BC Geological Survey
Coal Assessment Report
983

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: Assessment Report: 2014 Loop Ridge Exploration Program

TOTAL COST: **$6,566,795.33.**

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

SIGNATURE(S):

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

1. **Mines Act Permit CX-5-019, Approval #13-1630615-0711, issued July 11, 2013**
2. **Mines Act Permit CX-5-021, Approval #13-1630615-0722, issued July 22, 2014**

YEAR OF WORK: 2014
PROPERTY NAME: Michel Creek Coking Coal Project, Loop Ridge Property
CLAIM NAME(S) (on which work was done): Coal Licences #418319, 418624, 418628, 418629, 418630, 418631, 418632

COMMODITIES SOUGHT: Coal

MINING DIVISION: FORT STEELE
NTS / BCGS: 82G/10W
LATITUDE: 49° 38' 30" N
LONGITUDE: 114° 46' 30" W (at centre of work)
UTM Zone: 11 EASTING: 661,500m NORTHING: 5,501,000m

OWNER(S): CanAus Coal Limited

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

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

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

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: Summary Report on the Loop Ridge Property – 2013 Exploration Program Michel Creek Coking Coal Project

ASSESSMENT REPORT

2014 Loop Ridge Exploration Program

Owner and Operator: CanAus Coal Ltd.

Authorship: ***Dave Thompson, P.Geo.***
Chief Geologist, CanAus Coal Ltd.

April 2015

A portion of Section 1, all of Section 6, a portion of section 9, 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/251_2004

Table of Contents

List of Tables

List of Figures

List of Appendices

1 Introduction and Summary

This report describes the exploration work conducted on the Loop Ridge property owned by CanAus Coal Ltd. (CanAus) in the Michel Creek area near Sparwood, BC (Figure 1.1).

In 1964, Crow's Nest Pass Coal Co. explored the 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.

In 2013, exploration conducted by CanAus on Loop Ridge included 37 reverse circulation geology drillholes, four reverse circulation pilot drillholes for coring, and eight large diameter core holes. Samples were taken during the reverse circulation geology drilling which were used to map coal seam rank variability. The large diameter core was analyzed for detailed washability and coking coal characteristics. [redacted]

The 2014 Exploration Program on Loop Ridge included 66 reverse circulation geology drillholes, 19 reverse circulation pilot drillholes for coring and reverse flood sampling, 13 large diameter core holes, 8 HQ3 core holes and 2 large diameter reverse flood drillholes. Coal samples from the large diameter holes were analyzed for detailed sizing, washability and coking coal characteristics.

The 2014 program was designed to fulfill the requirements of GSC Paper 88-21, A Standardized Coal Resource/Reserve Reporting System for Canada, for a complex coal deposit, with closer spaced (150m section) drilling and coal sampling in preparation for pre-feasibility level study.

Construction of a 3D block model was completed and a resource estimate was calculated for areas that could potentially be mined by surface and underground methods. [redacted]

[redacted]

[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]			[redacted]	[redacted]	[redacted]

Figure 1.1 Location Plan

2 Property and Location

2.1 Ownership

Mineral rights are wholly owned by CanAus Coal Ltd. Surface rights are held by Jemi Fibre Corp. as part of their free-hold Tent Mountain Block 21. 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, cuts the property in half from east to west.

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 CanAus, represents seven coal licenses (Table 2.2.1). A location map shows information on the licenses (Figure 2.2.1).

Table 2.2.2 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	1160
Total Area		**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 property as the red and hashed area. Elevations range from ~1,400m along Michel Creek to a height of 1,680m at Loop Ridge.

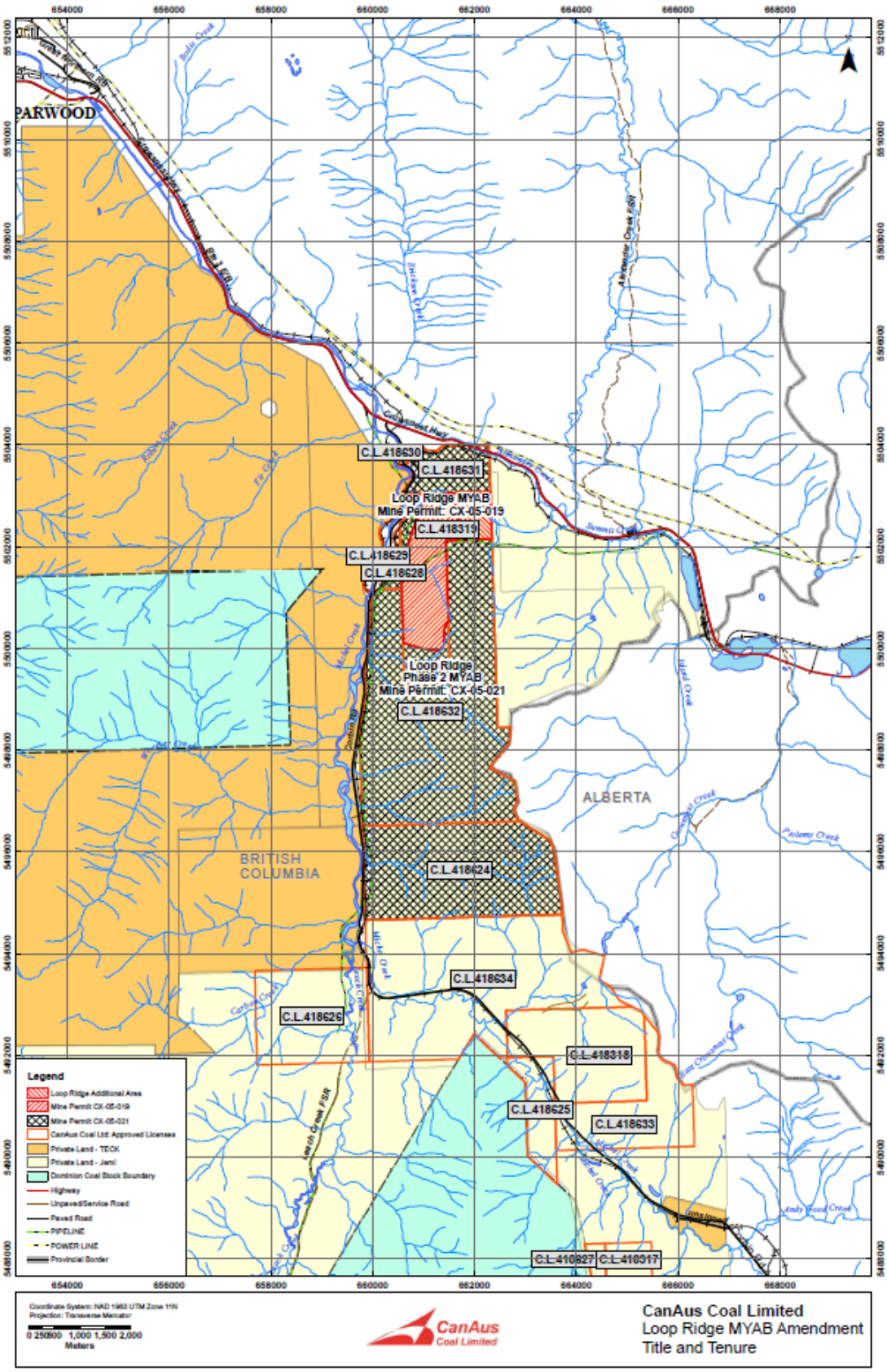
The Loop Ridge property is located between two open pit coal mines owned and operated by Teck Coal Ltd. The Teck Elkview Operations produce metallurgical coal ~10km north from the center of the Loop Ridge property and their Coal Mountain Operations produce both thermal and PCI coal ~19km south from the 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 portion of the property was logged within the past several years.

2.3 Location and Access

The Michel Creek Coking Coal Project 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 property is a further 4km. A network of logging and exploration trails on the property are utilized for drilling access.

Figure 2.2.1 – License Plan



3 Program Overview

3.1 Goals and Parameters

The 2014 exploration program was intended to gather sufficient geological data to support a pre-feasibility study on the entire Loop Ridge coal deposit. Coal seams of the Mist Mountain Formation have been extensively investigated to date.

This deposit is considered Complex under the guidelines of GSC Paper 88-21, and a data point density sufficient to define a Measured Resource was used in designing the exploration program. The program was focused on obtaining tighter data point spacing (150m section spacing) across the deposit in an attempt to confirm the known information gathered during the 2013 exploration program.

3.2 History

Exploration in the area dates back to the late nineteenth century. The 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 with this program. In 1969 the Crow's Nest Pass Coal Co. mined the McGillivray Pit at the north end of the Loop Ridge property. It is estimated that between 60,000t to 100,000t of coal was mined and trucked to the Michel preparation plant. 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 obtained by the spring of 1995. The same year, approximately 20,000t of coal was mined and trucked to Teck's 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.

In 2013, exploration conducted by CanAus on Loop Ridge included 37 reverse circulation geology drillholes, four reverse circulation pilot drillholes for coring, and eight large diameter core holes. Samples were taken during the reverse circulation geology drilling which were used to map coal seam rank variability. The large diameter core was analyzed for detailed washability and coking coal characteristics. A 3D resource model was prepared and a resource estimate was calculated.

3.3 2014 Drilling

In 2014, 66 reverse circulation geology drillholes, 19 reverse circulation pilot drillholes for large diameter coring and reverse flood sampling, 13 large diameter (15cm) core holes, 8 HQ3 (6.1cm) core holes and 2 large diameter (44cm) reverse flood drillholes were attempted, to confirm and expand on the 2013 and historic data (Figure 3.3.1 and Table 3.3.1). A total of 19,809m of drilling was completed, including 16,381m of reverse circulation holes, 2013m of HQ3 core holes, 1138m of large diameter core holes and 237m of reverse flood holes. Six of the reverse circulation geology drillholes and one of the HQ3 core holes were unsuccessful due to caving and casing difficulties.

All of the successful 2014 drill holes were geophysically logged with through-pipe density at a minimum and subsequently with open-hole density and deviation where conditions allowed.

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

Figure 3.3.1 Loop Ridge Exploration Plan

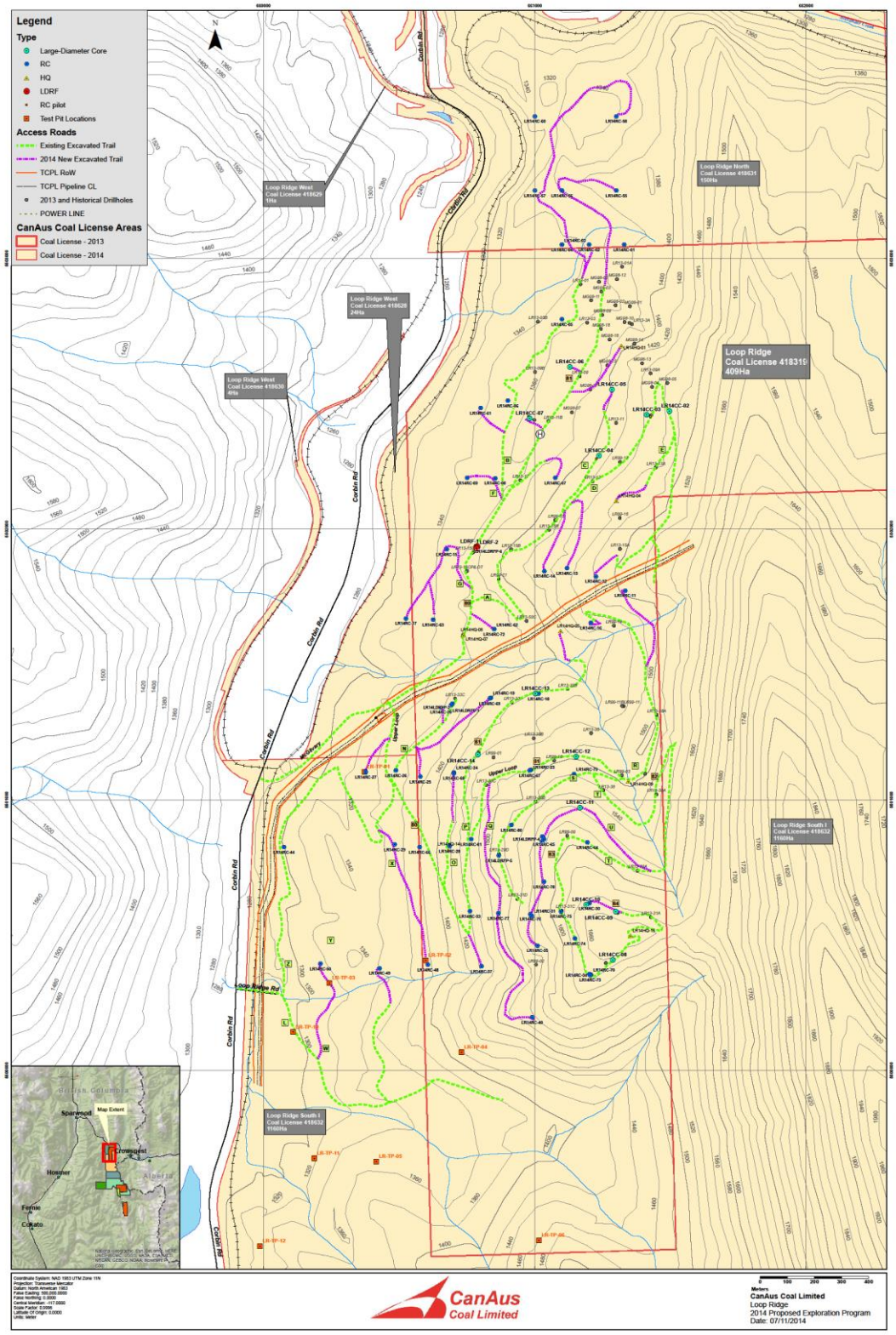


Table 3.3.1 Drillhole Locations

Hole ID	Type	Easting	Northing	Elevation	Azimuth	Dip	Depth (m)
LR14HQ-01	HQ Core	661319.10	5502677.15	1382.59	90	-70	209
LR14HQ-04	HQ Core	661300.39	5502106.03	1448.50	45	-50	275
LR14HQ-05	HQ Core	661095.82	5501624.40	1399.08	135	-70	399
LR14HQ-07	HQ Core	660736.49	5501610.07	1351.80	270	-70	0
LR14HQ-08	HQ Core	660736.78	5501610.12	1351.88	270	-80	351
LR14HQ-09	HQ Core	661345.46	5501069.55	1492.93	135	-50	245
LR14HQ-14	HQ Core	660683.31	5500818.99	1404.88	315	-70	200
LR14HQ-15	HQ Core	661352.98	5500498.32	1662.10	90	-50	333
						Subtotal	**2013**
LR14RC-01	RC	661329.00	5503050.00	1362.00	90	-50	18
LR14RC-02	RC	661224.58	5503040.01	1346.98	90	-60	116
LR14RC-03	RC	661109.38	5503045.66	1341.46	90	-60	202
LR14RC-04	RC	661107.37	5503045.61	1341.41	0	-90	250
LR14RC-05	RC	661115.43	5502770.82	1345.44	90	-60	275
LR14RC-06	RC	660905.43	5502467.67	1338.37	90	-50	360
LR14RC-07	RC	661082.85	5502186.06	1384.35	90	-60	327
LR14RC-08	RC	660853.69	5502188.34	1345.76	90	-60	431
LR14RC-09	RC	660758.96	5502187.47	1338.19	90	-60	360
LR14RC-11	RC	661333.25	5501772.85	1492.42	90	-50	205
LR14RC-12	RC	661232.53	5501824.18	1472.42	90	-50	202
LR14RC-13	RC	661118.42	5501854.99	1440.88	90	-50	262
LR14RC-14	RC	661034.91	5501844.72	1425.94	90	-50	301
LR14RC-15	RC	660690.32	5501934.19	1337.53	90	-50	240
LR14RC-16	RC	661206.37	5501652.97	1440.89	90	-70	205
LR14RC-17	RC	660539.26	5501673.31	1315.78	90	-60	211
LR14RC-18	RC	661013.70	5501391.74	1409.48	90	-50	373
LR14RC-19	RC	660837.59	5501376.59	1383.76	0	-90	93
LR14RC-20	RC	660654.02	5501342.22	1350.46	0	-90	342
LR14RC-23	RC	660985.39	5501110.33	1475.25	90	-60	445
LR14RC-24	RC	660701.38	5501101.17	1408.18	90	-70	250
LR14RC-25	RC	660577.65	5501085.34	1359.67	90	-70	250
LR14RC-26	RC	660487.94	5501109.18	1342.76	90	-70	267
LR14RC-27	RC	660376.65	5501102.15	1316.84	90	-70	202
LR14RC-28	RC	660685.88	5500829.36	1404.50	90	-70	300
LR14RC-29	RC	660483.15	5500835.75	1334.93	90	-70	201
LR14RC-30	RC	661200.86	5500618.14	1640.20	90	-60	364
LR14RC-31	RC	660988.66	5500571.50	1555.43	90	-50	280
LR14RC-33	RC	660760.47	5500588.81	1425.34	0	-90	102

LR14RC-34	RC	661201.01	5500355.98	1631.93	0	-90	220
LR14RC-35	RC	661009.63	5500461.13	1549.78	0	-90	175
LR14RC-37	RC	660803.34	5500384.68	1428.44	90	-50	205
LR14RC-40	RC	660990.16	5500196.98	1521.85	90	-50	118
LR14RC-44	RC	660097.55	5500832.98	1299.96	90	-70	0
LR14RC-48	RC	660605.88	5500390.21	1367.14	0	-90	189
LR14RC-49	RC	660427.97	5500377.96	1333.07	0	-90	205
LR14RC-50	RC	660209.74	5500394.15	1309.80	0	-90	209
LR14RC-55	RC	661298.95	5503256.51	1383.52	90	-50	150
LR14RC-56	RC	661105.25	5503246.48	1360.37	90	-50	152
LR14RC-57	RC	661102.76	5503246.62	1360.36	0	-90	250
LR14RC-58	RC	661300.00	5503525.00	1341.00	90	-50	40
LR14RC-59	RC	661100.00	5503525.00	1339.00	90	-50	0
LR14RC-60	RC	661099.39	5503521.32	1339.24	0	-90	208
LR14RC-61	RC	660791.26	5502435.80	1333.04	90	-50	378
LR14RC-62	RC	660850.00	5501630.00	1373.00	90	-50	23
LR14RC-63	RC	660629.81	5501683.39	1329.99	90	-60	361
LR14RC-64	RC	661193.48	5500843.06	1584.78	90	-50	351
LR14RC-65	RC	661033.60	5500854.83	1560.69	90	-50	271
LR14RC-66	RC	660599.45	5500834.06	1370.60	90	-70	201
LR14RC-67	RC	660981.18	5501108.14	1475.31	0	-90	166
LR14RC-68	RC	660701.36	5501098.09	1408.27	0	-90	151
LR14RC-69	RC	660833.54	5501373.84	1383.90	-90	-60	360
LR14RC-70	RC	661206.73	5500354.81	1632.14	90	-60	235
LR14RC-71	RC	661525.26	5501204.46	1537.96	90	-60	120
LR14RC-72	RC	660850.00	5501630.00	1373.00	90	-50	40
LR14RC-73	RC	661203.79	5500352.63	1632.04	270	-60	270
LR14RC-74	RC	661147.35	5500487.67	1616.99	0	-90	162
LR14RC-75	RC	661096.21	5500587.78	1605.42	0	-90	275
LR14RC-76	RC	660983.24	5500577.74	1555.08	270	-70	225
LR14RC-77	RC	660865.55	5500580.39	1480.96	0	-90	132
LR14RC-78	RC	661033.92	5500697.62	1567.08	0	-90	225
LR14RC-79	RC	661143.92	5501095.39	1506.50	0	-90	151
LR14RC-80	RC	660913.77	5500907.29	1503.44	0	-90	200
LR14RC-81	RC	660753.83	5500810.94	1444.25	0	-90	204
LR14RC-82	RC	660965.57	5501653.10	1374.51	0	-90	370
						Subtotal	**14055**
LR14LDRFP-1	RC	660690.87	5501349.84	1354.11	0	0	93
LR14LDRFP-2	RC	660696.02	5501355.71	1353.88	0	0	136
LR14LDRFP-3	RC	661025.97	5500844.25	1561.13	0	-90	100

LR14LDRFP-4	RC	661027.07	5500863.38	1560.94	0	-90	151
LR14LDRFP-5	RC	660866.61	5500794.03	1505.03	0	-90	184
LR14LDRFP-6	RC	660782.57	5501937.13	1355.22	0	-90	166
						Subtotal	**830**
LR14LDRF-1	LDRF	660787.97	5501934.55	1355.37	0	-90	126
LR14LDRF-2	LDRF	660784.69	5501929.84	1355.58	0	-90	111
						Subtotal	**237**
LR14CCP-02	RC pilot	661494.58	5502440.86	1454.43	0	-90	76
LR14CCP-03	RC pilot	661426.27	5502415.46	1436.89	0	-90	75
LR14CCP-04	RC pilot	661227.49	5502259.87	1400.05	0	-90	88
LR14CCP-05	RC pilot	661284.85	5502519.80	1389.08	0	-90	124
LR14CCP-06	RC pilot	661134.18	5502596.75	1361.26	0	-90	138
LR14CCP-07	RC pilot	660976.77	5502416.47	1355.40	0	-90	140
LR14CCP-08	RC pilot	661282.91	5500409.06	1642.67	0	-90	153
LR14CCP-09	RC pilot	661296.79	5500582.77	1638.84	0	-90	127
LR14CCP-10	RC pilot	661189.23	5500603.49	1640.08	0	-90	91
LR14CCP-11	RC pilot	661164.81	5500965.68	1545.19	0	-90	127
LR14CCP-12	RC pilot	661152.67	5501155.11	1486.15	0	-90	146
LR14CCP-13	RC pilot	661004.22	5501387.88	1409.50	0	-90	130
LR14CCP-14	RC pilot	660793.93	5501168.30	1422.67	0	-90	121
						Subtotal	**1536**
LR14CC-02	6" core	661496.13	5502436.34	1454.57	0	-90	66
LR14CC-03	6" core	661412.14	5502422.61	1433.66	0	-90	52
LR14CC-04	6" core	661236.47	5502270.77	1399.93	0	-90	69
LR14CC-05	6" core	661284.36	5502515.32	1389.17	0	-90	37
LR14CC-06	6" core	661128.84	5502599.38	1361.61	0	-90	123
LR14CC-07	6" core	660980.54	5502408.63	1355.56	0	-90	44
LR14CC-08	6" core	661287.43	5500408.35	1642.78	0	-90	157
LR14CC-09	6" core	661298.18	5500587.68	1638.91	0	-90	64
LR14CC-10	6" core	661189.47	5500612.78	1640.12	0	-90	74
LR14CC-11	6" core	661166.28	5500971.03	1545.19	0	-90	124
LR14CC-12	6" core	661152.65	5501159.10	1486.21	0	-90	95
LR14CC-13	6" core	661002.66	5501392.73	1409.47	0	-90	110
LR14CC-14	6" core	660790.06	5501167.73	1422.72	0	-90	126
						Subtotal	**1138**
						Total Drilled	**19809**

4 2014 Exploration Work

4.1 Drilling

A total of 19809m of drilling was completed over five months, including 16,381m of reverse circulation holes, 2013m of HQ3 core holes, 1138m of large diameter core holes and 237m of reverse flood holes.

Three drilling contractors were used during the course of the program: Good Earth Drilling Services Ltd., FB Drilling Ltd. and Foraco International SA.

Foraco International SA mobilized to the site on June 9 and completed 3 reverse circulation (4.5”/11.3cm) holes. Foraco International SA returned to the site on September 7 and completed 2 reverse flood (17.5”/44cm) holes and 10 reverse circulation (4.5”/11.3cm) holes.

Good Earth Drilling Services Ltd. mobilized to the site on June 19 and completed 72 reverse circulation (4.5”/11.3cm) holes and 13 large diameter (6 inch/15cm) core holes.

FB Drilling Ltd. mobilized to the site on July 1 and completed 8 HQ3-sized (6.1cm) diamond core holes.

All 2014 drill holes were cased with welded-joint steel casing. The casing was generally left in the holes and the holes left open. In some locations the casing was removed and the holes back-filled according to Mines Act regulations and mineral exploration best practice. Artesian-flowing holes were also plugged and sealed according to Mines Act regulations and mineral exploration best practice.

Six of the reverse circulation geology drillholes and one of the HQ3 core holes were unsuccessful due to caving and casing difficulties. These included LR14RC-01, 44, 58, 59, 62, 72 and LR14HQ-07.

Drilling was completed by October 12 at which time all drilling contractors mobilized off-site.

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 (#9058) and with a gamma/density/resistivity/caliper tool (#9239). Through-rod logs used a gamma-gamma tool (#9068A). Attempts were made to log all of the HQ3 core holes with either an acoustic televiewer

(#9804A) or an optical televiewer. Century has provided .las and .tif files of all geophysical logs as well as WellCAD files for the acoustic and optical televiewer data.

All holes were logged immediately after drilling with the exception of some of the more stable large diameter holes which were logged within a few days of drilling. Hole stability was an issue in many of the holes, where rock and coal sloughing prevented the wire-line logging tools from accessing the entire hole depths. Occasionally, holes that had sloughed or bridged had to be re-opened and additional attempts made to log the holes. Attempts to re-open holes were not always successful and through-rod gamma-gamma logs were all that were obtained.

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

All of the 2014 geophysical logs are included in Appendix B.

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.

A LiDAR survey was also performed over the area in 2014 to provide better definition of surface features and to provide a more accurate topographic surface for modelling. The LiDAR survey was performed by Airborne Imaging of Calgary, Alberta on August 26, 2014 and covered 131.5 square kilometres at a point density of 4.5 points per square metre at a flying height of 800m. The LiDAR system used was a Leica ALS70 and was calibrated with surveyed ground points. One

metre grids and topographic contours were provided of both the bare earth as well as the full features to a horizontal accuracy of 30cm and a vertical accuracy of 15cm.

4.4 Sampling and Analysis

4.4.1 Large Diameter Core Sampling

Large diameter (6”/15cm) core samples were taken from 13 drill holes on ten coal seams during July - August for the purpose of coal quality analysis. The large diameter core drilling was performed by Good Earth Drilling. A total of 174m of coal was submitted for analysis.

Geological examination of the large diameter core took place on site, immediately after being removed from the drilling apparatus. Detailed logs included measurements of depth, recovery, loss, seam and parting widths, geological features, lithological descriptions and sample information. Photos of each drill run were also taken.

All major seams were sampled in their entirety with a 30cm hanging wall and a 30cm footwall sample taken separately. In most cases, coal and seam partings were sampled separately except where the partings were small (<30cm), in which cases the partings were included in the seam samples. This sampling technique was an attempt to simulate expected mining conditions.

Recovery of coal seams averaged 92% in all large diameter core drilling. All samples selected for analysis were considered representative of the seams intersected.

All of the large diameter core samples were sent to ALS Coal Laboratories in Richmond, BC for analysis. Individual seam component samples were air dried, crushed to -19mm and combined. The resulting composite samples were screened, washed and proximate analysis including ash content, sulphur and free swelling index (FSI) was performed. Analytical results are shown in Appendix D.

A detailed evaluation of the coal quality from the large diameter core can be found in the report: “Michel Creek Coking Coal Project – Large Diameter Coring Program 2013-2014”, by Bob Leach Pty. Ltd. Leach concludes that: "The average clean coal properties from Loop Ridge are consistent with a hard coking coal and are similar to other products of similar rank derived from the Elk Valley region.”

Core logs are included in Appendix A. A sampling summary is shown in Appendix C. Analytical results are shown in Appendix D. Analytical process guidelines are shown in Appendix E.

4.4.2 HQ3 Core Sampling

Eight HQ3 (6.1cm) drill holes were drilled during the program, for the principal reason of geotechnical analysis. One hole (LR14HQ-07) was abandoned due to poor ground conditions and was re-drilled as LR14HQ-08 at the same azimuth but at a slightly steeper angle (from -70deg to -80deg). The drill core was geologically logged and a total of 150 core samples were taken from the major coal seams for coal quality analysis.

Core recovery was variable as the drillers encountered problems with the rock structure and the fine-grained and sheared coal. The coal seams were sampled in their entirety and 10 centimeter hanging wall and footwall samples were also collected on each seam.

Detailed geological and geotechnical logs and sampling were completed on the drill core. The core boxes (containing the core remaining after sampling) are stored at the CanAus office location in Sparwood, BC. All of the samples were packaged and shipped to Birtley Laboratories Ltd. in Calgary. Individual component samples were processed according to the following instructions:

- Crush to minus 12.5 mm and wet screen at plus/minus 0.25 mm
- Raw head analysis on each fraction
- Light Transmittance and FSI analysis
- Float Sink on plus 0.25 mm at 1.50,
    - Proximate, sulphur and FSI analysis on float
    - ash analysis on sink
- Starvation froth on minus 0.25 mm
    - Proximate, sulphur and FSI analysis
- Create a proportional clean coal composite
    - Perform Proximate, FSI, sulphur, phosphorus, fluidity, dilatation, and mineral ash analysis.

Core logs are included in Appendix A. A sampling summary is shown in Appendix C. Analytical results are shown in Appendix D. Analytical process guidelines are shown in Appendix E.

4.4.3 Large Diameter Reverse Flood Sampling

Two large diameter (44cm) reverse flood drill holes were completed at one location to collect a large sample of Seam 20 for pilot scale wash and carbonization testing. Approximately 7000kg (wet) of coal was collected in total from one 20m seam intersection. The samples were collected and sealed in bulk bags and shipped to Hazen Research Inc. in Golden, Colorado for pilot scale washing. Samples of the clean coal were then shipped to CANMET labs in Ottawa, Ontario and

to ALS Coal Labs in Richmond, BC for carbonization testing. Analytical results are shown in Appendix D.

4.4.4 Reverse Circulation Sampling

A total of 58 composite samples were collected from 8 reverse circulation holes in the northern and southern regions of Loop Ridge where limited coal quality data existed previously. All of the samples were packaged and shipped to Birtley Laboratories Ltd. in Calgary. The samples were crushed to -9.5 mm and a representative split (2.5 kg) was selected for analysis. Raw coal was analyzed for proximate, sulphur and FSI. Each sample was then subjected to float-sink analysis at 1.55SG and each fraction was weighed to calculate yield. Proximate, sulphur, phosphorus and FSI analysis was then completed on the float fraction. No further testing was completed on these samples

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).

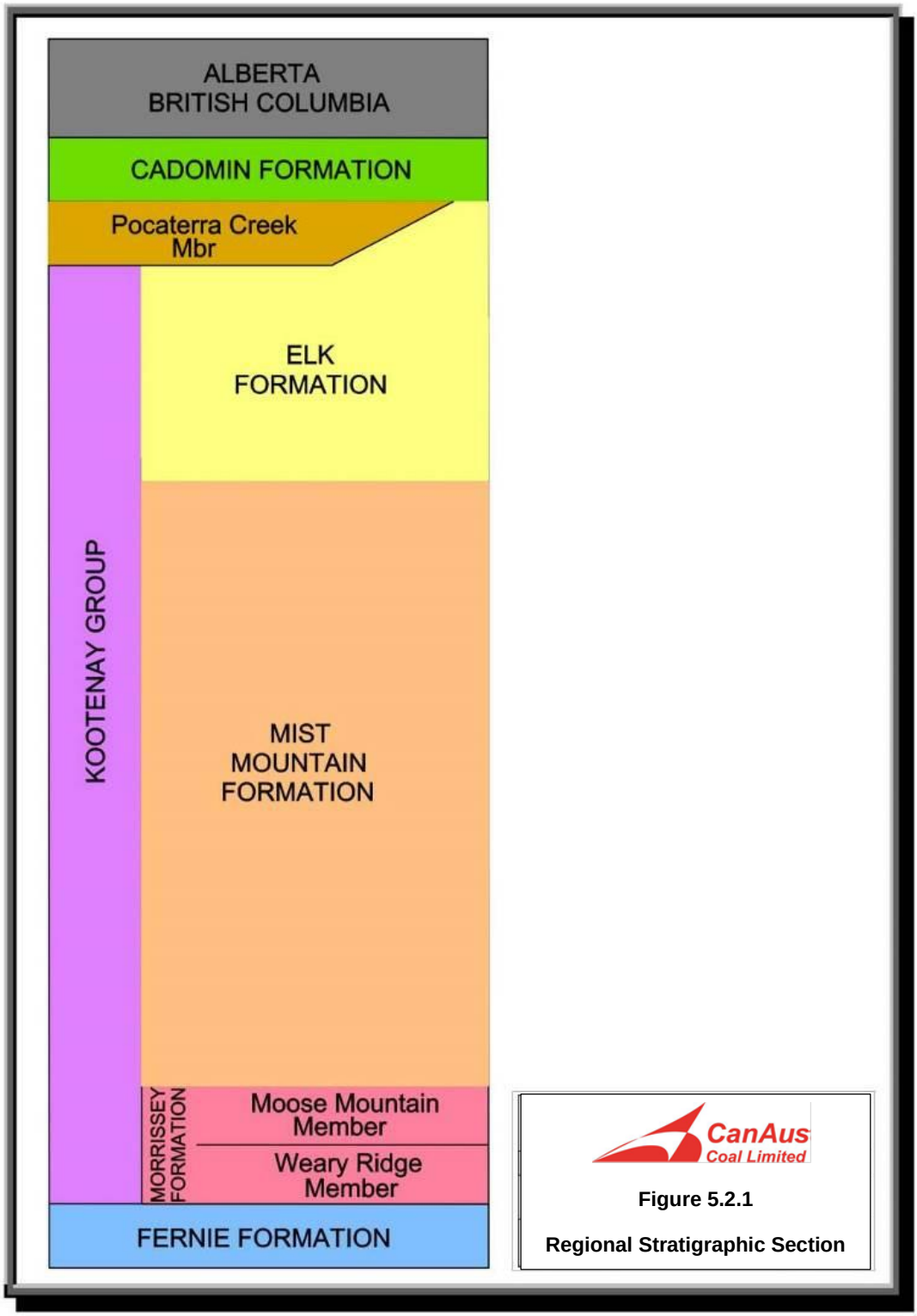
The Kootenay Group of the Rocky Mountain Foothills and Front Ranges encompasses the stratigraphic interval between the Jurassic Fernie Group below and the Lower Cretaceous Blairmore Group above (Gibson, 1985).

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.

Drilling on Loop Ridge has identified 20 coal seams with an average cumulative thickness of 70m in a 504m section, with the coal representing approximately 14% of the section, generally typical for the area. Table 5.3.1 lists the seams, the number of intercepts, as well as the minimum, maximum, and mean thickness of each. Artificial minimum seam thicknesses of 0.01-0.02m have been applied for modelling purposes only and were not used for the calculation of mean thicknesses.

Figure 5.2.1 Regional Stratigraphic Section



5.3 Geological Overview

The 2014 drilling took place principally within the Mist Mountain Formation. Older rocks of the underlying Morrisey Formation were intersected in 68 of the drillholes.

The 2014 drilling tested the Mist Mountain Formation section through the coal-bearing section. Twenty major coal seams from 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 20 seam being the uppermost major seam, and 10 seam, the lowest major seam present. The 2014 work permitted 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.

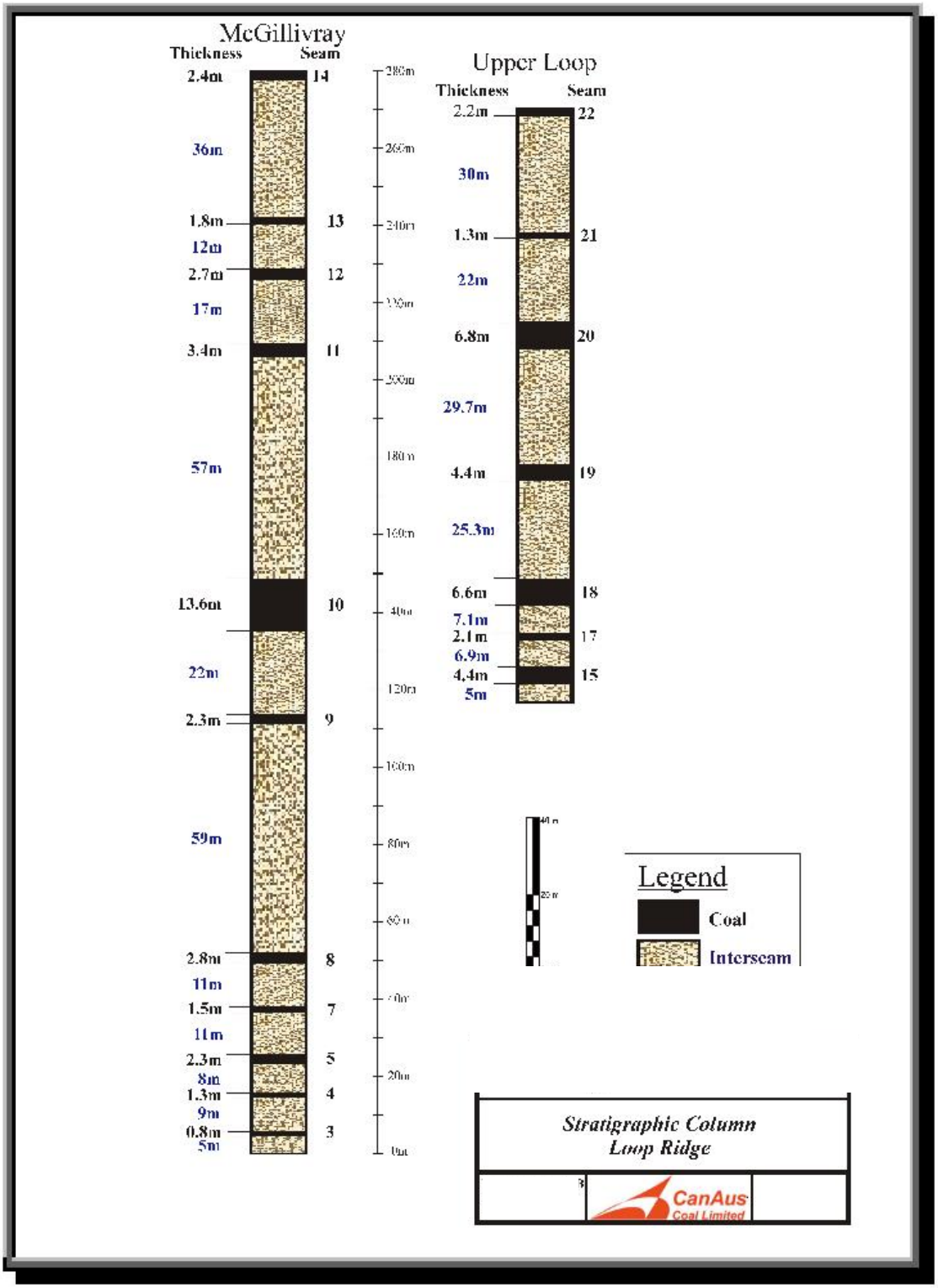
Overburden cover is variable, ranging from a few centimetres thick in the Upper Loop area of the property to over 50 metres in the northern area. This area is covered in a thick layer of well-sorted river channel gravels.

The accurate surface geological mapping from the 1960's and the new data gathered in 2013 assisted in the placement of drill holes in 2014.

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



7 Reclamation

CanAus 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 2014 was via existing exploration and forestry trails, as described in Section 2.3. During 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.

New drill trails and pads were constructed on the northern and southern areas of Loop Ridge, mostly in forested areas. Most of these were not recontoured in 2014, as it is expected that many will be reused in 2015. In addition, all areas of disturbed soil on the shoulders of the drill trails and pads were recontoured, leaving a ~3m running surface in useable condition. Steeper trails were temporarily deactivated with cross-ditches.

8 Expenditures

Actual expenditure for this work during the period June through December, 2014 was $6,566,795.33. Major expense items are shown in Table 8.1.

Table 8.1 Loop Ridge Expenditures

Drilling	$3,635,275.77
Technical Services	$1,001,527.44
Analytical	$797,193.49
Heavy Equipment	$550,235.71
Safety and First Aid	$261,905.00
Licenses and Permits	$229,785.95
Personnel	$54,261.41
Miscellaneous	$36,610.56
Total	**$6,566,795.33**

Details are presented in Appendix G.

9 Conclusions

The 2014 Loop Ridge exploration program accomplished the goal of gathering sufficient geological data to support a pre-feasibility study on the entire Loop Ridge coal deposit.

At the end of the 2014 program the entire Loop Ridge coal deposit had been drilled at a data point spacing consistent with assurance criteria for a measured and indicated resource of complex geology under the guidelines of GSC Paper 88-21. One hundred new drill holes were completed, confirming the deposit size and refining the structural and stratigraphic interpretation. [redacted]

[redacted]

[redacted]	[redacted]	[redacted]	[redacted]		
			[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]			[redacted]	[redacted]	[redacted]

[redacted]

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.

Crow's Nest Pass Coal Co. Ltd., 1964. Reserve Estimate Charts. Assessment Report 430c.

Gibson, 1985. Jurassic-Cretaceous Kootenay Group, G.S.C. Bulletin 357.

Engler, R.F., Moose Mountain Technical Services, 2015. NI 43-101 Resource Estimate Update 2015; Michel Creek Coking Coal Project

Morris, R.J., Stockey, A.G., Moose Mountain Technical Services, 2014. Summary Report on the Loop Ridge Property – 2013 Exploration Program

Leach, R. 2015. Michel Creek Coking Coal Project – Large Diameter Coring Program 2013-2014

11 Statement of Qualifications

I, David A. Thompson, BSc, P.Geo., of 14-2656 Morningstar Crescent, Vancouver BC V5S 4P4, do hereby certify that:

1. I am Chief Geologist for CanAus 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 fourteen years since my graduation from university.
5. My past experience includes ten 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: 2014 Loop Ridge Exploration Program" dated 15 April, 2015.
7. I was on site for the entirety of the 2014 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 15th day of April, 2015.

_____

Dave Thompson, P.Geo.
CanAus Coal Ltd.

Appendices

Appendix A Drill Core Logs – (on USB memory)

Appendix B Geophysical Logs – (on USB memory)

Appendix C Sampling Summary – (on USB memory)

Appendix D Sample Analytical Results and Certificates – (on USB memory)

Appendix E Analytical Process Guidelines – (on USB memory)

Appendix F Cross Sections – (on USB memory)

Appendix G Statement of Costs

Appendix G – Statement of Costs

2014 Loop Ridge Exploration

Major Expense Items	Contractor	Total ($)
Drilling	Good Earth Drilling	2,682,269.39
	Foraco International	583,374.48
	FB Drilling	369,631.90
	Subtotal	**3,635,275.77**
Technical Services	Moose Mtn Technical Services	426,039.45
	Century Wireline	241,861.32
	Silenus Resources Management	230,533.25
	Bob Leach Pty.	89,838.42
	Cima Geomatics Land Surveying	8,745.00
	Align Surveys	2,710.00
	Cameron Enterprises	1,800.00
	Subtotal	**1,001,527.44**
Analytical	Hazen Research	266,992.79
	ALS Coal	243,346.50
	Birtley Coal & Minerals Testing	83,944.84
	Elk Valley Environmental Services	7,644.42
	Pearson & Associates	5,400.00
	Other	189,864.94
	Subtotal	**797,193.49**
Heavy Equipment	Fiorentino Bros. Contracting	340,902.91
	Johnson Construction	126,657.84
	Down to Earth Excavating	78,460.56
	Cat Rental	4,214.40
	Subtotal	**550,235.71**
Safety	Trucut Logging	261,905.00
	Subtotal	**261,905.00**
Licences and Permits	Ministry of Finance (BC)	176,000.00
	Tembec	52,785.95
	CPR	1,000.00
	Subtotal	**229,785.95**

Personnel	CanAus Geologists	52,886.41
	Bren Kar Logging	1,375.00
	Subtotal	**54,261.41**
Miscellaneous	Canada Culvert	23,002.35
	Rosenau Transport	5,140.50
	K&K Forwarding	4,206.17
	Manitoulin Transport	1,738.87
	Uline	1,472.15
	Acklands Grainger	1,050.52
	Subtotal	**36,610.56**
Total		**6,566,795.33**

Legend

2014 Drill Program - Surveyed

- HQ
- LDRF
- Large Diameter Core
- RC
- RC Pilot
- Abandoned
- Geotech Test Pit
- Reclaimed Areas

Access Roads

- Existing Excavated Trail
- 2014 Modified Excavated Trail
- 2014 New Excavated Trail

Utilities

- TCPL RoW
- TCPL Pipeline CL
- 2013 and Historical Drillholes
- POWER LINE

CanAus Coal License Areas

- Coal License - 2013
- Coal License - 2014

" * " indicates a flowing hole that has been sealed
"pz" indicates Piezo install at location

Loop Ridge West Coal License 418629 1Ha

Loop Ridge West Coal License 418630 4Ha

Loop Ridge West Coal License 418628 24Ha

Loop Ridge North Coal License 418631 151Ha

Loop Ridge Coal License 418319 409Ha

Loop Ridge South I Coal License 418632 1161Ha

Loop Ridge South I Coal License 418632 1161Ha

Michel Creek

Corbin Road

McGilvary

Upper Loop

British Columbia

Alberta

Sparwood

Crowsnest

Hosmer

Fernie

Cokato

Map Extent

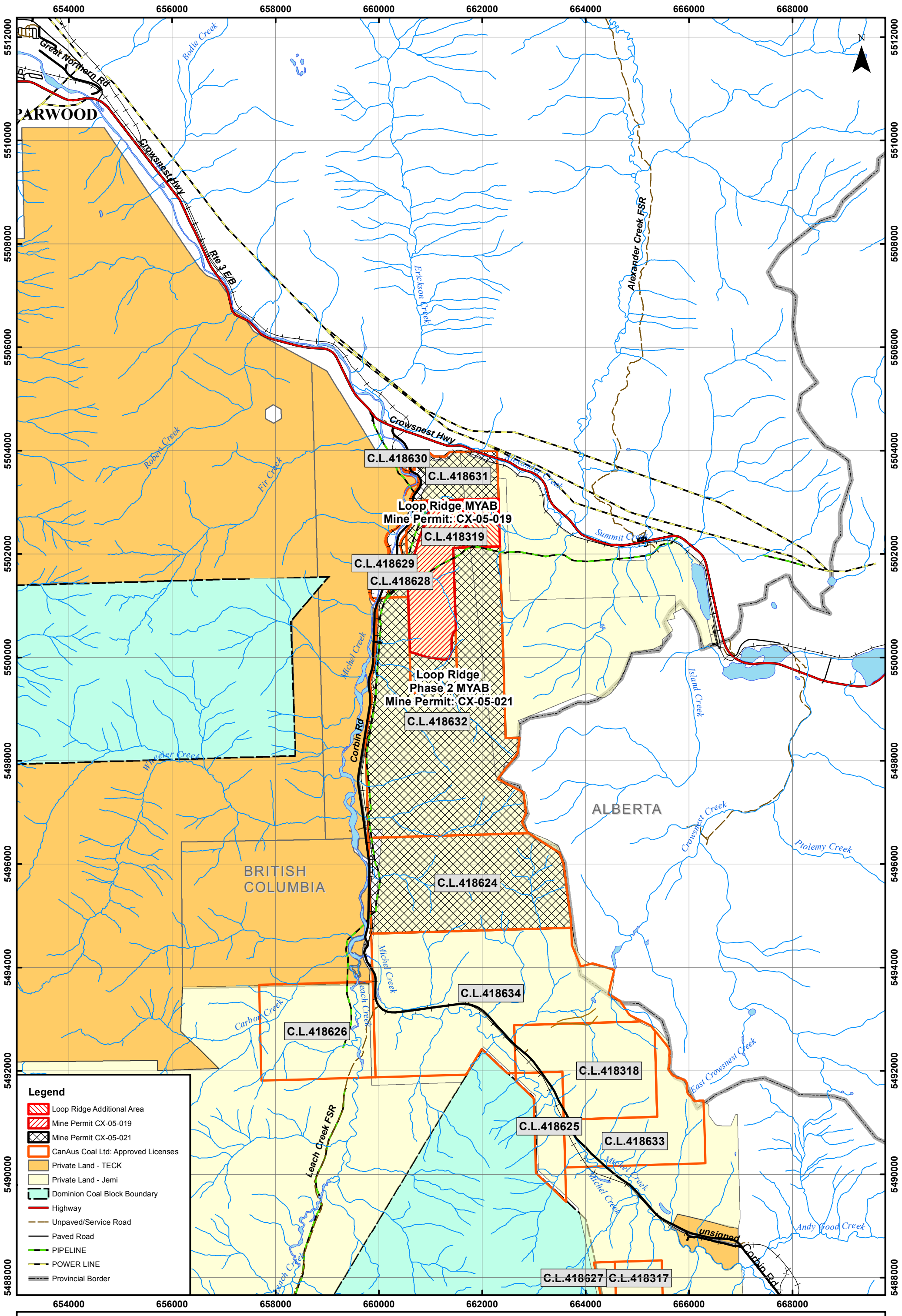
National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

Coordinate System: NAD 1983 UTM Zone 11N
Projection: Transverse Mercator
Datum: North American 1983
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: -117.0000
Scale Factor: 0.9996
Latitude Of Origin: 0.0000
Units: Meter

CanAus Coal Limited

0 100 200 300 400
Meters

CanAus Coal Limited
Loop Ridge
2014 Completed Exploration Program
Date: 24/02/2015



Coordinate System: NAD 1983 UTM Zone 11N
Projection: Transverse Mercator

0 250 500 1,000 1,500 2,000
Meters

CanAus Coal Limited

CanAus Coal Limited
Loop Ridge MYAB Amendment
Title and Tenure

CanAus Coal Limited

Lithological Core Logging Codes and Abbreviations

Definition Sheet

Code/Abbreviation	Definition
CGL	Conglomerate
SST	Sandstone
SLT	Siltstone
CLY	Claystone
SHL	Shale
MST/MS	Mudstone
CMST/CM	Carbonaceous mudstone
BC/BN	Boney Coal
SC	Shaley coal
CO/C	Coal
LMST	Limestone
OVB	Overburden
CL	Core loss
PY	Pyrite
CARB	Carbonates
VNLTS	Veinlets
BCN/CN	Bedding to core normal
TCA	To core axis
HW	Hanging wall
FW	Foot wall
EOH	End of hole

CanAus Coal Ltd.
Large Diameter (6”) Core Description

Hole ID: LR14CC-02

Northing: 5502436.341 **JTM System:** NAD 8 **Hole Orientation:** Vertical **Property:** Loop Ridge

Easting: 661496.134 **Hole Type:** 6 inch core **Seam:**

Elevation: 1454.573 **Logged by:** M. Lennox, G. Shewchuk **Date:** June 30, 2014

Run #	Driller's Coring Info		Recovered		Interval Corrected to Log			Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description
	from	to	m	%	from	to	Length (m)								
															Cased to 5.8 m.
															Core point at 44.89 m below ground level. Driller tagged the seam, some rock chips at the top.
1	44.89	46.39	1.50	100											
	44.89	45.89	1.00		44.87	45.87	1.00			00381	23.6		C	10	coal, dull, massive, intact, 10% viterence. Soft, sheared, slickenslides on fracture surfaces.
	45.89	46.39	0.50						45°	00382	24.2		C		"Uniform with above". Breaks distinctly at 45°. Distinct sulphur smell.
2	46.39	47.89	1.50	100	45.87	46.90	1.03								
	46.39	47	0.61							00382			C		coal, dull, massive intact, 10% viterence. Gradual contact into mudstone
	47	47.72	0.72		46.90	47.62	0.72			00383	20.6		CM		mudstone parting. Soft, intact, brown streak. High fracture angles @ 75°
	47.72	47.89	0.17							00384	7.8		C		Gradual contact mudstone into coal. Coal is dull, 10% viterence, distinct sulphur smell. Soft, broken. Slickenslides on fractures
3	47.89	48.89	1.00	100	47.62	48.02	0.40								
	47.89	48.04	0.15							00384			C		coal, dull, 10% viterence, distinct sulphur smell. Intact but easily broken. Slickenslides on fractures.
															Gradual contact with CM
	48.04	48.34	0.30		48.02	48.32	0.30			00385	13.8		CM		FW sample. Joint fracture 45°, brown streak. Intact, but relatively soft.
	48.34	48.9	0.55												"as above"

Run #	Driller's Coring Info		Recovered		Interval Corrected to Log			Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description
	from	to	m	%	from	to	Length (m)								
4	48.89	49.89	1.00	100									CM		mudstone, calcite stringers throughout. Recemented silty calcite areas throughout. Brown streak.
															Intact, but relativelty soft.
5	49.89	50.09	0.10	50									CM		mudstone, same as above. * Not photographed*
6	50.09	51.39	1.30	100									CM		mudstone, recemented areas silty calcite throughout. Intact. No fractures throughout core.
															Relatively soft. Brown streak.
7	51.39	52.89	1.60	107									CM		mudstone, v. soft easily broken. Slickenslides on fracture surfaces. Is completely broken to a rumble in some cases. Trace py. Throughout.
8	52.89	54.39	1.40	107					35°				CM		mudstone, harder with recemented silty areas. Intact, hard to break. Brown streak. Joint fracture 35°
9	54.39	55.89	1.65	110											
	54.39	55.59	1.20						75°				CM		mudstone, harder with recemented silty areas. Intact hard to brake. Little fractures @ 75°
	55.59	55.89	0.30		55.54	55.84	0.30			00386	13.8		CM		HW sample. "same as above"
	55.89	56.04	0.15							00387	26.0		C		Clean coal. Sharp contact with CM. Some shaley pieces close to contact. Sheared, soft, slickenslides on fracture surfaces. 10-15% viterece (shiny bands). Some shaley pieces in coal.
10	55.89	57.39	1.46	97	55.84	56.68	0.84								
	55.89	56.74	0.85						45°	00387			C		Clean coal. Intact, soft. Dull. 10% viterence. Sheared, slickenslides on fractures. Mudclast top 5cm.
															At bottom sample, parting 4cm thick silty bedding @ 45°. Parting included in sample.
	56.74	57.35	0.61						75°	00388	29.4		C		Clean coal. Soft, sheared, slickenslides on fractures. High angle fractures to 75° CN. Trace py.
11	57.39	58.89	1.60	107	56.68	57.74	1.06								
	57.39	57.95	0.6							00388			C		"same as above". Parting at bottom of sample. Mudclast in coal. Trace py.

Run #	Driller's Coring Info		Recovered		Interval Corrected to Log			Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description
	from	to	m	%	from	to	Length (m)								
	57.95	58.95	1		57.74	58.74	1.00			00389	25.8		C		uniform with above coal. Parting 1-2 cm thick @ 99 cm. Included in sample. Mudclasts throughout >
12	58.95	60.39	1.44	96											
	58.95	59.88	0.93		58.74	59.73	0.99			00390	19.6		C		coal, soft, sheared, slickenslides on fractures. Intact but broken easily. Dull.
															parting 1-3 cm thick (silty, shaley). parting deformed and bent. Trace py. Included in sample
	59.88	60.39	0.51							00391	22.6		C		"as above". More fractured and broken
13	60.39	61.89	1.5	100	59.73	60.72	0.99								
	60.39	60.75	0.36							00391			C		coal, soft, sheared slickenslides. Intact but broken easily. Dull parting @ 36 cm, 46 cm. 1-2 cm thick.
	60.75	61.05	0.3		60.72	61.02	0.30			00392	10.8		C		Coal. V. shaley. Contact with CM gradual.
	61.05	61.75	0.7		61.02	61.72	0.70			00393	22		CM		CM, soft, intact, gradual contact with upper coal FW sample.
	61.75	61.89	0.14							00394	4.4		C		sharp contact with CM. Soft sheared, slickenslides on fractures. V. broken.
14	61.89	63.39	1.5	100	61.72	61.97	0.25								
	61.89	62	0.11							00394			C		coal soft sheared, dull grades into CM
	62	63.39	1.39										CM		Intact, soft, can be broken easily. Brown streak.Fractured and broken near the bottom. Last 30cm
15	63.39	64.93	1.54	103											
	63.39	63.89	0.5										CM		"as above"
	63.89	64.13	0.24										C		coal band, v. dirty. Mudcalsts within.
	64.13	64.93	0.8										CM		same as CM overlying thin coal band
16	64.93	65.93	1	100									CM		Mudstone, with some thin coaly bands. Intact, with little fractures. Brown streak.
EOH															

CanAus Coal Ltd.
Large Diameter (6") Core Description

Hole: LR14CC-03

Northing: 5502422.606 **UTM System:** NAD 83 **Hole Orientation:** Vertical **Property:** Loop Ridge

Easting: 661412.137 **Hole Type:** 6 inch core **Seam:** 11 **Total Depth:** 51.6m

Elevation: 1433.658 **Logged by:** M. Lennox **Date:** July 2, 2014

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
															Cased to m.	
															Core point at 28 m below ground level.	
															Site moved 20m to the west of the pilot. Expected to intercept coal at 30m	
1	28	28.5	0.50	100												
			0.05		27.77	27.82	0.05			00606	1.8		CM		HW sample. Only 5cm of HW recovered. Mudstone, brown streak	
			0.45						50°	00607	22.8		C	11	Clean coal. Dull, 5-10% viterence. Soft, sheared, slickenslides on fracture surfaces. Breaks disticntly at 50. Intact but easily broken.	
					27.82	28.82	1.00									
2	28.5	30	1.40	93												
			0.55							00607			C	11	"as above"	
			0.85							00608	27.6		C	11	Uniform with coal above. A few mudclasts.	
					28.82	30.02	1.20									
3	30	31.5	1.60	107												
	30	30.2	0.20							00608			C	11	"as above". Distinct sulphur sulphur smell. Trace py.	
	30.2	31.2	1.00		30.02	31.02	1.00			00609	30.6		CM		Dirty coal. Mudclasts and bands throughout. Bands 1-4 cm thick. Distinct sulphur smell. Trace py. Coal stringers.	
	31.2	31.5	0.30							00610	17.8		C	11	Dirty coal. Mudclasts and bands throughout. Bands > 1cm. Distinct sulphur smell, Trace py.	
					31.02	31.70	0.68									
4	31.5	32.3	0.80	100												
	31.5	31.8	0.30						50°	00610			C	11	Dirty coal. As above. Begins to grade into CM	
	31.8	32.3	0.50						50°	00611	23.6		CM		Mudstone Parting. Coal stringers, soft breaks easily. Joint fractures at 50	
					31.70	32.38	0.68									
5	32.3	33.8	1.50	100												
	32.3	32.5	0.20							00611			CM		Mudstone parting. "as above"	
	32.5	33.5	1.00		32.38	33.24	0.86			00612	16.6		C	11	Becoming more clean from parting. Dull, sheared, soft, slickenslides on fractures. Trace py. Some mudclasts. 1-2 thick. V. broken	
	33.5	33.8	0.43							00613	20.6		C	11	Uniform with coal above.	

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
6	33.8	35.3	1.50	100	33.24	33.76	0.52									
	33.8	34.05	0.25							00613			C	11	"as above"	
	34.05	34.42	0.37		33.76	34.48	0.72			00614	24.6		CM		Mudstone. With recemented calcite silty areas. Contact at 50 with coal.	
	34.42	34.77	0.35							00614			C	11	Dirty coal with frequent mudclasts	
	34.77	35.3	0.53		34.48	35.00	0.52			00615	24.4		CM		Gradual contact with dirty coal. Same as Overlying mudstone. Coal stringers throughout 1-5 cm thick.	
7	35.3	36.8	1.50	100												
	35.3	36.05	0.75		35.00	35.85	0.85			00616	23.6		CM		"as above"	
	36.05	36.8	0.75		35.85	36.60	0.75			00617	19.8		C	11	Relatively clean coal. Dull, soft, sheared, slickenslides on fracture surfaces. Some small mudclasts.	

CanAus Coal Ltd.
Large Diameter (6") Core Description

Hole ID: LR14CC-04

Northing: 5502270.768 **UTM System:** NAD 83 **Hole Orientation:** Vertical **Property:** Loop Ridge

Easting: 661236.474 **Hole Type:** 6 inch core **Seam:** 11 **Total Depth:** 69.22m

Elevation: 1399.929 **Logged by:** M. Lennox **Date:** July 1st, 2014

Run #	Driller's Coring Info		Recovered		Interval Corrected to Log			Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description
	from	to	m	%	from	to	Length (m)								
															Cased to: 9m
															Core Point: 57.72m
1	**57.72**	**58.72**	**1.00**	100											
	57.72	57.79	0.07		58.07	58.14	0.07			00395	2.00		Carb Mud	HW-11	Hanging wall sample. Gradual contact into dirty coal, soft, easily broken, intact
	57.79	58.72	0.93		58.14	59.00	0.86			00396	19.00		Coal	11	Dirty coal, Carbonaceous mudstone bands, >1 cm throughout. Dull sheared slickensides on fractures. Soft.
2	**58.72**	**60.32**	**1.60**	100											
	58.72	59.52	0.80		59.00	59.60	0.60		45°	00397	21.20		Coal	11	Dirty coal, Carbonaceous mudstone bands >1cm throughout. Dull sheared with slickensides on fracture surfaces. Soft easily broken. Intact breaker on distict 45° planes. Trace pyrite.
	59.52	60.32	0.80		59.60	60.08	0.48		55°	00398	27.00		Carb Mud	11	parting mudstone. Intact, soft, some, fractures at a steeper 55°. Sharp contact with overlying coal. Very broken- to a rubble at bottom 20cm
3	**60.32**	**61.82**	**1.50**	100											
	60.32	61.32	1.00		60.08	61.38	1.30			00399	23.00		Coal	11	0.56m, broken to a rubble. Sharp contact with thick mud bands at bottom. Trace pyrite on fracture surfaces.
	61.32	61.82	0.50		61.38	61.90	0.52			00400	21.60		Carb Mud	11	Parting, dominantly mudstone with thin coal stringers throughout. Very soft, very broken- to a rubble.
4	**61.82**	**63.32**	**1.50**	100											
	61.82	61.97	0.15						60°	00400			Carb Mud	11	same as above, but intact. Breaks at 60°
	61.97	62.97	1.00		61.90	62.90	1.00		60°	00601	26.60		Coal	11	Dirty coal, with thin mud partings of 1-3cm. Mud clasts, soft, sheared, dull, , slickensides
	62.97	63.32	0.35		62.90	63.90	1.00			00602	26.00		Coal	11	Same as above
5	**63.32**	**64.82**	**1.50**	100											
	63.32	63.97	0.65						55°	00602			Coal	11	Becoming cleaner, very little mud clasts. Dull sheared slickensides. Soft, easily broken, breaks at 55°. Intact.
	63.97	64.82	0.85		63.90	65.00	1.10		75°	00603	19.20		Coal	11	Same as above but breaks at a steeper angle to the core normal
6	**64.82**	**66.32**	**1.40**	93.3				0.10							
	64.82	64.97	0.15							00603			Coal	11	Same as above with some mud clasts
	64.97	65.42	0.45		65.00	65.45	0.45		70°	00604	14.60		Coal	11	Same as above. Sharp contact with carbonaceous mud at 70°
	65.42	65.67	0.25		65.45	65.95	0.50			00605	5.20		Carb Mud	11	Carbonaceous mudstone band
	65.67	65.87	0.20							00605			Coal	11	Coal, same as above

Run #	Driller's Coring Info		Recovered		Interval Corrected to Log			Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description
	from	to	m	%	from	to	Length (m)								
	65.87	65.92	0.05						70°	00605			Carb Mud	FW-11	Sharp contact with coal, grades into siltstone
			0.30										Carb Mud		Same as above
			0.05										siltstone		massive siltstone
7	**66.32**	**67.82**	**1.50**	100					70°				siltstone		Same as above. 70° angle fractures, calcite stringers throughout.
8	**67.82**	**69.32**	**1.50**	100											
			1.50										siltstone		Same as above, fracture planes at 70°-80°
9	**69.32**	**70.82**	**1.50**	100											As above. End of Hole

CanAus Coal Ltd.
Large Diameter (6”) Core Description

Hole ID: LR14CC-05

Northing: 5502515.322 **UTM System:** NAD 83 **Hole Orientation:** Vertical **Property:** Loop Ridge

Easting: 661284.361 **Hole Type:** 6 inch core **Seam:** 14/15 **Total Depth:** 36.50m

Elevation: 1389.165 **Logged by:** H. Evans **Date:** July 14, 2014 10:00pm

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
															Cased to: 9m	
															Core Point: 18.51m	
1	**18.51**	**19.61**	**0.95- corrected after photo**	86												
			0.95						50°				Carb Mud		sheared carbonaceous mudstone very easily broken. Fractures at 50° to core normal. Coal stringers throughout getting more frequent towards end of run	
2	**19.61**	**20.11**	**0.45- corrected after photo**	90												
			0.45										Carb mud		same as above with less coal stringers. Harder carbonaceous mudstone. More intact than above	
3	**20.11**	**21.72**	**1.61**	107												
			0.30										Coal/ Carb Mud		Carbonaceous mudstone with coal stringers throughout. Fractured area 0.30m into run	
			0.30		20.24	20.54	0.30			00672	14.40		Coal/ Carb Mud		solid carbonaceous mudstone with coal stringers throughout. Hanging wall sample	
			1.00		20.54	21.54	1.00			00673	29.60		Coal/ Carb Mud		dirty heavy coal with some larger carbonaceous mudstone stringers	
4	**21.72**	**23.22**	**1.48**	99												
			1.00		21.54	22.54	1.00			00674	25.60		Coal		heavy muddy coal, some slickenside surfaces, easily broken, dull	
			0.48		22.54	23.54	1.00			00675	24.20		Coal		same as above	
5	**23.22**	**24.61**	**1.45**	97												
			0.52							00675			Coal		same as above	
			0.93		23.54	24.47	0.93			00676	22.60		Coal		Coal, same as above becoming more laminar toward the end of run. Very easily broken	
6	**24.61**	**26.11**	**1.52**	101												
			1.00		24.47	25.47	1.00			00677	22.60		Coal		Coal, slickenside surfaces, shiny, some hard chunks	
			0.52		25.47	26.47	1.00			00678	22.20		Coal		same as above, light weight	
7	**26.11**	**27.61**	**1.57**	105												
			0.48							00678			Coal		same as above	
			1.00		26.47	27.47	1.00			00679	27.20		Coal		same as above, very light, shiny, and soft	
			0.09		27.47	28.47	1.00			00680	26.00		Coal		same as above, getting harder down the run	
8	**27.61**	**29.11**	**1.41**	94												
			0.91							00680			Coal		hard, dull coal	

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
			0.50							00681			Coal		hard, dull coal	
9	**29.11**	**30.61**	**1.64**	109	28.47	29.47	1.00				24.60					
			0.50							00681			Coal/ Carb mud		coal mixed wth carbonaceous mudstone, getting heavier down the run	
			0.30		29.47	29.77	0.30			00682	11.20		Coal/ Carb mud		Carbonaceous mudstone with trace amounts of coal, soft and breaks easily. Footwall sample	
			0.84										Coal/ Carb mud		Carbonaceous mudstone parting with trace amounts of coal throughout	
10	**30.61**	**32.11**	**1.44**	96												
			1.10										Coal/ Carb mud		Carbonaceous mudstone with trace amounts of coal throughout	
			0.34										Coal		Coal, dull, sheared, muddy, and heavy	
11	**32.11**	**33.61**	**1.42**	95												
			0.25										Coal		same as above	
			1.17						40°				siltstone		hard siltstone and claystone with fractures at 40° to core normal	
12	**33.61**	**35.11**	**1.50**	100												
			1.50										siltstone		same as above	
13	**35.11**	**36.61**	**1.50**	100												
			1.50										siltstone		same as above. End of hole	

CanAus Coal Ltd.
Large Diameter (6") Core Description

Hole ID: LR14CC-06

Northing: 5502599.379 **UTM System:** NAD 83 **Hole Orientation:** Vertical **Property:** Loop Ridge

Seam: 14/15

Easting: 661128.836 **Hole Type:** 6 inch core **Total Depth:** 123.28m

Elevation: 1361.605 **Logged by:** D.Thompson, M. Lennox **Date:** June 28, 2014 9pm

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
															Cased to: 39m - in coal	
															Core Point: 39m	
															Pilot hole was approx 5m up dip (to the east). Projected core point was 45m, seam 15 at 46m. Drillers called loggers when coal was hit in casing	
1	**39.70**	**40.00**		100											**2.1 m coal lost**	
	39.70	40.00	0.30							00371			Coal		Sheared but blocky coal	
2	**40.00**	**41.50**	**1.54**	103	39.50	40.50	1.00				21.80					
	40.00	40.70	0.70						75	00371			Coal		blocky, breaks easily, one 1cm parting at 75° to Core Normal	
	40.70	41.54	0.84		40.50	41.18	0.68			00372	20.00		Coal	15	As above, shears in flakes, slickensides, two 1cm clay partings	
3	**41.50**	**42.30**	**0.75**	94												
	41.50	41.80	0.30		41.18	41.48	0.30			00373	10.60		Claystone		Claystone, very soft, sheared surfaces, Footwall sample	
			0.46										Claystone		soft brittle claystone, becoming more solid near bottom	
4	**42.30**	**43.80**	**1.50**	100												
			0.27										Claystone		solid claystone, soft at sharp contact with possible fault surface. Siltsone below	
			1.23						80°				Siltstone		hard faint bedding, massive	
	Second Coring Section															
5	**113.68**	**114.68**	**0.87**	87												
			0.87										Carb Mud		Soft, Sheared, core is intact but easily broken along sheared surfaces	
6	**114.68**	**115.78**	**1.10**	100											Slough at top of the hole	
			0.90										Carb Mud		Soft, Sheared, core is intact but easily broken, some small isolated areas of calcite, some cemented areas of harder silt lenses	
			0.20						35°				Carb Mud		soft, sheared, very broken, slickensides visible at 35°	
7	**115.78**	**117.28**	**1.37**	91												
			0.55										Carb Mud		solid but easily broken along sheared surfaces, some calcite visible	
	116.33	116.63	0.30		116.42	116.72	0.30			00374	10.60		Carb Mud	HW-14	As above, Hanging wall sample	
	116.63	116.88	0.25							00375			Coal	14	solid coal, easily broken along shears	
	116.88	117.06	0.18		116.72	117.36	0.64			00375	14.80		Coal	14	dull, waxy, possibly shaly coal	

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
	117.06	117.15	0.09					0.09		00375			Coal	14	dull, massive, blocky	
8	**117.28**	**118.78**	**1.35**	90												
	117.28	118.08	0.80		117.36	118.08	0.72		40°	00376	20.20		Coal	14	dull, waxy coal, blocky, easily broken into sheared flakes	
	118.08	118.38	0.30		118.08	118.38	0.30	0.11	60°	00377	13.00		Carb Mud	14	parting, easily broken, slickensides, concoidal fractured surfaces	
	118.38	118.63	0.25		118.38	118.74	0.36			00378	5.00		Coal	14	flakey, shiny	
9	**118.78**	**120.28**	**1.50**	100												
	118.78	118.85	0.07							00378			Coal	14	flakey, shiny, easily broken	
	118.85	119.50	0.65		118.74	119.38	0.64			00379	19.00		Coal	14	abundant clay, carbonaceous mudstone partings throughout	
	119.50	120.00	0.50		119.38	119.88	0.50		60°	00380	21.20		Claystone	FW-14	hard clays, bedding at 60°, trace pyrite on fractured surfaces. Footwall sample.	
			0.38										Carb Mud		Sheared Carbonaceous mudstone, soft, easily broken along shear planes.Trace pyrite, slickensides	
10	**120.28**	**121.78**	**1.50**	100												
			121.78						45°				mudstone		silty mudstone, blocky, massive silt bands. Shaly mudstone bands with bedding at 45°. Some calcite stringers.	
11	**121.78**	**123.28**	**1.50**	100												
			123.28										Siltstone		Siltstone, massive, calcite stringers >1mm thick. Harder, mostly intact with few fractures End of Hole	

CanAus Coal Ltd.
Large Diameter (6”) Core Description

Hole: **LR14CC-07**

Northing: 5502408.633 **UTM System:** NAD 83 **Hole Orientation:** Vertical **Property:** Loop Ridge

Seam: 16

Easting: 660980.535 **Hole Type:** 6 inch core **Total Depth:** 45.49m

Elevation: 1355.555 **Logged by:** D.Thompson, J. Galbraith, M. Lennox **Date:** June 27, ,2014

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Core Quality /	Lith Code	Seam	
			Recovered												
Run #	from	to	ft/m	%	from	to	Length (m)	Lost (m)	BCN	Sample #	(kg)	RQD			Description
															Cased to 27 m.
															Core point at 34.3 m below ground level.
1	**34.47**	**35.80**	**1.33**	100											
			0.04												Sandy slough from above
			0.16						50°				Dull and Bright	?	Dull coal with approx. 10% bright bands, sheared disseminated Pyrite, sharp lower contact @ 50° to CN
			0.55										sandstone		Sandstone with wavy sharp contact with claystone (see photo)
			0.58										Claystone		Claystone
2	**35.8**	**37.3**	**1.51**	100.6											
			0.05										Claystone		claystone
			0.52										Siltstone		Siltstone (transitional) medium grey, medium grained
			0.94										Claystone		claystone with coaly plant fragments, slightly silty, medium Grey, medium grained
3	**37.3**	**37.96**	**0.63**	95											
			0.25										Claystone		claystone
			0.38										Siltstone		siltstone with clay, few coaly plant fragments, slickensides
4	**37.96**	**39.46**	**1.43**	95											
			0.54										claystone		silty claystone with many coal stringers
	38.5	38.8	0.30		38.14	38.44	0.30			00364	9.2		Carb. Mud		Carbanaceous Mudstone,wavy bedding, abundant coal stringers, very soft
	38.8	39.39	0.59		38.44	39.40	0.96			00365	27.4		Coal	16?	Coal, sheared, soft, flakes, and powders easily
5	**39.46**	**40.66**	**1.24**	103											
	39.46	39.87	0.41							00365			Coal	16?	Coal. Soft-sheared. Bands of Pyrite >3mm, slikensides
	39.87	40.66	0.83		39.40	40.40	1.00			00366	26.2		Coal		Coal, soft-sheared slickensides, lens of pyrite minor partings, carbonaceous claystone lens 1-2 cm thick. Heavy
6	**40.66**	**41.96**	**1.30**	100											
	40.66	40.83	0.17							00366					coal, soft-sheared slikensides ,lens of Pyrite
	40.83	41.83	1.00		40.40	41.40	1.00			00367	26.4		Coal		Coal, soft, sheared slickensides, very small pods of clay (harder sections)
	41.83	41.96	0.13							00368			Coal		coal, soft, sheared slickensides

Run #	Driller's Coring Info from	to	Recovered ft/m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description
7	**41.96**	**42.91**	**0.95**	95	41.40	41.66	0.26				6.4				
	41.96	42.09	0.13							00368			Coal		coal, soft, sheared slickensides
	42.09	42.7	0.61		41.66	42.28	0.62		50°	00369	18.4				Coal, soft, sheared, abundant claystones mudstone
	42.7	42.91	0.21		42.28	42.49	0.21			00370	12.6		Claystone		Hard, carbonaceous claystone, sheared, slickensides, sharp contact with overlying coal. Footwall Sample
8	**42.91**	**43.91**	**1.00**	100											
			0.64									S?	Claystone		hard, carbonaceous claystone, coal fragments
			0.108										Coal		coal, soft, sheared slickensides, flakey
			0.25										Mudstone		soft mudstone
9	**43.91**	**45.49**	**1.58**	105											
			0.20										Mudstone		soft mudstone
			0.75										Claystone		Claystone, a few soft clay/mud sections
			0.63										Siltsone		Siltstone, End of Hole

CanAus Coal Ltd.
Large Diameter (6") Core Description

Hole ID: **LR14CC-08**

Northing: 5500408.4 **UTM System:** NAD 83 **Hole Orientation:** Vertical **Property:** Loop Ridge

Seam: **15**

Easting: 661287.43 **Hole Type:** 6 inch core **Total Depth:** 156.5m

Elevation: 1642.7768 **Logged by:** **H. Evans, J. Galbraith** **Date:** July 6-8, 2014

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Core Quality / RQD	Lith Code	Seam		Meas. length(m)
			Recovered													
Run #	from	to	ft/m	%	from	to	Length (m)	Lost (m)	BCN	Sample #	(kg)				Description	
															Cased to 12 m.	
															Core point at 123.4 m below ground level.	
															Started coring in coal	
1	123.40	124.40	1.01	101												
			1.01		123.22	124.22	1.00			00709	24		C		Coal intact, easily broken some slickenslide surfaces, easily shears along 40° CN	
2	124.4	125.9	1.42	95												
			1.00		124.22	125.22	1.00			00710	23		C		dull, intact same as above mostly soft with some small hard pieces throughout	
			0.42							00711	29.4		C		same as above, gets softer in last 30cm	
					125.22	126.22	1.00									
3	125.9	126.9	1.02	102												
			0.58							00711			C		coal with slickenslide surfaces. Carbonaceous mudstone parting 1 - 5 cm thick running parallel TCA	
			0.44						50°	00712	27		C		coal, slickenslide surfaces at 50°CN. Dull Getting shinier towards bottom. Parting from above carries through first ~ 25cm	
					126.22	127.22	1.00									
4	126.9	127.9	0.97	97												
			0.62						70°	00712			C		coal, shears @ 70°CN with slickenslide surfaces dull, hard, trace mudstone stringers. Sharp contact with carb mudstone @ 30° CN. Slickenslide sheared surfaces at 50°CN bottom 5 cm	
			0.35							00713	36.2		CM			
					127.22	128.15	0.93									
5	127.9	129.4	1.48	99												
			0.58						70/30°	00713			CM		carb. Mudstone with coal banding throughout. Shears @ 70° CN.	
			0.90		128.74	129.64	0.90		30°	00714	22.8		C/Cm		Mudstone with increasing amount of coal banding downhole - very soft mud. Bottom 35 cm is mostly dirty coal with some carb. Mud stringers	
6	129.4	130.9	1.54	103												
			1.00		129.64	130.64	1.00			00715	27		C		Coal with slickenslide surfaces @ 70° to CN. Easily broken into flakes. Intact, mudbands throughout <1cm Dull Coal	

			0.54							00716	25.2		C		same as above	
					130.64	131.64	1.00									
7	130.9	132.4	1.41	94												
			0.46							00716	25.2		C	C	coal intact, carb mudstone banding throughout. Slickenslides fracture surfaces	
			0.70		131.64	132.19	0.55			00717	27.4		C	C	coal with abundant carb mudstone banding throughout. Very Soft	
			0.25						40°	00717			CM/C	CM/C	Mostly carb mudstone with some dirty coal partial sharp contact between coal - carb. Mud @ 40°CN at last 20cm	
8	132.4	133.9	1.52	101												
			0.45		132.19	132.54	0.35		60°	00718	13.8		CM		Carbonaceous mud with coal stringers- soft , sharp contact with carb mudstone/Claystone	
			0.70		132.54	133.24	0.70			00719	29		Cm/CLY		Hard some coal stringers	
			0.37							00720	23.4		C		Dirty sheared coal. Heavy with muddy stringers and some hard pieces	
					133.24	134.24	1.00									
9	133.9	135.4	1.61	107												
			0.63							00720			C		Hard coal with abundant slickenslides on sheared surfaces, carb mud stringers and clasts	
			0.98		134.24	135.24	1.00			00721	27.6		C		Coal dull some slickenslides, Heavy easily broken into sheared flakes	
10	135.4	136.9	1.59	106												
			0.64		135.24	135.86	0.62			00722	15		C		coal with some mud sringers, heavy and sheared. Easily broken inot flakes	
			0.40		135.86	136.34	0.48			00723	14.4		C/CM		coal with abundant carb. Mud stringers and clasts throughout	
			0.55							00724	24.8		C		coal easily broken into sheared flakes, heavy with some carb. Mudstone stringers	
					136.34	137.34	1.00									
11	136.9	138.4	1.68	112												
			0.45							00724			C		coal, intact, some mud/claystone stringers. Easily broken into sheared flakes.	
			1.00		137.34	138.34	1.00			00725	25.6		C		same as above	
			0.23							00726	23.6		C		same as above	
					138.34	139.34	1.00									
12	138.4	139.8	1.45	104												
			0.77						30°	00726			C		Intact coal, shears @ 30° CN with slickenslides. Easily broken into flakes	

CanAus Coal Ltd.
Large Diameter (6") Core Description

Hole ID: **LR14CC-09**

Northing: 5500587.7 **UTM System:** NAD 83 **Hole Orientation:** Vertical **Property:** Loop Ridge

Seam: 15

Easting: 661298.18 **Hole Type:** 6 inch core **Total Depth:** 63.61 m

Elevation: 1638.9055 **Logged by:** **M. Lennox, H. Evans** **Date:** July 4th, 2014

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Core Quality / RQD	Lith Code	Seam	
			Recovered												
Run #	from	to	m	%	from	to	Length (m)	Lost (m)	BCN	Sample #	(kg)				Description
															FIRST ATTEMPT
															Cased to: 9m
															Core Point:42.0m
1	**42.00**	**43.00**	**0.90**	90				0.10							
			0.90										siltstone		Silstone, calcite cement, joints at 40° and 45°
2	**43.00**	**43.40**	**0.12**	33				0.28							
			0.12										Carb Mud		Shaly, friable carbonaceous mudstone
3	**43.40**	**43.90**	**0.55**	110											
			0.55										SH/MS		recovered 5 cm from last run. Shaly mudstone, friable
4	**43.90**	**44.90**	**0.05**	0.05				0.95							
			0.05										SH/MS		Same as above, poor recovery, potential drill issues.
															Drill shut down to replace drill bit and set new, deeper casing to cover a problem area- fault
															Second attempt (added 18m casing)
															Cased to: 27m
															Core Point: 45.1m
5	**45.10**	**54.95**	**0.85**	100											
			0.67						45°				Carb Mud		Carbonaceous Mudstone- browm,joint fractures at 45° to core normal.
			0.18										Shaly		Shaly, friable, broken, slickenside surfaces, greasy
6	**45.95**	**46.31**	**0.00**	0				0.36							
7	46.31	47.31	1.00	100											

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description
			0.49										Carb Mud		Carbonaceous mudstone in top 10cm. Very broken- potential fault. Three 70° fractures. Sharp contact with coal
			0.30		47.12	47.42	0.30			00642	12.00				Hanging wall sample, 30 cm. Same as above.
			0.21							00643			Coal		Coal, broken harder piesces, dull, sheared, mud clasts throughout.
8	**47.31**	**48.81**	**1.60**	107	47.42	48.52	1.10				25.60				
			0.10							00643			Carb. Mud		Carbonaceous mudstone. Broken, sharp contact with coal
			0.79							00643			Coal		Coal with some partings, soft, sheared, intact, some shiny and some dull micture.
			0.71						70°	00644			Coal		Intact coal, uniform, dull, soft, sheared
9	**48.81**	**50.01**	**1.20**	100	48.52	49.52	1.00				24.40				
			0.29							00644			Coal		As above
			0.66		49.52	50.12	0.60			00645	21.40		Coal		Hard coal, large calcite vein running near verticle to core axis, dull, some thin mud bands throughout
			0.24							00645			Coal		Coal, slickensides, mostly dull but some shiny. 1cm parting
10	**50.01**	**51.61**	1.60	100											
			0.52		50.12	50.64	0.52			00646	11.00		Coal		dull, hard coal
			0.18		50.64	50.94	0.30			00647	10.40		Carb mud		Carbonaceous Mudstone with some coal stringers. Footwall Sample
			0.65										Carb Mud		Carbonaceous Mudstone - soft
			0.10												Shaly Mudstone, broken Slickensides with coal stringer approx 3cm
			0.15		51.70	52.00	0.30			00648					Hanging wall sample same as above
11	**51.61**	**53.11**	**1.44**	96				0.16		00648	8.40				Hanging wall sample same as above
			0.15		52.00	52.84	0.84		50°	00649	22.60		Coal		Coal, dull, waxy with no obvious partings, fairly solid, sheared. More clay rich near bottom. Hard clasts
			0.45							00650			Carb Mud		Carbonaceous mudstone mixed with coal. Stringers throughout
12	**53.11**	**54.61**	**1.64**	110	52.84	53.66	0.82				32.60				
			0.40							00650			Carb Mud		Soft, sheared, carbonaceous mudstone with lots of coal stringers
			1.00		53.66	54.66	1.00			00701	28.20		Coal		Coal, soft, light, dull, few shiny bright bands
			0.24							00702			Coal		Same as above
13	**54.61**	**56.11**	**1.51**	100.6	54.66	55.66	1.00				29.00				
			0.76							00702			Coal		Sheared dull coal, some blocky. A few Claystone partings less than 1 cm thick
			0.75							00703			Coal		clean sheared coal, no visible partings
14	**56.11**	**57.61**	**1.50**	100	55.66	56.66	1.00				22.00				
			0.25							00703			Coal		coal, sheared, waxy, dull

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description
			1.00		56.66	57.66	1.00			00704	24.60		Coal		Same as above a few harder bands near the base of interval
			0.25		57.66	58.66	1.00			00705	25.00		Coal		Coal, dull, sheared, broken
15	**57.61**	**59.11**	**1.50**	100											
			0.75							00705			Coal		Dull sheared coal, solid core, a few thin clay partings <1cm
			0.75		58.66	59.66	1.00			00706	23.20		Coal		As above cleaner
16	**59.11**	**60.61**	**1.50**	100											
			0.25							00706			Coal		dull, sheared coal, solid core, no visible partings
			1.20		59.66	60.85	1.19			00707	28.80		Coal		as above
			0.05		60.85	61.15	0.30			00708	11.20		Carb mud		carbonaceous mudstone with coal partings
17	**60.61**	**62.11**	**1.50**	100											
			0.25							00708			claystone		hard claystone, coarseening downwads to massive siltstone. Footwall sample
			1.25						50°				siltstone		massive silstone, faint beding and a few fractures at 50° to Core normal
18	**62.11**	**63.61**	**1.50**	100											
			1.50										siltstone		last run, massive siltstone faint bedding, core stuck in barrel. End of Hole

CanAus Coal Ltd.
Large Diameter (6") Core Description

Hole ID: **LR14CC-10**

Northing: 5500612.8 **UTM System:** NAD 83 **Hole Orientation:** Vertical **Property:** Loop Ridge

Seam: **17**

Easting: 661189.47 **Hole Type:** 6 inch core **Total Depth:** 74m

Elevation: 1640.1213 **Logged by:** **M. Lennox** **Date:** July 3rd, 2014

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
															Cased to m.	
															Core point at 60 m below ground level.	
															Driller tagged coal seam, says there was thin hard/soft layers before he started coring @ 60m	
1	59.8	61	1.20	100												
			1.00		59.35	60.35	1.00		45°	00630	23		C		Coal, soft, sheared, slickenslides on fracture surfaces. Dull 5-10% brightness. Intact, but easily broken breaks distinctly @ 45°. Sulphur smell. V. uniform, massive	
			0.20							00631	15.4		C		"as above" Intact but broken in shoe.	
					60.35	61.35	1.00									
2	61	62	1.00	100												
			0.80						70°	00631			C		"as above". Breaks @ steeper angle 70°	
			0.20							00632	24		C		"as above". V. broken in shoe.	
					61.35	62.35	1.00									
3	62	63.5	1.50	100												
			0.80						70°	00632			C		"as above". Mudstone bands 3cm thick @ 10 cm. 70° bedding angle.	
			0.70						45°	00633	26.6		C		"as above". Broken into rubble @ 80 cm, 10 cm thick. Breaks distinctly @ 45-50°. No mud bands, v. clean. V. broken in shoe	
					62.35	63.35	1.00									
4	63.5	65	1.50	100												
			0.30							00633			C		"as above". Thin mudband. >1cm on top few cm.	
			1.00		63.35	64.35	1.00		70°	00634	25		C		"as above". Breaks distinctly @ 70°	
			0.20							00635	25.6		C		"as above". V. broken in shoe.	
					64.35	65.35	1.00									
5	65	66.6	1.60	100												
			0.80						50°	00635			C		"as above". clean coal. Breaks 50°.	
			0.80						50°	00636	21		C		"as above".	
					65.35	66.35	1.00									
6	66.6	68.1	1.50	100												

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
			0.20							00636			C		Coal is v. broken. Some shiny harder coal bands throughout 10% brightness. Fairly uniform with above coal.	
			1.00		66.35	67.35	1.00		50/70°	00637	24.8		C		mud band 1-2cm thick @ 30 cm. Contact 50°. Coal breaks distinctly 70°. Fairly uniform with above coal.	
			0.30							00638	18.2		C		uniform with above coal. Clean (no mud)	
					67.35	68.35	1.00									
7	68.1	69.7	1.60	100												
			0.70							00638					"as above"	
			0.90							00639	26		C		"as above"	
					68.35	69.35	1.00									
8	69.7	71.2	1.40	93												
			0.10							00639			C		coal. V. broken. Harder. V. dull (no brightness)	
			1.25		69.35	70.60	1.25			00640	27.2		C		muddy throughout. Dirty coal pieces of coal cemented in the mud.	
			0.05							00641	13		CM/C		Grading into CM. pieces of broken CM/C in shoe. FW sample	
					70.60	70.80	0.20									
9	71.2	72.7	1.50	100												
			0.25						70°	00641			CM		FW sample. Soft, brown streak. Intact, but easily broken	
10	71.2	74	1.50	100												
			0.10										CM		"as above". Sharp contact with slt	
			1.40						50°				SLT		slt, massive, intact & hard, fine-grained.	

CanAus Coal Ltd.
Large Diameter (6") Core Description

Hole ID: **LR14CC-11**

Northing: 5500971 **UTM System:** NAD 83 **Hole Orientation:** Vertical **Property:** Loop Ridge

Seam: **19, 18**

Easting: 661166.28 **Hole Type:** 6 inch core **Total Depth:** 123.81

Elevation: 1545.1868 **Logged by:** **J. Galbraith, M.Lennox** **Date:** July 12-14, 2014

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
															Cased to m.	
															Core point at 25.11m below ground level.	
1	25.11	26.11	0.90	93												
			0.17						60°				CM		carbonaceous mudstone with pieces of coal intermixed, broken, soft, sheared. Contact with claystone @ 60° to CN	
			0.50										CLY		Claystone, soft, fine-grained, grey-brown, contact with coal below @ 60° to CN	
			0.10										C		coal with carb mudstone fragments, broken, hard fragments, bright + dull	
			0.13										SLT		siltstone in shoe carboneous fracture surfaces, broken	
2	26.11	27.61	1.54	103									SLT		siltstone, fine-grained, grey-brown, two 20cm fractured zones near top + bottom of run, blocky, calcite on fracture surfaces.	
															*photograph says run 1 but the depths are correct - should be run #2.	
3	27.61	29.11	1.51	100.6												
									50°				SLT		siltstone- same as above, competent fractures @ 55° to CN, lower 30 cm is fractured with calcite on fracture surfaces slightly calcareous throughout.	
4	29.11	30.41	1.36	91												
									50°				SLT		siltstone-same as above. Competent hard fractures in to bedding @ 45° CN	
5	30.41	31.61	1.25	83												
									40°				SLT		siltstone- same as above, few sandstone laminations + few carb laminations. Calcareous slickenslides on fracture surfaces.	

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
6	31.61	32.11	0.53	106												
													SLT		siltstone, hard, calcite on fractures. Sandy siltstone for upper 20cm.	
7	32.61	37.11	1.30	87												
			1.10						40°				SLT		laminated siltstone, hard, fine-grained, with sandy + carb. Laminations.	
			0.20										MS		mudstone- shaley with gouge, v. soft	
8	37.11	38.61	1.52	101												
													SLT		siltstone, fine-grained, hard, top 5cm is gouge. 20 cm zone towards base of the run of broken rock + gouge	
9	38.61	39.61	1.00	1												
									50°				SLT		siltstone- same as above, laminated, 2 zones of fractured + broken (~15cm each) , non-calcareous	
10	39.61	40.11	0.87	174												
			0.67										CLY		claystone, fine grained, soft, fractures @ 40° to CN polised fracture surfaces.	
			0.20										MS		mudstone- v. soft, fissile, platy (shaley). Slightly carbonaceous.	
11	40.11	41.11	0.92	92												
			0.12						35°				MS		mudstone- same as above, v. soft. Contact between MS + C is 35° to CN	
													C		coal, soft, fissile	
													MS		mudstone, v. fractured + broken. Shaley layer 15cm thick.	
										00465	5.8				bottom 0.25 cm taken for HW sample	
12	41.11	42.61	1.44	96				0.06								
			0.05		37.80	38.10	0.30			00465			MS		Mudstone chunks, brown	
			0.25							00466	19.4		SC		shaley coal, mudstone chunks within. Mud bands cutting through, v. soft, easily broken. Dull + bright	
			0.40							00466			C		clean coal. Soft, but harder coal chunks within. Dull + bright	
			0.30		38.10	39.05	0.95			00466			C		Dull + bright.	
															v. hard small chunks of coal. Joint fracture at top 50° to CN. Conjugate fracture @ middle 45°, 50° to CN. Joint fracture @ bottom 60° to CN. Fracture surfaces slicked and shiny.	

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
			0.5							00467	24.8		C		Clean coal. Dull + bright. Soft , but harder coal chunks within. Sheared, Slicked surfaces	
13	42.61	44.11	1.5	100												
			0.1							00467			C		coal- as above. V. broken	
			0.4		39.05	39.99	0.94		70°	00467			C		coal- as above. V. soft, easily broken. Breaks @ 70° CN. @ 30cm v. broken band of hard coal chunks. Mud band @ 43 cm (5 cm thick), contact @ 70° CN	
			0.6							00468	24		C		coal - as above. @ 90 cm v. broken band of hard coal chunks.	
			0.4		39.99	40.86	0.87			00468			C		v. Hard coal. Breaks 35° CN. Dull + bright. Shows sheared surfaces. Some v. thin mud bands > 1cm throughout. Last 15 cm v. broken, soft (in shoe).	
14	44.11	45.61	1.54	103												
			1		40.86	41.78	0.92			00469	24		C		coal, harder pieces first 5 cm. Soft, sheared, slickenslides on fracture surfaces. Easily broken. Dull + bright (some shiny bands). V. small muclasts throughout.	
			0.54		41.78	42.57	0.79			00470	18.6		C		coal - as above. V. broken bottom 20 cm (in shoe)	
15	45.61	46.31	0.5	71				0.20								
			0.25							00470			C		coal, soft, sheared, slickenslides on fracture surfaces. Easily broken. Dull + bright (some shiny bands). V. small mudclasts throughtout	
			0.25		42.57	42.82	0.25			00471	13.8		C		coal-as above	
16	46.31	47	0.85	106												
			0.3		42.82	43.12	0.30			00472	12.8		SLT		FW sample. Siltstone, fine grained, hard, massive, brown streak. Intact, hard to break.	
			0.55						60°				SLT		siltstone - as above. Joint fractures 60° CN. (v. broken in shoe). Calcite on fracture surfaces, slickenslides.	
17	47.01	48.51	1.54	103												
			1.4										SLT		siltstone, fine- grained, massive, hard. Intact, hard to break. Joint fracture @25cm 35°. Conjugate fractures from 50-90 cm. @ 90 cm possible small fault zone. Slickenslides on all fracture surfaces.	
			0.14										MS		Mudstone. Wavy contact with MS. Calcite, py. Mineralization throughout.	
18	48.51	50.01	1.5	100												
													SLT		fractures throughout. @ 60, 77 cm shaley bands (2cm t, hick) Slickenslides, calcite on all fracture surfaces.	
19	50.01	51.41	1.2	86												
			0.5										SLT		siltstone "as above" some joint fractures 30° CN. Sharp contact with MS. Slickenslides on all fractures.	

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
			0.17						50°				MS		contact @ 50° CN. Sharp contact with underlying SLT. Soft, easily broken, brown streak.	
			0.28										SLT		siltstone "as above". Joint fracture 50° CN. Sharp contact with MS @ 65° CN, slickenslides on all fractures.	
			0.25										MS		soft, easily broken, brown streak. V. broken (in shoe). Sheared, slickenslides.	
20	51.41	52.91	1.5	100												
			1.25										SLT		siltstone "as above", thin 1-2 mm thick calcite stringers. Joint, conjugate fractures. 50-70° CN. Sharp contact @ 20 CN with MS.	
			0.25										MS		mudstone, soft, easily broken, brown streak. Some coaly stringers.	
21	52.91	54.51	1.44	96												
			0.75										MS		first 20cm, some coal stringers. Mudstone, soft, brown streak, breaks easily. @ 50 cm, 5cm thick silty band. Sharp contact with underlying siltstone.	
			0.69										SLT		siltstone, fine-grained, massive, hard. High angle joint fracture 75° CN through section. Fracture surfaces v. sheared.	
22	54.51	56.01	1.55	103												
													SLT		bottom @ 150cm coal stringer 1cm thick. Joint fractures 50° CN. Calcite on fracture surfaces, slickenslides.	
23	56.01	57.41	1.4	100												
													SLT		56cm mudband 1-2cm. Becoming more fine-grained at the bottom with a grey streak (could almost call claystone).	
									35°						1-2m shaley band @1m . Joint fracture 35°CN	
24	57.41	59.01	1.64	103												
			0.66						70°				SLT		siltstone "as above". Steeper joint fractures, with broken pieces ie. 70° CN	
			0.23		55.07	55.37	0.30			00473	12		SLT		HW sample "as above"	
			0.07							00473			CM		carb mudstone, v. broken, grades into coal. HW sample	
			0.68		55.37	55.97	0.60			00474	15.6		C		coal, soft, sheared, slickenslides. Dull + bright. Some bright bands. @ 140cm. Mud band 3cm thick.	
25	59.01	60.51	1.5	100												
			1		55.97	56.87	0.90		70°	00475	23.8		C		coal, soft, sheared, slickenslides. Dull + bright (some bright bands). Realatively intact, but breaks distinctly @ 70° CN. @ 1m (bottom of sample). 1 cm mudband 70°CN with sharp contact.	
			0.5		56.87	57.27	0.40			00476	12.2		C		coal "as above", clean with no mudclasts.	
26	60.51	62.01	1.5	100												

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
			0.74		57.27	57.85	0.58			00477	13.4		C		coal, soft, sheared, slickenslides, shaley bands with harder chunks of coal breaks distinctly 40° CN. Sharp contact with siltstone @ 35 CN	
			0.3		57.85	58.15	0.30		40°	00478	18.4		SLT		siltstone, fine-grained, massive, hard, joint + conjugate fractures with slickenslides. Bedding can be viewed @ 40° CN. FW sample.	
			0.46										SLT		siltstone- as above	
															switch to hammering, second core point at 77.41m	
27	77.41	78.61	1.16	97												
									60°				SST		sandstone- fine-grained, Lt. grey few soft 2-3cm muddy bands, 6cm broken zone near top of run. Polished fracture surfaces.	
28	78.61	80.11	1.45	97												
									60° top						sandstone- same as above. Fracture @ 50° CN, no muddy bands.	
									45°lower							
29	80.11	81.61	1.51	100.6												
			1						55°				SST		sandstone- as above	
			0.33		81.06	81.36	0.30			00479	16.6		SST		HW sample. Sandstone- as above. Contact with coal - sharp @ 60° CN. Py. on contact surface	
			0.18							00480	24.8		C		coal-soft, sheared, flakes easily. Shiny mostly dull with few bright fragments.	
					81.36	82.36	1.00									
30	81.61	83.11	1.36	91												
			0.82							00480			C		coal- same as above, few harder bands. Fratures @ 60° CN	
			0.54							00481	20.2		C		same as above	
					82.36	83.41	1.05									
31	83.11	84.61	1.34	89												
			0.46							00481			C		coal-as above. Some shiny bands	
			0.7		83.41	84.17	0.76			00482	19.6		C		"as above"-grades into carb mudstone.	
			0.18							00483	9		CM		mudstone, v. broken (in shoe) with pieces of coal intermixed. Soft, brown streak. FW sample.	
					84.17	84.47	0.30									
32	84.61	86.11	1.38	92												
			0.12							00483			CM		FW sample, as above	
			0.58										CM		mudstone, soft, brown streak. Joint fractures @ 70° CN. Grades into siltstone.	
			0.68										SLT		siltstone, fine-grained, massive, hard. Joint fractures @ 70°CN. Slickenslides on fracture surfaces.	

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
33	86.11	87.61	1.54	103												
													SLT		siltstone, fine-grained, hard. Some mudclasts throughout. Joint fractures @ 70° CN, with calcite + slickenslides. V. broken at bottom. (By driller to take shoe off)	
34	87.61	89.11	1.5	100												
			0.2							00484	10.4		SLT		siltstone- as above	
			0.35							00485	6.8		C		coal, v. soft (almost a powder), sheared, Dull + Bright (stringer)	
			0.3							00486	10		SLT		siltstone- as above. V. fractured. Slickenslides + calcite on fracture surfaces.	
			0.65										SLT		siltstone- as above	
35	89.11	90.61	1.5	100												
			0.6										SLT		siltstone-as above. Joint fractures @ 65° CN	
			0.3		89.63	89.93	0.30			00487	12.8		SLT		siltstone-as above. Bottom 10 cm v. broken (contact with coal). HW sample.	
			0.6		89.93	90.45	0.52			00488	16.2		C		coal, soft, sheared, slickenslides. Dull v. broken. @ 105 cm 1-2 cm thick mudband @ 75° CN	
															Forgot to change intervals + run # in photograph	
36	90.61	92.11	1.47	98												
			0.64		90.45	90.98	0.53			00489	13.6		C		coal, soft, sheared, slickenslides. Dull, Breaks 70° CN. Mudband 3cm thick @ 55cm contact @ 70°. V. broken zone 3-4 cm thick at 42cm. Near bottom v. sharp contact with siltstone @ 75°.	
			0.3		90.98	91.28	0.30			00490	10.4		SLT		FW sample. Siltstone, fine-grained, hard. Fractures @ 75° CN.	
			0.53												siltstone - as above. Last 30cm v. broken by drillers (shoe)	
37	92.11	93.61	1.4	93												
			0.6												siltstone- as above. Joint fractures 70° CN @ 40 cm. Some muddy gouge material between fracture.	
			0.2		92.53	92.83	0.30			00491	12.2				siltstone "as above". Slicks on fracture surfaces. Grades into CM. HW sample.	
			0.1							00491					HW sample. Grades into coal	
			0.5		92.83	93.15	0.32			00492	13.2				coal, soft, sheared, slickenslides. Dull + Bright. (5% viterence)	
38	93.61	95.11	1.3	87												
			0.67		93.15	93.82	0.67			00493	21.4		CM		mudstone, soft. Brown streak. Easily broken. Coal stringers. 1-3 cm thick throughout. Broken to a rubble @ 40 cm, 10 cm thick.	

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
			0.63		94.4	95.03	0.63			00494	16.6		C		shaley coal, mud bands throughout. Harder chunks of coal + mudclasts. V. soft, sheared, slickenslides. V. dull	
39	95.11	96.61	1.5	100												
			0.3		95.65	95.95	0.30			00495	9.8		CM		carb. Mudstone. Soft, sheared, broken, brown streak. Coal stringers (1cm) throughout. FW sample.	
			0.4										CM		as above, grades into less carby MS.	
			0.2										MS		mudstone, brown streak. Intact. Harder to break.	
			0.3		96.2	96.5	0.30			00496	11.2		MS		as above, HW sample	
			0.3		96.5	97.41	0.91			00497	20.8		C		Dirty coal, mudclasts throughout. Dull, soft, sheared v. broken (in shoe)	
40	96.61	98.11	1.4	93												
			0.7							00497			C		coal, soft, sheared, slickenslides. Intact but broken easily. Fairly uniform. Mudband @ 10 cm, 70cm (1 cm thick). Dull + Bright (5 % viterence)	
			0.7		97.41	98.32	0.91			00498	23.2		C		coal- as above. Clean no mudclasts.	
41	98.11	99.61	1.5	100												
			0.3							00498			C		Uniform with coal above. Mudclast @ 20cm	
			1		98.32	99.23	0.91			00499	24		C		coal - as above. Breaks @ 60° CN, clean (no mud).	
			0.2		99.23	100.02	0.79			00500	23		C		coal - as above. V. broken (in shoe). Some mudclasts	
42	99.61	101.11	1.5	100												
			0.8						70°	00500	23		C		coal - as above. Mudband (1 cm) @ 24cm, fairly broken zone 46-60 cm. Breaks 70° CN.	
			0.55		100.02	100.3	0.28			00651	17.2		C		dirty coal, many mudclats, grades into mudstone. Calcite stringers + calcite on pieces of sheared coal.	
			0.15							00652	9.2		CM		Carb. Mudstone, recemented areas of calcite, coal stringers throughout. Fairly Hard (v. broken by drillers in shoe) ie. Intermixing with coal. FW sample	
43	101.11	102.61	1.54	103												
			0.15		100.3	100.6	0.30			00652			MS		mudstone, brown streak, fairly hard. Calcite stringers throughout. Slickenslides. FW sample.	
			0.2										MS		"as above"	
			1.19										MS		mudstone. Soft, easier to break. In some sections broken to a rubble.	
44	102.61	104.11	1.5	100												

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
			0.39										CM		carb. Mudstone, soft, easily broken, brown streak. Coal stringers (1cm thick)	
			0.3		102.4	102.7	0.30		70°	00653	7		CM		"as above", Fractures 70° CN. HW sample.	
			0.71		102.7	103.48	0.78			00654	22		C		coal, soft, sheared, slickenslides, Dull+Bright. Intact but easily breaks. 110-120 cm. v. broken band. Harder coal chunks. (v. broken in shoe)	
45	104.11	105.61	0.67	45											* 0.83m slipped out of core barrel*	
			0.03							00655	16.6		CM		A few harder broken pieces of CM at the top	
			0.27							00655			C		coal, soft, sheared, Dull + Bright.	
			0.08							00655			C/CM		broken pieces of coal + CM	
			0.29		103.48	104.15	0.67			00655			C		coal, soft, sheared, Dull + Bright.	
46	105.61	106.11	0.38	76												
										00656	22.2		CM		carb. Mudstone, sheared with polished fracture surfaces. Soft, broken	
					105.27	105.8	0.53									
47	106.11	107.61	1.4	93												
			0.15						60°	00656			CM		carb. Mudstone- same as above	
															contact with coal @ 60°CN	
			1.1		105.8	106.8	1.00		50°	00657	27.6		C		coal fractures, @ 50° CN. Soft with hard bands sheared mostly dull few bright fragments.	
			0.02							00658	18		CM		carb. Mud band, med. Hard brown.	
			0.13							00658			C		coal, "as above the mud band"	
					106.8	107.49	0.69									
48	107.61	109.11	1.44	96												
			0.58							00658			C		coal-soft, flakes easily, sheared, mostly dull with few bright fragments	
					107.49	108.35	0.86			00659	25		C/CM		coal + carb mudstone. Coal is the "same as above", carb mudstone running ~ 90° to CN (ie. 1/2 core is CM, 1/2 is coal lengthwise) v.soft, flakes easily, sheared	
49	109.11	110.11	1.04	104												
			0.33		108.35	108.68	0.33			00660	10.4		CM		carb. Mudstone, soft, sheared, flakes easily, polished fracture surfaces. FW sample	
			0.13										CLY		claystone, soft, fine-grained, brown polished fracture surfaces.	
			0.27										SLT		siltstone-med. Hard, fractured + broken bands, polished fractures surfaces-fracture @ 20° to CN	
			0.31										CLY		claystone- soft, grey-brown, broken, polished fracture surfaces.	

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
50	110.11	111.61	1.41	94												
			0.57										CLY		claystone, muddy , "same as above", 10 cm band of broken rock + gouge in middle. Bottom 30 cm used for HW sample.	
			0.3		110.4	110.7	0.30			00661	11.8		CLY		HW sample	
			0.54							00662	24.4		C		coal, v. hard @ top 10 cm. The rest is soft sheared, flakes easily mostly dull with few bright fragments.	
51	111.61	113.11	1.3	87												
			0.46		110.7	111.7	1.00			00662			C		coal- as above. 2 cm band in lower 10cm of sample	
			0.84		111.7	112.7	1.00			00663	26.4		C		coal- as above. Fracture @ ~50° CN	
52	113.11	114.61	1.51	100.6												
			0.16							00663			C		coal - as above	
			1		112.7	113.7	1.00			00664	26.6		C		coal - as above. Fractures @ 60° to CN. Two, 1 cm CM bands	
			0.35							00665	24.4		C		coal - as above. Some CM in shoe	
53	114.61	116.11	1.51	100.6												
			0.65		113.7	114.7	1.00			00665			C		coal-as above fractures @ 50° to CN. Mostly soft with few harder bands, Dull with few bright fragments, sheared, flakes	
			0.63		114.7	115.33	0.63			00666	16.6		C		coal- as above. 2cm CM band @ base of sample	
			0.23							00667	27		C		coal -as above	
54	116.11	117.61	1.44	96												
			0.94		115.33	116.5	1.17			00667			C		coal- as above	
			0.5						25°	00668	23.4		C		coal- as above, 2cm CM band @ top of sample. CM @ 25° to CN	
55	117.61	119.11	1.38	92												
			0.5		116.5	117.58	1.08			00668			C		coal - as above, mostly soft, fractured zone ~ 30 cm.	
			0.88							00669	22.6		C		same as above	
56	119.11	120.61	1.41	94												

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
			0.12		117.58	118.67	1.09			00669			C		coal - as above	
			0.4		118.67	119.07	0.40			00670	9		C		coal - same as above. Bottom 2 cm is transition zone to CM (gougey). V. soft & intermixed with coal.	
			0.3		119.07	119.37	0.30			00671			SLT/MS		siltstone + muddy gouge. Hard siltstone with muddy gouge running parallel to core axis. Fractured + Broken rock, grey-brown to grey. FW sample	
			0.59										SLT/MS		siltstone with muddy gouge - same as above. V. fractured + broken.	
57	120.61	122.11	1.71	114												
			0.78										SLT		siltstone - gets softer with depth (transitional into claystone) no visible bedding	
			0.93										CLY		muddy claystone, soft, fine-grained, grey/grey brown. Few coaly fragments in shoe (~3 cm)	
58	122.11	123.81	1.59	106												
									50°				MS		mudstone v. soft, fine-grained. Flakey, few clayed bands, carboneous in lower half of run and coal stringer (2cm thick) in shoe.	
EOH																

CanAus Coal Ltd.
Large Diameter (6") Core Description

Hole ID: LR14CC-12

Northing: 5501159.101 **UTM System:** NAD 83 **Hole Orientation:** Vertical **Property:** Loop Ridge

Seam: 14/15

Easting: 661152.6466 **Hole Type:** 6 inch core **Total Depth:** 94.86m

Elevation: 1486.207 **Logged by:** J. Galbraith and H. Evans **Date:** July 8 and 9, 2014

	Driller's Coring Info				Interval Corrected to Log											
			Recovered								Sample Mass	Core Quality /	Lith Code	Seam		Meas. length(m)
Run #	from	to	m	%	from	to	Length (m)	Lost (m)	BCN	Sample #	(kg)	RQD			Description	
															Cased to: 9m	
															Core Point: 17.65m	
1	**17.65**	**18.50**	**0.85**	100												
			0.85										Sandstone		sandston, medium grey, medium grained, hard, very broken and fractured with soft muddy gouge throughout. Cm-scale coaly band at bottom of run (in shoe)	
2	**18.50**	**19.60**	**1.09**	99												
			1.02										mudstone		mudstone, brown, fine-grained, very soft, fissile	
			0.07										Carb. Mud		carbonaceous mudstone, soft, broken, polished, fractured surfaces, with coaly fragments, sheared (inshoe- was all broken when it came out)	
3	**19.60**	**20.30**	**0.72**	103												
			0.72										mudstone		mudstone, grey brown, fine grained, soft, broken with some gouge. Top of run is slightly carbonaceous	
4	**20.30**	**20.60**	**0.34**	113												
			0.17										mudstone		same as above, broken up, fine grained, pyrite at contact	
			0.17										Coal		Coal, dull and bright. Broken into fine, very small pieces. Soft with a few hard chunks	
5	**20.60**	**22.10**	**1.39**	93												
			0.10										Coal		Coal, same as above with carbonaceous mudstone (broken up and intermixed)	
			0.26										mudstone		mudstone, very soft, brown, very fine grained, fissile	
			0.30		20.80	21.10	0.30			00740	12.20		mudstone		same as above with 4cm coal lense towards base. Hanging wall sample	
			0.73							00741			Coal	17?	coal, soft, fissile, sheared, powdery, mostly dull.	
6	**22.10**	**23.00**	**0.84**	93	21.10	22.10	1.00				27.40					
			0.27							00741			Coal		Coal-same as above with few harder bands	
			0.57							00742			Coal		Coal, same as above	
7	**23.00**	**24.50**	**1.47**	98	22.10	23.20	1.10				24.80					
			0.43							00742			Coal		Coal, soft but competent to medium hard. Sheared, mostly dull with few bright fragments	

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
			0.57		23.20	23.80	0.60			00743	14.20		Coal		Coal, same as above	
			0.25		23.80	24.00	0.20			00744	9.60		Carb. Mud		Carbonaceous mudstone parting, soft, brown, with coaly lenses. Wavy contact (?)	
			0.22							00745			Coal		Coal, sheared, soft, flakes easily. Mostly dull with a few bright fragments.	
8	**24.50**	**26.00**	**1.48**	99	24.00	25.10	1.10				20.00					
			0.38							00745			Coal		Coal, same as above	
			0.20							00745			Carb. Mud		Carbonaceous mudstone parting, soft, brown	
			0.90		25.10	26.10	1.00			00746			Coal		Coal, sheared, medium hard, flakes easily, mostly dull with few bright fragments	
9	**26.00**	**27.50**	**1.34**	90							26.40					
			0.10							00746			Coal		Coal, same as above	
			1.00		26.10	27.10	1.00			00747	25.00		Coal		Coal, same as above. Lower 0.40 m is slightly softer	
			0.24							00748			Coal		Coal, same as above	
10	**27.50**	**29.00**	**1.42**	95	27.10	27.50	0.40				7.60					
			0.18						30°	00748			Coal		Coal, same as above. Contact at 30° to the core normal	
			0.30		27.50	27.80	0.30			00749	13.80		Claystone		claystone, brown-grey, fine grained, medium soft. Foot wall sample	
			0.94										siltstone		clayey siltstone, grey-browm, fine grained, fractures at 40° to core normal	
11	**29.00**	**30.50**	**1.51**	100.6												
			1.51										claystone		claystone, grey-brown, fine grained, soft, polished fracture surface with slickensides	
12	**30.50**	**32.00**	**1.44**	96												
			1.44										claystone		claystone, same as above, fractured and broken. Increasing silt content toward base of run at 50° to core normal	
13	**32.00**	**33.50**	**1.51**	100.6												
			0.70						50°				claystone / silstone		interbedded siltstone and claystone. Fine grained, medium soft, light to medium grey,	
			0.15										/ Carb. Mud		mudstone, carbonaceous, soft, very fine grained, grey brown	
			0.14										Coal		Coal, soft, flakes easily. Dull	
			0.52										Carb. Mud		Carbonaceous mudstone, soft, increasing hardness with depth	
14	**33.50**	**35.00**	**1.55**	103												
			0.73										Claystone		Claystone, fine grained, medium soft, competent	
			0.07										Carb. Mud		Carbonaceous mudstone fine grained dark brown/grey-brown, fissile, very soft	
			0.30		33.85	34.15	0.30			00750	11.20		Carb. Mud		Carbonaceous mudstone, same as above	
			0.45							00451			Coal	16?	Coal, sheared, hard and soft bands. Flakes easily, mostly dull with few bright fragments	

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
15	**35.00**	**36.50**	**1.41**	94	34.15	34.89	0.74				17.00					
			0.14							00451			Coal		Coal, same as above	
			0.87		34.89	35.90	1.01			00452	24.20		Coal		Coal, same as above with 15 cm carbonaceous mudstone parting at top of sample	
			0.40		35.90	36.30	0.40			00453	13.20		Claystone		Claystone, few carbonaceous lenses. Fine grained, medium soft. Footwall sample	
16	**36.50**	**38.00**	**1.62**	108												
			0.95						40°				Carb. Mud		solid, very hard mudstone parting. Fractures along 40° to Core normal. Some carbonaceous layers along fractures	
			0.67										Carb. Mud		broken easily, few carbonaceous lenses, soft, some slickenside surfaces, toward bottom 20cm	
17	**38.00**	**39.50**	**1.58**	105												
			1.30										/Carb mud		Claystone/Carbonaceou mudstone. Carbonaceous, solid, intact, heavy, hard, brown streak, polished surfaces along fractures	
			0.28										Carb. Mud		Carbonaceous mudstone. Easily broken, some slickenside, some conchoidal fracture, softer ,ud nea bottom 10cm.	
18	**39.50**	**41.00**	**1.56**	104												
			0.40										Coal/Car b mud		Carbonaceous mudstone, 5cm coal band along wall of core running along core axis, sharp contact with claystone along 50° to core normal.	
			1.16										Carb. Mud		polished, sheared surfaces in last 20cm (shoe). Solid, hard, carbonaceous mudstone. Brown, some cementing- not calcite	
19	**41.00**	**42.50**	**1.49**	99												
			0.45										Carb. Mud		soft carbonaceous mudstone, intact, brown	
			0.60										Coal/ Carb mud		coal banding with abundant Carbonaceous Mudstone	
			0.44						30°				Claystone		Hard claystone with polished fracture surfaces with mineralization	
20	**42.50**	**44.00**	**1.55**	103												
			0.60						40°				/ carb mud		Carbonaceous mud and claystone. Fracture angles at 30° to core normal. Trace coal	
			0.30		42.85	43.15	0.30		40°	00454	9.00		Coal/ Carb Mud		soft, sheared carbonaceous mudstone with some coal throughout. Easily broken- friable	
			0.60						35°	00455			Coal/ Carb Mud		dull, sheared coal, easily broken, heavy with some mud clasts. Polished fracture surfaces	
21	**44.00**	**45.50**	**1.36**	91	43.15	44.00	0.85				23.20					
			0.25							00455			Coal/ Carb mud		Coal with Carbonaceous mudstone clasts throughout	
			0.30		44.00	44.30	0.30		20°	00456	9.00		Claystone		Footwall sample. Carbonaceous mudstone and claystone	
			0.81										mud/ Claystone		Carbonaceous Mudstone with < 1cm coal stringers throughout. Getting softer toward end of run. Dirty hard coal in last 10cm	
22	**45.50**	**47.00**	**1.40**	93												
			0.35						30°				Carb Mud		Shaly carbonaceous mudstone with some coal throughout. 30° fractures. <1cm coal band	
			0.30		45.90	46.20	0.30			00457	10.60		Coal/ Carb Mud		Coal and Carbonaceous mudstone- pyrite mineralization on fracture surfaces. Hanging wall sample	
			0.75		46.20	47.05	0.85		30°	00458	16.80		Coal		Soft, dull coal, easily broken into sheared flakes.fractures 30° to core normal	

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
23	**47.00**	**48.50**	**1.50**	100												
			0.30		47.05	47.35	0.30		50°	00459	11.20		Carb Mud		Carbonaceous mudstone, sheared. Sharp contact at 50° to core normal 10cm into run. Footwall sample	
			1.10						50°				sandstone		hard intact sandstone with trace pyrite throughout	
24	**48.50**	**50.00**	**1.50**	100												
			1.50						50°				sandstone		sandstone same as above	
															Some initial confusion about the second core point due to sloughing in the hole.Core point calculated to be 79.06m	
25	**79.06**	**80.36**	**0.16**	12												
			0.16										Siltstone		siltstone, fine grained, hard, few carbonaceous lenses	
26	**80.36**	**81.36**	**1.01**	100.6												
			1.01						40°				siltstone		broken, fractures at 40° to core normal. 10cm zone in middle of run with gouge and broken rock. Slickensides on fracture surfaces	
27	**81.36**	**82.86**	**1.40**	93												
			1.40										siltstone		siltstone, fractured, some slickenside andcalcite mineralization on fractured surfaces. Dark, broken, and carbonaceous. Easily broken, polished surfaces	
28	**82.86**	**84.36**	**1.60**	107												
			1.60										siltstone		same as above	
29	**84.36**	**85.96**	**1.60**	107												
			1.60										silatone		same as above, some carbonaceous lenses	
30	**85.96**	**87.46**	**1.50**	100												
			1.50						50°				silstone		same as above	
31	**87.46**	**88.76**	**1.20**	92												
			0.60										silstone		same as above	
			0.30										carb mud		Carbonaceous mudstone, broken and soft	
			0.10		88.47	88.77	0.30			00460	8.20		carb mud		carbonaceous mudstone with hard silstone chunks	
			0.20							00460			coal/ carb mud		very broken soft coal mixed with carbonaceous mud (in shoe)	
32	**88.76**	**90.26**	**1.37**	91												
			0.25		88.77	89.77	1.00			00461	21.80		coal		abundant polished slickenside on fracture surfaces, chunky dull coal.	
			0.25							00461			Coal		very broken soft coal. Fracture? Sharp contact with carbonaceous mudstone	
			0.50							00461			Coal/Carb mud		Carbonaceous mudstone and coal mixture. Mineralization throughout - not calcite	
			0.37		89.77	90.89	1.12			00462	24.40		Coal		Coal, easily broken, laminar, dull, not as heavy as above- cleaner	
33	**90.26**	**91.86**	**1.56**	98												

Run #	Driller's Coring Info				Interval Corrected to Log		Length (m)	Lost (m)	BCN	Sample #	Sample Mass	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
			Recovered													
	from	to	m	%	from	to					(kg)					
			0.63						30°	00462			Coal		Coal, Uniform, easily broken, minor mud clasts throughout. Some hard/heavy pieces >1cm	
			0.37		90.89	91.26	0.37		20°	00463	8.80		Coal		coal, flakes easily, slickenside surfaces at 20° to core normal	
			0.56		91.26	91.82	0.56			00464	14.20		sandstone		Sharp contact with fine/ medium grained sandstone. Some carbonaceous stringers throughout. Footwall sample.	
34	**91.86**	**93.36**	**1.58**	105												
			1.58						20°				sandstone		sandstone fractures at 20°. Medium to fine grained, uniform	
35	**93.36**	**94.86**	**1.64**	109												
			1.64										sandstone		same as above. End of hole	

CanAus Coal Ltd.
Large Diameter (6") Core Description

Hole: **LR14CC-13**

Northing: 5501392.7 **UTM System:** NAD 83 **Hole Orientation:** Vertical **Property:** Loop Ridge

Seam: **19, 18**

Easting: 661002.66 **Hole Type:** 6 inch core **Total Depth:** 109.91 m

Elevation: 1409.4687 **Logged by:** **H. Evans, D. Thompson, I. Furigay** **Date:** 20-Jul-14

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
															Cased to 18 m.	
															Core point at 40.2 m below ground level.	
															Drillers noted ~ .5m coal seam at around 24m. Also noted soft + dark ~36m.	
1	40.2	41.2	1.00	100												
			0.30										MS		Fine grained mudstone with large calcite veins 0.5 -1.0cm thick.	
			0.10										MS		Fractured zone ~ 4cm thick, broken friable with some mineralization	
			0.60										MS		solild, intact grey-brown, relatively soft broken in shoe.	
2	41.2	42.7	1.53	102												
			0.30						50°				CM		solid, fine grained carb. Mudstone distinct 50° CN bedding. Some calcite stringers, brown streak. Fractures 50°/90° CN.	
			0.40						50°				CM		Fractured carb mud with calcite stringers	
			0.30										CM		solid, fine grained carb. Mud.	
			0.53										CM		Darker, friable carb mud. Mineralization throughout.soft easily broken. Broken in shoe. Slickendslide along 50° CN fracture surfaces.	
3	42.7	44.2	1.58	105												
			1.58						35°				CM		Carb. Mud. Solid and Intact. Fracture @ 35° CN. Minor calcite stringers. Softer and broken in shoe. Minor slickenslide surfaces darker than above.	
4	44.2	45.7	1.57	105												
			1.37										CM		Carb mudstone. Easily broken, some harder zones throughout but relatively soft.	
			0.20										CM		very broken and crumbly in shoe. Brown streak, shiny with some slickenslides	
5	45.7	47.2	1.30	87												
			0.30		46.30	46.60	0.30		40°	00683	11.4		CM		Same as above. Sharp contact with dirty coal at 40° CN. HW sample	
			0.46		46.60	47.60	1.00			00684	30.2		C		coal with some carb mud throughout. Shiny, soft, easily broken	
			0.30						45°	00684			Cm/C		dirty coal with carb mud throughout. 2 larger ~ 1cm mudstone bands at 45° CN - Parting	
			0.24							00684			C		Soft, broken, shiny coal. V. broken in shoe	

Run #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description	Meas. length(m)
6	47.2	48.7	1.40	93												
			1.00		47.60	48.60	1.00		30°	00685	22.2		C		coal intact, some hard zones. Fractures easily at 30° CN. Dull, some slickenslides on fracture surfaces.	
			0.40							00686	21.2		C		same as above	
					48.60	49.60	1.00									
7	48.7	50.15	1.57	105												
			0.60						50°	00686			C		same as above. Contact at 50° with muddier softer coal.	
			0.40							00687	28.2		C		carb. Mud and coal. Soft, flakey	
			0.40		49.60	50.60	1.00			00687			C		dull, easily broken soft flakey coal with minor carb mud throughout	
			0.17							00687			C		shinier, cleaner coal with some slickenslide surfaces. V. broken in shoe easily broken	
8	50.15	51.65	1.47	95												
			0.30		50.60	50.90	0.30			00688	9.8		CM		First 3cm of run is coal, gradually turning into carb. Mud with trace coal. FW sample	
			1.17										CM		Intact, solid carb mud, with trace coal-brown	
9	51.63	53.15	1.50	100												
			1.50										Cm		carb. Mud. Brown, soft, easily broken. Intact with bands of broken carb. Material. Some v. small coal stringers. (2-5mm)	
															2nd Core Point at 74.94m	
10	74.94	75.94	1.00	100												
			0.15						50°				MS		fine grained, grey mudstone 50° CN contact with 1 cm coal band	
			0.30										MS		mudstone, fine-grained, grey. Fine coal stringers throughout	
			0.05										C		5cm dirty coal seam. Broken with mud throughout	
			0.50										MS		mudstone with abundant mineralization broken, fine grained, grey	
11	75.94	77.44	1.54	103												
			0.30										CM		Easily broken carb. Mud. With minor coal lenses	
			0.94						20°				CM		Intact, grey-brown carb. Mud with some ~ 4cm soft mud bands at 20° CN fracture at ~50°CN. Some minor coal lenses. Polished slickenslide surrfaces.	
			0.30										CM		Broken dark grey carb mud with some slickenslide surfaces	

CanAus Coal Ltd.
Large Diameter (6”) Core Description

Hole ID: LR14CC-14

Northing: 5501167.730 **UTM System:** NAD 83 **Hole Orientation:** Vertical **Property:** Loop Ridge

Seam: 14/15

Easting: 660790.061 **Hole Type:** 6 inch core **Total Depth:** 125.5m

Elevation: 1422.719 **Logged by:** M. Lennox and H. Evans **Date:** July 17-19, 2014

Run #	Driller's Coring Info		Recovered		Interval Corrected to Log			Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description
	from	to	m	%	from	to	Length (m)								
										NO COAL					**Cased to: 36.64m**
															Core Point: 72.5m
1	**72.50**	**73.06**	**0.56**	100											
			0.56										Carb. Mud		Easily broken Carbonaceouse Mudstone with some mineralization, very crumbly
2	**73.06**	**73.22**	**0.28**	175											
			0.28										claystone		intact, hard, fine grained claystone. Drill lost circulation.
3	**73.22**	**74.02**	**0.67**	83.75											
			0.67										claystone		claystone, grey streak, fairly hard with cemented silty areas. Very broken with sheared faces. Drillers changed bit.
4	**74.02**	**75.52**	**1.54**	102.6666667											
			0.23						70°				claystone		as above
			1.31										mudstone		mudstone, soft, brown streak, breaks easily. Recemnted silty areas.Joint fracture at 1m at 70° to core normal. Broken sheared material in fracture
5	**75.52**	**75.92**	**0.28**	70											
			0.28										claystone		claystone, grey/brown streak, soft and muddy area with sheared surfaces. Shaley.
6	**75.92**	**77.42**	**1.54**	102.6666667											
			0.20						70°				claystone		grey streak, very fine grained, fairly hard, broken with sheared surfaces. Contact with mudstone at 70°
			0.88										mudstone		brown streak, soft, breaks easily, shaley
			0.46										claystone		very broken by drillers (in shoe) same as above
7	**77.42**	**78.92**	**1.66**	110.6666667											
			1.66						50°				claystone		fine grained, intact claystone with shaley bits. Slickenside on fracture surfaces at Approx 50° to core normal. Mineralization.
8	**78.92**	**80.42**	**1.57**	104.6666667											
			1.20										claystone		claystone with abundant carbonaceous mudstone stringers and mineralization throughout. Solid and intact, grey/brown.
			0.25										Carb Mud		Carbonaceous mudstone, broken, softer, some mineralization. Brown
			0.12										claystone		claystone with carbonaceous mud throughout. Intact in shoe. Grey/brown
9	**80.42**	**81.82**	**1.54**	110											

Run #	Driller's Coring Info		Recovered		Interval Corrected to Log			Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description
	from	to	m	%	from	to	Length (m)								
			1.00										claystone		claystone with carbonaceous mudstone stringers throughout. Some slickenside on fractured surfaces
			0.20						50°				Carb Mud		friable Carbonaceous mudstone with abundant mineralized veins. Grey/brown
10	**81.82**	**83.32**	**1.67**	111.3333333											
			0.85						40°				claystone		claystone, grey, intact, finegrained. Some Carbonaceous mudstone stringers
			0.20										carb mud		fractured claystone and carbonaceous mudstone, fraible, darker than above
			0.62										Coal/carb mud		Carbonacouse mudstone with trace amounts of coal throughout. Easily broken
11	**83.32**	**84.82**	**1.14**	76											
			0.20										claystone		hard claystone, intact, fine grained, grey. Some softer mudstone pieces
			0.62										carb mud		soft, friable carbonaceous mudstone, easily broken into crumbly bits. Dark brown
			0.32										claystone		hard claystone. Intact, grey, fine graine, trace carbonaceous mudstone stringers
12	**84.82**	**86.32**	**1.63**	108.6666667											
			0.96										Carb mud		Carbonaceous mudstone, very broken and sticky (stuck on pipe wall) a lot of expansion
			0.67						50°				claystone		grey claystone/siltstone, intact, 50° fracture to core normal,very hard
13	**86.32**	**87.82**	**1.32**	88											
			0.90						70°				carb mud		Carbonaceous mudstone, friable, fractures throughout. Polished slickenside surfaces, brown streak
			0.05										carb mud		fractured zone. Very broken, same as above
			0.37										mud/ claystone		Carbonacouse mudstone, harder than above, some claystone throughout
14	**87.82**	**89.32**	**1.43**	95.33333333											
			1.43										Carb Mud		Carbonaceous mudstone. Intact, polished slickenside surfaces running parrallel to the core normal. Fractures along core axis
15	**89.32**	**90.82**	**1.54**	102.6666667											
			1.54										carb mud		easily broken, soft carbonaceous mudstone, some hard claystone >1cm and trace mineralization
16	**90.82**	**92.32**	**1.57**	104.6666667											
			1.57						80-90°				/clayston e		axis- first real sign that we are drilling down bedding,slickenside surfaces running perpindicular to to core axis. Some mineralization
17	**92.32**	**93.52**	**1.00**	83.33333333											
			1.00						70°				mudstone		mudstone, brown streak, soft, easily broken. Top of run is very broken, bedding viewed at 70° to core normal, very broken in shoe, sheared surfaces with slickenside
18	**93.52**	**94.72**	**1.68**	140											
			1.68										mudstone		same as above, bottom of run very broken by drillers in shoe. No distinct bedding, very sheared surfaces. Shaley
19	**94.72**	**96.22**	**1.50**	100											
			1.00										mudstone		mudstone, hard and recemented- calcite. Silty areas, breaks easily, soft, shaley, very sheared. High angle joint fracture near bottom of run. Nearly vertical

Run #	Driller's Coring Info		Recovered		Interval Corrected to Log			Lost (m)	BCN	Sample #	Sample Mass (kg)	Core Quality / RQD	Lith Code	Seam	Description
	from	to	m	%	from	to	Length (m)								
			0.50										claystone		50 cm harder claystone. Shaley
20	**96.22**	**97.82**	**1.70**	106.25											
			1.70						70°				mudstone		mudstone, brown streak, soft, easily broken, top and bottom of run very broken, joint fracture at 70°, shaley
21	**97.82**	**99.32**	**1.64**	109.3333333											
			1.64						60°				mudstone		mudstone, harder, shaley, brown streak, joint fracture at 60° to core normal
22	**99.32**	**100.82**	**1.50**	100											
			1.50						70°				mudstone		grey mudston with brown streak, hard, massive, silty, joint fracture at 45°, 70° sheared with slickesides- shoe not photographed
23	**100.82**	**102.32**	**1.50**	100											
			1.50						60°				carb mud/ mudstone		grey mudstone, same as above. Softer and muddier at top of run- 20cm. Carbonceouse material within. Joint fractures at 60°, 45°
24	**102.32**	**103.82**	**1.45**	96.66666667											
			1.45										/ carb mud		first 0.1 m grey mudstone as above, becomes much softer and shaley. Brown streak, coal clasts within- carbonaceous material, easily broken but intact, broken in shoe
25	**103.82**	**105.32**	**1.50**	100											
			1.50										/ carb mud		first 12 cm is very shaley, coal in fracture 36cm, 1mm thick. Mudstone is grey-brown very brokenin shoe. Medium hardness, some carbonaceous material- darker coulour and lighter weight
26	**105.32**	**106.82**	**1.34**	89.33333333											
			1.34										carb mud		carbonaceous mudstone, soft and shaley. Easily broken, brown, dark carbonaceous material, sheared with slickensides
27	**106.82**	**107.82**	**0.84**	84											
			0.84										carb mud/ mudstone		first 35 cm is carbonaceous. Soft, and brown. End of run is grey mudstone, hard, massive, sheared, slickensides
															drillers started hammering to E.O.H at 125.5. No coal was found

CanAus Coal Ltd.
HQ Core Description

Hole: LR14 HQ-01 **Page:** 1 of 3

Northing: 5502670 **Hole Orientation:** Azimuth 90 / Dip - 70 **Total Depth:** 208.78m

Easting: 661305 **Elevation:** **Seam:** 10 seam

UTM System: NAD 83 **Logged by:** Ian Furigay **Date:** 10-13 July 2014

Box #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	BCN	Sample #	Sample Mass (kg)	Sulphide %	Lith Code	Seam	Description	Graphic
	0	3.05													Cased to 3.05m, overburden	
1 to 2	3.05	8.30	5.25	100			5.25	0.00	80				SST		Core point at 3.05m below ground level, medium gray, slightly weatherered with weak limonite staining, occasional bedding dipping 80 TCA, weak carbonate veinlets	
2	8.30	8.53	0.20	86			0.20	0.03					CM		Dark gray with lenses of coal	
2 to 3	8.53	9.4	0.87	100			0.87	0.00	70				SST		Light to medium gray, medium grained, rare carbonate veiblets, minor coal lenses	
3	9.40	9.60	0.20	100			0.20	0.00					MS		Medium gray, with weak sandy texture, poorly to moderately laminated with carbonate veinlets	
3	9.60	11.55	1.80	92			1.80	0.15		0801	2	0.5	SST		Light to medium gray, medium grained , poorly laminated, with 3% carbonate veinlets, minor coal streaks near the botton, with pyrite as fracture filling	
3 to 4	11.55	13.60	2.05	100			2.05	0.00		0802	8.6		CO	12	Black, soft, clayey, dull 90%, brightness/shiny 10%, with rock parting of CM <10cm thick, moderately heavy due to clay content, gradational lower contact , DB	
4	13.6	15.4	1.52	84			1.52	0.28		0803	2		MS		Dark gray to black, broken with minor lenses <3cm thick of coal	
4	15.4	15.55	0.16	100			0.16	0					CM		Black, moderate to strong streaks of coal, broken, highly carbonaceous	
5 to 6	15.55	20.15	4.37	95			4.37	0.23					MS		Dark gray, massive with rare lenses of coal, moderate carbonate veinlets/stringers, gradational lower contact with pyrite in fractures	
6	20.15	20.4	0.25	100			0.25	0					CO		Black, clayey, dull 95%, minor slickensides, shiny 5%	
6	20.4	20.73	0.33	100			0.33	0.00					CM		Dark gray, with moderate coal streaks, highly carbonaceous	
6	20.73	20.9	0.17	100			0.17	0.00					CO		Black, soft, clayey, dull 95%, bright 5%, moderately heavy due to clay content, sharp lower contact	
6 to 8	20.9	25..20	4.26	99			4.26	0.04	70				MS		Medium to dark gray, broken, with minor interbedded SLT/SST, carbonate stringers/veinlets 4%,	
8	25.2	25.3	0.05	100			0.05	0.00					CO		Black, broken, highly friable, dull 80%, bright/shiny 20%, light weight	
8	25.3	27.75	2.45	100			2.45	0.00	70				MS		Medium to dar gray, bedding dipping 70' TCA, carbonate veinlets 4% , highly jointed	
8	27.75	28	0.25	100			0.25	0.00		0804	13.2		CO		Black, clayey, shiny/bright 80%, soft, highly friable	
8 to 9	28	31.25	2.75	84			2.75	0.50		0804			BN		Black, soft clayey with numerous thin partings of CM <5cm thick, with zones showing occasional slickensides, highly friable, dull 95%	
9 to 10	31.25	33.6	2.35	100			2.35	0.00	50-60				MS		Dark gray, bedding dipping 50 to 60 TCA, minor lam of SST/SLT, carb vnlts 3%	
10	33.6	33.82	0.22	100			0.22	0.00					BN		Dark gray to black, motslt dull, friable, clayey, soft	
10 to 11	33.82	35.6	1.78	100			1.78	0.00	50-60				MS		Medium to dark gray, with interbedded SST, bedding dipping 50 to 60 TCA, carbonate stringers 5%, weakly carbonaceous at the bottom	
11	35.6	36.3	0.70	100			0.70	0.00					CO		Coal with interbeded CM <2-3cm thick, mostly dull 90%, soft, clayey, highly friable	
11 to 12	36.3	39.35	2.95	96			2.95	0.10					MS		Dark gray, slightly carbonaceous from top to 37.0m containing minor coal streaks, highly jointed, occasional slickensides in fractures	

	Driller's Coring Info				Interval Corrected to Log						Sample Mass		Lith Code	Seam	Page 2 of 3	Graphic
			Recovered													
Box #	from	to	ft/m	%	from	to	Length (m)	Lost (m)	BCN	Sample #	(kg)	Sulphide %			Description	
12 to 14	39.35	46.65	7.30	100			7.30	0.00	40-50				SST		Light to medium gray, fine to medium grained, occasional bedding dipping 40 to 50 TCA, occasiona thin laminations of MS/SLT, displays normal graded bedding fine to medium grained younging uphole, carbonate stringers 5%, shows calcite crystals in fractures, truncated bedding at 42.30-42.40m	
14 to 19	46.65	62	15.35	100			15.35	0.00	40-50			0.5	SHL		Medium gray, SHL with thin interbedded laminations of SST, bedding at 40 to 50 degrees from core axis, carbonate veinlets 5%, groundmass weakly carbonaceous, rare laminations of sandstone, shows coincoidal smooth fractures, weak pyrite as fracture filling	
19 to 20	62	64.75	2.75	100			2.75	0.00	50				SST		Medium gray, fine to medium grained with thin laminations of MST, bedding mostly oriented 50 TCA normal graded bedding, carbonate veinlets 2%, groundmass slightly carbonaceous	
20	64.75	65.3	0.55	100			0.55	0.00		0805	1.8		MST	11	Dark gray, massive, moderately carbonaceous at the bottom, gradational lower contact	
20 to 21	65.3	66.75	1.00	68			1.45	0.45		0806	3.8		CO	11	Black, clayey, soft, dull 60% shiny 40%, highly friable, core loss of 0.45cm, pyrite in fractures	
21	66.75	68.2	1.30	89			1.45	0.10		0807	10.0	0.5	CM	11	Black, mostly dull color, with moderate to strong cleats of coal(rock parting), weak disseminated pyrite	
21 to 22	68.2	70.3	2.00	95			2.10	0.10		0808	5.8	0.7	CO	11	Black, shiny 80%, highly friable with clayey sections, light weight, pyrite as disseminated	
22	70.3	71.3	1.00	100			1.00	0.00		0809	5.8		CM	11	Dark gray to black with moderate to strong lenses of coal 2-3cm thick, mostly dull color	
22 to 23	71.3	74.8	3.50	100			3.50	0.00	50			0.1	MST		Medium to dark gray with minor lenses of coal <3cm thick, carbonaceous groundmass, occasiona bedding dipping 50 TCA, rare thin laminations of SST, trace of pyrite in fractures	
23	74.8	75.25	0.45	100			0.45	0.00					CM		Medium gray to black with strong cleats of CO / BN, gradational lower contact	
23	75.25	75.85	0.60	100			0.60	0.00					MST		Dark gray, massive with carbonate veinlets at the botom, carbonaceous groundmas	
23 to 24	75.85	77.65	1.80	100			1.80	0.00				0.1	SST		Medium gray, fine to medium grained, minor MST beds dipping 45 TCA, carbonaceous groundmass carbonate veinlets 3%, trace of pyrite in fractures	
24 to 25	77.65	81.4	3.75	100			3.75	0.00					MST		Medium to dark gray, massive, slightly carbonaceous groundmass, gradational lower contact,	
25 to 28	81.4	90.65	9.25	100			9.25	0.00	40-50			0.1	SST		Light to medium gray, fine to medium grained, with occasional hairline size thin laminations of MST carbonate veinlets 4%, bedding mostly oriented 40 to 50 TCA, displays normal graded bedding fine to caorse grained texture, tarce of pyrite mostly in fractures	
28 to 34	90.65	109	18.35	100			18.35	0.00	70-80			1	SHL		Light to medium gray, exhibits normal graded bedding younging uphole (fine to coarse grained), bedding oriented 70-80 TCA, CM at 95.15-95.25m, carbonate veinlets 2%, rare laminations of MST/SST <1cm thick, groundmass slightly carbonaceous, pyrite 1% mostly in fractures	
34 to 35	109	112.6	3.60	100			3.60	0.00	50			0.5	MST		Medium to dark gray, generally massive with rare bedding oriented 50 TCA, shear zone at 109.35 to 109.65m, carbonate veinlets 2%, groundmass slightly carbonaceous, calcite veinlets in fractures, weak disseminated pyrite	
35	112.6	113.5	0.80	88			0.80	0.10	60			0.5	CMST		Dark gray, shows strong coal streaks, bedded oriented 60 TCA, carbonate veinlets <1%, weak disseminated pyrite 0.5%	
35	113.5	114.7	1.20	100			1.20	0.00	60-70			0.1	SST		Medium gray, shows occasional thin laminations of MST, moderately bedded oriented 60-70 TCA, minor thin wavy beds, carbonate veinlets 2%, groundmass carbonaceous, trace of pyrite in fractures	
35 to 37	114.7	118.5	3.80	100			3.80	0.00	50-60			0.1	MST		Medium to dark gray, minor bedding dipping 50-60 TCA, shear zone"rubble" at 116.40-116.90m, partly brecciated at 117.30-117.50m, carbonate veinlets 1%, gradational lower contact, trace of pyrite mostly in fractures	
37	118.5	119.85	1.35	100			1.35	0.00	50-60			0.1	CMST		Dark gray, highly fractured with moderate straks of coal, highly carbonaceous with weak carbonate veinlets, occasional slickensides, trace of pyrite in fractures	
37 to 39	119.85	124.5	4.65	100			4.65	0.00	50-60	0810	1.6	1	MST	10	Medium to dark gray, generally massive with rare bedding dipping 50-60 TCA, minor thin mm size laminations of SLT/SST, carbonate veinlets 2%, slightly carbonaceous at the bottom, weak pyrite 1% as fracture filling	
39 to 40	124.5	130.6	5.90	96			5.90	0.10		0811	21.4		CO	10	Black, shiny/bright 80%, highly fraible with polished fractured surface, with occasional clayey sections, light weight, gradational lower contact	
40 to 41	130.6	131.1	0.50	100			0.50	0.00		0812	1.6		BN	10	Black, dull 90%, moderately heavy with clayey sectior	
40 to 41	131.1	131.65	0.55	100			0.55	0.00		0813	2		CO	10	Black, soft, clayey, generally dull color 70% with shiny/bright coal 30%, moderately heavy due to clay content, cleated and fractured core	
41	131.65	132.35	1.25	100			1.25	0.00		0814	5.2		CMST	10	Dark gray, moderate to strong lenses of coal, moderately heavy, dull 100%, gradational lower contact	
41 to 45	132.35	147.25	14.90	100			14.90	0.00	50-60				SST		Light to medium gray, fine to medium grained, with occasional thin mm size laminations of SLT/MST foliated at 136.0 to 136.40m oriented almost parallel to core axis, bedding mostly oriented 50 -60 TCA, carbonate veinlets 3%, shear zone at 142.50-142.60m and at 142.90 to 143.0m, displays normal graded bedding, pyrite <1% mostly in fractures	
45 to 46	147.25	148.4	1.15	100			1.15	0.00	20-25			0.1	SLT		Medium gray with interbedded MST, low angle bedding 20-25 TCA, gradational lower contact, carbonate veinlets 3%, moderately to well indurated, trace of pyrite in fractures	
46 to 48	148.4	154.6	6.20	100			6.20	0.00	50			0.1	MST		Dark gray, generally massive with rare bedding dipping 50 TCA, occasional coal streaks, slightly carbonaceous at the bottomcarbonate veinlets 3%, shear zone from 149.60-150.26m with elongated fragments, trace of pyrite mostly in fractures	
48	154.6	154.85	0.25	100			0.25	0.00		0815	5.2		CO		Black, soft, clayey, mostly dull color 95%	

	Driller's Coring Info				Interval Corrected to Log						Sample Mass		Lith Code	Seam	Page __3__ of _3__	Graphic
			Recovered													
Box #	from	to	ft/m	%	from	to	Length (m)	Lost (m)	BCN	Sample #	(kg)	Sulphide %			Description	
48	154.85	155.0	0.15	100			0.15	0.00		0815			CMST		Medium to dark gray, shows moderate coal streaks, gradational lower contact, moderately heavy, dull color 95%	
48	155	155.6	0.60	100			0.60	0.00		0815			CO		Black, soft, clayey, dull color 95%, moderately heavy due to clay content	
48	155.6	156	0.40	100			0.40	0.00					CMST		Dark gray, clayey, dull color, soft with polished fracture surface, moderate to strong streaks of coal, highly carbonaceous	
48 to 49	156	160.1	4.10	100			4.10	0.00					MST		Dark gray, shear zone at 157.10-157.88m, carbonate veinlets 2%, gradational lower contact	
49 to 53	160.1	171.8	11.70	100			11.70	0.00	50-60				SST		Medium to dark gray, with interbedded thin mm size laminations of MST/SLT, heavy disseminated pyrite from 167.10 to 171.80m, bedding mostly oriented 50-60 TCA, brecciated texture from 163.0 to bottom, carbonate veinlets 2%, groundmass slightly carbonaceous, pyrite 2%, shear zone from 166.55 to 167.02m	
53 to 54	171.8	1`72.50	0.60	100			0.60	0.00				1	MST		Dark gray, massive with weak carbonate veinlets, weakly carbonaceous at the bottom, pyrite 1% as disseminated	
54	172.5	173.15	0.65	100			0.65	0.00					CMST		Dark gray to black, with narrow interbedded coal beds 2-3cm thick, dull color, partly clayey	
54	173.15	174.3	1.15	100			1.15	0.00					MST		Medium to dark gray, massive with minor lenses of coal 1-2cm thick, carbonate veinlets 1%, slightly carbonaceous at the bottom	
54	174.3	174.9	0.60	100			0.60	0.00		0816	2.8		CO		Black, shiny/bright 80%, dull color 20%, light weight, with polished fracture	
54 to 55	174.9	175.3	0.40	100			0.80	0.00		0817	2.6		BN		Dark gray to black, mostly dull color 95%, with soft clayey section	
55	175.3	176.95	1.65	100			1.65	0.00					CMST		Medium to dark gray with moderate interbedded coal beds 2-3cm thick, dull color 90%, coal beds clayey	
55 to 56	176.95	179.5	2.55	100			2.55	0.00	50			1	SST		Light to medium gray, with interbedded MST/SLT/SHL, muddy SST, bedding mostly dipping 50 TCA carbonate veinlets 3%, pyrite 1% as disseminated and fracture filling	
56	179.5	179.75	0.25	100			0.25	0.00					CO		Black, shiny/bright 80%, broken, highly friable, sharp lower contac	
56	179.75	180.05	0.30	100			0.30	0.00					MST		Medium gray, interbedded MST/SST, lower contact sharp/unconformity, carbonate veinlets 1%	
56 to 65	180.05	208.78	28.73	100			28.73	0.00					LMST		Light gray, massive, occasional vuggy texture probably formed by leaching of calcite/sulphides strong fracturing and clayey from top to 83.0m, more coherent/competent from 83.0 to bottom, no visible sulphide mineralisation, EOH = 208.78m	
EOH																

Depth From (m)	Depth To (m)	Type	Description / Comments
109.10	109.89	FLT	Shear zone, elongated rock fragments, closely spaced parellel to bedding, minimal clay, minor reduction in intact strength
111.60	112.16	FLT	Shear zone. Elongate and thinly fragments, closely spaced fractures parallel to bedding, no clay, minor reduction in strength. Slickensided
112.70	113.68	FLT	Shear zone. Elongate and thinly fragments, closely spaced fractures parallel to bedding, no clay, minor reduction in strength. Slickensided
142.54	143.64	FLT	8 cm Shear Zone. Ehinly aligned rock fragments, no clay, Slickensided shear planes.
143.64	148.74	FLT	Shear zone. Elongate and thinly fragments, closely spaced fractures parallel to bedding. Slickensided shear planes.
148.74	150.26	FLT	Shear zone. Elongate and thinly fragments, closely spaced fractures parallel to bedding. Slickensided shear planes.
150.26	157.88	FLT	Shear zone, intact rock appears to be similar in strength to surrounding rock, closed spaced fractures, some slickensided surfaces
157.88	166.75	FLT	Shear zone, intact rock appears to be similar in strength to surrounding rock, closed spaced fractures, some slickensided surfaces

CanAus Coal Ltd.
HQ Core Description

Hole: LR14 HQ-04

Page: 1 **of** 4

Northing: 5502120

Hole Orientation: Azimuth 045 / Dip - 70

Total Depth: 275.22m

Easting: 661300 **Elevation:**

Seam: 10 seam

UTM System: NAD 83

Logged by: Ian Furigay

Date : 13-17 July 2014

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Sulphide %	Lith Code	Seam		Graphic
			Recovered													
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	BCN	Sample #	(kg)				Description	
1	0	4.75													Casing, no core sample	
1	4.75	5.48	0.70	95									OVB		Overburden, glacial till/gravel, pebble size fragments of SST/SLT	
1 to 2	5.48	10.85	5.37	100					60-70			0.1	SST		Light gray, unaltered, slightly weathered, moderately bedded dipping 60 to 70 TCA, fine to medium grained, carbonate veinlets 2%, groundmass weakly carbonaceous, trace of pyrite in fractures	
2 to 3	10.85	11.9	1.05	100					40			0.1	SHL		Shear / fault zone, medium gray, clayey fault gouge with angular fragments, lower contact is 40 TCA, fault direction is almost parallel to bedding, specks of pyrite	
3 to 8	11.90	26.75	14.85	100					70-80			0.5	SST		Medium gray, fine to medium grained, well bedded oriented 70 to 80 TCA, shear zone at 12.45-16.05m, 16.15-16.35m and at 23.40-23.50m, occasional thin mm size laminations of MST/SLT, carbonate veinlets 2%, groundmass slightly carbonaceous, weak disseminated pyrite <1%	
8 to 11	26.75	36.70	9.95	100					60-70			0.1	SHL		Medium to dark gray, with interbedded narrow SST beds, bedding orientation at 60 -70 TCA, carbonate veinlets 3%, gradational lower contact, trace of pyrite in fractures	
11	36.70	37.40	0.70	100									MST		Dark gray, massive with weak carbonate veinlets, slightly carbonaceous at the bottom, no visible sulphide mineralisation	
11	37.4	38.15	0.75	100						0818	5.0		BN		Black, mostly dull color 95%, soft clayey with CMST parting, massive intact core, sharp lower contact	
12 to 13	38.15	41.6	3.45	100					60			0.5	SST		Shear / fault zone from 38.30-41.30m showing angular fragments with minor clay gouge, carbonate veinlets 2%, , shear zone lower contact is 60 TCA, sharp lower contact, pyrite <1%	
13	41.6	42.4	0.70	87									CMST		Dark gray to black with MST parting, soft clayey, moderate coal streaks, gradational lower contact, MST parting shows minor carbonate veinlets	
13	42.4	43.45	1.05	100					70				MST		Dark gray with interbedded SST, bedding oriented 70 TCA, carbonate veinlets 1%, slightly carbonaceous at the bottom	
13	43.45	43.6	0.10	66									CO		Black, mostly dull color 90%, soft, clayey	
13 to 14	43.6	44.4	0.80	100									CMST		Dark gray to black with moderate coal streaks and irregular lenses, carbonate veinlets 2%, gradational lower contact, shear/fault at 43.90-44.40m	
14	44.4	44.8	0.40	100					60-70			0.1	MST		Medium to dark gray, minor thin beds of SST dipping 60-70 TCA, trace of pyrite in fractures	
14	44.8	45.25	45.00	100					70			0.1	SST		Light to medium grained, fine to medium grained, well bedded dipping 70 TCA, displays norma graded bedding-younging uphole (fine to medium grained-coarse grained), carbonate veinlets 1%, specks of pyrite in fractures	
14 to 15	45.25	47.55	2.30	100					70-80			0.1	MST		Dark gray with interbedded SST, moderately bedded oriented 70 to 80 TCA, narrow fault/shear at 47.20-47.30m, carbonate veinlets 2%, trace of pyrite in fractures	
15	47.55	47.65	0.10	100						0819	0.6		CMST		Dark gray to black, highly carbonaceous with strong coal streaks	
15	47.65	47.95	0.30	100						0820	2.0		CO		Black, soft, clayey, highly friable, shiny/bright 70%, dull 30%	
15	47.95	48.45	0.50	100						0820			CMST		Dark gray, soft clayey with strong shiny/bright coal lenses, with MST parting	
15	48.45	48.77	0.00	0									CL		Core loss	
15	48.77	49.1	0.33	100						0821	4.2		CMST		Dark gray with strong coal streaks, MST parting 2-3cm thick, gradational lower contact	
15 to 18	49.1	58.3	9.20	100					70-80			0.1	MST		Medium to dark gray, minor thin mm size laminations of SST, bedding oriented 70-80 TCA, most par are massive with rare bedding dipping 70-80 TCA, minor coal lenses 1-2cm thick from 49.45-49.55m, shear/fault zone from 49.95-50.29m, carbonate veinlets 2%, specks of pyrite in fractures	
18 to 19	58.3	62	3.70	100					60-70			0.1	SST		Light to medium gray, fine to medium grained, moderately bedded with beds mostly dipping 60-70 TCA, minor thin laminations of MST, carbonate veinlets 1%, shear zone at 61.40-61.57m, trace of pyrite in fractures	

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Sulphide %	Lith Code	Seam	Page __2__ of _4____	Graphic
			Recovered													
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	BCN	Sample #	(kg)				Description	
19 to 20	62	64.10	2.10	100					60-70				SHL		Medium gray, moderately bedded with 1-2cm thick of MST beds, shear zone at 62.95-63.10m, bedding at 60-70 TCA, carbonate veinlets 1%	
20	64.1	65.3	1.20	100					70-80			0.1	SST		Light gray, fine to medium grained, well bedded mostly oriented 70-80 TCA, sharp lower contact, carbonate veinlets 1%, specks of pyrite mostly in fractures	
20 to 23	65.3	73.8	8.50	100					80				MST		Medium to dark gray, generally massive with rare SST bedding dipping 80 TCA, weakly carbonaceous at the bottom, carbonate veinlets <1%	
23	73.8	74.1	0.30	100						0822	1.0		CMST		Dark gray, massive, light weight, dull 100%, gradational lower contact	
23	74.1	74.65	0.55	100						0823	2.0		CO		Black, broken, highly friable, shiny/bright 90% with polished fracture surface	
23	74.65	75.55	0.90	100						0824	5.8		CMST		Dark gray, massive with moderate to strong coal streaks, highly carbonaceous	
23 to 24	75.55	76.8	1.15	92						0825	4.8		CO		Black, soft and clayey, shiny/bright 70%, dull color 30%, highly friable, mostly broken	
24	76.8	77.2	0.40	100						0826	3.2		CMST		Dark gray, massive, highly carbonaceouswith coal lenses, partly massive with clayey sections, gradational lower contact	
24	77.2	77.82	0.00	0									CL		Core loss 0.62m	
24	77.82	79.55	1.73	100						0827	7.2		CO		Black, soft, clayey dull 60% shiny/bright 40%, highly friable	
24	79.55	79.8	0.00	0									CL		Core loss 0.25m	
24 to 25	79.8	80.16	0.36	100						0828	1.6		CMST		Dark gray with strong thin 1-2cm thick of coal beds, highly carbonaceous, gradational lower contact	
25	80.16	81.3	1.14	100									MST		Medium to dark gray, with occasional thin beds 1-2cm thick of coal, generally massive with gradational lower contact, weak carbonate veinlets <1%	
25	81.3	81.5	0.20	100									CMST		Dark gray to black with strong coal streaks, clayey, soft coal interbeds	
25	81.5	82.35	0.85	100								0.1	MST		Medium to dark gray, massive, gradational lower contact, weak carbonate veinlets <1%, trace of pyrite	
25	82.35	82.55	0.20	100									CO		Black, highly fractured, friable with 3cm thick of MST parting	
25 to 26	82.55	84.3	1.75	100					70				MST		Dark gray with minor interbeds of fine grained SST, bedding at 70 TCA, rare carbonate veinlets	
26 to 27	84.3	87.15	2.85	100					70			0.1	SST		Light to medium gray, fine to medium grained, well bedded dipping 70 TCA, thin mm size laminations of MST, strong carbonate veinlets from 86.60-87.10m, trace of pyrite in fractures	
27 to 29	87.15	94.25	7.10	100					60			1	SHL		Light to medium gray, with occasional thin laminations of MST, bedding oriented 60 TCA, shear/fault at 89.30 to 89.60m, carbonate veinlets 2%, pyrite as frac filling	
29 to 30	94.25	98	3.75	100					70			0.8	MST		Medium gray, shear/fault zone at 95.90 to 96.50m with highly angular fragments, generally massive with very rare bedding dipping 70 TCA, carbonate veinlets 2%, pyrite in fractures	
30 to 31	98	100.95	2.95	100								0.1	SHL		occasional thin wavy beds of MST/SST, carbonate veinlets 2%, trace of pyrite in fractures, sharp lower contact	
31	100.95	101.3	0.35	100					45				SST		Light gray, fine to medium grained, folded and foliated with fold axis at 45 TCA, strong carbonate stringers, sharp lower contact	
31 to 33	101.3	105	3.50	94					70			0.1	SHL		Medium gray, shear/fault zone at 103.20 to 104.50m with clay fault gouge, occasional bedding dipping 70 TCA, carbonate veinlets/stringers 2%, trace of pyrite in fractures, CL = 0.20m	
33 to 34	105	110.65	5.65	100					70			0.1	MST		Medium gray, generally massive with rare bedding of SHL dipping 70 TCA, narrow shear zone at 110.25 to 110.45m, rare carbonate veinlets <1%, trace of pyrite in fractures	
34 to 37	110.65	118.3	7.65	100					60-70			0.1	SHL		Medium gray with interbedded SST/MST (mm size), bedding oriented 60 - 70 TCA, rare eye lenses of mgr SST, carbonate stringers 2%, trace of pyrite in fractures	
37 to 38	118.3	121.25	2.95	100					60-70				MST		Dark gray, massive, highly jointed with norrow shearing at 120.60-120.85m with fracture spacing of about 1-2cm, carbonate veinlets 2%, weak carbonates in groundmass, gradational lower contact, trace of pyrite	
38	121.25	121.6	0.35	100								0.1	SST		Light to medium gray, medium grained, well bedded dipping 80 TCA, with interbedded thin mm size laminations of MST, carbonate stringers 2%	
38 to 40	121.6	128.15	6.55	100								0.1	SHL		Medium to dark gray, generally massive with minor interbedded MST(<1cm thick), shear zone at 121.70-122.25m, very gradational lower contact, weak carbonate veinlets <1%, trace of pyrite	
40 to 41	128.15	132.45	4.00	93					60-70			0.1	MST		oriented 60-70 TCA, rare carbonate stringers/veinlets, slightly carbonaceous at the bottom, gradational lower contact, trace of pyrite mostly in fractures	

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Sulphide %	Lith Code	Seam	Page 3 of 4	Graphic
			Recovered													
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	BCN	Sample #	(kg)				Description	
41 to 42	132.45	132.95	0.50	100					60				CMST		Mostly dull / black 95%, with moderate to strong coal streaks and lenses, gradational lower contact, bedding at 60 TCA	
42 to 46	132.95	144.9	11.95	100								0.1	MST		Medium gray, highly sheared/faulted with clay gouge at 133.90-134.30m, 136.35-137.0m, 137.75-137.80m, 138.50-139.40m, 141.35-142.10m and at 142.80-143.55m, gradational lower contact, with polished fracture surface, trace of pyrite in fractures	
46	144.9	145.08	0.18	100									CO		Black-dull colored 90%, clayey, softwith minor shiny/bright coal	
46	145.08	145.5	0.42	100						0829	2.4		CMST		Medium to dark gray with moderate to strong coal streaks, with soft/clayey sections	
46 to 47	145.5	151.49	4.73	78						0830	16.8		CO		Black, sof, clayey with occasional intact light weight coal, general density is moderately heavy due to clay content, bright/shiny 60%, dull color 40%, shows 5-8cm thick of BN parting, gradational lower contact, CL=1.26m	
47	151.49	151.8	0.31	100					60	0831	2.4		CMST		Dark gray with strong coal lenses/streaks, highly carbonaceous, bedding at 60 TCA	
47	151.8	152.05	0.25	100					60				MST		Medium to dark gray, massive with minor coal streaks, gradational lower contact	
47	152.05	152.2	0.15	100									CO		Black, highly friable, broken, shiny/bright 80%	
47 to 48	152.2	152.65	0.45	100					50				MST		Dark gray, generall massive with minor coal streaks, bedding at 50 TCA	
48	152.65	153.25	0.60	100					60-70				CMST		Dark gray to black, dull 90% with moderate thin beds of CO dipping 60 -70 TCA, highly carbonaceous, gradational lower contact	
48	153.25	153.9	0.60	92					50				MST		Dark gray with occasional thin lenses <1cm thick of coal, bedding at 50 TCA, rare carbonate veinlets	
48	153.9	154.37	0.47	100									CMST		Dark gray to black with interbbed thin coal beds(<1cm thick), broken and highly friable, gradational lower contact	
48	154.37	155.1	0.73	100									MST		Medium to dark gray, generally massive with rare beds of SHL, gradational lower contact	
48 to 50	155.1	158.45	3.35	100					60-70				SHL		Medium gray, with interbedded MST <1cm thick, bedding oriented 60-70 TCA, carbonate veinlets <1%, gradational lower contact	
50 to 54	158.45	171.4	12.95	100					60-70			1	SST		Light to medium gray, medium to coarse grained, highly fractured with coal lenses/beds mm size thick at 161.0-161.75m, 162.45-163.70m and at 168.70-167.25m, bedding at 60 to 70 TCA, carbonate veinlets <1%, pyrite 1% as disseminated and fracture filling - dirty SST	
54	171.4	173.12	1.72	100								1.5	CGL		Light gray, massive, fragmental with pebbly size subangular to subrounded fragments of SST/SLT/MST, fragments 95% total rock volume, moderate pyrite as disseminated and fracture filling 2-3%, sharp lower contact	
54	173.12	173.5	0.38	100									CO		Black, sof, clayey, mostly dull 80%, partly shiny/bright, highly friable	
54 to 56	173.5	177.9	3.88	88									MST		Dark gray, massive with very rare hairline size laminations of coal, gradational lower contact, CL=0.52m	
56	177.9	178.15	0.25	100									CO		Black, soft, clayey, mostly dull 95%, gradational lower contact	
56	178.15	178.5	0.35	100									MST		Dark gray, massive, with rare thin laminations of coal <1cm thick	
56	178.5	181.3	2.31	82					70			0.1	CMST		Dark gray to black with interbedded soft, clayey coal 2-3cm thick, bedding at 70 TCA, highly fractured, friable, trace of pyrite in fractures, CL = 0.49m	
56 to 57	181.3	182.55	1.25	100									MST		Medium to dark gray, massive, with rare thin laminations of coal<1cm thick, gradational lower contact	
57	182.55	183.75	1.20	100								0.1	SHL		Medium gray, fine grained with tiny silt particles, carbonate stringers <1%, trace of pyrite	
57 to 58	183.75	185.6	1.85	100					50				SST		Light gray, fine to medium grained, well bedded dipping 50 TCA, rare thin mm size laminations of coal, dirty SST, gradational lower contact	
58 to 59	185.6	189.8	4.20	100					50			0.1	SHL		Medium gray, moderately bedded with occasional thin beds <1cm thick of SST, bedding dipping 50 TCA, carbonate veinlets <1%, trace of pyrite in fractures	
59 to 60	189.8	190.7	0.90	100									MST		Dark gray, massive, slightly fractured, gradational lower contact	
60	190.7	192.45	1.75	100					40-50			0.1	SHL		Medium gray, moderately bedded diping 40 to 50 TCA, shear zone at 192.05 to 192.25m, carbonate veinlets 1%, sharp lower contact, trace of pyrite in fractures	
60 to 61	192.45	193.85	1.40	100					50			0.1	SST		Light to medium gray, medium grained, well bedded dipping 50 TCA, shear zone at 192.60 to 193.05m mostly rubble zone, sharp lower contact, minor thin hairline size veinlets of SHL, trace of pyrite in fractures	

61 to 62	193.85	197.5	3.65	100					50				SHL		Medium gray with interbedded SST <2-3cm thick, 2cm coal beds at 196.59-196.61m, bedding oriented 50 TCA, rare carbonate in groundmass and veinlets, sharp lower contact
	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Sulphide %	Lith Code	Seam	Page _4___ of _4___
			Recovered												
Box #	from	to	ft/m	%	from	to	Length (m)	Lost (m)	BCN	Sample #	(kg)				Description
62	197.5	197.9	0.40	100					40-50				SST		Light to medium gray, fine to medium grained, bedding at 40 to 50 TCA, carbonate veinlets <1%, sharp lower contact
62	197.9	199.1	1.10	91					40				MST		Dark gray, generally massive with rare bedding dipping 40 TCA, weak carbonate veinlets and in groundmass, slightly carbonaceous at the bottom, gradational lower contact
62 to 63	199.1	199.4	0.30	100					30-40				CMST		Dark gray to black-dull 95%, with moderate coal streaks, highly carbonaceous, bedding at 30 to 40 TCA, gradational lower contact
63 to 69	199.4	222.85	21.75	93									CO	10	Black, soft, clayey, moderately defined bands of dull (60%) and bright(40%) material, highly friable, light mo derately heavy due to its clay content, with well polished fracture surface
69	222.85	224.1	1.25	100					70				MST		Medium gray, soft, clayey, fault parallel to bedding, sharp lower contact at 70 TCA
70 to 74	224.1	237.7	13.60	100									LMST		Light gray, massive with modetare calcite stringers/veinlets, highly jointed from 229.96 to 231.35m and at234.38 to 235.80m with joint oriented almost perpendicular to core axis
74 to 76	237.7	245.4	7.70	100					80				LMST		Muddy limestone with thin lam of carbonaceous mudstone, some joints are filled with carbonaceous sediments, calcite stringers 4%, , dirty limestone, bedding 80 TCA
76 to 86	245.4	275.22	29.82	100					70-80				LMST		Light gray, massive with rare bedding dipping 70-80 TCA, partly vuggy texture formed by leaching of carbonate materials, with highly localized breccia texture, highly fractured at 271.26-273.35m, rare carbonaceous sediments infilled in fractures, EOH = 275.22m
EOH															

Graphic

Depth From (m)	Depth To (m)	Type	Description / Comments
11.58	11.94	FLT	Shear Zone. Fracture intensity increases, elongated rock fragements, intact, with some clay infill
11.94	12.8	FLT	Shear Zone. Fracture intensity increases, elongated rock fragements, intact, intact rock strength similar to surrounding rock
12.8	13.5	FLT	Shear Zone. Fracture intensity increases, elongated rock fragements, intact, intact rock strength similar to surrounding rock
14.85	15.54	FLT	Shear Zone. Fracture intensity increases, elongated rock fragements, intact, intact rock strength similar to surrounding rock
15.54	16.15	FLT	Shear Zone. Fracture intensity increases, elongated rock fragements, intact, with some clay infill
16.15	18.78	FLT	Shear Zone. Sheared rock fragments, clay infill
18.78	38.86	FLT	Shear zone. Angular rock fragments, polished surfaces, clayey infill, some microfracturing in surrounding rock, appears to be sub parallel to bedding.
38.86	39.22	FLT	Shear zone. Angular rock fragments, polished surfaces, clayey infill, some microfracturing in surrounding rock, appears to be sub parallel to bedding.
39.22	40.23	FLT	Shear zone. Angular rock fragments, polished surfaces, clayey infill, some microfracturing in surrounding rock, appears to be sub parallel to bedding.
40.23	41.15	FLT	Shear zone. Angular rock fragments, polished surfaces, clayey infill, some microfracturing in surrounding rock, appears to be sub parallel to bedding.
96	96.46	FLT	Shear zone. Angular rock fragments, polished surfaces, slickensided surfaces
103.95	104.43	FLT	Shear zone. Angular rock fragments, polished surfaces, slickensided surfaces
104.43	104.63	FLT	Sheared and slickensided surfaces, rock distintergrated from drilling at started of core run
138	138.07	FLT	Shear zone, intact, clay infill. Thin elongated rock fragments. Insitu shear zone
161.54	162.45	FLT	Fault zone, microfractued rock, angular clasts of rock with some clay and carbonacous material.
222.85	223.1	FLT	Clayey zone, reduction in rock structure, parallel to bedding, above limestone unit, shearing of bedding surfaces
223.1	224.1	FLT	Clayey zone, reduction in rock structure, parallel to bedding, above limestone unit, shearing of bedding surfaces

HQ Core Description

Hole: LR14 HQ-05 **Page:** 1 of 4

Northing: 5501645 **Hole Orientation:** Azimuth 135 / Dip - 70 **Total Depth: 398.66m**

Easting: 661075 **Elevation:** **Seam:** 14, 13, 12, 10, 8

UTM System: NAD 83 **Logged by:** Ian Furigay **Date : 8-14, August 2014**

Box #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	Bedding (Alpha)	Sample #	Sample Mass (kg)	Sulphide %	Major Lith Code	Minor Lith Code	Seam	Description	Graphic
	0	5.20														Casing, no core samples	
1	5.20	8.55	2.08	62%									OVB			Light gray, pebble size subrounded fragments of SST/SHL set in sandy matrix-glacial till	
1	8.55	9.60	0.84	80%	6.36	6.98	0.62			860	2.4		CO			Black, soft clayey, bright/shiny 75% dull 25%, minor CMST parting 2-3cm thick, lower contact is broken, friable	
1 to 2	9.6	11.28	1.68	100%					75	861/862	1.2/1.2		SST			Light gray, fine to medium grained, moderately oxidized with limonite staining along fractures, poorly bedded, broken lower contact	
2	11.28	12.70	0.70	49%	11.52	12.32	0.80	0.10		863	2.4		CO		14	Black, soft, clayey, mostly dull with CMST parting	
2	12.70	13.55	0.53	62%						864	2.6		CMST			Dark gray to black, with moderate thin laminations of coal 1-2mm in size with minor SST beds, gradational lower contact	
2	13.55	14.32	0.77	100%									MST			Medium to dark gray, massive, slightly oxidized with limonite stains in fractures, rare coal lenses, sharp lower contact at 80 TCA	
3	14.32	16.00	1.68	100%					75				SST			Light to medium gray, fine to medium grained, moderately bedded with bedding oriented 75 TCA, slightly oxidized with limonite staining in fractures, minor carbonaceous sediments in fractures, gradational lower contact	
3	16.00	16.95	0.74	77%						865	1.8		MST	SST		Medium to dark gray with interbedded fine grained SST 1-2mm thick, moderately laminated with bedding at 65-70 TCA, gradational lower contact at 65 TCA	
3 to 4	16.95	17.98	1.03	100%	17.06	17.42	0.36			866	4.6		CO		13	Black, soft, clayey, shiny/bright 85% dull 15%, intact/solid core at the top, highly friable at the bottom	
4	17.98	18.45	0.15	31%	17.42	18.00	0.58	0.43		867	1.0		BC		13	Rock parting, black, generally dull 95%, moderately heavy, poor core recovery, highly broke	
4	18.45	20.73	2.07	90%	18.00	20.30	2.30	0.23		868	8.0		CO		13	Black, clayey, shiny/bright 90% dull 10%, with polished fracture surface, highly friable, light weight, gradational lower contact	
4 to 5	20.73	21.00	0.27	100%						869	1.6		MST			Medium to dark gray, partly sandy at the bottom, minor coal lenses, gradational lower contact	
5 to 17	21.00	56.90	35.59	99%					60-70			0.1	SST	MST		Light gray, fine to medium grained, shear/fault zones at 24.45-25.65m and at 37.10-37.50m, poorly to moderately bedded generally oriented 60 to 70 TCA, carbonate veinlets 2%, displays normal graded bedding(fine to coarse grained), trace of pyrite in fractures, gradational lower contact, base of oxidation at 40.23m depth, presence of minor thin laminations of MST persist from 55.40 to bottom	
17	56.90	57.25	0.35	100%					65-70			0.1	SHL	SST		Medium to dark gray with thin laminations of fine grained SST, highly laminated with bedding oriente 65-70 TCA, sharp lower contact at 80 TCA, trace of pyrite in fractures, moderately hard	
17 to 18	57.25	60.65	3.40	100%					60			1.0	SST	MST		Light to medium gray, dirty SST, containing thin laminations of MST/SHL (mm in size) moderatel laminated, carbonate veinlets 2%, sharp lower contact at 55 TCA, pyrite as fine grained disseminated and filling fractures, bedding 60 TCA	
18	60.65	61.60	0.95	100%					65				MST	SST		Medium gray, with interbedded SST beds 1-2mm in size, highly laminated with bedding oriented 65 TCA, sharp lower contact at 70 TCA, shows occasional polished fracture surface, moderately hard, carbonate veinlets 2%, no visible sulphide mineralisation	
18 to 20	61.60	67.00	5.40	100%					60-65			0.5	SST	MST		Light gray, "dirty SST" with interbedded thin MST beds 1-2cm thick, fine to medium grained, carbonaceous sediments at 63.95-64.0m, moderately bedded mostly dipping 60 to 65 TCA, carbonate veinlets 1% mostly in SST, sharp lower contact at 50 TCA, weak disseminated and fracture filling pyrite	
20 to 21	67.00	72.05	5.05	100%					70			0.5	MST	SST		Medium gray with interbedded fine grained SST (1-2mm in thick), highly laminated, bedding at 7 TCA, with occasional coal/carbonaceous sediments infilled in fractures, moderately indurated and hard rock, carbonate veinlets/stringers 1.5%, pyrite as fine grained disseminated and filling fractures sharp lower contact at 70 TCA	
21 to 22	72.05	74.80	2.75	100%					70			0.1	SST	MST		Light gray, fine to medium grained, highly laminated and well indurated hard rock, with interbedde MST 1-2mm thick, bedding dipping 70 TCA, competent/intact rock, carbonate veinlets 1%, trace of pyrite in fractures, sharp lower contact	
22 to 25	74.80	82.25	7.45	100%					65-70			0.1	MST	SST		Medium to dark gray, with interbedded SST <2cm in thick, well laminated with bedding oriented 65 70 TCA, highly indurated moderately hard rock, carbonate veinlets 2%, with occasional carbonaceous sediments infilled in fractures, sharp lower contact at 80 TCA, trace of pyrite in fractures	
25	82.25	82.80	0.55	100%						870	2.0		SST			Light gray, medium grained, clean SST, massive, competent hard rock, sharp lower contact at 75 TCA, no visible sulphide mineralisation	

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Sulphide %	Major Lith Code	Minor Lith Code	Seam	Page __2__ of __4__	Graphic
			Recovered														
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	Bedding (Alpha)	Sample #	(kg)					Description	
25	82.80	83.90	0.62	56%	82.62	83.72	1.10	0.48		871	3.4		CO		12	Black, mostly intact core, soft, partly clayey, highly friable and brittle, shiny/bright 90% dull 10%, sharp lower contact at 60 TCA	
25 to 29	83.90	97.75	13.85	100%					60-70	0872	1.6	1	SST	MST		occasional narrow MST beds at 93.05 to 93.50m, exhibits normal graded bedding from fine to coarse grained, rare carbonaceous sediments infilled in fractures, highly indurated hard rock,	
29	97.75	97.95	0.20	100%									BC			Black, generally dull with minor coal lenses, moderatly hard, heavy core, gradational lower contact	
29 to 30	97.95	98.60	0.65	100%									MST	CMST		Dark gray, massive, moderately indurated and hard rock, with rare lenses of CMST, gradational lower contact	
30	98.60	99.10	0.28	56%									CO			Black, shiny/bright 60% dull 40% with partings of CMST/BC, highly friable, soft partly clayey, weak rock, gradational lower contact at 60 TCA	
30	99.10	100.00	0.90	100%									MST	CMST		Dark gray to black, massive with rare lenses of CMST/CO, occasional polished fracture surface, moderately indurated and competent rock, gradational lower contact at 60 TCA	
30	100.00	100.10	0.10	100%									CO			Black, soft, clayey, friable, gradational lower contact	
30 to 31	100.10	102.25	1.57	73%									MST	CMST		Dark gray, generally massive with minor thin laminations of CMST, highly fractured, with several polised fracture surface, gradational lower contact	
31	102.25	103.02	0.53	68%									CMST	CO		Dark gray to black, clayey, soft weak rock, shows moderate thin laminations/lenses of coal, gradational lower contact, highly carbonaceous	
31	103.02	103.85	0.83	100%									MST	CO		Dark gray, generally massive with occasional lenses of coal, moderately indurated, hard rock, gradational lower contact, carbonate veinlets <1%	
31	103.85	104.10	0.25	100%									BC			Black, mostly dull 95%, broken, highly fraible with rare coal cleats, gradational lower contact at 65 TCA	
31	104.10	104.50	0.28	70%									CMST	CO		Dark gray, mostly dull with moderate lenses of coal, generally masive with sharp lower contact at 50 TCA	
31 to 32	104.50	106.90	2.40	100%					75			0.5	MST	SST		more sandy at the bottom, gradational lower contact, pyrite in fractures, moderately bedded, well indurated hard rock, rare carbonate veinlets, bedding at 75 TCA	
32 to 35	106.90	114.80	7.90	100%	114.18	114.48	0.30		50-60	0873	2.60	2	SST	MST		moderate to strong carbonaceous sediments/coal from 111.80 to 114.80m, shows graded bedding with fine to coarse grained texture, sharp lower contact at 75 TCA, carbonate veinlets <1%, pyrite	
35 to 37	114.80	123.55	6.04	69%	114.48	123.64	9.16	3.12		0874	20.40		CO		10	Black, shiny/bright 90% dull 10%, partly clayey, soft, occasional intact/solid core, polished fracture surface common, highly friable and brittle	
37	123.55	124.30	0.49	65%	123.64	124.14	0.50	0.01		0875	1.60		BC		10	Rock parting, black, generally dull 85%, moderately heavy with shiny/bright friable coal cleats/lenses	
37	124.30	124.75	0.32	42%	124.14	124.50	0.36	0.04		0876	2.60		CO		10	Black, soft, clayey, bright/shiny 90%, dull 10%, highly friable	
37	124.75	125.25	0.37	74%	124.50	125.34	0.84	0.47		0877	3.20		BC		10	Rock parting, black, generally dull 85% with coal cleats/lenses, soft, clayey	
37	125.25	125.80	0.24	43%	125.34	125.96	0.62	0.38		0878	1.00		CO		10	Black, soft, clayey, bright/shiny 80%, dull 20%, mostly broken core, highly fraible and crumbly	
37	125.80	126.15	0.20	71%	125.96	126.20	0.24	0.04		0879	1.80		BC		10	Rock parting, black, generally dull, intact core, slightly heavy	
37 to 38	126.15	132.00	3.15	53%	126.20	131.88	5.68	2.53		0880	12.00		CO		10	Black, shiny/bright 85%, dull 15%, soft, clayey, highly frianble, mostly broken coal with occasional polished fracture surface	
38 to 39	132.00	132.45	0.30	66%	131.88	132.40	0.52	0.22		0881	1.60		BC		10	Black, generally dull 90%, slightly heavy, intact/solid core with minor coal cleats	
39	132.45	135.90	1.77	51%	132.40	135.80	3.40	1.63		0882	5.40		CO		10	Black, soft/clayey, mostly broken coal, shiny/bright 80% dull 20%, broken core, friable and crumbly	
39 to 40	135.90	139.85	3.74	94%	135.80	136.10				0883	2.00	1	MST			Medium to dark gray, generally massive with moderate coal lenses/streaks from top to 136.80m, slightly carbonaceous with rare SST beds mostly at the bottom, gradational lower contact at 80 TCA	
40 to 47	139.85	160.70	20.85	100%					35-40			1.5	SST	MST		Light to medium gray, fine to medium grained, "Dirty SST" with interbedded MST beds 1-2mm thick, moderately bedded mostly dipping 35-40 TCA, occasional carbonaceous sediments infilled in fractures, moderately jointed, hard rock, carbonate veinlets 2%, pyrite as fine grained disseminated and filling fractures, sharp lower contact at 35 TCA	
47 to 49	160.70	167.05	6.35	100%					35-40			1	SHL	SST//MST		Medium gray, moderately laminated with SST/MST beds mostly oriented 35-40 TCA, SST beds <1cm thick, moderately indurated and hard rock, slightly carbonaceous, gradational lower contact, rare carbonate veinlets, pyrite as fine grained disseminated	
49 to 50	167.05	171.30	4.25	100%					45-50			0.5	SST	MST		Medium gray, "Dirty SST", poorly to moderately laminated with intercalated units of MST 1-2cm thick, minor carbonaceous sediments in fractures, well indurated, hard, competent rock, carbonate veinlets <1%, fine to medium grained, pyrite is weak as fine grained disseminated, slightly carbonaceous at 169.30 to 169.70m	

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Sulphide %	Major Lith Code	Minor Lith Code	Seam	Page __3__ of __4__	Graphic
			Recovered														
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	Bedding (Alpha)	Sample #	(kg)					Description	
50 to 52	171.30	177.60	6.30	100%					40			1.5	SST			Light to medium gray, fine to medium grained, "Clean SST", occasional carbonaceous sediments infilled in fractures, highly indurated, hard competent rock, moderately laminated, displays normal graded bedding - fine to coarse grained texture, sharp lower contact at 55 TCA, pyrite as fracture filling and disseminated	
52 to 55	177.60	184.10	6.50	100%					45-50			1	MST			Medium to dark gray, generally massive with rare bedding dipping 45 to 50 TCA, with zones showing slightly carbonaceous, moderately indurated, hard rock, carbonate veinlets <1%, gradational lower contact	
55	184.10	186.65	2.55	100%									CMST	CO		Dark gray to black, generally dull 95%, with moderate lenses/beds of coal <3cm thick, highly carbonaceous, shear zone from 184.30 to 184.85m, gradational lower contact	
55 to 57	185.65	190.15	6.05	100%								0.5	MST			Medium to dark gray, massive, slightly carbonaceous with minor lenses and fracture filling carbonaceous sediments, carbonate veinlets <1%, weak fracture filling pyrite	
57 to 62	190.15	206.75	16.34	98%					30-40			1.5	SLT	MST		Medium gray, moderately laminated with interbedded MST 1-2mm thick, shear/fault zones from 193.25-199.95m and at 200.75-201.75m, highly brecciated with pebble size subangular to subrounded fragments set in clay/gouge matrix, some zones are intact due to carbonate veinlets/stringers, slickensides common, rare carbonaceous sediments in fractures, carbonate veinlets/stringers 2%, pyrite as fine grained disseminated and filling fractures, gradational lower contact	
62 to 67	206.75	221.95	15.20	100%					35-40			1	MST	SLT		Medium gray, with interbedded SLT (<1cm thick), rubble/shear zones at 205.45-205.80m, 208.30-208.45m, 215.65-216.20m, and at 217.40-219.85m, bedding oriented 35 to 40 TCA, sharp lower contact at 35 TCA, occasional carbonaceous sediments in fractures at 211.40 to 215.0m, carbonate veinlets <2%, pyrite as fine grained disseminated and filling fractures	
67 to 68	221.95	224.60	2.65	100%					45			0.5	SST	MST		Light to medium gray, fine to medium grained, moderately laminated with interbedded MST 1-2mm thick, "Dirty SST", hairline size stringers/veinlets of carbonate 3%, minor carbonaceous sediments in fractures, weak disseminated fine grained pyrite	
68 to 69	224.60	227.20	2.60	100%					40	0884	2.4	1	SST			Light gray, fine to medium grained, "Clean SST", conglomeratic texture from 226.50 to 227.20m, bedding at 40 TCA, carbonate veinlets 2%, fine grained pyrite 1% as fracture filling, sharp lower contact at 85 TCA	
69	227.20	227.80	0.45	75%	227.04	227.68	0.64	0.19		0885	2.2		CO			Black, soft, clayey, shiny/bright 90% dull 10%, highly friable, mostly broken core	
69 to 70	227.80	229.18	1.38	100%					30	0886	2.8	0.1	CMST			Dark gray to black, with naroow beds/lenses of CO, bedding at 30 TCA, gradational lower contact at 45 TCA, soft to moderately hard, weak rock, trace of pyrite in fractures	
70	229.18	230.72	1.54	100%									MST			Medium gray, massive, carbonate veinlets <1%, no visible sulphide mineralisation, gradational lowe contact, very rare carbonaceous sediments in fractures	
70	230.72	231.05	0.33	100%									CMST			Dark gray, generally dull 95%, moderately heavy with lenses of coal, highly carbonaceous, gradational lower contact, soft to moderately hard, weak rock, no visible sulphide mineralisation	
70 to 71	231.05	234.30	3.25	100%					40			0.5	SLT	MST		Medium gray, interbedded MST 1-2mm thick, moderately bedded oriented 40 TCA, moderately to highly indurated, hard rock, carbonate veinlets/stringers 3%, gradational lower contact, weak fine grained disseminated pyrite	
71 to 74	234.30	241.50	7.20	100%					35-40			0.5	SST	SLT		Light to medium gray, fine grained with interbedded SLT 1-2mm thick, 'Dirty SST', moderately laminated with bedding dipping 35-40 TCA, sharp lower contact at 30 TCA, rare carbonaceous sediments in fractures, carbonate veinlets <1%, weak fine grained disseminated pyrite	
74 to 78	241.50	254.65	13.15	100%					30			0.1	SLT	MST		Medium to dark gray, poorly to moderately laminated, with occasional interbedded MST <1cm thick, partly carbonaceous with strong carbonaceous sediments in fractures, carbonate veinlets <1%, trace of pyrite in fractures, gradational lower contact	
78 to 79	254.65	257.00	2.35	100%					40				CMST	CO		Dark gray to black, with strong coal lenses/streaks, occasional bedding dipping 40 TCA, carbonate veinlets <1%, gradational lower contact	
79	257.00	259.65	2.65	100%								0.1	MST			Medium to dark gray, generally massive, soft, poorly indurated, weak rock, minor lenses of coal, gradational lower contac, slightly carbonaceous at the bottom, trace of pyrite in fractures	
79 to 80	259.65	261.20	1.55	100%									CMST	CO		Dark gray to black, generally dull 95% with moderate to strong lenses of coal, moderately heavy, partly clayey with rare interbeds of MST, gradational lower contact, no visible sulphide mineralisation	
80 to 82	261.20	270.10	8.18	91%					35-40			0.1	MST	CMST		Medium to dark gray, poorly to moderately laminated with CMST beds (<1cm thick), bedding at 35-40 TCA, shear/fault zone from 262.65 to 265.90m, mostly of intensely fractured MST (rubble zone) set in clay/gouge matrix, poorly indurated, weak rock, slickensides common, carbonate veinlets <1%, trace of pyrite in fractures	
82	270.10	271.90	1.59	88%									CMST			Dark gray to black, dull 90% with lenses of coal, highly fractured, poorly indurated, highly brittle, weak rock, gradational lower contact, no visible sulpide mineralisation	
82 to 85	271.90	278.55	6.51	97%					40			0.8	MST	SLT/CMST		Medium gray, moderately laminated with narrow beds of SLT/CMST, with rip up clast/fragments of CMST, bedding at 40 TCA, carbonate veinlets 1%, poorly to moderately indurated, weak rock, highly brittle, most fractures are filled with carbonates and CMST, pyrite as fine grained disseminated and fracture filling	
85 to 89	278.55	288.60	10.05	100%					40			1.5	SLT	MST		Medium gray, interbedded MST 1-2mm thick, shear/fault zone at 284.10 to 284.85m, occasional rip up clast/fragments of CMST, highly brittle, poorly to moderately indurated, weak rock, occasional polished fracture surface some filled with CMST/CO, bedding oriented 40 TCA, pyrite as fine grained disseminated	
89 to 90	288.60	291.20	2.60	100%					40			0.1	MST	CMST		Medium to dark gray, with minor laminations of CMST, poorly indurated, weak rock, brittle, carbonate veinlets/stringers <1%, rip up clast of CMST/CO, gradational lower contact, trace of pyrite in fractures	

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Sulphide %	Major Lith Code	Minor Lith Code	Seam	Page 4 of 4	Graphic
			Recovered														
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	Bedding (Alpha)	Sample #	(kg)					Description	
90 to 91	291.20	295.20	4.00	100%					35			0.1	SLT	MST		Medium gray, with interbedded MST (1-2mm thick), shows rip-up clast of CO/CMST, poorly indurated, weak rock, brittle, minor carbonaceous zones, CMST in fractures, carbonate veinlets/stringers <1%, trace of pyrite in fractures	
91	295.20	296.00	0.80	100%									CMST			Dark gray to black, dull 95% with strong lenses of coal, highly carbonaceous with strong rip up clast of CO, gradational lower contact	
91 to 92	296.00	298.75	2.75	100%					35-40			0.5	MST	CMST		Dark gray, with moderate lenses of CMST/CO, brittle, poorly induarted weak rock, carbonate veinlets <1%, partly carbonaceous mostly carbonaceous sediments infilled in fractures, gradational lower contact, pyrite as fine grained disseminated	
92	298.75	299.55	0.80	100%						887	2.4		CMST			Dark gray to black, dull 95%, heavy, soft, poorly indurated, weak rock, with strong coal lenses/streaks, gradational lower contact, highly carbonaceous from 299.14 to 299.50m	
92 to 93	299.55	300.85	0.79	60%	299.50	300.44	0.94	0.20		888	3.6		CO			Black, soft, clayey, shiny.bright 90% dull 10%, broken, highly friable, brittle, weak rock	
93	300.85	301.35	0.50	100%						889	2.8		MST			Medium to dark gray, massive, moderately indurated and hard rock, slightly carbonaceous at the top, gradational lower contact	
93 to 95	301.35	307.15	5.80	100%					35-40			0.5	SLT	MST		Light to medium gray, moderately bedded with thin laminations of MST (1-2mm thick), occasional rip up clast of carbonaceous sediments, rare laminations of fine grained SST, bedding mostly oriented 35 to 40 TCA, carbonate veinlets 2%, pyrite as fine grained disseminated	
95 to 98	307.15	315.75	8.60	100%					40			1	MST			Medium to dark gray, generally massive with rare laminations of fine grained SST, rare bedding dipping 40 TCA, minor carbonaceous sediments in fractures, sharp lower contact at 30 TCA, carbonate veinlets/stringers <2%, moderately indurated, hard, competent rock, pyrite occur as disseminated and filling fractures	
98 to 99	315.75	321.30	5.55	100%					45-50			2	SST	MST		Light to medium gray, "Dirty SST", with interbedded MST <2cm thick, moderately to well bedded with bedding mostly dipping 45-50 TCA, carbonaceous from 318.65 to 19.11m, sandy sections from 320.03 to 320.33m, minor rip up clast of CMST, carbonate veinlets 1%, moderately indurated, weak, highly brittle rock, pyrite as fine grained disseminated and fracture filling	
99 to 103	321.30	333.55	12.25	100%					65-70			2	SST			Light gray, "Clean SST", fine to medium grained, well laminated, shows normal graded bedding fine to medium grained texture, bedding mostly dipping 50 to 55 TCA, moderately to well indurated, hard rock, most fractures occurs along bedding plane, carbonaceous at 322.85 to 323.05m and at 330.60 to 331.10m, carbonate veinlets/stringers 1%, pyrite as diseminated and filling fractures	
104 to 105	333.55	337.80	4.25	100%					60-65			1	SLT	SST		Light to medium gray with interbedded SST laminations 1-2cm thick, bedding mostly oriented 60 tc 65 TCA, well indurated, hard rock, carbonate veinlets/stringers 2%, pyrite as fine grained disseminated	
105 to 107	337.80	343.80	6.00	100%					65-70			1	SST			Light gray, fine to medium grained, "Clean SST" with minor carbonaceous sediments infilled ii fractures, highly indurated, hard rock, occasional polished fracture surface, highly jointed usually breaks along bedding plane, carbonate veinlets 1% pyrite as disseminated and filling fractures, mino MST beds at the bottom, sharp lower contact at 75 TCA	
107 to 110	343.80	351.10	7.30	100%					75			0.5	MST			Medium todark gray, generally massive with rare bedding dipping 75 TCA, minor laminations of SLT carbonaceous from 350.70 to 350.95m, rare SST thin beds at the top (upper contact), carbonate veinlets <1%, weak fracture filling pyrite, gradational lower contact	
110 to 112	351.10	358.25	7.15	100%					70			1	SLT	SST		Medium gray, poorly to moderately laminated, occasional thin beds of SST (<1cm thick), bedding at 70 TCA, minor rip up clast of carbonaceous sediments, moderately indurated, medium hard, highly brittle, weak rock, carbonate veinlets/stringers 1%, pyrite as fine grained disseminated and filling fractures	
112 to 116	358.25	370.35	12.10	100%					60-70			1.5	SST	MST		Medium gray, fine to medium grained, with interbedded MST (<1cm thick), carbonaceous sediments in fractures common, rip up clasts/fragments of CMST, moderately indurated, medium hard, brittle weak rock, carbonate veinlets 2%, pyrite as fine grained disseminated and filling fractures	
116 to 117	370.35	373.97	3.62	100%					45-55	0890	2.2	1.5	SLT	MST		Light to medium gray with interbedded MST (1-2mm thick), partly carbonaceous with rip up clasts/fragments of CMST, gradational lower contact at 45 TCA, bedding mostly dipping 45 to 55 TCA, moderately indurated, brittle weak rock, carbonate veinlets 1%, pyrite as disseminated and fracture filling	
117	373.97	374.65	0.68	100%	374.02	374.48	0.46			0891	2.6		CO			Black, shiny/bright 80% dull 20%, moderately hard, mostly solid/intact rock, polished fracture surface common, highly friable and brittle	
117	374.65	375.10	0.45	100%	374.48	375.02	0.54	0.09		0892	2.8		CMST			Rock parting, medium to dark gray, with strong lenses/streaks of CO, partlyy sandy, moderately hard, solid/intact core	
117 to 118	375.10	376.55	1.45	100%	375.02	376.36	1.34			0893	5.2		CO			Black, shiny/bright 80% dull 20%, moderately hard, mostly solid/intact rock, polished fracture surface common, highly friable and brittle, sharp lower contact at 65 TCA	
118 to 125	376.55	398.66	22.11	100%						0894	1.8		LMST			White to light gray, massive with occasional calcite veinlets, occasional clay, highly indurated, hard competent rock, partly brecciated with rare carbonaceous sediments infilled in fractures, no visible sulphide mineralisation, EOH = 398.66m	
EOH																	

Depth From (m)	Depth To (m)	Type	Description / Comments
24.45	24.99	FLT	Fault/shear zone, angular rock fragments with minor sand/clay matrix
24.99	25.65	FLT	Fault/shear zone, angular rock fragments with minor sand/clay matrix
37.03	37.18	GO	Clay/fault gouge, pebbly size sub angular fragments set in caly matrix(mylonite)
37.18	37.5	GO	Clay/fault gouge, pebbly size sub angular fragments set in caly matrix(mylonite)
193.25	199.95	FLT	Fault/shear zone, SLT unit cut by narrow fault breccia, matrix to clasts supported breccia, angular to subrounded fragments set in clay
200.75	201.51	FLT	Fault/shear zone, SLT unit cut by narrow fault breccia, matrix to clasts supported breccia, angular to subrounded fragments set in clay
201.51	201.77	LC	Loss core at the bottom of fault/shear zone
205.45	205.8	FLT	Fault/shear zone, intensely fractured core, angular rock fragments
208.3	208.45	FLT	Fault/shear zone, angular rock fragments with minor sand/clay matrix
215.65	216.2	FLT	Fault/shear zone, angular rock fragments with minor sand/clay matrix
217.4	219.85	FLT	Fault/shear zone, rubble zone, intensely fractured core with narrow clay/fault gouge, fault gouge oriented almost parallel to core axis
262.65	265.9	FLT	Fault/shear zone, rubble zone, intensely fractured core with narrow clay/fault gouge matrix, low angle faulting
284.1	284.85	FLT	Fault/shear zone, rubble zone, intensely fractured core with narrow clay/fault gouge matrix, low angle faulting
EOH			

CanAus Coal Ltd.
HQ Core Description

Hole: LR14 HQ-08 **Page:** 1 of 2

Northing: 5501610.12 **Hole Orientation:** Azimuth 270 / Dip - 80 **Total Depth:** m

Easting: 660736.781 **Elevation:** 1351.88 **Seam:** 20 seam

UTM System: NAD 83 **Logged by:** Ian Furigay/Jaclyn Galbraith **Date :** 20-30 July 2014

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Sulphide %	Lith Code	Seam		Graphic
			Recovered													
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	BCN	Sample #	(kg)				Description	
	0	9.14	0.00												Casing, no core samples	
1 to 5	9.14	33.95	13.87	56									OVB		Khaki brown to dark brown, highly weathered and oxidized, soft, clayey, colluvial / till deposit, with pebble to cobble size subrounded fragments of silica-SST-MST set clay matrix/groundmass, moderate limonite staining	
5 to	33.95	38.50	4.14	90					60			0.1	SST		Khaki brown, highly weathered and oxidized SST, fine to medium grained, with sandy sections, bedding at 60 TCA, moderate limonite staining especially along fractures, trace of pyrite, base of weathering and oxidiation at 38.50m	
6 to 14	38.5	74.06	20.95	58					50-60			0.1	SST		Light to medium gray, fresh, fine to medium grained with sandy sections, bedding at 50 to 60 TCA,, shear zone at 54.51-55.50m, 61.10-62.05m and at 71.61-73.76m depth, no visible sulphide mineralisation, sharp lower contact	
14	74.06	74.85	0.23	29									CO		Balck, mostly dull 95%, clayey, soft, with highly friable sections	
14	74.85	75.50	0.65	100									CMST		Dark gray to black with moderate coal lenses/streaks of coal, highly carbonaceous, soft, clayey, gradational lower contact	
14 to 15	75.50	78.00	1.41	56					70-80				SLT		Medium to dark gray, highly bedded oriented 70 to 80 TCA, with minor thin laminations of SST <1cm thick, gradational lower contact, no visible sulphide mineralisation, calcite veinlets 1.5%	
15	78	79.5	1.18	78					80			0.1	MST		Dark gray, moderately bedded dipping 80 TCA, with thin laminations of SST, calcite veinlets <1%, gradational lower cpontact, trace of pyrite	
15	79.5	79.7	0.20	100					75-80				CMST		Dark gray to black, dull 90%, moderately heavy, with moderate lenses/streaks of coal, gradational lower contact	
15 to 17	79.7	87.17	6.32	84					75-80			0.5	MST		Medium to dark gray, generally massive with rare bedding dipping 75-80 TCA, calcite stringers/veinlets 2%, highly broken with polished fractured surface, shear zone from 82.24 to 83.95m, weak disseminated pyrite, gradational lower contact	
17	87.17	88	0.83	100					80				CMST		Dark gray to black, mostly dull 95% with moderate to strong lenses/streaks of coal, highly carbonaceous, moderately heavy, partly clayey	
17	88	88.3	0.30	100	87.34	87.64	0.30		80	0838	1.8		CMST		Dark gray to black, mostly dull 95% with moderate to strong lenses/streaks of coal, highly carbonaceous, moderately heavy, partly clayey	
17 to 18	88.3	93	1.59	66	87.64	89.80	2.16			0839	7.4		CO		Black, clayey, soft, highly friable, shiny/bright 70% dull 30%, with occasional partings of CMST <3cm thick, gradational lower contact	
18	93	93.3	0.30	100	89.80	90.10	0.30			0840	1.6		CMST		Dark gray to black, massive with minor streaks of coal, generall dull 98%	
18	93.3	93.7	0.40	100	90.10	90.50	0.40			0841	1.8		CO		Black, clayey, soft, bright/shiny 90%, friable, broken	
18	93.7	94	0.30	100	90.50	90.80	0.30			0842	2.2		CMST		Dark gray, massive, with moderate streaks of coal, highly carbonaceous with gradational lower contact	
18 to 19	94	98.4	4.40	100					75-80			0.5	SLT		Medium gray, moderately bedded oriented 75-80 TCA, minor laminations of SST <1cm thick, carbonate veinlets <1%, with sections showing sandy texture, pyrite as disseminated and fracture filling, gradational lower contact	
20	98.4	100.05	1.65	100									MST		Dark gray, massive with rare thin lenses of coal (mm size) minor sandy/silty sections, carbonate veinlets <1%, no visible sulphide mineralisation	
20 to 22	100.05	107	6.95	100					70			0.7	SLT		Light to medium gray, with interbedded SST 1-2cm thick, bedding dipping 70 TCA, presence of cross bedding, sharp lower contact, SST beds inceases down to bottom, carbonate veinlets/stringers 1%, pyrite mostly as fracture filling	
22 to 29	107	132.75	23.13	89					80			1.0	SST		Light to medium gray, fine to medium grained, moderately bedded dipping 80 TCA, occasionally exhibits normal graded bedding younging uphole, sandy from 121.0 to 127.0m, carbonate veinlets 1%, pyrite as fracture filling, sharp lower contact at 65 TCA	
29 to 31	132.75	137.7	4.95	100									MST		Medium to dark gray, massive, shear zone from 134.57 to 135.20m, shear oriented 60 TCA, slightly carbonaceous at the bottom, gradational lower contact	
31 to 32	137.7	140.15	1.97	80		138.75			70-80				CMST		Dark gray to black, with moderate to strong lenses of coal, bedding at 70 to 80 TCA, coal beds at 138.70-138.75m, with soft, clayey sections, gradational lower contact	
31 to 32	137.7	140.15	1.97	80	138.75	139.52	0.77		70-80	0843			CMST		Dark gray to black, with moderate to strong lenses of coal, bedding at 70 to 80 TCA, coal beds at 138.70-138.75m, with soft, clayey sections, gradational lower contact	
32	140.15	141.3	0.38	33	139.52	139.90	0.38			0843	4.0		BC		Black, mostly dull 95%, with thin beds of shiny/bright coal <3cm, broken, clayey sections	
32 to 34	141.3	148.3	6.02	86	139.90	144.66	4.76			0844	25.4		CO	20	Black, soft, clayey, shiny/bright 80% dull color 20%, highly friable, with minor beds of CMST <4cm thick, gradational lower contact	

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Sulphide %	Lith Code	Seam	Page __2__ of __2___	Graphic
			Recovered													
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	BCN	Sample #	(kg)				Description	
34 to 35	148.3	151.50	3.20	100	144.60	144.96	0.36			0845	3.0		SLT		Medium gray, massive with thin (<3cm thick) fault gouge clay rich breccia oriented 50 TCA, gradational lower contact, weakly carbonaceous at the top, shear/fault zone at 148.29-148.70m depth.	
35	151.5	151.8	0.30	100									CO		Black, dull, soft, clay, highly friable	
35 to 36	151.8	153.55	1.32	75					80				MST		Medium to dark gray, generally massive with rare bedding of SLT oriented 80 TCA, partlt carbonaceous with thin laminations of CMST, gradational lower contact	
36	153.55	155.25	0.68	49									CMST		Dark gray, highly broken, mostly dull 98%, moderately heavy, gradational lower contac	
36	155.25	155.55	0.30	100	151.14	151.44	0.30			0846	1.0		CMST		Dark gray, highly broken, mostly dull 98%, moderately heavy, gradational lower contac	
36	155.55	156.37	0.82	100	151.44	153.86	2.42			0847	2.6		CO		Black, soft, clayey, shiny/bright 90%, highly friable with occasional polished fracture surface	
36	156.37	157.59	0.00	0									LC		Loss core 1.22m within coal	
36	157.59	157.9	0.31	100	153.86	154.17	0.31		70	0848	1.4		CMST		Dark gray, mostly dull 95%, with moderate to strong coal lenses 1-2cm thick, gradational lower contact, bedding at 70 TCA	
36 38	157.9	161.85	3.95	100					75				SLT		Light to medium gray, shear/fault zone at 158.50 to 159.72m and at 161.0 to 162.15m , Fault mostly of clay rich breccia-fault gouge oriented 40 TCA	
36 38	161.85	162.15	0.30	100	159.00	159.30	0.30		75	0849	2.2		SLT		Light to medium gray, shear/fault zone at 158.50 to 159.72m and at 161.0 to 162.15m , Fault mostly of clay rich breccia-fault gouge oriented 40 TCA	
38	162.15	164.1	1.57	82	159.30	160.40	1.10			0850	6.8		CO		Black, soft, clayey, shiny/bright 80% dull 20%, highly fraible, with polished fractured surface, gradational lower contact	
38	164.1	164.29	0.19	100	160.40	160.59	0.19			0851	2.0		CMST		Dark gray, dull with moderate coal lenses, highly carbonaceous with sharp lower contact at 50 TCA	
38 to 46	164.29	188.4	24.11	100					40-50			0.5	SST		Light to medium gray, fine to medium grained, moderately bedding dipping 40 to 50 TCA, shows normal graded bedding younging uphole-fine to medium-coarse grained texture at 178.45 to 178.55m, minor SLT beds at 178.55 to 178.70m, carbonate veinlets 2%, sharp lower contact at 50 TCA, pyrite as fracture filling	
46	188.4	189.4	1.00	100									SLT		Medium gray to brown, massive with rare lenses of SST, carbonate veinlets <1%, sharp lower contact at 55 TCA, trace of pyrite	
46 to 51	189.4	204.35	14.95	100					55-60			1	SST		Light to medium gray, unaltered, fine to medium grained, shows normal graded bedding(fine to coarse grained), shear/fault at 192.15 to 192.85m with clay rich breccia-fault gouge, lower contact of the fault is 35 TCA, sharp lower contact to MST at 45 TCA, carbonate veinlets <1%, pyrite as disseminated and fracture filling	
51	204.35	204.85	0.50	100									MST		Dark gray, soft, clayey, slightly carbonaceous, shear/fault zone, sharp lower contact at 53 TCA, no visible sulphide mineralisation	
51 to 60	204.35	233.9	29.65	100					45-55			1	SST		Light to medium gray, fine to medium grained, moderately to highly bedded with beds mostly dipping 45 to 50 TCA, with zones showing thin laminations of SLT (<1cm thick), fold axis at 219.50 to 219.70m, fold axis is almost parallel to core axis, minor shearing at 218.45 to 218.85m, rare foliation, carbonate veinlets/stringers 1%, pyrite as fine grained disseminated and filling fractures, sharp lower contact at 47 TCA	
60	233.9	234	0.10	100					55-60				MST		Mudstone with interbeded fine grained sandstone, dark grey, moderately hard, sharp contact with coal 50 TCA, slightly wavy bedding. No visible sulphide mineralization	
61	234	234.05	0.05	100									CO		Coal, soft, "clayey" texture, black sheared,mostly dull with few bright fragments, abrupt contact with SST	
61	234.05	236.7	1.66	100					40				SST		Sandstone with laminations of mudstone, low intensity of laminations, fractures along bedding plane 40 to CN, 2% carbonate veinlets, feww fractures with carbonaceous infill material (soft, dk grey). Sharp contact at base	
61	236.7	236.8	0.10	100									CMST		carbonaceous mudstone, dk. Grey, massive, polished fracture surface, clayey fragments, broken	
61 to 69	236.8	259.5	22.70	100					45-60				SST		Dirty Sandstone, laminations of mudstone, fine grained, medium grey, moderately to highly bedded carbonaceous material on fracture surfaces, polished fracture surfaces, 1% calcite veinlets, occasional coal lenses <1cm thick, fractures along bedding, gradational contact w/ MDST below. bedding 60 TCN toward base of unit	
69 to 75	259.5	276.74	17.24	100					40-55				MDST		Mudstone with interbedded fine grained sandstone and siltstone, dark grey, v. fine grained, moderate hardness, moderately bedded, 2% carbonate veinlets, fractures along bedding, polished fracture surfaces, low angle fractures in shear zone 269.4-270.65m and more low angle fracturse 274.3-276.74m- folded and low angle bedding in shear zones, gradational/interbedded contact with SST below, bedding 55 TCN decreases to 40 degrees TCN towards base of unit.	
75 to 79	276.74	290.56	13.82	100					40-80				SST		Sandstone with laminations of mudstone, low intensity of laminations, fine grained, v. hard, fractures along bedding planes, <1% carbonate veinlets, low angle bedding, higher density of carbonate veinlets, and fractures infilled with coaly lenses and carbonaceous material in top 3.5 m of unit, disseminated py with carbonates on few fracture surfaces, polished fracture surfaces, highly to moderately bedded, bedding angle (TCN) decreases with depth	
70 to 83	290.56	303.4	12.84	100					40				SST		Dirty Sandstone, laminations of mudstone, fine grained, medium grey, moderately to highly bedded carbonaceous material on some fracture surfaces, polished fracture surfaces, <0.5% calcite veinlets fractures along bedding, moderately hard, contact with sandstone above at 50 degres TCN, lower contact is 30 degrees TCN	

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Sulphide %	Lith Code	Seam	Page __2__ of _2___	Graphic
			Recovered													
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	BCN	Sample #	(kg)				Description	
83 to 86	303.4	312.8	9.10	97					40				MST		Mudstone with interbedded fine grained sandstone and siltstone, dark grey, v. fine grained, moderate hardness, moderately bedded, <1% carbonate veinlets, occasional fractures along bedding,8cm moderately hard clay band at 306.45m, low angle fractures in shear zone 310.57-313.0m with highly fractured, highly polished fracture surfaces and 5% carbonate veinlets, bedding is 40 TCN throughout and steepens to 50 TCN just above shear zone. Low angle (TCA) to vertical bedding in shear zone,	
86 to 93	312.8	333.7	20.90	100					60-90				SST		Sandstone and with interbeds and laminations of mudstone, fine grained, light to medium grey multiple fractures along bedding planes, low angle bedding, 2% carbonate veinlets, polished carbonaceous fracture surfaces, abrupt upper contact at 45 TCN, lower contact 60 TCN, BCN generally 60 degrees	
93 to 95	333.7	340	6.30	100					60-70				MST		Mudstone with laminations of sandstone and siltstone, moderately hard, fine grained, dark grey, low angle bedding, 1% carbonate veinlets, few low angle fractures. No visible sulphides, lower contact abrupt at 70 TCN	
95 to 96	340	344.25	4.25	100					70-80				SST		Sandstone, light grey, fine grained, moderately bedded, low intensity of mudstone laminations, 2% calcite veinlets, few low angle fractures (TCA), some carbonaceous material along fracture surfaces, lower contact at 70 TCN	
96 to 97	344.25	345.66	1.41	100					70			<1	MST		Mudstone, very few laminations of sandstone, and very low intensity of laminations, v. fine grained, dark grey, moderatley hard, lower contact at 70 TCN, disseminated pyrite on fracture surface	
97	345.66	348.39	2.73	100					70-80				SST		Sandstone with laminations of mudstone, moderate intensity of laminations, fine grained,light to med Grey, 1% calcite veinlets cross cutting bedding, few low angle fractures. EOH	

Depth From (m)	Depth To (m)	Type	Description / Comments
54.51	55.02	LC	Loss core above the fault/shear zone
55.02	55.17	FLT	Fault/shear zone oriented almost paralle to bedding, angular pebble size fragments
55.17	55.5	FLT	Fault/shear zone oriented almost paralle to bedding, angular pebble size fragments
61.1	61.73	FLT	Fault/shear zone, sandy with pebble size angular fragments set in sandy matrix, with slickensides, fault direction almost parallel to bedding
61.73	62.05	FLT	Fault/shear zone, sandy with pebble size angular fragments set in sandy matrix, with slickensides, fault direction almost parallel to bedding
62.05	62.35	LC	Loss core below the fault/shear zone
71.05	71.61	FLT	Fault/shear zone, oriented 60 TCA, mostly soft sand with minor SST fragments
71.61	72.23	LC	Loss core within the fault/shear zone
72.23	73.41	LC	Loss core within the fault/shear zone
73.14	73.76	FLT	Fault/shear zone, SST fragments set in sandy matrix(60% fragments 40% sand matrix) soft, 75 TCA
82.4	83.21	LC	Loss core above the fault/shear zone
83.21	83.83	LC	Loss core above the fault/shear zone
83.83	83.95	FLT	Broken core, pebble size angular to sub-rounded fragments, less matrix probably washed out from drilling
123.43	123.89	LC	Loss core above the shear zone
123.89	124.15	FLT	Shear zone/ fault, contains angular fragments with slickensides
134.57	135.2	FLT	Shear zone/fault containing angular fragments with minor clay, slickensides common
148.29	148.7	FLT	Fault gouge-clay rich breccia oriented 38 TCA
158.5	158.96	FLT	Fault/shear zone with angular fragments set in clay rich breccia matrix-fault gouge
158.96	159.72	FLT	Fault/shear zone, with angular fragments set in clay rich breccia matrix-fault gouge, oriented 55 TCA
161	161.24	FLT	Fault/shear zone, with pebble size subrounded fragments set in clay rich matrix-fault gouge
161.24	162.15	FLT	Fault/shear zone, with pebble size subrounded fragments set in clay rich matrix-fault gouge, lower contact at 50 TCA

HQ Core Description

Hole: LR14 HQ-09

Page: 1 of 3

Northing: 5501090

Hole Orientation: Azimuth 135 / Dip - 70

Total Depth: 242.92m

Easting: 661320 **Elevation:**

Seam: 14, 13, 12, 10, 8

UTM System: NAD 83

Logged by: Ian Furigay

Date : 15-19, August 2014

	Driller's Coring Info				Interval Corrected to Log												
			Recovered														
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	Bedding (Alpha)	Sample #	Sample Mass (kg)	Sulphide %	Major Lith Code	Minor Lith Code	Seam	Description	Graphic
	0.00	10.70	10.70													Casing, no core sample	
1 to 3	7.10	22.80	10.03	66%									OVB			Khaki brown, highly weathered and oxidized, with subangular to subrounded fragments of SST/LMST/MST set in clay matrix, limonite staining common, glacial till	
3	22.80	23.50	0.70	100%	22.75	23.45	0.70			R340261	3.8		CMST	BC		Dark gray to black, mostly dull 90%, soft, clayey, with strong shiny/bright coal cleats/lenses, gradational lower contact	
3	23.50	24.10	0.34	56%	23.45	23.85	0.40	0.06		R340262	3.0		CO			Black, shiny/bright 75% dull 25%, soft, clayey, highly friable and brittle, gradational lower contact	
3 to 4	24.10	27.00	1.95	67%	23.85	27.25	3.40	1.45		R340263	7.4		BC	CO		Dark gray to black, soft, clayey, mostly dull 90% with interbedded shiny/bright coal, fiable and brittle	
4	27.00	28.35	1.09	80%	27.25	28.60	1.35	0.26	45	R340264	4.8		CMST	CO		Dark gray, highly carbonaceous with moderate coal streaks/lenses, mostly dull, slightly heavy, soft to moderately hard rock, gradational lower contact	
4 to 8	28.35	42.06	11.26	82%					40			0.1	MST	SST		Medium gray with occasional laminations of fine grained SST (1-2mm thick), shear/fault zone at 33.80 34.80m and at 38.20 - 39.93m depth, bedding oreinted 40 TCA, slightly carbonaceous at 33.45 to 33.70m, gradational lower contact, carbonate veinlets <1%, trace of pyrite in fractures	
8	42.06	42.10	0.04	100%									CO			Black, broken/loose, soft, shiny/bright 90%, friable, gradational lower contact	
8	42.10	42.30	0.20	100%									MST			Dark gray, massive, soft to moderately indurated rock, sharp lower contact at 60 TCA, rare coal streaks	
8 to 11	42.30	49.40	6.95	97%					45-50			0.5	SLT	MST		Medium to dark gray, generally massive with occasional narrow beds of CMST <2cm thick, carbonate veinlets <1%, shear zone at 48.35 to 48.75m depth, gradational lower contact, weak pyrite in fractures	
11	49.40	49.97	0.57	100%	49.35	49.92	0.57		50	R340265	2.8		CMST			Dark gray, with moderate bright/shiny coal lenses, poorly indurated, weak rock, polished fracture surface common, highly carbonaceous, gradational lower contact	
11	49.97	51.76	0.44	24%	49.92	51.82	1.90	1.46		R340266	1.6		CO			Black, highly fractured/jointed core, shiny/bright 90% dull 10%, light weight with polished fracture surface, highly brittle	
11	51.76	52.84	0.88	86%	51.82	53.06	1.24	0.36		R340267	4.8		CMST			Rock parting, dark gray, generally dull 95% with minor coal streaks/lenses, moderately heavy, gradational lower contact	
11	52.84	53.09	0.23	92%	53.06	53.34	0.28	0.05		R340268	1.0		CO			Black, soft, clayey, shiny/bright 85% dull 15%, friable and brittle, light weight	
11 to 12	53.09	54.29	0.98	81%	53.34	54.52	1.18	0.20		R340269	5.8		CMST			Rock parting, dark gray, generally dull 95% with minor coal streaks/lenses, moderately heavy, gradational lower contact	
12	54.29	55.61	1.11	84%	54.52	55.82	1.30	0.19		R340270	3.8		CO			Black, soft, clayey, shiny/bright 80% dull 20%, friable and brittle, light to slightly heavy weight probably due to clay content, gradational lower contact	
12	55.61	56.35	0.33	44%	55.82	56.56	0.74	0.41		R340271	2.6		CMST			Rock parting, dark gray with moderate coal lenses, generally dull slightly heavy, gradational lower contact, soft to moderately hard, weak rock	
12 to 13	56.35	58.60	2.25	100%					55-60			0.1	MST	CMST		Medium to dark gray, generally massive with occasional narrow beds of CMST <2cm thick, carbonate veinlets <1%, sharp lower contact at 60 TCA, bedding dipping 55 to 60 TCA, trace of pyrite in fractures	
13	58.60	59.40	0.80	100%					48				SST	MST		Light to Medium gray, fine to medium grained, with minor laminations of MST 1-2mm thick, gradational lower contact, well indurated, competent hard rock, carbonate veinlets 2%, no visible sulphide mineralisation	
13 to 14	59.40	61.00	1.60	100%					55-60			0.1	MST	SLT		Medium to dark gray with interbedded SST 1-2mm thick, moderately laminated with beds dipping 55 to 60 TCA, with coal/ carbonaceous sediments infilled in fractures from 60 40 60.95m depth, gradational lower contact, trace of pyrite in fractures	
14 to 16	61.00	69.19	7.76	94%	69.02	69.32	0.30		55-60	R340272	2.2	0.5	SLT	MST		Medium gray, moderately laminated with narrow thin beds - 2cm thick, bedding at 55 to 60 TCA, shear zone at 67.66 to 67.80m, occasional carbonaceous sediments infilled in fractures, moderately to well indurated, competent, hard rock, carbonate veinlets 2%, pyrite as fine grained disseminated and filling	
16 17	69.19	74.67	3.68	67%	69.32	74.58	5.26	1.58		R340273	14.2		CO			Black, soft, clayey, shiny/bright 90% dull 10%, broken/loose, highly friable	
17 to 18	74.67	75.10	0.17	39%	74.58	75.16	0.58	0.41		R340274	1.2		CMST			Dark gray, gennerally dull 90% with coal lenses/streaks, moderately heavy	

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Sulphide %	Major Lith Code	Minor Lith Code	Seam	Page 2 of 3	Graphic
			Recovered														
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	Bedding (Alpha)	Sample #	(kg)					Description	
18	75.10	75.70	0.34	56%	75.16	75.68	0.52	0.18		R340275	1.2		CO			Black, broken/loose, shiny/bright 95%, dull 5%, soft and clayey	
18	75.70	76.15	0.29	59%	75.68	76.12	0.44	0.15		R340276	1.2		BC			Rock parting, drak gray, dull 95%, slightly heavy, highly carbonaceous with coal lenses, soft to slightly hard rock	
18 to 19	76.15	79.85	2.18	58%	76.12	79.85	3.73	1.55		R340277	9.4		CO			Black, soft, clayey, broken highly friable and brittle, weak rock, shiny/bright 90% dull 10%	
19 to21	79.85	86.90	4.68	66%	79.85	86.96	7.11	2.43		R340278	19.2		CO			Black, soft, clayey with some intact/solid core, shiny/bright 90% dull 10%, with broken/loose zones, highly friable	
21	86.90	87.35	0.28	62%	86.96	87.41	0.45	0.17		R340279	1.8		CMST			Dark gray to black, with moderate lenses/streaks of coal, highly carbonaceous, gradational lower contact, poorly indurated, soft, weak rock	
21 to 23	87.35	94.40	7.05	100%					40-45			0.5	MST	SLT		in fractures common, bedding usually dipping 40-45 TCA, carbonate veinlets <1%, pyrite as fine grained disseminated and filling fractures, sharp lower contact at 35 TCA	
23 to 24	94.40	98.15	3.53	94%					40-45			1	SST	MST		sediments in fractures, bedding oriented 40-45 TCA, lower contact is broken, carbonate veinlets 2%, pyrite as disseminated and fracture filling	
24 to 27	98.15	106.55	8.40	100%					45-55			1	SLT	SST		hard, competent rock, fault/ shear zone from 100.0-100.25m depth, carbonate veinlets/stringers 3%, rare carbonaceous sediments infilled in fractures, with occasional rip up clast of CMST/MST, pyrite as	
27 to 28	106.55	111.10	4.55	100%					40-45			1	SST	SLT		indurated, hard, competent rock, carbonate veinlets 4%, with zones showing normal graded bedding (fine to medium grained), gradational lower contact, pyrite as disseminated and fracture filling	
29 to 30	111.10	116.45	5.35	100%					35-40			1	SLT			hard, competent rock, rare carbonaceous sediments in fractures, carbonate veinlets 2%, gradational lower contact, pyrite as disseminated fine grained	
30 to 31	116.45	118.65	2.20	100%					30-35			1.5	SST	MST		30 to 35 TCA, carbonate veinlets 2%, pyrite as fine grained disseminated and filling fractures, gradational lower contact	
31 to 34	118.65	127.55	8.90	100%					25-50			1	MST			sediments in fractures, moderately to well indurated, medium hard rock, carbonate veinlets 2%, sharp lower contact at 28 TCA, pyrite as fine grained disseminated	
34	127.55	128.45	0.90	100%					25-30			0.5	SST	MST		sharp lower contact at 27 TCA, well indurated, competent, hard rock, carbonates in groundmass, carbonate stringers/veinlets 2%, weak disseminated pyrite	
34 to 37	128.45	136.60	8.15	100%					25-30			0.5	MST	SLT		30 TCA, moderately indurated medium hard rock, carbonate veinlets 2%, carbonate in groundmass, minor rip up clasts/fragments of CMST mostly near the bottom, weak disseminated and filling fracture	
37	136.60	138.68	1.88	90%					30				CMST	BC		Dark gray to black with lenses and thin beds of of BC/CO, highly carbonaceous, soft to moderately indurated, weak rock, bedding at 30 TCA, gradational lower contact, no visible sulphide mineralisation	
37 to 38	138.68	140.16	1.37	92%	139.96	140.26	0.30		25-30	R340280	2.20		MST	CMST		Medium to dark gray, generally massive with minor laminations of CMST, moderately indurated, weak rock, bedding at 25-30 TCA, rare lenses/streaks of CO	
38	140.16	140.75	0.59	100%	140.26	140.68	0.42			R340281	3.40		CO			Black, soft, clayey, shiny/bright 90% dull 10%, with some zones showing intact solid core, polished fracture surface common	
38	140.75	142.03	1.04	85%	140.68	142.03	1.35			R340282	5.00		CMST	BC		Dark gray to black with lenses and thin beds of of BC/CO, highly carbonaceous, soft to moderately indurated, weak rock, gradational lower contact, no visible sulphide mineralisation	
38 to 39	142.03	142.60	0.57	100%	142.03	142.60	0.57			R340283	3.80		MST			Dark gray, massive, slightly carbonaceous with rare coal streaks, poorly indurated, weak rock, carbonaceous and with gradational lower contact	
39 to 40	142.60	147.90	4.91	92%	142.60	147.88	5.28	0.37		R340284	20.40		CO			Black, soft, clayey with minor rock parting of CMST <10cm thick, shiny/bright 90% dull 10%, with solid/intact core, poorly indurated, weak rock, polished surface common, very gradational lower contact	
40	147.90	148.25	0.35	100%	147.88	148.23	0.35			R340285	1.40		CMST	CO		Dark gray to black with thin beds of CO < 2cm thick, mostly dull 90%, slightly heavy, gradational lower contact	
40 to 43	148.25	155.59	7.34	100%					30-35			0.1	MST	CMST		154.05m and at 155.20-155.59m, poorly indurated, medium hard, weak rock, gradational lower contact, trace of pyrite in fractures	
43	155.59	155.85	0.26	100%	155.79	156.05	0.26	0.26		R340286	1.60		CMST			Dark gray, soft, clayey with minor coal in fractures, highly carbonaceous with polished fracture surface, poorly indurated, weak rock, gradational lower contact	
43 to 44	155.85	158.90	2.53	82%	156.05	158.80	2.75	0.22		R340287	9.40		CO			Black, shiny/bright 90% dull 10%, soft, clayey, with intact/solid core, weak rock	
44	158.90	160.65	1.15	65%	158.80	160.20	1.40	0.25		R340288	7.60		CMST	BC		Dark gray, with thin beds of BC/CO, generally dull 90%, slightly heavy, soft and clayey	
44 to 45	160.65	163.21	1.40	54%	N/A	N/A				R340289	6.40		CO			Black, soft, clayey, shiny/bright 90% dull 10%, with some zones showing intact solid core, polished fracture surface common	
45	163.21	163.55	0.34	100%	N/A	N/A				R340290	1.80		MST			Rock parting, dark gray, massive, intact/solid core, carbonate veinlets 2%, minor CMST laminations, gradational lower contact	
45 to 46	163.55	170.93	5.39	73%	N/A	N/A				R340291	22.60	0.5	CO			Black, shiny/bright 90% dull 10%, soft, clayey, with intact/solid core, weak rock, weak fracture filling pyrite	
46	170.93	171.13	0.20	100%	N/A	N/A				R340292	1.80	0.5	MST			Dark gray, massive, intact core, slightly carbonaceous, well indurated, hard rock, pyrite as disseminated	

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Sulphide %	Major Lith Code	Minor Lith Code	Seam	Page 3 of 3	Graphic
			Recovered														
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	Bedding (Alpha)	Sample #	(kg)					Description	
47	171.13	174.30	2.00	63%	N/A	N/A				R340293	8.6	0.5	CO			Black, soft, clayey, shiny/bright 85% dull 15%, poorly indurated, weak rock, highly friable with intact/solid core, very gradational lower contact, weak pyrite in fractures	
47 to 49	174.30	178.90	4.60	100%	N/A	N/A			45-50	R340294	24.8	1	CMST	BC		sharp lower contact at 58 TCA, minor bedding at the bottom dipping 45-50 TCA, presence of disseminated pyrite at the lower contact	
49 to	178.90	242.92	64.00	100%					30-35	R340295	2.8		LMST			competent rock, with minor carbonaceous sediments(bitumen) infilled in fractures from top to 226.30m, calcite veinlets/stringers 3%, no visible sulphide mineralisation, cave-in materials at 23.78m and at	
EOH																	

Depth From (m)	Depth To (m)	Type	Description / Comments
30	30.45	FLT	Fault/shear zone., rubble zone consist of angular fragments with minor clay/gouge matrix
30.45	31.09	LC	Loss core in fault/shear zone
31.09	31.99	FLT	Fault/shear zone., rubble zone consist of angular fragments with minor clay/gouge matrix
31.99	32.31	LC	Loss core in fault/shear zone
32.31	32.54	FLT	Fault/shear zone., rubble zone consist of angular fragments with minor clay/gouge matrix
32.54	32.61	LC	Loss core in fault/shear zone
32.61	33.51	FLT	Fault/shear zone., rubble zone consist of angular fragments with minor clay/gouge matrix
33.51	34.14	LC	Loss core in fault/shear zone
34.14	34.59	FLT	Fault/shear zone., rubble zone consist of angular fragments with minor clay/gouge matrix
34.59	34.8	FLT	Fault/shear zone., rubble zone consist of angular fragments with minor clay/gouge matrix
38.2	38.71	FLT	Fault/shear zone., rubble zone consist of angular fragments with minor clay/gouge matrix
38.71	39.46	FLT	Fault/shear zone., rubble zone consist of angular fragments with clay/gouge matrix
39.46	39.93	LC	Loss core below the fault/shear zone
48.35	48.6	FLT	Fault/shear zone, mostly clay gouge with occasional angular rock fragments
48.6	48.75	LC	Loss core below the fault/shear zone
100	100.25	FLT	Fault/shear zone, rubble zone, intensely fractured rock mostly angular rock fragments
152.55	152.85	FLT	Fault/shear zone, rubble zone with angular rock fragments in in clay/gouge matrix
153.6	154.07	FLT	Fault/shear zone, rubble zone with angular rock fragments in in clay/gouge matrix
155.2	155.59	FLT	Fault/shear zone, rubble zone with angular rock fragments in in clay/gouge matrix
178.25	178.9	FLT	Clayey zone, reduction in rock structure, parallel to bedding, above limestone unit, shearing of bedding surfaces
EOH			EOH = 242.92m

HQ Core Description

Hole: LR14 HQ-14 **Page:** 1 of 2

Northing: 5500825 **Hole Orientation:** Azimuth 315 / Dip - 70 **Total Depth: 200.24m**

Easting: 660575 **Elevation:** **Seam:** 21, 20, 19

UTM System: NAD 83 **Logged by:** Jaclyn/Ian **Date : 3-7, August 2014**

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Sulphide %	Lith Code	Seam		Graphic
			Recovered													
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	BCN	Sample #	(kg)				Description	
	0	3.05	0.00	0%											Casing, no core samples	
1 to 4	3.05	17.37	10.25	72%				3.16					OVB		Khaki brown to dark brown highly weathered and oxidized, soft, clayey, colluvial/till deposit with pebble to cobble sized angular to subrounded fragments of SST, MST, fine grained, moderate to intense limonite staining, multiple intervals of broken core, few interbeds of laminated silty sandstone few 5 cm zones of intense calcite veining, overall <1% calcite veinlets	
4 to 6	17.37	22.20	3.67	76%				1.15					OVB		dark brown to dark grey, moderately weathered and oxidized, soft, clayey, colluvial/til deposit with pebble to cobble size subrounded to angular fragments of SST, MST, fine grained, <1% calcite veinlets, moderate limonite staining, multiple intervals of broken core, few interbeds of laminated silty sandstone	
6	22.2	24.49	2.12	93%					20-25				SST		Sandstone, light grey, fine grained, slightly weathered, few soft mudstone bands, <1% calcite veinlets, moderately bedded, bedding 20-25 TCN, moderate limonite staining- especially along fractures	
6 to 7	24.49	28.19	2.81	76%				0.89					MST		Mudstone, vry soft, medium to dark grey, very fne grained, few CMST bands and fine SST bands 10-15 cm, minor limonite staining, especially on fractures, multiple intervals of broken core, angular to subrounded fragments	
7 to 14	28.19	48.80	18.47	89%				2.14	55-65			0.1	MST		Medium to dark gray, shows occasional thin laminations of SST(mm in size), moderately bedded with beds mostly dipping 55 to 65 TCA, shear/fault zones(rubble) at 28.19-28.40m, 39.60-40.70m 47.30-48.16m, and at 48.60-49.68m, carbonate veinlets <2%, trace of fine grained pyrite in fractures, gradational lower contact at 63 TCA	
14	48.80	49.60	0.48	60%				0.32	50				SST		Light to medium gray, fine to medium grained, well laminated with hairline size laminations of SLT, bedding at 50 TCA, carbonate stringers 3%, gradational lower contact(broken), no visible sulphide mineralisation	
14	49.6	50.25	0.65	100%					60			0.5	SLT		Medium gray, with interbedded fine grained SST (1-2mm in size), well bedded with beds mostly oriented 60 TCA, carbonate veinlets <1%, gradational lower contact at 60 TCA, pyrite as filling in ractures	
14 to 17	50.25	56.08	5.31	91%				0.52	50-60			1.0	SST		Light to medium gray, fine to medium grained, with occasional thin laminations of MST/SLT(mm in size), moderately to well bedded, shows normal graded beddin(fine to coarse grained), carbonate stringers 4%, minor carbonaceous sediments infilled in fractures, pyrite as fine grained disseminated and filling fractures, gradational lower contact at 50 TCA	
17	56.08	58.52	1.73	71%				0.71	55				MST		Medium to dark gray, shear/fault zone at 56.55 to 58.52m with intensely fractured core shows some slickensides and clayey, fault oriented 40 TCA, occasional bedding dipping 55 TCA, rae carbonate veinlets, no visible sulphide mineralisation	
17 to 18	58.52	60.60	1.83	87%				0.25	55-65			0.1	SST		Medium gray, fine grained with interbedded SLT/MST(1-2mm thick in size), well laminated with beds mostly oriented 55 to 65 TCA, minor slickensides/polished fracture surface, rare carbonate veinlets,broken lower contact, trace amount of fine grained pyrite in fractures	
18 to 19	60.60	63.75	3.15	100%					45-50			0.1	MST		Medium to dark gray, moderately laminated with thin bands of fine grained SST 1-2mm in size, bedding at 45 to 50 TCA, sharp lower contact at 65 TCA, rare carbonate veinlets, trace of pyrite in fractures	
19	63.75	64.15	0.40	100%					45-50				SST		Light to medium gray, fine to medium grained, highly laminated with bands of fine to medium grained SST, exhibits normal graded bedding dipping 45 to 50 TCA, sharp lower contact at 50TCA, carbonate veinlets 2%, no visible sulphide mineralisation	
19 to 21	64.15	70.90	6.75	100%								0.1	MST		Medium to dark gray, generally massive with rare lenses of fine grained SST/SLT, rare bedding dipping 60 TCA, gradational lower contact at 70 TCA, carbonate veinlets 1%, trace of fine grained pyrite in fractures	
21 to 22	70.90	71.85	0.95	100%					45-50			0.5	SLT		Medium gray, moderately laminated with thin bands of fine grained SST dipping 45 to 50 TCA, carbonate veinlets 2%, rare disseminated fine grained pyrite, gradational lower contact	
22 to 27	71.85	87.8	15.95	100%					65-70			0.1	MST		Medium to dark gray, poorly to moderately laminated with bedding dipping 60 to 70 TCA, minor thin laminations of carbonaceous mudstone, occasional lenses/eye of fine graine SST, carbonate veinlets 1-2%, with polished fractured surface, gradational lower contact at 65 TCA, trace of pyrite in fractures	
27	87.80	88.05	0.25	100%	87.70	87.90	0.20	0.05					BC		Black, mostly dull 95%, soft, clayey with minor lenses of shiny coal	
27 to 28	88.05	90.05	2.00	100%					55				SHL		Medium gray with interbedded thin laminations of fine grained SST, bedding at 55 TCA, gradational lower contact, carbonate veinlets <1%, no visible sulphide mineralisation	
28	90.05	90.50	0.45	100%					60				MST		Dark gray, poorly bedded, with rare thin laminations of SST, bedding at 60 TCA, gradational lower contact	
28	90.50	90.67	0.17	100%	90.28	90.40	0.12	0.05					BC		Dark gray to black, soft, highly friable, clayey, mostly dull 95%	
28	90.67	91.59	0.92	100%					55	0852	2.0		MST		Medium to dark gray with thin laminations of SST (1mm in size), bedding at 55 TCA, gradational lower contact	
28	91.59	93.00	0.50	35%	91.70	92.60	0.90	0.51	65	0853	3.8		CO	20	Black, soft, clayey, shiny/bright 60%, dull 40%, highly fraible, occasional polished fractured surface, gradational lower contact at 65 TCA	
28 to 29	93.00	94.15	1.03	89%	92.60	93.65	1.05	0.10	75	0854	7.4		MST	20	Medium to dark gray, with thin zones showing CMST, slightly sandy at the bottom, sharp lower contact at 75 TCA	

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Sulphide %	Lith Code	Seam	Page 2 of 2	Graphic
			Recovered													
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	BCN	Sample #	(kg)				Description	
29	94.15	94.55	0.40	100%	93.65	94.10	0.45		70	0855	1.0		CO	20	Black, soft, clayey, shiny/bright 80% dull 20%, highly friable	
29	94.55	94.85	0.30	100%						0856	2		MST		Medium to dark gray, massive aith sharp lower contact	
29 to 30	94.85	98.45	3.25	90%					50			0.1	SST		Light gray, fine to medium grained, well laminated with beds dipping 50 TCA, minor thin laminations of MST (1mm in size), sharp lower contact at 65 TCA, trace of pyrite in fractures	
30	98.45	99.30	0.85	100%					50	0857	1.6		MST		Medium to dark gray, highly laminated thin thin beds of SST/SLT (mm in size), slightly carbonaceous at the bottom, gradational lower contact, no visible sulphide mineralisation	
30 to 31	99.3	101.39	1.37	65%	98.90	101.20	2.30			0858	5.0		CO	19	Black, shiny/bright 90% dull 10%, soft, highly fraible/loose, partly clayey	
31	101.39	101.95	0.41	73%					70	0859	2.0		MST		Medium to dark gray with thin laminations of SST, slightly sandt at the booton, gradational lower contact, occasional bedding dipping 70 TCA, carbonate veinlets <1%, no visible sulphide mineralisation	
31 to 44	101.95	142.80	40.85	100%					60-65			1.5	SST		Light gray, fine to medium grained, clean SST, moderately bedded oriented 60 to 65 TCA, displays normal graded bedding (fine to coarse grained), rare carbonaceous sediments along fractures and lenses, carbonate veinlets 1.5%, shear/fault zone at 123.44-124.35m with clay gouge, pyrite as fine grained disseminated and fracture filling, sharp lower contact at 60 TCA	
44	142.80	142.95	0.15	100%					60				MST		Medium to dark gray with thin laminations of fine grained SST, well bedded mostly oriented 60 TCA, slightly carbonaceous with sharp lower contact at 55 TCA, no discernible sulphide mineralisation	
44 to 45	142.95	144.05	1.10	100%					60				SST		Light gray, fine to medium grained, clean STT, moderately laminated with thin bedding dipping 60 TCA, carbonate veinlets <1%, trace of pyrite in fractures	
45	144.05	144.15	0.10	100%									CMST		Dark gray to black, dull 95% with thin lenses/laminations of coal, sharp lower contact at 55 TCA	
45 to 48	144.15	153.50	9.35	100%					55-60			1.0	SST		Light gray, fine to medium grained with thin laminations of coal and CMST(mm in size) between 151.0 to 152.75m depth, moderately to highly bedded mostly oriented 55 to 60 TCA, sharp lower contact at 60 TCA, exhibits normal graded bedding (fine to coarse grained), carbonate veinlets 1%, pyrite as fine grained disseminated and fracture filling	
48	153.60	154.22	0.62	100%					60-65			0.5	MST		Dark gray, highly laminated with thin beds of CMST/CO, with zones showing slightly carbonaceous, lower contact is broken, pyrite as fine grained filling fractures	
48 to 49	154.22	157.50	3.28	100%					55			1	SST		Light gray, fine to medium grained, moderately bedded with beds dipping 55 TCA, sharp lower contact at 45 TCA, carbonate veinlets/stringers 1%, rare carbonacepus sediments infilled in fractures, dirty SST, pyrite as fine grained disseminated	
49	157.50	158.65	1.15	100%					60			0.1	MST		Medium to dark gray with interbedded SST(fine grained), highly fractured mostly breaks along bedding plane, rare carbonate veinlets <1%, trace of pyrite in fractures	
49 to 54	158.65	174.85	16.20	100%					55-60			1.5	SST		Light to medium gray, fine to medium grained, with minor thin laminations of carbonaceous sediments(infilled in fractures) between 163.0 to 168.35m depth, moderately to highly bedded with beds dipping 45 to 50 TCA, carbonate veinlets/stringers 2%, shear zone at 162.70 to 163.06m, pyrite as fine grained disseminated and filling fractures	
54 to 56	174.85	179.80	4.95	100%					45-50			0.5	SHL		Medium to dark gray, with interbedded fine grained SS(1-2mm in size), minor coal lenses, moderately to highly laminated with bedding mostly oriented 45 to 50 TCA, carbonate veinlets 1-2%, highly jointed with fractures mostly along bedding plane, weak disseminated pyrite, gradational lower contact	
56 to 60	179.80	193.35	13.55	100%					50-60			1	SST		Light to medium gray, "dirty SST", fine to medium grained with interbedded thin laminations of SHL/MST (1-2mm in size), occasional polished fracture surface, carbonate veinlets 1-2%, displays normal graded bedding (fine to coarse grained), pyrite as disseminated and fracture filling, gradational lower contact	
60 to 63	193.35	200.24	6.89	100%					35-40			0.5	SHL		Medium to dark gray, with interbedded fine grained SST(1-2mm thick), moderately bedded mostly dipping 35 to 40 TCA, carbonate veinlets/stringers 1%, rare coal lenses, occasional carbonaceous sediments infilled in fractures, pyrite as fracture filling, EOH = 200.24m	
EOH																

Depth From (m)	Depth To (m)	Type	Description / Comments
28.19	28.40	FLT	Fault/shear zone with angular fragments set in clayey/gouge matrix, slickensides common, intensely fractured core
39.60	39.77	LC	Loss core above shear/fault zone
39.77	40.54	FLT	Fault/shear zone, intensely fractured core with numerous slickensides, angular fragments with clayey zones/fault gouge
40.54	40.70	FLT	Fault/shear zone, intensely fractured core with numerous slickensides, angular fragments with clayey zones/fault gouge
40.70	40.92	LC	Loss core below shear/fault zone
47.30	47.76	FLT	Fault/shear zone, angular fragemnets set in clayey matrix/fault gouge
47.76	48.16	LC	Loss core within fault/shear zone
48.60	48.77	FLT	Soft, clayey, fault gouge
48.77	49.09	LC	Loss core within the fault
49.09	49.68	FLT	Fault/shear zone with angular fragments set in clayey/gouge matrix, slickensides common, intensely fractured core
56.55	56.99	FLT	Soft, clayey, fault gouge with minor angular fragments, slickensides mand polished fracture surface common
56.99	57.61	FLT	Soft, clayey, fault gouge with minor angular fragments, slickensides mand polished fracture surface common
57.61	58.21	LC	Loss core within the fault/shear zone
58.21	58.32	LC	Loss core within the fault/shear zone
58.32	58.52	FLT	Soft, clayey, fault gouge with minor angular fragments, slickensides mand polished fracture surface common
123.44	124.35	FLT	Fault/shear zone, angular fragments set in clayey/gouge matrix, intensely fractured core, with strong pyrite
130.30	131.05	FLT	Fault/shear zone, contains angular fragments with minor clay/gouge matrix, slickensides common
162.70	163.06	FLT	Fault/shear zone, angular fragments set in minor clayey/gouge matrix

HQ Core Description

Hole: LR14HQ-15 **Page:** 1 of

Northing: 5500490 **Hole Orientation:** Azimuth 90 / Dip -70 **Total Depth:** 330.42 m

Easting: 661360 **Elevation:** **Seam:** 15, 10

UTM System: NAD 83 **Logged by:** Ian Furigay/Jaclyn Galbraith **Date :** 19-30, August 2014

Box #	Driller's Coring Info from	to	Recovered m	%	Interval Corrected to Log from	to	Length (m)	Lost (m)	Bedding (Alpha)	Sample #	Sample Mass (kg)	Sulphide %	Major Lith Code	Minor Lith Code	Seam	Description	Graphic
	0.00	3.05														Casing, no core samples	
1	3.05	5.65	2.59	100%									OVB			Overburden, highly weathered and oxidized, fragments of SST/MST set in clay, glacial ti	
1 to 3	5.65	9.67	4.02	100%					60-65				MST	SST		Khaki brown to medium gray, highly weathered and oxidized, highly laminated with SST beds <1cm thick, bedding at 60 to 65 TCA, strong iron oxide/limonite staining, gradational lower contact, poorly indurated, partly clayey, weak rock	
3	9.67	10.00	0.20	60%									CO			Black, shiny/bright 85% dull 15%, highly fractured with polished fracture surface, light weight, highly friable and brittle	
3 to 4	10.00	13.25	3.25	100%					65-70			0.1	MST	SST		Medium gray, slightly weathered and oxidized with limonite staining mostly in fractures, highly laminated with fine grained SST beds <1cm thick, bedding at 65-70 TCA, moderately indurated, medium hard rock, carbonate veinlets <1%, trace of pyrite	
4 to 5	13.25	15.45	2.20	100%					65-70			0.5	SST	MST		Medium gray, fine to medium grained, moderately bedded with beds dipping 65-70 TCA, partly weathered and oxidized, with thin MST laminations 1-2 cm thick, limonite in fractures, carbonate veinlets 2%, gradational lower contact at 70 TCA, weak disseminated pyrite mostly fine grained	
5 to 6	15.45	19.70	4.25	100%					60-65			0.5	MST	SST		Medium gray, partly oxidized with limonite stains in fractures, highly laminated with fine grained SST beds <1cm thick, bedding at 60-65 TCA, carbonate veinlets/stringers <1%, moderately indurated, medium hard rock, gradational lower contact, occasionally displays thin wavy beds of SST, weak fine grained pyrite mostly localized in SST beds	
6 to 7	19.70	23.65	3.95	100%					70-75				MST			Medium to dark gray, highly laminated with beds dipping 70-75 TCA, soft to moderately indurated, weak rock, partly clayey, slightly carbonaceous at the bottom, gradational lower contact, no visible sulphide mineralisation, base of oxidation at 21.60m depth	
7	23.65	23.77	0.12	100%									CMST			Dark gray, soft, clayey with coal streaks, weak rock	
7 to 8	23.77	24.65	0.88	100%					70-75			0.1	MST			Medium to dark gray, soft to moderately hard, partly clayey weak rock, highly laminated with beds dipping 70-75 TCA, gradational lower contact, trace of pyrite in fractures	
8	24.65	24.85	0.20	100%						R340296	1.4		CMST			Dark gray with moderate lenses of coal, soft, weak rock, highly carbonaceous, gradational lower contact	
8	24.85	27.13	1.44	63%	24.90	26.90	2.00	0.56		R340297	6.2		CO			Black, soft/clayey, shiny/bright 90% dull 10%, light weight, highly friable, broken/loose	
8	27.13	27.49	0.15	41%	26.90	27.35	0.45	0.30		R340298	1.0		CMST			Rock parting, dark gray with moderate lenses of coal, soft, clayey, gradational lower contact	
8	27.49	28.10	0.40	65%	27.35	27.60	0.25			R340299	1.8		CO			Black, soft/clayey, shiny/bright 90% dull 10%, light weight, highly friable, broken/loose, gradational lower contact	
8 to 9	28.10	29.15	0.71	67%	27.60	28.65	1.05	0.34		R340300	5.8		CMST			Rock parting, dark gray with moderate lenses of coal, soft, clayey, gradational lower contact	
9	29.15	29.87	0.38	52%	28.65	28.85	0.20			R340301	1.4		CO			Black, shiny/bright 90%, dull 10%, soft/clayey, broken/loose, highly fraible	
9	29.87	30.40	0.33	62%	28.85	29.45	0.60	0.27		R340302	2.2		CMST			Rock parting, medium to dark gray, highly carbonaceous with strong lenses of coal, dull 80%, shiny/bright 20%, slightly heavy	
9	30.40	31.90	0.51	34%	29.45	31.24	1.79	1.28		R340303	2.8		CO	CMST		Black, with 8cm of CMST (rock parting), shiny/bright 80% dull 20%, soft, clayey	
9	31.90	32.46	0.56	100%						R340304	2.2		MST			Dark gray, massive, slightly carbonaceous, moderately indurated, medium hard rock, sharp lower contact	
9	32.46	32.60	0.14	100%									CO			Black, soft, clayey, highly friable, broken core, shiny/bright 80% dull 20%	
10 to 11	32.60	36.45	3.85	100%					60				MST			Medium to dark gray, generally massive with rare laminations of SLT/SST, bedding at 60 TCA, carbonate veinlets <1%, no visible sulphide mineralisation	
11	36.45	36.70	0.25	100%									CMST			Dark gray, soft, clayey with coal streaks, weak rock	
11	36.70	37.35	0.37	56%	36.45	36.98	0.53	0.16					CO			Black, soft, clayey, highly friable, broken core, shiny/bright 90% dull 10%, gradational lower contact	
11 to 12	37.35	39.71	2.36	100%					60-65	R340305	2.0		SST	SLT		Light to medium gray, fine to medium grained, highly laminated with narrow beds of SLT (1-2cm thick), bedding at 60-65 TCA, moderately to well indurated, hard rock	
12	39.71	42.06	0.73	31%	39.68	40.12	0.44			R340306	3.2		CO	CMST		Black, soft, clayey, shiny/bright 75% dull 25%, broken/loose, slightly heavy probably due to its clay content, sharp lower contact at 78 TCA, occasional partings of CMST	
12 to 14	42.06	45.85	3.79	100%					70	R340307	2.2	0.1	SST	MST		Medium gray, fine to medium grained, highly laminated with beds of MST 1-2cm thick, gradational lower contact at 80 TCA, minor carbonaceous sediments in fractures, carbonate veinlets <1%, trace of pyrite in fractures	
14	45.85	46.60	0.75	100%					70				MST	SLT		Medium gray with interbedded SLT laminations 1-2cm thick and coal beds <3cm thick, bedding oriented 70 TCA, slightly carbonaceous at the bottom, gradational lower contact, no visible sulphide mineralisation	
14	46.60	46.75	0.15	100%	44.88	46.50	1.62	1.24					CO	CMST		Black, highly fractured with CMST(partings), shiny/bright 75% dull 25%, sharp lower contact	
14 to 25	46.75	80.70	33.34	98%					65-70			1.5	SST			Light gray, fine to medium grained, "Clean SST" minor sandy sections, moderately to highly induarted, competent rock, displays normal graded bedding(fine to medium grained)-younging uphole, shear/fault zone at 61.25-61.60m, 70.50-70.85m and at 74.50-74.65m, weak carbonate veinlets <1%, pyrite as fine grained disseminated and filling fractures, sharp lower contact at 65 TCA	

	Driller's Coring Info				Interval Corrected to Log											Page __2__ of ___	Graphic
			Recovered														
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	Bedding (Alpha)	Sample #	(kg)					Description	
25	80.70	81.00	0.30	100%					60-65			0.1	MST	SST		Medium to dark gray, highly laminated with thin fine grained SST beds <1cm thick, bedding at 60 tc 65 TCA, minor carbonaceous sediments infilled along bedding plane, slightly indurated, weak rock, trace of pyrite in fractures	
25 to 26	81.00	83.50	3.50	100%					65-70			0.5	SST	MST		Light to medium gray, fine to medium grained, with thin laminations of MST <1cm thick, bedding a 65-70 TCA, minor wavy beds of fine grained SST, well indurated, medium hard, competent rock, carbonate veinlets <1%, weak disseminated pyrite, sharp lower contact at 70 TCA , pyrite beds at 81.37 to 81.40m depth	
26 to 29	83.50	93.20	9.70	100%					45-50			1.5	SST			Light to medium gray, "Clean SST", fine to medium grained, with several narrow to thick shear/fault zones at 85.0 - 86.25m, 86.85-87.05m, 87.50-87.78m, 88.80-89.40m, and at 90.75 to 91.0m, shear/fault zones exhibits angular fragments with clay rich breccia/gouge, carbonate veinlets <1%, pyrite as fine grained disseminated and fracture filling, sharp lower contact at 25 TCA	
29	93.20	94.95	1.75	100%					45-50			1	MST	SST		Medium to dark gray with thin laminations of SST ,1cm thick, highly bedded mostly oriented 45 to 50 TCA, sharp lower contact at 40 TCA, shear/fault zone at 93.20 to 93.87m depth, slightly carbonaceous, carbonate veinlets/stringers 2%, pyrite as disseminated and fracture filling	
29 to 30	94.95	96.75	1.80	100%					35-45			1	SST	MST		Light to medium gray, "Dirty SST" fine to medium grained, highly bedded with thin laminations o MST <1cm thick, sharp lower contact at 50 TCA, carbonate veinlets/stringers 2%, pyrite as fine grained disseminated	
30 to 31	96.75	100.55	3.80	100%					30-35			1.5	SST			Light to medium gray, fine to medium grained, "Clean SST", shear/fault zone at 97.15-97.60m, displays low angle bedding dipping 30 to 35 TCA, exhibits normal graded bedding (fine to medium grained),carbonate veinlets/stringers 2%, pyrite as fine grained disseminated and fracture filling, lower contact is shear/fault zone	
31 to 34	100.55	107.60	7.05	100%					25-30			1	SST	MST		Light to medium gray, "Dirty SST" with interbedded MST <1cm thick, low angle bedding dipping 25 to 30 TCA, MST display polished fracture surface, shear/fault zone at 100.55 to 100.85m, minor wavy MST beds, sharp lower contact at 30 TCA, rare carbonaceous sediments in fractures, carbonate veinlets 2%, pyrite as fine grained disseminated and filling fractures	
34 to 36	107.60	114.30	6.70	100%					25-30			1	MST	SST		Medium to dark gray, with thin laminations of fine grained SST 1-2cm thick, partly carbonaceous, carbonaceous sediments in fracture common, low angle bedding 25 - 30 TCA, shear/fault zone at 110.25-110.60m and at 111.90-112.16m mostly of angular fragemnts set in clay/gouge matrix, carbonate veinlets 2 mostly localized in SST beds, pyrite as disseminated, sharp lower contact at 27 TCA	
36 to 37	114.30	116.40	2.10	100%					25			0.5	SLT	MST		Medium to dark gray, highly laminated with thin beds of SLT 1-2 cm thick, low angle bedding, carbonate veinlets/stringers 3%, minor carbonaceous sediments in fractures, gradational lower contact at 23 TCA, weak disseminated fine grained pyrite	
37 to 42	116.40	133.00	16.60	100%					25			0.5	MST	SST		Medium to dark gray, well bedded with thin laminations of fine grained SST 1-2cm thick, shear/fault zone at 132.05 to 133.0m depth, partly carbonaceous, carbonaceous sediments common in fractures, weakly indurated, weak rock, bedding at 25 TCA, carbonate veinlets/stringers 2%, weak pyrite mostly localized in fractures	
42 to 44	133.00	137.25	4.25	100%					25-30			0.1	SLT	MST		Light to medium gray, partly carbonaceous with thin laminations of MST 1cm thick, moderately indurated, medium strong rock, polished fracture surface common in MST beds, low angle bedding at 25-30 TCA, carbonate veinlets 2%, trace of pyrite in fractures, gradational lower contact	
44 to 47	137.25	148.74	11.49	100%					25-30			0.5	MST	SST		Medium to dark gray with thin laminations of fine grained SST, partly carbonaceous with carbonaceous sediments mostly along bedding planes in MST beds, shear/fault zone at 139.20-140.0m and at 144.40 - 148.74m, occasional wavy SST beds, moderately indurated, weak to medium strong rock, carbonate veinlets/stringers 1% mostly in SST beds, exhibits low angle bedding dipping 25-30 TCA, weak disseminated fine grained pyrite.	
47 to 49	148.74	152.95	4.21	100%					30-35			0.1	SST	MST		Light to medium gray, fine grained with interbedded MST, partly carbonaceous, bedding at 30-35 TCA, carbonaceous sediments in fractures common, sharp lower contact at 30 TCA, carbonate stringers 2%, trace of pyrite in fractures	
49 to 56	152.95	176.17	22.79	98%					40-45			0.1	MST	SST		Medium to dark gray with interbedded fine grained SST 1-2cm thick, SST beds diminsihed towards bottom, shear zone at 161.90-162.15 and at 162.75-164.58m, partly carbonaceous with strong carbonaceous sediments in fractures, weakly indurated, weak rock, bedding mostly oriented 40 - 45 TCA, rare carbonate veinlets/stringers, trace of pyrite in fractures, gradational lower contact	
56 to 57	176.17	177.50	0.50	37%	176.45	177.58	1.13	0.63		R340315	1.80		CMST	BC		Black, soft, generally dull 95%, slightly heavy with coal lenses, gradational lower contac	
57	177.50	178.25	0.64	85%	177.58	178.18	0.60			R340316	4.00		CO			Black, soft, clayey, shiny/bright 95% dull 5%, light weight, with occasional pebble size clast of BC	
57	178.25	178.55	0.20	66%	178.18	178.50	0.32	0.12		R340317	1.20		BC			Black, soft, clayey, generally dull 90% with shiny/bright coal 10%, slightly heavy	
57	178.55	178.80	0.12	48%	178.50	178.77	0.27	0.15		R340318	0.80		CO			Black, soft, clayey, highly friable, shiny/bright 85% dull 15%, light weigh	
57 to 58	178.80	179.70	0.77	85%	178.77	179.70	0.93	0.16		R340319	4.80		CMST			Dark gray, dull 70%, highly carbonaceous, soft, clayey	

	Driller's Coring Info				Interval Corrected to Log											Page __3__ of _____	Graphic
			Recovered														
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	Bedding (Alpha)	Sample #	Sample Mass (kg)	Sulphide %	Major Lith Code	Minor Lith Code	Seam	Description	
58	179.70	181.40	1.70	100%	179.70	181.40	1.70			R340320	9.60		BC			Dark gray to black, soft, clayey, slightly heavy, highly friable and brittle, gradational lower contact	
58	181.40	182.00	0.28	46%	181.40	181.75	0.35	0.07		R340321	2.40		CMST			Dark gray with moderate to strong coal lenses, highly carbonaceous, gradational lower contact	
58 to 59	182.00	183.79	1.79	100%								0.5	MST			Medium to dark gray, massive, slightly carbonaceous at the top, weakly indurated, weak to medium strong rock, gradational lower contact, weak fine grained disseminated pyrite	
59 to 64	183.79	199.02	15.23	100%					45-50			1	SLT	MST		Medium to dark gray, with interbedded MST mostly dipping 45-50 TCA, shear zone at 186.50-186.68m, 187.10-187.35m and at 198.25-199.02m mostly of rubble zone with minor clay as matrix, carbonate veinlets <2%, presence of thin SST lam 1-2mm thick at the bottom, sharp lower contact at 40 TCA, pyrite as fine grained disseminated	
64 to 67	199.02	208.60	9.58	100%					45-50			1.5	SST			Light gray, fine to medium grained, "Dirty SST" with moderate carbonaceous sediments/coal lenses <2cm thick, bedding at 45 to 50 TCA, strong carbonaceous sediments at 205.90 to 206.15m, fault/shear zone at 199.25-203.60m and at 205.85-206.80m mostly of rubble zone with sand/clay, carbonate veinlets 2%, pyrite as fine grained disseminated and fracture filling, sharp lower contact at 65 TCA	
67 to 68	208.60	211.22	2.62	100%					60			1	MST	SST		Brown to medium gray, highly laminated with thin beds of SST <1cm thick, bedding at 60 TCA, slightly carbonaceous, moderately indurated, weak to medium strong rock, sharp lower contact at 55 TCA, carbonate veinlets <1%, pyrite as fine grained disseminated	
68 to 73	211.22	225	13.78	100%					40-45			1.5	SST	CMST		Light to medium gray, fine to medium grained, "Dirty SST" with moderate to strong laminations of CMST/CO, bedding at 40-45 TCA, with zones showing rip-up clast of MST, moderately indurated, highly brittle and crumbly, weak rock, fault/shear zone at 213.20-214.26m, 218.10-219.07m, 219.50-220.35m and at 221.10-222.25m mostly of rubble zone with angular fragments and with sand/clay, partly brecciated, sharp lower contact at 40 TCA, carbonate veinlets/stringers 1%, pyrite as fine grained disseminated and filling fractures	
73	225.00	226.40	1.40	100%					35-40			1.5	MST	SST		Brown to medium gray, with laminated fine grained SST 1-2cm thick slightly carbonaceous, lower contact is broken/fractured, slightly indurated weak rock, pyrite as fine grained disseminated	
73 to 74	226.40	228.95	2.55	100%					40			1.5	SST			Light to medium gray, fine to medium grained, with minor carbonaceous sediments in fractures rubble zone/shear zone from top to 228.40m with angular frragments and sand/clay, bedding at 40 TCA, poorly indurated, weak rock, brittle and highly crumbly, pyrite as fine grained disseminated and fracture filling	
74	228.95	230.15	1.20	100%					35				MST			Medium gray, generally massive with rare laminations of SST, sharp lower contact at 34 TCA, slightly carbonaceous, carbonaceous sediments in fracture common, no visible sulphide mineralisation	
74 to 78	230.15	244.74	13.31	91%					30-35			1.5	SST	MST		Light to medium gray, fine to medium grained, "Dirty SST" with CMST/CO infilled in fractures, slightly indurated, weak rock, fault/shear zone at 230.45-231.05m, 232.30-235.80m, 237.40-238.65m, 240.30-242.0 and at 242.50-244.34m, bedding oriented 30-35 TCA, carbonate veinlets <1%, occasionally displays normal graded bedding(fine to medium grained-younging uphole), pyrite as fine grained disseminated and fracture filling, sharp lower contact at 33 TCA	
78 to 87	244.74	267.00	21.87	98%					35			1	MST			Medium to dark gray, generally massive with rare bedding dipping 35 TCA, shear/fault zone at 256.64-260.50m, with sections showing slightly carbonaceous, carbonaceous sediments infilled in fractures common, moderately indurated, weak rock, carbonate veinlets <1%, pyrite as fine grained disseminated and filling fractures, gradational lower contact	
87 to 88	267.00	272.30	5.30	100%					40-45			1	SLT	MST		Medium to dark gray with interbedded MST 1-2cm thick, bedding at 40-45 TCA, shear zone at 269.40-273.70m mostly consist of pebbly size, angular rock fragments with sand/clay matrix(brecciated), cabonate veinlets <2%, pyrite as disseminated, stringers and fracture filling	
88 to 92	273.20	283.12	9.92	100%					70-80			1.5	MST	SST		Medium gray highly laminated with thin beds of fine grained SST 1-2cm thick, bedding at 70-80 TCA strong pyrite as veinlets/stringers and disseminated, some pyrite were oxidized, carbonate veinlets <2%, well indurated, medium strong rock	
92	283.12	283.37	0.25	100%					70-80	R340322	1.4	1.5	MST	SST		Medium gray highly laminated with thin beds of fine grained SST 1-2cm thick, bedding at 70-80 TCA strong pyrite as veinlets/stringers and disseminated, some pyrite were oxidized, carbonate veinlets <2%, well indurated, medium strong rock	
92	283.37	283.68	0.05	16%	283.22	283.74	0.52	0.47		R340322			CMST			dark grey, very fine grained, crushed and broken core, very soft. Core loss from run appears to be in this crushed rock section	
92 to 93	283.68	286.22	2.14	84%	283.74	286.26	2.52	0.38		R340323	9.0		CO			black, soft, mostly dull (95%), 5% bright, light weight, competent, two 1-2cm CMST bands, 5 cm CMST band at base of sample. Contact angle not visible due to crushed broken core at top of seam	
93	286.22	287.53	1.02	78%	286.26	287.20	0.94	(0.08)		R340324	4.4		CO			black, soft, mostly dull (90%), up to 10% bright, light weight, competent, 5 cm MST band at base of sample,	
93	287.53	289.26	1.23	71%	287.20	288.92	1.72	0.49		R340325	5.0		CO			black, soft, dull 85%, bright 15%, light weight, semi-competent, sheared	
94	289.26	289.91	0.16	25%	288.92	289.40	0.48	0.32		R340326	0.8		MST			brown, very fine grained, med. Soft, carbonaceous at top and base of parting	
94	289.91	290.60	0.61	88%	289.40	289.90	0.50	(0.11)		R340327	2.4		CO			black, soft, dull 85%, bright 15%, light weight, semi-competent, sheared, one 0.5 cm MST lense	

	Driller's Coring Info				Interval Corrected to Log						Sample Mass	Sulphide %	Major Lith Code	Minor Lith Code	Seam	Page __3__ of _____	Graphic
			Recovered														
Box #	from	to	m	%	from	to	Length (m)	Lost (m)	Bedding (Alpha)	Sample #	(kg)					Description	
94	290.60	290.75	0.14	93%	289.90	290.66	0.76	0.62		R340328	1.0		CMST			brown to medium grey, very soft, very fine grained, clayey, some soft coal intermixed	
94	290.75	291.15	0.37	93%	290.66	291.70	1.04	0.67		R340329	1.6		CO			black, soft, dull 85%, bright 15%, light weight, semi-competent, sheared, 5 cm SLT band at base of sample- med grey, med. Hard, fine grained	
94	291.15	293.07	1.65	86%	291.70	292.84	1.14	(0.51)		R340330	7.4	5	CO			black, soft, dull 80%, bright 20%, light weight, semi competent, sheared, few 0.5 cm CMST bands, 8cm pyrite band at 291.70m (driller depth), decreasing %bright towards base of sample	
95	293.07	293.28	0.22	105%	292.84	293.20	0.36	0.14		R340331	1.2		CMST			brown to dark grey, med. Soft, very fine grained, few coaly lenses throughout	
95	293.28	294.50	0.97	80%	293.20	294.30	1.10	0.13		R340332	4.0		CO			black, soft, dull 85%, bright 15%, light weight, semi-competent, sheared, two 1cm CMST bands	
95	294.50	295.78	1.19	93%	294.30	295.64	1.34	0.15		R340333	6.0		CO	CMST		black, soft, dull90%, brighth 10%, light weight, competent, sheared, 6 cm CMST parting at top of sample- soft, brown, very fine grained, two 2cm CMST bands in middle of sample	
95	295.78	296.24	0.41	89%	295.64	296.48	0.84	0.43		R340334	2.8		CMST			brown to dark grey, soft to med soft, very fine grained, few coaly lenses, 5 cm SLT band	
96	296.24	297.71	1.02	69%	296.48	297.28	0.80	(0.22)		R340335	4.4		CO	BC		black, soft, dull 90%, bright 10%, semi-competent, sheared, few 3cm CMST-SLT bands throughout, and few dirty coal bands	
96	297.71	297.98	0.26	96%	297.28	298.50	1.22	0.96		R340336	2.2		CMST			brown, soft with med soft lenses, very fine grained, sheared	
96 to 97	297.98	300.04	1.96	95%	298.50	299.82	1.32	(0.64)		R340337	8.6		CO			black, soft, few harder bands, dull 90% bright 10%, competent, sheared, few 2-5cm CSMT bands throughout- brown, soft, v fine grained	
97	300.04	300.43	0.37	95%	299.82	300.54	0.72	0.35		R340338	1.8		CO	CMST		black, soft, dull 90%, bright 10%, competent, 10 cm CMST parting at top of sample- brown, very fine grained	
97	300.43	300.96	0.30	57%	300.54					R340339	2.6		CMST			brown to med grey, very fine grained, med. Soft, polished fracture surfaces, with coaly material. Contact with LMST at 60 degrees TCA	
97 to 106 EOH	300.96	330.42	29.46	100%		329.64							LMST			light grey to white, med. grey 314.7-319m, generally massive with rare bedding dippng 30 TCA, weakly silicified, well indurated, hard, competent rock, with minor carbonaceous sediment bands and coatings on fracture surfaces, calcite weinlets 3% up ot 5% locally, partly breciated and re-cemented with calcite infilling fractues, no visible sulphide mineralization, clay-like band at 324-325m, EOH 330.42m	

Depth From (m)	Depth To (m)	Type	Description / Comments
61.25	61.60	FLT	Fault/shear zone, intensely fractured anglular clast/fragments with minor sand/clay, low angle faulting
70.50	70.85	FLT	Fault/shear zone, intensely fractured anglular clast/fragments with minor sand/clay, oriented almost parallel to bedding
74.50	74.63	FLT	Fault/shear zone, intensely fractured angular clast/fragments with sand matrix, oriented almost parallel to bedding
74.63	74.92	LC	Loss core below the fault/shear zone
85.00	86.25	FLT	Fault/shear zone, intensely fractured angular clast/fragments with sand matrix, low angle faulting/shearing, with healed fractured zone 30cm
86.85	87.05	FLT	Fault/shear zone, intensely fractured angular clast/fragments with clay matrix, low angle faulting/shearing
87.50	87.78	FLT	Fault/shear zone, rubble zone, angular rock fragments, intensely fractured
88.80	89.30	FLT	Fault/shear zone, angular fragments with clay/gouge matrix, oriented low angle, brecciated
89.30	89.40	FLT	Fault/shear zone, 2cm clay rich breccia within the SST unit
90.75	90.83	FLT	Fault/shear zone, intensely fractured core/rubble zone, angular fragments, almost parallel to bedding
90.83	91.00	FLT	Fault/shear zone, intensely fractured core/rubble zone, angular fragments, almost parallel to bedding, with clay gouge
93.20	93.87	FLT	Fault/shear zone, rubble zone, angular rock fragments with clay rich breccia matrix, oriented low angle
97.15	97.60	FLT	Fault/shear zone, rubble highly fractured angular rock fragments with sand, low angle faulting/shearing
100.55	100.85	FLT	Fault/shear zone, mostly of soft clay/fault gouge with angular fragments
100.70	100.90	FLT	Fault, mostly of clay rich breccia/gouge, soft, weak rock, oriented almost parallel to bedding
110.25	110.60	FLT	Fault, angular fragments with clay breccia matrix, oriented almost parallel to bedding
111.90	112.16	FLT	Fault/shear zone, angular fragments with clay/gouge matrix, oriented low angle, brecciated
132.05	133.00	FLT	Fault zone, highly fractured core with narrow clay rich breccia/fault gouge, oriented almost parallel to bedding
139.20	140.00	FLT	Fault/shear zone, rubble, highly fractured with angular fragments, minor clay
144.40	145.69	FLT	Fault/shear zone, fractured core, MST with several thin clay rich breccia/fault gouge oriented almost parallel to bedding
145.69	148.74	FLT	Fault/shear zone, rubble, intensely fractured core with angular size fragments and minor clay, almost parallel to bedding orientation
161.90	162.15	FLT	Fault/shear zone, rubble, intensely fractured core vwith minor clay rich breccia, almost parallel to bedding
162.75	164.58	FLT	Fault/shear zone, highly fractured core with fault gouge/breccia, angular fragments common orinted almost parallel to bedding
164.58	164.90	LC	Loss core below the fault/shear zone
167.90	168.39	FLT	Fault/shear zone, clayey/fault gouge with angular fragments, almost parallel to bedding
168.39	168.89	FLT	Fault/shear zone, clayey/fault gouge with angular fragments, almost parallel to bedding
186.50	186.68	FLT	Fault/shear zone, highly fractured core with fault gouge/breccia, angular fragments common oriented almost parallel to bedding
187.10	187.35	FLT	Fault/shear zone, rubble zone, highly fractured core, anglular fragments with minor sand/clay
198.25	199.02	FLT	Fault/shear , rubble zone composed of angular fragments with sand,parallel to bedding
199.02	200.55	FLT	Fault/shear zone, mostly of angular fragments with sand/clay, oriented parallel to bedding
200.55	202.07	FLT	Fault/shear, rubble zone, intensely fractured core, mostly of angular rock fragments with sand/clay/carbonaceous sediments, oriented sub-paralle to bedding, weak rock
202.07	203.60	FLT	Fault/shear, rubble zone, intensely fractured core, mostly of angular rock fragments with sand/clay/carbonaceous sediments, oriented sub-paralle to bedding, weak rock
205.85	206.69	FLT	Fault/shear, rubble zone, intensely fractured core, mostly of angular rock fragments with sand/clay/carbonaceous sediments, oriented sub-paralle to bedding, weak rock
206.69	206.80	FLT	Fault/shear, rubble zone, intensely fractured core, mostly of angular rock fragments with sand/clay/carbonaceous sediments, oriented sub-paralle to bedding, weak rock
213.20	214.26	FLT	Fault/shear, rubble zone, intensely fractured core, mostly of angular rock fragments with sand/clay/carbonaceous sediments, oriented sub-paralle to bedding, weak rock, more sand
218.10	219.07	FLT	Fault/shear zone, rubble, intensely fractured, sub-parallel to bedding, sandy at the bottom
219.50	220.35	FLT	Fault/shear zone, rubble, intensely fractured, sub-parallel to bedding, sandy at the bottom
221.10	222.25	FLT	Fault/shear, rubble zone, intensely fractured core with pebbly size angular fragments, slickensides common, sub-parallel to bedding
226.10	226.46	FLT	Fault/shear zone, highly fractured, sub-parallel to bedding
226.46	228.40	FLT	Fault/shear, rubble zone, intensely fractured core with pebbly size angular fragments, slickensides common, sub-parallel to bedding
232.30	235.80	FLT	Fault/shear, rubble zone, intensely fractured core with pebbly size angular fragments, slickensides common, sub-parallel to bedding
237.40	238.34	FLT	Fault/shear, rubble zone, sandy, intensely fractured core with pebbly size angular fragments, sub-parallel to bedding
240.30	242.00	FLT	Fault/shear, rubble zone, sandy, intensely fractured core with pebbly size angular fragments, sub-parallel to bedding
242.50	244.34	FLT	Fault/shear, rubble zone, sandy, intensely fractured core with pebbly size angular fragments, sub-parallel to bedding
256.64	260.50	FLT	Fault/shear zone, soft, clayey, highly fractured core, with angular rock fragments set in clay matrix-brecciated, almost sub-parallel to bedding
266.08	268.00	FLT	Fault/shear zone, fractured core with fault gouge-clayey, weak rock
269.30	270.65	FLT	Fault/shear zone, SLT with several narrow fault gouge-clay rich breccia, oriented sub-parallel to bedding

LR14CC-02
Core Sampling June 28, 2014
10 bags

#	Hole ID	Sample Prefix	Sample Number	Seam	Drillers From (m)	Drillers To (m)	Drillers Sample Length (m)	Corrected to Log From (m)	Corrected to Log To (m)	Corrected to Log Sample Length (m)	Weight (kg)	Seam Recovery (%)	New Seam Name
	LR14CC-02		N/A	10				44.50	44.87	0.37		0	10
1	LR14CC-02	00	381	10	44.89	45.89	1.00	44.87	45.87	1.00	23.60		10
2	LR14CC-02	00	382	10	45.89	46.92	1.03	45.87	46.90	1.03	24.20		10
3	LR14CC-02	00	383	10	46.92	47.64	0.72	46.90	47.62	0.72	20.60	100	10
4	LR14CC-02	00	384	10	47.64	48.04	0.40	47.62	48.02	0.40	7.80		10
5	LR14CC-02	00	385	10	48.04	48.34	0.30	48.02	48.32	0.30	13.80		10
6	LR14CC-02	00	386	10	55.59	55.89	0.30	55.54	55.84	0.30	13.80		10
7	LR14CC-02	00	387	10	55.89	56.74	0.85	55.84	56.68	0.84	26.00		10
8	LR14CC-02	00	388	10	56.74	57.95	1.21	56.68	57.74	1.06	29.40		10
9	LR14CC-02	00	389	10	57.95	58.95	1.00	57.74	58.74	1.00	25.80		10
10	LR14CC-02	00	390	10	58.89	59.82	0.93	58.74	59.73	0.99	19.60	100	10
11	LR14CC-02	00	391	10	59.82	60.75	0.93	59.73	60.72	0.99	22.60		10
12	LR14CC-02	00	392	10	60.75	61.05	0.30	60.72	61.02	0.30	10.80		10
13	LR14CC-02	00	393	10-FW	61.05	61.75	0.70	61.02	61.72	0.70	22.00		10-FW
14	LR14CC-02	00	394	10-FW	61.75	62.00	0.25	61.72	61.97	0.25	4.40		10-FW

Shipped

MODIFIED: NO CHANGE

LR14CC-03
Core Sampling July 2, 2014

#	Hole ID	Sample Number	Seam	Drillers From (m)	Drillers To (m)	Drillers Sample Length (m)	Corrected to Log From (m)	Corrected to Log To (m)	Corrected to Log Sample Length (m)	Weight (kg)	Seam Recovery (%)	New Seam Name
1	LR14CC-03	00606	11-HW	28.00	28.05	0.05	27.77	27.82	0.05	1.8		10-HW
2	LR14CC-03	00607	11	28.05	29.05	1.00	27.82	28.82	1.00	22.8	100	10
3	LR14CC-03	00608	11	29.05	30.20	1.15	28.82	30.02	1.20	27.6		
4	LR14CC-03	00609	11	30.20	31.20	1.00	30.02	31.02	1.00	30.6		
5	LR14CC-03	00610	11	31.20	31.80	0.60	31.02	31.70	0.68	17.8		
6	LR14CC-03	00611	11	31.80	32.50	0.70	31.70	32.38	0.68	23.6		
7	LR14CC-03	00612	11	32.50	33.50	1.00	32.38	33.24	0.86	16.6		
8	LR14CC-03	00613	11	33.50	34.05	0.55	33.24	33.76	0.52	20.0		
9	LR14CC-03	00614	11	34.05	34.77	0.72	33.76	34.48	0.72	24.6		
10	LR14CC-03	00615	11	34.77	35.30	0.53	34.48	35.00	0.52	24.4		
11	LR14CC-03	00616	11	35.30	36.05	0.75	35.00	35.85	0.85	23.6		
12	LR14CC-03	00617	11	36.05	36.80	0.75	35.85	36.60	0.75	19.8		
13	LR14CC-03	00618	11	36.80	37.87	1.07	36.60	37.58	0.98	24.6		
14	LR14CC-03	00619	11	37.87	38.30	0.43	37.58	38.98	1.40	42.8		
15	LR14CC-03	00620	11	39.20	39.70	0.50	38.98	39.48	0.50	9.6		
16	LR14CC-03	00621	11	39.70	40.40	0.70	39.48	40.18	0.70	15.0		
17	LR14CC-03	00622	11	40.40	41.10	0.70	40.18	40.88	0.70	14.2		
18	LR14CC-03	00623	11	41.10	41.85	0.75	40.88	41.63	0.75	27.2		
19	LR14CC-03	00624	11	41.85	42.60	0.75	41.63	42.38	0.75	15.6		
20	LR14CC-03	00625	11	42.60	43.38	0.78	42.38	43.16	0.78	18.0		
21	LR14CC-03	00626	11	43.38	44.16	0.78	43.16	43.94	0.78	19.6		
22	LR14CC-03	00627	11	44.10	44.85	0.75	43.94	44.69	0.75	18.4		
23	LR14CC-03	00628	11	44.85	45.60	0.75	44.69	45.44	0.75	18.4		
24	LR14CC-03	00629	11-FW	45.60	45.90	0.30	45.44	45.74	0.30	13.6		10-FW

Shipped

MODIFIED: CHANGED TO 10 SEAM

LR14CC-04
Core Sampling July 1, 2014

				Drillers			Corrected to Log					
#	Hole ID	Sample Number	Seam	From (m)	To (m)	Sample Length (m)	From (m)	To (m)	Sample Length (m)	Weight (kg)	Seam Recovery (%)	New Seam Name
1	LR14CC-04	00395	11-HW	57.72	57.79	0.07	58.07	58.14	0.07	2.0	100	11-HW
2	LR14CC-04	00396	11	57.79	58.72	0.93	58.14	59.00	0.86	19.0		11
3	LR14CC-04	00397	11	58.72	59.52	0.80	59.00	59.60	0.60	21.2		
4	LR14CC-04	00398	11	59.52	60.32	0.80	59.60	60.08	0.48	27.0		
5	LR14CC-04	00399	11	60.32	61.32	1.00	60.08	61.38	1.30	23.0		
6	LR14CC-04	00400	11	61.32	61.82	0.50	61.38	61.90	0.52	21.6		
7	LR14CC-04	00601	11	61.97	62.97	1.00	61.90	62.90	1.00	26.6		
8	LR14CC-04	00602	11	62.97	63.97	0.32	62.90	63.90	1.00	26.0		
9	LR14CC-04	00603	11	63.97	64.97	1.00	63.90	65.00	1.10	19.2		
10	LR14CC-04	00604	11	64.97	65.42	0.45	65.00	65.45	0.45	14.6	93	
11	LR14CC-04	00605	11-FW	65.42	65.92	0.50	65.45	65.95	0.50	5.2		11-FW

Shipped

MODIFIED: NO CHANGE

LR14CC-05

Core Sampling July 14-15, 2014

				Drillers			Corrected to Log					
#	Hole ID	Sample Number	Seam	From (m)	To (m)	Sample Length (m)	From (m)	To (m)	Sample Length (m)	Weight (kg)	Seam Recovery (%)	New Seam Name
	Loop Ridge											
1	LR14CC-05	00672	13-HW	20.41	20.71	0.30	20.24	20.54	0.30	14.4		13-HW
2	LR14CC-05	00673	13	20.71	21.71	1.00	20.54	21.54	1.00	29.6		
3	LR14CC-05	00674	13	21.71	22.71	1.00	21.54	22.54	1.00	25.6		
4	LR14CC-05	00675	13	22.71	23.71	1.00	22.54	23.54	1.00	24.2		
5	LR14CC-05	00676	13	23.71	24.64	0.93	23.54	24.47	0.93	22.6	100	
6	LR14CC-05	00677	13	24.64	25.64	1.00	24.47	25.47	1.00	22.6		13
7	LR14CC-05	00678	13	25.64	26.64	1.00	25.47	26.47	1.00	22.2		
8	LR14CC-05	00679	13	26.64	27.64	1.00	26.47	27.47	1.00	27.2		
9	LR14CC-05	00680	13	27.64	28.64	1.00	27.47	28.47	1.00	26.0		
10	LR14CC-05	00681	13	28.64	29.64	1.00	28.47	29.47	1.00	24.6		
11	LR14CC-05	00682	13-FW	29.64	29.94	0.30	29.47	29.77	0.30	11.2		13-FW
Shipped										250.2		

MODIFIED: NO CHANGE

LR14CC-06
Core Sampling June 28, 2014
10 bags

#	Hole ID	Sample Number	Seam	Drillers From (m)	Drillers To (m)	Drillers Sample Length (m)	Corrected to Log From (m)	Corrected to Log To (m)	Corrected to Log Sample Length (m)	Weight (kg)	Seam Recovery (%)	New Seam Name
	LR14CC-06	N/A	15				37.40	39.06	1.66		0	15
	LR14CC-06	N/A	15				39.06	39.50	0.44		0	15
1	LR14CC-06	371	15	39.70	40.70	1.00	39.50	40.50	1.00	21.8	100	15
2	LR14CC-06	372	15	40.70	41.54	0.84	40.50	41.18	0.68	20.0		15
3	LR14CC-06	373	15	41.50	41.80	0.30	41.18	41.48	0.30	10.6		15
4	LR14CC-06	374	14	116.33	116.63	0.30	116.42	116.72	0.30	10.6	91	14
5	LR14CC-06	375	14	116.63	117.15	0.52	116.72	117.36	0.64	14.8		14
6	LR14CC-06	376	14	117.28	118.08	0.80	117.36	118.08	0.72	20.2	90	14
7	LR14CC-06	377	14	118.08	118.38	0.30	118.08	118.38	0.30	13.0		14
8	LR14CC-06	378	14	118.38	118.85	0.32	118.38	118.74	0.36	5.0	100	14
9	LR14CC-06	379	14	118.85	119.50	0.65	118.74	119.38	0.64	19.0		14
10	LR14CC-06	380	14	119.50	120.00	0.50	119.38	119.88	0.50	21.2		14

Shipped

MODIFIED: NO CHANGE

LR14CC-07
Core Sampling June 28, 2014

7 bags

#	Hole ID	Sample Number	Seam	Drillers From (m)	Drillers To (m)	Drillers Sample Length (m)	Corrected to Log From (m)	Corrected to Log To (m)	Corrected to Log Sample Length (m)	Weight (kg)	Seam Recovery (%)	New Seam Name
1	LR14CC-07	364	16-HW	38.50	38.80	0.30	38.14	38.44	0.30	9.2	100	16-HW
2	LR14CC-07	365	16	38.80	39.87	1.07	38.44	39.40	0.96	27.4		16
3	LR14CC-07	366	16	39.87	40.83	0.96	39.40	40.40	1.00	26.2		
4	LR14CC-07	367	16	40.83	41.83	1.00	40.40	41.40	1.00	26.4		
5	LR14CC-07	368	16	41.83	42.09	0.26	41.40	41.66	0.26	6.4		
6	LR14CC-07	369	16	42.09	42.70	0.61	41.66	42.28	0.62	18.4		
7	LR14CC-07	370	16-FW	42.70	42.91	0.21	42.28	42.49	0.21	12.6		16-FW

Shipped

MODIFIED: NO CHANGE

LR14CC-08

Core Sampling July 6-8, 2014

				Drillers			Corrected to Log					
#	Hole ID	Sample Number	Seam	From (m)	To (m)	Sample Length (m)	From (m)	To (m)	Sample Length (m)	Weight (kg)	Seam Recovery (%)	New Seam Name
1	LR14CC-08	00709	15	123.40	124.40	1.00	123.22	124.22	1.00	24.0	100	20
2	LR14CC-08	00710	15	124.40	125.40	1.00	124.22	125.22	1.00	23.0		
3	LR14CC-08	00711	15	125.40	126.48	1.08	125.22	126.22	1.00	29.4		
4	LR14CC-08	00712	15	126.48	127.52	1.04	126.22	127.22	1.00	27.0		
5	LR14CC-08	00713	15	127.52	128.48	0.96	127.22	128.15	0.93	36.2	98	
6	LR14CC-08	00714	15	128.48	129.40	0.92	128.74	129.64	0.90	22.8		
7	LR14CC-08	00715	15	129.40	130.40	1.00	129.64	130.64	1.00	27.0	100	
8	LR14CC-08	00716	15	130.40	131.36	0.96	130.64	131.64	1.00	25.2	98	
9	LR14CC-08	00717	15	131.36	132.40	1.04	131.64	132.19	0.55	27.4	100	
10	LR14CC-08	00718	15	132.40	132.85	0.45	132.19	132.54	0.35	13.8		
11	LR14CC-08	00719	15	132.85	133.55	0.70	132.54	133.24	0.70	29.0		
12	LR14CC-08	00720	15	133.55	134.53	0.98	133.24	134.24	1.00	23.4		
13	LR14CC-08	00721	15	134.53	135.40	0.87	134.24	135.24	1.00	27.6		
14	LR14CC-08	00722	15	135.40	136.04	0.64	135.24	135.86	0.62	15.0		
15	LR14CC-08	00723	15	136.04	136.44	0.40	135.86	136.34	0.48	14.4		
16	LR14CC-08	00724	15	136.44	137.35	0.91	136.34	137.34	1.00	24.8		
17	LR14CC-08	00725	15	137.35	138.35	1.00	137.34	138.34	1.00	25.6		
18	LR14CC-08	00726	15	138.35	139.17	0.82	138.34	139.34	1.00	23.6		
19	LR14CC-08	00727	15	139.17	140.12	0.95	139.34	140.36	1.02	25.4		
20	LR14CC-08	00728	15	140.12	141.12	1.00	140.36	141.34	0.98	33.0		
21	LR14CC-08	00729	15	141.12	142.14	1.02	141.34	142.34	1.00	22.0		
22	LR14CC-08	00730	15	142.14	143.13	0.99	142.34	143.34	1.00	26.4	96	
23	LR14CC-08	00731	15	143.13	144.30	1.17	143.34	144.38	1.04	26.0		
24	LR14CC-08	00732	15	144.30	145.30	1.00	144.38	145.38	1.00	23.2	89	
25	LR14CC-08	00733	15	145.30	146.67	1.37	145.38	146.54	1.16	32.8		
26	LR14CC-08	00734	15	146.67	147.79	1.12	146.54	147.6	1.06	26.2	97	
27	LR14CC-08	00735	15	147.79	148.80	1.01	147.6	148.6	1.00	25.4	100	
28	LR14CC-08	00736	15	148.80	149.80	1.00	148.6	149.6	1.00	24.6		
29	LR14CC-08	00737	15	149.80	150.79	0.99	149.6	150.6	1.00	21.8		
30	LR14CC-08	00738	15	150.79	151.83	1.04	150.6	151.54	0.94	24.6		
31	LR14CC-08	00739	FW-15	151.83	152.34	0.51	151.54	151.94	0.40	22.0		FW-20

Shipped

MODIFIED: CHANGED TO 20 SEAM

LR14CC-09

Core Sampling July 4-5, 2014

				Drillers			Corrected to Log					
#	Hole ID	Sample Number	Seam	From (m)	To (m)	Sample Length (m)	From (m)	To (m)	Sample Length (m)	Weight (kg)	Seam Recovery (%)	New Seam Name
1	LR14CC-09	00642	HW-15	46.80	47.10	0.30	47.12	47.42	0.30	12.0		HW-20
2	LR14CC-09	00643	15	47.10	48.20	1.10	47.42	48.52	1.10	25.6		
3	LR14CC-09	00644	15	48.20	49.10	0.90	48.52	49.52	1.00	24.4	100%	20
4	LR14CC-09	00645	15	49.10	50.10	1.00	49.52	50.12	0.60	21.4		
5	LR14CC-09	00646	15	50.10	50.62	0.52	50.12	50.64	0.52	11.0		
6	LR14CC-09	00647	part-15	50.62	50.80	0.18	50.64	50.94	0.30	10.4		part-20
7	LR14CC-09	00648	part-15	51.46	51.76	0.30	51.70	52.00	0.30	8.4	98%	
8	LR14CC-09	00649	15	51.76	52.60	0.84	52.00	52.84	0.84	22.6		
9	LR14CC-09	00650	15	52.60	53.55	0.95	52.84	53.66	0.82	32.6		
10	LR14CC-09	00701	15	53.55	54.55	1.00	53.66	54.66	1.00	28.2		
11	LR14CC-09	00702	15	54.55	55.55	1.00	54.66	55.66	1.00	29.0		
12	LR14CC-09	00703	15	55.55	56.55	1.00	55.66	56.66	1.00	22.0	100%	20
13	LR14CC-09	00704	15	56.55	57.55	1.00	56.66	57.66	1.00	24.6		
14	LR14CC-09	00705	15	57.55	58.55	1.00	57.66	58.66	1.00	25.0		
15	LR14CC-09	00706	15	58.55	59.55	1.00	58.66	59.66	1.00	23.2		
16	LR14CC-09	00707	15	59.55	60.75	1.20	59.66	60.85	1.19	28.8		
17	LR14CC-09	00708	FW-15	60.75	61.05	0.30	60.85	61.15	0.30	11.2		FW-20

Shipped

MODIFIED: CHANGED TO 20 SEAM

LR14CC-10
Core Sampling July 3, 2014

				Drillers			Corrected to Log				
#	Hole ID	Sample Number	Seam	From (m)	To (m)	Sample Length (m)	From (m)	To (m)	Sample Length (m)	Weight (kg)	Seam Recovery (%)
1	LR14CC-10	00630	17	59.80	60.80	1.00	59.35	60.35	1.00	23.0	100
2	LR14CC-10	00631	17	60.80	61.80	1.00	60.35	61.35	1.00	15.4	
3	LR14CC-10	00632	17	61.80	62.80	1.00	61.35	62.35	1.00	24.2	
4	LR14CC-10	00633	17	62.80	63.80	1.00	62.35	63.35	1.00	26.6	
5	LR14CC-10	00634	17	63.80	64.80	1.00	63.35	64.35	1.00	25.0	
6	LR14CC-10	00635	17	64.80	65.80	1.00	64.35	65.35	1.00	25.6	
7	LR14CC-10	00636	17	65.80	66.80	1.00	65.35	66.35	1.00	20.6	
8	LR14CC-10	00637	17	66.80	67.80	1.00	66.35	67.35	1.00	24.8	
9	LR14CC-10	00638	17	67.80	68.80	1.00	67.35	68.35	1.00	18.2	
10	LR14CC-10	00639	17	68.80	69.80	1.00	68.35	69.35	1.00	26.0	
11	LR14CC-10	00640	17	69.80	71.05	1.25	69.35	70.60	1.25	27.2	
12	LR14CC-10	00641	FW-17	71.05	71.45	0.40	70.60	70.80	0.20	13.0	

Seam
20
FW-20

Shipped

MODIFIED: CHANGED TO 20 SEAM

LR14CC11

Core Sampling July 11-14, 2014

				Drillers			Corrected to Log					
#	Hole ID	Sample Number	Seam	From (m)	To (m)	Sample Length (m)	From (m)	To (m)	Sample Length (m)	Weight (kg)	Seam Recovery (%)	New Seam Names
	Loop Ridge											
1	LR14CC-11	00465	18-HW	40.86	41.16	0.30	37.80	38.10	0.30	5.8	100	20-HW
2	LR14CC-11	00466	18	41.16	42.11	0.95	38.10	39.05	0.95	19.4		20
3	LR14CC-11	00467	18	42.11	43.05	0.94	39.05	39.99	0.94	24.8		
4	LR14CC-11	00468	18	43.05	44.05	1.00	39.99	40.86	0.87	24.0		
5	LR14CC-11	00469	18	44.05	45.05	1.00	40.86	41.78	0.92	24.0		
6	LR14CC-11	00470	18	45.05	45.84	0.79	41.78	42.57	0.79	18.6		
7	LR14CC-11	00471	18	45.84	46.09	0.25	42.57	42.82	0.25	13.8		
8	LR14CC-11	00472	18-FW	46.09	46.39	0.30	42.82	43.12	0.30	12.8		20-FW
9	LR14CC-11	00473	17-HW	58.07	58.37	0.30	55.07	55.37	0.30	12.0	100	19-HW
10	LR14CC-11	00474	17	58.37	59.05	0.68	55.37	55.97	0.60	15.6		19
11	LR14CC-11	00475	17	59.05	60.05	1.00	55.97	56.87	0.90	23.4		
12	LR14CC-11	00476	17	60.05	60.55	0.50	56.87	57.27	0.40	12.2		
13	LR14CC-11	00477	17	60.55	61.29	0.74	57.27	57.85	0.58	13.4		
14	LR14CC-11	00478	17-FW	61.29	61.59	0.30	57.85	58.15	0.30	18.4		19-FW
15	LR14CC-11	00479	16-HW	81.11	81.44	0.33	81.06	81.36	0.30	16.6	98	17-HW
16	LR14CC-11	00480	16	81.44	82.44	1.00	81.36	82.36	1.00	24.8		17
17	LR14CC-11	00481	16	82.44	83.44	1.00	82.36	83.41	1.05	20.2		
18	LR14CC-11	00482	16	83.44	84.14	0.70	83.41	84.17	0.76	19.6		
19	LR14CC-11	00483	16-FW	84.14	84.44	0.30	84.17	84.47	0.30	9.0		17-FW
20	LR14CC-11	00484	16-HW	87.61	87.81	0.20	DO NOT ANALYZE			10.4		
21	LR14CC-11	00485	16	87.81	88.16	0.35	DO NOT ANALYZE			6.8		
22	LR14CC-11	00486	16-FW	88.16	88.46	0.30	DO NOT ANALYZE			10.0		
23	LR14CC-11	00487	16-HW	89.71	90.01	0.30	89.63	89.93	0.30	12.8		20-HW
24	LR14CC-11	00488	16	90.01	90.61	0.60	89.93	90.45	0.52	16.2		20
25	LR14CC-11	00489	16	90.61	91.25	0.64	90.45	90.98	0.53	13.6		
26	LR14CC-11	00490	16-FW	91.25	91.55	0.30	90.98	91.28	0.30	10.4		20-FW
27	LR14CC-11	00491	16HW	92.71	93.01	0.30	92.53	92.83	0.30	12.2		20-HW
28	LR14CC-11	00492	16	93.01	93.51	0.50	92.83	93.15	0.32	13.2		20
29	LR14CC-11	00493	16-parting	93.61	94.28	0.67	93.15	93.82	0.67	21.4		20-parting
30	LR14CC-11	00494	16	94.28	94.91	0.63	94.4	95.03	0.63	16.6		20
31	LR14CC-11	00495	16-FW	94.91	95.21	0.30	95.65	95.95	0.30	9.8		20-parting
32	LR14CC-11	00496	16-HW	96.01	96.41	0.40	96.2	96.5	0.30	11.2		
33	LR14CC-11	00497	16	96.41	97.41	1.00	96.5	97.41	0.91	20.8		20
34	LR14CC-11	00498	16	97.41	98.41	1.00	97.41	98.32	0.91	23.2		
35	LR14CC-11	00499	16	98.41	99.41	1.00	98.32	99.23	0.91	24		
36	LR14CC-11	00500	16	99.41	100.41	1.00	99.23	100.02	0.79	23		

LR14CC11

Core Sampling July 11-14, 2014

				Drillers			Corrected to Log					
#	Hole ID	Sample Number	Seam	From (m)	To (m)	Sample Length (m)	From (m)	To (m)	Sample Length (m)	Weight (kg)	Seam Recovery (%)	New Seam Names
37	LR14CC-11	00651	16	100.41	100.96	0.55	100.02	100.3	0.28	17.2		
38	LR14CC-11	00652	16-FW	100.96	101.26	0.30	100.3	100.6	0.30	9.2		20-FW
39	LR14CC-11	00653	16-HW	103	103.3	0.30	102.4	102.7	0.30	7		18-HW
40	LR14CC-11	00654	16	103.3	104.01	0.71	102.7	103.48	0.78	22		18
41	LR14CC-11	00655	16	104.11	104.78	0.67	103.48	104.15	0.67	16.6		
42	LR14CC-11	00656	16	105.61	106.14	0.53	105.27	105.8	0.53	22.2		
43	LR14CC-11	00657	16	106.14	107.24	1.10	105.8	106.8	1.00	27		
44	LR14CC-11	00658	16	107.24	107.97	0.73	106.8	107.49	0.69	18		
45	LR14CC-11	00659	16	107.97	108.83	0.86	107.49	108.35	0.86	25		
46	LR14CC-11	00660	16-FW	109.11	109.44	0.33	108.35	108.68	0.33	10.4		18-FW
47	LR14CC-11	00661	16-HW	110.68	110.98	0.30	110.4	110.7	0.30	11.8		17-HW
48	LR14CC-11	00662	16	110.98	111.98	1.00	110.7	111.7	1.00	24.4		17
49	LR14CC-11	00663	16	112.27	113.27	1.00	111.7	112.7	1.00	26.4		
50	LR14CC-11	00664	16	113.27	114.27	1.00	112.7	113.7	1.00	26.6		
51	LR14CC-11	00665	16	114.27	115.27	1.00	113.7	114.7	1.00	24.4		
52	LR14CC-11	00666	16	115.27	115.9	0.63	114.7	115.33	0.63	16.6		
53	LR14CC-11	00667	16	115.9	117.07	1.17	115.33	116.5	1.17	27		
54	LR14CC-11	00668	16	117.07	118.07	1.00	116.5	117.58	1.08	23.4		
55	LR14CC-11	00669	16	118.23	119.23	1.00	117.58	118.67	1.09	22.6		
56	LR14CC-11	00670	16	119.23	119.63	0.40	118.67	119.07	0.40	9		
57	LR14CC-11	00671	16-FW	119.63	119.93	0.30	119.07	119.37	0.30	14.5		17-FW
Shipped										656.0		

MODIFIED: SEAMS 16-18 CHANGED TO 17-20 SEAMS

LR14CC-12

Core Sampling July 8-9, 2014

				Drillers			Corrected to Log					
#	Hole ID	Sample Number	Seam	From (m)	To (m)	Sample Length (m)	From (m)	To (m)	Sample Length (m)	Weight (kg)	Seam Recovery (%)	New Seam Names
	Loop Ridge											
1	LR14CC-12	00740	14-HW	20.96	21.26	0.30	20.80	21.10	0.30	12.2		20-HW
2	LR14CC-12	00741	14	21.26	22.37	1.00	21.10	22.10	1.00	27.4		20
3	LR14CC-12	00742	14	22.37	23.43	1.00	22.10	23.20	1.10	24.8		20
4	LR14CC-12	00743	14	23.43	24.00	0.57	23.20	23.80	0.60	14.2		20
5	LR14CC-12	00744	14-parting	24.00	24.25	0.25	23.80	24.00	0.20	9.6		20-parting
6	LR14CC-12	00745	14	24.25	25.08	0.80	24.00	25.10	1.10	20.0		20
7	LR14CC-12	00746	14	25.08	26.10	1.00	25.10	26.10	1.00	26.4		20
8	LR14CC-12	00747	14	26.10	27.10	1.00	26.10	27.10	1.00	25.0		20
9	LR14CC-12	00748	14	27.10	27.68	0.42	27.10	27.50	0.40	7.6		20
10	LR14CC-12	00749	14-FW	27.68	27.98	0.30	27.50	27.80	0.30	13.8		20-FW
11	LR14CC-12	00750	13-HW	34.30	34.60	0.30	33.85	34.15	0.30	11.2		19-HW
12	LR14CC-12	00451	13	34.60	35.14	0.59	34.15	34.89	0.74	17.0		19
13	LR14CC-12	00452	13	35.14	36.01	0.87	34.89	35.90	1.01	24.2	100	19
14	LR14CC-12	00453	13-parting	36.01	36.41	0.40	35.90	36.30	0.40	13.2		19-FW
15	LR14CC-12	00454	13-parting	43.1	43.40	0.30	42.85	43.15	0.30	9.0		18-HW
16	LR14CC-12	00455	13	43.40	44.25	0.85	43.15	44.00	0.85	23.2		18
17	LR14CC-12	00456	13	44.25	44.55	0.30	44.00	44.30	0.30	9.0		18-FW
18	LR14CC-12	00457	13-parting	45.85	46.15	0.30	45.90	46.20	0.30	10.6		17-HW
19	LR14CC-12	00458	13	46.15	46.90	0.75	46.20	47.05	0.85	16.8		17
20	LR14CC-12	00459	13-FW	47.00	47.30	0.30	47.05	47.35	0.30	11.2		17-FW
21	LR14CC-12	00460	12-HW	88.36	88.66	0.30	88.47	88.77	0.30	8.2		10-HW
22	LR14CC-12	00461	12	88.76	89.76	1.00	88.77	89.77	1.00	21.8		10
23	LR14CC-12	00462	12	89.76	90.76	1.00	89.77	90.89	1.12	24.4		10
24	LR14CC-12	00463	12	90.89	91.26	0.37	90.89	91.26	0.37	8.8		10
25	LR14CC-12	00464	12-FW	91.26	91.82	0.56	91.26	91.82	0.56	14.2		10-FW
Shipped												

MODIFIED: CHANGED SEAMS 12-14 TO 10, 17-20 SEAMS

To: **Brett Warden**
Manager - Vancouver Coal Laboratory
ALS Energy Division - Coal
11191 Coppersmith Place
Richmond, BC
V7A5H1

Sample Shipping Manifest

Date: Friday, July 25, 2014

Number of pallet boxes shipped: 1

#	Hole ID	Sample #	Seam	Drillers From (m)	Drillers To (m)	Drillers Sample Length (m)	Corrected to Log From (m)	Corrected to Log To (m)	Corrected to Log Sample Length (m)	Mass (kg)	Seam Recovery (%)
1	LR14CC-13	00683	HW	45.70	46.00	0.30	46.30	46.60	0.30	11.4	100
2	LR14CC-13	00684		46.00	47.00	1.00	46.60	47.60	1.00	30.2	
3	LR14CC-13	00685		47.20	48.20	1.00	47.60	48.60	1.00	22.2	
4	LR14CC-13	00686		48.20	49.20	1.00	48.60	49.60	1.00	21.2	
5	LR14CC-13	00687		49.20	50.17	0.97	49.60	50.60	1.00	28.2	
6	LR14CC-13	00688	FW	50.15	50.45	0.30	50.60	50.90	0.30	9.8	
7	LR14CC-13	00689	HW	80.38	80.68	0.30	80.15	80.45	0.30	10.0	98
8	LR14CC-13	00690		80.68	81.68	1.00	80.45	81.55	1.10	22.4	
9	LR14CC-13	00691		81.68	82.68	1.00	81.55	82.55	1.00	22.6	
10	LR14CC-13	00692		82.68	83.68	1.00	82.55	83.55	1.00	21.8	
11	LR14CC-13	00693		83.68	84.68	1.00	83.55	84.55	1.00	22.2	
12	LR14CC-13	00694		84.68	85.68	1.00	84.55	85.55	1.00	24.6	
13	LR14CC-13	00695		85.68	86.68	1.00	85.65	86.25	0.60	10.0	
14	LR14CC-13	00696	FW	86.68	86.98	0.30	86.25	86.55	0.30	15.0	
15	LR14CC-13	00697		102.16	103.16	1.00	101.80	102.80	1.00	22.4	55%
16	LR14CC-13	00698		103.16	104.16	1.00	102.80	103.80	1.00	25.2	
17	LR14CC-13	00699	FW	104.16	104.46	0.30	103.80	104.10	0.30	14.2	

Total Number of Samples: **17**

Total Mass **333.4**

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

Received (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

To: **Birtley Labs**
7784 62 st. SE
T2C5K2
Calgary, AB

Sample Shipping Manifest

Date: Friday, July 25, 2014

Number of pallet boxes shipped: 1

#	Hole ID	Sample #	Seam	Drillers From (m)	Drillers To (m)	Drillers Sample Length (m)	Corrected to Log From (m)	Corrected to Log To (m)	Corrected to Log Sample Length (m)	Mass (kg)	Seam Recovery (%)
1	LR14HQ-01	00801	12	11.25	11.55	0.30	11.30	11.60	0.30	2	92
2	LR14HQ-01	00802	12	11.55	13.60	2.05	11.60	13.45	1.85	8.6	
3	LR14HQ-01	00803	12	13.60	13.90	0.30	13.45	13.75	0.30	2	
4	LR14HQ-01	00804	12	13.90	31.25	17.35	27.45	29.70	2.25	13.2	84
5	LR14HQ-01	00805	11	65.00	65.30	0.30	64.80	65.10	0.30	1.8	
6	LR14HQ-01	00806	11	65.30	66.30	1.00	65.10	66.20	1.10	3.8	
7	LR14HQ-01	00807	11	66.75	68.20	1.45	66.20	68.00	1.80	10.0	
8	LR14HQ-01	00808	11	68.20	70.30	2.10	68.00	69.75	1.75	5.8	
9	LR14HQ-01	00809	11	70.30	71.30	1.00	69.75	70.40	0.65	5.8	
10	LR14HQ-01	00810	10	124.20	124.50	0.30	123.90	124.20	0.30	1.6	96
11	LR14HQ-01	00811	10	124.50	130.40	5.90	124.20	130.80	6.60	21.4	
12	LR14HQ-01	00812	10	130.60	131.10	0.50	130.80	131.15	0.35	1.6	
13	LR14HQ-01	00813	10	131.10	131.65	0.55	131.15	131.45	0.30	2	
14	LR14HQ-01	00814	10	131.65	132.35	0.70	131.45	132.15	0.70	5.2	
15	LR14HQ-01	00815		154.60	155.60	1.00	154.50	155.35	0.85	5.2	100
16	LR14HQ-01	00816		174.30	174.90	0.60	173.80	174.25	0.45	2.8	
17	LR14HQ-01	00817		174.90	175.30	0.40	174.25	174.40	0.15	2.6	

Total Number of Samples: **17**

Total Mass **95.4**

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

Received (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

To: **Birtley Labs**
7784 62 st. SE
T2C5K2
Calgary, AB

Sample Shipping Manifest

Date: Friday, July 25, 2014

Number of pallet boxes shipped: 1

#	Hole ID	Sample #	Seam	Drillers From (m)	Drillers To (m)	Drillers Sample Length (m)	Corrected to Log From (m)	Corrected to Log To (m)	Corrected to Log Sample Length (m)	Mass (kg)	Seam Recovery (%)
1	LR14HQ-04	00818	11	37.40	38.15	0.75	36.90	37.35	0.45	5.0	100
2	LR14HQ-04	00819	11	47.55	47.65	0.10	47.10	47.20	0.10	0.6	
3	LR14HQ-04	00820	11	47.65	48.45	0.80	47.20	48.15	0.95	2.0	
4	LR14HQ-04	00821	11	48.77	49.10	0.33	48.15	48.48	0.33	4.2	
5	LR14HQ-04	00822	10	73.80	74.10	0.30	73.10	73.40	0.30	1.0	92
6	LR14HQ-04	00823	10	74.10	74.65	0.55	73.40	73.85	0.45	2.0	
7	LR14HQ-04	00824	10	74.65	75.55	0.90	73.85	75.15	1.30	5.8	
8	LR14HQ-04	00825	10	75.55	76.80	1.25	75.15	75.90	0.75	4.8	
9	LR14HQ-04	00826	10	76.80	77.20	0.40	75.90	76.70	0.80	3.2	
10	LR14HQ-04	00827	10	77.82	79.55	1.73	76.70	78.85	2.15	7.2	
11	LR14HQ-04	00828	10	79.80	80.16	0.36	78.85	79.21	0.36	1.6	
12	LR14HQ-04	00829	12	145.08	145.50	0.42	144.28	144.70	0.42	2.4	78
13	LR14HQ-04	00830	12	145.50	151.49	5.99	144.70	150.35	5.65	16.8	
14	LR14HQ-04	00831	12	151.49	151.80	0.31	150.35	150.66	0.31	2.4	
15	LR14HQ-04	00832	10	199.10	199.40	0.30	198.40	198.70	0.30	1.6	93
16	LR14HQ-04	00833	10	199.40	205.40	6.00	198.70	204.70	6.00	19.8	
17	LR14HQ-04	00834	10	205.40	211.40	6.00	204.70	210.70	6.00	20.8	
18	LR14HQ-04	00835	10	211.40	216.40	5.00	210.70	215.70	5.00	19.2	
19	LR14HQ-04	00836	10	216.40	222.85	6.45	215.70	219.45	3.75	29	
20	LR14HQ-04	00837	10	222.85	223.15	0.30	219.80	220.10	0.30	3.4	

Total Number of Samples: **20**

Total Mass **152.8**

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

Received (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

CanAus Coal Limited

NOT SHIPPED
CORE PROCEDURE
RC PROCEDURE

To: **Birtley Coal & Minerals Testing Division**
GWIL Industries Inc.
7784 - 62nd St SE
Calgary, AB T2C 5K2

Sample Shipping Manifest

Date: Tuesday, August 19, 2014

Number of pallet boxes shipped: 1

				Drillers				Corrected to Log				
#	Hole ID	Sample #	Seam	From (m)	To (m)	Sample Length (m)	Recovered Length (m)	From (m)	To (m)	Sample Length (m)	Mass (kg)	Seam Recovery (%)
1	LR14HQ-05	860	17	8.55	9.60	1.05	0.84	6.36	6.98	0.62	2.4	135%
2	LR14HQ-05	861	FW	9.60	9.90	0.30	0.30	6.98	7.28	0.30	1.2	
3	LR14HQ-05	862	HW-16	10.98	11.28	0.30	0.30	11.22	11.52	0.30	1.2	
4	LR14HQ-05	863	16	11.28	12.70	1.42	0.70	11.52	12.32	0.80	2.4	87
5	LR14HQ-05	864	FW-16	12.70	13.55	0.85	0.53	12.32	12.62	0.30	2.6	
6	LR14HQ-05	865	HW-15	16.65	16.95	0.30	0.30	16.76	17.06	0.30	1.8	
7	LR14HQ-05	866	15	16.95	17.98	1.03	1.03	17.06	17.42	0.36	4.6	
8	LR14HQ-05	867	Part-15	17.98	18.45	0.47	0.15	17.42	18.00	0.58	1.0	98
9	LR14HQ-05	868	15	18.45	20.73	2.28	2.07	18.00	20.30	2.30	8.0	
10	LR14HQ-05	869	FW-15	20.73	21.00	0.27	0.27	20.30	20.57	0.27	1.6	
11	LR14HQ-05	870	HW-11	82.50	82.80	0.30	0.30	82.32	82.62	0.30	2.0	
12	LR14HQ-05	871	11	82.80	83.90	1.10	0.62	82.62	83.72	1.10	3.4	56
13	LR14HQ-05	872	FW-11	83.90	84.20	0.30	0.30	83.72	84.02	0.30	1.6	
14	LR14HQ-05	873	HW-10	114.50	114.80	0.30	0.30	114.18	114.48	0.30	2.6	
15	LR14HQ-05	874	10	114.80	123.55	8.75	6.04	114.48	123.64	9.16	20.4	
16	LR14HQ-05	875	Part-10	123.55	124.30	0.75	0.49	123.64	124.14	0.50	1.6	
17	LR14HQ-05	876	10	124.30	124.75	0.45	0.32	124.14	124.50	0.36	2.6	
18	LR14HQ-05	877	Part-10	124.75	125.25	0.50	0.37	124.50	125.34	0.84	3.2	
19	LR14HQ-05	878	10	125.25	125.80	0.55	0.24	125.34	125.96	0.62	1.0	60
20	LR14HQ-05	879	Part-10	125.80	126.15	0.35	0.20	125.96	126.20	0.24	1.8	
21	LR14HQ-05	880	10	126.15	132.00	5.85	3.15	126.20	131.88	5.68	12.0	
22	LR14HQ-05	881	Part-10	132.00	132.45	0.45	0.30	131.88	132.40	0.52	1.6	
23	LR14HQ-05	882	10	132.45	135.90	3.45	1.77	132.40	135.80	3.40	5.4	
24	LR14HQ-05	883	FW-10	135.90	136.20	0.30	0.30	135.80	136.10	0.30	2.0	
25	LR14HQ-05	884	HW-09	226.90	227.20	0.30	0.30	226.74	227.04	0.30	2.4	
26	LR14HQ-05	885	9	227.20	227.80	0.60	0.45	227.04	227.68	0.64	2.2	70
27	LR14HQ-05	886	FW-9	227.80	228.10	0.30	0.30	227.68	227.98	0.30	2.8	
						0.00				0.00		
28	LR14HQ-05	887	HW-08	299.14	299.55	0.41	0.41	299.09	299.50	0.41	2.4	
29	LR14HQ-05	888	8	299.55	300.85	1.30	0.79	299.50	300.44	0.94	3.6	84
30	LR14HQ-05	889	FW-08	300.85	301.15	0.30	0.30	300.44	300.74	0.30	2.8	
						0.00				0.00		
31	LR14HQ-05	890	HW-07	373.67	373.97	0.30	0.30	373.72	374.02	0.30	2.2	
32	LR14HQ-05	891	7	373.97	374.65	0.68	0.68	374.02	374.48	0.46	2.6	
33	LR14HQ-05	892	Part-7	374.65	375.10	0.45	0.45	374.48	375.02	0.54	2.8	100
34	LR14HQ-05	893	7	375.10	376.55	1.45	1.45	375.02	376.36	1.34	5.2	
35	LR14HQ-05	894	FW-7	376.55	376.85	0.30	0.30	376.36	376.66	0.30	1.8	
						0.00				0.00		

Total Number of Samples: 35

Total Mass 118.8

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

:eived (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

To: **Birtley Coal & Minerals Testing Divisio**
GWIL Industries Inc.
7784 - 62nd St SE
Calgary, AB T2C 5K2

Sample Shipping Manifest

Date:

Number of pallet boxes shipped: 1

#	Hole ID	Sample #	Seam	Drillers From (m)	Drillers To (m)	Drillers Sample Length (m)	Recovered Length (m)	Corrected to Log From (m)	Corrected to Log To (m)	Corrected to Log Sample Length (m)	Mass (kg)	Seam Recovery (%)
1	LR14HQ-08	838	21-HW	88.00	88.30	0.30	0.30	87.34	87.64	0.30	1.8	
2	LR14HQ-08	839	21	88.30	93.00	4.70	1.59	87.64	89.80	2.16	7.4	**74%**
3	LR14HQ-08	840	21-part	93.00	93.30	0.30	0.30	89.80	90.10	0.30	1.6	
4	LR14HQ-08	841	21	93.30	93.70	0.40	0.40	90.10	90.50	0.40	1.8	
5	LR14HQ-08	842	21-FW	93.70	94.00	0.30	0.30	90.50	90.80	0.30	2.2	
6	LR14HQ-08	843	20-HW	140.15	141.30	1.15	1.15	138.75	139.90	1.15	4.0	
7	LR14HQ-08	844	20	141.30	148.30	7.00	6.02	139.90	144.66	4.76	25.4	**126%**
8	LR14HQ-08	845	20-FW	148.30	148.60	0.30	0.30	144.66	144.96	0.30	3.0	
9	LR14HQ-08	846	18-HW	155.25	155.55	0.30	0.30	151.14	151.44	0.30	1.0	
10	LR14HQ-08	847	18	155.55	156.37	0.82	0.82	151.44	153.86	2.42	2.6	**34%**
11	LR14HQ-08	848	18-FW	157.59	157.90	0.31	0.31	153.86	154.17	0.31	1.4	
12	LR14HQ-08	849	17-HW	161.85	162.15	0.30	0.30	159.00	159.30	0.30	2.2	
13	LR14HQ-08	850	17	162.15	164.10	1.95	1.57	159.30	160.40	1.10	6.8	**143%**
14	LR14HQ-08	851	17-FW	164.10	164.29	0.19	0.19	160.40	160.59	0.19	2.0	

Total Number of Samples: 14

Total Mass 63.2

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

:eived (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

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CanAus Coal Limited

NOT SHIPPED
CORE PROCEDURE
RC PROCEDURE

To: **Birtley Coal & Minerals Testing Division**
GWIL Industries Inc.
7784 - 62nd St SE
Calgary, AB T2C 5K2

Sample Shipping Manifest

Date:

Number of pallet boxes shipped: 1

#	Hole ID	Sample #	Seam	Drillers From (m)	Drillers To (m)	Sample Length (m)	Recovered Length (m)	Corrected to Log From (m)	Corrected to Log To (m)	Sample Length (m)	Mass (kg)	Seam Recovery (%)
1	LR14HQ-09	R340261	HW-12?	22.80	23.50	0.70	0.70	22.30	23.00	0.70	3.8	
2	LR14HQ-09	R340262	12?	23.50	24.10	0.60	0.34	23.00	23.40	0.40	3.0	131%
3	LR14HQ-09	R340263	12?	24.10	27.00	2.90	1.95	23.40	26.00	2.60	7.4	
4	LR14HQ-09	R340264	FW-12?	27.00	28.35	1.35	1.09	26.00	27.35	1.35	4.8	
5	LR14HQ-09	R340265	HW-11	49.40	49.97	0.57	0.57	49.35	49.92	0.57	2.8	
6	LR14HQ-09	R340266	11	49.97	51.76	1.79	0.44	49.92	51.82	1.90	1.6	
7	LR14HQ-09	R340267	Part-11	51.76	52.84	1.08	0.88	51.82	53.06	1.24	4.8	
8	LR14HQ-09	R340268	11	52.84	53.09	0.25	0.23	53.06	53.34	0.28	1.0	61%
9	LR14HQ-09	R340269	Part-11	53.09	54.29	1.20	0.98	53.34	54.52	1.18	5.8	
10	LR14HQ-09	R340270	11	54.29	55.61	1.32	1.11	54.52	55.82	1.30	3.8	
11	LR14HQ-09	R340271	FW-11	55.61	56.35	0.74	0.33	55.82	56.56	0.74	2.6	
12	LR14HQ-09	R340272	HW-10	68.89	69.19	0.30	0.30	69.02	69.32	0.30	2.2	
13	LR14HQ-09	R340273	10	69.19	74.67	5.48	3.68	69.32	74.58	5.26	14.2	
14	LR14HQ-09	R340274	Part-10	74.67	75.10	0.43	0.17	74.58	75.16	0.58	1.2	
15	LR14HQ-09	R340275	10	75.10	75.70	0.60	0.34	75.16	75.68	0.52	1.2	60%
16	LR14HQ-09	R340276	Part-10	75.70	76.15	0.45	0.29	75.68	76.12	0.44	1.2	
17	LR14HQ-09	R340277	10	76.15	79.85	3.70	2.18	76.12	79.85	3.73	9.4	
18	LR14HQ-09	R340278	10	79.85	86.90	7.05	4.68	79.85	86.96	7.11	19.2	
19	LR14HQ-09	R340279	FW-10	86.90	87.35	0.45	0.28	86.96	87.41	0.45	1.8	
20	LR14HQ-09	R340280	HW-9	139.86	140.16	0.30	0.30	139.96	140.26	0.30	2.20	
21	LR14HQ-09	R340281	9	140.16	140.75	0.59	0.59	140.26	140.68	0.42	3.40	
22	LR14HQ-09	R340282	Part-9	140.75	142.03	1.28	1.04	140.68	142.03	1.35	5.00	**93%**
23	LR14HQ-09	R340283	Part-9	142.03	142.60	0.57	0.57	142.03	142.60	0.57	3.80	
24	LR14HQ-09	R340284	9	142.60	147.90	5.30	4.91	142.60	147.88	5.28	20.40	
25	LR14HQ-09	R340285	FW-9	147.90	148.25	0.35	0.35	147.88	148.23	0.30	1.40	
26	LR14HQ-09	R340286	HW-8	155.59	155.85	0.26	0.26	155.79	156.05	0.26	1.60	
27	LR14HQ-09	R340287	8	155.85	158.90	3.05	2.53	156.05	158.80	2.75	9.40	
28	LR14HQ-09	R340288	Part-8	158.90	160.65	1.75	1.15	158.80	160.20	1.40	7.60	
29	LR14HQ-09	R340289	8	160.65	163.21	2.56	1.40	N/A	N/A		6.40	
30	LR14HQ-09	R340290	Part-8	163.21	163.55	0.34	0.34	N/A	N/A		1.80	76%
31	LR14HQ-09	R340291	8	163.55	170.93	7.38	5.39	N/A	N/A		22.60	
32	LR14HQ-09	R340292	Part-8	170.93	171.13	0.20	0.20	N/A	N/A		1.80	
33	LR14HQ-09	R340293	8	171.13	174.30	3.17	2.00	N/A	N/A		8.6	
34	LR14HQ-09	R340294	Part-8	174.30	178.90	4.60	4.60	N/A	N/A		24.8	
35	LR14HQ-09	R340295	FW-8	178.90	179.20	0.30	0.30	N/A	N/A		2.8	
	END											

Total Number of Samples: 35

Total Mass 126.6

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

:eived (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

To: **Birtley Coal & Minerals Testing Divisio**
GWIL Industries Inc.
7784 - 62nd St SE
Calgary, AB T2C 5K2

Sample Shipping Manifest

Date:

Number of pallet boxes shipped: 1

#	Hole ID	Sample #	Seam	Drillers From (m)	Drillers To (m)	Sample Length (m)	Recovered Length (m)	Corrected to Log From (m)	Corrected to Log To (m)	Sample Length (m)	Mass (kg)	Seam Recovery (%)
1	LR14HQ-14	852	20-HW	91.29	91.59	0.30	0.30	91.40	91.70	0.30	2.0	
2	LR14HQ-14	853	20	91.59	93.00	1.41	0.50	91.70	92.60	0.90	3.8	**56%**
3	LR14HQ-14	854	20-part	93.00	94.15	1.15	1.03	92.60	93.65	1.05	7.4	
4	LR14HQ-14	855	20	94.15	94.55	0.40	0.40	93.65	94.10	0.45	1.0	
5	LR14HQ-14	856	20-FW	94.55	94.85	0.30	0.30	94.10	94.40	0.30	2.0	
6	LR14HQ-14	857	20-HW	99.00	99.30	0.30	0.30	98.60	98.90	0.30	1.6	
7	LR14HQ-14	858	20	99.30	101.39	2.09	1.37	98.90	101.20	2.30	5.0	**60%**
8	LR14HQ-14	859	20-FW	101.39	101.69	0.30	0.30	101.20	101.50	0.30	2.0	

Total Number of Samples: 8

Total Mass 24.8

Shipped (Geologist): H. Evans Date: 13-Aug-14

Must Be Signed & Dated Prior to Shipment

:eived (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

n

To: **Birtley Coal & Minerals Testing Division**
GWIL Industries Inc.
7784 - 62nd St SE
Calgary, AB T2C 5K2

Sample Shipping Manifest

Date: Tuesday, September 2, 2014

Number of pallet boxes shipped: 1

				Drillers				Corrected to Log				
#	Hole ID	Sample #	Seam	From (m)	To (m)	Sample Length (m)	Recovered Length (m)	From (m)	To (m)	Sample Length (m)	Mass (kg)	Seam Recovery (%)
1	LR14HQ-15	R340296	HW-13	24.65	24.85	0.20	0.20	24.65	24.90	0.25	1.4	
2	LR14HQ-15	R340297	13	24.85	27.13	2.28	1.44	24.90	26.92	2.02	6.2	
3	LR14HQ-15	R340298	Part-13	27.13	27.49	0.36	0.15	26.92	27.28	0.36	1.0	
4	LR14HQ-15	R340299	13	27.49	28.10	0.61	0.40	27.28	27.56	0.28	1.8	
5	LR14HQ-15	R340300	Part-13	28.10	29.15	1.05	0.71	27.56	28.60	1.04	5.8	62%
6	LR14HQ-15	R340301	13	29.15	29.87	0.72	0.38	28.60	28.78	0.18	1.4	
7	LR14HQ-15	R340302	Part-13	29.87	30.40	0.53	0.33	28.78	29.40	0.62	2.2	
8	LR14HQ-15	R340303	13	30.40	31.90	1.50	0.51	29.40	31.18	1.78	2.8	
9	LR14HQ-15	R340304	FW-13	31.90	32.20	0.30	0.30	31.18	31.48	0.30	2.2	
13	LR14HQ-15	R340315	HW-11	176.17	177.50	1.33	0.50	176.45	177.58	1.13	1.80	
14	LR14HQ-15	R340316	11	177.50	178.25	0.75	0.64	177.58	178.18	0.60	4.00	
15	LR14HQ-15	R340317	Part-11	178.25	178.55	0.30	0.20	178.18	178.50	0.32	1.20	
16	LR14HQ-15	R340318	11	178.55	178.80	0.25	0.12	178.50	178.77	0.27	0.80	89%
17	LR14HQ-15	R340319	Part-11	178.80	179.70	0.90	0.77	178.77	179.70	0.93	4.80	
18	LR14HQ-15	R340320	11	179.70	181.40	1.70	1.70	179.70	181.40	1.70	9.60	
19	LR14HQ-15	R340321	FW-11	181.40	182.00	0.60	0.28	181.40	181.75	0.35	2.40	
20	LR14HQ-15	R340322	HW-10	283.12	283.68	0.56	0.30	283.22	283.74	0.52	1.40	
21	LR14HQ-15	R340323	10	283.68	286.22	2.54	2.14	283.74	286.26	2.52	9.00	
22	LR14HQ-15	R340324	10	286.22	287.53	1.31	1.02	286.26	287.20	0.94	4.40	
23	LR14HQ-15	R340325	10	287.53	289.26	1.73	1.23	287.20	288.92	1.72	5.00	
24	LR14HQ-15	R340326	10-part	289.26	289.91	0.65	0.16	288.92	289.40	0.48	0.80	
25	LR14HQ-15	R340327	10	289.91	290.60	0.69	0.61	289.40	289.90	0.50	2.40	
26	LR14HQ-15	R340328	10-part	290.60	290.75	0.15	0.14	289.90	290.66	0.76	1.0	
27	LR14HQ-15	R340329	10	290.75	291.15	0.40	0.37	290.66	291.70	1.04	1.60	
28	LR14HQ-15	R340330	10	291.15	293.07	1.92	1.65	291.70	292.84	1.14	7.40	
29	LR14HQ-15	R340331	10-part	293.07	293.28	0.21	0.22	292.84	293.20	0.36	1.20	82%
30	LR14HQ-15	R340332	10	293.28	294.50	1.22	0.97	293.20	294.30	1.10	4.00	
31	LR14HQ-15	R340333	10	294.50	295.78	1.28	1.19	294.30	295.64	1.34	6.00	
32	LR14HQ-15	R340334	10-part	295.78	296.24	0.46	0.41	295.64	296.48	0.84	2.80	
33	LR14HQ-15	R340335	10	296.24	297.71	1.47	1.02	296.48	297.28	0.80	4.40	
34	LR14HQ-15	R340336	10-part	297.71	297.98	0.27	0.26	297.28	298.50	1.22	2.2	
35	LR14HQ-15	R340337	10	297.98	300.04	2.06	1.96	298.50	299.82	1.32	8.6	
36	LR14HQ-15	R340338	10	300.04	300.43	0.39	0.37	299.82	300.54	0.72	1.8	
37	LR14HQ-15	R340339	10-FW	300.43	300.96	0.53	0.30	300.54	301.06	0.52	2.6	

Total Number of Samples: 34

Total Mass 116.0

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

Received (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

CanAus Coal Limited

Sample Shipping Manifest

Ship to: **Birtley Labs**
7784 62nd Street SE
Calgary AB
T2C 5K2 (403) 253-8273

Date: Friday, October 3, 2014

				Driller's Depths			Corrected to Log			
Composite	**Sample #**	**Hole ID**	**Seam**	**From (m)**	**To (m)**	**Length (m)**	**From (m)**	**To (m)**	**Sample Length (m)**	**Mass (kg)**
1	R339458	LR14RC-02	10	96	96.5	0.5	96	96.5	0.5	12.4
	R339459	LR14RC-02	10	96.5	97	0.5	96.5	97	0.5	13.4
	R339460	LR14RC-02	10	97	97.5	0.5	97	97.5	0.5	15.0
	R339461	LR14RC-02	10	97.5	98	0.5	97.5	98	0.5	15.4
	R339462	LR14RC-02	10	98	98.5	0.5	98	98.5	0.5	17.2
	R339463	LR14RC-02	10	98.5	99	0.5	98.5	99	0.5	14.6
	R339464	LR14RC-02	10	99	99.5	0.5	99	99.5	0.5	17.4
	R339465	LR14RC-02	10	99.5	100	0.5	99.5	100	0.5	16.8
2	R339466	LR14RC-02	10	100	100.5	0.5	100	100.5	0.5	9.2
	R339467	LR14RC-02	10	100.5	101	0.5	100.5	101	0.5	13.8
	R339468	LR14RC-02	10	101	101.5	0.5	101	101.5	0.5	13.4
	R339469	LR14RC-02	10	101.5	102	0.5	101.5	102	0.5	13.4
	R339470	LR14RC-02	10	102	102.5	0.5	102	102.5	0.5	13.0
	R339471	LR14RC-02	10	102.5	103	0.5	102.5	103	0.5	9.4
	R339472	LR14RC-02	10	103	103.5	0.5	103	103.5	0.5	10.6
	R339473	LR14RC-02	10	103.5	104	0.5	103.5	104	0.5	17.2
	R339474	LR14RC-02	10	104	104.5	0.5	104	104.5	0.5	14.2
	R339475	LR14RC-02	10	104.5	105	0.5	104.5	105	0.5	12.2
3	R339476	LR14RC-02	10	105	105.5	0.5	105	105.5	0.5	13.8
	R339477	LR14RC-02	10	105.5	106	0.5	105.5	106	0.5	14.8
	R339478	LR14RC-02	10	106	106.5	0.5	106	106.5	0.5	13.8
	R339479	LR14RC-02	10	106.5	107	0.5	106.5	107	0.5	13.8
	R339480	LR14RC-02	10	107	107.5	0.5	107	107.5	0.5	16.0
	R339481	LR14RC-02	10	107.5	108	0.5	107.5	108	0.5	13.8
	R339482	LR14RC-02	10	108	108.5	0.5	108	108.5	0.5	15.2
	R339483	LR14RC-02	10	108.5	109	0.5	108.5	109	0.5	14.4
	R339484	LR14RC-02	10	109	109.5	0.5	109	109.5	0.5	14.6
	R339485	LR14RC-02	10	109.5	110	0.5	109.5	110	0.5	14.4
4	R339488	LR14RC-02	10	0	111.5	111.5	0	111.5	111.5	13.0
	R339489	LR14RC-02	10	111.5	112	0.5	111.5	112	0.5	13.2
	R339490	LR14RC-02	10	112	112.5	0.5	112	112.5	0.5	10.4
	R339491	LR14RC-02	10	112.5	113	0.5	112.5	113	0.5	10.4
	R339492	LR14RC-02	10	113	113.5	0.5	113	113.5	0.5	11.2
	R339493	LR14RC-02	10	113.5	114	0.5	113.5	114	0.5	10.0
	R339494	LR14RC-02	10	114	114.5	0.5	114	114.5	0.5	11.0
	R339495	LR14RC-02	10	114.5	115	0.5	114.5	115	0.5	9.4
	R339496	LR14RC-02	10	115	115.5	0.5	115	115.5	0.5	10.2

Total Number of Samples: **37**

Total Mass **492.0**

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

Received (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

CanAus Coal Limited

Sample Shipping Manifest

Ship to: **Birtley Labs**
7784 62nd Street SE
Calgary AB
T2C 5K2 (403) 253-8273

Date: Friday, October 3, 2014

				Driller's Depths			Corrected to Log			
Composite	**Sample #**	**Hole ID**	**Seam**	**From (m)**	**To (m)**	**Length (m)**	**From (m)**	**To (m)**	**Sample Length (m)**	**Mass (kg)**
1	R339435	LR14RC-03	11	81	81.5	0.5	81	81.5	0.5	13.6
	R339436	LR14RC-03	11	81.5	82	0.5	81.5	82	0.5	16.0
	R339437	LR14RC-03	11	82	82.5	0.5	82	82.5	0.5	19.8
	R339438	LR14RC-03	11	82.5	83	0.5	82.5	83	0.5	19.0
	R339439	LR14RC-03	11	83	83.5	0.5	83	83.5	0.5	14.8
2	R339440	LR14RC-03	10	130	130.5	0.5	130	130.5	0.5	8.8
	R339441	LR14RC-03	10	130.5	131	0.5	130.5	131	0.5	11.0
	R339442	LR14RC-03	10	131	131.5	0.5	131	131.5	0.5	17.4
	R339443	LR14RC-03	10	131.5	132	0.5	131.5	132	0.5	16.8
	R339444	LR14RC-03	10	132	132.5	0.5	132	132.5	0.5	21.2
	R339445	LR14RC-03	10	132.5	133	0.5	132.5	133	0.5	16.8
	R339446	LR14RC-03	10	133	133.5	0.5	133	133.5	0.5	13.8
	R339447	LR14RC-03	10	133.5	134	0.5	133.5	134	0.5	13.8
3	R339451	LR14RC-03	10	135	135.5	0.5	135	135.5	0.5	11.0
	R339452	LR14RC-03	10	135.5	136	0.5	135.5	136	0.5	14.8
	R339453	LR14RC-03	10	136	136.5	0.5	136	136.5	0.5	13.4

Total Number of Samples: **16**

Total Mass **242.0**

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

Received (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

CanAus Coal Limited

Sample Shipping Manifest

Ship to: **Birtley Labs**
7784 62nd Street SE
Calgary AB
T2C 5K2 (403) 253-8273

Date: Friday, September 26, 2014

				Driller's Depths			Corrected to Log			
Composite	**Sample #**	**Hole ID**	**Seam**	**From (m)**	**To (m)**	**Length (m)**	**From (m)**	**To (m)**	**Sample Length (m)**	**Mass (kg)**
1	R340051	LR14RC-09	20	38	38.5	0.5	38.78		7.00	2.2
	R340052	LR14RC-09		38.5	39	0.5				6.8
	R340053	LR14RC-09		39	39.5	0.5				5.2
	R340054	LR14RC-09		39.5	40	0.5				5.2
	R340055	LR14RC-09		40	40.5	0.5				6.0
	R340056	LR14RC-09		40.5	41	0.5				5.0
	R340057	LR14RC-09		41	41.5	0.5				5.2
	R340058	LR14RC-09		41.5	42	0.5				4.4
	R340059	LR14RC-09		42	42.5	0.5				3.6
	R340060	LR14RC-09		42.5	43	0.5				5.0
	R340061	LR14RC-09		43	43.5	0.5				4.8
	R340062	LR14RC-09		43.5	44	0.5				5.2
	R340063	LR14RC-09		44	44.5	0.5				4.8
	R340064	LR14RC-09		44.5	45	0.5		45.78		4.8

Total Number of Samples: **14**

Total Mass **68.2**

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

Received (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

CanAus Coal Limited

Sample Summary

Ship to: **Birtley Labs**
7784 62nd Street SE
Calgary AB
T2C 5K2 (403) 253-8273

Date: Friday, October 3, 2014

				Driller's Depths			Corrected to Log			
Composite	**Sample #**	**Hole ID**	**Seam**	**From (m)**	**To (m)**	**Length (m)**	**From (m)**	**To (m)**	**Sample Length (m)**	**Mass (kg)**
	R339407	LR14RC-04		80.5	81	0.5	80.5	81	0.5	7.6
	R339408	LR14RC-04		81	81.5	0.5	81	81.5	0.5	7.6
	R339409	LR14RC-04		81.5	82	0.5	81.5	82	0.5	12.4
	R339410	LR14RC-04		82	82.5	0.5	82	82.5	0.5	13.2
	R339411	LR14RC-04		82.5	83	0.5	82.5	83	0.5	13.6
	R339412	LR14RC-04		136	136.5	0.5	136	136.5	0.5	17.4
	R339413	LR14RC-04		136.5	137	0.5	136.5	137	0.5	15.4
	R339414	LR14RC-04		137	137.5	0.5	137	137.5	0.5	12.0
	R339415	LR14RC-04		137.5	138	0.5	137.5	138	0.5	15.6
	R339416	LR14RC-04		138	138.5	0.5	138	138.5	0.5	13.6
	R339417	LR14RC-04		139.5	140	0.5	139.5	140	0.5	5.2
	R339418	LR14RC-04		202.5	203	0.5	202.40	202.90	0.50	6.4
	R339419	LR14RC-04		203	203.5	0.5	202.90	203.40	0.50	11.0
	R339420	LR14RC-04		213	213.5	0.5	213	213.5	0.5	10.2
	R339421	LR14RC-04		213.5	214	0.5	213.5	214	0.5	9.6
	R339422	LR14RC-04		214	214.5	0.5	214	214.5	0.5	9.4
	R339423	LR14RC-04		215	215.5	0.5	215	215.5	0.5	4.8
	R339424	LR14RC-04		215.5	216	0.5	215.5	216	0.5	8.6
	R339425	LR14RC-04		216	216.5	0.5	216	216.5	0.5	10.4
	R339426	LR14RC-04		216.5	217	0.5	216.5	217	0.5	11.6

Total Number of Samples: **20**

Total Mass **215.6**

CanAus Coal Limited

Sample Shipping Manifest

Ship to: **Birtley Labs**
7784 62nd Street SE
Calgary AB
T2C 5K2 (403) 253-8273

Date: ##############

Number of pallet boxes shipped: 1

Composite	Sample #	Hole ID	Seam	Corrected to Log From (m)	Corrected to Log To (m)	Sample Length (m)	Plastic Bags	Cloth Bags	Mass (kg)
LR14RC-20 Composite 1	253	LR14RC-20	18	92.00	92.50	0.50	1	4	23.8
	254	LR14RC-20	18	92.50	93.00	0.50	1	4	18.8
	255	LR14RC-20	18	93.00	93.50	0.50	1	3	15.6
	256	LR14RC-20	18	93.50	94.00	0.50	1	5	18.8
	257	LR14RC-20	18	94.00	94.50	0.50	1	4	16.6
	258	LR14RC-20	18	94.50	95.00	0.50	1	4	15.8
	259	LR14RC-20	18	95.00	95.50	0.50	1	4	15.6
	260	LR14RC-20	18	95.50	96.00	0.50	1	4	13.8
	261	LR14RC-20	18	96.00	96.50	0.50	1	4	16.0
	262	LR14RC-20	18	96.50	97.00	0.50	1	4	15.2
	263	LR14RC-20	18	97.00	97.50	0.50	1	2	13.4
	264	LR14RC-20	18	97.50	98.00	0.50	1	2	12.2
							12	**44**	**195.6**
LR14RC-20 Composite 2	269	LR14RC-20	17	112.80	113.30	0.50	1	3	17.0
	270	LR14RC-20	17	113.30	113.80	0.50	1	3	15.4
	271	LR14RC-20	17	113.80	114.30	0.50	1	4	24.2
	272	LR14RC-20	17	114.30	114.80	0.50	1	2	14.2
	273	LR14RC-20	17	114.80	115.30	0.50	1	5	31.6
	274	LR14RC-20	17	115.30	115.80	0.50	1	4	20.2
	275	LR14RC-20	17	115.80	116.30	0.50	1	3	15.4
	276	LR14RC-20	17	116.30	116.80	0.50	1	3	31.4
							8	**27**	**169.4**
LR14LDRFP2 Composite 1	289	LR14LDRFP2	19	50.50	51.00	0.50	1	3	21.2
	290	LR14LDRFP2	19	51.00	51.50	0.50	1	2	12.2
	291	LR14LDRFP2	19	51.50	52.00	0.50	1	3	18.2
	292	LR14LDRFP2	19	52.00	52.50	0.50	1	3	15.0
	293	LR14LDRFP2	19	52.50	53.00	0.50	1	3	15.6
	294	LR14LDRFP2	19	53.00	53.50	0.50	1	3	18.4
	295	LR14LDRFP2	19	53.50	54.00	0.50	1	3	16.8
	296	LR14LDRFP2	19	54.00	54.50	0.50	1	2	18.8
							8	**22**	**136.2**
LR14LDRFP2 Composite 2	297	LR14LDRFP2	18	90.80	91.30	0.50	1	3	24.4
	298	LR14LDRFP2	18	91.30	91.80	0.50	1	3	15.6
	299	LR14LDRFP2	18	91.80	92.30	0.50	1	3	17.4
	300	LR14LDRFP2	18	92.30	92.80	0.50	1	3	15.2
	351	LR14LDRFP2	18	92.80	93.30	0.50	1	4	31.0
	352	LR14LDRFP2	18	93.30	93.80	0.50	1	3	19.2
	353	LR14LDRFP2	18	93.80	94.30	0.50	1	3	18.8
	354	LR14LDRFP2	18	94.30	94.80	0.50	1	3	18.8
	355	LR14LDRFP2	18	94.80	95.30	0.50	1	3	16.4
	356	LR14LDRFP2	18	95.30	95.80	0.50	1	3	13.8
	357	LR14LDRFP2	18	95.80	96.30	0.50	1	3	17.6
	358	LR14LDRFP2	18	96.30	96.80	0.50	1	2	16.0
							12	**36**	**224.2**
			Totals				**40**	**129**	**725.4**

Please collect the water from the plastic bags in samples 297-358, dry and analyse the residue.

Ship to: **Birtley Labs**
7784 62nd Street SE
Calgary AB
T2C 5K2
(403) 253-8273

Sample Shipping Manifest

Date: Tuesday, August 19, 2014

Number of pallets bags shipped: 1

			Corrected to Log					
Composites	**Hole ID**	**Sample Number**	**Seam**	**From (m)**	**To (m)**	**Sample Length (m)**	**# Cloth Bags**	**Weight (kg)**
	Loop Ridge							
1	LR14RC-30	R340462	20	21.50	22.00		1	**7.0**
	LR14RC-30	R340463	20	22.00	22.50		1	**6.2**
	LR14RC-30	R340464	20	22.50	23.00		1	**6.0**
	LR14RC-30	R340465	20	23.00	23.50		1	**6.2**
	LR14RC-30	R340466	20	23.50	24.00		1	**6.6**
	LR14RC-30	R340467	20	24.00	24.50		1	**5.6**
	LR14RC-30	R340468	20	24.50	25.00		1	**5.2**
	LR14RC-30	R340469	20	25.00	25.50		1	**5.8**
	LR14RC-30	R340470	20	25.50	26.00		1	**4.6**
	LR14RC-30	R340471	20	26.00	26.50		1	**5.0**
	LR14RC-30	R340472	20	26.50	27.00		1	**6.4**
2	LR14RC-30	R340474	No ID	58.50	59.00		1	**6.6**
	LR14RC-30	R340475	No ID	59.00	59.50		1	**5.4**
	LR14RC-30	R340476	No ID	59.50	60.00		1	**5.0**
	LR14RC-30	R340477	No ID	60.00	60.50		1	**8.2**
	LR14RC-30	R340478	No ID	60.50	61.00		1	**5.8**
3	LR14RC-30	R340487	18L	118.50	119.00		1	**5.0**
	LR14RC-30	R340488	18L	119.00	119.50		1	**3.6**
	LR14RC-30	R340489	18L	119.50	120.00		1	**5.0**
	LR14RC-30	R340490	18L	120.00	120.50		1	**4.4**
	LR14RC-30	R340491	18L	120.50	121.00		1	**4.6**
4	LR14RC-30	R340492	17	124.00	124.50		1	**6.8**
	LR14RC-30	R340493	17	124.50	125.00		1	**6.0**
	LR14RC-30	R340494	17	125.00	125.50		1	**5.0**
	LR14RC-30	R340495	17	125.50	126.00		1	**6.4**
	LR14RC-30	R340496	17	126.00	126.50		1	**6.8**
	LR14RC-30	R340497	17	126.50	127.00		1	**5.6**
	LR14RC-30	R340498	17	127.00	127.50		1	**7.0**
5	LR14RC-30	R340230	10?	327.50	328.00		1	**4.4**
	LR14RC-30	R340231	10?	328.00	328.50		1	**5.0**
	LR14RC-30	R340232	10?	328.50	329.00		1	**5.2**
	LR14RC-30	R340233	10?	329.00	329.50		1	**4.2**
	LR14RC-30	R340234	10?	329.50	330.00		1	**4.6**
	LR14RC-30	R340235	10?	330.00	330.50		1	**4.2**
6	LR14RC-30	R340236	10?	330.50	331.00		1	**4.2**
	LR14RC-30	R340237	10?	331.00	331.50		1	**4.4**
	LR14RC-30	R340238	10?	331.50	332.00		1	**4.8**
	LR14RC-30	R340239	10?	332.00	332.50		1	**4.2**
	LR14RC-30	R340240	10?	332.50	333.00		1	**7.8**
	LR14RC-30	R340241	10?	333.00	333.50		1	**6.0**
7	LR14RC-30	R340245	10?	335.00	335.50		1	**7.4**
	LR14RC-30	R340246	10?	335.50	336.00		1	**4.8**
	LR14RC-30	R340247	10?	336.00	336.50		1	**5.6**
	LR14RC-30	R340248	10?	336.50	337.00		1	**4.4**
	LR14RC-30	R340249	10?	337.00	337.50		1	**7.6**
	LR14RC-30	R340250	10?	337.50	338.00		1	**7.0**
	LR14RC-30	R340251	10?	338.00	338.50		1	**7.6**
	LR14RC-30	R340252	10?	338.50	339.00		1	**6.2**

	LR14RC-30	R340253	10?	339.00	339.50		1	**9.2**
8	LR14RC-30	R340254	10?	340.50	341.00		1	**6.8**
	LR14RC-30	R340255	10?	341.00	341.50		1	**5.8**
	LR14RC-30	R340256	10?	341.50	342.00		1	**4.8**
	LR14RC-30	R340257	10?	342.00	342.50		1	**5.2**
9	LR14RC-30	R340258	10?	342.50	343.00		1	**5.0**
	LR14RC-30	R340259	10?	343.00	343.50		1	**4.2**
	LR14RC-30	R340260	10?	343.50	344.00		1	**2.4**
	LR14RC-30	R340311	10?	344.00	344.50		1	**3.2**

Total Number of Samples:	**57**

Total Mass	**318.0**

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

Received (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

CanAus Coal Limited

Sample Shipping Manifest

Ship to: **Birtley Labs**
7784 62nd Street SE
Calgary AB
T2C 5K2 (403) 253-8273

Date: ####################

Number of pallet bags shipped: 1

Composites	Hole ID	Sample Number	Seam	Corrected to Log From (m)	Corrected to Log To (m)	Sample Length (m)	# Cloth Bags	Weight (kg)
1	LR14RC-31	00551	21	105.50	106.00	0.50	1	1.6
	LR14RC-31	00552	21	106.00	106.50	0.50	1	3.6
	LR14RC-31	00553	21	106.50	107.00	0.50	1	2.8
2	LR14RC-31	00554	20	145.02	145.52	0.50	1	3.8
	LR14RC-31	00555	20	145.52	146.02	0.50	1	6.2
	LR14RC-31	00556	20	146.02	146.52	0.50	1	6.8
	LR14RC-31	00557	20	145.52	146.02	0.50	1	6.0
	LR14RC-31	00558	20	146.02	147.52	0.50	1	8.0
	LR14RC-31	00559	20	147.52	148.02	0.50	1	9.2
3	LR14RC-31	00565	19	187.10	187.60	0.50	1	5.0
	LR14RC-31	00566	19	187.60	188.10	0.50	1	2.8
	LR14RC-31	00567	19	188.10	188.60	0.50	1	2.6
	LR14RC-31	00568	19	188.60	189.10	0.50	1	5.6
	LR14RC-31	00569	19	189.10	189.60	0.50	1	4.8
	LR14RC-31	00570	19	189.60	191.10	0.50	1	4.6
	LR14RC-31	00571	19	190.10	190.60	0.50	1	4.0
	LR14RC-31	00572	19	190.60	191.10	0.50	1	5.2
	LR14RC-31	00573	19	191.10	191.60	0.50	1	6.2
	LR14RC-31	00574	19	191.60	192.10	0.50	1	6.0
4	LR14RC-31	00578	18	211.50	212.00	0.50	1	6.0
	LR14RC-31	00579	18	212.00	212.50	0.50	1	6.0
	LR14RC-31	00580	18	212.50	213.00	0.50	1	4.8
	LR14RC-31	00581	18	213.00	213.50	0.50	1	4.6
	LR14RC-31	00582	18	213.50	214.00	0.50	1	5.0
	LR14RC-31	00583	18	214.00	214.50	0.50	1	5.8
	LR14RC-31	00584	18	214.50	215.00	0.50	1	8.4
5	LR14RC-31	00585	18	215.00	215.50	0.50	1	6.0
	LR14RC-31	00586	18	215.50	216.00	0.50	1	7.4
	LR14RC-31	00587	18	216.00	216.50	0.50	1	4.4
	LR14RC-31	00588	18	216.50	217.00	0.50	1	6.0
	LR14RC-31	00589	18	217.00	217.50	0.50	1	6.0
	LR14RC-31	00590	18	217.50	218.00	0.50	1	8.4
	LR14RC-31	00591	18	218.00	218.50	0.50	1	7.4
	LR14RC-31	00592	18	218.50	219.00	0.50	1	4.6
6	LR14RC-31	00593	18	219.00	219.50	0.50	1	3.0
	LR14RC-31	00594	18	219.50	220.00	0.50	1	6.6
	LR14RC-31	00595	18	220.00	220.50	0.50	1	4.8
	LR14RC-31	00596	18	220.50	221.00	0.50	1	4.4
	LR14RC-31	00597	18	221.00	221.50	0.50	1	5.2
	LR14RC-31	00598	18	221.50	222.00	0.50	1	4.2
	LR14RC-31	00599	18	222.00	222.50	0.50	1	7.0
	LR14RC-31	00600	18	222.50	223.00	0.50	1	6.0
	LR14RC-31	00401	18	223.00	223.50	0.50	1	6.0
	LR14RC-31	00402	18	223.50	224.00	0.50	1	5.8
	LR14RC-31	00403	18	224.00	224.50	0.50	1	4.6
7	LR14RC-31	00404	18	228.50	229.00	0.50	1	4.4
	LR14RC-31	00405	18	229.00	229.50	0.50	1	6.4
	LR14RC-31	00406	18	229.50	230.00	0.50	1	6.2
	LR14RC-31	00407	18	230.00	230.50	0.50	1	3.6
	LR14RC-31	00408	18	230.50	231.00	0.50	1	5.8
						0.50		
8	LR14RC-31	00409	17	238.20	238.70	0.50	1	4.4
	LR14RC-31	00410	17	238.70	239.20	0.50	1	5.2
	LR14RC-31	00411	17	239.20	239.70	0.50	1	5.0
	LR14RC-31	00412	17	239.70	240.20	0.50	1	4.2
9	LR14RC-31	00413	16	243.90	244.40	0.50	1	4.8
	LR14RC-31	00414	16	244.40	244.90	0.50	1	5.6
	LR14RC-31	00415	16	244.90	245.40	0.50	1	4.8
	LR14RC-31	00416	16	245.40	245.90	0.50	1	5.0
10	LR14RC-31	00417	15	251.70	252.20	0.50	1	6.8
	LR14RC-31	00418	15	252.20	252.70	0.50	1	5.0
	LR14RC-31	00419	15	252.70	253.20	0.50	1	4.4

Total Number of Samples: 61

Total Mass 324.8

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

Received (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

LR14RC-34
RC Sampling Aug 10, 2014

				Drillers		Corrected to Log									
#	Hole ID	Sample Number	Seam	From (m)	To (m)	From (m)	To (m)	Sample Length (m)	# Cloth Bags	Weight (kg)	Avr Density for seam	Expected weight (kg)	Seam Recovery (%)	Overall Recovery (%)	Composites
	Loop Ridge														
1	LR14RC-34	R340171	20	53.50	54.00	52.82	53.32	0.5	1	3			40.00		
2	LR14RC-34	24455	20	54.00	54.50	53.32	53.82	0.5	1	3.8			50.67		
3	LR14RC-34	24456	20	54.50	55.00	53.82	54.32	0.5	1	2			26.67		
4	LR14RC-34	24457	20	55.00	55.50	54.32	54.82	0.5	1	2.2			29.33		
5	LR14RC-34	24458	20	55.50	56.00	54.82	55.32	0.5	1	1.8			24.00		
6	LR14RC-34	24459	20	56.00	56.50	55.32	55.82	0.5	1	1.6			21.33		
7	LR14RC-34	24460	20	56.50	57.00	55.82	56.32	0.5	1	2.2			29.33		
8	LR14RC-34	24461	20	57.00	57.50	56.32	56.82	0.5	1	2.6	1.31204724	7.50	34.67	34.49	1
9	LR14RC-34	24462	20	57.50	58.00	56.82	57.32	0.5	1	2.2			29.33		
10	LR14RC-34	24463	20	58.00	58.50	57.32	57.82	0.5	1	2.4			32.00		
11	LR14RC-34	24464	20	58.50	59.00	57.82	58.32	0.5	1	3.4			45.33		
12	LR14RC-34	24465	20	59.00	59.50	58.32	58.82	0.5	1	1.4			18.67		
13	LR14RC-34	24466	20	59.50	60.00	58.82	59.32	0.5	1	2.4			32.00		
14	LR14RC-34	24467	20	60.00	60.50	59.32	59.82	0.5	1	2.8			37.33		
15	LR14RC-34	24468	20	60.50	61.00	59.82	60.42	0.6	1	5			66.67		
16	LR14RC-34	24469	20	66.50	67.00	66.04	66.54	0.5	1	2.2			26.83		
17	LR14RC-34	24470	20	67.00	67.50	66.54	67.04	0.5	1	2			24.39		
18	LR14RC-34	24471	20	67.50	68.00	67.04	67.54	0.5	1	1.8			21.95		
19	LR14RC-34	24472	20	68.00	68.50	67.54	68.04	0.5	1	2			24.39		
20	LR14RC-34	24473	20	68.50	69.00	68.04	68.54	0.5	1	1.8			21.95		2
21	LR14RC-34	24474	20	69.00	69.50	68.54	69.04	0.5	1	2.4			29.27		
22	LR14RC-34	24475	20	69.50	70.00	69.04	69.54	0.5	1	1.8			21.95		
23	LR14RC-34	24476	20	70.00	70.50	69.54	70.04	0.5	1	1.8			21.95		
24	LR14RC-34	24477	20	70.50	71.00	70.04	70.54	0.5	1	2.2			26.83		
25	LR14RC-34	24478	20	71.00	71.50	70.54	71.04	0.5	1	2			24.39		
26	LR14RC-34	24479	20	71.50	72.00	71.04	71.54	0.5	1	2.8			34.15		
27	LR14RC-34	24480	20	72.00	72.50	71.54	72.04	0.5	1	2			24.39		
28	LR14RC-34	24481	20	72.50	73.00	72.04	72.54	0.5	1	2.8			34.15		
29	LR14RC-34	24482	20	73.00	73.50	72.54	73.04	0.5	1	2.8			34.15		
30	LR14RC-34	24483	20	73.50	74.00	73.04	73.54	0.5	1	2.4			29.27		
31	LR14RC-34	24484	20	74.00	74.50	73.54	74.04	0.5	1	2			24.39		3
32	LR14RC-34	24485	20	74.50	75.00	74.04	74.54	0.5	1	2.6			31.71		
33	LR14RC-34	24486	20	75.00	75.50	74.54	75.04	0.5	1	2.2			26.83		
34	LR14RC-34	24487	20	75.50	76.00	75.04	75.54	0.5	1	2.8			34.15		
35	LR14RC-34	24488	20	76.00	76.50	75.54	76.04	0.5	1	2			24.39		
36	LR14RC-34	24489	20	76.50	77.00	76.04	76.54	0.5	1	2.2			26.83		
37	LR14RC-34	24490	20	77.00	77.50	76.54	77.04	0.5	1	2			24.39		

38	LR14RC-34	24491	20	77.50	78.00	77.04	77.54	0.5	1	2.2			26.83		
39	LR14RC-34	24492	20	78.00	78.50	77.54	78.04	0.5	1	2.8			34.15		
40	LR14RC-34	24493	20	78.50	79.00	78.04	78.54	0.5	1	2.2			26.83		
41	LR14RC-34	24494	20	79.00	79.50	78.54	79.04	0.5	1	1.8	1.43707749	8.21	21.95	34.20	
42	LR14RC-34	24495	20	79.50	80.00	79.04	79.54	0.5	1	2.8			34.15		
43	LR14RC-34	24496	20	80.00	80.50	79.54	80.04	0.5	1	3			36.59		4
44	LR14RC-34	24497	20	80.50	81.00	80.04	80.54	0.5	1	2.2			26.83		
45	LR14RC-34	24498	20	81.00	81.50	80.54	81.04	0.5	1	3.8			46.34		
46	LR14RC-34	24499	20	81.50	82.00	81.04	81.54	0.5	1	2.8			34.15		
47	LR14RC-34	24500	20	82.00	82.50	81.54	82.04	0.5	1	3.2			39.02		
48	LR14RC-34	R340172	20	82.50	83.00	82.04	82.54	0.5	1	4			48.78		
49	LR14RC-34	R340173	20	83.00	83.50	82.54	83.04	0.5	1	4.2			51.22		
50	LR14RC-34	R340174	20	83.50	84.00	83.04	83.54	0.5	1	4			48.78		
51	LR14RC-34	R340175	20	84.00	84.50	83.54	84.04	0.5	1	4			48.78		
52	LR14RC-34	R340176	20	84.50	85.00	84.04	84.54	0.5	1	3.8			46.34		5
53	LR14RC-34	R340177	20	85.00	85.50	84.54	85.04	0.5	1	3.4			41.46		
54	LR14RC-34	R340178	20	85.50	86.00	85.04	85.54	0.5	1	3.6			43.90		
55	LR14RC-34	R340179	20	86.00	86.50	85.54	86.04	0.5	1	3.4			41.46		
56	LR14RC-34	R340180	20	86.50	87.00	86.04	86.54	0.5	1	3.6			43.90		
57	LR14RC-34	R340181	20	87.00	87.50	86.54	87.04	0.5	1	3.6			43.90		
58	LR14RC-34	R340182	20	87.50	88.00	87.04	87.54	0.5	1	3.6			43.90		
59	LR14RC-34	R340183	20	88.00	88.50	87.54	88.04	0.5	1	3.8			46.34		
60	LR14RC-34	R340184	20	88.50	89.00	88.04	88.54	0.5	1	3.6			43.90		
61	LR14RC-34	R340185	20	89.00	89.50	88.54	89.04	0.5	1	3.2			39.02		6
62	LR14RC-34	R340186	20	89.50	90.00	89.04	89.54	0.5	1	3.6			43.90		
63	LR14RC-34	R340187	20	90.00	90.50	89.54	90.04	0.5	1	3.8			46.34		
64	LR14RC-34	R340188	20	90.50	91.00	90.04	90.54	0.5	1	2.8			34.15		
65	LR14RC-34	R340189	20	91.00	91.50	90.54	91.14	0.6	1	2.8			34.15		
66	LR14RC-34	R340190		144.50	145.00	144	144.5	0.5	1	4.8					
67	LR14RC-34	R340191		145.00	145.50	144.5	145	0.5	1	4.2					
68	LR14RC-34	R340192		145.50	146.00	145	145.5	0.5	1	3					
69	LR14RC-34	R340193	19	149.00	149.50	149.12	149.62	0.5	1	4.4					
70	LR14RC-34	R340194	19	149.50	150.00	149.62	150.12	0.5	1	4					
71	LR14RC-34	R340195	19	150.00	150.50	150.12	150.62	0.5	1	4.2					
72	LR14RC-34	R340196	19	156.50	157.00	156.24	156.74	0.5	1	4.6			57.72		
73	LR14RC-34	R340197	19	157.00	157.50	156.74	157.24	0.5	1	3.2			40.15		
74	LR14RC-34	R340198	19	157.50	158.00	157.24	157.74	0.5	1	3.8			47.68		
75	LR14RC-34	R340199	19	158.00	158.50	157.74	158.24	0.5	1	5			62.74		
76	LR14RC-34	R340200	19	158.50	159.00	158.24	158.74	0.5	1	4	1.39404255	7.97	50.19	52.70	7
77	LR14RC-34	R340201	19	159.00	159.50	158.74	159.24	0.5	1	3.2			40.15		
78	LR14RC-34	R340202	19	159.50	160.00	159.24	159.74	0.5	1	5.4			67.75		
79	LR14RC-34	R340203	19	160.00	160.50	159.74	160.24	0.5	1	4			50.19		
80	LR14RC-34	R340204	19	160.50	161.00	160.24	160.74	0.5	1	4.6			57.72		
81	LR14RC-34	R340205		169.50	170.00	166.5	167	0.5	1	7.4					
82	LR14RC-34	R340206	18	183.50	184.00	183.06	183.56	0.5	1	6			70.92		

83	LR14RC-34	R340207	18	184.00	184.50	183.56	184.06	0.5	1	5.8			68.56		
84	LR14RC-34	R340208	18	184.50	185.00	184.06	184.56	0.5	1	4.6			54.37		
85	LR14RC-34	R340209	18	185.00	185.50	184.56	185.06	0.5	1	3.2			37.83		8
86	LR14RC-34	R340210	18	185.50	186.00	185.06	185.56	0.5	1	5.2			61.47		
87	LR14RC-34	R340211	18	186.00	186.50	185.56	186.06	0.5	1	4.2			49.65		
88	LR14RC-34	R340212	18	186.50	187.00	186.06	186.56	0.5	1	5			59.10		
89	LR14RC-34	R340213	18	187.00	187.50	186.56	187.06	0.5	1	3.8			44.92		
90	LR14RC-34	R340214	18	187.50	188.00	187.06	187.56	0.5	1	4			47.28		
91	LR14RC-34	R340215	18	188.00	188.50	187.56	188.06	0.5	1	3.8	1.48053097	8.46	44.92	56.38	
92	LR14RC-34	R340216	18	188.50	189.00	188.06	188.56	0.5	1	4			47.28		
93	LR14RC-34	R340217	18	189.00	189.50	188.56	189.06	0.5	1	4.8			56.74		
94	LR14RC-34	R340218	18	189.50	190.00	189.06	189.56	0.5	1	5.4			63.83		
95	LR14RC-34	R340219	18	190.00	190.50	189.56	190.06	0.5	1	4.6			54.37		9
96	LR14RC-34	R340220	18	190.50	191.00	190.06	190.56	0.5	1	4			47.28		
97	LR14RC-34	R340221	18	191.00	191.50	190.56	191.06	0.5	1	4.2			49.65		
98	LR14RC-34	R340222	18	191.50	192.00	191.06	191.56	0.5	1	4.4			52.01		
99	LR14RC-34	R340223	18	192.00	192.50	191.56	192.06	0.5	1	5			59.10		
100	LR14RC-34	R340224	18	192.50	193.00	192.06	192.56	0.5	1	6.2			73.29		
101	LR14RC-34	R340225	18	193.00	193.50	192.56	193.06	0.5	1	7.2			85.11		
102	LR14RC-34	R340226	18L	197.00	197.50	196.10	196.60	0.5	1	5.2					
103	LR14RC-34	R340227	18L	197.50	198.00	196.6	197.1	0.5	1	7					
104	LR14RC-34	R340228	17	207.5	208	207.06	207.56	0.5	1	7					
105	LR14RC-34	R340229	16	213	213.5	213.06	213.56	0.5	1	5.2					

Shipped:

CanAus Coal Limited

Ship to: **Birtley Labs**
7784 62nd Street SE
Calgary AB
T2C 5K2
(403) 253-8273

Sample Shipping Manifest

Date: ####################

Number of pallet bags shipped: 1

Composites	Sample Number	Hole ID	Seam	Corrected to Log From (m)	Corrected to Log To (m)	Sample Length (m)	# Cloth Bags	Weight (kg)
1	00420	LR14RC-35	20	61.00	61.50	0.50	1	3.8
	00421	LR14RC-35	20	61.50	62.00	0.50	1	5.6
	00422	LR14RC-35	20	62.00	62.50	0.50	1	3.0
	00423	LR14RC-35	20	62.50	63.00	0.50	1	3.2
	00424	LR14RC-35	20	63.00	63.50	0.50	1	5.0
	00425	LR14RC-35	20	63.50	64.00	0.50	1	1.6
	00426	LR14RC-35	20	64.00	64.50	0.50	1	1.8
	00427	LR14RC-35	20	64.50	65.00	0.50	1	2.0
	00428	LR14RC-35	20	65.00	65.50	0.50	1	1.6
	00429	LR14RC-35	20	65.50	66.00	0.50	1	2.8
2	00430	LR14RC-35	20	66.00	66.50	0.50	1	1.2
	00431	LR14RC-35	20	66.50	67.00	0.50	1	2.2
	00432	LR14RC-35	20	67.00	67.50	0.50	1	1.2
	00433	LR14RC-35	20	67.50	68.00	0.50	1	0.6
	00434	LR14RC-35	20	68.00	68.50	0.50	1	1.4
	00435	LR14RC-35	20	68.50	69.00	0.50	1	2.2
	00436	LR14RC-35	20	69.00	69.50	0.50	1	2.8
	00437	LR14RC-35	20	69.50	70.00	0.50	1	2.4
3	00438	LR14RC-35	19	101.00	101.50	0.50	1	1.8
	00439	LR14RC-35	19	101.50	102.00	0.50	1	2.4
	00440	LR14RC-35	19	102.00	102.50	0.50	1	1.6
	00441	LR14RC-35	19	102.50	103.00	0.50	1	1.4
	00442	LR14RC-35	19	103.00	103.50	0.50	1	2.8
	00443	LR14RC-35	19	103.50	104.00	0.50	1	3.4
	00444	LR14RC-35	19	104.00	104.50	0.50	1	2.4
	00445	LR14RC-35	19	104.50	105.00	0.50	1	3.0
	00446	LR14RC-35	19	105.00	105.50	0.50	1	2.4
	00447	LR14RC-35	19	105.50	106.00	0.50	1	4.6
4	00448	LR14RC-35	18	131.54	132.04	0.50	1	2.0
	00449	LR14RC-35	18	132.04	132.54	0.50	1	2.2
	00450	LR14RC-35	18	132.54	133.04	0.50	2	4.6
	00151	LR14RC-35	18	133.04	133.54	0.50	1	2.2
	00152	LR14RC-35	18	133.54	134.04	0.50	1	2.2
	00153	LR14RC-35	18	134.04	134.54	0.50	1	1.6
5	00155	LR14RC-35	17	141.30	141.80	0.50	1	1.0
	00156	LR14RC-35	17	141.80	142.30	0.50	1	1.2
	00157	LR14RC-35	17	142.30	142.80	0.50	1	1.4
	00158	LR14RC-35	17	142.80	143.30	0.50	1	1.8
	00159	LR14RC-35	17	143.30	143.80	0.50	1	1.2
	00160	LR14RC-35	17	143.80	144.30	0.50	1	2.6
6	00161	LR14RC-35	15	154.32	154.82	0.50	1	1.4
	00162	LR14RC-35	15	154.82	155.32	0.50	1	1.2
	00163	LR14RC-35	15	155.32	155.82	0.50	1	1.2
	00164	LR14RC-35	15	155.82	156.32	0.50	1	1.2
	00165	LR14RC-35	15	156.32	156.82	0.50	1	0.8

Total Number of Samples:	46

Total Mass	100.0

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

Received (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

CanAus Coal Limited

Sample Shipping Manifest

Ship to: **Birtley Labs**
7784 62nd Street SE
Calgary AB
T2C 5K2 (403) 253-8273

Date: ##################

				Driller's Depths			Corrected to Log			
Composite	**Sample #**	**Hole ID**	**Seam**	**From (m)**	**To (m)**	**Length (m)**	**From (m)**	**To (m)**	**Sample Length (m)**	**Mass (kg)**
1	R339362	LR14RC-57		93	93.5	0.5	92.98			5.8
	R339363	LR14RC-57		93.5	94	0.5				13.4
	R339364	LR14RC-57		94	94.5	0.5				12.8
	R339365	LR14RC-57		94.5	95	0.5				10.0
	R339366	LR14RC-57		95	95.5	0.5				9.4
	R339367	LR14RC-57		95.5	96	0.5				10.0
	R339368	LR14RC-57		96	96.5	0.5				8.8
2	R339369	LR14RC-57		96.5	97	0.5				9.4
	R339370	LR14RC-57		97	97.5	0.5				10.8
	R339371	LR14RC-57		97.5	98	0.5				10.6
	R339372	LR14RC-57		98	98.5	0.5				10.2
	R339373	LR14RC-57		98.5	99	0.5				8.2
	R339374	LR14RC-57		99	99.5	0.5				9.4
	R339375	LR14RC-57		99.5	100	0.5				10.8
	R339376	LR14RC-57		100	100.5	0.5				10.4
	R339377	LR14RC-57		100.5	101	0.5				9.6
	R339378	LR14RC-57		101	101.5	0.5				10.4
3	R339379	LR14RC-57		101.5	102	0.5				10.2
	R339380	LR14RC-57		102	102.5	0.5				10.8
	R339381	LR14RC-57		102.5	103	0.5				9.4
	R339382	LR14RC-57		103	103.5	0.5				10.6
	R339383	LR14RC-57		103.5	104	0.5				10.2
	R339384	LR14RC-57		104	104.5	0.5		104.98		10.2
4	R339387	LR14RC-57		113	113.5	0.5	112.66			9.4
	R339388	LR14RC-57		113.5	114	0.5				14.8
	R339389	LR14RC-57		114	114.5	0.5				13.0
	R339390	LR14RC-57		114.5	115	0.5				10.2
	R339391	LR14RC-57		115	115.5	0.5				10.0
	R339392	LR14RC-57		115.5	116	0.5				16.0
	R339393	LR14RC-57		116	116.5	0.5				16.0
	R339394	LR14RC-57		116.5	117	0.5				10.6
5	R339395	LR14RC-57		117	117.5	0.5				11.2
	R339396	LR14RC-57		117.5	118	0.5				11.0
	R339397	LR14RC-57		118	118.5	0.5				11.4
	R339398	LR14RC-57		118.5	119	0.5				10.0
	R339399	LR14RC-57		119	119.5	0.5				10.2
	R339400	LR14RC-57		119.5	120	0.5				9.8
	R339401	LR14RC-57		120	120.5	0.5				10.0
6	R339402	LR14RC-57		120.5	121	0.5				12.0
	R339403	LR14RC-57		121	121.5	0.5				16.0
	R339404	LR14RC-57		121.5	122	0.5				9.4
	R339405	LR14RC-57		122	122.5	0.5		123.16		13.6

Total Number of Samples: **42**

Total Mass **456.0**

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

Received (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

CanAus Coal Limited

Sample Shipping Manifest

Ship to: **Birtley Labs**
7784 62nd Street SE
Calgary AB
T2C 5K2 (403) 253-8273

Date: ##########

				Corrected to Log			
Composite	**Sample #**	**Hole ID**	**Seam**	**From (m)**	**To (m)**	**Sample Length (m)**	**Mass (kg)**
1	R339351	LR14RC-60		179.50	180.00	0.50	10.6
	R339352	LR14RC-60		180.00	180.50	0.50	13.4
	R339353	LR14RC-60		180.50	181.00	0.50	15.0
	R339354	LR14RC-60		181.00	181.50	0.50	12.4
	R339355	LR14RC-60		181.50	182.00	0.50	15.2
2	R339356	LR14RC-60		194.00	194.50	0.50	14.6
	R339357	LR14RC-60		194.50	195.00	0.50	13.4
	R339358	LR14RC-60		195.00	195.50	0.50	18.4
	R339359	LR14RC-60		195.50	196.00	0.50	16.6
3	R339360	LR14RC-60		198.50	199.00	0.50	11.4
	R339361	LR14RC-60		199.00	199.50	0.50	15.6

Total Number of Samples: 11

Total Mass 156.6

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

Received (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

CanAus Coal Limited

Ship to: **Birtley Labs**
7784 62nd Street SE
Calgary AB
T2C 5K2
(403) 253-8273

Sample Shipping Manifest

Date: Tuesday, August 19, 2014

Number of pallets bags shipped: 1

			Corrected to Log					
Composites	**Hole ID**	**Sample Number**	**Seam**	**From (m)**	**To (m)**	**Sample Length (m)**	**# Cloth Bags**	**Weight (kg)**
	Loop Ridge							
1	LR14RC-64	00753	19L	30.46	30.96	0.50	1	2.6
	LR14RC-64	00754	19L	30.96	31.46	0.50	1	4.0
	LR14RC-64	00755	19L	31.46	31.96	0.50	1	2.5
	LR14RC-64	00756	19L	31.96	32.46	0.50	1	2.5
2	LR14RC-64	00757	18	58.00	58.50	0.50	1	4.0
	LR14RC-64	00758	18	58.50	59.00	0.50	1	4.2
	LR14RC-64	00759	18	59.00	59.50	0.50	1	4.0
	LR14RC-64	00760	18	59.50	60.00	0.50	1	3.2
3	LR14RC-64	00763	10	290.04	290.54	0.50	1	4.6
	LR14RC-64	00764	10	290.54	291.04	0.50	1	1.2
	LR14RC-64	00765	10	291.04	291.54	0.50	1	2.4
	LR14RC-64	00766	10	291.54	292.04	0.50	1	4.6
	LR14RC-64	00767	10	292.04	292.54	0.50	1	2.7
	LR14RC-64	00768	10	292.54	293.04	0.50	1	5.4
	LR14RC-64	00769	10	293.04	293.54	0.50	1	4.2
	LR14RC-64	00770	10	293.54	294.04	0.50	1	2.8
	LR14RC-64	00771	10	294.04	294.54	0.50	1	4.4
	LR14RC-64	00772	10	294.54	295.04	0.50	1	4.6
4	LR14RC-64	00773	10	295.04	295.54	0.50	1	4.4
	LR14RC-64	00774	10	295.54	296.04	0.50	1	5.0
	LR14RC-64	00775	10	296.04	296.54	0.50	1	3.0
	LR14RC-64	00776	10	296.54	297.04	0.50	1	2.0
	LR14RC-64	00777	10	297.04	297.54	0.50	1	4.6
	LR14RC-64	00778	10	297.54	298.04	0.50	1	3.0
	LR14RC-64	00779	10	298.04	298.54	0.50	1	4.2
	LR14RC-64	00780	10	298.54	299.04	0.50	1	3.2
	LR14RC-64	00781	10	299.04	299.54	0.50	1	2.4
	LR14RC-64	00782	10	299.54	300.04	0.50	1	3.2
	LR14RC-64	00783	10	300.04	300.54	0.50	1	2.8
	LR14RC-64	00784	10	300.54	301.04	0.50	1	4.6
5	LR14RC-64	00785	10	301.04	301.54	0.50	1	5.0
	LR14RC-64	00786	10	301.54	302.04	0.50	1	4.8
	LR14RC-64	00787	10	302.04	302.54	0.50	1	4.2
	LR14RC-64	00788	10	302.54	303.04	0.50	1	3.0
	LR14RC-64	00789	10	303.04	303.54	0.50	1	3.4
	LR14RC-64	00790	10	303.54	304.04	0.50	1	3.2
	LR14RC-64	00791	10	304.04	304.54	0.50	1	4.0
	LR14RC-64	00792	10	304.54	305.04	0.50	1	3.2
	LR14RC-64	00793	10	305.04	305.54	0.50	1	4.2
6	LR14RC-64	00794	10	305.54	306.04	0.50	1	2.4
	LR14RC-64	00795	10	306.04	306.54	0.50	1	2.8
	LR14RC-64	00796	10	306.54	307.04	0.50	1	3.0
	LR14RC-64	00797	10	307.04	307.54	0.50	1	2.2
	LR14RC-64	00798	10	307.54	308.04	0.50	1	4.2
	LR14RC-64	00799	10	308.04	308.54	0.50	1	1.5
	LR14RC-64	00800	10	308.54	309.04	0.50	1	5.5
	LR14RC-64	00992	10	309.04	309.54	0.50	1	4.5
	LR14RC-64	00993	10	309.54	310.04	0.50	1	4.0
7	LR14RC-64	00994	10	310.04	310.54	0.50	1	4.5
	LR14RC-64	00995	10	310.54	311.04	0.50	1	3.0
	LR14RC-64	00996	10	311.04	311.54	0.50	1	3.4
	LR14RC-64	00997	10	311.54	312.04	0.50	1	3.4
	LR14RC-64	00998	10	312.04	312.54	0.50	1	5.2
	LR14RC-64	00999	10	312.54	313.04	0.50	1	5.0
	LR14RC-64	01000	10	313.04	313.54	0.50	1	6.6
	LR14RC-64	24451	10	313.54	314.04	0.50	1	5.4
	LR14RC-64	24452	10	314.04	314.54	0.50	1	6.6
	LR14RC-64	24453	10	314.54	315.04	0.50	1	5.8
	LR14RC-64	24454	10	315.04	315.54	0.50	1	2.6

Total Number of Samples:	**59**

Total Mass	**222.9**

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

Received (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

Ship to: **Birtley Labs**
7784 62nd Street SE
Calgary AB
T2C 5K2
(403) 253-8273

Date: Wednesday, August 6, 2014

Sample Shipping Manifest

Number of pallets bags shipped: 1

			Corrected to Log					
Composites	**Hole ID**	**Sample Number**	**Seam**	**From (m)**	**To (m)**	**Sample Length (m)**	**# Cloth Bags**	**Weight (kg)**
	Loop Ridge							
1	LR14RC-65	00901	20	40.30	40.80	0.50	1	**1.4**
	LR14RC-65	00902	20	40.80	41.30	0.50	1	**1.6**
	LR14RC-65	00903	20	41.30	41.80	0.50	1	**1.4**
	LR14RC-65	00904	20	41.80	42.30	0.50	1	**0.8**
	LR14RC-65	00905	20	42.30	42.80	0.50	1	**0.8**
	LR14RC-65	00906	20	42.80	43.30	0.50	1	**1.8**
	LR14RC-65	00907	20	43.30	43.80	0.50	1	**2.6**
2	LR14RC-65	00908	20	43.80	44.30	0.50	1	**1.4**
	LR14RC-65	00909	20	44.30	44.80	0.50	1	**1.6**
	LR14RC-65	00910	20	44.80	45.30	0.50	1	**1.0**
	LR14RC-65	00911	20	45.30	45.80	0.50	1	**0.8**
	LR14RC-65	00912	20	45.80	46.30	0.50	1	**2.0**
	LR14RC-65	00913	20	46.30	46.80	0.50	1	**2.0**
	LR14RC-65	00914	20	46.80	47.30	0.50	1	**2.0**
	LR14RC-65	00915	20	47.30	47.80	0.50	1	**2.8**
3	LR14RC-65	00916	20	47.80	48.30	0.50	1	**0.4**
	LR14RC-65	00917	20	48.30	48.80	0.50	1	**1.6**
	LR14RC-65	00918	20	48.80	49.30	0.50	1	**1.0**
	LR14RC-65	00919	20	49.30	49.80	0.50	1	**3.2**
	LR14RC-65	00920	20	49.80	50.30	0.50	1	**2.4**
	LR14RC-65	00921	20	50.30	50.80	0.50	1	**3.2**
	LR14RC-65	00922	20	50.80	51.30	0.50	1	**0.8**
	LR14RC-65	00923	20	51.30	51.80	0.50	1	**2.4**
4	LR14RC-65	00924	19	84.20	84.70	0.50	1	**2.4**
	LR14RC-65	00925	19	84.70	85.20	0.50	1	**2.6**
	LR14RC-65	00926	19	85.20	85.70	0.50	1	**2.8**
	LR14RC-65	00927	19	85.70	86.20	0.50	1	**3.0**
	LR14RC-65	00928	19	86.20	86.70	0.50	1	**2.6**
	LR14RC-65	00929	19	86.70	87.20	0.50	1	**3.2**
5	LR14RC-65	00933	18	124.50	125.00	0.50	1	**2.8**
	LR14RC-65	00934	18	125.00	125.50	0.50	1	**2.2**
	LR14RC-65	00935	18	125.50	126.00	0.50	1	**2.2**
	LR14RC-65	00936	18	126.00	126.50	0.50	1	**5.8**
	LR14RC-65	00937	18	126.50	127.00	0.50	1	**2.2**
	LR14RC-65	00938	18	127.00	127.50	0.50	1	**2.2**
6	LR14RC-65	00946	18	159.00	159.50	0.50	1	**3.0**
	LR14RC-65	00947	18	159.50	160.00	0.50	1	**2.6**
	LR14RC-65	00948	18	160.00	160.50	0.50	1	**4.6**
	LR14RC-65	00949	18	160.50	161.00	0.50	1	**7.6**
	LR14RC-65	00950	18	161.00	161.50	0.50	1	**2.2**
	LR14RC-65	00951	18	161.50	162.00	0.50	1	**2.8**
7	LR14RC-65	00957	18	169.30	169.80	0.50	1	**2.4**
	LR14RC-65	00958	18	169.80	170.30	0.50	1	**2.8**
	LR14RC-65	00959	18	170.30	170.80	0.50	1	**5.0**
	LR14RC-65	00960	18	170.80	171.30	0.50	1	**4.2**
	LR14RC-65	00961	18	171.30	171.80	0.50	1	**4.6**
	LR14RC-65	00962	18	171.80	172.30	0.50	1	**3.6**
	LR14RC-65	00963	18	172.30	172.80	0.50	1	**4.0**
	LR14RC-65	00964	18	172.80	173.30	0.50	1	**5.8**
	LR14RC-65	00965	18	173.30	173.80	0.50	1	**5.2**
8	LR14RC-65	00966	18	173.80	174.30	0.50	1	**2.6**
	LR14RC-65	00967	18	174.30	174.80	0.50	1	**3.2**
	LR14RC-65	00968	18	174.80	175.30	0.50	1	**3.4**
	LR14RC-65	00969	18	175.30	175.80	0.50	1	**3.4**
	LR14RC-65	00970	18	175.80	176.30	0.50	1	**3.6**
	LR14RC-65	00971	18	176.30	176.80	0.50	1	**4.6**
	LR14RC-65	00972	18	176.80	177.30	0.50	1	**2.8**
	LR14RC-65	00973	18	177.30	177.80	0.50	1	**4.2**
	LR14RC-65	00974	18	177.80	178.30	0.50	1	**3.8**
9	LR14RC-65	00986	15	190.00	190.50	0.50	1	**3**
	LR14RC-65	00987	15	190.50	191.00	0.50	1	**5.4**
	LR14RC-65	00988	15	191.00	191.50	0.50	1	**5**
	LR14RC-65	00989	15	191.50	192.00	0.50	1	**2.2**
	LR14RC-65	00990	15	192.00	192.50	0.50	1	**5.8**
	LR14RC-65	00991	15	192.50	193.00	0.50	1	**3.8**

Total Number of Samples: 65

Total Mass **190.2**

Shipped (Geologist): Date: _____

Must Be Signed & Dated Prior to Shipment

Received (Lab Supervisor): Date: _____

Email Signed Copy To:

CanAus Coal Limited

Ship to: **Birtley Labs**
7784 62nd Street SE
Calgary AB
T2C 5K2
(403) 253-8273

Sample Shipping Manifest

Date: Tuesday, August 19, 2014

Number of pallets bags shipped: 1

			Corrected to Log					
Composites	**Hole ID**	**Sample Number**	**Seam**	**From (m)**	**To (m)**	**Sample Length (m)**	**# Cloth Bags**	**Weight (kg)**
	Loop Ridge							
1	LR14RC-70	R340411	19	95.72	96.22	0.50	1	**5.2**
	LR14RC-70	R340412	19	96.22	96.72	0.50	1	**4.4**
	LR14RC-70	R340413	19	96.72	97.22	0.50	1	**4.4**
	LR14RC-70	R340414	19	97.22	97.72	0.50	1	**4.0**
	LR14RC-70	R340415	19	97.72	98.22	0.50	1	**5.2**
	LR14RC-70	R340416	19	98.22	98.72	0.50	1	**6.0**
2	LR14RC-70	R340417	19	98.72	99.22	0.50	1	**5.0**
	LR14RC-70	R340418	19	99.22	99.72	0.50	1	**2.8**
	LR14RC-70	R340419	19	99.72	100.22	0.50	1	**3.8**
	LR14RC-70	R340420	19	100.22	100.72	0.50	1	**4.4**
	LR14RC-70	R340421	19	100.72	101.22	0.50	1	**4.6**
	LR14RC-70	R340422	19	101.22	101.72	0.50	1	**4.4**
	LR14RC-70	R340423	19	101.72	102.22	0.50	1	**4.8**
3	LR14RC-70	R340424	18	116.74	117.24	0.50	1	**4.8**
	LR14RC-70	R340425	18	117.24	117.74	0.50	1	**4.8**
	LR14RC-70	R340426	18	117.74	118.24	0.50	1	**4.4**
	LR14RC-70	R340427	18	118.24	118.74	0.50	1	**4.6**
4	LR14RC-70	R340430	15	135.44	135.94	0.50	1	**6.0**
	LR14RC-70	R340431	15	135.94	136.44	0.50	1	**4.6**
5	LR14RC-70	R340432	18	158.64	159.14	0.50	1	**6.2**
	LR14RC-70	R340433	18	159.14	159.64	0.50	1	**5.2**
	LR14RC-70	R340434	18	159.64	160.14	0.50	1	**6.0**
	LR14RC-70	R340435	18	160.14	160.64	0.50	1	**5.2**
	LR14RC-70	R340436	18	160.64	161.14	0.50	1	**4.6**
6	LR14RC-70	R340437	18	161.14	161.64	0.50	1	**5.2**
	LR14RC-70	R340438	18	161.64	162.14	0.50	1	**5.2**
	LR14RC-70	R340439	18	162.14	162.64	0.50	1	**5.4**
7	LR14RC-70	R340440	18	162.64	163.14	0.50	1	**5.4**
	LR14RC-70	R340441	18	163.14	163.64	0.50	1	**4.2**
8	LR14RC-70	R340442	18	170.00	170.50	0.50	1	**5.2**
	LR14RC-70	R340443	18	170.50	171.00	0.50	1	**5.6**
	LR14RC-70	R340444	18	171.00	171.50	0.50	1	**5.4**
	LR14RC-70	R340445	18	171.50	172.00	0.50	1	**4.4**
	LR14RC-70	R340446	18	172.00	172.50	0.50	1	**5.4**
	LR14RC-70	R340447	18	172.50	173.00	0.50	1	**4.8**
	LR14RC-70	R340448	18	173.00	173.50	0.50	1	**5.2**
9	LR14RC-70	R340449	18	173.50	174.00	0.50	1	**6.2**
	LR14RC-70	R340450	18	174.00	174.50	0.50	1	**6.4**
	LR14RC-70	R340451	18	174.50	175.00	0.50	1	**4.4**
	LR14RC-70	R340452	18	175.00	175.50	0.50	1	**4.4**
	LR14RC-70	R340453	18	175.50	176.00	0.50	1	**4.8**
	LR14RC-70	R340454	18	176.00	176.50	0.50	1	**4.0**
10	LR14RC-70	R340455	17	190.92	191.42	0.50	1	**4.8**
	LR14RC-70	R340456	17	191.42	191.92	0.50	1	**4.8**
	LR14RC-70	R340457	17	191.92	192.42	0.50	1	**4.0**
	LR14RC-70	R340458	17	192.42	192.92	0.50	1	**4.4**
	LR14RC-70	R340459	17	192.92	193.42	0.50	1	**2.8**
11	LR14RC-70	R340460	15	199.58	200.08	0.50	1	**4.2**
	LR14RC-70	R340461	15	200.08	200.58	0.50	1	**4.0**

Total Number of Samples: **49**

Total Mass **236.0**

Shipped (Geologist): _____ Date: _____

Must Be Signed & Dated Prior to Shipment

Received (Lab Supervisor): _____ Date: _____

Email Signed Copy To: dthompson@canaus.ca

Appendix E

Analytical Process Guidelines

Reverse Circulation Samples

There were 10 RC holes drilled in 2014 which yielded a total of 64 individual coal seam composite samples. These composites were selected on the basis of geophysical log picks of logical coal seam units. The samples were sent to Birtley Labs in Calgary following the same shipping protocols used in 2013.

The samples were dried and a representative 2.5kg was selected for raw coal Proximate Analysis, Sulphur and FSI. This was followed by a 1.55SG single cut float (using a centrifuge) to create a clean coal sample that was analysed for Proximate Analysis, Sulphur, FSI and P in coal. No other tests were conducted.

HQ3 Core Samples

There were 6 HQ3 core holes drilled in 2014 which yielded a total of 16 full seam composite coal samples. Core recoveries ranged from 93% to 60% and only those samples with recoveries greater than 75% were selected for analytical work.

These samples were also shipped to Birtley Labs in Calgary for processing. The samples were initially dried and crushed to minus 12.5mm. A representative split was cut for raw coal Proximate Analysis, Sulphur and FSI.

The remaining raw coal sample was then wet screened at plus/minus 0.25mm. The plus 0.25mm fraction was subjected to float sink analysis at 1.40, 1.50, and 1.60SG. The minus 0.25mm fraction was cleaned through froth floatation. Instructions were then provided to create a combined clean coal composite using the appropriate weight proportions of each size fraction as determined in the initial wet screening. Experience with the first two holes showed the optimum separation gravity for the plus 0.25mm fraction was 1.50SG, so the program was modified to perform only one 1.50SG on this coarser fraction.

The clean coal composite created in this process was tested for Proximate Analysis, Sulphur, FSI, Fluidity, Dilatation, Mineral Analysis of Ash, and a sub-sample was sent to Pearson Labs for petrography.

Large Diameter (15cm) Core Samples

The analytical program was developed and managed by Bob Leach Pty Ltd. The samples were shipped to the ALS Lab in Vancouver for analytical testing. The raw coal sections were reduced by Drop Shatter and Wet Attrition to simulate size degradation in mining and processing. The plus 2mm fraction, 2mm x

1mm fraction, and the 1mm x 0.25mm fractions were tested for float/sink separation at gravities from 1.30 through 2.00 to build a full washability profile on the coarse through fines sizes. The ultra-fine minus 0.25mm fraction was processed by a modified froth floatation process to simulate column floatation cells.

Raw coal subsamples of the crushed materials were analysed for Proximate, Sulphur FSI, and relative density. Roof and floors were also subjected to attrition breakage or crushing prior to, with a subsample from each of the crushed samples analysed for Proximate, total sulphur and relative density.

Most sections were processed using attrition procedures, while others were crushed. Raw coal subsamples of the crushed materials were analysed for proximates, FSI, total sulphur, and relative density. Roof and floors were also subjected to attrition breakage or crushing prior to analysis in the 2014 program, with a subsample from each of the crushed samples analysed for proximates, total sulphur, and relative density.

Clean coal products were constructed from the washability and flotation products and analysed for a range of coking coal properties such as Proximates, Total Sulphur, FSI, Fluidity, Dilatation, Ultimates, Ash Chemistry and Petrography.

A more detailed description of the sample preparation and analytical procedures can be found in the report: “Michel Creek Coking Coal Project – Large Diameter Coring Program 2013-2014”, by Bob Leach Pty. Ltd.

Large Diameter Reverse Flood Sampling

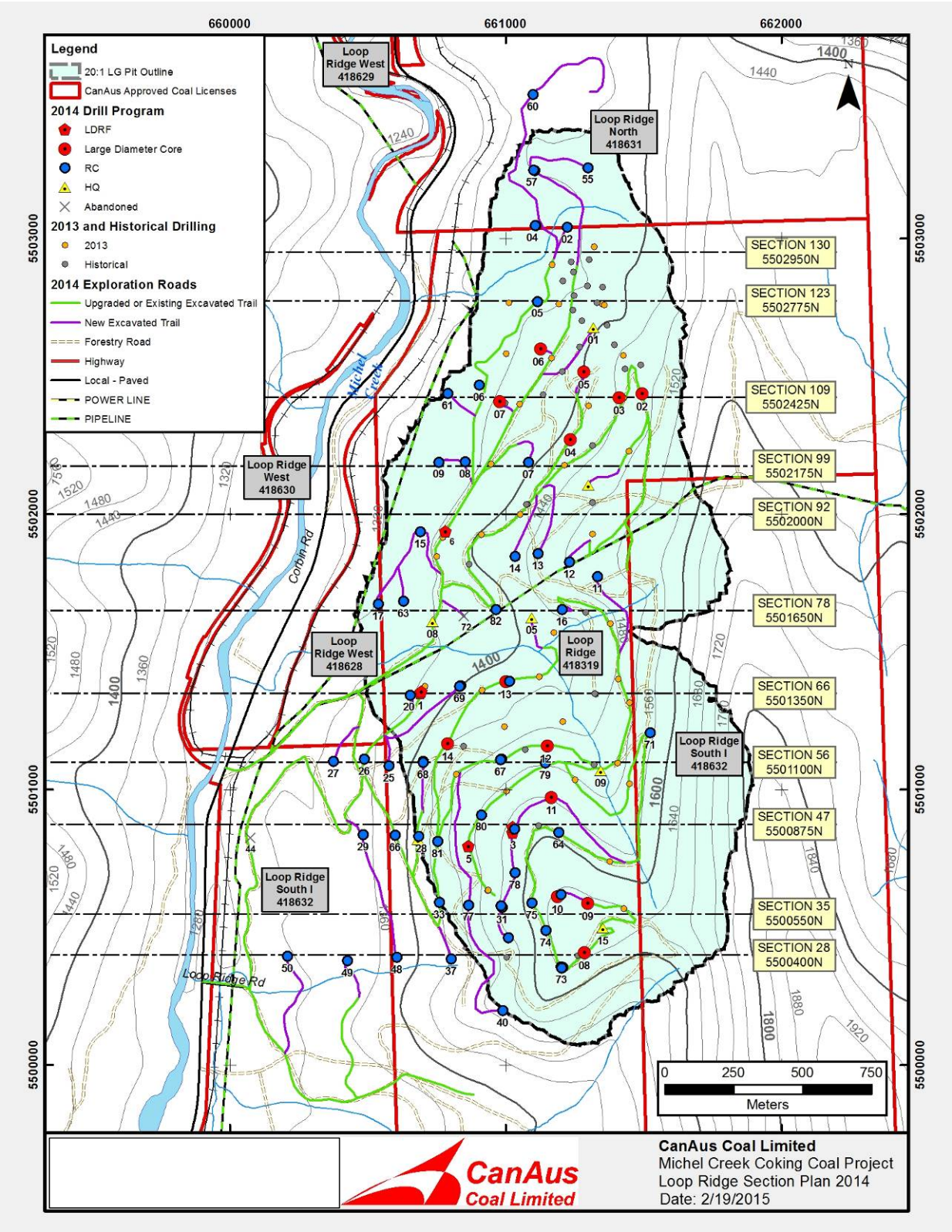
Samples were shipped to Hazen Research in Golden, Colorado for pilot scale washing. The coal was sized at nominal 2mm, creating a coarse fraction -25mm+2mm, then the -2mm fraction was wet screened at nominal 0.15mm. The resultant streams were washed in a batch process.

A dense medium bath was employed for the -25mm+2mm fraction. The product from the bath was screened and rinsed to remove magnetite. The -2mm+0.15mm fraction was washed in an industrial scale spiral, feed rate approximately 1000kg/hr. Preliminary dewatering of the product was undertaken on a fine screen. The fines (-0.15mm) were washed in conventional flotation cells at a nominal throughput rate of 25kg/hr to 50kg/hr. Preliminary dewatering of the product was undertaken on a batch scale vacuum filter. All of the products were air dried in an open environment by laying the materials on concrete pads.

Head and product sub-samples were shipped to Birtley Labs in Calgary for testing. Each sample was crushed to pass nominal 12mm and wet sized at 0.25mm, then the -12mm+0.25mm fraction was float sunk at 1.40, 1.45 and 1.50 densities with floats fractions analysed for proximates and FSI. The -0.25mm fraction was floated using a time release procedure collecting froths at 30, 60 and 90 seconds with floats fractions analysed for proximates and FSI. A clean coal product was constructed of the F1.45 coarse fraction and 90sec flotation froth. Sub-samples were sent to Pearson Labs for petrographic analysis.

Samples of the clean products at Hazen were also sent to Canmet Labs in Ottawa and ALS Labs in Vancouver for carbonisation testing.

Appendix F – Cross Sections



Loop Ridge Cross Section Plan

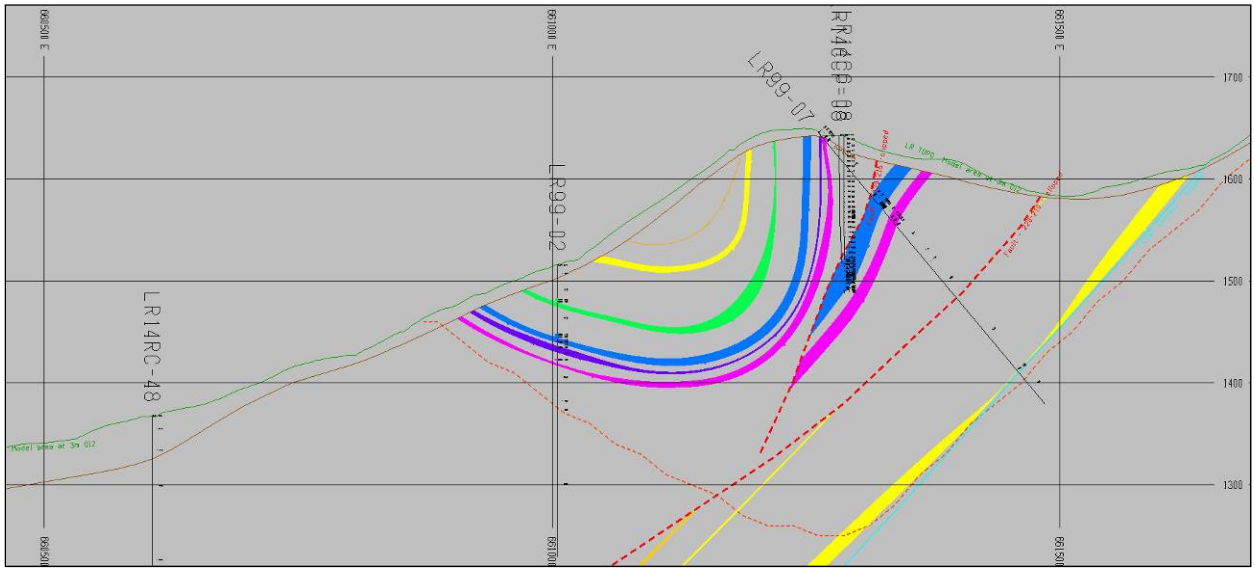
Loop Ridge Cross Sections

Illustrated:

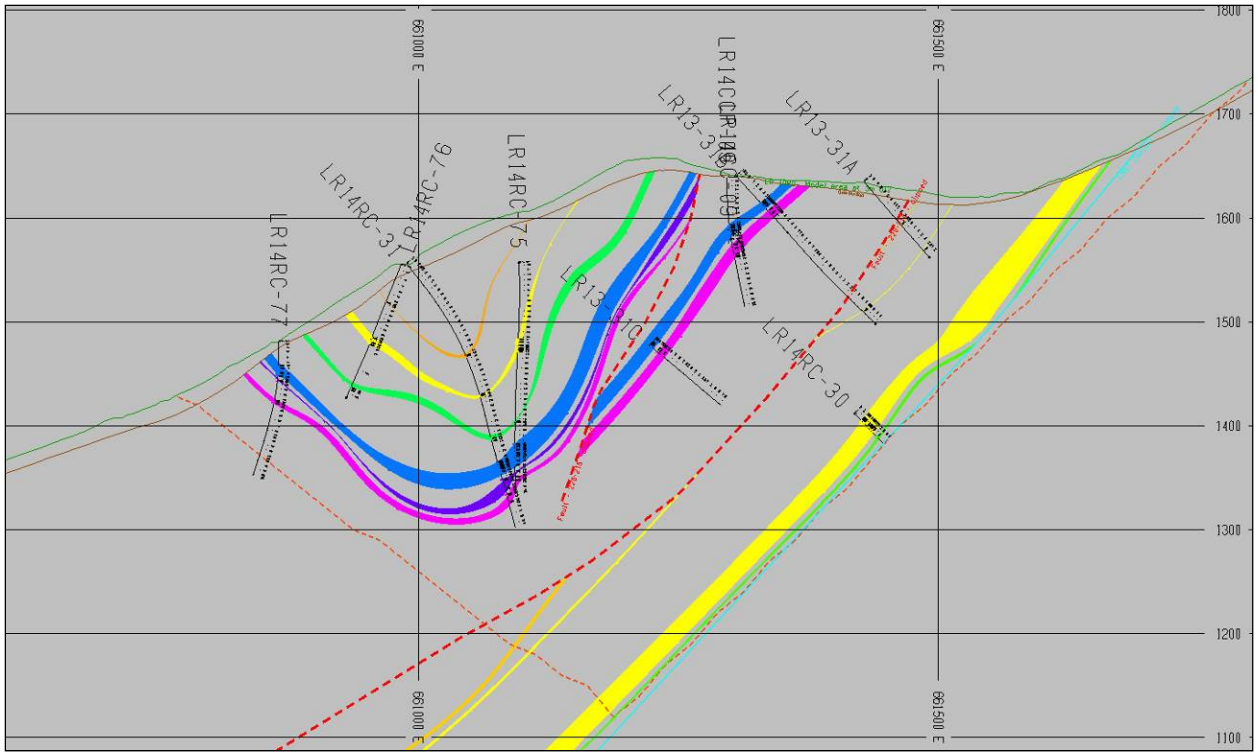
- the topography profile along the section line,
- the interpolated overburden thickness (marked as red at the top of the drillholes),
- the drillholes,
- the coal seams and their interpolated thickness,
- the interpreted faults,
- the 20:1 pit is outlined as a blue dashed line

The coal seam colours are:

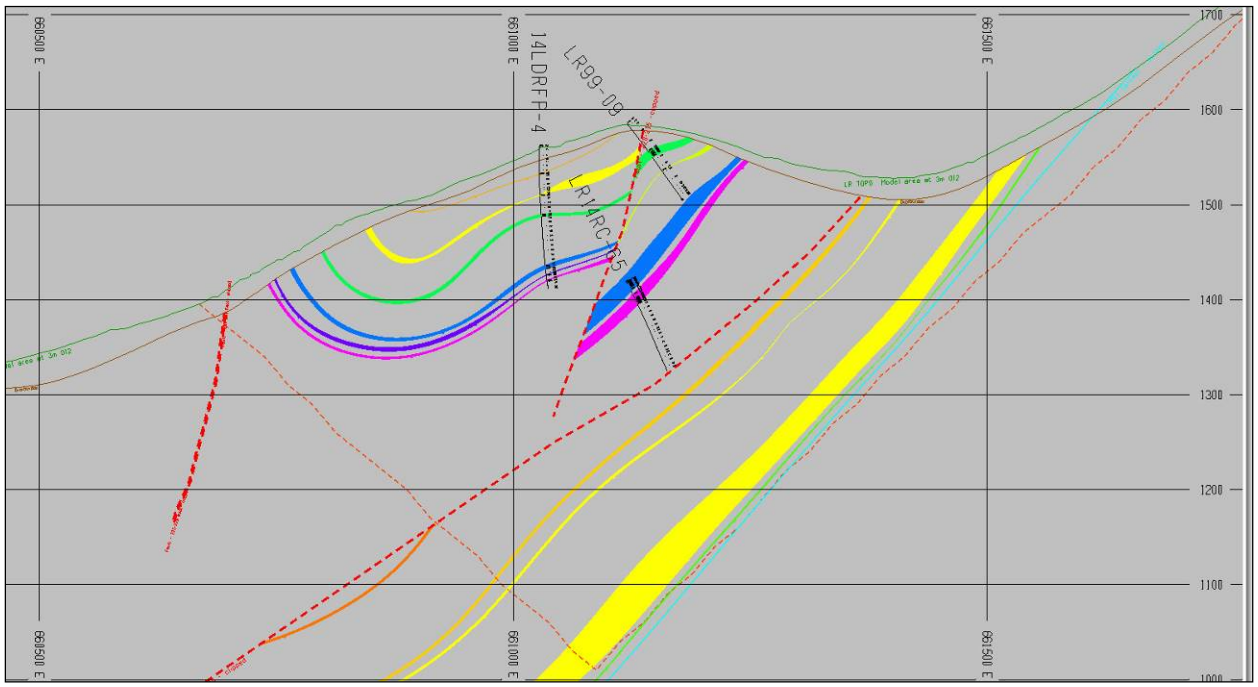
- upper yellow - seam 20
- green - seam 19
- blue - seam 18
- purple - seam 15
- thin yellow line - seam 11
- lower yellow - seam 10



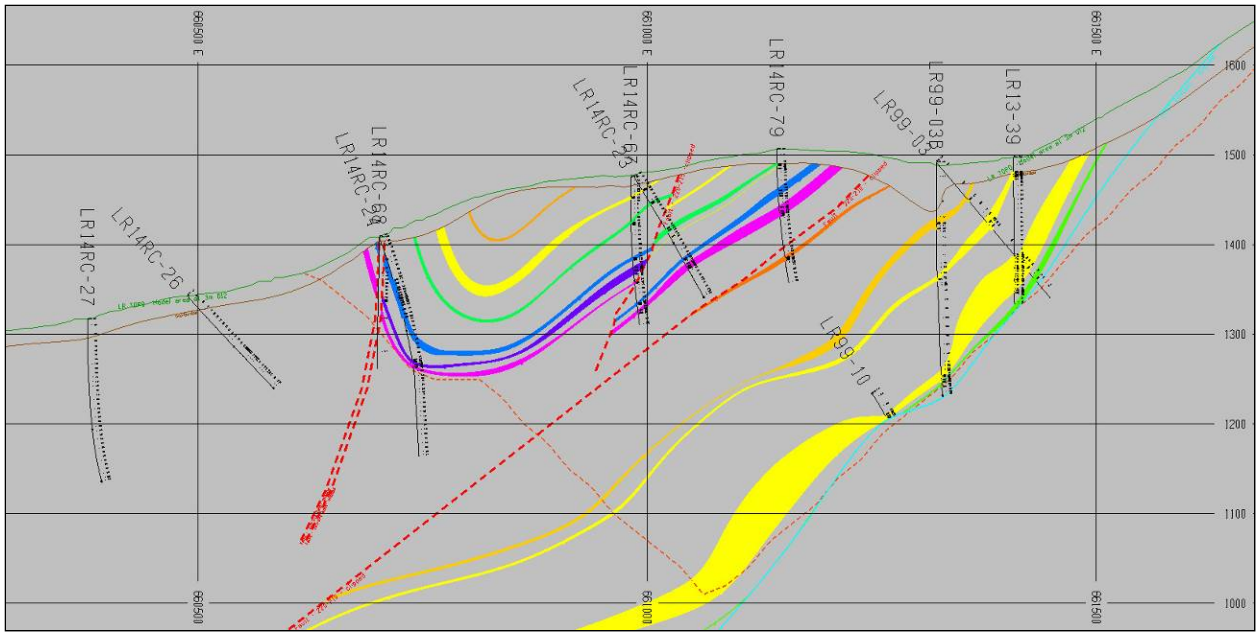
Loop Ridge Cross Section 28



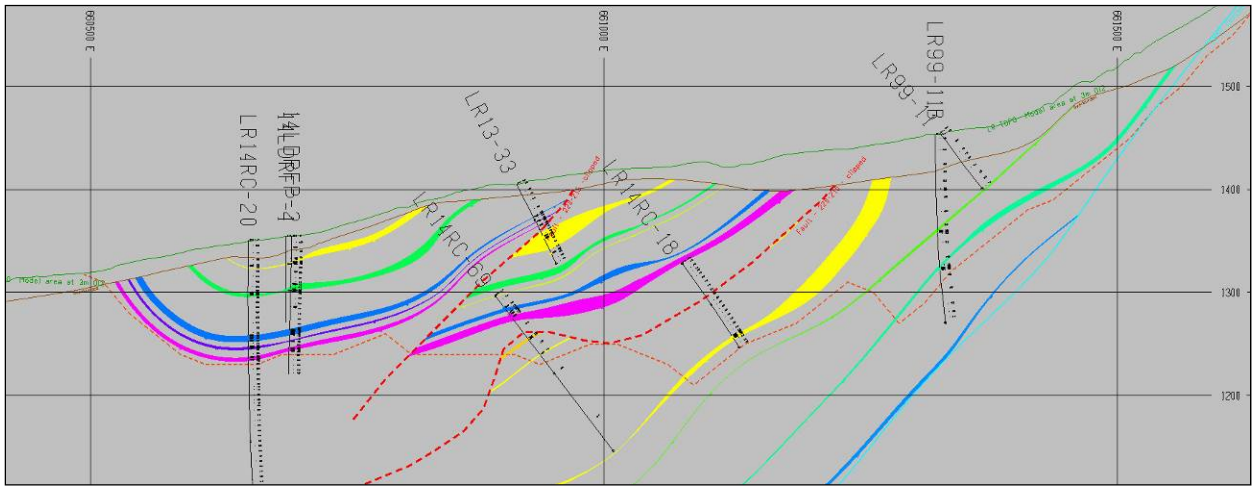
Loop Ridge Cross Section 35



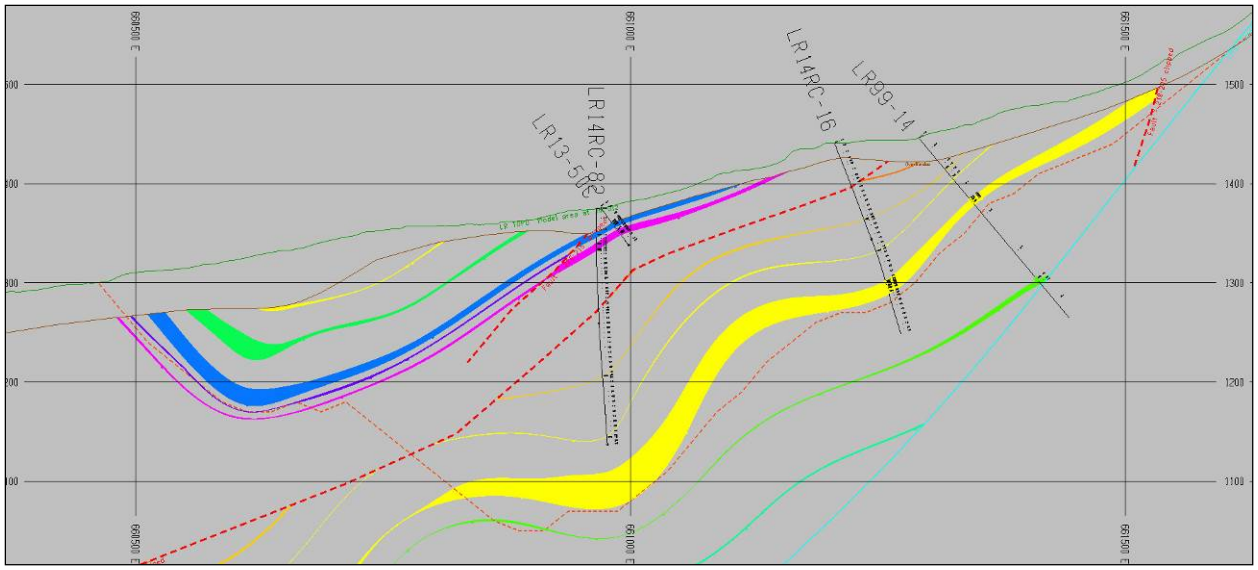
Loop Ridge Cross Section 47



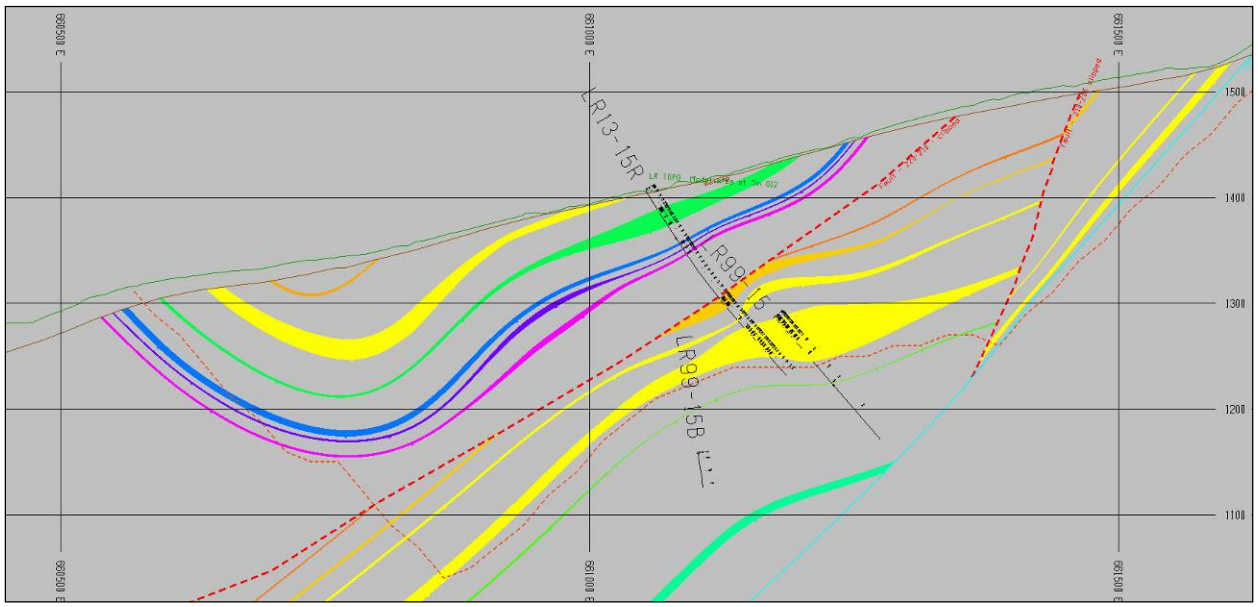
Loop Ridge Cross Section 56



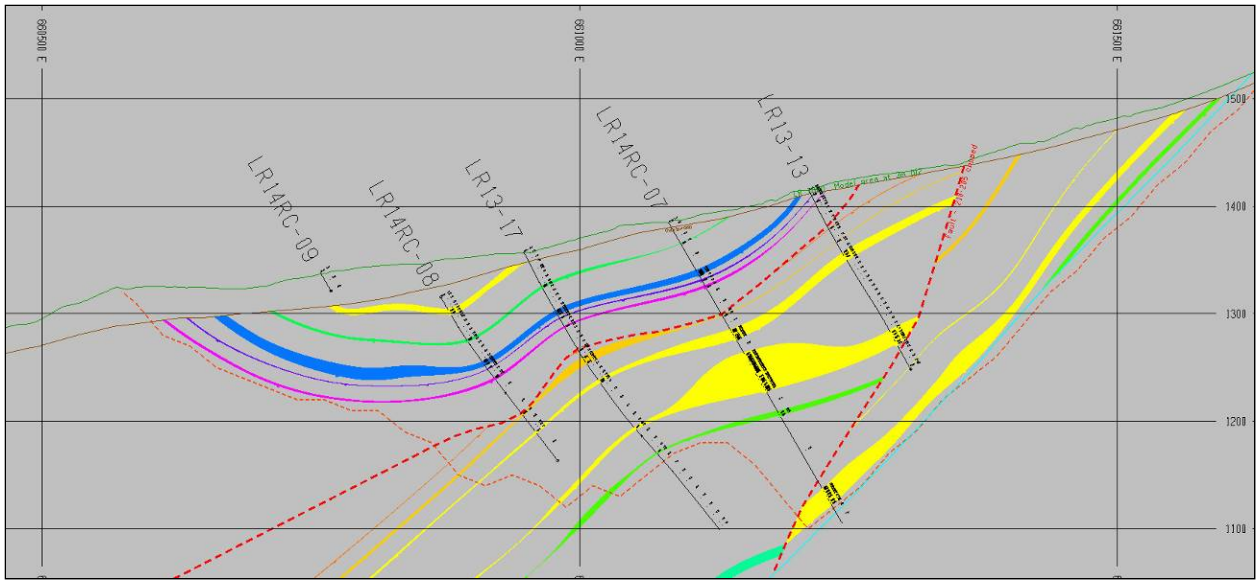
Loop Ridge Cross Section 66



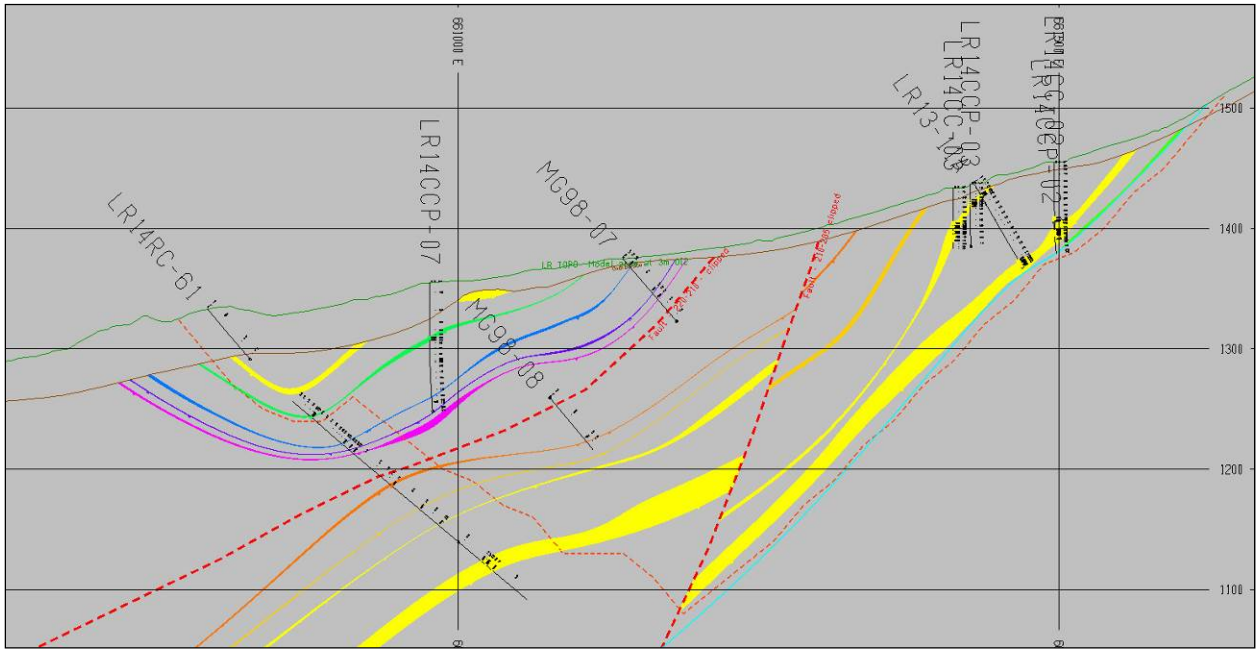
Loop Ridge Cross Section 78



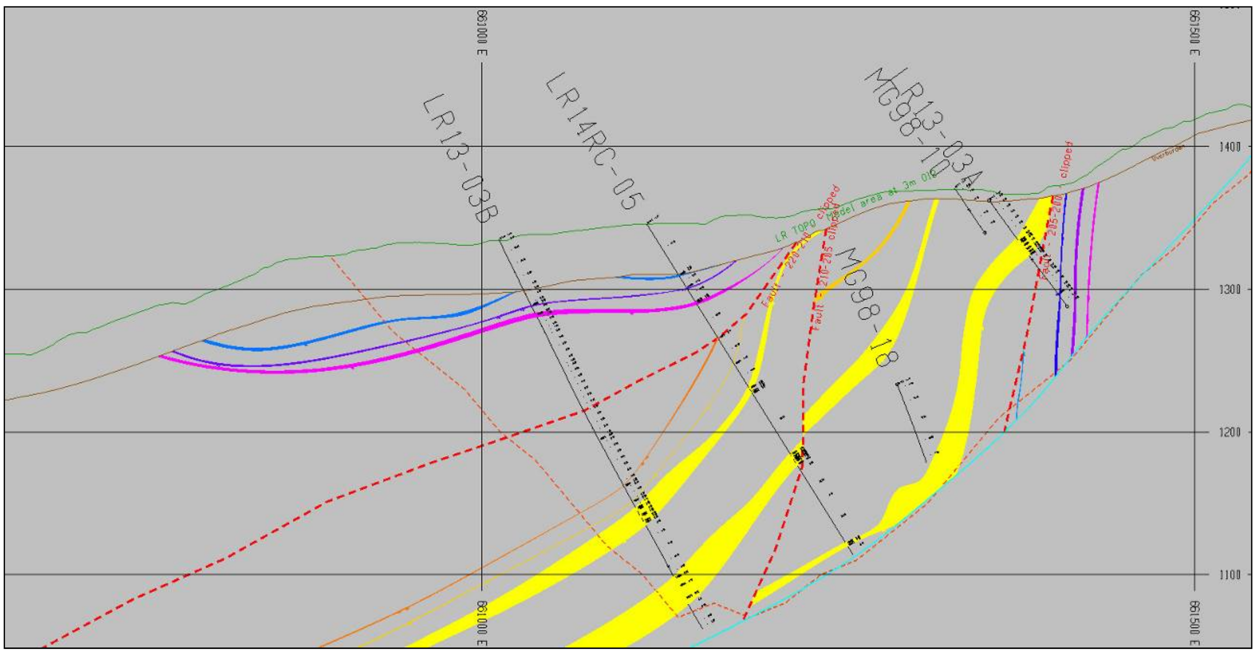
Loop Ridge Cross Section 92



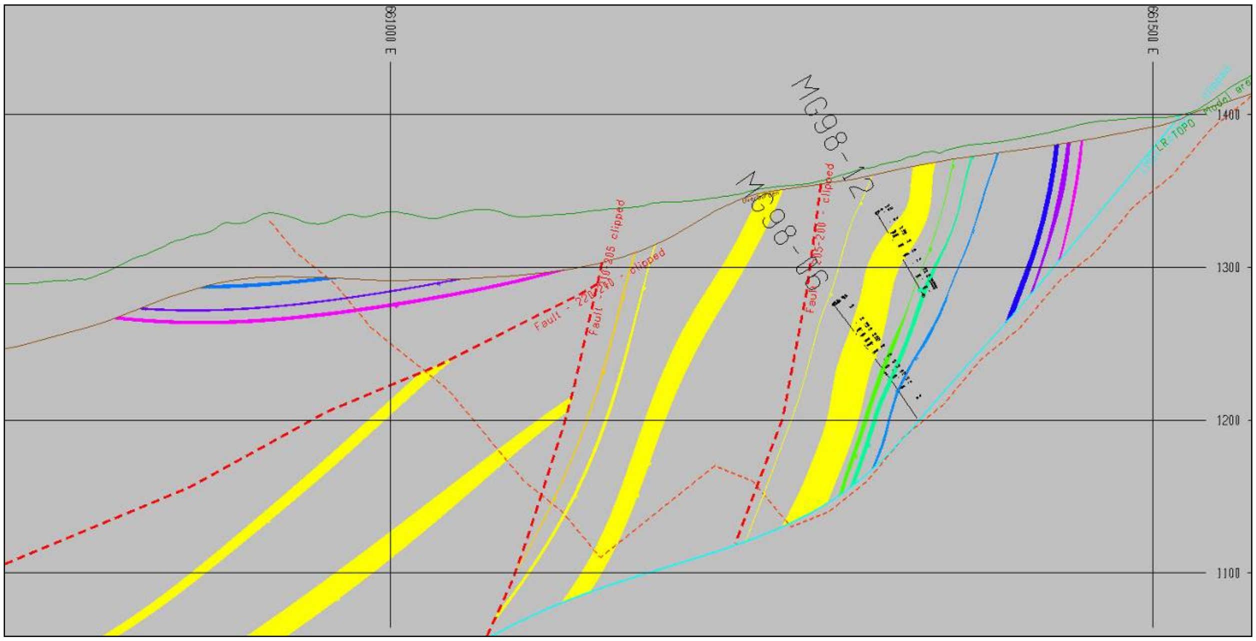
Loop Ridge Cross Section 99



Loop Ridge Cross Section 109



Loop Ridge Cross Section 123



Loop Ridge Cross Section 130