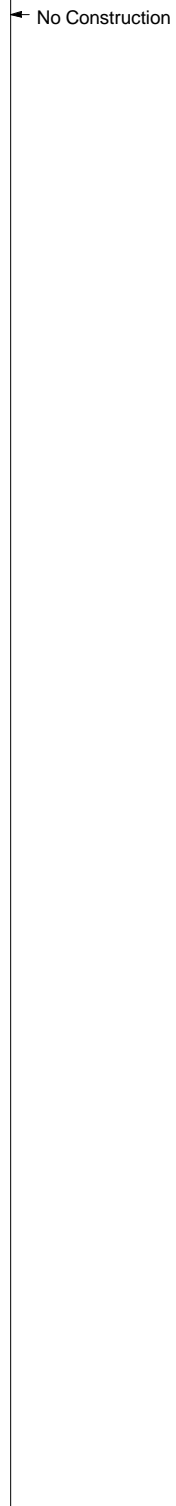


APPENDIX B

Drill Logs

PROJECT NUMBER M09812A03	CLIENT Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation	COMPLETION DATE 19/08/2013
LOCATION Browns Range	DRILL CONTRACTOR Welldrill
DRILLING METHOD Conventional Air-Hammer Rotary	COORDINATES 492142, 7910023, (MGA94 Zone 52)
SAMPLING METHOD Drill Chips	SURFACE ELEVATION 457.70
LOGGED BY Claire Kent	STICK UP (m) 0
TOTAL DEPTH (m) 200	BLANK Not Constructed
BOREHOLE SIZE(mm) 177	SCREEN Not Constructed
SWL (mbTOC) 38.32	

COMMENTS Coordinates: GPS, Hydrogeological Exploration Hole

DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
			Qz Qz	QUARTZ Highly weathered orange rock and iron staining.	2.00			
				SANDSTONE Coarse grained with sericite alteration (bleached zone).				
10	450				9.00			
				SANDSTONE Coarse grained bleached zone.				
20	440							
					30.00			
30	430			SANDSTONE Coarse grained with sericite alteration (bleached zone).				
					42.00		▼	
40	420			CLAY Hematite clay rich zone.	45.00			
				SANDSTONE Coarse grained with sericite alteration (bleached zone).		Water Strike 0.5 L/s		
50	410							
					73.00			
				QUARTZ Vein.	74.00			
				SAND Purple/orange, iron rich, feldspar.				
80	380							
90	370							
	360							

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03

CLIENT Northern Minerals Ltd.

PROJECT NAME Browns Range Stage 2 Investigation

COMPLETION DATE 19/08/2013

LOCATION Browns Range

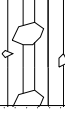
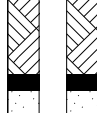




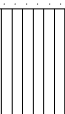

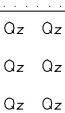
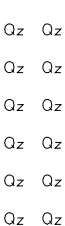
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DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
110	350			SAND Purple/orange, iron rich, feldspar.				
120	340					0.5 L/s		
130	330							
140	320							
150	310				150.00	1.25 L/s		
160	300			ARKOSE Deep purple feldspar rich.				
160	300				160.00			
170	290			SAND With feldspar.				
180	280							
190	270					1.8 L/s		
200	260				200.00			
200	260			Borehole terminated at 200.0 m		1.8 L/s		
250	250							

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03	CLIENT Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation	COMPLETION DATE 30/08/2013
LOCATION Browns Range	DRILL CONTRACTOR Welldrill
DRILLING METHOD Conventional Air-Hammer Rotary	COORDINATES 492213, 7909946, (MGA94 Zone 52)
SAMPLING METHOD Drill Chips	SURFACE ELEVATION 454.00
LOGGED BY Claire Kent	STICK UP (m) 0.558
TOTAL DEPTH (m) 200	BLANK Not Constructed
BOREHOLE SIZE(mm) 177	SCREEN Not Constructed
SWL (mbTOC) 36.81	

COMMENTS Coordinates: GPS, Monitoring Bore

DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
450				SAPROLITE Broken ground, oakre colour.				
10	440			SANDSTONE Bleached zone, white.	7.00			
20	430			SANDSTONE Bleached, coarse grained with liminite.	20.00			
30	420			SANDSTONE Coarse grained with green sericite alteration.	40.00		▼	
40	410			SANDSTONE Coarse grained with green sericite alteration.	63.00			
50	400			CLAY Light brown/beige with coarse grained sandstone.	70.00			
60	390			SANDSTONE Purple clayey, coarse grained.	78.00	Water Strike 1 L/s		
70	380			QUARTZ 95% quartz.	100.00			
80	370		Qz Qz					
90	360		Qz Qz					

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03

CLIENT Northern Minerals Ltd.

PROJECT NAME Browns Range Stage 2 Investigation

COMPLETION DATE 30/08/2013

LOCATION Browns Range

- Continued from Previous Page -

DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
350				SANDSTONE Light pink brown coarse grained, some feldspar, some clay.				
110								
340								
120				MUDSTONE Light green, mudstone, laminated, sericite and chlorite.	120.00	1 L/s		
330								
125				SANDSTONE Light green and pink, feldspar, quartz, mostly quartz.	125.00			
130								
320								
140						1.2 L/s		
310								
150								← Casing - 2" uPVC Class 18 Slotted
300				SANDSTONE Chloritic, dark green, fine grained.	155.00			
160								
290								
170								
280								← Backfill
180								
270								
184				SANDSTONE Red/brown, high iron content, feldspar, quartz, coarse grained.	184.00			
190								
260								
200				Borehole terminated at 200.0 m	200.00	1.8 L/s		
250								

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03	CLIENT Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation	COMPLETION DATE
LOCATION Browns Range	DRILL CONTRACTOR Welldrill
DRILLING METHOD Conventional Air-Hammer Rotary	COORDINATES 492178, 7909896, (MGA94 Zone 52)
SAMPLING METHOD Drill Chips	SURFACE ELEVATION 454.00
LOGGED BY Claire Kent	STICK UP (m)
TOTAL DEPTH (m) 200	BLANK Blank 0-144m
BOREHOLE SIZE(mm) 177	SCREEN Slotted 144-147m
SWL (mbTOC) 35.82	

COMMENTS Coordinates: GPS. Production Bore

DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
	450			NO RECOVERY No Chips.				Grout
	440			SANDSTONE With limonite, coarse grained, mostly quartz.	6.00			Bentonite Seal Casing - 8" uPVC Class 18 Solid
10	430			SANDSTONE Bleached zone - coarse grained, no limonite.	17.00			
20	420			SANDSTONE With higher Fe content. Clayey, dark red brown colour.	28.00			
30	410						▼	
40	400							
50	390							
60	380			QUARTZITE Translucent, quartz rich, some green minerals.	60.00	Water Strike		
70	370							
80	360							
90								

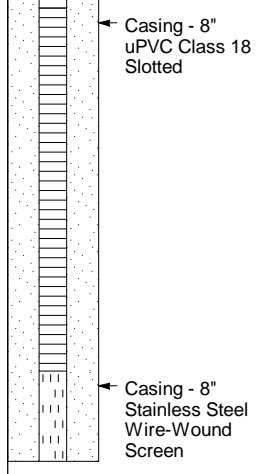
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PROJECT NUMBER M09812A03 **CLIENT** Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation **COMPLETION DATE** _____
LOCATION Browns Range _____

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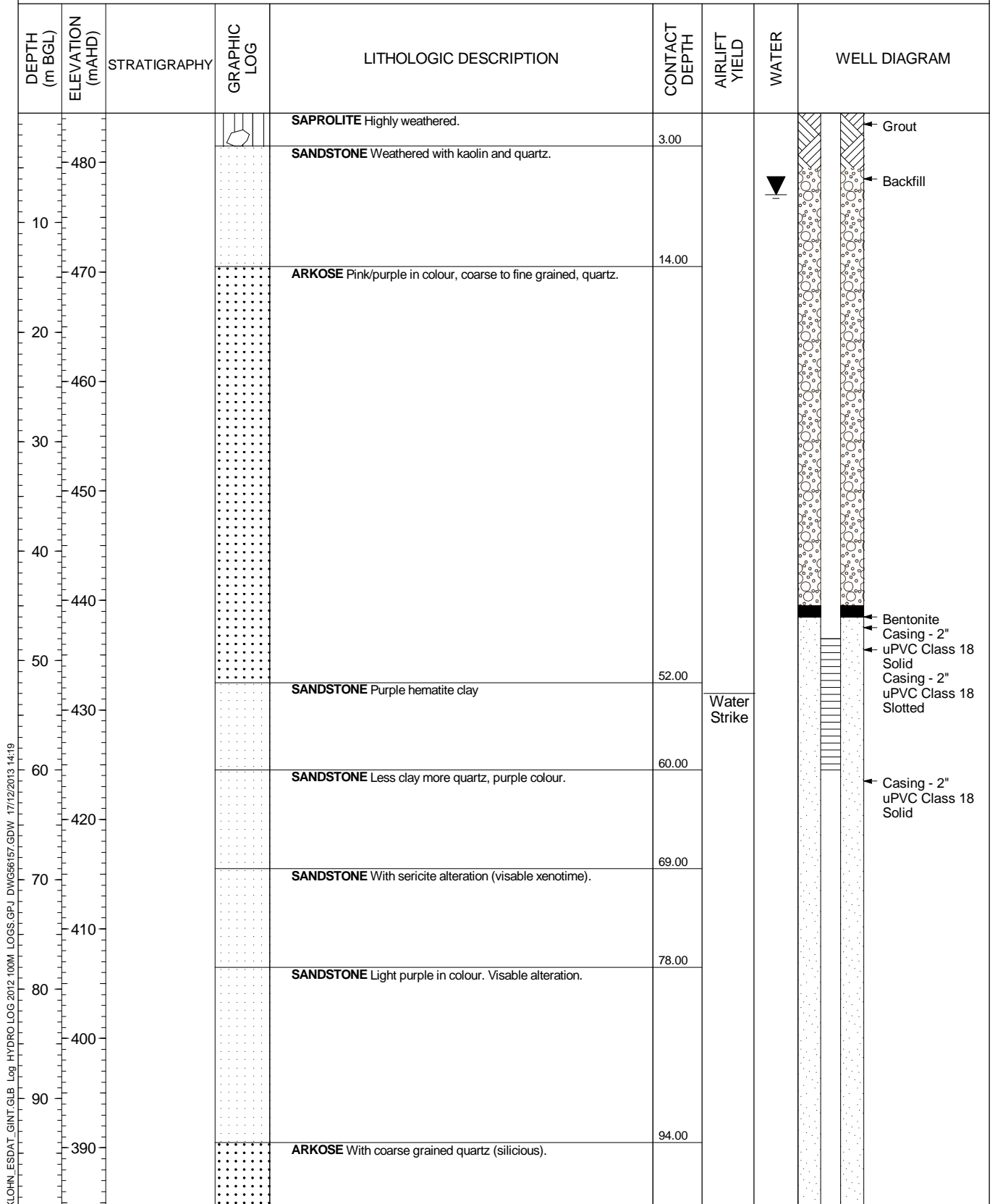
DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
350				QUARTZITE Translucent, quartz rich, some green minerals.				
110					113.00			
340				SANDSTONE Coarse grained, greeny/orange, with chlorite content (possibly a fault at 153).		1 L/s		
120						1.1 L/s		
130								
140								
150								
153					153.00			
300				ARENITE Feldspar, quartz, finer grained, some sericite alteration, silicified, some iron.				
160								
290						3 L/s		
170								
280								
180								
270								
190								
260								
200					200.00			
200				Borehole terminated at 200.0 m		3 L/s		
250								

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19



PROJECT NUMBER M09812A03	CLIENT Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation	COMPLETION DATE 14/08/2013
LOCATION Browns Range	DRILL CONTRACTOR Welldrill
DRILLING METHOD Conventional Air-Hammer Rotary	COORDINATES 493946, 7913905, (MGA94 Zone 52)
SAMPLING METHOD Drill Chips	SURFACE ELEVATION 484.50
LOGGED BY Claire Kent	STICK UP (m) 0.28
TOTAL DEPTH (m) 200	BLANK Not Constructed
BOREHOLE SIZE(mm) 177	SCREEN Not Constructed
SWL (mbTOC) 7.45	

COMMENTS Coordinates: DGPS, Monitoring Bore



KLOHN_ESDAT_GINT.GLB Loc HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03

CLIENT Northern Minerals Ltd.

PROJECT NAME Browns Range Stage 2 Investigation

COMPLETION DATE 14/08/2013

LOCATION Browns Range

- Continued from Previous Page -

DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
380				ARKOSE With coarse grained quartz (silicious).				
110								
370								
120								
360								
130								
350								
140								
340								
150								
330								
160								
320								
170								
310								
180								
300								
190								
290								
200				Borehole terminated at 200.0 m	200.00			
280								

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

← Casing - 2" uPVC Class 18 Slotted

← Filter Pack

PROJECT NUMBER M09812A03	CLIENT Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation	COMPLETION DATE 17/08/2013
LOCATION Browns Range	DRILL CONTRACTOR Welldrill
DRILLING METHOD Conventional Air-Hammer Rotary	COORDINATES 493110, 7913596, (MGA94 Zone 52)
SAMPLING METHOD Drill Chips	SURFACE ELEVATION 461.00
LOGGED BY Claire Kent	STICK UP (m) 0.072
TOTAL DEPTH (m) 200	BLANK Not Constructed
BOREHOLE SIZE(mm) 177	SCREEN Not Constructed
SWL (mbTOC) 27.27	

COMMENTS Coordinates: GPS, Monitoring Bore

DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
10	460			SANDSTONE Transported clays, regolith, colluvium, residual quartz and clay.	5.00		▼	Cement Seal
	450			SANDSTONE Serisite alteration - xenotime present.	9.00			Backfill
20	450			SANDSTONE Clay, serisite alteration.	13.00		▼	
	440			SANDSTONE Purple with quartz.				
30	430						▼	
	420							
40	410						▼	Bentonite Casing - 2" uPVC Class 18 Slotted
	400							Casing - 2" uPVC Class 18 Solid
50	390			SANDSTONE With hematite veins.	71.00		▼	
	380			SANDSTONE Purple with quartz.	72.00			
60	370						▼	
	370							
70	370						▼	
	370							

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03

CLIENT Northern Minerals Ltd.

PROJECT NAME Browns Range Stage 2 Investigation

COMPLETION DATE 17/08/2013

LOCATION Browns Range

- Continued from Previous Page -

DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
360				SANDSTONE Mauve with quartz.				
110	350			SCHIST Muscovite schist vein. SANDSTONE Mauve with quartz.	110.00 111.00			
120	340							
130	330							
140	320							
150	310			ARKOSE Pink in colour with quartz and potassium feldspar.	145.00			
160	300							
170	290							
180	280			ARKOSE With chlorite increasing.	174.00			
190	270							
200	260			Borehole terminated at 200.0 m	200.00			

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

← Casing - 2" uPVC Class 18 Slotted

← Filter Pack

PROJECT NUMBER M09812A03	CLIENT Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation	COMPLETION DATE 03/08/2013
LOCATION Browns Range	DRILL CONTRACTOR Welldrill
DRILLING METHOD Conventional Air-Hammer Rotary	COORDINATES 489319, 7905860, (MGA94 Zone 52)
SAMPLING METHOD Drill Chips	SURFACE ELEVATION 428.00
LOGGED BY Claire Kent	STICK UP (m) 0.047
TOTAL DEPTH (m) 150	BLANK Not Constructed
BOREHOLE SIZE(mm) 177	SCREEN Not Constructed
SWL (mbTOC) 6.08	


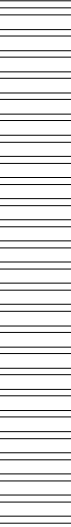
COMMENTS Coordinates: DGPS, Hydrogeological Exploration Hole

DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
				NO RECOVERY No Recovery.				← Pre-collar
				SANDSTONE Oxidised zone, limonite, medium grained.	6.00		▼	← No Construction
10								
20				SANDSTONE Medium to coarse grained, quartz, some iron. No alteration.	18.00			
30								
40								
50								
60				SANDSTONE Light brown, fresh, fine grained - micaceous and potassium feldspar.	60.00			
70						Water Strike		
80								
90								

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03 **CLIENT** Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation **COMPLETION DATE** 03/08/2013
LOCATION Browns Range

- Continued from Previous Page -

DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
440				SANDSTONE Light brown, fresh, fine grained - micaceous and potassium feldspar.				
110				MUDSTONE /shale - hematitic, fine grained.	115.00			
120								
130								
140								
150				Borehole terminated at 150.0 m	150.00			
160								
170								
180								
190								
200								

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03	CLIENT Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation	COMPLETION DATE 01/08/2013
LOCATION Browns Range	DRILL CONTRACTOR Welldrill
DRILLING METHOD Conventional Air-Hammer Rotary	COORDINATES 492991, 7901351, (MGA94 Zone 52)
SAMPLING METHOD Drill Chips	SURFACE ELEVATION 438.30
LOGGED BY Claire Kent	STICK UP (m) 0.24
TOTAL DEPTH (m) 150	BLANK Blank 0-126m
BOREHOLE SIZE(mm) 304	SCREEN Slotted 126-150m
SWL (mbTOC) 27.6	

COMMENTS Coordinates: DGPS. Production Bore

DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
				NO RECOVERY				
					6.00			Grout
10	430			TRANSPORTED SOIL Clayey, sandstone chips. Light orange brown highly weathered saprolite.	11.00			Bentonite Seal Casing - 8" uPVC Class 18 Solid
20	420			CLAY Residual, light orange brown.			Water Strike	
30	410						▼	
40	400							
50	390							
60	380			SANDSTONE Dark grey green arenite, mildly weathered (water struck at 54m).	54.00			Seepage
70	370					3.5		
80	360							
90	350							
	340							

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03

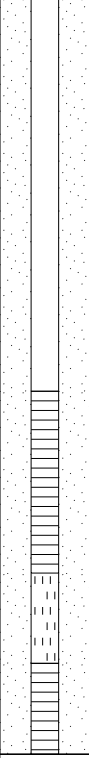
CLIENT Northern Minerals Ltd.

PROJECT NAME Browns Range Stage 2 Investigation

COMPLETION DATE 01/08/2013

LOCATION Browns Range


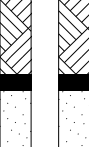
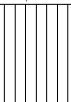

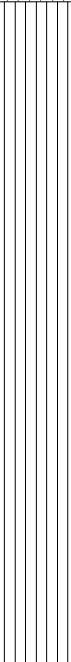

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DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
110	330			SANDSTONE Dark grey green arenite, mildly weathered (water struck at 54m).				 <p>← Casing - 8" uPVC Class 18 Slotted</p> <p>← Casing - 8" Stainless Steel Wire-Wound Screen</p> <p>← Casing - 8" uPVC Class 18 Slotted</p>
120	320			QUARTZ Vein. SANDSTONE Light grey fresh rock, coarse grained. Metamorphosed, quartz rich.	118.00 119.00			
150	290			Borehole terminated at 150.0 m	150.00	6.6		
160	280							
170	270							
180	260							
190	250							
200	240							
230	230							

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03	CLIENT Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation	COMPLETION DATE 25/08/2013
LOCATION Browns Range	DRILL CONTRACTOR Welldrill
DRILLING METHOD Conventional Air-Hammer Rotary	COORDINATES 493015, 7901358, (MGA94 Zone 52)
SAMPLING METHOD Drill Chips	SURFACE ELEVATION 449.80
LOGGED BY Claire Kent	STICK UP (m) 0.82
TOTAL DEPTH (m) 154	BLANK Blank 0-126m
BOREHOLE SIZE(mm) 177	SCREEN Slotted 126-150m
SWL (mbTOC) 28.15	

COMMENTS Coordinates: DGPS. Monitoring Bore

DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
10	440			TRANSPORTED SOIL Transported material, clayey, sandstone chips. Light orange brown highly weathered saprolite.	10.00			
				CLAY Light grey green kaolinite.	17.00			
20	430			SANDSTONE Weathered.	21.00			
				CLAY Orange grey green highly weathered saprolite, some quartz.	65.00			
30	420						▼	
40	410							
50	400							
60	390					Seepage		
70	380			SANDSTONE Dark grey green fine grained - chloritic, potentially sedimentary - mafic rock		3.5		
80	370							
90	360							

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03

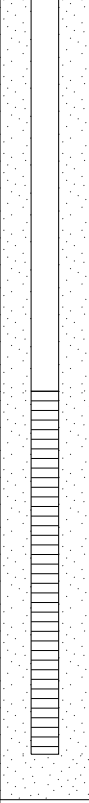
CLIENT Northern Minerals Ltd.

PROJECT NAME Browns Range Stage 2 Investigation

COMPLETION DATE 25/08/2013

LOCATION Browns Range

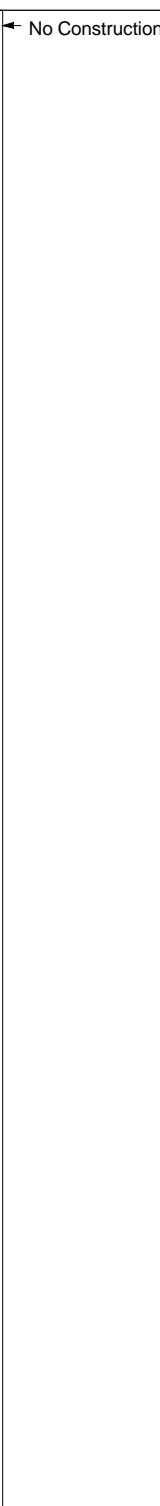
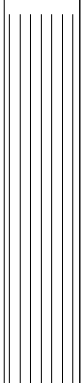

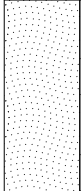
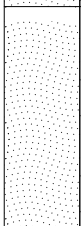
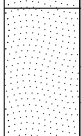
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DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
110	340		[Dotted Pattern]	SANDSTONE Dark grey green fine grained - chloritic, potentially sedimentary - mafic rock	106.00			 <p>← Casing - 2" uPVC Class 18 Slotted</p> <p>← Gravel Pack</p>
120	330			SANDSTONE Coarse grained - metamorphosed - light grey.		5.5		
130	320					6.6		
140	310				154.00			
150	300			Borehole terminated at 154.0 m				
160	290							
170	280							
180	270							
190	260							
200	250							

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03	CLIENT Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation	COMPLETION DATE 30/07/2013
LOCATION Browns Range	DRILL CONTRACTOR Welldrill
DRILLING METHOD Conventional Air-Hammer Rotary	COORDINATES 492776, 7910996, (MGA94 Zone 52)
SAMPLING METHOD Drill Chips	SURFACE ELEVATION 463.00
LOGGED BY Claire Kent	STICK UP (m) 0
TOTAL DEPTH (m) 150	BLANK Not Constructed
BOREHOLE SIZE(mm) 177	SCREEN Not Constructed
SWL (mbTOC) 27.81	

COMMENTS Coordinates: DGPS, Hydrogeological Exploration Hole

DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
460				NO RECOVERY No chips.				
10	450							
20	440				23.00			
30	430			CLAY Kaolinite, sandstone, mauve colour.			▼	
40	420				49.00			
50	410			ARENITE Dark purple, moderately weathered, coarse grained, quartz.	52.00			
60	400			ARENITE Pink, coarse grained, clayey quartz with hematite alteration.		Seepage		
70	390			ARENITE Purple coarse grained.	65.00			
80	380			ARENITE Dark red brown clayey, hematite alteration.	80.00			
90	370							

KLOHN_ESDAT_GINT.GLB Loc HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03 **CLIENT** Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation **COMPLETION DATE** 30/07/2013
LOCATION Browns Range

- Continued from Previous Page -

DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
360			[Dotted Pattern]	ARENITE Dark red brown clayey, hematite alteration.				
110	350				126.00			
120	340			ARENITE Red/brown colour, moderately weathered coarse grained.				
130	330				140.00			
140	320			ARENITE Dark green slightly weathered fine grained.				
150	310			Borehole terminated at 150.0 m	150.00			
160	300							
170	290							
180	280							
190	270							
200	260							

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03	CLIENT Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation	COMPLETION DATE 05/08/2013
LOCATION Browns Range	DRILL CONTRACTOR Welldrill
DRILLING METHOD Conventional Air-Hammer Rotary	COORDINATES 486096, 7905551, (MGA94 Zone 52)
SAMPLING METHOD Drill Chips	SURFACE ELEVATION 423.00
LOGGED BY Claire Kent	STICK UP (m) 0.82
TOTAL DEPTH (m) 99	BLANK Blank 0-69m
BOREHOLE SIZE(mm) 304	SCREEN Slotted 69-93m.
SWL (mbTOC) 5.12	

COMMENTS Coordinates: DGPS. Production Bore

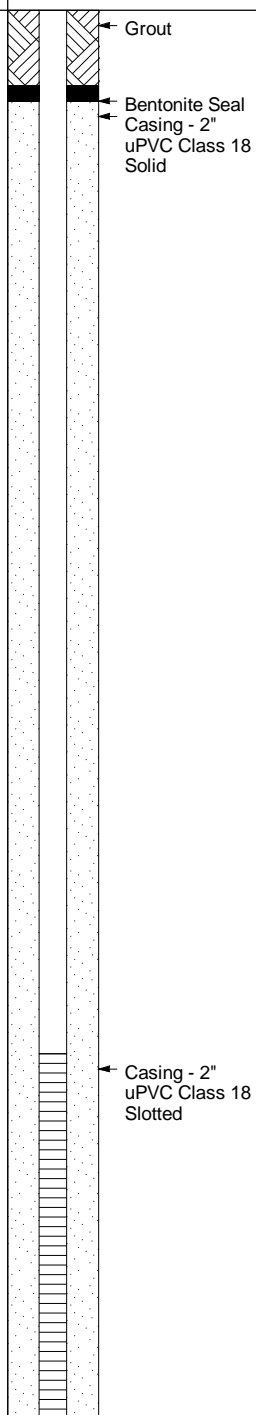
DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
420				NO RECOVERY No chips.				
					6.00			
				CLAY Brown / yellow clayey sand with biotite specs.	8.00			
10				CLAY White with quartz and medium grained red sand.				
410								
					18.00			
				QUARTZ Red/yellow sandstone with (fine grained).	19.00			
20				SAND Yellow medium grained with quartz.	21.00			
400			Qz Qz	QUARTZ Vein				
			Qz Qz		27.00			
30			Qz Qz	QUARTZ Pinky coloured fragments.				
390			Qz Qz					
			Qz Qz		37.00			
40				CONGLOMERATE Quartz, yellow sandstone, evidence of weathering.	38.00			
				ARKOSE With sandstone with mineralisation - mica and quartz.	41.00			
380				QUARTZ Fragments.	42.00			
				SAND Clayey with quartz.	43.00			
50				CONGLOMERATE Quartz with clayey grey sand, brown/ yellow sandstones.				
370					55.00			
60				SANDSTONE Arkose - purple in colour with quartz.	58.00			
				CLAY Brown / red sandy with arkose sandstone.	59.00			
360				SANDSTONE Arkose (grey/purple).				
					63.00			
				SAND Clayey with quartz.	64.00			
70				SANDSTONE With quartz mineralisation.				
350				CLAY Brown / red with arkose sandstone (grey colour).	70.00			
				SAND Coarse grained with quartz fragments.	74.00			
80				SAND Clayey - brown / mauve in colour.	77.00			
				SAND Grey/mauve arkose with quartz fragments.	80.00			
340			Qz Qz	QUARTZ Reddy pink (WATER STRUCK AT 86m) water red in colour - potential fracture zone at 86m, flow rate 10L/s).	84.00			
			Qz Qz	QUARTZ Reddy pink with brown sandstone, and white clay (conglomerate).	87.00	Water Strike 8 L/s		
90			Qz Qz					
330			Qz Qz					
			Qz Qz		99.00			

Borehole terminated at 99.0 m

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03	CLIENT Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation	COMPLETION DATE 05/08/2013
LOCATION Browns Range	DRILL CONTRACTOR Welldrill
DRILLING METHOD Conventional Air-Hammer Rotary	COORDINATES 486096, 7905551, (MGA94 Zone 52)
SAMPLING METHOD Drill Chips	SURFACE ELEVATION 423.00
LOGGED BY Claire Kent	STICK UP (m) 0.625
TOTAL DEPTH (m) 99	BLANK Blank 0-69m
BOREHOLE SIZE(mm) 177	SCREEN Slotted 69-93m.
SWL (mbTOC) 4.17	

COMMENTS Coordinates: DGPS. Monitoring Bore

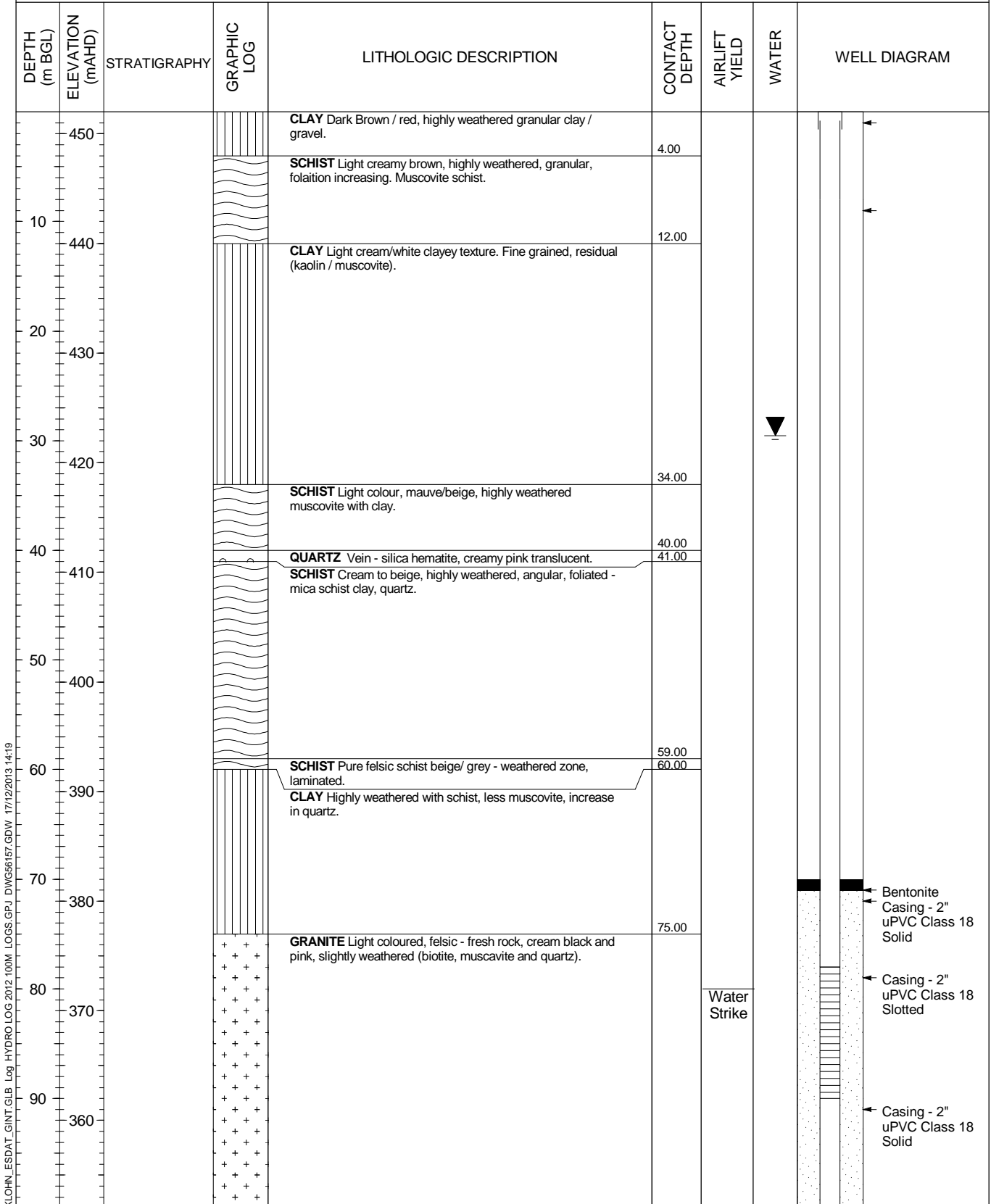
DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
420				NO RECOVERY No chips.	6.00			 <p>Grout</p> <p>Bentonite Seal Casing - 2" uPVC Class 18 Solid</p> <p>Casing - 2" uPVC Class 18 Slotted</p>
10				SAND Brown / yellow with biotite specs. CLAY White with quartz and medium grained red sand.	8.00			
410					18.00			
20				QUARTZ With red/yellow sand (fine grained). SAND Yellow medium grained with quartz.	19.00 21.00			
400			Qz Qz	QUARTZ Vein	27.00			
30			Qz Qz	QUARTZ Pinky coloured fragments.	37.00			
390			Qz Qz		38.00			
40				CONGLOMERATE Quartz, yellow sandstone, evidence of weathering. ARKOSE Sandstone with mineralisation - mica and quartz.	41.00 42.00			
380				QUARTZ Vein SAND Clayey with quartz. CONGLOMERATE Quartz with clayey grey sand, brown/ yellow sandstones.	43.00			
50					55.00			
370				SANDSTONE Arkose purple in colour with quartz.	58.00			
60				CLAY Brown / red sandy with arkose sandstone. SANDSTONE Arkose (grey/purple).	59.00			
360					63.00			
70				SAND Clayey with quartz. SANDSTONE With quartz mineralisation.	64.00			
350				CLAY Brown / red with arkose sandstone (grey colour).	70.00			
80				SAND Coarse grained with quartz fragments. SAND Clayey - brown / mauve in colour. SAND Grey/mauve arkose with quartz fragments.	74.00 77.00 80.00			
340					84.00			
90			Qz Qz	QUARTZ Reddy pink (WATER STRUCK AT 86m) water red in colour - potential fracture zone at 86m, flow rate 10L/s).	87.00	Water Strike		
330			Qz Qz	QUARTZ Reddy pink with brown sandstone, and white clay (conglomerate).	99.00			

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

Borehole terminated at 99.0 m

PROJECT NUMBER M09812A03	CLIENT Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation	COMPLETION DATE 11/08/2013
LOCATION Browns Range	DRILL CONTRACTOR Welldrill
DRILLING METHOD Conventional Air-Hammer Rotary	COORDINATES 498186, 7912762, (MGA94 Zone 52)
SAMPLING METHOD Drill Chips	SURFACE ELEVATION 452.00
LOGGED BY Claire Kent	STICK UP (m) 0.65
TOTAL DEPTH (m) 150	BLANK Blank 0-78, 90-120
BOREHOLE SIZE(mm) 215	SCREEN Slotted 78-90, 120-150
SWL (mbTOC) 29.53	

COMMENTS Coordinates: DGPS, Monitoring Bore



KLOHN_ESDAT_GINT_GLB_Log_HYDRO.LOG 2012.100M_LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03

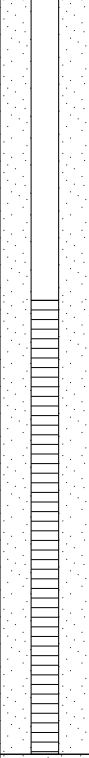

CLIENT Northern Minerals Ltd.

PROJECT NAME Browns Range Stage 2 Investigation

COMPLETION DATE 11/08/2013

LOCATION Browns Range

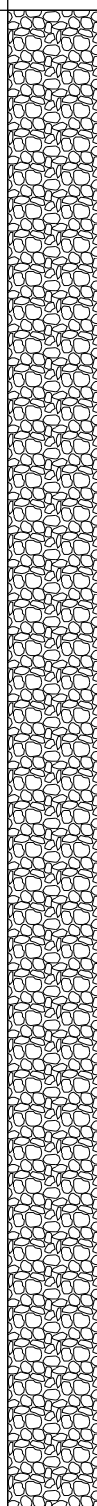
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DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
350			+	GRANITE Light coloured, felsic - fresh rock, cream black and pink, slightly weathered (biotite, muscovite and quartz).		1 L/s		 <p>← Casing - 2" uPVC Class 18 Slotted</p>
110			+					
340			+					
120			+					
330			+					
130			+					
320			+					
140			+					
310			+					
150			+			149.00 150.00		
300				GRANITE Beige coarse grained, weakly foliated, quartz - muscovite biotite fresh. Borehole terminated at 150.0 m			 <p>← Filter Pack</p>	
160								
290								
170								
280								
180								
270								
190								
260								
200								
250								

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03	CLIENT Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation	COMPLETION DATE 19/09/2013
LOCATION Browns Range	DRILL CONTRACTOR Welldrill
DRILLING METHOD Conventional Air-Hammer Rotary	COORDINATES 486000, 7916646, (MGA94 Zone 52)
SAMPLING METHOD Drill Chips	SURFACE ELEVATION 446.00
LOGGED BY Claire Kent	STICK UP (m)
TOTAL DEPTH (m) 150	BLANK Not Constructed
BOREHOLE SIZE(mm) 177	SCREEN Not Constructed
SWL (mbTOC)	

COMMENTS Coordinates: DGPS, Monitoring Bore

DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
				NO RECOVERY No Chips.				 <p>← Collapsed during Extraction</p>
440				MUDSTONE Oxidised dark brown weathered material.	6.00			
430				MUDSTONE Dark brown.	20.00			
20								
420								
30								
410								
40								
400								
50								
390								
60								
380								
70								
370								
80								
360								
90								
350								

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03

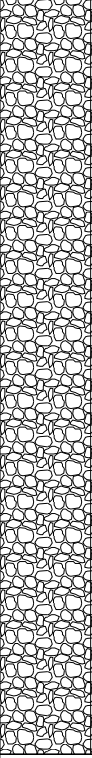
CLIENT Northern Minerals Ltd.

PROJECT NAME Browns Range Stage 2 Investigation

COMPLETION DATE 19/09/2013

LOCATION Browns Range

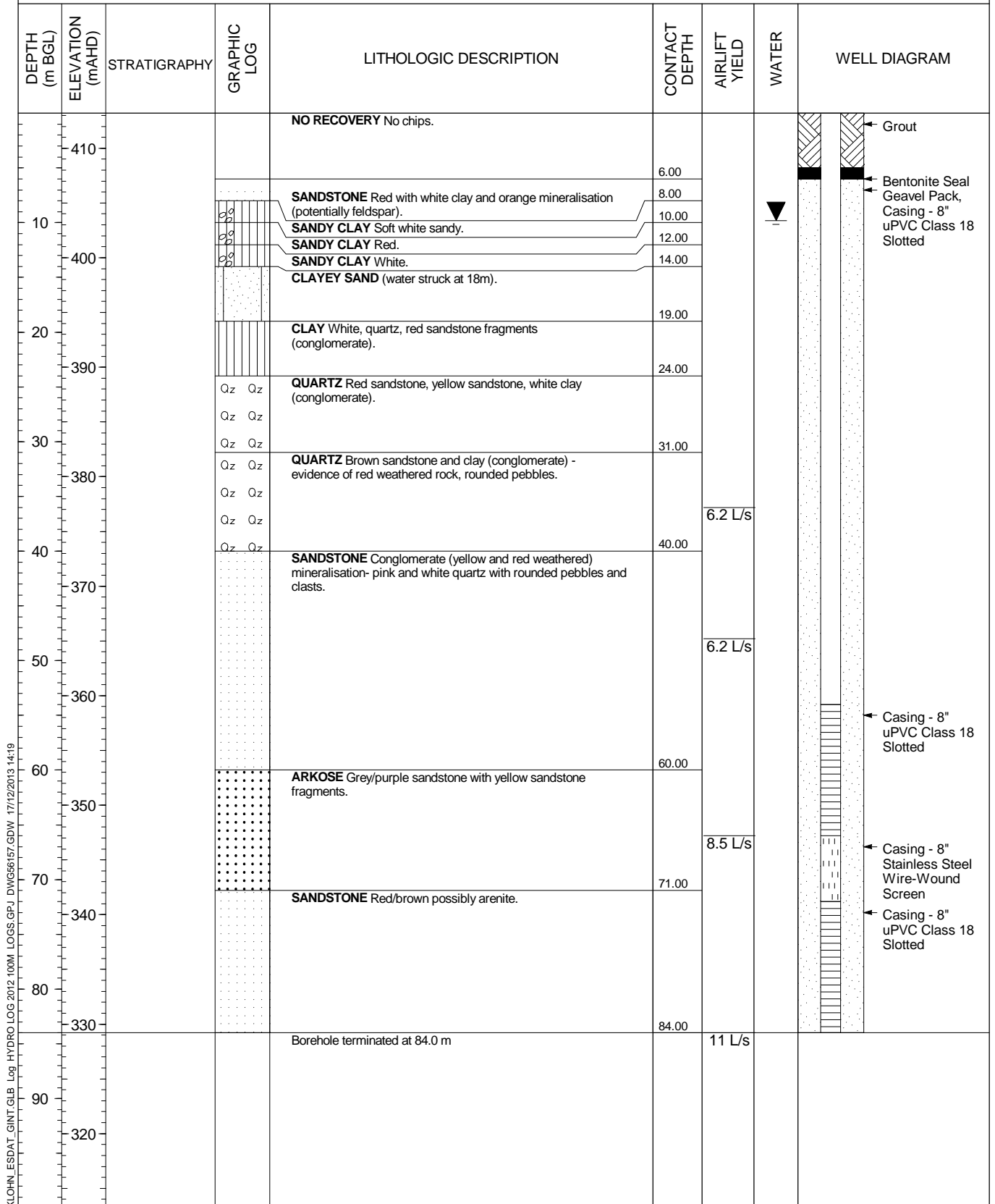
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DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
340				MUDSTONE Dark brown.				
110								
330								
120								
320								
130								
310								
140								
300								
150				Borehole terminated at 150.0 m	150.00			
290								
160								
280								
170								
270								
180								
260								
190								
250								
200								
240								

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03	CLIENT Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation	COMPLETION DATE 07/08/2013
LOCATION Browns Range	DRILL CONTRACTOR Welldrill
DRILLING METHOD Conventional Air-Hammer Rotary	COORDINATES 485045, 7907932, (MGA94 Zone 52)
SAMPLING METHOD Drill Chips	SURFACE ELEVATION 413.20
LOGGED BY Claire Kent	STICK UP (m) 0.047
TOTAL DEPTH (m) 84	BLANK Blank 0-54m
BOREHOLE SIZE(mm) 304	SCREEN Slotted 54-84m
SWL (mbTOC) 9.8	

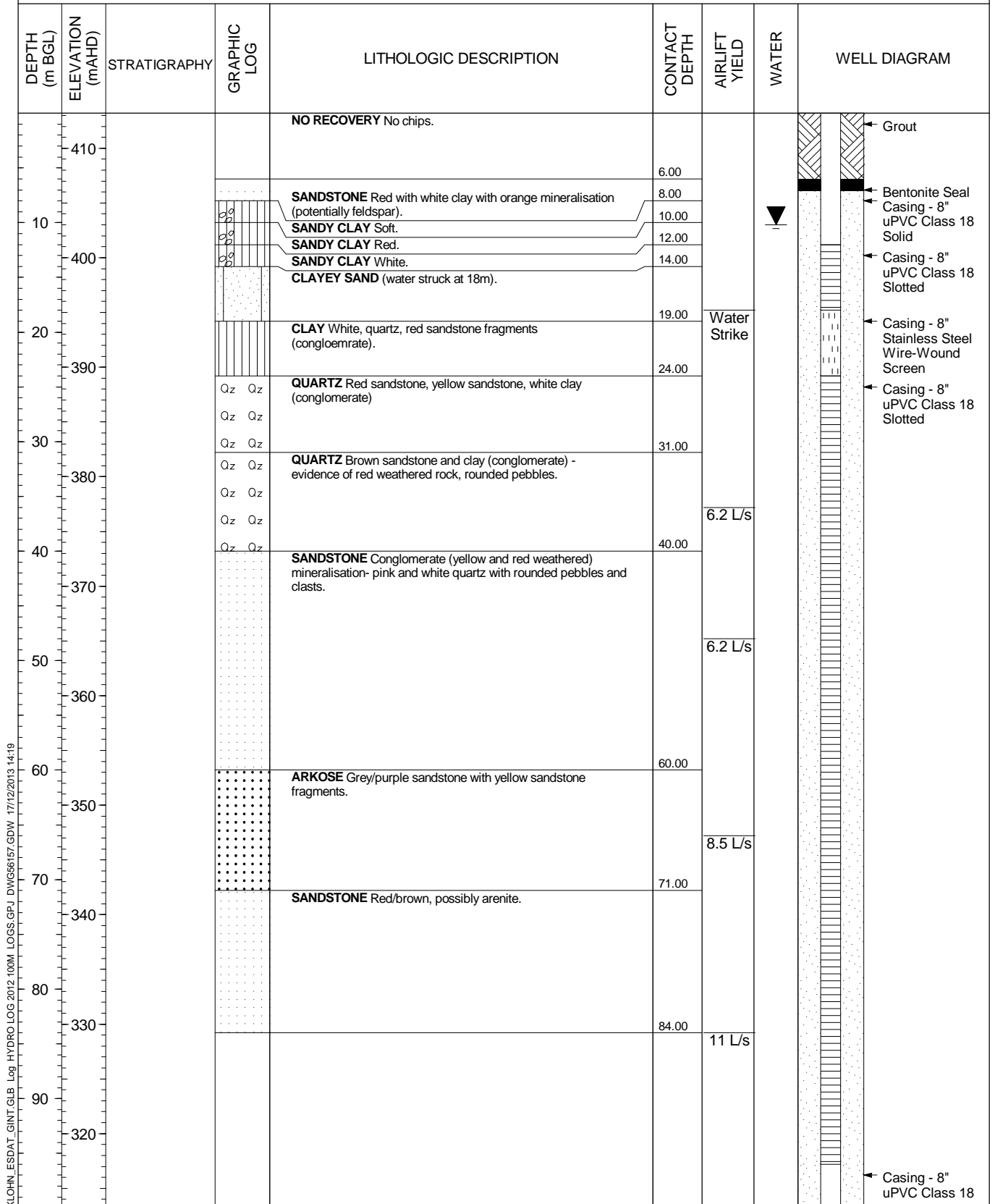
COMMENTS Coordinates: DGPS. Monitoring Bore



KLOHN_ESDAT_GINT.GLB Loc HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03	CLIENT Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation	COMPLETION DATE 07/08/2013
LOCATION Browns Range	DRILL CONTRACTOR Welldrill
DRILLING METHOD Conventional Air-Hammer Rotary	COORDINATES 485045, 7907932, (MGA94 Zone 52)
SAMPLING METHOD Drill Chips	SURFACE ELEVATION 413.20
LOGGED BY Claire Kent	STICK UP (m) 0.65
TOTAL DEPTH (m) 102	BLANK Blank 0-12m
BOREHOLE SIZE(mm) 304	SCREEN Slotted 12-96m.
SWL (mbTOC) 10.21	


COMMENTS Coordinates: DGPS. Production Bore



KLOHN_ESDAT_GINT.GLB Loc HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03 **CLIENT** Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation **COMPLETION DATE** 07/08/2013
LOCATION Browns Range

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DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
								 Solid
310				Borehole terminated at 102.0 m				
110								
300								
120								
290								
130								
280								
140								
270								
150								
260								
160								
250								
170								
240								
180								
230								
190								
220								
200								
210								

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03	CLIENT Northern Minerals Ltd.
PROJECT NAME Browns Range Stage 2 Investigation	COMPLETION DATE 16/08/2013
LOCATION Browns Range	DRILL CONTRACTOR Welldrill
DRILLING METHOD Conventional Air-Hammer Rotary	COORDINATES 493471, 7914714, (MGA94 Zone 52)
SAMPLING METHOD Drill Chips	SURFACE ELEVATION 464.00
LOGGED BY Claire Kent	STICK UP (m) 0.134
TOTAL DEPTH (m) 200	BLANK Blank 0-30 and 40-120m.
BOREHOLE SIZE(mm) 177	SCREEN Slotted 30-40m and 120-150m
SWL (mbTOC) 7.51	

COMMENTS Coordinates: DGPS, Monitoring Bore

DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
			△ △ △	COLLUVIUM Transported - brown in colour.	3.00			Grout
460				SANDSTONE Ozidised dark brown weathered material.				Backfill
10				SANDSTONE Light grey green with sericite alteration. Bleached with hematite veins.	9.00			
450								
20								
440								
30								Bentonite Casing - 2" uPVC Class 18 Slotted
430					36.00	Water Strike/Seepage		
40				SANDSTONE Purple/grey coarse grained quartz, hematite veins.				Casing - 2" uPVC Class 18 Solid
420								
50								
410								
60								
400								
70								
390								
80								
380					86.00			
90				SANDSTONE Grey green with sericite alteration.				
370								
				ARKOSE Interbedded with arenite.	98.00			

KLOHN_ESDAT_GINT.GLB Loc HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19

PROJECT NUMBER M09812A03

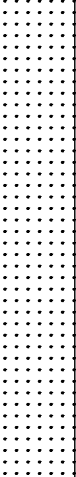
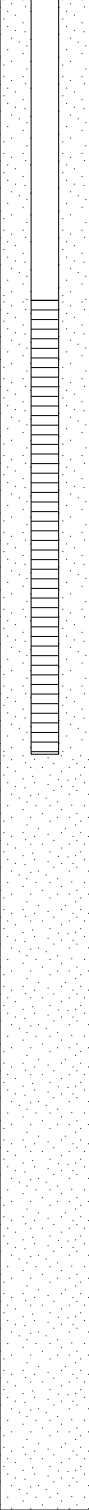

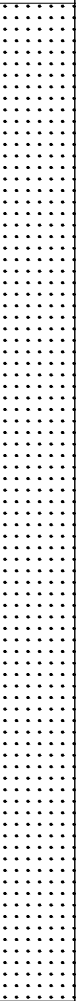
CLIENT Northern Minerals Ltd.

PROJECT NAME Browns Range Stage 2 Investigation

COMPLETION DATE 16/08/2013

LOCATION Browns Range

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DEPTH (m BGL)	ELEVATION (mAHD)	STRATIGRAPHY	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH	AIRLIFT YIELD	WATER	WELL DIAGRAM
360				ARKOSE Interbedded with arenite.				 <p>← Casing - 2" uPVC Class 18 Slotted</p> <p>← Filter Pack</p>
110								
350								
120								
340								
130					132.00			
330				SCHIST Fine grained phyllite (muscovite).	134.00			
140				ARKOSE Interbedded with arenite.				
320								
150								
310								
160								
300								
170								
290								
180								
280								
190								
270								
200				Borehole terminated at 200.0 m	200.00			
260								

KLOHN_ESDAT_GINT.GLB Log HYDRO.LOG 2012.100M LOGS.GPJ DWG56157.GDW 17/12/2013 14:19