



BC Geological Survey
Assessment Report
38541



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)]: Geochemical Sampling and Compilation

TOTAL COST: \$10,356.57

AUTHOR(S): Bernie Kreft

SIGNATURE(S): original signed

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): _____

YEAR OF WORK: 2019

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5746870

PROPERTY NAME: Herane Hill

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

COMMODITIES SOUGHT: Cu, Au, Ag

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 093M 006

MINING DIVISION: Omineca

NTS/BCGS: 093M01W/093M019

LATITUDE: 55 ° 10 ' 59 " LONGITUDE: 126 ° 17 ' 10 " (at centre of work)

OWNER(S):

1) Bernard Kreft

2) _____

MAILING ADDRESS:

1 Locust Place, Whitehorse Yukon, Y1A 5G9

OPERATOR(S) [who paid for the work]:

1) as above

2) _____

MAILING ADDRESS:

as above

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

Babine Igneous Suite, porphyry, epithermal, breccia, copper, gold, Hazelton Group volcanics

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: _____

1102, 1255, 1611, 1854, 2047, 9298, 20084, 24736, 25287

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			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil 8		35 element 1cp	
Silt			
Rock 3		35 element icp	
Other Biogeochemical (tree) 8		35 element icp	
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:			\$10,356.57

Assessment Report

**2019 Geochemical Sampling
and
Data Compilation Report
On the Hearne Hill Property
Tenure Worked On: 1062973
Work Period: June 20-22, 2019**

Located in the Babine Lake Area
Central British Columbia
Omineca Mining Division

On

NTS: 093M01W

BCGS: 093M019

Latitude 55°10' North and Longitude 126°17' West

By Bernie Kreft

October 12th, 2019

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Location - The Hearne Hill property is located on NTS map sheet 093M01W in the Omineca Mining Division, 71 kilometers northeast of Smithers BC and 20 kilometres north of the past producing Bell and Granisle copper mines, at approximately 55°10'N and 126°17'W. Six tenures totalling 1,034.28 hectares comprise the project, with claim data found on the following table:

Claim Status Table

Name	Tenure Number	Owner	Expiry Date	Area (Ha)
Hearne Main	1062973	114661 (100%)	2021/OCT/19	406.3959
Hearne Frac	1062976	114661 (100%)	2021/OCT/17	18.468
	1063158	114661 (100%)	2021/OCT/18	129.3296
	1063168	114661 (100%)	2021/OCT/16	332.3464
HEARNE NORTH FRAC	1071754	114661 (100%)	2020/OCT/12	110.8024
HEARNE NW FRAC	1071755	114661 (100%)	2020/OCT/12	36.938

Access – For the purposes of this program access to the property was achieved by helicopter from Smithers. The main ground access route is from Smithers to Topley Landing, then by barge across Babine Lake and via the Jinx and Hagan Forest Service roads to the southwest corner of the property. A four-wheel drive exploration road to the property intersects the Hagan road at kilometre 40, 21.2 kilometres north of the Bell Mine site. Access to this road system relies on a barge across Babine Lake which runs only intermittently during the summer field season.

Topography and Vegetation – The property is located on the Nechako Plateau which in the Babine region is characterized by basin and range topography. Deeply incised valleys are commonly filled with lakes and large streams while uplands are heavily forested with white spruce and lodgepole pine. Swampy and low lying areas are often covered by thick accumulations of brush and devil’s club and are a significant hindrance to ground traversing.

Extensive glacial sediments cover the area limiting the effectiveness of ground prospecting techniques to areas such as steep slopes and ridge tops where isolated outcrops occasionally occur. The main area of mineralization at Hearne Hill is covered by varying amounts of till and colluvium typically from 3 to 8 metres in thickness, with depths increasing at lower elevations. Occasional outcrops are found within steep creek gullies and at higher elevations where till is typically thinnest. Glacial direction at Hearne Hill was from the NNW to SSE.

Forestry and logging is the main economic activity in the area with logging planned for the southwest portion of the property during the fall-winter of 2020. Cut blocks and roads associated with logging typically improve access and exposure which is of significant benefit to mineral exploration.

History and Previous Work – The Hearne Hill property is located within the Babine porphyry belt which is approximately 90 kilometers long and includes twelve significant porphyry copper deposits and prospects including the Bell and Granisle past producers. The estimated value of known in-ground mineral resources in the area is \$1.96 billion and the value of past production is estimated at \$1.13 billion (1986 dollars).

AR01102 – Tro-Buttle Exploration Ltd – 1967 – Fieldwork consisted of mapping, a ground based magnetic survey and a 759 sample soil survey. This work partially defined an approximate 1000m x 250m SW trending copper soil anomaly with values of up to 1,575 ppm Cu extending from the general

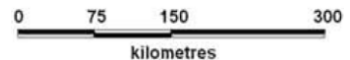


Property Location Map (Provincial)
 To Accompany 2019 Hearne Hill Assessment Report

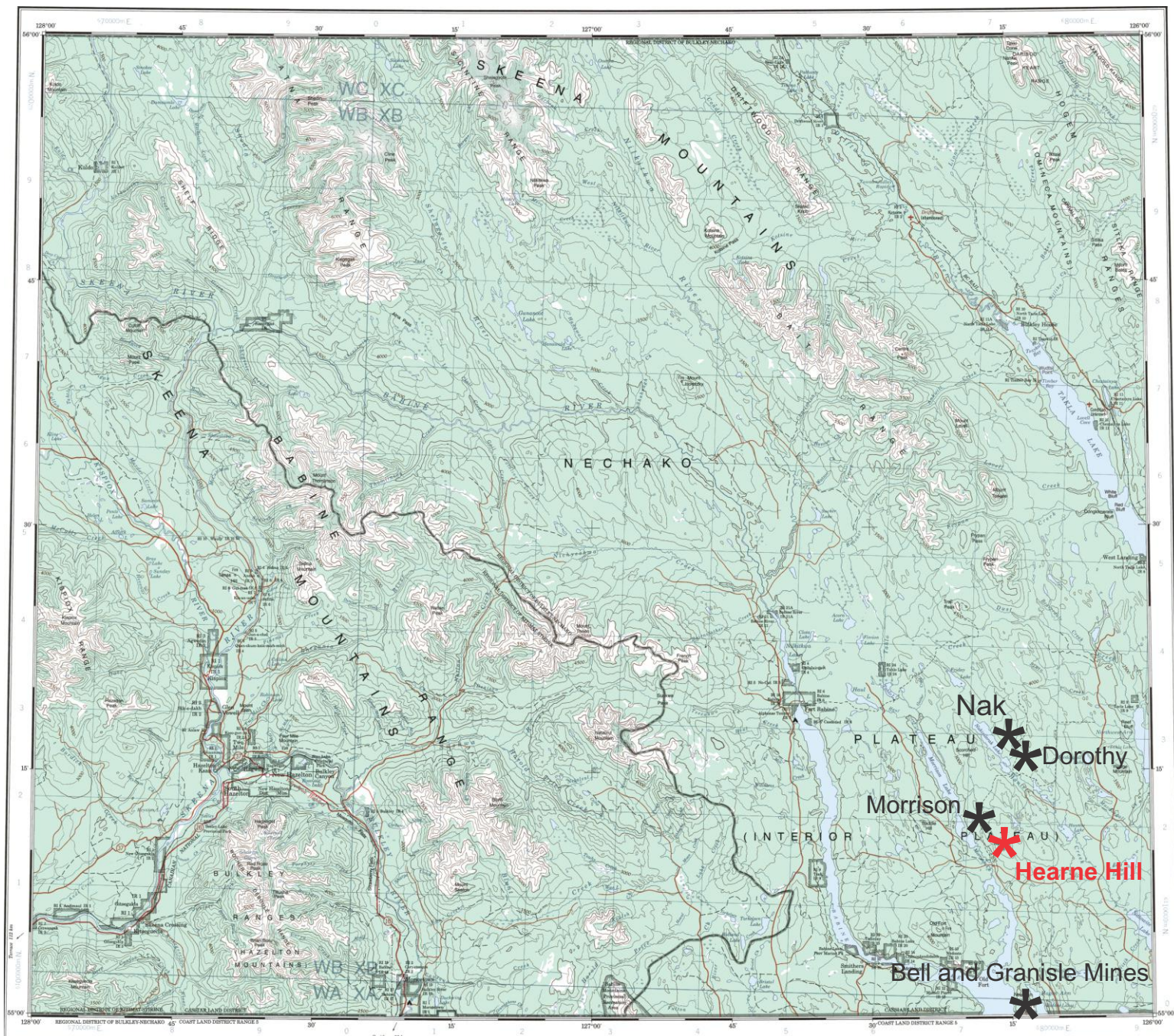
* = Property Location

Date Drawn: October 22nd, 2019
 Drawn By: Bernie Kreft

Fig1



Significant Regional Targets - figure 2



1984 1983
9
1986

E-Topo
93M Edition 5 UTM Zone 9

PRODUCED BY THE CANADA CENTRE FOR MAPPING
NATIONAL BUREAU OF CANADA / BUREAU FEDERAL DES CARTES
SCALE MAPS. INFORMATION CURRENT AS SHOWN IN
ORIGINAL PUBLISHED TILES.

Information concerning each map, and historical names
changes, can be found in the "Notes" section. Contact
Data by Survey, Data.

ÉTABLI PAR LE CENTRE CANADIEN DE CARTOGRAPHIE
BUREAU FÉDÉRAL DES CARTES, MISE À JOUR À PARTIR DE
CARTES À GRANDE ÉCHELLE. RENDUS/MENTS À SOURCES
D'ÉCHANGES DANS LE PROGRAMME. PUBLIÉ EN 1986.

For full description of symbols and abbreviations
of the map, please refer to the "Notes" section.
Pour les renseignements concernant les symboles et les
abréviations de la carte, veuillez consulter la section
des notes.

Scale 1:660,000 Échelle

Miles 0 5 10 15 20 25 30 Miles

Kilometres 0 5 10 15 20 25 30 Kilometres

CONVERSION SCALE FOR ELEVATIONS ÉCHELLE DE CONVERSION DES ALTITUDES

Meters 0 50 100 150 200 250 300 Meters

Feet 100 50 0 100 200 300 400 500 Feet

CONTOUR INTERVAL 500 FEET
Élévation in Feet above Mean Sea Level
Niveau Métrique (Géom. 1982)
Taux de Projection

CONTOUR INTERVAL 150 METERS
Élévation en mètres
Niveau Métrique (Géom. 1982)
Projection Transverse de Mercator

Notes to adjoining Maps of 9
Notes à l'adjointement des cartes

672000

674000

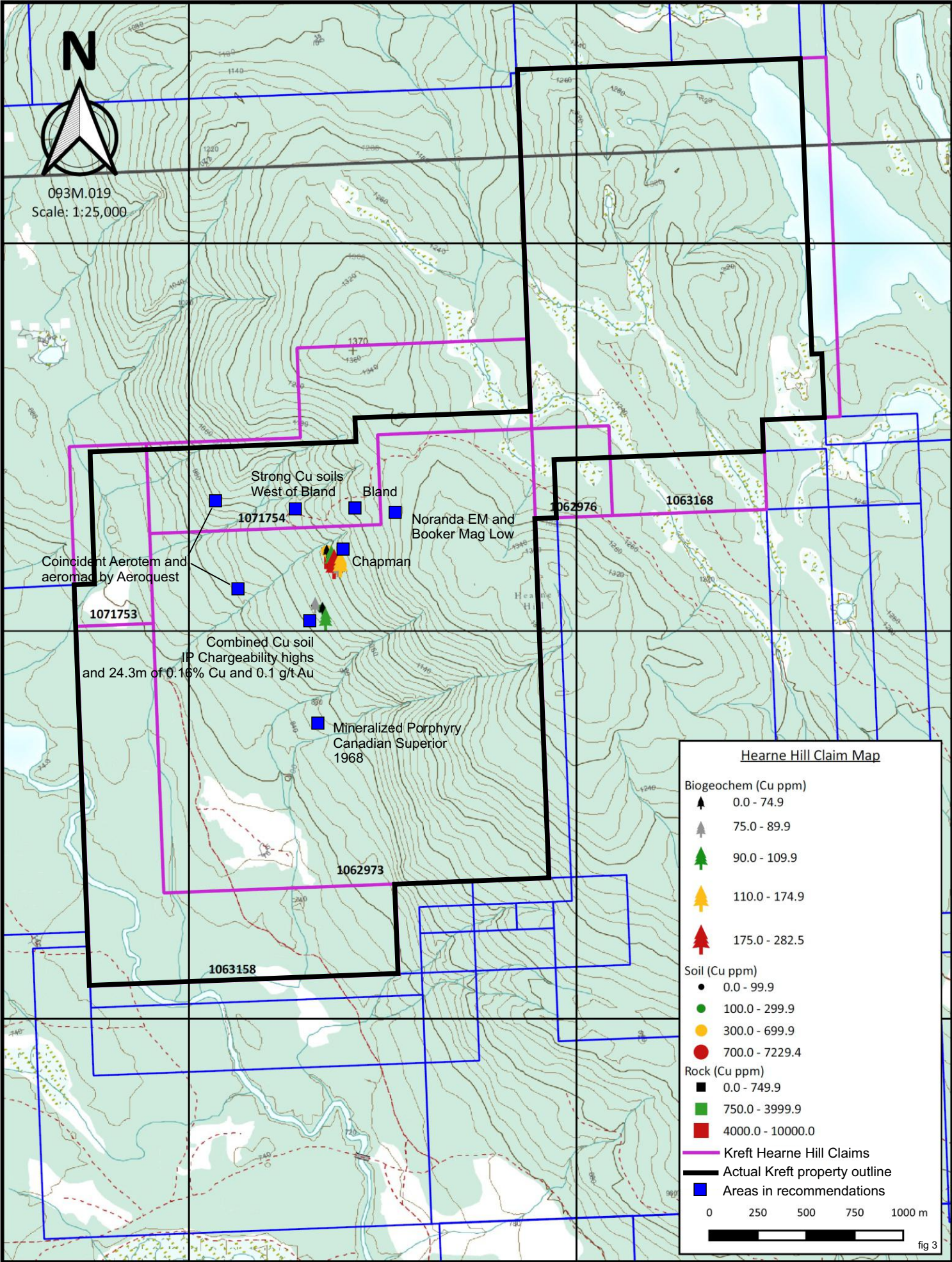
6120000

6118000

6116000



093M.019
Scale: 1:25,000



Hearne Hill Claim Map

Biogeochem (Cu ppm)

- ▲ 0.0 - 74.9
- ▲ 75.0 - 89.9
- ▲ 90.0 - 109.9
- ▲ 110.0 - 174.9
- ▲ 175.0 - 282.5

Soil (Cu ppm)

- 0.0 - 99.9
- 100.0 - 299.9
- 300.0 - 699.9
- 700.0 - 7229.4

Rock (Cu ppm)

- 0.0 - 749.9
- 750.0 - 3999.9
- 4000.0 - 10000.0

- Kreft Hearne Hill Claims
- Actual Kreft property outline
- Areas in recommendations

0 250 500 750 1000 m



vicinity of the Bland and Chapman Breccia zones downhill to the broad overburden covered Morrison Lake valley. Pyrite, chalcopyrite and bornite were noted in an area of brecciated, fracture and jointed “porphyry”. Recommendations were for continued work on the property.

AR01611 – Texas Gulf Sulphur – 1968 – Fieldwork consisted of a 450 sample soil geochemical program focusing on the A2 horizon in an area enveloping and extending to the south of the Chapman Breccia zone. A 300m x 180m copper anomaly with values of up to 780 ppm was found over the breccia zone with the rest of the grid containing numerous lower order or single point anomalies. Prospecting of the main anomaly located “minor” amounts of chalcopyrite within volcanic rocks.

AR01854 – Canadian Superior Exploration – 1968 – A program of prospecting IP geophysical surveying, soil sampling and drilling was conducted on the property. Drilling totalling 12 holes and 6,370 feet showed that very consistent mineralization occurred in the showing area. Grade of the split core averaged from 0.08 to 0.22% copper averaged over the length of each hole. A small but possibly significant showing of mineralized porphyry (possibly float) was located approximately 860 metres to the SSW of the Chapman zone (approximate coordinates of 672670E/6117520N). Further work was recommended for the mineralized porphyry as well as the large flat area to the SW of the main zone.

AR02047 – Canadian Superior Exploration – 1969 – Soil sampling and IP, EM and magnetic surveys were conducted. A series of EM conductors were located but thought to be related to conductive clay rich glacial overburden. Magnetic anomalies were located but thought to be related to argillite, magnetic boulders and magnetic dykes. IP anomalies were thought to be related to conductive overburden. No further work was recommended.

AR09298 – Noranda Mines – 1981 – A combined magnetics and VLF-EM airborne survey was conducted over a large area encompassing the Hearne Hill property. At Hearne Hill a group of four moderate EM anomalies were located within and east of the area of extensive bulldozer trenching over the Chapman Breccia and adjacent porphyry target.

AR20084 – Noranda Mines – 1989 – Six NQ diamond drill holes totalling 468 metres were completed to test the area of the Chapman Breccia body. Holes 1 to 4 intersected the mineralized breccia with Hole 89-1 returning 22.9 meters grading 2.75% Cu along with highly anomalous gold values of up to 2.6 g/t. The hole was lost in material grading > 5% Cu. The deposit is a breccia pipe with a true width of 14 meters and a strike length of 45 to 60 meters. It has been tested to a depth of 60 meters. Both grade and width appear to improve with depth, and the deposit remains open at depth. Because the breccia dips into the hillside, the possibility of developing a large open pit appears limited, as such it should be considered as a potential underground operation. Broad lower grade copper bearing intervals were encountered distal to and surrounding the higher grade breccia with Hole 89-5 returning from 0.08% to 0.4% copper and highly anomalous gold over its entire 75.6m length. Strong copper in soil anomalies (+1,000 ppm), possibly indicative of further high grade breccia type mineralization, were located to the north, northwest and south of the breccia body.

AR23426 – Booker Gold Exploration – 1993 – A summary of historical work includes mention of a geological reserve of 60 million tonnes grading 0.16% copper, 0.1 g/tonne gold, including a higher grade core of 16 million tonnes grading 0.32% copper, 0.1 g/tonne gold (at 0.2% copper cutoff) based on Canadian Superior’s 1969 drilling at the porphyry target adjacent to the NW side of the Chapman breccia. Drilling by David Chapman in 1991 was also referenced; this work focused on the Chapman breccia and resulted in 7 holes, only one (91-2) of which was assayed. This hole encountered good

grade copper mineralization to its bottom (103.32 m) including a 50 metre section assaying 2.30% Cu (Ogryzlo 1993). In addition several 3.05 metre sections contained appreciable amounts of gold in the 0.01 to 0.05 oz/ton range, with one section (48.8-51.8 metres) assaying 0.46 oz/ton gold. Booker Gold's field exploration consisted of trenching, percussion drilling and magnetometer surveying. Trenching encountered porphyry style copper-gold mineralization in altered feldspar porphyry and Hazelton volcanics. Although no in-situ breccia mineralization was encountered mineralized boulders grading up to 20.603% copper, 0.146 oz/ton gold and 1.75 oz/ton silver were encountered with their location suggesting the presence of a breccia body uphill to the northeast of the Chapman Zone. Percussion drilling consisted of 21 holes totalling 917.4 metres. Interesting results include 70.1 metres of 2.12% Cu and 0.014 oz/ton Au from Chapman as well as 24.3m grading 0.16% copper and 0.1 g/t Au in porphyry style mineralization located approximately 200 metres south and outside of Canadian Superior's geological reserve. Magnetic surveying showed a well-defined magnetic low associated with the Chapman breccia and a similar magnetic low feature located approximately 230 metres east of the breccia body.

AR24736 – Booker Gold Exploration – 1996 – Booker completed a total of 58 NQ diamond drill holes totalling 14,684 metres as well as trenching, IP Geophysics and soil geochemistry. Drilling in 1994 and 1997 was also referenced but not reported on. Two significant soil anomalies were defined with values of up to 5,937 ppm Cu. Trenching of one of the anomalies returned 40m of intensely mineralized volcanic breccia assaying over 1% Cu and 1 g/t Au. Subsequent drilling in this area returned 295.7m of 0.81% Cu and 0.28 g/t Au. Limited trenching just to the north of the second soil geochemistry anomaly returned mineralized porphyry grading up 0.8% Cu. IP geophysical surveying showed that the Chapman and Bland Zones manifest as chargeability highs and resistivity lows, with chargeability highs located on strike SW of Chapman and NE of Bland zones requiring further trenching and drilling. Drilling encountered numerous significant intervals from both the breccia zones as well as the porphyry envelope. Below is a table of select diamond drill intersections exhibiting porphyry style grade/width as well as high grade breccia mineralization.

Hole	Depth m	bearing	Interval m	Cu %	Au g/t
95-16	304.2	-90	304.2	0.75	0.32
95-23	348.1	-60	209.1	0.45	0.18
95-25	349.3	-60	349.3	0.25	0.1
95-29	297.8	-60	297.8	0.27	not reported
95-32	467.9	-70	467.9	0.21	not reported
96-60	96.9	-90	56.3	3.16	0.3
96-64	506	-90	506	0.28	0.11
96-67	335	-75	30.5	3.1	1.01

Drill logs are often either incomplete or missing and much data appears on maps but not within the body of the report. An attempt should be made to acquire complete copies of all exploration data from the Booker Gold Exploration programs.

Recommendations were for expanded ground magnetics and soil geochemistry programs to be followed by:

- 1) Trenching and drilling 50-300 metres west of the Bland Zone to find the source of strong copper soil geochemical anomalies in this area

- 2) Drilling between Bland and Chapman to see if the zones are connected at depth
- 3) Trenching and drilling of existing geophysical and geochemical anomalies northeast of Bland and southwest of Chapman
- 4) Trenching and drilling of any significant anomalies encountered by the expanded ground magnetic and soil geochemical sampling programs

AR25287 – Booker Gold Exploration – 1997 – Work consisted of soil geochemical and IP geophysical surveys along with the drilling of 69 NQ holes totaling 15,957.20 metres. Three main copper in soil geochemical anomalies were encountered but in two cases the anomaly was a result of mineralized cobbles in the till and could not be reproduced while the third anomaly was thought to be related to organic rich sediments. IP work showed the presence of a chargeability high south of the Chapman Zone. Diamond drilling continued to encounter good grade Cu-Au mineralization within the breccia bodies as well as the surrounding porphyry style mineralization. Many holes were terminated in highly anomalous to ore grade mineralization. The enriched core of the target (breccia zones and immediately adjacent porphyry stockwork or fracture zone) was estimated to be 500m long, 50m wide and extend to depths in excess of 300m. Recommendations for further work include further drilling of strong copper soil geochemical targets 100m to 300m west of the Bland Zone, exploration on the IP anomaly south of the Chapman Zone as well as further drilling to support a bankable resource estimate. A table of select drill results follows:

Hole	Depth m	bearing	Interval m	Cu %	Au g/t
97-90	242.3	-90	239.3	0.2	0.15
hole bottomed in 3m of 0.27% Cu, 0.21 g/t Au and 0.031% Mo					
97-102	358.7	-65	228.7	0.57	0.17
97-105	384.7	-70	33.5	0.39	0.28
hole bottomed in 21m of 0.21% Cu and 0.1 g/t Au; not part of above intersection					
97-123	228.2	-90	67.1	1.08	0.25
bottom of hole only partially assayed but consistently highly anomalous in Cu					
97-125	93.2	-65	36.4	2.5	0.4
97-129	282.5	-70	48.9	2.1	0.63
bottomed in approximately 100m of 0.2% Cu with increasing grade at depth					
97-130	142.3	-75	63.9	1.7	0.8
97-138	52.9	-75	44.4	2.15	0.32
97-139	103	-70	64.1	2.74	0.95
97-140	133.1	-75	48.7	1.79	1.2

Geoscience BC – Morrison Infill Block – 2008 – Aeroquest, on behalf of Geoscience BC, conducted a combined aeromagnetic and Aerotem geophysical survey over a broad area of west-central BC with several tighter spaced “infill” blocks over known porphyry targets within the survey area including the Morrison to Hearne area. Results show the Hearne property as having generally high magnetic response with the Bland and Chapman breccia zones occurring on the margins of strong positive magnetic and Aerotem anomalies. Two interesting geophysical targets were located; one is approximately 750 metres west of the Bland Breccia and consists of a strong positive coincident magnetic and Aerotem anomaly while the other is located approximately 500 metres west of the Chapman Breccia and consists of a strong positive Aerotem anomaly on the margin of a magnetic high. Recent aerial imagery shows no sign

of drill sites, roads or trenches in the vicinity of these anomalies. Although partially defining several interesting anomalies, the 200m line spacing used in this survey was too broad spaced to consistently identify breccia targets or discrete structures.

Regional Geology – Mineralization at the Hearne Hill property is associated with the Babine Igneous Suite of Tertiary and possible Cretaceous age (MacIntyre et al., 1997). Important deposits associated with this Suite include the Granisle and Bell Mines which together produced a combined total of 130 million tonnes of ore at 0.4% Cu, 0.15 g/t Au and 0.75 g/t Ag. The Morrison deposit, located 2.2 kilometres northwest of the Hearne Hill property mineralized zones, contains measured and indicated resources of 206,869,000 tonnes grading 0.39% Cu, 0.2 g/t Au and 0.005% Mo (Pacific Booker Minerals Inc. web site). Mineralization within the belt occurs within an approximate 5.0 kilometre wide and more than 90 km long north-northwesterly trend extending from the northern part of Babine Lake. The Hearne Hill property is located within the south-central portion of this belt.

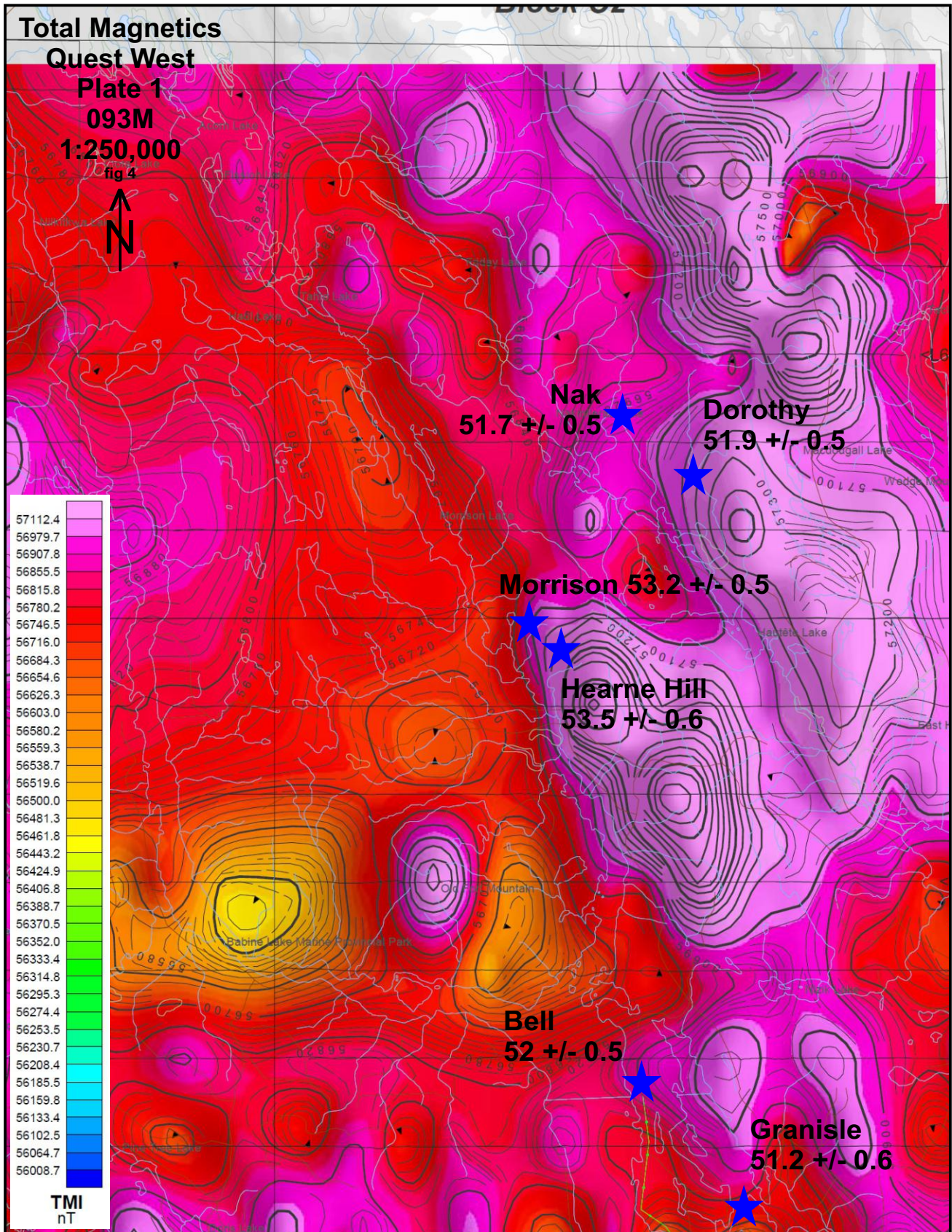
The Babine Igneous Suite intrudes Mesozoic volcanic and sedimentary rocks of the Stikine Terrane within the Intermontane Tectonic Belt. The Stikine Terrane is an ocean island arc that was accreted to the western margin of North America in Late-Jurassic to Early-Cretaceous time. The Property lies on the northern edge of a transverse tectonic feature known as Skeena Arch that separates the Bowser Basin in the north from the Nechako Trough in the south. The Skeena Arch was uplifted during the Jurassic and the faults thus generated acted as controls for the emplacement of Cretaceous and Tertiary intrusions (Carter, 1981).

The Stikine Terrane consists primarily of an island arc assemblage of Late-Triassic (Takla Group) and Early-Jurassic (Hazelton Group) marine volcanic, volcanoclastic and sedimentary rocks. Marine and non-marine sedimentary rocks of the Mid- to Late-Jurassic Bowser Lake and Mid-Cretaceous Skeena groups overlie the older volcanic and sedimentary units, and are preserved in down-dropped basins bounded by north-northwest trending faults developed during extensional and trans-tensional tectonic activity in Late-Cretaceous and Early-Tertiary time (Carter et al, 1995).

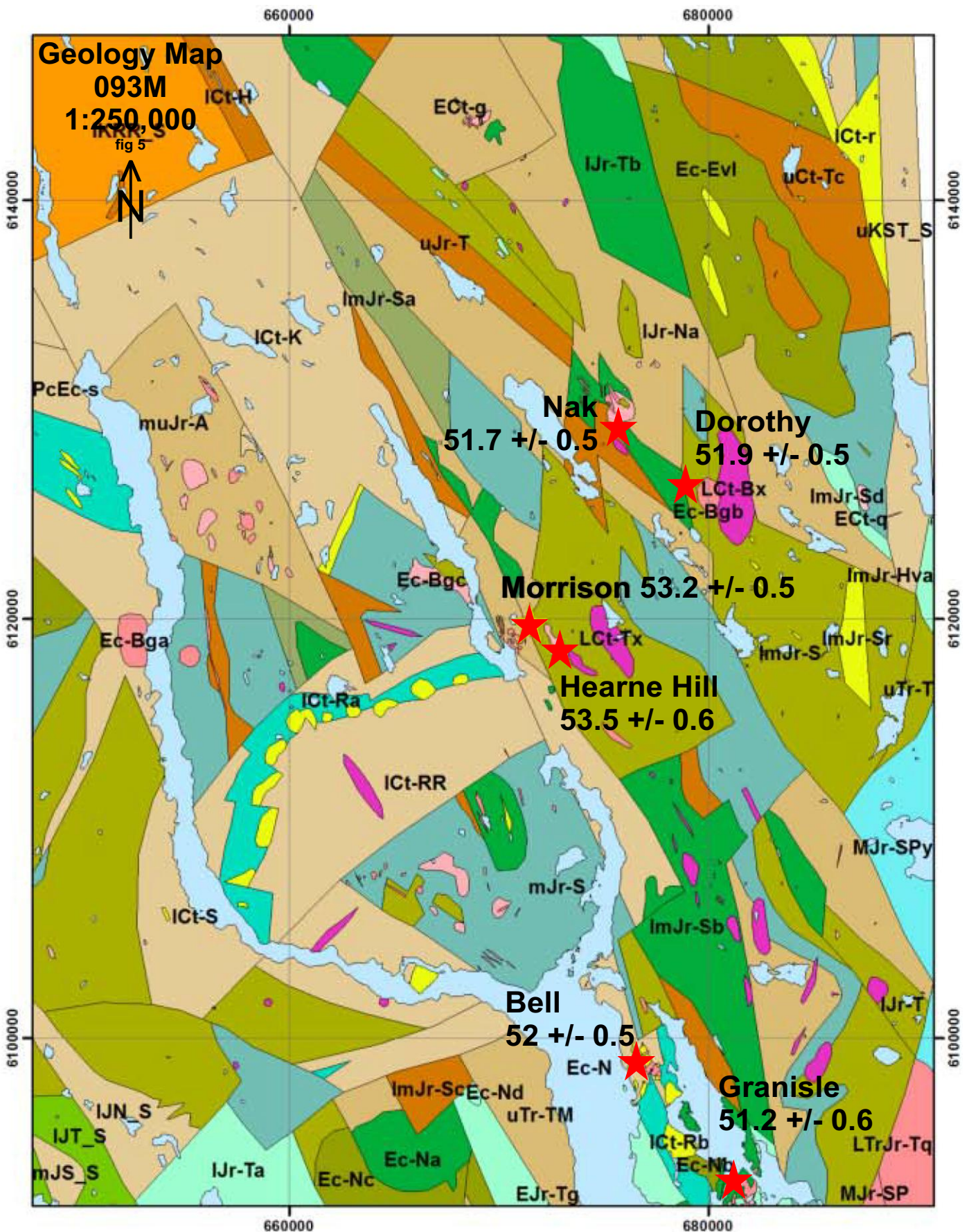
Radiometric ages for mineralized and un-mineralized biotite-feldspar porphyries of the Babine suite have yielded an average age of 50 Ma (Carter et al, 1995), suggesting that these intrusive bodies were emplaced over a short period in Mid-Eocene time.

Intrusive rocks include six major intrusive suites including Topley (173-206 Ma), Omineca (121 – 181 Ma), Bulkley (70 – 84 Ma), Goosley Lake (49 – 53 Ma), Nanika (47 – 56 Ma) and Babine (49 – 55 Ma). All suites have related economic metal deposits, however the most important porphyry copper mineralization in the area is associated with the Babine Igneous Suite which has been characterized (from oldest to youngest) as equigranular, fine- to medium-grained quartz diorite and quartz monzonite, sub-porphyrific rhyolite and dacite and a distinctive ‘crowded’ (hornblende)-biotite-feldspar porphyry (“BFP”) (Carter et al, 1995). These rocks occur as irregular dykes, dyke swarms and plugs generally not exceeding one kilometre in surface area. Multiple intrusive events are a common feature at some deposits. It has also been reported that some of the better mineralized properties in the region contain pre-, inter- and post-mineral (hornblende) biotite-feldspar porphyries and intrusive breccias.

Alteration zones associated with mineralized porphyries of the Babine Igneous Suite include a central potassic zone (hydrothermal biotite ± K-spar), grading outward into a phyllic zone (quartz-sericite-pyrite), and finally an outer zone of propylitic alteration (chlorite-carbonate ± epidote).



Nak - South Zone 54 million tonnes grading 0.17% Cu and 0.254 g/t Au, North Zone 217 million tonnes grading 0.187% Cu and 0.0398 g/t Au; Hera Resources 1998
 Dorothy - 40 million tonnes grading 0.25% Cu and 0.01% Mo; CIM 1976
 Morrison - 208 million tonnes grading 0.39% Cu and 0.19 g/t Au; measured and indicated 2009
 Bell - 71 million tonnes grading 0.46% Cu and 0.23 g/t Au; 1992 approximate remaining reserves
 Granisle - 119 million tonnes grading 0.41% Cu and 0.15 g/t Au; 1992 remaining reserves






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Regional Geology of the Babine Porphyry Belt (fig 6)

Legend


Eocene

-  Ec-Evl - Nechako Plateau Group - Endako Formation coarse volcanoclastic and pyroclastic volcanic rocks
-  Ec-N - Nechako Plateau Group - Newman Formation andesitic volcanic rocks
-  Ec-Na - Nechako Plateau Group - Newman Formation - Porphyritic Flows Member basaltic volcanic rocks
-  Ec-Nb - Nechako Plateau Group - Newman Formation - Breccia Member coarse volcanoclastic and pyroclastic volcanic rocks
-  Ec-Nc - Nechako Plateau Group - Newman Formation - Lahar Member coarse volcanoclastic and pyroclastic volcanic rocks
-  Ec-Nd - Nechako Plateau Group - Newman Formation - Mafic Flows Member andesitic volcanic rocks


Eocene Babine Intrusions

-  Ec-Bga - Babine Plutonic Suite - Biotite-Quartz-Feldspar Porphyritic Phase granodioritic intrusive rocks
-  Ec-Bgb - Babine Plutonic Suite - Biotite-Feldspar Porphyritic Phase granodioritic intrusive rocks
-  Ec-Bgc - Babine Plutonic Suite - Quartz Diorite to Granodiorite Phase quartz dioritic intrusive rocks

Paleocene to Eocene

-  PcEc-s - Unnamed undivided sedimentary rocks

Late Cretaceous Bulkley Intrusions









-  LCt-Bx - Bulkley Plutonic Suite - Diorite Phase dioritic intrusive rocks

Lower to Upper Cretaceous

Sustut Group

-  uKST_S - Sustut Group - Tango Creek Formation undivided sedimentary rocks
-  uCt-Tc - Sustut Group - Tango Creek Formation conglomerate, coarse clastic sedimentary rocks

Skeena Group

-  LCt-Tx - Unnamed dioritic intrusive rocks
-  ICt-S - Skeena Group undivided sedimentary rocks
-  ICt-RR - Skeena Group - Red Rose Formation undivided sedimentary rocks
-  IKRR_S - Skeena Group - Red Rose Formation coarse clastic sedimentary rocks
-  ICt-Ra - Skeena Group - Rocky Ridge Formation - Subvolcanic Rhyolite Domes alkaline volcanic rocks
-  ICt-r - Skeena Group - Felsic Volcanics rhyolite, felsic volcanic rocks
-  ICt-H - Skeena Group - Hanawald Conglomerate conglomerate, coarse clastic sedimentary rocks
-  ICt-K - Skeena Group - Kitsuns Creek Formation undivided sedimentary rocks

Early Cretaceous Intrusive Rocks



-  ECt-g - Unnamed granodioritic intrusive rocks
-  ECt-q - Wedge Mountain Stock quartz monzonitic to monzogranitic intrusive rocks

figure 7

- Middle to Upper Jurassic
Bowser Lake Group
-  uJr-T - Bowser Lake Group - Trout Creek Formation conglomerate, coarse clastic sedimentary rocks
 -  muJr-A - Bowser Lake Group - Ashman Formation argillite, greywacke, wacke, conglomerate turbidites
- Early to Middle Jurassic
Spike Peak Intrusive Suite
-  MJr-SP - Spike Peak Intrusive Suite - Quartz Monzonite Phase granodioritic intrusive rocks
 -  MJr-SPy - Spike Peak Intrusive Suite syenitic to monzonitic intrusive rocks
- Lower to Middle Jurassic
Hazelton Group
-  mJS_S - Hazelton Group - Smithers Formation undivided sedimentary rocks
 -  mJr-S - Hazelton Group - Smithers Formation marine sedimentary and volcanic rocks
 -  ImJr-Sr - Hazelton Group - Saddle Hill Formation - Subvolcanic Rhyolite Domes rhyolite, felsic volcanic rocks
 -  ImJr-S - Hazelton Group - Saddle Hill Formation undivided volcanic rocks
 -  ImJr-Sa - Hazelton Group - Saddle Hill Formation - Intermediate Volcanic Member volcanoclastic rocks
 -  ImJr-Sb - Hazelton Group - Saddle Hill Formation - Mafic Submarine Volcanic Member basaltic volcanic rocks
 -  ImJr-Sc - Hazelton Group - Saddle Hill Formation - Volcanoclastic-Sedimentary Member conglomerate, coarse clastic sedimentary rocks
 -  ImJr-Sd - Hazelton Group - Saddle Hill Formation - Megacrystic Porphyry Member andesitic volcanic rocks
 -  ImJr-Hva - Hazelton Group andesitic volcanic rocks
 -  IJN_S - Hazelton Group - Nilkitkwa Formation undivided sedimentary rocks
 -  IJr-Na - Hazelton Group - Nilkitkwa Formation argillite, greywacke, wacke, conglomerate turbidites
 -  IJT_S - Hazelton Group - Telkwa Formation calc-alkaline volcanic rocks
 -  IJr-Ta - Hazelton Group - Telkwa Formation - Felsic to Intermediate Volcanic Member andesitic volcanic rocks
 -  IJr-Tb - Hazelton Group - Telkwa Formation - Mafic Volcanic Member basaltic volcanic rocks
 -  IJr-T - Hazelton Group - Telkwa Formation undivided volcanic rocks
- Late Triassic to Early Jurassic
Topley Intrusive Suite
-  EJr-Tg - Topley Intrusive Suite - Porphyritic Phase granodioritic intrusive rocks
 -  LTrJr-Tq - Topley Intrusive Suite - Granodiorite to Monzonite Phase granodioritic intrusive rocks
- Upper Triassic
-  uTr-T - Takla Group undivided volcanic rocks
 -  uTr-TM - Takla Group - Moosevale Formation argillite, greywacke, wacke, conglomerate turbidites

Regionally, copper mineralization typically occurs within northeast and northwest striking, steeply-dipping quartz-chalcopyrite ± bornite veinlets less than 5 mm wide (Carter, 1994). Enhanced grades are locally developed at, or adjacent to contacts between intrusive phases and volcanic and sedimentary rocks of the Hazelton Group or within breccia zones such as those occurring on the Hearne Hill property. Mineralized haloes containing 5 to 10% pyrite have been reported at some Babine area deposits and extend up to 300 metres outboard from a central zone of copper mineralization.

Property Geology and Mineralization – The property is underlain by volcanic rocks belonging to the Lower to Middle Jurassic Hazelton group, which consists principally of water-lain grey lapilli crystal tuffs and grey andesites, with some associated sedimentary rocks. The volcanic sequence has been intruded by a dyke swarm of Biotite Feldspar Porphyry (BFP) bodies which belong to the Tertiary (Eocene) Babine Igneous Suite.

There are two main types of Cu-Au mineralization at Hearne Hill, a porphyry stockwork as well as breccia bodies within the core of the porphyry stockwork.

The porphyry stockwork occurs within Babine intrusive bodies and surrounding Hazelton volcanics, chalcopyrite, pyrite and molybdenite occur as fracture fillings, as disseminations and within stockwork quartz veinlets. The host rocks contain biotite and quartz-sericite alteration. Alteration zoning ranging from propylitic, phyllic and potassic is present within the porphyry. Many of the biotite feldspar porphyry units are inter-mineral or post-mineral in age, with variations in copper distribution caused by these late stage intrusions. The volcanic rocks, in contrast with late stage intrusives, are invariably higher in copper grade. The Hazelton volcanics were deposited before any mineralizing event, and consequently have been subjected to all stages of mineralization. When the distribution of copper in the volcanics is examined, it appears that grades are increasing to the south and west of the Chapman breccia zone.

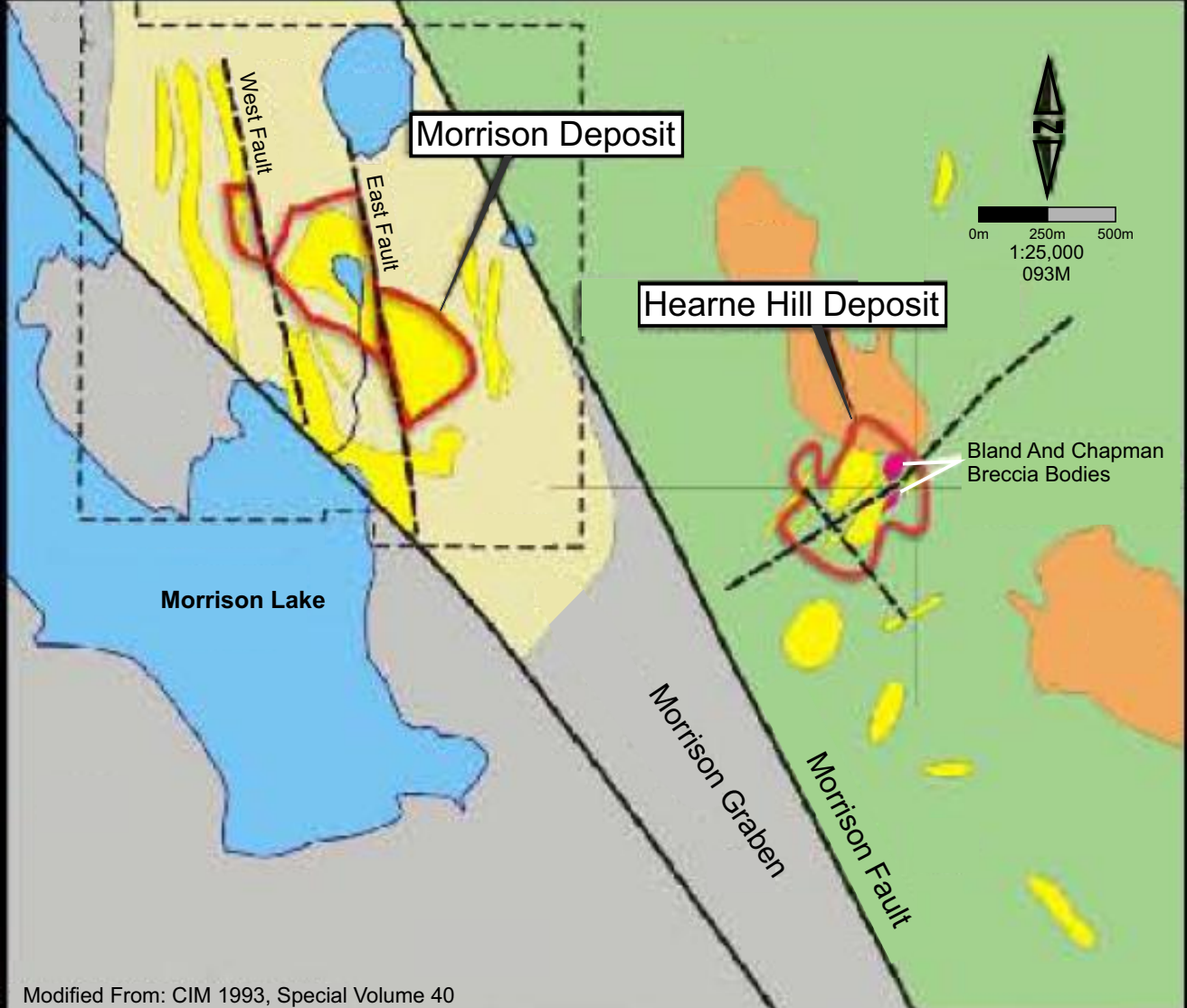
The breccia zones are situated within and adjacent to the porphyry stockwork. The two main breccia zones (Chapman and Bland) are separated by approximately 300 m, have a N 10-20E strike, and appear to dip steeply (80°) to the east. The breccias consist of angular clasts up to several tens of centimetres size of Babine intrusives and Hazelton volcanics. The porosity of the breccia before sulphide and carbonate cementation would have been close to the theoretical maximum of around 25%. Chalcopyrite, pyrite and marcasite fill angular interstices between the breccia clasts with later cementation provided by calcite, dolomite and minor chalcidony. Porosity remains between 5% and 8%. There is little evidence of milling or attrition of clasts. Rock flour is present between clasts but is a minor constituent.

It is postulated that regional tectonic events have displaced portions of a larger mineralizing system in the Hearne Hill area. Hearne Hill is hosted by Jurassic Hazelton Group volcanic rocks which sit in faulted contact with the Bowser Lake sedimentary rocks hosting the Morrison deposit. Hearne Hill is interpreted to represent the deeper roots of the Morrison Deposit (Ogryzlo et al., 1995), the original porphyry deposit having been dismembered as a result of extensional faulting. Later dextral shearing shifted the Morrison Deposit north of Hearne Hill.

The surface expression of the Bland zone is approximately 100 m by 75 m to a depth of 300 m. The Chapman zone has a surface expression of 75 m by 50 m to a depth of at least 100 m. Both zones are reportedly open to depth.









Hearne Hill Area Detailed Geology

fig 8



Modified From: CIM 1993, Special Volume 40

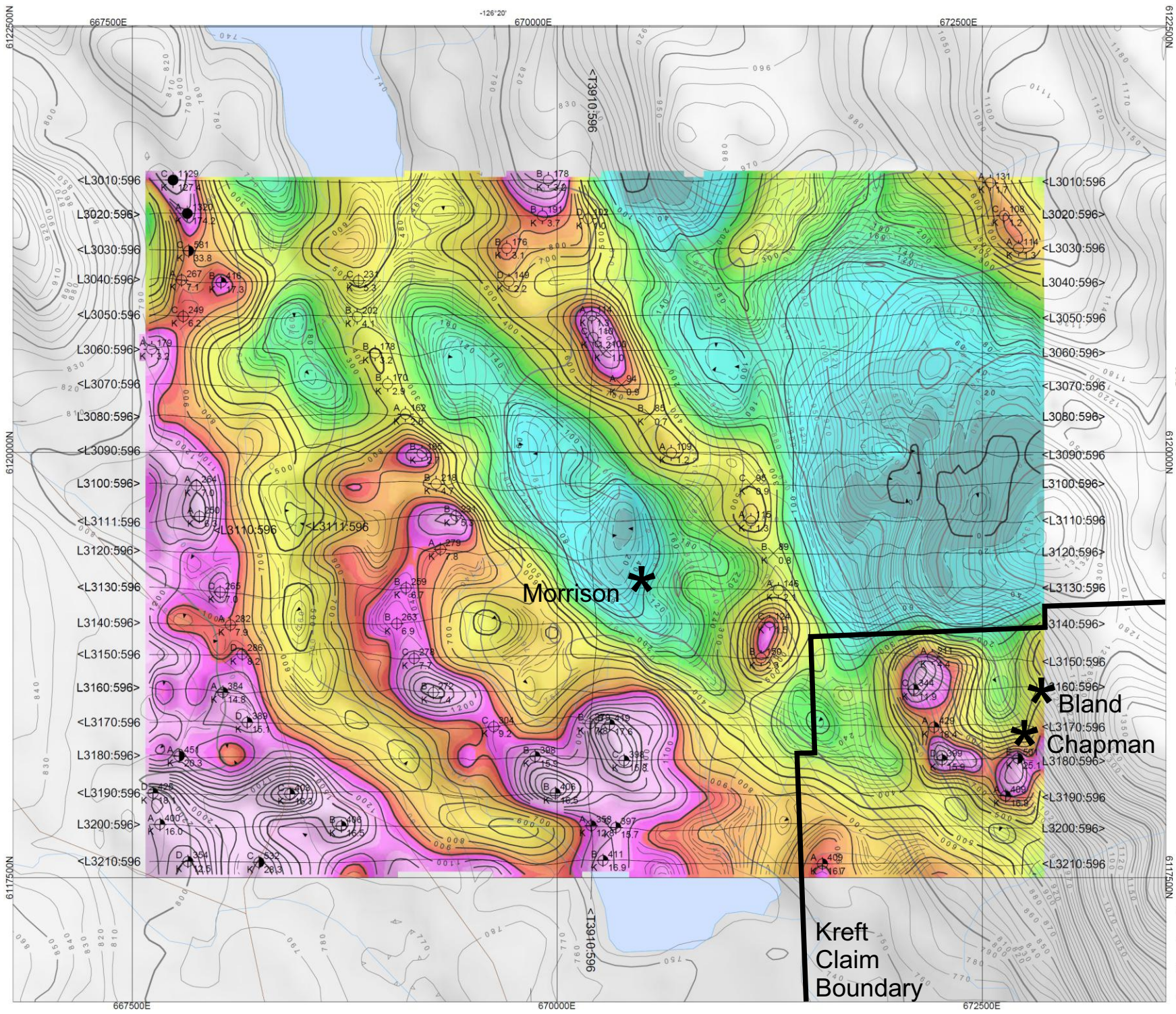
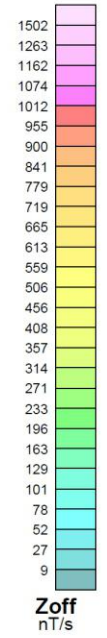
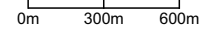
LEGEND

- | | | | |
|---|---|---|---|
|  | Quaternary - Recent Glaciolacustrine Clay, Sand Gravel Till |  | Lower Jurassic Hazelton Group Volcanics and Sediments |
|  | Eocene - Babine Igneous Suite |  | Fault, Major |
|  | Middle Jurassic Bowser Lake Group Sediments |  | Fault, Minor |
|  | Early Jurassic Diorite, Granodiorite |  | 0.2% Copper Isopleth |

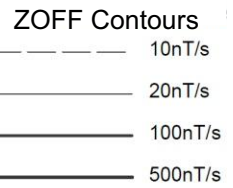
Aerotem Z1 Off-Time

fig 10

Hearne Hill Area
1:30,000



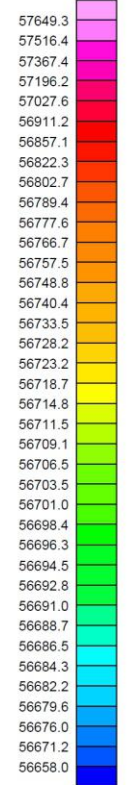
Geoscience BC
Morrison Infill Block
Report 2009-06



Total Magnetic Intensity

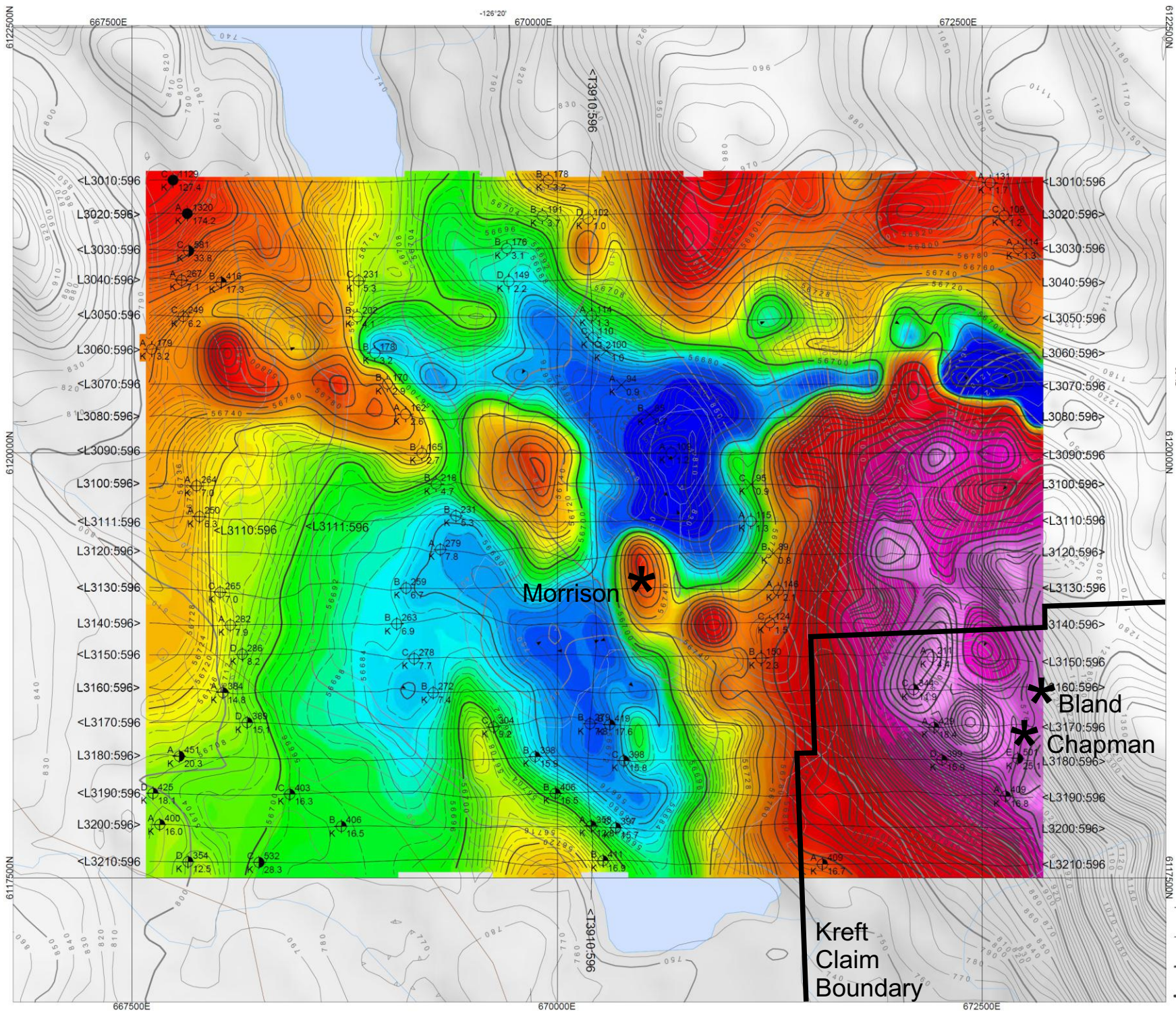
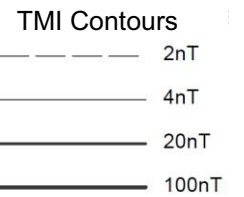
fig 9
Heerne Hill Area
1:30,000

0m 300m 600m



TMI
nT

Geoscience BC
Morrison Infill Block
Report 2009-06



Morrison *

Bland *
Chapman *

Kreft
Claim
Boundary

Hearne Hill Breccia Bodies Historic Resource

Classification	Zone	Tonnes	% Cu	g/t Au
Indicated	Bland	2,342,000	0.660	0.217
	Chapman	474,000	1.074	0.256
Total Indicated		2,816,000	0.730	0.224
Inferred	Bland	226,000	0.568	0.245
	Chapman	22,000	0.682	0.160
Total Inferred		248,000	0.578	0.237

Notes:

- 1) Resources listed above do not meet the requirements of NI 43-101 regulations and are shown for information purposes only.
- 2) Table taken from: PACIFIC BOOKER MINERALS INC. MORRISON COPPER/GOLD PROJECT – FEASIBILITY STUDY NI 43-101 TECHNICAL REPORT dated March 12, 2009

Fluids associated with the breccia mineralization were dilute epithermal chloride brines. In the breccia, fluid inclusions that are trapped in the dolomite cement homogenize at a mean temperature of 172.5°C (in a range of between 83°C and 240°C) with salinities ranging from 2% to 10% NaCl equivalent (Ogryzlo et al 1995).

Gold is enriched in the breccia pipes relative to the stockwork mineralization and averages 0.8 g/t. However, higher gold values (14 g/t over 3 m) have been obtained. Such values are rare in the porphyry deposits of the Babine region and indicate that suitable conditions for an epithermal precious metal deposit may be present. Such high gold values and gold-copper ratios are also found in pre-accretion porphyry deposits such as the Red Chris and the Kerr Sulphurets Mitchell deposits.

Current Work and Results – Exploration work on the Hearne Hill Property was conducted June 20th to June 22nd 2019 and yielded 3 rock samples, 8 soil samples and 8 biogeochemical (tree) samples. The work program was designed to prove historic anomalous results, to prospect for mineralization along strike to the southwest of the Chapman breccia body and to test the efficacy of biogeochemical sampling within this terrain. Sample sites were marked in the field using flagging inscribed with the sample code, with soil sample medium placed in industry standard soil sample envelopes, while rock and biogeochemical samples were placed into standard 8.5x13 poly rock sample bags. All samples were analyzed by Bureau Veritas, with soils prepped by SS80 (sieve 100g of soil to -80 mesh), rocks prepped using PRP7-250 (crush 70% to 10 mesh and pulverize a 250g split to 200 mesh) and biogeochemical samples prepped by VA475 (ashing of 50g). Rocks and soils were analyzed using AQ201 (15g sample via 1:1:1 Aqua Regia digestion with ICP-MS finish), while biogeochemical samples were analyzed by AQ200 (0.5g sample via 1:1:1 Aqua Regia digestion with ICP-MS finish).

Rock sampling confirmed the presence of high copper and gold values at the Chapman Breccia. The peak rock sample (1907939) value of >10,000 ppm Cu, 7.1 ppm Ag and 251.9 ppb Au was returned from a sample of breccia subcrop mineralized with pyrite, chalcopyrite and bornite with strong malachite.

Soil samples were taken at roughly the same site as biogeochemical samples in an effort to see if one method was superior to the other in defining anomalies. The two highest copper values from soils (7,229.4 ppm and 698.9 ppm) correspond respectively to the two highest copper values from biogeochemical samples (282.5 ppm and 117.8 ppm). The remaining soil and biogeochemical samples show very little correlation with copper biogeochemical anomalies often not supported by adjacent copper in soil results and vica versa. It is felt that the soil samples possibly represent erratically

distributed mineralized cobbles within the till while biogeochemical samples, with their much larger and deeper sampling “footprint”, provide a better overall average of the area and are less susceptible to erratic spikes typical to soil samples from glaciated terrain.

Sampling approximately 250m to the southeast of the Chapman Breccia encountered weak to moderate copper anomalies in both soils and biogeochemical samples. As at Chapman, anomalies in this area show little correlation between sample types. Of interest is biogeochemical sample 1907932 which returned 99.3 ppm Cu with this moderately anomalous value somewhat greater than copper values from biogeochemical samples taken adjacent to the Chapman Breccia (82.1 and 90.6 ppm Cu), suggesting good potential for copper mineralization in this area.

Conclusions – A strong copper gold porphyry system exists on the Hearne Hill property. Although significant amounts of historical work have been completed, a large portion of this work was focused on the high-grade Cu-Au breccia zones within the core of the deposit, leaving good peripheral targets relatively untested. Biogeochemical sampling appears to be capable of seeing through the mixed till and colluvium covering much of the property, and identifying anomalies related to local bedrock. Geophysical surveying readily identifies the high grade breccia’s as well defined magnetic lows coincident with IP chargeability highs and resistivity lows. Positive Aerotem anomalies, although not directly associated with surface exposures of the known high grade Cu-Au breccia style mineralization, still possibly represent sulphide mineralization and certainly warrant follow-up. Hearne Hill can be viewed both as a stand-alone exploration and development play as well as potential feed for the Morrison Deposit which is well into the mine planning and permitting stage.

Recommendations – Preliminary work should consist of ground prospecting and biogeochemical sampling over the following targets:

- 1) The small but possibly significant showing of chalcopyrite mineralized porphyry located SW of the Chapman Zone by Canadian Superior in 1968.
- 2) The roughly coincident magnetic low (Booker Gold, 1993) and EM anomaly (Noranda, 1981) located east of the Chapman Zone.
- 3) The combined copper soil anomalies (Trobuttle 1967 and Texas Gulf 1968) and IP chargeability highs (Booker Gold, 1996-97) located south to southwest of Chapman have seen only limited drilling and trenching (Booker, 1993) with interesting results such as 24.3 metres of 0.16% Cu in porphyry style mineralization.
- 4) The strong copper in soil geochemical anomalies 100-300 metres west of Bland (Booker Gold, 1997).
- 5) The coincident Aerotem and magnetic anomalies (Aeroquest, 2009) west of Bland/Chapman.
- 6) Some consideration should be given to acquiring complete copies of historical exploration data, in particular drill logs and results from the various Pacific Booker work programs.

Based on the results of this work, a program of airborne EM, magnetics and radiometrics should be conducted at 50 metre line spacings over the SW portion of the property (approximate survey size of 94 line kilometres) and at 100 metre line spacings over the NE portion of the property (approximate survey size of 25 line kilometres). Anomalies generated by this work should be subjected to ground prospecting, biogeochemical sampling and IP geophysical surveying. Although portions of the above noted geophysical work has been previously completed, it is a patchwork of coverage dating from various eras and operators and its updating and completion in a single pass using modern methods will likely prove of significant benefit. Significant anomalies generated by this program should be subjected to trenching and/or drilling.

672500

672750

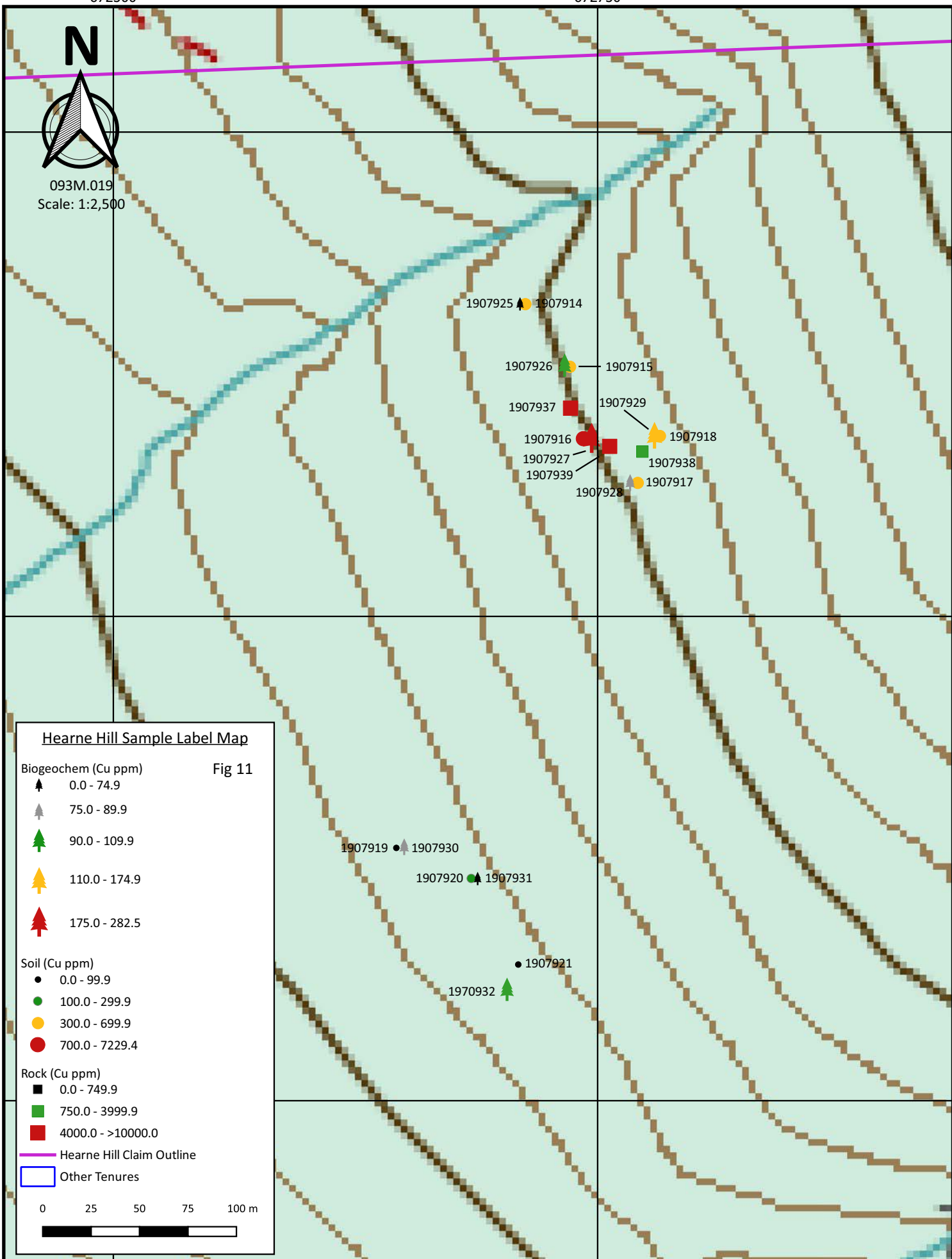
6118500

6118250

6118000



093M.019
Scale: 1:2,500



Hearne Hill Sample Label Map

Fig 11

Biogeochem (Cu ppm)

- ▲ 0.0 - 74.9
- ▲ 75.0 - 89.9
- ▲ 90.0 - 109.9
- ▲ 110.0 - 174.9
- ▲ 175.0 - 282.5

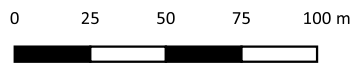
Soil (Cu ppm)

- 0.0 - 99.9
- 100.0 - 299.9
- 300.0 - 699.9
- 700.0 - 7229.4

Rock (Cu ppm)

- 0.0 - 749.9
- 750.0 - 3999.9
- 4000.0 - >10000.0

- Hearne Hill Claim Outline
- Other Tenures



672500

672750

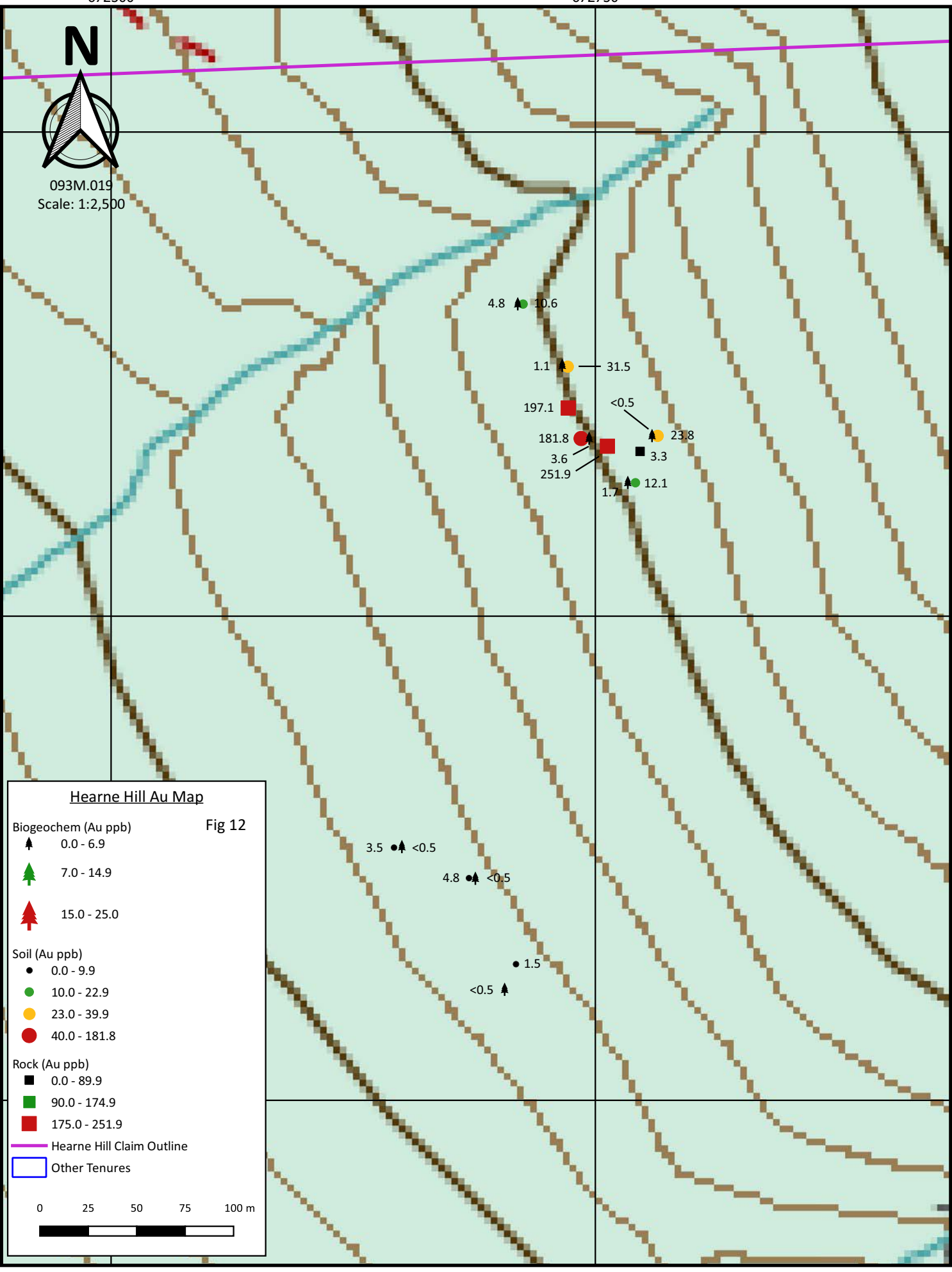
6118500

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Scale: 1:2,500



Hearne Hill Au Map

Fig 12

Biogeochem (Au ppb)

- ▲ 0.0 - 6.9
- ▲ 7.0 - 14.9
- ▲ 15.0 - 25.0

Soil (Au ppb)

- 0.0 - 9.9
- 10.0 - 22.9
- 23.0 - 39.9
- 40.0 - 181.8

Rock (Au ppb)

- 0.0 - 89.9
- 90.0 - 174.9
- 175.0 - 251.9

— Hearne Hill Claim Outline

□ Other Tenures

0 25 50 75 100 m



4.8 ▲ 10.6

1.1 ● 31.5

197.1 ■ <0.5 ▲ 23.8

181.8 ● 3.3 ■

3.6 ● 1.7 ▲ 12.1

251.9 ■

3.5 ▲ <0.5

4.8 ▲ <0.5

1.5 ●

<0.5 ▲

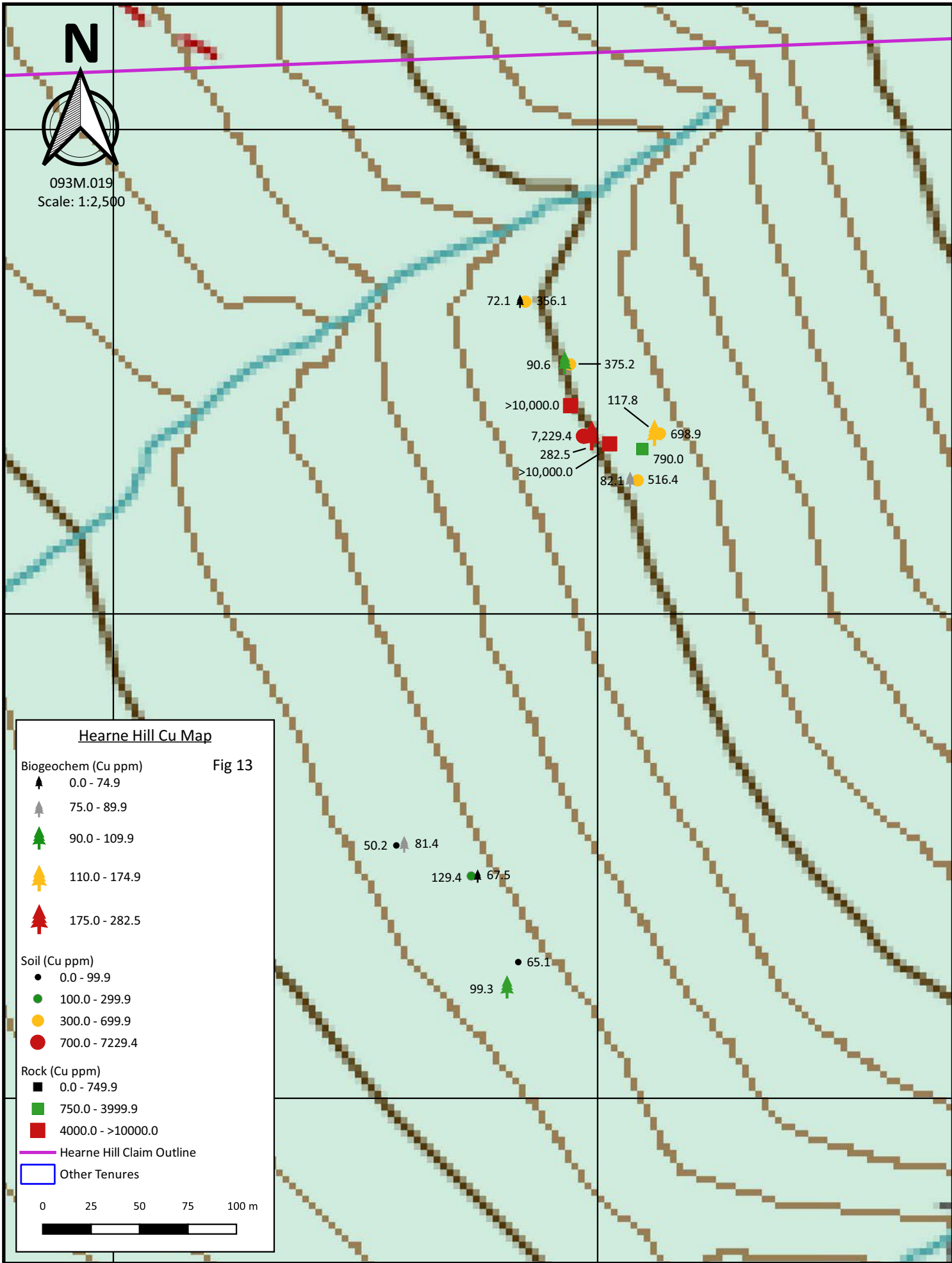
672500

672750

6118500

6118250

6118000



Hearne Hill Cu Map Fig 13

Biogeochem (Cu ppm)

- ▲ 0.0 - 74.9
- ▲ 75.0 - 89.9
- ▲ 90.0 - 109.9
- ▲ 110.0 - 174.9
- ▲ 175.0 - 282.5

Soil (Cu ppm)

- 0.0 - 99.9
- 100.0 - 299.9
- 300.0 - 699.9
- 700.0 - 7229.4

Rock (Cu ppm)

- 0.0 - 749.9
- 750.0 - 3999.9
- 4000.0 - >10000.0

— Hearne Hill Claim Outline

□ Other Tenures

0 25 50 75 100 m

72.1 ▲ 356.1

90.6 ▲ 375.2

>10,000.0 ■ 117.8

7,229.4 ■ 698.9

282.5 ■ 790.0

>10,000.0 ■ 82.1 ▲ 516.4

50.2 ▲ 81.4

129.4 ▲ 67.5

65.1 ●

99.3 ▲

Statement Of Qualifications

I, Bernie Kreft, directed the exploration work described herein.

I have 30 years prospecting experience in the Yukon and BC.

This report is based on fieldwork directed by the author, and includes information from various publicly available assessment reports and BCGS reports.

This report is based on fieldwork completed from June 20th to June 22nd of the 2019 field season.

This report is based on fieldwork completed on the Hearne Hill Project.

Respectfully Submitted,

Bernie Kreft

Statement of Costs

Wages Marty Huber MSC P.Geo (2.5 days x \$450/day) June 20 th to 22 nd 2019	\$1,125.00
Wages Lynsi Henrickson field helper (2.5 days x \$250/day) June 20 th to 22 nd 2019	\$625.00
Bureau Veritas (3 rocks, 8 biogeochem and 8 soil)	\$488.62
Report writing, data research and compilation, map making	\$2,500.00
Food, Field Supplies, Camp (2 people x 2.5 day x \$150/day/person)	\$750.00
Canadian Helicopters (2.0 hrs)	\$2,998.38
Truck Travel 2,294 kilometres x \$0.60/km	<u>\$1,376.40</u>
Sub Total	\$9,863.40
5% Management Fee	<u>\$493.17</u>
Total	\$10,356.57

2019 Hearne Hill Sample Table

Sample	Type	Datum	East	North	Comments	Mo	Cu	Ag	Au
1907937	Rock	WGS84	672736	6118357	lim vuggy brx diss py cpy and mal strong Fe-Carb	4.9	>10000.0	2.9	197.1
1907938	Rock	WGS84	672773	6118335	vuggy limonitic carb alt brx with patchy py	1.7	790	0.3	3.3
1907939	Rock	WGS84	672756	6118338	brx strong mal/py cpy tr bo poss boulder or subcrop	129	>10000.0	7.1	251.9

Sample	Type	Datum	East	North	Comments	Mo	Cu	Ag	Au
1907914	Soil	WGS84	672710	6118411	good quality rusty red B horizon soil 30cm deep	7.4	356.1	0.1	10.6
1907915	Soil	WGS84	672733	6118379	good quality brown B horizon soil 25cm deep	10.2	375.2	0.2	31.5
1907916	Soil	WGS84	672747	6118342	good quality grey B horizon soil 35cm deep	59.8	7229.4	2.4	181.8
1907917	Soil	WGS84	672767	6118319	good quality tan B horizon soil 35cm deep	9.4	516.4	0.2	12.1
1907918	Soil	WGS84	672779	6118343	good quality brown B horizon soil 30cm deep	13.4	698.9	0.2	23.8
1907919	Soil	WGS84	672649	6118131	good quality brown B horizon soil 30cm deep	1.4	50.2	<0.1	3.5
1907920	Soil	WGS84	672688	6118115	good quality brown B horizon soil 30cm deep	2.4	129.4	0.2	4.8
1907921	Soil	WGS84	672711	6118070	good quality brown B horizon soil 30cm deep	1.4	65.1	<0.1	1.5

Sample	Type	Datum	East	North	Comments	Wt	Ash Wt	Mo	Cu	Ag	Au
1907925	Tree	WGS84	672710	6118411	branch tips from fir tree with 5-7cm trunk diameter	51.831	1.59	2	72.1	0.1	1.1
1907926	Tree	WGS84	672733	6118379	branch tips from fir tree with 5-7cm trunk diameter	50.216	1.346	3.9	90.6	0.4	2.6
1907927	Tree	WGS84	672747	6118342	branch tips from fir tree with 5-7cm trunk diameter	50.948	1.206	14.9	282.5	0.4	3.6
1907928	Tree	WGS84	672767	6118319	branch tips from fir tree with 5-7cm trunk diameter	50.99	1.881	2.9	82.1	0.2	1.7
1907929	Tree	WGS84	672779	6118343	branch tips from fir tree with 5-7cm trunk diameter	50.131	1.341	8.4	117.8	0.2	<0.5
1907930	Tree	WGS84	672650	6118131	branch tips from fir tree with 5-7cm trunk diameter	50.878	1.574	0.7	81.4	<0.1	<0.5
1907931	Tree	WGS84	672688	6118115	branch tips from fir tree with 5-7cm trunk diameter	50.482	1.384	1.2	67.5	0.1	<0.5
1907932	Tree	WGS84	672703	6118057	branch tips from fir tree with 5-7cm trunk diameter	50.779	1.658	0.5	99.3	0.2	<0.5



BUREAU VERITAS MINERAL LABORATORIES
Canada

www.bureauveritas.com/um

Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: **Kreft, Bernie**
1 Locust Place
Whitehorse Yukon Y1A 5G9 Canada

Submitted By: Bernie Kreft
Receiving Lab: Canada-Vancouver
Received: June 24, 2019
Report Date: July 15, 2019
Page: 1 of 2

CERTIFICATE OF ANALYSIS

VAN19001569.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID:
P.O. Number
Number of Samples: 9

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 60 days

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.


Invoice To: Kreft, Bernie
1 Locust Place
Whitehorse Yukon Y1A 5G9
Canada

CC:

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
VA475C	9	Vegetation Ashing at 475C	50		VAN
Split Ash from VA475C	9	Analysis sample split/packet			VAN
AQ200	9	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN

ADDITIONAL COMMENTS


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: Kreft, Bernie
1 Locust Place
Whitehorse Yukon Y1A 5G9 Canada

Project: None Given
Report Date: July 15, 2019

Page: 2 of 2

Part: 1 of 2

CERTIFICATE OF ANALYSIS

VAN19001569.1

Method	VA475_	VA475_	VA475_	WGHT	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
Analyte	Rec. Wt	Ash	Wtshed	Wt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	
Unit	g	g	g	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	
MDL	0.01	0.001	0.001	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	
OVEN STD-2	Vegetation	41.465	1.199		2.7	47.3	11.9	1464	0.9	16.0	0.7	>10000	0.44	2.6	4.8	1.4	573	0.2	1.5	0.2	
1907925	Vegetation	51.831	1.590		2.0	72.1	9.7	1627	0.1	17.5	2.9	>10000	0.05	1.1	1.1	0.2	768	5.8	<0.1	<0.1	
1907926	Vegetation	50.216	1.346		3.9	90.6	11.7	1423	0.4	23.7	10.1	>10000	0.10	1.5	2.6	0.1	811	5.7	0.1	<0.1	
1907927	Vegetation	50.948	1.206		14.9	282.5	12.4	1837	0.4	24.3	2.8	>10000	0.20	4.7	3.6	0.2	537	1.6	0.2	<0.1	
1907928	Vegetation	50.990	1.881		2.9	82.1	6.6	757	0.2	14.9	1.6	>10000	0.06	0.7	1.7	<0.1	1888	1.0	<0.1	<0.1	
1907929	Vegetation	50.131	1.341		8.4	117.8	10.8	1034	0.2	22.4	4.9	>10000	0.15	2.0	<0.5	0.1	948	1.2	0.1	<0.1	
1907930	Vegetation	50.878	1.574		0.7	81.4	9.6	1561	<0.1	10.8	1.2	3112	0.07	1.0	<0.5	<0.1	1378	1.0	<0.1	<0.1	
1907931	Vegetation	50.482	1.384		1.2	67.5	9.4	1427	0.1	16.4	0.8	4633	0.05	1.0	<0.5	<0.1	1138	0.7	<0.1	<0.1	
1907932	Vegetation	50.779	1.658		0.5	99.3	9.0	1429	0.2	18.6	0.9	3567	0.06	0.7	<0.5	<0.1	1706	0.5	<0.1	<0.1	



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Kreft, Bernie**
1 Locust Place
Whitehorse Yukon Y1A 5G9 Canada

Project: None Given
Report Date: July 15, 2019

Page: 2 of 2

Part: 2 of 2

CERTIFICATE OF ANALYSIS

VAN19001569.1

Method	Analyte	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
		V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	0.01	0.001	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
OVEN STD-2	Vegetation	1	25.00	3.048	1	12	2.22	1260	0.013	274	0.16	0.040	>10	1.2	0.01	0.8	0.2	1.05	<1	<0.5	<0.2
1907925	Vegetation	<1	21.74	4.356	<1	<1	2.09	2965	0.014	259	0.40	0.028	>10	0.3	<0.01	0.1	0.2	0.50	<1	<0.5	<0.2
1907926	Vegetation	1	19.53	>5	<1	2	2.33	2470	0.019	184	0.59	0.043	>10	0.7	0.01	0.3	<0.1	0.58	<1	<0.5	<0.2
1907927	Vegetation	2	15.54	>5	<1	2	2.77	2357	0.021	352	0.29	0.063	>10	0.3	<0.01	0.6	<0.1	0.62	<1	<0.5	<0.2
1907928	Vegetation	<1	26.47	2.721	<1	<1	2.10	3586	0.009	100	0.39	0.010	>10	0.3	<0.01	0.2	<0.1	0.45	<1	<0.5	<0.2
1907929	Vegetation	2	18.61	4.744	<1	2	2.73	2883	0.018	152	0.60	0.069	>10	0.4	<0.01	0.4	<0.1	0.60	<1	<0.5	<0.2
1907930	Vegetation	<1	19.84	4.336	<1	<1	2.07	2531	0.013	215	0.04	0.057	>10	0.2	<0.01	0.3	<0.1	0.58	<1	<0.5	<0.2
1907931	Vegetation	<1	16.45	3.366	<1	<1	2.07	3022	0.012	235	0.03	0.058	>10	0.2	<0.01	0.2	<0.1	0.51	<1	<0.5	<0.2
1907932	Vegetation	<1	19.62	4.700	<1	<1	2.33	2562	0.014	170	0.03	0.063	>10	0.3	<0.01	0.3	<0.1	0.53	<1	<0.5	<0.2



Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: Kreft, Bernie
1 Locust Place
Whitehorse Yukon Y1A 5G9 Canada

Project: None Given
Report Date: July 15, 2019

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Part: 1 of 2

QUALITY CONTROL REPORT

VAN19001569.1

Method	VA475_	VA475_	VA475_	WGHT	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
Analyte	Rec. Wt	Ash	Wtshed Wt	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	
Unit	g	g	g	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	
MDL	0.01	0.001	0.001	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	
Pulp Duplicates																					
1907928	Vegetation	50.990	1.881		2.9	82.1	6.6	757	0.2	14.9	1.6	>10000	0.06	0.7	1.7	<0.1	1888	1.0	<0.1	<0.1	
REP 1907928	QC				2.9	87.5	6.7	797	0.2	15.5	1.7	>10000	0.06	0.9	2.5	<0.1	1802	1.2	<0.1	<0.1	
Reference Materials																					
STD DS11	Standard				13.2	156.1	134.4	330	1.7	76.0	13.4	1042	3.08	44.8	82.6	9.0	66	2.5	6.6	11.4	
STD OREAS262	Standard				0.6	116.6	59.4	150	0.5	65.9	27.4	573	3.34	38.0	59.8	10.0	37	0.6	3.0	1.1	
STD DS11 Expected					13.9	149	138	345	1.71	77.7	14.2	1055	3.1	42.8	79	7.65	67.3	2.37	7.2	12.2	
STD OREAS262 Expected					0.68	118	56	154	0.45	62	26.9	530	3.284	35.8	65	9.33	36	0.61	3.39	1.03	
BLK	Blank				<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	



Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: Kreft, Bernie
1 Locust Place
Whitehorse Yukon Y1A 5G9 Canada

Project: None Given
Report Date: July 15, 2019

Page: 1 of 1

Part: 2 of 2

QUALITY CONTROL REPORT

VAN19001569.1

Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	
Analyte	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	
Unit	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL	1	0.01	0.001	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	
Pulp Duplicates																					
1907928	Vegetation	<1	26.47	2.721	<1	<1	2.10	3586	0.009	100	0.39	0.010	>10	0.3	<0.01	0.2	<0.1	0.45	<1	<0.5	<0.2
REP 1907928	QC	<1	26.04	2.775	<1	<1	2.24	3295	0.010	109	0.40	0.008	>10	0.3	<0.01	0.1	<0.1	0.46	<1	<0.5	<0.2
Reference Materials																					
STD DS11	Standard	49	1.04	0.069	18	60	0.83	432	0.090	<20	1.16	0.067	0.39	2.6	0.26	2.8	4.9	0.30	5	2.0	4.5
STD OREAS262	Standard	21	2.98	0.038	16	45	1.18	262	0.003	<20	1.22	0.069	0.31	0.1	0.17	3.2	0.5	0.27	4	<0.5	0.3
STD DS11 Expected		50	1.063	0.0701	18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	0.26	3.1	4.9	0.2835	4.7	2.2	4.56
STD OREAS262 Expected		22.5	2.98	0.04	15.9	41.7	1.17	248	0.003		1.204	0.071	0.312	0.13	0.17	3.24	0.47	0.253	3.73	0.4	0.23
BLK	Blank	<1	0.02	<0.001	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	0.04	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2



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Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: **Kreft, Bernie**
1 Locust Place
Whitehorse Yukon Y1A 5G9 Canada

Submitted By: Bernie Kreft
Receiving Lab: Canada-Vancouver
Received: June 24, 2019
Report Date: July 02, 2019
Page: 1 of 2

CERTIFICATE OF ANALYSIS

VAN19001570.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID:
P.O. Number
Number of Samples: 3

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-250	3	Crush, split and pulverize 250 g rock to 200 mesh			VAN
AQ201	3	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 60 days

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Kreft, Bernie
1 Locust Place
Whitehorse Yukon Y1A 5G9
Canada

CC:


KERRY JAY
Geochem Project Specialist

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Kreft, Bernie**
1 Locust Place
Whitehorse Yukon Y1A 5G9 Canada

Project: None Given
Report Date: July 02, 2019

Page: 2 of 2

Part: 1 of 2

CERTIFICATE OF ANALYSIS

VAN19001570.1

Method	WGHT	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	1	0.01	0.001	
1907937	Rock	1.49	4.9	>10000	14.7	166	2.9	21.4	7.1	2130	6.27	84.2	197.1	3.6	135	0.5	5.0	0.4	54	8.73	0.118
1907938	Rock	1.16	1.7	790.0	16.3	81	0.3	10.0	5.7	3496	2.66	13.9	3.3	2.3	34	0.4	1.1	<0.1	11	0.58	0.265
1907939	Rock	1.14	129.0	>10000	42.8	197	7.1	13.8	3.9	2625	4.45	130.5	251.9	1.0	117	1.1	4.4	0.6	24	7.17	0.133



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Kreft, Bernie**
1 Locust Place
Whitehorse Yukon Y1A 5G9 Canada

Project: None Given
Report Date: July 02, 2019

Page: 2 of 2

Part: 2 of 2

CERTIFICATE OF ANALYSIS

VAN19001570.1

Method	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.01	0.1	0.05	1	0.5	0.2		
1907937	Rock	21	23	2.45	83	0.002	3	0.62	0.018	0.20	0.1	0.73	12.7	1.6	0.93	2	7.1	<0.2	
1907938	Rock	19	3	0.05	116	0.002	5	0.67	0.003	0.23	0.1	0.21	3.0	0.7	0.24	2	<0.5	<0.2	
1907939	Rock	16	2	1.24	49	0.001	2	0.68	0.009	0.17	<0.1	1.87	16.0	0.4	0.74	2	5.3	0.3	



Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: Kreft, Bernie
1 Locust Place
Whitehorse Yukon Y1A 5G9 Canada

Project: None Given
Report Date: July 02, 2019

Page: 1 of 1

Part: 1 of 2

QUALITY CONTROL REPORT

VAN19001570.1

Method	WGHT	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	1	0.01	0.001	
Pulp Duplicates																					
1907939	Rock	1.14	129.0	>10000	42.8	197	7.1	13.8	3.9	2625	4.45	130.5	251.9	1.0	117	1.1	4.4	0.6	24	7.17	0.133
REP 1907939	QC		127.5	>10000	43.0	191	7.0	12.8	3.6	2603	4.43	129.9	240.3	1.1	113	1.0	3.9	0.6	23	7.06	0.137
Core Reject Duplicates																					
1907937	Rock	1.49	4.9	>10000	14.7	166	2.9	21.4	7.1	2130	6.27	84.2	197.1	3.6	135	0.5	5.0	0.4	54	8.73	0.118
DUP 1907937	QC		5.1	>10000	14.0	161	2.7	20.6	6.3	2064	6.12	81.2	165.3	3.5	129	0.5	4.2	0.4	53	8.66	0.121
Reference Materials																					
STD DS11	Standard		13.8	150.3	140.6	347	1.7	76.9	13.4	1042	3.05	42.4	89.1	7.7	65	2.5	9.1	12.1	50	1.04	0.074
STD OREAS262	Standard		0.6	116.3	57.4	160	0.5	62.6	26.1	515	3.23	35.8	52.3	9.1	36	0.6	4.2	1.1	22	2.98	0.041
STD DS11 Expected			14.6	149	138	345	1.71	77.7	14.2	1055	3.1	42.8	79	7.65	67.3	2.37	8.74	12.2	50	1.063	0.0701
STD OREAS262 Expected			0.68	118	56	154	0.45	62	26.9	530	3.284	35.8	65	9.33	36	0.61	5.06	1.03	22.5	2.98	0.04
BLK	Blank		<0.1	1.1	<0.1	<1	<0.1	<0.1	<0.1	4	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.001
Prep Wash																					
ROCK-VAN	Prep Blank		0.9	6.7	1.3	35	<0.1	1.2	4.2	575	1.84	0.8	0.5	2.4	22	<0.1	<0.1	<0.1	26	0.70	0.043



Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: Kreft, Bernie
1 Locust Place
Whitehorse Yukon Y1A 5G9 Canada

Project: None Given
Report Date: July 02, 2019

Page: 1 of 1

Part: 2 of 2

QUALITY CONTROL REPORT

VAN19001570.1

Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																		
1907939	Rock	16	2	1.24	49	0.001	2	0.68	0.009	0.17	<0.1	1.87	16.0	0.4	0.74	2	5.3	0.3
REP 1907939	QC	15	2	1.24	48	0.002	2	0.67	0.009	0.17	<0.1	1.83	15.7	0.3	0.68	2	3.6	0.3
Core Reject Duplicates																		
1907937	Rock	21	23	2.45	83	0.002	3	0.62	0.018	0.20	0.1	0.73	12.7	1.6	0.93	2	7.1	<0.2
DUP 1907937	QC	21	22	2.39	82	0.002	6	0.63	0.018	0.21	<0.1	0.70	12.9	1.5	0.87	2	6.8	<0.2
Reference Materials																		
STD DS11	Standard	18	59	0.84	377	0.089	7	1.16	0.070	0.40	3.4	0.28	3.2	5.1	0.28	5	2.0	4.9
STD OREAS262	Standard	16	42	1.16	247	0.003	5	1.39	0.066	0.30	0.2	0.17	3.5	0.5	0.26	4	<0.5	0.3
STD DS11 Expected		18.6	61.5	0.85	385	0.0976		1.1795	0.0762	0.4	2.9	0.26	3.4	4.9	0.2835	5.1	2.2	4.56
STD OREAS262 Expected		15.9	41.7	1.17	248	0.0027	4	1.3	0.071	0.312	0.2	0.17	3.24	0.47	0.253	3.73	0.4	0.23
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
ROCK-VAN	Prep Blank	6	5	0.59	51	0.081	2	0.95	0.071	0.08	<0.1	<0.01	3.5	<0.1	<0.05	4	<0.5	<0.2



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Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: Kreft, Bernie
1 Locust Place
Whitehorse Yukon Y1A 5G9 Canada

Submitted By: Bernie Kreft
Receiving Lab: Canada-Vancouver
Received: June 24, 2019
Report Date: July 04, 2019
Page: 1 of 2

CERTIFICATE OF ANALYSIS

VAN19001568.1

CLIENT JOB INFORMATION

Project: None Given
Shipment ID:
P.O. Number
Number of Samples: 8

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT-SOIL Immediate Disposal of Soil Reject

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Kreft, Bernie
1 Locust Place
Whitehorse Yukon Y1A 5G9
Canada

CC:

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
BAT01	1	Batch charge of <20 samples			VAN
DY060	8	Dry at 60C			VAN
SS80	8	Dry at 60C sieve 100g to -80 mesh			VAN
AQ201	8	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

ADDITIONAL COMMENTS


KERRY JAY
Geochem Project Specialist

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Canada

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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Kreft, Bernie**
1 Locust Place
Whitehorse Yukon Y1A 5G9 Canada

Project: None Given
Report Date: July 04, 2019

Page: 2 of 2

Part: 1 of 2

CERTIFICATE OF ANALYSIS

VAN19001568.1

Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
1907914	Soil	7.4	356.1	14.7	162	0.1	30.1	12.9	402	4.18	18.7	10.6	2.1	26	0.3	1.3	0.2	88	0.20	0.070	7
1907915	Soil	10.2	375.2	13.1	209	0.2	12.8	11.1	365	4.54	11.8	31.5	1.4	26	0.5	0.5	0.2	55	0.20	0.119	7
1907916	Soil	59.8	7229.4	15.9	120	2.4	30.6	15.2	997	4.62	78.2	181.8	1.7	27	0.4	2.0	0.4	56	0.34	0.083	12
1907917	Soil	9.4	516.4	9.1	74	0.2	29.7	12.5	473	3.61	24.4	12.1	1.6	27	<0.1	0.9	0.2	69	0.21	0.049	7
1907918	Soil	13.4	698.9	15.4	106	0.2	26.8	14.0	673	4.00	48.9	23.8	1.1	31	0.2	1.3	0.3	68	0.25	0.060	10
1907919	Soil	1.4	50.2	8.8	114	<0.1	22.1	12.4	530	3.53	22.9	3.5	0.7	23	0.3	0.7	0.3	63	0.21	0.070	6
1907920	Soil	2.4	129.4	12.3	113	0.2	32.2	20.3	1347	4.76	30.8	4.8	1.3	52	0.4	1.2	0.4	76	0.66	0.079	12
1907921	Soil	1.4	65.1	10.8	95	<0.1	24.0	14.1	755	3.75	26.0	1.5	0.7	44	0.3	0.8	0.4	67	0.38	0.060	7



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Kreft, Bernie**
1 Locust Place
Whitehorse Yukon Y1A 5G9 Canada

Project: None Given
Report Date: July 04, 2019

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CERTIFICATE OF ANALYSIS

VAN19001568.1

Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
1907914	Soil	49	0.67	150	0.123	<1	1.59	0.008	0.11	<0.1	0.03	5.6	0.1	<0.05	8	<0.5	<0.2
1907915	Soil	29	0.61	209	0.158	<1	1.23	0.010	0.17	<0.1	0.02	9.7	0.2	<0.05	8	<0.5	<0.2
1907916	Soil	24	0.45	159	0.035	2	1.18	0.010	0.09	<0.1	0.45	10.7	0.2	<0.05	4	1.3	0.2
1907917	Soil	38	0.61	163	0.072	2	1.57	0.010	0.08	<0.1	0.07	6.2	0.1	<0.05	5	<0.5	<0.2
1907918	Soil	32	0.47	215	0.049	2	1.43	0.010	0.10	0.1	0.23	6.8	0.3	<0.05	5	<0.5	<0.2
1907919	Soil	25	0.46	130	0.039	2	1.29	0.015	0.10	0.1	0.05	5.6	0.1	<0.05	4	<0.5	<0.2
1907920	Soil	33	0.64	240	0.034	3	1.68	0.016	0.16	0.1	0.18	12.4	0.3	<0.05	5	<0.5	<0.2
1907921	Soil	26	0.48	159	0.038	2	1.37	0.011	0.08	0.1	0.07	6.8	0.1	<0.05	5	<0.5	<0.2



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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: Kreft, Bernie
1 Locust Place
Whitehorse Yukon Y1A 5G9 Canada

Project: None Given
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QUALITY CONTROL REPORT

VAN19001568.1

Method	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1	
Reference Materials																					
STD DS11	Standard	13.4	141.8	129.4	315	1.5	73.3	12.8	988	3.01	42.4	68.9	7.8	64	2.3	8.8	11.2	47	0.94	0.065	17
STD OREAS262	Standard	0.7	111.8	53.2	143	0.4	59.4	26.2	520	3.23	35.8	70.8	9.2	35	0.6	6.0	0.9	22	2.81	0.041	16
STD DS11 Expected		14.6	149	138	345	1.71	77.7	14.2	1055	3.1	42.8	79	7.65	67.3	2.37	8.74	12.2	50	1.063	0.0701	18.6
STD OREAS262 Expected		0.68	118	56	154	0.45	62	26.9	530	3.284	35.8	65	9.33	36	0.61	5.06	1.03	22.5	2.98	0.04	15.9
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1



Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

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1 Locust Place
Whitehorse Yukon Y1A 5G9 Canada

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QUALITY CONTROL REPORT

VAN19001568.1

Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
Reference Materials																	
STD DS11	Standard	55	0.78	337	0.083	6	1.04	0.070	0.39	3.0	0.23	3.3	4.9	0.22	5	1.9	4.4
STD OREAS262	Standard	42	1.11	248	0.003	3	1.28	0.062	0.31	0.3	0.14	3.3	0.5	0.22	4	<0.5	0.3
STD DS11 Expected		61.5	0.85	385	0.0976		1.1795	0.0762	0.4	2.9	0.26	3.4	4.9	0.2835	5.1	2.2	4.56
STD OREAS262 Expected		41.7	1.17	248	0.0027	4	1.3	0.071	0.312	0.2	0.17	3.24	0.47	0.253	3.73	0.4	0.23
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2