

**BC Geological Survey
Coal Assessment Report
1076**



COAL ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: 2021 Rocky Creek Coal Assessment Report

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SIGNATURE(S): Vincent Li Yulin Li

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): CX-9-062-1642079, 2020.07.17

YEAR OF WORK: 2021

PROPERTY NAME: Rocky Creek

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

1071915 1071916 1071918 1071919 1071920 1071922 1071923 1071927 1071928 1071934 1071936

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: not available

MINING DIVISION: Liard

NTS / BCGS: 093P031, 093P021, 093P022

LATITUDE: 55 ° 17 ' 13.25 "

LONGITUDE: 121 ° 49 ' 55.44 " (at centre of work)

UTM Zone: 10N **EASTING:** 574574.14 **NORTHING:** 6126971.71

OWNER(S): CTI Plus Resources Ltd.

MAILING ADDRESS: 2nd Floor, 555 Burrard Street, Vancouver, BC V7X 1M8

OPERATOR(S) [who paid for the work]: CTI Plus Resources Ltd.

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REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**)

Coal, Quality, Geochemistry, Resource, Measured, Indicated, Inferred, Washability, HCC, PCI, Bituminous, Petrography, Acid-Base Accounting, Metal Leaching, Acid Rock Drainage, Sulphide, Sulphate, Mudstone

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:

620, 621, 698 - BP Exploration Canada Ltd. (1979 - 1985); and 674 - Manalta Coal Ltd. (1975)

SUMMARY OF TYPES OF WORK IN THIS REPORT		EXTENT OF WORK (in metric units)	ON WHICH TENURES
GEOLOGICAL (scale, area)			
	Ground, mapping		
	Photo interpretation		
GEOPHYSICAL (line-kilometres)			
	Ground		
	(Specify types)		
	Airborne		
	(Specify types)		
	Borehole		
	Gamma, Resistivity,		
	Resistivity		
	Caliper		
	Deviation		
	Dip		
Others (specify)			
DRILLING			
	Core		
	Non-Core		
SAMPLING AND ANALYSES			
	Proximate 347 samples		1071915 1071916 1071918 1071919
	Ultimate 70 samples		as above
	Petrographic 76 samples		as above
	Vitrinite reflectance 76 samples		as above
	Coking		
	Wash tests 142 samples		as above
PROSPECTING (scale/area)			
PREPARATORY/PHYSICAL			
Line/grid (km)			
Trench (number, metres)			
Bulk sample(s)			

All or parts of Sections 3.5, 3.6, 3.7, 3.8, 7 and Appendices B, C, D, E, F, G, and K remain confidential under the terms of the Coal Act Regulation and have been removed from the public version.

http://www.bclaws.ca/civix/document/id/complete/statreg/25_1_2004

2021 Rocky Creek Coal Assessment Report

Peace River Land District and Liard Mining Division
Northeast BC, Canada

Coal License Numbers

1071915	1071920	1071925	1071934	1071941
1071916	1071921	1071927	1071936	1071942
1071917	1071922	1071928	1080729	1080728
1071918	1071923	1071931	1071937	1080730
1071919	1071924	1071932	1071940	1080731

BCGS Map No.: 093P/031, 093P/032, 093P/021, 093P/022, 093P/023
UTM NAD83 Zone 10: Easting : 571307 - 592139
Northing : 6135413 - 6119575
Latitude: 55°12'58.72"N - 55°21'29.46"N
Longitude: 121°52'35.47"W - 121°33'3.07"W

Prepared for: Mineral Titles Branch, Province of British Columbia



Prepared by: Vincent Li, P.Eng., P.Geo. Yulin Li, P.Geol.

CTI Plus Resources Ltd.

2021.12.20

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1 INTRODUCTION

This report describes coal sample analysis and result, geochemical sample analysis and result, and coal resource estimation of the Rocky Creek coal property in 2021.

CTI Plus Resources Ltd. (CTI Plus) wholly owns the Rocky Creek coal property, located approximately 65 km south of the town of Chetwynd, BC (Figure 1). The exploration drilling and sampling were occurred within coal licenses of West Rocky Creek coal property in 2020.

CTI Plus has not conducted the physical field work of coal exploration in Rocky Creek coal property in 2021.



— Road
— CN/CP Railway

0 100 200 300 400 500 km

CTI Plus Resources Ltd.

**Rocky Creek Coal Property
Location Map**

Prepared by:	Vincent Li, P.Eng., P.Geo.	Reviewed by:	Yulin Li, P.Geo.
Scale:	1 : 10,000,000	Figure No.:	1

2. PROPERTY AND LOCATION

2.1 Ownership and Property Description

CTI Plus wholly owns the Rocky Creek coal property, that is composed of 25 coal tenures, licensed in October 2019 and January 2020 respectively.

The Rocky Creek coal property is separated into the West Rocky Creek and East Rocky Creek by the Sukunka River (Figure 2). The property of West Rocky Creek is grouped as Northwest Block (NW Block) and Southeast Block (SE Block). The property of East Rocky Creek is named as the East Block (E Block) in this report. Coal licenses of the Rocky Creek coal property are summarized in Table 1, with the aggregate area of 10981.22 ha.

CTI Plus' 2020 coal exploration work took place on the following licenses of NW Block and SE Block:

NW Block	1071915	1071916	1071918	1071919	1071920
	1071922	1071923	1071927	1071928	
SE Block	1071934	1071936			

2.2 Location and Access

The Rocky Creek coal property is located approximately 65 km south of Chetwynd, northeast BC (Figure 1), within the map-area 093P/031-032 and 093P/021-023 of Canada's National Topographic System. The coordinates at the centre of the property are below:

West Rocky Creek: UTM Zone 10, NAD 83

NW Block: 574164 (Easting)
6127316 (Northing)

SE Block: 579518 (Easting)
6122249 (Northing)

East Rocky Creek: UTM Zone 10, NAD 83

East Block: 586021 (Easting)
6127864 (Northing)

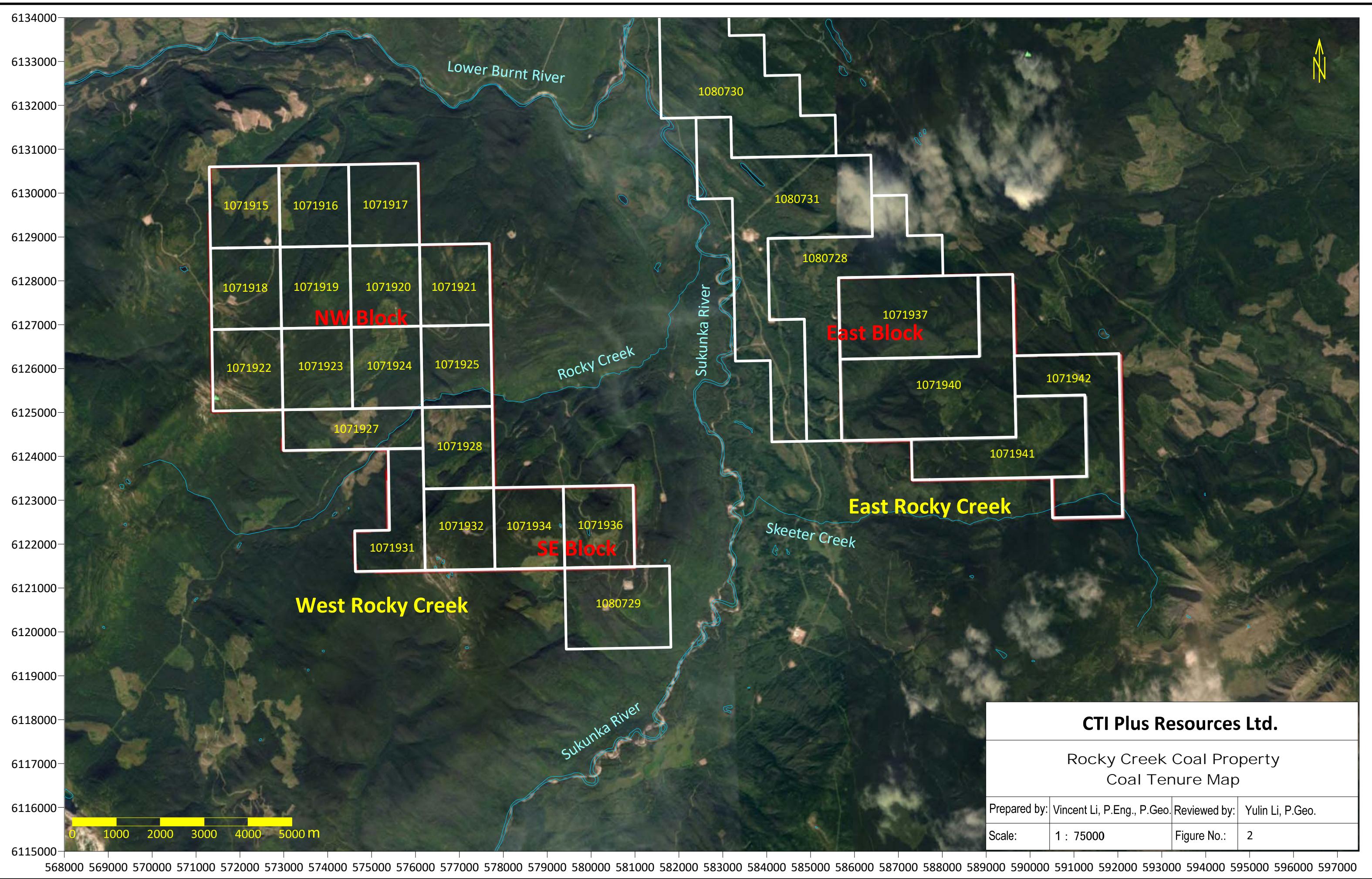


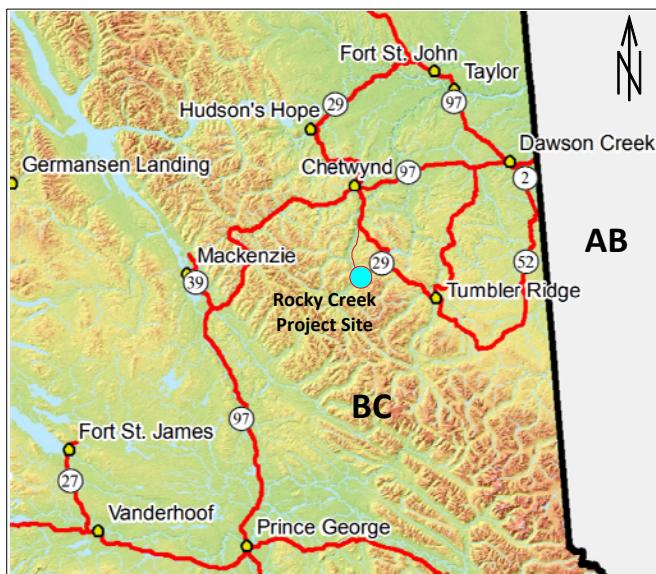
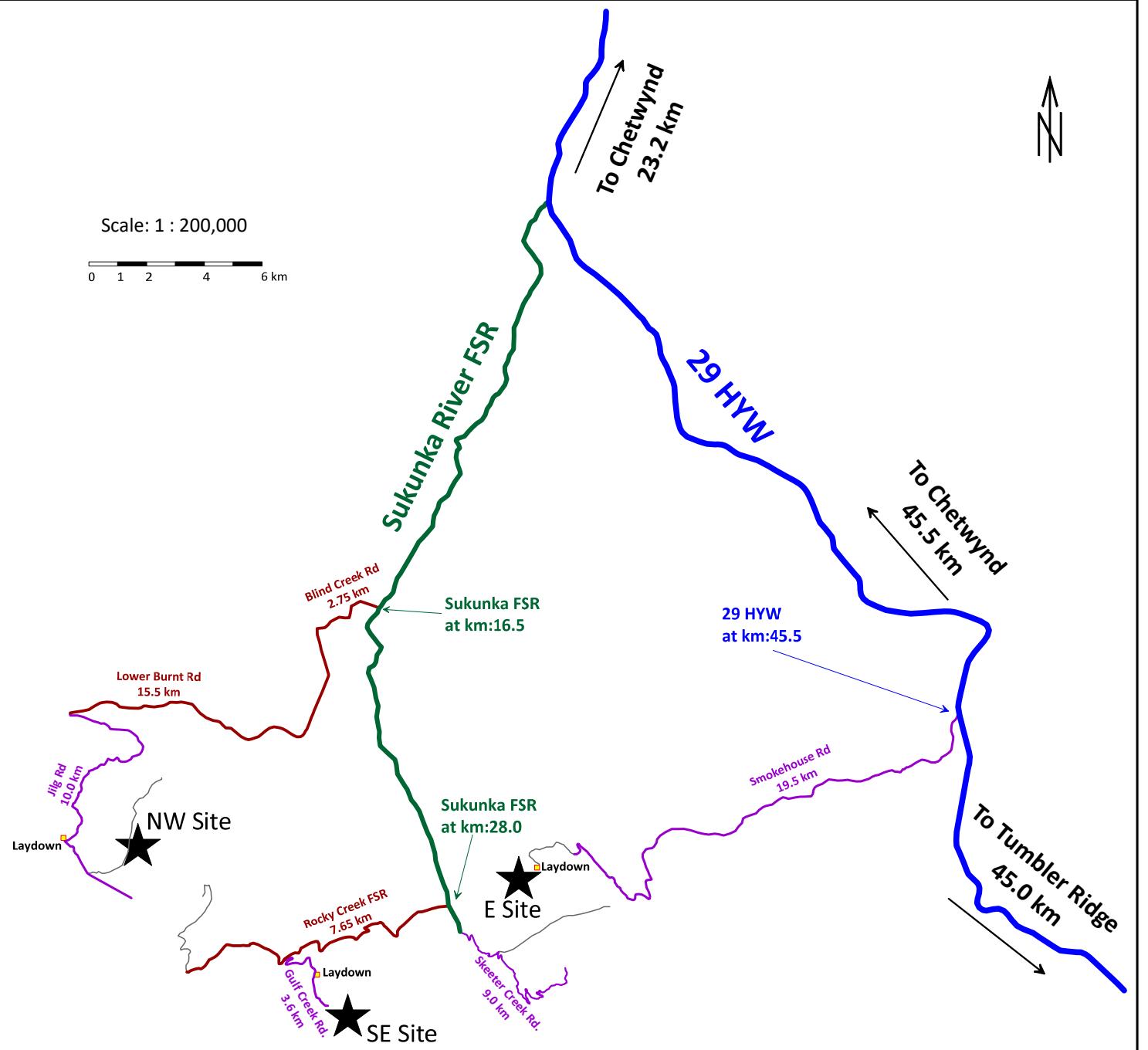
Table 1 Summary of Coal Tenures at West and East Rocky Creek

Block	Title Number	Owner	Title Type	Title Sub Type	Issue Date	Good To Date	Status	Area (ha)
NW Block	1071915	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	294.59
	1071916	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	294.59
	1071917	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	294.59
	1071918	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	294.72
	1071919	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	294.72
	1071920	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	294.71
	1071921	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	294.71
	1071922	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	294.84
	1071923	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	294.84
	1071924	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	294.84
	1071925	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	294.84
	1071927	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	294.93
	1071928	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	294.96
	1071931	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	295.07
	1071932	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	295.09
SE Block	1071934	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	295.09
	1071936	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	295.09
	1080729	286671 (100%)	Coal	License	2021/JAN/25	2022/JAN/25	GOOD	442.83
E Block	1071937	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	589.56
	1071940	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	884.64
	1071941	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	516.21
	1071942	286671 (100%)	Coal	License	2019/OCT/17	2022/OCT/17	PROTECTED	516.16
	1080728	286671 (100%)	Coal	License	2021/JAN/25	2022/JAN/25	GOOD	810.54
	1080730	286671 (100%)	Coal	License	2021/JAN/25	2022/JAN/25	GOOD	1030.39
	1080731	286671 (100%)	Coal	License	2021/JAN/25	2022/JAN/25	GOOD	1178.67
Total								10981.22

Highways 29 (29 HYW) and 97 (97 HYW) intersect in the town of Chetwynd. Highway 97 connects the Chetwynd to Prince George and Dawson Creek. Highway 29 connects Tumbler Ridge and Hudson's Hope. The CN Rail line branches off in three directions from Chetwynd, northward to Fort St. John, eastward to Dawson Creek, and westward through the Rockies to Prince George (Figure 1).

The property of NW Block is accessed at 8.0 km on the Jilg Road via the road traffic from the town of Chetwynd to south 23.5 km along 29 HYW, then turning to the Sukunka Forest Service Road (FSR) continually south forward approximately 16.5 km, then turning west on the Lower Burnt Road 15.5 km. The SE Block is accessed at 3 km on the Gulf Creek Road which is connected at 7.65 km of the Rocky Creek FSR from Sukunka FSR at 28 km. The E Block is accessed at approximately 19.5 km on Smokehouse Road which runs from the east of the property and pulling at 45.5 km of 29 HYW.

The access road network to Rocky Creek coal property is illustrated in Figure 3.



CTI Plus Resources Ltd.

Rocky Creek Coal Property Access Road Network Map

Prepared by:	Vincent Li, P.Eng., P.Geo.	Reviewed by:	Yulin Li, P.Geo.
Scale:	1 : 200,000	Figure No.:	3

3 COAL QUALITY ANALYSIS AND RESULT

3.1 Sampling for Coal Quality and Washability Testing

CTI Plus submitted the Coal Assessment Report of 2020 drilling program in May 2021. Coal Samples collected from 2020 drilling were not completed at the time the Coal Assessment Report was submitted. This part of the report covers the results of coal samples testing and analyses.

Coal samples collected from 2020 drilling program include coal samples from trench and coal samples from core. Coal samples from core are subjected to coal quality test, washability test in Birtley Coal & Minerals Testing Division in Calgary, Alberta and petrography analysis in Pearson Coal Petrography in Victoria, BC.

3.2 Trench Samples and Test Results

There are few coal outcrops along the existing roadside in both of NW and SE blocks. During the trail and drillhole pad construction, there were more fresh cut coal seams exposed. To understand more of the coal geology and coal quality, some trenches were dug and coal samples were taken. The trenches were mechanically dug by an excavator to fully expose the top and bottom of coal seam. Geologists described the exposed coal section and then took one channel sample from the exposed coal seam. The small trench sample was taken by cutting a small trench which is 10-15 cm wide and 5-10 cm deep perpendicular to the coal seam from the top to bottom. In two outcrops with thicker coal seams exposed, about 500 kg bulk samples were also taken.

The purpose of collecting channel samples and bulk samples from the coal outcrop trenches is to understand the coking coal quality and size of coal if the coal is not oxidized or weakly oxidized. We tested the channel samples where the bulk samples were taken in the two main coal seams. The sample test results indicate that the coal seams at the outcrop are oxidized. Therefore, we decided not to test the bulk coal samples and the rest of channel samples. Table 2 and Table 3 are the results of two channel samples were tested.

Table 2 Channel Sample # 33811 Lab Test Results

SCREEN SIZE ANALYSIS, air dried basis						
SIZE	WT(g)	WT%	ASH %	CUM WT%	CUM ASH%	
+ 50mm	0	0.00	0.00	0.00	0.00	
50 x 25mm	316	1.99	59.25	1.99	59.25	
25 x 12.5mm	1542	9.72	58.51	11.71	58.64	
12.5 x 6.3mm	2700	17.02	52.12	28.73	54.78	
6.3 x 4mm	1437	9.06	41.91	37.79	51.69	
4 x 2mm	2973	18.74	37.45	56.53	46.97	
2mm x 0	6896	43.47	31.59	100.00	40.28	

Simulated HEAD RAW ANALYSIS, air dried basis										
ADM%	MOIST %	ASH %	VM %	FC %	S %	Cal/g	FSI	SG	LT%	BASIS
7.94	3.85	40.24	18.21	37.70	0.20	3888	0.0	1.73	4.9	adb
	11.48	37.04	16.76	34.71	0.18	3579				arb
		41.85	18.94	39.21	0.21	4044				db

Table 3 Channel Sample # 33808 Lab Test Results

SCREEN SIZE ANALYSIS, air dried basis						
SIZE	WT(g)	WT%	ASH %	CUM WT%	CUM ASH%	
+ 50mm	2219	7.40	70.89	7.40	70.89	
50 x 25mm	2397	7.99	52.46	15.39	61.32	
25 x 12.5mm	5242	17.47	42.46	32.86	51.29	
12.5 x 6.3mm	6863	22.88	36.77	55.73	45.33	
6.3 x 4mm	2907	9.69	34.81	65.42	43.77	
4 x 2mm	3579	11.93	29.77	77.35	41.61	
2mm x 0	6795	22.65	25.57	100.00	37.98	

Simulated HEAD RAW ANALYSIS, air dried basis										
ADM%	MOIST %	ASH %	VM %	FC %	S %	Cal/g	FSI	SG	LT%	BASIS
4.46	3.38	36.64	19.99	39.99	0.22	4211	0.0	1.70	2.5	adb
	7.69	35.01	19.10	38.21	0.21	4023				arb
		37.92	20.69	41.39	0.23	4358				db

Light Transmittance 2.5% or 4.9% of coal is considered severely oxidized.

3.3 Coal Core Quality Test Plan

Coal core samples were undergone extensive and detailed test, especially if the coal core sample is not oxidized. For major coal seams such as Pump, Grizzly and Upper Lake in NW Block and C Upper, C Lower, B Upper and B Lower in SE Block, all samples are tested raw coal quality including proximate analysis, sulphur, FSI and bulk density, as

well as washability test by different sizes and number of SGs (specific gravity). The ultra fines were also tested by Froth and Floatation.

The raw coal quality on some samples from the minor coal seams or thinner than 0.3 m coal seams were tested as well, but only selected samples were undergone washability test with less size groups and less SGs.

For the clean coal of major coal seams, by considering the target ash of potential final coking coal product as well as overall yield of clean coal product, cut points of SGs were selected to prepare the Clean Coal Composite (CCC) samples for further testing. The clean coal composite testing was focus on the items affecting coking coal assessment, including petrography, rheology (Geisler Fluidity and Ruhr Dilatation), ultimate analysis, ash chemistry, ash fusion, as well as proximate analysis, sulphur and sulphur forms, phosphorus, fluorine, calorific values and HGI.

For the clean coal of minor coal seams, by considering the target ash of potential final coking coal product as well as overall yield of clean coal product, cut points of SGs were selected to prepare the Clean Coal Composite (CCC) samples for further testing. Only potentially mineable coal seams were selected for clean coal sample testing. In some cases, several samples from different drillholes were combined together for testing either due to not enough sample volume for individual coal seam or no significant values to the final coal product. The clean coal composite testing was also focus on the items affecting coking coal assessment, but may not be tested for all aspects as the major coal seam samples.

SE008 core hole intercepted a near vertical coal seam BL close to the major fault in SE Block, total about 35 m of BL coal with 80% core recovery. To take an advantage of the high volume of coal was collected, a more aggressive and detail testing plan, similar to bulk sample testing plan, was implemented. Before screen the coal sample into different sizes for washability test, Drop Shatter, Dry Attrition, Wet Attrition and Wet Sizing were conducted. Comparing to the regular major coal seam testing, more size groups were prepared for washability test, including 19x6.3mm, 6.3 x 2.0 mm, 2.0 x 1.0 mm, 1.0 x 0.5 mm, 0.5 x 0.25 mm and 0.25 x 0.0 mm (Froth and Floatation), more SGs were used

including 1.275, 1.3, 1.35, 1.4, 1.45, 1.5, 1.55, 1.6, 1.7, 1.8, 2.0 and 2.2. Clean coal tests are as detail as the major coal seams described above.

For details of sample testing flowsheet, Figure 4 presents the Lab Testing Plan for Minor Coal Seams, Figure 5 presents the Lab Testing Plan for Major Coal Seams, and Figure 6 presents the Lab Testing Plan for Bulk Sample.

3.4 Raw Coal Quality

A total of 277 coal seam composites were analyzed for proximate analysis, total sulphur, free swelling index, and specific gravity. The raw coal quality per drillhole and per seam across both of NW Block and SE Block are summarized in Table 4 and Table 5 respectively.

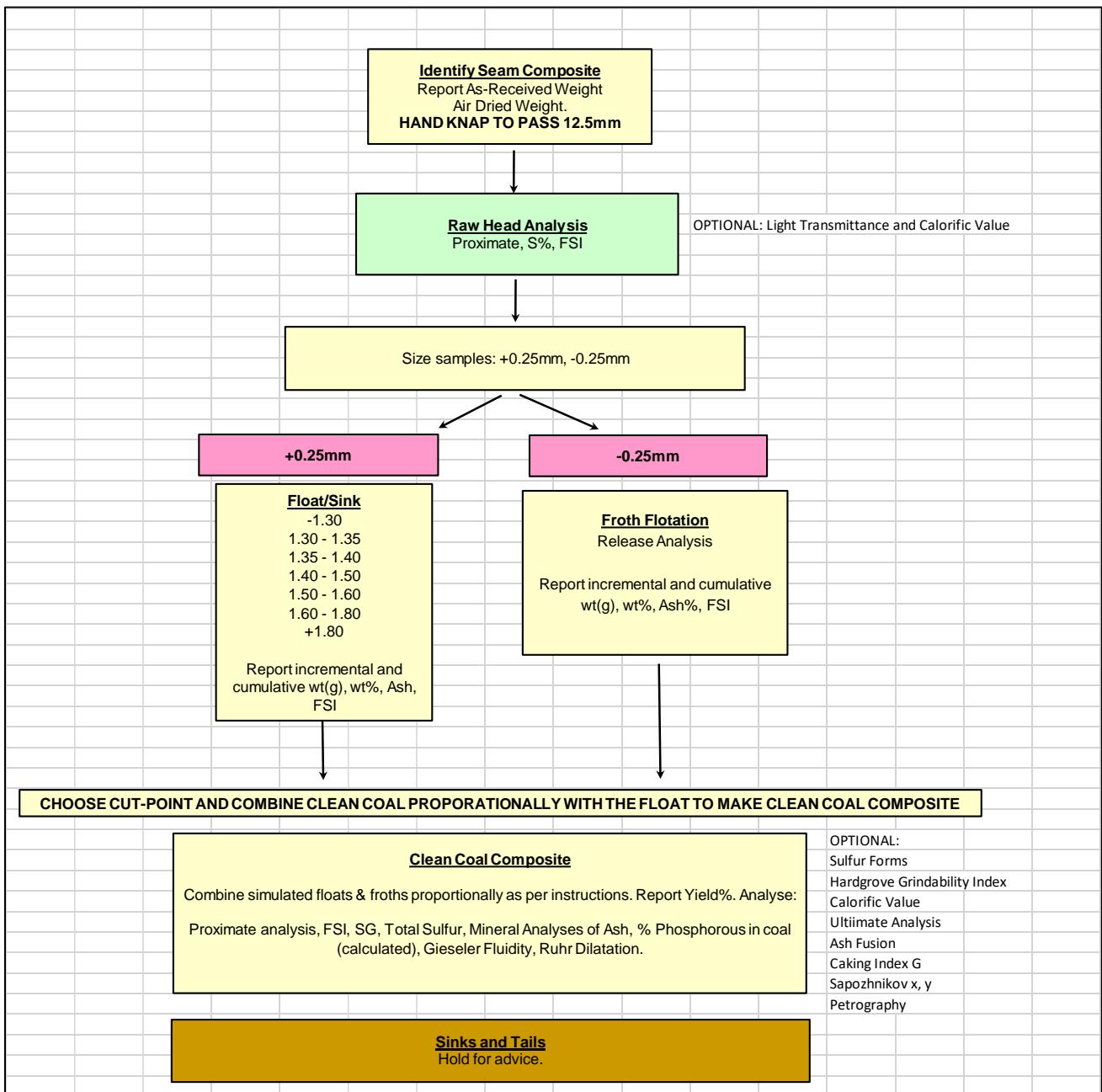


Figure 4 Lab Testing Plan for Minor Coal Seams

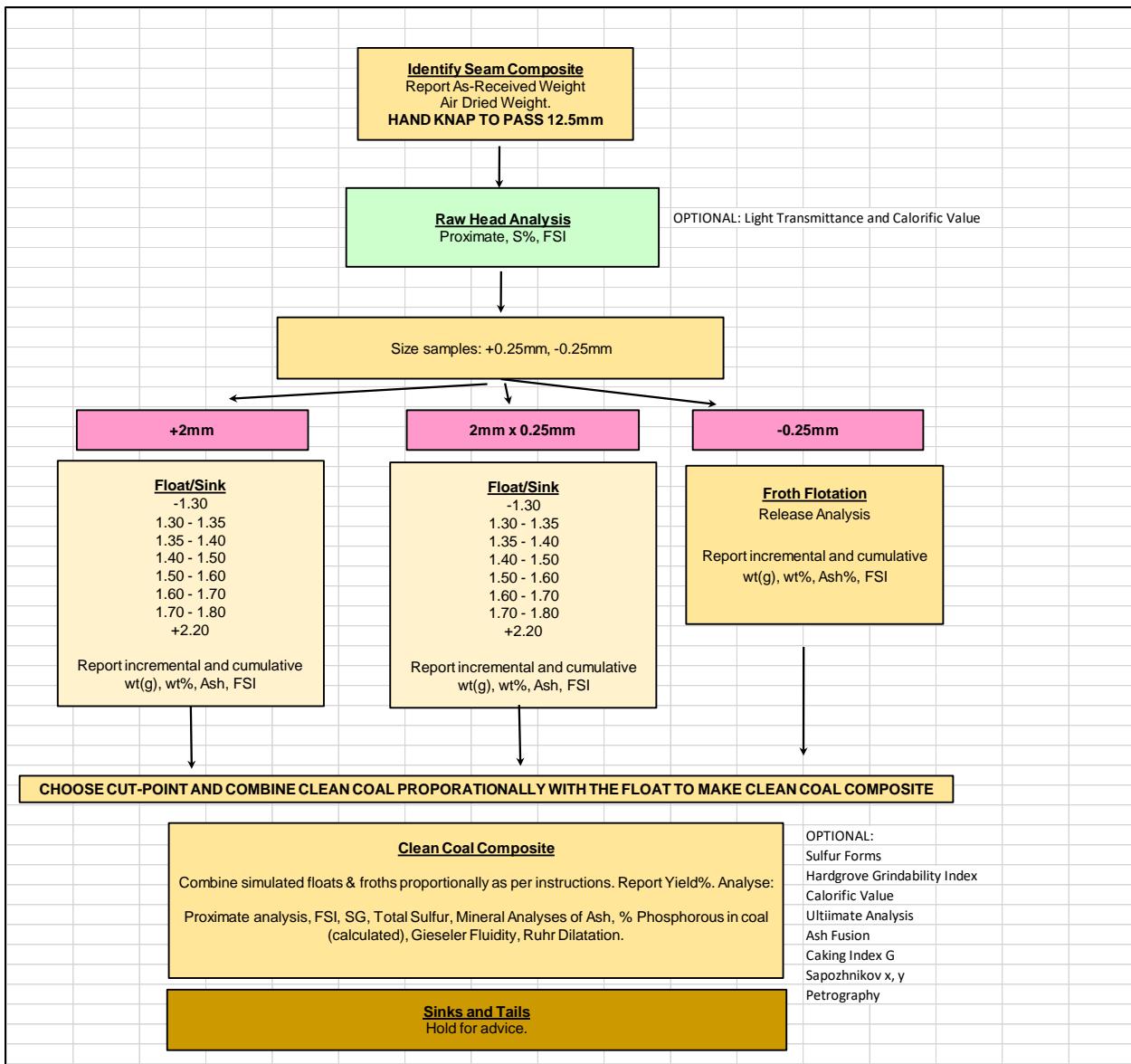


Figure 5 Lab Testing Plan for Major Coal Seams

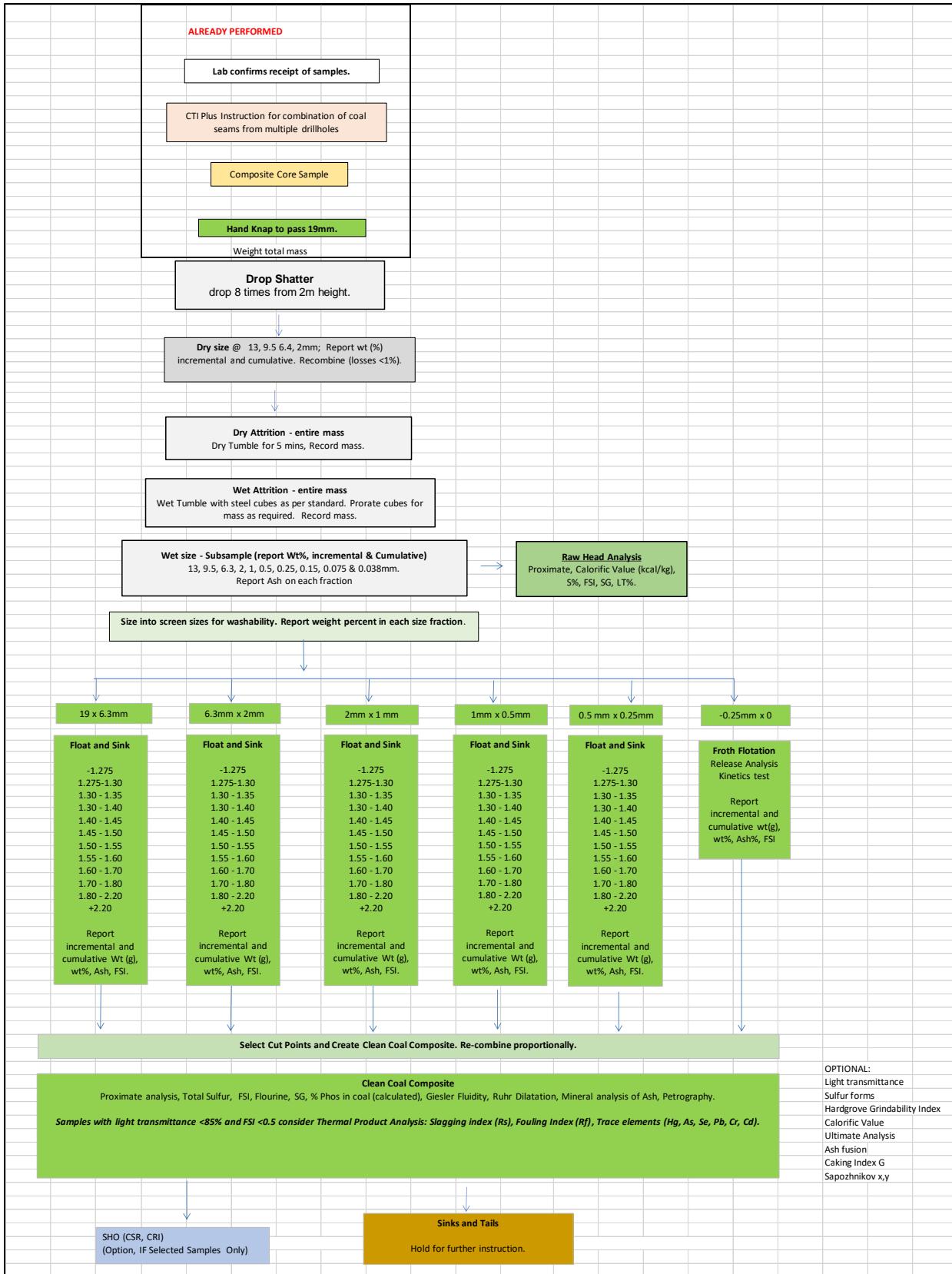


Figure 6 Lab Testing Plan for Bulk Sample

Table 4 Summary of Raw Coal Quality in NW Block

Drillhole ID	Seam ID	Depth (m)		Thickness (m)	Raw Coal Analysis Results, Air Dry Basis						
		From	To		Moisture %	Ash %	VM %	FC %	Total S %	FSI	Relative Density
NW-002	Upper Pump	25.25	27.80	2.55	1.33	19.41	23.00	56.26	0.48	5.5	1.42
NW-002	Upper Grizzly	59.65	61.80	2.15	1.06	15.85	20.93	62.16	0.33	2.5	1.41
NW-002	Lower Grizzly	64.10	65.00	0.90	0.94	11.50	24.62	62.94	0.40	4.0	1.45
NW-002	Lower Meadow	114.55	114.70	0.15	0.97	34.75	22.38	41.90	0.53	7.0	1.54
NW-002	Upper Bumpy	146.30	146.70	0.40	0.72	20.43	20.60	58.25	1.12	2.5	1.46
NW-002	Lower Bumpy 1	148.65	148.85	0.20	0.69	25.06	21.08	53.17	0.90	5.0	1.46
NW-003	Lower Pump 1	7.55	7.80	0.25	1.43	49.32	14.75	34.50	0.41	0.0	1.76
NW-003	Lower Pump 2	27.90	28.80	0.90	1.86	20.46	18.34	59.34	0.49	0.0	1.50
NW-003	Upper Grizzly	36.50	40.50	4.00	0.85	28.58	16.70	53.87	0.50	1.5	1.52
NW-003	Lower Grizzly 1	47.70	47.90	0.20	0.68	19.03	21.92	58.37	0.39	6.0	1.40
NW-003	Lower Grizzly 2	48.50	49.10	0.60	0.81	30.20	19.13	49.86	0.36	2.5	1.52
NW-003	Upper Meadow	74.80	75.20	0.40	0.70	37.72	22.83	38.75	2.93	5.0	1.62
NW-003	Upper Bumpy	125.70	126.30	0.60	0.84	18.73	19.65	60.78	1.28	1.0	1.44
NW-003	Upper Bumpy 1	128.00	128.40	0.40	0.85	31.39	20.41	47.35	0.96	5.0	1.53
NW-004	Upper Grizzly	15.25	17.25	2.00	1.19	23.65	20.80	54.36	0.51	3.5	1.47
NW-004	Lower Grizzly	19.80	20.80	1.00	1.06	25.27	18.91	54.76	0.31	1.0	1.51
NW-004	Upper Bumpy	101.50	101.90	0.40	0.94	50.90	15.42	32.74	0.70	1.0	1.81
NW-004	Lower Bumpy 2	110.85	111.10	0.25	0.89	19.22	22.90	56.99	0.73	4.0	1.45
NW-004	Upper Lake	173.65	174.80	1.15	0.94	9.83	19.03	70.20	0.46	1.0	1.40
NW-005-2	Upper Grizzly	14.20	15.80	1.60	1.06	22.32	18.38	58.24	0.30	1.0	1.51
NW-005-2	Lower Bumpy 2	103.00	103.20	0.20	0.83	21.13	18.84	59.20	0.72	1.5	1.48
NW-007	Upper Grizzly	36.85	39.00	2.15	1.34	12.85	20.82	64.99	0.49	1.0	1.38
NW-007	Lower Grizzly	41.10	42.05	0.95	1.11	50.93	14.09	33.87	0.21	0.5	1.76
NW-007	Lower Meadow	87.90	88.40	0.50	0.91	57.76	14.51	26.82	0.39	1.5	1.85
NW-007	Upper Bumpy	119.70	120.20	0.50	0.78	22.62	20.77	55.83	0.97	2.5	1.47
NW-007	Lower Bumpy 1	124.80	125.20	0.40	0.77	42.44	17.15	39.64	0.55	4.0	1.65
NW-007	Lower Bumpy 3	141.65	141.85	0.20	0.57	44.49	17.09	37.85	1.31	2.0	1.71
NW-007	Upper Lake	192.05	193.25	1.20	0.89	7.87	19.22	72.02	0.45	1.0	1.38
NW-007	Lower Lake	196.70	197.25	0.55	0.85	31.88	18.29	48.98	0.52	3.5	1.52
NW-011	Upper Grizzly	29.50	31.80	2.30	1.14	16.46	19.70	62.70	0.43	1.0	1.39

Drillhole ID	Seam ID	Depth (m)		Thickness (m)	Raw Coal Analysis Results, Air Dry Basis						
		From	To		Moisture %	Ash %	VM %	FC %	Total S %	FSI	Relative Density
NW-011	Lower Grizzly	33.50	34.20	0.70	0.76	27.86	18.89	52.49	0.35	2.0	1.50
NW-011	Lower Grizzly 1	34.80	35.10	0.30	0.89	37.54	19.24	42.33	0.40	4.5	1.58
NW-011	Upper Bumpy	116.40	116.90	0.50	0.86	18.60	22.42	58.12	0.82	6.0	1.41
NW-011	Lower Bumpy 1	120.60	121.00	0.40	0.28	20.77	23.48	55.47	0.94	5.0	1.43
NW-011	Lower Bumpy 2	123.80	124.00	0.20	0.45	22.73	21.01	55.81	0.72	4.5	1.46
NW-011	Upper Lake	183.80	185.00	1.20	1.01	7.44	19.14	72.41	0.52	1.0	1.35
NW-011	Lower Lake	188.60	189.20	0.60	0.81	28.26	19.08	51.85	0.59	6.0	1.50
NW-014	Upper Bumpy 1	47.90	48.20	0.30	0.74	28.85	19.74	50.67	0.79	6.5	1.51
NW-014	Lower Bumpy 3	56.90	57.20	0.30	0.75	36.23	15.31	47.71	0.56	1.0	1.63
NW-014	Upper Lake	112.20	112.60	0.40	0.79	15.45	19.55	64.21	0.66	3.0	1.41
NW-017	Upper Meadow	12.60	12.75	0.15	0.45	71.37	12.27	15.91	2.01	1.0	2.10
NW-017	Upper Bumpy	63.95	64.35	0.40	0.71	30.74	22.09	46.46	0.79	4.5	1.52
NW-017	Upper Lake	135.50	136.50	1.00	1.01	11.31	19.00	68.68	0.44	1.0	1.38
NW-017	Lower Lake	140.80	141.20	0.40	0.48	59.10	12.17	28.25	0.30	1.0	1.89
NW-022	Upper Bumpy	20.00	20.25	0.25	0.55	88.12	6.10	5.23	0.17	0.0	2.41
NW-022	Lower Bumpy 2	34.20	34.60	0.40	0.86	41.49	16.14	41.51	0.59	1.0	1.67
NW-022	Lower Bumpy 3	44.60	44.85	0.25	0.75	87.76	6.99	4.50	0.13	0.0	2.46
NW-022	Upper Lake	99.05	100.25	1.20	0.93	13.46	19.57	66.04	0.45	1.0	1.41
NW-022	Lower Lake	104.15	104.55	0.40	0.70	27.95	21.06	50.29	0.59	7.0	1.50
NW-023	A 1	26.00	26.20	0.20	0.72	22.13	21.97	55.18	0.82	5.0	1.46
NW-023	Upper Pump	65.90	66.50	0.60	0.86	15.30	20.48	63.36	0.41	1.0	1.40
NW-023	Lower Pump	72.20	72.50	0.30	0.83	18.97	17.47	62.73	0.55	1.0	1.44
NW-023	Upper Grizzly	86.00	87.20	1.20	1.06	9.32	23.60	66.02	0.45	1.0	1.35
NW-023	Lower Grizzly	88.40	88.60	0.20	0.86	37.10	19.23	42.81	0.52	5.5	1.57
NW-029	Upper Meadow	32.40	32.60	0.20	0.60	66.57	13.33	19.50	1.45	1.0	2.04
NW-029	Upper Bumpy	72.00	72.60	0.60	0.70	27.87	22.61	48.82	1.12	5.0	1.49
NW-029	Upper Lake	145.70	146.50	0.80	1.24	3.84	22.08	72.84	0.55	1.0	1.34
NW-029	Lower Lake	151.70	152.00	0.30	0.95	22.25	19.48	57.32	0.56	1.0	1.49
NW-030	Upper Grizzly	13.40	14.90	1.50	1.19	50.81	13.81	34.19	0.21	0.5	1.80
NW-030	Lower Meadow	49.00	49.25	0.25	0.59	51.31	17.79	30.31	1.64	5.0	1.76
NW-030	Upper Bumpy	96.05	96.50	0.45	0.61	15.81	24.18	59.40	0.97	7.5	1.39
NW-030	Lower Bumpy 3	103.55	103.90	0.35	0.59	20.23	22.50	56.68	0.73	5.0	1.44
NW-031	Upper Grizzly	26.80	28.00	1.20	1.26	34.27	18.08	46.39	0.30	1.0	1.58

Drillhole ID	Seam ID	Depth (m)		Thickness (m)	Raw Coal Analysis Results, Air Dry Basis						
		From	To		Moisture %	Ash %	VM %	FC %	Total S %	FSI	Relative Density
NW-031	Lower Grizzly	30.00	30.60	0.60	0.85	41.07	19.42	38.66	0.45	6.0	1.63
NW-031	Upper Meadow	65.00	65.30	0.30	0.84	58.76	15.51	24.89	1.49	4.0	1.88
NW-031	Lower Meadow	80.80	81.00	0.20	0.94	50.31	17.37	31.38	0.52	3.5	1.75
NW-031	Upper Bumpy	105.80	106.30	0.50	0.67	16.77	24.43	58.13	1.17	6.5	1.41
NW-031	Lower Bumpy 3	116.30	116.50	0.20	0.81	15.09	23.46	60.64	0.74	5.0	1.41
NW-031	Upper Lake	181.20	182.20	1.00	0.99	11.05	19.83	68.13	0.50	1.0	1.40
NW-031	Lower Lake	185.60	185.90	0.30	0.81	30.05	20.16	48.98	0.63	5.5	1.53
NW-036	Upper Grizzly	23.80	25.15	1.35	1.07	9.99	21.71	67.23	0.34	1.0	1.38
NW-036	Lower Grizzly	26.50	26.60	0.10	1.00	34.06	21.13	43.81	0.51	5.5	1.55
NW-036	Lower Grizzly 1	27.20	27.30	0.10	0.57	48.39	17.97	33.07	0.42	3.5	1.72
NW-036	Lower Meadow	76.25	77.00	0.75	0.72	46.22	15.95	37.11	0.39	2.5	1.70
NW-037	B Upper	44.70	45.40	0.70	0.92	16.10	21.23	61.75	0.42	2.5	1.41
NW-037	B Lower	46.10	47.60	1.50	0.91	11.70	23.13	64.26	0.36	2.5	1.37
NW-037	B Lower 1	48.20	48.80	0.60	0.92	15.61	23.89	59.58	0.38	7.0	1.37
NW-037	Lower Pump	123.60	123.80	0.20	0.94	11.87	19.78	67.41	0.53	1.0	1.39
NW-037	Upper Grizzly	143.70	145.20	1.50	1.05	10.77	20.34	67.84	0.56	1.5	1.37
NW-037-2	C	56.20	58.00	1.80	1.27	7.55	25.86	65.32	0.52	2.5	1.33
NW-037-2	B Upper 1	70.00	70.50	0.50	0.88	34.00	20.79	44.33	0.48	6.5	1.54
NW-042	Upper Meadow	24.00	24.30	0.30	0.68	12.47	29.14	57.71	1.60	8.0	1.34
NW-042	Lower Meadow	38.60	38.90	0.30	0.88	21.69	21.57	55.86	0.57	4.0	1.43
NW-042	Upper Bumpy	59.00	59.70	0.70	0.75	14.02	23.96	61.27	0.89	7.0	1.37
NW-042	Upper Lake	131.80	133.00	1.20	1.27	5.27	21.84	71.62	0.49	1.5	1.33
NW-042	Lower Lake	137.10	137.70	0.60	0.99	22.99	21.13	54.89	0.69	5.0	1.47
NW-045	Upper Lake	54.10	55.60	1.50	0.94	5.92	22.84	70.30	0.45	1.5	1.32
NW-045	Lower Lake	60.40	61.00	0.60	0.95	32.14	19.28	47.63	0.59	4.5	1.55
NW-053	Lower Pump	39.40	39.70	0.30	0.97	8.88	21.09	69.06	0.69	1.5	1.35
NW-053	Upper Grizzly	55.10	56.50	1.40	1.00	25.90	18.49	54.61	0.54	1.5	1.51
NW-053	Lower Grizzly	58.00	58.20	0.20	0.93	32.39	20.62	46.06	0.61	6.0	1.53
NW-053	Upper Bumpy 1	130.40	130.70	0.30	0.75	19.14	22.07	58.04	0.91	7.0	1.42
NW-054	Upper Meadow	21.70	21.90	0.20	0.44	25.71	23.94	49.91	1.15	7.5	1.45
NW-054	Lower Meadow	37.45	37.60	0.15	1.05	19.74	21.71	57.50	0.78	4.0	1.43
NW-054	Upper Bumpy	59.50	60.00	0.50	0.90	16.72	23.61	58.77	0.85	7.0	1.40
NW-054	Upper Lake	130.50	131.50	1.00	1.20	8.30	19.21	71.29	0.44	1.0	1.37

Drillhole ID	Seam ID	Depth (m)		Thickness (m)	Raw Coal Analysis Results, Air Dry Basis						
		From	To		Moisture %	Ash %	VM %	FC %	Total S %	FSI	Relative Density
NW-054	Lower Lake	134.80	135.30	0.50	1.04	46.40	14.88	37.68	0.44	1.5	1.71
NW-055	Upper Meadow	14.50	14.90	0.40	0.62	41.96	19.40	38.02	0.84	6.0	1.63
NW-055	Lower Meadow	28.60	28.90	0.30	0.56	34.57	19.55	45.32	0.43	7.0	1.54
NW-055	Lower Bumpy 2	63.60	63.80	0.20	0.17	18.88	22.77	58.18	0.84	7.5	1.42
NW-056	Upper Grizzly	2.10	3.50	1.40	4.25	49.00	15.75	31.00	0.22	0.0	1.69
NW-056	Lower Bumpy 1	83.85	84.30	0.45	0.86	31.17	21.49	46.48	0.78	4.0	1.54
NW-056	Lower Bumpy 3	99.75	99.90	0.15	0.57	43.02	19.30	37.11	1.10	2.0	1.64
NW-057	Upper Pump	16.50	19.10	2.60	1.73	17.15	21.42	59.70	0.46	0.0	1.42
NW-057	Upper Grizzly	49.20	51.60	2.40	1.00	18.23	20.86	59.91	0.40	1.5	1.43
NW-057	Lower Grizzly	53.40	54.50	1.10	0.85	32.15	18.55	48.45	0.32	2.0	1.55
NW-057	Upper Bumpy	134.70	135.20	0.50	1.02	26.98	21.45	50.55	0.96	5.0	1.50
NW-057	Upper Bumpy 1	137.10	137.50	0.40	0.85	18.00	25.32	55.83	0.81	7.0	1.43

Table 5 Summary of Raw Coal Quality in SE Block

Drillhole ID	Seam ID	Depth (m)		Thickness (m)	Raw Coal Analysis Results, Air Dry Basis						
		From	To		Moisture %	Ash %	VM %	FC %	Total S %	FSI	Relative Density
SE-001	Lower Bickford 3	104.60	104.80	0.20	0.64	18.15	26.72	54.49	1.75	6.0	1.38
SE-005	A 6	28.70	28.90	0.20	0.55	44.24	14.10	41.11	0.51	1.0	1.73
SE-005	A 8	68.80	69.30	0.50	0.78	47.36	17.01	34.85	0.78	4.0	1.69
SE-008	B Lower Upper	18.70	19.70	1.00	0.96	23.95	24.18	50.91	0.62	7.0	1.47
SE-008	B Lower	20.30	56.10	35.80	0.92	9.37	22.91	66.80	0.30	1.0	1.37
SE-008	B Lower Lower	56.50	57.70	1.20	0.74	18.50	23.42	57.34	0.47	6.0	1.43
SE-009	A 6	71.50	71.70	0.20	0.60	27.45	17.88	54.07	0.52	1.0	1.53
SE-009	A 9	133.05	133.60	0.55	0.56	35.00	17.25	47.19	0.60	1.0	1.61
SE-009	Upper Lake	181.45	181.70	0.25	0.32	44.82	16.36	38.50	0.44	3.5	1.67
SE-010	B Upper	29.50	32.10	2.60	1.30	10.14	26.49	62.07	0.51	4.0	1.37
SE-010	B Lower	32.60	35.70	3.10	1.17	20.75	23.05	55.03	0.25	2.5	1.47
SE-010	B Lower Lower	36.20	36.40	0.20	0.85	9.23	30.88	59.04	0.70	7.5	1.34
SE-011	A 9	91.70	91.95	0.25	0.69	38.65	16.47	44.19	0.58	1.0	1.67
SE-012	B Lower	2.80	31.60	28.80	0.79	17.27	22.79	59.15	0.30	1.5	1.44
SE-012	A 4	121.10	121.30	0.20	0.54	29.21	18.53	51.72	0.85	2.0	1.54
SE-012	A 5	131.60	131.90	0.30	0.54	25.19	20.30	53.97	0.58	5.0	1.49
SE-013	C Upper Upper	12.40	12.80	0.40	2.69	43.90	17.51	35.90	0.55	0.0	1.73
SE-013	C Upper	14.10	15.90	1.80	2.47	14.42	22.56	60.55	0.35	0.5	1.43
SE-013	C Upper Lower	27.00	27.60	0.60	1.03	42.87	16.85	39.25	0.34	0.0	1.69
SE-013	B Upper	67.30	70.50	3.20	0.97	15.32	23.45	60.26	0.34	2.5	1.40
SE-013	B Lower	71.40	75.20	3.80	0.89	15.77	23.65	59.69	0.27	1.5	1.43
SE-013	B Lower Lower	75.60	76.00	0.40	0.83	19.39	27.60	52.18	0.56	7.5	1.41
SE-015	Lower Bickford 1	73.90	74.10	0.20	0.66	14.32	21.79	63.23	0.70	2.5	1.39
SE-015	Lower Bickford 2	79.00	79.20	0.20	0.66	11.87	26.94	60.53	0.86	7.0	1.35
SE-015	Lower Bickford 3	82.20	82.70	0.50	0.62	33.81	19.79	45.78	0.68	4.5	1.55

Drillhole ID	Seam ID	Depth (m)		Thickness (m)	Raw Coal Analysis Results, Air Dry Basis						
		From	To		Moisture %	Ash %	VM %	FC %	Total S %	FSI	Relative Density
SE-017	A 3	39.35	39.95	0.60	0.71	49.28	16.64	33.37	0.38	2.5	1.73
SE-017	A 4	67.90	68.20	0.30	0.84	53.41	13.51	32.24	0.26	1.0	1.83
SE-017	A 5	77.90	78.30	0.40	0.65	37.31	19.92	42.12	1.34	5.0	1.61
SE-018	C Upper Lower	6.40	7.10	0.70	0.77	24.51	19.35	55.37	0.32	1.0	1.50
SE-018	C Lower Upper	17.10	17.25	0.15	0.75	40.03	16.82	42.40	0.32	1.0	1.64
SE-018	C Lower	18.00	18.95	0.95	0.83	23.23	20.08	55.86	0.37	1.5	1.48
SE-018	B Upper	42.30	45.00	2.70	0.91	9.65	24.32	65.12	0.38	2.5	1.35
SE-018	B Lower Upper	46.00	46.20	0.20	0.82	41.34	18.72	39.12	0.26	3.0	1.63
SE-018	B Lower	46.60	49.50	2.90	1.01	12.44	22.25	64.30	0.28	1.5	1.40
SE-018	B Lower Lower	50.00	50.30	0.30	0.58	19.42	25.76	54.24	0.52	6.5	1.41
SE-018	A 4	115.10	115.35	0.25	0.72	47.16	14.20	37.92	0.35	1.0	1.74
SE-019	B Upper	18.70	21.40	2.70	0.91	7.23	23.36	68.50	0.46	2.5	1.34
SE-019	B Lower Upper	22.00	22.30	0.30	0.78	48.04	15.90	35.28	0.21	1.0	1.71
SE-019	B Lower	22.50	25.20	2.70	1.11	13.91	22.65	62.33	0.27	1.0	1.40
SE-019	B Lower Lower	25.70	26.10	0.40	0.68	8.58	28.83	61.91	0.62	7.0	1.30
SE-019	A 4	57.60	57.80	0.20	0.98	76.08	9.69	13.25	0.12	0.0	2.20
SE-029	C Upper	1.00	2.40	1.40	2.03	12.71	23.62	61.64	0.35	0.0	1.41
SE-029	C Upper Lower	2.80	3.20	0.40	1.58	25.67	22.91	49.84	0.36	0.5	1.49
SE-029	C Lower Upper	12.10	12.50	0.40	0.76	9.92	22.93	66.39	0.56	2.5	1.35
SE-029	C Lower	13.40	14.20	0.80	0.66	9.17	22.06	68.11	0.41	1.0	1.35
SE-029	B Upper	29.40	31.80	2.40	0.90	5.60	25.87	67.63	0.39	4.0	1.32
SE-029	B Lower	33.50	35.50	2.00	0.98	8.80	23.21	67.01	0.26	1.5	1.35
SE-029	B Lower Lower	36.20	36.50	0.30	0.95	12.31	28.74	58.00	0.53	7.5	1.34
SE-030	C Upper Upper 1	21.60	21.80	0.20	0.60	4.49	23.06	71.85	0.94	2.5	1.33
SE-030	C Upper Upper	28.80	29.00	0.20	0.71	30.23	22.23	46.83	0.45	7.0	1.50
SE-030	C Upper	30.20	32.15	1.95	1.05	8.63	23.42	66.90	0.52	2.5	1.33
SE-030	C Upper Lower	32.60	33.00	0.40	0.85	25.33	22.83	50.99	0.53	7.0	1.46

Drillhole ID	Seam ID	Depth (m)		Thickness (m)	Raw Coal Analysis Results, Air Dry Basis						
		From	To		Moisture %	Ash %	VM %	FC %	Total S %	FSI	Relative Density
SE-030	C Lower Upper	42.80	43.30	0.50	0.88	19.35	20.42	59.35	0.62	1.5	1.45
SE-030	C Lower	43.80	44.80	1.00	0.81	14.40	20.55	64.24	0.40	1.0	1.39
SE-030	B Upper	58.15	60.90	2.75	0.83	5.78	23.94	69.45	0.41	3.5	1.32
SE-030	B Lower Upper	65.50	66.15	0.65	0.75	39.18	17.41	42.66	0.28	1.5	1.62
SE-030	B Lower	67.00	69.80	2.80	1.02	16.58	20.75	61.65	0.30	1.0	1.43
SE-031	B Upper	16.60	19.00	2.40	1.06	4.64	24.43	69.87	0.41	2.5	1.31
SE-031	B Lower Upper	20.00	20.40	0.40	1.00	16.14	22.30	60.56	0.23	2.0	1.43
SE-031	B Lower	21.00	23.00	2.00	1.17	10.22	21.89	66.72	0.26	1.5	1.36
SE-031	B Lower Lower	23.90	24.20	0.30	1.00	13.67	26.71	58.62	0.55	8.0	1.40
SE-031	A 9	148.50	148.70	0.20	0.59	22.77	20.25	56.39	0.73	4.5	1.48
SE-031	A 10	187.60	188.00	0.40	0.52	16.77	20.86	61.85	0.80	5.0	1.42
SE-031	A 11	190.80	191.10	0.30	0.67	19.37	22.47	57.49	0.85	5.0	1.45
SE-040	C Upper Upper 1	21.20	21.50	0.30	0.50	30.12	20.30	49.08	0.50	1.0	1.54
SE-040	C Upper Upper	25.90	26.20	0.30	0.65	37.50	21.78	40.07	0.34	5.5	1.58
SE-040	C Upper	27.50	29.00	1.50	0.74	9.62	24.37	65.27	0.43	4.5	1.35
SE-040	C Upper Lower	29.60	29.80	0.20	0.78	32.80	22.49	43.93	0.43	2.0	1.50
SE-040	C Lower	40.30	41.15	0.85	0.76	13.23	21.61	64.40	0.42	1.5	1.38
SE-040	B Upper	51.95	54.20	2.25	0.93	7.55	23.93	67.59	0.35	1.5	1.34
SE-040	B Lower	56.70	58.65	1.95	1.08	12.79	21.19	64.94	0.27	1.0	1.40
SE-040	B Lower Lower	59.20	59.60	0.40	0.72	22.64	23.86	52.78	0.46	7.0	1.45
SE-041	C Upper Upper 1	17.30	18.00	0.70	1.27	14.01	23.48	61.24	0.45	1.0	1.41
SE-041	C Upper Upper	26.25	27.00	0.75	0.92	28.60	23.86	46.62	0.42	7.0	1.48
SE-041	C Upper	28.75	30.65	1.90	1.05	6.94	26.87	65.14	0.34	5.0	1.33
SE-041	C Upper Lower	31.00	31.55	0.55	0.69	17.04	26.25	56.02	0.48	7.5	1.38
SE-041	C Lower	44.05	45.40	1.35	0.93	14.00	23.66	61.41	0.38	3.5	1.41
SE-041	B Upper	53.30	56.70	3.40	1.05	13.10	27.73	58.12	0.35	2.5	1.43
SE-041	B Lower	59.40	61.15	1.75	1.03	11.44	22.00	65.53	0.30	1.5	1.38

Drillhole ID	Seam ID	Depth (m)		Thickness (m)	Raw Coal Analysis Results, Air Dry Basis						
		From	To		Moisture %	Ash %	VM %	FC %	Total S %	FSI	Relative Density
SE-041	B Lower Lower	61.70	62.20	0.50	0.74	18.76	25.30	55.20	0.48	7.5	1.40
SE-041	A 1	84.20	85.10	0.90	0.60	56.98	16.39	26.03	0.21	3.0	1.87
SE-041	A 2	86.25	87.00	0.75	0.55	31.28	21.56	46.61	0.33	6.0	1.56
SE-041	A 3	89.00	90.00	1.00	0.48	63.84	14.87	20.81	0.12	0.5	2.03
SE-041	A 4	91.00	91.40	0.40	0.73	10.62	27.08	61.57	0.46	8.0	1.32
SE-045	C Lower	14.50	15.30	0.80	0.99	21.18	20.06	57.77	0.46	1.5	1.46
SE-045	B Upper	25.80	28.80	3.00	1.07	19.57	22.35	57.01	0.33	2.0	1.45
SE-045	B Lower	32.00	33.60	1.60	1.05	11.60	21.30	66.05	0.30	1.5	1.39
SE-050	C Upper Upper	39.00	39.30	0.30	0.90	41.06	21.02	37.02	0.35	5.0	1.61
SE-050	C Upper	41.35	42.80	1.45	1.11	5.93	26.83	66.13	0.37	3.5	1.31
SE-050	C Upper Lower	43.30	43.70	0.40	0.89	30.62	23.99	44.50	0.50	6.0	1.50
SE-050	C Lower	54.30	55.20	0.90	1.02	18.98	21.95	58.05	0.47	4.0	1.43
SE-050	B Upper	64.00	66.00	2.00	1.21	9.41	24.10	65.28	0.47	2.0	1.36
SE-050	B Lower	68.20	69.70	1.50	1.34	14.90	20.76	63.00	0.28	1.5	1.40
SE-050	B Lower Lower	70.60	71.10	0.50	0.91	16.40	25.50	57.19	0.45	7.5	1.38
SE-050	A 9	172.30	172.70	0.40	0.73	45.69	18.45	35.13	0.61	4.5	1.69
SE-050	A 10	180.60	181.10	0.50	0.93	37.58	17.87	43.62	0.59	1.0	1.64
SE-051	C Upper Upper 1	23.60	23.80	0.20	0.60	14.34	24.44	60.62	0.45	3.0	1.38
SE-051	C Upper Upper	27.10	27.55	0.45	0.76	34.87	21.35	43.02	0.38	7.0	1.56
SE-051	C Upper	29.70	31.35	1.65	0.86	9.67	24.90	64.57	0.35	3.0	1.34
SE-051	C Upper Lower	31.70	32.10	0.40	0.67	32.54	21.35	45.44	0.44	7.0	1.52
SE-051	C Lower	42.90	44.20	1.30	0.69	13.80	20.79	64.72	0.39	1.5	1.41
SE-051	B Upper	51.70	54.20	2.50	0.98	7.46	24.78	66.78	0.42	2.5	1.34
SE-051	B Lower	56.30	58.00	1.70	0.83	10.86	22.12	66.19	0.29	1.5	1.31
SE-051	B Lower Lower	58.70	59.40	0.70	0.83	24.80	22.70	51.67	0.39	7.0	1.44
SE-052	A 10	72.40	72.60	0.20	0.56	20.28	25.38	53.78	0.80	4.5	1.43
SE-056	A 1	10.00	10.20	0.20	0.88	27.23	24.36	47.53	1.02	6.0	1.49

Drillhole ID	Seam ID	Depth (m)		Thickness (m)	Raw Coal Analysis Results, Air Dry Basis						
		From	To		Moisture %	Ash %	VM %	FC %	Total S %	FSI	Relative Density
SE-069	Upper Bickford	78.55	79.15	0.60	0.72	22.79	21.11	55.38	0.64	5.5	1.44
SE-069	Lower Bickford	83.80	85.00	1.20	0.76	8.64	22.19	68.41	0.73	7.5	1.33
SE-069	Lower Bickford 1	106.25	106.80	0.55	0.58	10.11	24.47	64.84	0.78	4.5	1.33
SE-069	Lower Bickford 2	109.40	109.70	0.30	0.70	7.66	20.27	71.37	0.92	2.0	1.34

4 GEOCHEMICAL ANALYSIS AND RESULT

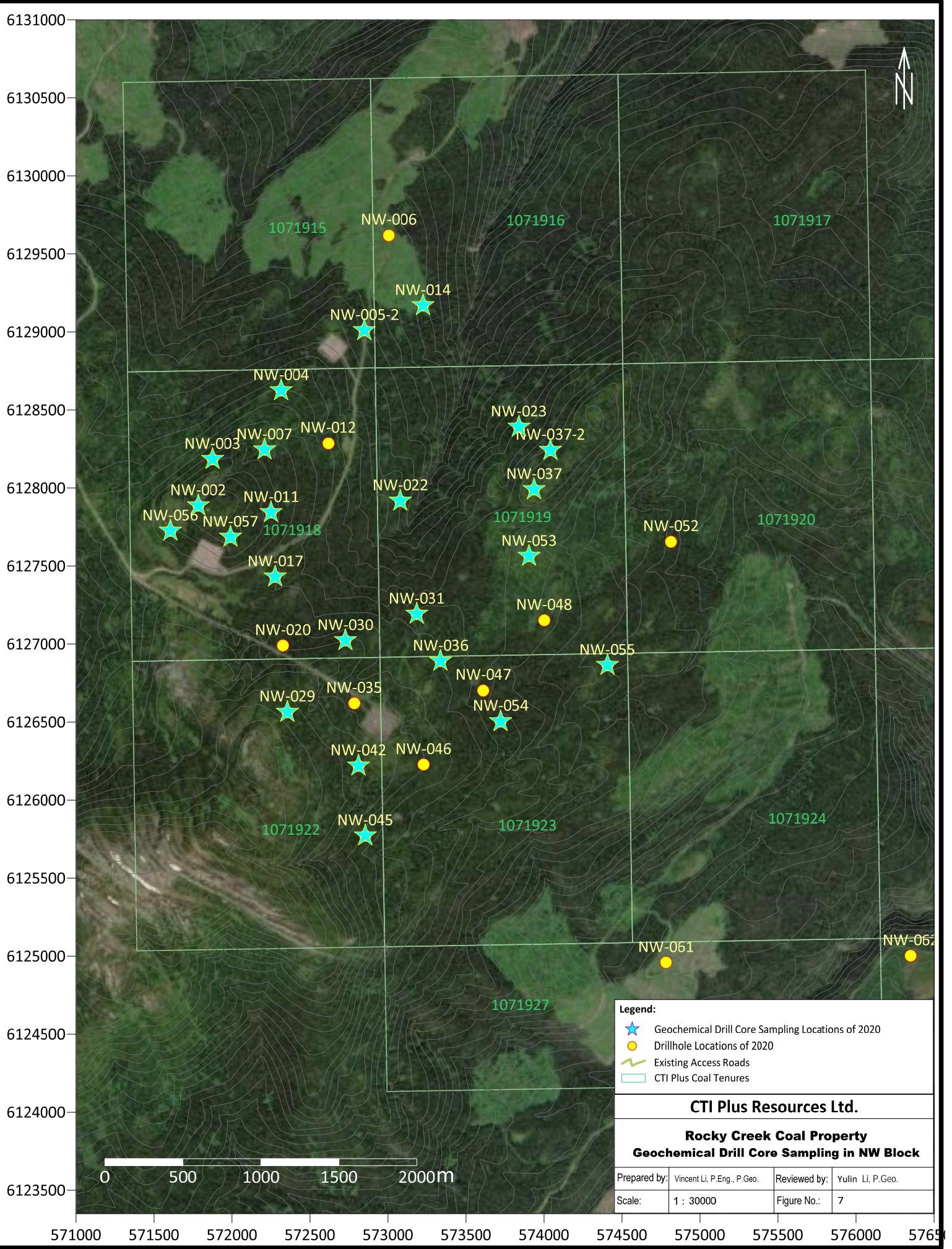
4.1 Overview of Drill Core Samples

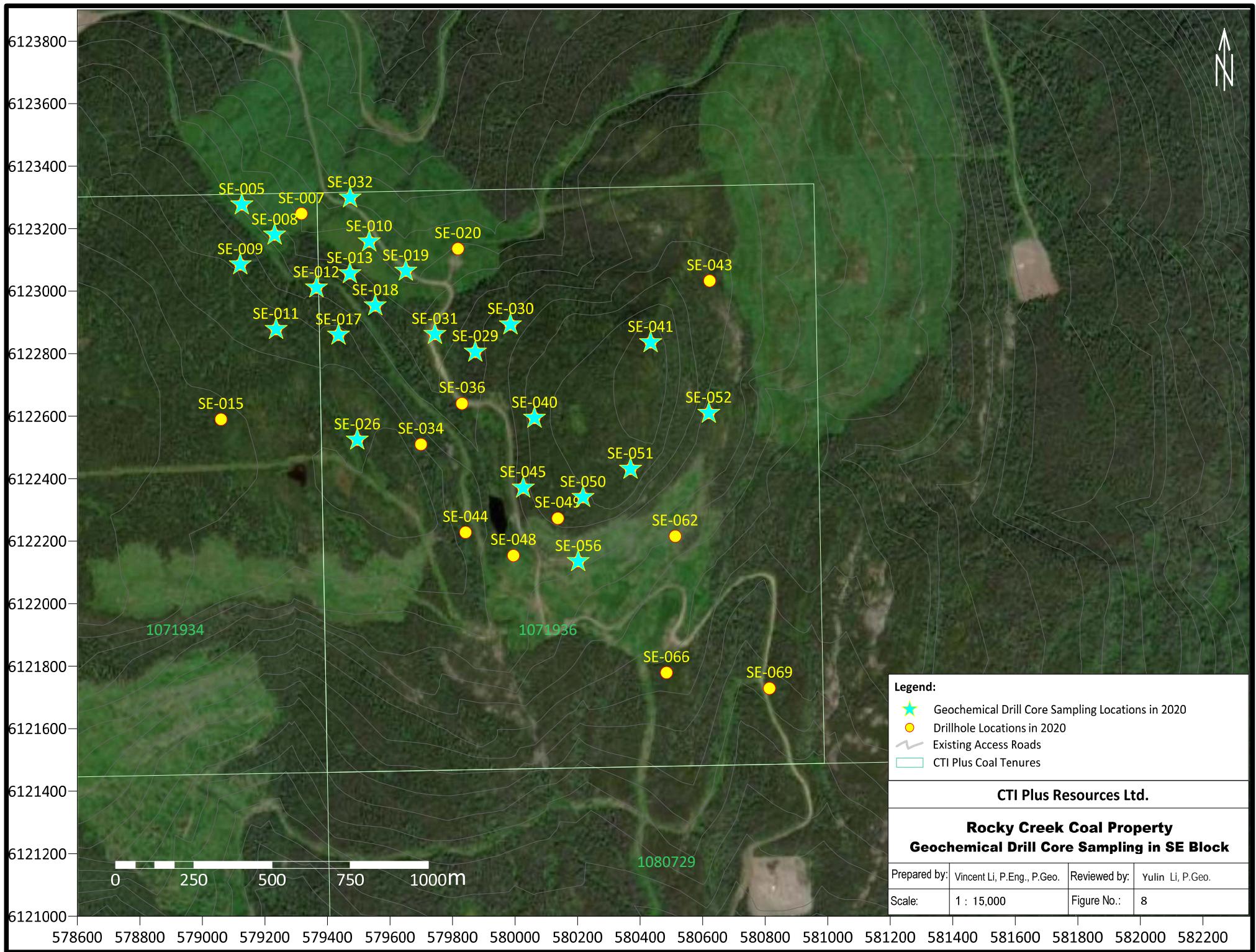
As part of 2020 Rocky Creek coal exploration, a total of 436 drill core samples were collected from 45 selected drillholes. Details of sampling was described in Section 3.10 (Geochemical Sampling), 2020 Rocky Creek Coal Assessment Report (2021.05.25). It is noted that there were no samples of coarse rejects and fine tailings available for the related study at the current stage of project.

Collected drill core samples cover a wide range of various stratigraphic horizons from overburden, interburden and base rock of each coal seam as well as lithologic units from carbonaceous mudstone to conglomerate, and represent the material that would be encountered during advanced exploration, mine development, and/or mine production operation within Gething Formation, Cadomin Formation, and Minnes Group. Samples are categorized in Appendix H and summarized in Table 14. The sampling locations show in Figure 7 and 8.

Table 14 Summary of Geochemical Sample Category and Distribution

Project Site	Grouping of Seams, (seam's overburden, interburden and base layer)	Grouping of Sample Lithology					
		Carbonaceous Mudstone	Mudstone to Silty Mudstone	Siltstone To Fine Sandstone	Sandstone	Coarse Sandstone	Conglomerate
		CBMS	MS	FSS	SS	CSS	CONG
NW Block	C Seams	1	2	3			
	B Seams	4					
	A Seams		2	4			
	Pump Seams	6	5	3	3		
	Grizzly Seams	14	9	6			
	Meadow Seams	12	10	16	7		
	Bumpy Seams	13	17	16	6	3	1
	Lake Seams	9	15	24	12		1
	Cadomin Formation						3
SE Block	C Seams	14	7	4	4	2	
	B Seams	3	12	5	8		1
	A Seams	40	34	33	21	2	5
	Lake Seams		1	1			
	Cadomin Formation						1
	Bickford Seams	1	3				





4.2 Analytical Parameters

All geochemical samples were sent to and pre-treated in Bureau Veritas Lab (BV Lab), located at 4606 Canada Way, Burnaby BC. Test works were undertaken in accordance with the Metal Leaching and Acid Rock Drainage (ML/ARD) Policy and Guidelines for Mines in British Columbia.

Limited laboratory static tests are completed in BV Lab in 2021. The parameters in test and interpretation include below:

- 1) Acid-Base Accounting (ABA)
 - Paste pH
 - Total Carbon, and Carbonate Carbon
 - Total Sulphur, Sulphate-Sulphur, and Sulphide-Sulphur
 - Fizz Rating, Acid Generation Potential, Net Neutralization Potential, Neutralization Potential, and Modified ABA Neutralization Potential
- 2) Whole Rock Major Element Analysis by XRF
 - SiO₂, TiO₂, Al₂O₃, Fe₂O₃, MnO, MgO, CaO, Na₂O, K₂O, P₂O₅, Cr₂O₃, and Ba
- 3) Ultra Trace Metals on Solids by Aqua Regia Digestion (37 elements)
 - Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Au, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Ti, B, Al, Na, K, W, Sc, Ti, Hg, Se, Te, Ga, and S

4.3 Summary of Analytical Result

Completed laboratory analysis reports from BV Lab in 2021 are provided in Appendix I. The master table (excel) combined the sample characteristics of 2020 and analytical results of 2021 is available from Appendix J.

4.3.1 Sulphur Speciation and pH

Analysis of sulphur speciation indicates that the Total Sulphur is dominated by sulphide, sulphate is not a primary source of sulphur in the samples, and significant sulphur occurs

in the potential acid generating sulphide form (Figure 9). Table 15 summarizes the content of each sulphur type from the analyzed samples. The maximum of total sulphur content is 0.78% (wt) in NW Block samples, and 0.57% (wt.) in SE Block samples.

Table 15 Summary of the Sulphur Content in Analyzed Drill Core Samples

Block	Sulphur Species	Unit	Content Range
NW Block	Sulphide - S	wt.%	0.03 – 0.58
	Sulphate - S	wt.%	<0.01 – 0.07
	Total - S	wt.%	0.02 – 0.78
SE Block	Sulphide - S	wt.%	0.02 – 0.56
	Sulphate - S	wt.%	<0.01 – 0.05
	Total - S	wt.%	0.02 -0.57

Sulphide-S, in general, is very low to low. In NW Block, Sulphide-S is less than 0.3% (wt.) in 199 analyzed samples, that takes 87.7% of total analyzed samples of 227. The samples with the Sulphide-S greater than 0.3% (wt.) are only eight from A seam group (1), Meadow seam group (2), Bumpy seam group (4), and Cadomin conglomerate (1).

In SE Block, Sulphide-S is less than 0.3% (wt.) in 195 analyzed samples, that takes 96.5% of total analyzed samples of 202. There are eight samples with the Sulphide-S 0.3% (wt.) or more, seven samples from A seam group and one sample from Cadomin conglomerate.

Figure 10 shows the Paste pH of 400 samples, varying between 5.6 and 9.8.

4.3.2 Potential Acid Generation

This section is a preliminary summary of the potential acid generation (PAD) interpretation from the partially analyzed individual samples according to the “Acid/Base Accounting (ABA) ARD Screening Criteria” for mining projects in BC (Price, 1997).

Figure 11 to 14 show the classification of ARD potential of drill core samples based on seam group and lithologic category, 157 from NW Block, and 163 from SE Block.

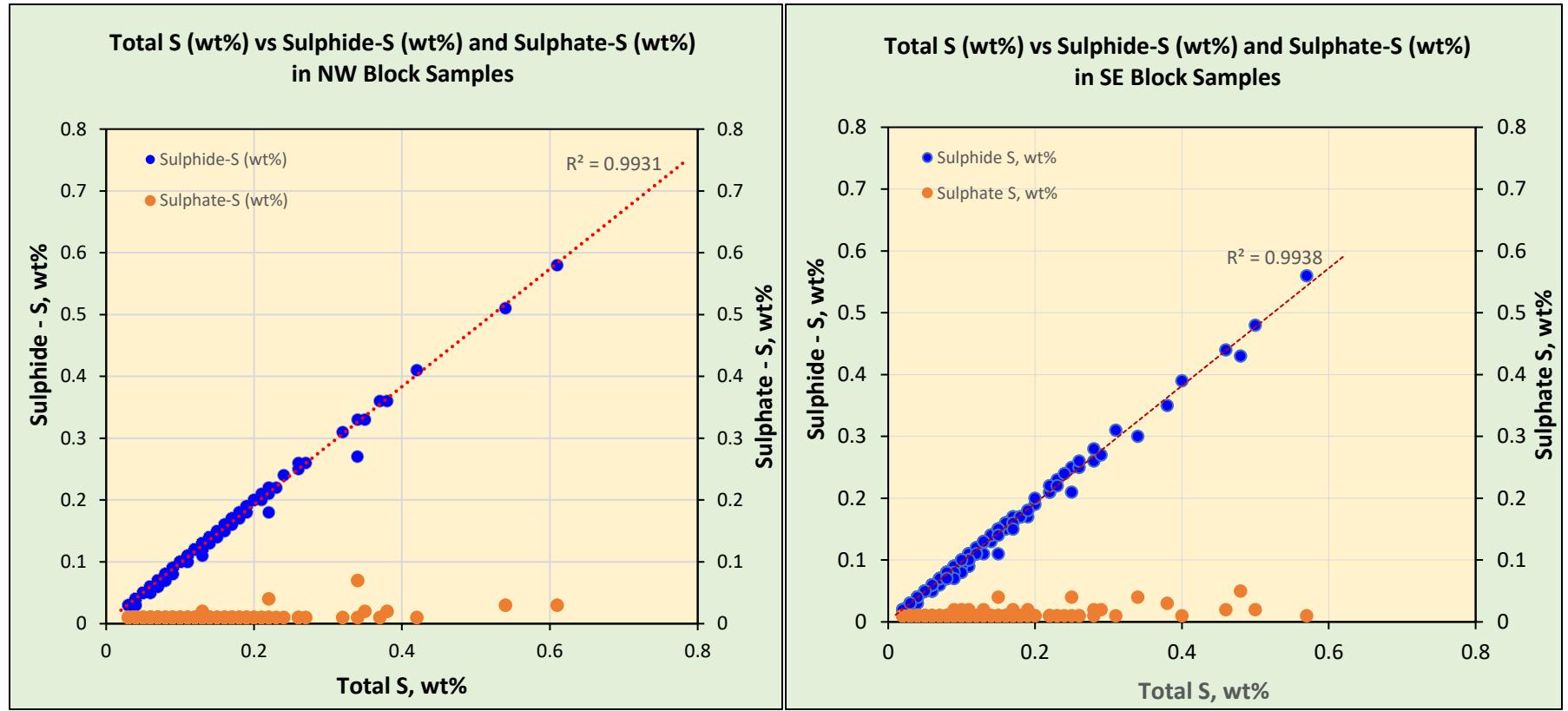


Figure 9 Sulphur Speciation in Drill Core Samples from NW and SE Blocks

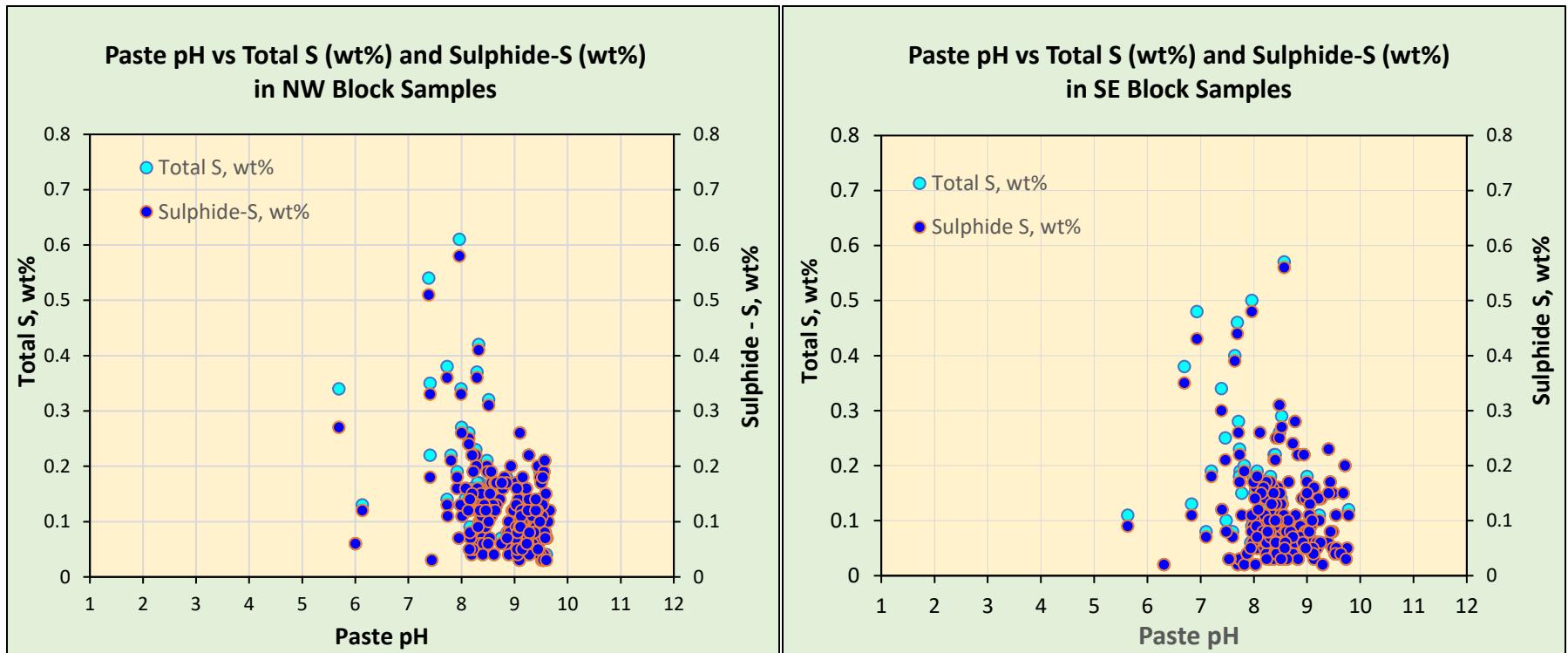


Figure 10 Paste pH vs Sulphur Speciation in Drill Core Samples from NW and SE Blocks

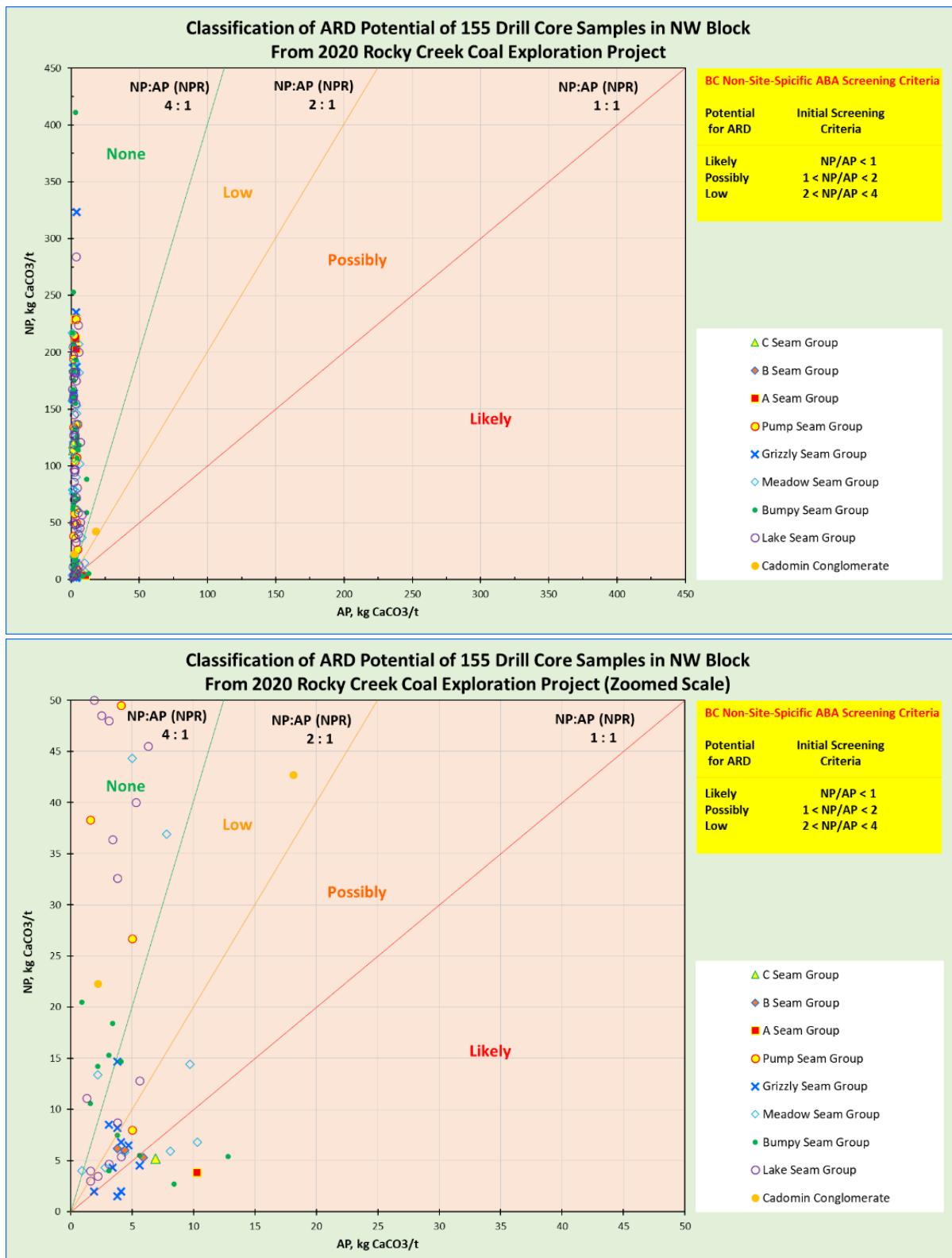


Figure 11 Classification of ARD Potential of 155 Drill Core Samples from NW Block
(based on seam group)

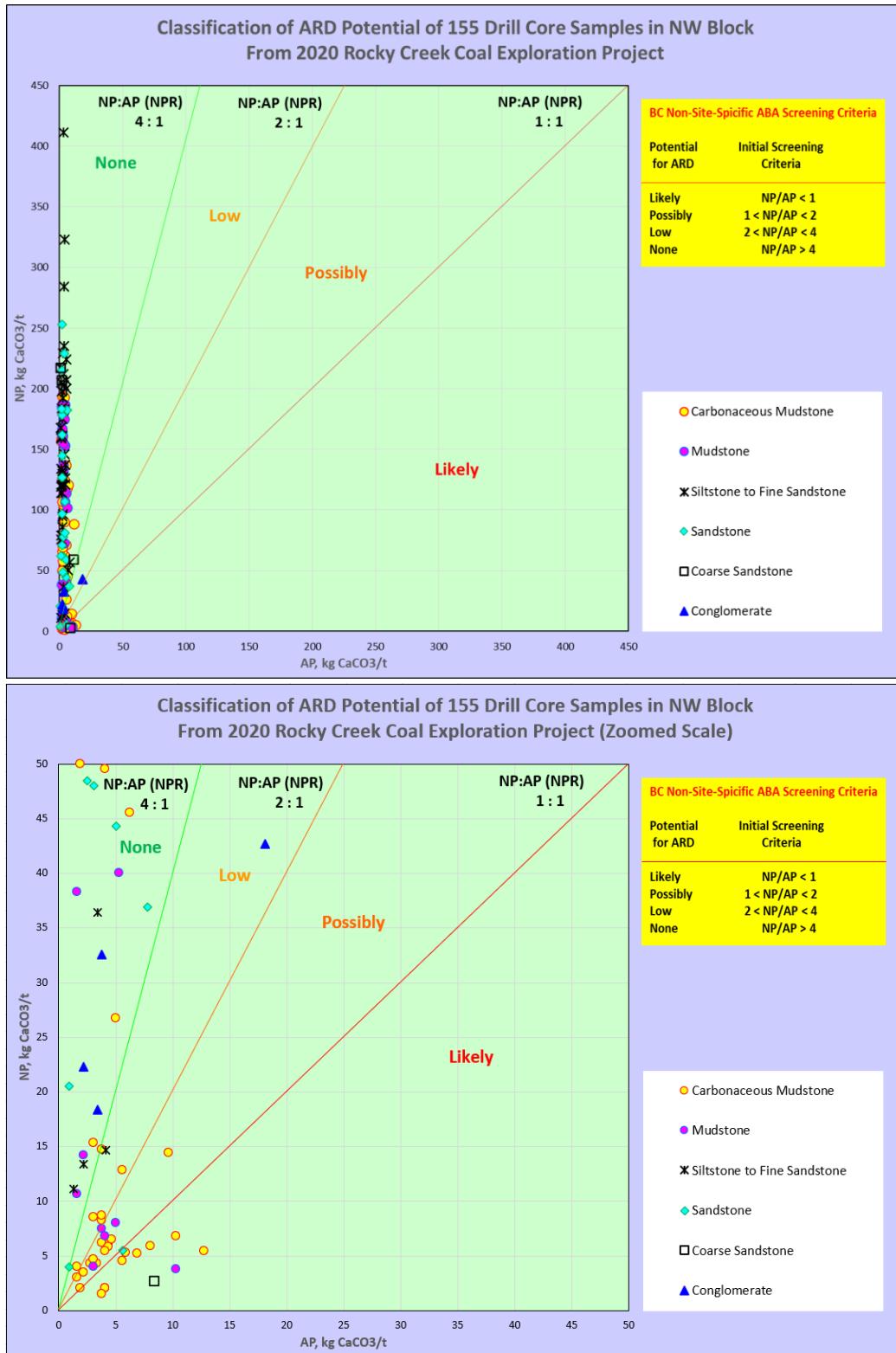


Figure 12 Classification of ARD Potential of 155 Drill Core Samples from NW Block
(based on lithologic unit)

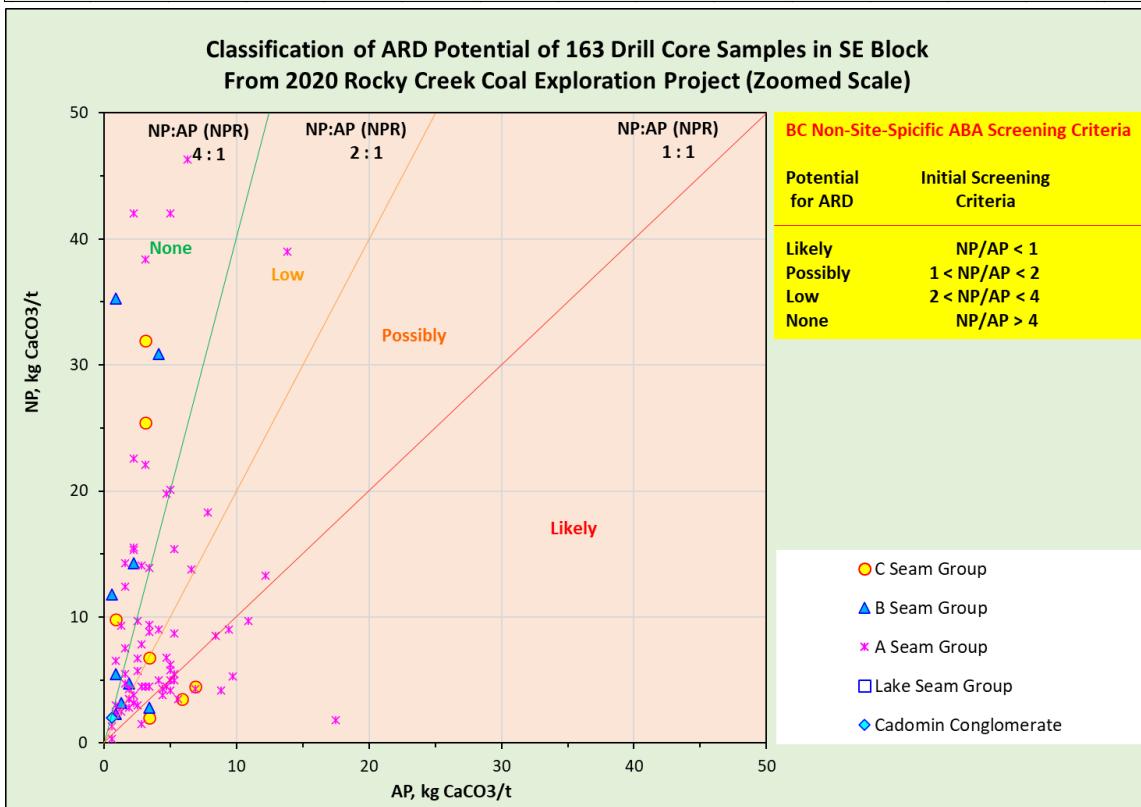
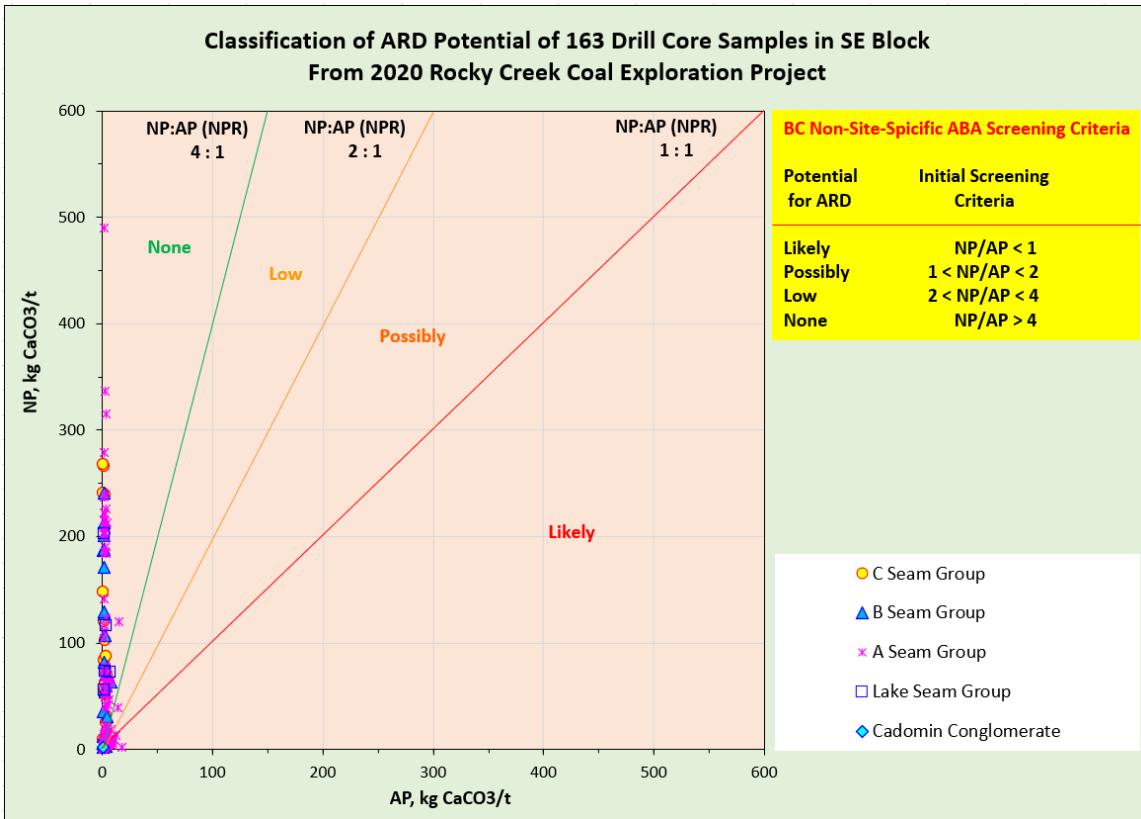


Figure 13 Classification of ARD Potential of 163 Drill Core Samples from SE Block
(based on seam group)

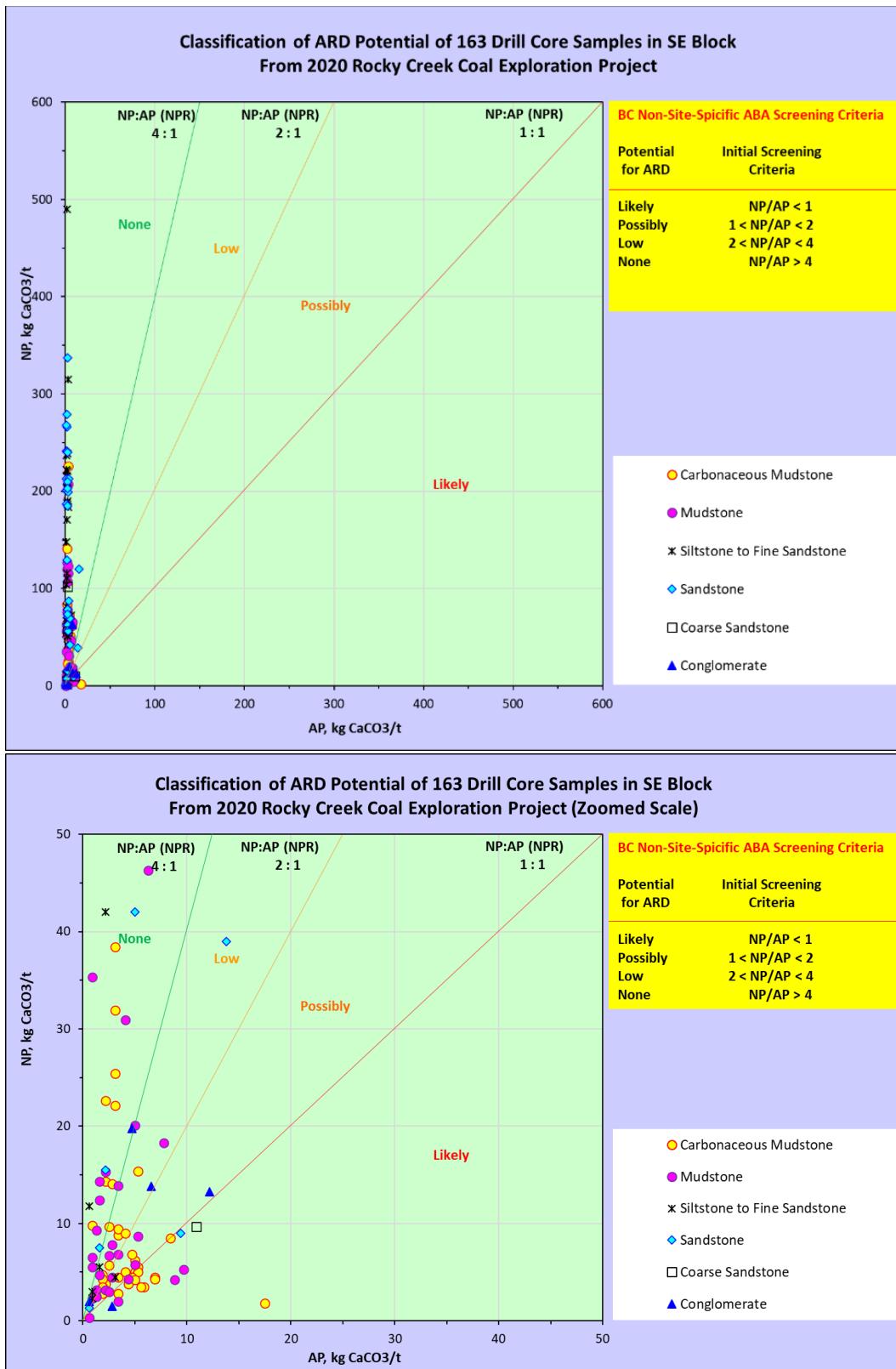


Figure 14 Classification of ARD Potential of 163 Drill Core Samples from SE Block
(based on lithologic unit)

Initial ABA analytical results present none and low potential ARD generating in majority samples from the coal stratigraphical groups in NW and SE blocks. There are 129 of 157 samples, that the net potential ratios (NPR) are greater than 2 in NW Block, and 124 of 161 samples, that the NPR are greater than 2 in SE Block. Samples with NPR less than 2 within the “possible” and “likely” ARD generating are variable from seam groups and lithologic units.

4.3.3 Ultratrace Elemental Concentration

A summary of the solid-phase ultratrace elemental concentration of the 227 drill core samples in NW Block and 209 drill core samples in SE Block is shown in Figure 15 and 16 respectively.

As a preliminary screening tool for elevated solid-phase elemental concentrations, each elemental concentration is compared with 3 times the normal range of concentrations found in sedimentary rocks of the Earth’s crust (Price, 1997). While the comparison of solid-phase elemental concentrations to 3 times crustal abundance can provide an indication of elevated elements, it does not determine susceptibility to weathering, weathering rates, or aqueous concentrations under site-specific conditions. However, the identification of elevated solid-phase elemental concentrations relative to crustal abundances provides an early-stage screening tool for identifying important mineral phases and potential constituents of concern in leach extraction and/or kinetic testing.

Based on this preliminary screening criterion, there are 12 elements of Mo, Zn, Ag, As, Th, Cd, Sb, Bi, Ca, Ba, Se, and S with the elevated concentration above 3 times crustal abundance in one or more samples of NW Block (Table 16 and Figure 17), and there are 13 elements of Mo, Zn, Ag, As, Th, Cd, Sb, Bi, Ca, Hg, Ba, Se, and S with the elevated concentration above 3 times crustal abundance in one or more samples of SE Block (Table 16 and Figure 18).

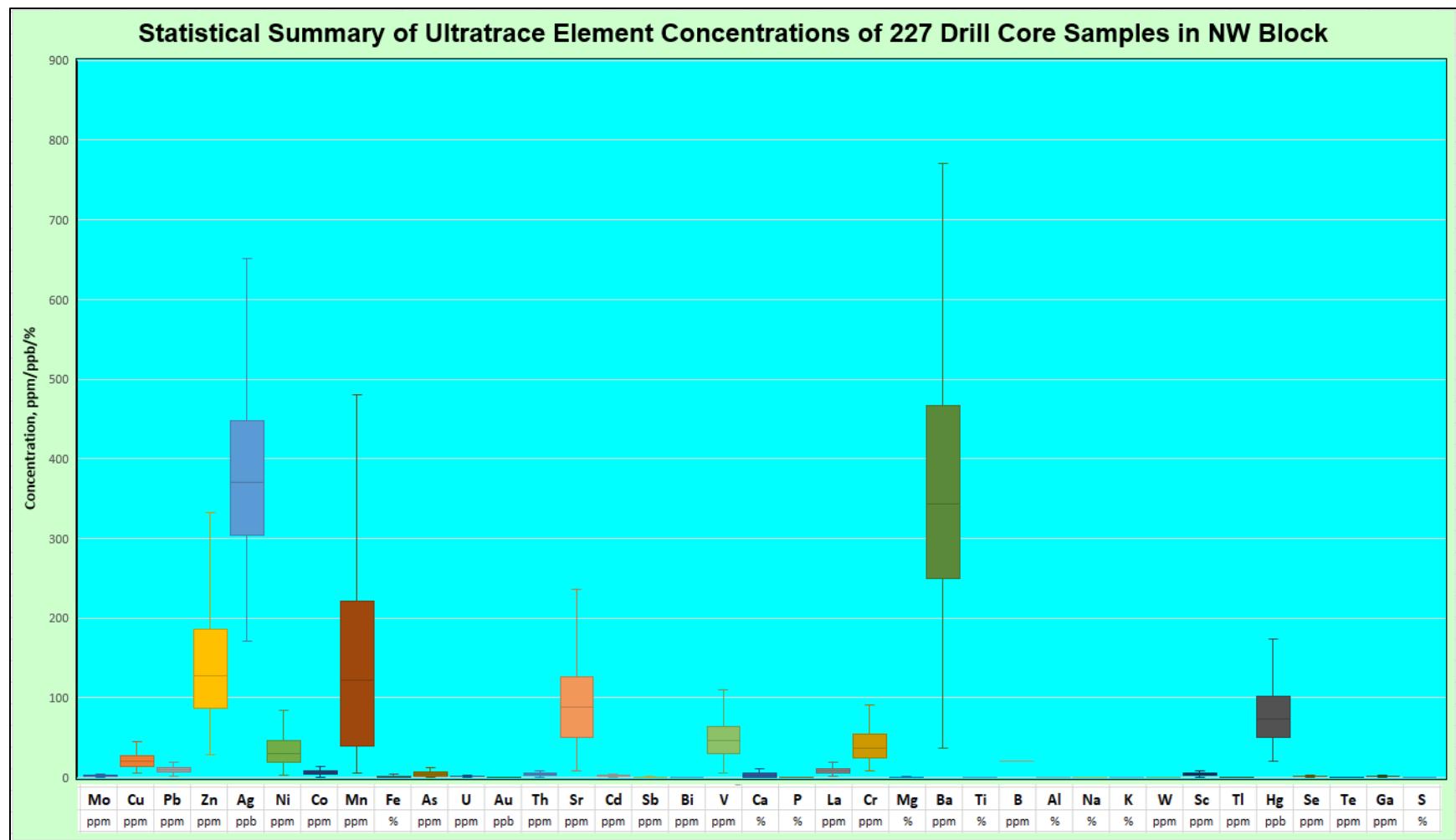


Figure 15 Box Chart of Statistical Ultratrace Elemental Concentration on Drill Core Samples in NW Block

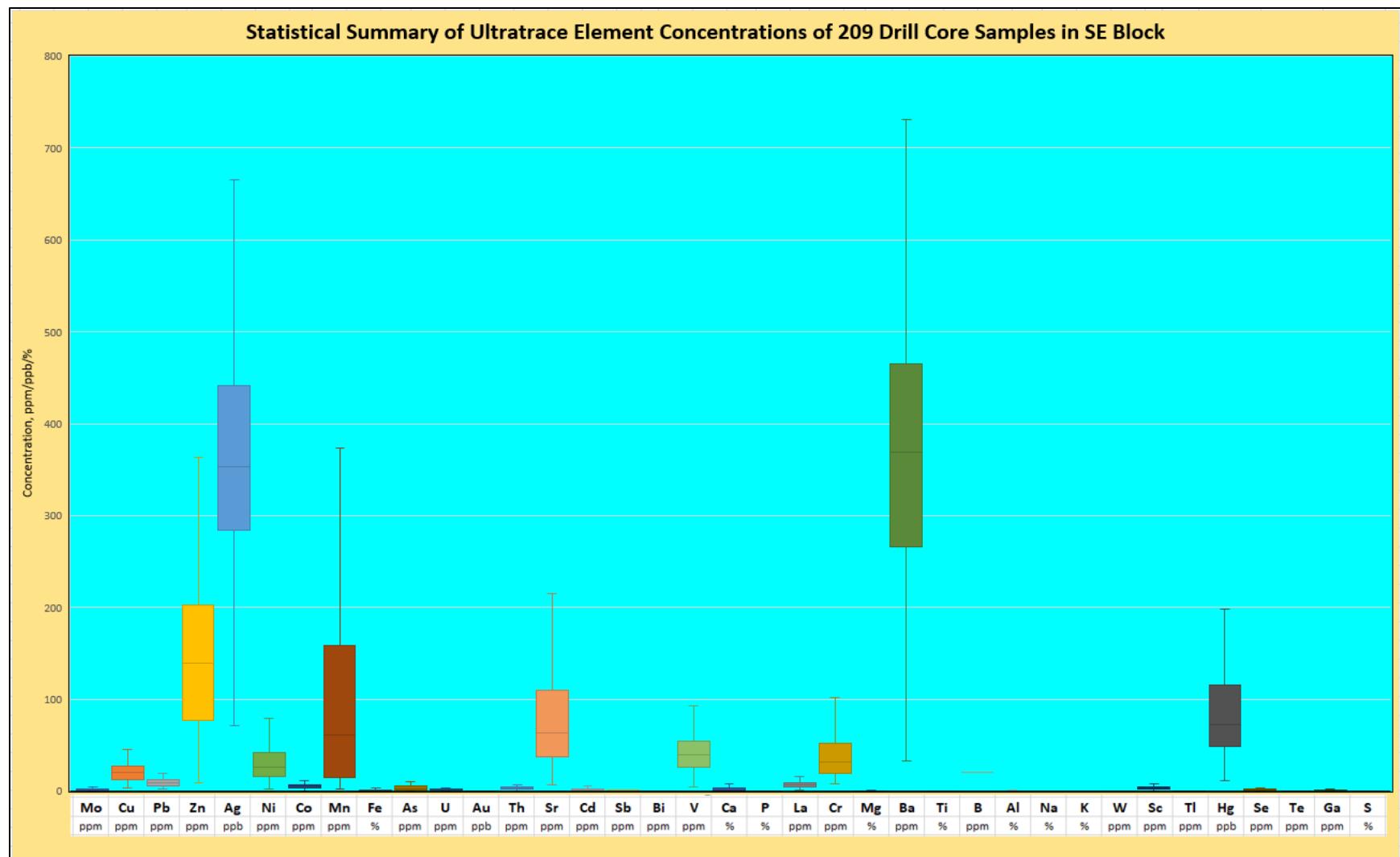


Figure 16 Box Chart of Statistical Ultratrace Elemental Concentration on Drill Core Samples in SE Block

Table 16 Statistical Summary of Ultratrace Elemental Concentration above 3 Times Crustal Abundance

Block	Elements	Mo	Zn	Ag	As	Th	Cd	Sb	Bi	Ca	Ba	Se	S	Hg
	Unit	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppb
Crustal Abundance	1.2	70	75	1.8	1.2	0.15	0.2	0.0085	4.15	425	0.05	0.035		85
	3 Times Crustal Abundance	3.6	210	225	5.4	3.6	0.45	0.6	0.0255	12.45	1275	0.15	0.105	255
SE	min	0.3	9	71	0.1	0.4	0.19	0.11	0.02	0.04	32.8	0.1	0.02	11
	max	10.5	496	973	41.1	7.8	7.83	2.29	0.57	14.2	2070	4.9	0.45	518
	median	1.6	139	353	2.8	3.5	1.91	0.51	0.15	0.9	369	1.5	0.05	73
	mean	1.8	145	367	4.7	3.4	2.03	0.57	0.14	2.4	391	1.6	0.08	93
NW	min	0.2	28.6	171	0.1	0.6	0.31	0.12	0.02	0.05	37	0.1	0.02	
	max	9.1	571	778	28	9.7	5.8	4.52	0.54	13.5	2500	5.1	0.6	
	median	1.8	128	371	3.6	4.3	2	0.59	0.16	2.65	343	1.5	0.06	
	mean	2.0	142	382	5.2	4.2	2.09	0.66	0.15	3.12	396	1.64	0.08	

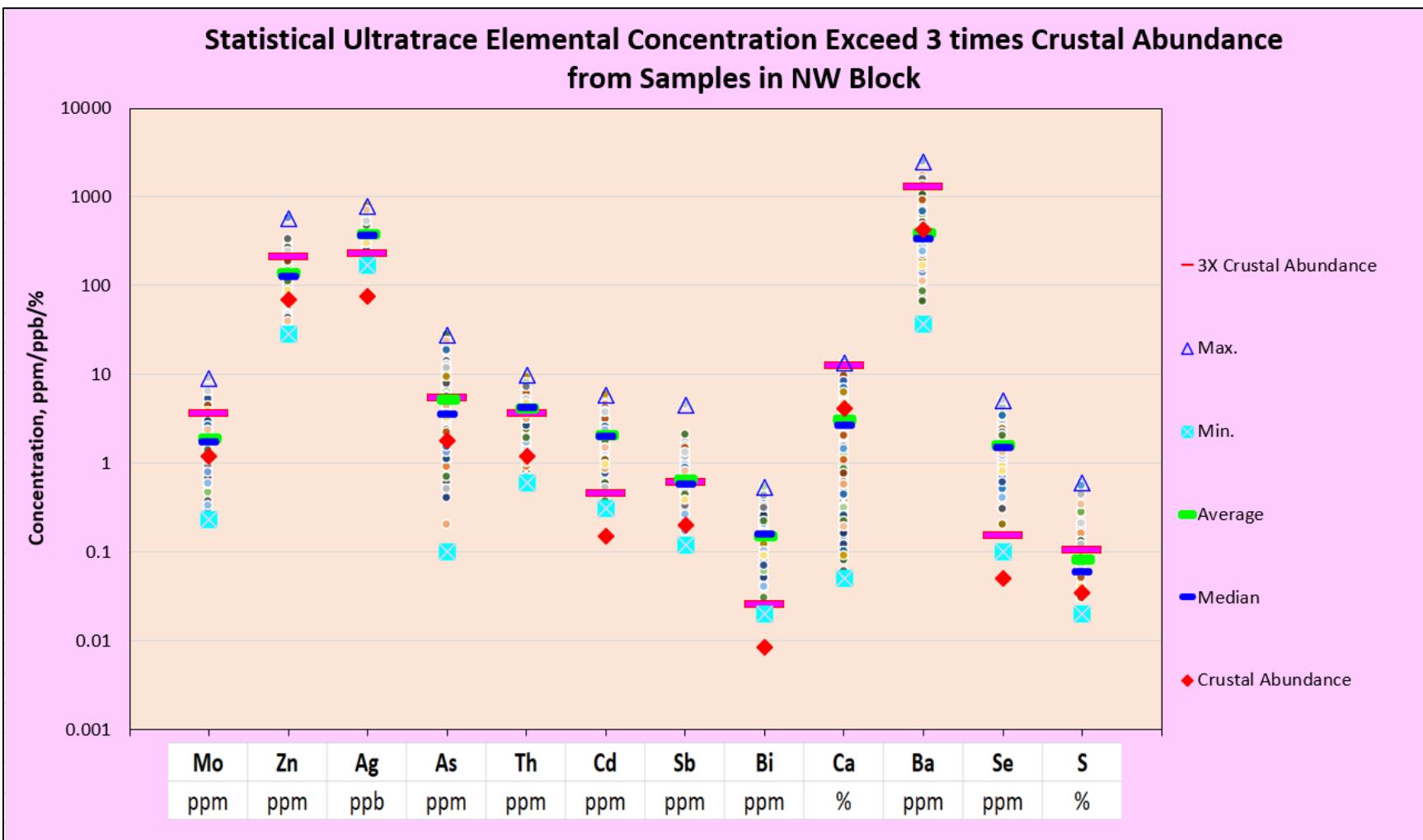


Figure 17 Statistical Ultratrace Elemental Concentration above 3 Times Crustal Abundance in Samples of NW Block

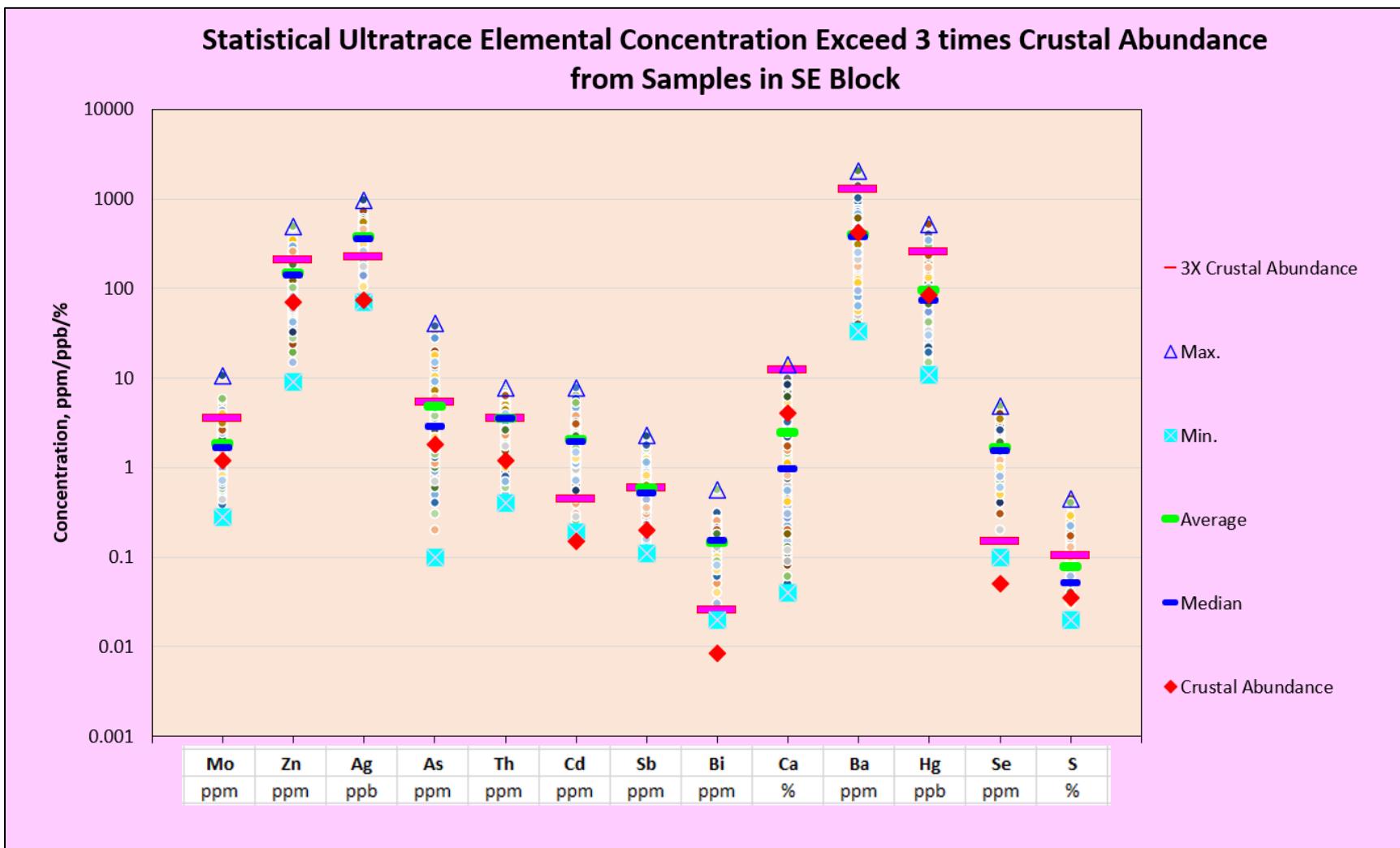


Figure 18 Statistical Ultratrace Elemental Concentration above 3 Times Crustal Abundance in Samples of SE Block

5 COAL RESOURCE ESTIMATION

CTI Plus retained Stantec Consulting Ltd. (Stantec), Alberta, Canada as a third party of technical consulting and service to prepare the Canadian National Instrument (NI) 43-101 technical report for the West Rocky Creek coal property. The purpose of NI43-101 technical report was to provide independent documentation of coal resources based on 2020 coal exploration, in accordance with the requirements of NI43-101 and the CIM Definition Standards. The Geological Survey of Canada (GSC) Paper 88-21 A Standardized Coal Resource/Reserve Reporting System for Canada was referenced during the classification, estimation and reporting of coal Resources.

Each section of this chapter quotes the relevant contents, results and figures in coal resource modeling and resource estimation from Stantec's NI43-101 technical report of June 2021.

5.1 Coal Geology, Deposit and Potential Development Types

Both NW Block and SE Block have a similar level of structural complexity with a gentle syncline structure and thrust fault in NW-SE direction. The "Geology Type" for both blocks is classified as "moderate", based on the definitions outlined in GSC Paper 88-21. Due to the southwest limb of the asymmetrical syncline structure in the SE Block is steeply dipping within a lateral extent along Rocky Creek fault, approaching 75° to 80° degrees., Stantec has classified a portion of the SE Block as a "complex" Geology Type (Appendix K, Figure 8-1).

The "Deposit Type", as defined in GSC Paper 88-21, refers to the probable extraction method that would be used to recover coal. The four categories of "Deposit Type" are:

- Surface;
- Underground;
- Non-conventional; and
- Sterilized.

The property of NW Block and SE Block is in close proximity to important infrastructure, which includes major roads, rail services, access to power and a mining town site. These features will be important for the development of the Property.

Due to the nature of the terrain and the geology of the area, surface mining and highwall mining methods are suitable for the planning and development of the coal in the property (Appendix K, Figure 10-1).

5.2 Resource Modelling

Two gridded structural seam models (GSM) were constructed by CTI Plus for NW and SE blocks. The GEOVIA MINEX™ modelling software was used for characterizing the structure of the deposit. Each grid within the GSM has a fixed position of easting and northing and contains a list of variables or numeric identifiers such as coal seam code, coal hanging wall elevation, coal foot wall elevation, vertical and true thicknesses. The GSM for NW Block has two fault block and 26 stratigraphic units (coal seams and marker beds) that were modeled in each fault block. The GSM for SE Block has three fault block and 31 stratigraphic units (coal seams and marker beds) that were modeled in each fault block.

Stantec loaded the structural model export into MinePlan® for review, adjustment, and validation, at the same time constructed the 3D block models (3DBM) for conducting the resource evaluation and estimation. The 3DBM consists of laterally and vertically contiguous cells that occupy the three-dimensional extents of the project area. The selected block size was determined based on the provided gridded data, as well as the requirements for the mining selectivity of the particular deposit. The selected block size for the NW Block 3DBM is 15 m x 15 m x 5m (x, y, z) and the selected grid size for the SE Block 3DBM is 10 m x 10 m x 5 (x, y, z). Each block has a fixed position of easting, northing and elevation within the 3DBM, and contains a list of variables or numeric identifiers such as the coal seam code, coal seam percent within the block, coal thickness, ash content, relative density, as well as other pertinent information.

The following procedures were used to construct the 3D block model:

- The GSM provided by CTI Plus for NW Block and the GSM adjusted by Stantec for SE Block were used to populate the 3DBM model blocks with seam codes, and to determine the volume percentage, as well as the true thickness values for the coal seams.
- The raw coal quality information from the drill holes was interpolated to the model block using inverse distance interpolation algorithm. The raw coal quality information added to the 3DBM include ash, volatile matter, fixed carbon, total sulphur, relative density and FSI.
- Where more than one coal seam intersected a model block, additional seam identifiers, volume percentage, raw coal quality information and thickness values were populated to the model blocks in majority order (ordered by volume).
- Oxidation depth on the property was assessed using the available FSI and LT% data from the drill holes. It was determined that the average oxidation depth for the deposit is about 6m. In addition to the oxidation depth, it was determined that on average the first two meters are represented as till thickness and/or very oxidized coal. As a result, no resources were reported in the first two meters below topographic surface and the coal from 2 to 6 m depth is considered as oxidized coal.
- The block model was further refined and developed for use in engineering and mine planning work; however, those aspects of the model are not discussed here.

5.3 Resource Classification

In accordance with the criteria of the CIM Guidelines, which apply to coal deposits, resources are classified in Measured, Indicated and Inferred categories, proceeding from that with the highest confidence level to the lowest. Besides the reserve and resource classification scheme of the CIM Guidelines, NI43-101 suggests that the criteria of GSC Paper 88-21 be referred to if necessary. The distinction between different classes of resources in that paper is based on the spacing of valid data points which, in this case, is coal drill holes. The concept is that the closer the holes are spaced, the higher the level of confidence that can be placed on the resource estimates. The coal resource classification is based on the following considerations:

- Geology type;
- Structural complexity of seam geometry; and
- Coal quality variability.

As a reference, the criteria used to define assurance of existence for deposits of Moderate Geology Type, listed in GSC Paper 88-21, use “distances from the nearest data point” and are as follow:

- Measured – 0 m to 450 m;
- Indicated – 450 m to 900 m; and
- Inferred – 900 m to 2,400 m.

As a reference, criteria used to define assurance of existence for deposits of Complex Geology Type, listed in GSC Paper 88-21, use multiple criteria, which are often simplified to half of the “cross-section spacing” and are as follows:

- Measured – 0 m to 75 m;
- Indicated – 75 m to 150 m; and
- Inferred – 150 m to 300 m.

The following assumptions and criteria have been used in the resource estimates for the property in the NI43-101 technical report:

- The SE Block is divided into two areas. The area along the Rocky Creek fault, is classified as “Complex” Geological Type and the rest of the SE Block is classified as “Moderate” Geological Type as indicated on Figure 8-1 in Appendix K. All the coal within NW Block is classified as “Moderate” Geological Type as indicated on Figure 8-1 in Appendix K.
- The data spacing used to define the assurance of existence in the NW Block and SE Block are consistent with the standards of GSC Paper 88-21 requirements for the corresponding Geology Type.
- The modelled distances to the nearest datapoint were used as guidance to classify the resources. Adjustments to the initial classification based on the calculated

distance were made to avoid a “spotted dog” classification distribution. The term “spotted dog”, in the context of resource classification, is referring to classification where individual drill holes are surrounded by annuli of Measured and Indicated Resources and lack of continuity in assurance of existence between the drill holes is observed.

5.4 Condition of Resource Estimation

Items below summarizes the reasonable prospects for economic extraction that were considered in the coal resource estimate of NW Block and SE Block.

- Minimum mineable seam thickness:

Surface mining	0.5 m
Highwall mining	0.6 m
- Average coal sale price: 130 USD\$/tonne (clean)
- Coal production cost: 90 – 95 USD\$/tonne (clean)
- Waste mining cost: 4 – 5 USD\$/m³
- Yield rate:

NW Block	65 %
SE Block	75 %
- Minimum open pit width 200 m
- Break-even strip ration 14 : 1 bcm/tonne
- Infrastructure offset (pipeline) 150 m

5.5 Summary of Resource Estimation

With respect to the in-place coal resource, the term “resource” is used to quantify coal contained in seams occurring within specified limits of thickness and depth from surface. The term “resource” refers to the in-place inventory of coal that has ‘reasonable prospects for economic extraction’. Coal resources are reported as an in-place tonnage and are not adjusted for mining losses or recovery.

All mineral resources are classified as to the assurance of their existence into one of three categories, Measured, Indicated or Inferred. The category to which a resource is assigned depends on the level of confidence in the geological information available (CIM Definition

Standards). GSC Paper 88-21 provides guidance for categorizing various types of coal deposits by levels of assurance. The spacing criteria for Moderate Geology Types are different from those for Complex deposits; the greater degree of uncertainty associated with Complex Deposits causes closer data spacing limits to be used for resource classification of these deposits than for Moderate Deposits.

The image consists of a series of horizontal black bars of varying lengths, arranged vertically. The bars are solid black and have thin white borders. They are positioned against a white background. The lengths of the bars decrease as they move from top to bottom. There are approximately 15 bars in total.

6 STATEMENT OF COST

Actual expenditure in the 2021 exploration of the Rocky Creek coal property was C\$1,524,160.16, including project management, coal and drill core sample management, laboratory analysis, analytical data interpretation, geology and resource modeling, coal quality evaluation, and coal resource estimation. A summary of annual cost is provided in Table 19 with a detailed spreadsheet in Appendix L.

Table 19 Summary of 2021 Exploration Cost

Work Type			Cost (C\$)
Project Management			387,659.79
Sample Management	Coal Quality	Coal	58,815.64
	Geochemistry	Drill Core/Rock	55,920.64
Laboratory Analysis	Coal Quality	Coal	321,758.29
	Geochemistry	Drill Core/Rock	78,843.79
Analytical Data Interpretation	Coal Quality	Coal	194,149.15
	Geochemistry	Drill Core/Rock	39,491.17
Geology and Resource Modeling	Geology		121,303.57
	Resource		42,780.07
Resource Estimation	Coal Quality		154,657.98
	Resource		29,780.07
Technical Report			39,000.00
Total			1,524,160.16

7 CONCLUSION

Results from 2021 CTI Plus exploration program indicate that the West Rocky Creek property contains mineable coal seams of Lower Gething Formation. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Partial ABA analysis and PAG screening illustrate none and low potential acid generating on majority drill core samples from various coal stratigraphical groups and lithological units. With an early-stage screening, 12 solid-phase trace element concentrations of Mo, Zn, Ag, As, Th, Cd, Sb, Bi, Ca, Be, Se, and S are elevated above 3 times crustal abundance in some drill core samples from NW Block. Except these 12 elements, Hg element concentration exceeds 3 times crustal abundance on some samples from SE Block.

Further to next step, it would be beneficial for the mine development plan to complete a metallurgical testing on the bulk coking coal sample from West Rocky Creek property. In addition, it is recommended to plan the drilling program that can indicate coal occurrence and identify the coal resource in the East Rocky Creek coal property.

8 STATEMENT OF QUALIFICATION

I, Vincent Li, of Vancouver, British Columbia, as the co-author of this report entitled “2021 Rocky Creek Coal Assessment Report, Peace River Land District and Liard Mining Division, Northeast BC, Canada” dated December 20, 2021, do hereby certify that:

1. I am currently employed as Vice President and Chief Engineer by CTI Plus Resources Ltd., 555 Burrard Street, 2nd Floor, Vancouver, BC V7X 1M8.
2. I graduated with a B.Eng. in Coal Geology and Exploration from Xi'an University of Science and Technology, China in 1984.
3. I am a registered Professional Engineer and Geologist of the:
 - Association of Professional Engineers and Geoscientists of Alberta (APEGA No. 75174).
 - Association of Professional Engineers and Geoscientists of British Columbia (APEGBC No. 35153).
4. I have worked as an engineer and/or geologist over 35 years since my undergraduate degree from university, the particular and relevant experiences in coal exploration and coal mine development in the Peace River Coalfield of NE BC, Groundhog-Klappan Coalfield of NW BC and Foothills of SW AB, and metal resource development in QC, Canada:
 - Engineering and geology lead for Guo Ao Lithium Ltd. on the detailed feasibility study and environmental impact assessment of the Moblan Lithium open cut mine development, Quebec (2018 – 2019).
 - Engineering and geology lead for Canadian Dehua International Mines Group Inc. on the coal exploration, mine development plan and feasibility study, environmental assessment, bulk sample mine permitting, etc. of the Gething, Murray River, Bullmoose Creek and Wapiti River underground longwall coking coal mine development, NE BC (2009 – 2018).
5. I am responsible for the preparation of Section 1, 2, 4, 5, 6, 7 and 9, and Section 10 (Appendix H to L).

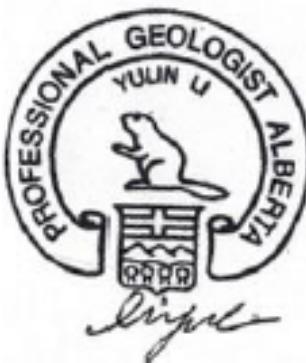


Vincent Li, P.Eng.; P.Geo.
Dated December 20, 2021
at Vancouver, BC.

I, Yulin Li, of Calgary, Alberta, as the co-author of this report entitled "2021 Rocky Creek Coal Assessment Report, Peace River Land District and Liard Mining Division, Northeast BC, Canada" dated December 20, 2021 ("the Report"), do hereby certify that:

1. I graduated from China University of Mining and Technology & China Coal Research Institute with a PhD of Geology in 1997.
2. I am a Registered member of the Association of Professional Engineers and Geoscientists of Alberta (Member #97939) and have been practicing since April 20, 2009.
3. I have worked as a geologist for 33 years internationally of which 18 years in Canada since 2003.
4. I had worked as a senior geologist, project manager and project director in Norwest Corporation from 2003 to 2015. I have extensive experience of exploration design, field operation, data acquisition & analysis and reporting of coal, coal bed methane, oil & gas and other mineral commodities.
5. I have worked as a chief geologist of junior oil and gas companies for exploration and production of oil and gas from 2016 to 2019.
6. I am currently employed as COO & Chief Geologist with CTI Plus Resources Ltd. Suite 970, 717 7th Ave. SW, Calgary, Alberta, T2P 0Z3.
7. I worked together with CTI Plus' coal processing consultants to design the coal quality & petrography testing plan and analyzed all geological and coal quality related data in the exploration program which is covered by this assessment report.
8. I am responsible for the preparation of Section 3 and Section 10 (Appendix A to G).

Yulin Li, PhD, P. Geol.
Dated December 20, 2021
At Calgary, AB.



9 REFERENCE

- [1] Dr. William A. Price: DRAFT - Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites British Columbia; April, 1997
- [2] Ministry of Energy and Mines: Guidelines For Metal Leaching and Acid Rock Drainage at Minesites British Columbia; August, 1998
- [3] Ministry of Energy and Mines, and Ministry of Environment, Land and Parks: Policy for Metal Leaching and Acid Rock Draining at Minesites in British Columbia; July, 1998
- [4] Stantec: Technical Report Rocky Creek Coal Property; June 30, 2021
- [5] Geological Survey of Canada: A Standardized Coal Resource/Reserve Reporting System For Canada, Paper 88-21; 1989

10 APPENDIX

- Appendix A: Lab Report of Coal Core Head Raw Analysis
- Appendix B: Lab Report of NW Block Clean Coal Analysis
- Appendix C: Lab Report of SE Block Clean Coal Analysis
- Appendix D: Lab Report of Coal Cuttings Analysis
- Appendix E: Lab Report of Bulk Sample Analysis
- Appendix F: Lab Report of Roof and Floor Sample Analysis
- Appendix G: Lab Report of Coal Petrography Analysis
- Appendix H: Table of Geochemical Sample Lithology Category and Seam Grouping
- Appendix I: Lab Report of Geochemical Analysis
- Appendix J: Master Table of Geochemical Samples and Analytical Results
- Appendix K: Figures Coal Resources Classification and Distribution
- Appendix L: 2021 Exploration Cost Statement of CTI Plus Rocky Creek Coal Property

All or parts of Sections 3.5, 3.6, 3.7, 3.8, 7 and Appendices B, C, D, E, F, G, and K remain confidential under the terms of the Coal Act Regulation and have been removed from the public version.

http://www.bclaws.ca/civix/document/id/complete/statreg/25_1_2004

Appendix A:

Lab Report of Coal Core Head Raw Analysis

Note: Lab Report are provided in PDF separately

Appendix H:

Table of Geochemical Sample Lithology Category and Seam Grouping

Note: The excel table is provided separately

Sample Labeling				Drill Core Sampling and Sample Lithology						Sample vs Seam Position			Sample Grouping						
Sample No.	BV Lab Sample ID	CTI Plus Field ID	Sample Type & Condition	Sample Weight, kg	Drillhole ID	Depth From, m	Depth To, m	Litho Name	Litho Category	Seam Partings	Indirect Seam Roof	Direct Seam Roof	Direct Seam Floor	Indirect Seam Floor	Direct Seam Roof and Floor	Sample Overburden	Seam InterBurden upward	Seam Floor downward	Seam Group (interburden)
1	ZI4291	32651	Dry Core Rock	3.215	NW-003	161	162.5	Fine Sandstone	FSS	FSS				LB3			LB3	BUMPY	
2	ZI4305	32652	Dry Core Rock	3.125	NW-004	161.5	163	Sandstone	SS	SS	UL					UL		LAKE	
3	ZI4316	32653	Dry Core Rock	3.94	SE-032	44	46	Carbonaceous mudstone	CBMS	CBMS	A04					A04		A	
4	ZI4328	32654	Dry Core Rock	3.369	SE-031	123.5	125	Fine Sandstone	FSS	FSS				A08		A09		A	
5	ZI5283	32655	Dry Core Rock	3.28	NW-056	106	107.5	sandstone	SS	SS							LB3	LAKE	
6	ZI5351	32656	Dry Core Rock	3.08	SE-009	61	62	Silty mudstone	STYMS	MS	A04					A04		A	
7	ZI5352	32657	Dry Core Rock	3.73	SE-009	70	71.25	Siltstone-fine sandstone	STS_FSS	FSS		A06				A06		A	
8	ZI5353	32658	Dry Core Rock	4.435	SE-009	71.95	73.5	Carbonaceous mudstone	CBMS	CBMS	A06					A09		A	
9	ZI5354	32659	Dry Core Rock	3.9	SE-009	80	81	Fine sandstone	FSS	FSS				A06		A09		A	
10	ZI5355	32660	Dry Core Rock	5.905	SE-009	131.5	132.9	Fine sandstone	FSS	FSS		A09			A09		A09		A
11	ZJ0905	32661	Dry Core Rock	3.96	SE-009	133.75	135	Carbonaceous mudstone	CBMS	CBMS			A09				A10		A
12	ZJ0906	32662	Dry Core Rock	4.445	SE-009	155	156.5	Carbonaceous mudstone	CBMS	CBMS				A10			A11		A
13	ZJ0907	32663	Dry Core Rock	4.195	SE-009	180	181.45	Fine sandstone	FSS	FSS		UL			UL		UL		LAKE
14	ZJ0908	32664	Dry Core Rock	4.67	SE-009	181.7	183	Silty mudstone	STYMS	MS			UL				UL		LAKE
15	ZJ0909	32665	Dry Core Rock	3.035	NW-057	3	4.5	Fine sandstone	FSS	FSS	UP					UP		PUMP	
16	ZJ0910	32666	Dry Core Rock	2.94	NW-057	3	4.5	Fine sandstone	FSS	FSS	UP					UP		PUMP	
17	ZJ0911	32667	Dry Core Rock	4.37	NW-057	15	16.35	Carbonaceous mudstone	CBMS	CBMS		UP			UP	UP		PUMP	
18	ZJ0912	32668	Dry Core Rock	4.485	NW-057	19.25	20.5	Carbonaceous mudstone	CBMS	CBMS			UP		UP		LP		PUMP
19	ZJ0913	32669	Dry Core Rock	6.015	NW-057	34.5	36	Very fine sandstone	VFSS	FSS				LP1		UG		GRIZZLY	
20	ZJ0914	32670	Dry Core Rock	4.17	NW-057	47.5	49	Carbonaceous mudstone	CBMS	CBMS		UG			UG	UG		GRIZZLY	
21	ZJ0915	32671	Dry Core Rock	3.8	NW-057	51.75	53.4	Carbonaceous mudstone	CBMS	CBMS		LG			LG	LG		GRIZZLY	
22	ZJ0916	32672	Dry Core Rock	5.195	NW-057	77	78.5	fine sandstone	FSS	FSS	LG2					LM		MEADOW	
23	ZJ0917	32673	Dry Core Rock	5	NW-057	123.5	125	fine to coarse sandstone	FCSS	CSS				LM		UB		BUMPY	
24	ZJ0918	32674	Dry Core Rock	3.855	NW-057	135.35	136.5	Carbonaceous mudstone	CBMS	CBMS		UB			UB1			BUMPY	
25	ZJ0919	32675	Dry Core Rock	5.335	NW-057	151	152.5	Fine Sandstone	FSS	FSS				LB3			LB3	BUMPY	
26	ZJ0920	32676	Dry Core Rock	3.545	SE-008	8.7	10.1	Siltstone	STS	FSS	BLU					BLU		B	
27	ZJ0921	32677	Dry Core Rock	3.635	SE-008	16	18	Silty Mudstone	STYMS	MS		BLU			BLU			B	
28	ZJ0922	32678	Dry Core Rock	3.29	SE-008	16	18	Silty Mudstone	STYMS	MS		BLU			BLU			B	
29	ZJ0923	32679	Dry Core Rock	5.465	SE-008	60	61.5	Mudstone	MS	MS			BLL			A01		A	
30	ZJ0924	32680	Dry Core Rock	4.355	SE-008	69	70.5	Carbonaceous mudstone	CBMS	CBMS		A02				A02		A	
31	ZJ0925	32681	Dry Core Rock	4.56	SE-008	83	84.5	Siltstone	STS	FSS			A03			A05		A	
32	ZJ0926	32682	Dry Core Rock	4.32	SE-008	107	108.5	Carbonaceous mudstone	CBMS	CBMS			A03			A05		A	
33	ZJ0927	32683	Dry Core Rock	5.815	SE-008	124.5	126	Very fine sandstone	VFSS	FSS		A05				A05		A	
34	ZJ0928	32684	Dry Core Rock	4.915	SE-008	131	132.5	Mudstone	MS	MS		A05				A05		A	
35	ZJ0929	32685	Dry Core Rock	3.985	SE-008	191	192	Medium to coarse sandstone	MCSS	CSS			A06			A05	A		

Sample Labeling				Drill Core Sampling and Sample Lithology						Sample vs Seam Position			Sample Grouping						
Sample No.	BV Lab Sample ID	CTI Plus Field ID	Sample Type & Condition	Sample Weight, kg	Drillhole ID	Depth From, m	Depth To, m	Litho Name	Litho Category	Seam Partings	Indirect Seam Roof	Direct Seam Roof	Direct Seam Floor	Indirect Seam Floor	Direct Seam Roof and Floor	Seam Overburden	Seam InterBurden upward	Seam Floor downward	Seam Group (interburden)
36	ZJ0930	32686	Dry Core Rock	3.23	NW-036	6.9	7.95	Carbonaceous mudstone	CBMS	CBMS	UG				UG			GRIZZLY	
37	ZJ0931	32687	Dry Core Rock	3.38	NW-036	9.7	10.7	Carbonaceous mudstone	CBMS	CBMS	UG				UG			GRIZZLY	
38	ZJ0932	32688	Dry Core Rock	3.585	NW-036	21.5	22.55	Carbonaceous mudstone	CBMS	CBMS	UG				UG			GRIZZLY	
39	ZJ0933	32689	Dry Core Rock	5.09	NW-036	32	33.5	carbonaceous mudstone	CBMS	CBMS				LG2		UM	UM	MEADOW	
40	ZJ0934	32690	Dry Core Rock	3.835	NW-036	46	47.5	siltstone	STS	FSS	UM					UM	UM	MEADOW	
41	ZJ0935	32691	Dry Core Rock	2.915	NW-036	46	47.5	siltstone	STS	FSS	UM					UM	UM	MEADOW	
42	ZJ0936	32692	Dry Core Rock	3.575	NW-036	74.5	76.1	Carbonaceous mudstone	CBMS	CBMS		LM		LM	LM	LM	MEADOW		
43	ZJ0937	32693	Dry Core Rock	5.31	NW-036	88	89.5	siltstone	STS	FSS				LM		UB	BUMPY		
44	ZJ0938	32694	Dry Core Rock	3.295	NW-036	107	108.5	Carbonaceous mudstone	CBMS	CBMS				UB		LB3	BUMPY		
45	ZJ0939	32695	Dry Core Rock	5.065	NW-036	132.5	134	siltstone	STS	FSS				LB3			LB3	LAKE	
46	ZJ0940	32696	Dry Core Rock	3.785	SE-018	50.75	52	Mudstone	MS	MS				BLL		A02	A		
47	ZJ0941	32697	Dry Core Rock	4.85	SE-018	52	53.5	Mudstone	MS	MS				BLL		A02	A		
48	ZJ0942	32698	Dry Core Rock	5.31	SE-018	53.5	55	Mudstone	MS	MS				BLL		A02	A		
49	ZJ0943	32699	Dry Core Rock	4.165	SE-018	55	56.5	Mudstone	MS	MS				BLL		A02	A		
50	ZJ0944	32700	Dry Core Rock	4.46	SE-018	56.5	58	Sandstone	SS	SS	A02					A02	A		
51	ZJ0945	32801	Dry Core Rock	3.02	SE-018	58	59.5	Sandstone	SS	SS	A02					A02	A		
52	ZJ0946	32802	Dry Core Rock	3.175	SE-018	58	59.5	Sandstone	SS	SS	A02					A02	A		
53	ZJ0947	32803	Dry Core Rock	4.57	SE-018	59.5	61	Sandstone	SS	SS	A02					A02	A		
54	ZJ0948	32804	Dry Core Rock	5.125	SE-018	61	62.5	Sandstone	SS	SS	A02					A02	A		
55	ZJ0949	32805	Dry Core Rock	5.01	SE-018	62.5	64	Sandstone	SS	SS	A02					A02	A		
56	ZJ0950	32806	Dry Core Rock	5.17	SE-018	64	65.5	Siltstone	STS	FSS		A02		A02		A02	A		
57	ZJ0951	32807	Dry Core Rock	4.13	SE-040	4.5	6	Siltstone	STS	FSS		CUU1				CUU1	C		
58	ZJ0952	32808	Dry Core Rock	4.41	SE-040	11.5	13	Medium to coarse sandstone	MCSS	CSS		CUU1				CUU1	C		
59	ZJ0953	32809	Dry Core Rock	3.575	SE-040	20	21	Carbonaceous mudstone	CBMS	CBMS		CUU1		CUU1	CUU1	C			
60	ZJ0954	32810	Dry Core Rock	3.65	SE-040	29.8	31	Carbonaceous mudstone	CBMS	CBMS		CUL		CUL	CLU	C			
61	ZJ0955	32811	Dry Core Rock	3.16	SE-040	47	48.5	Fine sandstone	FSS	FSS				CL		BU	B		
62	ZJ0956	32812	Dry Core Rock	3.09	SE-040	47	48.5	Fine sandstone	FSS	FSS				CL		BU	B		
63	ZJ0957	32813	Dry Core Rock	2.89	SE-040	59.75	60.75	Mudstone	MS	MS				BLL		A04	A		
64	ZJ0958	32814	Dry Core Rock	4.405	SE-040	88.5	90	Fine to Medium Sandstone	FMSS	SS	A04					A04	A		
65	ZJ0959	32815	Dry Core Rock	4.75	SE-040	118.5	120	Siltstone	STS	FSS				A06		A06	A		
66	ZJ0960	32816	Dry Core Rock	5.22	NW-014	9.5	11	Siltstone	STS	FSS	UM					LM	MEADOW		
67	ZJ0961	32817	Dry Core Rock	5.495	NW-014	20	21.5	fine to coarse sandstone	FCSS	CSS				LM		UB	BUMPY		
68	ZJ0962	32818	Dry Core Rock	4.875	NW-014	44.5	46	Mudstone	MS	MS	UB					UB	BUMPY		
69	ZJ0963	32819	Dry Core Rock	5.62	NW-014	60	61.5	carbonaceous mudstone	CBMS	CBMS				LB3		UL	LAKE		
70	ZJ0964	32820	Dry Core Rock	3.625	NW-014	111.1	112.05	Carbonaceous mudstone	CBMS	CBMS		UL		UL	UL	UL	LAKE		

Sample Labeling				Drill Core Sampling and Sample Lithology						Sample vs Seam Position			Sample Grouping						
Sample No.	BV Lab Sample ID	CTI Plus Field ID	Sample Type & Condition	Sample Weight, kg	Drillhole ID	Depth From, m	Depth To, m	Litho Name	Litho Category	Seam Partings	Indirect Seam Roof	Direct Seam Roof	Direct Seam Floor	Indirect Seam Floor	Direct Seam Roof and Floor	Sample Overburden	Seam InterBurden upward	Seam Floor downward	Seam Group (interburden)
71	ZJ0965	32821	Dry Core Rock	3.485	NW-014	112.85	113.85	Siltstone	STS	FSS			UL			LL		LAKE	
72	ZJ0966	32822	Dry Core Rock	3.03	NW-014	143	144.5	Fine to Medium Sandstone	FMSS	SS				LL			LL	LAKE	
73	ZJ0967	32823	Dry Core Rock	3.16	NW-014	143	144.5	Fine to Medium Sandstone	FMSS	SS				LL			LL	LAKE	
74	ZJ0968	32824	Dry Core Rock	4.06	NW-014	165	166.5	Conglomerate	CONG	CONG	CAD			LL				CADO	
75	ZJ0969	32825	Dry Core Rock	4.605	NW-022	52	53.5	Silty mudstone	STYMS	MS				LB3		UL		LAKE	
76	ZJ0970	32826	Dry Core Rock	5.83	NW-022	53.5	55	Carbonaceous mudstone	CBMS	CBMS				LB3		UL		LAKE	
77	ZJ0971	32827	Dry Core Rock	6.36	NW-022	55	56.5	siltstone	STS	FSS				LB3		UL		LAKE	
78	ZJ0972	32828	Dry Core Rock	5.435	NW-022	56.5	58	siltstone	STS	FSS				LB3		UL		LAKE	
79	ZJ0973	32829	Dry Core Rock	5.615	NW-022	58	59.5	siltstone	STS	FSS				LB3		UL		LAKE	
80	ZJ0974	32830	Dry Core Rock	5.48	NW-022	59.5	61	siltstone	STS	FSS				LB3		UL		LAKE	
81	ZJ0975	32831	Dry Core Rock	6.225	NW-022	61	62.5	siltstone	STS	FSS				LB3		UL		LAKE	
82	ZJ0976	32832	Dry Core Rock	5.725	NW-022	62.5	64	siltstone	STS	FSS				LB3		UL		LAKE	
83	ZJ0977	32833	Dry Core Rock	2.835	NW-022	64	65.5	fine sandstone	FSS	FSS				LB3		UL		LAKE	
84	ZJ0978	32834	Dry Core Rock	2.25	NW-022	64	65.5	fine sandstone	FSS	FSS				LB3		UL		LAKE	
85	ZJ0979	32835	Dry Core Rock	6.585	NW-022	65.5	67	Fine sandstone	FSS	FSS				LB3		UL		LAKE	
86	ZJ0980	32836	Dry Core Rock	4.54	NW-007	6.6	8.1	Silty mudstone	STYMS	MS		LP				LP		PUMP	
87	ZJ0981	32837	Dry Core Rock	3.805	NW-007	35.65	36.65	Silty mudstone	STYMS	MS		LP1				UG		GRIZZLY	
88	ZJ0982	32838	Dry Core Rock	2.095	NW-007	39.05	39.55	Carbonaceous mudstone	CBMS	CBMS			UG	UG		LG		GRIZZLY	
89	ZJ0983	32839	Dry Core Rock	5.3	NW-007	62	63.5	Sandstone	SS	SS	UM					UM		MEADOW	
90	ZJ0984	32840	Dry Core Rock	3.135	NW-007	86.7	87.7	Carbonaceous mudstone	CBMS	CBMS		LM		LM		LM		MEADOW	
91	ZJ1153	32841	Dry Core Rock	3.84	NW-007	98.5	99.5	Sandstone	SS	SS	UB					UB		BUMPY	
92	ZJ1154	32842	Dry Core Rock	5.336	NW-007	108	109.5	Sandstone	SS	SS	UB					UB		BUMPY	
93	ZJ1155	32843	Dry Core Rock	3.405	NW-007	118.5	119.5	carbonaceous mudstone	CBMS	CBMS		UB		UB		UB		BUMPY	
94	ZJ1156	32844	Dry Core Rock	3.14	NW-007	125.4	126.4	sandstone	SS	SS		LB2	LB1	LB2		LB2		BUMPY	
95	ZJ1157	32845	Dry Core Rock	5.165	NW-007	146	147.5	Siltstone	STS	FSS			LB3		UL		LAKE		
96	ZJ1158	32846	Dry Core Rock	2.925	NW-007	173	174.5	silty mudstone	STYMS	MS	UL					UL		LAKE	
97	ZJ1159	32847	Dry Core Rock	2.74	NW-007	173	174.5	silty mudstone	STYMS	MS	UL					UL		LAKE	
98	ZJ1160	32848	Dry Core Rock	5.91	NW-007	182	183.5	sandstone	SS	SS	UL					UL		LAKE	
99	ZJ1161	32849	Dry Core Rock	3.255	NW-007	197.4	198.4	carbonaceous mudstone	CBMS	CBMS		LL	LL			LL		LAKE	
100	ZJ1162	32850	Dry Core Rock	4.65	NW-005-2	5	6.5	Fine sandstone	FSS	FSS	UG					UG		GRIZZLY	
101	ZJ1163	32851	Dry Core Rock	5.78	NW-005-2	24	25.5	Siltstone	STS	FSS	UM					UM		MEADOW	
102	ZJ1164	32852	Dry Core Rock	5.01	NW-005-2	36	37.5	Carbonaceous mudstone	CBMS	CBMS	UM					UM		MEADOW	
103	ZJ1165	32853	Dry Core Rock	5.555	NW-005-2	52.5	54	Carbonaceous silty mudstone	CBSTYMS	MS	LM					LM		MEADOW	
104	ZJ1166	32854	Dry Core Rock	5.42	NW-005-2	79	80.5	silty mudstone	STYMS	MS	UB1					UB1		BUMPY	
105	ZJ1167	32855	Dry Core Rock	5.71	NW-005-2	107	108.5	Carbonaceous mudstone	CBMS	CBMS			LB2			LB2	BUMPY		

Sample Labeling				Drill Core Sampling and Sample Lithology						Sample vs Seam Position			Sample Grouping						
Sample No.	BV Lab Sample ID	CTI Plus Field ID	Sample Type & Condition	Sample Weight, kg	Drillhole ID	Depth From, m	Depth To, m	Litho Name	Litho Category	Seam Partings	Indirect Seam Roof	Direct Seam Roof	Direct Seam Floor	Indirect Seam Floor	Direct Seam Roof and Floor	Sample Overburden	Seam InterBurden upward	Seam Floor downward	Seam Group (interburden)
106	ZJ1168	32856	Dry Core Rock	2.675	NW-005-2	125	126.5	Fine sandstone	FSS	FSS				LB2			LB2	BUMPY	
107	ZJ1169	32857	Dry Core Rock	2.965	NW-005-2	125	126.5	Fine sandstone	FSS	FSS				LB2			LB2	BUMPY	
108	ZJ1170	32858	Dry Core Rock	4.465	NW-045	6.5	8	Siltstone	STS	FSS	UL				UL			LAKE	
109	ZJ1171	32859	Dry Core Rock	5.665	NW-045	29.5	31	Fine sandstone	FSS	FSS	UL				UL			LAKE	
110	ZJ1172	32860	Dry Core Rock	5.755	NW-045	49.5	51	Fine sandstone	FSS	FSS	UL				UL			LAKE	
111	ZJ1173	32861	Dry Core Rock	3.735	NW-045	56	57	Carbonaceous silty mudstone	CBSTYMS	MS			UL	UL		LL		LAKE	
112	ZJ1174	32862	Dry Core Rock	3.065	NW-045	61.25	62.25	Carbonaceous mudstone	CBMS	CBMS			LL	LL		LL		LAKE	
113	ZJ1175	32863	Dry Core Rock	4.89	NW-045	65	66.5	Silty mudstone	STYMS	MS				LL			LL	LAKE	
114	ZJ1176	32864	Dry Core Rock	5.42	NW-045	76.5	78	Fine to Medium Sandstone	FMSS	SS			LL			LL		LAKE	
115	ZJ1177	32865	Dry Core Rock	3.585	NW-045	95	96	Conglomerate	CONG	CONG	CAD			LL				CADO	
116	ZJ1178	32866	Dry Core Rock	2.91	SE-045	10.2	10.8	Fine sandstone	FSS	FSS	CLU					CLU	C		
117	ZJ1179	32867	Dry Core Rock	2.615	SE-045	12.9	14.35	Mudstone	MS	MS		CLU			CLU	CLU	C		
118	ZJ1180	32868	Dry Core Rock	2.665	SE-045	12.9	14.35	Mudstone	MS	MS		CLU			CLU	CLU	C		
119	ZJ1181	32869	Dry Core Rock	3.52	SE-045	15.55	16.6	Siltstone	STS	FSS				CL		BU	B		
120	ZJ1182	32870	Dry Core Rock	5.49	SE-045	41	42.5	Silty Mudstone	STYMS	MS	A01					A01	A		
121	ZJ1183	32871	Dry Core Rock	4.625	SE-045	45.5	47	Sandstone	SS	SS				A01		A02	A		
122	ZJ1184	32872	Dry Core Rock	4.295	SE-045	56	57.5	Carbonaceous mudstone	CBMS	CBMS				A03		A04	A		
123	ZJ1185	32873	Dry Core Rock	3.195	SE-045	73	74	sandstone	SS	SS	A04					A04	A		
124	ZJ1186	32874	Dry Core Rock	4.635	SE-045	82.5	84	Carbonaceous mudstone	CBMS	CBMS	A05					A05	A		
125	ZJ1187	32875	Dry Core Rock	3.545	SE-045	105.3	105.9	Carbonaceous mudstone	CBMS	CBMS				A06			A06	A	
126	ZJ1188	32876	Dry Core Rock	3.7	NW-037-2	23	24.5	Carbonaceous mudstone	CBMS	CBMS	C				C		C		
127	ZJ1189	32877	Dry Core Rock	4.83	NW-037-2	52	53.5	Silty mudstone	STYMS	MS	C				C		C		
128	ZJ1190	32878	Dry Core Rock	3.245	NW-037-2	54.6	56.1	siltstone	STS	FSS		C			C		C		
129	ZJ1191	32879	Dry Core Rock	2.795	NW-037-2	54.6	56.1	siltstone	STS	FSS		C			C		C		
130	ZJ1192	32880	Dry Core Rock	3.475	NW-037-2	59.5	60.3	Carbonaceous mudstone	CBMS	CBMS			C			BU1	B		
131	ZJ1193	32881	Dry Core Rock	3.11	NW-037-2	68.85	69.85	Carbonaceous mudstone	CBMS	CBMS		BU1				BU1	B		
132	ZJ1194	32882	Dry Core Rock	2.305	NW-037-2	70.7	71.2	Carbonaceous mudstone	CBMS	CBMS			BU1			BU1	B		
133	ZJ1195	32883	Dry Core Rock	4.795	SE-052	1.5	2.5	Mudstone	MS	MS	A04				A04		A		
134	ZJ1196	32884	Dry Core Rock	2.92	SE-052	5.15	6.15	Mudstone	MS	MS			A04			A05	A		
135	ZJ1197	32885	Dry Core Rock	4.72	SE-052	14.7	16.2	Siltstone	STS	FSS			A06			A08	A		
136	ZJ1198	32886	Dry Core Rock	3.585	SE-052	35	36	Sandstone	SS	SS	A08					A08	A		
137	ZJ1199	32887	Dry Core Rock	3.67	SE-052	44	45	Conglomerate	CONG	CONG	A08					A08	A		
138	ZJ1200	32888	Dry Core Rock	3.86	SE-052	50	51	Siltstone	STS	FSS			A08			A09	A		
139	ZJ1201	32889	Dry Core Rock	3.675	SE-052	65	67	Silty mudstone	STYMS	MS			A09			A10	A		
140	ZJ1202	32890	Dry Core Rock	3.225	SE-052	65	67	Silty mudstone	STYMS	MS			A09			A10	A		

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141	ZJ1203	32891	Dry Core Rock	4.75	SE-052	73	74.5	Mudstone	MS	MS	A10						A10	A	
142	ZJ1204	32892	Dry Core Rock	3.74	SE-019	13	14	Sandstone	SS	SS	BU				BU			B	
143	ZJ1205	32893	Dry Core Rock	3.415	SE-019	17.5	18.5	Sandstone	SS	SS	BU			BU	BU			B	
144	ZJ1206	32894	Dry Core Rock	4.135	SE-019	26.5	27.5	Carbonaceous mudstone	CBMS	CBMS				BLL		A01	A		
145	ZJ1207	32895	Dry Core Rock	3.635	SE-019	32	33	Sandstone	SS	SS		A01		A01	A01		A		
146	ZJ1208	32896	Dry Core Rock	5.105	SE-019	41	42.5	Carbonaceous mudstone	CBMS	CBMS				A03		A04	A		
147	ZJ1209	32897	Dry Core Rock	3.73	SE-019	63.5	65	Carbonaceous mudstone	CBMS	CBMS				A04			A04	A	
148	ZJ1210	32898	Dry Core Rock	4.435	SE-019	69	70.5	Carbonaceous mudstone	CBMS	CBMS				A04			A04	A	
149	ZJ1211	32899	Dry Core Rock	4.105	SE-050	32	33	Sandstone	SS	SS	CUU				CUU		C		
150	ZJ1212	32900	Dry Core Rock	3.01	SE-050	36.5	37.5	Carbonaceous mudstone	CBMS	CBMS	CUU				CUU		C		
151	ZI5301	32901	Dry Core Rock	4.335	SE-051	142.5	144	Conglomerate	CONG	CONG	A10						A10	A	
152	ZI5302	32902	Dry Core Rock	4.17	SE-051	165	166.5	Carbonaceous mudstone	CBMS	CBMS				A10			A10	A	
153	ZI5303	32903	Dry Core Rock	4.58	NW-023	12	13.5	Silty fine sandstone	STYFSS	FSS	A1				A1			A	
154	ZI5304	32904	Dry Core Rock	2.935	NW-023	24	25.5	Silty fine sandstone	STYFSS	FSS	A1						A1	A	
155	ZI5305	32905	Dry Core Rock	3.09	NW-023	24	25.5	Silty fine sandstone	STYFSS	FSS		A1					A1	A	
156	ZI5306	32906	Dry Core Rock	3.55	NW-023	26.2	27.5	Mudstone	MS	MS				A1	A1	A1	A		
157	ZI5307	32907	Dry Core Rock	4.795	NW-023	30.5	32	Silty Sandstone	STYSS	SS				A1		UP	PUMP		
158	ZI5308	32908	Dry Core Rock	3.27	NW-023	64.25	65.75	Mudstone	MS	MS		UP				UP	PUMP		
159	ZI5309	32909	Dry Core Rock	4.92	NW-023	84	85.35	Silty Mudstone	STYMS	MS	UG					UG	GRIZZLY		
160	ZI5310	32910	Dry Core Rock	5.09	NW-023	110.5	112	Silty fine sandstone	STYFSS	FSS	UM					UM	MEADOW		
161	ZI5311	32911	Dry Core Rock	5.17	NW-023	126	127.5	Silty fine sandstone	STYFSS	FSS				UM		LM	MEADOW		
162	ZI5312	32912	Dry Core Rock	5.04	NW-054	16	17.5	Carbonaceous mudstone	CBMS	CBMS	UM				UM		MEADOW		
163	ZI5313	32913	Dry Core Rock	2.715	NW-054	20.7	21.7	Carbonaceous mudstone	CBMS	CBMS		UM			UM	UM	MEADOW		
164	ZI5314	32914	Dry Core Rock	3.47	NW-054	37.6	38.6	Carbonaceous mudstone	CBMS	CBMS				LM			UB	BUMPY	
165	ZI5315	32915	Dry Core Rock	3.015	NW-054	51.5	53	Silty Mudstone	STYMS	MS				LM		UB	BUMPY		
166	ZI5316	32916	Dry Core Rock	3.305	NW-054	51.5	53	Silty Mudstone	STYMS	MS				LM		UB	BUMPY		
167	ZI5317	32917	Dry Core Rock	4.065	NW-054	58	59.35	Carbonaceous silty mudstone	CBSTYMS	MS		UB		UB	UB	UB	BUMPY		
168	ZI5318	32918	Dry Core Rock	4.555	NW-054	74.5	76	calcareous siltstone	CASTS	FSS		LB3				LB3	BUMPY		
169	ZI5319	32919	Dry Core Rock	5.475	NW-054	103.5	105	silty mudstone	STYMS	MS	UL					UL	LAKE		
170	ZI5320	32920	Dry Core Rock	4.15	NW-054	129	130.35	Carbonaceous mudstone	CBMS	CBMS		UL			UL	UL	LAKE		
171	ZI5321	32921	Dry Core Rock	4.28	NW-054	135.5	137	Carbonaceous mudstone	CBMS	CBMS				LL		LL	LAKE		
172	ZI5322	32922	Dry Core Rock	5.315	NW-054	151.5	153	Fine sandstone	FSS	FSS				LL		LL	LAKE		
173	ZI5323	32923	Dry Core Rock	5.09	NW-054	156	157.45	Conglomerate	CONG	CONG				LL		LL	LAKE		
174	ZI5324	32924	Dry Core Rock	3.585	SE-017	3.5	5	Mudstone 60%	MS	MS	A02				A02		A		
175	ZI5325	32925	Dry Core Rock	3.925	SE-017	6	7.5	Mudstont 80%	MS	MS	A02				A02		A		

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176	ZI5326	32926	Dry Core Rock	2.855	SE-017	11	12.5	Fine sandstone to siltstone	FSS_STS	FSS			A02			A03		A			
177	ZI5327	32927	Dry Core Rock	4.075	SE-017	38	39.2	Carbonaceous mudstone	CBMS	CBMS	A03			A03		A03	A				
178	ZI5328	32928	Dry Core Rock	2.845	SE-017	40.1	41.5	Carbonaceous mudstone	CBMS	CBMS			A03		A03	A04	A				
179	ZI5329	32929	Dry Core Rock	3.425	SE-017	66.5	67.75	Carbonaceous mudstone	CBMS	CBMS		A04			A04	A04	A				
180	ZI5330	32930	Dry Core Rock	3.96	SE-017	68.35	69.5	Carbonaceous mudstone	CBMS	CBMS			A04		A04	A05	A				
181	ZI5331	32931	Dry Core Rock	4.065	SE-017	76.5	77.75	Carbonaceous mudstone	CBMS	CBMS		A05			A05	A05	A				
182	ZI5332	32932	Dry Core Rock	3.73	SE-017	78.45	79.5	Carbonaceous mudstone	CBMS	CBMS			A05		A05	A06	A				
183	ZI5333	32933	Dry Core Rock	4.395	SE-017	95.7	97	Siltstone	STS	FSS				A07			A07	A			
184	ZI5334	32934	Dry Core Rock	2.705	SE-017	11	12.5	Fine sandstone to siltstone	FSS_STS	FSS			A02			A03	A				
185	ZI5335	32935	Dry Core Rock	4.395	SE-011	3.5	5	Conglomerate	CONG	CONG	CAD							LL	CADO		
186	ZI5336	32936	Dry Core Rock	4.15	SE-011	22.55	24	Carbonaceous mudstone	CBMD	CBMS	A03					A03		A			
187	ZI5337	32937	Dry Core Rock	2.92	SE-011	30.5	32	Siltstone	STS	FSS	A03					A03		A			
188	ZI5338	32938	Dry Core Rock	3.2	SE-011	30.5	32	Siltstone	STS	FSS	A03					A03		A			
189	ZI5339	32939	Dry Core Rock	4.145	SE-011	53	54.3	Carbonaceous mudstone	CBMS	CBMS	A06					A06	A06	A			
190	ZI5340	32940	Dry Core Rock	2.945	SE-011	54.55	55.5	Carbonaceous mudstone	CBMS	CBMS				A06		A09	A				
191	ZI5341	32941	Dry Core Rock	5.055	SE-011	67	68.5	Fine to Medium Sandstone	FMSS	SS				A06		A09	A				
192	ZI5342	32942	Dry Core Rock	4.695	SE-011	90.5	91.7	Sandstone	SS	SS		A09		A09		A09	A				
193	ZI5343	32943	Dry Core Rock	5.49	SE-011	91.95	93.5	Carbonaceous mudstone	CBMS	CBMS				A09			A09	A			
194	ZI5344	32944	Dry Core Rock	4.55	SE-011	101	102.5	Carbonaceous mudstone	CBMS	CBMS	A09						A09	A			
195	ZI5345	32945	Dry Core Rock	3.585	SE-011	137.5	138.5	Conglomerate	CONG	CONG	A09							A09	A		
196	ZI5346	32946	Dry Core Rock	3.665	SE-009	3	4.1	Conglomerate	CONG	CONG	A03						A03		A		
197	ZI5347	32947	Dry Core Rock	3.82	SE-009	12	13.5	Siltstone	STS	FSS	A03						A03		A		
198	ZI5348	32948	Dry Core Rock	2.965	SE-009	24.5	26	Fine sandstone	FSS	FSS	A03						A03		A		
199	ZI5349	32949	Dry Core Rock	3.575	SE-009	24.5	26	Fine sandstone	FSS	FSS	A03						A03		A		
200	ZI5350	32950	Dry Core Rock	3.94	SE-009	53	54.5	Carbonaceous mudstone	CBMS	CBMS			A03		A03			A03	A		
201	ZI4304	32951	Dry Core Rock	3.12	NW-004	161.5	163	Sandstone	SS	SS	UL						UL		LAKE		
202	ZI4306	32952	Dry Core Rock	5.81	NW-004	8	9.5	Siltstone	STS	FSS	UG						UG		GRIZZLY		
203	ZI4307	32953	Dry Core Rock	3.225	NW-004	17.4	18.5	Carbonaceous mudstone	CBMS	CBMS			UG					LG	GRIZZLY		
204	ZI4308	32954	Dry Core Rock	5.81	NW-004	31	32.5	Siltstone	STS	FSS	UM						UM		MEADOW		
205	ZI4309	32955	Dry Core Rock	5.235	NW-004	42.9	44.2	Siltstone	STS	FSS		UM					UM		MEADOW		
206	ZI4310	32956	Dry Core Rock	5.075	NW-004	59	60.5	Silty Mudstone	STYMS	MS	LM						LM		MEADOW		
207	ZI4311	32957	Dry Core Rock	5.385	NW-004	89	90.5	Conglomerate	CONG	CONG	UB						UB		BUMPY		
208	ZI4312	32958	Dry Core Rock	5.135	NW-004	102.05	103.55	Silty Mudstone	STYMS	MS			UB					LB1		BUMPY	
209	ZI4313	32959	Dry Core Rock	5.61	NW-004	132	133.5	Fine Sandstone	FSS	FSS	UL						UL		LAKE		
210	ZI4314	32960	Dry Core Rock	5.16	SE-032	12	13.5	sandstone	SS	SS				A01			A03		A		

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211	ZI4315	32961	Dry Core Rock	3.255	SE-032	44	46	Carbonaceous mudstone	CBMS	CBMS	A04					A04		A	
212	ZI4317	32962	Dry Core Rock	5.59	SE-032	60	61.5	Silty Mudstone	STYMS	MS	A05					A05		A	
213	ZI4318	32963	Dry Core Rock	5.36	SE-032	97	98.5	Silty Mudstone	STYMS	MS	A09					A09		A	
214	ZI4319	32964	Dry Core Rock	5.76	SE-032	118.5	120	Fine Sandstone	FSS	FSS				A10			A10	A	
215	ZI4320	32965	Dry Core Rock	6.035	SE-032	133	134.5	Fine Sandstone	FSS	FSS				A10			A10	A	
216	ZI4321	32966	Dry Core Rock	3.495	SE-032	4.8	5.5	Carbonaceous shale	CBSH	CBMS	BL							B	
217	ZI4322	32967	Dry Core Rock	4.87	SE-031	4	5.5	Sandstone	SS	SS			CL	CL	BU	BU	B		
218	ZI4323	32968	Dry Core Rock	5.365	SE-031	15	16.4	Silty Mudstone	STYMS	MS		BU		BU	BU	BU	B		
219	ZI4324	32969	Dry Core Rock	5.6	SE-031	26.5	28	Silty Sandstone	STYMS	MS			BLL		A01		A		
220	ZI4325	32970	Dry Core Rock	5.135	SE-031	62	63.5	Carbonaceous mudstone	CBMS	CBMS	A04					A04		A	
221	ZI4326	32971	Dry Core Rock	5.45	SE-031	91.5	93	Mudstone	MS	MS	A08					A08		A	
222	ZI4327	32972	Dry Core Rock	3.62	SE-031	123.5	125	Fine Sandstone	FSS	FSS			A08		A09		A		
223	ZI4329	32973	Dry Core Rock	3.73	SE-031	148.7	149.7	Carbonaceous mudstone	CBMS	CBMS			A09		A10		A		
224	ZI4330	32974	Dry Core Rock	5.09	SE-031	186	187.38	Siltstone	STS	FSS	A10			A10		A10		A	
225	ZI4331	32975	Dry Core Rock	5.64	SE-031	195.7	197.35	Silty Mudstone	STYMS	MS			A11				A11	LAKE	
226	ZI4332	32976	Dry Core Rock	2.435	NW-056	1.5	2.1	Carbonaceous shale	CBSH	CBMS		UG			UG			GRIZZLY	
227	ZI5276	32977	Dry Core Rock	3.585	NW-056	3.85	5	Carbonaceous shale	CBSH	CBMS		LG			LG			GRIZZLY	
228	ZI5277	32978	Dry Core Rock	5.125	NW-056	9	10.5	siltstone	STS	FSS			LG1		UB	UB	BUMPY		
229	ZI5278	32979	Dry Core Rock	4.585	NW-056	16.5	18	Fine Sandstone	FSS	FSS			LG1		UB	UB	BUMPY		
230	ZI5279	32980	Dry Core Rock	4.51	NW-056	53	54.5	Carbonaceous mudstone	CBMS	CBMS			UM		UB	UB	BUMPY		
231	ZI5280	32981	Dry Core Rock	4.01	NW-056	71.1	72.6	sandstone	SS	SS	UB					UB	UB	BUMPY	
232	ZI5281	32982	Dry Core Rock	5.95	NW-056	79	80.85	Mudstone	MS	MS	UB					UB	UB	BUMPY	
233	ZI5282	32983	Dry Core Rock	2.64	NW-056	106	107.5	sandstone	SS	SS			LB3				LB3	LAKE	
234	ZI5284	32984	Dry Core Rock	2.585	SE-005	9.5	10.7	Carbonaceous shale	CBSH	CBMS	A04				A04			A	
235	ZI5285	32985	Dry Core Rock	4.28	SE-005	19.5	21	Mudstone	MS	MS			A04			A05		A	
236	ZI5286	32986	Dry Core Rock	4.43	SE-005	30.5	32	Siltstone	STS	FSS	A06					A08		A	
237	ZI5287	32987	Dry Core Rock	4.6	SE-005	39	40.5	Mudstone	MS	MS			A06			A08		A	
238	ZI5288	32988	Dry Core Rock	3.34	SE-005	47.8	49	Carbonaceous mudstone	CBMS	CBMS	A08				A08			A	
239	ZI5289	32989	Dry Core Rock	4.655	SE-005	88.5	90	Mudstone	MS	MS	A09					A09		A	
240	ZI5290	32990	Dry Core Rock	3.945	SE-005	65.5	67	Silty Mudstone	STYMS	MS	A08					A08		A	
241	ZI5291	32991	Dry Core Rock	5.425	SE-005	159	160.5	Siltstone	STS	FSS	UL				UL		LAKE		
242	ZI5292	32992	Dry Core Rock	4.55	SE-005	193	194.5	Fine to Medium Sandstone	FMSS	SS			LL			LL	LAKE		
243	ZI5293	32993	Dry Core Rock	4.03	SE-051	7	8.5	Medium to coarse sandstone	MCSS	CSS	CUU1				CUU1		C		
244	ZI5294	32994	Dry Core Rock	3.37	SE-051	10	11.5	Sandstone	SS	SS	CUU1				CUU1		C		
245	ZI5295	32995	Dry Core Rock	2.575	SE-051	10	11.5	Sandstone	SS	SS	CUU1				CUU1		C		

Sample Labeling				Drill Core Sampling and Sample Lithology						Sample vs Seam Position			Sample Grouping						
Sample No.	BV Lab Sample ID	CTI Plus Field ID	Sample Type & Condition	Sample Weight, kg	Drillhole ID	Depth From, m	Depth To, m	Litho Name	Litho Category	Seam Partings	Indirect Seam Roof	Direct Seam Roof	Direct Seam Floor	Indirect Seam Floor	Direct Seam Roof and Floor	Sample Overburden	Seam InterBurden upward	Seam Floor downward	Seam Group (interburden)
246	ZI5296	32996	Dry Core Rock	4.48	SE-051	25.5	26.95	Carbonaceous mudstone	CBMS	CBMS	CUU			CUU		CUU	C		
247	ZI5297	32997	Dry Core Rock	3.995	SE-051	32.55	34	Carbonaceous mudstone	CBMS	CBMS			CUL		CL	C			
248	ZI5298	32998	Dry Core Rock	3.185	SE-051	54.35	55.5	Carbonaceous silty mudstone	CBSTYMS	MS		BU			BL	B			
249	ZI5299	32999	Dry Core Rock	4.44	SE-051	68.5	70	Fine Sandstone	FSS	FSS			A01		A02	A			
250	ZI5300	33000	Dry Core Rock	4.68	SE-051	92.5	94	Fine Sandstone	FSS	FSS	A04				A04	A			
251	ZJ1213	33551	Dry Core Rock	3.11	SE-050	39.45	41.2	Carbonaceous mudstone	CBMS	CBMS		CUU	CUU		CU	C			
252	ZJ1214	33552	Dry Core Rock	3.5	SE-050	46	47	Mudstone	MS	MS			CUL		CL	C			
253	ZJ1215	33553	Dry Core Rock	2.91	SE-050	39.45	41.2	Carbonaceous mudstone	CBMS	CBMS		CUU	CUU		CU	C			
254	ZJ1216	33554	Dry Core Rock	3.525	SE-050	57	58	Mudstone	MS	MS			CL		BU	B			
255	ZJ1217	33555	Dry Core Rock	3.535	SE-050	61	62	Sandstone	SS	SS	BU				BU	B			
256	ZJ1218	33556	Dry Core Rock	3.475	SE-050	73	74	Mudstone	MS	MS			BLL		A01	A			
257	ZJ1219	33557	Dry Core Rock	4.892	NW-002	2	3.5	Sandstone	SS	SS	UP				UP		PUMP		
258	ZJ1220	33558	Dry Core Rock	3.82	NW-002	11	12	Silty mudstone	STYMS	MS	UP				UP		PUMP		
259	ZJ1221	33559	Dry Core Rock	3.39	NW-002	24.1	25.1	Carbonaceous mudstone	CBMS	CBMS		UP			UP	UP		PUMP	
260	ZJ1222	33560	Dry Core Rock	3.635	NW-002	27.95	28.95	Carbonaceous mudstone	CBMS	CBMS	LP			UP		LP	PUMP		
261	ZJ1223	33561	Dry Core Rock	3.49	NW-002	53	54	Silty mudstone	STYMS	MS	UG					UG	GRIZZLY		
262	ZJ1224	33562	Dry Core Rock	3.915	NW-002	72	73	Carbonaceous mudstone	CBMS	CBMS	UM					UM	MEADOW		
263	ZJ1225	33563	Dry Core Rock	3.225	NW-002	95	96.5	Sandstone	SS	SS	LM				LM	MEADOW			
264	ZJ1226	33564	Dry Core Rock	3.085	NW-002	95	96.5	Sandstone	SS	SS	LM				LM	MEADOW			
265	ZJ1227	33565	Dry Core Rock	3.645	NW-002	128	129	Medium to coarse sandstone	MCSS	CSS	UB				UB	BUMPY			
266	ZJ1228	33566	Dry Core Rock	3.04	NW-002	145.15	146.15	Carbonaceous mudstone	CBMS	CBMS		LB1		UB	UB	BUMPY			
267	ZJ1229	33567	Dry Core Rock	3.415	NW-002	156	157	Siltstone	STS	FSS			LB2			LB2	BUMPY		
268	ZJ1230	33568	Dry Core Rock	3.235	NW-053	53.85	54.85	Carbonaceous mudstone	CBMS	CBMS	UG				UG	GRIZZLY			
269	ZJ1231	33569	Dry Core Rock	3.365	NW-053	37	38	Carbonaceous mudstone	CBMS	CBMS		UP			LP	PUMP			
270	ZJ1232	33570	Dry Core Rock	3.195	NW-053	57	58	Mudstone	MS	MS	LG		LG		LG	GRIZZLY			
271	ZJ1423	33571	Dry Core Rock	3.71	NW-053	80	81	Sandstone	SS	SS			UM		UM	MEADOW			
272	ZJ1424	33572	Dry Core Rock	3.74	NW-053	101	102	Mudstone	MS	MS	LM				LM	MEADOW			
273	ZJ1425	33573	Dry Core Rock	3.58	NW-053	145	146	Mudstone	MS	MS			LB2		LB3	BUMPY			
274	ZJ1426	33574	Dry Core Rock	2.82	NW-053	158	159.5	Silty mudstone	STYMS	MS			LB3			LB3	BUMPY		
275	ZJ1427	33575	Dry Core Rock	3.045	NW-053	158	159.5	Silty mudstone	STYMS	MS			LB3			LB3	BUMPY		
276	ZJ1428	33576	Dry Core Rock	6.62	NW-011	27.5	28.5	Mudstone	MS	MS	UG				UG	GRIZZLY			
277	ZJ1429	33577	Dry Core Rock	5.035	NW-011	28.5	29.35	Mudstone	MS	MS	UG				UG	GRIZZLY			
278	ZJ1430	33578	Dry Core Rock	4.365	NW-011	32	33	carbonaceous mudstone	CBMS	CBMS		UG		LG	LG	GRIZZLY			
279	ZJ1431	33579	Dry Core Rock	5.265	NW-011	46	47	siltstone	STS	FSS			LG2		UM	UM	MEADOW		
280	ZJ1432	33580	Dry Core Rock	5.32	NW-011	55	56	sandstone	SS	SS	UM				UM	UM	MEADOW		

Sample Labeling				Drill Core Sampling and Sample Lithology						Sample vs Seam Position			Sample Grouping						
Sample No.	BV Lab Sample ID	CTI Plus Field ID	Sample Type & Condition	Sample Weight, kg	Drillhole ID	Depth From, m	Depth To, m	Litho Name	Litho Category	Seam Partings	Indirect Seam Roof	Direct Seam Roof	Direct Seam Floor	Indirect Seam Floor	Direct Seam Roof and Floor	Sample Overburden	Seam InterBurden upward	Seam Floor downward	Seam Group (interburden)
281	ZJ1433	33581	Dry Core Rock	4.89	NW-011	95	96	Sandstone	SS	SS	UB					UB		BUMPY	
282	ZJ1434	33582	Dry Core Rock	6.165	NW-011	150	151	Mudstone	MS	MS	UL					UL		LAKE	
283	ZJ1435	33583	Dry Core Rock	3.73	NW-031	141	142	Sandstone	SS	SS	UL					UL		LAKE	
284	ZJ1436	33584	Dry Core Rock	3.485	NW-031	187	188	Mudstone	MS	MS				LL			LL	LAKE	
285	ZJ1437	33585	Dry Core Rock	2.71	NW-031	17.5	19	Siltstone	STS	FSS	UG					UG		GRIZZLY	
286	ZJ1438	33586	Dry Core Rock	2.48	NW-031	17.5	19	Siltstone	STS	FSS	UG					UG		GRIZZLY	
287	ZJ1439	33587	Dry Core Rock	3.68	NW-031	22	23	Mudstone	MS	MS	UG					UG		GRIZZLY	
288	ZJ1440	33588	Dry Core Rock	2.695	NW-031	28.15	29.15	Carbonaceous mudstone	CBMS	CBMS			UG	UG		LG		GRIZZLY	
289	ZJ1441	33589	Dry Core Rock	3.41	NW-031	36	37	Mudstone	MS	MS				LG2		UM		MEADOW	
290	ZJ1442	33590	Dry Core Rock	4.945	NW-031	57	58.5	Mudstone	MS	MS	UM					UM		MEADOW	
291	ZJ1443	33591	Dry Core Rock	3.035	NW-031	66	67	Siltstone	STS	FSS				UM		LM		MEADOW	
292	ZJ1444	33592	Dry Core Rock	3.215	NW-031	76	77	Mudstone	MS	MS	LM					LM		MEADOW	
293	ZJ1445	33593	Dry Core Rock	3.485	NW-031	86	87	Sandstone	SS	SS				LM1		UB		BUMPY	
294	ZJ1446	33594	Dry Core Rock	3.315	NW-055	78.2	79.2	Mudstone	MS	MS				LB3		UL		LAKE	
295	ZJ1447	33595	Dry Core Rock	3.49	NW-055	107.5	108.4	Silty mudstone	STYMS	MS	UL					UL		LAKE	
296	ZJ1448	33596	Dry Core Rock	3.68	NW-055	119	120	Fine sandstone	FSS	FSS				UL		LL		LAKE	
297	ZJ1449	33597	Dry Core Rock	2.88	NW-055	45	46.5	Fine sandstone	FSS	FSS	UB					UB		BUMPY	
298	ZJ1450	33598	Dry Core Rock	3.005	NW-055	45	46.5	Fine sandstone	FSS	FSS	UB					UB		BUMPY	
299	ZJ1451	33599	Dry Core Rock	3.345	NW-055	29.3	30.1	Carbonaceous mudstone	CBMS	CBMS			LM	LM		UB		BUMPY	
300	ZJ1452	33600	Dry Core Rock	3.14	NW-055	22	23	Carbonaceous mudstone	CBMS	CBMS	LM					LM		MEADOW	
301	ZJ1453	33601	Dry Core Rock	3.74	NW-055	13.5	14.25	Mudstone	MS	MS		UM			UM	UM		MEADOW	
302	ZJ1454	33602	Dry Core Rock	2.925	SE-041	9	10	Very fine sandstone	VFSS	FSS	CUU1					CUU1		C	
303	ZJ1455	33603	Dry Core Rock	3.43	SE-041	15	16	Carbonaceous mudstone	CBMS	CBMS	CUU1					CUU1		C	
304	ZJ1456	33604	Dry Core Rock	3.71	SE-041	18.1	19.1	Carbonaceous mudstone	CBMS	CBMS			CUU1	CUU1		CUU		C	
305	ZJ1457	33605	Dry Core Rock	3.63	SE-041	25	25.95	Carbonaceous mudstone	CBMS	CBMS	CUU					CUU		C	
306	ZJ1458	33606	Dry Core Rock	3.105	SE-041	27	28	Carbonaceous mudstone	CBMS	CBMS			CUU	CUU1		CU		C	
307	ZJ1459	33607	Dry Core Rock	3.385	SE-041	32	33	Carbonaceous mudstone	CBMS	CBMS				CUL		CL		C	
308	ZJ1460	33608	Dry Core Rock	3.82	SE-041	72	74	Silty mudstone	STYMS	MS	BLL					BLL		B	
309	ZJ1461	33609	Dry Core Rock	3.885	SE-041	72	74	Silty mudstone	STYMS	MS	BLL					BLL		B	
310	ZJ1462	33610	Dry Core Rock	3.65	SE-041	99	100	Carbonaceous mudstone	CBMS	CBMS				A05	A05		A09		A
311	ZJ1463	33611	Dry Core Rock	3.775	SE-041	154	155	Very fine sandstone	VFSS	FSS				A10			A11		A
312	ZJ1464	33612	Dry Core Rock	3.45	SE-041	192	193	Conglomerate	CONG	CONG				A11			A11		CADO
313	ZJ1465	33613	Dry Core Rock	3.965	SE-056	8.6	10	Carbonaceous mudstone	CBMS	CBMS		A01				A01		A	
314	ZJ1466	33614	Dry Core Rock	3.495	SE-056	37	38	Sandstone	SS	SS	A04					A04		A	
315	ZJ1467	33615	Dry Core Rock	3.96	SE-056	46	47.5	Carbonaceous mudstone	CBMS	CBMS	A04					A04		A	

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316	ZJ1468	33616	Dry Core Rock	3.585	SE-056	70	71	Fine to medium Sandstone	FMSS	SS	A08					A08		A	
317	ZJ1469	33617	Dry Core Rock	3.05	SE-056	78	79	Conglomerate	CONG	CONG	A08					A08		A	
318	ZJ1470	33618	Dry Core Rock	3.69	SE-056	110	111	Very fine sandstone	VFSS	FSS					A10		A10	A	
319	ZJ1471	33619	Dry Core Rock	3.05	SE-056	138.5	140	Very fine sandstone	VFSS	FSS					A10		A10	A	
320	ZJ1472	33620	Dry Core Rock	2.89	SE-056	138.5	140	Very fine sandstone	VFSS	FSS					A10		A10	A	
321	ZJ1473	33621	Dry Core Rock	3.795	SE-010	25.5	26.5	Siltstone	STS	FSS	BU					BU		B	
322	ZJ1474	33622	Dry Core Rock	3.82	SE-010	27	28	Sandstone	SS	SS	BU					BU		B	
323	ZJ1475	33623	Dry Core Rock	3.895	SE-010	37.1	38.1	Mudstone	MS	MS					BLL		A01	A	
324	ZJ1476	33624	Dry Core Rock	3.785	SE-010	45.5	46.5	Very fine Sandstone	VFSS	FSS					A02		A03	A	
325	ZJ1477	33625	Dry Core Rock	3.445	SE-010	53	54.5	Carbonaceous mudstone	CBMS	CBMS					A03		A04	A	
326	ZJ1478	33626	Dry Core Rock	4.45	SE-010	81	82.5	Carbonaceous mudstone	CBMS	CBMS	A04				A04		A04	A	
327	ZJ1479	33627	Dry Core Rock	3.845	SE-010	93.5	94.5	Siltstone	STS	FSS					A06		A08	A	
328	ZJ1480	33628	Dry Core Rock	3.815	SE-010	100	101	Mudstone	MS	MS					A06		A08	A	
329	ZJ1481	33629	Dry Core Rock	3.385	SE-010	115	116	Fine to coarse sandstone	FCSS	CSS	A08					A08		A	
330	ZJ1482	33630	Dry Core Rock	3.42	SE-030	122	124	Mudstone	MS	MS					A05		A05	A	
331	ZJ1483	33631	Dry Core Rock	3.145	SE-030	122	124	Mudstone	MS	MS					A05		A05	A	
332	ZJ1484	33632	Dry Core Rock	3.595	SE-030	118	119	Mudstone	MS	MS	A05					A05		A	
333	ZJ1485	33633	Dry Core Rock	3.73	SE-030	92	93	Very fine sandstone	VFSS	FSS					A03		A04	A	
334	ZJ1486	33634	Dry Core Rock	4.06	SE-030	82.8	83.8	Siltstone	STS	FSS	A03					A03		A	
335	ZJ1487	33635	Dry Core Rock	3.35	SE-030	61.05	62	Mudstone	MS	MS					BU		BLU	B	
336	ZJ1488	33636	Dry Core Rock	3.49	SE-030	47	48	Mudstone	MS	MS					CL		BU	B	
337	ZJ1489	33637	Dry Core Rock	3.685	SE-030	36	37	Siltstone	STS	FSS					CUL		CLU	C	
338	ZJ1490	33638	Dry Core Rock	3.035	SE-030	33.15	34.15	Carbonaceous mudstone	CBMS	CBMS					CUL		CLU	C	
339	ZJ1491	33639	Dry Core Rock	3.16	SE-030	29.15	30.05	Carbonaceous mudstone	CBMS	CBMS					CUU		CUU1	CU	
340	ZJ1492	33640	Dry Core Rock	3.235	SE-030	21	21.6	Mudstone	MS	MS					CUU1		CUU1	C	
341	ZJ1493	33641	Dry Core Rock	4.045	NW-037	117	119	Silty mudstone	STYMS	MS	UP					UP		PUMP	
342	ZJ1494	33642	Dry Core Rock	4.05	NW-037	117	119	Silty mudstone	STYMS	MS	UP					UP		PUMP	
343	ZJ1495	33643	Dry Core Rock	4.23	NW-037	150	151	Mudstone	MS	MS					LG2		UM	MEADOW	
344	ZJ1496	33644	Dry Core Rock	4.015	NW-037	168	169	Fine sandstone	FSS	FSS	UM					UM		MEADOW	
345	ZJ1497	33645	Dry Core Rock	3.56	NW-037	107	108	Very fine sandstone	VFSS	FSS	UP					UP		PUMP	
346	ZJ1498	33646	Dry Core Rock	3.205	NW-037	68	69	Very fine sandstone	VFSS	FSS					BL1		A1	A	
347	ZJ1499	33647	Dry Core Rock	3.69	NW-037	58	59	Silty mudstone	STYMS	MS					BL1		A1	A	
348	ZJ1500	33648	Dry Core Rock	3.59	NW-037	35.35	36.35	carbonaceous mudstone	CBMS	CBMS	C				C		BU1	B	
349	ZJ1501	33649	Dry Core Rock	3.875	NW-037	28	29	Fine sandstone	FSS	FSS	C					C		C	
350	ZJ1502	33650	Dry Core Rock	3.315	NW-037	17.3	18.7	Silty mudstone	STYMS	MS	C				C		C	C	

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351	ZJ1981	33651	Dry Core Rock	3.875	NW-030	148	149	carbonaceous mudstone	CBMS	CBMS				LB3			LB3	BUMPY	
352	ZJ1982	33652	Dry Core Rock	3.315	NW-030	104	106	carbonaceous mudstone	CBMS	CBMS				LB3			LB3	BUMPY	
353	ZJ1983	33653	Dry Core Rock	3.33	NW-030	104	106	carbonaceous mudstone	CBMS	CBMS				LB3			LB3	BUMPY	
354	ZJ1984	33654	Dry Core Rock	3.225	NW-030	84.5	85.5	Mudstone	MS	MS	UB					UB		BUMPY	
355	ZJ1985	33655	Dry Core Rock	3.77	NW-030	42	43	Fine sandstone	FSS	FSS	LM					LM		MEADOW	
356	ZJ1986	33656	Dry Core Rock	2.91	NW-030	11.45	12.45	carbonaceous mudstone	CBMS	CBMS	UG				UG			GRIZZLY	
357	ZJ1987	33657	Dry Core Rock	4.435	NW-030	8.05	8.65	Siltstone	STS	FSS	UG				UG			GRIZZLY	
358	ZJ1988	33658	Dry Core Rock	3.02	NW-030	7	8	Mudstone	MS	MS	UG				UG			GRIZZLY	
359	ZJ1989	33659	Dry Core Rock	3.46	NW-042	19.1	20.1	Mudstone	MS	MS	UM				UM			MEADOW	
360	ZJ1990	33660	Dry Core Rock	3.23	NW-042	21	22	carbonaceous mudstone	CBMS	CBMS	UM				UM			MEADOW	
361	ZJ1991	33661	Dry Core Rock	3.105	NW-042	25	26	carbonaceous mudstone	CBMS	CBMS				UM			LM	MEADOW	
362	ZJ1992	33662	Dry Core Rock	3.475	NW-042	30	30.8	Siltstone	STS	FSS	LM						LM	MEADOW	
363	ZJ1993	33663	Dry Core Rock	3.795	NW-042	42	44	Mudstone	MS	MS	LM					UB		BUMPY	
364	ZJ1994	33664	Dry Core Rock	3.805	NW-042	42	44	Mudstone	MS	MS	LM					UB		BUMPY	
365	ZJ1995	33665	Dry Core Rock	3.73	NW-042	68	69	Siltstone	STS	FSS		LB3			LB3	LB3		BUMPY	
366	ZJ1996	33666	Dry Core Rock	3.965	NW-042	93	94	Mudstone	MS	MS	UL					UL		LAKE	
367	ZJ1997	33667	Dry Core Rock	3.705	NW-042	101	102	Siltstone	STS	FSS	UL					UL		LAKE	
368	ZJ1998	33668	Dry Core Rock	3.895	NW-042	114	115	Siltstone	STS	FSS	UL					UL		LAKE	
369	ZJ1999	33669	Dry Core Rock	4.115	NW-042	146.5	147.5	Siltstone	STS	FSS				LL			LL	LAKE	
370	ZJ2000	33670	Dry Core Rock	5.765	NW-011	193	194	Fine sandstone	FSS	FSS				LL			LL	LAKE	
371	ZJ2001	33671	Dry Core Rock	6.385	NW-011	215.4	216.4	Mudstone	MS	MS				LL			LL	LAKE	
372	ZJ2002	33672	Dry Core Rock	4.125	NW-029	31.6	32.4	Carbonaceous mudstone	CBMS	CBMS	UM			UM		LM		MEADOW	
373	ZJ2003	33673	Dry Core Rock	3.13	NW-029	70.85	71.85	Mudstone	MS	MS	UB			UB		UB		BUMPY	
374	ZJ2004	33674	Dry Core Rock	3.105	NW-029	74	75.5	Siltstone	STS	FSS				UB		LB2		BUMPY	
375	ZJ2005	33675	Dry Core Rock	3.205	NW-029	74	75.5	Siltstone	STS	FSS				UB		LB2		BUMPY	
376	ZJ2006	33676	Dry Core Rock	3.535	NW-029	98	99	Fine sandstone	FSS	FSS				LB3		UL		LAKE	
377	ZJ2007	33677	Dry Core Rock	4.01	NW-029	153.5	155	Mudstone	MS	MS				LL			LL	LAKE	
378	ZJ2008	33678	Dry Core Rock	3.485	NW-029	170	171	Mudstone	MS	MS				LL			LL	LAKE	
379	ZJ2009	33679	Dry Core Rock	3.27	NW-029	201	202	Conglomerate	CONG	CONG	CAD			LL			LL	CADO	
380	ZJ2010	33680	Dry Core Rock	3.57	SE-026	6	7	Fine sandstone	FSS	FSS				LL			LL	LAKE	
381	ZJ2011	33681	Dry Core Rock	4.215	SE-026	18.5	20	Mudstone	MS	MS				LL			LL	LAKE	
382	ZJ2012	33682	Dry Core Rock	3.2	SE-026	22	23	Conglomerate	CONG	CONG	CAD				CAD			CADO	
383	ZJ2013	33683	Dry Core Rock	3.28	SE-026	41.4	42.2	Carbonaceous mudstone	CBMS	CBMS	UBC					UBC		BICKFORD	
384	ZJ2014	33684	Dry Core Rock	3.49	SE-026	46	47	Silty mudstone	STYMS	MS	UBC					UBC		BICKFORD	
385	ZJ2015	33685	Dry Core Rock	3.525	SE-026	54.2	56.2	Mudstone	MS	MS				UBC		LBC1		BICKFORD	

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386	ZJ2016	33686	Dry Core Rock	3.545	SE-026	54.2	56.2	Mudstone	MS	MS				UBC		LBC1		BICKFORD	
387	ZI4253	82351	Dry Core Rock	4.82	SE-013	6.5	8	Sandstone	SS	SS	CUU				CUU		C		
388	ZI4254	82352	Dry Core Rock	3.385	SE-013	17.65	19.15	Mudstone	MS	MS				CU		CUL		C	
389	ZI4255	82353	Dry Core Rock	4.56	SE-013	53	54.5	Conglomerate	CONG	CONG	BU				BU		B		
390	ZI4256	82354	Dry Core Rock	4.545	SE-013	65.65	67.15	Sandstone	SS	SS		BU		BU	BU	BU	B		
391	ZI4257	82355	Dry Core Rock	5.85	SE-013	76.15	77.65	Mudstone	MS	MS			BLL	BLL	A04		B		
392	ZI4258	82356	Dry Core Rock	7.075	SE-013	97.5	99	Sandstone	SS	SS	BLL				A04		A		
393	ZI4259	82357	Dry Core Rock	4.94	SE-013	107	108.5	Carbonaceous mudstone	CBMS	CBMS	A04				A04		A		
394	ZI4260	82358	Dry Core Rock	4.08	SE-013	129	131.4	Carbonaceous mudstone	CBMS	CBMS				A05		A06		A	
395	ZI4261	82359	Dry Core Rock	3.155	SE-013	129	131.4	Carbonaceous mudstone	CBMS	CBMS	A06				A06		A		
396	ZI4262	82360	Dry Core Rock	2.23	SE-012	10.3	11.35	Carbonaceous shale	CBSH	CBMS	BL						B		
397	ZI4263	82361	Dry Core Rock	4.105	SE-012	36.5	38	Sandstone	SS	SS			BL		A01		A		
398	ZI4265	82362	Dry Core Rock	5.185	SE-012	60	61.5	Sandstone	SS	SS	A01				A01		A		
399	ZI9775	82363	Dry Core Rock	3.76	SE-012	86	87.5	Sandstone	SS	SS			A02		A03		A		
400	ZI4266	82364	Dry Core Rock	3.29	SE-012	98.6	100	Mudstone	MS	MS		A03		A03	A03	A			
401	ZI4267	82365	Dry Core Rock	5.05	SE-012	106	107.5	Mudstone	MS	MS			A03		A04		A		
402	ZI4268	82366	Dry Core Rock	3.94	SE-012	130	131.45	Mudstone	MS	MS		A05		A05	A05	A			
403	ZI4269	82367	Dry Core Rock	4.98	SE-012	145.55	147	Mudstone	MS	MS			A06		A08		A		
404	ZI4270	82368	Dry Core Rock	4.905	SE-029	4	5.5	Silty Mudstone	STYMS	MS	CUL				CLU	C			
405	ZI4271	82369	Dry Core Rock	4.59	SE-029	10.45	11.95	Silty Mudstone	STYMS	MS	CLU				CLU	C			
406	ZI4272	82370	Dry Core Rock	4.87	SE-029	14.35	15.85	Silty Sandstone	STYMS	MS			CL	CL	BU	B			
407	ZI4273	82371	Dry Core Rock	3.55	SE-029	22	24	Sandstone	SS	SS	BU				BU	B			
408	ZI4274	82372	Dry Core Rock	4.02	SE-029	22	24	Sandstone	SS	SS	BU				BU	B			
409	ZI4275	82373	Dry Core Rock	5.815	SE-029	27.8	29.25	Mudstone	MS	MS	BU			BU	BU	B			
410	ZI4276	82374	Dry Core Rock	4.515	SE-029	32	33.35	Carbonaceous mudstone	CBMS	CBMS	BLU					B			
411	ZI4277	82375	Dry Core Rock	5.355	SE-029	38	39.5	Sandstone	SS	SS			BLL		A01	A			
412	ZI4278	82376	Dry Core Rock	4.805	SE-029	60	61.5	Carbonaceous Shale	CBSH	CBMS		A03		A03	A03	A			
413	ZI4279	82377	Dry Core Rock	6.515	NW-017	83.5	85	Mudstone	MS	MS			LB3		UL	LAKE			
414	ZI4280	82378	Dry Core Rock	3.33	NW-017	116	117.5	Sandstone	SS	SS	UL				UL	LAKE			
415	ZI4281	82379	Dry Core Rock	2.515	NW-017	116	117.5	Sandstone	SS	SS	UL				UL	LAKE			
416	ZI4282	82380	Dry Core Rock	4.51	NW-017	137.15	138.35	Siltstone	STS	FSS			UL		LL	LAKE			
417	ZI4283	82381	Dry Core Rock	5.09	NW-017	5.5	7	Sandstone	SS	SS	UM				UM	MEADOW			
418	ZI4284	82382	Dry Core Rock	4.26	NW-017	11	12.4	Carbonaceous mudstone	CBMS	CBMS		UM		UM	UM	UM	MEADOW		
419	ZI4285	82383	Dry Core Rock	5.984	NW-017	20.5	22	Silty Sandstone	STYSS	SS	LM				LM	MEADOW			
420	ZI4286	82384	Dry Core Rock	5.84	NW-017	31.5	33	Mudstone	MS	MS			LM		UB	BUMPY			

Sample Labeling				Drill Core Sampling and Sample Lithology						Sample vs Seam Position			Sample Grouping						
Sample No.	BV Lab Sample ID	CTI Plus Field ID	Sample Type & Condition	Sample Weight, kg	Drillhole ID	Depth From, m	Depth To, m	Litho Name	Litho Category	Seam Partings	Indirect Seam Roof	Direct Seam Roof	Direct Seam Floor	Indirect Seam Floor	Direct Seam Roof and Floor	Seam Overburden	Seam InterBurden upward	Seam Floor downward	Seam Group (interburden)
421	ZI4287	82385	Dry Core Rock	4.905	NW-017	51	52.5	Mudstone	MS	MS	UB					UB		BUMPY	
422	ZI4288	82386	Dry Core Rock	5.145	NW-017	62.5	63.8	Mudstone	MS	MS		UB				UB		BUMPY	
423	ZI4289	82387	Dry Core Rock	4.755	NW-017	64.5	66	Carbonaceous shale	CBSH	CBMS			LB1	LB1	LB2			BUMPY	
424	ZI4290	82388	Dry Core Rock	3.08	NW-003	161	162.5	Fine Sandstone	FSS	FSS				LB3			LB3		BUMPY
425	ZI4292	82389	Dry Core Rock	5.915	NW-003	132	133.5	sandy siltstone	SDSTS	FSS		LB2			LB2	LB2		BUMPY	
426	ZI4293	82390	Dry Core Rock	3.545	NW-003	124	125.55	Carbonaceous shale	CBSH	CBMS		UB			UB	UB		BUMPY	
427	ZI4294	82391	Dry Core Rock	6.33	NW-003	111.5	113	Very fine sandstone	VFSS	FSS	LM					LM		MEADOW	
428	ZI4295	82392	Dry Core Rock	5.53	NW-003	84.5	86	Silty Mudstone	STYMS	MS				UM		LM		MEADOW	
429	ZI4296	82393	Dry Core Rock	5.125	NW-003	58	59.5	Fine Sandstone	FSS	FSS	UM					UM		MEADOW	
430	ZI4297	82394	Dry Core Rock	3.08	NW-003	44.9	46.2	Carbonaceous shale	CBSH	CBMS			LG	LG		LG1		GRIZZLY	
431	ZI4298	82395	Dry Core Rock	5.44	NW-003	28.95	30.55	Mudstone	MS	MS			LP2			UG		GRIZZLY	
432	ZI4299	82396	Dry Core Rock	5.49	NW-003	17	18.5	Sandstone	SS	SS	LP2					LP2		PUMP	
433	ZI4300	82397	Dry Core Rock	3.91	NW-003	5.1	6.6	carbonaceous shale	CBSH	CBMS		LP			LP	LP		PUMP	
434	ZI4301	82398	Dry Core Rock	5.245	NW-004	192.5	194	Sandstone	SS	SS	LL						LL	LAKE	
435	ZI4302	82399	Dry Core Rock	3.775	NW-004	174.95	176	Carbonaceous mudstone	CBMS	CBMS			UL			LL		LAKE	
436	ZI4303	82400	Dry Core Rock	4.215	NW-004	172	173.5	Carbonaceous mudstone	CBMS	CBMS		UL			UL	UL		LAKE	

Appendix I:

Lab Report of Geochemical Analysis

Note: Lab Reports are provided in PDF and Excel Spreadsheet separately

Appendix J:

Master Table of Geochemical Samples and Analytical Results

Note: It is provided in excel table separately

Appendix L:

2021 Exploration Cost Statement of CTI Plus Rocky Creek Coal Property

Note: It is provided in excel table separately