Ministry of Energy and Mines	BC Geologic Assessmer 3851	nt Report	Assessment Report
BC Geological Survey			Title Page and Summary
TYPE OF REPORT [type of survey(s)]: Geochemical, Pros	pecting	τοτα	L COST: \$ 6,872.69
AUTHOR(S): Laurence Sookochoff, PEng	SIGN	IATURE(S): LAUVE	nce sookochoff
NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):			YEAR OF WORK: 2019
STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(	<b>s)/DATE(S):</b> <u>5746350</u> , Ju	ne 30, 2019	
PROPERTY NAME: California			
CLAIM NAME(S) (on which the work was done): 1068922			
COMMODITIES SOUGHT: Gold, silver, copper			
MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 082	2FSW169		
MINING DIVISION: Nelson	NTS/BCG	<b>s:</b> _082F.044	
LATITUDE: <sup>0</sup> <u>27</u> <sup>'</sup> LONGITUI	DE: <u>117</u> <u>18</u>	" (at centre	e of work)
OWNER(S):			
1) John Bakus	2)		
MAILING ADDRESS: #3, 1572 Lorne Street East			
Kamloops BC V2C 1X6			
OPERATOR(S) [who paid for the work]: 1) Bill McKinney	2)		
MAILING ADDRESS: 11571 Shell Road			
Richmond BC V7A 3W7			
PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraph Jurassic, Rossland Group, Elise Formation, Nelson B			
granodiorite, feldspar porphyry, intrusive,			
REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASS	ESSMENT REPORT NUMBE	<b>rs:</b> <u>1184, 9804, 11</u>	027, 22310, 22935, 33715

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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	1	-	54.64
Silt			
Rock	5	_	273.25
Other			
DRILLING (total metres; number of holes, size)			
Core		_	
Non-core			
RELATED TECHNICAL			
Sampling/assaying		<u></u>	3,272.25
Petrographic			
Mineralographic		<u> </u>	
Metallurgic			
PROSPECTING (scale, area)	1:5000 5 hectares		3,272.25
PREPARATORY / PHYSICAL			
Line/grid (kilometres)		-	
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/t	rail		
Trench (metres)			
Underground dev. (metres)			
 Other			
		TOTAL COST:	\$ 6,872.39

### John Nick Bakus

(Owner)

# **Bill McKinney**

(Operator)

# **Geochemical and Prospecting Report**

(Event 5746350)

Work done on Tenure

#### 1068922

of the

# **California Property**

Nelson Mining Division

#### BCGS Map 082F.044

Centre of Work

# **5477900N, 478250E** (*Zone 11U NAD 83*)

work done from

#### June 21, 2019 to June 30, 2019

Author & Consultant

# Laurence Sookochoff, PEng Sookochoff Consultants Inc.

Amended Report Submitted

February 12, 2020

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# **APPENDICES**

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# SUMMARY

The 105 hectare California Property ("Property") is located 416 kilometres east of Vancouver, four kilometres south of Nelson, and 48 kilometres northeast of Trail, a location providing smelter facilities.

The Property history stems from the discovery of gold and silver in 1867 and silver in 1886 which generated a regional silver rush with the city of Nelson growing rapidly to supply the local mining activity. Nelson developed to an extent that two railways were built to pass through the "Queen City" as it is now recognised.

The Property which includes the historic California mine located on the most developed 600-metre-long California Vein system to a depth of 400 metres, could be the vein system with the greatest potential for locating a high grade gold, low tonnage epithermal mineral resource or a low-grade copper-gold porphyry resource. Although eight of the 12 past productive mines within two kilometres of the California, in addition to the California, were classed as polymetallic vein type deposits, a type commonly associated with a mineralized porphyry, epithermal and porphyry type deposits are indicated.

Mineralized epithermal vein deposits, where "Bonanza" gold zones can develop, are indicated in the finely banded mineralization in the Union vein whereas porphyry mineral deposits were indicated at the Kenville mine by the drill intersection of low-grade porphyry-style mineralization and alteration over short intervals in a diamond drill hole.

Cross-structures are indicated as controls for higher grade mineralization. At the Kenville mine, the most past productive mine in the area, with seven levels in the development of five main veins, "ore-shoots" are formed at the intersection of the main vein with flatter lying offshoots. At the California mine, with three levels in the development of two veins, "Some enrichment of metal values was observed where normal faults cross-cut the vein-shear zone".

A reported (Assessment Report 11027) 91 metres long over a 1 metre width ore block grading 29.14 grams per tonne gold with a potential calculated 36,000 tonnes believed to exist at the west end of the No. 3 level, may be a cross-structural controlled "ore-shoot" associated to a mineralized porphyry deposit to depth. As the California was also designated as a gold-quartz vein type deposit, the reported higher gold grade could indicate the existence of an epithermally related "Bonanza" gold zone (Figure 9).

The results of the prospecting program were encouraging to the location of a mineralized zone within the, " ... up to 30 metres wide..." shear zone hosting the two California mine developed mineral veins. Soil sample CS-11 (Figure 8), taken from a location 550 metres west of the designated California Minfile symbol (Figure 6), and indicated within the easterly striking California shear zone, yielded mineral values of 530 ppm arsenic, 1.17 ppm gold, 187.5 ppm copper, and 10.05 ppm mercury. These anomalous values, amongst other indications, give added support to the presence of the upper levels of a gold laden epithermal system.

Recommendations to provide additional information to a potential epithermal or porphyry mineral resource, are for an IP (Induced Potential) survey over the California mine portion of the California vein and westerly to the anomalous soil sample CS-11.

A structural analysis of the California property should also be done to locate any potential mineral controlling cross-structures,

# **INTRODUCTION**

The California property is a past producing gold mine located four kilometres south of Nelson, British Columbia. A reported 36,000 tonnes of mineralization has been calculated for a 91-metre-long block believed to exist at the west end of the No. 3 level. The mineral zone reportedly grades 29.14 grams per tonne gold over a one metre width (Assessment Report 11027).

Information for this report was obtained from sources as cited under Selected References, from mineral exploration in the general Nelson area, and from information on the procedures and results on the prospecting and sampling program given the author.



# Figure 1. Location Map

(Base Map from MapPlace)

# **PROPERTY LOCATION & DESCRIPTION**

#### Location

The California property is located 416 kilometres east of Vancouver British Columbia and four kilometres south of Nelson within BCGS Map 082F.044.

Nelson is a city located in the Selkirk Mountains on the extreme West Arm of Kootenay Lake in the Southern Interior of British Columbia, Canada. Known as "The Queen City", and acknowledged for its impressive collection of restored heritage buildings from its glory days in a regional silver rush, Nelson is one of the three cities forming the commercial and population core of the West Kootenay region; the others being Castlegar and Trail.

Gold and silver were found in the area in 1867. Following the discovery of *silver* at nearby Toad Mountain in 1886, the town boomed quickly, leading to incorporation in 1897. Two railways were built to pass through Nelson. Due to its location near transportation corridors, Nelson grew to supply the local mining activity and soon became a transportation and distribution centre for the region.

The town soon matured from a false-fronted boom town to a sophisticated city.

# Property Location & Description (cont'd)

#### Description

The California Property is comprised of one mineral claim covering an area of 105 hectares. Particulars are as follows:

Tenure number	Claim name	Expire date*	Area in hectares
1068922	CALIFORNIA GOLD SOUTH	06/12/2025	105

\*Upon the approval of the assessment work filing Event Number 5746350.

#### Figure 2. Property Location to Vancouver



# ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE and

#### PHYSIOGRAPHY

#### Access

Access to the property is via highway #3A to Nelson, thence southward for six kilometres to a junction with a secondary road taken northwestward for three kilometres to the Property.

#### Climate

Nelson has a humid continental climate with four distinct seasons. Winters are cold and snowy, while summers are warm and drier with cool temperatures during the night.

#### Accessibility, Climate, Local Resources, Infrastructure and Physiography (cont'd)

#### Local Resources

Nelson has all the accommodation dining, communication, and transportation facilities available to service the need of any exploration and preliminary development program.

Any milled concentrates can be processed at the smelter in Trail. High-grade ore can be shipped directly to the smelter as was done during the historic "Boom" mining periods of the Rossland, the Nelson, and predominantly from the prolific mines in the Slocan Mining Camp.

#### Infrastructure

Many accommodation and dining facilities, in addition to suppliers of basic exploration needs, communication facilities and exploration personnel, are available at Nelson.

Castlegar, 30 kilometres southwest, maintains daily regional and international airline service.

Highways 3A and 6 pass through Nelson, while a scheduled commercial airline service is available at Castlegar.

#### Physiography

Most of the area underlain by the claims is characterized by steep, heavily wooded slopes with approximately half the claim area clear-cut logged and/or planted secondary growth.

Elevations range from 975 metres amsl within a deeply incised creek at the north central border to 1,310 metres along the central portion of the southern boundary.

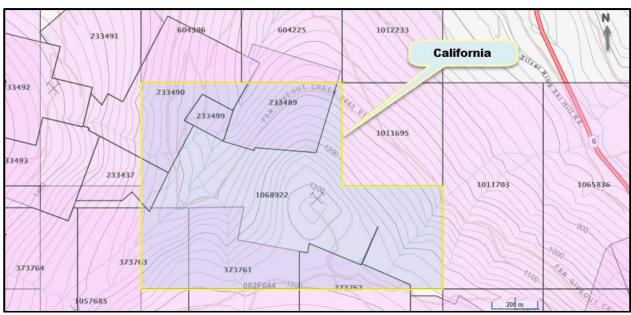
Figure 3. Property location to Nelson (Base Map from MapPlace & Google)

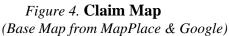


# WATER AND POWER

Sufficient water for a summer exploration program should be available on, or adjacent to the Property. Moderate snowfall in the winter would not hamper any drilling or underground exploration program on the Property.

Diesel-electric generated power would be required during an initial development program.





# HISTORY: CALIFORNIA PROPERTY AREA

The history on twelve MINFILE reported past producers in the area of the California Property (Figure 5) is reported as follows. The descriptions herein are copied from Minfile.

**STAR** past producer (Alkalic porphyry Cu-Au, Au-quartz veins) Minfile 082FSW083 Four kilometres west

The Star and Alma N. occurrences are situated on a narrow plateau between Eagle and Sandy creeks, approximately 8.3 kilometres southwest of Nelson. The Alma N. claim is situated at approximately 1524 metres elevation on the western side of Sandy Creek. The Star claim is situated between 1363 and 1818 metres elevation.

The Star and Alma N. occurrences were discovered circa 1897. In November 1899, the Star claim was Crown granted to John Bloomberg and associates.

**EUREKA** past producer (Alkalic porphyry Cu-Au; Au-quartz veins) Minfile 082FSW084 Four kilometres west

The Eureka workings are situated approximately 7 kilometres southwest of Nelson, south of Kootenay Lake. The property is situated at the head of Eagle Creek on Lot 5552, approximately 6 kilometres southwest of Nelson at an elevation of 823 metres. It covers more than 50 acres and consists of 10 claims and fractions: Eureka, Toronto, Champion, Imperial, Cold Hill, Gold Leaf, Gold Leaf Fraction, Alhambra Fraction, Viking Fraction and Viking Junior Fraction.

#### Eureka past producer (cont'd)

Exploration began in the area at the turn of the century. By 1896, the Eureka showing had been opened up and, in 1902, J.P. Swedberg received a Crown grant for the property. In 1904, two ledges had been opened up by two shafts of 27 and 23 metres in length, respectively, and an incline of 12 metres. More than 37 metres of drifting and sinking were done.

The following year, the property was bonded to J.A. Kirkpatrick and other Nelson men, who extended the working shaft by 15 metres and performed 610 metres of drifting.

The property was owned by the Eureka Copper Mines Limited in 1906. The company worked the property until 1912, carrying the shaft down another 15 metres, completing 463 metres of drifting and 213 metres of crosscutting, driving a tunnel for approximately 244 metres and constructing a raise.

In 1912, Eureka was under lease and bond to British Columbia Copper Company Limited, who installed a small boiler, an ore concentrator and a hoist driven by a gasoline engine. The company also sank a winze 30 metres and carried out 61 metres of drifting and 183 metres of raising.

In 1915, the property was secured under lease and bond to Keffer & Johns. Shortly after, the bond was turned over to Pingree Mines Limited. A tunnel was driven for approximately 61 metres.

Short aerial tramways, 329 and 914 metres in length, were installed in 1917 to alleviate the expense of hauling the ore by wagon. The same year, 60.9 metres of crosscutting and 61 metres of open cuts on the surface showing were made and a new compressor and hoist were brought to the mine but not installed.

In 1918, the property was operated under lease by Inland Mining Company Limited of Walla Walla, Washington. The following year, Vincent Development Company, also of Walla Walla, held the property under lease and bond. The Granite-Poorman mill was leased and flotation equipment was installed. Development work consisted of advancing the main drift and continuing a long crosscut for 37 metres. In 1920, the company dropped their option.

No work was reported on the property until 1945, when Kenville Gold Mines Limited, who owned the Granite-Poorman property, took over neighbouring properties on the northern slopes of Toad Mountain, including the Eureka workings. The company cleaned out old adit portals (except those that were seriously caved), surveyed most of the accessible workings and did a considerable amount of surface drilling on its extensive holdings.

In 1950, Copper Leaf Mines Limited started a raise, reopened the 76.2-metre level for 182.8 metres, rehabilitated the old shaft and located the old winze. The following year, Copper Leaf Mines purchased the property from Kenville Gold Mines Ltd.

In 1953, the property was optioned to Eureka Copper Syndicated. That year, a compressor was installed at the portal of the 137-metre adit.

In 1956, Copper Leaf Mines Limited rehabilitated the upper, or 76-metre, level and concentrated efforts on the south end of the workings, where three stopes were carried up the pillar for a distance of 34 metres. A stope was also carried up the pillar from the 46-metre level.

The Kenville Gold Mines Mill at Nelson was purchased to treat the ore. Reserves were estimated that year at 72 575 tonnes (80 000 short tons), grading 0 to 3942.9 grams per tonne (0 to 115 ounces per short ton) gold; 137.1 to 240 grams per tonne (4 to 7 ounces per short ton) silver; 1.26 per cent copper; 1.6 per cent lead; and 0.4 per cent molybdenum.

Later in 1956, the Finley Company of Reno, Nevada, provided funding for the project, after which all Copper Leaf Mines Limited operations carried on under the Finley name.

#### Eureka past producer (cont'd)

1980, Asarco Exploration Company of Canada Limited carried out geophysical and geochemical surveys over the 40-claim Aberdeen group to the east.

Between 1983 and 1984, Ryan Exploration Company Limited began acquiring the Star property, including the Star, Alma N. (MINFILE 082FSW083) and Eureka workings. Between 1984 and 1988, Ryan Exploration conducted extensive geophysical and geochemical surveying, trenching and rotary–reverse circulation drilling. Approximately 30 drillholes were completed over the Star, Alma N., Eureka and Bee claims.

In the 1980s, limited exploration was conducted on the Ron Gold claim group to the west of the Eureka workings. In 1985, property owners Eric and

Jack Denny leased the Ron Gold claim group to Ryan Exploration Company Limited. Exploration that year consisted of geochemical rock and soil sampling. The following year, Ryan Exploration conducted a very low-frequency geophysical survey over the claim group.

By 1989, Pacific Sentinel Gold Corporation had acquired the Star and Alma N. claims as part of their Great Western Star property. In the summer of 1989, Lloyd Geophysics Limited carried out geophysical surveys over the Ron and Toughnut grids to the west and southeast, respectively. In 1990, Pacific Sentinel Gold conducted a follow-up program of soil and rock sampling, trenching, geological mapping and geophysical surveying. Later that year, 26 NQ and NQ2 diamond drill holes totalling 5880 metres were completed. Drilling on the Eureka claim assayed significant mineralized intersections.

GEO Resources drilled in the area in 1997.

In 2004, on behalf of owner Jack Denny, Klondike Gold Corporation conducted a geochemical sampling program over the Ron property to the west, later optioning it in 2008. At this time, the property was expanded to include additional claims, including the Eureka and Star (MINFILE 082FSW083) claims. An exploration program of limited geological mapping and prospecting and soil geochemical surveying was carried out on the eastern portion of the claim group. The Ron property was then acquired by Anglo Swiss Resources and amalgamated with the Kenville (MINFILE 082FSW086) property.

In 2009, on behalf of Anglo Swiss Resources, Equity Exploration Consultants Limited undertook an exploration program consisting of 680 line kilometres of airborne electromagnetic geophysical surveying, surface diamond drilling, and underground rehabilitation and drilling. Ten diamond drill holes were completed on the south side of Eagle Creek, approximately 700 metres south of the Kenville mine.

By 2010, the Kenville property had been expanded to include separate claim groups to the north and south. In 2010, on behalf of Anglo Swiss Resources, St. Pierre Geoconsulting Incorporated conducted airborne magnetic and electromagnetic geophysical surveys over the entire Nelson Mining Camp area. Soil sampling was conducted over the central Kenville claim block, though the majority of the sampling was conducted in the area of the Silver Lynx occurrence (MINFILE 082FSW378) to the south.

Production from 1905 to 1954 totalled 8995 tonnes, yielding 1 124 747 grams silver, 19 190 grams gold, 159 170 kilograms copper and 713 kilograms lead. Production in 1956 was included with Queen Victoria (MINFILE 082FSW082).

**CENTRAL** past producer (Subvolcanic Cu-Ag-Au (As-Sb)) Minfile 082FSW085 Eight kilometres west

The Central occurrence is situated at approximately 1189 metres elevation on the west side of Eagle Creek, approximately 7.5 kilometres southwest of Nelson.

#### **Central** past producer (cont'd)

A shaft with four tunnels was developed in the early 1900s.

The area is underlain by Jurassic pseudodiorite and pyroxenite of unknown affinity.

A fissured and crushed zone, 1 to 2 metres wide, occurs in granodiorite (pseudodiorite?) proximal to the contact with volcanic rocks (pyroxenite?). The mineralized zone has a north strike and a vertical dip. Mineralization consists of stringers of pyrite and chalcopyrite ("iron and copper sulphides") with some limonite and malachite ("oxidation products") in a gangue of altered country rock. Disseminated sulphides extend into the wall rocks. Several small shipments totalling 21 tonnes (there is some question as to the accuracy of the figures) of high-grade vein material were produced.

In March 1907, the Central claim was Crown granted to Edward Dumont, Rodolphe Legault and Louis Niven. In 1906, two 10.9-tonne lots of sorted ore were shipped to the smelter at Trail. In 1910, the workings consisted of a 30.5-metre shaft on the lead, with 18.3-metre drifts at the 15.3- and 30.5-metre levels. Gold-copper ore was stoped from both levels and 72.6 tonnes of ore were shipped to the smelter at Trail.

The property, including the Central and Central Fraction Crown-granted claims, lay dormant for several years. In 1924, claim owners W. Dumont and L. Neveu began dewatering the shaft and workings with the intention of continual development and eventual mining. At this time, the old shaft was 29.3 metres deep with four short tunnels driven from it at different levels. Additional work was conducted on the property in 1925.

In 1948, areas to the east and west of the Central claim on either side of Eagle Creek were held by Kenville Gold Mines Limited. Wallace R. Baker conducted geological surveying and minor trenching on the properties.

In the 1980s, the Central occurrence was situated on the eastern boundary of the Ron Gold claim group owned by Eric and Jack Denny. Limited exploration was carried out on the claims. In 1985, claim owners Eric and Jack Denny leased the Ron Gold claim group to Ryan Exploration Company Limited. Exploration that year consisted of geochemical rock and sampling. The following year, Ryan Exploration conducted a very low-frequency geophysical survey over the claim group.

By 1989, Pacific Sentinel Gold Corporation had acquired the adjacent Ron property as part of their Great Western Star property. In the summer of 1989, Lloyd Geophysics Limited carried out geophysical surveys over the Ron and Toughnut grids to the west and southeast, respectively. In 1990, Pacific Sentinel Gold conducted a follow-up program of soil and rock sampling, trenching, geological mapping and geophysical surveying. Later that year, 26 NQ and NQ2 diamond drill holes totalling 5880 metres were completed.

The Kenville mine (MINFILE 082FSW086) and Venango (MINFILE 082FSW087) properties were acquired by Anglo Swiss Resources Incorporated in 1992. Together, the parcels were known as the Kenville property. Teck Exploration Limited optioned the Kenville property from Anglo Swiss Resources in 1994 and amalgamated it with the adjacent Ron property. Together, these two properties surrounded the Central claim to the south and northwest. Teck completed 16 diamond drill holes, as well as induced polarization, resistivity, ground magnetometer and geochemical surveying. Teck Exploration later dropped the option in 1997.

In 2004, on behalf of owner Jack Denny, Klondike Gold Corporation conducted a geochemical sampling program over the Ron property, later optioning it in 2008. An exploration program of limited geological mapping and prospecting and soil geochemical surveying was carried out on the eastern portion of the claim group. The Central claim, along with the Ron property, was then acquired by Anglo Swiss Resources and amalgamated with the Kenville property.

#### Central past producer (cont'd)

In 2009, on behalf of Anglo Swiss Resources, Equity Exploration Consultants Limited undertook an exploration program consisting of 680 line kilometres of airborne electromagnetic geophysical surveying, surface diamond drilling, and underground rehabilitation and drilling. Ten diamond drill holes were completed on the south side of Eagle Creek, approximately 700 metres south of the Kenville mine.

By 2010, the Kenville property had been expanded to include separate claim groups to the north and south. In 2010, on behalf of Anglo Swiss Resources, St. Pierre Geoconsulting Incorporated conducted airborne magnetic and electromagnetic geophysical surveys over the entire Nelson Mining Camp area. Soil sampling was conducted over the central Kenville claim block, though the majority of the sampling was conducted in the area of the Silver Lynx occurrence (MINFILE 082FSW378) to the south.

The two shipments of ore made in 1906 yielded 5.49 and 3.09 grams per tonne gold, 89.14 and 30.86 grams per tonne silver, and 10.8 and 11.8 per cent copper, respectively (Minister of Mines Annual Report, 1924, page 192).

#### KENVILLE past producer (Alkalic porphyry Cu-Au, Au quartz veins:

Intrusion-related Au pyrrhotite veins)

#### Minfile 082FSW086 Six kilometres west-northwest

The Kenville (formerly known as Granite-Poorman) mine is located on the east side of Eagle Creek and the north slope of Toad Mountain, 8 kilometres west of Nelson.

The Kenville Mine was the first underground lode gold mine in British Columbia and was the largest producer in the Nelson Mining Camp Project claims. The first claims on the Granite-Poorman property were staked by I. Neil in 1888. In 1889, Eagle Creek Mining Company began milling ore from five northwest-trending veins on the northeast corner of the modern Kenville mine property. Tungsten, copper and cadmium are also present but have never been recovered in significant amounts. From 1900 to 1929, the property changed ownership seven times; from 1904 to 1929, the mine was worked almost exclusively by lessees. The property was owned and operated by these companies, in the following order: Eagle Creek Gold Mining Co., Granite Gold Mines Ltd., Duncan United Mines Ltd., Kootenay Gold Mines Ltd., Kootenay Gold Exploration Co. Ltd., Inland Mining Co., Granite-Poorman Mines Ltd. and Granite-Poorman Gold Mines Ltd. In 1932, the property was acquired by Livingstone Mining Company. The mine continued to operate intermittently until 1944.

In 1945, Kenville Gold Mines Ltd. (owned by Noranda Mines Ltd.), acquired the property and proceeded with an exploration and development program that included building a 125-tonne per day cyanide mill. Over 6096 metres of diamond drilling were completed on the Granite-Poorman property, partially from the surface in a search for hidden veins and the remainder underground to search for extensions of known veins. The mine ceased operations in 1949, though small amounts of high-grade ore were shipped to the Trail smelter in 1960 and 1961. The mill remained in operation until 1962, processing feed from local small-scale mining operations. Upon decommissioning in 1962, the mill was shut down and all usable equipment was removed from the site.

In 1969, the property was acquired by Algoma Industries and Resources Ltd. Algoma attempted to restart mine production, re-opening the 257 Level and dewatering the mine. Further efforts maintained the mine open, rebuilt the mill and attempted production. These efforts failed and in 1987 the property was sold to Coral Industries Ltd. In 1989, Coral Industries exercised their right to operate the mine, took over the care and maintenance program and began an assessment of milling operations. Production was dedicated to testing milling operations.

#### Kenville past producer (cont'd)

Testing indicated the mill was not properly designed for the ore and that flotation might be a preferred recovery method.

That same year, the Kenville property was amalgamated with the Venango property (082FSW087) to the west. In 1980, DeKalb Mining Corporation completed 2932 metres of diamond drilling on the Venango-Shenango and Greenwood claims. One drillhole near the Venango mine returned 11 metres of 1.01 per cent copper and 15.2 grams per tonne silver with minor gold and molybdenum (Assessment Report 24303). In 1991, Coral Industries shipped a small tonnage of ore to the Trail smelter for processing and undertook a test pit sampling program to assess metallic and trace element grades in the former Kenville mine tailings pond. Test pit results returned no values of economic significance.

In 1992, the property (including the Venango adit) was acquired by Anglo Swiss Resources Ltd. In 1994, Teck Exploration Ltd. optioned the Kenville mine property and amalgamated it with the adjacent Ron property. The Teck exploration program focused on locating a bulk minable copper-gold porphyry target. From 1994 to 1997, work included 16 diamond drillholes totalling 3083 metres, induced polarization, resistivity and ground magnetic and geochemical surveys. Low-grade porphyry-style mineralization and alteration was encountered over short intervals. Teck dropped the option in 1997. During this time, the existing mill facilities were used by Anglo Swiss to process bulk samples extracted from the Blu Starr gemstone property to the north.

Anglo Swiss resumed exploration in 2005. Work focused on an area on the west side of Eagle Creek and consisted of GPS mapping, geochemical soil sampling and excavator trenching. The program continued into 2006 with trenching reclamation, soil sampling and the reconstruction of a 40-metre length of the 257 adit. In 2007 and 2008, Anglo Swiss completed 15 500 metres of drilling over 50 holes near the Kenville mine. The purpose of the program was to further define the Granite-Poorman vein system and to continue exploration for porphyry-style mineralization. Results of this program are unknown.

In 2009, work completed by Anglo Swiss Resources consisted of 680 line kilometres of airborne time-domain electromagnetic geophysical surveys, surface diamond drilling, underground rehabilitation and underground drilling. Ten diamond drillholes were completed at four sites on the east side of Eagle Creek, totalling 3568.4 metres of NQ2-size core. The aim of the drilling was to intersect the inferred extension of the Hardscrabble and Yule veins. Analysis of the core revealed quartz veins ranging from 1 to 40 centimetres thick, typically containing up to 30 per cent fine-grained pyrite with local chalcopyrite and chlorite.

The veins commonly imparted a silica-pyrite halo up to 15 centimetres into the hostrock. In 2010, Anglo Swiss Resources completed a diamond drilling program intending to test the southern extension of high-grade veins from the Kenville mine. Five holes were completed and a sixth was abandoned at 90 metres depth. In total, 2982 metres were drilled. From 2010 to 2012, 18 diamond drillholes were completed from eight locations on the Kenville property and one location on the adjacent Ron property. In total, 9375.53 metres of core were drilled, including 8863.17 metres of NQ2-size core and 512.36 metres of BTW core. The drilling successfully identified the southern extensions of the vein systems targeted in the Kenville and Venango mine workings. In 2013, Anglo Swiss sold the Kenville gold property to Eagle Creek Gold Corporation.

**VENUS** past producer (Polymetallic veins Ag-Pb-Zn+/-Au) Minfile 082FSW166 Two kilometres west

The Venus and Juno mines are located 4.4 kilometres southwest of Nelson.

#### Venus past producer (cont'd)

The two mines combined produced 5411 tonnes in the early 1900's and again in the 1930's. All workings, except the Juno adit, are caved in.

Production records indicate an average grade of 19.8 grams per tonne gold and 17.7 grams per tonne silver, with minor copper and lead reported.

ATHABASKA past producer (Au-quartz veins, Polymetallic veins Ag-Pb-Zn+/-Au, W veins,

Intrusion-related Au pyrrhotite veins)

Minfile 082FSW168 Two kilometres west

The Athabasca vein is located on the slopes of Toad Mountain, 3 kilometres southwest of Nelson. The vein was initially discovered in 1896.

In 2009, Hellix Ventures Inc. optioned the Athabasca property and completed rock sampling. Highlights include sample 8R257260, which assayed 213 grams per tonne gold, 128 grams per tonne silver and 2.85 per cent lead (Press Release, Hellix Ventures Inc., December 7, 2009).

In 2010, Hellix Ventures Inc. completed a ground magnetic survey over a total of 21 line-kilometres.

In 2011, Hellix Ventures Inc. completed soil geochemistry and surface and underground rock sampling. Highlights of the rock sampling include sample pgug02, which assayed 215.7 grams per tonne gold and 169 grams per tonne silver (Press Release, Hellix Ventures Inc., December 7, 2011).

In 2012, Hellix Ventures Inc. completed soil geochemistry.

SHAMROCK past producer (Polymetallic veins Ag-Pb-Zn+/-Au, Intrusion-related

Au pyrrhotite veins)

Minfile 082FSW170 500 metres southwest

The Shamrock occurrence is located approximately 5 kilometres southwest of Nelson. Minor production has been reported for this claim.

**IRENE** past producer (Polymetallic veins Ag-Pb-Zn+/-Au) Minfile 082FSW171 One kilometre south

*The Irene occurrence is located 5.5 kilometres south of Nelson. Minor production is recorded from this claim. The claim is now part of the Great Western group claims (082FSW333).* 

It is recorded that 15 tonnes of ore material was shipped in 1939 which produced 274 grams of gold and 377 grams of silver. In 1945, trenching and surface stripping was done on "mineralized shears". No other work is recorded.

**GREAT EASTERN** past producer (Polymetallic veins Ag-Pb-Zn+/-Au)

Minfile 082FSW172 Two kilometres south

The Great Eastern occurrence is located 12.8 kilometres south of Nelson on Toad Mountain. Minor production is recorded for this claim which was Crown granted in 1900.

This showing has been worked in conjunction with the Irene (082FSW171) and Great Western (082FSW333) showings.

#### Great Eastern past producer (cont'd)

Rock chip sampling by Sultan Minerals Inc. in 2002 included an assay from the D vein that yielded 119.30 grams per tonne gold and 20.9 grams per tonne silver.

**STARLIGHT** past producer (Polymetallic veins Ag-Pb-Zn+/-Au) Minfile 082FSW174 Two kilometres south

The Starlight occurrence is located on Toad Mountain, about 12 kilometres south of Nelson. Minor production is recorded for this claim in 1937 (the 1981 figures are questionable). The claim adjoins the Victoria-Jessie property (082FSW173) to the south.

**PERRIER** past producer (Polymetallic veins Ag-Pb-Zn+/-Au, Noranda/Kuroko

massive sulphide Cu-Pb-Zn)

Minfile 082FSW208 Two kilometres southwest

The Perrier mine is located 3 kilometres south of Nelson. The area has been intermittently explored since the early 1900's.

Limited information and production records between 1913 and 1937 indicate the mine produced in excess of 2000 tonnes recovering over 34,681 grams of gold, 94,803 grams of silver, 14,384 kilograms of lead and 21,144 kilograms of zinc. Geochemical and geophysical survey results in 1988 were interesting (Assessment Report 17686).

**STAR OF THE WEST** past producer (Polymetallic veins Ag-Pb-Zn+/-Au)

Minfile 082FSW309 Two kilometres south

The Star of the West showing is located 5 kilometres south of Nelson on Lot 1311. The claim was Crown Granted in 1897 and workings comprise a 6-metre long adit, a 4-metre trench and a few small pits.

# HISTORY: CALIFORNIA PROPERTY

**CALIFORNIA** past producer (Polymetallic veins Ag-Pb-Zn+/-Au, I01: Au-quartz veins) Minfile 082FSW169 Within Tenure 1068922

The California deposit is located 4 kilometres south of Nelson. The vein has been developed on 3 levels by 650 metres of drifts, producing 1,462 tonnes from 1910 to 1949.

# **REGIONAL GEOLOGICAL SETTING**

The oldest rocks in the area are referred to as the Rossland Group. Lithologies of this group include Elise Formation basal andesitic and basaltic volcanics, which are overlain by sedimentary rocks of the Hall Formation.

According to Little (1985) the Rossland Group is lower Jurassic in age. Rossland Group rocks are "intruded" by a poorly understood rock referred to as a pseudo-diorite. This unit occurs west of Toad Mountain in contact with Elise Fm. volcanics. Recent gold discoveries by U.S. Borax are located in these rocks which are now thought to be of metamorphic origin. Age is uncertain. Much of the Toad Mountain region is underlain by intrusive rocks of the Jurassic Nelson Batholith. The bulk of the intrusive body consists of granite with distinctive orthoclase phenocrysts. Monzonite, granodiorite, quartz diorite and diorite phases have also been identified. The youngest rock type of significance in the vicinity of the Athabasca property is the so-called "Silver King Porphyry".

# **Regional Geological Setting** (cont'd)

This is a major dyke which consists of porphyritic hornblende quartz diorite. Age is unknown but a Jurassic to Cretaceous age is likely. Its significance lies in the fact that the "Silver King Porphyry" is proximal to several important gold and silver occurrences, including the Athabasca and the adjacent gold showings of Lectus Developments Ltd.

There are a number of important structural elements associated with the geology and ore controls in the Toad Mountain area. Locally, the Rossland Group is confined to a graben which is readily apparent on large scale geologic maps. Of more importance, from an economic viewpoint, is the structural control of gold and silver mineralization in the area. Ore found to date in the Toad Mountain area is contained within a number of sub-parallel shear zones. The dominant trend is north by northwest. Gold and silver occur both as disseminations within these shears, and in quartz veins which are contained within the shear zones. The Athabasca and California Mines are examples of the latter. Lectus Developments Ltd. are currently drilling low-grade bulk tonnage mineralization in shear zones adjacent to the Athabasca property.

#### Local Geology and Mineralization

Geological observations indicate that the contact between the roof pendant of Rossland Fm metavolcanics and the Nelson granites lies near the northern boundary of the Exchequer(L391) California (L1677) and Hillside (L2238) cgs, and also approximately follows the west boundary of the Exchequer cg.

Metavolcanics also occur in old workings near the northwest corner of Deadwood (L.2232) cg. and also near its southern boundary (Deadwood adit) and along the road just south of the adit. Granites and altered granites are poorly exposed along the road to the south of Hillside Crown grant and on Cal 3 & 4 claims. From the above data the metavolcanic roof pendant may be inferred to be approximately 500m wide, trending slightly north of west, and open to the east. Quartz filled fissure veins occur within t h e roof pendant.

The California Vein system is the most developed. It is located within 50 metres of the northern contact of the roof pendant with Nelson granites. This system has been traced for about 600 metres on the California *c.g.* and Exchequer *c.g.* of which about 400 metres has been by underground workings, and to a vertical depth of 130m.

Two principal veins occur within the above shear, which is up to 3m wide and dips 4 5 -55 south. The footwall vein, commonly less than 50cm wide, is mineralized with pyrite, lesser sphalerite and galena. It also carries values in gold and silver. The hanging wall vein, often wider, is poorly mineralized.

Underground, on Level 3, the footwall vein (?) shows widths of 1.0 to 1.5m. (B.C.M.M. 1919) Unfortunately, due to cave blocking the drift, this could not be verified. Surface pits and trenches indicate that one or more mineralized veins are present which approximately parallel the California vein. These workings terminate near the western edge *of* Exchequer *c.g.* where outcrop is last due to deepening overburden. Two short adits in this area explore quartz veins. The "Cabin vein" is thought to be the continuation of the California vein (see map 4).

The Union vein, located on the Union c.g. approximately 200m north of the portals of Level 1 and 2, is exposed in two short adits and one small stope. This vein occurs in granodiorite and is interpreted as filling a tension fracture which dips at 10-15 southeasterly toward the intrusive-volcanic contact.

Where exposed in the workings the vein varies from 30-40cm in width and consists of white quartz with coarse, irregular disseminated pyrite and lesser sphalerite mineralization.

### Local Geology and Mineralization (cont'd)

Locally, the mineralization is finely banded. The contacts are sharp and the wall rocks competent, although some minor vertical fault offsets were noted in the stope.

The Deadwood "vein" is a wide zone of pyritized, calcareous, sericitic, rhyodacitic tuffs containing narrow veinlets and stringers of quartz. These rocks are exposed in the Deadwood adit and in outcrops along the road immediately south of the adit. Outcrops are characterized by heavy limonite stain, Limited sampling (B.C.M.M. 1930) from this zone returned assays equivalent to 0.188 oz/ton gold.

Somewhat similar geology is exposed 4km to the south in a trench on the Kena claims where a 1% section averaged 0.07 oz/ton geld. On the Hillside claim, a short adit exposes a vein, striking N68E and dipping 40 southeast, in sheared, chloritized andesite. The vein varies irregularly from 8 to 30cm in width and contains several very narrow sulfide bands. A narrow vein, in a similar geological setting as above, is poorly exposed at the northwest corner of Deadwood crown grant, 30m northwest of No. 2 Creek.

#### **GEOLOGY: CALIFORNIA PROPERTY AREA**

The Geology on twelve MINFILE reported past producers in the area of the California Property (Figure 5) is reported as follows. The descriptions herein are copied from Minfile.

**STAR** past producer (Alkalic porphyry Cu-Au, Au-quartz veins) Minfile 082FSW083 Four kilometres west

A mineralized shear zone occurs within Lower Jurassic Elise Formation (unit Je1) volcanics of the Rossland Group at and near the contact with Jurassic pseudodiorite (possibly monzonite) and pyroxenite of unknown affinity (possibly Eagle Creek). The Elise Formation consists of augite basalt flows, flow breccias and subvolcanic intrusions. The zone and showings occur at the northern extension of the Silver King shear zone (Silver King mine, MINFILE 082FSW176).

The Star occurrence consists of an irregular quartz vein that is a few centimetres to 1-metre-wide, which follows the shear zone striking 010 degrees with a vertical dip. The quartz is mineralized with pyrite, chalcopyrite, some malachite and traces of galena. Sulphides are also disseminated within the sheared country rock on either side of the quartz vein. The vein is hosted in sheared and potassically altered monzonite (?). Mineralization occurs over an 800 by 200-metre area. A grab sample of highly sheared sericitic volcanic rock containing trace pyrite from the shaft assayed 0.76 gram per tonne gold, 0.0623 per cent copper, 0.0085 per cent zinc and 0.0145 per cent lead (Assessment Report 19503).

**EUREKA** past producer (Alkalic porphyry Cu-Au; Au-quartz veins) Minfile 082FSW084 Four kilometres west

The area is underlain by Jurassic pseudodiorite, pyroxenite or monzonite (?) of unknown affinity (possibly Eagle Creek) and mafic to intermediate flows and tuffs of the Lower Jurassic Elise Formation, Rossland Group. The Silver King shear zone has been truncated to the south of the showing by the metamorphic (possibly intrusive) rocks.

**CENTRAL** past producer (Subvolcanic Cu-Ag-Au (As-Sb)) Minfile 082FSW085 Eight kilometres west

#### Central past producer (cont'd)

The Central occurrence is situated at approximately 1189 metres elevation on the west side of Eagle Creek, approximately 7.5 kilometres southwest of Nelson. A shaft with four tunnels was developed in the early 1900s.

The area is underlain by Jurassic pseudodiorite and pyroxenite of unknown affinity.

A fissured and crushed zone, 1 to 2 metres wide, occurs in granodiorite (pseudodiorite?) proximal to the contact with volcanic rocks (pyroxenite?). The mineralized zone has a north strike and a vertical dip. Mineralization consists of stringers of pyrite and chalcopyrite ("iron and copper sulphides") with some limonite and malachite ("oxidation products") in a gangue of altered country rock. Disseminated sulphides extend into the wall rocks. Several small shipments totalling 21 tonnes (there is some question as to the accuracy of the figures) of high-grade vein material were produced.

In March 1907, the Central claim was Crown granted to Edward Dumont, Rodolphe Legault and Louis Niven. In 1906, two 10.9-tonne lots of sorted ore were shipped to the smelter at Trail. In 1910, the workings consisted of a 30.5-metre shaft on the lead, with 18.3-metre drifts at the 15.3- and 30.5-metre levels. Gold-copper ore was stoped from both levels and 72.6 tonnes of ore were shipped to the smelter at Trail.

*The property, including the Central and Central Fraction Crown-granted claims, lay dormant for several years. In 1924, claim owners W. Dumont and L.* 

Neveu began dewatering the shaft and workings with the intention of continual development and eventual mining. At this time, the old shaft was 29.3 metres deep with four short tunnels driven from it at different levels. Additional work was conducted on the property in 1925.

In 1948, areas to the east and west of the Central claim on either side of Eagle Creek were held by Kenville Gold Mines Limited. Wallace R. Baker conducted geological surveying and minor trenching on the properties.

In the 1980s, the Central occurrence was situated on the eastern boundary of the Ron Gold claim group owned by Eric and Jack Denny. Limited exploration was carried out on the claims. In 1985, claim owners Eric and Jack Denny leased the Ron Gold claim group to Ryan Exploration Company Limited. Exploration that year consisted of geochemical rock and sampling. The following year, Ryan Exploration conducted a very low-frequency geophysical survey over the claim group.

By 1989, Pacific Sentinel Gold Corporation had acquired the adjacent Ron property as part of their Great Western Star property. In the summer of 1989, Lloyd Geophysics Limited carried out geophysical surveys over the Ron and Toughnut grids to the west and southeast, respectively. In 1990, Pacific Sentinel Gold conducted a follow-up program of soil and rock sampling, trenching, geological mapping and geophysical surveying. Later that year, 26 NQ and NQ2 diamond drill holes totalling 5880 metres were completed.

The Kenville mine (MINFILE 082FSW086) and Venango (MINFILE 082FSW087) properties were acquired by Anglo Swiss Resources Incorporated in 1992. Together, the parcels were known as the Kenville property. Teck Exploration Limited optioned the Kenville property from Anglo Swiss Resources in 1994 and amalgamated it with the adjacent Ron property. Together, these two properties surrounded the Central claim to the south and northwest. Teck completed 16 diamond drill holes, as well as induced polarization, resistivity, ground magnetometer and geochemical surveying. Teck Exploration later dropped the option in 1997.

In 2004, on behalf of owner Jack Denny, Klondike Gold Corporation conducted a geochemical sampling program over the Ron property, later optioning it in 2008.

#### **Central** past producer (cont'd)

An exploration program of limited geological mapping and prospecting and soil geochemical surveying was carried out on the eastern portion of the claim group. The Central claim, along with the Ron property, was then acquired by Anglo Swiss Resources and amalgamated with the Kenville property.

In 2009, on behalf of Anglo Swiss Resources, Equity Exploration Consultants Limited undertook an exploration program consisting of 680 line kilometres of airborne electromagnetic geophysical surveying, surface diamond drilling, and underground rehabilitation and drilling. Ten diamond drill holes were completed on the south side of Eagle Creek, approximately 700 metres south of the Kenville mine.

By 2010, the Kenville property had been expanded to include separate claim groups to the north and south. In 2010, on behalf of Anglo Swiss Resources, St. Pierre Geoconsulting Incorporated conducted airborne magnetic and electromagnetic geophysical surveys over the entire Nelson Mining Camp area. Soil sampling was conducted over the central Kenville claim block, though the majority of the sampling was conducted in the area of the Silver Lynx occurrence (MINFILE 082FSW378) to the south.

The two shipments of ore made in 1906 yielded 5.49 and 3.09 grams per tonne gold, 89.14 and 30.86 grams per tonne silver, and 10.8 and 11.8 per cent copper, respectively (Minister of Mines Annual Report, 1924, page 192).

**KENVILLE** past producer (Alkalic porphyry Cu-Au, Au-quartz veins:

Intrusion-related Au pyrrhotite veins)

Minfile 082FSW086

#### Six kilometres west-northwest

The area is underlain by the Eagle Creek Plutonic suite, consisting mainly of gabbro and diorite with quartz monzonite to hornblende syenite phases present. All phases are medium- to coarse-grained and locally gneissic with varying degrees of alteration. The dominant regional structural features are broad, north-trending and east-verging folds. Quartz veins occupy gravity fault planes and cut the diorite hostrock along a northwest trend and dip 45 degrees to the northeast. Flat quartz veins occupy tension fractures created by movement along northwest-trending faults. The veins are cut by faults, some of which are occupied by lamprophyre dykes. Because they occupy regional fault planes, the quartz veins have exceptional continuity along strike and downdip.

The Kenville mine has been classified as a gold-quartz vein deposit. The mine workings include five north-northwest-trending veins hosted in variably sheared mafic intrusives. These five veins are part of the Granite-Poorman veins, which consist of six main veins and several secondary or less continuous veins. The veins strike 330 to 350 degrees, dip approximately 45 degrees northwest and have an average thickness of 0.6 metre, although they are more commonly 0.02 to 0.1 metre wide. From west to east, over a horizontal distance of 518 metres, they are the Hardscrabble, Poorman, Greenhorn, Granite (or White) and Beelzebub veins. Lesser veins occur to the east and west. The veins consist of milky to glassy quartz with pyrite and chalcopyrite occurring as the dominant sulphides. Minor galena, sphalerite, scheelite and visible gold occur within the veins. Reports from earlier development mention "rich pockets" of visible gold. Where the veins are oxidized, limonite is common with some "free gold". Scheelite is widely distributed as individual grains but rarely as significant concentrations in any given zone. Sulphides are commonly disseminated in hanging wall or footwall rocks. Ore shoots, which rake to the south, are formed at the intersection of the main veins with flatter lying offshoots; high gold values in these shoots appear coincident with galena. Host rocks exhibit replacement of plagioclase by soda-potassic feldspar and alteration of ferromagnesian minerals to biotite and epidote.

#### Kenville past producer (cont'd)

At the Hardscrabble vein, steeply dipping faults drop the eastern block down as much as 15 metres. The largest fault has produced offset of approximately 100 metres to the left in the Granite and Greenhorn veins. Local structure is dominated by the northeast to northwest-trending, south-plunging Hall Creek syncline. To the north of the project area, a series of northwest-striking shears form a 1-kilometre-wide zone known as the Silver King shear.

Numerous adits and underground workings, most dating from the turn of the 19th century, are present on the property. The main mine workings consist of seven levels. The mine is developed from two main levels, the 2570 or lower (257 Level), and the 2750 or upper (275 Level) adits. Underground workings are extensive. The five main veins have been stoped for a combined length of over 915 metres.

**VENUS** past producer (Polymetallic veins Ag-Pb-Zn+/-Au) Minfile 082FSW166 Two kilometres west

The area is underlain by augite basalt flows, flow breccias and subvolcanic intrusions of the Lower Jurassic Elise Formation (unit Je4), Rossland Group. These have been intruded by granodiorite of the Middle to Late Jurassic Nelson Intrusions. Veins, and stringers up to 1-metre-wide, occupy shear zones in schistose volcanics and granodiorite.

The Venus vein strikes 320 to 335 degrees, dips 20 to 50 degrees north and is hosted in both volcanic rocks and granodiorite. The vein, associated with a basic dyke in the lowest adit, has not been traced beyond a fault or downdip from the lowest workings. The vein closely follows the granite-schistose volcanics contact.

The Juno vein, hosted in schistose volcanics, strikes 060 degrees and dips 55 to 60 degrees north, almost at right angles to the Venus vein. The vein was not explored for more than 200 metres on strike or 100 metres downdip.

ATHABASKA past producer (Au-quartz veins, Polymetallic veins Ag-Pb-Zn+/-Au, W veins,

Intrusion-related Au pyrrhotite veins)

Minfile 082FSW168 Two kilometres west

The Athabasca vein is located on the slopes of Toad Mountain, 3 kilometres southwest of Nelson. The vein was initially discovered in 1896.

The Athabasca vein strikes at 045 degrees with a 30 to 50-degree northwest dip. The vein is hosted within granodiorite and tends to flatten as it traverses the schistose volcanics to the south. The vein comprises quartz gangue mineralized with pyrite, some galena, sphalerite and free gold. The gold occurs as 80 per cent free gold and 20 per cent associated with sphalerite. The vein is a few centimetres to approximately 1.5 metres wide and averages approximately 0.3 metres.

The workings were developed where the vein crosses the granodiorite-volcanic fault contact. Pervasive shearing and faulting have offset and displaced portions of the vein. Scheelite occurs near the lithologic contact.

An enrichment of metal values occurs within the schistose volcanics at the granodiorite contact. The flatter sections of the vein, in the schist, were productive but here the vein is highly faulted and folded, with dikes common on the planes of the normal faults.

SHAMROCK past producer (Polymetallic veins Ag-Pb-Zn+/-Au, Intrusion-related

Au pyrrhotite veins)

Minfile 082FSW170 500 metres southwest

The area is underlain by augite basalt flows, breccia flows and subvolcanic intrusions of the Lower Jurassic Elise Formation, Rossland Group. These have been intruded by plagioclase porphyry of the Late (?) to Middle Jurassic Silver King Porphyry.

**IRENE** past producer (Polymetallic veins Ag-Pb-Zn+/-Au) Minfile 082FSW171 One kilometre south

The area is underlain by augite basalt flows, breccia flows and subvolcanic intrusions of the Lower Jurassic Elise Formation, Rossland Group. These have been intruded by plagioclase porphyry of the Late (?) to Middle Jurassic Silver King Porphyry. Shearing and metamorphism is common in the area. Regionally, schists are host to northwest trending shears, parallel to foliation, which host quartz veins with sulphides.

No geological description of the occurrence is available, though it is likely similar to the Silver King occurrence (082FSW176).

**GREAT EASTERN** past producer (Polymetallic veins Ag-Pb-Zn+/-Au) Minfile 082FSW172 Two kilometres south

The area is underlain by augite basalt flows, breccia flows and subvolcanic intrusions of the Lower Jurassic Elise Formation, Rossland Group. These have been intruded by plagioclase porphyry of the Late (?) to Middle Jurassic Silver King Porphyry. Shearing and metamorphism is common in the area. Regionally, schists are host to northwest trending shears, parallel to foliation, which host quartz veins with sulphides.

**STARLIGHT** past producer (Polymetallic veins Ag-Pb-Zn+/-Au)

Minfile 082FSW174 Two kilometres south

The area is underlain by sheared schistose augite basalt flows, breccia flows and subvolcanic intrusions of the Lower Jurassic Elise Formation (unit Je1 and Je4, Open File 1989-11), Rossland Group. These are intruded by plagioclase porphyry of the Late (?) to Middle Jurassic Silver King Porphyry. Shearing (Silver King shear) and metamorphism is prevalent in the area. Regionally, schists are host to northwest trending shears, parallel to foliation, which host quartz veins with sulphides.

A quartz vein up to 1.53 metres wide, within schists and volcanics contains disseminated and massive pyrite. Locally the zone is characterized by numerous quartz stringers and lenses.

PERRIER past producer (Polymetallic veins Ag-Pb-Zn+/-Au, Noranda/Kuroko

massive sulphide Cu-Pb-Zn)

Minfile 082FSW208 Two kilometres southwest

The area is underlain by altered augite (plus or minus plagioclase) basalt flows, flow breccia and subvolcanic intrusions of the Lower Jurassic Elise Formation (Unit Je1), Rossland Group (Open File 1989-11). A tongue of granite to granodiorite of the Middle to Late Jurassic Nelson batholith occurs to the east.

A flat lying quartz vein which crosscuts the regional foliation is hosted in chloritic schists. The vein strikes about 005 to 020 degrees and dips 35 to 60 degrees east.

#### **Perrier** past producer (cont'd)

The vein, 0.25 to 0.55 metres wide, has been traced along strike for over 500 metres. The vein has quartz gangue with sphalerite, galena, pyrite, chalcopyrite and occasionally, free gold. Concentrations of sulphides are reported in zones where the vein has a flatter dip. A crosscutting vein which may be a branch of the main vein outcrops about 61 metres southeast of the shaft, strikes 330 degrees and has a vertical dip. This second vein hosts minute amounts of ruby silver and native silver with some carbonate (calcite).

The Julius Ceasar vein, about 450 metres due west of the Perrier mine, is hosted in quartz-feldspar porphyry. Chip samples assayed only low gold and silver values.

**STAR OF THE WEST** past producer (Polymetallic veins Ag-Pb-Zn+/-Au)

Minfile 082FSW309 Two kilometres south

The area is underlain by volcanic rocks of the Lower Jurassic Elise Formation, Rossland Group which have been intruded by granodiorite and quartz monzonite of the Middle to late Jurassic Nelson Intrusions. The volcanic rocks comprise augite porphyry, augite porphyry basalt flows, flow breccias and plagioclase crystal tuffs.

The New Bicycle or main showing consists of slightly crosscutting pyrite-galena-sphalerite-magnetite veins or stringers hosted by dark green, sheared, chloritized tuffs. The tuffs strike 140 degrees and dip 50 to 60 degrees northwest.

## **GEOLOGY: CALIFORNIA PROPERTY**

**CALIFORNIA** past producer (Polymetallic veins Ag-Pb-Zn+/-Au, I01: Au-quartz veins) Minfile 082FSW169 Within Tenure 1068922

The California deposit is located 4 kilometres south of Nelson. The vein has been developed on 3 levels by 650 metres of drifts, producing 1,462 tonnes from 1910 to 1949.

The area is underlain by schistose volcanics comprising augite basalt flows and flow breccias of the Lower Jurassic Elise Formation, Rossland Group. These have been intruded by plagioclase porphyry of the Jurassic Silver King Intrusions and granodiorite and quartz monzonite of the Middle to Late Jurassic Nelson Intrusions.

The California vein is hosted in andesite near the ganodiorite contact in a shear zone which strikes east and dips 45 to 50 degrees south. The shear zone is up to 30 metres wide and hosts two parallel quartz veins with graphitic andesite between them. The vein on the hanging wall, 0.5 to 1.0-metre-wide, contains the best sulphide mineralization and the footwall vein, rarely more than 0.3-metre-wide, hosts higher gold values. The veins touch or can be separated by up to 2 metres of altered rock. Mineralization consists of quartz gangue containing significant pyrite with some galena, sphalerite, and free gold. The quartz veins are strongly sheared with graphitic material on fracture and shear planes.

# MINERALIZATION: CALIFORNIA PROPERTY AREA

The mineralization on twelve MINFILE reported past producers in the area of the California Property (Figure 5) is reported as follows. The descriptions herein are copied from Minfile.

**STAR** past producer (Alkalic porphyry Cu-Au, Au-quartz veins) Minfile 082FSW083 Four kilometres west

#### Perrier past producer (cont'd)

The Star occurrence consists of an irregular quartz vein that is a few centimetres to 1-metre-wide, which follows the shear zone striking 010 degrees with a vertical dip. The quartz is mineralized with pyrite, chalcopyrite, some malachite and traces of galena. Sulphides are also disseminated within the sheared country rock on either side of the quartz vein. The vein is hosted in sheared and potassically altered monzonite (?). Mineralization occurs over an 800 by 200-metre area. A grab sample of highly sheared sericitic volcanic rock containing trace pyrite from the shaft assayed 0.76 gram per tonne gold, 0.0623 per cent copper, 0.0085 per cent zinc and 0.0145 per cent lead (Assessment Report 19503).

The Alma N. showing, approximately 800 metres southeast of the Star, is reported to consist of a mineralized zone approximately 12 metres wide hosted in potassically altered monzonite (?) at the contact. Two shafts were sunk on the showing and a small shipment of sorted ore is thought to have come from this showing. A grab sample of siliceous grey rock containing 2 to 3 per cent pyrite and 3 per cent malachite staining collected from the dump by the shaft assayed 0.66 gram per tonne gold, 0.0944 per cent copper, 0.02 per cent lead and 0.035 per cent zinc (Assessment Report 19503).

The 1989 Ron grid, situated to the west, hosts similar mineralization to these workings. This is possibly a "conformable gold" occurrence.

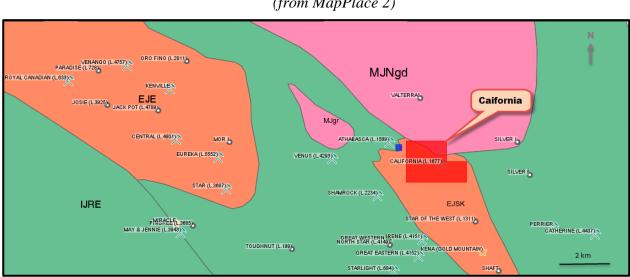


Figure 5. California Property: Geology (from MapPlace 2)

**GEOLOGY LEGEND** 

#### Lower Jurassic

Rossland Group - Elise Formation

#### Basaltic volcanic rocks

#### **Middle Jurassic**

MJNgd – Nelson Batholith

granodiorite intrusive rocks

#### **Early Jurassic**

**EJE** – Eagle Creek Plutonic Complex

- **EJSK** Silver King Intrusives
  - porphyry intrusive rocks

**EUREKA** past producer (Alkalic porphyry Cu-Au; Au-quartz veins) Minfile 082FSW084 Four kilometres west

The mineralization was originally documented as occurring in rafts or remnants of limestone of the Lower Jurassic Rossland Group that are incorporated into the diorites and granites of the Middle to Late Jurassic Nelson Intrusions. Two veins, closely associated with the limestones, host chalcopyrite, azurite, malachite, chrysocolla with minor galena, bornite and native silver in a quartz-carbonate gangue. The veins are both slightly larger than 1-metre-wide and are oxidized to the lowest levels of the underground workings. Sulphide mineralization occurs in the limestone as well as in the quartz veins. The main vein has a strike of 308 degrees with a dip of 85 degrees to the northeast. The veins produced a few thousand tonnes of copper ore grading 5 to 10 per cent copper with 5 to 7 grams of gold and 50 to 70 grams of silver. Better grades were observed in the limestone-hosted portions of the system than in the siliceous sections.

More recent work describes a shear-related quartz-carbonate vein system hosting 1 to 5 per cent pyrite, chalcopyrite and bornite, and up to 5 per cent sphalerite, galena and hematite. The veins are hosted in occasionally sericitic monzonite and monzosyenite. Mapping in the area defines the hostrock as pseudodiorite (Open File 1989-11). This is possibly a "conformable gold" occurrence.

A representative grab sample from the area of the Alhambra workings in 1989 assayed 1.75 grams per tonne gold, 173 grams per tonne silver, 0.82 per cent copper, 1.08 per cent lead and 1.5 per cent zinc (Assessment Report 19503).

Production from 1905 to 1954 totalled 8995 tonnes, yielding 1 124 747 grams silver, 19 190 grams gold, 159 170 kilograms copper and 713 kilograms lead. Production in 1956 was included with Queen Victoria (MINFILE 082FSW082).

From the 1990 drill program, drillhole GWS-89-05 reported 1 metre assaying 2.45 grams per tonne gold, 2.1 grams per tonne silver and 0.242 per cent copper, and 31.68 metres assaying 0.82 gram per tonne gold, 2.5 grams per tonne silver and 0.283 per cent copper (Assessment Report 20063, page 2).

**CENTRAL** past producer (Subvolcanic Cu-Ag-Au (As-Sb)) Minfile 082FSW085

Eight kilometres west

The Central occurrence is situated at approximately 1189 metres elevation on the west side of Eagle Creek, approximately 7.5 kilometres southwest of Nelson. A shaft with four tunnels was developed in the early 1900s.

The area is underlain by Jurassic pseudodiorite and pyroxenite of unknown affinity.

A fissured and crushed zone, 1 to 2 metres wide, occurs in granodiorite (pseudodiorite?) proximal to the contact with volcanic rocks (pyroxenite?). The mineralized zone has a north strike and a vertical dip. Mineralization consists of stringers of pyrite and chalcopyrite ("iron and copper sulphides") with some limonite and malachite ("oxidation products") in a gangue of altered country rock. Disseminated sulphides extend into the wall rocks. Several small shipments totalling 21 tonnes (there is some question as to the accuracy of the figures) of high-grade vein material were produced.

In March 1907, the Central claim was Crown granted to Edward Dumont, Rodolphe Legault and Louis Niven. In 1906, two 10.9-tonne lots of sorted ore were shipped to the smelter at Trail. In 1910, the workings consisted of a 30.5-metre shaft on the lead, with 18.3-metre drifts at the 15.3- and 30.5-metre levels. Gold-copper ore was stoped from both levels and 72.6 tonnes of ore were shipped to the smelter at Trail.

The property, including the Central and Central Fraction Crown-granted claims, lay dormant for several years

#### Central past producer (cont'd)

In 1924, claim owners W. Dumont and L. Neveu began dewatering the shaft and workings with the intention of continual development and eventual mining. At this time, the old shaft was 29.3 metres deep with four short tunnels driven from it at different levels. Additional work was conducted on the property in 1925.

*In 1948, areas to the east and west of the Central claim on either side of Eagle Creek were held by Kenville Gold Mines Limited. Wallace R. Baker conducted geological surveying and minor trenching on the properties.* 

In the 1980s, the Central occurrence was situated on the eastern boundary of the Ron Gold claim group owned by Eric and Jack Denny. Limited exploration was carried out on the claims. In 1985, claim owners Eric and Jack Denny leased the Ron Gold claim group to Ryan Exploration Company Limited. Exploration that year consisted of geochemical rock and sampling. The following year, Ryan Exploration conducted a very low-frequency geophysical survey over the claim group.

By 1989, Pacific Sentinel Gold Corporation had acquired the adjacent Ron property as part of their Great Western Star property. In the summer of 1989, Lloyd Geophysics Limited carried out geophysical surveys over the Ron and Toughnut grids to the west and southeast, respectively. In 1990, Pacific Sentinel Gold conducted a follow-up program of soil and rock sampling, trenching, geological mapping and geophysical surveying. Later that year, 26 NQ and NQ2 diamond drill holes totalling 5880 metres were completed.

The Kenville mine (MINFILE 082FSW086) and Venango (MINFILE 082FSW087) properties were acquired by Anglo Swiss Resources Incorporated in 1992. Together, the parcels were known as the Kenville property. Teck Exploration Limited optioned the Kenville property from Anglo Swiss Resources in 1994 and amalgamated it with the adjacent Ron property. Together, these two properties surrounded the Central claim to the south and northwest. Teck completed 16 diamond drill holes, as well as induced polarization, resistivity, ground magnetometer and geochemical surveying. Teck Exploration later dropped the option in 1997.

In 2004, on behalf of owner Jack Denny, Klondike Gold Corporation conducted a geochemical sampling program over the Ron property, later optioning it in 2008. An exploration program of limited geological mapping and prospecting and soil geochemical surveying was carried out on the eastern portion of the claim group. The Central claim, along with the Ron property, was then acquired by Anglo Swiss Resources and amalgamated with the Kenville property.

In 2009, on behalf of Anglo Swiss Resources, Equity Exploration Consultants Limited undertook an exploration program consisting of 680 line kilometres of airborne electromagnetic geophysical surveying, surface diamond drilling, and underground rehabilitation and drilling. Ten diamond drill holes were completed on the south side of Eagle Creek, approximately 700 metres south of the Kenville mine.

By 2010, the Kenville property had been expanded to include separate claim groups to the north and south. In 2010, on behalf of Anglo Swiss Resources, St. Pierre Geoconsulting Incorporated conducted airborne magnetic and electromagnetic geophysical surveys over the entire Nelson Mining Camp area. Soil sampling was conducted over the central Kenville claim block, though the majority of the sampling was conducted in the area of the Silver Lynx occurrence (MINFILE 082FSW378) to the south.

The two shipments of ore made in 1906 yielded 5.49 and 3.09 grams per tonne gold, 89.14 and 30.86 grams per tonne silver, and 10.8 and 11.8 per cent copper, respectively (Minister of Mines Annual Report, 1924, page 192).

### **KENVILLE** past producer (Alkalic porphyry Cu-Au, Au-quartz veins:

Intrusion-related Au pyrrhotite veins)

#### Minfile 082FSW086 Six kilometres west-northwest

The Granite-Poorman veins produced mainly gold with silver but the mill has been used at various periods to process ores from other properties that might have been richer in base metals. In recent years, some of the granitic rock has been used as a construction material (Granite MINFILE 082FSW342). A 1985 report by P.J. Stantos stated that indicated and inferred resources above the 257 (main mine adit) level were 294 800 tonnes grading 16.73 grams per tonne gold (www.anglo-swiss.com).

At end of life, mine production totalled 180 740.23 tonnes (199 232 short tons) averaging 9.07 grams (0.32 ounce) per tonne gold and 3.96 grams (0.14 ounce) per tonne silver (Assessment Report 24303). In total, the mine produced 1849.41 kilograms (65 236 ounces) of gold, 784.88 kilograms (27 686 ounces) of silver, 23.48 tonnes (51 782 pounds) of lead and 15.15 tonnes (33 393 pounds) of zinc (Assessment Report 32837).

A 1995 Teck Exploration drilling program returned 8.7 metres of 1.03 per cent copper and hosted within a newly discovered westward-dipping quartz vein 0.25 metre of coarse, massive pyrite grading 82.15 grams per tonne gold and 31 grams per tonne silver.

Significant results from the 2009 Anglo Swiss diamond drill program are shown in the table below (Assessment Report 31623).

Interval	Gold	Silver	Copper	
(metres) (parts per million) (parts per million) (parts per million				
0.55	10.55	5.71	699	
0.22	33.7	24.8	115	
0.5	4.48	12.5	1100	
1.14	14.49	20.24	3332	
3.2	17.29	34.34	8405	

Significant assay results returned from the 2010 drill program include

- 0.5 metre of 111.5 grams per tonne gold and 58.1 grams per tonne silver,
- 0.88 metre of 88.1 grams per tonne gold and 130 grams per tonne silver,
- 0.46 metre of 59.8 grams per tonne gold and 31.8 grams per tonne silver, and
- 0.28 metre of 47.2 grams per tonne gold and 51.4 grams per tonne silver (Assessment Report 32837).

Results from the 2010 to 2012 drilling included 85 samples that returned assays with greater than 5 grams per tonne gold, including 21 quartz vein intersections returning greater than 1 ounce per tonne (34.29 parts per million) gold (Assessment Report 32839).

#### **VENANGO** past producer (Au-quartz veins, W veins, Intrusion related Au pyrrhotite veins) Minfile 082FSW087 Seven kilometres west-northwest

The Venango occurrence is situated on the western edge of the Granite-Poorman mine (MINFILE 082FSW086), approximately 11.5 kilometres west of Nelson. The veins of this occurrence are similar to the Granite-Poorman veins and are part of the same fracture system.

The area is underlain by Jurassic pseudodiorite and pyroxenite of unknown affinity underlain by volcanic rocks of the Lower Jurassic Elise Formation, Rossland Group. These have been intruded by granodiorite of the Middle to Late Jurassic Nelson Intrusions (Nelson batholith). The Venango and Kenville area is underlain by the Eagle Creek plutonic suite, which is mainly composed of gabbro and diorite, though quartz monzonite to hornblende syenite phases are also present. All phases have undergone varying degrees of alteration.

A northwest-trending system of quartz veins is hosted in pseudodiorite, locally gneissic, intruding greenstone on the east limb of a syncline. The veins, which are weak fault zones, strike 330 to 350 degrees and dip 40 to 45 degrees north. The veins are cut by faults, some of which are occupied by lamprophyre dikes. The veins have good continuity along strike and downdip.

The occurrence consists of two quartz veins along strike with and similar to the Granite-Poorman veins. The quartz gangue hosts pyrite with lesser amounts of chalcopyrite, galena and sphalerite as irregular concentrations. Free gold was reported and scheelite was found in significant amounts but not recovered. The vein in the stope varies from 10 to 60 centimetres in width and is up to 46 metres in length. This vein is typically "sheeted" by fractures parallel to the walls. Locally, significant concentrations of scheelite were noted (0.3 to 3.39 per cent WO3) but no tungsten was produced (Property File, Maconachie, 1942). A scheelite lens 15 by 3.66 by 0.25 metre was documented near the collar of the shaft. The veins are remarkably consistent along strike with some anastomosing of the vein into narrow, flat-lying stringers. The ore shoots plunge to the south at approximately 30 degrees along the plane of the vein. No major faulting was observed in the underground workings but a large lamprophyre dike crosscuts the vein in its northern extension.

Production figures are scarce but it is estimated that approximately 809 tonnes were mined with shipping grades in the order of 14.5 grams of gold and 17 grams of silver per tonne with some lead and zinc.

In September 1900, the Venango claim was granted to Thomas R. French and Isaac Erickson. As of 1938, the property was owned and operated by D.H. Norcross and associates. That year, a small mining plant was installed, and 121.9 line metres of geophysical surveying and 18.3 metres of sinking were completed. The majority of work performed on the property took place after 1939.

By 1939, the property was owned by Venango Gold Mines Limited. The existing shaft was extended 36.6 metres, and 121.9 metres of ground sluicing was carried out to trace the vein. A new adit was started 89.6 metres below the existing workings. In total, 85.3 metres of drifting and 68.6 metres of crosscutting were completed and 464.5 tonnes of ore were shipped to the smelter at Trail. The shipped ore yielded 8228.6 grams of gold and 11 862.8 grams of silver (Ministry of Mines Annual Report, 1939, page 81).

In 1940, development work consisted of 259 metres of drifting, 35 metres of crosscutting, 30.5 metres of raising and 533.4 metres of diamond drilling. In total, 115.2 tonnes of ore were mined and shipped to the smelter at Trail. The ore yielded 1645.7 grams of gold and 2091.4 grams of silver (Ministry of Mines Annual Report, 1940, page 66). Though the ore contained some tungsten, no recovery was made.

Work continued into 1942 with considerable amounts of development work, including trenching by ground sluicing, 152.4 metres of diamond drilling and some underground drifting.

#### Venango past producer (cont'd)

As a result of this work, a new vein containing appreciable amounts of scheelite was discovered. The following year, 45.7 metres of ground sluicing, 30.5 metres of stripping and 121.9 metres of diamond drilling were performed. The assays of the newly discovered scheelite vein reported encouraging gold values and the vein was uncovered for more than 76.2 metres.

In 1944, work efforts focused on a new vein approximately 42.6 metres west of the original Venango vein. Approximately 30.5 metres of drifting opened up a commercial ore shoot approximately 15.3 metres long and 0.36 metre wide. A second adit, situated 21.3 metres below the first, was driven for 29 metres on a vein averaging approximately 0.31 centimetre in width. No ore was shipped from the property that year.

In 1945, the Venango property was leased to Granite-Poorman Kenville Gold Mines Limited. By this time, two veins had been opened up and a small amount of stoping had been conducted on one of the veins. Granite-Poorman Kenville Gold Mines drilled two holes from the bottom level of the Venango mine in an attempt to locate the downward continuation of the Venango No. 1 vein. In 1949, A.G. and D.H. Norcross leased the Venango property from Venango Gold Mines Limited. That year, 224 tonnes of ore were shipped to the Kenville mill for processing.

As of 1958, the Venango property was still owned by Venango Gold Mines Limited. That year, a small amount of surface stripping and 198.1 metres of diamond drilling were completed to prospect an extension of a quartz vein and locate a possible source for molybdenite float found on the property. In 1963, the portal on the No. 2 vein was reopened and the main drift was extended 11.6 metres. A raise was driven 14.6 metres from the drift face. In total, 57.1 tonnes of siliceous ore yielded 411.4 grams of gold, 857.1 grams of silver and 57.1 kilograms of lead and zinc (Ministry of Mines Annual Report, 1963, page 49).

In 1980, DeKalb Mining Corporation completed 2932 metres of diamond drilling in 20 holes on the Venango-Shenango and Greenwood claims.

Coral Industries acquired the Venango property in 1989 and amalgamated it with the Granite-Poorman (Kenville; MINFILE 082FSW086) property to the east.

The Kenville mine property, including the Venango workings, was acquired by Anglo Swiss Resources Incorporated in 1992. Teck Exploration Limited optioned the Kenville property from Anglo Swiss Resources in 1994 and amalgamated it with the adjacent Ron property. Teck completed 3083 metres of diamond drilling (16 drillholes), as well as induced polarization, resistivity, ground magnetometer and geochemical surveying. Low-grade porphyry-style mineralization and alteration were encountered over short drill intervals. Teck Exploration later dropped the option in 1997.

In 2002, Anglo Swiss Resources optioned the Kenville property to a joint venture among Babylon Enterprises Limited, Foaming Holdings Limited, Glacial Holdings Limited and Tracer Enterprises Limited. The joint venture group then optioned a percentage of their holdings to Gold Standard Resources Corporation. In 2005, on behalf of the joint venture group, Bob Burton carried out an exploration program of mapping, geochemical soil sampling and excavator trenching on the west side of Eagle Creek. The following year, work consisted of geochemical soil sampling, preparatory underground exploration, adit rehabilitation and trench reclamation.

In 2007 and 2008, Anglo Swiss Resources drilled 15 500 metres in 50 holes near the Kenville mine. In 2009, on behalf of Anglo Swiss Resources, Equity Exploration Consultants Limited undertook an exploration program consisting of 680 line kilometres of airborne electromagnetic geophysical surveying, surface diamond drilling, and underground rehabilitation and drilling. Ten diamond drill holes were completed on the south side of Eagle Creek, approximately 700 metres south of the Kenville mine.

**VENUS** past producer (Polymetallic veins Ag-Pb-Zn+/-Au) Minfile 082FSW166 Two kilometres west

The veins comprise quartz mineralized with pyrite and minor galena and sphalerite. The veins vary from a few centimetres to over 1 metre in width and locally occur as a number of quartz stringers in sheared host rock. The records indicate the veins tend to be less definite away from the granite contact and the schists become more faulted and brecciated. The two veins should intersect but the junction has not been located in any of the workings.

Production records indicate an average grade of 19.8 grams per tonne gold and 17.7 grams per tonne silver, with minor copper and lead reported.

ATHABASKA past producer (Au-quartz veins, Polymetallic veins Ag-Pb-Zn+/-Au, W veins,

Intrusion-related Au pyrrhotite veins)

Minfile 082FSW168 Two kilometres west

An enrichment of metal values occurs within the schistose volcanics at the granodiorite contact. The flatter sections of the vein, in the schist, were productive but here the vein is highly faulted and folded, with dikes common on the planes of the normal faults.

A weighted average of 27 samples taken in 1988 showed 22.29 grams per tonne gold (Assessment Report 17184). Up to 18 144 tonnes of material grading 8.579 grams per tonne gold may exist at the old mill site (Assessment Report 17184).

SHAMROCK past producer (Polymetallic veins Ag-Pb-Zn+/-Au, Intrusion-related

Au pyrrhotite veins)

Minfile 082FSW170 500 metres southwest

No geological description is available but a total of 7.7 tonnes of ore grade material was shipped in 1937 and 1948, which yielded some silver, lead, zinc, and minor gold. This occurrence is likely similar in setting to the Silver King deposit (082FSW176).

**GREAT EASTERN** past producer (Polymetallic veins Ag-Pb-Zn+/-Au) Minfile 082FSW172 Two kilometres south

No geological description of the occurrence is available except that the claim contains a quartz vein, about 20 to 25 centimetres wide, which assayed 19.2 grams per tonne gold and 6.86 grams per tonne silver (Minister of Mines Annual Report 1954, page A125). The showing is likely similar to the Silver King occurrence (082FSW176). Production was 34 tonnes yielding 1,276 grams of gold and 1,774 grams of silver.

**STARLIGHT** past producer (Polymetallic veins Ag-Pb-Zn+/-Au) Minfile 082FSW174 Two kilometres south

The Starlight vein produced 10.8 tonnes which yielded 583 grams of gold, 2936 grams of silver and 200 kilograms of copper. Free gold is contained in the vein material.

**PERRIER** past producer (Polymetallic veins Ag-Pb-Zn+/-Au, G06: Noranda/Kuroko

massive sulphide Cu-Pb-Zn)

#### Minfile 082FSW208 Two kilometres southwest

There are three types of mineralization in the area: (1) gold-bearing quartz veins; (2) stratiform lead-zinc deposits; and (3) widespread disseminated sulphide mineralization. The veins appear to be fault controlled.

A flat lying quartz vein which crosscuts the regional foliation is hosted in chloritic schists. The vein strikes about 005 to 020 degrees and dips 35 to 60 degrees east. The vein, 0.25 to 0.55 metres wide, has been traced along strike for over 500 metres. The vein has quartz gangue with sphalerite, galena, pyrite, chalcopyrite and occasionally, free gold. Concentrations of sulphides are reported in zones where the vein has a flatter dip. A crosscutting vein which may be a branch of the main vein outcrops about 61 metres southeast of the shaft, strikes 330 degrees and has a vertical dip. This second vein hosts minute amounts of ruby silver and native silver with some carbonate (calcite).

The Julius Ceasar vein, about 450 metres due west of the Perrier mine, is hosted in quartz-feldspar porphyry. Chip samples assayed only low gold and silver values.

At the Lucky Boy adit, 150 metres south of the Perrier shaft, a mineralized zone, 0.45-metre-wide, hosts galena, sphalerite, chalcopyrite and minor magnetite in schistose biotite tuffite. A grab sample taken in 1982 from the adit across the 0.45 metre assayed 0.190 per cent copper, 3.66 per cent lead, 5.75 per cent zinc, 114.5 grams per tonne silver, 2.71 grams per tonne gold (Assessment Report 10605). This deposit has been determined to be a Kuroko-type volcanogenic massive sulphide deposit.

Limited information and production records between 1913 and 1937 indicate the mine produced in excess of 2000 tonnes recovering over 34,681 grams of gold, 94,803 grams of silver, 14,384 kilograms of lead and 21,144 kilograms of zinc. Geochemical and geophysical survey results in 1988 were interesting (Assessment Report 17686).

**STAR OF THE WEST** past producer (Polymetallic veins Ag-Pb-Zn+/-Au)

Minfile 082FSW309 Two kilometres south

The veins or stringers are up to 1-centimetre-wide and locally contain massive, fine-grained quartz or massive fine-grained pyrite with some limonite staining. The veins appear stratabound locally but are accompanied by anomalous geochemical values for mercury which may indicate an epithermal environment. The veins carry insignificant gold and low amounts of silver. Grab samples from the 4-metre trench at the main showing assayed up to 3.63 per cent zinc and 2.68 per cent lead with up to 96.8 grams per tonne silver and 0.125 grams per tonne gold (Assessment Report 14064).

#### MINERALIZATION: CALIFORNIA PROPERTY

**CALIFORNIA** past producer (Polymetallic veins Ag-Pb-Zn+/-Au, I01: Au-quartz veins) Minfile 082FSW169 Within Tenure 1068922

The California vein is hosted in andesite near the ganodiorite contact in a shear zone which strikes east and dips 45 to 50 degrees south. The shear zone is up to 30 metres wide and hosts two parallel quartz veins with graphitic andesite between them. The vein on the hanging wall, 0.5 to 1.0-metre-wide, contains the best sulphide mineralization and the footwall vein, rarely more than 0.3-metre-wide, hosts higher gold values.

# California past producer (cont'd)

The veins touch or can be separated by up to 2 metres of altered rock. Mineralization consists of quartz gangue containing significant pyrite with some galena, sphalerite, and free gold. The quartz veins are strongly sheared with graphitic material on fracture and shear planes. The contacts with the country rocks are

## 2019 EXPLORATION PROGRAM

#### Prospecting and Rock Sampling

#### Purpose

The purpose of the program was to locate any location of a geological prospect that may have the potential to be developed to an economic resource. Any indication of mineralization may indicate a potential concealed polymetallic or porphyry type deposit.

#### Prospecting

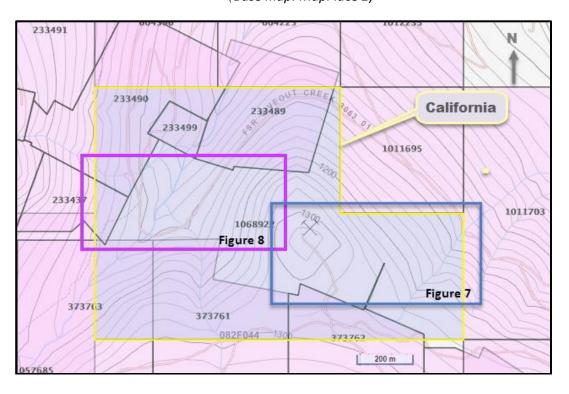
In the prospecting of the area, orange flagging and marking of sample sites were completed, photos were taken of samples, GPS coordinates were taken, and all samples were recorded and mapped.

#### Sampling

Bag size samples were taken between 1 pound and 10 pounds (float and heavy mineral soil samples. Of the thirty samples taken, 18 were float/dump (FB), and 1221 were heavy metal (HM). Descriptions of the samples are shown in Appendix II.

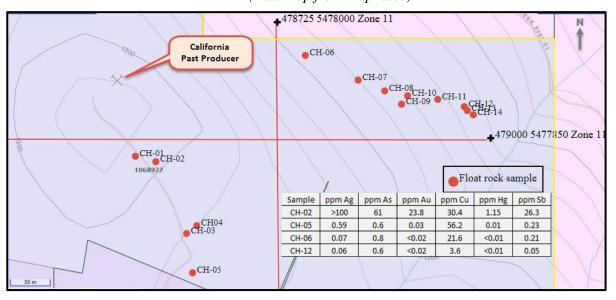
#### Results

Seven samples were submitted for assay. Certificates of Assay are shown in Appendix I with the sample locations and selected assays shown on Figures 7, and 8.



#### Figure .6 Sample location index map (Base map: MapPlace 2)

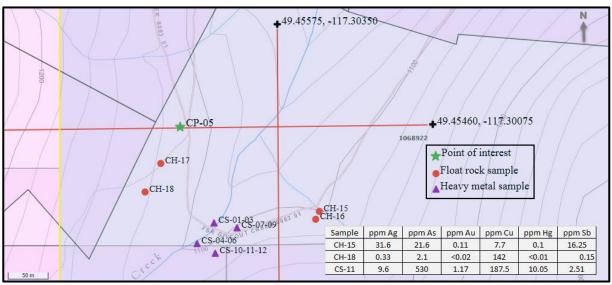
### **2019 Exploration Program** (cont'd)



#### Figure 7. Eastern sample locations\* and selected assays\*\* (Base map from MapPlace)

\* see Figure 6 for location on the California Property

\*\*see Certificate of Analysis KL19222082 in Appendix 1 for complete assays



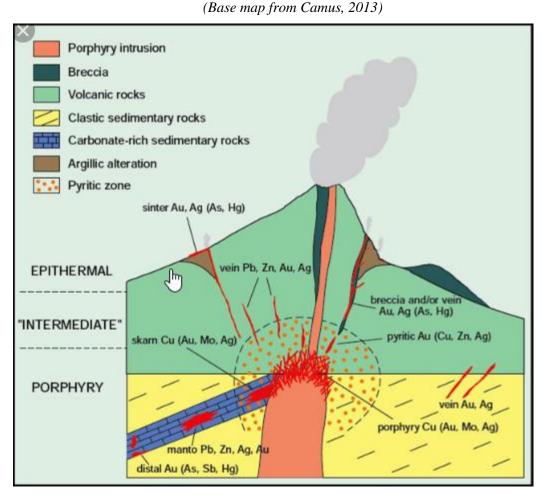
# Figure 8. Western Sample locations\*

(Base map from MapPlace)

\* see Figure 6 for location on the California Property.

\*\*see Certificate of Analysis KL19222082 in Appendix 1 for complete assays





# **INTERPRETATION & CONCLUSIONS**

The assayed samples taken from the California property provided information as to a potential location of a polymetallic mineral zone or an indication of a concealed porphyry resource to which the polymetallic quartz veins often provide an indication.

Soil sample CS-11 (Figure 8) with anomalous mineral values of 530 ppm arsenic, 1.17 ppm gold, 187.5 ppm copper, and 10.05 ppm mercury, are significant to the proximal location of a mineral zone. These mineral values may be indicative of the upper levels of a polymetallic or epithermal vein system (Figure 9), or the halo alteration of a mineralized porphyry.

The anomalous to highly anomalous pathfinder minerals of mercury and arsenic indicate that the sample may be over, or near a polymetallic vein of which there are eight documented past producers of polymetallic veins within two kilometres of the Property. The mineral values can also be related to an epithermal vein system in that a description of the Union vein refers to mineralization that is finely banded; the banding is a geological feature of an epithermal vein.

The Property potential for bulk mineable porphyry mineralization is not only indicated in the related polymetallic and epithermal veins, but has been typed at the Eureka (082FSW084), which is designated as an alkalic porphyry copper-gold, in addition to a gold quartz vein type of deposit, in that shear-related mineralized quartz-carbonate veins hosted, "... in occasionally sericitic monzonite and monzosyenite."

# Interpretation & Conclusions (cont'd)

The quartz, mineralization, and the indicated intrusive rock, may be a surficial indication of a concealed mineralized porphyry system; the shear facilitating the migration of the indicated porphyry material to surface.

A more definitive potential for a concealed mineralized porphyry system was from a 1994 to 1997 Teck Exploration program which was focused on locating a bulk mineable copper-gold porphyry target at the Kenville *(082FSW086)* property. Drill results of low-grade porphyry-style mineralization and alteration were encountered over short intervals.

The California Vein system, reportedly the most developed, could be the vein system with the greatest potential for locating a high grade gold, low tonnage epithermal mineral resource or a low-grade coppergold porphyry resource. The 600-metre-long Vein system on the California and the Exchequer was developed for 400 metres underground and to a depth of 130 metres.

Structure is the principal mineral controlling factor in most of the properties in the area in that the quartz vein related mineralization is mostly confined to shear zones. Cross-faulting is a significant factor.

At the Kenville, the most productive mine in the area, mine workings consist of seven levels with five main veins stoped for a combined length of over 915 metres,

"Ore shoots, which rake to the south, are formed at the intersection of the main veins with flatter lying offshoots; high gold values in these shoots appear coincident with galena,"

At the California the development of the two veins was extensive in the 650 metres of drifts in three levels and,

"Some enrichment of metal values was observed where normal faults crosscut the vein-shear zone".

It is reported that an ore block, 91 metres long grading 29.14 grams per tonne gold over a 1 metre width, is believed to exist at the west end of the No. 3 level. A potential tonnage of 36,000 tonnes has been calculated for this zone (Assessment Report 11027).

#### RECOMMENDATIONS

A depth related Induced Potential (IP) program centred on the California mine workings, to include a line over the potential tonnage at the west end of the No. 3, and an IP line over the location of sample CS-11, is recommended.

The purpose of the IP program is to detect any indication of a concealed copper-gold porphyry type deposit.

Respectfully submitted Sookochoff Consultants Inc.



Laurence Sookochoff, PEng

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MapPlace – Map downloads.

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**Orr, J.F.W. and Sinclair, A.J.** (1971): Mineral Deposits in the Slocan and Slocan City Areas of British Columbia, Western Miner, February 1971.

**Ridley, J.C., Troup, A., (**1982) G South Property, Cariboo Mining Division, Geological, Geophysical and Geochemical Report, Private Report for Gabriel Resources Inc.

**Thomson, G.R.** (1992) Geophysical Assessment Report on the Perrier 1-4 t Claims for Teck Corporation. May, 1992. AR 22310.

Way, B. (1981) California Project, for Western California Resources Ltd. November 24, 1981. AR 09804.

Von Einsiedel, C. (1993) Diamond Drilling Report on the Hillside Claim Group. June 25, 1993. AR 22935.

#### STATEMENT OF COSTS

Field work was performed on the California Property between June 21, 2019 and June 30, 2019 to the value as follows:

#### **Prospecting and Sampling**

Labour		
Bill McKinney: June 21, 22, 23, 2019 3 days @ \$450.00/day Lance Bradshaw: June 22, 23, 2019	1,350.00	
2 days @ \$300.00/day	600.00	1,950.00
Travel/TransportationRichmond to property return1,280 km @ \$0.68(allowed)		934.80
Exploration Equipment (5 days @ \$100.00)		
GPS, Computer, Clinometer, Electronics radios, etc	40.00	
Spot Locator's safety equipment and supplies -	40.00	
Bear spray, axes, mallets, pry bars, etc	40.00	
Chainsaw	<u>40.00</u>	160.00
Food/Lodging		
4 man days @ \$ 125.00		500.00
Assays		327.89
Report		
Laurence Sookochoff, PEng		2,500.00
Maps		500.00
		\$ 6,872.69
		======

# CERTIFICATE

I, Laurence Sookochoff, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geologist and principal of Sookochoff Consultants Inc. with an address at 120 125A-1030 Denman Street, Vancouver, BC V6G 2M6.

I, Laurence Sookochoff, further certify that:

1) I am a graduate of the University of British Columbia (1966) and hold a B.Sc. degree in Geology.

2) I have been practicing my profession for the past fifty-three years.

3) I am registered and in good standing with the Engineers and Geoscientists BC.

4) The information for this report is based on information as itemized in the Selected Reference section of this report, from exploration work done in the general Nelson area, and from information given me on the California property prospecting program.

5) I have no interest in the California property as described herein.



Laurence Sookochoff, P. Eng.

# FIELD CREW QUALIFICATIONS

Bill McKinney; 20 years' field

Lance Bradshaw; five years' field

Appendix 1

**Certificates of Assay** 



# CERTIFICATE KL19222079

Project: California

This report is for 6 Rock samples submitted to our lab in Kamloops, BC, Canada on 4-SEP-2019.

The following have access to data associated with this certificate:

JOHN BAKUS

To: MLS MINING #3 572 LORNE STREET EAST KAMLOOPS BC V2C 1X6 Page: 1 Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 18-SEP-2019 Account: MLSMIN

SAMPLE PREPARATION								
ALS CODE	DESCRIPTION							
WEI-21	Received Sample Weight							
DISP-01	Disposal of all sample fractions							
CRU-QC	Crushing QC Test							
LOG-22	Sample login - Rcd w/o BarCode							
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 PROCEDURE	S
ALS CODE	DESCRIPTION	
Ag-OG46	Ore Grade Ag - Aqua Regia	
ME-OG46	Ore Grade Elements - AquaRegia	ICP-AES
Pb-OG46	Ore Grade Pb - Aqua Regia	
Zn-OG46	Ore Grade Zn - Aqua Regia	
ME-MS41	Ultra Trace Aqua Regia ICP-MS	

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.

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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

#3 572 LORNE STREET EAST KAMLOOPS BC V2C 1X6 Page: 2 - A Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 18-SEP-2019 Account: MLSMIN

Project: California

CERTIFICATE OF ANALYSIS	KL19222079
CERTIFICATE OF ANALTSIS	KL19222079

Sample Description	Method	WEI-21	ME-MS41													
	Analyte	Recvd Wt.	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs
	Units	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1	0.05
CH-02		0.33	>100	0.12	61.0	23.8	<10	10	0.08	286	0.39	>1000	0.76	14.6	5	0.31
CH-05		0.32	0.59	1.12	0.6	0.03	<10	70	0.06	0.89	1.26	18.15	1.58	12.7	90	2.46
CH-06		0.23	0.07	2.02	0.8	<0.02	<10	350	0.12	0.09	0.72	2.03	0.98	20.6	311	5.07
CH-12		0.49	0.06	0.98	0.6	<0.02	<10	50	0.39	0.13	0.24	2.58	31.7	3.1	9	1.38
CH-15		0.22	31.6	0.03	21.6	0.11	<10	20	<0.05	16.30	0.01	252	0.57	2.1	9	0.05
CH-18		0.32	0.33	1.61	2.1	<0.02	<10	70	0.09	0.26	0.61	2.13	1.22	24.4	171	0.40



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**#3 572 LORNE STREET EAST KAMLOOPS BC V2C 1X6** 

Page: 2 - B Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 18-SEP-2019 Account: MLSMIN

Project: California

California	
CERTIFICATE OF ANALYSIS	KL19222079

Sample Description	Method Analyte Units LOD	ME-MS41 Cu ppm 0.2	ME-MS41 Fe % 0.01	ME-MS41 Ga ppm 0.05	ME-MS41 Ge ppm 0.05	ME-MS41 Hf ppm 0.02	ME-MS41 Hg ppm 0.01	ME-MS41 In ppm 0.005	ME-MS41 K % 0.01	ME-MS41 La ppm 0.2	ME-MS41 Li ppm 0.1	ME-MS41 Mg % 0.01	ME-MS41 Mn ppm 5	ME-MS41 Mo ppm 0.05	ME-MS41 Na % 0.01	ME-MS41 Nb ppm 0.05
CH-02		30.4	6.08	0.68	0.08	<0.02	1.15	15.50	0.05	0.4	1.0	0.09	388	3.58	0.01	<0.05
CH-05		56.2	1.67	2.55	0.08	0.10	0.01	0.041	0.49	0.6	17.4	1.18	310	0.20	0.10	0.05
CH-06		21.8	2.78	4.31	0.07	0.04	<0.01	0.008	0.92	0.4	24.1	2.14	570	0.14	0.04	0.11
CH-12		3.6	1.89	4.65	0.05	0.03	<0.01	0.017	0.15	14.4	13.9	0.47	380	0.46	0.04	0.41
CH-15		7.7	2.16	0.15	<0.05	<0.02	0.10	2.32	0.01	0.2	0.2	<0.01	104	6.67	0.01	<0.05
CH-18		142.0	2.44	5.26	<0.05	0.04	<0.01	0.028	0.06	0.6	28.3	1.80	359	0.55	0.05	0.05



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**#3 572 LORNE STREET EAST KAMLOOPS BC V2C 1X6** 

Page: 2 - C Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 18-SEP-2019 Account: MLSMIN

Project: California

CERTIFICATE OF ANALYSIS	KL19222079

Method Analyte Units LOD	ME-MS41 Ni ppm 0.2	ME-MS41 P ppm 10	ME-MS41 Pb ppm 0.2	ME-MS41 Rb ppm 0.1	ME-MS41 Re ppm 0.001	ME-MS41 S % 0.01	ME-MS41 Sb ppm 0.05	ME-MS41 Sc ppm 0.1	ME-MS41 Se ppm 0.2	ME-MS41 Sn ppm 0.2	ME-MS41 Sr ppm 0.2	ME-MS41 Ta ppm 0.01	ME-MS41 Te ppm 0.01	ME-MS41 Th ppm 0.2	ME-MS41 Ti % 0.005
	8.8 43.0 168.5 3.8 1.2	90 760 1050 640 30	>10000 177.5 17.7 15.5 >10000	3.0 27.4 44.1 15.9 0.6	0.002 <0.001 <0.001 <0.001 <0.001	8.64 0.04 <0.01 <0.01 2.08	26.3 0.23 0.21 0.05 16.25	0.4 5.5 2.3 1.8 0.1	29.1 <0.2 <0.2 <0.2 3.0	0.2 <0.2 <0.2 0.3 0.2	29.1 32.1 36.2 19.8 4.5	<0.01 <0.01 <0.01 <0.01 <0.01	8.79 0.05 0.01 <0.01 2.56	0.2 0.3 <0.2 4.8 <0.2	<0.005 0.120 0.189 0.025 <0.005
	1.2 219	30 770	>10000 162.0	0.6	<0.001 <0.001	2.08 0.06	16.25 0.15	0.1	3.0 0.3	0.2 <0.2	4.5 16.5	<0.01 <0.01	2.56 0.05	<0.2 0.2	<0.005 0.094
	Analyte Units	Analyte Units LOD Ni ppm 0.2   8.8 43.0   168.5 3.8   1.2	Analyte Units LOD Ni P   ppm ppm ppm   0.2 10   8.8 90   43.0 760   168.5 1050   3.8 640   1.2 30	Analyte Units LOD Ni P Pb   ppm ppm ppm ppm   0.2 10 0.2   43.0 760 177.5   168.5 1050 17.7   3.8 640 15.5   1.2 30 >10000	Analyte Units LOD Ni P Pb Rb   ppm ppm ppm ppm ppm   0.2 10 0.2 0.1   43.0 760 177.5 27.4   168.5 1050 17.7 44.1   3.8 640 15.5 15.9   1.2 30 >10000 0.6	Analyte Units LOD Ni P Pb Rb Re   ppm ppm ppm ppm ppm ppm ppm   LOD 0.2 10 0.2 0.1 0.001   43.0 760 177.5 27.4 <0.001	Analyte Units LOD Ni P Pb Rb Re S   ppm ppm ppm ppm ppm ppm ppm %   LOD 0.2 10 0.2 0.1 0.001 0.01   8.8 90 >10000 3.0 0.002 8.64   43.0 760 177.5 27.4 <0.001	Analyte Units LOD Ni P Pb Rb Re S Sb   ppm o.01 0.01 0.01 0.05   43.0 760 177.5 27.4 <0.001	Analyte Units LOD Ni P Pb Rb Re S Sb Sc   ppm </td <td>Analyte Units LOD Ni P Pb Rb Re S Sb Sc Se   units LOD ppm 0.01 0.01 0.05 0.1 0.2   8.8 90 &gt;10000 3.0 0.002 8.64 26.3 0.4 29.1   43.0 760 177.5 27.4 &lt;0.001</td> 0.04 0.23 5.5 <0.2	Analyte Units LOD Ni P Pb Rb Re S Sb Sc Se   units LOD ppm 0.01 0.01 0.05 0.1 0.2   8.8 90 >10000 3.0 0.002 8.64 26.3 0.4 29.1   43.0 760 177.5 27.4 <0.001	Analyte Units LOD Ni P Pb Rb Re S Sb Sc Se Sn   Units LOD ppm p	Analyte Units LOD Ni P Pb Rb Re S Sb Sc Se Sn Sr   Units LOD ppm quart	Analyte Units LOD Ni P Pb Rb Re S Sb Sc Se Sn Sr Ta   Units LOD ppm q0.01 0.01 0.05 0.1 0.2 0.2 29.1 <0.01	Analyte Units LOD Ni P Pb Rb Re S Sb Sc Se Sn Sr Ta Te   Units LOD ppm quart <td>Analyte Units Ni P Pb Rb Re S Sb Sc Se Sn Sr Ta Te Th   Units ppm o.0 o.2 o.2 o.2 o.2 o.0 o.0 o.2 o.2 o.2 o.2 o.0 o.0 o.2 o.3 o.3 o.0 o.2 o.3 o.3 o.0 o.3 o.3 o.3</td>	Analyte Units Ni P Pb Rb Re S Sb Sc Se Sn Sr Ta Te Th   Units ppm o.0 o.2 o.2 o.2 o.2 o.0 o.0 o.2 o.2 o.2 o.2 o.0 o.0 o.2 o.3 o.3 o.0 o.2 o.3 o.3 o.0 o.3 o.3 o.3



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#### **#3 572 LORNE STREET EAST KAMLOOPS BC V2C 1X6**

Page: 2 - D Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 18-SEP-2019 Account: MLSMIN

KL19222079

#### Project: California

Sample Description	Method Analyte Units LOD	ME-MS41 TI ppm 0.02	ME-MS41 U ppm 0.05	ME-MS41 V ppm 1	ME-MS41 W ppm 0.05	ME-MS41 Y ppm 0.05	ME-MS41 Zn ppm 2	ME-MS41 Zr ppm 0.5	Ag-OG46 Ag ppm 1	Pb-OG46 Pb % 0.001	Zn-OG46 Zn % 0.001	
CH-02 CH-05 CH-06 CH-12 CH-15		0.22 0.16 0.28 0.10 0.02	0.37 0.15 0.07 2.15 0.34	3 55 72 24 2	0.50 0.11 0.17 0.18 1.41	0.91 2.88 2.20 4.63 0.12	>10000 442 101 115 7140	<0.5 2.4 0.9 0.8 <0.5	175	5.05	19.90	
CH-15 CH-18		0.02	0.34	2 45	1.41 0.19	0.12 2.68	7140 89	<0.5 0.8		4.28		



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CERTIFICATE OF ANALYSIS



#### To: MLS MINING #3 572 LORNE STREET EAST KAMLOOPS BC V2C 1X6

Page: Appendix 1 Total # Appendix Pages: 1 Finalized Date: 18-SEP-2019 Account: MLSMIN

Project: California

## CERTIFICATE OF ANALYSIS KL19222079

		CERTIFICATE COMM	IENTS								
Applies to Method:	Gold determinations by this metho ME-MS41		<b>CAL COMMENTS</b> the small sample weight used (0.5g).								
		LABORATORY ADDRESSES									
Applies to Method:	Processed at ALS Kamloops located CRU-31 PUL-31	l at 2953 Shuswap Drive, Kaml CRU-QC PUL-QC	oops, BC, Canada. DISP-01 SPL-21	LOG-22 WEI-21							
Applies to Method:	Processed at ALS Vancouver located Ag-OG46 Zn-OG46	d at 2103 Dollarton Hwy, Nortl ME-MS41	n Vancouver, BC, Canada. ME-OG46	Pb-OG46							



#### To: MLS MINING #3 572 LORNE STREET EAST KAMLOOPS BC V2C 1X6

ME-MS41

Page: 1 Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 15-SEP-2019 This copy reported on 16-SEP-2019 Account: MLSMIN

# CERTIFICATE KL19222075

Project: California

This report is for 1 Soil sample submitted to our lab in Kamloops, BC, Canada on 4-SEP-2019.

The following have access to data associated with this certificate:

JOHN BAKUS

	SAMPLE PREPARATION						
ALS CODE	DESCRIPTION						
WEI-21	Received Sample Weight						
DISP-01 Disposal of all sample fractions							
LOG-22 Sample login - Rcd w/o BarCode							
SCR-41	Screen to -180um and save both						
	ANALYTICAL PROCEDURES						
ALS CODE	DESCRIPTION						

Ultra Trace Aqua Regia ICP-MS

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.

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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

**#3 572 LORNE STREET EAST KAMLOOPS BC V2C 1X6** 

Page: 2 - A Total # Pages: 2 (A - D) **Plus Appendix Pages** Finalized Date: 15-SEP-2019 Account: MLSMIN

ME-MS41

Cr

ppm

1

ME-MS41

Cs

ppm

0.05

KL19222075

Project: California

ME-MS41

Be

ppm

0.05

ME-MS41

Ва

ppm

10

# **CERTIFICATE OF ANALYSIS**

ME-MS41

Ca

%

0.01

ME-MS41

Cd

ppm

0.01

ME-MS41

Ce

ppm

0.02



Sample Description

ALS Canada Ltd.

WEI-21

Recvd Wt.

kg

0.02

Method

Analyte

Units

LOD

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ME-MS41

Ag

ppm

0.01

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ME-MS41

Al

%

0.01

ME-MS41

As

ppm

0.1

ME-MS41

Au

ppm

0.02

ME-MS41

В

ppm

10

ME-MS41

Bi

ppm

0.01

ME-MS41

Co

ppm

0.1

**#3 572 LORNE STREET EAST KAMLOOPS BC V2C 1X6** 

Page: 2 - B Total # Pages: 2 (A - D) **Plus Appendix Pages** Finalized Date: 15-SEP-2019 Account: MLSMIN

ME-MS41

Na

%

0.01

ME-MS41

Nb

ppm

0.05

KL19222075

ME-MS41

Мо

ppm

0.05

ME-MS41

Mn

ppm

5

ME-MS41

Mg

%

0.01

Project: California

ME-MS41

Κ

%

0.01

ME-MS41

In

ppm

0.005

# **CERTIFICATE OF ANALYSIS**

ME-MS41

La

ppm

0.2

ME-MS41

Li

ppm

0.1

CS-11	187.5	8.53	5.57	0.11	0.18	10.05	0.296	0.45	17.3	24.0	1.47	1940	5.90	0.02	1.50



Sample Description

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Method

Analyte

Units

LOD

ME-MS41

Cu

ppm

0.2

ME-MS41

Fe

%

0.01

ME-MS41

Ga

ppm

0.05

ME-MS41

Ge

ppm

0.05

ME-MS41

Ηf

ppm

0.02

ME-MS41

Hg

ppm

0.01

**#3 572 LORNE STREET EAST KAMLOOPS BC V2C 1X6** 

Page: 2 - C Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 15-SEP-2019 Account: MLSMIN

KL19222075

#### Project: California

# CERTIFICATE OF ANALYSIS

Sample Description	Method Analyte Units LOD	ME-MS41 Ni ppm 0.2	ME-MS41 P ppm 10	ME-MS41 Pb ppm 0.2	ME-MS41 Rb ppm 0.1	ME-MS41 Re ppm 0.001	ME-MS41 S % 0.01	ME-MS41 Sb ppm 0.05	ME-MS41 Sc ppm 0.1	ME-MS41 Se ppm 0.2	ME-MS41 Sn ppm 0.2	ME-MS41 Sr ppm 0.2	ME-MS41 Ta ppm 0.01	ME-MS41 Te ppm 0.01	ME-MS41 Th ppm 0.2	ME-MS41 Ti % 0.005
CS-11		55.7	1770	842	40.8	0.012	1.91	2.51	4.8	8.4	0.4	140.0	0.01	0.86	2.9	0.104



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Page: 2 - D Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 15-SEP-2019 Account: MLSMIN

Project: California

# CERTIFICATE OF ANALYSIS KL19222075

Sample Description	Method Analyte Units LOD	ME-MS41 TI ppm 0.02	ME-MS41 U ppm 0.05	ME-MS41 V ppm 1	ME-MS41 W ppm 0.05	ME-MS41 Y ppm 0.05	ME-MS41 Zn ppm 2	ME-MS41 Zr ppm 0.5			
CS-11		0.47	1.31	61	134.0	14.05	3890	6.2			



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#### To: MLS MINING #3 572 LORNE STREET EAST KAMLOOPS BC V2C 1X6

Page: Appendix 1 Total # Appendix Pages: 1 Finalized Date: 15-SEP-2019 Account: MLSMIN

Project: California

## CERTIFICATE OF ANALYSIS KL19222075

	CERTIFICATE COMMENTS							
Applies to Method:	<b>ANALYTICAL COMMENTS</b> Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g). ME-MS41							
	LABORATORY ADDRESSES							
Applies to Method:	Processed at ALS Kamloops located at 2953 Shuswap Drive, Kamloops, BC, Canada. DISP-01 LOG-22 SCR-41 WEI-21							
Applies to Method:	Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada. ME-MS41							

Appendix 2

## Sample Locations and Descriptions

California	2019		Sample	HM Heavy Mineral/Dump
Event	5746350		Types	FB Float, POI Point of interest/Access
Assayed				
Sample	Lat	Lon	Туре	Notes
CH-01	49.45273	-117.29607	FB	Granite with quartz
CH-02	49.45271	-117.29575	FB	Quartz, pyrite in granite
CH-03	49.45186	-117.29516	FB	1 mm stringers quartz in granite
CH-04	49.45194	-117.29497	FB	Pyritized quartz in granite
CH-05	49.45141	-117.29506	FB	Vein material Quartz vugs
CH-06	49.45391	-117.292301	FB	Granite with quartz and pyritic cubing
CH-07	49.45362	-117.292041	FB	Quartz with milky white banding
CH-08	49.45358	-117.29163	FB	Quartz vein material
CH-09	49.45333	-117.29131	FB	Granodiorite oxidized
CH-10	49.45342	-117.29123	FB	Rusty quartz with pyrite
CH-11	49.45341	-117.29068	FB	Banded quartz in granite decayed
CH-12	49.45332	-117.29019	FB	Heavy pyrite with vugs in quartz
CH-13	49.45328	-117.29015	FB	Quartz float with sulphides
CH-14	49.45322	-117.29004	FB	Veinlets quartz schist
CH-15	49.45361	-117.30275	FB	Granite with quartz and pyrite
CH-16	49.45357	-117.30279	FB	Quartz creamy vugs with sulphides
CH-17	49.45415	-117.30557	FB	Quartz with galena
CH-18	49.45383	-117.30584	FB	Granite quartz with pyrite
CS-01-03	49.45349	-117.30462	НМ	Soil Profile (Horizon A) 18" foot depth 1 LB each
CS-04-06	49.45332	-117.30489	HM	Soil Profile (Horizon A) 18" foot depth 1 LB each
CS-07-09	49.45347	-117.30432	НМ	Soil Profile (Horizon A) 18" foot depth 1 LB each
CS-10-11-12	49.45329	-117.30459	НМ	Soil Profile (Horizon A) 18" foot depth 1 LB each
CP-01	49.43583	-117.26146	POI	Giveout Road Highway 6
CP-02	49.45339	-117.30393	POI	Bridge Crossing Giveout Road
CP-03	49.45555	-117.29131	POI	Path Eastern California
CP-04	49.44491	-117.27278	POI	Access road Giveout west to South California
CP-05	49.45458	-117.30522	POI	Path Western California

Appendix 3

Photos

#### California 2019 Pictures

CP--01 Road Highway 6

View of Nelson from Giveout Road



CP-02 Bridge Crossing Giveout Road

CS-11 Assayed



CH-06 Assayed

CH-12 Assayed

