

**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:** \$ 9,762.30

**AUTHOR(S):** Laurence Sookochoff, PEng

**SIGNATURE(S):** *Laurence Sookochoff*

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

**YEAR OF WORK:** 2015

**STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S):** 5574628 October 14, 2015

**PROPERTY NAME:** Toni

**CLAIM NAME(S) (on which the work was done):** 1039173

**COMMODITIES SOUGHT:** Copper Gold

**MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:** \_\_\_\_\_

**MINING DIVISION:** Nicola

**NTS/BCGS:** 092H.088 092H.098 092H.099 092I.009

**LATITUDE:** 50 ° 00 ' 27 " **LONGITUDE:** 120 ° 21 ' 25 " (at centre of work)

**OWNER(S):**

1) Victory Resources Corporation

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

**MAILING ADDRESS:**

132366 Cliffstone Court

Lake Country BC V4V 2R1

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

1) Victory Resources Corporation

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

**MAILING ADDRESS:**

132366 Cliffstone Court

Lake Country BC V4V 2R1

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

Triassic-Jurassic, Pleistocene, Holocene, Granodiorites, Nicola Group, Eastern Volcanic Facies, Volcanics, Sediments,

Faults, Structures, Cross-Structures, Rose Diagrams

**REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:** 4230 31024 32160 32520 32627 35154

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
<b>GEOLOGICAL (scale, area)</b>			
Ground, mapping			
Photo interpretation	311 hectares	1039173	\$ 6,000.00
<b>GEOPHYSICAL (line-kilometres)</b>			
Ground			
Magnetic	1.6	1039173	3,762.30
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
<b>GEOCHEMICAL (number of samples analysed for...)</b>			
Soil			
Silt			
Rock			
Other			
<b>DRILLING (total metres; number of holes, size)</b>			
Core			
Non-core			
<b>RELATED TECHNICAL</b>			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
<b>PROSPECTING (scale, area)</b>			
<b>PREPARATORY / PHYSICAL</b>			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
<b>TOTAL COST:</b>			<b>\$ 9,762.30</b>

**VICTORY RESOURCES CORPORATION**  
(Owner & Operator)

**GEOLOGICAL & GEOPHYSICAL**

**ASSESSMENT REPORT**

(Event 5574628)

Work done on

**Tenure 1039173**

of the 15 claim

**Toni 1039173 Claim Group**

(Work done from October 8, 2015 to October 14, 2015)

Nicola Mining Division

BCGS Map 092H.088/.098/.099/092I.009

Centre of Work

**5,542,798N, 689,935E**

Author & Consultant

**Laurence Sookochoff, PEng**  
**Sookochoff Consultants Inc.**

Submitted

**February 23, 2016**

**BC Geological Survey**  
**Assessment Report**  
**35870**

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## SUMMARY

The 15 claim, 2742 hectare Toni 1039173 Claim Group, is located in south-central British Columbia 204 kilometres northeast of Vancouver, within eight kilometres north of the past productive Elk/Siwash property, and within 28 kilometres northeast of the past productive Benda property.

At the Elk property, past production was 51,460 ounces gold from the processing of material averaging 97 g/t (>3 opt). The property is currently under renewed exploration by Gold Mountain Mining Corporation which reports (2012 Corporate Presentation) an existing gold resource of 301,000 ounces in a measured and indicated category with 263,000 ounces of gold in an inferred category. In October 2013, Gold Mountain had 500 tons of 13.8 gram gold per tonne ore, taken from the Elk mineral deposit and processed which generated a return of \$250,408.00

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.

At the Elk, the structural controlling relationship with the intersection of faults is shown by the extensive north-south trending Elk fault intersected by numerous east-northeasterly trending structures. The mineral zones are mostly adjacent to the Elk Fault and related to the cross fault intersection. The Elk structure is indicated topographically over a distance of at least 20 kilometres from south of the Elk mineral zones to the SNOW (Minfile 092HNE292) mineral showing in the north where a drill hole intersected minor copper mineralization in weakly to moderately chloritized granite of the Pennask batholith.

At Brenda, the resource was defined 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.

As indicated by the BC government supported MapPlace geological maps, the Toni 1039173 Claim Group is predominantly underlain in the northeast by the Pennask granodiorite which is in contact with upper Triassic Nicola Group of basaltic volcanic rocks (uTrNE) to the south and the southwest. Tenure 1039173 on which a structural analysis and a localized magnetometer survey were completed, is underlain by the Pennask batholith.

In the structural analysis, two cross-structures were identified which could be the centres of maximum brecciation and depth intensive to provide the most favourable feeder zone to any convective hydrothermal fluids sourced from a potentially mineral laden reservoir with the geological indicators of the fluid constituents etched in the surface material.

The localized magnetometer survey indicated a correlative mag LO with an approximate location of cross-structure "A". The mag LO could reflect dynamically or hydrothermally produced alteration zone associated with the structures. The northerly configuration of the sub-anomalous mag LO could reflect only the northerly trending structure of cross-structure "A" with the actual location of cross-structure "A" some 50 to 75 metres north where the west-northwesterly structure could be reflected by an anomalous mag LO and by the configuration of the mag LO to the east-southeast.

Thus, the cross-structure "A" area should be explored for surficial geological signatures of a potential economic sub-surface mineral resource.

## INTRODUCTION

During October 2015 a structural analysis and a localized magnetometer survey were completed on Tenure 1039173 of the 15 claim Toni 1039173 claim group (Property). The purpose of the program was to delineate potential structures and correlative magnetic responses which may be integral in indicating near surface indications and/or geological controls, to a potential mineral resource.

Information for this report was obtained from sources as cited under Selected References.

Figure 1. Location Map



## PROPERTY DESCRIPTION AND LOCATION

### Description

The Property is comprised of 15 claims covering an area of 8027.623 hectares. Particulars are as follows:

Table 1: Tenures of Toni 1039173 Claim Group

Tenure Number	Type	Claim Name	Good Until	Area (ha)
<a href="#">551397</a>	Mineral	ENY	20160530	499.1721
<a href="#">551399</a>	Mineral	MEANY	20160530	499.3213
<a href="#">585980</a>	Mineral	VT679	20160530	374.4429
<a href="#">589847</a>	Mineral	TONI	20160530	520.0585
<a href="#">589849</a>	Mineral	TONI 1	20160530	520.1029
<a href="#">589853</a>	Mineral	TONI 4	20160729	520.0423
<a href="#">633163</a>	Mineral	WENC	20160729	270.3451
<a href="#">898131</a>	Mineral	SNOW 3	20161010	415.6527
<a href="#">1015041</a>	Mineral	TONIAMAL8	20160615	436.871
<a href="#">1032320</a>	Mineral		20160331	623.5115
<a href="#">1032322</a>	Mineral		20160615	623.8339
<a href="#">1032323</a>	Mineral		20160331	602.8623
<a href="#">1037891</a>	Mineral		20160331	498.5898
<a href="#">1038803</a>	Mineral		20160530	1311.3278
<a href="#">1039173</a>	Mineral		20161008	311.4889

\*Upon the approval of the assessment work filing of Event Number 5574628.

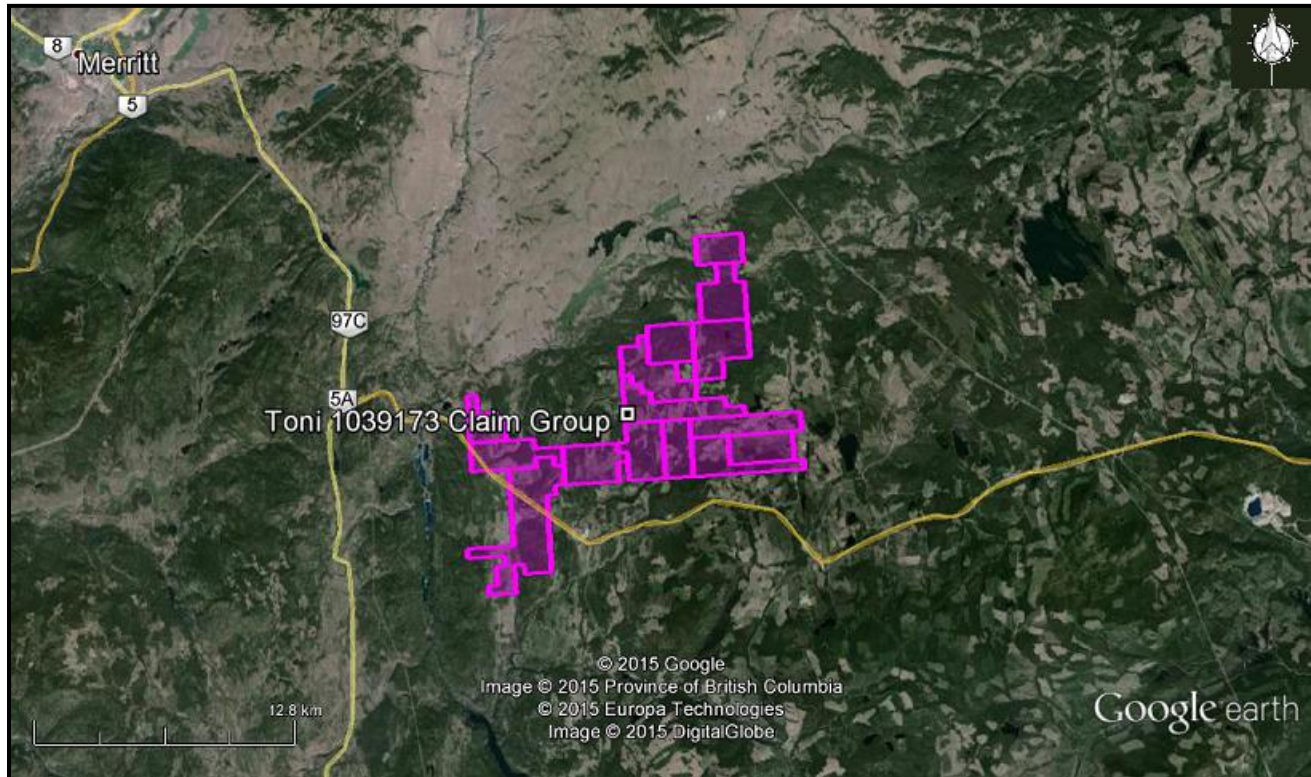
## Property Description and Location (cont'd)

### Location

The Property is located within BCGS Map 092H.088/.098/.099/092I.009 of the Nicola Mining Division, 204 kilometres east-northeast of Vancouver, 32 kilometres southeast of Merritt, and 28 kilometres west-northwest of the past productive Brenda copper/molybdenum porphyry deposit.

### Figure 2. Claim Location

(from MapPlace & Google)



## ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE & PHYSIOGRAPHY

### Access

Access to the Property is southward from Merritt via Highway 5A/97C or the Princeton/Kamloops Highway for 26 kilometres to the Aspen Grove junction thence eastward from via Highway 97C or the Coquihalla connector for eight kilometres to the western boundary of Tenure 589853 of the Toni 1039173 Claim Group.

### 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.



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

### 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.

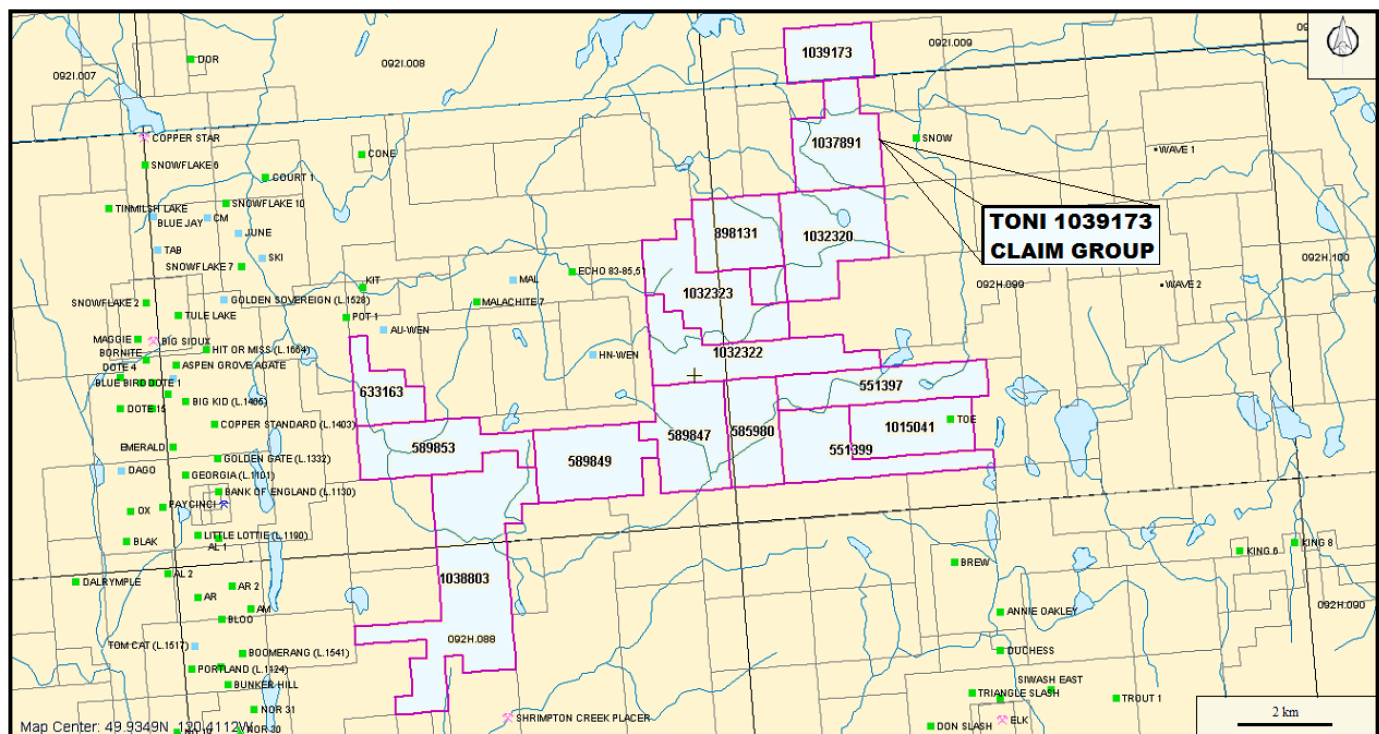
### Physiography

Tenure 1039173 covers a moderately sloped area of forest cover in the east and relatively flat barren in the west. Relief is in the order of 178 metres from an elevation of 1,119 metres at the southwest corner to 1,297 metres at the northeast corner.

### WATER and POWER

Sufficient water for all phases of the exploration program should be available from lakes and creeks, which are located within the confines or peripheral to Tenure 1039173. A 500Kv power line is within three kilometres northeast of the northeast corner of the Property.

Figure 3. Claim Map  
(from MapPlace)



### HISTORY: PROPERTY AREA

The history on some of the more significant mineral MINFILE reported mineral anomalies, showings, prospects, and past producers in the Toni 1039173 Claim Group area are reported as follows. The distance is relative to the Toni 1039173 claim, the subject of the geological and the geophysical surveys.

**MAL** prospect (Cu skarn; Fe skarn; Au skarn)

MINFILE 092HNE002

Six kilometres southwest

**History: Property Area (cont'd)****Mal prospect (cont'd)**

Initial work consisted of diamond drilling and trenching in the early 1960s on the main showing (Malachite 1 2 and Chalcocite 1-2 claims), on which the occurrence is centred. This is located on access road number 5116, 1 kilometre south of Quilchena Creek, 11.5 kilometres east-northeast of the community of Aspen Grove. A second showing, smaller and less significant but with the same characteristics, is located 1 kilometre to the southwest (Malachite 7, 092HNE269).

**BRENDA** past producer (Porphyry Cu +/- Mo +/- Au)

MINFILE 092HNE047

Twenty eight kilometres southeast

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 [ $eCu = \% Cu + (3.45 \times \% Mo)$ ]. The mine officially closed June 8, 1990.

**HN-WEN** prospect (Volcanic redbed Cu)

MINFILE 092HNE058

Six kilometres southwest

Adits and trenches were initially cut around 1900; later work included diamond drilling and trenching in the 1960s and 1970s.

Sookochoff (2011) reports that recent exploration work at the HN-WEN by Victory Resources resulted in the delineation of the Adit 1 east-west trending quartz vein within the 90 metre wide northwesterly striking shear zone. The significance of the Adit 1 vein is that it occurs within the Nicola volcanics 50 metres north of the W96-1 drill hole (George Resources) where a mineral hosting quartz vein was intersected from which assays averaging 16.578 gm/t Au, 18.185 gm/t Ag, and 0.75% Cu over 6.55 metres of core or 3.81 metres of 28.43 g/t Au and 0.98% Cu.

**ECHO** showing (Volcanic redbed Cu)

MINFILE 092HNE059

Five kilometres southwest

The Echo occurrence is hosted in the Upper Triassic Nicola Group, which regionally consists of alkalic and calcalkalic volcanics and intrusions of island arc origin, and which is the principal component of the Quesnel Terrane in southern British Columbia (Geological Survey of Canada Maps 41-1989, 1713A). This belt has been of major economic interest because of its potential for porphyry copper-gold mineralization. The occurrence lies in the northern assemblage of the Eastern belt of the Nicola Group (after Preto, Bulletin 69). This assemblage mainly consists of well-bedded submarine volcanoclastic rocks and volcanic flows. The main Aspen Grove copper camp lies several kilometres to the west in the Central belt, separated by the north-striking Kentucky-Alleyne fault system (Bulletin 69).

The area of the occurrence is underlain by augite porphyritic volcanic flows of andesitic to basaltic composition, and volcanic tuff and breccia (Assessment Report 1586; Geological Survey of Canada Map 41-1989). The volcanics may be affected by low grade propylitic and chloritic alteration. Less than 1 kilometre to the north of the occurrence is the east-striking contact of the Early Jurassic Pennask batholith, a large intrusion of medium-grained granodiorite to quartz diorite.

**BIG SIOUX** past producer (Volcanic redbed Cu; Alkalic porphyry Cu-Au)

MINFILE 092HNE073

Twelve kilometres west-southwest

**History: Property Area (cont'd)****Big Sioux past producer (cont'd)**

*This deposit was one of the first showings to be explored in the Aspen Grove copper camp. It was staked in 1899, and investigated periodically by H.H. Schmidt up to 1914. One shaft, 10 metres deep, an adit, 46 metres long, and numerous pits and trenches were excavated during this time. Forty-four tonnes of ore were shipped in 1918 grading 9.78 per cent copper and 67.9 grams per tonne silver. David Minerals Ltd., Amax Exploration Inc. and Norranco Mining and Refining completed soil and rock geochemical and geophysical surveys over the deposit between 1968 and along the north side of the recently completed Coquihalla Highway (Phase 3 - Okanagan Connector). The deposit was subsequently mapped and sampled by Amex Exploration Services Ltd. in 1990, Northair Mines Ltd. in 1991 and Placer Dome Inc. in 1992. Christopher James Gold Corp. drilled the area, including the Big Kidd (092HNE074) in 1997.*

**BOOMERANG** showing (Volcanic redbed Cu)

MINFILE 092HNE087

Fourteen kilometres southwest

*This showing was explored as early as 1901. Several trenches and shallow shafts were excavated by 1904 and two diamond-drill holes were drilled by 1928. Scope Development Ltd. and Alscope Consolidated Ltd. conducted trenching, soil sampling, geophysical surveying and some diamond drilling in 1964 and 1967. Various geological, geochemical and geophysical surveys were completed by F. Gingell between 1976 and 1981, Vanco Explorations Ltd. in 1985 and Laramide Resources Ltd. in 1987.*

**BUNKER HILL** showing (Volcanic redbed Cu)

MINFILE 092HNE089

Fifteen kilometres southwest

*The Bunker Hill showing is 1.05 kilometres west-southwest of the north end of Bluey Lake and 2.25 kilometres southwest of the south end of Kentucky Lake*

**ELK** past Producer (Intrusion-related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn

+/-Au; Au-quartz veins)

MINFILE 092HNE096

Seventeen kilometres south

*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). A total of 994 metres of ramp access and three development levels exist underground.*

*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.*

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

**SNOW** showing (Porphyry Cu +/- Mo +/- Au; Polymetallic veins Ag-Pb-Zn+/-Au)

MINFILE 092HNE292

Two kilometres southeast

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

**WAVE 1** anomaly (Polymetallic veins Ag-Pb-Zn+/-Au)

MINFILE 092HNE311

Seven kilometres east-southeast

*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.*

**WAVE 2** anomaly (Polymetallic veins Ag-Pb-Zn+/-Au)

MINFILE 092HNE312

Eight kilometres east-southeast

*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.*

**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 to its termination at the U.S. border and containing the important copper deposits of the Highland Valley, Craigmont, Copper Mountain, Afton, 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 litho-geochemistry 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 significant mineral MINFILE reported mineral anomalies, showings, prospects, and past producers in the Toni 1039173 Claim Group area are reported as follows. The distance is relative to the Toni 1039173 claim, the subject of the geological and the geophysical surveys.

**MAL** prospect (Cu skarn; Fe skarn; Au skarn)

MINFILE 092HNE002

Six kilometres southwest

*The Malachite occurrence is hosted in the Upper Triassic Nicola Group, which regionally consists of alkalic and calcalkalic volcanics and intrusions of island arc origin, and which is the principal component of the Quesnel Terrane in southern British Columbia (Geological Survey of Canada Maps 41-1989, 1713A). This belt has been of major economic interest because of its potential for porphyry copper-gold mineralization. The occurrence lies in the northern assemblage of the Eastern belt or facies of the Nicola Group (after Preto, Bulletin 69). This assemblage mainly consists of well-bedded submarine volcanoclastic rocks and volcanic flows.*

**Geology: Property Area (cont'd)****Mal prospect (cont'd)**

The area of the Malachite occurrence is underlain by dark green, augite porphyritic andesitic to basaltic volcanics and fragmental rocks, with subordinate black argillite with local limy horizons, and feldspar porphyry (Assessment Reports 449, 1586). Some volcanic flow breccia contains pink trachytic fragments (Assessment Report 9590). Stratified rocks strike north-northwest and dip moderately to steeply west (Geological Survey of Canada Map 41-1989).

**BRENDA** past producer (Porphyry Cu +/- Mo +/- Au)

MINFILE 092HNE047

Twenty eight kilometres southeast

The Pennask Mountain area is mainly underlain by a roof pendant comprising westerly younging, Upper Triassic sedimentary and volcanoclastic 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. 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.

**Geology: Property Area (cont'd)****Brenda past producer (cont'd)**

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.

**HN-WEN prospect (Volcanic redbed Cu)**

MINFILE 092HNE058

Six kilometres southwest

The HN-WEN occurrence is hosted in the Upper Triassic Nicola Group, which regionally consists of alkalic and calcalkalic volcanics and intrusions of island arc origin, and which is the principal component of the Quesnel Terrane in southern British Columbia (Geological Survey of Canada Maps 41-1989, 1713A). This belt has been of major economic interest because of its potential for porphyry copper-gold mineralization.

The occurrence lies in the northern assemblage of the Eastern belt of the Nicola Group (after Preto, Bulletin 69).

**ECHO showing (Volcanic redbed Cu)**

MINFILE 092HNE059

Five kilometres southwest

The Echo occurrence is hosted in the Upper Triassic Nicola Group, which regionally consists of alkalic and calcalkalic volcanics and intrusions of island arc origin, and which is the principal component of the Quesnel Terrane in southern British Columbia (Geological Survey of Canada Maps 41-1989, 1713A). This belt has been of major economic interest because of its potential for porphyry copper-gold mineralization.

The occurrence lies in the northern assemblage of the Eastern belt of the Nicola Group (after Preto, Bulletin 69). This assemblage mainly consists of well-bedded submarine volcanoclastic rocks and volcanic flows. The main Aspen Grove copper camp lies several kilometres to the west in the Central belt, separated by the north-striking Kentucky-Alleyne fault system (Bulletin 69).

The area of the occurrence is underlain by augite porphyritic volcanic flows of andesitic to basaltic composition, and volcanic tuff and breccia (Assessment Report 1586; Geological Survey of Canada Map 41-1989). The volcanics may be affected by low grade propylitic and chloritic alteration. Less than 1 kilometre to the north of the occurrence is the east-striking contact of the Early Jurassic Pennask batholith, a large intrusion of medium-grained granodiorite to quartz diorite.

**BIG SIOUX past producer (Volcanic redbed Cu; Alkalic porphyry Cu-Au)**

MINFILE 092HNE073

Twelve kilometres west-southwest

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

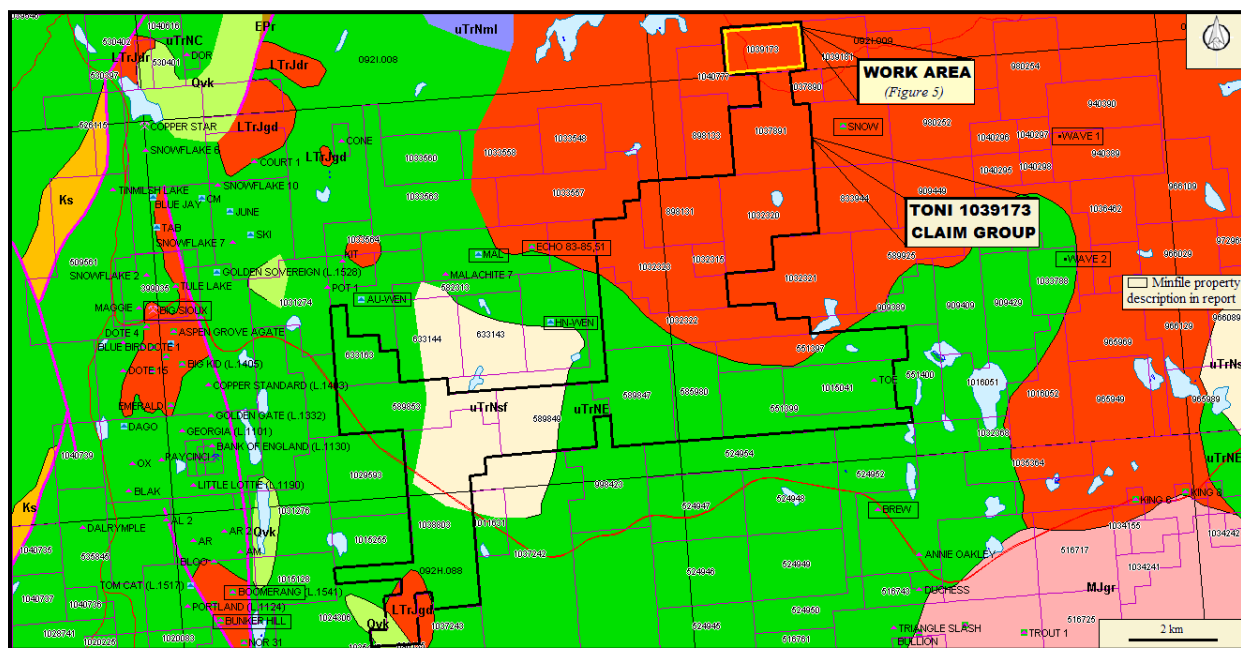
**Big Sioux past producer (cont'd)**

The Fairweather Hills region is underlain by the Central volcanic facies of the Upper Triassic Nicola Group, comprising intermediate, feldspar and feldspar augite porphyritic pyroclastics and flows, and associated alkaline intrusions. The intrusions vary from diorite to monzonite in composition and are thought to be comagmatic with the Nicola Group, ranging in age from Late Triassic to Early Jurassic.

Locally, the area is underlain by red and green laharic breccias, augite andesite porphyry and minor sediments of the Nicola Group (Central belt, Bulletin 69). The units generally strike north-northwest and dip east. This sequence is broken up into a series of tilted fault blocks trending north.

The occurrence is hosted in variably amphibole, augite and feldspar porphyritic basaltic andesite, subjected to extensive fracturing, shearing and faulting. Alteration minerals include abundant epidote, and minor silica and chlorite. Some microdiorite and diorite are also present.

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



**GEOLOGY MAP LEGEND**

**Pleistocene to Holocene**

Qvk

Unnamed alkalic volcanic rocks

**Upper Triassic: Nicola Group**

**Eastern Volcanic Facies**

uTrNE

basaltic volcanic rocks

uTtNsf

mudstone, siltstone, shale, fine clastic sedimentary rocks

uTrNMI

lower amphibolite/kyanite grade metamorphic rocks

uTrJum

unnamed ultramafic rocks

**Central Volcanic Facies**

uTrNc

andesitic volcanic rocks

**Late Triassic to Early Jurassic**

LTrJgd

unnamed granodiorite intrusive rocks

LTrJdr

dioritic to gabbroic intrusive  
rocks

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

**BOOMERANG** showing (Volcanic redbed Cu)

MINFILE 092HNE087

Fourteen kilometres southwest

*Chalcocite, bornite and malachite occur along fractures in fine-grained diorite (microdiorite) or dioritized volcanics of the Upper Triassic Nicola Group (Central belt, Bulletin 69).*

**BUNKER HILL** showing (Volcanic redbed Cu)

MINFILE 092HNE089

Fifteen kilometres southwest

*Several trenches and old pits expose chalcocite, bornite, chalcopyrite, pyrite, malachite and azurite in brecciated and altered pyroxene plagioclase porphyritic andesite of the Upper Triassic Nicola Group (Central belt, Bulletin 69). Brown carbonate (?) alteration is associated with sulphide mineralization.*

**ELK** past Producer (Intrusion-related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn

+/-Au; Au-quartz veins)

MINFILE 092HNE096

Seventeen kilometres south

*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. 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. Early Tertiary feldspar porphyry and quartz feldspar porphyry stocks and dikes of the Otter intrusions cut both of the above.*

**AU-WEN** prospect (Intrusion related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn+/-Au)

MINFILE 092HNE144

Nine kilometres southwest

*The occurrence lies in the northern assemblage of the Eastern belt of the Nicola Group (after Preto, Bulletin 69). This assemblage mainly consists of well-bedded submarine volcanoclastic rocks, ranging from tuffaceous volcanic siltstones characteristic of the lower part, to coarse volcanic conglomerate and laharic breccias in the upper part.*

*The AU occurrence is centred on the main gold showing, a small stripped, drilled and trenched area just off a gravel road south of Quilchena Creek (Assessment Reports 5766, 16008). This and most of the surrounding area is underlain by andesitic to dacitic tuff, cherty tuff, black argillite, and volcanic sandstone and siltstone. The rocks are strongly fractured in a variety of orientations. Bedding in the tuff has been measured to strike 060 degrees and dip 54 degrees northwest, but it varies.*

*About 1 kilometre to the north of the main showing is biotite hornblende granodiorite and quartz monzonite of the Early Jurassic Pennask batholith, and about 500 metres to the west are porphyritic andesitic and basaltic volcanic rocks (Bulletin 69; Assessment Report 16008). Small bodies of diorite and micromonzonite, possibly subvolcanic, are quite common in the area, on the surface and in drill*



*core (Assessment Report 16008). Some of the volcanics have sustained carbonate and epidote alteration, and locally they have pervasive hematite (Assessment Report 16008).*

*Maps 41-1989, 1713A). This belt has been of major economic interest because of its potential for porphyry copper-gold mineralization.*

**Geology: Property Area (cont'd)****BREW** showing (Alkalic porphyry Cu-Au; Subvolcanic Cu-Ag-Au; As-Sb)

MINFILE 092HNE275

Nine 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 mineralised 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.*

**SNOW** showing (Porphyry Cu +/- Mo +/- Au; Polymetallic veins Ag-Pb-Zn+/-Au)

MINFILE 092HNE292

Two kilometres southwest

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

*A drillhole intersected minor copper mineralization in weakly to moderately chloritized granite of the Early Jurassic Pennask batholith.*

**WAVE 1** anomaly (Polymetallic veins Ag-Pb-Zn+/-Au)

MINFILE 092HNE311

Seven kilometres east-southeast

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

**WAVE 2** anomaly (Polymetallic veins Ag-Pb-Zn+/-Au)

MINFILE 092HNE312

Eight kilometres east-southeast

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

## **GEOLOGY: PROPERTY**

As indicated by the BC government supported MapPlace geological maps, the Property is predominantly underlain in the northeast by the Pennask granodiorite which is in contact with upper Triassic Nicola Group of basaltic volcanic rocks (uTrNE) to the south and the southwest. The volcanics are partially overlain by a central capping of upper Triassic Nicola Group mudstone, siltstone, shale, and fine clastic sedimentary rocks (uTrNsf). In the southern corner, a localized stock intrudes the volcanics and which is partially capped by Pleistocene to Holocene volcanics.

## **MINERALIZATION: PROPERTY AREA**

The mineralization on some of the more significant mineral MINFILE mineral anomalies, showings, prospects, and past producers in the Toni 1039173 Claim Group area are reported as follows. The distance is relative to the Toni 1039173 claim, the subject of the geological and the geophysical surveys.

**MAL** prospect (Cu skarn; Fe skarn; Au skarn)

MINFILE 092HNE002

Six kilometres southwest

*Copper mineralization is concentrated in the skarn zones. Pyrite and subordinate magnetite and chalcopyrite are associated with quartz-calcite veins, or are disseminated in variable amounts (Assessment Report 1586). Chalcocite and malachite are also present at the main showing (Assessment Report 8453). Finely disseminated pyrite is common in most rocks, particularly the argillaceous rocks (Assessment Reports 1718, 9590). A zone of massive, medium-grained pyrite between 1 and 13 metres thick, in altered volcanic rocks, has been found below the surface by diamond drilling; the paragenesis is epidote, magnetite, pyrite (Assessment Report 9590).*

*Copper values appear to be erratic. In early diamond drilling, the best result reported is 1.62 per cent copper over 6 metres; this section contained at least 50 per cent magnetite (Assessment Report 449, page 6). More recent diamond drilling has resulted in generally low metal values, although one split core sample assayed 0.37 per cent copper and 6.8 grams per tonne silver (Assessment Report 9590).*

*More recent diamond drilling has resulted in generally low metal values, although one split core sample assayed 0.37 per cent copper and 6.8 grams per tonne silver (Assessment Report 9590). A grab sample from the main trenched and drilled area assayed 0.34 gram per tonne gold, 3.4 grams per tonne silver, and 0.2 per cent copper (Assessment Report 8453).*

*The high magnetite and pyrite content of the rocks at this occurrence is reflected in significant magnetic and induced polarization anomalies, respectively, over the mineralized zones (Assessment Reports 1586, 8453).*

**BRENDA** past producer (Porphyry Cu +/- Mo +/- Au)

MINFILE 092HNE047

Twenty eight kilometres southeast

*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.*

**Mineralization: Property Area (cont'd)****Brenda past producer (cont'd)**

*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.*

*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.*

**Mineralization: Property Area (cont'd)****Brenda past producer (cont'd)**

*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.*

*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).*

*In 2008, drilling returned up to 488.5 parts per million copper over 1.0 metre (Assessment Report 30340).*

**HN-WEN prospect (Volcanic redbed Cu)**

MINFILE 092HNE058

Six kilometres southwest

*The mineralization is restricted to the volcanics. It is exposed in 3 adits and at least 8 trenches, and is marked by alteration, mainly epidotization, silicification, carbonatization, moderate chloritization and local pyritization. Chalcopyrite is the only copper mineral: it is disseminated, or concentrated in quartz and calcite veins and veinlets between 0.3 and 30 centimetres thick, usually about 8 centimetres thick.*

**Mineralization: Property Area (cont'd)****HN-WEN prospect (cont'd)**

*Pyrite, pyrrhotite and rare specular hematite are also present in the veins. Locally oxidation has produced abundant malachite, azurite and limonite.*

*The mineralized zone measures 760 by 90 metres and has a depth of about 75 metres. Diamond drilling indicates that it strikes 160 degrees and dips vertically or steeply east, so it is not parallel to the volcanic-sedimentary contact, indicating that the contact is not the controlling factor.*

*Rather, the veins hosting the mineralization are structurally controlled by numerous faults and fractures which consistently strike 160 degrees and dip 85 degrees east (Assessment Report 4230). Incidentally, the Echo occurrence (092HNE059) lies on this trend, 2 kilometres to the north-northwest, and the mineralization may also extend south-southeast of the HN-WEN occurrence (Assessment Report 4230).*

*Some significant copper and silver values have been obtained from the workings and diamond drill core. A 1.5-metre chip sample from Adit Number 1 was assayed at 4.39 per cent copper, 92.6 grams per tonne silver, and 0.7 gram per tonne gold (Assessment Report 4230).*

*A grab sample from here was assayed at 4.84 per cent copper, 46.6 grams per tonne silver and 0.7 gram per tonne gold (Assessment Report 4230). Both samples were from oxidized material and may not be representative of grade throughout the deposit (Assessment Report 4230). A drill core sample (hole HNS 72-1) assayed 1.12 per cent copper and 3.4 grams per tonne silver (Assessment Report 4230).*

*The average grade of the whole deposit has been estimated at 0.08 per cent copper, with a generally low gold and silver content (Assessment Report 4230).*

Sookochoff (2011) reports that recent exploration work at the HN-WEN by Victory Resources resulted in the delineation of the Adit 1 east-west trending quartz vein within the 90 metre wide northwesterly striking shear zone. The Adit 1 vein occurs within the Nicola volcanics 50 metres north of the W96-1 drill hole where a mineral hosting quartz vein was intersected from which assays reportedly average 16.578 gm/t Au, 18.185 gm/t Ag, and 0.75% Cu over 6.55 metres of core or 3.81 metres of 28.43 g/t Au and 0.98% Cu.

**ECHO showing (Volcanic redbed Cu)**

MINFILE 092HNE059

Five kilometres southwest

*Chalcopyrite and malachite are present in trenches and open cuts in volcanics over an area 1000 by 800 metres. Chalcopyrite is disseminated, or concentrated in quartz-calcite veins (Assessment Report 1586).*

*The Echo occurrence lies directly along the strike of prominent fractures which host significant copper-silver mineralization at the HN-WEN occurrence (092HNE058), 2 kilometres to the south-southeast (Assessment Report 4230).*

**BIG SIOUX past producer (Volcanic redbed Cu; Alkalic porphyry Cu-Au)**

MINFILE 092HNE073

Twelve kilometres west-southwest

*The overall extent of the mineralization has not been determined, although diamond drilling has demonstrated that minor pyrite, pyrrhotite and chalcopyrite, disseminated or associated with quartz or calcite fracture veinlets, does persist below the surface (Assessment Reports 11241, 16008).*

*Gold values in the area are generally low, but high values have been obtained from trench sampling and drill core at the main showing. Significant gold assays in chip samples range from 6.8 grams per tonne over 5.1 metres to 10.8 grams per tonne over 4.9 metres (Assessment Report 16008).*

**Mineralization: Property Area (cont'd)****BOOMERANG** showing (Volcanic redbed Cu)

MINFILE 092HNE087

Fourteen kilometres southwest

*Chalcocite, bornite and malachite occur along fractures in fine-grained diorite (microdiorite) or dioritized volcanics of the Upper Triassic Nicola Group (Central belt, Bulletin 69). The diorite is chloritized and occasionally brecciated. Where brecciated, blebs and stringers of bornite, chalcocite and malachite occur between the fragments. Abundant disseminated magnetite, calcite and epidote are reported to accompany the brecciation. The mineralized zone appears to trend northwest. Three of five rock samples analysed 0.183 to 2.34 per cent copper, 0.4 to 7.9 grams per tonne silver and 0.016 to 0.980 gram per tonne gold (Assessment Report 14141, Drawing 5b, samples 2003, 2205, 2563).*

*A selected sample assayed 14.7 per cent copper, 4.1 grams per tonne gold and 74.1 grams per tonne silver (Minister of Mines Annual Report 1901, page 1183).*

*Similar mineralization occurs 350 metres northwest, where chalcocite, malachite and azurite form fracture coatings in several narrow, north-striking shears in chloritized diorite.*

*Additional mineralization is found 200 metres west of the shears, where malachite and chalcocite occur at the intersections of shears striking 060 and 150 degrees in red andesite breccia.*

**BUNKER HILL** showing (Volcanic redbed Cu)

MINFILE 092HNE089

Fifteen kilometres southwest

*A rock sample analysed 0.391 per cent copper (Assessment Report 14141, Figure 5b, sample 88603).*

*Copper mineralization is also found 470 metres east-southeast of the trenches, in red volcanic breccia and lahar deposits. Four rock samples analysed 0.229 to 0.857 per cent copper (Assessment Report 14141, Figure 5b, samples 2211, 2285, 2286, 2289).*

**ELK** Past Producer (Intrusion-related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn

+/-Au; Au-quartz veins)

MINFILE 092HNE096

Seventeen kilometres south

*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. 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 drillholes. 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).*

**Mineralization: Property Area (cont'd)****Elk past producer (cont'd)**

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 downdip 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.

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.



**Mineralization: Property Area (cont'd)****Elk past producer (cont'd)**

Reserves are based on results from 107 drillholes at 50-metre grid spacings along 804 metres of strike length to 304 metres down dip. 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).

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). A total of 994 metres of ramp access and three development levels exist underground.

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.

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 down dip 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. 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.*

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 51,460 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. 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.

In October 2013, Gold Mountain had 500 tons of 13.8 gram gold per tonne ore, taken from the Elk mineral deposit, and processed at a custom mill; a return of \$250,408.00 was generated.

**AU-WEN** prospect (Intrusion related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn+/-Au)

MINFILE 092HNE144

Nine kilometres southwest

*Pyrite, pyrrhotite, chalcopyrite and arsenopyrite are disseminated sporadically in the tuffaceous rocks and argillite, up to about 1 per cent, and also occur in fractures (Assessment Reports 11241, 16008). Native gold is associated with the sulphides in narrow quartz-filled fractures in these rocks (Assessment Report 16008). Minor malachite occurs in volcanics.*

*The overall extent of the mineralization has not been determined, although diamond drilling has demonstrated that minor pyrite, pyrrhotite and chalcopyrite, disseminated or associated with quartz or calcite fracture veinlets, does persist below the surface (Assessment Reports 11241, 16008).*

**Mineralization: Property Area (cont'd)****Au Wen prospect (cont'd)**

Gold values in the area are generally low, but high values have been obtained from trench sampling and drill core at the main showing. Significant gold assays in chip samples range from 6.8 grams per tonne over 5.1 metres to 10.8 grams per tonne over 4.9 metres (Assessment Report 16008).

Grab and select samples assayed between 14.4 and 91 grams per tonne gold (Assessment Reports 5766, 16008). The best drill core intersection assayed 4.97 grams per tonne gold over 1.5 metres (Assessment Report 16008).

Copper is associated with the gold mineralization; one rock sample from the main trench yielded 0.29 per cent copper (Assessment Report 7293). Another sample yielded 26 grams per tonne silver and 0.14 per cent lead (Assessment Report 7293). Silver in diamond drill core is generally under 1 gram per tonne (Assessment Report 11241).

**BREW showing (Alkalic porphyry Cu-Au; Subvolcanic Cu-Ag-Au; As-Sb)**

MINFILE 092HNE275

Nine 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).

**SNOW showing (Porphyry Cu +/- Mo +/- Au; Polymetallic veins Ag-Pb-Zn+/-Au)**

MINFILE 092HNE292

Two kilometres southeast

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.

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).

**WAVE 1 anomaly (Polymetallic veins Ag-Pb-Zn+/-Au)**

MINFILE 092HNE311

Seven kilometres east-southeast

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 metre in diameter, returned up to 8230 parts per billion gold, 249.3 parts per million silver, 844 parts per million copper and 4091 parts per million lead (Assessment Report 22864).

**WAVE 2 anomaly (Polymetallic veins Ag-Pb-Zn+/-Au)**

MINFILE 092HNE312

Eight kilometres east-southeast

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

The structural analysis was performed on a MapPlace DEM image hillshade map of Tenure 1039173 by viewing of the map and marking the lineaments, or indicated structures, thereon. A total of 57 lineaments were marked (Figure 5), compiled into a 10 degree class interval, and plotted as a rose diagram as indicated on Figure 6.

The centre of the work area is at 5,542,798N, 696,385E (NAD 83).

Figure 5. Indicated Structures on Tenure 1039173

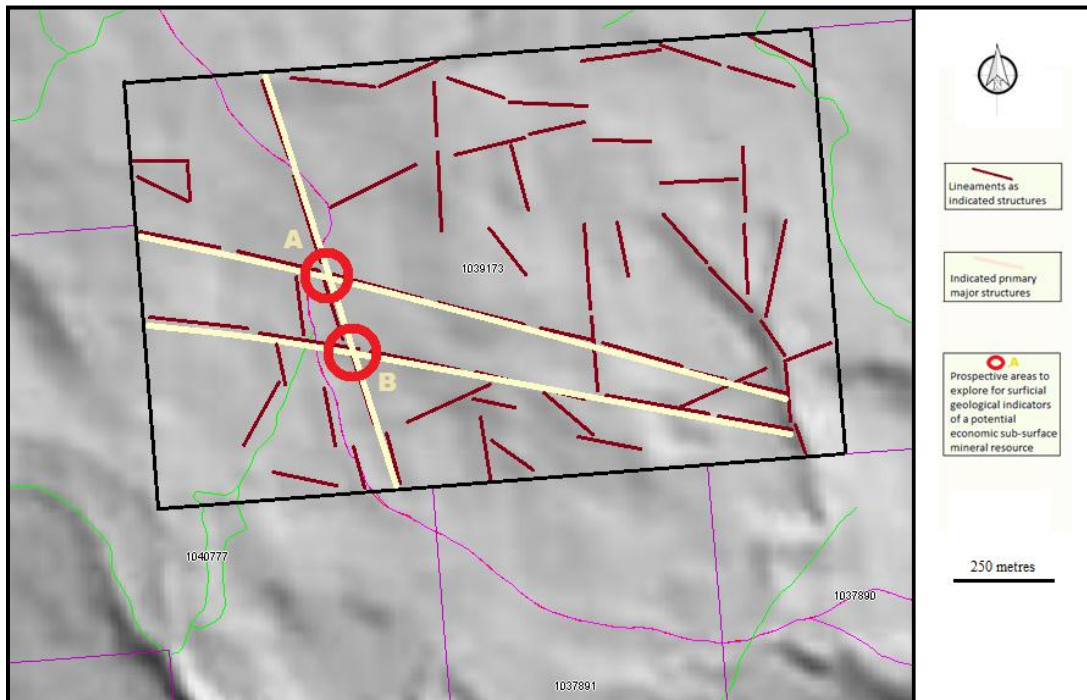
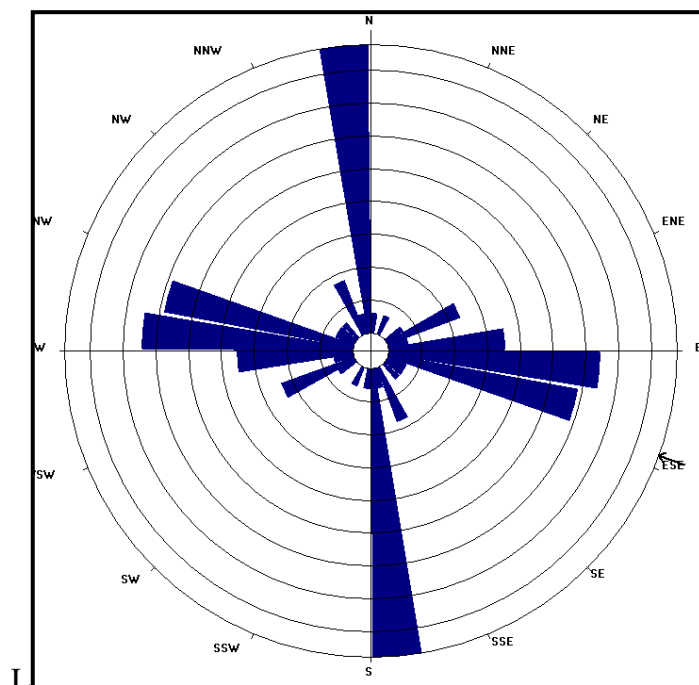


Figure 6. Rose Diagram from lineaments of Figure 5



*Structural Analysis (cont'd)*

## STATISTICS

Axial (non-polar) data

No. of Data = 57

Sector angle = 10°

Scale: tick interval = 3% [1.7 data]

Maximum = 26.3% [15 data]

Mean Resultant dir'n = 110-290

[Approx. 95% Confidence interval = ±30.3°]  
(valid only for unimodal data)

Mean Resultant dir'n = 110.0 - 290.0

Circ.Median = 105.0 - 285.0

Circ.Mean Dev.about median = 34.4°

Circ. Variance = 0.30

Circular Std.Dev. = 48.07°

Circ. Dispersion = 3.77

Circ.Std Error = 0.2572

Circ.Skewness = -3.36

Circ.Kurtosis = -1.86

kappa = 0.50

(von Mises concentration param. estimate)

Resultant length = 13.95

Mean Resultant length = 0.2448

'Mean' Moments: Cbar = -0.1876; Sbar = -0.1573

'Full' trig. sums: SumCos = -10.6905; Sbar = -8.9638

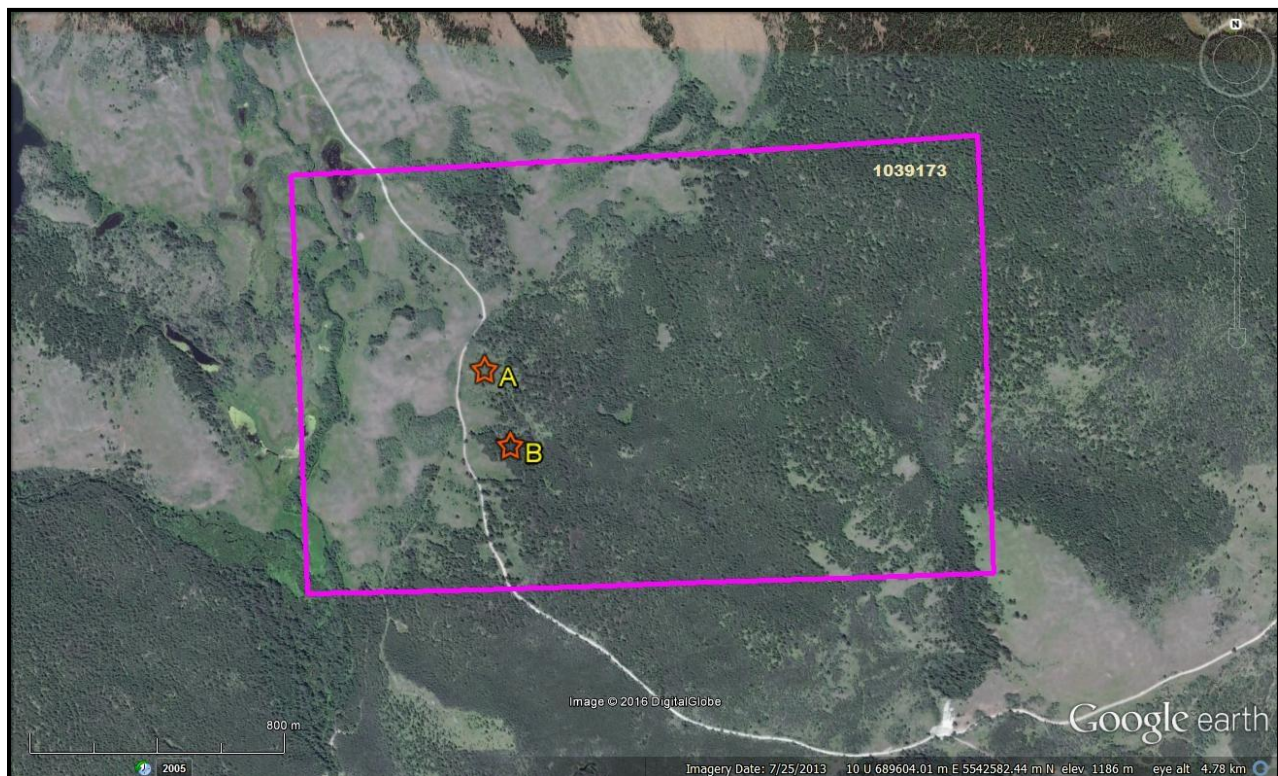
Mean resultant of doubled angles = 0.5482

Mean direction of doubled angles = 179

(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'

**Figure 7. Cross-Structural locations (Figure 5) on Google Earth**  
(Base map from MapPlace and Google Earth)



Structural Analysis (cont'd)

Table II. Approximate location of cross-structures  
(UTM-Zone 10 NAD 83)

Area	UTM East	UTM North	Elevation (metres)
A	699,076	5,542,670	1,167
B	699,161	5,542,423	1,180

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.

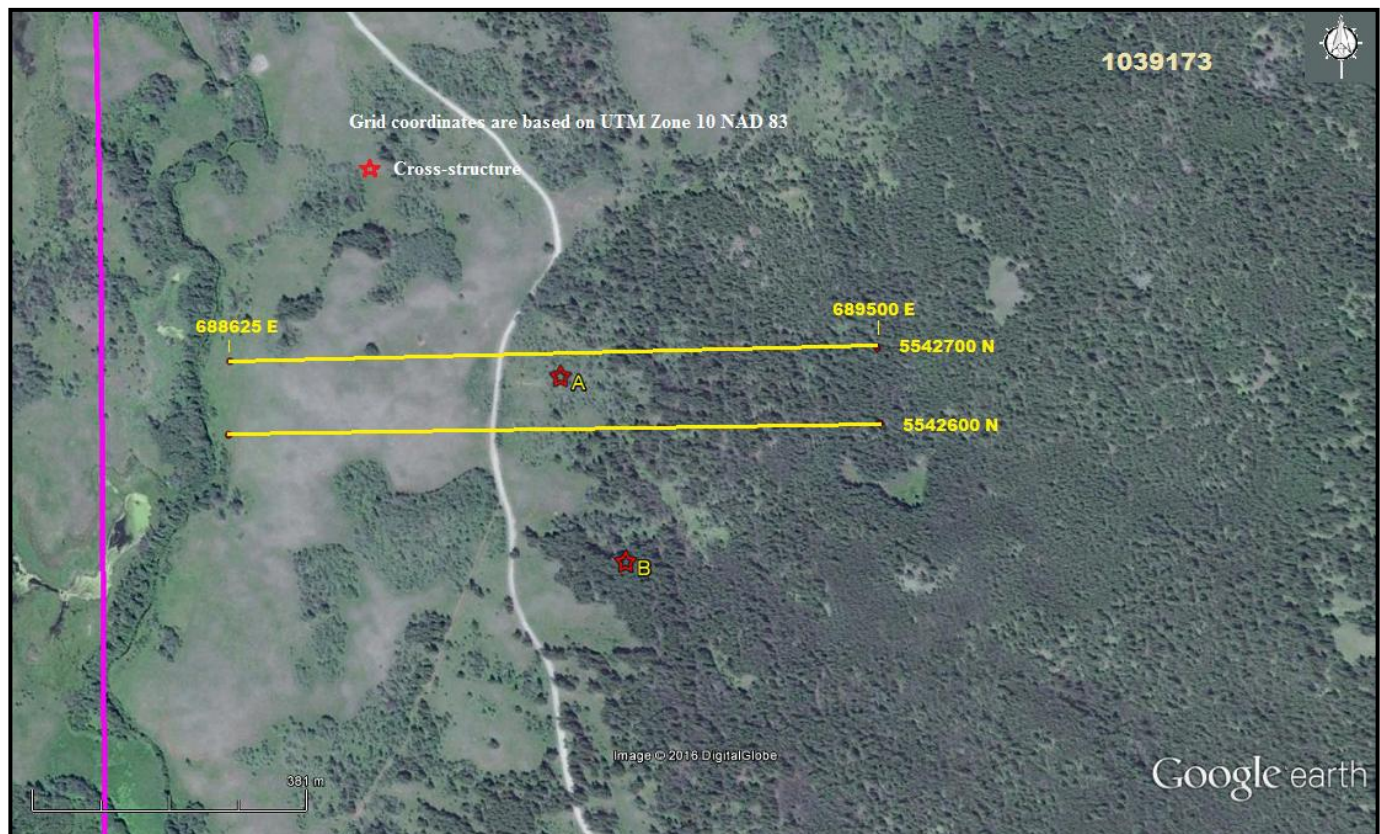
b) Theory

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 as a reconnaissance tool for mapping geologic lithology and structure since different rock types have different background amounts of magnetite and/or pyrrhotite.

d) Data Reduction

The field results were initially input to an Excel spreadsheet whereupon a Surfer 31 program was utilized to create the maps exemplified herein as Figures 9, 10, & 11.

Figure 8. Magnetometer Grid Index Map  
(Base from MapPlace)



Magnetometer Survey (cont'd)

Figure 9 .Magnetometer Survey Grid & Raw Data  
(Base from MapPlace)

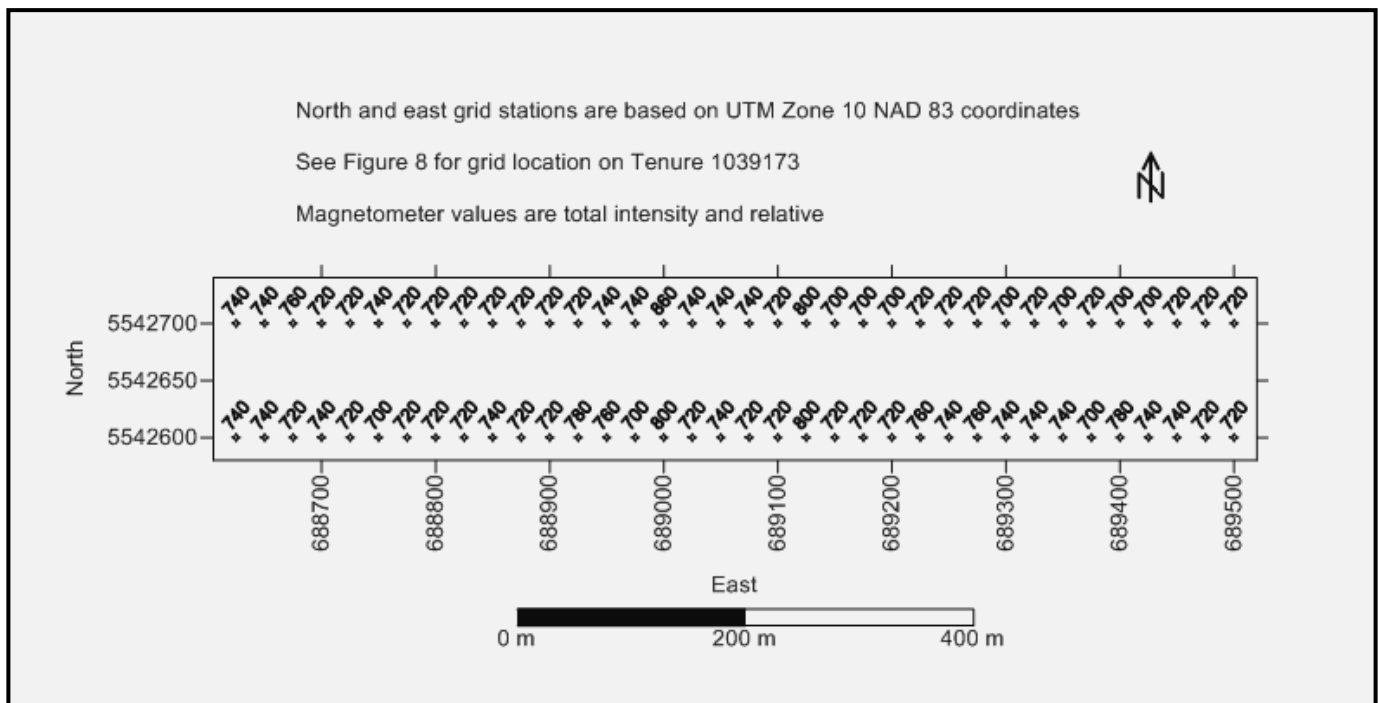
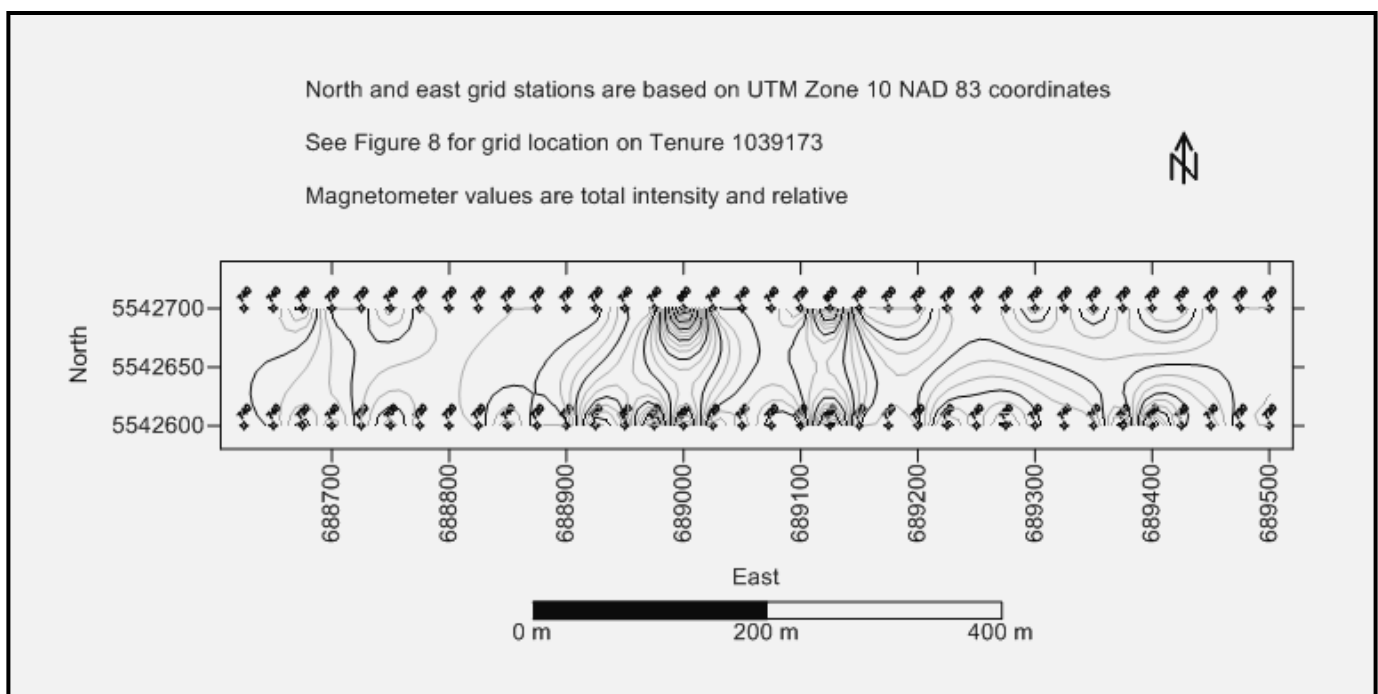


Figure 10. Magnetometer Survey Contour Map



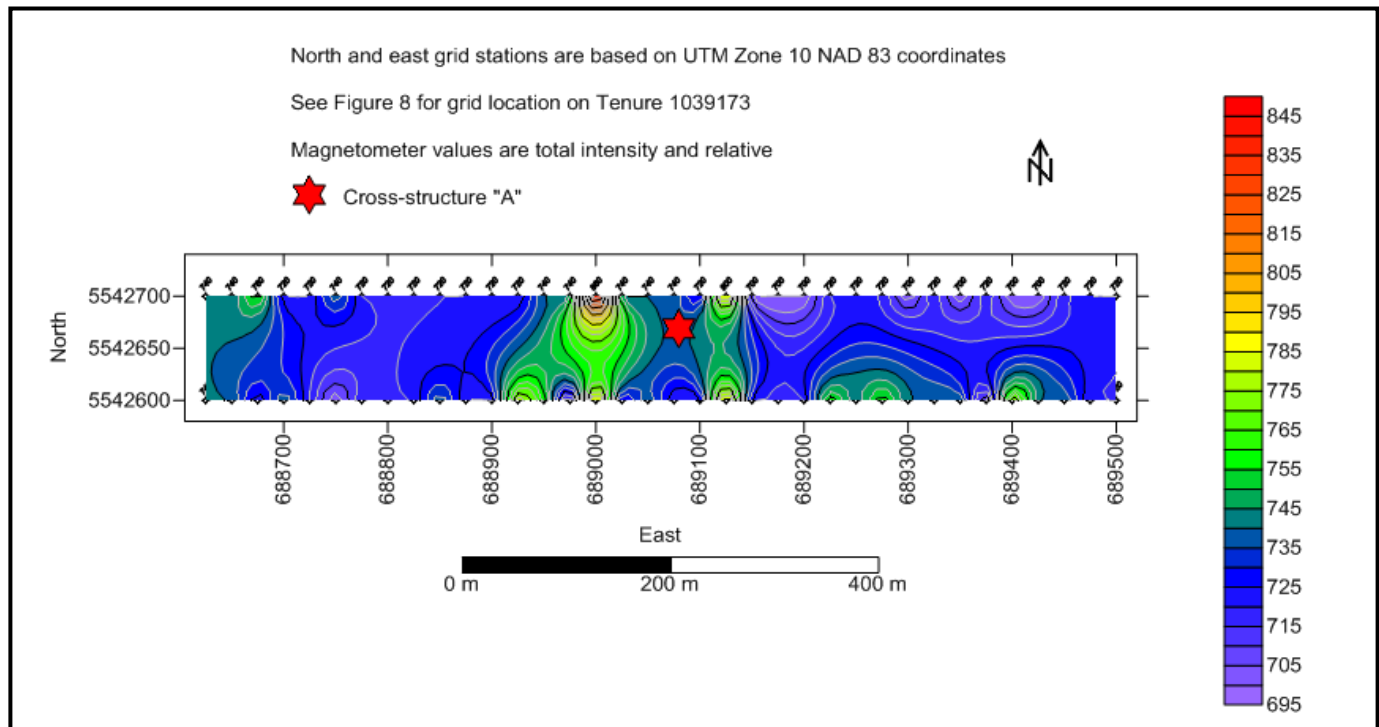
**Magnetometer Survey (cont'd)****e) Results**

The localized magnetometer survey which covered granodiorites of the Pennask Batholith indicated a 200 metre wide central northerly trending zone of relative magnetometer high's which is bisected by a 50 to 75 metre wide zone of a relative background to sub-anomalous magnetometer LO.

The approximate location of cross-structure "A" which was covered by the magnetometer survey, is indicated within this magnetometer LO.

The anomalous mag LO's are spotty without any obvious trend.

**Figure 11. Magnetometer Survey Coloured Contour Map**

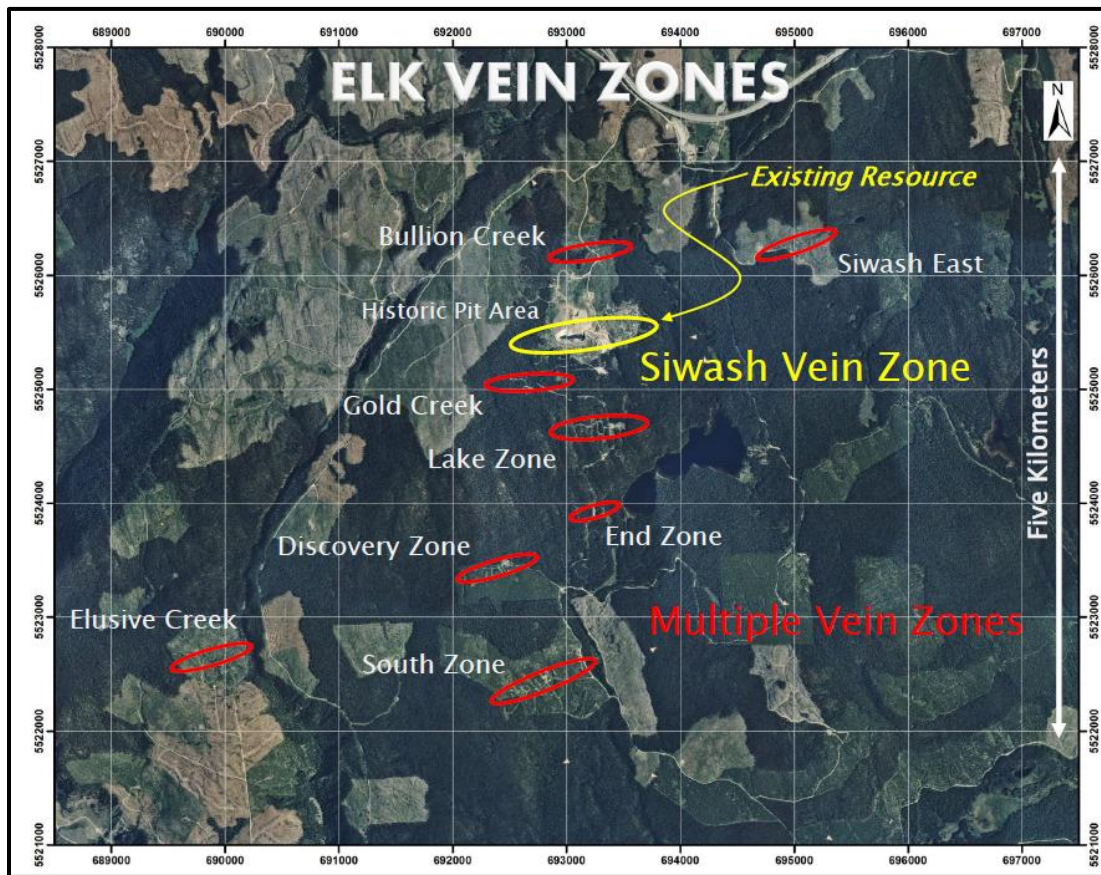
**INTERPRETATION & CONCLUSIONS**

The Structural Analysis of Tenure 1039173 indicated three cross-structural locations that would be prime prospective areas to explore for surficial geological indicators of a potential economic sub-surface mineral resource.

These locations would be the centre of maximum brecciation and 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 should 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.

This structural/mineral relationship was shown at the Brenda and the Elk mineral deposits. At Brenda, 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.



**Interpretation & Conclusions (cont'd)****Figure 12. Elk Property of Gold Mountain Mining Corporation showing the north trending vein zones as an indicated mineral control by the north trending Elk Fault***(Map from Gold Mountain Mining Corporation 2012)*

At the Elk, the structural controlling relationship with the intersection of faults is shown by the extensive north-south trending Elk fault intersected by numerous east-northeasterly trending structures. The cross-structural mineral controlling feature is obvious as the mineral zones are mostly adjacent to the Elk Fault and related to the cross fault intersection as shown in Figure 8.

Just north of the Elk property on, the Brew (*Minfile 092HNE275*) fault zone mineral zones are also controlled by the Elk structure and northwesterly associated structures. The Brew fault is exposed along the Coquihalla Highway for 600 metres and is indicated to offset the Elk fault in a local cross-cutting relationship where sections of the Brew fault zone are strongly mineralized with massive veins, narrow stringers and occasional disseminations of marcasite, pyrite and pyrrhotite.

The Elk structure is indicated topographically northward over a distance of at least 20 kilometres from south of the Elk mineral zones northward to the SNOW (*Minfile 092HNE292*) mineral showing, where a drill hole intersected minor copper mineralization in weakly to moderately chloritized granite within the Pennask batholith. The Snow mineral showing is indicated near the intersection of the northerly trending Elk fault and the northwesterly trending Snow fault.

***Interpretation & Conclusions (cont'd)***

In the magnetometer survey, the indicated correlative mag LO with cross-structure "A" could reflect dynamically or hydrothermally produced alteration zone associated with the structures. The northerly configuration of the 50 metre wide sub-anomalous zone at 689075E could reflect only the northerly trending structure of cross-structure "A". The actual location of cross-structure "A" may be some 50 to 75 metres north at 5542750N where the west-northwesterly structure could be reflected by the anomalous mag LO at 5542700N 689175E and the configuration of the mag LO to the east-southeast.

Thus, the cross-structure "A" area should be explored for surficial geological signatures of a potential economic sub-surface mineral resource.

Respectfully submitted  
Sookochoff Consultants Inc.



Laurence Sookochoff, PEng

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**SELECTED REFERENCES**

**Gold Mountain Mining Corporation** – Corporate Presentation January 2012.  
News Release. October 31, 2013

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

**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.

**Kierans, M.D.**, 1972: Mineral Exploration Report on the Hill Group, Wart Mountain Area for Nitracell Canada Ltd. AR 4,230.

**MapPlace** – Map Data downloads

092HNE002 – MAL

092HNE047 – BRENDA

092HNE058 – HN-WEN

092HNE059 – ECHO

092HNE060 – TOE

092HNE096 – ELK

092HNE257 – MALACHITE 7

092HNE292 – SNOW

092HNE311 – WAVE 1

092HNE312 – WAVE 2

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

**Mohebi, A. et al** - Controls on porphyry Cu mineralization around Hanza Mountain, south-east of Iran: An analysis of structural evolution from remote sensing, geophysical, geochemical and geological data. Ore Geology Reviews. Volume 69. September 2015, Pages 187-198.

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**Pareta, K., Pareta, U.** – Geomorphological Interpretation Through Satellite Imagery & DEM Data. American Journal of Geophysics, Geochemistry and Geosystems. Vol 1, No. 2 , pp19-36.

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**Sookchoff, L.** – Geological Assessment Report on Tenure 833943 of the Toni 833943 Claim Group for Victory Resources Corporation. November 24, 2011. AR 32,520.

**Sookchoff, L.** – Geological Assessment Report on Tenure 898133 of the Toni 898133 Claim Group for Victory Resources Corporation. December 5, 2014. AR 35,154.

**Sookchoff, L.** – Geological & Geophysical Assessment Report on Tenures 591361 & 520757 of the Toni 591361 Claim Group for Victory Resources Corporation. January 23, 2016.

**Sookchoff, L.** – Geological & Geophysical Assessment Report on Tenure 1040735 of the Tom Cat 1040735 Claim Group for Sierra Iron Ore Corp. January 5, 2016.

**STATEMENT OF COSTS**

Work on Tenure 1039173 was completed from October 8, 2015 to October 14, 2015 to the value as follows:

**Structural Analysis**

Laurence Sookochoff, P Eng. 3 days @ \$ 1,000.00/day ----- \$ 3,000.00

**Magnetometer Survey**

Christopher Delorme & Guy Delorme

October 13-14, 2015

Four man days @ \$300.00 per day ----- 1,200.00

Truck rental, kilometre charge, fuel, room & board,

mag rental ----- 1,312.30

\$ 5,512.30

Maps ----- 750.00

Report ----- 3,500.00

\$ 9,762.30

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**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 forty-nine 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.
- 6) I am a director of Victory Resources Corporation.



Laurence Sookochoff, P. Eng.

Appendix I  
**Magnetometer Data**

		<b>E5574623 T1039173</b>				
East	North	Mag		East	North	Mag
689500	5542600	720		689500	5542700	720
689475	5542600	720		689475	5542700	720
689450	5542600	740		689450	5542700	720
689425	5542600	740		689425	5542700	700
689400	5542600	780		689400	5542700	700
689375	5542600	700		689375	5542700	720
689350	5542600	740		689350	5542700	700
689325	5542600	740		689325	5542700	720
689300	5542600	740		689300	5542700	700
689275	5542600	760		689275	5542700	720
689250	5542600	740		689250	5542700	720
689225	5542600	760		689225	5542700	720
689200	5542600	720		689200	5542700	700
689175	5542600	720		689175	5542700	700
689150	5542600	720		689150	5542700	700
689125	5542600	800		689125	5542700	800
689100	5542600	720		689100	5542700	720
689075	5542600	720		689075	5542700	740
689050	5542600	740		689050	5542700	740
689025	5542600	720		689025	5542700	740
689000	5542600	800		689000	5542700	860
688975	5542600	700		688975	5542700	740
688950	5542600	760		688950	5542700	740
688925	5542600	780		688925	5542700	720
688900	5542600	720		688900	5542700	720
688875	5542600	720		688875	5542700	720
688850	5542600	740		688850	5542700	720
688825	5542600	720		688825	5542700	720
688800	5542600	720		688800	5542700	720
688775	5542600	720		688775	5542700	720
688750	5542600	700		688750	5542700	740
688725	5542600	720		688725	5542700	720
688700	5542600	740		688700	5542700	720
688675	5542600	720		688675	5542700	760
688650	5542600	740		688650	5542700	740
688625	5542600	740		688625	5542700	740