Ministry of Energy, Mines & Petroleum Resources Mining & Minerals Division	Assessment Report
BC Geological Survey	Title Page and Summar
TYPE OF REPORT [type of survey(s)]: Geological Geophysical	<b>TOTAL COST</b> : \$ 9.737.00
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)/DAT	E(S): 5574357 October 13, 2015
PROPERTY NAME: Toni	
CLAIM NAME(S) (on which the work was done): 1039181	
COMMODITIES SOUGHT: <u>Copper</u> Gold MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: <u>092HNEC</u>	058 092HNE144 092HNE270
	058 092HNE144 092HNE270 NTS/BCGS: 092H.098 092H.099 092I.009
MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 092HNEC	
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LATITUDE: 50 ° 0 '25 " LONGITUDE: 120	<sup>o</sup> '16 " (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:	·



TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation	373 hectares	1039181	\$ 6,000.00
GEOPHYSICAL (line-kilometres)			
Ground		1000/04	0 707 45
Magnetic	2.0	1039181	3,737.45
Electromagnetic			
Induced Polarization			
Airborne			
GEOCHEMICAL (number of samples analysed for)			
Soil			
Silt			
Rock			
Other			
DRILLING			
(total metres; number of holes, size) Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/t	rail		
Trough (matrice)			
Other			
		TOTAL COST:	\$ 9,737.45

## VICTORY RESOURCES CORPORATION

(Owner & Operator)

## **GEOLOGICAL & GEOPHYSICAL**

ASSESSMENT REPORT

(Event 5574357)

Work done on

Tenure 1039181

of the 13 claim

Toni 1039181 Claim Group (Work done from October 8, 2015 to October 13, 2015)

Nicola Mining Division

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

Centre of Work

**5,542,743N, 696,568E** (Zone 10 NAD 83)

Author & Consultant

Laurence Sookochoff, PEng Sookochoff Consultants Inc.

Submitted

February 16, 2016

BC Geological Survey Assessment Report 35869

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## SUMMARY

The 13 claim, 4760 hectare Toni 1039181 Claim Group, is located in south-central British Columbia 208 kilometres from Vancouver, 30 kilometres southeast of Merritt, and 24 kilometres west-northwest of the past productive Brenda copper/molybdenum porphyry deposit.

The Brenda deposit (*MINFILE 092HNE047*) is within the "Brenda stock", a composite quartz diorite/granodiorite body which forms part of the Pennask batholith. The Brenda stock was intensely fractured during several stages of time and tapped a hydrothermal source. As each stage of fractures developed, hydrothermal fluids introduced vein material which healed the fractures. The grade of the orebody was a function of fracture (vein) density and of the thickness and mineralogy of the filling material. Mineralization decreased outwardly from the most intensely fractured/mineralized rock and the centre of the main mineral zone.

As indicated by the BC government supported MapPlace geological maps, the Toni 1039181 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 west which are overlain in part by a central capping of upper Triassic Nicola Group mudstone, siltstone, shale, and fine clastic sedimentary rocks (uTrNsf). In the northwest corner, at the location of the KIT mineral showing, a relatively small granodiorite stock intrudes the Nicola basaltic rocks.

The structural analysis of Tenure 1039181, which covers a portion of the Pennask batholith, was completed to determine any cross-structural location that could be the core or the centre of fracture intensity as at the Brenda main mineral zone.

Three cross-structural locations were delineated which would be the centre of maximum brecciation and depth intensive and would provide the most favourable feeder zone to any convective hydrothermal fluids sourced from a potentially mineral laden reservoir at depth. 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.

The localized magnetometer survey which covered two approximately located cross-structures may have indicated a general mag LO/cross-structural correlation. Assuming that the mag LO's are an indication of hydrothermal alteration and possibly associated mineralization, one cross-structure may actually correlate with the 150 metre wide, north trending, open ended mag LO 200 metres to the west (*Figure 11*). This mag LO, could reflect the more intensive fault system and the most accommodating to hydrothermal fluids, of the northerly trending structure of cross-structure "B" as shown on Figure 5.

Thus, the three cross-structures on Tenure 1039181 should be the focus of initial exploration for a potential mineral resource with most extensive mag LO area near cross-structure "B" being the initial area of exploration.

## **INTRODUCTION**

During October 2015 a structural analysis and a localized magnetometer survey were completed on Tenure 1039181 of the 13 claim Toni 1039181 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 13 claims covering an area of 4760.0955 hectares. Particulars are as follows:

Table I: Tenures of Toni 1039181 Claim Group					
Tenure Number	<u>Type</u>	Claim Name	Good Until	<u>Area</u> (ha)	
<u>520757</u>	Mineral	WEN	20160331	499.041	
<u>520759</u>	Mineral	LUCKY GOLD	20160729	83.146	
<u>582313</u>	Mineral	NEW WEN 2	20160331	166.3116	
<u>591361</u>	Mineral	WIN 8	20160331	519.8243	
<u>633143</u>	Mineral	WENA	20160331	415.8861	
<u>633144</u>	Mineral	WENB	20160331	415.8874	
<u>633183</u>	Mineral	WEND	20160729	394.9934	
<u>1032315</u>	Mineral	T1	20160331	83.152	
<u>1032320</u>	Mineral		20160331	623.5115	
<u>1032323</u>	Mineral		20160331	602.8623	
<u>1037890</u>	Mineral		20160811	83.0803	
<u>1037891</u>	Mineral		20160331	498.5898	
<u>1039181</u>	Mineral		20161008	373.8098	

\*Upon the approval of the assessment work filing, Event Number 5574357.

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

#### Location

The Property is located within BCGS Map 092H.089/.099/092I.009 of the Nicola Mining Division, 208 kilometres east-northeast of Vancouver, 30 kilometres southeast of Merritt, and 26 kilometres west-northwest of the past productive Brenda copper/molybdenum porphyry deposit.

Figure 2. Claims 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 13 kilometres to the Loon Lake Junction, thence northerly for three kilometres via a graveled and forestry road to the southern boundary of Tenure 591361 of the Toni 1039181 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 1039181 covers a relatively flat area of forest cover with barren areas. Relief is in the order of 114 metres from an elevation of 1,212 metres at the southwest corner to 1,336 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 of, or peripheral, to Tenure 1039181. A 500Kv power line trends southeasterly one kilometre 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 1039181 Claim Group area are reported as follows. The distance from the Toni 1039181 Claim Group is relative to the Toni 1039181 Claim Group.

MAL prospect (Cu skarn; Fe skarn; Au skarn) MINFILE 092HNE002 400 metres north

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 six kilometres east-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.

**ECHO** showing (Volcanic redbed Cu) MINFILE 092HNE059 200 metres west

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 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, 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.

**POT 1** showing (Volcanic redbed Cu) MINFILE 092HNE204 50 metres west

The Pot 1 occurrence is a showing of gold-silver-copper mineralization, just east of the historical Aspen Grove copper camp, between Merritt and Princeton.

The occurrence is located 1.1 kilometres northeast of Pothole Lake, between Quilchena and Pothole creeks, 7 kilometres east-northeast of the community of Aspen Grove.

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

MALACHITE 7 showing (Cu skarn; Volcanic redbed Cu) MINFILE 092HNE269 100 metres north

The Malachite 7 showing is 1.0 kilometre southeast of Quilchena Creek and 10.5 kilometres westnorthwest of the south end of Boot Lake.

**SNOW** showing (Porphyry Cu +/- Mo +/- Au; Polymetallic veins Ag-Pb-Zn+/-Au) MINFILE 092HNE292 200 metres east

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 Eight kilometres east

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

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 float and coincidental soil and stream anomalies. Recently, the area has been explored by Sookochoff Consultants as a part of the Toni property.

## **HISTORY: PROPERTY**

**HN-WEN** prospect (Volcanic redbed Cu) MINFILE 092HNE058 Within Tenure 520757

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.

**AU-WEN** prospect (Intrusion related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn+/-Au) *MINFILE 092HNE144 Within Tenure 633183* 

Work on this showing dates back to the 1930s when visible gold was discovered in soil.

History: Property (cont'd)

**KIT** showing (Alkalic porphyry Cu-Au; Porphyry Mo (Low F type)) MINFILE 092HNE270 Within Tenure 520759

The Kit showing is exposed on the north bank of Quilchena Creek, 2.0 kilometres east-northeast of the creek's confluence with Pothole Creek and 7.8 kilometres northeast of Aspen Grove.

The intrusive was first prospected for molybdenum by J.E. Bate in 1915. Marengo Mines Ltd. excavated one trench, 60 metres long, and drilled two holes in 1967

## **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 mineral anomalies, showings, prospects, and past producers in the Toni 1039181 Claim Group area is reported as follows. The distance from the Toni 1039181 Claim Group is relative to the Toni 1039181 Claim Group.

MAL prospect (Cu skarn; Fe skarn; Au skarn) MINFILE 092HNE002 400 metres north

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 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 six kilometres east-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.

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

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.

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.

**ECHO** showing (Volcanic redbed Cu) MINFILE 092HNE059 200 metres west

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 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, 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.

**POT 1** showing (Volcanic redbed Cu) MINFILE 092HNE204 50 metres west

The Pot 1 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 alkalic volcanic flows and well bedded submarine volcaniclastic rocks, ranging from tuffaceous volcanic siltstones characteristic of the lower part, to coarse volcanic conglomerate and laharic breccias in the upper part. The assemblage is characterized by a paucity of intrusive rocks in comparison to the main Aspen Grove copper camp in the Central belt a few kilometres to the west, separated by the Kentucky-Alleyne fault system (Bulletin 69).

MALACHITE 7 showing (Cu skarn; Volcanic redbed Cu)

MINFILE 092HNE269

100 metres north

Chalcopyrite occurs in a small zone of skarn alteration in dioritized volcanics of the Upper Triassic Nicola Group, near the contact with the Early Jurassic Pennask batholith to the northeast.

**SNOW** showing (Porphyry Cu +/- Mo +/- Au; Polymetallic veins Ag-Pb-Zn+/-Au) MINFILE 092HNE292 200 metres east

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.





## **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

Geology: Property Area (cont'd)

WAVE 1 anomaly (Polymetallic veins Ag-Pb-Zn+/-Au) MINFILE 092HNE311 Eight kilometres east

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

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

WAVE 2 anomaly (Polymetallic veins Ag-Pb-Zn+/-Au) MINFILE 092HNE312 Eight kilometres east

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 west overlain in part by a central capping of upper Triassic Nicola Group mudstone, siltstone, shale, and fine clastic sedimentary rocks (uTrNsf). In the northeast corner, a contact between the Nicola rocks and. In the northwest corner, at the location of the KIT mineral showing, a relatively small granodiorite stock intrudes the Nicola basaltic rocks.

**HN-WEN** prospect (Volcanic redbed Cu) MINFILE 092HNE058 Within Tenure 520757

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).

**AU-WEN** prospect (Intrusion related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn+/-Au) MINFILE 092HNE144 Within Tenure 633183

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 volcaniclastic 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).

**KIT** showing (Alkalic porphyry Cu-Au; Porphyry Mo (Low F type)) MINFILE 092HNE270 Within Tenure 520759

A small body of granodiorite of Late Triassic to Early Jurassic age intrudes volcanics of the Upper Triassic Nicola Group. The granodiorite is cut by narrow, steeply-dipping shears striking north and northeast, near the faulted contact with slightly pyritic Nicola Group greenstone to the northwest.

## MINERALIZATION: PROPERTY AREA

The mineralization on some of the more significant mineral MINFILE mineral anomalies, showings, prospects, and past producers in the Toni 1039181 Claim Group area is reported as follows. The distance from the Toni 1039181 Claim Group is relative to the Toni 1039181 Claim Group

MAL prospect (Cu skarn; Fe skarn; Au skarn) MINFILE 092HNE002 400 metres north

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 Twenty six kilometres east-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: Property 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.

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.

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

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

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).

**ECHO** showing (Volcanic redbed Cu) MINFILE 092HNE059 200 metres west

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).

**POT 1** showing (Volcanic redbed Cu) MINFILE 092HNE204 50 metres west

*Mineralization comprises erratically disseminated chalcopyrite, malachite, azurite and pyrite (Preliminary Map 15; Assessment Report 13714). The copper minerals occur in narrow zones striking southwest, transverse to the regional strike but parallel to a fault 1 kilometre to the northwest (Bulletin 69).* 

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

Pot 1 showing (cont'd)

Individual rock samples from the showing were analysed at up to 0.95 gram per tonne gold and 4.8 grams per tonne silver (Assessment Report 13714). A composite chip sample across the showing was analysed at 2.55 grams per tonne gold and 1.9 grams per tonne silver over 130 metres (Assessment Report 13714, Drawing No. 2, sample W301). Gold and silver values appear to be proportional to the degree of alteration and copper mineralization (Assessment Report 13714).

MALACHITE 7 showing (Cu skarn; Volcanic redbed Cu)

MINFILE 092HNE269

100 metres north

Chalcopyrite occurs in a small zone of skarn alteration in dioritized volcanics of the Upper Triassic Nicola Group, near the contact with the Early Jurassic Pennask batholith to the northeast.

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

MINFILE 092HNE292

200 metres east

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

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

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

Eight kilometres east

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

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).

## **MINERALIZATION: PROPERTY**

The mineralization of the MINFILE reported showings, prospects, developed prospects, and past producers within the Toni 589880 Claim Group is reported as follows

**HN-WEN** prospect (Volcanic redbed Cu) MINFILE 092HNE058 Within Tenure 520757

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.

#### Mineralization: Property (cont'd)

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

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.

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.

**AU-WEN** prospect (Intrusion related Au pyrrhotite veins; Polymetallic veins Ag-Pb-Zn+/-Au) MINFILE 092HNE144 Within Tenure 633183

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).

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 (cont'd)

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

*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).

**KIT** showing (Alkalic porphyry Cu-Au; Porphyry Mo (Low F type)) MINFILE 092HNE270 Within Tenure 520759

Some of the shears are graphitic and they locally contain quartz lenses 2.5 to 5 centimetres wide with minor disseminated molybdenite. The intrusive is also fractured to some extent, with one prominent set striking 055 to 070 degrees and dipping steeply southeast. Some of the fractures contain quartz with minor chalcopyrite, malachite and molybdenite.

### STRUCTURAL ANALYSIS

The Structural Analysis was performed on a MapPlace DEM image hillshade map of Tenure 1039181 by viewing of the map and marking the lineaments, or indicated structures, thereon. A total of 44 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 5,542,743N, 696,568 (NAD 83).



#### Figure 5. Indicated Structures on Tenure 1039181

#### Structural Analysis (cont'd)



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

## **STATISTICS**

Axial (non-polar) data No. of Data = 44 Sector angle = 10° Scale: tick interval = 2% [0.9 data] Maximum = 18.2% [8 data] Mean Resultant dir'n = 132-312 [Approx. 95% Confidence interval = ±90.0°] (valid only for unimodal data)

Mean Resultant dir'n = 131.7 - 311.7 Circ.Median = not calculated Circ.Mean Dev.about median = not calculated (Not calculated if too many data, or data are axial (non-polar), and too coarsely grouped Circ. Variance = 0.38 Circular Std.Dev. = 55.87° Circ. Dispersion = 18.25 Circ.Std Error = 0.6441 Circ.Skewness = 0.76 Circ.Kurtosis = -1.46 kappa = 0.30 (von Mises concentration param. estimate)

Resultant length = 6.57 Mean Resultant length = 0.1493

'Mean' Moments: Cbar = -0.017; Sbar = -0.1483 'Full' trig. sums: SumCos = -0.7458; Sbar = -6.5269 Mean resultant of doubled angles = 0.1862 Mean direction of doubled angles = 138

(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 on Google Earth

(Base map from MapPlace and Google Earth)



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

Area	UTM East	UTM North	Elevation (metres)	
А	691,658	5,542,660	1,301	
В	692,189	5,542,679	1,260	
С	691,623	5,542,911	1,314	

#### Magnetometer Survey (cont'd)

## Figure 8. Magnetometer Grid Index Map

(Base map from Google Earth)



#### Magnetometer Survey a) Instrumentation

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

#### b) Theory

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

#### c) Survey Procedure

From an initial grid station 5542600N 692500 E a base line was established northerly to 5542700N. Magnetometer readings were taken at 25 metre intervals westerly along each of the two grid lines to 691500E. The grid line stations were located with a GPS instrument. Line kilometres of magnetometer survey completed was 2.0. The field data is reported herein in Appendix I.

#### d) Data Reduction

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

#### Magnetometer Survey (cont'd)

## Figure 9 .Magnetometer Survey Grid & Raw Data



## Figure 10. Magnetometer Survey Data Contour Map



#### Magnetometer Survey (cont'd)





#### e) Results (Figure 11)

The localized magnetometer survey which covered granodiorites of the Pennask Batholith indicated predominant relative background magnetometer readings. Sub-anomalous to anomalous magnetometer lows (mag LO) occur at occasional one or two stations open to the north and within notable areas in the east and the west. In the west, a 100 metre wide mag LO is open to the south and west. At the eastern portion of the survey area, a northerly trending 150 metre wide mag LO is open to the north, south, and east.

The approximate locations of the two cross-structures, "A" and "B", which were covered by the magnetometer survey, are indicated within the background magnetometer area. However, cross-structure "A", the western cross-structure, is peripheral to the western open-ended mag LO. Cross-structure "B", the eastern cross-structure is adjacent to a 50 metre wide, open to the north, mag LO and within 200 metres west of the 150 metre open ended eastern mag LO.

#### **INTERPRETATION & CONCLUSIONS**

In the structural analysis of Tenure 1039181 of the Toni 1039181 claim group, three cross-structural locations were delineated within the granodioritic Pennask Batholith. These locations would be prime prospective areas to explore for surficial geological indicators of a potentially economic sub-surface mineral resource as they 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 at depth. 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 copper-molybdenum deposit (*MINFILE* 092HNE047) which is within the "Brenda stock", a composite quartz diorite/granodiorite body which forms part of the Pennask batholith. The Brenda stock was intensely fractured during several stages of time and tapped a hydrothermal source. As each stage of fractures developed, hydrothermal fluids introduced vein material which healed the fractures. The grade of the orebody was a function of fracture (vein) density and of the thickness and mineralogy of the filling material. Mineralization decreased outwardly from the most intensely fractured/mineralized rock and the centre of the main mineral zone.

Other examples of mineral structural controls to potentially indicated mineralization, are reported herein in the nine other Minfile descriptions copied herein from the BC Government supported Minfile records, including the SNOW (*Minfile 092HNE292*) mineral showing where a drill hole intersected minor copper mineralization in weakly to moderately chloritized granite of the Pennask batholith.

The localized magnetometer survey which covered two approximately located cross-structures, "A" and "B", may have indicated a general mag LO/cross-structural correlation. Assuming that the mag LO's are an indication of hydrothermal alteration and possibly associated mineralization, cross-structure "B" may actually correlate with the 150 metre wide, north trending, open ended mag LO 200 metres to the west. This mag LO, could reflect the more intensive fault system and the most accommodating to hydrothermal fluids, of the northerly trending structure of cross-structure "B" as shown on Figure 5.

Thus, the three cross-structures on Tenure 1039181 should be the focus of initial exploration for a potential mineral resource with most extensive mag LO area near cross-structure "B" being the initial area of exploration.

Respectfully submitted Sookochoff Consultants Inc.



Laurence Sookochoff, PEng

## SELECTED REFERENCES

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.

MapPlace – Map Data downloads

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

MtOnline - MINFILE downloads.

092HNE002 – MAL 092HNE047 – BRENDA 092HNE058 – HN-WEN 092HNE059 – ECHO 092HNE144 –AU-WEN 092HNE204 – POT 1 092HNE257 – MALACHITE 7 092HNE270 – KIT 092HNE292 – SNOW 092HNE311 – WAVE 1 092HNE312 – WAVE 2

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

**Sookochoff, L.** – Geological & Geophysical Assessment Report on Tenure 980252 of the Toni 980252 Claim Group for Victory Resources Corporation. December 5, 2015. AR 35,503.

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

## STATEMENT OF COSTS

Work on Tenure 1039181 was completed from October 8, 2015 to October 13, 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 10-11, 2015	
Four man days @ \$300.00 per day	1,200.00
Truck rental, kilometre charge, fuel, room & board,	
mag rental	1,287.45
	<u>\$ 5,487.45</u>
Maps	750.00
Report	<u>3,500.00</u>
	\$ 9,737.45

## 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**

Sookochoff Consultants Inc.

	E5574623 T1039181					
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