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

Assessment Report
Title Page and Summary

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

TOTAL COST: $ 9,778.20

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

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): **YEAR OF WORK:** 2015

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5580995 December 7, 2015

PROPERTY NAME: Bertha

CLAIM NAME(S) (on which the work was done): 581011

COMMODITIES SOUGHT: Copper Gold

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 092ISE012 092ISE021 092ISE154 092ISE190

MINING DIVISION: Kamloops **NTS/BCGS:** 092I.046 092I.047

LATITUDE: 50 ° 31 ' 14 " **LONGITUDE:** 120 ° 45 ' 59 " **(at centre of work)**

OWNER(S):

1) Christopher Delorme
2) Guy Delorme

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

Nicola Group, Triassic, Triassic-Jurassic, Western Volcanic Facies, Guichon Creek Batholith, Bethsaida Phase, Granodiorites, Volcanic rocks, Structural Analysis, Cross-structure

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 00596, 08641, 34909

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TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation	514 hectares	581011	$ 6,000.00
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic	2.0	581011	3,778.20
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST:	$ 9,778.20

GUY & CHRISTOPHER DELORME

(Owners & Operators)

ASSESSMENT REPORT

on

GEOLOGICAL & GEOPHYSICAL SURVEYS

(Event 5580995)

work done from

November 15, 2015 to December 7, 2015

on

Tenure 581011

of the 14 claim

Bertha 581011 Claim Group

Kamloops Mining Divisions

BCGS Maps 092I.046/.047

Centre of Work

5,598,887N 658,343E
(NAD 83 Zone 10)

Author & Consultant

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Sookochoff Consultants Inc.

Submitted

July 5 ,2016

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SUMMARY

The 14 claim, 5269 hectare Bertha 581011 Claim Group is located 212 kilometres northeast of Vancouver in the Highland Valley of south central British Columbia. It is within 13 kilometres east of the Highland Valley Copper mine, one of the largest copper mining and concentrating operations in the world.

The Highland Valley low-grade copper/molybdenum deposit lies within the Late Jurassic Guichon Creek batholith in Bethsaida phase porphyritic quartz monzonite and granodiorite. The most prominent structural features are the north trending, west dipping Lornex fault and the east trending Highland Valley fault. Faults and fractures in the deposit comprise four main sets. Quartz veinlets are subparallel to two of the earlier formed fault and fracture sets.

The Bertha 581011 Claim Group, as indicated by the BC government supported MapPlace geological map, is underlain by rocks of the Western Volcanic Facies of the upper Triassic Nicola Group (uTrNW) with a portion of a feldspar porphyry intrusive in the northwest.

In the structural analysis of Tenure the cross-structure that is indicated from the structural analysis on Tenure 581011 is a prime location to explore for surficial geological indicators of a proximal potential mineral resource. This location would be the site of most intense brecciation/fracture formation to depth and peripherally and would be the most accommodating for the deposition of hydrothermal fluids.

Cross-structure "A" is developed from indicated general northerly and easterly trending structures; a mineral controlling structural setting similar to the structural setting at the Highland Valley/Lornex mineral deposits. Even though the cross-structure is located in the Nicola volcanics, the structures could indicate mineral controlling structures in an underlying satellite intrusive related to the Guichon batholith or other unrelated intrusives. The structures may also be controls to a mineral resource at the intrusive/volcanic contact as at the Copper Mountain mineral deposit *(Minfile 092HSE001).*

In the magnetometer survey, there could be variable interpretations of the survey results, however, if the mag LO's indicate hydrothermally altered structural zones, there are two mag LO's that may indicate such altered zones. The most significant is the eastern 75 metre north-northwesterly trending mag LO. Although this indicated structure does not correlate with the indicated major structure as determined from the structural analysis and as shown on Figure 5, a sporadic indicated structure is shown at this location. The major north-northwesterly structure and the location of cross-structure "A" could be indicated in the open-ended mag LO in the southwest corner of the magnetometer survey as shown on Figure 11.

In accordance with the interpretation of the structural analysis and the magnetometer survey results, the eastern mag LO should be explored for indications of mineralization associated with a hydrothermally altered structural zone with the southwestern mag LO explored for the location of cross-structure "A" and surficial indications of a concealed mineral resource.

INTRODUCTION

Between November 15, 2015 and December 7, 2015, a structural analysis and a localized magnetometer survey were completed on Tenure 581011 of the 14 claim Toni 581011 claim group (Property). The purpose of the program was to delineate potential structures which may be integral in geological controls to a potential mineral resource that may occur on Tenure 581011 or other claims of the Property and to determine the effectiveness of the magnetic survey in locating structures and/or lithologic contacts.

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

Figure 1. **Location Map**
(from MapPlace)

PROPERTY LOCATION & DESCRIPTION

Location

The Bertha 581011 Claim Group is located within BCGS Maps 092I.046 & 092I.047 of the Kamloops Mining Division, 212 kilometres northeast of Vancouver, 35 kilometres north of Merritt, 42 kilometres southwest of Kamloops, and within 13 kilometres of the world-class producing Highland Valley Copper mine.

Description

The Property is comprised of 14 contiguous claims covering an area of 5269.2575 hectares. Particulars are as follows:

Property Location and Description *(cont'd)*

Table I. **Tenures of Bertha 581011 Claim Group**

Tenure Number	Type	Claim Name	Good Until	Area (ha)
514175	Mineral	QUEN	20160824	41.183
522351	Mineral	MIKE	20160824	370.452
581002	Mineral		20160824	432.0029
581005	Mineral		20160824	514.5084
581009	Mineral		20160824	514.6423
581011	Mineral		20160824	514.5161
581012	Mineral		20160824	514.7582
581015	Mineral		20160824	514.8414
581016	Mineral		20160824	514.6721
585384	Mineral		20160824	494.0089
596301	Mineral	PONYBOY NORTH	20160824	390.9753
605002	Mineral	PONYBOY WEST	20160824	123.4998
679143	Mineral		20170205	308.6294
1011644	Mineral		20160824	20.5677

*Upon the approval of the assessment work filing, Event Number 5580995.

ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE and PHYSIOGRAPHY

Access

From Logan Lake, the Bertha 581011 claim group can be accessed by traveling from Logan Lake west on Highway 97D for 1.3 kilometres to the junction with Highway 97C thence south for five kilometres to the northern boundary of Tenure 581005.

Climate

The local climate is typical of south central British Columbia. Annual temperatures range from 35^{o}C to -40^{o}C. Negative temperatures can be typically expected between late October and late March. Annual precipitation ranges around an average of 30 cm.

Local Resources & Infrastructure

Merritt, 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 four hours distant by road and less than one hour by air from Kamloops. Logan Lake, where many of the Highland Valley Copper Mine employees reside, has many facilities to accommodate any preliminary exploration crew.

Physiography

Tenure 581011 covers a gentle to moderate forested area with elevations range from 1,120 metres in the northwest to 1,445 metres at the east-central corner boundary.

WATER & POWER

There would be an ample water supply for the needs of any exploration program from the many lakes, rivers, or streams within the confines of the Property.

A 550 KV power line crosses the northeast corner of Tenure 679143

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

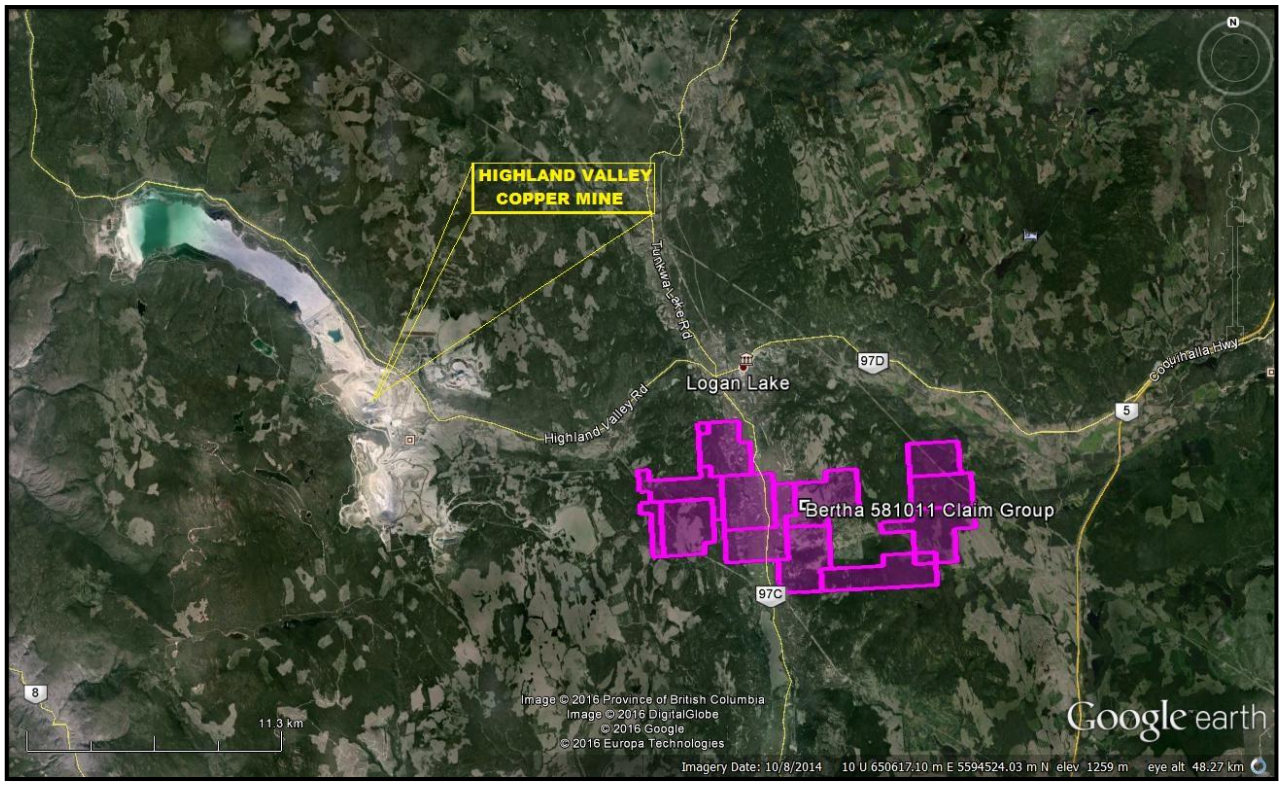
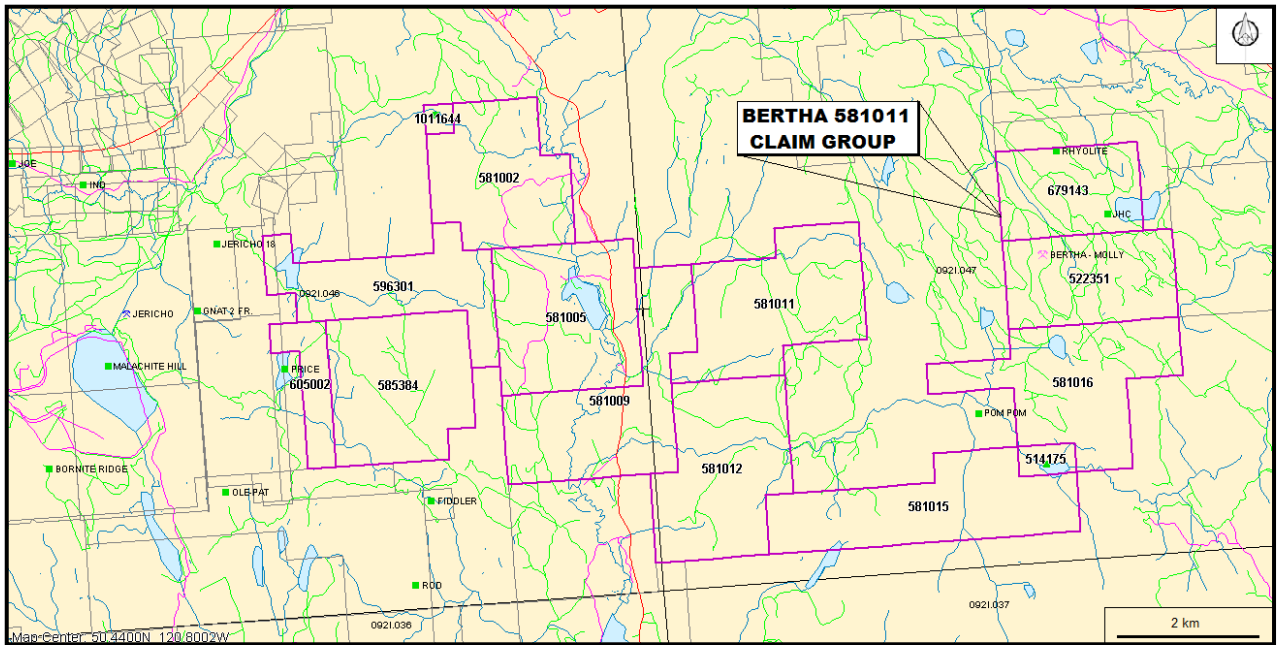


Figure 3. **Claim Map**
(from MapPlace)



HISTORY: PROPERTY AREA

The history on some of the more significant mineral MINFILE reported occurrences, prospects, and past producers peripheral to the Bertha 581011 Claim Group is reported as follows. The distance to the Minfile locations is relative to the Bertha 581011 Claim Group.

JERICHO Developed prospect (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISE011
Two kilometres west

The No. 1 zone was discovered in 1956 and subsequently developed by two adits.

HIGHLAND VALLEY COPPER producer (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISW012
Thirteen kilometres west

Highland Valley Copper was created in mid-1986 by bringing together the Highland Valley mining operations of Lornex Mining Corporation Ltd. and Cominco Ltd. into a new single entity, structured as a partnership.

On the south side of the valley was the Lornex mine which started mining in 1972. In 1981, the Lornex concentrator had been expanded to become one of the largest in the industry.

On the north side was Bethlehem Copper (092ISE001) which started mining in 1963. In 1981, this operation was absorbed by Cominco who already owned the Valley orebody (092ISW012) located west of the Lornex pit on the south side of the valley. Mining of the original Bethlehem Copper pits ceased in 1982.

Production from the Lornex mine (092ISW045) was combined with the Valley operations in 1987.

The Highmont mill on the south side of the valley was acquired in 1988 when Highmont Mining Company joined the partnership. This mill had been closed down in 1984 when the Highmont deposit (092ISE013) became uneconomical.

Lornex Mining Corporation Ltd. was wound up at the end of 1988 with the result that Rio Algom Limited, Teck Corporation and Highmont Mining Company obtained direct participation in the cash flow from the partnership.

In 1995, with Explore B.C. Program support, Highland Valley Copper carried out 197 line kilometres of high-powered induced polarization surveys for very deep penetration, and drilled 1701 metres in 4 holes. This work was done on the Lornex SW Extension, Roscoe Lake and JA zones. No anomalies of merit were detected in Lornex SW Extension, and Roscoe Lake gave only limited encouragement. IP work on the JA zone detected an anomaly extending to the south, well beyond the limits of known mineralization, and another anomaly 2000 by 1500 metres in size at the east end of the grid. Both anomalies warrant drill testing (Explore B.C. Program 95/96 - M80).

At the end of 1996, mine plans called for another 200 metres in depth in the Valley pit to the 2008. In addition, the partnership may consider mining the remaining 120 million tonnes grading 0.33 per cent copper estimated to exist in the Lornex pit (Information Circular 1997-1, page 8).

Highland Valley Copper suspended mining on May 15, 1999; they resumed August 30, 1999.

In September 2005, Highland Valley announced that mine life would be extended by five years to 2013. Very late in the year, Teck Cominco also announced that it is considering building a modern hydrometallurgical refinery on site. Most ore comes from the Valley pit, augmented by a small amount from the Lornex pit.

History: Property Area *(cont'd)*

Highland Valley Copper *(cont'd)*

Following a successful 300,000 tonne bulk sample test, the Highmont East pit, closed since the mid-1980s, was re-opened in the fall of 2005 to take advantage of higher molybdenum prices. In addition, exploration drilling was conducted nearby in the Highmont South area and results are being evaluated.

HISTORY: PROPERTY

The history of the mineral MINFILE reported showings and past producers within the Property is reported as follows

BERTHA - MOLLY past producer (Stockwork)
MINFILE 092ISE012
Within Tenure 522351

In 1942, George Campbell did some surface-stripping on a copper showing, about 457 metres west of an old shaft. Production from this occurrence, known as the Lost group, was 31 tonnes, yielding 218 grams of silver and 626 kilograms of copper.

RHYOLITE showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092ISE021
Within Tenure 679143

Trenches, 1.25 kilometres north-northwest of Homfray Lake, 8.5 kilometres south-southeast from Logan Lake (Assessment Report 18048).

QUEN showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092ISE190
Within Tenure 514175

Showing located along the shore of a small, unnamed lake along Quenville Creek, about 11 kilometres south-southeast of the community of Logan Lake (Property File - Geology map).

GEOLOGY: REGIONAL

The Bertha 581011 Claim Group is located on the southern Intermontane Belt of British Columbia on the southern extent of the Quesnel Trench. The central geological features of this region are the Late Triassic island-arc volcanic rocks of the Nicola Group, and Late Triassic mudstone, siltstone and shale clastic sedimentary rocks located to the east, and intrusive granodioritic rocks of the Late Triassic to early Jurassic. The Nicola Group is a succession of Late Triassic island-arc volcanic rocks. The Nicola Group volcanic rocks form part of a 30km to 60km wide northwest-trending belt extending from southern B.C. into the southern Yukon. This belt is enclosed by older rocks and intruded by batholiths and smaller intrusive rocks. Major batholiths in the area of the Logan Copper Property include the Guichon Creek Batholith to the west, the Wild Horse Batholith to the east, and the Iron Mask Batholith to the north northeast (see Figure 6 for regional geology).

The Guichon Creek batholith is a large, composite intrusion with a surface area of about 1,000 square kilometers. A cluster of nine major porphyry copper deposits lie within a 15 square kilometer zone in the center of the batholith. The batholith is a semi-concordant composite intrusive that is elliptical and elongated slightly west of north.

Geology: Regional *(cont'd)*

A central, steeply plunging root or feeder zone is inferred under Highland Valley, and the major deposits lie around the projection of the feeder zone to the surface.

The batholith has intruded and metamorphosed island-arc volcanic and associated sedimentary rocks of the Nicola Group, and a metamorphic halo up to 500 meters wide is developed adjacent to the contact. Rocks along the edge of the batholith are older and more mafic, and successive phases moving inward toward the core are younger and more felsic.

Although contacts can be sharp, they are generally gradational and chilled contacts are not common. Variations in the batholiths geochemistry indicate local areas of assimilated country rock in the border zone and roof pendants in the intrusion. Outcrop areas have inclusions of amphibolite and "granitized" metamorphic rocks and compositional variations.

Two younger volcanic-dominated successions are important in the area. First, a northwest trending belt of Cretaceous continental volcanic and sedimentary rocks of the Spences Bridge Group unconformably overlie both the Nicola Group country rock and intrusive rocks along the southwest flank of the batholith. Distribution of the Spences Bridge Group rocks was locally controlled by reactivation of older faults that were important mineralization conduits in the batholith, such as the Lornex fault. Second, continental volcanic and sedimentary rocks of the Tertiary Kamloops Group cover extensive areas of the batholith and also overlie Triassic and Jurassic rocks from north of Highland Valley to the Thompson River. These also form isolated outliers and local intrusive centers south of the Highland Valley

GEOLOGY: PROPERTY AREA

The geology of some of the more significant mineral MINFILE reported occurrences, prospects, and past producers peripheral to the Property is reported as follows. The distance to the Minfile locations is relative to the Property.

FORD past producer *(*Volcanogenic)
MINFILE 092ISE009
Five kilometres north

The Ford occurrence occupies the area north of Meadow Creek, which is underlain by dark grey to purplish red porphyritic amygdaloidal flows of the Upper Triassic Nicola Group. The lavas are typically amygdaloidal and vary in composition from olivine basalt to augite andesitic basalt.

Alteration consists of albitization of plagioclase and propylitization of pyroxene to epidote, zoisite and calcite, with or without chlorite. The rock is locally shot through with sericite and epidote. Flows averaging 1.8 metres thick strike 050 degrees and dip 30 degrees northeast.

BETHLEHEM COPPER-SPUD LAKE showing (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISE008
Four kilometres northwest

The property lies in the Lower Jurassic Guichon Creek batholith. The Spud Lake area is underlain primarily by medium-grained Guichon variety quartz diorite and granodiorite. This unit is cut by north trending dacite porphyry dykes up to 60 metres wide. To the west, at the Bethlehem mine (092ISE001), Guichon rocks have been intruded by Bethlehem phase granodiorite. Mineralization is controlled by intrusive contacts, north trending faults and closely spaced fractures.

Geology: Property Area*(cont'd)*

Bethlehem Copper-Spud Lake *(cont'd)*

Alteration is generally weak and consists of chlorite, epidote and sericite. Minor fault zones have sericite-kaolinite gouges. Quartz, calcite and zeolite (laumontite, heulandite) veining occurs sporadically. Oxidation consists of malachite and limonite.

JERICHO Developed prospect (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISE011
Two kilometres west

The property is underlain by Guichon variety rocks of the older Highland Valley phase of the batholith. These rocks are medium to coarse-grained, cream grey-pink coloured granodiorite to quartz diorite, rich in biotite and plagioclase. Foliation strikes 305 degrees. Intense sericite, chlorite and clay alteration is associated with east-northeast striking and north dipping fault zones which host mineralized quartz veins.

HIGHLAND VALLEY COPPER producer (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISW012
Thirteen kilometres west

The Valley deposit lies within the Late Triassic to Early Jurassic Guichon Creek batholith and is hosted by Bethsaida phase porphyritic quartz monzonite and granodiorite. Feldspar porphyry and quartz feldspar porphyry dykes 0.6 to 35 metres wide dip steeply eastward in the western and central areas, and northward in the southern area of the deposit.

These dykes are cut by mineralized fractures and quartz veinlets, and have been dated at 204 Ma +/- 4 Ma.

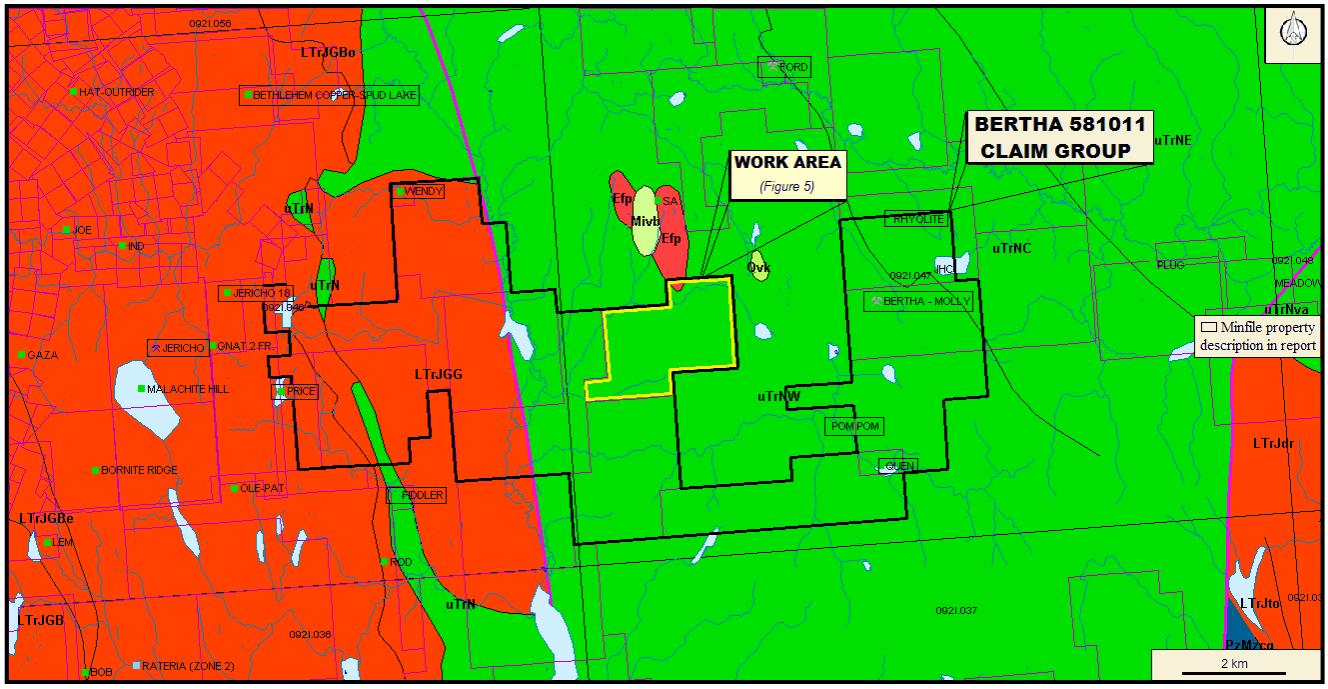
The Bethsaida granodiorite is also intruded by aplite dykes up to 30 centimetres wide, tan-coloured felsite dykes up to 4.5 metres wide, and three types of lamprophyre dykes (spessartite, hornblende vogesite).

The most prominent structural features are the north trending, west dipping Lornex fault and the east trending Highland Valley fault. Faults and fractures in the deposit comprise four main sets. Quartz veinlets are subparallel to two of the earlier formed fault and fracture sets. These veinlets are moderately abundant within the 0.3 per cent copper isopleth. An area of well-developed barren quartz veinlets, generally 0.5 to 1.3 millimetres wide, without alteration envelopes, occurs in the southeastern part of the deposit.

In the west-central part of the deposit, potassium feldspar is associated with vein sericite in some replacement zones, as veinlet envelopes along fractures, and disseminated in quartz veinlets. Hydrothermal biotite occurs in small amounts. Flaky sericite and quartz, both as replacement zones and as envelopes around quartz veinlets, constitute the most common type of alteration associated with copper mineralization.

Strong phyllic alteration coincides with the 0.5 per cent copper isopleth. Phyllic alteration is closely associated with pervasive argillization, which is strongest where fractures are most closely-spaced. Feldspars are altered to sericite, kaolinite, quartz and calcite. The phyllic-argillic zone grades outward to a peripheral zone of weak to moderate propylitization, characterized by clay, sericite, epidote, clinozoisite and calcite replacing plagioclase, and chlorite and epidote replacing biotite. The age of hydrothermal alteration is approximately 191 Ma.

Figure 4. **Geology, Claim, Index & Minfile**
(Base Map from MapPlace)



GEOLOGY MAP LEGEND

Eocene

Efp
Unnamed feldspar porphyry intrusive rocks

Upper Triassic-Nicola Group

uTrNc
Central Volcanic Facies
undivided volcanic rocks

uTrN
undivided volcanic rocks

uTrNW
Western Volcanic Facies
undivided volcanic rocks

uTrNE
Eastern Volcanic Facies
basaltic volcanic rocks

Late Triassic to Early Jurassic

LTrJGB
GUICHON CREEK BATHOLITH

LTrJGBe – Bethlehem Phase
granodioritic intrusive rocks

LTrJGB – Bethsaida Phase
quartz monzonitic intrusive rocks

LTrJGH – Highland Valley Phase
granodioritic intrusive rocks

LTrJGG – Gump Lake Phase
granodioritic intrusive rocks

LTrJGBo – Border Phase
quartz dioritic intrusive rocks

Geology: Property Area*(cont'd)*

Highland Valley Copper *(cont'd)*

At the Valley deposit, gypsum is interpreted to be secondary and post-ore. It is commonly fibrous and white to orange but locally it forms large platy crystals or may be massive. Anhydrite, which is also present, provides indirect evidence for the secondary nature of the gypsum. It is apparently the same age as and associated with sericitic and potassic alteration. Quartz-gypsum veins and quartz-potash feldspar veins in which gypsum fills interstices provide more direct evidence for its secondary nature. Gypsum is believed to have formed at the expense of anhydrite which was deposited from the ore-forming fluids. Gypsum veins are common in the lower portion of the orebody (Open File 1991-15).

FIDDLER showing *(*Porphyry Cu +/- Mo +/- Au)
MINFILE 092ISE072
One kilometre south

The Fiddler showing is situated immediately east of the eastern border of the Lower Jurassic Guichon Creek batholith. To the east are rocks of the Upper Triassic Gump Lake quartz monzonite stock. The area to the west is underlain by leucocratic hornblende-biotite quartz diorite to granodiorite of the Highland Valley phase of the batholith. Pegmatitic granite lenses within this unit have quartz- epidote knots, some containing magnetite and chalcopyrite.

The main showing is underlain by fine to coarse-grained biotite granodiorite with gneissic foliations striking north and dipping steeply. About 125 metres to the southeast in the South zone, layers of foliated and gneissic or schistose granodiorite alternate. Pyritic aplite is present as stringers and lenses lying within the metamorphic foliation and as larger crosscutting bodies with biotite- rich and leucocratic layers.

PRICE showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092ISE074
500 metres west

The property lies on the eastern flank of the Lower Jurassic Guichon Creek batholith and covers the contact between the Guichon and Chataway variety granodiorites which are part of the Highland Valley phase of the batholith. The area around Tupper Lake is underlain by medium to coarse-grained, hornblende-biotite granodiorite. To the west of Tupper Lake these rocks are cut by late-stage aplite dykes.

JERICHO 18 showing (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISE084
One kilometre west

The Jericho showing lies on the eastern flank of the Lower Jurassic Guichon Creek batholith. The area is underlain by Chataway and Guichon variety coarse to medium-grained hornblende-biotite granodiorite which is intruded by Bethlehem phase dyke swarms. These rocks have wide compositional and textural ranges and are cut by regional faults, fractures and joints and are locally strongly altered.

GEOLOGY: PROPERTY

As indicated by the BC government supported MapPlace geological maps, the Claim Group is underlain by the Late Triassic to Early Jurassic Guichon Creek Batholith (LTrJGB) in the west in a fault contact with rocks of the upper Triassic Nicola Group (uTrNW). A sliver of the Nicola Group occurs within the Guichon rocks with a portion of a feldspar porphyry intrusive occurs in the north.

The geology of the mineral MINFILE reported showings and past producers within the Property is reported as follows.

BERTHA - MOLLY past producer (Stockwork)
MINFILE 092ISE012
Within Tenure 522351

The Dupont Lake area is underlain mainly by Upper Triassic Nicola Group intermediate volcanics and derivatives. Approximately 8 kilometres to the west, Nicola Group rocks are in contact with the Lower Jurassic Guichon Creek batholith. Quartz diorite outcrops southwest of Dupont Lake.

The Bertha-Molly showing is hosted by purplish amygdaloidal andesites with intercalated reddish tuffs. These rocks are strongly fractured and chloritized. The original shaft was sunk at a point where patches of cuprite occur in fractures. Small shipments were made.

RHYOLITE showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092ISE021
Within Tenure 679143

The area straddles a northwest trending contact between two volcanic sequences of the Upper Triassic Nicola Group. To the west are plagioclase, plagioclase-augite intermediate pyroclastic and epiclastic breccia, conglomerate, tuff, sandstone, local shale and augite porphyry bodies. The central portion to the east is underlain by aphanitic pillowed mafic flows. The contact between these two sequences hosts the Rhyolite occurrence.

The Rhyolite showing is underlain by grey, green or black amygdaloidal basalt of the Upper Triassic Nicola Group. Varicoloured calcite amygdules occur within an aphanitic groundmass. Several beds of maroon to green volcaniclastic breccia occur within the basalt and contain maroon, subrounded to subangular clasts ranging up to 30 by 15 centimetres. Two northwest trending, light grey-green, aphanitic, siliceous and pyritic felsic dykes, 3 to 4 metres wide, also occur.

WENDY past producer *(*Volcanogenic)
MINFILE 092ISE154

Within Tenure 1011644

The Wendy showing is situated along the eastern edge of the Guichon Creek batholith where Lower Jurassic quartz diorites and granodiorites have intruded Upper Triassic Nicola Group intermediate volcanics and sediments. These rocks were subsequently intruded by Gump Lake phase granodiorite to quartz monzonite.

The eastern portion of the property is underlain by hornfels, hornfelsed schists and granitic gneisses which have a rough north trending foliation of variable dip. The metamorphosed rocks are intruded by leucocratic, fine to medium-grained granitic dykes which increase in abundance to the west until the hornfelsic units grade into granitic units. The southwestern part of the property is underlain by fine to medium-grained diorite or granodiorite and coarse grey granite.

Geology: Property *(cont'd)*

QUEN showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092ISE190

Within Tenure 514175

The Quen occurrence is underlain by augite and plagioclase porphyritic andesitic flows and red volcanic conglomerate of the Upper Triassic Nicola Group. Chalcopyrite, bornite, pyrite, native copper, molybdenite, chalcocite, malachite and azurite occur in the andesitic flows.

MINERALIZATION: PROPERTY AREA

The mineralization on some of the more significant mineral MINFILE reported occurrences, prospects, and past producers peripheral to the Property is reported as follows. The distance to the Minfile locations is relative to the Property.

FORD past producer *(*Volcanogenic)
MINFILE 092ISE009
Five kilometres north

The original open cuts (pre-1915) expose copper carbonate ore with occasional flecks of bornite and chalcocite along fracture planes in amygdaloidal flows. The adit follows a mineralized shear zone striking 040 degrees and intersects an east trending set of faults.

Chalcocite(?), bornite and some malachite occur in amygdules and associated veins in flow tops. Gangue minerals include chlorite, sericite, clinozoisite, zeolite and calcite. Some mineralization also occurs in calcite veins, calcite-epidote-sericite veins, sericite-zoisite veins and chlorite veins. Carbonate-zeolite veins are barren.

Drill core assays range from 0.22 to 2.8 per cent copper over an interval of less than one metre (Minister of Mines Annual Report 1973).

BETHLEHEM COPPER-SPUD LAKE showing (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISE008
Four kilometres northwest

Mineralization is spotty and consists of disseminations and veinlets of chalcopyrite, bornite and pyrite. Specularite and magnetite are also present in small amounts.

JERICHO Developed prospect (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISE011
Two kilometres west

The upper adit, located on a low ridge, was driven 269.4 metres at a bearing of 084 degrees. Starting approximately 45.7 metres from the portal, the adit intersects mineralized quartz veins which generally strike west to northwest and dip 65 degrees to the north. The principal sulphides are bornite associated with primary chalcocite, chalcopyrite and seams and disseminations of molybdenite. The vein walls are sheared and strongly altered. From 190 metres to its end, the upper adit intersects the No. 1 zone. The lower adit was driven in a south direction. At 525.8 metres, the 1725 zone was intersected and crosscut for a short distance. The No. 1 zone is about 685 metres from the portal and was drifted on for short distances.

Approximate (indicated) reserves are 272,130 tonnes grading 1.0 per cent copper (Highmont Mining Corporation Annual Report 1977).

Mineralization: Property Area *(cont'd)*

HIGHLAND VALLEY COPPER producer (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISW012
Thirteen kilometres west

Sulphides occur chiefly as disseminations in quartz veinlets, and in phyllic (bornite) and potassic (chalcopyrite) alteration zones. Mineralization includes bornite and chalcopyrite, with minor digenite, covellite, pyrite, pyrrhotite, molybdenite, sphalerite and galena. The oxide zone averages 4.5 metres in thickness, and contains limonite, malachite, pyrolusite, digenite, native copper, and tenorite(?).

Highland Valley Copper operates two distinct mines, the Valley mine and the Lornex mine, and between the two has measured and indicated ore reserves of 761 million tonnes of 0.408 per cent copper and 0.0072 molybdenum.

The ore reserves of each mine are: Valley mine - 627 million tonnes at 0.418 per cent copper and 0.0056 per cent molybdenum; Lornex mine - 135 million tonnes at 0.364 per cent copper and 0.0144 per cent molybdenum.

FIDDLER showing *(*Porphyry Cu +/- Mo +/- Au)
MINFILE 092ISE072
One kilometre south

Mineralization is not obviously related to the sericitic and limonitic alteration of the aplite and the granodiorite. Chalcopyrite occurs as disseminations in relatively fresh quartzose or biotite- rich zones in the granodiorite, as disseminations in biotite aplite, and in veins or pockets with quartz, alone or with pyrite, potassium feldspar or epidote. Some veins parallel foliation, others dip gently. A chip sample across a 75 centimetre veined, rusty mineralized zone assayed 0.35 per cent copper with traces of gold and silver (Geology, Exploration and Mining in British Columbia 1974). Some molybdenite was reported when the showing was first discovered (1915).

Post-mineralization shears cut both the aplite and country rock. The most prominent fault zones are 2.7 metres wide, strike north and dip steeply subparallel to foliation. Lesser shears strike southeast and dip moderately to the southwest. Malachite or copper oxides are usually present.

PRICE showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092ISE074
500 metres west

Fault zones host sericitic alteration, malachite staining and copper and molybdenum mineralization. One such zone trends north through Tupper and Gump Lakes.

Small grains of chalcopyrite and magnetite are disseminated in the intrusive rocks.

The Price showing, immediately west of Tupper Lake, consists of bornite and molybdenite occurring as thin coatings on fractures in sheared granodiorite. Malachite is also present.

Mineralization: Property Area *(cont'd)*

JERICHO 18 showing (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISE084
One kilometre west

Between Pete's Creek and Moly Creek, the granodiorite is intruded by quartz veins and pegmatite and aplite dykes varying in width from 2.5 centimetres to 30.5 metres or greater. Potassium feldspar enrichment is evidently associated with the smaller intrusions. Chalcopyrite with minor molybdenite occur in very widely spaced joints and fractures trending approximately 025 degrees. Mineralization occurs as thin coatings on the planes of the fractures. The fractures are very tight, vertical and accompanied by a barren conjugate set trending 060 degrees.

The showing is located along Pete's Creek and consists of a concentration of mineralized fractures. A 45.36 kilogram sample of this exposure assayed 0.48 per cent copper and 0.009 per cent molybdenum (Assessment Report 922).

MINERALIZATION: PROPERTY

The mineralization on the mineral MINFILE reported showings and past producers within the Property is reported as follows

BERTHA - MOLLY past producer (Stockwork)
MINFILE 092ISE012
Within Tenure 522351

Recent development has exposed malachite, azurite, chalcopyrite, cuprite and pyrite hosted by shears and fracture-fillings in vesicular volcanics and red tuffs. Mineralization is structurally controlled with an apparent north trend. A common alteration is calcite and epidote with silicification becoming stronger at depth.

RHYOLITE showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092ISE021
Within Tenure 679143

Mineralization occurs in amygdaloidal basalt near the flow-volcaniclastic contact and is related to narrow quartz-carbonate veinlets within shears. Several old trenches indicate the shear zone strikes approximately 335 to 345 degrees and dips steeply west. Pyrite is present with minor chalcopyrite, azurite, malachite and sphalerite. Rock samples from this zone assayed up to 0.377 per cent copper, 0.218 per cent zinc and are weakly anomalous in gold and silver values.

WENDY past producer *(*Volcanogenic)
MINFILE 092ISE154
Within Tenure 1011644

Minor chalcopyrite and malachite occur as narrow veins or along joint planes and as fine disseminations in the intrusive rocks.

QUEN showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092ISE190
Within Tenure 514175

Chalcopyrite, bornite, pyrite, native copper, molybdenite, chalcocite, malachite and azurite occur in the andesitic flows.

STRUCTURAL ANALYSIS

a) Purpose

The purpose of the structural analysis was to delineate any area of major fault intersections which location could be the centre of maximum brecciation and be depth intensive to provide the most favourable feeder zone to any convective hydrothermal fluids sourced from a potentially mineral laden reservoir. The fluid constituents and/or the indications thereof could be etched in the surface material where, by means of standard exploratory procedures, the source and location may be identified as a foundation on which to warrant any follow-up exploration.

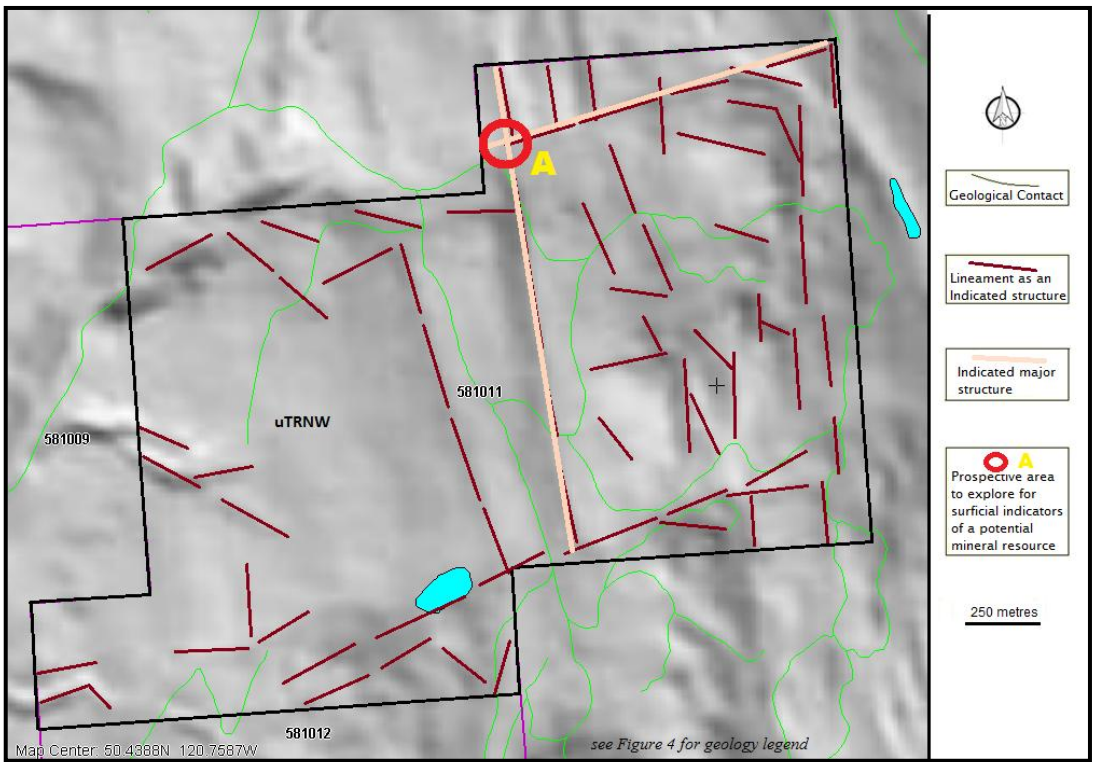
These surficial indications such as prime minerals, indicator minerals, or alteration patterns, may be an indication of a masked mineral resource. Thus, a cross-structural location would be the prime area to initially prospect for the surficial indicators which may be revealed as pathfinder minerals, minerals and/or alteration products that would be subject to interpretation as economic mineral indicators.

b) Method

The structural analysis was performed on a DEM image hillshade map of Tenure 581011 by viewing of the map and marking the lineaments as indicated structures thereon. A total of 63 lineaments were marked (*Figure 5*), compiled into a 10 degree class interval, and plotted as a rose diagram as indicated on *Figure 6.* . The indicated primary structural trend was then plotted on the lineament map with the general trend influenced by the predominant lineaments as shown by the Rose Diagram.

The centre of the work area on Tenure 581011 is at 5,598,887N 658,343E (10) (NAD 83).

Figure 5. **Indicated Lineaments on Tenure 581011**

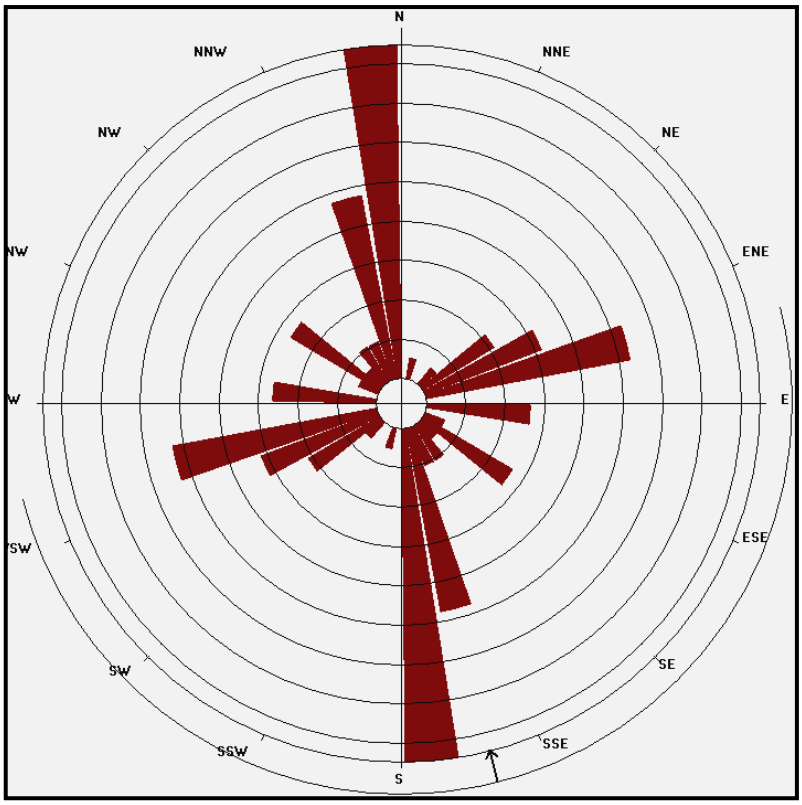


c) Results

One cross-structure was delineated by an indicated major trending northerly structure intersected by one indicated east-northeasterly trending major structure.

Structural Analysis *(cont'd)*

Figure 6. **Rose Diagram from lineaments** *(Figure 5)* **of Tenure 581011**



STATISTICS

Axial (non-polar) data
No. of Data = 63
Sector angle = 10°
Scale: tick interval = 3% [1.9 data]
Maximum = 25.4% [16 data]
Mean Resultant dir'n = 166-346
[Approx. 95% Confidence interval = ±90.0°]
(valid only for unimodal data)

Mean Resultant dir'n = 165.7 - 345.7
Circ.Median = 173.0 - 353.0
Circ.Mean Dev.about median = 39.2°
Circ. Variance = 0.44
Circular Std.Dev. = 61.28°
Circ. Dispersion = 23.76
Circ.Std Error = 0.6141
Circ.Skewness = -0.07
Circ.Kurtosis = 2.15

kappa = 0.20
(von Mises concentration param. estimate)

Resultant length = 6.40
Mean Resultant length = 0.1015

'Mean' Moments: Cbar = 0.0892; Sbar = -0.0486
'Full' trig. sums: SumCos = 5.6169; Sbar = -3.0591
Mean resultant of doubled angles = 0.5103
Mean direction of doubled angles = 150

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

Structural Analysis *(cont'd)*

Figure 7. **Cross structural location on Google Earth**
(Base Map: Google Earth)

Table II. **Approximate UTM location of cross-structure on Tenure 581011**
(UTM-NAD 83)

Location	UTM East	UTM North	Elevation
A	658,389	5,590,707	1,323

Magnetometer Survey

a) Instrumentation

A Scintrex MF 2 Model magnetometer used for the magnetometer survey. Diurnal variation was 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 a northerly base line at 5,590,800N 658,325E, four base stations were established at 50 metre intervals to 5,590,600N 658,325E. Magnetometer readings were taken at 25 metre intervals along the five grid lines to 658,725E. The grid line stations were located with the use of a GPS instrument. Line kilometres of magnetometer survey completed was 2.0. The field data is reported herein in Appendix I.

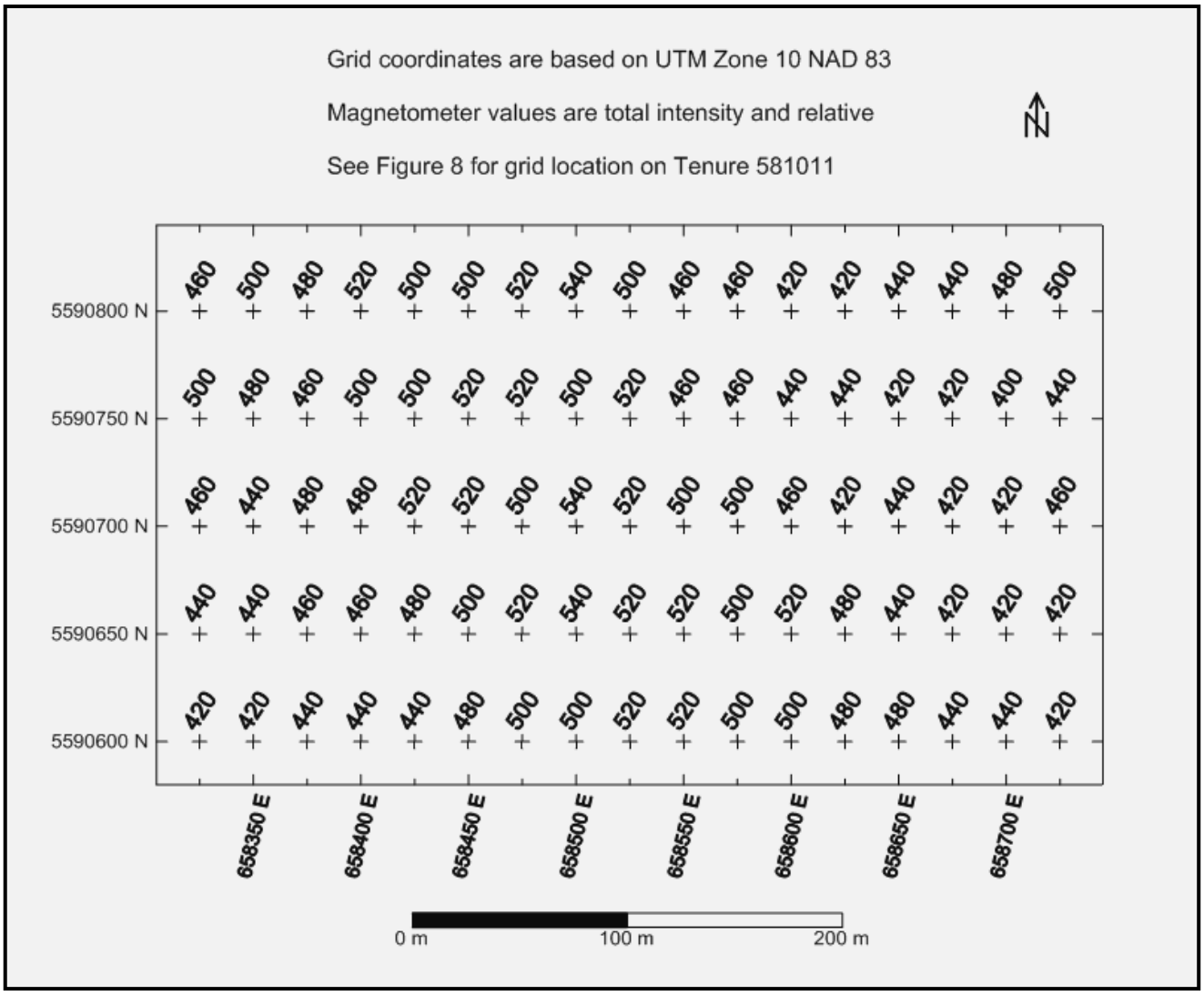
d) Data Reduction

The field results were initially input to an Exel spreadsheet whereupon a Surfer 31 program was utilized to create maps from the data results. The field results are included within Appendix I.

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

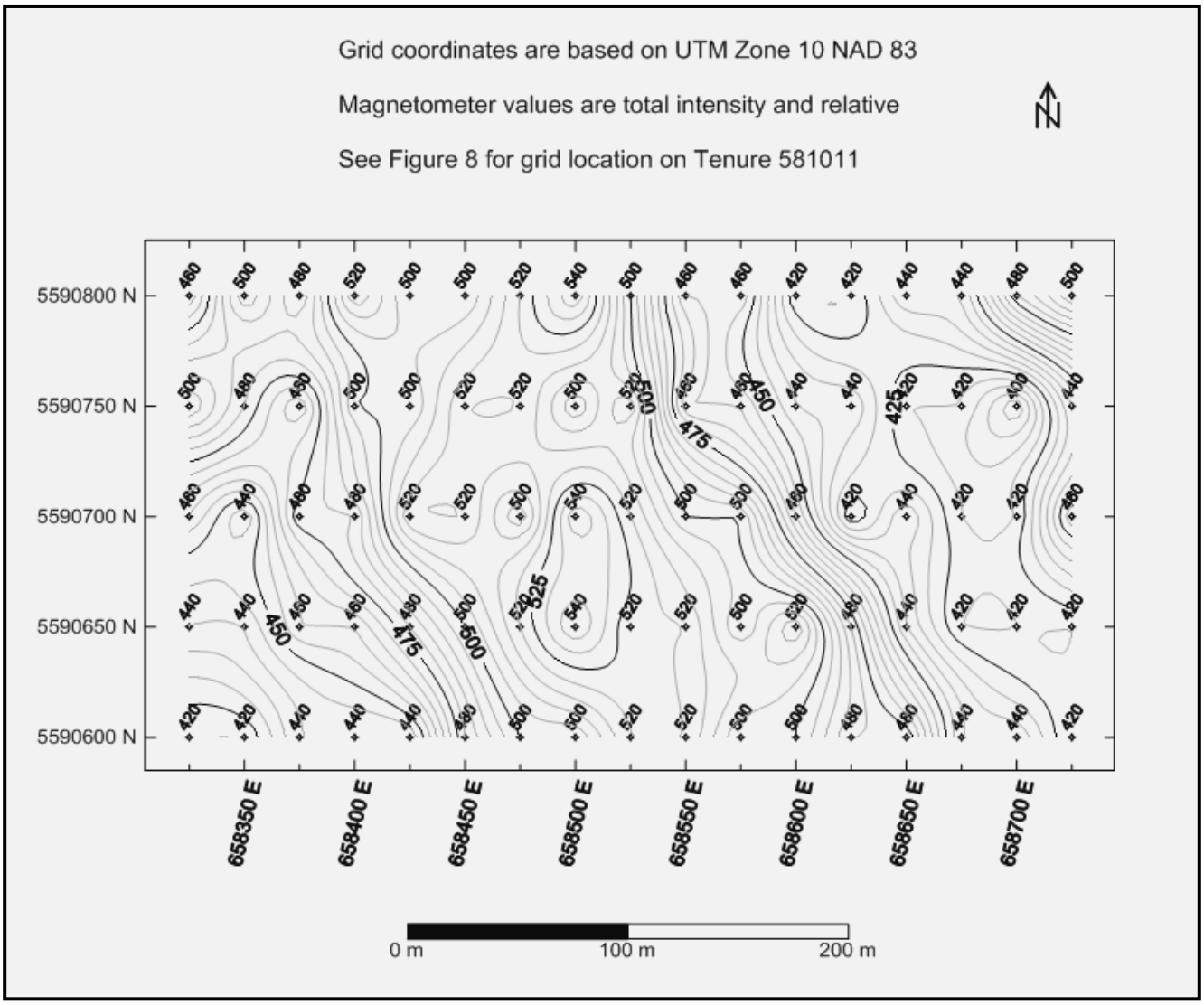
Magnetometer Survey *(cont'd)*

Figure 9 .**Magnetometer Survey Data**



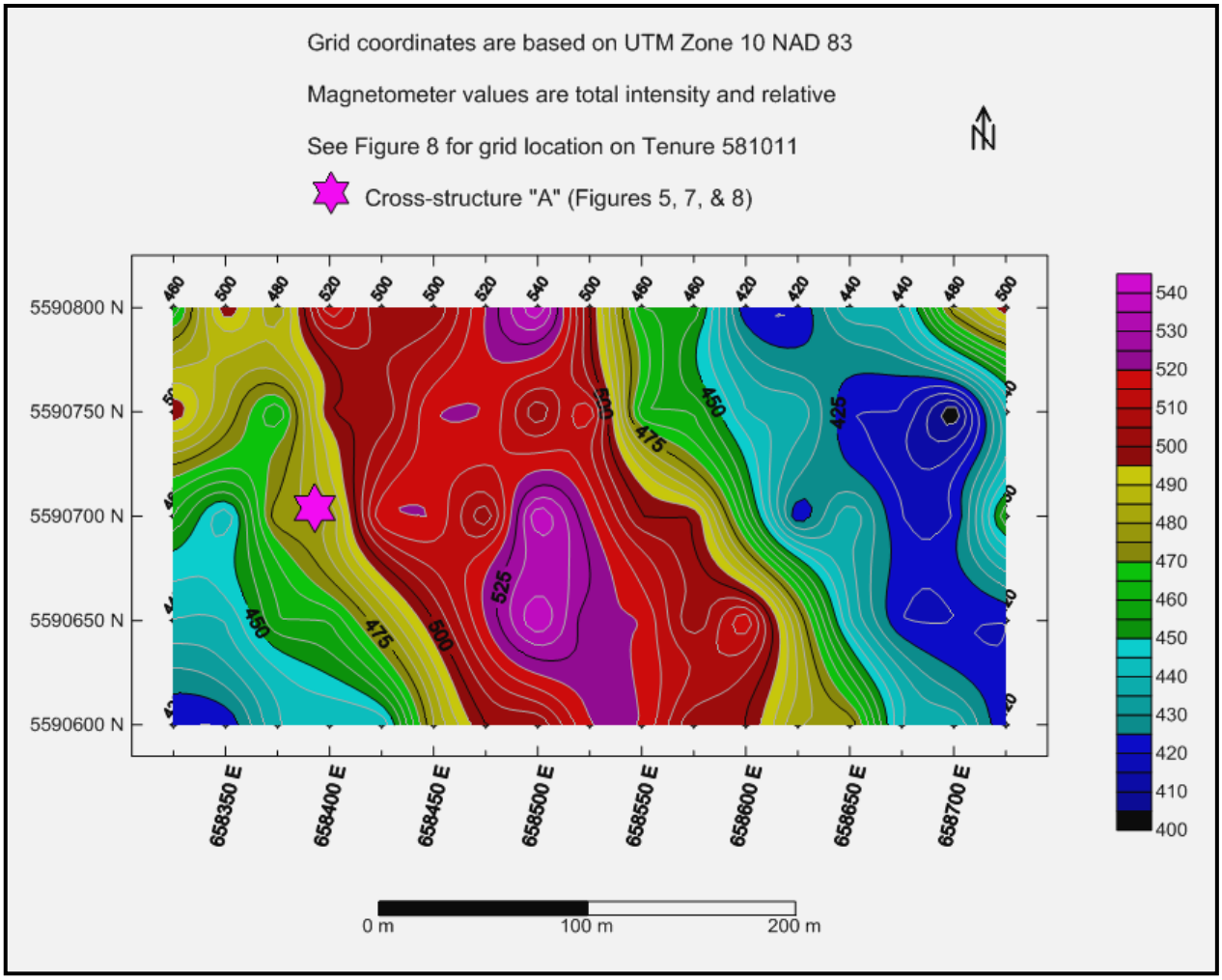
Magnetometer Survey *(cont'd)*

Figure 10. **Magnetometer Survey Data Contoured**



Magnetometer Survey *(cont'd)*

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



e) Results

The results indicated a central 225 metre wide, open-ended north-northwesterly trending magnetic high (mag HI) with a 100 metre wide, open-ended magnetic low (mag LO) in the east and a north-northwesterly mag LO in the southwest corner which is indicated to be over 100 metres wide and open to the south and the southwest.

Within the central mag HI Two localized anomalous mag HI's are; the northern one is up to 75 metres wide and open to the north; The southern one is up to 75 metres wide and may be open to the south.

Within the eastern mag LO is a north-northwesterly trending, up to 75 metre wide, open-ended anomalous/sub-anomalous mag LO.

Within the southwestern mag LO is a 25 metre localized anomalous mag LO in the extreme southwest corner.

Cross-structure "A" is located within a background area in the transitional zone between the central mag HI and the southeastern mag LO.

INTERPRETATION and CONCLUSIONS

Cross-structure "A", as indicated from the structural analysis on Tenure 581011 is a prime location to explore for surficial geological indicators of a concealed mineral resource. This location would be the site of most intense brecciation/fracture formation to depth and peripherally and would be the most accommodating for the deposition of hydrothermal fluids as at the Highland Valley (092ISW012) and the Bethlehem Spud Lake (092ISE008) ore deposits where mineralization is concentrated in breccia bodies, faults and highly fractured areas.

Cross-structure "A" is developed from indicated general northerly and easterly trending structures; a mineral controlling structural setting similar to the structural setting at the Highland Valley/Lornex mineral deposits. Even though the cross-structure is located in the Nicola volcanics, the structures could indicate mineral controlling structures in an underlying satellite intrusive related to the Guichon batholith or other unrelated intrusives. The structures may also be controls to a mineral resource at the intrusive/volcanic contact as at the Copper Mountain mineral deposit *(Minfile 092HSE001).*

There could be variable interpretations of the magnetometer survey results, however, if the mag LO's indicate hydrothermally altered structural zones there are two mag LO's that may indicate such altered zones. The most significant is the eastern 75 metre north-northwesterly trending mag LO. Although this indicated structure does not correlate with the indicated major structure as determined from the structural analysis and as shown on Figure 5, a sporadic indicated structure is shown at this location. The major north-northwesterly structure and the location of cross-structure "A" could be indicated in the open-ended mag LO in the southwest corner of the magnetometer survey as shown on Figure 11.

The central mag HI between the mag LO's may indicate the unaltered volcanics.

In accordance with the interpretation of the structural analysis and the magnetometer survey results, the eastern mag LO should be explored for indications of mineralization associated with a hydrothermally altered structural zone with the southwestern mag LO explored for the location of cross-structure "A" and surficial indications of a concealed mineral resource.

Respectfully submitted
Sookochoff Consultants Inc.

Laurence Sookochoff, PEng

SELECTED REFERENCES

Garrow, T. – 2010 Diamond Drilling Assessment Report on the Dansey Project for Highland North Inc. January 20, 2012. AR 32,980.

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

Holcombe, R. – 2009: GEOrient, ver 9.4.4. Stereographic Projections and Rose Diagram Plots

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.

kisgeo.com/SC09.htm – PROFESSIONAL DEVELOPMENT COURSE "Epithermal and Porphyry Ore Deposits- Field Aspects for Exploration Geologists-with Field visits" With Dr. Greg Corbett. Biga Peninsula, Turkey. March 11 to March 14, 2014.

MapPlace – Map Data downloads

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

MtOnline - MINFILE downloads.

092ISE009 – FORD
092ISE008 – BETHLEHEM COPPER-SPUD LAKE
092ISE011 – JERICHO
092ISW012 – HIGHLAND VALLEY COPPER
092ISE012 – BERTHA – MOLLY
092ISE021 – RHYOLITE
092ISE072 – FIDDLER
092ISE074 – PRICE
092ISE084 – JERICHO 18
092ISE154 – WENDY
092ISE190 – QUEN

Sookochoff, L., Zhonghua, P. – Dansey Project Technical Report for Logan Copper Inc. January 16, 2010.

Sookochoff, L. – Assessment Report on Geological & Geophysical Surveys for Guy and Christopher Delorme on Tenure 581012 of the Bertha 581012 Claim Group. December 9, 2015.

Sookochoff, L. – Geological Assessment Report for Guy and Christopher Delorme on Tenure 581005 of the Bertha 581005 Claim Group. July 8, 2015. AR 34,909.

STATEMENT OF COSTS

Work on Tenure 581011 was done from November 15, 2015 to December 7, 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	
November 29-30, 2015	
Four man days @ $300.00 per day ----------	1,200.00
Truck & skidoo rental, kilometre charge, fuel, room & board,	
mag rental ----------	1,328.20
	$ 5,528.20
Maps ----------	750.00
Report ----------	3,500.00
	$ 9,778.20
	======

CERTIFICATE

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

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

I, Laurence Sookochoff, further certify that:

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

2) I have been practicing my profession for the past fifty 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 in the Bertha Property area.

5) I have no interest in the Bertha 581011 Claim Group as described herein.

Laurence Sookochoff, P. Eng.

Appendix I

Magnetometer Data

E5580995 T581011

East	North	Mag	East	North	Mag	East	North	Mag
658325	5590600	420	658325	5590650	440	658325	5590700	460
658350	5590600	420	658350	5590650	440	658350	5590700	440
658375	5590600	440	658375	5590650	460	658375	5590700	480
658400	5590600	440	658400	5590650	460	658400	5590700	480
658425	5590600	440	658425	5590650	480	658425	5590700	520
658450	5590600	480	658450	5590650	500	658450	5590700	520
658475	5590600	500	658475	5590650	520	658475	5590700	500
658500	5590600	500	658500	5590650	540	658500	5590700	540
658525	5590600	520	658525	5590650	520	658525	5590700	520
658550	5590600	520	658550	5590650	520	658550	5590700	500
658575	5590600	500	658575	5590650	500	658575	5590700	500
658600	5590600	500	658600	5590650	520	658600	5590700	460
658625	5590600	480	658625	5590650	480	658625	5590700	420
658650	5590600	480	658650	5590650	440	658650	5590700	440
658675	5590600	440	658675	5590650	420	658675	5590700	420
658700	5590600	440	658700	5590650	420	658700	5590700	420
658725	5590600	420	658725	5590650	420	658725	5590700	460

East	North	Mag	East	North	Mag
658325	5590750	500	658325	5590800	460
658350	5590750	480	658350	5590800	500
658375	5590750	460	658375	5590800	480
658400	5590750	500	658400	5590800	520
658425	5590750	500	658425	5590800	500
658450	5590750	520	658450	5590800	500
658475	5590750	520	658475	5590800	520
658500	5590750	500	658500	5590800	540
658525	5590750	520	658525	5590800	500
658550	5590750	460	658550	5590800	460
658575	5590750	460	658575	5590800	460
658600	5590750	440	658600	5590800	420
658625	5590750	440	658625	5590800	420
658650	5590750	420	658650	5590800	440
658675	5590750	420	658675	5590800	440
658700	5590750	400	658700	5590800	480
658725	5590750	440	658725	5590800	500