**BC Geological Survey** 

Assessment Report

34593

# VICTORY RESOURCES CORPORATION

(Owner & Operator)

GEOLOGICAL ASSESSMENT REPORT (Event 5458240)

## **STRUCTURAL ANALYSIS**

(Work done from June 14, 2013 to June 17, 2013)

Work done on

**Tenure 940390** 

of the six claim

Toni 940390 Claim Group

of the

89 claim 40,526 hectare

## **TONI PROPERTY**

Nicola Mining Division

BCGS Map 092H.099/092I.009

**Centre of Work** 

5540733N, 699810E

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## SUMMARY

The six claim Toni 940390 Claim Group of the TONI 85 claim, 40,526 hectare Property covers an area of 2742 hectares located 222 kilometres northeast of Vancouver, 38 kilometres southeast of Merritt, and sixteen kilometres north of the past productive Elk/Siwash property in south-central British Columbia.

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 which generated a return of \$250,408.00

The structural controls to the eight generally northerly aligned mineralized zones of the Elk property are indicated as controlled by the major northerly Elk (Siwash) fault and by a transverse easterly to northeasterly fault set.

As indicated by the BC government supported MapPlace geological maps, the Property predominantly is underlain by an intrusive stock of late Triassic to early Jurassic granodiorite (uTrJgd). The southern portion of the Property skirts a northeasterly trending contact with the Eastern facies of the Upper Triassic Nicola volcanics.

These major structures could also provide a conduit for the migration of mineralization from potentially economic mineral zones at depth to the surface where geological indicators as mineralization, mineral indicators, and/or alteration could be etched at the surface to be interpreted accordingly.

The Pennask Batholith is highly prospective for the location and exploration of many different geological features on the Toni Property which can lead to the discovery of an economic resource. These include:

- the location of comparable stocks to the formerly productive Brenda (*Minfile 092HNE047*) deposit hosted by the Brenda stock of the Pennask intrusive.
- the exploration of the Snow (*Minfile 092HNE292*) mineral showing where the copper mineralization which occurs along fractures and as disseminations in the Pennask granite may be a surficial indicator of an underlying economic porphyry Cu +/- Mo +/- Au or a polymetallic vein Ag-Pb-Zn+/-Au mineral resource.
- the exploration of the Wave 1 (*Minfile 092HNE311*) anomaly associated with the Pennask intrusive where the quartz vein float containing disseminated pyrite and limonite with occasional specks of chalcopyrite, galena or sphalerite, could be surficial indicators to a polymetallic vein Ag-Pb-Zn+/-Au mineral resource.

From the results of the Tenure 940390 Structural Analysis there are four delineated areas that are prospective areas for surficial geological indicators of a potential sub-surface mineral resource.

Excluding other variable geological conditions, the structures are essential in the localization of potentially economic porphyry and/or quartz vein hosted mineralization within the Pennask intrusive on the Property.

#### **INTRODUCTION**

In June 2013 a Structural Analysis was completed Tenure 940390 of the six claim Toni 940390 claim group ("Property") of Victory's 89 claim 40,526 hectare (100,141 acre) TONI property. The purpose of the program was to delineate potential structures which may be integral in geological controls to potentially economic mineral zones that may occur on Tenure 940390 or other claims of the Toni 940390 claim group.

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 six claims covering an area of 2742.7642 hectares. Particulars are as follows:

<u>Tenure</u> <u>Number</u>	<u>Type</u>	Claim Name	Good Until	<u>Area</u> (ha)
<u>589925</u>	Mineral	TONI 24	20140430	519.7367
<u>909449</u>	Mineral		20140430	394.8686
<u>940389</u>	Mineral	TONI 109	20140430	436.3715
<u>940390</u>	Mineral	TONI 110	20140430	436.2555
<u>980252</u>	Mineral	V4150	20140430	498.6036
<u>980254</u>	Mineral	V4152	20140430	456.9283

#### Table I: Tenures of Toni 940390 Claim Group

\*Upon the approval of the assessment work filing, Event Number 5458240.

#### **Property Description and Location** (cont'd)

#### Location

The Property is located within BCGS Map 092H.099/092I.009 *o*f the Nicola Mining Division, 222 direct kilometres east-northeast of Vancouver, 38 direct kilometres southeast of Merritt and 16 kilometres north of the ELK (Siwash) past productive deposit of Gold Mountain Resources. The centre of the work area is at 5540733N, 699081E (NAD 83).

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 Highway for 27 kilometres to the Elkhart Lake Junction, thence northerly for 14 kilometres via a graveled and forestry road to the southern boundary of Tenure 940389 of the Toni 940390 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  $35^{\circ}$  and average  $25^{\circ}$ C with the winter temperatures reaching a low of  $-10^{\circ}$  and averaging  $8^{\circ}$ . 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.

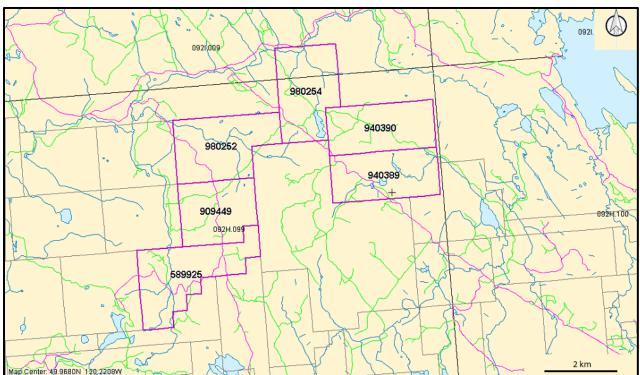
#### Physiography

Tenure 940390 covers a relatively flat area of forest cover with patches of logged areas. Relief is in the order of 80 metres from an elevation of 1,430 metres near the southwest corner to 1,510 metres at the northwest 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 940390. A 500Kv power line, twinned with a 150Kv power line, trends southeasterly through the northeast portion of the Property.

#### Figure 3. Claim Map – Toni 940390 Claim Group



(from MapPlace)

## HISTORY: PROPERTY AREA

The history on some of the more significant mineral MINFILE reported occurrences, prospects, and past producers in the Toni 940390 Claim Group area are reported as follows. The distance from the Toni 940390 Claim Group is relative to Tenure 940390, which is the subject of the structural analysis.

**MAL** prospect (Cu skarn; Fe skarn; Au skarn) MINFILE 092HNE002 Seventeen kilometres west-southwest

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 Nineteen 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 x % Mo)]. The mine officially closed June 8, 1990.

**HN-WEN** prospect (Volcanic redbed Cu) MINFILE 092HNE058 Sixteen kilometres west-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 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.

**PAYCINCI** prospect (Volcanic redbed Cu) MINFILE 092HNE084

Twenty-six kilometres southwest

The Cincinnatti deposit was first explored by the Bates brothers in the early 1900s. A number of trenches, and one adit 120 metres long, were excavated between 1899 and 1913. Payco Mines Ltd. and Alscope Consolidated Ltd. conducted geological and geophysical surveys, trenching and diamond and percussion drilling between 1963 and 1967. An additional 15 holes totalling 1000 metres were drilled by Gold River Mines and Enterprises Ltd. in 1973 and Sienna Developments Ltd. in 1979. The deposit was most recently sampled by Pacific Copperfields Ltd. in 1992.

In 1998, Christopher James Gold Corp. optioned the property. Reserves are estimated at 1.8 million tonnes grading 1 per cent copper (Tom Schroeter, 1998).

History: Property Area (cont'd)

**ELK** past Producer (Intrusion-related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn +/-Au; Au-quartz veins) MINFILE 092HNE096 Sixteen kilometres south-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). 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.

**SNOW** showing (Porphyry Cu +/- Mo +/- Au; Polymetallic veins Ag-Pb-Zn+/-Au) MINFILE 092HNE292 Seven 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.

**KING 6** showing (Intrusion-related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn+/-) MINFILE 092HNE297

Eleven kilometres southwest

The King 6 showing occurs along the north side of the Coquihalla Highway (Okanagan Connector), 2.6 kilometres north-northwest of Culmination Point and 7.4 kilometres west of the summit of Pennask Mountain.

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

## **HISTORY: PROPERTY**

**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 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 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 significant mineral MINFILE reported occurrences, prospects, and past producers in the Toni 940390 Claim Group area are reported as follows. The distance from the Toni 940390 Claim Group is relative to Tenure 940390, which is the subject of the structural analysis.

MAL prospect (Cu skarn; Fe skarn; Au skarn) MINFILE 092HNE002 Seventeen kilometres west-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 volcaniclastic 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 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 Nineteen kilometres southeast

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.

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

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.

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.

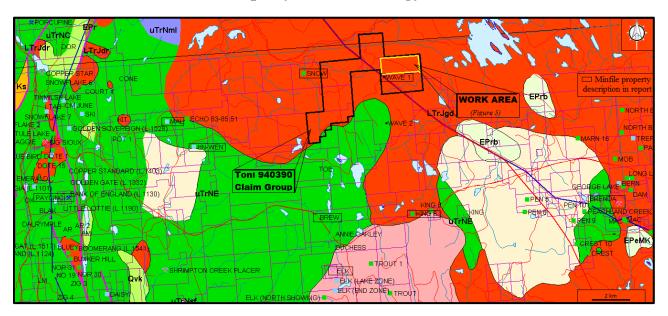
**HN-WEN** prospect (Volcanic redbed Cu) MINFILE 092HNE058 Sixteen kilometres west-southwest Toni 940390 Claim Group

Geology: Property Area (cont'd)

HN-WEN prospect (cont'd)

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).* 



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

## **GEOLOGY MAP LEGEND**

#### **Pleistocene to Holocene**

Qvk

Unnamed alkalic volcanic rocks

#### **Upper Triassic: Nicola Group**

## Eastern Volcanic Facies

basaltic volcanic rocks

#### uTtNsf

mudstone, siltstone, shale, fine clastic sedimentary rocks

#### uTrNMl

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

#### HN-WEN prospect (cont'd)

This assemblage mainly consists of well-bedded submarine volcaniclastic 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, fragmental rocks including tuff and breccia, and argillites (Assessment Reports 1586, 4230). The argillites are dark grey to black, well bedded, and locally limy. They are somewhat carbonaceous and pyritic. Minor rock types present include feldspar porphyry and locally lenses of diorite. About 2.5 kilometres to the northeast is the contact with the Early Jurassic Pennask batholith, a large intrusion of medium-grained granodiorite to quartz diorite.

The contact between the volcanic rocks and the argillites passes through the centre of the mineralized area. The contact is parallel to bedding, striking 130 degrees and dipping 40 degrees southwest, with the volcanic rocks on the northeast side (Assessment Report 4230).

#### **PAYCINCI** prospect (Volcanic redbed Cu) MINFILE 092HNE084

Twenty-six kilometres southwest

The deposit is located in the southern portion of an area of hilly upland situated in the centre of the Aspen Grove copper camp, known as the Fairweather Hills. 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.

Hypogene and supergene copper mineralization occurs in green laharic breccia, near the contact with red laharic breccia to the east. This mineralization consists primarily of disseminated and fracture controlled chalcocite and native copper, accompanied by lesser malachite and azurite, and minor chalcopyrite, bornite, cuprite and pyrite. Drilling indicates chalcopyrite becomes more abundant at depth at the expense of chalcocite. This mineralization is exposed along the crest and east flank of a small northerly trending ridge, over a north-south distance of 400 metres.

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

+/-Au; Au-quartz veins)

MINFILE 092HNE096

#### Sixteen kilometres south-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. 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.

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

Twelve kilometres south-southwest

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.

**SNOW** showing (Porphyry Cu +/- Mo +/- Au; Polymetallic veins Ag-Pb-Zn+/-Au) MINFILE 092HNE292 Seven 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.

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

**KING 6** showing (Intrusion-related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn+/-) MINFILE 092HNE297 Eleven kilometres southwest

A drusy quartz vein, 10 centimetres wide, cuts coarse-grained, feldspar megacrystic granite of the Middle Jurassic Osprey Lake batholith.

## **GEOLOGY: PROPERTY**

As indicated by the BC government supported MapPlace geological maps, the Property predominantly is underlain by an intrusive stock of late Triassic to early Jurassic granodiorite (uTrJgd). The southern portion of the Property skirts a northeasterly trending contact with the Eastern facies of the Upper Triassic Nicola volcanics.

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**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 significant mineral MINFILE reported occurrences, prospects, and past producers in the Toni 940390 Claim Group area are reported as follows. The distance from the Toni 940390 Claim Group is relative to Tenure 940390, which is the subject of the structural analysis.

MAL prospect (Cu skarn; Fe skarn; Au skarn) MINFILE 092HNE002 Seventeen kilometres west-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). 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 Nineteen 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. 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.

#### Mineralization: Toni 909409 Claim Group Area (cont'd)

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

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) quartzpotassium 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.

#### Mineralization: Toni 909409 Claim Group Area (cont'd)

Brenda past producer (cont'd)

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).

**HN-WEN** prospect (Volcanic redbed Cu) MINFILE 092HNE058 Sixteen kilometres west-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. Pyrite, pyrrhotite and rare specular hematite are also present in the veins. Locally oxidation has produced abundant malachite, azurite and limonite.

Sookochoff Consultants Inc.

#### HN-WEN prospect (cont'd)

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 northnorthwest, 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 significance of the Adit 1 vein is that it 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 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.

#### **PAYCINCI** prospect (Volcanic redbed Cu)

MINFILE 092HNE084

Twenty-six kilometres southwest

Hypogene and supergene copper mineralization occurs in green laharic breccia, near the contact with red laharic breccia to the east. This mineralization consists primarily of disseminated and fracture controlled chalcocite and native copper, accompanied by lesser malachite and azurite, and minor chalcopyrite, bornite, cuprite and pyrite. Drilling indicates chalcopyrite becomes more abundant at depth at the expense of chalcocite. This mineralization is exposed along the crest and east flank of a small northerly trending ridge, over a north-south distance of 400 metres.

Drill indicated reserves are 54,000 tonnes grading 0.876 per cent copper (Assessment Report 7654, page 1). Precious metal values are generally low. Six rock samples analysed 1.1 to 2.4 per cent copper, 0.005 to 0.010 gram per tonne gold and 1.3 to 5.7 grams per tonne silver (Assessment Report 14108, Figure 5, samples 2051 to 2056). One chip sample taken along a trench yielded 0.89 per cent copper over 49 metres (George Cross News Letter No. 90 (May 8), 1992).

**ELK** Past Producer (Intrusion-related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn +/-Au; Au-quartz veins) MINFILE 092HNE096 Sixteen kilometres south-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. 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). 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 copperbismuth- 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.

#### ELK Past Producer (cont'd)

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. 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).

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.

ELK Past Producer (cont'd)

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 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. 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).

ELK Past Producer (cont'd)

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.

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

Twelve kilometres south-southwest

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

#### Seven 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 cent copper, respectively (Assessment Report 3415, assay certificates).

**KING 6** showing (Intrusion-related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn+/-) MINFILE 092HNE297 Eleven kilometres southwest

The vein is mineralized with scattered blebs of chalcopyrite. A selected sample analysed 0.41 gram per tonne gold and 7.8 grams per tonne silver (Assessment Report 21922, page 9, Table 2, sample Q1b-R3).

### **MINERALIZATION: PROPERTY**

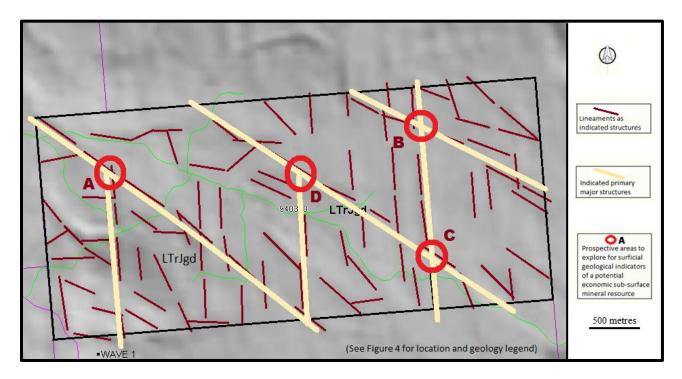
**WAVE 1** anomaly (Polymetallic veins Ag-Pb-Zn+/-Au) MINFILE 092HNE311 Within Tenure 940389

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 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).

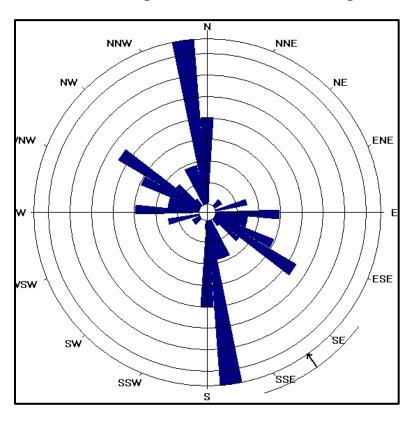
## STRUCTURAL ANALYSIS

The Structural Analysis was performed on a MapPlace DEM hillside shade map of Tenure 940390 by viewing of the map and marking the lineaments, or indicated structures, thereon. A total of 91 lineaments were marked (*Figure 5*), compiled into a 10 degree class interval, and plotted as a rose diagram as indicated on Figure 6.

Figure 5. Indicated Structures and recommended areas for exploration on Tenure 940390



#### Structural Analysis (cont'd)



#### Figure 6. Rose Diagram from lineaments of Figure 5.

## **STATISTICS**

Axial (non-polar) data No. of Data = 91 Sector angle =  $8^{\circ}$ Scale: tick interval = 3% [2.7 data] Maximum = 23.1% [21 data] Mean Resultant dir'n = 145-325 [Approx. 95% Confidence interval =  $\pm 17.8^{\circ}$ ] (valid only for unimodal data)

Mean Resultant dir'n = 144.6 - 324.6Circ.Median = 133.0 - 313.0Circ.Mean Dev.about median =  $32.1^{\circ}$ Circ. Variance = 0.21Circular Std.Dev. =  $39.05^{\circ}$ Circ. Dispersion = 2.22Circ.Std Error = 0.1563Circ.Skewness = 2.01 Circ.Kurtosis = -14.81 kappa = 0.86 (von Mises concentration param. estimate)

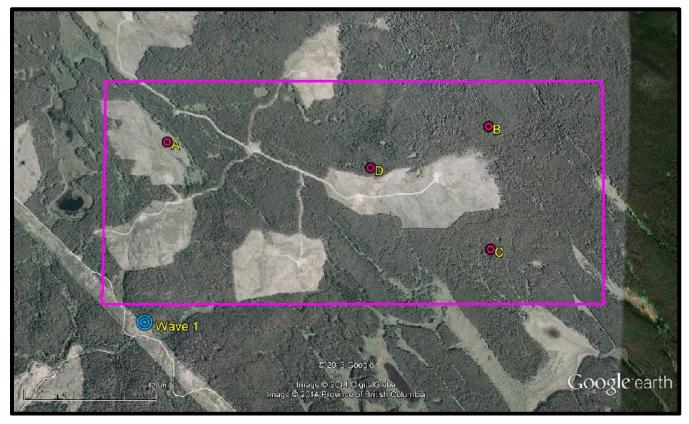
Resultant length = 35.93 Mean Resultant length = 0.3949

'Mean' Moments: Cbar = 0.1303; Sbar = -0.3727 'Full' trig. sums: SumCos = 11.861; Sbar = -33.9184 Mean resultant of doubled angles = 0.307 Mean direction of doubled angles = 000

(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 locations (Figure 5) on Google Earth (Base map from MapPlace and Google Earth)



*Table II.* Approximate location of Figure 6 cross-structures (UTM-NAD 83)

Area	UTM East	UTM North	Elevation (metres)
Α	697,882	5,540,968	1,445
В	699,900	5,541,139	1,456
C	699,938	5,540,373	1,467
D	699,168	5,540,853	1,461
Wave 1	697,798	5,539,839	1,502

#### **INTERPRETATION & CONCLUSIONS**

The Structural Analysis of Tenure 940390 of the Toni 940390 claim group indicated dominant northsouth (northerly) and northwesterly-southeasterly (northwesterly) indicated structures, within the Pennask granodioritic intrusive.

These primary northwesterly/northerly structures are manifest in the Pennask intrusive boundaries and the drainage pattern of the area which indicates the intense degree in the positioning of the Pennask intrusive and in the drainage pattern.

Victory Resources Corporation

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

Thus, these structures, and moreso the cross-structures would be an ideal prerequisite in creating a structural setting to accommodate sufficient mineralization for an economic resource as at the Brenda deposit. The Brenda resource was hosted be the "Brenda Stock", a composite quartz diorite/granodiorite body which forms part of the Pennask batholith, where the grade of the orebody was a function of fracture (vein) density and of the thickness and mineralogy of the filling material.

These major structures could also provide a conduit for the migration of mineralization from potentially economic mineral zones at depth to the surface where geological indicators as mineralization, mineral indicators, and/or alteration could be etched at the surface to be interpreted accordingly.

The Pennask Batholith is highly prospective for the location and exploration of many different geological features on the Toni Property which can lead to the discovery of an economic resource. These include:

- the location of comparable stocks to the formerly productive Brenda (*Minfile 092HNE047*) deposit hosted by the Brenda stock of the Pennask intrusive.
- the exploration of the Snow (*Minfile 092HNE292*) mineral showing where the copper mineralization which occurs along fractures and as disseminations in the Pennask granite may be a surficial indicator of an underlying economic porphyry Cu +/- Mo +/- Au or a polymetallic vein Ag-Pb-Zn+/-Au mineral resource.
- the exploration of the Wave 1 (*Minfile 092HNE311*) anomaly associated with the Pennask intrusive where the quartz vein float containing disseminated pyrite and limonite with occasional specks of chalcopyrite, galena or sphalerite, could be surficial indicators to a polymetallic vein Ag-Pb-Zn+/-Au mineral resource.

From the results of the Tenure 940390 Structural Analysis there are four delineated areas that should be explored for surficial geological indicators to a potential sub-surface mineral resource.

Excluding other variable geological conditions, the structures are essential in the localization of potentially economic porphyry and/or quartz vein hosted mineralization within the Pennask intrusive on the Property.

The nine Minfile mineral showings, prospects, or past producers included in this report are a reference to potential mineral resource indicators that could occur at the designated areas of Tenure 940390.

Respectfully submitted Sookochoff Consultants Inc.



Laurence Sookochoff, Peng

### SELECTED REFERENCES

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**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 092HNE084 – PAYCINCI 092HNE096 – ELK 092HNE275 – BREW 092HNE292 – SNOW 082ENW297 – KING 6 092HNE311 – WAVE 1

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## STATEMENT OF COSTS

The Structural Analysis of Tenure 940390 was completed from June 14, 2013 to June 17, 2013 to the value as follows: Laurence Sookochoff, P.Eng.:

Laurence Sookoenon, I.Ling.	
2 days @ \$ 1000.00	\$ 2,000.00
Maps	1,250.00
Report	4,000.00
	\$ 7,250.00

Sookochoff Consultants Inc.

## 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-six 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.