BC Geological Survey
Coal Assessment Report
1046

COAL ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: ELKO 2018 Exploration Summary

TOTAL COST:

AUTHOR(S): Dominic Hill
SIGNATURE(S):

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): CX-5-027 Date of Issuance: 2018-04-20

YEAR OF WORK: 2018
PROPERTY NAME: Elko
COAL LICENSE(S) AND/OR LEASES ON WHICH PHYSICAL WORK WAS DONE:

Title Number	Claim Name	Owner	Title Type	Title Sub Type	Map Number	Issue Date	Good To Date	Status	Area (ha)
418648		147508 (100%)	Coal	License	082G036	2014/SEP/19	2018/SEP/19	GOOD	1094.0
418649		147508 (100%)	Coal	License	082G037	2014/SEP/19	2018/SEP/19	GOOD	1128.0
418650		147508 (100%)	Coal	License	082G026	2014/SEP/19	2018/SEP/19	GOOD	1349.0

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

MINING DIVISION:
NTS / BCGS:
LATITUDE: ____49______° ____18______’ ______29.9____"
LONGITUDE: ___-114_______° _______48___’ ____3.7______" (at centre of work)
UTM Zone: 11 EASTING: 659836.76 NORTHING: 5464055.207

OWNER(S): TEXAS AND OKLAHOMA COAL COMPANY (CANADA) LIMITED

Owner Number: 147508

MAILING ADDRESS:
3026 Mockingbird Lance, #312
Dallas, Texas, 75205

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

Pacific American Coal Limited

MAILING ADDRESS:
Suite 1002, Level 10
171 Clarence Street
Sydney, NSW, 2000

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

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:

SUMMARY OF TYPES OF WORK IN THIS REPORT		EXTENT OF WORK (in metric units)	ON WHICH TENURES
GEOLOGICAL (scale, area)			
	Ground, mapping	25km	418648, 418649, 418650
	Photo interpretation	1:20,000	418648, 418649, 418650
GEOPHYSICAL (line-kilometres)			
	Ground (Specify types)	none	
	Airborne	None	
	(Specify types)		
	Borehole		
	Gamma, Resistivity,	3,457m	418648, 418650
	Resistivity		
	Caliper	3,457m	418648, 418650
	Deviation	3,457m	418648, 418650
	Dip		
	Others (specify)		
	Core	45.5m	418648, 418650
	Non-core	3,411.5m	418648, 418650
SAMPLING AND ANALYSES			
Total # of Samples			
104	Proximate	260.77	418648, 418650
76	Ultimate	260.77	418648, 418650
0	Petrographic		
18	Vitrinite reflectance	117.3	418648, 418650
140	Coking	260.77	
36	Wash tests	117.3	418648, 418650
PROSPECTING (scale/area)			
PREPARATORY/PHYSICAL			

Section 11, Section 14, Section 16.4, Appendix E, and parts of Appendix F remain confidential under the terms of the Coal Act Regulation, and have been removed from the public version.

http://www.bclaws.ca/civix/document/id/complete/statreg/251_2004

Pacific American Coal Limited

Coal Assessment Report for Licenses 418648, 418649 and 418650

CONFIDENTIAL

January 2019

Compiled by

Highland GeoComputing, LLC

Table of Contents

List of Figures

List of Tables

List of Equations

List of Abbreviations

Abbreviation	Description
ASG	Apparent Specific Gravity, synonymous with RD in this report
ASTM	ASTM International (American Society for Testing and Materials)
ASX	Australian Stock Exchange
BCGS	British Columbia Geological Survey
Btu or Btu/lb.	British Thermal Unit
Canfor	Canadian Forest Products, Ltd.
Canwel	Canwel Forest Products
Century	Century Wireline Services
CGS	Canadian Geological Survey
CSN	Crucible Swell Number synonymous with FSI
ESSF	Engelmann Spruce - Subalpine Fir
FLNRO	Ministry of Forestry, Land, and Natural Resource Operations
Foraco	Foraco International SA
FSI	Free Swelling Index synonymous with CSN
FSR	Forest Service Road
HGC	Highland GeoComputing, LLC
ICH	The Interior Cedar – Hemlock
Kcal/kg	kilocalories per kilogram
M	millions
m	metres
MEM	Ministry of Energy and Mines
MJ/kg	megajoules per kilogram
NOW	Notice of Work
PAK	Pacific American Coal, Ltd.
R/C	Reverse circulation
RD	Relative Density, synonymous with ASG in this report
ROPO	Recognized Overseas Professional Organization
SG	specific gravity
Silenus	Silenus Resource Management Company
SUP	special use permit
tonne	metric ton

1.0 Introduction

The Pacific American Coal Limited's (PAK) subsidiary Texas and Oklahoma Coal Company (Canada), Ltd. (TOCC), and Highland GeoComputing, LLC (HGC) prepared this coal assessment report for the Elko coal project area near Fernie, British Columbia, Canada as required by the British Columbia Coal Act.

In September 2014, The British Columbia Ministry of Energy and Mines (MEM) granted PAK yearly coal title licenses for three areas that comprise the Elko coal project area. The three active coal licenses for the Elko coal project area are 418648, 418649, and 418650, Table 1.

PAK drilled nine (9) holes within the Elko Exploration Project Area (Elko Project) in August and September 2018. Eight of the drill holes were reverse circulation and one drill hole was a spot core hole.

HGC's geological support consisted of exploration planning, drill site supervision, supervision of drill site geologists, geologic field mapping and reconnaissance, and sample preparation. HGC was on site from August 6, 2018 through August 15, 2018, and again from September 4, 2018 through September 14, 2018.

After drilling concluded HGC compiled geologic data collected during the drilling program and from field mapping. HGC updated the drill hole database, and correlated drill hole data for the 2018 drill holes in the Elko Project.

Table 1 Coal Licenses

Tenure No.	Owner	Tenure Type	Anniv. Date	Area (ha)
418648	Texas Oklahoma Coal Company (Canada), Ltd. (aka PAK)	Coal License	09/19/2019	1,094 ha.
418649	Texas Oklahoma Coal Company (Canada), Ltd. (aka PAK)	Coal License	09/19/2019	1,128 ha.
418650	Texas Oklahoma Coal Company (Canada), Ltd. (aka PAK)	Coal License	09/19/2019	1,349 ha.

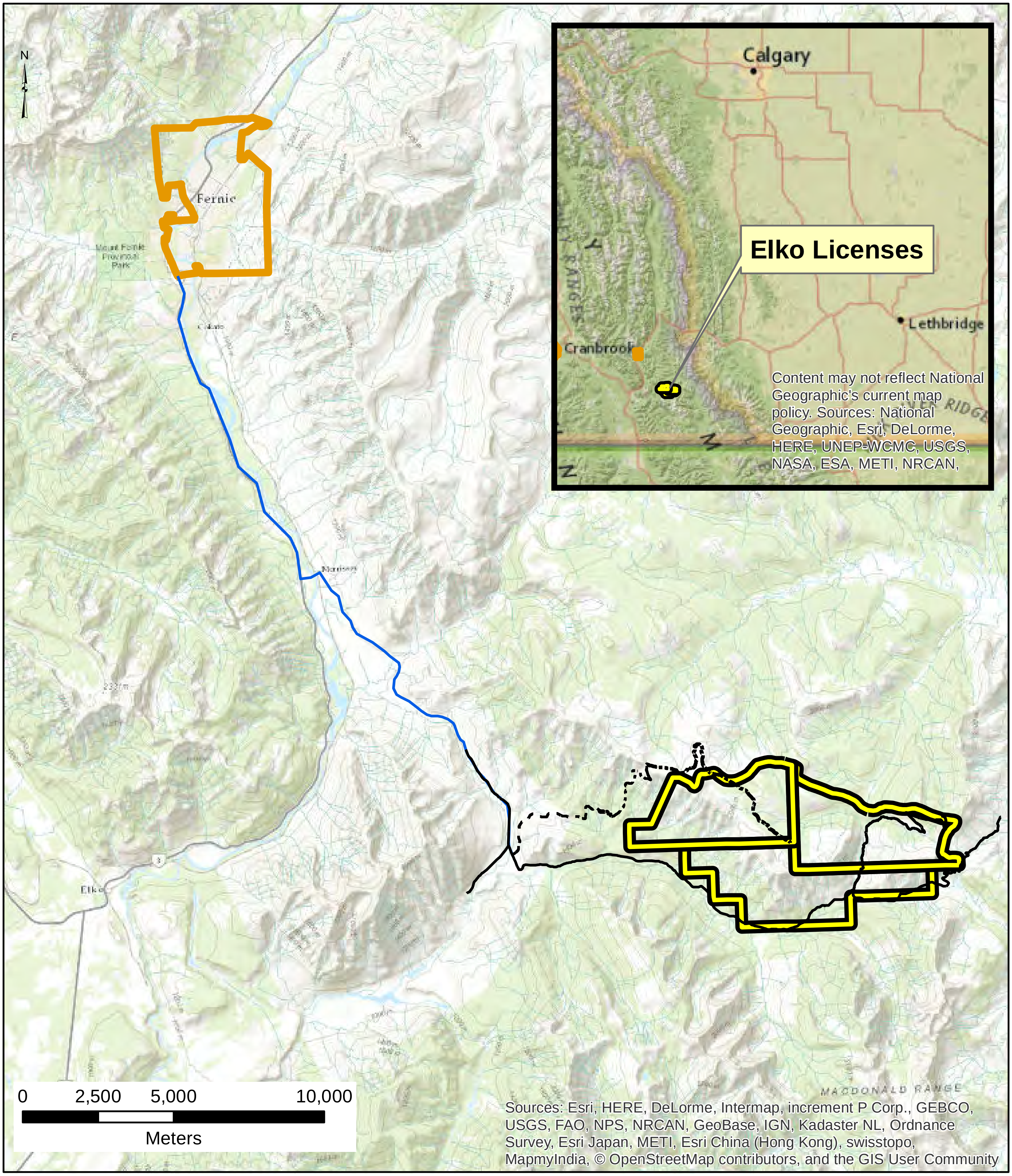
2.0 Location

The Elko Project is located approximately 26 kilometres east of the town of Elko, British Columbia and approximately 30 kilometres south of the town of Fernie, British Columbia, see Figure 1.

The Elko Project is accessible off the Crowsnest Highway 3 approximately 15 km south of the town of Fernie. A bridge at the Morrissey Rd. turn-off connects to Lodgepole Forest Service Road (FSR) between kilometre marker 12 and 13. Lodgepole FSR skirts along the south side of the Elko leases starting at marker 29.8. Lodgepole FSR enters the PAK licenses at marker 34.5. The Elko licenses extend east approximately 14.7 km along Lodgepole FSR. The eastern side of the PAK licenses occurs at kilometre marker 43.5 near the turn from Lodgepole FSR to McLatchie road. McLatchie road provides access to the Flathead Wilderness Area.

2.1 Project Description

The Elko Project is currently a “greenfield” exploration project in the development of several metallurgical coal seams located in the southern end of the Crowsnest coalfield.



Legend

Coal License Boundaries
Fernie, BC
Road
Elko Main
Pipeline Service Rd
Shofly Rd
Lodgepole FSR
Fernie - Elko Route

Pacific American Coal

Highland GeoComputing, LLC

2018 Elko Exploration Project

Figure 1
Project Location Map

Elko, British Columbia
January 2019

In September 2014, MEM granted PAK yearly coal title licenses for three areas that comprise the Elko Project. The three active coal licenses for the Elko area have license number of 418648, 418649, and 418650. The license areas are known informally as the "West Block", the "East Block" and the "Central Block", respectively.

PAK drilled nine (9) holes within the Elko Project in August and September 2018. Eight of the drill holes were reverse circulation and one drill hole was a spot core hole. Reverse circulation (R/C) coal samples and several coal core samples were collected during the 2018 exploration program. Coal quality analyses and simple washability tests were performed on the R/C samples and the core samples. HGC prepared a detailed geological report summarizing the results of the 2018 drilling for the Elko Project.

2.2 Project Access

The Elko Project is accessible off the Crowsnest Highway 3 approximately 15 km south of the town of Fernie. A bridge at the Morrissey Rd. turn-off connects to the Lodgepole (Forest Service Road) FSR between kilometre marker 12 and 13. Lodgepole FSR skirts along the south side of the Elko leases starting at marker 29.8. Lodgepole FSR enters the PAK licenses at marker 34.5. The Elko licenses extend east approximately 14.7 km along Lodgepole FSR. The eastern side of the PAK licenses occurs at kilometre marker 43.5 near the turn from Lodgepole FSR. to McLatchie road. McLatchie road provides access to the Flathead Wilderness Area.

The East Block is accessible via a two-track trail called "North Lodgepole" road. This road provided access to the Cline Resources Lodgepole mine area (now defunct). Portions of North Lodgepole road are accessible via 4x4, but the road is not currently maintained.

Primary access to the Elko Project is up Shofly [sic] road at marker 25.5 on the Lodgepole FSR. Temporary storage and laydown areas exist at marker 30 along Shofly road. Shofly road becomes steeper after marker 30 to the top of Flathead Ridge at marker 34. Road grades exceed 30% in places along this section of road.

Strict radio communication provided safe means of travel along Shofly road. Companies working in the area have developed specific "Resource Radio" frequencies to provide a means of communication along key roads. All vehicles traveling to, from and within the Elko Project have resource radios. Vehicle operators must announce their positions at posted kilometre markers. Different frequencies were assigned to different access roads to avoid confusion and excess radio traffic.

Silenus Resource Management Company (Silenus) provided construction management and logistical services to PAK during the course of the 2018 Elko Project. Silenus contracted Fiorentino Bros. Contracting Ltd. (Fiorentino) to upgrade access roads into the Elko Project and to build exploration trails and drill pads. Mr. Alex McLeod and Mr. Tim Copper of Silenus provided on-site management of Fiorentino during all phases of construction and reclamation.

At marker 34, at the top of Shofly road, Silenus Resource Management Company (Silenus) oversaw the improvement of approximately eight (8) kilometres of road. This stretch of road from marker 34 to marker 42 is known as "Elko Main". This road was originally built in the 1970s as part of the BC Coal exploration of Elko Project. Approximately 2 km of road, from marker 36 to marker 38 resides within the Flathead Wilderness Area. PAK obtained a Special Use Permit (SUP) from the Ministry of Energy and Mines (MEM) to upgrade and use this section of road.

The Elko licenses begin at maker 38 along Elko Main. Silenus/Fiorentino built five (5) spurs (exploration trails) off of Elko Main to provide access to drill pads. These spurs will be utilized throughout the life of Elko Project.

3.0 Statement of Costs

A detailed statement of costs accompanies this report using the standard spreadsheet document provided by MEM.

4.0 Statement of Qualifications

4.1 Qualified Person

The information in this document is based on information compiled by Mr. Dwight M. Kinnes, CPG who is President and Principal Consultant of Highland GeoComputing, LLC and is a registered member of the Society of Mining and Engineering (No. 4063295). Mr. Kinnes has sufficient experience which is relevant to the style of mineralization and type of deposit under consideration and to the activity which he is undertaking to qualify as a Qualified Person as defined under in NI 43-101 and a Competent Person under the JORC Code 2012 edition.

A signed and dated Certificate of Qualified Person resides in the appendix of this report.

5.0 Exploration Program Summary

PAK drilled nine (9) holes within the Elko Project area in August and September 2018, see Table 2. Eight of the drill holes were reverse circulation and one drill hole was a spot core hole.

HGC's geological support consisted of exploration planning, drill site supervision, supervision of drill site geologists, geologic field mapping and reconnaissance, and sample preparation. HGC was on site from August 6, 2018 through August 15, 2018, and again from September 4, 2018 through September 14, 2018.

PAK contracted Foraco International SA (Foraco) to perform drilling services for the Elko Project. Foraco used a GEFCO DH30K drill rig for the duration of the project.

Foraco provided the following equipment for the project:

- GEFCO DH30K drill rig with compressor
- Water Truck
- Fuel Truck
- Pipe Truck
- Dog house (with spare parts, tools, and personnel work space)
- Generator and Welder
- Crew change pickup truck, and a supervisor truck
- Mobile compressor unit
- Cuttings cyclone and shaker table

PAK drilled (9) holes for a total meterage of 3,457m. 3,440.6 metres were R/C drilling and 16.4 metres were core drilling, see Table 0.

PAK had drill site geologists logging chip samples throughout the drilling project. Chip samples were collected every 2 metres down each hole. The chip samples were logged and photographed by the drill site geologists.

Table 2 2018 Drill Hole Locations

DHID	Northing	Easting	Collar	Total Depth	Start Date	End Date	Days	Hole Type
DH_18_06	5,466,283.47	657,117.96	2,082.14	402.0	08-Aug-18	13-Aug-18	5	Reverse Circ.
DH_18_04	5,465,061.58	657,619.79	2,024.94	320.0	15-Aug-18	17-Aug-18	2	Reverse Circ.
DH_18_05	5,465,662.74	657,697.73	2,038.10	421.0	19-Aug-18	24-Aug-18	5	Reverse Circ.
DH_18_10	5,464,082.70	659,121.10	1,946.74	438.0	26-Aug-18	02-Sep-18	7	Reverse Circ.
DH_18_02	5,464,911.86	658,509.55	1,963.19	400.0	03-Sep-18	08-Sep-18	5	Reverse Circ.
DH_18_03	5,464,685.31	658,034.48	2,007.19	366.0	09-Sep-18	11-Sep-18	2	Reverse Circ.
DH_18_03C*	5,464,684.48	658,031.61	2,007.02	220.0	12-Sep-18	17-Sep-18	3	Reverse Circ./Partial Core
DH_18_09	5,464,306.76	658,430.44	2,053.54	455.0	13-Sep-18	15-Sep-18	2	Reverse Circ.
DH_18_11	5,463,418.56	659,436.95	2,001.44	435.0	18-Sep-18	23-Sep-18	5	Reverse Circ.
Total				3,457.0			36	

* Returned to hole after drilling DH_18_09. Drilling extended to determine seam locations

Samples of coal were collected by the driller when coal seams were intersected, see Section 10.2, below.

Century Wireline Services (Century) provided geophysical logging services for the Elko Project. Significant fracture zones occurred in most of the drill holes. Therefore, initial geophysical logs were collected inside drill pipe. Typically, three set of logs were collected with pipe: In-pipe density (gamma-gamma) with natural gamma, In-pipe neutron with natural gamma, and gyroscopic deviation. For holes in good condition, logs of natural gamma, caliper, density, resistivity were collected, and an open hole deviation log was collected.

Century provided PAK with TIFF format images and ASCII logs in LAS 2.0 format for each log.

At the conclusion of the project the drill hole collars were surveyed by Garrett Winkel Land Surveying from Cranbrook, BC.

6.0 General Geology and Exploration History

6.1 Geology

6.1.1 Geologic Formations

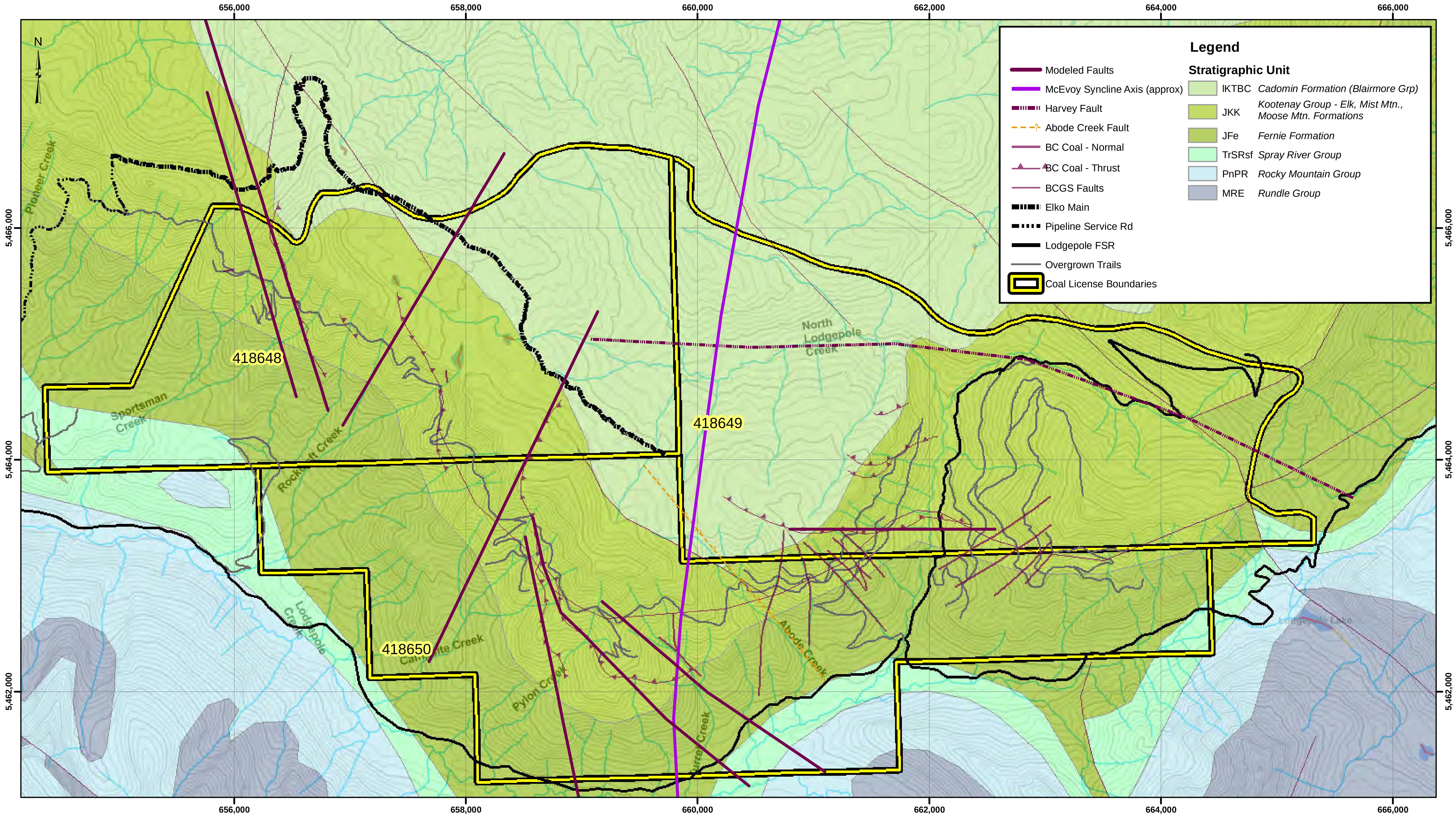
The Elko Project area resides at the southern end of the Crowsnest coalfield. The Crowsnest coalfield consists of late Jurassic and early Cretaceous aged sedimentary rocks belonging to the Fernie Formation – Jfe (mostly shales), the Kootenay Formation – JKK (interbedded sandstones, shales and coal), and the Blairmore Formation – IKTBC (conglomerates). The Elko licenses reside at the southern end of the Crowsnest Coal basin with regional northerly dips ranging from 15 to 40 degrees, see Figure 3.

The Fernie Formation is the lowest geological unit in the Elko License area. The Elko Project primarily resides in the Lower Cretaceous Kootenay Formation. The Kootenay Formation is divided into three members, the Moose Mountain Member, Mist Mountain Member, and the Elk Member. The Blairmore Group overlies the Kootenay Formation, see Figure 2.

The late Jurassic aged Fernie Formation is a thick unit of dark grey silty shale with interbeds of siltstone at the base and interbeds of fine-grained sandstone in towards the top. Fernie Formation “grey beds” can be seen on aerial images at the base of some valleys in the Elko Project area.

Figure 2 Stratigraphy of the Elko Project Area

<table>
<tr><th>Period</th><th colspan="2">Formation</th><th>Lithology</th><th>Thickness (m)</th></tr>
<tr><td>Lower Cretaceous</td><td colspan="2">Cadomin Fm (Blairmore Group)</td><td>non-marine sandstone, conglomerate and shale</td><td>360 - 1,980</td></tr>
<tr><td rowspan="3">Lower Cretaceous and Jurassic</td><td rowspan="3">Kootenay Formation</td><td>Elk Member</td><td>non-marine Interbedded medium for course grained sandstone, chert-pebble conglomerate with minor shale and thin coal</td><td>30 - 490</td></tr>
<tr><td>Mist Mountain Member (Elko Coal Bearing Member)</td><td>non-marine and brackish interbedded coal, siltstone, shale and sandstone</td><td>425 - 500</td></tr>
<tr><td>Moose Mountain Member</td><td>non-marine massive cliff-forming sandstone</td><td>20 - 60</td></tr>
<tr><td>Jurassic</td><td colspan="2">Fernie Formation</td><td>marine shale, siltstone, sandstone and limestone</td><td>180 - 380</td></tr>
</table>



0 500 1,000 2,000 3,000

Meters

1:30,000

Pacific American Coal

Highland GeoComputing, LLC

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

Basemap data from BCGov "Base Mapping" GIS Mapservers

2018 Elko Exploration Project

Figure 3
Regional Geology

January, 2019

Elko, British Columbia

The late Jurassic / early Cretaceous aged Kootenay Formation resides conformably above the Fernie Formation. As mentioned above, the Kootenay Formation is divided into three members. The Moose Mountain Member is the lowest member of the Kootenay Formation and ranges in thickness from approximately 20 metres to 60 within the Elko project area. According to BC Coal Ltd., the Moose Mountain Member is a medium to fine grained sandstone with occasional shale or siltstone interbeds. In the Elko license area, the Moose Mountain Member occurs as a sandstone outcrop at the base of the lowest coal seam (Seam 1). HGC does not believe that the Moose Mountain Member sandstone was intersected during the 2018 drilling program.

The Mist Mountain Member of the Kootenay Formation rests on the Moose Mountain sandstone with thickness between 425 to 500 metres. The unit consists of sandstone, siltstone, mudstone and coal. Conglomerate lenses up to 1 meter in thickness occur at the top of the member. HGC observed hard silicified carbonaceous shale outcrops across the Elko Project. BC Coal Ltd. identified at least six coal seams with mineable thickness and quality in the Mist Mountain Member. The Mist Mountain coal seams frequently contain several intra-seam partings of hard siliceous shale and carbonaceous shale.

The Elk Member of the Kootenay Formation outcrops along the top of Flathead Ridge forming a resistant cap above the Mist Mountain Member. The Elk Member consists of interbedded medium to coarse-grained sandstone, siltstone, silty mudstone, and localized conglomerate lenses. The Elk Formation sandstones are very hard and form prominent ridges in the Elko Project. The rocks of the Elk formation consist of thick, massive sandstones with well sorted, angular quartz grains with siliceous cement. The sandstone range in coarseness from fine grain sand up through pebble conglomerates. Hard, dark grey shale and carbonaceous mudstone units are interbedded with the sandstone units.

The 2018 drilling intersected a number of coal seams in the Elk Formations range from 0.5 to 2.0 metres thick. In the BC Coal literature, these coal seams are called "needle coal" because of fossilized coniferous needles occurring in the coal.

HGC is uncertain if the Elk Formation coal beds have any lateral continuity or sustain mineable thicknesses. The sediments of the Elk formation indicate a highly active depositional environment where large volumes of course sand and gravel were transported into the region. HGC hypothesizes that the coal beds were scoured away by braided steam channels incising through the alluvial plains. Such channels would prevent the Elk Formation coal seams from having wide lateral extents. That said, HGC was able to correlate several coal seams in the Elk Formation within the area of the 2018 drilling data.

The Blairmore Formation consists of a hard, very coarse well-cemented immature conglomerate. The course material clasts in the conglomerate consist of small rocks and pebbles ranging in size from one to two centimetres. The igneous pebbles are highly angular and poorly sorted. The conglomerate matrix is composed of hard, poorly sorted sand and silt. The Blairmore Formation occurs locally in the Elko Project area and is exposed along the "Elko Main" access road heading into the license areas.

6.1.2 Geologic Structure

The Elko Project area sits at the southern end of the McEvoy Syncline. The West Block is located on the southern limb of the syncline. The Central Block is essentially located along the synclinal axis. The East Block is located on the north-eastern limb of the syncline. Both reverse faulting and normal faulting have occurred in the project area.

While investigating coal and rock outcrops along the face of Flathead Ridge, HGC made observations along exposed geologic structures and collected strike and dip measurements. In order to gather as much information as possible, HGC reviewed historical reports from BC Coal and Shell with respect to geologic structures in the Elko Project area. HGC compiled the fault data from BC Coal, Shell and the British Columbia Geological Survey (BCGS).

HGC also studied aerial imagery on Google Earth, aerial images from 2016 using GIS servers from the BC government and some aerial images from 2004. These aerial images vary in resolution and clarity. HGC overlaid fault maps from the BC Coal, Shell and the BCGS to build a working fault model of the Elko Project.

HGC believes that reverse faulting occurred as part of the compressional forces that formed the McEvoy Syncline. Reverse faulting was first mapped by BC Coal along the south face of Flathead Ridge. HGC also observed these faults in the project area. HGC did not recognize any coal seam repeats in the 2018 drill hole data collected. Thus, HGC believes that the reverse faults are higher angle faults (65 to 85 degrees) and not thrust faults (less than 35 degrees).

The most prominent reverse fault is mapped west of drill hole DH_18_03 in the West Block. HGC believes this fault runs through the large pond at the top of Rockcleft creek. Another prominent fault is mapped west of DH_18_04, near the base of Flathead Peak.

The McEvoy syncline axis trends approximately 10 degrees east of north and plunges slightly to the north as well. Several lower angle reverse faults were also mapped by BC coal in the Central Block and these faults occur near the synclinal axis and are probably related.

It should be noted that the hard sandstone units of the Most Mountain and Elk Formation are hard, and well indurated. As a result, these rocks not bend or fold during a compressional event. These rocks fracture into blocks of various sizes depending upon stress levels during compression. The coal seams are soft and malleable relative to the sandstone. As a result, HGC believes that as the McEvoy syncline was formed the coal seams deformed and sheared while sandstone units fractured. If this situation occurs, then local thinning and thickening of the coal seams is to be expected. Structural thickening of the coal seams in or near the McEvoy syncline axis should be expected. HGC also expects structural thinning and thickening to occur in Elk Formation coal seams overlain by the thick sandstones. Further drilling is needed to understand whether these events occurred.

Several large normal faults occur on the eastern side of the Elko Project. The British Columbia Geological Survey (BCGS) mapped a larger normal fault, the "Harvey Fault", along the eastern side of the Elko License area, which effectively separates the Elko project area from the Cline Mining Lodgepole Area. The Elko Project resides on the down-thrown side of the Harvey fault.

BCGS geologic maps also show a prominent normal fault where the axis of the McEvoy Syncline daylights. This fault, called the "Abode Creek Fault" by HGC, effectively divides the East Block from the Central Block, along Abode Creek. HGC did not directly observe this fault in the field. However, aerial imagery strongly supports a fault in this area. The strata of the Eastern Block dip more steeply that the strata of the Central and West Blocks. The aerial images also suggest that the North-east limb of the McEvoy syncline has been "pushed" eastward relative to the Central Block and the West Block.

BC Coal mapped a number of strike-slip or normal faults on the north-eastern limb of the McEvoy Syncline in the Eastern Block. HGC has not visited the face of the Eastern Block, and has not observed these faults.

Additional, surface mapping, geotechnical mapping and logging, and perhaps surface geophysics will be needed to develop a more structural model for the Elko Project with respect to coal seam continuity, thickness and strength.

6.1.3 Coal Seam Geology

BC Coal identified six potentially economic coal seams across the Elko project area, see Figure 4. Historic reports indicate that as many as ten or twelve seams can occur within the Mist Mountain Formation along Flathead Ridge. The seams have splits of some degree and are often interbedded with thin mudstone and carbonaceous shale bands. Thin leader and rider coal seams occur below and above the main seams, respectively.

Seam 1

Seam 1 (SM1) is the lowest coal seam in the Mist Mountain Formation. In the available data, SM1 is the thickest and most laterally consistent seam observed in the Elko project area. HGC believes that DH_18_03 and DH_18_04 intersected SM1 with thicknesses of 9.5 and 11.8 metres, respectively.

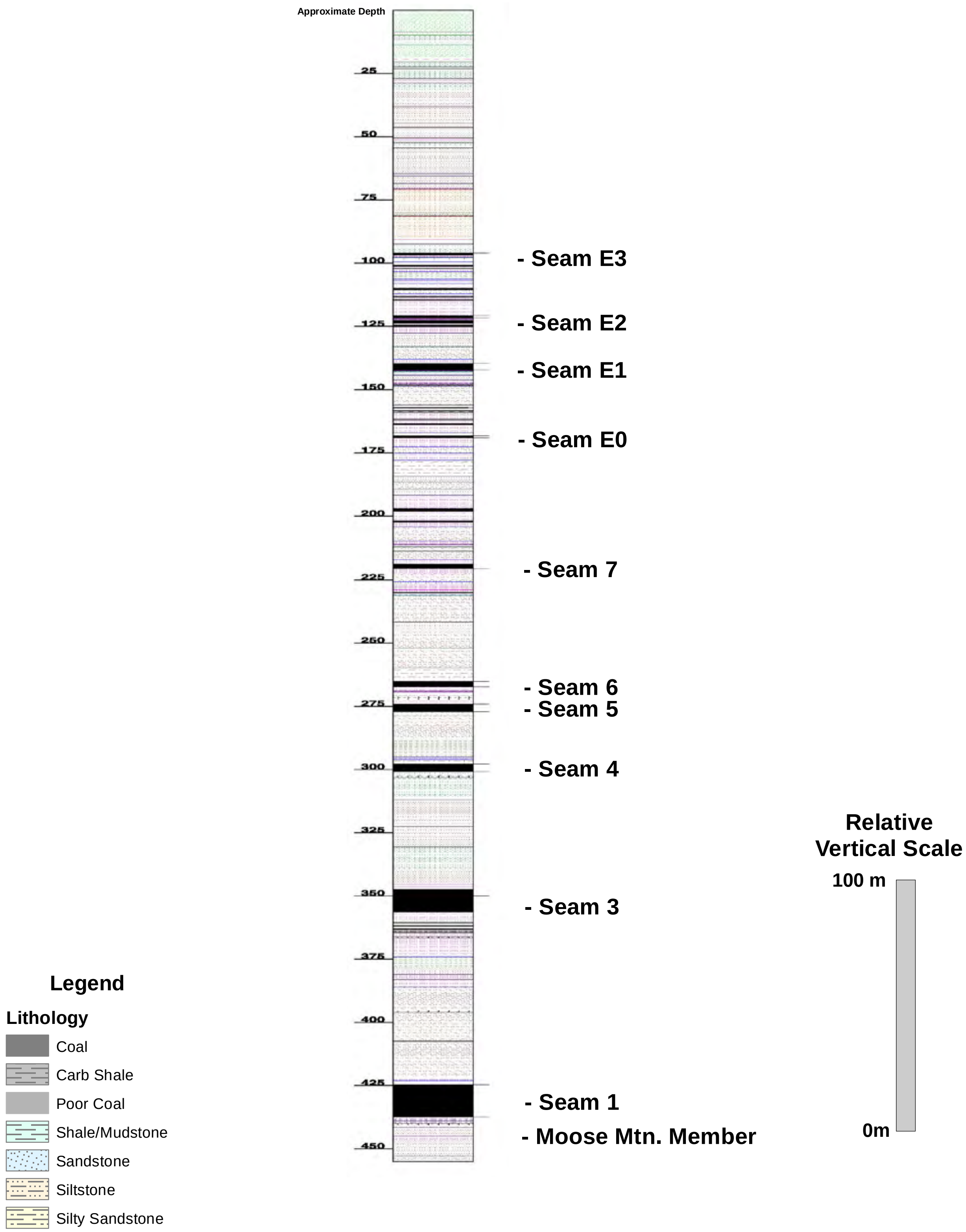
Seam 3

Seam 3 (SM3) occurs above SM1, separated by approximately 30 metres of mudstone and sandstone. The 2018 drill hole data shows two persistent splits in SM3. HGC called these SM3A and SM3B, with SM3B being above SM3A.

The SM3B seam ranges in thickness from 1.30 to 4.60 metres in 5 data points. The SM3A seam ranges in thickness from 4.30 to 10.10 metres in 7 data points.

Seam 4

Seam 4 (SM4) occurs above the SM3, separated by approximately 15 to 20 metres of mudstone and sandstone. The SM4 seam ranges in thickness from 1.00 to 6.98 metres in observed data.



Composite from 2018 Drill Hole Data

Pacific American Coal

Highland GeoComputing, LLC

2018 Elko Exploration Project

Figure 4
General Stratigraphic Column

Elko, British Columbia
January 2019

A consistent leader seam (SM4L) occurs below the SM4 seam. Likewise, a less consistent rider seam (SM4R) occurs above the SM4 seam.

The SM4 seam sits upon a hard sandstone layer. The access road BC Coal created during their exploration programs rests upon this sandstone layer.

Seam 5 and Seam 6

Seam 5 (SM5) and Seam 6 (SM6) occur in close proximity to each other. In drill hole DH_18_10C SM5 and SM6 coalesce into a single seam. However, the distinct SM5 and SM6 seams have been maintained in DH_18_10 to provide continuity across the Elk Project. The SM5 seam ranges in thickness from 1.10 to 4.4 metres. The SM6 seam ranges in thickness from 0.89 to 3.10 metres.

Approximately 10 metres of mudstone and sandstone separate the SM5 from the SM4.

Along the western side of the Elko project area the SM5 and SM6 are separate by approximately 0.5 metres of mudstone and shale. BC Coal shows the merging into a single seam moving east across the property, then splitting again. The lateral extent of SM5 appears to be more consistent than the lateral extent of SM6.

Seam 7

Seam 7 (SM7) is the upper most seam of interest across the Elko project area. The SM7 seam ranges in thickness from 0.20 to 2.00 metres in drill hole data.

The SM7 occurs most consistently along the western side of the Elko project area extending into Block 82. SM7 becomes thinner and pinches-out moving east across the Elko Project.

Elk Formation Coals

The 2018 drill holes intersected a number of coal seams, of potentially mineable thickness, within the Elk Formation. HGC assigned preliminary names to several of the Elk Formation coal seams that appear to correlate between the 2018 drill hole data. The names Elk Formation coal seams start at the interpreted base of the Elk formation (E0, E1, E2, and E3). The Elk Formation coal seams usually occur at the base of hard, thick, massive siliceous sandstone units.

Because the Elk Formation coal seams occur at the base of sandstones, the lateral extent of the Elk Formation coal seams might be limited or very lenticular due to erosion.

The E1 seam has the most consistent occurrence and thickness of the Elk seams correlated. The E1 and E2 seam have high FSI values in raw coal quality data.

6.2 Historical Exploration

Considerable exploration activities occurred in and around the Elko Project area from the late 1960's through about 1981. Table 0 lists public data from the BC CoalFile archive. PAK and HGC downloaded these documents and compiled geological data, and databases from them. BC Coal performed nearly all of the exploration within the actual Elko project area during this time. According to available reports, Kaiser Resources (which became BC Coal in 1981) acquired coal rights to Flathead Ridge in 1968. In 1973, BC Coal dug 7 adits, or channels in coal outcrops along the western face of Flathead Ridge.

Sometime between 1973 and 1979, Tembec acquired the rights to the coal where BC Coal built the adits. The historic reports indicate that Tembec would not allow BC Coal to access their coal under Tembec private land. As a result, the exploration activities BC Coal could perform were limited to an area at the top of Flathead Ride and an area in the lower-central part of the area. HGC believes that Tembec controlled the coal until they sold the surface to Jemi Fibre (now Canwel Forestry Products TSE:CWX) and the coal rights were relinquished to the BC government, at which time PAK was able to acquire licenses to the entire coal block.

BC Coal performed field mapping and road construction in 1979. In 1980, BC Coal performed additional geological field mapping and drilled one continuous core hole from July 26, 1980 to August 23, 1980. BC Coal analyzed six coal seams from this drill hole. HGC used these results as the basis for exploration target quality estimates. HGC believes that because BC Coal could not access coal within the Tembec block, the value of their licenses disappeared and they dropped them.

Mitsui performed extensive exploration in the area currently known as "Block 82" throughout the 1960s and early 1970s. A large portion of their work occurred on "Ridge 19" and "Ridge 20". These ridges are very close to the PAK licenses. Therefore, the geological data is useable for modeling and resource classification.

Cline Mining performed extensive exploration and mine planning in their Lodgepole Block that resides to the east and north of the Elko project area. Table 0 lists CoalFile reports available for the Lodgepole Mine. Two drill holes and two adits from the Cline Mining data actually reside within the Elko License area. A large normal fault, the "Harvey Fault", separates the Lodgepole project from the Elko license area, but the drill hole and adits provide good data for average thicknesses and coal quality.

The Lodgepole Mine area resides within the boundaries of the Flathead Wilderness Area. All development of the Lodgepole mine area ceased when the Flathead Wilderness area was designated as a "Wilderness Area".

Table 3 Coal File Reports Near Elko Project Area

Year	Coal File Report	Operator	Report Type
1965	289a	Nittetsu Mining Consultants for Mitsui	Preliminary Field Mapping Text- Fernie Ridge (west of PAK Properties)
1965	289b	Nittetsu Mining Consultants for Mitsui	Preliminary Field Mapping Maps - Fernie Ridge (west of PAK Properties)
1967	290a	Nittetsu Mining Consultants for Mitsui	Second Field Mapping Report Drilling and Adits - Text - Fernie Ridge (west of PAK Properties)
1967	290c	Nittetsu Mining Consultants for Mitsui	Second Field Mapping Report Drilling and Adits - Maps - Fernie Ridge (west of PAK Properties)
1967	290 Figure 19	Nittetsu Mining Consultants for Mitsui	Second Field Mapping Report Drilling and Adits - Figure - Fernie Ridge (west of PAK Properties)
1967	291	Fernie Coal Mining Co.	North end of Block 82 - Michel Ridge
1968	292	Nittetsu Mining Consultants for Mitsui	Detail Summary of Adits and Drill Holes Text, CQ - Block 82
1968	292 Appendix	Nittetsu Mining Consultants for Mitsui	Detail Summary of Adits and Drill Holes Maps, XS, Logs - Block 82
1968	293	Nittetsu Mining Consultants for Mitsui	Preliminary U/G Feasibility Study - Block 82
1970	294	Mitsui Mining Co.	Drawings Attached to Fernie Coal Mine Survey Report - Block 82
1961	295	Columbia Iron Mining Co.	Progress Report - Morrissey Ridge

Year	Coal File Report	Operator	Report Type
1961	296a	Cropco	Morrissey Ridge - Text
1961	296b	Cropco	Morrissey Ridge - Maps and Cross Sections
1972	298	Kaiser Resources	Morrissey Ridge - Maps Only - No Text
1975	299	Kaiser Resources	Morrissey Ridge - Resource Calculation Sheets Only - No Text
1970	300	Mitsui Mining Co.	Interim Field Report "Flathead Ridge P.C.I. Project" - Block 82
1973	301a	Kaiser Resources	Resource Calculation Sheets Only - No Text - Flathead Ridge and McLatchie
1973	301c	Kaiser Resources	Maps, Cross Sections, Adit Drawings - No Text - Flathead Ridge and McLatchie
1980	302	Kaiser Resources/BC Coal	Exploration Report - Flathead Ridge - North of Tembec License
1981	303	Kaiser Resources/BC Coal	Exploration Report - Flathead Ridge - South of Tembec License
1981	304a	BC Coal	Progress Report - Flathead Ridge - Drill Hole FH1 Logs
1981	304b	BC Coal	Progress Report - Flathead Ridge - Drill Hole FH1 - Quality Data

Table 4 Summary of Lodgepole Mine Area Exploration

Year	Coal File Report No.	Operator	Work Completed
1975	423	Crows Nest Ind.	Mapping
1976	424	Crows Nest Ind.	Mapping
1977	425	Shell Canada	Mapping
1978	426	Shell Canada	2 DDH, 495.3m
1979	427	Shell Canada	7 DDH, 1,403.1m
1980	428	Shell Canada	13 DDH (2,353.5m), 5 RCH (279.0m), 4 adits and bulk samples
1981	429	Shell Canada	Mapping
1997	865	Fording Coal	9 RCH, 796.0m
2005	-	Cline Mining Corp.	15 DDH, 1,204.97m

In July 2015, HGC and PAK personnel performed a field reconnaissance project across the Elko project area. This primary objective of the field reconnaissance project was to verify the locations of drill holes, adits outcrops, and faults referenced in geological reports prepared by BC Coal, Mitsui and Cline mining. HGC and PAK were able to locate and verify the locations of nearly every geological data point referenced in the historical reports.

7.0 Surface Control, Coal Control

7.1 Surface Control

Surface control across the Elko Project area is divided between the BC Province and Canadian Forest Products, Ltd. (Canfor), a private company. Surface property belonging to British Columbia, administered by the Ministry of Forestry, Land, and Natural Resource Operations (FLNRO), covers an area of approximately 1,856 hectares, see Table 0. Canwel Forest Products (Canwel) owns the surface property through the center of the Elko Project Area covering approximately 1,713 hectares.

While FNLRO generally administers public land in BC, MEM is the statutory decision maker with respect to access and development of land inside coal license boundaries.

Table 5 Elko Project Surface Control by Coal License

Ownership	418648 (West Block)	418649 (East Block)	418650 (Central Block)	Grand Total
Canwel Forest Products	427.3	585.4	700.2	1,713.0
Provincial	665.9	541.9	647.9	1,855.7
Grand Total	1,093.3	1,127.3	1,348.1	3,568.7

Canfor controls the logging and surface access rights to the Canwel property. PAK secured access agreements with Canwel and Canfor to access the property for the 2018 Elko Exploration project.

7.1.1 Coal Control

In September 2014, PAK acquired coal title licenses to three coal licenses across the Elko Project area: 418648, 418649, and 418650. The Elko Licenses 418648, 418649, and 418650 have areas of 1,094 ha., 1,128 ha., and 1,349 ha., respectively, see Table 5 Copies of the license approval documents can be obtained from PAK. PAK annually renews the licenses to keep the licenses in good standing.

MEM administers coal licenses across British Columbia. MEM also grants and administers surface use and exploration permits within coal license boundaries.

7.2 Current Permits and Planned Permit Revisions

7.2.1 Federal Permits

The Canadian Federal government owns land and minerals adjacent to the western side of the Elko Project. This parcel of land is known as the "Dominion Coal Block 82". No exploration or surface development is permitted within Federal land. PAK acquired a special use permit (SUP) from the Canadian Federal Government to travel through the Dominion Block. Copies of all permits can be obtained from PAK.

7.2.2 Provincial Permits

PAK received exploration permits and SUP permits from MEM, FNLRO and Natural Resources Canada for the 2018 Elko Exploration project, see Table 6. PAK is required to prepare summary reports for several of these permits. PAK and its contractors have either submitted these reports or they are a work in progress.

MEM issued the primary exploration permit, 18-130706-0420, on April 20, 2018 for the period of one year. PAK and Silenus are preparing a NOW for a 2019 Elko exploration project. PAK plans to submit this NOW application during the first quarter of 2019.

Table 6 Elko Exploration Permit, Environmental Permits, and Special Use Agreements

Permit ID	Type/Description	Issued by	Issue Date	End Date/Duration	Comments
18-130706-0420	Notice of Work (file:1630706201701)	MEM	April 20, 2018	1 year	Exploration Summary Report due March 31, 2019
S26304	Special Use Permit - Flathead	FLNRO	June 8, 2018	May 14, 2022	subject to specific closure dates
n/a	Dominion Block Road Use Agreement	Natural Resources Canada	July 15, 2018	March 31, 2019	
2018-0014	Archeology Inspection	FLNRO - Archeology Branch	January 30, 2018	December 31, 2019	Inspection report due June 1, 2020
2017-03	Road Use Permit	Canfor	July 1, 2018	July 1, 2019	Suspended from April 1, 2019 to May 15, 2019 for runoff, can file for exemption
CB17-272843	AMA Access Permit	FLNRO	July 1, 2018	October 10, 2019	
L50884	Occupant License to Cut and Remove Timber	FLNRO	June 8, 2018	May 14, 2022	

8.0 Physiography

The Elko Project property is situated in an area of moderate to steep topography of the Front Range Rocky Mountains of BC. The relief across the Elko Project property ranges from 1,200 m to 2,200 m above sea level. The area is characterized by rugged ridges with moderate to steep-sloping sides at higher elevations and gentle slopes at lower elevations. The terrain atop the steep slopes consists of moderately rolling slopes delineated with sandstone outcrops. The south and east sides of the Project is characterized by steep sided ridges and rolling mountains. The most notable geographic features near the Elko Project are Flathead Peak and Sportsman's Ridge (also known as Flathead Ridge). Flathead Peak is located outside of the PAK licenses, with an elevation of approximately 2,260 m. Sportsman's Ridge is a steep, prominent, south-facing escarpment within the Elko Project. The coal seams of interest outcrop along the Sportsman's Ridge escarpment.

The wide of range of elevations across the Elko Project also host a wide range of biogeoclimatic zones across the project area. Various types of soil and vegetation occur as a result. The climate of the Elko Project area is typical of south-central British Columbia with below freezing temperatures from November to April and periods of dry, hot weather in the summer. Precipitation averages 60 cm to 80 cm a year, with a substantial portion in the form of snow.

The "ESSF (Engelmann Spruce - Subalpine Fir)" zone is the predominant climatic zone across the Elko Project. The "ICH (The Interior Cedar – Hemlock)" climatic zone occurs in the low-lying parts of the Elko Project along Lodgepole Creek. Ranging from low elevation to high elevation, climatic subzones within the ESSF zone consist of: "Wet Mild", "Wet Mild Woodland", "Dry Cool Woodland", and "Dry Cool".

The Elko Project resides within the Lodgepole Creek watershed, which in-turn belongs to the Elk River watershed. North Lodgepole creek drains the northern and eastern portions of Elko Project. A number of ephemeral streams occur along the southern face Sportsman's Ridge which drain into Lodgepole Creek during spring runoff and after thunderstorms. It should be noted that the Elko Project licenses are located outside of the Flathead river watershed.

9.0 Prospecting Surveys - Geologic Field Observations

During the course of the exploration drilling HGC performed geologic mapping and field reconnaissance within the Western Block and the Central Block of the Elko Project. With the help of Mr. Tyler Philips of Nupqu Development Corporation (Nupqu), HGC made numerous geologic observations, see Table 7, prepared three measured sections, see Table 8, and collected strike and dip measurements across the area.

HGC mapped these points to assist in the overall geologic interpretation of the Elko Project and geologic models, see Figure 5.

On September 6, 2018 Nupqu and HGC personnel walked the length of overgrown roads in the Central Block to determine if a less steep access route into the Elko Project exists, see Figure 5. The road was overgrown in many places with alder bushes (trees), but HGC believes that the road can be easily cleared and made passible for pickup trucks and other equipment without significant earth moving.

HGC compiled geologic data for three measured sections across the Elko Project. HGC exposed the coal and rock across several outcrops and measured the true thickness of each exposed lithology. HGC then located the base of the section using a handheld GPS unit. HGC added the data for the measured section into the DHDB database and used these data in the geologic model.

HGC incorporated strike and dip measurements from across the Elko Project into the geologic model.

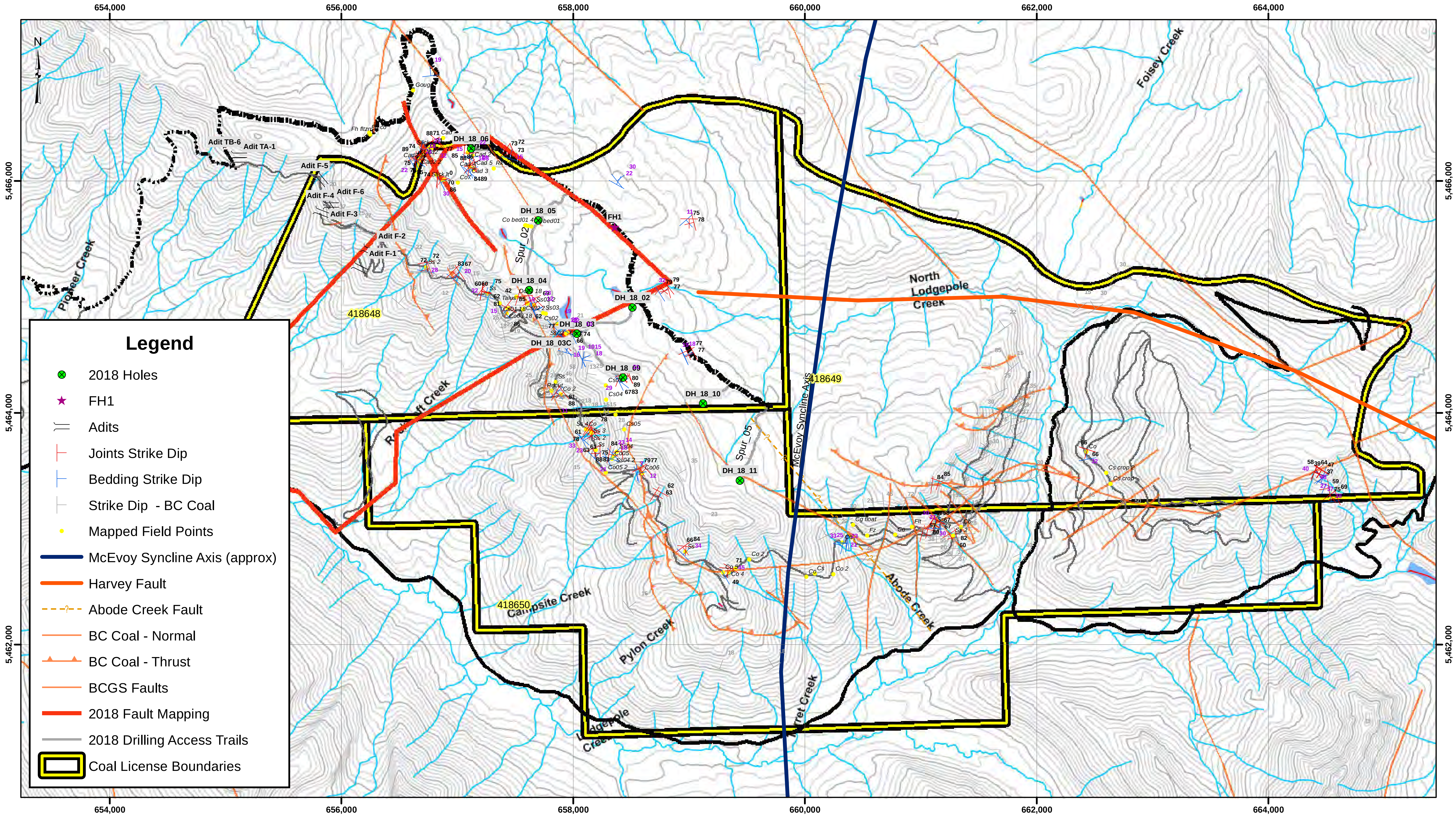
Table 7 Summary of Geologic Field Observation Points

					Joint Set 2		
Point ID	Strike	Dip	Strike	Dip	Strike	Dip	Point Description
OC1_18	4	20	120	10	103	15	md gr ss w/ xbeds
CO01_18	115	19					sm7? Outcrop. Oxidized coal w/ gry-blk shale
CO02_18							basal shale of coal. Se of CO01
SS01	324	15					Below CO01 and above CO03
JT01_18			115	85	217	62	SS outcrop
CO03_18							measured section
CO04_18							coal exposed from gopher hole. No exposed coal at surface.
OC02	326	21					ss w/ xbed
CS01_18							carb shale. Hard. Below DH_18_04
SS02	308	27	107	77			hard ss. Below DH_18_09
CS02	315	18.5					carb shale
SS03	340	12					hard ss
SS04	340	12	134	69	243	85	hard ss
CS03							carb sh w/ coal. Thin bands of coalified plants in shale
CS04							Carb shale. Central block
CS05							Carb shale. Minor coal
CAD	268	15	185	15			cadomin, CG
CAD2	301	22	166	88			cadomin, CG
CAD3	325	11	166	88			cadomin, CG
CAD4	311	24	36	88			cadomin, CG
CAD5	336	33	247	89	187	84	cadomin, CG
SS04	318	14	173	84			Sandstone at DH_18_09
SS04_2	287	23	11	88			Sandstone at DH_18_09
CO05	333	18					coal bloom
CO06	342	7	241	79	137	77	coal bloom

					Joint Set 2		
Point ID	Strike	Dip	Strike	Dip	Strike	Dip	Point Description
CAD			131	71	63	88	cadomin, CG
Slick			333	32			slickensided plane on Cad-CG
Slick/Flt	16	22	176	71			apparent fault in Cad-CG
Cad2	307	18	143	74			cadomin, CG
Cad2 2	334	22	66	75	183	73	cadomin, CG
Jt			115	70	5	86	Joint in Elk Fm
Slick			334	30			slickensided plane on Cad-CG
CO7							Carb Shale below cliffs near DH_18_06. IB co/sh
Cs crop							carb shale on north lodgepole
Cs crop 2	309	66					carb shale on north lodgepole
Co							coal, measured section on North lodgepole
SS	309	66					SS outcrop
CO							soft coal, platy
Co	199	27	104	88	16	57	flat lying coal, just east of synclinal axis, 1-1.5m thick
Flt							Fault zone/ slickensides in creek channel
Ss	273	30	34	67	121	58	SS outcrop near coal exposure
Co							1m Coal dull, no bright observed - Photo 10:04am
Fz							Fractured SS, md gr, xbeds, tight joints
Co							1m Coal, some bright observed - Photo 10:56am
Cs							IB coal and carb shale, in ravine
Co							1.5m coal, oxidized dull. Photo 11L56
Co 5							Big coal exposure. Mixed bright and dull. Large enough for a drill.
Ss	315	34	95	66	54	84	SS outcrop
Ss 4	285	22	37	75	191	81	shear: 10/60

Table 8 2018 Measured Section Lithology

Section ID	Seam	Lithology	From Depth	To Depth	Thickness
MS_18_01		coal/shale	0.00	0.40	0.40
MS_18_01	SM5	coal	0.40	1.20	0.80
MS_18_01	SM5	coal/shale	1.20	2.00	0.80
MS_18_01	SM5	coal	2.00	2.90	0.90
MS_18_01	SM5	coal	2.90	3.10	0.20
MS_18_01		coal/mudstone	3.10	4.00	0.90
MS_18_01		carbonaceous shale	4.00	4.20	0.20
MS_18_02		carbonaceous shale	0.00	0.05	0.05
MS_18_02	SM4	coal	0.05	0.10	0.05
MS_18_02	SM4	carbonaceous shale	0.10	0.20	0.10
MS_18_02	SM4	coal	0.20	0.30	0.10
MS_18_02	SM4	carbonaceous shale	0.30	0.45	0.15
MS_18_02	SM4	coal	0.45	0.65	0.20
MS_18_02	SM4	carbonaceous shale	0.65	0.80	0.15
MS_18_02	SM4	coal	0.80	0.90	0.10
MS_18_02	SM4	coal/shale	0.90	1.30	0.40
MS_18_02	SM4	coal	1.30	1.45	0.15
MS_18_02	SM4	carbonaceous shale	1.45	1.75	0.30
MS_18_02	SM4	coal	1.75	2.05	0.30
MS_18_02	SM4	rashy coal	2.05	2.35	0.30
MS_18_02		carbonaceous shale	2.35	2.50	0.15
MS_18_03		carbonaceous shale	0.00	0.10	0.10
MS_18_03		carbonaceous mudstone	0.10	0.30	0.20
MS_18_03	SM4	coal	0.30	1.00	0.70
MS_18_03	SM4	carbonaceous shale	1.00	1.10	0.10
MS_18_03	SM4	coal	1.10	1.20	0.10
MS_18_03	SM4	shale	1.20	1.35	0.15
MS_18_03	SM4	coal	1.35	1.40	0.05
MS_18_03		shale	1.40	1.50	0.10



0 500 1,000 2,000 3,000

Meters

1:30,000

Pacific American Coal

Highland GeoComputing, LLC

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

Basemap data from BCGov "Base Mapping" GIS Mapservers

2018 Elko Exploration Project

Figure 5
2018 Field Mapping Data

Elko, British Columbia
January 2019

HGC compiled the strike and dip data collected during 2018, 2015 and data collected by BC Coal geologists (circa 1975) for strata bedding and joint structures, see Figure 5. The Rose diagrams shown in Figure 6 and Figure 7 illustrate the direction and magnitude of the strike and dip measurements for bedding and jointing, respectively.

Upon analysis of the strike and dip data HGC assigned geologic-structural domains to the Elko Project area from Domain I through Domain IV, moving generally from west to east. Domain I occurs from the western border of the PAK coal licenses along the southwest facing slope of Flathead Ridge (the southwestern limb of the McEvoy Syncline). Domain II occurs within the McEvoy syncline axis. Domain III occurs along the east facing slope along North Lodgepole Creek (the eastern limb of the McEvoy Syncline). Domain IV occurs along the south facing slope east of North Lodgepole Creek to the eastern border of the PAK coal licenses.

Figure 6 Rose Diagram of Elko Bedding

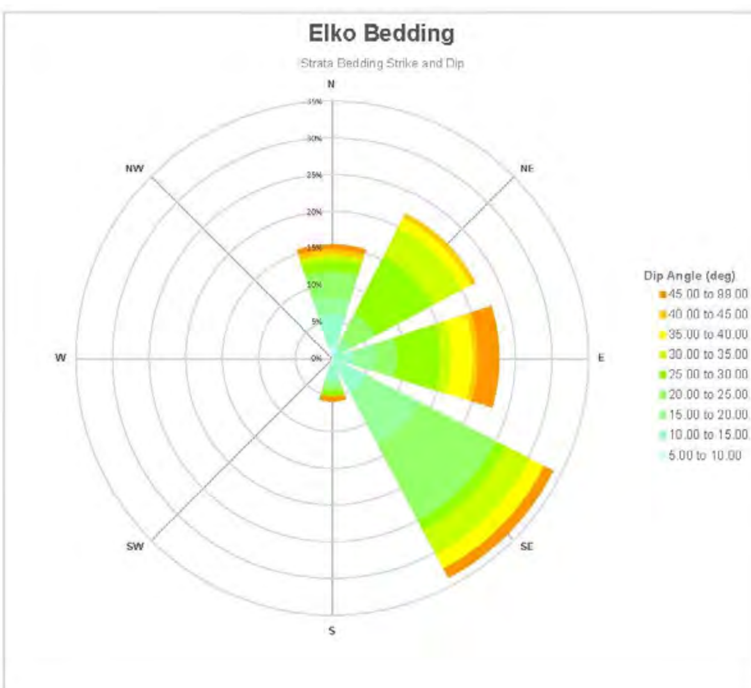
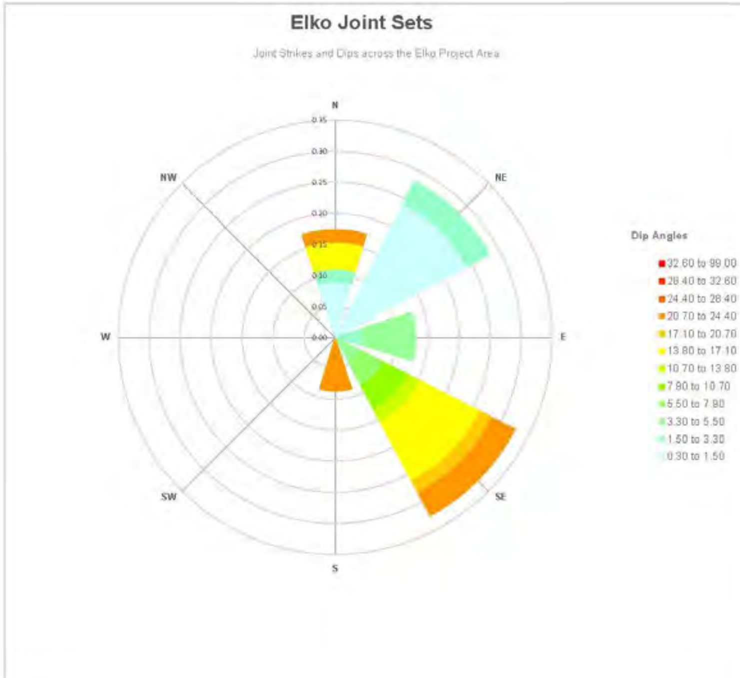


Figure 7 Rose Diagram of Elko Joint Sets



The Rose diagrams currently display all the bedding and mapped data in the Elko Project. As more mapping data is collected across the project area, domains will be assigned to each data point and analyzed independently.

The structural domains impact geological modeling and resource reporting. The geologic complexity, as defined by the Geological Survey of Canada in Paper, 88-21, can vary between geologic domains. At present, the Elko Project area has been classified with “Moderate” geologic complexity. The domains listed above may be assigned to different classes of geologic complexity.

10.0 Sampling

10.1 Sample Types

10.1.1 2018 Elko Exploration Data:

- 8 reverse circulation (RC) holes with chips samples collected of coal. 7 holes drilled in license 418648, one hole drilled in license 418650. The holes were drilled in August and September 2018.
- RC chip samples collected every 0.5 meters within coal zones. The detailed RC sampling protocol is available upon request from PAK
- All holes geophysically logged.
- 1 spot PQ core hole with PQ coal core collected
- Coal core sampling practices are detailed in Section 10.2.2

10.1.2 Historical Data:

- One HQ3 (61.1mm diameter) core hole located in license 418648 with coal quality analyses (FH1).
- Six Adits excavated in license 418648 in summer of 1974.
- Two drill holes exist in 418649 (LP101 and LP102)
- Two adits in 418649 (LP Adit-2 and LP Adit-3)

Coal samples were collected from Adits dug in 1973 on the face of Sportsman's Ridge. BC Coal collected bulk samples from the adits, F-1 through F-6, and performed washability analyses on them, see Table 9.

In the summer of 1980, BC Coal drilled a continuous core hole, FH1, to a depth of approximately 736 metres. BC Coal collected coal core down the hole and performed washability analyses on the coal core.

Cline drilled a large number of holes and dug a large number of adits in the Lodgepole Mine area. As mentioned above, two drill holes and two adits occur within the Elko licenses. HGC located these drill holes and adits during the

2015 field reconnaissance project. The quality for these data points are shown in Table 9

Historic CoalFile reports contain significant detail on how BC Coal collected the adit samples and the coal core samples. HGC is satisfied that the historic samples were collected and analyzed in a professional manner and represent valid data for modeling and resource estimates.

Table 9 Summary of Historic Coal Quality Data

						Raw Coal							Dry Basis Clean Coal										
ID	**Type**	**Coal File No.**	**Area**	**Seam**	**True Thickness**	**Res. Mst**	**Dry Ash**	VM	FC	Sulfur	**FSI**	DDM	**Float SG**	**Res. Mst**	**Ash**	**VM**	**FC**	**FSI**	**Sulfur**	**Yield**	**Btu**	**Ro**	**DDM**
FH1	DDH	304b	Elko	SM7	1.33		47.0				6.0		1.5		9.8	24.4	65.8	8.0	0.5	40.8	13,970	1.13	539.8
FH1	DDH	304b	Elko	SM3	0.30		21.7				6.0		1.5		4.6	24.0	71.4	7.5	0.5	60.4	14,990	1.13	375.0
FH1	DDH	304b	Elko	SM1	3.17		17.9				2.5		1.5		6.6	21.6	71.8	4.0	0.4	68.3	14,260	1.33	0.2
FH1	DDH	304b	Elko	SM1 Rpt	4.02		18.3				1.0		1.5		6.9	17.7	75.4	1.0	0.3	66.4	14,216	1.48	
FH1	DDH	304b	Elko	SM1 Rpt	3.65		28.5				1.0		1.5		7.1	18.9	74.0	1.0	0.4	49.1	14,145	1.50	
FH1	DDH	304b	Elko	MB	0.44		57.3						1.5		12.0	17.1	70.9	2.5	0.5	19.2	13,470		
F-1	Adit	301c	Elko	SM1	14.02		26.1	15.7	58.2	0.63	1.0	1.0	1.5		11.3	17.7	71.0	2.5	0.69				
F-2	Adit	301c	Elko	SM3	5.72		22.5	17.8	59.7	0.52	1.0	0.0	1.5		10.4	18.0	71.6	1.0	0.77				
F-3	Adit	301c	Elko	SM4	6.98		17.0	19.4	63.6	0.33	4.0	1.2	1.5		8.4	19.6	72.0	5.0	0.36				
F-4	Adit	301c	Elko	SM5	11.16		11.9	21.1	67.0	0.28	6.0	4.8	1.5		7.4	21.5	71.1	6.0	0.35				
F-5	Adit	301c	Elko	SM7	5.94		5.1	21.8	73.1	0.49	8.0	7.0	1.5		3.9	21.9	74.3	7.5	0.51				
F-6	Adit	301c	Elko	SM6	2.96		14.6	21.2	64.2	0.62	7.0	55.0	1.5		6.3	21.3	72.4	8.0	0.64				
J-4	DDH	292	Block 82	SM7	4.24	0.80	16.39	21.62	61.19		6.7		1.6		9.9					79.46			
J-4	DDH	292	Block 82	SM6	1.57	0.89	25.15	17.96	56.01		4.0												
J-5	DDH	292	Block 82	SM7	2.29	0.51	21.61	23.42	54.46		7.6												
J-5	DDH	292	Block 82	SM6	2.23	1.00	7.20	22.69	69.12		4.8												
J-5	DDH	292	Block 82	SM5	3.32	0.81	13.67	21.30	64.22														
OC150	Outcrop	292	Block 82	SM56	4.22	5.28	4.75	22.76	67.20														
OC153	Outcrop	292	Block 82	SM7	3.30	7.12	14.29	27.69	50.91														
OC623	Outcrop	292	Block 82	SM56	5.84	12.07	15.87	26.69	45.38														
OC627	Outcrop	292	Block 82	SM56	6.58	8.43	5.24	27.79	58.54														
OC714	Outcrop	292	Block 82	SM7	3.03	9.63	9.88	26.83	53.66														
TA-1	Adit	292	Block 82	SM56	4.17									1.80	4.20	21.90	72.10	7.00	0.33				
TB-6	Adit	292	Block 82	SM7	3.73									2.00	6.80	23.50	67.70	7.50	0.42		14,282		
LPAdit-2	Adit	428	Lodgepole	SM3	4.93	0.66	22.62				3.5		1.65	0.57	9.58	17.93	71.92	5.5		66%			
LPAdit-3	Adit	428	Lodgepole	SM1	18.4								1.63	2.04	9.36	15.56	73.04	1.00					
LP101	DDH	426	Lodgepole	SM6	0.90		22.72				7.5		1.50	0.52	5.78	21.84	71.86	8.00		66.63%			
LP101	DDH	426	Lodgepole	SM5	2.30		13.07				6.2		1.50	0.94	4.51	20.99	73.56	6.33		79.68%			
LP101	DDH	426	Lodgepole	SM4	1.65		48.18				1.0		1.50	0.67	6.48	20.84	72.01	8.00		27.19%			
LP101	DDH	426	Lodgepole	SM3	5.27		20.12				4.1		1.50	0.61	8.19	19.52	71.68	5.42		68.46%			
LP101	DDH	426	Lodgepole	SM1	13.44		24.87				1.3		1.50	1.06	8.98	18.69	71.26	1.82		47.79%			
LP102	DDH	426	Lodgepole	SM7	4.00		31.32				4.0		1.50	0.88	5.61	22.97	70.54	6.50		39.76%			
LP102	DDH	426	Lodgepole	SM6	0.90		33.65				6.0		1.50	0.96	6.03	22.78	70.23	8.00		64.71%			
LP102	DDH	426	Lodgepole	SM5	1.20		3.95				5.0		1.50	0.80	2.84	22.03	74.33	5.50		89.28%			

10.2 Sampling Methods

10.2.1 R/C Sampling

R/C sampling of drill hole cuttings was employed during the 2018 Elko Exploration project. The depths of the coals and physical limitations of the drill rig, and available drill bits made it hard to collect core from the drill holes. The drill rig was a reverse circulation rig that provided a steady stream of cuttings from the drill holes. Collection of R/C chip samples of coal is common practice at the other mines and mining projects in the Crowsnest and Elkview coalfields. A Silenus geologist, experienced in the region, compiled a sampling protocol to collect coal samples from R/C cuttings. The detailed R/C sampling protocol can be obtained from PAK.

In general, R/C samples are collected when a coal seam is first intersected. The driller stops drilling and activates the coal sampling shaker table. A mesh sample bag is placed below the shaker table and the driller commences downward drilling. Samples are collected 0.5-metre intervals until the driller determines the coal bottom has been intersected. The driller collects two 0.5-metre rock samples below the seam bottom to ensure that the rock is not a parting. If additional coal is intersected, then the sampling process continues. Normal drilling commences 1-metre below the coal seam.

R/C chip samples provided the only effective means of collecting coal samples across the property. HGC believes that the R/C samples provide indications of coal quality and high-level data about ash content, specific energy content and coke swelling (FSI – Free swelling Index and CSN – Crucible Swell Number).

Plate 1 - Foraco Shaker Table for R/C Samples

The R/C coal samples came out of the hole as coal granules (between 1mm and 2mm). Thus, the drilling process created numerous coal fines. HGC believes that some coal fines were washed away even with the fine mesh of the shaker table. Additionally, the granular size of the coal does not mimic coal that would be sent through a wash plant.

HGC believes that coal is lost at the top of a coal when the drill first penetrates the coal. Coal drills very easily and the bit can penetrate 10 to 20 centimeters into a coal seam before the driller can react and stop the drill.

Conversely, if the driller is not paying attention dilution material from the coal floor will contaminate the last 0.5-metre sample. The 2018 Elko Exploration project was the first multi-hole project in the area. At each drill hole location, HGC estimated coal seam depths from the previous modeled adapted from 1973 vintage BC Coal cross-sections. As it turned out the estimated coal depths were not very accurate. Therefore, drillers were unable to anticipate the top and bottom of coal seams. For that reason, HGC believes that coal was lost at the top of most seams and significant dilution occurred at the base of most coal seams - at no real fault of the drillers.

In thick coal seams, coal lost at the top and dilution at the base is diminished due to the relative volume of material. In thinner coal seams, less than 2 metres, the effects of loss and dilution within R/C samples have larger impacts on over quality, because a smaller volume of dilution will adversely affect raw quality values.

10.2.2 Coring

Drill hole DH_18_03C was the only drill hole chosen for coring during the 2018 field season. The Foraco drill rig was only able to collect core from depths less than 150 metres. Most of the coal seams intersected during the 2018 field season exceed 150 metres in depth. Drill Hole DH_18_03 (an R/C hole) was drilled as pilot hole. Coal seams of significant thickness occurred at depth of 37.4 metres and 72.5 metres. These seams were nominated for coring.

The Foraco core barrel was nominally three metres long (10 feet) with PQ diameter (3 inches/ 7.62 cm). The only drill bit available was a PDC button bit which, in HGC's opinion, adversely affected coal recovery.

Foraco hammer drilled to a depth of 35 metres. Coring for the first seam started at 35 metres. Foraco made four core runs through the first target seam, see Table 10. Foraco cut 8.40 metres of core and recovered 5.71 metres for a core recovery of 68%. Foraco cut 5.26 metres of coal and recovered 3.27 metres of coal for coal core recovery of 62%.

Table 10 Coring Runs and Recovery for DH_18_03C

Core Run	Run From	Run To	Core Cut	Core Recovered	Core Recovery %	Coal Cut	Coal Recovered	Coal Recovery %
1	35.10	38.10	3.00	1.46	48.7%	1.76	0.22	12.5%
2	38.10	40.00	1.90	1.20	63.2%	0.00	0.00	0.0%
3	40.00	41.50	1.50	1.05	70.0%	1.50	1.05	70.0%
4	41.50	43.50	2.00	2.00	100.0%	2.00	2.00	100.0%
5	71.00	72.30	1.30	1.00	76.9%	0.00	0.00	0.0%
6	72.30	73.70	1.40	1.20	85.7%	0.00	0.00	0.0%
7	73.70	76.00	2.30	2.00	87.0%	0.00	0.00	0.0%
8	76.00	79.00	3.00	3.00	100.0%	0.00	0.00	0.0%
Total			16.40	12.91	78.7%	5.26	3.27	62.2%

Coring for the second coal seam was supposed to start at a depth of 71 metres. The Foraco driller stated that they began coring at 71 metres. However, the caliper log on the geophysical log indicates that coring began at 73 metres. The second target seam was supposed to occur at 72 metres. A thin carbonaceous band, approximately 0.4-metres thick, occurred at 71.8 metres.

Foraco drilled four core runs from a nominal 71 metres to 79 metres. Foraco cut 8.00 metres of core and recovered 7.20 metres for a core recovery of 90%. No coal was cut or recovered during these four runs.

Table 11 Valid Data Points for Geologic Modeling and Resource Evaluation

DHID	Point Type	Northing	Easting	Collar	Total Depth
DH_18_02	R/C Hole	5,464,911.86	658,509.55	1,963.19	400.00
DH_18_03	R/C Hole	5,464,685.31	658,034.48	2,007.19	366.00
DH_18_03C	Spot Core	5,464,684.48	658,031.61	2,007.02	220.00
DH_18_04	R/C Hole	5,465,061.58	657,619.79	2,024.94	320.00
DH_18_05	R/C Hole	5,465,662.74	657,697.73	2,038.10	421.00
DH_18_06	R/C Hole	5,466,283.47	657,117.96	2,082.14	402.00
DH_18_09	R/C Hole	5,464,306.76	658,430.44	2,053.54	455.00
DH_18_10	R/C Hole	5,464,082.70	659,121.10	1,946.74	438.00
DH_18_11	R/C Hole	5,463,418.56	659,436.95	2,001.44	435.00
F-1	Adit	5,465,249.21	656,161.39	1,768.69	14.10
F-2	Adit	5,465,398.73	656,242.05	1,837.67	5.80
F-3	Adit	5,465,728.24	655,831.85	1,870.51	7.02
F-4	Adit	5,465,758.70	655,915.20	1,934.93	11.25
F-5	Adit	5,466,013.69	655,828.94	1,923.89	6.05
F-6	Adit	5,465,795.76	655,909.60	1,939.00	3.05
FH1	Core Hole	5,465,602.61	658,358.00	2,000.16	736.58
MS_18_01	Measured Section	5,464,904.41	657,440.40	1,963.60	4.20
MS_18_02	Measured Section	5,464,860.00	657,426.00	1,938.00	2.50

10.3 Drill Hole Database

HGC compiled lithological data from the field geologist logs, drillers logs and geophysical logs to prepare detailed lithological descriptions for each drill hole. The geologist and drillers logs provide details regarding the physical characteristics of rock chips extruded from the drill holes. The geophysical logs provide details about the depths of lithological components. HGC compiled location data and drill hole completion data for each drill hole.

For each drill hole, HGC scanned geologist logs and drillers logs into PDF documents. HGC converted all of the rock chip images and rock core images into single PDF documents for each drill hole. HGC also created PDF format files for the analytical sample advice sheets for each hole.

HGC entered all of the descriptive drill hole data into the DHDB drill hole database. Coal quality data from SGS was imported from spreadsheets into DHDB. The scanned original documents of each drill hole are cross-referenced and accessible from DHDB. HGC also cross-referenced TIFF images of the geophysical logs. HGC imported surveyed drill hole locations from Garrett Winkel and imported downhole deviation data from Century into DHDB.

DHDB is a comprehensive drill hole database specifically designed by HGC for use in the international coal community. DHDB is developed and maintained by Highland GeoComputing, LLC. DHDB is used by numerous coal companies across the United States and one company in Queensland, Australia.

DHDB stores all the information for each drill hole pertaining to the Elko Project. Historical drilling data from public reports was entered into DHDB as part of previous work performed for PAK by HGC.

DHDB resides on the HGC secure network and is backed up daily to HGC's 5TB NAS Raid 10 array of disk drives. DHDB is password protected and edits made to drill hole data are captured to an "audit trail" for each drill hole.

DHDB serves as the basis for geological interpretation, and geological modeling for the Elko Project. HGC created detailed header, lithology, and coal quality reports from DHDB for the 2018 Elko Exploration data.

[redacted]

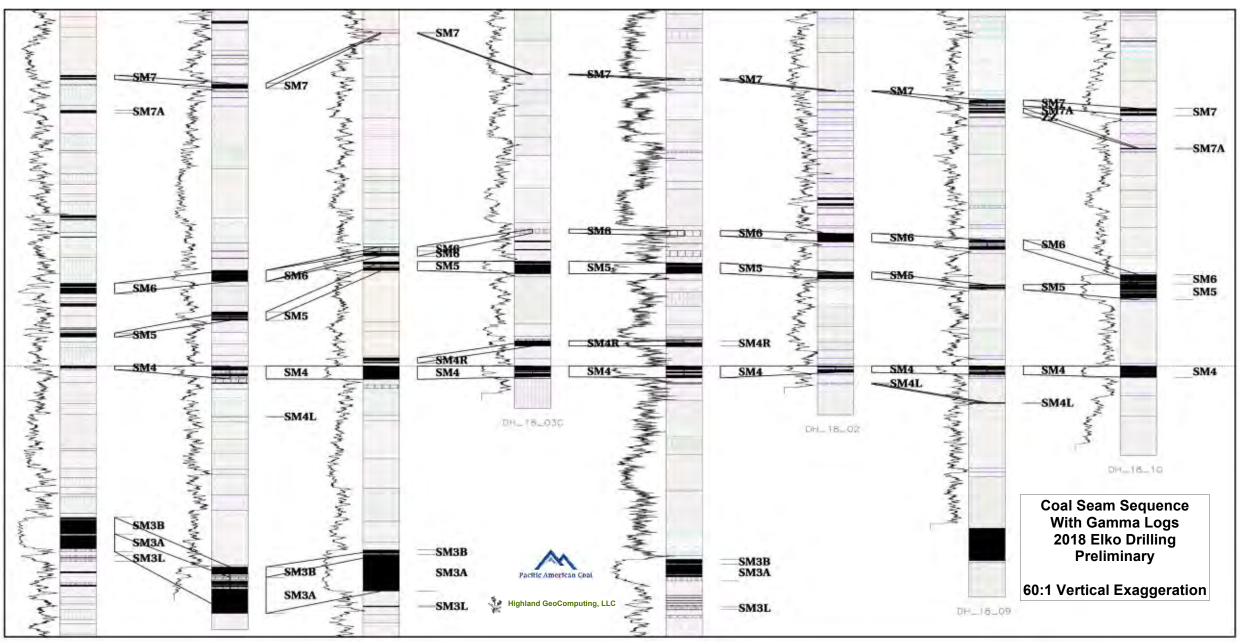
[redacted]

12.0 Seam Correlation

HGC studied coal seam correlations using all available data for the Elko Project. HGC built graphical fence diagrams through drill holes within and near the Elko Project. HGC used these diagrams as a reference to guide coal seam correlations. The fence diagrams include drill hole lithology, histograms of ash and FSI, and geophysical log traces of Gamma, Density and Neutron curves.

HGC performed numerous iterations of the fence diagrams to determine the most likely, and straight forward interpretation of the coal seams. HGC updated DHDB with changes made to seam names based on study of the fence diagrams. A preliminary Fence Diagram is shown below in Figure 10.

Figure 10 Preliminary Coal Seam Sequence with Gamma Logs



12.1 Geochemical Surveys

No geochemical surveys were performed or geochemical samples were collected during the 2017/2018 reporting period.

13.0 Geologic Resource Modeling

13.1 Topographic Model

HGC downloaded the most current publicly available topographic data from Geogratis. Available topographic data consisted of grid data in ArcGIS grid format. HGC transformed the coordinate system from Albers to UTM Zone 11, NAD 1983.

HGC exported topographic grid nodes from ArcGIS into MineScape. HGC created a high-resolution, gridded topographic surface using the data points at a 10-metre grid cell resolution.

13.2 Coal Structure Modeling

HGC uses the StratModel application in the MineScape geologic modeling and mine planning software system developed by ABB to build geologic structure models. StratModel allows users to define a set of stratigraphic units, coal seams, faults, and formational boundaries in what is called a "schema". The schema also includes parameters for surface and thickness interpolators. StratModel builds a stratigraphic structure model by combining the parameters in a schema with lithological data defined in drill hole objects. The drill hole objects are imported to MineScape from DHDB. The stratigraphic structure model, the StratModel, contains roof, floor and thicknesses for all of the seams in the schema. Effects of faulting, both reverse and normal, are applied to the structures to build a comprehensive geologic model.

HGC built a schema called "Elko _18a". The following tables list parameter values in schema "Elko_18a".

Table 12 Schema File Settings

Parameter	:	Value
Schema Name	:	Elko_18a
Geological Model Table File	:	Elko_18a
Geological Model Grid File	:	Elko_18a
Topo Surface Name	:	Topo
Strat Model and Quality model Grid spec	:	Elko_020
Quality Model Name	:	As Received

Table 13 Interpolator Settings

INTERPOLATOR		Power/Order	Search Radius
Thickness	Inverse	3	5000
Surface	Height	4	5000
Trend	Planar	0	5000

Table 14 Seam Settings

Name	Type	Relationship	Continuity
E1	INTERVAL	Conformable	Pinch
SM7	INTERVAL	Conformable	Pinch
SM7A	INTERVAL	Conformable	Pinch
SM6	INTERVAL	Conformable	Pinch
SM5	INTERVAL	Conformable	Pinch
SM4	INTERVAL	Conformable	Pinch
SM4L	INTERVAL	Conformable	Pinch
SM3B	INTERVAL	Conformable	Pinch
SM3A	INTERVAL	Conformable	Pinch
SM1	INTERVAL	Conformable	Pinch

Table 15 Compound Seam Settings

Name	Upper	Lower	Continuity
SM3	SM3B	SM3A	Pinch

Table 16 Fault Settings

Fault Sequence	Top Unit	Bottom Unit	Fault Name
KOOT	E1	SM1	FLT01
KOOT	E1	SM1	FLT02
KOOT	E1	SM1	FLT03
KOOT	E1	SM1	FLT04
KOOT	E1	SM1	FLT05
KOOT	E1	SM1	FLT07
KOOT	E1	SM1	FLT08

Table 17 Elko Geologic Model Boundary Coordinates

Limit	Value
North	5,468,000
West	653,000
East	667,000
South	5,460,000

13.3 Fault Interpretations

Using fault traces compiled by various source, as described in Section 2, HGC built a fault model in MineScape. Faults in MineScape are composed of line strings, in 3-D space, that contain a dip angle and a magnitude of displacement (throw) at each vertex. HGC determined suitable elevation of the lined strings, and then assigned dip angles and displacement to fault vertices. HGC adjusted these values while making numerous iterations of the StratModel.

15.0 Risk to Resources

Being a greenfield exploration project, the Elko Project has numerous risks associated with geology and permitting. The primary geologic risk for the Elko Project is that future drilling reveals that the deposit is more structurally complex than current data indicates. Structural complexity can arise in the form of folding, faulting or both. More complex structure would require closely spaced drilling and thus increase development costs.

Future drilling might show that thick sandstones of Elk Formation eroded the coal seams below limiting their lateral extent.

Core drilling was difficult during the 2018 season due to depth limitations of the drill rig and available core bits. PAK plans on drilling larger diameter core (six inch) during the 2019 season. If the large diameter coring does not provide good coal recovery, then expanding the resource might be difficult and the ability to quantify coal quality will be reduced. Conversely, good coal recovery will enable PAK to greatly expand the scope of geotechnical and geochemical (quality) analyses.

HGC believes that additional drilling and field mapping will locate additional coal resources in the Central Block and Eastern Block of the Elko Project. However, HGC also believes that the coal could be highly faulted in the Central block and the coal will be steeply dipping in the Eastern block.

Obtaining exploration and year-round site-access permits takes considerable time and effort. If permits are not granted prior to field seasons, if or access windows are too short, then detailed exploration drilling will be difficult and expensive. Annual exploration windows generally occur after spring snow melt (typically mid-June) through first snow fall (typically early October). If permits are not granted until July or August, then available time is greatly reduced. If this occurs, then additional cost would be needed to increase the number of drill rigs on the project. Furthermore, if multiple drill rigs cannot be obtained, then data acquisition will be required multiple field seasons to collect.

PAK is currently working on acquiring exploration permits for the 2019 field season. 2019 exploration plans include infilling areas between 2018 drill holes and expanding exploration into the Central Block and East Block. The 2019 exploration plans include increased core sampling for coal quality and geotechnical parameters. With favorable coal quality and geotechnical results PAK could begin preliminary mine design and mine planning studies at the end of 2019. These preliminary mining studies would then provide direction for detailed exploration during 2020 with a focus on developing pre-feasibility studies.

PAK is also working on obtaining year-round access permits to begin collection of baseline environmental data. Establishing baselines of environmental data over the course of several years will be crucial for any type of mine development. Permitting agencies require that environmental data be collected during all seasons. Therefore, the sooner PAK can get year-round access into the Elko Project area, the sooner PAK can begin collecting these data.

16.0 Physical Work

16.1 Ministry of Environment Site Visit

During the period, the ministry of environment made a site visit with PAK's project manager to review the wildlife habitat and review the exploration windows put in place. The site visit included walking the property, reviewing wild life habitat and invasive plant species.

16.2 Nesting Surveys

From July 17th to August 1st, VAST Resource Solutions (VAST) conducted 3 separate nesting bird surveys on the proposed access roads and drill pads for the Elko Project above the Lodgepole Forest Service Road in the Elko, BC region. Daryl Calder, the contract birder, carried out the nesting bird surveys over three separate visits with assistance from a wildlife technician provided by VAST. The survey work focused on locating active nests in the project area. Once located, the nest and associated buffer zone was flagged by the contractor and technician as per guidance from Environment Canada (https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory- birds/technical-information-risk-factors.html#_03_1) and from previous methods used in other industrial applications. The date, time, species, location and other details were recorded on an electronic wildlife inventory form created by VAST.

The information gathered was reported to the client's on-site supervisor and to the VAST project manager as soon as possible. Nests were determined to be active based on the behavior of birds in the area and signs such as whitewash, moulted feathers, prey remains, down, pellets, and new nesting material; in addition to the presence of any young in the nest or incubating adults. If behavior such as vocalizing alarm calls, circling overhead, carrying prey items, or "leading away from the nest" was observed, search efforts were intensified. Signs for cavity nesting species include some of the above behavior as well as chirping young, pellets, and down present on the tree trunk next to the cavity. Lightly tapping on snags or trees with potentially occupied cavities may cause adults to exit the cavity or bring them to the entrance.

16.3 Elko fish assessment and Stream Crossings

During the period PAK's qualified professionals spent time in the field checking stream crossing and completed a fish assessment before installing bridges. Crossing assessments were completed above the first potential barriers to fish passage, downstream of the proposed crossings. The crossings that were sampled included Crossings 4 – 6, and 9 – 11. The remaining crossings were dry or had too little water to sample when the sites were visited. Fish were captured at Crossing 5, and with no significant barriers between Crossing 5 and Crossing 3, Crossings 3 – 5 were determined to be fish bearing. No fish were captured at Crossings 1, 2 and 3 due to these sites being dry upon visit, however, due to the connection with fish bearing watercourses they default to fish bearing as it is possible for them to be fish bearing during periods of increased flow. No fish were captured at Crossings 6, and 9 - 11, therefore, are all considered non-fish bearing. Crossings 7 and 8 possessed little to no channel definition and were considered non-fish bearing.

Figure 11 Fish Distribution and Stream Gradient

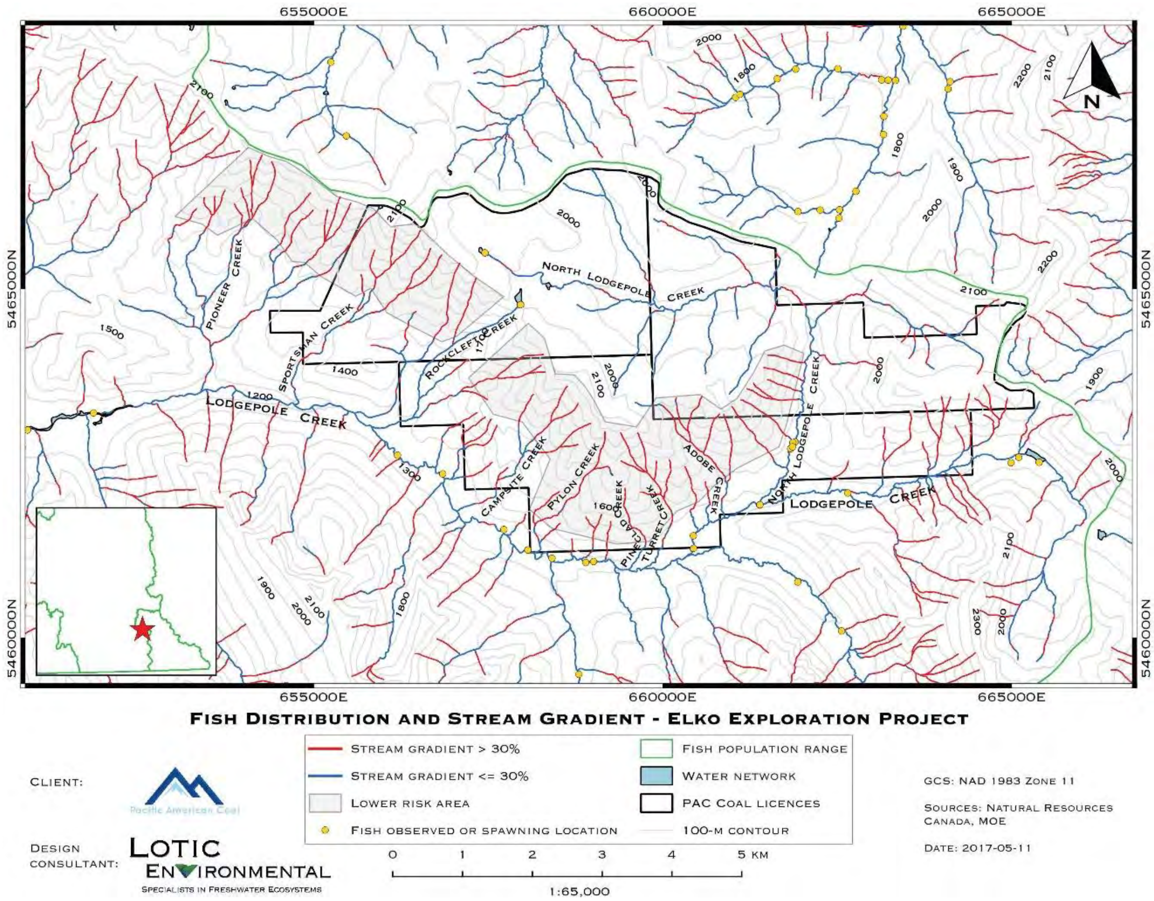
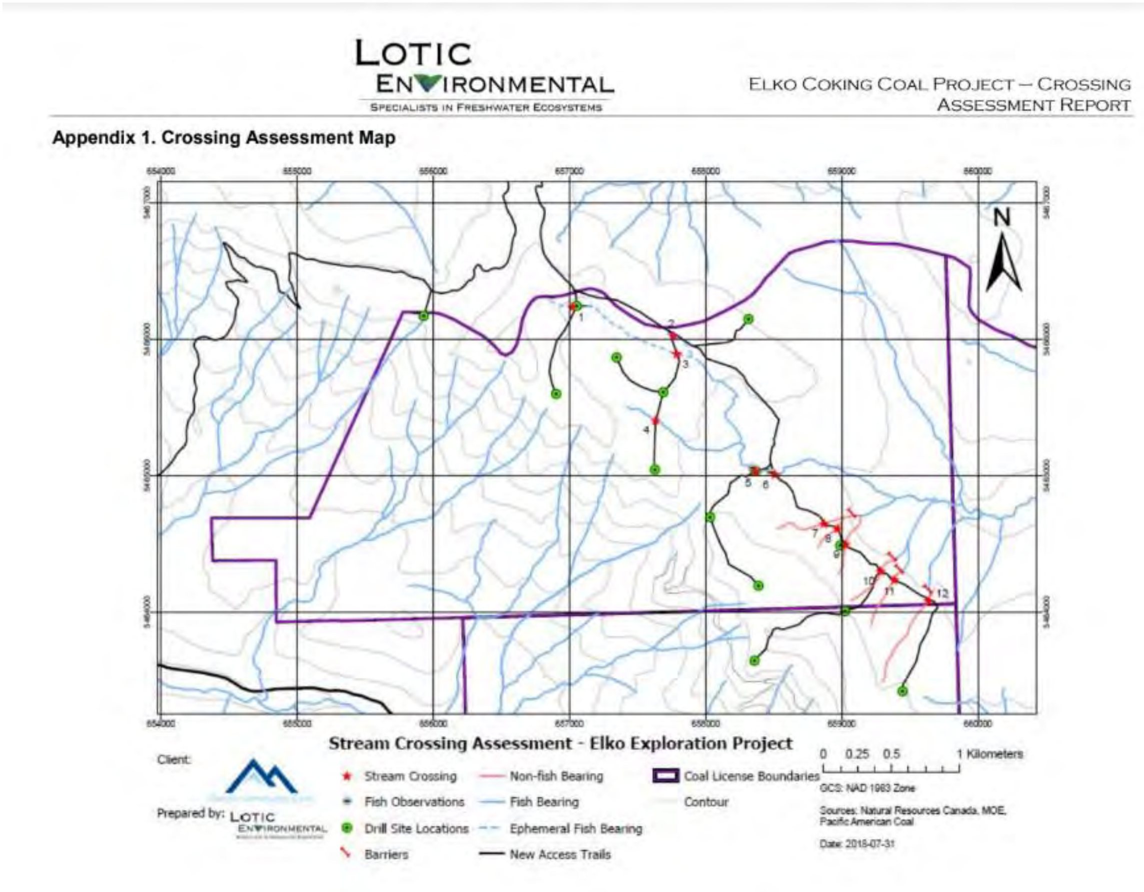


Figure 12 Stream Crossing Assessment



[redacted] [redacted]

[redacted]

[redacted] [redacted]

[redacted]

16.5 Conclusions and Recommendations

PAK will continue to provide MEM with additional information deemed necessary to acquire additional exploration permits in the licenses controlled, and paid for, by PAK. PAK is committed to the Elko project and the continued exploration of the Project area. PAK is planning on having updated exploration permits in hand for the 2019 exploration season.

17.0 References

"Geologic Summary of the 2018 Elko Exploration Project", Highland GeoComputing, LLC, November 2018.

"The JORC Code, 2012 Edition", The Australasian Institute of Mining and Metallurgy, Australian Institute of Geosciences and Minerals Council of Australia, December 2012.

"A Standardized Coal Resource/Reserve Reporting System for Canada", Paper 88-21, Geological Survey of Canada, 1989.

"Technical Report – Resources and Reserves of the Lodgepole Coal Property", Cline Mining Corporation/GR Technical Services Inc., February 2006.

"Report on the Survey of Fernie Coal Mine, B.C., Canada", Nittetsu Mining Co. Ltd., March, 1966. (B.C. CoalFile #289).

"Report on the Second Survey of Fernie Coal Mine, B.C., Canada", Nittetsu Mining Co. Ltd., April, 1967. (B.C. CoalFile #290).

"Survey Report on Fernie Coal Mine, B.C., Canada", Nittetsu Mining Co. Ltd., May, 1968. (B.C. CoalFile #292).

"The Interim Report on the Field Investigation Executed in The Flathead Ridge P.C.I. Property, B.C. Canada", Mitsui Mining Co, Ltd., 1970. (B.C. CoalFile #300).

"Flathead – McLatchie Reserve Estimate Charts", Kaiser Resources Ltd., 1973. (B.C. CoalFile #301a).

"Flathead – McLatchie Maps and Cross Sections", Kaiser Resources Ltd., 1973. (B.C. CoalFile #301c).

"Exploration Report Coal Licenses 500-506", Kaiser Resources Ltd., July 1980. (B.C. CoalFile #302).

"Flathead Ridge Coal Licenses (4188 – 4189) Progress Report", B.C. Coal Ltd., April 1981. (B.C. CoalFile #303).

"Flathead Ridge Coal Licenses (500 – 506) Progress Report", B.C. Coal Ltd., May 1981. (B.C. CoalFile #304a).

Quality Data from Drill Hole FH-1, B.C. Coal Ltd. May 1981. (B.C. CoalFile #304b).

"Summary of the Elko Geological Reconnaissance Project", Highland GeoComputing, LLC, August, 2015.

"Preliminary Geological Model and Resource Estimate for the Elko License Area", Highland GeoComputing, LLC, October, 2015.

"Coal Preparation, 5th Edition", Society for Mining, Metallurgy and Exploration, Leonard, et. al., 1991.

“Handbook of Practical Coal Geology” Larry Thomas, John Wiley and Sons, 1992.

“Australian Guidelines for the Estimation and Classification of Coal Resources 2014 Edition”, Prepared by the Guidelines Review Committee on behalf of the Coalfields Geology Council of New South Wales and the Queensland Resources Council, 2014.

Elko Coal Project					
Exploration Work type	**Comment**	**Days**			**Totals**
Personnel (Name)* / Position	**Field Days (list actual days)**	**Days**	**Rate**	**Subtotal***	
Dominic Hill / Project Mgr	7th - 15th September	8	$1,500.00	$ 12,000.00	
Mark Sykes / CEO	6 - 11 September, 2018	6	$2,000.00	$12,000.00	
Dwgith Kinnes / Geologist	6 - 15 August, 2018	10	$2,000.00	$20,000.00	
Dwgith Kinnes / Geologist	4 - 14 September, 2018	11	$2,000.00	$22,000.00	
Silenus Resources - Site Rep	9 July - 6 Oct	119	$1,820.00	$216,580.00	
				$282,580.00	**$282,580.00**
Office Studies	**List Personnel (note - Office only, do not include field days**				
Literature search	Dwight Kinnes	3.0	$1,080.00	$ 3,240.00	
Literature search	Mark Sykes	2.0	$2,000.00	$ 4,000.00	
Literature search	Dominic Hill	3.0	$1,500.00	$ 4,500.00	
Database compilation	Dwight Kinnes	0.0	$1,080.00	$ -	
Computer modelling	Dwight Kinnes	0.0	$1,080.00	$ -	
Reprocessing of data	Dwight Kinnes	0.0	$2,000.00	$ -	
General research	Dominic Hill	4.0	$1,000.00	$ 4,000.00	
	Mark Sykes	4.0	$2,000.00	$ 8,000.00	
Report preparation	Dwight Kinnes	4.0	$1,080.00	$ 4,320.00	
	Dominic Hill	3.0	$1,500.00	$ 4,500.00	
Other (specify)	Employment and Title Searches	2.0	$600.00	$ 1,200.00	
				$33,760.00	**$33,760.00**
Airborne Exploration Surveys	**Line Kilometres / Enter total invoiced amount**				
Aeromagnetics			$0.00	$0.00	
Radiometrics			$0.00	$0.00	
Electromagnetics			$0.00	$0.00	
Gravity			$0.00	$0.00	
Digital terrain modelling			$0.00	$0.00	
Other (specify)			$0.00	$0.00	
				$0.00	**$0.00**
Remote Sensing	**Area in Hectares / Enter total invoiced amount or list personnel**				
Aerial photography			$0.00	$0.00	
LANDSAT			$0.00	$0.00	
Other (specify)			$0.00	$0.00	
				$0.00	**$0.00**
Ground Exploration Surveys	**Area in Hectares/List Personnel**				
Geological mapping					
Regional		*note: expenditures here*			
Reconnaissance		*should be captured in Personnel*			
Prospect		*field expenditures above*			
Underground	Define by length and width				
Trenches	Define by length and width			$0.00	**$0.00**
Ground geophysics	**Line Kilometres / Enter total amount invoiced list personnel**				
Radiometrics					
Magnetics					
Gravity					
Digital terrain modelling					
Electromagnetics	*note: expenditures for your crew in the field*				
SP/AP/EP	*should be captured above in Personnel*				
IP	*field expenditures above*				
AMT/CSAMT					
Resistivity					
Complex resistivity					
Seismic reflection					
Seismic refraction					
Well logging	Define by total length				
Geophysical interpretation					
Petrophysics					
Other (specify)					

				$0.00	**$0.00**
Geochemical Surveying	**Number of Samples**	**No.**	**Rate**	**Subtotal**	
Drill (cuttings, core, etc.)			$0.00	$0.00	
Stream sediment			$0.00	$0.00	
Soil	*note: This is for assays or*		$0.00	$0.00	
Rock	*laboratory costs*		$0.00	$0.00	
Water			$0.00	$0.00	
Biogeochemistry			$0.00	$0.00	
Whole rock			$0.00	$0.00	
Petrology			$0.00	$0.00	
Other (specify)			$0.00	$0.00	
				$0.00	**$0.00**
Drilling	**No. of Holes, Size of Core and Metres**	**No.**	**Rate**	**Subtotal**	
Diamond			$0.00	$0.00	
Reverse circulation (RC)	8 RC, 1 Core 3895 Meters	9.0		$875,280.67	
Rotary air blast (RAB)			$0.00	$0.00	
Other (specify)			$0.00	$0.00	
				$875,280.67	**$875,280.67**
Other Operations	**Clarify**	**No.**	**Rate**	**Subtotal**	
Trenching			$0.00	$0.00	
Bulk sampling			$0.00	$0.00	
Underground development			$0.00	$0.00	
Other (specify)	Pre drilling and mobilization		$0.00	$158,903.07	
	Site Operating Costs			$308,637.80	
	Construction Costs			$230,366.40	
	Stumpage			$25,000.00	
				$722,907.28	**$722,907.28**
Reclamation	**Clarify**	**No.**	**Rate**	**Subtotal**	
After drilling			$0.00	$46,696.80	
Monitoring			$0.00	$0.00	
Other (specify)			$0.00	$0.00	
				$46,696.80	$46,696.80
Transportation		**No.**	**Rate**	**Subtotal**	
Airfare			$0.00	$0.00	
Taxi			$0.00	$0.00	
truck rental			$0.00	$0.00	
kilometers			$0.00	$0.00	
ATV			$0.00	$0.00	
fuel			$0.00	$0.00	
Helicopter (hours)			$0.00	$0.00	
Fuel (litres/hour)			$0.00	$0.00	
Other					
				$0.00	**$0.00**
Accommodation & Food	**Rates per day**				
Hotel			$0.00	$0.00	
Camp			$0.00	$0.00	
Meals	day rate or actual costs-specify		$0.00	$0.00	
				$0.00	**$0.00**
Miscellaneous					
Telephone			$0.00	$ -	
Other (Specify)	Land Access			$ -	
				$0.00	**$0.00**
Equipment Rentals					
Field Gear (Specify)	Consumables and equipment		$0.00	$ -	
Other (Specify)	GPS Unit			$ -	
				$0.00	**$0.00**
Freight, rock samples					
			$0.00	$0.00	
			$0.00	$0.00	
				$0.00	**$0.00**
TOTAL Expenditures					**$1,961,224.74**

Appendix

CERTIFICATE OF QUALIFIED PERSON

CERTIFICATE OF QUALIFIED PERSON

Dwight M. Kinnes, CPG, SME-RM 4063295

I, Dwight Kinnes, do hereby certify that:

1. I am President and Principal Consultant of:
   Highland GeoComputing, LLC
   7117 S Adams Cir.
   Centennial, CO 80122

2. I graduated with a Bachelor of Science degree in geology from Colorado State University in 1986. I have been a coal resource geologist for 33 years. My relevant experience includes building geological reserve models in British Columbia and Alberta Canada for coal and oil sands, building geological reserve models in every producing coal basin in the United States, building geological reserve models in select coal basins in Australia, Indonesia, Venezuela, Germany, and Thailand. I have performed exploration drilling projects in Wyoming, Montana, Texas and Thailand. I have been president and principal consultant for Highland GeoComputing, LLC since 2004.

3. I am a Registered Member of the Society of Mining, Metallurgy and Exploration (SME) No. 4063295. I am a certified profession geologist with the American Institute of Professional Geologists (AIPG) No. 10244. I am a licensed professional geologist in the state of Wyoming PG-2653.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) as certify that by reason of my education, affiliation with a professional organization (as defined by NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).

6. I am a Competent Person as defined by the JORC Code, 2012 Edition, having more than five years' experience that is relevant to the style of mineralization and type of deposit described in the Report, and to the activity for which I am accepting responsibility.

7. I am responsible for the preparation of "Coal Assessment Report for Licenses 418648, 418649 and 418650" report, dated January 25, 2019. I visited the Elko Coal Project on from August 6, 2018 through August 15, 2018, and again from September 4, 2018 through September 14, 2018.

8. I consent to the filing of this report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the report.

9. As of January 1, 2019, to the best of my knowledge, information and belief that the scientific and technical information in this report is not misleading.

Dated this 25th day of January 2019.

Dwight M. Kinnes

Dwight M. Kinnes, CPG, SME-RM 4063295

Hole: **DH_18_02**

Company: | County:
Date: | State:
E: 658509.55 | N: 5464911.85 | Elev: 1963.19
TWP: | RNG: | SEC:
Logged Top: | Logged Bot:
Logger:

Generated: 5/12/18

Hole: **DH_18_03**

Company: County:

Date: State:

E: 658034.47 N: 5464685.30 Elev: 2007.18

TWP: RNG: SEC:

Logged Top: Logged Bot:

Logger:

Gamma: Caliper: Lith: Density: Resistivity:

Generated: 5/12/18

Hole: **DH_18_03C**

Company:

County:

Date:

State:

E: 658031.61 N: 5464684.48 Elev: 2007.02

TWP: RNG: SEC:

Logged Top:

Logged Bot:

Logger:

Generated: 5/12/18

Hole: **DH_18_04**

Company: | County:
Date: | State:

E: **657619.79** N: **5465061.58** Elev: **2024.93**

TWP: RNG: SEC:

Logged Top: | Logged Bot:
Logger:

Gamma: Caliper: Lith: Density: Resistivity:

Generated: 5/12/18

Hole: **DH_18_05**

Company: PACIFIC AMERICAN COAL | County: N/A

Date: 08/25/2018 | State:

E: 657697.73 | N: 5465662.74 | Elev: 2038.10

TWP: | RNG: | SEC:

Logged Top: 0.000 | Logged Bot: 412.740

Logger:

Gamma: Caliper: Lith: Density: Resistivity:

Generated: 5/12/18

Hole: **DH_18_06**

Company: PACIFIC AMERICAN COAL | County: N/A

Date: 08/14/2018 | State:

E: 657117.95 | N: 5466283.46 | Elev: 2082.14

TWP: | RNG: | SEC:

Logged Top: 0.000 | Logged Bot: 400.740

Logger:

Gamma: Caliper: Lith: Density: Resistivity:

Hole: **DH_18_09**

Company:

County:

Date:

State:

E: **658430.44**

N: **5464306.76**

Elev: **2053.54**

TWP:

RNG:

SEC:

Logged Top:

Logged Bot:

Logger:

Generated: 5/12/18

Hole: **DH_18_10**

Company:		County:	
Date:		State:	
E: 659121.10	N: 5464082.70	Elev: 1946.74	
TWP:	RNG:	SEC:	
Logged Top:		Logged Bot:	
		Logger:	

Generated: 5/12/18

Hole: **DH_18_11**

Company: PACIFIC AMERICAN COAL County: N/A

Date: 09/24/2018 State:

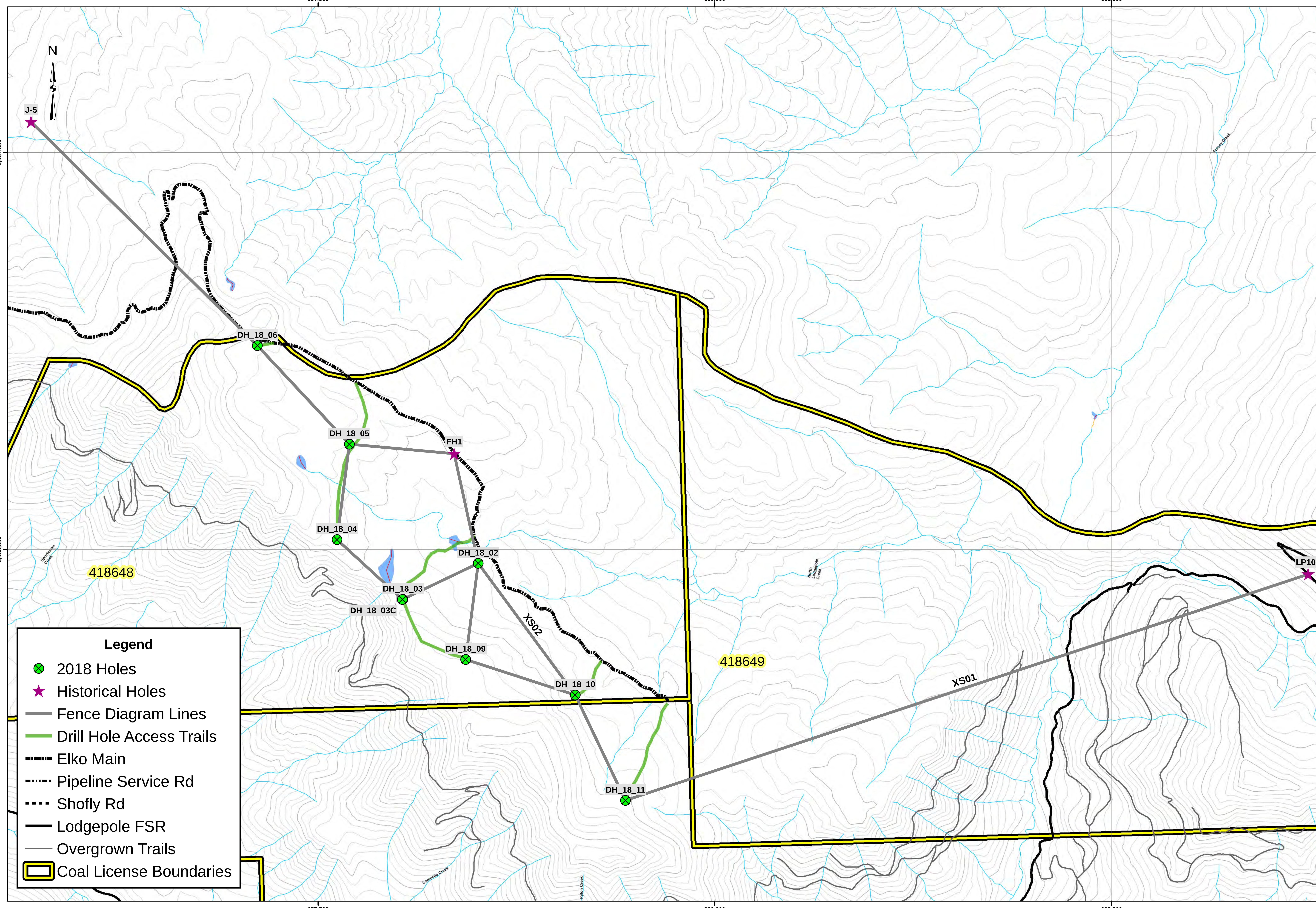
E: 659436.94 N: 5463418.55 Elev: 2001.43

TWP: RNG: SEC:

Logged Top: 0.000 Logged Bot: 432.200

Logger:

Generated: 5/12/18



0 500 1,000 2,000 3,000

Meters

1:15,000

Pacific American Coal

Highland GeoComputing, LLC

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

Basemap data from BCGov "Base Mapping" GIS Mapservers

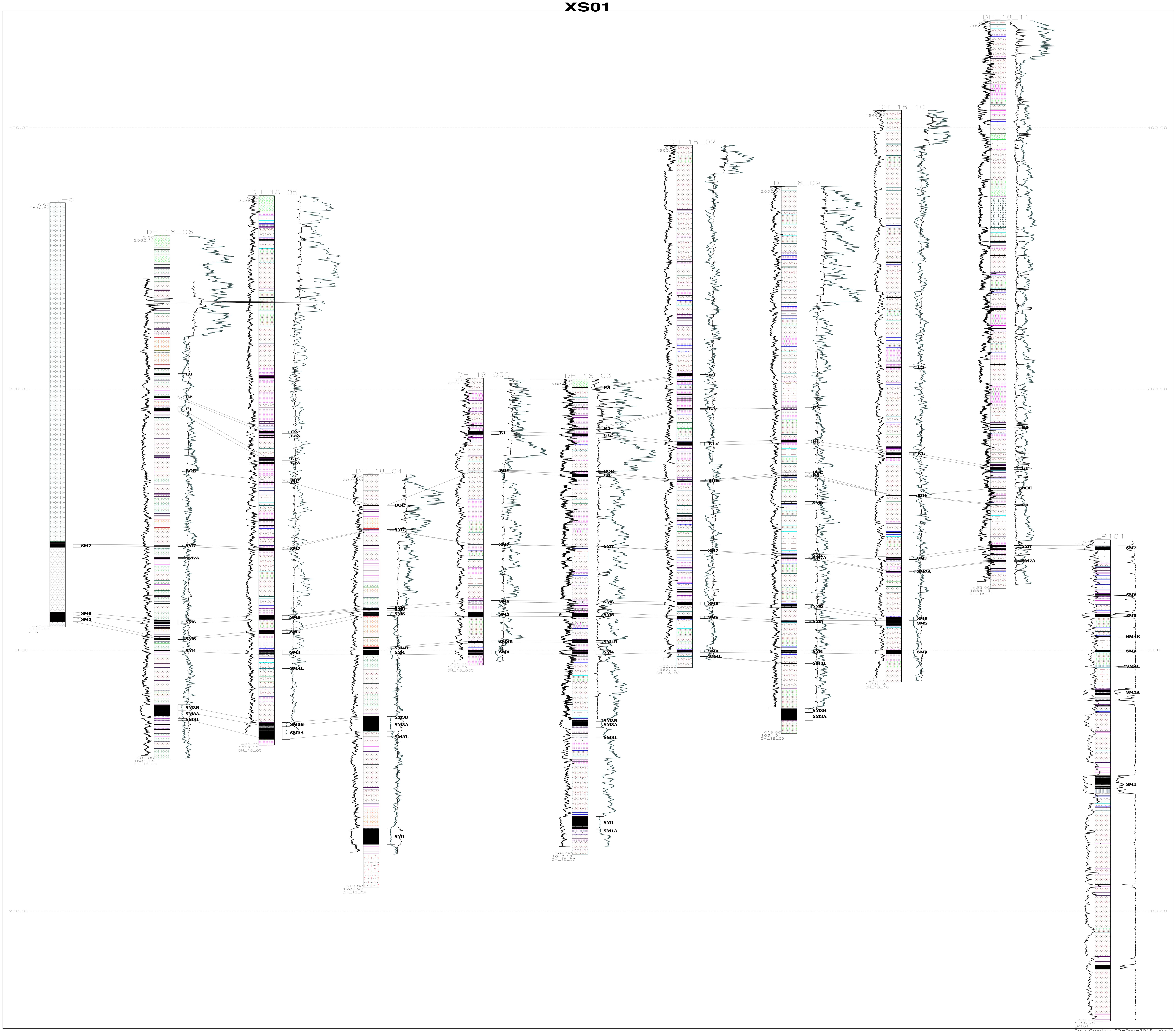
Elko Exploration Project

2018 Exploration Drilling
Correlation Fence Diagram Lines
PAK License Areas

November 27, 2018

Elko, British Columbia

XS01



2018 Elko Exploration

XS01
Vert. Exag. = 40:1

1:50000

Highland GeoComputing, LLC

XS02

2018 Elko Exploration

XS02

Vert. Exag. = 40:1

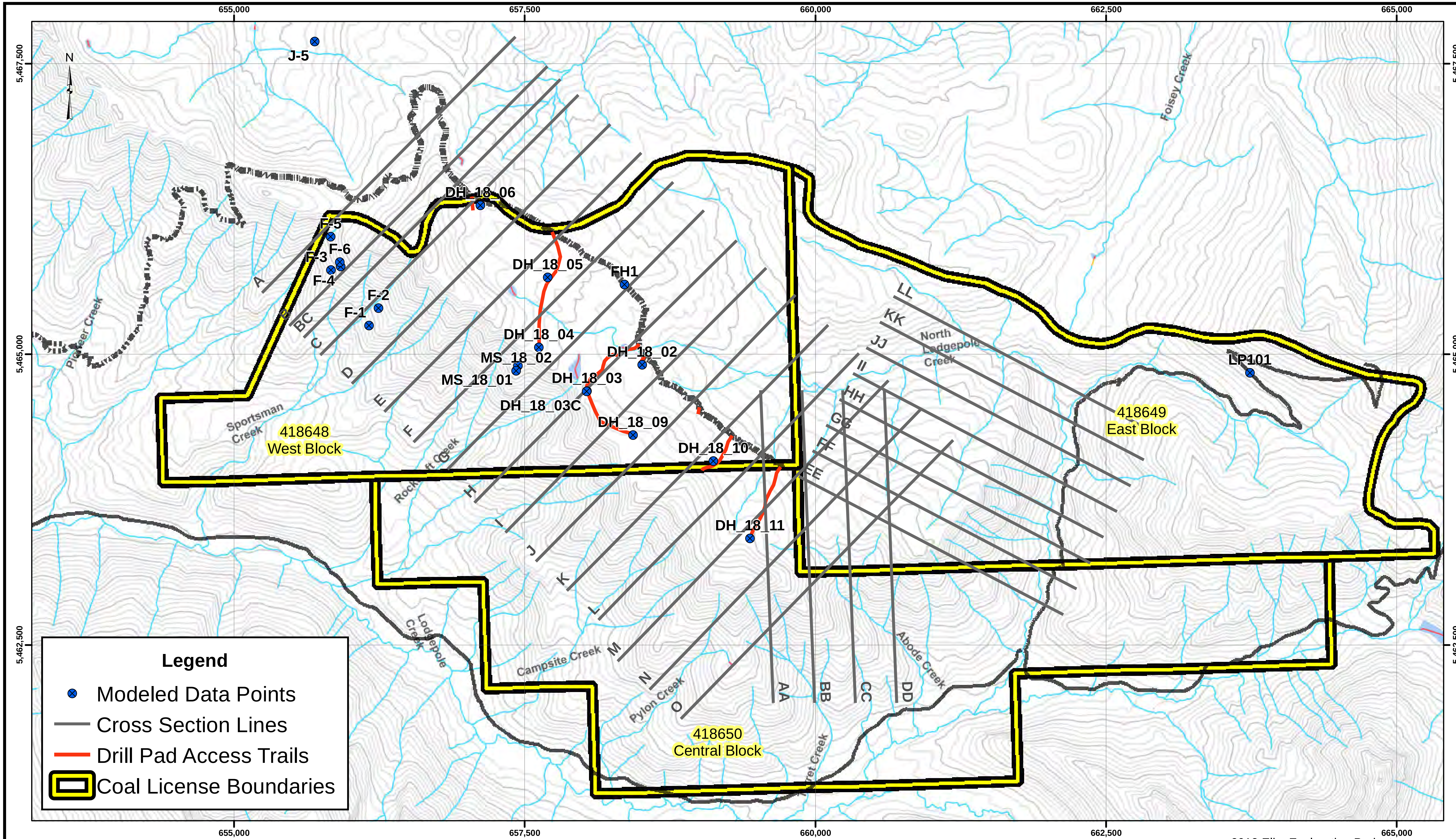
500 0 1000 2000

1:50000

Drawn By: | Filename:

Date : | Scale:

Highland GeoComputing, LLC



Pacific American Coal

Highland GeoComputing, LLC

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

Basemap data from BCGov "Base Mapping" GIS Mapservers

0 250 500 1,000 1,500

Meters

1:30,000

2018 Elko Exploration Project

Cross Section Locations
Drill Hole Locations

Elko, British Columbia
January 2018

655240 E
5465530 N
2250
656333 E
5466633 N
2250
657421 E
5467731 N
2250
Section: A
Section: A
Section: A'
Model Extent
F-5
2000
1750
1500
1250
655240 E
5465530 N
1000
656333 E
5466633 N
1000
657421 E
5467731 N
1000
25 13 0 25 50 75 100
1:2500
Legend
E2
E1
E0
SM7
SM5/6
SM4
SM3
SM1
Topography
Base of Weathering
Faults
600m Resource Depth
Pacific American Coal
2018 Elko Exploration
Section: A
Vert Exag: 1X
Drawn By: D. Kinnes
Filename:
Date : 04-Jan-19
Scale: 1:2500
Highland GeoComputing, LLC

655475 E
5465245 N
2250
656605 E
5466381 N
2250
657694 E
5467479 N
2250
Section: B
Section: B
Section: B'
Model Extent
2000
1750
1500
1250
F-3
F-4
F-6
655475 E
5465245 N
1000
656605 E
5466381 N
1000
657694 E
5467479 N
1000
75
100
1:2500
Legend
E2
E1
E0
SM7
SM5/6
SM4
SM3
SM1
Topography
Base of Weathering
Faults
600m Resource Depth
Pacific American Coal
2018 Elko Exploration
Section: B
Vert Exag: 1X
Drawn By: D. Kinnes
Filename:
Date : 04-Jan-19
Scale: 1:2500
Highland GeoComputing, LLC

1:2500

Legend

- E2
- E1
- E0
- SM7
- SM5/6
- SM4
- SM3
- SM1
- Topography
- Base of Weathering
- Faults
- 600m Resource Depth

Pacific American Coal

2018 Elko Exploration

Section: BC
Vert Exag: 1X

Drawn By:	D. Kinnes	Filename:	
Date :	04-Jan-19	Scale:	1:2500

Highland GeoComputing, LLC

Pacific American Coal

2018 Elko Exploration

Section: C
Vert Exag: 1X

Drawn By: D. Kinnes	Filename:
Date : 04-Jan-19	Scale: 1:2500

Highland GeoComputing, LLC


656012 E
5464746 N
2250
658236 E
5466979 N
2250
Section: D
Section: D
Section: D'
2000
1750
1500
1250
656012 E
5464746 N
1000
658236 E
5466979 N
1000
25 13 0 25 50 75 100
1:2500
Legend
E2
E1
E0
SM7
SM5/6
SM4
SM3
SM1
TOPO Topography
OXID Base of Weathering
Faults
600m Resource Depth
Pacific American Coal
2018 Elko Exploration
Section: D
Vert Exag: 1X
Drawn By: D. Kinnes
Filename:
Date : 04–Jan–19
Scale: 1:2500
Highland GeoComputing, LLC

656291 E
5464507 N
2250
656408 E
5464624 N
2250
657409 E
5465630 N
2250
658502 E
5466734 N
2250
Section: E
Section: E
Section: E'
2000
1750
1500
1250
656291 E
5464507 N
1000
656408 E
5464624 N
1000
657409 E
5465630 N
1000
658502 E
5466734 N
1000
1:2500
Legend
E2
E1
E0
SM7
SM5/6
SM4
SM3
SM1
Topography
Base of Weathering
Faults
600m Resource Depth
Pacific American Coal
2018 Elko Exploration
Section: E
Vert Exag: 1X
Drawn By: D. Kinnes
Filename:
Date : 04-Jan-19
Scale: 1:2500
Highland GeoComputing, LLC


656545 E
5464245 N
2250
656862 E
5464566 N
2250
657679 E
5465382 N
2250
658777 E
5466481 N
2250
Section: F
Section: F
Section: F'
2000
1750
1500
1250
656545 E
5464245 N
1000
656862 E
5464566 N
1000
657679 E
5465382 N
1000
658777 E
5466481 N
1000
25 13 0 25 50 75 100
1:2500
Legend
E2
E1
E0
SM7
SM5/6
SM4
SM3
SM1
Topography
Base of Weathering
Faults
600m Resource Depth
Pacific American Coal
2018 Elko Exploration
Section: F
Vert Exag: 1X
Drawn By: D. Kinnes
Filename:
Date : 04-Jan-19
Scale: 1:2500
Highland GeoComputing, LLC


656836 E
5464011 N
2250
657134 E
5464315 N
2250
657948 E
5465132 N
2250
659040 E
5466239 N
2250
Section: G
Section: G
Section: G'
2000
1750
1500
1250
FH1
E1
SM7
SM7A
SM6
656836 E
5464011 N
1000
657134 E
5464315 N
1000
657948 E
5465132 N
1000
659040 E
5466239 N
1000
1:2500
Legend
E2
E1
E0
SM7
SM5/6
SM4
SM3
SM1
Topography
Base of Weathering
Faults
600m Resource Depth
Pacific American Coal
2018 Elko Exploration
Section: G
Vert Exag: 1X
Drawn By: D. Kinnes
Filename:
Date : 04-Jan-19
Scale: 1:2500
Highland GeoComputing, LLC

657066 E
5463722 N
2250
657401 E
5464063 N
2250
658217 E
5464887 N
2250
659322 E
5465979 N
2250
Section: H
Section: H
Section: H'
DH_18_03
2000
1750
1500
1250
657066 E
5463722 N
1000
657401 E
5464063 N
1000
658217 E
5464887 N
1000
659322 E
5465979 N
1000
25 13 0 25 50 75 100
1:2500
Legend
E2
E1
E0
SM7
SM5/6
SM4
SM3
SM1
Topography
Base of Weathering
Faults
600m Resource Depth
Pacific American Coal
2018 Elko Exploration
Section: H
Vert Exag: 1X
Drawn By: D. Kinnes
Filename:
Date : 04–Jan–19
Scale: 1:2500
Highland GeoComputing, LLC

Pacific American Coal

2018 Elko Exploration

Section: I
Vert Exag: 1X

Drawn By:	D. Kinnes	Filename:	
Date :	04–Jan–19	Scale:	1:2500

Highland GeoComputing, LLC


657596 E
5463217 N
2250
657937 E
5463563 N
2250
658754 E
5464392 N
2250
659829 E
5465511 N
2250
Section: J
Section: J
Section: J'
2000
1750
1500
1250
657596 E
5463217 N
1000
657937 E
5463563 N
1000
658754 E
5464392 N
1000
659829 E
5465511 N
1000
25 13 0 25 50 75 100
1:2500
Legend
E2
E1
E0
SM7
SM5/6
SM4
SM3
SM1
TOPO Topography
OXID Base of Weathering
Faults
600m Resource Depth
Pacific American Coal
2018 Elko Exploration
Section: J
Vert Exag: 1X
Drawn By: D. Kinnes
Filename:
Date : 04-Jan-19
Scale: 1:2500
Highland GeoComputing, LLC

657863 E
5462967 N
2250
658207 E
5463313 N
2250
659023 E
5464143 N
2250
660110 E
5465253 N
2250
Section: K
Section: K
Section: K'
2000
1750
1500
1250
657863 E
5462967 N
1000
658207 E
5463313 N
1000
659023 E
5464143 N
1000
660110 E
5465253 N
1000
25 13 0 25 50 75 100
1:2500
Legend
E2
E1
E0
SM7
SM5/6
SM4
SM3
SM1
TOPO Topography
OXID Base of Weathering
Faults
600m Resource Depth
Pacific American Coal
2018 Elko Exploration
Section: K
Vert Exag: 1X
Drawn By: D. Kinnes
Filename:
Date : 04-Jan-19
Scale: 1:2500
Highland GeoComputing, LLC

Pacific American Coal

2018 Elko Exploration

Section: L
Vert Exag: 1X

Drawn By:	D. Kinnes	Filename:	
Date :	04-Jan-19	Scale:	1:2500

Highland GeoComputing, LLC

1:2500

Legend

E2	Topography
E1	Base of Weathering
E0	Faults
SM7	600m Resource Depth
SM5/6	
SM4	
SM3	
SM1	

Pacific American Coal

2018 Elko Exploration

Section: M
Vert Exag: 1X

Drawn By:	D. Kinnes	Filename:	
Date :	04-Jan-19	Scale:	1:2500

Highland GeoComputing, LLC

Pacific American Coal

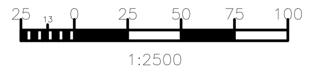
2018 Elko Exploration

Section: N
Vert Exag: 1X

Drawn By:	D. Kinnes	Filename:	
Date :	04–Jan–19	Scale:	1:2500

Highland GeoComputing, LLC


658842 E
5461864 N
2250
659287 E
5462320 N
2250
661184 E
5464262 N
2250
Section: 0
Section: 0
Section: 0'
2000
1750
1500
1250
658842 E
5461864 N
1000
659287 E
5462320 N
1000
661184 E
5464262 N
1000
25 13 0 25 50 75 100
1:2500
Legend
E2
E1
E0
SM7
SM5/6
SM4
SM3
SM1
TOPO Topography
OXID Base of Weathering
Faults
600m Resource Depth
Pacific American Coal
2018 Elko Exploration
Section: 0
Vert Exag: 1X
Drawn By: D. Kinnes
Filename:
Date : 04-Jan-19
Scale: 1:2500
Highland GeoComputing, LLC



Legend

E2	Topography
E1	Base of Weathering
E0	Faults
SM7	600m Resource Depth
SM5/6	
SM4	
SM3	
SM1	

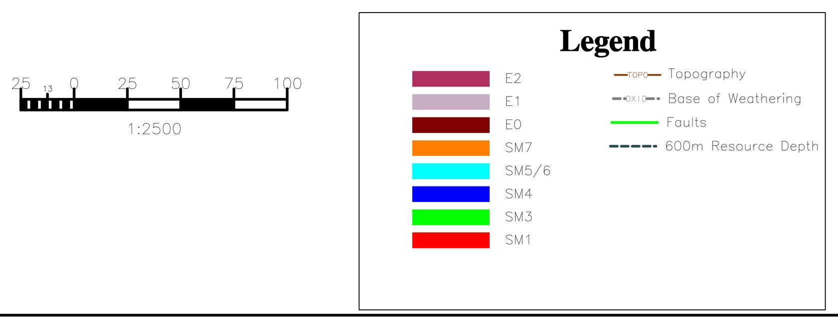
Pacific American Coal

2018 Elko Exploration

Section: AA
Vert Exag: 1X

Drawn By:	D. Kinnes	Filename:	
Date :	04-Jan-19	Scale:	1:2500

Highland GeoComputing, LLC



Pacific American Coal

2018 Elko Exploration

Section: BB
Vert Exag: 1X

Drawn By:	D. Kinnes	Filename:	
Date :	04-Jan-19	Scale:	1:2500

Highland GeoComputing, LLC

Pacific American Coal

2018 Elko Exploration

Section: CC
Vert Exag: 1X

Drawn By:	D. Kinnes	Filename:	
Date :	04–Jan–19	Scale:	1:2500

Highland GeoComputing, LLC

Legend

- E2
- E1
- E0
- SM7
- SM5/6
- SM4
- SM3
- SM1
- TOPO Topography
- OXID Base of Weathering
- Faults
- 600m Resource Depth

Pacific American Coal

2018 Elko Exploration

Section: DD
Vert Exag: 1X

Drawn By:	D. Kinnes	Filename:	
Date :	04-Jan-19	Scale:	1:2500

Highland GeoComputing, LLC

25 13 0 25 50 75 100
1:2500

Legend

- E2
- E1
- E0
- SM7
- SM5/6
- SM4
- SM3
- SM1
- Topography
- Base of Weathering
- Faults
- 600m Resource Depth

Pacific American Coal

2018 Elko Exploration

Section: EE
Vert Exag: 1X

Drawn By:	D. Kinnes	Filename:	
Date :	04–Jan–19	Scale:	1:2500

Highland GeoComputing, LLC

25 13 0 25 50 75 100
1:2500

Legend

- E2
- E1
- E0
- SM7
- SM5/6
- SM4
- SM3
- SM1
- TOPO Topography
- OXID Base of Weathering
- Faults
- 600m Resource Depth

Pacific American Coal

2018 Elko Exploration

Section: FF
Vert Exag: 1X

Drawn By:	D. Kinnes	Filename:	
Date :	04-Jan-19	Scale:	1:2500

Highland GeoComputing, LLC


660091 E
5464391 N
2250
662363 E
5463204 N
2250
Section: GG
Section: GG
Section: GG'
2000
1750
1500
1250
660091 E
5464391 N
1000
662363 E
5463204 N
1000
25 13 0 25 50 75 100
1:2500
Legend
E2
E1
E0
SM7
SM5/6
SM4
SM3
SM1
TOPO Topography
OXID Base of Weathering
Faults
600m Resource Depth
Pacific American Coal
2018 Elko Exploration
Section: GG
Vert Exag: 1X
Drawn By: D. Kinnes
Filename:
Date : 04-Jan-19
Scale: 1:2500
Highland GeoComputing, LLC


660207 E
5464613 N
2250
662479 E
5463426 N
2250
Section: HH
Section: HH
Section: HH'
2000
1750
1500
1250
660207 E
5464613 N
1000
662479 E
5463426 N
1000
25 13 0 25 50 75 100
1:2500
Legend
E2
E1
E0
SM7
SM5/6
SM4
SM3
SM1
Topography
Base of Weathering
Faults
600m Resource Depth
Pacific American Coal
2018 Elko Exploration
Section: HH
Vert Exag: 1X
Drawn By: D. Kinnes
Filename:
Date : 04-Jan-19
Scale: 1:2500
Highland GeoComputing, LLC

Pacific American Coal

2018 Elko Exploration

Section: II
Vert Exag: 1X

Drawn By:	D. Kinnes	Filename:	
Date :	04-Jan-19	Scale:	1:2500

Highland GeoComputing, LLC

Pacific American Coal

2018 Elko Exploration

Section: JJ
Vert Exag: 1X

Drawn By: D. Kinnes	Filename:
Date : 04-Jan-19	Scale: 1:2500

Highland GeoComputing, LLC

Pacific American Coal

2018 Elko Exploration

Section: KK
Vert Exag: 1X

Drawn By:	D. Kinnes	Filename:	
Date :	04–Jan–19	Scale:	1:2500

Highland GeoComputing, LLC


660670 E
5465499 N
2250
662942 E
5464312 N
2250
Section: LL
Section: LL
Section: LL'
2000
1750
1500
1250
660670 E
5465499 N
1000
662942 E
5464312 N
1000
25 13 0 25 50 75 100
1:2500
Legend
E2
E1
E0
SM7
SM5/6
SM4
SM3
SM1
TOPO Topography
OXID Base of Weathering
Faults
600m Resource Depth
Pacific American Coal
2018 Elko Exploration
Section: LL
Vert Exag: 1X
Drawn By: D. Kinnes
Filename:
Date : 04–Jan–19
Scale: 1:2500
Highland GeoComputing, LLC

Drill Hole Survey Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Hole Type	Tnshp	Range	Sect	County	State	Azimuth	Inclin.	In Model
DH_18_02	658,509.55	5,464,911.86	1,963.19	400.00 RC					East Koote	British Col			Yes
DH_18_03	658,034.48	5,464,685.31	2,007.19	366.00 RC					East Koote	British Col			Yes
DH_18_03C	658,031.61	5,464,684.48	2,007.02	220.00 PC					East Koote	British Col			Yes
DH_18_04	657,619.79	5,465,061.58	2,024.94	320.00 RC					East Koote	British Col			Yes
DH_18_05	657,697.73	5,465,662.74	2,038.10	421.00 RC					East Koote	British Col			Yes
DH_18_06	657,117.96	5,466,283.47	2,082.14	402.00 RC					East Koote	British Col			Yes
DH_18_09	658,430.44	5,464,306.76	2,053.54	455.00 RC					East Koote	British Col			Yes
DH_18_10	659,121.10	5,464,082.70	1,946.74	438.00 RC					East Koote	British Col			Yes
DH_18_11	659,436.95	5,463,418.56	2,001.44	435.00 RC					East Koote	British Col			Yes
F-1	656,161.39	5,465,249.21	1,768.69	14.10 AD									Yes
F-2	656,242.05	5,465,398.73	1,837.67	5.80 AD									Yes
F-3	655,831.85	5,465,728.24	1,870.51	7.02 AD									Yes
F-4	655,915.20	5,465,758.70	1,934.93	11.25 AD									Yes
F-5	655,828.94	5,466,013.69	1,923.89	6.05 AD									Yes
F-6	655,909.60	5,465,795.76	1,939.00	3.05 AD									Yes
FH1	658,358.00	5,465,602.61	2,000.16	736.58 GC									Yes
J-4	653,390.08	5,469,144.20	1,936.50	420.00 FC									Yes
J-5	655,692.49	5,467,692.75	1,832.50	325.00 FC									Yes
LP101	663,738.06	5,464,843.30	1,937.00	368.80 PC									Yes
MS_18_01	657,440.40	5,464,904.41	1,963.60	4.20 MS					East Koote	British Col			Yes
MS_18_02	657,426.00	5,464,860.00	1,938.00	2.50 MS					East Koote	British Col			Yes

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_02	*658,509.55*	*5,464,911.86*	*1,963.19*	*400.00*					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	7.30	7.30					STMS										
7.30	13.54	6.24					STSS										
13.54	13.54	0.00	DW														
13.54	49.10	35.56					SS										
49.10	51.20	2.10					SH										
51.20	65.50	14.30	FZ	C		G	STMS	FK									
65.50	69.50	4.00		B		G	SS	CA	fn								
69.50	73.40	3.90		C		G	MS	CA									
73.40	87.00	13.60	FZ	M		G	STMS	FK									
87.00	89.00	2.00		M		G	MS		fn								
89.00	89.30	0.30		M		G	CMS										
89.30	89.50	0.20		M		G	CO										
89.50	90.70	1.20					MS										
90.70	93.90	3.20	FZ	B		G	ST	FK	fn								
93.90	99.80	5.90		B		G	SS		fm								
99.80	100.10	0.30		B		G	ST		fm								
100.10	105.60	5.50	FZ	B		G	SSST	FK	fm								
105.60	106.90	1.30		B		G	SH		fm								
106.90	109.20	2.30		B		G	SS		fm								
109.20	110.50	1.30		B		G	SH		fm								
110.50	112.30	1.80		B		G	SS		fm								
112.30	115.00	2.70		B	K	G	MS										
115.00	117.00	2.00		B		G	SSST	SL	fn								
117.00	118.80	1.80		B	K	G	SH										
118.80	122.50	3.70					STSS										
122.50	129.50	7.00	FZ	B		G	SS		fm								
129.50	131.80	2.30		B	K	G	MS	SS									
131.80	132.70	0.90					SS										
132.70	137.90	5.20					SH										
137.90	140.80	2.90		B	B	G	SS		fm								
140.80	148.10	7.30			A	G	SS	SI	md								
148.10	148.50	0.40			A	G	MS		md								
148.50	148.95	0.45			A	G	RC		md								
148.95	152.80	3.85			B	G	MS		fn								
152.80	153.20	0.40			B	G	ST		fn								
153.20	155.50	2.30			B	G	MS		fn								
155.50	156.70	1.20			B	G	SS		fn								
156.70	157.70	1.00			B	G	MS		fn								
157.70	173.00	15.30			B	G	STMS										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_02	658,509.55	5,464,911.86	1,963.19	400.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
173.00	174.70	1.70		B		G	MS	CA									
174.70	175.00	0.30		C	B	G	CO										
175.00	175.50	0.50					MS										
175.50	176.50	1.00	E3	B		G	CO		vf								
176.50	177.30	0.80		B		G	MS		vf								
177.30	177.45	0.15		B		G	RC		vf								
177.45	179.20	1.75		B		G	ST		vf								
179.20	180.50	1.30		B		G	MS		vf								
180.50	181.10	0.60		C	K	G	CO										
181.10	181.90	0.80					MS										
181.90	182.10	0.20		C		G	CO	SS									
182.10	183.30	1.20		C		G	MS	SS									
183.30	186.40	3.10		B		G	STSS		fn								
186.40	187.10	0.70		B		G	MS		fn								
187.10	188.00	0.90		B		G	ST		fn								
188.00	190.20	2.20		C	K	G	MS										
190.20	190.90	0.70	ZZ				CO										
190.90	192.50	1.60					STMS										
192.50	193.50	1.00		C	K	G	MS	SS									
193.50	193.80	0.30					CO										
193.80	194.30	0.50					MS										
194.30	194.50	0.20					CMS										
194.50	195.00	0.50					MS										
195.00	195.30	0.30					CO										
195.30	201.50	6.20		C	B	G	MS										
201.50	202.20	0.70	E2	C	B	G	CO										
202.20	206.00	3.80		C	K	G	MS										
206.00	212.30	6.30		B	B	G	STMS	SS,RA,CA									
212.30	216.80	4.50		B	B	G	SSMS	SS,RA,CA									
216.80	222.70	5.90		B	L	G	STSS										
222.70	224.20	1.50		B	L	G	SS										
224.20	226.90	2.70		B	B	G	STMS										
226.90	227.50	0.60		B	B	G	MS										
227.50	228.50	1.00	E1				CO										
228.50	228.70	0.20	E1				MS										
228.70	229.70	1.00	E1				CO										
229.70	229.70	0.00					MS										
229.70	229.80	0.10					CMS										
229.80	231.80	2.00					MS										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_02	658,509.55	5,464,911.86	1,963.19	400.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
231.80	232.20	0.40		C	B	G	RC	CL									
232.20	234.20	2.00		C	B	G	MS	CL									
234.20	234.90	0.70		C	B	G	ST	CL									
234.90	240.80	5.90		C	B	G	MS										
240.80	242.50	1.70		C	B	G	STMS										
242.50	244.10	1.60		C	B	G	MS										
244.10	254.20	10.10		B		G	SS	CA	fm								
254.20	254.50	0.30		B		G	MS	CA	fm								
254.50	255.80	1.30		B		G	SS	CA	fm								
255.80	256.00	0.20		B		G	RC	CA	fm								
256.00	256.80	0.80		C	K	G	MS										
256.80	256.80	0.00	BOE														
256.80	257.00	0.20	E0	C	K	G	CO										
257.00	257.10	0.10	E0				MS										
257.10	257.60	0.50	E0				CO										
257.60	260.00	2.40		C	K	G	MS										
260.00	264.50	4.50		C	K	G	STMS										
264.50	275.80	11.30		B		G	SS		fm								
275.80	278.50	2.70		B		G	ST		fm								
278.50	282.00	3.50		B		G	SS		fm								
282.00	283.40	1.40					ST										
283.40	284.20	0.80					CS										
284.20	284.80	0.60					RC										
284.80	286.20	1.40		C	K	G	MS	SH,CO,SS									
286.20	286.40	0.20		C	K	G	CMS	SH,CO,SS									
286.40	287.30	0.90		C	K	G	MS	SH,CO,SS									
287.30	287.50	0.20		C	K	G	CMS	SH,CO,SS									
287.50	290.30	2.80		C	K	G	MS	SH,CO,SS									
290.30	291.40	1.10		C	K	G	STSS	SH,CO,SS									
291.40	295.80	4.40		B		G	STMS		fn								
295.80	299.70	3.90		B		G	SSST	SL									
299.70	310.30	10.60		C		G	SS	SL									
310.30	310.50	0.20	SM7	C		G	CS	SL									
310.50	311.60	1.10					MS										
311.60	313.20	1.60					ST										
313.20	313.50	0.30	FZ				FZ										
313.50	315.50	2.00		M		G	MS		md								
315.50	315.80	0.30		M		G	ST		md								
315.80	317.80	2.00		M		G	MS		md								

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_02	658,509.55	5,464,911.86	1,963.19	400.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
317.80	319.00	1.20		I		G	ST										
319.00	319.80	0.80		I		G	MS										
319.80	321.30	1.50		M		G	ST										
321.30	323.30	2.00		M		G	MS										
323.30	324.20	0.90		M		G	SS										
324.20	325.50	1.30		M		G	ST										
325.50	327.00	1.50		M		G	MS	SS									
327.00	329.00	2.00		M		G	SSST	SS									
329.00	334.50	5.50		M		G	MS	SS									
334.50	334.70	0.20					RC										
334.70	335.50	0.80		D	K	G	MS										
335.50	338.80	3.30					STMS										
338.80	339.90	1.10		D	K	G	MS										
339.90	340.50	0.60				K	CO										
340.50	341.50	1.00				K	MS										
341.50	342.10	0.60					CO										
342.10	342.60	0.50					MS										
342.60	342.80	0.20					CMS										
342.80	344.50	1.70					MS										
344.50	344.75	0.25					RC										
344.75	347.70	2.95		C	K	G	MS	CL									
347.70	348.30	0.60		C	K	G	SS	CL									
348.30	349.80	1.50		C	K	G	MS	CL									
349.80	350.50	0.70	SM6	C	K	G	CO	CL									
350.50	350.60	0.10	SM6				MS										
350.60	352.20	1.60	SM6				CO										
352.20	353.50	1.30					MS										
353.50	357.10	3.60		C	K	G	STMS										
357.10	360.50	3.40		C	K	G	SS	SI									
360.50	361.00	0.50	SM5				CO										
361.00	361.20	0.20	SM5				MS										
361.20	362.40	1.20	SM5				CO										
362.40	363.00	0.60					MS										
363.00	365.00	2.00		C	K	G	STMS										
365.00	370.00	5.00		C	K	G	ST										
370.00	375.60	5.60		C		G	STSS	SL	fn								
375.60	379.80	4.20					SS										
379.80	382.10	2.30		B		G	STSS										
382.10	384.30	2.20		B		G	MS	CA									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_02	658,509.55	5,464,911.86	1,963.19	400.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
384.30	386.00	1.70		C	K	G	STSS										
386.00	386.50	0.50		C	K	G	MS										
386.50	386.90	0.40	SM4	C	K	G	CO										
386.90	387.30	0.40	SM4	C	K	G	MS										
387.30	387.50	0.20	SM4	C	K	G	RC										
387.50	388.30	0.80	SM4	C	K	G	CO										
388.30	389.00	0.70		C	K	G	MS										
389.00	391.20	2.20		B		G	STMS	SS									
391.20	391.50	0.30	SM4L	B		G	RC	SS									
391.50	400.00	8.50		B		G	STMS	SS									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_03	658,034.48	5,464,685.31	2,007.19	366.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	6.30	6.30					CG										
6.30	6.90	0.60	E3				CO										
6.90	14.00	7.10		B	L	G	STMS	CA									
14.00	15.25	1.25		B	L	G	SS	CA									
15.25	17.80	2.55					MS										
17.80	18.30	0.50					CO										
18.30	20.50	2.20					MS										
20.50	21.85	1.35		C	K	G	CMS										
21.85	28.00	6.15		C		G	MS	CR									
28.00	28.30	0.30		M	B	G	RC	MD									
28.30	29.30	1.00		M	B	G	MS	MD									
29.30	29.50	0.20		M	B	G	RC	MD									
29.50	34.20	4.70					MS										
34.20	34.40	0.20		C	K	B	RC	SL									
34.40	37.40	3.00		C	K	B	MS	SL									
37.40	38.55	1.15	E2	C	K	B	CO	SL									
38.55	41.80	3.25		C	B	G	MS										
41.80	43.50	1.70	E1				CO										
43.50	43.85	0.35	E1				MS										
43.85	44.20	0.35	E1				RC										
44.20	50.00	5.80					MS		fm								
50.00	54.50	4.50		B	B	G	STMS										
54.50	60.50	6.00		B		G	SS										
60.50	62.70	2.20		B		G	MS										
62.70	66.70			B		G	SS										
66.70	66.70	0.00	DW														
66.70	70.80						SS										
70.80	70.80	0.00	BOE														
70.80	72.50	1.70		B	K	G	MS	SS									
72.50	72.90	0.40	E0	B	K	G	CO	SS									
72.90	73.10	0.20	E0	B	K	G	RC	SS									
73.10	74.70	1.60	E0				CO										
74.70	81.15	6.45		C	B	G	MS	MD									
81.15	83.30	2.15	FZ	C	B	G	SS	MD,FK									
83.30	84.10	0.80		C	B	G	SH	MD									
84.10	92.10	8.00		B		G	SS	CA,SL,RA,CO,FR	fn								
92.10	95.20	3.10		B		G	SSST	CA,SL,RA,CO,FR	fn								
95.20	99.30	4.10		B		G	SS	CA,SL,RA,CO,FR	fn								
99.30	110.00	10.70		C	B	G	MS	SS									

Drill Hole Lithology Summary

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Azimuth*	*Inclin*
DH_18_03	*658,034.48*	*5,464,685.31*	*2,007.19*	*366.00*					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
110.00	114.00	4.00		B		G	SS	CA	fn								
114.00	118.00	4.00		C		G	MSST	SL	fm								
118.00	128.00	10.00	FZ	C		G	SS	SL,FK	fm								
128.00	128.40	0.40	SM7	C		G	CMS	SL	vf								
128.40	129.80	1.40		C		G	STMS	SL	vf								
129.80	131.80	2.00		C		G	MS	SL	vf								
131.80	139.30	7.50		C		G	ST	SL	vf								
139.30	145.50	6.20	FZ	B		G	SS	CA,FK	fm								
145.50	148.00	2.50		C	B	G	MS										
148.00	148.50	0.50					RC										
148.50	150.50	2.00					MS										
150.50	156.40	5.90		C		G	STMS	IB, SL,RA,CA	fn								
156.40	158.50	2.10		C		G	MS	SL,RA,CA	fn								
158.50	168.70	10.20	FZ	B		G	SS	CA,FK	fm								
168.70	170.00	1.30		B		G	MS	CA	fm								
170.00	171.50	1.50	SM6				CMS										
171.50	173.40	1.90					MS										
173.40	173.80	0.40		C	B	G	RC										
173.80	175.60	1.80		C	B	G	MS										
175.60	177.20	1.60					CMS										
177.20	179.00	1.80		C	K	B	MS	CA									
179.00	179.80	0.80	SM5	C	K	B	CO	CA									
179.80	179.95	0.15	SM5				MS										
179.95	181.90	1.95	SM5				CO										
181.90	183.70	1.80					MS										
183.70	187.00	3.30		B		G	SSST	CA	fn								
187.00	191.00	4.00		C	K	G	MSST										
191.00	196.00	5.00		B		G	STMS	SL	fn								
196.00	199.50	3.50	FZ	B		G	SS	SL,FK	fn								
199.50	200.10	0.60		B		G	MS	CA	fm								
200.10	200.30	0.20		B		G	CO										
200.30	200.60	0.30		B		G	MS										
200.60	201.00	0.40	SM4R			R	RC										
201.00	201.90	0.90	SM4R			R	CO										
201.90	202.00	0.10				R	CMS										
202.00	202.20	0.20				R	CO										
202.20	207.50	5.30		B		G	MS										
207.50	208.60	1.10	SM4			K	CO										
208.60	209.00	0.40	SM4			K	MS										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_03	658,034.48	5,464,685.31	2,007.19	366.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
209.00	209.50	0.50	SM4			K	CO										
209.50	209.95	0.45	SM4			K	MS										
209.95	210.80	0.85	SM4			K	CO										
210.80	212.00	1.20				K	MS										
212.00	212.60	0.60					CS	XM									
212.60	217.00	4.40					MS	XM									
217.00	227.00	10.00		B		G	STMS	HR									
227.00	232.00	5.00		B		G	STSS										
232.00	242.00	10.00		B		G	SS		md								
242.00	254.00	12.00		C		K	STMS										
254.00	259.00	5.00					ST										
259.00	260.00	1.00					STMS										
260.00	261.00	1.00					MS										
261.00	262.20	1.20	SM3B			K	CO										
262.20	262.40	0.20	SM3B			K	CMS										
262.40	265.10	2.70	SM3A			K	CO										
265.10	265.30	0.20	SM3A			K	MS										
265.30	265.90	0.60	SM3A			K	CO										
265.90	267.00	1.10	SM3A			K	RC										
267.00	271.00	4.00				K	MS										
271.00	274.20	3.20				K	CS										
274.20	274.90	0.70	SM3L			K	RC										
274.90	275.00	0.10				K	CS										
275.00	276.55	1.55				K	MS										
276.55	277.20	0.65				K	CMS										
277.20	284.50	7.30				K	MS	CA									
284.50	288.80	4.30					STSS										
288.80	291.50	2.70					SS										
291.50	293.00	1.50		C		K	MS										
293.00	293.50	0.50		C		K	SS										
293.50	296.50	3.00		C		G	MS										
296.50	305.70	9.20		B		B	STMS	RA,CO,FR									
305.70	306.40	0.70				K	CMS										
306.40	317.80	11.40		C		G	STMS										
317.80	318.00	0.20		C		G	CMS										
318.00	332.00	14.00		C		G	STMS										
332.00	333.50	1.50		C		G	MS										
333.50	334.50	1.00		C		B	ST	PY									
334.50	335.00	0.50		C		B	MS	PY									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_03	658,034.48	5,464,685.31	2,007.19	366.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
335.00	336.10	1.10	SM1	C		B	CO	PY									
336.10	336.40	0.30	SM1			K	CS										
336.40	337.20	0.80	SM1			K	CO										
337.20	342.10	4.90	SM1			K	CO										
342.10	342.80	0.70	SM1			K	CMS										
342.80	344.50	1.70	SM1			K	CO										
344.50	345.20	0.70				K	MS										
345.20	346.10	0.90	SM1A			K	RC										
346.10	346.30	0.20	SM1A			K	MS										
346.30	347.00	0.70	SM1A			K	RC										
347.00	347.70	0.70				K	CMS										
347.70	348.70	1.00					MS	MS,ST,SS									
348.70	352.00	3.30					SS	MS,ST,SS									
352.00	353.70	1.70					MS	MS,ST,SS									
353.70	360.00	6.30		B		G	SS										
360.00	364.00	4.00		B		G	STMS										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_03C	658,031.61	5,464,684.48	2,007.02	220.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	9.70	9.70					SSST										
9.70	12.20	2.50					MS										
12.20	17.20	5.00					MSST										
17.20	17.60	0.40					RC										
17.60	19.80	2.20					MS										
19.80	21.40	1.60					SS										
21.40	25.50	4.10					MS										
25.50	25.75	0.25					RC										
25.75	27.50	1.75					MS										
27.50	33.50	6.00					STMS										
33.50	33.90	0.40					CO										
33.90	36.40	2.50					MS										
36.40	36.60	0.20					CMS										
36.60	37.50	0.90					RC										
37.50	38.80	1.30					MS										
38.80	40.80	2.00					MSST										
40.80	42.70	1.90	E1				CO										
42.70	43.00	0.30	E1				MS										
43.00	43.20	0.20	E1				CO										
43.20	45.50	2.30					MS										
45.50	45.65	0.15					RC										
45.65	49.10	3.45					MS										
49.10	53.40	4.30					ST										
53.40	57.30	3.90					SS										
57.30	57.30	0.00	DW														
57.30	59.50	2.20					SS										
59.50	60.50	1.00					MS										
60.50	63.70	3.20					STSS										
63.70	70.60	6.90					SS										
70.60	70.60	0.00	BOE														
70.60	71.00	0.40					MS										
71.00	71.40	0.40	E0				CO										
71.40	71.80	0.40					STMS										
71.80	72.20	0.40					CS										
72.20	80.50	8.30					STMS										
80.50	84.30	3.80					SSST										
84.30	91.30	7.00					SS										
91.30	92.90	1.60					STMS										
92.90	108.90	16.00					MS										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_03C	658,031.61	5,464,684.48	2,007.02	220.00					

Adjusted Depths

From	To	Thick	Seam	Shd Hue Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
108.90	118.20	9.30			STSS										
118.20	127.50	9.30			SS										
127.50	127.70	0.20	SM7		RC										
127.70	132.00	4.30			MS										
132.00	135.70	3.70			STSS										
135.70	139.00	3.30			STMS										
139.00	145.00	6.00			SS										
145.00	150.00	5.00			MS										
150.00	159.00	9.00			ST										
159.00	168.70	9.70			SS										
168.70	170.40	1.70			MS										
170.40	171.50	1.10	SM6		RC										
171.50	173.60	2.10			MS										
173.60	174.00	0.40			CO										
174.00	176.00	2.00			MS										
176.00	176.25	0.25			CO										
176.25	179.30	3.05			MS										
179.30	180.00	0.70	SM5		CO										
180.00	180.20	0.20	SM5		CMS										
180.20	182.80	2.60	SM5		CO										
182.80	183.60	0.80			MS										
183.60	196.70	13.10			STSS										
196.70	200.00	3.30			SS										
200.00	200.80	0.80			MS										
200.80	201.30	0.50			CMS										
201.30	202.80	1.50	SM4R		CO										
202.80	206.30	3.50			STMS										
206.30	208.30	2.00			MS										
208.30	209.50	1.20	SM4		CO										
209.50	209.65	0.15	SM4		MS										
209.65	210.00	0.35	SM4		CO										
210.00	210.30	0.30	SM4		MS										
210.30	211.30	1.00	SM4		CO										
211.30	211.70	0.40			MS										
211.70	211.80	0.10			CO										
211.80	220.00	8.20			MSST										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_04	657,619.79	5,465,061.58	2,024.94	320.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	2.60	2.60		C		G	SS	HR	md								
2.60	12.30	9.70		C		G	SS	SH	fn								
12.30	17.30	5.00		C		G	SS	HR	md								
17.30	18.00	0.70		C		G	SH										
18.00	23.50			C		G	SS		fn								
23.50	23.50		BOE														
23.50	24.00	0.50					CO										
24.00	28.00	4.00		C		G	SH										
28.00	28.25	0.25				K	RC										
28.25	33.30	5.05		C		G	SH	SI									
33.30	41.20	7.90		B		G	SHSS										
41.20	42.00	0.80		C		G	SH										
42.00	42.30	0.30	SM7			G	RC										
42.30	45.40	3.10		C		G	SH										
45.40	54.30	8.90		C		G	SS	SH	fn								
54.30	57.90	3.60		C		K	SH	CR									
57.90	65.60	7.70		C		G	SS	HR	fn								
65.60	70.60	5.00		C		K	SH	SI									
70.60	79.80	9.20		C		K	SH	SA									
79.80	82.00	2.20		C		G	SS	HR									
82.00	83.00	1.00		C		G	SH										
83.00	86.30	3.30		C		G	SSSH										
86.30	90.60	4.30		C		K	SHSS										
90.60	94.00	3.40		C		G	SH										
94.00	100.50	6.50		C		K	SSSH										
100.50	101.30	0.80		C		G	SH										
101.30	101.50	0.20	SM6			K	CO										
101.50	102.50	1.00	SM6			K	RC										
102.50	102.50	0.00	DW														
102.50	103.00	0.50	SM6	C		G	CS										
103.00	103.90	0.90	SM6			K	CO										
103.90	105.40	1.50		C		G	SH										
105.40	106.20	0.80	SM5			K	CO										
106.20	107.00	0.80	SM5	C		G	CS										
107.00	107.90	0.90	SM5			K	CO										
107.90	108.50	0.60		C		G	SH										
108.50	122.00	13.50	FZ	C		G	SHSS										
122.00	124.80	2.80	FZ	C		K	SS	HR, FZ	fn								
124.80	131.50	6.70		C		G	SHSS										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_04	*657,619.79*	*5,465,061.58*	*2,024.94*	*320.00*					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
131.50	132.00	0.50		C		K	SH										
132.00	132.80	0.80	SM4R			K	CO										
132.80	133.20	0.40	SM4R	C		G	CS										
133.20	133.50	0.30	SM4R			K	CO										
133.50	134.30	0.80		C		G	SH	CR									
134.30	138.00	3.70	SM4			K	CO										
138.00	139.50	1.50		C		G	SSSH										
139.50	140.50	1.00		C		G	CMS										
140.50	148.00	7.50		C		K	SSSH										
148.00	149.40	1.40		C		K	SH	CC, CA	fn								
149.40	160.00	10.60		C		K	SS	SH	fn								
160.00	168.20	8.20	FZ	C		K	SS	FK, CA	fn								
168.20	177.30	9.10		C		K	SSSH	IB									
177.30	183.10	5.80		C		K	SS	SH									
183.10	185.20	2.10		C		K	SH										
185.20	186.20	1.00	SM3B			K	CO										
186.20	186.50	0.30	SM3B			K	RC										
186.50	196.60	10.10	SM3A			K	CO										
196.60	200.70	4.10		C		G	STSH										
200.70	201.00	0.30	SM3L			K	CO										
201.00	203.10	2.10		C		G	SH										
203.10	205.50	2.40		C		G	SS										
205.50	212.00	6.50		C		K	SH										
212.00	222.00	10.00		C		G	SS	CS	md								
222.00	239.60	17.60		C		G	SS	SI	fn								
239.60	241.00	1.40		C		G	SH										
241.00	252.00	11.00		C		G	SSST		fn								
252.00	255.30	3.30		C		G	SH		fn								
255.30	268.90	13.60		C		G	SHSS										
268.90	270.50	1.60		C		K	SH	CS									
270.50	271.10	0.60				K	RC	CS									
271.10	271.40	0.30		C		G	CS										
271.40	283.20	11.80	SM1			K	CO	FK									
283.20	290.00	6.80		C		G	SH										
290.00	316.00	26.00					UK										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_05	*657,697.73*	*5,465,662.74*	*2,038.10*	*421.00*					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	11.90	11.90					CG										
11.90	12.40	0.50		O	B	G	CS	CS,FR,PY									
12.40	15.40	3.00		O	B	G	MS	CS,FR,PY									
15.40	19.00	3.60		M	B	G	ST	SL	vf								
19.00	21.30	2.30		D	K	G	STMS										
21.30	22.00	0.70					MS										
22.00	23.70	1.70	ZZ				RC										
23.70	24.50	0.80					MS										
24.50	24.60	0.10					RC										
24.60	25.50	0.90					MS										
25.50	32.20	6.70		D	K	G	STMS	IB									
32.20	32.50	0.30		D	G	B	MS										
32.50	32.60	0.10		D	G	B	RC										
32.60	33.10	0.50		D	G	B	MS										
33.10	34.30	1.20	ZZ				CO										
34.30	34.90	0.60	ZZ				RC										
34.90	37.20	2.30		D	K	G	MS	MD									
37.20	40.50	3.30		D	K	G	STMS	MD									
40.50	45.30	4.80		D	K	G	STSS	CM,ST,FR	vf								
45.30	47.00	1.70		M		G	SS	RA,ST,FR	cm								
47.00	51.00	4.00		M		G	STSS	RA,ST,FR	cm								
51.00	71.00	20.00		M		G	SS	RA,ST,FR	cm								
71.00	72.40	1.40		D	B	G	MS	CM,SS,FR,CA,PY									
72.40	74.40	2.00		D	B	G	ST										
74.40	78.00	3.60		M		G	STSS	FR	cm								
78.00	78.00	0.00	DW														
78.00	78.20	0.20		M		G	RC	FR	cm								
78.20	87.80	9.60		M		G	STSS	FR	cm								
87.80	89.00	1.20		D		G	SS										
89.00	90.60	1.60		D		G	ST										
90.60	100.00	9.40		M		G	STSS	IB	vf								
100.00	113.40	13.40		D		G	SS	RA,MS,CA									
113.40	113.80	0.40		D		G	MS	RA,MS,CA									
113.80	131.40	17.60	FZ	M		G	SS	SI, FZ									
131.40	135.30	3.90		D	B	G	MS										
135.30	135.70	0.40		D	B	G	RC										
135.70	137.75	2.05		D	K	B	MS										
137.75	137.90	0.15		D	K	B	RC										
137.90	138.50	0.60		D	B	G	MS										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_05	657,697.73	5,465,662.74	2,038.10	421.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
138.50	139.50	1.00		D	B	G	CO										
139.50	140.20	0.70		D	B	G	MS										
140.20	140.30	0.10		D	B	G	RC										
140.30	141.30	1.00		D	B	G	MS										
141.30	142.10	0.80		D	B	G	RC										
142.10	143.40	1.30					MS										
143.40	145.80	2.40		D	K	B	ST										
145.80	150.60	4.80		D	K	G	SS	AB,MS,CM,CO,FR									
150.60	158.80	8.20		D	K	B	MS	AB,CO,FR,PY,CA									
158.80	161.85	3.05		D		B	SSST										
161.85	162.15	0.30		D		B	CO		vf								
162.15	173.00	10.85		M		G	MS		vf								
173.00	174.50	1.50		D	B	G	SS										
174.50	177.00	2.50		D	B	G	MS										
177.00	178.50	1.50		D	B	G	ST										
178.50	180.25	1.75		D	K	B	MS										
180.25	181.50	1.25	E2				CO										
181.50	181.60	0.10	E2				MS										
181.60	181.75	0.15	E2				CO										
181.75	182.10	0.35	E2				RC										
182.10	182.40	0.30					MS										
182.40	182.70	0.30					RC										
182.70	183.10	0.40	E2A				MS										
183.10	184.20	1.10	E2A				CO										
184.20	184.80	0.60	E2A				MS										
184.80	185.60	0.80	E2A				CO										
185.60	188.10	2.50					MS										
188.10	193.60	5.50		L	W	G	SS	SI, IB	vf								
193.60	198.60	5.00		D	K	G	STMS	CM,CO,FR,RA,CA	fm								
198.60	200.40	1.80		D		G	MS	CA									
200.40	201.30	0.90	E1	D		G	CO	CA									
201.30	201.50	0.20	E1				MS										
201.50	201.80	0.30	E1				RC										
201.80	202.80	1.00	E1				CO										
202.80	203.00	0.20	E1				RC										
203.00	203.90	0.90					MS										
203.90	204.50	0.60	E1A				CO										
204.50	204.60	0.10	E1A				RC										
204.60	205.00	0.40	E1A				CMS										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_05	657,697.73	5,465,662.74	2,038.10	421.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
205.00	205.70	0.70	E1A				CO										
205.70	210.10	4.40		D	K	G	MS	RA,SS,FR									
210.10	210.90	0.80		D	K	G	ST	RA,SS,FR									
210.90	211.50	0.60		D	K	G	MS	RA,SS,FR									
211.50	211.70	0.20		D	K	G	CO	RA,SS,FR									
211.70	213.80	2.10		D	K	G	MS	RA,SS,FR									
213.80	213.95	0.15		D	K	G	RC	RA,SS,FR									
213.95	214.70	0.75		D	K	G	MS	RA,SS,FR									
214.70	217.80	3.10		D	K	G	SS	RA,SS,FR									
217.80	217.80	0.00	BOE														
217.80	219.30	1.50		D	K	G	MS	RA,SS,FR									
219.30	219.85	0.55	E0	D	K	G	CO	RA,SS,FR									
219.85	223.40	3.55					MS										
223.40	225.90	2.50		D	K	G	STMS	CM,SS,FR									
225.90	228.70	2.80		D	K	G	MS	CM,SS,FR									
228.70	234.90	6.20		D		G	ST	SL	vf								
234.90	237.30	2.40		D	K	G	SS	CM,CO,FR	fm								
237.30	240.10	2.80		M		G	STMS	CA	md								
240.10	242.50	2.40		M		G	SS	CA	md								
242.50	247.60	5.10		D	K	G	MS										
247.60	247.80	0.20	ZZ	D	K	G	RC										
247.80	248.80	1.00	ZZ				CO										
248.80	252.50	3.70		D	K	G	MS										
252.50	253.20	0.70	YY	D	K	B	CO	CM,CO,FR									
253.20	255.00	1.80					MS										
255.00	260.60	5.60		M		G	STMS		fm								
260.60	261.90	1.30		D	B	G	MS	CM,MS,FR									
261.90	262.10	0.20		D	B	G	RC	CM,MS,FR									
262.10	262.85	0.75		D	B	G	MS	CM,MS,FR									
262.85	264.50	1.65		D		G	SSST		vf								
264.50	264.70	0.20		D		G	CMS		vf								
264.70	268.00	3.30		D		G	STMS		vf								
268.00	269.70	1.70		D	K	B	MS	SL,FR,RA,CO,FR									
269.70	270.00	0.30	SM7	D	K	B	RC	SL,FR,RA,CO,FR									
270.00	271.20	1.20	SM7				CO										
271.20	271.80	0.60					MS										
271.80	272.10	0.30					CMS										
272.10	273.70	1.60		D		G	MS	CM,MS,FR									
273.70	273.80	0.10		D		G	RC	CM,MS,FR									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_05	657,697.73	5,465,662.74	2,038.10	421.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
273.80	276.00	2.20		D		G	MS	CM,MS,FR									
276.00	287.70	11.70		M		G	STMS										
287.70	293.50	5.80		M		G	STSS	CA	md								
293.50	307.00	13.50		M		G	SS	CA	md								
307.00	308.70	1.70		M		G	ST	CA	md								
308.70	314.00	5.30		D	G	B	STMS										
314.00	316.00	2.00		D	K	B	MS	CM,CO,FR									
316.00	316.30	0.30		D	K	B	RC	CM,CO,FR									
316.30	318.10	1.80		D	K	B	MS	CM,CO,FR									
318.10	318.20	0.10		D	K	B	CO	CM,CO,FR									
318.20	321.50	3.30		D	K	B	MS	CM,CO,FR									
321.50	322.50	1.00	SM6	D	K	B	CO	CM,CO,FR									
322.50	322.60	0.10	SM6				MS										
322.60	324.60	2.00	SM6				CO										
324.60	325.80	1.20					MS										
325.80	331.20	5.40		D	K	B	STSS	CM,CO,FR									
331.20	333.00	1.80		D		G	MS	CA									
333.00	334.00	1.00	SM5				CO										
334.00	334.15	0.15	SM5				MS										
334.15	334.65	0.50	SM5				CO										
334.65	334.85	0.20	SM5				MS										
334.85	335.40	0.55	SM5				CO										
335.40	338.70	3.30		D	K	B	MS	CM,CO,FR									
338.70	341.90	3.20		D		G	ST										
341.90	345.00	3.10		D		G	MS										
345.00	346.80	1.80		D		G	STMS										
346.80	348.00	1.20					MS										
348.00	348.20	0.20	SM4	D	K	B	RC	AB,CO,FR									
348.20	349.10	0.90	SM4	D	K	B	CO	AB,CO,FR									
349.10	349.20	0.10	SM4				MS										
349.20	350.00	0.80	SM4				RC										
350.00	350.20	0.20	SM4				CMS										
350.20	350.80	0.60	SM4				CO										
350.80	351.20	0.40	SM4				CMS										
351.20	351.60	0.40	SM4				RC										
351.60	352.60	1.00					CMS										
352.60	352.85	0.25					CO										
352.85	354.50	1.65					MS										
354.50	357.50	3.00		D		G	ST	CA									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_05	657,697.73	5,465,662.74	2,038.10	421.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
357.50	362.00	4.50		D		G	STMS	CA									
362.00	362.15	0.15	SM4L	D		G	RC	CA									
362.15	363.40	1.25		D		G	STMS	CA									
363.40	368.20	4.80		D		G	SSST	CA									
368.20	372.30	4.10		D		G	STMS	CA									
372.30	376.60	4.30		M		G	SSST	CA									
376.60	378.00	1.40		D	B	G	MS										
378.00	383.70	5.70		D	B	G	STMS										
383.70	387.90	4.20		D		G	MS										
387.90	403.20	15.30		M		G	SS	RA,CO,FR									
403.20	403.60	0.40					MS										
403.60	405.70	2.10	SM3B				CO										
405.70	406.50	0.80	SM3B				CS										
406.50	407.10	0.60	SM3A				CMS										
407.10	407.50	0.40	SM3A				RC										
407.50	408.50	1.00	SM3A				CO										
408.50	408.70	0.20	SM3A				CMS										
408.70	409.20	0.50	SM3A				CO										
409.20	409.70	0.50	SM3A				CMS										
409.70	416.50	6.80	SM3A				CO										
416.50	421.00	4.50		D	K	B	MS	SI									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_06	657,117.96	5,466,283.47	2,082.14	402.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	9.50	9.50		M	L	G	CG	HR, HR	vc	m							
9.50	10.80	1.30	FZ	M	L	K	FZ	HR	vc								
10.80	14.90	4.10		M	L	K	SSSH	HR, HR	vc								
14.90	20.60	5.70		M	L	K	CG	HR, HR	vc	p							
20.60	22.40	1.80		C		G	SH	CL									
22.40	24.70	2.30		C		G	SSSH	CL									
24.70	25.50	0.80		C		G	SH	HR, CL									
25.50	29.80	4.30		C		G	SSSH	HR									
29.80	31.60	1.80		C		G	SH	HR, HR									
31.60	35.50	3.90		C		G	SSSH	HR									
35.50	41.70	6.20		B		B	SS	HR, HR	md	w							
41.70	42.30	0.60		C		G	SH	HR									
42.30	48.70	6.40	FZ	B		B	SS	FK, HR	md	w							
48.70	49.30	0.60	FZ	C		G	FZ	FR									
49.30	50.80	1.50	FZ	C		B	SS	FK	md	w							
50.80	51.20	0.40	FZ	C		G	FZ										
51.20	55.50	4.30		B		B	SS		md	w							
55.50	56.00	0.50	FZ				FZ										
56.00	57.70	1.70		C		G	SH										
57.70	60.00	2.30		C		G	SSSH										
60.00	64.10	4.10		B		K	SS	HR, HR	md	w							
64.10	66.90	2.80		C		K	SS	SH, HR									
66.90	71.30	4.40		B		K	SS	HR, HR	md	w							
71.30	72.20	0.90		M		Y	SH										
72.20	75.00	2.80		M		Y	SS	HR	md	w							
75.00	75.60	0.60		D		Y	MS										
75.60	77.80	2.20		D		Y	SS										
77.80	77.80	0.00	DW														
77.80	78.20	0.40		D		Y	MS										
78.20	88.30	10.10		C		G	SHSS	FR									
88.30	89.40	1.10	FZ				SS	FR									
89.40	89.90	0.50				K	RC	SH, FR									
89.90	99.00	9.10		C		G	SHSS										
99.00	102.00	3.00		C		G	SH	SF									
102.00	105.90	3.90		B		G	SSSH	IB, SF									
105.90	106.80	0.90	E3			K	CO	SF									
106.80	108.30	1.50		C		G	SH	SF									
108.30	110.60	2.30		C		K	SSSH										
110.60	111.00	0.40				K	CO										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_06	657,117.96	5,466,283.47	2,082.14	402.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
111.00	111.30	0.30		C		K	SH										
111.30	114.00	2.70		C		G	SSSH										
114.00	117.10	3.10		C		G	SS		md	w							
117.10	120.20	3.10		C		G	SH										
120.20	123.20	3.00		C		G	SSSH	IB									
123.20	123.50	0.30	E2			K	RC										
123.50	124.50	1.00	E2			K	CO										
124.50	127.00	2.50		C		G	SH										
127.00	130.50	3.50		C		G	SHSS	IB	md	w							
130.50	131.30	0.80		C		G	SH										
131.30	132.30	1.00	E1			K	RC										
132.30	132.40	0.10	E1	C		K	CS										
132.40	132.70	0.30	E1			K	CO										
132.70	133.30	0.60	E1	C		K	CS										
133.30	134.80	1.50	E1			K	CO										
134.80	137.40	2.60		C		G	SH										
137.40	138.20	0.80		C		G	SS	HR									
138.20	139.50	1.30		C		G	SH	HR									
139.50	141.50	2.00		C		G	SSSH	IB, HR									
141.50	155.70	14.20		B		G	SS	HR, HR	md	w							
155.70	156.70	1.00		C		G	SH	HR									
156.70	161.40	4.70		B		G	SS	HR, HR	md	w							
161.40	162.00	0.60		C		G	SH	HR									
162.00	168.30	6.30		B		G	SS	HR, HR	md	w							
168.30	168.60	0.30		C		G	SH	HR									
168.60	169.50	0.90		B		G	SS	HR									
169.50	170.20	0.70		C		G	SH										
170.20	180.40	10.20		D		G	SS	HR, HR	vc	w							
180.40	180.40	0.00	BOE														
180.40	180.60	0.20		N		G	RC										
180.60	182.70	2.10		M		G	SH										
182.70	186.50	3.80		N		G	SS	HR, SH									
186.50	189.60	3.10		N		G	SSSH	SH									
189.60	191.00	1.40		C		G	SH										
191.00	197.80	6.80		M		G	SS	HR, FR	md	w							
197.80	198.40	0.60		C		G	SH	MS									
198.40	200.00	1.60		M		S	SS	HR, HR									
200.00	201.20	1.20		M		S	SH	HR									
201.20	207.30	6.10		D		G	SSSH	IB									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_06	657,117.96	5,466,283.47	2,082.14	402.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
207.30	208.00	0.70		D		G	SH		cb								
208.00	212.00	4.00		D		G	SSSH	IB	cb								
212.00	213.10	1.10		D		G	SH		cb								
213.10	214.70	1.60		D		G	SS		cb								
214.70	217.80	3.10		D		G	SH		cb								
217.80	221.00	3.20		D		G	SHSS		cb								
221.00	223.80	2.80		D		G	SH		cb								
223.80	226.50	2.70		D		G	SHSS		cb								
226.50	237.10	10.60	FZ	D		G	SS	HR, FK	cb	w							
237.10	237.50	0.40	SM7	D		G	CO		cb								
237.50	237.90	0.40	SM7	C		K	CS	SH,RC,IB									
237.90	238.30	0.40	SM7			K	CO	SH,RC,IB									
238.30	239.60	1.30		C		K	SH	SH,RC,IB									
239.60	240.00	0.40		D		G	RC										
240.00	245.50	5.50		D		G	SSSH										
245.50	246.80	1.30		D		G	SH										
246.80	247.60	0.80	SM7A	D		G	CO										
247.60	253.30	5.70		D		G	SH										
253.30	258.00	4.70		D		G	SSSH										
258.00	258.60	0.60		M		G	SH	AN	fn								
258.60	264.30	5.70		D		G	SS	SH									
264.30	267.30	3.00		D		G	SSSH										
267.30	270.00	2.70		M		G	SH										
270.00	272.00	2.00		D		G	SS		md	w							
272.00	275.90	3.90		D		G	SSSH	IB									
275.90	276.60	0.70	ZZ			K	CO										
276.60	277.00	0.40		C		K	MS										
277.00	277.20	0.20				K	CO										
277.20	280.60	3.40		D		G	SSSH										
280.60	281.80	1.20		D		G	SH										
281.80	282.00	0.20		D		G	CO										
282.00	287.60	5.60		D		G	SS		md	w							
287.60	294.70	7.10		D		G	SSSH	IB									
294.70	295.60	0.90	SM6	D	G	K	CO										
295.60	295.90	0.30	SM6	C		K	CS										
295.90	297.60	1.70	SM6			K	CO										
297.60	298.80	1.20		C		K	SH										
298.80	299.80	1.00		D		G	SSSH										
299.80	300.30	0.50		D		G	SH										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_06	657,117.96	5,466,283.47	2,082.14	402.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
300.30	301.10	0.80	ZZ			K	CO										
301.10	303.70	2.60		C		K	SHSS										
303.70	307.00	3.30		D		G	SH	CS									
307.00	307.30	0.30		D		G	CS	CS									
307.30	307.50	0.20	ZZ			K	CO										
307.50	308.50	1.00		C		K	CS										
308.50	309.60	1.10	SM5			K	CO										
309.60	311.00	1.40		D		K	SH	CS									
311.00	312.50	1.50		D		G	SSSH	CS									
312.50	317.50	5.00		D		G	SSSH	CS									
317.50	317.60	0.10		D		G	SH	CS									
317.60	318.20	0.60	SM4	D		K	CO	CS									
318.20	318.60	0.40	SM4			K	RC										
318.60	322.20	3.60		D		G	SH	CS									
322.20	328.00	5.80		M		G	SS	SH, AN	gr								
328.00	331.00	3.00		D		G	SH										
331.00	340.50	9.50		M		G	SS		md	w							
340.50	341.00	0.50		M		G	SH										
341.00	346.00	5.00		M		G	SS		md	w							
346.00	348.50	2.50		D		G	SH										
348.50	351.20	2.70		D		G	SSSH										
351.20	353.00	1.80		D		G	SS	HR	md	w							
353.00	353.70	0.70		D		G	SH										
353.70	358.30	4.60		D		G	SSSH										
358.30	359.50	1.20		D		G	SH	CS									
359.50	360.00	0.50	SM3B			K	CO										
360.00	360.20	0.20	SM3B	C		K	CS										
360.20	364.10	3.90	SM3B			K	CO										
364.10	364.50	0.40	SM3A			K	RC										
364.50	368.20	3.70	SM3A			K	CO										
368.20	369.00	0.80	SM3A	D		G	RC	CS									
369.00	370.00	1.00					SH										
370.00	370.60	0.60	SM3L			K	RC										
370.60	371.00	0.40	SM3L	C		K	CS										
371.00	371.70	0.70	SM3L			K	RC										
371.70	374.50	2.80		C		K	SH										
374.50	374.90	0.40		D		G	CO	CS									
374.90	377.60	2.70		C		K	SH	SH									
377.60	378.20	0.60				K	RC										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_06	*657,117.96*	*5,466,283.47*	*2,082.14*	*402.00*					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
378.20	378.60	0.40				K	CO										
378.60	381.50	2.90		C		K	SH										
381.50	383.50	2.00		D		G	SSSH										
383.50	385.00	1.50		D		G	SH										
385.00	387.80	2.80		D		G	SSSH										
387.80	389.00	1.20		M		G	SH		fn								
389.00	391.80	2.80		D		G	SS										
391.80	393.00	1.20		D		G	SH										
393.00	401.00	8.00		D		G	SSSH										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_09	658,430.44	5,464,306.76	2,053.54	455.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	3.00	3.00					ST										
3.00	18.60	15.60		C	K	G	SS	FK									
18.60	21.30	2.70		M		B	STMS										
21.30	29.00	7.70		C		G	STSS										
29.00	34.70	5.70		C	K	G	SS										
34.70	37.50	2.80		C		G	STMS										
37.50	43.80	6.30		C		G	STSS										
43.80	50.50	6.70		C		B	SS										
50.50	51.80	1.30		C		B	MS										
51.80	53.00	1.20		C		B	STMS										
53.00	56.00	3.00		C		B	MS										
56.00	61.50	5.50		C		B	STMS										
61.50	62.00	0.50		B		G	SS										
62.00	79.20	17.20		C		B	STMS										
79.20	82.97	3.77		C		B	SS										
82.97	82.97	0.00	DW														
82.97	89.00	6.03					SS										
89.00	92.00	3.00		B		G	ST										
92.00	95.00	3.00		C		B	MS										
95.00	96.00	1.00	FZ	C		B	FZ	WO									
96.00	99.00	3.00		C		B	ST										
99.00	101.10	2.10		A		B	MS										
101.10	106.30	5.20		C		B	STSS										
106.30	114.50	8.20		B		G	SS										
114.50	122.60	8.10		B		G	MSST	CA									
122.60	126.30	3.70		B		G	STMS	CA									
126.30	132.00	5.70		B		G	SSST	CA									
132.00	143.20	11.20		C		G	SS										
143.20	147.50	4.30		B	B	G	STMS	CA									
147.50	149.20	1.70		C		B	MS	RA,CO,FR									
149.20	150.80	1.60		C		B	SS	RA,CO,FR									
150.80	162.00	11.20	FZ	C		B	ST	FK, RA,CO,FR									
162.00	162.15	0.15		C		B	CO	RA,CO,FR									
162.15	164.30	2.15		C		B	ST	RA,CO,FR									
164.30	169.50	5.20		C	B	G	MS	CA									
169.50	169.90	0.40	E2				CO										
169.90	170.80	0.90					CMS										
170.80	171.00	0.20					RC										
171.00	173.50	2.50		C	K	B	MS	RA,CO,FR									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_09	658,430.44	5,464,306.76	2,053.54	455.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
173.50	175.00	1.50		C	B	G	ST										
175.00	178.40	3.40		C	B	G	MS										
178.40	190.10	11.70		C	B	G	STSS										
190.10	192.90	2.80		C		G	SS	PY									
192.90	194.20	1.30		C		B	MS	CA									
194.20	194.40	0.20	E1	C		B	RC	CA									
194.40	194.90	0.50	E1				CO										
194.90	195.10	0.20	E1				MS										
195.10	195.90	0.80	E1				CO										
195.90	196.10	0.20	E1				RC										
196.10	196.40	0.30	E1				MS										
196.40	196.75	0.35	E1				RC										
196.75	198.00	1.25					MS										
198.00	200.70	2.70		C		B	STMS	CA									
200.70	207.00	6.30		C		B	ST	CA									
207.00	212.30	5.30		C	B	G	STSS	CA									
212.30	219.00	6.70		C		G	SS	CA	fm								
219.00	219.00	0.00	BOE														
219.00	221.00	2.00		M	G	B	MS	CM,CO,FR									
221.00	222.10	1.10	E0				CO										
222.10	223.00	0.90					MS										
223.00	225.10	2.10		C	K	B	STMS										
225.10	232.30	7.20		C		G	SSST		vf								
232.30	235.00	2.70		B		G	STSS		fm								
235.00	241.40	6.40		B		G	SS		fm								
241.40	241.70	0.30	SM8	B		G	CO	AB,PY,CA	fm								
241.70	241.80	0.10	SM8	B		G	RC	AB,PY,CA	fm								
241.80	242.40	0.60	SM8			K	CMS										
242.40	243.50	1.10	SM8				CO										
243.50	243.80	0.30					MS										
243.80	245.50	1.70		C		B	ST										
245.50	246.20	0.70		C		B	CY										
246.20	248.00	1.80		C		G	ST										
248.00	252.20	4.20		B		G	STSS	CA	fm								
252.20	258.50	6.30		B		G	SS	CA	fm								
258.50	259.50	1.00		B		G	ST	CA	fm								
259.50	262.20	2.70		B		G	STSS	CA	fm								
262.20	264.40	2.20		C		G	STMS										
264.40	279.00	14.60		C		B	ST										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_09	658,430.44	5,464,306.76	2,053.54	455.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
279.00	280.10	1.10		C		B	STMS										
280.10	281.10	1.00		C	K	B	ST	CM,CO,FR									
281.10	281.50	0.40		C	K	B	MS	CM,CO,FR									
281.50	281.80	0.30	SM7			K	CO										
281.80	281.90	0.10	SM7			K	MS										
281.90	282.40	0.50	SM7			K	CO										
282.40	283.00	0.60	SM7			K	COMS										
283.00	283.15	0.15	SM7			K	CO										
283.15	283.70	0.55				K	MS										
283.70	284.10	0.40	SM7A			K	CO										
284.10	284.50	0.40	SM7A			K	COMS										
284.50	285.10	0.60	SM7A			K	CO										
285.10	286.20	1.10					MS										
286.20	286.35	0.15					CO										
286.35	288.70	2.35		C	K	B	MS	PY									
288.70	296.50	7.80		B		G	STSS	FK, CA	fm								
296.50	307.00	10.50		B		G	SS	CA	fm								
307.00	310.70	3.70		C		G	STSS	CA									
310.70	311.50	0.80	ZZ	C		G	RC	CA									
311.50	316.00	4.50		C		G	STSS	CA									
316.00	317.00	1.00		C		G	MS	CA									
317.00	319.60	2.60		C		G	ST	CA									
319.60	320.20	0.60		C		G	MS	CA									
320.20	321.00	0.80	SM6				CO										
321.00	321.30	0.30	SM6				MS										
321.30	321.50	0.20	SM6				RC										
321.50	321.90	0.40	SM6				CMS										
321.90	322.90	1.00	SM6				CO										
322.90	323.90	1.00		B		G	MS										
323.90	332.60	8.70		B		G	SS										
332.60	333.00	0.40	SM5				CO										
333.00	333.20	0.20	SM5				CS										
333.20	333.70	0.50	SM5				CO										
333.70	333.76	0.06	SM5				CS										
333.76	334.00	0.24	SM5				RC										
334.00	345.00	11.00		B		G	STMS										
345.00	352.30	7.30		C		G	STSS	CA	fn								
352.30	353.30	1.00				K	MS										
353.30	355.10	1.80				K	ST	HR									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_09	658,430.44	5,464,306.76	2,053.54	455.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
355.10	356.20	1.10	SM4			K	CO										
356.20	356.50	0.30	SM4			K	CMS										
356.50	356.70	0.20	SM4			K	RC										
356.70	357.50	0.80	SM4			K	CO										
357.50	358.10	0.60				K	RC										
358.10	358.60	0.50				K	MS										
358.60	365.20	6.60		C		G	STMS										
365.20	365.50	0.30	SM4L	C		G	CO										
365.50	383.40	17.90		B		G	STMS	IB, CA									
383.40	384.50	1.10		B		G	MS	CA									
384.50	385.80	1.30		B		G	SS	CA									
385.80	400.00	14.20		B		G	STSS	CA	fn								
400.00	403.00	3.00	SM3B				CO										
403.00	409.00	6.00	SM3A				CO	FZ									
409.00	409.50	0.50					MS										
409.50	419.00	9.50					STSS										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_10	659,121.10	5,464,082.70	1,946.74	438.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	6.80	6.80					SSST										
6.80	15.60	8.80		B	O	G	STMS	WE	vf								
15.60	19.00	3.40		B	O	G	SS		fm								
19.00	19.00	0.00	DW														
19.00	25.50	6.50					SS										
25.50	26.00	0.50		B	O	G	STMS		fm								
26.00	34.60	8.60		B	O	G	SS	WE,RA,QZ	md								
34.60	43.40	8.80		B	B	G	STSS	WE	fm								
43.40	59.20	15.80	FZ	V	O	G	SS	WE									
59.20	61.30	2.10		V	O	G	STMS										
61.30	82.20	20.90	FZ	V	B	G	SS	FK									
82.20	88.20	6.00		B	K	G	ST	CA	cm								
88.20	89.50	1.30		B	K	G	MS	CA	cm								
89.50	95.30	5.80		B	K	G	STSS	CA	cm								
95.30	100.00	4.70		B	K	G	SS	CA	cm								
100.00	100.80	0.80		B	K	G	STSS	CA	cm								
100.80	105.30	4.50		B	K	G	SS	CA	cm								
105.30	106.00	0.70		B	K	G	STSS	CA	cm								
106.00	112.50	6.50		B	K	G	SSST	FK, CA	cm								
112.50	115.90	3.40		B	K	G	SS	CA,RA,PY	cm								
115.90	116.20	0.30	ZZ				RC										
116.20	117.00	0.80	ZZ				CO										
117.00	118.00	1.00		B	K	G	STSS		vf								
118.00	119.00	1.00		B	K	G	MS		vf								
119.00	124.50	5.50		B	C	G	STMS	CA,CO,FR	fn								
124.50	138.90	14.40		B	C	G	SS	FK, CA,CO,FR	fn								
138.90	139.80	0.90		B	C	G	MS	CA	fm								
139.80	140.60	0.80				K	CMS										
140.60	143.10	2.50		C	K	G	STMS										
143.10	143.60	0.50					CO										
143.60	153.00	9.40		B	L	G	STMS	IB, CO									
153.00	156.90	3.90		B	L	G	STSS	CA	fm								
156.90	160.80	3.90		B	L	G	STMS	IB, CA	fm								
160.80	172.80	12.00	FZ	C	K	G	SS	FK	fm								
172.80	173.90	1.10		C	K	G	MS		fm								
173.90	176.30	2.40		C	K	G	STMS		fm								
176.30	179.00	2.70		C	G	B	MS										
179.00	181.70	2.70		C	G	B	STSS										
181.70	192.50	10.80		C	G	B	MSST										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_10	659,121.10	5,464,082.70	1,946.74	438.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
192.50	193.50	1.00		C	K	B	SS	AB,CO,FR									
193.50	194.50	1.00		C	K	B	MS	AB,CO,FR									
194.50	194.90	0.40	ZZ	C	K	B	RC	AB,CO,FR									
194.90	196.30	1.40		C	K	B	MS	AB,CO,FR									
196.30	197.30	1.00	E3				CO										
197.30	198.70	1.40					MS										
198.70	208.30	9.60		B	K	G	SS	CA	fm								
208.30	209.90	1.60		B	K	G	MS	CA	fm								
209.90	221.80	11.90					STMS	IB									
221.80	234.30	12.50					SS	SI									
234.30	239.20	4.90					STMS										
239.20	241.00	1.80					MS										
241.00	248.40	7.40					SSST										
248.40	257.50	9.10	FZ				SS	SI, FZ									
257.50	257.80	0.30					MS										
257.80	258.20	0.40					CO										
258.20	258.30	0.10					MS										
258.30	259.00	0.70					RC										
259.00	259.10	0.10					MS										
259.10	259.60	0.50					RC										
259.60	262.10	2.50					MS										
262.10	263.10	1.00	E1				CO										
263.10	263.50	0.40	E1				MS										
263.50	263.80	0.30	E1				CO										
263.80	265.80	2.00					MS										
265.80	266.20	0.40					CO										
266.20	267.60	1.40					MS										
267.60	267.90	0.30					CMS										
267.90	268.50	0.60					MS										
268.50	271.00	2.50					ST										
271.00	295.00	24.00					SS	FZ									
295.00	295.00	0.00	E0				CS										
295.00	295.00	0.00	BOE														
295.00	295.50	0.50					MS										
295.50	299.70	4.20					SSST										
299.70	314.60	14.90					SS	FZ									
314.60	315.20	0.60					MS										
315.20	315.50	0.30					SS										
315.50	316.50	1.00					MS										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_10	659,121.10	5,464,082.70	1,946.74	438.00					

Adjusted Depths

From	To	Thick	Seam	Shd Hue Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
316.50	317.60	1.10			SS										
317.60	322.60	5.00			STMS										
322.60	323.30	0.70			MS										
323.30	323.50	0.20			CO										
323.50	324.80	1.30			MS										
324.80	326.30	1.50			ST										
326.30	328.30	2.00			STMS										
328.30	334.40	6.10			STSS	IB									
334.40	342.00	7.60			SS										
342.00	342.80	0.80	SM7		CO										
342.80	343.30	0.50	SM7		MS										
343.30	344.00	0.70	SM7		CO										
344.00	345.70	1.70			MS										
345.70	349.00	3.30			STMS										
349.00	352.10	3.10			MSST										
352.10	353.00	0.90			MS										
353.00	353.30	0.30	SM7A		CO										
353.30	354.00	0.70			MS										
354.00	354.25	0.25			RC										
354.25	360.70	6.45			STMS										
360.70	364.70	4.00			SSST										
364.70	369.40	4.70			SS										
369.40	375.00	5.60			STMS										
375.00	382.70	7.70			SSST										
382.70	387.50	4.80			ST										
387.50	388.00	0.50			MS										
388.00	389.80	1.80	SM6		CO										
389.80	390.00	0.20	SM6		CS										
390.00	390.40	0.40	SM6		CO										
390.40	390.60	0.20	SM6		MS										
390.60	392.30	1.70	SM5		CO										
392.30	392.50	0.20	SM5		MS										
392.50	393.00	0.50	SM5		CO										
393.00	393.20	0.20	SM5		MS										
393.20	394.50	1.30	SM5		CO										
394.50	395.00	0.50	SM5		RC										
395.00	395.50	0.50			MS										
395.50	396.00	0.50			ST										
396.00	412.60	16.60			STMS	SI, IB									

Drill Hole Lithology Summary

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Azimuth*	*Inclin*
DH_18_10	*659,121.10*	*5,464,082.70*	*1,946.74*	*438.00*					

Adjusted Depths

From	To	Thick	Seam	Shd Hue Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
412.60	413.30	0.70			MS										
413.30	415.30	2.00	SM4		CO										
415.30	415.40	0.10	SM4		MS										
415.40	416.50	1.10	SM4		CO										
416.50	421.60	5.10			MS										
421.60	427.20	5.60			STSS										
427.20	438.00	10.80	FZ		SS	FZ									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_11	659,436.95	5,463,418.56	2,001.44	435.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	3.00	3.00				G	ST										
3.00	4.00	1.00		A	C	G	SS										
4.00	5.80	1.80		B	C	G	ST	we,mu									
5.80	10.00	4.20		B	C	G	STMS										
10.00	12.20	2.20		B	C	G	MS										
12.20	27.00	14.80		B	C	G	STMS	IB, we,mu									
27.00	29.00	2.00		B	C	G	MS										
29.00	32.30	3.30		B	C	G	SSST										
32.30	48.50	16.20		B	C	G	STMS	IB									
48.50	54.80	6.30		B	C	G	MSST										
54.80	60.00	5.20		B	R	B	MS										
60.00	64.30	4.30		B	C	G	STSS										
64.30	68.20	3.90		B	C	G	SS	CG,HR									
68.20	68.90	0.70		B	C	G	MS	we,ca									
68.90	72.20	3.30		B	C	G	MSSS	IB, we,ca									
72.20	75.80	3.60		B	C	G	SS	we,ca									
75.80	77.20	1.40		B	C	G	MS	we,ca									
77.20	79.10	1.90		B	C	G	ST	we,ca									
79.10	80.00	0.90		B	C	G	MS	we,ca									
80.00	86.50	6.50		B	K	G	SS	FU									
86.50	91.00	4.50				G	CG	MD, CG,CA									
91.00	97.50	6.50				G	ST	CA									
97.50	99.00	1.50				G	MS	CA									
99.00	103.70	4.70				G	SSST	CA									
103.70	103.70	0.00	DW														
103.70	108.20	4.50				G	STMS	CA									
108.20	121.40	13.20				G	SS	CA									
121.40	128.30	6.90				G	STSS	CG,CA									
128.30	134.50	6.20				G	CG	SA									
134.50	135.00	0.50				G	MS										
135.00	158.40	23.40				G	CGSS	AB,QZ,CH,FR									
158.40	162.30	3.90				G	STMS										
162.30	165.10	2.80				G	STSS	CA									
165.10	165.20	0.10	FZ				FZ	CA									
165.20	169.10	3.90				G	SS	CA									
169.10	169.20	0.10	FZ				FZ	CA									
169.20	169.90	0.70				K	RC										
169.90	172.30	2.40				G	SS	ST, CA,PY,CH,FR									
172.30	174.80	2.50				G	MS	CH,FR									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_11	659,436.95	5,463,418.56	2,001.44	435.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
174.80	179.80	5.00				G	SS	CH,FR									
179.80	179.90	0.10	FZ				FZ										
179.90	192.80	12.90				G	SS	CA,PY									
192.80	194.30	1.50				G	MS										
194.30	195.00	0.70		C	G	K	RC										
195.00	198.50	3.50				G	STMS	SL,CA									
198.50	205.00	6.50				G	STSS	SL,CA									
205.00	205.40	0.40	ZZ	C	G	K	RC										
205.40	206.00	0.60	ZZ			K	CO										
206.00	208.30	2.30				G	MS										
208.30	218.50	10.20				G	STMS										
218.50	219.90	1.40		C		G	MS	WO, PY,CH									
219.90	220.60	0.70	YY			K	CO										
220.60	221.20	0.60				G	MS										
221.20	221.40	0.20				K	CO										
221.40	224.50	3.10		B		G	STMS										
224.50	233.50	9.00		B		G	MSST										
233.50	235.60	2.10		C	B	G	MS										
235.60	235.80	0.20		C	B	G	CMS										
235.80	237.80	2.00				G	MS										
237.80	247.00	9.20		C	B	G	STMS	CA,PY,RA,CL									
247.00	254.00	7.00		B	B	G	STSS										
254.00	257.50	3.50				G	MS										
257.50	258.30	0.80				G	SS										
258.30	259.70	1.40				G	MS										
259.70	263.30	3.60				G	SS										
263.30	263.40	0.10	FZ				FZ										
263.40	277.40	14.00		B		G	SS	CH,FR,QZ,FR									
277.40	280.00	2.60				G	MS	CM,CA,FR									
280.00	292.60	12.60		B	G	B	MSST	CM,CA,FR									
292.60	295.00	2.40				G	MS	CM,CA,FR									
295.00	298.20	3.20				G	SSST	CM,CA,FR									
298.20	301.30	3.10	FZ			G	SS	CM,CA,FR									
301.30	306.00	4.70				G	ST	SH,BN									
306.00	307.70	1.70				G	SS	CA,CG,FR									
307.70	308.70	1.00				G	MS										
308.70	308.80	0.10		C	G	K	RC										
308.80	309.00	0.20				G	MS										
309.00	309.40	0.40				K	CO										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
DH_18_11	659,436.95	5,463,418.56	2,001.44	435.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
309.40	311.40	2.00				G	MS										
311.40	312.00	0.60	E2			K	CO										
312.00	313.00	1.00				G	MS										
313.00	316.00	3.00				G	STMS										
316.00	320.50	4.50				G	MS										
320.50	325.80	5.30				G	SSST	CA									
325.80	327.50	1.70				G	MS										
327.50	330.90	3.40				G	SSST										
330.90	331.00	0.10	FZ				FZ										
331.00	334.70	3.70				B	SSST	CO,BN									
334.70	335.00	0.30	FZ				FZ										
335.00	338.50	3.50			R	B	SSST										
338.50	338.70	0.20		C	G	K	RC										
338.70	339.70	1.00				G	MS										
339.70	339.80	0.10		C	G	K	RC										
339.80	340.00	0.20				G	MS										
340.00	340.70	0.70		C	B	G	CMS										
340.70	342.20	1.50				G	MS										
342.20	342.60	0.40	E1			K	CO										
342.60	342.70	0.10	E1			G	MS										
342.70	343.70	1.00	E1			K	CO										
343.70	343.85	0.15		C	G	K	RC										
343.85	344.00	0.15				G	MS										
344.00	344.10	0.10				K	CO										
344.10	344.50	0.40				G	RC										
344.50	345.50	1.00				G	ST										
345.50	346.00	0.50				B	MS										
346.00	347.80	1.80				B	SS										
347.80	348.90	1.10				B	MS										
348.90	349.40	0.50		C	G	K	RC										
349.40	349.80	0.40				B	MS										
349.80	350.10	0.30		C	B	G	CMS										
350.10	350.50	0.40				G	MS										
350.50	358.00	7.50				B	STMS										
358.00	358.00	0.00	BOE														
358.00	361.00	3.00		C	K	B	CS	MS, CO,BN									
361.00	363.80	2.80				G	MS										
363.80	364.20	0.40				G	CS	MS, CO,BN									
364.20	365.60	1.40				G	MS										

Drill Hole Lithology Summary

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Azimuth*	*Inclin*
DH_18_11	*659,436.95*	*5,463,418.56*	*2,001.44*	*435.00*					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
365.60	366.50	0.90				G	CS	MS, CO,BN									
366.50	369.20	2.70				G	MS										
369.20	370.50	1.30				G	ST										
370.50	371.50	1.00	E0			G	CS										
371.50	379.00	7.50				G	STMS										
379.00	387.00	8.00				G	ST										
387.00	394.80	7.80				G	SS	ST									
394.80	395.20	0.40				G	MS										
395.20	398.50	3.30				G	SS										
398.50	402.00	3.50				G	MS										
402.00	403.30	1.30	SM7			K	CO										
403.30	404.20	0.90				G	MS										
404.20	404.40	0.20		C	B	G	CMS										
404.40	405.20	0.80				K	CO										
405.20	406.10	0.90				G	MS										
406.10	407.70	1.60				G	SS										
407.70	408.50	0.80				G	MS										
408.50	408.90	0.40				K	CO										
408.90	410.00	1.10				G	MS										
410.00	412.50	2.50				G	SSST										
412.50	413.40	0.90				G	MS										
413.40	414.20	0.80	SM7A			K	CO										
414.20	415.20	1.00				G	MS										
415.20	416.80	1.60				G	STMS										
416.80	419.60	2.80				G	SSST										
419.60	420.80	1.20				G	MS										
420.80	421.00	0.20				K	CO										
421.00	421.80	0.80				G	MS	CM,MS									
421.80	435.00	13.20				G	STMS	CM,CA									

Drill Hole Lithology Summary

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Azimuth*	*Inclin*
F-1	*656,161.39*	*5,465,249.21*	*1,768.69*	*14.10*					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	0.03	0.03					OB										
0.03	14.05	14.02	SM1				CO										
14.05	14.10	0.05					UN										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
F-2	*656,242.05*	*5,465,398.73*	*1,837.67*	*5.80*					

Adjusted Depths

From	To	Thick	Seam	Shd Hue Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	0.03	0.03													
0.03	5.75	5.72	SM3A		CO										
5.75	5.80	0.05													

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
F-3	*655,831.85*	*5,465,728.24*	*1,870.51*	*7.02*					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	0.02	0.02					OB										
0.02	7.00	6.98	SM4				CO										
7.00	7.02	0.02					UN										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
F-4	*655,915.20*	*5,465,758.70*	*1,934.93*	*11.25*					

Adjusted Depths

From	To	Thick	Seam	Shd Hue Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	0.04	0.04													
0.04	11.20	11.16	SM5		CO										
11.20	11.25	0.05													

Drill Hole Lithology Summary

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Azimuth*	*Inclin*
F-5	*655,828.94*	*5,466,013.69*	*1,923.89*	*6.05*					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	0.06	0.06					OB										
0.06	6.00	5.94	SM7				CO										
6.00	6.05	0.05					UN										

Drill Hole Lithology Summary

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Azimuth*	*Inclin*
F-6	*655,909.60*	*5,465,795.76*	*1,939.00*	*3.05*					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	0.04	0.04					OB										
0.04	3.00	2.96	SM6				CO										
3.00	3.05	0.05					UN										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
FH1	658,358.00	5,465,602.61	2,000.16	736.58					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	6.93	6.93					ST	SI									
6.93	11.00	4.07					SS	SA									
11.00	19.40	8.40					ST	SI									
19.40	23.20	3.80					ST	SI									
23.20	27.70	4.50					SS	SA									
27.70	30.80	3.10					SS	SA									
30.80	31.38	0.58					CS	CO									
31.38	32.60	1.22					MS	MD									
32.60	34.03	1.43					MS	CL, MD									
34.03	34.65	0.62					SS	SA									
34.65	35.30	0.65					SS	SA									
35.30	36.52	1.22					CS	CO									
36.52	37.25	0.73					CS	CO									
37.25	41.70	4.45					ST	SI									
41.70	48.57	6.87					ST	ID, SI									
48.57	51.60	3.03					SS	ID, SA									
51.60	61.00	9.40					CS	CO									
61.00	62.38	1.38					CS	CO									
62.38	63.36	0.98					ST	ID, SI									
63.36	64.86	1.50					ST	FP, SI									
64.86	66.50	1.64					SS	ID, SA									
66.50	71.00	4.50					ST	CL, SI									
71.00	74.55	3.55					ST	CC, SI									
74.55	79.50	4.95					SS	SA									
79.50	82.40	2.90					SS	SA									
82.40	83.50	1.10					SS	XB, SA									
83.50	85.08	1.58					SS	SA									
85.08	90.87	5.79					CS	CO									
90.87	92.12	1.25					SS	PY, SA									
92.12	93.80	1.68					CS	FP, CO									
93.80	97.30	3.50					SS	PY, SA									
97.30	98.07	0.77					CS	CO									
98.07	98.47	0.40					ST	IB, SI									
98.47	103.60	5.13					SS	SA									
103.60	104.30	0.70					CS	CO									
104.30	108.10	3.80					SS	SA									
108.10	110.68	2.58					SS	SA									
110.68	113.40	2.72					CS	IB, CO									
113.40	114.57	1.17					SS	CO, SA									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
FH1	658,358.00	5,465,602.61	2,000.16	736.58					

Adjusted Depths

From	To	Thick	Seam	Shd Hue Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
114.57	117.15	2.58			CS	PB, CO									
117.15	118.83	1.68			MS	MD									
118.83	128.86	10.03			SS	SA									
128.86	132.58	3.72			SS	SA									
132.58	132.98	0.40	ZZ		CO	FK, CO									
132.98	135.55	2.57			MS	CO, MD									
135.55	137.14	1.59			SS	SA									
137.14	140.32	3.18			MS	PY, MD									
140.32	142.03	1.71			SS	CB, SA									
142.03	143.11	1.08			CS	CB, CO									
143.11	145.85	2.74			SS	SA									
145.85	148.05	2.20			CS	PB, CO									
148.05	150.00	1.95			MS	SF, MD									
150.00	156.09	6.09			MS	SF, MD									
156.09	159.50	3.41			MS	SF, MD									
159.50	162.00	2.50			MS	CB, MD									
162.00	167.95	5.95			MS	CL, MD									
167.95	170.07	2.12			MS	SA, MD									
170.07	171.80	1.73			SS	IB, SA									
171.80	175.85	4.05			ST	SA, SI									
175.85	177.96	2.11			MS	MD									
177.96	178.30	0.34	FLT		MS	FZ, FZ									
178.30	184.00	5.70			MS	FK, MD									
184.00	186.00	2.00			MS	CC, MD									
186.00	189.29	3.29			ST	SF, SI									
189.29	191.75	2.46			SS	SF, SA									
191.75	204.38	12.63			SS	CB, SA									
204.38	205.90	1.52			MS	MD									
205.90	206.93	1.03			SS	BR, SA									
206.93	209.45	2.52			ST	SI									
209.45	214.65	5.20			SS	SA									
214.65	217.20	2.55			SS	SF, SA									
217.20	222.56	5.36			SS	SA									
222.56	225.60	3.04			SS	CB, SA									
225.60	226.50	0.90			SS	CB, SA									
226.50	229.00	2.50			SS	CU, SA									
229.00	231.14	2.14			SS	SF, SA									
231.14	236.90	5.76			SS	SA									
236.90	241.00	4.10			SS	CB, SA									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
FH1	658,358.00	5,465,602.61	2,000.16	736.58					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
241.00	243.00	2.00					MS	MD									
243.00	246.00	3.00					MS	SF, MD									
246.00	249.08	3.08					ST	SF, SI									
249.08	252.13	3.05					ST	CC, SI									
252.13	255.18	3.05					ST	SI									
255.18	258.23	3.05					SS	SA									
258.23	261.28	3.05					SS	SF, SA									
261.28	263.11	1.83					ST	SA, SI									
263.11	266.16	3.05					ST	CB, SI									
266.16	269.20	3.04					ST	CB, SI									
269.20	270.73	1.53					ST	IB, SI									
270.73	274.08	3.35					ST	CL, SI									
274.08	275.91	1.83					ST	CL, SI									
275.91	277.74	1.83					ST	IB, SI									
277.74	280.16	2.42					ST	SF, SI									
280.16	280.18	0.02	E1				CO	CO									
280.18	280.21	0.03	E1				MS	MD									
280.21	280.25	0.04	E1				CO	CO									
280.25	280.76	0.51	E1				CO	BK, CO									
280.76	280.88	0.12	E1				CO	MD, CO									
280.88	280.96	0.08	E1				CO	BK, CO									
280.96	282.32	1.36	E1				CO	CO									
282.32	282.62	0.30	E1				CO	BK, CO									
282.62	282.82	0.20	E1				MS	MD									
282.82	282.88	0.06	E1				CO	CO									
282.88	283.24	0.36	E1				MS	MD									
283.24	284.04	0.80	E1				CO	CO									
284.04	286.28	2.24					MS	MD									
286.28	289.02	2.74					ST	CB, SI									
289.02	289.94	0.92					MS	CL, MD									
289.94	292.17	2.23					SS	FK, SA									
292.17	293.80	1.63					ST	CL, SI									
293.80	297.86	4.06					SS	CL, SA									
297.86	302.90	5.04					ST	CB, SI									
302.90	306.70	3.80					MS	CB, MD									
306.70	309.35	2.65					ST	CL, SI									
309.35	311.43	2.08					ST	SI									
311.43	313.25	1.82					SS	IB, SA									
313.25	316.15	2.90					SS	CB, SA									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
FH1	658,358.00	5,465,602.61	2,000.16	736.58					

Adjusted Depths

From	To	Thick	Seam	Shd Hue Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
316.15	316.98	0.83			SS	CB, SA									
316.98	319.33	2.35			SS	CB, SA									
319.33	321.90	2.57			SS	SA									
321.90	324.60	2.70			ST	SI									
324.60	326.65	2.05			SS	CB, SA									
326.65	329.88	3.23			ST	SA, SI									
329.88	332.00	2.12			SS	CB, SA									
332.00	333.84	1.84			MS	CB, MD									
333.84	336.20	2.36			ST	SI									
336.20	337.00	0.80			RC										
337.00	337.97	0.97			ST										
337.97	338.27	0.30			MS	SF, MD									
338.27	339.39	1.12	SM7		CO	CO									
339.39	341.76	2.37			MS	CO, MD									
341.76	342.70	0.94	SM7A		RC	MD									
342.70	345.43	2.73			MS	BK, MD									
345.43	348.47	3.04			MS	MD									
348.47	351.22	2.75			MS	MD									
351.22	353.66	2.44			MS	CB, MD									
353.66	357.87	4.21			SS	CB, SA									
357.87	360.67	2.80			ST	CL, SI									
360.67	361.65	0.98			MS	CB, MD									
361.65	366.70	5.05			ST	SI									
366.70	367.12	0.42			MS	FK, MD									
367.12	368.07	0.95	ZZ		CO	FK, CO									
368.07	371.44	3.37			MS	FK, MD									
371.44	374.67	3.23			ST	SA, SI									
374.67	375.52	0.85			ST	SA, SI									
375.52	379.26	3.74			ST	IB, SI									
379.26	381.70	2.44			SS	SA									
381.70	386.28	4.58			SS	CB, SA									
386.28	387.85	1.57			SS	FK, SA									
387.85	388.41	0.56	SM6		CO	CO									
388.41	389.01	0.60	SM6		CO	CO									
389.01	389.38	0.37			SS	SA									
389.38	393.60	4.22			SS	SA									
393.60	394.15	0.55			SS	CB, SA									
394.15	394.51	0.36			MS	MD									
394.51	396.05	1.54			MS	CO, MD									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
FH1	658,358.00	5,465,602.61	2,000.16	736.58					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
396.05	397.05	1.00	ZZ				CO	BK, CO									
397.05	397.85	0.80					MS	MD									
397.85	398.25	0.40					MS	CO, MD									
398.25	398.88	0.63					MS	MD									
398.88	399.36	0.48	SM5				CO	MD, CO									
399.36	399.46	0.10	SM5				CO	CO									
399.46	399.54	0.08	SM5				MS	MD									
399.54	399.66	0.12	SM5				CO	CO									
399.66	399.84	0.18	SM5				CO	CO									
399.84	399.88	0.04	SM5				MS	MD									
399.88	399.98	0.10	SM5				CO	MD, CO									
399.98	402.13	2.15					ST	SI									
402.13	406.70	4.57					ST	SF, SI									
406.70	409.45	2.75					ST	SF, SI									
409.45	413.41	3.96					ST	CC, SI									
413.41	416.47	3.06					ST	VE, SI									
416.47	416.87	0.40					MS	MD									
416.87	422.56	5.69					ST	CC, SI									
422.56	425.91	3.35					ST	SF, SI									
425.91	428.96	3.05					ST	SF, SI									
428.96	432.00	3.04					MS	SF, MD									
432.00	436.28	4.28					MS	CB, MD									
436.28	442.07	5.79					ST	CB, SI									
442.07	450.80	8.73					ST	MD, SI									
450.80	454.27	3.47					ST	MD, SI									
454.27	460.00	5.73					MS	CB, MD									
460.00	466.00	6.00					ST	FS, SI									
466.00	467.68	1.68					MS	BK, MD									
467.68	472.55	4.87					ST	SI									
472.55	476.78	4.23					MS	CB, MD									
476.78	482.62	5.84					ST	CC, SI									
482.62	485.07	2.45					ST	IB, SI									
485.07	490.85	5.78					MS	SF, MD									
490.85	493.60	2.75					ST	BK, SI									
493.60	495.73	2.13					ST	FK, SI									
495.73	502.18	6.45					MS	BK, MD									
502.18	508.23	6.05					ST	CC, SI									
508.23	509.53	1.30					SS	BK, SA									
509.53	513.11	3.58					ST	SI									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
FH1	658,358.00	5,465,602.61	2,000.16	736.58					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
513.11	513.35	0.24	ZZ				CO	CO									
513.35	513.51	0.16	ZZ				MS	MD									
513.51	513.92	0.41	ZZ				CO	CO									
513.92	514.04	0.12	ZZ				MS	MD									
514.04	514.42	0.38	ZZ				CO	SI, CO									
514.42	515.53	1.11					MS	MD									
515.53	518.60	3.07	FLT				ST	FK, SI									
518.60	522.45	3.85					ST	CC, SI									
522.45	523.85	1.40					MS	BR, MD									
523.85	528.15	4.30	FLT				SS	BR, SA									
528.15	535.36	7.21	FLT				SS	BR, SA									
535.36	546.60	11.24					SS	SF, SA									
546.60	550.91	4.31					MS	BK, MD									
550.91	566.16	15.25	SM1				CO	BK, CO									
566.16	566.77	0.61					MS	BK, MD									
566.77	568.28	1.51					MS	CB, MD									
568.28	570.47	2.19	ZZ				RC	CB, MD									
570.47	576.22	5.75	FLT				ST	FK, SI									
576.22	578.05	1.83					MS	CB, MD									
578.05	581.20	3.15					ST	SI									
581.20	584.14	2.94					MS	CB, MD									
584.14	589.02	4.88					ST	CB, SI									
589.02	595.52	6.50					ST	FK, SI									
595.52	599.00	3.48					ST	FK, SI									
599.00	603.05	4.05	FLT				ST	SF, SI									
603.05	609.03	5.98					ST	SI									
609.03	617.07	8.04	YY				CO	FS, CO									
617.07	619.51	2.44					ST	IB, SI									
619.51	625.60	6.09					ST	SI									
625.60	628.05	2.45					ST	SI									
628.05	632.19	4.14					ST	CC, SI									
632.19	637.87	5.68	ZZ				CO	FK, CO									
637.87	642.07	4.20					MS	MD									
642.07	643.06	0.99					MS	FK, MD									
643.06	649.02	5.96					MS	FK, MD									
649.02	649.82	0.80	YY				CO	BK, CO									
649.82	655.18	5.36					MS	CB, MD									
655.18	656.00	0.82					MS	CB, MD									
656.00	656.60	0.60					ST	BI, SI									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
FH1	*658,358.00*	*5,465,602.61*	*2,000.16*	*736.58*					

Adjusted Depths

From	To	Thick	Seam	Shd Hue Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
656.60	657.40	0.80			MS	MD									
657.40	657.75	0.35			SS	SF, SA									
657.75	661.28	3.53			MS	CB, MD									
661.28	664.33	3.05			ST	SI									
664.33	670.40	6.07			ST	CC, SI									
670.40	675.00	4.60			ST	CC, SI									
675.00	679.27	4.27			MS	SF, MD									
679.27	685.06	5.79			MS	MD									
685.06	685.90	0.84			SS	SA									
685.90	687.50	1.60			MS	SF, MD									
687.50	689.33	1.83			SS	BK, SA									
689.33	700.10	10.77			MS	BK, MD									
700.10	703.05	2.95			ST	SF, SI									
703.05	709.25	6.20			ST	CC, SI									
709.25	710.97	1.72			MS	BK, MD									
710.97	711.49	0.52	MB		CO	BK, CO									
711.49	712.04	0.55			MS	BK, MD									
712.04	712.50	0.46			ST	CC, SI									
712.50	717.07	4.57			ST	SF, SI									
717.07	720.60	3.53			MS	CB, MD									
720.60	725.61	5.01			ST	FK, SI									
725.61	729.80	4.19			ST	CB, SI									
729.80	732.32	2.52			SS	BK, SA									
732.32	734.07	1.75			SS	BI, SA									
734.07	735.05	0.98			SS	CB, SA									
735.05	736.58	1.53			SS	CB, SA									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
J-4	*653,390.08*	*5,469,144.20*	*1,936.50*	*420.00*					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	360.11	360.11					OB										
360.11	360.36	0.25					BSH										
360.36	360.61	0.25					BSH										
360.61	360.71	0.10					BSH										
360.71	360.82	0.11					BSH										
360.82	361.04	0.22					CO										
361.04	361.08	0.04					CS										
361.08	361.09	0.01					BSH										
361.09	361.13	0.04					CO										
361.13	361.17	0.04					CS										
361.17	361.22	0.05					BSH										
361.22	361.28	0.06					CS										
361.28	361.69	0.41					BSH										
361.69	361.79	0.10					BSH										
361.79	361.96	0.17					BSH										
361.96	361.98	0.02					CLSH										
361.98	369.98	8.00					CLSH										
369.98	370.00	0.02					CLSH										
370.00	370.44	0.44	SM7				CO										
370.44	370.50	0.06	SM7				CS										
370.50	370.53	0.03	SM7				CO										
370.53	370.63	0.10	SM7				CO										
370.63	371.35	0.72	SM7				CO										
371.35	371.37	0.02	SM7				CO										
371.37	371.88	0.51	SM7				CO										
371.88	372.49	0.61	SM7				CO										
372.49	373.30	0.81	SM7				CO										
373.30	373.64	0.34	SM7				CO										
373.64	373.73	0.09	SM7				CO										
373.73	374.24	0.51	SM7				CO										
374.24	374.32	0.08					CS										
374.32	374.54	0.22					BSH										
374.54	374.63	0.09					CO										
374.63	374.86	0.23					BSH										
374.86	375.01	0.15					BSH										
375.01	375.06	0.05					CO										
375.06	375.24	0.18					SH										
375.24	375.30	0.06					CS										
375.30	375.36	0.06					CO										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
J-4	*653,390.08*	*5,469,144.20*	*1,936.50*	*420.00*					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
375.36	375.42	0.06					BSH										
375.42	375.48	0.06					CS										
375.48	375.53	0.05					BSH										
375.53	375.66	0.13					CS										
375.66	375.84	0.18					BSH										
375.84	376.00	0.16					BSH										
376.00	376.11	0.11					SH										
376.11	376.24	0.13					CLSH										
376.24	376.27	0.03					BSH										
376.27	376.30	0.03					CS										
376.30	401.76	25.46					IB										
401.76	404.15	2.39					SSSH										
404.15	404.19	0.04					BSH										
404.19	404.25	0.06					CS										
404.25	404.95	0.70	SM6				CO										
404.95	405.13	0.18	SM6				CO										
405.13	405.28	0.15	SM6				BSH										
405.28	405.54	0.26	SM6				CO										
405.54	405.62	0.08	SM6				CS										
405.62	405.82	0.20	SM6				CO										
405.82	406.02	0.20					CS										
406.02	406.07	0.05					BSH										
406.07	406.13	0.06					CS										
406.13	406.26	0.13					BSH										
406.26	406.38	0.12					CS										
406.38	406.46	0.08					BSH										
406.46	406.55	0.09					CO										
406.55	406.64	0.09					CS										
406.64	406.69	0.05					BSH										
406.69	406.97	0.28					CO										
406.97	407.25	0.28					BSH										
407.25	407.29	0.04					CS										
407.29	407.37	0.08					SH										
407.37	408.85	1.48					SSH										
408.85	410.60	1.75					SH										
410.60	410.74	0.14					SSH										
410.74	412.13	1.39					SS										
412.13	412.24	0.11					SS										
412.24	412.43	0.19					SSH										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
J-4	653,390.08	5,469,144.20	1,936.50	420.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
412.43	413.12	0.69					BSH										
413.12	413.65	0.53	SM5				CO										
413.65	413.70	0.05	SM5				CS										
413.70	413.93	0.23	SM5				BSH										
413.93	414.06	0.13	SM5				CO										
414.06	414.11	0.05	SM5				BSH										
414.11	414.16	0.05	SM5				CO										
414.16	414.52	0.36	SM5				SH										
414.52	414.53	0.01	SM5				CO										
414.53	414.57	0.04	SM5				SH										
414.57	414.61	0.04	SM5				CS										
414.61	414.66	0.05	SM5				SH										
414.66	414.69	0.03	SM5				CS										
414.69	414.80	0.11	SM5				BSH										
414.80	415.29	0.49	SM5				CO										
415.29	415.40	0.11					CS										
415.40	415.48	0.08					SH										
415.48	415.54	0.06					BSH										
415.54	420.00	4.46					UB										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
J-5	655,692.49	5,467,692.75	1,832.50	325.00					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	259.51	259.51					OB										
259.51	259.78	0.27				G	SSSH										
259.78	259.97	0.19					SS										
259.97	260.12	0.15				G	SSSH										
260.12	260.21	0.09				K	SH										
260.21	260.29	0.08	ZZ				BNCO										
260.29	260.39	0.10	ZZ				CS										
260.39	260.90	0.51	ZZ				CO										
260.90	261.08	0.18					CS										
261.08	261.40	0.32				K	SH										
261.40	261.67	0.27				K	SH										
261.67	262.13	0.46	SM7				CO										
262.13	262.76	0.63	SM7				CO										
262.76	263.96	1.20	SM7				CO										
263.96	264.06	0.10					CS										
264.06	313.60	49.54					IB										
313.60	314.25	0.65	SM6				CO										
314.25	314.55	0.30	SM6				CO										
314.55	315.01	0.46	SM6				CO										
315.01	315.11	0.10	SM6				CO										
315.11	315.16	0.05	SM6			K	SH										
315.16	315.31	0.15	SM6				CO										
315.31	315.39	0.08	SM6				CO										
315.39	315.47	0.08	SM6				CO										
315.47	315.83	0.36	SM6				CO										
315.83	316.08	0.25				K	SH										
316.08	316.14	0.06					CS										
316.14	316.34	0.20					CO										
316.34	316.51	0.17				K	SH										
316.51	316.71	0.20					CO										
316.71	316.76	0.05					CS										
316.76	316.99	0.23					CO										
316.99	317.07	0.08					CS										
317.07	317.23	0.16				K	SH										
317.23	317.36	0.13					CS										
317.36	317.42	0.06				K	SH										
317.42	317.55	0.13					CS										
317.55	317.63	0.08					CS										
317.63	318.64	1.01	SM5				CO										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
J-5	*655,692.49*	*5,467,692.75*	*1,832.50*	*325.00*					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
318.64	318.73	0.09	SM5			K	RC										
318.73	319.58	0.85	SM5				CO										
319.58	319.68	0.10	SM5			K	RC										
319.68	320.34	0.66	SM5				CO										
320.34	320.57	0.23	SM5				CO										
320.57	320.62	0.05	SM5			K	SH										
320.62	320.65	0.03	SM5				CS										
320.65	320.66	0.01	SM5				CO										
320.66	320.67	0.01	SM5				CS										
320.67	320.95	0.28	SM5				CO										
320.95	325.00	4.05					UB										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
LP101	663,738.06	5,464,843.30	1,937.00	368.80					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	4.60	4.60					CASE										
4.60	5.30	0.70	SM7				RC										
5.30	5.90	0.60	SM7				CASE										
5.90	8.00	2.10	SM7				CO										
8.00	15.58	7.58					CASE										
15.58	15.68	0.10					SS										
15.68	17.65	1.97					SS										
17.65	17.85	0.20					RC										
17.85	18.05	0.20					SH										
18.05	20.41	2.37					SS										
20.41	20.71	0.30					ST										
20.71	21.30	0.59					SH										
21.30	23.67	2.37					SS										
23.67	25.25	1.58					SH	CB									
25.25	25.74	0.49					RC										
25.74	27.51	1.78					SH										
27.51	28.50	0.99					ST										
28.50	29.88	1.38					SS										
29.88	30.28	0.39					ST										
30.28	34.32	4.04					SH										
34.32	37.97	3.65					ST										
37.97	41.22	3.25					SH										
41.22	41.42	0.20					RC										
41.42	41.80	0.38					SH										
41.80	42.70	0.90	SM6				CO										
42.70	43.20	0.50					SH										
43.20	43.60	0.40					RC										
43.60	44.87	1.27					SH										
44.87	45.46	0.59					RC										
45.46	46.55	1.08					SH	SI									
46.55	49.70	3.16					SH										
49.70	54.14	4.44					STSH										
54.14	57.10	2.96					SH	CB									
57.10	59.40	2.30	SM5				CO	SH									
59.40	60.00	0.60					CS										
60.00	60.10	0.10					CO										
60.10	67.08	6.98					STSS										
67.08	67.38	0.30					SH										
67.38	67.68	0.30					ST										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
LP101	663,738.06	5,464,843.30	1,937.00	368.80					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
67.68	70.31	2.63					SS										
70.31	73.25	2.93					STSS	IB									
73.25	73.75	0.51					SH										
73.75	74.16	0.40	SM4R				CO	SH									
74.16	74.56	0.40	SM4R				RC										
74.56	75.17	0.61					SH										
75.17	84.47	9.30					ST										
84.47	86.10	1.63	SM4				CO	SH									
86.10	86.20	0.10	SM4				RC										
86.20	96.10	9.90					STSS	IB									
96.10	97.80	1.70	SM4L				RC	SH									
97.80	110.44	12.64					ST										
110.44	111.23	0.79					SS										
111.23	113.60	2.37					ST										
113.60	113.70	0.10					SH										
113.70	114.10	0.40					RC										
114.10	114.70	0.60					SH										
114.70	115.30	0.60	SM3A				RC										
115.30	116.80	1.50	SM3A				CO										
116.80	117.20	0.40	SM3A				RC										
117.20	117.90	0.70	SM3A				CO										
117.90	118.20	0.30	SM3A				RC										
118.20	119.00	0.80	SM3A				CO										
119.00	119.80	0.80					ST										
119.80	120.36	0.56					SH	CO									
120.36	121.02	0.67					SH										
121.02	121.80	0.78					CS										
121.80	122.20	0.40	ZZ				CO	SH									
122.20	122.60	0.40	ZZ				RC										
122.60	123.20	0.60	ZZ				CO										
123.20	126.20	3.00					SH	CB									
126.20	126.50	0.30					RC										
126.50	127.60	1.10					CS										
127.60	128.00	0.40					SH										
128.00	130.60	2.60					SS										
130.60	131.50	0.90					ST										
131.50	132.30	0.80					SH										
132.30	143.50	11.20					SS										
143.50	144.30	0.80					SH										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
LP101	663,738.06	5,464,843.30	1,937.00	368.80					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
144.30	146.80	2.50					SS										
146.80	149.00	2.20					SH										
149.00	149.50	0.50					ST										
149.50	161.20	11.70					SS										
161.20	162.60	1.40					ST										
162.60	170.70	8.10					SS										
170.70	180.70	10.00					SH										
180.70	181.70	1.00	SM1				CO										
181.70	182.20	0.50	SM1				RC										
182.20	186.80	4.60	SM1				CO										
186.80	188.40	1.60	SM1				CS										
188.40	189.70	1.30	SM1				CO										
189.70	190.10	0.40	SM1				RC										
190.10	191.00	0.90	SM1				CO										
191.00	193.90	2.90	SM1				RC										
193.90	194.20	0.30	SM1				CS										
194.20	196.00	1.80					ST										
196.00	196.80	0.80					SH										
196.80	197.74	0.94					ST										
197.74	202.00	4.26					STSH										
202.00	204.20	2.20					STSH										
204.20	205.21	1.01					CY	FT									
205.21	207.54	2.33					SS										
207.54	210.27	2.73					ST										
210.27	232.23	21.96					SS										
232.23	233.75	1.52					SH										
233.75	251.65	17.91					SS										
251.65	251.96	0.30					SH										
251.96	255.30	3.34					SS										
255.30	256.61	1.32					SH										
256.61	264.10	7.49					SS	SI									
264.10	264.50	0.40					CO										
264.50	266.81	2.31					SH										
266.81	270.32	3.51					SS										
270.32	272.53	2.21					SH	SA									
272.53	297.51	24.98					SS										
297.51	301.02	3.51					STSS	IB									
301.02	319.18	18.16					SS										
319.18	323.09	3.91					SH										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
LP101	*663,738.06*	*5,464,843.30*	*1,937.00*	*368.80*					

Adjusted Depths

From	To	Thick	Seam	Shd	Hue	Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
323.09	325.60	2.51					SS	CR									
325.60	329.00	3.40					CO	BN									
329.00	362.68	33.68					SS										
362.68	368.80	6.12					SH	SA									

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
MS_18_01	*657,440.40*	*5,464,904.41*	*1,963.60*	*4.20*					

Adjusted Depths

From	To	Thick	Seam	Shd Hue Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	0.40	0.40			COSH										
0.40	1.20	0.80	SM5		CO										
1.20	2.00	0.80	SM5		COSH										
2.00	2.90	0.90	SM5		CO										
2.90	3.10	0.20	SM5		CO										
3.10	4.00	0.90			COMS										
4.00	4.20	0.20			CS										

Drill Hole Lithology Summary

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Azimuth	Inclin
MS_18_02	*657,426.00*	*5,464,860.00*	*1,938.00*	*2.50*					

Adjusted Depths

From	To	Thick	Seam	Shd Hue Clr	Lith Type	Lithologic Qualifiers	GrSize	Sort	Mch St	Bed Sp	Sed Str	Weath	IntrRel	Gas	MnFoss
0.00	0.05	0.05			CS										
0.05	0.10	0.05	SM4		CO										
0.10	0.20	0.10	SM4		CS										
0.20	0.30	0.10	SM4		CO										
0.30	0.45	0.15	SM4		CS										
0.45	0.65	0.20	SM4		CO										
0.65	0.80	0.15	SM4		CS										
0.80	0.90	0.10	SM4		CO										
0.90	1.30	0.40	SM4		COSH	IB									
1.30	1.45	0.15	SM4		CO										
1.45	1.75	0.30	SM4		CS										
1.75	2.05	0.30	SM4		CO										
2.05	2.35	0.30	SM4		RC										
2.35	2.50	0.15			CS										

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
DH_18_02	*658,509.55*	*5,464,911.86*	*1,963.19*	*400.00*				*_Exploration*	*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
	DH_18_02_01	supplemental	190.50	191.50	190.20	190.90	0.70		☑	☑	☑	☐	☐	☐	☑
	DH_18_02_02	supplemental	193.50	196.00	193.50	196.00	2.50		☑	☑	☑	☐	☐	☐	☑
E1	DH_18_02_03	Incremental	227.50	228.50	227.50	228.50	1.00		☑	☑	☑	☐	☐	☐	☐
E1	18_02_Comp_01	Washed_Comp	227.50	230.00	227.50	229.70	2.20		☑	☑	☑	☐	☐	☐	☑
E1	DH_18_02_04	Incremental	228.50	229.00	228.50	229.00	0.50		☑	☑	☑	☐	☐	☐	☐
E1	DH_18_02_05	Incremental	229.00	230.00	229.00	229.70	0.70		☑	☑	☑	☐	☐	☐	☐
	DH_18_02_06	floor	230.00	230.50	229.70	230.20	0.50		☑	☐	☐	☐	☐	☐	☑
E0	DH_18_02_07	Both	257.00	258.00	256.80	257.60	0.80		☑	☑	☑	☐	☐	☐	☑
	DH_18_02_08	supplemental	283.00	284.00	283.40	284.40	1.00		☑	☑	☑	☐	☐	☐	☑
	DH_18_02_09	supplemental	284.00	284.50	284.40	284.90	0.50		☑	☐	☐	☐	☐	☐	☑
	DH_18_02_10	supplemental	284.50	285.00	284.90	285.40	0.50		☑	☑	☑	☐	☐	☐	☑
SM6	DH_18_02_11	Both	350.50	352.50	350.60	352.20	1.60		☑	☑	☑	☐	☐	☐	☑
	DH_18_02_12	floor	352.50	353.00	352.20	352.70	0.50		☑	☐	☐	☐	☐	☐	☑
SM5	DH_18_02_13	Both	360.50	363.00	360.50	362.40	1.90		☑	☑	☑	☐	☐	☐	☑

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
DH_18_03	*658,034.48*	*5,464,685.31*	*2,007.19*	*366.00*				*_Exploration*	*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
	DH_18_03_01	supplemental	18.00	20.50	18.00	20.50	2.50		☑	☑	☑	☐	☐	☐	☑
	DH_18_03_02	supplemental	29.50	31.50	29.50	31.50	2.00		☑	☑	☑	☐	☐	☐	☑
E2	DH_18_03_03	Both	38.00	39.50	37.40	38.55	1.15		☑	☑	☑	☐	☐	☐	☑
E1	DH_18_03_04	Both	42.00	45.50	41.80	45.30	3.50		☑	☑	☑	☐	☐	☐	☑
E0	DH_18_03_05	Both	73.00	75.50	72.50	74.70	2.20		☑	☑	☑	☐	☐	☐	☑
	DH_18_03_06	supplemental	120.50	122.00	120.50	122.00	1.50		☑	☑	☑	☐	☐	☐	☑
SM5	DH_18_03_07	Both	179.50	183.00	179.00	182.50	3.50		☑	☑	☑	☐	☐	☐	☑
SM4R	DH_18_03_08	Incremental	200.50	203.00	200.10	202.20	2.10		☑	☑	☑	☐	☐	☐	☑
SM4	DH_18_03_09	Both	208.00	212.00	207.50	210.80	3.30		☑	☑	☑	☐	☐	☐	☑
SM3A	DH_18_03_10	Both	261.00	269.50	261.00	267.00	6.00		☑	☑	☑	☐	☐	☐	☑
	DH_18_03_11	supplemental	271.00	275.00	271.00	275.00	4.00		☑	☑	☑	☐	☐	☐	☑
	DH_18_03_12	supplemental	305.00	307.00	305.00	307.00	2.00		☑	☑	☑	☐	☐	☐	☑
SM1	DH_18_03_13	Incremental	336.00	342.50	335.00	341.50	6.50		☑	☑	☑	☐	☐	☐	☐
SM1	18_03_Comp_07	Washed_Comp	336.00	347.50	335.00	345.50	10.50		☑	☑	☑	☐	☐	☐	☑
SM1	DH_18_03_14	Incremental	343.00	345.00	341.50	343.50	2.00		☑	☑	☑	☐	☐	☐	☐
SM1	DH_18_03_15	Incremental	345.50	347.50	343.50	345.50	2.00		☑	☑	☑	☐	☐	☐	☐

Drill Hole Sample Definitions

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Mine Area	Modeled
DH_18_03C	*658,031.61*	*5,464,684.48*	*2,007.02*	*220.00*				*_Exploration*	*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
	DH_18_03C_01	Incremental	36.17	36.56	36.60	36.99	0.39		✓	✓	✓	✓			✓
	DH_18_03C_02	Incremental	38.60	38.90	36.99	37.50	0.51		✓						✓
	DH_18_03C_03	roof	40.70	40.87	40.63	40.80	0.17		✓						✓
E1	DH_18_03C_04	Both	40.87	43.50	40.80	43.20	2.40		✓	✓	✓	✓			✓

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
DH_18_04	*657,619.79*	*5,465,061.58*	*2,024.94*	*320.00*				*_Exploration*	*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
SM6	DH_18_04_01	incremental	102.00	104.50	101.30	103.90	2.60		☑	☑	☑	☐	☐	☐	☑
SM5	DH_18_04_02	Incremental	106.00	109.50	105.40	108.90	3.50		☑	☑	☑	☐	☐	☐	☑
SM4R	DH_18_04_03	Incremental	133.00	134.50	132.00	133.50	1.50		☑	☑	☑	☐	☐	☐	☑
	DH_18_04_04	parting	134.50	135.50	133.50	134.30	0.80		☑	☐	☐	☐	☐	☐	☑
SM4	DH_18_04_05	Both	135.50	139.00	134.30	138.00	3.70		☑	☑	☑	☐	☐	☐	☑
	DH_18_04_06	floor	139.00	140.00	138.00	139.00	1.00		☑	☐	☐	☐	☐	☐	☑
	DH_18_04_07	floor	140.50	141.50	139.00	140.00	1.00		☑	☐	☐	☐	☐	☐	☑
SM3B	DH_18_04_08	Incremental	186.00	187.50	185.20	186.50	1.30		☑	☑	☐	☐	☐	☐	☐
SM3A	103738-008-009	Washed_Comp	186.00	197.50	185.20	196.60	11.40		☑	☑	☑	☐	☐	☐	☑
SM3A	DH_18_04_09	Incremental	187.50	197.50	186.50	196.60	10.10		☑	☑	☑	☐	☐	☐	☐
	DH_18_04_10	floor	197.50	201.00	196.60	200.70	4.10		☑	☑	☑	☐	☐	☐	☑
	DH_18_04_11	roof	271.00	272.00	270.40	271.40	1.00		☑	☑	☐	☐	☐	☐	☑
SM1	DH_18_04_12	Incremental	272.00	284.00	271.40	283.20	11.80		☑	☑	☑	☐	☐	☐	☑
	DH_18_04_13	floor	284.00	285.00	283.20	284.20	1.00		☑	☐	☐	☐	☐	☐	☑

Drill Hole Sample Definitions

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Mine Area	Modeled
DH_18_05	*657,697.73*	*5,465,662.74*	*2,038.10*	*421.00*				*_Exploration*	*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
E2	DH_18_05_03	incremental	180.50	182.00	180.25	181.75	1.50		✓	✓	✓				
E2	103761-003-004	Washed_Comp	180.50	183.00	180.25	182.70	2.45		✓	✓					✓
E2	DH_18_05_04	Incremental	182.00	183.00	181.75	182.70	0.95		✓						
E2A	DH_18_05_05	Both	183.00	186.00	182.70	185.60	2.90		✓	✓	✓				✓
E1	DH_18_05_06	Incremental	201.00	203.50	200.40	203.00	2.60		✓	✓	✓				✓
E1	103761-006-008	Washed_Comp	201.00	205.50	200.40	205.70	5.30		✓		✓				
	DH_18_05_07	parting	203.50	204.00	203.00	203.90	0.90		✓						
E1A	DH_18_05_08	Incremental	204.00	205.50	203.90	205.70	1.80		✓	✓	✓				
SM6	DH_18_05_09	Both	322.00	325.00	321.50	324.60	3.10		✓	✓	✓				✓
SM5	DH_18_05_10	Incremental	333.00	335.50	333.00	335.40	2.40		✓	✓	✓				✓
SM4	DH_18_05_11	Incremental	349.00	354.00	348.00	351.60	3.60		✓	✓	✓				✓
SM3B	DH_18_05_12	Incremental	404.00	406.00	403.60	405.70	2.10		✓	✓	✓				
SM3B	18_05_Comp_01	Washed_Comp	404.00	407.00	403.60	406.50	2.90		✓	✓	✓				✓
SM3B	DH_18_05_13	Incremental	406.00	407.00	405.70	406.50	0.80		✓	✓	✓				
SM3A	DH_18_05_14	Incremental	407.00	417.00	406.50	416.50	10.00		✓	✓	✓				✓

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
DH_18_06	*657,117.96*	*5,466,283.47*	*2,082.14*	*402.00*				*_Exploration*	*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
E2	DH_18_06_01	Both	123.50	125.00	123.20	124.50	1.30		✓						✓
E1	DH_18_06_02	Both	131.50	135.50	131.30	134.80	3.50		✓						✓
SM6	DH_18_06_06	Both	296.00	298.50	294.70	297.60	2.90		✓	✓	✓				✓
	DH_18_06_07	parting	300.50	301.50	299.30	300.30	1.00		✓						✓
ZZ	DH_18_06_08	Incremental	301.50	302.50	300.30	301.10	0.80		✓						✓
	DH_18_06_09	roof	307.50	308.50	306.50	307.50	1.00		✓						✓
	DH_18_06_10	roof	308.50	309.50	307.50	308.50	1.00		✓						✓
SM5	DH_18_06_11	Incremental	309.50	310.50	308.50	309.60	1.10		✓						✓
SM3B	DH_18_06_13	Incremental	360.00	363.50	359.50	363.00	3.50		✓	✓	✓				
SM3B	103721-013-014	Washed_Comp	360.00	364.50	359.50	364.10	4.60		✓	✓	✓				✓
SM3B	DH_18_06_14	Incremental	363.50	364.50	363.00	364.10	1.10		✓	✓	✓				
SM3A	DH_18_06_15	Incremental	364.50	368.50	364.10	368.00	3.90		✓	✓	✓				
SM3A	103721-015-016	Washed_Comp	364.50	369.50	364.10	369.00	4.90		✓	✓	✓				✓
SM3A	DH_18_06_16	Incremental	368.50	369.50	368.00	369.00	1.00		✓	✓	✓				
SM3L	DH_18_06_17	Incremental	370.50	372.00	370.00	371.70	1.70		✓						✓
	DH_18_06_18	Incremental	372.00	377.00	371.70	376.50	4.80		✓						✓

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
DH_18_09	*658,430.44*	*5,464,306.76*	*2,053.54*	*455.00*				*_Exploration*	*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
	DH_18_09_01	Incremental	169.50	170.50	169.50	170.80	1.30		☑	☑	☑	☐	☐	☐	☑
E1	DH_18_09_02	Both	194.50	197.00	194.20	196.75	2.55		☑	☑	☑	☐	☐	☐	☑
E0	DH_18_09_03	Both	221.50	223.00	221.00	222.10	1.10		☑	☑	☑	☐	☐	☐	☑
SM8	DH_18_09_04	Incremental	242.00	243.50	242.00	243.50	1.50		☑	☐	☐	☐	☐	☐	☑
	DH_18_09_05	Incremental	281.50	285.50	281.50	285.10	3.60		☑	☑	☑	☐	☐	☐	☑
	DH_18_09_06	Incremental	311.00	312.00	310.70	311.50	0.80		☑	☑	☑	☐	☐	☐	☑
SM6	DH_18_09_07	Both	320.00	323.00	320.20	322.90	2.70		☑	☑	☑	☐	☐	☐	☑
SM5	DH_18_09_08	Incremental	333.00	334.00	332.60	333.70	1.10		☑	☑	☑	☐	☐	☐	☑
SM4	DH_18_09_09	Both	355.50	358.00	355.10	357.50	2.40		☑	☑	☑	☐	☐	☐	☑
SM3A	DH_18_09_10	Both	358.50	367.50	400.00	409.00	9.00		☑	☑	☑	☐	☐	☐	☑

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
DH_18_10	*659,121.10*	*5,464,082.70*	*1,946.74*	*438.00*				*_Exploration*	*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
ZZ	DH_18_10_01	Both	116.00	117.00	115.90	117.00	1.10		✓						✓
	DH_18_10_02	parting	139.50	140.50	139.80	140.60	0.80		✓						✓
	DH_18_10_03	Incremental	143.00	144.00	143.60	144.60	1.00		✓						✓
E3	DH_18_10_04	Both	195.50	198.00	194.50	197.30	2.80		✓						✓
	DH_18_10_05	roof	259.00	260.00	258.30	259.60	1.30		✓						✓
E1	DH_18_10_06	Both	263.00	264.50	262.10	263.80	1.70		✓						✓
SM6	DH_18_10_07	Incremental	382.50	384.50	388.00	390.00	2.00		✓	✓	✓				
SM6	103764-007-008	Washed_Comp	382.50	385.50	388.00	390.60	2.60		✓	✓					✓
SM6	DH_18_10_08	Incremental	384.50	385.50	390.00	390.60	0.60		✓	✓	✓				
SM5	DH_18_10_09	Both	385.50	389.50	390.60	395.00	4.40		✓	✓	✓				✓
SM4	DH_18_10_10	Both	408.50	411.50	413.30	416.50	3.20		✓	✓	✓				✓

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
DH_18_11	*659,436.95*	*5,463,418.56*	*2,001.44*	*435.00*				*_Exploration*	*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
	DH_18_11_01	Incremental	169.50	170.50	169.20	169.90	0.70		[x]	[x]	[x]	[ ]	[ ]	[ ]	[x]
	DH_18_11_02	Incremental	340.00	341.00	340.00	340.70	0.70		[x]	[x]	[x]	[ ]	[ ]	[ ]	[x]
E1	DH_18_11_03	Both	342.50	344.00	342.20	343.70	1.50		[x]	[x]	[x]	[ ]	[ ]	[ ]	[x]
SM7	DH_18_11_04	Both	402.50	403.50	402.30	403.30	1.00		[x]	[x]	[x]	[ ]	[ ]	[ ]	[x]

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
F-1	*656,161.39*	*5,465,249.21*	*1,768.69*	*14.10*				*Adits*	*Yes*

	Sample		Raw Depths		Adjusted Depths											
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
SM1	F-1_01								☑	☐	☐	☐	☐	☐	☑

Drill Hole Sample Definitions

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Mine Area	Modeled
F-2	656,242.05	5,465,398.73	1,837.67	5.80				Adits	Yes

	Sample		Raw Depths		Adjusted Depths											
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
SM3	F-2_01								☑	☐	☐	☐	☐	☐	☑

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
F-3	*655,831.85*	*5,465,728.24*	*1,870.51*	*7.02*				*Adits*	*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
SM4	F-3_01		0.02	7.00	0.02	7.00	6.98		☑	☐	☐	☐	☐	☐	☑

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
F-4	*655,915.20*	*5,465,758.70*	*1,934.93*	*11.25*				*Adits*	*Yes*

Seam	Sample Number	Sample Type	Raw Depths From	Raw Depths To	Adjusted Depths From	Adjusted Depths To	Thick.	Comments	Proximate	Ultimate	MAA	Fusion	Other	OB Qual	In Model
SM5	F-4_01								☑	☐	☐	☐	☐	☐	☑

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
F-5	*655,828.94*	*5,466,013.69*	*1,923.89*	*6.05*				*Adits*	*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
SM7	F-5_01								☑	☐	☐	☐	☐	☐	☑

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
F-6	*655,909.60*	*5,465,795.76*	*1,939.00*	*3.05*				*Adits*	*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
SM6	F-6_01								☑	☐	☐	☐	☐	☐	☑

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
FH1	*658,358.00*	*5,465,602.61*	*2,000.16*	*736.58*				*Elko*	*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
E1	FH1_01a	both	280.16	284.04	280.16	284.04	3.88		☑	☐	☐	☐	☐	☐	☑
SM5	FH1_02a	both	398.88	399.66	398.88	399.66	0.78		☑	☐	☐	☐	☐	☐	☑
SM1	FH1_03a	both	550.91	566.16	550.91	566.16	15.25		☑	☐	☐	☐	☐	☐	☑
	FH1_04a	both	609.03	617.07	609.03	617.07	8.04		☑	☐	☐	☐	☐	☐	☑
	FH1_05a	both	632.19	637.87	632.19	637.87	5.68		☑	☐	☐	☐	☐	☐	☑
	FH1_06a	both	649.02	649.82	649.02	649.82	0.80		☑	☐	☐	☐	☐	☐	☑

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
J-4	*653,390.08*	*5,469,144.20*	*1,936.50*	*420.00*					*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
	J-4_01	incremental	360.82	361.04	360.82	361.04	0.22		☑	☐	☐	☐	☐	☐	☑
	J-4_02	incremental	361.09	361.13	361.09	361.13	0.04		☑	☐	☐	☐	☐	☐	☑
SM7	J-4_03	incremental	370.00	370.44	370.00	370.44	0.44		☑	☐	☐	☐	☐	☐	☐
SM7	J-4_Comp_01	Comp_Calc	370.00	374.24	370.00	374.24	4.24		☑	☐	☐	☐	☐	☐	☑
SM7	J-4_04	incremental	370.44	370.50	370.44	370.50	0.06		☑	☐	☐	☐	☐	☐	☐
SM7	J-4_05	incremental	370.50	370.53	370.50	370.53	0.03		☑	☐	☐	☐	☐	☐	☐
SM7	J-4_06	incremental	370.53	370.63	370.53	370.63	0.10		☑	☐	☐	☐	☐	☐	☐
SM7	J-4_07	incremental	370.63	371.35	370.63	371.35	0.72		☑	☐	☐	☐	☐	☐	☐
SM7	J-4_08	incremental	371.35	371.37	371.35	371.37	0.02		☑	☐	☐	☐	☐	☐	☐
SM7	J-4_09	incremental	371.37	371.88	371.37	371.88	0.51		☑	☐	☐	☐	☐	☐	☐
SM7	J-4_10	incremental	371.88	372.49	371.88	372.49	0.61		☑	☐	☐	☐	☐	☐	☐
SM7	J-4_11	incremental	372.49	373.30	372.49	373.30	0.81		☑	☐	☐	☐	☐	☐	☐
SM7	J-4_12	incremental	373.30	373.64	373.30	373.64	0.34		☑	☐	☐	☐	☐	☐	☐
SM7	J-4_13	incremental	373.64	373.73	373.64	373.73	0.09		☑	☐	☐	☐	☐	☐	☐
SM7	J-4_14	incremental	373.73	374.24	373.73	374.24	0.51		☑	☐	☐	☐	☐	☐	☐
	J-4_15	incremental	374.24	374.32	374.24	374.32	0.08		☑	☐	☐	☐	☐	☐	☑
	J-4_16	incremental	374.54	374.63	374.54	374.63	0.09		☑	☐	☐	☐	☐	☐	☑
	J-4_17	incremental	375.01	375.06	375.01	375.06	0.05		☑	☐	☐	☐	☐	☐	☑
	J-4_18	incremental	375.30	375.36	375.30	375.36	0.06		☑	☐	☐	☐	☐	☐	☑
	J-4_19	incremental	375.42	375.48	375.42	375.48	0.06		☑	☐	☐	☐	☐	☐	☑
	J-4_20	incremental	375.53	375.66	375.53	375.66	0.13		☑	☐	☐	☐	☐	☐	☑
	J-4_21	incremental	404.19	404.25	404.19	404.25	0.06		☑	☐	☐	☐	☐	☐	☑
SM6	J-4_22	incremental	404.25	404.95	404.25	404.95	0.70		☑	☐	☐	☐	☐	☐	☐
SM6	J-4_Comp_02	Comp_Calc	404.25	405.82	404.25	405.82	1.57		☑	☐	☐	☐	☐	☐	☑
SM6	J-4_23	incremental	404.95	405.13	404.95	405.13	0.18		☑	☐	☐	☐	☐	☐	☐
SM6	J-4_24	incremental	405.13	405.28	405.13	405.28	0.15		☑	☐	☐	☐	☐	☐	☐

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
J-4	*653,390.08*	*5,469,144.20*	*1,936.50*	*420.00*					*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
SM6	J-4_25	incremental	405.28	405.54	405.28	405.54	0.26		☑	☐	☐	☐	☐	☐	☐
SM6	J-4_26	incremental	405.54	405.62	405.54	405.62	0.08		☑	☐	☐	☐	☐	☐	☐
SM6	J-4_27	incremental	405.62	405.82	405.62	405.82	0.20		☑	☐	☐	☐	☐	☐	☐
	J-4_28	incremental	405.82	406.02	405.82	406.02	0.20		☑	☐	☐	☐	☐	☐	☑
	J-4_29	incremental	406.26	406.38	406.26	406.38	0.12		☑	☐	☐	☐	☐	☐	☑
	J-4_30	incremental	406.46	406.55	406.46	406.55	0.09		☑	☐	☐	☐	☐	☐	☑
	J-4_31	incremental	406.55	406.64	406.55	406.64	0.09		☑	☐	☐	☐	☐	☐	☑
	J-4_32	incremental	406.69	406.97	406.69	406.97	0.28		☑	☐	☐	☐	☐	☐	☑
SM5	J-4_33	incremental	413.12	413.65	413.12	413.65	0.53		☑	☐	☐	☐	☐	☐	☐
SM5	J-4_Comp_03	Comp_Calc	413.12	415.29	413.12	415.29	2.17		☑	☐	☐	☐	☐	☐	☑
SM5	J-4_34	incremental	413.93	414.06	413.93	414.06	0.13		☑	☐	☐	☐	☐	☐	☐
SM5	J-4_35	incremental	414.11	414.16	414.11	414.16	0.05		☑	☐	☐	☐	☐	☐	☐
SM5	J-4_36	incremental	414.52	414.53	414.52	414.53	0.01		☑	☐	☐	☐	☐	☐	☐
SM5	J-4_37	incremental	414.57	414.61	414.57	414.61	0.04		☑	☐	☐	☐	☐	☐	☐
SM5	J-4_38	incremental	414.66	414.69	414.66	414.69	0.03		☑	☐	☐	☐	☐	☐	☐
SM5	J-4_39	incremental	414.80	415.29	414.80	415.29	0.49		☑	☐	☐	☐	☐	☐	☐
	J-4_40	incremental	415.29	415.40	415.29	415.40	0.11		☑	☐	☐	☐	☐	☐	☑

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
J-5	*655,692.49*	*5,467,692.75*	*1,832.50*	*325.00*					*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
ZZ	J-5_01	incremental	260.21	260.29	260.21	260.29	0.08		☑	☐	☐	☐	☐	☐	☑
ZZ	J-5_02	incremental	260.29	260.39	260.29	260.39	0.10		☑	☐	☐	☐	☐	☐	☑
ZZ	J-5_03	incremental	260.39	260.90	260.39	260.90	0.51		☑	☐	☐	☐	☐	☐	☑
	J-5_04	incremental	260.90	261.08	260.90	261.08	0.18		☑	☐	☐	☐	☐	☐	☑
SM7	J-5_05	incremental	261.67	262.13	261.67	262.13	0.46		☑	☐	☐	☐	☐	☐	☐
SM7	J-5_Comp_01	Comp_Calc	261.67	263.96	261.67	263.96	2.29		☑	☐	☐	☐	☐	☐	☑
SM7	J-5_06	incremental	262.13	262.76	262.13	262.76	0.63		☑	☐	☐	☐	☐	☐	☐
SM7	J-5_07	incremental	262.76	263.96	262.76	263.96	1.20		☑	☐	☐	☐	☐	☐	☐
	J-5_08	incremental	263.96	264.06	263.96	264.06	0.10		☑	☐	☐	☐	☐	☐	☐
SM6	J-5_09	incremental	313.60	314.25	313.60	314.25	0.65		☑	☐	☐	☐	☐	☐	☐
SM6	J-5_Comp_02	Comp_Calc	313.60	315.83	313.60	315.83	2.23		☑	☐	☐	☐	☐	☐	☑
SM6	J-5_10	incremental	314.25	314.55	314.25	314.55	0.30		☑	☐	☐	☐	☐	☐	☐
SM6	J-5_11	incremental	314.55	315.01	314.55	315.01	0.46		☑	☐	☐	☐	☐	☐	☐
SM6	J-5_12	incremental	315.01	315.11	315.01	315.11	0.10		☑	☐	☐	☐	☐	☐	☐
SM6	J-5_13	incremental	315.16	315.31	315.16	315.31	0.15		☑	☐	☐	☐	☐	☐	☐
SM6	J-5_14	incremental	315.31	315.39	315.31	315.39	0.08		☑	☐	☐	☐	☐	☐	☐
SM6	J-5_15	incremental	315.39	315.47	315.39	315.47	0.08		☑	☐	☐	☐	☐	☐	☐
SM6	J-5_16	incremental	315.47	315.83	315.47	315.83	0.36		☑	☐	☐	☐	☐	☐	☐
	J-5_17	incremental	316.14	316.34	316.14	316.34	0.20		☑	☐	☐	☐	☐	☐	☑
	J-5_18	incremental	316.51	316.71	316.51	316.71	0.20		☑	☐	☐	☐	☐	☐	☑
	J-5_19	incremental	316.71	316.76	316.71	316.76	0.05		☑	☐	☐	☐	☐	☐	☑
	J-5_20	incremental	316.76	316.99	316.76	316.99	0.23		☑	☐	☐	☐	☐	☐	☑
	J-5_21	incremental	316.99	317.07	316.99	317.07	0.08		☑	☐	☐	☐	☐	☐	☑
	J-5_22	incremental	317.23	317.36	317.23	317.36	0.13		☑	☐	☐	☐	☐	☐	☑
	J-5_23	incremental	317.42	317.55	317.42	317.55	0.13		☑	☐	☐	☐	☐	☐	☑
	J-5_24	incremental	317.55	317.63	317.55	317.63	0.08		☑	☐	☐	☐	☐	☐	☑

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
J-5	*655,692.49*	*5,467,692.75*	*1,832.50*	*325.00*					*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
SM5	J-5_25	incremental	317.63	318.64	317.63	318.64	1.01		☑	☐	☐	☐	☐	☐	☐
SM5	J-5_Comp_03	Comp_Calc	317.63	320.95	317.63	320.95	3.32		☑	☐	☐	☐	☐	☐	☑
SM5	J-5_26	incremental	318.64	318.73	318.64	318.73	0.09		☑	☐	☐	☐	☐	☐	☐
SM5	J-5_27	incremental	318.73	319.58	318.73	319.58	0.85		☑	☐	☐	☐	☐	☐	☐
SM5	J-5_28	incremental	319.58	319.68	319.58	319.68	0.10		☑	☐	☐	☐	☐	☐	☐
SM5	J-5_29	incremental	319.68	320.34	319.68	320.34	0.66		☑	☐	☐	☐	☐	☐	☐
SM5	J-5_30	incremental	320.34	320.57	320.34	320.57	0.23		☑	☐	☐	☐	☐	☐	☐
SM5	J-5_31	incremental	320.62	320.65	320.62	320.65	0.03		☑	☐	☐	☐	☐	☐	☐
SM5	J-5_32	incremental	320.65	320.66	320.65	320.66	0.01		☑	☐	☐	☐	☐	☐	☐
SM5	J-5_33	incremental	320.66	320.67	320.66	320.67	0.01		☑	☐	☐	☐	☐	☐	☐
SM5	J-5_34	incremental	320.67	320.95	320.67	320.95	0.28		☑	☐	☐	☐	☐	☐	☐

Drill Hole Sample Definitions

Drill Hole	*Easting*	*Northing*	*Collar*	*Total Depth*	*Township*	*Range*	*Section*	*Mine Area*	*Modeled*
LP101	*663,738.06*	*5,464,843.30*	*1,937.00*	*368.80*				*Lodgepole*	*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
	78-234	washed	42.40	43.30	41.80	42.70	0.90		☑	☐	☐	☐	☐	☐	☑
	78-235	washed	43.30	43.80	42.70	43.20	0.50		☑	☐	☐	☐	☐	☐	☑
	78-236	washed	43.80	44.20	43.20	43.60	0.40		☑	☐	☐	☐	☐	☐	☑
SM5	78-237	washed	57.90	59.40	57.10	58.60	1.50		☑	☐	☐	☐	☐	☐	☐
SM5	lp101_comp_01	Washed_Comp	57.10	59.40	57.10	59.40	2.30		☑	☐	☐	☐	☐	☐	☑
SM5	78-238	washed	59.40	60.20	58.60	59.40	0.80		☑	☐	☐	☐	☐	☐	☐
	78-239	floor	60.20	60.50	59.40	59.70	0.30		☑	☐	☐	☐	☐	☐	☑
SM4	78-240	washed	84.55	86.20	84.55	86.20	1.65		☑	☐	☐	☐	☐	☐	☑
SM4L	78-241	washed	96.10	97.80	96.10	97.80	1.70		☑	☐	☐	☐	☐	☐	☑
SM3A	78-242	washed	113.88	118.47	113.70	118.20	4.50		☑	☐	☐	☐	☐	☐	☐
SM3A	lp101_comp_02	Washed_Comp	113.88	119.15	113.70	119.00	5.30		☑	☐	☐	☐	☐	☐	☑
SM3A	78-243	washed	118.47	119.15	118.20	119.00	0.80		☑	☐	☐	☐	☐	☐	☐
	78-244	washed	121.50	122.90	121.80	123.20	1.40		☑	☐	☐	☐	☐	☐	☑
SM1	78-245	washed	180.72	182.58	180.70	182.55	1.85		☑	☐	☐	☐	☐	☐	☐
SM1	lp101_comp_03	Washed_Comp	180.72	194.16	180.70	194.20	13.50		☑	☐	☐	☐	☐	☐	☑
SM1	78-246	washed	182.58	184.28	182.55	184.25	1.70		☑	☐	☐	☐	☐	☐	☐
SM1	78-247	washed	184.28	185.93	184.25	185.90	1.65		☑	☐	☐	☐	☐	☐	☐
SM1	78-248	washed	185.93	187.45	185.90	187.45	1.55		☑	☐	☐	☐	☐	☐	☐
SM1	78-249	washed	187.45	188.98	187.45	188.95	1.50		☑	☐	☐	☐	☐	☐	☐
SM1	78-250	washed	188.98	190.50	188.95	190.50	1.55		☑	☐	☐	☐	☐	☐	☐
SM1	78-251	washed	190.50	192.02	190.50	192.00	1.50		☑	☐	☐	☐	☐	☐	☐
SM1	78-252	washed	192.02	192.94	192.00	192.90	0.90		☑	☐	☐	☐	☐	☐	☐
SM1	78-253	washed	192.94	194.16	192.90	194.20	1.30		☑	☐	☐	☐	☐	☐	☐
	78-262	washed	324.85	325.63	325.60	326.40	0.80		☑	☐	☐	☐	☐	☐	☑
	78-263	washed	325.63	326.14	326.40	326.90	0.50		☑	☐	☐	☐	☐	☐	☑
	78-264	washed	326.14	326.64	326.90	327.40	0.50		☑	☐	☐	☐	☐	☐	☑

Drill Hole Sample Definitions

Drill Hole	Easting	Northing	Collar	Total Depth	Township	Range	Section	Mine Area	Modeled
LP101	*663,738.06*	*5,464,843.30*	*1,937.00*	*368.80*				*Lodgepole*	*Yes*

	Sample		Raw Depths		Adjusted Depths										
Seam	**Number**	**Type**	**From**	**To**	**From**	**To**	**Thick.**	**Comments**	**Proximate**	**Ultimate**	**MAA**	**Fusion**	**Other**	**OB Qual**	**In Model**
	78-265	washed	326.64	327.36	327.40	328.10	0.70		☑	☐	☐	☐	☐	☐	☑
	78-266	washed	327.36	328.30	328.10	329.00	0.90		☑	☐	☐	☐	☐	☐	☑