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: $ 9,984.65

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): 5580989 December 8, 2015

PROPERTY NAME: Bertha

CLAIM NAME(S) (on which the work was done): 585388

COMMODITIES SOUGHT: Copper Gold

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 092INE034 092INE040 092INE135

MINING DIVISION: Kamloops **NTS/BCGS:** O92I.046 092I.047

LATITUDE: 50 ° 34 ' 29 " **LONGITUDE:** 120 ° 53 ' 57 " **(at centre of work)**

OWNER(S):

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

Trasssic, Nicola Group, Western Volcanic Facies, Volcanics, Triassic-Jurassic, Guichon Creek Batholith, Highland Valley Phase, Border Phase, Intrusives, Granodiorite, Quartz Diorite

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 02312 03631 03632 29164 29173 34975

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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	573 hectares	585388	$ 6,000.00
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic	2.4	585388	3,984.65
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:	9,984.65

GUY & CHRISTOPHER DELORME

(Owners & Operators)

ASSESSMENT REPORT

on

GEOLOGICAL & GEOPHYSICAL SURVEYS

(Event 5580989)

work done from

December 3, 2015 to December 7, 2015

on

Tenure 585388

of the 10 claim

Bertha 585388 Claim Group

Kamloops Mining Divisions

BCGS Maps 092I.046/.047

Centre of Work
5,604,645N, 648,824E
(Zone10 NAD83)

Author & Consultant

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Submitted
May 8, 2016

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SUMMARY

The 10 claim, 4935 hectare Bertha 585388 Claim Group, located 209 kilometres northeast of Vancouver in the Highland Valley of south central British Columbia, is within six kilometres of the Highland Valley Copper mine, a world-class mining operation.

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. The cross-faulting relationship may have been the initiation to the formation of the mineral resource in that a mineralization conduit was provided. The reactivation of the Lornex fault created a progressively expansive structural system to accommodate the mineralizing fluids.

As indicated by the BC government supported MapPlace geological maps, the Bertha 585388 Claim Group is underlain by the Guichon Batholith in the west which is in a fault contact with the Western Volcanic Facies of the upper Triassic Nicola Group (uTrNW) in the east. Two Phases of the Guichon Batholith are covered by the Claim Group; quartz diorites of the Border Phase centrally and granodiorites of the Highland Valley Phase in the west. Tenure 585388 is predominantly underlain by the Border Phase skirted by the Highland Valley Phase.

In the structural analysis of Tenure 585388, two cross-structural locations were delineated within the quartz dioritic intrusive rocks. The cross-structural locations could be the centre of maximum brecciation and mineralization with the mineral zone decreasing outwardly to the limits of a mineral resource which would be a function of fracture (vein) density and of the thickness and the mineralogy of the filling material.

This condition is well illustrated at the Brenda (092HNE047) mineral zone and to a greater degree at the Highland Valley Copper (092ISW012) mineral zone. The Highland Valley Copper mineral zone may have originated at the cross-structural location between the major Lornex and Highland Valley Faults. The fault and the mineral zone are within an expansive residual magnetic low.

The mag LO's from the magnetometer survey are assumed to indicate dynamic or hydrothermal alteration zones associated with major structures. As the general mag LO zone appears to have the configuration of the structural trends of the two structures compositing the structures of cross-structure "B" which correlates with an anomalous mag LO within the general zone, the area of this zone should be explored for a central zone of brecciation where surficial geological indications of a mineral resource may be found.

Should the exploration result in indicators such as favourable structural zones, pathfinder minerals, minerals and/or alteration products, a soil geochemical survey and an IP survey would be warranted.

Excluding other variable geological conditions, the structures are essential in the localization of potentially economic porphyry and/or quartz vein hosted mineralization within related intrusives to the Guichon Creek Batholith and/or the host units of the Nicola Group.

INTRODUCTION

In December 2015 a structural analysis and a localized magnetometer survey were completed on Tenure 585388 of the 10 claim Bertha 585388 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 585388 or other claims of the Property and to determine the effectiveness of the magnetic results in locating a potential mineral resource.

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 585388 Claim Group is located within BCGS Maps 092I.046/.047 of the Kamloops Mining Division, 209 kilometres northeast of Vancouver, 45 kilometres north of Merritt, 47 kilometres southwest of Kamloops, and within six kilometres northeast of the world-class producing Highland Valley Copper mine (*Minfile 092ISW012).*

Description

The Property is comprised of 10 contiguous claims covering an area of 4935.9856 hectares. Particulars are as follows:

Property Location and Description *(cont'd)*

Table I. **Tenures of Bertha 585388 Claim Group**

Tenure Number	Type	Claim Name	Good Until	Area (ha)
528848	Mineral	DANSEY	20160421	493.128
528849	Mineral	DAB	20160421	492.954
580837	Mineral		20160421	328.6647
580839	Mineral		20160421	472.6054
580984	Mineral	LOGAN	20160421	431.502
580989	Mineral	LOGAN	20160421	328.8907
585388	Mineral		20160421	513.0757
926530	Mineral	HIGHLAND VALEEY EAST 2	20221029	287.7855
1040357	Mineral		20160421	533.9322
1040358	Mineral		20160421	513.4474

*Upon the approval of the assessment work filing, Event Number 5580989.

ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

Access

From Logan Lake, the Bertha 585388 claim group can be accessed by traveling from Logan Lake west on Highway 97D for two kilometres to the junction with Highway 97C and the Highland Valley road thence for one kilometre westerly on the Highland Valley road for one kilometre to the eastern boundary of Tenure 580989. Access on the Property is provided by numerous secondary roads.

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

The Property is located within the Thompson Plateau of Southern British Columbia. Topography on Tenure 585388 is of gentle rolling hills, with a relief of 125 metres and elevations ranging between 1,100m along the mid-northeastern border to 1,225 along the southwestern border.

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 passes through the Property.

HISTORY: PROPERTY AREA

The history on some of the more significant mineral MINFILE reported occurrences, prospects, and past producers peripheral to the Bertha 585388 Claim Group is reported as follows. The distance to the Minfile locations is relative to the Tenure 585388 Claim Group.

BETHLEHEM past producer (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISW001
Three kilometres west-southwest

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
Six kilometres west-southwest

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.

History: Property Area *(cont'd)*

Highland Valley Copper *producer (cont'd)*

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. 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.

BX prospect (Porphyry Cu+/-Mo+-Au)
MINFILE 092INE042
Two kilometres west

Previous to 1958, the showing was trenched by B.X. Mining Company. In 1958, the Bob, Star, B.X. and Cow groups of claims were optioned by Noranda Exploration Company Limited and work consisted of a ground electromagnetic survey and geological mapping. Some bulldozer trenching was done on the showing on the B.X. claims and 8 kilometres of road was constructed; the options were dropped at the end of the summer.

LUX showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092INE151
Two kilometres west

The showing had various owners in the late 1950s and early 1960s but no serious exploration programs were conducted until Canzac Mines Ltd. became owner in 1964.

By early 1965, Canzac was very active with road building, trenching, geophysics and diamond drilling; eight holes were drilled totalling 1280 metres. Much of this work was concentrated in what corresponds to the northwest portion of the Lux claim group. In 1966, a geological report was made based on photogeology and previous work, by Chew-Walker Associates. In 1968-69, Burlington Mines Ltd. completed 22 kilometres of ground EM-16 survey and 457 metres of trenching on the Burl claims. In 1982, Goldrich Resources Inc. acquired the current Lux claims and in 1983 conducted a soil survey (49 samples), prospecting and geological mapping and established a grid. In 1984, Goldrich Resources completed two diamond-drill holes totalling 244 metres.

HISTORY: PROPERTY

DANSEY prospect (Porphyry Cu+/-Mo+-Au)
MINFILE 092INE034
Within Tenure 528848

Deerhorn Mines Ltd. held the Witches Brook group of 24 claims in the vicinity of the JB showing in 1956. Noranda Exploration Company Limited held the PG group of 99 claims along and mainly west of Guichon Creek to the north of Witches Brook in 1962.

This property was partly a relocation of the claims held by Deerhorn Mines Ltd. Geological, geochemical and geophysical surveys were carried out during 1963. The CL group, apparently staked by C.W.

History: Property *(cont'd)*

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

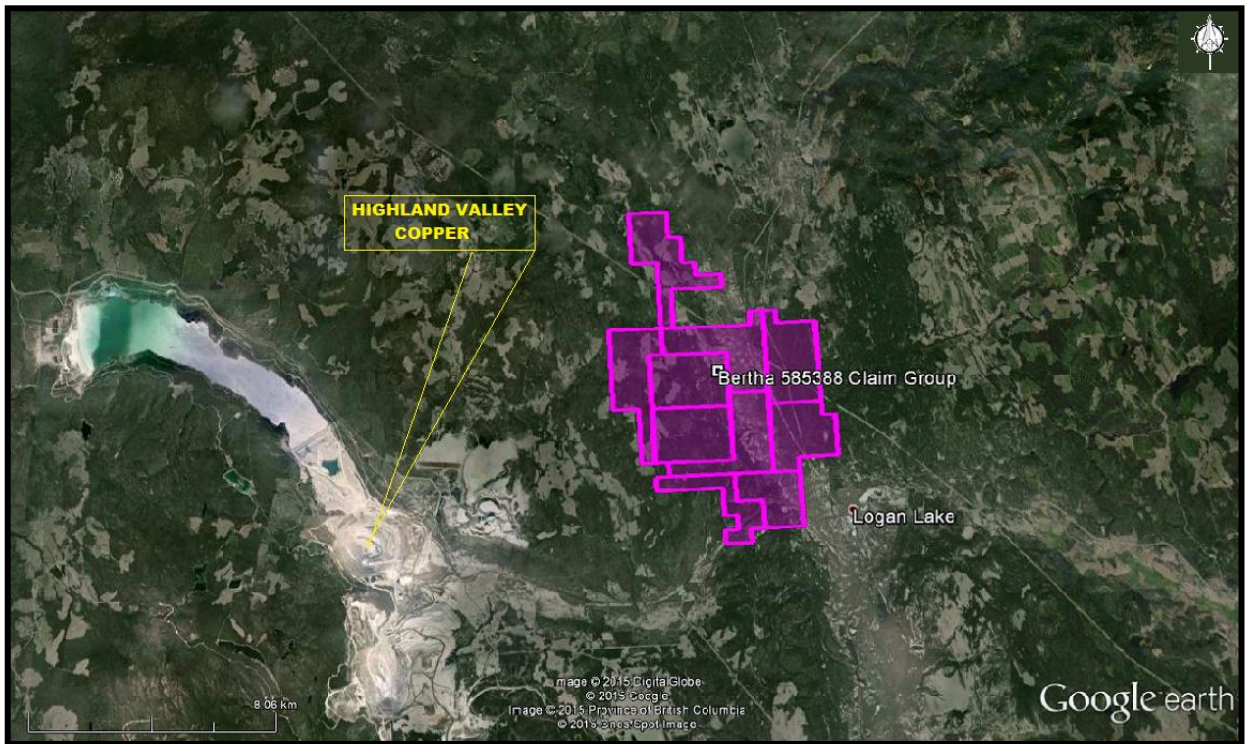
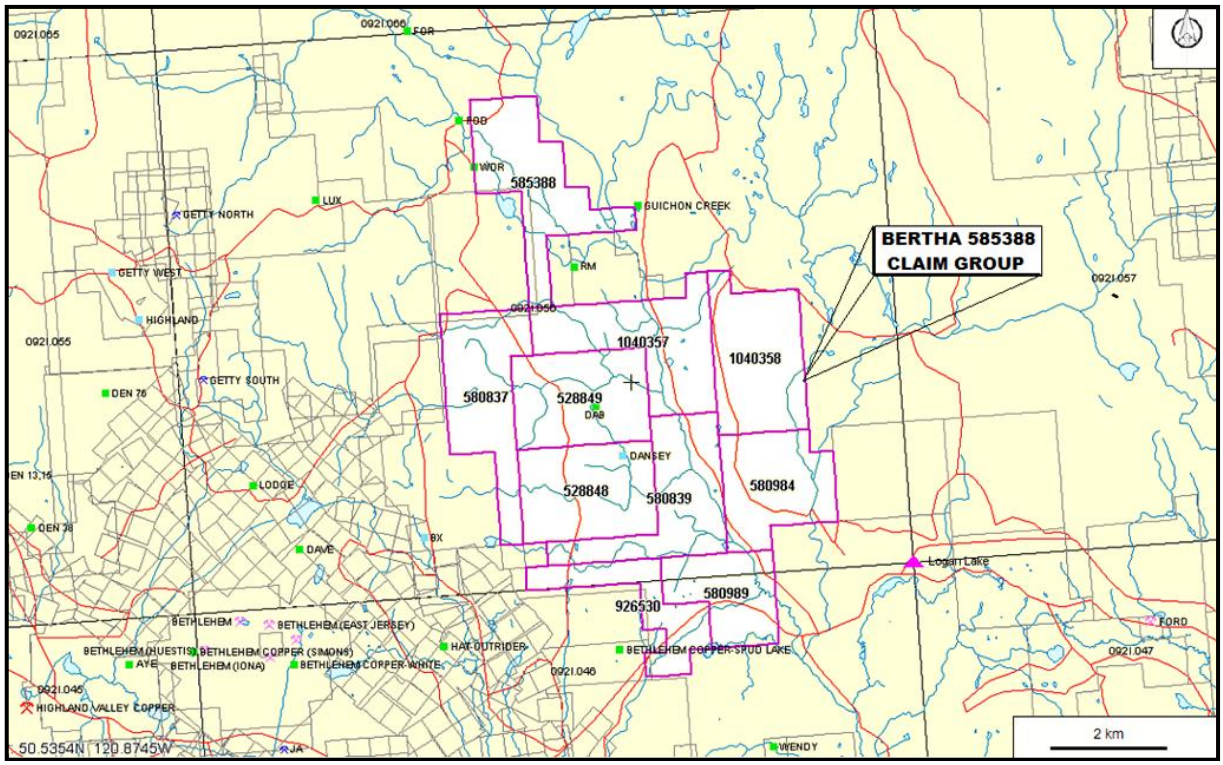


Figure 3. **Claim Map**
(from Google Earth)



History: Property*(cont'd)*

Dansey *prospect (cont'd)*

Dansey in 1964, was located partially on ground formerly part of the PG group. North Pacific Mines Limited carried out a program of trenching, soil sampling, magnetometer and geological surveying on the property during 1964. In 1965, North Pacific Mines Ltd. carried out an induced polarization survey which outlined an anomaly about 914 metres long over a width of 244 metres. Other work consisted of trenching, road building and 8 diamond-drill holes totalling 1280 metres. In 1968, an airborne magnetometer survey (202 kilometres) was flown on behalf of North Pacific Mines Ltd. and Comet-Krain Mines Ltd. In 1969, Noranda Exploration Company Limited conducted a soil geochemical survey and induced polarization surveys over the Mike, Bill, Tom and JB claims. In 1974, North Pacific Mines Ltd. conducted percussion drilling in 5 holes totalling 384 metres on the Tom claims.

In 1965, an induced polarization survey (15 kilometres) was completed on the Cow claims on behalf of The Consolidated Mining and Smelting Company of Canada Limited. In 1969, work done on behalf of Laura Mines Limited on the WJ claims, which covered the BX showing, consisted of 93 kilometres of line cutting, 1567 soil samples, 93 kilometres of ground magnetometer survey, 43 kilometres of induced polarization survey, geological mapping, 4 trenches totalling 152 metres were bulldozed and 9 diamond-drill holes totalling 853 metres were put down.

DAB showing (Porphyry Cu+/-Mo+-Au)
MINFILE 092INE040
Within Tenure 528849

In 1967, an aeromagnetic survey was conducted over some of the Dab claims on behalf of Alwin Mining Company Limited and in 1968-69 a soil geochemical survey (969 samples) was run over 28 kilometres of grid.

WDR showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092INE135
Within Tenure 585388

In 1963, work by Valley Copper Mines included geological mapping, road building and bulldozer trenching at a number of localities scattered at intervals throughout a distance of nearly 6 kilometres in a north-northwesterly direction

GEOLOGY: REGIONAL

The Bertha 585388 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.

Geology: Regional *(cont'd)*

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 Bertha 585388 Claim Group is situated on the eastern contact of the Guichon Creek Batholith and the Nicola volcanics within 12 kilometres of the Highland Valley Copper Mine.

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: PROPERTY AREA

The geology of some of the more significant mineral MINFILE reported occurrences, prospects, and past producers peripheral to the Bertha 585388 Claim Group is reported as follows. The distance to the Minfile locations is relative to the Bertha 585388 Claim Group.

BETHLEHEM past producer (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISW001
Three kilometres west-southwest

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.

Geology: Property Area *(cont'd)*

Bethlehem *(cont'd)*

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.

BETHLEHEM COPPER-SPUD LAKE showing (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISE008
One kilometre west

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.

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

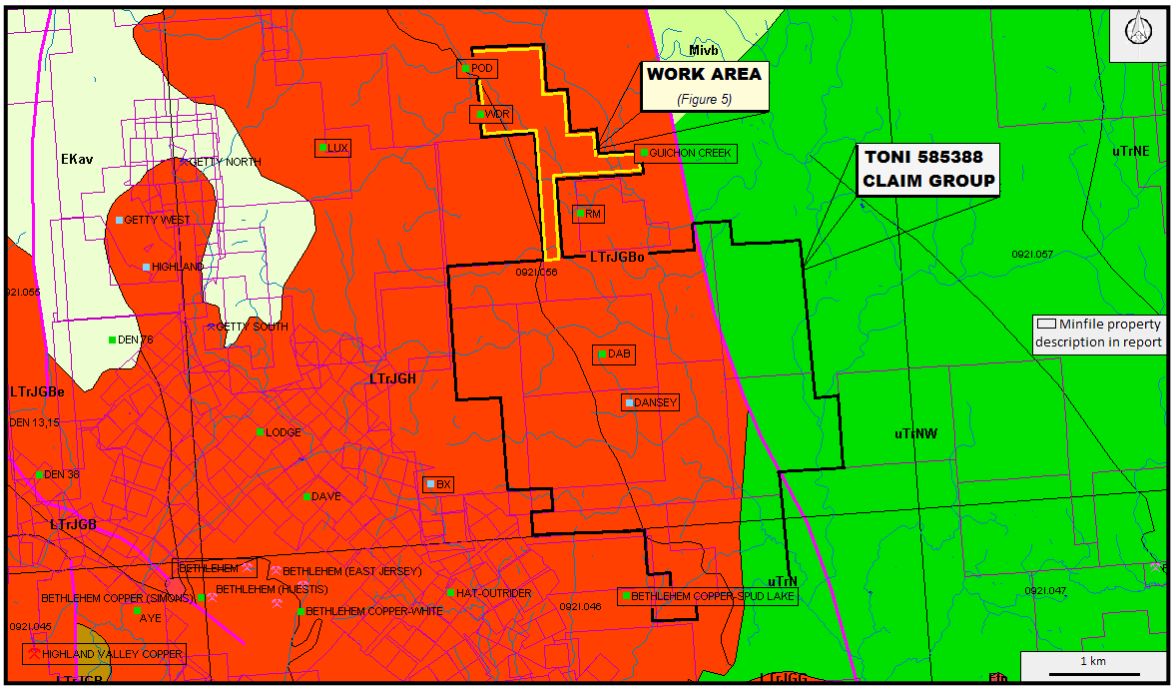
The Valley deposit lies within the Late Triassic to Early Jurassic Guichon Creek batholith and is hosted by Bethsaida phase porphyritic quartz monzonite and granodiorite. Feldspar porphyry and quartz feldspar porphyry dykes 0.6 to 35 metres wide dip steeply eastward in the western and central areas,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

***Geology: Property 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: Property Area**(cont'd)*
***Highland Valley Copper** producer (cont'd)*

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.

Geology: Property Area*(cont'd)*
Highland Valley Copper *producer (cont'd)*

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.

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(?).

BX prospect (Porphyry Cu+/-Mo+-Au)
MINFILE 092INE042
Two kilometres west

The BX showing area is underlain by quartz diorite (Guichon variety) of the Late Triassic-Middle Jurassic Guichon Creek batholith which in places are cut by finer dike rocks correlated with the Witches Brook phase of the batholith. A long, north trending, altered shear zone has been exposed by trenching on the original BX claims. The shear zone is at least 762 metres long and 122 metres wide. The altered rock is chlorite rich and the shear zone is surrounded by partially brecciated, sheared, weathered or decomposed quartz diorite. Calcite veinlets, rich in iron, run through the area giving rise to considerable rust staining.

RM showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 09INE111
500 metres east

The RM property lies near the northwesterly trending contact between Upper Triassic Nicola Group volcanic rocks in the east from Late Triassic-Middle Jurassic Guichon Creek batholith intrusive rocks to the west.

POD showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092INE117
100 metres west

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

***Pod** showing (cont'd)*

The Pod showing area straddles the transitional contact zone between quartz diorite of the Hybrid phase to the east from granodiorite of the Guichon variety to the west. Intrusive rocks belong to the Late Triassic-Middle Jurassic Guichon Creek batholith.

LUX showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092INE151
Two kilometres west

The Lux copper showings occur in north trending shear/fault zones in Guichon variety granodiorite of the Late Triassic-Middle Jurassic Guichon Creek batholith. The granodiorite is typically altered near the shear zones and contains spotty amounts of chalcopyrite, pyrite, malachite, azurite and occasional bornite. Alteration consists of potassium feldspar enrichment with epidote and argillic alteration occurring on fracture planes. The Getty North deposit (092INE038) is 2 kilometres west.

GEOLOGY: PROPERTY

As indicated by the BC government supported MapPlace geological maps, the Bertha 585388 Claim Group is underlain by the Guichon Batholith in the west which is in a fault contact with the Western Volcanic Facies of the upper Triassic Nicola Group (uTrNW) in the east. Two Phases of the Guichon Batholith are covered by the Claim Group; quartz diorites of the Border Phase centrally and granodiorites of the Highland Valley Phase in the west. Tenure 585388 is predominantly underlain by the Border Phase skirted by the Highland Valley Phase.

DANSEY prospect (Porphyry Cu+/-Mo+-Au)
MINFILE 092INE034
Within Tenure 528848

The Dansey property is located at the eastern edge of the Late Triassic-Middle Jurassic Guichon Creek batholith and overlies the contact between Hybrid phase and Guichon variety rocks. Three main rock types are evident and comprise diorite, quartz diorite and granodiorite. Fracturing and shearing are abundant in the diorite and quartz diorite but markedly less in the granodiorite.

DAB showing (Porphyry Cu+/-Mo+-Au)
MINFILE 092INE040
Within Tenure 528849

The Dab property lies close to the northwest trending contact between Upper Triassic Nicola Group volcanics to the east from intrusive rocks of the Late Triassic-Middle Jurassic Guichon Creek batholith to the west. In this area Guichon rocks appear to be quartz diorite of the Hybrid phase.

WDR showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092INE135
Within Tenure 585388

The WDR property covers the northwesterly contact between Upper Triassic Nicola Group volcanics in the east from the Late Triassic-Middle Jurassic Guichon Creek batholith in the west. The contact is gradational showing a change from unaltered Nicola volcanics on the east through baked, hornfelsic Nicola into medium-grained diorite which becomes progressively lighter coloured and coarser grained to the west.

MINERALIZATION: PROPERTY AREA

The mineralization on some of the more significant mineral MINFILE reported occurrences, prospects, and past producers peripheral to the Bertha 585388 Claim Group is reported as follows. The distance to the Minfile locations is relative to the Bertha 585388 Claim Group.

BETHLEHEM past producer (Porphyry Cu+/-Mo+-Au)
MINFILE 092ISW001
Three kilometres west-southwest

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
One kilometre west

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

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

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).

BX prospect (Porphyry Cu+/-Mo+-Au)
MINFILE 092INE042
Two kilometres west

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).

Mineralization: Property Area *(cont'd)*

RM showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 09INE111
500 metres east

Disseminated copper mineralization (inferred to be chalcopyrite) occurs in altered quartz diorite of the Hybrid phase of the Guichon Creek batholith.

POD showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092INE117
100 metres west

A small prospect pit in quartz diorite exposes two parallel quartz veinlets, 2.5 to 5 centimetres wide, mineralized with chalcopyrite, tetrahedrite and chrysocolla. Weak disseminated pyrite is present locally.

LUX showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092INE151
Two kilometres west

A chloritic shear zone on surface was tested by diamond drilling and was intersected at depth containing disseminated native copper, chalcopyrite and chrysocolla. A 0.2-metre drill intersection analysed 2.2 per cent copper and 4.1 grams per tonne silver (Assessment Report 12838).

MINERALIZATION: PROPERTY

The mineralization on the mineral MINFILE reported occurrences, prospects, and past producers within the Bertha 585388 Claim Group is reported as follows

DANSEY prospect (Porphyry Cu+/-Mo+-Au)
MINFILE 092INE034
Within Tenure 528848

Mineralization on the Dansey property is associated with diorite and quartz diorite. Most of the mineralization occurs along fractures but the majority of it is associated with a second group of fractures that strike from 040 to 080 degrees. The main minerals include chalcopyrite and pyrite, with minor amounts of molybdenite, specularite, chalcocite and bornite. Malachite, azurite and chrysocolla occur as secondary minerals. Areas of moderate copper-molybdenum mineralization (>0.1 per cent copper) occur near the contact between diorite and quartz diorite with weak zones of copper-molybdenum mineralization scattered throughout the diorite.

Trenching has exposed disseminations and blebs of chalcopyrite, pyrite, bornite, hematite, magnetite and molybdenite mineralization in and adjacent to several northeast faults and shear zones in quartz diorite. The faults and shears mostly dip northwest at moderate to high angles. The shears are characterized by intensely chloritized and sericitized quartz diorite and vary from 1.5 to 9 metres wide. Near the shears are random fractured zones with pyrite and minor chalcopyrite on fracture planes.

Mineralization: Property *(cont'd)*

DAB showing (Porphyry Cu+/-Mo+-Au)
MINFILE 092INE040
Within Tenure 528849

Very low grade copper mineralization (inferred to be disseminated chalcopyrite) occurs in mafic intrusive rocks (Nicola?). The mineralization was found by drilling but is not reported in assessment reports (W.J. McMillan, 1970).

WDR showing (Porphyry Cu +/- Mo +/- Au)
MINFILE 092INE135
Within Tenure 585388

A trench exposes a steep mineralized fault which strikes 050 degrees and is parallel to joints in the adjacent quartz diorite of the Hybrid phase of the Guichon Creek batholith. Chalcopyrite and lesser amounts of bornite are present as fracture fillings and are partly oxidized to malachite, which is accompanied by limonite, possibly representing former specularite. The rock near the fault is bleached, probably by kaolinization of plagioclase, and contains pink orthoclase veinlets and others of calcite

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 and 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 MapPlace DEM image hillshade map of Tenure 1039980 by viewing of the map and marking the lineaments, or indicated structures, thereon. A total of 60 lineaments were marked as shown on Figure 5. The lineaments were compiled into a 10 degree class interval and plotted as a rose diagram as shown 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 585388 is at 5,604,645N, 648,874E (10) (NAD 83).

c) Results

Two cross-structures were delineated by an indicated major northwesterly trending structure intersected by two indicated northerly trending major structures.

Structural Analysis *(cont'd)*

Figure 5. **Indicated Major Structures on Tenure 585388**

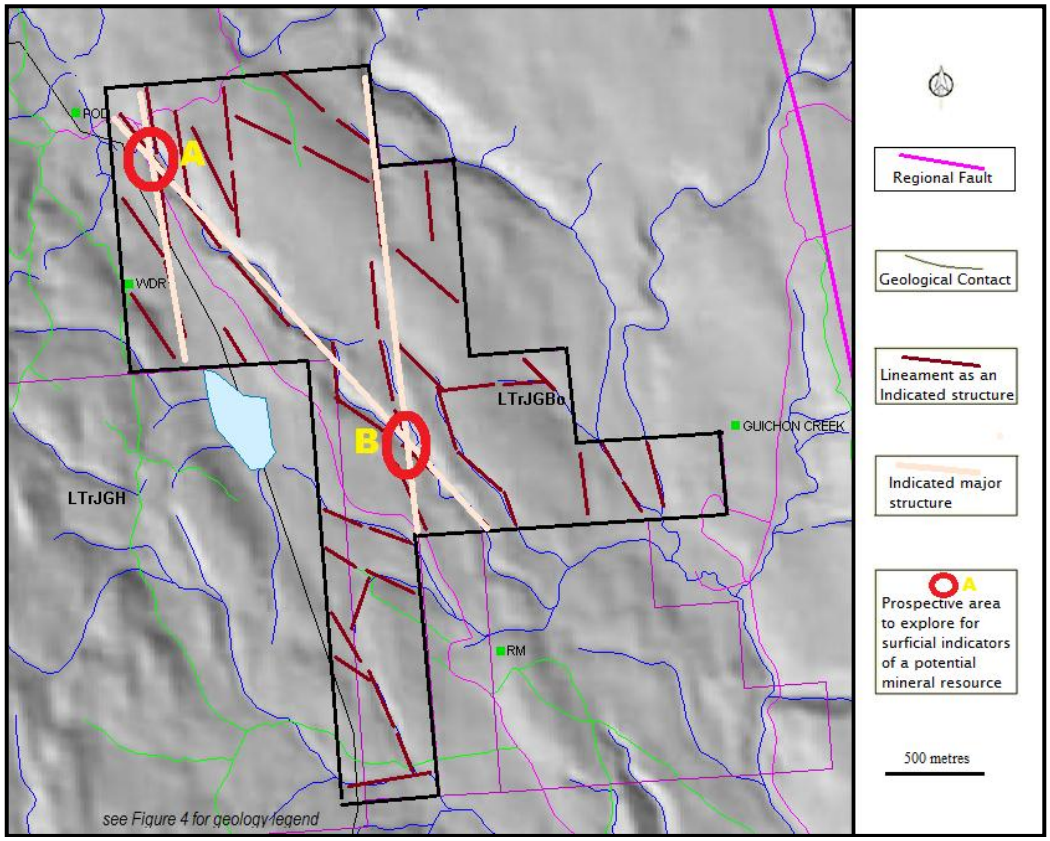
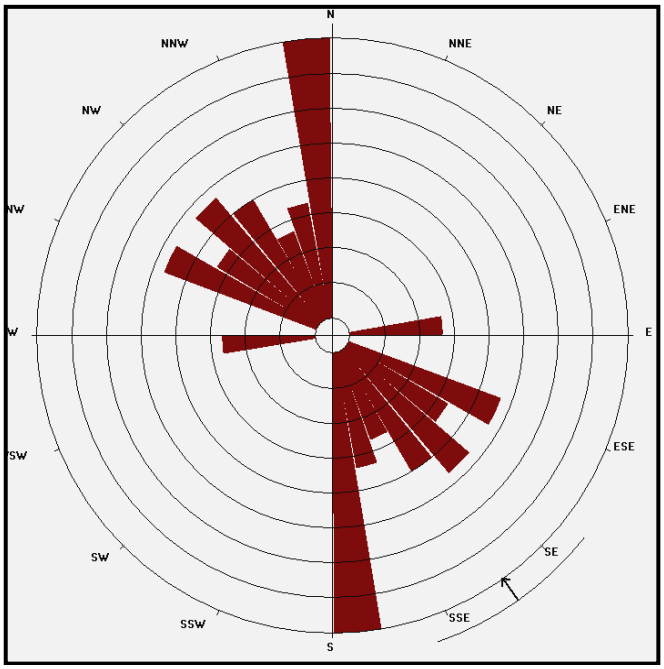


Figure 6. **Rose Diagram from lineaments of Tenure 585388**



***Structural Analysis** (cont'd)*

STATISTICS

Axial (non-polar) data
No. of Data = 37
Sector angle = 10°
Scale: tick interval = 5% [1.9 data]
Maximum = 32.4% [12 data]
Mean Resultant dir'n = 132-312
[Approx. 95% Confidence interval = ±24.5°]
(valid only for unimodal data)

_____

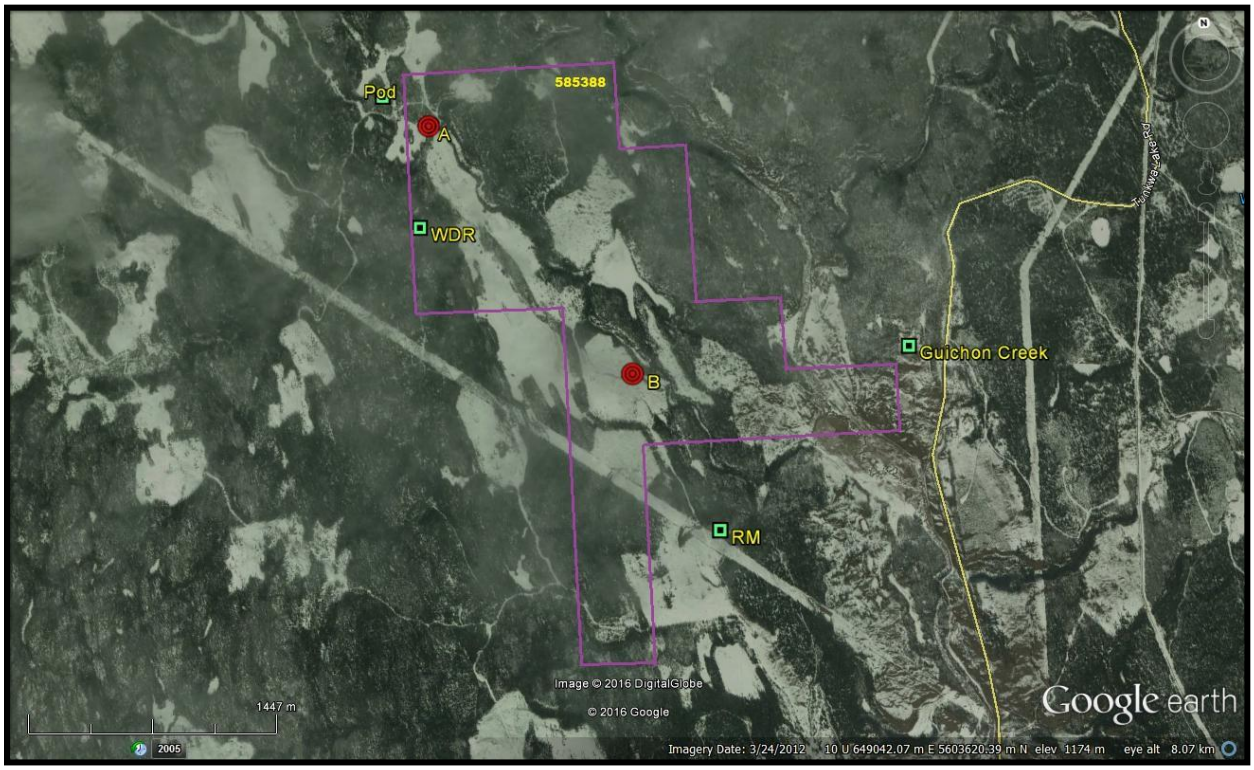
Mean Resultant dir'n = 132.5 - 312.5
Circ.Median = 124.0 - 304.0
Circ.Mean Dev.about median = 27.1°
Circ. Variance = 0.17
Circular Std.Dev. = 35.26°
Circ. Dispersion = 1.66
Circ.Std Error = 0.2117
Circ.Skewness = -3.12
Circ.Kurtosis = -20.88
kappa = 1.06
(von Mises concentration param. estimate)

Resultant length = 17.35
Mean Resultant length = 0.4689

'Mean' Moments: Cbar = -0.0413; Sbar = -0.4671
'Full' trig. sums: SumCos = -1.5299; Sbar = -17.2829
Mean resultant of doubled angles = 0.2704
Mean direction of doubled angles = 023

(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 and Minfile locations on Google Earth**
(Base Map: Google Earth)



Structural Analysis *(cont'd)*

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

Location	UTM East	UTM North	Elevation
A	647,764	5,605,402	1,204
B	649,069	5,603,675	1,172

Magnetometer Survey

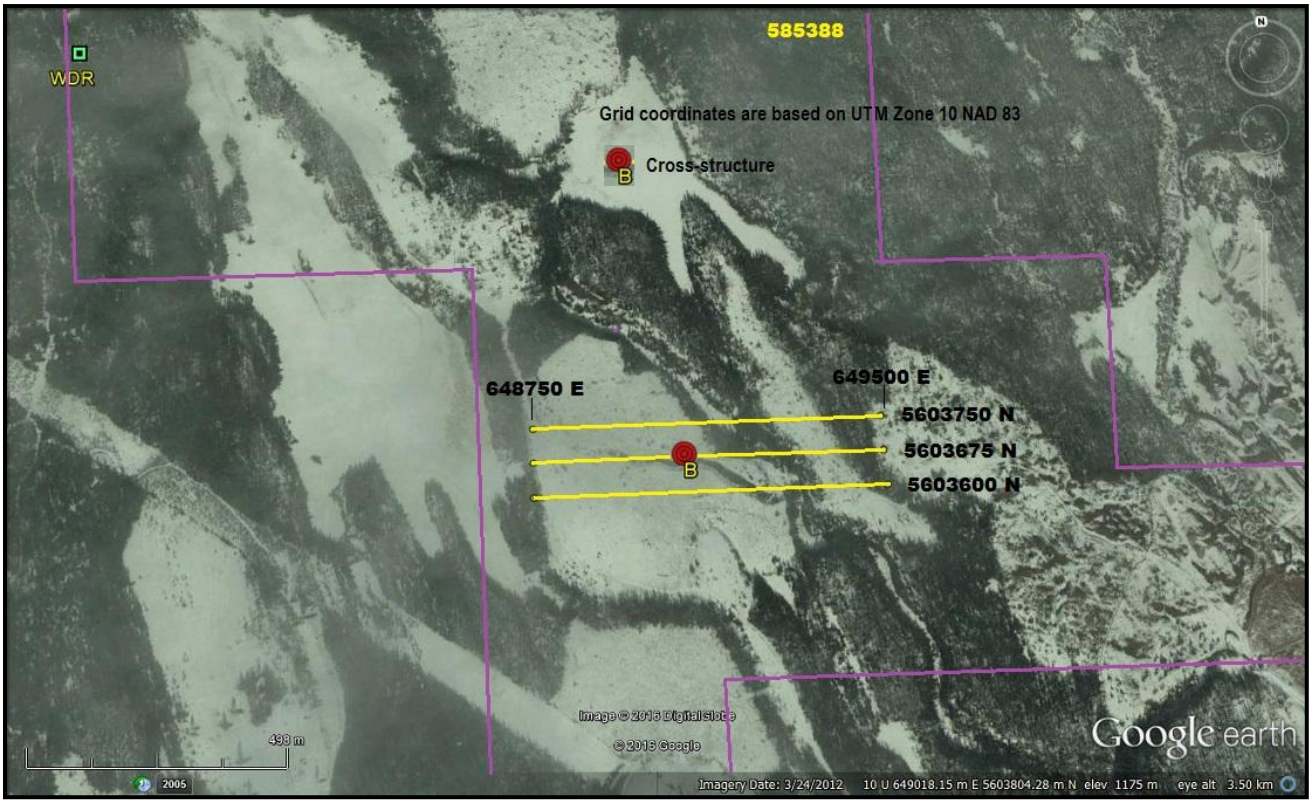
a) Instrumentation

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 Survey Grid Location**
(Base map from Google Earth)



Magnetometer Survey *(cont'd)*

c) Survey Procedure

From an initial base-line station 5603750N 648750E two additional base-line stations were established southerly at 5603675N and 5603600N. Magnetometer readings were taken at 25 metre intervals easterly along each of the three grid lines to 649500E. The grid line stations were located with a GPS instrument. Line kilometres of magnetometer survey completed was 2.25. The field data is reported in Appendix I.

Figure 9 .**Magnetometer Survey Data**

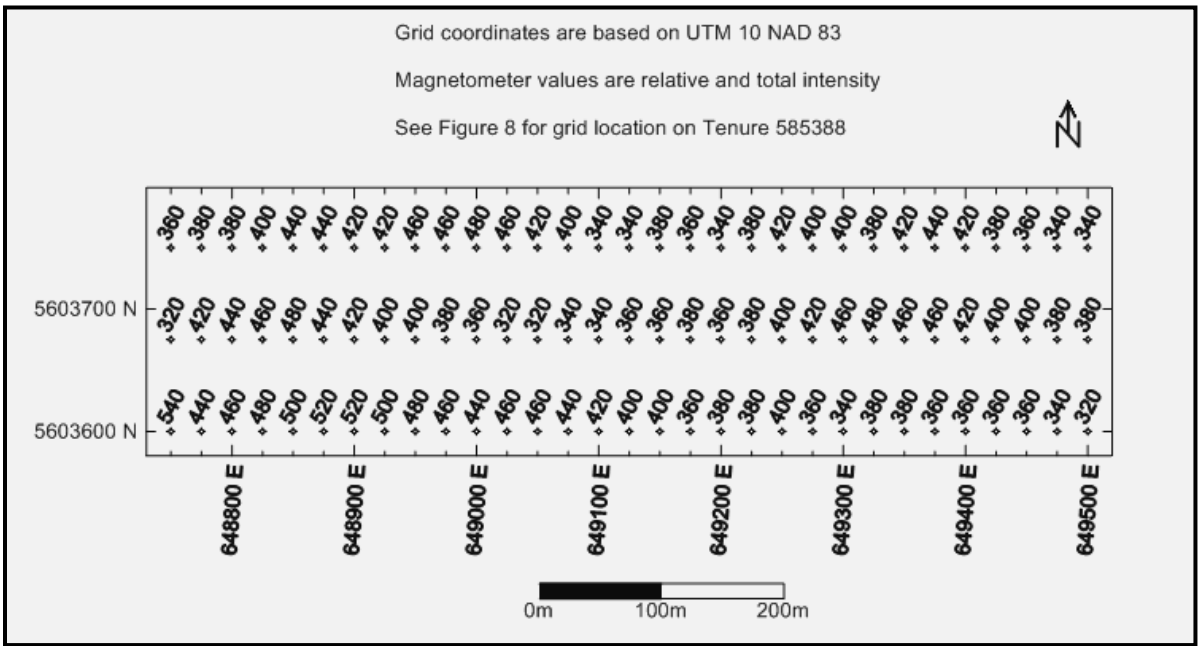
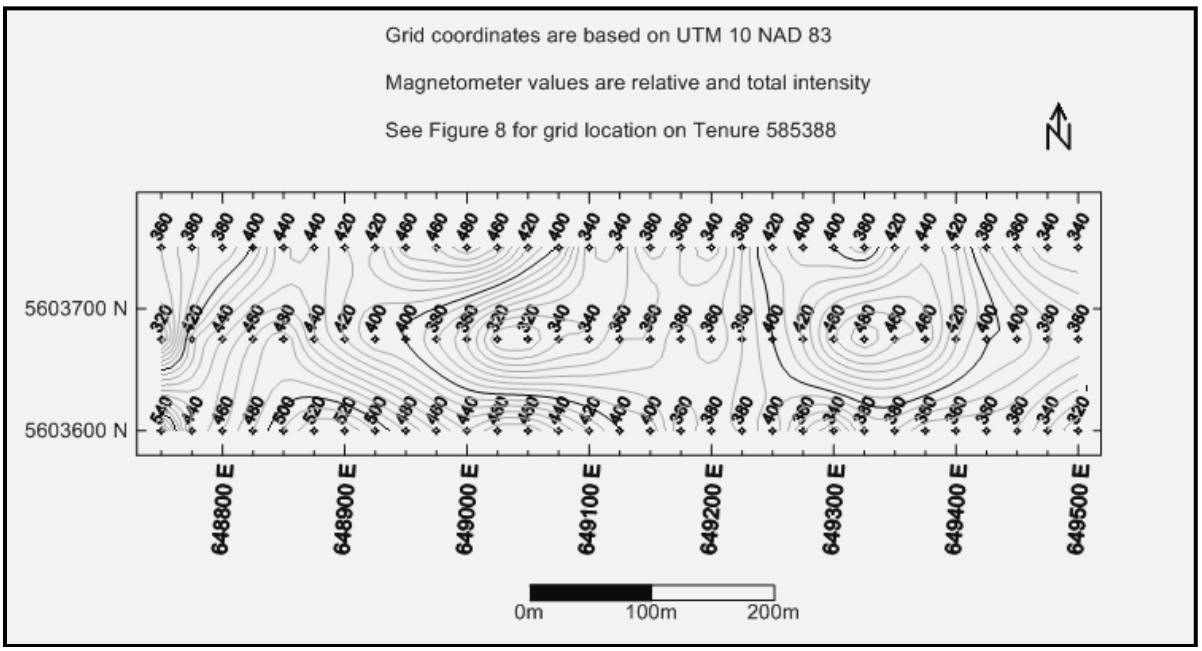
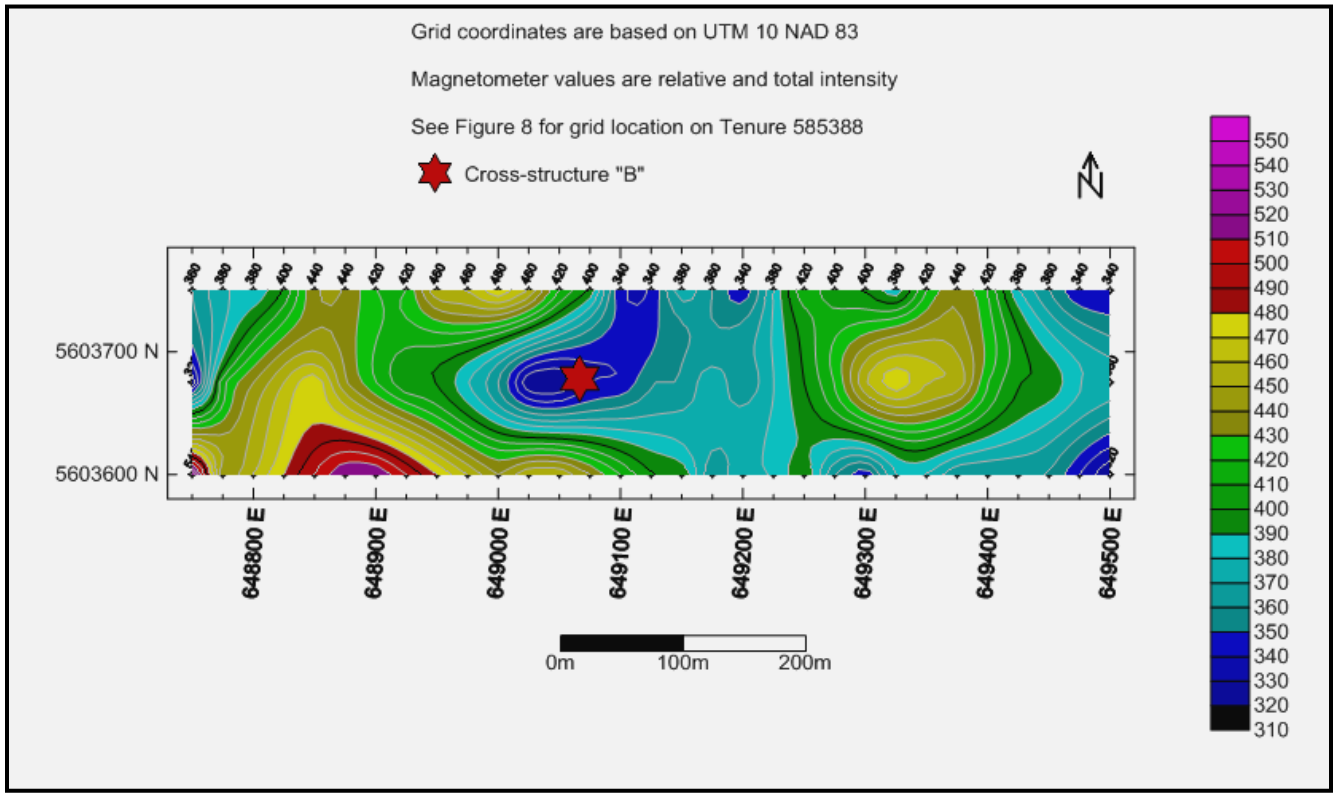


Figure 10. **Magnetometer Survey Data Contoured**



Magnetometer Survey *(cont'd)*

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



d) Data Reduction

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

e) Results

The magnetometer survey, which covered quartz dioritic intrusive rocks, indicated a central north trending 75 metre to 250 metre wide magnetometer low (mag LO) zone enveloping 25 metre to 75 metre wide anomalous mag LO which is open to the north. A mag LO zone at the eastern portion of the survey area is open to the east with localized mag LO's at the northeast and the southeast corners.

A lone 25 metre wide anomalous mag HI, open to the south, is located within the southwest

The survey covered the approximately located cross-structure "B" which appears to correlate with the mag LO anomaly.

INTERPRETATION and CONCLUSIONS

The two cross-structures, located within quartz dioritic rocks of the Guichon Creek batholith, should be primary zones of increased fractural intensity and/or localized breccias and would be ideal conduits for hydrothermal fluids to surface and be deposited to the greatest degree within the primary zone and peripherally. Should the fluids be mineral bearing, the mineral zone would decrease outwardly from the centre or the primary zone. The peripheral limits to an "orebody" would be a function of fracture (vein) density and of the thickness and mineralogy of the filling material.

This condition is well illustrated at the Brenda (092HNE047) mineral zone and to a greater degree at the Highland Valley Copper (092ISW012) mineral zone where the Highland Valley Copper and the Lornex mineral deposits are associated with the major Lornex Fault zone and included within a residual magnetic low.

The mag LO's from the magnetometer survey are assumed to indicate dynamic or hydrothermal alteration zones associated with major structures. As the general mag LO zone appears to have the configuration of the structural trends of the two structures comprising the structures of cross-structure "B" which correlates with an anomalous mag LO within the general zone, the area of this zone should be explored for a primary zone of brecciation where surficial geological indications of a mineral resource may be found.

Should the exploration result in positive geological indicators such as favourable structural zones, pathfinder minerals, minerals and/or alteration products, a soil geochemical survey and an IP survey would be warranted.

Respectfully submitted
Sookochoff Consultants Inc.

Laurence Sookochoff, PEng

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092ISE008 – BETHLEMEN SPUD LAKE
092ISW012 – HIGHLAND VALLEY COPPER
092INE034 – DANSEY
092INE040 – DAB
092INE042 – BX
092INE111 – RM
092INE117 – POD
092INE135 – WDR
092INE151 – LUX

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Sookochoff, L. – Geological Assessment Report on a Lineament Array Analysis on the Dab Claim (Tenure No. 528849). June 27, 2007. AR 29,173.

Sookochoff, L. – Geological Assessment Report on a Structural Analysis on Tenure 580837 of the Bertha 580837 Claim Group for Guy & Christopher Delorme. September 10, 2014. AR 34,975.

STATEMENT OF COSTS

Work on Tenure 585388 was completed from December 3, 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	
December 6-7, 2015	
Four man days @ $300.00 per day ----------	1,200.00
Truck rental, kilometre charge, fuel, room & board,	
mag rental ----------	1,534.65
	$ 5,734.65
Maps ----------	750.00
Report ----------	3,500.00
	$ 9,984.65
	======

CERTIFICATE

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

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

I, Laurence Sookochoff, further certify that:

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

2) I have been practicing my profession for the past forty-nine years.

3) I am registered and in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.

4) The information for this report is based on information as itemized in the Selected Reference section of this report and from work the author has performed in the Bertha Property area.

5) I have no interest in the Bertha 585388 Claim Group as described herein.

Laurence Sookochoff, P. Eng.

Appendix I

Magnetometer Data

		E5580989 T585388						
East	**North**	**Mag**	**East**	**North**	**Mag**	**East**	**North**	**Mag**
648750	5603600	540	648750	5603675	320	648750	5603750	360
648775	5603600	440	648775	5603675	420	648775	5603750	380
648800	5603600	460	648800	5603675	440	648800	5603750	380
648825	5603600	480	648825	5603675	460	648825	5603750	400
648850	5603600	500	648850	5603675	480	648850	5603750	440
648875	5603600	520	648875	5603675	440	648875	5603750	440
648900	5603600	520	648900	5603675	420	648900	5603750	420
648925	5603600	500	648925	5603675	400	648925	5603750	420
648950	5603600	480	648950	5603675	400	648950	5603750	460
648975	5603600	460	648975	5603675	380	648975	5603750	460
649000	5603600	440	649000	5603675	360	649000	5603750	480
649025	5603600	460	649025	5603675	320	649025	5603750	460
649050	5603600	460	649050	5603675	320	649050	5603750	420
649075	5603600	440	649075	5603675	340	649075	5603750	400
649100	5603600	420	649100	5603675	340	649100	5603750	340
649125	5603600	400	649125	5603675	360	649125	5603750	340
649150	5603600	400	649150	5603675	360	649150	5603750	380
649175	5603600	360	649175	5603675	380	649175	5603750	360
649200	5603600	380	649200	5603675	360	649200	5603750	340
649225	5603600	380	649225	5603675	380	649225	5603750	380
649250	5603600	400	649250	5603675	400	649250	5603750	420
649275	5603600	360	649275	5603675	420	649275	5603750	400
649300	5603600	340	649300	5603675	460	649300	5603750	400
649325	5603600	380	649325	5603675	480	649325	5603750	380
649350	5603600	380	649350	5603675	460	649350	5603750	420
649375	5603600	360	649375	5603675	460	649375	5603750	440
649400	5603600	360	649400	5603675	420	649400	5603750	420
649425	5603600	360	649425	5603675	400	649425	5603750	380
649450	5603600	360	649450	5603675	400	649450	5603750	360
649475	5603600	340	649475	5603675	380	649475	5603750	340
649500	5603600	320	649500	5603675	380	649500	5603750	340