# Geochemical Sampling Report on the Sylvia Project

Omineca Mining Division Tenure Numbers: 896175

# 093E/14

# UTM Zone 09 (NAD 83) 617000E 5966500 N

Work performed September 21-26, 2016 By R. Keefe, S. Turford, and C. Lobermayer

> For Ken Galambos

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### Item 1: Summary

The Sylvia property consists of one claim totalling 476.894ha located 90km south of Houston. Access to the property is by a network of logging roads that connects to the provincial highway system at Houston. Alternatively, the Property is accessible year round by helicopter from Smithers, Houston or Terrace.

The region is host to numerous porphyry copper-gold deposits and prospects near the Property. The recently shuttered Huckleberry mine is situated 20km to the south and was a major producer of copper, molybdenum, silver and gold. The mine had been in production since October, 1997 and has produced 404.2 million kilograms of copper, 3.5 million kilograms of molybdenum, 4.9 million grams (143,855 ounces) of gold and 93.2 million grams (2.7 million ounces) of silver from 94.4 million tonnes of ore milled to the end of 2011. At December 31, 2014 the total mineral reserve estimate for the Main Zone Optimization pit (MZO) was 42.2 million tonnes grading 0.327% copper. Mining this additional reserve will extend the mine life through 2022 (Imperial Metals website, February 14, 2017). The Berg project, 558 million tonnes grading 0.30% Cu, 0.037% Mo, 0.11opt (3.77ppm) Ag (Terrane Metals website, February 20, 2013) lies 17km to the west of the Property.

The Sylvia showing (Minfile 093E 089) consists of a single percussion hole intercept that was drilled in 1974 by Hudson Bay Oil and Gas on the south edge of a granodiorite stock. The hole drilled into porphyry-style mineralization that reportedly assayed 0.33% copper and 0.02% molybdenum over the entire 63m (200') drilled using rotary air blast (RAB) drilling equipment. This included values as high as 0.635% copper, 0.132% molybdenum and 15ppm silver over 3.05m (10') (Kilby, 1974). The zone is at the inside edge of a crescent-shaped pyritic zone which has a maximum width of 400 to 500m and an arc length of about 2000m. This zone, which contains 1-5 per cent pyrite as fracture fillings and disseminations, straddles the south contact of the granodiorite stock. Volcanics adjacent to the stock are variably hornfelsed and locally cut by numerous fine-grained monzonite/quartz monzonite dikes. Subsequent diamond drilling in 1996 intersected similar widths but somewhat lower grades of mineralization in a four hole, 608m program. Twinning of percussion hole S-8 returned values of 0.19% Cu, 0.004% Mo, 1.8 ppm Ag over a 65m interval from 17.7m-82.7m (Belik, 1996).

Quest West surveys completed over the area have identified magnetic and gravity anomalies with striking similarities to those present at both the nearby Berg and Bergette deposits.

Exploration over much of the area is greatly hampered by widespread, glacial overburden. The 2016 exploration program consisted of additional geochemical sampling in an effort to see through this overburden.

The claims are 100% owned by the author, in partnership with Shawn Turford and Ralph Keefe of Francois Lake.

It is the author's opinion that high potential exists for significant porphyry-style coppermolybdenum-gold mineralization on the Property, in which bedrock exposures have been obscured by Quaternary glacial-derived sediment cover. Evidence of similarities in the Property to significant Porphyry deposits include: similar aged intrusive rocks, through-going structure related to major deposits, similar magnetic signatures and anomalous geochemical signatures.

Consequently a two-stage exploration program is recommended to test the potential of the property. Establish a grid to conduct detailed geochemical surveys (Ah and/or MMI) to expand the anomalies discovered in 2011 and 2016 at the Sylvia showing and for geophysical, magnetic and Induced Potential (IP) surveys to map possible structure and areas of higher sulphide content. Contingent second-stage work will include follow-up geochemistry, trenching of areas with shallower overburden and drilling.

### Item 2: Introduction

This report is being prepared for the owners for the purposes of filing assessment on the claims comprising the Sylvia property.

### 2.1 Qualified Person and Participating Personnel

Mr. Kenneth D. Galambos P.Eng. planned and with the assistance of Ralph Keefe, Shawn Turford and Chris Lobermayer conducted the current exploration program in order to do additional preliminary evaluations of the property and to make recommendations for the next phase of exploration work in order to test the economic potential of the area.

This report describes the property in accordance with the guidelines specified in National Instrument 43-101 and is based on historical information and additional geochemical evaluations of the property. The current field program was conducted September 21-26, 2016.

### 2.2 Terms, Definitions and Units

- All costs contained in this report are denominated in Canadian dollars.
- Distances are primarily reported in metres (m) and kilometers (km) and in feet (ft) when reporting historical data.
- GPS refers to global positioning system.
- Minfile showing refers to documented mineral occurrences on file with the British Columbia Geological Survey.
- The term ppm refers to parts per million, equivalent to grams per metric tonne (g/t).
- ppb refers to parts per billion.
- The abbreviation oz/t refers to troy ounces per imperial short ton.
- The symbol % refers to weight percent unless otherwise stated. 1% is equivalent to 10,000ppm.
- Elemental and mineral abbreviations used in this report include: arsenic (As), bismuth (Bi), cadmium (Cd), copper (Cu), gold (Au), molybdenum (Mo), silver (Ag), tellurium (Te), zinc (Zn); chalcopyrite (Cpy), pyrite (Py).

## 2.3 Source Documents

Sources of information are detailed below and include the available public domain information and private company data.

- Research of the Minfile data available for the area at http://www.empr.gov.bc.ca/Mining/Geoscience/MINFILE/Pages/default.aspx
- Research of mineral titles at https://www.mtonline.gov.bc.ca/mtov/home.do
- Review of company reports and annual assessment reports filed with the government at
- http://www.empr.gov.bc.ca/Mining/Geoscience/ARIS/Pages/default.aspx Review of geological maps and reports completed by the British Columbia
- Review of geological maps and reports completed by the British Columbia Geological Survey at http://www.empr.gov.bc.ca/Mining/Geoscience/MapPlace/MainMaps/Pages/defa ult.aspx .
- Published scientific papers on the geology and mineral deposits of the region and on mineral deposit types.
- Work on the property by R. Keefe and S. Turford from September 21-26, 2016

# 2.4 Limitations, Restrictions and Assumptions

The author has assumed that the previous documented work in the area of the property is valid and has not encountered any information to discredit such work. The author planned the current program which was completed independently by the co-owners of the claims in 2016.

# 2.5 Scope

This report describes the 2016 exploration program, geology, previous exploration history and mineral potential of the Sylvia Project. Research included a review of the historical work that related to the immediate and surrounding areas including that related to the Huckleberry mine and the Berg deposit. Regional geological data and current exploration information have been reviewed to determine the geological setting of the mineralization and to obtain an indication of the level of industry activity in the area. The property was evaluated by a program planned by Ken Galambos and completed by Ralph Keefe and Shawn Turford with the assistance of Chris Lobermayer. Work consisted of limited prospecting and rock sampling and the collection of 22 Ah-humus samples on two transects across the suspected trace of mineralization. The program was completed between September 21 and 26, 2016.

# Item 3: Reliance on Other Experts

Some data referenced in the preparation of this report was compiled by geologists employed by various companies in the mineral exploration field. These individuals would be classified as "qualified persons" today, although that designation did not exist when some of the historic work was done. The author believes the work completed and results reported historically to be accurate but assumes no responsibility for the interpretations and inferences made by these individuals prior to the inception of the "qualified person" designation.

## Item 4: Property Description and Location

The author controls one claim totalling 476.89ha located 90km south of Houston, BC, in north central British Columbia. The centre of the Property lies at approximately latitude 53°51'01"N and longitude 127°10' 51"W, on mapsheet 93E/14 in the Omineca Mining Division.

A listing of the tenures covering the Sylvia project is contained in Table 1 below.

Table 1. Claim Data

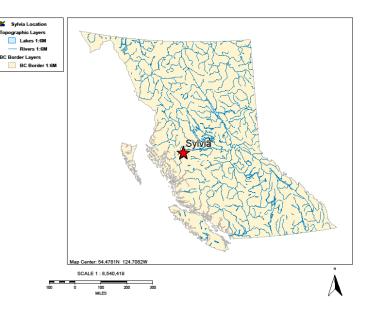


Figure 1: Property Location Map

Upon acceptance of this report for assessment purposes, the highlighted tenure will have Expiry dates moved to September 28, 2018.

Tenure #	Claim name Issue date		Issue date Expiry date Area in ha		Owner		
896175	5 Sylvia 2011/Sep/07		2018/Sep/28	476.89	Galambos, Ken 100%		
			Total area	1755.54			

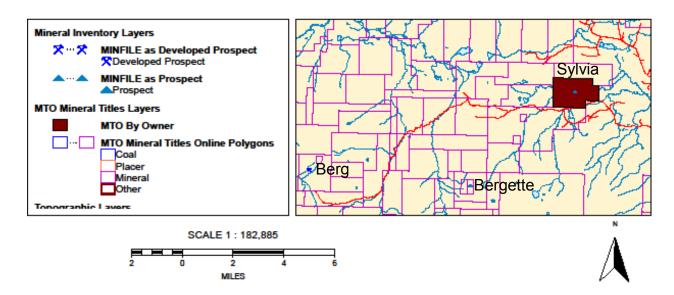


Figure 2: Project Claim map

The claims comprising the Sylvia property are being held as an exploration target for possible hardrock mining activities which may or may not be profitable. Any exploration completed will be subject to the application and receipt of necessary Mining Land Use Permits for the activities recommended in this report. There is no guarantee that this application process will be successful.

The Claims lie in the Traditional territories of a number of local First Nations and to date no dialog has been initiated with these First Nations regarding the property. There is no guarantee that approval for the proposed exploration will be received.

**Item 5:** Accessibility, Climate, Local Resources, Infrastructure and Physiography The Sylvia project area is situated in west-central British Columbia on mapsheet 93E14 approximately 20 km north of the Huckleberry mine site and 105km south of the community of Smithers, BC. The Property is accessible by a network of private logging roads to the west of the main access road into the area. The turnoff to the Sylvia property is at km 100.5 of the Huckleberry mine road. These secondary roads are usable during spring to fall, but are not reliably maintained when snow-covered. Connection from the provincial highway system is at Houston, BC, 65km east of Smithers and 307km west of Prince George. Alternatively, the Property is accessible year-round by helicopter from Smithers, Houston or Burns Lake. The claims lie within the Omineca Mining Division and are administered out of Smithers, BC.



Plate 1 Satellite image showing the Sylvia claims.

The property is situated along the north flank of the Sibola Range. Relief within the claim area is gentle to moderate. Elevations range from approximately 1030m to

1155m. The property is covered in part by mature stands of spruce, pine and balsam with interspersed swampy meadows. The central part of the property has been extensively logged and replanted over the past 20 years. Much of the remaining area south of Glacier Creek was logged in 2015.

Climate is transitional between that of the Coast Ranges and that of the Central Interior, with short cool summers, and long relatively mild winters. Annual temperature variation in the region is approximately -25 to +25 degrees Celsius. Snowpack in the winter ranges from approximately 1 to 4 metres, but has reached a maximum of 10 metres during the past 20 years. The operating season for ground based activities such as geological mapping, surface sampling and geophysical surveys would extend from approximately May to October.



Plate 2: Trapper's cabin near the Sylvia property

Lodging, groceries and helicopter charter are available in the small community of Houston while nearby centers such as Smithers and Terrace host regional airports serviced from Vancouver and businesses such as helicopter charter companies and building supply stores. Both communities support diamond drilling and exploration service companies and a pool of labour skilled in mining trades and professions. The immediate area to the project site contain adequate space for concentrator site, tailing ponds or waste dumps required in any contemplated mine operation. Power is available along the Huckleberry mine access road, 8km to the east.

### Item 6: History

Prospecting activity in the Tahtsa District dates back to the early 1900's and lead to the discovery of a number of polymetallic, precious metal vein and shear zone occurrences which were worked intermittently into the 1960's. A few of these deposits saw limited production.

During the porphyry exploration boom in the 1960's and early 1970's, numerous companies carried out large scale, helicopter-supported, regional prospecting and stream sediment sampling programs in the Tahtsa District which lead to the discovery of a large number of deposits including Huckleberry (91 million tonnes grading 0.52% Cu. 0.014% Mo), the Berg (506 million tonnes grading 0.30% Cu, 0.037% Mo), Bergette, Troitsa, Coles Creek, Poplar Lake, Whiting Creek, Ox Lake, Red Bird, Lucky Ship and Nanika.

In 1972 Hudson Bay Oil and Gas Limited completed an airborne magnetic survey covering about 1000 square miles including the area presently covered by the Sylvia and Pam claims. This survey was followed up the same year with preliminary reconnaissance mapping and geochemical sampling. Magnetic highs concealed by overburden were the primary targets selected for follow-up work by HBOG.

In 1973, HBOG carried out a large scale, reconnaissance IP survey to evaluate a number of magnetic features in a broad, low-relief area around the northern and eastern flanks of the Sibola Range. As a result of this work, HBOG staked a number of claim blocks including the Sylvia and Pam claim blocks which covered separate, coincident induced polarization/magnetic anomalies.

During 1974 and 1975 HBOG carried out follow-up geological, geochemical and geophysical surveys on the Slide, Sylvia and Pam claims and drilled 56 smalldiameter percussion holes totalling 9,815 feet. This drilling lead to the discovery of low-grade, porphyry-type, Cu/Mo mineralization on both the Sylvia and Pam claims. The best drill hole on the Sylvia occurrence averaged 0.33% Cu and 0.02% Mo over the entire bedrock interval of 63m.

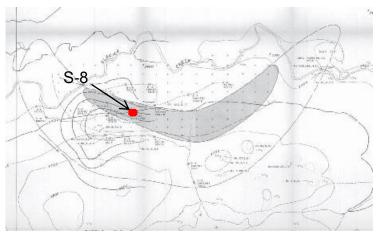


Figure 3: Copper zone and pyrite halo outlined by Hudson Bay Oil and Gas

In 1976, Rio Tinto Canadian Exploration Limited carried out a four-line detailed induced polarization/magnetic survey over part of the Sylvia claims. This survey, which was carried out as an orientation-type study over the significant mineralization intersected in the HBOG drill hole, confirmed the presence of a broad, very strong, easterly-trending,

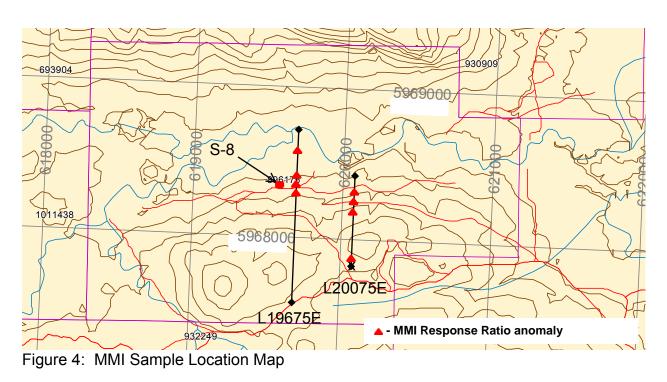
chargeability anomaly extending beyond the area tested by' drilling. No further work was carried out by Rio Tinto or HBOG.

The area was staked in February, 1991 and optioned by Kingsvale Resources Limited who conducted a preliminary geological and geochemical sampling program. No further work was completed and the claims lapsed in 1993.

The property was re-staked and Westley Technologies Ltd. of Vancouver was granted an option on the claim group in 1995. The company completed a short, 4 hole (608m), diamond drill program to follow up on earlier results Hole #1, a twin of historic percussion hole S-8, intersected a mineralized section that averaged 0.19% Cu, 0.004% Mo, 1.8 ppm Ag over 65m from 17.7-82.7m. Holes 2 and 3 were drilled from the same collar location at an angle of -47° to the north and south respectively. Hole 2 intersected weakly disseminated chalcopyrite throughout most of the hole, while Hole 3 contained an interval averaging 0.11% Cu over 85m. The hole contained anomalous gold (790ppb) over a width of 5.0m in intrusive rocks at the contact with pyritic hornfelsed volcanics. Hole 4 drilled 160m to the east of S-8 intersected 0.1% Cu and 0.011% Mo over 82.5m, with lower grade copper and molybdenite mineralization over the entire 167.2 metres drilled.

The property was held by a number of individuals prior to the staking of the property by the author in September, 2011. That same year, humus and MMI samples were collected in two transects across the property. Both lines were run in a north-south direction across the previously identified pyritic and chalcopyrite zone of the porphyry system to test which sample medium gave the best response to the mineralization near the Sylvia showing. The first line was located approximately 100m east of the S-8 percussion hole. The second line was run a further 400m to the east to test the strike extension to the suspected copper mineralization. MMI samples were collected on the western line across the area disturbed by logging activities while both MMI and humus samples were collected in the timbered area to the east.

Results from the MMI sampling program were very encouraging. Response Ratios, the ratio between the values obtained and background values, showed a very strong anomaly over the suspected mineralized area and suggest mineralization exists over a width of at least 100m and over a minimum strike length of 500m (i.e. from Sylvia S-8 drill hole to line 20075E MMI anomaly). Exact dimensions of the area of anomalous soils are limited only by the extent of the survey itself. MMI Response Ratios from approximately 100m east of percussion hole S-8 returned molybdenum, copper and tungsten values of up to 144, 45 and 36 times background respectively. The intrusion appears geochemically anomalous in all of the elements, especially uranium when compared to the overlying volcanics to the south of the copper zone.



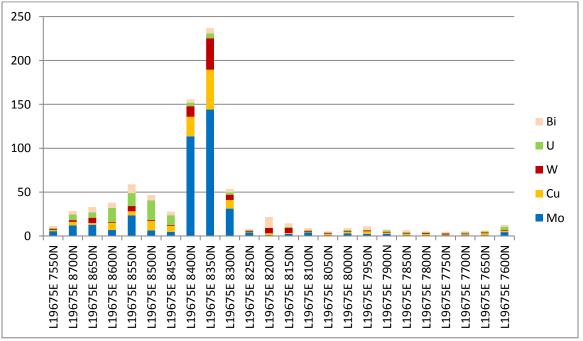


Figure 5: Stacked MMI Response Ratios L19675E

A further 400m to the east MMI sampling returned Response Ratios of 6, 4 and 12 times background for the same elements.

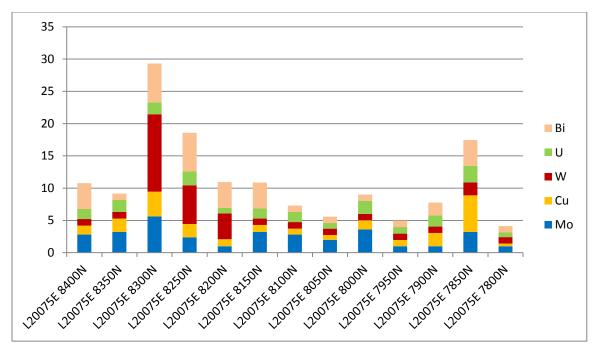


Figure 6: Stacked MMI Response Ratios L20075E

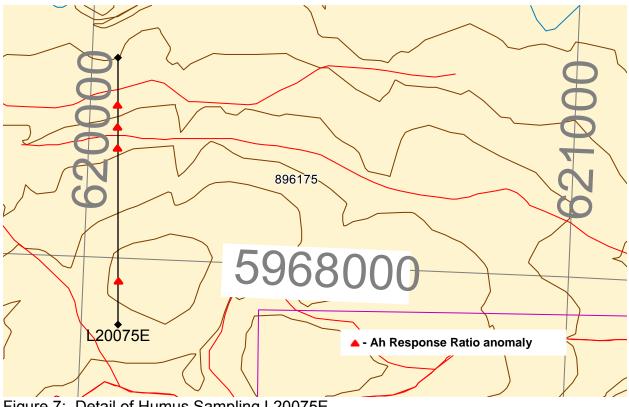


Figure 7: Detail of Humus Sampling L20075E

Results from the humus sampling confirmed the MMI anomalies on the second test line located approximately 500m to the east of the S-8 percussion hole. Response Ratios for the Ah samples were much more pronounced for some elements and were up to 6 x background for Cu, 3.2 for Au, 23.1 for Ag.

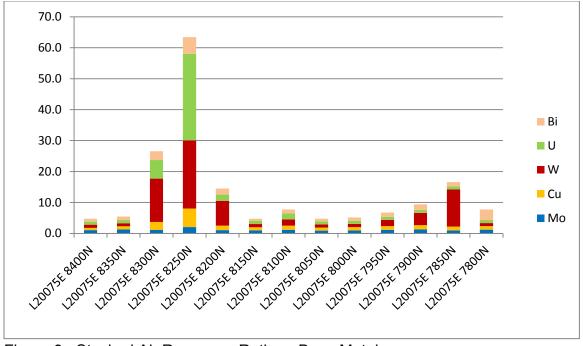


Figure 8: Stacked Ah Response Ratios - Base Metals

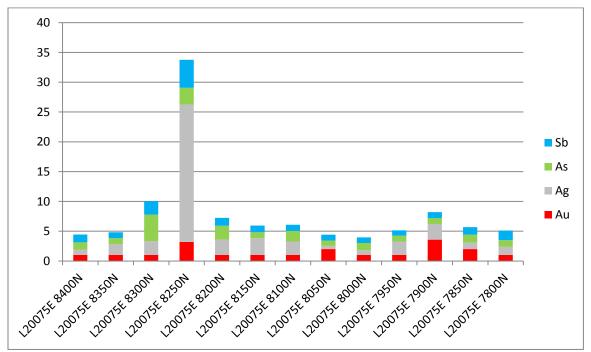


Figure 9: Stacked Ah Response Ratios - Precious Metals

Indicator elements such as Fe, As, Sb and Bi returned RRS of 9.9, 4.4, 5.4 and 4.7 respectively while many of the Rare Earth Elements returned very anomalous values from over the projected extension of the copper mineralization. Response Ratios for the Ah sampling also confirmed the presence of the narrow anomaly near the southern end of L20075E.

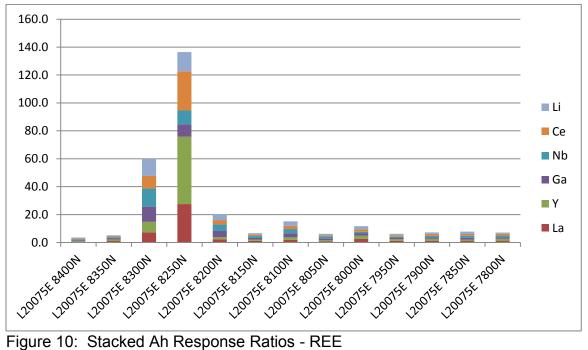


Figure 10: Stacked Ah Response Ratios - REE

### Item 7: Geological Setting and Mineralization

### 7.1 Regional Geology

The Property occurs within the Tahtsa Porphyry District. The district contains a number of significant calc-alkaline, porphyry Cu/Mo deposits which occur within and adjacent to small stocks which intrude Jurassic and Cretaceous volcanic and sedimentary rocks. The deposits are accompanied by extensive pyrite halos and generally well developed concentric zones of hydrothermal alteration from potassic at the core through phyllic, argillic and propylitic. Most of the deposits in the Tahtsa District have been radiometrically dated and have yielded ages of 74 Ma to 80 Ma (Late Cretaceous) with the exception of the Berg deposit which has been dated at 50.2 Ma (Eocene).

A strong north-easterly structural fabric is suggested by numerous lineaments and the northeast trend of many lakes and valleys in the Tahtsa District. Seraphim and Hollister postulate that a strong system of northeast-trending tensional faults and fracture zones developed in the Tahtsa region between major northwesterly through going shear zones and that these tensional features controlled subsequent emplacement of the porphyry intrusions.

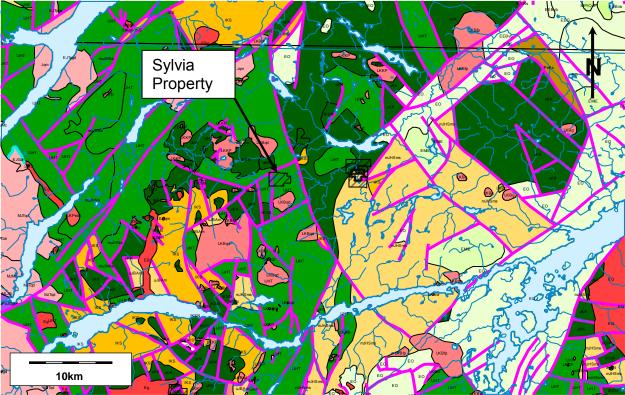


Figure 11: Regional Geology map

# **Geology Legend**

**Bounding Box:** *North:* 54.018 *South:* 53.703 *West:* -127.593 *East:* -126.473 **NTS Mapsheets:** 093L, 093E

#### **Eocene to Lower Miocene**

#### Endako Group

**EMiE** basaltic volcanic rocks

#### Eocene

EBo	Boundary Stock: granodioritic intrusive rocks
Eqp	high level quartz phyric, felsitic intrusive rocks
EEG	Goosly Lake Formation: alkaline volcanic rocks
EEBvb	Buck Creek Formation: basaltic volcanic rocks

#### Nanika Plutonic Suite



**ENqm** quartz monzonitic intrusive rocks

#### **Ootsa Lake Group**

EO

EQ



rhyolite, felsic volcanic rocks

#### Quanchus Plutonic Suite



feldspar porphyritic intrusive rocks

#### **Paleocene to Eocene**

**PeEs** undivided sedimentary rocks

### Late Cretaceous to Paleocene



LKPedr dioritic intrusive rocks

#### Cretaceous

#### Kasalka Group



uKK andesitic volcanic rocks

#### Late Cretaceous

#### **Bulkley Plutonic Suite**

LKBdr	dioritic intrusive rocks
LKBfp	feldspar porphyritic intrusive rocks
LKBqp	high level quartz phyric, felsitic intrusive rocks
LKBg	intrusive rocks, undivided
LKBqd	quartz dioritic intrusive rocks

Kasalka Plutonic Suite



LKKP granodioritic intrusive rocks

#### Lower Cretaceous

#### Skeena Group

- **IKS** undivided sedimentary rocks
- IKSN Mt. Ney Volcanics: undivided volcanic rocks

#### Jurassic



quartz monzonitic intrusive rocks

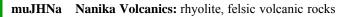
#### **Upper Jurassic**

#### Bowser Lake Group

uJBAm Ashman Formation: mudstone, siltstone, shale fine clastic sedimentary rocks

#### Middle Jurassic to Upper Jurassic

#### Hazelton Group

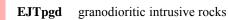


#### **Middle Jurassic**

mJHSms Smithers Formation: undivided sedimentary rocks

#### **Early Jurassic**

#### **Topley Plutonic Suite**



#### Lower Jurassic

#### Hazelton Group



**IJHT Telkwa Formation:** calc-alkaline volcanic rocks

<u>Ministry of Energy and Mines</u> <u>BC Geological Survey</u>

### 7.2 Regional Geophysics

The regional geophysics from the Quest West surveys show striking similarities between the Berg, Bergette and Sylvia properties on the 1<sup>st</sup> Vertical Derivative gravity maps. Gravity surveys reveal large magnetic low areas at each of the Minfile showings with the Berg deposit located on the eastern margin of the western gravity low anomaly. These anomalies are probably reflecting the specific gravity differences between lighter intrusive bodies and areas of thicker volcanic and sedimentary rocks. The eastern group of gravity low anomalies appears to be controled by the later northeast trending faulting as shown below. The Sylvia property sits on the northeast margin of the furthest east of these gravity low features.

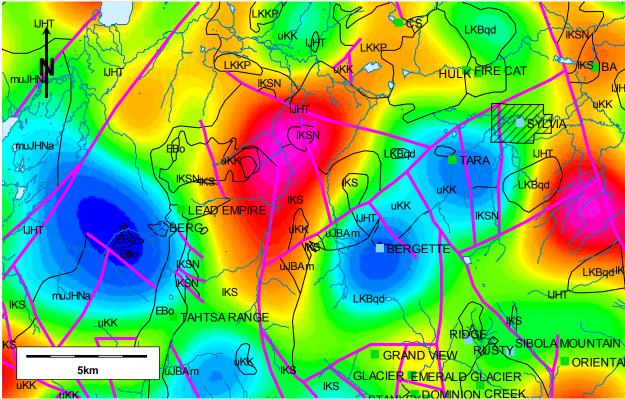


Figure 12: Regional Geophysics 1<sup>st</sup> Vertical Derivative Gravity map

Magnetic surveys conducted as part of the Quest West project also show similarities on the 1<sup>st</sup> Vertical Derivative Magnetic maps. The three properties sit on the flanks of large magnetic low anomalies surrounded partially by more magnetic rocks. The areas of higher magnetism possibly reflect pyrrhotite hornfels on the margins and possibly overlying the intrusive centres outlined by the gravity low anomalies shown above. The exception to this is the Sylvia showing where intrusive rocks are not outcropping. The large magnetic low anomalies possibly reflect the same buried intrusive centres as suggested by the 1<sup>st</sup> Vertical Derivative gravity anomalies.

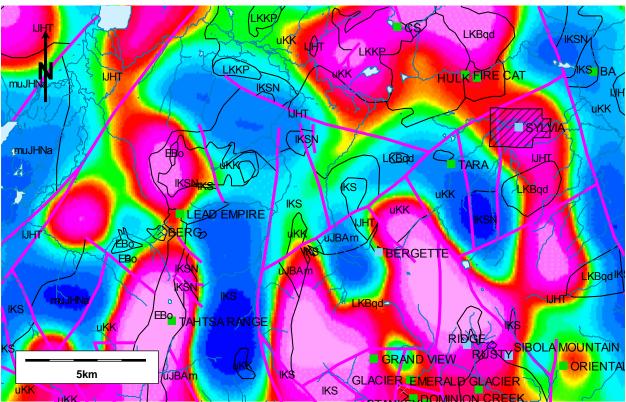


Figure 13: Regional Geophysics 1<sup>st</sup> Derivative Magnetic map

# 7.3 Property Geology

The area of the Sylvia Minfile showing is underlain by an elliptical stock about 1.5 km long and 1.0 km wide that intrudes Hazelton Group epidote-rich tuffs and andesitic to basaltic volcanic fragmental rocks. This stock is not shown on government maps as it is not outcropping. The northern and central parts of the stock consist of fresh, medium-to coarse-grained, hornblende-biotite granodiorite +/- quartz monzonite with minor disseminated pyrite. The southern margin contains an early, biotite-rich, fine-grained border phase that is locally strongly pyritic, variably altered and cut by medium- to coarse-grained granodiorite to quartz monzonite dykes. Volcanics adjacent to the stock are variably hornfelsed and locally cut by numerous fine-grained monzonite/quartz monzonite dykes. A well-developed, crescent-or boomerang-shaped pyritic zone, which contains 1%-10% pyrite as fracture fillings and disseminations, straddles the south contact. This pyrite halo has a maximum width of 400 to 500 metres and an apparent arc length of about 2,000m.

The initial percussion drill program carried out by HBOG in 1974 intersected widespread pyrite mineralization along the south edge of the granodiorite/quartz monzonite stock and adjacent volcanics. One hole, S-8, intersected significant porphyry-type Cu/Mo mineralization along the inside edge of the pyrite halo. This hole, which was only 230 feet deep, averaged 0.33% Cu and 0.02% Mo with higher grade intervals grading up to 0.635% Cu and 0.132% Mo. According to the HBOG drill log, mineralization occurs within a medium-grained granodiorite and fine-grained quartz monzonite with up to 10% felted biotite which is probably secondary. Thin sections of this material reportedly show

feldspars partly altered to clay and sericite. Follow-up drilling by HBOG in 1975 failed to extend the mineralization beyond hole S-8, however, several critical holes failed to reach bedrock due to thick overburden (Belik 1996).

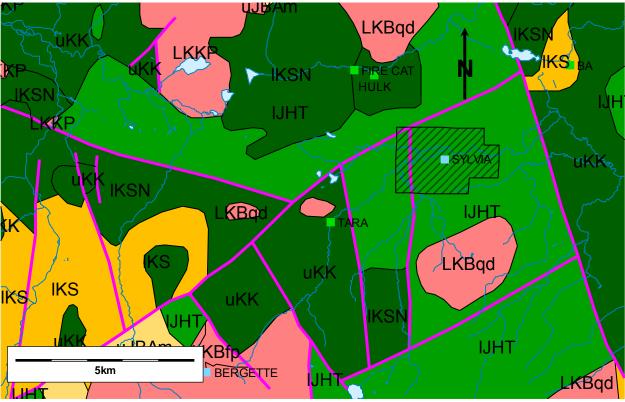


Figure 14: Property Geology map

The diamond drill program, conducted by Westley Technologies Limited, intersected grey, strongly fractured, fine-grained, granular granodiorite, quartz monzonite and medium grained granodiorite. Some fractures in the intrusive rocks were noted to have K-spar alteration envelopes. Better grade sections generally occurred within zones of secondary(?) up to 30% very fine-grained biotite. Drilling of the contact with the volcanics to the south, intersected a 5.0m zone of bleached, strongly pyrite, quartz-sericite alteration that averaged 790ppb Au.

The immediate property area hosts numerous northwest trending faults which have been cut by yournger northeast trending structures such as northeast of the Bergette showing where a northeast trending creek separates intrusive Late Cretaceous Biotitequartz-diorite (LKBqd), and uKK volcanic rocks. This structure crosscuts the mapped northwest faults and suggests a possible connection between the Bergette, Tara and Sylvia showings. It is evident that the rocks at the Bergette showing have been uplifted relative to those on the Sylvia property. The mineralization on the Sylvia reflects the top of a somewhat deeper mineralized porphyry system.

# 7.4 Mineralization

Evidence of a mineralized porphyry system on the Sylvia property comes primarily from historic drill results. Initial percussion drilling on the property by Hudson Bay Oil and

Gas intersected 3350ppm Cu and 206ppm Mo over 63m, the entire length of hole S-8. Subsequent diamond drilling returned wide intercepts of lower grade material. DDH1, a vertical twin of S-8 intersected strongly fractured, fine grained, granular granodiorite with up to 30% fine-grained biotite which returned 0.19% Cu, 0.004% Mo and 1.8ppm Ag over 65m. DDH3 intersected an interval of 0.11% Cu over 85m in pyritic, altered intrusive with fracture controlled copper mineralization including a 5m section at the southern contact of the intrusion with the overlying volcanics assayed 790ppb Au. DDH hole 4, located 160m to the east of S-8, intersected mainly disseminated pyrite-chalcopyrite-molybdenite mineralization grading 0.10% Cu, 0.011% Mo over 82.5m in medium grained granodiorite.

## Item 8: Deposit Types

The most important mineral occurrences in the area of the Property are gold-bearing porphyry copper deposits associated with the late Cretaceous Bulkley Plutonic Suite granodiorite and quartz diorite intrusive rocks and Eocene Nanika Plutonic Suite quartz monzonite intrusions. The nearby, Huckleberry mine and many major prospects are located in the same assemblage of rocks as the Property. There is also low sulphidation epithermal VMS potential with silver-lead- zinc mineralization similar to that at the New Moon prospect in Lower-Middle Jurassic Hazelton Group rocks. The formerly producing Silver Queen mine is classified as a polymetallic Ag/Pb/Zn +/- Au vein and occurs in upper Cretaceous to Eocene Endako Group volcanics associated with late Cretaceous Bulkley Plutonic Suite felsic to basaltic dykes and sills. The most important focus for exploration on the Sylvia Property is for calcalkaline porphyry copper-gold deposits.

### 8.1 Calcalkaline Porphyry Copper-Gold Deposits

According to Pantelevev (1995), Volcanic-type Calcalkaline Porphyry Copper-gold deposits are characterized by stockworks of guartz veinlets and veins, closely spaced fractures, disseminations and breccias, containing pyrite and chalcopyrite with lesser molybdenite, bornite and magnetite, occurring in large zones of economically bulk mineable mineralization, in or adjoining porphyritic stocks, dikes and related breccia bodies. Intrusions compositions range from calcalkaline guartz diorite to granodiorite and guartz monzonite. Commonly there are multiple emplacements of successive intrusive phases and a wide variety of breccias. The mineralization is spatially, temporally and genetically associated with hydrothermal alteration of the host rock intrusions and wallrocks. Propylitic alteration is widespread and generally flanks early, centrally located potassic alteration which is commonly well mineralized. Younger mineralized phyllic alteration commonly overprints the early mineralization. Barren advanced argillic alteration is rarely present as a late, high-level hydrothermal carapace. Ore controls include igneous contacts, both internal between intrusive phases, and external with wallrocks; dike swarms, breccias, and zones of most intense fracturing, notably where there are intersecting multiple mineralized fracture sets.

Porphyry Cu-Au deposits have been the major source of copper for British Columbia, and a significant source of gold. Median values for 40 B.C. deposits with reported reserves are: 115 Mt with 0.37 % Cu, 0.01 % Mo, 0.3g /t Au and 1.3 g/t Ag.

# 8.2 High And Low Sulphidation VMS Deposits

Analogous to epithermal precious metal deposits, volcanogenic massive sulphide (VMS) deposits are recently recognized to occur in two associations: high- and low sulphidation. High sulphidation VMS have been only recently recognized in the geological record, and are notable for their exceptionally high grades of gold and silver, in addition to their base metal content.

### 8.2.1 Low Sulphidation VMS Deposits

Based on the mineralogical classification used for epithermal deposits, the majority of volcanogenic massive sulphide (VMS) deposits, could be classified as low sulphidation. These VMS deposits formed from an ore fluid that was dominated by modified seawater, and as with low sulphidation epithermal deposits, evidence for magmatic contributions to these systems is limited.

## 8.2.2 High Sulphidation VMS Deposits

Certain VMS deposits and seafloor occurrences contain mineralogy that suggests that a high sulphidation classification is appropriate. These high sulphidation VMS deposits probably formed from magmatic hydrothermal systems that were active in submarine settings. High sulphidation deposits form in magmatic-hydrothermal systems according to Thompson (2007). In a similar manner, Dubé et al. (2007) describe a class of deposits that are a subtype of both volcanogenic massive sulphide (VMS) and lode gold deposits, namely gold-rich VMS deposits. Like most VMS deposits, they consist of semi-massive to massive, concordant sulphide lenses underlain by discordant stockwork feeder zones. They have diverse geochemical signatures dominated by Au, Ag, Cu and Zn and often accompanied by elevated concentrations of As, Sb, Pb, Te and Hg.

Figures 15 and 16 demonstrate schematically the geological and spatial characteristics of these types of VMS deposits. High-sulphidation VMS deposits can also be described as shallow submarine hot spring deposits. They are represented by stratiform Au-Ag barite deposits, pyritic Cu-Au stockworks, and auriferous polymetallic sulfides.

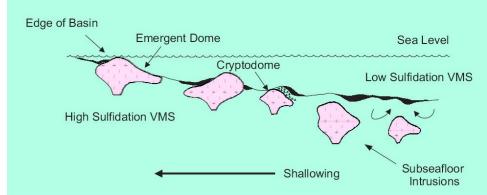


Figure 15: Development of high-sulphidation versus low-sulphidation hydrothermal systems in a submarine setting in relation to the depth of emplacement of associated sub-volcanic intrusions (from Dubé et al., 2007; after Hannington et al., 1999)

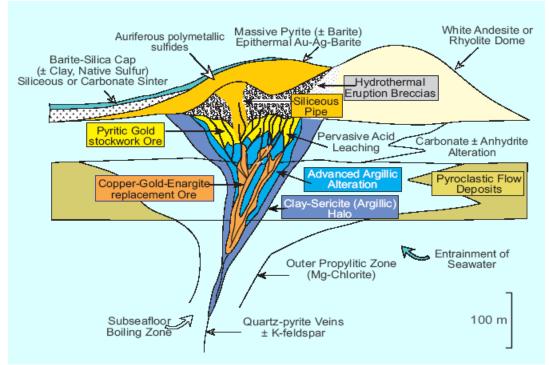


Figure 16: Geological setting of Au-rich high sulphidation VMS systems (from Dubé et al., 2007).

### Item 9: Exploration

### 9.1 Current Evaluation Program

Exploration on the Sylvia property in 2016 consisted of one trip into the area to conduct additional geochemical sampling in an effort to expand the area of anomalous soils outlined in the 2011 survey. A total of 22 Ah-humus samples were collected in two transects located approximately 400m west and 400m east of the previous sampling. The western transect was also ~300m west of percussion hole S-8. Sample coordinates are located in Table 3 below. A location map for the geochemical Ah-sampling can be found in Appendix A, significant geochemical plots in Appendix B and assay certificates in Appendix C.

Sample #	GPS Easting	GPS Northing	Sample description
192405	620560	5968566	Ah
192404	620545	5968521	Ah
192403	620513	5968428	Ah
192402	620479	5968331	Ah
192401	620453	5968220	Ah
192418	620430	5968129	Ah
192419	620438	5968027	Ah
192420	620435	5967928	Ah
192421	620450	5967841	Ah

Table 3: Sample Descriptions - Humus
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192422	620461	5967733	Ah
192409	619236	5968369	Ah
192408	619241	5968353	Ah
192407	619218	5968252	Ah
192406	619201	5968145	Ah
192410	619208	5968053	Ah
192411	619226	5967952	Ah
192412	619224	5967856	Ah
192413	619235	5967767	Ah
192414	619231	5967669	Ah
192415	619238	5967574	Ah
192416	619223	5967487	Ah
192417	619208	5967391	Ah

Response Ratios (RRs) are an efficient method of handling trace and ultra-trace data where absolute values are often meaningless. Stacked profiles offer a visual picture of areas that are considered anomalous compared to background values. The data is presented with the charts having north to the left and south to the right (ie. looking to the east). The three Ah transects completed on the property to date are shown starting with the western transect. The vertical axis has been restricted to 100 x background in order to see the more subtle anomalies.

Numerous anomalous sample sites are shown throughout the transect with sample 192409 highly anomalous in Au (RR of 27) and weakly to moderately anomalous in Cu, As and Sb; sample 192407 (Au RR of 23) and sample 192410 weakly anomalous in Ag. A 100m wide anomaly is indicated with samples 192411 and 192412 (Au RRs of 17 and 50 respectively) with sample 192412 also anomalous in Cu and As. At the southern end

of the transect a 100m wide, openended anomaly is indicated with samples 192416 and 192417 (Au RRs of 87 and 185). Sample 192417 is offscale for Au with the vertical scale limited to 100 x background to show the subtle Cu, As and Ag anomalies.

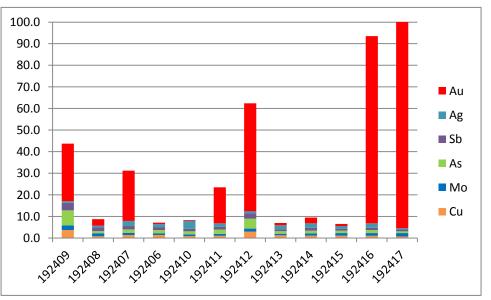
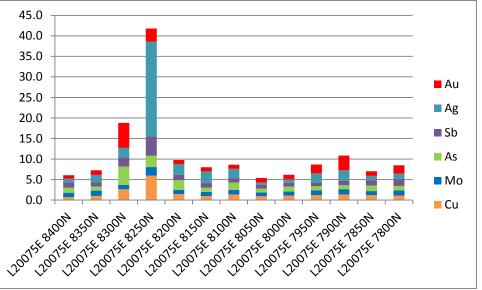
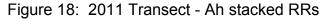


Figure 17: West Transect - Ah stacked RRs

The 2011 Ah-transect, located roughly 860m east of the western transect is shown with stacked RRs for the same elements and show the 50m wide anomaly present between

8300 and 82250N on L20075E. The sample sites are anomalous in Cu, As, Sb and moderately to highly anomalous in Ag and Au. The single station anomaly at 7900N shows precious metal enrichment in humus with Au RR of 3.6 x background.





A further 400m to the east, the second transect completed during the 2016 program returned three areas with precious metal enrichment in humus. A single station, open-

ended anomaly with RRs for Ag of 4.7 and Au of 3.3 x background is present at the north end of the transect at sample 192405. A 100m wide anomaly is indicated between samples 192401 and 192418 with Au RRs of 3.3 and 46.7 x background. A second 100m wide anomaly is present between samples 192420 and 421 with Au

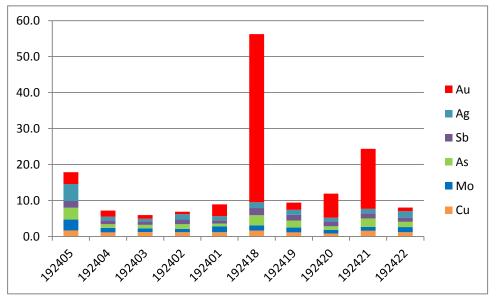


Figure 19: East Transect - Ah stacked RRs

RRs of 6.7 and 16.7 x background. Both of these intervals are also weakly anomalous in As.

Two rock samples were collected during the program but both returned background values in all elements. The location of these can be found in Table 4 and in Figure 17.

Sample #	GPS Easting	GPS Northing	Sample type	Sample description
1043570	620560	5968566	grab o/c	Intrusive with visible Py, Cpy
1043571	620545	5968521	grab float	Andesite - no visible sulphides



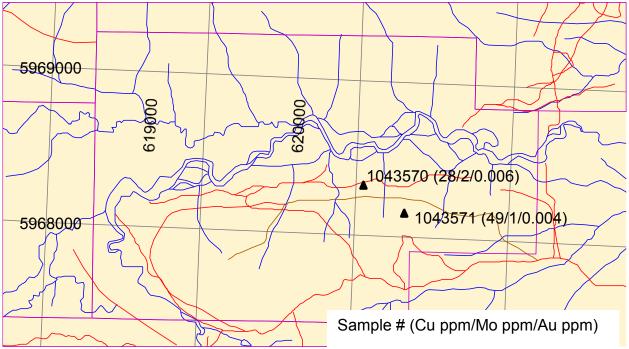


Figure 20: Rock Sample Location map

# Item 10: Drilling

No drilling was completed as part of the exploit

### Item 11: Sample Preparation, Analyses and

All rock samples collected were placed in clean 12x20 poly bags with a sample tag and tied closed with flagging tape. Ah-humus samples were collected in clean 9x12 poly bags, labeled with a sample tag and tied closed with flagging tape. The samples were transported to Francois Lake where they were placed into a woven rice bag and sealed with a zip tie. Samples were then transported to Prince George and then shipped to the ALS Minerals laboratory in North Vancouver.

Rocks were initially crushed to 70% passing 2mm. A 250g sub-sample was then split and pulverized to 85% passing 75 microns. Rock samples were analyzed for 33 elements plus gold. 30g splits were subjected to a four acid digestion prior to elemental determination using ICP-AES (ME-ICP61). Gold determinations were completed using a Fire Assay of a 30g split (ICP21). Humus samples were screened to -180micron (-80 mesh). A 0.5g sub-sample was split and leached in hot aqua regia digestion prior to using Super Trace analytical procedures (ME-MS41L). Humus samples were analyzed for 52 elements plus gold. Gold determinations were also completed using a Fire Assay of a 25g split (ICP21).

### Item 12: Data Verification

No data verification was completed as part of the exploration program.

### Item 13: Mineral Processing and Metallurgical Testing

No mineral processing or metallurgical testing was completed as part of the exploration program.

### Item 14: Mineral Resource Estimates

No mineral resource estimates were completed as part of the exploration program

### Item 15: Adjacent Properties

### 15.1 Huckleberry (Minfile 093E 037, rev. Meredith-Jones, 2012)

At the Huckleberry deposit, 190km to the southwest, porphyry copper and molybdenum mineralization is associated with a near elliptical stock of Upper Cretaceous age granodiorite porphyry (Bulkley Intrusions) measuring approximately 670 by 425 metres. The stock intrudes fine-grained crystal tuff of the Lower-Middle Jurassic Hazelton Group. Tuffs adjacent to the intrusion have been hornfelsed.

Mineralization consists of chalcopyrite and minor molybdenite in fractures, principally in the hornfelsed volcanics but also in the stock. Minerals accompanying chalcopyrite are quartz, orthoclase and pyrite with probably later calcite, gypsum and zeolite. Magnetite occasionally accompanies chalcopyrite. Disseminated chalcopyrite also occurs. Molybdenite usually occurs with quartz in hairline fractures. The mineralization generally occurs around the stock contact but the extent outward from the contact and the grade vary greatly. The best mineralization occurs on the east side of the stock. Potassic, pyrite and chlorite alteration haloes surround the stock.

The ore zones at Huckleberry are enclosed by an easterly-oriented zone of alteration approximately 4 kilometres long and 1 kilometre to 2 kilometres wide. The Main zone occurs along the eastern periphery of a sub-circular stock located in the western part of the alteration zone and is further centred on an apophysis of the stock. Most of the mineralization occurs in an arc measuring 500 metres by 100 metres. The East zone occurs within and surrounding a similar porphyritic stock in the eastern part of the system and is approximately 900 metres by 300 metres and remains open at depth. The East zone appears to be centred on an apophysis of the East zone.

The Huckleberry mine has been in production since October, 1997. Published reserves for the deposit in 2010 were Proven and Probable reserves totaling 14.01 million tonnes grading 0.362% Cu, 0.005% Mo, Measured and Indicated reserves of 182.9M tonnes

grading 0.321% Cu and Inferred reserves of 45.4M tonnes grading 0.288% Cu. Reserves were calculated with 0.20% Cu cut-off grade.

### 15.2 Berg (Minfile 093E 046, rev. Flower, 2009)

The area of the Berg porphyry copper-molybdenum deposit, situated 175km to the south, is underlain by massive and clastic volcanic and sedimentary rocks of the Lower-Middle Jurassic Hazelton Group. These rocks have been intruded by an elongate body of quartz diorite and a circular quartz monzonite porphyry stock (Berg Stock) approximately 800 metres in diameter. A breccia pipe and quartz latite porphyry dikes postdate the stock. Volcanic and sedimentary rocks adjacent to the stock have been metamorphosed to biotite hornfels. Mineralization is associated with the Eocene age porphyry stock.

The most common forms of primary mineralization are fracture-controlled and disseminated pyrite and chalcopyrite with quartz stockworks of pyrite, molybdenite and chalcopyrite. Less commonly, quartz and quartz-carbonate veins contain pyrite, sphalerite, galena, chalcopyrite and sulphosalt minerals. Secondary copper sulphides, with chalcocite being the most important, are found in an enrichment blanket over most of the deposit. Primary ore minerals are most abundant in an asymmetrical annular zone around the quartz monzonite stock.

In general, the best molybdenum mineralization is within and adjacent to the stock while the highest copper values are normally 70 metres or more beyond the contact. The best developed mineralization occurs along the eastern side of the stock.

A pyrite halo extends 300 to 600 metres beyond the stock contact. Potassic, phyllic, propylitic and argillic alteration types are all present at Berg.

The deposit has a recently published 43-101 compliant measured & indicated resource of 557.8.5 million tonnes, grading 0.30% Cu and 0.037% Mo and 3.77g/t Ag and an inferred resource of 159.4 million tonnes grading 0.23% Cu, 0.033% Mo and 2.5 g/t Ag using a 0.30% copper equivalent cut-off grade.

### 15.3 Poplar (Minfile 093L 239, rev. Duffett, 1988)

The Poplar deposit is located 155km south of the Property, where Lower-Middle Jurassic Hazelton Group volcanics are intruded by a Middle-Late Cretaceous Bulkley Intrusions. The Hazelton rocks are comprised of massive andesite, tuff, lapilli tuff, agglomerate, flow breccia with narrow bands and interbedded argillite. This group is overlain by Juro-Cretaceous sediments which are estimated to be 400 metres thick. The basal unit is comprised of gritty argillite overlain by sorted to unsorted medium to coarse-grained sandstone and conglomerate. The average bedding strikes 035 degrees and dips 60 degrees to the southeast.

The Bulkley Intrusions are comprised of a granodiorite to biotite monzonite porphyry which is aplitic near the contact margins. The stock is weakly mineralized with chalcopyrite, molybdenite and pyrite in fracture-fillings. As well, the biotite porphyry

hosts an estimated 1.5 per cent of disseminated sulphides, mainly pyrite with minor chalcopyrite.

A 200-metre wide dike swarm associated with the biotite porphyry stock crosscuts the volcanics which have undergone considerable fracturing/faulting and hornfelsing throughout. Mineralization in the quartz veins and dike swarms is comprised of pyrite with minor chalcopyrite.

There is a well-developed hydrothermal alteration facies concentric to the biotite porphyry which includes potassic, phyllic, argillic and propylitic zones. There is weak hornfelsing throughout the volcanics and it is strongest near the contact with the granodiorite stock. Mineralization in the hornfelsed aureole consists mainly of disseminated pyrite with very minor chalcopyrite.

Lions Gate Metals of Vancouver has filed the new 43-101 report on April 5, 2012 with an updated resource for the Poplar deposit. The property has a new indicated resource of 171.3 million tonnes grading 0.28% Cu, 0.008% Mo, 0.08 g/t Au and 2.30 g/t Ag (0.40% CuEq), plus an inferred resource of 209.0 million tonnes grading 0.23% Cu, 0.004% Mo, 0.06 g/t Au and 3.62 g/t Ag (0.33% CuEq) using a 0.15% Cu cut-off.

# 15.4 Ox Lake (Minfile 093E 004, rev. Barlow, 1998)

The Ox Lake porphyry copper-molybdenum deposit occurs in an area underlain by felsic tuff, andesitic tuff, sandstone and siltstone of the Lower-Middle Jurassic Hazelton Group. Intruding the sequence is a 400 by 600 metre granodiorite porphyry plug of Upper Cretaceous age. Volcanic tuffs marginal to the porphyry plug are hornfelsed and pyritized in a halo up to about 300 metres wide. Intrusive breccias occur along the southwestern side of the plug.

Copper and molybdenum mineralization occur in a peripheral zone around the plug and is concentrated in hornfels immediately west of the plug. The highest grades occur at the porphyry-hornfels contact and gradually decline in the hornfels away from the contact. On the porphyry side of the contact the grade of mineralization falls sharply.

The main host to mineralization is an intense stockwork of veins and fractures in the hornfels zone. In general, copper mineralization is most prominent in the hornfels while molybdenum is concentrated in porphyry dikes with small amounts in the hornfels. Nine vein types are developed in four stages that form part of the stockwork. The most common metallic minerals are pyrite, chalcopyrite, bornite, hematite, magnetite, pyrrhotite and molybdenite. Very minor late veins contain some sphalerite and galena.

Potassic, albitic, propylitic, sericitic and argillic alteration are evident at the deposit and are defined by biotite, chlorite, sericite, epidote, albite, magnetite and hematite alteration mineralogy.

Drilling by Goldreach Resources in 2011, at the newly discovered West Seel deposit, intersected 566m of 0.51% copper equivalent. The company recently released an independent resource calculation at Seel of 28.13 million tonnes (indicated) at 0.40% copper equivalent and 214.78 million tonnes (inferred) at 0.33% copper equivalent using a 0.2% copper equivalent cut off.

### 15.5 Equity Silver (Minfile 093L 001, rev. Robinson, 2009)

Silver, copper and gold were produced from the Equity Silver deposit, located 150km to the southeast of the Property.

The mineral deposits are located within an erosional window of uplifted Cretaceous age sedimentary, pyroclastic and volcanic rocks near the midpoint of the Buck Creek Basin. Strata within the inlier strike 015 degrees with 45 degree west dips and are in part correlative with the Lower-Upper Skeena(?) Group. Three major stratigraphic units have been recognized. A lower clastic division is composed of basal conglomerate, chert pebble conglomerate and argillite. A middle pyroclastic division consists of a heterogeneous sequence of tuff, breccia and reworked pyroclastic debris. This division hosts the main mineral deposits. An upper sedimentary-volcanic division consists of tuff, sandstone and conglomerate. The inlier is flanked by flat-lying to shallow dipping Eocene andesitic to basaltic flows and flow breccias of the Francois Lake Group (Goosly Lake and Buck Creek formations).

Intruding the inlier is a small granitic intrusive (57.2 Ma) on the west side, and Eocene Goosly Intrusions gabbro-monzonite (48 Ma) on the east side.

The chief sulphides at the Equity Silver mine are pyrite, chalcopyrite, pyrrhotite and tetrahedrite with minor amounts of galena, sphalerite, argentite, minor pyrargyrite and other silver sulphosalts. These are accompanied by advanced argillic alteration clay minerals, chlorite, specularite and locally sericite, pyrophyllite, and alusite, tourmaline and minor amounts of scorzalite, corundum and dumortierite. The three known zones of significant mineralization are referred to as the Main zone, the Southern Tail zone and the more recently discovered Waterline zone. The ore mineralization is generally restricted to tabular fracture zones roughly paralleling stratigraphy and occurs predominantly as veins and disseminations with massive, coarse-grained sulphide replacement bodies present as local patches in the Main zone. Main zone ores are finegrained and generally occur as disseminations with a lesser abundance of veins. Southern Tail ores are coarse-grained and occur predominantly as veins with only local disseminated sulphides. The Main zone has a thickness of 60 to 120 metres while the Southern Tail zone is approximately 30 metres thick. An advanced argillic alteration suite includes andalusite, corundum, pyrite, quartz, tourmaline and scorzalite. Other zones of mineralization include a zone of copper-molybdenum mineralization in a quartz stockwork in and adjacent to the guartz monzonite stock and a large zone of tourmalinepyrite breccia located to the west and northwest of the Main zone.

Alteration assemblages in the Goosly sequence are characterized by minerals rich in alumina, boron and phosphorous, and show a systematic spatial relationship to areas of

mineral deposits. Aluminous alteration is characterized by a suite of aluminous minerals including andalusite, corundum, pyrophyllite and scorzalite. Boron-bearing minerals consisting of tourmaline and dumortierite occur within the ore zones in the hanging wall section of the Goosly sequence. Phosphorous-bearing minerals including scorzalite, apatite, augelite and svanbergite occur in the hanging wall zone, immediately above and intimately associated with sulphide minerals in the Main and Waterline zones. Argillic alteration is characterized by weak to pervasive sericite-quartz replacement. It appears to envelope zones of intense fracturing, with or without chalcopyrite/tetrahedrite mineralization.

The copper-silver-gold mineralization is epigenetic in origin. Intrusive activity resulted in the introduction of hydrothermal metal-rich solutions into the pyroclastic division of the Goosly sequence. Sulphides introduced into the permeable tuffs of the Main and Waterline zones formed stringers and disseminations which grade randomly into zones of massive sulphide. In the Southern Tail zone, sulphides formed as veins, fracture-fillings and breccia zones in brittle, less permeable tuff. Emplacement of post-mineral dikes into the sulphide-rich pyroclastic rocks has resulted in remobilization and concentration of sulphides adjacent to the intrusive contacts. Remobilization, concentration and contact metamorphism of sulphides occurs in the Main and Waterline zones at the contact with the postmineral gabbro-monzonite complex.

The Southern Tail deposit has been mined out to the economic limit of an open pit. With its operation winding down, Equity Silver Mines does not expect to continue as an operating mine after current reserves are depleted. Formerly an open pit, Equity is mined from underground at a scaled-down rate of 1180 tonnes-per-day. Proven and probable ore reserves at the end of 1992 were about 286,643 tonnes grading 147.7 grams per tonne silver, 4.2 grams per tonne gold and 0.46 per cent copper, based on a 300 grams per tonne silver-equivalent grade. Equity has also identified a small open-pit resource at the bottom of the Waterline pit which, when combined with underground reserves, should provide mill feed through the first two months of 1994 (Northern Miner - May 10, 1993).

Equity Silver Mines Ltd. was British Columbia's largest producing silver mine and ceased milling in January 1994, after thirteen years of open pit and underground production. Production totaled 2,219,480 kilograms of silver, 15,802 kilograms of gold and 84,086 kilograms of copper, from over 33.8 Million tonnes mined at an average grade of 0.4 per cent copper, 64.9 grams per tonne silver and 0.46 gram per tonne gold.

### 15.6 Emerald Glacier (Minfile 093E 001, rev. Sweene, 2009)

The Emerald Glacier mine area is underlain by the Lower-Middle Jurassic Hazelton Group which consists of a sedimentary member of feldspathic sandstone with minor siltstone and silty tuffaceous shale, and an overlying volcanic member of andesitic and dacitic breccias, tuffs and some massive volcanic rocks. Mineralization is hosted primarily by sedimentary rocks in a zone of transition between the two members. These rocks include intercalated sandstone, tuff, tuffaceous sandstone, siltstone and shale. Dacite, basalt and rhyolite dikes cut the stratified rocks. En echelon quartz veining extends for at least 1200 metres and is associated with shears striking about 170 degrees and dipping 60 degrees to 75 degrees east. The main mineralization occurs in one of these shears and is associated with quartz veining up to 3 metres wide that is variously stockwork, massive, banded, brecciated and drusy in form. Sulphide mineralization includes galena, sphalerite, chalcopyrite and pyrite in order of decreasing abundance. Smaller veins in the vicinity are dominated by sphalerite.

Unclassified reserves are 40,800 tonnes grading 355 grams per tonne silver, 8.23 per cent lead, 9.49 per cent zinc and 1.13 grams per tonne gold (CIM Special Volume 37, page 186).

### Item 16: Other Relevant Data and Information

There is no other relevant data or information other than that included in this report.

### Item 17: Interpretation and Conclusions

Significant initial drill results of 0.335% copper and 0.021% molybdenum over 63m, in percussion hole S-8 identified a significant mineralized porphyry system. Twinning of the hole returned results of 0.19% Cu, 0.004% Mo and 1.8ppm Ag over 65m, in DDH-1. DDH-3, at the same collar location but drilled to the south, intersected 0.11% Cu over 85m, including 5m of 790ppb Au at the intrusive/volcanic contact. DDH-4, located 160m east of S-8 intersected 0.10% Cu, 0.011% Mo over 82.5m.

An IP survey completed in 1973 by HBOG the Sylvia claim identified the presence of a broad, very strong, easterly-trending, chargeability anomaly which was only partially tested by later drilling. A second reconnaissance IP survey over part of the Sylvia claim suggests that the chargeability anomaly plunges to the west and is more complex than previously believed. None of the drilling to date has tested this hypothesis.

The mineralization and intrusive host do not outcrop at the Sylvia showing and any attempts at delineating the mineralization will have to be done remotely. Glacial till where encountered by drilling is highly variable, from 1-24m thick and would generally mask any local mineralization. Traditional B-horizon soil sampling would not be an effective exploration technique in this environment.

In 2011, the author completed orientation surveys to test the effectiveness of alternative geochemical survey techniques in an effort to "see through" the glacial till. Results from the both the MMI and Ah sampling programs were very encouraging. MMI Response Ratios showed a very strong anomaly over the suspected mineralized area, on line L19675E, and suggest mineralization exists over a width of at least 100m and over a minimum strike length of 500m (i.e. from Sylvia S-8 drill hole to line 20075E MMI anomaly). MMI Response Ratios from approximately 100m east of percussion hole S-8 returned molybdenum, copper and tungsten values of up to 144, 45 and 36 times background respectively. A further 400m to the east MMI sampling returned Response Ratios of 6, 4 and 12 times background for the same elements. Humus sampling

confirmed the MMI anomalies on second test line located approximately 500m to the east of the S-8 percussion hole. Ah Response ratios on the eastern line were higher contrast than the MMI ratios and returned RRs of up to 6 for Cu, 6 for Au, 23.1 for Ag. Indicator elements such as Fe, As, Sb and Bi returned RRs of 9.9, 4.4, 5.4 and 4.7 respectively while many of the Rare Earth Elements returned very anomalous values such as 48.3 x background for Y. Both techniques appear to give good definition to underlying mineralization however humus samples may be difficult to collect over the extensive area of disturbance caused by logging that has been completed over the claims since the area was initially explored in the mid-1970s.

Additional Ah-humus sampling in 2016 identified anomalous base and precious metals an additional 300m to the west of drill hole S-8 and 400m east of the 2011 eastern line. A number of single station and 100m wide Au +/- base metal anomalies returned Au RRs up to 185 x background on the western transect and up to 47 x background Au on the eastern transect. Humus sampling has now identified a minimum strike length for anomalous base and precious metals in Ah-humus of at least 1200m.

Recent airborne geophysical surveys conducted as part of the Quest West program show a northeast trending zone of gravity low and magnetic low anomalies. One anomaly may identify a large buried intrusive centre to the southwest of the Sylvia Minfile location. This anomaly is covered by the expanded Sylvia property and includes the Tara Minfile showing. The gravity and magnetic anomalies are very similar to that which hosts the nearby Berg deposit.

It is the author's opinion that the Sylvia property is a property that has not been adequately tested and has a high potential for new discoveries and as such is a property of merit, worthy of further exploration expenditures.

### Item 18: Recommendations

The logical first steps in the exploration of the Sylvia property should involve updated geophysical and geochemical surveys in an attempt to see through the potentially thick blanket of glacial till present over much of the area. Magnetic surveys should be completed in an effort to outline the granodiorite intrusive and map any structural complications. Induced Potential (IP) chargeability and resistivity surveys would hope to identify areas of sulphide concentration and silicification. Geochemical MMI and/or humus-Ah surveys over the claim would focus further exploration to areas of higher copper, molybdenum and gold potential. Line cutting would be required to allow access for the various surveys in areas that have not been previously logged.

Project Geologist (20 days @ 600/day)		\$12,000
Prospector/sampler (20 days @ \$400/day) x 2		16,000
Line-cutting (30km @\$1500/km)		45,000
Geochemical Ah surveys (700 samples @ \$30/sample)		21,000
Geophysical surveys mag/IP (30km @ \$2500/km)		75,000
Mob/demob and vehicle rental		10,000
Room and board (220 person days @ \$130/day)		28,600
Reporting		<u>10,000</u>
	subtotal	\$217,600
Contingency (15%)		<u>32,640</u>
		\$250,240

Dependent on the results obtained from these surveys, additional trenching or diamond drilling should target favorable anomalies.

Respectfully submitted,

Ken Galambos P.Eng. KDG Exploration Services

Victoria, BC. February 22, 2017

### Item 19: References

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van der Heyden. P., 1982, Geology of the West-Central Whitesail Lake Area, B.C. M.Sc. Thesis, Univ. of British Columbia.

#### Item 20: Date and Signature Page

1) I, Kenneth Daryl Galambos of 1535 Westall Avenue, Victoria, British Columbia am self-employed as a consultant geological engineer, authored and am responsible for this report entitled "Geochemical Sampling Report on the Sylvia Project", dated February 22, 2017.

2) I am a graduate of the University of Saskatchewan in Saskatoon, Saskatchewan with a Bachelor's Degree in Geological Engineering (1982). I began working in the mining field in 1974 and have more than 30 years mineral exploration and production experience, primarily in the North American Cordillera. Highlights of this experience include the discovery and delineation of the Brewery Creek gold deposit, near Dawson City, Yukon for Noranda Exploration Ltd.

3) I am a registered member of the Association of Professional Engineers of Yukon, registration number 0916 and have been a member in good standing since 1988. I am a registered Professional Engineer with APEGBC, license 35364, since 2010.

4) This report is based upon the author's personal knowledge of the region, a review of additional pertinent data and a 2016 work program on the property.

5) As stated in this report, in my professional opinion the property is of potential merit and further exploration work is justified.

6) To the best of my knowledge this report contains all scientific and technical information required to be disclosed so as not to be misleading.

7) I am partners with Ralph Keefe and Shawn Turford on the Sylvia property and a number of other properties in British Columbia. My professional relationship is as a non-arm's length consultant, and I have no expectation that this relationship will change.

8) I consent to the use of this report by Ralph Keefe and Shawn Turford for such assessment and/or regulatory and financing purposes deemed necessary, but if any part shall be taken as an excerpt, it shall be done only with my approval.

Dated at Victoria, British Columbia this 22nd day of February, 2017. "Signed and Sealed"

Ken Galambos, P.Eng. (APEY Reg. No. 0916, APEGBC license 35364) KDG Exploration Services 1535 Westall Ave. Victoria, British Columbia V8T 2G6

# Item 21 Statement of Expenditures

# Sept 21-26, 2016

# Personnel

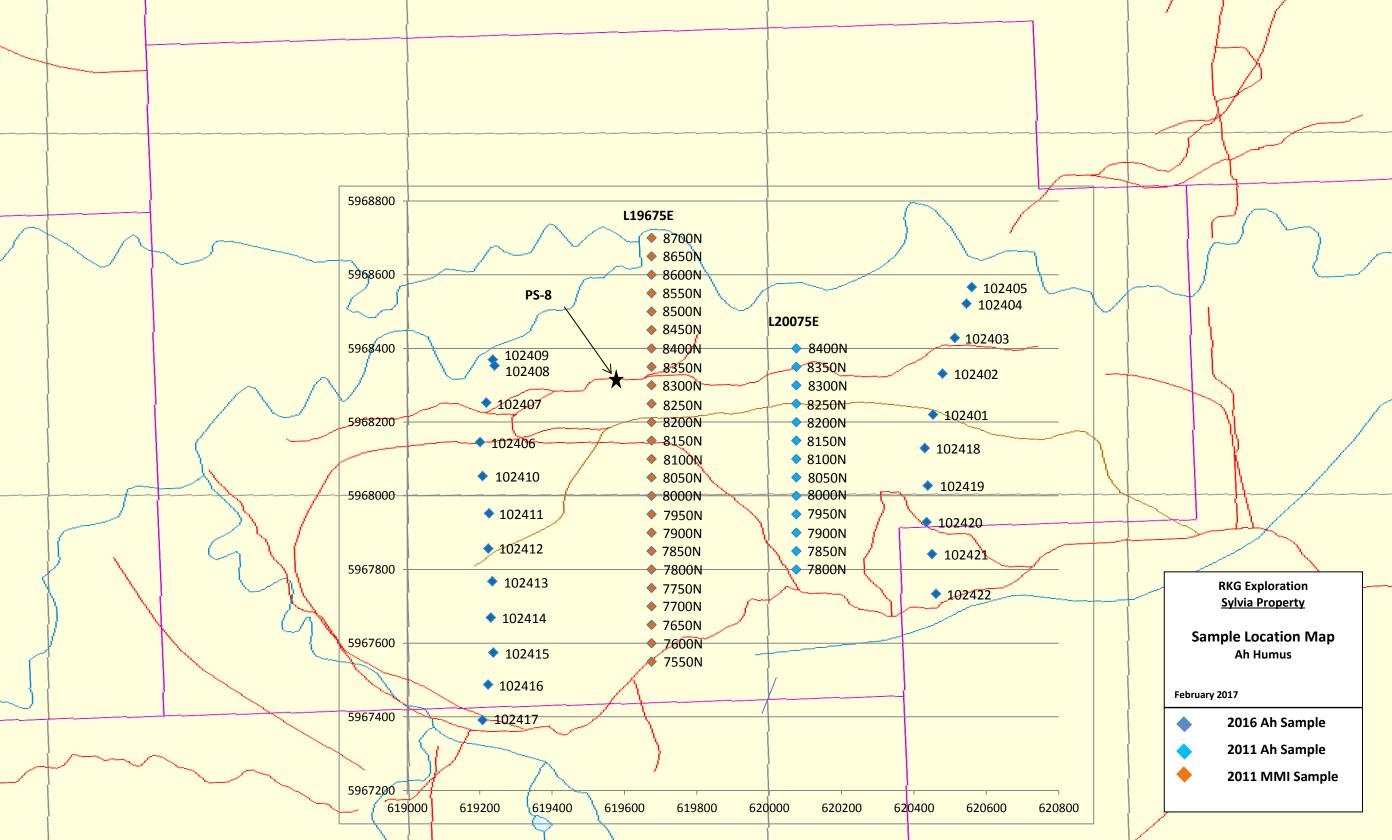
Shawn Turford 4 days @ \$350/day Ralph Keefe 6 days @ \$350/day Chris Lobermayer 4 days @ \$350/day	\$1400.00 \$2100.00 \$1400.00
Transportation and Camp costs Truck 4 days @ \$100/day x 2 trucks Mileage 280km @ \$0.50/km x 2 trucks Trailer 4 days @ \$50/day ATV 4 days @ \$75/day x 2 ATVs Food 12 person days @ \$35/day Cabin rental 4 days @ \$50/night misc. field supplies	\$800.00 \$280.00 \$200.00 \$600.00 \$420.00 \$200.00 \$30.00
Analysis costs soil samples 22 @ \$35/ea rock samples 2 @ \$35/ea shipping	\$770.00 \$70.00 \$30.00
<b>Report</b> 2 days @ \$600/day	<u>\$1200.00</u>
TOTAL =	\$9470.00

## Item 22: Software Used in the Program

Adobe Acrobat 9 Adobe Photoshop Elements 8.0 Adobe Reader 8.1.3 Google Earth Pro Internet Explorer Microsoft Windows 7 Microsoft Office Professional 2010 Item 23 Appendices

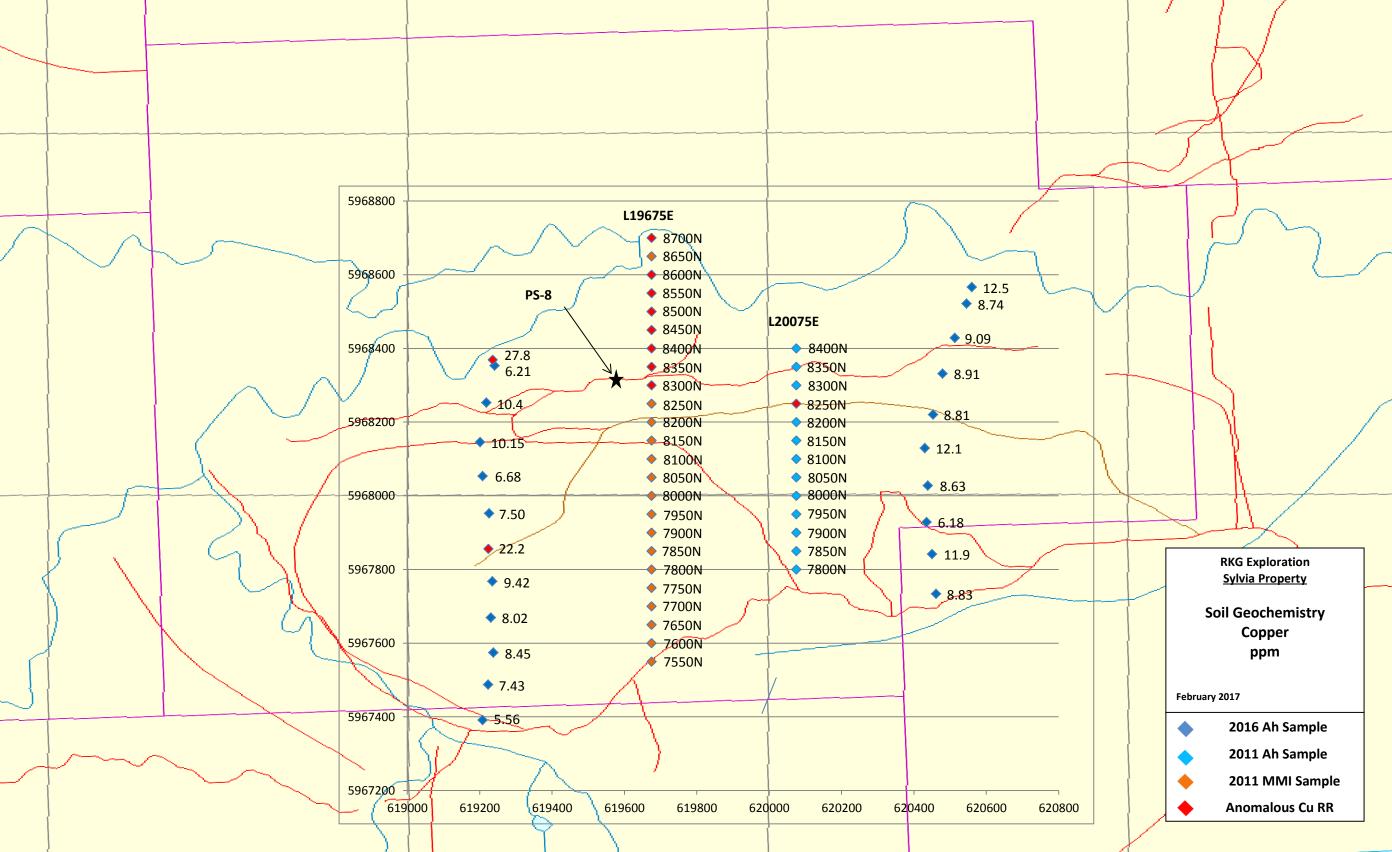
Appendix A

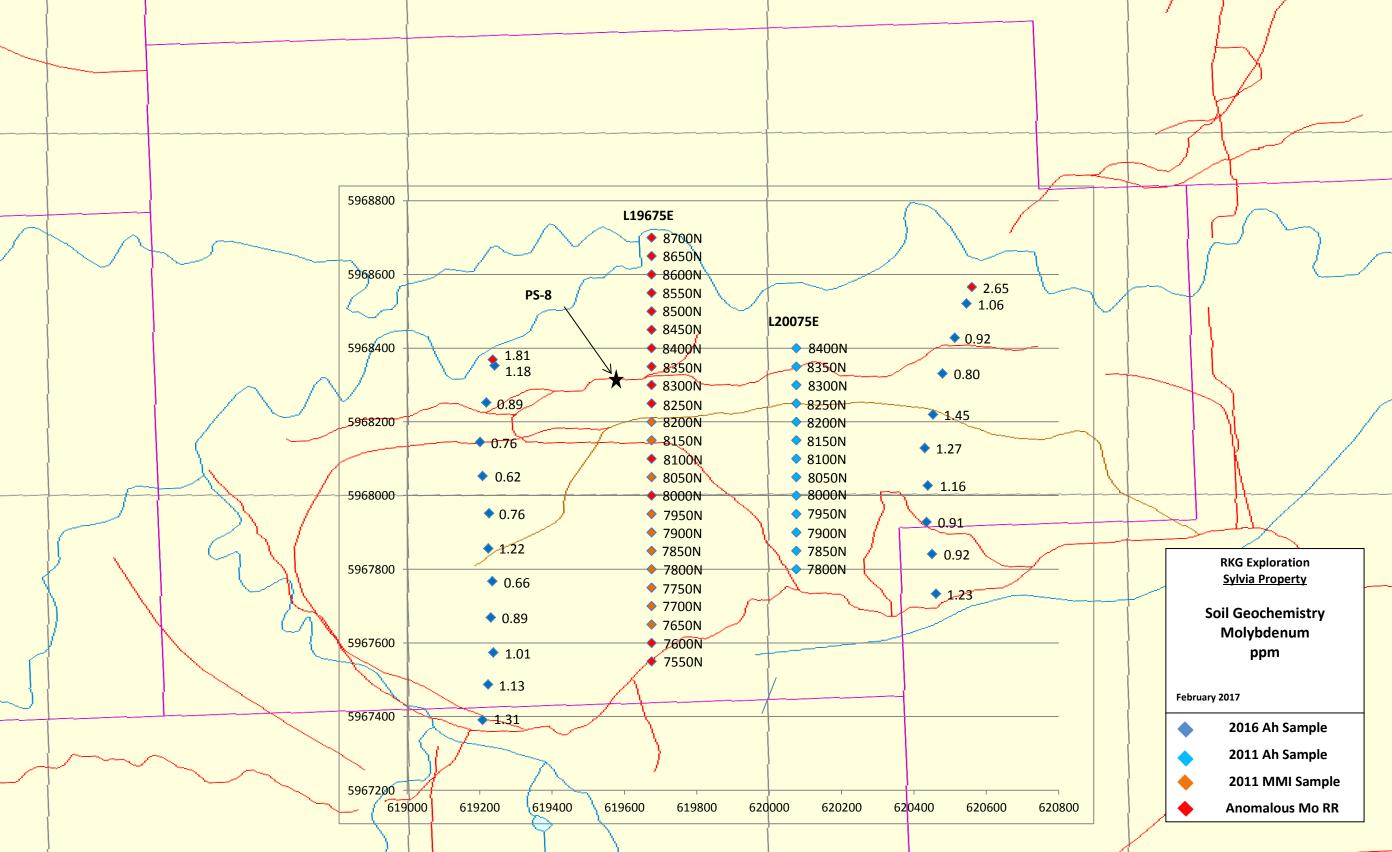
Sample Location Map Humus

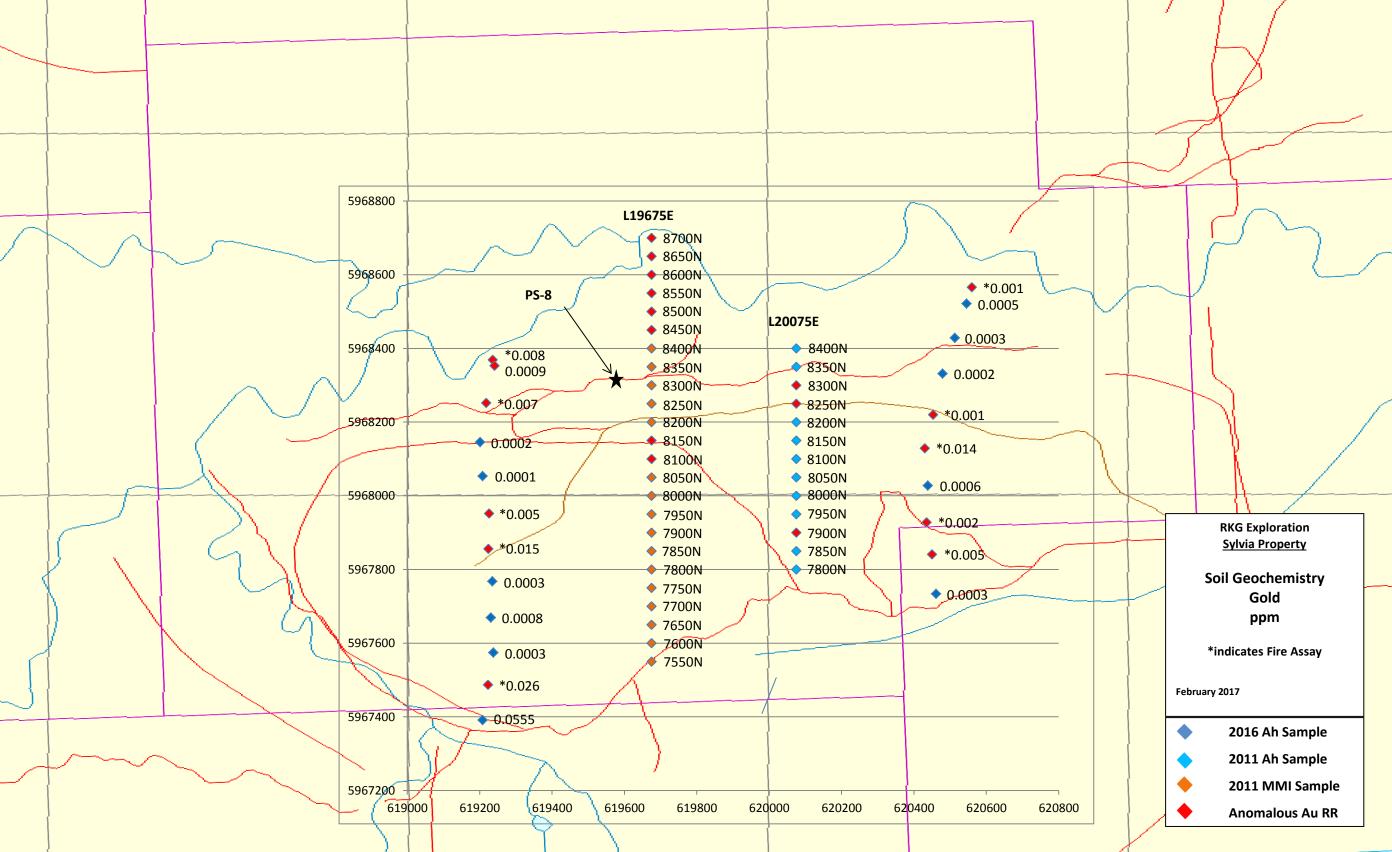


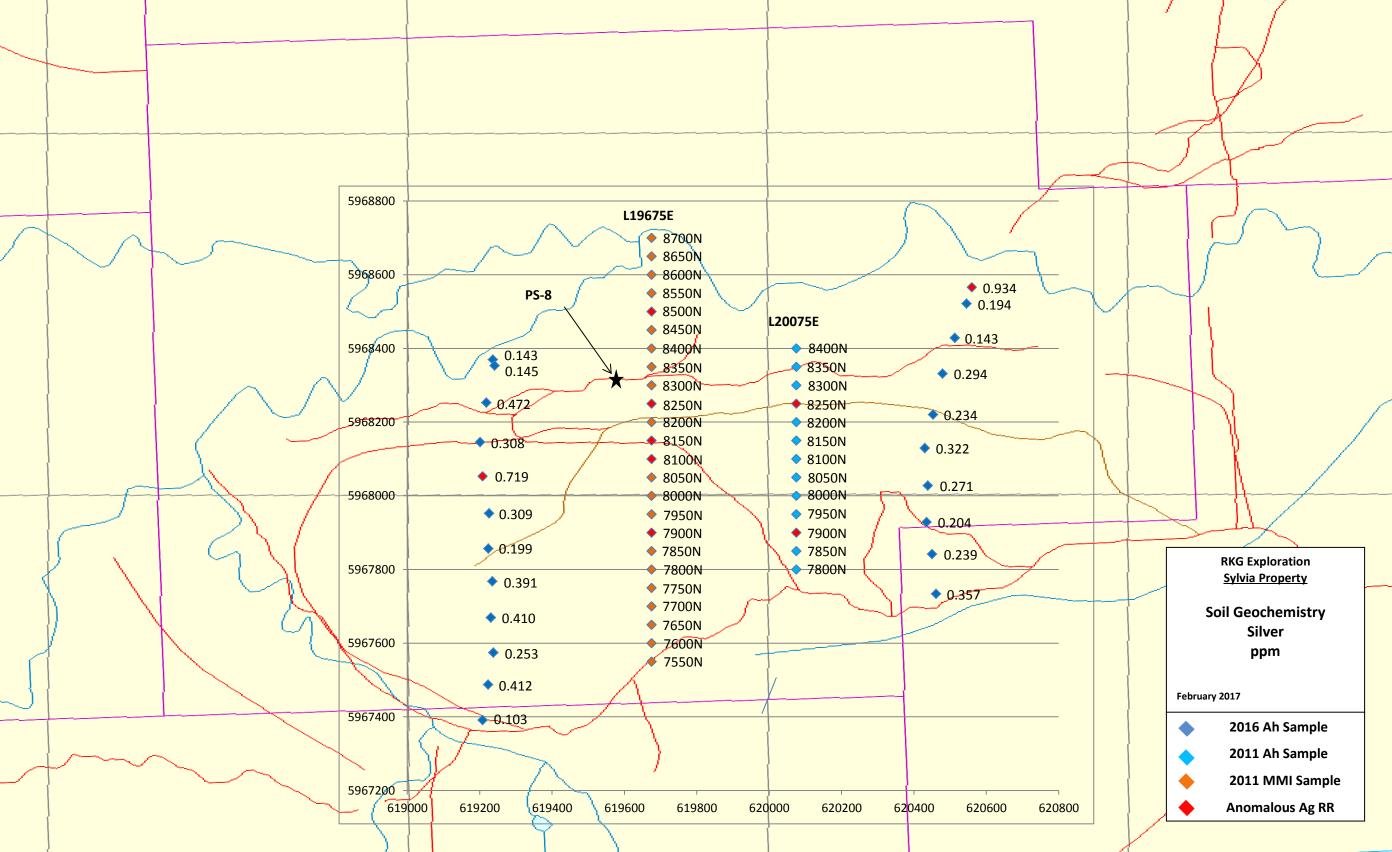
Appendix B

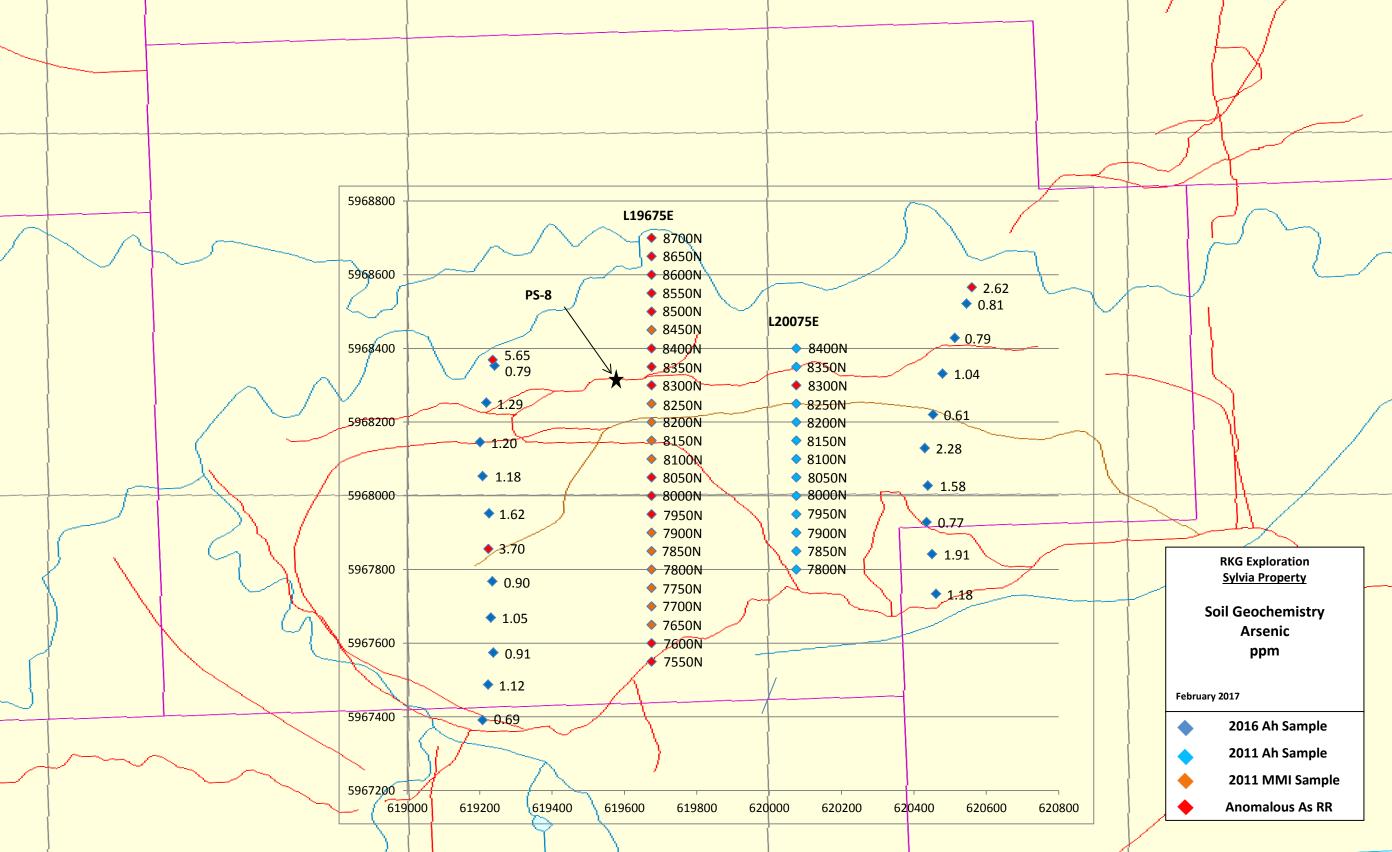
Geochemical Results Humus











Appendix C

Assay Certificates Humus



To: ALTIUS RESOURCES INC. PO BOX 8263 STN. A ST JOHNS NL A1B 3N4 Page: 1 Total # Pages: 5 (A - D) Plus Appendix Pages Finalized Date: 3- NOV- 2016 Account: TDP

#### CERTIFICATE VA16178041

Project: BC Proj.Generation- Ralph Keefe

This report is for 138 Soil samples submitted to our lab in Vancouver, BC, Canada on 13- OCT- 2016.

The following have access to data associated with this certificate:

SHANE EBERT	ALTIUS RESOURCES WEBTRIEVE	LAWRENCE WINTER

	SAMPLE PREPARATION	
ALS CODE	DESCRIPTION	
WEI- 21	Received Sample Weight	24
LOG-22	Sample login - Rcd w/o BarCode	
SCR- 41	Screen to - 180um and save both	
	ANALYTICAL PROCEDURES	5
ALS CODE	DESCRIPTION	INSTRUMENT
Au- ICP21	Au 30g FA ICP- AES Finish	ICP- AES
ME- MS41L	Super Trace Lowest DL AR by ICP- MS	

To: ALTIUS RESOURCES INC. ATTN: SHANE EBERT PO BOX 8263 STN. A ST JOHNS NL A1B 3N4

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.





To: ALTIUS RESOURCES INC. PO BOX 8263 STN. A ST JOHNS NL A1B 3N4 Page: 2 - A Total # Pages: 5 (A - D) Plus Appendix Pages Finalized Date: 3- NOV- 2016 Account: TDP

Project: BC Proj.Generation- Ralph Keefe

# CERTIFICATE OF ANALYSIS VA16178041

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg 0.02	Au- ICP21 Au ppm 0.001	ME- MS41L Au ppm 0.0002	ME- MS41L Ag ppm 0.001	ME- MS41L Al % 0.01	ME- MS41L As ppm 0.01	ME-MS41L B ppm 10	ME-MS41L Ba ppm 0,5	ME- MS41L Be ppm 0.01	ME- MS41L Bi ppm 0.001	ME- MS41L Ca % 0.01	ME-MS41L Cd ppm 0.001	ME- MS41L Ce ppm 0.003	ME- MS41L Co ppm 0.001	ME- MS41 Cr ppm 0.01
103751		0.24	<0.001	<0.0002	0.245	0.18	0.24	20	482	0.03	0.023	3.44	2.99	1.605	2.43	1.18
103752		0.30	0.001	<0.0002	0.168	0.10	0.38	10	337	0.03	0.024	2.74	2.63	1.235	1.800	1.67
03753		0.48	NSS	0.0005	0.393	0.15	0.35	10	50.3	0.02	0.012	0.54	1.440	0.604	0.525	1.57
03754		0.46	NSS	<0.0002	0.367	0.40	0.72	10	130.5	0.13	0.026	2.04	2.57	6.55	1.615	3.83
03755		0.26	<0.001	0.0006	0.141	0.13	0.46	10	141.0	0.03	0.033	2.23	0.973	1.320	2.03	2.69
03756		0.30	<0.001	0.179	0.297	0.23	0.60	10	406	0.04	0.034	3.05	0.892	2.20	2.60	4.00
03757		0.66	<0.001	0.0002	0.251	2.05	3.73	<10	2710	0.76	0.088	1.01	1.360	21.6	10.30	20.1
03758		0.70	<0.001	0.0002	0.197	0.31	0.58	10	719	0.04	0.030	0.65	1.655	2.61	0.943	2.78
03759		0.36	<0.001	<0.0002	1.085	0.31	0.35	10	2150	0.04	0.034	1.26	1.350	1.615	1.780	1.38
03760		0.42	0.003	0.0003	0.193	0.44	0.99	10	1285	0.17	0.045	2.36	2.11	7.44	3.17	6.53
03761		0.50	0.001	<0.0002	0.570	0.28	1.33	10	754	0.09	0.035	1.90	6.32	4.60	2.89	4.95
03762		0.30	0.020	<0.0002	0.031	0.01	0.17	30	340	0.01	0.009	2.67	1.220	0.203	0.355	0.49
03763		0.40	0.002	<0.0002	0.210	0.04	0.20	30	460	0.02	0.028	2.60	2.43	0.512	0.485	0.79
03764		0.42	<0.001	0.0004	0.142	0.78	0.71	20	301	0.42	0.025	2.13	0.851	26.7	2.00	5.29
03765		0.34	0.004	0.0003	0.086	0.20	0.30	20	619	0.02	0.011	2.83	4.38	0.537	1.060	0.83
03766		0.54	0.002	0.0002	0.110	0.12	0.35	20	535	0.04	0.016	3.09	1.450	1.120	1.220	0.99
03767		0.32	0.004	<0.0002	0.176	0.15	0.39	10	787	0.04	0.021	1.89	1.960	1.655	1.900	1.80
03768		0.30	0.007	0.0005	0.120	0.07	0.26	10	305	0.03	0.025	2.70	1.305	0.896	1.010	0.78
03769		0.32	<0.001	<0.0002	0.079	0.08	0.35	20	281	0.02	0.019	3.55	1.535	0.524	0.550	0.55
03770		0.28	0.001	<0.0002	0.078	0.02	0.12	50	356	0.01	0.009	3.79	0.984	0.215	0.359	0.32
03771		0.30	0.001	0.0003	0.072	0.07	0.23	30	308	0.02	0.018	3.56	1.910	0.785	1.405	0.71
03772	1	0.24	<0.001	<0.0002	0.365	0.08	0.30	30	726	0.03	0.030	3.44	5.04	1.440	3.29	0.92
03773		0.58	<0.001	0.0002	1.035	0.56	1.74	20	2300	0.19	0.047	2.07	4.47	6.12	4.76	9.44
103774		0.66	<0.001	<0.0002	0.427	1.57	5.62	10	4690	0.59	0.075	1.54	2.73	32.7	10.85	14.50
03775		0.50	<0.001	<0.0002	0.220	0.55	1.02	10	479	0.11	0.042	1.00	5.91	4.29	3.09	5.61
03776		0.32	0.002	0.0002	0.337	0.52	1.60	<10	240	0.11	0.043	0.99	2.56	3.30	2.54	5.36
03777		0.22	< 0.001	0.0008	0.349	0.21	0.55	10	651	0.05	0.027	1.21	10.80	1.510	1.545	2.05
03778		0.28	<0.001	<0.0002	0.290	0.13	0.55	30	875	0.05	0.034	2.70	3.23	2.24	3.16	2.91
103779	3	0.22	0.008	0.0002	0.242	0.29	0.67	<10	163.5	0.12	0.034	0.55	2.70	12.20	1.840	2.55
03780		0.46	<0.001	0.0003	0.186	0.29	0.58	10	672	0.05	0.022	1.55	2.55	2.02	1.515	2.62
03781		0.36	<0.001	<0.0002	0.197	0.05	0.32	50	477	<0.01	0.014	3.28	8.68	0.361	0.608	0.62
03782		0.30	<0.001	0.0002	0.234	0.08	0.26	10	578	0.03	0.026	2.47	1.900	1.025	0.925	1.06
03783		0.20	<0.001	<0.0002	0.485	0.10	0.35	10	406	0.03	0.022	2.15	1.945	1.090	0.857	1.39
03784		0.34	<0.001	<0.0002	0.024	0.01	0.12	50	164.0	<0.01	0.004	2.82	0.356	0.091	0.206	0.25
03785		0.28	0.001	<0.0002	0.026	0.02	0.09	10	157.5	0.01	0.013	1.44	0.125	0.217	0.079	0.30
03786		0.18	<0.001	0.0002	0.083	0.30	0.49	10	357	0.02	0.033	2.82	1.245	1.870	1.785	2.28
03787		0.30	< 0.001	0.0007	0.293	0.18	0.29	· <10	128.0	0.03	0.017	0.64	0.920	1.535	1.145	1.87
103788		0.42	< 0.001	0.0003	0.206	0.29	0.87	10	143.0	0.07	0.017	2.57	2.24	4.45	2.07	2.03
103789		0.30	0.004	0.0003	0.181	0.48	2.34	10	104.0	0.08	0.033	1.45	0.823	2.49	2.81	4.36
103790		0.44	< 0.001	0.0006	0.193	0.50	3.70	<10	139.0	0.06	0.053	0.87	0,809	5.29	3.53	6.05



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#### To: ALTIUS RESOURCES INC. PO BOX 8263 STN. A ST JOHNS NL A1B 3N4

Page: 2 - B Total # Pages: 5 (A - D) Plus Appendix Pages Finalized Date: 3- NOV- 2016 Account: TDP

Project: BC Proj.Generation- Ralph Keefe

#### CERTIFICATE OF ANALYSIS VA16178041

Sample Description	Method Analyte Units LOR	ME- MS41L Cs ppm 0.005	ME- MS41L Cu ppm 0.01	ME- MS41L Fe % 0.001	ME- MS41L Ga ppm 0.004	ME- MS41L Ge ppm 0.005	ME- MS41L Hf ppm 0.002	ME- MS41L Hg ppm 0.004	ME- MS41L In ppm 0.005	ME- MS41L K % 0.01	ME- MS41L La ppm 0.002	ME- MS41L Li ppm 0.1	ME- MS41L Mg % 0.01	ME- MS41L Mn ppm 0.1	ME-MS41L Mo ppm 0.01	ME- MS41L Na % 0.001
103751		0.117	8.78	0.090	0.335	<0.005	0.003	0.177	0.010	0.32	1.150	0.3	0.17	3090	1.52	0.003
103752		0.115	8.62	0.154	0.431	0.014	0.008	0.198	0.005	0.18	0.804	0.4	0.15	2780	1.92	0.002
103753		0.060	8.27	0.094	0.226	0.006	0.003	0.225	0.006	0.09	0.357	0.2	0.05	414	0.65	0.009
103754		0.318	11.95	0.410	1.065	0.024	0.020	0.159	0.011	0.11	4.78	1.4	0.16	426	0.98	0.003
103755		0.181	7.04	0.310	0.721	0.011	0.006	0.175	0.007	0.13	0.697	0.6	0.14	1090	1.67	0.004
103756		0.776	9.95	0.400	0.919	0.014	0.007	0.114	0.011	0.12	1.195	1.4	0.15	895	1.05	0.003
103757		2.96	41.8	2.84	7.09	0.061	0.029	0.073	0.043	0.14	8.70	12.9	0.50	2100	0.55	0.003
103758		0.852	10.90	0.350	0.898	0.016	< 0.002	0.213	0.007	0.12	1.300	0.4	0.06	945	0.24	0.004
103759		0.505	49.7	0.226	1.055	0.010	<0.002	0.239	0.012	0.14	0.648	0.7	0.10	6900	0.31	0.002
103760		0.628	23.9	0.810	1.855	0.035	0.008	0.160	0.012	0.14	2.87	3.2	0.21	2910	0.61	0.004
103761		0.224	13.50	0.620	1.255	0.020	0.016	0.185	0.009	0.16	2.45	1.7	0.18	2120	0.89	0.003
103762		0.127	7.70	0.025	0.093	0.006	0.003	0.161	<0.005	0.16	0.114	0.1	0.10	723	0.40	0.005
103763		0.121	9.38	0.074	0.194	0.007	0.003	0.292	<0.005	0.21	0.362	0.2	0.10	822	0.74	0.005
103764		0.239	19.00	0.590	1.680	0.091	0.036	0.120	0.017	0.10	12.65	2.2	0.27	383	0.60	0.015
103765		0.052	8.15	0.065	0.279	0.006	0.005	0.199	0.005	0.26	0.287	0.3	0.13	3530	0.38	0.002
103766		0.131	10.20	0.117	0.319	0.007	0.002	0.390	0.006	0.32	0.506	0.4	0.18	2330	0.35	0.004
103767		0.129	11.00	0.189	0.464	0.011	0.014	0.168	<0.005	0.15	0.873	0.6	0.15	901	1.69	0.003
103768		0.153	8.93	0.071	0.260	<0.005	0.004	0.232	0.006	0.20	0.997	0.2	0.16	2820	1.35	0.004
103769		0.120	9.65	0.050	0.213	0.008	<0.002	0.308	0.006	0.27	0.463	0.2	0.17	2260	1.03	0.003
103770		0.098	8.63	0.023	0.103	<0.005	<0.002	0.363	0.009	0.27	0.128	0.2	0.21	877	0.21	0.005
103771		0.164	11.30	0.079	0.271	0.009	0.004	0.335	<0.005	0.27	0.485	0.3	0.24	2270	0.73	0.005
103772		0.215	16.85	0.114	0.369	0.005	0.006	0.211	0.005	0.14	0.834	0.4	0.17	2390	0.51	0.005
103773		0.308	17.45	1.340	2.78	0.036	0.017	0.174	0.018	0.18	2.74	5.3	0.26	3580	0.56	0.003
103774		2.72	181.5	2.79	6.78	0.081	0.033	0.099	0.048	0.13	11.70	14.6	0.61	4830	0.59	<0.001
103775		0.812	9.31	0.650	1.555	0.021	0.003	0.199	0.015	0.12	1.995	2.1	0.12	3390	0.47	0.005
103776		0.473	7.94	0.710	1.525	0.017	0.004	0.209	0.014	0.14	1.560	2.4	0.10	2070	0.68	0.007
103777		0.311	7.95	0.223	0.534	0.016	0.009	0.201	0.006	0.11	0.742	0.8	0.08	1765	0.69	0.004
103778		0.680	11.50	0.290	0.740	0.016	<0.002	0.101	0.005	0.17	1.355	0.6	0.22	3990	0.98	0.005
103779		0.315	32.3	0.300	0.814	0.025	0.002	0.186	0.008	0.08	5.39	1.2	0.07	599	0.38	0.004
103780		0.295	9.10	0.320	0.856	0.013	0.006	0.259	0.013	0.10	0.923	0.9	0.12	1855	0.56	0.005
103781		0.088	13.30	0.055	0.240	<0.005	<0.002	0.307	0.010	0.18	0.247	0.3	0.29	2720	0.57	0.004
103782		0.245	9.70	0.104	0.531	0.006	0.006	0.442	0.008	0.11	0.538	0.4	0.07	6400	0.93	0.004
103783		0.151	8.67	0.149	0.510	0.010	0.007	0.299	0.006	0.11	0.565	0.4	0.08	3300	0.86	0.005
103784		0.061	2.59	0.012	0.085	<0.005	<0.002	0.078	0.005	0.09	0.036	0.1	0.21	388	0.91	0.021
103785		0.143	2.91	0.024	0.111	<0.005	0.003	0.296	<0.005	0.13	0.098	0.1	0.04	470	0.23	0.005
103786		0.194	9,63	0.181	0.628	0.015	0.002	0.191	0.009	0.42	1.335	0.5	0.20	4040	2.42	0.007
103787		0.106	7.17	0.208	0.509	<0.005	0.009	0.116	<0.005	0.16	0.980	0.3	0.07	1095	1.09	0.006
103788		0.298	12.90	0.300	0.593	0.020	0.012	0.109	<0.005	0.15	2.49	0.7	0.26	499	0.88	0.008
103789		0.207	7.53	0.750	1.350	0.019	<0.002	0.135	0.013	0.14	1.360	1.7	0.17	1950	0.69	0.007
103790		0.273	11.15	1.090	1.915	0.021	0.003	0,156	0.007	0.13	2.83	1.9	0.15	1710	1.01	0.010



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Project: BC Proj.Generation- Ralph Keefe

	CERT	<b>TIFICA</b>	TE	OF	ANALYSIS	VA16178041	1
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Sample Description	Method Analyte Units LOR	ME- MS41L Nb ppm 0.002	ME- MS41L Ni ppm 0.04	ME- MS41L P % 0.001	ME- MS41L Pb ppm 0.005	ME- MS41L Pd ppm 0.001	ME- MS41L Pt ppm 0.002	ME- MS41L Rb ppm 0.005	ME- MS41L Re ppm 0.001	ME- MS41L S % 0.01	ME- MS41L Sb ppm 0.005	ME-MS41L Sc ppm 0.005	ME- MS41L Se ppm 0.1	ME- MS41L Sn ppm 0.01	ME-MS41L Sr ppm 0.01	ME- MS41L Ta ppm 0.005
103751		0.042	5.94	0.221	3.93	<0.001	<0.002	4.94	<0.001	0.14	0.069	0.382	0.7	0.08	206	<0.005
103752		0.078	3.73	0.148	3.25	<0.001	<0.002	2.43	< 0.001	0.15	0.085	0.444	0,9	0.11	154.5	< 0.005
103753		0.034	3.04	0.117	2.35	< 0.001	<0.002	1.370	<0.001	0.11	0.067	0.314	0.4	0.05	19.65	<0.005
103754		0.139	5.28	0.099	2.94	< 0.001	< 0.002	3.83	< 0.001	0.14	0.130	1.200	0.8	0.10	102.0	<0.005
103755		0.152	2.58	0.127	4.53	<0.001	<0.002	3.15	<0.001	0.16	0.067	0.551	0.6	0.13	96.7	<0.005
103756	() ()	0.186	3.41	0.140	4.93	<0.001	<0.002	3.38	<0.001	0.14	0.087	0.625	0.7	0.16	77.6	<0.005
103757		0.634	15.75	0.150	40.8	<0.001	<0.002	21.0	<0.001	0.08	0.241	4.58	0.5	0.51	62.6	<0.005
103758		0.134	3.54	0.107	7.45	<0.001	<0.002	6.23	<0.001	0.10	0.087	0.412	-0.6	0.20	26.0	<0.005
103759	3	0.080	3.59	0.131	6.89	< 0.001	<0.002	5.08	< 0.001	0.13	0.074	0.508	0.5	0.09	74.6	<0.005
103760		0.290	5.15	0.156	40.9	<0.001	<0.002	6.58	<0.001	0.12	0.130	1.430	0.7	0.22	62.2	<0.005
103761		0.217	6.72	0.132	21.2	<0.001	<0.002	4.23	<0.001	0.14	0.141	0.905	0.6	0.16	124.5	<0.005
103762		0.006	0.90	0.128	0.751	<0.001	<0.002	2.75	<0.001	0.21	0.032	0.247	0.6	0.01	129.0	<0.005
103763		0.039	1.78	0.130	2.24	<0.001	< 0.002	2.77	< 0.001	0.18	0.060	0.321	0.7	0.05	151.0	<0.005
103764		0.134	15.05	0.124	1.575	< 0.001	< 0.002	3.54	< 0.001	0.20	0.409	1.860	0.7	0.10	289	<0.005
103765		0.016	3.69	0.190	2.09	<0.001	<0.002	1.565	<0.001	0.14	0.092	0.399	0.7	0.05	156.5	<0.005
103766		0.034	7.24	0.108	2.22	< 0.001	<0.002	2.23	<0.001	0.14	0,050	0,553	0.8	0.04	166.5	<0.005
103767		0.042	3.84	0.120	2.28	<0.001	< 0.002	2.07	< 0.001	0.16	0.066	0.651	0.9	0.08	443	<0.005
103768		0.024	3.81	0.143	3.16	<0.001	<0.002	3.30	< 0.001	0.17	0.066	0.348	0.8	0.02	139.5	<0,005
103769		0.018	2.91	0.143	2.13	< 0.001	<0.002	3.79	< 0.001	0.14	0.048	0.473	0.8	0.03	143.0	<0.005
103770		0.007	1.70	0.119	0.845	<0.001	<0.002	3.53	0.001	0.17	0.023	0.423	0.7	0.03	189.0	<0.005
103771		0.035	3.01	0.131	2.90	<0.001	<0.002	3.82	0.001	0.20	0.057	0.432	0.8	0.04	134.0	<0.005
103772		0.040	3.55	0.174	4.73	<0.001	<0.002	2.11	<0.001	0.19	0.075	0.468	0.9	0.09	180.5	<0.005
103773		0.690	7.55	0.200	26.7	<0.001	<0.002	6.17	<0.001	0.11	0.193	1.115	0.6	0.33	98.0	<0.005
103774	1	0.755	12.80	0.163	175.0	< 0.001	<0.002	16.35	< 0.001	0.10	0.460	6.47	0.7	0.55	80.3	<0.005
103775		0.228	6.71	0.115	9.61	< 0.001	<0.002	6.87	<0.001	0.09	0.086	0.514	0.4	0.21	44.3	<0.005
103776		0.188	5.80	0.218	10.30	<0.001	<0.002	4.35	<0.001	0.10	0.102	0.701	0.6	0.13	49.0	<0.005
103777		0.090	3.31	0.121	5.78	<0.001	< 0.002	2.35	<0.001	0.13	0.065	0.547	0.6	0.08	91.4	<0.005
103778	1	0.070	4.92	0.154	5.34	<0.001	0.002	3.18	< 0.001	0.14	0.095	0.505	0.7	0.10	169.5	<0.005
103779		0.121	3.16	0.103	11.30	0.001	<0.002	2.39	<0.001	0.10	0.120	1.340	0.4	0.07	49.3	<0.005
103780		0.181	4.61	0.097	4.83	<0.001	<0.002	3.70	<0.001	0.12	0.070	0.548	0.5	0.08	106.5	<0.005
103781		0.028	4.28	0.135	2.43	<0.001	<0.002	2.05	<0.001	0.21	0.042	0.286	0,8	0.02	93.9	<0.005
103782		0.062	2.45	0.111	3.87	<0.001	<0.002	2.43	<0.001	0.13	0.080	0.517	0.5	0.05	116.5	<0.005
103783		0.076	2.07	0.098	3.24	<0.001	<0.002	1.800	<0.001	0.11	0.056	0.609	0.7	0.06	120.5	<0.005
103784		0.006	0.24	0.099	0.444	<0.001	<0.002	1.520	<0.001	0.16	0.033	0.337	0.6	0.01	190.0	<0.005
103785		0.010	0.36	0.106	0.964	<0.001	<0.002	2.79	<0.001	0.09	0.041	0.261	0.4	0.03	100.0	<0.005
103786		0.092	4.05	0.227	4.43	<0.001	<0.002	4.53	<0.001	0.16	0.064	0.407	0.9	0.08	146.0	<0.005
103787		0.106	2.24	0.124	2.22	<0.001	<0.002	2.33	<0.001	0.09	0.064	0.530	0.5	0.09	54.0	<0.005
103788		0.086	3.11	0.135	1.760	<0.001	<0.002	5.90	0.001	0.19	0.104	0.817	0.6	0.07	149.0	<0.005
103789		0.234	4.58	0.133	2.69	<0.001	<0.002	4.60	<0.001	0.11	0.150	0.468	0.5	0.15	42.1	<0.005
103790		0.283	6.13	0.116	4.93	< 0.001	0.002	4.62	< 0.001	0.10	0.245	1.230	0.5	0.20	37.9	<0.005



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Project: BC Proj.Generation- Ralph Keefe

CERTIFICATE OF ANALYSIS VA16178041

		ME- MS41L	ME-MS41L	ME- MS41L	ME- MS41L								
	Method	Te	Th	Ti	TI	U	v	w	Y	Zn	Zr		
	Analyte Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Sample Description	LOR	0.01	0.002	0.001	0.002	0.005	0.1	0.001	0.003	0.1	0.01		
103751		<0.01	0.021	0.002	0.012	0.020	1.5	0.021	1.080	428	0.10		
103752		< 0.01	0.024	0.005	0.022	0.026	3.7	0.020	0.669	359	0.25		
103753		0.01	0.014	0.003	0.024	0.020	2.4	0.015	0.234	65.8	0.12		
103754		0.01	0.057	0.006	0.039	0.150	7.0	0.023	5.53	131.5	0.61		
103755		0.02	0.037	0.011	0.025	0.037	8.2	0.037	0.301	107.0	0.29		
103756		0.01	0.024	0.012	0.034	0.052	10.0	0.047	0.749	134.0	0.28		
103757		0.04	0.185	0.047	0.072	0.341	60.3	0.072	9.72	349	0.70		
103758		< 0.01	0.002	0.008	0.026	0.043	8.1	0.022	0.658	108.5	0.05		
103759		0.01	0.012	0.005	0.133	0.030	3.8	0.019	0.416	325	0.07		
103760		<0.01	0.047	0.014	0.034	0.090	16.3	0.055	2.83	230	0.35		
103761		0.01	0.063	0.015	0.030	0.077	15.2	0.043	1.240	285	0.48		
103762		<0.01	0.003	<0.001	0.016	0.008	0.4	0.014	0.098	130.0	0.07		
103763		0.01	0.010	0.002	0.027	0.017	1.5	0.013	0.291	202	0.15		
103764		0.01	0.069	0.004	0.065	0.301	9.5	0.019	22.8	31.8	1.10		
103765		0.02	0.012	0.001	0.018	0.009	1.1	0.013	0.266	331	0.07		
103766		0.01	0.025	0.002	0.014	0.021	2.3	0.013	0.520	199.5	0.12		
103767		0.01	0.038	0.002	0.018	0.037	3.0	0.014	1.295	69.7	0.26		
103768		0.03	0.023	0.002	0.040	0.013	1.4	0.019	0.869	203	0.11		1
103769		0.02	0.010	0.001	0.011	0.011	0.8	0.011	0.407	389	0.07		
103770		<0.01	0.006	<0.001	0.014	0.008	0.4	0.008	0.131	251	0.05		
103771		0.01	0.020	0.002	0.024	0.017	1.4	0.012	0.392	276	0.16		
103772		< 0.01	0.025	0.002	0.016	0.020	2.0	0.024	0.824	586	0.13		
103773		0.01	0.016	0.044	0.026	0.129	33.8	0.056	1.970	575	0.44		0
103774		0.02	0.138	0.070	0.038	0.308	73.2	0.127	15.70	470	0.95		3
103775		<0.01	0.009	0.011	0.074	0.070	15.4	0.084	1.035	285	0.06		
103776		<0.01	0.012	0.014	0.040	0.070	16.6	0.040	0.816	153.0	0.09		
103777		0.01	0.027	0.007	0.031	0.029	5.2	0.032	0.449	276	0.19	224.5	
103778		0.01	0.017	0.005	0.024	0.031	5.5	0.028	0.718	540	0.11		
103779		0.04	0.032	0.009	0.037	0.084	6.9	0.028	5.95	140.0	0.25		
103780		0.03	0.009	0.011	0.029	0.040	7.9	0.031	0.510	197.5	0.22		
103781		0.01	0.007	0.001	0.029	0.008	1.0	0.008	0.187	630	0.07		
103782		0.04	0.026	0.004	0.049	0.026	2.2	0.026	0.413	522	0.14		
103783		0.01	0.023	0.006	0.034	0.029	3.7	0.017	0.366	269	0.15		
103784		0.02	0.003	<0.001	0.029	0.005	0.3	0.005	0.040	77.7	0.03		
103785		<0.01	0.005	0.001	0.031	0.008	0.5	0.009	0.068	75.0	0.05		
103786		0.02	0.010	0.005	0.019	0.028	4.0	0.042	0.979	220	0.07		
103787		0.02	0.025	0.008	0.020	0.033	5.2	0.025	0.572	73.4	0.23		
103788		0.01	0.041	0.004	0.023	0.160	4.9	0.018	2.94	84.7	0.33		
103789		0.01	0.006	0.010	0.024	0.053	14.6	0.038	0.716	138.0	0.06		
103790		0.02	0.051	0.020	0.021	0.089	23.2	0.065	1.170	55.7	0.19		



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Project: BC Proj.Generation- Ralph Keefe

### CERTIFICATE OF ANALYSIS VA16178041

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg 0.02	Au- ICP2 1 Au ppm 0.001	ME- MS41L Au ppm 0.0002	ME- MS41L Ag ppm 0.001	ME- MS41L Al % 0.01	ME- MS41L As ppm 0.01	ME-MS41L B ppm 10	ME- MS41L Ba ppm 0.5	ME- MS41L Be ppm 0.01	ME- MS41L Bi ppm 0.001	ME- MS41L Ca % 0.01	ME- MS41L Cd ppm 0.001	ME- MS41L Ce ppm 0.003	ME- MS41L Co ppm 0.001	ME- MS41L Cr ppm 0.01
103791		0.48	<0.001	0.0328	0.158	0.54	1.66	10	201	0.12	0.030	2.23	1.015	5,88	2.60	4.64
103792		0.56	< 0.001	0.0004	0.197	0.22	0.82	10	157.5	0.05	0.024	1.84	0.487	3.00	1.350	1.86
103793		0.90	< 0.001	0.0006	0.225	2.25	11.60	<10	371	0.62	0.097	0.85	0.537	24.1	14.60	23.9
103794		0.98	< 0.001	0.0008	0.220	1.82	7.91	<10	353	0.42	0.082	1.14	0.558	19.65	13.80	19.90
103795		Not Recvd														
103796		Not Recvd														
103797		Not Recvd														
103798		Not Recvd			V112114				1000	0.00	0.004	1.00	0.713	2.16	1.900	2.98
103799	-	0.66	<0.001	<0.0002	0.376	0.48	0.66	10	1030	0.06	0.024	1.08 1.51	0.713	1.480	1,420	1.66
103800		0.18	<0.001	0.0002	0.124	0.33	0.54	10	1270	0.08	0.026	19.62642	101208	And see	105,0755	
103801		0.52	<0.001	0.0074	0.142	0.65	2.30	10	187.0	0.24	0.029	3.14	1.340	19.30	2.32	3.49
103802		0.36	<0.001	0.0002	0.154	0.11	0.74	10	83.3	0.02	0.022	1.34	0.572	2.06	0.440	1.00
103803		0.28	<0.001	0.0013	0.577	0.65	6.81	10	489	0.19	0.068	3.02	1.700	10.00	1.945	5.12
103804		0.46	0.004	<0.0002	0.434	0.16	4.19	10	289	0.04	0.052	1.03	1.075	1.745	1.055	1.88
103805	3	0.50	<0.001	0.0016	0.382	0.82	7.47	10	237	0.28	0.054	2.78	0.655	13.05	3.14	7.37
103806		0.32	< 0.001	<0.0002	0.199	0.34	1,73	10	201	0.07	0.046	0.88	0.680	3.34	2.04	4.09
103807		0.42	0.001	<0.0002	0.099	0.37	1.75	<10	125.5	0.06	0.063	0.56	0.425	4.42	2.21	5.46
103808		0.56	<0.001	0.0002	0.197	0.69	5.23	<10	256	0.15	0.078	0.94	0.742	6.24	4.75	9.59
103809		0.62	< 0.001	0.0003	0.121	0.97	5.99	<10	130.5	0.20	0.066	0.96	0.691	8.82	6.88	10.50
103810		0.30	0.001	0.0002	0.766	0.66	5.91	10	113.5	0.15	0.048	1.92	9.72	5.02	7.66	6.23
103811		0.68	<0.001	<0.0002	0.112	0.65	2.16	20	419	0.10	0.038	2.44	0.618	5.56	3.80	6.09
103812		0.40	< 0.001	0.0002	0.051	0.37	2.39	10	196.0	0.08	0.032	1.80	2.26	4.99	5.67	4.73
103813		0.48	< 0.001	0.0005	0.121	0.20	1.39	20	408	0.04	0.042	2.26	0.505	2.14	1.105	3.06
103814		0.44	<0.001	0.0002	0.084	0.20	0.76	20	377	0.05	0.016	2.77	0.529	2.97	0.831	1.73
103815		0.42	<0.001	0.0003	0,207	0.31	0.85	30	1130	0.06	0.038	3.40	1.450	2.71	2.50	2.10
103816		0.40	0.002	0.0003	0.364	0.37	3.26	10	360	0.08	0.081	1.65	0.601	3.99	4.06	6.10
103817		0.42	< 0.001	0.0004	0.126	0.87	4.91	10	184.5	0.23	0.069	0.93	0.517	8.69	6.15	11.45
103818		0.36	<0.001	0.0003	0.124	0.91	3.74	<10	410	0.35	0.052	1.02	0.447	22.4	7.47	7.86 10.55
103819		0.50	<0.001	0.0002	0.200	0.99	4.52	10	234	0.21	0.065	0.81	0.985	7.65	6.33	
103820		0.96	<0.001	0.0004	0.207	0.84	4.77	<10	275	0.16	0.071	0.50	0.718	7.97	6.00	10.50
103821		1.24	0.045	0.0007	0.146	1.05	4.67	<10	381	0.25	0.082	0.69	0.452	10.80	7.60	14.05
103822		0.36	< 0.001	<0.0002	0.158	0.36	1.57	10	70.6	0.05	0.020	0.94	0.676	1.890	1.775	2.66
103823		0.50	< 0.001	0.0008	0.087	0.33	1.66	10	83.3	0.05	0.017	0.74	0.319	2.01	2.20	4.20
103824		0.56	0.012	0.0003	0.220	0.36	1.60	<10	481	0.05	0.050	1.17	0.792	3.23	2.49 3.22	4.20
103825		0.30	< 0.001	0.0005	0.108	0.58	1.87	10	369	0.23	0.035	1.64	0.991	12.80		
103826		0.34	<0.001	<0.0002	0.524	0.42	1.31	10	121.0	0.04	0.021	0.94	1.090	1.675	1.920	2.71
103827		0.52	< 0.001	0.0223	0.277	0.69	1.85	10	479	0.30	0.059	1.31	0.605	15.90	4.41	4.76
103828		0.42	0.048	0.0004	0.184	0.31	1.31	10	202	0.09	0.036	1.16	0.200	4.51	4.35	3.29
103829		0.38	0.047	0.0010	0.159	0.10	0.72	10	62.6	0.03	0.022	0.34	0.331	1.100	1.480	1.12
103830		0.38	0.019	<0.0002	0.199	0.70	2.17	10	229	0.22	0.039	0.59	0.226	10.95	4.86	6.81



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Project: BC Proj.Generation- Ralph Keefe

# CERTIFICATE OF ANALYSIS VA16178041

Sample Description	Method	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOR	0.005	0.01	0.001	0.004	0.005	0.002	0.004	0.005	0.01	0.002	0.1	0.01	0.1	0.01	0.001
103791 103792 103793 103794 103795		0.270 0.265 0.579 0.615	15.50 11.05 24.1 17.40	0.650 0.320 3.93 3.64	1.265 0.598 5.44 4.39	0.029 0.015 0.091 0.077	0.012 0.010 0.045 0.031	0.252 0.219 0.118 0.112	0.010 0.009 0.053 0.028	0.10 0.07 0.08 0.06	4.33 1.755 10.00 7.34	1.8 0.5 12.9 22.3	0.21 0.17 0.50 0.38	1165 580 1290 3840	0.79 0.76 0.94 0.69	0.008 0.008 0.013 0.013
103796 103797 103798 103799 103800		1.445 0.816	9.24 7.85	0.450 0.202	1.110 0.887	0.016 0.005	<0.002 0.002	0.247 0.308	<0.005 <0.005	0.27 0.11	1.020 0.638	1.5 0.4	0.17 0.07	1935 14050	0.23 0.36	0.008 0.006
103801		0.134	24.4	0.560	0.987	0.086	0.027	0.171	0.007	0.06	16.35	0.9	0.24	653	0.50	0.010
103802		0.101	11.55	0.104	0.238	0.015	<0.002	0.197	<0.005	0.06	1.685	0.2	0.12	47.6	1.08	0.005
103803		0.504	51.6	0.540	1.565	0.044	0.006	0.268	0.013	0.18	7.22	2.7	0.22	1215	0.80	0.008
103804		0.234	16.55	0.270	0.480	0.011	<0.002	0.207	0.006	0.11	1.095	0.4	0.09	123.0	1.31	0.007
103805		0.448	76.9	1.030	1.715	0.064	0.030	0.133	0.012	0.03	11.30	2.4	0.22	929	0.93	0.011
103806		0.194	10.40	0.590	1,125	0.017	<0.002	0.203	0.006	0.11	1.860	0.7	0.08	903	1.03	0.010
103807		0.276	9.85	0.770	1,820	0.014	<0.002	0.111	0.005	0.08	2.47	1.0	0.07	797	0.82	0.009
103808		0.395	14.75	1.430	2,74	0.018	<0.002	0.104	0.011	0.11	3.13	3.6	0.21	2400	0.70	0.009
103809		0.460	13.80	1.720	3,23	0.031	<0.002	0.064	0.013	0.10	4.57	5.2	0.29	1245	0.66	0.008
103810		0.610	13.30	1.280	1,930	0.020	<0.002	0.149	0.028	0.16	2.42	4.7	0.29	664	0.46	0.007
103811 103812 103813 103814 103815		0.608 0.206 0.369 0.203 0.311	23.5 11.85 14.40 19.35 37.2	0.870 0.790 0.430 0.208 0.270	1.730 1.220 0.838 0.443 0.705	0.029 0.030 0.013 0.023 0.009	0.003 <0.002 <0.002 <0.002 <0.002 <0.002	0.125 0.092 0.243 0.147 0.224	0.007 0.007 <0.005 <0.005 <0.005	0.19 0.15 0.18 0.15 0.14	3.08 2.16 1.380 2.68 1.585	1.7 2.1 0.8 0.5 0.6	0.24 0.23 0.17 0.26 0.14	1435 1495 1100 774 9320	0.59 0.67 1.02 0.63 1.04	0.015 0.008 0.008 0.009 0.009
103816 103817 103818 103819 103820		0.383 0.266 0.248 0.320 0.282	23.4 15.30 19.25 11.65 14.50	0.920 1.650 1.420 1.550 1.630	1.720 2.66 2.08 2.91 2.77	0.021 0.037 0.057 0.034 0.028	<0.002 0.002 0.006 <0.002 <0.002	0.173 0.087 0.120 0.068 0.080	0.007 0.018 0.019 0.019 0.019 0.014	0.12 0.14 0.11 0.16 0.13	2.23 3.85 9.31 3.67 3.88	1.7 4.7 3.3 3.9 3.2	0.18 0.26 0.19 0.19 0.16	2290 1140 2110 2580 1385	1.32 0.91 0.60 0.63 0.86	0.008 0.008 0.009 0.009 0.008
103821		0.391	14.80	1.960	3.40	0.038	0.008	0.053	0.011	0.14	4.96	6.0	0.29	1550	0.69	0.008
103822		0.139	7.09	0.420	0.724	0.010	<0.002	0.127	<0.005	0.12	0.952	1.2	0.13	2020	0.41	0.006
103823		0.177	7.90	0.460	0.725	0.017	0.005	0.097	<0.005	0.19	1.060	1.3	0.15	950	0.44	0.006
103824		0.234	15.65	0.610	1.245	0.013	<0.002	0.126	<0.005	0.15	1.640	0.9	0.12	1550	0.89	0.007
103825		0.210	17.20	0.760	1.295	0.045	0.008	0.131	0.005	0.22	6.64	2.2	0.26	1295	0.64	0.009
103826		0.161	6.98	0.400	0.783	0.007	<0.002	0.141	0.007	0.15	0.822	1.2	0.10	4460	0.50	0.006
103827		0.162	19.45	0.750	1.695	0.034	0.002	0.250	0.010	0.17	6.17	1.7	0.17	3060	0.69	0.008
103828		0.264	8.02	0.550	0.958	0.014	0.007	0.204	0.005	0.22	1.770	0.7	0.17	1355	1.23	0.009
103829		0.231	8.63	0.192	0.260	<0.005	0.005	0.187	<0.005	0.14	0.481	0.2	0.10	604	2.42	0.010
103830		0.238	12.90	0.850	1.940	0.020	0.003	0.116	0.011	0.10	4.50	2.1	0.14	1630	0.69	0.008



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Project: BC Proj.Generation- Ralph Keefe

# CERTIFICATE OF ANALYSIS VA16178041

Sample Description	Method	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME-MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L	ME- MS41L
	Analyte	Nb	Ni	P	Pb	Pd	Pt	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOR	0.002	0.04	0.001	0.005	0.001	0.002	0.005	0.001	0.01	0.005	0.005	0,1	0.01	0.01	0.005
103791 103792 103793 103794 103795		0.222 0.090 0.514 0.407	6.59 3.31 34.6 31.6	0.116 0.091 0.092 0.089	3.42 2.47 7.88 6.18	<0.001 <0.001 <0.001 <0.001	<0.002 <0.002 <0.002 <0.002	3.30 2.36 7.28 8.58	<0.001 <0.001 <0.001 0.001	0.17 0.19 0.05 0.08	0.175 0.115 0.323 0.270	1.810 0.949 5.66 4.60	0.7 0.7 0.7 0.6	0.13 0.07 0.45 0.33	79.7 71.8 106.0 93.2	<0.005 <0.005 <0.005 <0.005
103796 103797 103798 103799 103800		0.331 0.046	3.65 4.72	0.109 0.154	11.80 7.51	<0.001 <0.001	<0.002 <0.002	7.09 7.06	<0.001 <0.001	0.13 0.13	0.081 0.096	0.573 0.413	0.5 0.5	0.16 0.09	38.9 47.3	<0.005 <0.005
103801		0.119	6.71	0.146	1.955	<0.001	<0.002	1.905	0.004	0.22	0.682	1.205	0.8	0.07	163.0	<0.005
103802		0.020	2.60	0.076	1.800	<0.001	<0.002	2.01	<0.001	0.21	0.100	0.469	0.3	0.04	86.7	<0.005
103803		0.190	9.84	0.147	2.67	<0.001	<0.002	5.32	<0.001	0.19	0.196	2.19	0.5	0.17	142.0	<0.005
103804		0.073	3.00	0.109	3.87	<0.001	<0.002	2.29	<0.001	0.16	0.146	0.530	0.5	0.09	51.2	<0.005
103805		0.286	11.25	0.104	2.80	<0.001	<0.002	3.73	0.002	0.17	0.483	2.69	0.7	0.13	107.5	<0.005
103806		0.146	4.24	0.107	6.29	0.001	<0.002	1.900	<0.001	0.10	0.184	0.450	0.4	0.16	42.4	<0.005
103807		0.247	3.66	0.077	6.19	<0.001	<0.002	3.25	<0.001	0.06	0.179	0.337	0.2	0.26	23.6	<0.005
103808		0.339	7.92	0.116	6.90	<0.001	<0.002	6.01	<0.001	0.07	0.204	1.080	0.2	0.25	46.8	<0.005
103809		0.496	8.96	0.083	9.52	<0.001	<0.002	5.79	<0.001	0.07	0.234	1.720	0.3	0.28	52.6	<0.005
103810		0.350	6.64	0.134	202	<0.001	<0.002	3.72	<0.001	0.13	0.739	0.673	0.4	0.19	73.4	<0.005
103811 103812 103813 103814 103815		0.246 0.152 0.190 0.051 0.082	7.99 6.39 2.95 3.42 11.20	0.168 0.151 0.121 0.155 0.576	5.64 3.68 4.96 2.98 6.65	<0.001 <0.001 <0.001 <0.001 <0.001	<0.002 <0.002 <0.002 <0.002 <0.002 <0.002	9.51 3.52 6.34 3.72 4.86	<0.001 <0.001 <0.001 <0.001 0.001	0.16 0.14 0.17 0.20 0.14	0.137 0.149 0.146 0.094 0.113	0.929 1.030 0.508 0.540 0.262	0.4 0.3 0.2 0.4 0.3	0.18 0.10 0.14 0.08 0.13	130.0 95.6 108.0 152.0 159.5	<0.005 <0.005 <0.005 <0.005 <0.005
103816 103817 103818 103819 103820		0.272 0.352 0.309 0.352 0.405	7.03 14.40 18.30 12.95 13.60	0.124 0.096 0.114 0.122 0.095	6.85 3.89 3.72 4.52 5.91	0.001 <0.001 <0.001 <0.001 <0.001	<0.002 <0.002 <0.002 <0.002 <0.002 <0.002	7.72 5.04 3.40 5.64 6.74	<0.001 <0.001 <0.001 <0.001 <0.001	0.10 0.07 0.10 0.06 0.05	0.233 0.249 0.301 0.199 0.320	0.555 1.325 1.870 1.235 0.935	0.2 0.4 0.5 0.5 0.3	0.20 0.24 0.15 0.28 0.35	76.2 48.5 85.0 43.5 44.0	<0.005 <0.005 <0.005 <0.005 <0.005
103821		0.737	16.35	0.122	5.63	<0.001	<0.002	5.56	<0.001	0.04	0.284	2.10	0.4	0.36	71.2	<0.005
103822		0.112	5.82	0.145	1.435	<0.001	<0.002	1.705	<0.001	0.13	0.087	0.411	0.4	0.08	20.9	<0.005
103823		0.099	6.94	0.144	1.470	<0.001	<0.002	1.830	<0.001	0.13	0.109	0.707	0.5	0.07	40.2	<0.005
103824		0.137	6.49	0.125	5.47	<0.001	<0.002	3.40	<0.001	0.09	0.151	0.348	0.5	0.21	109.0	<0.005
103825		0.186	12.40	0.172	2.10	<0.001	<0.002	4.07	<0.001	0.16	0.253	0.668	0.5	0.12	164.5	<0.005
103826		0.091	4.51	0.160	1.895	<0.001	<0.002	2.24	<0.001	0.13	0.061	0.341	0.5	0.07	28.7	<0.005
103827		0.193	10.45	0.153	6.93	<0.001	<0.002	3.52	<0.001	0.08	0.223	0.466	0.4	0.19	114.5	<0.005
103828		0.314	4.99	0.147	2.39	<0.001	<0.002	7.81	<0.001	0.11	0.147	1.015	0.4	0.12	117.0	<0.005
103829		0.034	1.91	0.133	2.63	<0.001	<0.002	4.84	<0.001	0.09	0.132	0.529	0.3	0.07	31.6	<0.005
103830		0.316	10.45	0.104	3.13	<0.001	<0.002	4.72	<0.001	0.07	0.204	0.872	0.4	0.19	55.0	<0.005



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Project: BC Proj.Generation- Ralph Keefe

CERTIFICATE OF ANALYSIS VA16178041

												71101010	1/1101/0011
Sample Description	Method Analyte Units LOR	ME- MS41L Te ppm 0.01	ME-MS41L Th ppm 0.002	ME- MS41L Ti % 0.001	ME- MS41L TI ppm 0.002	ME- MS41L U ppm 0.005	ME-MS41L V ppm 0,1	ME- MS41L W ppm 0.001	ME- MS41L Y ppm 0.003	ME- MS41L Zn ppm 0.1	ME- MS41L Zr ppm 0.01		5 <sub>6</sub>
103791 103792 103793 103794 103795		0.02 0.01 0.04 0.06	0.088 0.062 0.557 0.468	0.006 0.005 0.011 0.008	0.039 0.024 0.079 0.090	0.269 0.067 0.605 0.331	10.3 5.4 52.9 42.1	0.024 0.016 0.090 0.064	5.74 1.775 12.75 9.20	85.6 28.2 92.5 112.0	0.61 0.36 1.43 0.96		
103796 103797 103798 103799 103800		0.02	0.013 0.010	0.012 0.003	0.026 0.285	0,042 0.035	8.9 3.5	0.026 0.023	0.547 0.418	189.0 289	0.27 0.04	5. 	
103801 103802 103803 103804 103805		0.01 0.01 0.05 <0.01 0.04	0.072 0.036 0.138 0.069 0.122	0.004 0.002 0.005 0.005 0.007	0.069 0.017 0.069 0.016 0.064	0.475 0.101 0.307 0.050 0.919	6.2 1.6 9.2 4.7 13.8	0.016 0.005 0.039 0.019 0.042	30.1 2.13 9.86 0.966 23.6	21.7 8.3 133.0 110.0 52.3	0.93 0.26 0.52 0.19 1.22		
103806 103807 103808 103809 103810		0.02 0.01 0.02 0.01 0.02	0.008 0.004 0.024 0.055 0.017	0.014 0.016 0.024 0.022 0.012	0.021 0.021 0.035 0.035 0.035	0.069 0.089 0.118 0.175 0.066	15.1 19.7 30.3 34.6 23.1	0.043 0.048 0.061 0.069 0.052	1.085 1.150 2.00 3.59 2.22	77.7 34.6 117.5 125.0 1070	0.10 0.07 0.07 0.15 0.27		an da especiela con especiela de producto de facilitado en la
103811 103812 103813 103814 103815		0.01 <0.01 0.01 0.01 <0.01	0.048 0.103 0.039 0.030 0.017	0.016 0.013 0.010 0.004 0.005	0.026 0.020 0.017 0.015 0.044	0.091 0.079 0.048 0.063 0.043	19.1 15.0 10.2 4.1 5.2	0.047 0.046 0.033 0.018 0.035	2.35 1.890 0.709 2.96 1.130	150.0 157.5 132.5 161.0 395	0.46 0.47 0.28 0.43 0.11		
103816 103817 103818 103819 103820		0.02 0.02 0.03 0.02 0.01	0.010 0.063 0.072 0.056 0.034	0.016 0.010 0.007 0.011 0.013	0.027 0.033 0.040 0.038 0.033	0.086 0.192 0.209 0.160 0.149	21.0 26.7 19.4 24.8 27.9	0.058 0.057 0.057 0.080 0.087	1.135 2.81 12.00 1.545 1.290	86.7 92.9 73.6 111.5 71.6	0.05 0.14 0.25 0.10 0.10	7	a 1
103821 103821 103822 103823 103824 103825		0.01 0.02 0.01 <0.01 <0.01 0.01	0.289 0.019 0.047 0.007 0.029	0.019 0.005 0.006 0.005 0.005 0.004	0.037 0.013 0.015 0.019 0.026	0.201 0.041 0.053 0.069 0.230	31.2 6.7 6.6 10.2 10.1	0.093 0.037 0.027 0.049 0.037	2.38 0.426 0.618 0.800 8.75	84.5 79.4 57.2 97.3 114.0	0.33 0.07 0.19 0.05 0.24		
103826 103827 103828 103829 103830		0.01 0.04 0.03 0.01 0.03	0.006 0.009 0.046 0.017 0.052	0.003 0.003 0.005 0.003 0.006	0.022 0.036 0.018 0.030 0.042	0.040 0.221 0.202 0.038 0.187	5.6 11.2 6.8 2.5 16.1	0.024 0.064 0.162 0.025 0.044	0.559 5.96 2.04 0.482 4.16	101.0 123.0 56.5 28.7 66.7	0.02 0.09 0.35 0.11 0.14		



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Project: BC Proj.Generation- Ralph Keefe

#### CERTIFICATE OF ANALYSIS VA16178041

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg 0.02	Au- ICP2 I Au ppm 0.001	ME- MS41L Au ppm 0.0002	ME- MS41L Ag ppm 0.001	ME- MS41L Al % 0.01	ME- MS41L As ppm 0.01	ME-MS41L B ppm 10	ME- MS41L Ba ppm 0.5	ME- MS41L Be ppm 0.01	ME- MS41L Bi ppm 0.001	ME- MS41L Ca % 0.01	ME-MS41L Cd ppm 0.001	ME- MS41L Ce ppm 0.003	ME- MS41L Co ppm 0.001	ME- MS41L Cr ppm 0.01
103831		0.52	<0,001	0.0002	0.174	0.54	2.04	10	228	0.17	0.047	0.55	0.552	7.06	4.34	6.36
103832	1	0.58	< 0.001	0.0002	0.095	0.40	2.50	10	264	0.13	0.049	0.86	0.820	6.28	3.36	8.56
103833		0.46	< 0.001	0.0003	0.110	0.10	0.71	20	700	0.02	0.022	3.99	1.645	0.848	0.995	1.41
103834	5	0.52	<0.001	0.0002	0.113	0.54	6.19	10	270	0.19	0.067	0.74	0.406	5.60	5.16	10.80
103835		0.50	<0.001	<0.0002	0.187	0.16	1.48	10	159.5	0.03	0.035	0.51	0.697	2.59	1.430	3.17
103836		0.52	<0.001	<0.0002	0.187	0.28	3.48	10	193.0	0.10	0.078	0.52	0.510	7.94	1.965	6.59
103837		0.56	<0.001	0.0003	0.127	0.40	2.74	10	365	0.16	0.049	1.05	0.497	8.21	3.25	6.36
103838		0.34	<0.001	<0.0002	0.168	0.14	0.90	10	477	0.05	0.017	2.08	0.636	2.16	1.460	2.45
103839		0.78	< 0.001	0.0003	0.192	0.72	6.61	<10	181.0	0.31	0.071	0.24	0.267	13.85	5.40	11.85
103840		0.52	<0.001	0.0002	0.114	0.17	1.30	10	456	0.09	0.031	1.79	3.55	4.74	2.27	1.61
103841		0.32	<0.001	<0.0002	0.150	0.12	0.69	20	235	0.02	0.015	3.97	2.26	0.464	0.769	0.61
103842		0.40	<0.001	<0.0002	0.227	0.23	1.32	10	337	0.06	0.032	1.83	3.84	0.950	0.952	1.65
103843		0.50	< 0.001	0.0004	0.082	0.34	3.37	10	169.5	0.12	0.047	1.57	0.988	3.24	3.99	6.25
103844		0.42	< 0.001	0.0003	0.073	0.11	1.43	10	271	0.06	0.021	3.03	1.035	2.09	1.355	1.25
103845		0.36	0.003	0.0014	0.106	0.24	1.48	10	76.1	0.04	0.042	0.47	0.595	2.03	0.958	3.01
103846		0.46	0.012	0.0630	0.150	0.17	0.83	10	133.5	0.02	0.032	0.91	0.771	1.375	1.125	1.81
103847	8	0.42	< 0.001	0.0009	0.102	0.07	0.31	20	645	0.02	0.014	3.63	0.972	0.540	0.663	0.59
103848		0.36	<0.001	0.0008	0.135	0.20	1.32	10	354	0.04	0.030	1.47	0.956	1,575	2.22	1.94
103849	1	1.22	<0.001	0.0012	0.083	0.04	0.55	20	116.0	0.02	0.016	2.75	0.631	0.507	0.362	1.08
103850		0.78	0.008	<0.0002	0.064	0.18	1.13	20	360	0.10	0.016	3.28	0.313	3.13	2.66	1.70
103851		0.28	0.032	0.0005	0.122	0.21	0.88	10	912	0.03	0.040	1.77	1.170	1.505	2.51	1.38
103852		0.68	< 0.001	0.0007	0.384	0.05	0.54	10	54.8	0.01	0.025	0.70	0.278	0.490	0.211	0.67
103853		0.84	< 0.001	0.0335	0.761	0.17	1.70	<10	90.9	0.02	0.045	0.56	0.448	0.869	1.300	1.34
103854		0,54	< 0.001	0.0009	0.780	0.35	2.58	<10	113.0	0.03	0.052	0.68	0.470	2.17	1.240	1.72
103855		0.26	< 0.001	0.0003	0.374	0.17	0.91	10	31.0	0.01	0.028	0.74	0.886	0.566	0.390	0.57
103856		0.40	<0.001	0.0002	0.239	0.09	0.69	<10	46.6	0.01	0.025	0.50	0.290	0.467	0.361	0.46
103857		0.28	< 0.001	<0.0002	0.142	0.16	0.76	10	15.8	0.01	0.018	0.53	0.314	0.423	0.303	0.47
103858		0.44	< 0.001	0.0002	0.182	0.10	0.76	<10	21.4	0.01	0.024	0.21	0.299	0.360	0.287	0.42
103859		0.36	0.008	0.0168	0.117	0.15	0.59	10	20.6	0.01	0.021	0.63	0.309	0.363	0.373	0.48
103860		0.40	<0.001	0.0007	0.256	0.20	0.71	<10	37.5	0.01	0.032	0.40	0.670	0.521	0.413	0.54
103861		0.40	0.054	<0.0002	0.104	0.22	0.70	10	31.7	0.01	0.025	0.76	0.391	0.386	0.500	0.47
103862		0.36	0.009	0.0003	0.369	0.14	1.08	<10	64.9	0.02	0.031	0.37	0.331	0.726	0.363	0.75
103863		0.42	0.019	0.0002	0.339	0.15	0.74	<10	26.5	0.01	0.028	0.45	0.804	0.504	0.535	0.52
103864		0.34	<0.001	0.0002	0.141	0.06	0.88	<10	39.5	0.01	0.015	0.34	0.249	0.326	0.286	0.38
103865		0.38	0,005	0.0129	0.496	0.14	0.56	<10	110.5	0.04	0.057	0.66	0.444	0.480	0.712	0.49
103866		0.32	<0.001	0.0002	0.182	0.07	0.74	<10	95.4	0.01	0.027	0.19	0.432	0.401	0.346	0.51
192401		0.40	0.001	0.0005	0.234	0.09	0.61	* <10	79.9	0.02	0.065	0.89	0.512	0.678	0.560	0.78
192402		0.38	< 0.001	0.0002	0.294	0.23	1.04	<10	125.0	0.05	0.183	0.40	0.245	3.53	0.786	4.12
192403		0.16	<0.001	0.0003	0.143	0.22	0.79	<10	64.8	0.03	0.073	0.56	0.518	1.465	0.905	1.77
192404		0.24	< 0.001	0.0005	0.194	0.16	0.81	<10	77.8	0.02	0.092	0.53	1.515	1.110	1.130	1.77



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Project: BC Proj.Generation- Ralph Keefe

### CERTIFICATE OF ANALYSIS VA16178041

Sample Description	Method Analyte Units LOR	ME-MS41L Cs ppm 0.005	ME- MS41L Cu ppm 0.01	ME- MS41L Fe % 0.001	ME- MS41L Ga ppm 0.004	ME- MS41L Ge ppm 0.005	ME- MS41L Hf ppm 0.002	ME- MS41L Hg ppm 0.004	ME- MS41L In ppm 0.005	ME- MS41L K % 0.01	ME- MS41L La ppm 0.002	ME-MS41L Li ppm 0.1	ME- MS41L Mg % 0.01	ME- MS41L Mn ppm 0.1	ME- MS41L Mo ppm 0.01	ME- MS41L Na % 0.001
103831		0.211	13.80	0.800	1.730	0.021	<0.002	0.109	0.010	0.11	2.84	1.5	0.10	2010	0.70	0.006
103832		0.342	11.90	0.880	1.650	0.019	0.008	0.284	0.013	0.14	2.92	2.0	0.13	632	0.80	0.007
103833		0.082	11.35	0.167	0.381	<0.005	0.004	0.526	0.005	0.18	0.409	0.5	0.12	2110	0.36	0.007
103834		0.139	13.30	1.660	2.51	0.014	0.002	0.096	0.016	0.16	2.37	4.3	0.17	1040	0.81	0.005
103835		0.167	10.45	0.420	0.869	0.005	0.004	0.159	0.006	0.14	1.195	0.6	0.09	1200	0.54	0.007
103836		0.177	11.60	0.990	1.695	0.017	0.008	0.109	0.013	0.12	4.25	1.0	0.16	602	0.75	0.006
103837		0.199	12.90	0.860	1.590	0.021	0.006	0.194	0.010	0.14	4.28	2.4	0.17	1230	0.80	0,006
103838		0.152	8.85	0.238	0.661	<0.005	0.002	0.219	<0.005	0.17	0,804	0.6	0.10	5840	0.74	0.006
103839		0.218	13.05	1.590	2.76	0.026	0.002	0.065	0.015	0.11	5.94	4.2	0.15	575	0.51	0.004
103840		0.133	12.10	0.207	0.460	0.011	0.008	0.444	0.005	0.09	2.11	0.4	0.09	1885	0.74	0.007
103841		0.122	12.70	0.067	0.180	<0.005	0.002	0.620	<0.005	0.20	0.294	0.2	0.19	1535	0.17	0.005
103842		0.661	14.80	0.168	0.357	<0.005	0.006	0.630	<0.005	0.31	0.493	0.4	0.09	1480	0.32	0.006
103843		0.609	13.30	0.950	1.435	0.012	0.011	0.270	0.008	0.05	1.410	1.9	0.09	1500	1.62	0.004
103844		0.372	13.50	0.189	0.417	0.005	0.004	0.170	<0.005	0.08	1.665	0.6	0.20	1695	0.46	0.005
103845		0.304	7.96	0.390	0.890	0.009	0.003	0.296	<0.005	0.09	0.952	0.5	0.05	433	0.51	0.005
103846		0.175	11.85	0.220	0.488	<0.005	0.006	0.354	<0.005	0,11	0.674	0.5	0.07	1185	0.67	0.005
103847		0.126	12,15	0.043	0.250	<0.005	0.003	0.561	<0.005	0.13	0.384	0.1	0.13	3890	0.20	0.007
103848		0.402	13.30	0.280	0.644	0.006	0.002	0.478	<0.005	0.15	0.678	0.9	0.13	3960	0.40	0.005
103849		0.113	12.90	0.084	0.154	<0.005	0.003	0.281	<0.005	0.04	0.261	0.3	0.13	252	0.30	0.008
103850		0.121	9.65	0.560	0.713	0.016	0.009	0.177	<0.005	0.05	2.23	0.7	0.17	9370	0.61	0.012
103851		0.457	11.95	0.204	1.045	<0.005	0.005	0.457	<0.005	0.22	0.716	0.3	0.12	15050	0.43	0.009
103852		0.119	7.90	0.051	0.136	<0.005	0.003	0.223	<0.005	0.09	0.284	0.1	0.07	162.0	1.03	0.004
103853		0.145	5.58	0.184	0.376	<0.005	0.003	0.385	0.006	0.04	0.390	0.2	0.06	393	0.74	0.005
103854		0.481	10.95	0.560	1.340	0.010	0.003	0.329	0.006	0.08	1.005	1.1	0.10	1390	1.42	0.006
103855		0.500	9.16	0.083	0.300	<0.005	0.003	0.844	<0.005	0.12	0.278	0.1	0.04	3470	0.45	0.006
103856		0.407	5.02	0.066	0.185	<0.005	0.003	0.369	<0.005	0.13	0.243	0.1	0.03	769	0.38	0.005
103857		0.511	9.99	0.065	0.172	<0.005	<0.002	0.689	<0.005	0.13	0.211	0.1	0.04	1220	0.26	0.006
103858		0.277	6.47	0.056	0.130	<0.005	0.002	0.425	<0.005	0.10	0.175	0.1	0.03	221	0.27	0.005
103859		0.447	10.70	0.058	0.134	< 0.005	<0.002	0.850	<0.005	0.15	0.196	0.1	0.04	703	0.25	0.005
103860		0.552	9.90	0.084	0.249	<0.005	<0.002	0.812	<0.005	0.15	0.286	0.1	0.03	2030	0.39	0.005
103861		0.718	10.80	0.065	0.228	0.006	0.003	0.875	<0.005	0.35	0.201	0.1	0.05	4200	0.32	0.004
103862		0.689	6.49	0.093	0.236	0.009	0.003	0.494	0.005	0.14	0.442	0.1	0.03	734	0.47	0.005
103863		0.709	9.47	0.075	0.224	0.021	<0.002	0.752	<0.005	0.13	0.267	0.1	0.04	3000	0.35	0.004
103864		0.397	4.39	0.049	0.106	0.018	<0.002	0.336	<0.005	0.09	0.193	0.1	0.03	77.0	0.30	0.003
103865		0.819	7.18	0.066	0.199	0.021	<0.002	0.677	0.005	0.13	0.262	0.1	0.04	3850	0.32	0.006
103866		0.163	3.19	0.062	0.148	0.017	<0.002	0.295	<0.005	0.04	0.221	0.1	0.03	50.0	0.66	0.003
192401		0.771	8.81	0.105	0.199	0.019	<0.002	0.327	<0.005	0.13	0.561	0.2	0.08	866	1.45	0.005
192402		0.802	8.91	0.440	1.610	0.023	<0.002	0.218	0.007	0.12	1.935	0.4	0.06	1255	0.80	0.007
192403		0.414	9.09	0.247	0.592	0.023	<0.002	0.242	<0.005	0.14	0.750	0.5	0.07	941	0.92	0.005
192404		0.592	8.74	0.212	0.426	0.024	0.007	0.298	<0.005	0.09	0.564	0.5	0.07	328	1.06	0.004



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Project: BC Proj.Generation- Ralph Keefe

## CERTIFICATE OF ANALYSIS VA16178041

Sample Description	Method Analyte Units LOR	ME- MS41L Nb ppm 0.002	ME- MS41L Ni ppm 0.04	ME- MS41L P % 0.001	ME-MS41L Pb ppm 0.005	ME- MS41L Pd ppm 0.001	ME- MS41L Pt ppm 0.002	ME- MS41L Rb ppm 0.005	ME-MS41L Re ppm 0.001	ME- MS41L S % 0.01	ME- MS41L Sb ppm 0.005	ME- MS41L Sc ppm 0.005	ME- MS41L Se ppm 0.1	ME- MS41L Sn ppm 0.01	ME- MS41L Sr ppm 0.01	ME- MS41L Ta ppm 0.005
103831		0.205	9.90	0.117	5.39	<0.001	<0.002	4.20	<0.001	0.06	0.221	0.357	0.2	0.20	24.4	<0.005
103832		0.302	10.95	0.079	3.83	< 0.001	<0.002	8.29	< 0.001	0.09	0.214	1.210	0.3	0.17	72.9	<0.005
103833		0.064	5.88	0.098	2.13	< 0.001	<0.002	1.735	< 0.001	0.16	0.098	0.446	0.3	0.06	243	<0.005
103834	1	0.515	11.85	0.113	5.08	< 0.001	<0.002	3.54	< 0.001	0.07	0.339	0.656	0.2	0.27	54.0	<0.005
103835		0.137	3.47	0.115	3.36	<0.001	<0.002	2.28	<0.001	0.08	0.120	0.569	0.3	0.12	26.9	<0.005
103836		0.271	7.03	0.091	4.26	<0.001	<0.002	3,08	<0.001	0.06	0.268	1.055	0.2	0.20	40.3	<0.005
103837		0.301	10.50	0.134	4.31	<0.001	<0.002	3.47	<0.001	0.10	0.240	0.886	0.3	0.14	68.4	<0.005
103838		0.067	6.08	0.166	1.545	<0.001	< 0.002	2.46	< 0.001	0.13	0.068	0.446	0.3	0.08	97.3	<0.005
103839		0.463	13.95	0.080	5.05	< 0.001	< 0.002	4.80	< 0.001	0.04	0.395	1.160	0.3	0.24	20.9	<0.005
103840		0.070	13.65	0.125	4.06	<0.001	<0.002	1.540	<0.001	0.19	0.106	0.488	0.5	0.09	103.0	<0.005
103841		0.025	4.24	0.119	2.19	<0.001	<0.002	2.55	<0.001	0.17	0.085	0.249	0.5	0.04	89.2	<0.005
103842		0.090	5.39	0.160	4.73	< 0.001	< 0.002	13.25	< 0.001	0.17	0.145	0.368	0.3	0.13	52.9	<0.005
103843		0.328	8.52	0.088	5.32	< 0.001	< 0.002	4.65	< 0.001	0.14	0.340	0.845	0.3	0.15	37.8	<0.005
103844		0.104	3.41	0.148	3.56	< 0.001	<0.002	1.860	< 0.001	0.22	0.103	0.363	0.3	0.08	93.2	<0.005
103845		0.141	3.09	0.088	4.24	<0.001	<0.002	3.01	<0.001	0.09	0.179	0.568	0.3	0.14	13.60	<0.005
103846		0.062	4.52	0.132	3.99	<0.001	<0.002	1.680	0.001	0.12	0.146	0.420	0.3	0.12	30.9	<0.005
103847		0.016	8.27	0.104	3.40	<0.001	<0.002	1.945	<0.001	0.18	0.053	0.199	0.3	0.04	70.8	<0.005
103848		0.084	4.99	0.134	5.05	<0.001	<0.002	3.51	< 0.001	0.15	0.171	0.464	0.3	0.10	44.4	<0.005
103849		0.036	1.04	0.096	2.04	< 0.001	<0.002	0.918	<0.001	0.20	0.086	0.262	0.3	0.04	140.0	<0.005
103850		0.053	5.58	0.118	1.355	<0.001	<0.002	1.020	<0.001	0.28	0.223	0.439	0.5	0.03	177.0	<0.005
103851		0.065	5.73	0.145	5.20	<0.001	<0.002	4.15	< 0.001	0.14	0.154	0.374	0.3	0.11	54.2	<0.005
103852		0.026	0.76	0.098	2.35	<0.001	< 0.002	0.768	<0.001	0.12	0.161	0.200	0.2	0.06	43.8	<0.005
103853		0.072	1.74	0.103	4.62	<0.001	< 0.002	1.195	0.001	0.12	0.331	0.320	0.5	0.10	43.0	<0.005
103854		0.233	2.06	0.130	5.74	<0.001	< 0.002	3.69	< 0.001	0.13	0.598	0.613	0.5	0.17	40.8	<0.005
103855		0.020	1.26	0.135	3.16	<0.001	<0.002	3.48	<0.001	0.14	0.257	0.252	0.3	0.09	12.85	<0.005
103856		0.021	0.91	0.133	3.56	<0.001	<0.002	3.75	<0.001	0.11	0.162	0.222	0.3	0.07	17.30	<0.005
103857		0.018	1.20	0.149	6.32	< 0.001	<0.002	4.59	<0.001	0.14	0.221	0.205	0.3	0.06	12.50	<0.005
103858		0.026	1.03	0.113	3.37	< 0.001	<0.002	3.30	<0.001	0.11	0.264	0.192	0.3	0.07	10.75	<0.005
103859		0.014	1.57	0.140	2.73	< 0.001	<0.002	4.80	< 0.001	0.16	0.126	0.186	0.3	0.06	17.60	<0.005
103860		0.025	1.21	0.164	3.55	<0.001	<0.002	5.21	<0.001	0.13	0.257	0.235	0.4	0.09	13.05	<0.005
103861		0.031	1.93	0.197	3.21	<0.001	<0.002	11.45	<0.001	0.15	0.126	0.117	0.6	0.09	20.1	<0.005
103862		0.038	1.08	0.107	2.79	<0.001	<0.002	6.19	<0.001	0.08	0.308	0.234	0.8	0.11	26.2	<0.005
103863		0.021	1.21	0.141	3.20	<0.001	<0.002	5.19	<0.001	0.15	0.165	0.107	0.5	0.05	17.05	<0.005
103864		0.018	0.73	0.091	4.56	<0.001	<0.002	2.86	<0.001	0.10	0.119	0.073	0.2	0.07	28.0	<0.005
103865		0.022	1.79	0.133	3.58	0.001	<0.002	5.49	<0.001	0.13	0.187	0.080	0.4	0.07	28.8	<0.005
103866		0.026	0.96	0.066	2.87	<0.001	<0.002	1.710	<0.001	0.12	0.150	0.092	0.3	0.09	25.9	<0.005
192401		0.038	0.90	0.124	5.32	<0.001	<0.002	6.76	<0.001	0.13	0.094	0.150	0.3	0.05	41.1	<0.005
192402		0.204	2.12	0.084	6.60	<0.001	<0.002	7.61	< 0.001	0.06	0.144	0.240	0.3	0.27	21.2	<0.005
192403		0.077	1.86	0.108	3.88	<0.001	0.002	4.03	<0.001	0.11	0.106	0.324	0.3	0.06	23.9	<0.005
192404		0.062	3.30	0.111	3.72	< 0.001	< 0.002	4.37	< 0.001	0.13	0.126	0.348	0.3	0.06	32.6	<0.005



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Project: BC Proj.Generation- Ralph Keefe

# CERTIFICATE OF ANALYSIS VA16178041

Sample Description	Method Analyte Units LOR	ME- MS41L Te ppm 0.01	ME-MS41L Th ppm 0.002	ME- MS41L Ti % 0.001	ME- MS41L TI ppm 0.002	ME- MS41L U ppm 0.005	ME-MS41L V ppm 0.1	ME- MS41L W ppm 0.001	ME- MS41L Y ppm 0.003	ME- MS41L Zn ppm 0.1	ME- MS41L Zr ppm 0.01			2
103831		0.02	0.011	0.007	0.035	0.118	16.5	0.065	2.10	76.1	0.03			
103832		0.05	0.145	0.010	0.037	0.123	17.3	0.081	2.17	66.5	0.22			
103833		0.02	0.037	0.003	0.009	0.021	3.2	0.023	0.270	230	0.15			
103834		0.02	0.023	0.010	0.025	0.135	31.0	0.100	1.095	108.0	0.07			
103835		<0.01	0.056	0.007	0.039	0.052	9.0	0.063	0.311	45.8	0.15			
103836		0.05	0.096	0.011	0.021	0.125	22.1	0.080	1.075	36.4	0.17			
103837		0.01	0.048	0.008	0.030	0.167	15.6	0.127	4.67	66.7	0.18			
103838		0.01	0.028	0.003	0.022	0.034	4.3	0.027	0.555	209	0.10			
103839		0.03	0.117	0.009	0.042	0.219	28.0	0.099	2.79	47.9	0.11			
103840		0.01	0.043	0.003	0.019	0.059	3.8	0.043	2.48	143.5	0.16			
103841		0.01	0.006	0.001	0.026	0.016	1.2	0.014	0.291	300	0.09			
103842		0.02	0.041	0.003	0.112	0.028	3.0	0.034	0.291	370	0.13			
103843		0.03	0.068	0.008	0.065	0.100	16.9	0.055	0.829	172.0	0.27			
103844		0.01	0.021	0.002	0.040	0.018	2.3	0.044	0.734	97.8	0.12			
103845		0.03	0.079	0.006	0.042	0.091	9.3	0.045	0.300	45.1	0.14			
103846		0.02	0.032	0.004	0.046	0.035	4.7	0.027	0.268	79.5	0.16			
103847		0.03	0.006	0.001	0.027	0.009	0.7	0.004	0.327	209	0.05			
103848		0.02	0.036	0.004	0.055	0.035	4.9	0.031	0.381	133.0	0.11			
103849		0.02	0.011	0.001	0.010	0.028	1.2	0.019	0.236	75.3	0.09			
103850		0.02	0.023	0.002	0.048	0.116	3.0	0.019	5.07	21.9	0.24			
103851		0.01	0.039	0.004	0.202	0.034	3.9	0.029	0.472	173.5	0.09			
103852		0.02	0.016	0.001	0.025	0.024	0.9	0.035	0.117	28.1	0.07			
103853		0.02	0.029	0.002	0.025	0.030	2.6	0.047	0.201	33.9	0.12			
103854		0.01	0.080	0.006	0.036	0.053	8.5	0.075	0.399	31.1	0,17			
103855		0.02	0.007	0.002	0.113	0.024	1.3	0.069	0.140	42.5	0.03			
103856		0.01	0.012	0.001	0.045	0.033	1.1	0.031	0.125	30.2	0.06			
103857		0.02	0.006	0.001	0.051	0.015	1.0	0.022	0.113	23.6	0.04		240	
103858		0.01	0.008	0.001	0.035	0.019	1.0	0.024	0.079	26.1	0.08			
103859		0.01	0.006	0.001	0.055	0.016	0.9	0.049	0.109	29.4	0.04			
103860		0.02	0.008	0.002	0.104	0.024	1.3	0.025	0.130	24.9	0.05			
103861		< 0.01	0.005	0.001	0.083	0.016	1.0	0.019	0.139	78.5	0.05			
103862		0.02	0.026	0.002	0.049	0.033	1.6	0.026	0.218	21.3	0.07			
103863		0.01	0.002	0.001	0.089	0.024	1.2	0.024	0.135	24.1	0.05			
103864		<0.01	0.004	0.001	0.030	0.016	0.8	0.100	0.088	24.3	0.06			
103865		<0.01	0.008	0.001	0.180	0.020	1.0	0.019	0.163	36.9	0.07			
103866		0.02	0.010	0.001	0.014	0.023	1.1	0.032	0.103	20.3	0.11			
192401		0.01	0.025	0.002	0.087	0.040	1.9	0.026	0.345	41.2	0.07			
192402		0.03	0.003	0.015	0.191	0.108	13.6	0.231	0.621	30.1	0.01			
192403		0.03	0.035	0.007	0.085	0.072	4.7	0.063	0.396	48.8	0.12			
192404		0.05	0.086	0.005	0.060	0.116	4.2	0.053	0.324	85.2	0.12			



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Project: BC Proj.Generation- Ralph Keefe

## CERTIFICATE OF ANALYSIS VA16178041

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg 0.02	Au- ICP2 1 Au ppm 0.001	ME- MS41L Au ppm 0.0002	ME- MS41L Ag ppm 0.001	ME- MS41L Al % 0.01	ME- MS41L As ppm 0.01	ME-MS41L B ppm 10	ME-MS41L Ba ppm 0.5	ME- MS41L Be ppm 0.01	ME- MS41L Bi ppm 0.001	ME- MS41L Ca % 0.01	ME- MS41L Cd ppm 0.001	ME- MS41L Ce ppm 0.003	ME- MS41L Co ppm 0.001	ME- MS41L Cr ppm 0.01
192405 192406 192407 192408		0.10 0.26 0.22 0.12	0.001 <0.001 0.007 <0.001	0.0006 0.0002 0.0007 0.0009	0.934 0.308 0.472 0.154	0.36 0.37 0.40 0.16 0.65	2.62 1.20 1.29 0.79 5.65	<10 <10 <10 <10 <10	149.5 220 147.0 156.5 113.0	0.07 0.09 0.09 0.03 0.16	0.233 0.154 0.168 0.105 0.393	0.56 0.72 0.87 1.08 0.92	1.475 0.447 0.386 0.542 0.439	2.83 3.74 5.24 1.035 7.89	3.57 1.315 1.345 0.784 5.51	5.32 3.67 3.05 1.42 11.20
192409 192410 192411 192412 192413 192413 192414		0.12 0.24 0.24 0.38 0.22 0.26	0.008 <0.001 0.005 0.015 <0.001 <0.001	0.0011 <0.0002 0.0010 0.0003 0.0003 0.0008	0.143 0.719 0.309 0.199 0.391 0.410	0.85 0.15 0.37 0.92 0.26 0.35	1.18 1.62 3.70 0.90 1.05	<10 <10 <10 <10 <10 <10 <10	87.6 92.2 128.5 108.0 99.6	0.02 0.05 0.18 0.04 0.04	0.109 0.142 0.209 0.083 0.101	0.52 0.58 0.42 0.80 0.94 0.61	0.461 0.237 0.347 0.388 0.410	1.195 2.50 7.05 1.280 1.950	0.491 1.040 4.66 0.691 1.105	1.75 3.68 9.81 1.50 2.59
192415 192416 192417 192418 192419		0.20 0.24 0.20 0.26 0.22	<0.001 <0.001 <0.001 0.014 <0.001	0.0003 0.0007 0.0555 0.0016 0.0006	0.253 0.412 0.103 0.322 0.271	0.29 0.22 0.17 0.39 0.42	0.91 1.12 0.69 2.28 1.58	<10 <10 <10 <10 <10 <10	75.0 179.0 42.6 357 324	0.05 0.03 0.03 0.08 0.07	0.087 0.117 0.074 0.171 0.159	0.56 0.77 0.63 1.05 1.03	0.333 0.287 0.356 0.732 0.752	1.210 1.565 0.815 3.49 2.56	0.681 1.200 0.565 3.57 2.42	1.23 2.14 1.40 5.09 3.36
192420 192421 192422		0.28 0.24 0.14	0.002 0.005 <0.001	0.0004 0.0008 0.0003	0.204 0.239 0.357	0.25 0. <b>5</b> 8 0.37	0.77 1.91 1.18	<10 <10 <10	81.9 111.5 63.5	0.06 0.17 0.05	0.101 0.213 0.090	0.86 0.38 0.51	0.174 0.252 0.371	3.58 4.35 1.815	1.215 1.285 1.005	2.21 5.42 2.13
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Project: BC Proj.Generation- Ralph Keefe

## CERTIFICATE OF ANALYSIS VA16178041

Sample Description	Method Analyte Units LOR	ME- MS41L Cs ppm 0.005	ME- MS41L Cu ppm 0.01	ME- MS41L Fe % 0.001	ME- MS41L Ga ppm 0.004	ME- MS41L Ge ppm 0.005	ME- MS41L Hf ppm 0.002	ME- MS41L Hg ppm 0.004	ME- MS41L In ppm 0.005	ME- MS41L K % 0.01	ME- MS41L La ppm 0.002	ME- MS41L Li ppm 0.1	ME- MS41L Mg % 0.01	ME- MS41L Mn ppm 0.1	ME- MS41L Mo ppm 0.01	ME- MS41L Na % 0.001
192405 192406 192407		1.510 0.670 0.543	12.50 10.15 10.40	0.730 0.480 0.400	1.225 1.380 1.415	0.023 0.024 0.033	<0.002 <0.002 <0.002	0.392 0.153 0.185	0.013 0.010 0.010	0.15 0.07 0.07	1.445 2.01 3.35	1.7 0.8 0.9	0.11 0.07 0.08	3390 682 711	2.65 0.76 0.89	0.007 0.008 0.006
192408 192409		0.461 1.110	6.21 27.8	0.158 1.520	0.323 2.38	0.016 0.041	<0.002 0.008	0.320 0.109	0.007	0.14 0.14	0.549 3.65	0.2 5.8	0.05 0.32	2940 1190	1.18 1.81	0.005 0.013
192410 192411 192412 192413 192414		0.338 0.984 1.780 0.603 0.917	6.68 7.50 22.2 9.42 8.02	0.240 0.600 1.490 0.227 0.420	0.544 1.380 3.05 0.445 1.015	0.022 0.026 0.033 0.023 0.019	0.003 <0.002 <0.002 <0.002 <0.002	0.216 0.212 0.117 0.320 0.335	<0.005 0.008 0.014 <0.005 0.006	0.07 0.07 0.11 0.06 0.10	0.612 1.405 3.10 0.745 1.105	0.3 0.9 6.7 0.4 0.7	0.06 0.07 0.27 0.09 0.06	164.0 275 879 753 967	0.62 0.76 1.22 0.66 0.89	0.006 0.007 0.010 0.007 0.006
192415 192416 192417 192418 192419		0.669 0.991 0.293 1.525 0.768	8.45 7.43 5.56 12.10 8.63	0.174 0.330 0.161 0.820 0.520	0.371 0.625 0.293 2.12 1.320	0.023 0.019 0.024 0.019 0.022	0.002 <0.002 <0.002 <0.002 <0.002	0.340 0.271 0.248 0.311 0.306	0.009 0.005 <0.005 0.012 0.009	0.08 0.07 0.08 0.16 0.11	0.711 0.880 0.439 1.790 1.350	0.3 0.5 0.2 1.9 1.5	0.04 0.06 0.04 0.12 0.09	472 545 302 9160 9130	1.01 1.13 1.31 1.27 1.16	0.006 0.007 0.006 0.008 0.007
192420 192421 192422		0.846 0.453 0.575	6.18 11.90 8.83	0.320 0.840 0.270	0.871 2.30 0.728	0.025 0.028 0.025	0.002 <0.002 0.002	0.205 0.149 0.244	0.005 0.014 0.009	0.08 0.08 0.08	1.900 3.18 1.010	0.5 1.5 0.8	0.07 0.08 0.05	103.0 462 506	0.91 0.92 1.23	0.009 0.007 0.005
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Project: BC Proj.Generation- Ralph Keefe

## CERTIFICATE OF ANALYSIS VA16178041

Sample Description	Method Analyte Units LOR	ME- MS41L Nb ppm 0.002	ME- MS41L Ni ppm 0.04	ME- MS41L P % 0.001	ME- MS41L Pb ppm 0.005	ME-MS41L Pd ppm 0.001	ME- MS41L Pt ppm 0.002	ME- MS41L Rb ppm 0.005	ME- MS41L Re ppm 0.001	ME- MS41L S % 0.01	ME- MS41L Sb ppm 0.005	ME- MS41L Sc ppm 0.005	ME- MS41L Se ppm 0.1	ME- MS41L Sn ppm 0.01	ME- MS41L Sr ppm 0.01	ME- MS41L Ta ppm 0.005
192405 192406 192407 192408 192408		0.143 0.224 0.350 0.046 0.346	4.10 2.48 2.67 1.56 8.28	0.130 0.056 0.075 0.123 0.109	11.25 6.60 7.24 5.33 9.49	<0.001 <0.001 <0.001 <0.001 <0.001	<0.002 <0.002 <0.002 <0.002 <0.002 <0.002	10.25 5.98 7.20 6.23 6.91	<0.001 <0.001 <0.001 <0.001 <0.001	0.10 0.06 0.08 0.13 0.11	0.206 0.130 0.165 0.199 0.379	0.230 0.199 0.380 0.302 1.820	0.6 0.4 0.4 0.4 0.2	0.13 0.19 0.16 0.11 0.16	31.1 45.2 57.0 61.6 50.7	<0.005 <0.005 <0.005 <0.005 <0.005
192410 192411 192412 192413 192414	,	0.113 0.353 0.702 0.095 0.170	1.15 2.38 6.54 2.18 2.24	0.066 0.068 0.081 0.085 0.101	4.03 4.93 6.31 3.96 4.56	<0.001 <0.001 <0.001 <0.001 <0.001	<0.002 <0.002 <0.002 <0.002 <0.002	2.80 9.56 14.65 4.48 7.86	<0.001 <0.001 <0.001 <0.001 <0.001	0.10 0.08 0.08 0.13 0.10	0.134 0.145 0.264 0.089 0.143	0.330 0.341 1.255 0.287 0.230	0.3 0.5 0.3 0.5 0.3	0.10 0.14 0.23 0.06 0.13	18.80 29.4 23.7 35.2 27.1	<0.005 <0.005 <0.005 <0.005 <0.005
192415 192416 192417 192418 192418		0.075 0.101 0.055 0.348 0.213	2.03 2.06 1.52 3.55 3.25	0.090 0.114 0.100 0.139 0.143	5.46 5.24 5.50 8.69 9.12	<0.001 <0.001 <0.001 <0.001 <0.001	<0.002 <0.002 <0.002 <0.002 <0.002	4.46 5.15 4.16 15.90 7.50	<0.001 <0.001 <0.001 <0.001 <0.001	0.13 0.13 0.11 0.09 0.11	0.088 0.111 0.100 0.218 0.175	0.268 0.233 0.242 0.250 0.237	0.5 0.3 0.4 0.3 0.4	0.06 0.07 0.09 0.17 0.13	27.0 23.5 14.90 47.6 38.3	<0.005 <0.005 <0.005 <0.005 <0.005
192420 192421 192422		0.136 0.508 0.123	1.57 3.01 2.06	0.111 0.094 0.100	4.65 8.31 5.05	<0.001 <0.001 <0.001	<0.002 <0.002 <0.002	5.48 5.83 5.81	<0.001 <0.001 <0.001	0.13 0.07 0.10	0.150 0.157 0.128	0.553 0.465 0.256	0.3 0.4 0.5	0.11 0.25 0.10	74.4 20.1 28.1	<0.005 <0.005 <0.005
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Project: BC Proj.Generation- Ralph Keefe

CERTIFICATE OF ANALYSIS VA16178041

Sample Description	Method Analyte Units LOR	ME-MS41L Te ppm 0.01	ME- MS41L Th ppm 0.002	ME- MS41L Ti % 0.001	ME- MS41L TI ppm 0.002	ME- MS41L U ppm 0.005	ME- MS41L V ppm 0.1	ME- MS41L W ppm 0.001	ME- MS41L Y ppm 0.003	ME- MS41L Zn ppm 0.1	ME- MS41L Zr ppm 0.01		~
192405 192406 192407 192408 192409 192410 192410	LUK	0.01 0.02 0.03 0.04 0.12 0.04 0.05	0.002 0.011 0.004 0.012 0.053 0.501 0.080 0.014	0.010 0.012 0.017 0.004 0.029 0.007 0.014	0.128 0.051 0.079 0.079 0.076 0.051 0.068	0.162 0.131 0.125 0.065 0.596 0.069 0.097	17.7 11.0 10.0 2.6 33.4 5.7 14.6	0.139 0.099 0.137 0.052 0.305 0.064 0.140	0.706 0.894 2.51 0.330 3.57 0.272 0.625	95.6 56.9 44.0 85.7 85.0 34.0 34.2	0.02 0.04 0.14 0.07 0.57 0.16 0.12	1	
92412 92413 92414		0.07 0.04 0.02 0.01	0.061 0.071 0.010 0.062	0.030 0.006 0.009 0.004	0.094 0.077 0.122 0.070	0.233 0.070 0.083 0.075	32.9 4.3 8.9 3.0	0.286 0.043 0.072 0.037	2.31 0.441 0.469 0.508	82.1 66.9 52.9 44.3	0.17 0.13 0.11 0.11		 
192415 192416 192417 192418 192419		0.01 0.02 0.05 0.04 0.03	0.082 0.016 0.071 0.007 0.009	0.004 0.007 0.005 0.016 0.011	0.077 0.041 0.325 0.301	0.100 0.065 0.138 0.099	6.0 3.0 20.3 10.3	0.065 0.033 0.223 0.078	0.303 0.438 0.242 0.750 0.762	42.9 43.9 132.0 127.5	0.08 0.11 0.01 0.02		
192420 192421 192422		0.03 0.02 0.02	0.053 0.017 0.028	0.009 0.022 0.008	0.026 0.040 0.046	0.161 0.144 0.072	4.5 19.8 5.5	0.058 0.224 0.053	1.475 1.475 0.618	20.7 36.2 51.8	0.12 0.06 0.12		
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Project: BC Proj.Generation- Ralph Keefe

# CERTIFICATE OF ANALYSIS VA16178041

	CERTIFICATE COMMENTS	×
	ANALYTICAL COMMENTS	
Applies to Method:	NSS is non- sufficient sample. ALL METHODS	
Applies to Method:	Gold determinations by this method are semi- quantitative due to the small sample weight used (0.5g). ME- MS41L	
Applies to Method:	LABORATORY ADDRESSES   Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.   Au- ICP21 LOG- 22 ME- MS41L SCR- 41   WEI- 21 VEI- 21 SCR- 41	

Appendix D

Assay Certificates Rock



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## CERTIFICATE VA16178042

Project: BC Proj.Generation- Ralph Keefe

This report is for 21 Rock samples submitted to our lab in Vancouver, BC, Canada on 13- OCT- 2016.

The following have access to data associated with this certificate:

SHANE EBERT	ALTIUS RESOURCES WEBTRIEVE	LAWRENCE WINTER

	SAMPLE PREPARATION	
ALS CODE	DESCRIPTION	
WEI- 21	Received Sample Weight	1
LOG-21	Sample logging - ClientBarCode	
CRU-QC	Crushing QC Test	
CRU- 31	Fine crushing - 70% < 2mm	
SPL-21	Split sample - riffle splitter	
PUL- 31	Pulverize split to 85% < 75 um	

#### ANALYTICAL PROCEDURES DESCRIPTION INSTRUMENT ALS CODE ICP- AES ME- ICP61 33 element four acid ICP- AES Ag- OG62 Ore Grade Ag - Four Acid ICP- AES ICP- AES Ore Grade Elements - Four Acid ME- OG62 Ore Grade Cu - Four Acid **ICP-AES** Cu-OG62 Pb-OG62 Ore Grade Pb - Four Acid ICP- AES Zn- OG62 Ore Grade Zn - Four Acid ICP- AES WST-SIM Ag- GRA21 Ag 30g FA- GRAV finish ICP- AES Au- ICP21 Au 30g FA ICP- AES Finish

To: ALTIUS RESOURCES INC. ATTN: SHANE EBERT PO BOX 8263 STN. A ST JOHNS NL A1B 3N4

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.





ALS Canada Ltd. 2103 Dollarton Hwy North Vancouver BC V7H 0A7 Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218 www.alsglobal.com

To: ALTIUS RESOURCES INC. PO BOX 8263 STN. A ST JOHNS NL A1B 3N4

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VA16178042

Project: BC Proj.Generation- Ralph Keefe

CERTIFICATE OF ANALYSIS

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg 0.02	Au- ICP2 1 Au ppm 0.001	ME- ICP61 Ag ppm 0.5	ME- ICP61 Al % 0.01	ME- ICP61 As ppm 5	ME- ICP61 Ba ppm 10	ME- ICP61 Be ppm 0.5	ME- ICP61 Bi ppm 2	ME- ICP61 Ca % 0.01	ME- ICP61 Cd ppm 0.5	ME- ICP61 Co ppm 1	ME- ICP61 Cr ppm 1	ME- ICP61 Cu ppm 1	ME- ICP61 Fe % 0.01	ME- ICP61 Ga ppm 10
1043551 1043552 1043553		1.06 0.56 0.56	0.006 0.007 <0.001	45.8 >100 0.8	5.23 7.76 8.69	<5 <5 <5	2000 4370 830	0.5 1.2 0.6	<2 <2 <2	0.13 0.85 7.08	0.7 2.2 0.9	4 8 16	8 12 26	5880 >10000 85	2.04 2.74 6.30	10 20 20
1043554 1043555		0.62 0.38	0.014 0.001	1.6 <0.5	8.10 9.27	5 18	490 1740	1.3 0.6	<2 <2	0.75 0.38	<0.5 <0.5	6 11	14 23	314 34	4.51 7.57	20 20
1043556 1043557		0.24 0.34	<0.001 0.001	<0.5 <0.5	9.33 7.13	7 <5	440 1170	0.8 1.0	<2 <2	1.23 5.61	<0.5 <0.5	3 16	17 25 47	23 12 42	5.51 4.29 3.71	20 20 20
1043558 1043559 1043560		1.26 0.80 1.02	0.001 <0.001 <0.001	<0.5 <0.5 <0.5	7.48 7.99 8.66	<5 6 <5	1330 2280 3070	1.4 1.4 3.6	<2 <2 <2	3.61 1.49 2.13	<0.5 <0.5 <0.5	14 7 2	47 11 5	42 78 11	2.43 1.89	20 20 20
1043561 1043562 1043563 1043564 1043565		1.70 1.74 0.44 0.64 0.32	0.003 0.008 2.52 0.030 0.023	<0.5 0.9 >100 32.5 18.2	8.33 7.39 0.09 8.95 8.28	<5 <5 319 26 14	900 860 70 850 920	1.2 1.2 <0.5 1.0 1.3	<2 <2 <2 <2 <2 <2	2.32 1.51 0.01 2.41 2.11	<0.5 <0.5 >1000 4.9 1.9	21 20 <1 17 22	12 10 <1 12 9	430 1500 >10000 2240 2340	4.08 3.71 3.76 2.73 3.71	20 20 <10 20 20
1043566 1043567 1043568 1043569 1043570		1.26 0.84 0.46 1.14 1.70	0.010 0.008 0.007 0.063 0.006	2.1 6.0 0.8 10.8 0.5	6.92 6.86 6.36 5.79 6.77	249 183 361 801 10	380 440 430 370 190	2.4 2.6 2.3 1.9 <0.5	<2 <2 <2 12 <2	0.03 0.04 0.72 0.15 1.38	<0.5 12.7 2.1 50.7 <0.5	2 1 3 9 9	4 5 6 4 9	24 57 14 213 28	1.70 2.25 2.39 6.54 3.10	20 20 20 20 10
1043571		2.14	0.004	1.1	7.73	9	490	0.6	<2	3.11	<0.5	14	16	49	4.48	10
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Project: BC Proj.Generation- Ralph Keefe

# CERTIFICATE OF ANALYSIS VA16178042

Sample Description	Method	ME- ICP61	ME-ICP61	ME- ICP61												
	Analyte	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th	Ti
	Units	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%
	LOR	0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01
1043551		4.70	<10	0.50	958	1	1.07	<1	310	82	0.21	<5	9	2030	<20	0.20
1043552		4.99	20	0.85	1885	<1	1.50	4	1430	111	0.41	<5	21	77	<20	0.50
1043553		0.49	10	2.00	1430	5	2.49	9	1310	15	1.30	6	37	596	<20	0.65
1043554		3.81	10	0.13	165	19	2.81	7	1070	16	2.59	5	6	455	<20	0.23
1043555		1.81	<10	1.13	661	5	2.30	6	1030	23	1.58	<5	25	321	<20	0.56
1043556		0.78	10	0.34	274	3	2.69	2	410	6	0.41	<5	19	428	<20	0.42
1043557		0.35	20	0.28	1385	2	2.64	20	1830	7	0.09	<5	7	748	<20	0.47
1043558		1.64	30	1.51	612	2	3.12	38	2150	28	0.82	<5	8	1445	<20	0.39
1043559		2.10	30	0.63	169	7	3.30	10	1030	7	0.49	<5	4	632	<20	0.22
1043560		3.23	20	0.17	1240	<1	4.82	2	330	20	0.05	<5	1	1590	<20	0.18
1043561		1.39	20	1.03	198	4	3.23	7	1170	9	1.08	<5	8	608	<20	0.35
1043562		1.79	20	1.04	98	4	2.65	6	1010	7	2.54	5	7	525	<20	0.25
1043563		0.01	<10	0.01	61	14	0.01	<1	30	>10000	>10.0	>10000	<1	20	<20	<0.01
1043564		3.09	10	0.60	119	214	2.00	20	440	732	1.06	200	15	331	<20	0.26
1043565		2.04	20	1.21	132	8	2.63	7	1340	385	1.47	140	9	532	<20	0.33
1043566		2.94	40	0.21	74	3	0.08	1	120	31	0.26	53	3	15	20	0.13
1043567		2.97	40	0.20	254	1	0.06	2	280	234	1.18	27	3	18	20	0.12
1043568		2.20	40	0.19	1605	2	1.69	2	320	17	0.35	<5	2	85	20	0.11
1043569		2.53	30	0.25	4760	3	0.05	2	270	398	3.98	21	2	15	20	0.11
1043570		0.89	10	0.62	476	2	2.78	4	720	16	1.63	<5	10	186	<20	0.12
1043571		2.86	10	0.93	1035	1	0.93	4	880	38	2.01	10	15	185	<20	0.31



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VA16178042

Project: BC Proj.Generation- Ralph Keefe

CERTIFICATE OF ANALYSIS

Sample Description	Method Analyte Units LOR	ME- ICP61 TI ppm 10	ME- ICP61 U ppm 10	ME-ICP61 V ppm 1	ME-ICP61 W ppm 10	ME-ICP61 Zn ppm 2	Ag- OG62 Ag ppm 1	Cu- OG62 Cu % 0.001	Pb- OG62 Pb % 0.001	Zn- OG62 Zn % 0.001	Ag- GRA21 Ag ppm 5			ц., С.,
1043551 1043552 1043553 1043554 1043555		<10 <10 <10 <10 <10	<10 <10 <10 <10 <10	12 51 161 62 214	<10 <10 <10 90 <10	412 239 401 59 64	334	2.55						
1043556 1043557 1043558 1043559 1043560		<10 <10 <10 <10 <10 <10	<10 <10 <10 <10 <10 <10	121 110 105 44 46	<10 <10 <10 <10 <10 <10	39 93 90 25 82						2		
1043561 1043562 1043563 1043564 1043564 1043565		<10 <10 <10 <10 <10 <10	<10 <10 <10 <10 <10 <10	91 87 1 116 108	<10 10 <10 60 50	41 32 >10000 355 153	>1500	1.630	>20.0	15.80	>10000			с <u>с с</u> еля 1 1000 дурой 1000
1043566 1043567 1043568 1043569 1043570		<10 <10 <10 <10 <10 <10	<10 <10 <10 <10 <10	14 13 12 12 57	<10 <10 <10 <10 <10 <10	46 2080 425 8440 73								
1043571		<10	<10	132	<10	112			e					
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Project: BC Proj.Generation- Ralph Keefe

### CERTIFICATE OF ANALYSIS VA16178042

	LABORATORY ADDRESSES Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.												
Applies to Method:	Ag- GRA21 CRU- QC ME- OG62 WEI- 21	Ag- OG62 Cu- OG62 Pb- OG62 Zn- OG62	Au- ICP21 LOG- 21 PUL- 31	CRU- 31 ME- ICP61 SPL- 21									
-													