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Dear Natassja,

## **CORUNNA DOWNS PROJECT – WASTE ROCK GEOCHEMICAL ASSESSMENT**

Mine Earth was commissioned by Atlas Iron Limited (Atlas) to undertake a waste rock assessment on targeted zones for the Razorback, Runway, Shark Gully and Split Rock deposits at the Corunna Downs Project (the Project).

The waste rock geochemistry of the listed deposits had previously been characterised by MWH (2016). A review of this assessment by the Department of Mines, Industry Regulation and Safety (DMIRS) identified the need for further testwork to better characterise the geochemical properties of the expected waste rock. Additionally, further investigation of mercury levels within Split Rock shale samples was required.

The objectives of the assessment were to:

- Work with Atlas geology personnel to identify shale samples from the Split Rock deposit that were representative of the two shale units to be mined.
- Work with Atlas geology personnel to identify additional samples from the Razorback, Runway and Shark Gully deposit that are representative of the waste rock to be mined.
- Undertake laboratory analysis on the selected sample zones to better understand their geochemical character and, in the case of Split Rock, the stability and solubility of Hg.
- Review the testwork results with Dr Graeme Campbell (Graeme Campbell and Associates Pty Ltd) and develop appropriate recommendations for waste rock management during mining, if required.

This memorandum describes the outcomes from the waste rock assessment: background information is presented in Section 1, testwork methods are presented in Section 2, results are presented in Section 3, and a summary is presented in Section 4.

## 1. Background

Further carbonaceous shale samples from the Split Rock deposit (geozone codes: 102, 112) were required for the characterisation of elevated mercury (Hg) results seen in previous testwork (MWH, 2016). As the sampled material from MWH (2016) was unavailable, additional material had to be obtained from nearby reverse circulation (RC) drillholes. A total of 6 samples of predominantly shale material (as logged by Atlas geologists) were tested to determine the behaviour of Hg. All shale samples selected were chosen from sources as close to the proposed pit shell as possible, to be best representative of the expected waste rock.

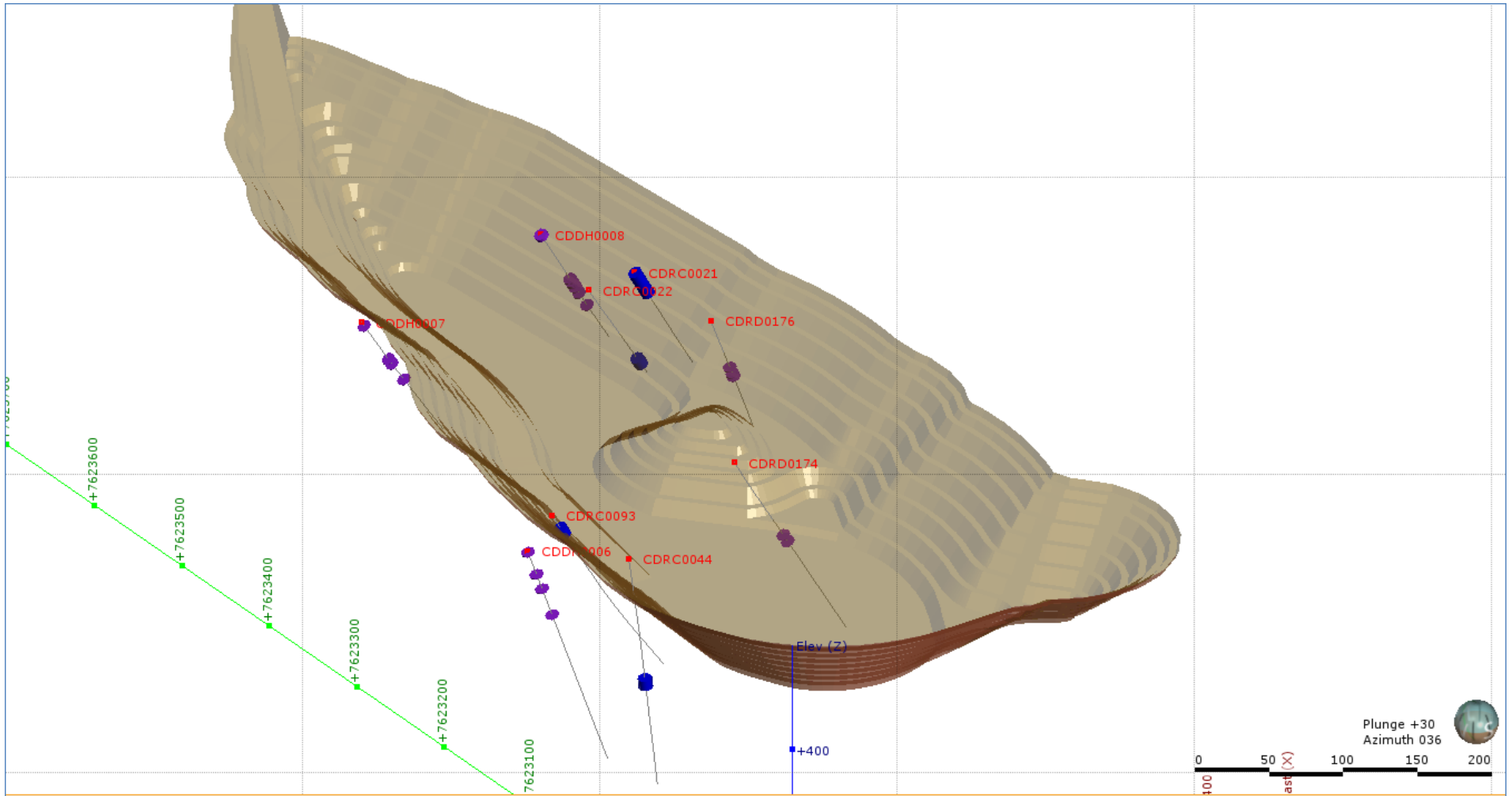
The locations of these samples in the current assessment, in relation to the drillholes tested by MWH (2016), are presented within Figure 1.

Based on the waste rock volumes for each deposit, the number of samples from MWH (2016) for the Razorback, Runway and Shark Gully deposits were deemed insufficient as per the Materials Characterisation Guidelines (DMP, 2016) developed by the Department of Mines, Industrial Regulation and Safety (DMIRS), Western Australia. The number of samples studied by MWH (2016), along with the recommended number by DMIRS, are presented within Table 1. As an additional consideration, the Runway deposit consisted of a north and south pit, for which MWH (2016) only analysed samples from the south pit.

Based on these sample numbers, a further 9 samples from Razorback, 5 samples from Runway north, 2 samples from Runway south and 2 samples from Shark Gully were allocated for testwork during the current assessment. The extra samples chosen also considered the dominant lithologies identified at each deposit (Table 2). The location of the drillholes utilised within MWH (2016) and those for the current assessment, are presented in Figure 2 (Razorback), Figure 3 (Runway) and Figure 4 (Shark Gully).

**Table 1 Sample numbers compared to the DMIRS recommendations**

Deposit	MWH 2016 samples	Total including current study	DMIRS recommendation
Split Rock	23	29	26-80
Razorback	0	9	8
Runway	9	16	8-26
Shark Gully	4	6	3-8



**Figure 1 Drillhole locations for geochemical samples at Split Rock (Purple – drill holes tested by MWH 2016; Blue – current assessment holes)**

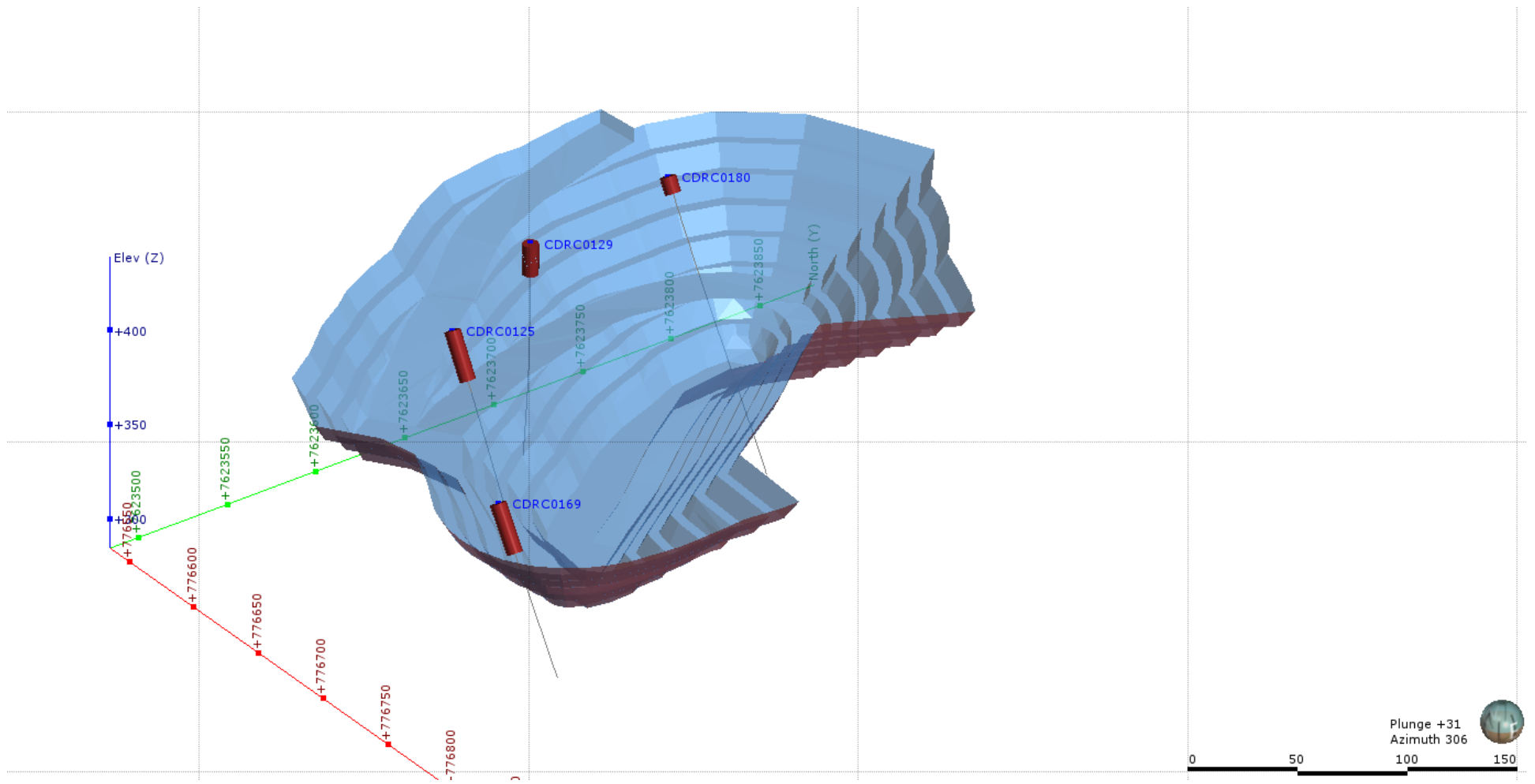
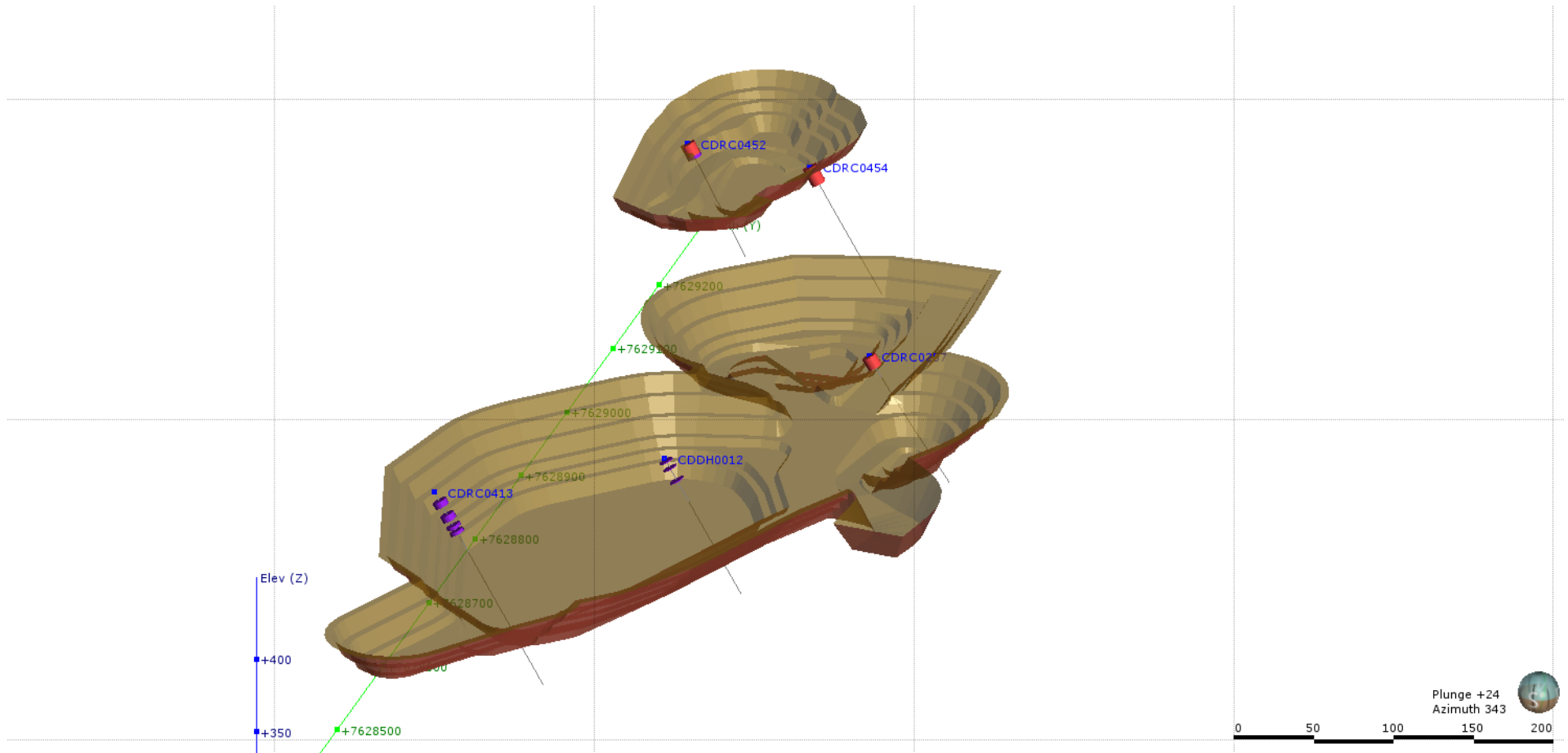
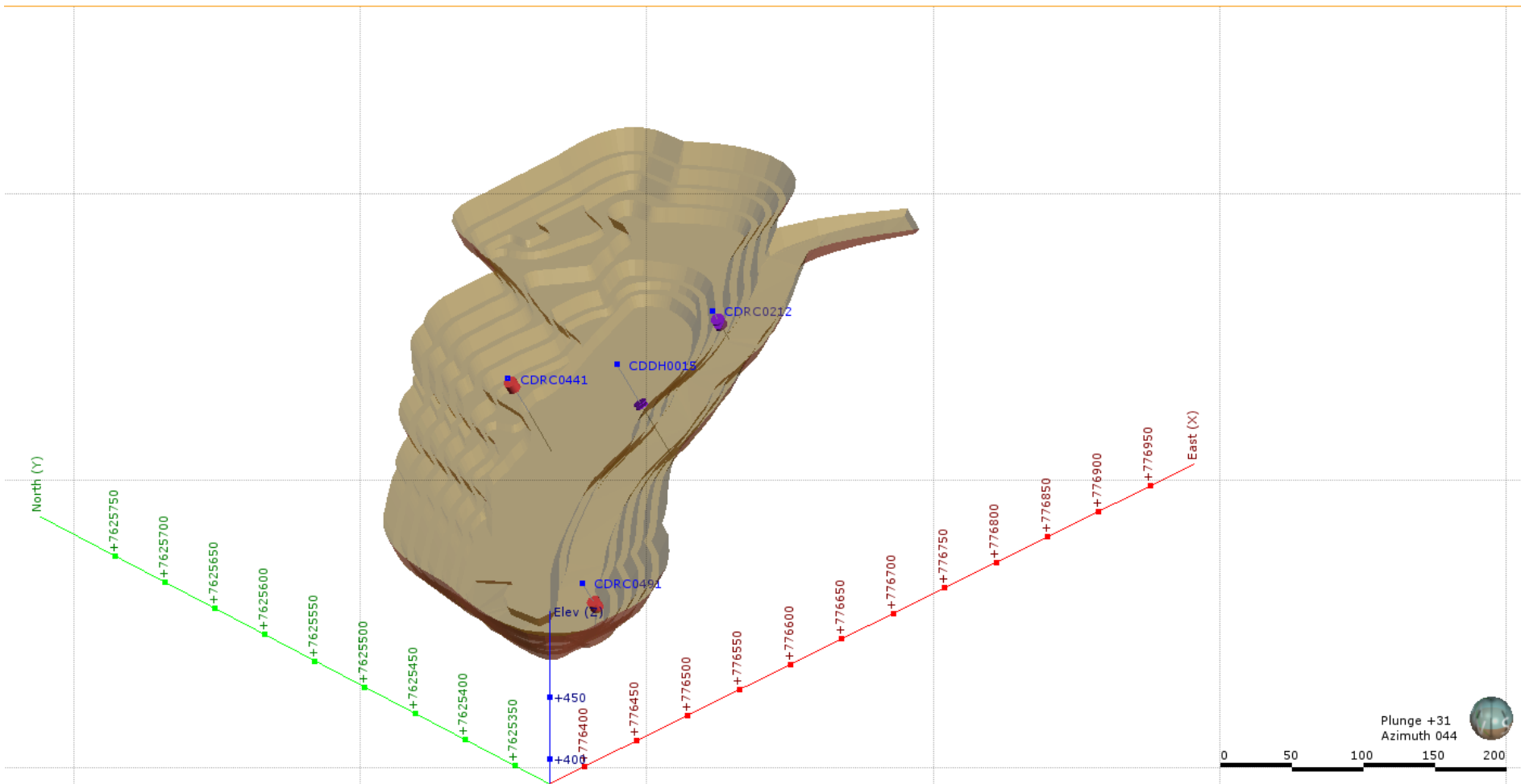


Figure 2 Drillhole locations for geochemical samples at Razorback (Red – current assessment holes)



**Figure 3 Drillhole locations for geochemical samples at Runway (Purple – MWH 2016 holes; Red – current assessment holes)**



**Figure 4** Drillhole locations for geochemical samples at Shark Gully (Purple – MWH 2016 holes; Red – current assessment holes)

**Table 2 Volumes and percentages for waste rocks at the Corunna Project (as of 6 April 2018)**

Deposit	Lithology	Volume (kbcm)	Percentage
<b>Split Rock</b>	Jaspilite	193	6.8 %
	Shale	642	22.7 %
	Banded Iron Formation	1,054	37.2 %
	Chert	774	27.3 %
	Shaly Chert	168	5.9 %
	<b>Total</b>	<b>2,831</b>	<b>100%</b>
<b>Razorback</b>	Chert	177	35.9 %
	Banded Iron Formation	315	64.1 %
	<b>Total</b>	<b>492</b>	<b>100%</b>
<b>Runway</b>	Clastic Sediment	16	2.3 %
	Banded Iron Formation	665	95.9 %
	Chert	13	1.8 %
	<b>Total</b>	<b>694</b>	<b>100%</b>
<b>Shark Gully</b>	Banded Iron Formation	341	100 %

## 2. Methods

For this study, samples for the Split Rock, Razorback and Shark Gully deposits were sourced from RC drilling material stored in chip trays. The chip tray material was composited over 8 metre intervals for each sample. Retained pulp sample material was able to be used for the Runway analysis.

The Split Rock shale samples were analysed for pH, EC, total sulphur and carbon, Hg (whole rock) and water extractable multielements (Al, Cd, Fe, Hg and Si).

Sample material from the Razorback, Runway and Shark Gully deposits were more conventionally analysed for pH, EC, total sulphur and carbon, acid-base accounting and suite of 33 multielements as the purpose of this testwork was simply to ascertain the geochemical character of the additional samples.

All results are presented within Appendix A.

### 3. Geochemical Characteristics

#### Split Rock

MWH (2016) presented enriched Hg results within shales, in drillholes CDDH006 and CDDH008 (Figure 1). To determine the water solubility of the Hg in drainage waters, 6 similar shale samples from four nearby RC drillholes were tested during the current study using water extraction testwork. The results of the water extraction testwork, along with their whole-rock analysis values, are presented in Table 3.

**Table 3 Hg results for the Split Rock deposit (current assessment)**

Drillhole	Sample ID	Initial Hg ( $\mu\text{g}/\text{kg}$ )	Water Ext Hg ( $\mu\text{g}/\text{kg}$ )
CDRC0021	CDME01	39	untested (low Hg)
	CDME02	23	untested (low Hg)
	CDME03	65	untested (low Hg)
CDRC0022	CDME04	2,681	< 0.5 <sup>1</sup>
CDRC0044	CDME05	318	< 0.5
CDRC0093	CDME06	94	< 0.5

From these results it is apparent that even though the Hg concentrations seen in samples CDME04 and CDME05 are elevated (average background crustal abundance is  $\sim 50 \mu\text{g}/\text{kg}$  (Reimann & Caritat, 1998)), the solubility of this Hg in both acidic and neutral drainage waters is negligible. The Hg contents of shales in MWH (2016) ranged between the detection limit for that study ( $100 \mu\text{g}/\text{kg}$ ) and  $5,400 \mu\text{g}/\text{kg}$ . Of the 14 shale samples tested by MWH (2016), 4 samples exceeded  $1,000 \mu\text{g}/\text{kg}$ .

Sulphur and carbon analysis of these samples was also conducted to complement the multielement data. This testwork highlighted that samples CDME04 and CDME05 also displayed comparatively high sulphur percentages (5.05 % and 0.56 % respectively, with 2.14 % and 0.44 % carbon) indicating that they would most likely be potentially acid-forming (PAF). Sample CDME04 was from the eastern shale and CDME05 was from the western shale. It should be noted that the elevated Hg and S values identified within the current assessment may have a degree of magnification involved in them due to the very small sample size available. All shale samples analysed in MWH (2016) were however identified as non-acid forming (NAF).

Based on the results from the current assessment, in conjunction with the results from MWH (2016), only 2 samples from a total of 20 (between both studies) were classified as PAF. It therefore can be concluded that most of the shale from the Split Rock deposit (both west and east units) will be non-acid forming, with only discrete point sources being PAF.

#### Razorback

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<sup>1</sup>  $0.5 \mu\text{g}/\text{kg}$  represents the detection limit for this analytical method



The 9 samples analysed for the Razorback deposit were comprised of variable amounts of iron oxide sediments, chert, sandstone and shale. These samples were classified as NAF, with pH from 5.5-9.1, low salinity and elevated Bi, Sb and Te.

### **Runway**

The 7 samples analysed for the north and south pits at the Runway deposit were comprised of variable amounts of iron oxide sediments, chert and shale. These samples were classified as NAF, with pH from 5-7.5, low salinity and elevated Bi, Sb and Te. These results complement the similar NAF results from the Runway south pit in MWH (2016).

### **Shark Gully**

The 2 samples analysed for the Shark Gully deposit were comprised of variable amounts of iron oxide sediments and chert. These samples were classified as NAF, with pH from 5.3-5.4, low salinity and elevated Bi, Sb and Te. These results complement the similar NAF results from Shark Gully in MWH (2016).

## **4. Summary**

All laboratory results from the current geochemical assessment were reviewed in collaboration with Graeme Campbell and Associates (GCA).

Samples of PAF and Hg enriched shale material at the Split Rock deposit has been identified in both the western and eastern shale units but, of the total 20 samples between both assessments (current assessment and MWH (2016)), only 2 are classified as PAF. This shows that the occurrence of PAF material is likely to be isolated in discrete locations and may be geologically controlled. A preliminary, conservative cut off of 0.1 % sulphur could be used to delineate zones of likely PAF material until a more thorough assessment is conducted to refine a total sulphur cut off.

The remainder of the shale samples analysed from Split Rock were classified as NAF with varying quantities of buffering minerals. Of the samples from Split Rock that displayed Hg enrichment, it was indicated by the water extraction testwork that Hg solubility in both acidic and neutral drainage waters will be negligible.

It should be noted that the elevated Hg and S values identified within the current assessment may have a degree of magnification involved in them due to the very small sample size available.

Due to the likely erosive nature of the shale unit (creating stability issues) and to the isolated occurrences of elevated Hg (can be absorbed by plants), all NAF shale from the Split Rock pit should be buried deeper than 10 m from the final WRD surface (top surface and batters). The NAF shale does not need to be deposited on a base of geochemically benign waste rock. The rooting zone of most vegetation should occur within the top 10 m of the WRD surface, as governed by water holding capacity and frequency/magnitude of major, seasonal rainfall events. Burial of NAF shale deeper than 10 m from the final WRD surface should place this beyond the rooting zone of most vegetation.

It is recommended that the shale waste units from Split Rock are further examined during mining to determine what controls the distribution of elevated sulphur, and to allow for the definition of the spatial

extent of PAF waste rock. Should it be determined that the PAF shale comprises a minor volume of the shale unit overall (e.g. <10%), then the PAF shale could be co-mingled with other NAF waste rock and disposed in a similar manner as the NAF shale (i.e. >10 m from final WRD surface).

It is recommended that initial PAF cells are constructed and operated until such time that it can be shown that PAF shale variants are, and will remain, minor. Dedicated cells required for the construction and encapsulation of PAF shale should be:

- Constructed on a basal layer (minimum 5 m thickness) of geochemically benign waste rock.
- Covered with low permeability layers of traffic compacted waste rock (~0.5 m thick).
- A minimum thickness of 10 m over the low-permeability traffic compacted cover, to the final WRD surfaces (top surface and batters).
- Measures to minimise infiltration through the PAF cells should be implemented, such as mounding on the final WRD top surface to discourage ponding directly above the PAF cells.

The final design for PAF encapsulation cells, should they be required, will be determined based on the physical properties of as-mined waste rock, including the permeability of candidate cover materials.

The tested waste rock from the Razorback, Runway and Shark Gully deposits were entirely NAF but were enriched in Bi, Sb and Te. Bismuth (Bi) will be 'fixed' within crystal lattices and Antimony (Sb) and Tellurium (Te) will remain strongly bound to iron complexes, rendering them environmentally inert. It should be noted that a small proportion of shale material could be encountered from the ramp in the southern Runway pit. No drilling samples for this material were available for testing.

It can be recommended that all waste rock from Razorback and Shark Gully is benign and should pose no risk from a geochemical perspective. Waste rock from the Razorback and Shark Gully deposits has no special management requirements and can be stored on final WRD surfaces.

The non-shale waste rock from the Runway deposit (both pits) can be recommended as benign and should pose no risk from a geochemical perspective. Shale material from the northern Runway pit has also been shown via testwork to be benign. The shale material in the southern Runway pit was not able to be tested and should conservatively be managed as per the recommendation for PAF shale from the Split Rock deposit. This recommendation should stand until such time that additional infill drilling and testwork can be completed during mining to confirm whether this material poses a geochemical risk.

**Closing**

In closing, please let me know if you have any queries and thank you for the opportunity to be of service.

Yours sincerely

**Mine Earth**



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**Glendon Wesley**

**SENIOR CONSULTANT**

## APPENDIX A – LABORATORY TEST RESULTS

### Drillhole depths for samples

Deposit	BHID	From	To	Sample	Lithology
<b>Split Rock</b>	CDRC0021	0	8	CDME01	Shale/Chert
	CDRC0021	8	16	CDME02	Shale
	CDRC0021	16	24	CDME03	Shale
	CDRC0022	78	86	CDME04	Carb Shale
	CDRC0044	100	108	CDME05	Shale/Chert/Iron Ore
	CDRC0093	14	22	CDME06	Shale/Chert
<b>Razorback</b>	CDRC0125	0	8	CDME07	Iron Ore/Chert
	CDRC0125	8	16	CDME08	Iron Ore/Chert
	CDRC0125	16	24	CDME09	Chert/Iron Ore
	CDRC0129	0	8	CDME10	Chert/Iron Ore
	CDRC0129	8	16	CDME11	Chert/Iron Ore
	CDRC0169	0	8	CDME12	Iron Ore/Chert
	CDRC0169	8	16	CDME13	Iron Ore/Chert
	CDRC0169	16	24	CDME14	Iron Ore/Chert/Shale
	CDRC0180	0	8	CDME15	Sandstone/Chert
<b>Runway</b>	CDRC0257	0	8	CDME16	Chert/Iron Ore
	CDRC0257	8	16	CDME17	Iron Ore/Chert
	CDRC0452	0	4	CDME18	Iron Ore/Chert
	CDRC0452	4	8	CDME19	Iron Ore/Chert/Shale
	CDRC0454	0	4	CDME20	Iron Ore/Shale
	CDRC0454	4	8	CDME21	Iron Ore/Shale
	CDRC0454	8	12	CDME22	Iron Ore/Shale
<b>Shark Gull</b>	CDRC0441	4	12	CDME23	Iron Ore
	CDRC0491	22	30	CDME24	Chert/Iron Ore

## Acid-Base Accounting Results

Deposit	BHID	Sample	Lithology	pH	H (H2O Ex)	NAG pH	% S	% C	μS/cm EC	kgH2SO4/t ANC	kgH2SO4/t NAG	kgH2SO4/t NAG (4.5)	MPA	NAPP	AFP	mg/kg Al	μg/kg Cd	mg/kg Fe	μg/kg Hg	mg/kg Si
Split Rock	CDRC0021	CDME01	Shale/Chert		8.4		0.03	4.52	348											
	CDRC0021	CDME02	Shale		7.6		0.01	0.12	257											
	CDRC0021	CDME03	Shale		8.4		0.02	1.46	309											
	CDRC0022	CDME04	Carb Shale		2.6		5.05	2.14	2710						paf	593	2.9	3145	X	X
	CDRC0044	CDME05	Shale/Chert/Iron Ore		2.8		0.56	0.44	1102						paf	51	1.5	297	X	X
	CDRC0093	CDME06	Shale/Chert		6.5		0.08	0.05	406							X	X	X	X	5
Razorback	CDRC0125	CDME07	Iron Ore/Chert	6.3		7	0.03	0.07	24	5	0	0	0.78	-4	NAF					
	CDRC0125	CDME08	Iron Ore/Chert	5.5		6.4	0.01	0.03	X	2	0	0	0.36	-2	NAF					
	CDRC0125	CDME09	Chert/Iron Ore	6.3		6.7	0.01	0.03	12	4	0	0	0.32	-3	NAF					
	CDRC0129	CDME10	Chert/Iron Ore	6.5		6.9	0.01	0.07	47	7	0	0	0.31	-6	NAF					
	CDRC0129	CDME11	Chert/Iron Ore	6.5		6.6	X		0.03	13	3	0	0.16	-3	NAF					
	CDRC0169	CDME12	Iron Ore/Chert	8.7		9.1	X		0.33	62	25	0	0.29	-25	NAF					
	CDRC0169	CDME13	Iron Ore/Chert	9		7.7	X		0.12	52	11	0	0.25	-11	NAF					
	CDRC0169	CDME14	Iron Ore/Chert/Shale	7.6		7.5	X		0.07	28	5	0	0.21	-5	NAF					
	CDRC0180	CDME15	Sandstone/Chert	9.1		7.9		0.01	0.23	211	17	0	0.33	-17	NAF					
Runway	CDRC0257	CDME16	Chert/Iron Ore	7.5		6.6	X		0.05	25	3	0	0.22	-3	NAF					
	CDRC0257	CDME17	Iron Ore/Chert	6.4		7	X		0.07	19	5	0	0.3	-5	NAF					
	CDRC0452	CDME18	Iron Ore/Chert	6.3		6.5		0.01	0.08	10	2	0	0.32	-2	NAF					
	CDRC0452	CDME19	Iron Ore/Chert/Shale	5		6.6	X		0.1	14	3	0	0.21	-3	NAF					
	CDRC0454	CDME20	Iron Ore/Shale	5.4		5.5		0.04	0.16	94	4	1	0	1.1	-3	NAF				
	CDRC0454	CDME21	Iron Ore/Shale	5.6		5.7		0.04	0.13	37	5	1	0	1.11	-4	NAF				
	CDRC0454	CDME22	Iron Ore/Shale	6.4		6.5		0.03	0.19	90	5	0	0	0.8	-4	NAF				
Shark Gully	CDRC0441	CDME23	Iron Ore	5.3		5.6		0.02	0.15	36	3	1	0	0.64	-2	NAF				
	CDRC0491	CDME24	Chert/Iron Ore	5.4		5.6		0.02	0.12	27	4	1	0	0.66	-3	NAF				
Water Ext			Water													24	10.2	242	X	50
			Blank		5.6											X	X	X	X	X

## Multielement Results - 1

Deposit	BHID	Sample	Lithology	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
				Ag	Al	As	Ba	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe	Hg	K	La	Li	Mg
Split Rock	CDRC0021	CDME01	Shale/Chert	X	51680	X	244	5	30199	X	23	2	288	167	5.73	39	16792	X	5	81635
	CDRC0021	CDME02	Shale	X	80173	X	297	X	1532	X	47	1	375	25	4.1	23	31345	23	6	4516
	CDRC0021	CDME03	Shale	X	84725	13	247	10	18643	X	32	8	667	146	13.75	65	29288	X	7	15571
	CDRC0022	CDME04	Carb Shale	X	79916	23	222	6	243	X	38	57	652	156	5.46	2681	35210	X	2	3350
	CDRC0044	CDME05	Shale/Chert/Iron Ore	X	16290	15	44	15	662	X	X	12	167	38	23.31	318	2233	X	7	1184
	CDRC0093	CDME06	Shale/Chert	X	31221	22	210	X	436	X	X		165	50	2.81	94	9196	X	12	969
Razorback	CDRC0125	CDME07	Iron Ore/Chert	X	6230	14	29	23	937	0.9	X	12	65	16	43.22		135	X	7	59
	CDRC0125	CDME08	Iron Ore/Chert	X	2966	10	28	19	X	X	X	8	134	7	33.2		94	X	4	44
	CDRC0125	CDME09	Chert/Iron Ore	X	3394	13	38	16	118	1.3	X	6	34	19	27.77		330	X	3	48
	CDRC0129	CDME10	Chert/Iron Ore	X	17749	X	129	10	545	X	X	11	197	27	14.73		442	X	8	483
	CDRC0129	CDME11	Chert/Iron Ore	X	4165	X	20	10	54	X	X	6	42	7	16.35		112	X	X	94
	CDRC0169	CDME12	Iron Ore/Chert	X	6623	13	38	24	7496	1.1	X	7	48	5	50.2		402	X	8	1179
	CDRC0169	CDME13	Iron Ore/Chert	X	3960	12	35	28	1560	2.5	X	7	32	2	52.51		92	X	9	1246
	CDRC0169	CDME14	Iron Ore/Chert/Shale	X	1668	X	12	18	681	X	X	6	39	2	35.85		57	X	4	266
	CDRC0180	CDME15	Sandstone/Chert	X	26760	10	54	X	3517	X	25	X	218	19	8.8		124	X	17	2232
	Runway	CDRC0257	CDME16	Chert/Iron Ore	X	3217	X	32	19	173	X	X	2	69	3	41.48		71	X	6
CDRC0257		CDME17	Iron Ore/Chert	X	4613	X	117	22	260	X	X	13	26	9	42.84		117	X	6	195
CDRC0452		CDME18	Iron Ore/Chert	X	18381	X	51	20	266	X	X	5	68	2	41.66		295	X	5	403
CDRC0452		CDME19	Iron Ore/Chert/Shale	X	2104	X	237	18	X	X	X	9	12	X	36.05		377	X	6	X
CDRC0454		CDME20	Iron Ore/Shale	X	49300	24	41	24	263	X	X	8	739	33	44.23		855	X	2	135
CDRC0454		CDME21	Iron Ore/Shale	X	37653	19	19	24	152	0.7	X	4	561	33	49.17		207	X	6	79
CDRC0454		CDME22	Iron Ore/Shale	X	58798	24	21	23	366	X	X	8	435	34	47.71		211	X	4	183
Shark Gully		CDRC0441	CDME23	Iron Ore	X	58506	17	18	20	69	X	21	8	431	43	45.63		180	X	2
	CDRC0491	CDME24	Chert/Iron Ore	X	53887	27	17	21	99	1.3	21	13	327	75	43.97		200	X	2	72

## Multielement Results - 2

Deposit	BHID	Sample	Lithology	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
				Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sn	Sr	Te	Ti	Tl	V	W	Zn
Split Rock	CDRC0021	CDME01	Shale/Chert	183	2	426	38	277	21	143 X		15 X	169	6	1630 X		143 X			21
	CDRC0021	CDME02	Shale	127 X		444	55	237	29	67	5	21 X	50 X		2917 X		189 X			30
	CDRC0021	CDME03	Shale	231 X		546	124	581	8	90 X		27 X	96	6	3268 X		213	6		85
	CDRC0022	CDME04	Carb Shale	16	2	309	240	255	19	53008 X		24 X	20 X		3151 X		176 X			25
	CDRC0044	CDME05	Shale/Chert/Iron Ore	72 X		89	55	392 X		6193	27	10 X	19	6	508 X		40 X			64
	CDRC0093	CDME06	Shale/Chert	72 X		494	34	146	37	789 X		7 X	58 X		1158 X		49 X			48
Razorback	CDRC0125	CDME07	Iron Ore/Chert	504 X		25	64	219	16	63	31	3 X	3	12	205 X		13 X			70
	CDRC0125	CDME08	Iron Ore/Chert	365 X		31	42	189 X		X	34	2 X	1	8	87 X		1 X			54
	CDRC0125	CDME09	Chert/Iron Ore	935 X		63	24	131	11 X		22	1 X	5	6	137 X	X	X			36
	CDRC0129	CDME10	Chert/Iron Ore	1941 X		150	67	199	8	60	17	5 X	12 X		789 X		36 X			67
	CDRC0129	CDME11	Chert/Iron Ore	631 X		60	69	211	14 X	X		2 X	4 X		87 X		6	6		106
	CDRC0169	CDME12	Iron Ore/Chert	387 X		63	46	167 X		X	35	1 X	8	8	304 X	X	X			48
	CDRC0169	CDME13	Iron Ore/Chert	457 X		53	42	218	8 X		39 X	X	7	17	117 X	X	X			56
	CDRC0169	CDME14	Iron Ore/Chert/Shale	297 X		24	37	148 X		X	21 X	X	2	7	47 X	X	X			48
	CDRC0180	CDME15	Sandstone/Chert	87 X		597	41	77	16	84	5	7 X	30 X		3251 X		45 X			9
Runway	CDRC0257	CDME16	Chert/Iron Ore	57 X		85	15	203 X		X	17 X	X	4	10	109 X	X			17	15
	CDRC0257	CDME17	Iron Ore/Chert	2256 X		141	52	220	13	65	24 X	X	6	9	224 X	X			11	136
	CDRC0452	CDME18	Iron Ore/Chert	180 X		91	15	451 X		76	31	1 X	6	8	1677 X		15		6 X	
	CDRC0452	CDME19	Iron Ore/Chert/Shale	15085 X		81	6	282 X		X	34 X	X	4	13	56	16 X			14	5
	CDRC0454	CDME20	Iron Ore/Shale	123 X		159	63	167	8	405	31	14 X	6	9	1967 X		99 X			5
	CDRC0454	CDME21	Iron Ore/Shale	174 X		60	47	169	10	436	54	12 X	3	8	1514 X		62 X			2
	CDRC0454	CDME22	Iron Ore/Shale	67 X		141	54	227 X		288	40	14 X	6	10	7194 X		184		16 X	
Shark Gully	CDRC0441	CDME23	Iron Ore	104 X		91	91	295 X		255	37	15 X	5	8	7451 X		123		13	28
	CDRC0491	CDME24	Chert/Iron Ore	174 X		79	104	314	14	219	42	13 X	5	12	6979 X		119		8	108

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