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

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Geological Geophysical

TOTAL COST: $ 9,081.80

AUTHOR(S): Laurence Sookochoff, PEng

SIGNATURE(S): Digitally signed by Laurence Sookochoff Date: 2017.07.25 18:28:15 -07'00'

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):

YEAR OF WORK: 2016

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5626877 November 23, 2016

PROPERTY NAME: Toni

CLAIM NAME(S) (on which the work was done): 1047970

COMMODITIES SOUGHT: Copper Gold

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 092HNE299 092HNE311

MINING DIVISION: Nicola/Similkameen

NTS/BCGS: 092H.089 092H.090 092H.099

LATITUDE: 49 ° 52 ' 46 " **LONGITUDE:** 120 ° 09 ' 50 " **(at centre of work)**

OWNER(S):
1) Victory Resources Corporation
2)

MAILING ADDRESS:
13236 Cliffstone Court
Lake Country BC V4V 2R1

OPERATOR(S) [who paid for the work]:
1) Victory Resources Corporation
2)

MAILING ADDRESS:
13236 Cliffstone Court
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PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
Triassic, Nicola Group, Eastern Volcanic Facies, Basaltic Volcanic Rocks, Sedimentary Rocks, Triassic Jurassic, Granodiorite, Jurassic, Granite, Granodiorite, Cross-Structures

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 21922, 22864, 32030, 34574, 34661, 35155, 35366, 35501, 35862, 35932, 35933, 36155, 36297, 36366, 36514

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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	333 hectares	1047970	$ 6,000.00
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic	3.0	1047970	3,081.80
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST:	$ 9,081.80

VICTORY RESOURCES CORPORATION

(Owner & Operator)

GEOLOGICAL & GEOPHYSICAL

ASSESSMENT REPORT

(Event 5626877)

Work done between November 20, 2016 and November 24, 2016

on

Tenure 1047970

of the 19 claim

Toni 1047970 Claim Group

Nicola/Similkameen Mining Divisions

BCGS Map 092H.089/099/.090

Centre of Work
5,529,091N 703,746E

Author & Consultant

Laurence Sookochoff, PEng

Sookochoff Consultants Inc.

Submitted

July 25, 2017

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SUMMARY

The 19 claim 5,502 hectare Toni 1047970 Claim Group ("Property") is located in south-central British Columbia, 220 kilometres east-northeast of Vancouver, nine kilometres west of the formerly productive copper-molybdenum porphyry Brenda mine, and 69 kilometres north of the productive Copper Mountain copper-gold porphyry mine. All these properties are located within the prolific "porphyry copper belt" of British Columbia and all have mineral resources controlled by cross-structural zones.

This structural/mineral relationship was shown at the Brenda copper-molybdenum deposit (*Minfile 092HNE047)* which is within the "Brenda stock", a composite quartz diorite/granodiorite body which forms part of the Pennask batholith. The grade of the orebody was a function of fracture (vein) density and of the thickness and mineralogy of the filling material. Mineralization decreased outwardly from the most intensely fractured/mineralized rock and the centre of the main mineral zone.

At Copper Mountain, the Ingerbelle mineral zone is one of five productive mineral zones that exhibit cross-structural mineral controls where up to four structures merge to a cross-structure at the centre of the open-pit *(Figure 14)*. The major Copper Mountain Fault appears as the primary development to other structures; all of which relate to primary mineral controls. The mineral zones may lie along an indistinct and irregular contact of volcanic rocks with Lost Horse intrusive rocks, both rock types being host to ore.

As indicated by the BC government supported MapPlace geological maps, the Toni 1047970 Claim Group is predominantly underlain centrally by the Pennask Batholith in contact with basaltic volcanics of the upper Triassic Eastern Facies (uTrNE) to the west and also exposed in the east which are capped by a succession of Upper Triassic Nicola Group sedimentary rocks (uTrNsf).

Tenure 1047970 covers the northwesterly trending contact zone between the volcanic rocks and the sedimentary rocks with cross-structure "A" within the volcanic rocks and less than one kilometre east of the Pennask intrusive, host to the Brenda orebody, and one kilometre east of the Osprey Lake batholith, host to the Elk orebody *(Figure 4).*

The results of the localized magnetometer survey within Tenure 1047970 may have indicated a potential concealed mineral resource in the northwesterly trending indicated structure *(Figure 5)* which is reasonably correlative with the northwesterly trending, open-ended magnetometer LO zone *(Figure 11).* The mag LO may indicate hydrothermal alteration as a result of hydrothermal fluids surfacing via the structure.

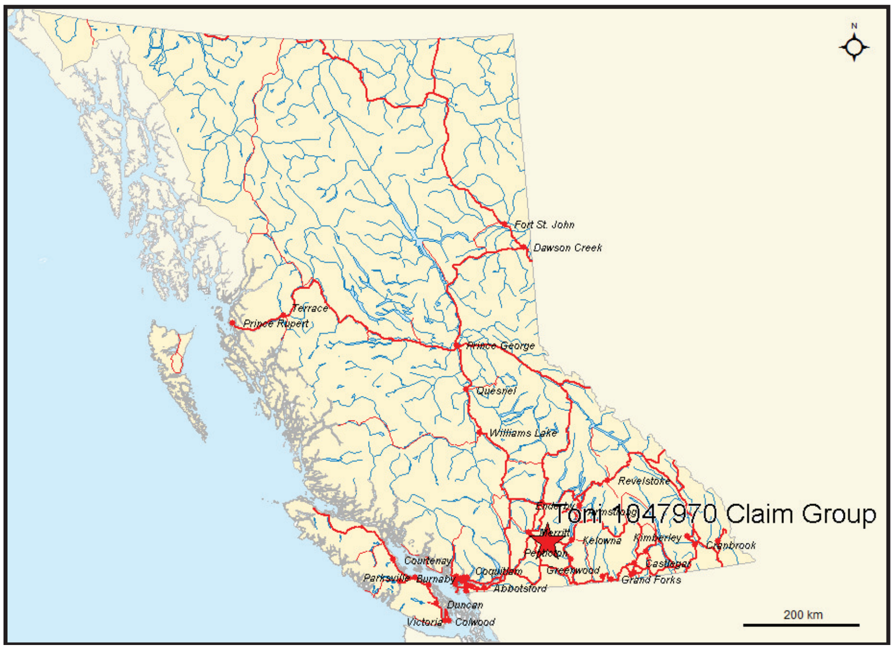
Thus, the general location of cross-structure "A" and the magnetometer LO zone are priority areas in the exploration for surficial geological indicators of a potential concealed mineral resource. These geological indicators may be revealed as pathfinder minerals, minerals and/or alteration products that would be subject to interpretation as economic mineral indicators to follow-up exploration.

INTRODUCTION

From November 20, 2016 to November 23, 2016 a structural analysis and a localized magnetometer survey were completed on Tenure 1047970 of the 19 claim Toni 1047970 claim group ("Property"). The purpose of the program was to delineate potential structures and correlative magnetic responses which may be integral in geological controls to potentially economic mineral zones that may occur on Tenure 1047970 or on other claims of the Property.

Information for this report was obtained from sources as cited under Selected References and from work the author has performed on the Toni Property since 2006.

Figure 1. **Location Map**



PROPERTY LOCATION & DESCRIPTION

Location

The Property is located within BCGS Maps 092H.089/.090/.099 of the Nicola and Similkameen Mining Divisions, 220 kilometres east-northeast of Vancouver, ten kilometres west of the formerly productive copper-molybdenum porphyry Brenda mine, and 69 kilometres north of the productive Copper Mountain copper-gold porphyry mine.

Description

The Property is comprised of 18 contiguous claims covering an area of 5502.5939 hectares.

ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE & PHYSIOGRAPHY

Access

Access to the Property is southward from Merritt via Highway 5A/97C for 26 kilometres to the Aspen Grove junction thence eastward via Highway 97C or the Okanagan Connector for 37 kilometres to the western boundary of Tenure 1047971. A network of logging roads provide access routes to many areas within Tenure 1047970.

Property Location & Description *(cont'd)*

Figure 2. **Claim Location**
(Base Map from MapPlace & Google)

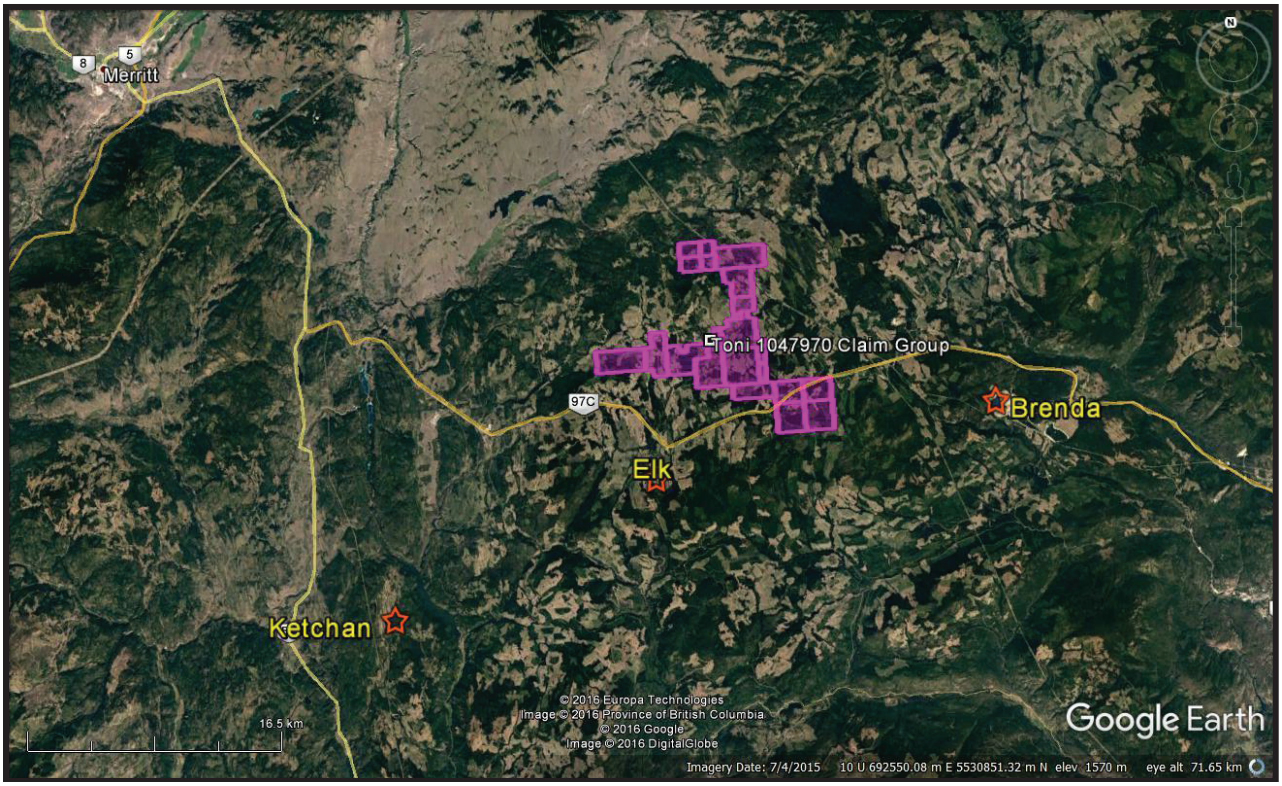
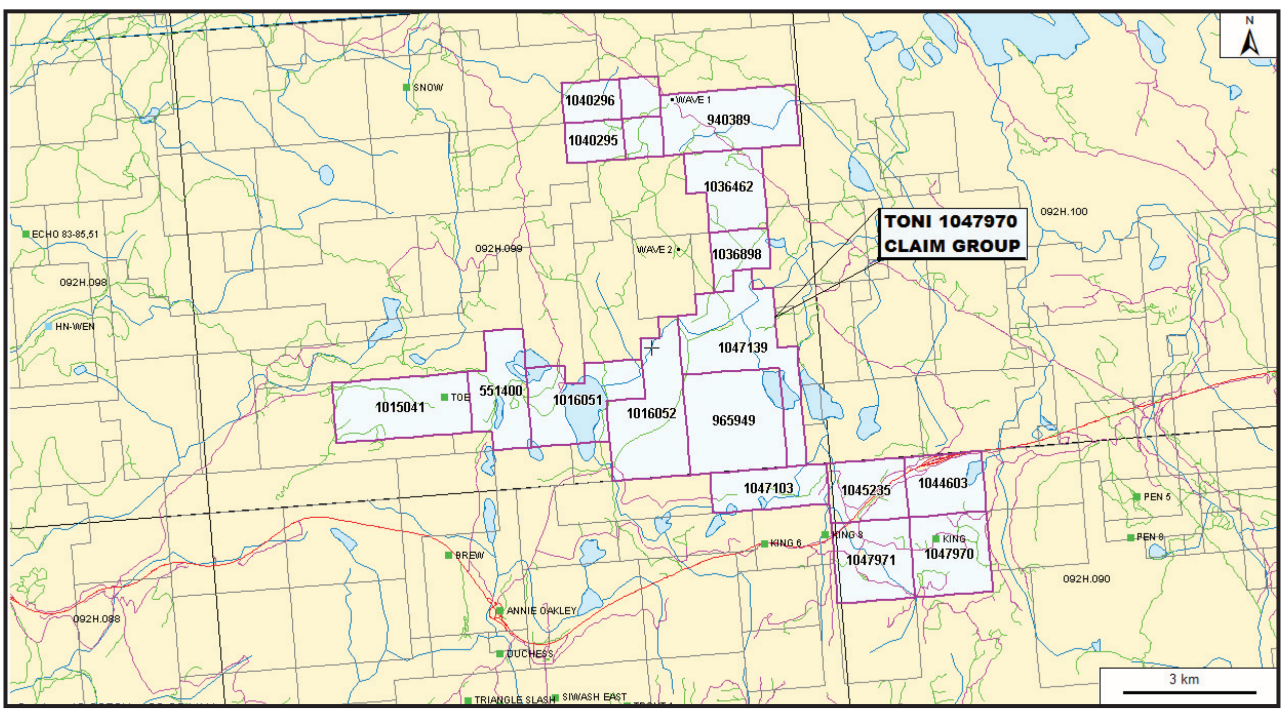


Figure 3. **Claim Map**
(Base Map from MapPlace)



Property Location & Description *(cont'd)*

Table I. **Tenures of the Toni 1047970 Claim Group**
(from MapPlace)

Tenure Number	Type	Claim Name	Good Until*	Area (ha)
551400	Mineral	MINY	20170419	312.041
940389	Mineral	TONI 109	20170509	436.3715
965949	Mineral	TOE120	20170607	520.1682
1015041	Mineral	TONIAMAL8	20170419	436.871
1015235	Placer	LD SPRUCE	20141130	114.8913
1016051	Mineral	TONI11613	20170519	395.2778
1016052	Mineral	TONI11613A	20170519	478.5305
1036462	Mineral		20170509	291.0007
1036898	Mineral		20170615	145.5435
1040295	Mineral		20170418	124.6855
1040296	Mineral		20170419	124.6639
1040297	Mineral		20170419	83.1082
1040298	Mineral		20170419	83.1228
1044603	Mineral		20170606	249.7572
1045235	Mineral		20170708	249.765
1047103	Mineral		20171005	249.7544
1047139	Mineral		20170607	540.8111
1047970	Mineral		20171120	333.1109
1047971	Mineral		20171120	333.1194

*Upon the approval of the assessment work filing, Event Number 5626877

Accessibility, Climate, Local Resources, Infrastructure & Physiography *(cont'd)*

Climate

The region is situated within the dry belt of British Columbia with rainfall between 25 and 30 cm per year. Temperatures during the summer months could reach a high of 35° and average 25°C with the winter temperatures reaching a low of -10° and averaging 8°. On the Property snow cover on the ground could be from December to April and would not hamper a year-round exploration program.

Local Resources and Infrastructure

Merritt, and/or Kamloops, historic mining centres, could be a source of experienced and reliable exploration and mining personnel and a supply for most mining related equipment. Kamloops is serviced daily by commercial airline and is a hub for road and rail transportation. Vancouver, a port city on the southwest corner of, and the largest city in, the Province of British Columbia is three hours distant by road and less than one hour by air from Kamloops.

Physiography

The topography of Tenure 1047970 is of gently sloped, forested with clear-cut areas. Elevations range from 1,684 metres along the mid-west boundary to 1,773 metres in the southeast corner.

HISTORY: PROPERTY AREA

The history on some of the more selected significant reported *MINFILE* mineral properties peripheral to the Toni 1047970 Claim Group is reported as follows. The distance is relative to the Toni 1047970 Claim Group.

SIMILCO (COPPER MOUNTAIN) producer (Alkalic porphyry Cu-Au)
MINFILE 092HSE001
Sixty nine kilometres south

Development by Granby Consolidated Mining, Smelting and Power Company Ltd. during the 1950's and by Newmont Mining Corporation of Canada during 1968-69, outlined two areas of economic grade mineralization centred on Pit 1 and Pit 2. Most of the ore from the Copper Mountain mine came from glory hole and underground mining, but also included production from several open pits mined from 1952 to 1957. The mine closed in 1957. From 1959 through 1962 the mine was leased and small amounts of ore shipped.

In 1977-1978 the Ingerbelle mine (092HSE004) and Copper Mountain mine consolidated operations (the Ingerbelle open pit and mill are across the Similkameen River, west of the Copper Mountain mine). Production from the Ingerbelle orebody commenced in 1972 and mining in the Ingerbelle pit was completed in August 1981. With the installation of an ore conveyor across the Similkameen River canyon, the delivery of Copper Mountain ore from Pit 2 to the Ingerbelle mill began on a limited scale in October 1980, but full production was not implemented until September 1981 after the Ingerbelle orebody was depleted. The mining operation is currently called the Similco mine.

Giroux & Holbek (2009) provide a historical summary of the Copper Mountain mine as follows

The Copper Mountain area has a long history of exploration and production, beginning with initial exploration in the late 1890"s. Successful production was attained in 1923, mostly as an underground mine and continued with minor shut-downs through to 1957 and is referred to as the underground phase. Open pit mining began in 1968 and continued, intermittently through to late 1996 and is termed the open pit phase. An exploration drilling program was carried out in 1997 and thereafter the property was dormant until Copper Mountain Mining Corp resumed exploration in January, 2007.

BRENDA past producer (Porphyry Cu +/- Mo +/- Au)
MINFILE 092HNE047
Nine kilometres east

The Brenda mine began production in early 1970 with measured geological (proven) reserves of 160,556,700 tonnes grading 0.183 per cent copper and 0.049 per cent molybdenum at a cutoff of 0.3 per cent copper equivalent [eCu = % Cu + (3.45 x % Mo)]. The mine officially closed June 8, 1990.

ELK *past producer (Intrusion-related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn +/-Au; Au-quartz veins)*
MINFILE 092HNE096
Six kilometres southwest

From 1992 and 1995 (inclusive), 16,570 tonnes of ore were mined and milled and 1,518,777 grams (48,830 ounces) of gold and 1,903,000 grams (61,183 ounces) of silver recovered.

In 1996, Fairfield shipped all remaining stockpiles, estimated to contain 2700 tonnes and grading greater than 12 grams per tonne (Information Circular 1997-1, page 21).

History: Property Area (cont'd)

***Elk** past producer (cont'd)*

Reverse circulation drilling, underground diamond drilling, reclamation, road construction, water sampling and aerial photography were also undertaken during this period. Surface and underground diamond drill programs were carried out in the Siwash Mine area from 1994 to 1996 to define the resource. Exploration surface drilling was also carried out during the 1995 and 1996 field seasons to test trench targets between the Siwash mine site and the South Showing area 2.5 kilometres to the south. Limited prospecting and environmental monitoring was undertaken from 1997 to 1999.

In 1995, Fairfield Minerals with the support from the Explore B.C. Program carried out an extensive program including geochemistry, 13,972 metres of surface and underground diamond drilling in 315 holes and reserve calculations.

CREST 10 showing (Intrusion-related Au pyrrhotite veins, I01: Au-quartz veins)
MINFILE 092HNE289
Seven kilometres south-southeast

Fairfield Minerals Ltd. prospected and soil sampled the showing during 1989 through 1991 as part of the Pen and Crest claims. In 1994, a program of trenching, geological mapping and geochemical sampling was completed. In 1995, reconnaissance diamond drilling, totalling 258.46 metres, was completed on the Crest 6 and 8 claims. In 1996, programs of prospecting, geological mapping, trenching and fill-in geochemical surveys were continued on the claims. In 2001, Terrace Ventures acquired the property and completed a program of prospecting and rock sampling. In 2004, a program of geological mapping and soil sampling was completed. In 2012, a program o prospecting and soil sampling was completed.

SNOW showing (Porphyry Cu +/- Mo +/- Au; Polymetallic veins Ag-Pb-Zn+/-Au)
MINFILE 092HNE292
Three kilometres west

The Pine showing is 500 metres south of Quilchena Creek and 4.8 kilometres north-northeast of the north end of Boot Lake.

PEACHLAND CREEK showing (Polymetallic veins Ag-Pb-Zn+/-Au)
MINFILE 092HNE303
Seven kilometres east

The Peachland Creek showing is 900 metres north of Peachland Creek and 5.6 kilometres east-southeast of the summit of Pennask Mountain.

WAVE 2 anomaly (Polymetallic veins Ag-Pb-Zn+/-Au)
MINFILE 092HNE312
One kilometre west

Between 1986 and 1995, Fairfield Minerals explored the area and completed a program of wide-spaced grid soil sampling. The Wave 1 and 2 claims were staked to cover areas of mineralized quartz float and coincidental soil and stream anomalies. In 1991, samples of mineralized vein float, up to 0.20 metres in diameter, returned up to 25.7 parts per million silver, 1732 parts per million lead and 2107 parts per million zinc (Assessment Report 22864). Recently, the area has been explored by Sookochoff Consultants as a part of the Toni property.

History: Property Area (cont'd)

PEN 10 showing (Cu skarn, Au skarn)
MINFILE 092HNE313
Seven kilometres east

The area was originally explored in the 1960s for copper-molybdenum mineralization similar to that of the Brenda (MINFILE 092HNE047) deposit to the east.

From 1986 to 1990, Fairfield Minerals Ltd. completed prospecting in the area and subsequently staked the claims in 1990.

In 1991, Fairfield Minerals Ltd. conducted soil sampling and prospecting consisting of 2886 soil samples and 35 rock samples.

In 1992, Fairfield Minerals Ltd. followed up on anomalous soil sites found in 1991 and completed prospecting which led to the discovery of the Pen 10 showing.

In 1993, Fairfield Minerals Ltd. collected 1156 soil, 11 rock and three stream sediment samples throughout the Pen claims. Highlights at the Pen 10 showing include PEN93-R11, which assayed 5.025 grams per tonne gold (Assessment Report 23255).

In 1994, Fairfield Minerals Ltd. executed an exploration program of infill soil sampling, trenching and rock sampling. Two trenches totaling 122 metres were excavated, mapped and sampled. Highlights included chip sample PE941-3, which assayed 42.16 grams per tonne gold over 0.65 metre (Assessment Report 23919).

In 1995, Fairfield Minerals Ltd. completed soil geochemical surveys, rock sampling and 124.05 metres of diamond drilling in five holes. No significant mineralization was found in the drillcore.

HISTORY: PROPERTY

KING anomaly (Intrusion-related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn+/-Au)
MINFILE 092HNE299
Within Tenure 1047970

The King showing occurs along a logging roadcut, 1.5 kilometres southeast of the Coquihalla Highway (Okanagan Connector), 4.0 kilometres northeast of Culmination Point and 3.5 kilometres west-southwest of the summit of Pennask Mountain.

The showing was sampled by Kingsvale Resources Inc. in 1991.

WAVE 1 anomaly (Polymetallic veins Ag-Pb-Zn+/-Au)
MINFILE 092HNE311
Within Tenure 940389

Between 1986 and 1995, Fairfield Minerals conducted exploration, including a program of wide-spaced grid soil sampling. The Wave 1 and 2 claims were staked to cover areas of mineralized quartz float and coincidental soil and stream anomalies. Recently, the area has been explored by Sookochoff Consultants as a part of the Toni property.

GEOLOGY: REGIONAL

The Aspen Grove geological district is located within the regional Quesnel Trough, a 30 to 60, km wide belt of Lower Mesozoic volcanic and related strata enclosed between older rocks and much invaded by batholiths and lesser intrusions (Campbell and Tipper, 1970). The southern part is the well-known Nicola belt, continuing nearly 200 km northward from the U.S. border and containing the important copper deposits of the Highland Valley, Craigmont, Copper Mountain, Afton, and Brenda, in addition to the historic Hedley gold camp.

The Nicola Group has been divided into western, central, and eastern belts on the basis of lithology and lithogeochemistry and by major fault systems. Variation from calc-alkaline to shoshinitic compositions from west to east has been interpreted to reflect eastward dipping subduction in the Nicola arc.

GEOLOGY: PROPERTY AREA

The geology on some of the more selected significant reported *MINFILE* mineral showings, and past producers peripheral to the Property is reported as follows. The distance is relative to the Toni 1047970 Claim Group.

SIMILCO (COPPER MOUNTAIN) producer (Alkalic porphyry Cu-Au)
MINFILE 092HSE001
Sixty nine kilometres north

The regional geological setting is characterized by major north-striking high-angle faults which form an ancient, long-lived rift system that extends from the United States border to at least 160 kilometres north. This system was the locus of a long, narrow marine basin in which Nicola Group rocks were deposited during Triassic time, and it then accommodated basins of continental volcanism and sedimentation in Early Tertiary time. The central part of the Nicola basin is marked by an abundance of high-energy, proximal volcanic rocks and contains a large number of coeval, comagmatic, high-level plutons with several associated copper deposits. A group of such plutons, some of which are differentiated, are known as the Copper Mountain Intrusions.

The copper deposits of the Copper Mountain camp occur chiefly in a northwest-trending belt of Upper Triassic Nicola Group rocks, approximately 1100 metres wide and 4300 metres long, that is bounded on the south by the Copper Mountain stock, on the west by a major normal fault system known as the Boundary fault, and on the north by a complex of dioritic to syenitic porphyries and breccias known as the Lost Horse complex. Copper mineralization diminishes markedly to the east, where the Copper Mountain stock and Lost Horse complex diverge sharply.

The Nicola rocks in the vicinity of Copper Mountain are andesitic to basaltic and are composed predominantly of coarse agglomerate, tuff breccia and tuff, with lesser amounts of massive flow units and some lensy layers of volcanic siltstone. These rocks were previously included with the Wolf Creek Formation (Geological Survey of Canada Memoir 171).

The coarse fragmental rocks, which locally contain clasts up to 35 centimetres in diameter, rapidly grade to the southeast and south into massive flows, abundant waterlain tuff and some pillow lava. This distribution of coarse fragmental volcanics, and their spatial association with the porphyry breccia complex and with the copper deposits indicate that one or more Nicola volcanic centres were localized close to the Lost Horse complex. It also indicates the close relationship between copper mineralization and Nicola magmatism in this camp. West of the Boundary fault, the Nicola Group consists of intercalated volcanic and sedimentary rocks that include massive and fragmental andesites, tuff and generally well-bedded calcareous shale, siltstone and sandstone.

Geology: Property Area *(cont'd)*

Similco (Copper Mountain) *producer (cont'd)*

The Copper Mountain Intrusions include the Copper Mountain, Smelter Lake and Voigt stocks. These plutons form a continuous alkalic-calcic rock series ranging in composition from pyroxenite to perthosite pegmatite and syenite. The Copper Mountain stock is a concentrically differentiated intrusion, elliptical in plan, and approximately 17 square kilometres in area. Its major axis is 10 kilometres long and strikes 300 degrees. The stock is zoned, with diorite at its outer edge grading through monzonite to syenite and perthosite pegmatite at the core. The two smaller satellites, the Smelter Lake and Voigt stocks, show no differentiation, but are similar in composition to the outer phase of the Copper Mountain stock.

The Lost Horse complex is approximately 4300 metres long and 760 to 2400 metres wide, and consists of porphyries and porphyry breccias which range in composition from diorite to syenite, showing widespread but variable albitization, saussuritization and pink feldspar alteration. These porphyries are not a continuous mass, but are a complex of dykes, sills and irregular bodies. Some phases of the complex are mineralized, but others, such as some major dykes, are clearly post-mineral.

Radiometric age dates on the Lost Horse complex, the Smelter Lake and Voigt stocks, and on sulphide-bearing pegmatite veins indicate that the apparent age of these intrusions and of the associated mineralization is Early Jurassic (Bulletin 59, page 43; Canadian Journal of Earth Sciences, Volume 24, page 2533).

Nicola Group rocks near Copper Mountain exhibit secondary mineral assemblages which are characteristic of greenschist facies, or of albite-epidote hornfels. The volcanic rocks have widespread epidote, chlorite, tremolite-actinolite, sericite, carbonate and locally biotite and prehnite. In the immediate vicinity of the Copper Mountain stock, a narrow aureole of contact metamorphism, generally less than 60 metres wide, overprints the above assemblages and is characterized by a widespread development of granoblastic diopsidic pyroxene, green hornblende, brown to reddish biotite, abundant epidote, intermediate plagioclase and some quartz.

In the narrow belt of Nicola rocks, between the Ingerbelle mine (092HSE004) to the west and Copper Mountain, the alteration differs and, where best developed, involves widespread development of biotite, followed by albite-epidote, with subsequent local potash feldspar and/or scapolite metasomatism in both Nicola rocks and Lost Horse intrusions.

The feldspar and scapolite metasomatism is characterized by intense veining and is controlled by the presence and intensity of fractures and by the proximity of large bodies of Lost Horse intrusive rocks.

The area near Copper Mountain is characterized by brittle deformation which produced a large number of faults and locally, intense fracturing. Very broad, northerly trending folds have been recognized or postulated at widely-spaced localities, but these folds decrease quickly in amplitude and down section. The area is dominated regionally by well-developed, northerly striking, high-angle faults which are best described as forming a rift system. Copper Mountain is dominated by strong easterly and northwesterly faulting. The narrow belt of Nicola rocks between Ingerbelle and Copper Mountain, confined between the Copper Mountain stock and the Lost Horse complex, is highly faulted and fractured, but does not appear appreciably folded.

Geology: Property Area *(cont'd)*

Similco (Copper Mountain) *producer (cont'd)*

The strata are mostly flat-lying or very gently dipping where marker beds exist, and the few areas of steep dips can best be explained as blocks tilted by faulting. Faults in this area have been grouped in order of decreasing relative age of their latest movement into: easterly faults (Gully, Pit), "mine breaks", northwest faults (Main), northeast faults (Tremblay, Honeysuckle) and the Boundary fault. Of these, the Boundary fault is part of the regional rift system; the others appear to be local structures, the genesis and history of which are closely related to the evolution of the Copper Mountain Intrusions (Canadian Institute of Mining and Metallurgy Special Volume 15).

Concentric patterns of rock alteration about individual orebodies at Copper Mountain are not evident. Alteration appears to be related mainly to the intrusive bodies and also controlled in distribution by faults and fractures. Biotite is well-developed along the stock contact in the underground mine and appears to be associated with the orebodies, and also forms selvages on bigger veins.

Pale green bleaching of both volcanic and intrusive rocks is best developed at Pit 2, but also occurs and is locally intense at several other localities throughout the camp, such as along the Lost Horse contact, in portions of Pit 1 and in the outer part of the underground mine.

It appears to follow the biotite stage and involves the development of albitic plagioclase and epidote, and the destruction of biotite and disseminated magnetite. Pink potash feldspar developed along fractures in the latest stage of alteration and is often accompanied by pegmatite veins. These "veins", found in most orebodies and elsewhere at Copper Mountain, consist of potash feldspar, biotite, calcite, fluorite, apatite and also some chalcopyrite and bornite. They are usually less than 0.3 metre wide and have formed in part by replacement of the wallrock. Closely-spaced thin pegmatite veins form the northeast sheeted zones of ore fractures. As at the Ingerbelle mine, copper mineralization appears to have occurred during the intermediate and late stages of alteration (Canadian Institute of Mining and Metallurgy Special Volume 15).

BRENDA past producer (Porphyry Cu +/- Mo +/- Au)
MINFILE 092HNE047
Nine kilometres east

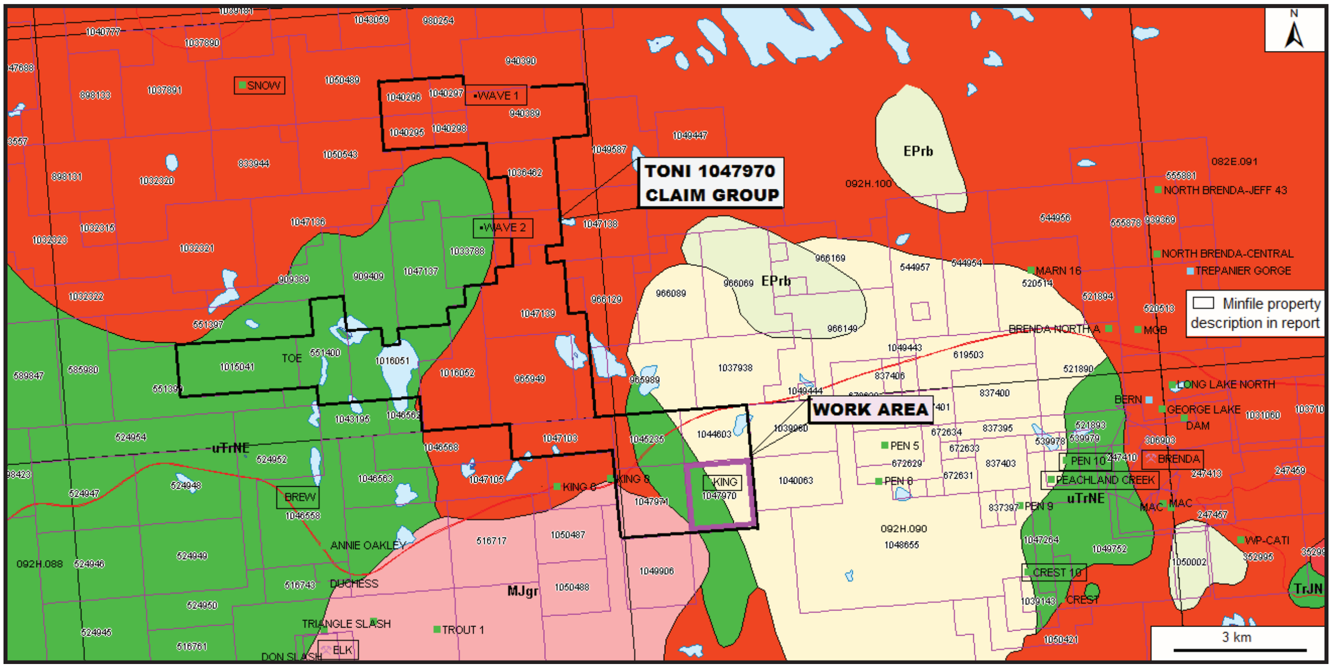
The Pennask Mountain area is mainly underlain by a roof pendant comprising westerly younging, Upper Triassic sedimentary and volcaniclastic rocks of the Nicola Group.

These are intruded and enclosed to the north, east and south by plutonic rocks of the Early Jurassic Pennask batholith and Middle Jurassic Osprey Lake batholith. Both the Nicola rocks and the Pennask batholith are unconformably overlain by Tertiary sediments and volcanics of the Princeton Group.

The Brenda copper-molybdenum deposit is within the "Brenda stock", a composite quartz diorite/granodiorite body which forms part of the Pennask batholith. Several ages and compositions of pre and post-ore dikes cut the stock. The deposit is approximately 390 metres from the contact with Nicola Group rocks to the west. Nicola Group tuffs, volcanic breccias and flows adjacent to the Brenda stock have been altered to "schistose hornfels". This hornfels, which is as wide as 450 metres, is characterized by the development of bands and aligned lenses of felted brown to black biotite. schistosity generally strikes roughly parallel to the intrusive contact and dips west at 30 to 70 degrees.

Figure 4. **Geology, Claims, Index, & Minfile**

(Base Map from MapPlace)



GEOLOGY MAP LEGEND

Pleistocene to Holocene

Qvk

Unnamed alkalic volcanic rocks

Eocene

EPrb: **Princeton Group**

andesitic volcanic rocks

Upper Triassic: Nicola Group

Eastern Volcanic Facies

uTrNE

basaltic volcanic rocks

uTrNsf

mudstone, siltstone, shale, fine clastic sedimentary rocks

uTrNMl

basaltic volcanic rocks

uTrJum

unnamed ultramafic rocks

Late Triassic to Early Jurassic

LTrJgd

unnamed granodiorite intrusive rocks

LTrJdr

dioritic to gabbroic intrusive rocks

Middle Jurassic

MJgr: **Osprey Lake batholith**

granites and granodiorites

Geology: Property Area *(cont'd)*

Brenda *past producer (cont'd)*

The schistose hornfels grades westerly into recognizable west-dipping volcanic rocks which in turn are overlain by greywacke, argillite and shales. The Brenda stock is a composite, zoned quartz diorite to granodiorite body which can be divided into two units. Unit 1 is of quartz diorite composition and contains abundant mafic minerals (hornblende > biotite) and angular quartz grains, whereas unit 2 is porphyritic granodiorite and contains fewer mafic minerals (biotite > hornblende), well-defined biotite phenocrysts and subhedral quartz grains.

The contact between units 1 and 2 is generally gradational, but locally sharp. At sharp contacts, unit 2 is chilled against unit 1.

Dikes of several ages and compositions cut the Brenda stock. At least four types, aplite-pegmatite, andesite, trachyte porphyry and basalt, have been identified in the Brenda orebody. Similar dikes, as well as felsite, dacite and quartz diorite have been mapped beyond the limits of economic mineralization. The aplite-pegmatite dikes are cut by all other dikes and by all mineralized fractures. The andesite dikes have been altered and mineralized during ore formation. Two types of quartz diorite dikes are found and both are cut by quartz-sulphide veins. Dacite porphyry and felsite dikes are also cut by quartz-sulphide veins.

A trachyte porphyry dike up to 4.5 metres wide and 300 metres in strike length is exposed in the Brenda pit. A weakly mineralized vein was observed in the dike which suggested an intermineral age for the dike. Further evidence has clearly shown that the dikes cut all stages of mineralization, except some of the latest quartz veins (Canadian Institute of Mining and Metallurgy Special Volume 15). Several post-mineral hornblende lamprophyre dikes also occur within the Brenda orebody and are probably genetically related to the trachyte porphyry dikes. Irregular, branching basalt dikes, probably related to Tertiary volcanism, have been intruded along pre-existing fault zones. They cut all phases of mineralization and alteration.

Initial potassium-argon dating of two samples from the Brenda mine area resulted in different ages for hornblende (176 Ma) and biotite (148 Ma). Interpretation of these results suggests that the Brenda stock crystallized about 176 million years ago. Biotite samples from the pit area have been dated at about 146 Ma, which probably represents the age of mineralization (Canadian Institute of Mining and Metallurgy Special Volume 15).

Faults in the Brenda pit are expressed as fracture zones in which the rock is intensely altered to clay minerals, sericite, epidote and chlorite. These fracture zones range in width from a few centimetres to 9 metres. Most strike 070 degrees and dip steeply south. Northwest-striking faults exhibit left-lateral movement. The faults transect all mineralization, except some calcite veins. Sulphides, especially molybdenite, have been smeared along fault planes. Shear zones are wider and more numerous in the north half of the pit, where they control bench limits.

ELK *past producer (Intrusion-related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn +/-Au; Au-quartz veins)*
MINFILE 092HNE096
Six kilometres southwest

The Elk property is underlain by Upper Triassic volcanics and sediments of the Nicola Group and by Middle Jurassic granites and granodiorites of the Osprey Lake batholith.

Geology: Property Area *(cont'd)*

Elk *past producer (cont'd)*

The contact between these units trends northeasterly across the property. Early Tertiary feldspar porphyry stocks and dikes of the Otter intrusions occur throughout the property. The western property area is underlain by steeply west-dipping andesitic to basaltic flows, agglomerates, tuffs and minor siltstone and limestone units of the Nicola Group. The eastern half of the property is underlain by granitic rocks of the Osprey Lake batholith.

BREW *showing (Alkalic porphyry Cu-Au; Subvolcanic Cu-Ag-Au; As-Sb)*
MINFILE 092HNE275
Three kilometres south

This occurrence is hosted in volcanics and minor sediments of the Upper Triassic Nicola Group, 2.6 kilometres northwest of the Middle Jurassic Osprey Lake batholith. The volcanics consist primarily of andesite and fine-grained diorite. The contact between the two units is gradational, suggesting the diorite may be a subvolcanic equivalent of the andesite. Minor tuffs, lapilli tuffs, agglomerates, and feldspar porphyritic andesite are also present. The sediments consist of mudstone, siltstone, shale, and rare carbonate, intercalated with the pyroclastic units.

A major fault zone, the Brew fault, striking 140 degrees and dipping steeply southwest, is exposed along the Coquihalla Highway for 600 metres.

The zone is approximately 40 metres wide. It is somewhat gossanous and exhibits carbonate and clay alteration and sporadic silicification. Some quartz +/- calcite stringers and blebs are present but not common. Pyrite is ubiquitous along the entire fault. Sections of the zone are strongly mineralized with massive veins, narrow stringers and occasional disseminations of marcasite, pyrite and pyrrhotite. Samples of pyritic clay-altered sections have yielded up to 0.280 gram per tonne gold and 0.445 per cent arsenic (Assessment Report, 18041, page 8, samples 128665, 44719)

A sample from a zone of quartz stringers analysed 0.600 gram per tonne gold (sample 239716).

This fault is traversed by several significant fault/shear zones striking 100 to 120 degrees. One major crossfault, the Mugwump fault, is exposed west of the Brew fault, striking 100 degrees and dipping 60 degrees south.

CREST 10 showing (Intrusion-related Au pyrrhotite veins, I01: Au-quartz veins)
MINFILE 092HNE289
Seven kilometres south-southeast

The occurrence is situated in a large pendant of Upper Triassic Nicola Group volcanics and sediments, near its south eastern margin. The pendant is surrounded by granodiorite and quartz diorite of the Early Jurassic Pennask Batholith.

Locally, a number of quartz veins cut argillite of the Stemwinder Mountain Formation (Nicola Group) and siliceous volcanics of the Peachland Creek Formation (Nicola Group), approximately 1 kilometre northwest of the contact with granodiorite of the Pennask Batholith. The veins are irregular, discontinuous and vary up to 30 centimetres wide. They are glassy grey to white and contain scattered grains of pyrite and a fine- grained black metallic mineral (tetrahedrite (?)).

Geology: Property Area *(cont'd)*

SNOW showing (Porphyry Cu +/- Mo +/- Au; Polymetallic veins Ag-Pb-Zn+/-Au)
MINFILE 092HNE292
Three kilometres west

A sample of drill core from 28.0 metres depth contained fine-grained magnetite accompanied by fine-grained chalcocite or bornite along the margins of a zeolite vein. Copper mineralization also occurs along fractures and as disseminations in the granite.

Two assays of a grab sample taken in the vicinity of the drillhole yielded less than 0.3 gram per tonne gold, 3.1 grams per tonne silver and 0.54 per cent copper, and 0.45 gram per tonne gold, 3.1 grams per tonne silver and 0.30 per cent copper, respectively (Assessment Report 3415, assay certificates).

PEACHLAND CREEK showing (Polymetallic veins Ag-Pb-Zn+/-Au)
MINFILE 092HNE303
Seven kilometres east

An outcrop of mafic tuff of the Upper Triassic Peachland Creek Formation (Nicola Group) is mineralized with sphalerite, galena and pyrite.

WAVE 2 anomaly (Polymetallic veins Ag-Pb-Zn+/-Au)
MINFILE 092HNE312
One kilometre west

The area is underlain by granitic rocks of the Jurassic Pennask batholith and basaltic volcanics of the Triassic Nicola Group.

PEN 10 showing (Cu skarn, Au skarn)
MINFILE 092HNE313
Seven kilometres east

The occurrence is hosted in a small elongate stock of granodiorite, near its eastern margin. This north-trending stock is 1.8 kilometres long and intrudes andesitic ash and lapilli tuff of the Upper Triassic Whistle Creek Formation (Nicola Group). The stock may be related to the Early Jurassic Pennask batholith, which surrounds the Nicola Group volcanics and sediments comprising this roof pendant.

GEOLOGY: PROPERTY

As indicated by the BC government supported MapPlace geological maps, the Toni 1047970 Claim Group is predominantly underlain centrally by the Pennask Batholith in contact with basaltic volcanics of the upper Triassic Eastern Facies (uTrNE) to the west and also exposed in the east which are capped by a succession of Upper Triassic Nicola Group sedimentary rocks (uTrNsf).

Tenure 1047970 covers the northwesterly trending contact zone between the volcanic rocks and the sedimentary rocks.

KING anomaly (Intrusion-related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn+/-Au)
MINFILE 092HNE299
Within Tenure 1047970

A quartz vein, 1 centimetre wide, cuts bleached, pyritic andesitic ash tuff of the Upper Triassic Whistle Creek Formation (Nicola Group). A sample of selected chips analysed 0.68 gram per tonne gold (Assessment Report 21922, page 9, Table 2, sample L89-R1D).

Geology: Property *(cont'd)*

WAVE 1 anomaly (Polymetallic veins Ag-Pb-Zn+/-Au)
MINFILE 092HNE311
Within Tenure 940389

The area is underlain by granitic rocks of the Jurassic Pennask batholith and basaltic volcanics of the Triassic Nicola Group.

MINERALIZATION: PROPERTY AREA

The mineralization on some of the more selected significant reported *MINFILE* mineral properties, peripheral to the Property is reported as follows. The distance is relative to the Toni 1047970 Claim Group.

SIMILCO (COPPER MOUNTAIN) producer (Alkalic porphyry Cu-Au)
MINFILE 092HSE001
Sixty nine kilometres south

Three major orebodies are confined to a 1100 by 4300-metre belt. Numerous other occurrences of copper mineralization related to the Copper Mountain Intrusions are found over an area with maximum dimensions of 10 by 11 kilometres.

Development by Granby Consolidated Mining, Smelting and Power Company Ltd. during the 1950's and by Newmont Mining Corporation of Canada during 1968-69, outlined two areas of economic grade mineralization centred on Pit 1 and Pit 2. The Pit 1 (Princess May) orebody lies in a chalcopyrite zone immediately northwest of the underground mine. It is 700 metres long and up to 300 metres wide, with open pit ore extending to a maximum depth of 170 metres. The bulk of the ore was emplaced along the Main fault in massive and fragmental volcanic rocks above the lower bedded tuff horizon. Recognizable pre-ore porphyritic intrusive rocks are scarce. Sulphides occur mainly as fine disseminations of chalcopyrite and pyrite and only rarely as blebs and stringers. Mineralization at the west end of the orebody, between the stock contact and the fault, consists typically of thin fracture coatings of bornite and chalcopyrite in the fine-grained tuff bed. Pits 1 and 7 are developed in this orebody.

The Pit 2 orebody is 900 metres long, 90 to 360 metres wide and appears to have a maximum mineable depth of 170 metres. It is located 240 metres northeast of Pit 1. It lies along an indistinct and irregular contact of volcanic rocks with Lost Horse intrusive rocks, both rock types being host to ore. Faults control the boundaries of the orebody to a considerable degree. The northern boundary is formed in part by a zone of faulting and crushing; the southern boundary, although relatively straight, has not been related to any structure to date. To the west, the ore diminishes in grade in the vicinity of a strong northerly fault; to the east, the outline of the orebody becomes most irregular and mineralization grades to predominant pyrite with minor chalcopyrite. Within the orebody, ore-grade material is distributed irregularly, but several local trends and centres of copper mineralization occur. The sulphides are predominantly chalcopyrite and pyrite; bornite is rare. The largest known breccia pipe in the area, 90 metres in diameter and at least 150 metres deep, lies in the north-central part of the orebody. Although fine disseminations and fracture coatings of sulphide are common, the Pit 2 orebody has a much greater proportion of coarse blebs and veinlets than Pit 1.

The Pit 3 (Sunset) orebody begins 200 metres southeast of the Pit 1 orebody and continues southeast, along the eastern margin the Copper Mountain stock, for 1200 metres.

Mineralization: Property Area *(cont'd)*

Copper Mountain *producer (cont'd)*

This zone is located over old caved and collapsed workings of the underground mine and is therefore also referred to as the Subsidence Area zone (Bulletin 59, page 68). The orebody is 120 to 250 metres wide over most of its length, and is hosted almost entirely in the Nicola Group volcanics. Mineralization occurs along the northwest-striking intrusive contact, along major faults such as the Main fault or the "Mine breaks" or at the intersection of a series of steeply-dipping, west-striking, Lost Horse porphyry dykes with northeast-striking breaks and pegmatite-sheeted zones. Mineralization penetrates only a metre or so into the diorite of the stock. The form of the orebody segments is pipe-like in many places, as a result of their control by steep planar elements and division by a series of barren north-striking felsite dykes. The diameter of the segments that were mined ranged from about 15 to 60 metres. The contact orebody, which produced about half of the underground ore, was mined over widths of 9 to 38 metres, along a length of 900 metres and a maximum depth of 400 metres. The most productive areas of the mine consisted mainly of sequences of fine-grained bedded tuffs.

These rocks, being more brittle than the adjacent flows, tuffs and agglomerates, shattered readily and yielded more "ore fractures". The lower bedded unit warped downward near the contact of the stock, so that it also formed a hostrock on deeper levels of the orebody. In addition, Lost Horse Intrusions which occur within the less favourable massive flows and coarse tuffs contained more fractures, and copper mineralization was concentrated in the contact areas of these irregular masses. Ore minerals are bornite and chalcopyrite in roughly equal proportions, with most of the bornite occurring within 60 metres of the stock contact. Minor chalcocite occurs with the best bornite ore. Pyrite exists in areas of chalcopyrite mineralization, but was absent in areas where bornite was present. The sulphide content of the rocks generally decreases sharply at the limits of the mine area. This orebody has been mined from the Nos. 3, 5 and 6 pits over a vertical elevation of 450 metres and from an elaborate system of underground workings.

Concentric patterns of rock alteration about individual orebodies at Copper Mountain are not evident. Alteration appears to be related mainly to the intrusive bodies and also controlled in distribution by faults and fractures. Biotite is well-developed along the stock contact in the underground mine and appears to be associated with the orebodies, and also forms selvages on bigger veins. Pale green bleaching of both volcanic and intrusive rocks is best developed at Pit 2, but also occurs and is locally intense at several other localities throughout the camp, such as along the Lost Horse contact, in portions of Pit 1 and in the outer part of the underground mine. Pink potash feldspar developed along fractures in the latest stage of alteration and is often accompanied by pegmatite veins. These "veins", found in most orebodies and elsewhere at Copper Mountain, consist of potash feldspar, biotite, calcite, fluorite, apatite and also some chalcopyrite and bornite. They are usually less than 0.3 metre wide and have formed in part by replacement of the wallrock. Closely-spaced thin pegmatite veins form the northeast sheeted zones of ore fractures. As at the Ingerbelle mine, copper mineralization appears to have occurred during the intermediate and late stages of alteration (Canadian Institute of Mining and Metallurgy Special Volume 15).

The well-differentiated Copper Mountain stock is thought to have been emplaced at the roots of an active volcanic centre. The various phases of the Lost Horse complex were intruded, with rapid uplift and erosion, as a series of separate injections from a differentiating magma.

Mineralization: Property Area *(cont'd)*

Copper Mountain *producer (cont'd)*

Their shallower, subvolcanic level of emplacement is indicated by their finer grained porphyritic texture, their highly variable contact relationships, including chilled margins, and the pipes and irregular bodies of breccia. The various characteristics of the orebodies suggest that they formed during the later stages of this magmatism. The Copper Mountain stock was probably not the immediate source of hydrothermal fluids at that time, but it most likely was still a hot mass and could easily have provided a temperature gradient as well as a physical and chemical barrier to the sulphide-bearing fluids which probably came from the same source as the Lost Horse rocks.

Magnetite-rich parts of the Copper Mountain orebodies demonstrate textures of magmatic origin; the elevated PGE (platinum group elements) content of sulphide ore supports a mantle source similar to that of coeval and possibly cogenetic PGE-rich zoned Alaskan-type intrusions in eastern Quesnellia (e.g. Tulameen Ultramafic Complex, Polaris Intrusive Complex). Analyses of sulphide concentrate from the mine yielded up to 2.8 grams per tonne palladium and 0.155 gram per tonne platinum. A sample of a bornite- chalcopyrite vein from the glory hole yielded 3.25 grams per tonne palladium (Property File - Cordilleran Roundup 1991, Program and Abstracts Volume).

BRENDA past producer (Porphyry Cu +/- Mo +/- Au)
MINFILE 092HNE047
Nine kilometres east

The Brenda orebody is part of a belt of copper-molybdenum mineralization that extends north-northeast from the Nicola Group-Brenda stock contact.

Mineralization of economic grade (0.3 per cent copper equivalent) is confined to a somewhat irregular zone approximately 720 metres long and 360 metres wide. Ore-grade mineralization extends more than 300 metres below the original surface.

Lateral boundaries of ore-grade mineralization are gradational and appear to be nearly vertical.

Primary mineralization is confined almost entirely to veins, except in altered dike rocks and in local areas of intense hydrothermal alteration which may contain minor disseminations. The grade of the orebody is a function of fracture (vein) density and of the thickness and mineralogy of the filling material. The average total sulphide content within the orebody is 1 per cent or less.

Chalcopyrite and molybdenite, the principal sulphides, generally are accompanied by minor, but variable, quantities of pyrite and magnetite. Bornite, specular hematite, sphalerite and galena are rare constituents of the ore.

Johnson (1973), in a study of 17 samples from the deposit, reported minor pyrrhotite, mackinawite, carrollite, cubanite, ilmenite, rutile and native gold (?), as well as several secondary sulphides (Canadian Institute of Mining and Metallurgy Special Volume 15).

Pyrite is most abundant in altered andesite dikes and in quartz-molybdenite veins. The ratio of pyrite to chalcopyrite in the orebody is about 1:10, with the chalcopyrite content diminishing beyond the ore boundaries.

Because mineralization is confined almost entirely to veins in relatively fresh homogeneous rock, the veins are divided into separate stages, based on crosscutting relations and their mineralogy and alteration effects on the hostrock. The vein density within the orebody is not uniform.

Mineralization: Property Area *(cont'd)*

Brenda past *producer (cont'd)*

Ranges are recorded from less than 9 per metre near the periphery of the orebody to 63 per metre and occasionally 90 per metre near the centre of the orebody. Some veins have very sharp contacts with wallrocks, but most contacts are irregular in detail where gangue and sulphide minerals replace the wallrock. A vein may show features characteristic of fracture- filling in one part and of replacement in another. Mineralized solutions were introduced into fractures and, during development of the resultant veins, minor replacement of the wallrock ensued.

The chronological stages of mineralization are as follows: (1) biotite-chalcopyrite (oldest); (2) quartz-potassium feldspar- sulphide; (3) quartz-molybdenite-pyrite; (4) epidote-sulphide- magnetite; and (5) biotite, calcite and quartz. Stages 1 through 4 are all genetically related to a single mineralizing episode, which was responsible for the orebody. Stage 5 represents a later, probably unrelated, event(s) (Canadian Institute of Mining and Metallurgy Special Volume 15). Stage 2 veins form the bulk of the mineralization in the deposit, and are the most important source of ore.

Hydrothermal alteration at the Brenda deposit generally is confined to narrow envelopes bordering veins. These alteration envelopes commonly grade outward into unaltered or weakly propylitic-altered rock. Where veins are closely spaced, alteration envelopes on adjacent veins may coalesce to produce local areas of pervasive alteration.

For the most part, hydrothermal alteration at the Brenda deposit is exceptionally weak for a porphyry copper system.

Four types of alteration are recognized in the Brenda deposit, three of which are related to the mineralizing process. Two of these are potassic (potassium feldspar) and biotite, and the other is propylitic. Later argillic alteration has been superimposed on the system along post-mineral faults.

Potassium feldspar and biotite alteration generally are separated in space, but locally occur together. Both types of alteration accompanied sulphide deposition. Potassium feldspar replaces plagioclase adjacent to most stage 2 and, to a lesser extent, stage 3 veins. These irregular envelopes range in width from a centimetre or less up to a metre, with an average of about 2 centimetres. Potassium feldspar also occurs as a minor constituent of stage 1 veins.

Hydrothermal biotite replaces magmatic mafic minerals (hornblende, biotite) and, more rarely, plagioclase in hostrock adjacent to stage 2 and especially stage 3 veins. These envelopes of hydrothermal biotite range in width from less than 1 millimetre to several centimetres.

Weak to intense propylitic alteration, which is characterized by the development of chlorite and epidote, as well as less obvious microscopic sericite and carbonate, is sporadically distributed throughout the Brenda stock.

Large areas within the orebody have not been propylitized and in these areas, veins with potassic alteration envelopes clearly cut across propylitized quartz diorite, indicating an early hydrothermal or even a pre-ore origin for the propylitization (Canadian Institute of Mining and Metallurgy Special Volume 15). A second period of propylitization accompanied the development of stage 4 veins and is reflected as envelopes of epidote and chlorite.

Locally intense argillic alteration is confined to post-mineral fault zones where the hostrock has been highly shattered. Kaolinite, sericite and epidote have almost completely replaced the host rocks.

Mineralization: Property Area *(cont'd)*

Brenda *past producer (cont'd)*

Surface weathering, which is expressed predominantly by the development of limonite, extends as a highly irregular blanket over the mineralized zone for depths ranging from a few metres to greater than 30 metres. In this weathered area, limonite stains all fractures. Fault zones have been especially susceptible to surface weathering, and the argillic alteration of these zones may be primarily the result of groundwater action. Secondary minerals developed during weathering, all highly subordinate in quantity to limonite, include malachite, azurite, hematite, ferrimolybdite, powellite and cupriferous manganese oxides. Cuprite, covellite, chalcopyrite, native copper, tenorite and ilsemannite are rare constituents. Copper-molybdenum mineralization in the Brenda deposit was developed during several sequential stages, all of which constitute one mineralizing episode.

Each stage occupies unique sets of fractures, which are filled with specific combinations of metallic and gangue minerals. Although the attitudes of veins in each stage are unique in detail, most stages include conjugate steeply dipping sets of northeast and northwest striking veins. If these veins occupy shear fractures, it is probable that they were formed by generally east-west compressive forces. Examination of the structure in the Nicola Group rocks to the west reveals that north-northwest and north trending fold axes also indicate an east-west compression.

It is suggested that intermittent east-west compressional forces intensely fractured the rocks of the Brenda stock during several stages of time and tapped a hydrothermal source, either a later phase of the Brenda stock or a separate intrusive system. As each stage of fractures developed, hydrothermal fluids introduced vein material which healed the fractures. Renewed build-up of compressional forces again fractured the rocks, which were again healed. Repetition of this sequence can explain all stages of mineralization within the Brenda deposit. East-west compression continued after ore deposition ceased and produced prominent east-northeast and northwest striking shear zones (Canadian Institute of Mining and Metallurgy Special Volume 15).

ELK *past producer (Intrusion-related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn +/-Au; Au-quartz veins)*
MINFILE 092HNE096
Six kilometres southwest

Gold-silver mineralization on the Elk property is hosted primarily by pyritic quartz veins and stringers in altered pyritic granitic and, less frequently, volcanic rocks.

Crosscutting relationships indicate that the veins are Tertiary in age; they may be related to Tertiary Otter intrusive events.

To date, mineralization has been located in four areas on the Elk property: Siwash North, South Showing (092HNE261), North Showing (092HNE281) and Siwash Lake (092HNE041, 295).

The Siwash Lake zone is 800 metres south of the Siwash North deposit; the North Showing and South Showing areas are 2 and 3 kilometres south of Siwash North respectively.

In the Siwash North area, gold occurs in veins measuring 5-70 centimetres wide, hosted by a zone of strongly sericitic altered granite and, in the west, volcanic rocks.

In general, the mineralized zone trends east-northeast with southerly dips from 20-80 degrees (from east to west), and appears to be related to minor shearing.

Mineralization: Property Area *(cont'd)*

Elk *past producer (cont'd)*

Quartz veining occurs in a number of parallel to subparallel zones. Each zone consists of one or more veins within an elevation range of 5 to 10 metres that can be correlated as a group to adjacent drill holes. In the eastern parts of the area, up to six subparallel zones occur.

Five of these zones are consistent enough to be labelled the A, B, C, D and E zones.

Mineralization in the west has been identified in one or locally two zones (the B and C zones). The main mineralized zone (B) is consistent, with only minor exceptions, across the entire drill grid.

The Siwash North structure has been tested to 335 metres down dip and along a strike length of 925 metres. The zone remains open to depth and along strike.

At surface, supergene alteration has leached out most of the sulphides with some pyrite and chalcopyrite remaining. Mineralization occurs primarily as native gold, occasionally as spectacular aggregates of coarse flakes in frothy quartz (strong pyrite boxwork) or in fractures in the vein. Electrum was noted in one area as very coarse-grained flakes associated with strong manganese staining. Gold is rarely seen in boxworks in sericitic (phyllic) alteration.

In drill core, mineralization has not been affected by supergene processes. Metallic minerals in drill core include pyrite, chalcopyrite, sphalerite, galena, tetrahedrite, maldonite? pyrrhotite and native gold in order of decreasing abundance. Gold is strongly associated with pyrite and with a blue-grey mineral. Photomicrographs show the gold commonly in contact with this mineral, which may be a gold-bismuth alloy (maldonite?) or a copper-bismuth- antimony sulphosalt.

Gangue mineralogy consists primarily of quartz and altered wallrock fragments. Ankerite is commonly present, with lesser amounts of calcite. Minor barite is also present. Fluorite was noted in one vein as very small (less than 1 millimetre) zoned purple cubes scattered in the quartz.

Stronger alteration generally accompanies higher grade gold mineralization. Seven main types of alteration were recognized in the granitic rocks throughout the property: propylitic, argillic, sericitic, potassium feldspar stable phyllic, phyllic, advanced argillic and silicic. Locally, potassic alteration, skarnification and silicification are evident, but are relatively minor and do not appear to be related to mineralization.

Propylitic alteration is generally light green with biotite and hornblende altered to chlorite, and plagioclase is saussuritized. In volcanics, the colour is generally olive green, and the rock is soft. Argillic alteration is exemplified by bleached rock, with plagioclase white and clay-altered; potassium feldspar is slightly altered.

Volcanics are bleached to light green or grey. Sericitic alteration is typically pale green with a micaceous sheen, with plagioclase altered to sericite; trace disseminated pyrite may be present. This type of alteration is often associated with quartz veins and appears to be the lowest grade alteration associated with gold mineralization. It is not recognized in volcanics.

Potassium feldspar stable phyllic alteration is light pink, green or yellowish with potassium feldspar fresh and pink and blocky. Plagioclase and mafic minerals are altered to fine-grained quartz-sericite-pyrite. It often occurs with veins and is associated with gold mineralization; it is not recognized in volcanics.

Mineralization: Property Area *(cont'd)*

Elk *past producer (cont'd)*

Phyllic alteration is generally grey, fine-grained quartz-sericite-pyrite alteration usually associated with veins and often gradational to quartz and often auriferous. Advanced argillic alteration is exemplified by most or all of feldspar being destroyed, quartz is "free-floating". The alteration is often sheared and white in colour and is often associated with quartz veins.

Volcanics are white or blue coloured. Silicic alteration is quartz veining or replacement that is hard with moderate conchoidal fracture

There is a strong symmetrical zoning of alteration around the quartz veins: vein-advanced argillic-phyllic-potassium feldspar stable phyllic-argillic-propylitic.

Measured geological reserves of the Siwash North deposit are 308,414 tonnes grading 22.17 grams per tonne gold and 24.68 grams per tonne silver using a cutoff grade of 10 grams per tonne gold.

Reserves are based on results from 107 drillholes at 50-metre grid spacings along 804 metres of strike length to 304 metres downdip. All veining intercepts have been adjusted for true width and assays diluted to 2-metre mining widths (George Cross News Letter No. 223 (November), 1991).

The revised drill indicated reserve, based on more realistic open pit and underground mining widths of 0.39 to 0.79 metre with a 20.5 grams per tonne gold cutoff grade, is 122,458 tonnes averaging 54.5 grams per tonne gold (George Cross News Letter No. 65 (April 2), 1993).

Surface drilling was done on fences 10-50 metres apart, underground drilling on fences 10 metres apart.

Reserve calculations by the company and consultant Roscoe Postle gave the following results (Explore B.C. Program 95/96 - A38):

Probable (undiluted) 16,991 tonnes at 28,200 tonnes at 50.2 g/t gold 26.6 g/t gold

Possible (undiluted) 50,260 tonnes at 66,400 tonnes at 42.0 g/t gold 31.4 g/t gold

The 1996 exploration program consisted of 6873 metres of drilling in 91 holes. The Siwash zone has been traced along a 914 metre strike length and downdip to 245 metres.

Reserves estimated by the company at January 1, 1996 were 121,350 tonnes grading 25.4 grams per tonne gold and 35.3 grams per tonne silver.

These include a diluted, probable open-pit resource of 11,340 tonnes grading 58.97 grams per tonne gold, an underground probable resource below the open pit of 20,225 tonnes grading 26.74 grams per tonne gold, and a further possible underground resource of 89,790 tonnes grading 23.66 grams per tonne gold (Information Circular 1997-1, page 21).

Surface diamond drilling totaling 1413.96 metres in 12 holes was completed on the Siwash Mining lease during 2000 testing the B, WD and Gold Creek West (GCW) zones.

A trenching program was carried out in 2001 in the Siwash East Area consisting of six trenches totaling 202 meters. Almaden Resources and Fairfield Minerals Ltd. merged into Almaden Minerals Ltd. in February, 2002.

In 2002, Almaden undertook a 26 hole surface diamond drill program for a total of 4995.67 metres testing the B, WD, GCW and Bullion Creek zones.

***Mineralization: Property Area** (cont'd)*

***Elk** past producer (cont'd)*

During the 2003 field season a 6570 metre, 30 hole, diamond drill program was carried out by Almaden in the Siwash North area testing the WD zone. The WD vein system is located approximately 100 metres north of the Siwash B zone vein and has been tested over a strike length of 610m and down dip for 380m.

By the end of May 2004, a total of eight mineralized veins had been discovered on the property. Four vein systems had been drilled in the Siwash area: the B system with a strike length of 900 m has been tested down dip to 320 m; the WD zone with a strike length of 650 m has been tested to 370 m down dip; the GCW zone with a strike length of 300 m has been tested to 130 m down dip and the Bullion Creek (BC) zone which has been tested with two holes to a depth of 75 m.

A new 43-101 compliant resource was calculated using drill data for the Siwash B and WD veins, just two of eight known mesothermal vein structures on the property.

Global (bulk-tonnage and underground mineable) measured and indicated resources were reported to total 668,300 tonnes grading 9.66 grams per tonne gold (207,600 ounces) plus an additional 1,317,200 tonnes grading 4.91 grams per tonne gold (207,800 ounces) in the inferred category (News Release, Almaden Minerals Limited, May 28, 2004).

Included in the global figures is a higher grade, underground-mineable resource totaling 164,000 tonnes grading 33.69 g/t gold in the measured and indicated category, plus another 195 200 tonnes grading 16.38 g/t gold in the inferred category.

In 2004 a diamond drill program consisting of 10,265 meters of NQ drilling in 44 holes was completed.

Included in the global figures is a higher grade, underground-mineable resource totaling 164,000 tonnes grading 33.69 g/t gold in the measured and indicated category, plus another 195 200 tonnes grading 16.38 g/t gold in the inferred category.

In 2004 a diamond drill program consisting of 10,265 meters of NQ drilling in 44 holes was completed.

As reported by Almaden in 2001, a possible extension to the B and WD vein systems was found roughly two kilometres along strike to the east, on the other side of an area of overburden cover and no outcrop, as part of a trenching program.

Grab samples of the vein material taken at surface returned averaged analyses of 31.6 grams per tonne gold and 104.4 grams per tonne silver (News Release, Almaden Minerals Limited, March 4, 2005. This discovery added about two kilometres of prospective, unexplored strike length to the high-grade vein system.

Update

Gold Mountain Mining Corporation, the present owner of the Elk property reports (2012 Corporate Presentation) on recent information at the Elk Property; past gold production at 51,500 ounces at 97 g/t (>3 opt) and an existing gold resource of 301,000 ounces gold in a measured and indicated category with 263,000 ounces of gold in an inferred category.

Mineralization: Property Area *(cont'd)*

BREW *showing (Alkalic porphyry Cu-Au; Subvolcanic Cu-Ag-Au; As-Sb)*
MINFILE 092HNE275
Three kilometres south

The zone has been traced on surface for 400 metres and is 30 to 40 centimetres wide. It is comprised of strongly gossanous clay and fault gouge containing 1 to 2 per cent pyrite. Quartz and quartz-calcite stringers and quartz blebs occur sporadically throughout the zone. A sample of quartz vein material yielded 0.14 gram per tonne gold and 14.4 grams per tonne silver (Assessment Report, 18041, page 8, sample 239774).

CREST 10 showing (Intrusion-related Au pyrrhotite veins, I01: Au-quartz veins)
MINFILE 092HNE289
Seven kilometres south-southeast

In 1991, a grab sample (C90-R22) of a narrow pyritic quartz vein in argillite assayed 3.52 grams per tonne gold and 30.8 grams per tonne silver (Assessment Report 21058, page 9). A grab sample (PEN91-R32) of an 8-centimetre wide quartz vein with minor pyrite and limonite in siliceous volcanics, taken 1.0 kilometre northeast of sample C90-R22, yielded 4.28 grams per tonne gold and 38.1 grams per tonne silver (Assessment Report 22304, page 18, Table 2). Two other samples (PEN91-R22, PEN91-R33), taken 400 and 800 metres northeast of sample C90-R22, analysed 2.74 and 1.06 grams per tonne gold and 6.2 and 3.0 grams per tonne silver, respectively (Assessment Report 22304, page 18, Table 2).

In 1994, trench CR94-2 yielded 4.96 grams per tonne gold over 3.9 metres (Assessment Report 23923).

SNOW showing (Porphyry Cu +/- Mo +/- Au; Polymetallic veins Ag-Pb-Zn+/-Au)
MINFILE 092HNE292
Three kilometres west

A sample of drill core from 28.0 metres depth contained fine-grained magnetite accompanied by fine-grained chalcocite or bornite along the margins of a zeolite vein. Copper mineralization also occurs along fractures and as disseminations in the granite. Two assays of a grab sample taken in the vicinity of the drillhole yielded less than 0.3 gram per tonne gold, 3.1 grams per tonne silver and 0.54 per cent copper, and 0.45 gram per tonne gold, 3.1 grams per tonne silver and 0.30 per cent copper, respectively (Assessment Report 3415, assay certificates).

PEACHLAND CREEK showing (Polymetallic veins Ag-Pb-Zn+/-Au)
MINFILE 092HNE303
Seven kilometres east

An outcrop of mafic tuff of the Upper Triassic Peachland Creek Formation (Nicola Group) is mineralized with sphalerite, galena and pyrite.

WAVE 2 anomaly (Polymetallic veins Ag-Pb-Zn+/-Au)
MINFILE 092HNE312
One kilometre west

Locally, mineralized quartz vein float was found and contain disseminated pyrite and limonite with occasional specks of chalcopyrite, galena or sphalerite.

Mineralization: Property Area *(cont'd)*

Wave 2 *anomaly (cont'd)*

In 1991, samples of mineralized vein float, up to 0.20 metres in diameter, returned up to 25.7 parts per million silver, 1732 parts per million lead and 2107 parts per million zinc (Assessment Report 22864).

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PEN 10 showing (Cu skarn, Au skarn)
MINFILE 092HNE313
Seven kilometres east

Mineralization occurs as pyrite with lesser pyrrhotite, chalcopyrite, molybdenite, galena, sphalerite, arsenopyrite and tetrahedrite hosted in diorite and altered volcanics crosscut by feldspar porphyry dikes.

MINERALIZATION: PROPERTY

KING anomaly (Intrusion-related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn+/-Au)
MINFILE 092HNE299
Within Tenure 1047970

A quartz vein, 1 centimetre wide, cuts bleached, pyritic andesitic ash tuff of the Upper Triassic Whistle Creek Formation (Nicola Group). A sample of selected chips analysed 0.68 gram per tonne gold (Assessment Report 21922, page 9, Table 2, sample L89-R1D).

WAVE 1 anomaly (Polymetallic veins Ag-Pb-Zn+/-Au)
MINFILE 092HNE311
Within Tenure 940389

Locally, mineralized quartz vein float was found and contain disseminated pyrite and limonite with occasional specks of chalcopyrite, galena or sphalerite. In 1991, samples of mineralized vein float, up to 0.20 metres in diameter, returned up to 25.7 parts per million silver, 1732 parts per million lead and 2107 parts per million zinc (Assessment Report 22864).

Locally, mineralized quartz vein float was found and contain disseminated pyrite and limonite with occasional specks of chalcopyrite, galena or sphalerite. In 1991, samples of mineralized vein float, up to 0.20 metres in diameter, returned up to 25.7 parts per million silver, 1732 parts per million lead and 2107 parts per million zinc (Assessment Report 22864).

STRUCTURAL ANALYSIS

a) Purpose

The purpose of the structural analysis was to delineate any area of major fault intersections which location could be the centre of maximum brecciation and be depth intensive to provide the most favourable feeder zone to any convective hydrothermal fluids sourced from a potentially mineral laden reservoir. The fluid constituents and/or the indications thereof could be etched in the surface material; where, by means of standard exploratory procedures, the source and location may be identified and a foundation on which to warrant any follow-up exploration.
These surficial indications such as prime minerals, indicator minerals, or alteration patterns, may be an indication of a masked mineral resource. Thus, a cross-structural location would be the prime area to initially prospect for the surficial indicators which may be revealed as pathfinder minerals, minerals and/or alteration products that would be subject to interpretation as economic mineral indicators.

b) Method

The structural analysis was performed on a MapPlace DEM image hillshade map of Tenure 1047970 by viewing of the map and marking the lineaments, or indicated structures, thereon. A total of 60 lineaments were marked as shown on Figure 5. The lineaments were compiled into a 10 degree class interval and plotted as a rose diagram as shown on Figure 6. The indicated primary structural trend was then plotted on the lineament map with the general trend influenced by the predominant lineaments as shown by the Rose Diagram.

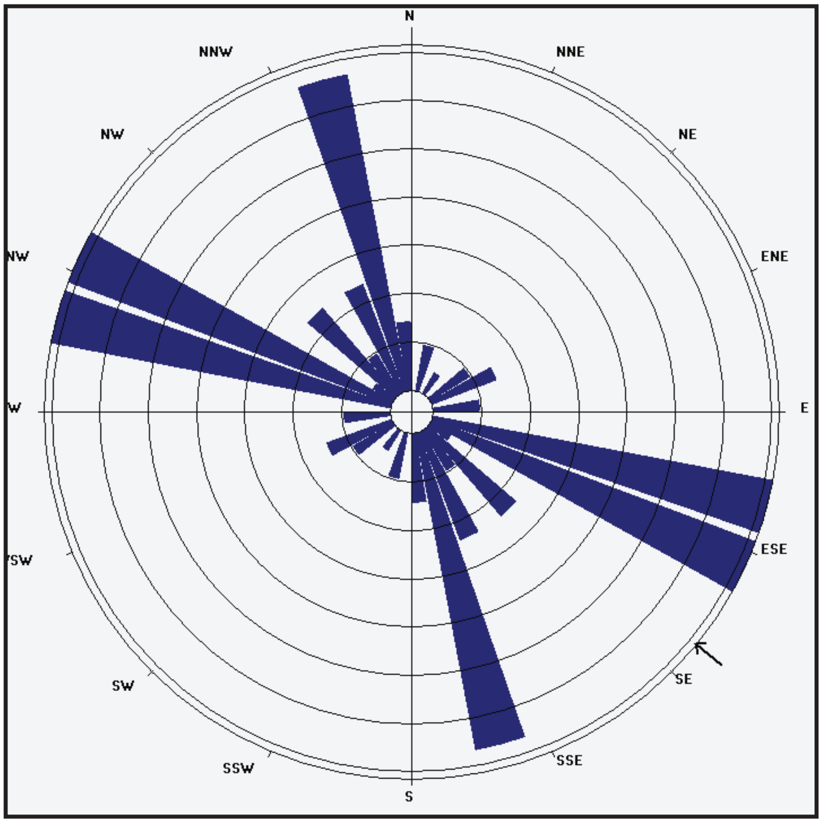
c) Results

One cross-structure, "A", was delineated from an indicated primary northerly trending structure intersected by a indicated northwesterly trending structure. The cross-structure is located in an area of mudstone, siltstone, shale, fine clastic sedimentary rocks of the Nicola Group *(uTrNsf)* which is indicated to cap an inlier of basaltic volcanic rocks of the Nicola Group *(uTrNE)*

Figure 5. **Lineaments as Indicated Structures on Tenure 1047970**

***Structural Analysis** (cont'd)*

Figure 6. **Rose Diagram from indicated structures on Tenure 1047970**



STATISTICS

Axial (non-polar) data
No. of Data = 70
Sector angle = 10°
Scale: tick interval = 3% [2.1 data]
Maximum = 21.4% [15 data]
Mean Resultant dir'n = 129-309
[Approx. 95% Confidence interval = ±19.5°]
(valid only for unimodal data)

Mean Resultant dir'n = 129.3 - 309.3
Circ.Median = 116.5 - 296.5
Circ.Mean Dev.about median = 28.4°
Circ. Variance = 0.18
Circular Std.Dev. = 35.60°
Circ. Dispersion = 2.02
Circ.Std Error = 0.17
Circ.Skewness = -1.70
Circ.Kurtosis = -16.70

kappa = 1.04
(von Mises concentration param. estimate)

Resultant length = 32.35
Mean Resultant length = 0.4621

'Mean' Moments: Cbar = -0.092; Sbar = -0.4529
'Full' trig. sums: SumCos = -6.4391; Sbar = -31.701
Mean resultant of doubled angles = 0.1357
Mean direction of doubled angles = 022

(Usage references: Mardia & Jupp, 'Directional Statistics', 1999, Wiley;
Fisher, 'Statistical Analysis of Circular Data', 1993, Cambridge University Press)
Note: The 95% confidence calculation uses Fisher's (1993) 'large-sample method''

Structural Analysis *(cont'd)*

Figure 7. **Cross-structural location on Google Earth**

(Base map from MapPlace & Google Earth)

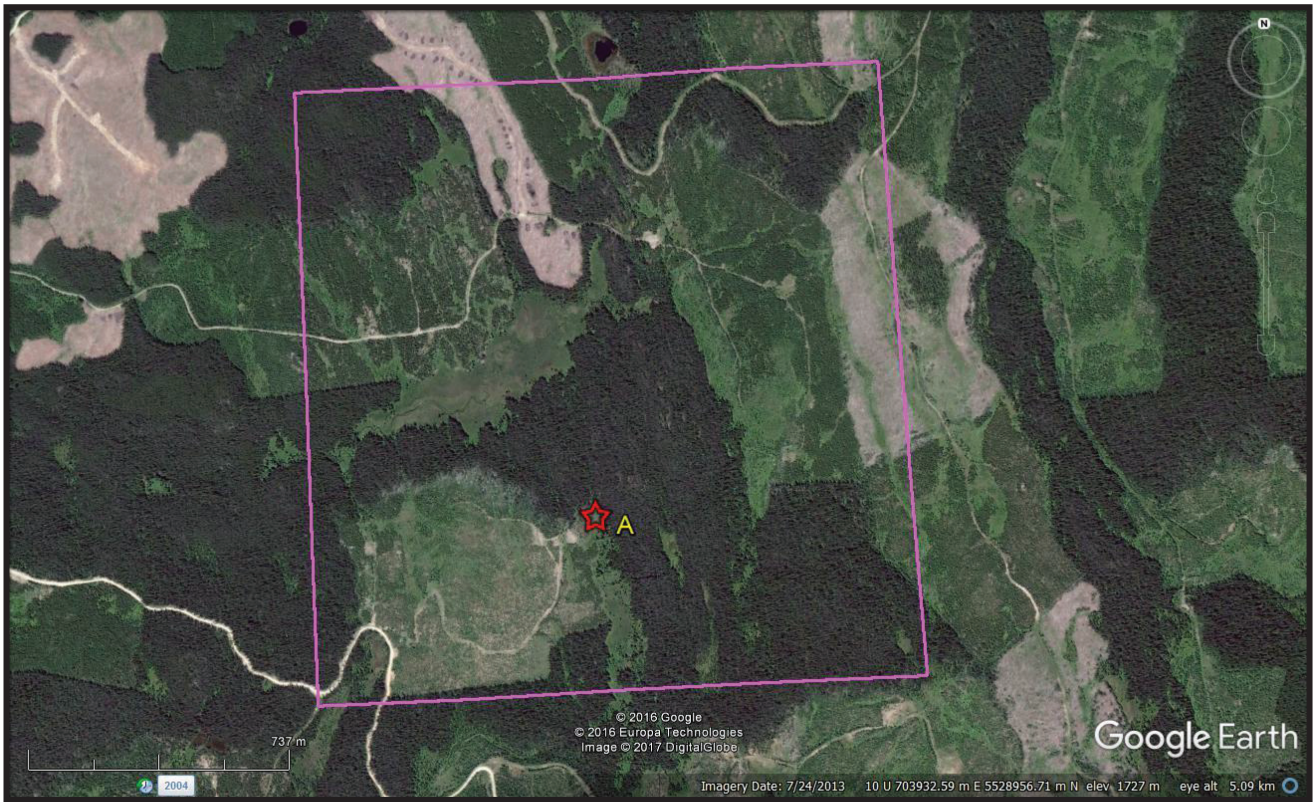


Table II. **Approximate location of cross-structure**

(UTM 10 NAD 83)

Cross-Structure	UTM East	UTM North	Elevation *(metres)*
A	703,736	5,528,622	1,711

Magnetometer Survey

a) Instrumentation

A Scintrex MF 2 Model magnetometer was used for the magnetometer survey. Diurnal variations were corrected by taking repeated readings at a base point throughout the day. Magnetometer values are total intensity and relative.

b) Theory

Only two commonly occurring minerals are strongly magnetic, magnetite and pyrrhotite; magnetic surveys are therefore used to detect the presence of these minerals in varying concentrations. Magnetics is also useful is a reconnaissance tool for mapping geologic lithology and structure since different rock types have different background amounts of magnetite and/or pyrrhotite.

Magnetometer Survey *(cont'd)*

Figure 8. **Magnetometer Survey Grid**
Base map from Google Earth)

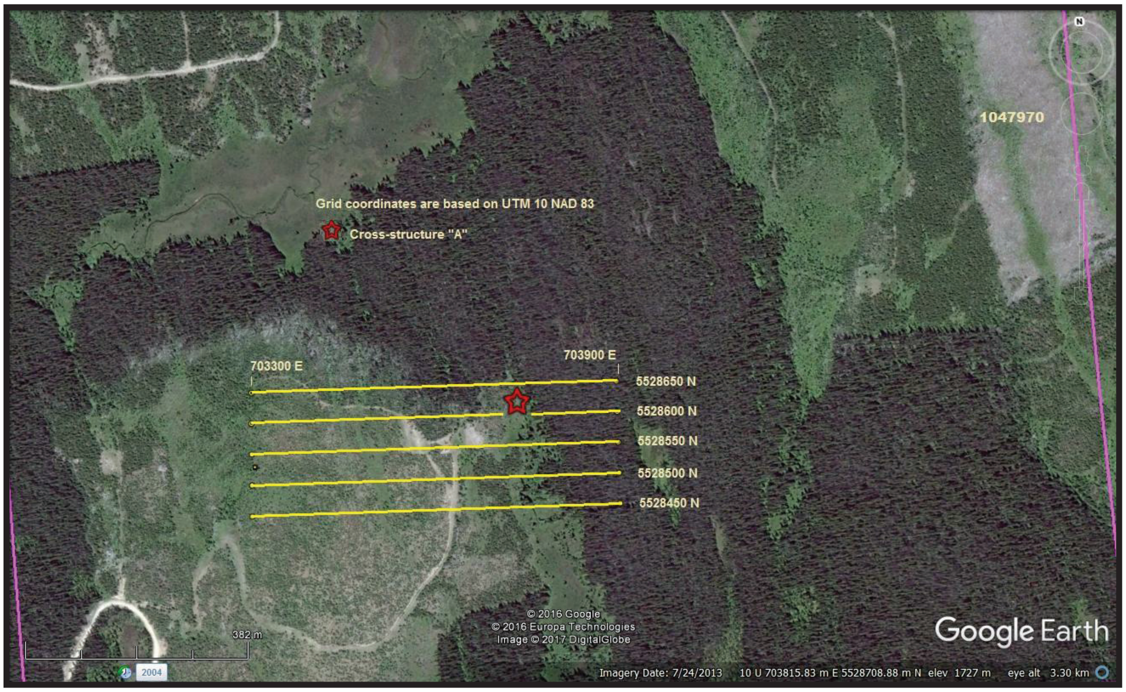
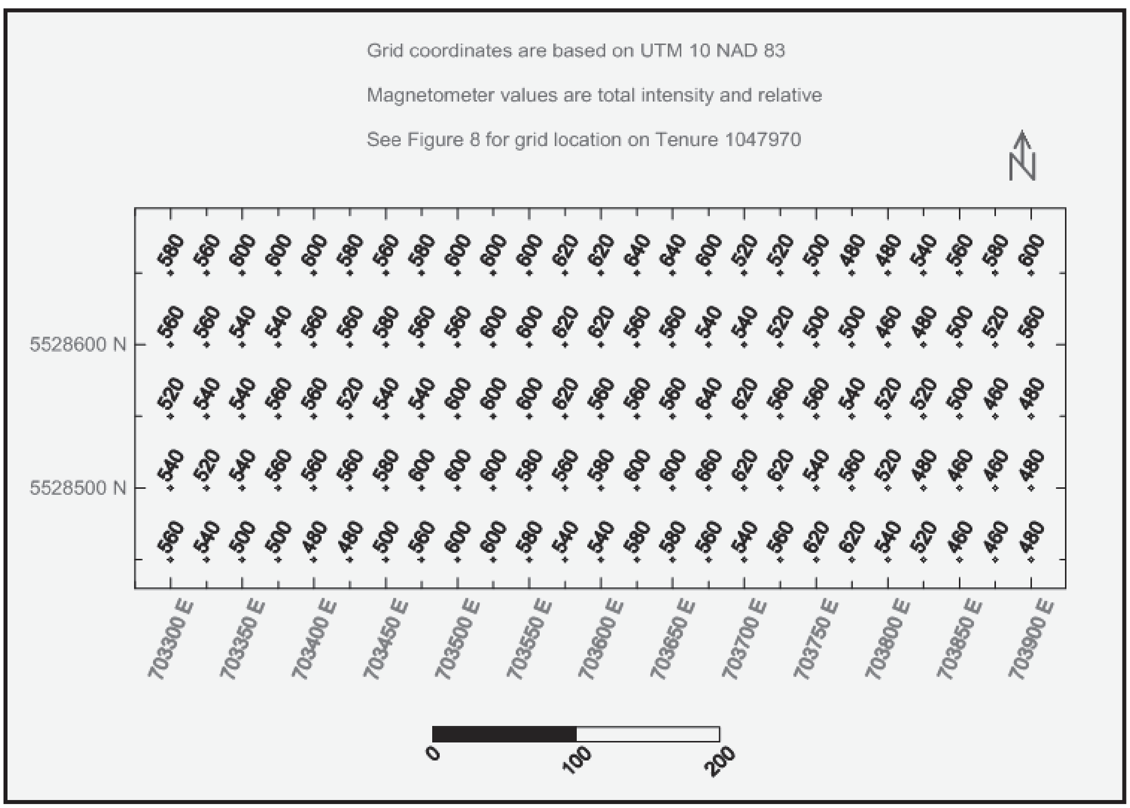


*Figure 9 .***Magnetometer Survey Data**



Magnetometer Survey *(cont'd)*

c) Survey Procedure

From an initial grid station at 5528650N 703300E four additional base-line station was established southerly at 50 metre intervals. Magnetometer readings were taken at 25 metre intervals along each of the five grid lines from to 703900E. The grid line stations were located with a GPS instrument. Line kilometres of magnetometer survey completed was 3.0. The field data is reported herein in Appendix I.

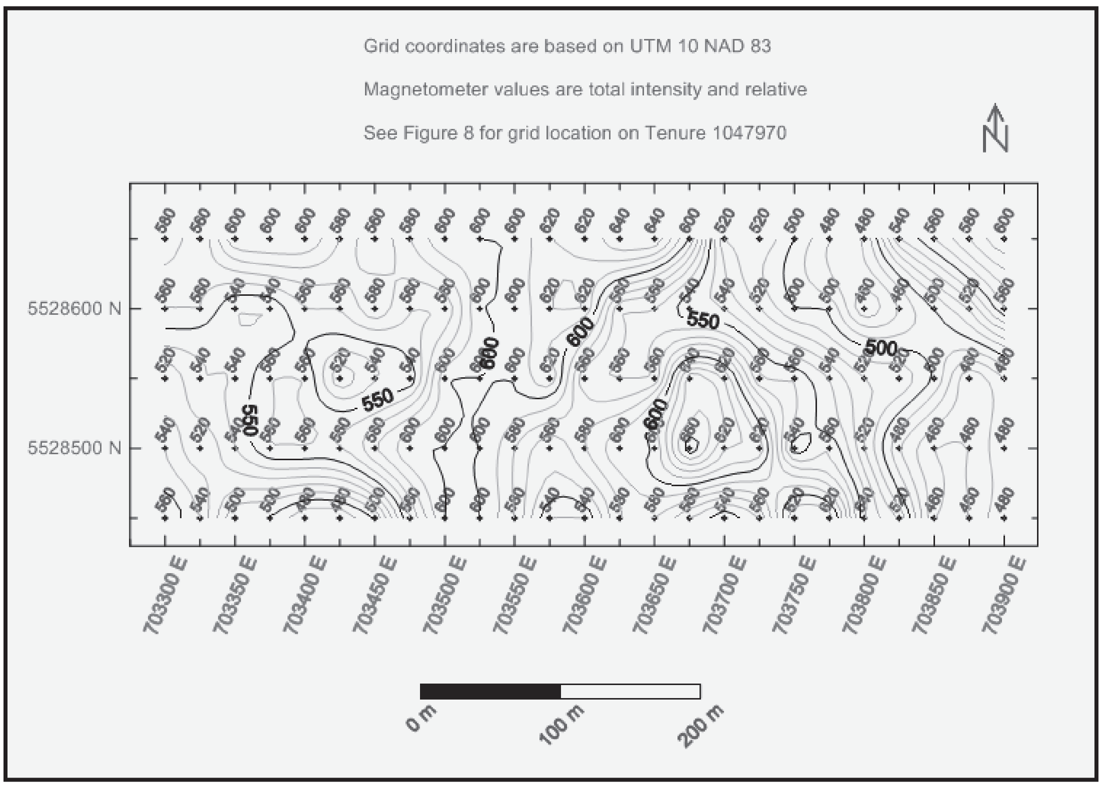
e) Results

The localized magnetometer survey which covered Nicola Group volcanics near the contact with the Nicola Group volcanics, indicated one open-ended magnetometer low (mag LO) and one relative anomalous magnetometer high (mag HI).

The sporadic anomalous mag LO in the extreme eastern sector is a 75 metre wide northwesterly trending zone with a relative anomalous HI in, and open, to the southeast.

The anomalous mag HI is a localized 50 metre wide zone adjacent to the mag LO. Cross-structure "A" is located between the anomalous mag HI and the anomalous mag LO

Figure 10. **Magnetometer Survey Data Contoured**



Magnetometer Survey *(cont'd)*

Figure 11. **Magnetometer Survey Data Colour Contoured**

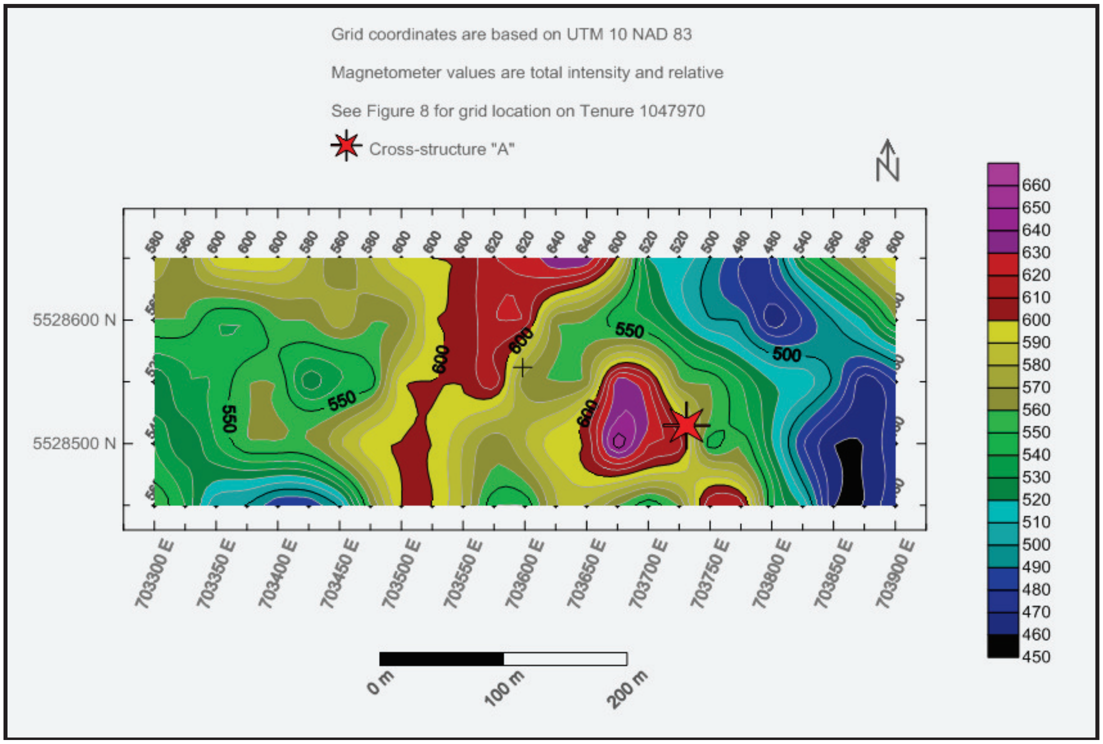
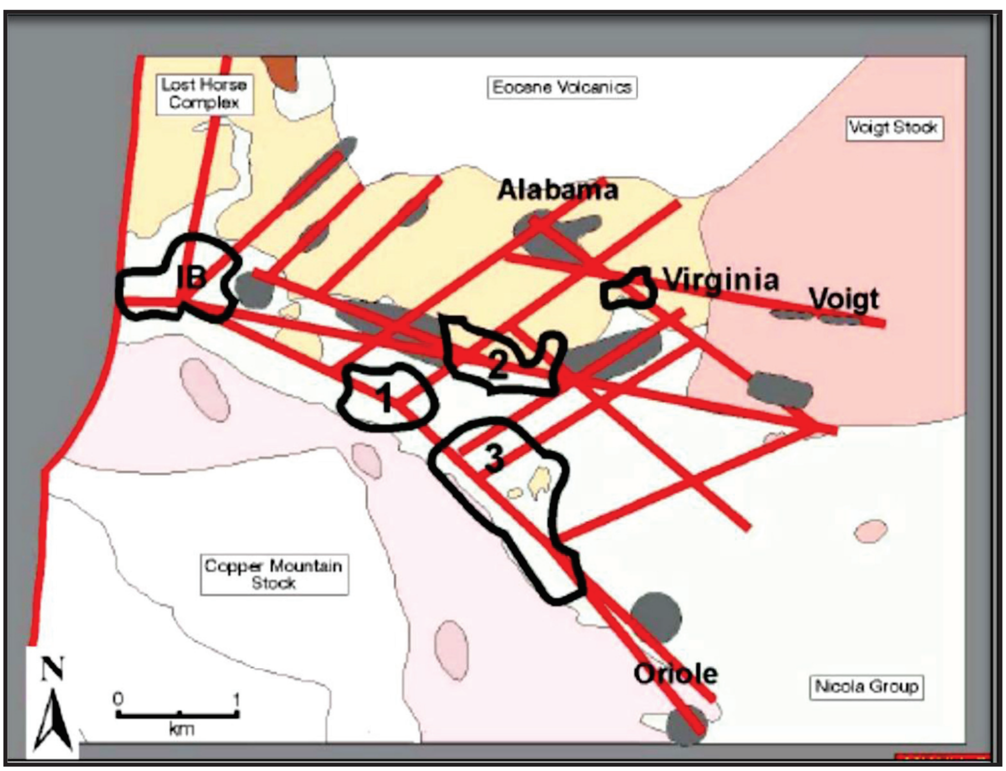


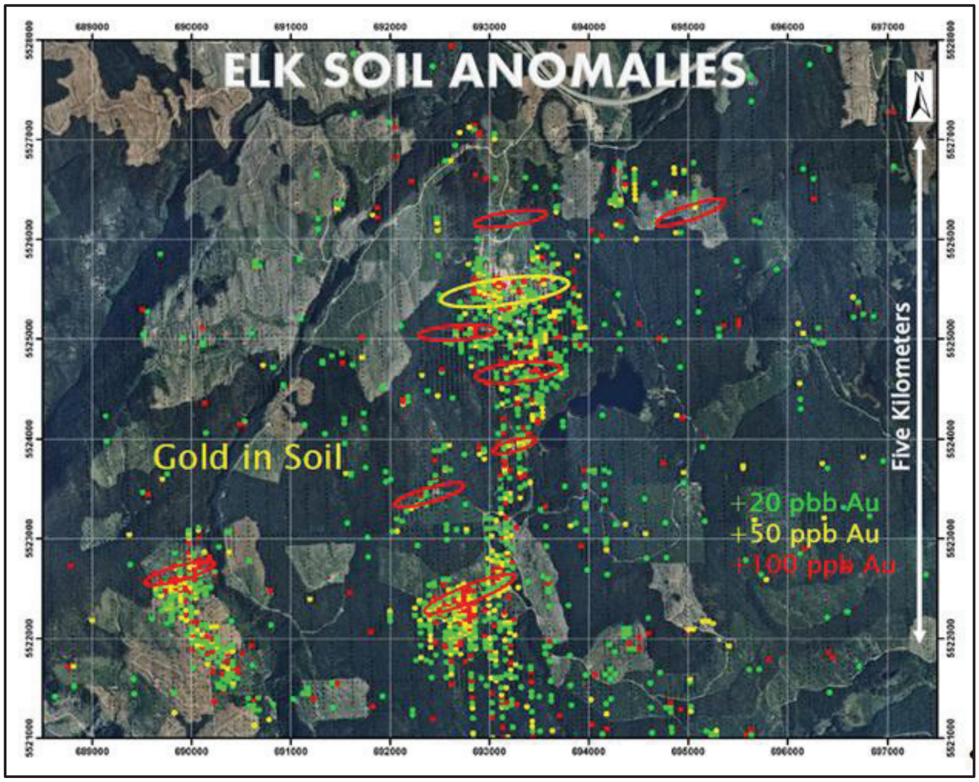
Figure 12. **Geology: Copper Mountain Camp**

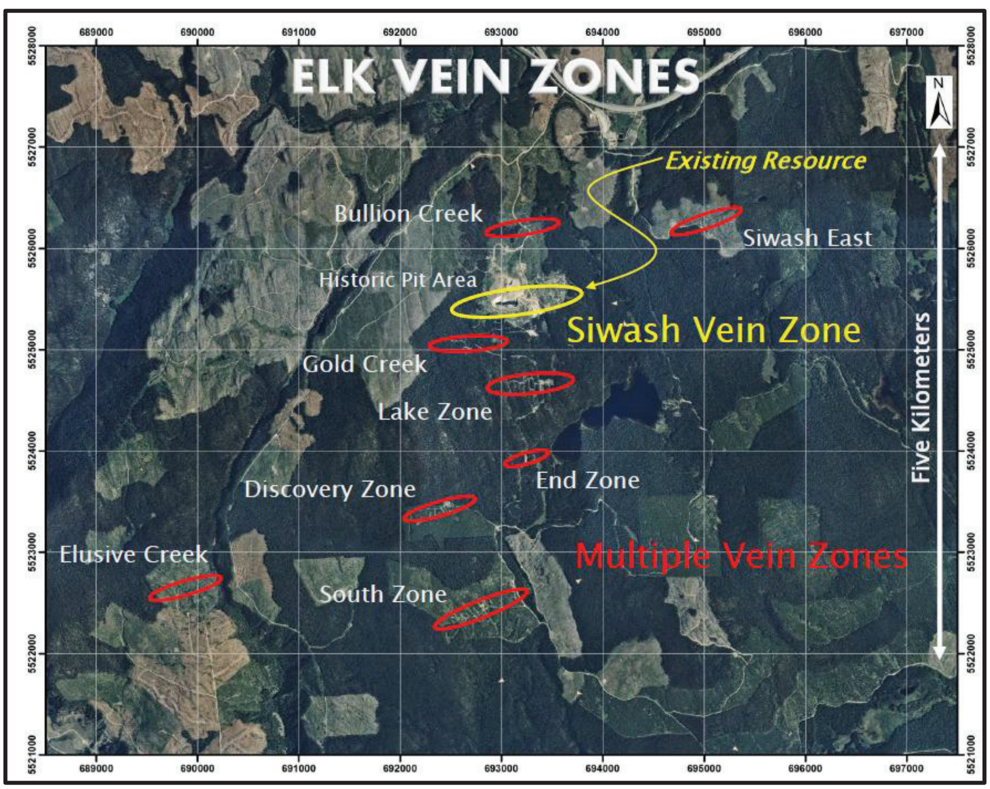
(Map from Giroux & Holbek, Figure 9.4)



Figures 13 & 13a. ***Elk Soil Anomalies & Vein Zones showing the indicated localized association to structural intersections of the major north trending Elk/Siwash fault and a subsidiary set of easterly to east-northeasterly trending faults.***

(Map from Gold Mountain Mining Corporation January 2012 Corporate Presentation)





INTERPRETATION and CONCLUSIONS

The location of the one cross-structure "A" delineated on Tenure 1047970, is significant as a basic mineral controlling structure in providing a space for hydrothermal fluids to vent, precipitate and form the basis of a potential mineral resource. This structural/mineral relationship was shown at the Brenda copper-molybdenum deposit (*Minfile 092HNE047)* which is within the "Brenda stock", a composite quartz diorite/granodiorite body which forms part of the Pennask batholith. The Brenda stock was intensely fractured during several stages of time and tapped a hydrothermal source. As each stage of fractures developed, hydrothermal fluids introduced vein material which healed the fractures. The grade of the orebody was a function of fracture (vein) density and of the thickness and mineralogy of the filling material. Mineralization decreased outwardly from the most intensely fractured/mineralized rock and the centre of the main mineral zone.

The compatibility of the cross-structure to mineral controls is also shown at the Elk *(Figure 13 & 13A)* and at the Copper Mountain *(Figure 12)* properties. At the southern portion of the Elk structure which is indicated topographically over a distance of at least 20 kilometres from south of the Elk mineral zones to and north of the SNOW *(Minfile 092HNE292)* mineral showing, the associated controlling structures are exposed as east-northeasterly structures by the many mineral zones. The location of the cross-structures are obvious in the many mineral zones associated with the cross-structural locations.

One of the anomalous locations at the Elk was developed to an economic mineral deposit from which past production (1992-1995) was reportedly 1,518,777 grams (48,830 ounces) of gold and 1,903,000 grams (61,183 ounces) of silver. Recent additional exploration and development at the former mine-site reportedly delineated an additional gold resource of 301,000 ounces of gold in a measured and indicated category and 263,000 ounces of gold in an inferred category.

At Copper Mountain, the Ingerbelle mineral deposit is one of five productive mineral zones that exhibit cross-structural mineral controls where up to four structures merge to a central cross-structure at the centre of the open-pit. The major Copper Mountain Fault appears as the primary development to other structures.

The results of the localized magnetometer survey within Tenure 1047970 may have indicated a potential concealed mineral resource in the northwesterly trending indicated structure *(Figure 5)* which is reasonably correlative with the northwesterly trending, open-ended magnetometer LO zone *(Figure 11).* The mag LO may indicate hydrothermal alteration as a result of hydrothermal fluids surfacing via the structure.

Thus, the general location of cross-structure "A" and the magnetometer LO zone are priority areas in the exploration for surficial geological indicators of a potential concealed mineral resource. These geological indicators may be revealed as pathfinder minerals, minerals and/or alteration products that would be subject to interpretation as economic mineral indicators to follow-up exploration.

Respectfully submitted
Sookochoff Consultants Inc.

Laurence Sookochoff, PEng

SELECTED REFERENCES

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Guilbert, J.M., Park Jr., C.F. - The Geology of Ore Deposits. Waveland Press, Inc. 2007.

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John, D.A. - Porphyry Copper Deposit Model. Scientific Investigations Report 2010-5070-B.U.S. Department of the Interior. U.S. Geological Survey, Reston, Virginia: 2010.

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Marshak, S., Mitra, G. – Basic Methods of Structural Geology. pp 258-259, 264* .Prentice-Hall Inc. 1988

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092HSE001 – SIMILCO (COPPER MOUNTAIN)
092HNE047 – BRENDA
092HNE096 – ELK
092HNE275 – BREW
092HNE289 – CREST 10
092HNE292 – SNOW
092HNE303 – PEACHLAND CREEK
092HNE312 – WAVE 2
092HNE313 – PEN 10
092HNE299 – KING
092HNE311 – WAVE 1

Similco Mines Ltd. Copper Mountain Project. An Existing B.C. Porphyry Copper/Gold/Silver Mine. September 18, 2008.
http://www.rdosmaps.bc.ca/min_bylaws/contract_reports/CorpBd/2008/09Sep18/4_1CooperMountainPresentation.pdf

Solgold.plc: www.solgold.com.au – Characteristics of Porphyry Copper Deposits.

Sookochoff, L. – Structural Analysis on Tenure 966089 of the eight Claim Toni 966089 Claim Group of the Toni Property for Victory Resources Corporation. August 31, 2013. AR 34170.

Sookochoff, L. – Structural Analysis on Tenure 966069 of the 11 Claim Toni 966069 Claim Group of the Toni Property for Victory Resources Corporation. September 5, 2013. AR 34420.

Sookochoff, L. – Structural Analysis on Tenure 965989 of the five Claim 965989 Claim Group of the Toni Property for Victory Resources Corporation. December 10, 2014. AR 34043.

Sookochoff, L. – Geological & Geophysical Assessment Report on Tenure 1036474 Similkameen Mining Division for G. Delorme and L. Sookochoff. November 8, 2016. AR 36279

STATEMENT OF COSTS

Work on Tenure 1047970 was completed from November 20, 2016 to November 24, 2016 to the value as follows:

Structural Analysis

Laurence Sookochoff, P Eng. 3 days @ $ 1,000.00/day -----------------------		$ 3,000.00
Magnetometer Survey		
Rick Pearson & Ross Heyer		
November 22-23, 2016		
Four man-days @ $ 250.00 --		1,000.00
Truck rental: 2 days @ $135 -----------------------	$ 270.00	
Kilometre charge: 348 @ $0.70 -------------------	243.60	
Fuel --	48.20	
Room & board 4 man days @ $90.00 ----------	360.00	
Mag rental 2 days @ $80.00 ---------------------	160.00	1,081.80
		$ 5,081.80
Maps ---		500.00
Report --		3,500.00
		$ 9,081.80
		======

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-one years.

3) I am registered and in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.

4) The information for this report is based on information as itemized in the Selected Reference section of this report and from work the author has performed on the Toni Property since 2006.

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

Laurence Sookochoff, P. Eng.

Appendix I

Magnetometer Data

E 5626877 T 1047970														
East	North	Mag	East	North	Mag	East	North	Mag	East	North	Mag	East	North	Mag
703300	5528450	560	703300	5528500	540	703300	5528550	520	703300	5528600	560	703300	5528650	580
703325	5528450	540	703325	5528500	520	703325	5528550	540	703325	5528600	560	703325	5528650	560
703350	5528450	500	703350	5528500	540	703350	5528550	540	703350	5528600	540	703350	5528650	600
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703875	5528450	460	703875	5528500	460	703875	5528550	460	703875	5528600	520	703875	5528650	580
703900	5528450	480	703900	5528500	480	703900	5528550	480	703900	5528600	560	703900	5528650	600