BC Geological Survey
Coal Assessment Report
1064

COAL ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: 2019 Michel Coal Exploration Program

TOTAL COST: $1,383,718.84

AUTHOR(S): Abby Cousins
SIGNATURE(S):

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): 1. Mines Act Permit CX-05-018, Approval #19-1630658-0917
Mines Act Permit CX-05-019, Approval #18-1630615-0927, issued Sept 27, 2018

YEAR OF WORK: 2019

PROPERTY NAME: Michel Coal Project: Loop Ridge, Tent Mountain and Michel Head Properties

COAL LICENSE(S) AND/OR LEASES ON WHICH PHYSICAL WORK WAS DONE:
418318, , 418319, 418632

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

MINING DIVISION: FORT STEELE
NTS / BCGS: 82G/10E
LATITUDE: 49 ° 553 ' "
LONGITUDE: 114 ° 731 ' " (at centre of work)
UTM Zone: 11 EASTING: 664144 NORTHING: 5491991

OWNER(S): North Coal Limited

MAILING ADDRESS: 652F Sparwood Dr, Sparwood, BC V0B 2G0

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

MAILING ADDRESS: 652F Sparwood Dr, Sparwood, BC V0B 2G0

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**)
Jurassic/Cretaceous, Mist Mountain Formation, Coal

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:
Assessment Report #1025: 2016 Loop Ridge Exploration Program; Assessment Report #1026: 2016
Assessment Report #1039: 2017 Loop Ridge Phase 2 (Loop South) Exploration Program
Assessment Report #1040: 2017 Tent Mountain Exploration Program; Assessment Report #1052: As

SUMMARY OF TYPES OF WORK IN THIS REPORT		EXTENT OF WORK (in metric units)	ON WHICH TENURES
GEOLOGICAL (scale, area)			
	Ground, mapping	n/a	
	Photo interpretation	n/a	
GEOPHYSICAL (line-kilometres)			
	Ground		
	(Specify types)	n/a	
	Airborne		
	(Specify types)	n/a	
	Borehole		
	Gamma, Resistivity, Density	3660.68m	418319, 418632
	Resistivity	3660.68m	418319, 418632
	Caliper	3660.68m	418319, 418632
	Deviation	3562.26m	418319, 418632
	Dip	3562.21m	418319, 418632
	Others (specify) Neutron	1357.30m	418319, 418632
DRILLING			
	Core	n/a	
	Non-Core	4389m	418319, 418632
SAMPLING AND ANALYSES			
	Proximate 704.93m		418319, 418632
	Ultimate		
	Petrographic 510.34m		418319, 418632
	Vitrinite reflectance 510.34m		418319, 418632
	Coking		
	Wash tests		
PROSPECTING (scale/area)		n/a	
PREPARATORY/PHYSICAL			
Line/grid (km)		n/a	
Trench (number, metres)		n/a	
Bulk sample(s)		n/a	

North Coal Limited
2019 Michel Coal Exploration Program

Assessment Report

24th March 2020

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CLAIM NAME(S) (on which work was done): Coal Licence numbers: 418318, 418319, 418632

COMMODITIES SOUGHT: Coal

MINING DIVISION: FORT STEELE

NTS / BCGS: 82G/10E

LATITUDE: 49.553° N

LONGITUDE: -114.731° W (at centre of work at Tent Mountain)

UTM Zone: 11 EASTING: 664144 NORTHING: 5491991

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MAILING ADDRESS: 652F Sparwood Dr, Sparwood, BC V0B 2G0, Canada

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Assessment Report #1040: 2017 Tent Mountain Exploration Program

Assessment Report #1052: Assessment Report 2018 Michel Coal Exploration Program

Section 7 and Appendix 4 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

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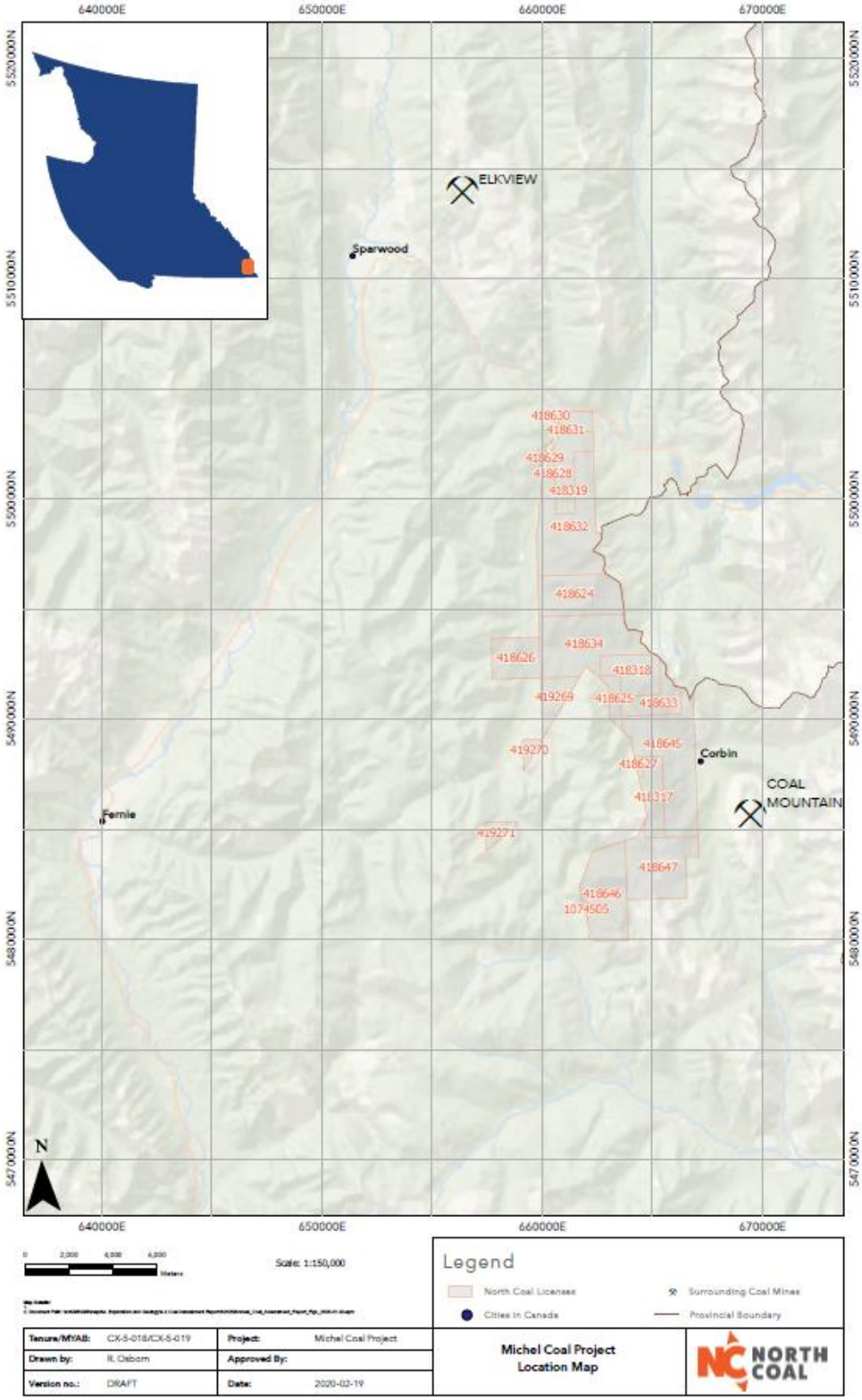
1. Introduction and Summary

The purpose of this report is to describe exploration work conducted on the Michel Coal Project during 2019. The Michel Coal Project is solely owned by North Coal Limited and is located in the Michel Creek area near Sparwood, BC (Figure 1.0). The 2019 program saw 4389m of exploration reverse circulation drilling completed at Loop Ridge, with a small amount of reclamation, approximately 1 hectare, carried out on the Tent Mountain property.

The Michel Coal Project is currently comprised of 21 coal licenses (Figure 1.0, Table 1.0) owned by North Coal Limited on which three principal coal deposits have been extensively explored and modelled, Loop Ridge, Tent Mountain and Michel Head.

Figure 1.0 Location and License Plan



2. Property and Location

2.1 Ownership

Coal exploration and development rights are solely owned by North Coal Limited. Surface rights are held by CanWel Timber Limited as part of their free-hold Tent Mountain Block (PID 023-431-482, Lot 2 District Lot 4590, Kootenay District Plan 229332).

On the 11th of October of 2019 ownership of the land in which North Coal has been carrying out exploration changed hands from CanWel Timber Limited to the Corbin Road Land Corporation.

There are no oil and gas drilling activities on the property; however, the TransCanada Pipeline, which carries natural gas from wells in Alberta, runs through the Loop Ridge deposit from east to west. There are also two FortisBC branch pipelines, which supply the town of Sparwood and local operating mines, following the right-of-way along Michel Creek.

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

2.2 Property

The approximate centre point of the Michel Coal Project is at Tent Mountain at 5492062N and 664325E (UTM NAD 83 Zone 11). With the approximate centre point of the Loop Ridge property at 5501000N and 661500E (UTM NAD 83 Zone 11). The Michel Coal Project coal licenses, held by North Coal, are summarized in Table 1.0.

All 2019 exploration and reclamation work was performed on coal licenses 418318, 418319, and 418632. A location plan above shows information on the licenses (Figure 1.0).

Table 1.0 Michel Coal Project Coal Licenses

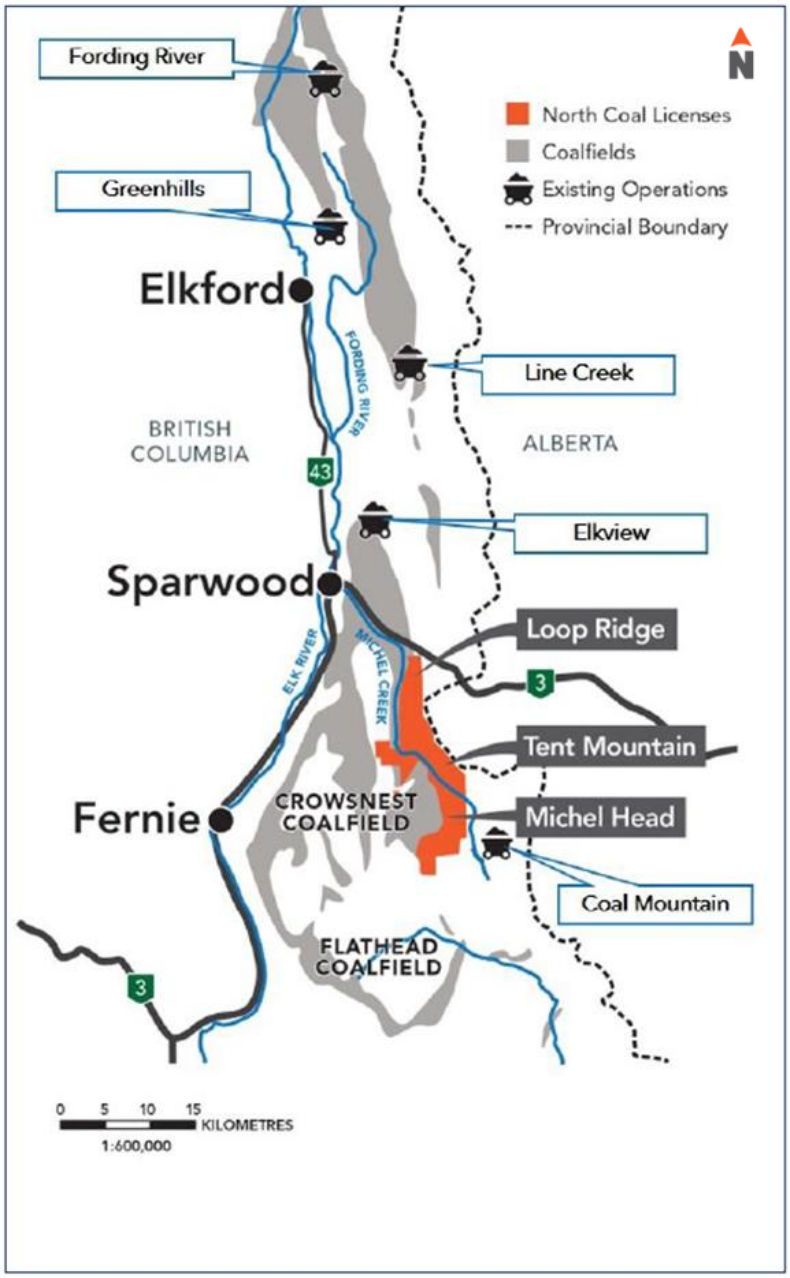
Tenure Number	Commodity	Tenure Type	Issue Date	Good to Date	Owner Name	Area (Ha)
418317	Coal	Coal License	2013-03-25	2020-04-30	NORTH COAL LIMITED	341.87
418318	Coal	Coal License	2013-03-25	2020-04-30	NORTH COAL LIMITED	418
418319	Coal	Coal License	2013-03-25	2020-04-30	NORTH COAL LIMITED	409
418624	Coal	Coal License	2014-07-21	2020-04-30	NORTH COAL LIMITED	690
418625	Coal	Coal License	2014-07-21	2020-04-30	NORTH COAL LIMITED	132.64
418626	Coal	Coal License	2014-07-21	2020-04-30	NORTH COAL LIMITED	409
418627	Coal	Coal License	2014-07-21	2020-04-30	NORTH COAL LIMITED	26.91
418628	Coal	Coal License	2014-07-21	2020-04-30	NORTH COAL LIMITED	25
418629	Coal	Coal License	2014-07-21	2020-04-30	NORTH COAL LIMITED	1
418630	Coal	Coal License	2014-07-21	2020-04-30	NORTH COAL LIMITED	4
418631	Coal	Coal License	2014-07-21	2020-04-30	NORTH COAL LIMITED	151
418632	Coal	Coal License	2014-07-21	2020-04-30	NORTH COAL LIMITED	1160
418633	Coal	Coal License	2014-07-21	2020-04-30	NORTH COAL LIMITED	326
418634	Coal	Coal License	2014-07-21	2020-04-30	NORTH COAL LIMITED	1048.94
418645	Coal	Coal License	2014-09-19	2020-09-19	NORTH COAL LIMITED	1178.64
418646	Coal	Coal License	2014-09-19	2020-09-19	NORTH COAL LIMITED	787.53
418647	Coal	Coal License	2014-09-19	2020-09-19	NORTH COAL LIMITED	826.26
419269	Coal	Coal License	2018-11-19	2020-11-19	NORTH COAL LIMITED	246.78
419270	Coal	Coal License	2018-11-19	2020-11-19	NORTH COAL LIMITED	64.21
419271	Coal	Coal License	2018-11-19	2020-11-19	NORTH COAL LIMITED	104.19
1074505	Coal	Coal License	2020-02-10	2021-02-10	NORTH COAL LIMITED	85
					Total	**8435.97**

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. Elevations range from ~1,400m along Michel Creek to a height of 2200m at Michel Head. The elevations of Loop Ridge range from ~1400m at Michel Creek to 1680m at the Upper Loop area of the property.

The property lies adjacent to the rail track infrastructure of the Canadian Pacific Railway (CP) running through the Michel Creek Valley which connects the area to the major export bulk commodity ports on the west coast of Canada. A paved landing strip is available north of Sparwood for light aircraft.

The Michel Coal Project is located between two open pit coal mines owned and operated by Teck Coal Limited (Figure 2.0). The Teck Elkview Operation is located approximately 20km north from the center of Tent Mountain and produces metallurgical coal. Teck's Coal Mountain Operation is approximately 9km south from the centre of Tent Mountain and produced both thermal and pulverised coal injection coal (PCI) until operations were ceased in 2018. Loop Ridge property is accessed from Corbin Road approximately 4km from the Highway 3 turnoff. A network of logging and exploration trails on the property is utilized for drilling access.

Figure 2.0 Elk Valley Coal Mines (Source: North Coal Limited)



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. However. temperatures at the higher altitudes of the properties would be slightly lower. The average amount of precipitation in Sparwood is 603mm with an equivalent of 248cm of that falling as snow. The Michel Coal Project property generally has dense forest cover of pine and spruce; however, a significant portion of the property has been logged extensively recently.

2.3 Location and Access

The Michel 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. Access to the project area is through a network of logging and exploration trails which branch off from Corbin Road over a distance of 20km.

3. Property History

The Loop Ridge property was geologically mapped by Crow's Nest Pass Coal Company in 1964, with seven trenches, two adits, and at least 12 coal exploration drill holes were completed. In 1969, the Crow's Nest Pass Coal Company mined the McGillivray Pit at the north end of the Loop Ridge property, with approximately 60,000t to 100,000t of coal mined and trucked to the Michel preparation plant. A historic resource estimate by Crow's Nest Pass Coal Co. Limited indicated a total of 153.6Mt within 460m of surface with a further 13.3Mt between the depths of 460m and 760m.

In 1993, McGillivray Mining Limited completed an agreement with Tembec to mine the old McGillivray Pit site. Environmental studies were completed, and a bulk sample permit was obtained in 1995, at which time approximately 20,000t of coal was mined and trucked to the Elkview plant near Sparwood. In 1996, Fording Coal purchased McGillivray's property and rights from Tembec and mined a further 30,000t. The second bulk sample was trucked to the Coal Mountain mine, approximately 19km to the southeast. Fording Coal completed two drill programs on the entire Loop Ridge property, one in 1998 (18 holes) and another in 1999 (18 holes).

The Tent Mountain and Michel Head deposits were originally owned and mapped by Kaiser Resources in the 1960's and 1970's. No information is known about any exploration drilling carried out at that time.

The Loop Ridge coal licenses were acquired by CanAus Coal Limited in 2013. From 2013 to 2017, CanAus Coal Limited carried out several exploration drill programs on each of the deposits, with a total of 49,197m of drilling completed in 325 holes. Core drilling and RC chip sampling formed a component of these campaigns and the samples obtained were processed and analyzed to determine coal quality. The results of these analyses indicated favourable hard coking-coal qualities. The data gathered from each of these campaigns was used to develop geological and resource models of each deposit. The models provide details sufficient for NI 43-101-compliant resource estimates and provide the geological basis for engineering at the Pre-Feasibility Study (PFS) level. Resource estimates were calculated based on the recommended data point spacing as outlined in GSC Paper 88-21 (Hughes et al, 1989), for complex coal deposits.

In late 2017, CanAus Coal Limited changed its name to North Coal Limited. During the 2018 exploration program North Coal largely focused efforts on exploration drilling at Tent Mountain to

improve modelled resources, with 5042m of exploration reverse circulation drilling completed in 21 holes. In addition to the reverse circulation drilling, 438m of geotechnical core was drilled in 2 holes on Tent Mountain, as well as 555m, 158m, and 133m of geotechnical and hydrogeological reverse circulation drilling completed on Loop Ridge, Tent Mountain and Michel Head, respectively.

4. 2019 Exploration Work

4.1 Goals and Parameters

The 2019 exploration program focused exclusively on North Coal's Loop Ridge property. In total 15 reverse circulation (RC) holes were drilled, totaling 4389m. The main objectives of the 2019 exploration program on Loop Ridge are outlined below.

- To confirm and define the coal seam structure and interpretation
- Upgrade resources from inferred to measured and indicated.
- Obtain coal quality data of all seams.

In addition to the exploration work carried out on Loop Ridge in 2019, reclamation of two road spurs, and three drill pads took place on Tent Mountain.

4.2 Drilling

In 2019, a total of 4389m of drilling was completed in 15 holes on Loop Ridge, consisting entirely of exploration reverse circulation drilling. The exploration reverse circulation holes were drilled at appropriate spacing to collect sufficient structural, stratigraphic and coal quality data to support an update of the 2018 resource model and re-evaluate the Loop Ridge coal resource. The locations, depths and orientations of all 2019 drill holes are shown in Figure 3.0, and Table 2.0.

Good Earth Drilling Services Limited, from Rocky View County, Alberta, was the sole drilling contractor used during the 2019 program. All drilling was completed between July 2nd and August 22nd, 2019 using a Novamac Explotrac ET-642 (Rig 130) drill with an automated pipe loading system. A separate tracked Morooka unit was used with a mounted with a compressor, an auxiliary truck-mounted compressor was occasionally used for additional power. The cyclone used for sampling purposes was mounted on a separate two-wheeled unit.

Reverse circulation drilling was carried out in competent rock. All 2019 drill holes were cased with 7-inch welded-joint steel casing using an ODEX system. Casing was left in all holes. Casing was installed into competent bedrock at an average of 24.6m in depth. With the average thickness of overburden being around 16m, holes were cased when a good seal for drilling was successfully achieved after penetrating the first few metres of competent bedrock. Artesian-flowing holes were plugged and sealed according to Mines Act regulations and mineral exploration best practice.

Figure 3.0 Loop Ridge Drill Hole Location Map

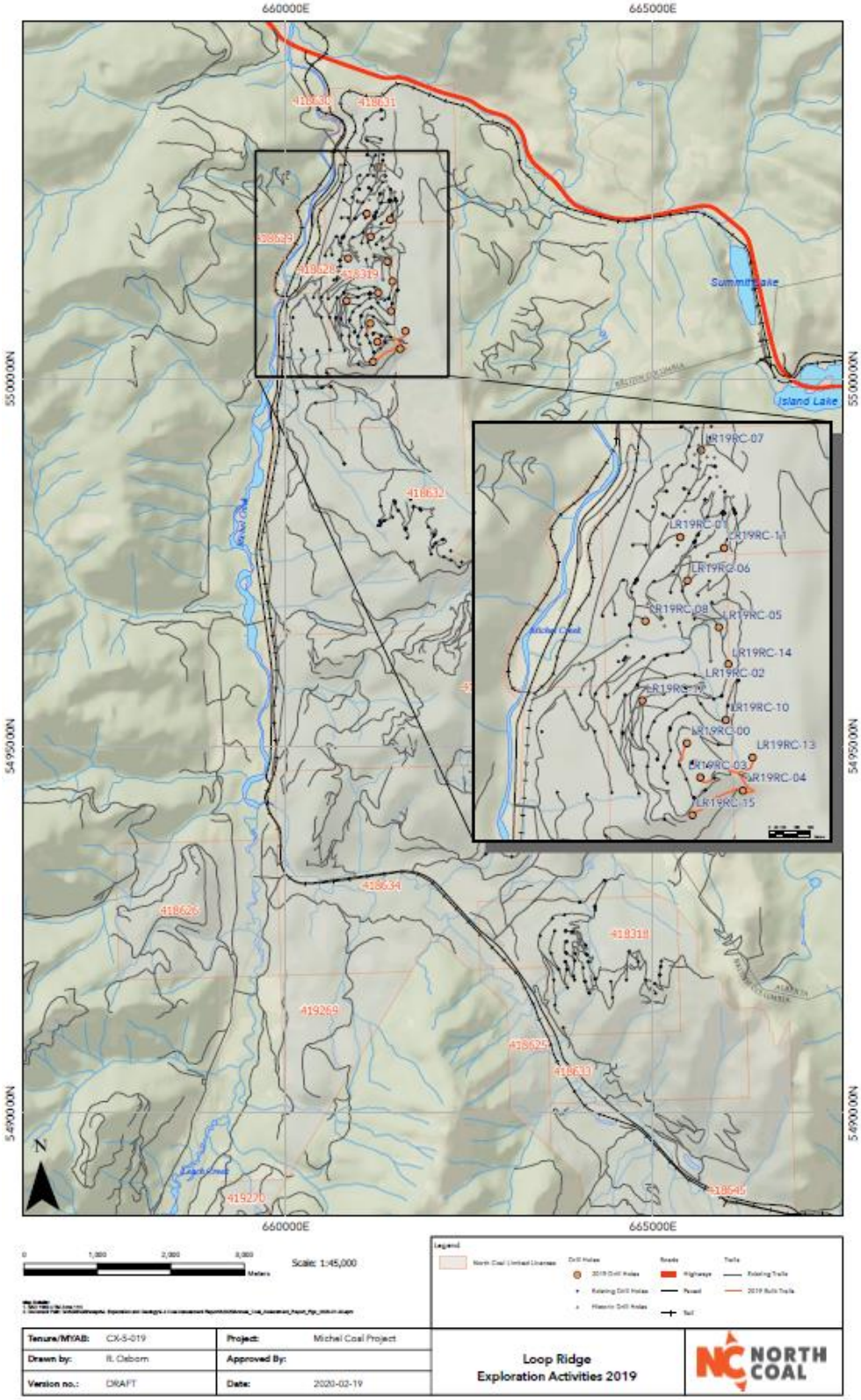


Table 2.0 Drill Hole Locations

								Survey Coordinates		
Location	**Hole ID**	**Hole Type**	**Hole Size (mm)**	**Date Completed**	**Azimuth**	**Dip**	**Depth (m)**	**Easting**	**Northing**	**Elevation (m)**
Loop Ridge	LR19RC-00	RC	127	2019-07-18	0	-90	504.5	661151.75	5500750.08	1614.46
Loop Ridge	LR19RC-01	RC	133	2019-07-08	0	-90	365.5	661104.40	5502245.07	1378.44
Loop Ridge	LR19RC-02	RC	133	2019-08-04	0	-90	342.25	661259.63	5501167.02	1481.15
Loop Ridge	LR19RC-03	RC	133	2019-08-01	0	-90	492	661249.30	5500501.27	1669.75
Loop Ridge	LR19RC-04	RC	133	2019-07-20	0	-90	132.8	661558.09	5500405.15	1595.78
Loop Ridge	LR19RC-05	RC	133	2019-07-26	0	-90	216.5	661384.09	5501591.86	1461.79
Loop Ridge	LR19RC-06	RC	133	2019-08-10	0	-90	415	661155.61	5501930.68	1439.94
Loop Ridge	LR19RC-07	RC	133	2019-07-05	0	-90	288	661254.29	5502876.91	1356.84
Loop Ridge	LR19RC-08	RC	133	2019-07-12	0	-90	160.07	660850.24	5501636.42	1359.74
Loop Ridge	LR19RC-10	RC	133	2019-07-28	0	-90	188.92	661434.89	5500918.35	1522.99
Loop Ridge	LR19RC-11	RC	133	2019-08-06	0	-90	177.45	661422.73	5502166.83	1460.51
Loop Ridge	LR19RC-13	RC	133	2019-07-21	0	-90	80	661629.28	5500645.56	1638.09
Loop Ridge	LR19RC-14	RC	133	2019-07-23	0	-90	161.6	661452.63	5501323.28	1492.14
Loop Ridge	LR19RC-15	RC	133	2019-08-23	0	-90	496.7	661190.90	5500228.00	1582.39
Loop Ridge	LR19RC-17	RC	133	2019-08-19	270	-70	366.5	660827.70	5501058.92	1463.19

4.3 Geophysical Logging

As per industry standard, all 2019 exploration drill holes were geophysically logged. Century Wireline Services, based in Red Deer, Alberta were the sole geophysical contractor used in 2019. The 2019 exploration year was the most involved geophysical logging program to date, with holes drilled in areas of known difficulty, where previous open hole logs had failed, and with deeper total depths.

All holes were logged within hours of the completion of the drill hole. Some holes were blocked within or near the coal seams, when this occurred an open-ended single-wall drill string was lowered through the area of blockage to allow the geophysical tool to pass through and achieve a successful open-hole log. Occasionally, this process had to be repeated several times per hole to obtain a full log. For some particularly difficult holes multiple attempts of lowering the open-ended drill string did not work, without a bit on the end the pipe was unable to advance. On these rare occasions an open ended drill bit was attached to the drill string, however the internal diameter of the bit was too narrow for a compensated density to pass through so in these cases the slim density was run open hole to obtain open hole data without caliper.

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

All 2019 geophysical logs are included in Appendix 5.

4.4 Surveying

All drill collars were surveyed with base-station corrected differential GPS equipment to centimetre-level accuracy at the end of the exploration season in August 2019. Align Surveys of Fernie, BC, were contracted to perform a field survey on site of all new trails constructed and all drill holes drilled in 2019.

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 drill hole 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 drill hole 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 drill hole surface locations is 0.20m in horizontal and 0.26m in vertical.

The GPS locations of drill holes are shown in Table 2.0.

4.5 Sampling and Analysis

4.5.1 Reverse Circulation Sampling

Coal seams were intersected in all 15 exploration reverse circulation holes. Coal samples were directly sampled by a geologist in 1m increments from the drill rig. All samples were assigned a unique sample identification number and sealed in a single 23”x40” white woven poly rice bag. Samples had their weight recorded before shipping by the on-site geologist. Samples were then shipped to Birtley Labs in Calgary, Alberta for coal quality analysis as soon as practicable after hole completion. A total of 1646 individual samples were collected from the 15 RC holes (Table 3.0).

Table 3.0 Reverse Circulation Sample Summary

Hole ID	Number of Samples (Plies)
LR19RC-00	189
LR19RC-01	137
LR19RC-02	128
LR19RC-03	185
LR19RC-04	50
LR19RC-05	81
LR19RC-06	158
LR19RC-07	108
LR19RC-08	60
LR19RC-10	71
LR19RC-11	67
LR19RC-13	29
LR19RC-14	61
LR19RC-15	186
LR19RC-17	137
Total	**1646**

Birtley then carried out analysis according to the instructions specified by North Coal (details in Appendix 1). Upon arrival to the lab each metre sample was analysed for its ash content to allow for reconciliation with geophysical logs. Once results for the ash content of sample was received by North Coal the samples were composited into single seam samples and analyzed for proximate, FSI and ash chemistry.

Once analyses were completed at Birtley sub-samples were sent to Pearson Petrography in Victoria, British Columbia for petrographic analysis. Analytical results from Birtley Labs and Pearson Petrography are shown in Appendix 4.

4.6 Geological Mapping

No additional geological mapping was performed in 2019.

5. Deactivation and Reclamation

North Coal's aim when undertaking any kind of earthworks or exploration is to keep disturbance to the smallest practical area. Natural soil profiles are maintained whenever possible to enhance natural regeneration and to control erosion-causing runoff. In addition, all exploration areas are left in a clean, safe and stable condition at the end of each field season. North Coal has developed and follows a best practices management plan which describes the methods used in the design, construction, deactivation and reclamation of exploration access trails and drill sites.

Primary access in 2019 was via existing exploration trails and new excavated trails, as described in Section 2.3. During trail and pad construction, woody debris was buried or stacked to the greatest extent possible, and shoulder areas were contoured to a naturalistic form. Drainage is controlled by ditches and culverts, with some supplemental cross-ditching.

5.1 Deactivation

Once exploration had been completed on Loop ridge deactivation began. This included filling in all drill sumps, cleaning out any ditch systems and installing cross-ditches and water bars on exploration trails. This was done to ensure that all disturbed areas remain hydrologically and geotechnically stable, as required by the BC Mines Act. Deactivation was carried out solely by a Cat 320 excavator, for a period of approximately two weeks.

5.2 Reclamation

Under the BC Mines Act (1996a) and Health, Safety and Reclamation Code for Mines in British Columbia, 1996 (HSRC), mining operations such as North Coal are required to carry out a program of environmental protection and reclamation to return, where practical, land, watercourses, and cultural heritage resources to a safe and environmentally sound state and to an acceptable end land use upon termination of exploration and/or mining.

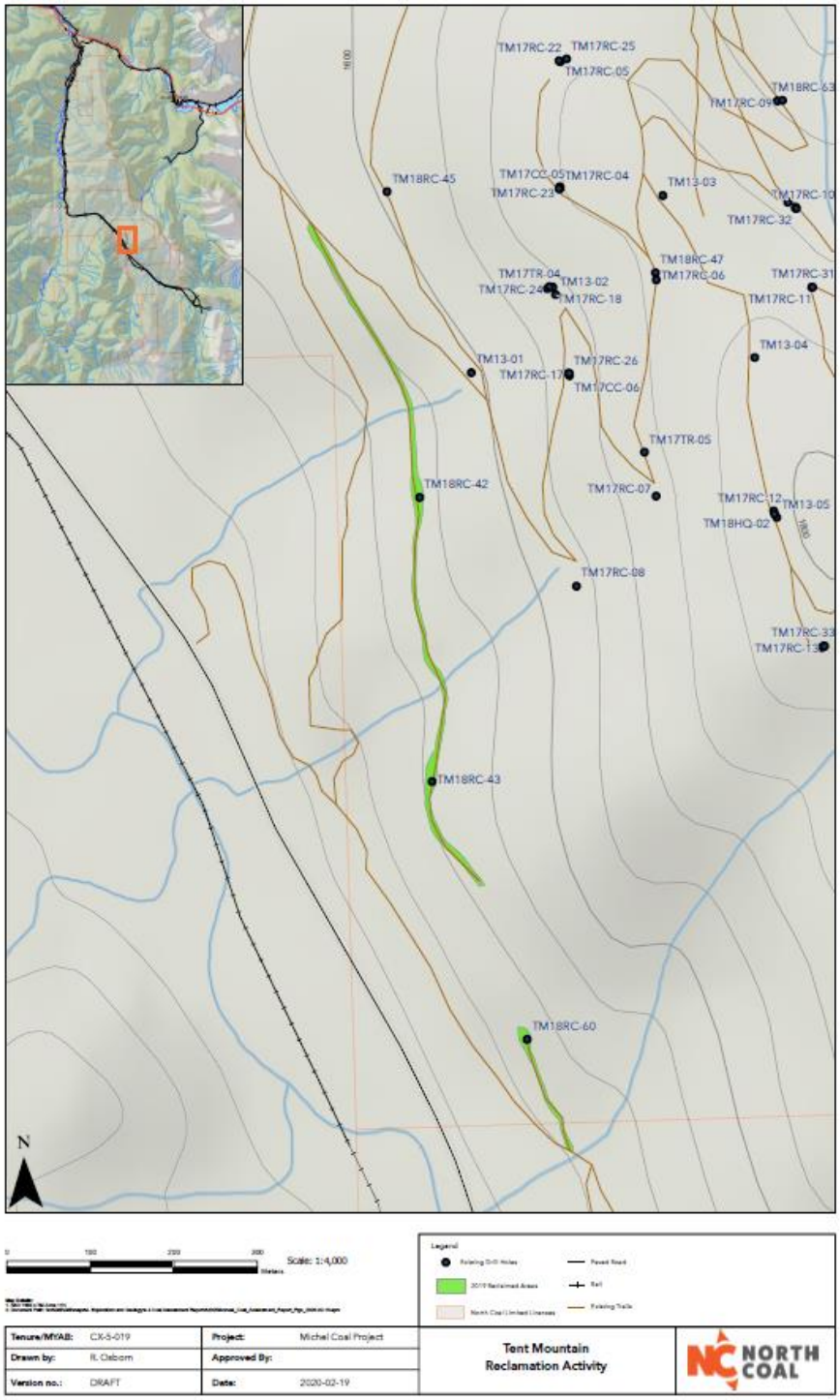
In addition to the deactivation of all drill sites and trails on Loop Ridge a program of full reclamation occurred on Tent Mountain (Figure 4.0). A single 320 Cat excavator was used to reclaim approximately 1 hectare of trail and drill pads over a period of 18 days, some minor delays were encountered due to significant rainfall and snowfall events.

The method of reclamation consisted of:

1. Steel casing was pulled from drill holes on drill pads.
2. A large tree was then placed into the drill hole before the area was reclaimed. This hole marker was visible and marked accordingly once the pad has been reclaimed.
3. Surrounding fill material was used to recontour the area to as close to its undisturbed state as possible. This recontouring took water drainage and water courses into account.
4. When possible, soil and overburden was placed on top of the recontoured area.

5. Surrounding dead vegetation/slash was then placed on top of the recontoured landscape to aid in re-vegetation efforts.

Figure 4.0 Showing Areas of Reclamation on Tent Mountain



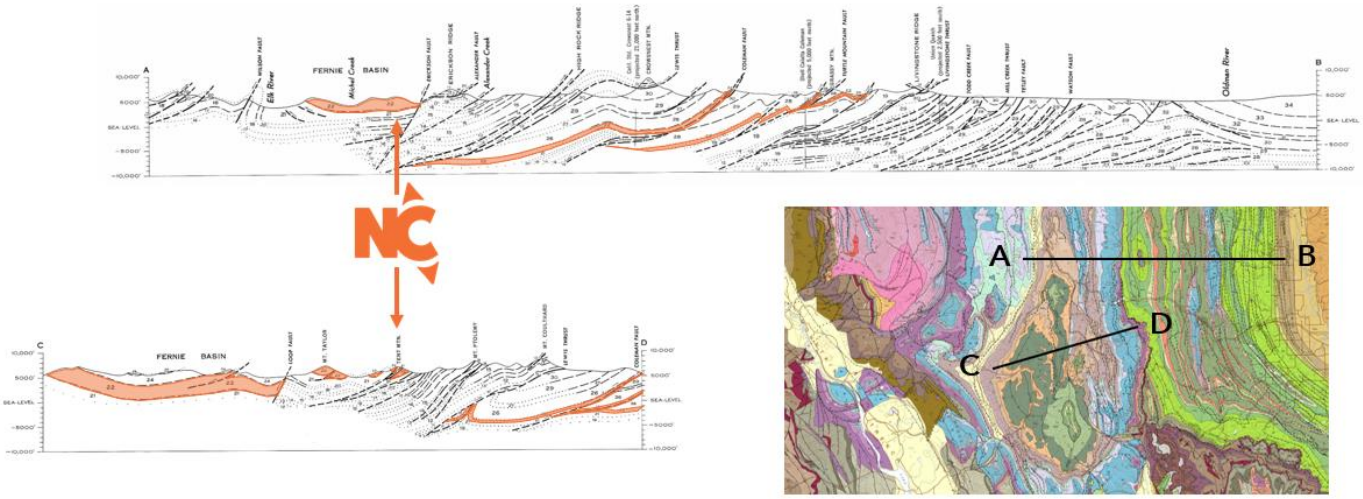
6. Geology

6.1 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.

Figure 5.0 Cross-section Showing Regional Structure (Geological Survey of Canada, 1962; Price, 2013).



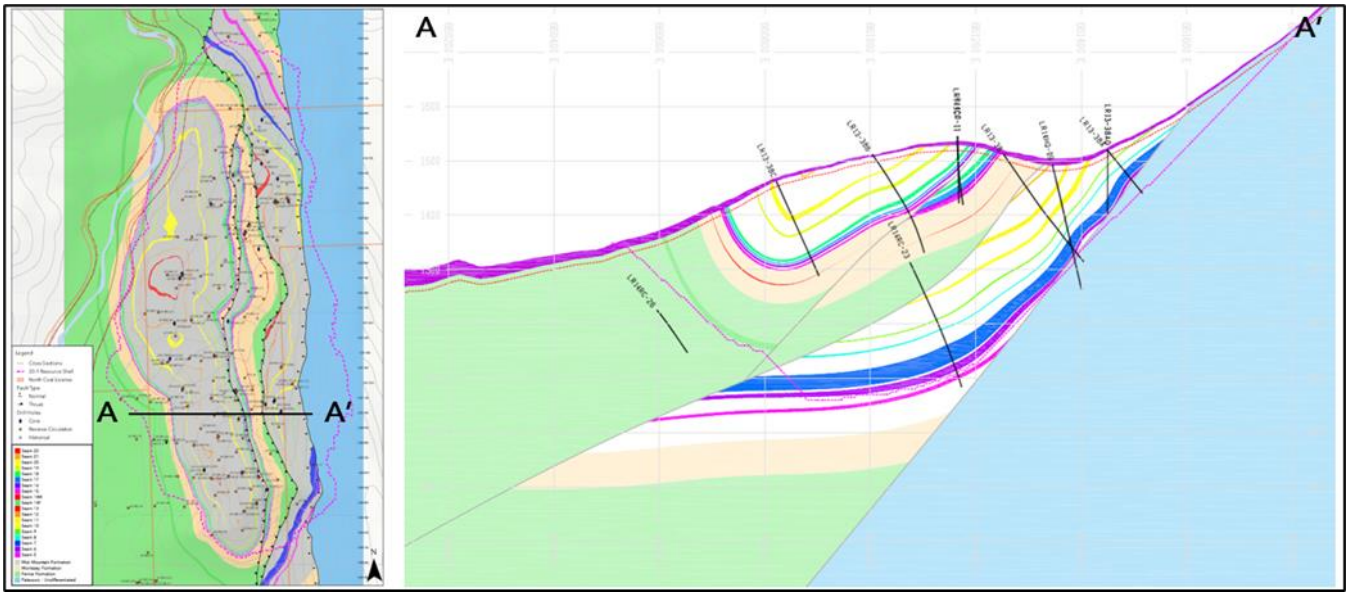
6.2 Property Structure

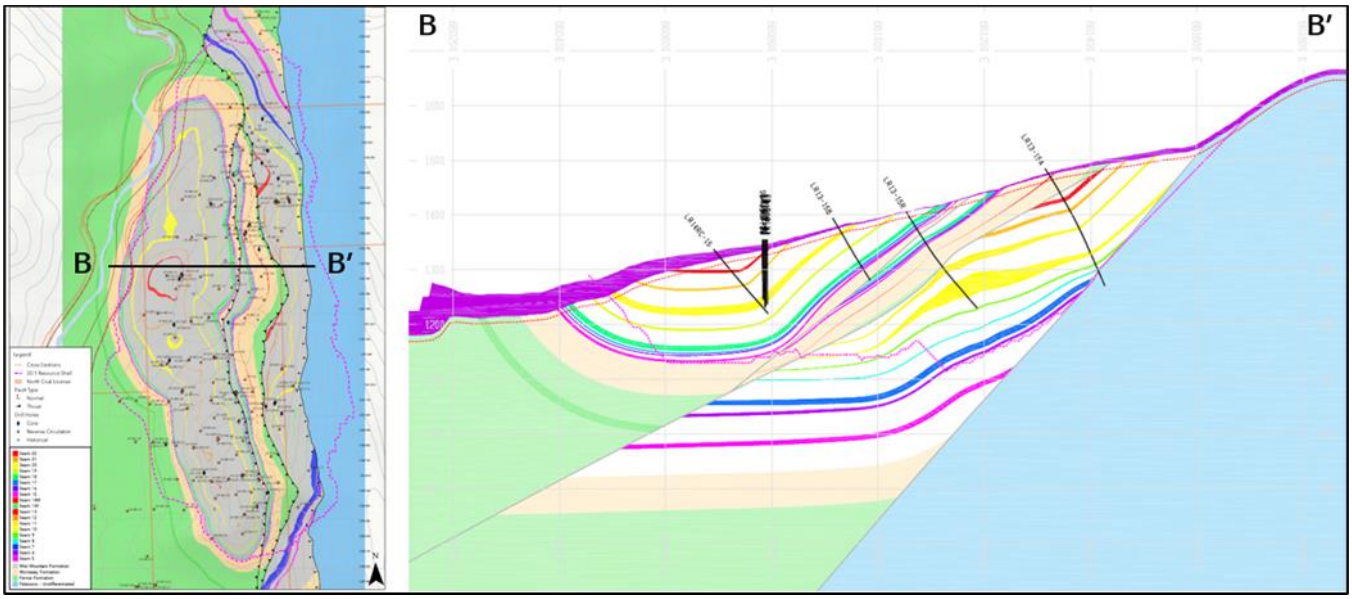
Drilling on the Loop Ridge property has occurred principally in the coal-bearing section the Mist Mountain Formation. Coal seams of the Mist Mountain Formation are interpreted as two sequences juxtaposed by a major thrust fault: The Upper Loop sequence, a moderate to tight syncline structure; and the Lower Loop sequence, a shallow west-dipping dip slope or gentle syncline.

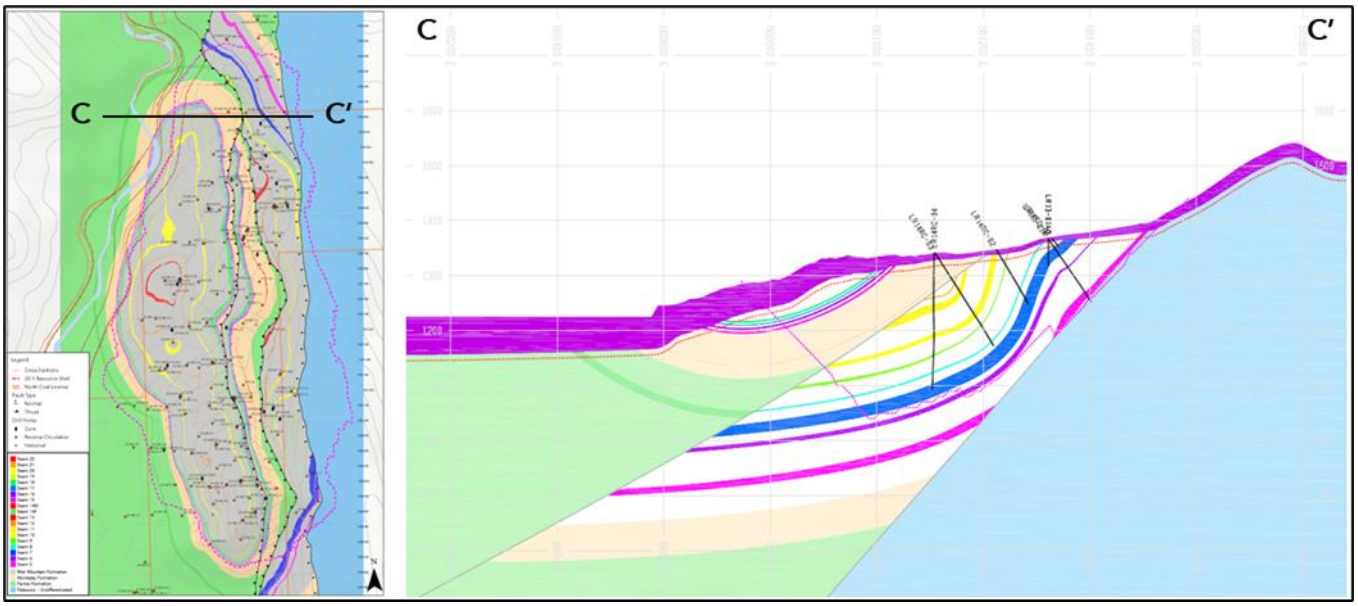
The limestone represents the footwall side of the major, regional, Erickson normal fault which juxtaposes Mississippian limestone and the Kootenay Group. The fault has a minimum, west side down, displacement of 1,200m.

Cross-sections demonstrating the structure of various areas of Loop Ridge taken from North Coal geological model LR18-3 are shown below in Figure 6.0.

Figure 6.0 Cross-sections and Location Map (LR18-3 model)




B
B′
B
B′

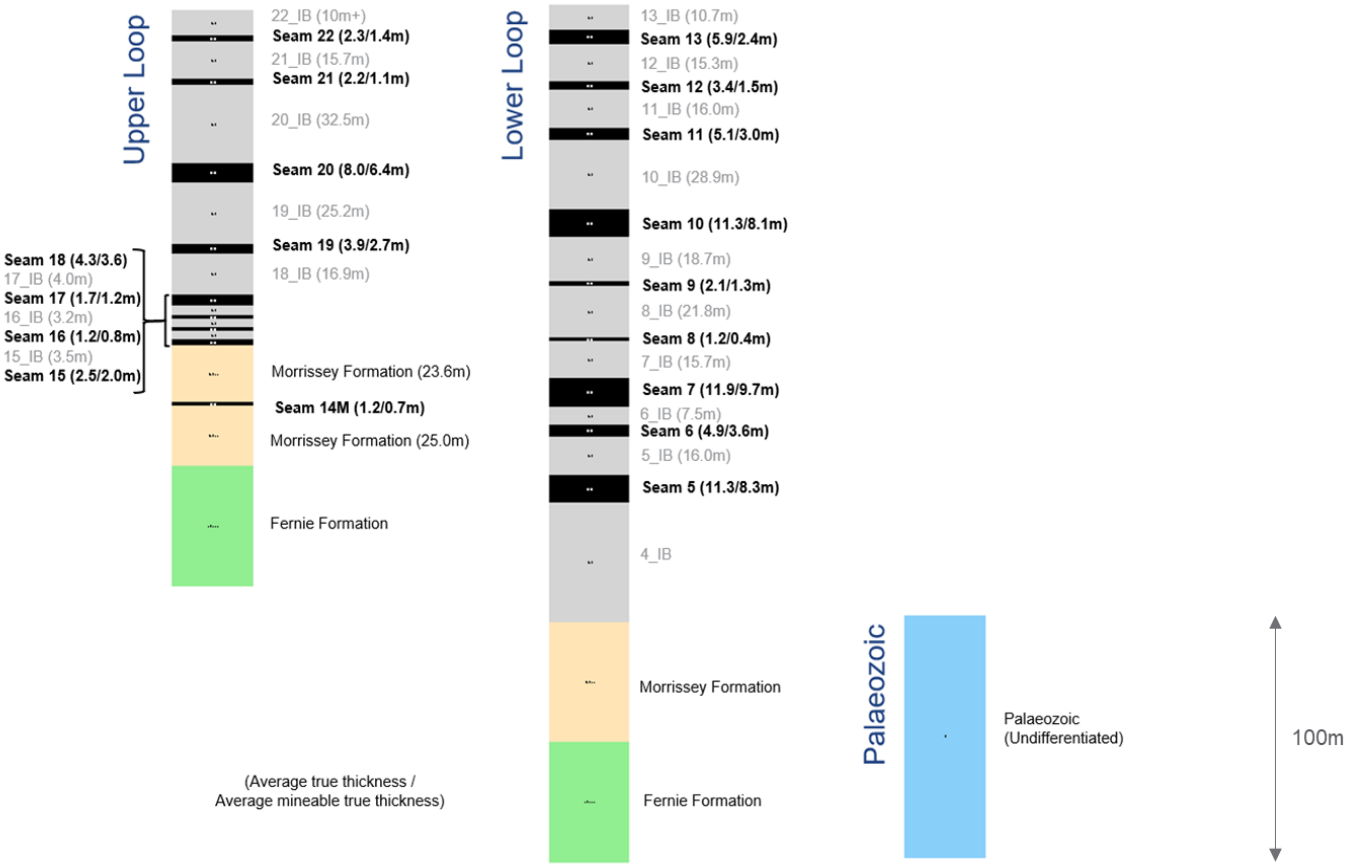

C
C′
C
C′

6.3 Property Stratigraphy

The stratigraphy of Loop Ridge is typical of the Jurassic-Cretaceous Kootenay Group. 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).

Knowledge and definition of the stratigraphic column is required prior to any correlation and structural work. A typical stratigraphic section of Loop Ridge has been created from the 2018 Loop Ridge model, LR18-3 (Figure 7.0).

Figure 7.0 Typical Stratigraphic Section (LR18-3 model)



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

The Kootenay Group

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, the upper Elk Formation, Mist Mountain Formation, Morrissey Formation (Figure 8.0). The Kootenay Group is underlain by marine shales of the Fernie Formation. The Fernie Formation is observed at the base of sequence at Loop Ridge.

Elk Formation

The Elk Formation, which gradationally overlies the Mist Mountain Formation, is the uppermost formation in the Kootenay Group. It is a relatively resistant nonmarine unit dominated by coarse clastic rocks and in the Crowsnest coalfield it varies in thickness from a maximum of 482 m on Sparwood Ridge (Gibson, 1985) to 155 m near McLatchie Creek (Grieve and Ollerenshaw, 1989).

Mist Mountain Formation

The primary coal-bearing formation is the Mist Mountain Formation which overlies the sandstones of the Morrissey formation. Mist Mountain Formation in the Crowsnest coalfield consists of an interbedded sequence of siltstone, sandstone, mudstone, shale, conglomerate, and coal. Coal seams are typically interbedded with many rock partings.

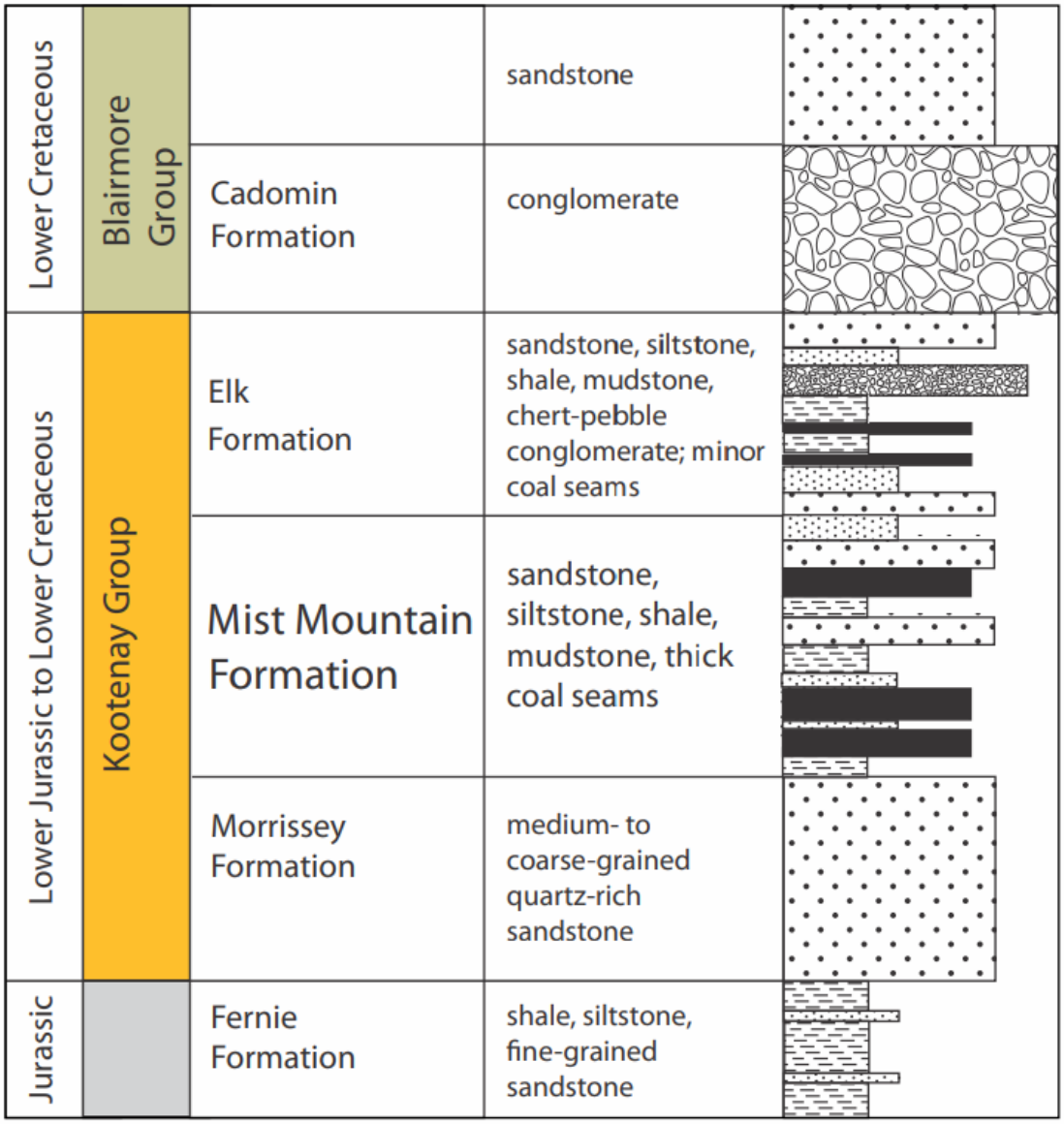
Morrissey Formation

The Morrissey Formation consists of two highly resistant sandstone members, the Moose Mountain member and the Weary Ridge member. Thin interbeds of carbonaceous coal and shale occur occasionally within the Moose Mountain Member, with rare thin coal seams such as the 14M seam (LR18-3 model) found on Loop Ridge.

Fernie Formation

The Kootenay group is underlain by marine shales of the Fernie Formation. The marine Fernie Formation is Jurassic in age and is the oldest stratigraphic unit in the block (Grieve and Kilby, 1989) The Fernie formation is observed at the base of sequence at Loop Ridge.

Figure 8.0 Regional Stratigraphic Section (Ministry of Energy, Mines and Petroleum Resources, 2019).



8. Expenditures

Exploration expenditure for work during the period July through December 2019 was $1,383,718.84, with all major expense items are shown in Table 7.0.

Table 7.0 Michel Coal Project Expenditures

Budget Items	Contractor	Total $
Drilling	Good Earth Drilling	$669,477.01
Technical Services	Century Wireline Services	$91,386.91
	Silenus Resource Mgt	$3,134.25
	Align Surveys	$1,113.00
Analytical	Birtley Coal & Mineral Testing	$132,834.11
	Pearson & Associates	$14,400
Heavy Equipment	TruCut Logging	$124,413.22
	R and L Ventures Limited.	$1,039.50
Miscellaneous	Manitoulin Transport	$4,774.00
	Site Sundries	$12,517.28
	Budget – rental trucks and fuel	$9,016.00
	Lidar and ortho imagery	$52,500.00
Safety	TruCut Logging	$76,675
Licenses and Permits	MEMPR	$82,890.56
Personnel	Salaries and accommodations	$107,548.00
Total		**$1,383,718.84**

A more detailed statement of costs is attached as Appendix 6.0.

9. Conclusions

The 2019 exploration program on Loop Ridge was successful in gathering sufficient structural, stratigraphic and coal quality data to update the 2018 resource model, an updated geological and resource model remains in progress at the time of this report.

The 2019 Loop Ridge exploration program accomplished the goal of gathering comprehensive data to determine the extent and depth of the coal seams, with the main objectives outlined at the start of the program being met such as upgrading resources from inferred to measured and indicated. As well as successfully obtaining coal quality data of all seams, with results confirming the hard-coking coal properties of the coal within the Loop Ridge deposit.

In addition to the exploration work carried out on Loop Ridge in 2019, reclamation of two road spurs, and 3 drill pads took place on Tent Mountain.

10. References

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Thompson, D., North Coal Limited, 2018. Assessment Report #1040: 2017 Tent Mountain Exploration Program.

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11. Statement of Qualifications

I, Abby Cousins of 13 Mt Proctor Ave, Fernie, BC, V0B1M3, Canada, do hereby certify that:

1. I am Senior Exploration Geologist for North Coal Limited.
2. I graduated in 2005 with a Bachelor of Science in Geology, and a Postgraduate Diploma in Geology in 2010 from Victoria University of Wellington, New Zealand.
3. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (Member ID #50604).
4. I have worked as a geologist for a total of 9 years since my graduation from university.
5. My past experience includes work on various active underground mines and exploration projects in the Bowen Basin, Queensland Australia. My roles ranged from an exploration drill rig geologist to site supervising geologist during that time. I have worked in the coal industry within the Elk Valley since 2015 for North Coal, with my primary focus being on exploration.
6. I am responsible for the entire Assessment Report titled "2019 Michel Coal Exploration Program" dated the 24th of March 2020.
7. I was on site for the entirety of the 2019 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 day 24th March 2020.

North Coal Limited.

Appendices

Appendix 1.0 Analytical and Processing Guidelines
Appendix 2.0 Sample Summary
Appendix 3.0 Drill Logs – (in .ZIP file attached)
Appendix 4.0 Sample Analytical Results and Certificates – (in .ZIP file attached)
Appendix 5.0 Geophysical Logs – (in .ZIP file attached)
Appendix 6.0 Statement of Costs (in .ZIP file attached)

Appendix 1.0 Analytical and Processing Guidelines

2018_RC_Crush Flowsheet

Receiving

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

Weigh each sample in bag, as received, and record weights on shipping manifest. Return completed manifest to client.

All samples must remain in cold storage when not undergoing processing.

RC samples will be delivered with top size between -2mm and -12.5mm, and moisture 15-30%.

Raw Ply Samples

Inspect sample. If top size as received exceeds -6.3mm, crush entire sample to -6.3mm.

Homogenize and lay entire sample out on tray. Report Mass (wet) for entire sample.

Use strip method to collect ~2kg representative split. Excess material may be discarded.

Air dry ~2kg representative split.

Report Moisture (ad) and Ash (ad) for each ply.

Compositing

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

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

Head Raw Analysis (1/8 of composite mass)

Undertake a raw coal analysis on a representative portion of the raw composite l

Analyse for Proximates, Total Sulphur, FSI, Relative Density, and MAA.

Sizing (7/8 of composite mass)

Screen at 0.120mm and report sizing

Washability

Float sink +0.120mm fraction at one density 1.50. Report masses.

Report Moisture (ad) and Ash (ad) on sinks.

Reserve all materials for future work.

Clean Coal Composite/Quick Float

Assign new Sample ID to Quick Float product as indicated by client

Analyse for the following: Proximate Analysis, Total Sulphur, FSI, MAA including Pcoal, Alkali Light Transmittance.

Petrography

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

Appendix 2.0 Sample Summary

Legend: QPCO: Quality ply coal.

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-00	33139	33139-33145	195389	42344	57.18	58.14	QPCO
LR19RC-00	33140	33139-33145	195389	42344	58.14	59.11	QPCO
LR19RC-00	33141	33139-33145	195389	42344	59.11	60.08	QPCO
LR19RC-00	33142	33139-33145	195389	42344	60.08	61.05	QPCO
LR19RC-00	33143	33139-33145	195389	42344	61.05	62.02	QPCO
LR19RC-00	33144	33139-33145	195389	42344	62.02	62.98	QPCO
LR19RC-00	33145	33139-33145	195389	42344	62.98	63.95	QPCO
LR19RC-00	33146				63.95	64.96	QPCO
LR19RC-00	33147	33147-33152	195390	42345	92.13	93.17	QPCO
LR19RC-00	33148	33147-33152	195390	42345	93.17	94.21	QPCO
LR19RC-00	33149	33147-33152	195390	42345	94.21	95.25	QPCO
LR19RC-00	33150	33147-33152	195390	42345	95.25	96.29	QPCO
LR19RC-00	33151	33147-33152	195390	42345	96.29	97.33	QPCO
LR19RC-00	33152	33147-33152	195390	42345	97.33	98.37	QPCO
LR19RC-00	33153				98.37	99.27	QPCO
LR19RC-00	33154	33154-33155	195391	42346	105.55	106.58	QPCO
LR19RC-00	33155	33154-33155	195391	42346	106.58	107.61	QPCO
LR19RC-00	33156	33156-33158	195392	42347	111.17	112.28	QPCO
LR19RC-00	33157	33156-33158	195392	42347	112.28	113.4	QPCO
LR19RC-00	33158	33156-33158	195392	42347	113.4	114.51	QPCO
LR19RC-00	33159	33159-33162	195393	42348	158.59	160.08	QPCO
LR19RC-00	33160	33159-33162	195393	42348	160.08	161.08	QPCO
LR19RC-00	33161	33159-33162	195393	42348	161.08	162.07	QPCO
LR19RC-00	33162	33159-33162	195393	42348	162.07	163.07	QPCO
LR19RC-00	33163				163.07	164.02	QPCO
LR19RC-00	33164	33164-33169	195394	42349	168.32	168.86	QPCO
LR19RC-00	33165	33164-33169	195394	42349	168.86	169.93	QPCO
LR19RC-00	33166	33164-33169	195394	42349	169.93	171.01	QPCO
LR19RC-00	33167	33164-33169	195394	42349	171.01	172.08	QPCO
LR19RC-00	33168	33164-33169	195394	42349	172.08	173.16	QPCO
LR19RC-00	33169	33164-33169	195394	42349	173.16	174.23	QPCO
LR19RC-00	33170				174.23	175.11	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-00	33171				184.33	185.21	QPCO
LR19RC-00	33172				185.21	186.31	QPCO
LR19RC-00	33173				191.81	192.83	QPCO
LR19RC-00	33174				192.83	193.82	QPCO
LR19RC-00	33175				391.75	392.95	QPCO
LR19RC-00	33176				392.95	394.15	QPCO
LR19RC-00	33177				394.15	395.5	QPCO
LR19RC-00	33178				414.51	415.51	QPCO
LR19RC-00	33179				415.51	416.5	QPCO
LR19RC-00	33180				416.5	417.5	QPCO
LR19RC-00	33181				417.5	418.5	QPCO
LR19RC-00	33182				418.5	419.5	QPCO
LR19RC-00	33183				419.5	420.49	QPCO
LR19RC-00	33184				420.49	421.49	QPCO
LR19RC-00	33185				421.49	422.49	QPCO
LR19RC-00	33186				422.49	423.48	QPCO
LR19RC-00	33187				423.48	424.48	QPCO
LR19RC-00	33188				424.48	425.48	QPCO
LR19RC-00	33189				425.48	426.48	QPCO
LR19RC-00	33190				426.48	427.47	QPCO
LR19RC-00	33191				427.47	428.47	QPCO
LR19RC-00	33192				428.47	429.47	QPCO
LR19RC-00	33193	33193-33194	195395	42350	429.47	430.47	QPCO
LR19RC-00	33194	33193-33194	195395	42350	430.47	431.46	QPCO
LR19RC-00	33195				431.46	432.46	QPCO
LR19RC-00	33196				432.46	433.46	QPCO
LR19RC-00	33197				433.46	434.45	QPCO
LR19RC-00	33198				434.45	435.45	QPCO
LR19RC-00	33199				435.45	436.45	QPCO
LR19RC-00	33200				436.45	437.45	QPCO
LR19RC-00	33201				437.45	438.44	QPCO
LR19RC-00	33202				438.44	439.44	QPCO
LR19RC-00	33203	33203-33204	195396	42351	439.44	440.44	QPCO
LR19RC-00	33204	33203-33204	195396	42351	440.44	441.43	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-00	33205				441.43	442.43	QPCO
LR19RC-00	33206				442.43	443.43	QPCO
LR19RC-00	33207				443.43	444.43	QPCO
LR19RC-00	33208				444.43	445.42	QPCO
LR19RC-00	33209				445.42	446.42	QPCO
LR19RC-00	33210				446.42	447.42	QPCO
LR19RC-00	33211				447.42	448.41	QPCO
LR19RC-00	33212				448.41	449.41	QPCO
LR19RC-00	33213				449.41	450.41	QPCO
LR19RC-00	33214				450.41	451.41	QPCO
LR19RC-00	33215				451.41	452.4	QPCO
LR19RC-00	33216				452.4	453.4	QPCO
LR19RC-00	33217				453.4	454.4	QPCO
LR19RC-00	33218	33218-33220	195397	42352	454.4	455.39	QPCO
LR19RC-00	33219	33218-33220	195397	42352	455.39	456.39	QPCO
LR19RC-00	33220	33218-33220	195397	42352	456.39	457.39	QPCO
LR19RC-00	33221				457.39	458.39	QPCO
LR19RC-00	33222				458.39	459.38	QPCO
LR19RC-00	33223				459.38	460.38	QPCO
LR19RC-00	33224				460.38	461.38	QPCO
LR19RC-00	33225				461.38	462.38	QPCO
LR19RC-00	33226	33226-33228	195398	42353	462.38	463.37	QPCO
LR19RC-00	33227	33226-33228	195398	42353	463.37	464.37	QPCO
LR19RC-00	33228	33226-33228	195398	42353	464.37	465.37	QPCO
LR19RC-00	33229				465.37	466.36	QPCO
LR19RC-00	33230				466.36	467.36	QPCO
LR19RC-00	33231				467.36	468.36	QPCO
LR19RC-00	33232				468.36	469.36	QPCO
LR19RC-00	33233				469.36	470.35	QPCO
LR19RC-00	33234				470.35	471.35	QPCO
LR19RC-00	33235				471.35	472.32	QPCO
LR19RC-00	33236				472.32	473.29	QPCO
LR19RC-00	33237				473.29	474.26	QPCO
LR19RC-01	33047				38.79	39.73	QPCO
LR19RC-01	33048	33048-33052	195024	42145	39.73	40.67	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-01	33049	33048-33052	195024	42145	40.67	41.6	QPCO
LR19RC-01	33050	33048-33052	195024	42145	41.6	42.54	QPCO
LR19RC-01	33051	33048-33052	195024	42145	42.54	43.48	QPCO
LR19RC-01	33052	33048-33052	195024	42145	43.48	44.42	QPCO
LR19RC-01	33053				44.42	45.35	QPCO
LR19RC-01	33054	33054-33055	195025	42146	52.31	53.59	QPCO
LR19RC-01	33055	33054-33055	195025	42146	53.59	54.87	QPCO
LR19RC-01	33056	33056-33081	195026	42178	127.31	128.35	QPCO
LR19RC-01	33057	33056-33081	195026	42178	128.35	129.39	QPCO
LR19RC-01	33058	33056-33081	195026	42178	129.39	130.44	QPCO
LR19RC-01	33059	33056-33081	195026	42178	130.44	131.48	QPCO
LR19RC-01	33060	33056-33081	195026	42178	131.48	132.52	QPCO
LR19RC-01	33061	33056-33081	195026	42178	132.52	133.56	QPCO
LR19RC-01	33062	33056-33081	195026	42178	133.56	134.6	QPCO
LR19RC-01	33063	33056-33081	195026	42178	134.6	135.64	QPCO
LR19RC-01	33064	33056-33081	195026	42178	135.64	136.69	QPCO
LR19RC-01	33065	33056-33081	195026	42178	136.69	137.73	QPCO
LR19RC-01	33066	33056-33081	195026	42178	137.73	138.77	QPCO
LR19RC-01	33067	33056-33081	195026	42178	138.77	139.81	QPCO
LR19RC-01	33068	33056-33081	195026	42178	139.81	140.85	QPCO
LR19RC-01	33069	33056-33081	195026	42178	140.85	141.89	QPCO
LR19RC-01	33070	33056-33081	195026	42178	141.89	142.94	QPCO
LR19RC-01	33071	33056-33081	195026	42178	142.94	143.98	QPCO
LR19RC-01	33072	33056-33081	195026	42178	143.98	145.02	QPCO
LR19RC-01	33073				145.02	145.03	QPCO
LR19RC-01	33074				145.03	145.04	QPCO
LR19RC-01	33075	33056-33081	195026	42178	145.04	146.06	QPCO
LR19RC-01	33076	33056-33081	195026	42178	146.06	147.1	QPCO
LR19RC-01	33077	33056-33081	195026	42178	147.1	148.14	QPCO
LR19RC-01	33078	33056-33081	195026	42178	148.14	149.19	QPCO
LR19RC-01	33079	33056-33081	195026	42178	149.19	150.23	QPCO
LR19RC-01	33080	33056-33081	195026	42178	150.23	151.27	QPCO
LR19RC-01	33081	33056-33081	195026	42178	151.27	152.31	QPCO
LR19RC-01	33082				152.31	152.32	QPCO
LR19RC-01	33083				152.32	152.33	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-01	33084				162.97	163.45	QPCO
LR19RC-01	33085	33085-33093	195027	42147	163.45	164.4	QPCO
LR19RC-01	33086	33085-33093	195027	42147	164.4	165.35	QPCO
LR19RC-01	33087	33085-33093	195027	42147	165.35	166.31	QPCO
LR19RC-01	33088	33085-33093	195027	42147	166.31	167.26	QPCO
LR19RC-01	33089	33085-33093	195027	42147	167.26	168.22	QPCO
LR19RC-01	33090	33085-33093	195027	42147	168.22	169.17	QPCO
LR19RC-01	33091	33085-33093	195027	42147	169.17	170.12	QPCO
LR19RC-01	33092	33085-33093	195027	42147	170.12	171.08	QPCO
LR19RC-01	33093	33085-33093	195027	42147	171.08	172.03	QPCO
LR19RC-01	33094				172.03	172.9	QPCO
LR19RC-01	33095				172.9	173.77	QPCO
LR19RC-01	33096	33096-33111	195028	42179	178.26	179.28	QPCO
LR19RC-01	33097	33096-33111	195028	42179	179.28	180.29	QPCO
LR19RC-01	33098	33096-33111	195028	42179	180.29	181.3	QPCO
LR19RC-01	33099	33096-33111	195028	42179	181.3	182.31	QPCO
LR19RC-01	33100	33096-33111	195028	42179	182.31	183.33	QPCO
LR19RC-01	33101	33096-33111	195028	42179	183.33	184.34	QPCO
LR19RC-01	33102	33096-33111	195028	42179	184.34	185.35	QPCO
LR19RC-01	33103	33096-33111	195028	42179	185.35	186.37	QPCO
LR19RC-01	33104	33096-33111	195028	42179	186.37	187.38	QPCO
LR19RC-01	33105	33096-33111	195028	42179	187.38	188.39	QPCO
LR19RC-01	33106	33096-33111	195028	42179	188.39	189.41	QPCO
LR19RC-01	33107	33096-33111	195028	42179	189.41	190.42	QPCO
LR19RC-01	33108	33096-33111	195028	42179	190.42	191.43	QPCO
LR19RC-01	33109	33096-33111	195028	42179	191.43	192.44	QPCO
LR19RC-01	33110	33096-33111	195028	42179	192.44	193.46	QPCO
LR19RC-01	33111	33096-33111	195028	42179	193.46	194.47	QPCO
LR19RC-01	33112				194.47	195.47	QPCO
LR19RC-01	33113				234.33	235.18	QPCO
LR19RC-01	33114				235.18	236.02	QPCO
LR19RC-01	33115				236.02	236.87	QPCO
LR19RC-01	33116				282.81	283.61	QPCO
LR19RC-01	33117	33117-33126	195029	42180	324.65	325.61	QPCO
LR19RC-01	33118	33117-33126	195029	42180	325.61	326.58	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-01	33119	33117-33126	195029	42180	326.58	327.54	QPCO
LR19RC-01	33120	33117-33126	195029	42180	327.54	328.51	QPCO
LR19RC-01	33121	33117-33126	195029	42180	328.51	329.47	QPCO
LR19RC-01	33122	33117-33126	195029	42180	329.47	330.43	QPCO
LR19RC-01	33123	33117-33126	195029	42180	330.43	331.4	QPCO
LR19RC-01	33124	33117-33126	195029	42180	331.4	332.36	QPCO
LR19RC-01	33125	33117-33126	195029	42180	332.36	333.33	QPCO
LR19RC-01	33126	33117-33126	195029	42180	333.33	334.29	QPCO
LR19RC-01	33127				334.29	335.29	QPCO
LR19RC-01	33128				335.29	336.29	QPCO
LR19RC-01	33129	33129-33129	195030	42148	350.25	351.25	QPCO
LR19RC-01	33130				351.25	352.25	QPCO
LR19RC-02	33461	33461-33462	196369	42945	104.99	105.99	QPCO
LR19RC-02	33462	33461-33462	196369	42945	105.99	106.99	QPCO
LR19RC-02	33463				106.99	107.98	QPCO
LR19RC-02	33464	33464-33466	196370	42946	145.78	146.82	QPCO
LR19RC-02	33465	33464-33466	196370	42946	146.82	147.85	QPCO
LR19RC-02	33466	33464-33466	196370	42946	147.85	148.89	QPCO
LR19RC-02	33467				148.89	149.84	QPCO
LR19RC-02	33468				149.84	150.8	QPCO
LR19RC-02	33469				150.8	151.75	QPCO
LR19RC-02	33470				151.75	152.71	QPCO
LR19RC-02	33471	33471-33484	196371	42947	158.43	159.47	QPCO
LR19RC-02	33472	33471-33484	196371	42947	159.47	160.5	QPCO
LR19RC-02	33473	33471-33484	196371	42947	160.5	161.54	QPCO
LR19RC-02	33474	33471-33484	196371	42947	161.54	162.57	QPCO
LR19RC-02	33475	33471-33484	196371	42947	162.57	163.61	QPCO
LR19RC-02	33476	33471-33484	196371	42947	163.61	164.64	QPCO
LR19RC-02	33477	33471-33484	196371	42947	164.64	165.68	QPCO
LR19RC-02	33478	33471-33484	196371	42947	165.68	166.71	QPCO
LR19RC-02	33479	33471-33484	196371	42947	166.71	167.75	QPCO
LR19RC-02	33480	33471-33484	196371	42947	167.75	168.78	QPCO
LR19RC-02	33481	33471-33484	196371	42947	168.78	169.82	QPCO
LR19RC-02	33482	33471-33484	196371	42947	169.82	170.86	QPCO
LR19RC-02	33483	33471-33484	196371	42947	170.86	171.89	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-02	33484	33471-33484	196371	42947	171.89	172.93	QPCO
LR19RC-02	33485	33485-33495	196372	42948	172.93	173.96	QPCO
LR19RC-02	33486	33485-33495	196372	42948	173.96	175	QPCO
LR19RC-02	33487	33485-33495	196372	42948	175	176.03	QPCO
LR19RC-02	33488	33485-33495	196372	42948	176.03	177.07	QPCO
LR19RC-02	33489	33485-33495	196372	42948	177.07	178.1	QPCO
LR19RC-02	33490	33485-33495	196372	42948	178.1	179.14	QPCO
LR19RC-02	33491	33485-33495	196372	42948	179.14	180.17	QPCO
LR19RC-02	33492	33485-33495	196372	42948	180.17	181.21	QPCO
LR19RC-02	33493	33485-33495	196372	42948	181.21	182.24	QPCO
LR19RC-02	33494	33485-33495	196372	42948	182.24	183.28	QPCO
LR19RC-02	33495	33485-33495	196372	42948	183.28	184.32	QPCO
LR19RC-02	33496	33496-33505	196373	42949	184.32	185.35	QPCO
LR19RC-02	33497	33496-33505	196373	42949	185.35	186.39	QPCO
LR19RC-02	33498	33496-33505	196373	42949	186.39	187.42	QPCO
LR19RC-02	33499	33496-33505	196373	42949	187.42	188.46	QPCO
LR19RC-02	33500	33496-33505	196373	42949	188.46	189.49	QPCO
LR19RC-02	33501	33496-33505	196373	42949	189.49	190.53	QPCO
LR19RC-02	33502	33496-33505	196373	42949	190.53	191.56	QPCO
LR19RC-02	33503	33496-33505	196373	42949	191.56	192.6	QPCO
LR19RC-02	33504	33496-33505	196373	42949	192.6	193.63	QPCO
LR19RC-02	33505	33496-33505	196373	42949	193.63	194.67	QPCO
LR19RC-02	33506				194.67	195.68	QPCO
LR19RC-02	33507				312.96	313.94	QPCO
LR19RC-02	33508				313.94	314.92	QPCO
LR19RC-02	33509				314.92	315.9	QPCO
LR19RC-02	33510				315.9	316.89	QPCO
LR19RC-02	33511				316.89	317.87	QPCO
LR19RC-02	33512				317.87	318.85	QPCO
LR19RC-02	33513				318.85	319.86	QPCO
LR19RC-03	33376	33376-33381	196158	42637	52.76	53.8	QPCO
LR19RC-03	33377	33376-33381	196158	42637	53.8	54.84	QPCO
LR19RC-03	33378	33376-33381	196158	42637	54.84	55.88	QPCO
LR19RC-03	33379	33376-33381	196158	42637	55.88	56.91	QPCO
LR19RC-03	33380	33376-33381	196158	42637	56.91	57.95	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-03	33381	33376-33381	196158	42637	57.95	58.99	QPCO
LR19RC-03	33382				58.99	59.98	QPCO
LR19RC-03	33383				59.98	60.97	QPCO
LR19RC-03	33384	33384-33384	196159	42638	160.01	160.85	QPCO
LR19RC-03	33385				160.85	161.98	QPCO
LR19RC-03	33436				174.37	175.63	QPCO
LR19RC-03	33437	33437-33443	196166	42645	175.63	176.88	QPCO
LR19RC-03	33438	33437-33443	196166	42645	176.88	178.14	QPCO
LR19RC-03	33439	33437-33443	196166	42645	178.14	179.4	QPCO
LR19RC-03	33440	33437-33443	196166	42645	179.4	180.66	QPCO
LR19RC-03	33441	33437-33443	196166	42645	180.66	181.91	QPCO
LR19RC-03	33442	33437-33443	196166	42645	181.91	183.17	QPCO
LR19RC-03	33443	33437-33443	196166	42645	183.17	184.43	QPCO
LR19RC-03	33444				184.43	185.13	QPCO
LR19RC-03	33386	33386-33387	196160	42639	190.01	190.71	QPCO
LR19RC-03	33387	33386-33387	196160	42639	190.71	191.41	QPCO
LR19RC-03	33388				191.41	192.31	QPCO
LR19RC-03	33389	33389-33402	196161	42640	195.01	196.03	QPCO
LR19RC-03	33390	33389-33402	196161	42640	196.03	197.06	QPCO
LR19RC-03	33391	33389-33402	196161	42640	197.06	198.08	QPCO
LR19RC-03	33392	33389-33402	196161	42640	198.08	199.1	QPCO
LR19RC-03	33393	33389-33402	196161	42640	199.1	200.12	QPCO
LR19RC-03	33394	33389-33402	196161	42640	200.12	201.15	QPCO
LR19RC-03	33395	33389-33402	196161	42640	201.15	202.17	QPCO
LR19RC-03	33396	33389-33402	196161	42640	202.17	203.19	QPCO
LR19RC-03	33397	33389-33402	196161	42640	203.19	204.22	QPCO
LR19RC-03	33398	33389-33402	196161	42640	204.22	205.24	QPCO
LR19RC-03	33399	33389-33402	196161	42640	205.24	206.26	QPCO
LR19RC-03	33400	33389-33402	196161	42640	206.26	207.28	QPCO
LR19RC-03	33401	33389-33402	196161	42640	207.28	208.31	QPCO
LR19RC-03	33402	33389-33402	196161	42640	208.31	209.33	QPCO
LR19RC-03	33403				231.33	232.14	QPCO
LR19RC-03	33404				232.14	232.95	QPCO
LR19RC-03	33405	33405-33408	196162	42641	240.03	241.1	QPCO
LR19RC-03	33406	33405-33408	196162	42641	241.1	242.18	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-03	33407	33405-33408	196162	42641	242.18	243.26	QPCO
LR19RC-03	33408	33405-33408	196162	42641	243.26	244.33	QPCO
LR19RC-03	33409				244.33	245.33	QPCO
LR19RC-03	33445				424.08	424.81	QPCO
LR19RC-03	33410	33410-33417	196163	42642	424.81	425.82	QPCO
LR19RC-03	33411	33410-33417	196163	42642	425.82	426.84	QPCO
LR19RC-03	33412	33410-33417	196163	42642	426.84	427.85	QPCO
LR19RC-03	33413	33410-33417	196163	42642	427.85	428.86	QPCO
LR19RC-03	33414	33410-33417	196163	42642	428.86	429.87	QPCO
LR19RC-03	33415	33410-33417	196163	42642	429.87	430.88	QPCO
LR19RC-03	33416	33410-33417	196163	42642	430.88	431.9	QPCO
LR19RC-03	33417	33410-33417	196163	42642	431.9	432.91	QPCO
LR19RC-03	33418				432.91	433.99	QPCO
LR19RC-03	33419				433.99	435.08	QPCO
LR19RC-03	33446				439.41	440.49	QPCO
LR19RC-03	33447	33447-33449	196167	42646	440.49	441.41	QPCO
LR19RC-03	33448	33447-33449	196167	42646	441.41	442.33	QPCO
LR19RC-03	33449	33447-33449	196167	42646	442.33	443.26	QPCO
LR19RC-03	33450				443.26	444.18	QPCO
LR19RC-03	33451				444.18	445.1	QPCO
LR19RC-03	33420				446.02	446.94	QPCO
LR19RC-03	33421				446.94	447.86	QPCO
LR19RC-03	33422	33422-33425	196164	42643	447.86	448.79	QPCO
LR19RC-03	33423	33422-33425	196164	42643	448.79	449.71	QPCO
LR19RC-03	33424	33422-33425	196164	42643	449.71	450.63	QPCO
LR19RC-03	33425	33422-33425	196164	42643	450.63	451.55	QPCO
LR19RC-03	33426				451.55	452.57	QPCO
LR19RC-03	33427				452.57	453.59	QPCO
LR19RC-03	33428	33428-33430	196165	42644	454.61	455.63	QPCO
LR19RC-03	33429	33428-33430	196165	42644	455.63	456.65	QPCO
LR19RC-03	33430	33428-33430	196165	42644	456.65	457.67	QPCO
LR19RC-03	33431				457.67	458.69	QPCO
LR19RC-03	33432				458.69	459.71	QPCO
LR19RC-03	33433				459.71	460.73	QPCO
LR19RC-03	33434				460.73	461.75	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-03	33435				461.75	462.77	QPCO
LR19RC-03	33452				462.77	463.79	QPCO
LR19RC-03	33453				463.79	464.81	QPCO
LR19RC-03	33454				464.81	465.83	QPCO
LR19RC-03	33455				465.83	466.85	QPCO
LR19RC-03	33456				466.85	467.87	QPCO
LR19RC-03	33457				467.87	468.89	QPCO
LR19RC-03	33458	33458-33458	196168	42647	468.89	469.91	QPCO
LR19RC-03	33459				469.91	470.93	QPCO
LR19RC-03	33460				470.93	471.93	QPCO
LR19RC-04	33238				110.77	111.77	QPCO
LR19RC-04	33239				111.77	112.77	QPCO
LR19RC-05	33305	33305-33311	195676	42579	113.11	113.64	QPCO
LR19RC-05	33306	33305-33311	195676	42579	113.64	114.71	QPCO
LR19RC-05	33307	33305-33311	195676	42579	114.71	115.77	QPCO
LR19RC-05	33308	33305-33311	195676	42579	115.77	116.84	QPCO
LR19RC-05	33309	33305-33311	195676	42579	116.84	117.9	QPCO
LR19RC-05	33310	33305-33311	195676	42579	117.9	118.97	QPCO
LR19RC-05	33311	33305-33311	195676	42579	118.97	120.03	QPCO
LR19RC-05	33312				120.03	121.2	QPCO
LR19RC-05	33313				124.52	125.51	QPCO
LR19RC-05	33314	33314-33326	195677	42580	125.51	126.5	QPCO
LR19RC-05	33315	33314-33326	195677	42580	126.5	127.49	QPCO
LR19RC-05	33316	33314-33326	195677	42580	127.49	128.48	QPCO
LR19RC-05	33317	33314-33326	195677	42580	128.48	129.46	QPCO
LR19RC-05	33318	33314-33326	195677	42580	129.46	130.45	QPCO
LR19RC-05	33319	33314-33326	195677	42580	130.45	131.44	QPCO
LR19RC-05	33320	33314-33326	195677	42580	131.44	132.43	QPCO
LR19RC-05	33321	33314-33326	195677	42580	132.43	133.42	QPCO
LR19RC-05	33322	33314-33326	195677	42580	133.42	134.41	QPCO
LR19RC-05	33323	33314-33326	195677	42580	134.41	135.4	QPCO
LR19RC-05	33324	33314-33326	195677	42580	135.4	136.39	QPCO
LR19RC-05	33325	33314-33326	195677	42580	136.39	137.38	QPCO
LR19RC-05	33326	33314-33326	195677	42580	137.38	138.37	QPCO
LR19RC-05	33327	33327-33331	195678	42581	138.37	139.35	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-05	33328	33327-33331	195678	42581	139.35	140.34	QPCO
LR19RC-05	33329	33327-33331	195678	42581	140.34	141.33	QPCO
LR19RC-05	33330	33327-33331	195678	42581	141.33	142.32	QPCO
LR19RC-05	33331	33327-33331	195678	42581	142.32	143.31	QPCO
LR19RC-05	33332				143.31	144.29	QPCO
LR19RC-05	33333				144.29	145.26	QPCO
LR19RC-05	33334	33334-33335	195679	42582	183.35	184.54	QPCO
LR19RC-05	33335	33334-33335	195679	42582	184.54	185.72	QPCO
LR19RC-05	33336				185.72	186.91	QPCO
LR19RC-05	33337	33337-33337	195680	42583	192.27	193.29	QPCO
LR19RC-05	33338				193.29	194.31	QPCO
LR19RC-06	33538	33538-33541	197054	43225	35.63	36.76	QPCO
LR19RC-06	33539	33538-33541	197054	43225	36.76	37.89	QPCO
LR19RC-06	33540	33538-33541	197054	43225	37.89	39.02	QPCO
LR19RC-06	33541	33538-33541	197054	43225	39.02	40.15	QPCO
LR19RC-06	33542				40.15	41.15	QPCO
LR19RC-06	33543				104.15	105.04	QPCO
LR19RC-06	33544	33544-33555	197055	43226	123.25	124.27	QPCO
LR19RC-06	33545	33544-33555	197055	43226	124.27	125.29	QPCO
LR19RC-06	33546	33544-33555	197055	43226	125.29	126.31	QPCO
LR19RC-06	33547	33544-33555	197055	43226	126.31	127.33	QPCO
LR19RC-06	33548	33544-33555	197055	43226	127.33	128.35	QPCO
LR19RC-06	33549	33544-33555	197055	43226	128.35	129.37	QPCO
LR19RC-06	33550	33544-33555	197055	43226	129.37	130.39	QPCO
LR19RC-06	33551	33544-33555	197055	43226	130.39	131.41	QPCO
LR19RC-06	33552	33544-33555	197055	43226	131.41	132.43	QPCO
LR19RC-06	33553	33544-33555	197055	43226	132.43	133.45	QPCO
LR19RC-06	33554	33544-33555	197055	43226	133.45	134.47	QPCO
LR19RC-06	33555	33544-33555	197055	43226	134.47	135.49	QPCO
LR19RC-06	33556				135.49	136.38	QPCO
LR19RC-06	33557				136.38	137.28	QPCO
LR19RC-06	33558	33558-33570	197056	43227	139.07	140.11	QPCO
LR19RC-06	33559	33558-33570	197056	43227	140.11	141.14	QPCO
LR19RC-06	33560	33558-33570	197056	43227	141.14	142.18	QPCO
LR19RC-06	33561	33558-33570	197056	43227	142.18	143.22	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-06	33562	33558-33570	197056	43227	143.22	144.25	QPCO
LR19RC-06	33563	33558-33570	197056	43227	144.25	145.29	QPCO
LR19RC-06	33564	33558-33570	197056	43227	145.29	146.33	QPCO
LR19RC-06	33565	33558-33570	197056	43227	146.33	147.36	QPCO
LR19RC-06	33566	33558-33570	197056	43227	147.36	148.4	QPCO
LR19RC-06	33567	33558-33570	197056	43227	148.4	149.44	QPCO
LR19RC-06	33568	33558-33570	197056	43227	149.44	150.47	QPCO
LR19RC-06	33569	33558-33570	197056	43227	150.47	151.51	QPCO
LR19RC-06	33570	33558-33570	197056	43227	151.51	152.55	QPCO
LR19RC-06	33571	33571-33577	197057	43228	156.69	157.73	QPCO
LR19RC-06	33572	33571-33577	197057	43228	157.73	158.77	QPCO
LR19RC-06	33573	33571-33577	197057	43228	158.77	159.8	QPCO
LR19RC-06	33574	33571-33577	197057	43228	159.8	160.84	QPCO
LR19RC-06	33575	33571-33577	197057	43228	160.84	161.88	QPCO
LR19RC-06	33576	33571-33577	197057	43228	161.88	162.91	QPCO
LR19RC-06	33577	33571-33577	197057	43228	162.91	163.95	QPCO
LR19RC-06	33578	33578-33580	197058	43229	163.95	164.99	QPCO
LR19RC-06	33579	33578-33580	197058	43229	164.99	166.02	QPCO
LR19RC-06	33580	33578-33580	197058	43229	166.02	167.06	QPCO
LR19RC-06	33581	33581-33591	197059	43230	167.06	168.1	QPCO
LR19RC-06	33582	33581-33591	197059	43230	168.1	169.13	QPCO
LR19RC-06	33583	33581-33591	197059	43230	169.13	170.17	QPCO
LR19RC-06	33584	33581-33591	197059	43230	170.17	171.21	QPCO
LR19RC-06	33585	33581-33591	197059	43230	171.21	172.24	QPCO
LR19RC-06	33586	33581-33591	197059	43230	172.24	173.28	QPCO
LR19RC-06	33587	33581-33591	197059	43230	173.28	174.32	QPCO
LR19RC-06	33588	33581-33591	197059	43230	174.32	175.35	QPCO
LR19RC-06	33589	33581-33591	197059	43230	175.35	176.39	QPCO
LR19RC-06	33590	33581-33591	197059	43230	176.39	177.43	QPCO
LR19RC-06	33591	33581-33591	197059	43230	177.43	178.46	QPCO
LR19RC-06	33592	33592-33607	197060	43231	178.46	179.5	QPCO
LR19RC-06	33593	33592-33607	197060	43231	179.5	180.54	QPCO
LR19RC-06	33594	33592-33607	197060	43231	180.54	181.57	QPCO
LR19RC-06	33595	33592-33607	197060	43231	181.57	182.61	QPCO
LR19RC-06	33596	33592-33607	197060	43231	182.61	183.65	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-06	33597	33592-33607	197060	43231	183.65	184.68	QPCO
LR19RC-06	33598	33592-33607	197060	43231	184.68	185.72	QPCO
LR19RC-06	33599	33592-33607	197060	43231	185.72	186.76	QPCO
LR19RC-06	33600	33592-33607	197060	43231	186.76	187.79	QPCO
LR19RC-06	33601	33592-33607	197060	43231	187.79	188.83	QPCO
LR19RC-06	33602	33592-33607	197060	43231	188.83	189.87	QPCO
LR19RC-06	33603	33592-33607	197060	43231	189.87	190.9	QPCO
LR19RC-06	33604	33592-33607	197060	43231	190.9	191.94	QPCO
LR19RC-06	33605	33592-33607	197060	43231	191.94	192.98	QPCO
LR19RC-06	33606	33592-33607	197060	43231	192.98	194.01	QPCO
LR19RC-06	33607	33592-33607	197060	43231	194.01	195.05	QPCO
LR19RC-06	33608				195.05	195.99	QPCO
LR19RC-06	33609				195.99	196.94	QPCO
LR19RC-06	33610				196.94	197.88	QPCO
LR19RC-06	33611	33611-33611	197061	43232	238.51	239.41	QPCO
LR19RC-06	33612				239.41	240.42	QPCO
LR19RC-06	33613				313.94	314.95	QPCO
LR19RC-06	33614				314.95	315.96	QPCO
LR19RC-06	33615	33615-33626	197062	43233	378.56	379.6	QPCO
LR19RC-06	33616	33615-33626	197062	43233	379.6	380.64	QPCO
LR19RC-06	33617	33615-33626	197062	43233	380.64	381.68	QPCO
LR19RC-06	33618	33615-33626	197062	43233	381.68	382.72	QPCO
LR19RC-06	33619	33615-33626	197062	43233	382.72	383.76	QPCO
LR19RC-06	33620	33615-33626	197062	43233	383.76	384.8	QPCO
LR19RC-06	33621	33615-33626	197062	43233	384.8	385.84	QPCO
LR19RC-06	33622	33615-33626	197062	43233	385.84	386.87	QPCO
LR19RC-06	33623	33615-33626	197062	43233	386.87	387.91	QPCO
LR19RC-06	33624	33615-33626	197062	43233	387.91	388.95	QPCO
LR19RC-06	33625	33615-33626	197062	43233	388.95	389.99	QPCO
LR19RC-06	33626	33615-33626	197062	43233	389.99	391.03	QPCO
LR19RC-06	33627				391.03	391.99	QPCO
LR19RC-06	33628				391.99	392.95	QPCO
LR19RC-07	33001				56.47	57.49	QPCO
LR19RC-07	33002	33002-33010	195033	42174	57.49	58.52	QPCO
LR19RC-07	33003	33002-33010	195033	42174	58.52	59.54	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-07	33004	33002-33010	195033	42174	59.54	60.56	QPCO
LR19RC-07	33005	33002-33010	195033	42174	60.56	61.59	QPCO
LR19RC-07	33006	33002-33010	195033	42174	61.59	62.61	QPCO
LR19RC-07	33007	33002-33010	195033	42174	62.61	63.64	QPCO
LR19RC-07	33008	33002-33010	195033	42174	63.64	64.66	QPCO
LR19RC-07	33009	33002-33010	195033	42174	64.66	65.68	QPCO
LR19RC-07	33010	33002-33010	195033	42174	65.68	66.71	QPCO
LR19RC-07	33011	33011-33027	195034	42175	66.71	67.73	QPCO
LR19RC-07	33012	33011-33027	195034	42175	67.73	68.75	QPCO
LR19RC-07	33013	33011-33027	195034	42175	68.75	69.78	QPCO
LR19RC-07	33014	33011-33027	195034	42175	69.78	70.8	QPCO
LR19RC-07	33015	33011-33027	195034	42175	70.8	71.82	QPCO
LR19RC-07	33016	33011-33027	195034	42175	71.82	72.85	QPCO
LR19RC-07	33017	33011-33027	195034	42175	72.85	73.87	QPCO
LR19RC-07	33018	33011-33027	195034	42175	73.87	74.89	QPCO
LR19RC-07	33019	33011-33027	195034	42175	74.89	75.92	QPCO
LR19RC-07	33020	33011-33027	195034	42175	75.92	76.94	QPCO
LR19RC-07	33021	33011-33027	195034	42175	76.94	77.97	QPCO
LR19RC-07	33022	33011-33027	195034	42175	77.97	78.99	QPCO
LR19RC-07	33023	33011-33027	195034	42175	78.99	80.01	QPCO
LR19RC-07	33024	33011-33027	195034	42175	80.01	81.04	QPCO
LR19RC-07	33025	33011-33027	195034	42175	81.04	82.06	QPCO
LR19RC-07	33026	33011-33027	195034	42175	82.06	83.08	QPCO
LR19RC-07	33027	33011-33027	195034	42175	83.08	84.11	QPCO
LR19RC-07	33028	33028-33039	195035	42176	84.11	85.13	QPCO
LR19RC-07	33029	33028-33039	195035	42176	85.13	86.15	QPCO
LR19RC-07	33030	33028-33039	195035	42176	86.15	87.18	QPCO
LR19RC-07	33031	33028-33039	195035	42176	87.18	88.2	QPCO
LR19RC-07	33032	33028-33039	195035	42176	88.2	89.22	QPCO
LR19RC-07	33033	33028-33039	195035	42176	89.22	90.25	QPCO
LR19RC-07	33034	33028-33039	195035	42176	90.25	91.27	QPCO
LR19RC-07	33035	33028-33039	195035	42176	91.27	92.3	QPCO
LR19RC-07	33036	33028-33039	195035	42176	92.3	93.32	QPCO
LR19RC-07	33037	33028-33039	195035	42176	93.32	94.34	QPCO
LR19RC-07	33038	33028-33039	195035	42176	94.34	95.37	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-07	33039	33028-33039	195035	42176	95.37	96.39	QPCO
LR19RC-07	33040				96.39	97.39	QPCO
LR19RC-07	33041				97.39	98.39	QPCO
LR19RC-07	33042				263.02	263.96	QPCO
LR19RC-07	33043	33043-33046	195036	42177	263.96	264.89	QPCO
LR19RC-07	33044	33043-33046	195036	42177	264.89	265.82	QPCO
LR19RC-07	33045	33043-33046	195036	42177	265.82	266.76	QPCO
LR19RC-07	33046	33043-33046	195036	42177	266.76	267.69	QPCO
LR19RC-08	33131	33131-33134	195031	42149	81.45	82.66	QPCO
LR19RC-08	33132	33131-33134	195031	42149	82.66	83.88	QPCO
LR19RC-08	33133	33131-33134	195031	42149	83.88	85.1	QPCO
LR19RC-08	33134	33131-33134	195031	42149	85.1	86.31	QPCO
LR19RC-08	33135				86.31	87.24	QPCO
LR19RC-08	33136	33136-33137	195032	42150	101.15	102.15	QPCO
LR19RC-08	33137	33136-33137	195032	42150	102.15	103.15	QPCO
LR19RC-08	33138				103.15	104.14	QPCO
LR19RC-10	33339				108.83	109.86	QPCO
LR19RC-10	33340	33340-33344	195681	42584	109.86	110.89	QPCO
LR19RC-10	33341	33340-33344	195681	42584	110.89	111.92	QPCO
LR19RC-10	33342	33340-33344	195681	42584	111.92	112.96	QPCO
LR19RC-10	33343	33340-33344	195681	42584	112.96	113.99	QPCO
LR19RC-10	33344	33340-33344	195681	42584	113.99	115.02	QPCO
LR19RC-10	33345	33345-33354	195682	42585	115.02	116.05	QPCO
LR19RC-10	33346	33345-33354	195682	42585	116.05	117.08	QPCO
LR19RC-10	33347	33345-33354	195682	42585	117.08	118.11	QPCO
LR19RC-10	33348	33345-33354	195682	42585	118.11	119.15	QPCO
LR19RC-10	33349	33345-33354	195682	42585	119.15	120.18	QPCO
LR19RC-10	33350	33345-33354	195682	42585	120.18	121.21	QPCO
LR19RC-10	33351	33345-33354	195682	42585	121.21	122.24	QPCO
LR19RC-10	33352	33345-33354	195682	42585	122.24	123.27	QPCO
LR19RC-10	33353	33345-33354	195682	42585	123.27	124.3	QPCO
LR19RC-10	33354	33345-33354	195682	42585	124.3	125.34	QPCO
LR19RC-10	33355	33355-33364	195683	42586	125.34	126.37	QPCO
LR19RC-10	33356	33355-33364	195683	42586	126.37	127.4	QPCO
LR19RC-10	33357	33355-33364	195683	42586	127.4	128.43	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-10	33358	33355-33364	195683	42586	128.43	129.46	QPCO
LR19RC-10	33359	33355-33364	195683	42586	129.46	130.49	QPCO
LR19RC-10	33360	33355-33364	195683	42586	130.49	131.53	QPCO
LR19RC-10	33361	33355-33364	195683	42586	131.53	132.56	QPCO
LR19RC-10	33362	33355-33364	195683	42586	132.56	133.59	QPCO
LR19RC-10	33363	33355-33364	195683	42586	133.59	134.62	QPCO
LR19RC-10	33364	33355-33364	195683	42586	134.62	135.65	QPCO
LR19RC-10	33365				135.65	136.68	QPCO
LR19RC-10	33366				136.68	137.72	QPCO
LR19RC-10	33367				137.72	138.75	QPCO
LR19RC-10	33368				138.75	139.78	QPCO
LR19RC-10	33369				139.78	140.81	QPCO
LR19RC-10	33370				140.81	141.77	QPCO
LR19RC-10	33371				141.77	142.74	QPCO
LR19RC-10	33372				142.74	143.7	QPCO
LR19RC-10	33373				143.7	144.66	QPCO
LR19RC-10	33374				144.66	145.63	QPCO
LR19RC-11	33514	33514-33519	197535	43306	20.31	21.28	QPCO
LR19RC-11	33515	33514-33519	197535	43306	21.28	22.25	QPCO
LR19RC-11	33516	33514-33519	197535	43306	22.25	23.22	QPCO
LR19RC-11	33517	33514-33519	197535	43306	23.22	24.2	QPCO
LR19RC-11	33518	33514-33519	197535	43306	24.2	25.17	QPCO
LR19RC-11	33519	33514-33519	197535	43306	25.17	26.14	QPCO
LR19RC-11	33520				26.14	27.11	QPCO
LR19RC-11	33521				27.11	28.07	QPCO
LR19RC-11	33522	33522-33523	197536	43307	40.61	41.55	QPCO
LR19RC-11	33523	33522-33523	197536	43307	41.55	42.49	QPCO
LR19RC-11	33524	33524-33534	197537	43308	110.85	111.86	QPCO
LR19RC-11	33525	33524-33534	197537	43308	111.86	112.86	QPCO
LR19RC-11	33526	33524-33534	197537	43308	112.86	113.86	QPCO
LR19RC-11	33527	33524-33534	197537	43308	113.86	114.87	QPCO
LR19RC-11	33528	33524-33534	197537	43308	114.87	115.87	QPCO
LR19RC-11	33529	33524-33534	197537	43308	115.87	116.87	QPCO
LR19RC-11	33530	33524-33534	197537	43308	116.87	117.88	QPCO
LR19RC-11	33531	33524-33534	197537	43308	117.88	118.88	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-11	33532	33524-33534	197537	43308	118.88	119.88	QPCO
LR19RC-11	33533	33524-33534	197537	43308	119.88	120.89	QPCO
LR19RC-11	33534	33524-33534	197537	43308	120.89	121.89	QPCO
LR19RC-11	33535				121.89	122.87	QPCO
LR19RC-11	33536				122.87	123.86	QPCO
LR19RC-11	33537				123.86	124.84	QPCO
LR19RC-13	33240	33240-33242	195399	42354	12.9	13.87	QPCO
LR19RC-13	33241	33240-33242	195399	42354	13.87	14.84	QPCO
LR19RC-13	33242	33240-33242	195399	42354	14.84	15.82	QPCO
LR19RC-13	33243				15.82	16.79	QPCO
LR19RC-13	33244				16.79	17.76	QPCO
LR19RC-13	33245				17.76	18.74	QPCO
LR19RC-13	33246				18.74	19.71	QPCO
LR19RC-13	33247				19.71	20.69	QPCO
LR19RC-13	33248				20.69	21.66	QPCO
LR19RC-13	33249	33249-33255	195400	42355	21.66	22.63	QPCO
LR19RC-13	33250	33249-33255	195400	42355	22.63	23.61	QPCO
LR19RC-13	33251	33249-33255	195400	42355	23.61	24.58	QPCO
LR19RC-13	33252	33249-33255	195400	42355	24.58	25.56	QPCO
LR19RC-13	33253	33249-33255	195400	42355	25.56	26.53	QPCO
LR19RC-13	33254	33249-33255	195400	42355	26.53	27.5	QPCO
LR19RC-13	33255	33249-33255	195400	42355	27.5	28.48	QPCO
LR19RC-13	33256				28.48	29.45	QPCO
LR19RC-13	33257				29.45	30.42	QPCO
LR19RC-13	33258				30.42	31.4	QPCO
LR19RC-13	33259	33259-33278	195401	42356	31.4	32.37	QPCO
LR19RC-13	33260	33259-33278	195401	42356	32.37	33.35	QPCO
LR19RC-13	33261	33259-33278	195401	42356	33.35	34.32	QPCO
LR19RC-13	33262	33259-33278	195401	42356	34.32	35.29	QPCO
LR19RC-13	33263	33259-33278	195401	42356	35.29	36.27	QPCO
LR19RC-13	33264	33259-33278	195401	42356	36.27	37.24	QPCO
LR19RC-13	33265	33259-33278	195401	42356	37.24	38.22	QPCO
LR19RC-13	33266	33259-33278	195401	42356	38.22	39.19	QPCO
LR19RC-13	33267	33259-33278	195401	42356	39.19	40.16	QPCO
LR19RC-13	33268	33259-33278	195401	42356	40.16	41.14	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-13	33269	33259-33278	195401	42356	41.14	42.11	QPCO
LR19RC-13	33270	33259-33278	195401	42356	42.11	43.09	QPCO
LR19RC-13	33271	33259-33278	195401	42356	43.09	44.06	QPCO
LR19RC-13	33272	33259-33278	195401	42356	44.06	45.03	QPCO
LR19RC-13	33273	33259-33278	195401	42356	45.03	46.01	QPCO
LR19RC-13	33274	33259-33278	195401	42356	46.01	46.98	QPCO
LR19RC-13	33275	33259-33278	195401	42356	46.98	47.95	QPCO
LR19RC-13	33276	33259-33278	195401	42356	47.95	48.93	QPCO
LR19RC-13	33277	33259-33278	195401	42356	48.93	49.9	QPCO
LR19RC-13	33278	33259-33278	195401	42356	49.9	50.88	QPCO
LR19RC-13	33279				50.88	51.85	QPCO
LR19RC-14	33297	33297-33280	195667	42459	6	7	QPCO
LR19RC-14	33296	33297-33280	195667	42459	7	8	QPCO
LR19RC-14	33295	33297-33280	195667	42459	8	8.99	QPCO
LR19RC-14	33280	33297-33280	195667	42459	8.99	9.99	QPCO
LR19RC-14	33281	33281-33292	195668	42460	9.99	11.99	QPCO
LR19RC-14	33282	33281-33292	195668	42460	11.99	12.99	QPCO
LR19RC-14	33283	33281-33292	195668	42460	12.99	13.98	QPCO
LR19RC-14	33284	33281-33292	195668	42460	13.98	14.98	QPCO
LR19RC-14	33285	33281-33292	195668	42460	14.98	15.98	QPCO
LR19RC-14	33286	33281-33292	195668	42460	15.98	16.98	QPCO
LR19RC-14	33287	33281-33292	195668	42460	16.98	17.97	QPCO
LR19RC-14	33288	33281-33292	195668	42460	17.97	18.97	QPCO
LR19RC-14	33289	33281-33292	195668	42460	18.97	19.97	QPCO
LR19RC-14	33290	33281-33292	195668	42460	19.97	20.97	QPCO
LR19RC-14	33291	33281-33292	195668	42460	20.97	21.97	QPCO
LR19RC-14	33292	33281-33292	195668	42460	21.97	22.96	QPCO
LR19RC-14	33293	33293-33301	195669	42461	22.96	23.96	QPCO
LR19RC-14	33294	33293-33301	195669	42461	23.96	24.96	QPCO
LR19RC-14	33298	33293-33301	195669	42461	24.96	25.96	QPCO
LR19RC-14	33299	33293-33301	195669	42461	25.96	26.96	QPCO
LR19RC-14	33300	33293-33301	195669	42461	26.96	27.95	QPCO
LR19RC-14	33301	33293-33301	195669	42461	27.95	28.95	QPCO
LR19RC-14	33302				28.95	29.95	QPCO
LR19RC-14	33303				113.57	114.23	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-14	33304				114.23	115.22	QPCO
LR19RC-15	33657	33657-33658	197538	43309	27	28	QPCO
LR19RC-15	33658	33657-33658	197538	43309	28	29.99	QPCO
LR19RC-15	33659				29.99	30.98	QPCO
LR19RC-15	33694	33694-33663	197539	43310	77.61	78.56	QPCO
LR19RC-15	33660	33694-33663	197539	43310	78.56	79.51	QPCO
LR19RC-15	33661	33694-33663	197539	43310	79.51	80.47	QPCO
LR19RC-15	33662	33694-33663	197539	43310	80.47	81.42	QPCO
LR19RC-15	33663	33694-33663	197539	43310	81.42	82.37	QPCO
LR19RC-15	33664				86.65	87.47	QPCO
LR19RC-15	33665	33665-33668	197540	43311	103.17	104.08	QPCO
LR19RC-15	33666	33665-33668	197540	43311	104.08	104.98	QPCO
LR19RC-15	33667	33665-33668	197540	43311	104.98	105.89	QPCO
LR19RC-15	33668	33665-33668	197540	43311	105.89	106.79	QPCO
LR19RC-15	33669				106.79	107.75	QPCO
LR19RC-15	33670	33670-33683	197541	43312	129.55	130.63	QPCO
LR19RC-15	33671	33670-33683	197541	43312	130.63	131.71	QPCO
LR19RC-15	33672	33670-33683	197541	43312	131.71	132.8	QPCO
LR19RC-15	33673	33670-33683	197541	43312	132.8	133.98	QPCO
LR19RC-15	33674	33670-33683	197541	43312	133.98	135.07	QPCO
LR19RC-15	33675	33670-33683	197541	43312	135.07	136.15	QPCO
LR19RC-15	33676	33670-33683	197541	43312	136.15	137.23	QPCO
LR19RC-15	33677	33670-33683	197541	43312	137.23	138.31	QPCO
LR19RC-15	33678	33670-33683	197541	43312	138.31	139.39	QPCO
LR19RC-15	33679	33670-33683	197541	43312	139.39	140.58	QPCO
LR19RC-15	33680	33670-33683	197541	43312	140.58	141.66	QPCO
LR19RC-15	33681	33670-33683	197541	43312	141.66	142.75	QPCO
LR19RC-15	33682	33670-33683	197541	43312	142.75	143.83	QPCO
LR19RC-15	33683	33670-33683	197541	43312	143.83	144.91	QPCO
LR19RC-15	33684				144.91	145.87	QPCO
LR19RC-15	33685	33685-33685	197542	43313	150.87	152.07	QPCO
LR19RC-15	33686				152.07	153.06	QPCO
LR19RC-15	33687				153.06	154.04	QPCO
LR19RC-15	33688				155.03	156.02	QPCO
LR19RC-15	33689	33689-33690	197543	43314	165.89	167.09	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-15	33690	33689-33690	197543	43314	167.09	168.29	QPCO
LR19RC-15	33691				168.29	169.29	QPCO
LR19RC-15	33692				169.29	170.29	QPCO
LR19RC-15	33693				251.2	252.2	QPCO
LR19RC-15	33695	33695-33695	197544	43315	451.97	453.09	QPCO
LR19RC-15	33696				453.09	453.99	QPCO
LR19RC-15	33697				456.71	457.61	QPCO
LR19RC-15	33698				457.61	458.8	QPCO
LR19RC-15	33699				458.8	460	QPCO
LR19RC-15	33700				460	461.19	QPCO
LR19RC-15	33701				467.15	467.65	QPCO
LR19RC-17	33629	33629-33635	197545	43316	65.09	66.03	QPCO
LR19RC-17	33630	33629-33635	197545	43316	66.03	66.97	QPCO
LR19RC-17	33631	33629-33635	197545	43316	66.97	67.91	QPCO
LR19RC-17	33632	33629-33635	197545	43316	67.91	68.85	QPCO
LR19RC-17	33633	33629-33635	197545	43316	68.85	69.79	QPCO
LR19RC-17	33634	33629-33635	197545	43316	69.79	70.73	QPCO
LR19RC-17	33635	33629-33635	197545	43316	70.73	71.67	QPCO
LR19RC-17	33636				71.67	72.58	QPCO
LR19RC-17	33637				72.58	73.49	QPCO
LR19RC-17	33638	33638-33641	197546	43317	76.23	77.34	QPCO
LR19RC-17	33639	33638-33641	197546	43317	77.34	78.45	QPCO
LR19RC-17	33640	33638-33641	197546	43317	78.45	79.56	QPCO
LR19RC-17	33641	33638-33641	197546	43317	79.56	80.67	QPCO
LR19RC-17	33642				80.67	81.69	QPCO
LR19RC-17	33643				81.69	82.71	QPCO
LR19RC-17	33644	33644-33646	197547	43318	181.56	182.53	QPCO
LR19RC-17	33645	33644-33646	197547	43318	182.53	183.5	QPCO
LR19RC-17	33646	33644-33646	197547	43318	183.5	184.47	QPCO
LR19RC-17	33647				184.47	185.6	QPCO
LR19RC-17	33648				185.6	186.74	QPCO
LR19RC-17	33649				210.32	211.31	QPCO
LR19RC-17	33650	33650-33655	197548	43319	211.31	212.37	QPCO
LR19RC-17	33651	33650-33655	197548	43319	212.37	213.43	QPCO
LR19RC-17	33652	33650-33655	197548	43319	213.43	214.49	QPCO

Hole ID	North Coal Sample ID	Composite Sample ID	Birtley ID	Pearson ID	From (m)	To (m)	Sample Type
LR19RC-17	33653	33650-33655	197548	43319	214.49	215.55	QPCO
LR19RC-17	33654	33650-33655	197548	43319	215.55	216.61	QPCO
LR19RC-17	33655	33650-33655	197548	43319	216.61	217.67	QPCO
LR19RC-17	33656				217.67	218.67	QPCO

Appendix 3.0 Drill Logs (in .ZIP file attached)
Appendix 4.0 Sample Analytical Results and Certificates (in .ZIP file attached)
Appendix 5.0 Geophysical Logs (in .ZIP file attached)
Appendix 6.0 Statement of Costs (in .ZIP file attached)