



BC Geological Survey Assessment Report 37669



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)]: TECHNICAL - PROSPECTING

TOTAL COST: 4735.00

AUTHOR(S): KEN ELLERBECK

SIGNATURE(S): 

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): _____ YEAR OF WORK: 2018

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5704430 JULY 16, 2018

PROPERTY NAME: KM 18

CLAIM NAME(S) (on which the work was done): KM 18 TENURE 1052501

COMMODITIES SOUGHT: Au Ag Pb Zn Cu

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: _____

MINING DIVISION: KAMLOOPS

NTS/BCGS: 082M UTM 11

LATITUDE: 51 ° 17 ' 46.6 " LONGITUDE: 119 ° 58 ' 36 " (at centre of work)

OWNER(S):

1) KEN ELLERBECK

2) GERALD LOCKE

MAILING ADDRESS:

255 BATTLE STREET WEST
KAMLOOPS, BC V2C 1G8

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

1) KEN ELLERBECK

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

ryholite porphyry, alteration, silicification, silica flooding, felsic dome, Fennel Formation, Eagle Bay Formation, Devonian,
Permian, Barriere, Kamloops, massive sulphide, gold, copper, Chu Chua Deposit, Rea Gold, Samatosum

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 15856 , 23816, 34307

Next Page

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			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area) 100m X 100m		1052501	4735.00
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:			4735.00

KEN ELLERBECK, GERALD LOCKE
(Owner & Operator)

TECHNICAL EXPLORATION REPORT

(Event 5704430)
on

PROSPECTING and EXPLORING

Work done on

Tenures 1052501

of the 1 Claim

KM 18 CLAIM GROUP

Kamloops Mining Division
BCGS Maps 82M.021

Centre of Work
UTM 11 292616E 5687017N

AUTHOR KEN ELLERBECK, PMP

REPORT SUBMITTED August 5, 2018

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INTRODUCTION

PURPOSE

In July 2018 a prospecting program was completed on Tenures 1052501 of the 1 Claim KM 18 CLAIM GROUP. The purpose of the prospecting program was to locate, if possible, geological features (typical copper, gold, silver bearing structures in particular) similar to those found immediately to the West at the BAR gold showing area, and to prospect for unidentified outcrops and showings of significance. Information for this report was obtained from sources cited under Selected References and from a property examination made on July 15, 2018.

ACCESS AND LOCATION

Road access to the Property from Kamloops, BC is by Highway 5A north for 70 km. to Barriere, BC, then east for 2 km to Grenier Lake Road, north 0.5 km to Leonie Creek Forestry Road, then 19 km on Leonie Creek Forestry Road to claims. Driving time from Vancouver to Kamloops is 4 hours, and ~400 km and from Kamloops is 90 minutes.

A series of overgrown logging roads provide access for prospecting activities. However, windfall made vehicle access difficult.

The area is part of the Shuswap Highlands, a region of rolling, wooded mountains cut by deep valleys that give way westward, across the North Thompson River Valley, to the more subdued Thompson Plateau physiographic region.

The Property is underlain by rolling forested mountains of the Shuswap Highlands physiographic region. Elevations range from 1300 to 14000 metres. Tree species include Lodgepole Pine (*Pinus contorta* var. *latifolia*), Trembling Aspen (*Populus tremuloides*), Interior Douglas Fir (*Pseudotsuga Menziesii* var. *glauca*), Engelmann Spruce (*Picea Engelmannii*), and at higher elevations, Subalpine Fir (*Abies lasiocarpa*).

The Property is located within the dry belt of British Columbia with rainfall between 25 and 30 cm per year. Temperatures during the summer months could reach a high of 35°C, with the winter temperatures reaching a low of -35°C.

Barriere, BC, and Kamloops, BC both historic mining centers, could be a source of experienced and reliable exploration and mining personnel and a supply for most mining related equipment.

PROPERTY DESCRIPTION

KM 18 Claim Group

Tenure 105251 was acquired by staking by the Owners on June 12, 2017.

<u>Tenure Number</u>	<u>Type</u>	<u>Claim Name</u>	<u>Good Until</u>	<u>Area (ha)</u>
1052501	Mineral	KM18	20190612	60.6324

Total Area: 60.6342 ha

Figure 1 LOCATION MAP from MTO Mapbuilder



Map Center: 54.4781N 124.7082W

Figure 2 CLAIM LOCATION MAP (Base Map GOOGLE EARTH)

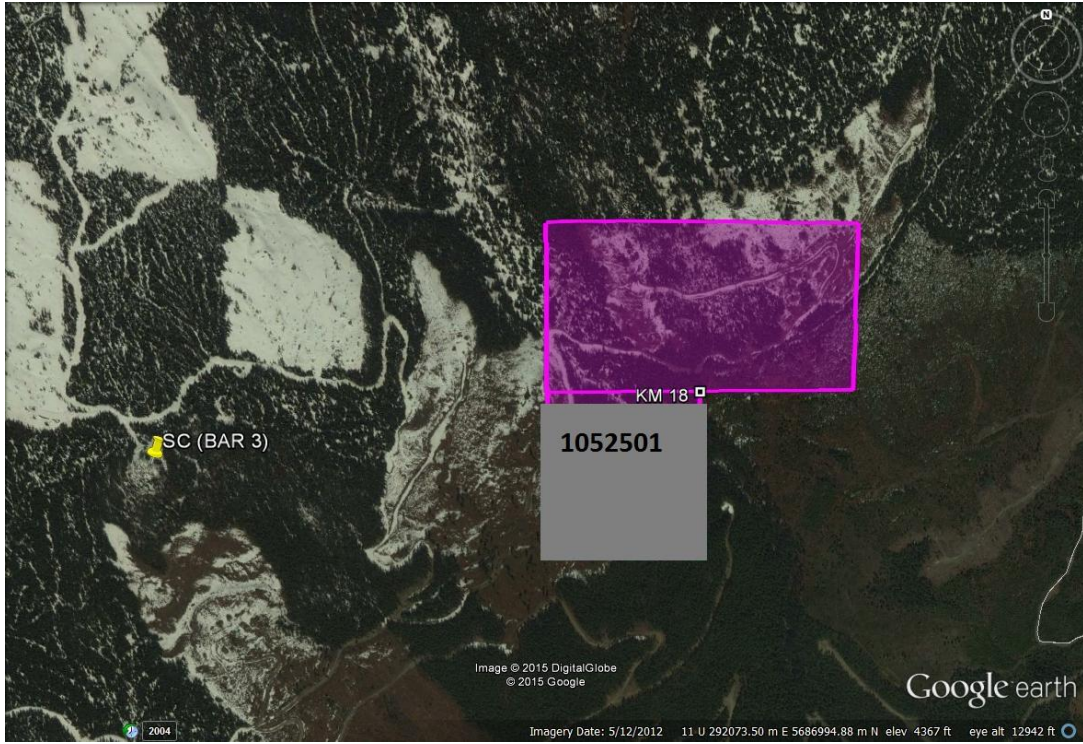


Figure 3 Regional Location Map (Base Map GOOGLE EARTH)

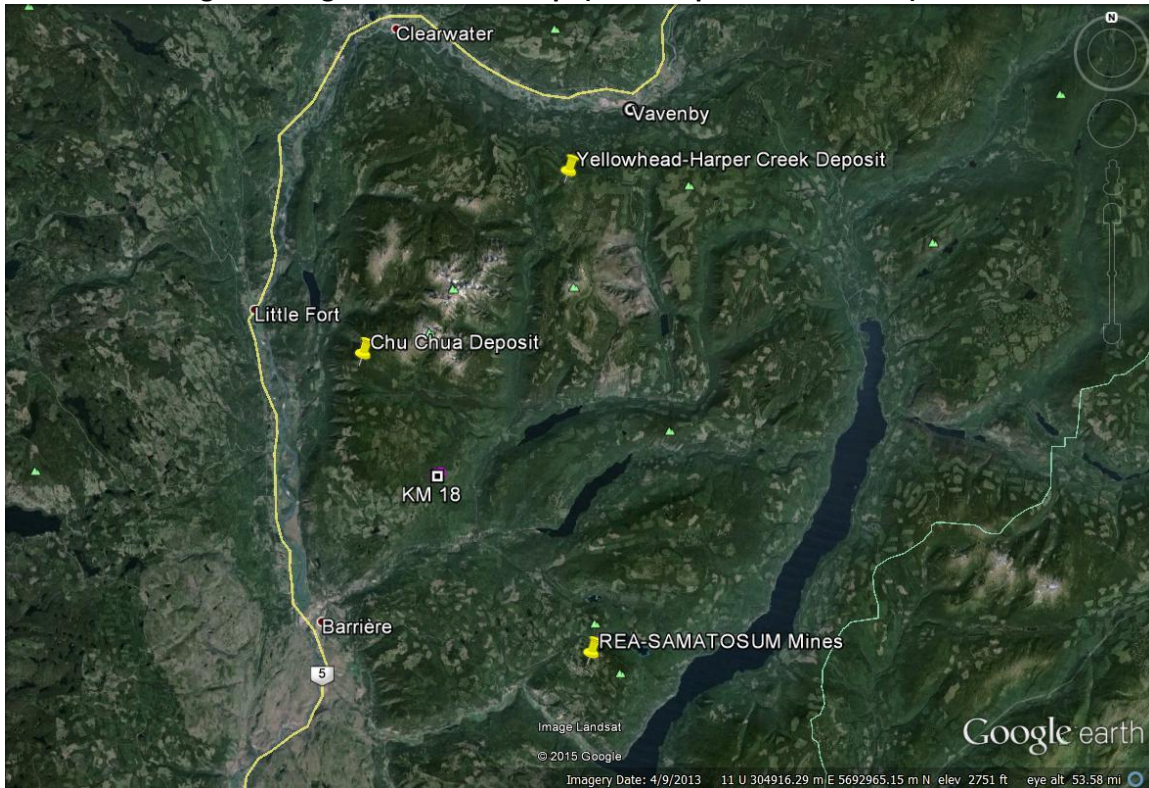
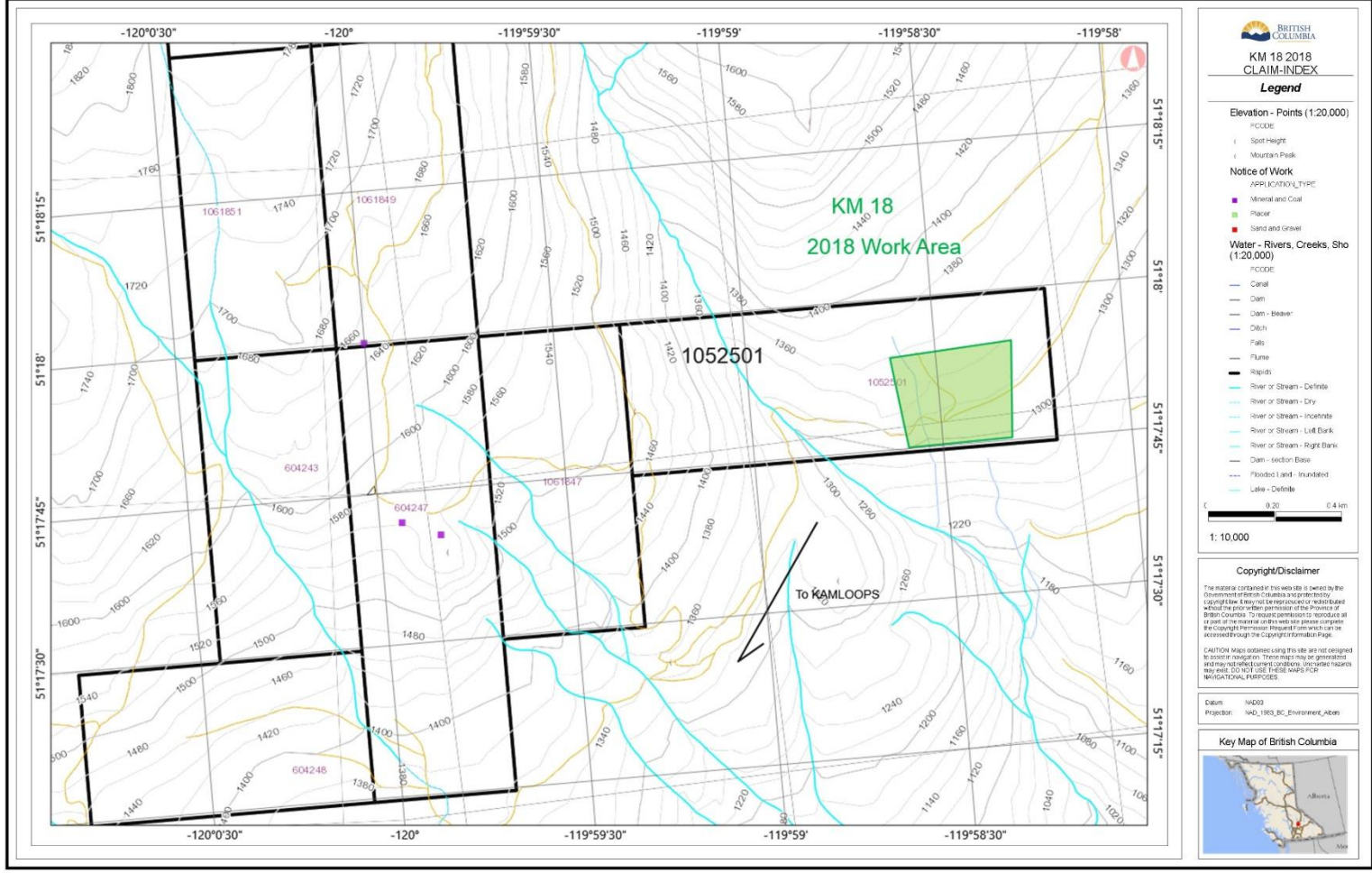


Figure 4 KM 18 Claim Map and Index Map – UTM 11 – iMapBC



HISTORY

Exploration by others on land near the current KM 18 Claim Group has been reported.

The SC (BAR 3) Zone is located 1 km due west of the KM 18 Claim Group.

The Energite (Enargite) Past Producer is located 6 km north of the KM 18 Claim Group.

Note - The KM 18 Claim Group contains the geological contact between Lower Fennel and Eagle Bay rocks. The writer will provide background for the significance of both rock groups:

SC (BAR 3) Zone

From AR34307, Thompson, R., 2013 First Americas Gold Corp. FAC

*"The area is host to a large number and wide variety of mineral deposits; chief among them are volcanogenic massive sulfides, stratabound massive to semi-massive sulfides in sedimentary rocks, pyrite-fluorite replacements, disseminated sulfides in (Devonian) intrusive rocks, and disseminated copper-gold in the Cretaceous Baldy Batholith. The Kamloops Property surrounds the Chu Chua massive sulfide deposit; hence, the potential for additional pods of Chu Chua-like mineralization on the Property is significant. As well, gold in high-level, quartz-feldspar porphyry intrusions was explored in the 1980's and '90's and represents a 2nd class of deposit of particular interest to FAC."and " Falconbridge explored the Property in 1984 and acquired the Chu Chua deposit in 1985. Drilling followed ground geophysical surveys with 3 holes drilled east of Chu Chua but to no effect. Falconbridge then extended their efforts south, along strike of Chu Chua and identified both conductors and soil anomalies; however, drill results were disappointing. Meanwhile, farther south, at the head of Sprague Creek, they explored a gold-bearing rhyolite porphyry and drilled 4 holes, one of which, **Bar 3**, intersected significant gold in a 59 m interval which returned assays of 4.45 g/t Au over 2.52 m, including 30 cm of massive pyrite assaying 17.6 g/t gold (Evans, 1987).....and*

..... "Gold Potential of Devonian Quartz-Feldspar Porphyry

*The focus of this report is a succession of quartz-feldspar porphyry derived from rhyolitic extrusion or hypabyssal intrusions that are concordant within argillite and siltstone of the lower division of the Fennell Formation. According the Schiarizza and Preto (1987), the intrusion sampled for gold content and reported on herein, is approximately 800 m thick and is located in and around the headwaters of Sprague Creek (Fig. 6.1). For the purposes of this report it will be termed **the SC Zone**. ".....and " The porphyry has a siliceous aphanitic matrix that varies from light grey to green to dark maroon which weathers to a chalky light-grey, white or pale green. Phenocrysts of feldspar and quartz are ubiquitous and may form up to 30% of the rock. The quartz is clear and round(ish) whereas the feldspar is white and anhedral to euhedral. The rhyolite outcrops as rounded, dense, hard masses that are very hard to break. Occasionally flow-like textures are observed. According to Schiarizza and Preto (1987, p. 40): "The phenocryst assemblage comprises either quartz-plagioclase or quartz-sanidine-plagioclase. The quartz and sanidine crystals are generally fresh and unaltered...and " [whereas] the plagioclase phenocrysts are commonly altered to a fine-grained assemblage of sericite, chlorite, calcite and quartz."*

The SC Zone (Fig. 6.1) is interpreted by Schiarizza and Preto (ibid) as a rhyolite dome or high-level intrusion. This author favors the latter interpretation."and

..... " Alteration

The rhyolite porphyry is strongly altered by secondary silica as 1) replacements wholesale flooding, 2) apparent albitization distinguished by a chalky-white weathering rind, and 3) disseminated, secondary sericite (chlorite)-pyrite-epidote mineral growth. Veins and stockworks filled with white, grey and translucent quartz with or without pyrite, cut the silicified host rocks and their antecedents. It is the

opinion of this author that secondary silicification, accompanied by brecciation, veining, stockworks and the introduction of disseminated to massive pyrite, played an important role in gold emplacement.

Silicification

Silicification refers to zones in which country rock has been partially or entirely replaced by hydrothermal silica. Preservation of primary texture is inversely proportional to the intensity of silicification. Silica in the form of white or colourless quartz and smoky/grey quartz occurs in veins and stockworks in silicified zones.

Silica-matrix hydrothermal breccias, often dark grey to black due to the admixture of iron oxide occurs within zones of intense silicification. Angular fragments are typically strongly silicified country rock – in most cases altered rhyolite porphyry but occasionally argillite when close to the porphyry-argillite boundary. ”.....and

.....” Mineralization and Potential Deposit Types

No visible gold was encountered. It appears, based on the gold values returned from altered porphyry cuts by numerous late quartz veins and stockworks (Table 7.1), that gold deposition was a late-stage process associated with fracturing and brecciation.

*Interpretation of the **SC Zone** as a felsic volcanic dome suggests a comparison with Noranda-type massive sulfide deposits (e.g. Franklin, 1993). Presence of high gold grades in association with massive pyrite (Bar-3 drill hole, ref. above) lends credence to the comparison; however, additional work is required before model associations are indicated.”*

Energite (Enargite)

MINFILE Number: 082M 065, Name(s): ENARGITE, NORTH STAR (SOUTH SHOWING)

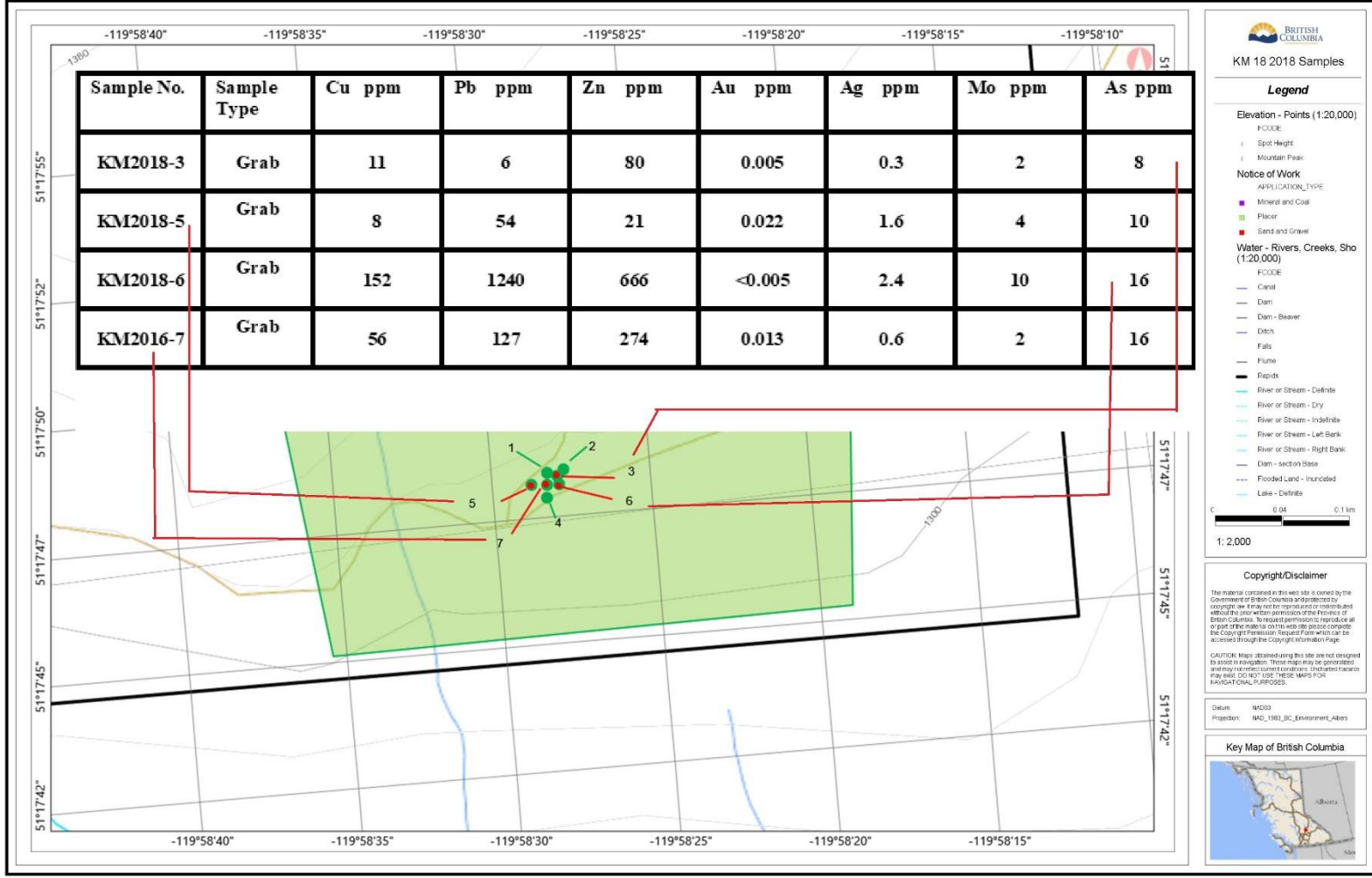
Past Producer. *“The property is underlain by Devonian to Permian age **Fennell Formation rocks** consisting of cherts and phyllites in the west and Mississippian age **Eagle Bay Formation rocks** consisting of phyllites, siltstones and sandstones in the east. A fault striking 150 degrees and dipping steeply fault, separating the two formations, has sheared and silicified the metasediments. The rocks generally strike 160 to 170 degrees and dip 50 to 90 degrees to the west, and in places, display rusty carbonate alteration. To the east is a Mississippian limestone unit.*

Mineralization consisting of galena and pyrite and lesser sphalerite and chalcopyrite, occurs within several quartz veins within a northerly trending zone measuring about 200 by 120 metres. Individual veins and lenses vary from a few centimetres to several metres wide and vary in orientation, although northerly strikes and moderate (40 to 50 degrees) easterly dips predominate.”

SUMMARY OF WORK DONE 2018

The Tenure Numbers in the KM 18 Claim Group on which work was performed: 1052501. Prospecting was conducted on 1052501 on July 15, 2018 (Figure 4 Index - Work Areas) to explore for similar geological features to the Kamloops Property (FAC) noted in History above. Seven (7) rock grab samples were collected. Four (4) samples were submitted for assay. One (1) field days were spent on the KM 18 Claim Group, including prospecting and travelling to and from the property. One (1) day was spent researching reference material, and a further one (1) day was spent compiling data, drafting and writing this report.

Figure 5 Sample Location Area Maps



2018 WORK PROGRAM

Sampling Program - The author was on the KM 18 Claim Group in July 2018 to select rock samples for understanding the geology of the property and to determine if there was mineralization present. Seven (7) grab samples were taken within the 2018 work area and four (4) grab samples were submitted for assay.

Table I. Particulars of 7 Grab Samples taken by ELLERBECK (2018) in KM 18 Group

No.	LOCATION / SAMPLE #	UTM LOCATION		DESCRIPTION All OUTCROP
1	KM 2018-1	0292624	5687015	Quartz vein - white - in contact with sediment-Eagle Bay/Fennel. Exposed 24". Fractured. Iron stain, no visible metal. Vuggy quartz/iron vugs. N-S strike – vertical dip
2	KM 2018-2	0292616	5687017	Quartz vein – white and gray – contact with sediments – no visible metal, iron stain, rust, iron vugs in quartz. N-S strike – vertical dip. 24 “ exposed
3	KM 2018-3 to Lab	0292616	5687017	Quartz vein – gray – contact with sediments – white quartz crystals. Iron stain/rust. No visible metal. Quartz breccia. Iron veinlets – secondary event(s). N-S strike – vertical dip. 36’ exposed width
4	KM 2018-4	0292623	5687011	Quartz vein in contact with highly altered sediments. Iron stained, iron veining. Bleached sediments. White quartz breccia. Vugs in altered sediments. N-S strike – vertical dip. 24” exposed width
5	KM 2018-5 to Lab	0292623	5687011	Gray quartz vein. Visible metal-pyrite. Iron staining. Contact with sediments. N-S strike – vertical dip
6	KM 2018-6 to Lab	0292624	5687008	White quartz, contact with sediments. Visible metal – galena? Pyrothite? Iron vugs. Layered quartz. Heavy Iron stain. N-S strike – vertical dip. 36’ exposed width
7	KM 2018-7 to Lab	0292631	5687002	Quartz breccia – highly fractured. Contact with sediments. Altered sediments. Heavy iron stain, rust. No visible metal. In contact with gray and white quartz and sediments. Iron soil staining in area. 24 “ exposed

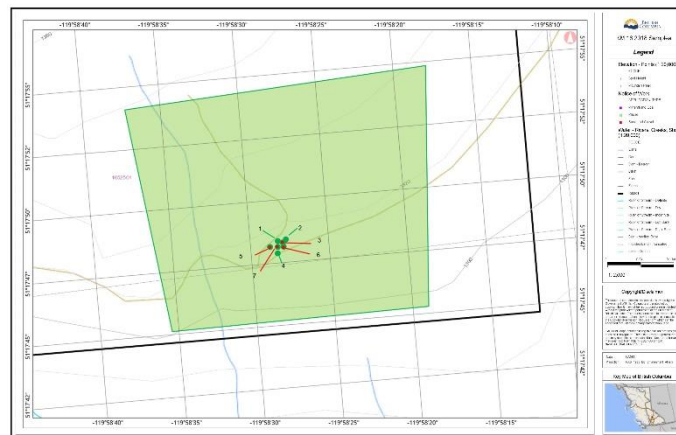


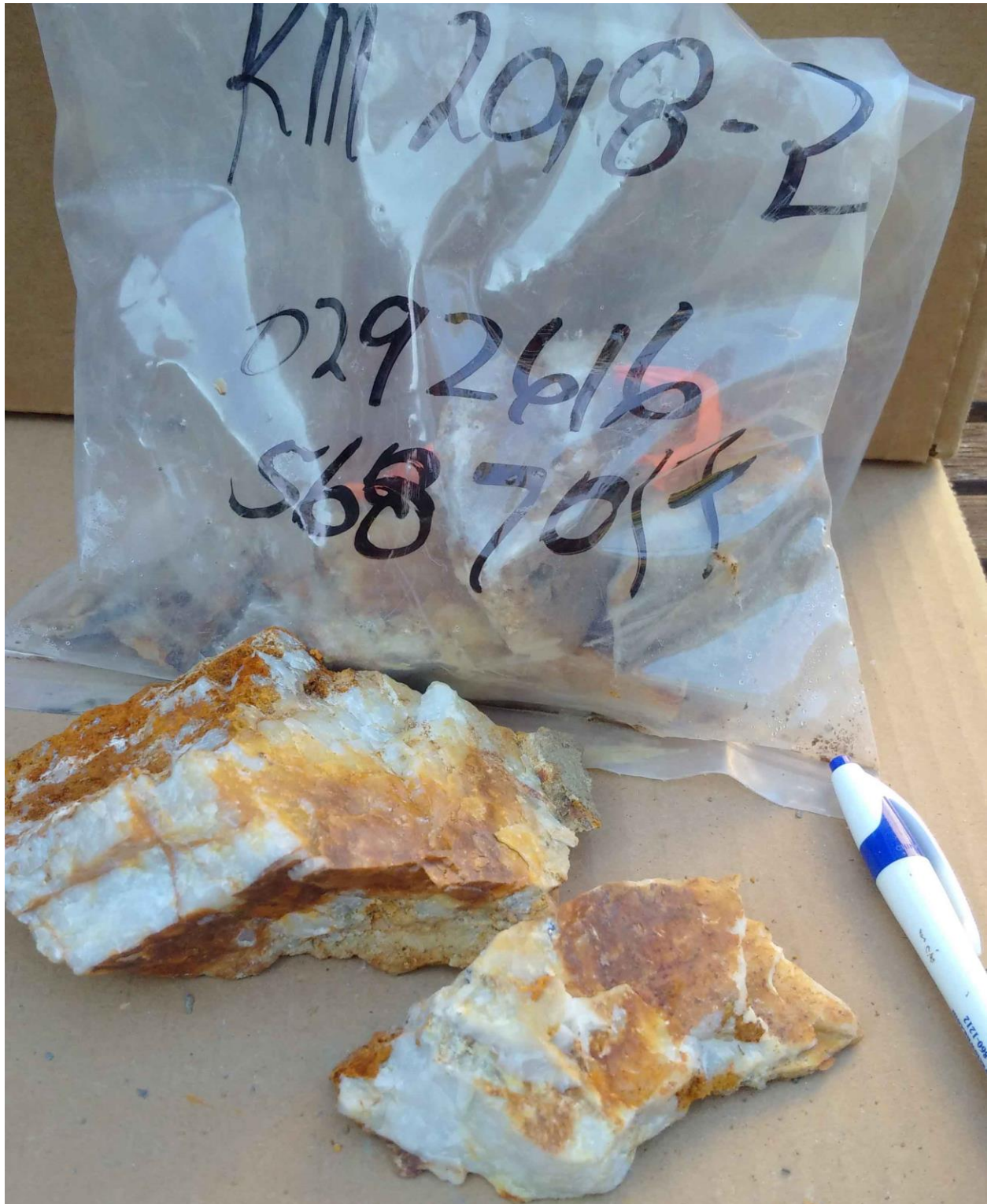
FIGURE 6 LOCATION AND TYPICAL ROCK PICTURES
KM 2018-1 TYPICAL ROCK PICTURE



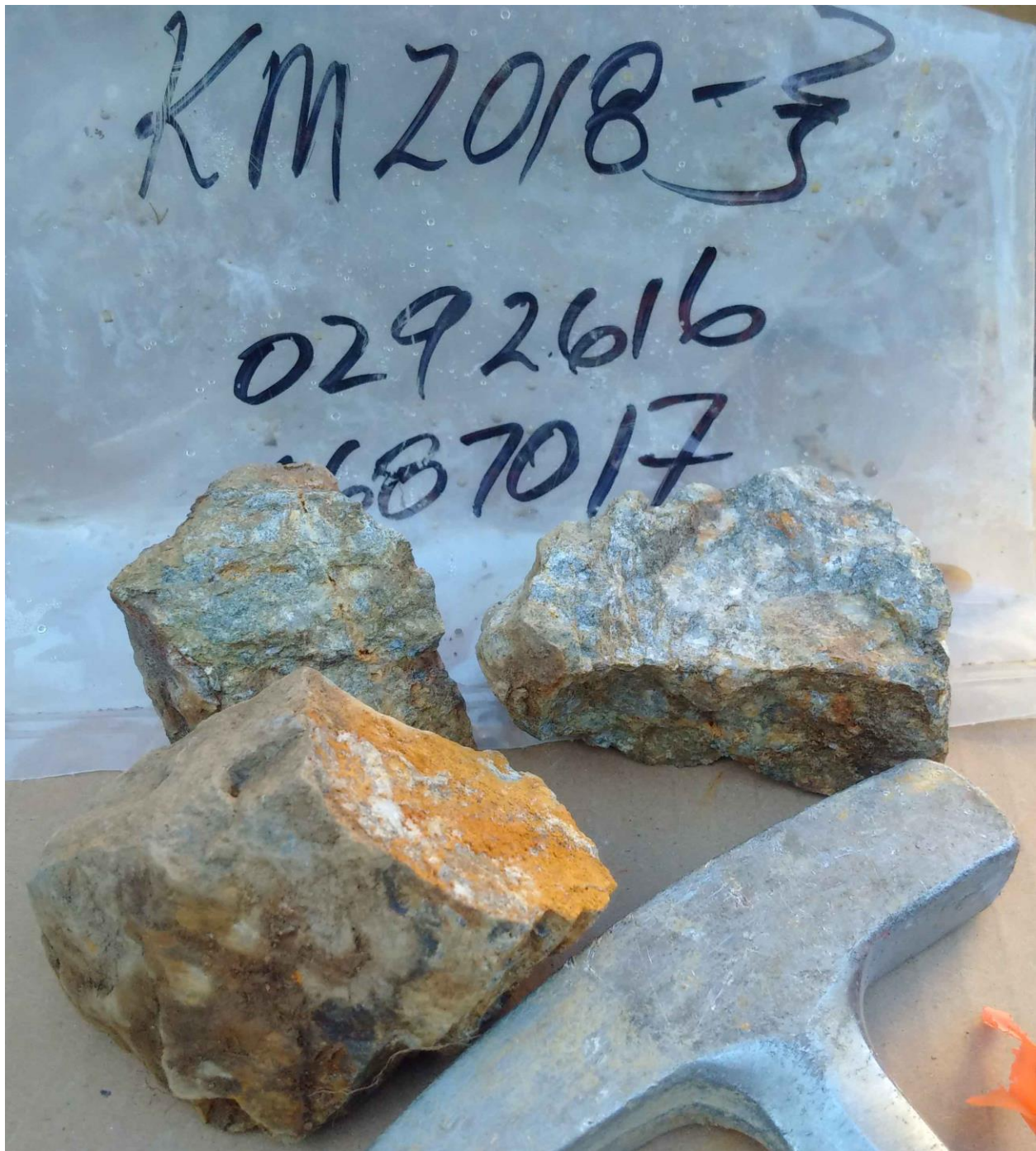


KM 2018-2 TYPICAL ROCK PICTURE

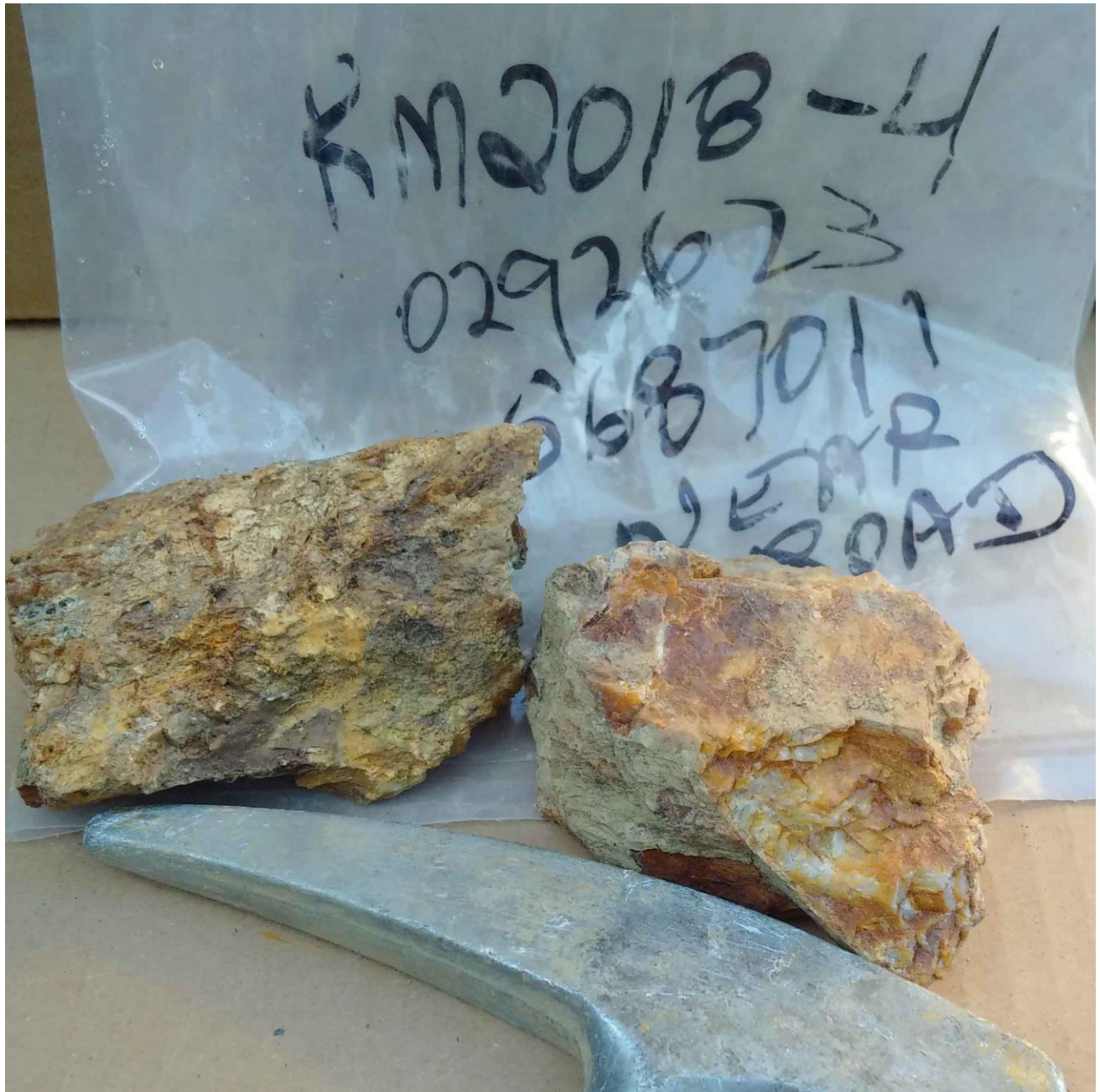




KM 2018-3 TYPICAL ROCK PICTURE



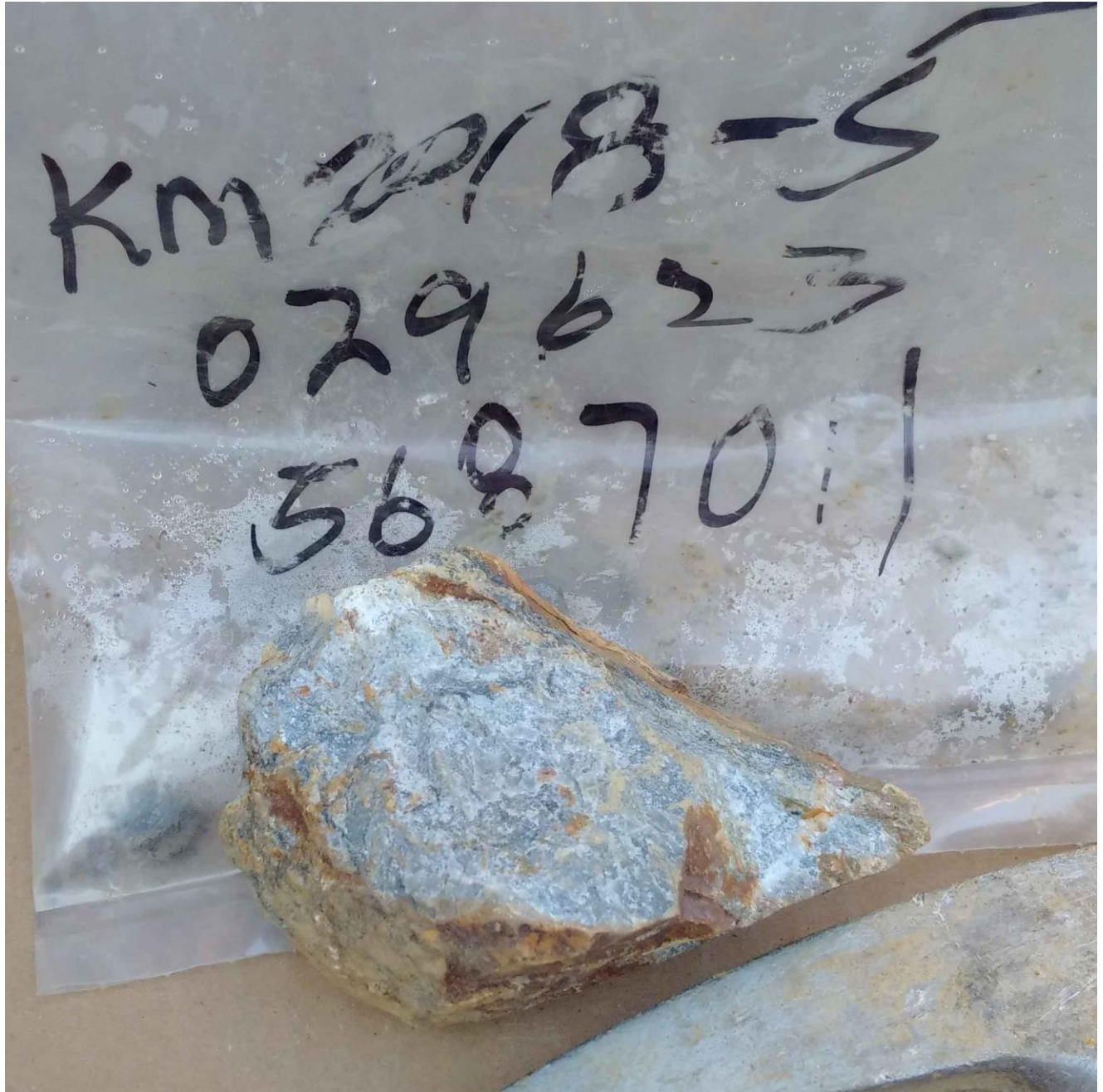
KM 2018-4 TYPICAL ROCK PICTURE



KM 2018-5 TYPICAL ROCK PICTURE

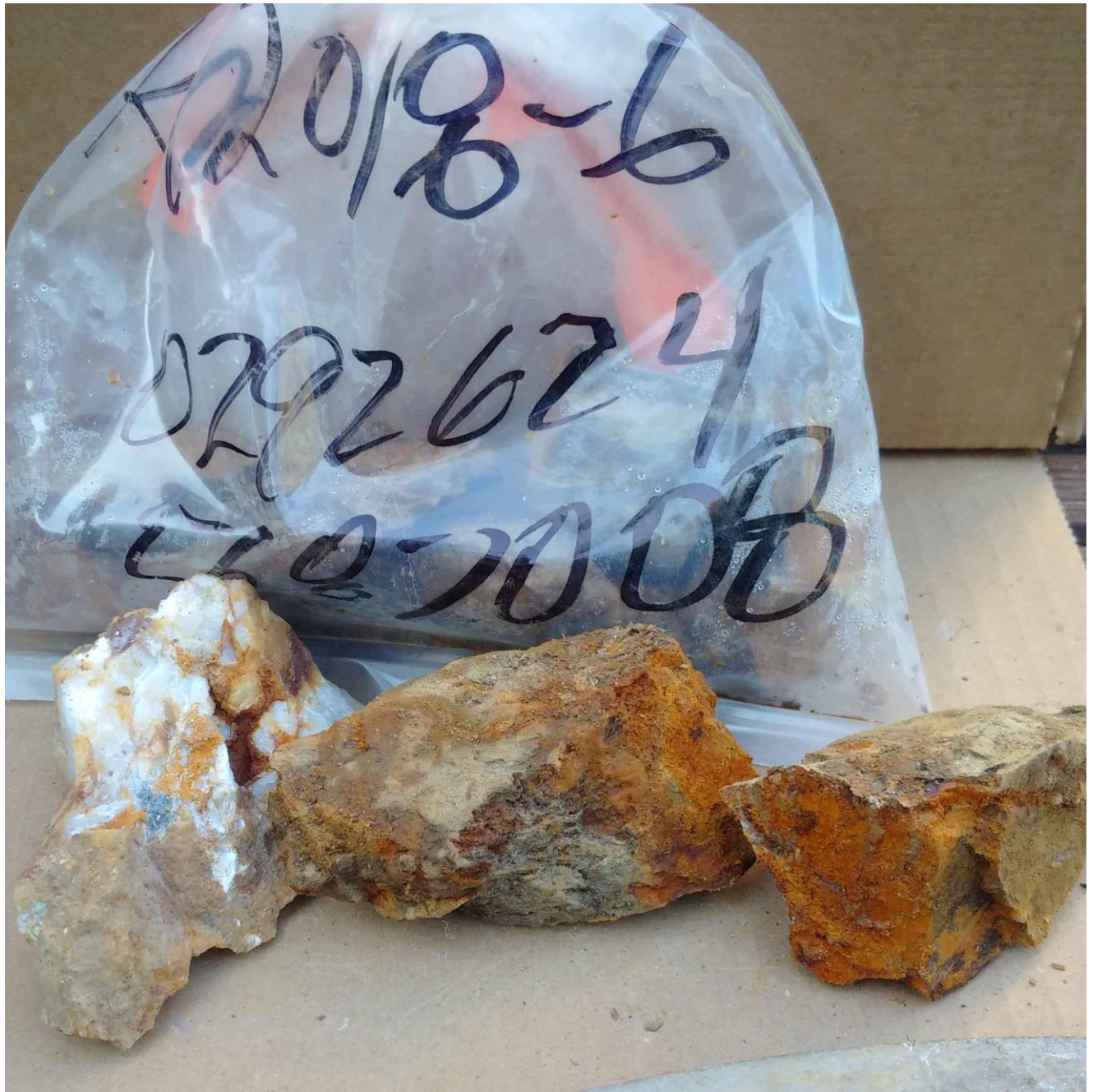






KM 2018-6 TYPICAL ROCK PICTURE



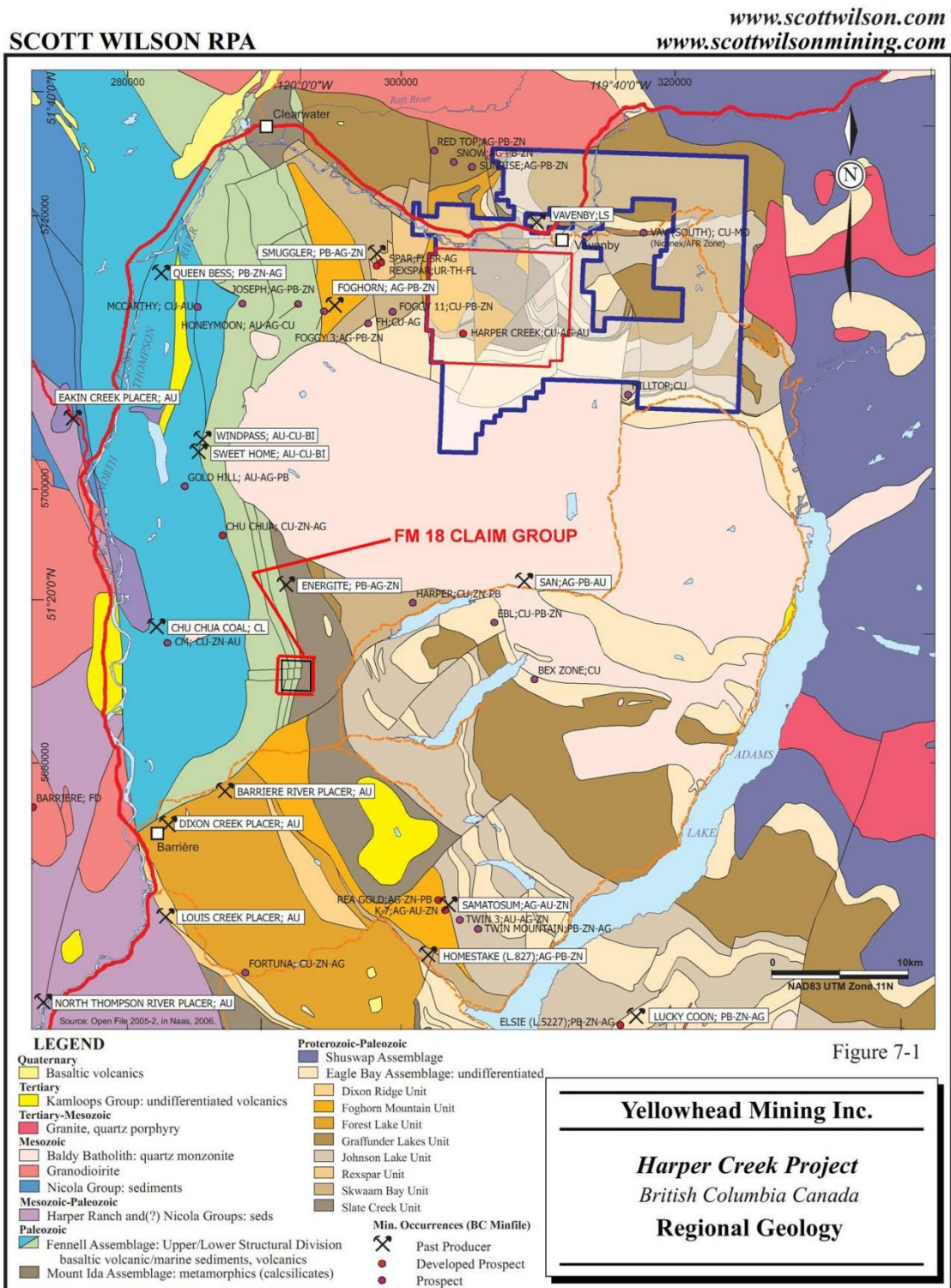


KM 2018-7 TYPICAL ROCK PICTURE



SUMMARY OF REGIONAL AND PROPERTY GEOLOGY

REGIONAL GEOLOGY Figure 7 KM 18 CLAIM GROUP Regional Geology



From Thompson, R., AR 34307, Kamloops Property, First Americas Gold Corp, 2013.

.....” *The Property is in an area of past producing mines including Samatosum and Homestake; the area also contains deposits with 43-101 compliant resource estimates having production potential: Chu Chua, Rea and Harper Creek. The region is underlain by the metal-rich Eagle Bay Group of rocks. The Property occurs at the boundary between the Eagle Bay Assemblage (blue, unit CEB) and the Fennell Formation (grey, unit DTS). West of the Property is an important metallogenic boundary, separating Triassic volcanic and Early Jurassic intrusions which host porphyry copper deposits, from the older Eagle Bay assemblage which is host to volcanogenic, replacement and stratabound-type poly-metallic deposits.”..... and “...According to previous authors, the Chu Chua Property is underlain by the upper and lower divisions of the Fennell Formation. The upper division is dominated by mafic pillowed basalt and greenstone (Fig. 6.3) with mafic sills some argillite and rare chert; the lower division consists of carbonaceous greywacke and argillite (Fig. 6.4), ribbon chert, intraformational conglomerate, and rhyolite porphyry. This succession was intruded by quartz monzonite belonging to the Cretaceous Baldy Batholith. The cherts are fossiliferous and from them a pattern of internal thrust imbrications is derived (Fig. 6.2; Schiarizza and Preto, 1987).”*

The Author’s inspection of the KM 18 tenure area 1052501 in July 2018 confirmed the presence of the Fennell Formation rocks and Eagle Bay Assemblage rocks with mineralization.

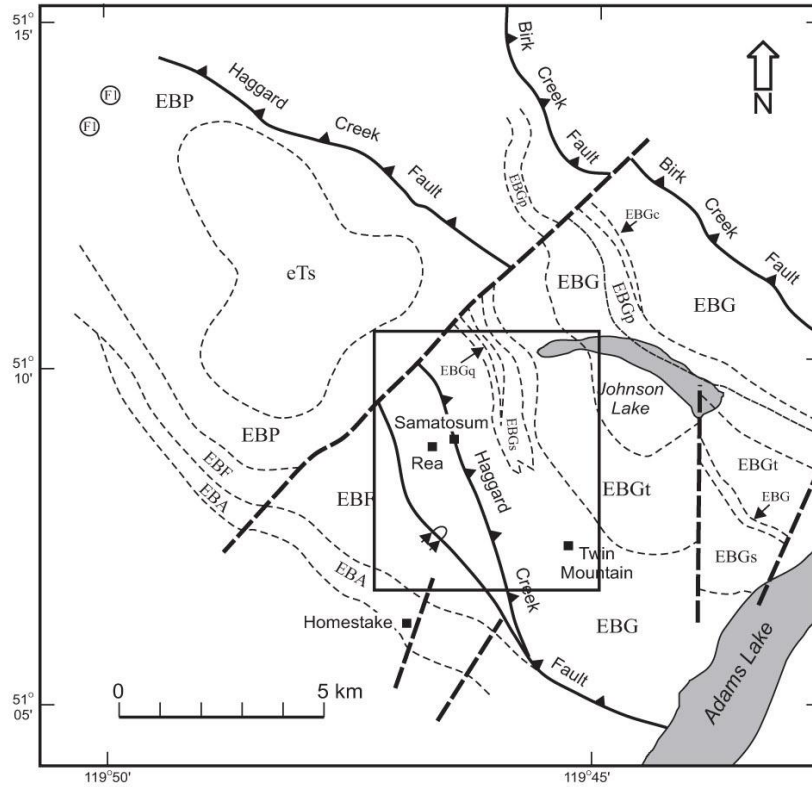
Previous geological mapping by others has provided some detail of the contact between the Fennell and Eagle Bay rocks.

Of note is that rocks of the Eagle Bay assemblage host significant deposits – REA and SAMATOSUM, Yellowhead’s Harper Creek deposit (in Environmental Review process), and the ENARGITE (Past Producer).

The Yellowhead Mining Inc. Regional Geology Map (Fig. 7) is a good reference.

(Fig. 8) – Geology of the REA-SAMATOSUM Deposits indicates that the Eagle Bay Assemblage rock unit EBP may be host to those deposits. The EBP unit is present in the FM 18 Claim Group in the vicinity of the Fennell Formation rocks. Site inspection 2015, prospecting.

Figure 8 KM 18 CLAIM GROUP Regional Geology – REA-SAMATOSUM DEPOSITS
From Geologic Setting of the Devonian-Mississippian, Rea and Samatosum VMS Deposits of
the Eagle Bay Assemblage, Adams Lake Area, South Central British Columbia
Sean L. Bailey², Suzanne Paradis³, Stephen T. Johnston², and Trygve Höy, 1999 BCGS



LEGEND

- - - Geological contacts
- ⌒ Overturned syncline
- ▲ Thrust fault
- Fault
- Ⓢ Conodont fossil locality; Mississippian
- Mineral occurrence

EOCENE
 eTs Kamloops Group:
 Andesite and basalt

EAGLE BAY ASSEMBLAGE
MISSISSIPPIAN
 EBP Phyllite, sandstone, grit; minor conglomerate, limestone and metavolcanic rocks
DEVONIAN and/or MISSISSIPPIAN
 EBF Feldspathic phyllite and schist derived from intermediate tuff and volcanic breccia
DEVONIAN
 EBA Chlorite - sericite - quartz phyllite and schist derived from felsic to intermediate volcanic rocks
LOWER CAMBRIAN
 EBG Calcareous chlorite schist and greenstone derived from mafic volcanic rocks; EBGc - marble
 EBGt - Tshinakin limestone; EBGs - phyllite, limestone, quartzite; EBGq - quartzite; EBGp - phyllite and limestone

Figure 2. Geological map of the Johnson Lake area, modified after Schiarizza and Preto (1987)

.....”Highly deformed Cambrian to Mississippian metasedimentary and metavolcanic rocks of the Eagle Bay Assemblage in the Adams Lake area host numerous polymetallic sulphide deposits. The region has long been recognized as favorable for various types of sulphide deposits, and is still today a prospective “ground” for mineral exploration. The Homestake barite-sulphide deposit was discovered in 1893. Since then numerous sulphide occurrences have been found in the district. Some of these, including Samatosum, Rea and Homestake, have had limited production, and others, such as Twin Mountain, have had extensive exploration work over the years. This paper briefly describes the Samatosum, Rea, and Twin Mountain sulphide deposits located in the Adams Lake area of south central British Columbia, approximately 80 kilometers northeast of Kamloops (Figure 1). It defines their geological settings, and addresses some fundamental structural and stratigraphic problems in the region. This study was initiated during the summer of 1999 as the M.Sc. project of the first author (Sean L. Bailey) and included 1: 5000 scale regional mapping of an approximately 30 km² area conducted over a 7 week period. It is part of the Ancient Pacific Margin NATMAP metallogenic study of syngenetic sulphide deposits of the Kootenay Terrane and the correlative Yukon-Tanana Terrane in northern British Columbia and Yukon..... The first documented discovery of sulphide occurrence in the Adams Lake area dates back to 1893 with the discovery of the Homestake barite-sulphide deposit. The Homestake mine was worked intermittently between 1893 and 1984. In the 1920s, numerous sulphide occurrences were found in the Birk Creek and Harper Creek areas. In 1978, the Chu Chua massive cupriferous pyrite deposit was discovered in basalts of the Fennell Formation. However, none of these discoveries resulted in significant production. In 1983, A. Hilton and R. Nicholls discovered the Rea massive sulphide deposit. They optioned it to Rea Gold Corporation who in turn optioned it to Corporation Falconbridge Copper (presently Inmet Mining Corporation). Drilling carried out by Corporation Falconbridge Copper in the 1980s outlined two small but fairly high-grade massive sulphide lenses (known as the Discovery zone” or the “Rea horizon”). The most recent published estimate of the mineralization was 376,000 tonnes grading 0.33 percent copper, 2.2 percent lead, 2.3 percent zinc, 6.1 grams per tonne gold, and 69.4 grams per tonne silver (Northern Miner – November 30, 1987).....

Regional Geology

Metavolcanic and metasedimentary rocks of the Eagle Bay Assemblage of the Kootenay Terrane host the Rea and Twin Mountain sulphide deposits and the Samatosum vein deposit. The Kootenay Terrane and correlative rocks of the Yukon-Tanana Terrane farther north comprise dominantly Paleozoic sedimentary and volcanic rocks that are inferred to have been deposited on the distal western edge of ancestral North America. The successions of the Kootenay Terrane include the Lardeau Group, the Eagle Bay Assemblage, eastern assemblages of the Late Paleozoic Milford Group, and equivalent rocks within the Shuswap metamorphic complex (Höy, 1999). The Eagle Bay Assemblage, described by Schiarizza and Preto (1987), comprises Lower Cambrian to Mississippian rocks that are intruded by Late Devonian orthogneiss and Jurassic-Cretaceous granodiorite and quartz monzonite of the Raft and Baldy batholiths. Within the study area, the Eagle Bay Assemblage is contained within four west-directed thrust slices. The assemblage consists of clastic metasedimentary rocks (units EBH and EBQ Schiarizza and Preto 1987), mafic metavolcanic rocks and limestone (unit EBG), and structurally overlying clastic metasedimentary rocks, with minor carbonate and volcanic rocks (unit EBS), all of which are interpreted as Cambrian in age. These are in turn overlain by Devonian-Mississippian mafic to intermediate metavolcanic and metasedimentary rocks (units EBA and EBF, respectively),

which are overlain by metaclastic rocks (unit EBP). Numerous volcanogenic sulphide occurrences of the Eagle Bay Assemblage, including Rea, Homestake, Samatosum and Twin Mountain are within mafic to intermediate metavolcanic and metasedimentary rocks of units EBA, EBF, and EBG (Figure 2). Regional mapping by Schiarizza and Preto (1987) and this study indicate that units EBA, EBF, and EBP between the Samatosum and Homestake deposits are apparently right-way-up regionally but locally overturned (Figure 2). These are structurally overlain by mafic metavolcanic rocks of EBG and the Tshinakin Limestone Member which is assigned a Lower Cambrian age (Schiarizza and Preto, 1987). These stratigraphic and structural relationships led to the inference by Schiarizza and Preto (1987) of the Haggard Creek Thrust Fault, which places Cambrian rocks on Devonian–Mississippian rocks. The Samatosum and Rea deposits are located near the inferred trace of this fault, and controversy exists over which package(s) of rocks hosts the deposits and whether or not a major thrust fault exists. This study will attempt to resolve these matters.....”

<p>DEVONIAN TO PERMIAN</p> <p>ALLOCHTHONOUS INTERNALLY IMBRICATED OCEANIC ASSEMBLAGE</p> <p>FENNELL FORMATION</p> <p>UPPER STRUCTURAL DIVISION</p> <p>uFb GREY AND GREEN PILLOWED AND MASSIVE METABASALT; MINOR AMOUNTS OF BASALTIC BRECCIA, TUFF, DIABASE, GABBRO, AND CHERT</p> <p>uFc GREY AND GREEN BEDDED CHERT</p> <p>LOWER STRUCTURAL DIVISION</p> <p>IFc GREY AND GREEN BEDDED CHERT, CHERTY ARGILLITE, SLATE, AND PHYLLITE</p> <p>IFb GREY AND GREEN PILLOWED AND MASSIVE METABASALT; MINOR AMOUNTS OF BASALTIC BRECCIA AND TUFF</p> <p>IFg GABBRO, DIORITE, DIABASE</p> <p>IFp LIGHT TO MEDIUM GREY QUARTZ-FELDSPAR PORPHYRY RHYOLITE</p> <p>IFs LIGHT TO DARK GREY SANDSTONE, SILTSTONE, SLATE, PHYLLITE, AND QUARTZITE; MINOR AMOUNTS OF LIMESTONE AND CHERT; IN PLACES INCLUDES GREY TO GREEN QUARTZOSE AND FELDSPATHIC PHYLLITE (METATUFF)</p> <p>IFcg INTRAFORMATIONAL CONGLOMERATE; CLASTS DERIVED EXCLUSIVELY FROM FENNELL FORMATION LITHOLOGIES</p> <p>IFu UNDIVIDED; MAINLY IFc, IFg, and IFb, BUT MAY INCLUDE ANY OR ALL OF ABOVE ROCK TYPES</p>	<p>DEVONO-MISSISSIPPIAN AND OLDER PARAUTOCHTHONOUS ROCKS (EBP TO SDQ)</p> <p>EAGLE BAY FORMATION (EBP TO EBG)</p> <p>MISSISSIPPIAN</p> <p>EBP DARK GREY PHYLLITE AND SLATE WITH INTERBEDDED SILTSTONE, SANDSTONE, AND GRIT; MINOR AMOUNTS OF CONGLOMERATE, LIMESTONE, AND METATUFF; EBPI-LIMESTONE; EBPV-METAVOLCANIC BRECCIA AND TUFF</p> <p>DEVONIAN AND/OR MISSISSIPPIAN</p> <p>EBF LIGHT TO MEDIUM GREY, RUSTY WEATHERING FELDSPATHIC PHYLLITE AND FRAGMENTAL PHYLLITE DERIVED FROM INTERMEDIATE TO FELSIC TUFF AND VOLCANIC BRECCIA; MINOR AMOUNTS OF DARK GREY PHYLLITE AND SILTSTONE; EBFq-LIGHT GREY MASSIVE "CHERTY QUARTZITE" (SILICEOUS EXHALITE?)</p> <p>DEVONIAN</p> <p>EBA LIGHT SILVERY GREY TO MEDIUM GREENISH GREY SERICITE-QUARTZ PHYLLITE AND SERICITE-CHLORITE-QUARTZ PHYLLITE DERIVED FROM FELSIC TO INTERMEDIATE VOLCANIC AND VOLCANICLASTIC ROCKS INCLUDING PYRITIC, FELDSPATHIC, AND COARSELY FRAGMENTAL VARIETIES; LESSER AMOUNTS OF DARK GREY PHYLLITE, SILTSTONE, AND GREEN CHLORITIC PHYLLITE; INCLUDES BIOTITE-FELDSPAR-QUARTZ SCHIST AND GNEISS, BIOTITE-QUARTZ HORNFELS AND AMPHIBOLITE ADJACENT TO BALDY BATHOLITH; EBAf-FELDSPAR PORPHYRY, FELDSPATHIC PHYLLITE, PYRITIC SERICITE-FELDSPAR-QUARTZ PHYLLITE, METAVOLCANIC BRECCIA; EBAi-SERICITIC QUARTZO-FELDSPATHIC SCHIST AND GNEISS DERIVED FROM FELSIC INTRUSIVE ROCKS; EBAu-UNDIVIDED EBA and EBAi</p>
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From Thompson, R., AR 34307, Kamloops Property, First Americas Gold Corp, 2013.
... "The Kamloops Property is underlain by mafic volcanic rocks belonging to the Permian Fennell Formation; carbonaceous argillite and siltstone along with rhyolite porphyry that are part of the mid-Paleozoic Eagle Bay assemblage (Scharizza and Preto, 1987; Thompson et. al. 2006); and Cretaceous granodiorite and quartz-monzonite of the Raft and Baldy batholiths which intrude the whole."

The Author confirmed the presence of Fennell Formation Lower Structural Division rocks and Eagle Bay rocks within the 2018 KM 18 claim group Work Area.

SUMMARY OF REGIONAL AND PROPERTY GEOLOGY (.....continued)

Prospecting on the KM 18 CLAIM GROUP in July 2018 confirmed the presence of the Fennell Formation rocks as well as Eagle Bay rocks, and mineralization in the Work Area.

Previous geological mapping by others has provided some detail of the contact between the Fennell and Eagle Bay rocks.

Of note is that rocks of the Eagle Bay assemblage host significant deposits – REA and SAMATOSUM, Yellowhead's Harper Creek deposit (in Environmental Review process), and the ENARGITE (Past Producer).

The Yellowhead Mining Inc. Regional Geology Map (*Fig. 7*) is a good reference.

(*Fig. 8*) – Geology of the REA-SAMATOSUM Deposits indicates that the Eagle Bay Assemblage rock unit EBP may be host to those deposits. The EBP unit is present in the KM 18 Claim Group in the vicinity of the Fennell Formation rocks.

Elevated levels of Au were found in samples KM2018-3,6,7;

Elevated levels of Ag were found in all samples;

Elevated levels of Cu, Pb, Zn were found in all samples;

Table I. Particulars of Grab Samples taken by ELLERBECK LOCKE (2018) KM18

No.	LOCATION / SAMPLE #	UTM LOCATION		DESCRIPTION All OUTCROP
1	KM 2018-1	0292624	5687015	Quartz vein - white - in contact with sediment-Eagle Bay/Fennel. Fractured. Iron stain, no visible metal. Vuggy quartz/iron vugs. N-S strike – vertical dip
2	KM 2018-2	0292616	5687017	Quartz vein – white and gray – contact with sediments – no visible metal, iron stain, rust, iron vugs in quartz. N-S strike – vertical dip
3	KM 2018-3 to Lab	0292616	5687017	Quartz vein – gray – contact with sediments – white quartz crystals. Iron stain/rust. No visible metal. Quartz breccia. Iron veinlets – secondary event(s). N-S strike – vertical dip
4	KM 2018-4	0292623	5687011	Quartz vein in contact with highly altered sediments. Iron stained, iron veining. Bleached sediments. White quartz breccia. Vugs in altered sediments. N-S strike – vertical dip
5	KM 2018-5 to Lab	0292623	5687011	Gray quartz vein. Visible metal-pyrite. Iron staining. Contact with sediments. N-S strike – vertical dip
6	KM 2018-6 to Lab	0292624	5687008	White quartz, contact with sediments. Visible metal – galena? Pyrrhotite? Iron vugs. Layered quartz. Heavy Iron stain. N-S strike – vertical dip
7	KM 2018-7 to Lab	0292631	5687002	Quartz breccia – highly fractured. Contact with sediments. Altered sediments. Heavy iron stain, rust. No visible metal. In contact with gray and white quartz and sediments. Iron soil staining in area.

TECHNICAL DATA AND INTERPRETATION
Table II. Summarized Assay Results- Grab Samples-Ellerbeck (2018) – KM 18 Claim

Sample No.	Sample Type	Cu ppm	Pb ppm	Zn ppm	Au ppm	Ag ppm	Mo ppm	As ppm
KM2018-3	Grab	11	6	80	0.005	0.3	2	8
KM2018-5	Grab	8	54	21	0.022	1.6	4	10
KM2018-6	Grab	152	1240	666	<0.005	2.4	10	16
KM2016-7	Grab	56	127	274	0.013	0.6	2	16

PURPOSE

In July 2018 a prospecting program was completed on Tenures 1052501 of the 1 Claim KM 18 CLAIM GROUP. The purpose of the prospecting program was to locate, if possible, geological features (typical copper, gold, silver bearing structures in particular) similar to those found immediately to the West at the BAR gold showing area, and to prospect for unidentified outcrops and showings of significance. Information for this report was obtained from sources cited under Selected References and from a property examination made on July 15, 2018.

PROSPECTING RESULTS

Outcrops/Bedrock observance confirmed local/property and regional geological mapping. Prospecting on the FM 18 CLAIM GROUP revealed the presence of quartz veins within Eagle Bay Assemblage in the Work Area. (mapping done by Schiarizza/Preto circa 1987. (Fig. 9)). The 2018 field program showed that mineralization is present in rocks of the host Fennel Formation of the KM 18 property in proximity to rocks of the Eagle Bay formation which hosts the REA, SAMATOSUM and HARPER CREEK deposits as well as the ENARGITE (ENERGITE) past producer . The 2018 field program assay results justify a detailed geological examination of the FM 18 Claim Group.

ASSAY RESULTS

Elevated levels of Au were found in samples KM2018-3,6,7;
 Elevated levels of Ag were found in all samples;
 Elevated levels of Cu, Pb, Zn were found in all samples;

INTERPRETATIONS AND CONCLUSIONS

The reported (in various ARIS assessment reports) presence of mineralization in proximity to the KM 18 Claim Group was researched, as well as the host rock type for that mineralization.

Sampling and assaying rocks from various outcroppings within the KM 18 on the July 15, 2018 prospecting program revealed significant and encouraging amounts of mineralization.

Assays of samples revealed the presence of significant mineralization.

The presence of arsenic (As) in significant amounts in all samples is of interest because of the association of As with the Rea-Samatosum deposit and the rock type (Eagle Bay Formation).

FM 18 Mineralization: Ag Au Pb Zn Cu As

Host rock type - FENNEL FORMATION and EAGLE BAY FORMATION rocks noted.

Proximal Mineralization:

SC (BAR 3) - Au

ENARGITE – Pb Zn Ag Au

REA – SAMATOSUM – Ag Au

CHU CHUA – Cu Pb Zn

Host rock type - FENNEL FORMATION and EAGLE BAY FORMATION rocks noted.

CONCLUSIONS

The KM 18 CLAIM GROUP contains both FENNEL FORMATION and EAGLE BAY FORMATION rocks and significant mineralization. The rock-type setting for mineralization within the KM 18 is similar to that of known deposits and past producers in the area.

SUMMARY AND RECOMMENDATIONS

The 2018 field program showed that mineralization is present in rocks of the host Fennel Formation of the KM 18 property in proximity to rocks of the Eagle Bay formation which hosts the REA, SAMATOSUM and HARPER CREEK deposits as well as the ENARGITE (ENERGITE) past producer .

The 2018 field program assay results justify a detailed geological examination of the FM 18 Claim Group.

Therefore, it is recommended by the Author that a comprehensive prospecting plan be created and executed in the field as soon as practical to confirm and map the extent of the mineralized areas herein reported and to locate and understand the Fennell and Eagle Bay Formations' contact within the KM 18.

ITEMIZED COST STATEMENT

Exploration Work type	KM18 CLAIM GROUP	Days			Totals
PROSPECTING & EXPLORATION					
Personnel (Name)* / Position	Field Days (list actual days)	Days	Rate	Subtotal*	
Ken Ellerbeck / Owner	July 15, 2018	1	\$500.00	\$500.00	
Gerald Locke / Owner	July 15, 2018	1	\$250.00	\$250.00	
			\$500.00	\$0.00	
			\$250.00	\$0.00	
				\$750.00	\$750.00
Office Studies	List Personnel (note - Office only, do not include field days)				
Literature search	Ken Ellerbeck	1.0	\$500.00	\$500.00	
Database compilation	Ken Ellerbeck	0.5	\$500.00	\$250.00	
General research	Ken Ellerbeck	0.5	\$500.00	\$250.00	
Report preparation	Ken Ellerbeck	1.0	\$500.00	\$500.00	
Other (specify)				\$0.00	
				\$1,500.00	\$1,500.00
Ground Exploration Surveys	Area in Hectares/List Personnel				
Prospect	see Personnel Field Days				
Underground					
Trenches				\$0.00	\$0.00
Geochemical Surveying	Number of Samples	No.	Rate	Subtotal	
Soil	ALS MINERALS Vancouver	0.0	\$49.46	\$0.00	
Rock	ALS MINERALS Vancouver	4.0	\$48.00	\$192.00	
				\$192.00	\$192.00
Transportation		No.	Rate	Subtotal	
KM Kamloops-Property-return	July 15, 2018	190.00	\$0.95	\$180.50	
KM SAMPLES TO LAB	July 18, 2018	50.00	\$0.95	\$47.50	
Ft. St. John-Kamloops Return		2100.00	\$0.95	\$1,995.00	
				\$2,223.00	\$2,223.00
Accommodation & Food	Rates per day				
Hotel			\$0.00	\$0.00	
Camp			\$0.00	\$0.00	
Meals	2 man-days @\$35/day	2.00	\$35.00	\$70.00	
				\$70.00	\$70.00
Miscellaneous					
Telephone			\$0.00	\$0.00	
Other (Specify)				\$0.00	\$0.00
Equipment Rentals					
Field Gear (Specify)			\$0.00	\$0.00	
Other (Specify)				\$0.00	\$0.00
Freight, rock samples					
			\$0.00	\$0.00	
			\$0.00	\$0.00	
			\$0.00	\$0.00	\$0.00
TOTAL Expenditures					\$4,735.00

STATEMENT OF AUTHOR'S QUALIFICATIONS

STATEMENT OF AUTHOR'S QUALIFICATIONS

KENNETH C. ELLERBECK, PMP

I hold a BSc in Mechanical Engineering, University of Alberta, Edmonton, 1973.

I have completed University level introductory geology courses.

I hold a Certificate in Project Management from University of British Columbia, Sauder School of Business, 2010.

I hold a Project Management Professional designation – PMP – 1391810 – 2011.

I have been actively involved in all aspects of mineral exploration since 1980 in the Province of British Columbia.

I have managed staking and exploration programs since 1980 on my own mineral tenures as well as for tenures held by both private and publicly-held junior exploration companies.

My mineral exploration experience includes staking, prospecting, trenching, trench mapping, line cutting and grid construction, geochemical surveys, geophysical surveys, diamond drilling supervision and general exploration program supervision.

SIGNED



KENNETH C. ELLERBECK

LIST OF SELECTED REFERENCES

BC Geological Survey, Ministry of Energy, Mines & Petroleum Resources – MINFILE

British Columbia Survey Branch, The Map Place.

TECHNICAL REPORT ON THE HARPER CREEK PROJECT, BRITISH COLUMBIA, CANADA, PREPARED FOR YELLOWHEAD MINING INC. NI 43-101 Report, David W. Rennie, P.Eng., Kevin Scott, P.Eng., November 2007.

Geologic Setting of the Devonian-Mississippian, Rea and Samatosum VMS Deposits of the Eagle Bay Assemblage, Adams Lake Area, South Central British Columbia, bc Geological Fieldwork 1999. Sean L. Bailey², Suzanne Paradis³, Stephen T. Johnston², and Trygve Höy.

Schiarrizza, P. and Preto, V.A. (1987): Geology of the Adams Plateau-Clearwater-Vavenby Area; *British Columbia Ministry of Energy, Mines and Petroleum Resources*, Paper 1987-1, 88 pages.

Preliminary Map 56, Geology of the Adams Plateau-Clearwater Area, Schiarrizza, P., Preto, V. 1987.

Thompson, R., AR 34307, Kamloops Property, First Americas Gold Corp, 2013.

REPORT KEYWORDS: massive sulfide, gold, copper, Chu Chua deposit, rhyolite porphyry, alteration, silicification, silica flooding, felsic dome, Fennell Formation, Devonian, Permian, Barrière.

Thompson, R., Cook, F., Assessment Report, Kamloops Property, First Americas Gold Corp, 2014.

Thompson, R., Assessment Report, Kamloops Property, Ellerbeck and Locke, 2014.

Belik, G., AR23816, Eighty-Eight Resources Limited, KB Property, 1995.

Evans, G., Corporation Falconbridge Copper, Diamond Drill Report, Holes BAR 1-4, Bar Property (SC Croup), 1987

LIST OF SOFTWARE PROGRAMS USED

ADOBE PHOTOSHOP 7.0

PAINT for WINDOWS

ARIS MAPBUILDER – Map Data downloads

Imap BC – Map Data downloads

MtOnline - MINFILE downloads.

APPENDIX 1 SAMPLE PREPARATION AND METHOD OF ANALYSIS



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 KAMLOOPS BC V2C 1G8

Page: 1
 Total # Pages: 2 (A - C)
 Plus Appendix Pages
 Finalized Date: 30-JUL-2018
 Account: ELLERK

CERTIFICATE KL18172830

This report is for 4 Rock samples submitted to our lab in Kamloops, BC, Canada on 18-JUL-2018.

The following have access to data associated with this certificate:

KEN ELLERBECK

SAMPLE PREPARATION


ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
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
Au- AA23	Au 30g FA- AA finish	AAS

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

APPENDIX 2

CERTIFICATE OF ANALYSIS - ASSAY RESULTS



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 Total # Pages: 2 (A - C)
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CERTIFICATE OF ANALYSIS KL18172830

Sample Description	Method Analyte Units LOD	WEI- 21 Recvd Wt. kg	Au- AA23 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	0.005	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01
KM2018- 3		1.00	0.005	0.3	0.11	8	<10	70	<0.5	<2	0.09	<0.5	3	14	11	1.17
KM2018- 5		0.69	0.022	1.6	0.12	10	<10	150	<0.5	<2	0.01	<0.5	1	10	8	1.25
KM2018- 6		0.46	<0.005	2.4	0.31	16	<10	60	<0.5	<2	0.10	1.5	10	20	152	3.20
KM2018- 7		0.63	0.013	0.6	0.26	16	<10	60	<0.5	<2	0.04	3.0	5	16	56	2.30

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



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Page: 2 - B
 Total # Pages: 2 (A - C)
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 Finalized Date: 30- JUL- 2018
 Account: ELLERK

CERTIFICATE OF ANALYSIS KL18172830

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	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41
		Cd ppm 10	Hg ppm 1	K % 0.01	La ppm 10	Mg % 0.01	Mn ppm 5	Mo ppm 1	Na % 0.01	Ni ppm 1	P ppm 10	Pb ppm 2	S % 0.01	Sb ppm 2	Sc ppm 1	Sr ppm 1
KM2018-3		<10	<1	0.01	10	0.01	134	2	0.03	19	460	6	0.01	<2	2	22
KM2018-5		<10	<1	0.04	10	0.01	34	4	0.04	9	30	54	0.38	<2	1	7
KM2018-6		<10	<1	0.01	10	0.01	459	10	0.03	40	810	1240	0.02	2	6	25
KM2018-7		<10	<1	0.01	10	0.01	282	2	0.03	40	270	127	0.02	2	5	9

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



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CERTIFICATE OF ANALYSIS KL18172830

Sample Description	Method Analyte Units LOD	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41
		Th ppm 20	Ti % 0.01	Ti ppm 10	U ppm 10	V ppm 1	W ppm 10	Zn ppm 2
KM2018-3		<20	<0.01	<10	<10	6	<10	80
KM2018-5		<20	<0.01	<10	<10	7	<10	21
KM2018-6		<20	<0.01	<10	<10	10	<10	666
KM2018-7		<20	<0.01	<10	<10	14	<10	274

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