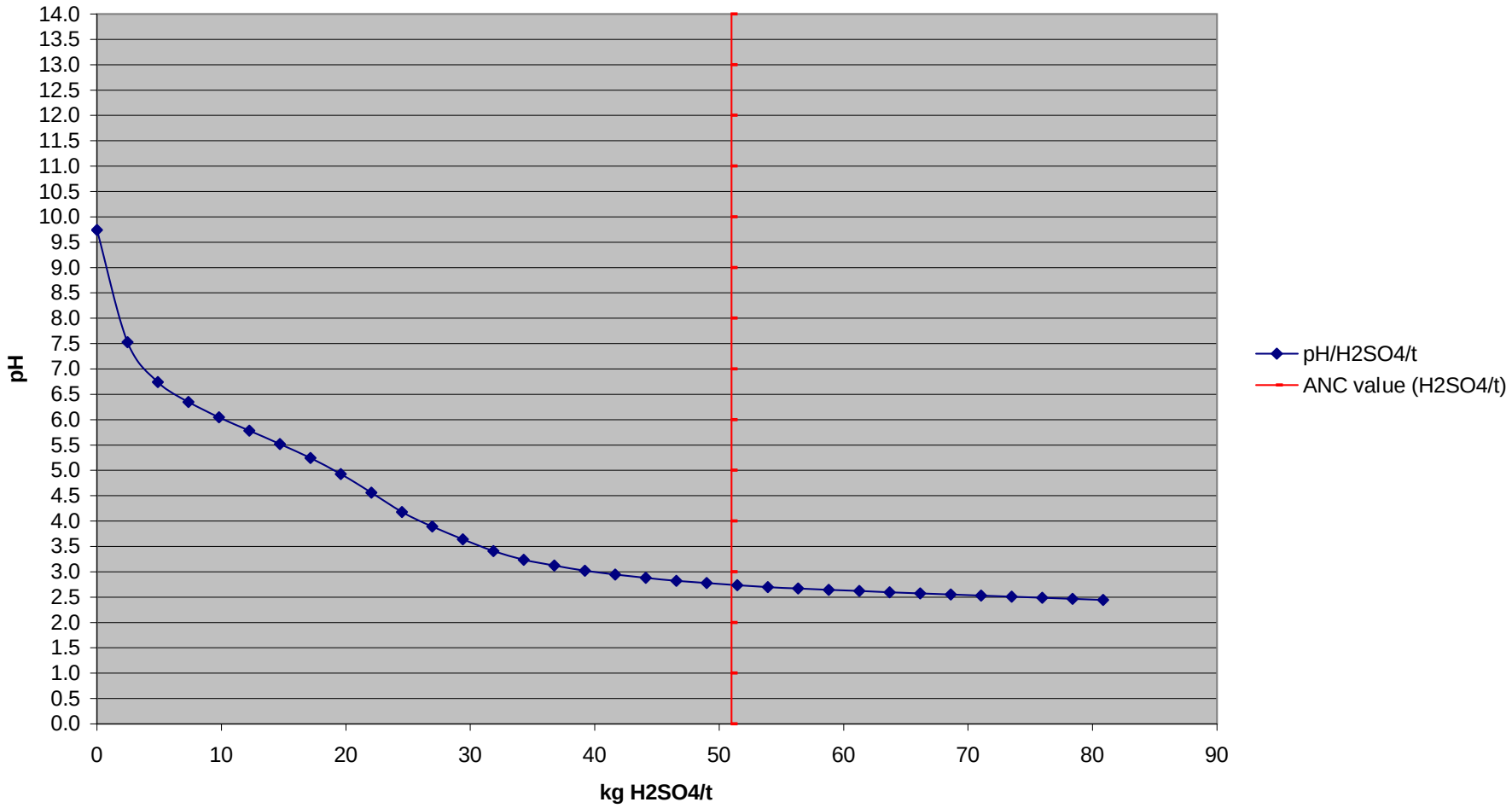
Titrating with 0.1M HCl, in increments of 0.2 mLs every 1000 seconds



EP1204028 014(EP1201383006, NS0092 48-50)

Acid Buffering Characteristic Curve

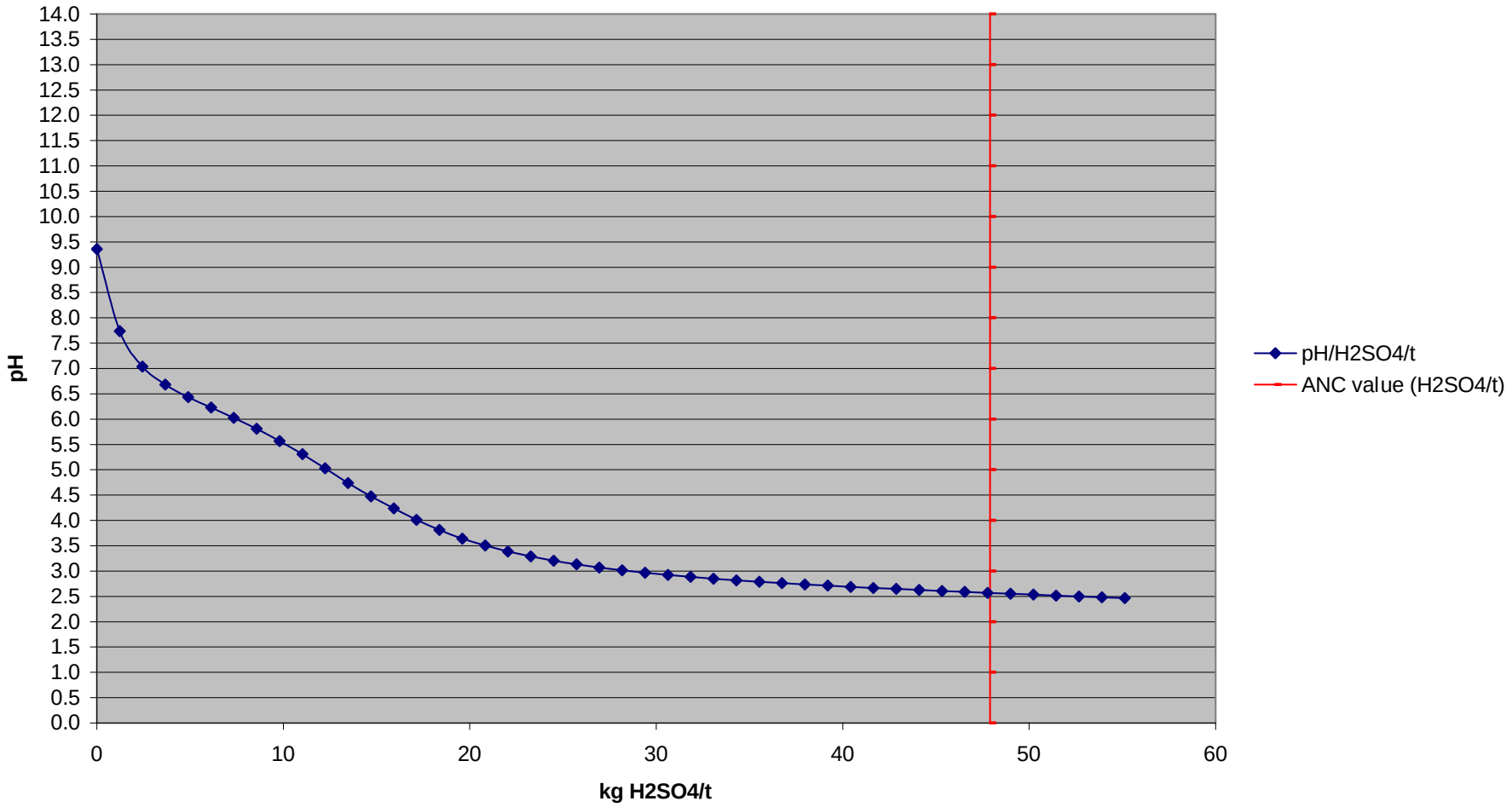
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



EP1204028 015(EP1201383007, NS0092 40-42)

Acid Buffering Characteristic Curve

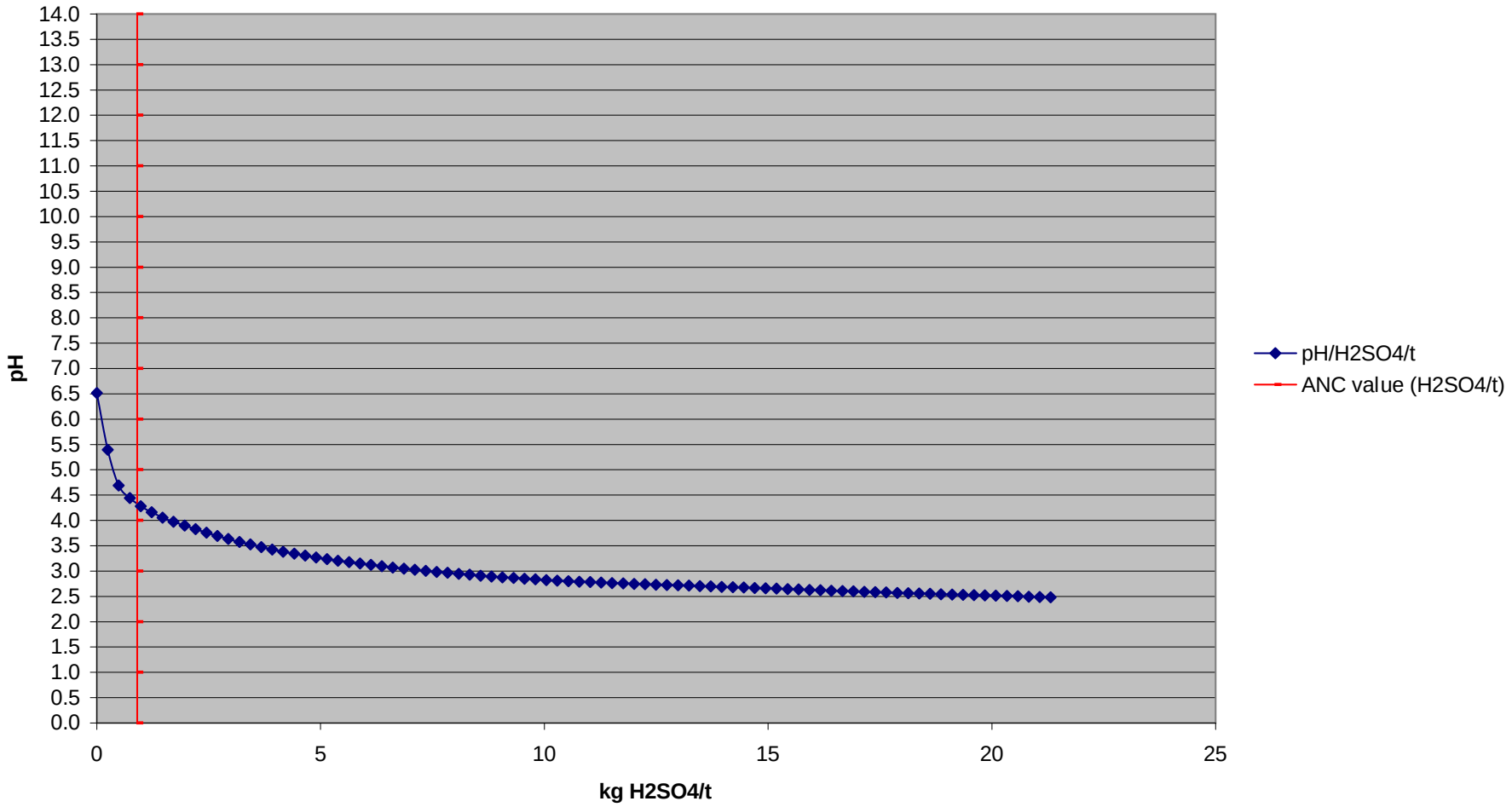
Titrating with 0.1M HCl, in increments of 0.5 mLs every 1000 seconds



EP1204028 016(EP1201383012, NS0085 10-12)

Acid Buffering Characteristic Curve

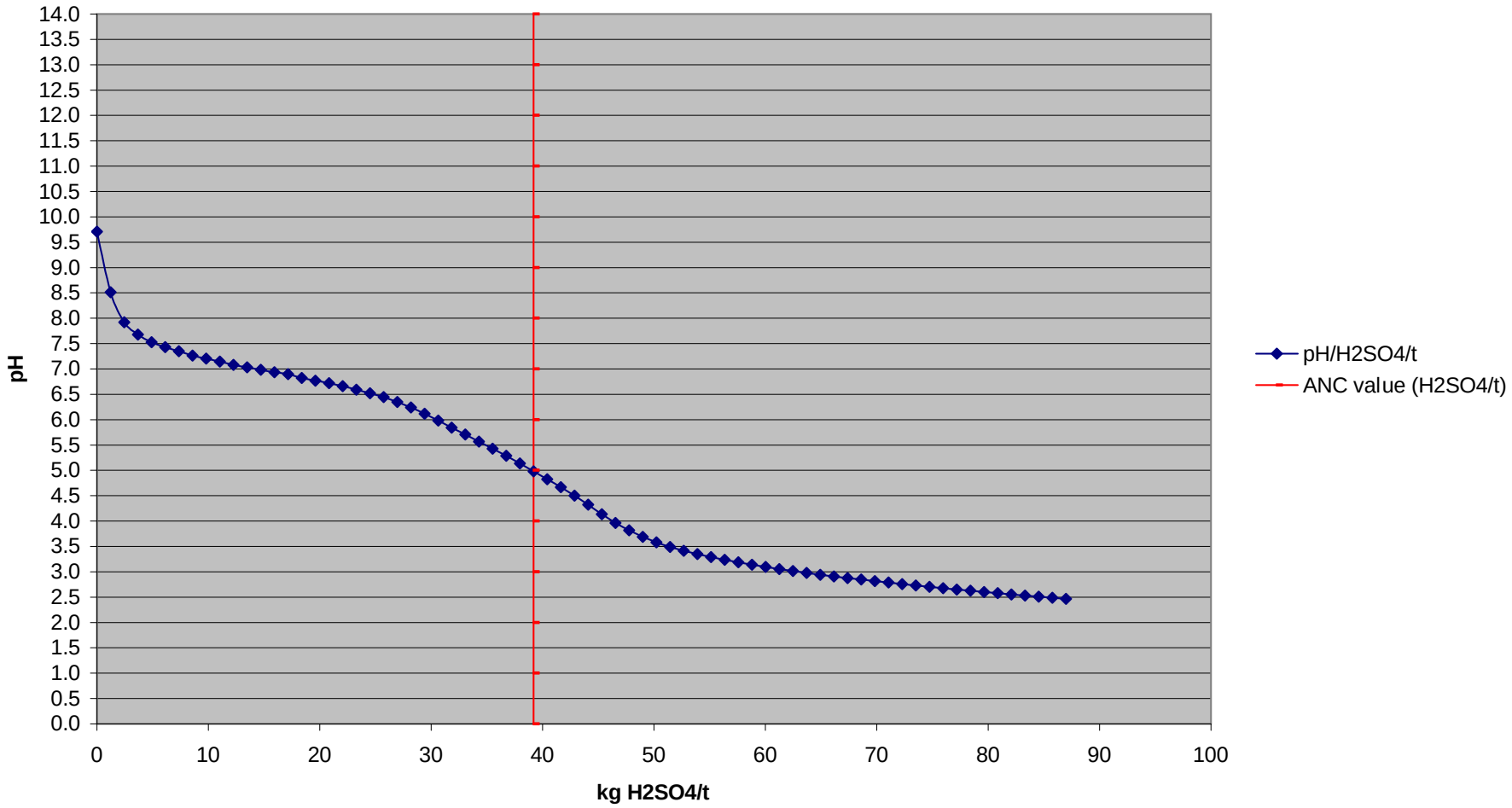
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



EP1204028 017(EP1201383026, NS0092 158-160)

Acid Buffering Characteristic Curve

Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



CERTIFICATE OF ANALYSIS

Work Order	: **EP1204028**	Page	: 1 of 4
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201379 1380 1381 1383 1382 1526 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 21-MAY-2012
Sampler	: ----	Issue Date	: 18-JUL-2012
Site	: Northstar		
		No. of samples received	: 20
Quote number	: EP/406/12	No. of samples analysed	: 9

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Myles.Clark	Acid Sulfate Soils Supervisor	Brisbane Acid Sulphate Soils

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **(ADD METHOD): NATA accreditation does not cover performance of this service.**
- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201379015 NS0093 90-92	EP1201379038 NS0083 88-90	EP1201380009 NS0078 108-110	EP1201380011 NS0078 8-10	EP1201380043 NS0083 130-132
				Client sampling date / time: 21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
				EP1204028-001	EP1204028-002	EP1204028-003	EP1204028-004	EP1204028-005
EA013: Acid Neutralising Capacity								
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	**67.3**	**45.1**	**31.6**	**2.9**	**19.4**
ANC as CaCO3	----	0.1	% CaCO3	**6.9**	**4.6**	**3.2**	**0.3**	**2.0**
Fizz Rating	----	0	Fizz Unit	**2.0000000**	**2.0000000**	**1.0000000**	**0.0000000**	**2.0000000**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201383006 NS0092 48-50	EP1201383007 NS0092 40-42	EP1201383012 NS0085 10-12	EP1201383026 NS0092 158-160	----
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	----
					EP1204028-014	EP1204028-015	EP1204028-016	EP1204028-017	----
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t		**51.0**	**47.4**	**0.9**	**39.2**	----
ANC as CaCO3	----	0.1	% CaCO3		**5.2**	**4.8**	<0.1	**4.0**	----
Fizz Rating	----	0	Fizz Unit		**2.0000000**	**2.0000000**	**0.0000000**	**2.0000000**	----

ALS Environmental

Acid Buffering Characteristic Curve (ABCC) REPORT

Batch: EP1204029

CONTACT:	David Morgan	LABORATORY:	Brisbane
CLIENT:	GHD PTY LTD	DATE SAMPLED:	21/02/2012
ADDRESS:	239 ADELAIDE TERRACE	DATE RECEIVED:	21/05/2012
	PERTH, WA 6004	DATE COMPLETED:	23/05/012
		SAMPLE TYPE:	Soil
		No. of SAMPLES:	17

COMMENTS

EA046 : NATA accreditation does not cover performance of this service.

ISSUING LABORATORY: ALS BRISBANE

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Signatory

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201383048
	Client Sample Identification 2			NS0091 198-200
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	1
	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**23.7**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.40				
1	0.5	1.225	6.56				
2	1	2.45	5.53				
3	1.5	3.675	5.03				
4	2	4.9	4.39				
5	2.5	6.125	3.87				
6	3	7.35	3.57				
7	3.5	8.575	3.36				
8	4	9.8	3.21				
9	4.5	11.025	3.09				
10	5	12.25	2.99				
11	5.5	13.475	2.91				
12	6	14.7	2.84				
13	6.5	15.925	2.79				
14	7	17.15	2.75				
15	7.5	18.375	2.71				
16	8	19.6	2.67				
17	8.5	20.825	2.63				
18	9	22.05	2.59				
19	9.5	23.275	2.56				
20	10	24.5	2.53				
21	10.5	25.725	2.50				
22	11	26.95	2.47				
23	11.5	28.175	2.44				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201383048
	Client Sample Identification 2			NS0091 198-200
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	1	Check
	EP1204029	

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**23.7**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.28				
1	0.5	1.225	6.43				
2	1	2.45	5.69				
3	1.5	3.675	5.08				
4	2	4.9	4.31				
5	2.5	6.125	3.82				
6	3	7.35	3.56				
7	3.5	8.575	3.30				
8	4	9.8	3.23				
9	4.5	11.025	3.08				
10	5	12.25	2.98				
11	5.5	13.475	2.90				
12	6	14.7	2.85				
13	6.5	15.925	2.80				
14	7	17.15	2.74				
15	7.5	18.375	2.70				
16	8	19.6	2.67				
17	8.5	20.825	2.63				
18	9	22.05	2.58				
19	9.5	23.275	2.57				
20	10	24.5	2.53				
21	10.5	25.725	2.50				
22	11	26.95	2.48				
23	11.5	28.175	2.47				
24	12	29.4	2.46				
25	12.5	30.625	2.44				
26	13	31.85	2.43				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201384003
	Client Sample Identification 2			NS0085 208-210
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	2
	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**53.8**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.48	36	7.2	88.2	2.64
1	0.2	2.45	7.43	37	7.4	90.65	2.61
2	0.4	4.9	6.75	38	7.6	93.1	2.58
3	0.6	7.35	6.41	39	7.8	95.55	2.55
4	0.8	9.8	6.13	40	8	98	2.53
5	1	12.25	5.82	41	8.2	100.45	2.50
6	1.2	14.7	5.44	42	8.4	102.9	2.48
7	1.4	17.15	5.02	43	8.6	105.35	2.45
8	1.6	19.6	4.64	44	8.8	107.8	2.43
9	1.8	22.05	4.39				
10	2	24.5	4.21				
11	2.2	26.95	4.04				
12	2.4	29.4	3.91				
13	2.6	31.85	3.79				
14	2.8	34.3	3.68				
15	3	36.75	3.60				
16	3.2	39.2	3.51				
17	3.4	41.65	3.43				
18	3.6	44.1	3.36				
19	3.8	46.55	3.30				
20	4	49	3.24				
21	4.2	51.45	3.18				
22	4.4	53.9	3.13				
23	4.6	56.35	3.08				
24	4.8	58.8	3.04				
25	5	61.25	3.00				
26	5.2	63.7	2.96				
27	5.4	66.15	2.92				
28	5.6	68.6	2.88				
29	5.8	71.05	2.85				
30	6	73.5	2.82				
31	6.2	75.95	2.78				
32	6.4	78.4	2.75				
33	6.6	80.85	2.72				
34	6.8	83.3	2.69				
35	7	85.75	2.66				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201384015
	Client Sample Identification 2			NS0085 90-92
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	3
	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**65.5**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.93	36	7.2	88.2	2.68
1	0.2	2.45	8.86	37	7.4	90.65	2.62
2	0.4	4.9	7.90	38	7.6	93.1	2.57
3	0.6	7.35	7.26	39	7.8	95.55	2.51
4	0.8	9.8	6.91	40	8	98	2.46
5	1	12.25	6.71	41	8.2	100.45	2.41
6	1.2	14.7	6.56	42	8.4	102.9	2.36
7	1.4	17.15	6.45				
8	1.6	19.6	6.36				
9	1.8	22.05	6.27				
10	2	24.5	6.21				
11	2.2	26.95	6.14				
12	2.4	29.4	6.08				
13	2.6	31.85	6.02				
14	2.8	34.3	5.96				
15	3	36.75	5.89				
16	3.2	39.2	5.81				
17	3.4	41.65	5.73				
18	3.6	44.1	5.63				
19	3.8	46.55	5.52				
20	4	49	5.39				
21	4.2	51.45	5.22				
22	4.4	53.9	5.01				
23	4.6	56.35	4.75				
24	4.8	58.8	4.51				
25	5	61.25	4.30				
26	5.2	63.7	4.03				
27	5.4	66.15	3.74				
28	5.6	68.6	3.51				
29	5.8	71.05	3.32				
30	6	73.5	3.19				
31	6.2	75.95	3.07				
32	6.4	78.4	2.97				
33	6.6	80.85	2.89				
34	6.8	83.3	2.81				
35	7	85.75	2.75				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201384022
	Client Sample Identification 2			NS0107 40-42
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	4
	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**2.8**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	7.48	36	3.6	8.82	3.13
1	0.1	0.245	6.28	37	3.7	9.065	3.10
2	0.2	0.49	5.48	38	3.8	9.31	3.07
3	0.3	0.735	4.99	39	3.9	9.555	3.04
4	0.4	0.98	4.76	40	4	9.8	3.01
5	0.5	1.225	4.65	41	4.1	10.045	2.99
6	0.6	1.47	4.58	42	4.2	10.29	2.96
7	0.7	1.715	4.53	43	4.3	10.535	2.94
8	0.8	1.96	4.49	44	4.4	10.78	2.92
9	0.9	2.205	4.45	45	4.5	11.025	2.89
10	1	2.45	4.42	46	4.6	11.27	2.87
11	1.1	2.695	4.38	47	4.7	11.515	2.85
12	1.2	2.94	4.33	48	4.8	11.76	2.83
13	1.3	3.185	4.29	49	4.9	12.005	2.81
14	1.4	3.43	4.25	50	5	12.25	2.79
15	1.5	3.675	4.20	51	5.1	12.495	2.78
16	1.6	3.92	4.14	52	5.2	12.74	2.76
17	1.7	4.165	4.08	53	5.3	12.985	2.74
18	1.8	4.41	4.02	54	5.4	13.23	2.73
19	1.9	4.655	3.96	55	5.5	13.475	2.71
20	2	4.9	3.90	56	5.6	13.72	2.68
21	2.1	5.145	3.84	57	5.7	13.965	2.65
22	2.2	5.39	3.77	58	5.8	14.21	2.64
23	2.3	5.635	3.71	59	5.9	14.455	2.63
24	2.4	5.88	3.65	60	6	14.7	2.62
25	2.5	6.125	3.59	61	6.1	14.945	2.60
26	2.6	6.37	3.54	62	6.2	15.19	2.59
27	2.7	6.615	3.49	63	6.3	15.435	2.58
28	2.8	6.86	3.44	64	6.4	15.68	2.57
29	2.9	7.105	3.39	65	6.5	15.925	2.56
30	3	7.35	3.35	66	6.6	16.17	2.55
31	3.1	7.595	3.31	67	6.7	16.415	2.54
32	3.2	7.84	3.27	68	6.8	16.66	2.53
33	3.3	8.085	3.23	69	6.9	16.905	2.52
34	3.4	8.33	3.20	70	7	17.15	2.51
35	3.5	8.575	3.16	71	7.1	17.395	2.50

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201384027
	Client Sample Identification 2			NS0107 80-82
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	5
	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**40.5**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	8.26	36	18	44.1	2.50
1	0.5	1.225	5.99	37	18.5	45.325	2.47
2	1	2.45	4.91	38	19	46.55	2.45
3	1.5	3.675	4.50				
4	2	4.9	4.38				
5	2.5	6.125	4.33				
6	3	7.35	4.22				
7	3.5	8.575	4.05				
8	4	9.8	3.89				
9	4.5	11.025	3.75				
10	5	12.25	3.63				
11	5.5	13.475	3.54				
12	6	14.7	3.45				
13	6.5	15.925	3.38				
14	7	17.15	3.31				
15	7.5	18.375	3.25				
16	8	19.6	3.20				
17	8.5	20.825	3.15				
18	9	22.05	3.10				
19	9.5	23.275	3.06				
20	10	24.5	3.02				
21	10.5	25.725	2.98				
22	11	26.95	2.95				
23	11.5	28.175	2.92				
24	12	29.4	2.88				
25	12.5	30.625	2.85				
26	13	31.85	2.81				
27	13.5	33.075	2.78				
28	14	34.3	2.74				
29	14.5	35.525	2.71				
30	15	36.75	2.67				
31	15.5	37.975	2.64				
32	16	39.2	2.61				
33	16.5	40.425	2.58				
34	17	41.65	2.55				
35	17.5	42.875	2.52				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201384043
	Client Sample Identification 2			NS0086 208-210
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	6
	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**64.4**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.64	36	7.2	88.2	2.39
1	0.2	2.45	8.45				
2	0.4	4.9	7.94				
3	0.6	7.35	7.67				
4	0.8	9.8	7.55				
5	1	12.25	7.44				
6	1.2	14.7	7.32				
7	1.4	17.15	7.17				
8	1.6	19.6	7.03				
9	1.8	22.05	6.92				
10	2	24.5	6.83				
11	2.2	26.95	6.71				
12	2.4	29.4	6.61				
13	2.6	31.85	6.50				
14	2.8	34.3	6.30				
15	3	36.75	6.06				
16	3.2	39.2	5.67				
17	3.4	41.65	5.36				
18	3.6	44.1	5.10				
19	3.8	46.55	4.85				
20	4	49	4.59				
21	4.2	51.45	4.26				
22	4.4	53.9	3.93				
23	4.6	56.35	3.61				
24	4.8	58.8	3.36				
25	5	61.25	3.19				
26	5.2	63.7	3.05				
27	5.4	66.15	2.94				
28	5.6	68.6	2.85				
29	5.8	71.05	2.77				
30	6	73.5	2.70				
31	6.2	75.95	2.64				
32	6.4	78.4	2.58				
33	6.6	80.85	2.53				
34	6.8	83.3	2.48				
35	7	85.75	2.44				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201384045
	Client Sample Identification 2			NS0086 248-250
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	7
	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**59.6**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.97				
1	0.2	2.45	8.64				
2	0.4	4.9	7.96				
3	0.6	7.35	7.51				
4	0.8	9.8	7.22				
5	1	12.25	7.03				
6	1.2	14.7	6.84				
7	1.4	17.15	6.65				
8	1.6	19.6	6.44				
9	1.8	22.05	6.21				
10	2	24.5	5.98				
11	2.2	26.95	5.73				
12	2.4	29.4	5.49				
13	2.6	31.85	5.21				
14	2.8	34.3	4.79				
15	3	36.75	4.30				
16	3.2	39.2	3.84				
17	3.4	41.65	3.45				
18	3.6	44.1	3.19				
19	3.8	46.55	3.00				
20	4	49	2.88				
21	4.2	51.45	2.78				
22	4.4	53.9	2.68				
23	4.6	56.35	2.59				
24	4.8	58.8	2.51				
25	5	61.25	2.44				
26	5.2	63.7	2.38				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201526047
	Client Sample Identification 2			NS0089 348-350
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	12
	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**25.6**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	8.66				
1	0.5	1.225	6.50				
2	1	2.45	6.00				
3	1.5	3.675	5.77				
4	2	4.9	5.55				
5	2.5	6.125	5.50				
6	3	7.35	5.39				
7	3.5	8.575	5.22				
8	4	9.8	4.92				
9	4.5	11.025	4.51				
10	5	12.25	4.07				
11	5.5	13.475	3.71				
12	6	14.7	3.45				
13	6.5	15.925	3.24				
14	7	17.15	3.09				
15	7.5	18.375	2.98				
16	8	19.6	2.89				
17	8.5	20.825	2.82				
18	9	22.05	2.75				
19	9.5	23.275	2.69				
20	10	24.5	2.63				
21	10.5	25.725	2.57				
22	11	26.95	2.52				
23	11.5	28.175	2.48				
24	12	29.4	2.44				
25	12.5	30.625	2.40				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201527028
	Client Sample Identification 2			NS0087 8-10
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	13
	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**1.8**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	6.87	36	3.6	8.82	2.70
1	0.1	0.245	5.44	37	3.7	9.065	2.69
2	0.2	0.49	4.78	38	3.8	9.31	2.68
3	0.3	0.735	4.38	39	3.9	9.555	2.66
4	0.4	0.98	4.13	40	4	9.8	2.65
5	0.5	1.225	3.93	41	4.1	10.045	2.64
6	0.6	1.47	3.78	42	4.2	10.29	2.63
7	0.7	1.715	3.67	43	4.3	10.535	2.62
8	0.8	1.96	3.57	44	4.4	10.78	2.60
9	0.9	2.205	3.48	45	4.5	11.025	2.59
10	1	2.45	3.42	46	4.6	11.27	2.58
11	1.1	2.695	3.35	47	4.7	11.515	2.57
12	1.2	2.94	3.30	48	4.8	11.76	2.56
13	1.3	3.185	3.25	49	4.9	12.005	2.55
14	1.4	3.43	3.21	50	5	12.25	2.54
15	1.5	3.675	3.17	51	5.1	12.495	2.53
16	1.6	3.92	3.13	52	5.2	12.74	2.52
17	1.7	4.165	3.10	53	5.3	12.985	2.51
18	1.8	4.41	3.06	54	5.4	13.23	2.50
19	1.9	4.655	3.04	55	5.5	13.475	2.49
20	2	4.9	3.01	56	5.6	13.72	2.48
21	2.1	5.145	2.98	57	5.7	13.965	2.47
22	2.2	5.39	2.96				
23	2.3	5.635	2.93				
24	2.4	5.88	2.91				
25	2.5	6.125	2.89				
26	2.6	6.37	2.87				
27	2.7	6.615	2.85				
28	2.8	6.86	2.83				
29	2.9	7.105	2.81				
30	3	7.35	2.80				
31	3.1	7.595	2.78				
32	3.2	7.84	2.76				
33	3.3	8.085	2.75				
34	3.4	8.33	2.73				
35	3.5	8.575	2.72				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201528001
	Client Sample Identification 2			NS0089 88-90
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	14
	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**22.0**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	8.22				
1	0.5	1.225	6.76				
2	1	2.45	5.92				
3	1.5	3.675	5.18				
4	2	4.9	4.65				
5	2.5	6.125	4.27				
6	3	7.35	3.95				
7	3.5	8.575	3.70				
8	4	9.8	3.51				
9	4.5	11.025	3.35				
10	5	12.25	3.22				
11	5.5	13.475	3.11				
12	6	14.7	3.03				
13	6.5	15.925	2.96				
14	7	17.15	2.90				
15	7.5	18.375	2.84				
16	8	19.6	2.80				
17	8.5	20.825	2.76				
18	9	22.05	2.73				
19	9.5	23.275	2.70				
20	10	24.5	2.67				
21	10.5	25.725	2.65				
22	11	26.95	2.62				
23	11.5	28.175	2.60				
24	12	29.4	2.59				
25	12.5	30.625	2.57				
26	13	31.85	2.56				
27	13.5	33.075	2.54				
28	14	34.3	2.53				
29	14.5	35.525	2.52				
30	15	36.75	2.51				
31	15.5	37.975	2.49				
32	16	39.2	2.48				
33	16.5	40.425	2.47				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201529008
	Client Sample Identification 2			NS0090 190-192
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	16
	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**25.6**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	8.08				
1	0.5	1.225	6.48				
2	1	2.45	5.65				
3	1.5	3.675	5.28				
4	2	4.9	4.93				
5	2.5	6.125	4.47				
6	3	7.35	4.10				
7	3.5	8.575	3.80				
8	4	9.8	3.58				
9	4.5	11.025	3.42				
10	5	12.25	3.27				
11	5.5	13.475	3.15				
12	6	14.7	3.04				
13	6.5	15.925	2.95				
14	7	17.15	2.86				
15	7.5	18.375	2.79				
16	8	19.6	2.72				
17	8.5	20.825	2.66				
18	9	22.05	2.60				
19	9.5	23.275	2.55				
20	10	24.5	2.51				
21	10.5	25.725	2.46				
22	11	26.95	2.42				
23	11.5	28.175	2.39				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201529008
	Client Sample Identification 2			NS0090 190-192
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

16	Check
EP1204029	

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**25.6**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.04				
1	0.5	1.225	6.51				
2	1	2.45	5.79				
3	1.5	3.675	5.40				
4	2	4.9	5.21				
5	2.5	6.125	4.73				
6	3	7.35	4.30				
7	3.5	8.575	3.91				
8	4	9.8	3.63				
9	4.5	11.025	3.42				
10	5	12.25	3.24				
11	5.5	13.475	3.10				
12	6	14.7	2.97				
13	6.5	15.925	2.87				
14	7	17.15	2.78				
15	7.5	18.375	2.71				
16	8	19.6	2.64				
17	8.5	20.825	2.58				
18	9	22.05	2.53				
19	9.5	23.275	2.48				
20	10	24.5	2.44				
21	10.5	25.725	2.40				
22	11	26.95	2.37				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201530008
	Client Sample Identification 2			NS0106 28-30
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	17
	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**7.9**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	8.54	36	3.6	8.82	3.03
1	0.1	0.245	7.42	37	3.7	9.065	3.01
2	0.2	0.49	6.78	38	3.8	9.31	2.98
3	0.3	0.735	6.38	39	3.9	9.555	2.96
4	0.4	0.98	6.02	40	4	9.8	2.94
5	0.5	1.225	5.65	41	4.1	10.045	2.92
6	0.6	1.47	5.32	42	4.2	10.29	2.90
7	0.7	1.715	5.06	43	4.3	10.535	2.88
8	0.8	1.96	4.86	44	4.4	10.78	2.86
9	0.9	2.205	4.70	45	4.5	11.025	2.85
10	1	2.45	4.55	46	4.6	11.27	2.83
11	1.1	2.695	4.42	47	4.7	11.515	2.81
12	1.2	2.94	4.30	48	4.8	11.76	2.80
13	1.3	3.185	4.19	49	4.9	12.005	2.78
14	1.4	3.43	4.10	50	5	12.25	2.77
15	1.5	3.675	4.01	51	5.1	12.495	2.75
16	1.6	3.92	3.93	52	5.2	12.74	2.74
17	1.7	4.165	3.86	53	5.3	12.985	2.73
18	1.8	4.41	3.78	54	5.4	13.23	2.71
19	1.9	4.655	3.72	55	5.5	13.475	2.70
20	2	4.9	3.65	56	5.6	13.72	2.69
21	2.1	5.145	3.59	57	5.7	13.965	2.68
22	2.2	5.39	3.53	58	5.8	14.21	2.67
23	2.3	5.635	3.48	59	5.9	14.455	2.66
24	2.4	5.88	3.43	60	6	14.7	2.65
25	2.5	6.125	3.39	61	6.1	14.945	2.64
26	2.6	6.37	3.34	62	6.2	15.19	2.63
27	2.7	6.615	3.30	63	6.3	15.435	2.62
28	2.8	6.86	3.27	64	6.4	15.68	2.61
29	2.9	7.105	3.23	65	6.5	15.925	2.60
30	3	7.35	3.20	66	6.6	16.17	2.60
31	3.1	7.595	3.17	67	6.7	16.415	2.59
32	3.2	7.84	3.14	68	6.8	16.66	2.58
33	3.3	8.085	3.11	69	6.9	16.905	2.57
34	3.4	8.33	3.08	70	7	17.15	2.57
35	3.5	8.575	3.06	71	7.1	17.395	2.56

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201530008
	Client Sample Identification 2			NS0106 28-30
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

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	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**7.9**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
72	7.2	17.64	2.55				
73	7.3	17.885	2.55				
74	7.4	18.13	2.54				
75	7.5	18.375	2.54				
76	7.6	18.62	2.53				
77	7.7	18.865	2.53				
78	7.8	19.11	2.52				
79	7.9	19.355	2.51				
80	8	19.6	2.51				
81	8.1	19.845	2.50				
82	8.2	20.09	2.50				
83	8.3	20.335	2.49				
84	8.4	20.58	2.49				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201530010
	Client Sample Identification 2			NS0106 48-50
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	18
	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**54.7**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.79	36	7.2	88.2	2.75
1	0.2	2.45	7.98	37	7.4	90.65	2.72
2	0.4	4.9	7.04	38	7.6	93.1	2.69
3	0.6	7.35	6.66	39	7.8	95.55	2.65
4	0.8	9.8	6.43	40	8	98	2.62
5	1	12.25	6.27	41	8.2	100.45	2.59
6	1.2	14.7	6.15	42	8.4	102.9	2.56
7	1.4	17.15	6.05	43	8.6	105.35	2.53
8	1.6	19.6	5.96	44	8.8	107.8	2.51
9	1.8	22.05	5.87	45	9	110.25	2.49
10	2	24.5	5.80	46	9.2	112.7	2.46
11	2.2	26.95	5.73	47	9.4	115.15	2.45
12	2.4	29.4	5.65				
13	2.6	31.85	5.58				
14	2.8	34.3	5.51				
15	3	36.75	5.44				
16	3.2	39.2	5.36				
17	3.4	41.65	5.28				
18	3.6	44.1	5.20				
19	3.8	46.55	5.10				
20	4	49	5.00				
21	4.2	51.45	4.87				
22	4.4	53.9	4.74				
23	4.6	56.35	4.59				
24	4.8	58.8	4.40				
25	5	61.25	4.21				
26	5.2	63.7	3.94				
27	5.4	66.15	3.70				
28	5.6	68.6	3.49				
29	5.8	71.05	3.30				
30	6	73.5	3.16				
31	6.2	75.95	3.04				
32	6.4	78.4	2.95				
33	6.6	80.85	2.88				
34	6.8	83.3	2.82				
35	7	85.75	2.79				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201530029
	Client Sample Identification 2			NS0094 160-162
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	19
	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**73.4**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.26				
1	0.2	2.45	7.35				
2	0.4	4.9	6.68				
3	0.6	7.35	6.38				
4	0.8	9.8	6.19				
5	1	12.25	6.06				
6	1.2	14.7	5.95				
7	1.4	17.15	5.86				
8	1.6	19.6	5.78				
9	1.8	22.05	5.70				
10	2	24.5	5.63				
11	2.2	26.95	5.55				
12	2.4	29.4	5.47				
13	2.6	31.85	5.39				
14	2.8	34.3	5.30				
15	3	36.75	5.20				
16	3.2	39.2	5.09				
17	3.4	41.65	4.95				
18	3.6	44.1	4.76				
19	3.8	46.55	4.45				
20	4	49	3.98				
21	4.2	51.45	3.51				
22	4.4	53.9	3.20				
23	4.6	56.35	2.98				
24	4.8	58.8	2.81				
25	5	61.25	2.69				
26	5.2	63.7	2.58				
27	5.4	66.15	2.50				
28	5.6	68.6	2.42				
29	5.8	71.05	2.36				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201530033
	Client Sample Identification 2			NS0094 148-150
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	20
	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**75.6**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.79				
1	0.2	2.45	7.91				
2	0.4	4.9	7.01				
3	0.6	7.35	6.64				
4	0.8	9.8	6.43				
5	1	12.25	6.31				
6	1.2	14.7	6.20				
7	1.4	17.15	6.11				
8	1.6	19.6	6.04				
9	1.8	22.05	5.97				
10	2	24.5	5.90				
11	2.2	26.95	5.83				
12	2.4	29.4	5.75				
13	2.6	31.85	5.66				
14	2.8	34.3	5.57				
15	3	36.75	5.46				
16	3.2	39.2	5.34				
17	3.4	41.65	5.19				
18	3.6	44.1	4.99				
19	3.8	46.55	4.70				
20	4	49	4.33				
21	4.2	51.45	3.82				
22	4.4	53.9	3.43				
23	4.6	56.35	3.17				
24	4.8	58.8	2.97				
25	5	61.25	2.84				
26	5.2	63.7	2.72				
27	5.4	66.15	2.62				
28	5.6	68.6	2.53				
29	5.8	71.05	2.46				
30	6	73.5	2.40				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201530042
	Client Sample Identification 2			NS0106 170-172
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	21
	EP1204029

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**74.79**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.73	36	7.2	88.2	2.50
1	0.2	2.45	8.47	37	7.4	90.65	2.43
2	0.4	4.9	7.71	38	7.6	93.1	2.37
3	0.6	7.35	7.30				
4	0.8	9.8	7.08				
5	1	12.25	6.96				
6	1.2	14.7	6.87				
7	1.4	17.15	6.81				
8	1.6	19.6	6.75				
9	1.8	22.05	6.69				
10	2	24.5	6.64				
11	2.2	26.95	6.57				
12	2.4	29.4	6.51				
13	2.6	31.85	6.45				
14	2.8	34.3	6.35				
15	3	36.75	6.28				
16	3.2	39.2	6.17				
17	3.4	41.65	6.05				
18	3.6	44.1	5.95				
19	3.8	46.55	5.83				
20	4	49	5.71				
21	4.2	51.45	5.58				
22	4.4	53.9	5.44				
23	4.6	56.35	5.29				
24	4.8	58.8	5.09				
25	5	61.25	4.85				
26	5.2	63.7	4.48				
27	5.4	66.15	4.04				
28	5.6	68.6	3.63				
29	5.8	71.05	3.33				
30	6	73.5	3.14				
31	6.2	75.95	2.98				
32	6.4	78.4	2.86				
33	6.6	80.85	2.76				
34	6.8	83.3	2.66				
35	7	85.75	2.58				

Work Order :	EP1204029	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			EP1201531004
	Client Sample Identification 2			NS0090 128-130
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	22
	EP1204029

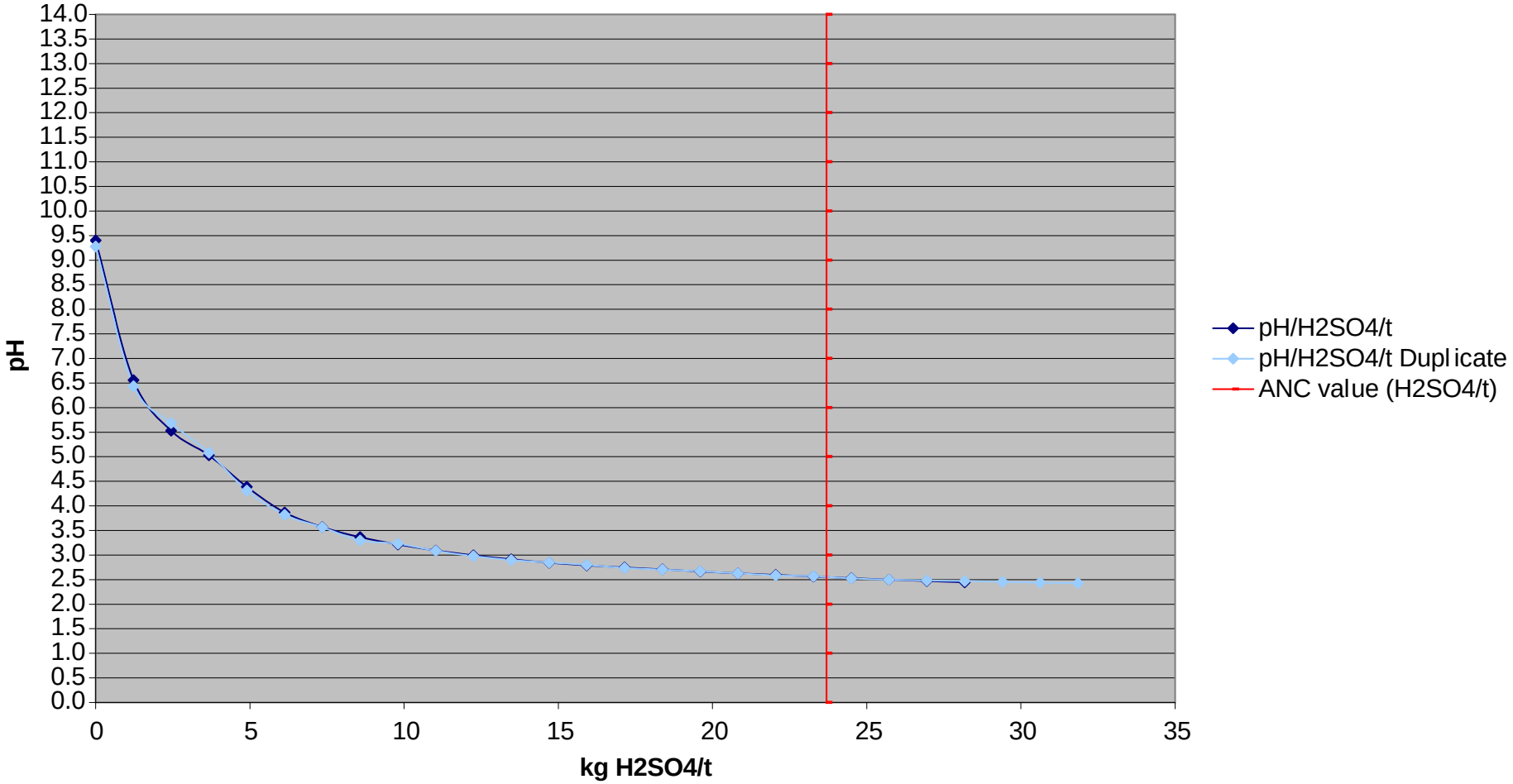
EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**50.16**

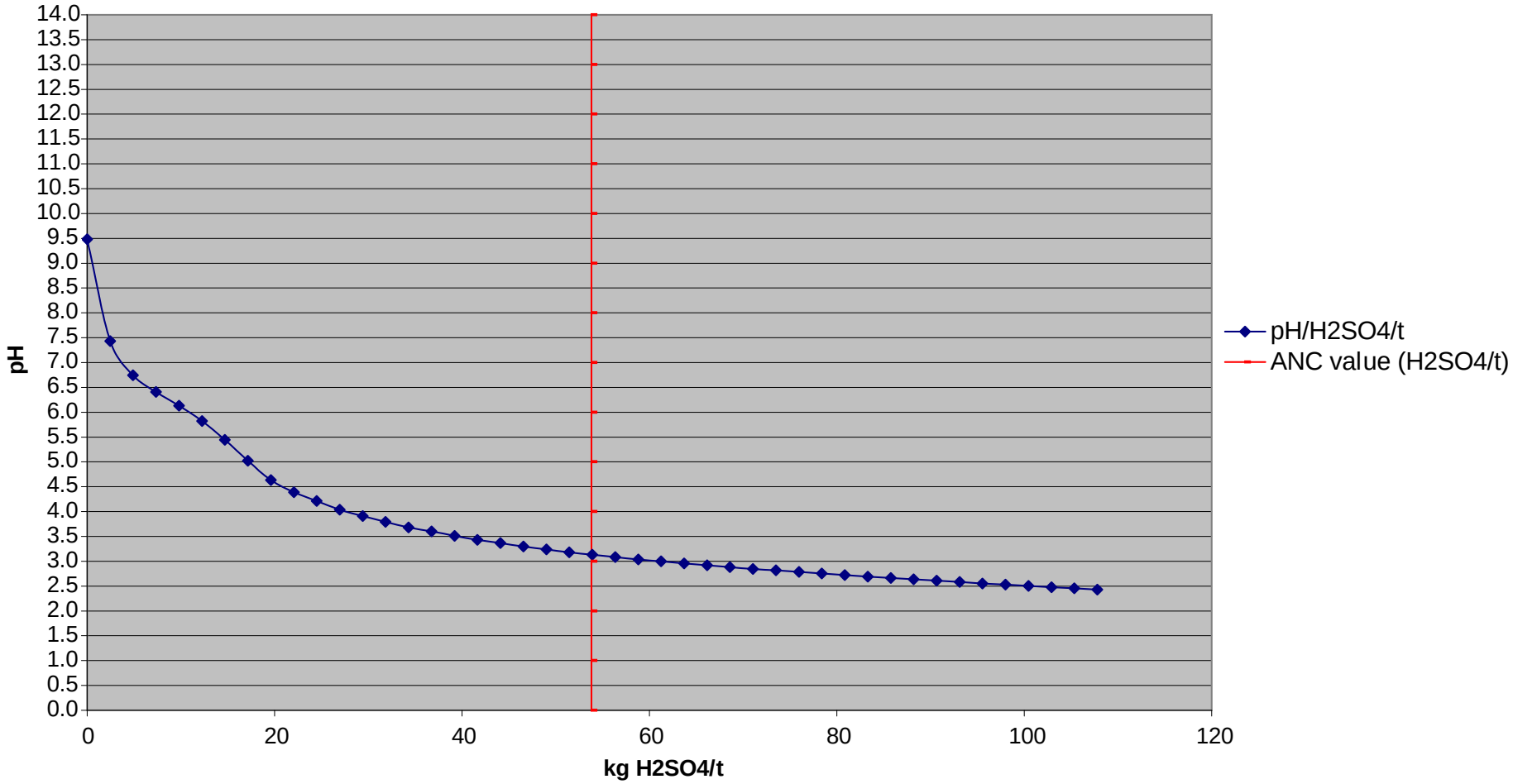
EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.74				
1	0.2	2.45	7.94				
2	0.4	4.9	7.02				
3	0.6	7.35	6.67				
4	0.8	9.8	6.47				
5	1	12.25	6.31				
6	1.2	14.7	6.14				
7	1.4	17.15	5.97				
8	1.6	19.6	5.80				
9	1.8	22.05	5.64				
10	2	24.5	5.48				
11	2.2	26.95	5.31				
12	2.4	29.4	5.12				
13	2.6	31.85	4.87				
14	2.8	34.3	4.58				
15	3	36.75	4.29				
16	3.2	39.2	3.86				
17	3.4	41.65	3.50				
18	3.6	44.1	3.23				
19	3.8	46.55	3.05				
20	4	49	2.92				
21	4.2	51.45	2.80				
22	4.4	53.9	2.71				
23	4.6	56.35	2.64				
24	4.8	58.8	2.57				
25	5	61.25	2.51				
26	5.2	63.7	2.46				
27	5.4	66.15	2.42				
28	5.6	68.6	2.38				

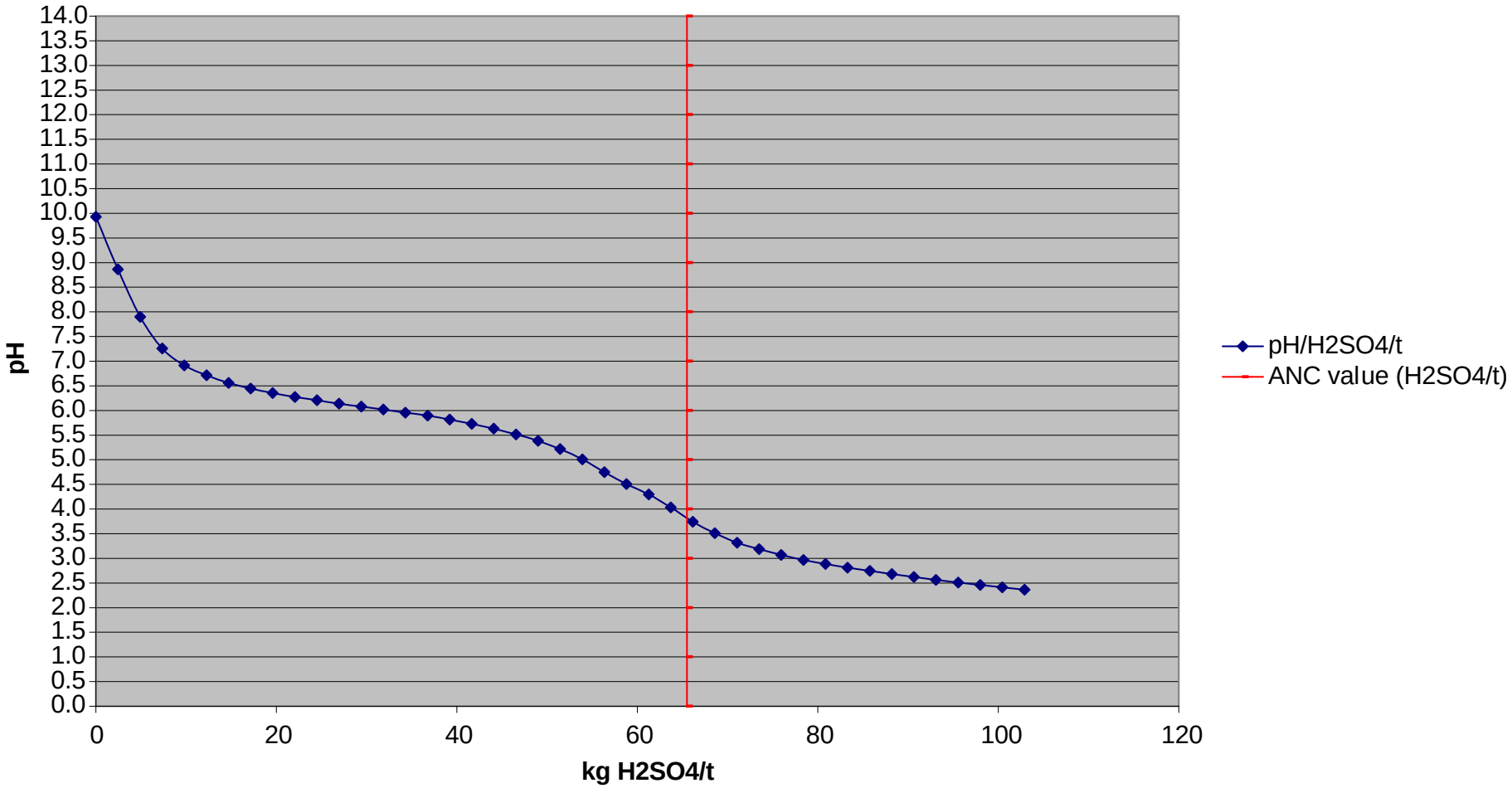
EP1204029 001 (EP1201383048, NS0091 198-200)
Acid Buffering Characteristic Curve
Titrating with 0.1M HCl, in increments of 0.5 mLs every 1000 seconds



EP1204029 002 (EP1201384003, NS0085 208-210)
Acid Buffering Characteristic Curve
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



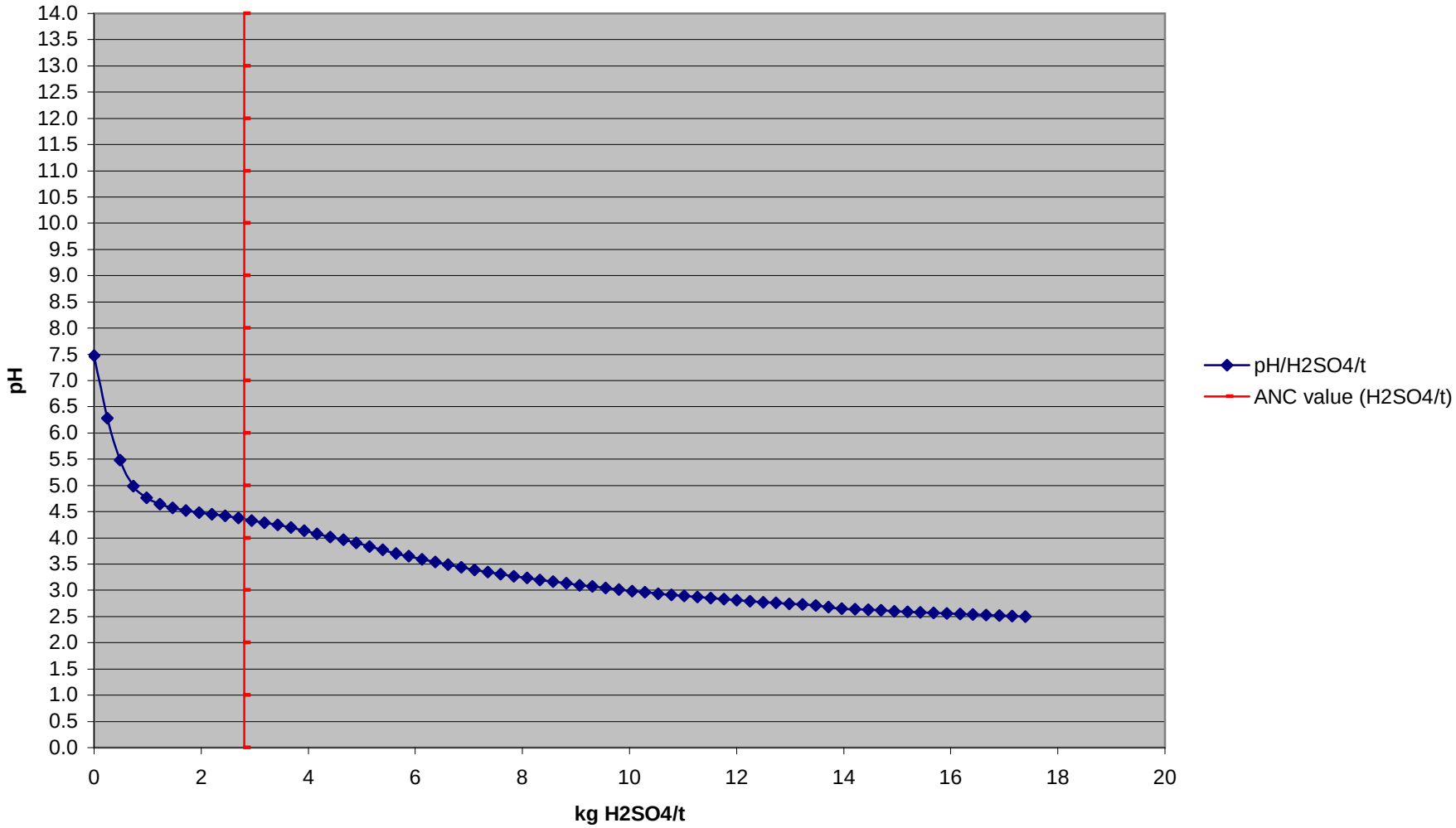
EP1204029 003 (EP1201384015, NS0085 90-92)
Acid Buffering Characteristic Curve
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



EP1204029 004 (EP1201384022, NS0107 40-42)

Acid Buffering Characteristic Curve

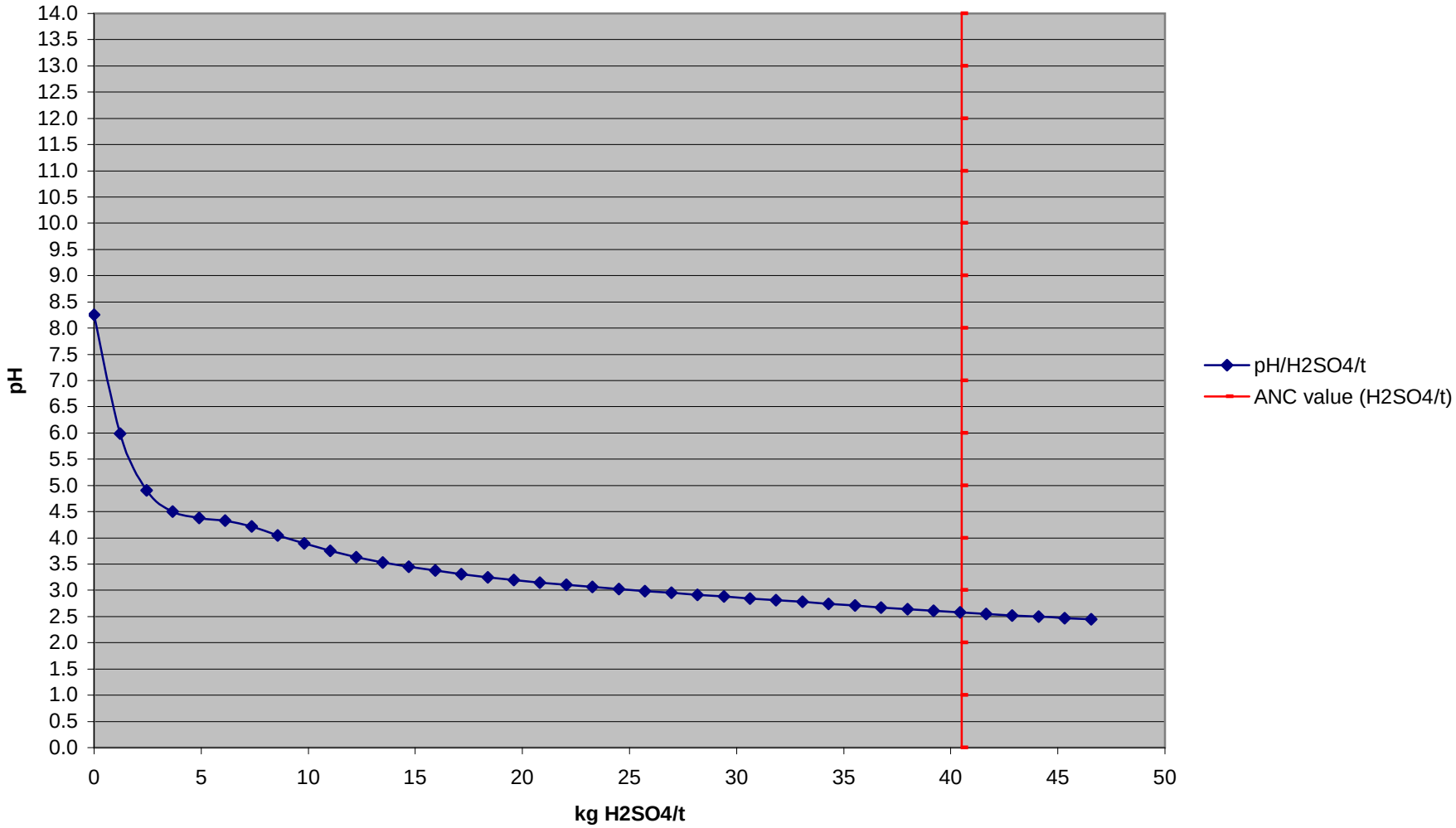
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



EP1204029 005 (EP1201384027, NS0107 80-82)

Acid Buffering Characteristic Curve

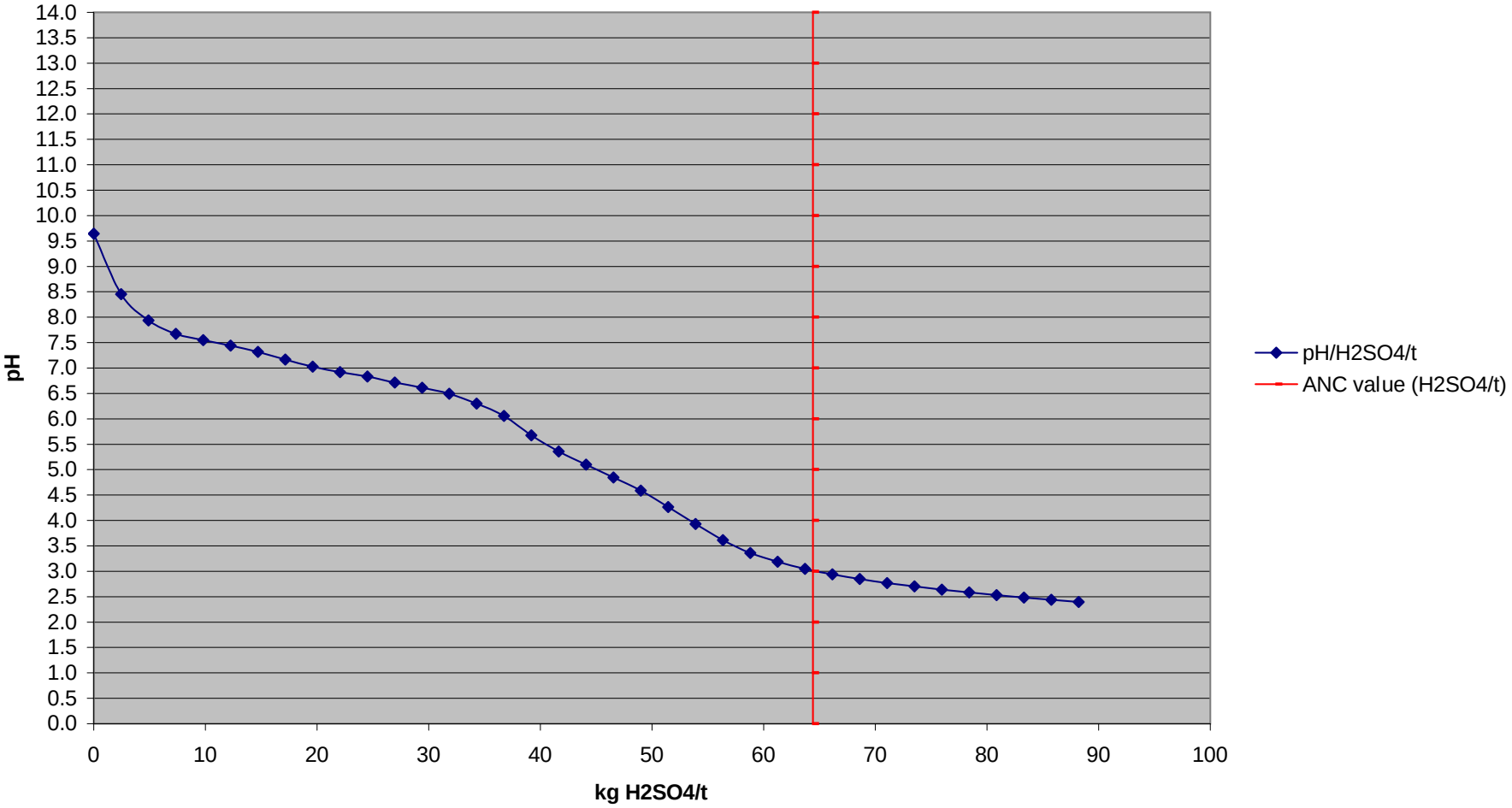
Titrating with 0.1M HCl, in increments of 0.5 mLs every 1000 seconds



EP1204029 006 (EP1201384043, NS0086 208-210)

Acid Buffering Characteristic Curve

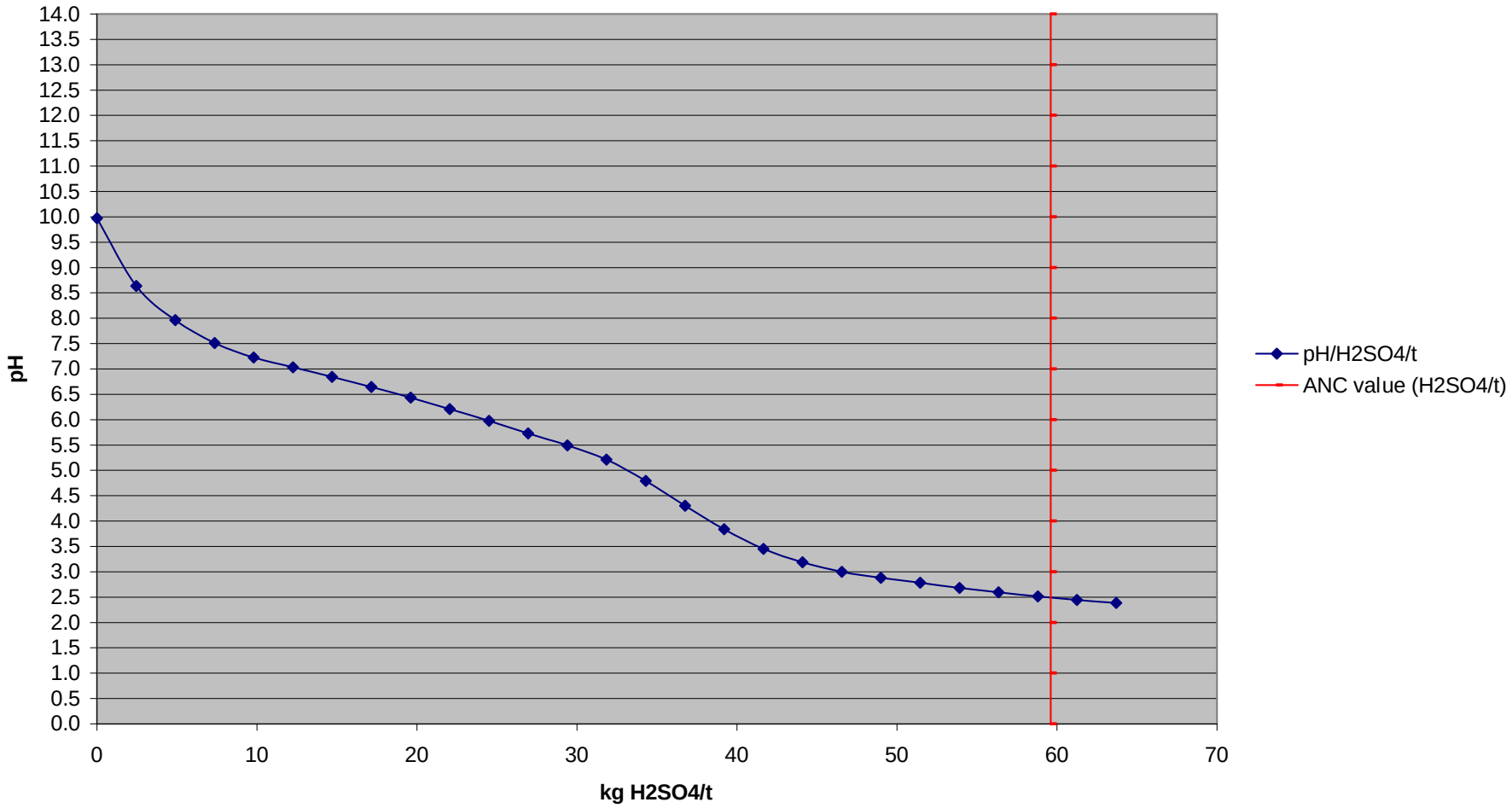
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



EP1204029 007 (EP1201384045, NS0086 248-250)

Acid Buffering Characteristic Curve

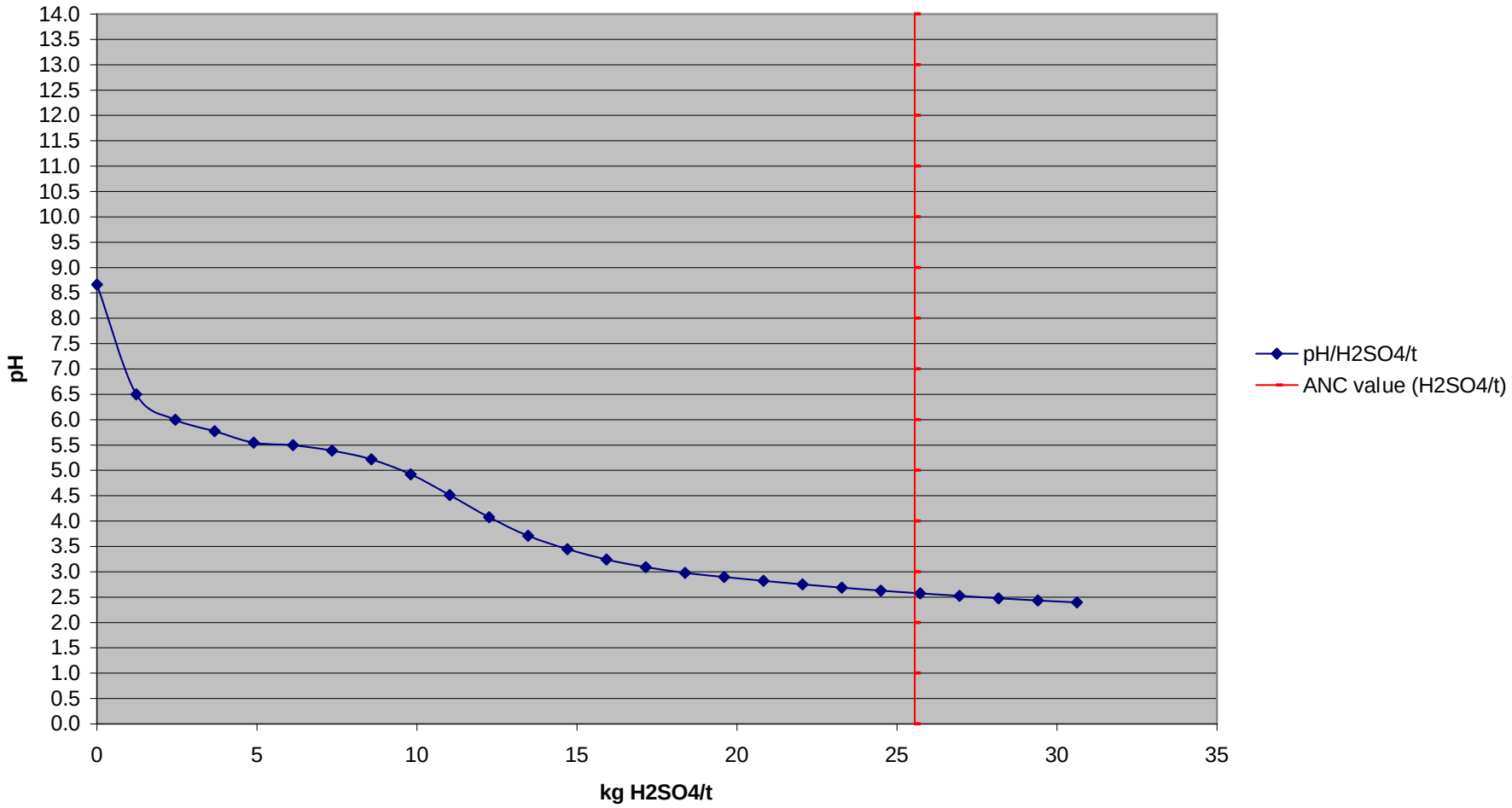
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



EP1204029 012 (EP1201526047, NS0089 348-350)

Acid Buffering Characteristic Curve

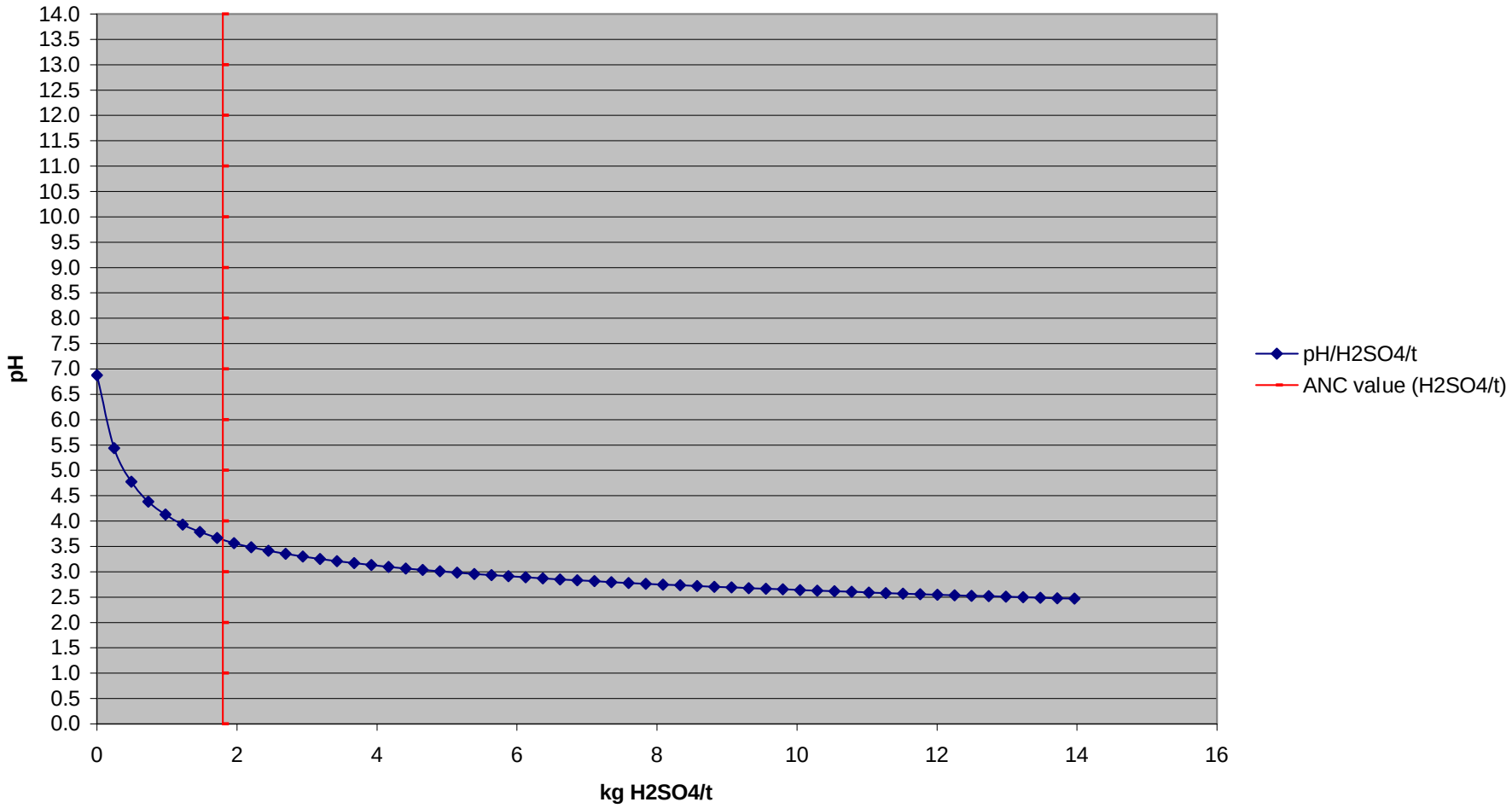
Titrating with 0.1M HCl, in increments of 0.5 mLs every 1000 seconds



EP1204029 013 (EP1201527028, NS0087 8-10)

Acid Buffering Characteristic Curve

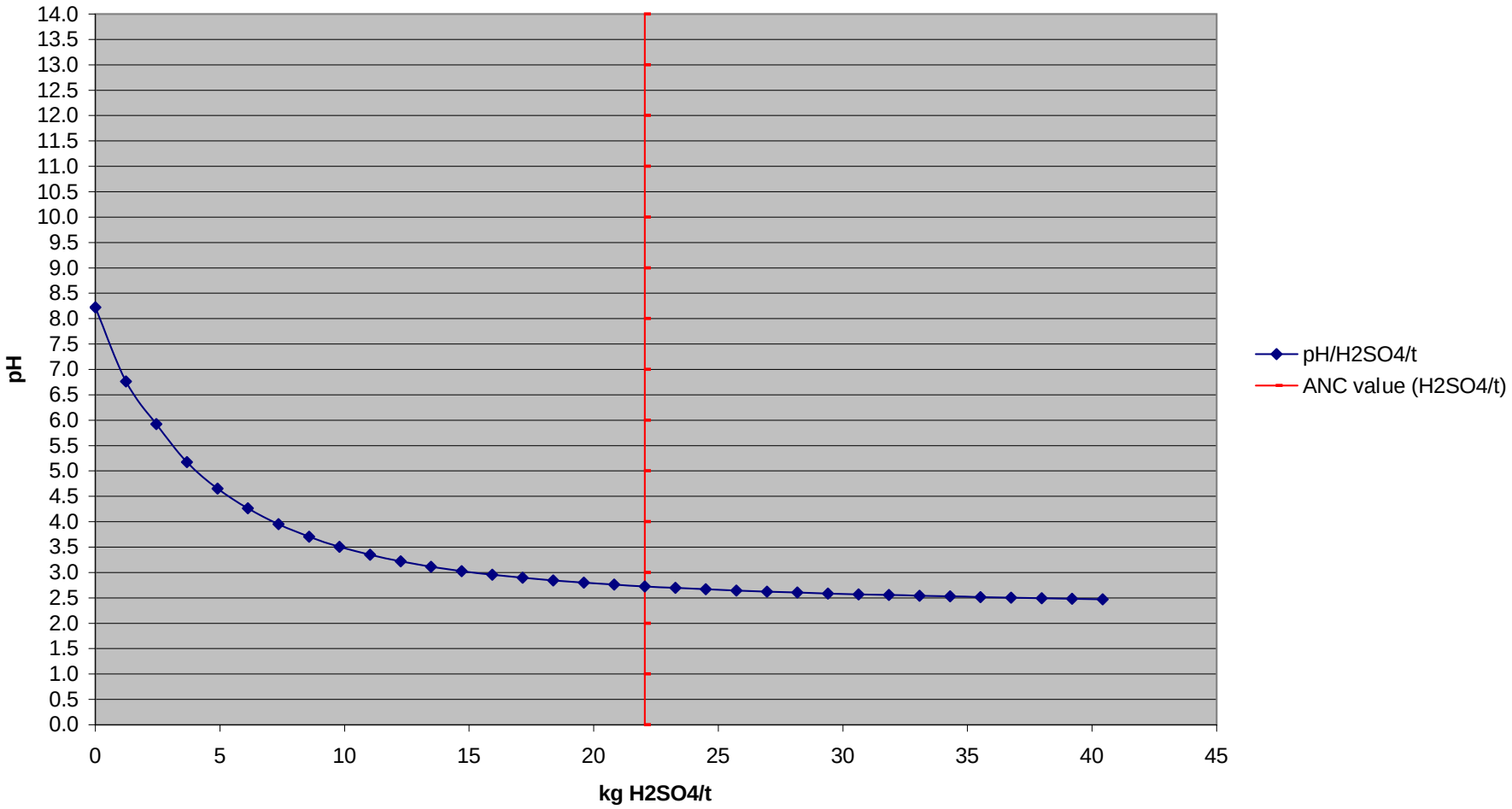
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



EP1204029 014 (EP1201528001 ,NS0089 88-90)

Acid Buffering Characteristic Curve

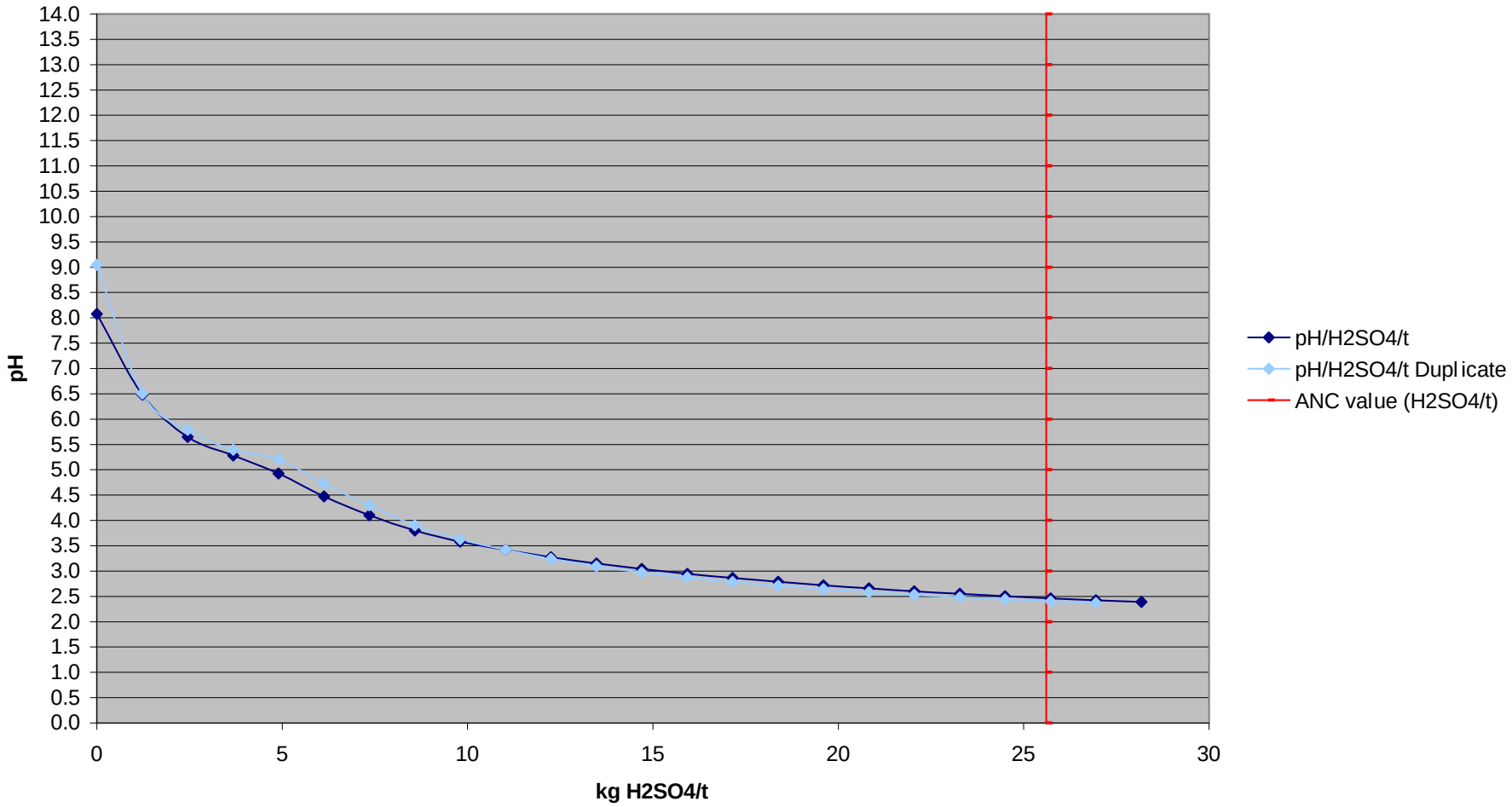
Titrating with 0.1M HCl, in increments of 0.5 mLs every 1000 seconds



EP1204029 016 (EP1201529008, NS0090 190-192)

Acid Buffering Characteristic Curve

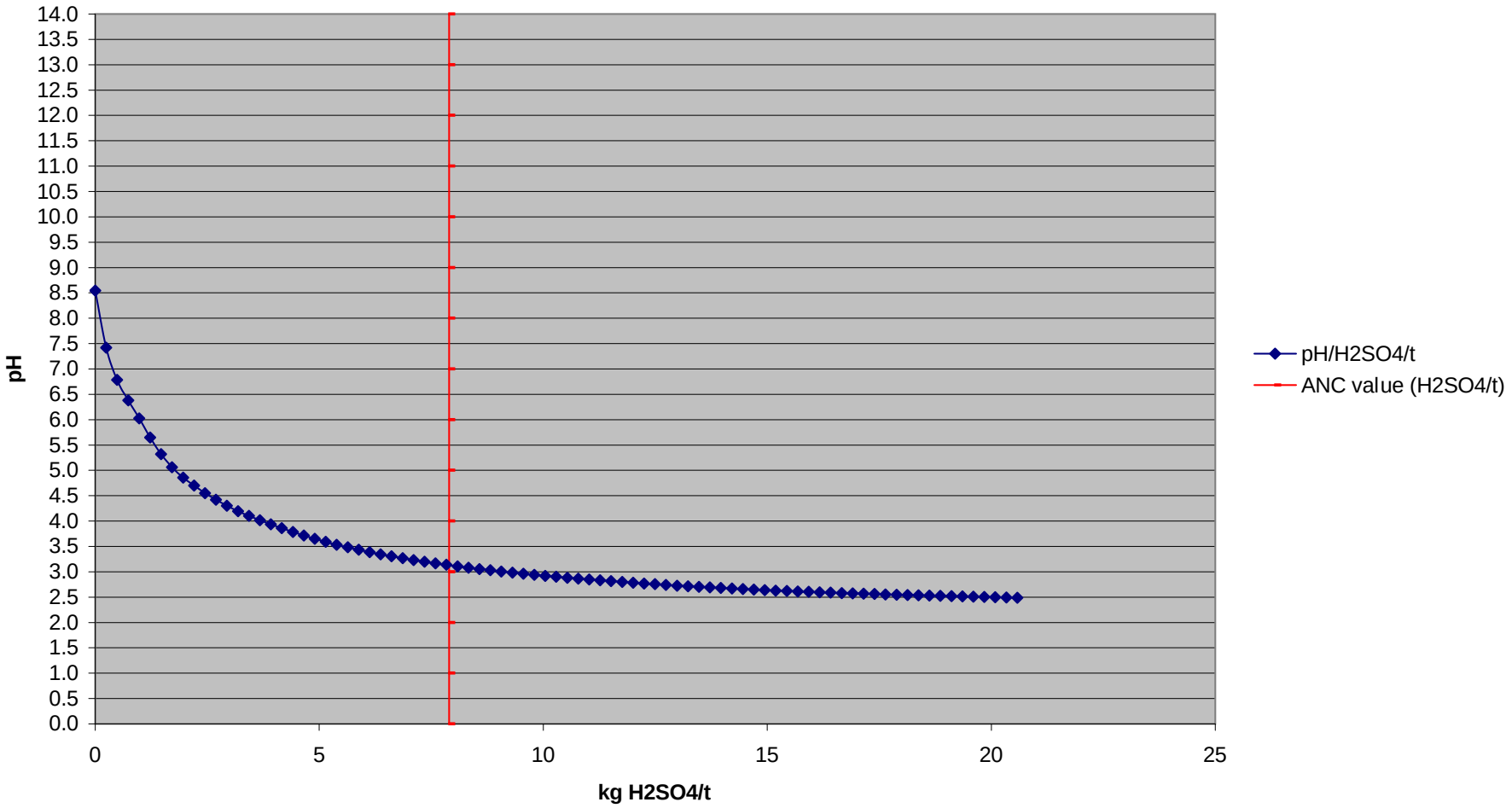
Titrating with 0.1M HCl, in increments of 0.5 mLs every 1000 seconds



EP1204029 017 (EP1201530008, NS0106 28-30)

Acid Buffering Characteristic Curve

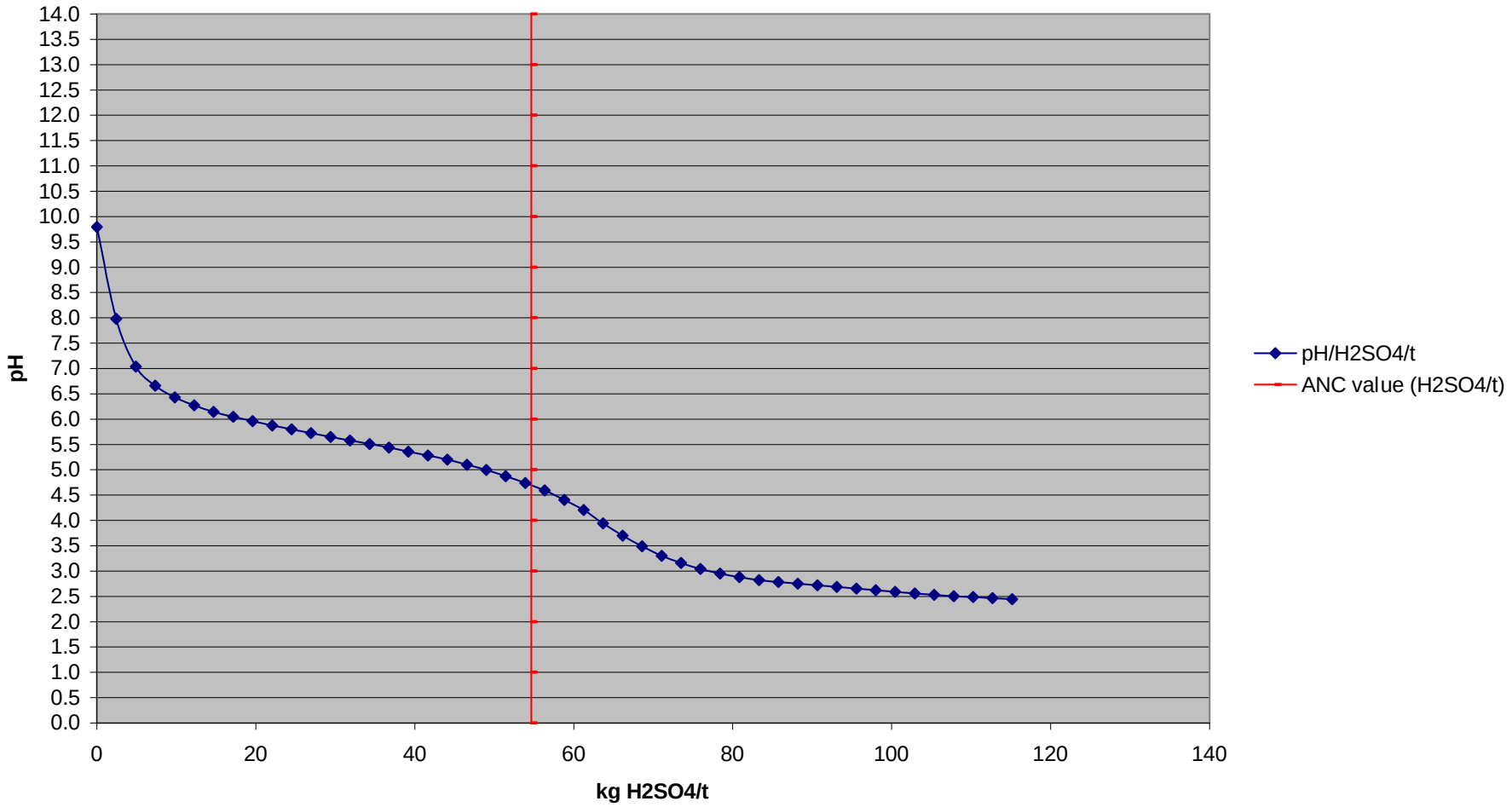
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



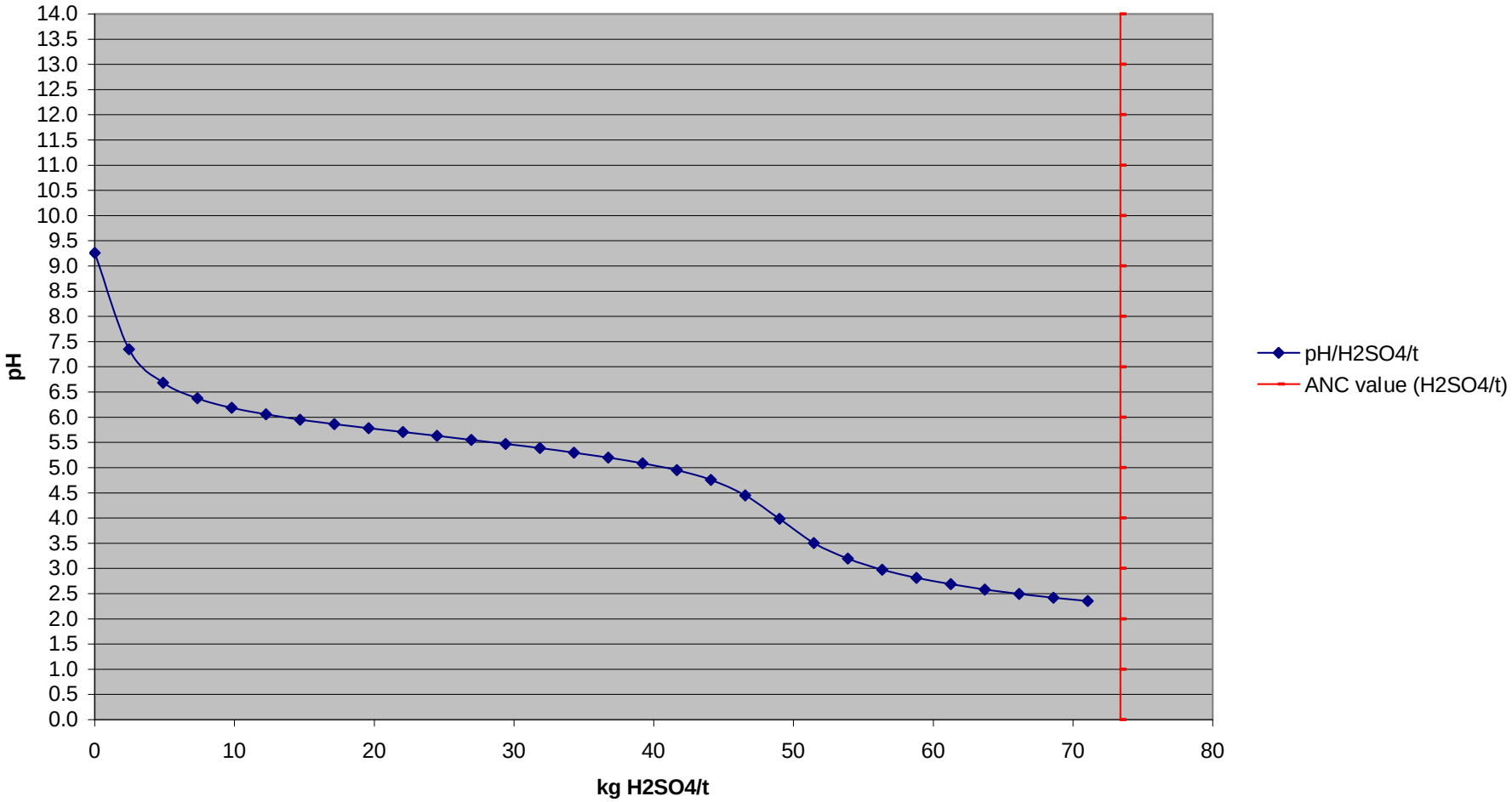
EP1204029 018 (EP1201530010, NS0106 48-50)

Acid Buffering Characteristic Curve

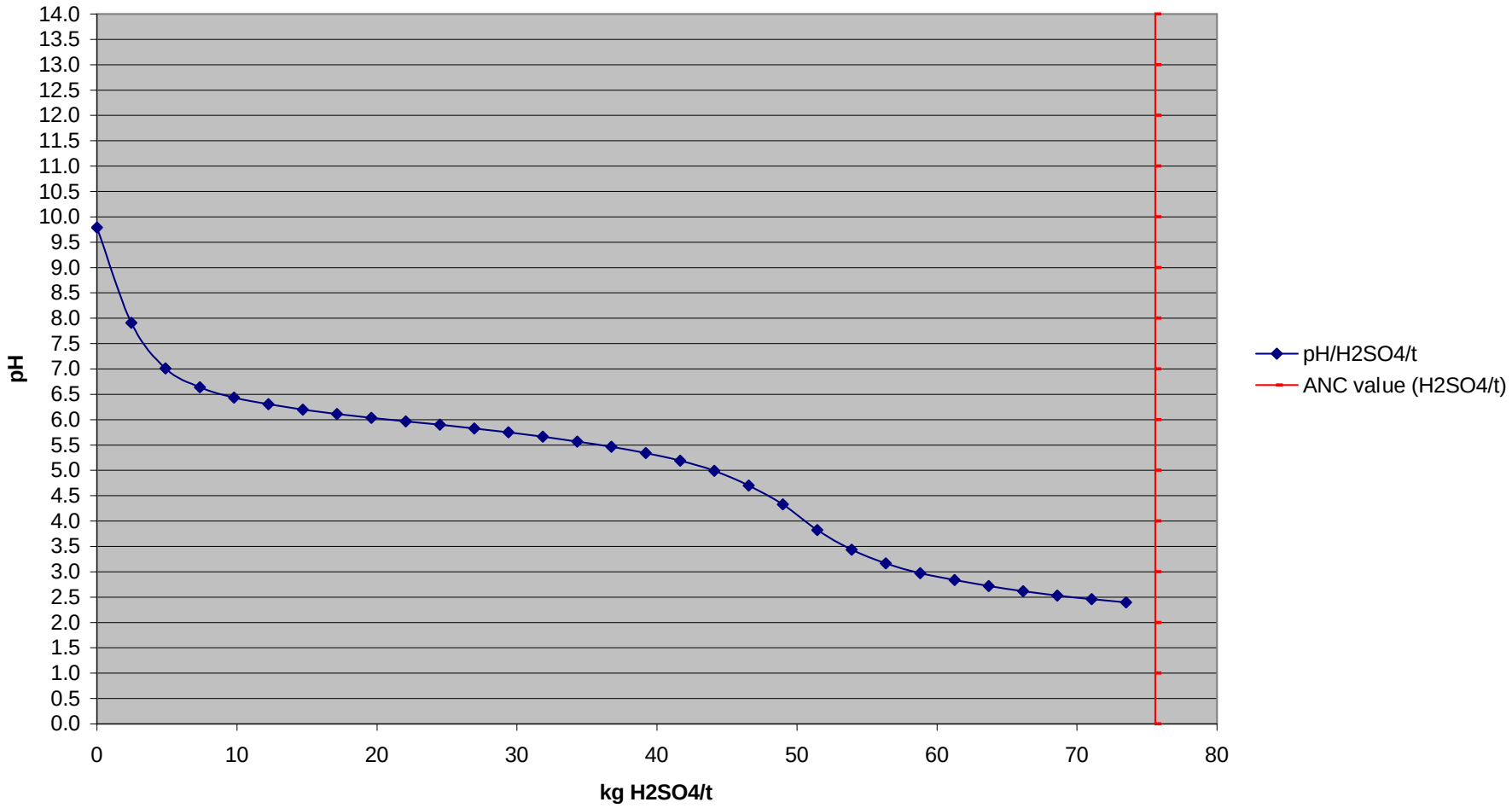
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



EP1204029 019 (EP1201530029, NS0094 160-162)
Acid Buffering Characteristic Curve
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



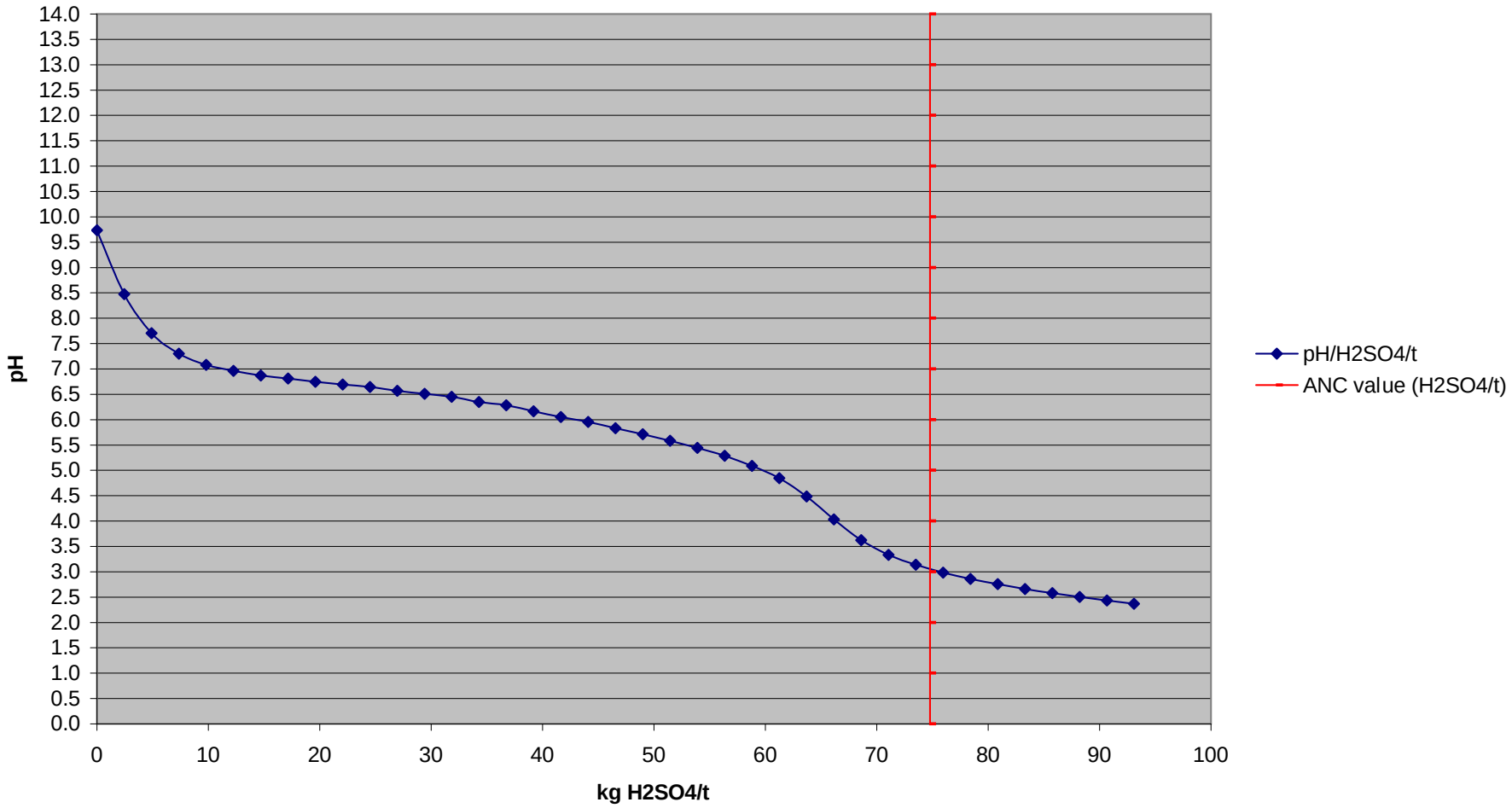
EP1204029 020 (EP1201530033, NS0094 148-150)
Acid Buffering Characteristic Curve
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



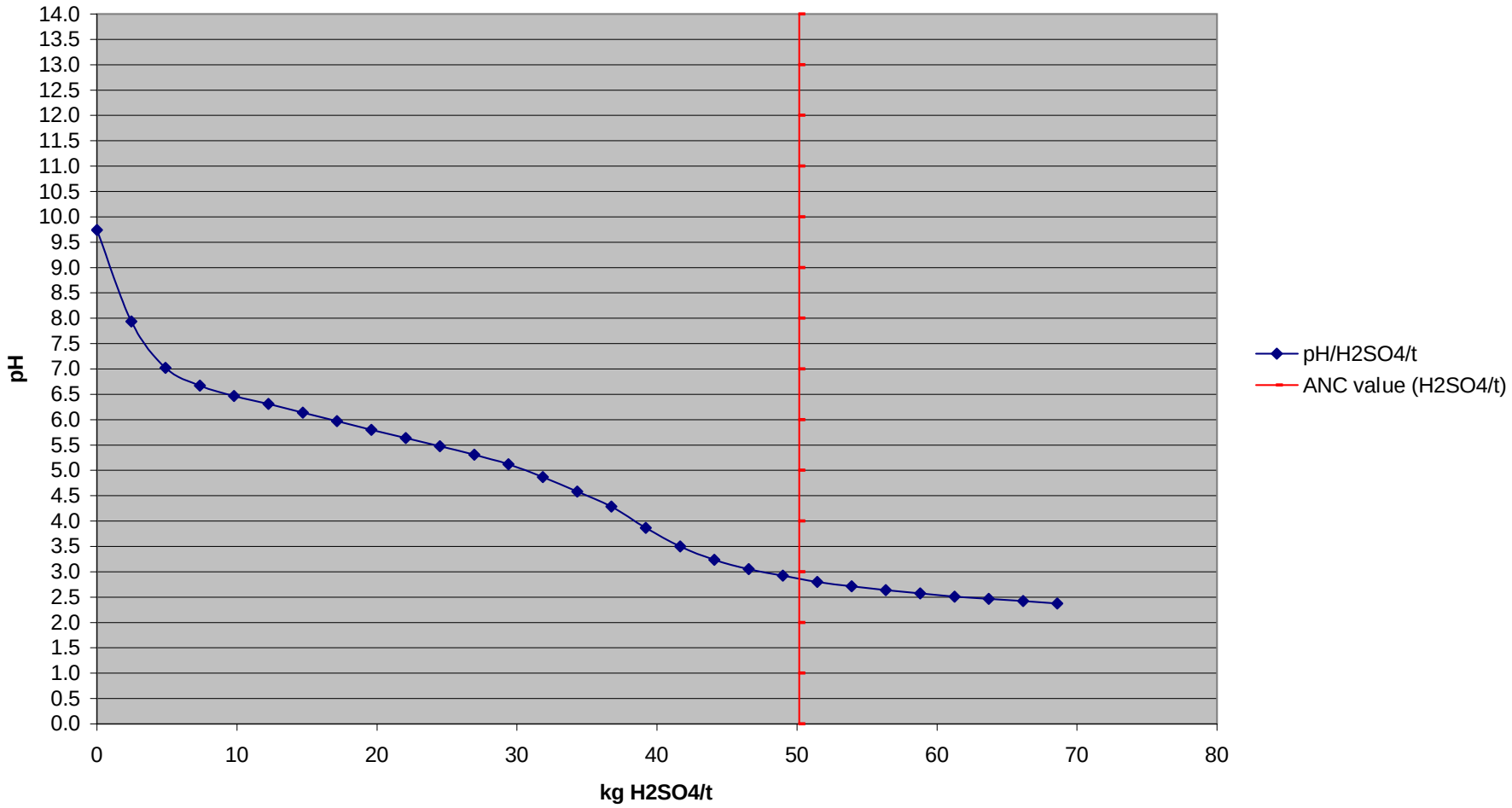
EP1204029 021 (EP1201530042, NS0106 170-172)

Acid Buffering Characteristic Curve

Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



EP1204029 022 (EP1201531004, NS0090 128-130)
Acid Buffering Characteristic Curve
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



CERTIFICATE OF ANALYSIS

Work Order	: **EP1204029**	Page	: 1 of 5
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201379 1380 1381 1383 1382 1526 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 21-MAY-2012
Sampler	: ----	Issue Date	: 25-JUL-2012
Site	: Northstar		
		No. of samples received	: 22
Quote number	: EP/406/12	No. of samples analysed	: 11

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Myles.Clark	Acid Sulfate Soils Supervisor	Brisbane Acid Sulphate Soils

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **(ADD METHOD): NATA accreditation does not cover performance of this service.**
- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201383048 NS0091 198-200	EP1201526047 NS0089 348-350	EP1201527028 NS0087 8-10	EP1201528001 NS0089 88-90	EP1201529008 NS0090 190-192
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204029-001	EP1204029-012	EP1204029-013	EP1204029-014	EP1204029-016
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t		**23.6**	**25.6**	**1.8**	**22.0**	**25.6**
ANC as CaCO3	----	0.1	% CaCO3		**2.4**	**2.6**	**0.2**	**2.2**	**2.6**
Fizz Rating	----	0	Fizz Unit		**1**	**1**	**0**	**1**	**1**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201530008 NS0106 28-30	EP1201530010 NS0106 48-50	EP1201530029 NS0094 160-162	EP1201530033 NS0094 148-150	EP1201530042 NS0106 170-172
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204029-017	EP1204029-018	EP1204029-019	EP1204029-020	EP1204029-021
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t		**7.9**	**54.7**	**73.4**	**75.6**	**74.8**
ANC as CaCO3	----	0.1	% CaCO3		**0.8**	**5.6**	**7.5**	**7.7**	**7.6**
Fizz Rating	----	0	Fizz Unit		**0**	**2**	**2**	**2**	**2**

Analytical Results

Sub-Matrix: SOIL			Client sample ID	EP1201531004 NS0090 128-130	----	----	----	----
			Client sampling date / time	21-FEB-2012 15:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EP1204029-022	----	----	----	----
EA013: Acid Neutralising Capacity								
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	**50.2**	----	----	----	----
ANC as CaCO3	----	0.1	% CaCO3	**5.1**	----	----	----	----
Fizz Rating	----	0	Fizz Unit	**2**	----	----	----	----

QUALITY CONTROL REPORT

Work Order	: **EP1204029**	Page	: 1 of 5
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201379 1380 1381 1383 1382 1526 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Northstar		
C-O-C number	: ----	Date Samples Received	: 21-MAY-2012
Sampler	: ----	Issue Date	: 25-JUL-2012
Order number	: ----		
		No. of samples received	: 22
Quote number	: EP/406/12	No. of samples analysed	: 11

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Myles.Clark	Acid Sulfate Soils Supervisor	Brisbane Acid Sulphate Soils

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EA013: Acid Neutralising Capacity (QC Lot: 2406620)									
EP1204029-001	EP1201383048 NS0091 198-200	EA013: ANC as H2SO4	----	0.5	kg H2SO4/t	23.6	24.1	1.7	0% - 20%

Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EA013: Acid Neutralising Capacity (QCLot: 2406620)								
EA013: ANC as H2SO4	----	0.5	kg H2SO4/t	----	9.9 kg H2SO4/t	113	80	121

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

- **No Matrix Spike (MS) Results are required to be reported.**

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **EP1204029**	Page	: 1 of 5
Client	: GHD PTY LTD	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201379 1380 1381 1383 1382 1526 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Northstar		
C-O-C number	: ----	Date Samples Received	: 21-MAY-2012
Sampler	: ----	Issue Date	: 25-JUL-2012
Order number	: ----		
		No. of samples received	: 22
Quote number	: EP/406/12	No. of samples analysed	: 11

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA013: Acid Neutralising Capacity							
80* dried soil							
EP1201383048 - NS0091 198-200, EP1201526047 - NS0089 348-350, EP1201527028 - NS0087 8-10, EP1201528001 - NS0089 88-90, EP1201529008 - NS0090 190-192, EP1201530008 - NS0106 28-30, EP1201530010 - NS0106 48-50, EP1201530029 - NS0094 160-162, EP1201530033 - NS0094 148-150, EP1201530042 - NS0106 170-172, EP1201531004 - NS0090 128-130	**21-FEB-2012**	**17-JUL-2012**	20-FEB-2013	✓	**24-JUL-2012**	13-JAN-2013	✓
EA046 Acid Buffering Characterisation Curves							
80* dried soil							
EP1201383048 - NS0091 198-200, EP1201384003 - NS0085 208-210, EP1201384015 - NS0085 90-92, EP1201384022 - NS0107 40-42, EP1201384027 - NS0107 80-82, EP1201384043 - NS0086 208-210, EP1201384045 - NS0086 248-250, EP1201526047 - NS0089 348-350, EP1201527028 - NS0087 8-10, EP1201528001 - NS0089 88-90, EP1201529008 - NS0090 190-192, EP1201530008 - NS0106 28-30, EP1201530010 - NS0106 48-50, EP1201530029 - NS0094 160-162, EP1201530033 - NS0094 148-150, EP1201530042 - NS0106 170-172, EP1201531004 - NS0090 128-130	**21-FEB-2012**	**----**	----	----	**05-JUL-2012**	20-FEB-2013	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Acid Neutralising Capacity (ANC)	EA013	1	11	**9.1**	**10.0**	×	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Acid Neutralising Capacity (ANC)	EA013	1	11	**9.1**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Acid Neutralising Capacity (ANC)	EA013	SOIL	USEPA 600/2-78-054, I. Miller (2000). A fizz test is done to semiquanititatively estimate the likely reactivity. The soil is then reacted with an known excess quanitity of an appropriate acid. Titration determines the acid remaining, and the ANC can be calculated from comparison with a blank titration.
Acid Buffering Characterisation Curves (ABCC's)	EA046	SOIL	Miller and Jeffery (1995) Determine the portion of an ANC value of a particular sample is readily available for acid neutralisation.

Preparation Methods	Method	Matrix	Method Descriptions
Drying at 85 degrees, bagging and labelling (ASS)	EN020PR	SOIL	In house

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

- **For all matrices, no Method Blank value outliers occur.**
- **For all matrices, no Duplicate outliers occur.**
- **For all matrices, no Laboratory Control outliers occur.**
- **For all matrices, no Matrix Spike outliers occur.**

Regular Sample Surrogates

- **For all regular sample matrices, no surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

- **No Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

Matrix: **SOIL**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
Acid Neutralising Capacity (ANC)	1	11	9.1	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Exploration Geology
87 Adelaide Terrace WA 6004
Phone: 08 6218 8888

CLIENT: Fortescue Metals Group Ltd

Page Number:

CONTACT: Steven Pearce GHD, David Morgan GHD
PHONE NO: Steven Pearce GHD (08) 6222 8811 or David Morgan GHD 08 6222 8133

PROJECT: MA
Job No.: GHD_FMG_AMD_NorthStar

REPORTS TO: HARD COPY - Glen Neeves, FMG Ltd, 87 Adelaide Tce WA 6004
DIGITAL COPY - gneeves@fmgl.com.au
david.morgan@ghd.com

INVOICE TO: Fortescue Metals Group Ltd.
Attn Glen Neeves
87 Adelaide Tce
Perth 6004 WA

Special Instructions: Please sub sample from primary sample for intial analytical tests. Keep remainder of samples to allow follow up analysis. Please do not pulverise and oven dry all of sample!

Contact Steven Pearce GHD for technical queries on test work:
Phone: +61 (0)8 6222 8811
Email: steven.pearce@ghd.com

SAMPLE IDENTIFICATION Sample Number	Hole ID		From	To	DATE SAMPLED	TIME SAMPLED	DISPATCH DATE	Strata			ABCC Curve	Comments
EP1201383048	NS0091	1	198	200	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201384003	NS0085	2	208	210	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201384015	NS0085	3	90	92	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201384022	NS0107	4	40	42	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201384027	NS0107	5	80	82	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201384043	NS0086	6	208	210	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201384045	NS0086	7	248	250	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201385014	NS0091	8	160	162	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201385015	NS0111	9	188	190	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201385016	NS0111	10	290	292	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201385017	NS0111	11	240	242	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201526047	NS0089	12	348	350	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201527028	NS0087	13	8	10	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201528001	NS0089	14	88	90	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201529005	NS0108	15	160	162	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201529008	NS0090	16	190	192	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201530008	NS0106	17	28	30	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201530010	NS0106	18	48	50	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201530029	NS0094	19	160	162	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201530033	NS0094	20	148	150	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201530042	NS0106	21	170	172	Sample at lab	Sample at lab	Sample at lab	G			x	
EP1201531004	NS0090	22	128	130	Sample at lab	Sample at lab	Sample at lab	G			x	

Environmental Division
Perth
Work Order
EP1204029

Telephone : +61-8-9209 7655

ALS Environmental

Acid Buffering Characteristic Curve (ABCC) REPORT

Batch: EP1204032

CONTACT:	David Morgan	LABORATORY:	Brisbane
CLIENT:	GHD PTY LTD	DATE SAMPLED:	21/02/2012
ADDRESS:	239 ADELAIDE TERRACE	DATE RECEIVED:	21/05/2012
	PERTH, WA 6004	DATE COMPLETED:	3/08/2012
		SAMPLE TYPE:	Soil
		No. of SAMPLES:	22

COMMENTS

EA046 : NATA accreditation does not cover performance of this service.

ISSUING LABORATORY: ALS BRISBANE

Address:	32 Shand Street	Telephone:	07 3243 7222
	STAFFORD QLD 4053	Facsimile:	07 3243 7218
	AUSTRALIA	E-mail:	Myles.Clark@alsenviro.com

Signatory

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065685.029
	Client Sample Identification 2			NS0159 116-118
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	1
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.4**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**34.8**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	8.40				
1	0.4	4.9	6.21				
2	0.8	9.8	5.19				
3	1.2	14.7	4.66				
4	1.6	19.6	4.18				
5	2	24.5	3.68				
6	2.4	29.4	3.28				
7	2.8	34.3	3.01				
8	3.2	39.2	2.82				
9	3.6	44.1	2.68				
10	4	49	2.57				
11	4.4	53.9	2.46				
12	4.8	58.8	2.37				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065685.050
	Client Sample Identification 2			NS0158 178-180
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	2
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**59.6**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.21				
1	0.2	2.45	6.69				
2	0.4	4.9	6.32				
3	0.6	7.35	6.11				
4	0.8	9.8	5.97				
5	1	12.25	5.86				
6	1.2	14.7	5.77				
7	1.4	17.15	5.70				
8	1.6	19.6	5.63				
9	1.8	22.05	5.56				
10	2	24.5	5.50				
11	2.2	26.95	5.44				
12	2.4	29.4	5.38				
13	2.6	31.85	5.31				
14	2.8	34.3	5.25				
15	3	36.75	5.18				
16	3.2	39.2	5.11				
17	3.4	41.65	5.02				
18	3.6	44.1	4.90				
19	3.8	46.55	4.72				
20	4	49	4.46				
21	4.2	51.45	4.03				
22	4.4	53.9	3.61				
23	4.6	56.35	3.34				
24	4.8	58.8	3.16				
25	5	61.25	3.03				
26	5.2	63.7	2.92				
27	5.4	66.15	2.84				
28	5.6	68.6	2.77				
29	5.8	71.05	2.71				
30	6	73.5	2.65				
31	6.2	75.95	2.60				
32	6.4	78.4	2.56				
33	6.6	80.85	2.52				
34	6.8	83.3	2.48				
35	7	85.75	2.44				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065685.050
	Client Sample Identification 2			NS0158 178-180
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	2	Check
	EP120403	

EA046 - A Titration information

HCl Molarity:		**M**	**0.5**
Increments:		**mL**	**0.2**
Weight		**(g)**	**2**
ANC		**kgH2SO4/t**	**59.6**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.77				
1	0.2	2.45	7.11				
2	0.4	4.9	6.47				
3	0.6	7.35	6.23				
4	0.8	9.8	6.07				
5	1	12.25	5.95				
6	1.2	14.7	5.84				
7	1.4	17.15	5.75				
8	1.6	19.6	5.66				
9	1.8	22.05	5.58				
10	2	24.5	5.50				
11	2.2	26.95	5.41				
12	2.4	29.4	5.40				
13	2.6	31.85	5.29				
14	2.8	34.3	5.22				
15	3	36.75	5.15				
16	3.2	39.2	5.07				
17	3.4	41.65	4.96				
18	3.6	44.1	4.91				
19	3.8	46.55	4.67				
20	4	49	4.43				
21	4.2	51.45	4.10				
22	4.4	53.9	3.54				
23	4.6	56.35	3.26				
24	4.8	58.8	3.17				
25	5	61.25	2.82				
26	5.2	63.7	2.93				
27	5.4	66.15	2.81				
28	5.6	68.6	2.76				
29	5.8	71.05	2.96				
30	6	73.5	2.63				
31	6.2	75.95	2.53				
32	6.4	78.4	2.44				
33	6.6	80.85	2.36				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065685.089
	Client Sample Identification 2			NS0152 148-150
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	3
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**79.4**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	7.15				
1	0.2	2.45	6.75				
2	0.4	4.9	6.49				
3	0.6	7.35	6.28				
4	0.8	9.8	6.13				
5	1	12.25	6.03				
6	1.2	14.7	5.94				
7	1.4	17.15	5.87				
8	1.6	19.6	5.80				
9	1.8	22.05	5.73				
10	2	24.5	5.67				
11	2.2	26.95	5.60				
12	2.4	29.4	5.53				
13	2.6	31.85	5.46				
14	2.8	34.3	5.39				
15	3	36.75	5.32				
16	3.2	39.2	5.24				
17	3.4	41.65	5.16				
18	3.6	44.1	5.06				
19	3.8	46.55	4.95				
20	4	49	4.80				
21	4.2	51.45	4.61				
22	4.4	53.9	4.36				
23	4.6	56.35	4.13				
24	4.8	58.8	3.92				
25	5	61.25	3.67				
26	5.2	63.7	3.45				
27	5.4	66.15	3.29				
28	5.6	68.6	3.13				
29	5.8	71.05	2.99				
30	6	73.5	2.85				
31	6.2	75.95	2.75				
32	6.4	78.4	2.65				
33	6.6	80.85	2.56				
34	6.8	83.3	2.48				
35	7	85.75	2.41				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065685.098
	Client Sample Identification 2			NS0152 244-246
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	4
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**75.4**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.46				
1	0.2	2.45	8.10				
2	0.4	4.9	7.32				
3	0.6	7.35	6.80				
4	0.8	9.8	6.46				
5	1	12.25	6.22				
6	1.2	14.7	6.05				
7	1.4	17.15	5.93				
8	1.6	19.6	5.83				
9	1.8	22.05	5.73				
10	2	24.5	5.63				
11	2.2	26.95	5.53				
12	2.4	29.4	5.41				
13	2.6	31.85	5.27				
14	2.8	34.3	5.11				
15	3	36.75	4.90				
16	3.2	39.2	4.59				
17	3.4	41.65	4.18				
18	3.6	44.1	3.72				
19	3.8	46.55	3.40				
20	4	49	3.19				
21	4.2	51.45	3.04				
22	4.4	53.9	2.93				
23	4.6	56.35	2.84				
24	4.8	58.8	2.77				
25	5	61.25	2.70				
26	5.2	63.7	2.63				
27	5.4	66.15	2.57				
28	5.6	68.6	2.51				
29	5.8	71.05	2.46				
30	6	73.5	2.41				
31	6.2	75.95	2.36				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065686.007
	Client Sample Identification 2			NS0152 120-122
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	5
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**61.4**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.10				
1	0.2	2.45	7.04				
2	0.4	4.9	6.46				
3	0.6	7.35	6.17				
4	0.8	9.8	5.98				
5	1	12.25	5.84				
6	1.2	14.7	5.72				
7	1.4	17.15	5.62				
8	1.6	19.6	5.51				
9	1.8	22.05	5.40				
10	2	24.5	5.28				
11	2.2	26.95	5.15				
12	2.4	29.4	5.00				
13	2.6	31.85	4.83				
14	2.8	34.3	4.60				
15	3	36.75	4.34				
16	3.2	39.2	4.00				
17	3.4	41.65	3.67				
18	3.6	44.1	3.39				
19	3.8	46.55	3.16				
20	4	49	2.99				
21	4.2	51.45	2.85				
22	4.4	53.9	2.74				
23	4.6	56.35	2.65				
24	4.8	58.8	2.56				
25	5	61.25	2.49				
26	5.2	63.7	2.42				
27	5.4	66.15	2.36				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065686.020
	Client Sample Identification 2			NS0153 168-170
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	6
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**25.4**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	8.62				
1	0.5	1.225	7.11				
2	1	2.45	6.60				
3	1.5	3.675	6.12				
4	2	4.9	5.78				
5	2.5	6.125	5.51				
6	3	7.35	5.22				
7	3.5	8.575	4.90				
8	4	9.8	4.57				
9	4.5	11.025	4.21				
10	5	12.25	3.89				
11	5.5	13.475	3.60				
12	6	14.7	3.40				
13	6.5	15.925	3.24				
14	7	17.15	3.11				
15	7.5	18.375	3.01				
16	8	19.6	2.92				
17	8.5	20.825	2.84				
18	9	22.05	2.78				
19	9.5	23.275	2.72				
20	10	24.5	2.67				
21	10.5	25.725	2.62				
22	11	26.95	2.58				
23	11.5	28.175	2.55				
24	12	29.4	2.51				
25	12.5	30.625	2.48				
26	13	31.85	2.44				
27	13.5	33.075	2.41				
28	14	34.3	2.37				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065686.021
	Client Sample Identification 2			NS0153 98-100
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	7
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**16.7**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	7.74				
1	0.2	0.49	5.76				
2	0.4	0.98	4.98				
3	0.6	1.47	4.56				
4	0.8	1.96	4.19				
5	1	2.45	3.90				
6	1.2	2.94	3.66				
7	1.4	3.43	3.49				
8	1.6	3.92	3.35				
9	1.8	4.41	3.25				
10	2	4.9	3.17				
11	2.2	5.39	3.10				
12	2.4	5.88	3.05				
13	2.6	6.37	3.00				
14	2.8	6.86	2.95				
15	3	7.35	2.90				
16	3.2	7.84	2.86				
17	3.4	8.33	2.82				
18	3.6	8.82	2.78				
19	3.8	9.31	2.74				
20	4	9.8	2.71				
21	4.2	10.29	2.68				
22	4.4	10.78	2.65				
23	4.6	11.27	2.62				
24	4.8	11.76	2.59				
25	5	12.25	2.57				
26	5.2	12.74	2.54				
27	5.4	13.23	2.52				
28	5.6	13.72	2.50				
29	5.8	14.21	2.48				
30	6	14.7	2.46				
31	6.2	15.19	2.44				
32	6.4	15.68	2.42				
33	6.6	16.17	2.40				
34	6.8	16.66	2.39				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065686.035
	Client Sample Identification 2			NS0154 38-40
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	8
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**66**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.27				
1	0.2	2.45	7.36				
2	0.4	4.9	6.85				
3	0.6	7.35	6.54				
4	0.8	9.8	6.26				
5	1	12.25	6.07				
6	1.2	14.7	5.90				
7	1.4	17.15	5.75				
8	1.6	19.6	5.60				
9	1.8	22.05	5.43				
10	2	24.5	5.26				
11	2.2	26.95	5.03				
12	2.4	29.4	4.75				
13	2.6	31.85	4.43				
14	2.8	34.3	4.03				
15	3	36.75	3.66				
16	3.2	39.2	3.34				
17	3.4	41.65	3.11				
18	3.6	44.1	2.94				
19	3.8	46.55	2.80				
20	4	49	2.69				
21	4.2	51.45	2.59				
22	4.4	53.9	2.50				
23	4.6	56.35	2.43				
24	4.8	58.8	2.35				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065686.040
	Client Sample Identification 2			NS0154 18-20
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	9
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**7.1**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	7.58	36	3.6	8.82	2.76
1	0.1	0.245	6.56	37	3.7	9.065	2.74
2	0.2	0.49	5.78	38	3.8	9.31	2.73
3	0.3	0.735	5.25	39	3.9	9.555	2.71
4	0.4	0.98	4.89	40	4	9.8	2.70
5	0.5	1.225	4.62	41	4.1	10.045	2.68
6	0.6	1.47	4.40	42	4.2	10.29	2.67
7	0.7	1.715	4.22	43	4.3	10.535	2.66
8	0.8	1.96	4.06	44	4.4	10.78	2.65
9	0.9	2.205	3.94	45	4.5	11.025	2.63
10	1	2.45	3.83	46	4.6	11.27	2.62
11	1.1	2.695	3.73	47	4.7	11.515	2.61
12	1.2	2.94	3.65	48	4.8	11.76	2.60
13	1.3	3.185	3.57	49	4.9	12.005	2.59
14	1.4	3.43	3.50	50	5	12.25	2.58
15	1.5	3.675	3.43	51	5.1	12.495	2.57
16	1.6	3.92	3.37	52	5.2	12.74	2.56
17	1.7	4.165	3.32	53	5.3	12.985	2.55
18	1.8	4.41	3.27	54	5.4	13.23	2.54
19	1.9	4.655	3.22	55	5.5	13.475	2.54
20	2	4.9	3.18	56	5.6	13.72	2.52
21	2.1	5.145	3.14	57	5.7	13.965	2.51
22	2.2	5.39	3.10	58	5.8	14.21	2.50
23	2.3	5.635	3.06	59	5.9	14.455	2.49
24	2.4	5.88	3.03	60	6	14.7	2.48
25	2.5	6.125	3.00	61	6.1	14.945	2.47
26	2.6	6.37	2.97				
27	2.7	6.615	2.94				
28	2.8	6.86	2.92				
29	2.9	7.105	2.89				
30	3	7.35	2.87				
31	3.1	7.595	2.85				
32	3.2	7.84	2.83				
33	3.3	8.085	2.81				
34	3.4	8.33	2.79				
35	3.5	8.575	2.77				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065686.054
	Client Sample Identification 2			NS0154 200-202
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	
				10
				EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**29.5**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.19				
1	0.5	1.225	6.68				
2	1	2.45	5.62				
3	1.5	3.675	4.88				
4	2	4.9	4.17				
5	2.5	6.125	3.69				
6	3	7.35	3.41				
7	3.5	8.575	3.24				
8	4	9.8	3.12				
9	4.5	11.025	3.04				
10	5	12.25	2.97				
11	5.5	13.475	2.91				
12	6	14.7	2.87				
13	6.5	15.925	2.82				
14	7	17.15	2.79				
15	7.5	18.375	2.75				
16	8	19.6	2.72				
17	8.5	20.825	2.70				
18	9	22.05	2.67				
19	9.5	23.275	2.64				
20	10	24.5	2.62				
21	10.5	25.725	2.59				
22	11	26.95	2.57				
23	11.5	28.175	2.54				
24	12	29.4	2.52				
25	12.5	30.625	2.50				
26	13	31.85	2.48				
27	13.5	33.075	2.46				
28	14	34.3	2.44				
29	14.5	35.525	2.42				
30	15	36.75	2.40				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065687.013
	Client Sample Identification 2			NS0124 118-120
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	11
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**51.7**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.89				
1	0.2	2.45	8.32				
2	0.4	4.9	7.61				
3	0.6	7.35	7.19				
4	0.8	9.8	6.86				
5	1	12.25	6.51				
6	1.2	14.7	6.12				
7	1.4	17.15	5.69				
8	1.6	19.6	5.24				
9	1.8	22.05	4.75				
10	2	24.5	3.89				
11	2.2	26.95	3.28				
12	2.4	29.4	2.98				
13	2.6	31.85	2.78				
14	2.8	34.3	2.65				
15	3	36.75	2.55				
16	3.2	39.2	2.47				
17	3.4	41.65	2.41				
18	3.6	44.1	2.34				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065687.047
	Client Sample Identification 2			NS0155 210-212
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	
				12
				EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**46.5**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.76	36	18	44.1	3.02
1	0.5	1.225	8.12	37	18.5	45.325	2.96
2	1	2.45	7.20	38	19	46.55	2.91
3	1.5	3.675	6.83	39	19.5	47.775	2.86
4	2	4.9	6.61	40	20	49	2.81
5	2.5	6.125	6.42	41	20.5	50.225	2.77
6	3	7.35	6.23	42	21	51.45	2.73
7	3.5	8.575	6.02	43	21.5	52.675	2.70
8	4	9.8	5.81	44	22	53.9	2.66
9	4.5	11.025	5.61	45	22.5	55.125	2.63
10	5	12.25	5.46	46	23	56.35	2.60
11	5.5	13.475	5.33	47	23.5	57.575	2.57
12	6	14.7	5.22	48	24	58.8	2.54
13	6.5	15.925	5.12	49	24.5	60.025	2.52
14	7	17.15	5.03	50	25	61.25	2.49
15	7.5	18.375	4.94	51	25.5	62.475	2.47
16	8	19.6	4.85	52	26	63.7	2.45
17	8.5	20.825	4.76				
18	9	22.05	4.67				
19	9.5	23.275	4.57				
20	10	24.5	4.47				
21	10.5	25.725	4.36				
22	11	26.95	4.26				
23	11.5	28.175	4.15				
24	12	29.4	4.04				
25	12.5	30.625	3.94				
26	13	31.85	3.84				
27	13.5	33.075	3.74				
28	14	34.3	3.64				
29	14.5	35.525	3.55				
30	15	36.75	3.46				
31	15.5	37.975	3.37				
32	16	39.2	3.29				
33	16.5	40.425	3.22				
34	17	41.65	3.15				
35	17.5	42.875	3.08				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065687.047
	Client Sample Identification 2			NS0155 210-212
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

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EP120403		

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**46.5**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.75	36	18	44.1	2.92
1	0.5	1.225	8.03	37	18.5	45.325	2.87
2	1	2.45	7.10	38	19	46.55	2.82
3	1.5	3.675	6.71	39	19.5	47.775	2.78
4	2	4.9	6.47	40	20	49	2.73
5	2.5	6.125	6.29	41	20.5	50.225	2.69
6	3	7.35	6.11	42	21	51.45	2.65
7	3.5	8.575	5.92	43	21.5	52.675	2.62
8	4	9.8	5.73	44	22	53.9	2.58
9	4.5	11.025	5.53	45	22.5	55.125	2.55
10	5	12.25	5.36	46	23	56.35	2.52
11	5.5	13.475	5.21	47	23.5	57.575	2.49
12	6	14.7	5.07	48	24	58.8	2.46
13	6.5	15.925	4.94	49	24.5	60.025	2.44
14	7	17.15	4.80				
15	7.5	18.375	4.67				
16	8	19.6	4.54				
17	8.5	20.825	4.40				
18	9	22.05	4.28				
19	9.5	23.275	4.15				
20	10	24.5	4.03				
21	10.5	25.725	3.92				
22	11	26.95	3.82				
23	11.5	28.175	3.77				
24	12	29.4	3.69				
25	12.5	30.625	3.61				
26	13	31.85	3.53				
27	13.5	33.075	3.46				
28	14	34.3	3.41				
29	14.5	35.525	3.34				
30	15	36.75	3.28				
31	15.5	37.975	3.21				
32	16	39.2	3.15				
33	16.5	40.425	3.08				
34	17	41.65	3.03				
35	17.5	42.875	2.97				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065687.058
	Client Sample Identification 2			NS0098 0-2
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	
				13 EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**2.2**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	6.71	36	3.6	8.82	2.92
1	0.1	0.245	5.81	37	3.7	9.065	2.90
2	0.2	0.49	5.28	38	3.8	9.31	2.88
3	0.3	0.735	5.02	39	3.9	9.555	2.86
4	0.4	0.98	4.86	40	4	9.8	2.84
5	0.5	1.225	4.72	41	4.1	10.045	2.82
6	0.6	1.47	4.60	42	4.2	10.29	2.81
7	0.7	1.715	4.47	43	4.3	10.535	2.79
8	0.8	1.96	4.35	44	4.4	10.78	2.78
9	0.9	2.205	4.25	45	4.5	11.025	2.76
10	1	2.45	4.16	46	4.6	11.27	2.75
11	1.1	2.695	4.07	47	4.7	11.515	2.73
12	1.2	2.94	3.99	48	4.8	11.76	2.72
13	1.3	3.185	3.91	49	4.9	12.005	2.71
14	1.4	3.43	3.82	50	5	12.25	2.70
15	1.5	3.675	3.74	51	5.1	12.495	2.68
16	1.6	3.92	3.66	52	5.2	12.74	2.67
17	1.7	4.165	3.60	53	5.3	12.985	2.66
18	1.8	4.41	3.54	54	5.4	13.23	2.65
19	1.9	4.655	3.48	55	5.5	13.475	2.65
20	2	4.9	3.43	56	5.6	13.72	2.64
21	2.1	5.145	3.38	57	5.7	13.965	2.63
22	2.2	5.39	3.34	58	5.8	14.21	2.62
23	2.3	5.635	3.29	59	5.9	14.455	2.61
24	2.4	5.88	3.26	60	6	14.7	2.60
25	2.5	6.125	3.22	61	6.1	14.945	2.60
26	2.6	6.37	3.18	62	6.2	15.19	2.59
27	2.7	6.615	3.15	63	6.3	15.435	2.58
28	2.8	6.86	3.12	64	6.4	15.68	2.57
29	2.9	7.105	3.09	65	6.5	15.925	2.56
30	3	7.35	3.06	66	6.6	16.17	2.56
31	3.1	7.595	3.04	67	6.7	16.415	2.51
32	3.2	7.84	3.01	68	6.8	16.66	2.50
33	3.3	8.085	2.99	69	6.9	16.905	2.49
34	3.4	8.33	2.96	70	7	17.15	2.48
35	3.5	8.575	2.94	71	7.1	17.395	2.47

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065687.060
	Client Sample Identification 2			NS0098 58-60
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	14
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**19.7**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	7.66				
1	0.5	1.225	5.48				
2	1	2.45	4.32				
3	1.5	3.675	3.78				
4	2	4.9	3.49				
5	2.5	6.125	3.27				
6	3	7.35	3.10				
7	3.5	8.575	2.96				
8	4	9.8	2.85				
9	4.5	11.025	2.76				
10	5	12.25	2.69				
11	5.5	13.475	2.62				
12	6	14.7	2.56				
13	6.5	15.925	2.51				
14	7	17.15	2.46				
15	7.5	18.375	2.41				
16	8	19.6	2.37				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065687.067
	Client Sample Identification 2			NS0098 108-110
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	15
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**29.5**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.16				
1	0.5	1.225	6.62				
2	1	2.45	6.13				
3	1.5	3.675	5.90				
4	2	4.9	5.76				
5	2.5	6.125	5.63				
6	3	7.35	5.51				
7	3.5	8.575	5.34				
8	4	9.8	5.06				
9	4.5	11.025	4.67				
10	5	12.25	4.21				
11	5.5	13.475	3.84				
12	6	14.7	3.65				
13	6.5	15.925	3.44				
14	7	17.15	3.17				
15	7.5	18.375	3.01				
16	8	19.6	2.89				
17	8.5	20.825	2.80				
18	9	22.05	2.71				
19	9.5	23.275	2.64				
20	10	24.5	2.57				
21	10.5	25.725	2.52				
22	11	26.95	2.46				
23	11.5	28.175	2.42				
24	12	29.4	2.37				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065687.083
	Client Sample Identification 2			NS0096 254-256
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	16
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.5**
Increments:	**mL**	**0.2**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**80.4**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.27				
1	0.2	2.45	8.45				
2	0.4	4.9	8.02				
3	0.6	7.35	7.47				
4	0.8	9.8	7.16				
5	1	12.25	6.21				
6	1.2	14.7	5.76				
7	1.4	17.15	5.78				
8	1.6	19.6	5.75				
9	1.8	22.05	5.71				
10	2	24.5	5.66				
11	2.2	26.95	5.63				
12	2.4	29.4	5.58				
13	2.6	31.85	5.55				
14	2.8	34.3	5.51				
15	3	36.75	5.46				
16	3.2	39.2	5.42				
17	3.4	41.65	5.37				
18	3.6	44.1	5.31				
19	3.8	46.55	5.24				
20	4	49	5.16				
21	4.2	51.45	5.06				
22	4.4	53.9	4.93				
23	4.6	56.35	4.71				
24	4.8	58.8	4.36				
25	5	61.25	3.89				
26	5.2	63.7	3.47				
27	5.4	66.15	3.19				
28	5.6	68.6	2.98				
29	5.8	71.05	2.82				
30	6	73.5	2.69				
31	6.2	75.95	2.58				
32	6.4	78.4	2.50				
33	6.6	80.85	2.42				
34	6.8	83.3	2.34				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065687.093
	Client Sample Identification 2			NS0096 70-72
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	17
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.5**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**37.5**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	9.71	36	18	44.1	2.47
1	0.5	1.225	7.55	37	18.5	45.325	2.44
2	1	2.45	6.81	38	19	46.55	2.40
3	1.5	3.675	6.45	39	19.5	47.775	2.37
4	2	4.9	6.23	40			
5	2.5	6.125	6.07	41			
6	3	7.35	5.95	42			
7	3.5	8.575	5.85	43			
8	4	9.8	5.75	44			
9	4.5	11.025	5.67	45			
10	5	12.25	5.58	46			
11	5.5	13.475	5.49	47			
12	6	14.7	5.40	48			
13	6.5	15.925	5.30	49			
14	7	17.15	5.20	50			
15	7.5	18.375	5.08	51			
16	8	19.6	4.94	52			
17	8.5	20.825	4.77	53			
18	9	22.05	4.58	54			
19	9.5	23.275	4.35	55			
20	10	24.5	4.09	56			
21	10.5	25.725	3.84	57			
22	11	26.95	3.62	58			
23	11.5	28.175	3.44	59			
24	12	29.4	3.30	60			
25	12.5	30.625	3.18	61			
26	13	31.85	3.07	62			
27	13.5	33.075	2.98	63			
28	14	34.3	2.90	64			
29	14.5	35.525	2.83	65			
30	15	36.75	2.76	66			
31	15.5	37.975	2.70	67			
32	16	39.2	2.65	68			
33	16.5	40.425	2.60	69			
34	17	41.65	2.55	70			
35	17.5	42.875	2.51	71			

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065688.007
	Client Sample Identification 2			NS0095 30-32
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

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	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**4.5**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	7.45	36	3.6	8.82	2.69
1	0.1	0.245	6.11	37	3.7	9.065	2.67
2	0.2	0.49	5.23	38	3.8	9.31	2.65
3	0.3	0.735	4.71	39	3.9	9.555	2.64
4	0.4	0.98	4.40	40	4	9.8	2.62
5	0.5	1.225	4.18	41	4.1	10.045	2.61
6	0.6	1.47	4.04	42	4.2	10.29	2.60
7	0.7	1.715	3.92	43	4.3	10.535	2.58
8	0.8	1.96	3.83	44	4.4	10.78	2.57
9	0.9	2.205	3.74	45	4.5	11.025	2.56
10	1	2.45	3.66	46	4.6	11.27	2.54
11	1.1	2.695	3.58	47	4.7	11.515	2.53
12	1.2	2.94	3.50	48	4.8	11.76	2.52
13	1.3	3.185	3.43	49	4.9	12.005	2.51
14	1.4	3.43	3.37	50	5	12.25	2.50
15	1.5	3.675	3.31	51	5.1	12.495	2.48
16	1.6	3.92	3.26	52	5.2	12.74	2.47
17	1.7	4.165	3.21	53	5.3	12.985	2.46
18	1.8	4.41	3.16	54	5.4	13.23	2.45
19	1.9	4.655	3.12	55	5.5	13.475	2.44
20	2	4.9	3.08	56	5.6	13.72	2.43
21	2.1	5.145	3.04	57	5.7	13.965	2.42
22	2.2	5.39	3.01	58	5.8	14.21	2.41
23	2.3	5.635	2.98	59	5.9	14.455	2.40
24	2.4	5.88	2.95	60	6	14.7	2.39
25	2.5	6.125	2.92	61			
26	2.6	6.37	2.89	62			
27	2.7	6.615	2.87	63			
28	2.8	6.86	2.84	64			
29	2.9	7.105	2.82	65			
30	3	7.35	2.80	66			
31	3.1	7.595	2.78	67			
32	3.2	7.84	2.76	68			
33	3.3	8.085	2.74	69			
34	3.4	8.33	2.72	70			
35	3.5	8.575	2.71	71			

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065688.008
	Client Sample Identification 2			NS0095 38-40
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	19
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**8.2**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	7.95	36	3.6	8.82	3.02
1	0.1	0.245	6.84	37	3.7	9.065	3.01
2	0.2	0.49	6.30	38	3.8	9.31	2.99
3	0.3	0.735	5.89	39	3.9	9.555	2.98
4	0.4	0.98	5.49	40	4	9.8	2.96
5	0.5	1.225	5.16	41	4.1	10.045	2.95
6	0.6	1.47	4.90	42	4.2	10.29	2.94
7	0.7	1.715	4.70	43	4.3	10.535	2.92
8	0.8	1.96	4.55	44	4.4	10.78	2.91
9	0.9	2.205	4.41	45	4.5	11.025	2.90
10	1	2.45	4.29	46	4.6	11.27	2.89
11	1.1	2.695	4.18	47	4.7	11.515	2.88
12	1.2	2.94	4.08	48	4.8	11.76	2.87
13	1.3	3.185	4.00	49	4.9	12.005	2.86
14	1.4	3.43	3.91	50	5	12.25	2.85
15	1.5	3.675	3.83	51	5.1	12.495	2.84
16	1.6	3.92	3.74	52	5.2	12.74	2.83
17	1.7	4.165	3.67	53	5.3	12.985	2.82
18	1.8	4.41	3.61	54	5.4	13.23	2.81
19	1.9	4.655	3.55	55	5.5	13.475	2.80
20	2	4.9	3.50	56	5.6	13.72	2.79
21	2.1	5.145	3.45	57	5.7	13.965	2.79
22	2.2	5.39	3.40	58	5.8	14.21	2.78
23	2.3	5.635	3.36	59	5.9	14.455	2.77
24	2.4	5.88	3.32	60	6	14.7	2.76
25	2.5	6.125	3.29	61	6.1	14.945	2.76
26	2.6	6.37	3.25	62	6.2	15.19	2.75
27	2.7	6.615	3.22	63	6.3	15.435	2.75
28	2.8	6.86	3.20	64	6.4	15.68	2.74
29	2.9	7.105	3.17	65	6.5	15.925	2.73
30	3	7.35	3.15	66	6.6	16.17	2.73
31	3.1	7.595	3.12	67	6.7	16.415	2.72
32	3.2	7.84	3.10	68	6.8	16.66	2.72
33	3.3	8.085	3.08	69	6.9	16.905	2.71
34	3.4	8.33	3.06	70	7	17.15	2.71
35	3.5	8.575	3.04	71	7.1	17.395	2.70

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065688.008
	Client Sample Identification 2			NS0095 38-40
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

19
EP120403 continued

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**8.2**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
72	7.2	17.64	2.70	108	10.8	26.46	2.58
73	7.3	17.885	2.69	109	10.9	26.705	2.58
74	7.4	18.13	2.69	110	11	26.95	2.58
75	7.5	18.375	2.68	111	11.1	27.195	2.58
76	7.6	18.62	2.68	112	11.2	27.44	2.58
77	7.7	18.865	2.68	113	11.3	27.685	2.57
78	7.8	19.11	2.67	114	11.4	27.93	2.57
79	7.9	19.355	2.67	115	11.5	28.175	2.57
80	8	19.6	2.66	116	11.6	28.42	2.57
81	8.1	19.845	2.66	117	11.7	28.665	2.57
82	8.2	20.09	2.65	118	11.8	28.91	2.57
83	8.3	20.335	2.65	119	11.9	29.155	2.57
84	8.4	20.58	2.65	120	12	29.4	2.56
85	8.5	20.825	2.64	121	12.1	29.645	2.56
86	8.6	21.07	2.64	122	12.2	29.89	2.56
87	8.7	21.315	2.64	123	12.3	30.135	2.56
88	8.8	21.56	2.63	124	12.4	30.38	2.56
89	8.9	21.805	2.63	125	12.5	30.625	2.56
90	9	22.05	2.63	126	12.6	30.87	2.56
91	9.1	22.295	2.62	127	12.7	31.115	2.56
92	9.2	22.54	2.62	128	12.8	31.36	2.56
93	9.3	22.785	2.62	129	12.9	31.605	2.56
94	9.4	23.03	2.62	130	13	31.85	2.56
95	9.5	23.275	2.61	131	13.1	32.095	2.55
96	9.6	23.52	2.61	132	13.2	32.34	2.55
97	9.7	23.765	2.61	133	13.3	32.585	2.55
98	9.8	24.01	2.61	134	13.4	32.83	2.55
99	9.9	24.255	2.60	135	13.5	33.075	2.55
100	10	24.5	2.60	136	13.6	33.32	2.55
101	10.1	24.745	2.60	137	13.7	33.565	2.55
102	10.2	24.99	2.60	138	13.8	33.81	2.55
103	10.3	25.235	2.59	139	13.9	34.055	2.55
104	10.4	25.48	2.59	140	14	34.3	2.54
105	10.5	25.725	2.59	141	14.1	34.545	2.54
106	10.6	25.97	2.59	142	14.2	34.79	2.55
107	10.7	26.215	2.58	143	14.3	35.035	2.54

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065688.008
	Client Sample Identification 2			NS0095 38-40
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

19
EP120403 continued

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**8.2**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
144	14.4	35.28	2.54	180	18	44.1	2.51
145	14.5	35.525	2.54	181	18.1	44.345	2.51
146	14.6	35.77	2.54	182	18.2	44.59	2.51
147	14.7	36.015	2.54	183	18.3	44.835	2.51
148	14.8	36.26	2.54	184	18.4	45.08	2.51
149	14.9	36.505	2.54	185	18.5	45.325	2.51
150	15	36.75	2.54	186	18.6	45.57	2.51
151	15.1	36.995	2.54	187	18.7	45.815	2.51
152	15.2	37.24	2.54	188	18.8	46.06	2.51
153	15.3	37.485	2.54	189	18.9	46.305	2.51
154	15.4	37.73	2.54	190	19	46.55	2.51
155	15.5	37.975	2.54	191	19.1	46.795	2.51
156	15.6	38.22	2.54	192	19.2	47.04	2.51
157	15.7	38.465	2.54	193	19.3	47.285	2.51
158	15.8	38.71	2.54	194	19.4	47.53	2.51
159	15.9	38.955	2.54	195	19.5	47.775	2.51
160	16	39.2	2.54	196	19.6	48.02	2.51
161	16.1	39.445	2.54	197	19.7	48.265	2.51
162	16.2	39.69	2.54	198	19.8	48.51	2.51
163	16.3	39.935	2.53	199	19.9	48.755	2.51
164	16.4	40.18	2.53	200	20	49	2.51
165	16.5	40.425	2.53	201	20.1	49.245	2.51
166	16.6	40.67	2.53	202	20.2	49.49	2.50
167	16.7	40.915	2.53	203	20.3	49.735	2.50
168	16.8	41.16	2.53	204	20.4	49.98	2.51
169	16.9	41.405	2.53	205	20.5	50.225	2.51
170	17	41.65	2.53	206	20.6	50.47	2.50
171	17.1	41.895	2.52	207	20.7	50.715	2.50
172	17.2	42.14	2.52	208	20.8	50.96	2.50
173	17.3	42.385	2.52	209	20.9	51.205	2.50
174	17.4	42.63	2.52	210	21	51.45	2.50
175	17.5	42.875	2.52	211	21.1	51.695	2.50
176	17.6	43.12	2.52	212	21.2	51.94	2.50
177	17.7	43.365	2.52	213	21.3	52.185	2.50
178	17.8	43.61	2.51	214	21.4	52.43	2.50
179	17.9	43.855	2.51	215	21.5	52.675	2.50

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065688.026
	Client Sample Identification 2			NS0094 28-30
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

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	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**6.6**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	7.56	36	3.6	8.82	3.02
1	0.1	0.245	6.81	37	3.7	9.065	2.99
2	0.2	0.49	6.31	38	3.8	9.31	2.97
3	0.3	0.735	5.92	39	3.9	9.555	2.95
4	0.4	0.98	5.60	40	4	9.8	2.92
5	0.5	1.225	5.32	41	4.1	10.045	2.90
6	0.6	1.47	5.11	42	4.2	10.29	2.88
7	0.7	1.715	4.93	43	4.3	10.535	2.86
8	0.8	1.96	4.78	44	4.4	10.78	2.84
9	0.9	2.205	4.65	45	4.5	11.025	2.83
10	1	2.45	4.54	46	4.6	11.27	2.81
11	1.1	2.695	4.43	47	4.7	11.515	2.79
12	1.2	2.94	4.33	48	4.8	11.76	2.78
13	1.3	3.185	4.24	49	4.9	12.005	2.76
14	1.4	3.43	4.15	50	5	12.25	2.75
15	1.5	3.675	4.07	51	5.1	12.495	2.73
16	1.6	3.92	3.99	52	5.2	12.74	2.72
17	1.7	4.165	3.90	53	5.3	12.985	2.70
18	1.8	4.41	3.83	54	5.4	13.23	2.69
19	1.9	4.655	3.76	55	5.5	13.475	2.68
20	2	4.9	3.69	56	5.6	13.72	2.67
21	2.1	5.145	3.63	57	5.7	13.965	2.66
22	2.2	5.39	3.56	58	5.8	14.21	2.65
23	2.3	5.635	3.51	59	5.9	14.455	2.64
24	2.4	5.88	3.45	60	6	14.7	2.62
25	2.5	6.125	3.41	61	6.1	14.945	2.61
26	2.6	6.37	3.36	62	6.2	15.19	2.60
27	2.7	6.615	3.31	63	6.3	15.435	2.59
28	2.8	6.86	3.27	64	6.4	15.68	2.58
29	2.9	7.105	3.23	65	6.5	15.925	2.57
30	3	7.35	3.20	66	6.6	16.17	2.56
31	3.1	7.595	3.16	67	6.7	16.415	2.56
32	3.2	7.84	3.13	68	6.8	16.66	2.55
33	3.3	8.085	3.10	69	6.9	16.905	2.51
34	3.4	8.33	3.07	70	7	17.15	2.50
35	3.5	8.575	3.04	71	7.1	17.395	2.50

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065688.042
	Client Sample Identification 2			NS0097 28-30
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	21
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**7.1**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	8.04	36	3.6	8.82	2.84
1	0.1	0.245	6.66	37	3.7	9.065	2.82
2	0.2	0.49	5.99	38	3.8	9.31	2.80
3	0.3	0.735	5.51	39	3.9	9.555	2.78
4	0.4	0.98	5.18	40	4	9.8	2.77
5	0.5	1.225	4.94	41	4.1	10.045	2.75
6	0.6	1.47	4.76	42	4.2	10.29	2.73
7	0.7	1.715	4.59	43	4.3	10.535	2.71
8	0.8	1.96	4.45	44	4.4	10.78	2.70
9	0.9	2.205	4.32	45	4.5	11.025	2.68
10	1	2.45	4.20	46	4.6	11.27	2.67
11	1.1	2.695	4.09	47	4.7	11.515	2.66
12	1.2	2.94	3.98	48	4.8	11.76	2.64
13	1.3	3.185	3.89	49	4.9	12.005	2.63
14	1.4	3.43	3.80	50	5	12.25	2.62
15	1.5	3.675	3.72	51	5.1	12.495	2.60
16	1.6	3.92	3.64	52	5.2	12.74	2.59
17	1.7	4.165	3.56	53	5.3	12.985	2.58
18	1.8	4.41	3.49	54	5.4	13.23	2.57
19	1.9	4.655	3.43	55	5.5	13.475	2.56
20	2	4.9	3.38	56	5.6	13.72	2.55
21	2.1	5.145	3.32	57	5.7	13.965	2.54
22	2.2	5.39	3.27	58	5.8	14.21	2.53
23	2.3	5.635	3.23	59	5.9	14.455	2.52
24	2.4	5.88	3.19	60	6	14.7	2.51
25	2.5	6.125	3.15	61	6.1	14.945	2.50
26	2.6	6.37	3.11	62	6.2	15.19	2.49
27	2.7	6.615	3.08	63	6.3	15.435	2.48
28	2.8	6.86	3.04				
29	2.9	7.105	3.01				
30	3	7.35	2.99				
31	3.1	7.595	2.96				
32	3.2	7.84	2.93				
33	3.3	8.085	2.91				
34	3.4	8.33	2.89				
35	3.5	8.575	2.86				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065688.042
	Client Sample Identification 2			NS0097 28-30
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	21	Check
EP120403		

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**7.1**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	8.08	36	3.6	8.82	2.82
1	0.1	0.245	6.78	37	3.7	9.065	2.80
2	0.2	0.49	6.11	38	3.8	9.31	2.78
3	0.3	0.735	5.60	39	3.9	9.555	2.76
4	0.4	0.98	5.25	40	4	9.8	2.74
5	0.5	1.225	4.98	41	4.1	10.045	2.73
6	0.6	1.47	4.77	42	4.2	10.29	2.71
7	0.7	1.715	4.58	43	4.3	10.535	2.70
8	0.8	1.96	4.42	44	4.4	10.78	2.68
9	0.9	2.205	4.29	45	4.5	11.025	2.67
10	1	2.45	4.17	46	4.6	11.27	2.65
11	1.1	2.695	4.05	47	4.7	11.515	2.64
12	1.2	2.94	3.94	48	4.8	11.76	2.62
13	1.3	3.185	3.85	49	4.9	12.005	2.61
14	1.4	3.43	3.76	50	5	12.25	2.60
15	1.5	3.675	3.68	51	5.1	12.495	2.59
16	1.6	3.92	3.60	52	5.2	12.74	2.58
17	1.7	4.165	3.53	53	5.3	12.985	2.56
18	1.8	4.41	3.46	54	5.4	13.23	2.55
19	1.9	4.655	3.40	55	5.5	13.475	2.54
20	2	4.9	3.34	56	5.6	13.72	2.53
21	2.1	5.145	3.29	57	5.7	13.965	2.52
22	2.2	5.39	3.24	58	5.8	14.21	2.51
23	2.3	5.635	3.19	59	5.9	14.455	2.50
24	2.4	5.88	3.15	60	6	14.7	2.49
25	2.5	6.125	3.12	61	6.1	14.945	2.49
26	2.6	6.37	3.08	62	6.2	15.19	2.48
27	2.7	6.615	3.05				
28	2.8	6.86	3.01				
29	2.9	7.105	2.98				
30	3	7.35	2.96				
31	3.1	7.595	2.93				
32	3.2	7.84	2.90				
33	3.3	8.085	2.88				
34	3.4	8.33	2.86				
35	3.5	8.575	2.84				

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065688.078
	Client Sample Identification 2			NS0113 128-130
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

	22
	EP120403

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**4.6**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
0	0	0	8.53	36	3.6	8.82	4.61
1	0.1	0.245	8.00	37	3.7	9.065	4.56
2	0.2	0.49	7.69	38	3.8	9.31	4.52
3	0.3	0.735	7.52	39	3.9	9.555	4.48
4	0.4	0.98	7.44	40	4	9.8	4.42
5	0.5	1.225	7.38	41	4.1	10.045	4.38
6	0.6	1.47	7.33	42	4.2	10.29	4.35
7	0.7	1.715	7.29	43	4.3	10.535	4.30
8	0.8	1.96	7.23	44	4.4	10.78	4.27
9	0.9	2.205	7.16	45	4.5	11.025	4.24
10	1	2.45	7.08	46	4.6	11.27	4.21
11	1.1	2.695	6.99	47	4.7	11.515	4.17
12	1.2	2.94	6.88	48	4.8	11.76	4.15
13	1.3	3.185	6.77	49	4.9	12.005	4.12
14	1.4	3.43	6.65	50	5	12.25	4.10
15	1.5	3.675	6.53	51	5.1	12.495	4.07
16	1.6	3.92	6.40	52	5.2	12.74	4.04
17	1.7	4.165	6.27	53	5.3	12.985	4.02
18	1.8	4.41	6.14	54	5.4	13.23	4.00
19	1.9	4.655	6.01	55	5.5	13.475	3.99
20	2	4.9	5.89	56	5.6	13.72	3.97
21	2.1	5.145	5.76	57	5.7	13.965	3.95
22	2.2	5.39	5.64	58	5.8	14.21	3.93
23	2.3	5.635	5.53	59	5.9	14.455	3.91
24	2.4	5.88	5.43	60	6	14.7	3.90
25	2.5	6.125	5.33	61	6.1	14.945	3.89
26	2.6	6.37	5.24	62	6.2	15.19	3.88
27	2.7	6.615	5.16	63	6.3	15.435	3.87
28	2.8	6.86	5.08	64	6.4	15.68	3.86
29	2.9	7.105	5.01	65	6.5	15.925	3.86
30	3	7.35	4.94	66	6.6	16.17	3.85
31	3.1	7.595	4.88	67	6.7	16.415	3.84
32	3.2	7.84	4.82	68	6.8	16.66	3.83
33	3.3	8.085	4.76	69	6.9	16.905	3.82
34	3.4	8.33	4.71	70	7	17.15	3.82
35	3.5	8.575	4.66	71	7.1	17.395	3.81

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065688.078
	Client Sample Identification 2			NS0113 128-130
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

22
EP120403 continued

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**4.6**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
72	7.2	17.64	3.80	108	10.8	26.46	3.40
73	7.3	17.885	3.80	109	10.9	26.705	3.38
74	7.4	18.13	3.79	110	11	26.95	3.37
75	7.5	18.375	3.79	111	11.1	27.195	3.36
76	7.6	18.62	3.78	112	11.2	27.44	3.35
77	7.7	18.865	3.77	113	11.3	27.685	3.34
78	7.8	19.11	3.76	114	11.4	27.93	3.32
79	7.9	19.355	3.75	115	11.5	28.175	3.31
80	8	19.6	3.74	116	11.6	28.42	3.30
81	8.1	19.845	3.73	117	11.7	28.665	3.29
82	8.2	20.09	3.71	118	11.8	28.91	3.28
83	8.3	20.335	3.70	119	11.9	29.155	3.27
84	8.4	20.58	3.69	120	12	29.4	3.26
85	8.5	20.825	3.69	121	12.1	29.645	3.25
86	8.6	21.07	3.68	122	12.2	29.89	3.24
87	8.7	21.315	3.67	123	12.3	30.135	3.23
88	8.8	21.56	3.65	124	12.4	30.38	3.22
89	8.9	21.805	3.64	125	12.5	30.625	3.21
90	9	22.05	3.62	126	12.6	30.87	3.20
91	9.1	22.295	3.61	127	12.7	31.115	3.19
92	9.2	22.54	3.60	128	12.8	31.36	3.18
93	9.3	22.785	3.59	129	12.9	31.605	3.17
94	9.4	23.03	3.57	130	13	31.85	3.16
95	9.5	23.275	3.56	131	13.1	32.095	3.15
96	9.6	23.52	3.55	132	13.2	32.34	3.14
97	9.7	23.765	3.54	133	13.3	32.585	3.13
98	9.8	24.01	3.53	134	13.4	32.83	3.12
99	9.9	24.255	3.51	135	13.5	33.075	3.11
100	10	24.5	3.50	136	13.6	33.32	3.11
101	10.1	24.745	3.48	137	13.7	33.565	3.10
102	10.2	24.99	3.47	138	13.8	33.81	3.09
103	10.3	25.235	3.46	139	13.9	34.055	3.08
104	10.4	25.48	3.45	140	14	34.3	3.08
105	10.5	25.725	3.43	141	14.1	34.545	3.07
106	10.6	25.97	3.42	142	14.2	34.79	3.07
107	10.7	26.215	3.41	143	14.3	35.035	3.06

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065688.078
	Client Sample Identification 2			NS0113 128-130
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

22
EP120403 continued

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**4.6**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
144	14.4	35.28	3.06	180	18	44.1	3.03
145	14.5	35.525	3.06	181	18.1	44.345	3.02
146	14.6	35.77	3.06	182	18.2	44.59	3.02
147	14.7	36.015	3.06	183	18.3	44.835	3.01
148	14.8	36.26	3.06	184	18.4	45.08	3.00
149	14.9	36.505	3.06	185	18.5	45.325	2.99
150	15	36.75	3.06	186	18.6	45.57	2.99
151	15.1	36.995	3.06	187	18.7	45.815	2.98
152	15.2	37.24	3.06	188	18.8	46.06	2.97
153	15.3	37.485	3.06	189	18.9	46.305	2.97
154	15.4	37.73	3.06	190	19	46.55	2.96
155	15.5	37.975	3.07	191	19.1	46.795	2.95
156	15.6	38.22	3.07	192	19.2	47.04	2.95
157	15.7	38.465	3.07	193	19.3	47.285	2.94
158	15.8	38.71	3.07	194	19.4	47.53	2.93
159	15.9	38.955	3.07	195	19.5	47.775	2.93
160	16	39.2	3.07	196	19.6	48.02	2.92
161	16.1	39.445	3.08	197	19.7	48.265	2.92
162	16.2	39.69	3.08	198	19.8	48.51	2.91
163	16.3	39.935	3.08	199	19.9	48.755	2.90
164	16.4	40.18	3.08	200	20	49	2.90
165	16.5	40.425	3.08	201	20.1	49.245	2.89
166	16.6	40.67	3.08	202	20.2	49.49	2.89
167	16.7	40.915	3.08	203	20.3	49.735	2.88
168	16.8	41.16	3.08	204	20.4	49.98	2.87
169	16.9	41.405	3.08	205	20.5	50.225	2.87
170	17	41.65	3.08	206	20.6	50.47	2.86
171	17.1	41.895	3.08	207	20.7	50.715	2.86
172	17.2	42.14	3.07	208	20.8	50.96	2.85
173	17.3	42.385	3.07	209	20.9	51.205	2.85
174	17.4	42.63	3.06	210	21	51.45	2.84
175	17.5	42.875	3.06	211	21.1	51.695	2.84
176	17.6	43.12	3.05	212	21.2	51.94	2.83
177	17.7	43.365	3.05	213	21.3	52.185	2.83
178	17.8	43.61	3.04	214	21.4	52.43	2.82
179	17.9	43.855	3.04	215	21.5	52.675	2.82

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065688.078
	Client Sample Identification 2			NS0113 128-130
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

22
EP120403 continued

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**4.6**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
216	21.6	52.92	2.81	252	25.2	61.74	2.79
217	21.7	53.165	2.80	253	25.3	61.985	2.79
218	21.8	53.41	2.80	254	25.4	62.23	2.79
219	21.9	53.655	2.79	255	25.5	62.475	2.79
220	22	53.9	2.79	256	25.6	62.72	2.79
221	22.1	54.145	2.78	257	25.7	62.965	2.79
222	22.2	54.39	2.78	258	25.8	63.21	2.79
223	22.3	54.635	2.77	259	25.9	63.455	2.80
224	22.4	54.88	2.77	260	26	63.7	2.80
225	22.5	55.125	2.77	261	26.1	63.945	2.79
226	22.6	55.37	2.76	262	26.2	64.19	2.79
227	22.7	55.615	2.76	263	26.3	64.435	2.79
228	22.8	55.86	2.76	264	26.4	64.68	2.79
229	22.9	56.105	2.75	265	26.5	64.925	2.79
230	23	56.35	2.75	266	26.6	65.17	2.78
231	23.1	56.595	2.75	267	26.7	65.415	2.78
232	23.2	56.84	2.74	268	26.8	65.66	2.78
233	23.3	57.085	2.74	269	26.9	65.905	2.77
234	23.4	57.33	2.74	270	27	66.15	2.77
235	23.5	57.575	2.74	271	27.1	66.395	2.77
236	23.6	57.82	2.74	272	27.2	66.64	2.76
237	23.7	58.065	2.75	273	27.3	66.885	2.76
238	23.8	58.31	2.75	274	27.4	67.13	2.76
239	23.9	58.555	2.75	275	27.5	67.375	2.75
240	24	58.8	2.75	276	27.6	67.62	2.75
241	24.1	59.045	2.75	277	27.7	67.865	2.75
242	24.2	59.29	2.76	278	27.8	68.11	2.74
243	24.3	59.535	2.76	279	27.9	68.355	2.74
244	24.4	59.78	2.76	280	28	68.6	2.74
245	24.5	60.025	2.77	281	28.1	68.845	2.73
246	24.6	60.27	2.77	282	28.2	69.09	2.73
247	24.7	60.515	2.77	283	28.3	69.335	2.72
248	24.8	60.76	2.78	284	28.4	69.58	2.72
249	24.9	61.005	2.78	285	28.5	69.825	2.72
250	25	61.25	2.78	286	28.6	70.07	2.71
251	25.1	61.495	2.78	287	28.7	70.315	2.71

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065688.078
	Client Sample Identification 2			NS0113 128-130
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

22
EP120403 continued

EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**4.6**

EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
288	28.8	70.56	2.70	324	32.4	79.38	2.58
289	28.9	70.805	2.70	325	32.5	79.625	2.58
290	29	71.05	2.69	326	32.6	79.87	2.59
291	29.1	71.295	2.69	327	32.7	80.115	2.59
292	29.2	71.54	2.68	328	32.8	80.36	2.59
293	29.3	71.785	2.68	329	32.9	80.605	2.59
294	29.4	72.03	2.68	330	33	80.85	2.59
295	29.5	72.275	2.67	331	33.1	81.095	2.59
296	29.6	72.52	2.67	332	33.2	81.34	2.60
297	29.7	72.765	2.66	333	33.3	81.585	2.60
298	29.8	73.01	2.66	334	33.4	81.83	2.60
299	29.9	73.255	2.66	335	33.5	82.075	2.60
300	30	73.5	2.65	336	33.6	82.32	2.61
301	30.1	73.745	2.65	337	33.7	82.565	2.61
302	30.2	73.99	2.64	338	33.8	82.81	2.61
303	30.3	74.235	2.64	339	33.9	83.055	2.61
304	30.4	74.48	2.64	340	34	83.3	2.61
305	30.5	74.725	2.63	341	34.1	83.545	2.62
306	30.6	74.97	2.63	342	34.2	83.79	2.62
307	30.7	75.215	2.62	343	34.3	84.035	2.62
308	30.8	75.46	2.62	344	34.4	84.28	2.62
309	30.9	75.705	2.62	345	34.5	84.525	2.62
310	31	75.95	2.61	346	34.6	84.77	2.62
311	31.1	76.195	2.61	347	34.7	85.015	2.62
312	31.2	76.44	2.61	348	34.8	85.26	2.62
313	31.3	76.685	2.60	349	34.9	85.505	2.62
314	31.4	76.93	2.60	350	35	85.75	2.62
315	31.5	77.175	2.60	351	35.1	85.995	2.62
316	31.6	77.42	2.59	352	35.2	86.24	2.61
317	31.7	77.665	2.59	353	35.3	86.485	2.61
318	31.8	77.91	2.59	354	35.4	86.73	2.61
319	31.9	78.155	2.59	355	35.5	86.975	2.61
320	32	78.4	2.58	356	35.6	87.22	2.61
321	32.1	78.645	2.58	357	35.7	87.465	2.60
322	32.2	78.89	2.58	358	35.8	87.71	2.60
323	32.3	79.135	2.58	359	35.9	87.955	2.60

Work Order :	EP1204032	Client ID:	GHD PTY LTD

	Sub Matrix			Soil
	Client Sample Identification 1			PE065688.078
	Client Sample Identification 2			NS0113 128-130
	Sample Date			21/02/2012
Method	Analyte	Units	LOR	

22
EP120403 continued

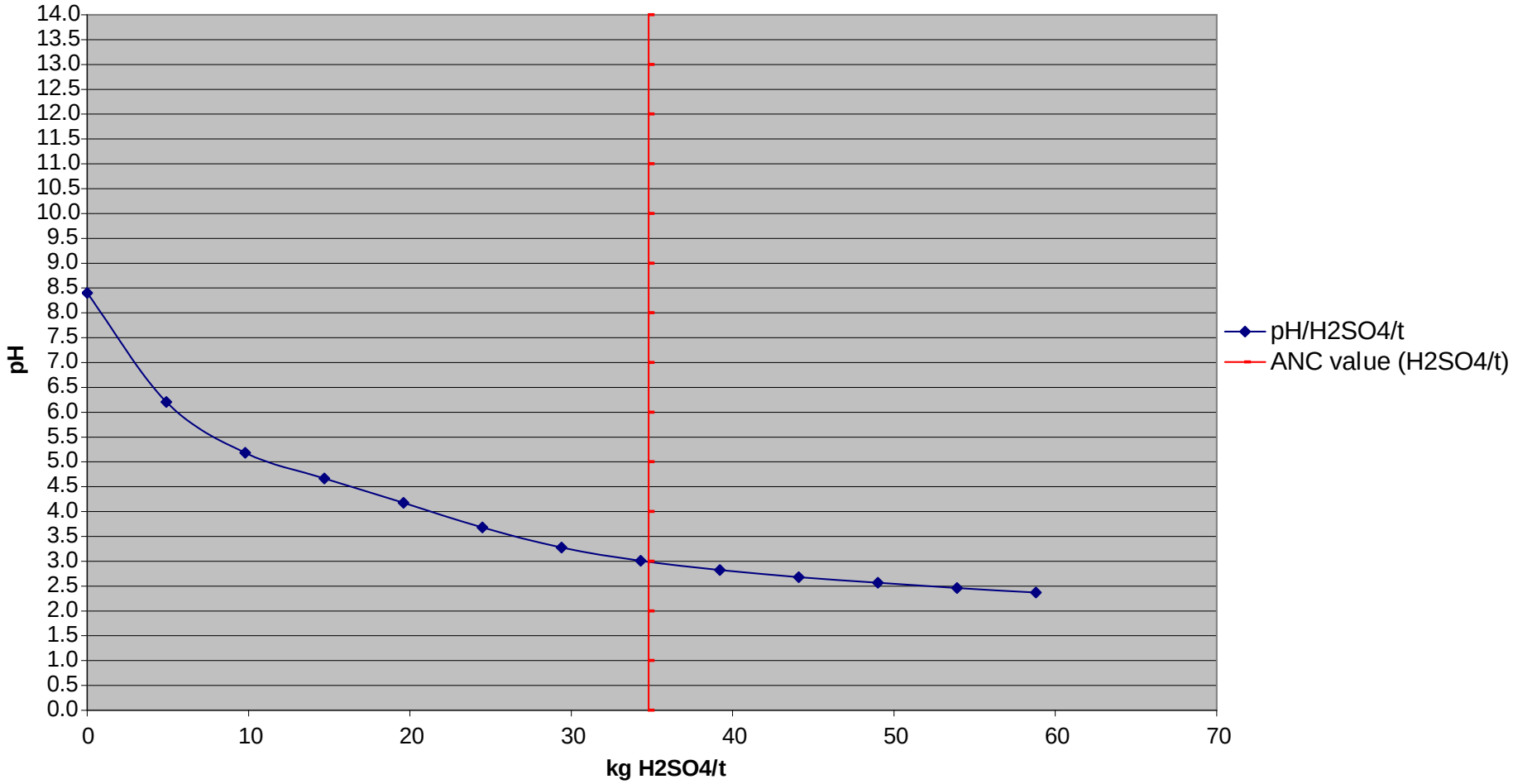
EA046 - A Titration information

HCl Molarity:	**M**	**0.1**
Increments:	**mL**	**0.1**
Weight	**(g)**	**2**
ANC	**kgH2SO4/t**	**4.6**

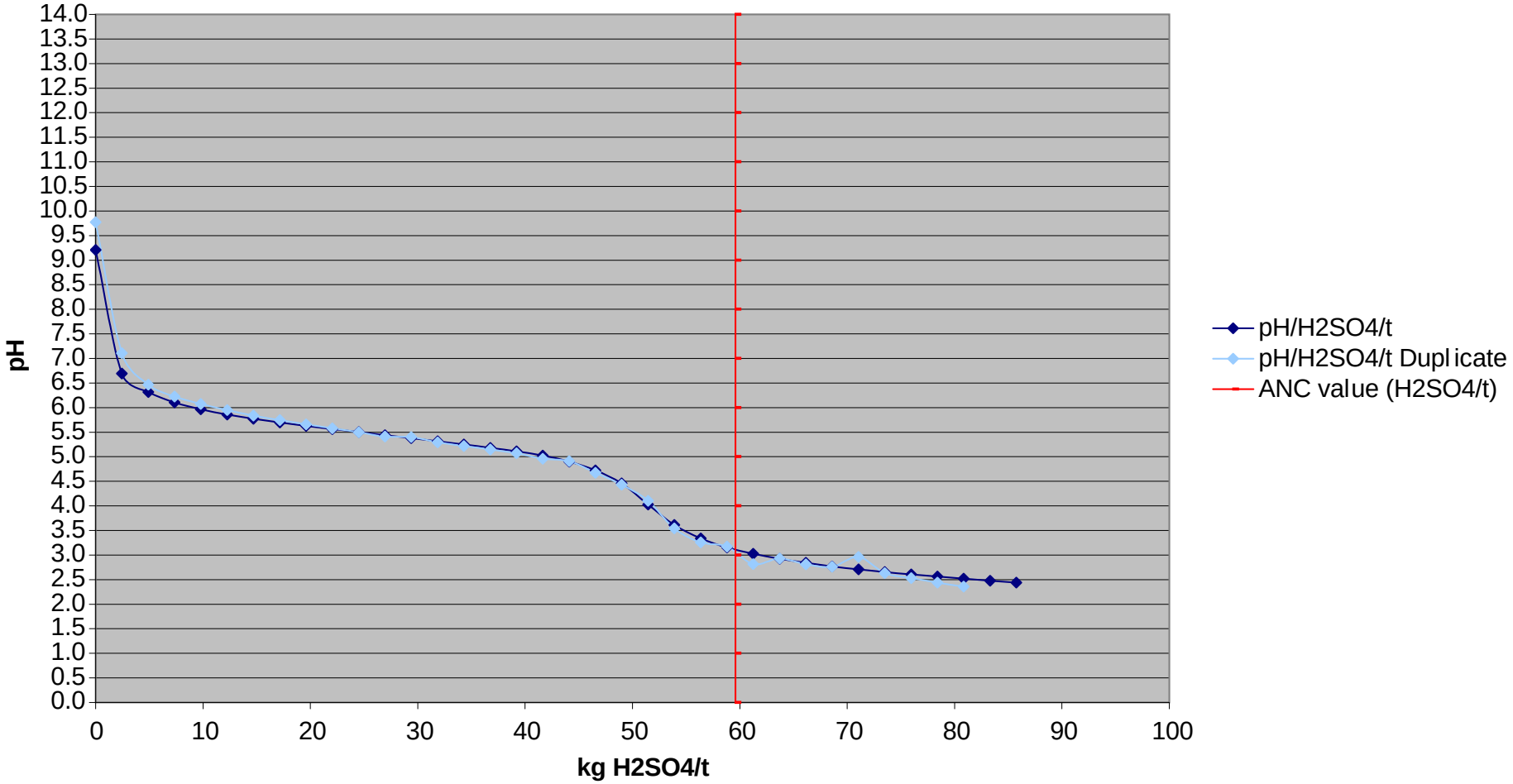
EA046 -B - Curve information

Addition	mLs adde (total)	kg H2SO4/t	pH	Addition	mLs adde (total)	kg H2SO4/t	pH
360	36	88.2	2.60	396	39.6	97.02	2.50
361	36.1	88.445	2.59	397	39.7	97.265	2.50
362	36.2	88.69	2.59	398	39.8	97.51	2.50
363	36.3	88.935	2.59	399	39.9	97.755	2.49
364	36.4	89.18	2.58	400	40	98	2.49
365	36.5	89.425	2.58	401	40.1	98.245	2.49
366	36.6	89.67	2.58				
367	36.7	89.915	2.58				
368	36.8	90.16	2.58				
369	36.9	90.405	2.57				
370	37	90.65	2.57				
371	37.1	90.895	2.57				
372	37.2	91.14	2.57				
373	37.3	91.385	2.56				
374	37.4	91.63	2.56				
375	37.5	91.875	2.56				
376	37.6	92.12	2.55				
377	37.7	92.365	2.55				
378	37.8	92.61	2.55				
379	37.9	92.855	2.55				
380	38	93.1	2.54				
381	38.1	93.345	2.54				
382	38.2	93.59	2.54				
383	38.3	93.835	2.54				
384	38.4	94.08	2.53				
385	38.5	94.325	2.53				
386	38.6	94.57	2.53				
387	38.7	94.815	2.53				
388	38.8	95.06	2.52				
389	38.9	95.305	2.52				
390	39	95.55	2.52				
391	39.1	95.795	2.51				
392	39.2	96.04	2.51				
393	39.3	96.285	2.51				
394	39.4	96.53	2.51				
395	39.5	96.775	2.50				

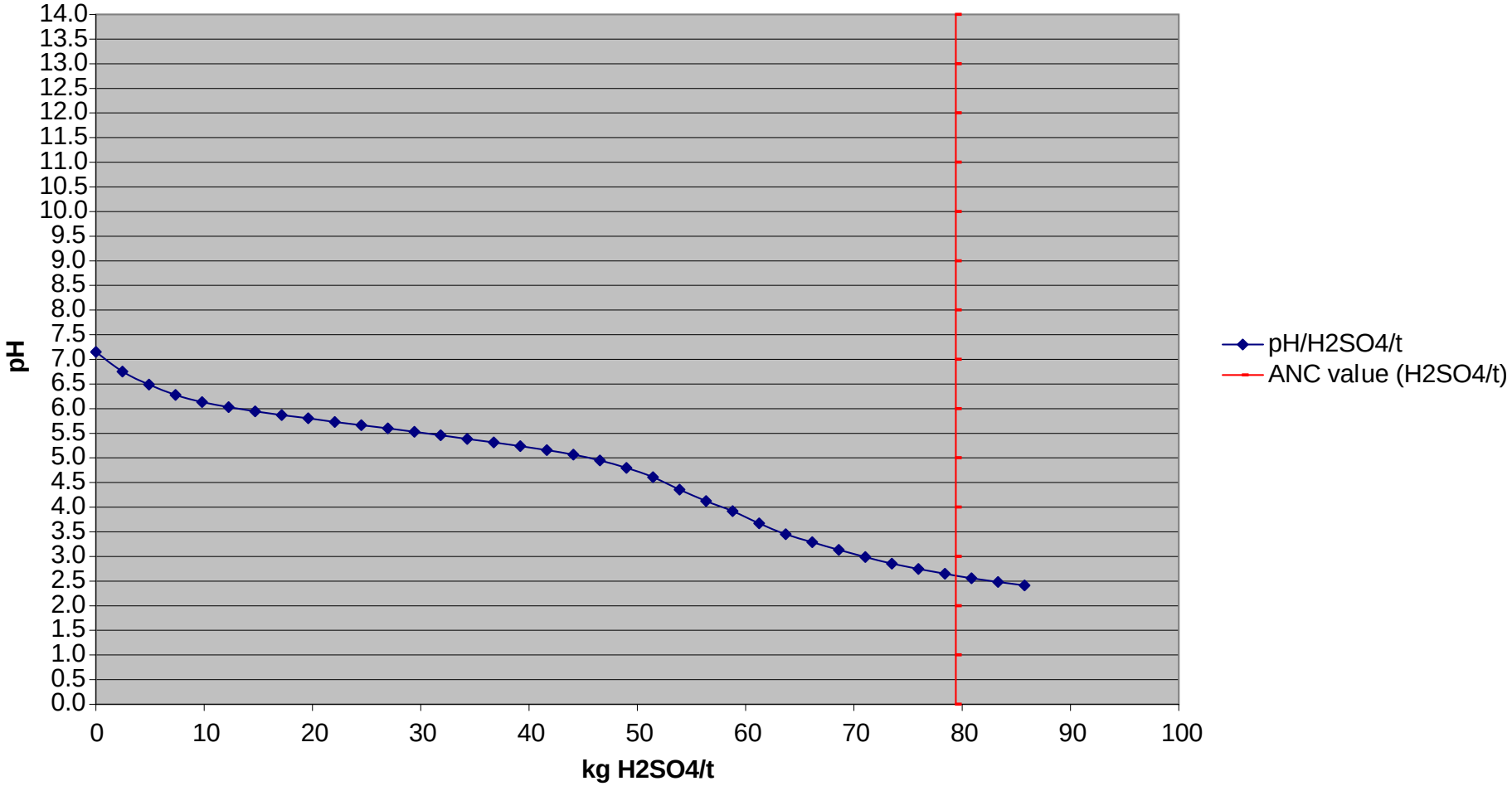
EP1204032 001(PE065685.029, NS0159 116-118)
Acid Buffering Characteristic Curve
Titrating with 0.5M HCl, in increments of 0.4 mLs every 1000 seconds



EP1204032 002(PE065685.050, NS0158 178-180)
Acid Buffering Characteristic Curve
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



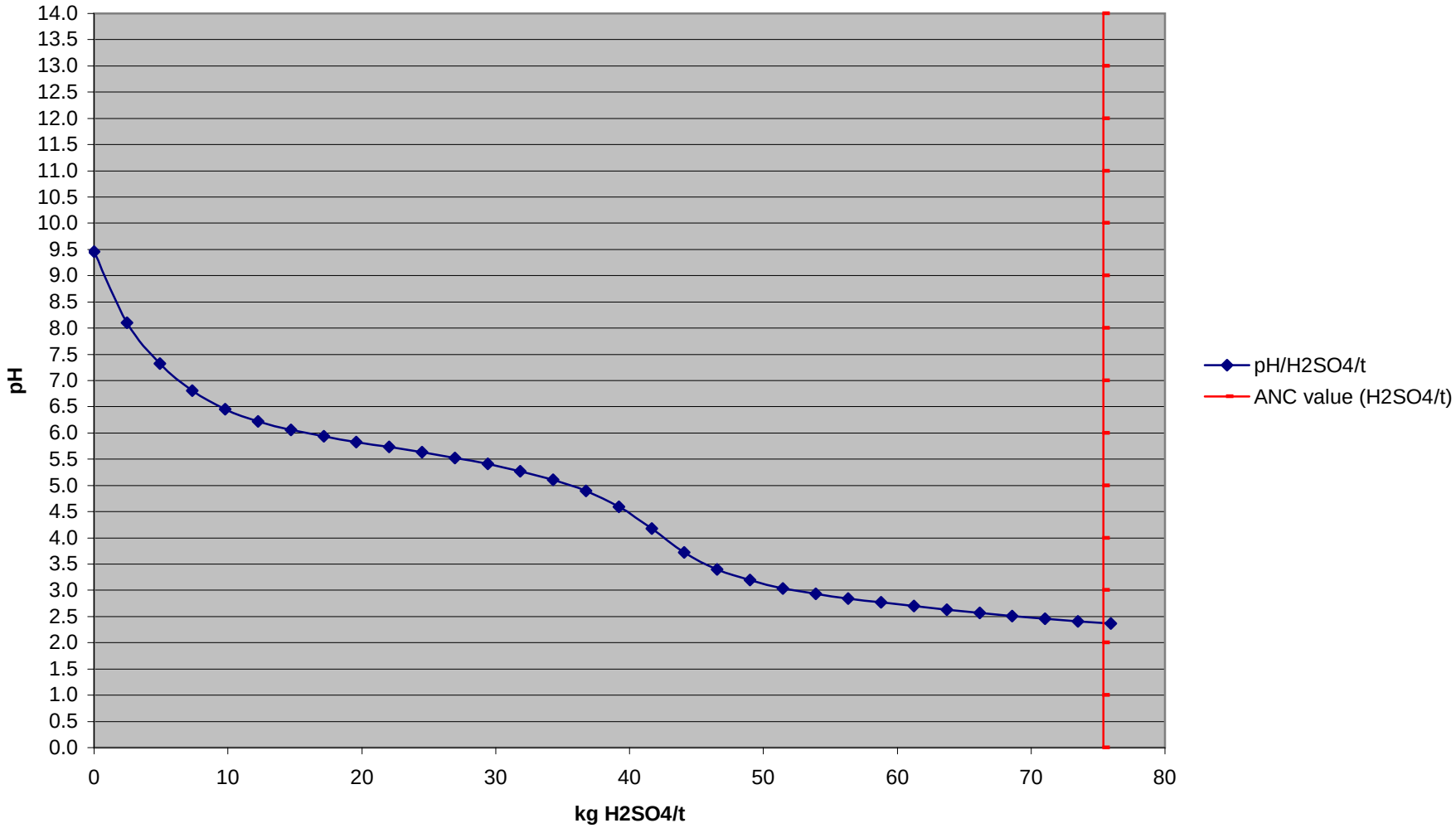
EP1204032 003(PE065685.089, NS0152 148-150)
Acid Buffering Characteristic Curve
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



EP1204032 004(PE065685.098, NS0152 244-246)

Acid Buffering Characteristic Curve

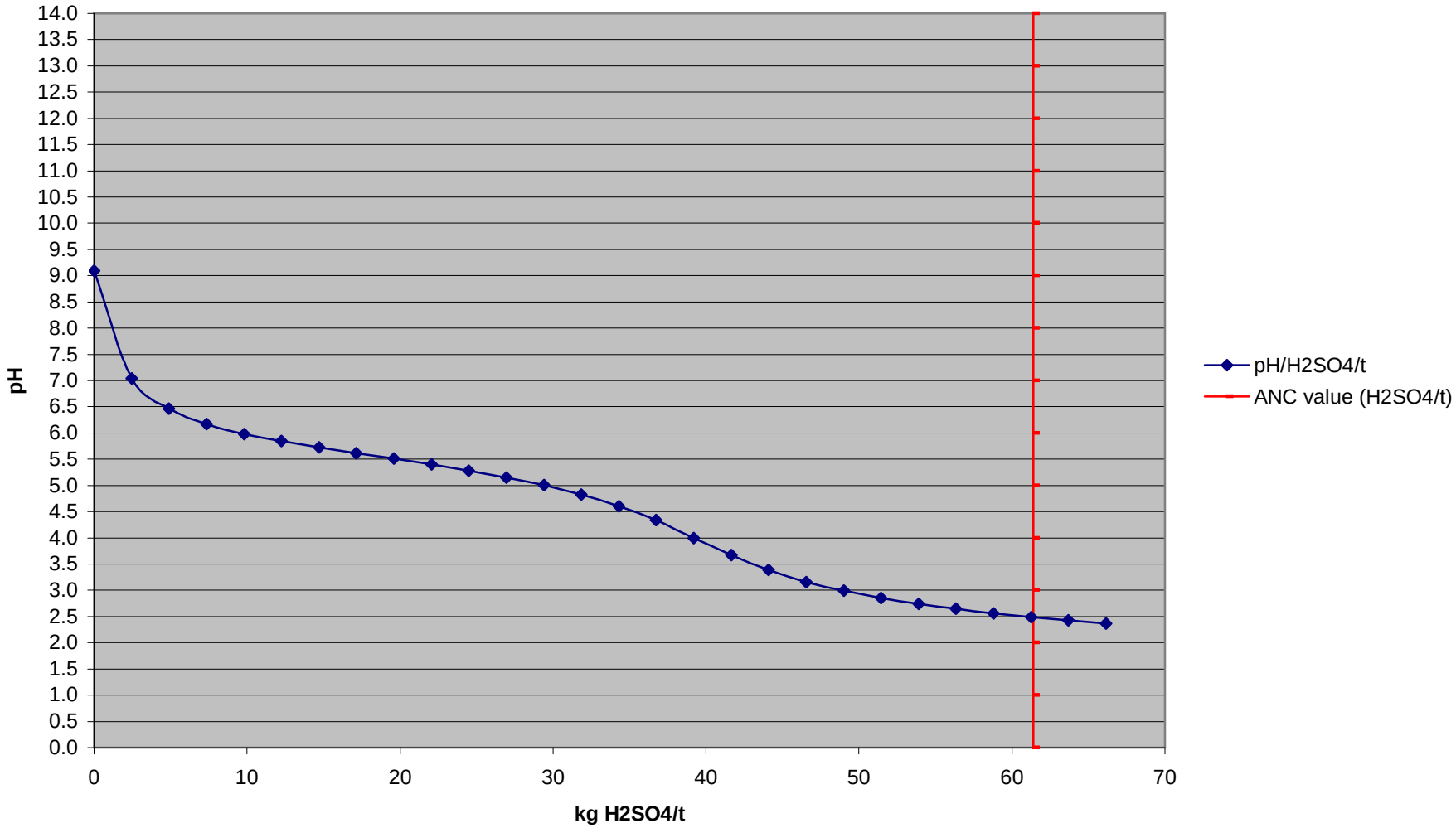
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



EP1204032 005(PE065686.007, NS0152 120-122)

Acid Buffering Characteristic Curve

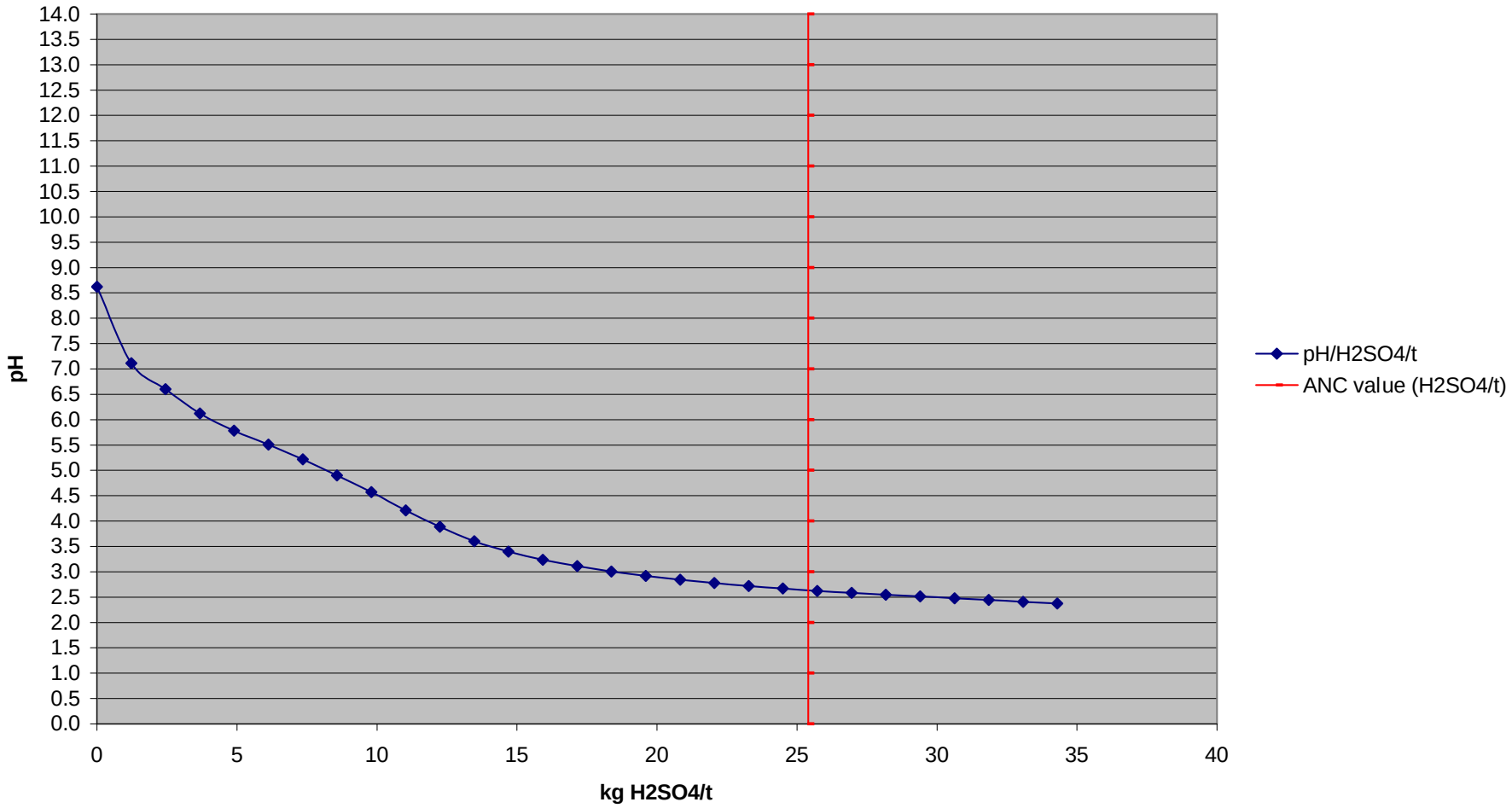
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



EP1204032 006(PE065686.020, NS0153 168-170)

Acid Buffering Characteristic Curve

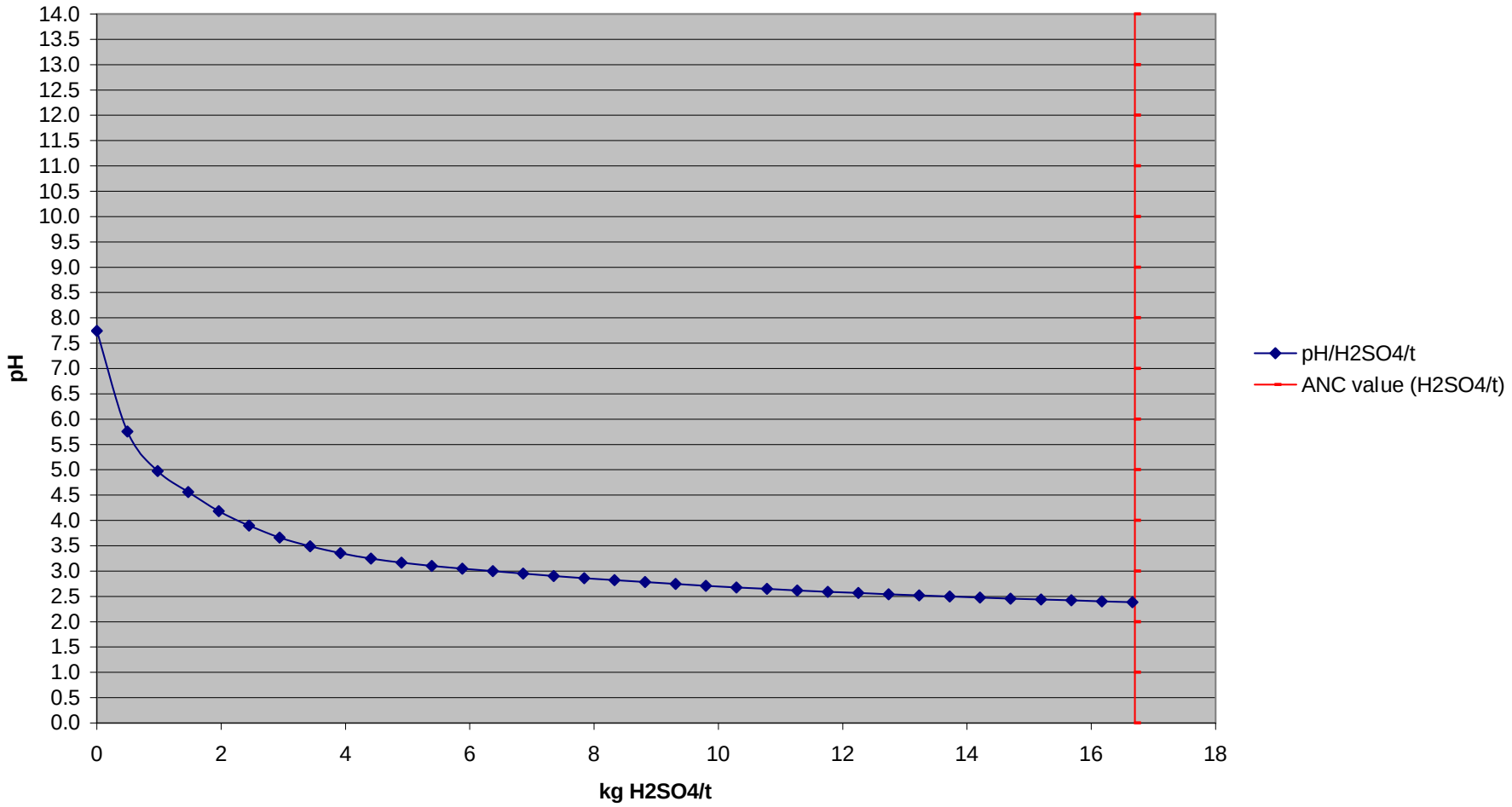
Titrating with 0.1M HCl, in increments of 0.5 mLs every 1000 seconds



EP1204032 007(PE065686.021, NS0153 98-100)

Acid Buffering Characteristic Curve

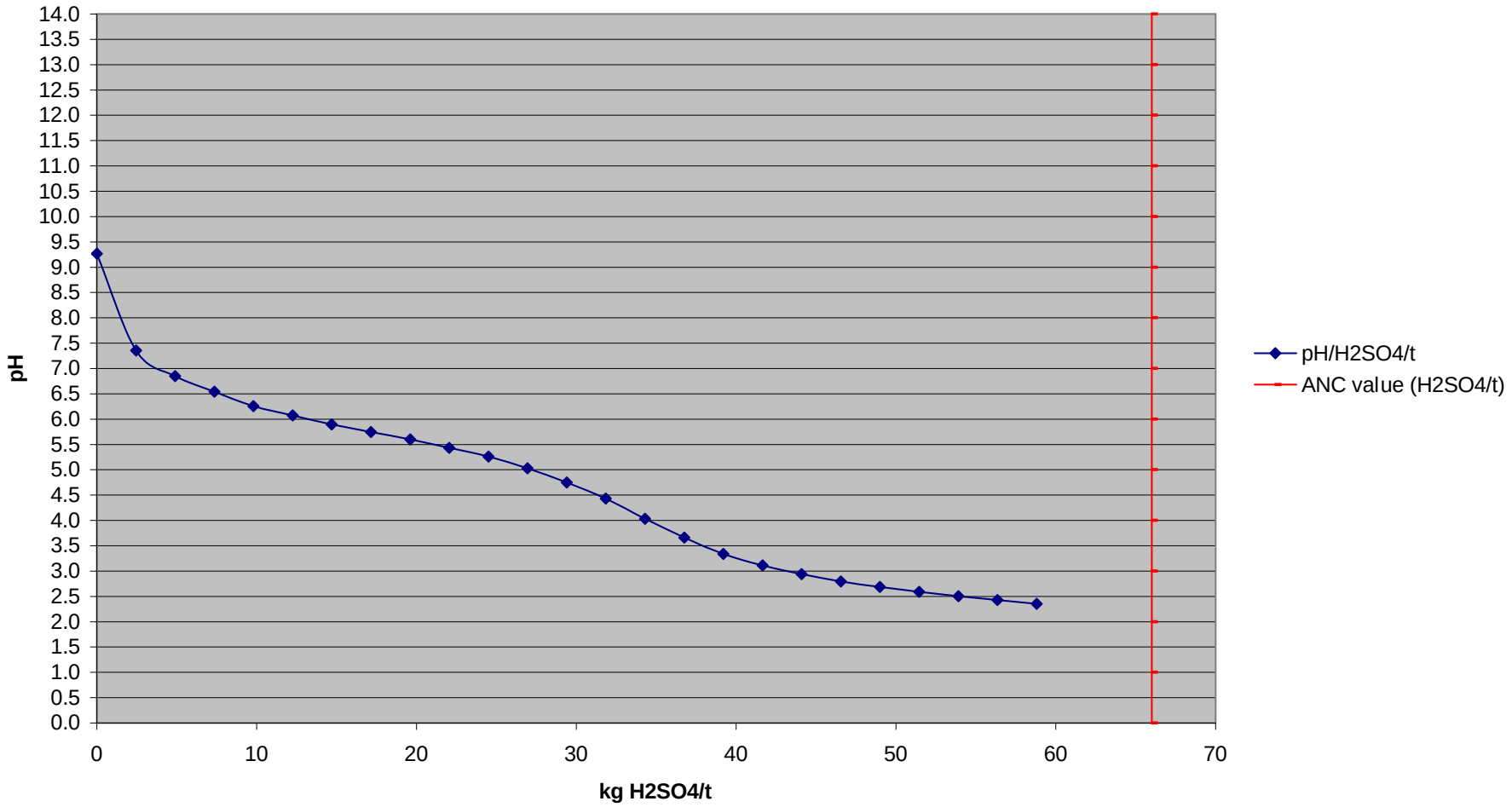
Titrating with 0.1M HCl, in increments of 0.2 mLs every 1000 seconds



EP1204032 008(PE065686.035, NS0154 38-40)

Acid Buffering Characteristic Curve

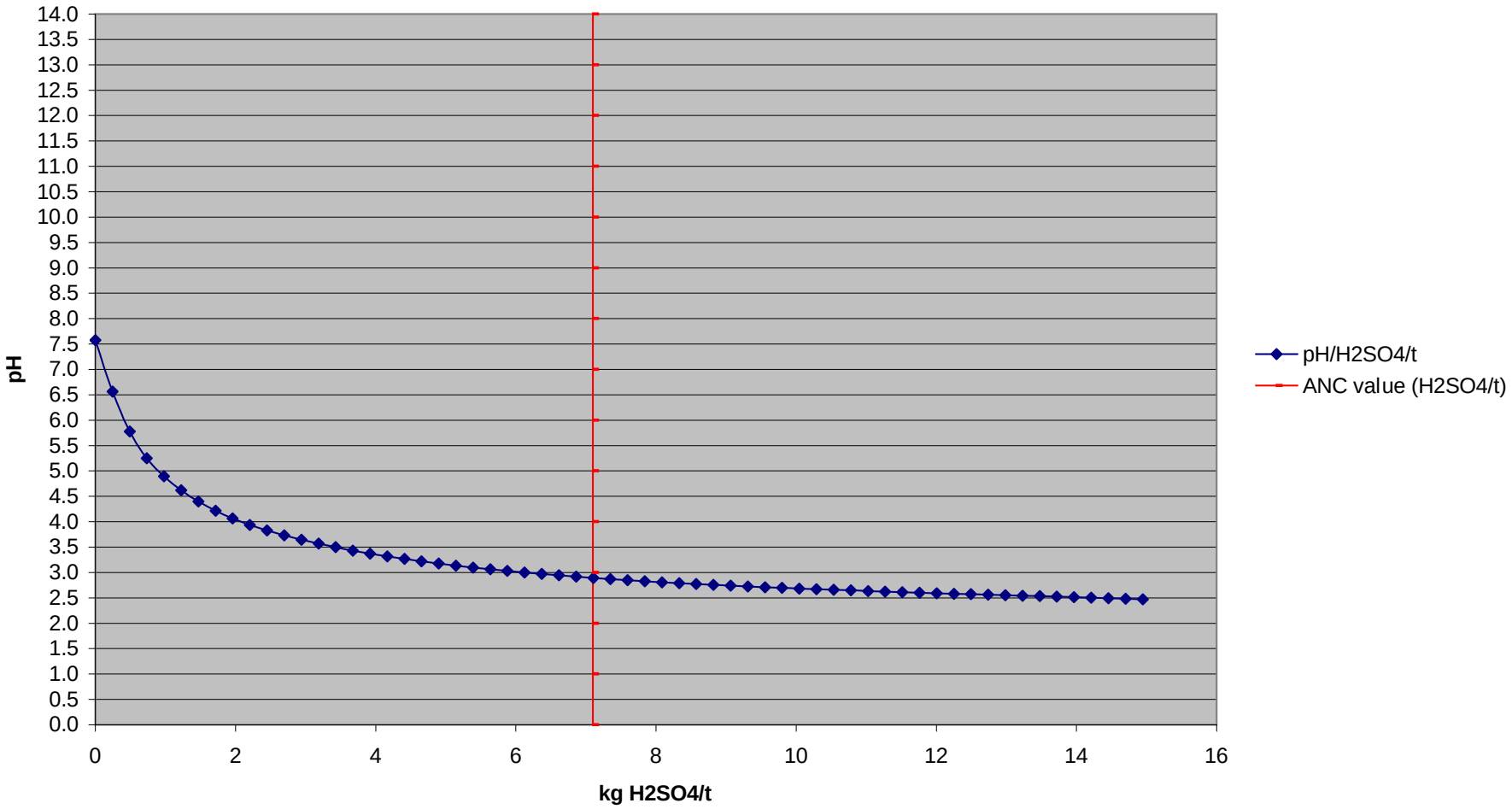
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



EP1204032 009(PE065686.040, NS0154 18-20)

Acid Buffering Characteristic Curve

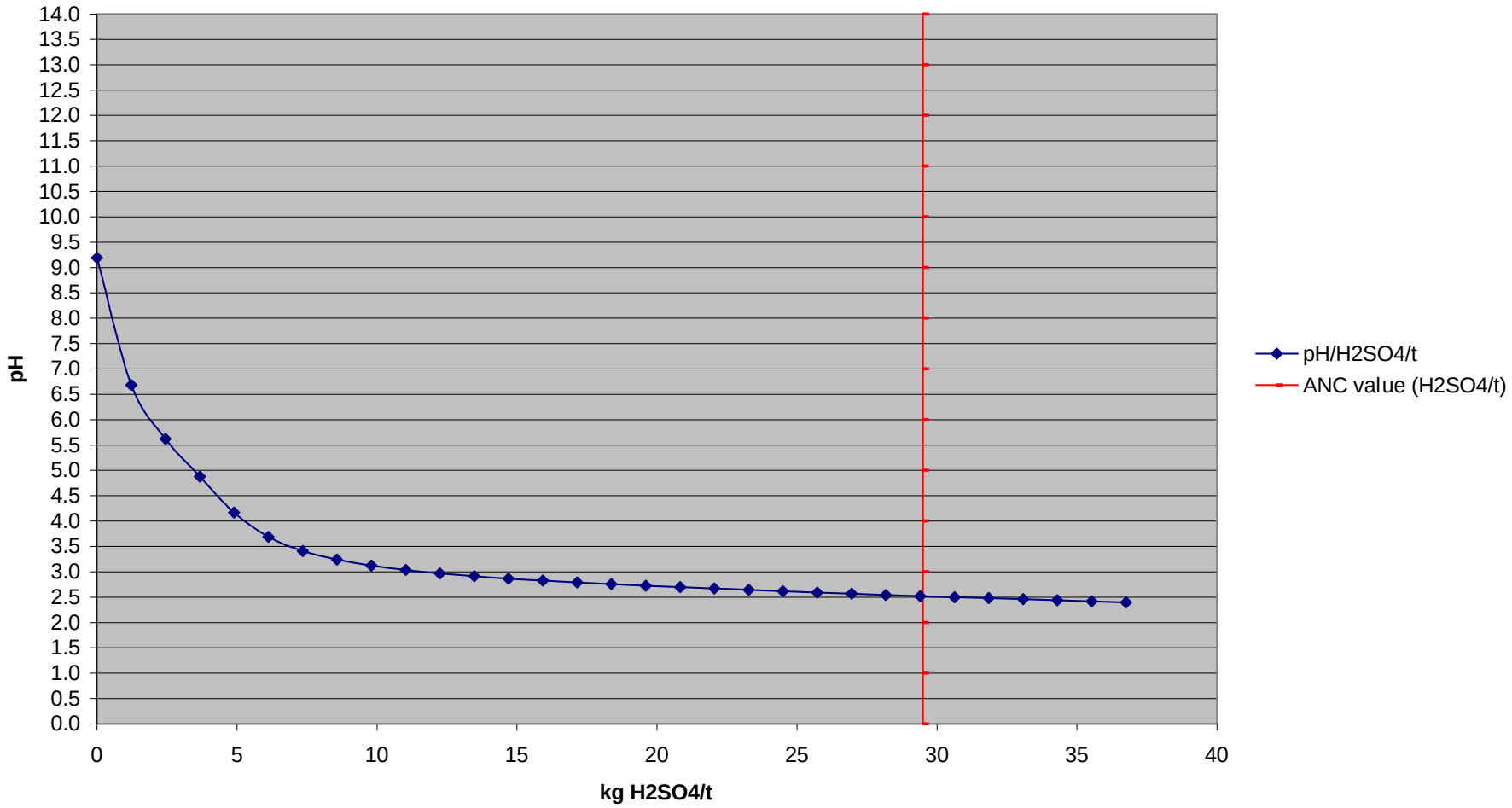
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



EP1204032 010(PE065686.054, NS0154 200-202)

Acid Buffering Characteristic Curve

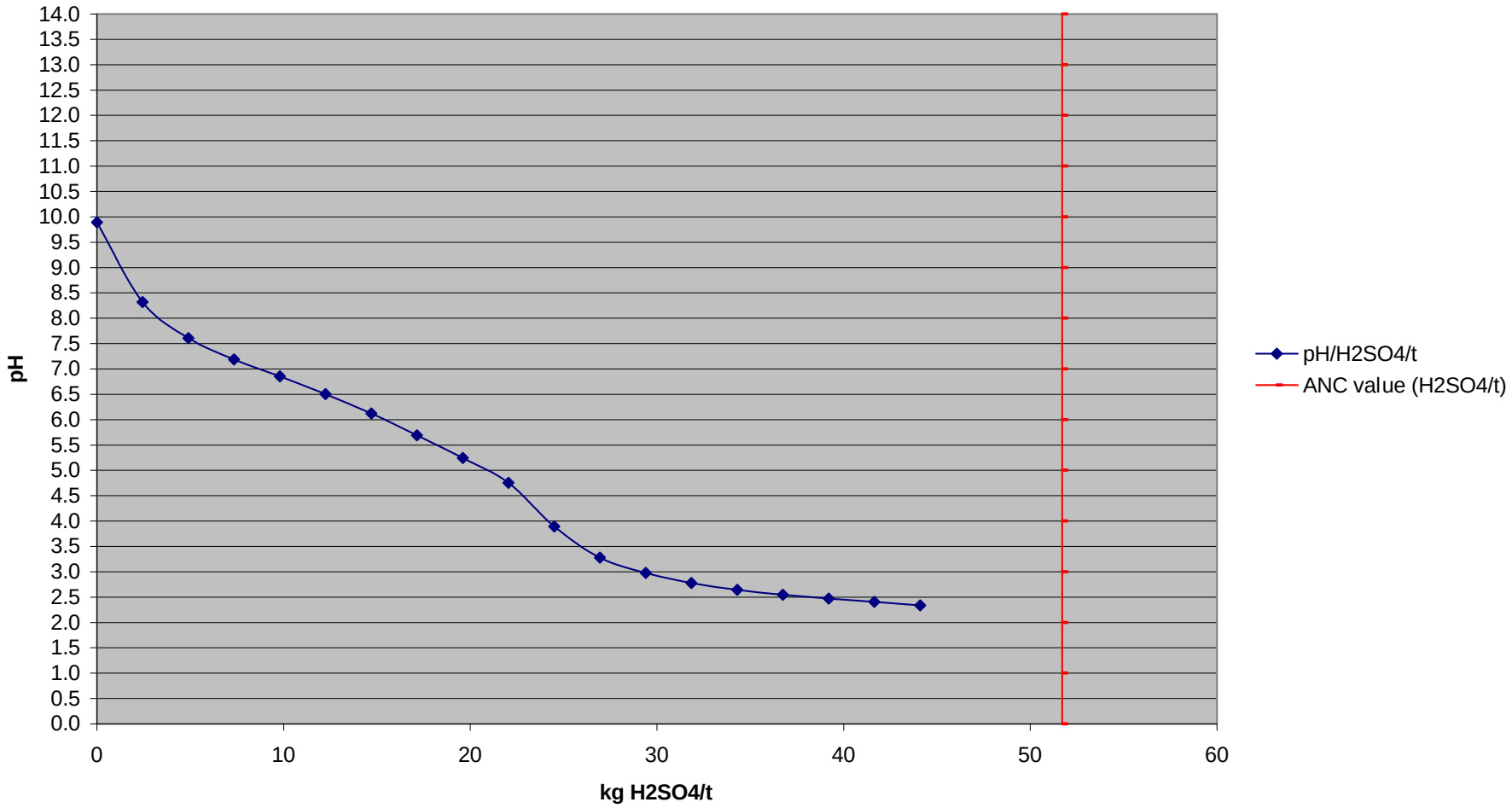
Titrating with 0.1M HCl, in increments of 0.5 mLs every 1000 seconds



EP1204032 011(PE065687.013, NS0124 118-120)

Acid Buffering Characteristic Curve

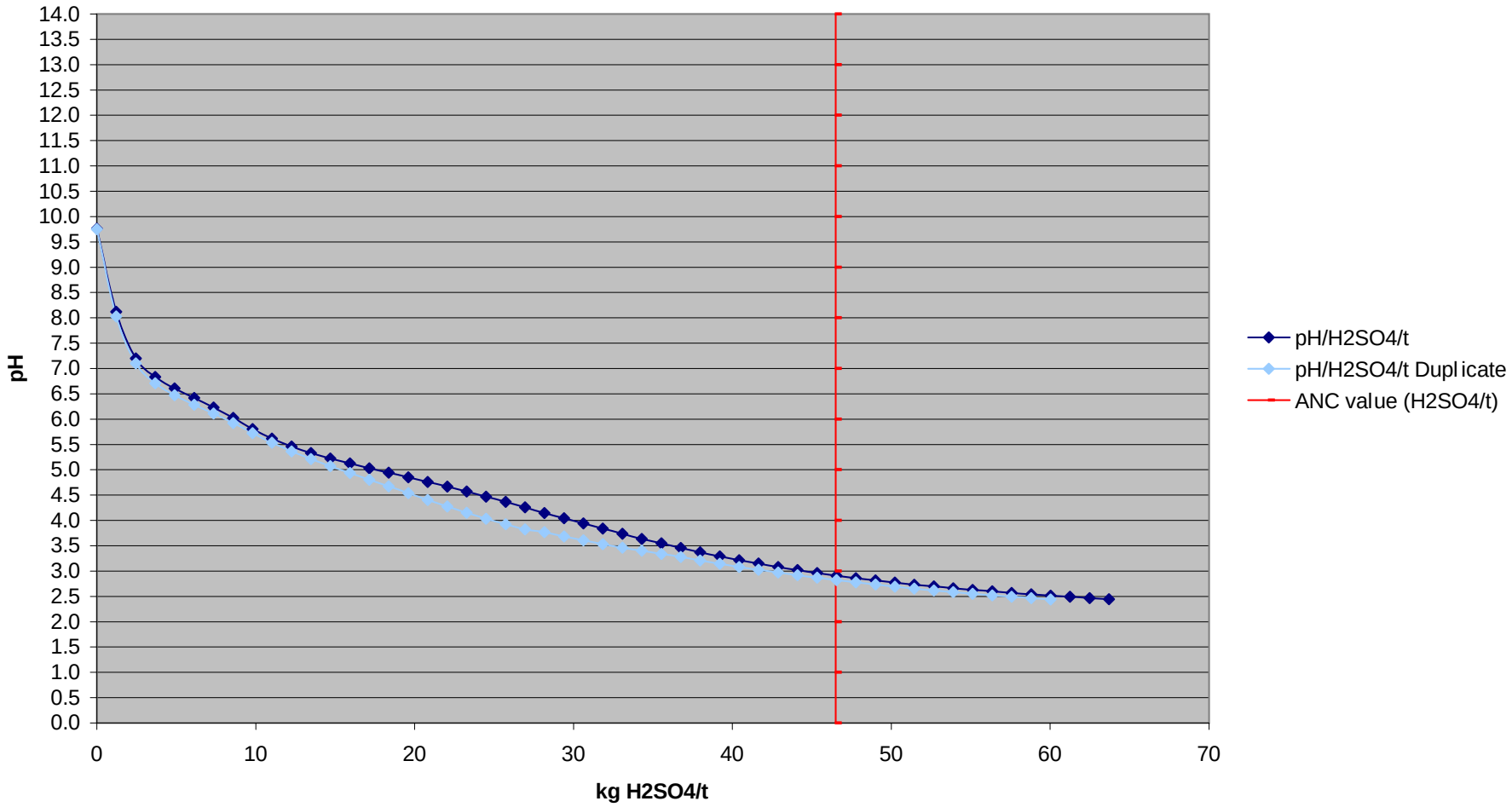
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



EP1204032 012(PE065687.047, NS0155 210-212)

Acid Buffering Characteristic Curve

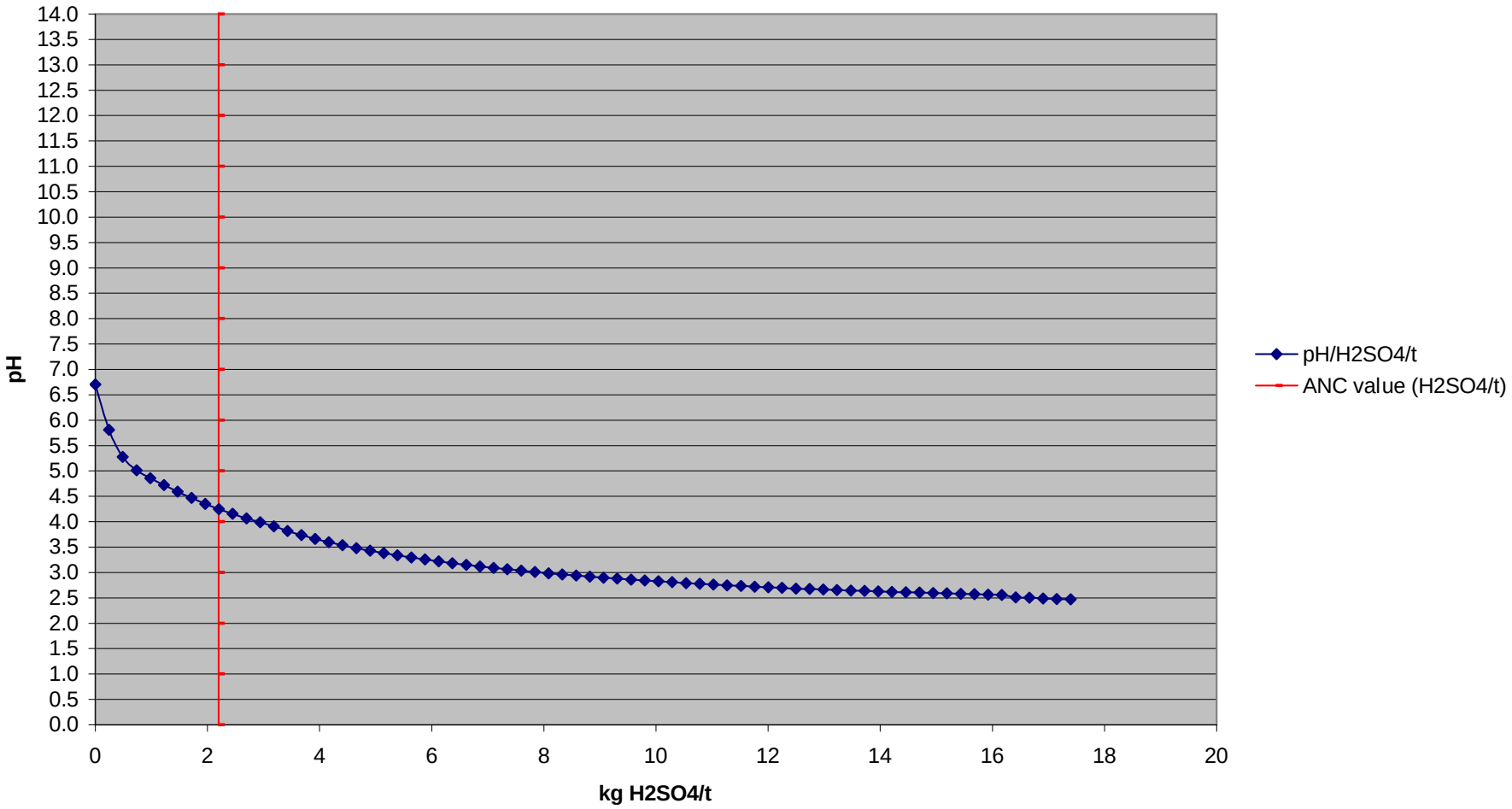
Titrating with 0.1M HCl, in increments of 0.5 mLs every 1000 seconds



EP1204032 013(PE065687.058, NS0098 0-2)

Acid Buffering Characteristic Curve

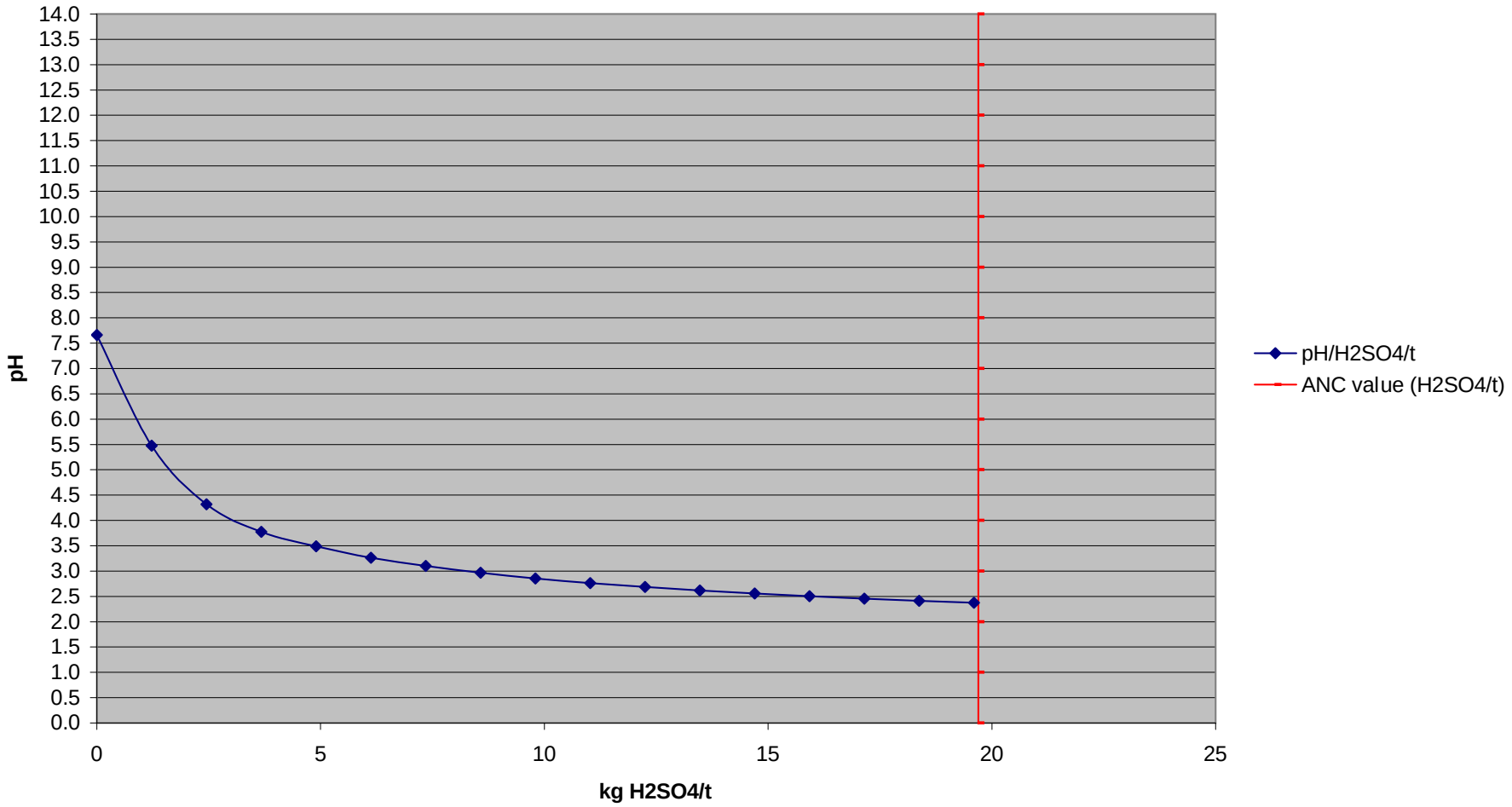
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



EP1204032 014(PE065687.060, NS0098 58-60)

Acid Buffering Characteristic Curve

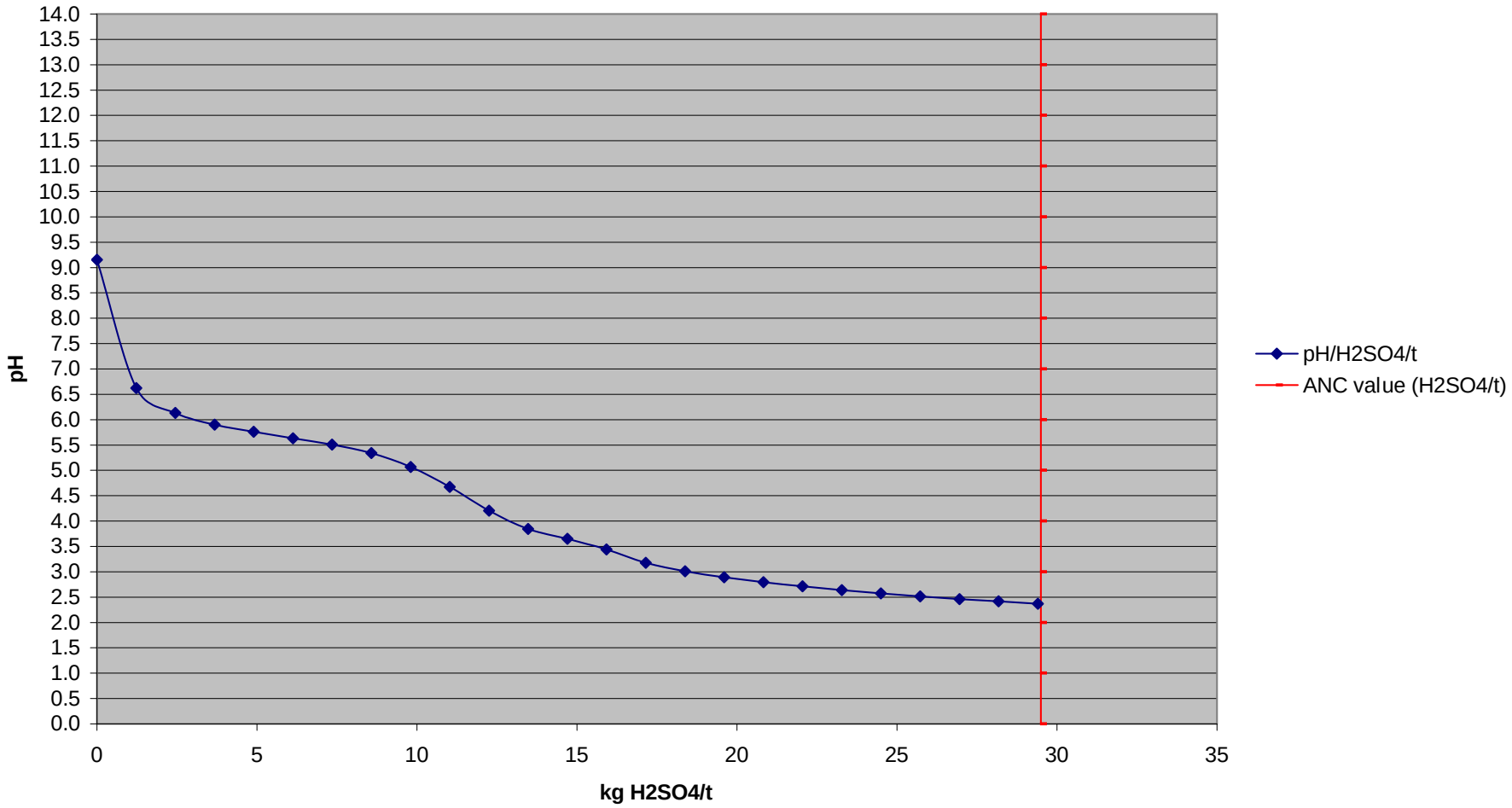
Titrating with 0.1M HCl, in increments of 0.5 mLs every 1000 seconds



EP1204032 015(PE065687.067, NS0098 108-110)

Acid Buffering Characteristic Curve

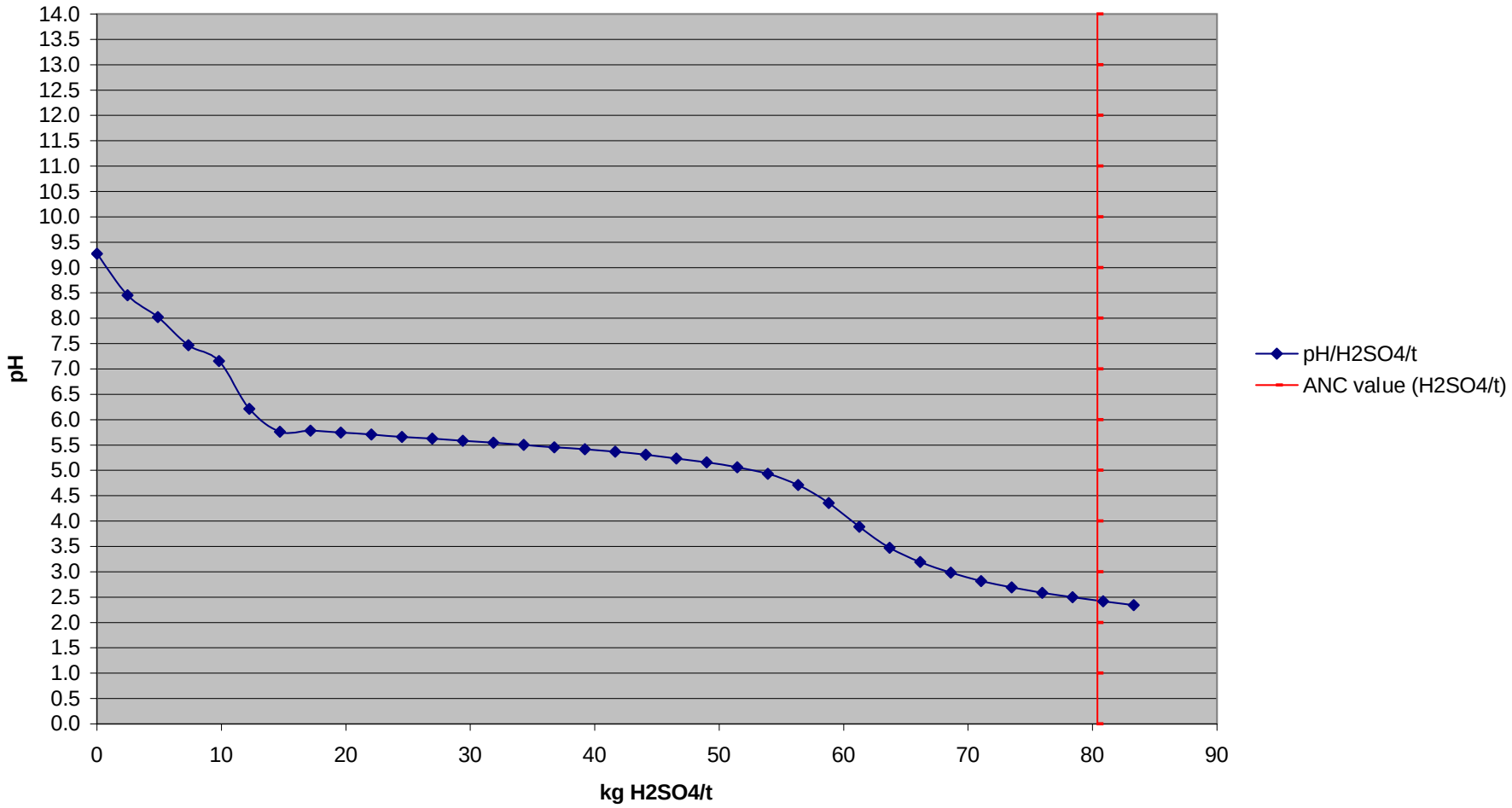
Titrating with 0.1M HCl, in increments of 0.5 mLs every 1000 seconds



EP1204032 016(PE065687.083, NS0096 254-256)

Acid Buffering Characteristic Curve

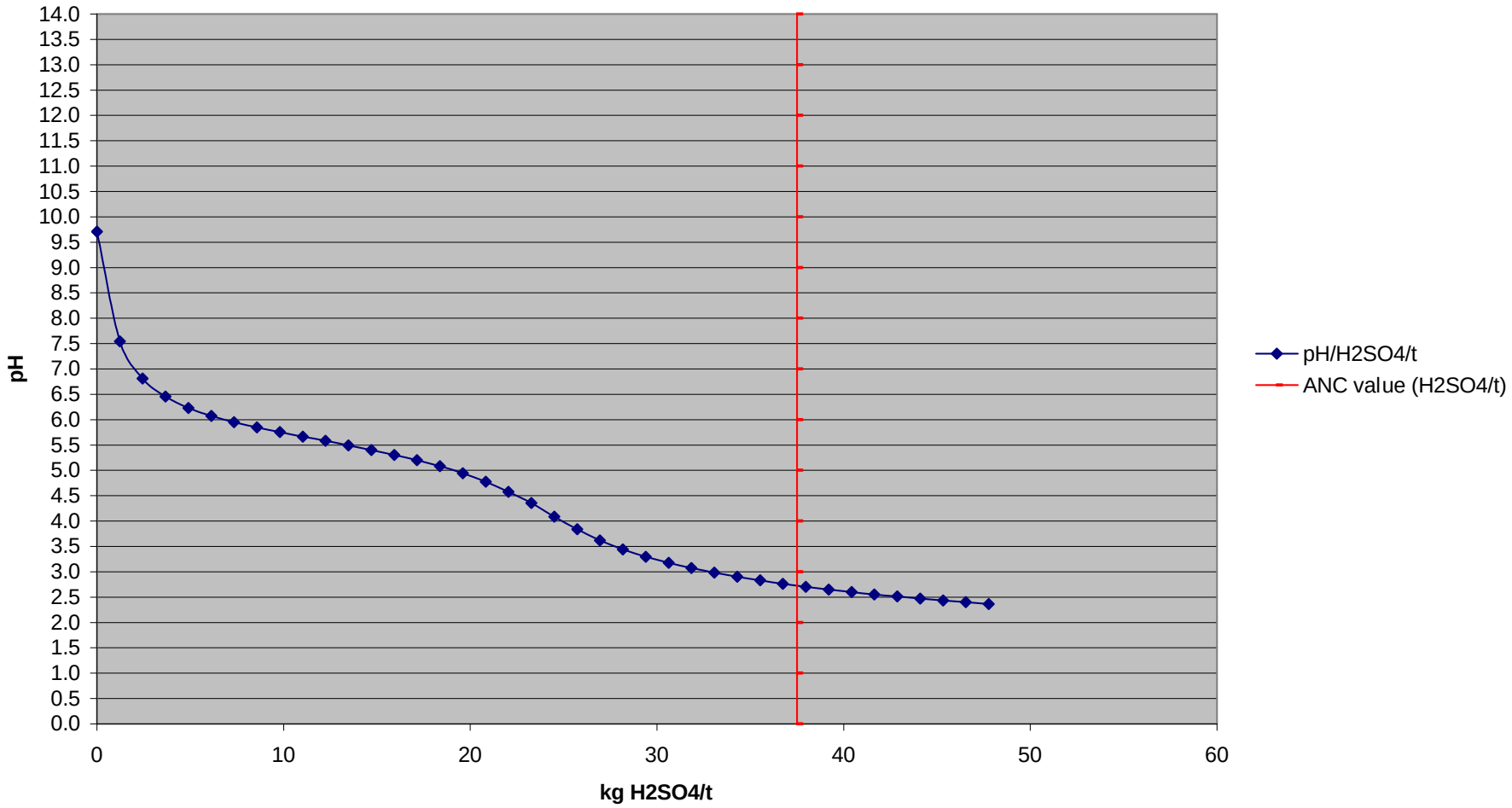
Titrating with 0.5M HCl, in increments of 0.2 mLs every 1000 seconds



EP1204032 017(PE065687.093, NS0096 70-72)

Acid Buffering Characteristic Curve

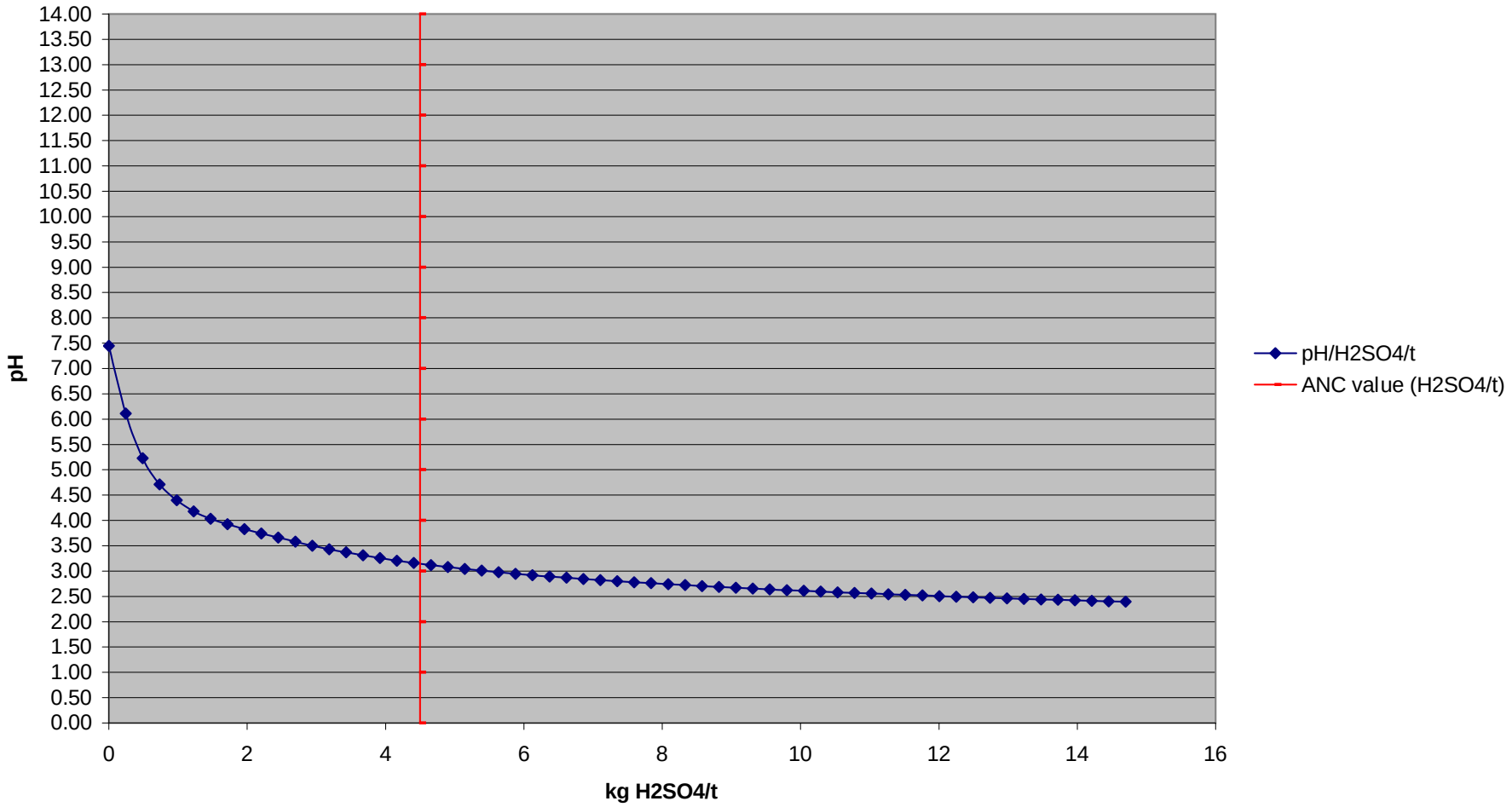
Titrating with 0.1M HCl, in increments of 0.5 mLs every 1000 seconds



EP1204032 018(PE065688.007, NS0095 30-32)

Acid Buffering Characteristic Curve

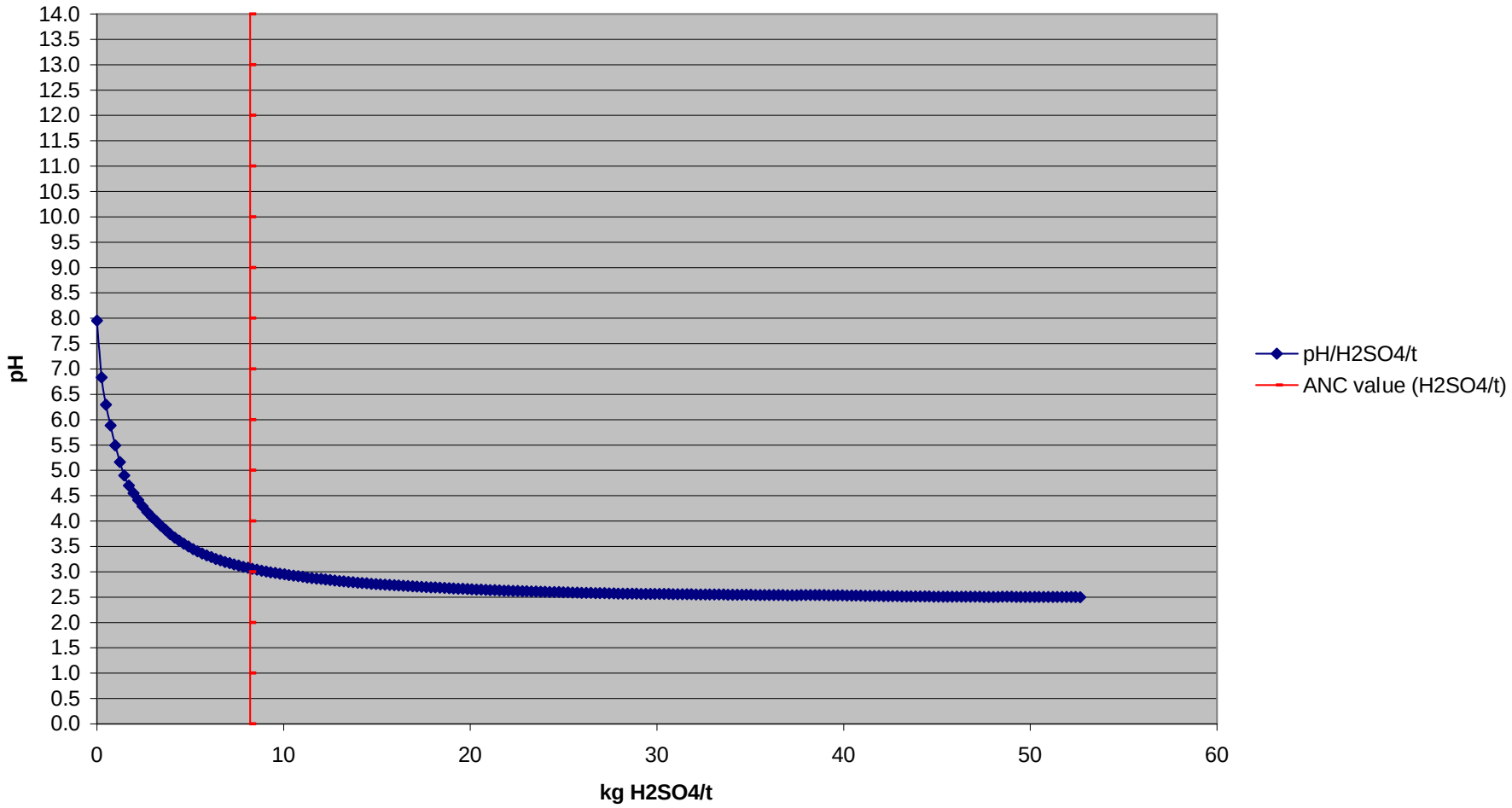
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



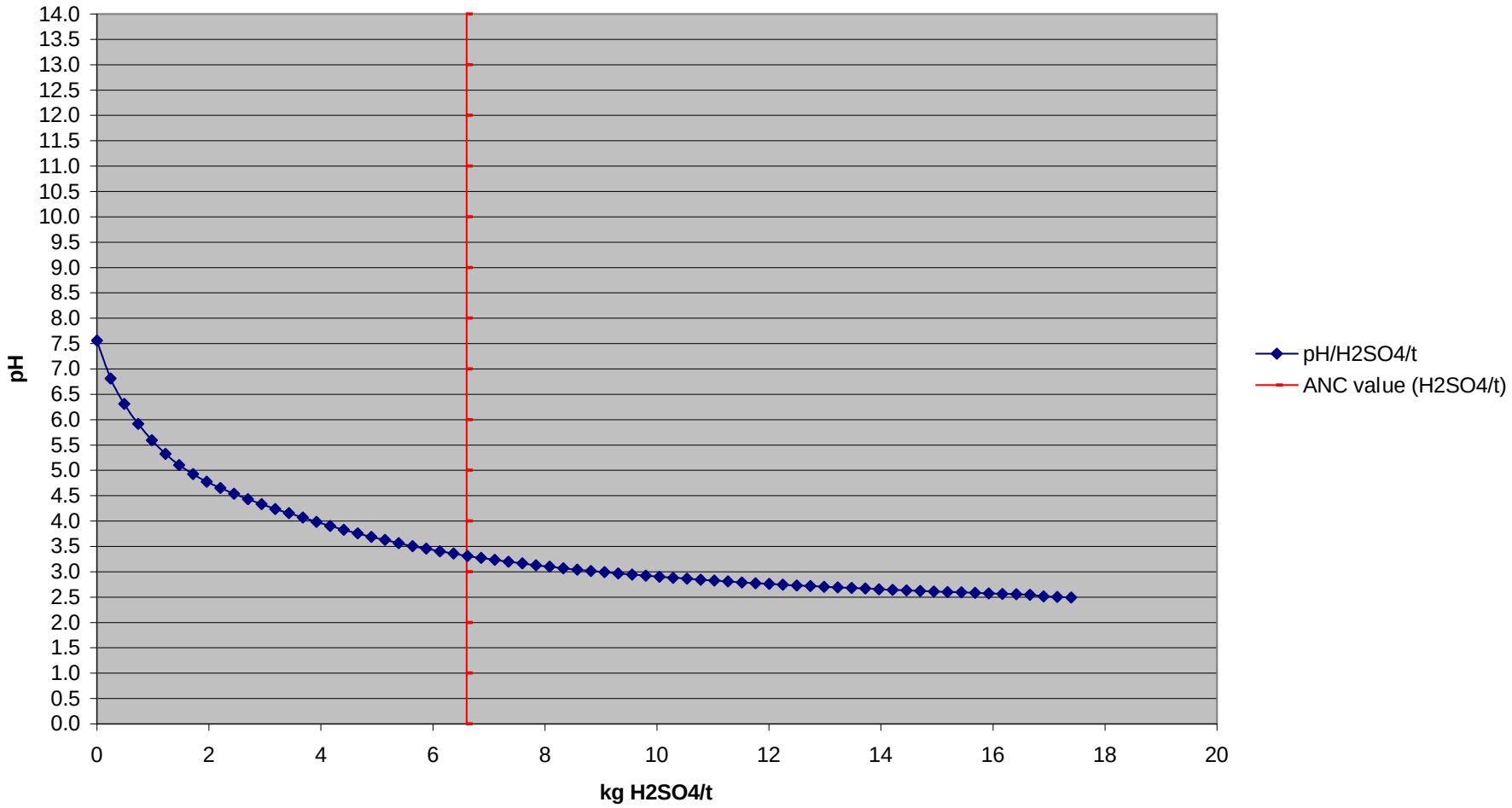
EP1204032 019(PE065688.008, NS0095 38-40)

Acid Buffering Characteristic Curve

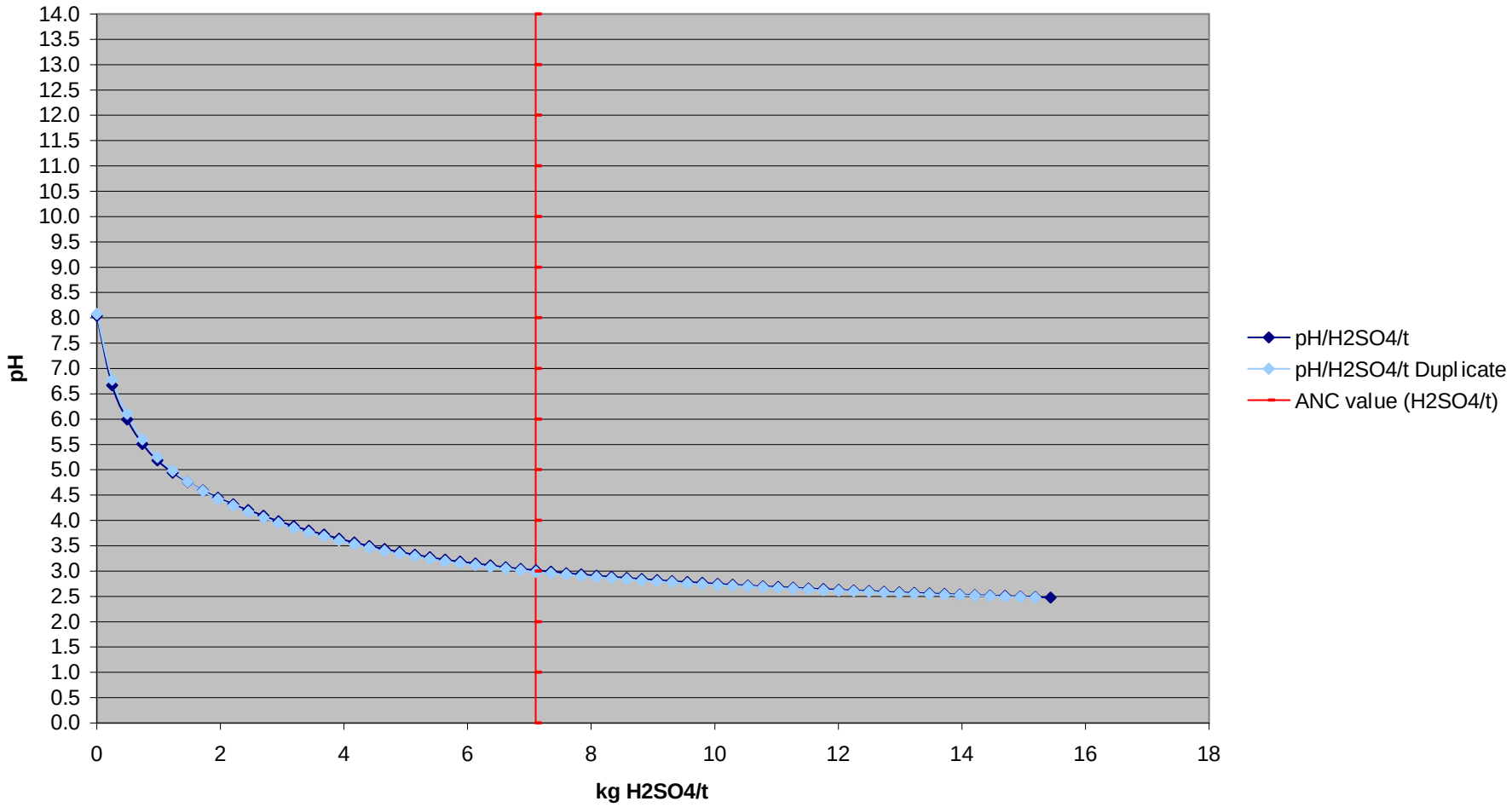
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



EP1204032 020(PE065688.026, NS0094 28-30)
Acid Buffering Characteristic Curve
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



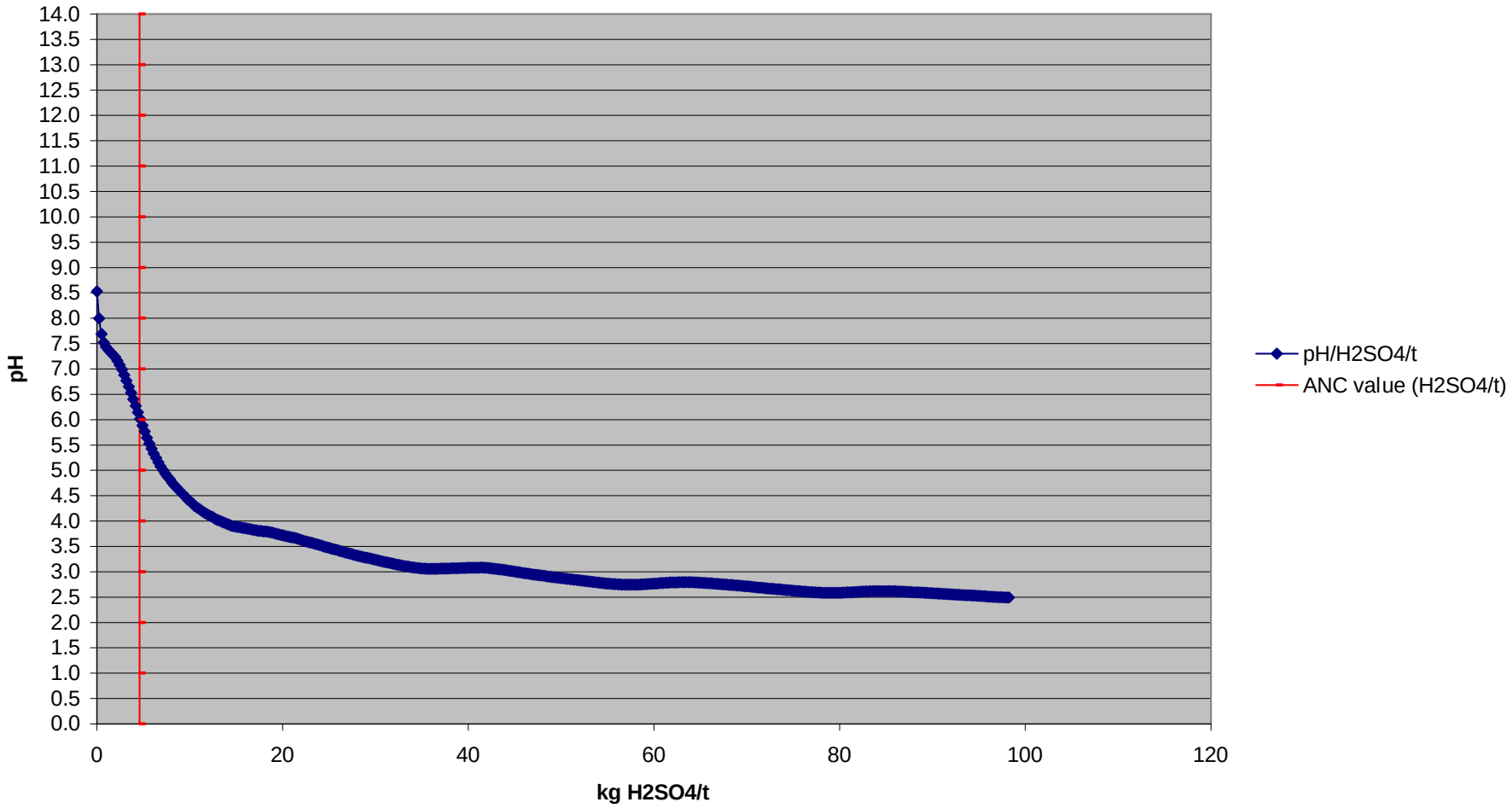
EP1204032 021(PE065688.042, NS0097 28-30)
Acid Buffering Characteristic Curve
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



EP1204032 022(PE065688.078, NS0113 128-130)

Acid Buffering Characteristic Curve

Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



CERTIFICATE OF ANALYSIS

Work Order	: **EP1204032**	Page	: 1 of 7
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: SGS Batch# PE065685 686 687 688 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 21-MAY-2012
Sampler	: ----	Issue Date	: 03-AUG-2012
Site	: Northstar		
		No. of samples received	: 22
Quote number	: EP/406/12	No. of samples analysed	: 22

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Myles.Clark	Acid Sulfate Soils Supervisor	Brisbane Acid Sulphate Soils

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **(ADD METHOD): NATA accreditation does not cover performance of this service.**
- **ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065685.029 NS0159 116-118	PE065685.050 NS0158 178-180	PE065685.089 NS0152 148-150	PE065685.098 NS0152 244-246	PE065686.007 NS0152 120-122
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204032-001	EP1204032-002	EP1204032-003	EP1204032-004	EP1204032-005
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t		**34.8**	**59.6**	**79.4**	**75.4**	**61.4**
ANC as CaCO3	----	0.1	% CaCO3		**3.5**	**6.1**	**8.1**	**7.7**	**6.3**
Fizz Rating	----	0	Fizz Unit		**1**	**2**	**2**	**2**	**2**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065686.020 NS0153 168-170	PE065686.021 NS0153 98-100	PE065686.035 NS0154 38-40	PE065686.040 NS0154 18-20	PE065686.054 NS0154 200-202
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204032-006	EP1204032-007	EP1204032-008	EP1204032-009	EP1204032-010
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t		**25.4**	**16.7**	**66.0**	**7.1**	**29.5**
ANC as CaCO3	----	0.1	% CaCO3		**2.6**	**1.7**	**6.7**	**0.7**	**3.0**
Fizz Rating	----	0	Fizz Unit		**1**	**1**	**2**	**0**	**2**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065687.013 NS0124 118-120	PE065687.047 NS0155 210-212	PE065687.058 NS0098 0-2	PE065687.060 NS0098 58-60	PE065687.067 NS0098 108-110
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204032-011	EP1204032-012	EP1204032-013	EP1204032-014	EP1204032-015
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t		**51.7**	**46.5**	**2.2**	**19.7**	**29.5**
ANC as CaCO3	----	0.1	% CaCO3		**5.3**	**4.7**	**0.2**	**2.0**	**3.0**
Fizz Rating	----	0	Fizz Unit		**2**	**2**	**0**	**1**	**1**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065687.083 NS0096 254-256	PE065687.093 NS0096 70-72	PE065688.007 NS0095 30-32	PE065688.008 NS0095 38-40	PE065688.026 NS0094 28-30
				Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00	21-FEB-2012 15:00
					EP1204032-016	EP1204032-017	EP1204032-018	EP1204032-019	EP1204032-020
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t		**80.4**	**37.5**	**4.5**	**8.2**	**6.6**
ANC as CaCO3	----	0.1	% CaCO3		**8.2**	**3.8**	**0.4**	**0.8**	**0.7**
Fizz Rating	----	0	Fizz Unit		**2**	**1**	**0**	**0**	**0**

Analytical Results

Sub-Matrix: SOIL			Client sample ID	PE065688.042 NS0097 28-30	PE065688.078 NS0113 128-130	-----	-----	-----
			Client sampling date / time	21-FEB-2012 15:00	21-FEB-2012 15:00	----	----	----
Compound	CAS Number	LOR	Unit	EP1204032-021	EP1204032-022	----	----	----
EA013: Acid Neutralising Capacity								
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	**7.1**	**4.6**	----	----	----
ANC as CaCO3	----	0.1	% CaCO3	**0.7**	**0.5**	----	----	----
Fizz Rating	----	0	Fizz Unit	**0**	**0**	----	----	----

QUALITY CONTROL REPORT

Work Order	: **EP1204032**	Page	: 1 of 5
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: SGS Batch# PE065685 686 687 688 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Northstar		
C-O-C number	: ----	Date Samples Received	: 21-MAY-2012
Sampler	: ----	Issue Date	: 03-AUG-2012
Order number	: ----		
		No. of samples received	: 22
Quote number	: EP/406/12	No. of samples analysed	: 22

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Myles.Clark	Acid Sulfate Soils Supervisor	Brisbane Acid Sulphate Soils

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EA013: Acid Neutralising Capacity (QC Lot: 2414011)									
EP1204032-001	PE065685.029 NS0159 116-118	EA013: ANC as H2SO4	----	0.5	kg H2SO4/t	34.8	32.4	7.0	0% - 20%
EP1204032-012	PE065687.047 NS0155 210-212	EA013: ANC as H2SO4	----	0.5	kg H2SO4/t	46.5	43.9	5.7	0% - 20%
EA013: Acid Neutralising Capacity (QC Lot: 2414012)									
EP1204032-021	PE065688.042 NS0097 28-30	EA013: ANC as H2SO4	----	0.5	kg H2SO4/t	7.1	7.1	0.0	0% - 50%

Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EA013: Acid Neutralising Capacity (QCLot: 2414011)								
EA013: ANC as H2SO4	----	0.5	kg H2SO4/t	----	9.9 kg H2SO4/t	90.5	80	121
EA013: Acid Neutralising Capacity (QCLot: 2414012)								
EA013: ANC as H2SO4	----	0.5	kg H2SO4/t	----	9.9 kg H2SO4/t	117	80	121

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

- **No Matrix Spike (MS) Results are required to be reported.**

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **EP1204032**	Page	: 1 of 5
Client	: GHD PTY LTD	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: SGS Batch# PE065685 686 687 688 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Northstar		
C-O-C number	: ----	Date Samples Received	: 21-MAY-2012
Sampler	: ----	Issue Date	: 03-AUG-2012
Order number	: ----		
		No. of samples received	: 22
Quote number	: EP/406/12	No. of samples analysed	: 22

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA013: Acid Neutralising Capacity							
80* dried soil							
PE065685.029 - NS0159 116-118, PE065685.050 - NS0158 178-180, PE065685.089 - NS0152 148-150, PE065685.098 - NS0152 244-246, PE065686.007 - NS0152 120-122, PE065686.020 - NS0153 168-170, PE065686.021 - NS0153 98-100, PE065686.035 - NS0154 38-40, PE065686.040 - NS0154 18-20, PE065686.054 - NS0154 200-202, PE065687.013 - NS0124 118-120, PE065687.047 - NS0155 210-212, PE065687.058 - NS0098 0-2, PE065687.060 - NS0098 58-60, PE065687.067 - NS0098 108-110, PE065687.083 - NS0096 254-256, PE065687.093 - NS0096 70-72, PE065688.007 - NS0095 30-32, PE065688.008 - NS0095 38-40, PE065688.026 - NS0094 28-30, PE065688.042 - NS0097 28-30, PE065688.078 - NS0113 128-130	**21-FEB-2012**	**23-JUL-2012**	20-FEB-2013	✓	**23-JUL-2012**	19-JAN-2013	✓
EA046 Acid Buffering Characterisation Curves							
80* dried soil							
PE065685.029 - NS0159 116-118, PE065685.050 - NS0158 178-180, PE065685.089 - NS0152 148-150, PE065685.098 - NS0152 244-246, PE065686.007 - NS0152 120-122, PE065686.020 - NS0153 168-170, PE065686.021 - NS0153 98-100, PE065686.035 - NS0154 38-40, PE065686.040 - NS0154 18-20, PE065686.054 - NS0154 200-202, PE065687.013 - NS0124 118-120, PE065687.047 - NS0155 210-212, PE065687.058 - NS0098 0-2, PE065687.060 - NS0098 58-60, PE065687.067 - NS0098 108-110, PE065687.083 - NS0096 254-256, PE065687.093 - NS0096 70-72, PE065688.007 - NS0095 30-32, PE065688.008 - NS0095 38-40, PE065688.026 - NS0094 28-30, PE065688.042 - NS0097 28-30, PE065688.078 - NS0113 128-130	**21-FEB-2012**	**----**	----	----	**16-JUL-2012**	20-FEB-2013	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Acid Neutralising Capacity (ANC)	EA013	3	22	**13.6**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Acid Neutralising Capacity (ANC)	EA013	2	22	**9.1**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Acid Neutralising Capacity (ANC)	EA013	SOIL	USEPA 600/2-78-054, I. Miller (2000). A fizz test is done to semiquanititatively estimate the likely reactivity. The soil is then reacted with an known excess quanitity of an appropriate acid. Titration determines the acid remaining, and the ANC can be calculated from comparison with a blank titration.
Acid Buffering Characterisation Curves (ABCC's)	EA046	SOIL	Miller and Jeffery (1995) Determine the portion of an ANC value of a particular sample is readily available for acid neutralisation.

Preparation Methods	Method	Matrix	Method Descriptions
Drying at 85 degrees, bagging and labelling (ASS)	EN020PR	SOIL	In house

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

- **For all matrices, no Method Blank value outliers occur.**
- **For all matrices, no Duplicate outliers occur.**
- **For all matrices, no Laboratory Control outliers occur.**
- **For all matrices, no Matrix Spike outliers occur.**

Regular Sample Surrogates

- **For all regular sample matrices, no surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

- **No Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- **No Quality Control Sample Frequency Outliers exist.**

Exploration Geology
87 Adelaide Terrace WA 6004
Phone: 08 6218 8888

CLIENT: Fortescue Metals Group Ltd

CONTACT: Steven Pearce GHD, David Morgan GHD PHONE NO: Steven Pearce GHD (08) 6222 8811 or David Morgan GHD 08 6222 8133

PROJECT: MA Job No.: GHD_FMG_AMD_NorthStar

REPORTS TO: HARD COPY - Glen Neeves, FMG Ltd, 87 Adelaide Tce WA 6004
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david.morgan@ghd.com

INVOICE TO: Fortescue Metals Group Ltd.
Attn Glen Neeves
87 Adelaide Tce
Perth 6004 WA

SAMPLE IDENTIFICATION Sample Number	Hole ID		From	To	DATE SAMPLED	TIME SAMPLED	DISPATCH DATE	Strata		ABCC Curve	Comments
PE065685.029	NS0159	1	116	118	Sample at lab	Sample at lab	Sample at lab	G		x	
PE065685.050	NS0158	2	178	180	Sample at lab	Sample at lab	Sample at lab	G		x	
PE065685.089	NS0152	3	148	150	Sample at lab	Sample at lab	Sample at lab	G		x	
PE065685.098	NS0152	4	244	246	Sample at lab	Sample at lab	Sample at lab	G		x	
PE065686.007	NS0152	5	120	122	Sample at lab	Sample at lab	Sample at lab	G		x	
PE065686.020	NS0153	6	168	170	Sample at lab	Sample at lab	Sample at lab	G		x	
PE065686.021	NS0153	7	98	100	Sample at lab	Sample at lab	Sample at lab	G		x	
PE065686.035	NS0154	8	38	40	Sample at lab	Sample at lab	Sample at lab	G		x	
PE065686.040	NS0154	9	18	20	Sa		b	G		x	
PE065686.054	NS0154	10	200	202	Sa		b	G		x	
PE065687.013	NS0124	11	118	120	Sa		b	G		x	
PE065687.047	NS0155	12	210	212	Sa		b	G		x	
PE065687.058	NS0098	13	0	2	Sa		b	G		x	
PE065687.060	NS0098	14	58	60	Sa		b	G		x	
PE065687.067	NS0098	15	108	110	Sa		b	G		x	
PE065687.083	NS0096	16	254	256	Sa		b	G		x	
PE065687.093	NS0096	17	70	72	Sa		b	G		x	
PE065688.007	NS0095	18	30	32	Sa		b	G		x	
PE065688.008	NS0095	19	38	40	Sample at lab	Sample at lab	Sample at lab	G		x	
PE065688.026	NS0094	20	28	30	Sample at lab	Sample at lab	Sample at lab	G		x	
PE065688.042	NS0097	21	28	30	Sample at lab	Sample at lab	Sample at lab	G		x	
PE065688.078	NS0113	22	128	130	Sample at lab	Sample at lab	Sample at lab	G		x	

Environmental Division
Perth
Work Order
EP1204032
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ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **EP1205581**	Page	: 1 of 6
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201378 1380 1381 1382 1383 1527 1530	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 12-JUL-2012
Sampler	: ----	Issue Date	: 18-JUL-2012
Site	: ----		
		No. of samples received	: 16
Quote number	: EP/406/12	No. of samples analysed	: 16

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Canhuang Ke	Metals Instrument Chemist	Perth Inorganics
Chas Tucker	Inorganic Chemist	Perth Inorganics
Cicelia Bartels	Metals Instrument Chemist	Perth Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **Ionic Balance out of acceptable limits for various sample due to analytes not quantified in this report.**

Analytical Results

Sub-Matrix: **WATER**

Compound	CAS Number	LOR	Unit	Client sample ID: EP12001378014 Client sampling date / time: [12-JUL-2012] EP1205581-001	Client sample ID: EP1201380028 Client sampling date / time: [12-JUL-2012] EP1205581-002	Client sample ID: EP1201381007 Client sampling date / time: [12-JUL-2012] EP1205581-003	Client sample ID: EP1201381048 Client sampling date / time: [12-JUL-2012] EP1205581-004	Client sample ID: EP1201382016 Client sampling date / time: [12-JUL-2012] EP1205581-005
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<1	57	13	6	9
Total Alkalinity as CaCO3	----	1	mg/L	<1	57	13	6	9
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	179	<1	4	14	309
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	410	10	3	54	<1
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	<1	<1	<1	<1	14
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	12	8	<1	6	<1
Magnesium	7439-95-4	1	mg/L	62	7	1	7	<1
Sodium	7440-23-5	1	mg/L	12	8	3	8	4
Potassium	7440-09-7	1	mg/L	26	1	<1	1	<1
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	85.8	16.1	13.5	48.5	8.74
Arsenic	7440-38-2	0.001	mg/L	0.180	0.005	<0.001	0.003	<0.001
Beryllium	7440-41-7	0.001	mg/L	0.006	0.003	0.003	0.004	0.002
Barium	7440-39-3	0.001	mg/L	0.607	0.156	0.072	0.395	0.081
Cadmium	7440-43-9	0.0001	mg/L	0.0004	0.0003	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	1.07	0.082	0.089	0.387	0.071
Cobalt	7440-48-4	0.001	mg/L	0.214	0.021	0.004	0.038	0.003
Copper	7440-50-8	0.001	mg/L	0.228	0.056	0.014	0.045	0.010
Lead	7439-92-1	0.001	mg/L	0.064	0.006	0.004	0.009	0.006
Manganese	7439-96-5	0.001	mg/L	19.0	13.6	0.715	1.78	0.411
Nickel	7440-02-0	0.001	mg/L	1.12	0.127	0.039	0.307	0.025
Selenium	7782-49-2	0.01	mg/L	0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	0.14	0.02	0.02	0.03	<0.01
Zinc	7440-66-6	0.005	mg/L	0.353	0.079	0.010	0.086	0.016
Iron	7439-89-6	0.05	mg/L	650	597	118	248	91.7
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	0.0011	0.0008	<0.0001	<0.0001	<0.0001
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	8.54	1.35	0.32	1.24	0.57
Total Cations	----	0.01	meq/L	6.89	1.35	0.21	1.25	0.17
Ionic Balance	----	0.01	%	10.7	----	----	----	----

Analytical Results

Sub-Matrix: **WATER**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201382020	EP1201382031	EP1201383006	EP1201383012	EP1201527028
				Client sampling date / time	[12-JUL-2012]	[12-JUL-2012]	[12-JUL-2012]	[12-JUL-2012]	[12-JUL-2012]
					EP1205581-006	EP1205581-007	EP1205581-008	EP1205581-009	EP1205581-010
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	6	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		8	37	52	11	9
Total Alkalinity as CaCO3	----	1	mg/L		8	37	58	11	9
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		10	<1	<1	27	10
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		6	105	3	1	12
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		<1	2	<1	1	<1
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		<1	5	7	<1	<1
Magnesium	7439-95-4	1	mg/L		<1	26	7	<1	2
Sodium	7440-23-5	1	mg/L		4	9	8	4	5
Potassium	7440-09-7	1	mg/L		1	4	2	<1	<1
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		30.4	35.8	20.3	21.6	29.3
Arsenic	7440-38-2	0.001	mg/L		<0.001	0.035	0.014	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L		0.002	0.004	0.005	0.003	0.004
Barium	7440-39-3	0.001	mg/L		0.082	0.239	0.505	0.049	0.072
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	0.0001	0.0003	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		0.241	0.370	0.055	0.149	0.259
Cobalt	7440-48-4	0.001	mg/L		0.011	0.055	0.030	0.005	0.010
Copper	7440-50-8	0.001	mg/L		0.019	0.072	0.055	0.010	0.019
Lead	7439-92-1	0.001	mg/L		0.013	0.021	0.005	0.006	0.014
Manganese	7439-96-5	0.001	mg/L		0.601	11.1	17.4	0.636	1.31
Nickel	7440-02-0	0.001	mg/L		0.082	0.323	0.123	0.042	0.088
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		0.05	0.07	0.01	0.01	0.03
Zinc	7440-66-6	0.005	mg/L		0.021	0.114	0.085	0.022	0.044
Iron	7439-89-6	0.05	mg/L		170	533	542	169	272
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	0.0004	0.0002	<0.0001	<0.0001
EN055: Ionic Balance									
Total Anions	----	0.01	meq/L		0.28	2.98	1.22	0.27	0.43
Total Cations	----	0.01	meq/L		0.20	2.88	1.32	0.17	0.38

Analytical Results

Sub-Matrix: **WATER**

Compound	CAS Number	LOR	Unit	Client sample ID	EP120153008	EP1201530228	PE065686.032	PE065687.036	PE065688.043
				Client sampling date / time	[12-JUL-2012]	[12-JUL-2012]	[12-JUL-2012]	[12-JUL-2012]	[12-JUL-2012]
					EP1205581-011	EP1205581-012	EP1205581-013	EP1205581-014	EP1205581-015
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**35**	**56**	**29**	**25**	<1
Total Alkalinity as CaCO3	----	1	mg/L		**35**	**56**	**29**	**25**	<1
ED038A: Acidity									
Acidity as CaCO3	----	1	mg/L		<1	**10**	**18**	**11**	**140**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		<1	**243**	**159**	**232**	**219**
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L		<1	<1	<1	<1	<1
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**3**	**15**	**14**	**27**	**7**
Magnesium	7439-95-4	1	mg/L		**3**	**53**	**34**	**41**	**41**
Sodium	7440-23-5	1	mg/L		**5**	**5**	**3**	**15**	**5**
Potassium	7440-09-7	1	mg/L		**3**	<1	**1**	**9**	**6**
EG020T: Total Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**19.3**	**37.8**	**42.5**	**13.2**	**117**
Arsenic	7440-38-2	0.001	mg/L		**0.003**	**0.006**	**0.047**	**0.009**	**0.048**
Beryllium	7440-41-7	0.001	mg/L		**0.006**	**0.003**	**0.003**	**0.008**	**0.005**
Barium	7440-39-3	0.001	mg/L		**0.598**	**0.084**	**0.030**	**0.238**	**0.303**
Cadmium	7440-43-9	0.0001	mg/L		**0.0003**	**0.0002**	**0.0002**	**0.0004**	**0.0001**
Chromium	7440-47-3	0.001	mg/L		**0.049**	**0.347**	**0.586**	**0.181**	**1.32**
Cobalt	7440-48-4	0.001	mg/L		**0.032**	**0.044**	**0.117**	**0.050**	**0.215**
Copper	7440-50-8	0.001	mg/L		**0.038**	**0.051**	**0.068**	**0.108**	**0.226**
Lead	7439-92-1	0.001	mg/L		**0.004**	**0.016**	**0.017**	**0.016**	**0.037**
Manganese	7439-96-5	0.001	mg/L		**29.9**	**19.5**	**21.8**	**16.1**	**8.20**
Nickel	7440-02-0	0.001	mg/L		**0.139**	**0.304**	**0.517**	**0.338**	**1.70**
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	**0.01**
Vanadium	7440-62-2	0.01	mg/L		<0.01	**0.02**	**0.09**	**0.03**	**0.14**
Zinc	7440-66-6	0.005	mg/L		**0.101**	**0.138**	**0.169**	**0.192**	**0.649**
Iron	7439-89-6	0.05	mg/L		**230**	**539**	**1100**	**1170**	**377**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	**0.0003**	**0.0006**	<0.0001
EN055: Ionic Balance									
Total Anions	----	0.01	meq/L		**0.70**	**6.18**	**3.89**	**5.33**	**4.56**
Total Cations	----	0.01	meq/L		**0.69**	**5.33**	**3.65**	**5.60**	**4.09**
Ionic Balance	----	0.01	%		----	**7.41**	**3.15**	**2.50**	**5.39**

Analytical Results

Sub-Matrix: **WATER**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065688.079	----	----	----	----
				Client sampling date / time: [12-JUL-2012]	----	----	----	----
				EP1205581-016	----	----	----	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	----	----	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**12**	----	----	----	----
Total Alkalinity as CaCO3	----	1	mg/L	**12**	----	----	----	----
ED038A: Acidity								
Acidity as CaCO3	----	1	mg/L	**6**	----	----	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**138**	----	----	----	----
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	<1	----	----	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**6**	----	----	----	----
Magnesium	7439-95-4	1	mg/L	**26**	----	----	----	----
Sodium	7440-23-5	1	mg/L	**8**	----	----	----	----
Potassium	7440-09-7	1	mg/L	**8**	----	----	----	----
EG020T: Total Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**51.5**	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L	**0.044**	----	----	----	----
Beryllium	7440-41-7	0.001	mg/L	**0.005**	----	----	----	----
Barium	7440-39-3	0.001	mg/L	**0.232**	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	**0.0005**	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	**0.934**	----	----	----	----
Cobalt	7440-48-4	0.001	mg/L	**0.171**	----	----	----	----
Copper	7440-50-8	0.001	mg/L	**0.202**	----	----	----	----
Lead	7439-92-1	0.001	mg/L	**0.036**	----	----	----	----
Manganese	7439-96-5	0.001	mg/L	**14.4**	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	**0.750**	----	----	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	----	----	----	----
Vanadium	7440-62-2	0.01	mg/L	**0.16**	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	**0.305**	----	----	----	----
Iron	7439-89-6	0.05	mg/L	**767**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	**0.0003**	----	----	----	----
EN055: Ionic Balance								
Total Anions	----	0.01	meq/L	**3.11**	----	----	----	----
Total Cations	----	0.01	meq/L	**2.99**	----	----	----	----
Ionic Balance	----	0.01	%	**2.00**	----	----	----	----

CERTIFICATE OF ANALYSIS

Work Order	: **EP1205583**	Page	: 1 of 3
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
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Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: ----	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 12-JUL-2012
Sampler	: ----	Issue Date	: 07-AUG-2012
Site	: ----		
		No. of samples received	: 5
Quote number	: EP/406/12	No. of samples analysed	: 0

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

Analytical Results

Sub-Matrix:			Client sample ID	----	----	----	----	----
			Client sampling date / time	----	----	----	----	----
Compound	CAS Number	LOR	Unit	----	----	----	----	----
----		-	-	----	----	----	----	----

QUALITY CONTROL REPORT

Work Order	: **EP1205583**	Page	: 1 of 5
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: ----	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 12-JUL-2012
Sampler	: ----	Issue Date	: 07-AUG-2012
Order number	: ----		
		No. of samples received	: 5
Quote number	: EP/406/12	No. of samples analysed	: 0

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

- **No Laboratory Duplicate (DUP) Results are required to be reported.**

Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

- **No Method Blank (MB) or Laboratory Control Spike (SCS) Results are required to be reported.**

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

- **No Matrix Spike (MS) Results are required to be reported.**

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **EP1205583**	Page	: 1 of 5
Client	: GHD PTY LTD	Laboratory	: Environmental Division Perth
Contact	: MR STEVEN PEARCE	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: steven.pearce@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: ----	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 12-JUL-2012
Sampler	: ----	Issue Date	: 07-AUG-2012
Order number	: ----		
		No. of samples received	: 5
Quote number	: EP/406/12	No. of samples analysed	: 0

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix:

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix:

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Miscellaneous Subcontracted Analysis	MIS1-SOL	SOIL	Miscellaneous Subcontracted Analysis conducted by Subcontracting Laboratory

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

- **For all matrices, no Method Blank value outliers occur.**
- **For all matrices, no Duplicate outliers occur.**
- **For all matrices, no Laboratory Control outliers occur.**
- **For all matrices, no Matrix Spike outliers occur.**

Regular Sample Surrogates

- **For all regular sample matrices, no surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

- **No Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- **No Quality Control Sample Frequency Outliers exist.**

CERTIFICATE OF ANALYSIS

Work Order	: **EP1207897**	Page	: 1 of 20
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex SGS Batch PE065685 686 687 688 689 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 21-SEP-2012
Sampler	: ----	Issue Date	: 02-OCT-2012
Site	: ----		
		No. of samples received	: 44
Quote number	: EP/406/12 V2	No. of samples analysed	: 44

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Cicelia Bartels	Metals Instrument Chemist	Perth Inorganics
Scott James	Laboratory Manager	Perth Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

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Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065685.007 NS0165 100-102	PE065685.046 NS0157 130-132	PE065685.050 NS0158 178-180	PE065685.064 NS0158 110-112	PE065685.065 NS0158 66-68
				Client sampling date / time: 29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00
				EP1207897-001	EP1207897-002	EP1207897-003	EP1207897-004	EP1207897-005
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.04**	**0.03**	**0.07**	**0.13**	**0.14**
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	<0.001	**0.001**	<0.001	<0.001	**0.006**
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.002**	**0.012**	**0.006**	**0.006**	**0.005**
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065685.098 NS0152 244-246	PE065686.003 NS0152 78-80	PE065686.007 NS0152 120-122	PE065686.020 NS0153 168-170	PE065686.021 NS0153 98-100
				Client sampling date / time: 29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00
				EP1207897-006	EP1207897-007	EP1207897-008	EP1207897-009	EP1207897-010
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.19**	**0.15**	**0.13**	**0.06**	**0.03**
Arsenic	7440-38-2	0.001	mg/L	**0.001**	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	**0.002**	<0.001	**0.001**	**0.008**	**0.003**
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.001**	**0.005**	**0.002**	**0.010**	**0.012**
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	**0.05**	<0.05	**0.11**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065686.028 NS0153 200-202	PE065686.032 NS0153 220-222	PE065686.035 NS0154 38-40	PE065686.037 NS0154 30-32	PE065686.040 NS0154 18-20
				Client sampling date / time: 29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00
				EP1207897-011	EP1207897-012	EP1207897-013	EP1207897-014	EP1207897-015
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.68**	<0.01	**0.05**	**0.04**	**0.03**
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	**0.001**	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	**0.003**	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	<0.001	<0.001	**0.006**	**0.002**	<0.001
Cadmium	7440-43-9	0.0001	mg/L	**0.0025**	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	**0.091**	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.012**	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**5.37**	**0.080**	**0.007**	**0.008**	**0.011**
Nickel	7440-02-0	0.001	mg/L	**1.38**	**0.001**	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.137**	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L	**4.19**	<0.05	<0.05	**0.07**	**0.12**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065686.054 NS0154 200-202	PE065686.068 NS0160 58-60	PE065687.014 NS0124 130-132	PE065687.035 NS0155 100-102	PE065687.036 NS0155 108-110
				Client sampling date / time	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00
					EP1207897-016	EP1207897-017	EP1207897-018	EP1207897-019	EP1207897-020
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.20**	**0.16**	**0.54**	**0.27**	**0.06**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	**0.002**	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		**0.002**	**0.014**	**0.007**	**0.002**	**0.001**
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		**0.002**	**0.003**	**0.001**	**0.001**	**0.002**
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L		**0.22**	**0.09**	**0.27**	**0.10**	**0.10**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065687.056 NS0098 20-22	PE065687.058 NS0098 0-2	PE065687.060 NS0098 58-60	PE065687.065 NS0098 180-182	PE065687.081 NS0096 230-232
				Client sampling date / time: 29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00
				EP1207897-021	EP1207897-022	EP1207897-023	EP1207897-024	EP1207897-025
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.03**	**0.09**	<0.01	**0.04**	**0.26**
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	**0.001**
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	<0.001	**0.001**	**0.012**	**0.004**	**0.012**
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	**0.191**	**0.005**	**0.003**
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L	**0.07**	<0.05	<0.05	<0.05	**0.08**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065687.086 NS0096 120-122	PE065687.088 NS0096 20-22	PE065687.093 NS0096 70-72	PE065688.007 NS0095 30-32	PE065688.008 NS0095 38-40
				Client sampling date / time	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00
					EP1207897-026	EP1207897-027	EP1207897-028	EP1207897-029	EP1207897-030
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.18**	**0.07**	**0.06**	**0.02**	**0.02**
Arsenic	7440-38-2	0.001	mg/L		**0.001**	<0.001	**0.001**	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		**0.011**	**0.004**	**0.013**	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		**0.009**	**0.036**	**0.004**	**0.022**	**0.028**
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L		**0.07**	**0.17**	<0.05	**0.16**	**0.23**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065688.026 NS0094 28-30	PE065688.042 NS0097 28-30	PE065688.043 NS0097 40-42	PE065688.066 NS0113 158-160	PE065688.070 NS0113 198-200
				Client sampling date / time: 29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00
				EP1207897-031	EP1207897-032	EP1207897-033	EP1207897-034	EP1207897-035
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.13**	**0.03**	**0.06**	**0.02**	**0.03**
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	**0.003**	**0.002**	**0.018**	<0.001	**0.004**
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	**0.051**	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	**0.007**	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.042**	**0.034**	**5.20**	**0.014**	**0.008**
Nickel	7440-02-0	0.001	mg/L	<0.001	**0.001**	**0.105**	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	**0.019**	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L	**0.44**	**0.27**	**0.20**	<0.05	<0.05
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065688.079 NS0113 140-142	PE065688.082 NS0118 140-142	PE065689.019 NS0120 206-208	PE065689.041 NS0117 190-192	PE065689.057 NS0116 108-110
				Client sampling date / time: 29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00
				EP1207897-036	EP1207897-037	EP1207897-038	EP1207897-039	EP1207897-040
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.08**	<0.01	**0.19**	**0.21**	**0.10**
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	**0.004**	**0.002**	**0.005**	**0.008**	**0.007**
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	**0.002**	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.001**	**0.001**	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.005**	**0.379**	**0.002**	**0.002**	**0.003**
Nickel	7440-02-0	0.001	mg/L	<0.001	**0.004**	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	**0.06**	<0.05	<0.05
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: PE065689.063 NS0116 130-132	PE065689.072 NS0128	PE065689.080 NS0089 360-362	PE065689.087 NS0084 270-272	----
				Client sampling date / time: 29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	----
				EP1207897-041	EP1207897-042	EP1207897-043	EP1207897-044	----
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.24**	**0.01**	<0.01	**0.20**	----
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Barium	7440-39-3	0.001	mg/L	**0.002**	<0.001	<0.001	**0.003**	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	----
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Manganese	7439-96-5	0.001	mg/L	**0.001**	**0.036**	**0.054**	**0.002**	----
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	----
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	----
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	<0.005	<0.005	----
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	**0.05**	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	----

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065685.007 NS0165 100-102	PE065685.046 NS0157 130-132	PE065685.050 NS0158 178-180	PE065685.064 NS0158 110-112	PE065685.065 NS0158 66-68
	Client sampling date / time	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00
Compound / CAS Number	LOR / Unit	EP1207897-001	EP1207897-002	EP1207897-003	EP1207897-004	EP1207897-005
EN60: Bottle Leaching Procedure						
Final pH ----	0.1 pH Unit	**8.5**	**8.1**	**9.2**	**9.4**	**9.2**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065685.098 NS0152 244-246	PE065686.003 NS0152 78-80	PE065686.007 NS0152 120-122	PE065686.020 NS0153 168-170	PE065686.021 NS0153 98-100
	Client sampling date / time	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00
Compound / CAS Number	LOR / Unit	EP1207897-006	EP1207897-007	EP1207897-008	EP1207897-009	EP1207897-010
EN60: Bottle Leaching Procedure						
Final pH ----	0.1 pH Unit	**9.7**	**8.7**	**9.6**	**8.9**	**8.9**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065686.028 NS0153 200-202	PE065686.032 NS0153 220-222	PE065686.035 NS0154 38-40	PE065686.037 NS0154 30-32	PE065686.040 NS0154 18-20
	Client sampling date / time	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00
Compound / CAS Number	LOR / Unit	EP1207897-011	EP1207897-012	EP1207897-013	EP1207897-014	EP1207897-015
EN60: Bottle Leaching Procedure						
Final pH ----	0.1 pH Unit	**4.0**	**6.4**	**9.4**	**8.8**	**8.2**

Analytical Results

Sub-Matrix: **SOIL**

Compound	CAS Number	LOR	Unit	Client sample ID	PE065686.054 NS0154 200-202	PE065686.068 NS0160 58-60	PE065687.014 NS0124 130-132	PE065687.035 NS0155 100-102	PE065687.036 NS0155 108-110
				Client sampling date / time	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00
					EP1207897-016	EP1207897-017	EP1207897-018	EP1207897-019	EP1207897-020
EN60: Bottle Leaching Procedure									
Final pH	----	0.1	pH Unit		**9.4**	**9.1**	**9.7**	**9.7**	**9.3**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065687.056 NS0098 20-22	PE065687.058 NS0098 0-2	PE065687.060 NS0098 58-60	PE065687.065 NS0098 180-182	PE065687.081 NS0096 230-232
	Client sampling date / time	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00
Compound / CAS Number	LOR / Unit	EP1207897-021	EP1207897-022	EP1207897-023	EP1207897-024	EP1207897-025
EN60: Bottle Leaching Procedure						
Final pH ----	0.1 pH Unit	**8.8**	**8.1**	**7.8**	**8.0**	**9.4**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065687.086 NS0096 120-122	PE065687.088 NS0096 20-22	PE065687.093 NS0096 70-72	PE065688.007 NS0095 30-32	PE065688.008 NS0095 38-40
	Client sampling date / time	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00
Compound / CAS Number	LOR / Unit	EP1207897-026	EP1207897-027	EP1207897-028	EP1207897-029	EP1207897-030
EN60: Bottle Leaching Procedure						
Final pH ----	0.1 pH Unit	**9.4**	**8.4**	**9.6**	**8.5**	**8.2**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065688.026 NS0094 28-30	PE065688.042 NS0097 28-30	PE065688.043 NS0097 40-42	PE065688.066 NS0113 158-160	PE065688.070 NS0113 198-200
	Client sampling date / time	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00
Compound / CAS Number	LOR / Unit	EP1207897-031	EP1207897-032	EP1207897-033	EP1207897-034	EP1207897-035
EN60: Bottle Leaching Procedure						
Final pH ----	0.1 pH Unit	**7.9**	**7.8**	**4.9**	**6.7**	**7.7**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065688.079 NS0113 140-142	PE065688.082 NS0118 140-142	PE065689.019 NS0120 206-208	PE065689.041 NS0117 190-192	PE065689.057 NS0116 108-110
	Client sampling date / time	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00
Compound / CAS Number	LOR / Unit	EP1207897-036	EP1207897-037	EP1207897-038	EP1207897-039	EP1207897-040
EN60: Bottle Leaching Procedure						
Final pH ----	0.1 pH Unit	**8.2**	**7.5**	**8.5**	**8.2**	**9.0**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	PE065689.063 NS0116 130-132	PE065689.072 NS0128	PE065689.080 NS0089 360-362	PE065689.087 NS0084 270-272	----
	Client sampling date / time	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	29-MAY-2012 15:00	----
Compound / CAS Number	LOR / Unit	EP1207897-041	EP1207897-042	EP1207897-043	EP1207897-044	----
EN60: Bottle Leaching Procedure						
Final pH ----	0.1 pH Unit	**9.2**	**8.3**	**8.0**	**9.4**	----

QUALITY CONTROL REPORT

Work Order	: **EP1207897**	Page	: 1 of 9
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex SGS Batch PE065685 686 687 688 689 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 21-SEP-2012
Sampler	: ----	Issue Date	: 02-OCT-2012
Order number	: ----		
		No. of samples received	: 44
Quote number	: EP/406/12 V2	No. of samples analysed	: 44

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Cicelia Bartels	Metals Instrument Chemist	Perth Inorganics
Scott James	Laboratory Manager	Perth Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2513453)									
EP1207897-001	PE065685.007 NS0165 100-102	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.04	0.04	0.0	No Limit
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.0	No Limit
EP1207897-011	PE065686.028 NS0153 200-202	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	0.0025	0.0023	9.7	0% - 20%
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	0.091	0.093	2.0	0% - 20%
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.012	0.012	0.0	0% - 50%
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	5.37	5.41	0.8	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	1.38	1.39	1.0	0% - 20%
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.137	0.143	4.5	0% - 20%
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.68	0.68	0.0	0% - 20%
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	4.19	4.22	0.6	0% - 20%
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2513455)									
EP1207897-021	PE065687.056 NS0098 20-22	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2513455) - continued									
EP1207897-021	PE065687.056 NS0098 20-22	EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.03	0.03	0.0	No Limit
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	0.07	0.09	21.3	No Limit
EP1207897-031	PE065688.026 NS0094 28-30	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.042	0.042	0.0	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.13	0.14	0.0	0% - 50%
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	0.44	0.44	0.0	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2513457)									
EP1207897-041	PE065689.063 NS0116 130-132	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2513457) - continued									
EP1207897-041	PE065689.063 NS0116 130-132	EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.24	0.24	0.0	0% - 20%
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 2513452)									
EP1207897-001	PE065685.007 NS0165 100-102	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP1207897-011	PE065686.028 NS0153 200-202	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 2513454)									
EP1207897-021	PE065687.056 NS0098 20-22	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP1207897-031	PE065688.026 NS0094 28-30	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 2513456)									
EP1207897-041	PE065689.063 NS0116 130-132	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit

Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 2513453)								
EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.50 mg/L	92.5	77	113
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.100 mg/L	92.5	79	111
EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.100 mg/L	90.8	71	121
EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	0.100 mg/L	94.4	79	109
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1000 mg/L	95.3	81	109
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.100 mg/L	94.2	81	109
EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.100 mg/L	96.9	78	112
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.100 mg/L	94.8	79	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.100 mg/L	93.5	80	108
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.100 mg/L	92.9	79	109
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.100 mg/L	93.9	79	109
EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.10 mg/L	92.1	80	112
EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	0.10 mg/L	93.4	78	108
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.100 mg/L	98.1	79	113
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.50 mg/L	91.0	76	112
EG020F: Dissolved Metals by ICP-MS (QCLot: 2513455)								
EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.50 mg/L	97.4	77	113
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.100 mg/L	96.5	79	111
EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.100 mg/L	95.7	71	121
EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	0.100 mg/L	98.9	79	109
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1000 mg/L	98.3	81	109
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.100 mg/L	97.0	81	109
EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.100 mg/L	97.1	78	112
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.100 mg/L	97.1	79	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.100 mg/L	95.2	80	108
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.100 mg/L	98.1	79	109
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.100 mg/L	97.5	79	109
EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.10 mg/L	91.0	80	112
EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	0.10 mg/L	97.1	78	108
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.100 mg/L	100	79	113
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.50 mg/L	92.9	76	112
EG020F: Dissolved Metals by ICP-MS (QCLot: 2513457)								
EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.50 mg/L	97.4	77	113
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.100 mg/L	93.0	79	111

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 2513457) - continued								
EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.100 mg/L	97.0	71	121
EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	0.100 mg/L	94.9	79	109
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1000 mg/L	96.8	81	109
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.100 mg/L	94.4	81	109
EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.100 mg/L	95.8	78	112
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.100 mg/L	94.6	79	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.100 mg/L	96.1	80	108
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.100 mg/L	94.7	79	109
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.100 mg/L	94.6	79	109
EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.10 mg/L	92.4	80	112
EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	0.10 mg/L	94.4	78	108
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.100 mg/L	96.1	79	113
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.50 mg/L	94.4	76	112
EG035F: Dissolved Mercury by FIMS (QCLot: 2513452)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.0100 mg/L	103	75	123
EG035F: Dissolved Mercury by FIMS (QCLot: 2513454)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.0100 mg/L	101	75	123
EG035F: Dissolved Mercury by FIMS (QCLot: 2513456)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.0100 mg/L	102	75	123

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 2513453)							
EP1207897-002	PE065685.046 NS0157 130-132	EG020A-F: Arsenic	7440-38-2	0.200 mg/L	106	70	130
		EG020A-F: Beryllium	7440-41-7	0.200 mg/L	104	70	130
		EG020A-F: Barium	7440-39-3	0.200 mg/L	98.4	70	130
		EG020A-F: Cadmium	7440-43-9	0.0500 mg/L	104	70	130
		EG020A-F: Chromium	7440-47-3	0.200 mg/L	104	70	130
		EG020A-F: Cobalt	7440-48-4	0.200 mg/L	105	70	130
		EG020A-F: Copper	7440-50-8	0.200 mg/L	104	70	130
		EG020A-F: Lead	7439-92-1	0.200 mg/L	100	70	130
		EG020A-F: Manganese	7439-96-5	0.200 mg/L	105	70	130
		EG020A-F: Nickel	7440-02-0	0.200 mg/L	103	70	130
		EG020A-F: Vanadium	7440-62-2	0.20 mg/L	105	70	130
		EG020A-F: Zinc	7440-66-6	0.200 mg/L	110	70	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 2513455)							
EP1207897-022	PE065687.058 NS0098 0-2	EG020A-F: Arsenic	7440-38-2	0.200 mg/L	105	70	130
		EG020A-F: Beryllium	7440-41-7	0.200 mg/L	105	70	130
		EG020A-F: Barium	7440-39-3	0.200 mg/L	101	70	130
		EG020A-F: Cadmium	7440-43-9	0.0500 mg/L	106	70	130
		EG020A-F: Chromium	7440-47-3	0.200 mg/L	106	70	130
		EG020A-F: Cobalt	7440-48-4	0.200 mg/L	106	70	130
		EG020A-F: Copper	7440-50-8	0.200 mg/L	105	70	130
		EG020A-F: Lead	7439-92-1	0.200 mg/L	104	70	130
		EG020A-F: Manganese	7439-96-5	0.200 mg/L	106	70	130
		EG020A-F: Nickel	7440-02-0	0.200 mg/L	106	70	130
		EG020A-F: Vanadium	7440-62-2	0.20 mg/L	106	70	130
		EG020A-F: Zinc	7440-66-6	0.200 mg/L	109	70	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 2513457)							
EP1207897-042	PE065689.072 NS0128	EG020A-F: Arsenic	7440-38-2	0.200 mg/L	106	70	130
		EG020A-F: Beryllium	7440-41-7	0.200 mg/L	105	70	130
		EG020A-F: Barium	7440-39-3	0.200 mg/L	102	70	130
		EG020A-F: Cadmium	7440-43-9	0.0500 mg/L	106	70	130
		EG020A-F: Chromium	7440-47-3	0.200 mg/L	105	70	130
		EG020A-F: Cobalt	7440-48-4	0.200 mg/L	107	70	130
		EG020A-F: Copper	7440-50-8	0.200 mg/L	104	70	130
		EG020A-F: Lead	7439-92-1	0.200 mg/L	102	70	130
		EG020A-F: Manganese	7439-96-5	0.200 mg/L	104	70	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 2513457) - continued							
EP1207897-042	PE065689.072 NS0128	EG020A-F: Nickel	7440-02-0	0.200 mg/L	106	70	130
		EG020A-F: Vanadium	7440-62-2	0.20 mg/L	105	70	130
		EG020A-F: Zinc	7440-66-6	0.200 mg/L	111	70	130
EG035F: Dissolved Mercury by FIMS (QCLot: 2513452)							
EP1207897-002	PE065685.046 NS0157 130-132	EG035F: Mercury	7439-97-6	0.0100 mg/L	90.4	70	130
EG035F: Dissolved Mercury by FIMS (QCLot: 2513454)							
EP1207897-022	PE065687.058 NS0098 0-2	EG035F: Mercury	7439-97-6	0.0100 mg/L	86.4	70	130
EG035F: Dissolved Mercury by FIMS (QCLot: 2513456)							
EP1207897-042	PE065689.072 NS0128	EG035F: Mercury	7439-97-6	0.0100 mg/L	80.4	70	130

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **EP1207897**	Page	: 1 of 8
Client	: GHD PTY LTD	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex SGS Batch PE065685 686 687 688 689 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 21-SEP-2012
Sampler	: ----	Issue Date	: 02-OCT-2012
Order number	: ----		
		No. of samples received	: 44
Quote number	: EP/406/12 V2	No. of samples analysed	: 44

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020F: Dissolved Metals by ICP-MS								
Clear Plastic Bottle - Nitric Acid; Filtered								
PE065685.007 - NS0165 100-102,	PE065685.046 - NS0157 130-132,	**29-MAY-2012**	**---**	25-NOV-2012	----	**25-SEP-2012**	25-NOV-2012	✓
PE065685.050 - NS0158 178-180,	PE065685.064 - NS0158 110-112,							
PE065685.065 - NS0158 66-68,	PE065685.098 - NS0152 244-246,							
PE065686.003 - NS0152 78-80,	PE065686.007 - NS0152 120-122,							
PE065686.020 - NS0153 168-170,	PE065686.021 - NS0153 98-100,							
PE065686.028 - NS0153 200-202,	PE065686.032 - NS0153 220-222,							
PE065686.035 - NS0154 38-40,	PE065686.037 - NS0154 30-32,							
PE065686.040 - NS0154 18-20,	PE065686.054 - NS0154 200-202,							
PE065686.068 - NS0160 58-60,	PE065687.014 - NS0124 130-132,							
PE065687.035 - NS0155 100-102,	PE065687.036 - NS0155 108-110,							
PE065687.056 - NS0098 20-22,	PE065687.058 - NS0098 0-2,							
PE065687.060 - NS0098 58-60,	PE065687.065 - NS0098 180-182,							
PE065687.081 - NS0096 230-232,	PE065687.086 - NS0096 120-122,							
PE065687.088 - NS0096 20-22,	PE065687.093 - NS0096 70-72,							
PE065688.007 - NS0095 30-32,	PE065688.008 - NS0095 38-40,							
PE065688.026 - NS0094 28-30,	PE065688.042 - NS0097 28-30,							
PE065688.043 - NS0097 40-42,	PE065688.066 - NS0113 158-160,							
PE065688.070 - NS0113 198-200,	PE065688.079 - NS0113 140-142,							
PE065688.082 - NS0118 140-142,	PE065689.019 - NS0120 206-208,							
PE065689.041 - NS0117 190-192,	PE065689.057 - NS0116 108-110,							
PE065689.063 - NS0116 130-132,	PE065689.072 - NS0128,							
PE065689.080 - NS0089 360-362,	PE065689.087 - NS0084 270-272							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035F: Dissolved Mercury by FIMS								
Clear Plastic Bottle - Nitric Acid; Filtered								
PE065685.007 - NS0165 100-102,	PE065685.046 - NS0157 130-132,	**29-MAY-2012**	**---**	26-JUN-2012	----	**25-SEP-2012**	26-JUN-2012	×
PE065685.050 - NS0158 178-180,	PE065685.064 - NS0158 110-112,							
PE065685.065 - NS0158 66-68,	PE065685.098 - NS0152 244-246,							
PE065686.003 - NS0152 78-80,	PE065686.007 - NS0152 120-122,							
PE065686.020 - NS0153 168-170,	PE065686.021 - NS0153 98-100,							
PE065686.028 - NS0153 200-202,	PE065686.032 - NS0153 220-222,							
PE065686.035 - NS0154 38-40,	PE065686.037 - NS0154 30-32,							
PE065686.040 - NS0154 18-20,	PE065686.054 - NS0154 200-202,							
PE065686.068 - NS0160 58-60,	PE065687.014 - NS0124 130-132,							
PE065687.035 - NS0155 100-102,	PE065687.036 - NS0155 108-110,							
PE065687.056 - NS0098 20-22,	PE065687.058 - NS0098 0-2,							
PE065687.060 - NS0098 58-60,	PE065687.065 - NS0098 180-182,							
PE065687.081 - NS0096 230-232,	PE065687.086 - NS0096 120-122,							
PE065687.088 - NS0096 20-22,	PE065687.093 - NS0096 70-72,							
PE065688.007 - NS0095 30-32,	PE065688.008 - NS0095 38-40,							
PE065688.026 - NS0094 28-30,	PE065688.042 - NS0097 28-30,							
PE065688.043 - NS0097 40-42,	PE065688.066 - NS0113 158-160,							
PE065688.070 - NS0113 198-200,	PE065688.079 - NS0113 140-142,							
PE065688.082 - NS0118 140-142,	PE065689.019 - NS0120 206-208,							
PE065689.041 - NS0117 190-192,	PE065689.057 - NS0116 108-110,							
PE065689.063 - NS0116 130-132,	PE065689.072 - NS0128,							
PE065689.080 - NS0089 360-362,	PE065689.087 - NS0084 270-272							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EN60: Bottle Leaching Procedure								
Lab Split : Leach for Hg, Cr(VI) and other metal								
PE065685.007 - NS0165 100-102,	PE065685.046 - NS0157 130-132,	**29-MAY-2012**	**---**	26-JUN-2012	----	**25-SEP-2012**	26-JUN-2012	×
PE065685.050 - NS0158 178-180,	PE065685.064 - NS0158 110-112,							
PE065685.065 - NS0158 66-68,	PE065685.098 - NS0152 244-246,							
PE065686.003 - NS0152 78-80,	PE065686.007 - NS0152 120-122,							
PE065686.020 - NS0153 168-170,	PE065686.021 - NS0153 98-100,							
PE065686.028 - NS0153 200-202,	PE065686.032 - NS0153 220-222,							
PE065686.035 - NS0154 38-40,	PE065686.037 - NS0154 30-32,							
PE065686.040 - NS0154 18-20,	PE065686.054 - NS0154 200-202,							
PE065686.068 - NS0160 58-60,	PE065687.014 - NS0124 130-132,							
PE065687.035 - NS0155 100-102,	PE065687.036 - NS0155 108-110,							
PE065687.056 - NS0098 20-22,	PE065687.058 - NS0098 0-2,							
PE065687.060 - NS0098 58-60,	PE065687.065 - NS0098 180-182,							
PE065687.081 - NS0096 230-232,	PE065687.086 - NS0096 120-122,							
PE065687.088 - NS0096 20-22,	PE065687.093 - NS0096 70-72,							
PE065688.007 - NS0095 30-32,	PE065688.008 - NS0095 38-40,							
PE065688.026 - NS0094 28-30,	PE065688.042 - NS0097 28-30,							
PE065688.043 - NS0097 40-42,	PE065688.066 - NS0113 158-160,							
PE065688.070 - NS0113 198-200,	PE065688.079 - NS0113 140-142,							
PE065688.082 - NS0118 140-142,	PE065689.019 - NS0120 206-208,							
PE065689.041 - NS0117 190-192,	PE065689.057 - NS0116 108-110,							
PE065689.063 - NS0116 130-132,	PE065689.072 - NS0128,							
PE065689.080 - NS0089 360-362,	PE065689.087 - NS0084 270-272							

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	5	44	**11.4**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	5	44	**11.4**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	3	44	**6.8**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	3	44	**6.8**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	3	44	**6.8**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	3	44	**6.8**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	3	44	**6.8**	**5.0**	✓	ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	3	44	**6.8**	**5.0**	✓	ALS QCS3 requirement

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals by ICP-MS - Suite A	EG020A-F	SOIL	(APHA 21st ed., 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020): Samples are 0.45 um filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	SOIL	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45 um filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)

Preparation Methods	Method	Matrix	Method Descriptions
Deionised Water Leach	EN60-DIa	SOIL	AS4439.3 Preparation of Leachates

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

- **For all matrices, no Method Blank value outliers occur.**
- **For all matrices, no Duplicate outliers occur.**
- **For all matrices, no Laboratory Control outliers occur.**
- **For all matrices, no Matrix Spike outliers occur.**

Regular Sample Surrogates

- **For all regular sample matrices, no surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

Matrix: **SOIL**

Method		Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered							
PE065685.007 - NS0165 100-102,	PE065685.046 - NS0157 130-132,	----	----	----	25-SEP-2012	26-JUN-2012	**91**
PE065685.050 - NS0158 178-180,	PE065685.064 - NS0158 110-112,						
PE065685.065 - NS0158 66-68,	PE065685.098 - NS0152 244-246,						
PE065686.003 - NS0152 78-80,	PE065686.007 - NS0152 120-122,						
PE065686.020 - NS0153 168-170,	PE065686.021 - NS0153 98-100,						
PE065686.028 - NS0153 200-202,	PE065686.032 - NS0153 220-222,						
PE065686.035 - NS0154 38-40,	PE065686.037 - NS0154 30-32,						
PE065686.040 - NS0154 18-20,	PE065686.054 - NS0154 200-202,						
PE065686.068 - NS0160 58-60,	PE065687.014 - NS0124 130-132,						
PE065687.035 - NS0155 100-102,	PE065687.036 - NS0155 108-110,						
PE065687.056 - NS0098 20-22,	PE065687.058 - NS0098 0-2,						
PE065687.060 - NS0098 58-60,	PE065687.065 - NS0098 180-182,						
PE065687.081 - NS0096 230-232,	PE065687.086 - NS0096 120-122,						
PE065687.088 - NS0096 20-22,	PE065687.093 - NS0096 70-72,						
PE065688.007 - NS0095 30-32,	PE065688.008 - NS0095 38-40,						
PE065688.026 - NS0094 28-30,	PE065688.042 - NS0097 28-30,						
PE065688.043 - NS0097 40-42,	PE065688.066 - NS0113 158-160,						
PE065688.070 - NS0113 198-200,	PE065688.079 - NS0113 140-142,						
PE065688.082 - NS0118 140-142,	PE065689.019 - NS0120 206-208,						
PE065689.041 - NS0117 190-192,	PE065689.057 - NS0116 108-110,						
PE065689.063 - NS0116 130-132,	PE065689.072 - NS0128,						
PE065689.080 - NS0089 360-362,	PE065689.087 - NS0084 270-272						

Matrix: **SOIL**

Method / Container / Client Sample ID(s)		Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EN60: Bottle Leaching Procedure							
Lab Split : Leach for Hg, Cr(VI) and other metal							
PE065685.007 - NS0165 100-102,	PE065685.046 - NS0157 130-132,	----	----	----	25-SEP-2012	26-JUN-2012	**91**
PE065685.050 - NS0158 178-180,	PE065685.064 - NS0158 110-112,						
PE065685.065 - NS0158 66-68,	PE065685.098 - NS0152 244-246,						
PE065686.003 - NS0152 78-80,	PE065686.007 - NS0152 120-122,						
PE065686.020 - NS0153 168-170,	PE065686.021 - NS0153 98-100,						
PE065686.028 - NS0153 200-202,	PE065686.032 - NS0153 220-222,						
PE065686.035 - NS0154 38-40,	PE065686.037 - NS0154 30-32,						
PE065686.040 - NS0154 18-20,	PE065686.054 - NS0154 200-202,						
PE065686.068 - NS0160 58-60,	PE065687.014 - NS0124 130-132,						
PE065687.035 - NS0155 100-102,	PE065687.036 - NS0155 108-110,						
PE065687.056 - NS0098 20-22,	PE065687.058 - NS0098 0-2,						
PE065687.060 - NS0098 58-60,	PE065687.065 - NS0098 180-182,						
PE065687.081 - NS0096 230-232,	PE065687.086 - NS0096 120-122,						
PE065687.088 - NS0096 20-22,	PE065687.093 - NS0096 70-72,						
PE065688.007 - NS0095 30-32,	PE065688.008 - NS0095 38-40,						
PE065688.026 - NS0094 28-30,	PE065688.042 - NS0097 28-30,						
PE065688.043 - NS0097 40-42,	PE065688.066 - NS0113 158-160,						
PE065688.070 - NS0113 198-200,	PE065688.079 - NS0113 140-142,						
PE065688.082 - NS0118 140-142,	PE065689.019 - NS0120 206-208,						
PE065689.041 - NS0117 190-192,	PE065689.057 - NS0116 108-110,						
PE065689.063 - NS0116 130-132,	PE065689.072 - NS0128,						
PE065689.080 - NS0089 360-362,	PE065689.087 - NS0084 270-272						

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- **No Quality Control Sample Frequency Outliers exist.**

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order	: **EP1207897**		
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex SGS Batch PE065685 686 687 688 689 612739100	Page	: 1 of 5
Order number	: ----		
C-O-C number	: ----	Quote number	: EP2012GHDSER0556 (EP/406/12 V2)
Site	: ----		
Sampler	: ----	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 21-SEP-2012	Issue Date	: 21-SEP-2012 18:33
Client Requested Due Date	: 28-SEP-2012	Scheduled Reporting Date	: **28-SEP-2012**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: Ambient
No. of coolers/boxes	: NIL	No. of samples received	: 44
Security Seal	: N/A	No. of samples analysed	: 44

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- Samples received in appropriately pretreated and preserved containers.
- Please see scanned COC for sample discrepencies: extra samples , samples not received etc.
- **Samples received in appropriately pretreated and preserved containers.**
- **pH analysis should be conducted within 6 hours of sampling.**
- Analytical work for this work order will be conducted at ALS Environmental Perth.
- Please direct any turnaround / technical queries to the laboratory contact designated above.
- Please direct any queries related to sample condition / numbering / breakages to Sample Receipt (SamplesPerth@alsenviro.com)
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of Work Order.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exist.**

EP1207897-001	: 29-MAY-2012 15:00	: PE065685.007 - NS0165 100-102
EP1207897-002	: 29-MAY-2012 15:00	: PE065685.046 - NS0157 130-132
EP1207897-003	: 29-MAY-2012 15:00	: PE065685.050 - NS0158 178-180
EP1207897-004	: 29-MAY-2012 15:00	: PE065685.064 - NS0158 110-112
EP1207897-005	: 29-MAY-2012 15:00	: PE065685.065 - NS0158 66-68
EP1207897-006	: 29-MAY-2012 15:00	: PE065685.098 - NS0152 244-246
EP1207897-007	: 29-MAY-2012 15:00	: PE065686.003 - NS0152 78-80
EP1207897-008	: 29-MAY-2012 15:00	: PE065686.007 - NS0152 120-122
EP1207897-009	: 29-MAY-2012 15:00	: PE065686.020 - NS0153 168-170
EP1207897-010	: 29-MAY-2012 15:00	: PE065686.021 - NS0153 98-100
EP1207897-011	: 29-MAY-2012 15:00	: PE065686.028 - NS0153 200-202
EP1207897-012	: 29-MAY-2012 15:00	: PE065686.032 - NS0153 220-222
EP1207897-013	: 29-MAY-2012 15:00	: PE065686.035 - NS0154 38-40
EP1207897-014	: 29-MAY-2012 15:00	: PE065686.037 - NS0154 30-32
EP1207897-015	: 29-MAY-2012 15:00	: PE065686.040 - NS0154 18-20
EP1207897-016	: 29-MAY-2012 15:00	: PE065686.054 - NS0154 200-202
EP1207897-017	: 29-MAY-2012 15:00	: PE065686.068 - NS0160 58-60
EP1207897-018	: 29-MAY-2012 15:00	: PE065687.014 - NS0124 130-132
EP1207897-019	: 29-MAY-2012 15:00	: PE065687.035 - NS0155 100-102
EP1207897-020	: 29-MAY-2012 15:00	: PE065687.036 - NS0155 108-110
EP1207897-021	: 29-MAY-2012 15:00	: PE065687.056 - NS0098 20-22
EP1207897-022	: 29-MAY-2012 15:00	: PE065687.058 - NS0098 0-2
EP1207897-023	: 29-MAY-2012 15:00	: PE065687.060 - NS0098 58-60
EP1207897-024	: 29-MAY-2012 15:00	: PE065687.065 - NS0098 180-182
EP1207897-025	: 29-MAY-2012 15:00	: PE065687.081 - NS0096 230-232
EP1207897-026	: 29-MAY-2012 15:00	: PE065687.086 - NS0096 120-122
EP1207897-027	: 29-MAY-2012 15:00	: PE065687.088 - NS0096 20-22
EP1207897-028	: 29-MAY-2012 15:00	: PE065687.093 - NS0096 70-72
EP1207897-029	: 29-MAY-2012 15:00	: PE065688.007 - NS0095 30-32
EP1207897-030	: 29-MAY-2012 15:00	: PE065688.008 - NS0095 38-40
EP1207897-031	: 29-MAY-2012 15:00	: PE065688.026 - NS0094 28-30
EP1207897-032	: 29-MAY-2012 15:00	: PE065688.042 - NS0097 28-30
EP1207897-033	: 29-MAY-2012 15:00	: PE065688.043 - NS0097 40-42
EP1207897-034	: 29-MAY-2012 15:00	: PE065688.066 - NS0113 158-160
EP1207897-035	: 29-MAY-2012 15:00	: PE065688.070 - NS0113 198-200
EP1207897-036	: 29-MAY-2012 15:00	: PE065688.079 - NS0113 140-142
EP1207897-037	: 29-MAY-2012 15:00	: PE065688.082 - NS0118 140-142
EP1207897-038	: 29-MAY-2012 15:00	: PE065689.019 - NS0120 206-208
EP1207897-039	: 29-MAY-2012 15:00	: PE065689.041 - NS0117 190-192
EP1207897-040	: 29-MAY-2012 15:00	: PE065689.057 - NS0116 108-110
EP1207897-041	: 29-MAY-2012 15:00	: PE065689.063 - NS0116 130-132
EP1207897-042	: 29-MAY-2012 15:00	: PE065689.072 - NS0128
EP1207897-043	: 29-MAY-2012 15:00	: PE065689.080 - NS0089 360-362
EP1207897-044	: 29-MAY-2012 15:00	: PE065689.087 - NS0084 270-272

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process neccessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default to 15:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory for processing purposes and will be shown bracketed without a time component.

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	SOIL - EG020F Dissolved Metals by ICPMS	SOIL - EG035F Dissolved Mercury by FIMS	SOIL - EN60-DI Suite Deionised Water Leach
EP1207897-001	29-MAY-2012 15:00	PE065685.007 NS0165...	✓	✓	✓
EP1207897-002	29-MAY-2012 15:00	PE065685.046 NS0157...	✓	✓	✓
EP1207897-003	29-MAY-2012 15:00	PE065685.050 NS0158...	✓	✓	✓
EP1207897-004	29-MAY-2012 15:00	PE065685.064 NS0158...	✓	✓	✓
EP1207897-005	29-MAY-2012 15:00	PE065685.065 NS0158...	✓	✓	✓
EP1207897-006	29-MAY-2012 15:00	PE065685.098 NS0152...	✓	✓	✓
EP1207897-007	29-MAY-2012 15:00	PE065686.003 NS0152...	✓	✓	✓
EP1207897-008	29-MAY-2012 15:00	PE065686.007 NS0152...	✓	✓	✓
EP1207897-009	29-MAY-2012 15:00	PE065686.020 NS0153...	✓	✓	✓
EP1207897-010	29-MAY-2012 15:00	PE065686.021 NS0153...	✓	✓	✓
EP1207897-011	29-MAY-2012 15:00	PE065686.028 NS0153...	✓	✓	✓
EP1207897-012	29-MAY-2012 15:00	PE065686.032 NS0153...	✓	✓	✓
EP1207897-013	29-MAY-2012 15:00	PE065686.035 NS0154...	✓	✓	✓
EP1207897-014	29-MAY-2012 15:00	PE065686.037 NS0154...	✓	✓	✓
EP1207897-015	29-MAY-2012 15:00	PE065686.040 NS0154...	✓	✓	✓
EP1207897-016	29-MAY-2012 15:00	PE065686.054 NS0154...	✓	✓	✓
EP1207897-017	29-MAY-2012 15:00	PE065686.068 NS0160...	✓	✓	✓
EP1207897-018	29-MAY-2012 15:00	PE065687.014 NS0124...	✓	✓	✓
EP1207897-019	29-MAY-2012 15:00	PE065687.035 NS0155...	✓	✓	✓
EP1207897-020	29-MAY-2012 15:00	PE065687.036 NS0155...	✓	✓	✓
EP1207897-021	29-MAY-2012 15:00	PE065687.056 NS0098...	✓	✓	✓
EP1207897-022	29-MAY-2012 15:00	PE065687.058 NS0098...	✓	✓	✓
EP1207897-023	29-MAY-2012 15:00	PE065687.060 NS0098...	✓	✓	✓
EP1207897-024	29-MAY-2012 15:00	PE065687.065 NS0098...	✓	✓	✓
EP1207897-025	29-MAY-2012 15:00	PE065687.081 NS0096...	✓	✓	✓
EP1207897-026	29-MAY-2012 15:00	PE065687.086 NS0096...	✓	✓	✓
EP1207897-027	29-MAY-2012 15:00	PE065687.088 NS0096...	✓	✓	✓
EP1207897-028	29-MAY-2012 15:00	PE065687.093 NS0096...	✓	✓	✓
EP1207897-029	29-MAY-2012 15:00	PE065688.007 NS0095...	✓	✓	✓
EP1207897-030	29-MAY-2012 15:00	PE065688.008 NS0095...	✓	✓	✓
EP1207897-031	29-MAY-2012 15:00	PE065688.026 NS0094...	✓	✓	✓
EP1207897-032	29-MAY-2012 15:00	PE065688.042 NS0097...	✓	✓	✓
EP1207897-033	29-MAY-2012 15:00	PE065688.043 NS0097...	✓	✓	✓
EP1207897-034	29-MAY-2012 15:00	PE065688.066 NS0113...	✓	✓	✓
EP1207897-035	29-MAY-2012 15:00	PE065688.070 NS0113...	✓	✓	✓
EP1207897-036	29-MAY-2012 15:00	PE065688.079 NS0113...	✓	✓	✓
EP1207897-037	29-MAY-2012 15:00	PE065688.082 NS0118...	✓	✓	✓
EP1207897-038	29-MAY-2012 15:00	PE065689.019 NS0120...	✓	✓	✓
EP1207897-039	29-MAY-2012 15:00	PE065689.041 NS0117...	✓	✓	✓
EP1207897-040	29-MAY-2012 15:00	PE065689.057 NS0116...	✓	✓	✓
EP1207897-041	29-MAY-2012 15:00	PE065689.063 NS0116...	✓	✓	✓

			SOIL - EG020F Dissolved Metals by ICPMS	SOIL - EG035F Dissolved Mercury by FIMS	SOIL - EN60-DI Suite Deionised Water Leach
EP1207897-042	29-MAY-2012 15:00	PE065689.072 NS0128	✓	✓	✓
EP1207897-043	29-MAY-2012 15:00	PE065689.080 NS0089...	✓	✓	✓
EP1207897-044	29-MAY-2012 15:00	PE065689.087 NS0084...	✓	✓	✓

Proactive Holding Time Report

The following table summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method		Due for extraction	Due for analysis	Samples Received		Instructions Received	
Client Sample ID(s)	Container			Date	Evaluation	Date	Evaluation
EG035F: Dissolved Mercury by FIMS							
PE065685.007	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065685.046	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065685.050	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065685.064	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065685.065	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065685.098	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065686.003	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065686.007	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065686.020	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065686.021	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065686.028	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065686.032	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065686.035	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065686.037	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065686.040	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065686.054	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065686.068	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065687.014	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065687.035	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065687.036	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065687.056	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065687.058	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065687.060	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065687.065	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065687.081	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065687.086	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065687.088	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065687.093	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065688.007	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065688.008	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065688.026	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065688.042	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065688.043	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065688.066	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065688.070	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065688.079	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065688.082	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065689.019	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065689.041	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065689.057	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065689.063	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065689.072	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065689.080	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----
PE065689.087	Clear Plastic Bottle - Nitric Acid;	26-JUN-2012	----	21-SEP-2012	×	----	----

Requested Deliverables

MR Scott James

- *AU Certificate of Analysis - NATA (COA)	Email	scott.james@alsenviro.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	scott.james@alsenviro.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	scott.james@alsenviro.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	scott.james@alsenviro.com
- A4 - AU Tax Invoice (INV)	Email	scott.james@alsenviro.com
- Chain of Custody (CoC) (COC)	Email	scott.james@alsenviro.com
- EDI Format - ENMRG (ENMRG)	Email	scott.james@alsenviro.com
- EDI Format - ESDAT (ESDAT)	Email	scott.james@alsenviro.com
- EDI Format - XTab (XTAB)	Email	scott.james@alsenviro.com

CERTIFICATE OF ANALYSIS

Work Order	: **EP1207918**	Page	: 1 of 16
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201378 1379 1380 1381 1382 1383 1382 1526 & 1529 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 21-SEP-2012
Sampler	: ----	Issue Date	: 03-OCT-2012
Site	: ----		
		No. of samples received	: 36
Quote number	: EP/406/12 V2	No. of samples analysed	: 33

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Cicelia Bartels	Metals Instrument Chemist	Perth Inorganics
Scott James	Laboratory Manager	Perth Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201378014 NS0077 178-180	EP1201378041 NS0077 20-22	EP1201378042 NS0077 28-30	EP1201379013 NS0093 216-218	EP1201379046 NS0091
				Client sampling date / time: 21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00
				EP1207918-001	EP1207918-002	EP1207918-003	EP1207918-004	EP1207918-005
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	**0.08**	**0.08**	**0.05**	<0.01
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	**0.061**	**0.002**	<0.001	**0.008**	**0.042**
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.001**	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.716**	**0.017**	**0.038**	**0.004**	**0.379**
Nickel	7440-02-0	0.001	mg/L	**0.004**	<0.001	<0.001	<0.001	**0.001**
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L	<0.05	**0.39**	**0.64**	<0.05	<0.05
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201379047 NS0083 158-160	EP1201380010 NS0078 0-2	EP1201380011 NS0078 8-10	EP1201380025 NS0100 78-80	EP1201380028 NS0078 80-82
				Client sampling date / time: 21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00
				EP1207918-006	EP1207918-007	EP1207918-008	EP1207918-009	EP1207918-010
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.42**	<0.01	**0.02**	**0.24**	**0.04**
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	**0.005**	**0.051**	<0.001	**0.003**	<0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	<0.001	**0.001**	<0.001	**0.002**	**0.003**
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	**0.18**	**0.13**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201380030 NS0078 276-278	EP1201380046 NS0106	EP1201380049 NS0106 20-22	EP1201380050 NS0106 92-94	EP1201381007 NS0077 8-10
				Client sampling date / time	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00
					EP1207918-011	EP1207918-012	EP1207918-013	EP1207918-014	EP1207918-015
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.15**	**1.26**	**0.08**	**0.05**	**0.03**
Arsenic	7440-38-2	0.001	mg/L		**0.002**	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		**0.002**	**0.003**	**0.002**	<0.001	**0.002**
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	**0.0014**	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	**0.001**	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	**0.032**	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		**0.023**	**0.002**	**0.037**	**9.40**	**0.012**
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	**0.257**	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	**0.011**	<0.005
Iron	7439-89-6	0.05	mg/L		**1.18**	**0.59**	**0.47**	**1.30**	**0.07**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201381008 NS0077 0-2	EP1201381013 NS0087 380-382	EP1201381045 NS0078 28-30	EP1201381048 NS0078 20-22	EP1201382016 NS0088 8-10
				Client sampling date / time: 21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00
				EP1207918-016	EP1207918-017	EP1207918-018	EP1207918-019	EP1207918-020
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	<0.01	**0.04**	**0.35**	**0.43**	**0.03**
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	**0.014**	**0.002**	**1.13**	**1.36**	**1.24**
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	**0.002**	**0.002**	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	**0.092**	**0.063**	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.006**	**0.007**	**0.003**	**0.004**	**0.001**
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	**0.002**	**0.001**	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	**0.409**	**0.595**	**0.436**
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	**1.37**	**1.81**	**0.21**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201382020 NS0088 0-2	EP1201382031 NS0079 94-96	EP1201383006 NS0092 48-50	EP1201383007 NS0092 40-42	EP1201383010 NS0085 0-2
				Client sampling date / time	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00
					EP1207918-021	EP1207918-022	EP1207918-023	EP1207918-024	EP1207918-025
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.01**	**0.04**	**0.11**	**0.02**	**0.28**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		**0.004**	**0.011**	**0.009**	**0.027**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		**0.025**	**0.014**	**0.004**	**0.015**	**0.031**
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	**0.20**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201383011 NS0085 18-20	EP1201383012 NS0085 10-12	EP1201383026 NS0092 158-160	EP1201383045 NS0086 8-10	EP1201382019 NS0088 108-110
				Client sampling date / time	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00
					EP1207918-026	EP1207918-027	EP1207918-028	EP1207918-029	EP1207918-030
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.11**	**0.14**	<0.01	**0.04**	<0.01
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		**0.001**	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		**0.006**	<0.001	**0.002**	**0.004**	**0.069**
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L		**0.47**	**0.35**	<0.05	**0.48**	<0.05
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201382001 NS0088 280-282	EP1201529050 NS0089 210-212	EP1201526049 NS0089 268-270	----	----
				Client sampling date / time	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	----	----
					EP1207918-032	EP1207918-034	EP1207918-035	----	----
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.10**	**0.11**	**0.01**	----	----
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Barium	7440-39-3	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Manganese	7439-96-5	0.001	mg/L		**0.004**	**0.006**	**0.028**	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	----	----
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	----	----
Iron	7439-89-6	0.05	mg/L		<0.05	**0.15**	<0.05	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	----	----

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201378014 NS0077 178-180	EP1201378041 NS0077 20-22	EP1201378042 NS0077 28-30	EP1201379013 NS0093 216-218	EP1201379046 NS0091
	Client sampling date / time	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00
Compound / CAS Number	LOR / Unit	EP1207918-001	EP1207918-002	EP1207918-003	EP1207918-004	EP1207918-005
EN60: Bottle Leaching Procedure						
Final pH ----	0.1 pH Unit	**6.6**	**5.9**	**6.1**	**8.5**	**7.1**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201379047 NS0083 158-160	EP1201380010 NS0078 0-2	EP1201380011 NS0078 8-10	EP1201380025 NS0100 78-80	EP1201380028 NS0078 80-82
	Client sampling date / time	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00
Compound / CAS Number / LOR / Unit		EP1207918-006	EP1207918-007	EP1207918-008	EP1207918-009	EP1207918-010
EN60: Bottle Leaching Procedure						
Final pH ---- 0.1 pH Unit		**9.4**	**7.0**	**7.0**	**9.1**	**8.7**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201380030 NS0078 276-278	EP1201380046 NS0106	EP1201380049 NS0106 20-22	EP1201380050 NS0106 92-94	EP1201381007 NS0077 8-10
	Client sampling date / time	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00
Compound / CAS Number	LOR / Unit	EP1207918-011	EP1207918-012	EP1207918-013	EP1207918-014	EP1207918-015
EN60: Bottle Leaching Procedure						
Final pH ----	0.1 pH Unit	**7.7**	**7.2**	**7.2**	**4.6**	**6.1**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201381008 NS0077 0-2	EP1201381013 NS0087 380-382	EP1201381045 NS0078 28-30	EP1201381048 NS0078 20-22	EP1201382016 NS0088 8-10
	Client sampling date / time	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00
Compound / CAS Number	LOR / Unit	EP1207918-016	EP1207918-017	EP1207918-018	EP1207918-019	EP1207918-020
EN60: Bottle Leaching Procedure						
Final pH ----	0.1 pH Unit	**6.6**	**9.1**	**7.8**	**7.9**	**7.3**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201382020 NS0088 0-2	EP1201382031 NS0079 94-96	EP1201383006 NS0092 48-50	EP1201383007 NS0092 40-42	EP1201383010 NS0085 0-2
	Client sampling date / time	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00
Compound / CAS Number / LOR / Unit		EP1207918-021	EP1207918-022	EP1207918-023	EP1207918-024	EP1207918-025
EN60: Bottle Leaching Procedure						
Final pH ---- 0.1 pH Unit		**7.5**	**7.6**	**9.2**	**8.6**	**6.8**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201383011 NS0085 18-20	EP1201383012 NS0085 10-12	EP1201383026 NS0092 158-160	EP1201383045 NS0086 8-10	EP1201382019 NS0088 108-110
	Client sampling date / time	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00
Compound / CAS Number / LOR / Unit		EP1207918-026	EP1207918-027	EP1207918-028	EP1207918-029	EP1207918-030
EN60: Bottle Leaching Procedure						
Final pH ---- 0.1 pH Unit		**6.8**	**6.6**	**6.4**	**6.3**	**7.5**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201382001 NS0088 280-282	EP1201529050 NS0089 210-212	EP1201526049 NS0089 268-270	----	----
	Client sampling date / time	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	----	----
Compound / CAS Number	LOR / Unit	EP1207918-032	EP1207918-034	EP1207918-035	----	----
EN60: Bottle Leaching Procedure						
Final pH ----	0.1 pH Unit	**8.6**	**6.6**	**7.8**	----	----

QUALITY CONTROL REPORT

Work Order	: **EP1207918**	Page	: 1 of 7
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201378 1379 1380 1381 1382 1383 1382 1526 & 1529 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 21-SEP-2012
Sampler	: ----	Issue Date	: 03-OCT-2012
Order number	: ----		
		No. of samples received	: 36
Quote number	: EP/406/12 V2	No. of samples analysed	: 33

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Cicelia Bartels	Metals Instrument Chemist	Perth Inorganics
Scott James	Laboratory Manager	Perth Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2516000)									
EP1207918-001	EP1201378014 NS0077 178-180	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.061	0.061	0.0	0% - 20%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.716	0.712	0.6	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.004	0.004	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.0	No Limit
EP1207918-011	EP1201380030 NS0078 276-278	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.023	0.023	0.0	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.15	0.16	0.0	0% - 50%
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	1.18	1.21	1.9	0% - 20%
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2516002)									
EP1207918-021	EP1201382020 NS0088 0-2	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2516002) - continued									
EP1207918-021	EP1201382020 NS0088 0-2	EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.004	0.003	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.025	0.026	0.0	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.01	0.01	0.0	No Limit
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.0	No Limit
EP1207918-032	EP1201382001 NS0088 280-282	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.004	0.004	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.10	0.10	0.0	0% - 50%
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 2515999)									
EP1207918-001	EP1201378014 NS0077 178-180	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP1207918-011	EP1201380030 NS0078 276-278	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 2516001)									
EP1207918-021	EP1201382020 NS0088 0-2	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP1207918-032	EP1201382001 NS0088 280-282	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit

Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 2516000)								
EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.50 mg/L	94.2	77	113
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.100 mg/L	97.8	79	111
EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.100 mg/L	89.2	71	121
EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	0.100 mg/L	95.8	79	109
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1000 mg/L	96.8	81	109
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.100 mg/L	89.7	81	109
EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.100 mg/L	93.8	78	112
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.100 mg/L	94.6	79	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.100 mg/L	92.1	80	108
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.100 mg/L	95.9	79	109
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.100 mg/L	92.7	79	109
EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.10 mg/L	89.6	80	112
EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	0.10 mg/L	99.6	78	108
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.100 mg/L	102	79	113
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.50 mg/L	93.9	76	112
EG020F: Dissolved Metals by ICP-MS (QCLot: 2516002)								
EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.50 mg/L	93.4	77	113
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.100 mg/L	94.1	79	111
EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.100 mg/L	91.2	71	121
EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	0.100 mg/L	94.3	79	109
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1000 mg/L	95.8	81	109
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.100 mg/L	94.0	81	109
EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.100 mg/L	94.0	78	112
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.100 mg/L	93.8	79	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.100 mg/L	90.9	80	108
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.100 mg/L	98.3	79	109
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.100 mg/L	90.4	79	109
EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.10 mg/L	88.4	80	112
EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	0.10 mg/L	95.4	78	108
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.100 mg/L	100	79	113
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.50 mg/L	95.1	76	112
EG035F: Dissolved Mercury by FIMS (QCLot: 2515999)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.0100 mg/L	101	75	123
EG035F: Dissolved Mercury by FIMS (QCLot: 2516001)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EG035F: Dissolved Mercury by FIMS (QCLot: 2516001) - continued								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.0100 mg/L	102	75	123

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 2516000)							
EP1207918-002	EP1201378041 NS0077 20-22	EG020A-F: Arsenic	7440-38-2	0.200 mg/L	104	70	130
		EG020A-F: Beryllium	7440-41-7	0.200 mg/L	96.8	70	130
		EG020A-F: Barium	7440-39-3	0.200 mg/L	97.3	70	130
		EG020A-F: Cadmium	7440-43-9	0.0500 mg/L	101	70	130
		EG020A-F: Chromium	7440-47-3	0.200 mg/L	97.8	70	130
		EG020A-F: Cobalt	7440-48-4	0.200 mg/L	102	70	130
		EG020A-F: Copper	7440-50-8	0.200 mg/L	102	70	130
		EG020A-F: Lead	7439-92-1	0.200 mg/L	96.8	70	130
		EG020A-F: Manganese	7439-96-5	0.200 mg/L	102	70	130
		EG020A-F: Nickel	7440-02-0	0.200 mg/L	101	70	130
		EG020A-F: Vanadium	7440-62-2	0.20 mg/L	94.5	70	130
		EG020A-F: Zinc	7440-66-6	0.200 mg/L	107	70	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 2516002)							
EP1207918-022	EP1201382031 NS0079 94-96	EG020A-F: Arsenic	7440-38-2	0.200 mg/L	105	70	130
		EG020A-F: Beryllium	7440-41-7	0.200 mg/L	98.4	70	130
		EG020A-F: Barium	7440-39-3	0.200 mg/L	95.7	70	130
		EG020A-F: Cadmium	7440-43-9	0.0500 mg/L	103	70	130
		EG020A-F: Chromium	7440-47-3	0.200 mg/L	99.2	70	130
		EG020A-F: Cobalt	7440-48-4	0.200 mg/L	101	70	130
		EG020A-F: Copper	7440-50-8	0.200 mg/L	102	70	130
		EG020A-F: Lead	7439-92-1	0.200 mg/L	99.2	70	130
		EG020A-F: Manganese	7439-96-5	0.200 mg/L	101	70	130
		EG020A-F: Nickel	7440-02-0	0.200 mg/L	99.1	70	130
		EG020A-F: Vanadium	7440-62-2	0.20 mg/L	99.3	70	130
		EG020A-F: Zinc	7440-66-6	0.200 mg/L	108	70	130
EG035F: Dissolved Mercury by FIMS (QCLot: 2515999)							
EP1207918-002	EP1201378041 NS0077 20-22	EG035F: Mercury	7439-97-6	0.0100 mg/L	84.8	70	130
EG035F: Dissolved Mercury by FIMS (QCLot: 2516001)							
EP1207918-022	EP1201382031 NS0079 94-96	EG035F: Mercury	7439-97-6	0.0100 mg/L	83.1	70	130

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **EP1207918**	Page	: 1 of 7
Client	: GHD PTY LTD	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201378 1379 1380 1381 1382 1383 1382 1526 & 1529 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 21-SEP-2012
Sampler	: ----	Issue Date	: 03-OCT-2012
Order number	: ----		
		No. of samples received	: 36
Quote number	: EP/406/12 V2	No. of samples analysed	: 33

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered							
EP1201378014 - NS0077 178-180, EP1201378041 - NS0077 20-22, EP1201378042 - NS0077 28-30, EP1201379013 - NS0093 216-218, EP1201379046 - NS0091, EP1201379047 - NS0083 158-160, EP1201380010 - NS0078 0-2, EP1201380011 - NS0078 8-10, EP1201380046 - NS0106, EP1201380025 - NS0100 78-80, EP1201380028 - NS0078 80-82, EP1201380030 - NS0078 276-278, EP1201380049 - NS0106 20-22, EP1201380050 - NS0106 92-94, EP1201381007 - NS0077 8-10, EP1201381008 - NS0077 0-2, EP1201381013 - NS0087 380-382, EP1201381045 - NS0078 28-30, EP1201381048 - NS0078 20-22, EP1201382016 - NS0088 8-10, EP1201382020 - NS0088 0-2, EP1201382031 - NS0079 94-96, EP1201383006 - NS0092 48-50, EP1201383007 - NS0092 40-42, EP1201383010 - NS0085 0-2, EP1201383011 - NS0085 18-20, EP1201383012 - NS0085 10-12, EP1201383026 - NS0092 158-160, EP1201383045 - NS0086 8-10, EP1201382019 - NS0088 108-110, EP1201382001 - NS0088 280-282, EP1201529050 - NS0089 210-212, EP1201526049 - NS0089 268-270	**21-SEP-2012**	**---**	20-MAR-2013	----	**02-OCT-2012**	20-MAR-2013	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered							
EP1201378014 - NS0077 178-180, EP1201378041 - NS0077 20-22, EP1201378042 - NS0077 28-30, EP1201379013 - NS0093 216-218, EP1201379046 - NS0091, EP1201379047 - NS0083 158-160, EP1201380010 - NS0078 0-2, EP1201380011 - NS0078 8-10, EP1201380046 - NS0106, EP1201380025 - NS0100 78-80, EP1201380028 - NS0078 80-82, EP1201380030 - NS0078 276-278, EP1201380049 - NS0106 20-22, EP1201380050 - NS0106 92-94, EP1201381007 - NS0077 8-10, EP1201381008 - NS0077 0-2, EP1201381013 - NS0087 380-382, EP1201381045 - NS0078 28-30, EP1201381048 - NS0078 20-22, EP1201382016 - NS0088 8-10, EP1201382020 - NS0088 0-2, EP1201382031 - NS0079 94-96, EP1201383006 - NS0092 48-50, EP1201383007 - NS0092 40-42, EP1201383010 - NS0085 0-2, EP1201383011 - NS0085 18-20, EP1201383012 - NS0085 10-12, EP1201383026 - NS0092 158-160, EP1201383045 - NS0086 8-10, EP1201382019 - NS0088 108-110, EP1201382001 - NS0088 280-282, EP1201529050 - NS0089 210-212, EP1201526049 - NS0089 268-270	**21-SEP-2012**	**---**	19-OCT-2012	----	**27-SEP-2012**	19-OCT-2012	✓
EN60: Bottle Leaching Procedure							
Lab Split : Leach for Hg, Cr(VI) and other metal							
EP1201378014 - NS0077 178-180, EP1201378041 - NS0077 20-22, EP1201378042 - NS0077 28-30, EP1201379013 - NS0093 216-218, EP1201379046 - NS0091, EP1201379047 - NS0083 158-160, EP1201380010 - NS0078 0-2, EP1201380011 - NS0078 8-10, EP1201380046 - NS0106, EP1201380025 - NS0100 78-80, EP1201380028 - NS0078 80-82, EP1201380030 - NS0078 276-278, EP1201380049 - NS0106 20-22, EP1201380050 - NS0106 92-94, EP1201381007 - NS0077 8-10, EP1201381008 - NS0077 0-2, EP1201381013 - NS0087 380-382, EP1201381045 - NS0078 28-30, EP1201381048 - NS0078 20-22, EP1201382016 - NS0088 8-10, EP1201382020 - NS0088 0-2, EP1201382031 - NS0079 94-96, EP1201383006 - NS0092 48-50, EP1201383007 - NS0092 40-42, EP1201383010 - NS0085 0-2, EP1201383011 - NS0085 18-20, EP1201383012 - NS0085 10-12, EP1201383026 - NS0092 158-160, EP1201383045 - NS0086 8-10, EP1201382019 - NS0088 108-110, EP1201382001 - NS0088 280-282, EP1201529050 - NS0089 210-212, EP1201526049 - NS0089 268-270	**24-MAY-2012**	**---**	21-JUN-2012	----	**27-SEP-2012**	21-JUN-2012	×

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	4	33	**12.1**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	4	33	**12.1**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	2	33	**6.1**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	33	**6.1**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	2	33	**6.1**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	33	**6.1**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	2	33	**6.1**	**5.0**	✓	ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	33	**6.1**	**5.0**	✓	ALS QCS3 requirement

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals by ICP-MS - Suite A	EG020A-F	SOIL	(APHA 21st ed., 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020): Samples are 0.45 um filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	SOIL	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45 um filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)

Preparation Methods	Method	Matrix	Method Descriptions
Deionised Water Leach	EN60-DIa	SOIL	AS4439.3 Preparation of Leachates

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

- **For all matrices, no Method Blank value outliers occur.**
- **For all matrices, no Duplicate outliers occur.**
- **For all matrices, no Laboratory Control outliers occur.**
- **For all matrices, no Matrix Spike outliers occur.**

Regular Sample Surrogates

- **For all regular sample matrices, no surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

Matrix: **SOIL**

Method	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EN60: Bottle Leaching Procedure						
Lab Split : Leach for Hg, Cr(VI) and other metal						
EP1201378014 - NS0077 178-180, EP1201378041 - NS0077 20-22, EP1201378042 - NS0077 28-30, EP1201379013 - NS0093 216-218, EP1201379046 - NS0091, EP1201379047 - NS0083 158-160, EP1201380010 - NS0078 0-2, EP1201380011 - NS0078 8-10, EP1201380046 - NS0106, EP1201380025 - NS0100 78-80, EP1201380028 - NS0078 80-82, EP1201380030 - NS0078 276-278, EP1201380049 - NS0106 20-22, EP1201380050 - NS0106 92-94, EP1201381007 - NS0077 8-10, EP1201381008 - NS0077 0-2, EP1201381013 - NS0087 380-382, EP1201381045 - NS0078 28-30, EP1201381048 - NS0078 20-22, EP1201382016 - NS0088 8-10, EP1201382020 - NS0088 0-2, EP1201382031 - NS0079 94-96, EP1201383006 - NS0092 48-50, EP1201383007 - NS0092 40-42, EP1201383010 - NS0085 0-2, EP1201383011 - NS0085 18-20, EP1201383012 - NS0085 10-12, EP1201383026 - NS0092 158-160, EP1201383045 - NS0086 8-10, EP1201382019 - NS0088 108-110, EP1201382001 - NS0088 280-282, EP1201529050 - NS0089 210-212, EP1201526049 - NS0089 268-270	----	----	----	27-SEP-2012	21-JUN-2012	**98**

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- **No Quality Control Sample Frequency Outliers exist.**

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order	: **EP1207918**		
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201378 1379 1380 1381 1382 1383 1382 1526 & 1529 612739100	Page	: 1 of 5
Order number	: ----		
C-O-C number	: ----	Quote number	: EP2012GHDSER0556 (EP/406/12 V2)
Site	: ----		
Sampler	: ----	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 21-SEP-2012	Issue Date	: 24-SEP-2012 16:32
Client Requested Due Date	: 28-SEP-2012	Scheduled Reporting Date	: **28-SEP-2012**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: Ambient
No. of coolers/boxes	: NIL	No. of samples received	: 36
Security Seal	: N/A	No. of samples analysed	: 33

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- Samples received in appropriately pretreated and preserved containers.
- Please see scanned COC for sample discrepencies: extra samples , samples not received etc.
- **Samples received in appropriately pretreated and preserved containers.**
- **INSUFFICIENT VOLUME FOR TESTING ON SAMPLE #31, #33, #36**
- **pH analysis should be conducted within 6 hours of sampling.**
- Analytical work for this work order will be conducted at ALS Environmental Perth.
- Please direct any turnaround / technical queries to the laboratory contact designated above.
- Please direct any queries related to sample condition / numbering / breakages to Sample Receipt (SamplesPerth@alsenviro.com)
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of Work Order.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exist.**

EP1207918-001	: 21-SEP-2012 15:00	: EP1201378014 - NS0077 178-180
EP1207918-001	: 24-MAY-2012 15:00	: EP1201378014 - NS0077 178-180
EP1207918-002	: 21-SEP-2012 15:00	: EP1201378041 - NS0077 20-22
EP1207918-002	: 24-MAY-2012 15:00	: EP1201378041 - NS0077 20-22
EP1207918-003	: 21-SEP-2012 15:00	: EP1201378042 - NS0077 28-30
EP1207918-003	: 24-MAY-2012 15:00	: EP1201378042 - NS0077 28-30
EP1207918-004	: 21-SEP-2012 15:00	: EP1201379013 - NS0093 216-218
EP1207918-004	: 24-MAY-2012 15:00	: EP1201379013 - NS0093 216-218
EP1207918-005	: 21-SEP-2012 15:00	: EP1201379046 - NS0091
EP1207918-005	: 24-MAY-2012 15:00	: EP1201379046 - NS0091
EP1207918-006	: 21-SEP-2012 15:00	: EP1201379047 - NS0083 158-160
EP1207918-006	: 24-MAY-2012 15:00	: EP1201379047 - NS0083 158-160
EP1207918-007	: 21-SEP-2012 15:00	: EP1201380010 - NS0078 0-2
EP1207918-007	: 24-MAY-2012 15:00	: EP1201380010 - NS0078 0-2
EP1207918-008	: 21-SEP-2012 15:00	: EP1201380011 - NS0078 8-10
EP1207918-008	: 24-MAY-2012 15:00	: EP1201380011 - NS0078 8-10
EP1207918-009	: 21-SEP-2012 15:00	: EP1201380025 - NS0100 78-80
EP1207918-009	: 24-MAY-2012 15:00	: EP1201380025 - NS0100 78-80
EP1207918-010	: 21-SEP-2012 15:00	: EP1201380028 - NS0078 80-82
EP1207918-010	: 24-MAY-2012 15:00	: EP1201380028 - NS0078 80-82
EP1207918-011	: 21-SEP-2012 15:00	: EP1201380030 - NS0078 276-278
EP1207918-011	: 24-MAY-2012 15:00	: EP1201380030 - NS0078 276-278
EP1207918-012	: 21-SEP-2012 15:00	: EP1201380046 - NS0106
EP1207918-012	: 24-MAY-2012 15:00	: EP1201380046 - NS0106
EP1207918-013	: 21-SEP-2012 15:00	: EP1201380049 - NS0106 20-22
EP1207918-013	: 24-MAY-2012 15:00	: EP1201380049 - NS0106 20-22
EP1207918-014	: 21-SEP-2012 15:00	: EP1201380050 - NS0106 92-94
EP1207918-014	: 24-MAY-2012 15:00	: EP1201380050 - NS0106 92-94
EP1207918-015	: 21-SEP-2012 15:00	: EP1201381007 - NS0077 8-10
EP1207918-015	: 24-MAY-2012 15:00	: EP1201381007 - NS0077 8-10
EP1207918-016	: 21-SEP-2012 15:00	: EP1201381008 - NS0077 0-2
EP1207918-016	: 24-MAY-2012 15:00	: EP1201381008 - NS0077 0-2
EP1207918-017	: 21-SEP-2012 15:00	: EP1201381013 - NS0087 380-382
EP1207918-017	: 24-MAY-2012 15:00	: EP1201381013 - NS0087 380-382
EP1207918-018	: 21-SEP-2012 15:00	: EP1201381045 - NS0078 28-30
EP1207918-018	: 24-MAY-2012 15:00	: EP1201381045 - NS0078 28-30
EP1207918-019	: 21-SEP-2012 15:00	: EP1201381048 - NS0078 20-22
EP1207918-019	: 24-MAY-2012 15:00	: EP1201381048 - NS0078 20-22
EP1207918-020	: 21-SEP-2012 15:00	: EP1201382016 - NS0088 8-10
EP1207918-020	: 24-MAY-2012 15:00	: EP1201382016 - NS0088 8-10
EP1207918-021	: 21-SEP-2012 15:00	: EP1201382020 - NS0088 0-2
EP1207918-021	: 24-MAY-2012 15:00	: EP1201382020 - NS0088 0-2
EP1207918-022	: 21-SEP-2012 15:00	: EP1201382031 - NS0079 94-96
EP1207918-022	: 24-MAY-2012 15:00	: EP1201382031 - NS0079 94-96
EP1207918-023	: 21-SEP-2012 15:00	: EP1201383006 - NS0092 48-50
EP1207918-023	: 24-MAY-2012 15:00	: EP1201383006 - NS0092 48-50
EP1207918-024	: 21-SEP-2012 15:00	: EP1201383007 - NS0092 40-42
EP1207918-024	: 24-MAY-2012 15:00	: EP1201383007 - NS0092 40-42
EP1207918-025	: 21-SEP-2012 15:00	: EP1201383010 - NS0085 0-2
EP1207918-025	: 24-MAY-2012 15:00	: EP1201383010 - NS0085 0-2
EP1207918-026	: 21-SEP-2012 15:00	: EP1201383011 - NS0085 18-20
EP1207918-026	: 24-MAY-2012 15:00	: EP1201383011 - NS0085 18-20
EP1207918-027	: 21-SEP-2012 15:00	: EP1201383012 - NS0085 10-12
EP1207918-027	: 24-MAY-2012 15:00	: EP1201383012 - NS0085 10-12
EP1207918-028	: 21-SEP-2012 15:00	: EP1201383026 - NS0092 158-160

EP1207918-028	: 24-MAY-2012 15:00	: EP1201383026 - NS0092 158-160
EP1207918-029	: 21-SEP-2012 15:00	: EP1201383045 - NS0086 8-10
EP1207918-029	: 24-MAY-2012 15:00	: EP1201383045 - NS0086 8-10
EP1207918-030	: 21-SEP-2012 15:00	: EP1201382019 - NS0088 108-110
EP1207918-030	: 24-MAY-2012 15:00	: EP1201382019 - NS0088 108-110
EP1207918-031	: 21-SEP-2012 15:00	: EP1201382041 - NS0088 150-152
EP1207918-031	: 24-MAY-2012 15:00	: EP1201382041 - NS0088 150-152
EP1207918-032	: 21-SEP-2012 15:00	: EP1201382001 - NS0088 280-282
EP1207918-032	: 24-MAY-2012 15:00	: EP1201382001 - NS0088 280-282
EP1207918-033	: 21-SEP-2012 15:00	: EP1201382010 - NS0088 346-348
EP1207918-033	: 24-MAY-2012 15:00	: EP1201382010 - NS0088 346-348
EP1207918-034	: 21-SEP-2012 15:00	: EP1201529050 - NS0089 210-212
EP1207918-034	: 24-MAY-2012 15:00	: EP1201529050 - NS0089 210-212
EP1207918-035	: 21-SEP-2012 15:00	: EP1201526049 - NS0089 268-270
EP1207918-035	: 24-MAY-2012 15:00	: EP1201526049 - NS0089 268-270
EP1207918-036	: 21-SEP-2012 15:00	: EP1201382040 - NS0088
EP1207918-036	: 24-MAY-2012 15:00	: EP1201382040 - NS0088

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process neccessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default to 15:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory for processing purposes and will be shown bracketed without a time component.

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) SOIL No analysis requested	SOIL - EG020F Dissolved Metals by ICPMS	SOIL - EG035F Dissolved Mercury by FIMS	SOIL - EN60-DI Suite Deionised Water Leach
EP1207918-001	21-SEP-2012 15:00	EP1201378014 NS0077...		✓	✓	
	24-MAY-2012 15:00	EP1201378014 NS0077...				✓
EP1207918-002	21-SEP-2012 15:00	EP1201378041 NS0077...		✓	✓	
	24-MAY-2012 15:00	EP1201378041 NS0077...				✓
EP1207918-003	21-SEP-2012 15:00	EP1201378042 NS0077...		✓	✓	
	24-MAY-2012 15:00	EP1201378042 NS0077...				✓
EP1207918-004	21-SEP-2012 15:00	EP1201379013 NS0093...		✓	✓	
	24-MAY-2012 15:00	EP1201379013 NS0093...				✓
EP1207918-005	21-SEP-2012 15:00	EP1201379046 NS0091		✓	✓	
	24-MAY-2012 15:00	EP1201379046 NS0091				✓
EP1207918-006	21-SEP-2012 15:00	EP1201379047 NS0083...		✓	✓	
	24-MAY-2012 15:00	EP1201379047 NS0083...				✓
EP1207918-007	21-SEP-2012 15:00	EP1201380010 NS0078...		✓	✓	
	24-MAY-2012 15:00	EP1201380010 NS0078...				✓
EP1207918-008	21-SEP-2012 15:00	EP1201380011 NS0078...		✓	✓	
	24-MAY-2012 15:00	EP1201380011 NS0078...				✓
EP1207918-009	21-SEP-2012 15:00	EP1201380025 NS0100...		✓	✓	
	24-MAY-2012 15:00	EP1201380025 NS0100...				✓
EP1207918-010	21-SEP-2012 15:00	EP1201380028 NS0078...		✓	✓	
	24-MAY-2012 15:00	EP1201380028 NS0078...				✓
EP1207918-011	21-SEP-2012 15:00	EP1201380030 NS0078...		✓	✓	
	24-MAY-2012 15:00	EP1201380030 NS0078...				✓
EP1207918-012	21-SEP-2012 15:00	EP1201380046 NS0106		✓	✓	
	24-MAY-2012 15:00	EP1201380046 NS0106				✓
EP1207918-013	21-SEP-2012 15:00	EP1201380049 NS0106...		✓	✓	

			(On Hold) SOIL No analysis requested	SOIL - EG020F Dissolved Metals by ICPMS	SOIL - EG035F Dissolved Mercury by FIMS	SOIL - EN60-DI Suite Deionised Water Leach
EP1207918-013	24-MAY-2012 15:00	EP1201380049 NS0106...				✓
EP1207918-014	21-SEP-2012 15:00	EP1201380050 NS0106...		✓	✓	
	24-MAY-2012 15:00	EP1201380050 NS0106...				✓
EP1207918-015	21-SEP-2012 15:00	EP1201381007 NS0077...		✓	✓	
	24-MAY-2012 15:00	EP1201381007 NS0077...				✓
EP1207918-016	21-SEP-2012 15:00	EP1201381008 NS0077...		✓	✓	
	24-MAY-2012 15:00	EP1201381008 NS0077...				✓
EP1207918-017	21-SEP-2012 15:00	EP1201381013 NS0087...		✓	✓	
	24-MAY-2012 15:00	EP1201381013 NS0087...				✓
EP1207918-018	21-SEP-2012 15:00	EP1201381045 NS0078...		✓	✓	
	24-MAY-2012 15:00	EP1201381045 NS0078...				✓
EP1207918-019	21-SEP-2012 15:00	EP1201381048 NS0078...		✓	✓	
	24-MAY-2012 15:00	EP1201381048 NS0078...				✓
EP1207918-020	21-SEP-2012 15:00	EP1201382016 NS0088...		✓	✓	
	24-MAY-2012 15:00	EP1201382016 NS0088...				✓
EP1207918-021	21-SEP-2012 15:00	EP1201382020 NS0088...		✓	✓	
	24-MAY-2012 15:00	EP1201382020 NS0088...				✓
EP1207918-022	21-SEP-2012 15:00	EP1201382031 NS0079...		✓	✓	
	24-MAY-2012 15:00	EP1201382031 NS0079...				✓
EP1207918-023	21-SEP-2012 15:00	EP1201383006 NS0092...		✓	✓	
	24-MAY-2012 15:00	EP1201383006 NS0092...				✓
EP1207918-024	21-SEP-2012 15:00	EP1201383007 NS0092...		✓	✓	
	24-MAY-2012 15:00	EP1201383007 NS0092...				✓
EP1207918-025	21-SEP-2012 15:00	EP1201383010 NS0085...		✓	✓	
	24-MAY-2012 15:00	EP1201383010 NS0085...				✓
EP1207918-026	21-SEP-2012 15:00	EP1201383011 NS0085...		✓	✓	
	24-MAY-2012 15:00	EP1201383011 NS0085...				✓
EP1207918-027	21-SEP-2012 15:00	EP1201383012 NS0085...		✓	✓	
	24-MAY-2012 15:00	EP1201383012 NS0085...				✓
EP1207918-028	21-SEP-2012 15:00	EP1201383026 NS0092...		✓	✓	
	24-MAY-2012 15:00	EP1201383026 NS0092...				✓
EP1207918-029	21-SEP-2012 15:00	EP1201383045 NS0086...		✓	✓	
	24-MAY-2012 15:00	EP1201383045 NS0086...				✓
EP1207918-030	21-SEP-2012 15:00	EP1201382019 NS0088...		✓	✓	
	24-MAY-2012 15:00	EP1201382019 NS0088...				✓
EP1207918-031	24-MAY-2012 15:00	EP1201382041 NS0088...	✓			
EP1207918-032	21-SEP-2012 15:00	EP1201382001 NS0088...		✓	✓	
	24-MAY-2012 15:00	EP1201382001 NS0088...				✓
EP1207918-033	24-MAY-2012 15:00	EP1201382010 NS0088...	✓			
EP1207918-034	21-SEP-2012 15:00	EP1201529050 NS0089...		✓	✓	
	24-MAY-2012 15:00	EP1201529050 NS0089...				✓

			(On Hold) SOIL No analysis requested	SOIL - EG020F Dissolved Metals by ICPMS	SOIL - EG035F Dissolved Mercury by FIMS	SOIL - EN60-DI Suite Deionised Water Leach
EP1207918-035	21-SEP-2012 15:00	EP1201526049 NS0089...		✓	✓	
	24-MAY-2012 15:00	EP1201526049 NS0089...				✓
EP1207918-036	24-MAY-2012 15:00	EP1201382040 NS0088	✓			

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

MR Scott James

- *AU Certificate of Analysis - NATA (COA)	Email	scott.james@alsenviro.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	scott.james@alsenviro.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	scott.james@alsenviro.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	scott.james@alsenviro.com
- A4 - AU Tax Invoice (INV)	Email	scott.james@alsenviro.com
- Chain of Custody (CoC) (COC)	Email	scott.james@alsenviro.com
- EDI Format - ENMRG (ENMRG)	Email	scott.james@alsenviro.com
- EDI Format - ESDAT (ESDAT)	Email	scott.james@alsenviro.com
- EDI Format - XTab (XTAB)	Email	scott.james@alsenviro.com

CERTIFICATE OF ANALYSIS

Work Order	: **EP1207919**	Page	: 1 of 18
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201383 1384 1526 1527 1528 1529 1530 & 1531 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 21-SEP-2012
Sampler	: ----	Issue Date	: 03-OCT-2012
Site	: ----		
		No. of samples received	: 38
Quote number	: EP/406/12 V2	No. of samples analysed	: 36

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Cicelia Bartels	Metals Instrument Chemist	Perth Inorganics
Scott James	Laboratory Manager	Perth Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201383046 NS0086 28-30	EP1201384003 NS0085 208-210	EP1201384005 NS0085 58-60	EP1201384006 NS0085 30-32	EP1201384015 NS0085 90-92
				Client sampling date / time: 21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00
				EP1207919-001	EP1207919-002	EP1207919-003	EP1207919-004	EP1207919-005
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.13**	**0.04**	**0.08**	**0.04**	**0.04**
Arsenic	7440-38-2	0.001	mg/L	**0.002**	**0.001**	**0.002**	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	<0.001	**0.010**	**0.002**	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	<0.001	**0.006**	**0.009**	**0.025**	**0.007**
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	**0.008**	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L	**0.44**	<0.05	<0.05	**0.14**	<0.05
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201384028 NS0107 160-162	EP1201384029 NS0107 170-172	EP1201384031 NS0107 128-130	EP1201384033 NS0107 148-150	EP1201384035 NS0107 140-142
				Client sampling date / time: 21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00
				EP1207919-006	EP1207919-007	EP1207919-008	EP1207919-009	EP1207919-010
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.04**	**0.08**	**0.11**	**0.07**	**0.05**
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	<0.001	**0.003**	<0.001	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	**0.0014**	<0.0001	**0.0008**
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	**0.169**	<0.001	**0.119**
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	**0.145**	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.012**	**0.007**	**3.13**	**0.071**	**5.00**
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	**0.394**	<0.001	**0.418**
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	<0.005	**0.020**	**0.165**	<0.005	**0.059**
Iron	7439-89-6	0.05	mg/L	**0.21**	**0.24**	**0.94**	<0.05	**4.71**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201384039 NS0107 120-122	EP1201527006 NS0084 140-142	EP1201527007 NS0084 190-192	EP1201527028 NS0087 8-10	EP1201527032 NS0087 88-90
				Client sampling date / time: 21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00
				EP1207919-011	EP1207919-012	EP1207919-013	EP1207919-014	EP1207919-016
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.44**	**0.06**	**0.12**	**0.13**	**0.15**
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	<0.001	<0.001	**0.001**	**0.023**	**0.008**
Cadmium	7440-43-9	0.0001	mg/L	**0.0013**	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	**0.184**	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	**0.204**	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**1.42**	**0.091**	**0.015**	**0.005**	**0.004**
Nickel	7440-02-0	0.001	mg/L	**0.474**	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	**0.161**	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L	**1.21**	<0.05	<0.05	**0.08**	**0.13**
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201528001 NS0089 88-90	EP1201528003 NS0089 60-62	EP1201528018 NS0089 0-2	EP1201528043 NS0084 158-160	EP1201529008 NS0090 190-192
				Client sampling date / time	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00
					EP1207919-017	EP1207919-018	EP1207919-019	EP1207919-020	EP1207919-021
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.14**	**0.04**	**0.41**	**0.09**	**0.11**
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	**0.003**	**0.002**
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		**0.002**	<0.001	**0.002**	**0.003**	**0.002**
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		**0.008**	<0.001	**0.010**	**0.001**	**0.010**
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L		**0.14**	**0.12**	**0.86**	<0.05	**0.56**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201529015 NS0090 8-10	EP1201529016 NS0090 0-2	EP1201529017 NS0090 20-22	EP1201529040 NS0089 128-130	EP1201529045 NS0089 178-180
				Client sampling date / time	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00
					EP1207919-022	EP1207919-023	EP1207919-024	EP1207919-025	EP1207919-026
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.05**	**0.05**	**0.10**	<0.01	**0.09**
Arsenic	7440-38-2	0.001	mg/L		<0.001	**0.001**	<0.001	**0.001**	<0.001
Beryllium	7440-41-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		**0.002**	<0.001	**0.007**	**0.006**	<0.001
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	**0.012**	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		**0.005**	**0.005**	<0.001	**0.613**	**0.012**
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	**0.015**	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L		<0.05	**0.17**	**0.10**	**0.06**	**0.12**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201530008 NS0106 28-30	EP1201530010 NS0106 48-50	EP1201530012 NS0106 8-10	EP1201530028 NS0108 176-178	EP1201530029 NS0094 160-162
				Client sampling date / time: 21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00
				EP1207919-027	EP1207919-028	EP1207919-029	EP1207919-030	EP1207919-031
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.01**	**0.06**	**0.11**	**0.01**	<0.01
Arsenic	7440-38-2	0.001	mg/L	**0.001**	**0.002**	<0.001	<0.001	<0.001
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	<0.001	**0.005**	**0.002**	<0.001	<0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	<0.001	**0.006**	**0.003**	**0.014**	**0.041**
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID: EP1201531001 NS0090 268-270	EP1201384022 NS0107	EP1201384025 NS0107	EP1201384036 NS0107	EP1201526047 NS0089
				Client sampling date / time: 21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00	21-SEP-2012 15:00
				EP1207919-033	EP1207919-034	EP1207919-035	EP1207919-036	EP1207919-037
EG020F: Dissolved Metals by ICP-MS								
Aluminium	7429-90-5	0.01	mg/L	**0.09**	<0.01	**0.22**	**0.07**	**0.05**
Arsenic	7440-38-2	0.001	mg/L	**0.002**	<0.001	<0.001	**0.003**	**0.002**
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L	**0.008**	<0.001	<0.001	**0.002**	<0.001
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	**0.001**	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	**0.022**	**0.047**	**0.031**	**0.017**	**0.010**
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	**0.027**	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L	**0.14**	<0.05	<0.05	**0.10**	<0.05
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: **DI WATER LEACHATE**

Compound	CAS Number	LOR	Unit	Client sample ID	EP1201527035 NS0087	----	----	----	----
				Client sampling date / time	21-SEP-2012 15:00	----	----	----	----
					EP1207919-038	**----**	**----**	**----**	**----**
EG020F: Dissolved Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L		**0.01**	----	----	----	----
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Beryllium	7440-41-7	0.001	mg/L		<0.001	----	----	----	----
Barium	7440-39-3	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----
Cobalt	7440-48-4	0.001	mg/L		<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Manganese	7439-96-5	0.001	mg/L		**0.037**	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	----	----	----	----
Selenium	7782-49-2	0.01	mg/L		<0.01	----	----	----	----
Vanadium	7440-62-2	0.01	mg/L		<0.01	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	----	----	----	----
Iron	7439-89-6	0.05	mg/L		<0.05	----	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201383046 NS0086 28-30	EP1201384003 NS0085 208-210	EP1201384005 NS0085 58-60	EP1201384006 NS0085 30-32	EP1201384015 NS0085 90-92
	Client sampling date / time	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00
Compound / CAS Number	LOR / Unit	EP1207919-001	EP1207919-002	EP1207919-003	EP1207919-004	EP1207919-005
EN60: Bottle Leaching Procedure						
Final pH ----	0.1 pH Unit	**6.1**	**8.9**	**9.1**	**6.3**	**9.1**

Analytical Results

Sub-Matrix: **SOIL**

			Client sample ID	EP1201384028 NS0107 160-162	EP1201384029 NS0107 170-172	EP1201384031 NS0107 128-130	EP1201384033 NS0107 148-150	EP1201384035 NS0107 140-142
			Client sampling date / time	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00
Compound	CAS Number	LOR	Unit	EP1207919-006	EP1207919-007	EP1207919-008	EP1207919-009	EP1207919-010
EN60: Bottle Leaching Procedure								
Final pH	----	0.1	pH Unit	**7.0**	**6.9**	**4.8**	**7.3**	**4.8**

Analytical Results

Sub-Matrix: **SOIL**

				Client sample ID	EP1201384039 NS0107 120-122	EP1201527006 NS0084 140-142	EP1201527007 NS0084 190-192	EP1201527028 NS0087 8-10	EP1201527032 NS0087 88-90
				Client sampling date / time	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00
Compound	CAS Number	LOR	Unit		EP1207919-011	EP1207919-012	EP1207919-013	EP1207919-014	EP1207919-016
EN60: Bottle Leaching Procedure									
Final pH	----	0.1	pH Unit		**4.4**	**7.1**	**8.1**	**8.9**	**9.3**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201528001 NS0089 88-90	EP1201528003 NS0089 60-62	EP1201528018 NS0089 0-2	EP1201528043 NS0084 158-160	EP1201529008 NS0090 190-192
	Client sampling date / time	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00
Compound / CAS Number / LOR / Unit		EP1207919-017	EP1207919-018	EP1207919-019	EP1207919-020	EP1207919-021
EN60: Bottle Leaching Procedure						
Final pH ---- 0.1 pH Unit		**9.3**	**6.9**	**7.4**	**9.2**	**8.1**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201529015 NS0090 8-10	EP1201529016 NS0090 0-2	EP1201529017 NS0090 20-22	EP1201529040 NS0089 128-130	EP1201529045 NS0089 178-180
	Client sampling date / time	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00
Compound / CAS Number / LOR / Unit		EP1207919-022	EP1207919-023	EP1207919-024	EP1207919-025	EP1207919-026
EN60: Bottle Leaching Procedure						
Final pH ---- 0.1 pH Unit		**7.6**	**7.8**	**7.5**	**6.6**	**7.2**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201530008 NS0106 28-30	EP1201530010 NS0106 48-50	EP1201530012 NS0106 8-10	EP1201530028 NS0108 176-178	EP1201530029 NS0094 160-162
	Client sampling date / time	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00
Compound / CAS Number	LOR / Unit	EP1207919-027	EP1207919-028	EP1207919-029	EP1207919-030	EP1207919-031
EN60: Bottle Leaching Procedure						
Final pH ----	0.1 pH Unit	**7.7**	**9.2**	**7.8**	**7.7**	**7.6**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201531001 NS0090 268-270	EP1201384022 NS0107	EP1201384025 NS0107	EP1201384036 NS0107	EP1201526047 NS0089
	Client sampling date / time	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00	24-MAY-2012 15:00
Compound	CAS Number / LOR / Unit	EP1207919-033	EP1207919-034	EP1207919-035	EP1207919-036	EP1207919-037
EN60: Bottle Leaching Procedure						
Final pH	---- / 0.1 / pH Unit	**9.3**	**8.2**	**8.2**	**9.4**	**9.3**

Analytical Results

Sub-Matrix: SOIL	Client sample ID	EP1201527035 NS0087	----	----	----	----
	Client sampling date / time	24-MAY-2012 15:00	----	----	----	----
Compound / CAS Number / LOR / Unit		EP1207919-038	----	----	----	----
EN60: Bottle Leaching Procedure						
Final pH ---- 0.1 pH Unit		**8.6**	----	----	----	----

QUALITY CONTROL REPORT

Work Order	: **EP1207919**	Page	: 1 of 7
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201383 1384 1526 1527 1528 1529 1530 & 1531 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 21-SEP-2012
Sampler	: ----	Issue Date	: 03-OCT-2012
Order number	: ----		
		No. of samples received	: 38
Quote number	: EP/406/12 V2	No. of samples analysed	: 36

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Cicelia Bartels	Metals Instrument Chemist	Perth Inorganics
Scott James	Laboratory Manager	Perth Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2516005)									
EP1207844-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	0.0001	0.0002	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.003	0.002	0.0	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.036	0.035	0.0	0% - 20%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.004	0.006	34.5	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.030	0.030	0.0	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.059	0.054	8.1	0% - 20%
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.014	0.014	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.03	<0.01	101	No Limit
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.0	No Limit
EP1207919-007	EP1201384029 NS0107 170-172	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.007	0.008	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.020	0.020	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.08	0.08	0.0	No Limit
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	0.24	0.25	4.7	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2516007)									
EP1207919-018	EP1201528003 NS0089 60-62	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.001	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2516007) - continued									
EP1207919-018	EP1201528003 NS0089 60-62	EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.04	0.04	0.0	No Limit
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	0.12	0.12	0.0	No Limit
EP1207919-028	EP1201530010 NS0106 48-50	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.005	0.005	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.006	0.006	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	0.06	0.09	42.4	No Limit
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 2516004)									
EP1207844-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP1207919-007	EP1201384029 NS0107 170-172	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 2516006)									
EP1207919-018	EP1201528003 NS0089 60-62	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP1207919-028	EP1201530010 NS0106 48-50	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit

Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 2516005)								
EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.50 mg/L	105	77	113
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.100 mg/L	105	79	111
EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.100 mg/L	100	71	121
EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	0.100 mg/L	97.0	79	109
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1000 mg/L	97.0	81	109
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.100 mg/L	99.4	81	109
EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.100 mg/L	101	78	112
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.100 mg/L	101	79	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.100 mg/L	104	80	108
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.100 mg/L	102	79	109
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.100 mg/L	100	79	109
EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.10 mg/L	91.1	80	112
EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	0.10 mg/L	105	78	108
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.100 mg/L	104	79	113
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.50 mg/L	104	76	112
EG020F: Dissolved Metals by ICP-MS (QCLot: 2516007)								
EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.50 mg/L	106	77	113
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.100 mg/L	99.5	79	111
EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.100 mg/L	102	71	121
EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	0.100 mg/L	102	79	109
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1000 mg/L	99.1	81	109
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.100 mg/L	104	81	109
EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.100 mg/L	104	78	112
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.100 mg/L	102	79	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.100 mg/L	101	80	108
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.100 mg/L	101	79	109
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.100 mg/L	104	79	109
EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.10 mg/L	86.7	80	112
EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	0.10 mg/L	105	78	108
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.100 mg/L	105	79	113
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.50 mg/L	104	76	112
EG035F: Dissolved Mercury by FIMS (QCLot: 2516004)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.0100 mg/L	102	75	123
EG035F: Dissolved Mercury by FIMS (QCLot: 2516006)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EG035F: Dissolved Mercury by FIMS (QCLot: 2516006) - continued								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.0100 mg/L	104	75	123

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 2516005)							
EP1207844-002	Anonymous	EG020A-F: Arsenic	7440-38-2	0.200 mg/L	115	70	130
		EG020A-F: Beryllium	7440-41-7	0.200 mg/L	95.7	70	130
		EG020A-F: Barium	7440-39-3	0.200 mg/L	114	70	130
		EG020A-F: Cadmium	7440-43-9	0.0500 mg/L	109	70	130
		EG020A-F: Chromium	7440-47-3	0.200 mg/L	94.8	70	130
		EG020A-F: Cobalt	7440-48-4	0.200 mg/L	116	70	130
		EG020A-F: Copper	7440-50-8	0.200 mg/L	106	70	130
		EG020A-F: Lead	7439-92-1	0.200 mg/L	102	70	130
		EG020A-F: Manganese	7439-96-5	0.200 mg/L	97.5	70	130
		EG020A-F: Nickel	7440-02-0	0.200 mg/L	119	70	130
		EG020A-F: Vanadium	7440-62-2	0.20 mg/L	101	70	130
		EG020A-F: Zinc	7440-66-6	0.200 mg/L	113	70	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 2516007)							
EP1207919-019	EP1201528018 NS0089 0-2	EG020A-F: Arsenic	7440-38-2	0.200 mg/L	109	70	130
		EG020A-F: Beryllium	7440-41-7	0.200 mg/L	103	70	130
		EG020A-F: Barium	7440-39-3	0.200 mg/L	103	70	130
		EG020A-F: Cadmium	7440-43-9	0.0500 mg/L	106	70	130
		EG020A-F: Chromium	7440-47-3	0.200 mg/L	108	70	130
		EG020A-F: Cobalt	7440-48-4	0.200 mg/L	112	70	130
		EG020A-F: Copper	7440-50-8	0.200 mg/L	108	70	130
		EG020A-F: Lead	7439-92-1	0.200 mg/L	102	70	130
		EG020A-F: Manganese	7439-96-5	0.200 mg/L	105	70	130
		EG020A-F: Nickel	7440-02-0	0.200 mg/L	113	70	130
		EG020A-F: Vanadium	7440-62-2	0.20 mg/L	106	70	130
		EG020A-F: Zinc	7440-66-6	0.200 mg/L	114	70	130
EG035F: Dissolved Mercury by FIMS (QCLot: 2516004)							
EP1207844-002	Anonymous	EG035F: Mercury	7439-97-6	0.0100 mg/L	88.8	70	130
EG035F: Dissolved Mercury by FIMS (QCLot: 2516006)							
EP1207919-019	EP1201528018 NS0089 0-2	EG035F: Mercury	7439-97-6	0.0100 mg/L	85.9	70	130

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **EP1207919**	Page	: 1 of 7
Client	: GHD PTY LTD	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201383 1384 1526 1527 1528 1529 1530 & 1531 612739100	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 21-SEP-2012
Sampler	: ----	Issue Date	: 03-OCT-2012
Order number	: ----		
		No. of samples received	: 38
Quote number	: EP/406/12 V2	No. of samples analysed	: 36

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020F: Dissolved Metals by ICP-MS								
Clear Plastic Bottle - Nitric Acid; Filtered								
EP1201383046 - NS0086 28-30,	EP1201384003 - NS0085 208-210,	**21-SEP-2012**	**---**	20-MAR-2013	----	**02-OCT-2012**	20-MAR-2013	✓
EP1201384005 - NS0085 58-60,	EP1201384006 - NS0085 30-32,							
EP1201384015 - NS0085 90-92,	EP1201384028 - NS0107 160-162,							
EP1201384029 - NS0107 170-172,	EP1201384031 - NS0107 128-130,							
EP1201384033 - NS0107 148-150,	EP1201384035 - NS0107 140-142,							
EP1201384039 - NS0107 120-122,	EP1201527006 - NS0084 140-142,							
EP1201527007 - NS0084 190-192,	EP1201527028 - NS0087 8-10,							
EP1201527032 - NS0087 88-90,	EP1201528001 - NS0089 88-90,							
EP1201528003 - NS0089 60-62,	EP1201528018 - NS0089 0-2,							
EP1201528043 - NS0084 158-160,	EP1201529008 - NS0090 190-192,							
EP1201529015 - NS0090 8-10,	EP1201529016 - NS0090 0-2,							
EP1201529017 - NS0090 20-22,	EP1201529040 - NS0089 128-130,							
EP1201529045 - NS0089 178-180,	EP1201530008 - NS0106 28-30,							
EP1201530010 - NS0106 48-50,	EP1201530012 - NS0106 8-10,							
EP1201530028 - NS0108 176-178,	EP1201530029 - NS0094 160-162,							
EP1201531001 - NS0090 268-270,	EP1201384022 - NS0107,							
EP1201384025 - NS0107,	EP1201384036 - NS0107,							
EP1201526047 - NS0089,	EP1201527035 - NS0087							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035F: Dissolved Mercury by FIMS								
Clear Plastic Bottle - Nitric Acid; Filtered								
EP1201383046 - NS0086 28-30,	EP1201384003 - NS0085 208-210,	**21-SEP-2012**	---	19-OCT-2012	----	**27-SEP-2012**	19-OCT-2012	✓
EP1201384005 - NS0085 58-60,	EP1201384006 - NS0085 30-32,							
EP1201384015 - NS0085 90-92,	EP1201384028 - NS0107 160-162,							
EP1201384029 - NS0107 170-172,	EP1201384031 - NS0107 128-130,							
EP1201384033 - NS0107 148-150,	EP1201384035 - NS0107 140-142,							
EP1201384039 - NS0107 120-122,	EP1201527006 - NS0084 140-142,							
EP1201527007 - NS0084 190-192,	EP1201527028 - NS0087 8-10,							
EP1201527032 - NS0087 88-90,	EP1201528001 - NS0089 88-90,							
EP1201528003 - NS0089 60-62,	EP1201528018 - NS0089 0-2,							
EP1201528043 - NS0084 158-160,	EP1201529008 - NS0090 190-192,							
EP1201529015 - NS0090 8-10,	EP1201529016 - NS0090 0-2,							
EP1201529017 - NS0090 20-22,	EP1201529040 - NS0089 128-130,							
EP1201529045 - NS0089 178-180,	EP1201530008 - NS0106 28-30,							
EP1201530010 - NS0106 48-50,	EP1201530012 - NS0106 8-10,							
EP1201530028 - NS0108 176-178,	EP1201530029 - NS0094 160-162,							
EP1201531001 - NS0090 268-270,	EP1201384022 - NS0107,							
EP1201384025 - NS0107,	EP1201384036 - NS0107,							
EP1201526047 - NS0089,	EP1201527035 - NS0087							
EN60: Bottle Leaching Procedure								
Lab Split : Leach for Hg, Cr(VI) and other metal								
EP1201383046 - NS0086 28-30,	EP1201384003 - NS0085 208-210,	**24-MAY-2012**	---	21-JUN-2012	----	**27-SEP-2012**	21-JUN-2012	×
EP1201384005 - NS0085 58-60,	EP1201384006 - NS0085 30-32,							
EP1201384015 - NS0085 90-92,	EP1201384028 - NS0107 160-162,							
EP1201384029 - NS0107 170-172,	EP1201384031 - NS0107 128-130,							
EP1201384033 - NS0107 148-150,	EP1201384035 - NS0107 140-142,							
EP1201384039 - NS0107 120-122,	EP1201527006 - NS0084 140-142,							
EP1201527007 - NS0084 190-192,	EP1201527028 - NS0087 8-10,							
EP1201527032 - NS0087 88-90,	EP1201528001 - NS0089 88-90,							
EP1201528003 - NS0089 60-62,	EP1201528018 - NS0089 0-2,							
EP1201528043 - NS0084 158-160,	EP1201529008 - NS0090 190-192,							
EP1201529015 - NS0090 8-10,	EP1201529016 - NS0090 0-2,							
EP1201529017 - NS0090 20-22,	EP1201529040 - NS0089 128-130,							
EP1201529045 - NS0089 178-180,	EP1201530008 - NS0106 28-30,							
EP1201530010 - NS0106 48-50,	EP1201530012 - NS0106 8-10,							
EP1201530028 - NS0108 176-178,	EP1201530029 - NS0094 160-162,							
EP1201531001 - NS0090 268-270,	EP1201384022 - NS0107,							
EP1201384025 - NS0107,	EP1201384036 - NS0107,							
EP1201526047 - NS0089,	EP1201527035 - NS0087							

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	4	40	**10.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	4	38	**10.5**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	2	40	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	38	**5.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	2	40	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	38	**5.3**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	2	40	**5.0**	**5.0**	✓	ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	38	**5.3**	**5.0**	✓	ALS QCS3 requirement

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals by ICP-MS - Suite A	EG020A-F	SOIL	(APHA 21st ed., 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020): Samples are 0.45 um filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	SOIL	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45 um filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)

Preparation Methods	Method	Matrix	Method Descriptions
Deionised Water Leach	EN60-DIa	SOIL	AS4439.3 Preparation of Leachates

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

- **For all matrices, no Method Blank value outliers occur.**
- **For all matrices, no Duplicate outliers occur.**
- **For all matrices, no Laboratory Control outliers occur.**
- **For all matrices, no Matrix Spike outliers occur.**

Regular Sample Surrogates

- **For all regular sample matrices, no surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

Matrix: **SOIL**

Method	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EN60: Bottle Leaching Procedure						
Lab Split : Leach for Hg, Cr(VI) and other metal						
EP1201383046 - NS0086 28-30, EP1201384003 - NS0085 208-210, EP1201384005 - NS0085 58-60, EP1201384006 - NS0085 30-32, EP1201384015 - NS0085 90-92, EP1201384028 - NS0107 160-162, EP1201384029 - NS0107 170-172, EP1201384031 - NS0107 128-130, EP1201384033 - NS0107 148-150, EP1201384035 - NS0107 140-142, EP1201384039 - NS0107 120-122, EP1201527006 - NS0084 140-142, EP1201527007 - NS0084 190-192, EP1201527028 - NS0087 8-10, EP1201527032 - NS0087 88-90, EP1201528001 - NS0089 88-90, EP1201528003 - NS0089 60-62, EP1201528018 - NS0089 0-2, EP1201528043 - NS0084 158-160, EP1201529008 - NS0090 190-192, EP1201529015 - NS0090 8-10, EP1201529016 - NS0090 0-2, EP1201529017 - NS0090 20-22, EP1201529040 - NS0089 128-130, EP1201529045 - NS0089 178-180, EP1201530008 - NS0106 28-30, EP1201530010 - NS0106 48-50, EP1201530012 - NS0106 8-10, EP1201530028 - NS0108 176-178, EP1201530029 - NS0094 160-162, EP1201531001 - NS0090 268-270, EP1201384022 - NS0107, EP1201384025 - NS0107, EP1201384036 - NS0107, EP1201526047 - NS0089, EP1201527035 - NS0087	----	----	----	27-SEP-2012	21-JUN-2012	**98**

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- **No Quality Control Sample Frequency Outliers exist.**

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order	: **EP1207919**		
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Perth
Contact	: MR DAVID MORGAN	Contact	: Lauren Ockwell
Address	: 239 ADELAIDE TERRACE PERTH WA 6004	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: david.morgan@ghd.com	E-mail	: lauren.ockwell@alsenviro.com
Telephone	: +61 08 6222 8222	Telephone	: 08 9209 7606
Facsimile	: +61 08 9429 6555	Facsimile	: 08 9209 7600
Project	: Ex EP1201383 1384 1526 1527 1528 1529 1530 & 1531 612739100	Page	: 1 of 5
Order number	: ----		
C-O-C number	: ----	Quote number	: EP2012GHDSER0556 (EP/406/12 V2)
Site	: ----		
Sampler	: ----	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 21-SEP-2012	Issue Date	: 24-SEP-2012 16:20
Client Requested Due Date	: 28-SEP-2012	Scheduled Reporting Date	: **28-SEP-2012**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: Ambient
No. of coolers/boxes	: NIL	No. of samples received	: 38
Security Seal	: N/A	No. of samples analysed	: 36

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- Samples received in appropriately pretreated and preserved containers.
- Please see scanned COC for sample discrepencies: extra samples , samples not received etc.
- **Samples received in appropriately pretreated and preserved containers.**
- **INSUFFICIENT VOLUME FOR SAMPLE #15, #32**
- **pH analysis should be conducted within 6 hours of sampling.**
- Analytical work for this work order will be conducted at ALS Environmental Perth.
- Please direct any turnaround / technical queries to the laboratory contact designated above.
- Please direct any queries related to sample condition / numbering / breakages to Sample Receipt (SamplesPerth@alsenviro.com)
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of Work Order.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exist.**

EP1207919-001	: 21-SEP-2012 15:00	: EP1201383046 - NS0086 28-30
EP1207919-001	: 24-MAY-2012 15:00	: EP1201383046 - NS0086 28-30
EP1207919-002	: 21-SEP-2012 15:00	: EP1201384003 - NS0085 208-210
EP1207919-002	: 24-MAY-2012 15:00	: EP1201384003 - NS0085 208-210
EP1207919-003	: 21-SEP-2012 15:00	: EP1201384005 - NS0085 58-60
EP1207919-003	: 24-MAY-2012 15:00	: EP1201384005 - NS0085 58-60
EP1207919-004	: 21-SEP-2012 15:00	: EP1201384006 - NS0085 30-32
EP1207919-004	: 24-MAY-2012 15:00	: EP1201384006 - NS0085 30-32
EP1207919-005	: 21-SEP-2012 15:00	: EP1201384015 - NS0085 90-92
EP1207919-005	: 24-MAY-2012 15:00	: EP1201384015 - NS0085 90-92
EP1207919-006	: 21-SEP-2012 15:00	: EP1201384028 - NS0107 160-162
EP1207919-006	: 24-MAY-2012 15:00	: EP1201384028 - NS0107 160-162
EP1207919-007	: 21-SEP-2012 15:00	: EP1201384029 - NS0107 170-172
EP1207919-007	: 24-MAY-2012 15:00	: EP1201384029 - NS0107 170-172
EP1207919-008	: 21-SEP-2012 15:00	: EP1201384031 - NS0107 128-130
EP1207919-008	: 24-MAY-2012 15:00	: EP1201384031 - NS0107 128-130
EP1207919-009	: 21-SEP-2012 15:00	: EP1201384033 - NS0107 148-150
EP1207919-009	: 24-MAY-2012 15:00	: EP1201384033 - NS0107 148-150
EP1207919-010	: 21-SEP-2012 15:00	: EP1201384035 - NS0107 140-142
EP1207919-010	: 24-MAY-2012 15:00	: EP1201384035 - NS0107 140-142
EP1207919-011	: 21-SEP-2012 15:00	: EP1201384039 - NS0107 120-122
EP1207919-011	: 24-MAY-2012 15:00	: EP1201384039 - NS0107 120-122
EP1207919-012	: 21-SEP-2012 15:00	: EP1201527006 - NS0084 140-142
EP1207919-012	: 24-MAY-2012 15:00	: EP1201527006 - NS0084 140-142
EP1207919-013	: 21-SEP-2012 15:00	: EP1201527007 - NS0084 190-192
EP1207919-013	: 24-MAY-2012 15:00	: EP1201527007 - NS0084 190-192
EP1207919-014	: 21-SEP-2012 15:00	: EP1201527028 - NS0087 8-10
EP1207919-014	: 24-MAY-2012 15:00	: EP1201527028 - NS0087 8-10
EP1207919-015	: 24-MAY-2012 15:00	: EP1201527031 - NS0087 84-86
EP1207919-016	: 21-SEP-2012 15:00	: EP1201527032 - NS0087 88-90
EP1207919-016	: 24-MAY-2012 15:00	: EP1201527032 - NS0087 88-90
EP1207919-017	: 21-SEP-2012 15:00	: EP1201528001 - NS0089 88-90
EP1207919-017	: 24-MAY-2012 15:00	: EP1201528001 - NS0089 88-90
EP1207919-018	: 21-SEP-2012 15:00	: EP1201528003 - NS0089 60-62
EP1207919-018	: 24-MAY-2012 15:00	: EP1201528003 - NS0089 60-62
EP1207919-019	: 21-SEP-2012 15:00	: EP1201528018 - NS0089 0-2
EP1207919-019	: 24-MAY-2012 15:00	: EP1201528018 - NS0089 0-2
EP1207919-020	: 21-SEP-2012 15:00	: EP1201528043 - NS0084 158-160
EP1207919-020	: 24-MAY-2012 15:00	: EP1201528043 - NS0084 158-160
EP1207919-021	: 21-SEP-2012 15:00	: EP1201529008 - NS0090 190-192
EP1207919-021	: 24-MAY-2012 15:00	: EP1201529008 - NS0090 190-192
EP1207919-022	: 21-SEP-2012 15:00	: EP1201529015 - NS0090 8-10
EP1207919-022	: 24-MAY-2012 15:00	: EP1201529015 - NS0090 8-10
EP1207919-023	: 21-SEP-2012 15:00	: EP1201529016 - NS0090 0-2
EP1207919-023	: 24-MAY-2012 15:00	: EP1201529016 - NS0090 0-2
EP1207919-024	: 21-SEP-2012 15:00	: EP1201529017 - NS0090 20-22
EP1207919-024	: 24-MAY-2012 15:00	: EP1201529017 - NS0090 20-22
EP1207919-025	: 21-SEP-2012 15:00	: EP1201529040 - NS0089 128-130
EP1207919-025	: 24-MAY-2012 15:00	: EP1201529040 - NS0089 128-130
EP1207919-026	: 21-SEP-2012 15:00	: EP1201529045 - NS0089 178-180
EP1207919-026	: 24-MAY-2012 15:00	: EP1201529045 - NS0089 178-180
EP1207919-027	: 21-SEP-2012 15:00	: EP1201530008 - NS0106 28-30
EP1207919-027	: 24-MAY-2012 15:00	: EP1201530008 - NS0106 28-30
EP1207919-028	: 21-SEP-2012 15:00	: EP1201530010 - NS0106 48-50
EP1207919-028	: 24-MAY-2012 15:00	: EP1201530010 - NS0106 48-50

EP1207919-029	: 21-SEP-2012 15:00	: EP1201530012 - NS0106 8-10
EP1207919-029	: 24-MAY-2012 15:00	: EP1201530012 - NS0106 8-10
EP1207919-030	: 21-SEP-2012 15:00	: EP1201530028 - NS0108 176-178
EP1207919-030	: 24-MAY-2012 15:00	: EP1201530028 - NS0108 176-178
EP1207919-031	: 21-SEP-2012 15:00	: EP1201530029 - NS0094 160-162
EP1207919-031	: 24-MAY-2012 15:00	: EP1201530029 - NS0094 160-162
EP1207919-032	: 21-SEP-2012 15:00	: EP1201530042 - NS0106 170-172
EP1207919-032	: 24-MAY-2012 15:00	: EP1201530042 - NS0106 170-172
EP1207919-033	: 21-SEP-2012 15:00	: EP1201531001 - NS0090 268-270
EP1207919-033	: 24-MAY-2012 15:00	: EP1201531001 - NS0090 268-270
EP1207919-034	: 21-SEP-2012 15:00	: EP1201384022 - NS0107
EP1207919-034	: 24-MAY-2012 15:00	: EP1201384022 - NS0107
EP1207919-035	: 21-SEP-2012 15:00	: EP1201384025 - NS0107
EP1207919-035	: 24-MAY-2012 15:00	: EP1201384025 - NS0107
EP1207919-036	: 21-SEP-2012 15:00	: EP1201384036 - NS0107
EP1207919-036	: 24-MAY-2012 15:00	: EP1201384036 - NS0107
EP1207919-037	: 21-SEP-2012 15:00	: EP1201526047 - NS0089
EP1207919-037	: 24-MAY-2012 15:00	: EP1201526047 - NS0089
EP1207919-038	: 21-SEP-2012 15:00	: EP1201527035 - NS0087
EP1207919-038	: 24-MAY-2012 15:00	: EP1201527035 - NS0087

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process neccessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default to 15:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory for processing purposes and will be shown bracketed without a time component.

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	(On Hold) SOIL No analysis requested	SOIL - EG020F Dissolved Metals by ICPMS	SOIL - EG035F Dissolved Mercury by FIMS	SOIL - EN60-DI Suite Deionised Water Leach
EP1207919-001	21-SEP-2012 15:00	EP1201383046 NS0086...		✓	✓	
	24-MAY-2012 15:00	EP1201383046 NS0086...				✓
EP1207919-002	21-SEP-2012 15:00	EP1201384003 NS0085...		✓	✓	
	24-MAY-2012 15:00	EP1201384003 NS0085...				✓
EP1207919-003	21-SEP-2012 15:00	EP1201384005 NS0085...		✓	✓	
	24-MAY-2012 15:00	EP1201384005 NS0085...				✓
EP1207919-004	21-SEP-2012 15:00	EP1201384006 NS0085...		✓	✓	
	24-MAY-2012 15:00	EP1201384006 NS0085...				✓
EP1207919-005	21-SEP-2012 15:00	EP1201384015 NS0085...		✓	✓	
	24-MAY-2012 15:00	EP1201384015 NS0085...				✓
EP1207919-006	21-SEP-2012 15:00	EP1201384028 NS0107...		✓	✓	
	24-MAY-2012 15:00	EP1201384028 NS0107...				✓
EP1207919-007	21-SEP-2012 15:00	EP1201384029 NS0107...		✓	✓	
	24-MAY-2012 15:00	EP1201384029 NS0107...				✓
EP1207919-008	21-SEP-2012 15:00	EP1201384031 NS0107...		✓	✓	
	24-MAY-2012 15:00	EP1201384031 NS0107...				✓
EP1207919-009	21-SEP-2012 15:00	EP1201384033 NS0107...		✓	✓	
	24-MAY-2012 15:00	EP1201384033 NS0107...				✓
EP1207919-010	21-SEP-2012 15:00	EP1201384035 NS0107...		✓	✓	
	24-MAY-2012 15:00	EP1201384035 NS0107...				✓
EP1207919-011	21-SEP-2012 15:00	EP1201384039 NS0107...		✓	✓	
	24-MAY-2012 15:00	EP1201384039 NS0107...				✓

			(On Hold) SOIL No analysis requested	SOIL - EG020F Dissolved Metals by ICPMS	SOIL - EG035F Dissolved Mercury by FIMS	SOIL - EN60-DI Suite Deionised Water Leach
EP1207919-012	21-SEP-2012 15:00	EP1201527006 NS0084...		✓	✓	
	24-MAY-2012 15:00	EP1201527006 NS0084...				✓
EP1207919-013	21-SEP-2012 15:00	EP1201527007 NS0084...		✓	✓	
	24-MAY-2012 15:00	EP1201527007 NS0084...				✓
EP1207919-014	21-SEP-2012 15:00	EP1201527028 NS0087...		✓	✓	
	24-MAY-2012 15:00	EP1201527028 NS0087...				✓
EP1207919-015	24-MAY-2012 15:00	EP1201527031 NS0087...	✓			
EP1207919-016	21-SEP-2012 15:00	EP1201527032 NS0087...		✓	✓	
	24-MAY-2012 15:00	EP1201527032 NS0087...				✓
EP1207919-017	21-SEP-2012 15:00	EP1201528001 NS0089...		✓	✓	
	24-MAY-2012 15:00	EP1201528001 NS0089...				✓
EP1207919-018	21-SEP-2012 15:00	EP1201528003 NS0089...		✓	✓	
	24-MAY-2012 15:00	EP1201528003 NS0089...				✓
EP1207919-019	21-SEP-2012 15:00	EP1201528018 NS0089...		✓	✓	
	24-MAY-2012 15:00	EP1201528018 NS0089...				✓
EP1207919-020	21-SEP-2012 15:00	EP1201528043 NS0084...		✓	✓	
	24-MAY-2012 15:00	EP1201528043 NS0084...				✓
EP1207919-021	21-SEP-2012 15:00	EP1201529008 NS0090...		✓	✓	
	24-MAY-2012 15:00	EP1201529008 NS0090...				✓
EP1207919-022	21-SEP-2012 15:00	EP1201529015 NS0090...		✓	✓	
	24-MAY-2012 15:00	EP1201529015 NS0090...				✓
EP1207919-023	21-SEP-2012 15:00	EP1201529016 NS0090...		✓	✓	
	24-MAY-2012 15:00	EP1201529016 NS0090...				✓
EP1207919-024	21-SEP-2012 15:00	EP1201529017 NS0090...		✓	✓	
	24-MAY-2012 15:00	EP1201529017 NS0090...				✓
EP1207919-025	21-SEP-2012 15:00	EP1201529040 NS0089...		✓	✓	
	24-MAY-2012 15:00	EP1201529040 NS0089...				✓
EP1207919-026	21-SEP-2012 15:00	EP1201529045 NS0089...		✓	✓	
	24-MAY-2012 15:00	EP1201529045 NS0089...				✓
EP1207919-027	21-SEP-2012 15:00	EP1201530008 NS0106...		✓	✓	
	24-MAY-2012 15:00	EP1201530008 NS0106...				✓
EP1207919-028	21-SEP-2012 15:00	EP1201530010 NS0106...		✓	✓	
	24-MAY-2012 15:00	EP1201530010 NS0106...				✓
EP1207919-029	21-SEP-2012 15:00	EP1201530012 NS0106...		✓	✓	
	24-MAY-2012 15:00	EP1201530012 NS0106...				✓
EP1207919-030	21-SEP-2012 15:00	EP1201530028 NS0108...		✓	✓	
	24-MAY-2012 15:00	EP1201530028 NS0108...				✓
EP1207919-031	21-SEP-2012 15:00	EP1201530029 NS0094...		✓	✓	
	24-MAY-2012 15:00	EP1201530029 NS0094...				✓
EP1207919-032	24-MAY-2012 15:00	EP1201530042 NS0106...	✓			
EP1207919-033	21-SEP-2012 15:00	EP1201531001 NS0090...		✓	✓	

			(On Hold) SOIL No analysis requested	SOIL - EG020F Dissolved Metals by ICPMS	SOIL - EG035F Dissolved Mercury by FIMS	SOIL - EN60-DI Suite Deionised Water Leach
EP1207919-033	24-MAY-2012 15:00	EP1201531001 NS0090...				✓
EP1207919-034	21-SEP-2012 15:00	EP1201384022 NS0107		✓	✓	
	24-MAY-2012 15:00	EP1201384022 NS0107				✓
EP1207919-035	21-SEP-2012 15:00	EP1201384025 NS0107		✓	✓	
	24-MAY-2012 15:00	EP1201384025 NS0107				✓
EP1207919-036	21-SEP-2012 15:00	EP1201384036 NS0107		✓	✓	
	24-MAY-2012 15:00	EP1201384036 NS0107				✓
EP1207919-037	21-SEP-2012 15:00	EP1201526047 NS0089		✓	✓	
	24-MAY-2012 15:00	EP1201526047 NS0089				✓
EP1207919-038	21-SEP-2012 15:00	EP1201527035 NS0087		✓	✓	
	24-MAY-2012 15:00	EP1201527035 NS0087				✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

MR Scott James

- *AU Certificate of Analysis - NATA (COA)	Email	scott.james@alsenviro.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	scott.james@alsenviro.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	scott.james@alsenviro.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	scott.james@alsenviro.com
- A4 - AU Tax Invoice (INV)	Email	scott.james@alsenviro.com
- Chain of Custody (CoC) (COC)	Email	scott.james@alsenviro.com
- EDI Format - ENMRG (ENMRG)	Email	scott.james@alsenviro.com
- EDI Format - ESDAT (ESDAT)	Email	scott.james@alsenviro.com
- EDI Format - XTab (XTAB)	Email	scott.james@alsenviro.com

ANALYTICAL REPORT

WORLD RECOGNISED ACCREDITATION

CLIENT DETAILS

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Project	**GHD_FMG Northstar**
Order Number	(Not specified)
Samples	101

LABORATORY DETAILS

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SGS Reference	PE065685 R0
Report Number	0000036657
Date Reported	15 Mar 2012
Date Received	02 Mar 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

SIGNATORIES

Jeremy Truong
Inorganics Co-ordinator

Michael McKay
Inorganic Team Leader - Waters

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065685.001 Soil NS0165 X123077-X123078	PE065685.002 Soil NS0165 X123087-X123088	PE065685.003 Soil NS0165 X123081-X123082	PE065685.004 Soil NS0165 X123071-X123072	PE065685.005 Soil NS0165 X123056-X123057
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**76**	**160**	**74**	**140**	**190**
pHox (NAG pH)	No unit	-	**9.0**	**8.7**	**9.2**	**8.8**	**8.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065685.006 Soil NS0165 X123061-X123062	PE065685.007 Soil NS0165 X123052-X123053	PE065685.008 Soil NS0165 X123041-X123042	PE065685.009 Soil NS0165 X123045-X123046	PE065685.010 Soil NS0165 X123031-X123032
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**260**	**570**	**200**	**220**	**110**
pHox (NAG pH)	No unit	-	**8.6**	**6.4**	**8.5**	**8.4**	**7.8**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	**0.8**	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	**0.8**	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065685.011 Soil NS0165 X123091-X123092	PE065685.012 Soil NS0165 X123099	PE065685.013 Soil NS0165 X123067-X123068	PE065685.014 Soil NS0159 X139621-X123922	PE065685.015 Soil NS0159 X139671-X139672
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**250**	**220**	**190**	**200**	**130**
pHox (NAG pH)	No unit	-	**7.5**	**8.6**	**8.1**	**8.1**	**8.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065685.016 Soil NS0159 X139665-X139666	PE065685.017 Soil NS0159 X139631-X139632	PE065685.018 Soil NS0159 X139575-X139576	PE065685.019 Soil NS0159 X139649-X139650	PE065685.020 Soil NS0159 X139661-X139662
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**130**	**150**	**190**	**150**	**160**
pHox (NAG pH)	No unit	-	**8.6**	**8.4**	**8.8**	**8.6**	**8.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065685.021 Soil NS0159 X139645-X139646	PE065685.022 Soil NS0159 X139655-X139656	PE065685.023 Soil NS0159 X139685-X139686	PE065685.024 Soil NS0159 X139681-X139682	PE065685.025 Soil NS0159 X139717-X139718
Single Addition Net Acid Generation (NAG)	**Method: AN216**						
ECox (NAG Conductivity)	µS/cm	1	**130**	**160**	**120**	**170**	**78**
pHox (NAG pH)	No unit	-	**8.5**	**7.9**	**8.3**	**8.5**	**8.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065685.026 Soil NS0159 X139721-X139722	PE065685.027 Soil NS0159 X139695-X139696	PE065685.028 Soil NS0159 X139702	PE065685.029 Soil NS0159 X139643	PE065685.030 Soil NS0159 X139691
Single Addition Net Acid Generation (NAG)	**Method: AN216**						
ECox (NAG Conductivity)	µS/cm	1	**120**	**110**	**120**	**280**	**160**
pHox (NAG pH)	No unit	-	**8.3**	**8.6**	**8.6**	**8.2**	**8.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065685.031 Soil NS0159 X139644	PE065685.032 Soil NS0159 X139791-X139732	PE065685.033 Soil NS0159 X139711-X139712	PE065685.034 Soil NS0159 X139625-X139626	PE065685.035 Soil NS0159 X139741-X139742
Single Addition Net Acid Generation (NAG)	**Method: AN216**						
ECox (NAG Conductivity)	µS/cm	1	**260**	**120**	**96**	**180**	**83**
pHox (NAG pH)	No unit	-	**8.3**	**8.9**	**9.5**	**8.1**	**9.2**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065685.036 Soil NS0159 X139639-X139640	PE065685.037 Soil NS0159 X139635-X139636	PE065685.038 Soil NS0159 X139645	PE065685.039 Soil NS0159 X139615-X139616	PE065685.040 Soil NS0159 X139727-X139728
Single Addition Net Acid Generation (NAG)	**Method: AN216**						
ECox (NAG Conductivity)	µS/cm	1	**220**	**170**	**110**	**30**	**110**
pHox (NAG pH)	No unit	-	**8.8**	**8.9**	**8.9**	**7.2**	**9.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.041 Soil NS0159 X139619-X139620	PE065685.042 Soil NS0159 X139737-X139738	PE065685.043 Soil NS0165 X123035-X123036	PE065685.044 Soil NS0157 X079931	PE065685.045 Soil NS0157 X079925-X079926
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**25**	**160**	**110**	**110**	**130**
pHox (NAG pH)	No unit	-		**8.0**	**11.0**	**8.6**	**7.5**	**7.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.046 Soil NS0157 X079921-X079922	PE065685.047 Soil NS0157 X079917-X079916	PE065685.048 Soil NS0157 X079919-X079920	PE065685.049 Soil NS0158 X139506-X139507	PE065685.050 Soil NS0158 X139571-X139572
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**150**	**170**	**110**	**19**	**140**
pHox (NAG pH)	No unit	-		**7.2**	**7.5**	**7.8**	**8.4**	**11.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.051 Soil NS0158 X139520-X139521	PE065685.052 Soil NS0158 X139581-X139582	PE065685.053 Soil NS0158 X139577-X139578	PE065685.054 Soil NS0158 X139561-X139562	PE065685.055 Soil NS0158 X139526-X139527
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**130**	**83**	**140**	**88**	**110**
pHox (NAG pH)	No unit	-		**10.9**	**9.4**	**10.8**	**10.5**	**10.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.056 Soil NS0158 X139510-X139511	PE065685.057 Soil NS0158 X139557-X139558	PE065685.058 Soil NS0158 X139552	PE065685.059 Soil NS0158 X07999-X080000	PE065685.060 Soil NS0158 X139508-X139509
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**91**	**77**	**80**	**15**	**75**
pHox (NAG pH)	No unit	-		**9.9**	**10.4**	**10.4**	**8.7**	**9.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.061 Soil NS0158 X139540-X139541	PE065685.062 Soil NS0158 X139531	PE065685.063 Soil NS0158 X139546-X139547	PE065685.064 Soil NS0158 X139536-X139537	PE065685.065 Soil NS0158 X139514-X139515
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**180**	**100**	**85**	**79**	**210**
pHox (NAG pH)	No unit	-		**10.4**	**10.6**	**10.4**	**10.2**	**8.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.066 Soil NS0125 X082591-X082592	PE065685.067 Soil NS0125 X082607-X082608	PE065685.068 Soil NS0125 X082597-X082598	PE065685.069 Soil NS0125 X082567-X082568	PE065685.070 Soil NS0125 X082887-X082888
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**110**	**75**	**110**	**65**	**60**
pHox (NAG pH)	No unit	-		**9.0**	**9.0**	**8.7**	**9.2**	**9.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.071 Soil NS0125 X082505-X082506	PE065685.072 Soil NS0125 X082531-X082532	PE065685.073 Soil NS0125 X082511-X082512	PE065685.074 Soil NS0126 X082707-X082708	PE065685.075 Soil NS0126 X082702
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**180**	**150**	**80**	**91**	**100**
pHox (NAG pH)	No unit	-		**7.6**	**8.7**	**9.8**	**10.1**	**10.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.076 Soil NS0126 X082721-X082722	PE065685.077 Soil NS0126 X082747-X082748	PE065685.078 Soil NS0126 X082717-X082718	PE065685.079 Soil NS0126 X082737-X082738	PE065685.080 Soil NS0126 X082731-X082732
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**98**	**120**	**68**	**120**	**120**
pHox (NAG pH)	No unit	-		**10.5**	**9.2**	**10.1**	**9.3**	**9.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.081 Soil NS0126 X082681-X082682	PE065685.082 Soil NS0126 X082675-X082676	PE065685.083 Soil NS0126 X082661-X082662	PE065685.084 Soil NS0126 X082695-X082696	PE065685.085 Soil NS0126 X082665-X082666
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**130**	**160**	**150**	**250**	**180**
pHox (NAG pH)	No unit	-		**10.8**	**9.2**	**10.6**	**7.8**	**8.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.086 Soil NS0126 X082639	PE065685.087 Soil NS0126 X082649-X072650	PE065685.088 Soil NS0126 X082672	PE065685.089 Soil NS0152 X066787-X066788	PE065685.090 Soil NS0152 X066793-X066794
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**160**	**150**	**210**	**410**	**110**
pHox (NAG pH)	No unit	-		**8.3**	**8.9**	**8.6**	**11.5**	**9.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.091 Soil NS0152 X066803-X066804	PE065685.092 Soil NS0152 X066807-X066808	PE065685.093 Soil NS0152 X066813-X066814	PE065685.094 Soil NS0152 X066817-X066818	PE065685.095 Soil NS0152 X066823-X066824
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**97**	**97**	**110**	**94**	**130**
pHox (NAG pH)	No unit	-		**10.1**	**9.4**	**10.5**	**10.2**	**10.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.096 Soil NS0152 X066827-X066828	PE065685.097 Soil NS0152 X066833-X066834	PE065685.098 Soil NS0152 X066835-X066836	PE065685.099 Soil NS0152 X066837-X066838	PE065685.100 Soil NS0152 X066843-X066844
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**150**	**140**	**230**	**140**	**110**
pHox (NAG pH)	No unit	-		**8.9**	**9.7**	**11.2**	**10.6**	**10.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number PE065685.101 Sample Matrix Soil Sample Name NS0157 X079911-X079912
Single Addition Net Acid Generation (NAG) Method: AN216			
ECox (NAG Conductivity)	µS/cm	1	**150**
pHox (NAG pH)	No unit	-	**7.8**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Single Addition Net Acid Generation (NAG) **Method: ME-(AU)-[ENV]AN216**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
ECox (NAG Conductivity)	LB037377	µS/cm	1	5.7		
	LB037378	µS/cm	1	14		
	LB037379	µS/cm	1	5.9		
	LB037380	µS/cm	1	5.9		
	LB037381	µS/cm	1	6.1		
pHox (NAG pH)	LB037377	No unit	-	4.7	0 - 2%	101%
	LB037378	No unit	-	4.6	0%	102%
	LB037379	No unit	-	4.6	0%	100%
	LB037380	No unit	-	4.4	1 - 6%	99%
	LB037381	No unit	-	4.6	0 - 4%	100%
NAG as kg H_2SO_4/tonne to pH 4.5	LB037377	kg H2SO4/T	0.5	<0.5	0%	111%
	LB037378	kg H2SO4/T	0.5	<0.5	0%	111%
	LB037379	kg H2SO4/T	0.5	<0.5	0%	104%
	LB037380	kg H2SO4/T	0.5	<0.5	0%	115%
	LB037381	kg H2SO4/T	0.5	<0.5	0%	109%
NAG as kg H_2SO_4/tonne to pH 7	LB037377	kg H2SO4/T	0.5	<0.5	0%	104%
	LB037378	kg H2SO4/T	0.5	<0.5	0%	107%
	LB037379	kg H2SO4/T	0.5	<0.5	0%	101%
	LB037380	kg H2SO4/T	0.5	<0.5	0%	106%
	LB037381	kg H2SO4/T	0.5	<0.5	0%	104%
NAG as kg CaCO3/tonne to pH 4.5	LB037377	kg CaCO3/T	0.5	<0.5	0%	111%
	LB037378	kg CaCO3/T	0.5	<0.5	0%	111%
	LB037379	kg CaCO3/T	0.5	<0.5	0%	104%
	LB037380	kg CaCO3/T	0.5	<0.5	0%	115%
	LB037381	kg CaCO3/T	0.5	<0.5	0%	109%
NAG as kg CaCO3/tonne to pH 7	LB037377	kg CaCO3/T	0.5	<0.5	0%	104%
	LB037378	kg CaCO3/T	0.5	<0.5	0%	107%
	LB037379	kg CaCO3/T	0.5	<0.5	0%	101%
	LB037380	kg CaCO3/T	0.5	<0.5	0%	106%
	LB037381	kg CaCO3/T	0.5	<0.5	0%	104%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN216	Pulverised sub-sample of a waste rock or an as received sample of filter cake, soil or sludge is subjected to an oxidising digest with hydrogen peroxide. The pH and EC of the NAG suspension is recorded at various stages in the digest. The acid produced (if any) is titrated using standardised NaOH to pH 7.0. NAG results are reported to 0.5 kg H2SO4/tonne.

FOOTNOTES

IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
*	This analysis is not covered by the scope of accreditation.
^	Performed by outside laboratory.
LOR	Limit of Reporting
↑↓	Raised or Lowered Limit of Reporting
QFH	QC result is above the upper tolerance
QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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ANALYTICAL REPORT

WORLD RECOGNISED ACCREDITATION

CLIENT DETAILS

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Project	**GHD_FMG_AMD_NORTHSTAR**
Order Number	**Bulk Invoice**
Samples	101

LABORATORY DETAILS

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SGS Reference	PE065685 R1
Report Number	0000037154
Date Reported	23 Mar 2012
Date Received	02 Mar 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

This report cancels and supersedes the report No. PE065685 dated 15/03/2012 issued by SGS Environmental Services due to amendment to job description as requested by client

SIGNATORIES

Jeremy Truong
Inorganics Co-ordinator

Michael McKay
Inorganic Team Leader - Waters

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065685.001 Soil NS0165 X123077-X123078	PE065685.002 Soil NS0165 X123087-X123088	PE065685.003 Soil NS0165 X123081-X123082	PE065685.004 Soil NS0165 X123071-X123072	PE065685.005 Soil NS0165 X123056-X123057
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**76**	**160**	**74**	**140**	**190**
pHox (NAG pH)	No unit	-	**9.0**	**8.7**	**9.2**	**8.8**	**8.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065685.006 Soil NS0165 X123061-X123062	PE065685.007 Soil NS0165 X123052-X123053	PE065685.008 Soil NS0165 X123041-X123042	PE065685.009 Soil NS0165 X123045-X123046	PE065685.010 Soil NS0165 X123031-X123032
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**260**	**570**	**200**	**220**	**110**
pHox (NAG pH)	No unit	-	**8.6**	**6.4**	**8.5**	**8.4**	**7.8**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	**0.8**	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	**0.8**	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065685.011 Soil NS0165 X123091-X123092	PE065685.012 Soil NS0165 X123099	PE065685.013 Soil NS0165 X123067-X123068	PE065685.014 Soil NS0159 X139621-X123922	PE065685.015 Soil NS0159 X139671-X139672
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**250**	**220**	**190**	**200**	**130**
pHox (NAG pH)	No unit	-	**7.5**	**8.6**	**8.1**	**8.1**	**8.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065685.016 Soil NS0159 X139665-X139666	PE065685.017 Soil NS0159 X139631-X139632	PE065685.018 Soil NS0159 X139575-X139576	PE065685.019 Soil NS0159 X139649-X139650	PE065685.020 Soil NS0159 X139661-X139662
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**130**	**150**	**190**	**150**	**160**
pHox (NAG pH)	No unit	-	**8.6**	**8.4**	**8.8**	**8.6**	**8.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065685.021 Soil NS0159 X139645-X139646	PE065685.022 Soil NS0159 X139655-X139656	PE065685.023 Soil NS0159 X139685-X139686	PE065685.024 Soil NS0159 X139681-X139682	PE065685.025 Soil NS0159 X139717-X139718
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**130**	**160**	**120**	**170**	**78**
pHox (NAG pH)	No unit	-	**8.5**	**7.9**	**8.3**	**8.5**	**8.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065685.026 Soil NS0159 X139721-X139722	PE065685.027 Soil NS0159 X139695-X139696	PE065685.028 Soil NS0159 X139702	PE065685.029 Soil NS0159 X139643	PE065685.030 Soil NS0159 X139691
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**120**	**110**	**120**	**280**	**160**
pHox (NAG pH)	No unit	-	**8.3**	**8.6**	**8.6**	**8.2**	**8.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065685.031 Soil NS0159 X139644	PE065685.032 Soil NS0159 X139791-X139732	PE065685.033 Soil NS0159 X139711-X139712	PE065685.034 Soil NS0159 X139625-X139626	PE065685.035 Soil NS0159 X139741-X139742
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**260**	**120**	**96**	**180**	**83**
pHox (NAG pH)	No unit	-	**8.3**	**8.9**	**9.5**	**8.1**	**9.2**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065685.036 Soil NS0159 X139639-X139640	PE065685.037 Soil NS0159 X139635-X139636	PE065685.038 Soil NS0159 X139645	PE065685.039 Soil NS0159 X139615-X139616	PE065685.040 Soil NS0159 X139727-X139728
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**220**	**170**	**110**	**30**	**110**
pHox (NAG pH)	No unit	-	**8.8**	**8.9**	**8.9**	**7.2**	**9.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.041 Soil NS0159 X139619-X139620	PE065685.042 Soil NS0159 X139737-X139738	PE065685.043 Soil NS0165 X123035-X123036	PE065685.044 Soil NS0157 X079931	PE065685.045 Soil NS0157 X079925-X079926
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**25**	**160**	**110**	**110**	**130**
pHox (NAG pH)	No unit	-		**8.0**	**11.0**	**8.6**	**7.5**	**7.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.046 Soil NS0157 X079921-X079922	PE065685.047 Soil NS0157 X079917-X079916	PE065685.048 Soil NS0157 X079919-X079920	PE065685.049 Soil NS0158 X139506-X139507	PE065685.050 Soil NS0158 X139571-X139572
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**150**	**170**	**110**	**19**	**140**
pHox (NAG pH)	No unit	-		**7.2**	**7.5**	**7.8**	**8.4**	**11.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.051 Soil NS0158 X139520-X139521	PE065685.052 Soil NS0158 X139581-X139582	PE065685.053 Soil NS0158 X139577-X139578	PE065685.054 Soil NS0158 X139561-X139562	PE065685.055 Soil NS0158 X139526-X139527
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**130**	**83**	**140**	**88**	**110**
pHox (NAG pH)	No unit	-		**10.9**	**9.4**	**10.8**	**10.5**	**10.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.056 Soil NS0158 X139510-X139511	PE065685.057 Soil NS0158 X139557-X139558	PE065685.058 Soil NS0158 X139552	PE065685.059 Soil NS0158 X07999-X080000	PE065685.060 Soil NS0158 X139508-X139509
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**91**	**77**	**80**	**15**	**75**
pHox (NAG pH)	No unit	-		**9.9**	**10.4**	**10.4**	**8.7**	**9.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.061 Soil NS0158 X139540-X139541	PE065685.062 Soil NS0158 X139531	PE065685.063 Soil NS0158 X139546-X139547	PE065685.064 Soil NS0158 X139536-X139537	PE065685.065 Soil NS0158 X139514-X139515
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**180**	**100**	**85**	**79**	**210**
pHox (NAG pH)	No unit	-		**10.4**	**10.6**	**10.4**	**10.2**	**8.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.066 Soil NS0125 X082591-X082592	PE065685.067 Soil NS0125 X082607-X082608	PE065685.068 Soil NS0125 X082597-X082598	PE065685.069 Soil NS0125 X082567-X082568	PE065685.070 Soil NS0125 X082887-X082888
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**110**	**75**	**110**	**65**	**60**
pHox (NAG pH)	No unit	-		**9.0**	**9.0**	**8.7**	**9.2**	**9.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.071 Soil NS0125 X082505-X082506	PE065685.072 Soil NS0125 X082531-X082532	PE065685.073 Soil NS0125 X082511-X082512	PE065685.074 Soil NS0126 X082707-X082708	PE065685.075 Soil NS0126 X082702
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**180**	**150**	**80**	**91**	**100**
pHox (NAG pH)	No unit	-		**7.6**	**8.7**	**9.8**	**10.1**	**10.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.076 Soil NS0126 X082721-X082722	PE065685.077 Soil NS0126 X082747-X082748	PE065685.078 Soil NS0126 X082717-X082718	PE065685.079 Soil NS0126 X082737-X082738	PE065685.080 Soil NS0126 X082731-X082732
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**98**	**120**	**68**	**120**	**120**
pHox (NAG pH)	No unit	-		**10.5**	**9.2**	**10.1**	**9.3**	**9.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.081 Soil NS0126 X082681-X082682	PE065685.082 Soil NS0126 X082675-X082676	PE065685.083 Soil NS0126 X082661-X082662	PE065685.084 Soil NS0126 X082695-X082696	PE065685.085 Soil NS0126 X082665-X082666
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**130**	**160**	**150**	**250**	**180**
pHox (NAG pH)	No unit	-		**10.8**	**9.2**	**10.6**	**7.8**	**8.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.086 Soil NS0126 X082639	PE065685.087 Soil NS0126 X082649-X072650	PE065685.088 Soil NS0126 X082672	PE065685.089 Soil NS0152 X066787-X066788	PE065685.090 Soil NS0152 X066793-X066794
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**160**	**150**	**210**	**410**	**110**
pHox (NAG pH)	No unit	-		**8.3**	**8.9**	**8.6**	**11.5**	**9.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.091 Soil NS0152 X066803-X066804	PE065685.092 Soil NS0152 X066807-X066808	PE065685.093 Soil NS0152 X066813-X066814	PE065685.094 Soil NS0152 X066817-X066818	PE065685.095 Soil NS0152 X066823-X066824
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**97**	**97**	**110**	**94**	**130**
pHox (NAG pH)	No unit	-		**10.1**	**9.4**	**10.5**	**10.2**	**10.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065685.096 Soil NS0152 X066827-X066828	PE065685.097 Soil NS0152 X066833-X066834	PE065685.098 Soil NS0152 X066835-X066836	PE065685.099 Soil NS0152 X066837-X066838	PE065685.100 Soil NS0152 X066843-X066844
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**150**	**140**	**230**	**140**	**110**
pHox (NAG pH)	No unit	-		**8.9**	**9.7**	**11.2**	**10.6**	**10.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number PE065685.101 Sample Matrix Soil Sample Name NS0157 X079911-X079912
Single Addition Net Acid Generation (NAG) Method: AN216			
ECox (NAG Conductivity)	µS/cm	1	**150**
pHox (NAG pH)	No unit	-	**7.8**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Single Addition Net Acid Generation (NAG) **Method: ME-(AU)-[ENV]AN216**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
ECox (NAG Conductivity)	LB037377	µS/cm	1	5.7		
	LB037378	µS/cm	1	14		
	LB037379	µS/cm	1	5.9		
	LB037380	µS/cm	1	5.9		
	LB037381	µS/cm	1	6.1		
pHox (NAG pH)	LB037377	No unit	-	4.7	0 - 2%	101%
	LB037378	No unit	-	4.6	0%	102%
	LB037379	No unit	-	4.6	0%	100%
	LB037380	No unit	-	4.4	1 - 6%	99%
	LB037381	No unit	-	4.6	0 - 4%	100%
NAG as kg H_2SO_4/tonne to pH 4.5	LB037377	kg H2SO4/T	0.5	<0.5	0%	111%
	LB037378	kg H2SO4/T	0.5	<0.5	0%	111%
	LB037379	kg H2SO4/T	0.5	<0.5	0%	104%
	LB037380	kg H2SO4/T	0.5	<0.5	0%	115%
	LB037381	kg H2SO4/T	0.5	<0.5	0%	109%
NAG as kg H_2SO_4/tonne to pH 7	LB037377	kg H2SO4/T	0.5	<0.5	0%	104%
	LB037378	kg H2SO4/T	0.5	<0.5	0%	107%
	LB037379	kg H2SO4/T	0.5	<0.5	0%	101%
	LB037380	kg H2SO4/T	0.5	<0.5	0%	106%
	LB037381	kg H2SO4/T	0.5	<0.5	0%	104%
NAG as kg CaCO3/tonne to pH 4.5	LB037377	kg CaCO3/T	0.5	<0.5	0%	111%
	LB037378	kg CaCO3/T	0.5	<0.5	0%	111%
	LB037379	kg CaCO3/T	0.5	<0.5	0%	104%
	LB037380	kg CaCO3/T	0.5	<0.5	0%	115%
	LB037381	kg CaCO3/T	0.5	<0.5	0%	109%
NAG as kg CaCO3/tonne to pH 7	LB037377	kg CaCO3/T	0.5	<0.5	0%	104%
	LB037378	kg CaCO3/T	0.5	<0.5	0%	107%
	LB037379	kg CaCO3/T	0.5	<0.5	0%	101%
	LB037380	kg CaCO3/T	0.5	<0.5	0%	106%
	LB037381	kg CaCO3/T	0.5	<0.5	0%	104%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN216	Pulverised sub-sample of a waste rock or an as received sample of filter cake, soil or sludge is subjected to an oxidising digest with hydrogen peroxide. The pH and EC of the NAG suspension is recorded at various stages in the digest. The acid produced (if any) is titrated using standardised NaOH to pH 7.0. NAG results are reported to 0.5 kg H2SO4/tonne.

FOOTNOTES

IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
*	This analysis is not covered by the scope of accreditation.
^	Performed by outside laboratory.
LOR	Limit of Reporting
↑↓	Raised or Lowered Limit of Reporting
QFH	QC result is above the upper tolerance
QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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ANALYTICAL REPORT

WORLD RECOGNISED ACCREDITATION

CLIENT DETAILS

Contact	Chris Fowers
Client	Fortescue Metal Group Ltd
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Telephone	08 917 66 191
Facsimile	(Not specified)
Email	cfowers@fmgl.com.au
Project	**GHD_FMG_AMD_NORTHSTAR**
Order Number	**612739100**
Samples	1

LABORATORY DETAILS

Manager	Said Hirad
Laboratory	SGS Newburn Environmental
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SGS Reference	PE065685A R0
Report Number	0000038870
Date Reported	27 Apr 2012
Date Received	17 Apr 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

Spkie recovery failed due to high background of the target analyte

SIGNATORIES

Michael McKay
Inorganic Team Leader - Waters

Said Hirad
Laboratory Manager

Parameter	Units	LOR	Sample Number PE065685A.007 Sample Matrix Soil Sample Name NS0165 X123052-X123053
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**4500**
Sulphur, S	mg/kg	10	**8300**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Total Recoverable Metals in Soil by ICPOES **Method: ME-(AU)-[ENV]AN/320AN321**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery	MSD %RPD
Calcium, Ca	LB039782	mg/kg	10	<10	1%	91%	179%	8%
Sulphur, S	LB039782	mg/kg	10	<10	2%	120%	779%	117%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN045	A portion of sample is digested with Nitric acid and Hydrogen Peroxide over time and then with Hydrochloric acid through several heating and cooling cycles. It provides a strong oxidising medium for bringing metal analytes into solution according to USEPA3050, after filtration the solution is presented for analysis on AAS or ICP.
AN320/AN321	Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.
AN320/AN321	Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements. Reference APHA 3120 B.

FOOTNOTES

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^	Performed by outside laboratory.
LOR	Limit of Reporting
↑↓	Raised or Lowered Limit of Reporting
QFH	QC result is above the upper tolerance
QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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SGS Reference	PE065685A R0
Report Number	0000038870
Date Reported	27 Apr 2012
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COMMENTS

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Spkie recovery failed due to high background of the target analyte

SIGNATORIES

Michael McKay
Inorganic Team Leader - Waters

Said Hirad
Laboratory Manager

Parameter	Units	LOR	Sample Number PE065685A.007 Sample Matrix Soil Sample Name NS0165 X123052-X123053
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**4500**
Sulphur, S	mg/kg	10	**8300**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Total Recoverable Metals in Soil by ICPOES **Method: ME-(AU)-[ENV]AN/320AN321**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery	MSD %RPD
Calcium, Ca	LB039782	mg/kg	10	<10	1%	91%	179%	8%
Sulphur, S	LB039782	mg/kg	10	<10	2%	120%	779%	117%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN045	A portion of sample is digested with Nitric acid and Hydrogen Peroxide over time and then with Hydrochloric acid through several heating and cooling cycles. It provides a strong oxidising medium for bringing metal analytes into solution according to USEPA3050, after filtration the solution is presented for analysis on AAS or ICP.
AN320/AN321	Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.
AN320/AN321	Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements. Reference APHA 3120 B.

FOOTNOTES

IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
*	This analysis is not covered by the scope of accreditation.
^	Performed by outside laboratory.
LOR	Limit of Reporting
↑↓	Raised or Lowered Limit of Reporting
QFH	QC result is above the upper tolerance
QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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ANALYTICAL REPORT

WORLD RECOGNISED ACCREDITATION

CLIENT DETAILS

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Project	**GHD_FMG_AMD_NYDIRC**
Order Number	**Bulk Invoice**
Samples	100

LABORATORY DETAILS

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SGS Reference	PE065686 R0
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COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

SIGNATORIES

Michael McKay
Inorganic Team Leader - Waters

Ros Ma
Laboratory Assistant Manager

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.001 Soil NS0152 X066847-X066848	PE065686.002 Soil NS0152 X066853	PE065686.003 Soil NS0152 X066752-X066753	PE065686.004 Soil NS0152 X066758-X066759	PE065686.005 Soil NS0152 X066763-X066764
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**180**	**260**	**340**	**200**	**110**
pHox (NAG pH)	No unit	-		**8.9**	**8.4**	**6.0**	**8.3**	**9.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	**0.6**	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	**0.6**	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.006 Soil NS0152 X066767-X066768	PE065686.007 Soil NS0152 X066773-X066774	PE065686.008 Soil NS0152 X066777-X066778	PE065686.009 Soil NS0152 X066783-X066784	PE065686.010 Soil NS0152 X066797-X066798
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**86**	**100**	**100**	**110**	**96**
pHox (NAG pH)	No unit	-		**9.4**	**9.3**	**9.3**	**9.1**	**9.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.011 Soil NS0089 X077431-X077432	PE065686.012 Soil NS0089 X077415-X077416	PE065686.013 Soil NS0089 X077411-X077412	PE065686.014 Soil NS0089 X077421-X077422	PE065686.015 Soil NS0151 X066667-X066668
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**210**	**210**	**210**	**160**	**210**
pHox (NAG pH)	No unit	-		**8.2**	**7.8**	**8.5**	**7.6**	**8.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.016 Soil NS0151 X066673-X066674	PE065686.017 Soil NS0151 X066677-X066678	PE065686.018 Soil NS0151 X066683-X066684	PE065686.019 Soil NS0153 X066914-X066915	PE065686.020 Soil NS0153 X066939-X066940
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**130**	**160**	**180**	**140**	**180**
pHox (NAG pH)	No unit	-		**7.5**	**7.2**	**7.5**	**7.8**	**8.3**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.021 Soil NS0153 X066904-X066905	PE065686.022 Soil NS0153 X066910-X066911	PE065686.023 Soil NS0153 X066920-X066921	PE065686.024 Soil NS0153 X066924-X066925	PE065686.025 Soil NS0153 X066935-X066936
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		200	130	180	190	140
pHox (NAG pH)	No unit	-		7.5	7.9	7.7	7.9	8.6
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.026 Soil NS0153 X066945-X066946	PE065686.027 Soil NS0153 X066949-X066950	PE065686.028 Soil NS0153 X066955-X066956	PE065686.029 Soil NS0153 X066969-X066970	PE065686.030 Soil NS0153 X066675-X066976
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		230	260	4100	210	240
pHox (NAG pH)	No unit	-		7.7	7.8	2.0	7.7	8.3
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	86	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	99	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	88	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	100	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.031 Soil NS0153 X066979-X066980	PE065686.032 Soil NS0153 X066965-X066966	PE065686.034 Soil NS0154 X079595-X079596	PE065686.035 Soil NS0154 X079503-X079504
Single Addition Net Acid Generation (NAG)	**Method: AN216**						
ECox (NAG Conductivity)	µS/cm	1		220	430	360	110
pHox (NAG pH)	No unit	-		8.1	6.0	8.5	9.1
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	1.9	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	2.0	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.036 Soil NS0154 X079555-X079556	PE065686.037 Soil NS0154 X066999-X067000	PE065686.038 Soil NS0154 X079527-X079528	PE065686.039 Soil NS0154 X079509-X079510	PE065686.040 Soil NS0154 X066993-X066994
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		220	150	290	86	40
pHox (NAG pH)	No unit	-		8.9	8.7	7.9	9.6	9.1
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.041 Soil NS0154 X079539-X079540	PE065686.042 Soil NS0154 X079533-X079534	PE065686.043 Soil NS0154 X079565-X076566	PE065686.044 Soil NS0154 X079529	PE065686.045 Soil NS0154 X079543-X079544
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**210**	**95**	**160**	**250**	**300**
pHox (NAG pH)	No unit	-		**8.9**	**9.7**	**9.1**	**8.4**	**8.2**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.046 Soil NS0154 X079549-X079550	PE065686.047 Soil NS0154 X079523-X079524	PE065686.048 Soil NS0154 X079513-X079514	PE065686.049 Soil NS0154 X079569-X079570	PE065686.050 Soil NS0154 X079611-X079612
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**200**	**190**	**95**	**310**	**140**
pHox (NAG pH)	No unit	-		**8.9**	**8.9**	**9.5**	**8.3**	**10.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.051 Soil NS0154 X079615-X079616	PE065686.052 Soil NS0154 X079621-X079622	PE065686.053 Soil NS0154 X079601-X079602	PE065686.054 Soil NS0154 X079585-X079586	PE065686.055 Soil NS0154 X079605-X079606
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**150**	**160**	**290**	**430**	**280**
pHox (NAG pH)	No unit	-		**9.1**	**9.7**	**8.5**	**7.7**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.056 Soil NS0154 X079575-X079576	PE065686.057 Soil NS0154 X079579-X079580	PE065686.058 Soil NS0160 X139874-X139875	PE065686.059 Soil NS0160 X139878-X139879	PE065686.060 Soil NS0160 X139894-X139895
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**240**	**250**	**290**	**230**	**230**
pHox (NAG pH)	No unit	-		**8.9**	**8.9**	**8.6**	**8.6**	**8.8**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.061 Soil NS0160 X139884-X139885	PE065686.062 Soil NS0160 X139838-X139839	PE065686.063 Soil NS0160 X139888-X139889	PE065686.064 Soil NS0160 X139854-X139855	PE065686.065 Soil NS0160 X139782-X139783
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1	**250**	**190**	**120**	**220**	**280**
pHox (NAG pH)	No unit	-	**8.9**	**8.5**	**8.9**	**8.6**	**763.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.066 Soil NS0160 X139858-X139859	PE065686.067 Soil NS0160 X139842-X139853	PE065686.068 Soil NS0160 X139776-X139777	PE065686.069 Soil NS0160 X139848-X139849	PE065686.070 Soil NS0160 X139786-X139787
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1	**260**	**130**	**290**	**170**	**270**
pHox (NAG pH)	No unit	-	**8.1**	**8.8**	**8.0**	**8.7**	**7.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.071 Soil NS0160 X139796-X139797	PE065686.072 Soil NS0160 X139812-X139813	PE065686.073 Soil NS0160 X139792-X139793	PE065686.074 Soil NS0160 X139808-X139809	PE065686.075 Soil NS0160 X139802-X139803
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1	**260**	**150**	**290**	**200**	**140**
pHox (NAG pH)	No unit	-	**8.2**	**8.7**	**8.2**	**8.4**	**9.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.076 Soil NS0160 X139822-X139823	PE065686.077 Soil NS0160 X139864-X139865	PE065686.078 Soil NS0160 X139828-X139829	PE065686.079 Soil NS0160 X139832-X139833	PE065686.080 Soil NS0160 X139868-X139869
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1	**220**	**270**	**160**	**160**	**240**
pHox (NAG pH)	No unit	-	**8.6**	**8.4**	**8.7**	**8.7**	**8.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.081 Soil NS0160 X139818-X139819	PE065686.082 Soil NS0122 X082114-X082115	PE065686.083 Soil NS0122 X082118-X082119	PE065686.084 Soil NS0122 X082124-X082125	PE065686.085 Soil NS0122 X082128-X082129
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**150**	**140**	**130**	**120**	**120**
pHox (NAG pH)	No unit	-	**9.4**	**9.2**	**9.3**	**9.4**	**9.3**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.086 Soil NS0122 X082165-X082166	PE065686.087 Soil NS0122 X082154-X082155	PE065686.088 Soil NS0122 X082133-X082134	PE065686.089 Soil NS0122 X082139-X082140	PE065686.090 Soil NS0122 X082149-X082150
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**120**	**160**	**160**	**130**	**130**
pHox (NAG pH)	No unit	-	**10.0**	**9.0**	**9.2**	**9.3**	**9.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.091 Soil NS0122 X082143-X082144	PE065686.092 Soil NS0122 X082170	PE065686.093 Soil NS0122 X082169	PE065686.094 Soil NS0122 X082185-X082186	PE065686.095 Soil NS0122 X082179-X082180
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**210**	**150**	**79**	**120**	**120**
pHox (NAG pH)	No unit	-	**8.3**	**8.6**	**9.4**	**9.0**	**10.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.096 Soil NS0122 X082189	PE065686.097 Soil NS0122 X082175-X082176	PE065686.098 Soil NS0122 X082104-X082105	PE065686.099 Soil NS0122 X082093-X082094	PE065686.100 Soil NS0122 X082077-X082078
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**120**	**110**	**84**	**78**	**94**
pHox (NAG pH)	No unit	-	**9.2**	**9.3**	**9.6**	**9.5**	**9.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number PE065686.101 Sample Matrix Soil Sample Name NS0154 X079519-X079520
Single Addition Net Acid Generation (NAG) Method: AN216			
ECox (NAG Conductivity)	µS/cm	1	**100**
pHox (NAG pH)	No unit	-	**8.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Single Addition Net Acid Generation (NAG) **Method: ME-(AU)-[ENV]AN216**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
ECox (NAG Conductivity)	LB037459	µS/cm	1	36		
	LB037460	µS/cm	1	4.4		
	LB037485	µS/cm	1	34		
	LB037486	µS/cm	1	34		
	LB037533	µS/cm	1	35		
pHox (NAG pH)	LB037459	No unit	-	6.2	3 - 4%	103%
	LB037460	No unit	-	4.8	1 - 2%	99%
	LB037485	No unit	-	6.3	0 - 2%	102%
	LB037486	No unit	-	6.3	0%	102%
	LB037533	No unit	-	6.4	0%	103%
NAG as kg H_2SO_4/tonne to pH 4.5	LB037459	kg H2SO4/T	0.5	<0.5	0%	102%
	LB037460	kg H2SO4/T	0.5	<0.5	0%	112%
	LB037485	kg H2SO4/T	0.5	<0.5	0%	101%
	LB037486	kg H2SO4/T	0.5	<0.5	0%	100%
	LB037533	kg H2SO4/T	0.5	<0.5	0%	102%
NAG as kg H_2SO_4/tonne to pH 7	LB037459	kg H2SO4/T	0.5	<0.5	0%	94%
	LB037460	kg H2SO4/T	0.5	<0.5	0%	106%
	LB037485	kg H2SO4/T	0.5	<0.5	0%	98%
	LB037486	kg H2SO4/T	0.5	<0.5	0%	93%
	LB037533	kg H2SO4/T	0.5	<0.5	0%	95%
NAG as kg CaCO3/tonne to pH 4.5	LB037459	kg CaCO3/T	0.5	<0.5	0%	102%
	LB037460	kg CaCO3/T	0.5	<0.5	0%	112%
	LB037485	kg CaCO3/T	0.5	<0.5	0%	101%
	LB037486	kg CaCO3/T	0.5	<0.5	0%	100%
	LB037533	kg CaCO3/T	0.5	<0.5	0%	102%
NAG as kg CaCO3/tonne to pH 7	LB037459	kg CaCO3/T	0.5	<0.5	0%	94%
	LB037460	kg CaCO3/T	0.5	<0.5	0%	106%
	LB037485	kg CaCO3/T	0.5	<0.5	0%	98%
	LB037486	kg CaCO3/T	0.5	<0.5	0%	93%
	LB037533	kg CaCO3/T	0.5	<0.5	0%	95%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN216	Pulverised sub-sample of a waste rock or an as received sample of filter cake, soil or sludge is subjected to an oxidising digest with hydrogen peroxide. The pH and EC of the NAG suspension is recorded at various stages in the digest. The acid produced (if any) is titrated using standardised NaOH to pH 7.0. NAG results are reported to 0.5 kg H2SO4/tonne.

FOOTNOTES

IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
*	This analysis is not covered by the scope of accreditation.
^	Performed by outside laboratory.
LOR	Limit of Reporting
↑↓	Raised or Lowered Limit of Reporting
QFH	QC result is above the upper tolerance
QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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ANALYTICAL REPORT

WORLD RECOGNISED ACCREDITATION

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Project	**GHD_FMG_AMD_NYDIRC**
Order Number	**Bulk Invoice**
Samples	100

LABORATORY DETAILS

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COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

SIGNATORIES

Michael McKay
Inorganic Team Leader - Waters

Ros Ma
Laboratory Assistant Manager

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.001 Soil NS0152 X066847-X066848	PE065686.002 Soil NS0152 X066853	PE065686.003 Soil NS0152 X066752-X066753	PE065686.004 Soil NS0152 X066758-X066759	PE065686.005 Soil NS0152 X066763-X066764
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**180**	**260**	**340**	**200**	**110**
pHox (NAG pH)	No unit	-		**8.9**	**8.4**	**6.0**	**8.3**	**9.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	**0.6**	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	**0.6**	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.006 Soil NS0152 X066767-X066768	PE065686.007 Soil NS0152 X066773-X066774	PE065686.008 Soil NS0152 X066777-X066778	PE065686.009 Soil NS0152 X066783-X066784	PE065686.010 Soil NS0152 X066797-X066798
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**86**	**100**	**100**	**110**	**96**
pHox (NAG pH)	No unit	-		**9.4**	**9.3**	**9.3**	**9.1**	**9.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.011 Soil NS0089 X077431-X077432	PE065686.012 Soil NS0089 X077415-X077416	PE065686.013 Soil NS0089 X077411-X077412	PE065686.014 Soil NS0089 X077421-X077422	PE065686.015 Soil NS0151 X066667-X066668
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**210**	**210**	**210**	**160**	**210**
pHox (NAG pH)	No unit	-		**8.2**	**7.8**	**8.5**	**7.6**	**8.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.016 Soil NS0151 X066673-X066674	PE065686.017 Soil NS0151 X066677-X066678	PE065686.018 Soil NS0151 X066683-X066684	PE065686.019 Soil NS0153 X066914-X066915	PE065686.020 Soil NS0153 X066939-X066940
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**130**	**160**	**180**	**140**	**180**
pHox (NAG pH)	No unit	-		**7.5**	**7.2**	**7.5**	**7.8**	**8.3**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.021 Soil NS0153 X066904-X066905	PE065686.022 Soil NS0153 X066910-X066911	PE065686.023 Soil NS0153 X066920-X066921	PE065686.024 Soil NS0153 X066924-X066925	PE065686.025 Soil NS0153 X066935-X066936
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		200	130	180	190	140
pHox (NAG pH)	No unit	-		7.5	7.9	7.7	7.9	8.6
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.026 Soil NS0153 X066945-X066946	PE065686.027 Soil NS0153 X066949-X066950	PE065686.028 Soil NS0153 X066955-X066956	PE065686.029 Soil NS0153 X066969-X066970	PE065686.030 Soil NS0153 X066675-X066976
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		230	260	4100	210	240
pHox (NAG pH)	No unit	-		7.7	7.8	2.0	7.7	8.3
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	86	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	99	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	88	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	100	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.031 Soil NS0153 X066979-X066980	PE065686.032 Soil NS0153 X066965-X066966	PE065686.034 Soil NS0154 X079595-X079596	PE065686.035 Soil NS0154 X079503-X079504
Single Addition Net Acid Generation (NAG)	**Method: AN216**						
ECox (NAG Conductivity)	µS/cm	1		220	430	360	110
pHox (NAG pH)	No unit	-		8.1	6.0	8.5	9.1
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	1.9	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	2.0	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.036 Soil NS0154 X079555-X079556	PE065686.037 Soil NS0154 X066999-X067000	PE065686.038 Soil NS0154 X079527-X079528	PE065686.039 Soil NS0154 X079509-X079510	PE065686.040 Soil NS0154 X066993-X066994
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		220	150	290	86	40
pHox (NAG pH)	No unit	-		8.9	8.7	7.9	9.6	9.1
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.041 Soil NS0154 X079539-X079540	PE065686.042 Soil NS0154 X079533-X079534	PE065686.043 Soil NS0154 X079565-X076566	PE065686.044 Soil NS0154 X079529	PE065686.045 Soil NS0154 X079543-X079544
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**210**	**95**	**160**	**250**	**300**
pHox (NAG pH)	No unit	-		**8.9**	**9.7**	**9.1**	**8.4**	**8.2**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.046 Soil NS0154 X079549-X079550	PE065686.047 Soil NS0154 X079523-X079524	PE065686.048 Soil NS0154 X079513-X079514	PE065686.049 Soil NS0154 X079569-X079570	PE065686.050 Soil NS0154 X079611-X079612
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**200**	**190**	**95**	**310**	**140**
pHox (NAG pH)	No unit	-		**8.9**	**8.9**	**9.5**	**8.3**	**10.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.051 Soil NS0154 X079615-X079616	PE065686.052 Soil NS0154 X079621-X079622	PE065686.053 Soil NS0154 X079601-X079602	PE065686.054 Soil NS0154 X079585-X079586	PE065686.055 Soil NS0154 X079605-X079606
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**150**	**160**	**290**	**430**	**280**
pHox (NAG pH)	No unit	-		**9.1**	**9.7**	**8.5**	**7.7**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.056 Soil NS0154 X079575-X079576	PE065686.057 Soil NS0154 X079579-X079580	PE065686.058 Soil NS0160 X139874-X139875	PE065686.059 Soil NS0160 X139878-X139879	PE065686.060 Soil NS0160 X139894-X139895
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**240**	**250**	**290**	**230**	**230**
pHox (NAG pH)	No unit	-		**8.9**	**8.9**	**8.6**	**8.6**	**8.8**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.061 Soil NS0160 X139884-X139885	PE065686.062 Soil NS0160 X139838-X139839	PE065686.063 Soil NS0160 X139888-X139889	PE065686.064 Soil NS0160 X139854-X139855	PE065686.065 Soil NS0160 X139782-X139783
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1	**250**	**190**	**120**	**220**	**280**
pHox (NAG pH)	No unit	-	**8.9**	**8.5**	**8.9**	**8.6**	**763.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.066 Soil NS0160 X139858-X139859	PE065686.067 Soil NS0160 X139842-X139853	PE065686.068 Soil NS0160 X139776-X139777	PE065686.069 Soil NS0160 X139848-X139849	PE065686.070 Soil NS0160 X139786-X139787
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1	**260**	**130**	**290**	**170**	**270**
pHox (NAG pH)	No unit	-	**8.1**	**8.8**	**8.0**	**8.7**	**7.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.071 Soil NS0160 X139796-X139797	PE065686.072 Soil NS0160 X139812-X139813	PE065686.073 Soil NS0160 X139792-X139793	PE065686.074 Soil NS0160 X139808-X139809	PE065686.075 Soil NS0160 X139802-X139803
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1	**260**	**150**	**290**	**200**	**140**
pHox (NAG pH)	No unit	-	**8.2**	**8.7**	**8.2**	**8.4**	**9.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.076 Soil NS0160 X139822-X139823	PE065686.077 Soil NS0160 X139864-X139865	PE065686.078 Soil NS0160 X139828-X139829	PE065686.079 Soil NS0160 X139832-X139833	PE065686.080 Soil NS0160 X139868-X139869
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1	**220**	**270**	**160**	**160**	**240**
pHox (NAG pH)	No unit	-	**8.6**	**8.4**	**8.7**	**8.7**	**8.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.081 Soil NS0160 X139818-X139819	PE065686.082 Soil NS0122 X082114-X082115	PE065686.083 Soil NS0122 X082118-X082119	PE065686.084 Soil NS0122 X082124-X082125	PE065686.085 Soil NS0122 X082128-X082129
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**150**	**140**	**130**	**120**	**120**
pHox (NAG pH)	No unit	-	**9.4**	**9.2**	**9.3**	**9.4**	**9.3**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.086 Soil NS0122 X082165-X082166	PE065686.087 Soil NS0122 X082154-X082155	PE065686.088 Soil NS0122 X082133-X082134	PE065686.089 Soil NS0122 X082139-X082140	PE065686.090 Soil NS0122 X082149-X082150
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**120**	**160**	**160**	**130**	**130**
pHox (NAG pH)	No unit	-	**10.0**	**9.0**	**9.2**	**9.3**	**9.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.091 Soil NS0122 X082143-X082144	PE065686.092 Soil NS0122 X082170	PE065686.093 Soil NS0122 X082169	PE065686.094 Soil NS0122 X082185-X082186	PE065686.095 Soil NS0122 X082179-X082180
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**210**	**150**	**79**	**120**	**120**
pHox (NAG pH)	No unit	-	**8.3**	**8.6**	**9.4**	**9.0**	**10.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.096 Soil NS0122 X082189	PE065686.097 Soil NS0122 X082175-X082176	PE065686.098 Soil NS0122 X082104-X082105	PE065686.099 Soil NS0122 X082093-X082094	PE065686.100 Soil NS0122 X082077-X082078
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**120**	**110**	**84**	**78**	**94**
pHox (NAG pH)	No unit	-	**9.2**	**9.3**	**9.6**	**9.5**	**9.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number PE065686.101 Sample Matrix Soil Sample Name NS0154 X079519-X079520
Single Addition Net Acid Generation (NAG) Method: AN216			
ECox (NAG Conductivity)	µS/cm	1	**100**
pHox (NAG pH)	No unit	-	**8.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Single Addition Net Acid Generation (NAG) **Method: ME-(AU)-[ENV]AN216**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
ECox (NAG Conductivity)	LB037459	µS/cm	1	36		
	LB037460	µS/cm	1	4.4		
	LB037485	µS/cm	1	34		
	LB037486	µS/cm	1	34		
	LB037533	µS/cm	1	35		
pHox (NAG pH)	LB037459	No unit	-	6.2	3 - 4%	103%
	LB037460	No unit	-	4.8	1 - 2%	99%
	LB037485	No unit	-	6.3	0 - 2%	102%
	LB037486	No unit	-	6.3	0%	102%
	LB037533	No unit	-	6.4	0%	103%
NAG as kg H_2SO_4/tonne to pH 4.5	LB037459	kg H2SO4/T	0.5	<0.5	0%	102%
	LB037460	kg H2SO4/T	0.5	<0.5	0%	112%
	LB037485	kg H2SO4/T	0.5	<0.5	0%	101%
	LB037486	kg H2SO4/T	0.5	<0.5	0%	100%
	LB037533	kg H2SO4/T	0.5	<0.5	0%	102%
NAG as kg H_2SO_4/tonne to pH 7	LB037459	kg H2SO4/T	0.5	<0.5	0%	94%
	LB037460	kg H2SO4/T	0.5	<0.5	0%	106%
	LB037485	kg H2SO4/T	0.5	<0.5	0%	98%
	LB037486	kg H2SO4/T	0.5	<0.5	0%	93%
	LB037533	kg H2SO4/T	0.5	<0.5	0%	95%
NAG as kg CaCO3/tonne to pH 4.5	LB037459	kg CaCO3/T	0.5	<0.5	0%	102%
	LB037460	kg CaCO3/T	0.5	<0.5	0%	112%
	LB037485	kg CaCO3/T	0.5	<0.5	0%	101%
	LB037486	kg CaCO3/T	0.5	<0.5	0%	100%
	LB037533	kg CaCO3/T	0.5	<0.5	0%	102%
NAG as kg CaCO3/tonne to pH 7	LB037459	kg CaCO3/T	0.5	<0.5	0%	94%
	LB037460	kg CaCO3/T	0.5	<0.5	0%	106%
	LB037485	kg CaCO3/T	0.5	<0.5	0%	98%
	LB037486	kg CaCO3/T	0.5	<0.5	0%	93%
	LB037533	kg CaCO3/T	0.5	<0.5	0%	95%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN216	Pulverised sub-sample of a waste rock or an as received sample of filter cake, soil or sludge is subjected to an oxidising digest with hydrogen peroxide. The pH and EC of the NAG suspension is recorded at various stages in the digest. The acid produced (if any) is titrated using standardised NaOH to pH 7.0. NAG results are reported to 0.5 kg H2SO4/tonne.

FOOTNOTES

IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
*	This analysis is not covered by the scope of accreditation.
^	Performed by outside laboratory.
LOR	Limit of Reporting
↑↓	Raised or Lowered Limit of Reporting
QFH	QC result is above the upper tolerance
QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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ANALYTICAL REPORT

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Project	**GHD_FMG_AMD_NORTHSTAR**	SGS Reference	PE065686 R1
Order Number	**Bulk Invoice**	Report Number	0000037157
Samples	100	Date Reported	23 Mar 2012
		Date Received	02 Mar 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

This report cancels and supersedes the report No. PE065686 R0 dated 16/03/2012 issued by SGS Environmental Services due to amendment to job description as requested by client

SIGNATORIES

Michael McKay
Inorganic Team Leader - Waters

Ros Ma
Laboratory Assistant Manager

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.001 Soil NS0152 X066847-X066848	PE065686.002 Soil NS0152 X066853	PE065686.003 Soil NS0152 X066752-X066753	PE065686.004 Soil NS0152 X066758-X066759	PE065686.005 Soil NS0152 X066763-X066764
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		180	260	340	200	110
pHox (NAG pH)	No unit	-		8.9	8.4	6.0	8.3	9.6
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	0.6	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	0.6	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.006 Soil NS0152 X066767-X066768	PE065686.007 Soil NS0152 X066773-X066774	PE065686.008 Soil NS0152 X066777-X066778	PE065686.009 Soil NS0152 X066783-X066784	PE065686.010 Soil NS0152 X066797-X066798
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		86	100	100	110	96
pHox (NAG pH)	No unit	-		9.4	9.3	9.3	9.1	9.5
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.011 Soil NS0089 X077431-X077432	PE065686.012 Soil NS0089 X077415-X077416	PE065686.013 Soil NS0089 X077411-X077412	PE065686.014 Soil NS0089 X077421-X077422	PE065686.015 Soil NS0151 X066667-X066668
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		210	210	210	160	210
pHox (NAG pH)	No unit	-		8.2	7.8	8.5	7.6	8.1
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.016 Soil NS0151 X066673-X066674	PE065686.017 Soil NS0151 X066677-X066678	PE065686.018 Soil NS0151 X066683-X066684	PE065686.019 Soil NS0153 X066914-X066915	PE065686.020 Soil NS0153 X066939-X066940
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		130	160	180	140	180
pHox (NAG pH)	No unit	-		7.5	7.2	7.5	7.8	8.3
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.021 Soil NS0153 X066904-X066905	PE065686.022 Soil NS0153 X066910-X066911	PE065686.023 Soil NS0153 X066920-X066921	PE065686.024 Soil NS0153 X066924-X066925	PE065686.025 Soil NS0153 X066935-X066936
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**200**	**130**	**180**	**190**	**140**
pHox (NAG pH)	No unit	-	**7.5**	**7.9**	**7.7**	**7.9**	**8.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.026 Soil NS0153 X066945-X066946	PE065686.027 Soil NS0153 X066949-X066950	PE065686.028 Soil NS0153 X066955-X066956	PE065686.029 Soil NS0153 X066969-X066970	PE065686.030 Soil NS0153 X066675-X066976
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**230**	**260**	**4100**	**210**	**240**
pHox (NAG pH)	No unit	-	**7.7**	**7.8**	**2.0**	**7.7**	**8.3**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	**86**	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	**99**	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	**88**	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	**100**	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.031 Soil NS0153 X066979-X066980	PE065686.032 Soil NS0153 X066965-X066966	PE065686.034 Soil NS0154 X079595-X079596	PE065686.035 Soil NS0154 X079503-X079504
Single Addition Net Acid Generation (NAG) Method: AN216						
ECox (NAG Conductivity)	µS/cm	1	**220**	**430**	**360**	**110**
pHox (NAG pH)	No unit	-	**8.1**	**6.0**	**8.5**	**9.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	**1.9**	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	**2.0**	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.036 Soil NS0154 X079555-X079556	PE065686.037 Soil NS0154 X066999-X067000	PE065686.038 Soil NS0154 X079527-X079528	PE065686.039 Soil NS0154 X079509-X079510	PE065686.040 Soil NS0154 X066993-X066994
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**220**	**150**	**290**	**86**	**40**
pHox (NAG pH)	No unit	-	**8.9**	**8.7**	**7.9**	**9.6**	**9.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.041 Soil NS0154 X079539-X079540	PE065686.042 Soil NS0154 X079533-X079534	PE065686.043 Soil NS0154 X079565-X076566	PE065686.044 Soil NS0154 X079529	PE065686.045 Soil NS0154 X079543-X079544
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**210**	**95**	**160**	**250**	**300**
pHox (NAG pH)	No unit	-		**8.9**	**9.7**	**9.1**	**8.4**	**8.2**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.046 Soil NS0154 X079549-X079550	PE065686.047 Soil NS0154 X079523-X079524	PE065686.048 Soil NS0154 X079513-X079514	PE065686.049 Soil NS0154 X079569-X079570	PE065686.050 Soil NS0154 X079611-X079612
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**200**	**190**	**95**	**310**	**140**
pHox (NAG pH)	No unit	-		**8.9**	**8.9**	**9.5**	**8.3**	**10.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.051 Soil NS0154 X079615-X079616	PE065686.052 Soil NS0154 X079621-X079622	PE065686.053 Soil NS0154 X079601-X079602	PE065686.054 Soil NS0154 X079585-X079586	PE065686.055 Soil NS0154 X079605-X079606
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**150**	**160**	**290**	**430**	**280**
pHox (NAG pH)	No unit	-		**9.1**	**9.7**	**8.5**	**7.7**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065686.056 Soil NS0154 X079575-X079576	PE065686.057 Soil NS0154 X079579-X079580	PE065686.058 Soil NS0160 X139874-X139875	PE065686.059 Soil NS0160 X139878-X139879	PE065686.060 Soil NS0160 X139894-X139895
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**240**	**250**	**290**	**230**	**230**
pHox (NAG pH)	No unit	-		**8.9**	**8.9**	**8.6**	**8.6**	**8.8**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.061 Soil NS0160 X139884-X139885	PE065686.062 Soil NS0160 X139838-X139839	PE065686.063 Soil NS0160 X139888-X139889	PE065686.064 Soil NS0160 X139854-X139855	PE065686.065 Soil NS0160 X139782-X139783
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1	**250**	**190**	**120**	**220**	**280**
pHox (NAG pH)	No unit	-	**8.9**	**8.5**	**8.9**	**8.6**	**763.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.066 Soil NS0160 X139858-X139859	PE065686.067 Soil NS0160 X139842-X139853	PE065686.068 Soil NS0160 X139776-X139777	PE065686.069 Soil NS0160 X139848-X139849	PE065686.070 Soil NS0160 X139786-X139787
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1	**260**	**130**	**290**	**170**	**270**
pHox (NAG pH)	No unit	-	**8.1**	**8.8**	**8.0**	**8.7**	**7.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.071 Soil NS0160 X139796-X139797	PE065686.072 Soil NS0160 X139812-X139813	PE065686.073 Soil NS0160 X139792-X139793	PE065686.074 Soil NS0160 X139808-X139809	PE065686.075 Soil NS0160 X139802-X139803
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1	**260**	**150**	**290**	**200**	**140**
pHox (NAG pH)	No unit	-	**8.2**	**8.7**	**8.2**	**8.4**	**9.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.076 Soil NS0160 X139822-X139823	PE065686.077 Soil NS0160 X139864-X139865	PE065686.078 Soil NS0160 X139828-X139829	PE065686.079 Soil NS0160 X139832-X139833	PE065686.080 Soil NS0160 X139868-X139869
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1	**220**	**270**	**160**	**160**	**240**
pHox (NAG pH)	No unit	-	**8.6**	**8.4**	**8.7**	**8.7**	**8.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.081 Soil NS0160 X139818-X139819	PE065686.082 Soil NS0122 X082114-X082115	PE065686.083 Soil NS0122 X082118-X082119	PE065686.084 Soil NS0122 X082124-X082125	PE065686.085 Soil NS0122 X082128-X082129
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**150**	**140**	**130**	**120**	**120**
pHox (NAG pH)	No unit	-	**9.4**	**9.2**	**9.3**	**9.4**	**9.3**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.086 Soil NS0122 X082165-X082166	PE065686.087 Soil NS0122 X082154-X082155	PE065686.088 Soil NS0122 X082133-X082134	PE065686.089 Soil NS0122 X082139-X082140	PE065686.090 Soil NS0122 X082149-X082150
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**120**	**160**	**160**	**130**	**130**
pHox (NAG pH)	No unit	-	**10.0**	**9.0**	**9.2**	**9.3**	**9.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.091 Soil NS0122 X082143-X082144	PE065686.092 Soil NS0122 X082170	PE065686.093 Soil NS0122 X082169	PE065686.094 Soil NS0122 X082185-X082186	PE065686.095 Soil NS0122 X082179-X082180
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**210**	**150**	**79**	**120**	**120**
pHox (NAG pH)	No unit	-	**8.3**	**8.6**	**9.4**	**9.0**	**10.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065686.096 Soil NS0122 X082189	PE065686.097 Soil NS0122 X082175-X082176	PE065686.098 Soil NS0122 X082104-X082105	PE065686.099 Soil NS0122 X082093-X082094	PE065686.100 Soil NS0122 X082077-X082078
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**120**	**110**	**84**	**78**	**94**
pHox (NAG pH)	No unit	-	**9.2**	**9.3**	**9.6**	**9.5**	**9.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number PE065686.101 Sample Matrix Soil Sample Name NS0154 X079519-X079520
Single Addition Net Acid Generation (NAG) Method: AN216			
ECox (NAG Conductivity)	µS/cm	1	**100**
pHox (NAG pH)	No unit	-	**8.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Single Addition Net Acid Generation (NAG) **Method: ME-(AU)-[ENV]AN216**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
ECox (NAG Conductivity)	LB037459	µS/cm	1	36		
	LB037460	µS/cm	1	4.4		
	LB037485	µS/cm	1	34		
	LB037486	µS/cm	1	34		
	LB037533	µS/cm	1	35		
pHox (NAG pH)	LB037459	No unit	-	6.2	3 - 4%	103%
	LB037460	No unit	-	4.8	1 - 2%	99%
	LB037485	No unit	-	6.3	0 - 2%	102%
	LB037486	No unit	-	6.3	0%	102%
	LB037533	No unit	-	6.4	0%	103%
NAG as kg H_2SO_4/tonne to pH 4.5	LB037459	kg H2SO4/T	0.5	<0.5	0%	102%
	LB037460	kg H2SO4/T	0.5	<0.5	0%	112%
	LB037485	kg H2SO4/T	0.5	<0.5	0%	101%
	LB037486	kg H2SO4/T	0.5	<0.5	0%	100%
	LB037533	kg H2SO4/T	0.5	<0.5	0%	102%
NAG as kg H_2SO_4/tonne to pH 7	LB037459	kg H2SO4/T	0.5	<0.5	0%	94%
	LB037460	kg H2SO4/T	0.5	<0.5	0%	106%
	LB037485	kg H2SO4/T	0.5	<0.5	0%	98%
	LB037486	kg H2SO4/T	0.5	<0.5	0%	93%
	LB037533	kg H2SO4/T	0.5	<0.5	0%	95%
NAG as kg CaCO3/tonne to pH 4.5	LB037459	kg CaCO3/T	0.5	<0.5	0%	102%
	LB037460	kg CaCO3/T	0.5	<0.5	0%	112%
	LB037485	kg CaCO3/T	0.5	<0.5	0%	101%
	LB037486	kg CaCO3/T	0.5	<0.5	0%	100%
	LB037533	kg CaCO3/T	0.5	<0.5	0%	102%
NAG as kg CaCO3/tonne to pH 7	LB037459	kg CaCO3/T	0.5	<0.5	0%	94%
	LB037460	kg CaCO3/T	0.5	<0.5	0%	106%
	LB037485	kg CaCO3/T	0.5	<0.5	0%	98%
	LB037486	kg CaCO3/T	0.5	<0.5	0%	93%
	LB037533	kg CaCO3/T	0.5	<0.5	0%	95%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN216	Pulverised sub-sample of a waste rock or an as received sample of filter cake, soil or sludge is subjected to an oxidising digest with hydrogen peroxide. The pH and EC of the NAG suspension is recorded at various stages in the digest. The acid produced (if any) is titrated using standardised NaOH to pH 7.0. NAG results are reported to 0.5 kg H2SO4/tonne.

FOOTNOTES

IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
*	This analysis is not covered by the scope of accreditation.
^	Performed by outside laboratory.
LOR	Limit of Reporting
↑↓	Raised or Lowered Limit of Reporting
QFH	QC result is above the upper tolerance
QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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ANALYTICAL REPORT

WORLD RECOGNISED ACCREDITATION

CLIENT DETAILS

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Telephone	08 917 66 191
Facsimile	(Not specified)
Email	cfowers@fmgl.com.au
Project	**GHD_FMG_AMD_NORTHSTAR**
Order Number	**612739100**
Samples	3

LABORATORY DETAILS

Manager	Said Hirad
Laboratory	SGS Newburn Environmental
Address	10 Reid Rd Newburn WA 6105
Telephone	(08) 9373 3500
Facsimile	(08) 9373 3556
Email	au.environmental.perth@sgs.com
SGS Reference	PE065686A R0
Report Number	0000038890
Date Reported	27 Apr 2012
Date Received	17 Apr 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

SIGNATORIES

Michael McKay
Inorganic Team Leader - Waters

Said Hirad
Laboratory Manager

Parameter	Units	LOR	Sample Number PE065686A.003 Sample Matrix Soil Sample Name NS0152 X066752-X066753
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**4300**
Sulphur, S	mg/kg	10	**5500**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065686A.028 Sample Matrix Soil Sample Name NS0153 X066955-X066956
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**420**
Sulphur, S	mg/kg	10	**34000**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065686A.032 Sample Matrix Soil Sample Name NS0153 X066965
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**9600**
Sulphur, S	mg/kg	10	**6300**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Total Recoverable Metals in Soil by ICPOES **Method: ME-(AU)-[ENV]AN/320AN321**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery	MSD %RPD
Calcium, Ca	LB039933	mg/kg	10	<10	0%	95%	195%	4%
Sulphur, S	LB039933	mg/kg	10	<10	1%	89%	11562%	6%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN045	A portion of sample is digested with Nitric acid and Hydrogen Peroxide over time and then with Hydrochloric acid through several heating and cooling cycles. It provides a strong oxidising medium for bringing metal analytes into solution according to USEPA3050, after filtration the solution is presented for analysis on AAS or ICP.
AN320/AN321	Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.
AN320/AN321	Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements. Reference APHA 3120 B.

FOOTNOTES

IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
*	This analysis is not covered by the scope of accreditation.
^	Performed by outside laboratory.
LOR	Limit of Reporting
↑↓	Raised or Lowered Limit of Reporting
QFH	QC result is above the upper tolerance
QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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ANALYTICAL REPORT

WORLD RECOGNISED ACCREDITATION

CLIENT DETAILS

Contact	Chris Fowers
Client	Fortescue Metal Group Ltd
Address	Level 2 . 87 Adelaide Terrace East Perth WA 6004
Telephone	08 917 66 191
Facsimile	(Not specified)
Email	cfowers@fmgl.com.au
Project	**GHD_FMG_AMD_NORTHSTAR**
Order Number	**612739100**
Samples	3

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Email	au.environmental.perth@sgs.com
SGS Reference	PE065686A R0
Report Number	0000038890
Date Reported	27 Apr 2012
Date Received	17 Apr 2012

COMMENTS

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SIGNATORIES

Michael McKay
Inorganic Team Leader - Waters

Said Hirad
Laboratory Manager

Parameter	Units	LOR	Sample Number PE065686A.003 Sample Matrix Soil Sample Name NS0152 X066752-X066753
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Calcium, Ca	mg/kg	10	**4300**
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Moisture Content Method: AN002			
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Parameter	Units	LOR	Sample Number PE065686A.028 Sample Matrix Soil Sample Name NS0153 X066955-X066956
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**420**
Sulphur, S	mg/kg	10	**34000**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065686A.032 Sample Matrix Soil Sample Name NS0153 X066965
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**9600**
Sulphur, S	mg/kg	10	**6300**
Moisture Content Method: AN002			
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Total Recoverable Metals in Soil by ICPOES **Method: ME-(AU)-[ENV]AN/320AN321**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery	MSD %RPD
Calcium, Ca	LB039933	mg/kg	10	<10	0%	95%	195%	4%
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↑↓	Raised or Lowered Limit of Reporting
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QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

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The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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ANALYTICAL REPORT

NATA WORLD RECOGNISED ACCREDITATION

CLIENT DETAILS

Contact	Chris Fowers
Client	Fortescue Metal Group Ltd
Address	Level 2 . 87 Adelaide Terrace East Perth WA 6004
Telephone	08 917 66 191
Facsimile	(Not specified)
Email	cfowers@fmgl.com.au
Project	**GHD_FMG_AMD_NYDIRC**
Order Number	**Bulk Invoice**
Samples	103

LABORATORY DETAILS

Manager	Said Hirad
Laboratory	SGS Newburn Environmental
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Email	au.environmental.perth@sgs.com
SGS Reference	PE065687 R0
Report Number	0000036830
Date Reported	19 Mar 2012
Date Received	02 Mar 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

SIGNATORIES

Jeremy Truong
Inorganics Co-ordinator

Michael McKay
Inorganic Team Leader - Waters

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.001 Soil NS0122 X082087-X082088	PE065687.002 Soil NS0122 X082084	PE065687.003 Soil NS0122 X082083	PE065687.004 Soil NS0122 X082108	PE065687.005 Soil NS0122 X082098
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**110**	**200**	**200**	**180**	**160**
pHox (NAG pH)	No unit	-		**9.5**	**8.9**	**8.8**	**9.2**	**8.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.006 Soil NS0122 X082109	PE065687.007 Soil NS0122 X082097	PE065687.008 Soil NS0124 X082363-X082364	PE065687.009 Soil NS0124 X082370	PE065687.010 Soil NS0124 X082373-X082374
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**140**	**170**	**120**	**160**	**130**
pHox (NAG pH)	No unit	-		**9.4**	**9.1**	**9.1**	**10.1**	**9.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.011 Soil NS0124 X082379-X082380	PE065687.012 Soil NS0124 X082385-X082386	PE065687.013 Soil NS0124 X082393-X082394	PE065687.014 Soil NS0124 X082399-X082400	PE065687.015 Soil NS0124 X082466-X082467
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**160**	**110**	**93**	**350**	**200**
pHox (NAG pH)	No unit	-		**9.0**	**10.3**	**10.0**	**5.4**	**10.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	**0.8**	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	**0.8**	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.016 Soil NS0124 X082389	PE065687.017 Soil NS0124 X082405-X082406	PE065687.018 Soil NS0124 X082409-X082410	PE065687.019 Soil NS0124 X082417-X082418	PE065687.020 Soil NS0124 X082415-X082416
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**98**	**200**	**240**	**120**	**210**
pHox (NAG pH)	No unit	-		**10.3**	**8.5**	**8.4**	**8.9**	**10.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.021 Soil NS0124 X082419-X082420	PE065687.022 Soil NS0124 X082425-X082426	PE065687.023 Soil NS0124 X082435-X082436	PE065687.024 Soil NS0124 X082470-X082471	PE065687.025 Soil NS0124 X082480-X082481
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**110**	**120**	**180**	**170**	**270**
pHox (NAG pH)	No unit	-		**9.4**	**9.2**	**8.7**	**10.8**	**8.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.026 Soil NS0124 X082439-X082440	PE065687.027 Soil NS0124 X082449-X082450	PE065687.028 Soil NS0124 X082456-X082457	PE065687.030 Soil NS0124 X082461
Single Addition Net Acid Generation (NAG)	**Method: AN216**						
ECox (NAG Conductivity)	µS/cm	1		**270**	**140**	**180**	**72**
pHox (NAG pH)	No unit	-		**8.3**	**8.8**	**9.0**	**9.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.031 Soil NS0124 X082359	PE065687.032 Soil NS0124 X082477	PE065687.033 Soil NS0124 X082484	PE065687.034 Soil NS0124 X082445	PE065687.035 Soil NS0155 X079677-X079678
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**20**	**200**	**220**	**200**	**260**
pHox (NAG pH)	No unit	-		**8.2**	**9.4**	**8.5**	**8.1**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.036 Soil NS0155 X079681-X079682	PE065687.037 Soil NS0155 X079687-X079688	PE065687.038 Soil NS0155 X079691-X079692	PE065687.039 Soil NS0155 X079697-X079698	PE065687.040 Soil NS0155 X079703-X079704
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**430**	**110**	**190**	**130**	**150**
pHox (NAG pH)	No unit	-		**6.6**	**9.3**	**8.4**	**9.1**	**9.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		**0.6**	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		**0.6**	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.041 Soil NS0155 X079707-X079708	PE065687.042 Soil NS0155 X079713-X079714	PE065687.043 Soil NS0155 X079763-X079764	PE065687.044 Soil NS0155 X079717-X079718	PE065687.045 Soil NS0155 X079723-X079724
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**140**	**160**	**100**	**140**	**90**
pHox (NAG pH)	No unit	-		**9.5**	**8.9**	**9.9**	**9.2**	**9.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.046 Soil NS0155 X079727-X079728	PE065687.047 Soil NS0155 X079733-X079734	PE065687.048 Soil NS0155 X079737-X079738	PE065687.049 Soil NS0155 X079743-X079744	PE065687.050 Soil NS0155 X079747-X079748
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**88**	**110**	**130**	**110**	**95**
pHox (NAG pH)	No unit	-		**9.9**	**9.0**	**9.3**	**9.4**	**10.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.051 Soil NS0155 X079753-X079754	PE065687.052 Soil NS0155 X079757-X079758	PE065687.053 Soil NS0155 X079767-X079768	PE065687.054 Soil NS0098 X078620-X078621	PE065687.055 Soil NS0098 X078610-X078611
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**200**	**190**	**110**	**12**	**13**
pHox (NAG pH)	No unit	-		**8.7**	**8.7**	**9.0**	**8.0**	**7.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.056 Soil NS0098 X078616-X078617	PE065687.057 Soil NS0098 X078631-X078632	PE065687.058 Soil NS0098 X078606-X078607	PE065687.059 Soil NS0098 X078626-X078627	PE065687.060 Soil NS0098 X078635-X078636
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**12**	**220**	**15**	**13**	**300**
pHox (NAG pH)	No unit	-		**6.3**	**6.4**	**6.7**	**7.9**	**6.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		**1.4**	<0.5	**0.6**	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		**1.4**	<0.5	**0.6**	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.061 Soil NS0098 X078645-X078646	PE065687.062 Soil NS0098 X078657-X078658	PE065687.063 Soil NS0098 X078651-X078652	PE065687.064 Soil NS0098 X078667-X078668	PE065687.065 Soil NS0098 X078697-X078698
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**140**	**160**	**180**	**210**	**210**
pHox (NAG pH)	No unit	-		**7.9**	**9.1**	**8.1**	**9.0**	**8.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.066 Soil NS0098 X078641-X078642	PE065687.067 Soil NS0098 X078661-X078662	PE065687.068 Soil NS0098 X078691-X078692	PE065687.069 Soil NS0098 X078671-X078672	PE065687.070 Soil NS0098 X078703-X078704
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**30**	**110**	**190**	**180**	**240**
pHox (NAG pH)	No unit	-		**8.0**	**9.1**	**8.5**	**8.4**	**8.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.071 Soil NS0098 X078707-X078708	PE065687.072 Soil NS0098 X078713-X078714	PE065687.073 Soil NS0098 X078677-X078678	PE065687.074 Soil NS0098 X078687-X078688	PE065687.075 Soil NS0096 X078399-X078400
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**170**	**280**	**130**	**140**	**100**
pHox (NAG pH)	No unit	-		**9.0**	**8.0**	**8.9**	**8.9**	**9.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.076 Soil NS0096 X078405-X078406	PE065687.077 Soil NS0096 X078419-X078420	PE065687.078 Soil NS0096 X078415-X078416	PE065687.079 Soil NS0096 X078409-X078410	PE065687.080 Soil NS0096 X078125-X078126
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**180**	**110**	**150**	**80**	**110**
pHox (NAG pH)	No unit	-		**9.1**	**9.0**	**8.8**	**9.3**	**9.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.081 Soil NS0096 X078435-X078436	PE065687.082 Soil NS0096 X078439-X078440	PE065687.083 Soil NS0096 X078447-X078448	PE065687.084 Soil NS0096 X078437-X078438	PE065687.085 Soil NS0096 X078349-X078350
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**550**	**110**	**59**	**110**	**110**
pHox (NAG pH)	No unit	-		**4.2**	**9.2**	**9.3**	**8.9**	**8.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		**0.8**	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		**5.4**	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		**0.8**	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		**5.6**	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.086 Soil NS0096 X078379-X078380	PE065687.087 Soil NS0096 X078383-X078384	PE065687.088 Soil NS0096 X078328-X078329	PE065687.089 Soil NS0096 X078333-X078334	PE065687.090 Soil NS0096 X078337-X078338
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**90**	**64**	**13**	**13**	**12**
pHox (NAG pH)	No unit	-		**9.2**	**9.4**	**7.9**	**7.9**	**8.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.091 Soil NS0096 X078343-X078344	PE065687.092 Soil NS0096 X078347-X078348	PE065687.093 Soil NS0096 X078353-X078354	PE065687.094 Soil NS0096 X078357-X078358	PE065687.095 Soil NS0096 X078363-X078364
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**87**	**120**	**75**	**62**	**64**
pHox (NAG pH)	No unit	-		**8.9**	**9.1**	**9.3**	**9.4**	**9.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.096 Soil NS0096 X078369-X078370	PE065687.097 Soil NS0096 X078373-X078374	PE065687.098 Soil NS0096 X078451-X078452	PE065687.099 Soil NS0096 X078455-X078456	PE065687.100 Soil NS0096 X078393
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**76**	**69**	**72**	**64**	**110**
pHox (NAG pH)	No unit	-		**9.3**	**9.2**	**9.4**	**9.4**	**9.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065687.101 Soil NS0096 X078389	PE065687.102 Soil NS0096 X078461	PE065687.103 Soil NS0096 X078445	PE065687.104 Soil NS0124 X082383
Single Addition Net Acid Generation (NAG) Method: AN216						
ECox (NAG Conductivity)	µS/cm	1	**67**	**70**	**64**	**97**
pHox (NAG pH)	No unit	-	**9.4**	**9.3**	**9.3**	**9.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Single Addition Net Acid Generation (NAG) **Method: ME-(AU)-[ENV]AN216**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
ECox (NAG Conductivity)	LB037592	µS/cm	1	4.5		
	LB037593	µS/cm	1	5.0		
	LB037594	µS/cm	1	3.7		
	LB037609	µS/cm	1	3.8		
	LB037615	µS/cm	1	3.1 - 4.0		
pHox (NAG pH)	LB037592	No unit	-	4.6	0%	100%
	LB037593	No unit	-	4.6	0 - 2%	99%
	LB037594	No unit	-	4.9	0%	100%
	LB037609	No unit	-	4.5	0 - 1%	99%
	LB037615	No unit	-	4.8 - 5.0	0 - 3%	100 - 102%
NAG as kg H_2SO_4/tonne to pH 4.5	LB037592	kg H2SO4/T	0.5	<0.5	0%	112%
	LB037593	kg H2SO4/T	0.5	<0.5	0%	105%
	LB037594	kg H2SO4/T	0.5	<0.5	0%	109%
	LB037609	kg H2SO4/T	0.5	<0.5	0%	111%
	LB037615	kg H2SO4/T	0.5	<0.5	0%	109 - 112%
NAG as kg H_2SO_4/tonne to pH 7	LB037592	kg H2SO4/T	0.5	<0.5	0%	106%
	LB037593	kg H2SO4/T	0.5	<0.5	0%	104%
	LB037594	kg H2SO4/T	0.5	<0.5	0%	102%
	LB037609	kg H2SO4/T	0.5	<0.5	0%	103%
	LB037615	kg H2SO4/T	0.5	<0.5	0%	100 - 103%
NAG as kg CaCO3/tonne to pH 4.5	LB037592	kg CaCO3/T	0.5	<0.5	0%	112%
	LB037593	kg CaCO3/T	0.5	<0.5	0%	105%
	LB037594	kg CaCO3/T	0.5	<0.5	0%	109%
	LB037609	kg CaCO3/T	0.5	<0.5	0%	111%
	LB037615	kg CaCO3/T	0.5	<0.5	0%	109 - 112%
NAG as kg CaCO3/tonne to pH 7	LB037592	kg CaCO3/T	0.5	<0.5	0%	106%
	LB037593	kg CaCO3/T	0.5	<0.5	0%	104%
	LB037594	kg CaCO3/T	0.5	<0.5	0%	102%
	LB037609	kg CaCO3/T	0.5	<0.5	0%	103%
	LB037615	kg CaCO3/T	0.5	<0.5	0%	100 - 103%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN216	Pulverised sub-sample of a waste rock or an as received sample of filter cake, soil or sludge is subjected to an oxidising digest with hydrogen peroxide. The pH and EC of the NAG suspension is recorded at various stages in the digest. The acid produced (if any) is titrated using standardised NaOH to pH 7.0. NAG results are reported to 0.5 kg H2SO4/tonne.

FOOTNOTES

IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
*	This analysis is not covered by the scope of accreditation.
^	Performed by outside laboratory.
LOR	Limit of Reporting
↑↓	Raised or Lowered Limit of Reporting
QFH	QC result is above the upper tolerance
QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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ANALYTICAL REPORT

WORLD RECOGNISED ACCREDITATION

CLIENT DETAILS

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Project	**GHD_FMG_AMD_NORTHSTAR**
Order Number	**Bulk Invoice**
Samples	103

LABORATORY DETAILS

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SGS Reference	PE065687 R1
Report Number	0000037162
Date Reported	23 Mar 2012
Date Received	02 Mar 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

This report cancels and supersedes the report No. PE065687 R0 dated 19/03/2012 issued by SGS Environmental Services due to amendment to job description as requested by client

SIGNATORIES

Jeremy Truong
Inorganics Co-ordinator

Michael McKay
Inorganic Team Leader - Waters

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.001 Soil NS0122 X082087-X082088	PE065687.002 Soil NS0122 X082084	PE065687.003 Soil NS0122 X082083	PE065687.004 Soil NS0122 X082108	PE065687.005 Soil NS0122 X082098
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**110**	**200**	**200**	**180**	**160**
pHox (NAG pH)	No unit	-		**9.5**	**8.9**	**8.8**	**9.2**	**8.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.006 Soil NS0122 X082109	PE065687.007 Soil NS0122 X082097	PE065687.008 Soil NS0124 X082363-X082364	PE065687.009 Soil NS0124 X082370	PE065687.010 Soil NS0124 X082373-X082374
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**140**	**170**	**120**	**160**	**130**
pHox (NAG pH)	No unit	-		**9.4**	**9.1**	**9.1**	**10.1**	**9.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.011 Soil NS0124 X082379-X082380	PE065687.012 Soil NS0124 X082385-X082386	PE065687.013 Soil NS0124 X082393-X082394	PE065687.014 Soil NS0124 X082399-X082400	PE065687.015 Soil NS0124 X082466-X082467
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**160**	**110**	**93**	**350**	**200**
pHox (NAG pH)	No unit	-		**9.0**	**10.3**	**10.0**	**5.4**	**10.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	**0.8**	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	**0.8**	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.016 Soil NS0124 X082389	PE065687.017 Soil NS0124 X082405-X082406	PE065687.018 Soil NS0124 X082409-X082410	PE065687.019 Soil NS0124 X082417-X082418	PE065687.020 Soil NS0124 X082415-X082416
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**98**	**200**	**240**	**120**	**210**
pHox (NAG pH)	No unit	-		**10.3**	**8.5**	**8.4**	**8.9**	**10.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.021 Soil NS0124 X082419-X082420	PE065687.022 Soil NS0124 X082425-X082426	PE065687.023 Soil NS0124 X082435-X082436	PE065687.024 Soil NS0124 X082470-X082471	PE065687.025 Soil NS0124 X082480-X082481
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**110**	**120**	**180**	**170**	**270**
pHox (NAG pH)	No unit	-		**9.4**	**9.2**	**8.7**	**10.8**	**8.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.026 Soil NS0124 X082439-X082440	PE065687.027 Soil NS0124 X082449-X082450	PE065687.028 Soil NS0124 X082456-X082457	PE065687.030 Soil NS0124 X082461
Single Addition Net Acid Generation (NAG)	**Method: AN216**						
ECox (NAG Conductivity)	µS/cm	1		**270**	**140**	**180**	**72**
pHox (NAG pH)	No unit	-		**8.3**	**8.8**	**9.0**	**9.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.031 Soil NS0124 X082359	PE065687.032 Soil NS0124 X082477	PE065687.033 Soil NS0124 X082484	PE065687.034 Soil NS0124 X082445	PE065687.035 Soil NS0155 X079677-X079678
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**20**	**200**	**220**	**200**	**260**
pHox (NAG pH)	No unit	-		**8.2**	**9.4**	**8.5**	**8.1**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.036 Soil NS0155 X079681-X079682	PE065687.037 Soil NS0155 X079687-X079688	PE065687.038 Soil NS0155 X079691-X079692	PE065687.039 Soil NS0155 X079697-X079698	PE065687.040 Soil NS0155 X079703-X079704
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**430**	**110**	**190**	**130**	**150**
pHox (NAG pH)	No unit	-		**6.6**	**9.3**	**8.4**	**9.1**	**9.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		**0.6**	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		**0.6**	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.041 Soil NS0155 X079707-X079708	PE065687.042 Soil NS0155 X079713-X079714	PE065687.043 Soil NS0155 X079763-X079764	PE065687.044 Soil NS0155 X079717-X079718	PE065687.045 Soil NS0155 X079723-X079724
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**140**	**160**	**100**	**140**	**90**
pHox (NAG pH)	No unit	-		**9.5**	**8.9**	**9.9**	**9.2**	**9.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.046 Soil NS0155 X079727-X079728	PE065687.047 Soil NS0155 X079733-X079734	PE065687.048 Soil NS0155 X079737-X079738	PE065687.049 Soil NS0155 X079743-X079744	PE065687.050 Soil NS0155 X079747-X079748
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**88**	**110**	**130**	**110**	**95**
pHox (NAG pH)	No unit	-		**9.9**	**9.0**	**9.3**	**9.4**	**10.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.051 Soil NS0155 X079753-X079754	PE065687.052 Soil NS0155 X079757-X079758	PE065687.053 Soil NS0155 X079767-X079768	PE065687.054 Soil NS0098 X078620-X078621	PE065687.055 Soil NS0098 X078610-X078611
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**200**	**190**	**110**	**12**	**13**
pHox (NAG pH)	No unit	-		**8.7**	**8.7**	**9.0**	**8.0**	**7.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.056 Soil NS0098 X078616-X078617	PE065687.057 Soil NS0098 X078631-X078632	PE065687.058 Soil NS0098 X078606-X078607	PE065687.059 Soil NS0098 X078626-X078627	PE065687.060 Soil NS0098 X078635-X078636
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**12**	**220**	**15**	**13**	**300**
pHox (NAG pH)	No unit	-		**6.3**	**6.4**	**6.7**	**7.9**	**6.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		**1.4**	<0.5	**0.6**	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		**1.4**	<0.5	**0.6**	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.061 Soil NS0098 X078645-X078646	PE065687.062 Soil NS0098 X078657-X078658	PE065687.063 Soil NS0098 X078651-X078652	PE065687.064 Soil NS0098 X078667-X078668	PE065687.065 Soil NS0098 X078697-X078698
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**140**	**160**	**180**	**210**	**210**
pHox (NAG pH)	No unit	-		**7.9**	**9.1**	**8.1**	**9.0**	**8.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.066 Soil NS0098 X078641-X078642	PE065687.067 Soil NS0098 X078661-X078662	PE065687.068 Soil NS0098 X078691-X078692	PE065687.069 Soil NS0098 X078671-X078672	PE065687.070 Soil NS0098 X078703-X078704
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**30**	**110**	**190**	**180**	**240**
pHox (NAG pH)	No unit	-		**8.0**	**9.1**	**8.5**	**8.4**	**8.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.071 Soil NS0098 X078707-X078708	PE065687.072 Soil NS0098 X078713-X078714	PE065687.073 Soil NS0098 X078677-X078678	PE065687.074 Soil NS0098 X078687-X078688	PE065687.075 Soil NS0096 X078399-X078400
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**170**	**280**	**130**	**140**	**100**
pHox (NAG pH)	No unit	-		**9.0**	**8.0**	**8.9**	**8.9**	**9.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.076 Soil NS0096 X078405-X078406	PE065687.077 Soil NS0096 X078419-X078420	PE065687.078 Soil NS0096 X078415-X078416	PE065687.079 Soil NS0096 X078409-X078410	PE065687.080 Soil NS0096 X078125-X078126
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**180**	**110**	**150**	**80**	**110**
pHox (NAG pH)	No unit	-		**9.1**	**9.0**	**8.8**	**9.3**	**9.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.081 Soil NS0096 X078435-X078436	PE065687.082 Soil NS0096 X078439-X078440	PE065687.083 Soil NS0096 X078447-X078448	PE065687.084 Soil NS0096 X078437-X078438	PE065687.085 Soil NS0096 X078349-X078350
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**550**	**110**	**59**	**110**	**110**
pHox (NAG pH)	No unit	-		**4.2**	**9.2**	**9.3**	**8.9**	**8.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		**0.8**	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		**5.4**	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		**0.8**	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		**5.6**	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.086 Soil NS0096 X078379-X078380	PE065687.087 Soil NS0096 X078383-X078384	PE065687.088 Soil NS0096 X078328-X078329	PE065687.089 Soil NS0096 X078333-X078334	PE065687.090 Soil NS0096 X078337-X078338
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**90**	**64**	**13**	**13**	**12**
pHox (NAG pH)	No unit	-		**9.2**	**9.4**	**7.9**	**7.9**	**8.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.091 Soil NS0096 X078343-X078344	PE065687.092 Soil NS0096 X078347-X078348	PE065687.093 Soil NS0096 X078353-X078354	PE065687.094 Soil NS0096 X078357-X078358	PE065687.095 Soil NS0096 X078363-X078364
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**87**	**120**	**75**	**62**	**64**
pHox (NAG pH)	No unit	-		**8.9**	**9.1**	**9.3**	**9.4**	**9.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065687.096 Soil NS0096 X078369-X078370	PE065687.097 Soil NS0096 X078373-X078374	PE065687.098 Soil NS0096 X078451-X078452	PE065687.099 Soil NS0096 X078455-X078456	PE065687.100 Soil NS0096 X078393
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**76**	**69**	**72**	**64**	**110**
pHox (NAG pH)	No unit	-		**9.3**	**9.2**	**9.4**	**9.4**	**9.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065687.101 Soil NS0096 X078389	PE065687.102 Soil NS0096 X078461	PE065687.103 Soil NS0096 X078445	PE065687.104 Soil NS0124 X082383
Single Addition Net Acid Generation (NAG) Method: AN216						
ECox (NAG Conductivity)	µS/cm	1	**67**	**70**	**64**	**97**
pHox (NAG pH)	No unit	-	**9.4**	**9.3**	**9.3**	**9.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Single Addition Net Acid Generation (NAG) **Method: ME-(AU)-[ENV]AN216**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
ECox (NAG Conductivity)	LB037592	µS/cm	1	4.5		
	LB037593	µS/cm	1	5.0		
	LB037594	µS/cm	1	3.7		
	LB037609	µS/cm	1	3.8		
	LB037615	µS/cm	1	3.1 - 4.0		
pHox (NAG pH)	LB037592	No unit	-	4.6	0%	100%
	LB037593	No unit	-	4.6	0 - 2%	99%
	LB037594	No unit	-	4.9	0%	100%
	LB037609	No unit	-	4.5	0 - 1%	99%
	LB037615	No unit	-	4.8 - 5.0	0 - 3%	100 - 102%
NAG as kg H_2SO_4/tonne to pH 4.5	LB037592	kg H2SO4/T	0.5	<0.5	0%	112%
	LB037593	kg H2SO4/T	0.5	<0.5	0%	105%
	LB037594	kg H2SO4/T	0.5	<0.5	0%	109%
	LB037609	kg H2SO4/T	0.5	<0.5	0%	111%
	LB037615	kg H2SO4/T	0.5	<0.5	0%	109 - 112%
NAG as kg H_2SO_4/tonne to pH 7	LB037592	kg H2SO4/T	0.5	<0.5	0%	106%
	LB037593	kg H2SO4/T	0.5	<0.5	0%	104%
	LB037594	kg H2SO4/T	0.5	<0.5	0%	102%
	LB037609	kg H2SO4/T	0.5	<0.5	0%	103%
	LB037615	kg H2SO4/T	0.5	<0.5	0%	100 - 103%
NAG as kg CaCO3/tonne to pH 4.5	LB037592	kg CaCO3/T	0.5	<0.5	0%	112%
	LB037593	kg CaCO3/T	0.5	<0.5	0%	105%
	LB037594	kg CaCO3/T	0.5	<0.5	0%	109%
	LB037609	kg CaCO3/T	0.5	<0.5	0%	111%
	LB037615	kg CaCO3/T	0.5	<0.5	0%	109 - 112%
NAG as kg CaCO3/tonne to pH 7	LB037592	kg CaCO3/T	0.5	<0.5	0%	106%
	LB037593	kg CaCO3/T	0.5	<0.5	0%	104%
	LB037594	kg CaCO3/T	0.5	<0.5	0%	102%
	LB037609	kg CaCO3/T	0.5	<0.5	0%	103%
	LB037615	kg CaCO3/T	0.5	<0.5	0%	100 - 103%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN216	Pulverised sub-sample of a waste rock or an as received sample of filter cake, soil or sludge is subjected to an oxidising digest with hydrogen peroxide. The pH and EC of the NAG suspension is recorded at various stages in the digest. The acid produced (if any) is titrated using standardised NaOH to pH 7.0. NAG results are reported to 0.5 kg H2SO4/tonne.

FOOTNOTES

IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
*	This analysis is not covered by the scope of accreditation.
^	Performed by outside laboratory.
LOR	Limit of Reporting
↑↓	Raised or Lowered Limit of Reporting
QFH	QC result is above the upper tolerance
QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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ANALYTICAL REPORT

WORLD RECOGNISED ACCREDITATION

CLIENT DETAILS

Contact	Chris Fowers
Client	Fortescue Metal Group Ltd
Address	Level 2 . 87 Adelaide Terrace East Perth WA 6004
Telephone	08 917 66 191
Facsimile	(Not specified)
Email	cfowers@fmgl.com.au
Project	**GHD_FMG_AMD_NORTHSTAR**
Order Number	**612739100**
Samples	4

LABORATORY DETAILS

Manager	Said Hirad
Laboratory	SGS Newburn Environmental
Address	10 Reid Rd Newburn WA 6105
Telephone	(08) 9373 3500
Facsimile	(08) 9373 3556
Email	au.environmental.perth@sgs.com
SGS Reference	PE065687A R0
Report Number	0000038908
Date Reported	27 Apr 2012
Date Received	17 Apr 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

Spkie recovery failed due to high background of the target analyte

SIGNATORIES

Michael McKay
Inorganic Team Leader - Waters

Said Hirad
Laboratory Manager

Parameter	Units	LOR	Sample Number: PE065687A.014 Sample Matrix: Soil Sample Name: NS0124 X082399-X082400
Total Recoverable Metals in Soil by ICPOES	**Method: AN/320AN321**		
Calcium, Ca	mg/kg	10	**1500**
Sulphur, S	mg/kg	10	**4200**

Parameter	Units	LOR	Sample Number: PE065687A.056 Sample Matrix: Soil Sample Name: NS0098 X078616-X078617	Sample Number: PE065687A.057 Sample Matrix: Soil Sample Name: NS0098 X078631-X078632
Total Recoverable Metals in Soil by ICPOES	**Method: AN/320AN321**			
Calcium, Ca	mg/kg	10	**130**	**1300**
Sulphur, S	mg/kg	10	**36**	**2300**

Parameter	Units	LOR	Sample Number: PE065687A.081 Sample Matrix: Soil Sample Name: NS0096 X078435-X078436
Total Recoverable Metals in Soil by ICPOES	**Method: AN/320AN321**		
Calcium, Ca	mg/kg	10	**3200**
Sulphur, S	mg/kg	10	**9800**

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Total Recoverable Metals in Soil by ICPOES **Method: ME-(AU)-[ENV]AN/320AN321**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery	MSD %RPD
Calcium, Ca	LB039782	mg/kg	10	<10	1%	91%	179%	8%
Sulphur, S	LB039782	mg/kg	10	<10	2%	120%	779%	117%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN045	A portion of sample is digested with Nitric acid and Hydrogen Peroxide over time and then with Hydrochloric acid through several heating and cooling cycles. It provides a strong oxidising medium for bringing metal analytes into solution according to USEPA3050, after filtration the solution is presented for analysis on AAS or ICP.
AN320/AN321	Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.
AN320/AN321	Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements. Reference APHA 3120 B.

FOOTNOTES

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SIGNATORIES

Michael McKay
Inorganic Team Leader - Waters

Said Hirad
Laboratory Manager

Parameter	Units	LOR	Sample Number: PE065687A.014 Sample Matrix: Soil Sample Name: NS0124 X082399-X082400
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Total Recoverable Metals in Soil by ICPOES	**Method: AN/320AN321**			
Calcium, Ca	mg/kg	10	**130**	**1300**
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Parameter	Units	LOR	Sample Number: PE065687A.081 Sample Matrix: Soil Sample Name: NS0096 X078435-X078436
Total Recoverable Metals in Soil by ICPOES	**Method: AN/320AN321**		
Calcium, Ca	mg/kg	10	**3200**
Sulphur, S	mg/kg	10	**9800**

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Calcium, Ca	LB039782	mg/kg	10	<10	1%	91%	179%	8%
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ANALYTICAL REPORT

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Chris Fowers	Manager	Said Hirad
Client	Fortescue Metal Group Ltd	Laboratory	SGS Newburn Environmental
Address	Level 2 . 87 Adelaide Terrace East Perth WA 6004	Address	10 Reid Rd Newburn WA 6105
Telephone	08 917 66 191	Telephone	(08) 9373 3500
Facsimile	(Not specified)	Facsimile	(08) 9373 3556
Email	cfowers@fmgl.com.au	Email	au.environmental.perth@sgs.com
Project	**GHD_FMG_AMD_NORTHSTAR**	SGS Reference	PE065688 R0
Order Number	**Bulk Invoice**	Report Number	0000036980
Samples	101	Date Reported	20 Mar 2012
		Date Received	02 Mar 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

SIGNATORIES

Jeremy Truong
Inorganics Co-ordinator

Michael McKay
Inorganic Team Leader - Waters

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.001 Soil NS0095 X078219-X078220	PE065688.002 Soil NS0095 X078261-X078262	PE065688.003 Soil NS0095 X078245-X078246	PE065688.004 Soil NS0095 X078235-X078236	PE065688.005 Soil NS0095 X078215-X078216
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**93**	**230**	**120**	**160**	**90**
pHox (NAG pH)	No unit	-		**8.6**	**8.3**	**8.6**	**8.5**	**8.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.006 Soil NS0095 X078225-X078226	PE065688.007 Soil NS0095 X078205-X078206	PE065688.008 Soil NS0095 X078209-X078210	PE065688.009 Soil NS0095 X078295-X078296	PE065688.010 Soil NS0095 X078291-X078292
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**140**	**13**	**23**	**110**	**200**
pHox (NAG pH)	No unit	-		**8.5**	**7.6**	**7.8**	**8.9**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.011 Soil NS0095 X078285-X078286	PE065688.012 Soil NS0095 X078307-X078308	PE065688.013 Soil NS0095 X078271-X078272	PE065688.014 Soil NS0095 X078275-X078276	PE065688.015 Soil NS0095 X078281-X078282
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**120**	**120**	**110**	**210**	**110**
pHox (NAG pH)	No unit	-		**8.9**	**8.8**	**8.9**	**8.2**	**8.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.016 Soil NS0095 X078265-X078266	PE065688.017 Soil NS0095 X078301-X078302	PE065688.018 Soil NS0095 X078256-X078257	PE065688.019 Soil NS0095 X078249-X078250	PE065688.020 Soil NS0095 X078239-X078240
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**170**	**190**	**180**	**110**	**160**
pHox (NAG pH)	No unit	-		**8.4**	**7.8**	**8.4**	**8.6**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.021 Soil NS0095 X078312	PE065688.022 Soil NS0095 X078317	PE065688.023 Soil NS0094 X078107-X078108	PE065688.024 Soil NS0094 X078119-X078120	PE065688.025 Soil NS0094 X078077-X078078
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**170**	**210**	**120**	**91**	**110**
pHox (NAG pH)	No unit	-		**8.5**	**8.4**	**8.6**	**8.8**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.026 Soil NS0094 X078061-X078062	PE065688.027 Soil NS0094 X078067-X078068	PE065688.028 Soil NS0094 X079071-X078072	PE065688.029 Soil NS0097 X078497-X078498	PE065688.030 Soil NS0097 X078503-X078504
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**17**	**120**	**120**	**75**	**91**
pHox (NAG pH)	No unit	-		**7.9**	**8.4**	**8.5**	**8.9**	**8.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.031 Soil NS0097 X078507-X078508	PE065688.032 Soil NS0097 X078513-X078514	PE065688.033 Soil NS0097 X078517-X078518	PE065688.034 Soil NS0097 X078547-X078548
Single Addition Net Acid Generation (NAG)	**Method: AN216**						
ECox (NAG Conductivity)	µS/cm	1		**71**	**120**	**84**	**88**
pHox (NAG pH)	No unit	-		**8.8**	**8.5**	**8.6**	**8.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.036 Soil NS0097 X078563-X078564	PE065688.037 Soil NS0097 X078569-X078570	PE065688.038 Soil NS0097 X078573-X078574	PE065688.039 Soil NS0097 X078579-X078580	PE065688.040 Soil NS0097 X078583-X078584
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**77**	**110**	**80**	**110**	**74**
pHox (NAG pH)	No unit	-		**8.6**	**8.5**	**8.6**	**8.5**	**8.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.041 Soil NS0097 X078593-X078594	PE065688.042 Soil NS0097 X078476-X078477	PE065688.043 Soil NS0097 X078482-X078483	PE065688.044 Soil NS0097 X078486-X078487	PE065688.045 Soil NS0097 X078491-X078492
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**120**	**23**	**500**	**81**	**110**
pHox (NAG pH)	No unit	-		**8.5**	**7.9**	**3.5**	**8.7**	**8.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	**3.8**	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	**11**	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	**3.9**	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	**11**	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.046 Soil NS0097 X078523-X078524	PE065688.047 Soil NS0097 X078527-X078528	PE065688.048 Soil NS0097 X078533-X078534	PE065688.049 Soil NS0097 X078537-X078538	PE065688.050 Soil NS0097 X078543-X078544
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**81**	**91**	**71**	**450**	**63**
pHox (NAG pH)	No unit	-		**8.6**	**8.7**	**8.9**	**6.4**	**9.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.051 Soil NS0097 X078559	PE065688.052 Soil NS0097 X078589	PE065688.053 Soil NS0097 X078599	PE065688.054 Soil NS0097 X078605	PE065688.055 Soil NS0097 X078473
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**89**	**78**	**76**	**200**	**17**
pHox (NAG pH)	No unit	-		**8.7**	**8.6**	**8.8**	**8.1**	**7.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.056 Soil NS0112 X080858-X080859	PE065688.057 Soil NS0112 X080822-X080823	PE065688.058 Soil NS0112 X080806-X080807	PE065688.059 Soil NS0112 X080878-X080879	PE065688.060 Soil NS0112 X080836-X080837
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**150**	**120**	**15**	**120**	**110**
pHox (NAG pH)	No unit	-		**8.6**	**8.3**	**7.4**	**8.4**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.061 Soil NS0112 X080872-X080873	PE065688.062 Soil NS0113 X080964-X080965	PE065688.063 Soil NS0113 X080968-X080969	PE065688.064 Soil NS0113 X080974-X080975	PE065688.065 Soil NS0113 X080978-X080979
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**110**	**53**	**160**	**110**	**220**
pHox (NAG pH)	No unit	-		**8.6**	**7.6**	**8.1**	**7.7**	**6.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.066 Soil NS0113 X081004-X081005	PE065688.067 Soil NS0113 X081010-X081011	PE065688.068 Soil NS0113 X081014-X081015	PE065688.069 Soil NS0113 X081020-X081021	PE065688.070 Soil NS0113 X081024-X081025
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**290**	**170**	**170**	**260**	**290**
pHox (NAG pH)	No unit	-		**5.6**	**8.1**	**8.0**	**8.5**	**8.3**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		**1.2**	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		**1.2**	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.071 Soil NS0113 X081034-X081035	PE065688.072 Soil NS0113 X081050	PE065688.073 Soil NS0113 X081056-X081057	PE065688.074 Soil NS0113 X081061	PE065688.075 Soil NS0113 X081066-X081067
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**190**	**190**	**150**	**150**	**160**
pHox (NAG pH)	No unit	-		**7.9**	**8.1**	**7.7**	**8.0**	**8.2**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.076 Soil NS0113 X081070-X081071	PE065688.077 Soil NS0113 X080984-X080652	PE065688.078 Soil NS0113 X080988-X080989	PE065688.079 Soil NS0113 X080994	PE065688.080 Soil NS0113 X080998-X080999
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**150**	**150**	**180**	**310**	**130**
pHox (NAG pH)	No unit	-		**8.3**	**8.4**	**8.2**	**5.9**	**8.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	**1.8**	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	**1.8**	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.081 Soil NS0118 X081633-X081634	PE065688.082 Soil NS0118 X081649-X081650	PE065688.083 Soil NS0118 X081655-X081656	PE065688.084 Soil NS0118 X081635-X081636	PE065688.085 Soil NS0118 X081639-X081640
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**260**	**270**	**220**	**180**	**200**
pHox (NAG pH)	No unit	-		**8.0**	**6.8**	**8.0**	**8.0**	**7.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.086 Soil NS0118 X081643-X081644	PE065688.087 Soil NS0118 X081629	PE065688.088 Soil NS0115 X081231-X081232	PE065688.089 Soil NS0115 X081193-X081194	PE065688.090 Soil NS0115 X081272-X081273
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**130**	**170**	**110**	**92**	**130**
pHox (NAG pH)	No unit	-		**8.0**	**8.3**	**8.0**	**7.5**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.091 Soil NS0115 X081252-X081253	PE065688.092 Soil NS0115 X081261-X081262	PE065688.093 Soil NS0115 X081257-X081258	PE065688.094 Soil NS0115 X081266-X081267	PE065688.095 Soil NS0115 X081245-X081246
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**140**	**110**	**320**	**160**	**140**
pHox (NAG pH)	No unit	-		**8.4**	**8.5**	**6.4**	**8.2**	**8.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.096 Soil NS0115 X081185-X081186	PE065688.097 Soil NS0115 X081235-X081236	PE065688.098 Soil NS0115 X081225-X081226	PE065688.099 Soil NS0115 X081221-X081222	PE065688.100 Soil NS0115 X081199-X081200
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**12**	**110**	**100**	**120**	**120**
pHox (NAG pH)	No unit	-		**7.5**	**7.6**	**7.7**	**7.7**	**7.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name X078081-X078082	PE065688.101 Soil NS0094	PE065688.102 Soil NS0097 X078553-X078554
Single Addition Net Acid Generation (NAG) **Method: AN216**					
ECox (NAG Conductivity)	µS/cm	1		**74**	**65**
pHox (NAG pH)	No unit	-		**9.1**	**9.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Single Addition Net Acid Generation (NAG) **Method: ME-(AU)-[ENV]AN216**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
ECox (NAG Conductivity)	LB037616	µS/cm	1	9.3		
	LB037617	µS/cm	1	14		
	LB037618	µS/cm	1	5.3		
	LB037619	µS/cm	1	5.0		
	LB037620	µS/cm	1	3.0 - 3.8		
pHox (NAG pH)	LB037616	No unit	-	4.5	0 - 1%	105%
	LB037617	No unit	-	4.4	0 - 1%	104%
	LB037618	No unit	-	4.3	1%	104%
	LB037619	No unit	-	4.2	0 - 2%	104%
	LB037620	No unit	-	4.4 - 4.6	0 - 2%	104%
NAG as kg H_2SO_4/tonne to pH 4.5	LB037616	kg H2SO4/T	0.5	<0.5	0%	119%
	LB037617	kg H2SO4/T	0.5	<0.5	0%	107%
	LB037618	kg H2SO4/T	0.5	<0.5	0%	104%
	LB037619	kg H2SO4/T	0.5	<0.5	0%	102%
	LB037620	kg H2SO4/T	0.5	<0.5	0%	106 - 108%
NAG as kg H_2SO_4/tonne to pH 7	LB037616	kg H2SO4/T	0.5	<0.5	0%	118%
	LB037617	kg H2SO4/T	0.5	<0.5	0%	98%
	LB037618	kg H2SO4/T	0.5	<0.5	0%	96%
	LB037619	kg H2SO4/T	0.5	<0.5	0%	96%
	LB037620	kg H2SO4/T	0.5	<0.5	0%	98 - 101%
NAG as kg CaCO3/tonne to pH 4.5	LB037616	kg CaCO3/T	0.5	<0.5	0%	119%
	LB037617	kg CaCO3/T	0.5	<0.5	0%	107%
	LB037618	kg CaCO3/T	0.5	<0.5	0%	104%
	LB037619	kg CaCO3/T	0.5	<0.5	0%	102%
	LB037620	kg CaCO3/T	0.5	<0.5	0%	106 - 108%
NAG as kg CaCO3/tonne to pH 7	LB037616	kg CaCO3/T	0.5	<0.5	0%	118%
	LB037617	kg CaCO3/T	0.5	<0.5	0%	98%
	LB037618	kg CaCO3/T	0.5	<0.5	0%	96%
	LB037619	kg CaCO3/T	0.5	<0.5	0%	96%
	LB037620	kg CaCO3/T	0.5	<0.5	0%	98 - 101%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN216	Pulverised sub-sample of a waste rock or an as received sample of filter cake, soil or sludge is subjected to an oxidising digest with hydrogen peroxide. The pH and EC of the NAG suspension is recorded at various stages in the digest. The acid produced (if any) is titrated using standardised NaOH to pH 7.0. NAG results are reported to 0.5 kg H2SO4/tonne.

FOOTNOTES

IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
*	This analysis is not covered by the scope of accreditation.
^	Performed by outside laboratory.
LOR	Limit of Reporting
↑↓	Raised or Lowered Limit of Reporting
QFH	QC result is above the upper tolerance
QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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ANALYTICAL REPORT

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Project	**GHD_FMG_AMD_NORTHSTAR**	SGS Reference	PE065688 R1
Order Number	**Bulk Invoice**	Report Number	0000037163
Samples	101	Date Reported	23 Mar 2012
		Date Received	02 Mar 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

This report cancels and supersedes the report No. PE065688 R0 dated 20/03/2012 issued by SGS Environmental Services due to amendment to job description as requested by client

SIGNATORIES

Jeremy Truong
Inorganics Co-ordinator

Michael McKay
Inorganic Team Leader - Waters

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.001 Soil NS0095 X078219-X078220	PE065688.002 Soil NS0095 X078261-X078262	PE065688.003 Soil NS0095 X078245-X078246	PE065688.004 Soil NS0095 X078235-X078236	PE065688.005 Soil NS0095 X078215-X078216
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**93**	**230**	**120**	**160**	**90**
pHox (NAG pH)	No unit	-		**8.6**	**8.3**	**8.6**	**8.5**	**8.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.006 Soil NS0095 X078225-X078226	PE065688.007 Soil NS0095 X078205-X078206	PE065688.008 Soil NS0095 X078209-X078210	PE065688.009 Soil NS0095 X078295-X078296	PE065688.010 Soil NS0095 X078291-X078292
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**140**	**13**	**23**	**110**	**200**
pHox (NAG pH)	No unit	-		**8.5**	**7.6**	**7.8**	**8.9**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.011 Soil NS0095 X078285-X078286	PE065688.012 Soil NS0095 X078307-X078308	PE065688.013 Soil NS0095 X078271-X078272	PE065688.014 Soil NS0095 X078275-X078276	PE065688.015 Soil NS0095 X078281-X078282
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**120**	**120**	**110**	**210**	**110**
pHox (NAG pH)	No unit	-		**8.9**	**8.8**	**8.9**	**8.2**	**8.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.016 Soil NS0095 X078265-X078266	PE065688.017 Soil NS0095 X078301-X078302	PE065688.018 Soil NS0095 X078256-X078257	PE065688.019 Soil NS0095 X078249-X078250	PE065688.020 Soil NS0095 X078239-X078240
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**170**	**190**	**180**	**110**	**160**
pHox (NAG pH)	No unit	-		**8.4**	**7.8**	**8.4**	**8.6**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.021 Soil NS0095 X078312	PE065688.022 Soil NS0095 X078317	PE065688.023 Soil NS0094 X078107-X078108	PE065688.024 Soil NS0094 X078119-X078120	PE065688.025 Soil NS0094 X078077-X078078
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**170**	**210**	**120**	**91**	**110**
pHox (NAG pH)	No unit	-		**8.5**	**8.4**	**8.6**	**8.8**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.026 Soil NS0094 X078061-X078062	PE065688.027 Soil NS0094 X078067-X078068	PE065688.028 Soil NS0094 X079071-X078072	PE065688.029 Soil NS0097 X078497-X078498	PE065688.030 Soil NS0097 X078503-X078504
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**17**	**120**	**120**	**75**	**91**
pHox (NAG pH)	No unit	-		**7.9**	**8.4**	**8.5**	**8.9**	**8.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.031 Soil NS0097 X078507-X078508	PE065688.032 Soil NS0097 X078513-X078514	PE065688.033 Soil NS0097 X078517-X078518	PE065688.034 Soil NS0097 X078547-X078548
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**71**	**120**	**84**	**88**
pHox (NAG pH)	No unit	-		**8.8**	**8.5**	**8.6**	**8.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.036 Soil NS0097 X078563-X078564	PE065688.037 Soil NS0097 X078569-X078570	PE065688.038 Soil NS0097 X078573-X078574	PE065688.039 Soil NS0097 X078579-X078580	PE065688.040 Soil NS0097 X078583-X078584
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**77**	**110**	**80**	**110**	**74**
pHox (NAG pH)	No unit	-		**8.6**	**8.5**	**8.6**	**8.5**	**8.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.041 Soil NS0097 X078593-X078594	PE065688.042 Soil NS0097 X078476-X078477	PE065688.043 Soil NS0097 X078482-X078483	PE065688.044 Soil NS0097 X078486-X078487	PE065688.045 Soil NS0097 X078491-X078492
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**120**	**23**	**500**	**81**	**110**
pHox (NAG pH)	No unit	-		**8.5**	**7.9**	**3.5**	**8.7**	**8.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	**3.8**	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	**11**	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	**3.9**	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	**11**	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.046 Soil NS0097 X078523-X078524	PE065688.047 Soil NS0097 X078527-X078528	PE065688.048 Soil NS0097 X078533-X078534	PE065688.049 Soil NS0097 X078537-X078538	PE065688.050 Soil NS0097 X078543-X078544
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**81**	**91**	**71**	**450**	**63**
pHox (NAG pH)	No unit	-		**8.6**	**8.7**	**8.9**	**6.4**	**9.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.051 Soil NS0097 X078559	PE065688.052 Soil NS0097 X078589	PE065688.053 Soil NS0097 X078599	PE065688.054 Soil NS0097 X078605	PE065688.055 Soil NS0097 X078473
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**89**	**78**	**76**	**200**	**17**
pHox (NAG pH)	No unit	-		**8.7**	**8.6**	**8.8**	**8.1**	**7.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.056 Soil NS0112 X080858-X080859	PE065688.057 Soil NS0112 X080822-X080823	PE065688.058 Soil NS0112 X080806-X080807	PE065688.059 Soil NS0112 X080878-X080879	PE065688.060 Soil NS0112 X080836-X080837
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**150**	**120**	**15**	**120**	**110**
pHox (NAG pH)	No unit	-		**8.6**	**8.3**	**7.4**	**8.4**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.061 Soil NS0112 X080872-X080873	PE065688.062 Soil NS0113 X080964-X080965	PE065688.063 Soil NS0113 X080968-X080969	PE065688.064 Soil NS0113 X080974-X080975	PE065688.065 Soil NS0113 X080978-X080979
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**110**	**53**	**160**	**110**	**220**
pHox (NAG pH)	No unit	-		**8.6**	**7.6**	**8.1**	**7.7**	**6.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.066 Soil NS0113 X081004-X081005	PE065688.067 Soil NS0113 X081010-X081011	PE065688.068 Soil NS0113 X081014-X081015	PE065688.069 Soil NS0113 X081020-X081021	PE065688.070 Soil NS0113 X081024-X081025
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**290**	**170**	**170**	**260**	**290**
pHox (NAG pH)	No unit	-		**5.6**	**8.1**	**8.0**	**8.5**	**8.3**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		**1.2**	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		**1.2**	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.071 Soil NS0113 X081034-X081035	PE065688.072 Soil NS0113 X081050	PE065688.073 Soil NS0113 X081056-X081057	PE065688.074 Soil NS0113 X081061	PE065688.075 Soil NS0113 X081066-X081067
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**190**	**190**	**150**	**150**	**160**
pHox (NAG pH)	No unit	-		**7.9**	**8.1**	**7.7**	**8.0**	**8.2**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.076 Soil NS0113 X081070-X081071	PE065688.077 Soil NS0113 X080984-X080652	PE065688.078 Soil NS0113 X080988-X080989	PE065688.079 Soil NS0113 X080994	PE065688.080 Soil NS0113 X080998-X080999
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**150**	**150**	**180**	**310**	**130**
pHox (NAG pH)	No unit	-		**8.3**	**8.4**	**8.2**	**5.9**	**8.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	**1.8**	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	**1.8**	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.081 Soil NS0118 X081633-X081634	PE065688.082 Soil NS0118 X081649-X081650	PE065688.083 Soil NS0118 X081655-X081656	PE065688.084 Soil NS0118 X081635-X081636	PE065688.085 Soil NS0118 X081639-X081640
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**260**	**270**	**220**	**180**	**200**
pHox (NAG pH)	No unit	-		**8.0**	**6.8**	**8.0**	**8.0**	**7.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.086 Soil NS0118 X081643-X081644	PE065688.087 Soil NS0118 X081629	PE065688.088 Soil NS0115 X081231-X081232	PE065688.089 Soil NS0115 X081193-X081194	PE065688.090 Soil NS0115 X081272-X081273
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**130**	**170**	**110**	**92**	**130**
pHox (NAG pH)	No unit	-		**8.0**	**8.3**	**8.0**	**7.5**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.091 Soil NS0115 X081252-X081253	PE065688.092 Soil NS0115 X081261-X081262	PE065688.093 Soil NS0115 X081257-X081258	PE065688.094 Soil NS0115 X081266-X081267	PE065688.095 Soil NS0115 X081245-X081246
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**140**	**110**	**320**	**160**	**140**
pHox (NAG pH)	No unit	-		**8.4**	**8.5**	**6.4**	**8.2**	**8.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065688.096 Soil NS0115 X081185-X081186	PE065688.097 Soil NS0115 X081235-X081236	PE065688.098 Soil NS0115 X081225-X081226	PE065688.099 Soil NS0115 X081221-X081222	PE065688.100 Soil NS0115 X081199-X081200
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**12**	**110**	**100**	**120**	**120**
pHox (NAG pH)	No unit	-		**7.5**	**7.6**	**7.7**	**7.7**	**7.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name X078081-X078082	PE065688.101 Soil NS0094	PE065688.102 Soil NS0097 X078553-X078554
Single Addition Net Acid Generation (NAG) **Method: AN216**					
ECox (NAG Conductivity)	µS/cm	1		**74**	**65**
pHox (NAG pH)	No unit	-		**9.1**	**9.0**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Single Addition Net Acid Generation (NAG) **Method: ME-(AU)-[ENV]AN216**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
ECox (NAG Conductivity)	LB037616	µS/cm	1	9.3		
	LB037617	µS/cm	1	14		
	LB037618	µS/cm	1	5.3		
	LB037619	µS/cm	1	5.0		
	LB037620	µS/cm	1	3.0 - 3.8		
pHox (NAG pH)	LB037616	No unit	-	4.5	0 - 1%	105%
	LB037617	No unit	-	4.4	0 - 1%	104%
	LB037618	No unit	-	4.3	1%	104%
	LB037619	No unit	-	4.2	0 - 2%	104%
	LB037620	No unit	-	4.4 - 4.6	0 - 2%	104%
NAG as kg H_2SO_4/tonne to pH 4.5	LB037616	kg H2SO4/T	0.5	<0.5	0%	119%
	LB037617	kg H2SO4/T	0.5	<0.5	0%	107%
	LB037618	kg H2SO4/T	0.5	<0.5	0%	104%
	LB037619	kg H2SO4/T	0.5	<0.5	0%	102%
	LB037620	kg H2SO4/T	0.5	<0.5	0%	106 - 108%
NAG as kg H_2SO_4/tonne to pH 7	LB037616	kg H2SO4/T	0.5	<0.5	0%	118%
	LB037617	kg H2SO4/T	0.5	<0.5	0%	98%
	LB037618	kg H2SO4/T	0.5	<0.5	0%	96%
	LB037619	kg H2SO4/T	0.5	<0.5	0%	96%
	LB037620	kg H2SO4/T	0.5	<0.5	0%	98 - 101%
NAG as kg CaCO3/tonne to pH 4.5	LB037616	kg CaCO3/T	0.5	<0.5	0%	119%
	LB037617	kg CaCO3/T	0.5	<0.5	0%	107%
	LB037618	kg CaCO3/T	0.5	<0.5	0%	104%
	LB037619	kg CaCO3/T	0.5	<0.5	0%	102%
	LB037620	kg CaCO3/T	0.5	<0.5	0%	106 - 108%
NAG as kg CaCO3/tonne to pH 7	LB037616	kg CaCO3/T	0.5	<0.5	0%	118%
	LB037617	kg CaCO3/T	0.5	<0.5	0%	98%
	LB037618	kg CaCO3/T	0.5	<0.5	0%	96%
	LB037619	kg CaCO3/T	0.5	<0.5	0%	96%
	LB037620	kg CaCO3/T	0.5	<0.5	0%	98 - 101%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN216	Pulverised sub-sample of a waste rock or an as received sample of filter cake, soil or sludge is subjected to an oxidising digest with hydrogen peroxide. The pH and EC of the NAG suspension is recorded at various stages in the digest. The acid produced (if any) is titrated using standardised NaOH to pH 7.0. NAG results are reported to 0.5 kg H2SO4/tonne.

FOOTNOTES

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LNR	Sample listed, but not received.
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^	Performed by outside laboratory.
LOR	Limit of Reporting
↑↓	Raised or Lowered Limit of Reporting
QFH	QC result is above the upper tolerance
QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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ANALYTICAL REPORT

WORLD RECOGNISED ACCREDITATION

CLIENT DETAILS

Contact	Chris Fowers
Client	Fortescue Metal Group Ltd
Address	Level 2 . 87 Adelaide Terrace East Perth WA 6004
Telephone	08 917 66 191
Facsimile	(Not specified)
Email	cfowers@fmgl.com.au
Project	**GHD_FMG_AMD_NORTHSTAR**
Order Number	**612739100**
Samples	6

LABORATORY DETAILS

Manager	Said Hirad
Laboratory	SGS Newburn Environmental
Address	10 Reid Rd Newburn WA 6105
Telephone	(08) 9373 3500
Facsimile	(08) 9373 3556
Email	au.environmental.perth@sgs.com
SGS Reference	PE065688A R0
Report Number	0000039013
Date Reported	30 Apr 2012
Date Received	17 Apr 2012

COMMENTS

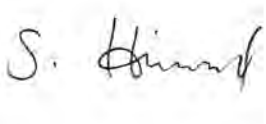
The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

The Matrix Spike Recovery for Calcium and Sulfur failed the acceptance criteria due to the presence of a high concentration of the target analyte.

SIGNATORIES

Jeremy Truong
Inorganics Co-ordinator

Michael McKay
Inorganic Team Leader - Waters



Said Hirad
Laboratory Manager

Parameter	Units	LOR	Sample Number PE065688A.043 Sample Matrix Soil Sample Name NS0097 X078482-X078483
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**12000**
Sulphur, S	mg/kg	10	**410**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065688A.049 Sample Matrix Soil Sample Name NS0097 X078537-X078538
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**11000**
Sulphur, S	mg/kg	10	**120**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065688A.065 Sample Matrix Soil Sample Name NS0113 X080978-X080979
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**2100**
Sulphur, S	mg/kg	10	**3600**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065688A.066 Sample Matrix Soil Sample Name NS0113 X081004-X081005
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**2900**
Sulphur, S	mg/kg	10	**1600**

Parameter	Units	LOR	Sample Number PE065688A.066 Sample Matrix Soil Sample Name NS0113 X081004-X081005
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065688A.079 Sample Matrix Soil Sample Name NS0113 X080994
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**2600**
Sulphur, S	mg/kg	10	**1500**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065688A.093 Sample Matrix Soil Sample Name NS0115 X081257-X081258
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**3900**
Sulphur, S	mg/kg	10	**1200**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Moisture Content **Method: ME-(AU)-[ENV]AN002**

Parameter	QC Reference	Units	LOR	DUP %RPD
% Moisture	LB040037	%	0.5	0 - 5%

Total Recoverable Metals in Soil by ICPOES **Method: ME-(AU)-[ENV]AN/320AN321**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery	MSD %RPD
Calcium, Ca	LB039782	mg/kg	10	<10	1%	91%	179%	8%
Sulphur, S	LB039782	mg/kg	10	<10	2%	120%	779%	117%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN045	A portion of sample is digested with Nitric acid and Hydrogen Peroxide over time and then with Hydrochloric acid through several heating and cooling cycles. It provides a strong oxidising medium for bringing metal analytes into solution according to USEPA3050, after filtration the solution is presented for analysis on AAS or ICP.
AN320/AN321	Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.
AN320/AN321	Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements. Reference APHA 3120 B.

FOOTNOTES

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QFH	QC result is above the upper tolerance
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NVL	Not Validated

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Solid samples expressed on a dry weight basis.

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The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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ANALYTICAL REPORT

WORLD RECOGNISED ACCREDITATION

CLIENT DETAILS

Contact	Chris Fowers
Client	Fortescue Metal Group Ltd
Address	Level 2 . 87 Adelaide Terrace East Perth WA 6004
Telephone	08 917 66 191
Facsimile	(Not specified)
Email	cfowers@fmgl.com.au
Project	**GHD_FMG_AMD_NORTHSTAR**
Order Number	**612739100**
Samples	6

LABORATORY DETAILS

Manager	Said Hirad
Laboratory	SGS Newburn Environmental
Address	10 Reid Rd Newburn WA 6105
Telephone	(08) 9373 3500
Facsimile	(08) 9373 3556
Email	au.environmental.perth@sgs.com
SGS Reference	PE065688A R0
Report Number	0000039013
Date Reported	30 Apr 2012
Date Received	17 Apr 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
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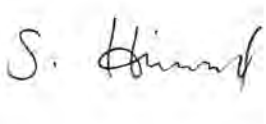
The Matrix Spike Recovery for Calcium and Sulfur failed the acceptance criteria due to the presence of a high concentration of the target analyte.

SIGNATORIES

Jeremy Truong
Inorganics Co-ordinator

Michael McKay
Inorganic Team Leader - Waters



Said Hirad
Laboratory Manager

Parameter	Units	LOR	Sample Number PE065688A.043 Sample Matrix Soil Sample Name NS0097 X078482-X078483
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**12000**
Sulphur, S	mg/kg	10	**410**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065688A.049 Sample Matrix Soil Sample Name NS0097 X078537-X078538
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**11000**
Sulphur, S	mg/kg	10	**120**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065688A.065 Sample Matrix Soil Sample Name NS0113 X080978-X080979
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**2100**
Sulphur, S	mg/kg	10	**3600**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065688A.066 Sample Matrix Soil Sample Name NS0113 X081004-X081005
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**2900**
Sulphur, S	mg/kg	10	**1600**

Parameter	Units	LOR	Sample Number PE065688A.066 Sample Matrix Soil Sample Name NS0113 X081004-X081005
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065688A.079 Sample Matrix Soil Sample Name NS0113 X080994
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**2600**
Sulphur, S	mg/kg	10	**1500**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065688A.093 Sample Matrix Soil Sample Name NS0115 X081257-X081258
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**3900**
Sulphur, S	mg/kg	10	**1200**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
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Moisture Content **Method: ME-(AU)-[ENV]AN002**

Parameter	QC Reference	Units	LOR	DUP %RPD
% Moisture	LB040037	%	0.5	0 - 5%

Total Recoverable Metals in Soil by ICPOES **Method: ME-(AU)-[ENV]AN/320AN321**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery	MSD %RPD
Calcium, Ca	LB039782	mg/kg	10	<10	1%	91%	179%	8%
Sulphur, S	LB039782	mg/kg	10	<10	2%	120%	779%	117%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN045	A portion of sample is digested with Nitric acid and Hydrogen Peroxide over time and then with Hydrochloric acid through several heating and cooling cycles. It provides a strong oxidising medium for bringing metal analytes into solution according to USEPA3050, after filtration the solution is presented for analysis on AAS or ICP.
AN320/AN321	Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.
AN320/AN321	Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements. Reference APHA 3120 B.

FOOTNOTES

IS	Insufficient sample for analysis.
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NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

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ANALYTICAL REPORT

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Chris Fowers	Manager	Said Hirad
Client	Fortescue Metal Group Ltd	Laboratory	SGS Newburn Environmental
Address	Level 2 . 87 Adelaide Terrace East Perth WA 6004	Address	10 Reid Rd Newburn WA 6105
Telephone	08 917 66 191	Telephone	(08) 9373 3500
Facsimile	(Not specified)	Facsimile	(08) 9373 3556
Email	cfowers@fmgl.com.au	Email	au.environmental.perth@sgs.com
Project	**GHD_FMG_AMD_NORTHSTAR**	SGS Reference	PE065689 R0
Order Number	**Bulk Invoice**	Report Number	0000036909
Samples	87	Date Reported	20 Mar 2012
		Date Received	02 Mar 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

SIGNATORIES

Jeremy Truong
Inorganics Co-ordinator

Michael McKay
Inorganic Team Leader - Waters

Parameter	Units	LOR	Sample Number: PE065689.001 Sample Matrix: Soil Sample Name: NS0115 X081195-X081196	PE065689.002 Soil NS0115 X081211-X081212	PE065689.003 Soil NS0115 X081205-X081206	PE065689.004 Soil NS0115 X081179-X081180	PE065689.005 Soil NS0115 X081286-X081287
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**130**	**120**	**120**	**11**	**150**
pHox (NAG pH)	No unit	-	**7.9**	**8.1**	**7.5**	**7.4**	**8.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number: PE065689.006 Sample Matrix: Soil Sample Name: NS0115 X081241	PE065689.007 Soil NS0115 X081216	PE065689.008 Soil NS0115 X081276-X081277	PE065689.009 Soil NS0115 X081288-X081289	PE065689.010 Soil NS0115 X081282-X081283
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**160**	**96**	**90**	**190**	**92**
pHox (NAG pH)	No unit	-	**8.8**	**8.2**	**8.5**	**7.9**	**8.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number: PE065689.011 Sample Matrix: Soil Sample Name: NS0120 X081878-X081879	PE065689.012 Soil NS0120 X081869	PE065689.013 Soil NS0120 X081872-X081873	PE065689.014 Soil NS0120 X081882-X081883	PE065689.015 Soil NS0120 X081816
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**110**	**550**	**97**	**220**	**95**
pHox (NAG pH)	No unit	-	**8.9**	**3.6**	**9.0**	**6.8**	**9.2**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	**2.9**	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	**9.7**	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	**3.0**	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	**9.9**	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number: PE065689.016 Sample Matrix: Soil Sample Name: NS0120 X081888-X081889	PE065689.017 Soil NS0120 X081892-X081893	PE065689.018 Soil NS0120 X081842-X081843	PE065689.019 Soil NS0120 X081866-X081867	PE065689.020 Soil NS0120 X081822-X081823
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**170**	**200**	**120**	**670**	**130**
pHox (NAG pH)	No unit	-	**8.1**	**7.4**	**9.0**	**3.2**	**8.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	**6.4**	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	**12**	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	**6.5**	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	**12**	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065689.021 Soil NS0120 X081806-X081807	PE065689.022 Soil NS0120 X081836-X081837	PE065689.023 Soil NS0120 X081810-X081811	PE065689.024 Soil NS0120 X081898-X081899	PE065689.025 Soil NS0120 X081846-X081847
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**90**	**96**	**170**	**130**	**200**
pHox (NAG pH)	No unit	-	**9.3**	**9.3**	**8.5**	**7.9**	**8.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065689.026 Soil NS0120 X081858-X081859	PE065689.027 Soil NS0120 X081862-X081863	PE065689.028 Soil NS0120 X081852-X081853	PE065689.029 Soil NS0120 X081832-X081833	PE065689.030 Soil NS0120 X081826-X081827
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**210**	**230**	**190**	**120**	**110**
pHox (NAG pH)	No unit	-	**8.5**	**7.4**	**8.5**	**9.2**	**9.3**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065689.031 Soil NS0117 X081542-X081543	PE065689.032 Soil NS0117 X081546-X081547	PE065689.033 Soil NS0117 X081552-X081553	PE065689.034 Soil NS0117 X081568-X081569	PE065689.035 Soil NS0117 X081574-X081575
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**160**	**190**	**120**	**110**	**100**
pHox (NAG pH)	No unit	-	**8.2**	**7.9**	**8.3**	**8.4**	**8.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name PE065689.036 Soil NS0117 X081558-X081559	PE065689.037 Soil NS0117 X081572-X081573	PE065689.038 Soil NS0117 X081528-X081529	PE065689.039 Soil NS0117 X081562-X081563	PE065689.040 Soil NS0117 X081522-X081523
Single Addition Net Acid Generation (NAG) Method: AN216							
ECox (NAG Conductivity)	µS/cm	1	**190**	**99**	**80**	**140**	**120**
pHox (NAG pH)	No unit	-	**7.8**	**8.3**	**9.1**	**8.3**	**8.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.041 Soil NS0117 X081532-X081533	PE065689.042 Soil NS0117 X081536-X081537	PE065689.043 Soil NS0117 X081526-X081527	PE065689.044 Soil NS0117 X081538-X081539	PE065689.045 Soil NS0116 X081425-X081426
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**160**	**190**	**120**	**210**	**180**
pHox (NAG pH)	No unit	-		**8.8**	**8.6**	**9.0**	**8.6**	**8.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.046 Soil NS0116 X081363-X081364	PE065689.047 Soil NS0116 X081419-X081420	PE065689.048 Soil NS0116 X081405-X081406	PE065689.049 Soil NS0116 X081373-X081374	PE065689.050 Soil NS0116 X081409-X081410
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**310**	**180**	**180**	**190**	**140**
pHox (NAG pH)	No unit	-		**8.4**	**7.9**	**8.6**	**8.7**	**8.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.051 Soil NS0116 X081528-X081529	PE065689.052 Soil NS0116 X081415-X081416	PE065689.053 Soil NS0116 X081353-X081354	PE065689.054 Soil NS0116 X081333-X081334	PE065689.055 Soil NS0116 X081343-X081344
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**140**	**140**	**240**	**260**	**230**
pHox (NAG pH)	No unit	-		**8.5**	**8.8**	**8.5**	**8.2**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.056 Soil NS0116 X081369-X081370	PE065689.057 Soil NS0116 X081347-X081348	PE065689.058 Soil NS0116 X081337-X081338	PE065689.059 Soil NS0116 X081399-X081400	PE065689.060 Soil NS0116 X081393-X081394
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**150**	**420**	**140**	**150**	**250**
pHox (NAG pH)	No unit	-		**8.7**	**5.0**	**8.7**	**8.9**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	**2.0**	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	**2.0**	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.061 Soil NS0116 X081383-X081384	PE065689.062 Soil NS0116 X081379-X081380	PE065689.063 Soil NS0116 X081359	PE065689.064 Soil NS0116 X081389	PE065689.065 Soil NS0128 X140045-X140046
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**170**	**150**	**350**	**110**	**130**
pHox (NAG pH)	No unit	-		**8.8**	**9.1**	**8.2**	**9.3**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.066 Soil NS0128 X140049-X140050	PE065689.067 Soil NS0128 X140055-X140056	PE065689.068 Soil NS0128 X140061-X140062	PE065689.069 Soil NS0128 X140065-X140066	PE065689.070 Soil NS0128 X140035-X140036
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**130**	**150**	**110**	**200**	**140**
pHox (NAG pH)	No unit	-		**9.2**	**9.1**	**9.1**	**8.9**	**9.2**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.071 Soil NS0128 X140039-X140040	PE065689.072 Soil NS0128 X140071-X140072	PE065689.073 Soil NS0128 X140075-X140076	PE065689.074 Soil NS0128 X140081-X140072	PE065689.075 Soil NS0128 X140085-X140086
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**100**	**330**	**180**	**66**	**77**
pHox (NAG pH)	No unit	-		**9.0**	**5.2**	**8.0**	**8.7**	**8.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	**1.6**	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	**1.6**	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.076 Soil NS0128 X140091-X140092	PE065689.077 Soil NS0128 X140095-X140096	PE065689.078 Soil NS0089 X077279-X077280	PE065689.079 Soil NS0089 X077455-X077456	PE065689.080 Soil NS0089 X077451-X077452
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**210**	**280**	**77**	**190**	**320**
pHox (NAG pH)	No unit	-		**8.2**	**7.2**	**7.6**	**8.3**	**8.8**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.081 Soil NS0089 X077461-X077462	PE065689.082 Soil NS0089 X076880-X076881	PE065689.083 Soil NS0089 X076921-X076922	PE065689.084 Soil NS0089 X078899-X078900	PE065689.085 Soil NS0094 X078095-X078096
Single Addition Net Acid Generation (NAG) Method: AN216								
ECox (NAG Conductivity)	µS/cm	1		**230**	**67**	**330**	**70**	**170**
pHox (NAG pH)	No unit	-		**8.4**	**7.1**	**8.6**	**7.7**	**9.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.086 Soil NS0084 X076461-X076462	PE065689.087 Soil NS0084 X076586-X076857
Single Addition Net Acid Generation (NAG) Method: AN216					
ECox (NAG Conductivity)	µS/cm	1		**76**	**260**
pHox (NAG pH)	No unit	-		**7.8**	**8.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Single Addition Net Acid Generation (NAG) Method: ME-(AU)-[ENV]AN216

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
ECox (NAG Conductivity)	LB037621	µS/cm	1	9.0		
	LB037622	µS/cm	1	6.0		
	LB037623	µS/cm	1	7.7		
	LB037624	µS/cm	1	53		
	LB037625	µS/cm	1	43		
pHox (NAG pH)	LB037621	No unit	-	3.9	0 - 1%	105%
	LB037622	No unit	-	4.5	0 - 1%	106%
	LB037623	No unit	-	4.2	0 - 1%	102%
	LB037624	No unit	-	4.8	1%	108%
	LB037625	No unit	-	4.9	1%	108%
NAG as kg H_2SO_4/tonne to pH 4.5	LB037621	kg H2SO4/T	0.5	<0.5	0%	107%
	LB037622	kg H2SO4/T	0.5	<0.5	0%	102%
	LB037623	kg H2SO4/T	0.5	<0.5	0%	107%
	LB037624	kg H2SO4/T	0.5	<0.5	0%	97%
	LB037625	kg H2SO4/T	0.5	<0.5	0%	97%
NAG as kg H_2SO_4/tonne to pH 7	LB037621	kg H2SO4/T	0.5	<0.5	0%	99%
	LB037622	kg H2SO4/T	0.5	<0.5	0%	95%
	LB037623	kg H2SO4/T	0.5	<0.5	0%	97%
	LB037624	kg H2SO4/T	0.5	<0.5	0%	90%
	LB037625	kg H2SO4/T	0.5	<0.5	0%	93%
NAG as kg CaCO3/tonne to pH 4.5	LB037621	kg CaCO3/T	0.5	<0.5	0%	107%
	LB037622	kg CaCO3/T	0.5	<0.5	0%	102%
	LB037623	kg CaCO3/T	0.5	<0.5	0%	107%
	LB037624	kg CaCO3/T	0.5	<0.5	0%	97%
	LB037625	kg CaCO3/T	0.5	<0.5	0%	97%
NAG as kg CaCO3/tonne to pH 7	LB037621	kg CaCO3/T	0.5	<0.5	0%	99%
	LB037622	kg CaCO3/T	0.5	<0.5	0%	95%
	LB037623	kg CaCO3/T	0.5	<0.5	0%	97%
	LB037624	kg CaCO3/T	0.5	<0.5	0%	90%
	LB037625	kg CaCO3/T	0.5	<0.5	0%	93%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN216	Pulverised sub-sample of a waste rock or an as received sample of filter cake, soil or sludge is subjected to an oxidising digest with hydrogen peroxide. The pH and EC of the NAG suspension is recorded at various stages in the digest. The acid produced (if any) is titrated using standardised NaOH to pH 7.0. NAG results are reported to 0.5 kg H2SO4/tonne.

FOOTNOTES

IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
*	This analysis is not covered by the scope of accreditation.
^	Performed by outside laboratory.
LOR	Limit of Reporting
↑↓	Raised or Lowered Limit of Reporting
QFH	QC result is above the upper tolerance
QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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ANALYTICAL REPORT

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Project	**GHD_FMG_AMD_NORTHSTAR**	SGS Reference	PE065689 R1
Order Number	**Bulk Invoice**	Report Number	0000037164
Samples	87	Date Reported	23 Mar 2012
		Date Received	02 Mar 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

This report cancels and supersedes the report No. PE065689 R0 dated 20/03/2012 issued by SGS Environmental Services due to amendment to job description as requested by client

SIGNATORIES

Jeremy Truong
Inorganics Co-ordinator

Michael McKay
Inorganic Team Leader - Waters

Parameter	Units	LOR	Sample Number: PE065689.001 Sample Matrix: Soil Sample Name: NS0115 X081195-X081196	PE065689.002 Soil NS0115 X081211-X081212	PE065689.003 Soil NS0115 X081205-X081206	PE065689.004 Soil NS0115 X081179-X081180	PE065689.005 Soil NS0115 X081286-X081287
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1	**130**	**120**	**120**	**11**	**150**
pHox (NAG pH)	No unit	-	**7.9**	**8.1**	**7.5**	**7.4**	**8.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number: PE065689.006 Sample Matrix: Soil Sample Name: NS0115 X081241	PE065689.007 Soil NS0115 X081216	PE065689.008 Soil NS0115 X081276-X081277	PE065689.009 Soil NS0115 X081288-X081289	PE065689.010 Soil NS0115 X081282-X081283
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1	**160**	**96**	**90**	**190**	**92**
pHox (NAG pH)	No unit	-	**8.8**	**8.2**	**8.5**	**7.9**	**8.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number: PE065689.011 Sample Matrix: Soil Sample Name: NS0120 X081878-X081879	PE065689.012 Soil NS0120 X081869	PE065689.013 Soil NS0120 X081872-X081873	PE065689.014 Soil NS0120 X081882-X081883	PE065689.015 Soil NS0120 X081816
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1	**110**	**550**	**97**	**220**	**95**
pHox (NAG pH)	No unit	-	**8.9**	**3.6**	**9.0**	**6.8**	**9.2**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	**2.9**	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	**9.7**	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	**3.0**	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	**9.9**	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number: PE065689.016 Sample Matrix: Soil Sample Name: NS0120 X081888-X081889	PE065689.017 Soil NS0120 X081892-X081893	PE065689.018 Soil NS0120 X081842-X081843	PE065689.019 Soil NS0120 X081866-X081867	PE065689.020 Soil NS0120 X081822-X081823
Single Addition Net Acid Generation (NAG) **Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1	**170**	**200**	**120**	**670**	**130**
pHox (NAG pH)	No unit	-	**8.1**	**7.4**	**9.0**	**3.2**	**8.7**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	**6.4**	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5	<0.5	<0.5	<0.5	**12**	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	**6.5**	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5	<0.5	<0.5	<0.5	**12**	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.021 Soil NS0120 X081806-X081807	PE065689.022 Soil NS0120 X081836-X081837	PE065689.023 Soil NS0120 X081810-X081811	PE065689.024 Soil NS0120 X081898-X081899	PE065689.025 Soil NS0120 X081846-X081847
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**90**	**96**	**170**	**130**	**200**
pHox (NAG pH)	No unit	-		**9.3**	**9.3**	**8.5**	**7.9**	**8.6**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.026 Soil NS0120 X081858-X081859	PE065689.027 Soil NS0120 X081862-X081863	PE065689.028 Soil NS0120 X081852-X081853	PE065689.029 Soil NS0120 X081832-X081833	PE065689.030 Soil NS0120 X081826-X081827
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**210**	**230**	**190**	**120**	**110**
pHox (NAG pH)	No unit	-		**8.5**	**7.4**	**8.5**	**9.2**	**9.3**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.031 Soil NS0117 X081542-X081543	PE065689.032 Soil NS0117 X081546-X081547	PE065689.033 Soil NS0117 X081552-X081553	PE065689.034 Soil NS0117 X081568-X081569	PE065689.035 Soil NS0117 X081574-X081575
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**160**	**190**	**120**	**110**	**100**
pHox (NAG pH)	No unit	-		**8.2**	**7.9**	**8.3**	**8.4**	**8.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.036 Soil NS0117 X081558-X081559	PE065689.037 Soil NS0117 X081572-X081573	PE065689.038 Soil NS0117 X081528-X081529	PE065689.039 Soil NS0117 X081562-X081563	PE065689.040 Soil NS0117 X081522-X081523
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**190**	**99**	**80**	**140**	**120**
pHox (NAG pH)	No unit	-		**7.8**	**8.3**	**9.1**	**8.3**	**8.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.041 Soil NS0117 X081532-X081533	PE065689.042 Soil NS0117 X081536-X081537	PE065689.043 Soil NS0117 X081526-X081527	PE065689.044 Soil NS0117 X081538-X081539	PE065689.045 Soil NS0116 X081425-X081426
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**160**	**190**	**120**	**210**	**180**
pHox (NAG pH)	No unit	-		**8.8**	**8.6**	**9.0**	**8.6**	**8.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.046 Soil NS0116 X081363-X081364	PE065689.047 Soil NS0116 X081419-X081420	PE065689.048 Soil NS0116 X081405-X081406	PE065689.049 Soil NS0116 X081373-X081374	PE065689.050 Soil NS0116 X081409-X081410
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**310**	**180**	**180**	**190**	**140**
pHox (NAG pH)	No unit	-		**8.4**	**7.9**	**8.6**	**8.7**	**8.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.051 Soil NS0116 X081528-X081529	PE065689.052 Soil NS0116 X081415-X081416	PE065689.053 Soil NS0116 X081353-X081354	PE065689.054 Soil NS0116 X081333-X081334	PE065689.055 Soil NS0116 X081343-X081344
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**140**	**140**	**240**	**260**	**230**
pHox (NAG pH)	No unit	-		**8.5**	**8.8**	**8.5**	**8.2**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.056 Soil NS0116 X081369-X081370	PE065689.057 Soil NS0116 X081347-X081348	PE065689.058 Soil NS0116 X081337-X081338	PE065689.059 Soil NS0116 X081399-X081400	PE065689.060 Soil NS0116 X081393-X081394
Single Addition Net Acid Generation (NAG)	**Method: AN216**							
ECox (NAG Conductivity)	µS/cm	1		**150**	**420**	**140**	**150**	**250**
pHox (NAG pH)	No unit	-		**8.7**	**5.0**	**8.7**	**8.9**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	**2.0**	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	**2.0**	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.061 Soil NS0116 X081383-X081384	PE065689.062 Soil NS0116 X081379-X081380	PE065689.063 Soil NS0116 X081359	PE065689.064 Soil NS0116 X081389	PE065689.065 Soil NS0128 X140045-X140046
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**170**	**150**	**350**	**110**	**130**
pHox (NAG pH)	No unit	-		**8.8**	**9.1**	**8.2**	**9.3**	**8.5**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.066 Soil NS0128 X140049-X140050	PE065689.067 Soil NS0128 X140055-X140056	PE065689.068 Soil NS0128 X140061-X140062	PE065689.069 Soil NS0128 X140065-X140066	PE065689.070 Soil NS0128 X140035-X140036
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**130**	**150**	**110**	**200**	**140**
pHox (NAG pH)	No unit	-		**9.2**	**9.1**	**9.1**	**8.9**	**9.2**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.071 Soil NS0128 X140039-X140040	PE065689.072 Soil NS0128 X140071-X140072	PE065689.073 Soil NS0128 X140075-X140076	PE065689.074 Soil NS0128 X140081-X140072	PE065689.075 Soil NS0128 X140085-X140086
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**100**	**330**	**180**	**66**	**77**
pHox (NAG pH)	No unit	-		**9.0**	**5.2**	**8.0**	**8.7**	**8.9**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	**1.6**	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	**1.6**	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.076 Soil NS0128 X140091-X140092	PE065689.077 Soil NS0128 X140095-X140096	PE065689.078 Soil NS0089 X077279-X077280	PE065689.079 Soil NS0089 X077455-X077456	PE065689.080 Soil NS0089 X077451-X077452
Single Addition Net Acid Generation (NAG) **Method: AN216**								
ECox (NAG Conductivity)	µS/cm	1		**210**	**280**	**77**	**190**	**320**
pHox (NAG pH)	No unit	-		**8.2**	**7.2**	**7.6**	**8.3**	**8.8**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.081 Soil NS0089 X077461-X077462	PE065689.082 Soil NS0089 X076880-X076881	PE065689.083 Soil NS0089 X076921-X076922	PE065689.084 Soil NS0089 X078899-X078900	PE065689.085 Soil NS0094 X078095-X078096
Single Addition Net Acid Generation (NAG) Method: AN216								
ECox (NAG Conductivity)	µS/cm	1		**230**	**67**	**330**	**70**	**170**
pHox (NAG pH)	No unit	-		**8.4**	**7.1**	**8.6**	**7.7**	**9.1**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5	<0.5	<0.5	<0.5

Parameter	Units	LOR	Sample Number Sample Matrix Sample Name	PE065689.086 Soil NS0084 X076461-X076462	PE065689.087 Soil NS0084 X076586-X076857
Single Addition Net Acid Generation (NAG) Method: AN216					
ECox (NAG Conductivity)	µS/cm	1		**76**	**260**
pHox (NAG pH)	No unit	-		**7.8**	**8.4**
NAG as kg H_2SO_4/tonne to pH 4.5	kg H2SO4/T	0.5		<0.5	<0.5
NAG as kg H_2SO_4/tonne to pH 7	kg H2SO4/T	0.5		<0.5	<0.5
NAG as kg CaCO3/tonne to pH 4.5	kg CaCO3/T	0.5		<0.5	<0.5
NAG as kg CaCO3/tonne to pH 7	kg CaCO3/T	0.5		<0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Single Addition Net Acid Generation (NAG) **Method: ME-(AU)-[ENV]AN216**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
ECox (NAG Conductivity)	LB037621	µS/cm	1	9.0		
	LB037622	µS/cm	1	6.0		
	LB037623	µS/cm	1	7.7		
	LB037624	µS/cm	1	53		
	LB037625	µS/cm	1	43		
pHox (NAG pH)	LB037621	No unit	-	3.9	0 - 1%	105%
	LB037622	No unit	-	4.5	0 - 1%	106%
	LB037623	No unit	-	4.2	0 - 1%	102%
	LB037624	No unit	-	4.8	1%	108%
	LB037625	No unit	-	4.9	1%	108%
NAG as kg H_2SO_4/tonne to pH 4.5	LB037621	kg H2SO4/T	0.5	<0.5	0%	107%
	LB037622	kg H2SO4/T	0.5	<0.5	0%	102%
	LB037623	kg H2SO4/T	0.5	<0.5	0%	107%
	LB037624	kg H2SO4/T	0.5	<0.5	0%	97%
	LB037625	kg H2SO4/T	0.5	<0.5	0%	97%
NAG as kg H_2SO_4/tonne to pH 7	LB037621	kg H2SO4/T	0.5	<0.5	0%	99%
	LB037622	kg H2SO4/T	0.5	<0.5	0%	95%
	LB037623	kg H2SO4/T	0.5	<0.5	0%	97%
	LB037624	kg H2SO4/T	0.5	<0.5	0%	90%
	LB037625	kg H2SO4/T	0.5	<0.5	0%	93%
NAG as kg CaCO3/tonne to pH 4.5	LB037621	kg CaCO3/T	0.5	<0.5	0%	107%
	LB037622	kg CaCO3/T	0.5	<0.5	0%	102%
	LB037623	kg CaCO3/T	0.5	<0.5	0%	107%
	LB037624	kg CaCO3/T	0.5	<0.5	0%	97%
	LB037625	kg CaCO3/T	0.5	<0.5	0%	97%
NAG as kg CaCO3/tonne to pH 7	LB037621	kg CaCO3/T	0.5	<0.5	0%	99%
	LB037622	kg CaCO3/T	0.5	<0.5	0%	95%
	LB037623	kg CaCO3/T	0.5	<0.5	0%	97%
	LB037624	kg CaCO3/T	0.5	<0.5	0%	90%
	LB037625	kg CaCO3/T	0.5	<0.5	0%	93%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN216	Pulverised sub-sample of a waste rock or an as received sample of filter cake, soil or sludge is subjected to an oxidising digest with hydrogen peroxide. The pH and EC of the NAG suspension is recorded at various stages in the digest. The acid produced (if any) is titrated using standardised NaOH to pH 7.0. NAG results are reported to 0.5 kg H2SO4/tonne.

FOOTNOTES

IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
*	This analysis is not covered by the scope of accreditation.
^	Performed by outside laboratory.
LOR	Limit of Reporting
↑↓	Raised or Lowered Limit of Reporting
QFH	QC result is above the upper tolerance
QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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ANALYTICAL REPORT

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Chris Fowers	Manager	Said Hirad
Client	Fortescue Metal Group Ltd	Laboratory	SGS Newburn Environmental
Address	Level 2 . 87 Adelaide Terrace East Perth WA 6004	Address	10 Reid Rd Newburn WA 6105
Telephone	08 917 66 191	Telephone	(08) 9373 3500
Facsimile	(Not specified)	Facsimile	(08) 9373 3556
Email	cfowers@fmgl.com.au	Email	au.environmental.perth@sgs.com
Project	**GHD_FMG_AMD_NORTHSTAR**	SGS Reference	PE065689A R0
Order Number	**612739100**	Report Number	0000039012
Samples	5	Date Reported	30 Apr 2012
		Date Received	17 Apr 2012

COMMENTS

The document is issued in accordance with NATA's accreditation requirements.
Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

The Matrix Spike Recovery for Calcium and Sulfur failed the acceptance criteria due to a high concentration of the target analyte.

SIGNATORIES

Jeremy Truong
Inorganics Co-ordinator

Michael McKay
Inorganic Team Leader - Waters

Said Hirad
Laboratory Manager

Parameter	Units	LOR	Sample Number PE065689A.012 Sample Matrix Soil Sample Name NS0120 X081868-X081869
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**1200**
Sulphur, S	mg/kg	10	**9500**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065689A.019 Sample Matrix Soil Sample Name NS0120 X081866-X081867
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**1400**
Sulphur, S	mg/kg	10	**10000**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065689A.057 Sample Matrix Soil Sample Name NS0116 X081347-X0813748
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**3000**
Sulphur, S	mg/kg	10	**5500**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065689A.072 Sample Matrix Soil Sample Name NS0128 X140071-X140072
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**2400**
Sulphur, S	mg/kg	10	**4800**

Parameter	Units	LOR	Sample Number PE065689A.072 Sample Matrix Soil Sample Name NS0128 X140071-X140072
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065689A.082 Sample Matrix Soil Sample Name NS0089 X076880-X076881
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**230**
Sulphur, S	mg/kg	10	**58**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Moisture Content **Method: ME-(AU)-[ENV]AN002**

Parameter	QC Reference	Units	LOR	DUP %RPD
% Moisture	LB040037	%	0.5	0 - 5%

Total Recoverable Metals in Soil by ICPOES **Method: ME-(AU)-[ENV]AN/320AN321**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery	MSD %RPD
Calcium, Ca	LB039782	mg/kg	10	<10	1%	91%	179%	8%
Sulphur, S	LB039782	mg/kg	10	<10	2%	120%	779%	117%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN045	A portion of sample is digested with Nitric acid and Hydrogen Peroxide over time and then with Hydrochloric acid through several heating and cooling cycles. It provides a strong oxidising medium for bringing metal analytes into solution according to USEPA3050, after filtration the solution is presented for analysis on AAS or ICP.
AN320/AN321	Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.
AN320/AN321	Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements. Reference APHA 3120 B.

FOOTNOTES

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ANALYTICAL REPORT

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Order Number	**612739100**	Report Number	0000039012
Samples	5	Date Reported	30 Apr 2012
		Date Received	17 Apr 2012

COMMENTS

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The Matrix Spike Recovery for Calcium and Sulfur failed the acceptance criteria due to a high concentration of the target analyte.

SIGNATORIES

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Inorganics Co-ordinator

Michael McKay
Inorganic Team Leader - Waters

Said Hirad
Laboratory Manager

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Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

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Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**1400**
Sulphur, S	mg/kg	10	**10000**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

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Sulphur, S	mg/kg	10	**5500**
Moisture Content Method: AN002			
% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065689A.072 Sample Matrix Soil Sample Name NS0128 X140071-X140072
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
Calcium, Ca	mg/kg	10	**2400**
Sulphur, S	mg/kg	10	**4800**

Parameter	Units	LOR	Sample Number PE065689A.072 Sample Matrix Soil Sample Name NS0128 X140071-X140072
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% Moisture	%	0.5	<0.5

Parameter	Units	LOR	Sample Number PE065689A.082 Sample Matrix Soil Sample Name NS0089 X076880-X076881
Total Recoverable Metals in Soil by ICPOES Method: AN/320AN321			
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QC SUMMARY

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Moisture Content **Method: ME-(AU)-[ENV]AN002**

Parameter	QC Reference	Units	LOR	DUP %RPD
% Moisture	LB040037	%	0.5	0 - 5%

Total Recoverable Metals in Soil by ICPOES **Method: ME-(AU)-[ENV]AN/320AN321**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery	MSD %RPD
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METHOD	METHODOLOGY SUMMARY
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ANALYTICAL REPORT

WORLD RECOGNISED ACCREDITATION

CLIENT DETAILS

Contact	Fern Beavis
Client	GHD Pty Ltd
Address	PO Box Y3106 WA 6832
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Email	fern.beavis@ghd.com
Project	**Norst Star 612739100 Additional Testing**
Order Number	(Not specified)
Samples	5

LABORATORY DETAILS

Manager	Ros Ma
Laboratory	SGS Newburn Environmental
Address	10 Reid Rd Newburn WA 6105
Telephone	(08) 9373 3500
Facsimile	(08) 9373 3556
Email	au.environmental.perth@sgs.com
SGS Reference	**PE069651 R0**
Report Number	0000044405
Date Reported	14 Aug 2012
Date Received	09 Aug 2012

COMMENTS

Accredited for compliance with ISO/IEC 17025. NATA accredited laboratory 2562(898/20210).

SIGNATORIES

Hue Thanh Ly
Spectroscopy Chemist

Michael McKay
Inorganic Team Leader - Waters

Ohmar David
Spectroscopy Chemist

Ros Ma
Laboratory Assistant Manager

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	PE069651.001 Soil 23 May 2012 EP1201381045 NS0078	PE069651.002 Soil 29 May 2012 PE065688-026 NS00094	PE069651.003 Soil 29 May 2012 PE065688-007 NS00095	PE069651.004 Soil 24 May 2012 EP1201530012 NS0106	PE069651.005 Soil 24 May 2012 EP1201530008 NS0106
ASLP (Australian Standard Leaching Procedure) DI Water Method: AN007								
Mass of liquid expelled	g	-		-	-	-	-	-
pH of liquid expelled	pH Units	-		-	-	-	-	-
Percentage Solids*	%	-		-	-	-	-	-
Mass of test sample for extraction	g	-		**50**	**50**	**51**	**50**	**50**
Mass of leaching solution used	g	-		**1000**	**1000**	**1000**	**1000**	**1000**
Leaching solution used*	No unit	-		DI Water	DI Water	DI Water	DI Water	DI Water
pH of solids leachate	pH Units	-		**6.8**	**6.4**	**6.2**	**6.4**	**6.2**
Conductivity @25C	µS/cm	1		-	-	-	-	-
Alkalinity in ASLP DI Water Extract Method: AN135								
Bicarbonate Alkalinity as HCO3	mg/L	5		**16**	**5**	<5	**7**	<5
Carbonate Alkalinity as CO3	mg/L	1		<1	<1	<1	<1	<1
Hydroxide Alkalinity as OH	mg/L	5		<5	<5	<5	<5	<5
Total Alkalinity as CaCO3	mg/L	5		**13**	<5	<5	**6**	<5
Acidity of ASLP DI Water Extract Method: AN140								
Acidity to pH 8.3	mg CaCO3/L	5		<5	<5	<5	<5	<5
Chloride by Discrete Analyser in ASLP DI Water Extract Method: AN274								
Chloride	mg/L	1		<1	**4**	**2**	**2**	**2**
Sulphate in ASLP DI Water Extract Method: AN275								
Sulphate	mg/L	1		<1	<1	<1	<1	<1
Metals in Water (ASLP DI) by ICPOES Method: AN320/AN321								
Calcium, Ca	mg/L	0.2		**0.4**	**0.3**	<0.2	**0.3**	<0.2
Magnesium, Mg	mg/L	0.1		**0.3**	**0.2**	<0.1	**0.5**	<0.1
Potassium, K	mg/L	0.1		**0.5**	**0.2**	**0.3**	**0.4**	**0.1**
Sodium, Na	mg/L	0.5		**8.5**	**3.8**	**2.3**	**2.7**	**1.7**
Trace Metals in ASLP DI Extract by ICPMS Method: AN318								
Aluminium, Al	mg/L	0.001		**0.12**	**0.16**	**0.088**	**0.096**	**0.37**
Arsenic, As	mg/L	0.001		<0.001	<0.001	<0.001	<0.001	<0.001
Barium, Ba	mg/L	0.001		**0.11**	**0.057**	**0.029**	**0.11**	**0.026**
Beryllium, Be	mg/L	0.001		<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium, Cd	mg/L	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium, Cr	mg/L	0.001		**0.002**	<0.001	**0.001**	<0.001	**0.002**
Cobalt, Co	mg/L	0.001		<0.001	<0.001	<0.001	<0.001	<0.001
Copper, Cu	mg/L	0.001		**0.002**	<0.001	<0.001	**0.001**	<0.001
Iron, Fe	mg/L	0.005		**0.75**	**0.96**	**1.3**	**1.2**	**1.1**
Lead, Pb	mg/L	0.001		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese, Mn	mg/L	0.001		**0.002**	**0.053**	**0.064**	**0.062**	**0.019**
Nickel, Ni	mg/L	0.001		**0.002**	**0.002**	<0.001	**0.001**	<0.001
Selenium, Se	mg/L	0.002		<0.002	<0.002	<0.002	<0.002	<0.002
Vanadium, V	mg/L	0.001		<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, Zn	mg/L	0.001		**0.020**	**0.011**	**0.004**	**0.008**	**0.003**
Mercury in ASLP DI Water Extract Method: AN311/AN312								
Mercury	mg/L	0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Acidity of ASLP DI Water Extract **Method: ME-(AU)-[ENV]AN140**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD
Acidity to pH 8.3	LB047006	mg CaCO3/L	5	<5	0%

Alkalinity in ASLP DI Water Extract **Method: ME-(AU)-[ENV]AN135**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD
Bicarbonate Alkalinity as HCO3	LB047005	mg/L	5	<5	
Carbonate Alkalinity as CO3	LB047005	mg/L	1	<1	
Hydroxide Alkalinity as OH	LB047005	mg/L	5	<5	
Total Alkalinity as CaCO3	LB047005	mg/L	5	<5	0%

ASLP (Australian Standard Leaching Procedure) DI Water **Method: ME-(AU)-[ENV]AN007**

Parameter	QC Reference	Units	LOR	MB
Mass of test sample for extraction	LB046920	g	-	50
Mass of leaching solution used	LB046920	g	-	1000
Leaching solution used*	LB046920	No unit	-	DI Water
pH of solids leachate	LB046920	pH Units	-	5.7

Chloride by Discrete Analyser in ASLP DI Water Extract **Method: ME-(AU)-[ENV]AN274**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD
Chloride	LB047040	mg/L	1	<1	12%

Mercury in ASLP DI Water Extract **Method: ME-(AU)-[ENV]AN311/AN312**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD
Mercury	LB046995	mg/L	0.0001	<0.0001	0%

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Metals in Water (ASLP DI) by ICPOES Method: ME-(AU)-[ENV]AN320/AN321

Parameter	QC Reference	Units	LOR	MB	DUP %RPD
Calcium, Ca	LB046996	mg/L	0.2	<0.2	0%
Magnesium, Mg	LB046996	mg/L	0.1	<0.1	0%
Potassium, K	LB046996	mg/L	0.1	<0.1	8%
Sodium, Na	LB046996	mg/L	0.5	<0.5	17%

Sulphate in ASLP DI Water Extract Method: ME-(AU)-[ENV]AN275

Parameter	QC Reference	Units	LOR	MB	DUP %RPD
Sulphate	LB047040	mg/L	1	<1	0%

Trace Metals in ASLP DI Extract by ICPMS Method: ME-(AU)-[ENV]AN318

Parameter	QC Reference	Units	LOR	MB	DUP %RPD
Aluminium, Al	LB046997	mg/L	0.001	<0.001	13%
Arsenic, As	LB046997	mg/L	0.001	<0.001	0%
Barium, Ba	LB046997	mg/L	0.001	<0.001	9%
Beryllium, Be	LB046997	mg/L	0.001	<0.001	0%
Cadmium, Cd	LB046997	mg/L	0.0001	<0.0001	0%
Chromium, Cr	LB046997	mg/L	0.001	<0.001	32%
Cobalt, Co	LB046997	mg/L	0.001	<0.001	0%
Copper, Cu	LB046997	mg/L	0.001	<0.001	21%
Iron, Fe	LB046997	mg/L	0.005	<0.005	2%
Lead, Pb	LB046997	mg/L	0.001	<0.001	0%
Manganese, Mn	LB046997	mg/L	0.001	<0.001	5%
Nickel, Ni	LB046997	mg/L	0.001	<0.001	0%
Selenium, Se	LB046997	mg/L	0.002	<0.002	0%
Vanadium, V	LB046997	mg/L	0.001	<0.001	0%
Zinc, Zn	LB046997	mg/L	0.001	<0.001	18%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN007	Contaminants of interest in a waste material are leached out of the waste with a selected leaching solution under controlled conditions. The ratio of sample to extraction fluid is 100 g to 2 L (1 to 20 by mass). The concentration of each contaminant of interest is determined in the leachate by appropriate methods after separation from the sample by filtering.
AN135	Alkalinity (and forms of) by Titration: The sample Extract is titrated with standard acid to pH 8.3 (P titre) and pH 4.5 (T titre) and permanent and/or total alkalinity calculated. The results are expressed as equivalents of calcium carbonate or recalculated as bicarbonate, carbonate and hydroxide. Reference APHA 2320. Internal Reference AN135
AN140	Acidity by Tritration: The water/extract sample is titrated with sodium hydroxide to designated pH end point. In a sample containing only carbon dioxide, bicarbonates and carbonates, titration to pH 8.3 at 25°C corresponds to stoichiometric neutralisation of carbonic acid to bicarbonate. Method reference APHA 2310 B.
AN274	Chloride by Aquakem DA following ASLP DI extraction: Chloride reacts with mercuric thiocyanate forming a mercuric chloride complex. In the presence of ferric iron, highly coloured ferric thiocyanate is formed which is proportional to the chloride concentration. Reference APHA 4500Cl-
AN275	Sulphate by Aquakem DA from ASLP DI Water Extract: Sulphate is precipitated in an acidic medium with barium chloride. The resulting turbidity is measured photometrically at 405nm and compared with standard calibration solutions to determine the sulphate concentration in the sample. Reference APHA 4500-SO42-. Internal reference AN275.
AN311/AN312	Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.
AN318	Determination of elements at trace level in waters by ICP-MS technique, in accordance with USEPA 6020A.
AN320/AN321	Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.
AN320/AN321	Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements. Reference APHA 3120 B.

FOOTNOTES

IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
*	This analysis is not covered by the scope of accreditation.
^	Performed by outside laboratory.
LOR	Limit of Reporting
↑↓	Raised or Lowered Limit of Reporting
QFH	QC result is above the upper tolerance
QFL	QC result is below the lower tolerance
-	The sample was not analysed for this analyte
NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

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STATEMENT OF QA/QC PERFORMANCE

PE069651 R0

CLIENT DETAILS

Contact	Fern Beavis
Client	GHD Pty Ltd
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Email	fern.beavis@ghd.com
Project	**Norst Star 612739100 Additional Testing**
Order Number	(Not specified)
Samples	5

LABORATORY DETAILS

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SGS Reference	PE069651 R0
Report Number	0000044406
Date Reported	14 Aug 2012

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS Environmental Services' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document and was supplied by the Client.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
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All Data Quality Objectives were met with the exception of the following:

Extraction Date	Acidity of ASLP DI Water Extract	5 items
	Alkalinity in ASLP DI Water Extract	5 items
	Chloride by Discrete Analyser in ASLP DI Water Extract	5 items
	Mercury in ASLP DI Water Extract	5 items
	Sulphate in ASLP DI Water Extract	5 items
Analysis Date	Chloride by Discrete Analyser in ASLP DI Water Extract	5 items
	Mercury in ASLP DI Water Extract	5 items
	Sulphate in ASLP DI Water Extract	5 items

SAMPLE SUMMARY

Sample counts by matrix	5 Soil	Type of documentation received	COC
Date documentation received	9/8/2012	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	20°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes	Number of eskies/boxes received	1

HOLDING TIME SUMMARY

PE069651 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Acidity of ASLP DI Water Extract

Method: ME-(AU)-[ENV]AN140

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
EP1201381045 NS0078	PE069651.001	LB047006	23 May 2012	09 Aug 2012	06 Jun 2012	13 Aug 2012†	14 Aug 2012	14 Aug 2012
PE065688-026 NS00094	PE069651.002	LB047006	29 May 2012	09 Aug 2012	12 Jun 2012	13 Aug 2012†	14 Aug 2012	14 Aug 2012
PE065688-007 NS00095	PE069651.003	LB047006	29 May 2012	09 Aug 2012	12 Jun 2012	13 Aug 2012†	14 Aug 2012	14 Aug 2012
EP1201530012 NS0106	PE069651.004	LB047006	24 May 2012	09 Aug 2012	07 Jun 2012	13 Aug 2012†	14 Aug 2012	14 Aug 2012
EP1201530008 NS0106	PE069651.005	LB047006	24 May 2012	09 Aug 2012	07 Jun 2012	13 Aug 2012†	14 Aug 2012	14 Aug 2012

Alkalinity in ASLP DI Water Extract

Method: ME-(AU)-[ENV]AN135

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
EP1201381045 NS0078	PE069651.001	LB047005	23 May 2012	09 Aug 2012	30 May 2012	13 Aug 2012†	15 Aug 2012	13 Aug 2012
PE065688-026 NS00094	PE069651.002	LB047005	29 May 2012	09 Aug 2012	05 Jun 2012	13 Aug 2012†	15 Aug 2012	13 Aug 2012
PE065688-007 NS00095	PE069651.003	LB047005	29 May 2012	09 Aug 2012	05 Jun 2012	13 Aug 2012†	15 Aug 2012	13 Aug 2012
EP1201530012 NS0106	PE069651.004	LB047005	24 May 2012	09 Aug 2012	31 May 2012	13 Aug 2012†	15 Aug 2012	13 Aug 2012
EP1201530008 NS0106	PE069651.005	LB047005	24 May 2012	09 Aug 2012	31 May 2012	13 Aug 2012†	15 Aug 2012	13 Aug 2012

ASLP (Australian Standard Leaching Procedure) DI Water

Method: ME-(AU)-[ENV]AN007

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
EP1201381045 NS0078	PE069651.001	LB046920	23 May 2012	09 Aug 2012	19 Nov 2012	10 Aug 2012	19 Nov 2012	14 Aug 2012
PE065688-026 NS00094	PE069651.002	LB046920	29 May 2012	09 Aug 2012	25 Nov 2012	10 Aug 2012	25 Nov 2012	14 Aug 2012
PE065688-007 NS00095	PE069651.003	LB046920	29 May 2012	09 Aug 2012	25 Nov 2012	10 Aug 2012	25 Nov 2012	14 Aug 2012
EP1201530012 NS0106	PE069651.004	LB046920	24 May 2012	09 Aug 2012	20 Nov 2012	10 Aug 2012	20 Nov 2012	14 Aug 2012
EP1201530008 NS0106	PE069651.005	LB046920	24 May 2012	09 Aug 2012	20 Nov 2012	10 Aug 2012	20 Nov 2012	14 Aug 2012

Chloride by Discrete Analyser in ASLP DI Water Extract

Method: ME-(AU)-[ENV]AN274

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
EP1201381045 NS0078	PE069651.001	LB047040	23 May 2012	09 Aug 2012	20 Jun 2012	13 Aug 2012†	20 Jun 2012	13 Aug 2012†
PE065688-026 NS00094	PE069651.002	LB047040	29 May 2012	09 Aug 2012	26 Jun 2012	13 Aug 2012†	26 Jun 2012	13 Aug 2012†
PE065688-007 NS00095	PE069651.003	LB047040	29 May 2012	09 Aug 2012	26 Jun 2012	13 Aug 2012†	26 Jun 2012	13 Aug 2012†
EP1201530012 NS0106	PE069651.004	LB047040	24 May 2012	09 Aug 2012	21 Jun 2012	13 Aug 2012†	21 Jun 2012	13 Aug 2012†
EP1201530008 NS0106	PE069651.005	LB047040	24 May 2012	09 Aug 2012	21 Jun 2012	13 Aug 2012†	21 Jun 2012	13 Aug 2012†

Mercury in ASLP DI Water Extract

Method: ME-(AU)-[ENV]AN311/AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
EP1201381045 NS0078	PE069651.001	LB046995	23 May 2012	09 Aug 2012	20 Jun 2012	13 Aug 2012†	20 Jun 2012	13 Aug 2012†
PE065688-026 NS00094	PE069651.002	LB046995	29 May 2012	09 Aug 2012	26 Jun 2012	13 Aug 2012†	26 Jun 2012	13 Aug 2012†
PE065688-007 NS00095	PE069651.003	LB046995	29 May 2012	09 Aug 2012	26 Jun 2012	13 Aug 2012†	26 Jun 2012	13 Aug 2012†
EP1201530012 NS0106	PE069651.004	LB046995	24 May 2012	09 Aug 2012	21 Jun 2012	13 Aug 2012†	21 Jun 2012	13 Aug 2012†
EP1201530008 NS0106	PE069651.005	LB046995	24 May 2012	09 Aug 2012	21 Jun 2012	13 Aug 2012†	21 Jun 2012	13 Aug 2012†

Metals in Water (ASLP DI) by ICPOES

Method: ME-(AU)-[ENV]AN320/AN321

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
EP1201381045 NS0078	PE069651.001	LB046996	23 May 2012	09 Aug 2012	19 Nov 2012	13 Aug 2012	19 Nov 2012	14 Aug 2012
PE065688-026 NS00094	PE069651.002	LB046996	29 May 2012	09 Aug 2012	25 Nov 2012	13 Aug 2012	25 Nov 2012	14 Aug 2012
PE065688-007 NS00095	PE069651.003	LB046996	29 May 2012	09 Aug 2012	25 Nov 2012	13 Aug 2012	25 Nov 2012	14 Aug 2012
EP1201530012 NS0106	PE069651.004	LB046996	24 May 2012	09 Aug 2012	20 Nov 2012	13 Aug 2012	20 Nov 2012	14 Aug 2012
EP1201530008 NS0106	PE069651.005	LB046996	24 May 2012	09 Aug 2012	20 Nov 2012	13 Aug 2012	20 Nov 2012	14 Aug 2012

Sulphate in ASLP DI Water Extract

Method: ME-(AU)-[ENV]AN275

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
EP1201381045 NS0078	PE069651.001	LB047040	23 May 2012	09 Aug 2012	20 Jun 2012	13 Aug 2012†	20 Jun 2012	14 Aug 2012†
PE065688-026 NS00094	PE069651.002	LB047040	29 May 2012	09 Aug 2012	26 Jun 2012	13 Aug 2012†	26 Jun 2012	14 Aug 2012†
PE065688-007 NS00095	PE069651.003	LB047040	29 May 2012	09 Aug 2012	26 Jun 2012	13 Aug 2012†	26 Jun 2012	14 Aug 2012†
EP1201530012 NS0106	PE069651.004	LB047040	24 May 2012	09 Aug 2012	21 Jun 2012	13 Aug 2012†	21 Jun 2012	14 Aug 2012†
EP1201530008 NS0106	PE069651.005	LB047040	24 May 2012	09 Aug 2012	21 Jun 2012	13 Aug 2012†	21 Jun 2012	14 Aug 2012†

Trace Metals in ASLP DI Extract by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
EP1201381045 NS0078	PE069651.001	LB046997	23 May 2012	09 Aug 2012	19 Nov 2012	13 Aug 2012	19 Nov 2012	14 Aug 2012
PE065688-026 NS00094	PE069651.002	LB046997	29 May 2012	09 Aug 2012	25 Nov 2012	13 Aug 2012	25 Nov 2012	14 Aug 2012
PE065688-007 NS00095	PE069651.003	LB046997	29 May 2012	09 Aug 2012	25 Nov 2012	13 Aug 2012	25 Nov 2012	14 Aug 2012
EP1201530012 NS0106	PE069651.004	LB046997	24 May 2012	09 Aug 2012	20 Nov 2012	13 Aug 2012	20 Nov 2012	14 Aug 2012
EP1201530008 NS0106	PE069651.005	LB046997	24 May 2012	09 Aug 2012	20 Nov 2012	13 Aug 2012	20 Nov 2012	14 Aug 2012

SURROGATES

PE069651 R0

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No surrogates were required for this job.

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in ASLP DI Water Extract

Method: ME-(AU)-[ENV]AN311/AN312

Sample Number	Parameter	Units	LOR	Result
LB046995.001	Mercury	mg/L	0.0001	<0.0001

Metals in Water (ASLP DI) by ICPOES

Method: ME-(AU)-[ENV]AN320/AN321

Sample Number	Parameter	Units	LOR	Result
LB046996.001	Calcium, Ca	mg/L	0.2	<0.2
	Magnesium, Mg	mg/L	0.1	<0.1
	Potassium, K	mg/L	0.1	<0.1
	Sodium, Na	mg/L	0.5	<0.5

Trace Metals in ASLP DI Extract by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result
LB046997.001	Aluminium, Al	mg/L	0.001	<0.001
	Arsenic, As	mg/L	0.001	<0.001
	Barium, Ba	mg/L	0.001	<0.001
	Beryllium, Be	mg/L	0.001	<0.001
	Cadmium, Cd	mg/L	0.0001	<0.0001
	Chromium, Cr	mg/L	0.001	<0.001
	Cobalt, Co	mg/L	0.001	<0.001
	Copper, Cu	mg/L	0.001	<0.001
	Iron, Fe	mg/L	0.005	<0.005
	Lead, Pb	mg/L	0.001	<0.001
	Manganese, Mn	mg/L	0.001	<0.001
	Nickel, Ni	mg/L	0.001	<0.001
	Selenium, Se	mg/L	0.002	<0.002
	Vanadium, V	mg/L	0.001	<0.001
	Zinc, Zn	mg/L	0.001	<0.001

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Acidity of ASLP DI Water Extract

Method: ME-(AU)-[ENV]AN140

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
PE069651.005	LB047006.007	Acidity to pH 8.3	mg CaCO3/L	5	<5	<5	200	0

Alkalinity in ASLP DI Water Extract

Method: ME-(AU)-[ENV]AN135

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
PE069651.005	LB047005.007	Total Alkalinity as CaCO3	mg/L	5	<5	<5	200	0

Chloride by Discrete Analyser in ASLP DI Water Extract

Method: ME-(AU)-[ENV]AN274

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
PE069651.005	LB047040.007	Chloride	mg/L	1	2	2	71	12

Mercury in ASLP DI Water Extract

Method: ME-(AU)-[ENV]AN311/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
PE069651.005	LB046995.007	Mercury	µg/L	0.0001	<0.0001	<0.0001	200	0

Metals in Water (ASLP DI) by ICPOES

Method: ME-(AU)-[ENV]AN320/AN321

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
PE069651.005	LB046996.007	Calcium, Ca	mg/L	0.2	<0.2	<0.2	200	0
		Magnesium, Mg	mg/L	0.1	<0.1	<0.1	200	0
		Potassium, K	mg/L	0.1	0.1	0.1	90	8
		Sodium, Na	mg/L	0.5	1.7	2.0	43	17

Sulphate in ASLP DI Water Extract

Method: ME-(AU)-[ENV]AN275

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
PE069651.005	LB047040.007	Sulphate	mg/L	1	<1	<1	200	0

Trace Metals in ASLP DI Extract by ICPMS

Method: ME-(AU)-[ENV]AN318

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
PE069651.005	LB046997.007	Aluminium, Al	µg/L	0.001	0.37	0.32	15	13
		Arsenic, As	µg/L	0.001	<0.001	<0.001	200	0
		Barium, Ba	µg/L	0.001	0.026	0.028	19	9
		Beryllium, Be	µg/L	0.001	<0.001	<0.001	200	0
		Cadmium, Cd	µg/L	0.0001	<0.0001	<0.0001	200	0
		Chromium, Cr	µg/L	0.001	0.002	0.002	65	32
		Cobalt, Co	µg/L	0.001	<0.001	<0.001	200	0
		Copper, Cu	µg/L	0.001	<0.001	0.001	115	21
		Iron, Fe	µg/L	0.005	1.1	1.0	15	2
		Lead, Pb	µg/L	0.001	<0.001	<0.001	200	0
		Manganese, Mn	µg/L	0.001	0.019	0.020	20	5
		Nickel, Ni	µg/L	0.001	<0.001	<0.001	133	0
		Selenium, Se	µg/L	0.002	<0.002	<0.002	200	0
		Vanadium, V	µg/L	0.001	<0.001	<0.001	200	0
		Zinc, Zn	µg/L	0.001	0.003	0.004	46	18

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

No laboratory control standards were required for this job.

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub -sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spikes were required for this job.

MATRIX SPIKE DUPLICATES

PE069651 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here:
http://www.au.sgs.com/sgs-mp-au-env-qu-022-qa-qc-plan-en-11.pdf

*	Non-accredited analysis.
-	Sample not analysed for this analyte.
^	Analysis performed by external laboratory.

IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.

①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Low surrogate recovery due to the sample emulsifying during extraction.
†	Refer to Analytical Report comments for further information.

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Document Status

Rev No.	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
A	D Morgan	S Pearce		A Kemp		
B	F Beavis	S Winchester		A Kemp		
0	F Beavis	S Winchester		D Horn		16/11/2012