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BC Geological Survey Coal Assessment Report 1039



ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: Assessment Report:

2017 Loop Ridge Phase 2 (Loop South) Exploration Program

TOTAL COST: \$1,137,861.84

AUTHOR(S): Dave Thompson, P.Geo.

Toyot-

SIGNATURE(S):

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):

1. Mines Act Permit CX-05-021, Approval #14-1630615-0702, issued July 2, 2014

YEAR OF WORK: 2017

PROPERTY NAME: Michel Creek Coking Coal Project, Loop Ridge Phase 2 Property

CLAIM NAME(S) (on which work was done): Coal Licence #418632

COMMODITIES SOUGHT: Coal

MINING DIVISION: FORT STEELE

NTS / BCGS: 82G/10W LATITUDE: 49.615° N

LONGITUDE: -114.763° W (at centre of work)

UTM Zone: 11 EASTING: 661,599m NORTHING: 5,498,229m

OWNER(S): North Coal Limited

MAILING ADDRESS: #5000 Hwy 43, Sparwood, BC V0B 2G1

OPERATOR(S) [who paid for the work]: North Coal Limited

REPORT KEYWORDS: Jurassic/Cretaceous, Mist Mountain Formation, Coal

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT

NUMBERS: Assessment Report – 2016 Loop Ridge Exploration Program #1025

SUMMARY OF TYPES OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH TENURES
GEOLOGICAL (scale, area)		
Ground, mapping		
Photo interpretation		
GEOPHYSICAL (line-kilometres)		
Ground		
(Specify types)		
Airborne		
(Specify types)		
Borehole		
Gamma, Resistivity,	3638m	418632
Resistivity	3638m	418632
Caliper	3638m	418632
Deviation	3638m	418632
Dip	3638m	418632
Others (specify)		
DRILLING		
Core	110m	418632
Non-Core	3528m	418632
SAMPLING AND ANALYSES		
Proximate	144 samples	418632
Ultimate		418632
Petrographic	35 samples	418632
Vitrinite reflectance	35 samples	418632
Coking		418632
Wash tests	35 samples	418632
PROSPECTING (scale/area)		
PREPARATORY/PHYSICAL		
Line/grid (km)		
Trench (number, metres)		
Bulk sample(s)		

Parts of Page 5 (Resources), Table 1, Section 6 (pages 21 and 22) and Appendix D remain confidential under the terms of the Coal Act Regulation, and have been removed from the public version.

http://www.bclaws.ca/civix/document/id/complete/statreg/25
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ASSESSMENT REPORT

2017 Loop Ridge Phase 2 (Loop South) Exploration Program



Owner and Operator: North Coal Ltd.

Authorship: Dave Thompson, P.Geo.

Chief Geologist, North Coal Ltd.



2017 Loop Ridge Phase 2 Exploration Program



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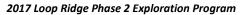
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2017 Loop Ridge Phase 2 Exploration Program

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1 Introduction and Summary

This report describes the exploration work conducted on the Loop Ridge Phase 2 (Loop South) property owned by North Coal Ltd. (formerly CanAus Coal Ltd.) in the Michel Creek area near Sparwood, BC, as part of the overall Michel Creek Coking Coal Project (Figure 1.1). Loop South is considered an extension of the Loop Ridge property.

In 1964, Crow's Nest Pass Coal Co. explored the Loop Ridge property and completed a test pit in 1969, mining between 60,000t and 100,000t. Further test pit mining of 50,000t was completed by McGillivray Mining and Fording Coal in 1995 and 1996. Fording Coal completed two drill programs on the property in 1998 and 1999, totaling 36 holes.

From 2013 to 2016, exploration conducted by CanAus Coal Ltd. on Loop Ridge coal licenses 418319, 418631 and 418632 included 123 reverse circulation geology drillholes, 24 reverse circulation pilot drillholes for coring, 46 large diameter core holes, 10 large diameter reverse flood drillholes and 8 HQ3 diamond core holes, totaling approximately 40,000m of drilling. Samples were taken from many of the reverse circulation geology drillholes which were used to map coal seam rank variability. The large diameter core was analyzed for detailed washability and coking coal characteristics. Several tonnes of coal from the main target seams were pilot-scale washed and carbonized.

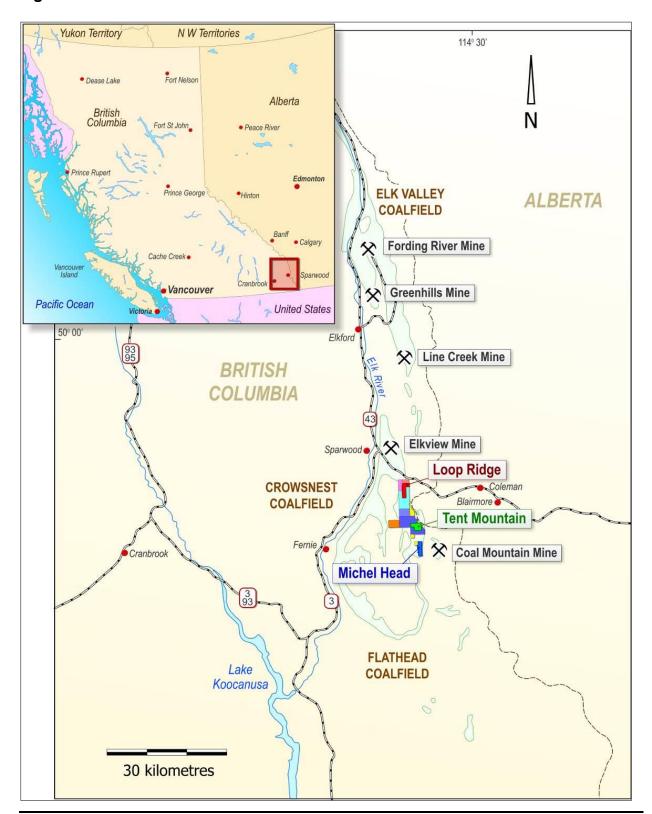
In 2015, fourteen trenches were excavated on Coal License 418632, exposing several seams with true thicknesses up to 10m. This area is now referred to as Loop South.

In 2017, CanAus Coal Ltd. changed its name to North Coal Ltd.

The 2017 program included 21 reverse circulation drillholes and 2 large diameter (1 holes, totaling 3638m, on Coal License 418632 (Loop South). Coal samples were colleall the drillholes and analyzed for washability and coking coal characteristics.	



Figure 1.1 Location Plan





2 Property and Location

2.1 Ownership

Mineral rights are wholly owned by North Coal Ltd. (formerly CanAus Coal Ltd.) Surface rights are held by CanWel Timber Ltd. as part of their free-hold Tent Mountain Block (PID 023-431-482, Lot 2 District Lot 4590, Kootenay District Plan 229332). There are no oil and gas drilling activities on the property; however, the TransCanada Pipeline, which carries natural gas from wells in Alberta and transports it south across the Canada-United States border, crosses the northern and western edges of Coal License 418632.

At this time there are no environmental liabilities identified on the property.

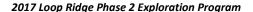
2.2 Property

The approximate centre point of the Loop Ridge property is 5,501,000N and 661,500E (UTM NAD 83). The Loop Ridge property, held by North Coal, represents seven coal licenses (Table 2.2.1). 2017 work was performed on Coal License 418632, part of Loop Ridge Phase 2, and referred to as Loop South. A location map shows information on the licenses (Figure 2.2.1).

Table 2.2.1 Loop Ridge Property Coal Licenses

Coal Licence	Property Name	Approx. Area (ha)
418319	Loop Ridge	409
418624	Loop Ridge Phase 2	689
418628	Loop Ridge Phase 2	24
418629	Loop Ridge Phase 2	1
418630	Loop Ridge Phase 2	4
418631	Loop Ridge Phase 2	151
418632	Loop Ridge Phase 2 (Loop South)	1160
To	2438	

The property is situated in the northwest trending Front Ranges of the Rocky Mountains physiographic region, which is characterized by a series of steep mountains running to the northwest, incised by west flowing streams. Figure 2.2.1 shows the Loop Ridge Phase 2 property as the black hashed area. Elevations range from ~1,400m along Michel Creek to a height of 1,680m at Loop Ridge.





The Loop Ridge property is located between two open pit coal mines owned and operated by Teck Coal Ltd. The Teck Elkview Operations produce metallurgical coal approximately 10km north from the center of the Loop Ridge property and their Coal Mountain Operations produce both thermal and PCI coal approximately 19km south from the centre of the Loop Ridge property.

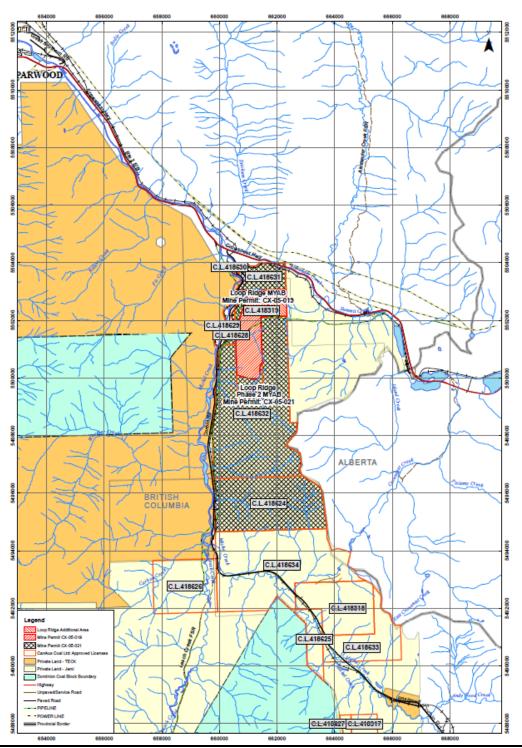
The climate is characterized by long, cold winters and short, cool to hot summers. In Sparwood, the temperature ranges from a record high of 39°C in the summer to a record low of -39.8°C in the winter, with a mean maximum in August of 23.6°C and a mean minimum in December of -11.6°C. Temperatures at the higher altitudes of the property would be slightly lower. The average amount of precipitation in Sparwood is 603mm with an equivalent of 248cm of that falling as snow. Loop Ridge generally has dense forest cover of pine and spruce; however, a significant portion of the property has been logged in recent years.

2.3 Location and Access

The Michel Creek Coking Coal Project, of which the Loop Ridge Phase 2 property forms a part, is located southeast of the town of Sparwood in the Michel Creek valley, southeast British Columbia. Primary road access to the general area is via the Crowsnest Highway (Highway 3), which is an all-weather paved major highway connecting Sparwood with Fernie in the west and communities of the Crowsnest Pass in the east. The project area is accessed by driving east from Sparwood along Highway 3 for 11km and turning south onto Corbin Road. From Corbin Road, access to the Loop Ridge Phase 2 (Loop South) property is a further 5km. A network of logging and exploration trails on the property is utilized for drilling access.



Figure 2.2.1 – License Plan





3 Program Overview

3.1 Goals and Parameters

The intent of the 2017 drilling program on Loop South was to test the extent at depth of the coal seams exposed in the 2015 trenches at surface and to develop a preliminary 3D resource model. The drill program was originally designed to utilize the existing forestry access trails and drill 3 holes from each site, in a fan pattern, perpendicular to the regional north-south strike of the known coal seams. The trench and surface mapping data suggested that the geological structure encountered on the Loop Ridge property two kilometers to the north continued along strike to the south. A hypothetical syncline axis was determined, and the drill sites were chosen to test this hypothesis. As drilling progressed during the program, and the new data was evaluated, the plan was adjusted accordingly.

3.2 History

The main Loop Ridge property was geologically mapped by Crow's Nest Pass Coal Company in 1964. Seven trenches, two adits, and at least 12 coal exploration drillholes were completed. In 1969, the Crow's Nest Pass Coal Co. mined the McGillivray Pit at the north end of the Loop Ridge property. Approximately 60,000t to 100,000t of coal was mined. In 1993, McGillivray Mining Ltd. completed an agreement with Tembec to mine at the old McGillivray site. Environmental studies were completed, and a bulk sample permit was obtained in 1995, at which time approximately 20,000t of coal was mined and trucked to the Elkview plant near Sparwood. In 1996, Fording Coal purchased McGillivray's property and rights from Tembec and mined a further 30,000t. The second bulk sample was trucked to the Coal Mountain mine, approximately 19km to the southeast. Fording Coal completed two drill programs on the entire Loop Ridge property, one in 1998 (18 holes) and another in 1999 (18 holes). A historic resource estimate by Crow's Nest Pass Coal Co. Ltd. indicated a total of 153.6Mt within 460m of surface with a further 13.3Mt between the depths of 460m and 760m. The Loop Ridge coal licenses were acquired by CanAus Coal Ltd. in 2012.

From 2013 to 2016, exploration conducted by CanAus Coal Ltd. on Loop Ridge coal licenses 418319, 418631 and 418632 included 123 reverse circulation geology drillholes, 24 reverse circulation pilot drillholes for coring, 46 large diameter core holes, 10 large diameter reverse flood drillholes and 8 HQ3 diamond core holes, totaling approximately 40,000m of drilling. Samples were taken from many of the reverse circulation geology drillholes which were used to map coal seam rank variability. The large diameter core was analyzed for detailed washability and coking coal characteristics. In three separate programs from 2014 to 2016, several tonnes of coal from the main target seams were collected from core holes, reverse flood holes, and the McGillivray pit to be pilot-scale washed and carbonized. 3D resource models were prepared as the project evolved and a prefeasibility study resource estimate was calculated.



2017 Loop Ridge Phase 2 Exploration Program

In 2015, fourteen trenches were excavated on Coal License 418632, exposing several seams with apparent thicknesses up to 10m. A future drill program was proposed based on the evaluation of the trench program. No further work was done on the property until 2017.

In 2017, CanAus Coal Ltd. changed its name to North Coal Ltd.

3.3 2017 Drilling

In 2017, a total of 21 reverse circulation drillholes and 2 large diameter (15cm) core drillholes were completed on Coal License 418632 at fourteen locations. The reverse circulation holes were drilled to test the depth extent of the coal seams exposed at surface, to collect coal samples and to determine geological structure. The large diameter core holes were drilled to collect coal samples to follow a full analytical program including drop/shatter, attrition and full washability. A total of 3638m of drilling was completed, including 3528m of reverse circulation drilling and 110m of large diameter core drilling (Figure 3.3.1 and Table 3.3.1).

All of the 2017 drill holes were geophysically logged with through-pipe gamma and neutron, and with open-hole density, deviation and dipmeter tools when possible.

All drill collars were surveyed with base-station corrected differential GPS equipment to centimetre-level accuracy.



Figure 3.3.1 Loop Ridge South Exploration Plan

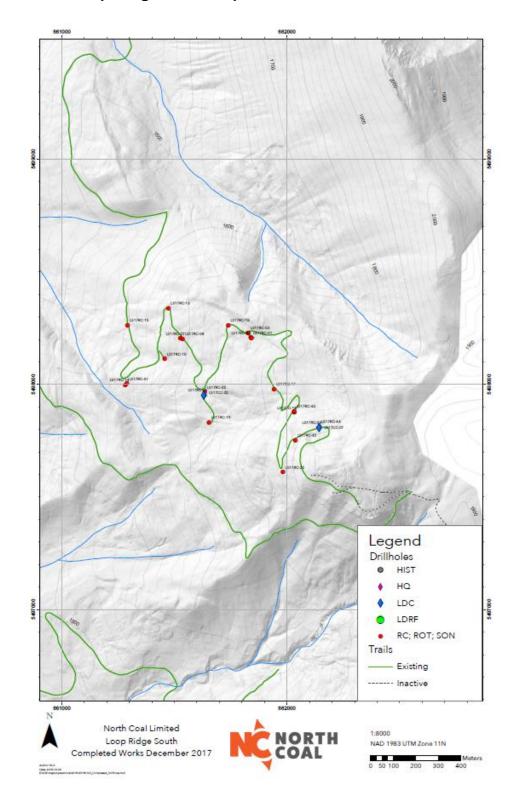




Table 3.3.1 Drillhole Locations

Loop South			Sur	veyed Loca	tion			
Hole ID	Hole Type	Date Completed	Easting	Northing	Elevation	Azimuth	Dip	Depth
LS17RC-01	RC	24-05-2017	661840	5498209	1755	0	-90	245
LS17RC-02	RC	25-05-2017	661842	5498207	1755	90	-60	334
LS17RC-03	RC	28-05-2017	661828	5498230	1754	270	-60	44
LS17RC-04	RC	28-05-2017	661632	5497951	1720	0	-90	341
LS17RC-05	RC	07-06-2017	661635	5497965	1720	270	-60	65
LS17RC-07	RC	08-06-2017	661526	5498204	1686	0	-90	202
LS17RC-08	RC	11-06-2017	661537	5498203	1687	90	-60	250
LS17RC-10	RC	17-05-2017	661457	5498113	1653	0	-90	282
LS17RC-13	RC	12-06-2017	661474	5498338	1669	0	-90	122
LS17RC-14	RC	13-06-2017	661282	5497998	1629	0	-90	37
LS17RC-15	RC	15-06-2017	661292	5498264	1598	0	-90	52
LS17RC-16	RC	16-06-2017	661739	5498264	1743	0	-90	136
LS17RC-17	RC	24-06-2017	661942	5497980	1811	0	-90	156
LS17RC-18	RC	18-06-2017	662032	5497875	1841	0	-90	201
LS17RC-19	RC	17-06-2017	661654	5497831	1725	0	-90	97
LS17RC-24	RC	21-06-2017	662140	5497808	1888	0	-90	200
LS17RC-25	RC	20-06-2017	661982	5497610	1869	90	-60	201
LS17RC-41	RC	15-06-2017	661289	5498004	1630	90	-60	20
LS17RC-42	RC	22-06-2017	662037	5497753	1886	270	-60	170
LS17RC-43	RC	25-06-2017	662032	5497881	1841	270	-60	214
LS17RC-44	RC	27-06-2017	662143	5497812	1888	90	-60	159
LS17CC-01	LDC	28-06-2017	662143	5497810	1888	0	-90	72
LS17CC-02	LDC	03-07-2017	661631	5497953	1720	0	-90	39
						RC metre	s	3528
Totals						LDC metre	es	110
						Total met	res	3638



4 2017 Exploration Work

4.1 Drilling

During May, June and July of 2017, 3528m of reverse circulation drilling was completed in 21 holes at 14 locations along new and existing trails on the Loop South property to identify the depths, thicknesses and quality of coal seams exposed at surface. Following the completion of the reverse circulation drilling and sampling, 110m of large diameter (15cm) core drilling was also completed.

Good Earth Drilling Services Ltd. was the single drilling contractor used during the program and completed all of the drilling between May 17 and July 5, 2017.

All 2017 drill holes were cased with welded-joint steel casing. The casing was left in the holes and the holes left open. Artesian-flowing holes were plugged and sealed according to Mines Act regulations and mineral exploration best practice.

Casing installation was difficult in most holes as the rocky ground underlying the thin overburden was severely broken and unconsolidated. In most cases, a good seal for drilling was not successfully achieved until at least 30m of casing was installed. Several coal seams were intersected during the casing installation.

4.2 Geophysical Logging

As per industry standard, all drill holes were geophysically logged. The geophysical contractor was Century Wireline Services, based in Red Deer, Alberta.

All open holes were logged with a gamma/neutron/deviation tool (#9058A) and with a gamma/density/resistivity/caliper tool (#9239). Where open-hole conditions were favourable, the holes were logged with a dipmeter tool (#9411A). All holes were also logged through the drill pipe with a gamma tool (#9068A) and a neutron tool (#9067A). Century has provided .las and .tif files of all geophysical logs.

All holes were logged within hours of drilling. Several of the holes were blocked within the coal seam and only partial logs were obtained.

In general, the quality of the data was found to be good.

All of the 2017 geophysical logs are included in Appendix A.



4.3 Surveying

CIMA Geomatics conducted a survey of drillhole locations for CanAus Coal Limited. Align Surveys was subcontracted to perform the field survey on site.

A static GPS survey was performed from the Priddis Canadian Active Control System monument PRDS CACS-GSD 756047 to several spikes that were placed on site. These placed spikes were used as local control benchmarks for the survey. Survey point 17 is one of these local control benchmarks and was used for the RTK survey of the drillhole locations. As an additional check for positional accuracy, a Precise Point Position (PPP) was processed for survey point 17 from the GPS data logged at that position.

The results of the PPP matched with the static survey results from PRDS CACS-GSD 756047 within 0.03m horizontally and 0.04m in elevation. The survey was performed in NAD 83 (CSRS) datum and the coordinates produced are UTM Zone 11 North. The Vertical Datum Is CGVD28 and elevations are orthometric heights. The geoid model used was GSD95.

The drillhole locations were surveyed in relation to survey point 17 (located along Corbin Road). Measurements were made to the approximate center of the drill holes at the surface entry points. Based on the terrain conditions and the survey methodology, the estimated positional accuracy of the drillhole surface locations is 0.20m in horizontal and 0.26m in vertical.

The locations of drillholes are shown in Table 3.3.1.

4.4 Sampling and Analysis

4.4.1 Reverse Circulation Sampling

Coal seams were intersected in 14 of the 21 RC holes and were sampled in 0.5 - 1m increments and later combined into single seam samples and analyzed for proximate, FSI and ash chemistry. Several seam samples were also washed to a single cut-point density and analyzed for rheology, ash chemistry and petrography. A total of 118 individual samples were collected from the RC holes (Table 4.4.1). The samples were sealed in heavy gauge plastic bags and immediately sent to Birtley Labs in Calgary, Alberta for coal quality analysis (details in Appendix C). Subsamples from the Birtley samples were sent to Pearson Petrography in Victoria, British Columbia for petrographic analysis. Analytical results from Birtley Labs and Pearson Petrography are shown in Appendix D.

4.4.2 Large Diameter Core Sampling

Two vertical large diameter core holes were drilled where seams were encountered in vertical RC drillholes at depths and thicknesses appropriate for large core sampling. The large diameter core



samples followed a full analytical program including drop/shatter, attrition and full washability. The core was logged and sampled on-site during drilling. A total of 26 individual samples were collected from the LD core (Table 4.4.1). The samples were sealed in heavy gauge plastic bags and immediately sent to Birtley Labs in Calgary, Alberta for coal quality analysis (details in Appendix C). Sub-samples from the Birtley samples were sent to Pearson Petrography in Victoria, British Columbia for petrographic analysis. Analytical results from Birtley Labs and Pearson Petrography are shown in Appendix D.

Table 4.4.1 Sample Summary

Reverse Circulation Samples		
Hole	Number of Samples	
LS17RC-01	14	
LS17RC-02	25	
LS17RC-03	7	
LS17RC-04	7	
LS17RC-05	14	
LS17RC-07	3	
LS17RC-08	10	
LS17RC-10	2	
LS17RC-14	2	
LS17RC-15	4	
LS17RC-17	5	
LS17RC-24	16	
LS17RC-43	3	
LS17RC-44	6	
Total	118	

Large Diameter Core Samples

Hole	Number of Samples
LS17CC-01	8
LS17CC-02	18

Total 26



5 Geology

5.1 Regional Structure

The East Kootenay coalfields lie in the Front Ranges of the Rocky Mountains which are characterized by north to northwest trending concentric folds and west dipping thrust faults. Tertiary normal faults, some of which are listric and probably occupy earlier thrust surfaces, are also a major feature.

The Crowsnest coalfield is a complex synclinorium in the Lewis thrust sheet. The major compressional features of the basin are the synclines linked en echelon by low-amplitude anticlines. A series of west dipping thrust faults dominate the structure of the north half of the basin. The major extensional feature is the Erickson fault system, which juxtaposes Mississippian limestone and the Kootenay Group. The fault has a minimum, west side down, displacement of 1,200m.

5.2 Stratigraphy

The Jurassic-Cretaceous Kootenay Group occupies part of a northwest trending belt of predominantly non-marine rocks comprising part of the Rocky Mountain Foothills and Front Ranges of southwestern Alberta and southeastern British Columbia. The Kootenay Group extends from just north of the United States border in the south to the North Saskatchewan River in the north (Gibson, 1985).

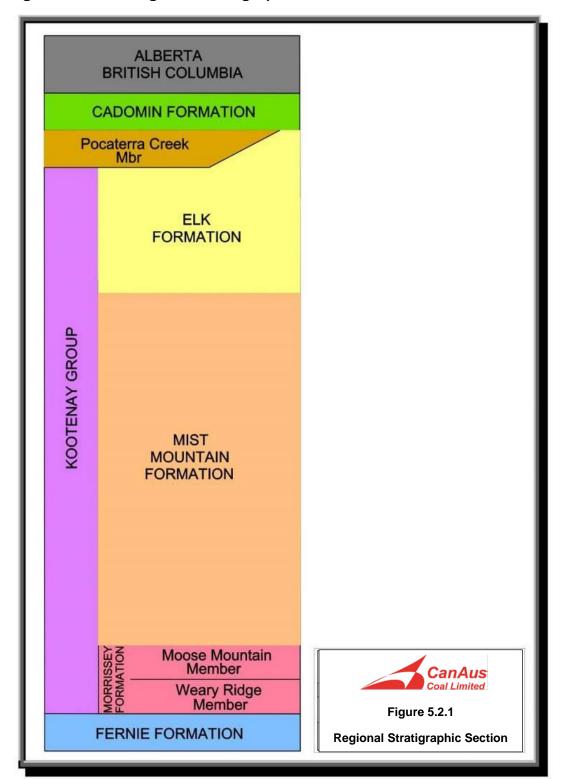
The Kootenay Group of the Rocky Mountain Foothills and Front Ranges encompasses the stratigraphic interval between the Jurassic Fernie Group below and the Lower Cretaceous Blairmore Group above (Gibson, 1985).

Three formations are recognized within the Kootenay Group, including the basal sandstone, Morrissey Formation, the coal-bearing Mist Mountain Formation, and the upper Elk Formation, (Figure 5.2.1).

Knowledge and definition of the stratigraphic column is required prior to any correlation and structural work. Figure 5.3.1 has been compiled from the drilling and interpretation of the geology to date at Loop Ridge. The section shows 20 coal seams within a section that is slightly more than 500m thick. The Moose Mountain Member of the basal Morrissey Formation has been identified in 68 of the holes drilled to date. On the east side of the Loop Ridge property, 22 drillholes have located limestone below the coal measures. The limestone represents the footwall side of the major, regional, Erickson normal fault which juxtaposes Mississippian limestone and the Kootenay Group. The fault has a minimum, west side down, displacement of 1,200m.



Figure 5.2.1 Regional Stratigraphic Section





5.3 Geological Overview

Drilling on the Loop Ridge property has occurred principally within the Mist Mountain Formation. Older rocks of the underlying Morrissey Formation have been intersected in 68 of the drillholes.

Drilling on the Loop Ridge property has tested the coal-bearing section the Mist Mountain Formation. Twenty major coal seams from Seams 3 to 22, are present and several subsidiary seams have been identified. Seam nomenclature is consistent with that of other mines in the area with Seam 20 being the uppermost major seam, and Seam 10, the lowest major seam present. Work in 2013 and 2014 allowed the average thicknesses of the coal seams to be calculated over the entire deposit (Table 5.3.1). Artificial minimum seam thicknesses of 0.01-0.02m were applied for modelling purposes only.

Overburden cover is variable, ranging from a few centimetres thick in the southern area of the known deposit (Upper Loop) to over 50 metres in the northern area (McGillivray). This area is covered in a thick layer of well-sorted river channel gravels.

Table 5.3.1 Loop Ridge Seam Data

Seam	Intercepts	Minimum (m)	Maximum (m)	Average (m)
22	1			2.17
21	21	0.02	3.65	0.73
20	49	0.02	22.52	6.23
19	72	0.02	18.74	4.11
19L	13	0.02	5.89	0.78
18	89	0.02	34.25	6.30
17	58	0.02	9.05	1.72
15	87	0.02	14.82	4.27
14	8	0.02	6.85	1.52
13	34	0.02	5.63	1.18
12	59	0.02	10.62	1.73
11	92	0.02	14.02	2.51
10	95	0.02	59.86	13.06
9	35	0.02	5.21	1.19
8	11	0.01	7.99	2.29
7	7	0.05	3.81	1.48
5	3	0.74	3.42	2.31
4	2	1.28	1.37	1.33
3	1	0.81	0.81	0.81



Figure 5.3.1 Typical Stratigraphic Section

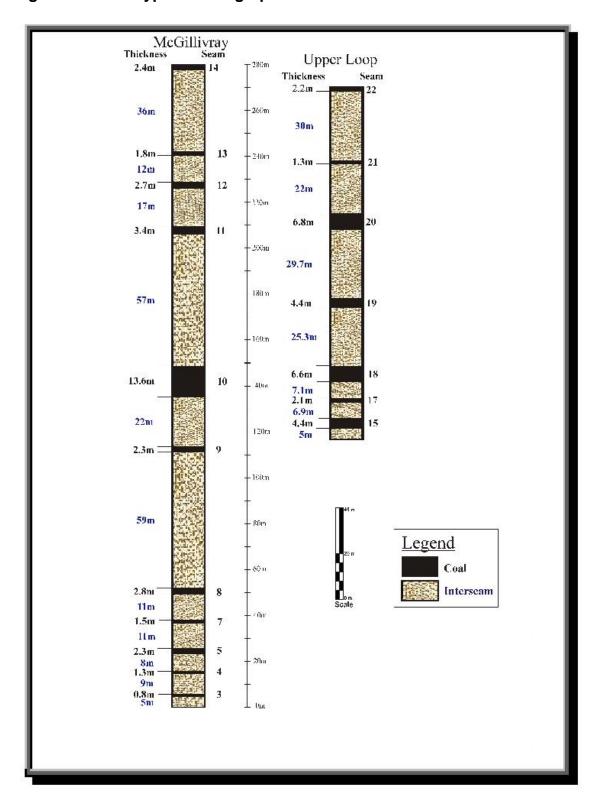




Figure 6.1 Section Location Map

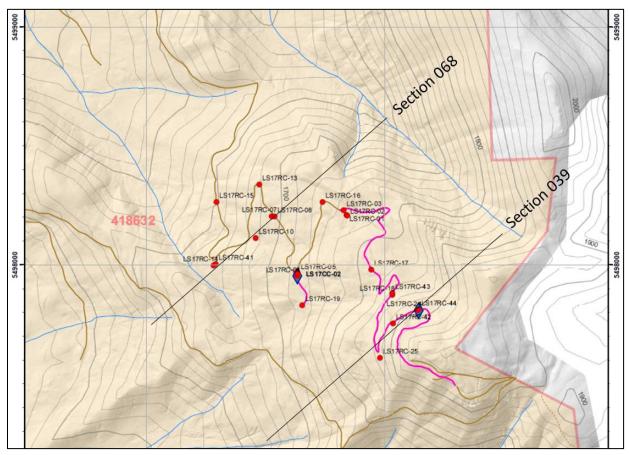
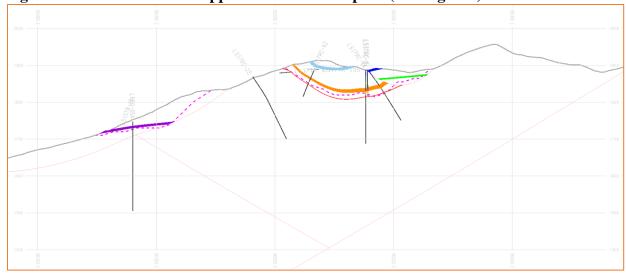


Figure 6.2 Section 039 Upper/South end of deposit (looking NW)





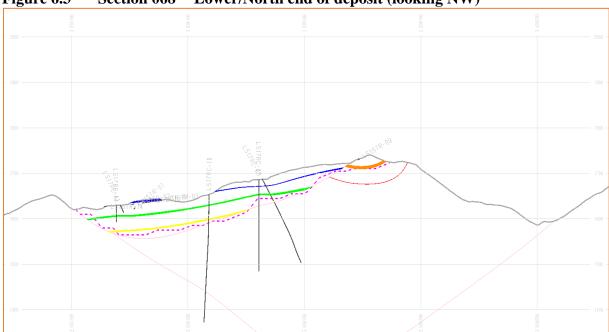


Figure 6.3 Section 068 Lower/North end of deposit (looking NW)

7 Reclamation

North Coal policy is to keep exploration disturbance to the smallest practical area. Natural soil profiles are maintained whenever possible to enhance natural regeneration and to control erosion-causing runoff. Drill sites are recontoured and revegetated as soon as work is completed and deemed not required for future use. In addition, all exploration areas are left in a clean, safe and stable condition at the end of each field season.

Primary access in 2017 was via existing forestry trails and new excavated trails, as described in Section 2.3. During trail and pad construction, woody debris was buried or stacked to the greatest extent possible, and shoulder areas were contoured to a naturalistic form. Disturbed areas were seeded and fertilized with the appropriate mixtures. Drainage is controlled by ditches and culverts, with some supplemental cross-ditching.

Most pads were constructed on existing forestry trails and landings where deactivation consisted of filling and re-contouring sumps. A section of new trail at the south end of the deposit was recontoured and seeded as it is not expected to be used in the future. All other pads and trails were left as-is in anticipation of future work. Steeper trails were temporarily deactivated with cross-ditches.



8 Expenditures

Actual expenditure for this work during the period May through December 2017 was \$1,137,861.84. Major expense items are shown in Table 8.1.

Table 8.1 Loop South Expenditures

Drilling	\$ 637,392.00
Technical Services	\$ 167,862.00
Analytical	\$77,825.00
Heavy Equipment	\$137,613.00
Safety and First Aid	\$52,670.00
Licenses and Permits	\$17,066.00
Personnel	\$36,691.84
Miscellaneous	\$10,742.00
Total	\$1,137,861.84

Details are presented in Appendix F.

9 Conclusions

The 2017 Loop South exploration program accomplished the goal of determining the extent at depth of the coal seams exposed in the 2015 trenches at surface and to develop a preliminary 3D resource model.

Loop South represents a small coal deposit at low strip ratio, with a large proportion of oxidized coal. Geological and topographical constraints suggest that coal is shallow and limited in extent. Further drilling is unlikely to significantly expand the resource. The structural complexity of the deposit is likely greater than presently modeled.

It is possible that oxidation is less extensive than currently interpreted, which represents an opportunity for improving the metallurgical coal resource. Extensive large diameter core drilling would be required to accurately define the limits of oxidation. In any future drilling, the risk of low core recovery and difficulty obtaining open hole logs should be considered.



10 References

Hughes, J.D., Klatzel-Maudry, L. and Nikols, D.J. 1989: A Standardized Coal Resource/Reserve Reporting System for Canada. Geological Survey of Canada Paper 88-21, 17p.

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Thompson, D., CanAus Coal Ltd., 2015. Assessment Report #1013, 2015 Loop Ridge Exploration Program

Thompson, D., CanAus Coal Ltd., 2016. Assessment Report #1025, 2016 Loop Ridge Exploration Program



11 Statement of Qualifications

I, David A. Thompson, BSc, P.Geo., of 201-35 Rivermount Pl, Fernie BC V0B 1M7, do hereby certify that:

- 1. I am Chief Geologist for North Coal Ltd.
- 2. I graduated with a B.Sc. from the University of BC in 1986.
- 3. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (Member ID #150701) and the Association of Professional Engineers and Geoscientists of Alberta (Member ID #184563).
- 4. I have worked as a geologist for a total of seventeen years since my graduation from university.
- 5. My past experience includes twelve years working in coal exploration and mining in British Columbia and Alberta. I have managed large scale exploration programs for the definition and resource development of several complex metallurgical coal deposits up to and including the feasibility stage and mine development of those deposits. I was also the Chief Geologist in the production department at Peace River Coal's Trend Mine in Tumbler Ridge BC.
- 6. I am responsible for the entire Assessment Report titled "Assessment Report: 2017 Loop Ridge Phase 2 Exploration Program" dated 31 March 2018.
- 7. I was on site for the entirety of the 2017 exploration program.
- 8. To the best of my knowledge, information and belief, the Assessment Report contains all scientific and technical information that is required to conform to the Mineral Tenure Act Regulations of British Columbia.
- 9. I consent to the filing of the Assessment Report with the British Columbia Ministry of Energy and Mines Geological Survey Branch.

Dated this 31st day of March 2018.

Dave Thompson, P.Geo.

North Coal Ltd.



Appendices

Appendix A Geophysical Logs – (in .ZIP file attached)

Appendix B Drill Core Logs – (in .ZIP file attached)

Appendix C Sample Summary

Appendix D Sample Analytical Results and Certificates – (in .ZIP file attached)

Appendix E Analytical and Processing Guidelines

Appendix F Statement of Costs



Appendix C - Sample Summary

2017 Loop South Sampling Summary

Reverse Circulation Samples

	culation Sam	Birtley	Birtley	Pearson		From	
Hole	Sample ID	Lab ID	Composite ID	Lab ID	Sample Type	(m)	To (m)
LS17RC-01	21603	171667	21603-21608	35898	COAL	26.00	26.50
LS17RC-01	21604	171668	21603-21608		COAL	26.50	27.00
LS17RC-01	21605	171669	21603-21608		COAL	27.00	28.00
LS17RC-01	21606	171670	21603-21608		COAL	28.00	29.00
LS17RC-01	21607	171671	21603-21608		COAL	29.00	29.50
LS17RC-01	21608	171672	21603-21608		COAL	29.50	30.00
LS17RC-01	21609	171673	none		ROCK	37.90	39.10
LS17RC-01	21610	171674	21610-21611	35899	COAL	40.40	41.60
LS17RC-01	21611	171675	21610-21611		COAL	41.60	42.30
LS17RC-01	21612	171676	none		ROCK	42.30	44.00
LS17RC-01	21613	171677	none		ROCK	46.50	47.00
LS17RC-01	21614	171678	21614-21616	35900	COAL	47.00	47.50
LS17RC-01	21615	171679	21614-21616		COAL	47.50	47.75
LS17RC-01	21616	171680	21614-21616		COAL	47.75	48.30
LS17RC-02	21617	171710	21617-21628	35901	COAL	31.00	31.50
LS17RC-02	21618	171708	21617-21628		COAL	31.50	32.00
LS17RC-02	21619	171709	21617-21628		COAL	32.00	32.25
LS17RC-02	21620	171711	21617-21628		COAL	32.25	32.50
LS17RC-02	21621	171712	21617-21628		COAL	32.50	32.75
LS17RC-02	21622	171713	21617-21628		COAL	32.75	33.00
LS17RC-02	21623	171714	21617-21628		COAL	33.00	33.25
LS17RC-02	21624	171715	21617-21628		COAL	33.25	33.50
LS17RC-02	21625	171716	21617-21628		COAL	33.50	33.75
LS17RC-02	21626	171717	21617-21628		COAL	33.75	34.00
LS17RC-02	21627	171718	21617-21628		COAL	34.00	34.25
LS17RC-02	21628	171719	21617-21628		COAL	34.25	34.50
LS17RC-02	21629	171720	21629-21636	35902	COAL	34.50	34.75
LS17RC-02	21630	171721	21629-21636		COAL	34.75	35.00
LS17RC-02	21631	171722	21629-21636		COAL	35.00	35.25
LS17RC-02	21632	171723	21629-21636		COAL	35.25	35.50
LS17RC-02	21633	171724	21629-21636		COAL	35.50	35.75
LS17RC-02	21634	171725	21629-21636		COAL	35.75	36.00
LS17RC-02	21635	171726	21629-21636		COAL	36.00	36.50
LS17RC-02	21636	171727	21629-21636		COAL	36.50	37.00
LS17RC-02	21637	171728	21637-21641	35903	COAL	44.00	44.50



2017 Loop Ridge Phase 2 Exploration Program

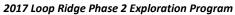
LS17RC-02	21638	171729	21637-21641		COAL	44.50	45.00
LS17RC-02	21639	171730	21637-21641		COAL	45.00	45.50
LS17RC-02	21640	171731	21637-21641		COAL	45.50	46.00
LS17RC-02	21641	171732	21637-21641		COAL	46.00	46.50
LS17RC-03	21642	171752	21642-21645	35904	COAL	8.50	9.50
LS17RC-03	21643	171753	21642-21645		COAL	9.50	10.00
LS17RC-03	21644	171754	21642-21645		COAL	10.00	11.00
LS17RC-03	21645	171755	21642-21645		COAL	11.00	11.75
LS17RC-03	21646	171756	21646-21647	35905	COAL	39.00	40.00
LS17RC-03	21647	171757	21646-21647		COAL	40.00	40.75
LS17RC-03	21648	171758	none		COAL	42.00	42.80
LS17RC-04	21649	171759	none		ROCK	24.75	25.00
LS17RC-04	21650	171760	21650-21652	35906	COAL	25.00	26.00
LS17RC-04	21651	171761	21650-21652		COAL	26.00	27.00
LS17RC-04	21652	171762	21650-21652		COAL	27.00	27.75
LS17RC-04	21653	171763	none		ROCK	29.25	29.75
LS17RC-04	21654	171764	21654-21655	35907	COAL	31.50	32.50
LS17RC-04	21655	171765	21654-21655		COAL	32.50	33.00
LS17RC-05	21656	171848	21656-21659	35939	COAL	29.50	30.80
LS17RC-05	21657	171849	21656-21659		COAL	30.80	31.80
LS17RC-05	21658	171850	21656-21659		COAL	31.80	32.80
LS17RC-05	21659	171851	21656-21659		COAL	32.80	33.40
LS17RC-05	21660	171852	21660-21669	35940	COAL	37.20	38.00
LS17RC-05	21661	171853	21660-21669		COAL	38.00	39.00
LS17RC-05	21662	171854	21660-21669		COAL	39.00	40.00
LS17RC-05	21663	171855	21660-21669		COAL	40.00	41.00
LS17RC-05	21664	171856	21660-21669		COAL	41.00	42.00
LS17RC-05	21665	171857	21660-21669		COAL	42.00	43.00
LS17RC-05	21666	171858	21660-21669		COAL	43.00	44.00
LS17RC-05	21667	171859	21660-21669		COAL	44.00	45.00
LS17RC-05	21668	171860	21660-21669		COAL	45.00	46.00
LS17RC-05	21669	171861	21660-21669		COAL	46.00	46.50
LS17RC-07	21670	171862	21670-21671	35941	COAL	27.00	28.00
LS17RC-07	21671	171863	21670-21671		COAL	28.00	28.25
LS17RC-07	21672	171864	none		COAL	76.00	76.75
LS17RC-08	21673	171865	none		COAL	22.75	23.50
LS17RC-08	21674	171866	21674-21675	35942	COAL	36.75	37.25
LS17RC-08	21675	171867	21674-21675		COAL	37.50	38.50
LS17RC-08	21676	171868	21676-21678	35943	COAL	39.25	40.00
LS17RC-08	21677	171869	21676-21678		COAL	40.00	41.25
LS17RC-08	21678	171870	21676-21678		COAL	41.50	42.25
LS17RC-08	21679	171871	none		COAL	56.50	57.60
LS17RC-08	21680	171872	21680-21682	35944	COAL	57.60	58.60



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LS17RC-08	21681	171873	21680-21682		COAL	58.60	59.60
LS17RC-08	21682	171874	21680-21682		COAL	59.60	60.49
LS17RC-10	21601	171766	none		ROCK	56.00	57.00
LS17RC-10	21602	171767	none		ROCK	57.00	58.00
LS17RC-14	21683	171875	21683-21684	35945	COAL	16.70	17.30
LS17RC-14	21684	171876	21683-21684		COAL	17.30	19.50
LS17RC-15	21685	171877	21685-21687	35946	COAL	12.70	13.50
LS17RC-15	21686	171878	21685-21687		COAL	13.50	14.60
LS17RC-15	21687	171879	21685-21687		COAL	15.20	15.60
LS17RC-15	21688	171880	none		COAL	24.10	24.70
LS17RC-17	21705	172315	21705-21707	36063	COAL	5.10	6.00
LS17RC-17	21706	172315	21705-21707		COAL	6.00	7.00
LS17RC-17	21707	172315	21705-21707		COAL	7.00	8.00
LS17RC-17	21708	172316	21708-21709	36064	COAL	16.10	17.00
LS17RC-17	21709	172316	21708-21709		COAL	17.00	17.40
LS17RC-24	21689	172123	21689-21693	36059	COAL	5.50	6.50
LS17RC-24	21690	172124	21689-21693		COAL	6.50	7.50
LS17RC-24	21691	172125	21689-21693		COAL	7.50	8.50
LS17RC-24	21692	172126	21689-21693		COAL	8.50	9.50
LS17RC-24	21693	172127	21689-21693		COAL	9.50	10.00
LS17RC-24	21694	172128	21694-21695	36060	COAL	14.50	15.50
LS17RC-24	21695	172129	21694-21695		COAL	15.50	16.50
LS17RC-24	21696	172130	21696-21701	36061	COAL	57.50	59.00
LS17RC-24	21697	172131	21696-21701		COAL	59.00	60.00
LS17RC-24	21698	172132	21696-21701		COAL	60.00	61.00
LS17RC-24	21699	172133	21696-21701		COAL	61.00	62.00
LS17RC-24	21700	172134	21696-21701		COAL	62.00	63.00
LS17RC-24	21701	172135	21696-21701		COAL	63.00	63.40
LS17RC-24	21702	172136	21702-21704	36062	COAL	64.30	66.00
LS17RC-24	21703	172137	21702-21704		COAL	66.00	67.00
LS17RC-24	21704	172138	21702-21704		COAL	67.00	67.70
LS17RC-43	21710	172144	21710-21711	36065	COAL	86.50	87.50
LS17RC-43	21711	172145	21710-21711		COAL	87.50	88.00
LS17RC-43	21712	172146	21712	36066	COAL	103.50	106.49
LS17RC-44	21713	172147	21713	36067	COAL	3.50	4.50
LS17RC-44	21714	172148	21714	36068	COAL	13.50	14.50
LS17RC-44	21715	172149	21715-21716	36069	COAL	34.00	35.00
LS17RC-44	21716	172150	21715-21716		COAL	35.00	35.50
LS17RC-44	21717	172151	21717-21718	36070	COAL	61.50	62.50
LS17RC-44	21718	172152	21717-21718		COAL	62.50	63.00





Large Diameter Core Samples

		Birtley	Birtley	Pearson		From	
Hole	Sample ID	Lab ID	Composite ID	Lab ID	Sample Type	(m)	To (m)
LS17CC-01	21719	172188	21719-21722	36344	COAL	58.00	58.70
LS17CC-01	21720	172189	21719-21722		COAL	58.70	59.60
LS17CC-01	21721	172190	21719-21722		COAL	61.10	62.10
LS17CC-01	21722	172191	21719-21722		COAL	62.10	62.20
LS17CC-01	21723	172192	21723-21725	36345	COAL	63.05	64.19
LS17CC-01	21724	172193	21723-21725		COAL	64.19	65.19
LS17CC-01	21725	172194	21723-21725		COAL	65.19	65.49
LS17CC-01	21726	172195	none		FW	66.20	67.30
LS17CC-02	21727	172196	none		HW	23.92	24.30
LS17CC-02	21728	172197	21728-21730	36346	COAL	24.30	25.24
LS17CC-02	21729	172198	21728-21730		COAL	25.24	26.13
LS17CC-02	21730	172199	21728-21730		COAL	26.13	27.00
LS17CC-02	21731	172200	none		FW	27.00	27.33
LS17CC-02	21732	172201	21732-21733	36347	COAL	28.12	28.47
LS17CC-02	21733	172202	21732-21733		COAL	28.47	29.10
LS17CC-02	21734	172203	none		PARTING	29.10	29.31
LS17CC-02	21735	172204	none		PARTING	29.31	29.47
LS17CC-02	21736	172205	none		PARTING	29.47	29.70
LS17CC-02	21737	172206	21737-21743	36348	COAL	29.83	30.64
LS17CC-02	21738	172207	21737-21743		COAL	30.64	31.64
LS17CC-02	21739	172208	21737-21743		COAL	31.64	32.39
LS17CC-02	21740	172209	21737-21743		COAL	32.39	33.14
LS17CC-02	21741	172210	21737-21743		COAL	33.32	33.80
LS17CC-02	21742	172211	21737-21743		PARTING	33.80	34.20
LS17CC-02	21743	172212	21737-21743		COAL	34.20	34.80
LS17CC-02	21744	172213	none		FW	34.80	35.18



Appendix E - Analytical and Processing Guidelines

Receiving

Check that all samples received correspond to the sample sheet provided by sampling geologist.

Weigh each sample in bag, as received, and record weights on shipping manifest. Return completed manifest to client. All samples must remain in cold storage when not undergoing processing.

Raw Ply Samples

On commencement, lay samples out to dry. If necessary, gently break intact core to ARD apparatus dimensions.

Report Mass (ar), Mass (ad), and Free Moisture.

Screen at 2mm. Report proportions of +2mm and -2mm material. Report ARD on +2mm fraction.

Recombine +2mm and -2mm fractions.

Compositing

Combine full mass of Raw Ply samples into Raw Composite as instructed.

Assign new Sample ID to Raw Composite as indicated by client.

Crush to pass -12.5mm

Head Raw Analysis

Undertake a raw coal analysis on a representative portion of the crushed coal Analyse for Proximates, Total Sulphur, FSI, Relative Density, and MAA.

Sizing

Screen three size fractions and report sizing: -12.5+2mm, -2+0.25mm, -0.25+0mm

Recombine -12.5+2mm and -2+0.25mm size fractions

into one size fraction -12.5+0.25mm.

Washability

Complete float sink on -12.5mm+0.25mm size fraction.

Float sink each increment at 1.40, 1.50, 1.60 densities.

Analyse each density increment for proximates.

Analyse each density increment up to and including F1.60 for FSI.

On a -0.25mm fraction, undertake starvation flotation.

Report masses for all froths and tails.

Recombine fractions 1C, 2C, 3C into one fraction. Analyze proximates and FSI.

Recombine fractions 4C, 3T, 2T, 1T into one fraction. Analyze proximates

Reserve all materials for future work.

Clean Coal Composite

Instructions will be provided on the construction of Clean Composite.

Produce sufficient clean sample for the tests indicated below. No bulk wash required.

Assign new Sample ID to Clean Composite as indicated by client.

Analyse for the following:

Proximate Analysis

Total Sulphur

FSI

GCV

HGI

Ultimate Analysis

MAA including Pcoal

Gieseler Fluidity

Dilatation

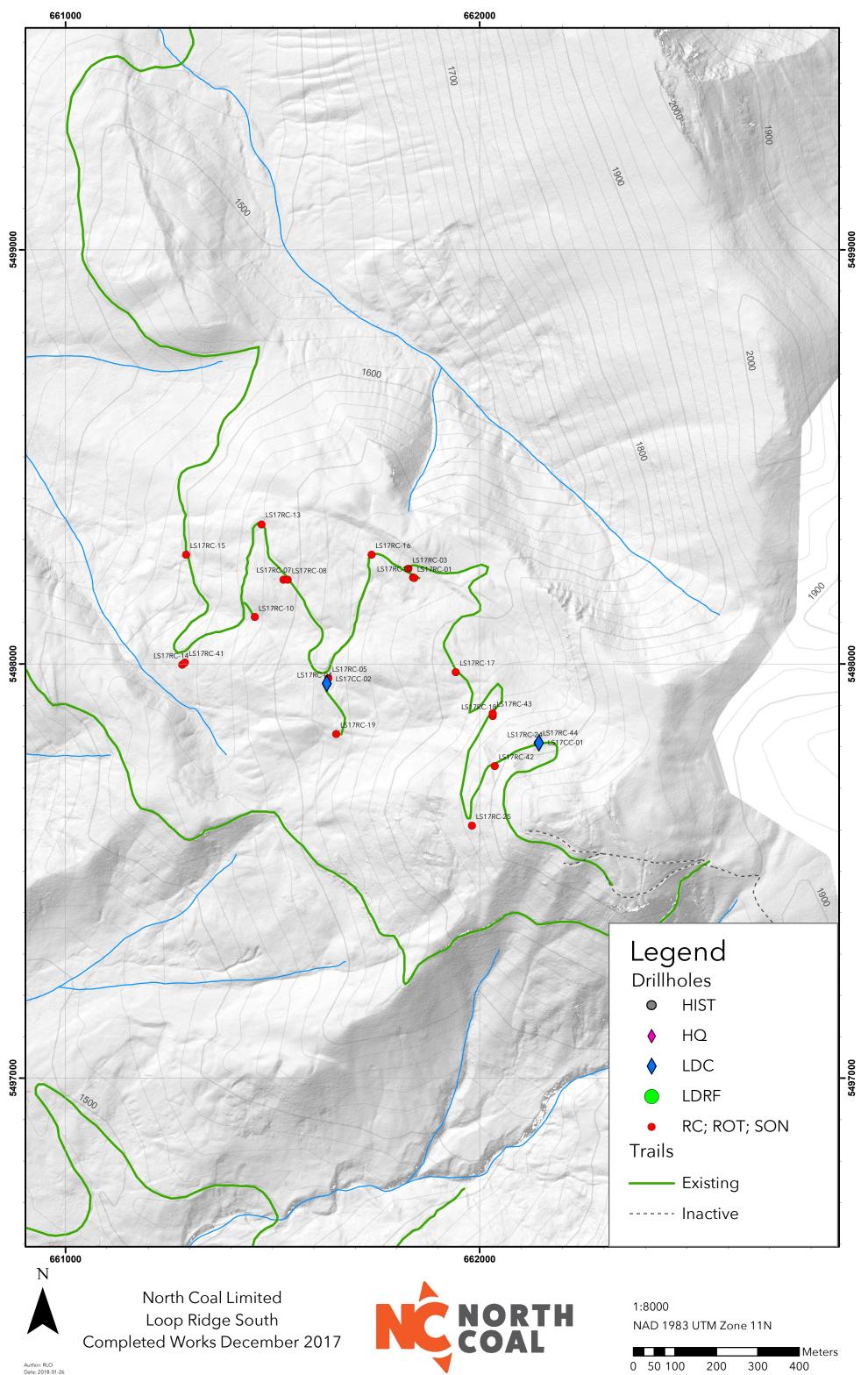
Ship 100g subsample to Pearson Petrography (Vitrinite Reflectance and Macerals)



Appendix F – Statement of Costs

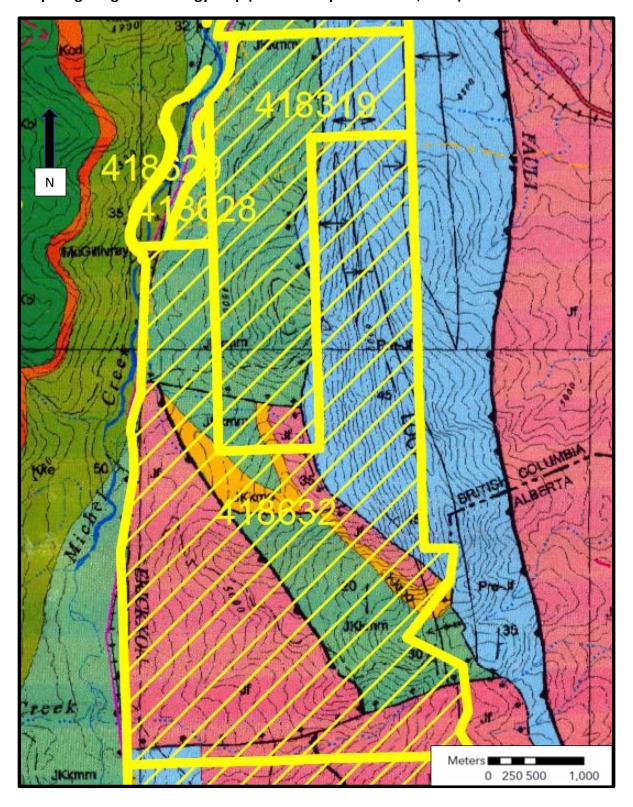
Budget Items	Contractor	LS Total \$		
Drilling	Good Earth Drilling	637,392.00		
Technical Services	Century Wireline	89,670.00		
	Silenus Resources Mgt Inc.	71,483.00		
	Bob Leach	3,044.00		
	Align Surveys	1,460.00		
	Moose Mtn	2,205.00		
Analytical	Birtley Coal & Mineral Testing	77,525.00		
	Pearson & Assoc	300.00		
Heavy Equipment	Fiorentino Bros	18,061.00		
	Down to Earth	59,578.00		
	Johnston construction	33,238.00		
	TruCut	26,736.00		
Safety	TruCut	52,670.00		
Licenses	Ministry of Energy and Mines	17,066.00		
		10.001.00		
Personnel	IF Consulting Ltd.	12,284.00		
	Matesoi, A	9,559.84		
	Next Resources Inc.	14,848.00		
Miscellaneous	Manitoulin Transport	720.00		
	Devon Transport	3,280.00		
	Cameron Enterprises	2,236.00		
	Other	4,506.00		

1,137,861.84

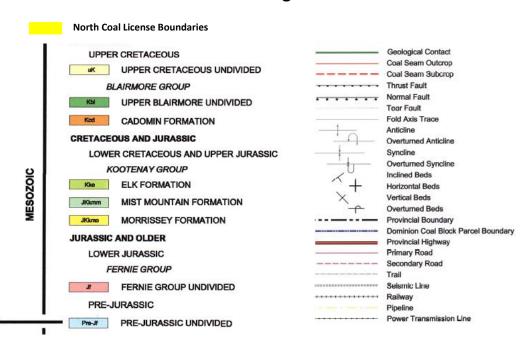


Author: RLO
Date: 2018-01-26
E:\GIS\maps\operations\2018\20180123_Completed_Drillhole.mxd

Loop Ridge Regional Geology Map (from GSC Open File 3549, 1998)



Legend



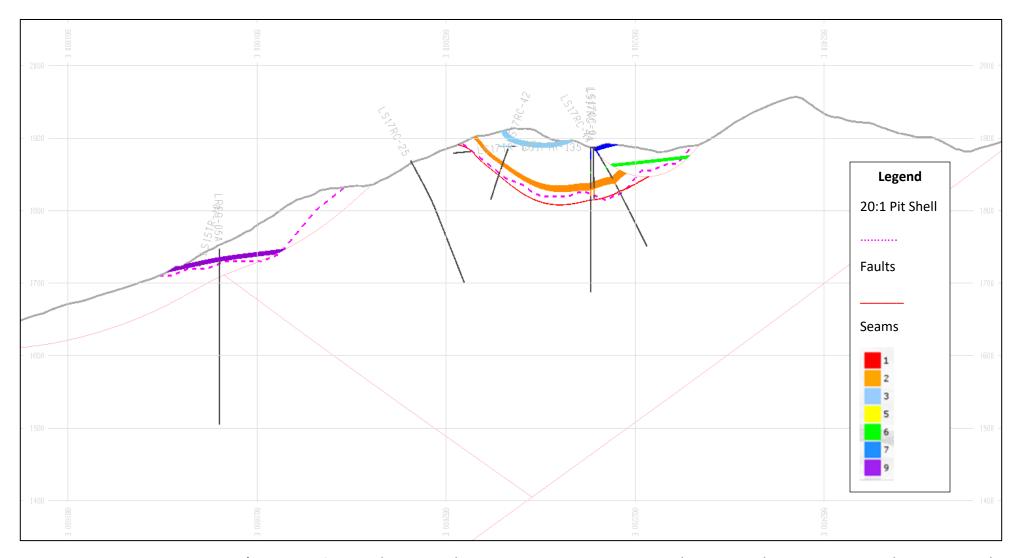


Figure 6.2: Cross-section 039, Upper/South end of deposit (looking NW), showing coal seams in in-situ zone (Seams 1, 2, 3) and disturbed zone (Seams 5, 6, 7, 9)

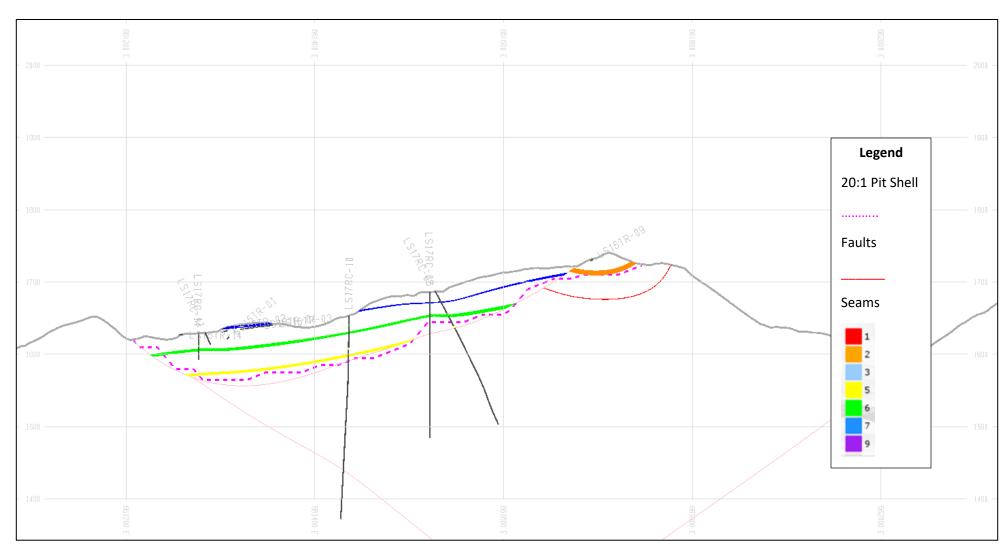


Figure 6.3: Cross-section 068, Lower/North end of deposit (looking NE), showing coal seams in in-situ zone (Seams 1, 2, 3) and disturbed zone (Seams 5, 6, 7, 9)

Appendix B - Core Logs

CanAus Common Codes	
Lithology	Code
Overburden, undifferentiated	OV
Coal	CO
Carbonaceous Claystone	XC
Carbonaceous Mudstone	XM
Carbonaceous Shale	XH
Claystone	CS
Mudstone	MS
Shale	SH
Siltstone	ST
Sandstone	SS
Conglomerate	CG
Limestone	LS
Sedimentary Rock, undifferentiated	SU
Core Loss, interpreted as coal	KLC
Core Loss, interpreted as rock	KLR
Core Loss, undifferentiated	KL
Not Logged	NL

Sorted by Lithology		Sorted on Code		Sorted on Description	
Lithology	Code	Code	Lithology	Lithology	Code
Unconsolidated Sediments		Al	Acid Intrusive	Acid Intrusive	Al
Clay	CL	AL	Alluvium	Acid Volcanic	AV
Mud	MD	AN	Andesite	Alluvium	AL
Silt	SI	AV	Acid Volcanic	Andesite	AN
Sand	SA	Av	Acid Volcanic	Andesite	AIN
Gravel		D.C	Brown Cool	Basalt	DC
Cobbles	GV	BC	Brown Coal	Basement Undifferentiated	BS
	OB	BI	Basic Intrusive		BU
Boulders	ВО	ВО	Boulders	Basic Intrusive	BI
		BR	Breccia	Basic Volcanic	BV
Alluvium	AL	BS	Basalt	Boulders	ВО
Colluvium	CV	BU	Basement Undifferentiated	Breccia	BR
Diatomaceous Earth	DE	BV	Basic Vocanic	Brown Coal	ВС
Fill/Spoil	FI				
Fireclay	FC	CA	Calcite	Calcite	CA
Loam	LO	СВ	Carbonate	Calcrete	CC
Soil	SO	CC	Calcrete	Carbonaceous Claystone	XC
		CG	Conglomerate	Carbonaceous Mudstone	XM
Carbonaceous Sediments		СН	Chert	Carbonaceous Sandstone	XS
Coal	CO	CK	Chalk	Carbonaceous Shale	XH
Lignite	LG	CL	Clay	Carbonaceous Siltstone	XT
Brown Coal	ВС	СО	Coal	Carbonate	СВ
Peat	PE	CS	Claystone	Chalk	CK
Oil Shale	OS	CV	Colluvium	Chert	СН
Tar Sand	TS			Clay	CL
		DE	Diatomaceous Earth	Claystone	CS
Coaly Claystone	ZC	DI	Diamictite	Coal	СО
Coaly Mudstone	ZM	DM	Dolomite	Coaly Claystone	ZC
Coaly Sandstone	ZS	DO	Dolerite	Coaly Mudstone	ZM
Coaly Shale	ZH	50	Doicitic	Coaly Sandstone	ZS
Coaly Silate Coaly Siltstone	ZT	FB	Fault Breccia	Coaly Shale	ZH
	۷1	FC		Coaly Siltstone	ZT
		FI FI	Fireclay Fill	Cobbles	OB
 	VA 4				
Carbonaceous Mudstone	XM	FK	Ferricrete	Colluvium	CV
Carbonaceous Sandstone	XS	FW	Fossil Wood	Cone in Cone Carbonate	KK
Carbonaceous Shale	XH	65		Conglomerate	CG
Carbonaceous Siltstone	XT	GB	Gabbro	Conglomerate (>65% matrix)	M1
		GD	Granodiorite	Conglomerate (35-65% matrix)	M2
Clastic Sedimentary Rocks		GN	Gneiss	Conglomerate (<35% matrix)	M3
Sedimentary Rock, undifferentiated	SU	GR	Granite	Core Loss	KL
Claystone	CS	GV	Gravel		
Pellet Claystone	PC			Diamictite	DI
Mudstone	MS	IG	Igneous Rock, undifferentiated	Diatomaceous Earth	DE
Shale	SH	П	Intermediate Intrusive	Dolerite	DO
Siltstone	ST	IN	Intrusive Rock, undifferentiated	Dolomite	DM
Sandstone	SS	IS	Ironstone		
Conglomerate	CG	IV	Intermediate Volcanic	Fault Breccia	FB
Conglomerate (>65% matrix)	M1			Ferricrete	FK
Conglomerate (35-65% matrix)	M2	KA	Kaolinite	Fill/Spoil	FI
Conglomerate (<35% matrix)	M3	KK	Cone in Cone Carbonate	Fireclay	FC
,		KL	Core Loss	Fossil Wood	FW
Breccia	BR				, ,,
Fault Breccia	FB	LA	Laterite	Gabbro	GB
Diamictite	DI	LG	Lignite	Gneiss	GN
Tillite	TI	LI	Limonite	Granite	GR
i i i i i i i i i i i i i i i i i i i	11			Granodiorite	
Chamical Sadimonton: Basks		LO	Limostono		GD GV
Chemical Sedimentary Rocks	66	LS	Limestone	Gravel	GV
Calcrete	CC		0 1 1 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		
Carbonate	CB	M1	Conglomerate (>65% matrix)	Igneous Rock, undifferentiated	IG

Chalk	CK	M2	Conglomerate (35-65% matrix)	Intermediate Intrusive	Ш
Chert	CH	M3	Conglomerate (<35% matrix)	Intermediate inclusive	IV
Cone in Cone Carbonate	KK	MD	Mud	Intrusive Rock, undifferentiated	IN
Polomite	DM	MM	Metamorphic Rock, undifferentiated	Ironstone	IS
erricrete	FK	MR	Missing Record	lionstone	13
			_	Kaalinita	1/ /
ossil Wood	FW	MS	Mudstone	Kaolinite	KA
ronstone	IS	MY	Mylonite		
aolinite	KA			Laterite	LA
aterite	LA	NC	Non Coal	Lignite	LG
imestone	LS	NL	Not Logged	Limestone	LS
monite	LI	NR	No Recovery	Limonite	LI
lcrete	SC			Loam	LO
onstein	TN	ОВ	Cobbles		
		OS	Oil Shale	Metamorphic Rock, undifferentiated	MM
neous		OW	Old Workings	Missing Record	MR
neous Rock, undifferentiated	IG	-		Mud	MD
olcanic Rock, undifferentiated	VR	PC	Pellet Claystone	Mudstone	MS
trusive Rock, undifferentiated	IN	PE	Peat	Mylonite	MY
a asive nock, anamerentiated	11.4	PH	Phyllite	Invitation in the second secon	1411
cid/Eoleic Volcania	A\/		•	No Posovory	NID
cid/Felsic Volcanic	AV	PY	Pyrite	No Recovery	NR
ntermediate Volcanic	IV		-	Non Coal	NC
asic/Mafic Volcanic	BV	QT	Quartzite	Not Logged	NL
cid/Felsic Intrusive	Al	QZ	Quartz		
ntermediate Intrusive	II			Oil Shale	OS
asic/Mafic Intrusive	ВІ	RH	Rhyolite	Old Workings	OW
ndesite	AN	SA	Sand	Peat	PE
asalt	BS	SC	Silcrete	Pellet Claystone	PC
olerite	DO	SD	Siderite	Phyllite	PH
abbro	GB	SH	Shale	Pyrite	PY
ranite	GR	SI	Silt		
ranodiorite	GD	SL	Slate	Quartz	QZ
nyolite	RH	SO	Soil	Quartzite	QT
uff	TF	SS	Sandstone		
uffite	TT	ST	Siltstone	Rhyolite	RH
olcanic Breccia	VB	SU	Sedimentary Rock, undifferentiated		
		SZ	Schist	Sand	SA
<u>letamorphic</u>				Sandstone	SS
letamorphic Rock, undifferentiated	ММ	TA	Talc	Schist	SZ
asement Undifferentiated	BU	TF	Tuff	Sedimentary Rock, undifferentiated	SU
				II	
lylonite	MY	TI	Tillite	Shale	SH
uartzite	QT	TN	Tonstein	Siderite	SD
ate	SL	TS —	Tar Sand	Silcrete	SC
nyllite	PH	TT	Tuffite	Silt	SI
chist	SZ			Siltstone	ST
neiss	GN	VB	Volcanic Breccia	Slate	SL
		VD	Void	Soil	SO
<u>linerals</u>		VR	Volcanic Rock, undifferentiated		
alcite	CA			Talc	TA
yrite	PY	XC	Carbonaceous Claystone	Tar Sand	TS
uartz	QZ	XH	Carbonaceous Shale	Tillite	TI
derite	SD	XM	Carbonaceous Mudstone	Tonstein	TN
alc	TA	XS	Carbonaceous Sandstone	Tuff	TF
ni.	IA	XS XT	Carbonaceous Sandstone Carbonaceous Siltstone	Tuffite	TT
<u>ther</u>		ΛI	Carbonaceous sinstone	Tunite	11
ore Loss	KL	ZC	Coaly Claystone	Void	VD
				Volcanic Breccia	
lissing Record	MR	ZH	Coaly Shale	II	VB
on Coal	NC	ZM	Coaly Mudstone	Volcanic Rock, undifferentiated	VR
o Recovery	NR	ZS	Coaly Sandstone		
ot Logged	NL	ZT	Coaly Siltstone		
ld Workings	OW				
oid	VD				



																					Diamand						Commenced			
							_														Planned			Approx			Surveyed			
													Driller's			Open		Logger's												
					Target				Driller's	Bit Size	Core Size	Overburden	Casing	Corepoint	Date	Hole Log	Logger's	Casing	Water									Date		
Hole ID	Project	Year	Type	Geologist(s) Rig	Seam(s)	Date Drilled	Azimuth	Dip	TD (m)	(mm)	(mm)	(m)	(m)	(m)	Logged	to TD?	TD (m)	(m)	Table (m) Flowing	g? E	N	Elev	E	N	Elev	E	N Elev	Surveyed	Survey ID Com	iments
LS17CC-01		LS 201	7	CC n; Ian Fraser; GE	D 130	2017-06-28	3 0	-90	71.5	Odex 279;	229		3 46	5 57	.2 2017-07	-01 Yes	71.42	45.6	5 10 No	662146	5497816	6	66214	4 5497809	9 189	2 662143.3	5497810 1887	7.893 2017-08-09	2544 First	attempt this drill hole failed at

approx 18m, drillers trippped out, hammer did not come out, eventually casing was retrieved as was hammer bit. Second attempt, same hole location; hole# not changed. Discrepency with core point, miscommunication between different GED shifts. Actual core point 57.2m (AC).

Hole ID Run # From To Interval Recovery Recovery (m) (DRILLHO	LE LOG - L	ithology [Data												CanAus Coal Limited
Hole ID Run # (m) (m)				DR	ILLER'S DEPT	THS		'	COR	RECTED DEP	THS					
STCC-01 0.00 57.50 57.50 0.00 0% 0.00 57.50 57.50 0.00 0% 0.00 57.50 57.50 0.00 0% 0.00 0.00 0.00 0.00 0% 0.00		-	From	_	Interval	Recovery	Recovery	From	То	Interval	Recovery	Recovery	Lithology	Lithology		
LSTPCC-01 S7.50 S8.00 S8.50 O.50 O.00 O% S7.50 S8.00 O.50 O.70	Hole ID	Run #	(m)	(m)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(%)	Code	English	Sample ID	Description
LSTCC-01 1 58.00 58.50 0.50 0.70 140% 58.00 58.70 0.70 0.70 100% CO Coal 21719 Granular, shiny, no fizz, minor partition approx 0.10m CO Coal 21720 Dull w shiny fragments, flakey, shearing, no fizz; Minor partition approx 0.10m CO Coal 21720 Dull w shiny fragments, flakey, shearing, no fizz; Minor partition approx 0.10m CO Coal CO Coal CO COAL	LS17CC-01		0.00	57.50	57.50	0.00	0%	0.00	57.50	57.50	0.00	0%	NL	Not Logged		
LSTCC-01 2 58.50 59.40 59.50 59.40 59.50 59.50 59.50 59.60	LS17CC-01		57.50	58.00	0.50	0.00	0%	57.50	58.00	0.50	0.00	0%	СО	Coal	21719	Hammered through hangingwall, not logged
LS17CC-01 2 59.40 59.50 0.10 0.00 0% 59.60 59.60 59.60 0.00 0.	LS17CC-01	1	58.00	58.50	0.50	0.70	140%	58.00	58.70	0.70	0.70	100%	CO	Coal	21719	Granular, shiny, no fizz, minor partition approx 0.10m
LS17CC-01 4 61.00 62.00 1.00 0.90 90% 61.10 62.10 1.00 0.90 90% CO Coal 21721 Games Sheared 61-61.6m, more granular and LS17CC-01 5 62.00 62.10 0.10 0.10 100% 62.10 62.20 0.10 0.10 100% ST Siltstone EXCL Soft brown, siltstone w calcite micro veins. Little fizz LS17CC-01 5 62.00 63.00 0.30 0.00 0% 62.80 63.40 0.60 0.00 0.00 0% KLR Core Loss, in EXCL Soft brown mudstone, FW, carbonaceous stringers, no fizz LS17CC-01 6 63.35 64.00 65.50 0.30 0.30 0.30 0.00 0% 64.54 65.54 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	LS17CC-01	2	58.50	59.40	0.90	0.90	100%	58.70	59.60	0.90	0.90	100%	CO	Coal	21720	Dull w shiny fragments, flakey, shearing, no fizz; Minor parting 0.10cm
ESTOC-01 4 61.00 62.00 62.00 62.00 62.10 0.10 0.90 90% 61.10 62.10 62.20 0.10 0.10 0.10 100% 62.20 0.10 0.10 100% 62.20 0.10 0.10 100% 62.20 0.10 0.10 100% 62.20 0.10 0.10 100% 62.20 0.10 0.10 100% 62.20 0.10 0.10 100% 62.20 0.10 0.10 100% 62.20 0.10 0.10 100% 62.20 0.10 0.10 100% 62.20 0.10 0.10 100% 62.20 0.10 0.10 100% 62.20 0.10 0.10 100% 62.20 0.10 0.10 100% 62.20 0.10 0.10 100% 63.10 0.10 0.10 100% 63.40 0.60 0.60 0.60 0.60 0.60 0.60 0.60 0.60 100% 63.10 0.10 0.10 100% 63.40 63.50 0.10 0.10 100% 63.40 0.60 0.10 0.10 100% 63.40 0.60 0.10 0.10 100% 63.40 0.60 0.10 0.10 100% 63.40 0.60 0.10 0.10 100% 63.40 0.60 0.10 0.10 100% 63.40 0.60 0.10 0.10 100% 63.40 0.60 0.10 0.10 100% 63.40 0.60 0.10 0.10 100% 63.40 0.60 0.10	LS17CC-01	2	59.40	59.50	0.10	0.00	0%	59.60	59.60	0.00	0.00	-	KLC	Core Loss, ir		
LS17CC-01 4 61.00 62.00 1.00 0.90 90% 61.10 62.10 1.00 0.90 90% CO Coal 21721 62m	LS17CC-01	3	59.50	61.00	1.50	0.00	0%	59.60	61.10	1.50	0.00	0%	KLC	Core Loss, in	21721	
LS17CC-01 S G2.00 G2.10 G2.70 G3.00 G2.70 G3.00 G2.70 G3.00 G3.0																Fairly hard, blocky, appears sheared 61-61.6m, more granular and powdery to
LS17CC-01 S G2.10 G2.70 G3.00 G3.0	LS17CC-01	4	61.00	62.00	1.00	0.90	90%	61.10	62.10	1.00	0.90	90%	CO	Coal	21721	62m
LS17CC-01 S G2.70 G3.00 G3.0		5	62.00	62.10	0.10	0.10	100%	62.10	62.20	0.10	0.10	100%	CO	Coal	21722	Dull surface, shiny , sheared inside, brittle
LS17CC-01 6 63.00 63.10 0.10 0.10 100% 63.40 63.50 0.10 0.10 100% CO Coal 21723 Dull surface, shiny, sheared inside, brittle LS17CC-01 6 63.35 64.00 0.65 0.79 122% 63.75 64.54 0.79 0.79 100% CO Coal 21723 As above, no fizz LS17CC-01 7 64.00 65.00 1.00 1.00 100% 64.54 65.54 1.00 1.00 100% CO Coal 21724 Dull surface, shiny inside, cleaves well, no fizz LS17CC-01 8 65.30 65.50 0.30 0.30 100% 65.54 65.84 0.30 0.30 100% CO Coal 21725 Dull surface, shiny inside, cleaves well, no fizz LS17CC-01 8 65.30 65.50 0.20 0.00 0% 65.84 66.10 0.26 0.00 0% KLC Core Loss, in 21725 LS17CC-01 9 65.50 67.00 1.50 0.00 0% 66.10 66.20 0.10 1.00 1.00 MS Mudstone 21726 Soft brown mudstone, FW, carbonaceous stringers, no fizz	LS17CC-01	5	62.10	62.70	0.60	0.60	100%	62.20	62.80	0.60	0.60	100%	ST	Siltstone	EXCL	Soft brown, siltstone w calcite micro veins. Little fizz
LS17CC-01 6 63.10 63.35 64.00 0.65 0.79 122% 63.75 64.54 0.79 0.79 100% CO Coal 21723 As above, no fizz	LS17CC-01	5	62.70	63.00	0.30	0.00	0%	62.80	63.40	0.60	0.00	0%	KLR	Core Loss, in	EXCL	
LS17CC-01 6 63.35 64.00 0.65 0.79 122% 63.75 64.54 0.79 0.79 100% CO Coal 21723 As above, no fizz LS17CC-01 7 64.00 65.00 1.00 1.00 100% 64.54 65.54 1.00 1.00 100% CO Coal 21724 Dull surface, shiny inside, cleaves well, no fizz LS17CC-01 8 65.00 65.30 0.30 0.30 100% 65.54 65.84 0.30 0.30 100% CO Coal 21725 Dull surface, shiny inside, cleaves well, no fizz LS17CC-01 8 65.30 65.50 0.20 0.00 0% 65.84 66.10 0.26 0.00 0% KLC Core Loss, in 21725 LS17CC-01 9 65.50 67.00 1.50 0.00 0% 66.10 66.20 0.10 0.00 0% KLR Core Loss, in 21726 LS17CC-01 10 67.00 67.30 0.30 1.10 367% 66.20 67.30 1.10 1.10 1.00 MS Mudstone 21726 Soft brown mudstone, FW, carbonaceous stringers, no fizz		6	63.00	63.10	0.10	0.10	100%	63.40	63.50	0.10	0.10	100%	CO	Coal	21723	Dull surface, shiny , sheared inside, brittle
LS17CC-01 7 64.00 65.00 1.00 1.00 1.00 100% 64.54 65.54 1.00 1.00 100% CO Coal 21724 Dull surface, shiny inside, cleaves well, no fizz LS17CC-01 8 65.00 65.30 0.30 0.30 100% 65.54 65.84 0.30 0.30 100% CO Coal 21725 Dull surface, shiny inside, cleaves well, no fizz LS17CC-01 8 65.30 65.50 0.20 0.00 0% 65.84 66.10 0.26 0.00 0% KLC Core Loss, in LS17CC-01 9 65.50 67.00 1.50 0.00 0% 66.10 66.20 0.10 0.00 0% KLR Core Loss, in LS17CC-01 10 67.00 67.30 0.30 1.10 367% 66.20 67.30 1.10 1.10 1.00 MS Mudstone 21726 Soft brown mudstone, FW, carbonaceous stringers, no fizz	LS17CC-01	6	63.10	63.35	0.25	0.25	100%	63.50	63.75	0.25	0.25	100%	XM	Carbonaceo	EXCL	Excluded
LS17CC-01 8 65.00 65.30 0.30 0.30 100% 65.54 65.84 0.30 0.30 100% CO Coal 21725 Dull surface, shiny inside, cleaves well, no fizz LS17CC-01 8 65.30 65.50 0.20 0.00 0% 65.84 66.10 0.26 0.00 0% KLC Core Loss, in 21725 21725 LS17CC-01 9 65.50 67.00 1.50 0.00 0% 66.20 0.10 0.00 0% KLR Core Loss, in 21726 21726 LS17CC-01 10 67.00 67.30 1.10 1.10 1.10 MS Mudstone 21726 Soft brown mudstone, FW, carbonaceous stringers, no fizz	LS17CC-01	6	63.35	64.00	0.65	0.79	122%	63.75	64.54	0.79	0.79	100%	CO	Coal		,
LS17CC-01 8 65.30 65.50 0.20 0.00 0% 65.84 66.10 0.26 0.00 0% KLC Core Loss, in 21725 LS17CC-01 9 65.50 67.00 1.50 0.00 0% 66.10 66.20 0.10 0.00 0% KLR Core Loss, in 21726 LS17CC-01 10 67.00 67.30 1.10 1.10 1.10 100 MS Mudstone 21726 Soft brown mudstone, FW, carbonaceous stringers, no fizz	LS17CC-01	7	64.00	65.00	1.00	1.00	100%	64.54	65.54	1.00	1.00	100%	CO	Coal	21724	Dull surface, shiny inside, cleaves well, no fizz
LS17CC-01 9 65.50 67.00 1.50 0.00 0% 66.10 66.20 0.10 0.00 0% KLR Core Loss, in 21726 LS17CC-01 10 67.00 67.30 0.30 1.10 367% 66.20 67.30 1.10 1.10 1.00 MS Mudstone 21726 Soft brown mudstone, FW, carbonaceous stringers, no fizz	LS17CC-01	8	65.00	65.30	0.30	0.30	100%	65.54	65.84	0.30	0.30	100%	CO	Coal	21725	Dull surface, shiny inside, cleaves well, no fizz
LS17CC-01 10 67.00 67.30 0.30 1.10 367% 66.20 67.30 1.10 1.10 1.10 1.00 MS Mudstone 21726 Soft brown mudstone, FW, carbonaceous stringers, no fizz	LS17CC-01	8	65.30	65.50	0.20	0.00	0%	65.84	66.10	0.26	0.00	0%	KLC	Core Loss, in	21725	
	LS17CC-01	9	65.50	67.00	1.50	0.00	0%	66.10	66.20	0.10	0.00	0%	KLR	Core Loss, in		
LS17CC-01 67.30 71.50 4.20 0.00 0% 67.30 71.50 4.20 0.00 0% NL Not Logged 71.5m TD @4am 2017-07-01	LS17CC-01	10	67.00	67.30	0.30	1.10	367%	66.20	67.30	1.10	1.10	100%	MS	Mudstone	21726	Soft brown mudstone, FW, carbonaceous stringers, no fizz
	LS17CC-01		67.30	71.50	4.20	0.00	0%	67.30	71.50	4.20	0.00	0%	NL	Not Logged		71.5m TD @4am 2017-07-01
					-		-			-	-	-		-		

DRILLHOLE LOG - Run Data



Hole ID Run # From (m) (m) (m) Recovery Recovery (%) Comments	
Hole ID Run # (m) (m) (m) (m) (%) Comments LS17CC-01 1 58.00 58.50 0.50 0.70 140% No HW?? Hammered past core point!!? LS17CC-01 2 58.50 59.50 1.00 0.90 90% KL parting approx. 0.10m LS17CC-01 3 59.50 61.00 1.50 0.00 0% ??? Core barrel empty at surface, drillers change	
LS17CC-01 1 58.00 58.50 0.50 0.70 140% No HW?? Hammered past core point!!? LS17CC-01 2 58.50 59.50 1.00 0.90 90% KL parting approx. 0.10m LS17CC-01 3 59.50 61.00 1.50 0.00 0% ??? Core barrel empty at surface, drillers change	
LS17CC-01 2 58.50 59.50 1.00 0.90 90% KL parting approx. 0.10m LS17CC-01 3 59.50 61.00 1.50 0.00 0% ??? Core barrel empty at surface, drillers change	
LS17CC-01 3 59.50 61.00 1.50 0.00 0% ??? Core barrel empty at surface, drillers change	
154755 04	ed mud mix
LS17CC-01 4 61.00 62.00 1.00 0.90 90%	
LS17CC-01 5 62.00 63.00 1.00 0.70 70% KL @ 62.7-63.0m	
LS17CC-01 6 63.00 64.00 1.00 1.00 100%	
LS17CC-01 7 64.00 65.00 1.00 1.00 100%	
LS17CC-01 8 65.00 65.50 0.50 0.30 60% KL @ 65.3-65.5m	
LS17CC-01 9 65.50 67.00 1.50 0.00 0% Core barrel came to surface empty, drillers adde	ed core catcher to core barrel
LS17CC-01 10 67.00 67.30 0.30 1.10 367%	



																											Planne	d		Арр	rox			Surveyed			
Hole ID	Project	Year	Туре	Geol	gist(s) Ri	ig	Target Seam(s)	Date Drill	led Azi	imuth	Dip	Drille TD (n	r's Bit S		Core Size (mm)	Overburd (m)	Drille en Casir (m)	er's ng Co (n	orepoint n)	Date Logge	Open Hole Lo d to TD?	g Logger TD (m)	Logger' 's Casing (m)	s Water Table ((m) Flo	lowing? E	N	Elev	E	N	EI	lev	E	N	Elev	Date Surveyed	Survey ID Comme
LS17CC-0	2 L	S 2	2017	CC ns, la	Fraser (GED 130		2017-07	7-03	0	-	90	38.9	229	152.4	2	1.75	24	24	2017-07-0	3 YES	38.	38 23.9	98	1 N	1			6616	27 5497	956	1719	66163	1 5497953	1719.69	93 2017-08-09	2541

DRILLHOI	LE LOG -	Lithology	Data													CanAus Coal Limited
			DR	LLER'S DEPT	THS			COR	RECTED DEP	THS						
		From	To	Interval	Recovery	Recovery	From	To	Interval	Recovery	Recovery	Lithology		Lithology		
Hole ID	Run#	(m)	(m)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(%)	Code	ARD	English	Sample ID	Description
LS17CC-02		0.00	24.25	24.25	0.00	0%	0.00	23.92	23.92	0.00	0%	OV	-	Overburden, undifferentiated		Not logged. Overburden 24.75 in COLLARS.
LS17CC-02	1	24.25	24.46	0.21	0.21	100%	23.92	24.13	0.21	0.21	100%	OV	2.17	Overburden, undifferentiated	21727	mud, gravel, till, carb. Content HW sample.
LS17CC-02	1	24.46	24.50	0.04	0.00	0%	24.13	24.17	0.04	0.00	0%	KLR	-	Core Loss, interpreted as rock		
LS17CC-02	2	24.50	24.60	0.10	0.10	100%	24.17	24.27	0.10	0.10	100%	OV	2.17	Overburden, undifferentiated	21727	mud, gravel, till
LS17CC-02	2		24.63	0.03	0.03	100%	24.27	24.30	0.03					Mudstone		brown, soft, mudstone, rust streaks. SampleID blank in paper log - excluded?
LS17CC-02	2	24.63	25.50	0.87	0.94	108%	24.30	25.24	0.94					Coal		dull, granular, coal in shoe v broken, rock frags in shoe section
LS17CC-02	3	25.50	26.50	1.00		91%	25.24	26.13	0.89					Coal		dull minor shiny flakes, granular, top 20cm dirty
LS17CC-02	4	26.50	27.20	0.70		124%	26.13	27.00	0.87				_	Coal		dull some shiny flakes, grainy, dirty
LS17CC-02	4	27.20	27.50	0.30		60%	27.00	27.18	0.18					Carbonaceous Mudstone		dirty carbonaceous mud, parting sample
LS17CC-02	5	27.50	27.65	0.15		100%	27.18	27.33	0.15		.		2.00	Carbonaceous Mudstone	21731	FW sample, dirty carb mud
LS17CC-02	5	27.65	28.00	0.35		100%	27.33	27.68	0.35				-	Carbonaceous Mudstone		dirty carb mud
LS17CC-02	6		28.18	0.18		100%	27.68	27.86	0.18		.		-	Carbonaceous Mudstone		carb mud, large rock fragments
LS17CC-02	6		28.50	0.32		0%	27.86	28.10	0.24				-	Core Loss, interpreted as rock		
LS17CC-02	7	28.50	28.52	0.02		0%	28.10	28.12	0.02		l l		-	Core Loss, interpreted as coal		
LS17CC-02	7	28.52	28.87	0.35		100%	28.12	28.47	0.35		l l			Coal		carbonaceous grading into coal
LS17CC-02	7	20.07	29.00	0.13		100%	28.47	28.60	0.13				1.61	Coal	21733	muddy at top intact firm, v. minor fizz
LS17CC-02	8	29.00	29.03	0.03	0.00	0%	28.60	28.63	0.03	0.00	0%	KLC		Core Loss, interpreted as coal		
																softer than coal above, multiple small mudstone partings ~1cm in thickness
LS17CC-02	8	_0.00	29.50	0.47		100%	28.63	29.10	0.47					Coal		minor fizz in MS
LS17CC-02	9	_0.00	29.70	0.20		150%	29.10	29.31	0.21					Carbonaceous Mudstone		~ 2cm coal at top grading into MS, same coaly bands of ~1cm (x3)
LS17CC-02	9		29.80	0.10		230%	29.31	29.47	0.16					Carbonaceous Mudstone		coaly bands 1-2cm throughout, occasional harder bands no fizz
LS17CC-02	9	29.80	30.00	0.20		170%	29.47	29.70	0.23				2.12	Carbonaceous Mudstone	21736	as above, coaly at base
LS17CC-02	10		30.19	0.19		0%	29.70	29.83	0.13				-	Core Loss, interpreted as coal		
LS17CC-02	10		30.50	0.31		100%	29.83	30.14	0.31	0.31			=	Coal		muddy, soft v minor fizz
LS17CC-02	11	30.50	31.00	0.50	0.50	100%	30.14	30.64	0.50	0.50	100%	CO	1.42	Coal	21737	soft, v minor fizz, muddy especially towrds base
		24.00	22.22			4000/	22.54			4.00	1000/				24=20	occasional mudstone partings throughout, soft, sheared, some harder
LS17CC-02	12		32.00	1.00		100%	30.64	31.64	1.00					Coal		sections
LS17CC-02	13	32.00	32.75	0.75	0.75	100%	31.64	32.39	0.75	0.75	100%	CO	1.41	Coal	21/39	massive, sheared, locally muddy, gritty, harder shiny frags throughout
164766.00	42	22.75	22.50	0.75	0.75	4000/	22.20	22.44	0.75	0.75	4000/	60	4.20		24740	massive, sheared, coarser towards bottom, larger shiny fragments,
LS17CC-02	13		33.50	0.75		100%	32.39	33.14	0.75				1.39	Coal	21740	intermittent muddy partings very thin.
LS17CC-02	14 14		33.68 34.16	0.18		0% 100%	33.14 33.32	33.32 33.80	0.18				1.48	Core Loss, interpreted as coal	24744	
LS17CC-02	14	33.68	34.16	0.48	0.48	100%	33.32	33.80	0.48	0.48	100%	CO	1.48	Coal	21/41	some mudstone, muddy coal, with some larger shiny bits brown, muddy, v thin coal seams, upper contact w coal ~ 50dg, lower contact
151700 02	1.4	24.16	34.50	0.24	0.24	100%	33.80	34.20	0.40	0.24	85%	VNA	2 00	Carbanasaous Mudstana	21742	
LS17CC-02	14	34.16	34.50	0.34	0.34	100%	33.80	34.20	0.40	0.34	85%	AIVI	2.00	Carbonaceous Mudstone	21/42	sharp but irregular and broken, no fizz thin parting of MS, sheared coal, sharp lower contact w SS, very broken, no
LS17CC-02	14	34.50	34.90	0.40	0.40	100%	34.20	34.80	0.60	0.40	67%	CO	1 55	Coal	21743	
LS17CC-02 LS17CC-02	14		35.00	0.40		100%	34.20	34.90	0.60					Sandstone		large angular coarse fragments - unconsolidated, rusty brown
LS17CC-02 LS17CC-02	15		35.00	0.10		0%	34.80	34.93	0.10				2.20	Suriustorie	21/44	large angular coarse fragments - unconsolidated, rusty brown
LS17CC-02	15		35.23	0.03		100%	34.93	35.13	0.03		L.		2 20	Sandstone	217//	large angular coarse fragments - unconsolidated, rusty brown
LS17CC-02	15		35.28	0.20		100%	35.13	35.18	0.20		.			Mudstone		brown, fg, mud, contact core axis not obvious, wk fizz
LS17CC-02 LS17CC-02	15		35.60	0.03		100%	35.13	35.50	0.03				2.20	Sandstone	21/44	coarse fragments SS within muddy matrix - gouge?
LS17CC-02 LS17CC-02	15		35.80	0.32		100%	35.50	35.70	0.32		F		_	Sandstone		interbedded SS/MS
LS17CC-02	16		36.03	0.20		0%	35.70	35.70	0.20		L.		_	Junustone		interseduce 35/1915
LS17CC-02	16		36.40	0.23		100%	35.70	36.30	0.23		L.		_			large angular v broken SS fragments some mud, no fizz
LJ1/CC-UZ	10	30.03	30.40	0.37	0.37	100%	33.33	30.30	0.37	0.37	100%	JJ	L	Juliustolic		iarge angular v broken 33 magnients some muu, no mzz

DRILLHO	LE LOG - I	Lithology	Data													CanAus Coal Limited
			DR	ILLER'S DEPT	'HS			CORI	RECTED DEP	THS						
		From	То	Interval	Recovery	Recovery	From	То	Interval	Recovery	Recovery	Lithology		Lithology		
Hole ID	Run#	(m)	(m)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(%)	Code	ARD	English	Sample ID	Description
LS17CC-02					` '	(, -,	(,	(,	(,		(70)	Code	AND	English	Sample ID	Description
L31/CC-02	17	36.40	37.40	1.00	0.00	0%	36.30	37.30	1.00	0.00	0%		-	English	Sample ID	Description
LS17CC-02 LS17CC-02	17 18	36.40 37.40	37.40 37.60	1.00 0.20	. , ,			• • •				KLR	- -	English	Sample 1D	Description
	17 18 18	37.40			0.00	0%	36.30	37.30	1.00	0.00	0%	KLR KLR	- -	Sandstone		resembles a breccia, SS fragments being held by mud matrix
LS17CC-02	17 18 18 18	37.40	37.60	0.20	0.00	0% 0%	36.30 37.30	37.30 37.50	1.00 0.20	0.00 0.70	0% 0%	KLR KLR SS	- - -			

DRILLHOLE LOG - Run Data



			0	ORILLER'S DEPTHS	5		
		From		Interval	•	Recovery	
Hole ID	Run #	(m)	(m)	(m)	(m)	(%)	Comments
LS17CC-02	1	24.25	24.50	0.25	0.21	84%	
LS17CC-02	2	24.50	25.50	1.00	1.07	107%	
LS17CC-02	3	25.50	26.50	1.00	0.91	91%	
LS17CC-02	4	26.50	27.50	1.00	1.05	105%	
LS17CC-02	5	27.50	28.00	0.50	0.50	100%	
LS17CC-02	6	28.00	28.50	0.50	0.18	36%	
LS17CC-02	7	28.50	29.00	0.50	0.48	96%	
LS17CC-02	8	29.00	29.50	0.50	0.47	94%	
LS17CC-02	9	29.50	30.00	0.50	0.87	174%	
LS17CC-02	10	30.00	30.50	0.50	0.31	62%	
LS17CC-02	11	30.50	31.00	0.50	0.50	100%	
LS17CC-02	12	31.00	32.00	1.00	1.00	100%	
LS17CC-02	13	32.00	33.50	1.50	1.50	100%	
LS17CC-02	14	33.50	35.00	1.50	1.32	88%	
LS17CC-02	15	35.00	35.80	0.80	0.77	96%	
LS17CC-02	16	35.80	36.40	0.60	0.37	62%	
LS17CC-02	17	36.40	37.40	1.00	0.00	0%	
LS17CC-02	18	37.40	38.90	1.50	1.00	67%	
				-		-	
				-		-	



																							Planned			Approx	1		Surveyed	d			
							Target				Driller's		Core Siz	e Overburde	Driller n Casing	r's Corepoint	Date	Open Hole Log	Logger's	Logger's Casing	Water										Date		
Hole ID	Project	Year	Type	Geologist(s)		Rig	Seam(s)	Date Drilled	Azimuth	Dip	TD (m)	Bit Size (mm)	(mm)	(m)	(m)	(m)	Logged	to TD?	TD (m)	(m)	Table (m) Flowing	? E	N	Elev	E	N	Elev	E	N	Elev	Surveyed	Survey ID C	Comments
LS17RC-	01	S 201	L7	RC Brian Larsen:	David Ross	GED 13	0	2017-05-2	4	0	-90 245	Hammer 140mm to 130m; PDC 133r	nm to TD		20 5	51.9	2017-05	-24 no	236.7	51.	.9 39 no	66190	5498200	1770	0 66183	9 549821	0 175	60 661839	.8 549820	9 1754.99	8 2017-06-23	2439	

CanAus **DRILLHOLE LOG - Lithology Data DRILLER'S DEPTHS CORRECTED DEPTHS** From То Interval Recovery Recovery From То Interval Recovery Recovery Lithology Lithology (m) (m) (m) (m) (%) (m) (m) (m) (m) (%) Hole ID Code Sample ID Run# English Description LS17RC-01 0.00 26.00 26.00 NL Not Logged Casing LS17RC-01 26.00 26.50 co 21603 Coal: powderd, slurry, black 0.50 Coal LS17RC-01 26.50 27.00 0.50 CO Coal 21604 Coal: powderd, slurry, black LS17RC-01 27.00 28.00 1.00 CO Coal 21605 Coal: powderd, slurry, black LS17RC-01 28.00 29.00 CO 21606 Coal: wet, slushy, black 1.00 Coal LS17RC-01 29.00 29.50 0.50 CO Coal 21607 Coal LS17RC-01 29.50 30.00 0.50 CO Coal 21608 Coal: found chips of bright coal Coal mixed w/ carbonaceous claystone: Floor of coal seam? (Black and dark LS17RC-01 30.00 30.50 0.50 CO Coal brown chips 2-10mm size) Claystone: carbonaceous, dark grey to black, mixed w/ small chips of hard LS17RC-01 30.50 31.00 0.50 CS Claystone coal. (No fizz) LS17RC-01 31.00 32.00 1.00 CS Claystone Claystone: silty, med gray to brown. No HCL fizz LS17RC-01 32.00 33.00 1.00 Siltstone siltstone: gray-brown, fine grained; No HCL fizz 33.00 36.00 ST LS17RC-01 3.00 Siltstone siltstone: gray, very fine grained; No HCL fizz 36.00 38.00 ХC Carbonaceous Claystone claystone - carbonaceous: roof of seam? Mixed w/ coal LS17RC-01 2.00 co LS17RC-01 38.00 39.50 21609 Coal: black slush 1.50 Coal LS17RC-01 39.50 40.00 0.50 CS Claystone Claystone-grey; No HCL fizz 40.00 CS CS carbonaceous mixed w/ coal; LS17RC-01 41.00 1.00 Claystone LS17RC-01 41.00 41.60 0.60 CO Coal 21610 Coal; black slush mixed w/ chips (of coal?) co LS17RC-01 41.60 42.30 0.70 Coal 21611 Coal; black slush mixed w/ chips (of coal?) LS17RC-01 42.30 44.00 1.70 CO Coal 21612 Coal; black with aspect of mud/slush Coal mixed with rock(carb. Claystone)Dark grey No HCL fizz. Fbov of seam? LS17RC-01 44.00 45.00 1.00 CO Coal Not sampled CS LS17RC-01 45.00 46.50 1.50 Claystone Carbonaceous claystone; dark to medium grey. NO HCL fizz 46.50 47.00 CO LS17RC-01 0.50 Coal 21613 Coal slurry 47.00 CO 21614 Coal slurry LS17RC-01 47.50 0.50 Coal LS17RC-01 47.50 47.75 0.25 co Coal 21615 Coal slurry LS17RC-01 47.75 48.00 0.25 CO Coal 21616 Coal slurry, bag was getting full so we got a second. Carbonaceous mudstone transitioning to grey mudstone, footwall. Casing set LS17RC-01 48.00 51.90 3.90 XM Carbonaceous Mudstone at 51.9m in a grey siltstone. LS17RC-01 51.90 67.50 Grey and black interbedded silt and mudstone 15.60 Siltstone Resistant sandstone, large chips up to 1cm. Drilled through a fracture. Dirty sandstone recoveries. Very resistant. Inflow of water from fractured zone. Decision point to add more casing or continue cleaning. Hole cleaning up and LS17RC-01 67.50 68.50 1.00 Sandstone drill pipe added. continued drilling. Added another length of drillpipe and continuing @ a slower rate drilling more resistant rock. Resistant dirty SS, smaller chips. Fine grained grey SS LS17RC-01 68.50 93.00 24.50 Sandstone most chips ~4mm

Sandstone

fine grained dark grey SS chips are bigger up to 1cm most ~5mm

112.00

19.00

93.00

LS17RC-01

DRILLHOI	.E LOG - L	ithology D	ata												CanAus Coal Limited						
			DRI	LLER'S DEPT	HS			COF	RECTED DEF	THS											
		From	То	Interval	Recovery	Recovery	From	То	Interval	Recovery	Recovery	Lithology	Lithology	,							
Hole ID	Run #	(m)	(m)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(%)	Code	English	Sample ID	Description						
															Driller switched to rotary drilling at 130m. Grey and black siltstone and darker						
LS17RC-01		112.00	150.00	38.00					-	-	-	ST	Siltstone		shale.						
LS17RC-01		150.00	245.00	95.00					-	-	-	ST	Siltstone	245m Drillers TD							



																							Planned			Approx			Surveyed	d			
														Driller's	;		Open		Logger's														
						Target				Driller's	Bit Size	Core Size	Overburden	Casing	Corepoint	Date	Hole Log	Logger's	Casing	Water											Date		
Hole ID	Project	Year	Type	Geologist(s)	Rig	Seam(s)	Date Drilled	Azimuth	Dip	TD (m)	(mm)	(mm)	(m)	(m)	(m)	Logged	to TD?	TD (m)	(m)	Table (m)	Flowing?	- I	N	Elev	E	N	Elev	E	N	Elev	Surveyed	Survey ID Comme	ents
LS17RC-02	LS	5 201	7 R	Cn; David Ross	GED 130)	2017-05-25	90)	-60 333.	5 17	8		9	68	2017-05-2	27 no	332.	3 6	9 1	no	661900	5498200	1770	661940	549820	7 175	0 661842	.3 5498207	7 1755.032	2017-06-23	2440	

CanAus DRILLHOLE LOG - Lithology Data Coal Limited **DRILLER'S DEPTHS CORRECTED DEPTHS** From То Interval Recovery Recovery From То Interval Recovery Recovery Lithology Lithology (m) (m) (m) (m) (%) (m) (m) (m) (m) (%) Hole ID Code English Sample ID Description Run# LS17RC-02 0.00 9.00 9.00 NL Not Logged Overburden LS17RC-02 9.00 12.00 0% SS Sandstone fine grained SS grey 3.00 LS17RC-02 12.00 15.00 MS Mudstone 3.00 brown mudstone LS17RC-02 15.00 24.00 9.00 MS Mudstone mix of both brown ms & brown siltstone LS17RC-02 24.00 31.00 0% ST Siltstone Grey ST many chips over 1cm 7.00 LS17RC-02 31.00 31.50 0.50 CO Coal 21617 black, dull, dense 31.50 LS17RC-02 32.00 0.50 0% CO Coal 21618 LS17RC-02 32.00 32.25 0.25 0% co Coal 21619 LS17RC-02 32.25 32.50 0.25 0% CO Coal 21620 LS17RC-02 32.50 32.75 0.25 0% co Coal 21621 33.00 co LS17RC-02 32.75 0.25 Coal 21622 LS17RC-02 33.00 33.25 0.25 0% CO Coal 21623 LS17RC-02 33.50 co 33.25 0.25 Coal 21624 LS17RC-02 33.50 33.75 0% co 21625 0.25 Coal co LS17RC-02 33.75 34.00 0.25 0% 21626 Coal co LS17RC-02 34.00 34.25 0.25 0% 21627 Coal LS17RC-02 34.25 34.50 0.25 0% CO Coal 21628 LS17RC-02 34.50 34.75 CO 21629 0.25 Coal LS17RC-02 34.75 35.00 0.25 0% CO Coal 21630 co 21631 LS17RC-02 35.00 35.25 0.25 0% Coal 35.50 LS17RC-02 35.25 0.25 0% CO Coal 21632 LS17RC-02 35.50 35.75 CO 0.25 0% Coal 21633 CO LS17RC-02 35.75 36.00 0.25 Coal 21634 LS17RC-02 21635 36.00 36.50 0.50 0% CO Coal LS17RC-02 36.50 37.00 CO 21636 0.50 0% Coal LS17RC-02 37.00 40.00 0% ST fine grained siltstone, grey, fairly hard, fw 3.00 Siltstone LS17RC-02 40.00 44.00 4.00 0% MS Mudstone grey mudstone, soft, hw LS17RC-02 44.00 44.50 0.50 0% co Coal 21637 black, dull, dense LS17RC-02 44.50 45.00 0.50 0% CO Coal 21638 LS17RC-02 45.50 co 21639 45.00 0.50 Coal LS17RC-02 45.50 46.00 0.50 0% co Coal 21640 LS17RC-02 46.00 46.50 0.50 0% co Coal 21641 LS17RC-02 46.50 48.00 1.50 0% XM Carbonaceous Mudstone fw, soft black carbonaceous mudstone

LS17RC-02

LS17RC-02

LS17RC-02

LS17RC-02

48.00

50.00

53.00

62.00

50.00

53.00

62.00

76.00

2.00

3.00

9.00

14.00

0%

0%

0%

0%

ST

XM

ST

SS

Siltstone

Siltstone

Sandstone

Carbonaceous Mudstone

grey siltstone, large chips to 2cm

casing to 69m casing.

soft black carbonaceous mudstone

dirty sandstone, hard and resistant, very fractured. Will set another 6m of

DRILLHO	LE LOG - I	Lithology D	ata												CanAus Coal Limited
			DR	ILLER'S DEPT	THS			COF	RRECTED DEI	PTHS					
		From	То	Interval	Recovery	Recovery	From	То	Interval	Recovery	Recovery	Lithology	Lithology		
Hole ID	Run #	(m)	(m)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(%)	Code	English	Sample ID	Description
															fine grained grey sandstone. Very fractured zone down to 90m but a few
LS17RC-02		76.00	100.00	24.00		0%			-	-	-	SS	Sandstone		fractures down to 99m.
															dark grey, fine grained siltstone and sandstone, quite hard, some calcite micro-
LS17RC-02		100.00	115.00	15.00		0%			-	-	-	ST	Siltstone		veins, light fizz
															as above but getting softer, light fizz. mudstone, siltstone, shales. Grey to
LS17RC-02		115.00	160.00	45.00		0%			-	-	-	ST	Siltstone		black, soft, minor calcite light fizz
LS17RC-02		160.00	184.00	24.00		0%			-	-	-	ST	Siltstone		same
LS17RC-02		184.00	186.00	2.00		0%			-	-	-	SS	Sandstone		fine grained dirty grey sandstone.
															grey mudstone w/ a brown streak. Minor calcite stringers light fizz. No photo
LS17RC-02		186.00	285.00	99.00		0%			-	-	-	MS	Mudstone		from 200-220 but it's the same as above and below.
LS17RC-02		285.00	293.00	8.00		0%			-	-	-	ST	Siltstone		grey siltstone, interbedded w/ the above grey mudstone
LS17RC-02		293.00	327.00	34.00		0%			-	-	-	SS	Sandstone		grey finegrained sandstone
LS17RC-02		327.00	333.50	6.50		0%			-	-	-	LS	Limestone		limestone, grey w white, very hard
						_									
						_							_		
						_							_		



																							Planned			Approx			Surveye	d			
Hole ID	Project	Vaar	Type	Geologist(s)		Target	Date Drilled	Azimuth	Din	Driller's TD (m)	Bit Size	Core Size	Overburden	Driller's Casing	Corepoint	Date Logged	Open Hole Log to TD?	Logger's TD (m)	Logger's Casing (m)	Water	Flowing?	E .	-	Flov	E	N	Fley	E	N	Flev	Date	Survey ID	Comments
LS17RC-C		2017	RO		GED 130		2017-05-28	270	- (i0 (iii)	4 17	8	1(111)	12	21	2017-05-28		38.79	. ,	1 1	no		5498200	1770	66182	4 549823	0 175	0 661827	.9 549823	0 1754.423	Surveyed 2017-06-23	3 2441	Comments

CanAus DRILLHOLE LOG - Lithology Data Coal Limited DRILLER'S DEPTHS CORRECTED DEPTHS From To Interval Recovery Recovery From To Interval Recovery Recovery Lithology Lithology (%) Hole ID (m) (m) (m) (m) (m) (m) (m) (m) (%) English Sample ID Description Run# Code 0.00 8.50 Not Logged LS17RC-03 8.50 NL CO LS17RC-03 8.50 9.50 1.00 0% Coal 21642 coal slurry LS17RC-03 9.50 10.00 0.50 Coal 21643 coal slurry LS17RC-03 10.00 11.00 СО 21644 coal slurry 1.00 Coal co LS17RC-03 11.00 11.75 0.75 0% Coal 21645 coal slurry Sedimentary Rock, undiffer not logged, chip tray blew over in the wind LS17RC-03 21.00 9.25 11.75 grey/brown fine grained sandstone, dirty, much of this section we were getting no chips so this info is not reliable LS17RC-03 21.00 36.00 15.00 Sandstone grey mudstone streak is brown LS17RC-03 36.00 39.00 3.00 0% MS Mudstone LS17RC-03 39.00 40.00 1.00 0% Coal 21646 coal slurry 40.00 40.75 СО 21647 coal slurry LS17RC-03 0.75 Coal LS17RC-03 40.75 42.00 1.25 Not Logged 21648 coal slurry LS17RC-03 42.00 42.80 0.80 Coal LS17RC-03 42.80 44.00 1.20 Sandstone fine grained sandstone



																				Plan	ned		Αŗ	prox			Surveyed	l			
				Target							Overburden	Driller's Casing	Corepoint				Logger's Casing	Water											Date		
Hole ID Proj	ject Year LS	r Type 2017	Geologist(s) Rig RCn; David Ross GI	Seam(s)	Date Drilled 2017-05-28	Azimuth 0	Dip -9	TD (m)	(mm) 13:	(mm) 3	(m) 24.7	(m) 5 6](m) 3	Logged 2017-05-30	to TD?	TD (m) 336.58	(m) 63.04	Table (m)	Flowing? E	661650 549	Elev 8000	.730 6	N 51630 54	97951	Elev 1709	661632.3	N 5497951		Surveyed 2017-06-23	Survey ID 3 2436	Comments

CanAus DRILLHOLE LOG - Lithology Data Coal Limited **DRILLER'S DEPTHS** CORRECTED DEPTHS From То Interval Recovery Recovery From То Interval Recovery Recovery Lithology Lithology (m) (m) (m) (m) (%) (m) (m) (m) (m) (%) Hole ID Code English Sample ID Description Run # LC17RC-04 0.00 24.75 ΟV Overburden, undifferentiate Unconsolidated overburden. 24.75 0% LC17RC-04 24.75 25.00 0.25 0% CO 21649 Coal, dull and very dense Coal LC17RC-04 25.00 26.00 1.00 co Coal 21650 Coal sampled .25 x 4 / meter drilled СО LC17RC-04 26.00 27.00 1.00 0% Coal 21651 Coal sampled .25 x 4 / meter drilled co LC17RC-04 27.00 27.75 0.75 0% Coal 21652 Coal sampled .25 x 4 / meter drilled MS LC17RC-04 27.75 29.25 1.50 Mudstone grey brown mudstone brown streak LC17RC-04 co 29.25 29.75 0.50 0% Coal 21653 Coal slurry LC17RC-04 29.75 31.50 1.75 0% MS Mudstone grey brown mudstone brown streak LC17RC-04 31.50 32.50 1.00 0% CO Coal 21654 Coal slurry LC17RC-04 32.50 33.00 0.50 0% CO Coal 21655 Coal slurry LC17RC-04 33.00 35.00 XM 2.00 Carbonaceous Mudstone black carbonaceous mudstone LC17RC-04 35.00 40.00 5.00 0% Sandstone brownish soft siltstone LC17RC-04 40.00 58.00 18.00 very hard dirty sandstone w multiple fractures, producing water to the surface 0% Sandstone LC17RC-04 58.00 0% ST soft siltstone and shaly mix brownish mudstone 61.00 3.00 Siltstone MS LC17RC-04 61.00 65.00 4.00 0% Mudstone brown mudstone LC17RC-04 65.00 70.00 5.00 0% ST Siltstone dark grey siltstone LC17RC-04 70.00 77.00 0% MS dark grey mudstone, brown streak 7.00 Mudstone 77.00 LC17RC-04 80.00 3.00 0% ST Siltstone dark grey siltstone LC17RC-04 0% MS 80.00 107.00 27.00 Mudstone dark grey mudstone, brown streak LC17RC-04 0% MS dark grey mudstone, brown streak minor calcite 107.00 133.00 26.00 Mudstone LC17RC-04 133.00 195.00 62.00 0% MS Mudstone dark grey mudstone, brown streak LC17RC-04 195.00 341.00 146.00 Mudstone grey to black mudstone and shale, v soft, minor calcite w fizz



																							Planned	i		Approx			Surveyed		
Hole ID	Pro	ject Y	ear	Туре	Geologist(s) Rig	Target Seam(s)	Date Drilled	Azimuth	Dip		Bit Size (mm)	Core Size (mm)	Overburden (m)	Driller's Casing (m)			Open Hole Log to TD?	Logger's TD (m)	Logger Casing (m)	Water	n) Flowing?	E	N	Elev	E	N	Elev	Е	N Elev	Date Surveyed	Survey ID Comments
LS17R	C-05	LS	2017	R	Brian Larsen; RC David Ross GED 130)	2017-06-0	7 270	0	-60 65	5 17	8		1	65	2017-06-08	3 No	64.	8 6	4.8	17	661650	5498000	0 17	30 66163	1 549796	5 172	3 661634.6	5 5497965 1719.97	75 2017-06-2?	3 2437

CanAus DRILLHOLE LOG - Lithology Data **DRILLER'S DEPTHS CORRECTED DEPTHS** From То Interval Recovery Recovery From То Interval Recovery Recovery Lithology Lithology (m) (m) (m) (m) (%) (m) (m) (m) (m) (%) Hole ID Code English Sample ID Description Run# LS17RC-05 0.00 4.00 ΟV 4.00 Overburden, undifferentiate overburden, undifferentiated, brown LS17RC-05 4.00 10.00 0% ST grey claystone/siltstone 6.00 Siltstone LS17RC-05 10.00 14.00 4.00 ST Siltstone brown siltstone LS17RC-05 14.00 21.00 7.00 Siltstone trending darker, grey to dark grey, siltstone and shale LS17RC-05 21.00 29.00 8.00 0% SS Sandstone medium grained grey sandstone LS17RC-05 29.00 29.80 0.80 MS Mudstone black mudstone brown streak soft LS17RC-05 29.80 30.80 1.00 0% Coal 21656 Black Coal Slurry LS17RC-05 30.80 31.80 1.00 0% co Coal 21657 Black Coal Slurry LS17RC-05 31.80 32.80 1.00 0% CO Coal 21658 Black Coal Slurry LS17RC-05 32.80 33.80 1.00 0% co Coal 21659 Black Coal Slurry 37.00 ST LS17RC-05 33.80 3.20 Siltstone dark grey siltstone and shale LS17RC-05 37.00 38.00 1.00 0% CO Coal 21660 v. fine, dense, dull inner w shiny outer surface LS17RC-05 39.00 21661 v. fine, dense, dull inner w shiny outer surface 38.00 1.00 Coal LS17RC-05 39.00 40.00 0% co 21662 v. fine, dense, dull inner w shiny outer surface 1.00 Coal co 21663 v. fine, dense, dull inner w shiny outer surface LS17RC-05 40.00 41.00 0% 1.00 Coal co 21664 v. fine, dense, dull inner w shiny outer surface LS17RC-05 41.00 42.00 1.00 0% Coal LS17RC-05 42.00 43.00 1.00 0% Coal 21665 v. fine, dense, dull inner w shiny outer surface LS17RC-05 43.00 44.00 CO 21666 v. fine, dense, dull inner w shiny outer surface 1.00 Coal LS17RC-05 44.00 45.00 1.00 0% CO Coal 21667 v. fine, dense, dull inner w shiny outer surface co 21668 v. fine, dense, dull inner w shiny outer surface LS17RC-05 45.00 46.00 1.00 0% Coal 21669 v. fine, dense, dull inner w shiny outer surface LS17RC-05 46.00 46.75 0.75 0% CO Coal 46.75 50.00 0% dark grey siltstone and shale, soft, fw LS17RC-05 3.25 Siltstone dk grey to black carbonaceous mudstone and shale, soft, casing getting very LS17RC-05 50.00 57.00 7.00 0% XM Carbonaceous Mudstone tight affecting drill rate LS17RC-05 57.00 58.00 0% SS dirty resistant sandstone, brown and dk grey(Moose Mtn.), large chips 1.00 Sandstone LS17RC-05 59.00 0% grey siltstone, hard, large chips 58.00 1.00 Siltstone LS17RC-05 59.00 65.00 6.00 Sandstone brown to dk grey, dirty resistant silty sandstone, micro bedding



_																							Planned	ı		Approx			Surveyed					
							Targe	:			Driller's	Bit Size	Core Size	Overburden	Driller's Casing	Corepoint	Date	Open Hole Log	Logger's	Logger's Casing	Water										Date			
	Hole ID	Project	Year	Туре	Get	ologist(s) Rig	Seam	s) Date Dri	illed Azimut	th Dip	TD (m)	(mm)	(mm)	(m)	(m)	(m)	Logged	to TD?	TD (m)	(m)	Table (m) Flow	ing? E	N 00 549825	Elev	E 661527		Elev	E	N	Elev	Surveyed 2017-06-23	Survey ID Comm	ents helled as I S17RC-7 in s	

DRILLHO	LE LOG - I	Lithology D	ata												CanAus Coal Limited
			DR	ILLER'S DEPT	THS			COI	RRECTED DEI	PTHS					
		From	To	Interval	Recovery	Recovery	From	То	Interval	Recovery	Recovery	Lithology	Lithology		
Hole ID	Run #	(m)	(m)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(%)	Code	English	Sample ID	Description
LS17RC-07		0.00	19.00	19.00		0%			-	-	-	SS	Sandstone		Grey medium grained sandstone which is dirty
LS17RC-07		19.00	21.00	2.00		0%			-	-	-	MS	Mudstone		Brown mudstone, soft
LS17RC-07		21.00	23.00	2.00		0%			-	-	-	ST	Siltstone		Mix of brown siltstone and mudstone
LS17RC-07		23.00	27.00	4.00		0%			-	-	-	MS	Mudstone		Brown mudstone, soft
LS17RC-07		27.00	28.00	1.00		0%			-	-	-	СО	Coal	21670	dense, coarse grain
LS17RC-07		28.00	28.25	0.25		0%			-	-	-	СО	Coal	21671	dense, coarse grain
LS17RC-07		28.25	33.00	4.75		0%			-	-	-	ST	Siltstone		grey siltstone
LS17RC-07		33.00	38.00	5.00		0%			_	-	-	SS	Sandstone		dominant grey w brown, silty fine sandstone, hard w. fractures
LS17RC-07		38.00	40.00	2.00		0%				-	-	ST	Siltstone		soft siltstone in an orange muddy matrix, minor fizz
															hard dirty sandstone, fractured; broke casing and changed to hammer bit.
															Little progress, drillpipe plugging w rocks to 4cm. Decision to pull casing and
LS17RC-07		40.00	56.00	16.00		0%			_	-	-	SS	Sandstone		repair. Odex casing past fractured zone to seal.
LS17RC-07		56.00	63.00	7.00		0%			_	-	-	MS	Mudstone		Grey mudstone, likely into fernie shale, no interstitial calcite - no Fizz
															Mudstone - Siltstone, significantly larger fragments up to 6cm, fracture zone?
LS17RC-07		63.00	64.00	1.00		0%			_	-	-	MS	Mudstone		Lost RC return - drill string plugged.
															Mudstone - Siltstone, drilling improved, hole cleaning itself up, dark grey
															grainy siltstone, no interstitial carbonate no Fizz, note; chips for intervals 74,
LS17RC-07		64.00	76.00	12.00		0%			_	-	-	MS	Mudstone		75m not recovered driller + helper not in sync.
															Coal carbonaceous shale mix, black coal slurry intermixed with chunks of carb
LS17RC-07		76.00	76.75	0.75		0%			_	-	-	СО	Coal	21672	shale - sample taken
LS17RC-07		76.75	79.00	2.25		0%			_	-	-	ST	Siltstone		Silstone, hole sluffed in, coarse gey, grainy fragments of siltstone
															Grey-brown, softer, quartz-calcite stingers, local disseminated pyrite, no
LS17RC-07		79.00	91.00	12.00		0%			_	-	-	MS	Mudstone		interstial carbonate, however, calcite stingers give good Fizz
															Brown -grey, softer, brown streak, < calcite stringers - make good Fizz, locally
LS17RC-07		91.00	197.00	106.00		0%			_	-	-	MS	Mudstone		pyrite appears bedded (116m)
LS17RC-07		197.00	198.00	1.00		0%			-	-	-	MS	Mudstone		Calcareous mudstone, lighter brown, abundant calcite
															Dark brown, calcite still prominent as stringers, minor local interstitial
LS17RC-07		198.00	202.00	4.00		0%			-	-	-	MS	Mudstone		carbonate. Hole stopped at 202m @ 6:50pm June 10, 2017



																							Planned			Approx			Surveyed	i			
Hole ID	Project	Year	Type	Geologist(s)	Pig	Target Seam(s)	Date Drilled	Azimuth D	Di	riller's D (m)		Core Size	Overburden	Driller's Casing	Corepoint	Date Logged	Open Hole Log	Logger's	Logger's Casing	Water Table (m)	Elowing?	E	M	Elev	E	N	Elev	E	N	Elev	Date Surveyed	Survey ID	Comments
_S17RC-		.S 20:		C; Brian Larsen	_		2017-06-11	90	-60	250	133	3	15	63.8		2017-06-12		244.84	63.06	. ,	N	661500	5498250		66153	5 549820		97 661536			2017-06-23		

labelled as LS17RC-8 in survey file

CanAus **DRILLHOLE LOG - Lithology Data** Coal Limited **DRILLER'S DEPTHS CORRECTED DEPTHS** From То Interval Recovery Recovery From То Interval Recovery Recovery Lithology Lithology (m) (m) (m) (m) (%) (m) (m) (m) (m) (%) Hole ID Code Sample ID Run# English fine, thick muddy texture 0.00 15.00 ΟV LS17RC-08 15.00 Overburden, undifferentiate Grey medium grained sandstone which is dirty 0% LS17RC-08 15.00 21.00 0% SS Medium grey, fine-medium grained sandstone 6.00 Sandstone 22.75 0% SS LS17RC-08 21.00 1.75 Sandstone Dark grey sandstone, carbonaceous and silty in part, medium grained LS17RC-08 22.75 23.50 0.75 0% CO Coal 21673 Silty fragments, sample is very fine, hard to distinguish features LS17RC-08 23.50 24.00 0.50 0% SS Sandstone Medium grey, fine-medium grained, finer than sandstone above ST LS17RC-08 24.00 25.00 1.00 Siltstone Brown/grey in colour, sandstone fragments throughout LS17RC-08 25.00 26.00 1.00 0% Sandstone Medium grained, iron-stained fragments, medium grey in colour Calcite fragments at top of unit, medium grey in colour, common brown LS17RC-08 26.00 29.00 3.00 0% Siltstone mudstone fragments. Coarser at bottom of unit, grading into sandstone Medium grey in colour, medium grained, abundant brown stained fragments, LS17RC-08 29.00 32.00 3.00 0% SS Sandstone occasional calcite fragments LS17RC-08 32.00 33.50 1.50 0% Siltstone Dark grey, some brown staining on surfaces LS17RC-08 33.50 34.00 0.50 Carbonaceous Siltstone Coaly, very fine coal fragments 34.00 36.75 0% ST LS17RC-08 2.75 Siltstone Medium grey, brown iron staining on fragment surfaces 21674 Very fine, soft LS17RC-08 36.75 37.25 0% CO 0.50 Coal LS17RC-08 37.25 37.50 0% Carbonaceous Siltstone Dark grey, Coaly 0.25 LS17RC-08 37.50 38.50 1.00 0% CO Coal 21675 Very fine. Soft coal 38.50 39.25 Carbonaceous Siltstone Coaly throughout, small fragments, hard to tell exact rock type LS17RC-08 0.75 LS17RC-08 39.25 40.00 0.75 0% CO Coal 21676 Soft, fine, occasional silty fragments co LS17RC-08 40.00 40.25 0.25 0% Coal 21677 LS17RC-08 40.25 40.75 0.50 0% Carbonaceous Siltstone Not sampled, parting, dark grey in colour Occasional carbonaceous partings, hard to distinguish between coal and LS17RC-08 40.75 41.00 0.25 0% CO Coal 21677 carbonaceous silt and mud 21677 LS17RC-08 41.00 41.25 0.25 0% CO Coal 41.50 0% хт LS17RC-08 41.25 0.25 Carbonaceous Siltstone Not sampled, parting 41.50 0% CO LS17RC-08 41.75 0.25 Coal 21678 LS17RC-08 41.75 42.00 0.25 0% ΧТ Carbonaceous Siltstone Coalv LS17RC-08 42.00 42.25 0.25 0% co Coal 21678 Some rock but mainly coal LS17RC-08 42.25 42.50 0.25 0% ST Siltstone Coaly, occasioanal coarser fragments LS17RC-08 42.50 43.00 0.50 Siltstone Dark grey, some coal fragments and coarser sandstone fragments Fine grained, silty in part, some brown staining on fragment surfaces, brown 43.00 LS17RC-08 46.00 3.00 0% SS Sandstone fragments incrreasing in abundance towards bottom of unit LS17RC-08 46.00 48.00 2.00 0% SS Sandstone Medium grained, medium grey LS17RC-08 48.00 57.00 9.00 0% SS Sandstone dirty resistant sandstone 0% co LS17RC-08 57.00 58.00 1.00 Coal 21679 fine, thick muddy texture LS17RC-08 59.00 CO 58.00 1.00 0% Coal 21680 fine, thick muddy texture co LS17RC-08 Coal 21681 fine, thick muddy texture 59.00 60.00 1.00 LS17RC-08 60.00 60.50 0.50 0% CO Coal 21682 fine, thick muddy texture

ST

Siltstone

soft dk grey siltstone/shale, fw

60.50

63.80

3.30

0%

LS17RC-08

DRILLHOL	E LOG - I	Lithology D	Data												CanAus Coal Limited
			DR	ILLER'S DEPT	HS	_		COF	RRECTED DE	PTHS					
		From	То	Interval	Recovery	Recovery	From	То	Interval	Recovery	Recovery	Lithology	Lithology		
Hole ID	Run #	(m)	(m)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(%)	Code	English	Sample ID	fine, thick muddy texture
LS17RC-08		63.80	180.00	116.20		0%			-	-	-	ST	Siltstone		soft dk grey siltstone/shale, v. minor calcite particles
LS17RC-08		180.00	198.00	18.00		0%			-	-	-	ST	Siltstone		soft dk grey siltstone/shale
LS17RC-08		198.00	200.00	2.00		0%			-	-	-	XM	Carbonaceo	us mudstone	v. soft black carbonaceus mudstone
LS17RC-08		200.00	202.00	2.00		0%			-	-	-	ST	Siltstone		soft dk grey siltstone/shale
LS17RC-08		202.00	218.00	16.00		0%			_	-	-	ST	Siltstone		Dark grey, occasional calcite fragments throughout. Actively fizzed with acid medium to dark grey, some calcite fragments, mainly in the top of the unit.
LS17RC-08		218.00	232.00	14.00		0%				-	-	ST	Siltstone		Minor fizzing with acid. Silty Dark grey, soft and pliable, common siltstone and sandstone fragments. Minor
LS17RC-08		232.00	233.00	1.00		0%			_	-	-	MS	Mudstone		fizzing when acid was applied
LS17RC-08		233.00	235.00	2.00		0%			-	-	-	ST	Siltstone		Dark grey, fine grained, occasional sandstone
LS17RC-08		235.00	238.00	3.00		0%			-	-	-	ST	Siltstone		Soft, medium grey, sandy at base
LS17RC-08		238.00	244.00	6.00		0%			-	-	-	ST	Siltstone		medium to dark grey in colour. Minor fizzing. Sandy
LS17RC-08		244.00	250.00	6.00		0%			-	-	-	ST	Siltstone		Medium grey in colour, common sandstone fragments



																						Planned	ı	Appro	<		Surveye	ed .			
Hole ID	Project	Year	Type	Geologist(s)	Rig	Target Seam(s)	Date Drilled	d Azimuth	Dip	Driller's TD (m)	Bit Size (mm)	Core Size	e Overburden	Driller's Casing (m)	Corepoint (m)	Date Logged	Open Hole Log to TD?	Logger's	Logger's Casing (m)	Water Table (m)) Flowing?	E N	Elev	E N	Elev	E	N	Elev	Date Surveyed Survey II	ID Comments	
LR17RC	-10 L	S 201	7 R	Citesoi: Larsen	GFD 130)	2017-05-17	7 (9	0 28	2 14'	0	1	9 5	4	2017-05-2	21 N	276.48	8 53.9	93 44	1	661430 549810	1660	661455 549811	3 165	5 661457	.1 549811	3 1653.46	8 2017-06-23 241	14 Difficult setting casing, lost circulation se	several times

DRILLHOI	LE LOG -	Lithology	Data												CanAus Coal Limited
			DF	RILLER'S DEP	THS			COI	RRECTED DE	PTHS					
		From	То	Interval	Recovery	Recovery	From	То	Interval	Recovery	Recovery	Lithology	Lithology		
Hole ID	Run #	(m)	(m)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(%)	Code	English	Sample ID	Description
LS17RC-10		0.00	44.00	44.00		0%			-	-	-	NL	Not Logged		Not logged
LS17RC-10		44.00	46.00	2.00		0%			-	-	-	SS	Sandstone		Chips of gray, gritty, sandstone + siltstone; fine to medium grained, as 3-10mm subangular to subrounded fragments.
LS17RC-10		46.00	49.00	3.00		0%			-	-	-	SS	Sandstone		Same rock as above, but as larger cuttings (up to 20mm).
LS17RC-10	From (m) 0.00 4 44.00 4 46.00 5 50.00 5 51.00 5 56.00 5 57.00 5 58.00 19 199.00 22 224.00 22 229.00 23 230.00 23 234.00 23 235.00 24 244.00 25 252.00 29 254.00 26 268.00 26 268.00 26 271.00 28		50.00	1.00		0%			-	-	-	XC	Carbonaceous Claystone		Black cuttings of carbonaceous claystone (brown streak) mixed with haed coal (black streak). Minor sandstone fragments (subrounded).
LS17RC-10		50.00	51.00	1.00		0%						XC	Carbonaceous Claystone		As above
LS17RC-10		51.00	56.00	5.00		0%			-	-	-	MS	Mudstone		Grey mudstone
LS17RC-10		56.00	57.00	1.00		0%			-	-	-	СО	Coal	21601	SPL #21601: 56-57m SPL #21602: 57-58m
LS17RC-10			58.00	1.00		0%			_			СО	Coal	21602	
LS17RC-10	From (m) 10			141.00		0%			-	-	-	MS	Mudstone		dark grey mudstone
LS17RC-10	D Run # (m) (-10 0.00 44 -10 44.00 49 -10 46.00 49 -10 49.00 50 -10 50.00 50 -10 51.00 50 -10 51.00 50 -10 56.00 50 -10 57.00 50 -10 58.00 19 -10 199.00 22 -10 224.00 22 -10 230.00 23 -10 230.00 23 -10 235.00 24 -10 243.00 24 -10 244.00 25 -10 252.00 25 -10 263.00 26 -10 268.00 27 -10 268.00 27 -10 271.00 28			25.00		0%			-	-	-	LS	Limestone		Grey LS, w/ calcite stringers drilling got more difficult, strong fizz.
LS17RC-10	-10 51.00 56.0 -10 56.00 57.0 -10 57.00 58.0 -10 58.00 199.0 -10 199.00 224.0 -10 224.00 229.0 -10 229.00 230.0			5.00		0%			-	-	-	CS	Claystone		Grey cst w/ calcite stringers; STRONG FIZZ
LS17RC-10			230.00	1.00		0%			-	-	-	CS	Claystone		Dark grey to black; no fizz
LS17RC-10	49.00 50 50.00 51 51.00 56 56.00 57 57.00 58 58.00 199 199.00 224 224.00 229 229.00 230 230.00 234 234.00 235 235.00 243 244.00 245 244.00 255 252.00 254		234.00	4.00		0%			-	-	-	LS	Limestone		Limestone; strong fizz; light grey colour
LS17RC-10	Run # (m) (r 0.00 44 44.00 46 46.00 49 49.00 50 50.00 51 51.00 56 56.00 57 57.00 58 58.00 199 199.00 224 224.00 225 229.00 230 230.00 234 243.00 243 243.00 244 244.00 252 252.00 254 254.00 263 263.00 268 268.00 271 271.00 281		235.00	1.00		0%			-	-	-	CS	Claystone		CS; no fizz
LS17RC-10	Run # (m) (n 0.00 44 44.00 46 46.00 49 49.00 50 50.00 51 51.00 56 56.00 57 57.00 58 58.00 199 199.00 224 224.00 229 229.00 230 230.00 234 235.00 243 243.00 244 244.00 252 252.00 254 254.00 263 263.00 268 268.00 271 271.00 281		243.00	8.00		0%			-	-	-	LS	Limestone		Limestone; strong fizz; light grey colour
LS17RC-10			244.00	1.00		0%			-	-	-	LS	Limestone		Limestone; strong fizz; light grey colour
LS17RC-10			252.00	8.00		0%			-	-	-	LS	Limestone		Limestone; strong fizz; light grey colour
LS17RC-10			254.00	2.00		0%			-	-	-	CL	Clay		Fault gauge? Light grey fine mud; strong HCL fizz
LS17RC-10			263.00	9.00		0%			-	-	-	LS	Limestone		Limestone; strong fizz; light grey colour
LS17RC-10			268.00	5.00		0%			-	-	-	LS	Limestone		Limestone; small (1-10mm) chips; strong HCL fizz
LS17RC-10			271.00	3.00		0%			-	-	-	LS	Limestone		Limestone: chips up to 2 cm in size
LS17RC-10		271.00	281.00	10.00		0%			-	-	-	LS	Limestone		Limestone; small (2-15mm) subrounded chips; strong HCL fizz
LS17RC-10		281.00	282.00	1.00		0%			- -	-	-	LS	Limestone		Limestone; small (2-15mm) subrounded chips; strong HCL fizz End of Hole Driller's TD @ 282m
				-		-			-	-	-		-		
				-		_			-	-	-		_		
				_		-			-	-	-		_		
				-		-			-	-	-		_		
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														Driller's			Open		Logger's													
						Target				Driller's	Bit Size	Core Size	Overburder	Casing	Corepoint		Hole Log	Logger's	Casing	Water										Date		1 1
Hole ID	Project	Year	Type	Geologist(s)	Rig	Seam(s)	Date Drilled	Azimuth [Dip	TD (m)	(mm)	(mm)	(m)	(m)	(m)	Date Logged	to TD?	TD (m)	(m)	Table (m) Flowing?	E	N	Elev	E	N	Elev	E	N	Elev	Surveyed	Survey ID	Comments
LS17RC-	13 LS	20:	L7 RC	n; Abby Cousir	s GED 13	0	2017-06-12	0	-90	122	178 Odex	; 133 PDC		3 7	0	2017-06-12	2 Y	122.2	69.77	24.5 N	661468	549833	7	6614	73 549833	6 167	0 661473	8 5498338	3 1669.396	5 2017-06-23	3 2421	Driller

mentioned that the hole made water at 55m

DRILLHOL	E LOG - I	Lithology D	ata												CanAus Coal Limited
		_		ILLER'S DEPT					RRECTED DE						
		From	То	Interval	Recovery	Recovery	From	То	Interval	Recovery	_	Lithology			
Hole ID	Run #	(m)	(m)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(%)	Code	English	Sample ID	Description
LS17RC-13		0.00	3.00	3.00		0%				-	-	OV	_	, undifferentia	
LS17RC-13		3.00	9.00	6.00		0%				-	-	MS	Mudstone		soft brown mudstone
LS17RC-13		9.00	10.00	1.00		0%				-	-	XM	_	us Mudstone	carbonaceous mudstone, coaly
LS17RC-13		10.00	12.00	2.00		0%				-	-	ST	Siltstone		soft grey siltstone
LS17RC-13		12.00	15.00	3.00		0%			-	-	-	XM	_	us Mudstone	carbonaceous mudstone
LS17RC-13		15.00	22.00	7.00		0%			-	-	-	ST	Siltstone		soft grey siltstone, some carbonaceous content
LS17RC-13		22.00	42.00	20.00		0%			_	-	-	SS	Sandstone		hard and resistant, dirty fine sandstone, larger chips, some fractures
															Medium grained, medium grey, hard, common iron-stained fragments
LS17RC-13		42.00	51.00	9.00		0%			_	-	-	SS	Sandstone		throughout
															No fizz, dark grey, rare fragments with iron-staining on surfaces, minor light
LS17RC-13		51.00	56.00	5.00		0%			-	-	-	ST	Siltstone		brown mudstone fragments. Hole made water at around 55-57m
															Medium grey, common siltstone fragments at top of unit, no fizz, abundant
LS17RC-13		56.00	62.00	6.00		0%			_	-	_	SS	Sandstone		iron-stained fragments, occasional hard brown mudstone fragments
LS17RC-13		62.00	63.00	1.00		0%				-	-	SS	Sandstone		Medium grained, dark grey, very hard, no fizz
LS17RC-13		63.00	64.00	1.00		0%						SS	Sandstone		Medium grained, medium grey, occasional iron-stained fragments, no fizz
L317RC-13		03.00	04.00	1.00		- 0/8			-	-	-	33	Sullustone		Dark grey, no fizz (except for calcite), occasional calcite fragments throughout.
LS17RC-13		64.00	97.00	33.00		0%			-	-	-	ST	Siltstone		Casing depth
						-			_				_		Medium grey/brown, platey-shaped chips at top, occasional coarser fragments
LS17RC-13		97.00	122.00	25.00		0%			-	_	-	MS	Mudstone		of siltstone throughout, minor calcite fragments
				-		-			-	-	-		-		5 7
				-		-			-	-	-		-		
				-		-			-	-	-		-		
				-		-			-	-	-		-		
									-	-	-		-		
				-		-			-	-	-		-		
				-		-			-	-	-		-		
				-		-			-	-	-		-		
				-		-			-	-	-		-		
				-		-			-	-	-		-		
				-		-			-	-	-		-		
				-		-			-	-	-		-		



															Planned			Approx				Surveyed												
															Driller's			Open		Logger's										T		,		·i
							Target				Driller's	Bit Size	Core Size	Overburden	Casing	Corepoint	Date	Hole Log	Logger's	Casing	Water											Date	1 1	i
Hole	ID	Project	Year	Type	Geologist(s)	Rig	Seam(s)	Date Drilled	Azimuth	Dip	TD (m)	(mm)	(mm)	(m)	(m)	(m)	Logged	to TD?	TD (m)	(m)	Table (m)	Flowing?	E	N	Elev	E	N	Elev	E	N	Elev	Surveyed	Survey ID	Comments
LS17RC-14 LS 2017 RCn; David Ross GED 130 2017-06-13 0 -90 37 169 9 29.5 2017-06-17 N									33.:	L 29.37	27.56	N	661271	5498000)	661278	549799	6 162	29 661281.	7 5497998	1629.446	6 2017-06-23	2412	Fractured										

112 Fractured ground around 24-29m, casing was very hard to set, slow drilling. Casing stuck at 29.5m. Hole abandoned at 37m once drilling down pas the casing failed.

CanAus **DRILLHOLE LOG - Lithology Data Coal Limited** DRILLER'S DEPTHS CORRECTED DEPTHS From To Interval Recovery Recovery From To Interval Recovery Recovery Lithology Lithology Hole ID (m) (m) (m) (m) (%) (m) (m) (m) (m) (%) English Sample ID Description Run# Code 0.00 OV LS17RC-14 9.00 9.00 Overburden, undifferentiate Mixture of clay and gravel, some larger rock chips, brown LS17RC-14 9.00 11.00 2.00 0% SS Sandstone Medium grained, medium grey, no fizz Medium grained, abundant iron-stained surfaces, occasional claystone LS17RC-14 11.00 15.00 4.00 Sandstone fragments, minor fizz at 13m otherwise none XM LS17RC-14 15.00 17.50 2.50 0% Carbonaceous Mudstone Dark brown-grey, no fizz, very small chips, coaly in part 18.50 co 21683 Very fine, soft, black slurry, no fizz LS17RC-14 17.50 1.00 Coal LS17RC-14 18.50 18.75 0% 21684 As above 0.25 Coal Abundant mudstone, some coal fragments, dark grey, no fizz LS17RC-14 18.75 21.00 2.25 0% ΧT Carbonaceous Siltstone LS17RC-14 21.00 24.00 3.00 0% Sandstone Medium grained, abundant iron-stained surfaces, medium grey, no fizz Medium grained, medium grey, very hard, fractured zone, large-sized sub 24.00 angular fragments, no fizz LS17RC-14 37.00 13.00 Sandstone



																							Planned			Approx			Surveyed	d			
														Driller's			Open		Logger'	5													
						Target				Driller's	Bit Size	Core Size	Overburden	Casing	Corepoint	Date	Hole Log	Logger's	Casing	Water											Date		
Hole ID	Project	Year	Type	Geologist(s)	Rig	Seam(s)	Date Drilled	Azimuth	Dip	TD (m)	(mm)	(mm)	(m)	(m)	(m)	Logged	to TD?	TD (m)	(m)	Table (m)	Flowing?	E	V	Elev	E	N	Elev	E	N	Elev	Surveyed	Survey ID	Comments
LS17RC-15	LS	201	7 R	C David Ross	GED 130)	2017-06-15	0	-90	0 52.2	ODEX 178	3		5 5	52	2017-06-1	L7 N	52.13	3 !	27.19	N	661311	5498201	1610	66129	1 549826	1 160	6 661291.	.8 5498264	4 1597.619	9 2017-06-23	3 2411	

CanAus DRILLHOLE LOG - Lithology Data Coal Limited DRILLER'S DEPTHS CORRECTED DEPTHS From To Interval Recovery Recovery From To Interval Recovery Recovery Lithology Lithology (%) Hole ID (m) (m) (m) (m) (m) (m) (m) (m) (%) English Sample ID Run# Code Description 0.00 OV Overburden, undifferentiate Dark grey medium grained SS LS17RC-15 5.00 5.00 LS17RC-15 5.00 12.00 7.00 0% SS Sandstone Dark grey medium grained SS LS17RC-15 12.00 12.50 0.50 MS Mudstone Brown mudstone LS17RC-15 12.50 13.50 СО 21685 Coal Slurry 1.00 Coal co 21686 Coal Slurry LS17RC-15 13.50 14.50 1.00 0% Coal LS17RC-15 15.75 CO 21687 Coal Slurry 14.50 1.25 Coal LS17RC-15 15.75 21.00 0% Sandstone grey fine grained SS 5.25 brown mudstone soft no fizz LS17RC-15 21.00 24.00 3.00 0% MS Mudstone LS17RC-15 24.00 25.00 1.00 0% CO Coal 21688 Coal Slurry grey siltstone rounded chips no fizz LS17RC-15 25.00 31.00 6.00 0% Siltstone 31.00 41.00 LS17RC-15 SS grey fine grained SS, angular chips no fizz 10.00 Sandstone LS17RC-15 41.00 43.00 0% dark grey siltstone 2.00 Siltstone Mainly MS interbedded with some siltstone calcite veins throughout fizz LS17RC-15 43.00 52.00 9.00 MS Mudstone



																					Pla	anned			Approx	:		Surve	yed			
														Driller's		Open		Logger's	;													
						Target				Driller's		Core Size	Overburden	Casing	Corepoint	Hole I	og Logge	r's Casing	Water											Date		
Hole ID	Project	Year	Type	Geologist(s)	Rig	Seam(s)	Date Drilled	Azimuth	Dip	TD (m)	Bit Size (mm)	(mm)	(m)	(m)	(m)	Date Logged to TD	? TD (m) (m)	Table (m)) Flowing? E	E N	E	lev	E	N	Elev	E	N	Elev	Surveyed	Survey ID	Comments
LS17RC-1	6	S 201	7	RCn; David Ross	GED 130)	2017-06-1	.6 () -9(136	PDC 133		4	59	.5	2017-06-17 No	119	.38 59	.5	No	661742 54	498261		661739	549826	6	66173	39 5498	264 1742.82	6 2017-06-23	2438	Hole caved in during density
																															1	log; 80m, trouble retrieving
																															1	but did recover tool w

effort. Dip meter not attempted.

CanAus **DRILLHOLE LOG - Lithology Data** Coal Limited CORRECTED DEPTHS **DRILLER'S DEPTHS** То Interval From Recovery Recovery From То Interval Recovery Recovery Lithology Lithology (m) (m) (m) (m) (%) (m) (m) (m) (m) (%) Hole ID Run# Code English Sample ID Description LS17RC-16 0.00 4.00 4.00 OV Overburden, undifferentiate unconsolidated clays and gravel 0% LS17RC-16 4.00 8.00 4.00 0% ST Siltstone grey siltstone, brown streaks LS17RC-16 8.00 12.00 4.00 0% SS Sandstone dirty hard silkty sandstone LS17RC-16 12.00 14.00 2.00 0% XM Carbonaceous Mudstone black, silty LS17RC-16 14.00 18.00 4.00 0% MS Mudstone soft, light brown, mudstone 0% It. brown to grey siltstone LS17RC-16 18.00 24.00 6.00 Siltstone LS17RC-16 24.00 25.00 1.00 0% XM Carbonaceous Mudstone black, silty LS17RC-16 25.00 30.00 5.00 0% ST Siltstone v. soft grey siltstone LS17RC-16 30.00 34.00 4.00 0% XM Carbonaceous Mudstone black mudstone, grainy LS17RC-16 34.00 35.00 1.00 0% Siltstone lt. brown to grey siltstone, v. soft LS17RC-16 35.00 37.00 0% CS 2.00 Claystone light brown claystone very soft black carbonaceous siltstone LS17RC-16 37.00 38.00 1.00 0% Siltstone LS17RC-16 38.00 41.00 0% XM black carbonaceous mudstone 3.00 Carbonaceous Mudstone LS17RC-16 41.00 47.00 6.00 0% MS dark grey MS with a brown streak Mudstone 47.00 0% black carbonaceous shale LS17RC-16 52.00 5.00 Carbonaceous Shale 56.00 MS dark grey MS with a brown streak LS17RC-16 52.00 4.00 0% Mudstone LS17RC-16 56.00 110.00 54.00 0% SS Sandstone grey fine grained SS LS17RC-16 110.00 121.00 11.00 0% grey very fine grained SS Sandstone LS17RC-16 121.00 129.00 8.00 0% ST Siltstone dark grey siltstone with a few calcite stringers dark grey mudstone with a bit of siltstone lots of calcite stringers LS17RC-16 0% MS 129.00 134.00 5.00 Mudstone LS17RC-16 134.00 136.00 2.00 Not Logged TD, No samples taken



														Planned		Approx	(Surveyed	i			
						Driller's			Open		Logger's												
	Target		Driller's		Core Size Overburd	en Casing (Corepoint	Date	Hole Log	Logger's	Casing	Water									Date		
Hole ID Project Year Type G	Geologist(s) Rig Seam(s)	Date Drilled Azimutl	n Dip TD (m)	Bit Size (mm)	(mm) (m)	(m) ((m)	Logged	to TD?	TD (m)	(m)	Table (m) Flowing	? E	N Elev	E	N	Elev	E	N	Elev	Surveyed	Survey ID Cor	mments

DRILLHOL	E LOG - L	ithology D	ata													CanAus Coal Limited
			DRI	ILLER'S DEP	ГНЅ			COF	RRECTED DEI	PTHS						
		From	To	Interval	Recovery	Recovery	From	То	Interval	Recovery	Recovery	Lithology	Lithology			
Hole ID	Run#	(m)	(m)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(%)	Code	English	Sample ID	Acid Test	Description
LS17RC-17		0.00	2.00	2.00		0%			-	-	-	NL	Not Logged			
LS17RC-17		2.00	4.00	2.00		0%			-	-	-	OV	Overburden,	, undifferentiate	N	grey sandstone
LS17RC-17		4.00	5.00	1.00		0%			-	-	-	NL	Not Logged			
LS17RC-17		5.00	6.00	1.00		0%			-	-	-	СО	Coal	21705		coal slurry
LS17RC-17		6.00	7.00	1.00		0%			-	-	-	СО	Coal	21706		coal slurry
LS17RC-17		7.00	7.50	0.50		0%			-	-	-	CO	Coal	21707		coal slurry
LS17RC-17		7.50	8.00	0.50		0%			-	-	-	MS	Mudstone		Ν	dark grey mudstone
LS17RC-17		8.00	11.00	3.00		0%			-	-	-	MS	Mudstone		Υ	brown mudstone
LS17RC-17		11.00	16.00	5.00		0%			_	-	-	ST	Siltstone		Υ	grey siltstone
LS17RC-17		16.00	17.00	1.00		0%			_	-	-	CO	Coal	21708		coal slurry
LS17RC-17		17.00	17.75	0.75		0%			-	-	-	CO	Coal	21709		coal slurry
LS17RC-17		17.75	19.00	1.25		0%			-	-	-	MS	Mudstone		N	dark grey mudstone
LS17RC-17		19.00	21.00	2.00		0%			_	-	-	SS	Sandstone		N	grey finegrained SS
LS17RC-17		21.00	25.00	4.00		0%			_	-	-	SS	Sandstone		N	grey finegrained SS some chips very rusty
LS17RC-17		25.00	30.00	5.00		0%			-	-	-	SS	Sandstone		N	Grey medium grained SS
LS17RC-17		30.00	35.00	5.00		0%			-	-	-	SS	Sandstone		Υ	Grey/Orange fine grained SS
LS17RC-17		35.00	60.00	25.00		0%			-	-	-	SS	Sandstone		N	Grey medium grained SS a few rusty bits
LS17RC-17		60.00	66.00	6.00		0%			-	-	-	ST	Siltstone		N	sandy siltstone, dark and coaly
LS17RC-17		66.00	72.00	6.00		0%			-	-	-	ST	Siltstone		N	black coaly siltstone
LS17RC-17		72.00	77.00	5.00		0%			-	-	-	SH	Shale		N	finer grained, soft, increasing shale
LS17RC-17		77.00	78.00	1.00		0%			_			NL	Not Logged			
LS17RC-17		78.00	79.00	1.00		0%				-	-	ST	Siltstone		N	siltstone w sandstone chips, flecks of calcite, gritty and less coaly, hard
LS17RC-17		79.00	99.00	20.00		0%				-	-	ST	Siltstone		N	gritty, consistent chip size, hard and sandy, grey, clean
LS17RC-17		99.00	120.00	21.00		0%				-	-	ST	Siltstone		Υ	grey siltstone, occasional calcite visible, light fizz
LS17RC-17		120.00	140.00	20.00		0%			-	-	-	ST	Siltstone		Υ	grey siltstone, occasional calcite visible, light fizz
LS17RC-17		140.00	156.00	16.00		0%			-	-	-	ST	Siltstone		Υ	grey siltstone, occasional calcite visible, light fizz
				-		-			-	-	-		-			



																						F	Planned		Αŗ	prox			Surveyed				
														Driller's			Open		Logger's														
						Target				Driller's	Bit Size	Core Size	Overburden	Casing	Corepoint	Date	Hole Log	Logger's	Casing	Water										ĺ	Date	1 1	
Hole ID	Project	Year	Type	Geologist(s)	Rig	Seam(s)	Date Drilled	Azimuth	Dip	TD (m)	(mm)	(mm)	(m)	(m)	(m)	Logged	to TD?	TD (m)	(m)	Table (m)	Flowing?	E N	Elev	E	N	Ele	v E		N	Elev	Surveyed	Survey ID	Comments
LS17RC-	8 LS	2017	7	RC Abby Cousins	GED 130		2017-06-18	() -	90 201.3	178 Ode	; 140 Hami	1 3	3 48.	.2	2017-06-1	.9/:NO	194.2	4		NO	662032 5	497878	66	2031 54	97874	1839 6	662031.8	5497875	1841.08	3 2017-06-23	2442	Hole made water

at around 50m.
Geophysical log
did not note
casing depth or
water table.

DRILLHO	LE LOG - I	ithology D	ata												CanAus Coal Limited
			DR	ILLER'S DEPT	ГНЅ			CO	RRECTED DE	PTHS					
		From	То	Interval	Recovery	Recovery	From	То	Interval	Recovery	Recovery	Lithology	Lithology		
Hole ID	Run #	(m)	(m)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(%)	Code	English	Sample ID	Description
LS17RC-18		0.00	3.00	3.00		0%			-	-	-	OV	Overburden		Grey-brown, muddy
						_							_		Dark brown-black, small to medium chips, brown streak, carbonaceous shale
LS17RC-18		3.00	9.00	6.00		0%			-	-	-	хн	Carbonaceo	us Shale	with some coaly bits
LS17RC-18		9.00	11.00	2.00		0%			-	-	-	ST	Siltstone		Light brown, fine grain, angular and coarser chips, siltstone
LS17RC-18		11.00	14.00	3.00		0%			-	-	-	MS	Mudstone		Light grey/grey, very fine grain mudstone
LS17RC-18		14.00	18.00	4.00		0%			-	-	-	ST	Siltstone		Light grey/grey becoming rusty brown @ end, fine grain siltstone
LS17RC-18		18.00	19.00	1.00		0%			_	-	-	ST	Siltstone		Rusty brown fine grain siltstone
LS17RC-18		19.00	20.00	1.00		0%			-	-	-	SS	Sandstone		Grey, fine grained sandstone
LS17RC-18		20.00	22.00	2.00		0%			-	-	-	MS	Mudstone		Dark brown MS, hard, brown streak
LS17RC-18		22.00	29.00	7.00		0%			-	-	-	SS	Sandstone		Grey, fine grained sandstone, very fractured
LS17RC-18		29.00	35.00	6.00		0%			-	-	-	SS	Sandstone		Dark grey, medium grained sandstone, major fractures
LS17RC-18		35.00	47.00	12.00		0%			-	-	-	SS	Sandstone		Grey, medium grained sandstone
LS17RC-18		47.00	51.00	4.00		0%			-	-	-	SH	Shale		Dark grey, shale soft
LS17RC-18		51.00	53.00	2.00		0%			-	-	-	SS	Sandstone		Very fine grained, medium grey, siltstone fragments throughout.
															Dark grey, soft, occasional coarser iron-stained fragments (possible
LS17RC-18		53.00	54.00	1.00		0%			-	-	-	ST	Siltstone		contamination)
LS17RC-18		54.00	56.00	2.00		0%			-	-	-	SS	Sandstone		Fine-grained, medium grey, abundant iron-stained fragments
															Dark grey, occasional slickensided fragments, rare small calcite veins in
LS17RC-18		56.00	60.00	4.00		0%			-	-	-	ST	Siltstone		fragments, some large sized fragments
LS17RC-18		60.00	61.00	1.00		0%			-	-	-	MS	Mudstone		Medium grey/brown, common fragments with iron-staining
LS17RC-18		61.00	62.00	1.00		0%			-	-	-	ST	Siltstone		Dark grey with some mudstone fragments, common iron-stained fragments
LS17RC-18		62.00	63.00	1.00		0%			-	-	-	MS	Mudstone		Medium grey/brown, soft, silty in part
LS17RC-18		63.00	68.00	5.00		0%			_	-	-	ST	Siltstone		Dark grey, soft, rare, iron-stained fragments.
															Medium grey/brown, abundant siltstone fragments, some large sized
															fragments, some with calcite on surfaces, minor iron-stained sanstone
LS17RC-18		68.00	70.00	2.00		0%			-	-	-	MS	Mudstone		(contamination)
															Dark grey, common mudstone fragments, rare iron-stained fragments, rare
LS17RC-18		70.00	74.00	4.00		0%			-	-	-	ST	Siltstone		coal fragments at base of unit.
															Abundant iron-stained fragments at top of unit, minor siltstone, grey/brown
LS17RC-18		74.00	77.00	3.00		0%			_	_	_	MS	Mudstone		colour, some larger sized fragmentsat base, rare coal fragments.
LS17RC-18		77.00	79.00			0%			_	_	_	ST	Siltstone		Dark grey, common mudstone fragments, common iron-staining
LS17RC-18		79.00	126.00	47.00		- 0% 0%			-	_	_	SS	Sandstone		Medium grained, medium-dark grey, no fizz.
LS17RC-18		126.00	130.00			0%			-	_	_	ST	Siltstone		Dark grey, occasional coarser fine sandstone fragments, no fizz.
LS17RC-18		130.00	138.00			- 0% 0%			-	_	-	ST	Siltstone		Medium grey, no fizz
LS17RC-18		138.00	201.00	63.00		- 0%			-	_	_	ST	Siltstone		Medium brown/grey, minor calcite fragments throughout, no fizz
			_52.00	55.50									-		2, 6, 7
													-		
								1							l .



						Planned	Approx	Surveyed	
	Target	Driller's Bit Size	Core Size Overburden Casin	ler's ling Corepoint Date	Open Logger's Logger's Casing Water				Date
Hole ID Project Year Type Geologist(s LS17RC-19 LS 2017 RC ss; Ian Fras		uth Dip TD (m) (mm)	(mm) (m) (m) ; 140 Hamn 6	(m) Logged 36.1 2017-06-18	, , , , , , , , , , , , , , , , , , , ,	Flowing? E N Elev N 661637 5497854	E N Elev 661653 5497833 172		Surveyed Survey ID Comments

CanAus Coal Limited **DRILLHOLE LOG - Lithology Data** DRILLER'S DEPTHS CORRECTED DEPTHS From То Interval Recovery Recovery From То Interval Recovery Recovery Lithology Lithology (%) Hole ID (m) (m) (m) (m) (m) (m) (m) (m) (%) Code English Sample ID Description Run# 0.00 OV Overburden, undifferentiat unconsolidated clays and gravel, till, brown LS17RC-19 6.00 6.00 LS17RC-19 6.00 11.00 5.00 0% ST Siltstone soft grey siltstone dirty fine sandstone, rust colored streaks(oxidation) LS17RC-19 11.00 13.00 2.00 SS Sandstone LS17RC-19 13.00 18.00 5.00 Siltstone soft grey siltstone XM black carbonaceous mudstone LS17RC-19 18.00 20.00 2.00 0% Carbonaceous Mudstone Dark grey mudstone soft brown streak LS17RC-19 20.00 24.00 4.00 Mudstone LS17RC-19 24.00 31.00 0% Sandstone Grey medium grained SS 7.00 35.00 SS Sandstone Grey very fine grained SS LS17RC-19 31.00 4.00 0% Dark grey mudstone soft brown streak with a few calcite stringers LS17RC-19 35.00 96.60 61.60 MS Mudstone



																						Planned			Approx	1		Surveyed	d			
														Driller's			Open		Logger's													
						Target			ı	Oriller's	Bit Size	Core Size	Overburden	Casing	Corepoint	Date	Hole Log	Logger's	Casing	Water										Date		1
Hole ID	Project	Year	Type	Geologist(s)	Rig	Seam(s)	Date Drilled	Azimuth D	ip T	ΓD (m)	(mm)	(mm)	(m)	(m)	(m)	Logged	to TD?	TD (m)	(m)	Table (m) Flowing	? E	N	Elev	E	N	Elev	E	N	Elev	Surveyed	Survey ID	Comments
LS17RC-2	.4 L	S 201	.7 F	RCn; David Ross	GED 130)	2017-06-21	0	-90	200	0 178 Ode	c; 140 Ham	r 3	2)	2017-06-2	2 N	193.83	1	No	66214	16 5497816	5	662139	9 549780	9 1	888 662139.	9 549780	8 1887.828	3 2017-06-2	3 2445	

CanAus DRILLHOLE LOG - Lithology Data Coal Limited **DRILLER'S DEPTHS CORRECTED DEPTHS** From То Interval Recovery Recovery From То Interval Recovery Recovery Lithology Lithology (m) (m) (m) (m) (%) (m) (m) (m) (m) (%) Hole ID Code English Sample ID Run# Description 0.00 ΟV LS17RC-24 3.00 3.00 Overburden, undifferentiate unconsolidated clays and gravels, till 0% LS17RC-24 3.00 5.50 0% XM Carbonaceous Mudstone granular carbonaceous mudstone 2.50 LS17RC-24 5.50 6.50 1.00 0% CO Coal 21689 v. dense dry mud, fine LS17RC-24 6.50 7.50 1.00 0% CO Coal 21690 v. dense dry mud, fine LS17RC-24 7.50 8.50 0% CO Coal 21691 v. dense dry mud, fine 1.00 LS17RC-24 8.50 9.50 1.00 CO Coal 21692 v. dense dry mud, fine 9.50 LS17RC-24 10.00 0.50 0% CO Coal 21693 v. dense dry mud, fine, becoming more granular LS17RC-24 10.00 14.50 4.50 0% XM Carbonaceous Mudstone granular carbonaceous mudstone, w chips LS17RC-24 14.50 15.50 1.00 0% CO Coal 21694 v. dense dry mud, fine LS17RC-24 15.50 16.50 1.00 0% co Coal 21695 v. dense dry mud, fine, becoming more granular 23.00 XM LS17RC-24 16.50 6.50 0% Carbonaceous Mudstone granular carbonaceous mudstone, w chips LS17RC-24 23.00 25.00 2.00 0% ST Siltstone Dark brown siltstone, medium chips ST LS17RC-24 25.00 28.00 3.00 Siltstone Brown siltstone, medium chips LS17RC-24 28.00 36.00 0% MS 8.00 Mudstone Brown mudstone, large chips, brown streaks LS17RC-24 36.00 0% Dark grey ST large chips 43.00 7.00 Siltstone Grey/Brown fine grained SS, some large chips highly fractured zone, some LS17RC-24 43.00 56.00 13.00 0% SS Sandstone rusty chips LS17RC-24 56.00 58.00 0% MS Black MS with some siltstone MS has brown streak 2.00 Mudstone LS17RC-24 58.00 59.00 1.00 0% CO Coal 21696 Coal Slurry co LS17RC-24 59.00 60.00 1.00 0% Coal 21697 Coal Slurry 21698 Coal Slurry LS17RC-24 60.00 61.00 1.00 0% CO Coal 62.00 CO 21699 Coal Slurry LS17RC-24 61.00 1.00 0% Coal co LS17RC-24 62.00 63.00 1.00 Coal 21700 Coal Slurry 21701 Coal Slurry LS17RC-24 63.00 64.00 1.00 0% CO Coal 64.50 0% CO LS17RC-24 64.00 0.50 Coal not sampled Coal Slurry LS17RC-24 64.50 0% MS Black MS dark brown streak 65.00 0.50 Mudstone LS17RC-24 65.00 66.00 1.00 0% co Coal 21702 LS17RC-24 66.00 67.00 1.00 0% co Coal 21703 Coal Slurry 21704 Coal Slurry LS17RC-24 67.00 68.00 1.00 0% CO Coal 77.00 MS Dark grey mudstone very soft brown streak LS17RC-24 68.00 9.00 Mudstone LS17RC-24 77.00 117.00 40.00 0% SS Dark grey fine grained SS Sandstone LS17RC-24 117.00 127.00 0% Grey, fine-grained siltstone, fairly hard 10.00 Siltstone LS17RC-24 127.00 128.00 0% SH Shale Grey shale 1.00 LS17RC-24 128.00 136.00 8.00 0% ST Siltstone Grey, fine-grained siltstone, fairly hard LS17RC-24 136.00 138.00 2.00 0% Siltstone Light grey with visible calcite; good fizz LS17RC-24 143.00 ST Grey, fine-grained siltstone 138.00 5.00 0% Siltstone MS LS17RC-24 144.00 143.00 1.00 Mudstone non-gritty, smooth

Siltstone

Mudstone

MS

Grey, fine-grained siltstone

Grey, slightly darker, consistent chips, fizzy when calcite visible

LS17RC-24

LS17RC-24

144.00

156.00

156.00

200.00

12.00

44.00

0%

0%



																						P	lanned			Appro	x		Surveyed	d			
														Driller's			Open		Logger's														
						Target			Drill	er's Bit	t Size	Core Size	Overburden	Casing	Corepoint	Date	Hole Lo	Logger's	Casing	Water											Date		
Hole ID	Project	Year	Type	Geologist(s)	Rig	Seam(s)	Date Drilled	Azimuth D	p TD (m) (m	nm)	(mm)	(m)	(m)	(m)	Logged	to TD?	TD (m)	(m)	Table (m)	Flowing?	E N		Elev	E	N	Elev	E	N	Elev	Surveyed	Survey IT	Comments
LS17R0	2-25	LS 2017	7 R	C.r. Dave Thompso	on GFD 13	80	2017-06-20	90	-60	201 Oc	dex 178n	mm: Hami	n	8 3	ñ	2107-06-	-20 No	193.54	35.93	2 63.75	No	661976 5	497617		66198	2 549761	13 187	3 661981	.8 5497610	1868.699	2017-06-2	3 244	3

DRILLHOI	E LOG - L	ithology D	ata												CanAus Coal Limited
				LLER'S DEPT					RECTED DEF						
		From	То	Interval	Recovery	Recovery	From	То	Interval	Recovery	Recovery	Lithology	Lithology		
Hole ID	Run #	(m)	(m)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(%)	Code	English	Sample ID	Description
LS17RC-25		0.00	8.00	8.00		0%			-	-	-	OV	Overburden,	, undifferentiat	mixed sandstone and mudstone chips, some Fe-oxide staining
LS17RC-25		8.00	12.00	4.00		0%			-	-	-	SS	Sandstone		hard grey sandstone, clean, no fizz
LS17RC-25		12.00	18.00	6.00		0%			-	-	-	SS	Sandstone		some mixed particles of mudstone and siltstone, no fizz
LS17RC-25		18.00	25.00	7.00		0%			-	-	-	SS	Sandstone		hard, large particles, no fizz
															mixed particles of sandstone and siltstone, darker grey siltstone, fining
LS17RC-25		25.00	36.00	11.00		0%			-	-	-	ST	Siltstone		downwards, little sandstone in bottom 2m. No fizz. End of casing
LS17RC-25		36.00	40.00	4.00		0%			-	-	-	ST	Siltstone		grey siltstone, small particles
LS17RC-25		40.00	49.00	9.00		0%			-	-	-	ST	Siltstone		transition from siltstone to mudstone, very fine particles, no fizz
LS17RC-25		49.00	63.00	14.00		0%			-	-	-	MS	Mudstone		mixed siltstone and mudstone, no fizz
LS17RC-25		63.00	74.00	11.00		0%			-	-	-	MS	Mudstone		all mudstone, no fizz
LS17RC-25		74.00	75.00	1.00		0%			-	-	-	MS	Mudstone		garker grey, calcite stringers
LS17RC-25		75.00	82.00	7.00		0%			-	-	-	MS	Mudstone		darker grey, rock fizzes, no visible calcite
LS17RC-25		82.00	84.00	2.00		0%			-	-	-	MS	Mudstone		dark grey, no fizz
LS17RC-25		84.00	87.00	3.00		0%			-	-	-	MS	Mudstone		dark grey, some larger chips, some fizz when powdered
LS17RC-25		87.00	100.00	13.00		0%			-	-	-	MS	Mudstone		most chips fizz when powdered
LS17RC-25		100.00	104.00	4.00		0%			-	-	-	MS	Mudstone		very few particles fizz when powdered
LS17RC-25		104.00	107.00	3.00		0%			-	-	-	MS	Mudstone		dark grey, some larger chips, some fizz when powdered
LS17RC-25		107.00	120.00	13.00		0%			-	-	-	MS	Mudstone		change in colour, lighter grey, brown streak no fizz
LS17RC-25		120.00	128.00	8.00		0%			-	-	-	MS	Mudstone		minor fizz through interval, harder and some large fragments, brown streak
LS17RC-25		128.00	140.00	12.00		0%			-	-	-	MS	Mudstone		finer grain, smaller fragments, dark brown-grey, softer, no fizz
LS17RC-25		140.00	157.00	17.00		0%			-	-	-	MS	Mudstone		fine grain, grittier, brown, locally coarser fragments, locally strong fizz
				-											fine grain dark brown, calcite bits disseminated amongst chips, calcite
LS17RC-25		157.00	160.00	3.00		0%			-	-	-	MS	Mudstone		stringers in chips, strong fizz, overall smaller chips / fragments
LS17RC-25		160.00	164.00	4.00		0%			-	_	-	MS	Mudstone		no apparent calcite, no interstitial carbonate - no fizz
LS17RC-25		164.00	170.00	6.00		0%			-	-	-	MS	Mudstone		coarser larger fragments, brown no fizz
LS17RC-25		170.00	173.00	3.00		0%			-	-	-	MS	Mudstone		smaller chips, calcite bits in chips, good fizz
LS17RC-25		173.00	176.00	3.00		0%			_	_	_	MS	Mudstone		very muddy interval, small chips no apparent fizz
LS17RC-25		176.00	181.00	5.00		0%			_	_	_	MS	Mudstone		brown smaller fragments / chips, no fizz
				-									-		darker brown some larger fragments calcite stringers and bits within the mix,
LS17RC-25		181.00	195.00	14.00		0%						MS	Mudstone		some fragments evidence of interstitial carbonate, good fizz
LS17RC-25		195.00	201.00	6.00		0%						MS	Mudstone		very muddy interval assume as above



																		Pla	nned			Approx			Surveyed	l			
	1									Driller's			Open		Logger's														
	i l		Target			Driller	s Bit Size	Core Size	Overburden	Casing	Corepoint	Date	Hole Log	Logger's	Casing	Water											Date	1 1	
Hole ID Project Year	Type Geologi	ist(s) Rig	Seam(s)	Date Drilled	Azimuth Dip	TD (m)	(mm)	(mm)	(m)	(m)	(m)	Logged	to TD?	TD (m)	(m)	Table (m) F	lowing?	E N	Elev	/ E		N	Elev	E	N	Elev	Surveyed	Survey ID (Comments
.S17RC-41 LS 2017	RC Abby Co	ousins GED 130		2017-06-15	90	-60	20 Odex 1	68		6	0					N	1	661271 549	8000	1630	661290	5498006	163	82 661288.9	5498004	1630.053	3 2017-06-23	2413	Casing was pulled to

change the shoe, we then decided to abandon the hole as it was going to take the same amount of time to reset up as to drill a new hole. Hole abandoned and not logged.

DRILLHOI	E LOG - L	ithology D	ata												CanAus Coal Limited
				ILLER'S DEPT				COF	RRECTED DEF						
		From	То	Interval	Recovery		From	То	Interval	Recovery		Lithology	Lithology		
Hole ID	Run #	(m)	(m)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(%)	Code	English	Sample ID	Description
LS17RC-41		0.00	6.00	6.00		0%			-	-	-	OV	Overburden,	, undifferentiat	medium grained, grey sandstone
						-							_		medium grained, grey sandstone, very slow drilling progress through very hard
LS17RC-41		6.00	20.00	14.00		0%			-	-	-	SS	Sandstone		and fractured sandstone.
				-		-			-	-	-		-		
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															Driller'	s		Open		Logger's	5								T						ı
					ľ	Target				D	riller's		Core Siz	e Overburdei	Casing	Corepoin	t Date	Hole Log	Logger's	Casing	Water											Date			ı
Hole ID	Project	Year	Type	Geologist(s)	Rig	Seam(s)	Date Drilled	Azim	uth Dip	Т	D (m)	Bit Size (mm)	(mm)	(m)	(m)	(m)	Logged	to TD?	TD (m)	(m)	Table (m)	Flowing? E		N	Elev	E	N	Elev	E	N	Elev	Surveyed	Survey ID	Comments	ı
LS17RC-	12 LS	2017		C. Brian Larsen	GFD 130		2017-06-2	22	270	-60	170	ODFX 178mm:	Hammer 1	40	7	30	2017-06-	-24 No	162.7	8		No	662029	549774	17	662029	549775	6 188	4 662036	.7 549775	53 1885.6C	4 2017-06-2	/3 2444	Lost circulat	ion at 152r

DRILLHOL	E LOG - L	ithology D	ata												CanAus Coal Limited
			DR	ILLER'S DEP1	ГНЅ			CO	RRECTED DEI	PTHS					
		From	То	Interval	Recovery	-	From	То	Interval	Recovery	Recovery	Lithology	Lithology		
Hole ID	Run#	(m)	(m)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(%)	Code	English	Sample ID	Description
LS17RC-42		0.00	4.00	4.00		0%			-	-	-	٥٧	Overburden	, undifferentiated	Not logged
LS17RC-42		4.00	4.50	0.50		0%			-	-	-	СО	Coal		Coal stringer, decided not to sample
LS17RC-42		4.50	7.00	2.50		0%			-	-	-	OV	Overburden	, undifferentiated	Brown rock not logged
LS17RC-42		7.00	24.00			0%			-	-	-	SS	Sandstone		Dark grey fine grained SS, no fizz
LS17RC-42		24.00	30.00			0%			-	-	-	SS	Sandstone		dirty sandstone, consistent chip size and color, no fizz
LS17RC-42		30.00	55.00	25.00		0%			_	-	-	ST	Siltstone		brown siltstone, hard, gritty, no fizz
LS17RC-42		55.00	63.00	8.00		0%			_	-	-	SS	Sandstone		grey fine grained sandstone gritty no fizz
LS17RC-42		63.00	70.00	7.00		0%			_	-	-	SS	Sandstone		grey very fine grained sandstone some rusty light fizz
LS17RC-42		70.00	79.00	9.00		0%			_	-	-	ST	Siltstone		grey siltstone light fizz
LS17RC-42		79.00	87.00	8.00		0%			_	-	-	SS	Sandstone		dark grey very fine grained SS light fizz
LS17RC-42		87.00	110.00	23.00		0%			-	-	-	ST	Siltstone		grey siltstone light fizz
LS17RC-42		110.00	120.00			0%			_	-	-	SS	Sandstone		dark grey very fine grained SS light fizz
LS17RC-42		120.00	131.00			0%			-	-	-	SS	Sandstone		grey very fine grained SS light fizz
LS17RC-42		131.00	152.00	21.00		0%			_	-	-	ST	Siltstone		grey siltstone light fizz
															Inconsistent samples caused by circulation problems - grey siltstone where
LS17RC-42		152.00	170.00	18.00		0%			-	-	-	ST	Siltstone		sampled
				-		-			-	-	-		-		
				-		-			-	-	-		-		
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Hole ID Project Year Type Geologist(s) Rig Seam(s) Date Drilled Azimuth Dip TD (m) Bit Size (mm) (mm) (m) (m) (m) Logged to TD? TD (m) (m) Logged to TD? TD (m) (m) Table (m) Flowing? E N Elev E N Elev E N Elev Surveyed																								F	Planned			Approx			Surveyed	d			
								Target				Driller's		Core Siz	e Overburder	Driller's	Corenoint	Date	Open Hole Log	Laggaria	Casina	Water											Date		
	Hole ID	Project	Ye	ar	Туре	Geologist(s)	Rig	Seam(s)	Date Drille	d Azimuth	Dip	TD (m)	Bit Size (mm)	(mm)	(m)	(m)	(m)	Logged	to TD2	TD (m)	(m)	Table (m) El	owing? E	N		Elev	E	N	Elev	E	N	Elev	Surveyed	Survey ID (Comments

DRILLHO	LE LOG - I	Lithology [Data													CanAus Coal Limited
			DR	ILLER'S DEP	THS			COI	RRECTED DEI	PTHS						
		From	То	Interval	Recovery	Recovery	From	То	Interval	Recovery	Recovery	Lithology	Lithology			
Hole ID	Run #	(m)	(m)	(m)	(m)	(%)	(m)	(m)	(m)	(m)	(%)	Code	English	Sample ID	ACID	Description
LS17RC-43		0.00	14.00	14.00		0%			-	-	-	OV	Overburden,	, undifferentiate	ed	Jumbalaya, crayfish pie, phili-gumbo:)
LS17RC-43		14.00	16.00	2.00		0%			-	-	-	MS	Mudstone			Brown MS soft
LS17RC-43		16.00	19.00	3.00		0%			-	-	-	ST	Siltstone			Dark grey siltstone
LS17RC-43		19.00	27.00	8.00		0%			-	-	-	SS	Sandstone			Dark grey medium grained SS, some rusty bits
LS17RC-43		27.00	35.00	8.00		0%			-	-	-	ST	Siltstone			Dark grey siltstone
LS17RC-43		35.00	42.00	7.00		0%			-	-	-	SS	Sandstone			Grey fine grained SS some rusty bits
																dirty resistant fine grained sandstone, rusty streaks, hard. set casing at 58m
LS17RC-43		42.00	58.00	16.00		0%			-	-	-	SS	Sandstone			and switch from 178mm Odex to 144mm Hammer
LS17RC-43		58.00	68.00	10.00		0%			-	-	-	SS	Sandstone			dirty fine grained sandstone, hard. toh and switch to PDC bit at 68m
LS17RC-43		68.00	76.00	8.00		0%			-	-	-	ST	Siltstone			grey siltstone, no fizz
LS17RC-43		76.00	87.00	11.00		0%			-	-	-	XM	Carbonaceo	us Mudstone		no fizz
LS17RC-43		87.00	88.00	1.00		0%			-	-	-	со	Coal	21710		thick, muddy
LS17RC-43		88.00	88.50	0.50		0%			-	-	-	СО	Coal	21711		thick, muddy
LS17RC-43		88.50	90.00	1.50		0%			-	-	-	XM	Carbonaceo	us Mudstone		no fizz
LS17RC-43		90.00	92.00	2.00		0%			-	-	-	ST	Siltstone			brown siltstone, no fizz
LS17RC-43		92.00	98.00	6.00		0%			-	-	-	ST	Siltstone			grey siltstone, no fizz, calcite micro-veins
LS17RC-43		98.00	99.00	1.00		0%			-	-	-	XM	Carbonaceo	us Mudstone		no fizz
LS17RC-43		99.00	107.00	8.00		0%			-	-	-	ST	Siltstone			grey siltstone, no fizz
LS17RC-43		107.00	107.80	0.80		0%			-	-	-	со	Coal	21712		thick, muddy
LS17RC-43		107.80	110.00	2.20		0%			-	-	-	SS	Sandstone		N	Dark grey medium grained SS
LS17RC-43		110.00	144.00	34.00		0%			-	-	-	SS	Sandstone		N	Grey medium grained Sandstone
LS17RC-43		144.00	180.00	36.00		0%			-	-	-	SS	Sandstone		N	Grey fine grained SS
LS17RC-43		180.00	193.00	13.00		0%			-	-	-	SS	Sandstone		Υ	Grey fine grained SS
LS17RC-43		193.00	203.00	10.00		0%			-	-	-	SS	Sandstone		Υ	Dark grey fine grained SS
LS17RC-43		203.00	214.00	11.00		0%			-	-	-	SS	Sandstone		Υ	Dark grey fine grained SS a few bits of calcite



																	Planned		Approx			Surveyed		
			Target		Driller's	Bit Size		Overburden	Driller's Casing	Corepoint	Open Hole Log	Logger's	Logger's Casing	Water									Date	
Hole ID Project LS17RC-44	Year Type	Geologist(s) Rig RC Brian Larsen; GED 130		Azimuth Dip	TD (m)	(mm)	Core Size (mm) X; 144 Hammer; 133 F	(m)	(m)	(m)	Date Logged to TD? 2017-06-28 No	TD (m)	(m)	Table (m) F	lowing?	E 662145	N Elev 5497858	E 662	N 145 549781	Elev	E 96 6621/13	N Elev I 5497812 1887.9	Surveyed	Comments Very poor

recoveries on coal intersection between57 and

CanAus **DRILLHOLE LOG - Lithology Data** DRILLER'S DEPTHS **CORRECTED DEPTHS** Acid Test Fizz Lithology From То Interval Recovery Recovery From То Interval Recovery Recovery Lithology Y/N (m) (m) (m) (m) (%) (m) (m) (m) (%) Sample ID Hole ID Run# (m) Code English Description LS17RC-44 2.00 2.00 Overburden, undifferentiated 0.00 0% OV LS17RC-44 2.00 3.50 1.50 0% XМ Carbonaceous Mudstone LS17RC-44 3.50 4.50 1.00 0% co Coal 21713 thick, muddy 4.50 Carbonaceous Mudstone LS17RC-44 7.00 2.50 0% XМ LS17RC-44 7.00 9.00 2.00 0% SH Shale v soft grey shale LS17RC-44 9.00 13.50 4.50 0% XM Carbonaceous Mudstone LS17RC-44 13.50 14.50 1.00 0% Coal 21714 N thick, muddy 14.50 LS17RC-44 18.00 0% хм Carbonaceous Mudstone N 3.50 LS17RC-44 18.00 21.00 3.00 0% Siltstone soft brown siltstone, rusty chips mixed w grey LS17RC-44 21.00 24.00 3.00 0% Siltstone harder brown siltstone w good fizz LS17RC-44 24.00 28.00 4.00 0% Siltstone hard brown siltstone, rusty chips, light fizz LS17RC-44 28.00 30.00 2.00 0% soft grey shale, no fizz Shale LS17RC-44 30.00 31.00 1.00 0% SH Shale soft grey shale w rusty streaks, no fizz LS17RC-44 31.00 34.00 3.00 0% Shale black carbonaceous shale, v soft, no fizz 21715 N LS17RC-44 34.00 35.00 1.00 0% Coal thick, muddy LS17RC-44 35.00 35.50 0.50 0% co 21716 N thick, muddy, increasing granular Coal black carbonaceous shale, v soft, no fizz. set casing at 36m, 500pm 2017-06-LS17RC-44 35.50 36.00 0.50 0% Shale 27, switching to a 144mm hammer LS17RC-44 36.00 40.00 4.00 0% Siltstone grey siltstone, increasing rust color, larger chips, hard, no fizz LS17RC-44 40.00 43.00 3.00 0% Siltstone grey siltstone, decreasing rust color, smaller chips, hard, no fizz LS17RC-44 43.00 49.00 6.00 0% brownish grey siltstone, consistent chip size, granular, soft, no fizz Siltstone Went through a fractured zone and lost circulation. No returns then they went LS17RC-44 49.00 13.00 0% through 3-6m of coal but no recoveries. The pipe was plugged with coal 62.00 Not Logged LS17RC-44 62.00 63.00 0% 21717 1.00 Coal Coal slurry LS17RC-44 63.00 63.50 0.50 0% Coal 21718 Coal slurry LS17RC-44 63.50 65.00 0% MS Dark grev mudstone 1.50 Coal LS17RC-44 65.00 68.00 3.00 0% Mudstone Grey fine grained sandstone LS17RC-44 68.00 75.00 7.00 0% Grey mudstone Sandstone LS17RC-44 75.00 80.00 5.00 0% Mudstone Grey medium grained sandstone LS17RC-44 80.00 111.00 31.00 0% Sandstone Grey fine grained sandstone LS17RC-44 111.00 120.00 9.00 0% Sandstone Grey very fine grained sandstone LS17RC-44 120.00 127.00 7.00 0% Grey, very hard, fine grain, interstitial carbonate, strong FIZZ Sandstone Grey-brown, distinctive rusty colour, smaller fragments, weaker interstitial 127.00 2.00 0% LS17RC-44 129.00 Siltstone carbonate - FIZZ Grey-dk grey, finer grained, overall smaller fragments than SS, weak-moderate interstitial carbonate, calcite stringers and bits throughout cuttings, weak LS17RC-44 129.00 159.00 30.00 0% Siltstone interstitial FIZZ