COAL ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: **Line Creek Operations Assessment Report 2019 Burnt Ridge North Exploration Program**

TOTAL COST: $2,164,564

AUTHOR: **Melissa Newton**
SIGNATURE: Melissa Newton

NOTICE OF WORK PERMIT NUMBER/DATE: **Mine Permit C-129**

YEAR OF WORK: **2019**
PROPERTY NAME: **Burnt Ridge North (BRN) at Line Creek Operations (LCO)**

COAL LICENSE(S) AND/OR LEASES ON WHICH PHYSICAL WORK WAS DONE: **Teck Fee Simple tenure DL 4588 Lot #1**

MINERAL INVENTORY MINFILE NUMBER**:**
File: 082JSE001

MINING DIVISION: **Fort Steele**
NTS / BCGS: **082J02W / 082J006**
LATITUDE: **49° 58' 57"**
LONGITUDE: **-114° 48' 03"** (at centre of work)
UTM Zone: **11** EASTING: **657669** NORTHING: **5539008**

OWNER: **Teck Coal Limited**

MAILING ADDRESS: **PO BOX 2003, Sparwood, BC, V0B 2G0**

OPERATOR: **Teck Coal Limited**

MAILING ADDRESS: **PO BOX 100, Elkford, BC, V0B 1H0**

REPORT KEYWORDS:

Interbedded sequence of sandstones, siltstones, silty shales, mudstones, and low to high volatile bituminous coal from the Jurassic–Cretaceous Mist Mountain Formation. The region is structurally complex, containing extensive thrust faulting and folding.

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:
Annual Assessment Reports Since 1974

SUMMARY OF TYPES OF WORK IN THIS REPORT		EXTENT OF WORK (metric units)	ON WHICH TENURES
GEOLOGICAL (scale, area)			
	Ground, mapping		
	Photo interpretation		
GEOPHYSICAL (line-kilometres)			
	Ground (Specify types)		
	Airborne (Specify types)		
	Borehole		
	Gamma, Neutron	**4,242 m**	**Teck Fee Simple tenure DL 4588 Lot #1**
	Density	**6,554.3 m**	**Teck Fee Simple tenure DL 4588 Lot #1**
	Caliper	**3,770.7 m**	**Teck Fee Simple tenure DL 4588 Lot #1**
	Deviation	**4,198.6 m**	**Teck Fee Simple tenure DL 4588 Lot #1**
	Others(specify): **Acoustical Televiewer** **Optical Televiewer** **Flowmeter** **Heat Pulse**	**1,364.3 m** **1,333.9 m** **632.5 m** **690.0 m**	**Teck Fee Simple tenure DL 4588 Lot #1**
	Core (One 9” Large Diameter Core hole)	**145.5 m**	**Teck Fee Simple tenure DL 4588 Lot #1**
	Non-core (Twenty 4 ¾” diameter Reverse Circulation holes)	**4,478 m**	**Teck Fee Simple tenure DL 4588 Lot #1**
SAMPLING AND ANALYSES			
Total # of Samples			
1,728	**Ply Analysis (Ash, FSI, RM, and LT)**		**Teck Fee Simple tenure DL 4588 Lot #1**
246 240 6	**Total Proximate (RM, Ash, & VM)** -Analysis run twice on each of the 80 comps for raw and clean results. The RM and ash analysis were also run on the float sink samples -Analysis run twice on the bulk samples for raw and clean results		**Teck Fee Simple tenure DL 4588 Lot #1**
86	**Analysis of Trace Elements, Dilatation, Gieseler Fluidity, heating value, LT, and Sapozhnikov analysis were only completed on select samples.**		**Teck Fee Simple tenure DL 4588 Lot #1**
166	**Total Sulphur and FSI** -Analysis run on each of the 80 comps and 3 bulk samples for raw and clean results		**Teck Fee Simple tenure DL 4588 Lot #1**
50	**Total Petrographic** -Analysis on composite samples, three clean bulk samples, and two coke samples		**Teck Fee Simple tenure DL 4588 Lot #1**
2	**Carbonization and Coke Testing**		**Teck Fee Simple tenure DL 4588 Lot #1**
77	**Total Mineral Ash Analysis** -Analysis run on select comp and twice on the bulk samples for raw and clean results		**Teck Fee Simple tenure DL 4588 Lot #1**

Table 6 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

Line Creek Operations

Assessment Report

2019 Burnt Ridge North Exploration Program

Teck

Line Creek Operations Assessment Report

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1. INTRODUCTION

This report presents the results of coal exploration activities conducted during the fall and winter of 2019 on the Burnt Ridge North (BRN) Exploration program, located in the Elk Valley Coalfield, Teck Coal Limited, Line Creek Operations, in southeastern British Columbia. The exploration work was completed by Teck personnel.

i. Property Description and Access

The BRN Exploration program is located on the Line Creek property, approximately 25 kilometers north, and east of Sparwood, BC. Access to the Line Creek property is by driving 15 km north on highway 43, then 15 km east on the Line Creek Mine access road. Refer to Figure 1 for property location.

ii. Property History

Burnt Ridge North (BRN) comprises approximately 2,500 ha. and is part of the 44,000 ha coal-bearing lands acquired by Kaiser Resources Ltd. from Crowsnest Industries Ltd. in 1968. In 1980, Kaiser Resources Ltd. mining interests were acquired by British Columbia Resources Investment Corporation, which became B.C. Coal Ltd. a year later. The name was later changed to Westar Mining. In 1992, Westar Mining filed for bankruptcy protection. The D.L. 4588 Lot 1 and associated coal licenses were acquired by Fording Coal Ltd. and through amalgamation they later became part of Teck Resources Ltd.

Exploration activities from 1968 to 1979 have included access construction, the excavation of three test pit for bulk sample collection, trenched coal seams, sampled and mapped six adits driven into five of the main coal seams, and one diamond drill hole was completed at the north end of the property. Afterwards, the property remained dormant until the early to mid-1990's when a number of small reverse circulation drill programs and associated access construction were completed. In 2010, larger drilling campaigns resumed and since then have continued sporadically. Soon after BRN became part of the Line Creek Operations Phase II Mine Permit C-129 and is scheduled for mining activities to begin in 2021.

BRN is located north of the existing Burnt Ridge Extension (BRX) open pit mining operation and is part of the Teck Fee Simple tenure DL 4588 Lot #1. The tenure number, name, owner, grant, and area are summarized in Table 1. All licenses are located in British Columbia in the Fort Steel Mining Division. Refer to Figure 2 for coal lease and license location.

Mining operations, which commenced in 1981, have produced as much as 4.0 million tonnes of clean metallurgical and thermal coal (mtcc) each year for markets in North and South America, Africa, Europe, and Asia.

Table 1
LCO Coal Licenses

Code	Parties	Type	Status	Grant Date	Area (Ha)	Project
327719	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	10/28/1986	130	Line Creek Operation, BC
327810	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
327811	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	130	Line Creek Operation, BC
327978	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
327990	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
327991	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
327992	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
327993	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
327995	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
327996	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
327997	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
327998	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
327999	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
328000	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
328001	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	65	Line Creek Operation, BC
328002	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
328003	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
328004	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
328005	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
328006	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	130	Line Creek Operation, BC
328007	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	130	Line Creek Operation, BC
328012	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	10/16/1986	130	Line Creek Operation, BC
328013	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	10/16/1986	130	Line Creek Operation, BC
328014	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	10/16/1986	130	Line Creek Operation, BC
328674	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	3/13/1986	259	Line Creek Operation, BC
336958	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	6/15/1995	259	Line Creek Operation, BC
336959	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	6/15/1995	182	Line Creek Operation, BC
336960	TECK COAL LIMITED (100.0000%)	CLI (BC)	Active	6/15/1995	129	Line Creek Operation, BC
389284	TECK COAL LIMITED (100.0000%)	CLE (BC)	Active	6/30/1981	3,238.00	Line Creek Operation, BC
389291	TECK COAL LIMITED (100.0000%)	CLE (BC)	Active	10/1/1991	782	Line Creek Operation, BC
418131	TECK COAL LIMITED (100.0000%)	CLE (BC)	Active	10/28/2013	1,402.00	Line Creek Operation, BC

2. GEOLOGY

The information in the following stratigraphy and structure sections was taken from Olver's 2014 LCO ARIS report, Musil's 2018 FRO ARIS report, and Lawrence and Reicher's 1982 report on the 1980/81 development work carried out in the Elk River Coal Project.

i. Stratigraphy

The general stratigraphic succession on the Line Creek Property is summarized in Table 2:

Table 2
Line Creek Stratigraphy

Period	Litho-Stratigraphic Units			Principle Rock Types
Recent				Colluvium
Quaternary				Clay, silt, sand, gravel, cobbles
Lower Cretaceous	Blairmore Group			Massive bedded sandstones and conglomerates
Lower Cretaceous to Upper Jurassic	KOOTENAY GROUP	Elk Formation		Sandstone, siltstone, shale, mudstones, chert pebble conglomerate, minor coal
		Mist Mountain Formation		Sandstone, siltstone, shale, mudstones, thick coal seams
		MORRISSEY FORMATION	Moose Mountain Member	Medium to coarse-grained quartz-chert sandstone
			Weary Ridge Member	Fine to coarse-grained, slight ferruginous quartz-chert sandstone
Jurassic	Fernie Formation			Shale, siltstone, fine-grained sandstone
Triassic	Spray River Formation			Sandy shale, shale quartzite
	Rocky Mountain Formation			Quartzite
Mississippian	Rundle Group			Limestone

The oldest rocks present on the Line Creek property are the Mississippian Rundle Group which are located on top of Mt. Lyne at the southwestern corner of the DL4588 Lot #1.

The Jurassic Fernie Formation shales occur throughout the area, generally along the sides of the valleys on the lower flanks of the mountains. These dark-grey to black marine shales are recessive and, generally poorly exposed. The Fernie Formation is approximately 100 m thick and has a conformable contact with the Morrissey Formation through the "Passage Beds," which is a transitional zone from

marine to non-marine sedimentation. This transition zone is made up of a sequence of siltstones, shales, and fine-grained sandstone.

The overlying Jurassic-Cretaceous Kootenay Group is subdivided into the Morrissey, the Mist Mountain, and the Elk Formations from bottom to top. These formations are of a non-marine origin and are part of an eastward thinning wedge of rock.

The Jurassic-Cretaceous Morrissey Formation, which is the "basal sandstone" of the Kootenay Group, is a prominent cliff-forming marker horizon in many locations. This formation is approximately 65 m thick and can be further subdivided into two distinct units called the Weary Ridge and Moose Mountain members. The lower Weary Ridge Member is composed of a weaker, slightly argillaceous sandstone deposited in thicker beds that represents a foreshore beach deposit. In contrast, the upper Moose Mountain Member is composed of a thinly bedded, stronger, more siliceous rich sandstone that has been interpreted to represent a backshore beach deposit. On the Line Creek property, the Moose Mountain Member has an abrupt and conformable contact with the lowermost bed of the overlying Mist Mountain Formation.

The Mist Mountain Formation of the Jurassic-Cretaceous Kootenay Group contains all of the economic coal seams on the Line Creek property. This economically important formation is approximately 500-600 m thick and composed of an interbedded sequence of fine-grained sandstones, dark grey carbonaceous and argillaceous siltstones, silty shales, mudstones, minor conglomerate, and low to high volatile bituminous coal seams. There is approximately 60 m of minable coal in the formation that is divided between 4 to over 30 seams depending on the location. These seems do vary in thickness, presence of partings, and in quality along their length. Overall this formation represents a deltaic or an interdeltaic coastal plain marsh environment.

The economic coal in the Mist Mountain Formation supports a number of coalfields in southeastern British Columbia, including the Elk Valley Coalfield, within which lies Teck's Line Creek, Greenhills, and Fording River Operations. The volatility of the coal seams increases from medium-volatile hard coking coal with minor amounts of thermal coal in the south to medium-high volatile coking coal in the north.

The Jurassic-Cretaceous Elk Formation conformably overlies the Mist Mountain Formation at the top of the Kootenay Group. This formation is characterized as a thick, cliff-forming, coarsening up sequence of sandstone to conglomerate lithologies with some interbeds of siltstone, mudstone, shale, and thin coal seams. The coal seams lack the thickness necessary to be economically viable and contain a mix of sapropelic and humic coals. This formation's depositional environment has been interpreted as an alluvial plain.

The top of the Elk Formation marks the upper boundary of the Kootenay Group, which is unconformably overlain by the basal member of the Lower Cretaceous Blairmore Group. This thick bedded, cliff-forming sandstone and conglomerate unit is observed north of the Line Creek property.

ii. Structure

The LCO property is located within the Elk Valley Coalfield in the Front Ranges of the Rocky Mountains in Southern British Columbia. This coalfield is approximately 100 km long and was uplift into its current position during the late Cretaceous to early Tertiary Laramide Orogeny. The major structural features

that developed in the Elk Valley coalfield are the north-south trending synclines, steep westerly dipping thrust faults, a few high angle normal faults, and rare transverse faults.

The formation of the major fold structures began early in the tectonic cycle. In the Elk Valley coalfield, two asymmetric synclines are evident: the Greenhills Syncline to the west and the Alexander Creek Syncline to the east. These synclines are separated by the west-dipping Erickson Normal Fault. The dominant syncline, the Alexander Syncline (Line Creek Operations), is an asymmetric open fold with an upright to steeply inclined axial plane. Overall the fold has no net plunge, but locally its plunge can be sub-horizontal to gentle. The second syncline, the Greenhills Syncline (Greenhills Operations), is essentially a "mirror-image" of the Alexander Creek structure until it dies out to the north in the area of the Osborne Creek Depression. The asymmetry of these folds is possibly due, at least in part, to the influence of the underlying Ewin Pass Thrust and the Erickson Fault which subcrops east of the Alexander and Greenhills Synclinal Axis, respectively.

Thrust faulting was probably contemporaneous with the later stages of folding; however, some earlier formed faults were folded during later deformation. The major thrust faults in the Elk Valley coalfield consist of, from east to west, the Ewin Pass Fault, the Erickson Fault, and the Bourgeau Thrust. The Ewin Pass Thrust is located on the eastern limb of the Alexander Creek Syncline and resulted in a repeat of the west dipping Kootenay Group strata. This fault begins to 'splay' before terminating at the south end of the Line Creek property. The Erickson Fault is a westerly dipping normal fault that separates the two major synclines in the Elk Valley coalfield. This fault places the Mist Mountain Formation in the western hanging wall in contact with Rundle, Rocky Mountain, Spray River, Fernie, and Morrissey formations of the eastern footfall. The west dipping Bourgeau Thrust defines the western boundary of the northern portion of the Elk Valley coalfield. Overall, thrust faults are more common on the eastern limb of the synclines than on the western limb.

The main structural features contained on the Line Creek property is the Ewin Pass Thrust and the Alexander Creek Syncline. The Ewin Pass Thrust lies on the eastern edge of the property and was historically mined by the Horseshoe Ridge (HSR) and Mine Services Area North (MSAN) pits. In the hanging wall of this thrust lies the Alexander Creek Syncline which outcrops along Dry Creek and is the dominant structural feature in the remaining area. The eastern limb of the syncline is currently being mined by the Mt. Michael and Mine Services Extension pits. The western limb of the syncline is currently being mined by the Burnt Ridge Extension pit and explored in the BRN area. There are also numerous smaller faults on the property with varying amounts of displacement that may be associated with minor folding, over turned coal seams, and other deformations.

Refer to Figure 3 for detailed geological map of LCO, and Figures 5-1 and 5-2 for cross-sections through BRN.

3. 2019 SUMMARY OF EXPLORATION WORK

i. 2019 Exploration Project Objectives

In 2019, Line Creek conducted an exploration drilling and coal sampling program on Burnt Ridge North (BRN) which is located in the Line Creek Operations Phase II mining area. Refer to Figure 4 for the BRN drill hole location map.

During this program, there was 20 Reverse Circulation (RC) holes totaling 4,478 m drilled, one Large Diameter Core (LDC) hole totaling 145.5 m drilled, and nine vibrating wire piezometers (piezos) installed in three holes. The 20 RC holes were drilled for structure, coal thickness, and coal quality information. The single LDC hole was drilled to obtain three 0.23 m diameter bulk samples from different coal seams for coal quality testing. Only two bulk samples were large enough for carbonization testing while the third sample provides general coal quality and washability information. Geophysical logs were completed on all holes except two, hole BN1928 which was abandoned at 81 m due to poor hole conditions and BN1916A-LD (LDC) due to ice blocking the hole at the water level. After drilling was completed, the rig returned to three holes to install three piezos in each.

The overall objective for the 2019 BRN exploration drilling program was to improve resource confidence, structural interpretation and quality knowledge of the coal seams in BRN.

These objectives were accomplished by:

- Developing and implementing an exploration program that included drilling and logging 20 new RC coal exploration holes, collecting three bulk samples, and installing 9 piezos;
- Integrating the new exploration and drilling results with previous historic programs;
- Revising the geological interpretation that was based on historic mapping and drilling in the area;
- Determine the coal quality of the represented coal seams from drill cuttings and bulk samples;
- Updating the coal interpretation in the exploration area using a computer based geologic model; and
- Improve the reserve and resource model and support an economic assessment of BRN.

Note: Samples collected in 2019 are still being processed and evaluations are ongoing for the BRN area.

Each drilling location was surveyed to obtain exact coordinates and elevations within the Teck Fee Simple tenue DL4588 Lot #1 area. The exploration project was completed under the direction and supervision of Line Creek Operations geology team.

ii Summary of Completed Work

The total cost for the 2019 BRN Exploration Program is $2,164,564 which includes an estimate for the outstanding sample analysis costs. See Appendix 1 for the cost statement.

The exploration project planning, execution, geological interpretation, and modeling were completed by the Line Creek and Teck Geoscience Services geology teams. Additional assistance was provided by LCO's Environmental, Survey, and Mine Ops teams. See the 'Sustainability Initiatives' section for more information on efforts to decrease environmental imparts made during the project.

Prior to construction beginning on BRN, the excavated trails and exploration drill sites were located by the Construction Advisor. Construction began on August 19th with the rehabilitation of about 9 km of existing roads followed by the creation of about 600 m of new road and 25 new pads. When possible, hole locations were moved to take advantage of historic disturbance, natural flat or less treed areas, and to avoid key ecosystems (ex. White Bark Pine). All construction was completed under the guidance of a

qualified Construction Advisor. A few holes were located in areas with greater than 60 degree slopes and required a geotechnical assessment by a Line Creek Geotechnical Engineer before and after the pads was build. All danger tree falling were identified by the Construction Advisor, these trees were then verified by a qualified Tree Faller and the hazard was removed, if the tree was deemed a danger to exploration activities.

The original plan called for 28 RC and 2 LDC holes to be drilled on 25 different pads; however, due to delays, drilling conditions, and weather concerns some of the holes were postponed. Twenty RC holes were drilled in 2019. All pads were built on or adjacent to existing roads, except for 2 pads, in order to reduce the amount of ground disturbance in the area.

The RC and LDC drilling services were performed using the Prospector W750 and BF-800 drills, respectively. A total of 20 RC Drill Holes were completed for a cumulative drilling length of 4,478 m with individual holes ranging from 120 to 350 m and an average of 231 m. The RC drilling method is the preferred method for collecting uncontaminated, representative, and accurately located coal samples. LDC is the preferred method for collecting bulk samples for the purpose of carbonization (collection of critical coke quality data). Drill hole information is given in Table 3 and in the map shown in Figure 4.

The downhole geophysical logs that were collected include: gamma ray, density, neutron, and gyro (deviation) through the pipe (TP); and gamma ray, density, caliper, resistivity, Acoustic Televiewer (ATV), and Optic Televiewer (OTV) were run open hole (OH). The ATV and OTV tools were run wherever conditions permitted. Several holes in the area had very poor hole conditions and only through pipe logs were possible. In addition, there was issues with the OH density logs which required re-processing to resolve and will be provided when available. Geophysical logging information is given in Table 3 and Appendix 2.

As sampling accuracy is critical to develop an accurate understanding of coal seam thickness and quality, Line Creek conducted sample audits at the RC rig to assure accurate collection of coal samples. Approximately once per week, the ply samples were shipped to the lab for analysis. These analysis included: ash, free swelling index (FSI), residual moisture (RM), light transmittance (LT), and volatile matter (VM).

Composite intervals were chosen after the ply results were reviewed by a Line Creek Geologist and the instructions were sent to the lab for the composite preparation and analysis. The raw coal composites are being analyzed for ash, RM, and VM. The clean coal composites are also being analyzed for FSI, heating value, LT, Sulphur, Phosphorus, Fluorine, Arsenic, Chlorine, Mercury, Dilation, Gieseler Fluidity, and Mineral Ash Analysis (MAA).

Currently, 45 samples were chosen for petrographic analysis. Additional analysis may be chosen depending on the outstanding composite lab results.

LDC is a specialized method of drilling using a conventional reverse circulation rig to recover a 0.23 m diameter core of the target coal seams. The LDC hole was drilled approximately 4 m from the pilot RC hole on pad BN1916. This hole recovered approximately 38.75 m of seam 72, 19.25 m of seam 80, and 4.5 m of seam 81. All core retrieved was geological logged by a Teck Geologist, see Appendix 3, and then sent to the lab for further analysis. These analysis included Proximate, FSI, LT, Trace Elements, MAA, Fluorine,

Dilation, Gieseler Fluidity, Sapozhnikov, and Petrology. Two of the bulk samples, seams 72 and 80, were then sent for carbonization testing as they met the required weight of coal needed for the analysis. All results are still outstanding. Refer to Table 4 for LDC hole coordinates.

Table 3
2019 Drill Hole Collar Locations and Logging Information

Drill Hole Name	Status	UTM COORDINATES		Elevation (m)	Azimuth	Dip	Hole Depth (m)	Logs Completed
		Easting	Northing					
BN1928	Abandoned	657140.8	5540567.9	2121.0	260	-60	81	No Logs
BN1928B	Completed	657142.2	5540564.9	2121.5	260	-60	302	TP only
BN1927	Completed	657170.7	5540426.4	2141.5	260	-60	290	TP only
BN1926	Completed	657222.9	5540267.8	2156.9	260	-70	330	TP only
BN1925	Completed	657378.1	5539789.8	2205.7	260	-70	280	TP only
BN1924	Completed	657349.6	5539645.2	2229.9	260	-60	185	OH & OTV
BN1923	Completed	657461.2	5539675.4	2198.0	260	-60	137	OH
BN1922	Completed	657463.7	5539547.9	2231.8	260	-60	230	OH & ATV
BN1921	Completed	657566.7	5539556.8	2129.9	260	-70	311	TP only
BN1920	Completed	657701.3	5539372.0	2163.8	260	-60	351	TP only
BN1919	Postponed	657538.4	5539250.7	2254.9	260	-70		
BN1918	Postponed	657485.5	5539179.8	2298.1	260	-70		
BN1917	Completed	657514.0	5539073.0	2326.3	260	-80	146	OH & OTV
BN1916	Completed	657715.1	5538604.6	2234.1	0	-90	197	OH/ATV/OTV
BN1915	Completed	657671.5	5539087.4	2251.5	260	-80	103	OH/ATV/OTV
BN1914	Postponed	657769.3	5539124.7	2220.9	260	-80		
BN1913	Completed	657627.7	5538768.8	2263.4	0	-90	102	OH/ATV/OTV
BN1912	Postponed	657596.2	5538461.4	2269.3	0	-90		
BN1911	Postponed	657902.8	5538560.7	2129.9	260	-60		
BN1910	Completed	658096.4	5538040.3	2194.5	260	-65	305	OH/ATV/OTV
BN1909	Completed	658237.9	5538065.2	2170.7	260	-60	263	OH/ATV/OTV
BN1908	Completed	657816.8	5537911.7	2301.6	260	-60	120	OH/ATV/OTV
BN1907	Completed	657817.6	5537913.2	2300.1	0	-90	153	OH/ATV/OTV
BN1906	Postponed	658137.8	5537922.4	2212.9	260	-60		
BN1905	Postponed	658137.8	5537922.4	2212.9	260	-75		
BN1904	Completed	658179.6	5537837.8	2247.4	260	-65	287	OH/ATV/OTV
BN1903	Completed	658180.3	5537837.8	2247.4	260	-85	305	OH/ATV/OTV
BN1902	Postponed	658292.1	5537892.4	2222.7	260	-80		
BN1901	Postponed	658213.7	5537744.1	2217.6	260	-70		

Note: Logs legend: TP = through pipe, OH = open hole, ATV = acoustic televiewer, and OTV = optic televiewer.

All 2019 RC holes were evaluated as potential piezo installation locations based on their hole condition,

hole dip, and depth of water level. Four potential locations were chosen and geophysically logged with the heat pulse and flowmeter tools. Based on the results, only three holes were chosen for piezo installations. The drillers with the help of the Environmental Services Consultants installed three Vibrating Wire Piezometers (piezos) in each of the three holes. Each hole was topped off with cement to prevent contamination and a monument was installed before the drilling equipment left the area. Each piezo was programmed to take frequent measures of the pressure, equates to water level, throughout the winter and will be downloaded once access to the area is re-establish this summer. Refer to Table 5 for piezo installation locations and the previous logging information.

Table 4
2019 LDC Hole Location

Drill hole Name	Project	UTM COORDINATES		Elevation	Azimuth	Dip	# of Holes	Hole Depth (m)	Target Seam and Thickness (m)
		Easting	Northing						
BN1916A-LD	LDC Bulk Sample	657712.7	5538609.2	2247.82	0	-90	1	145.5	72 – 38.75 m 80 – 19.25 m 81 – 4.5 m

Table 5
2019 Piezo Installation Locations and Logging Information

Drill hole Name	UTM COORDINATES		Elevation	# of Piezos Installed	Depth of Piezos installed (m)	Logs Completed
	Easting	Northing				
BN1925	657378.1	5539789.8	2205.7	0		Heat pulse – No water so No Data
BN1922	657463.7	5539547.9	2231.8	3	217.6, 197.6, & 182.8	Heat pulse & Flowmeter
BN1915	657671.5	5539087.4	2251.5	3	98.6, 87.6, & 80.6	Heat pulse & Flowmeter
BN1903	658180.3	5537837.8	2247.4	3	294.0, 200.0, & 150.0	Heat pulse & Flowmeter

iii Sustainability Initiatives

All involved in the program attempted to reduce its impact on the environment. Some of the initiatives that were implemented include:

- Tried the Prospector W750 Rig, not used at Teck previously, as it required a smaller pad size of 16 x 25 m that can be built parallel to the slope rather than the 20 x 30 m pad size of most RC rigs that must be built at a very specific angle. Resulted in a learning curve for all at the beginning of the program.
- All pad locations were chosen adjacent to existing roads, except for two pads, to minimize disturbance to the area. These locations were moved slightly during the pre-construction stage of the project to take advantage of natural topography and existing disturbance to further decrease construction disturbance and timber clearing in the area.
    - This same thought process applied to the new roads and the two associate pads that needed to be built.
- Soil salvage occurred in all new disturbance unless the work was not safe to complete.

- A large steel plate, about 1.5 x 1.5 m, was buried approximately 0.5 m under the pad surface over the LDC hole to eliminate the hazard of a large open hole on animals and works in the area.
- All RC holes were capped or a piezo monument was installed to prevent contaminates from entering the hole.
- Water was pulled from a non-fish bearing creek by a small portable pump. This pump was kept at the rig when not in use and all maintenance, including fueling, was accomplished at the drilling pad which is outside of the riparian setback.
- One of the permit requirements of working in this area during the bird window was weekly visits by an Independent Environmental Monitor (EM). The EM also asked to check the area for cleanliness, compliance with environmental management plans, and that spills were cleaned up appropriately. No major issues were recorded in the final report which has been shared with FLNRORD.
- All spills, even a drop, where cleaned up and reported for tracking and learning purposes. This information was shared with the EM and Teck's Environmental Team.
- In addition, the EM and Construction Supervisor assisted in two Independent Environmental Inspections as part of the Environmental Assessment Certificate in LCO Phase II. No issues observed.
- At the end of the program, the project area was de-activated. This work included filling in the sumps to eliminate wildlife traps, bucking trees to prevent the spread of pine beetles, and breaking berms and adding swales for water management and erosion control.

All learnings from this project will be used to improve future exploration projects.

4. RESULTS

The primary goal of the 2019 drilling program in BRN was to improve resource confidence through tighter spaced drilling as well as increased knowledge of coal seam location, thickness, and quality. Drilling has not been completed in this area since 2013. The project consisted of 20 exploration RC Drill Holes, three bulk samples using a LDC drilling rig, and three piezo installs for groundwater monitoring. There was 4,478 m of RC and 145.5 m of LDC drilling for a total of 4,623.5 m drilled. Geophysical logs were completed on all holes, except the one abandoned hole. Seven additional planned holes were postponed.

The project area in BRN is composed of two different structural domains. The southern domain is dominated by an anticline-syncline complex and numerous thrust faults, including some duplexes, which result in a very complicated geology as seen in the adjacent pit to the south (BRX). The northern domain has a more planar stratigraphic geometry with some thrust faults. A transverse fault has been interpreted to separate these domains, but direct evidence is not available. The coal quality in the area changes from a hard metallurgical coal in the south, to an oxidized coal in the middle area of the ridge, to hard metallurgical coal in the north. A number of holes were targeting this change in coal quality to increase confidence in the location of this transition. Two representative cross-sections of the different structural domains can be found in Figures 5-1 and 5-2.

The ply analysis has been completed, but are still in the process of being incorporated into a new model. The raw and clean coal assay results are outstanding at the time of writing this report and samples are still at the lab being processed. Only five composite results have been returned to-date and they have been included in Appendix 4. No petrography analysis has been completed. As results are received, they will be added to the geological data base and interpolated in the geological model. Carbonization and coke testing from the two bulk samples have yet to be completed. These results are key to determine the coal's marketability and assist the long term mine plan for the region.

The 2019 drilling program results have yet to be incorporated into the BRN 3D Block Model. The geological model will be used for detailed mine planning and economic analysis.

There are no reserves published for BRN that incorporate the information gained during the 2019 exploration program as the model update is still in progress, but the most recent reserves numbers for BRN are shown in Table 6. These resources encompass the entire BRN area which extends from the active Burnt Ridge Extension (BRX) pit along the ridge to the north near Highway 43 and Greenhills Operations. The 2019 project area only covers a small portion of BRN.

5. CONCLUSION

The 2019 exploration drilling program has successfully increased drill hole density and geological confidence in BRN. The program confirmed the location and continuity of all coal seams in the area allowing for improved geological and structural interpretation. The assay results are ongoing and will be incorporated into the geological database and model as they become available.

Further drilling to improve confidence in this structurally complex area, reserves estimates, and to increase the amount of coal quality data, especially LT and coke quality. Future drill programs can be complemented with field mapping and drone flights of BRN, and the adjacent active BRX pit information.

6. REFERENCES

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7. AUTHOR'S QUALIFICATIONS

Statements of Author's Academic and Professional Qualifications

CERTIFICATE OF QUALIFIED PERSON

Name: Melissa Newton, P.Geo.

Company: Teck Resources Ltd.

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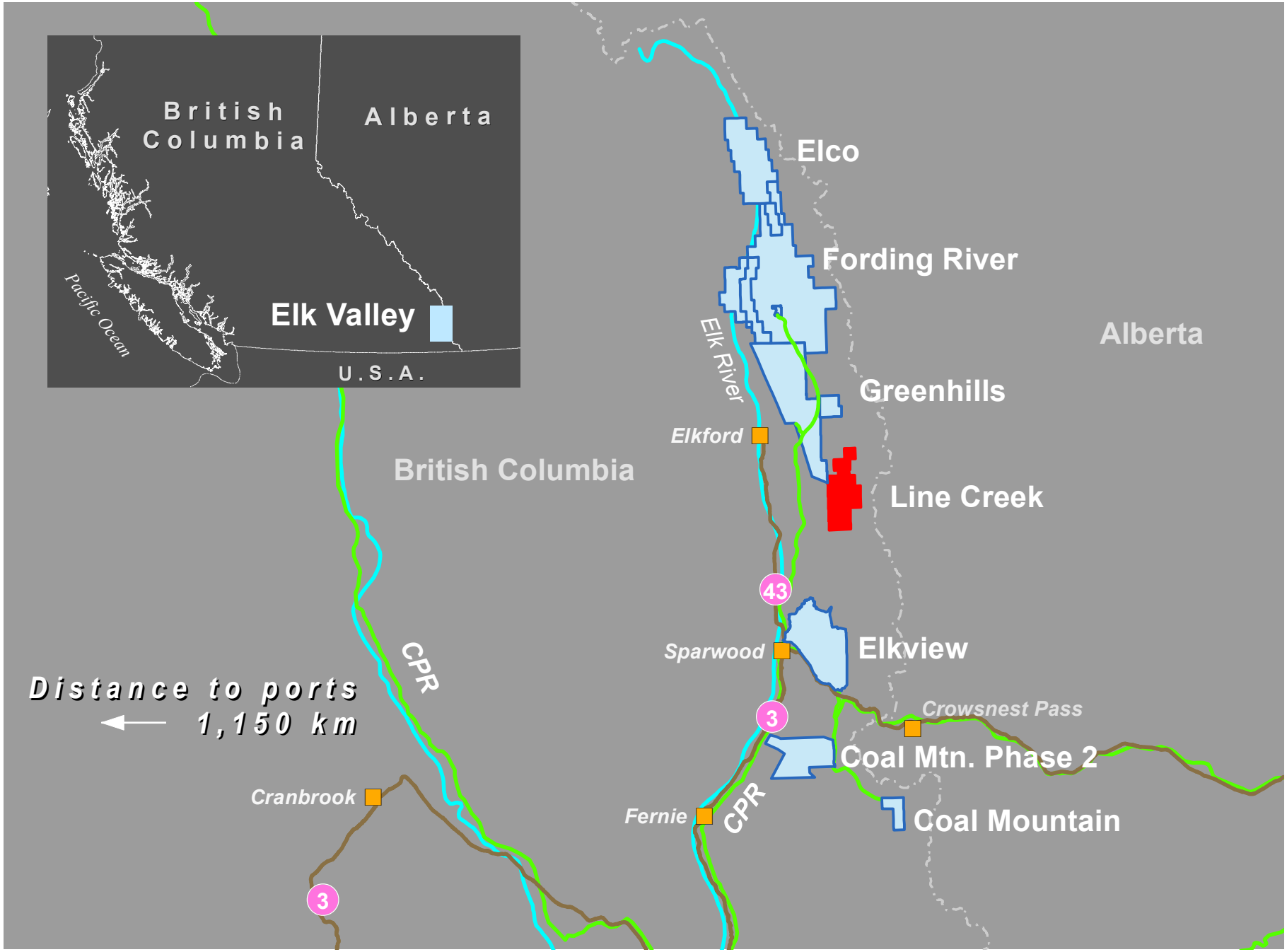
15km North, Hwy 43
Sparwood, BC
V0B 2G0

I, Melissa Newton, P.Geo, am employed as a Project Geologist at Teck Resources Ltd. This certificate applies to the report titled "Line Creek Operations, Assessment Report, 2019 Burnt Ridge North Exploration Program". I graduated from the University of Calgary with two Bachelor of Science Degrees in Geology and Geophysics in 2008 and a Master of Science Degree in Geology in 2011. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (# 209674). From 2011 to 2016, I worked for ConocoPhillips on various projects throughout the Western Canadian Sedimentary Basin. In 2017, I worked as a sessional instructor at the University of Calgary were I taught a second year geology students about igneous and metamorphic rocks, and ore deposits. In 2018, I worked at North Coal Ltd. as a Supervising Geologist and help execute an exploration drilling program. From 2018 to present I have worked at Teck Coal Ltd. as a Project Geology and have helped execute exploration drilling programs at different Teck mines. I am currently helping plan the 2020 LCO exploration drilling program. As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101).

Melissa Newton

Melissa Newton, P.Geo.


British Columbia
Alberta
Pacific Ocean
Elk Valley
U.S.A.
Elco
Fording River
Alberta
Elk River
Greenhills
Elkford
British Columbia
Line Creek
43
Sparwood
Elkview
CPR
Distance to ports
1,150 km
Crowsnest Pass
3
Coal Mtn. Phase 2
Cranbrook
Fernie
CPR
Coal Mountain
3

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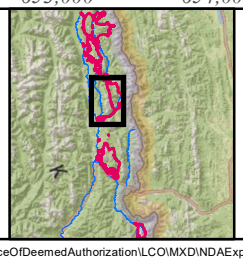

Line Creek Operations Property Lease Map

- 2019 Pads
- LCO Facility Locations
- C-129 Permit Boundary
- Coal Tenure
- Teck Fee Simple Lands

N

0 250 500 1,000 1,500 Meters

DATE:	MINE OPERATION:
3/25/2020	Line Creek
SCALE:	COORDINATE SYSTEM:
1:46,986	NAD 1983 UTM Zone 11N

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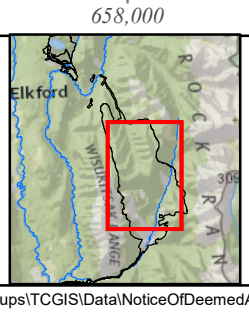
Alexander Creek Syncline

Ewin Pass Thrust

Teck



Line Creek Geology

- 2019 Pad Locations
- 2019 BRN Roads
- Syncline
- Anticline
- Minor Thrust Faulting
- Ewin Pass Thrust
- Alexander Creek Syncline
- KKe Elk Fm
- Jkki Mist Mountain Fm
- Jko Moose Mountain Mbr
- Jf Fernie Fm
- Triassic & older rocks

N

0 140 280 560 Meters

DATE: 3/26/2020	MINE OPERATION: Line Creek
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BN1916A-LD
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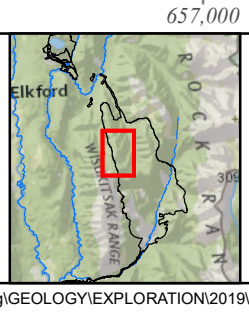
BN1901



BRN 2019 Drill Hole Lcoation Map

- 2019 BRN Roads
- Abandoned (1)
- Postponed (9)
- Complete - RC (16)
- Complete - LDC (1)
- Complete - Piezo (3)

N

0 60 120 240 Meters

DATE: 3/25/2020	MINE OPERATION: Line Creek
SCALE: 1:9,523	COORDINATE SYSTEM: NAD 1983 UTM Zone 11N

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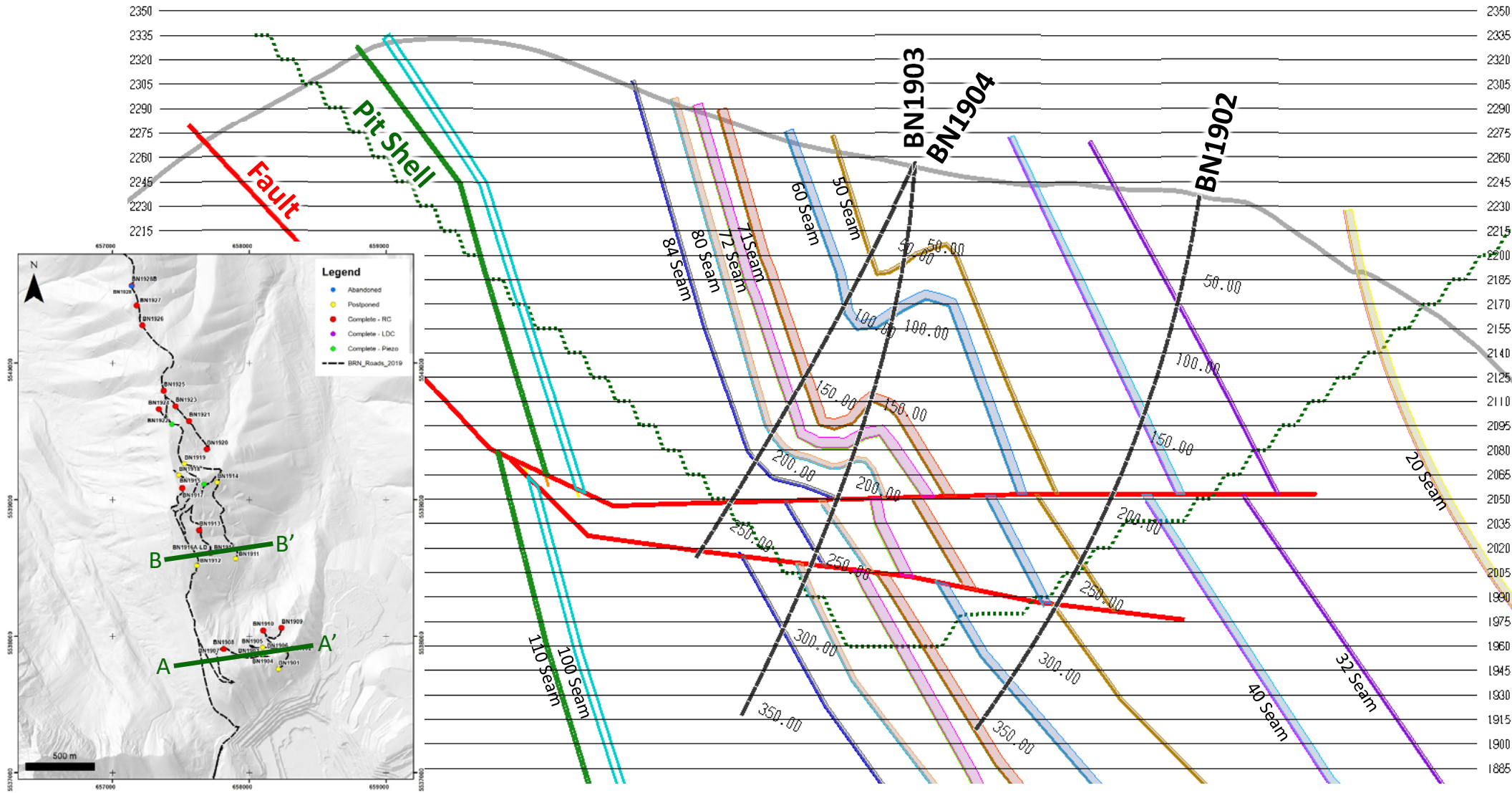
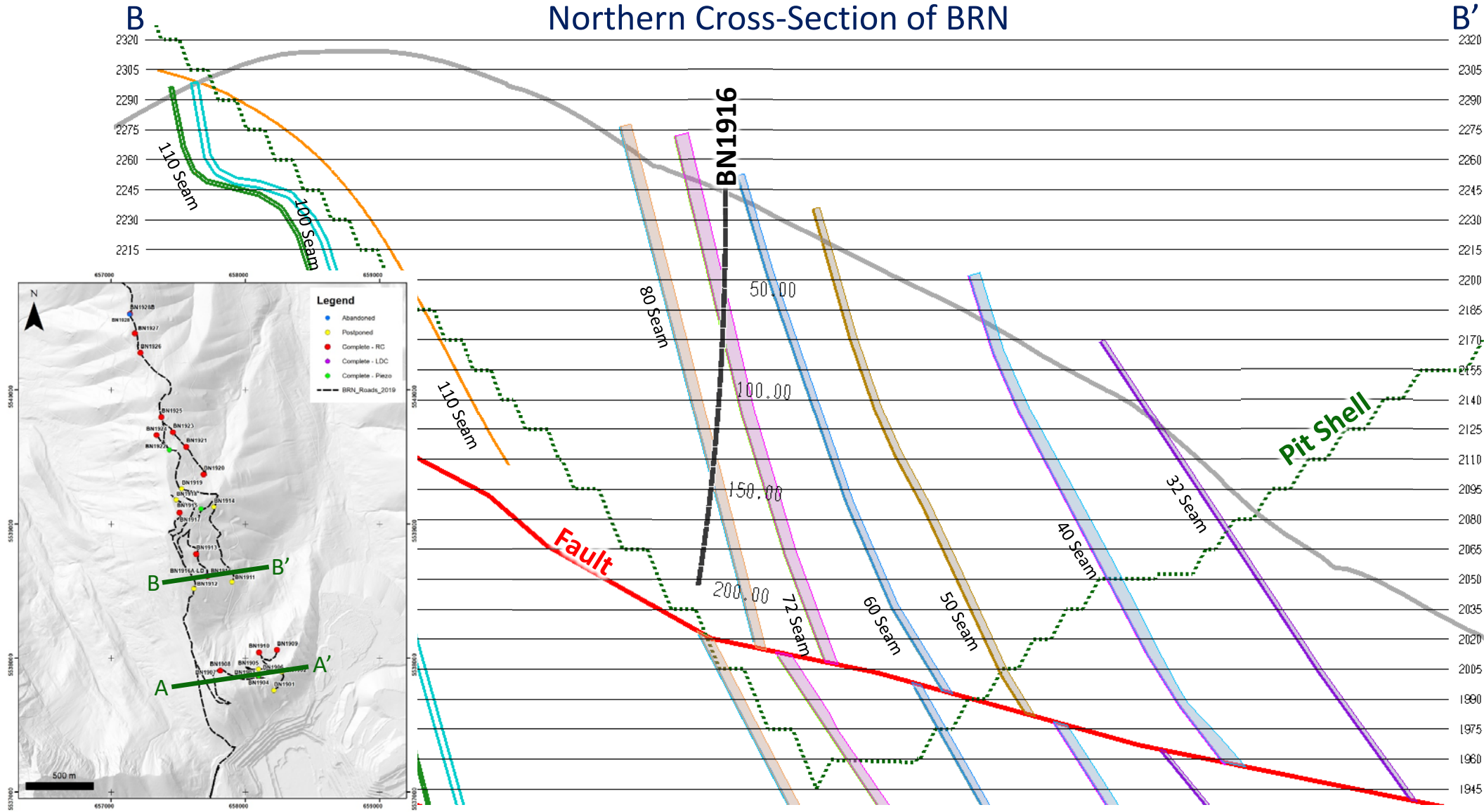
Southern Cross-Section of BRN



Northern Cross-Section of BRN



At the time this report was written, the following data was outstanding:

- All open hole density logs
- 11 Composite Certificates
    - Note:
        - No samples were recovered in BN1908.
        - No composite analysis were run in BN1922 due to poor sample recovery.
        - The bulk samples from the LDC hole will be used for the composite analysis rather than the samples collected from the pilot hole BN1916.
- Bulk sample analysis and carbonization results.

This data will be provided as it becomes available to complete the 'Line Creek Operations, Assessment Report, 2019 Burnt Ridge North Exploration Program'.

2019 BRN Exploration Program Statement of Expenditure

Personnel		Days	Rate	Subtotal	Total
Teck Resources Limited - Field Days			*		
Oct 1 - Oct 30	Senior Geologist Supervisor	2	$937.50	$1,875	
July 10 - Aug 19	Geologist	2	$675.00	$1,350	
July 10 - Nov5	Project Geologist	44	$675.00	$29,700	
Aug 12 - Nov 8	Project Geologist	36	$675.00	$24,300	
Oct 15 - Oct 19	Principal Geologist	5	$937.50	$4,688	
Aug 26 - Sept 30	Geotechnical Engineer	1	$675.00	$675	
Sept 16 - Oct 11	Utility Truck Driver	2	$300.00	$600	
Oct 28 - Oct 30	Technician Survey	1	$300.00	$300	
** Day rates are approximate for Teck personnel*					**$63,488**
Teck Resources Limited - Office Days			*		
Field Preparation	Senior Geologist Supervisor	7	$937.50	$6,563	
	Geologist	61	$675.00	$41,175	
	Project Geologists	20	$675.00	$13,500	
Data Management	Project Geologists	40	$675.00	$27,000	
	Geologist	30	$675.00	$20,250	
Geophysical Interpretation and Survey Design	Geologist	20	$675.00	$13,500	
	Project Geologists	10	$675.00	$6,750	
	Senior Technician Geology	10	$675.00	$6,750	
	Senior Project Geologist	7	$937.50	$6,563	
GIS & Logging Software Set Up	GIS Analyst	1	$525.00	$525	
Interpretation and Reporting	Project Geologist	10	$675.00	$6,750	
	Geologist	30	$675.00	$20,250	
Permitting	Coordiator Environment	14	$675.00	$9,450	
** Day rates are approximate for Teck personnel*					**$179,025**

Consulting Services		Number	Rate	Subtotal	
Field Consulting Services					
	Construction Advisor	51	$2,084.00	$106,284	
	Independent Environmental Monitor	29	$1,125.33	$32,635	
					$138,919

Transportation		Number	Rate	Subtotal	
Vehicle Rental					
	Truck Rental	1	$17,981.90	$17,982	
	Oil change and truck maintenance	1	$145.39	$145	
					$18,127

Analytical Services				Subtotal	
Sample Analysis					
	Plys, Composite, and Bulk Sample Analysis	1	$179,233.00	$179,233	
	Rush Ply LT analysis	1	$12,008.00	$12,008	
	Petrographic Analysis	1	$13,500.00	$13,500	
	Mini-Wash of bulk sample	1	$36,500.00	$36,500	
	Carbonization Testing	1	$16,000.00	$16,000	
					$257,241

Drilling and Geophyscial Logging				Subtotal	
Drilling					
	RC Drilling	1	$655,975.99	$655,976	
	LDC Drilling	1	$118,777.60	$118,778	
	Piezometer Installation	1	$108,028.36	$108,028	
Geophysical Logging					
	Geophysical Logging Company	1	$157,841.74	$157,842	
					$1,040,624

Field Costs				Subtotal	
Construction					
	Construction Crew and Equipment	1	$300,954.95	$300,955	
First Aid					
	First Aid Attendent and Equipment	1	$90,303.78	$90,304	
Piezo Installation and Set-up					
	Environmental Services Consultant	1	$17,879.00	$17,879	
Other					
	Danger Tree Falling	1	$11,148.44	$11,148	
	Washroom Facilities	1	$4,005.38	$4,005	
					$424,292

Equipment				Subtotal	
Field Equipment and Supplies					
	Sample tags and bags	1	$19,521.36	$19,521	
	Piezo Equipment	1	$23,328.00	$23,328	
					$42,849

Total Expenditures	$2,164,564

Teck Coal Core Logging Form

Teck

PROJECT: LCO LDC BRN HOLEID: BN1916A-LD LOGGED BY: PAM DATE: 17-Oct-2019 PAGE

Hole ID	Run Number	Box - As cored	DEPTH From m	DEPTH To m	Interval m	Core Recovery m	Core Recovery %	Seam	Lithology	Colour	Hardness	Broken Texture	Comments
BN1916A-LD	1	1	25.50	26.90	1.40	1.35	96%	72	Coal	Black	Soft-Med	Intact Brittle/Fractured	Locally weakly foliated
BN1916A-LD	1	1	26.90	27.00	0.10	0.10	100%	72	Coal	Black	Med-Hard	Intact Broken	Relatively massive, dull coal; minor vitreous
BN1916A-LD	1	2	27.00	28.50	1.50	1.50	100%	72	Coal	Black	Med-Hard	Intact	Relatively massive, dull coal; minor vitreous; some low angle banding at ~70 deg to CA; local steep CA parallel fractures/clay seams
BN1916A-LD	2	1	28.50	29.20	0.70	0.40	57%	72	Coal	Black	Med-Hard	Intact Broken	Relatively massive, dull coal; minor vitreous; increasingly foliated
BN1916A-LD	2	1	29.20	29.60	0.40	0.40	100%	72	Coal	Black	Soft-Med	Broken Faulted	Broken zone at ~70 deg to CA
BN1916A-LD	2	1	29.60	30.00	0.40	0.40	100%	72	Coal	Black	Soft-Med	Intact Broken	Relatively massive, dull coal; minor vitreous; fractures at ~45 deg to CA; tr-2% fine-gr dissem py; locally foliated
BN1916A-LD	2	2	30.00	31.50	1.50	1.30	87%	72	Coal	Black	Med-Hard	Intact Broken	Relatively massive, dull coal; minor vitreous; fractures at ~45 deg to CA; tr-2% fine-gr dissem py; locally foliated
BN1916A-LD	3	1	31.50	32.80	1.30	1.50	115%	72	Coal	Black	Med-Hard	Intact	Generally massive but locally thin banded, dull and vitreous (bright); high angle to CA; trace py
BN1916A-LD	3	2	32.80	34.00	1.20	1.20	100%	72	Coal	Black	Med-Hard	Intact	Generally massive but locally thin banded, dull and vitreous (bright); high angle to CA; trace py
BN1916A-LD	4	1	34.00	35.50	1.50	1.50	100%	72	Coal	Black	Hard	Intact	Generally massive; occasional irregular black-dk brn coaly mudstone/clay seam/fractures at high angle to CA
BN1916A-LD	4	2	35.50	37.00	1.50	1.50	100%	72	Coal	Black	Med-Hard	Intact	Generally massive; some vitreous; increased foliation; few black-dk brn coaly mudstone/clay seam/fractures (<1 cm)
BN1916A-LD	5	1	37.00	38.50	1.50	1.50	100%	72	Coal	Black	Med-Hard	Intact	As above; less vitreous; trace py; weakly foliated
BN1916A-LD	5	2	38.50	39.70	1.20	1.20	100%	72	Coal	Black	Hard	Intact	More massive dull; trace-1% py on fracture surfaces; weakly foliated
BN1916A-LD	6	1	39.70	41.20	1.50	1.50	100%	72	Coal	Black	Med-Hard	Intact	Occasional <1cm dk brn clay seam (as above) ~ parallel to CA; slightly more vitreous; locally banded; trace-1% fine gr dissem py
BN1916A-LD	6	2	41.20	42.70	1.50	1.50	100%	72	Coal	Black	Med-Hard	Intact	As above
BN1916A-LD	7	1	42.70	44.20	1.50	1.50	100%	72	Coal	Black	Med-Hard	Intact	As above
BN1916A-LD	7	2	44.20	45.20	1.00	1.00	100%	72	Coal	Black	Med-Hard	Intact	As above; increased foliation
BN1916A-LD	7	2	45.20	45.70	0.50	0.50	100%	72	Coal	Black	Hard	Intact	Thin banded to massive (less foliated) dull and vitreous/bright (10%) coal
BN1916A-LD	8	1	45.70	47.20	1.50	1.50	100%	72	Coal	Black	Hard	Intact	As above banded coal
BN1916A-LD	8	2	47.20	48.70	1.50	1.50	100%	72	Coal	Black	Hard	Intact	As above banded coal
BN1916A-LD	9	1	48.70	49.00	0.30	0.30	100%	72	Coal	Black	Soft-Med	Intact	As above; weakly banded coal ~80 deg to CA
BN1916A-LD	9	1	49.00	50.20	1.20	1.20	100%	72	Coal	Black	Med	Broken Faulted Foliated/Sheared	Foliated and sheared interval; carbonaceous; upper contact at ~75 deg to CA
BN1916A-LD	9	2	50.20	50.50	0.30	0.30	100%	72	Coal	Black	Soft-Med	Broken Faulted Foliated/Sheared	As above; carbonaceous
BN1916A-LD	9	2	50.50	51.70	1.20	1.20	100%	72	Coal	Black	Med	Intact Broken	More massive, dull coal; weakly carbonaceous; trace py; less foliated
BN1916A-LD	10	1	51.70	53.20	1.50	1.50	100%	72	Coal	Black	Med-Hard	Intact	As above
BN1916A-LD	10	2	53.20	54.70	1.50	1.50	100%	72	Coal	Black	Med-Hard	Intact	As above; generally dull but locally more vitreous; weakly carbonaceous; trace-1% py
BN1916A-LD	11	1	54.70	55.40	0.70	0.70	100%	72	Coal	Black	Soft-Med	Intact Foliated/Sheared	As above; generally dull; some vitreous; trace py; well foliated/sheared - soft
BN1916A-LD	11	1	55.40	55.50	0.10	0.10	100%	72	Coal/Carb Mudstone	Black-Dark Brn	Med-Soft	Intact	Dull coal with thin, soft, dark brn clay (mudstone) seams
BN1916A-LD	11	1	55.50	56.20	0.70	0.70	100%	72	Coal	Black	Med-Hard	Intact	More vitreous (bright); massive to thin banded at ~50 deg to CA; foliated
BN1916A-LD	11	2	56.20	56.40	0.20	0.20	100%	72	Coal	Black	Med-Hard	Intact	As above
BN1916A-LD	11	2	56.40	57.70	1.30	1.30	100%	72	Coal	Black	Med-Hard	Intact	Weakly foliated 56.4-56.9m; more massive; some sugary thin vitreous bands; trace py
BN1916A-LD	12	1	57.70	59.20	1.50	1.50	100%	72	Coal	Black	Med-Hard	Intact	Similar to above but more banded at ~75 deg to CA; few drk brn clay seams at 58.8m
BN1916A-LD	12	2	59.20	60.70	1.50	1.50	100%	72	Coal	Black	Med-Hard	Intact	As above; banded
BN1916A-LD	13	1	60.70	61.70	1.00	1.00	100%	72	Coal	Black	Med	Intact Foliated	As above; massive to weakly banded; trace py; increasing foliation towards lower contact (~80 deg to CA)
BN1916A-LD	13	1	61.70	62.10	0.40	0.30	75%	72	Coal	Black	Soft-Med	Rubbly/Sheared	Faulted
BN1916A-LD	13	2	62.10	63.70	1.60	1.60	100%	72	Coal	Black	Soft-Med	Rubbly/Foliated	Broken, rubbly, foliated/fauted interval; less rubbly over lower 20cm
BN1916A-LD	14	1	63.70	64.70	1.00	1.00	100%	72	Coal	Black	Med-Soft	Intact Foliated	Lower contact at 75 deg to CA; sharp 1 cm sheared contact with mudstone
BN1916A-LD	14	1	64.70	65.10	0.40	0.40	100%		Silty Mudstone	Med Dark Brn-Grey	Hard	Intact	Massive; no laminations
BN1916A-LD	14	2	65.10	66.00	0.90	0.90	100%		Silty Mudstone	Med Dark Brn-Grey	Hard	Broken	As above
BN1916A-LD	15	1	66.00	67.50	1.50	1.50	100%		Silty Mudstone	Med Dark Brn-Grey	Hard	Intact	As above
BN1916A-LD	15	1	67.50	67.60	0.10	0.10	100%		Coal	Black	Med-Soft	Broken	Stringers
BN1916A-LD	15	2	67.60	68.40	0.80	0.80	100%		Silty Mudstone	Med Dark Brn-Grey	Hard	Broken	
			25.50	64.70	39.20	38.75	99%	72	Coal				

Teck Coal Core Logging Form

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Hole ID	Run Number	Box - As cored	DEPTH From m	DEPTH To m	Interval m	Core Recovery m	Core Recovery %	Seam	Lithology	Colour	Hardness	Broken Texture	Comments
BN1916A-LD	1	1	114.20	115.60	1.40	1.40	100%	81	Coal	Black	Med-Hard	Intact	Generally massive with eweak thin banding defined by dull and minor (10%) vitreous lam/bands; high angle to CA; trace py on foliation
BN1916A-LD	1	1	115.60	115.70	0.10	0.10	100%	81	Silty Mudstone	Black-Dark Brn	Hard	Intact	Seen in box 2 - assume extends into box 1. Dark brn streak, hard, massive silty mudstone; vitreous partings throughout
BN1916A-LD	1	2	115.70	115.90	0.20	0.20	100%	81	Silty Mudstone	Black-Dark Brn	Hard	Intact	Dark brn streak, hard, massive silty mudstone; ~10-20cm thick; vitreous partings throughout; ~80 deg to CA
BN1916A-LD	1	2	115.90	117.10	1.20	1.20	100%	81	Coal	Black	Med-Hard	Intact	As above
BN1916A-LD	1	2	117.10	117.20	0.10	0.10	100%	81	Silty Mudstone	Black-Dark Brn	Hard	Intact	As above; ~5-15cm thick split; abundant mm scale carb/coal seams and fracture fillings; possibly same split as noted above?
BN1916A-LD	2	1	117.20	118.70	1.50	1.50	100%	81	Coal	Black	Med-Hard	Intact	As above; banded with increased vitreous/bright coal content (20-25%); 75 deg to CA; over basal 20 cms increase in vitreous coal partings and fractures; sharp lower contact seen on box 2 at 72 deg to CA
BN1916A-LD	2	2	118.70	120.20	1.50	1.50	100%		Silty Mudstone	Med Brn	Hard	Intact	Upper contact with 81SM visible in box 2; massive silty mudstone with occasional vitreous partings/fractures
BN1916A-LD	3	1	120.20	121.70	1.50	1.50	100%		Silty Mudstone	Med Brn	Hard	Intact	As above; increase in vitreous partings
BN1916A-LD	3	2	121.70	123.20	1.50	1.50	100%		Silty Mudstone	Med Brn	Hard	Intact	As above
BN1916A-LD	4	1	123.20	124.70	1.50	1.50	100%		Silty Mudstone	Med Brn	Hard	Intact	As above; 2cm thick coal bed at 123.2m at 72 deg to CA; abundant anatamosing coal partings (80 deg to CA) and fracture fillings
			114.20	118.70	4.50	4.50	100%	81	Coal				
BN1916A-LD	4	2	124.70	125.40	0.70	0.70	100%		Silty Mudstone	Med Brn	Hard	Intact	As above; increased carb/coal partings and fracture fillings towards the 80SM contact; sharp lower contact at 80 deg to CA
BN1916A-LD	4	2	125.40	126.20	0.80	0.80	100%	80	Coal	Black	Med	Intact	Sharp upper contact; massive to banded; true thickness around 30cm; steep to CA
BN1916A-LD	5	1	126.20	127.20	1.00	1.00	100%	80	Silty Mudstone	Med Brn	Hard	Intact	As above; ~5cm thick coal parting at 126.7 (75 deg to CA); sharp lower contact at 75 deg to CA; true thickness around 30cm - possible equivalent to overlying mudstone
BN1916A-LD	5	1	127.20	127.70	0.50	0.50	100%	80	Coal	Black	Med-Soft	Intact (Broken)	Weakly sheared at upper contact; foliated dull coal with minor vitreous coal; broken to rubbly
BN1916A-LD	5	2	127.70	129.20	1.50	1.50	100%	80	Coal	Black	Med-Soft	Intact Broken	Becomes increasingly thin banded wih inceasing vitreous content (5-10%)
BN1916A-LD	6	1	129.20	130.70	1.50	1.50	100%	80	Coal	Black	Med-Hard	Intact	Massive dull becoming thinly banded dull and vitreous coal beyond around 129.9m
BN1916A-LD	6	2	130.70	131.70	1.00	0.80	80%	80	Coal	Black	Med-Hard	Intact	Thinly banded
BN1916A-LD	6	2	131.70	132.20	0.50	0.50	100%	80	Coaly Mudstone	Black	Hard	Intact	Carbonaceous/sooty, hard, black mudstone with a distinctive fine grainular/nodular texture (<1.5mms)
BN1916A-LD	7	1	132.20	133.00	0.80	0.80	100%	80	Coaly Mudstone	Black	Hard	Intact	As above; lower contact at 70 deg to CA
BN1916A-LD	7	1	133.00	133.70	0.70	0.70	100%	80	Coal	Black	Med-Hard	Intact	Thin banded; as above
BN1916A-LD	7	2	133.70	135.20	1.50	1.50	100%	80	Coal	Black	Med-Hard	Intact	Thin banded; increased vitreous content 10-20% locally; banding at 60 deg to CA at 135.0m
BN1916A-LD	8	1	135.20	136.70	1.50	1.50	100%	80	Coal	Black	Med-Hard	Intact	Thin banded; dull and vitreous coal; as above
BN1916A-LD	8	2	136.70	138.20	1.50	1.50	100%	80	Coal	Black	Med-Hard	Broken	Thin banded; as above
BN1916A-LD	9	1	138.20	139.70	1.50	1.50	100%	80	Coal	Black	Med-Hard	Intact (Broken)	Thin banded; as above
BN1916A-LD	9	2	139.70	141.20	1.50	1.50	100%	80	Coal	Black	Med-Hard	Intact	Thin banded; as above; banding at 70 deg to CA
BN1916A-LD	10	1	141.20	141.55	0.35	0.35	100%	80	Coal	Black	Hard	Broken	Vitreous.
BN1916A-LD	10	1	141.55	142.80	1.25	1.25	100%	80	Coal	Black	Hard	Intact	Vitreous, minor pyrite nodules, fractures at 25 & 40 deg to CA, minor thin (few mm thick) interbeds of brighter band coal
BN1916A-LD	10	2	142.80	144.10	1.30	1.30	100%	80	Coal	Black	Hard	Intact	Vitreous, minor white mineral @ 143.6 m that forms a thin layer in part of the coal, 3 fractures at 35 deg to CA
BN1916A-LD	10	2	144.10	144.20	0.10	0.10	100%	80	Coal	Black	Hard	Broken	Vitreous.
BN1916A-LD	11	1	144.20	144.60	0.40	0.40	100%	80	Coal	Black	Hard	Broken	Vitreous, broken into large chunks.
BN1916A-LD	11	1	144.60	144.85	0.25	0.25	100%	80	Coal	Black	Med-Hard	Intact	Some fine grained dull coal mixed with vitreous coal (dominant lithology).
BN1916A-LD	11	1	144.85	145.40	0.55	0.55	100%		Coaly Mudstone	Black-Brown	Hard	Intact	Upper contact with coal at ~50 deg to CA.
BN1916A-LD	11	1	145.40	145.50	0.10	0.10	100%		Shale	Dark Grey	Hard	Broken	
			125.40	144.85	19.45	19.25	99%	80	Coal				