

**BC Geological Survey  
Assessment Report  
38243**



**Ministry of Energy and Mines  
BC Geological Survey**

**Assessment Report  
Title Page and Summary**

**TYPE OF REPORT [type of survey(s)]: geochemical**

**TOTAL COST: \$15,680.23**

**AUTHOR(S): Diana Benz**

**SIGNATURE(S): Diana Benz**

Digitally signed by Diana Benz  
DN: cn=Diana Benz, o=,  
emailId: benz20@mail.com, c=CA  
Date: 2019.04.04 10:02:48 -0700

**NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):** \_\_\_\_\_ **YEAR OF WORK: 2018**

**STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5736832**

**PROPERTY NAME:** Proof

**CLAIM NAME(S) (on which the work was done):** Proof

**COMMODITIES SOUGHT:** gold

**MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:** none

**MINING DIVISION:** Omineca

**NTS/BCGS:** 093F/14 and 15

**LATITUDE:** 125.01 ° \_\_\_\_\_ ' \_\_\_\_\_ " **LONGITUDE:** 53.95 ° \_\_\_\_\_ ' \_\_\_\_\_ " **(at centre of work)**

**OWNER(S):**

1) Diana Benz

2)

**MAILING ADDRESS:**

12925 Chief Lake Road

Prince George, BC V2K 5K1

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

1) Takom Exploration Ltd.

2)

**MAILING ADDRESS:**

12925 Chief Lake Road

Prince George, BC V2K 5K1

**PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):**

Lower to Middle Jurassic Hazelton Group undivided volcanic rocks, Late Cretaceous Kasalka Group andesitic volcanic rocks,

Late Cretaceous Holy Cross feldspar porphyritic pluton, greenstone, white schist, metavolcanic, shear zone; gold, silver,

caesium, vanadium, arsenic, antimony, thallium and molybdenum; gold-in-twig anomaly 935 m within a 30 km regional

caesium-in-bark anomaly

**REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:** none

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping	1:20,000, 1.1 ha	Proof	\$2,500
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt 2		Proof	\$640.81
Rock 10		Proof	\$3,204.07
Other vegetation: 21		Proof	\$6,835.35
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)	1:20,000, 500 ha	Proof	\$2,500
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST:	\$15,680.23

**GEOCHEMICAL SURVEY  
ON THE  
PROOF PROPERTY**

**OMINECA MINING DIVISION  
NTS 093F/14 AND 15  
53.950° N  
125.0129° W**

**OWNER: DIANA BENZ  
OPERATOR: DIANA BENZ & TAKOM EXPLORATION LTD.**

**CLAIMS WORKED:  
1060061, 1062808 & 1062809**

Prepared by: Diana Benz, Ph.D.  
Takom Exploration Ltd.

Date April 04, 2019

## EXECUTIVE SUMMARY

The Proof Property is located within the Nechako Plateau physiographic region of the Interior Plateau approximately 25 kilometres southwest of Fraser Lake, BC. It is comprised of three mineral tenures 100% owned by Diana Benz and totals approximately 905.01 hectares of land within NTS map sheets 093F/14 and 15. The Property is within an area of gentle relief along the northern shore of Borel Lake and south of Francois Lake. This region experiences typical central British Columbia weather with cold, snowy winters and cool to warm summers. Mineral exploration may be conducted on a year round basis, although at higher elevations, the season may be dependent on the snow pack levels and/or stability.

Historical work within the current Proof Property includes regional airborne magnetic and electromagnetic geophysical surveys. In general, the project area sits on a moderate magnetic high that increases in intensity to the northeast. The electromagnetic survey shows a large late time tau (conductive) anomaly underlies the Proof Project while an early time Z off time (resistivity) anomaly is located to the northwest. No known historical work has been conducted within the project area.

The Proof Property is based within the Intermontane Tectonic Belt. The main lithological units recognized within this area are the Middle Jurassic Hazelton Group undivided volcanic rocks, described as maroon crystal tuff, and dark grey Late Cretaceous Kasalka Group andesitic volcanic rocks. The Late Cretaceous Holy Cross Pluton, consisting of feldspar porphyritic rocks, is located in the southeast. Mapping during the 2018 program showed potassic and sericitic feldspar porphyry in proximity to the Holy Cross Pluton in the southeast, a greenstone unit within the northwest and a white (talc) schist was discovered in the south. A very magnetic meta-volcanic unit was mapped in the north and consisted of andesitic volcanic rocks with pervasive chlorite alteration, green chalcedony pods and rare patches of biotite.

Mineralization and alteration within the Project may be consistent with an orogenic gold deposit, although a lot more information should be collected prior to determining the deposit model. The geological setting consists of volcanic rocks located between a pluton to the southeast and a greenstone unit to the northwest. The area is situated on a localized caesium high within a 30 kilometre caesium anomaly associated with notable silver, antimony, arsenic, vanadium and thallium concentrations found in rock and silt samples.

Promising gold values were located via a survey of lodgepole pine twig samples collected in an east-west direction approximately at 200 metres intervals along two lines approximately 400 metres apart. A linear series of five twig samples, ranging from 21 to 38.8 ppb Au, delineated the newly discovered Goldtree Zone. General rules concerning gold in vegetation samples include ensuring they delineate a zone (rather than single point anomalies), the zone is substantiated by pathfinder elements such as arsenic and antimony (etc.), and “repeatable Au anomalies (several to tens of ppb) usually indicate Au is present in the ground” (Dunn, 2007- page 254).

One prospector and one forestry specialist/field assistant traversed the Property taking samples, geological observations and photographs. Samples were collected within predefined areas derived from regional geochemistry and based on topography. Rock grab, chip, twig, and silt sampling revealed a number of areas anomalous for gold, silver, antimony, arsenic, vanadium and thallium. The element of interest, gold, was found within the newly identified Goldtree Zone.

**Proof Rock Grab Sample Highlights (concentrations are in ppm unless otherwise specified)**

Sample ID	Zone	Type	Au ppb	Ag	Cs	V	As	Sb	Tl	Mo
PF18RK03	North of Goldtree	outcrop	<0.5	0.028	50.5	660	503	>500	1.62	11.2
PF18PT01	Goldtree	pit	11.7	0.427	18.8	99	18.1	17	0.34	1.51
PF18RK09	West of Goldtree	chip	4.6	0.275	21.8	83	16.5	0.5	1.12	0.29
PF18RK10	North of Goldtree	chip	2.1	0.298	33.7	81	13.6	1.56	1.45	0.38
PF18RK11	South of Goldtree	chip	1.8	0.264	1.77	6	1.1	0.33	0.11	0.45
PF18RK12	West of Goldtree	chip	2.7	0.245	8.93	108	6.4	0.1	0.22	0.62

**Proof Silt Sample Highlights (concentrations are in ppm unless otherwise specified)**

Sample ID	Au ppb	Ag	Cs	V	As	Sb	Tl	Mo
PF18SS02	2.5	0.212	5.84	48	6.1	1.29	0.23	0.29
PF18SS03	< 0.5	0.199	5.05	129	7.1	0.6	0.34	0.78
PF18SS04	< 0.5	0.089	7.57	59	3.8	1.13	0.14	0.36
PF18SS05	0.9	0.134	11.3	63	3.2	1.18	0.11	0.6

**Proof Twig Sample Highlights (concentrations are in ppb)**

Sample ID	Zone	Au	Ag	Cs	V	As	Sb	Tl	Mo
PF18TR01	Goldtree	29.6	20	4930	210	50	17	1.4	1850
PF18TR02	Goldtree	38.8	20	689	200	30	11	< 0.5	980
PF18TR03	Goldtree	26.2	20	969	290	40	8	0.6	1090
PF18TR04	Goldtree	21	10	2540	160	40	9	8.3	1380
PF18TR05	Goldtree	30.8	20	499	200	30	11	< 0.5	5970

Future work should focus on a detailed soil sampling and induced polarization/magnetic geophysical surveys within the Goldtree Zone plus trenching, detailed mapping, prospecting, and the development of a Quality Assurance/Quality Control (QA/QC) program for any sampling program with a population greater than 300 of one type of sample.

---

**TABLE OF CONTENTS**

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>1. INTRODUCTION.....</b>	<b>1</b>
1.1 Location and Access .....	1
1.2 Physiography and Climate .....	3
1.3 Property Status and Ownership .....	4
<b>2. EXPLORATION HISTORY.....</b>	<b>5</b>
<b>3. ADJACENT PROPERTIES .....</b>	<b>8</b>
3.1 Endako Molybdenum Mine.....	8
3.2 Cabin Lake Gold-Silver-Lead-Zinc Property.....	9
<b>4. GEOLOGICAL SETTING.....</b>	<b>10</b>
4.1 Regional Geology.....	10
4.2 Property Geology .....	11
4.2.1 Surficial Geology .....	11
4.2.2 Mineralization and Alteration .....	12
4.2.3 Geological Model.....	12
4.2.3.1 Hydrothermal Deposits.....	12
<b>5. 2018 EXPLORATION PROGRAM - GEOCHEMICAL SURVEY.....</b>	<b>13</b>
5.1 Survey Overview .....	13
5.1.1 Rock Grab, Chip and Pit Sampling Protocol .....	14
5.1.2 Silt Sampling Protocol .....	15
5.1.3 Twig Sampling Protocol.....	15
5.1.4 Data Verification .....	16
5.2 Geochemical Results .....	16
5.2.1 Rock Grab and Chip Samples.....	18
5.2.1 Silt Samples .....	23
5.2.1 Lodgepole Pine Twig Samples .....	25
5.3 Property Geology Mapping .....	28
5.4 Summary of Exploratory Work .....	30
<b>6. CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>31</b>
<b>11. STATEMENT OF COSTS.....</b>	<b>32</b>
<b>12. REFERENCES .....</b>	<b>35</b>
<b>13. STATEMENT OF QUALIFICATIONS .....</b>	<b>38</b>

---

**FIGURES**

Figure 1 Proof Property Location .....	2
Figure 2 Looking north towards the Endako Molybdenum Mine before (left-in July) and after (right-in October) the 2018 Island Lake Fire. ....	4
Figure 3 Proof Property Mineral Tenures .....	5
Figure 4 Proof Project Regional First Vertical Derivative (from GBC Earth Science Viewer Quest West data 200 m-NRCan magnetic data) .....	6
Figure 5 Proof Project Electromagnetic Late Tau-conductivity (from GBC Earth Science Viewer Quest West data).....	7
Figure 6 Proof Project Early Time Z-off-resistivity (from GBC Earth Science Viewer Quest West data).....	8
Figure 7 Proof Property Regional Geology (after Cui et al., 2018) .....	11
Figure 8 Idealized Deposit Models Showing Relational Depths and Environments (Groves et al., 1998).....	13
Figure 9 New growth sampled on a lodgepole pine tree.....	16
Figure 10 Proof Project sample names and locations .....	17
Figure 11 Proof Project Gold Values.....	18
Figure 12 Proof Rock Grab Sample PF18RK03 location (left) and sample (right) – fault gouge with quartz vein with discrete orange crystals in patches of 1.5 cm, Mn-staining and no visible carbonates. ....	21
Figure 13 Proof Pit/Chip Sample PT18RK01 location (left) and sample (right) 75 cm deep, 20 cm chip sample approximately 5 m northeast of 38.8 ppb Au twig sample consisting of maroon crystal tuff with ~20% magnetite blotches and rare sub-mm quartz veins (minor carbonates). 21	
Figure 14 Proof Chip PF18RK09 Sample location (left) and sample (right) crystal tuff-metavolcanic with wavy quartz veins, ankerite selvages, magnetite blotches, pervasive chlorite and green chalcedony pods. Very magnetic. ....	22
Figure 15 Proof Chip PF18RK10 Sample location (left) and sample (right) crystal tuff-metavolcanic with wavy quartz veins, ankerite selvages, magnetite blotches, pervasive chlorite and green chalcedony pods. Very magnetic. ....	22
Figure 16 Proof Chip Sample PF18RK11 location (left) and sample (right) – talc (white/talc schist?) with patches of limonite and tourmaline. ....	22
Figure 17 Proof Chip Sample PF18RK12 location (left) and sample (right) consisting of dark green and rusty brick red patches with blotches of magnetite (very magnetic) greenstone (no distinct cleavage). ....	23
Figure 18 Preliminary mapping within the Proof Project area.....	30
Figure 19 Proof Project Work Events Jul 14 to 16 and Oct 06 showing claim issue dates. ....	35

**TABLES**

Table 1 Proof Mineral Tenure .....	4
Table 2 Proof 2018 Rock Grab Sample Summary (below detection limit values were replaced by half the detection limit for each element). NA = not applicable, DL= detection limit, Min = minimum, Max = maximum, SD = standard deviation, MAD = mean absolute deviation and CV = coefficient of variation. ....	19
Table 3 Proof Rock Grab Sample Highlights (concentrations are in ppm unless otherwise specified) .....	21
Table 4 Proof 2018 Silt Sample Summary (below detection limit values were replaced by half the detection limit for each element). NA = not applicable, DL= detection limit, Min = minimum, Max = maximum, SD = standard deviation, MAD = mean absolute deviation and CV = coefficient of variation. ....	23
Table 5 Proof Silt Sample Highlights (concentrations are in ppm unless otherwise specified) .	25
Table 6 Proof 2018 Twig Sample Summary (below detection limit values were replaced by half the detection limit for each element). NA = not applicable, DL= detection limit, Min = minimum, Max = maximum, SD = standard deviation, MAD = mean absolute deviation and CV = coefficient of variation. Above detection limit values were replaced by the upper detection limit plus half the lower detection limit. ....	26
Table 7 Proof Twig Sample Highlights (concentrations are in ppb).....	28

**APPENDICES**

Appendix A:	Sample Descriptions
Appendix B:	Certificates of Analysis
Appendix C:	Sample Map-For Display Purposed Only

## 1. INTRODUCTION

### 1.1 Location and Access

The Proof Property is situated within the Omineca Mining Division and is located within west-central British Columbia (BC) approximately 25 kilometres southwest of Fraser Lake, 155 kilometres west of Prince George and 340 kilometres southeast from Prince Rupert (Figure 1). Local infrastructure includes an 8.5 kilometre long, 69 kilovolt BC Hydro power line that runs from the Village of Endako to the Endako Molybdenum Mine approximately 10 kilometres northwest of the Property. Railway lines are located approximately 25 kilometres northeast at Fraser Lake. The Kitimat Deep Water Port Railway Connection is located 230 km west and the Prince Rupert Deep Water Port Railway Connection is 340 km west.

The Proof Property is accessible via resource roads from the Village of Fraser Lake. Directions to the Property are as follows: approximately 6 kilometres east of Fraser Lake along Highway 16 (Yellowhead Highway) is the junction with the Holy Cross Forest Service Road (FSR). Drive 12.6 kilometres south along the Holy Cross FSR to the Holy Cross-Binta FSR (200 Road). Turn right onto the Holy Cross-Binta FSR (200 Road). Between 7.5 and 9.5 kilometres along the Holy Cross-Binta FSR are resource roads that lead north and provide access to the Property.

Helicopter access is also available and a number of charter companies are based in Prince George. Both Fraser Lake and Prince George are situated along Highway 16 and each community has a district population in excess of 1,000 to 74,000. Most services and supplies are available in these resource-based communities.

Timber harvesting is on-going and its associated road construction provides access to the local area. Cut-blocks of harvested timber are located throughout the Property. The development of access roads for logging in 2018, by Gordon Peter Logging Ltd., has increased access to the Property and has assisted in exposing bedrock.



**Figure 1 Proof Property Location**

## 1.2 Physiography and Climate

The Proof Property is located within the Nechako Plateau physiographic region of the Interior Plateau within central British Columbia (Holland, 1976). The Property is within an area of gentle relief along the northern shore of Borel Lake and south of Francois Lake. This area primarily consists of large expanses of flat or gently rolling country that remains almost completely unmarred by watercourse incisions in some areas (Holland, 1976).

Elevations range from 3,300 feet (945 m) above sea level to the south and 4,100 feet (1,250 m) in the central-north area of the Property. The most notable topographic feature on the Property is a small lake in the east that drains south into Borel Lake.

This area consists of the Sub-Boreal Spruce biogeoclimactic zone at lower elevations and Engelmann Spruce -- Subalpine Fir at higher elevations. Lower elevations are well forested by hybrid white spruce (*Picea engelmannii* x *glauca*) and subalpine fir (*Abies lasiocarpa*) (Meidinger et al., 1991). Paper birch can be found in moist, rich areas whereas Douglas fir occurs on warm, dry sites. Lodgepole pine stands typically occur in drier areas, within mature forests, as well as in monocultures within forestry re-planted areas. Understories consisting of huckleberry, highbush cranberry, oak fern and devil's club can be found in this region. At higher elevations, the area is well forested by Engelmann spruce (*Picea engelmannii*) and subalpine fir (*Abies lasiocarpa*) (Coupé et al., 1991). Spruce often dominates the canopy of mature stands, while subalpine fir comprises the understory. The shrub layer is poorly to moderately developed with a relatively well-developed herb layer and a moderate moss layer. Many species of wildlife can be found in this area including black and grizzly bears, mountain goats, moose, mule deer, lynx, wolf and many small mammals as well as a variety of birds (Meidinger et al., 1991). There are no known designated wildlife habitat areas within the Property. The Francois Lake Park is located north of the Property and recreation areas are located to the south along the northern shores of Borel and Anzus Lakes.

Mineral exploration may be conducted on a year round basis, depending on the activity, and may be dependent on the snow pack levels and/or stability. The climate is typical of central British Columbia with cold, snowy winters and cool to warm summers. Summer temperatures average a daytime high of 21°C with occasional temperatures reaching the 7°C range. December through February sees average sub-zero temperatures with lows reaching -12°C from November through March. The annual average precipitation is 525 mm including winter snowfall. Snowfalls can occur between November and March where snowpack can linger into late June/early July.

The Island Lake Wildfire burned through the project area during the month of August in 2018 (Figure 2). The total affected area was estimated at 20,671.0 hectares by the BC Wildfire Service. The fire burned primarily through the centre of the claim area, reaching south towards the shorelines of Borel and Anzus Lakes in some areas and north, up the ridge, into Francois Lake Park. Due to recent logging activity within the project area, very few standing trees remain.



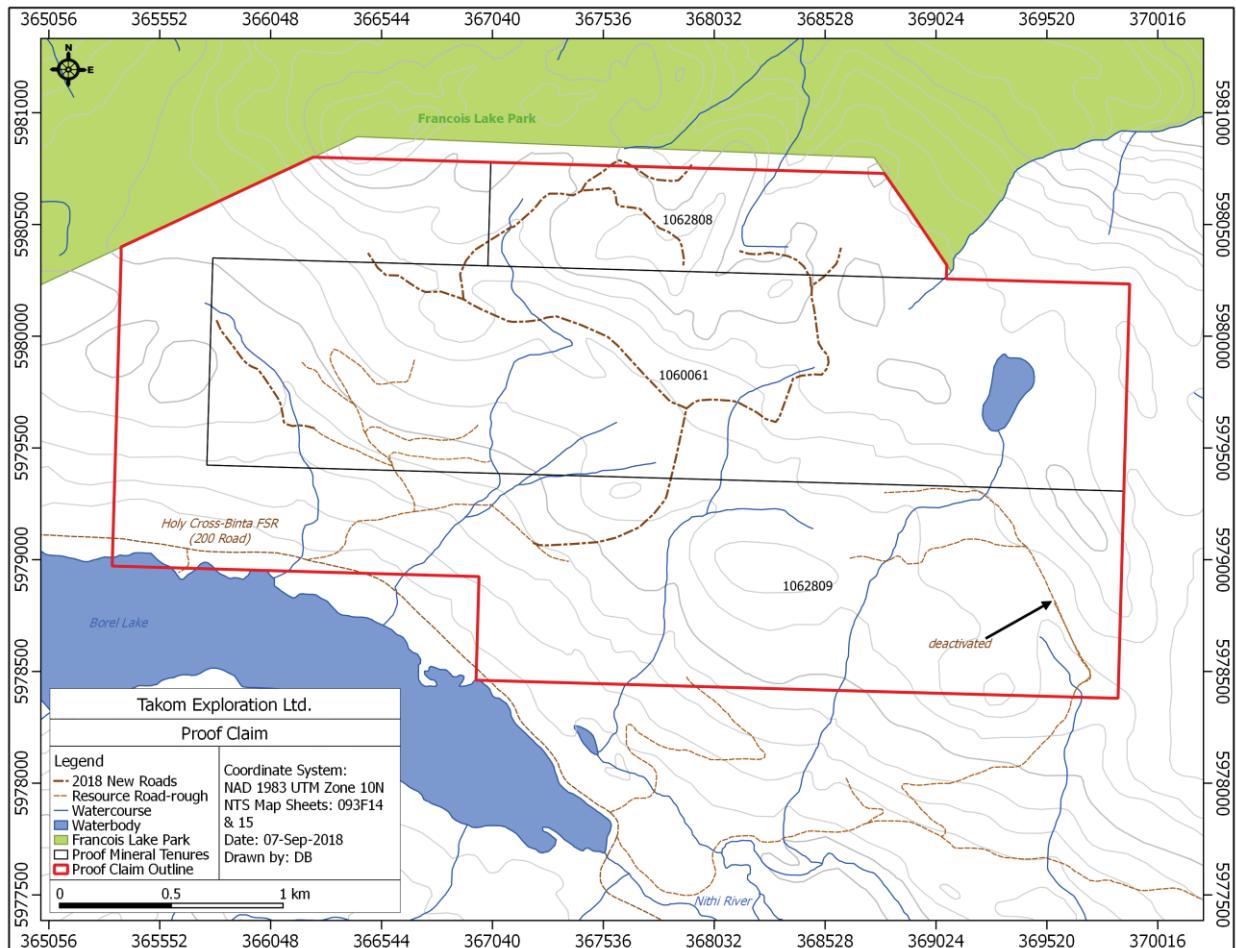
**Figure 2** Looking north towards the Endako Molybdenum Mine before (left-in July) and after (right-in October) the 2018 Island Lake Fire.

### 1.3 Property Status and Ownership

The Proof Property is comprised of three mineral tenures (Figure 3). The tenures cover approximately 905.0119 hectares of land within NTS map sheets 093F/14 and 15 (excluding the area overlapping with Francois Lake Park). The Property is located between latitudes 53.937° and 53.958° North and longitudes 125.051° and 124.983° West. The centre of the claim block is located at 53.950° North and 125.0129° West. All of the tenures are 100%-owned by Diana Benz with anniversary dates shown in Table 1.

**Table 1** Proof Mineral Tenure

Tenure No.	Claim Name	Issue Date	Good to Date	Area (ha)
1060061	PROOF	2018-APR-14	2019-APR-14	380.6196
1062809	PROOF	2018-SEP-04	2018-SEP-04	456.7967
1062808	PROOF	2018-SEP-04	2018-SEP-04	95.1406
			Total Area (ha)	932.5569



**Figure 3 Proof Property Mineral Tenures**

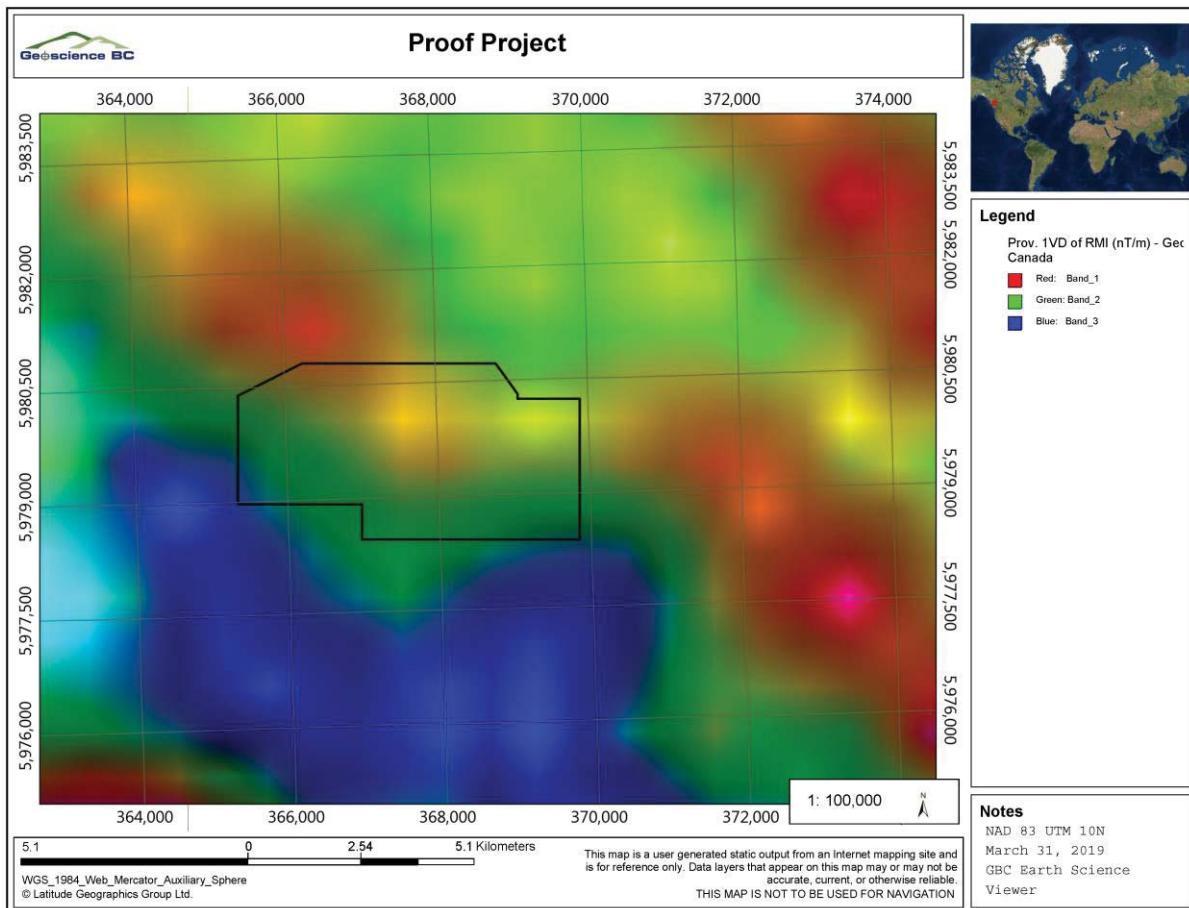
## 2. EXPLORATION HISTORY

This region continues to rely on active logging and has a long history of mineral exploration. One porphyry-molybdenum mine, the current Thompson Creek Metals Company Inc.-Centerra Gold Inc.-Sojitz Corporation joint venture Endako Mine, has been operating within this area since 1965. It suspended production at the end of 2014 and has been under care and maintenance since July of 2015 due to a poor molybdenum market. Two porphyry copper ± molybdenum ± gold mines were also active in this area: Granisle (1966-1982) and Bell (1972-1991) (Baker, 2002). This area also saw the establishment of two mercury mines: Pinchi Lake (1940-1944 and 1968-1975) and Bralorne-Takla (1944-nine months in operation) (Baker, 2002). Other past producers and developed prospects commonly include the following deposit types: surficial placer, jade/nephrite, limestone, polymetallic veins and porphyry copper ± molybdenum ± gold. This area is mainly prospected for molybdenum and gold, although a number of copper and lead prospects are recorded in the BC MINFILE Mineral Inventory database: 093F 032-Boss with 1.7% Cu and 33,962 ppm Pb and 093F 076-Goodwin with 2.5% Cu. There was no recorded historical work found on the Proof Property (Table 2).

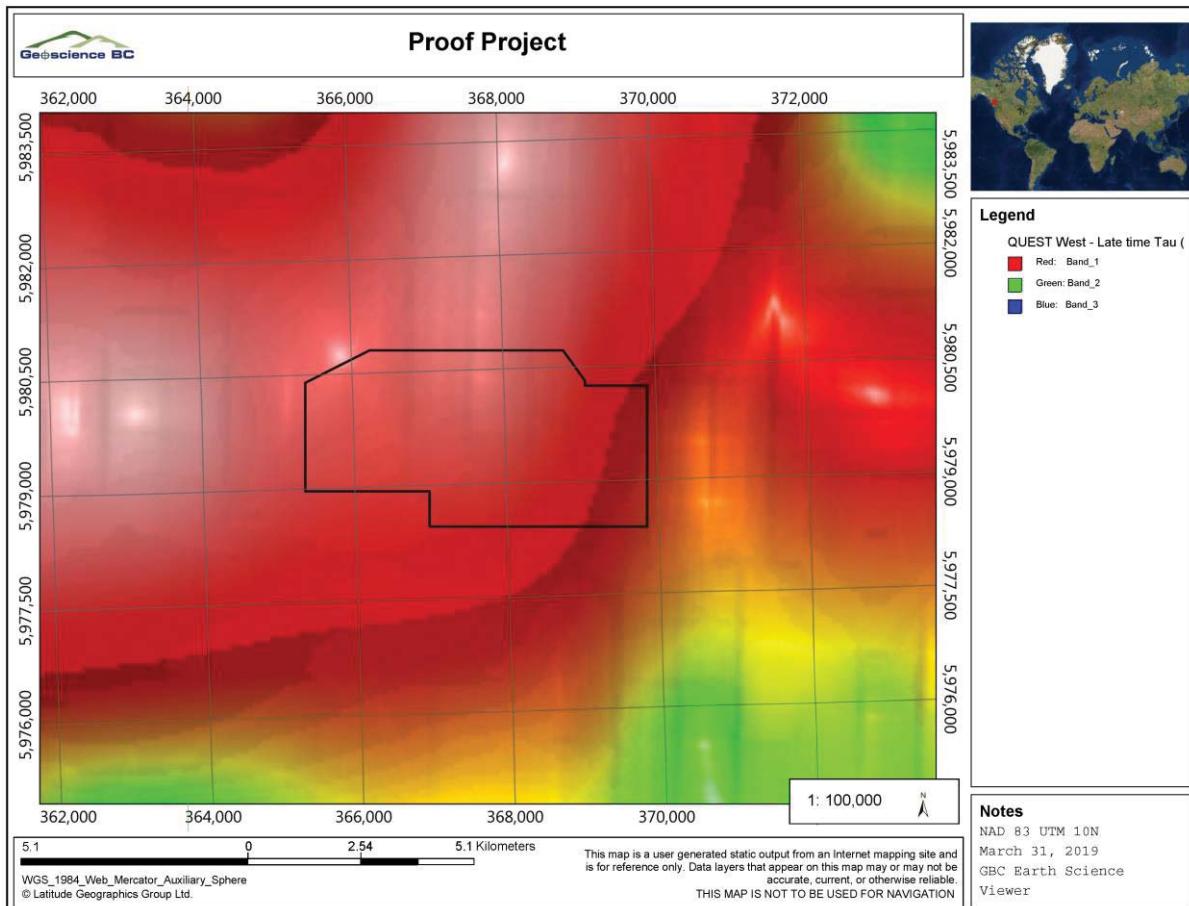
**Table 2: Summary of Previous Work**

<u>Year-ARIS-MINFILE</u>	<u>Claim Name-Operator-Author</u>	<u>Exploration Activities</u>
N/A	RHY 1 – Nation River Resources – N/A	In 2007, a mineral claim was registered to Nation River Resources Ltd. No known work was filed on this claim and the tenure was forfeited at its expiry date in 2008.

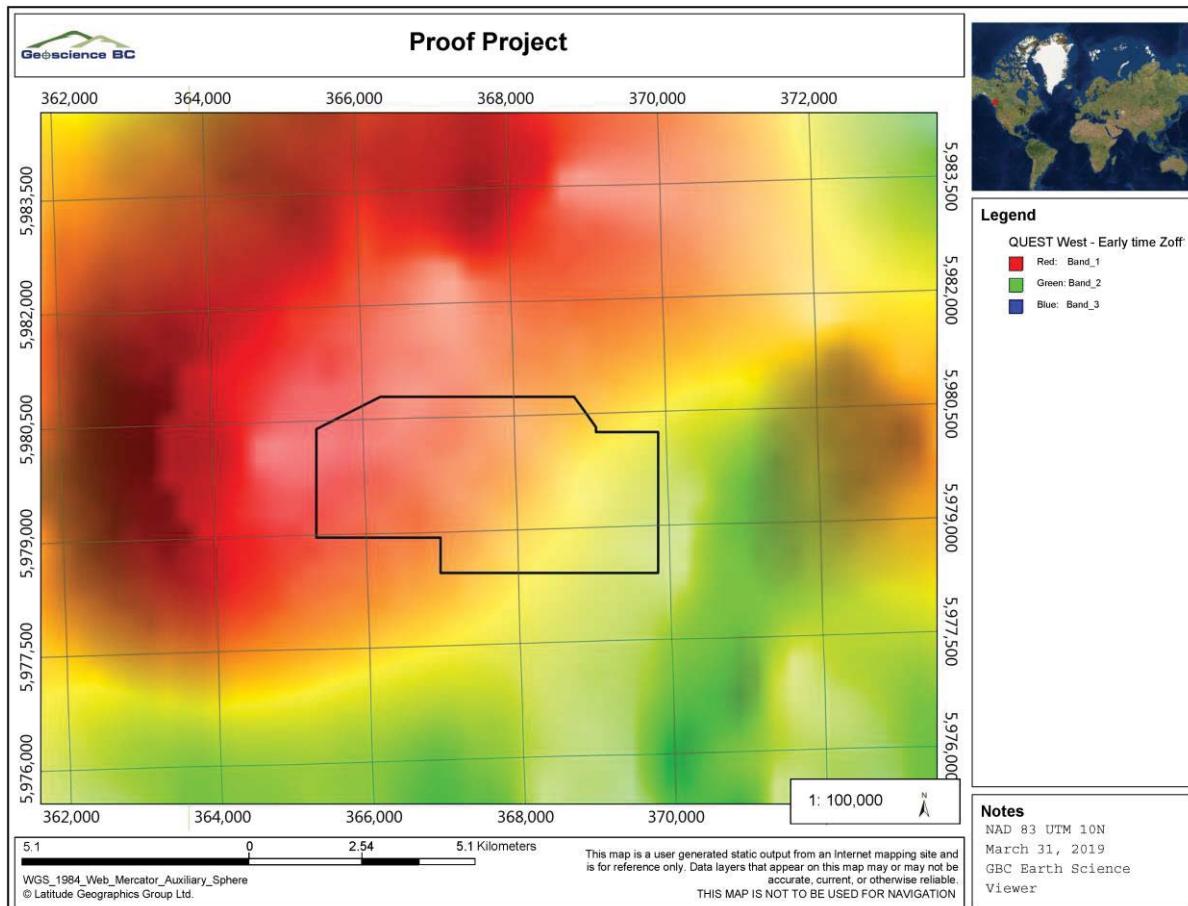
Regional geophysical surveys were conducted in the area with spacings between 200 and 4000 metres by Natural Resources Canada and Geoscience BC. The resolutions of the geophysical data are too coarse for detailed interpretations within the Proof Project area. In general, the project area sits on a moderate magnetic high that increases in intensity to the northeast (Canada 200 metre magnetic survey in 2010 - first vertical derivative) indicating a structure or lineament (Figure 4). An electromagnetic survey flown by Geoscience BC, as part of the Quest West Project in 2009 (4000 m spacing), shows a large late time tau (conductive) anomaly underlies the Proof Project while an early time Z off time (resistivity) anomaly is located to the northwest (Figures 5 and 6).



**Figure 4 Proof Project Regional First Vertical Derivative (from GBC Earth Science Viewer Quest West data 200 m-NRCan magnetic data)**



**Figure 5 Proof Project Electromagnetic Late Tau-conductivity (from GBC Earth Science Viewer Quest West data)**



**Figure 6 Proof Project Early Time Z-off-resistivity (from GBC Earth Science Viewer Quest West data)**

### 3. ADJACENT PROPERTIES

Two projects of note are located within approximately 5 kilometres of the Proof Property: Endako low F-type molybdenum mine and the fault-hosted Cabin Lake gold-silver-zinc-lead low-sulfidation epithermal-style project.

#### 3.1 Endako Molybdenum Mine

The Endako Molybdenum Mine is approximately 15 kilometres west of Fraser Lake, BC and sits along the northern shore of the eastern arm of Francois Lake. The southern mine tenure boundary is located approximately 5 kilometres north of the Proof Property. The Endako Mine is operated as a joint venture between Thompson Creek Metals Company Inc., Centerra Gold Inc., and Sojitz Corporation. Production at the Endako Mine began in 1965 and was suspended towards the end of 2014. The mine has been under care and maintenance since July of 2015 due to the poor molybdenum market. As per Marek (2011), the infrastructure at the mine includes a 28,000 to 31,000 tonnes per day concentrator, a 50,000 tonnes per day concentrator, an operating roaster with up to 45,000 pounds per day capacity, a non-operating roaster, tailings and reclaim water ponds, a crushing plant and various buildings (administration, warehouse, change house, laboratory, mine shops and first aid station). The

following paragraphs are a summary of Marek's 2011 report on the Endako Molybdenum Mine.

The Endako Mo deposit is a low F-type Mo porphyry centrally located within the Late Jurassic Francois Lake composite batholith (Whalen et al., 2001). Ten distinct textural and compositional phases have been mapped thus far for this batholith (Meredith-Jones, 2015). Molybdenum mineralization occurs as molybdenite and can be found in two types of quartz veins: large veins up to 1.2 m in width with fine fracture-fillings and ribbon-textured veins (Devine et al., 2015). The large stockwork veins are located within the Endako East area and are associated with K-feldspar alteration assemblages (K-feldspar+biotite (K, Mg, Fe mica)+quartz) with minor molybdenite. The ribbon-textured veins are laminated as quartz-molybdenite and form the majority of the ore. The mineralogy of these veins includes combinations of quartz ( $\text{SiO}_2$ ), molybdenite ( $\text{MoS}_2$ ), magnetite ( $\text{Fe}_3\text{O}_4$ ), pyrite ( $\text{FeS}_2$ ) and chalcopyrite ( $\text{CuFeS}_2$ ) with rare occurrences of bornite ( $\text{Cu}_5\text{FeS}_4$ ), sphalerite ( $[\text{Zn},\text{Fe}]\text{S}$ ), beryl ( $\text{Be}_3\text{Al}_2[\text{SiO}_3]_6$ ) and bismuthinite ( $\text{Bi}_2\text{S}_3$ ), whereas post-ore veins consist of calcite, chalcedony and quartz-specularite (Dawson, 1972). Alteration of the ore zone occurs in three distinct phases: pervasive kaolinization (formation of hydrous Al silicate [kaolinite-clay] and release of K<sup>+</sup> ions), envelopes of K-feldspar and envelopes with sericite-K mica (Meredith-Jones, 2015). K-feldspar alteration is generally barren, whereas sericite alteration and late kaolinite alteration is associated with the ore zone (Devine et al., 2015). The host rocks are overlain by the Eocene post-mineral volcanic rocks of the Ootsa Lake Group and underlain by basinal clastic rocks from the Early Jurassic Boer plutonic suite (Whalen et al., 2001). Quaternary deposits conceal the majority of the bedrock within this deposit's area. The measured reserves in 2014 were calculated at 47.6 million tonnes at 0.047% Mo (Meredith-Jones, 2015).

### 3.2 Cabin Lake Gold-Silver-Lead-Zinc Property

The Cabin Lake Property is approximately 20 km southwest of Fraser Lake, BC and sits along the northern shore of Cabin Lake approximately 3 kilometres south of the Proof Property. Decoors Mining Corp. currently holds the Cabin Lake Property tenures and the following paragraphs are a summary of Harper and Leslie's 2013 ARIS Report on the Cabin Lake Au-Ag-Pb-Zn Prospect.

The Cabin Lake Property is located at the western margin of the Intermontane Belt. This area is comprised of the Stikine Terrane and is locally represented by Lower to Middle Jurassic volcano-sedimentary rocks of the Hazelton Group to the east, Late Cretaceous andesite of the Kasalka Group to the west, Eocene Endako Formation andesite in the south and Late Cretaceous Cabin Lake quartz monzonite pluton. Unaltered monzonite of the Late Cretaceous Cabin Lake pluton contains abundant magnetite and a regional aeromagnetic anomaly (centre high with large lows extending northwest and southeast) are thought to represent magnetite-destructive alteration associated with mineralization.

The mineralization at the Cabin Lake Property is divided into three areas: the West Zone, Central Zone and East Zone. The West Zone consists of fault-hosted mineralized veins, averaging 1 centimetre to 1 metre in width, striking 325° with a steep dip west. The alteration zones from peripheral alteration consisting of unaltered magnetite quartz monzonite through magnetite-destructive yellow chert-sericite-pyrite quartz monzonite to manganese-stained chalcopyrite galena-sphalerite crustiform quartz veins at the centre. The alteration zones range from gradational over several centimetres to tens of metres in width with the most heavily altered zones coincident with manganese-oxide surface stains and anomalous gold, silver, lead and zinc concentrations. Strong, early- and late-phase flow-banded silica flooding,

hematite-after-magnetite, propylitic chlorite-after biotite and iron-oxide weathering are also associated with anomalous gold, silver, lead and zinc values. Mineralization in the West Zone is characterized by disseminated and blebby sulfides associated with quartz and quartz-carbonate alteration near the centre and peripheral to fault-controlled veins of the Cabin Lake quartz monzonite. In the highest grade areas, sphalerite and galena occur with chalcopyrite as inclusions or as an alteration product. The Central Zone is similar in character to the West Zone with an extension of alternating fresh magnetite quartz monzonite and highly altered red-yellow manganese-galena-sphalerite stockwork within quartz monzonite possibly representing another mineralized vein system sub-parallel to the known zones. The East Zone is similar to the West and Central Zones with the addition of several, possibly contemporaneous, mineralized veins trending northeast-southwest with steep east-west dips. Outcrops, in the East Zone, are porphyritic andesite, possibly belonging to the Jurassic Hazelton Group, and are situated along the eastern contact with strongly altered and mineralized quartz monzonite.

#### **4. GEOLOGICAL SETTING**

The metallogeny of British Columbia is primarily linked to the tectonic evolution for the Canadian Cordillera (Clarke et al., 2018). The sequence of events for its formation includes the welding of allochthonous (derived at a distance) terranes to the western margin of ancestral North America resulting in deformation and post-accretionary tectonism and magmatism. The Northwest Region of British Columbia intersects with the Cordilleran orogeny and is comprised of: 1) the autochthonous (formed at present position) and parautochthonous (intermediate character between auto- and allochthonous) carbonate and siliciclastic strata of ancestral North America; 2) Intermontane terranes include the Slide Mountain back-arc basin, Yukon-Tanana rifted pericratonic arc, Quesnel and Stikine volcanic arcs, as well as the Cache Creek oceanic terrane; 3) Alexander Terrane (a large composite crustal fragment); 4) post-accretionary rocks; and 5) younger overlying rocks (Clarke et al., 2018). The accretion of the allochthonous terranes to each other and North America occurred within the Jurassic. Post-accretion plutonic suites as well as Jurassic, and younger, syn- to post-accretionary siliciclastic deposits mosaic this area.

##### **4.1 Regional Geology**

The Proof Property lies within the Intermontane Tectonic Belt. The Intermontane Belt is a partly collisional tectonic belt comprised of a series of accreted terranes. The largest of these terranes is Stikinia, which underlies a large portion of central British Columbia.

Stikinia consists of a series of Jurassic, Cretaceous and Tertiary magmatic arcs and successor basins which unconformably overlie Permian sedimentary basement rocks (Wojdak, 1998, as per MacIntyre et al., 1989). In central BC, the Stikinia is mainly comprised of Palaeozoic arc and associated rocks collectively called the Stikine Assemblage (McKeown et al., 2008). In the regionally mapped area of the Proof Property, the Stikinia consists of Lower to Middle Jurassic Hazelton Group undivided, maroon, maroon-grey, and green, heterogeneous, fine- to coarse-grained, feldspar-phyric basaltic, andesitic and rhyolitic pyroclastic and flow rocks; heterolithic and monolithic volcaniclastic and epiclastic volcanic rocks, and tuffaceous rocks (after Cui, et al., 2018).

The stratigraphy of the Proof area (NTS 093F/14 and 15) consists of Lower to Middle Jurassic Hazelton Group undivided volcanic rocks and Late Cretaceous Kasalka Group andesitic volcanic rocks (after Cui et al., 2018). The Kasalka Group rocks, in this area, consist of grey-green or purple, heterolithic andesite lapilli tuff and tuff breccia; some pale-green to green, andesite to dacite, aphanitic to (biotite-, hornblende- and/or chloritized pyroxene-) plagioclase-phyric crystal-rich flows, tuffs, and volcanic rocks (Cui

et al., 2018). The Late Cretaceous Holy Cross Pluton consisting of feldspar porphyritic rocks is exposed to the southeast (Figure 7).

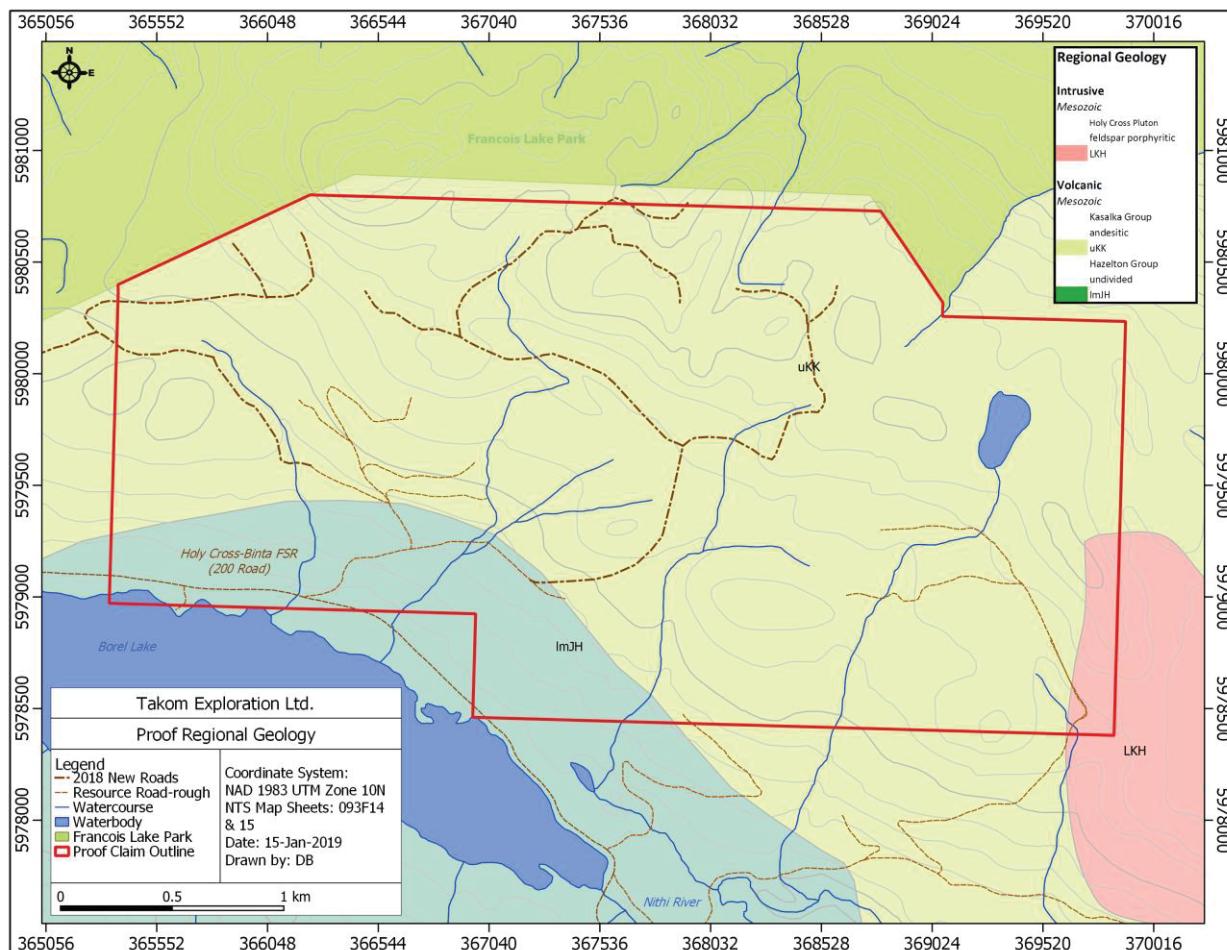


Figure 7 Proof Property Regional Geology (after Cui et al., 2018)

## 4.2 Property Geology

No known previous detailed mapping work was conducted in the area.

### 4.2.1 Surficial Geology

The Proof Property is located within an area of Nechako Plateau with gentle relief. Glacial deposits, within the Nechako Plateau, occur in variable thicknesses as hummocky, kettled, fluted or relatively flat topography (Levson and Giles, 1997). The thickness of tills ranges from less than one metre following bedrock ridges and steep slopes to several tens of metres in valleys and in the down-ice (lee) direction of bedrock high points. Within valleys oriented at high angles to the regional ice direction, till thicknesses may reach greater than 10 metres in depth. Basal tills often unconformably overlie bedrock, rarely overlie older deposits and seldom occur at the surface. Glacigenic debris-flow and glaciofluvial deposits overlie the majority of the area with colluvial diamicton (poorly sorted sediment of various particle sizes within a matrix of mud or

sand) occurring on steep slopes (Levson and Giles, 1997). Morainal sediments also tend to be buried within valleys by glaciofluvial, fluvial and organic sediments.

#### 4.2.2 Mineralization and Alteration

No known previous exploration work was conducted in the area, however, in 2017 a Ph.D. thesis was published describing a 30 kilometre long caesium anomaly found while statistically reviewing outer lodgepole pine bark data collected as part of a regional survey program from the 1990's (Benz, 2017). Further research showed that the anomaly's centre occurs within the now-present Proof Property's boundary and is also reflected in regional stream and lake sediment data. No regional till samples were collected in this area.

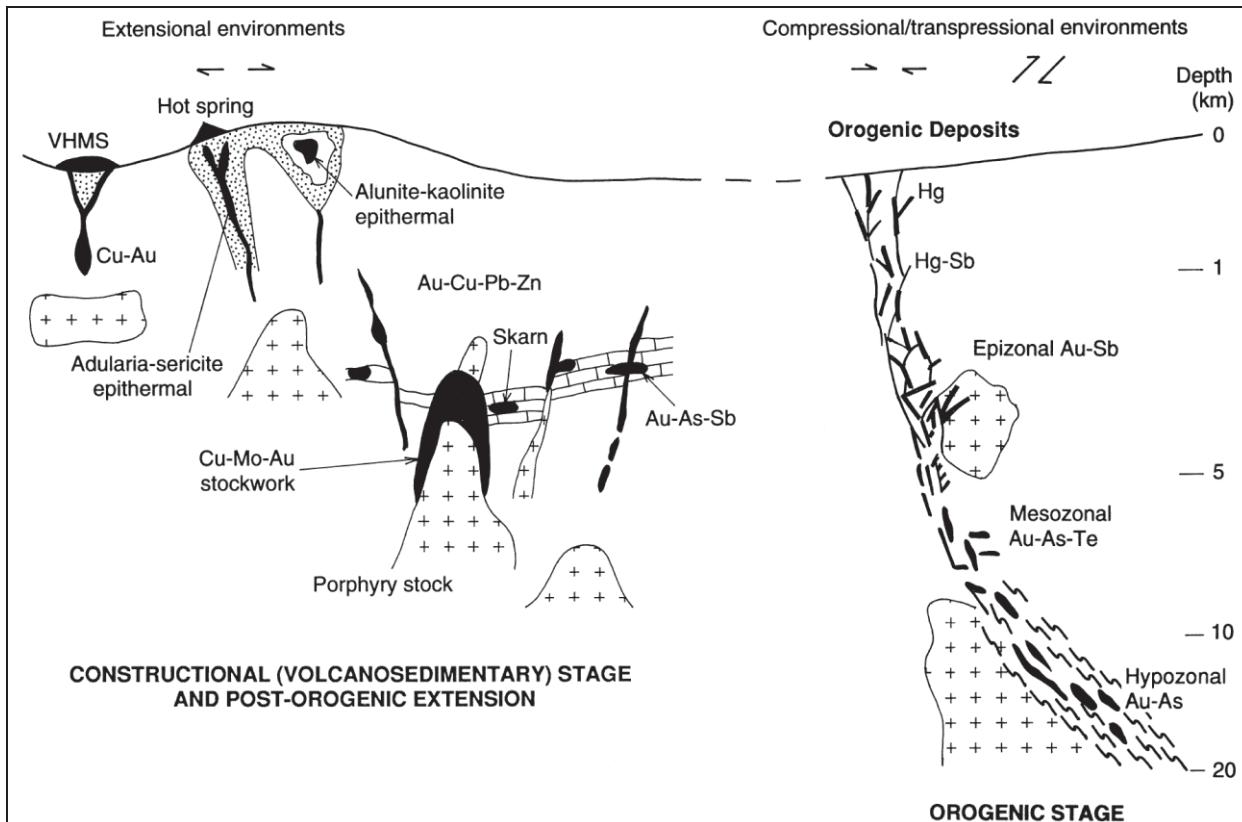
#### 4.2.3 Geological Model

The style of mineralization thought to occur on the Proof Property is a hydrothermal system which may possibly be an orogenic gold deposit. Figure 8 shows an idealized model of the depth relationship between different deposits and environments.

##### 4.2.3.1 Hydrothermal Deposits

Hydrothermal processes are the movement of hot water within the Earth's crust as a consequence of thermal activity such as a magmatic intrusion or tectonic (crustal) movement (Robb, 2005). The sources of this fluid are commonly from seawater, formation brines (saline to hypersaline waters liberated during sedimentary rock formation) and from fluid created by the dehydration of minerals during metamorphism. Typical hydrothermal deposits are in the form of quartz-carbonate veins or orogenic gold deposits (e.g. Eskay Creek silver deposit, BC-Roth, 2002 or the Hemlo gold deposit-Cox, et al., 2017).

Orogenic gold deposits are one type of hydrothermal deposits. The classification of orogenic (lode gold or mesothermal quartz-carbonate) gold deposits is debatable, however, there are many characteristics that are consistent for mineral deposits associated with aqueo-carbonic metamorphic fluids (Goldfarb and Groves, 2015). These characteristics include similar settings, metamorphic timing, alteration assemblages, hydrothermal element additions and fluid inclusion chemistry. Orogenic gold deposits typically occur within metamorphosed fore arc and back arc areas of continental margins or along sheared margins of continental batholiths at depths of 5 to 20 km. The timing of the metamorphism is usually late to post-peak. There is typically a broad thermal equilibrium between the alteration assemblages and the country rocks. Orogenic gold deposits typically only show zoning within epizonal areas in the form of Hg- and Sb-rich zones (Hart and Goldfarb, 2005). Lastly, the hydrothermal addition of elements and the composition of the fluid inclusions tend to be consistent between deposits. Examples of orogenic gold deposits are the Bralorne Gold Mine near Lillooet (Britton, 2015) and the Hemlo gold deposit near Marathon, ON (Cox, et al., 2017).



**Figure 8 Idealized Deposit Models Showing Relational Depths and Environments (Groves et al., 1998)**

## 5. 2018 EXPLORATION PROGRAM - GEOCHEMICAL SURVEY

### 5.1 Survey Overview

The 2018 geochemical sampling and mapping survey consisted of 4 days and was conducted between July 14<sup>th</sup> and 16<sup>th</sup> as well as on October 6<sup>th</sup> by one prospector and one forestry specialist/field assistant. The purpose of the 2018 program was to follow-up on a 30 kilometre caesium anomaly discovered in the outer bark of lodgepole pine as part of a Ph.D. thesis project by Diana Benz (2017). The area was narrowed-down by researching local lake sediment regional geological survey (RGS) samples, regionally mapped geology, nearby MINFILE occurrences and BC assessment reports as well as investigating the relationship of caesium with hydrothermal occurrences and mineral deposits.

A total of 37 samples were collected during the 2018 field season: 12 rock, 21 lodgepole pine twigs and 4 silt. All samples collected during the 2018 field season were selected, sealed and shipped to Activation Labs in Kamloops, BC. All samples were selected by the site manager. The rock samples were photographed *in situ*, and as a hand sample, prior to sealing with a cable tie in a labelled polypropylene sample bag. Representative rock samples were also collected for future reference. The silt and twig samples were placed within a labelled, sturdy Kraft paper sampling bag and the silt samples were sealed within a polypropylene sample bag with flagging after air drying.

Samples were stored in a secure location at a campsite near the project area which served as the base of the 2018 field program. Groups of twig and silt samples, or rock samples, were placed into sturdy, cardboard boxes prior to shipping. All sample packaging for

transport was overseen by the site manager and documented with sample names, sample type, assay type, shipping date, shipping ID, and the number of boxes. Samples were transported by the crew from camp to Prince George, BC prior to shipping to the lab via FedEx.

All the samples were prepped and assayed at Activation Laboratories Ltd.'s in Kamloops, BC. The rock samples were crushed and pulverized using the RX1 sample preparation package: crush (< 7 kilograms) up to 80% passing 2 millimetre, riffle split (250 grams) and pulverize (mild steel) to 95% passing 105 micrometre with cleaner sand included. The resulting rock sample pulps were assayed using the Ultratrace-1 assay method: aqua regia (partial) digestion with a 63 element inductively-coupled plasma mass spectrometry (ICP-MS) finish. Aqua regia digestion uses a combination of concentrated hydrochloric and nitric acids to leach sulfides as well as some oxide and silicate minerals. Barite, zircon, monazite, sphene, chromite, gahnite, garnet, ilmenite, rutile and cassiterite mineral phases are rarely dissolved whereas the remainder of silicate and oxide minerals are moderately attacked, depending on the degree of their alteration; generally, most base metals and gold are usually dissolved. The silt samples were dried and sieved using the S1 DIS sample preparation package: dried at 60°C and sieved to pass through a 177 micrometre mesh with the oversized fraction discarded. The sieved fraction was assayed using the Ultratrace-1 assay method. The twig samples were dried and macerated using the B2 sample preparation package. The macerated plant material was assayed using the 2G biogeochemical assay package: un-ashed material is dissolved in acid prior to analysis by 63 element ICP-MS. The rock samples were returned to the Takom Exploration storage facility in Prince George, BC while the silt and vegetation samples were disposed of by the lab. The assay certificates are located in Appendix B: Certificates of Analysis.

### 5.1.1 Rock Grab, Chip and Pit Sampling Protocol

Rock grab, chip and pit samples were collected by foot with vehicular assistance. The rock sample sites were chosen in the field based on changes in lithology and/or the potential for mineralization. The pit sample was located approximately 5 metres north of the 38.8 ppb Au twig sample. Any areas with visible alteration assemblages or of structural interest were chip sampled.

The pit sample was hand-dug with a pick and shovels. The Island Lake Wildfire had burned away all ground vegetation therefore a top layer of vegetation wasn't available to save and place back over top of the hole. The hole was re-filled and packed after a chip sample was collected. The maximum final dimensions of the pit were less than 1 metre wide at the top and 75 cm deep. A chip sample was collected at the bottom of the pit and the sample was marked with labelled flagging attached to a nearby tree.

The rock grab, chip and pit samples were extracted using a rock hammer, or hammer and chisel, to expose fresh surfaces and to liberate a sample of approximately 0.5 to 1.0 kilograms of sample material. All sample sites were flagged with biodegradable flagging tape and marked with the sample number. The sample sites were recorded using hand-held GPS units (accuracy  $\pm$  0 to 10 metres) and the following information was recorded on all-weather paper: sample ID, easting, northing, elevation, type of sample (outcrop, subcrop, float, talus, chip, etc.), chip length (where applicable) and a brief description.

### 5.1.2 Silt Sampling Protocol

Silt samples were collected by foot with vehicular assistance. The silt sampling locations were chosen based on the location of their watershed area. Locations in the streams with a well-developed bed were typically chosen for silt sample collection sites.

The silt samples were extracted to ensure the greatest amount of silt was collected based on the sampler's desired method: digging with a hand-spade under large rocks or in sandy to gravelly areas towards the centre of the stream. All sample sites were flagged with biodegradable flagging tape and marked with the sample number. The sample sites were recorded using hand-held GPS units (accuracy  $\pm$  0 to 10 metres) and the following information was recorded on all-weather paper: sample ID, easting, northing, elevation and a short description.

### 5.1.3 Twig Sampling Protocol

Twig samples from lodgepole pine were chosen as the sample material due to the young age of the majority of the trees (<20 years), the extensive monoculture of lodgepole pine replanted after harvesting in the 1990's and the time of year (new growth was ample in the form of needles with an undeveloped, green stem). Outer bark samples were not a viable option since the trees were too young to have a thick enough bark layer in which to collect material from without accidentally collecting inner bark material.

The twig samples were collected by foot with vehicular assistance. The twig sampling locations were chosen to be collected at approximately 200 metre intervals to cross-section the project area with two lines approximately 400 metres apart. Healthy lodgepole pine trees were chosen and the new growth twig samples were collected, by pinching or slicing off the new growth with a knife, from chest height around the circumference of the tree and its neighbours, as needed, for a sample weighing approximately 30 grams. The new growth was a uniform green colour through the centre of the undeveloped stem.

All sample sites were flagged with biodegradable flagging tape and marked with the sample number. The sample sites were recorded using hand-held GPS units (accuracy 1-10 m) and the following information is recorded on all-weather paper: sample ID, easting, northing, elevation and a short description: replanted/natural, tissue, tree age, tree height and tree trunk diameter.



**Figure 9 New growth sampled on a lodgepole pine tree.**

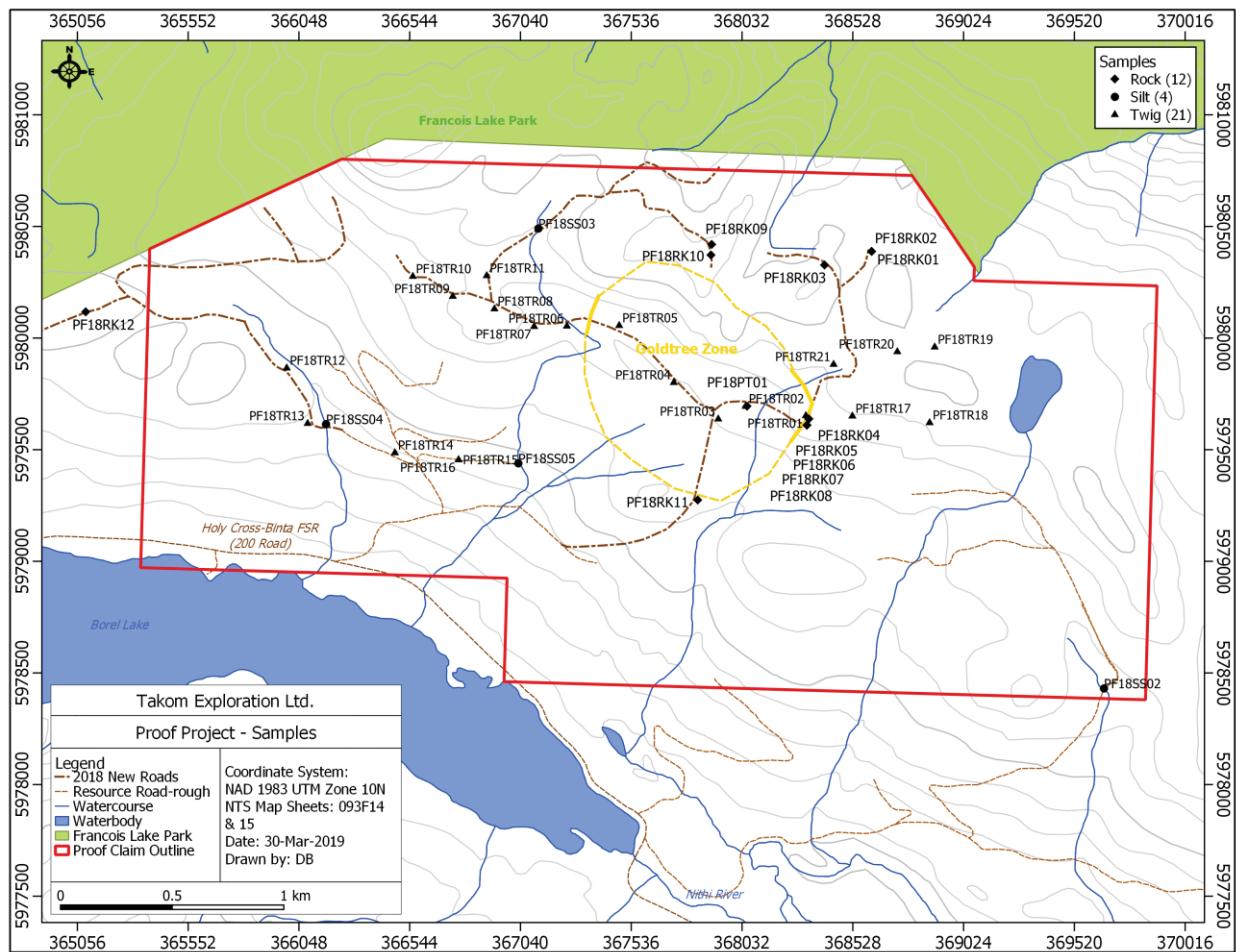
#### 5.1.4 Data Verification

All GPS units were downloaded to a laptop using DNR Garmin®. The GPS information was transferred into a Microsoft Excel® spreadsheet and the remaining sample information underwent manual data entry. The database was checked by the site project lead while in the field, and again in the office. A second check of the database was conducted when the results were merged with the database. The third and final check of the database was performed by the author of the report.

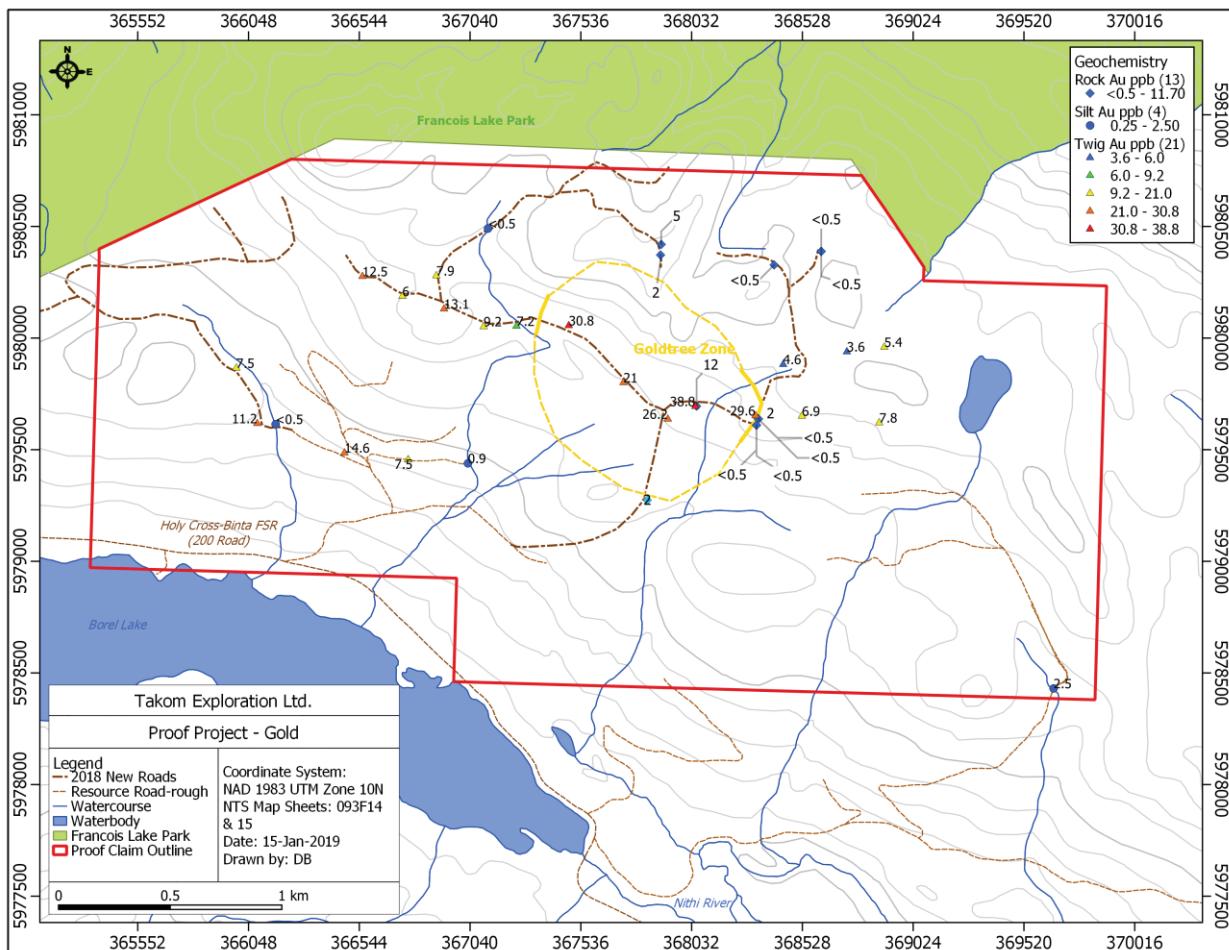
All the rock, silt and twig samples were processed and analysed by Activation Labs Ltd. Verification of assays was performed by the lab using internal QA/QC procedures of duplicates, blanks and proprietary reference standards. A rigorous quality assurance/quality control (QA/QC) program including blanks, standards and duplicates was not conducted. Ideally, at least 20 to 30 of each type of QC sample would be inserted into the sample stream to acquire a statistical representation of the quality of the data.

### 5.2 Geochemical Results

The 2018 geochemical survey on the Proof Property took place between July 14<sup>th</sup> and October 6<sup>th</sup> by one prospector and one forestry specialist/field assistant. The property was traversed by foot with vehicular assistance. The traverse areas are based around road cuts for potential outcrop exposures (Figure 10). The main element of interest is gold (Figure 11). A total of 37 samples were collected during the 2018 field season: 12 rock, 21 twig soil and 4 silt. The sample descriptions are located in Appendix B. The map displaying sample name, gold, silver, caesium, vanadium, arsenic, antimony, thallium and molybdenum is located in Appendix C and is for display purposes only: due to the compositional nature of geochemical data, in the form of ratios not free to vary independently (Aitchison, 2005), multi-element associations should not be assumed in this context.



**Figure 10 Proof Project sample names and locations.**



**Figure 11 Proof Project Gold Values.**

### 5.2.1 Rock Grab and Chip Samples

Exploratory data analysis (EDA) of the 12 rock grab/chip (outcrop) samples collected during the 2018 exploration program includes a summary table. EDA information is used to determine the composition of the data, to discover anomalies and to determine pathfinder relationships unique to the area in which the samples were collected. Due to the small number of samples collected (<30) no further statistical analyses were performed.

The summary table includes sample count, detection limits, quantiles, minimum (Min)-maximum (Max) values, standard deviation (SD), mean absolute deviation (MAD) and the coefficient of variation (CV) (Table 2). These summary statistics assist in determining the character of the data. The below detection limit values were replaced by half the detection limit for each element.

**Table 2 Proof 2018 Rock Grab Sample Summary (below detection limit values were replaced by half the detection limit for each element). NA = not applicable, DL= detection limit, Min = minimum, Max = maximum, SD = standard deviation, MAD = mean absolute deviation and CV = coefficient of variation.**

Element	Units	Count	DL	% < and > DL	Min	25%	Median (50%)	Mean	95%	99%	Max	SD	MAD	CV
Ti	pct	12	0.001	0.00%	0.026	0.059	0.075	0.084	0.152	0.155	0.156	0.04	0.03	0.49
S	pct	12	1	100%	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.00	0.00	0.00
P	pct	12	0.001	0.00%	0.010	0.110	0.116	0.110	0.145	0.146	0.146	0.04	0.02	0.38
Li	ppm	12	0.1	0.00%	0.9	1.5	2.5	3.1	6.3	6.5	6.6	1.94	1.00	0.63
Be	ppm	12	0.1	0.00%	0.4	0.5	0.6	1.1	3.4	5.9	6.5	1.72	0.05	1.62
B	ppm	12	1	100%	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.00	0.00	0.00
Na	pct	12	0.001	0.00%	0.055	0.103	0.143	0.135	0.208	0.230	0.235	0.05	0.04	0.36
Mg	pct	12	0.01	0.00%	0.10	0.24	0.28	0.30	0.49	0.53	0.54	0.12	0.09	0.41
Al	pct	12	0.01	0.00%	0.56	1.30	1.52	1.70	2.97	3.43	3.55	0.75	0.23	0.44
K	pct	12	0.01	0.00%	0.08	0.10	0.14	0.20	0.44	0.48	0.49	0.14	0.06	0.68
Bi	ppm	12	0.02	16.67%	0.01	0.03	0.06	0.08	0.27	0.39	0.42	0.11	0.03	1.40
Ca	pct	12	0.01	0.00%	0.05	0.69	0.90	1.24	3.37	4.59	4.89	1.26	0.25	1.01
Sc	ppm	12	0.1	0.00%	1.4	7.6	8.6	10.1	20.4	29.8	32.1	7.35	1.45	0.73
V	ppm	12	1	0.00%	6	83	99	136	360	600	660	167.36	13.00	1.23
Cr	ppm	12	1	0.00%	2	16	18	16	21	21	21	5.65	2.00	0.34
Mn	ppm	12	1	0.00%	110	325	415	621	1798	3024	3330	862.38	91.00	1.39
Fe	pct	12	0.01	0.00%	0.77	2.97	3.29	4.07	9.09	14.06	15.30	3.62	0.30	0.89
Co	ppm	12	0.1	0.00%	0.8	8.8	10.2	10.5	17.1	20.9	21.9	4.93	1.90	0.47
Ni	ppm	12	0.1	0.00%	0.7	7.9	9.7	9.7	16.7	22.4	23.8	5.23	1.15	0.54
Cu	ppm	12	0.2	0.00%	3.3	19.3	22.5	22.6	36.7	42.9	44.4	9.85	3.25	0.44
Zn	ppm	12	0.1	0.00%	23.3	49.7	54.4	62.0	115.9	168.8	182.0	39.26	5.65	0.63
Ga	ppm	12	0.02	0.00%	2.30	3.85	4.57	4.56	6.71	7.10	7.20	1.29	0.69	0.28
Ge	ppm	12	0.1	25.00%	0.05	0.09	0.10	0.22	0.78	1.36	1.50	0.41	0.03	1.84
As	ppm	12	0.1	0.00%	1.1	7.5	12.4	52.3	237.5	449.9	503.0	142.04	5.00	2.72
Rb	ppm	12	0.1	0.00%	8.6	13.7	19.6	42.7	110.4	115.7	117.0	40.97	10.45	0.96
Sr	ppm	12	0.5	0.00%	12.4	67.9	88.0	157.9	458.7	654.9	704.0	185.15	39.90	1.17
Y	ppm	12	0.01	0.00%	4.28	7.60	8.49	9.93	19.26	25.77	27.40	5.98	1.33	0.60
Zr	ppm	12	0.1	8.33%	0.05	0.30	0.40	1.95	7.43	8.05	8.20	2.74	0.28	1.40
Nb	ppm	12	0.1	75.00%	0.05	0.05	0.05	0.10	0.28	0.46	0.50	0.13	0.00	1.34
Mo	ppm	12	0.01	0.00%	0.29	1.02	1.50	2.11	6.13	10.19	11.20	2.92	0.36	1.39
Ag	ppm	12	0.002	0.00%	0.028	0.045	0.064	0.139	0.356	0.413	0.427	0.14	0.02	0.98
In	ppm	12	0.02	33.33%	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.01	0.01	0.43
Sn	ppm	12	0.05	0.00%	0.06	0.39	0.46	0.44	0.60	0.63	0.64	0.15	0.09	0.35
Sb	ppm	12	0.02	0.00%	0.33	1.27	2.17	45.48	234.35	446.88	500.01	143.23	1.61	3.15
Te	ppm	12	0.02	75.00%	0.01	0.01	0.01	0.02	0.07	0.08	0.08	0.02	0.00	1.07
Cs	ppm	12	0.02	0.00%	1.77	11.78	17.60	21.58	50.06	50.41	50.50	15.41	6.44	0.71
Ba	ppm	12	0.5	0.00%	39.0	61.4	73.8	100.7	207.7	232.7	239.0	59.78	24.15	0.59
La	ppm	12	0.5	0.00%	13.5	15.6	16.0	16.6	20.4	21.4	21.7	2.12	0.60	0.13
Ce	ppm	12	0.01	0.00%	31.00	32.50	33.55	34.58	39.15	39.19	39.20	2.78	1.90	0.08
Cd	ppm	12	0.01	16.67%	0.005	0.030	0.040	0.048	0.118	0.136	0.140	0.04	0.01	0.82
Pr	ppm	12	0.1	0.00%	3.8	4.1	4.4	4.4	5.1	5.3	5.4	0.45	0.30	0.10
Nd	ppm	12	0.02	0.00%	14.00	16.28	17.65	17.23	19.59	20.16	20.30	1.87	1.25	0.11
Sm	ppm	12	0.1	0.00%	2.3	3.0	3.3	3.2	3.7	3.8	3.8	0.47	0.30	0.15
Se	ppm	12	0.1	83.33%	0.05	0.05	0.05	0.08	0.24	0.37	0.40	0.10	0.00	1.21

**Proof 2018 Geochemical Survey**

Element	Units	Count	DL	% < and > DL	Min	25%	Median (50%)	Mean	95%	99%	Max	SD	MAD	CV
Eu	ppm	12	0.1	0.00%	0.2	0.4	0.5	0.4	0.5	0.6	0.6	0.10	0.05	0.23
Gd	ppm	12	0.1	0.00%	1.8	2.6	2.8	2.8	3.5	3.6	3.6	0.55	0.45	0.20
Tb	ppm	12	0.1	0.00%	0.2	0.3	0.4	0.4	0.5	0.6	0.6	0.12	0.10	0.31
Dy	ppm	12	0.1	0.00%	1.0	1.6	1.8	1.9	3.1	3.7	3.9	0.75	0.30	0.39
Ho	ppm	12	0.1	0.00%	0.2	0.3	0.3	0.4	0.6	0.8	0.8	0.16	0.10	0.46
Er	ppm	12	0.1	0.00%	0.4	0.8	0.9	1.0	2.1	2.9	3.1	0.69	0.15	0.68
Tm	ppm	12	0.1	25.00%	0.05	0.09	0.10	0.13	0.34	0.47	0.50	0.12	0.00	0.95
Yb	ppm	12	0.1	0.00%	0.3	0.6	0.7	0.9	2.2	3.3	3.6	0.86	0.15	0.93
Lu	ppm	12	0.1	33.33%	0.05	0.05	0.10	0.13	0.38	0.56	0.60	0.15	0.03	1.15
Hf	ppm	12	0.1	91.67%	0.05	0.05	0.05	0.07	0.16	0.27	0.30	0.07	0.00	1.02
Ta	ppm	12	0.05	100%	0.0025	0.0025	0.0250	0.018	0.025	0.0250	0.025	0.01	0.00	0.63
W	ppm	12	0.1	25.00%	0.05	0.09	0.20	0.84	3.84	6.61	7.30	2.05	0.13	2.45
Re	ppm	12	0.001	41.67%	0.0005	0.0005	0.0010	0.002	0.004	0.0057	0.006	0.00	0.00	1.05
Au	ppb	12	0.5	58.33%	0.25	0.25	0.25	2.00	7.79	10.92	11.70	3.34	0.00	1.66
Tl	ppm	12	0.02	0.00%	0.11	0.18	0.29	0.93	2.85	4.05	4.35	1.22	0.17	1.32
Pb	ppm	12	0.1	0.00%	0.6	1.7	3.2	4.1	10.8	15.8	17.0	4.39	1.55	1.07
Th	ppm	12	0.1	0.00%	1.5	3.2	3.8	3.8	5.6	6.7	7.0	1.26	0.55	0.33
U	ppm	12	0.1	0.00%	0.8	0.9	1.0	1.2	1.8	2.0	2.1	0.39	0.15	0.33
Hg	ppb	12	10	66.67%	5	5	5	9	20	20	20	6.69	0.00	0.73
Pd-FA	ppb	4	1	100%	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.00	0.50	0.00
Pt-FA	ppb	4	1	100%	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.00	0.50	0.00
Au-FA	ppb	4	2	100%	1	1	1	1	1	1	1	0.00	1.00	0.00

EDA indicates there is insufficient assay data for sulfur, boron, niobium, tellurium, selenium, hafnium, tantalum, mercury and fire assay data due to greater than 65 percent of the population below the detection limits (DL) of the assay methods. The standard deviation (SD) and MAD values indicate that lithium, magnesium, aluminium, potassium, calcium, scandium, vanadium, manganese, iron, cobalt, nickel, copper, zinc, gallium, arsenic, rubidium, strontium, yttrium, molybdenum, silver, antimony, caesium, barium, cerium, neodymium, gadolinium, dysprosium, thallium, lead, thorium, uranium and mercury vary greatly from the mean. The CV values show that the variance is high for beryllium, bismuth, calcium, vanadium, manganese, germanium, arsenic, strontium, zirconium, molybdenum, antimony, tungsten, gold, thallium and lead. The large CV values (high variance) indicate possible links with alteration, mineralization or changes in lithology although, due to the small population size (<30), a cautious interpretation is recommended.

Highlighted rock grab samples are displayed in Table 3 showing sample name, Zone/Area collected, material sampled as well as gold, silver, caesium, vanadium, arsenic, antimony, thallium and molybdenum concentrations. Figures 12 to 17 display the sample and location photos for the highlighted rock grab samples. The information for all the samples is located in Appendix B: Sample Descriptions.

**Table 3 Proof Rock Grab Sample Highlights (concentrations are in ppm unless otherwise specified)**

Sample ID	Zone	Type	Au ppb	Ag	Cs	V	As	Sb	Tl	Mo
PF18RK03	North of Goldtree	outcrop	<0.5	0.028	50.5	660	503	>500	1.62	11.2
PF18PT01	Goldtree	pit	11.7	0.427	18.8	99	18.1	17	0.34	1.51
PF18RK09	West of Goldtree	chip	4.6	0.275	21.8	83	16.5	0.5	1.12	0.29
PF18RK10	North of Goldtree	chip	2.1	0.298	33.7	81	13.6	1.56	1.45	0.38
PF18RK11	South of Goldtree	chip	1.8	0.264	1.77	6	1.1	0.33	0.11	0.45
PF18RK12	West of Goldtree	chip	2.7	0.245	8.93	108	6.4	0.1	0.22	0.62



**Figure 12 Proof Rock Grab Sample PF18RK03 location (left) and sample (right) – fault gouge with quartz vein with discrete orange crystals in patches of 1.5 cm, Mn-staining and no visible carbonates.**



**Figure 13 Proof Pit/Chip Sample PT18RK01 location (left) and sample (right) 75 cm deep, 20 cm chip sample approximately 5 m northeast of 38.8 ppb Au twig sample consisting of maroon crystal tuff with ~20% magnetite blotches and rare sub-mm quartz veins (minor carbonates).**



**Figure 14 Proof Chip PF18RK09** Sample location (left) and sample (right) crystal tuff-metavolcanic with wavy quartz veins, ankerite selvages, magnetite blotches, pervasive chlorite and green chalcedony pods. Very magnetic.



**Figure 15 Proof Chip PF18RK10** Sample location (left) and sample (right) crystal tuff-metavolcanic with wavy quartz veins, ankerite selvages, magnetite blotches, pervasive chlorite and green chalcedony pods. Very magnetic.



**Figure 16 Proof Chip Sample PF18RK11** location (left) and sample (right) – talc (white/talc schist?) with patches of limonite and tourmaline.



**Figure 17 Proof Chip Sample PF18RK12 location (left) and sample (right) consisting of dark green and rusty brick red patches with blotches of magnetite (very magnetic) greenstone (no distinct cleavage).**

### 5.2.1 Silt Samples

Exploratory data analysis (EDA) of the 4 silt samples collected during the 2018 exploration program includes a summary table. This information is used to determine the composition of the data. Due to the small number of silt samples collected (<30) no further statistical analyses were performed.

The summary table includes sample count, detection limits, quantiles, minimum (Min)-maximum (Max) values, standard deviation (SD), mean absolute deviation (MAD) and the coefficient of variation (CV) (Table 4). The summary statistics assist in determining the character of the data. The below detection limit values were replaced by half the detection limit to calculate the summary statistics.

**Table 4 Proof 2018 Silt Sample Summary (below detection limit values were replaced by half the detection limit for each element). NA = not applicable, DL= detection limit, Min = minimum, Max = maximum, SD = standard deviation, MAD = mean absolute deviation and CV = coefficient of variation.**

Element	Units	Count	DL	% < and > DL	Min	25%	Median (50%)	Mean	95%	99%	Max	SD	MAD	CV
Ti	pct	4	0.001	0.00%	0.024	0.054	0.074	0.071	0.109	0.113	0.114	0.04	0.03	0.53
S	pct	4	1	100%	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.00	0.00	0.00
P	pct	4	0.001	0.00%	0.096	0.098	0.108	0.128	0.187	0.197	0.199	0.05	0.01	0.38
Li	ppm	4	0.1	0.00%	7.1	7.4	10.3	10.9	15.5	15.8	15.9	4.30	2.95	0.40
Be	ppm	4	0.1	0.00%	0.5	0.6	0.8	0.8	1.2	1.2	1.2	0.33	0.25	0.40
B	ppm	4	1	100%	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.00	0.00	0.00
Na	pct	4	0.001	0.00%	0.045	0.050	0.054	0.069	0.112	0.120	0.122	0.04	0.01	0.52
Mg	pct	4	0.01	0.00%	0.26	0.27	0.33	0.39	0.60	0.63	0.64	0.18	0.06	0.46
Al	pct	4	0.01	0.00%	1.72	1.76	2.13	2.50	3.80	3.98	4.03	1.08	0.39	0.43
K	pct	4	0.01	0.00%	0.10	0.12	0.14	0.15	0.21	0.22	0.22	0.05	0.02	0.35
Bi	ppm	4	0.02	0.00%	0.07	0.08	0.08	0.10	0.16	0.17	0.17	0.05	0.01	0.47
Ca	pct	4	0.01	0.00%	0.63	0.64	0.96	1.06	1.64	1.70	1.71	0.53	0.32	0.49
Sc	ppm	4	0.1	0.00%	3.1	3.6	4.8	5.5	8.9	9.4	9.5	2.87	1.30	0.52
V	ppm	4	1	0.00%	48	56	61	75	119	127	129	36.72	7.50	0.49

**Proof 2018 Geochemical Survey**

Element	Units	Count	DL	% < and > DL	Min	25%	Median (50%)	Mean	95%	99%	Max	SD	MAD	CV
Cr	ppm	4	1	0.00%	12	14	15	15	19	20	20	3.40	1.50	0.22
Mn	ppm	4	1	0.00%	539	540	1135	1235	2070	2118	2130	819.25	595.50	0.66
Fe	pct	4	0.01	0.00%	2.52	2.60	2.66	3.33	5.05	5.39	5.47	1.43	0.09	0.43
Co	ppm	4	0.1	0.00%	5.9	6.0	6.7	9.1	15.8	17.0	17.3	5.49	0.70	0.60
Ni	ppm	4	0.1	0.00%	6.4	7.4	8.8	8.9	11.4	11.6	11.7	2.33	1.70	0.26
Cu	ppm	4	0.2	0.00%	10.3	10.4	14.3	16.3	25.2	26.2	26.4	7.66	3.90	0.47
Zn	ppm	4	0.1	0.00%	43.7	44.8	51.1	57.2	79.2	82.3	83.1	18.23	6.60	0.32
Ga	ppm	4	0.02	0.00%	3.99	4.16	5.04	5.68	8.22	8.56	8.64	2.14	0.94	0.38
Ge	ppm	4	0.1	50.00%	0.05	0.05	0.08	0.10	0.19	0.20	0.20	0.07	0.03	0.71
As	ppm	4	0.1	0.00%	3.2	3.7	5.0	5.1	7.0	7.1	7.1	1.85	1.45	0.37
Rb	ppm	4	0.1	0.00%	10.1	11.2	12.4	12.9	16.1	16.5	16.6	2.80	1.55	0.22
Sr	ppm	4	0.5	0.00%	93.8	94.6	125.0	143.4	218.8	227.8	230.0	64.41	30.60	0.45
Y	ppm	4	0.01	0.00%	10.8	11.0	18.3	19.5	29.9	30.5	30.7	10.16	7.35	0.52
Zr	ppm	4	0.1	0.00%	0.7	1.1	1.5	1.8	3.2	3.4	3.4	1.17	0.55	0.66
Nb	ppm	4	0.1	0.00%	0.1	0.2	0.2	0.2	0.4	0.4	0.4	0.13	0.05	0.56
Mo	ppm	4	0.01	0.00%	0.29	0.34	0.48	0.51	0.75	0.77	0.78	0.23	0.16	0.44
Ag	ppm	4	0.002	0.00%	0.089	0.123	0.167	0.159	0.210	0.212	0.212	0.06	0.04	0.36
In	ppm	4	0.02	50.00%	0.01	0.01	0.02	0.02	0.04	0.04	0.04	0.01	0.01	0.71
Sn	ppm	4	0.05	0.00%	0.33	0.35	0.40	0.47	0.70	0.74	0.75	0.19	0.06	0.42
Sb	ppm	4	0.02	0.00%	0.60	1.00	1.16	1.05	1.27	1.29	1.29	0.31	0.08	0.29
Te	ppm	4	0.02	75.00%	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.00	0.40
Cs	ppm	4	0.02	0.00%	5.05	5.64	6.71	7.44	10.74	11.19	11.30	2.78	1.26	0.37
Ba	ppm	4	0.5	0.00%	110.0	110.0	175.5	180.8	258.9	261.4	262.0	82.14	65.50	0.45
La	ppm	4	0.5	0.00%	14.4	14.5	23.7	25.1	37.7	38.4	38.6	12.52	9.25	0.50
Ce	ppm	4	0.01	0.00%	43.40	44.00	51.35	54.55	70.06	71.69	72.10	13.60	7.55	0.25
Cd	ppm	4	0.01	0.00%	0.07	0.07	0.17	0.18	0.30	0.31	0.31	0.13	0.10	0.71
Pr	ppm	4	0.1	0.00%	3.9	3.9	6.7	7.0	10.5	10.7	10.7	3.59	2.75	0.51
Nd	ppm	4	0.02	0.00%	15.20	15.58	26.55	28.10	43.10	43.90	44.10	14.86	11.10	0.53
Sm	ppm	4	0.1	0.00%	2.9	3.0	5.1	5.5	8.6	8.8	8.9	3.03	2.15	0.55
Se	ppm	4	0.1	50.00%	0.05	0.05	0.48	0.63	1.41	1.48	1.50	0.71	0.43	1.13
Eu	ppm	4	0.1	0.00%	0.50	0.58	0.95	1.05	1.73	1.79	1.80	0.61	0.40	0.58
Gd	ppm	4	0.1	0.00%	2.6	2.8	4.6	4.9	7.6	7.8	7.8	2.61	1.90	0.53
Tb	ppm	4	0.1	0.00%	0.4	0.4	0.7	0.7	1.0	1.0	1.0	0.32	0.25	0.47
Dy	ppm	4	0.1	0.00%	2.0	2.0	3.5	3.6	5.3	5.4	5.4	1.83	1.45	0.51
Ho	ppm	4	0.1	0.00%	0.3	0.4	0.7	0.6	0.9	0.9	0.9	0.32	0.25	0.51
Er	ppm	4	0.1	0.00%	1.1	1.1	1.9	1.9	2.8	2.8	2.8	0.95	0.80	0.50
Tm	ppm	4	0.1	0.00%	0.1	0.1	0.2	0.2	0.4	0.4	0.4	0.15	0.10	0.67
Yb	ppm	4	0.1	0.00%	1.0	1.1	1.8	1.8	2.5	2.5	2.5	0.81	0.70	0.46
Lu	ppm	4	0.1	0.00%	0.1	0.2	0.3	0.3	0.4	0.4	0.4	0.15	0.10	0.55
Hf	ppm	4	0.1	100%	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.00
Ta	ppm	4	0.05	100%	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.00	0.00	0.00
W	ppm	4	0.1	50.00%	0.050	0.050	0.125	0.125	0.200	0.200	0.200	0.09	0.08	0.69
Re	ppm	4	0.001	75.00%	0.0005	0.0005	0.0005	0.002	0.0043	0.0049	0.0050	0.00	0.00	1.38
Au	ppb	4	0.5	50.00%	0.25	0.25	0.58	0.98	2.26	2.45	2.50	1.06	0.33	1.09
Tl	ppm	4	0.02	0.00%	0.11	0.13	0.19	0.21	0.32	0.34	0.34	0.10	0.06	0.50
Pb	ppm	4	0.1	0.00%	3.1	3.3	4.5	5.0	7.4	7.6	7.7	2.15	1.25	0.43

Element	Units	Count	DL	% < and > DL	Min	25%	Median (50%)	Mean	95%	99%	Max	SD	MAD	CV
Th	ppm	4	0.1	0.00%	1.7	1.9	2.1	2.7	4.4	4.7	4.8	1.44	0.20	0.54
U	ppm	4	0.1	0.00%	1.7	1.9	3.8	4.9	9.7	10.3	10.4	4.09	2.00	0.83
Hg	ppb	4	10	0.00%	30	45	60	58	79	80	80	22.17	15.00	0.39

EDA with a small number of samples (<30) should be interpreted cautiously and will only give a general idea of the composition of the data. There is insufficient assay data for sulfur, boron, tellurium, tantalum and rhenium due to greater than 65 percent of the population below the detection limits (DL) of the assay methods. The standard deviation (SD) and MAD values indicate that lithium, aluminium, scandium, vanadium, manganese, cobalt, nickel, copper, zinc, gallium, arsenic, rubidium, strontium, yttrium, zirconium, molybdenum, silver, antimony, caesium, cadmium, praseodymium, neodymium, samarium, selenium, europium, gadolinium, dysprosium, thallium, lead and thorium vary greatly from the mean. The CV values show that the variance is high for selenium, rhenium and gold indicating a possible link with mineralization.

The highlighted silt samples are displayed in Table 5 showing sample names with gold, silver, caesium, vanadium, arsenic, antimony, thallium and molybdenum concentrations. The information for all the samples is located in Appendix B: Sample Descriptions.

**Table 5 Proof Silt Sample Highlights (concentrations are in ppm unless otherwise specified)**

Sample ID	Au ppb	Ag	Cs	V	As	Sb	Tl	Mo
PF18SS02	2.5	0.212	5.84	48	6.1	1.29	0.23	0.29
PF18SS03	< 0.5	0.199	5.05	129	7.1	0.6	0.34	0.78
PF18SS04	< 0.5	0.089	7.57	59	3.8	1.13	0.14	0.36
PF18SS05	0.9	0.134	11.3	63	3.2	1.18	0.11	0.6

### 5.2.1 Lodgepole Pine Twig Samples

Exploratory data analysis (EDA) of the 21 lodgepole pine twig samples collected during the 2018 exploration program includes a summary table. This information is used to determine the composition of the data, to discover anomalies and to determine pathfinder relationships unique to the area in which the samples were collected. Due to the small number of samples collected (<30) no further statistical analyses were performed.

The summary table includes sample count, detection limits, quantiles, minimum (Min)-maximum (Max) values, standard deviation (SD), mean absolute deviation (MAD) and the coefficient of variation (CV) (Table 6). These summary statistics assist in determining the character of the data.

**Table 6 Proof 2018 Twig Sample Summary (below detection limit values were replaced by half the detection limit for each element). NA = not applicable, DL= detection limit, Min = minimum, Max = maximum, SD = standard deviation, MAD = mean absolute deviation and CV = coefficient of variation. Above detection limit values were replaced by the upper detection limit plus half the lower detection limit.**

Element	Units	Count	DL	% < and > DL	Min	25%	Median (50%)	Mean	95%	99%	Max	SD	MAD	CV
Ag	ppb	21	10	4.76%	5	10	10	14	20	20	20	5.28	0.00	0.39
Al	ppb	21	1000	0.00%	55000	140000	208000	214429	374000	425200	438000	104990	68000	0.49
As	ppb	21	10	0.00%	10	20	30	28	50	58	60	11.67	10.00	0.42
Au	ppb	21	0.2	0.00%	3.6	7.2	9.0	13.4	30.8	37.2	38.8	9.95	3.50	0.75
B	ppb	21	1000	0.00%	3000	7000	8000	9048	14000	15600	16000	3293.57	3000.00	0.36
Ba	ppb	21	10	0.00%	380	700	850	990	1750	1766	1770	418.75	290.00	0.42
Be	ppb	21	50	100%	25	25	25	25	25	25	25	0.00	0.00	0.00
Bi	ppb	21	0.5	28%	0.25	0.25	0.60	0.67	1.10	1.66	1.80	0.38	0.35	0.57
Ca	ppb	21	10000	0.00%	1190000	1490000	1630000	1710476	2130000	2226000	2250000	302563	220000	0.18
Cd	ppb	21	10	0.00%	20	30	50	60	140	156	160	38.08	20.00	0.63
Ce	ppb	21	1	0.00%	20	26	43	57	152	164	167	42.28	20.00	0.74
Co	ppb	21	2	0.00%	16	43	61	59	83	130	142	25.40	17.00	0.43
Cr	ppb	21	20	0.00%	120	170	190	207	340	348	350	60.84	40.00	0.29
Cs	ppb	21	2	0.00%	239	680	880	2227	4950	14830	17300	3718.26	278.00	1.67
Cu	ppb	21	10	0.00%	2410	3350	3530	3671	4820	4844	4850	584.92	180.00	0.16
Dy	ppb	21	0.5	0.00%	1.2	1.6	2.0	2.8	7.0	7.3	7.4	1.93	0.80	0.68
Er	ppb	21	1	38%	0.5	0.5	1.0	1.5	4.0	4.0	4.0	1.17	0.50	0.79
Eu	ppb	21	1	67%	0.5	0.5	0.5	0.9	3.0	3.0	3.0	0.78	0.00	0.87
Fe	ppm	21	1	0.00%	27	31	36	44	83	90	92	18.26	8.00	0.42
Ga	ppb	21	4	0.00%	4	5	7	9	17	20	21	4.56	2.00	0.52
Gd	ppb	21	4	62%	2	2	2	4	11	12	12	3.27	0.00	0.80
Ge	ppb	21	1	90%	0.5	0.5	0.5	0.5	1.0	1.0	1.0	0.15	0.00	0.27
Hf	ppb	21	3	90%	1.5	1.5	1.5	1.7	4.0	4.0	4.0	0.75	0.00	0.43
Hg	ppb	21	10	100%	5	5	5	5	5	5	5	0.00	0.00	0.00
Ho	ppb	21	0.4	52%	0.2	0.2	0.2	0.5	1.4	1.8	1.9	0.47	0.00	0.91
In	ppb	21	0.2	100%	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.00
K	ppb	21	10	0.00%	6040000	7200000	8250000	8012381	9520000	9592000	9610000	1014341	780000	0.13
La	ppb	21	3	0.00%	11	15	23	33	82	86	87	22.92	10.00	0.70
Li	ppb	21	10	14%	5	10	20	29	80	80	80	21.62	10.00	0.75
Lu	ppb	21	0.4	38%	0.2	0.2	0.5	0.8	3.4	3.5	3.5	0.94	0.30	1.23
Mg	ppb	21	1000	0.00%	741000	900000	958000	978667	1170000	1218000	1230000	127056	85000	0.13
Mn	ppb	21	100	0.00%	83800	214000	325000	315990	505000	562600	577000	124567	102000	0.39
Mo	ppb	21	10	0.00%	720	1090	1500	2267	5970	7722	8160	1887.02	480.00	0.83
Na	ppb	21	1000	0.00%	10000	11000	12000	12190	14000	16400	17000	1806.07	1000.00	0.15
Nb	ppb	21	2	38%	1.0	1.0	3.0	3.3	7.0	12.6	14.0	3.10	2.00	0.93
Nd	ppb	21	5	0.00%	9	11	16	25	71	74	75	19.67	6.00	0.79
Ni	ppb	21	10	0.00%	650	1070	1270	1350	2030	2302	2370	409.52	200.00	0.30
P	ppb	21	3000	0.00%	1490000	1760000	1810000	1826190	2220000	2260000	2270000	194768	70000	0.11
Pb	ppb	21	5	0.00%	79	126	169	280	420	1956	2340	478.01	43.00	1.71
Pd	ppb	21	0.1	0.00%	0.4	0.8	1.0	1.1	1.9	2.1	2.2	0.5	0.30	0.41
Pr	ppb	21	2	0.00%	2	3	4	7	19	19	19	5.11	1.00	0.77

**Proof 2018 Geochemical Survey**

Element	Units	Count	DL	% < and > DL	Min	25%	Median (50%)	Mean	95%	99%	Max	SD	MAD	CV
Pt	ppb	21	0.2	0.00%	0.3	0.4	0.6	0.9	2.4	2.7	2.8	0.77	0.20	0.85
Rb	ppb	21	20	0.00%	26400	31800	38400	39019	52900	55060	55600	8696.59	7000.00	0.22
Re	ppb	21	0.2	100%	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.00	0.00	0.00
Sb	ppb	21	5	0.00%	6	8	8	9	11	16	17	2.30	1.00	0.26
Se	ppb	21	10	0.00%	10	20	30	30	40	96	110	20.12	10.00	0.66
Sm	ppb	21	2	19%	1	2	3	5	16	16	16	4.43	2.00	0.93
Sn	ppb	21	30	100%	15	15	15	15	15	15	15	0.00	0.00	0.00
Sr	ppb	21	50	0.00%	1650	3620	4930	4949	8080	9608	9990	2048.59	1310.00	0.41
Ta	ppb	21	1	86%	0.5	0.5	0.5	0.6	1.0	1.8	2.0	0.35	0.00	0.57
Tb	ppb	21	2	100%	1	1	1	1	1	1	1	0.00	0.00	0.00
Te	ppb	21	5	95%	2.5	2.5	2.5	2.6	2.5	4.5	5.0	0.55	0.00	0.21
Th	ppb	21	1	0.00%	2	2	4	6	20	22	23	5.95	2.00	0.92
Ti	ppb	21	200	0.00%	500	700	1100	1490	2600	5000	5600	1171.71	500.00	0.79
Tl	ppb	21	0.5	57%	0.25	0.25	0.25	1.24	3.50	7.34	8.30	1.93	0.00	1.56
Tm	ppb	21	0.1	24%	0.05	0.10	0.20	0.21	0.50	0.58	0.60	0.15	0.10	0.71
U	ppb	21	0.5	0.00%	0.7	1.1	1.6	2.1	4.9	6.8	7.3	1.65	0.70	0.77
V	ppb	21	20	0.00%	110	120	140	158	220	276	290	46.36	20.00	0.29
W	ppb	21	5	95%	2.5	2.5	2.5	2.6	2.5	4.5	5.0	0.55	0.00	0.21
Y	ppb	21	4	0.00%	6	9	11	16	42	43	43	11.11	4.00	0.69
Yb	ppb	21	3	95%	1.5	1.5	1.5	1.6	1.5	3.5	4.0	0.55	0.00	0.34
Zn	ppb	21	100	0.00%	35900	44400	46700	47190	53400	60360	62100	5313.65	3300.00	0.11
Zr	ppb	21	20	4.76%	10	20	40	39	60	100	110	21.89	10.00	0.56
Ag	ppb	21	10	4.76%	5	10	10	14	20	20	20	5.28	0.00	0.39
Al	ppb	21	1000	0.00%	55000	140000	208000	214429	374000	425200	438000	104990	68000	0.49
As	ppb	21	10	0.00%	10	20	30	28	50	58	60	11.67	10.00	0.42
Au	ppb	21	0.2	0.00%	3.6	7.2	9.0	13.4	30.8	37.2	38.8	9.95	3.50	0.75
B	ppb	21	1000	0.00%	3000	7000	8000	9048	14000	15600	16000	3293.57	3000.00	0.36
Ba	ppb	21	10	0.00%	380	700	850	990	1750	1766	1770	418.75	290.00	0.42
Be	ppb	21	50	100%	25	25	25	25	25	25	25	0.00	0.00	0.00
Bi	ppb	21	0.5	29%	0.25	0.25	0.60	0.67	1.10	1.66	1.80	0.38	0.35	0.57
Ca	ppb	21	10000	0.00%	1190000	1490000	1630000	1710476	2130000	2226000	2250000	302563	220000	0.18

EDA indicates there is insufficient assay data for beryllium, europium, gadolinium, germanium, hafnium, mercury, holmium, indium, rhenium, tin, tantalum, terbium, tellurium, tungsten and ytterbium due to greater than 65 percent of the population below the detection limits (DL) of the assay method. The standard deviation (SD) and MAD values indicate that aluminium, arsenic, gold, boron, barium, calcium, cadmium, cerium, cobalt, chromium, caesium, copper, iron, potassium, magnesium, manganese, molybdenum, nickel, phosphorous, lead, rubidium, strontium, titanium, vanadium and zinc vary greatly from the mean. The CV values show that the variance is high for caesium, lutetium, lead and thallium. The large CV values (high variance) indicate possible links with alteration, mineralization or changes in lithology.

The highlights of the twig samples includes the discovery of the Goldtree Zone, a five sample, 935 metre gold-in-twig anomaly with values ranging from 21 to 38.8 ppb gold. Table 7 shows the sample names with gold, silver, caesium, vanadium, arsenic,

antimony, thallium and molybdenum concentrations. The information for all the samples is located in Appendix B: Sample Descriptions.

**Table 7 Proof Twig Sample Highlights (concentrations are in ppb)**

Sample ID	Zone	Au	Ag	Cs	V	As	Sb	Tl	Mo
PF18TR01	Goldtree	29.6	20	4930	210	50	17	1.4	1850
PF18TR02	Goldtree	38.8	20	689	200	30	11	< 0.5	980
PF18TR03	Goldtree	26.2	20	969	290	40	8	0.6	1090
PF18TR04	Goldtree	21	10	2540	160	40	9	8.3	1380
PF18TR05	Goldtree	30.8	20	499	200	30	11	< 0.5	5970

### 5.3 Property Geology Mapping

Preliminary mapping in the Fall of 2018 revealed that the Proof Project is primarily underlain by maroon volcanic rock with greenstone to the northwest, meta-volcanic rock to the north, white (talc) schist in the central-south and pale green-grey volcanic rock to the east (Figure 18). The Late Cretaceous Holy Cross Pluton, consisting of feldspar porphyritic rocks, is exposed to the southeast with potassic and sericite alteration extending into the southeast corner of the project area. Gossan, breccia and a shear zone were found within the east and northeast portions of the project area.

The Lower to Middle Jurassic Hazleton Group rocks (PF18PT01) consist of undivided, maroon, maroon-grey, and green, heterogeneous, fine- to coarse-grained, feldspar-phyric basaltic, andesitic and rhyolitic pyroclastic and flow rocks; heterolithic and monolithic volcaniclastic and epiclastic volcanic rocks, and tuffaceous rocks (after Cui, et al., 2018).

The greenstone (PF18RK12) has a dark green and rusty brick red weathered surface with small cm-sized areas of dark grey oxide (magnetite), chlorite and patches of dark black non-magnetic powdery mineral (Mn). Overall the greenstone is very magnetic and lacks distinct cleavage.

Similar greenstone units mapped in the region include the Palaeozoic to Mesozoic, Early Permian to Early Triassic, Sitlika Assemblage (PJSgs) volcanic unit, metamorphic rocks, greenstone, greenschist metamorphic rocks located within the Intermontane Belt, Cache Creek Terrane to the northwest and the Palaeozoic to Mesozoic, Permian to Triassic, Cache Creek Complex (PTrCum), ultramafic rocks, peridotite, serpentinite, silica-carbonate-altered ultramafite. The PJSgs is a volcanic unit consisting of medium to dark green chlorite schist, fragmental chlorite schist and pillowed metabasalt; chlorite-sericite schist containing felsic metavolcanic fragments; lesser amounts of quartz-sericite schist, metadacite, metarhyolite and quartz. The PTrCum consists of ultramafic rocks, peridotite, serpentinite, silica-carbonate-altered ultramafite; minor greenstone, gabbro, conglomerate and greywacke, Intermontane Belt, Cache Creek Terrane.

The meta-volcanic unit (PF18RK09-10) has a dark green and orange weathered surface with a grey to pale maroon fresh surface. The phenocrysts consist of 20%, subangular white feldspar and a green mineral (phyllosilicate to chalcedony?) approximate 2 mm in size with blotches of dark grey oxide (magnetite) with rusty fragments within veins sub mm to 3 mm in width. Chlorite and biotite are also present

in rare, 2 mm patches (<1 %). The quartz veins are wavy with ankerite edges (yellow) infills and consist of crystalline quartz as well as breccia with rusted fragments. There is pervasive chlorite alteration with green chalcedony pods approximately 1 cm length and 1 mm width. This meta-volcanic unit is very magnetic.

The white (talc) schist (PF18RK11) consists of large cm-sized powdery pockets of talc and pockets of limonite (3 cm) with a hard black mineral (tourmaline?) as well as mm-width veins of limonite within a harder white matrix. The white (talc) schist is primarily non-magnetic and contains little to no carbonates.

The Late Cretaceous Kasalka Group rocks (PF18RK01-08), in this area, consist of grey-green or purple, heterolithic andesite lapilli tuff and tuff breccia; some pale-green to green, andesite to dacite, aphanitic to (biotite-, hornblende- and/or chloritized pyroxene-) plagioclase-phyric crystal-rich flows, tuffs, and volcanic rocks (after Cui et al., 2018).

The gossanous area (PF19RK04 to 08) likely consists of the Kasalka Group rocks with a pale cream and rusty red weathered surface and a dark grey fresh surface. Weathered out pyrite in the form of limonite is pervasive and hematite veins, as well as stringers, are common. One carbonate vein sample was found in this area, but the remaining samples showed little to no carbonates. Epidote, hematite, as well as Mn-staining were disseminated and in blotches which ranged in size from 2 millimetres to 8 centimetres.

The breccia zone was a small 1 metre by 20 centimetres exposure at the side of a road cut. The breccia (PF18RK02) had a maroon weathered surface with purple-red fresh surface and was located underneath a 1 metre thick layer of blue-grey clay. The fragments were 30% of the rock sample, were likely from the Kasalka Group rocks and had sharp edges. Milky quartz veins, grading to clear at the edges, were rare and approximately 1 mm in width. Manganese-staining was evident in blotches covering ~20% of the sample.

The shear zone (PF18RK03) was found at a large road side cut (10 metres by 20 metres) and consisted of a brittle-ductile fault gouge with quartz veining as well as a possible green andesitic micro-dyke (1-2 cm in width). The weathered surface was slightly rusty with a white fresh surface (quartz). The most notable features were small 1 to 2 millimetres translucent crystals that may be iron-quartz (due to up to 15% Fe) or galkhaite: a dark orange-red complex sulfosalt consisting of  $(\text{Cs},\text{Ti})(\text{Hg},\text{Cu},\text{Zn})_6(\text{As},\text{Sb})_4\text{S}_{12}$  due to large Cs (50.5 ppm), Ti (1.62 ppm), As (503 ppm), and Sb (>500 ppm) contents.

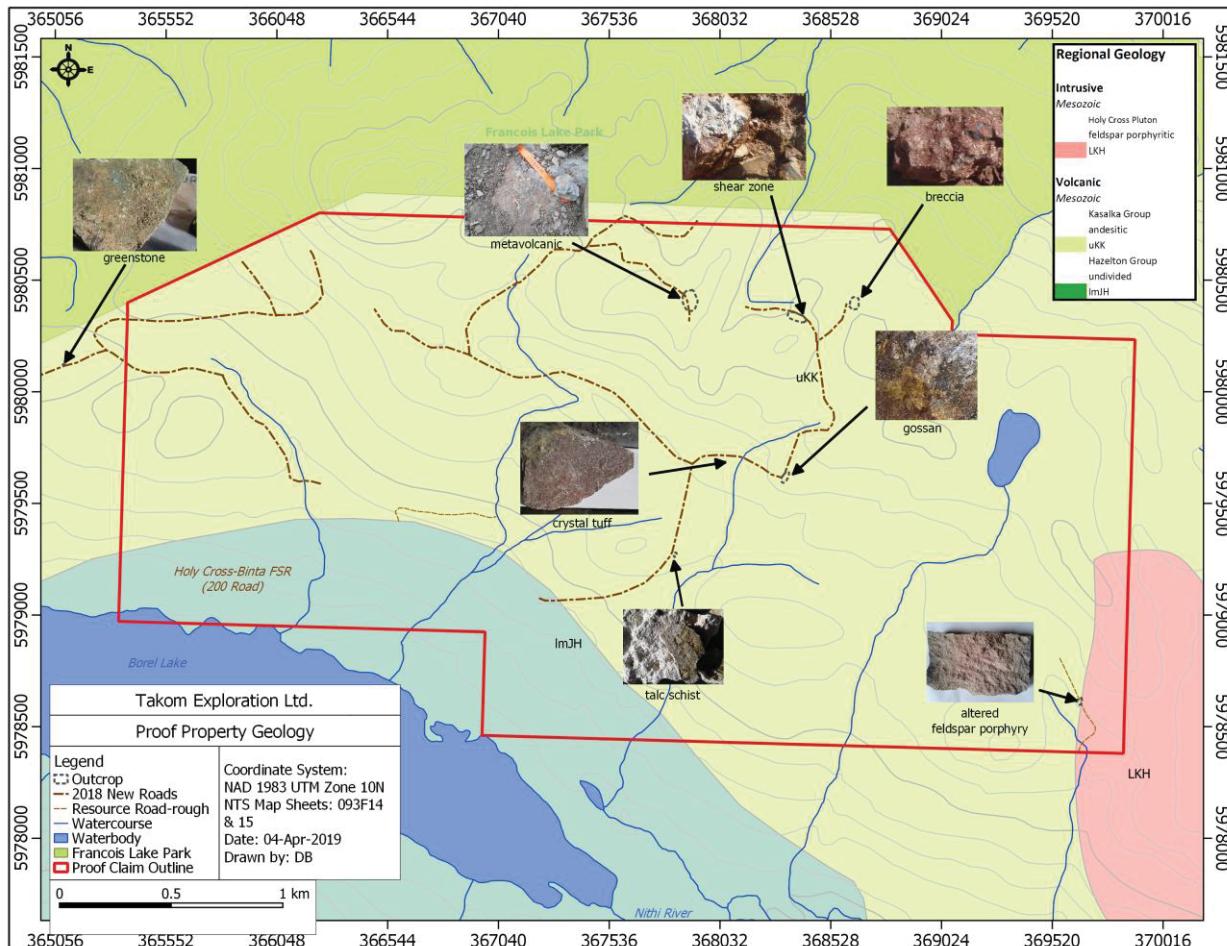


Figure 18 Preliminary mapping within the Proof Project area.

#### 5.4 Summary of Exploratory Work

A reconnaissance prospecting, general mapping, chip, rock, twig and silt sampling program was carried out on the Proof Property between July 14<sup>th</sup> and 16<sup>th</sup> as well as on October 6<sup>th</sup>. A total of 37 samples were taken over this period of time. The Property consists of three contiguous mineral tenures covering approximately 905.0119 hectares of land. The Property is located within an area of gentle relief along the northern shore of Borel Lake in central BC and is approximately 25 kilometres southwest of Fraser Lake, BC. The property can be accessed via a resource road network from Fraser Lake, BC.

The Proof Property lies within the Intermontane Tectonic Belt. The main lithological units recognized within Proof Property consist of Middle Jurassic Hazelton Group undivided volcanic rocks and Late Cretaceous Kasalka Group andesitic volcanic rocks. The Late Cretaceous Holy Cross Pluton consisting of feldspar porphyritic rocks is exposed to the southeast.

Mineralization and alteration within the Project may be consistent with an orogenic gold deposit, although a lot more information should be collected prior to determining the deposit model. The geological setting shows volcanic rocks located between a feldspar porphyritic pluton to the southeast and a greenstone to the northwest. The area is

situated within a localized high of a 30 kilometre caesium anomaly with supporting silver, antimony, arsenic, vanadium and thallium values found in rock and silt samples. Promising gold values were located via a survey of lodgepole pine twig samples collected in an east-west direction approximately at 200 metres intervals along two lines approximately 400 metres apart. A linear series of five twig samples, ranging from 21 to 38.8 ppb Au, marked the newly discovered Goldtree Zone. General rules concerning gold in vegetation samples include ensuring they delineate a zone, rather than single point anomalies, the zone is substantiated by pathfinder elements such as arsenic and antimony (etc.), and “repeatable Au anomalies (several to tens of ppb) usually indicate Au is present in the ground” (Dunn, 2007- page 254).

One prospector and one forestry specialist/field assistant traversed the Property taking samples, geological observations and photographs. Samples were collected within predefined areas derived from satellite imagery and based on topography as well as the regional geochemistry. Rock grab, chip, twig, and silt sampling revealed a number of areas anomalous for gold, silver, antimony, arsenic, vanadium and thallium. The element of interest, gold, was found within the newly identified Goldtree Zone.

## 6. CONCLUSIONS AND RECOMMENDATIONS

The Proof Property is located within the Nechako Plateau physiographic region of the Interior Plateau approximately 25 kilometres southwest of Fraser Lake, BC. The Fraser Lake area has been explored for molybdenum, copper, gold, silver, lead, zinc, jade and limestone while recent activities are focused on precious metal and porphyry-style copper-gold mineralization. Two projects of note are located within approximately 5 kilometres of the Proof Property: Endako low F-type molybdenum Mine and the fault-hosted Cabin Lake gold-silver-zinc-lead low-sulfidation epithermal-style project.

Historical work within the current Proof Property includes regional airborne aeromagnetic and electromagnetic geophysical surveys. The regional geophysical surveys are coarsely detailed for the size of the project area, but they indicate a possible NW-SE trending structure or lineament, as well as a conductive anomaly, within the Goldtree Zone and a resistivity anomaly to the northwest. Geochemical surveying in 2018 announced the Goldtree Zone and property-scale mapping showed the presence of greenstone to the northwest and talc (white) schist to the south. Both types of rocks have not been previously found in this area.

In general, the Proof Project appears prospective for orogenic gold mineralization although this style of mineralization has yet to be found within this area of BC. The closest known orogenic deposits are located to the south at the Cariboo Gold District, north at the Snowbird Mine near Fort St. James and far to the north within the Cassiar Gold District. More work on mapping the structure, mineralization and alteration found in the area is required to build a deposit model in which to base future exploration programs.

Based on the 2018 field observations and examination of the results a soil sampling, detailed mapping, prospecting program with a geophysical survey and trenching program as well as the development of a Quality Assurance/Quality Control (QA/QC) program for any sampling program with greater than 300 of one type of sample taken is recommended.

The future work recommended is:

- A rock sampling and mapping survey of the ridge north of the Goldtree Zone that was exposed after the Island Lake Wildfire, to look for mineralization and potential shear zones.
- A geochemical sampling program designed to explore the entire Property, with priority focused on silt, rock and/or soil samples to expand the Goldtree Zone, as well as a biogeochemical sampling program of lodgepole pine twigs (preferable collected in July) extending the 2018 twig survey further south where the Island Lake fire did not destroy the trees and where thick sediments and vegetation may obscure outcrop and impede till/soil sampling methods and interpretations.
- Re-visit/re-sample the highlighted rock samples to map in detail, send in for thin section descriptions and provide geochemical information on host, altered and mineralized zones.
- Soil sample the Goldtree Zone in 20 to 50 metres grid survey since the Island Mountain fire destroyed the trees within this area and the pit sample indicated that the till cover may be less than 1 metre thick.
- Ground induced-polarization and magnetic geophysical surveys over the Goldtree Zones within Prosperity Trend would also be warranted to map potential shear zones and structures.
- After identifying potential structures with the geophysical surveys, plan a trenching and/or pit sampling program to investigate the anomalies.

## 11. STATEMENT OF COSTS

Two silt and two rock samples were collected prior to staking. One rock sample was collected outside the current claim boundary. See Figure 19 for work event locations.

**Proof 2018 July 13, 14, 15, 16; 2 silt and 2 rock were collected prior to staking therefore their assay costs are not included**

Personnel (Name)* / Position	Field Days	Days	Rate	Subtotal*	Totals
Diana Benz; Project Manager	July 14, 15 and 16	4.0	\$650.00	\$2,600.00	
Dave Zajac; Forestry/Field Assist.	July 14, 15 and 16	4.0	\$300.00	\$1,200.00	
				\$3,800.00	<b>\$3,800.00</b>
Office Studies	List Personnel	Unit/Hours	Rate	Subtotal*	
Pre-field Mapping	Diana Benz	3.0	\$81.25	\$243.75	
Pre-field Research/Program Plan	Diana Benz	10.0	\$81.25	\$812.50	
				\$1,056.25	<b>\$1,056.25</b>
Geochemical Surveying	Lab	No.	Rate	Subtotal	

**Proof 2018 Geochemical Survey**

Silt	<i>Activation Laboratories</i>	2	\$33.71	\$67.41
Twig	<i>Activation Laboratories</i>	21	\$42.59	\$894.29
Rock	<i>Activation Laboratories</i>	6	\$46.46	\$278.77
				\$1,240.47
<b>Transportation</b>		<b>Days/Unit/Hours/km</b>	<b>Rate</b>	<b>Subtotal</b>
Diana Benz; Project Manager	July 13	1.0	\$650.00	\$650.00
Dave Zajac; Forestry/Field	July 13	1.0	\$300.00	\$300.00
Freight	Sample shipment to Kamloops	1.0		\$41.40
Truck km use	Truck and Jeep	1033.9	\$0.53	\$547.97
Fuel	Fuel costs, including generator	1		\$286.22
				\$1,825.59
<b>Accommodation &amp; Food</b>	<b>Rates per day</b>	<b>Days</b>	<b>Rate</b>	<b>Subtotal</b>
Lodging	Camping-travel trailer	4	\$25.00	\$100.00
Meals	Groceries & meals	4		\$217.87
				\$317.87
<b>Equipment Rentals</b>		<b>Number</b>	<b>Rate</b>	<b>Subtotal</b>
Field Sampling Supplies	sample bags, zip ties, flagging, office supplies, etc.	29	\$0.20	\$5.80
				\$5.80
<b>TOTAL Expenditures</b>				<b>\$8,245.98</b>

**Proof 2018 Oct 06**

<b>Personnel (Name)* / Position</b>	<b>Field Days</b>	<b>Days</b>	<b>Rate</b>	<b>Subtotal*</b>	<b>Totals</b>
Diana Benz; Project Manager	Oct 06	1.0	\$650.00	\$650.00	
Dave Zajac; Forestry/Field Assist.	Oct 06	1.0	\$300.00	\$300.00	
				\$950.00	<b>\$950.00</b>
<b>Office Studies</b>	<b>List Personnel</b>	<b>Unit/Hours</b>	<b>Rate</b>	<b>Subtotal*</b>	
Pre-field Mapping	Diana Benz	0.5	\$81.25	\$40.63	
Pre-field Research/Program Plan	Diana Benz	1.0	\$81.25	\$81.25	
Database Compilation	Diana Benz	0.5	\$81.25	\$40.63	
Geological Report incl. Maps	Diana Benz	70.0	\$81.25	\$5,687.50	
				\$5,850.00	<b>\$5,850.00</b>
<b>Geochemical Surveying</b>	<b>Lab</b>	<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Silt	<i>Activation Laboratories</i>	0	\$33.71	\$0.00	
Twig	<i>Activation Laboratories</i>	0	\$42.59	\$0.00	

**Proof 2018 Geochemical Survey**

Rock	<i>Activation Laboratories</i>	4	\$46.46	\$185.85	
				\$185.85	<b>\$185.85</b>
<b>Transportation</b>		<b>Days/Unit/Hours/km</b>	<b>Rate</b>	<b>Subtotal</b>	
Freight	Sample shipment to Kamloops	1.0		\$20.54	
Truck km use	Jeep	412.6	\$0.53	\$218.68	
Fuel	Fuel costs	1		\$93.59	
				\$332.81	<b>\$332.81</b>
<b>Accommodation &amp; Food</b>	<b>Rates per day</b>	<b>Days</b>	<b>Rate</b>	<b>Subtotal</b>	
Lodging	Camping	0		\$0.00	
Meals	Meals & snacks	1		\$114.80	
				\$114.80	<b>\$114.80</b>
<b>Equipment Rentals</b>		<b>Number</b>	<b>Rate</b>	<b>Subtotal</b>	
Field Sampling Supplies	sample bags, zip ties, flagging, office supplies, etc.	4	\$0.20	\$0.80	
				\$0.80	<b>\$0.80</b>
<b>TOTAL Expenditures</b>					<b>\$7,434.26</b>
<b>GRAND TOTAL Expenditures</b>					<b>\$15,680.23</b>

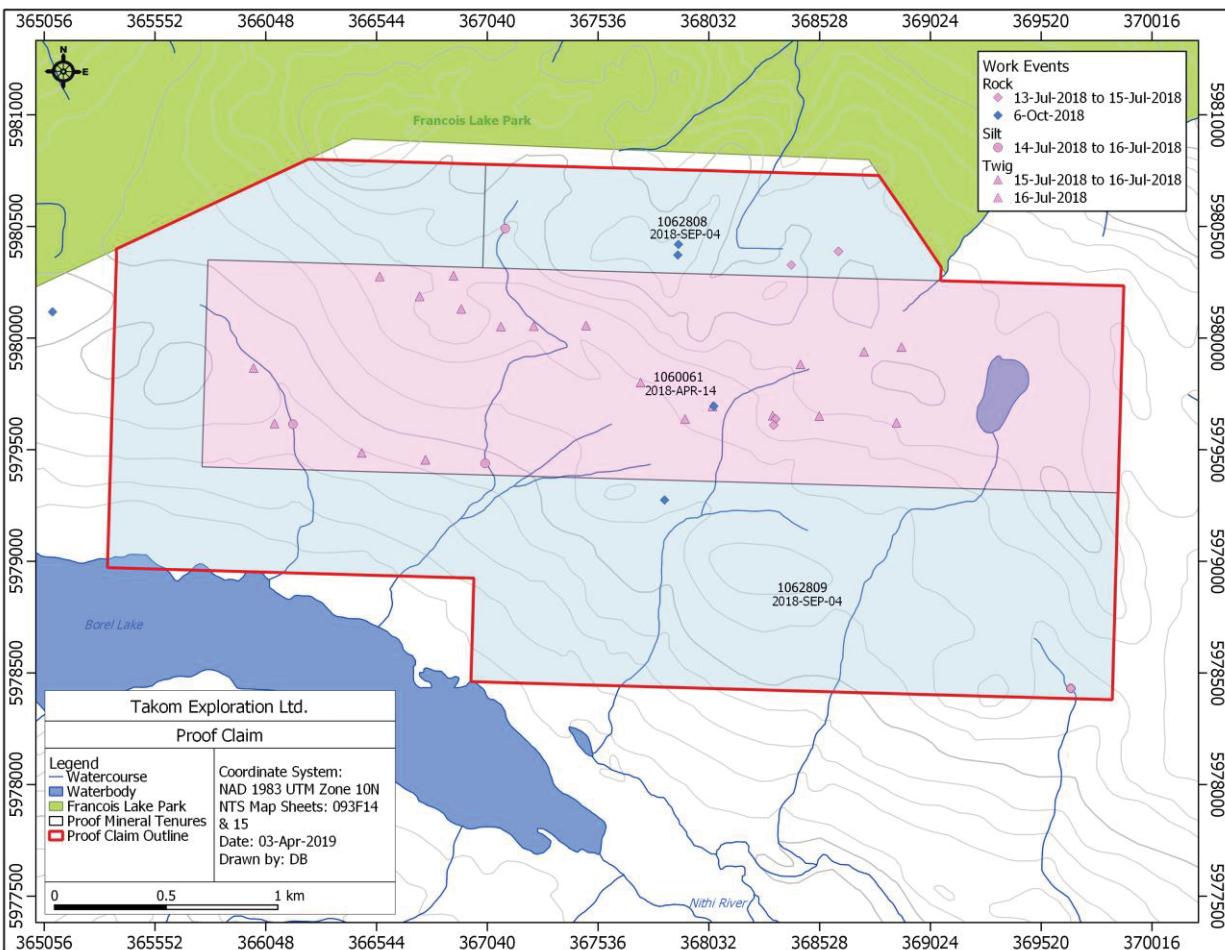


Figure 19 Proof Project Work Events Jul 14 to 16 and Oct 06 showing claim issue dates.

## 12. REFERENCES

- Baker, D. C. (2002). Mining in Northern British Columbia. *Western Geography* 12, pp. 1–20.
- Barber, R. (2010). Barrick Hemlo Reserves and Resources Summary End 2010. Barrick Gold Corporation. December 31, 2010.
- Benz, Diana M. (2017). Multivariate Statistical Analysis of Lodgepole Pine Outer Bark Samples for Metallic Mineral Exploration within the Southern Nechako Plateau. Doctor of Philosophy Thesis. The University of Northern British Columbia.
- Clarke, G. Britton, J., Jago, P., Katay, F. and Northcote, B. (2018). Exploration and Mining in British Columbia, 2016: A summary. In: Provincial Overview of Exploration and Mining in British Columbia, 2016. British Columbia Ministry of Energy and Mines, British Columbia Geological Survey, Information Circular 2018-1, pp. 1-29.
- Coupé, R., Stewart, A.C. and Wikeem, B.M. (1991). Chapter 15 Engelmann Spruce – Subalpine Fir Zone. In: D. Meidinger & J. Pojar (Eds.). Special Report Series #6 Ecosystems of British Columbia (pp. 223-236). Victoria, BC: Ministry of Forests Research Branch.
- Cox, J.J., Valliant, W.W. and Altman, K.A. (2017). Technical Report on the Hemlo Mine, Marathon, Ontario, Canada. Barrick Gold Corporation. NI 43-101 Report.

- Dawson, K.M. (1972). Geology of Endako Mine, British Columbia. Doctor of Philosophy Thesis. The University of British Columbia.
- deGroot, L. (2012). GOLDEN BEAR. Detail MINFILE Report 104K 079. BC Geological Survey, Ministry of Energy, Mines and Natural Gas Responsible for Housing.
- Devine, F.A.M., M.A. Pond, D.R. Heberlein, P. Kowalczyk, and W. Kilby (2015). Geo-exploration atlas of the Endako porphyry molybdenum district. Report 2015-08. Geoscience BC.
- Dunn, C. E. (2007). Biogeochemistry in Mineral Exploration, Handbook of Exploration and Environmental Geochemistry. Vol. 9. p. 462. Amsterdam: Elsevier.
- Goldfarb, R. J. and D. I. Groves (2015). "Orogenic gold: Common or evolving fluid and metal sources through time". In: *Lithos* 233, pp. 2–26.
- Groves, D.I., Goldfarb, R.J., Gebre-Mariam, M., Hagemann, S.G. and Rober, F. (1998). Orogenic gold deposits: A proposed classification in the context of the crustal distribution and relationship to other gold deposit types. *Ore Geology Reviews*, 13, p. 7-27.
- Harris, D.C. (1989). The Mineralogy and Geochemistry of the Hemlo Gold Deposit, Ontario. *Economic Geology Report* 38. Geological Survey of Canada.
- Harper, Q.P. and Leslie, C.D. (2013). Assessment Report Summary of Field Mapping and Sampling Exercises on the Cabin Lake Au-Ag-Pb-Zn Prospect. ARIS Report Number 33741. RebelEx Resources Corporation.
- Hart, C.J.R. and R. J. Goldfarb (2005). "Distinguishing intrusion-related from orogenic gold systems". In: New Zealand Minerals Conference Proceedings, pp. 125–133.
- Holland, S.S. (1976). Landforms of British Columbia, a physiographic outline. British Columbia Department of Mines and Petroleum Resources. Bulletin 48, 138 p.
- Keith, T.E. (1983). Selective concentration of cesium in analcime during hydrothermal alteration, Yellowstone National Park, Wyoming. *Geochimica et Cosmochimica Acta*, 47(4), 795-804.
- Levson, V.M. and T.R. Giles (1997). Quaternary geology and till geochemistry in the Nechako and Fraser Plateau, Central British Columbia (NTS 93C/1, 8, 9, 10; F/2, 3, 7; L/16; M/1). Paper 1997-2. Ministry of Employment and Investment.
- MacIntyre, D.G. and Tercier, P. (1989). Jurassic Stratigraphic Relationships in the Babine and Telkwa Ranges, in Geological Fieldwork 1988, BC Ministry of Energy, Mines and Petroleum Resources Paper 1989-1, pp. 195-208.
- Marek, J.M. (2011). Technical Report Endako Molybdenum Mine. Thompson Creek Metals Company Inc.
- Meidinger, D., Pojar, J. and Harper, W.L. (1991). Chapter 14 Sub-Boreal Spruce Zone. In: D. Meidinger & J. Pojar (Eds.). Special Report Series #6 Ecosystems of British Columbia (pp. 209-221). Victoria, BC: Ministry of Forests Research Branch.
- Meredith-Jones, S. (2015). ENDAKO. Detail MINFILE Report 093K 006. BC Geological Survey, Ministry of Energy, Mines and Natural Gas Responsible for Housing.
- Muir, T.L. (2002). The Hemlo gold deposit, Ontario, Canada: principal deposit characteristics and constraints on mineralization. *Ore Geology Reviews*, 21, pp. 1-66.
- Patterson, G.C. (1987). Regional Field Guide. In: D. C. Harris. Field Trip Guidebook Geology of the Hemlo Deposit Volume 33, Part 4 (pp. 2-24). Wawa, ON: Institute on Lake Superior Geology Thirty-Third Annual Meeting.

- Robb, L.J. (2005). *Ore Forming Processes*. Malden, MA: Blackwell Science.
- Roth, T. (2002). "Physical and chemical constraints on mineralization in the Eskay Creek deposit, northwestern British Columbia: evidence from petrography, mineral chemistry, and sulfur isotopes". PhD thesis. University of British Columbia. URL: <https://open.library.ubc.ca/cIRcle/collections/ubctheses/831/items/1.0052469>.
- Whalen, J.B., R.G. Anderson, L.C. Struik, and M.E. Villeneuve (2001). Geochemistry and Nd isotopes of the Francois Lake plutonic suite, Endako batholith: host and progenitor to the Endako molybdenum camp, central British Columbia. Canadian Journal of Earth Sciences 38, pp. 603–618.
- Wojdak, P. (1998). Volcanogenic Massive Sulphide Deposits in the Hazleton Group, Babine Range, B.C., Exploration and Mining in British Columbia 1998, Ministry of Energy, Mines and Petroleum Resources, pp. C-1-C-13.

### 13. STATEMENT OF QUALIFICATIONS

I, Diana M. Benz, certify that:

1. I am the President of Takom Exploration Ltd., a mineral exploration consulting company located at 12925 Chief Lake Road, Prince George, BC.
2. I am the author of the assessment report titled Geochemical Survey on the Proof Property.
3. I graduated from the University of British Columbia in 1997 with a B.Sc. in Biology, a M.Sc. in Earth Sciences from University of Windsor in 2006 and a Ph.D. in Natural Resources and Environmental Studies from the University of Northern British Columbia in 2017.
4. I have worked in the diamonds and base/precious metals exploration industry since 1996 (~23 years) on projects located across Canada (BC, YT, NWT, ON) and in Greenland, as well as, remotely through a BC-based office on projects located in the South America, Africa, Eurasia, the Middle East and Nevada, USA.

Diana  
Benz

  
Digitally signed by Diana Benz  
DN: cn=Diana Benz, o=Takom  
Exploration Ltd.,  
email=takomexploration@live.ca,  
c=CA  
Date: 2019.04.04 10:17:44 -07'00'

---

Diana M. Benz, Ph.D..  
Takom Exploration Ltd.

**APPENDIX A**  
**Sample Descriptions**

Proof Project 2018 Rock Samples

Sample	Property	Date	Sampler	Easting	Northing	Elevation	Zone	Datum	Accuracy_m	Type
PF18RK01	Proof	14-Jul-2018	DB	368612.53	5980388.31	1220.98	10N	NAD 83	0	outcrop
PF18RK02	Proof	14-Jul-2018	DB	368612.53	5980388.31	1220.98	10N	NAD 83	0	chip
PF18RK03	Proof	14-Jul-2018	DB	368401.55	5980327.48	1210.60	10N	NAD 83	0	outcrop
PF18RK04	Proof	15-Jul-2018	DB	368330.86	5979637.8	1157.36	10N	NAD 83	0	chip
PF18RK05	Proof	15-Jul-2018	DB	368330.86	5979637.8	1157.36	10N	NAD 83	0	chip
PF18RK06	Proof	15-Jul-2018	DB	368330.86	5979637.8	1157.36	10N	NAD 83	0	chip
PF18RK07	Proof	15-Jul-2018	DB	368322.59	5979609.98	1162.10	10N	NAD 83	0	chip
PF18RK08	Proof	15-Jul-2018	DB	368322.59	5979609.98	1162.10	10N	NAD 83	0	chip
PF18PT01	Proof	6-Oct-2018	DB	368054.45	5979695.00	1135.88	10N	NAD 83	1	pit
PF18RK09	Proof	6-Oct-2018	DB	367896.09	5980419.57	1231.09	10N	NAD 83	1	chip
PF18RK10	Proof	6-Oct-2018	DB	367893.03	5980372.01	1235.13	10N	NAD 83	1	chip
PF18RK11	Proof	6-Oct-2018	DB	367833.72	5979274.44	1092.87	10N	NAD 83	1	chip
PF18RK12	Outside-West	6-Oct-2018	DB	365093.27	5980117.33	1073.13	10N	NAD 83	1	chip
feldspar pophyry	Proof	13-Jul-2018	DB	369652.85	5978430.39	1101.29	10N	NAD 83	1	outcrop

Proof Project 2018 Rock Samples

Sample	OutcropSize_ChipLength_FloatEdges_m
PF18RK01	10
PF18RK02	0.5
PF18RK03	15
PF18RK04	0.3
PF18RK05	0.3
PF18RK06	0.3
PF18RK07	0.3
PF18RK08	0.3
PF18PT01	0.3
PF18RK09	0.2
PF18RK10	0.4
PF18RK11	0.5
PF18RK12	0.2
feldspar pophyry	15

Proof Project 2018 Rock Samples

Sample	Setting	Weathered	Fresh
PF18RK01	from side cut of new road in the rubble	maroon	purple-red
PF18RK02	from side cut of new road in the rubble, blue-grey clay above, 1 m deep	maroon	purple-red
PF18RK03	in new road cut, fault gouge with quartz vein	slightly rusty	white
PF18RK04	in road cut trench	pale cream & rusty	very broken
PF18RK05	in rock trench working down elevation, 4 m from 04	pale cream & rusty	very broken
PF18RK06	in rock trench working down elevation, fault gouge rusty selvages	pale cream & rusty	very broken
PF18RK07	in rock trench working down elevation, lowest elevation in trench, carbonate vein	pale cream & rusty	very broken
PF18RK08	in rock trench working down elevation, 1 m up from carbonate veins	rusty red south side	very broken
PF18PT01	in dug pit ~5 m northeast of PT18TR02 and 75 cm deep	maroon	dark maroon red
PF18RK09	from side of new road	dark green and orange	grey to pale maroon
PF18RK10	from side of new road (same as PF18RK09, except more green)	dark green and orange	grey to pale maroon
PF18RK11	from road, scraped up	white	white
PF18RK12	from side of new road corresponds with greenish soil mapped further east	dark green and rusty brick red	
feldspar pophyry	sidecut of old road, approximate location	pale pink and white	pinky-white

Proof Project 2018 Rock Samples

Sample	Grain_Pheno	GP_Size_mm	GP-Colour	GP-Edges	GP-pct	Matrix	Matrix_Color
PF18RK01	feldspar		2 white-cream	sharp	20	aphanitic	red-hematitic
PF18RK02	feldspar		2 white-cream	sharp	30	aphanitic	red-hematitic
PF18RK03							
PF18RK04	weathered out pyrite		2 yellow	subangular	30	aphanitic	dark grey
PF18RK05	weathered out pyrite		2 yellow	subangular	30	aphanitic	dark grey
PF18RK06	weathered out pyrite		2 yellow	subangular	30	aphanitic	red-hematitic
PF18RK07	weathered out pyrite		2 yellow	subangular	30	aphanitic	dark grey
PF18RK08	weathered out pyrite		2 yellow	subangular	30	aphanitic	dark grey
PF18PT01	feldspar		2 pinkish	sharp	20	aphanitic	red-hematitic
PF18RK09	feldspar and green mineral (phyllosilicate to chalcedony)		2 white-green	subangular	20	aphanitic	grey to pale maroon
PF18RK10	feldspar and green mineral (phyllosilicate to chalcedony)		2 white-green	subangular	20	aphanitic	grey to pale maroon
PF18RK11	talc pockets and very altered/metamorphosed rock	sub mm	white				white
PF18RK12	chlorite	sub mm	green to white to black	rounded	90	aphanitic	green
feldspar pophyry	feldspar	2-3 mm	white	fuzzy	20	aphanitic	white

Proof Project 2018 Rock Samples

Sample	Sulfides	Sf_pct	Vein_Size_mm
PF18RK01	none	0	200
PF18RK02	none	0	1
PF18RK03	none	0	
PF18RK04	none	0	none
PF18RK05	none	0	none
PF18RK06	none	0	none
PF18RK07	none	0	2
PF18RK08	none	0	none
PF18PT01	rusty rind with dark grey-black amorphous blotches towards inner part of rind	0	sub mm
PF18RK09	blotches of dark grey oxide-magnetite with rusty fragments within veins 2-3 mm	0	sub mm to 3 mm
PF18RK10	blotches of dark grey oxide-magnetite with rusty fragments within veins 2-3 mm	0	sub mm to 3 mm
PF18RK11	pockets of limonite 3 cm and veins/lines of limonite 1 mm	0	1
PF18RK12	blotches of dark grey oxide-magnetite	0	none
feldspar pophyry	none	0	none

## Proof Project 2018 Rock Samples

Sample	Vein_Minerals	Alteration	Alt_Intensity	Magnetic	Carbonates
PF18RK01	quartz, yellowish	Mn-staining	blotches, 20%	none	no fizz
PF18RK02	quartz milky grading to clear at edges	Mn-staining	blotches, 20%	none	no fizz
PF18RK03	quartz, orange in patches 1.5 cm	Mn-staining	blotches, 20%	none	no fizz
PF18RK04	none	sericite?	pervasive	none	no fizz
PF18RK05	none	limonite	disseminated	none	no fizz
PF18RK06	none	limonite, epidote, Mn	disseminated, 2 mm, blotch 8 cm	none	no fizz
PF18RK07	carbonate	hematite	veins and stringers	none	lots
PF18RK08	none	epidote, garnet	disseminated	none	no fizz
PF18PT01	quartz	magnetite blotches	blotches, 20%	none	no fizz
PF18RK09	blotches of dark grey oxide-magnetite with rusty fragments within veins 2-3 mm	magnetite blotches, chlorite, biotite (2 mm-patchy <1 %)	pervasive chlorite?, green chalcedony pods 1 cm length and 1 mm width	very	minor fizz
PF18RK10	wavy quartz with ankerite edges (yellow) infills with crystalline quartz as well as breccia with rusted fragments	magnetite blotches, chlorite, biotite (2 mm-patchy <1 %)	pervasive chlorite?, green chalcedony pods 1 cm length and 1 mm width	very	minor fizz
PF18RK11	limonite with black hard mineral (tourmaline?)	large 2 cm crystals pale yellow and hollowed around them 2 mm		none	no fizz
PF18RK12	none	magnetite blotches, chlorite, dark black non-magnetic powdery mineral patch (Mn?)		very	minor fizz
feldspar pophyry	none	potassic and sericitic	pervasive, 80%	none	no fizz

Proof Project 2018 Rock Samples

Sample	Structure	Rock	Note	Lab	Certificate	Cert_Date
PF18RK01		crystal tuff		Activation Labs	A18-09471	2018-Aug-27
PF18RK02		crystal tuff-breccia		Activation Labs	A18-09471	2018-Aug-27
PF18RK03		crystal tuff		Activation Labs	A18-09471	2018-Aug-27
PF18RK04		volcanic		Activation Labs	A18-09471	2018-Aug-27
PF18RK05		volcanic	rename PK18RK05	Activation Labs	A18-09471	2018-Aug-27
PF18RK06	folded	volcanic		Activation Labs	A18-09471	2018-Aug-27
PF18RK07		volcanic		Activation Labs	A18-09471	2018-Aug-27
PF18RK08		volcanic		Activation Labs	A18-09471	2018-Aug-27
PF18PT01		crystal tuff		Activation Labs	A18-15826	2018-Dec-17
PF18RK09	folded veins, fracture 148 with near vertical dip	crystal tuff-metavolcanic		Activation Labs	A18-15826	2018-Dec-17
PF18RK10	folded veins	crystal tuff-metavolcanic		Activation Labs	A18-15826	2018-Dec-17
PF18RK11	foliation	talc (talc schist/white schist)		Activation Labs	A18-15826	2018-Dec-17
PF18RK12		greenstone		Activation Labs	A18-15826	2018-Dec-17
feldspar porphyry		altered feldspar porphyry	not sent to lab, edge of Late Cretaceous Holy Cross Pluton			

## Proof Project 2018 Rock Samples

Sample	Method	Ti_pct	S_pct	P_pct	Li_ppm	Be_ppm	B_ppm	Na_pct	Mg_pct
PF18RK01	Ultratrace 1 (UT-1)	0.075 < 1		0.117	2.5	0.6 < 1		0.164	0.26
PF18RK02	Ultratrace 1 (UT-1)	0.111 < 1		0.14	2.6	0.9 < 1		0.149	0.36
PF18RK03	Ultratrace 1 (UT-1)	0.038 < 1		0.046	3.8	6.5 < 1		0.055	0.54
PF18RK04	Ultratrace 1 (UT-1)	0.06 < 1		0.145	1.5	0.4 < 1		0.107	0.32
PF18RK05	Ultratrace 1 (UT-1)	0.084 < 1		0.136	0.9	0.5 < 1		0.235	0.19
PF18RK06	Ultratrace 1 (UT-1)	0.066 < 1		0.146	1.5	0.6 < 1		0.151	0.29
PF18RK07	Ultratrace 1 (UT-1)	0.055 < 1		0.115	1.4	0.4 < 1		0.108	0.25
PF18RK08	Ultratrace 1 (UT-1)	0.113 < 1		0.133	2.1	0.5 < 1		0.185	0.25
PF18PT01	Ultratrace 1 (UT-1)/1C-Exploration	0.074 < 1		0.113	2.4	0.7 < 1		0.087	0.19
PF18RK09	Ultratrace 1 (UT-1)/1C-Exploration	0.156 < 1		0.11	6	0.5 < 1		0.137	0.42
PF18RK10	Ultratrace 1 (UT-1)/1C-Exploration	0.148 < 1		0.108	5.4	0.6 < 1		0.153	0.45
PF18RK11	Ultratrace 1 (UT-1)/1C-Exploration	0.026 < 1		0.01	6.6	0.5 < 1		0.090	0.1
PF18RK12	Ultratrace 1 (UT-1)/1C-Exploration	0.076 < 1		0.1	2.7	0.3 < 1		0.258	0.22
feldspar pophyry									

Proof Project 2018 Rock Samples

Sample	Al_pct	K_pct	Bi_ppm	Ca_pct	Sc_ppm	V_ppm	Cr_ppm	Mn_ppm	Fe_pct	Co_ppm	Ni_ppm
PF18RK01	3.55	0.25	0.03	2.12	7.7	83	16	290	2.94	8.8	8.5
PF18RK02	2.11	0.49	0.06	0.91	9.3	96	19	428	4.01	11.1	10.7
PF18RK03	2.49	0.16	0.42	0.89	32.1	660	9	544	15.30	21.9	23.8
PF18RK04	1.69	0.09	0.03	0.73	10.9	115	20	485	3.38	13.2	10.8
PF18RK05	1.29	0.10	0.02	0.96	10.6	103	21	403	3.30	9.9	9.9
PF18RK06	1.56	0.10	< 0.02	0.77	10.1	109	21	110	3.58	12.6	9.6
PF18RK07	1.22	0.08	< 0.02	4.89	7.8	100	17	3330	2.98	10.2	9.7
PF18RK08	1.3	0.10	0.07	1.55	9.5	98	20	518	3.49	12.6	10.5
PF18PT01	1.48	0.12	0.15	0.54	7.9	99	20	206	3.28	6	6.7
PF18RK09	1.43	0.40	0.06	0.57	7.1	83	16	426	2.79	10.1	8
PF18RK10	1.67	0.32	0.05	0.93	7.2	81	16	336	3.00	8.8	7.6
PF18RK11	0.56	0.21	0.06	0.05	1.4	6	2	376	0.77	0.8	0.7
PF18RK12	1.41	0.26	0.03	0.95	6.9	108	1	1010	2.52	4.7	1.7
feldspar pophyry											

Proof Project 2018 Rock Samples

Sample	Cu_ppm	Zn_ppm	Ga_ppm	Ge_ppm	As_ppm	Rb_ppm	Sr_ppm	Y_ppm	Zr_ppm	Nb_ppm	Mo_ppm
PF18RK01	24.9	47.7	5.23	< 0.1	9.7	34.1	258	6.29	0.3 < 0.1		1.49
PF18RK02	13.1	55.2	7.2 < 0.1		20.2	117	197	8.13	0.3 < 0.1		1.21
PF18RK03	44.4	182	6.3	1.5	503	61.4	159	27.4	6.8 < 0.1		11.2
PF18RK04	22.1	61.8	4.59	0.1	7.6	14.6	65.2	8.84	0.2 < 0.1		1.64
PF18RK05	23.5	53.5	3.86	0.1	7.1	9.7	101	12.6 < 0.1	< 0.1		1.77
PF18RK06	22.9	59.4	4.26	0.1	11.2	16.5	72	8.22	0.3 < 0.1		1.98
PF18RK07	19.8	51	3.27	0.1	6	12.9	68.8	12.1	0.3 < 0.1		1.47
PF18RK08	19.1	60.6	3.82	0.2	13.5	14	74.9	8.81	0.5 < 0.1		1.93
PF18PT01	19.4	40.8	4.54	0.1	18.1	22.7	51.2	8.03	2.1	0.1	1.51
PF18RK09	28.3	57.7	4.76	0.2	16.5	105	131	5.75	2.3	0.1	0.29
PF18RK10	30.4	50.4	4.64	0.1	13.6	95.6	704	8.76	2.1 < 0.1		0.38
PF18RK11	3.3	23.3	2.3 < 0.1		1.1	8.6	12.4	4.28	8.2	0.5	0.45
PF18RK12	16.4	31.3	3.55	0.1	6.4	24.7	128	11.7	1.6 < 0.1		0.62
feldspar pophyry											

Proof Project 2018 Rock Samples

Sample	Ag_ppm	In_ppm	Sn_ppm	Sb_ppm	Te_ppm	Cs_ppm	Ba_ppm	La_ppm	Ce_ppm	Cd_ppm	Pr_ppm
PF18RK01	0.057	0.02	0.39	11.4 < 0.02		18.8	130	16.7	32.2 < 0.01		4.1
PF18RK02	0.045	0.03	0.55	5.56 < 0.02		49.7	182	21.7	39.1	0.03	5.4
PF18RK03	0.028	0.03	0.06	> 500	0.06	50.5	66.9	17.1	32.6	0.1	4.1
PF18RK04	0.034	0.02	0.43	1.84 < 0.02		16.4	70.7	16	35.8	0.08	4.6
PF18RK05	0.075	0.02	0.38	2.93 < 0.02		9.93	76.8	16	33.6	0.04	4.7
PF18RK06	0.052	0.03	0.44	2.5 < 0.02		15.8	52.7	15.3	33.5	0.03	4.4
PF18RK07	0.07	< 0.02		0.62 < 0.02		9.31	39	15.5	32.9	0.14	4.3
PF18RK08	0.045	0.03	0.55	1.48 < 0.02		12.4	59.6	13.5	31 < 0.01		4
PF18PT01	0.427	< 0.02		0.47	17	0.08	18.8	62	15.6	36.7	0.03
PF18RK09	0.275	< 0.02		0.57	0.5	0.05	21.8	129	15.6	32	0.04
PF18RK10	0.298	0.02	0.64	1.56 < 0.02		33.7	239	19.4	39.2	0.04	4.8
PF18RK11	0.264	< 0.02		0.47	0.33 < 0.02		1.77	101	16.5	36.4	0.04
PF18RK12	0.245	0.02	0.4	0.1 < 0.02		8.93	100	14	28.3	0.06	3.8
feldspar pophyry											

Proof Project 2018 Rock Samples

Sample	Nd_ppm	Sm_ppm	Se_ppm	Eu_ppm	Gd_ppm	Tb_ppm	Dy_ppm	Ho_ppm	Er_ppm	Tm_ppm	Yb_ppm
PF18RK01	15.9	2.8 < 0.1		0.4	2.1	0.3	1.3	0.2	0.6 < 0.1		0.5
PF18RK02	20.3	3.6 < 0.1		0.5	2.8	0.4	1.7	0.3	0.8	0.1	0.7
PF18RK03	16.4	3.2	0.4	0.6	3.6	0.6	3.9	0.8	3.1	0.5	3.6
PF18RK04	18.5	3.5 < 0.1		0.4	2.9	0.4	1.9	0.3	0.9	0.1	0.8
PF18RK05	19	3.8 < 0.1		0.5	3.4	0.5	2.5	0.4	1.3	0.2	1.1
PF18RK06	17.5	3.3 < 0.1		0.4	2.7	0.4	1.8	0.3	0.8	0.1	0.7
PF18RK07	17.8	3.6	0.1	0.5	3.2	0.4	2.3	0.4	1.1	0.1	0.9
PF18RK08	16.4	3.1 < 0.1		0.4	2.7	0.3	1.8	0.3	0.9	0.1	0.8
PF18PT01	18.6	3.4 < 0.1		0.5	3.2	0.4	1.9	0.4	0.9	0.1	0.6
PF18RK09	14.4	2.4 < 0.1		0.4	2.1	0.2	1.3	0.2	0.6 < 0.1		0.5
PF18RK10	17.9	3 < 0.1		0.5	2.7	0.3	1.8	0.4	0.9	0.1	0.7
PF18RK11	14	2.3 < 0.1		0.2	1.8	0.2	1	0.2	0.4 < 0.1		0.3
PF18RK12	15.7	3.2	0.1	0.4	3.3	0.5	2.4	0.5	1.3	0.2	1.2
feldspar pophyry											

Proof Project 2018 Rock Samples

Sample	Lu_ppm	Hf_ppm	Ta_ppm	W_ppm	Re_ppm	Au_ppb	Tl_ppm	Pb_ppm	Th_ppm	U_ppm	Hg_ppb
PF18RK01	< 0.1	< 0.1	< 0.05	< 0.1	0.001	< 0.5	1.2	2.5	3.2	1.1	20
PF18RK02	0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	4.35	3.6	4.3	1.5	< 10
PF18RK03	0.6	< 0.1	< 0.05	7.3	0.006	< 0.5	1.62	17	1.5	2.1	20
PF18RK04	0.1	< 0.1	< 0.05	0.1	< 0.001	< 0.5	0.24	2.7	4.5	0.9	< 10
PF18RK05	0.2	< 0.1	< 0.05	0.1	0.003	2.1	0.17	1.9	3.8	0.9	< 10
PF18RK06	0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.19	1	3.8	0.9	< 10
PF18RK07	0.1	< 0.1	< 0.05	0.2	0.002	< 0.5	0.14	0.6	3.2	1.2	20
PF18RK08	0.1	< 0.1	< 0.05	0.3	< 0.001	< 0.5	0.18	0.8	3.2	0.8	< 10
PF18PT01	< 0.1	< 0.1	< 0.05	1	0.002	11.7	0.34	5.7	3.6	0.9	< 10
PF18RK09	< 0.1	< 0.1	< 0.05	0.3	0.001	4.6	1.12	3.9	4	0.9	10
PF18RK10	0.1	< 0.1	< 0.05	0.2	0.001	2.1	1.45	4.7	3.9	1.6	< 10
PF18RK11	< 0.1	0.3	< 0.05	0.4	< 0.001	1.8	0.11	4.7	7	1.2	< 10
PF18RK12	0.2	< 0.1	< 0.05	0.2	0.001	2.7	0.22	2.8	3.4	1.2	< 10
feldspar pophyry											

Proof Project 2018 Rock Samples

Sample	PdFA_ppb	PtFA_ppb	AuFA_ppb
PF18RK01			
PF18RK02			
PF18RK03			
PF18RK04			
PF18RK05			
PF18RK06			
PF18RK07			
PF18RK08			
PF18PT01	< 1	< 1	< 2
PF18RK09	< 1	< 1	< 2
PF18RK10	< 1	< 1	< 2
PF18RK11	< 1	< 1	< 2
PF18RK12	< 1	< 1	< 2
feldspar pophyry			

Proof Project 2018 Silt Samples

Sample	Property	Date	Sampler	Easting	Northing	Elevation	Zone	Datum	Accuracy_m	Type
PF18SS01	Outside [REDACTED]	14-Jul-2018	DB	[REDACTED]	[REDACTED]	[REDACTED]	10N	NAD 83	0	stream sediment
PF18SS02	Proof	14-Jul-2018	DB	369652.8	5978430	1101.29	10N	NAD 83	0	stream sediment
PF18SS03	Proof	15-Jul-2018	DB	367120.5	5980491	1189.325	10N	NAD 83	0	stream sediment
PF18SS04	Proof	16-Jul-2018	DB	366169.4	5979614	1028.768	10N	NAD 83	0	stream sediment
PF18SS05	Proof	16-Jul-2018	DB	367030.5	5979439	1049.141	10N	NAD 83	0	stream sediment

Proof Project 2018 Silt Samples

Sample	Location	Width_m	Flow	Cobble_pct	Gravel_pct	Sand_pct	Silt_pct	Clay_pct	Organic_pct
PF18SS01	upstream culvert in 2-3 yr old cutblock	0.5	slow	20	10	5	10	50	5
PF18SS02	upstream culvert in 2-3 yr old cutblock	0.3	slow	0	0	20	10	65	5
PF18SS03	upstream culvert in 2-3 yr old cutblock	0.4	medium	20	10	10	20	35	5
PF18SS04	upstream culvert in current cutblock	0.3	medium	20	15	15	30	15	5
PF18SS05	dry stream in old cut block	0.3	none	20	10	20	26	20	5

Proof Project 2018 Silt Samples

Sample	Banks	Vegetation	Note	Lab	Certificate	Cert_Date	Method
PF18SS01	vegetation	fireweed, grasses		Activation Labs	A18-09457	2018-Aug-28	Ultratrace 1
PF18SS02	vegetation	alder, moss		Activation Labs	A18-09457	2018-Aug-28	Ultratrace 1
PF18SS03	vegetation	grasses		Activation Labs	A18-09457	2018-Aug-28	Ultratrace 1
PF18SS04	heavy overbank of grasses	forest, moss, grasses	recent wolf track	Activation Labs	A18-09457	2018-Aug-28	Ultratrace 1
PF18SS05	vegetation	alder, grasses		Activation Labs	A18-09457	2018-Aug-28	Ultratrace 1

Proof Project 2018 Silt Samples

Sample	Ti_pct	S_pct	P_pct	Li_ppm	Be_ppm	B_ppm	Na_pct	Mg_pct	Al_pct	K_pct	Bi_ppm	Ca_pct
PF18SS01	0.084 < 1		0.116	6.8	0.6 < 1		0.049	0.37	1.89	0.1	0.1	0.63
PF18SS02	0.024 < 1		0.117	13	1 < 1		0.045	0.38	2.49	0.1	0.08	1.27
PF18SS03	0.114 < 1		0.199	15.9	1.2 < 1		0.122	0.64	4.03	0.22	0.17	1.71
PF18SS04	0.064 < 1		0.096	7.5	0.6 < 1		0.051	0.26	1.72	0.13	0.07	0.63
PF18SS05	0.083 < 1		0.098	7.1	0.5 < 1		0.056	0.27	1.77	0.14	0.08	0.64

Proof Project 2018 Silt Samples

Sample	Sc_ppm	V_ppm	Cr_ppm	Mn_ppm	Fe_pct	Co_ppm	Ni_ppm	Cu_ppm	Zn_ppm	Ga_ppm	Ge_ppm	As_ppm
PF18SS01	5.5	60	13	420	2.48	8.6	7.2	14.3	45.4	4.79	0.1	5.4
PF18SS02	5.7	48	14	1730	2.7	7.3	9.8	18.1	56.9	5.86	0.1	6.1
PF18SS03	9.5	129	20	2130	5.47	17.3	11.7	26.4	83.1	8.64	0.2	7.1
PF18SS04	3.1	59	12	540	2.52	5.9	6.4	10.3	43.7	3.99 < 0.1		3.8
PF18SS05	3.8	63	15	539	2.62	6	7.7	10.4	45.2	4.22 < 0.1		3.2

Proof Project 2018 Silt Samples

Sample	Rb_ppm	Sr_ppm	Y_ppm	Zr_ppm	Nb_ppm	Mo_ppm	Ag_ppm	In_ppm	Sn_ppm	Sb_ppm	Te_ppm	Cs_ppm
PF18SS01	12.8	76.6	12.1	2.3	0.4	0.51	0.199	< 0.02	0.37	0.66	< 0.02	5.1
PF18SS02	10.1	155	30.7	1.8	0.2	0.29	0.212	0.02	0.33	1.29	< 0.02	5.84
PF18SS03	16.6	230	25.5	3.4	0.2	0.78	0.199	0.04	0.75	0.6	0.02	5.05
PF18SS04	11.5	93.8	10.8	0.7	0.1	0.36	0.089	< 0.02	0.35	1.13	< 0.02	7.57
PF18SS05	13.2	94.9	11	1.2	0.4	0.6	0.134	< 0.02	0.44	1.18	< 0.02	11.3

Proof Project 2018 Silt Samples

Sample	Ba_ppm	La_ppm	Ce_ppm	Cd_ppm	Pr_ppm	Nd_ppm	Sm_ppm	Se_ppm	Eu_ppm	Gd_ppm	Tb_ppm	Dy_ppm
PF18SS01	110	21.8	45.3	0.13	5.9	23	4.3	0.3	0.9	3.7	0.5	2.6
PF18SS02	241	38.6	58.5	0.27	10.7	44.1	8.9	1.5	1.8	7.8	1	5.4
PF18SS03	262	32.9	72.1	0.31	9.4	37.4	7.2	0.9	1.3	6.4	0.9	4.9
PF18SS04	110	14.5	44.2	0.07	3.9	15.7	3 < 0.1		0.6	2.8	0.4	2
PF18SS05	110	14.4	43.4	0.07	3.9	15.2	2.9 < 0.1		0.5	2.6	0.4	2

Proof Project 2018 Silt Samples

Sample	Ho_ppm	Er_ppm	Tm_ppm	Yb_ppm	Lu_ppm	Hf_ppm	Ta_ppm	W_ppm	Re_ppm	Au_ppb	Tl_ppm	Pb_ppm
PF18SS01	0.4	1.2	0.1	1	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.09	4.7
PF18SS02	0.9	2.8	0.4	2.5	0.4	< 0.1	< 0.05	0.2	0.005	2.5	0.23	5.6
PF18SS03	0.9	2.7	0.3	2.4	0.4	< 0.1	< 0.05	0.2	< 0.001	< 0.5	0.34	7.7
PF18SS04	0.4	1.1	0.1	1	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.14	3.4
PF18SS05	0.3	1.1	0.1	1.1	0.1	< 0.1	< 0.05	< 0.1	< 0.001	0.9	0.11	3.1

Proof Project 2018 Silt Samples

Sample	Th_ppm	U_ppm	Hg_ppb
PF18SS01	2.7	1.8	60
PF18SS02	2.1	10.4	70
PF18SS03	4.8	5.7	80
PF18SS04	2	1.9	50
PF18SS05	1.7	1.7	30

Proof Project 2018 Twig Samples

Sample	Property	Date	Sampler	Easting	Northing	Elevation	Zone	Datum	Accuracy_m	Type
PF18TR01	Proof	15-Jul-2018	DB	368317.94	5979652.30	1162.87	10N	NAD 83	0	lodgepole pine-replanted
PF18TR02	Proof	15-Jul-2018	DB	368048.36	5979694.01	1133.92	10N	NAD 83	0	lodgepole pine-replanted
PF18TR03	Proof	15-Jul-2018	DB	367925.72	5979637.27	1124.72	10N	NAD 83	0	lodgepole pine-replanted
PF18TR04	Proof	15-Jul-2018	DB	367726.65	5979800.46	1120.66	10N	NAD 83	0	lodgepole pine-replanted
PF18TR05	Proof	15-Jul-2018	DB	367482.16	5980055.91	1133.38	10N	NAD 83	0	lodgepole pine-replanted
PF18TR06	Proof	15-Jul-2018	DB	367247.86	5980053.46	1134.55	10N	NAD 83	0	lodgepole pine-replanted
PF18TR07	Proof	15-Jul-2018	DB	367101.04	5980051.54	1144.52	10N	NAD 83	0	lodgepole pine-replanted
PF18TR08	Proof	15-Jul-2018	DB	366923.50	5980130.54	1159.23	10N	NAD 83	0	lodgepole pine-replanted
PF18TR09	Proof	15-Jul-2018	DB	366736.85	5980186.76	1156.45	10N	NAD 83	0	lodgepole pine-replanted
PF18TR10	Proof	15-Jul-2018	DB	366558.05	5980276.06	1150.46	10N	NAD 83	0	lodgepole pine-replanted
PF18TR11	Proof	15-Jul-2018	DB	366888.95	5980279.15	1163.46	10N	NAD 83	0	lodgepole pine-replanted
PF18TR12	Proof	16-Jul-2018	DB	365993.46	5979865.57	1050.65	10N	NAD 83	0	lodgepole pine-natural
PF18TR13	Proof	16-Jul-2018	DB	366087.11	5979617.28	1029.34	10N	NAD 83	0	lodgepole pine-replanted
PF18TR14	Proof	16-Jul-2018	DB	366477.70	5979485.92	1039.16	10N	NAD 83	0	lodgepole pine-replanted
PF18TR15	Proof	16-Jul-2018	DB	366762.76	5979454.81	1047.07	10N	NAD 83	0	lodgepole pine-replanted
PF18TR16	Proof	16-Jul-2018	DB	366762.76	5979454.81	1047.07	10N	NAD 83	0	lodgepole pine-replanted
PF18TR17	Proof	15-Jul-2018	DZ	368526.20	5979650.42	1212.82	10N	NAD 83	0	lodgepole pine-replanted
PF18TR18	Proof	15-Jul-2018	DZ	368872.09	5979620.61	1193.11	10N	NAD 83	0	lodgepole pine-replanted
PF18TR19	Proof	15-Jul-2018	DZ	368894.79	5979959.52	1208.01	10N	NAD 83	0	lodgepole pine-replanted
PF18TR20	Proof	15-Jul-2018	DZ	368727.41	5979938.64	1224.60	10N	NAD 83	0	lodgepole pine-replanted
PF18TR21	Proof	15-Jul-2018	DZ	368442.13	5979882.13	1195.76	10N	NAD 83	0	lodgepole pine-replanted

Proof Project 2018 Twig Samples

Sample	Tissue	Age_yr	Health	Height_m	Diameter_cm	Note
PF18TR01	new growth	9	good	2.5	4	rename PF18TR001; Gordon Peter Logging Ltd.-currently logging centre of
PF18TR02	new growth	9	good	2.5	4	
PF18TR03	new growth	9	good	2.5	4	
PF18TR04	new growth	9	good	2.5	4	
PF18TR05	new growth	4.5	good	1	2	
PF18TR06	new growth	4.5	good	1	2	
PF18TR07	new growth	4.5	good	1	2	
PF18TR08	new growth	4.5	good	1	2	
PF18TR09	new growth	4.5	good	1	2	
PF18TR10	new growth	3.5	good	1	2	
PF18TR11	new growth	3.5	good	1	2	
PF18TR12	new growth	22	poor	7.5	10	spindly regen in SW5Pl4Bl1, mature Pl in area is dead from beetle
PF18TR13	new growth	10	good	3.75	5	
PF18TR14	new growth	18	good	7	9	
PF18TR15	new growth	17	good	6.5	9	
PF18TR16	new growth	5	good	2	2	natural regen
PF18TR17	new growth	8	good	2.5	4	rename PF18TR037
PF18TR18	new growth	8	good	3	4	rename PF18TR039
PF18TR19	new growth	8	good	2.5	4	rename PF18TR017
PF18TR20	new growth	9	good	2.5	4	rename PF18TR016
PF18TR21	new growth	9	good	2.5	4	rename PF18TR0Z01

Proof Project 2018 Twig Samples

Sample	Lab	Certificate	Cert_Date	Method	Ag_ppb	Al_ppb	As_ppb	Au_ppb	B_ppb	Ba_ppb	Be_ppb
PF18TR01	Activation Labs	A18-09457	2018-Aug-28	2G	20	208000	50	29.6	14000	1410	< 50
PF18TR02	Activation Labs	A18-09457	2018-Aug-28	2G	20	140000	30	38.8	13000	1620	< 50
PF18TR03	Activation Labs	A18-09457	2018-Aug-28	2G	20	191000	40	26.2	11000	1110	< 50
PF18TR04	Activation Labs	A18-09457	2018-Aug-28	2G	10	106000	40	21	11000	740	< 50
PF18TR05	Activation Labs	A18-09457	2018-Aug-28	2G	20	90000	30	30.8	10000	1010	< 50
PF18TR06	Activation Labs	A18-09457	2018-Aug-28	2G	20	250000	30	7.2	16000	720	< 50
PF18TR07	Activation Labs	A18-09457	2018-Aug-28	2G	20	227000	20	9.2	5000	1140	< 50
PF18TR08	Activation Labs	A18-09457	2018-Aug-28	2G	20	178000	20	13.1	7000	700	< 50
PF18TR09	Activation Labs	A18-09457	2018-Aug-28	2G	10	374000	20	6	8000	1310	< 50
PF18TR10	Activation Labs	A18-09457	2018-Aug-28	2G	10	352000	20	12.5	5000	1770	< 50
PF18TR11	Activation Labs	A18-09457	2018-Aug-28	2G	10	201000	20	7.9	7000	700	< 50
PF18TR12	Activation Labs	A18-09457	2018-Aug-28	2G	10	234000	20	7.5	8000	490	< 50
PF18TR13	Activation Labs	A18-09457	2018-Aug-28	2G	10	211000	20	11.2	7000	1120	< 50
PF18TR14	Activation Labs	A18-09457	2018-Aug-28	2G	< 10	121000	30	14.6	8000	380	< 50
PF18TR15	Activation Labs	A18-09457	2018-Aug-28	2G	10	68000	60	9	5000	740	< 50
PF18TR16	Activation Labs	A18-09457	2018-Aug-28	2G	10	146000	20	7.5	11000	540	< 50
PF18TR17	Activation Labs	A18-09457	2018-Aug-28	2G	10	263000	10	6.9	8000	850	< 50
PF18TR18	Activation Labs	A18-09457	2018-Aug-28	2G	10	359000	20	7.8	3000	810	< 50
PF18TR19	Activation Labs	A18-09457	2018-Aug-28	2G	20	55000	30	5.4	11000	530	< 50
PF18TR20	Activation Labs	A18-09457	2018-Aug-28	2G	10	291000	30	3.6	12000	1750	< 50
PF18TR21	Activation Labs	A18-09457	2018-Aug-28	2G	10	438000	30	4.6	10000	1360	< 50

Proof Project 2018 Twig Samples

Sample	Bi_ppb	Ca_ppb	Cd_ppb	Ce_ppb	Co_ppb	Cr_ppb	Cs_ppb	Cu_ppb	Dy_ppb	Er_ppb	Eu_ppb	Fe_ppb
PF18TR01	1.1	1410000	60	152	83	350	4930	3530	7	4	3	83
PF18TR02	1	1850000	50	114	44	250	689	3600	6.3	3	2	62
PF18TR03	1.8	1600000	80	167	68	340	969	3440	7.4	4	3	92
PF18TR04	1	1970000	140	61	43	250	2540	3350	2.9	2	1	46
PF18TR05	1	1960000	50	77	74	200	499	3670	3.1	2	1	46
PF18TR06	< 0.5	1270000	90	74	142	230	982	4760	4.6	3	1	56
PF18TR07	< 0.5	1680000	40	64	64	200	784	3230	3.3	2 < 1		43
PF18TR08	0.8	1410000	20	33	43	190	484	3520	1.6 < 1	< 1		36
PF18TR09	0.7	1620000	60	30	61	150	801	3350	2.3	1 < 1		31
PF18TR10	0.7	2100000	20	26	44	160	1020	3190	1.8	1 < 1		31
PF18TR11	0.6	1540000	100	24	28	140	239	4850	1.2 < 1	< 1		30
PF18TR12	0.6	1850000	160	45	64	190	680	3710	2	1 < 1		34
PF18TR13	0.8	2250000	50	20	40	140	838	3810	1.6 < 1	< 1		28
PF18TR14	0.6	1190000	40	32	68	190	602	4220	1.7	1 < 1		38
PF18TR15	0.8	2000000	50	69	58	220	880	3700	1.2 < 1	< 1		32
PF18TR16	0.6	1400000	30	24	41	270	1400	3760	1.4 < 1	< 1		27
PF18TR17	0.5	1560000	30	21	52	170	637	2410	1.6 < 1	< 1		28
PF18TR18	< 0.5	1490000	20	26	65	170	17300	3460	1.3 < 1	< 1		32
PF18TR19	< 0.5	2130000	30	23	16	120	4950	4820	1.2 < 1	< 1		34
PF18TR20	< 0.5	2010000	90	43	62	180	3430	3510	2.7	1 < 1		46
PF18TR21	< 0.5	1630000	50	74	80	240	2120	3200	3.3	2	1	65

Proof Project 2018 Twig Samples

Sample	Ga_ppb	Gd_ppb	Ge_ppb	Hf_ppb	Hg_ppb	Ho_ppb	In_ppb	K_ppb	La_ppb	Li_ppb	Lu_ppb	Mg_ppb
PF18TR01	21	11	1 < 3	< 3	< 10	1.9	< 0.2	8620000	82	50	0.5	969000
PF18TR02	12	10	< 1	< 3	< 10	1.2	< 0.2	9070000	64	30	0.4	994000
PF18TR03	17	12	< 1		4 < 10	1.4	< 0.2	8280000	87	80	0.6	1120000
PF18TR04	10	4	< 1	< 3	< 10	0.6	< 0.2	7200000	33	80	1.3	980000
PF18TR05	8	6	< 1	< 3	< 10	0.6	< 0.2	8770000	49	40	3.4	856000
PF18TR06	14	6	< 1	< 3	< 10	0.6	< 0.2	9520000	39	30	< 0.4	949000
PF18TR07	9	6	< 1	< 3	< 10	0.6	< 0.2	8250000	34	20	0.6	1170000
PF18TR08	7	< 4	< 1	< 3	< 10	0.4	< 0.2	8510000	18	10	< 0.4	900000
PF18TR09	7	< 4	< 1	< 3	< 10	0.5	< 0.2	9030000	17	20	0.4	1080000
PF18TR10	5	< 4	< 1	< 3	< 10	< 0.4	< 0.2	7710000	15	20	3.5	775000
PF18TR11	7	< 4	< 1	< 3	< 10	< 0.4	< 0.2	9610000	14	20	0.8	913000
PF18TR12	7	< 4	< 1	< 3	< 10	< 0.4	< 0.2	8390000	29	10	< 0.4	943000
PF18TR13	4	< 4	< 1		4 < 10	< 0.4	< 0.2	6730000	12	< 10	< 0.4	1100000
PF18TR14	6	< 4	< 1	< 3	< 10	< 0.4	< 0.2	6040000	18	40	< 0.4	1120000
PF18TR15	6	< 4	< 1	< 3	< 10	< 0.4	< 0.2	7000000	56	40	< 0.4	873000
PF18TR16	5	< 4	< 1	< 3	< 10	< 0.4	< 0.2	8080000	15	10	0.5	741000
PF18TR17	4	< 4	< 1	< 3	< 10	< 0.4	< 0.2	6870000	11	< 10	< 0.4	958000
PF18TR18	5	< 4	< 1	< 3	< 10	< 0.4	< 0.2	6640000	18	< 10	1	878000
PF18TR19	5	< 4	< 1	< 3	< 10	< 0.4	< 0.2	7520000	13	20	< 0.4	933000
PF18TR20	10	< 4	< 1	< 3	< 10	< 0.4	< 0.2	9020000	23	40	0.7	1230000
PF18TR21	14	5	1 < 3	< 10		0.8	< 0.2	7400000	38	30	0.8	1070000

Proof Project 2018 Twig Samples

Sample	Mn_ppb	Mo_ppb	Na_ppb	Nb_ppb	Nd_ppb	Ni_ppb	P_ppb	Pb_ppb	Pd_ppb	Pr_ppb	Pt_ppb	Rb_ppb	
PF18TR01	447000	1850	14000	7	71	2370	1770000	2340	1.3	19	2.2	51100	
PF18TR02	223000	980	12000	7	53	1160	1650000	420	1.2	15	2.8	29400	
PF18TR03	325000	1090	13000	14	75	1360	1540000	257	1.4	19	1.9	38900	
PF18TR04	381000	1380	14000	5	32	1340	1760000	254	1.4	7	1.4	45400	
PF18TR05	83800	5970	12000	4	29	1440	1810000	211	1.8	8	2.4	31800	
PF18TR06	577000	1600	14000	4	35	1270	1990000	181	0.6	9	0.3	55600	
PF18TR07	373000	1260	14000	4	28	1460	1860000	159	1	7	0.3	52900	
PF18TR08	240000	8160	12000	2	16	1000	1820000	117	0.4	5	0.7	29500	
PF18TR09	505000	3780	17000	< 2		14	1030	1870000	148	1.2	4	0.3	51800
PF18TR10	202000	1140	12000	< 2		12	1070	1760000	179	2.2	4	0.6	40800
PF18TR11	275000	1040	11000	< 2		10	1960	2010000	169	1.1	3	0.6	30900
PF18TR12	367000	1740	12000	2	14	1830	2220000	125	1	4	0.6	34300	
PF18TR13	361000	1020	10000	3	11	1380	1930000	96	1	3	0.7	36000	
PF18TR14	214000	1500	10000	3	17	2030	1760000	111	0.6	4	1.2	30500	
PF18TR15	253000	720	10000	< 2		12	1480	1550000	199	1.9	3	0.6	26400
PF18TR16	212000	980	11000	< 2		11	1070	1490000	126	1	3	0.4	38400
PF18TR17	338000	3310	11000	< 2		9	1180	1800000	134	0.8	2	0.4	34000
PF18TR18	214000	2180	11000	< 2		9	910	1860000	182	0.8	3	0.6	47900
PF18TR19	159000	1480	14000	< 2		10	650	1890000	79	0.5	3	0.4	34400
PF18TR20	419000	4280	12000	3	20	1090	2270000	133	1.3	5	0.3	40300	
PF18TR21	467000	2150	10000	4	33	1270	1740000	266	1	9	0.4	39100	

Proof Project 2018 Twig Samples

Sample	Re_ppb	Sb_ppb	Se_ppb	Sm_ppb	Sn_ppb	Sr_ppb	Ta_ppb	Tb_ppb	Te_ppb	Th_ppb	Ti_ppb	Tl_ppb
PF18TR01	< 0.2	17	20	16 < 30	5320	1 < 2	< 5	23	2600	1.4		
PF18TR02	< 0.2	11	30	10 < 30	5710	1 < 2	5	12	2400	< 0.5		
PF18TR03	< 0.2	8	30	16 < 30	5320	2 < 2	< 5	20	5600	0.6		
PF18TR04	< 0.2	9	20	4 < 30	6680 < 1	< 2	< 5	10	1800	8.3		
PF18TR05	< 0.2	11	40	7 < 30	7340 < 1	< 2	< 5	7	1700	< 0.5		
PF18TR06	< 0.2	8	20	6 < 30	1650 < 1	< 2	< 5	6	2300	< 0.5		
PF18TR07	< 0.2	7	20	6 < 30	4010 < 1	< 2	< 5	5	1700	0.7		
PF18TR08	< 0.2	9	10	3 < 30	3270 < 1	< 2	< 5	4	1200	< 0.5		
PF18TR09	< 0.2	7	20	3 < 30	5540 < 1	< 2	< 5	2	800	3.4		
PF18TR10	< 0.2	7	40	2 < 30	9990 < 1	< 2	< 5	3	700	< 0.5		
PF18TR11	< 0.2	8	20 < 2	< 30	4860 < 1	< 2	< 5	2	700	< 0.5		
PF18TR12	< 0.2	6	20	2 < 30	3750 < 1	< 2	< 5	3	1000	< 0.5		
PF18TR13	< 0.2	7	20	2 < 30	4930 < 1	< 2	< 5	12	600	< 0.5		
PF18TR14	< 0.2	8	40	3 < 30	2180 < 1	< 2	< 5	6	1100	< 0.5		
PF18TR15	< 0.2	10	110	3 < 30	8080 < 1	< 2	< 5	3	700	3.5		
PF18TR16	< 0.2	8	40 < 2	< 30	4550 < 1	< 2	< 5	2	500	< 0.5		
PF18TR17	< 0.2	8	30 < 2	< 30	2900 < 1	< 2	< 5	2	500	< 0.5		
PF18TR18	< 0.2	8	30	3 < 30	3620 < 1	< 2	< 5	2	700	< 0.5		
PF18TR19	< 0.2	8	30 < 2	< 30	2480 < 1	< 2	< 5	2	700	2.3		
PF18TR20	< 0.2	10	20	3 < 30	6640 < 1	< 2	< 5	3	1600	2.1		
PF18TR21	< 0.2	9	30	7 < 30	5110 < 1	< 2	< 5	6	2400	0.7		

Proof Project 2018 Twig Samples

Sample	Tm_ppb	U_ppb	V_ppb	W_ppb	Y_ppb	Yb_ppb	Zn_ppb	Zr_ppb
PF18TR01	0.6	4.9	210 < 5		42 < 3		52800	60
PF18TR02	0.4	4.7	200 < 5		34 < 3		42300	60
PF18TR03	0.5	7.3	290	5	43	4	48200	110
PF18TR04	0.3	2.4	160 < 5		22 < 3		43000	40
PF18TR05	0.2	2.7	200 < 5		20 < 3		46700	50
PF18TR06	0.3	2.8	180 < 5		21 < 3		53400	40
PF18TR07	0.2	2.1	160 < 5		18 < 3		46000	40
PF18TR08	0.2	1.6	140 < 5		10 < 3		51700	30
PF18TR09	0.1	1.3	110 < 5		8 < 3		44400	30
PF18TR10	< 0.1	1.7	120 < 5		9 < 3		47000	20
PF18TR11	0.2	0.9	130 < 5		10 < 3		50200	20
PF18TR12	0.2	1.1	120 < 5		9 < 3		45100	40
PF18TR13	< 0.1	0.9	110 < 5		9 < 3		45400	60
PF18TR14	0.2	1.7	140 < 5		12 < 3		43400	30
PF18TR15	0.2	1.2	150 < 5		11 < 3		35900	30
PF18TR16	0.1	1.1	120 < 5		7 < 3		42500 < 20	
PF18TR17	< 0.1	0.7	110 < 5		6 < 3		44500	20
PF18TR18	< 0.1	1	120 < 5		7 < 3		47600	20
PF18TR19	< 0.1	0.9	140 < 5		9 < 3		62100	20
PF18TR20	0.2	1.5	180 < 5		13 < 3		48300	40
PF18TR21	0.3	2.3	220 < 5		20 < 3		50500	50

**APPENDIX B**  
**CERTIFICATES OF ANALYSIS**

**Quality Analysis ...**



**Innovative Technologies**

**Date Submitted:** 24-Oct-18  
**Invoice No.:** A18-15826  
**Invoice Date:** 17-Dec-18  
**Your Reference:** Proof

**Takom Exploration Ltd.**  
**12925 Chief Lake Rd.**  
**Prince George BC V2K 5K1**  
**Canada**

**ATTN: Diana Benz**

## **CERTIFICATE OF ANALYSIS**

5 Rock samples were submitted for analysis.

The following analytical package(s) were requested:  
Code 1C-Exp-Kamloops Fire Assay-ICP/MS  
Code UT-1-Kamloops Aqua Regia ICP/MS

**REPORT      A18-15826**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

**Notes:**

Assays are recommended for values above the upper limit. The Au from AR-MS is only semi-quantitative. For accurate Au data, fire assay is recommended.

We recommend reanalysis by fire assay Au, Pt, Pd Code 8 if values exceed upper limit.

**CERTIFIED BY:**

A handwritten signature in black ink, appearing to read "Emmanuel Eseme".

Emmanuel Eseme , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
9989 Dallas Drive, Kamloops, British Columbia, Canada, V2C 6T4  
TELEPHONE +250 573-4484 or +1.888.228.5227 FAX +1.905.648.9613  
E-MAIL Kamloops@actlabs.com ACTLABS GROUP WEBSITE [www.actlabs.com](http://www.actlabs.com)

**Results****Activation Laboratories Ltd.****Report: A18-15826**

Analyte Symbol	Pd	Pt	Au	Ti	S	P	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu
Unit Symbol	ppb	ppb	ppb	%	%	%	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Lower Limit	1	1	2	0.001	1	0.001	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.2
Method Code	FA-MS	FA-MS	FA-MS	AR-MS																			
PF18PT01	< 1	< 1	< 2	0.074	< 1	0.113	2.4	0.7	< 1	0.087	0.19	1.48	0.12	0.15	0.54	7.9	99	20	206	3.28	6.0	6.7	19.4
PF18RK09	< 1	< 1	< 2	0.156	< 1	0.110	6.0	0.5	< 1	0.137	0.42	1.43	0.40	0.06	0.57	7.1	83	16	426	2.79	10.1	8.0	28.3
PF18RK10	< 1	< 1	< 2	0.148	< 1	0.108	5.4	0.6	< 1	0.153	0.45	1.67	0.32	0.05	0.93	7.2	81	16	336	3.00	8.8	7.6	30.4
PF18RK11	< 1	< 1	< 2	0.026	< 1	0.010	6.6	0.5	< 1	0.090	0.10	0.56	0.21	0.06	0.05	1.4	6	2	376	0.77	0.8	0.7	3.3
PF18RK12	< 1	< 1	< 2	0.076	< 1	0.100	2.7	0.3	< 1	0.258	0.22	1.41	0.26	0.03	0.95	6.9	108	1	1010	2.52	4.7	1.7	16.4

**Results****Activation Laboratories Ltd.****Report: A18-15826**

Analyte Symbol	Zn	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm												
Lower Limit	0.1	0.02	0.1	0.1	0.1	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS												
PF18PT01	40.8	4.54	0.1	18.1	22.7	51.2	8.03	2.1	0.1	1.51	0.427	< 0.02	0.47	17.0	0.08	18.8	62.0	15.6	36.7	0.03	4.6	18.6	3.4
PF18RK09	57.7	4.76	0.2	16.5	105	131	5.75	2.3	0.1	0.29	0.275	< 0.02	0.57	0.50	0.05	21.8	129	15.6	32.0	0.04	3.8	14.4	2.4
PF18RK10	50.4	4.64	0.1	13.6	95.6	704	8.76	2.1	< 0.1	0.38	0.298	0.02	0.64	1.56	< 0.02	33.7	239	19.4	39.2	0.04	4.8	17.9	3.0
PF18RK11	23.3	2.30	< 0.1	1.1	8.6	12.4	4.28	8.2	0.5	0.45	0.264	< 0.02	0.47	0.33	< 0.02	1.77	101	16.5	36.4	0.04	4.0	14.0	2.3
PF18RK12	31.3	3.55	0.1	6.4	24.7	128	11.7	1.6	< 0.1	0.62	0.245	0.02	0.40	0.10	< 0.02	8.93	100	14.0	28.3	0.06	3.8	15.7	3.2

**Results****Activation Laboratories Ltd.****Report: A18-15826**

Analyte Symbol	Se	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppb											
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.1	0.1	0.1	10
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS											
PF18PT01	< 0.1	0.5	3.2	0.4	1.9	0.4	0.9	0.1	0.6	< 0.1	< 0.1	< 0.05	1.0	0.002	11.7	0.34	5.7	3.6	0.9	< 10
PF18RK09	< 0.1	0.4	2.1	0.2	1.3	0.2	0.6	< 0.1	0.5	< 0.1	< 0.1	< 0.05	0.3	0.001	4.6	1.12	3.9	4.0	0.9	10
PF18RK10	< 0.1	0.5	2.7	0.3	1.8	0.4	0.9	0.1	0.7	0.1	< 0.1	< 0.05	0.2	0.001	2.1	1.45	4.7	3.9	1.6	< 10
PF18RK11	< 0.1	0.2	1.8	0.2	1.0	0.2	0.4	< 0.1	0.3	< 0.1	0.3	< 0.05	0.4	< 0.001	1.8	0.11	4.7	7.0	1.2	< 10
PF18RK12	0.1	0.4	3.3	0.5	2.4	0.5	1.3	0.2	1.2	0.2	< 0.1	< 0.05	0.2	0.001	2.7	0.22	2.8	3.4	1.2	< 10

Analyte Symbol	Pd	Pt	Au	Ti	S	P	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	
Unit Symbol	ppb	ppb	ppb	%	%	%	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	
Lower Limit	1	1	2	0.001	1	0.001	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.2	
Method Code	FA-MS	FA-MS	FA-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	
GXR-6 Meas					< 1	0.038	25.3	1.0	< 1	0.064	0.43	7.83	1.23	0.18	0.14	22.2	175	83	1160	5.92	13.8	23.0	78.3	
GXR-6 Cert						0.0160	0.0350	32.0	1.40	9.80	0.104	0.609	17.7	1.87	0.290	0.180	27.6	186	96.0	1010	5.58	13.8	27.0	66.0
GXR-6 Meas					< 1	0.035	23.9	0.9	< 1	0.059	0.38	7.28	1.13	0.17	0.13	20.2	164	77	1070	5.45	13.1	22.3	76.2	
GXR-6 Cert						0.0160	0.0350	32.0	1.40	9.80	0.104	0.609	17.7	1.87	0.290	0.180	27.6	186	96.0	1010	5.58	13.8	27.0	66.0
PK2 Meas	5680	4810	4760																					
PK2 Cert	5918	4749	4785																					
OREAS 904 (Aqua Regia) Meas					< 1	0.096		6.6			0.20	1.80	0.87	3.67	0.04	3.9	27	22	417	6.33	84.2	35.9	6230	
OREAS 904 (Aqua Regia) Cert					0.0340	0.0950		6.54			0.143	1.25	0.603	3.74	0.0404	3.83	21.7	17.5	410	6.40	82.0	36.6	6300	
OREAS 45e (Aqua Regia) Meas					< 1	0.029				0.029	0.10	3.76	0.06		0.03	71.2	255	810	408	21.7	49.6	363	705	
OREAS 45e (Aqua Regia) Cert					0.044	0.029				0.027	0.095	3.32	0.053		0.032	78	295.0	849.0		22.650	52	357.0	709.0	
OREAS 45e (Aqua Regia) Meas					< 1	0.031				0.032	0.11	4.09	0.06		0.04	73.7	268	868	437	22.8	51.0	379	712	
OREAS 45e (Aqua Regia) Cert					0.044	0.029				0.027	0.095	3.32	0.053		0.032	78	295.0	849.0		22.650	52	357.0	709.0	
OREAS 45e (Aqua Regia) Meas					< 1	0.029				0.029	0.10	3.76	0.06		0.03	71.2	255	810	408	21.7	49.6	363	705	
OREAS 45e (Aqua Regia) Cert					0.044	0.029				0.027	0.095	3.32	0.053		0.032	78	295.0	849.0		22.650	52	357.0	709.0	
OREAS 45e (Aqua Regia) Meas					< 1	0.031				0.031	0.11	4.01	0.06		0.03	72.5	266	847	426	22.7	51.5	381	732	
OREAS 45e (Aqua Regia) Cert					0.044	0.029				0.027	0.095	3.32	0.053		0.032	78	295.0	849.0		22.650	52	357.0	709.0	
OREAS 922 (AQUA REGIA) Meas					< 1	0.064	22.7	0.8		0.027	1.30	2.91	0.46	11.2	0.38	3.7	32	45	775	5.05	18.6	33.5	2140	
OREAS 922 (AQUA REGIA) Cert					0.386	0.063	22.8	0.65		0.021	1.33	2.72	0.376	10.3	0.324	3.15	29.4	40.7	730	5.05	19.4	34.3	2176	
OREAS 922 (AQUA REGIA) Meas					< 1	0.062	23.0	0.8		0.026	1.26	2.75	0.43	11.4	0.37	3.6	31	44	740	4.87	18.2	33.5	2160	
OREAS 922 (AQUA REGIA) Cert					0.386	0.063	22.8	0.65		0.021	1.33	2.72	0.376	10.3	0.324	3.15	29.4	40.7	730	5.05	19.4	34.3	2176	
OREAS 922 (AQUA REGIA) Meas					< 1	0.066	23.1	0.8		0.028	1.33	2.94	0.48	11.3	0.39	3.7	32	45	787	5.20	19.2	35.2	2230	
OREAS 922 (AQUA REGIA)					0.386	0.063	22.8	0.65		0.021	1.33	2.72	0.376	10.3	0.324	3.15	29.4	40.7	730	5.05	19.4	34.3	2176	

Analyte Symbol	Pd	Pt	Au	Ti	S	P	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu
Unit Symbol	ppb	ppb	ppb	%	%	%	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Lower Limit	1	1	2	0.001	1	0.001	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.2
Method Code	FA-MS	FA-MS	FA-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
Cert																							
OREAS 922 (AQUA REGIA) Meas				< 1	0.062	23.0	0.8		0.026	1.26	2.75	0.43	11.4	0.37	3.6	31	44	740	4.87	18.2	33.5	2160	
OREAS 922 (AQUA REGIA) Cert				0.386	0.063	22.8	0.65		0.021	1.33	2.72	0.376	10.3	0.324	3.15	29.4	40.7	730	5.05	19.4	34.3	2176	
OREAS 923 (AQUA REGIA) Meas				< 1	0.061	24.1	0.8			1.41	3.01	0.41	24.0	0.40	3.6	32	43	923	6.12	22.1	33.1	4240	
OREAS 923 (AQUA REGIA) Cert				0.684	0.061	23.4	0.61			1.43	2.80	0.322	21.8	0.326	3.09	30.6	39.4	850	5.91	22.2	32.7	4248	
OREAS 923 (AQUA REGIA) Meas				< 1	0.058	23.3	0.7			1.36	2.82	0.37	20.1	0.39	3.5	31	41	872	5.75	21.0	31.5	4250	
OREAS 923 (AQUA REGIA) Cert				0.684	0.061	23.4	0.61			1.43	2.80	0.322	21.8	0.326	3.09	30.6	39.4	850	5.91	22.2	32.7	4248	
OREAS 923 (AQUA REGIA) Meas				< 1	0.063	23.7	0.7			1.45	3.03	0.42	23.6	0.40	3.7	33	43	936	6.13	22.2	33.9	4490	
OREAS 923 (AQUA REGIA) Cert				0.684	0.061	23.4	0.61			1.43	2.80	0.322	21.8	0.326	3.09	30.6	39.4	850	5.91	22.2	32.7	4248	
OREAS 923 (AQUA REGIA) Meas				< 1	0.058	23.3	0.7			1.36	2.82	0.37	20.1	0.39	3.5	31	41	872	5.75	21.0	31.5	4250	
OREAS 923 (AQUA REGIA) Cert				0.684	0.061	23.4	0.61			1.43	2.80	0.322	21.8	0.326	3.09	30.6	39.4	850	5.91	22.2	32.7	4248	
OREAS 907 (Aqua Regia) Meas				0.022	< 1	0.021	4.8	1.0		0.083	0.23	1.16	0.35	21.4	0.26	2.3	5	7	329	8.00	44.2	5.0	6100
OREAS 907 (Aqua Regia) Cert				0.0170	0.0660	0.0240	4.05	0.870		0.0860	0.221	0.945	0.286	22.3	0.280	2.16	5.12	8.59	330	8.18	43.7	4.74	6370
OREAS 907 (Aqua Regia) Meas				0.022	< 1	0.021	4.8	1.1		0.082	0.23	1.18	0.34	21.6	0.26	2.3	5	8	326	7.82	42.6	4.9	6220
OREAS 907 (Aqua Regia) Cert				0.0170	0.0660	0.0240	4.05	0.870		0.0860	0.221	0.945	0.286	22.3	0.280	2.16	5.12	8.59	330	8.18	43.7	4.74	6370
OREAS 907 (Aqua Regia) Meas				0.021	< 1	0.021	4.7	1.0		0.082	0.22	1.15	0.34	21.2	0.25	2.2	4	7	315	7.75	42.4	4.8	6080
OREAS 907 (Aqua Regia) Cert				0.0170	0.0660	0.0240	4.05	0.870		0.0860	0.221	0.945	0.286	22.3	0.280	2.16	5.12	8.59	330	8.18	43.7	4.74	6370
OREAS 907 (Aqua Regia) Meas				0.022	< 1	0.021	4.8	1.1		0.082	0.23	1.18	0.34	21.6	0.26	2.3	5	8	326	7.82	42.6	4.9	6220

Analyte Symbol	Pd	Pt	Au	Ti	S	P	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu		
Unit Symbol	ppb	ppb	ppb	%	%	%	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm		
Lower Limit	1	1	2	0.001	1	0.001	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.2		
Method Code	FA-MS	FA-MS	FA-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS		
OREAS 907 (Aqua Regia) Cert				0.0170	0.0660	0.0240	4.05	0.870		0.0860	0.221	0.945	0.286	22.3	0.280	2.16	5.12	8.59	330	8.18	43.7	4.74	6370		
Oreas 621 (Aqua Regia) Meas					4	0.032	6.9	0.7		0.158	0.43	1.76	0.36	3.90	1.54	2.2	11	31	525	3.30	28.3	24.9	3410		
Oreas 621 (Aqua Regia) Cert					4.50	0.0335	8.17	0.530		0.160	0.436	1.60	0.333	3.85	1.65	2.20	10.9	31.3	520	3.43	27.9	25.8	3660		
Oreas 621 (Aqua Regia) Meas						4	0.032	7.1	0.6		0.153	0.42	1.70	0.35	3.91	1.61	2.3	11	28	534	3.36	28.6	24.1	3560	
Oreas 621 (Aqua Regia) Cert						4.50	0.0335	8.17	0.530		0.160	0.436	1.60	0.333	3.85	1.65	2.20	10.9	31.3	520	3.43	27.9	25.8	3660	
Oreas 621 (Aqua Regia) Meas							4	0.032	6.9	0.6		0.157	0.42	1.69	0.35	3.68	1.54	2.2	10	29	527	3.31	28.4	25.1	3430
Oreas 621 (Aqua Regia) Cert						4.50	0.0335	8.17	0.530		0.160	0.436	1.60	0.333	3.85	1.65	2.20	10.9	31.3	520	3.43	27.9	25.8	3660	
Oreas 621 (Aqua Regia) Meas							4	0.032	7.1	0.6		0.153	0.42	1.70	0.35	3.91	1.61	2.3	11	28	534	3.36	28.6	24.1	3560
Oreas 621 (Aqua Regia) Cert						4.50	0.0335	8.17	0.530		0.160	0.436	1.60	0.333	3.85	1.65	2.20	10.9	31.3	520	3.43	27.9	25.8	3660	
CDN-PGMS-30 Meas	1530	209	1740																						
CDN-PGMS-30 Cert	1660.0 00	1897.0 00	223.000 00																						
PF18PT01 Orig	< 1	< 1	< 2																						
PF18PT01 Dup	< 1	< 1	< 2																						
PF18RK10 Orig				0.145	< 1	0.108	5.5	0.5	< 1	0.153	0.45	1.68	0.32	0.06	0.94	7.2	80	16	335	3.01	8.8	7.7	30.8		
PF18RK10 Dup					0.151	< 1	0.108	5.4	0.6	< 1	0.153	0.45	1.66	0.32	0.05	0.93	7.1	81	15	336	2.99	8.7	7.4	30.1	
PF18RK12 Orig	< 1	< 1	3																						
PF18RK12 Dup	< 1	< 1	< 2																						
Method Blank				< 0.001	< 1	0.002	< 0.1	< 0.1	< 1	0.009	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	0.2	< 1	< 1	< 1	< 0.01	< 0.1	< 0.1	1.0		
Method Blank				< 0.001	< 1	0.002	< 0.1	< 0.1	< 1	0.008	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	0.2	< 1	< 1	< 1	< 0.01	< 0.1	< 0.1	1.7		
Method Blank	< 1	< 1	< 2																						

Analyte Symbol	Zn	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm														
Lower Limit	0.1	0.02	0.1	0.1	0.1	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS														
GXR-6 Meas	134	15.5		258	66.4	30.7	6.91	12.0	< 0.1	1.80	0.565	0.06	1.02	1.97	0.06	3.84	906	11.7	34.1	0.11		11.5	2.3
GXR-6 Cert	118	35.0		330	90.0	35.0	14.0	110	7.50	2.40	1.30	0.260	1.70	3.60	0.0180	4.20	1300	13.9	36.0	1.00		13.0	2.67
GXR-6 Meas	122	15.1		235	61.7	28.9	6.53	10.3	< 0.1	1.54	0.495	0.06	0.90	1.40	0.05	3.51	833	10.6	31.7	0.09		10.8	2.2
GXR-6 Cert	118	35.0		330	90.0	35.0	14.0	110	7.50	2.40	1.30	0.260	1.70	3.60	0.0180	4.20	1300	13.9	36.0	1.00		13.0	2.67
PK2 Meas																							
PK2 Cert																							
OREAS 904 (Aqua Regia) Meas	23.0	4.56		93.5	34.0	17.3	17.8			1.94	0.585	0.17	0.73	0.84		0.99	79.9	37.2	76.7	0.06			
OREAS 904 (Aqua Regia) Cert	22.4	3.40		91.0	22.4	16.5	17.2			2.02	0.366	0.170	0.580	0.780		0.620	68.0	33.9	70.0	0.0580			
OREAS 45e (Aqua Regia) Meas	34.7	12.3		10.4	7.1	3.9	5.05					0.08	0.81			0.74	135		17.1				
OREAS 45e (Aqua Regia) Cert	30.6	11.7		11.4	7.93	4.05	5.74					0.090	0.97			0.77	139		17.7				
OREAS 45e (Aqua Regia) Meas	39.1	12.8		11.2	7.8	4.3	5.39					0.08	0.94			0.81	139		18.0				
OREAS 45e (Aqua Regia) Cert	30.6	11.7		11.4	7.93	4.05	5.74					0.090	0.97			0.77	139		17.7				
OREAS 45e (Aqua Regia) Meas	34.7	12.3		10.4	7.1	3.9	5.05					0.08	0.81			0.74	135		17.1				
OREAS 45e (Aqua Regia) Cert	30.6	11.7		11.4	7.93	4.05	5.74					0.090	0.97			0.77	139		17.7				
OREAS 45e (Aqua Regia) Meas	39.6	13.0		11.2	7.6	4.2	5.20					0.09	0.91			0.79	136		18.4				
OREAS 45e (Aqua Regia) Cert	30.6	11.7		11.4	7.93	4.05	5.74					0.090	0.97			0.77	139		17.7				
OREAS 922 (AQUA REGIA) Meas	260	7.76	< 0.1	6.1	28.1	15.1	20.4	13.2	0.6	0.70	0.994	0.24	3.82	0.64		2.01	85.8	35.8	72.0	0.30	8.0	30.4	5.4
OREAS 922 (AQUA REGIA) Cert	256	7.62	0.10	6.12	22.7	15.0	16.0	22.3	0.35	0.69	0.851	0.24	3.83	0.57		1.76	70	32.5	63	0.28	7.33	27.5	4.98
OREAS 922 (AQUA REGIA) Meas	253	7.49	0.1	6.1	25.2	14.8	19.2	22.2	0.4	0.69	0.878	0.23	3.71	0.50		1.71	82.4	34.3	69.7	0.29	7.8	29.0	5.1
OREAS 922 (AQUA REGIA) Cert	256	7.62	0.10	6.12	22.7	15.0	16.0	22.3	0.35	0.69	0.851	0.24	3.83	0.57		1.76	70	32.5	63	0.28	7.33	27.5	4.98
OREAS 922 (AQUA REGIA) Meas	266	8.12	< 0.1	6.1	28.8	15.7	21.0	13.7	0.6	0.71	1.05	0.25	4.00	0.67		2.04	86.9	37.0	75.5	0.28	8.4	31.1	5.4
OREAS 922 (AQUA REGIA)	256	7.62	0.10	6.12	22.7	15.0	16.0	22.3	0.35	0.69	0.851	0.24	3.83	0.57		1.76	70	32.5	63	0.28	7.33	27.5	4.98

Analyte Symbol	Zn	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm
Unit Symbol	ppm																						
Lower Limit	0.1	0.02	0.1	0.1	0.1	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.5	0.5	0.5	0.01	0.01	0.1	0.02	0.1
Method Code	AR-MS																						
Cert																							
OREAS 922 (AQUA REGIA) Meas	253	7.49	0.1	6.1	25.2	14.8	19.2	22.2	0.4	0.69	0.878	0.23	3.71	0.50		1.71	82.4	34.3	69.7	0.29	7.8	29.0	5.1
OREAS 922 (AQUA REGIA) Cert	256	7.62	0.10	6.12	22.7	15.0	16.0	22.3	0.35	0.69	0.851	0.24	3.83	0.57		1.76	70	32.5	63	0.28	7.33	27.5	4.98
OREAS 923 (AQUA REGIA) Meas	338	7.75		7.6	25.1	14.1	19.6	14.7		0.84	1.63	0.45	6.23	0.68		1.86	74.0	33.8	68.0	0.43	7.6	28.7	5.2
OREAS 923 (AQUA REGIA) Cert	335	8.01		7.07	19.6	13.6	14.3	22.5		0.84	1.62	0.45	5.99	0.58		1.56	54	30.0	60	0.40	6.79	25.4	4.34
OREAS 923 (AQUA REGIA) Meas	324	7.64		7.1	22.3	13.7	17.8	24.4		0.83	1.57	0.42	5.63	0.55		1.45	62.4	31.5	63.1	0.42	7.1	26.1	4.7
OREAS 923 (AQUA REGIA) Cert	335	8.01		7.07	19.6	13.6	14.3	22.5		0.84	1.62	0.45	5.99	0.58		1.56	54	30.0	60	0.40	6.79	25.4	4.34
OREAS 923 (AQUA REGIA) Meas	350	8.33		7.5	25.6	14.1	19.8	15.0		0.87	1.70	0.46	6.38	0.70		1.86	74.6	35.3	71.4	0.44	8.0	29.8	5.3
OREAS 923 (AQUA REGIA) Cert	335	8.01		7.07	19.6	13.6	14.3	22.5		0.84	1.62	0.45	5.99	0.58		1.56	54	30.0	60	0.40	6.79	25.4	4.34
OREAS 923 (AQUA REGIA) Meas	324	7.64		7.1	22.3	13.7	17.8	24.4		0.83	1.57	0.42	5.63	0.55		1.45	62.4	31.5	63.1	0.42	7.1	26.1	4.7
OREAS 923 (AQUA REGIA) Cert	335	8.01		7.07	19.6	13.6	14.3	22.5		0.84	1.62	0.45	5.99	0.58		1.56	54	30.0	60	0.40	6.79	25.4	4.34
OREAS 907 (Aqua Regia) Meas	139	15.7		36.3	21.1	12.4	7.41	17.2		5.32	1.44	2.37	2.37	1.83	0.19	1.35	242	36.3	72.9	0.59	7.8	28.9	4.9
OREAS 907 (Aqua Regia) Cert	139	14.7		37.0	16.7	11.7	6.52	43.7		5.64	1.30	2.35	2.34	2.28	0.230	1.17	225	36.1	73.0	0.540	7.36	27.8	4.79
OREAS 907 (Aqua Regia) Meas	139	15.7		35.4	19.6	12.0	7.08	20.3		5.21	1.41	2.24	2.35	1.85	0.18	1.31	237	35.1	71.0	0.60	7.9	29.1	4.8
OREAS 907 (Aqua Regia) Cert	139	14.7		37.0	16.7	11.7	6.52	43.7		5.64	1.30	2.35	2.34	2.28	0.230	1.17	225	36.1	73.0	0.540	7.36	27.8	4.79
OREAS 907 (Aqua Regia) Meas	137	15.8		35.8	20.0	11.6	7.08	17.0		5.26	1.35	2.28	2.31	1.73	0.17	1.30	232	35.5	72.9	0.48	7.9	29.3	5.0
OREAS 907 (Aqua Regia) Cert	139	14.7		37.0	16.7	11.7	6.52	43.7		5.64	1.30	2.35	2.34	2.28	0.230	1.17	225	36.1	73.0	0.540	7.36	27.8	4.79
OREAS 907 (Aqua Regia) Meas	139	15.7		35.4	19.6	12.0	7.08	20.3		5.21	1.41	2.24	2.35	1.85	0.18	1.31	237	35.1	71.0	0.60	7.9	29.1	4.8

Analyte Symbol	Zn	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.02	0.1	0.1	0.1	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.5	0.5	0.5	0.01	0.01	0.1	0.02	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
OREAS 907 (Aqua Regia) Cert	139	14.7		37.0	16.7	11.7	6.52	43.7		5.64	1.30	2.35	2.34	2.28	0.230	1.17	225	36.1	73.0	0.540	7.36	27.8	4.79
Oreas 621 (Aqua Regia) Meas	> 5000	9.40		78.0		18.1	7.80	69.7		12.7	61.2	1.69	2.57	116		1.12		19.7	40.7	262			
Oreas 621 (Aqua Regia) Cert	51700	9.29		75.0		18.9	6.87	55.0		13.3	68.0	1.73	2.68	107		1.01		19.4	39.6	278			
Oreas 621 (Aqua Regia) Meas	> 5000	9.55		75.3		17.3	7.97	65.8		12.6	62.5	1.73	2.53	89.8		1.05		18.6	40.0	278			
Oreas 621 (Aqua Regia) Cert	51700	9.29		75.0		18.9	6.87	55.0		13.3	68.0	1.73	2.68	107		1.01		19.4	39.6	278			
Oreas 621 (Aqua Regia) Meas	> 5000	9.51		75.5		17.9	7.79	68.5		13.4	60.9	1.70	2.50	111		1.09		19.6	41.1	269			
Oreas 621 (Aqua Regia) Cert	51700	9.29		75.0		18.9	6.87	55.0		13.3	68.0	1.73	2.68	107		1.01		19.4	39.6	278			
Oreas 621 (Aqua Regia) Meas	> 5000	9.55		75.3		17.3	7.97	65.8		12.6	62.5	1.73	2.53	89.8		1.05		18.6	40.0	278			
Oreas 621 (Aqua Regia) Cert	51700	9.29		75.0		18.9	6.87	55.0		13.3	68.0	1.73	2.68	107		1.01		19.4	39.6	278			
CDN-PGMS-30 Meas																							
CDN-PGMS-30 Cert																							
PF18PT01 Orig																							
PF18PT01 Dup																							
PF18RK10 Orig	51.7	4.57	0.1	13.7	95.4	710	8.74	2.1	< 0.1	0.40	0.334	0.02	0.66	1.52	0.03	32.7	242	19.6	39.2	0.04	4.9	17.7	3.0
PF18RK10 Dup	49.2	4.70	0.2	13.5	95.8	698	8.77	2.1	< 0.1	0.36	0.263	0.02	0.62	1.59	< 0.02	34.6	235	19.3	39.2	0.03	4.8	18.0	3.0
PF18RK12 Orig																							
PF18RK12 Dup																							
Method Blank	< 0.1	0.03	< 0.1	< 0.1	< 0.1	< 0.5	< 0.01	< 0.1	< 0.1	0.03	0.078	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	8.2	< 0.5	0.01	< 0.01	< 0.1	< 0.02	< 0.1
Method Blank	0.2	0.03	< 0.1	< 0.1	< 0.1	< 0.5	< 0.01	0.1	< 0.1	0.05	< 0.002	< 0.02	0.08	< 0.02	< 0.02	< 0.02	6.4	< 0.5	0.01	< 0.01	< 0.1	< 0.02	< 0.1
Method Blank																							

Analyte Symbol	Se	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppb											
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.1	0.1	0.1	10
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS											
GXR-6 Meas	0.1	0.5	2.1	0.3	1.6				0.8	0.1	0.2	< 0.05	0.2		19.3	1.63	106	4.0	0.8	80
GXR-6 Cert	0.940	0.760	2.97	0.415	2.80				2.40	0.330	4.30	0.485	1.90		95.0	2.20	101	5.30	1.54	68.0
GXR-6 Meas	0.2	0.5	1.9	0.3	1.4				0.8	< 0.1	0.1	< 0.05	0.5		32.3	1.51	100	3.7	0.8	70
GXR-6 Cert	0.940	0.760	2.97	0.415	2.80				2.40	0.330	4.30	0.485	1.90		95.0	2.20	101	5.30	1.54	68.0
PK2 Meas																				
PK2 Cert																				
OREAS 904 (Aqua Regia) Meas	2.7			0.6					1.4	0.2					0.14	10.0	7.2	4.9		
OREAS 904 (Aqua Regia) Cert	2.81			0.700					1.41	0.210					0.150	8.49	7.56	5.20		
OREAS 45e (Aqua Regia) Meas									0.7						23.7	0.09	14.3	9.8	1.5	
OREAS 45e (Aqua Regia) Cert									0.86						50.000	0.072	14.3	10.70	1.73	
OREAS 45e (Aqua Regia) Meas									0.8						19.0	0.10	15.5	10.3	1.7	
OREAS 45e (Aqua Regia) Cert									0.86						50.000	0.072	14.3	10.70	1.73	
OREAS 45e (Aqua Regia) Meas									0.7						23.7	0.09	14.3	9.8	1.5	
OREAS 45e (Aqua Regia) Cert									0.86						50.000	0.072	14.3	10.70	1.73	
OREAS 45e (Aqua Regia) Meas									0.8						19.2	0.10	15.8	10.0	1.7	
OREAS 45e (Aqua Regia) Cert									0.86						50.000	0.072	14.3	10.70	1.73	
OREAS 922 (AQUA REGIA) Meas	3.4		4.9	0.7							0.1		1.2			0.16	55.9	13.7	2.2	
OREAS 922 (AQUA REGIA) Cert	3.44		4.44	0.62							0.61		1.12			0.14	60	14.5	1.98	
OREAS 922 (AQUA REGIA) Meas	3.2		4.7	0.7							0.5		1.3			0.14	59.8	13.3	2.1	
OREAS 922 (AQUA REGIA) Cert	3.44		4.44	0.62							0.61		1.12			0.14	60	14.5	1.98	
OREAS 922 (AQUA REGIA) Meas	3.2		4.9	0.7							0.1		1.2			0.16	59.0	13.9	2.2	
OREAS 922 (AQUA REGIA)	3.44		4.44	0.62							0.61		1.12			0.14	60	14.5	1.98	

Analyte Symbol	Se	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppb							
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.1	0.1	0.1	10
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS							
Cert																				
OREAS 922 (AQUA REGIA) Meas	3.2			4.7	0.7							0.5		1.3			0.14	59.8	13.3	2.1
OREAS 922 (AQUA REGIA) Cert	3.44			4.44	0.62							0.61		1.12			0.14	60	14.5	1.98
OREAS 923 (AQUA REGIA) Meas	6.1			4.8	0.7							0.2		2.0			0.15	80.7	14.4	2.2
OREAS 923 (AQUA REGIA) Cert	5.99			4.07	0.54							0.60		1.96			0.12	81	14.3	1.80
OREAS 923 (AQUA REGIA) Meas	6.1			4.5	0.6							0.5		1.9			0.12	77.0	13.1	2.0
OREAS 923 (AQUA REGIA) Cert	5.99			4.07	0.54							0.60		1.96			0.12	81	14.3	1.80
OREAS 923 (AQUA REGIA) Meas	5.7			4.9	0.7							0.2		2.0			0.15	82.7	14.5	2.2
OREAS 923 (AQUA REGIA) Cert	5.99			4.07	0.54							0.60		1.96			0.12	81	14.3	1.80
OREAS 923 (AQUA REGIA) Meas	6.1			4.5	0.6							0.5		1.9			0.12	77.0	13.1	2.0
OREAS 923 (AQUA REGIA) Cert	5.99			4.07	0.54							0.60		1.96			0.12	81	14.3	1.80
OREAS 907 (Aqua Regia) Meas	9.1	1.0	3.8	0.4	1.8	0.3	0.5	< 0.1	0.3	< 0.1	0.3		0.8		17.0	0.12	33.9	7.7	2.2	
OREAS 907 (Aqua Regia) Cert	9.05	0.950	3.45	0.430	1.63	0.210	0.430	0.0490	0.290	0.0390	1.09		0.980		101	0.120	34.1	8.04	2.15	
OREAS 907 (Aqua Regia) Meas	9.1	1.0	3.9	0.4	1.7	0.2	0.5	< 0.1	0.3	< 0.1	0.4		1.0		50.2	0.12	34.5	7.9	2.2	
OREAS 907 (Aqua Regia) Cert	9.05	0.950	3.45	0.430	1.63	0.210	0.430	0.0490	0.290	0.0390	1.09		0.980		101	0.120	34.1	8.04	2.15	
OREAS 907 (Aqua Regia) Meas	9.1	1.0	3.7	0.4	1.7	0.2	0.5	< 0.1	0.3	< 0.1	0.3		0.9		13.1	0.12	33.9	7.7	2.1	
OREAS 907 (Aqua Regia) Cert	9.05	0.950	3.45	0.430	1.63	0.210	0.430	0.0490	0.290	0.0390	1.09		0.980		101	0.120	34.1	8.04	2.15	
OREAS 907 (Aqua Regia) Meas	9.1	1.0	3.9	0.4	1.7	0.2	0.5	< 0.1	0.3	< 0.1	0.4		1.0		50.2	0.12	34.5	7.9	2.2	

Analyte Symbol	Se	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppb							
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.1	0.1	0.1	10
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS							
OREAS 907 (Aqua Regia) Cert	9.05	0.950	3.45	0.430	1.63	0.210	0.430	0.0490	0.290	0.0390	1.09		0.980		101	0.120	34.1	8.04	2.15	
Oreas 621 (Aqua Regia) Meas	4.3			0.3					0.6	< 0.1	1.7		1.1		1030	0.71	> 5000	5.1	1.8	4150
Oreas 621 (Aqua Regia) Cert	5.64			0.330					0.520	0.0780	1.43		1.00		1230	0.770	13600	5.91	1.63	3930
Oreas 621 (Aqua Regia) Meas	4.3			0.3					0.6	< 0.1	1.6		1.1		1040	0.70	> 5000	5.1	1.7	3980
Oreas 621 (Aqua Regia) Cert	5.64			0.330					0.520	0.0780	1.43		1.00		1230	0.770	13600	5.91	1.63	3930
Oreas 621 (Aqua Regia) Meas	4.2			0.3					0.6	< 0.1	1.7		1.0		1030	0.72	> 5000	4.8	1.7	3940
Oreas 621 (Aqua Regia) Cert	5.64			0.330					0.520	0.0780	1.43		1.00		1230	0.770	13600	5.91	1.63	3930
Oreas 621 (Aqua Regia) Meas	4.3			0.3					0.6	< 0.1	1.6		1.1		1040	0.70	> 5000	5.1	1.7	3980
Oreas 621 (Aqua Regia) Cert	5.64			0.330					0.520	0.0780	1.43		1.00		1230	0.770	13600	5.91	1.63	3930
CDN-PGMS-30 Meas																				
CDN-PGMS-30 Cert																				
PF18PT01 Orig																				
PF18PT01 Dup																				
PF18RK10 Orig	< 0.1	0.5	2.7	0.3	1.8	0.4	0.9	0.1	0.7	0.1	< 0.1	< 0.05	0.2	0.001	2.4	1.41	4.8	3.8	1.6	< 10
PF18RK10 Dup	< 0.1	0.5	2.8	0.3	1.8	0.4	0.9	0.1	0.8	0.1	< 0.1	< 0.05	0.3	0.001	1.8	1.48	4.7	4.0	1.7	< 10
PF18RK12 Orig																				
PF18RK12 Dup																				
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	0.1	0.001	< 0.5	0.03	1.0	< 0.1	< 0.1	< 10
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	0.1	< 0.001	< 0.5	0.05	1.0	< 0.1	< 0.1	20
Method Blank																				

**Quality Analysis ...**



**Innovative Technologies**

**Date Submitted:** 20-Jul-18  
**Invoice No.:** A18-09471  
**Invoice Date:** 27-Aug-18  
**Your Reference:** Proof

**Takom Exploration Ltd.**  
**12925 Chief Lake Rd.**  
**Prince George BC V2K 5K1**  
**Canada**

**ATTN: Diana Benz**

## **CERTIFICATE OF ANALYSIS**

8 Rock samples were submitted for analysis.

The following analytical package(s) were requested: Code UT-1-Kamloops Aqua Regia ICP/MS

**REPORT      A18-09471**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

**Notes:**

Assays are recommended for values above the upper limit. The Au from AR-MS is only semi-quantitative. For accurate Au data, fire assay is recommended.

**CERTIFIED BY:**

A handwritten signature in black ink, appearing to read "Emmanuel Eseme".

Emmanuel Eseme , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
9989 Dallas Drive, Kamloops, British Columbia, Canada, V2C 6T4  
TELEPHONE +250 573-4484 or +1.888.228.5227 FAX +1.905.648.9613  
E-MAIL Kamloops@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

## Results

## Activation Laboratories Ltd.

## Report: A18-09471

Analyte Symbol	Ti	S	P	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	%	ppm						
Lower Limit	0.001	1	0.001	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	0.01	0.1	0.1	0.2	0.1	0.02	0.1	
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS											
PF8RK01	0.075	< 1	0.117	2.5	0.6	< 1	0.164	0.26	3.55	0.25	0.03	2.12	7.7	83	16	290	2.94	8.8	8.5	24.9	47.7	5.23	< 0.1
PF8RK02	0.111	< 1	0.140	2.6	0.9	< 1	0.149	0.36	2.11	0.49	0.06	0.91	9.3	96	19	428	4.01	11.1	10.7	13.1	55.2	7.20	< 0.1
PF8RK03	0.038	< 1	0.046	3.8	6.5	< 1	0.055	0.54	2.49	0.16	0.42	0.89	32.1	660	9	544	15.3	21.9	23.8	44.4	182	6.30	1.5
PF8RK04	0.060	< 1	0.145	1.5	0.4	< 1	0.107	0.32	1.69	0.09	0.03	0.73	10.9	115	20	485	3.38	13.2	10.8	22.1	61.8	4.59	0.1
PF8RK05	0.084	< 1	0.136	0.9	0.5	< 1	0.235	0.19	1.29	0.10	0.02	0.96	10.6	103	21	403	3.30	9.9	9.9	23.5	53.5	3.86	0.1
PF8RK06	0.066	< 1	0.146	1.5	0.6	< 1	0.151	0.29	1.56	0.10	< 0.02	0.77	10.1	109	21	110	3.58	12.6	9.6	22.9	59.4	4.26	0.1
PF8RK07	0.055	< 1	0.115	1.4	0.4	< 1	0.108	0.25	1.22	0.08	< 0.02	4.89	7.8	100	17	3330	2.98	10.2	9.7	19.8	51.0	3.27	0.1
PF8RK08	0.113	< 1	0.133	2.1	0.5	< 1	0.185	0.25	1.30	0.10	0.07	1.55	9.5	98	20	518	3.49	12.6	10.5	19.1	60.6	3.82	0.2

**Results****Activation Laboratories Ltd.****Report: A18-09471**

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm								
Lower Limit	0.1	0.1	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS								
PF8RK01	9.7	34.1	258	6.29	0.3	< 0.1	1.49	0.057	0.02	0.39	11.4	< 0.02	18.8	130	16.7	32.2	< 0.01	4.1	15.9	2.8	< 0.1	0.4	2.1
PF8RK02	20.2	117	197	8.13	0.3	< 0.1	1.21	0.045	0.03	0.55	5.56	< 0.02	49.7	182	21.7	39.1	0.03	5.4	20.3	3.6	< 0.1	0.5	2.8
PF8RK03	503	61.4	159	27.4	6.8	< 0.1	11.2	0.028	0.03	0.06	> 500	0.06	50.5	66.9	17.1	32.6	0.10	4.1	16.4	3.2	0.4	0.6	3.6
PF8RK04	7.6	14.6	65.2	8.84	0.2	< 0.1	1.64	0.034	0.02	0.43	1.84	< 0.02	16.4	70.7	16.0	35.8	0.08	4.6	18.5	3.5	< 0.1	0.4	2.9
PF8RK05	7.1	9.7	101	12.6	< 0.1	< 0.1	1.77	0.075	0.02	0.38	2.93	< 0.02	9.93	76.8	16.0	33.6	0.04	4.7	19.0	3.8	< 0.1	0.5	3.4
PF8RK06	11.2	16.5	72.0	8.22	0.3	< 0.1	1.98	0.052	0.03	0.44	2.50	< 0.02	15.8	52.7	15.3	33.5	0.03	4.4	17.5	3.3	< 0.1	0.4	2.7
PF8RK07	6.0	12.9	68.8	12.1	0.3	< 0.1	1.47	0.070	< 0.02	0.30	0.62	< 0.02	9.31	39.0	15.5	32.9	0.14	4.3	17.8	3.6	0.1	0.5	3.2
PF8RK08	13.5	14.0	74.9	8.81	0.5	< 0.1	1.93	0.045	0.03	0.55	1.48	< 0.02	12.4	59.6	13.5	31.0	< 0.01	4.0	16.4	3.1	< 0.1	0.4	2.7

**Results****Activation Laboratories Ltd.****Report: A18-09471**

Analyte Symbol	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppb								
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.1	0.1	0.1	10
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS									
PF8RK01	0.3	1.3	0.2	0.6	< 0.1	0.5	< 0.1	< 0.1	< 0.05	< 0.1	0.001	< 0.5	1.20	2.5	3.2	1.1	20
PF8RK02	0.4	1.7	0.3	0.8	0.1	0.7	0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	4.35	3.6	4.3	1.5	< 10
PF8RK03	0.6	3.9	0.8	3.1	0.5	3.6	0.6	< 0.1	< 0.05	7.3	0.006	< 0.5	1.62	17.0	1.5	2.1	20
PF8RK04	0.4	1.9	0.3	0.9	0.1	0.8	0.1	< 0.1	< 0.05	0.1	< 0.001	< 0.5	0.24	2.7	4.5	0.9	< 10
PF8RK05	0.5	2.5	0.4	1.3	0.2	1.1	0.2	< 0.1	< 0.05	0.1	0.003	2.1	0.17	1.9	3.8	0.9	< 10
PF8RK06	0.4	1.8	0.3	0.8	0.1	0.7	0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.19	1.0	3.8	0.9	< 10
PF8RK07	0.4	2.3	0.4	1.1	0.1	0.9	0.1	< 0.1	< 0.05	0.2	0.002	< 0.5	0.14	0.6	3.2	1.2	20
PF8RK08	0.3	1.8	0.3	0.9	0.1	0.8	0.1	< 0.1	< 0.05	0.3	< 0.001	< 0.5	0.18	0.8	3.2	0.8	< 10

Analyte Symbol	Ti	S	P	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.001	1	0.001	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	0.01	0.1	0.1	0.2	0.1	0.02	0.1	
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-6 Meas		< 1	0.033	23.4	0.7	< 1	0.080	0.37	6.69	1.04	0.14	0.18	20.2	142	63	919	5.07	11.9	20.0	59.1	110	12.8	
GXR-6 Cert		0.0160	0.0350	32.0	1.40	9.80	0.104	0.609	17.7	1.87	0.290	0.180	27.6	186	96.0	1010	5.58	13.8	27.0	66.0	118	35.0	
OREAS 922 (AQUA REGIA) Meas		< 1	0.065	20.0	0.8		0.025	1.25	2.72	0.44	9.95	0.36	3.0	29	38	728	5.05	18.4	33.4	2110	252	6.73	0.2
OREAS 922 (AQUA REGIA) Cert		0.386	0.063	22.8	0.65		0.021	1.33	2.72	0.376	10.3	0.324	3.15	29.4	40.7	730	5.05	19.4	34.3	2176	256	7.62	0.10
OREAS 923 (AQUA REGIA) Meas		< 1	0.070	21.8	0.6			1.46	3.00	0.40	22.7	0.40	3.2	31	38	893	6.27	23.0	33.3	4470	349	7.28	
OREAS 923 (AQUA REGIA) Cert		0.684	0.061	23.4	0.61			1.43	2.80	0.322	21.8	0.326	3.09	30.6	39.4	850	5.91	22.2	32.7	4248	335	8.01	
PF8RK08 Orig	0.115	< 1	0.133	2.1	0.5	< 1	0.186	0.25	1.31	0.10	0.07	1.55	9.6	99	19	519	3.51	12.5	10.6	19.4	61.1	3.85	0.2
PF8RK08 Dup	0.112	< 1	0.133	2.2	0.5	< 1	0.183	0.25	1.29	0.10	0.06	1.55	9.5	98	20	516	3.46	12.6	10.4	18.9	60.2	3.80	0.2
Method Blank	< 0.001	< 1	< 0.001	< 0.1	< 0.1	< 1	0.009	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.1	< 1	< 1	< 1	< 0.01	< 0.1	< 0.1	< 0.2	< 0.1	< 0.02	

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-6 Meas	161	47.4	34.7	5.41	5.6	< 0.1	0.52	0.335	0.05	0.74	0.78	< 0.02	3.01	1040	9.4	26.7	0.04		9.24	1.9	< 0.1	0.4	1.5
GXR-6 Cert	330	90.0	35.0	14.0	110	7.50	2.40	1.30	0.260	1.70	3.60	0.0180	4.20	1300	13.9	36.0	1.00		13.0	2.67	0.940	0.760	2.97
OREAS 922 (AQUA REGIA) Meas	5.5	21.6	13.3	17.1	1.1	< 0.1	0.53	0.792	0.20	3.67	0.45		1.66	72.1	32.2	64.1	0.20	7.4	26.9	4.9	2.1		4.0
OREAS 922 (AQUA REGIA) Cert	6.12	22.7	15.0	16.0	22.3	0.35	0.69	0.851	0.24	3.83	0.57		1.76	70	32.5	63	0.28	7.33	27.5	4.98	3.44		4.44
OREAS 923 (AQUA REGIA) Meas	7.6	20.3	12.9	17.1	2.7		0.78	1.72	0.37	6.27	0.63		1.55	61.8	31.8	63.4	0.46	7.3	26.5	4.8	6.2		4.0
OREAS 923 (AQUA REGIA) Cert	7.07	19.6	13.6	14.3	22.5		0.84	1.62	0.45	5.99	0.58		1.56	54	30.0	60	0.40	6.79	25.4	4.34	5.99		4.07
PF8RK08 Orig	13.7	14.1	76.0	8.82	0.6	< 0.1	1.96	0.045	0.03	0.56	1.39	< 0.02	12.4	58.6	13.5	30.9	0.06	4.0	16.3	3.1	< 0.1	0.4	2.6
PF8RK08 Dup	13.3	13.9	73.7	8.80	0.5	< 0.1	1.90	0.045	0.03	0.53	1.57	< 0.02	12.4	60.5	13.5	31.0	< 0.01	4.0	16.4	3.2	< 0.1	0.5	2.7
Method Blank	0.3	0.3	< 0.5	< 0.01	< 0.1	< 0.1	< 0.01	0.013	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	6.3	< 0.5	< 0.01	< 0.01	< 0.1	< 0.02	< 0.1	< 0.1	< 0.1	< 0.1

Analyte Symbol	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppb								
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.1	0.1	0.1	10
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS								
GXR-6 Meas	0.2	1.3				0.6	< 0.1	< 0.1	< 0.05	< 0.1			1.00	92.1	3.5	0.6	30
GXR-6 Cert	0.415	2.80				2.40	0.330	4.30	0.485	1.90			2.20	101	5.30	1.54	68.0
OREAS 922 (AQUA REGIA) Meas	0.6							< 0.1		0.9			0.10	60.2	13.8	1.9	
OREAS 922 (AQUA REGIA) Cert	0.62							0.61		1.12			0.14	60	14.5	1.98	
OREAS 923 (AQUA REGIA) Meas	0.6							< 0.1		1.6			0.08	86.5	14.7	2.0	
OREAS 923 (AQUA REGIA) Cert	0.54							0.60		1.96			0.12	81	14.3	1.80	
PF8RK08 Orig	0.3	1.8	0.3	0.9	0.1	0.8	0.1	< 0.1	< 0.05	0.3	0.001	< 0.5	0.19	0.8	3.2	0.8	< 10
PF8RK08 Dup	0.3	1.7	0.3	0.9	0.1	0.8	0.1	< 0.1	< 0.05	0.3	< 0.001	< 0.5	0.18	0.7	3.2	0.8	30
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	< 0.1	< 0.1	< 0.1	< 10

**Quality Analysis ...**



**Innovative Technologies**

**Date Submitted:** 20-Jul-18

**Invoice No.:** A18-09457

**Invoice Date:** 28-Aug-18

**Your Reference:**

**Takom Exploration Ltd.  
12925 Chief Lake Rd.  
Prince George BC V2K 5K1  
Canada**

**ATTN: Diana Benz**

## **CERTIFICATE OF ANALYSIS**

26 Stream Sediment samples were submitted for analysis.

The following analytical package(s) were requested: Code UT-1-Kamloops Aqua Regia ICP/MS

**REPORT      A18-09457**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

**Notes:**

Assays are recommended for values above the upper limit. The Au from AR-MS is only semi-quantitative. For accurate Au data, fire assay is recommended.

**CERTIFIED BY:**

A handwritten signature in black ink, appearing to read "Emmanuel Eseme".

Emmanuel Eseme , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**

9989 Dallas Drive, Kamloops, British Columbia, Canada, V2C 6T4  
TELEPHONE +250 573-4484 or +1.888.228.5227 FAX +1.905.648.9613  
E-MAIL Kamloops@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

**Date Submitted:** 20-Jul-18  
**Invoice No.:** A18-09457  
**Invoice Date:** 28-Aug-18  
**Your Reference:**

**Takom Exploration Ltd.**  
**12925 Chief Lake Rd.**  
**Prince George BC V2K 5K1**  
**Canada**

**ATTN: Diana Benz**

## **CERTIFICATE OF ANALYSIS**

26 Stream Sediment samples were submitted for analysis.

The following analytical package(s) were requested: Code 2G Unashed Vegetation ICP/MS

**REPORT      A18-09457**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

**Notes:**

Assays are recommended for values above the upper limit. The Au from AR-MS is only semi-quantitative. For accurate Au data, fire assay is recommended.

**CERTIFIED BY:**



Emmanuel Eseme , Ph.D.  
Quality Control

ACTIVATION LABORATORIES LTD.  
41 Bittern Street, Ancaster, Ontario, Canada, L9G 4V5  
TELEPHONE +905 648-9611 or +1.888.228.5227 FAX +1.905.648.9613  
E-MAIL [Ancaster@actlabs.com](mailto:Ancaster@actlabs.com) ACTLABS GROUP WEBSITE [www.actlabs.com](http://www.actlabs.com)

## Results

## Activation Laboratories Ltd.

## Report: A18-09457

Analyte Symbol	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb
Lower Limit	10	1000	10	0.2	1000	10	50	0.5	10000	10	1	2	20	2	10	0.5	1	1	1	4	4	1	3
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
PF18SS01																							
PF18SS02																							
PF18SS03																							
PF18SS04																							
PF18SS05																							
PF18TR01	20	208000	50	29.6	14000	1410	< 50	1.1	1410000	60	152	83	350	4930	3530	7.0	4	3	83	21	11	1	< 3
PF18TR02	20	140000	30	38.8	13000	1620	< 50	1.0	1850000	50	114	44	250	689	3600	6.3	3	2	62	12	10	< 1	< 3
PF18TR03	20	191000	40	26.2	11000	1110	< 50	1.8	1600000	80	167	68	340	969	3440	7.4	4	3	92	17	12	< 1	4
PF18TR04	10	106000	40	21.0	11000	740	< 50	1.0	1970000	140	61	43	250	2540	3350	2.9	2	1	46	10	4	< 1	< 3
PF18TR05	20	90000	30	30.8	10000	1010	< 50	1.0	1960000	50	77	74	200	499	3670	3.1	2	1	46	8	6	< 1	< 3
PF18TR06	20	250000	30	7.2	16000	720	< 50	< 0.5	1270000	90	74	142	230	982	4760	4.6	3	1	56	14	6	< 1	< 3
PF18TR07	20	227000	20	9.2	5000	1140	< 50	< 0.5	1680000	40	64	64	200	784	3230	3.3	2	< 1	43	9	6	< 1	< 3
PF18TR08	20	178000	20	13.1	7000	700	< 50	0.8	1410000	20	33	43	190	484	3520	1.6	< 1	< 1	36	7	< 4	< 1	< 3
PF18TR09	10	374000	20	6.0	8000	1310	< 50	0.7	1620000	60	30	61	150	801	3350	2.3	1	< 1	31	7	< 4	< 1	< 3
PF18TR10	10	352000	20	12.5	5000	1770	< 50	0.7	2100000	20	26	44	160	1020	3190	1.8	1	< 1	31	5	< 4	< 1	< 3
PF18TR11	10	201000	20	7.9	7000	700	< 50	0.6	1540000	100	24	28	140	239	4850	1.2	< 1	< 1	30	7	< 4	< 1	< 3
PF18TR12	10	234000	20	7.5	8000	490	< 50	0.6	1850000	160	45	64	190	680	3710	2.0	1	< 1	34	7	< 4	< 1	< 3
PF18TR13	10	211000	20	11.2	7000	1120	< 50	0.8	2250000	50	20	40	140	838	3810	1.6	< 1	< 1	28	4	< 4	< 1	4
PF18TR14	< 10	121000	30	14.6	8000	380	< 50	0.6	1190000	40	32	68	190	602	4220	1.7	1	< 1	38	6	< 4	< 1	< 3
PF18TR15	10	68000	60	9.0	5000	740	< 50	0.8	2000000	50	69	58	220	880	3700	1.2	< 1	< 1	32	6	< 4	< 1	< 3
PF18TR16	10	146000	20	7.5	11000	540	< 50	0.6	1400000	30	24	41	270	1400	3760	1.4	< 1	< 1	27	5	< 4	< 1	< 3
PF18TR17	10	263000	10	6.9	8000	850	< 50	0.5	1560000	30	21	52	170	637	2410	1.6	< 1	< 1	28	4	< 4	< 1	< 3
PF18TR18	10	359000	20	7.8	3000	810	< 50	< 0.5	1490000	20	26	65	170	17300	3460	1.3	< 1	< 1	32	5	< 4	< 1	< 3
PF18TR19	20	55000	30	5.4	11000	530	< 50	< 0.5	2130000	30	23	16	120	4950	4820	1.2	< 1	< 1	34	5	< 4	< 1	< 3
PF18TR20	10	291000	30	3.6	12000	1750	< 50	< 0.5	2010000	90	43	62	180	3430	3510	2.7	1	< 1	46	10	< 4	< 1	< 3
PF18TR21	10	438000	30	4.6	10000	1360	< 50	< 0.5	1630000	50	74	80	240	2120	3200	3.3	2	1	65	14	5	1	< 3

## Results

## Activation Laboratories Ltd.

## Report: A18-09457

Analyte Symbol	Ho	In	K	La	Li	Lu	Mg	Mn	Mo	Na	Nb	Nd	Ni	P	Pb	Pd	Pr	Pt	Rb	Re	Sb	Se	Sm
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Lower Limit	0.4	0.2	10	3	10	0.4	1000	100	10	1000	2	5	10	3000	5	0.1	2	0.2	20	0.2	5	10	2
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
PF18SS01																							
PF18SS02																							
PF18SS03																							
PF18SS04																							
PF18SS05																							
PF18TR01	1.9	< 0.2	8620000	82	50	0.5	969000	447000	1850	14000	7	71	2370	1770000	2340	1.3	19	2.2	51100	< 0.2	17	20	16
PF18TR02	1.2	< 0.2	9070000	64	30	0.4	994000	223000	980	12000	7	53	1160	1650000	420	1.2	15	2.8	29400	< 0.2	11	30	10
PF18TR03	1.4	< 0.2	8280000	87	80	0.6	1120000	325000	1090	13000	14	75	1360	1540000	257	1.4	19	1.9	38900	< 0.2	8	30	16
PF18TR04	0.6	< 0.2	7200000	33	80	1.3	980000	381000	1380	14000	5	32	1340	1760000	254	1.4	7	1.4	45400	< 0.2	9	20	4
PF18TR05	0.6	< 0.2	8770000	49	40	3.4	856000	83800	5970	12000	4	29	1440	1810000	211	1.8	8	2.4	31800	< 0.2	11	40	7
PF18TR06	0.6	< 0.2	9520000	39	30	< 0.4	949000	577000	1600	14000	4	35	1270	1990000	181	0.6	9	0.3	55600	< 0.2	8	20	6
PF18TR07	0.6	< 0.2	8250000	34	20	0.6	1170000	373000	1260	14000	4	28	1460	1860000	159	1.0	7	0.3	52900	< 0.2	7	20	6
PF18TR08	0.4	< 0.2	8510000	18	10	< 0.4	900000	240000	8160	12000	2	16	1000	1820000	117	0.4	5	0.7	29500	< 0.2	9	10	3
PF18TR09	0.5	< 0.2	9030000	17	20	0.4	1080000	505000	3780	17000	< 2	14	1030	1870000	148	1.2	4	0.3	51800	< 0.2	7	20	3
PF18TR10	< 0.4	< 0.2	7710000	15	20	3.5	775000	202000	1140	12000	< 2	12	1070	1760000	179	2.2	4	0.6	40800	< 0.2	7	40	2
PF18TR11	< 0.4	< 0.2	9610000	14	20	0.8	913000	275000	1040	11000	< 2	10	1960	2010000	169	1.1	3	0.6	30900	< 0.2	8	20	< 2
PF18TR12	< 0.4	< 0.2	8390000	29	10	< 0.4	943000	367000	1740	12000	2	14	1830	2220000	125	1.0	4	0.6	34300	< 0.2	6	20	2
PF18TR13	< 0.4	< 0.2	6730000	12	< 10	< 0.4	1100000	361000	1020	10000	3	11	1380	1930000	96	1.0	3	0.7	36000	< 0.2	7	20	2
PF18TR14	< 0.4	< 0.2	6040000	18	40	< 0.4	1120000	214000	1500	10000	3	17	2030	1760000	111	0.6	4	1.2	30500	< 0.2	8	40	3
PF18TR15	< 0.4	< 0.2	7000000	56	40	< 0.4	873000	253000	720	10000	< 2	12	1480	1550000	199	1.9	3	0.6	26400	< 0.2	10	110	3
PF18TR16	< 0.4	< 0.2	8080000	15	10	0.5	741000	212000	980	11000	< 2	11	1070	1490000	126	1.0	3	0.4	38400	< 0.2	8	40	< 2
PF18TR17	< 0.4	< 0.2	6870000	11	< 10	< 0.4	958000	338000	3310	11000	< 2	9	1180	1800000	134	0.8	2	0.4	34000	< 0.2	8	30	< 2
PF18TR18	< 0.4	< 0.2	6640000	18	< 10	1.0	878000	214000	2180	11000	< 2	9	910	1860000	182	0.8	3	0.6	47900	< 0.2	8	30	3
PF18TR19	< 0.4	< 0.2	7520000	13	20	< 0.4	933000	159000	1480	14000	< 2	10	650	1890000	79	0.5	3	0.4	34400	< 0.2	8	30	< 2
PF18TR20	< 0.4	< 0.2	9020000	23	40	0.7	1230000	419000	4280	12000	3	20	1090	2270000	133	1.3	5	0.3	40300	< 0.2	10	20	3
PF18TR21	0.8	< 0.2	7400000	38	30	0.8	1070000	467000	2150	10000	4	33	1270	1740000	266	1.0	9	0.4	39100	< 0.2	9	30	7

## Results

## Activation Laboratories Ltd.

## Report: A18-09457

Analyte Symbol	Sn	Sr	Ta	Tb	Te	Th	Ti	Tl	Tm	U	V	W	Y	Yb	Zn	Zr	Ti	S	P	Li	Be	B	Na	
Unit Symbol	ppb	%	%	ppm	ppm	ppm	%																	
Lower Limit	30	50	1	2	5	1	200	0.5	0.1	0.5	20	5	4	3	100	20	0.001	1	0.001	0.1	0.1	1	0.001	
Method Code	AR-MS																							
PF18SS01																		0.084	< 1	0.116	6.8	0.6	< 1	0.049
PF18SS02																		0.024	< 1	0.117	13.0	1.0	< 1	0.045
PF18SS03																		0.114	< 1	0.199	15.9	1.2	< 1	0.122
PF18SS04																		0.064	< 1	0.096	7.5	0.6	< 1	0.051
PF18SS05																		0.083	< 1	0.098	7.1	0.5	< 1	0.056
PF18TR01	< 30	5320	1	< 2	< 5	23	2600	1.4	0.6	4.9	210	< 5	42	< 3	52800	60								
PF18TR02	< 30	5710	1	< 2	5	12	2400	< 0.5	0.4	4.7	200	< 5	34	< 3	42300	60								
PF18TR03	< 30	5320	2	< 2	< 5	20	5600	0.6	0.5	7.3	290	5	43	4	48200	110								
PF18TR04	< 30	6680	< 1	< 2	< 5	10	1800	8.3	0.3	2.4	160	< 5	22	< 3	43000	40								
PF18TR05	< 30	7340	< 1	< 2	< 5	7	1700	< 0.5	0.2	2.7	200	< 5	20	< 3	46700	50								
PF18TR06	< 30	1650	< 1	< 2	< 5	6	2300	< 0.5	0.3	2.8	180	< 5	21	< 3	53400	40								
PF18TR07	< 30	4010	< 1	< 2	< 5	5	1700	0.7	0.2	2.1	160	< 5	18	< 3	46000	40								
PF18TR08	< 30	3270	< 1	< 2	< 5	4	1200	< 0.5	0.2	1.6	140	< 5	10	< 3	51700	30								
PF18TR09	< 30	5540	< 1	< 2	< 5	2	800	3.4	0.1	1.3	110	< 5	8	< 3	44400	30								
PF18TR10	< 30	9990	< 1	< 2	< 5	3	700	< 0.5	< 0.1	1.7	120	< 5	9	< 3	47000	20								
PF18TR11	< 30	4860	< 1	< 2	< 5	2	700	< 0.5	0.2	0.9	130	< 5	10	< 3	50200	20								
PF18TR12	< 30	3750	< 1	< 2	< 5	3	1000	< 0.5	0.2	1.1	120	< 5	9	< 3	45100	40								
PF18TR13	< 30	4930	< 1	< 2	< 5	12	600	< 0.5	< 0.1	0.9	110	< 5	9	< 3	45400	60								
PF18TR14	< 30	2180	< 1	< 2	< 5	6	1100	< 0.5	0.2	1.7	140	< 5	12	< 3	43400	30								
PF18TR15	< 30	8080	< 1	< 2	< 5	3	700	3.5	0.2	1.2	150	< 5	11	< 3	35900	30								
PF18TR16	< 30	4550	< 1	< 2	< 5	2	500	< 0.5	0.1	1.1	120	< 5	7	< 3	42500	< 20								
PF18TR17	< 30	2900	< 1	< 2	< 5	2	500	< 0.5	< 0.1	0.7	110	< 5	6	< 3	44500	20								
PF18TR18	< 30	3620	< 1	< 2	< 5	2	700	< 0.5	< 0.1	1.0	120	< 5	7	< 3	47600	20								
PF18TR19	< 30	2480	< 1	< 2	< 5	2	700	2.3	< 0.1	0.9	140	< 5	9	< 3	62100	20								
PF18TR20	< 30	6640	< 1	< 2	< 5	3	1600	2.1	0.2	1.5	180	< 5	13	< 3	48300	40								
PF18TR21	< 30	5110	< 1	< 2	< 5	6	2400	0.7	0.3	2.3	220	< 5	20	< 3	50500	50								

## Results

## Activation Laboratories Ltd.

## Report: A18-09457

Analyte Symbol	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo
Unit Symbol	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm												
Lower Limit	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.2	0.1	0.02	0.1	0.1	0.1	0.5	0.01	0.1	0.1	0.01
Method Code	AR-MS																						
PF18SS01	0.37	1.89	0.10	0.10	0.63	5.5	60	13	420	2.48	8.6	7.2	14.3	45.4	4.79	0.1	5.4	12.8	76.6	12.1	2.3	0.4	0.51
PF18SS02	0.38	2.49	0.10	0.08	1.27	5.7	48	14	1730	2.70	7.3	9.8	18.1	56.9	5.86	0.1	6.1	10.1	155	30.7	1.8	0.2	0.29
PF18SS03	0.64	4.03	0.22	0.17	1.71	9.5	129	20	2130	5.47	17.3	11.7	26.4	83.1	8.64	0.2	7.1	16.6	230	25.5	3.4	0.2	0.78
PF18SS04	0.26	1.72	0.13	0.07	0.63	3.1	59	12	540	2.52	5.9	6.4	10.3	43.7	3.99	< 0.1	3.8	11.5	93.8	10.8	0.7	0.1	0.36
PF18SS05	0.27	1.77	0.14	0.08	0.64	3.8	63	15	539	2.62	6.0	7.7	10.4	45.2	4.22	< 0.1	3.2	13.2	94.9	11.0	1.2	0.4	0.60
PF18TR01																							
PF18TR02																							
PF18TR03																							
PF18TR04																							
PF18TR05																							
PF18TR06																							
PF18TR07																							
PF18TR08																							
PF18TR09																							
PF18TR10																							
PF18TR11																							
PF18TR12																							
PF18TR13																							
PF18TR14																							
PF18TR15																							
PF18TR16																							
PF18TR17																							
PF18TR18																							
PF18TR19																							
PF18TR20																							
PF18TR21																							

## Results

## Activation Laboratories Ltd.

## Report: A18-09457

Analyte Symbol	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
PF18SS01	0.199	< 0.02	0.37	0.66	< 0.02	5.10	110	21.8	45.3	0.13	5.9	23.0	4.3	0.3	0.9	3.7	0.5	2.6	0.4	1.2	0.1	1.0	0.2
PF18SS02	0.212	0.02	0.33	1.29	< 0.02	5.84	241	38.6	58.5	0.27	10.7	44.1	8.9	1.5	1.8	7.8	1.0	5.4	0.9	2.8	0.4	2.5	0.4
PF18SS03	0.199	0.04	0.75	0.60	0.02	5.05	262	32.9	72.1	0.31	9.4	37.4	7.2	0.9	1.3	6.4	0.9	4.9	0.9	2.7	0.3	2.4	0.4
PF18SS04	0.089	< 0.02	0.35	1.13	< 0.02	7.57	110	14.5	44.2	0.07	3.9	15.7	3.0	< 0.1	0.6	2.8	0.4	2.0	0.4	1.1	0.1	1.0	0.2
PF18SS05	0.134	< 0.02	0.44	1.18	< 0.02	11.3	110	14.4	43.4	0.07	3.9	15.2	2.9	< 0.1	0.5	2.6	0.4	2.0	0.3	1.1	0.1	1.1	0.1
PF18TR01																							
PF18TR02																							
PF18TR03																							
PF18TR04																							
PF18TR05																							
PF18TR06																							
PF18TR07																							
PF18TR08																							
PF18TR09																							
PF18TR10																							
PF18TR11																							
PF18TR12																							
PF18TR13																							
PF18TR14																							
PF18TR15																							
PF18TR16																							
PF18TR17																							
PF18TR18																							
PF18TR19																							
PF18TR20																							
PF18TR21																							

**Results****Activation Laboratories Ltd.****Report: A18-09457**

Analyte Symbol	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Lower Limit	0.1	0.05	0.1	0.001	0.5	0.02	0.1	0.1	0.1	10
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
PF18SS01	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.09	4.7	2.7	1.8	60
PF18SS02	< 0.1	< 0.05	0.2	0.005	2.5	0.23	5.6	2.1	10.4	70
PF18SS03	< 0.1	< 0.05	0.2	< 0.001	< 0.5	0.34	7.7	4.8	5.7	80
PF18SS04	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.14	3.4	2.0	1.9	50
PF18SS05	< 0.1	< 0.05	< 0.1	< 0.001	0.9	0.11	3.1	1.7	1.7	30
PF18TR01										< 10
PF18TR02										< 10
PF18TR03										< 10
PF18TR04										< 10
PF18TR05										< 10
PF18TR06										< 10
PF18TR07										< 10
PF18TR08										< 10
PF18TR09										< 10
PF18TR10										< 10
PF18TR11										< 10
PF18TR12										< 10
PF18TR13										< 10
PF18TR14										< 10
PF18TR15										< 10
PF18TR16										< 10
PF18TR17										< 10
PF18TR18										< 10
PF18TR19										< 10
PF18TR20										< 10
PF18TR21										< 10

Analyte Symbol	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb
Lower Limit	10	1000	10	0.2	1000	10	50	0.5	10000	10	1	2	20	2	10	0.5	1	1	1	4	4	1	3
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-6 Meas																							
GXR-6 Cert																							
NIST 1575a Meas					10000	5700			212000 0	220		58		284	3050				41				
NIST 1575a Cert					9600	6000			25000 00	233		61		283	2800				46				
CDV-1 Meas	< 10	159000 0	1490	42.0	20000	9700		18.6	166000 00	40	4570	2000	18400	136	8920				2780	623		18	45
CDV-1 Cert	9	15000 00	1300	2.3	12400	8500		20	19400 000	40	4350	2000	12100	121	8610				2560	600		30	46
OREAS 922 (AQUA REGIA) Meas																							
OREAS 922 (AQUA REGIA) Cert																							
OREAS 923 (AQUA REGIA) Meas																							
OREAS 923 (AQUA REGIA) Cert																							
PF18TR05 Orig	20	97000	30	34.7	11000	990	< 50	1.1	197000 0	50	69	79	200	489	3640	2.8	2	1	47	9	6	1	< 3
PF18TR05 Dup	20	83000	30	26.9	10000	1030	< 50	0.9	195000 0	50	86	69	200	509	3700	3.3	2	1	45	7	6	< 1	< 3
PF18TR15 Orig	10	66000	40	10.1	5000	700	< 50	0.7	201000 0	40	26	47	210	903	3820	1.0	< 1	< 1	31	5	< 4	< 1	< 3
PF18TR15 Dup	10	70000	80	7.9	4000	770	< 50	0.9	199000 0	50	112	70	220	857	3590	1.4	< 1	< 1	32	7	< 4	< 1	< 3
Method Blank																							

Analyte Symbol	Hg	Ho	In	K	La	Li	Lu	Mg	Mn	Mo	Na	Nb	Nd	Ni	P	Pb	Pd	Pr	Pt	Rb	Re	Sb	Se	
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	
Lower Limit	10	0.4	0.2	10	3	10	0.4	1000	100	10	1000	2	5	10	3000	5	0.1	2	0.2	20	0.2	5	10	
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	
GXR-6 Meas																								
GXR-6 Cert																								
NIST 1575a Meas	30			343000 0				859000	482000			54000			1410	881000	246				16000			120
NIST 1575a Cert	39.9			41700 00				106000 0	488000			63000			1470	107000 0	167				16500			99
CDV-1 Meas	40			141000 0	2490	770		107000 0	407000	240	48000	61		7110	311000	1070				2640		34	190	
CDV-1 Cert	41			18000 00	2310	560		13100 00	413000	200	60000	60		6400	400000	1330				2600		30	300	
OREAS 922 (AQUA REGIA) Meas																								
OREAS 922 (AQUA REGIA) Cert																								
OREAS 923 (AQUA REGIA) Meas																								
OREAS 923 (AQUA REGIA) Cert																								
PF18TR05 Orig	< 10	0.6	< 0.2	881000 0	42	40	6.3	866000	83500	6090	12000	4	25	1720	180000 0	235	1.8	8	2.6	32100	< 0.2	9	40	
PF18TR05 Dup	< 10	0.6	< 0.2	873000 0	56	40	0.6	845000	84200	5840	13000	4	33	1160	181000 0	187	1.8	9	2.1	31600	< 0.2	12	40	
PF18TR15 Orig	< 10	< 0.4	< 0.2	723000 0	15	40	< 0.4	885000	261000	740	10000	< 2	12	1480	158000 0	179	2.0	4	0.7	27000	< 0.2	9	100	
PF18TR15 Dup	< 10	0.4	< 0.2	678000 0	97	40	0.5	861000	245000	700	10000	< 2	12	1490	152000 0	219	1.8	3	0.5	25700	< 0.2	10	120	
Method Blank																								

Analyte Symbol	Sm	Sn	Sr	Ta	Tb	Te	Th	Tl	Tm	U	V	W	Y	Yb	Zn	Zr	Ti	S	P	Li	Be	B	
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	%	%	%	ppm	ppm	ppm	
Lower Limit	2	30	50	1	2	5	1	200	0.5	0.1	0.5	20	5	4	3	100	20	0.001	1	0.001	0.1	0.1	1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	
GXR-6 Meas																	< 1	0.033	23.4	0.7	< 1		
GXR-6 Cert																	0.0160	0.0350	32.0	1.40	9.80		
NIST 1575a Meas																	40900						
NIST 1575a Cert																	38000						
CDV-1 Meas		80	118000			< 5	672	33800			174	6160		1460		25200	1310						
CDV-1 Cert		80	122000			40	610	30000			170	4200		1410		23300	1290						
OREAS 922 (AQUA REGIA) Meas																		< 1	0.065	20.0	0.8		
OREAS 922 (AQUA REGIA) Cert																		0.386	0.063	22.8	0.65		
OREAS 923 (AQUA REGIA) Meas																		< 1	0.070	21.8	0.6		
OREAS 923 (AQUA REGIA) Cert																		0.684	0.061	23.4	0.61		
PF18TR05 Orig	6	< 30	7270	1	< 2	10	7	1800	< 0.5	0.2	2.6	200	7	20	< 3	47300	50						
PF18TR05 Dup	8	< 30	7410	< 1	< 2	< 5	7	1600	0.7	0.3	2.8	200	< 5	19	< 3	46100	50						
PF18TR15 Orig	3	< 30	8180	< 1	< 2	< 5	4	700	3.4	0.2	1.1	140	< 5	11	< 3	36400	30						
PF18TR15 Dup	3	< 30	7990	< 1	< 2	< 5	3	800	3.5	0.2	1.2	160	< 5	11	< 3	35300	30						
Method Blank																	< 0.001	< 1	< 0.001	< 0.1	< 0.1	< 1	

Analyte Symbol	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr	Y	Zr	Nb
Unit Symbol	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.2	0.1	0.02	0.1	0.1	0.1	0.5	0.01	0.1	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-6 Meas	0.080	0.37	6.69	1.04	0.14	0.18	20.2	142	63	919	5.07	11.9	20.0	59.1	110	12.8		161	47.4	34.7	5.41	5.6	< 0.1
GXR-6 Cert	0.104	0.609	17.7	1.87	0.290	0.180	27.6	186	96.0	1010	5.58	13.8	27.0	66.0	118	35.0		330	90.0	35.0	14.0	110	7.50
NIST 1575a Meas																							
NIST 1575a Cert																							
CDV-1 Meas																							
CDV-1 Cert																							
OREAS 922 (AQUA REGIA) Meas	0.025	1.25	2.72	0.44	9.95	0.36	3.0	29	38	728	5.05	18.4	33.4	2110	252	6.73	0.2	5.5	21.6	13.3	17.1	1.1	< 0.1
OREAS 922 (AQUA REGIA) Cert	0.021	1.33	2.72	0.376	10.3	0.324	3.15	29.4	40.7	730	5.05	19.4	34.3	2176	256	7.62	0.10	6.12	22.7	15.0	16.0	22.3	0.35
OREAS 923 (AQUA REGIA) Meas		1.46	3.00	0.40	22.7	0.40	3.2	31	38	893	6.27	23.0	33.3	4470	349	7.28		7.6	20.3	12.9	17.1	2.7	
OREAS 923 (AQUA REGIA) Cert		1.43	2.80	0.322	21.8	0.326	3.09	30.6	39.4	850	5.91	22.2	32.7	4248	335	8.01		7.07	19.6	13.6	14.3	22.5	
PF18TR05 Orig																							
PF18TR05 Dup																							
PF18TR15 Orig																							
PF18TR15 Dup																							
Method Blank	0.009	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.1	< 1	< 1	< 1	< 0.01	< 0.1	< 0.1	< 0.2	< 0.1	< 0.02	< 0.1	0.3	0.3	< 0.5	< 0.01	< 0.1	< 0.1

Analyte Symbol	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-6 Meas	0.52	0.335	0.05	0.74	0.78	< 0.02	3.01	1040	9.4	26.7	0.04		9.24	1.9	< 0.1	0.4	1.5	0.2	1.3				0.6
GXR-6 Cert	2.40	1.30	0.260	1.70	3.60	0.0180	4.20	1300	13.9	36.0	1.00		13.0	2.67	0.940	0.760	2.97	0.415	2.80				2.40
NIST 1575a Meas																							
NIST 1575a Cert																							
CDV-1 Meas																							
CDV-1 Cert																							
OREAS 922 (AQUA REGIA) Meas	0.53	0.792	0.20	3.67	0.45		1.66	72.1	32.2	64.1	0.20	7.4	26.9	4.9	2.1		4.0	0.6					
OREAS 922 (AQUA REGIA) Cert	0.69	0.851	0.24	3.83	0.57		1.76	70	32.5	63	0.28	7.33	27.5	4.98	3.44		4.44	0.62					
OREAS 923 (AQUA REGIA) Meas	0.78	1.72	0.37	6.27	0.63		1.55	61.8	31.8	63.4	0.46	7.3	26.5	4.8	6.2		4.0	0.6					
OREAS 923 (AQUA REGIA) Cert	0.84	1.62	0.45	5.99	0.58		1.56	54	30.0	60	0.40	6.79	25.4	4.34	5.99		4.07	0.54					
PF18TR05 Orig																							
PF18TR05 Dup																							
PF18TR15 Orig																							
PF18TR15 Dup																							
Method Blank	< 0.01	0.013	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	6.3	< 0.5	< 0.01	< 0.01	< 0.1	< 0.02	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	

Analyte Symbol	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Lower Limit	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.1	0.1	0.1	10
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-6 Meas	< 0.1	< 0.1	< 0.05	< 0.1			1.00	92.1	3.5	0.6	30
GXR-6 Cert	0.330	4.30	0.485	1.90			2.20	101	5.30	1.54	68.0
NIST 1575a Meas											
NIST 1575a Cert											
CDV-1 Meas											
CDV-1 Cert											
OREAS 922 (AQUA REGIA) Meas		< 0.1		0.9			0.10	60.2	13.8	1.9	
OREAS 922 (AQUA REGIA) Cert		0.61		1.12			0.14	60	14.5	1.98	
OREAS 923 (AQUA REGIA) Meas		< 0.1		1.6			0.08	86.5	14.7	2.0	
OREAS 923 (AQUA REGIA) Cert		0.60		1.96			0.12	81	14.3	1.80	
PF18TR05 Orig											
PF18TR05 Dup											
PF18TR15 Orig											
PF18TR15 Dup											
Method Blank	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	< 0.1	< 0.1	< 0.1	< 10

**APPENDIX C**  
**SAMPLE MAP-FOR DISPLAY PURPOSED ONLY**

