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

Assessment Report
Title Page and Summary

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

TOTAL COST: $ 8,955.70

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

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): **YEAR OF WORK:** 2016

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5615455 August 23, 2016

PROPERTY NAME: Bertha

CLAIM NAME(S) (on which the work was done): 605002

COMMODITIES SOUGHT: Copper, Gold

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 092ISE012, 092ISE021, 092ISE147, 092ISE154, 092ISE190

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

LATITUDE: 50 ° 25 ' 53 " **LONGITUDE:** 120 ° 52 ' 26 " **(at centre of work)**

OWNER(S):

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PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
Triassic-Jurassic, Guichon Creek Batholith, Granodiorites, Triassic, Nicola Group, Volcanic rocks

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 00974, 01601, 03638, 03496, 04828, 35003

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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	123 hectares	605002	$ 5,500.00
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic	2.4	605002	3,455.70
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:	$ 8,955.70

GUY & CHRISTOPHER DELORME

(Owners & Operators)

ASSESSMENT REPORT

on

GEOLOGICAL & GEOPHYSICAL SURVEYS

(Event 5615455)

work done from

August 10, 2016 to August 15, 2016

on

Tenure 605002

of the 14 claim

Bertha 605002 Claim Group

Kamloops Mining Divisions

BCGS Maps 092I.046/.047

Centre of Work

5,588,760N 650,997E
(Zone 10 NAD 83)

Author & Consultant

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Submitted

February 3, 2017

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SUMMARY

The 14 claim, 5,62929 hectare Bertha 605002 Claim Group is located 210 kilometres northeast of Vancouver in the Highland Valley of south central British Columbia. It is within 13 kilometres of the Highland Valley Copper mine, one of the largest copper mining and concentrating operations in the world.

The Highland Valley Copper deposit is one of a cluster of nine major porphyry copper deposits that lie within a 15 square kilometer zone in the center of the Late Jurassic Guichon Creek batholith. 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 most prominent structural features are the north trending Lornex fault and the west-northwesterly Highland Valley fault.

At the Bethlehem Copper-Spud Lake mineral showing (Minfile 092ISE008) intrusive contacts, north trending faults, and closely spaced fractures control the mineralization. At the Bethlehem past producer (Minfile 092ISW001) mineralization is concentrated in breccia bodies, faults and highly fractured areas. The Highland Valley Copper and the Lornex deposits were created from a favourable structural setting at the intersection of two regional faults.

The Bertha 605002 Claim Group, as indicated by the BC government supported MapPlace geological map, is underlain primarily by rocks of the Guichon Batholith in the west which are in a northerly trending regional Guichon Creek fault contact with the Western Volcanic Facies of the upper Triassic Nicola Group.

Tenure 605002 is underlain by granodioritic rocks of the Highland Valley Phase (LTrJGH).

On Tenure 605002 the two cross-structures are indicated as a reflection of the structural trends controlling the mineralization at some of the major Highland Valley mineral deposits, as shown on Figure 12. The major east-west structure, Highland Valley fault, extends eastward from the Highland Valley mineral resource to within three kilometres north of Tenure 605002.

In the results of the localized magnetometer survey, assuming a mag LO reflects a structural zone, the westerly and northwesterly trending structures making up cross-structure "A" were revealed in the mag LO zone of variable and relative intensity. However, even though cross-structure "A" was not correlative with an anomalous mag LO in the mag LO zone, the approximate location within a transition zone from a mag HI to a mag LO zone, the anomalous mag LO was a more indicative location of a potential concealed mineral resource as the best grades of copper and gold mineralization are generally associated with the margins of magnetic highs.

Accordingly, the two structural intersections on Tenure 605002 should be explored for surficial geological indicators of a mineral resource with the priority in the area of, and including the cross-structural "A" location where the approximate UTM locations of the intersections are shown in Table II.

INTRODUCTION

Between August 10, 2016 and August 15, 2016, a structural analysis and a localized magnetometer survey were completed on Tenure 605002 of the 14 claim Bertha 605002 claim group (Property). The purpose of the program was to delineate potential structures which may be integral in geological controls to potentially economic mineral zones that may occur on Tenure 605002 or other claims of the Bertha 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 605002 Claim Group is located within BCGS Map 092I.046 of the Kamloops Mining Division, 210 kilometres northeast of Vancouver, 36 kilometres north of Merritt, 45 kilometres southwest of Kamloops, and within 13 kilometres of the world-class Highland Valley Copper mine (*Minfile 092ISW012).*

Description

The Property is comprised of 14 contiguous claims covering an area of 5629.2575 hectares. Particulars are as follows:

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

Table I. **Tenures of Bertha 605002 Claim Group**

Tenure Number	Type	Claim Name	Good Until	Area (ha)
514175	Mineral	QUEN	20161110	41.183
522351	Mineral	MIKE	20180514	370.452
581002	Mineral		20160910	432.0029
581005	Mineral		20161110	514.5084
581009	Mineral		20161110	514.6423
581011	Mineral		20161110	514.5161
581012	Mineral		20161110	514.7582
581015	Mineral		20161110	514.8414
581016	Mineral		20161110	514.6721
585384	Mineral		20170129	494.0089
596301	Mineral	PONYBOY NORTH	20170228	390.9753
605002	Mineral	PONYBOY WEST	20170228	123.4998
679143	Mineral		20170517	308.6294
1011644	Mineral		20170228	20.5677

Total Area: 5269.2575 ha

*Upon the approval of the assessment work filing, Event Number 5615455.

ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE and PHYSIOGRAPHY

Access

From Logan Lake, the Bertha 605002 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 six 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 605002 covers gentle to moderate forested slopes with clear-cut areas. Elevations range between 1,325 m along the southeast border to 1,385 m along the northwest border.

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

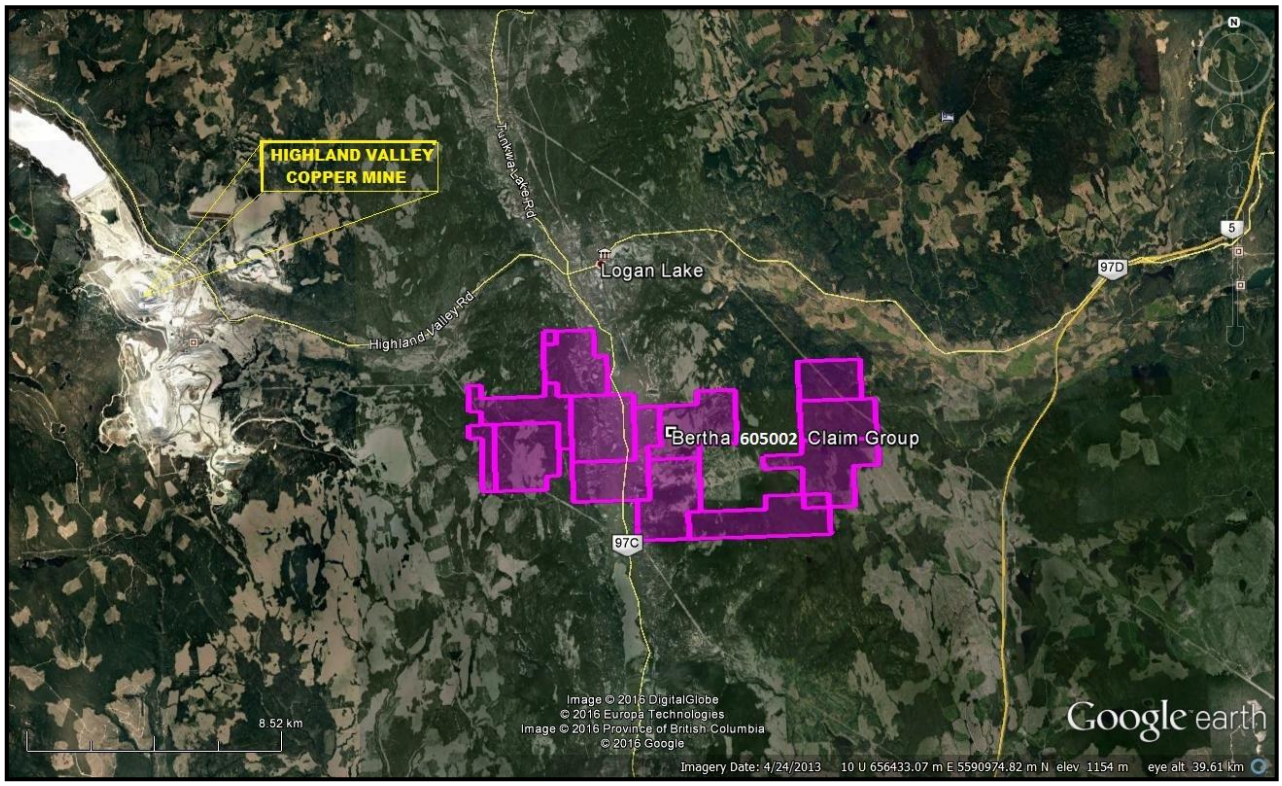
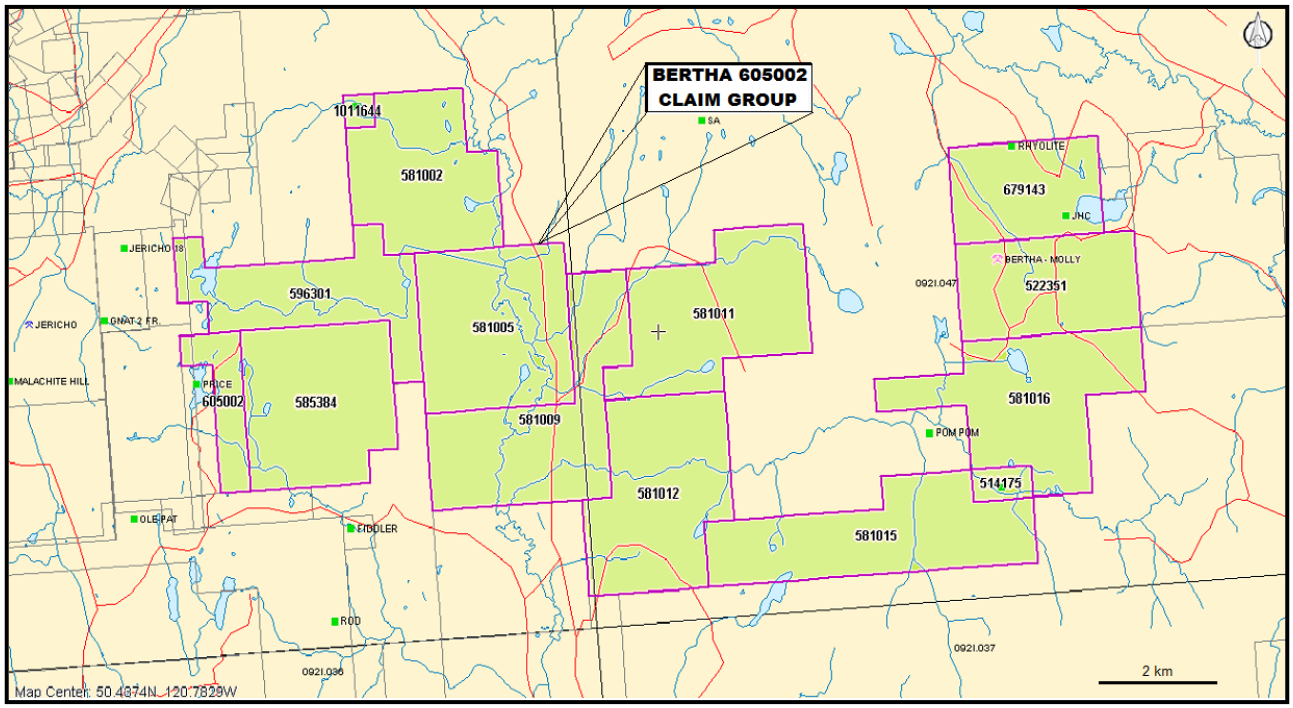


Figure 3. **Claim Map**
(from Google Earth)



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.

Two power lines cross the Property; one in the west and one in the east

HISTORY: BERTHA 605002 CLAIM GROUP AREA

The history on some of the more significant mineral MINFILE reported showings, prospects, past producers, and producers peripheral to the Bertha 605002 Claim Group is reported as follows. The distance to the Minfile locations is relative to the Bertha 605002 Claim Group.

BETHLEHEM past producer (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISW001
Ten kilometres northwest

Production from 1963 to 1982 totalled 96,324,510 tonnes, yielding 99,826,893 grams silver, 1,279,833 grams gold, 398,112,545 kilograms copper and 851,048 kilograms molybdenum.

The Bethlehem concentrator milled Valley ore (092ISW012) until its closure in June of 1989.

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

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.

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.

History: Bertha 605002 Claim Group Area *(cont'd)*

Highland Valley Copper *producer (cont'd)*

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. 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.

HIGHMONT past producer (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISW013
Nine kilometres west

The West Pit (092ISW036) was mined first; East Pit production began concurrently.

Production from 1981 to 1984 totalled 37,247,399 tonnes, yielding 50,219 tonnes of copper and 6865.6 tonnes of molybdenite.

HIGHMONT (WEST) past producer (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISW036
Nine kilometres west

The West Pit (092ISW036) was mined first; East Pit production began concurrently.

Production from 1981 to 1984 totalled 37,247,399 tonnes, yielding 50,219 tonnes of copper and 6865.6 tonnes of molybdenite.

HISTORY: BERTHA 605002 CLAIM GROUP

The history of the mineral MINFILE reported showings, and past producers within the Bertha 605002 Claim Group 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 605002 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 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. 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: BERTHA 605002 CLAIM GROUP AREA

The geology of some of the more significant mineral MINFILE reported showings, prospects, past producers, and producers peripheral to the Bertha 605002 Claim Group is reported as follows. The distance to the Minfile locations is relative to the Bertha 605002 Claim Group.

BETHLEHEM past producer (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISW001
Ten kilometres northwest

Geology: Bertha 605002 Claim Group Area *(cont'd)*

Bethlehem *past producer (cont'd)*

The Bethlehem property lies within the Early Jurassic-Late Triassic Guichon Creek batholith and straddles an intrusive contact where younger Bethlehem phase rocks form an irregular embayment in older Guichon variety rocks. The Bethlehem phase is medium-grained granodiorite to quartz diorite which ranges from equigranular to hornblende-biotite porphyry. The Guichon variety is medium-grained granodiorite. Igneous breccias are postulated to have been forcefully emplaced.

Clasts up to 20 centimetres in diameter are subrounded and sit in a generally compact, but sometimes vuggy matrix. The granodiorites and breccias are intruded by north trending, steeply dipping dykes which are compositionally similar to the enclosing rocks; contacts are chilled. Most of the dykes are dacite porphyry and range in width from less than 1 metre to 60 metres.

The Bethlehem ore deposits (East Jersey (092ISE002), Huestis (092ISE004), Iona (092ISE006), and Snowstorm (092ISE005) are controlled by north trending faults and are localized in zones of closely-spaced fractures. Mineralization is concentrated in breccia bodies, faults and highly fractured areas. The Jersey fault cuts through the centre of the Jersey pit.

Hydrothermal alteration is restricted to the immediate area of the ore zones. The distribution of secondary biotite defines an inner potassic zone, sericite with kaolinite and montmorillonite define an intermediate phyllic zone, and epidote defines a peripheral propylitic zone. There is an outer halo of chloritized mafic minerals. Calcite, zeolite and quartz veining and vug-filling is common.

Metallic mineral zoning is very similar to alteration patterns. Bornite and chalcopyrite occur in the hydrothermal biotite zone, specularite in the epidote zone and minor pyrite in the outer halo. Molybdenite, chalcocite and magnetite occur in minor amounts. Malachite, azurite, chrysocolla, cuprite, native copper, hematite, goethite and manganese oxides occur to shallow depths. An age date from a sample of a mixture of magmatic and hydrothermal biotite from the Iona ore zone (092ISE006) returned 199 Ma +/- 8 Ma (Canadian Institute of Mining and Metallurgy Special Volume 15).

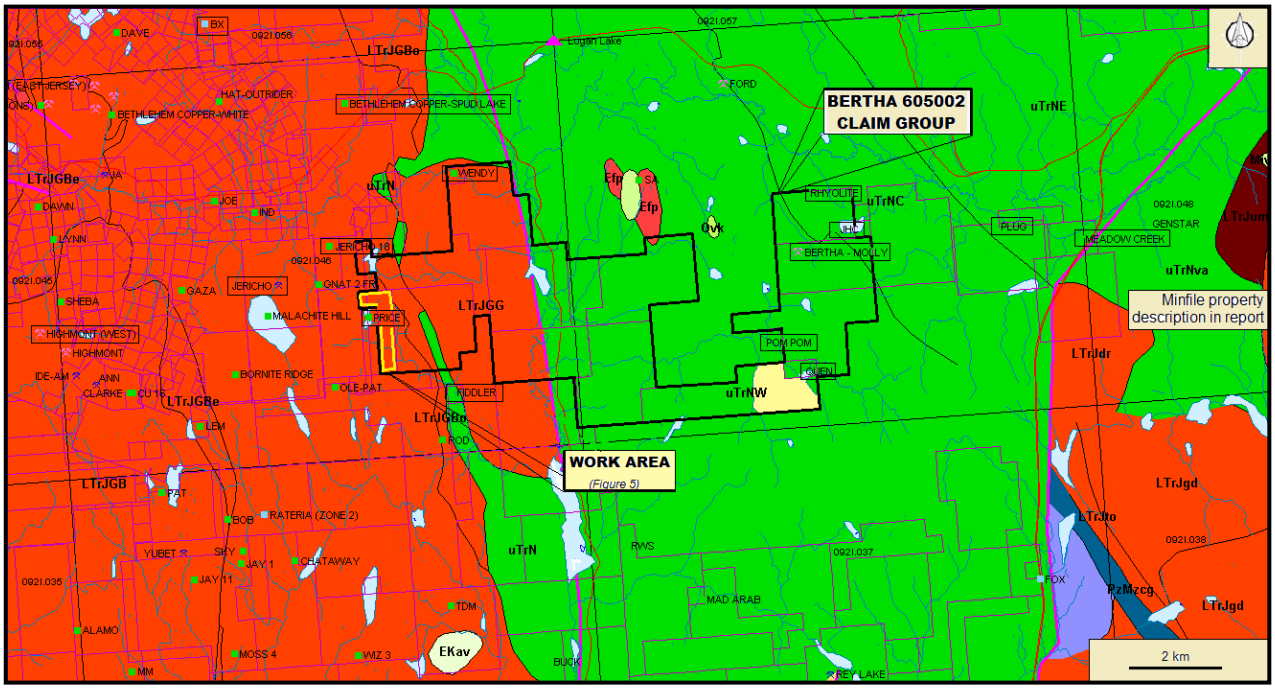
BETHLEHEM COPPER-SPUD LAKE showing (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISE008
Five kilometres north

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.

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.

***Geology: Bertha 605002 Claim Group Area** (cont'd)*

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



GEOLOGY MAP LEGEND

Mivb
Miocene-unnamed
Basaltic volcanic rocks

EKav
Eocene-Kamloops Group
Undivided volcanic rocks

EPrb
Eocene-Penticton Group
Andesitic volcanic rocks

Upper Triassic-Nicola Group

uTrNc
Central Volcanic Facies
undivided volcanic rocks

uTrN
undivided 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: Bertha 605002 Claim Group Area *(cont'd)*

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

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, 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.

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).

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(?).

Geology: Bertha 605002 Claim Group Area *(cont'd)*

The West Pit (092ISW036) was mined first; East Pit production began concurrently.

Production from 1981 to 1984 totalled 37,247,399 tonnes, yielding 50,219 tonnes of copper and 6865.6 tonnes of molybdenite.

HIGHMONT past producer (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISW013
Nine kilometres west

The Highmont mine is situated in the central core of the Early Jurassic-Late Triassic Guichon Creek batholith and is underlain primarily by Skeena variety quartz diorite. Skeena rocks are intruded by the composite Gnawed Mountain porphyry dyke which trends west-northwest and dips vertically in the central part of the property and 75 degrees north in the eastern part. This dyke consists of biotite-quartz-feldspar porphyry derived from Bethsaida phase leucocratic quartz porphyry and breccia. The two major ore zones roughly parallel the Gnawed Mountain dyke, which itself is partly mineralized. Near the southeast corner of the East pit there is a breccia consisting of granitoid fragments in a tourmaline-hematite matrix, which appears to be gradational into crackle breccia. Smaller plagioclase-quartz porphyry dykes and narrow aplite dykes are scattered throughout the property. Tertiary lamprophyre and andesite porphyry dykes also occur.

The property is cut by several north-northeast trending post-mineral faults. The Waterhole fault strikes 025 degrees, dips westward at 60 degrees and has clay and gouge sections up to 7.5 metres wide bounded by hematitic shattered zones. Apparent left-lateral offset of up to 30 metres is evident. The fracture pattern in the East pit is well-defined and involves four main attitudes: 140 to 150 degree strike and 80 degree northeast dips; 040 to 050 degree strike and 45 degree northwest dips; 075 degree strike and vertical dip; and 095 degree strike and vertical dip. Fractures are concentrated in parallel swarms up to 60 metres in width which coincide with higher grade mineralization.

The Highmont deposits exhibit the lowest overall intensity of alteration of any producing Highland Valley deposits. Potassic alteration is weak although minor potassium feldspar occurs as veins and alteration envelopes. Secondary biotite is widespread. Quartz-sulphide veinlets with sericitic envelopes comprise phyllic alteration which coincides with the 0.28 copper isopleth in the East pit. Argillic and propylitic alteration are entirely fracture-related.

Alteration grades outward from a central vein, fracture or shear, through a zone of kaolinite and montmorillonite, into chlorite- epidote-sericite-albite alteration and then into unaltered rock. The widths of these zones vary from several centimetres to 50 metres. Late-stage calcite and zeolite veins are also present.

HIGHMONT (WEST) past producer (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISW036
Nine kilometres west

The Highmont deposits are located in the central core of the Late Triassic to Early Jurassic Guichon Creek batholith and are hosted primarily by Skeena variety quartz diorite to granodiorite. Skeena rocks are intruded by the composite Gnawed Mountain porphyry dyke which trends west-northwest and dips vertically in the central portion of the property.

Geology: Bertha 605002 Claim Group Area *(cont'd)*

Highmont (West) *past producer (cont'd)*

This dyke consists of biotite-quartz- feldspar porphyry derived from the Bethsaida phase leucocratic quartz porphyry and breccia. Small, pre-mineral plagioclase-quartz porphyry and aplite dykes are scattered throughout the property. Tertiary lamprophyre and andesite porphyry dykes also occur. The property is cut by several north striking faults.

Potassic, phyllic, argillic and propylitic alteration on the property is weak compared to that at other deposits in the Highland Valley district. Argillic and propylitic alteration are entirely fracture-related, grading outward from a central vein or fracture through a zone of intense kaolinite alteration into chlorite-epidote-sericite-albite alteration and finally into unaltered rock. Alteration zones vary from several centimetres to 50 metres wide.

FIDDLER showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092ISE072
600 metres 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.

POM POM showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092ISE170
400 metres south

The Pom Pom occurrence is underlain by grey-green and purple andesitic tuffs, flows and breccias of the Upper Triassic Nicola Group intruded by a microdiorite dyke. Chalcopyrite and bornite occur in the dyke as fracture controlled mineralization accompanied by epidote, calcite and hematite alteration mineralogy.

GEOLOGY: BERTHA 605002 CLAIM GROUP

The Bertha 605002 claim group is shown to be underlain by volcanics of the Nicola Group in the east in a fault contact with intrusives of the Guichon batholith to the west.

Eastward from the regional fault, the Nicola Group is comprised predominantly of undivided rocks of the Western Volcanic Facies *(uTrNW)* in a conformable contact with volcanics of the Central Volcanic Facies *(uTrNC)* at the extreme east

Westward, the Guichon batholith *(LTrJGB)* is comprised of granodiorites of the Gump Lake Phase *(LTrJGG)* in a conformable contact centrally with quartz diorites of the Border Phase *(LTrJGBo)*. The north and the south portions of the contact zone is partly occupied by lenticular zones of Nicola volcanics. At the extreme western portion of the claim group, the Border Phase is in a conformable contact with granodioritic intrusive rocks of the Highland Valley Phase *(LTrJGH).*

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

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

JHC showing (Volcanic redbed Cu)
MINFILE 092ISE147
Within Tenure 679143

The property lies west of Homfray Lake and is underlain by volcanic rocks of the Upper Triassic Nicola Group. The area straddles a northwest trending contact between two volcanic sequences. East of the contact zone are very fine-grained red flows with occasional feldspar (plagioclase?) phenocrysts. The matrix contains moderate amounts of hematite disseminations. To the west are grey volcanics with an aphanitic to fine-grained matrix and associated feldspar and/or augite phenocrysts. Alteration consists of epidote, chlorite and carbonate. The contact zone parallels the main northwest structural trend. Northeast and north trends are also evident. Drilling (1971) intersected disseminated chalcocite in porphyritic and amygdaloidal basalt.

Geology: Bertha 605002 Claim Group *(cont'd)*

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.

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: BERTHA 605002 CLAIM GROUP AREA

The mineralization on some of the more significant mineral MINFILE reported showings, prospects, past producers, and producers peripheral to the Bertha 605002 Claim Group is reported as follows. The distance to the Minfile locations is relative to the Bertha 605002 Claim Group.

BETHLEHEM past producer (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISW001
Ten kilometres northwest

The Jersey orebody hosts disseminated mineralization and occurs in an area of relatively evenly distributed and variously oriented pervasive fracturing. Irregular, discontinuous quartz veins also hosts mineralization. Production from the Jersey pit began in 1964 and from the Jersey pit extension in 1977.

Reserves for the Jersey deposit are 22.9 million tonnes of 0.40 per cent copper. Total reserves for the Bethlehem deposits (Jersey, East Jersey and Iona) are 43.5 million tonnes (plus 6 million tonnes oxide) grading 0.40 per cent copper, minor molybdenum and 0.013 grams per tonne gold (CIM Special Volume 46, page 175).

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

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

Mineralization: Bertha 605002 Claim Group Area*(cont'd)*

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

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. The individual mine reserves are calculated at an equivalent cutoff grade of 0.25 per cent copper using a molybdenum multiplying factor of 3.5 (CIM Bulletin July/August 1992, pages 73,74).

HIGHMONT past producer (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISW013
Nine kilometres west

The principal economic minerals are chalcopyrite, bornite and molybdenite occurring predominantly in four types of veins and fracture-fillings. In the East pit, quartz veins are generally 1 to 25 millimetres wide with a vuggy texture. Chalcopyrite and bornite occur in the centre of the veins with scattered flaky molybdenite. Alteration envelopes 2.5 to 5.0 centimetres wide are characterized by coarse white sericite flakes, tourmaline clusters, minor potassium feldspar and limonite. Chalcocite is present in small amounts. Pyrite and specular hematite are gangue minerals.

Unclassified reserves in Zone 1 are 87.6 million tonnes grading 0.26 per cent copper and 0.021 per cent molybdenum (Cominco Limited Annual Report 1988).

HIGHMONT (WEST) past producer (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISW036
Nine kilometres west

The principal economic minerals are chalcopyrite, bornite and molybdenite occurring in veins and fractures. Chalcocite is present in minor amounts. Pyrite and specular hematite are gangue minerals. Minor chalcopyrite disseminations occur within a few centimetres of mineralized veins and shears. Veins of grey, brecciated quartz are up to 1 metre wide and are cut by seams of molybdenite and clay minerals. Mineralized clay gouge also occurs at the edges of veins. These zones consist mainly of quartz, albite, calcite and kaolinite and are usually accompanied by several metres of intensely argillized wallrock.

The West pit was mined first; East pit production began concurrently. See Highmont mine (092ISE013) for production statistics.

Reserves for the East Pit are reported as 800,000 tonnes of 0.15 per cent copper and 0.048 per cent molybdenum (CIM Special Volume 46, page 175).

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

Mineralization is not obviously related to the sericitic and limonitic alteration of the aplite and the granodiorite.

Mineralization: Bertha 605002 Claim Group Area*(cont'd)*

Fiddler *showing (cont'd)*

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.

POM POM showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092ISE170
400 metres south

Copper mineralization grades 0.17 per cent copper (Assessment Report 18048).

MINERALIZATION: BERTHA 605002 CLAIM GROUP

The mineralization on the mineral MINFILE reported showings and past producers within the Bertha 605002 Claim Group 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

Mineralization: Bertha 605002 Claim Group *(cont'd)*

Rhyolite *showing (cont'd)*

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.

JHC showing (Volcanic redbed Cu)
MINFILE 092ISE147
Within Tenure 679143

Drilling (1971) intersected disseminated chalcocite in porphyritic and amygdaloidal basalt. Fracturing and narrow shears in amygdaloidal andesite contain epidote, carbonate, quartz, malachite and chalcopyrite. A chip sample assayed 4.27 per cent copper and 14.2 grams per tonne silver (Assessment Report 17337).

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 605002 by viewing of the map and marking the lineaments as indicated structures thereon. A total of 33 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 605002 is at 5,588,760N, 650,997E (10) (NAD 83).

Structural Analysis *(cont'd)*

c) Results

Two cross-structures, the southern, designated as "A", and the northern, designated as "B", between intersections of structures with a variable westerly, northwesterly and northerly trend, were delineated.

Figure 5. **Indicated Lineaments on Tenure 605002**

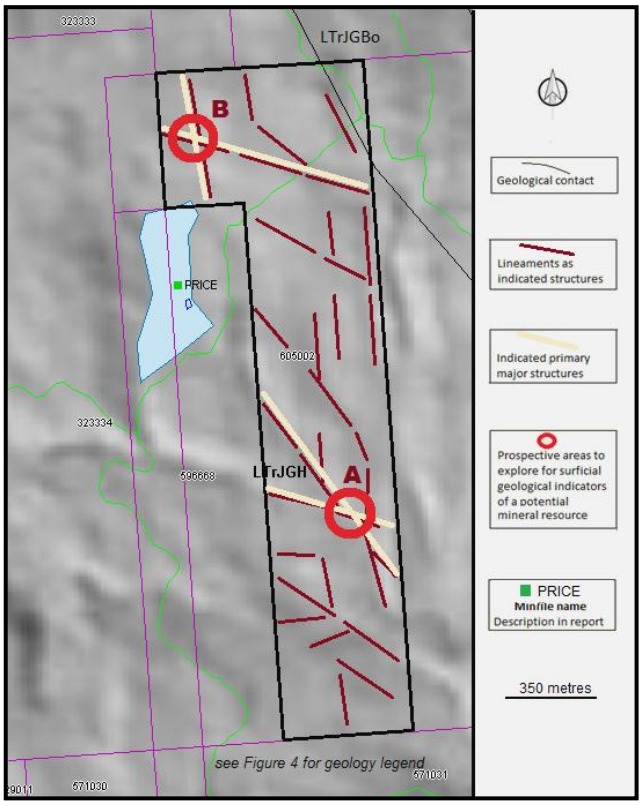
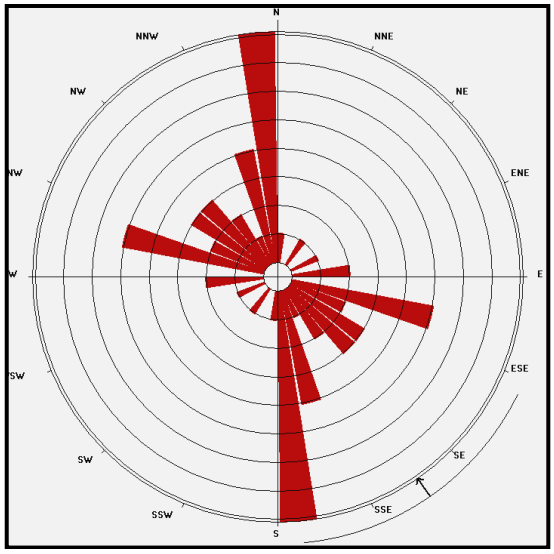


Figure 6. **Rose Diagram from lineaments of Tenure 605002**



Structural Analysis *(cont'd)*

STATISTICS

Axial (non-polar) data
No. of Data = 33
Sector angle = 10°
Scale: tick interval = 3% [1.0 data]
Maximum = 24.2% [8 data]
Mean Resultant dir'n = 145-325
[Approx. 95% Confidence interval = ±29.1°]
(valid only for unimodal data)

Mean Resultant dir'n = 145.3 - 325.3
Circ.Median = 148.0 - 328.0
Circ.Mean Dev.about median = 30.0°
Circ. Variance = 0.19
Circular Std.Dev. = 36.65°
Circ. Dispersion = 2.04
Circ.Std Error = 0.2484
Circ.Skewness = 2.03
Circ.Kurtosis = -16.71

kappa = 0.98
(von Mises concentration param. estimate)

Resultant length = 14.56
Mean Resultant length = 0.4412

'Mean' Moments: Cbar = 0.1547; Sbar = -0.4132
'Full' trig. sums: SumCos = 5.1055; Sbar = -13.6342
Mean resultant of doubled angles = 0.2075
Mean direction of doubled angles = 175

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

Figure 7. **Cross structural locations** *(Figure 5)* **on Google Earth**
(Base Map: Google Earth)

Structural Analysis *(cont'd)*

Table II. **Approximate UTM locations of cross-structures**
(UTM-10NAD 83)

Location	UTM East	UTM North	Elevation
A	651,142	5,588,227	1,340
B	650,647	5,589,640	1,369

Magnetometer Survey

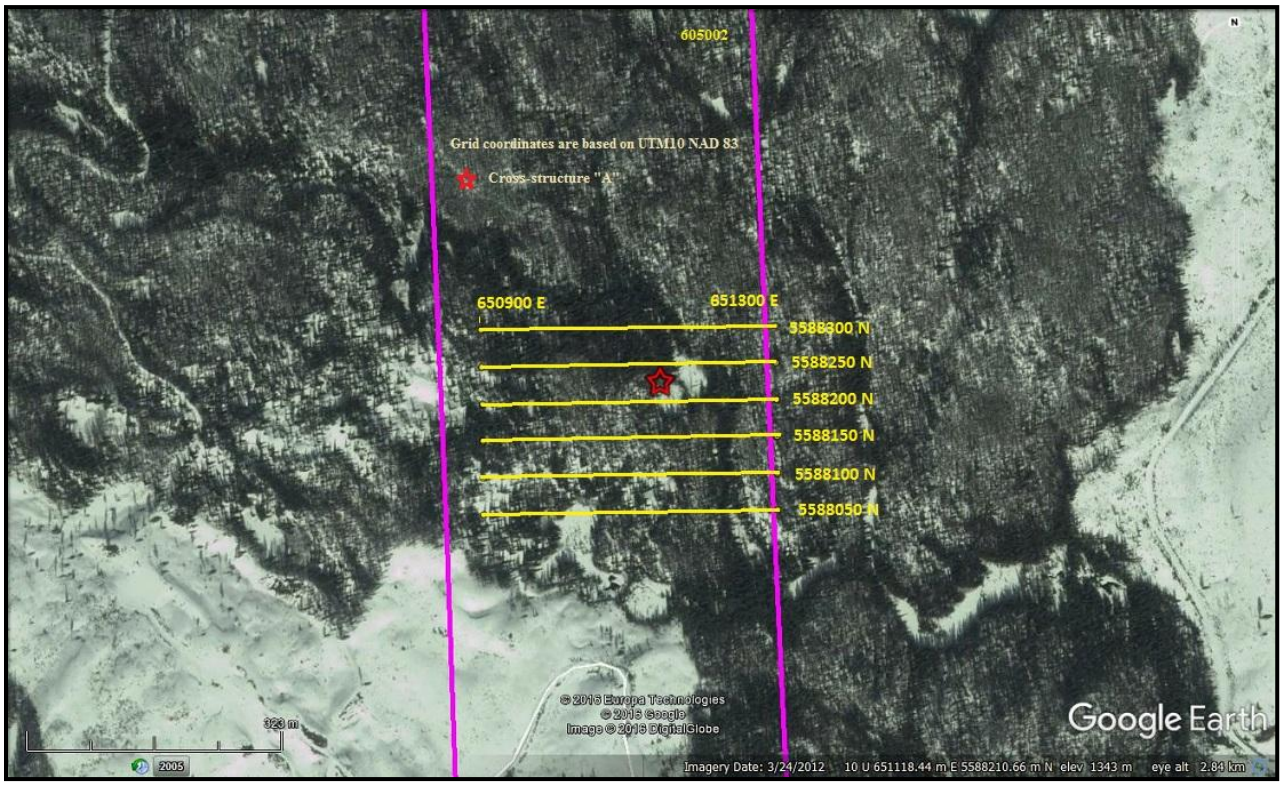
a) Instrumentation

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.

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



Magnetometer Survey *(cont'd)*

c) Survey Procedure

From a base line station at 5588050N 650900E, five additional base-line stations were established at 50 metre intervals northerly to 5588300N 650900E. Magnetometer readings were taken at 25 metre intervals easterly along the six grid lines from 650900E to 651300E. The grid line stations were established with a GPS instrument. Line kilometres of magnetometer survey completed was 2.4. The field data is reported herein in Appendix I.

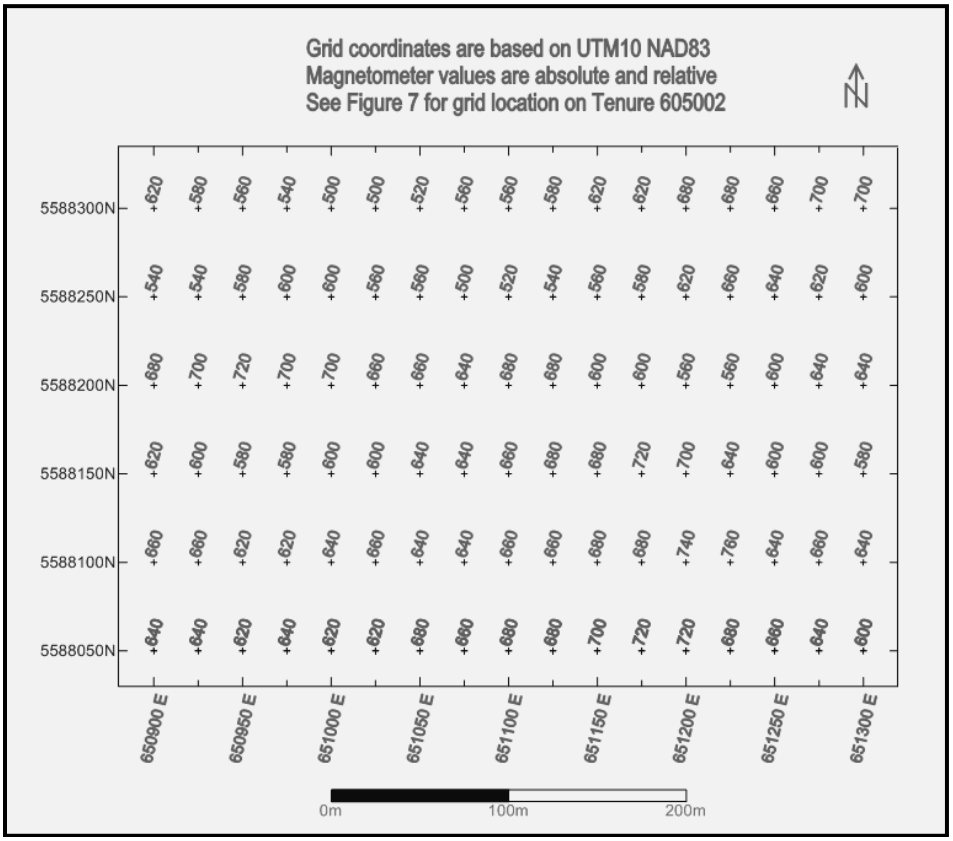
d) Data Reduction

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 herein as Appendix I.

e) Results

The results indicated a general magnetometer low (mag LO) zone trending west-northwesterly with decreasing intensity westward to a 125 metre open-ended sub-anomalous to anomalous mag LO. The westernmost portion of the anomaly is indicated by a 50 meter anomalous, open mag LO which is indicated at an intersection with a general northwest trending mag LO. The location of cross-structure "A", approximately 150 metres from the indicated anomalous mag LO intersection, is proximal to the eastern portion of the sub-anomalous/anomalous mag LO zone and within the transition zone to a localized mag HI 50 metres southwest.

Figure 9 .**Magnetometer Survey Data**



Magnetometer Survey *(cont'd)*

Figure 10. **Magnetometer Survey Data Contoured**

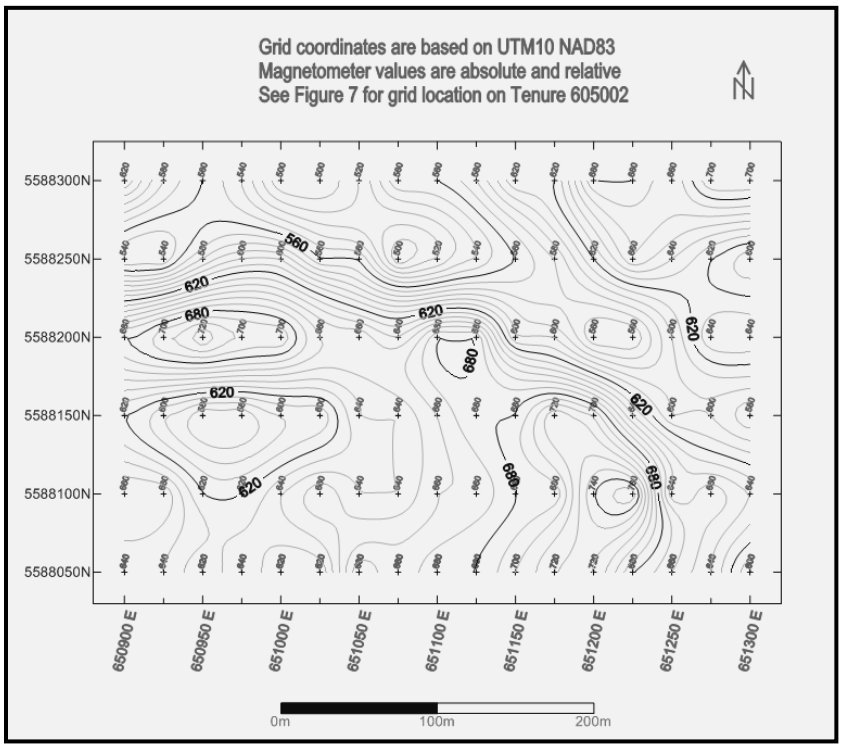


Figure 11. **Magnetometer Survey Data Colour Contoured**

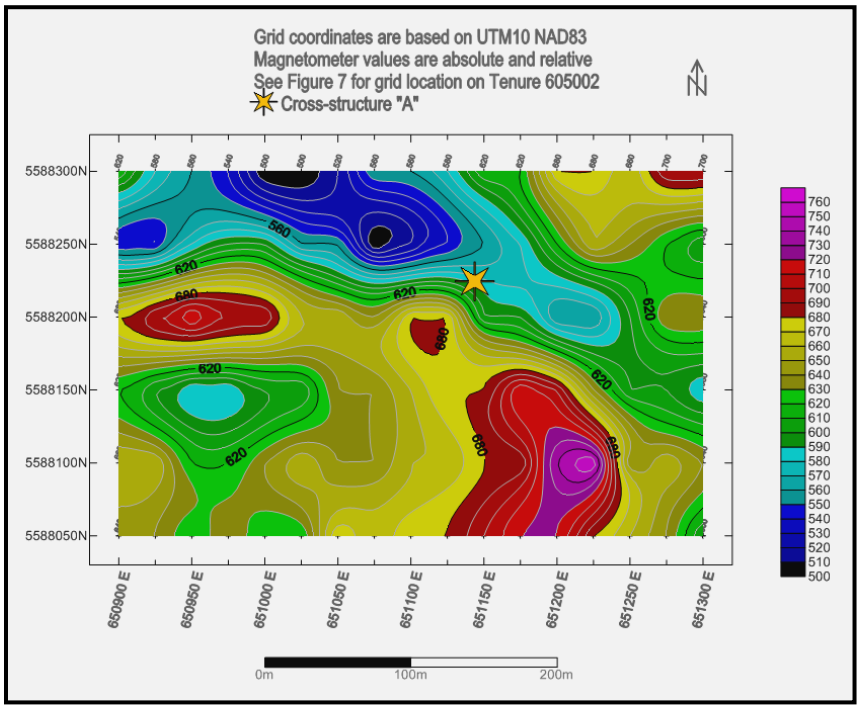
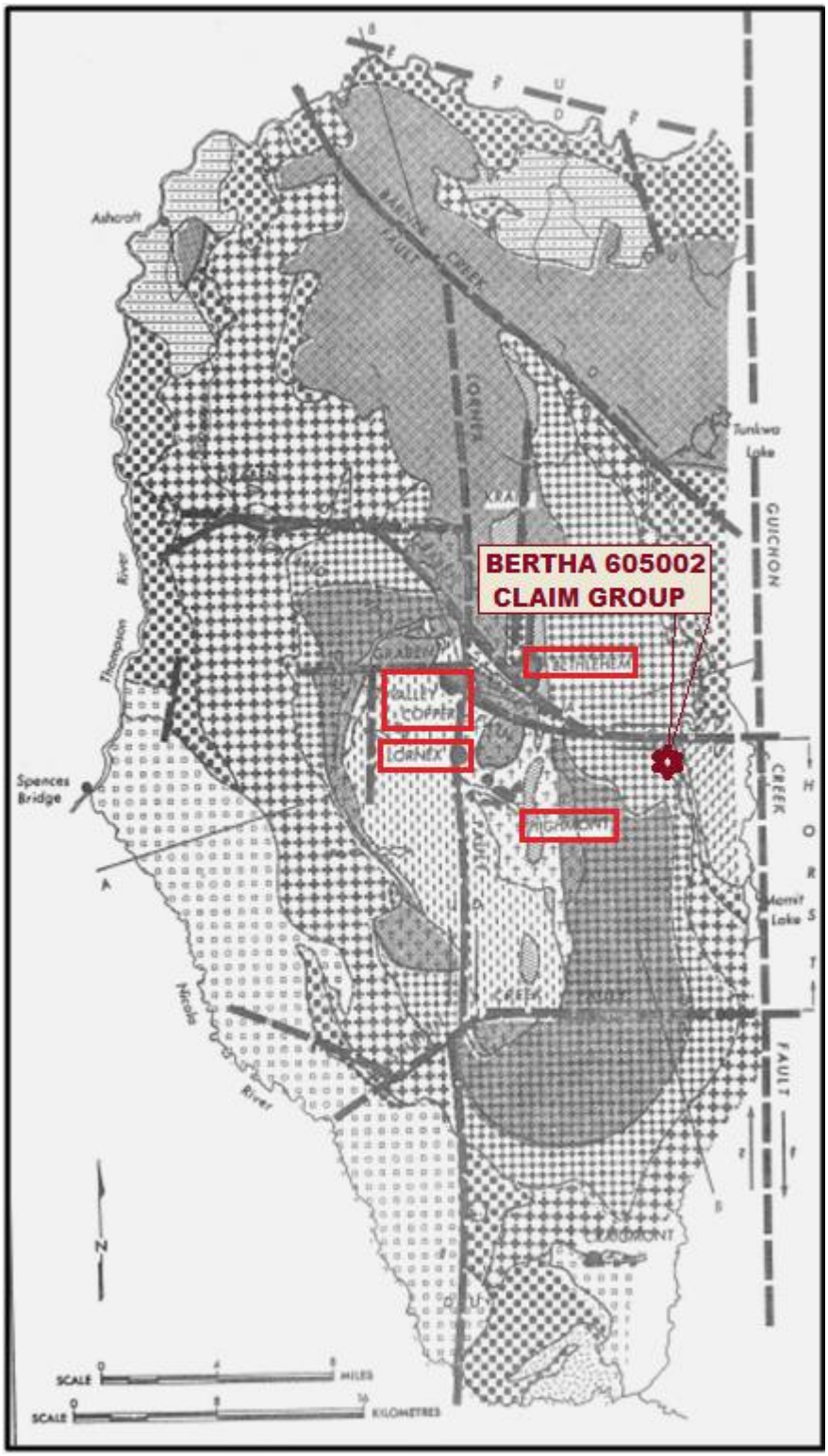


Figure 12. **Major mineral deposits & location of the Bertha 605002 Claim Group in the Guichon Batholith**

(Base Map: Figure 6 - CIM Special Volume No. 15)



INTERPRETATION and CONCLUSIONS

The structural directions of the two cross-structures delineated in the structural analysis of Tenure 605002 of the 14 claim Bertha 605002 Claim Group are indicated as a reflection of the structural trends controlling the mineralization at some of the major Highland Valley mineral deposits, as shown on Figure 12. The major east-west structure, Highland Valley fault, extends eastward from the Highland Valley mineral resource to within three kilometres north of Tenure 605002.

The Highland Valley Copper and the Lornex mineral deposits, are perhaps the most classic example of mineral deposits where the intersection of the major northerly trending Lornex fault and west-northwesterly trending Highland Valley fault originally created a central intensive and expansive breccia zone which hosted mineralization which was subsequently divided and offset by the Lornex Fault.

In the results of the localized magnetometer survey, assuming a mag LO reflects a structural zone, the westerly and northwesterly trending structures making up cross-structure "A" were revealed in the mag LO zone of variable and relative intensity. Even though cross-structure "A" was not correlative with an anomalous mag LO in the mag LO zone, the approximate location within a transition zone from a mag HI to a mag LO zone, the anomalous mag LO was a more indicative location of a potential concealed mineral resource as the best grades of copper and gold mineralization are generally associated with the margins of magnetic highs.

Accordingly, the two structural intersections on Tenure 605002 should be explored for surficial geological indicators of a mineral resource with the priority in the area of, and including the cross-structural "A" location where the approximate UTM locations of the intersections are shown in Table II.

The geological indicators may be revealed as pathfinder minerals, minerals and/or alteration products that would be subject to interpretation as economic mineral indicators to follow-up exploration.

Respectfully submitted
Sookochoff Consultants Inc.

Laurence Sookochoff, PEng

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MapPlace – Map Data downloads

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McMillan, W.J., Osatenko, M.J. – Guichon Creek Batholith and Mineral Deposits. Geological Association of Canada. Society of Economic Geologists. Joint Annual Meeting, 1977. British Columbia Ministry of Mines and Petroleum Resources.

MtOnline - MINFILE downloads.

092ISW001 – BETHLEHEM
092ISE008 – BETHLEHEM COPPER-SPUD LAKE
092ISW012 – HIGHLAND VALLEY COPPER
092ISE012 – BERTHA – MOLLY
092ISE013 – HIGHMONT
092ISE021 – RHYOLITE
092ISE036 – HIGHMONT (WEST)
092ISE072 – FIDDLER
092ISE074 – PRICE
092ISE147 – JHC
092ISE154 – WENDY
092ISE170 – POM-POM
092ISE190 – QUEN

Sookochoff, L. – Geological Assessment Report on Tenure 596301 of the Bertha 596301 Claim Group for Guy and Christopher Delorme. November 26, 2014. AR 35003.

STATEMENT OF COSTS

Work on Tenure 605002 was done from August 10, 2016 to August 15, 2016 to the value as follows:

Structural Analysis		
Laurence Sookochoff, P Eng. 2 days @ $ 1,000.00/day -----		$ 2,000.00
Magnetometer Survey		
Christopher Delorme & Guy Delorme		
August 12-14, 1016		
Six man days @ $300.00 per day ----------		1,800.00
Kilometre charge: 360 @ $0.70 ----------	252.00	
Fuel ----------	73.70	
Room & board 6 man days @ $90.00 ----------	540.00	
Mag rental 3 days @ $80.00 ----------	240.00	1,105.70
		$ 4,905.70
Maps ----------		750.00
Report ----------		3,300.00
		$ 8,955.70
		======

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 605002 Claim Group as described herein.

Laurence Sookochoff, P. Eng.

Appendix I

Magnetometer Data

		Event 5615455 Tenure 605002						
East	**North**	**Mag**	**East**	**North**	**Mag**	**East**	**North**	**Mag**
650900	5588050	640	650900	5588100	660	650900	5588150	620
650925	5588050	640	650925	5588100	660	650925	5588150	600
650950	5588050	620	650950	5588100	620	650950	5588150	580
650975	5588050	640	650975	5588100	620	650975	5588150	580
651000	5588050	620	651000	5588100	640	651000	5588150	600
651025	5588050	620	651025	5588100	660	651025	5588150	600
651050	5588050	680	651050	5588100	640	651050	5588150	640
651075	5588050	660	651075	5588100	640	651075	5588150	640
651100	5588050	680	651100	5588100	660	651100	5588150	660
651125	5588050	680	651125	5588100	660	651125	5588150	680
651150	5588050	700	651150	5588100	680	651150	5588150	680
651175	5588050	720	651175	5588100	680	651175	5588150	720
651200	5588050	720	651200	5588100	740	651200	5588150	700
651225	5588050	680	651225	5588100	760	651225	5588150	640
651250	5588050	660	651250	5588100	640	651250	5588150	600
651275	5588050	640	651275	5588100	660	651275	5588150	600
651300	5588050	600	651300	5588100	640	651300	5588150	580
East	**North**	**Mag**	**East**	**North**	**Mag**	**East**	**North**	**Mag**
650900	5588200	680	650900	5588250	540	650900	5588300	620
650925	5588200	700	650925	5588250	540	650925	5588300	580
650950	5588200	720	650950	5588250	580	650950	5588300	560
650975	5588200	700	650975	5588250	600	650975	5588300	540
651000	5588200	700	651000	5588250	600	651000	5588300	500
651025	5588200	660	651025	5588250	560	651025	5588300	500
651050	5588200	660	651050	5588250	560	651050	5588300	520
651075	5588200	640	651075	5588250	500	651075	5588300	560
651100	5588200	680	651100	5588250	520	651100	5588300	560
651125	5588200	680	651125	5588250	540	651125	5588300	580
651150	5588200	600	651150	5588250	560	651150	5588300	620
651175	5588200	600	651175	5588250	580	651175	5588300	620
651200	5588200	560	651200	5588250	620	651200	5588300	680
651225	5588200	560	651225	5588250	660	651225	5588300	680
651250	5588200	600	651250	5588250	640	651250	5588300	660
651275	5588200	640	651275	5588250	620	651275	5588300	700
651300	5588200	640	651300	5588250	600	651300	5588300	700