

**Ministry of Energy, Mines & Petroleum Resources**  
Mining & Minerals Division  
BC Geological Survey

**Assessment Report**  
**Title Page and Summary**

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

**TOTAL COST:** \$16,083.17

**AUTHOR(S):** Tyler Ruks, MSc, PhD

**SIGNATURE(S):** 

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

**YEAR OF WORK:** 2018

**STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S):** 5724467

**PROPERTY NAME:** Blacktop

**CLAIM NAME(S) (on which the work was done):** 1057323, 1057325, 1057327, 1057331, 1057338, 1057378

**COMMODITIES SOUGHT:** Cu, Pb, Zn, Au and Ag

**MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:** 092ISE191

**MINING DIVISION:** Nicola

**NTS/BCGS:** 0921/07

**LATITUDE:** 50 ° 22 '00624 " **LONGITUDE:** 120 ° 38 '32.636 " (at centre of work)

**OWNER(S):**

1) Seven Devils Exploration Ltd.

2) \_\_\_\_\_

**MAILING ADDRESS:**

3417 Slocan St., Vancouver BC, V5M 3E7

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

1) Seven Devils Exploration Ltd.

2) \_\_\_\_\_

**MAILING ADDRESS:**

3417 Slocan St., Vancouver BC, V5M 3E7

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

Mafic volcanic rocks, Late Triassic-Early Jurassic, Nicola Group, VMS, Volcanic Hosted Copper

**REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:** 03894, 02715, 02811, 04765, 05678,

06040, 06119, 07016, 09880, 25209, 26660, 27476, 30006, 32518, 35612

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
<b>GEOLOGICAL (scale, area)</b>			
<b>Ground, mapping</b>	variable, 16.6 km <sup>2</sup>	See page above	8041.58
<b>Photo interpretation</b>			
<b>GEOPHYSICAL (line-kilometres)</b>			
<b>Ground</b>			
<b>Magnetic</b>			
<b>Electromagnetic</b>			
<b>Induced Polarization</b>			
<b>Radiometric</b>			
<b>Seismic</b>			
<b>Other</b>			
<b>Airborne</b>			
<b>GEOCHEMICAL (number of samples analysed for...)</b>			
<b>Soil</b>			
<b>Silt</b>			
<b>Rock 4</b>		See page above	8041.58
<b>Other</b>			
<b>DRILLING (total metres; number of holes, size)</b>			
<b>Core</b>			
<b>Non-core</b>			
<b>RELATED TECHNICAL</b>			
<b>Sampling/assaying</b>			
<b>Petrographic</b>			
<b>Mineralographic</b>			
<b>Metallurgic</b>			
<b>PROSPECTING (scale, area)</b>			
<b>PREPARATORY / PHYSICAL</b>			
<b>Line/grid (kilometres)</b>			
<b>Topographic/Photogrammetric (scale, area)</b>			
<b>Legal surveys (scale, area)</b>			
<b>Road, local access (kilometres)/trail</b>			
<b>Trench (metres)</b>			
<b>Underground dev. (metres)</b>			
<b>Other</b>			
		<b>TOTAL COST:</b>	16083.17

**Assessment Report**

**Rock Geochemistry  
and  
Geology of the  
Blacktop Property**

**Nicola Mining Division**

**0921/07**

**667665mE 5582059mN UTM Z10 NAD83  
50°22'N 120°38'W NAD83**

**For**

**Seven Devils Exploration Ltd.**

**By**

**Tyler Ruks, MSc, PhD**

**March 2019**

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## Introduction

### Location and Access

The Blacktop property is located in south-central British Columbia, approximately 45 km south of Kamloops (Figure 1). The property is located predominantly on the west side of Highway 5, which bisects the easternmost claims. Access to the majority of the property is via logging road, some of which has been decommissioned.

### Physiography, Climate and Vegetation

The Blacktop Property is located within the Mt. Guichon area of the Interior Plateau. The property is in a rolling upland east of Mt. Guichon, and west of Surrey and Sussex Lakes. Maximum elevation is 1600 m.

The area has a continental climate with summer temperatures averaging 20°C and winter temperatures averaging -4°C. The property could be snow covered from October through May. Vegetation on the property comprises spruce, lodge pole pine and poplar. Aspen and willow predominate in swamps. Much of the area has been clear-cut logged, with cut blocks in varying stages of regrowth.

### Claims and Ownership

The Blacktop Property consists of 6 contiguous claims which total 2123 hectares, as indicated in Table 1 and Figure 2. They are owned 100% by Seven Devils Exploration, Ltd., 3417 Slocan St., Vancouver, BC.

Table 1: Claim Status

Title Number	Owner	Title Type	Issue Date	Good To Date	Status	Area (ha)
1057323	234642 (100%)	Mineral	2018/JAN/01	2020/JAN/01	GOOD	123.6869
1057325	234642 (100%)	Mineral	2018/JAN/01	2020/JAN/01	GOOD	969.1591
1057327	234642 (100%)	Mineral	2018/JAN/01	2020/JAN/01	GOOD	783.0007
1057331	234642 (100%)	Mineral	2018/JAN/01	2020/JAN/01	GOOD	123.628
1057338	234642 (100%)	Mineral	2018/JAN/01	2020/JAN/01	GOOD	20.6145
1057378	234642 (100%)	Mineral	2018/JAN/02	2020/JAN/02	GOOD	103.0726

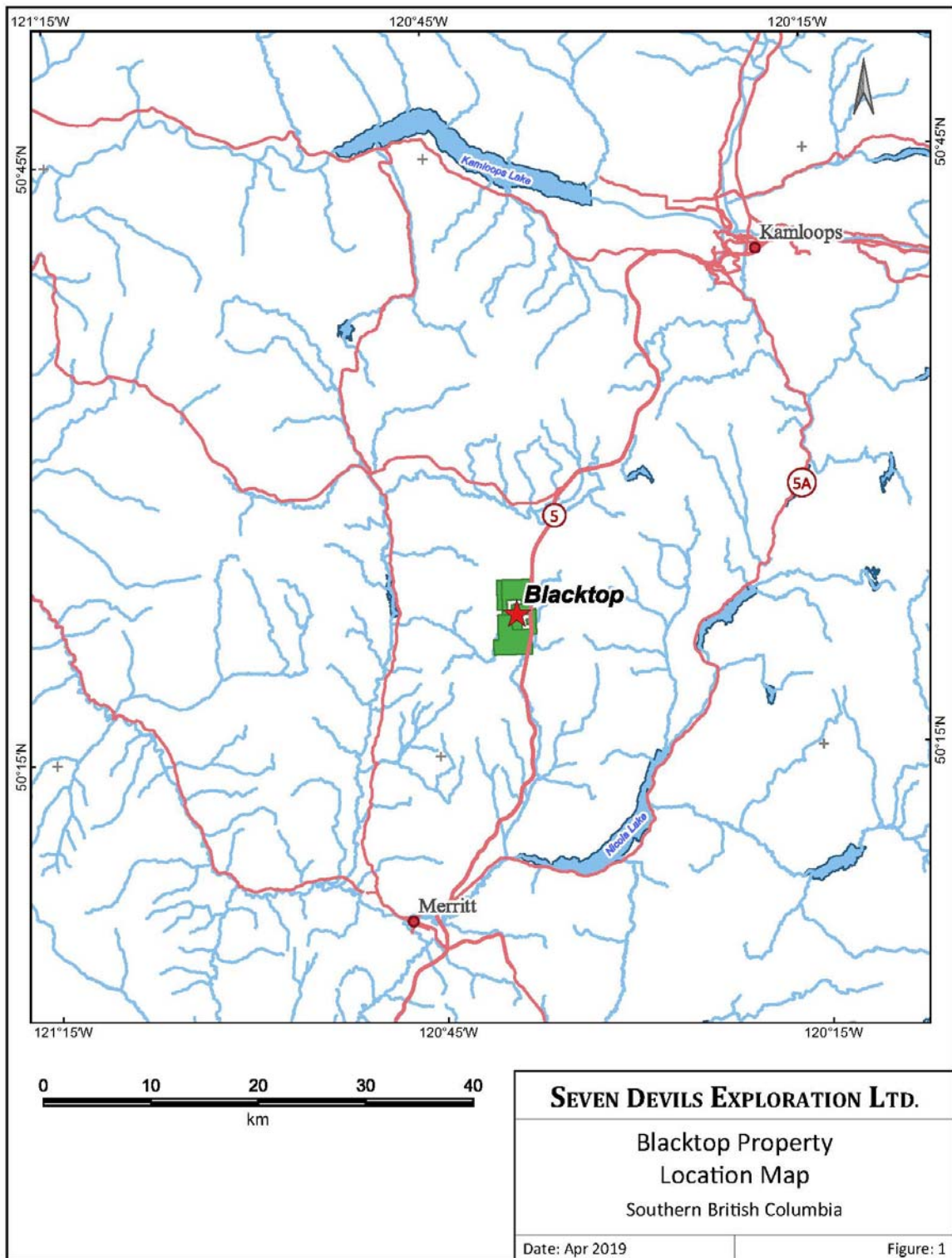


Figure 1: Location of the Blacktop Property.

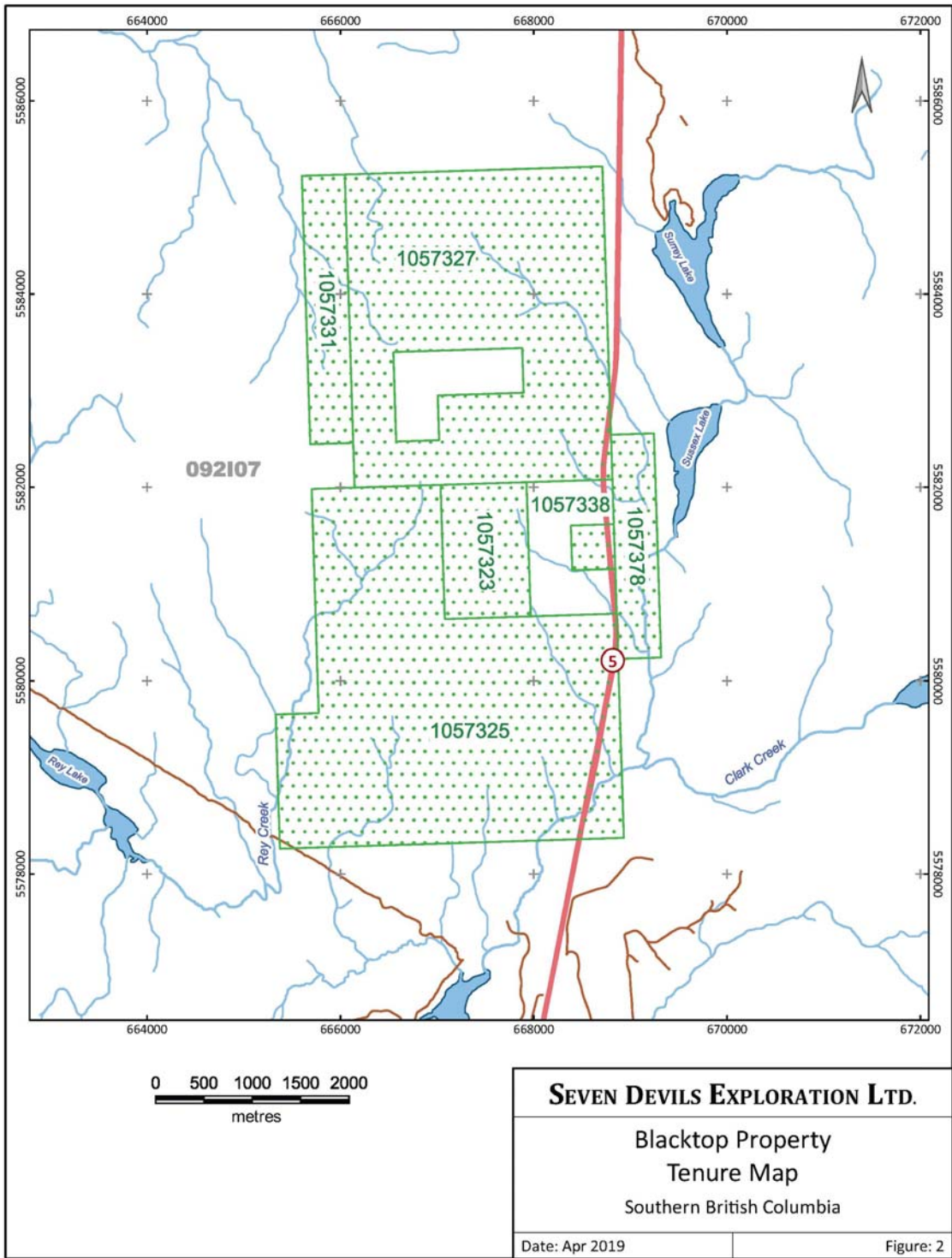


Figure 2: Mineral Tenures, Blacktop Property.



## Exploration History

The mineral exploration history of the Blacktop area is summarized by Liaghat and Blann (2015). The following summary is modified from this account.

The earliest record of mineral exploration in the Blacktop region is that concerning Au-Ag bearing quartz veins of the Stump Lake occurrence (MINFILE, 2019), located approximately 20 km east of the Property. This was followed in the 1920s by exploration of the Iron Mountain, Nicola Lake and Swakum Mountain areas, leading to the discovery of the Enterprise-King William veins, which produced until 1942 (Meyers et al., 1989). The Afton deposit (New Gold Inc.) was discovered in 1970. This discovery triggered exploration of the Blacktop property and immediate surroundings, which from 1972 through 1983 included geological mapping, geochemical and geophysical surveys. These surveys lead to the discovery of Pb-Zn-Au-Ag bearing quartz-carbonate veins in the Helmer Lake area, located to the south of the Property (Stadnyk, 1970).

The Rey Lake porphyry copper-molybdenum occurrence, located west of the property, has first documented work comprising a significant mapping, geophysical, soil geochemical, road building, trenching and diamond drilling program in 1972. A non-43—101 compliant resource of 47 million tonnes of 0.17% Cu and 0.018% Mo is reported (Howell, 1994).

Copper-gold mineralized float boulders containing porphyry copper style mineralization and alteration was discovered on the property by geologist Michael Moore in 1997. This discovery was followed by an induced polarization geophysical survey of the target area, which was in turn followed by a 451 m, three hole drill test by International Skyline Gold (Moore, 1997). This program did not outline economically significant copper mineralization, but was successful in demonstrating the presence of porphyry copper style alteration (propylitic, phyllic and argillic alteration) and coincident, anomalous copper mineralization in several of the holes.

Volcanogenic massive sulfide mineralization comprising the Blacktop showing was discovered on the Property by geologist Michael Moore in 2000. This discovery was followed up with geological mapping, soil and stream sediment geochemical sampling, trenching and several geophysical surveys including helicopter and ground based magnetic and electro-magnetic (EM) surveys, in addition to induced polarization (IP) surveys (Cathro, 2001). Chip sampling of the zone exposed in trenches returned assays up to 17% Zn, 1.6% Cu, 0.47% Pb, 76 g/t Ag and 0.49 g/t Au over 1.1 m (Gitennes (2001). An eight-hole drilling program by Gitennes encountered significant mineralization in F01-02, comprising 70 cm of strongly deformed, fine-grained, sphalerite-pyrite-chalcopyrite massive sulfide that assayed 16.5% Zn, 1.18% Cu, 87.4 ppm Ag and 0.45 ppm Au (McArthur, 2002).

Exploration of the property in 2007 and 2011 by Rich River Exploration Ltd. (Williams, 2008 and 2011) resulted in the discovery of a broad zone of malachite and native copper

mineralized mafic volcanic rocks along newly constructed logging roads, with assays up to 1.9% Cu.

## **Regional Geology**

The Blacktop property is underlain by Late Triassic-Early Jurassic submarine through subaerial volcanic and sedimentary rocks assigned to the Nicola Group (Figures 3 and 4; Massey, 2005). Regional geology of the Blacktop area was compiled in Schiarizza and Church (1996) and later in Massey (2005). The following summary of the regional geology and metallogeny of the region is summarized by Williams (2011), containing excerpts from Moore et al. (1990).

*The Nicola Group comprises a diverse assemblage of Late Triassic to Early Jurassic submarine and subaerial volcanic, volcanoclastic, and sedimentary rocks that underlie much of the Intermontane Belt of south central British Columbia. The Nicola Group, part of the Quesnellia tectono-stratigraphic terrane is accompanied by other early Mesozoic volcanic arc sequences of the Takla and Rossland Groups (Mortimer, 1987). Several plutons that straddle the Triassic-Jurassic boundary cut the Nicola Group. A Tertiary fault-bounded structure of the Nicola Horst, exposes relatively deep-seated metamorphic equivalents of the Nicola Group, intruded by plutons of Triassic to Paleocene age (Moore, 2000).*

### **Nicola Group**

*Nicola Group rocks have been divided in a sequence of three belts, each characterized by distinct facies and assemblages. A western belt is an easterly facing succession of calc alkaline, mainly plagioclase phyric andesitic flows and breccia, with lenticular interlayers of limestone and bedded volcanoclastic rocks. Although flows are more abundant relative to clastic facies in the western part of the belt, sedimentary facies can be found throughout its entire width in the Swakum Mountain area. The alternation of thick successions of massive uniform green flows and unsorted breccias with bioclastic limestones, volcanic conglomerate and local subaerial volcanic facies, such as maroon scoriaceous breccias, suggests deposition near a rapidly fluctuating shoreline. Local felsic centers contain dacite and rhyolite flows, welded tuff and breccia, with intercalated heterolithic, intermediate to felsic volcanoclastics.*

*The central belt consists of mainly augite and plagioclase-phyric basaltic flows and associated breccias. These may be considered largely submarine deposits of alkalic composition. Subvolcanic intrusions of diorite and gabbro are abundant. Preto (1977) in the eastern belt, south of Merritt, interpreted similar intrusions may be the erosional remnants of Upper Triassic volcanoes.*

*The eastern belt consists almost entirely of mafic augite-phyric volcanoclastic rocks, ranging from predominant coarse breccia to more subordinate fine wacke*

*and siltstone. This eastern succession may be an emergent part of the western belt. Regional metamorphism is low greenschist facies.*

*An unconformable sequence of clastic rocks of the Early and Middle Jurassic Ashcroft Formation overlie the Nicola Group. They are mostly unlayered, poorly sorted coarse conglomerate with discontinuous interbeds of pyritic, rusty weathering sandstone and siltstone. In the Swakum Mountain area a grey, commonly fetid bioclastic limestone up to 200 m thick occurs near the base of the formation. Clasts in the conglomerate are mainly volcanic, resembling Nicola Group rocks, along with boulders of granite and diorite composition. At several localities, a distinctive chert-pebble conglomerate containing green clasts overlies the polymictic conglomerate, occasionally with chert bearing horizons.*

*Flat-lying Miocene Chilcotin basalts occur north of the Blacktop Property and probably in smaller outliers elsewhere. These flows are nearly indistinguishable from Pleistocene and Recent valley basalts that once filled the major drainage channels of the region and now occur only as remnants in the Nicola and Quilchena valleys.*

*The seven major plutons that intrude Nicola Group rocks are also of Late Triassic to Early Jurassic in age. Principal among them is the Guichon Creek batholith that consists of biotite and hornblende diorite, quartz monzonite, granodiorite and rare granite. The batholith is chemically and mineralogically very similar to lavas of the western Nicola belt. Some of the plutons are zoned, consisting of pyroxenite, gabbro, diorite, monzonite and syenite, while others are composed of biotite and hornblende diorite, quartz diorite, quartz monzonite, granodiorite and rare granite (Mortimer, 1987). Based on the similarity of their chemical signatures to adjacent Nicola volcanic rocks, at least some plutons are considered comagmatic to the volcanic assemblage they intrude.*

### **Nicola Horst**

*The Nicola Horst is a northerly trending block 40 kilometres in length and entirely detached from the surrounding Nicola Group rocks by Tertiary normal faults. The Horst, often referred to as the "Nicola batholith" in earlier studies, is a complex of Nicola Group rocks, sedimentary rocks of unknown age, tonalite and tonalite porphyry. Those rocks are all strongly deformed, metamorphosed to low amphibolite facies and intruded by granitoid rocks ranging in age from at least Early Jurassic to Paleocene.*

*Stratified rocks of the Nicola Horst consist of strongly foliated and lineated quartzite metaconglomerate and interlayered graphitic mica schist as well as several units that are closely comparable to Nicola Group rocks except for their relatively high strain and metamorphic grade. The conglomerate and black schist are not comparable to any facies of the Nicola Group. They appear to structurally overlie the Nicola correlatives in the Horst, although they are separated from*

*them by plutonic units. The conglomerate comprises stretched pebble-size clasts mainly of white, grey and black quartzite in a biotite-muscovite-quartz matrix with a few granitoid clasts. Staurolite and garnet accompany andalusite in the schist that suggests uplift during metamorphism.*

*The Nicola-like rocks are characterized by hornblende pseudomorphs after augite phenocrysts that resemble units of the central and eastern belts. Those identified with the central belt consist mainly of uniform or meta-augite porphyry while the remainder are mostly layered hornblende and hornblende-biotite schists that appear to be volcanoclastic sediments. In the east-central part of the Horst, these rocks contain relict graded and load-cast beds, but in the north end those primary features are obscured by strain and grain growth.*

*The most strongly deformed intrusive rocks in the Horst are leucocratic and tonalite porphyry that exhibits strain geometry comparable to the metasediments. Metadiorite, varying to metagabbro and tonalite is generally less penetratively and homogeneously strained. Along the Clapperton Fault system that bounds the west side of the Horst, the metadiorite has been intruded by granodiorite to granite that is also metamorphosed. A lenticular body of metaperidotite is converted to a pale amphibolite assemblage. Two varieties of less-deformed but metamorphosed, coarse biotite granitoid rocks are recognized; the Le Jeune variety containing augen of potassium-feldspar that cuts the Frogmore variety, which is less strongly foliated and more equigranular, containing highly oblate mafic xenoliths. Both of these types vary in composition from granite to tonalite but are predominantly granite and granodiorite. The Le Jeune metagranodiorite has been dated to early Jurassic.*

*The southern part of the Horst is dominated by the Paleocene Rocky Gulch batholith, a potassium-feldspar megacrystic granodiorite to granite that is superficially similar to the earlier units but is typically coarser and essentially massive and un-deformed. It cuts the older type with which it is intimately mixed in the north-central part of the Horst.*

### ***Regional Tectonics & Structure***

*The tectonic history of the property region is dominated by a complex pattern of brittle deformation. Only in the Nicola Horst are the rocks penetratively deformed – evident as westerly plunging stretching features probably related to accretion of the Nicola arc in Mesozoic time. Most of the Nicola rocks are steeply dipping with stratigraphic tops facing east. Major northwest trending lineaments in Nicola rocks are transected by northerly striking Tertiary extensional fault systems. These systems occupy the Nicola River, Guichon, Clapperton and Quilchena Creek valleys. Eocene sediments are deformed to a near vertical dip and the Nicola Horst elevated relative to its surroundings. Where exposed, these faults exhibit intense shattering, veining and local alteration.*

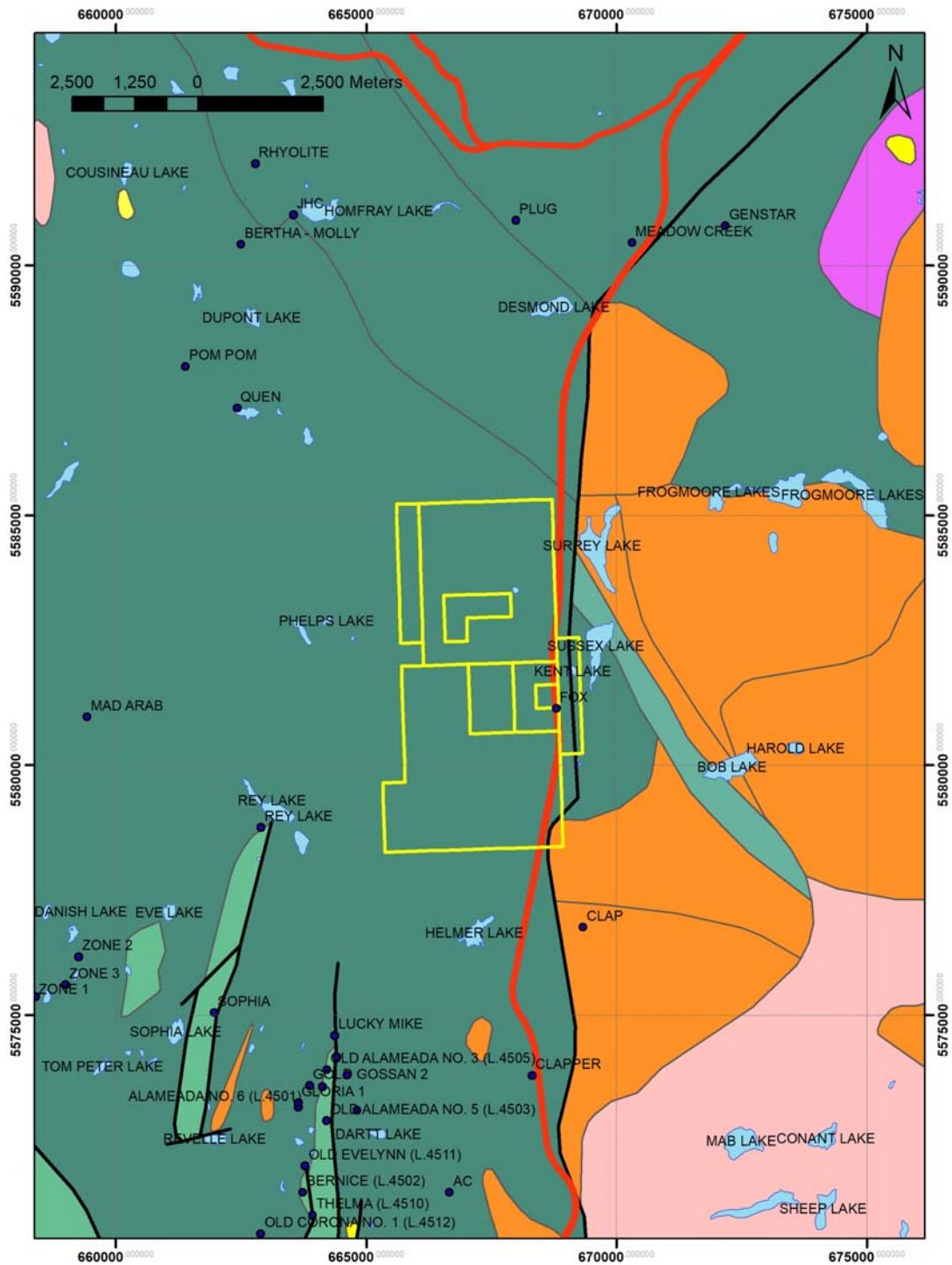



Figure 3: Regional geology and MINFILE occurrences, after Massey (2005). Scale is 1 to 100,000 (NAD83, Zone 10).

## Legend


Quaternary

 *Alkaline volcanic rocks*


Miocene

 *Basaltic volcanic rocks*


Eocene

 *Feldspar porphyritic  
intrusive rocks*


Paleocene

 *Paleocene granodiorite  
intrusive rocks*


Lower to Middle Jurassic

 *Ashcroft Formation:  
Sedimentary rocks*

Upper Triassic


 *Nicola Group: Mafic through felsic  
volcanic rocks, and sedimentary  
rocks with local limestone.*

Late Triassic to Early Jurassic

 *Tonalite, diorite and  
granodiorite intrusive  
rocks*

 *Ultramafic rocks*


Paleozoic to Mesozoic

 *Conglomerate and coarse  
clastic sedimentary rocks*

• MINFILE

 Claims

 Road

 Fault

 Lake

Figure 4: Regional geology and MINFILE occurrences, after Massey (2005).

## Reconnaissance Geology, Alteration and Mineralization

Reconnaissance traverses were conducted in four areas of the property (Figure 5), all with the goal of evaluating the prospectivity of the property for hosting porphyry copper-gold and VMS mineralization:

- 1) West Area: Hydrothermal biotite was described in this area by previous workers (Koffeyberg, 2012). Work was conducted in this area in order to evaluate the porphyry copper-gold potential of the area;
- 2) Central Area: A strong magnetic anomaly was delineated in this area by a previous airborne geophysical survey. Work was conducted here in order to evaluate the porphyry copper-gold potential of the area; in particular, to examine the area for the presence of hydrothermal magnetite, a mineral commonly associated with the K-silicate altered zones of porphyry copper-gold systems.
- 3) North Area: Malachite-chalcocite bearing mafic volcanic rocks yielding significant copper grades were discovered in this area by previous workers along a recently constructed logging road. Work was conducted in this area in order to evaluate the porphyry copper-gold potential of the zone.
- 4) East Area: VMS mineralization of the Blacktop zone has been the subject of significant exploration by previous workers, including diamond drilling. Work was conducted in this area in order to locate and resample the showing, understand its geometry, and evaluate its potential for hosting additional VMS mineralization.

### **West Area**

The West Area of the property is located along the eastern flank of Mt. Guichon (Figures 5 and 6). Previous workers have described potassic altered basalts in the area (Koffeyberg, 2012). Reconnaissance mapping of the area by the authors was hampered by snow cover. However, the work conducted indicates that the zone is predominantly underlain by fragmental red and green mafic volcanic rocks, including abundant zones of breccia, some of which may be the result of phreatomagmatic processes, and potentially intrusive in nature (Figures 6 and 7). Lapilli to tuff breccia like, red and green volcanic rocks predominate, with variably feldspar-clinopyroxene/hornblende phryic clasts ranging in size from centimeter to decimeter scale. Centimeter scale limestone clasts are present locally (Figure 8). At station 18TRBK014, a clast supported breccia contains local zones of white, fine grained matrix, which might comprise comminuted clasts and feldspar crystals (Figure 9). This breccia also contains centimeter scale mafic (?) composition amoeboid clasts, some of which are near jigsaw fit and resemble juvenile clasts in phreatomagmatic breccias. Alteration assemblages in the area are typified by chlorite, epidote and hematite, in varying proportions (Figure 7). Potassic alteration was not observed.

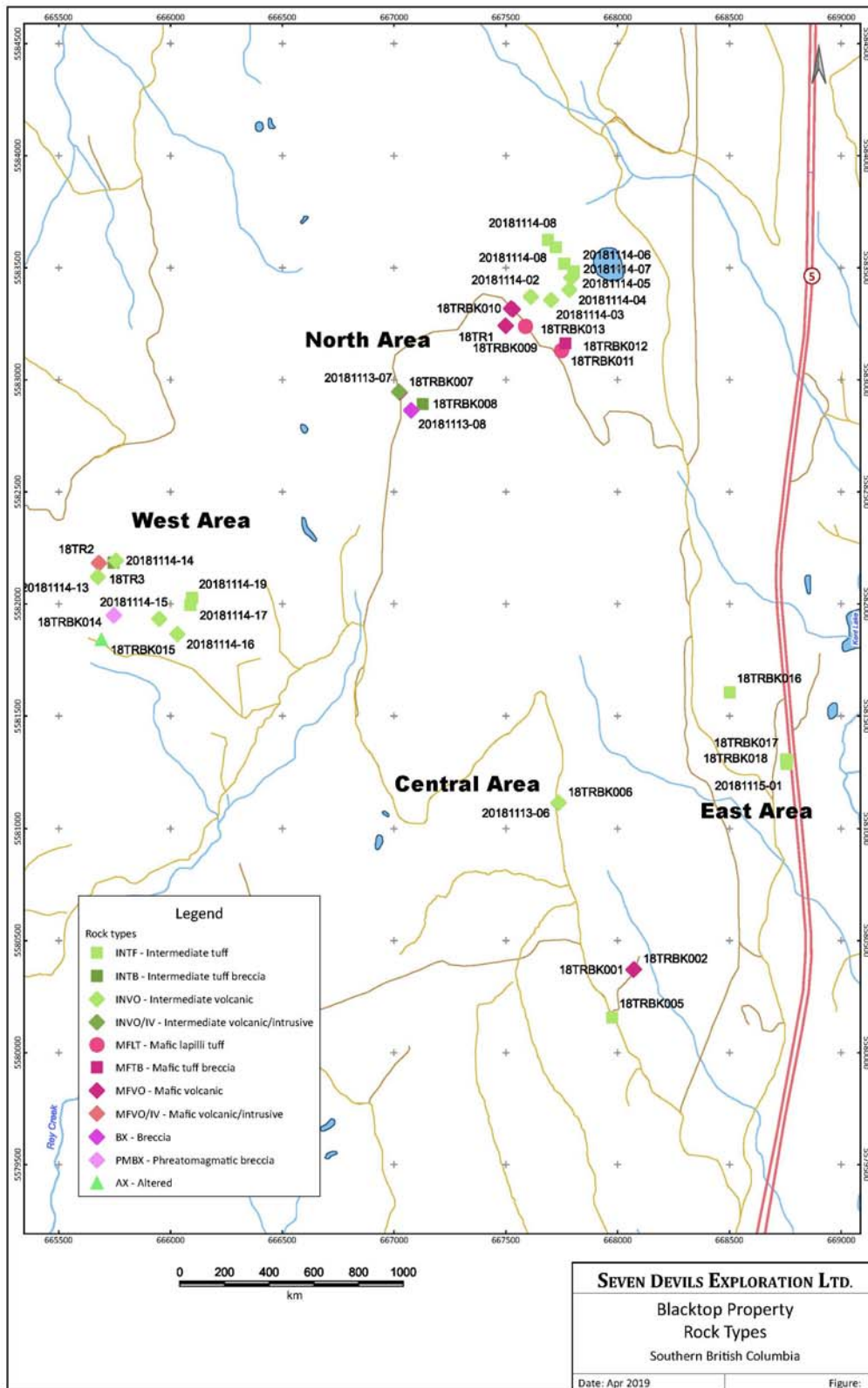


Figure 5: Blacktop property 2018 station locations and rock types.



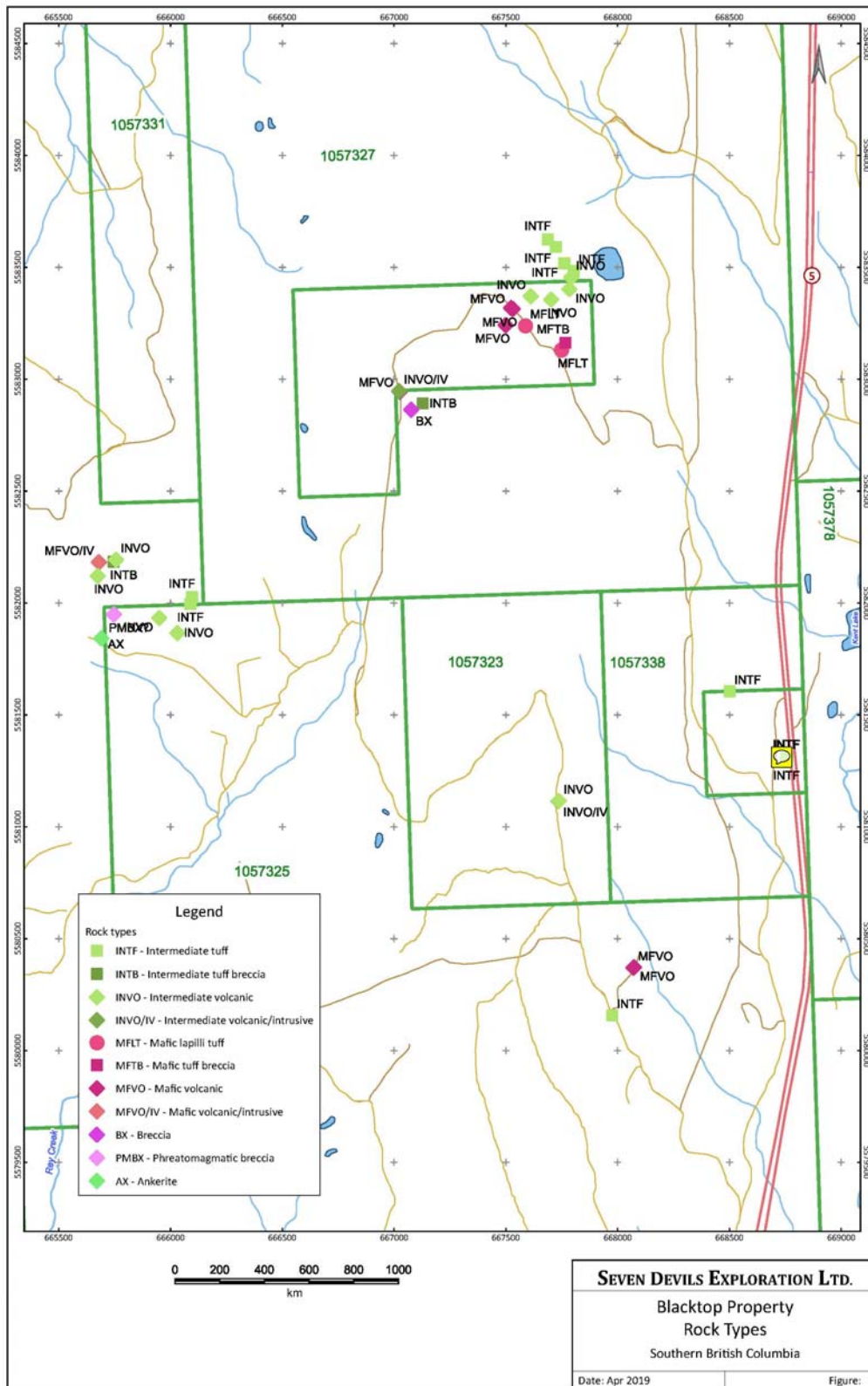


Figure 6: Blacktop property 2018 rock types.

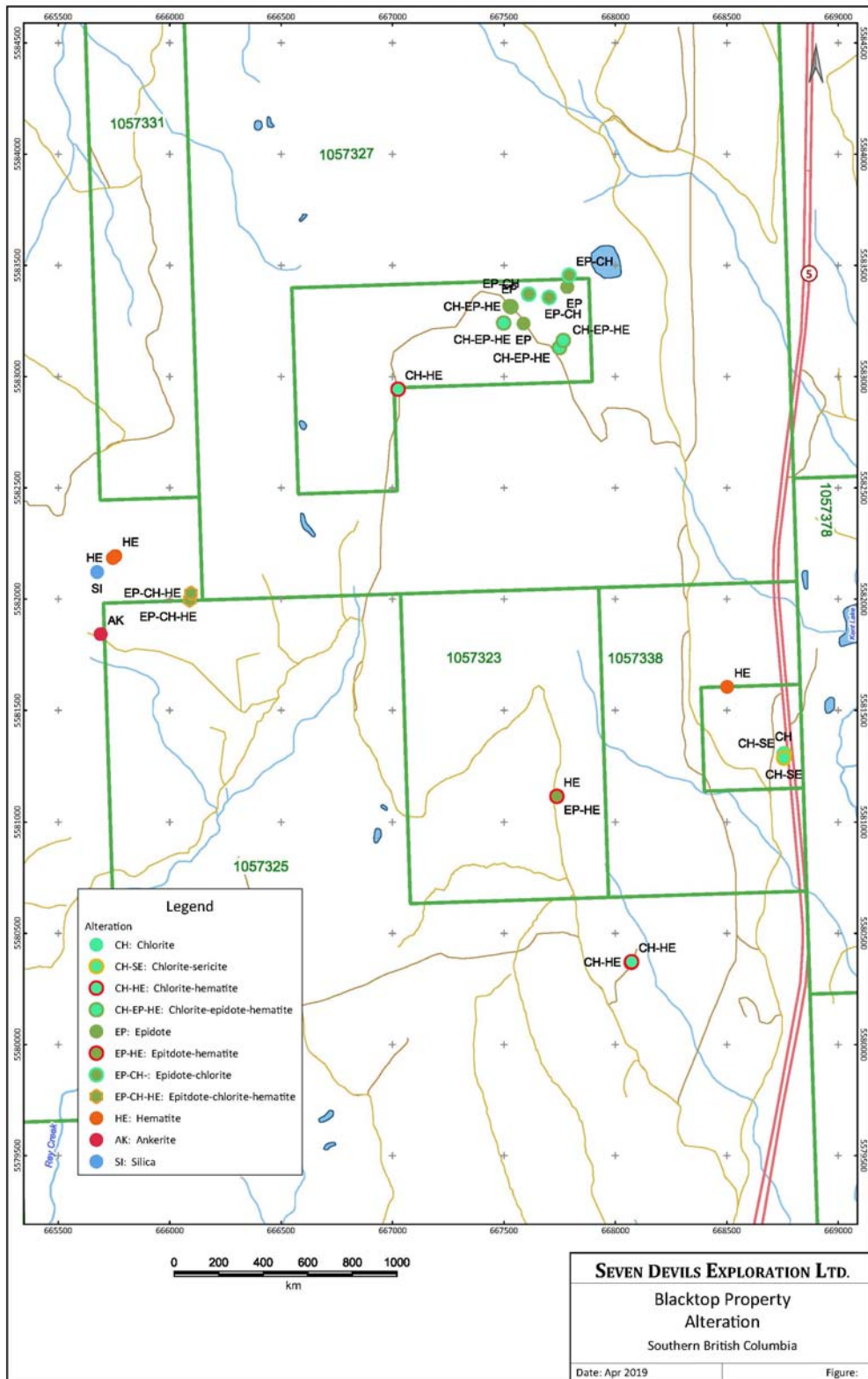


Figure 7: Blacktop property 2018 alteration.

## **Central Area**

The Central Area of the property, located at station 18TRBK006 (Figure 5), is host to a strong magnetic anomaly (Liaghat and Blann, 2015) delineated by a previous government airborne geophysical survey of the area. Reconnaissance mapping of the area by the authors was hampered by lack of exposure and snow cover, but was able to identify a prominent outcrop in the core of the geophysical anomaly. This outcrop, comprising a red, matrix supported mafic fragmental (Figure 6) comprises approximately 20% clasts of pyroxene +/- hornblende phyric mafic volcanic rocks to multi-centimetre size (subround to subangular). The clasts contain up to multi-millimetre size pyroxene +/- hornblende phenocrysts (euhedral to subhedral), some of which appear altered to chlorite (Figures 10 and 11). Local clasts contain up to 20% carbonate amygdules, suggesting a volcanic origin (or component). The matrix is strongly red in colour, and fine grained. Abundant disseminated fine grained magnetite is present both in the matrix and the clasts. Magnetite veining was not observed, suggesting that much of the magnetite in the sample may be magmatic in nature, and not hydrothermal. However, more work, including detailed thin section petrography, is recommended in order to evaluate this. The abundant magnetite in the sample, however, is a potential explanation for the strong magnetic response of this zone in the regional geophysical survey.

## **North Area**

Chalcocite-malachite-native copper bearing mafic volcanic rocks were discovered in the North area (Figure 5) along logging roadcuts by previous workers. Reconnaissance geology in the area by the authors was hampered by snow cover, but was successful in locating the showings. Abundant mafic volcanic rocks in the area are predominantly well bedded variably pyroxene phyric volcanoclastic rocks, including tuff, lapilli tuff and tuff breccia, in addition to potential flows (Figure 6). Limestone clast bearing, red-green heterolithic breccia similar to the that of the West area was also documented on slopes above the showings. Host rocks to the chalcocite-malachite-native copper showings are dark green to black in colour, and contain in hand sample up to 30% green pyroxene euhedra (and potential hornblende) to 3 mm size. In hand sample, mafic sites appear to have undergone weak to moderate chlorite alteration (Figure 12). The matrix is fine grained and dark green in colour, and contains disseminated fine grained carbonate. The rock is moderately to strongly magnetic, suggesting the presence of abundant, fine grained magnetite. Disseminated native copper blebs ranging from sub-millimetre to 1 millimetre size are locally present. Quartz-epidote +/- carbonate veining is relatively abundant in the vicinity of the showings (Figure 7), and vein density decreases with distance from the mineralization. A cut section of a quartz-epidote-malachite vein bearing sample was found to contain a large, centimeter sized bleb of bornite, indicating that copper in the showing was introduced with a quartz-epidote +/-carbonate bearing hydrothermal assemblage. This style of mineralization is similar to so-called volcanic hosted copper showings elsewhere in the Nicola Group.

### ***East Area:***

VMS mineralization of the Blacktop showing has been subject to significant exploration by previous workers, including diamond drilling. Reconnaissance geology in the area by the authors was successful in locating the showings, which were sampled for geochemistry and representative samples for hand sample scale petrography (Figure 5).

VMS mineralization of the Blacktop showing, located in road cut on the west side of highway 5, is associated with a gossanous zone approximately 2 m width (Figure 13). The showings include laminated to thinly bedded massive sulfides comprising alternating layers of fine to very fine grained sphalerite, pyrite, and chalcopyrite. Chalcopyrite abundance appears to be enhanced in more silicic layers, some of which may be later quartz veins emplaced parallel to bedding/foliation, which is oriented 212/25 (Figures 14 and 15). Host rocks to the showings are moderately to strongly sericite altered, and appear to be overlain by relatively unaltered, red-maroon volcanoclastic Nicola Group volcanic rocks.



*Figure 8: West area red and green heterolithic tuff breccia containing a variety of clast types including mafic to intermediate (?) volcanic rocks and limestone.*



*Figure 9: West area breccias containing amoeboid clasts (potential juvenile clasts?) set in a white-grey matrix comprising potential comminuted clasts/crystals suggests a possible phreatomagmatic component to breccias in the West Area.*



*Figure 10: Central area mafic lapilli tuff (?) comprising 20% clasts of pyroxene +/- hornblende phyric mafic volcanic rocks (with local carbonate amygdules) set in a fine grained, red matrix comprising hematite and fine grained disseminated magnetite.*



*Figure 11: Slabbed hand sample of Central area mafic lapilli tuff, as per above. Note the carbonate amygdule bearing clast in the upper left, suggesting a volcanic origin (or component).*



*Figure 12: North area native copper bearing, pyroxene-phyric mafic volcanic rock. Millimetre scale blebs of pink coloured native copper are visible in the upper left and upper right of the sample.*



*Figure 13: Blacktop showing (East area), looking west across highway 5. The gossanous area is host to strongly sericite altered volcanic rocks (?) and associated VMS mineralization.*



*Figure 14: Strongly chlorite-pyrite altered host rocks to the Blacktop showing. Foliation/bedding is oriented 212/25.*





*Figure 15: Cut hand sample of VMS mineralization of the Blacktop showing, comprising laminated to thinly bedded layers of fine to very fine grained massive sphalerite, pyrite, and chalcopyrite.*

## **Rock Geochemistry 2018**

Representative rock samples (4 in total) were collected in mineralized areas throughout the property (Figure 16) to document the distribution and tenor of mineralization. These include a sample of malachite-chalcocite-native copper bearing mafic volcanic rocks from the North area, a sample of highly magnetic mafic lapilli tuff from the central area, and two samples of VMS style mineralization from the Blacktop showing (East area).

### ***Procedure***

Rock samples were collected from variably mineralized and altered rock in order to help characterize the tenor of different styles of mineralization. The samples comprise representative grabs from outcrops. Samples were collected in plastic sample bags and sealed with plastic zip ties. Sample locations were recorded by GPS. Sample locations are marked with flagging tape and embossed aluminum tags. Samples were bundled in security sealed rice bags and trucked to ALS Minerals laboratory in North Vancouver.

At the laboratory, the samples were dried, crushed and pulverized using standard rock preparation procedures. The pulps were then analyzed for Au using a 30 gram fire assay with ICP-AES finish and for 35 elements by ICP-AES. Aqua regia digestion was utilized for the ICP analyses. Ore grade (>1%) lead and zinc were re-analyzed by ICP-AES. Quality control at the laboratory is maintained by submitting blanks, standards and re-assaying duplicate samples from each analytical batch.

Rock sample descriptions and analytical results are in Appendix C. Sample locations and copper assays are plotted on Figures 16 through 18.

### ***Results***

#### **North Area**

Due to abundant snow cover, a single sample of malachite-chalcocite-native copper mineralized mafic volcanic rock was collected and analyzed from the North area (S851312). The sample returned strongly anomalous Cu values (2850 ppm), anomalous Ag (0.5 ppm), and negligible Au (0.001 ppm).

#### **Central Area**

A single sample of mafic lapilli tuff with abundant matrix hosted disseminated fine grained hematite and magnetite was collected and analyzed from the Central area (Figure 16). The area is underlain by a prominent magnetic anomaly. No mineralization was observed in hand sample, which is confirmed in the geochemical results. The sample (S851311) contains 85 ppm Cu, slightly anomalous Ag values (0.2 ppm) and negligible Au (0.001 ppm).

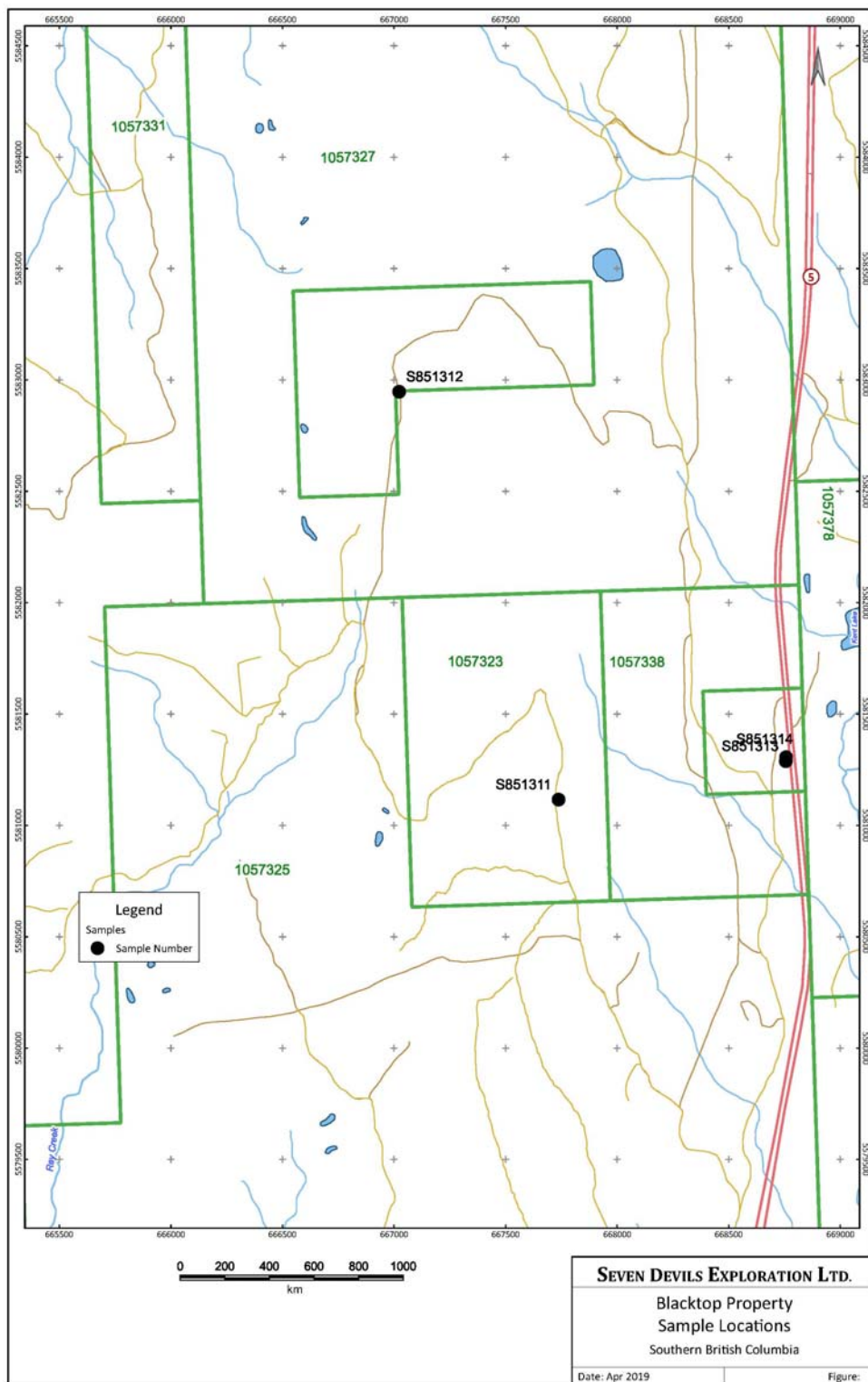


Figure 16: Geochemical sample locations with sample numbers.

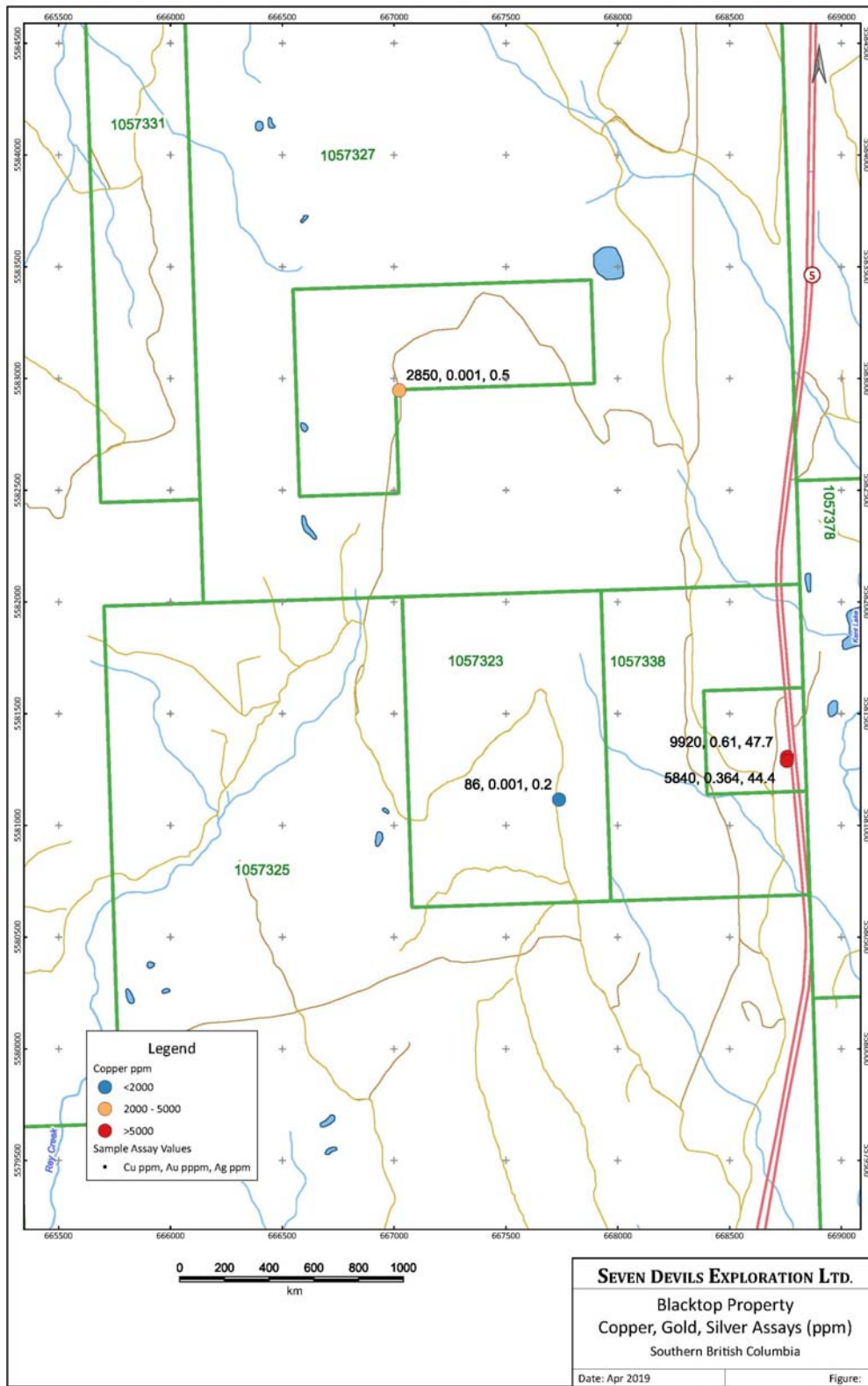


Figure 17: Geochemical sample locations with copper, gold, and silver assays.

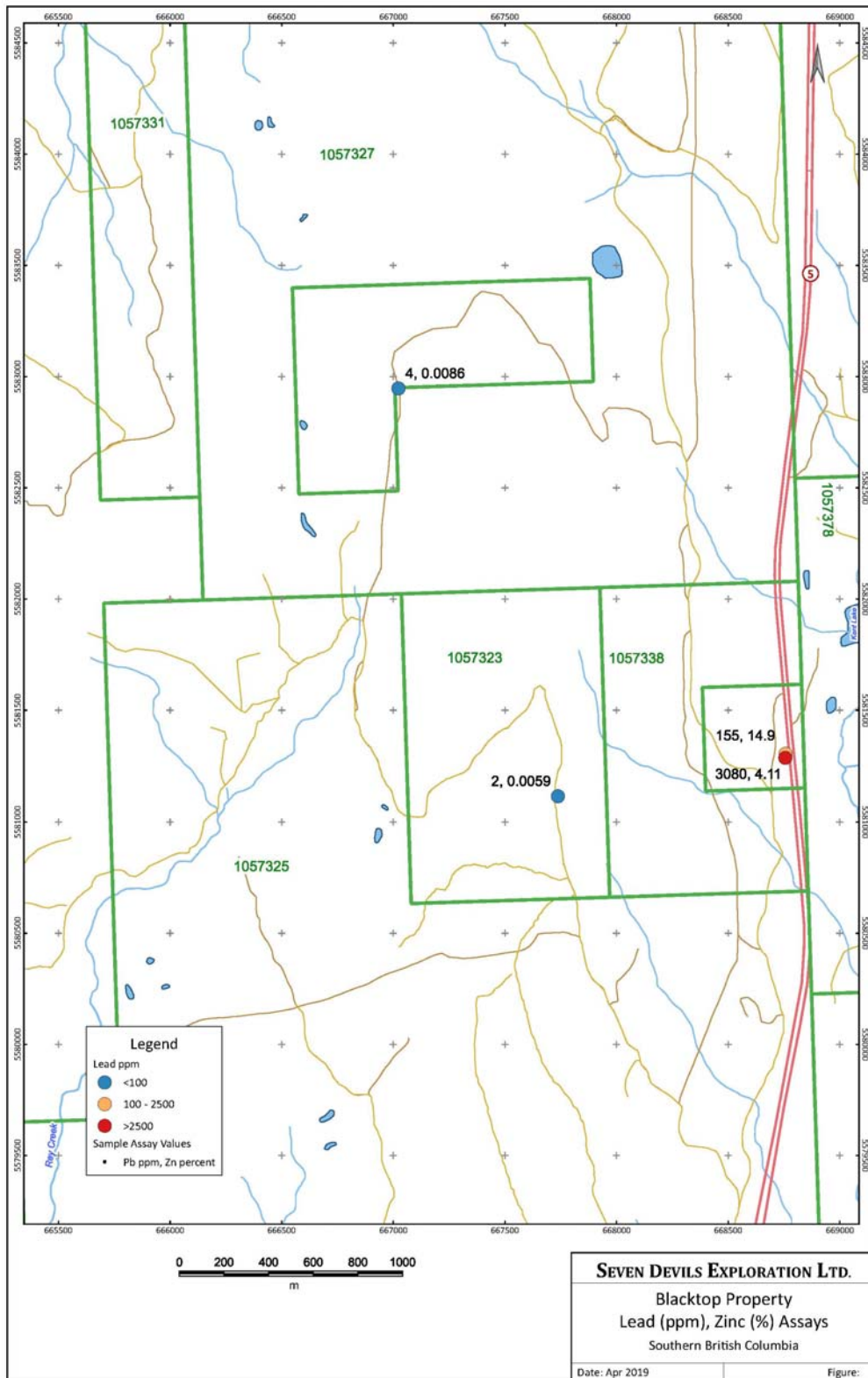


Figure 18: Geochemical sample locations with lead and zinc assays.

## East Area

Two samples of sphalerite-chalcopyrite-pyrite bearing VMS mineralization, hosted by strongly sericitized host rocks (tuffaceous protolith?) were collected from the Blacktop showing for geochemistry (Figure 16). Both samples yielded strongly anomalous polymetallic tenors. Sample S851313 assayed 5840 ppm Cu, 3080 ppm Pb, 4.11% Zn, 0.364 ppm Au, and 44.4 ppm Ag. Sample S851314 assayed 9920 ppm Cu, 155 ppm Pb, 14.9% Zn, 0.61 ppm Au, and 47.7 ppm Ag.

## Conclusions and Recommendations

### **West Area**

Limited reconnaissance traverses in the West area were hampered by snow cover, but support the following conclusions:

- 1) The West area is underlain primarily by mafic to intermediate volcanic rocks of the Nicola Group. Fragmental red and green mafic volcanic rocks predominate, including abundant zones of breccia;
- 2) Some of the West area breccias appear in hand sample to contain juvenile clasts within a matrix comprising comminuted clasts/crystals, suggesting a potential phreatomagmatic origin.
- 3) Although potassic alteration has been documented in the area by previous workers, it was not noted by the authors. Instead, chlorite-epidote-hematite alteration predominates, in varying proportions.

Further work in the area would include the following:

- 1) Additional mapping and sampling to confirm the existence of previously documented potassic alteration in the area, and;
- 2) Detailed petrographic work in order to characterize the abundant breccias in the area. If phreatomagmatic breccias are indeed present, they should be mapped and examined for the presence of copper mineralized clasts, potentially indicative of the presence of an underlying porphyry copper-gold centre.

### **Central Area**

Reconnaissance mapping of the Central area was conducted to groundtruth a strong magnetic geophysical anomaly delineated during a previous government airborne survey of the area (Liaghat and Blann, 2015), and evaluate its potential for porphyry copper-gold mineralization. Mapping in the area was hampered by a paucity of outcrop and snow cover, but identified an outcrop of strongly magnetic mafic fragmental within the core of the geophysical anomaly. The rock contains variably carbonate amygdule bearing,

pyroxene +/- hornblende phyric clasts within a matrix containing abundant fine grained hematite and magnetite. No magnetite veining typical of a porphyry copper style K-silicate alteration assemblage was observed. The presence of carbonate amygdules suggest a volcanic origin or component to the unit. Geochemical sampling of the outcrop indicates negligible base and precious metal values.

Because 2018 field work in the zone was hampered by snow cover, further work in the area would include additional reconnaissance mapping and sampling in order to identify additional exposures and therefore properly groundtruth the geophysical anomaly. Thin section petrography is recommended in order to examine the area for evidence of magnetite alteration, typical of K-silicate alteration in porphyry copper-gold systems.

### ***North area***

Chalcocite-malachite-native copper bearing mafic volcanic rocks were discovered in the North area along logging roadcuts by previous workers. Reconnaissance geology in the area by the authors was hampered by snow cover, but was successful in locating the showings, which comprise pyroxene +/- hornblende phyric mafic volcanic rocks with disseminated native copper, and local bornite bearing quartz-epidote +/- carbonate veins. Veining appears to increase in intensity with proximity to the showings. Samples from the area returned strongly anomalous Cu values (2850 ppm), anomalous Ag (0.5 ppm), and negligible Au (0.001 ppm). Heterolithic breccias reminiscent to those of the West area are present along slopes above the showings.

Further work in the area would include the following:

- 1) Additional mapping and sampling in the area in order to understand the true extents of the copper mineralized area;
- 2) Additional mapping, sampling and petrographic studies in order to understand the nature of heterolithic breccias located on slopes above the showings. Important questions include the following:
  - i), Are the breccias the product of hydrothermal +/- magmatic processes?
  - ii) Are the breccias genetically related to the copper mineralized volcanic rocks downslope, and if so, do they contain mineralized clasts potentially indicative of a more significant, underlying copper mineralized system?

### ***East area***

Reconnaissance geology and sampling of the East area was successful in relocating and sampling the Blacktop VMS showing, which comprises fine grained sphalerite-chalcopyrite-pyrite bearing VMS mineralization, hosted by strongly sericitized host rocks (tuffaceous protolith?). Bedding/foliation within the VMS horizon is 212/25. Two samples collected from the showing for geochemistry returned strongly anomalous to

high grade polymetallic tenors, including values up to 9920 ppm Cu, 3080 ppm Pb, 14.9% Zn, 0.61 ppm Au and 47.7 ppm Ag.

Further work recommended for the Blacktop area would include the following:

- 1) Additional mapping and sampling in the area in order to evaluate the extents of VMS-style, semi-conformable alteration. An important question to address is whether or not the VMS system is preserved on the east side of the Clapperton fault.
- 2) Locating drill core from the 1997 International Skyline program: If the core is present, an attempt to salvage it and relog it is recommended. Previously documented porphyry style alteration in the drill core should be examined in order to verify that it is, indeed, porphyry copper related, and not related to the nearby Blacktop VMS system.



## References

- Cathro, Michael S. (2001): South Central Region; in Cathro, M.S., Exploration and Mining in British Columbia – 2000; Ministry of Energy and Mines, p.6.
- Gitennes Exploration Inc. (2001): Fox Property, Blacktop Showing, British Columbia, Trench Sample Location; unpublished map printed from source file Fox5a.dwg, drawing dated 08 Jan 2001, revised 18 Jan 2001, 'Rev No:DS04'.
- Liaghat, S. and Blann, D. (2015): Prospecting and Sampling Report on the NCu Property, Nicola Mining Division, British Columbia. For Happy Creek Minerals Ltd. BC Geological Survey Assessment Report 35612.
- Koffeyberg, A. (2012): Assessment report on the 2012 Geochemical Stream Sediment Survey, Rey Lake Property, Nicola Mining Division, BC. For Owner/Operator Bearclaw Capital Corp. BC Geological Survey Assessment Report 33869.
- Massey, N.W.D., Desjardins, P.J., and Cooney, R.T. (2005). Digital map of British Columbia: B.C. Ministry of Energy, Mines and Petroleum Resources, GeoFile 2005-3.
- Meyers, R.E., Moore, J.M., Hubner, T.B., Pettipas, A.R. (1990): Metallogenic Studies in South-Central British Columbia: Mineral Occurrences in the Nicola Lake Region (92I/SE); in Exploration in British Columbia 1989, Grant, Brian, Newell, John, eds, British Columbia Geological Survey Branch, British Columbia Ministry of Energy and Mines, pages 119-134.
- Moore, John A., Pettipas, A. (1990): PART A Geological Studies in the Nicola Lake Region (92I/SE); in Nicola Lake Region, Geology and Mineral Deposits, British Columbia Geological Survey Branch, British Columbia Ministry of Energy and Mines, Open File 1990-29, pages 1-13, 2 map sheets.
- Moore, M.J. (1997): Kent 2 Claim Drilling Assessment Report, Nicola Mining Division; International Skyline Gold Corp., British Columbia Ministry of Energy and Mines, Assessment Report 25209, 84 pages.
- Moore, John M. (2000): Nicola Horst: southern British Columbia: window into the pre-Triassic margin of North America?; Natural Resources Canada, Geological Survey of Canada, Current Research, 2000-A16, 8 pages.
- Mortimer, N. (1987): The Nicola Group: Late Triassic and Early Jurassic subduction-related volcanism in British Columbia; Canadian Journal of Earth Sciences, vol. 24, pages 2521-2536.

McArthur, G.F. (2002): Report on Diamond Drilling, Fox Property, March-April, 2001; Gitennes Exploration Inc., 22 pages, available on SEDAR: [www.sedar.com](http://www.sedar.com)

Preto, V.A. (1977): The Nicola Group: Mesozoic Volcanism Related to Rifting in Southern British Columbia; in Volcanic Regimes in Canada, Baragar, W.R.A., Coleman, L.C., Hall J.M., eds., The Geological Association of Canada Special Paper Number 16, pages 39-57.

Stadnyk, M.P. (1970): Report on Geochemical and Geophysical Surveys on the Smokie Aca and Con Mineral Claims, Helmer, British Columbia; Ronrico Explorations Ltd., British Columbia Ministry of Energy and Mines, Assessment Report 02715, 41 pages, 6 maps.

Williams J.David (2008) Prospecting, Trenching and Sampling Report on the Fox Property in 2007 Thompson-Nicola Regional District South-central British Columbia. For Craig. A. Lynes Rich River Exploration Ltd, and Great Michael Resources Ltd. by Integrex Engineering J.David Williams, P.Eng. 27 April 2008

Williams, J.David (2011) Prospecting and Sampling Report on the FOX PROPERTY in 2011 Thompson- Nicola Regional District South-central British Columbia or Craig. A. Lynes Rich River Exploration Ltd. and Great Michael Resources Ltd. by Integrex Engineering J.David Williams, P.Eng. 21 November 2011

## **Appendix A Statement of Qualifications**

I, Tyler Ruks, MSc, PhD., certify that:

1. I am presently President for Seven Devils Exploration, Ltd. with a business address located at:  
24510 106B Ave..  
Maple Ridge, BC, Canada  
V2W 2G2
2. I graduated from the University of Victoria with a BSc in Earth and Ocean Science (Hon) in 2002, from Laurentian University with an MSc in Geology in 2004, and from the University of British Columbia with a PhD in 2015.
3. Since 1999 I have been intermittently employed in exploration for base and precious metals in North America.
4. I supervised and participated in the 2018 exploration program at Blacktop and am therefore personally familiar with the geology of the Blacktop property and the work conducted in 2018. I have co-prepared all sections of this report.

Dated this 4th Day of April, 2019

A handwritten signature in black ink, appearing to read 'Tyler Ruks', written in a cursive style.

Signature

Tyler Ruks, BSc (Hon), MSc, PhD

## Appendix B Statement of Expenditures

				Item sub-total	Sub-totals
<b>Property - Description of work</b>					
<b>WORK COSTS</b>					
Geological - salaries and wages.					
			days	daily rate	
Tyler Ruks	project geologist	Nov 13 - Nov 15	3	\$ 1,000	3,000.00
Nigel Luckman	project geologist	Nov 13 - Nov 15	3	\$ 1,000	3,000.00
William Ruks	field assistant	Nov 13 - Nov 15	3	\$ 500	1,500.00
			0	\$ 400	0.00
			0	\$ 250	0.00
			0	\$ 230	0.00
			0	\$ 750	0.00
					<b>\$ 7,500.00</b>
Food, accommodation					
Accommodation			9	125	1,125.00
Food			9	75	675.00
					<b>\$ 1,800.00</b>
Geochemical:					
ALS Canada Ltd	VA18314725				233.17
					<b>\$ 233.17</b>
Vehicle					
Truck rental (2), insurance	days		3	150	450.00
					<b>\$ 450.00</b>
Report					
Preparation			days	daily rate	
			3	1000	3,000.00
					<b>\$ 3,000.00</b>
<b>Sub-total Work:</b>					<b>\$ 12,983.17</b>
<b>Mob-demob</b>					
Salaries and wages.					
			days	daily rate	
Tyler Ruks	project geologist	12-Nov	1	\$ 1,000	1,000.00
Nigel Luckman	project geologist	12-Nov	1	\$ 1,000	1,000.00
William Ruks	core tech	12-Nov	1	\$ 500	500.00
			0	\$ 315	0.00
			0	\$ 250	0.00
			0	\$ 230	0.00
			0	\$ 750	0.00
Food, accommodation					
Accommodation			3	125	375.00
Food			3	75	225.00
					<b>Sub-total travel: 3,100.00</b>
<b>Allowable travel costs (maximum of 50% work):</b>					<b>\$ 3,100.00</b>
<b>Assessment work to claim:</b>					<b>\$ 16,083.17</b>

## ***Appendix C Rock Samples***

StationID	Description	Easting (m)	Northing (m)	SAMPLE	Au (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Zn (%)
20181113-06	Outcrop - magnetite hematite epidote int?	667737.07	5581116.20	S851311	0.001	0.2	86	2	59	
20181113-07	Malachite, native Cu, chalcocite in Fn-grnd int?	667022.55	5582947.13	S851312	0.001	0.5	2850	4	86	
20181113-08	Bx	667076.59	5582863.48							
20181114-02	Volc outcrop, ep, chl, mg in aphanatic gm.	667610.83	5583370.76							
20181114-03	Volc outcrop. Ep, chl, mg in aph gm.	667702.46	5583356.32							
20181114-04	Strongly mg volc outcrop. Ep, mg in pink brn aph gm.	667783.87	5583402.62							
20181114-05	Volc outcrop, stg mg, pink brwn gm, ep, chl, mg. On property.	667792.23	5583455.81							
20181114-06	Bedded tuff outcrop, long exposure, 50m. Rock same as last stn	667803.54	5583484.71							
20181114-07	Tuff outcrop. As prev stn.	667761.51	5583518.52							
20181114-08	Tuff outcrop. As prev stn.	667723.65	5583591.88							
20181114-08	Tuff oc. As prev stn.	667688.08	5583624.63							
20181114-13	Fine grnd green volc? Siliceous. Large oc.	665674.48	5582121.88							
20181114-14	Fragmental volc. Red-brn matrix, frags to 1cm.	665756.25	5582193.82							
20181114-15	Fragmental volc	665949.20	5581933.28							
20181114-16	Frag volc	666030.48	5581866.51							
20181114-17	Volc, tuff? Fngrnd, ep, chl, red matrix, hm?	666089.33	5581995.75							
20181114-19	Volc. As prev stn.	666095.89	5582026.66							
20181115-01	Sample at blacktop.	668755.52	5581288.55	S851313	0.364	44.4	5840	3080	10000	4.11
18TRBK001	CH-HEM ALTERED MAFIC VOLC. 1-2% CH-HEM ALTERED MAFIC PHENOS.	668070.83	5580369.97							

StationID	Description	Easting (m)	Northing (m)	SAMPLE	Au (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Zn (%)
18TRBK002		668072.54	5580372.74							
18TRBK005	RARE OC OF GREEN GREY MAFIC-INTERMED TUFF OR FINE GRAINED VOLC SANDSTONE.	667975.24	5580157.45							
18TRBK006	OUTCROP OF PURPLE BROWN, HEM AND MT RICH INTRUSIVE? PERVASIVE HEM IN MATRIX AND ABUNDANT MAGMATIC MT PHENOCRYSTS(?). COINCIDES WITH STRONG MAG HIGH. BX TEXTURE IN PLACES?. NL SAMPLE 311.	667735.86	5581115.70							
18TRBK007	ROADSIDE SUB OC. CPX (?) PHYRIC BAS, WITH HEM-CH ALTERATION IN GENERAL AREA. LOCAL AMYGS. HERE HAVE LOCAL MALACHITE AND NATIVE CU. NL SAMPLE 312.	667024.67	5582943.72							

StationID	Description	Easting (m)	Northing (m)	SAMPLE	Au (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Zn (%)
18TRBK008	SNOW COVERED HILLTOP OC. HEM RICH HETEROLITH TF BX OR PHREATOMAG BX SIMILAR TO ZIG? SIMILAR BX PROXIMAL TO NATIVE CU AT ZIG. AMYG BEARING VOLC CLASTS, TRACH TEXTURED FSPAR PHYRIC CLASTS AND LIMESTONE CLASTS..	667127.90	5582892.70							
18TRBK009	CH-EP-HE ALTERED MAFIC VOLC. MALACHITE ABUNDANT. STRONGLY MAGNETIC. CPX PHYRIC?	667530.62	5583314.53							
18TRBK010	CH-EP-HE ALTERED MFVO CUT BY QTZ-EP(?)-MAL VEINS. MAL AFTER CPY OR OTHER?	667523.48	5583318.45							
18TRBK011	CH-EP-HE ALTERED MFVO. LAP TUFF. CPX PHENOS? STRONGLY MAGNETIC.	667749.03	5583130.71							
18TRBK012	MAFIC TUFF BX. CH-EP-HE ALTERED. CPX BEARING CLASTS?	667766.07	5583162.96							
18TRBK013	CH-EP-HE ALTERED MFVO. LAP TUFF. NO CU MIN. EPIDOTE VEIN DENSITY INCREASES TOWARDS SHOWING.	667587.69	5583238.74							
	CH-EP-HE ALTERED MF VO. CALCITE AMYGS? NO CU.	667498.50	5583241.29							



StationID	Description	Easting (m)	Northing (m)	SAMPLE	Au (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Zn (%)
	CROWDED FSPAR PORPH INTERCALATED WITH ZONES OF HETEROLITH BX. INTRUSIVE OR PHREATOMAG BX? VESICLES IN PORPHYRY IN PLACES. IV OR VO?	665679.37	5582182.24							
	RED HETEROLITH TUFF BX WITH VOLC AND LIMESTONE CLASTS IN RED, HEM RICH FG MATRIX.	665744.93	5582184.96							
18TRBK014	BEAUTIFUL BX. PHREATOMAG BX(?) WITH JUVENILE CLASTS (?). HETEROLITHIC. NO VEINS. ROCK FLOUR MATRIX IN PLACES? PREDOM VOLC CLASTS. CROWDED FSPAR PORPHYRY CAUSATIVE INTRUSION?	665746.49	5581949.10							
18TRBK015	RUSTY SBCRP ALONG RD. PERVASIVELY FE CARB ALTERED WITH CARB VEINLETS AND COCKSCOMB QTZ VEINLETS WITH LOCAL CHALCOCITE AND MAL. FAULT ZONE?	665690.44	5581842.65							
18TRBK016	HEM RICH MF TO INT LAP TUFF. GRADED BEDS.	668501.31	5581605.70							

StationID	Description	Easting (m)	Northing (m)	SAMPLE	Au (ppm)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Zn (%)
18TRBK017	BLACKTOP SHOWING. CH-SE ALTD TUFF WITH THIN BANDS OF MSv BLACK SPHAL, CPY AND PY. BELOW PROMINENT GOSSAN ALONG ROADSIDE. STRONGLY FOLIATED CH ALTD MAFIC TUFF UPHILL. TRENCH 2?	668756.81	5581306.83	S851314	0.61	47.7	9920	155	10000	14.9
18TRBK018	CH ALTD MF TF. STRONG FOL.	668753.82	5581309.25							

***Appendix D Analytical Certificates***



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Page: 1  
Total # Pages: 2 (A - C)  
Plus Appendix Pages  
Finalized Date: 19-DEC-2018  
This copy reported on  
21-DEC-2018  
Account: SEDEXP

**CERTIFICATE VA18314725**

This report is for 4 Rock samples submitted to our lab in Vancouver, BC, Canada on 10-DEC-2018.

The following have access to data associated with this certificate:

J. BRADFORD

NIGEL LUCKMAN

TYLER RUKS

**SAMPLE PREPARATION**

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
DISP-01	Disposal of all sample fractions
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

**ANALYTICAL PROCEDURES**

ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP41	35 Element Aqua Regia ICP-AES	ICP-AES
ME-OG46	Ore Grade Elements - AquaRegia	ICP-AES
Zn-OG46	Ore Grade Zn - Aqua Regia	
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES

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

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

**Signature:**   
Colin Ramshaw, Vancouver Laboratory Manager



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**CERTIFICATE OF ANALYSIS VA18314725**

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg	Au-ICP21 Au ppm	ME-ICP41 Ag ppm	ME-ICP41 Al %	ME-ICP41 As ppm	ME-ICP41 B ppm	ME-ICP41 Ba ppm	ME-ICP41 Be ppm	ME-ICP41 Bi ppm	ME-ICP41 Ca %	ME-ICP41 Cd ppm	ME-ICP41 Co ppm	ME-ICP41 Cr ppm	ME-ICP41 Cu ppm	ME-ICP41 Fe %
		0.02	0.001	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01
S851311		1.28	0.001	<0.2	2.24	2	10	70	<0.5	<2	1.87	<0.5	27	123	86	5.18
S851312		2.16	0.001	0.5	2.72	3	20	20	<0.5	2	3.34	<0.5	23	82	2850	5.21
S851313		2.58	0.364	44.4	0.30	25	<10	20	<0.5	2	1.03	139.5	1	4	5840	2.57
S851314		5.32	0.610	47.7	0.37	457	10	10	<0.5	7	0.25	485	<1	4	9920	10.45



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**CERTIFICATE OF ANALYSIS VA18314725**

Sample Description	Method	Analyte	Units	LOD	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41				
					Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr
					ppm	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm
					10	1	0.01	10	0.01	5	1	0.01	1	10	2	0.01	2	1	1
S851311					10	<1	0.13	10	2.58	767	1	0.07	105	1020	2	0.01	<2	7	79
S851312					10	1	0.01	<10	1.75	651	1	0.10	53	1060	4	0.02	2	7	36
S851313					<10	30	0.16	<10	0.05	218	106	<0.01	23	120	3080	4.38	<2	<1	159
S851314					10	26	0.20	<10	0.10	118	182	0.01	18	20	155	>10.0	41	<1	6

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*



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**CERTIFICATE OF ANALYSIS VA18314725**

Sample Description	Method Analyte Units LOD	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	Zn-OG46
		Th	Ti	Tl	U	V	W	Zn	Zn
		ppm	%	ppm	ppm	ppm	ppm	ppm	%
		20	0.01	10	10	1	10	2	0.001
S851311		<20	0.30	<10	<10	196	<10	59	
S851312		<20	0.35	<10	<10	197	<10	86	
S851313		<20	<0.01	<10	<10	18	<10	>10000	4.11
S851314		<20	<0.01	50	<10	10	<10	>10000	14.90



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

To: SEVEN DEVILS EXPLORATION LTD.  
11571 7TH AVENUE  
RICHMOND BC V7E 3B7

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Account: SEDEXP

**CERTIFICATE OF ANALYSIS VA18314725**

**CERTIFICATE COMMENTS**

**LABORATORY ADDRESSES**

Applies to Method:	Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.			
	Au-ICP21	CRU-31	CRU-QC	DISP-01
	LOG-21	ME-ICP41	ME-OG46	PUL-31
	PUL-QC	SPL-21	WEI-21	Zn-OG46