



Ministry of Energy and Mines  
BC Geological Survey

Assessment Report  
Title Page and Summary

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

Geochemical, Geophysical

TOTAL COST:

\$6,670.30

AUTHOR(S):

SIGNATURE(S):

A. Kikauka

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

YEAR OF WORK: 2023

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

5993991

PROPERTY NAME:

Copper Island (Pomeroy)

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

848551, 808082, 848942

COMMODITIES SOUGHT:

Cu, Ag, Au

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

092K071, 092K072, 092K012, 092K058,

MINING DIVISION:

Nanaimo

NTS/BCGS:

092K03/W, 092K014

LATITUDE:

50 ° 07 ' 22 "

LONGITUDE:

125 ° 16 ' 43 "

(at centre of work)

OWNER(S):

1)

J. Lazerson

2)

MAILING ADDRESS:

3689 Angus Dr

Vancouver, BC V6J 4H6

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

1)

same

2)

MAILING ADDRESS:

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

Amygdaloidal basalt-andesite Kamtsen Formation trends NW, shallow dip SW, amygdules filled with calcite, quartz, actinolite, prehnite, fracture fill chlorite, epidote with copper-silver bearing minerals consisting of chalcocite, native copper, malachite, azurite, cuprite, bornite, chalcopyrite

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:

852, 5076, 19282, 22264

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
<b>GEOLOGICAL (scale, area)</b>			
Ground, mapping			
Photo interpretation			
<b>GEOPHYSICAL (line-kilometres)</b>			
Ground			
Magnetic	3.3 line-km	848551, 808082, 848942	3,580.15
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
<b>GEOCHEMICAL (number of samples analysed for...)</b>			
Soil			
Silt			
Rock	8 Cu PKG 06 L 1 oxide/sulphide/residual	848551	3,090.15
Other			
<b>DRILLING (total metres; number of holes, size)</b>			
Core			
Non-core			
<b>RELATED TECHNICAL</b>			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
<b>PROSPECTING (scale, area)</b>			
<b>PREPARATORY / PHYSICAL</b>			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
			TOTAL COST: \$ 6,670.30

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**Confirmation**

**Recorder:** KIKAUKA, ANDRIS ARTURS (114051) **Submitter:** KIKAUKA, ANDRIS ARTURS (114051)  
**Recorded:** 2023/AUG/16 **Effective:** 2023/AUG/16  
**D/E Date:** 2023/AUG/16

**Confirmation**

If you have not yet submitted your report for this work program, your technical work report is due in 90 days. The Exploration and Development Work/Expiry Date Change event number is required with your report submission. **Please attach a copy of this confirmation page to your report.** Contact Mineral Titles Branch for more information.

**Event Number:** 5993991

**Work Type:** Technical Work

**Technical Items:** Geochemical, Geophysical, PAC Withdrawal (up to 30% of technical work required)

**Work Start Date:** 2023/MAR/06

**Work Stop Date:** 2023/MAR/10

**Total Value of Work:** \$ 6670.30

**Mine Permit No:**

**Summary of the work value:**

Title Number	Claim Name	Issue Date	Good To Date	New Good To Date	# of Days Forward	Area in Ha	Applied Work Value	Sub-mission Fee
808082	POMEROY 1	2010/JUL/03	2023/SEP/21	2024/JUN/25	278	20.72	\$ 186.46	\$ 0.00
844515		2011/JAN/26	2023/SEP/21	2024/JUN/25	278	41.42	\$ 372.77	\$ 0.00
848551		2011/MAR/10	2023/SEP/21	2024/JUN/25	278	331.51	\$ 2983.74	\$ 0.00
848942		2011/MAR/15	2023/SEP/21	2024/JUN/25	278	207.19	\$ 1864.82	\$ 0.00
848943		2011/MAR/15	2023/SEP/21	2024/JUN/25	278	455.78	\$ 4102.30	\$ 0.00

**Financial Summary:**

**Total applied work value:** \$ 9510.09

**PAC name:** Andris Arturs Kikauka

**Debited PAC amount:** \$ 2839.79

**Credited PAC amount:** \$ 0

**Total Submission Fees:** \$ 0.0

**Total Paid:** \$ 0.0

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NTS 092K 03/W, TRIM 092K.014

LAT. 50 07' 04" N

LONG. 125 16' 20" W

GEOCHEMICAL, GEOPHYSICAL

REPORT ON

COPPER ISLAND (POMEROY) MINERAL PROPERTY

POMEROY 1-4, COPPER BELL, BEAVER, INGERSOLL, COLLEEN

MINERAL OCCURRENCES

WEST QUADRA ISLAND

Nanaimo Mining Division

by

Andris Kikauka, P.Geol.

4199 Highway 101,

Powell River, BC V8A 0C7

August 31, 2023

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## 1 Summary

The Copper Island mineral claims are located on west-central Quadra Island, approximately 15 kilometers north of Campbell River, BC. The Copper Island property features a cluster of small to medium size (several thousand tonnes) copper and silver bearing mineral occurrences that collectively, constitute a large resource of high-grade copper (silver is associated with the copper mineralization). Cu-Ag bearing mineralization within the property is hosted in basaltic/andesitic volcanic rocks of the Lower-Upper Triassic Karmutsen Formation (volcanic hosted Cu-redbed deposit type). Copper-silver bearing minerals include chalcocite, with minor occurrences of chalcopyrite, bornite, native copper, cuprite, malachite and azurite.

The Copper Island property is situated 10 kilometers north of Campbell River, B.C., in the Nanaimo Mining Division of southwest British Columbia, Canada. Access to Quadra Island is via 10 minute (3 kilometers) ferry from Campbell River to Quathiaski Cove. The property is 4 kilometers northwest of the Community of Heriot Bay, Quadra Island. The property is owned by J. Lazerson, (President- Copper Island Mines Ltd.).

The property also has potential vanadium and manganese concentrations. Previous work has identified vanadium geochemical values that are reported in black, siliceous (& laminated) carbonaceous clastic rocks (located several hundred meters south of the Pomeroy Zone). It is unclear whether the vanadium and manganese are directly associated with copper-silver, but may be collectively associated with Triassic-Jurassic age mafic volcanics. The north portion of Vancouver Island has several 90<sup>th</sup> percentile RGS anomalies for manganese and vanadium, and may reflect Triassic age black smokers, rift pull-apart zones (sea-floor spreading).

Copper-silver bearing mineralization occurs in amygdaloidal basaltic lava flows. Mineralization is classified as volcanic redbed copper deposit type (fault-breccia-fracture fill mineralization hosted in lava flows in submarine environment). Regional controls include extensional fault structures associated with mafic tuffs and stacked deposits at several stratigraphic intervals separated by barren basalt characterized by amygdales and veinlets of quartz-calcite-prehnite alteration. Mineralization occurs as replacement of amygdales, within veins, fracture filling and disseminations. Faulting and minor brecciation are associated with the mineralized zones. Overlying the mineralized flow is a homogeneous medium-coarse grained dense homogeneous basaltic to andesitic composition volcanic flow (and minor volcanoclastic component).

Quadra Island is underlain by Triassic & Jurassic volcanic, sedimentary & intrusive rocks. The predominant rocks are Triassic Karmutsen Formation volcanics, Quatsino formation limestones and Island intrusives of Middle Jurassic age, part of the Coast Intrusive complex. The southern part of the island is covered by Quaternary glacial debris. Glacio-alluvial deposits cover low-lying contacts and fault zones. The Karmutsen and Quatsino Formations host numerous mineral

deposits on Vancouver Island such as magnetite ( $\text{Fe}_3\text{O}_4$ ), gold-silver, and copper-lead-zinc-silver-gold (polymetallic) deposits such as Buttle Lake within Strathcona Provincial Park). Porphyry type copper, molybdenum-rhenium deposits (Island Copper), at the north end of Vancouver Island, and the skarn type iron, copper, and high-calcium limestone deposits on Texada Island. The Copper Island (Pomeroy) property is underlain by Karmutsen volcanics, which consist chiefly of amygdaloidal, fine to medium-grained, heavily fractured basaltic lava. Mineralized areas are exposed on higher topographic relief where outcrop is exposed. The mineral of interest is chalcocite ( $\text{Cu}_2\text{S}$ ), a secondary mineral of copper, with subordinate and local occurrences of bornite ( $\text{Cu}_5\text{FeS}_4$ ), cuprite ( $\text{Cu}_2\text{O}$ ), malachite ( $\text{CuCO}_3(\text{OH})$ ), and native copper ( $\text{Cu}$ ), in highly oxidized material. Chalcocite occurs in the higher-grade showings as partial to complete replacement of amygdules in the upper portion of individual flow structures, and as chalcocite in veinlets and fracture fillings, disseminated amygdules (similar to the Keweenaw, Point Michigan, copper-bearing basaltic flows). The volcanic flows range in thickness from 1-12 feet (0.3-3.7 meters), and vary in composition from andesitic to basaltic. Many are highly amygdaloidal and the cavities are mainly filled with calcite, quartz, and chlorite. Regionally the volcanic rocks are traversed by major faults that trend northwesterly and have associated jointing and fracturing. Distribution of copper mineralization within the volcanic rocks is erratic and occurs mainly along fractures, within quartz-calcite veinlets, in the amygdules, and disseminated in the flows. Chalcocite is the most abundant copper mineral, with some native copper, malachite and azurite.

Considerable previous work has been performed on the Pomeroy Group copper-silver bearing mineralization. The first recorded mining in the project area was in 1906- 1907, when high grade ores from the Copper Cliff deposit were mined from an adit in the cliff face and shipped to a smelter at Ladysmith B.C. The next period of activity was between 1915 and 1919 when ores from the Pomeroy area were mined by the Valdez Copper Company and shipped to the smelter at Anyox B.C. Samples from the Senator claim in the Pomeroy area were tested for Radium in 1922. Testing was done on siliceous carbonaceous thin-bedded sediments with an electroscope. the instrument used to detect radioactivity at that time. No radioactivity was detected. In 1929 the Pomeroy area was acquired as the Hercules 1-10 Claims by the Hercules Consolidated Mining Smelting and Power Company. Samples collected by Gunning identified acid leachable vanadium which contain the highest V values in a black siliceous sediment, overlying a copper mineralized flow. In 1952-53, Dodge Copper Mines Limited carried out a detailed exploration program of trenching and diamond drilling. Dodge Copper Mines drilled 145 holes totaling 8800 feet on various deposits. The Quadra Mining Company acquired the property in 1968. In 2011, the Pomeroy Group of mineral claims were acquired by Copper Island Mines Ltd. A program of geochemical sampling was carried out and identified several zones of high-grade



copper located in the Pomeroy 1-4 mineralized zones, as well as new showings adjacent to the known occurrences.

The known ore deposits occur mainly on the surface and have been drilled, trenched and sampled in by Prince Stewart Mines Ltd (Sheppard, 1974). Ore tonnage estimates have been made by previous operators (Note-estimates are non-compliant with NI 43-101 standards & guidelines)

In 1973 Prince Stewart Mines Ltd. optioned the properties from Quadra and Quadra Bell and carried out intensive work including 392 metres of diamond drilling. A report of the drilling of one vertical hole to 33.6 metres on the Bit1 claim encountered no visible sulphide mineralization and the remaining holes were recommended to be inclined. Results from the remaining holes are unknown. Prince Stewart estimated indicated reserves from several mineralized zones:

<b>ZONE</b>	<b>TONS*</b>	<b>% COPPER</b>
Pomeroy 1	12,300	3.55
Pomeroy 2 North	5,000	2.70
Pomeroy 2 South	25,000	2.11
Pomeroy 3	194,500	0.67
Pomeroy 4	10,500	2.69
Beaver 1	18,000	1.73

*\* These reserves probably should be considered as inferred by current standards.*

In 1996 the property was acquired by Ms. Elisa Reyes as the Copper Bell, Copper Cliffs and VC claims. Reyes had Minestart Management Inc. evaluate the property based on property history, review of mineralization, mineralized zones and inferred reserves. Reyes also contracted a mine technologist to review the feasibility of acid leaching 3,000 tons of broken mineralized material extracted previously by Quadra and Quadra Bell. In 1997 the claims were forfeited.

In 2011, the claims were acquired by Copper Island Mines Ltd, and a program of geochemical sampling was carried out on the Pomeroy, Beaver and Colleen Zones. A significant portion of geochemical sampling returned >2% Cu from numerous new & historic copper-silver bearing mineral occurrences (Betmanis, 2012).

The Pomeroy 3, 4 Zone occurs over a strike length of approximately 200 meters (largest of the numerous Cu-Ag zones identified), following a northwest to north trending formation of amygdaloidal basaltic flows. Several parallel zones have been identified (e.g. Copper Valley, Butte, Copper Bell, Colleen, Vanadium & Ingersoll). The Pomeroy zones have been extensively trenched and sampled by large open cuts that exposed large areas of low-grade copper mineralization in a calcite filled amygdules and veinlet stockwork that is evident throughout the property. The other mineralized zones consist of increased quartz, calcite veining, and copper

sulphides in 1-10 meter wide altered and fractured zone traced intermittently for approximately 20-200 meters on surface.

The following list describes the various Minfile occurrences located within Copper Island mineral claims.

### **POMEROY 1: 336900E, 5554850N**

Area is highly disturbed from previous workings with blasted material covering up most of the bedrock. There is a 4m long x 3m wide x 3m deep pit. Neighboring outcrop is light-dark green fgr mafic with angular clastic fragments of quartz, epidote, chlorite up to 1cm in a fine grained matrix. There are amygdules present however the majority are angular. This indicates a fault zone breccia or possible pyroclastic flow west of the main pit, in the forest are a series of small trenches (3m x 2m) and blast sites with visible blebs of chalcocite up to 2cm. Malachite staining seen throughout blasted rock. Area of bedrock open cuts with observed mineralization is 25m x 15m. Historic estimates for Pomeroy 1 mineral zone are 16,500 short tons @3.67% Cu (Sheppard, 1974). Note that historic estimates are not compliant with NI 43-101 and are not to be relied upon.

East of Pomeroy 1 there is a normal fault trending 315 (Fig 3) with the hanging wall on the NE side with a potential vertical displacement of 10m. Mineralization is observed along an E-W trending ridge structure up to 200m long. The structure has potential to be mineralized 200m long x 25m wide x 5m thick. The host rock is a medium green fine grained mafic flow with amygdules up to 5mm. Rock is weathered red-brown and has crackled brecciated appearance. Malachite staining is visible on weathered surface. The dominant rock type is medium green fine grained basalt with quartz and black amygdules. Coarse disseminated blebs of chalcocite up to 3cm were noted.

### **POMEROY 2: 337540E, 5554480N**

#### **North Zone:**

Host rock is a fine grained dark green vesicular mafic with 1-3mm amygdules filled with qtz, epidote and chalcocite stained with malachite. Mineralization in pit extends approximately 5m wide x15m long x2m deep. Flows at pit have a shallow dip of 10-15 degrees to south. Rock has crackled weathered appearance, minor brecciation.

Sheppard, 1974: PROVEN: 5,000 short tons @ 2.70% Cu

INDICATED: 17,000 short tons @ 2.70% Cu

### **POMEROY 3: 337750E, 5554300N**

Pomeroy 3 is a series of discontinuous mineralized outcrops, trenches and blast pits along the western edge of a flow structure, east of Pomeroy 2 and 4. Mineralization is also seen in trenches in the low lying area between Pomeroy 2 and Pomeroy 3, which is interpreted as a N-S fault extending southward between Pomeroy 3 and 4. Outcrops are medium-dark green fine-grained mafic dominated by quartz amygdules up to 1cm, black amygdules also present. Moderate silicification with some quartz veining. At Pomeroy 3 north, there is an intensely brecciated outcrop, rock is soft and friable, malachite and chalcocite occur as disseminations and fracture

fillings. Clasts are angular-subangular and vary from 1-10cm. Mineralization is dominant in the matrix but also coating the clasts. This feature supports that there is a N-S trending fault potentially being the control on mineralization of Pomeroy 2, 3 and 4. Above the mafic, silicified breccia on top of the fault structure, is chalcocite, chalcopyrite and malachite mineralisation. Apparent dip of the Pomeroy 3 mineralized flow is 20 degrees south. From mineralized outcrops and neighboring mineralized pits Pomeroy 3 has a potential thickness of 7 meters.

**POMEROY 4: 337650E, 5554150N**

Pomeroy 4 is a 200m long x 100m wide structure dipping approximately 15-20° to the south. Mineralization is most apparent on the eastern flank of the structure where there is series of historic pits that extend N-S approximately 70 meters long. The most northerly pit is the site where a historic bulk sample was taken for the Mill. The outcrop contains near vertical fractures that are filled with Chalcocite minor native copper and quartz. Chaotic quartz-carbonate veins and epidote stringers throughout outcrop. Chalcocite is seen disseminated throughout the rock, most noticeably next to veins. Rock has dull grey look, friable, weathered crackled appearance. The southern pit is much larger, 20m long x 15m wide x 10m+ high. Pit has disseminated chalcocite blebs throughout a dark green mafic with small <1mm black amygdules and larger <1cm quartz amygdules. Across the structure along strike is a series of pits and outcrops with weathered, friable malachite stained rock (Photo 18). The top of Pomeroy 4 structure is covered by pods and ridges of dark grey coarse grained mafic (cap flow?).

**Pomeroy 3+4**

Sheppard, 1974: PROVEN: 972,400 short tons @ 1.22% Cu  
INDICATED: 472,000 short tons @ 1.62% Cu

**POMEROY 5: 337620E, 5554490N**

Pomeroy 5 is east of Pomeroy 2 across the new logging road on the adjacent structure. The mineralized area is 10m long x 2m wide x 2m high. The surrounding rock is a fine grained dark green blocky mafic, whereas at the showing the rock is crackled and weathered as seen in other mineralized zones. Continuous mineralization is not observed, however a NW trending fault contained malachite staining and is traced SE to a series of small mineralized prospects with crackled weathered outcrops with malachite staining. Chalcocite mineralization is hosted in about 10% of the small black 1mm amygdules. The rest of the amygdules are quartz.  
Mineral Potential: 100m x 100m x 2m x 2.66 ton/m<sup>3</sup> = 53,200 metric tons @ 1.00% Cu

**Beaver 1: 338100E, 5553560N**

Turtle back structure 100m long (N-S) x 30m wide (E-W). Dark green-grey fine grained mafic with large amounts of Mn staining and high Fe content, highly magnetic on top of ridge. Thin 5mm quartz and epidote veins and stringers throughout outcrop. Three trenches on top of central structure, 2 meters wide 2 meters deep. Chalcocite mineralization is visible at the bottom of trenches indicating thickness of 2m+. Malachite staining throughout. Mineralization observed at north end of structure, could entire structure potentially be mineralized. The mineral zone is estimated to contain 19,375 short tons @ 1.74% Cu (Sheppard, 1974). Note that historic estimates are not compliant with NI 43-101 and are not to be relied upon.

**Hall: 336915E, 5555595N**

Small blasted pits 3m x 10m on top of a small structure 60m x 30m next to logging road. Mineralization is seen locally within the blasted pits as chalcocite, malachite and azurite. Rock is a dark green fine grained mafic with quartz, chlorite, epidote, chalcocite amygdules 1-3mm in size. Minor Fe and Mn staining. No visible mineralization on neighboring structures which host dark green-grey coarse grained dense mafic flows. West of Hall showing outcrop with 30cm thick quartz veins cutting through mafic flows with epidote stringers.

Sheppard, 1974: PROVEN: 5,000 short tons @ 3.45% Cu

INDICATED: 50,000 short tons @ 2.40% Cu Note that historic estimates are not compliant with NI 43-101 and are not to be relied upon.

**Copper Bell 1: 338290E, 5555028N**

Series of small blasts and small pits in an area 15m x 15m. One blast trench found 6m long x 2m wide x 2m deep. Mineralization in this area is found within chaotic quartz-carbonate veins and disseminations in the wallrock proximal to veining. Veins are up to 10cm thick with mafic inclusions up to 5cm. Chalcocite and bornite are the dominant form of copper mineralization within the veins and along selvages. Chalcocite is seen disseminated in the mafic host rock especially noticeable next to veining. Host rock is a medium-dark green fine grained mafic that has crackled, brecciated, weathered appearance.

**Copper Bell 2: 337920E, 5555150N**

Structure is 230m long x 50m wide x 3m thick. Light-medium green amygdaloidal fine grained andesite? It has chl, qtz, and black amygdules. Vuggy quartz clasts and amygdules. 5-10cm quartz veins with visible bornite and malachite. Veins are both vuggy and comb with comb crystal up to 2-2.5cm in length. Epidote stringers throughout. Host rock is moderately silicified giving it lighter appearance. Localized areas have crackled brecciated appearance.

Copper Bell 1 & 2: An estimate of the combined Copper Bell 1 & 2 mineral zones are 112,000 short tons @ 2.55% Cu (Sheppard, 1974). Note that historic estimates are not compliant with NI 43-101 and are not to be relied upon.

Work performed by the writer in February, 2020 consisted of soil sampling of the Pomeroy 2, 3, & 4 zones (total number = 50), and rock sampling (total number = 4). Geochemical soil sampling was carried out on the central portion of MTO ID# 848551. Work carried out in 2022 consisted of 50 SGH soil samples and rock chip samples covering the Pomeroy 2, 3, & 4 mineral zones (similar area as covered in 2020 soil sampling which covered the Pomeroy 2, 3, & 4 and Beaver zones, but SGH analysis is a highly sensitive method which measures compounds in the C5-C17 range down to parts per trillion). There has been considerable drilling in the Pomeroy 3, 4 area with shallow drill holes, and several thousand tonnes of 1-3% Cu has been outlined in 1-6 meter wide zones. Plotted drill holes indicate 2 mineralized zones, an upper zone dipping 20-25 degrees into hillside (north dip), and a lower zone dipping 10 degrees into hillside (north dip). The upper & lower zones are separated by about 18 meters of altered (calcite, quartz, chlorite, actinolite, prehnite), highly amygdaloidal basalt. The mineralogy of copper mineralization consists mainly of chalcocite with minor malachite-azurite, chalcopyrite and native copper. This

mineralogy suggests the ore has a portion of copper oxide (carbonate oxides such as malachite, azurite, and minor cuprite), and copper sulphide (chalcocite, minor chalcopyrite, trace bornite), and minor native copper as residual. This 'high oxide/residual Cu' is the principal target that is shown in Block D-1, 2, & 3 (Pomeroy 4), and Block C & B (Pomeroy 3), based on DDH data from Dodge Copper Mines Ltd 1953 (source: Property File, Prince Stewart Mines Ltd, Sheppard, 1972). The 1953 drilling covers an area of 200 X 70 meters, elongated east-west, and this area coincides with the SGH hydrocarbon soil geochemical 'Rabbit- Ear Anomaly' (337,425E to 337,675 E and 5,553,225 N to 5,553,275 N).

Geophysical fieldwork in 2023 included 3.3 line-kilometers of magnetometer ground surveying. Ground magnetometer surveys carried out in March, 2023 (3.3 line-km, 264 readings taken @ 12.5 m spacing) covered a section of the claims that are underlain by Vancouver Group Karmutsen Formation basaltic and andesitic rocks. The magnetometer survey objective is to locate concentrations of magnetic minerals (e.g. magnetite, ilmenite). Variation in magnetic total field strength can be linked to change in lithology. Results of the ground magnetometer survey identified values ranging from a low of 51,993 nT to a high of 55,157 nT (range of 3,164 nT). Most of the readings were high quality (99 ranking) and a small portion (< 5%) were ranked between 29-78 quality of readings. The 2023 magnetometer survey covered 4 areas (Fig 9). Magnetometer positive anomalous values are associated with silicified basalt-andesite (increased magnetite) and significant positive anomalies (and copper-silver bearing mineralization) that require detailed mapping/sampling are described for each of the 4 surveyed areas:

- 1) Pomeroy 1 (Fig 10): L 54800 N, stn 36837 E to 36750 E,  
L 54850 N, stn 36587 E to 36600 E
- 2) Copper Bell (Fig 11): L 54900 N, stn 38100 E to 38212 E,  
L 54900 N, stn 38300 E to 38350 E,
- 3) Beaver, Ingersoll (Fig 12): L 53500 N, stn 38050 E to 38150 E  
L 53500 N, stn 37862 E to 37900 E  
L 53600 N, stn 38125 E to 38200 E
- 4) Colleen (Fig 13): L 55300 N, stn 36612 E, stn 36662 E, stn 36687 E, stn 36825 E  
L 55350 N, stn 36950 E, stn 36750 E, stn 36700 E, stn 36637 E

Geochemical fieldwork carried out in 2023 consisted of 8 rock chip samples covering the Pomeroy 1 and Copper Bell mineral zones. The rock chip sampling done in 2023 consisted of sequential leach for oxide, sulphide and residual geochemical analysis (Fig 5-10). Copper sequential leach (ALS method Cu-PKG06LI involving sulfuric & cyanide leach) identifies oxide, sulphide and residual copper geochemistry. A total of 8 rock samples, ranging from 0.68-1.84 kilograms in weight, of acorn sized rock chips were taken with rock hammer and moil, and placed in marked poly bags and shipped to ALS Chemex Labs Ltd, North Vancouver, BC for Prep-31 & Cu-PKG06LI sequential leach for oxide, sulphide and residual geochemical analysis, (Appendix A). Location was aided by maps from [www.Mapplace](http://www.Mapplace) and Google Earth. Locations

were marked by waypoints generated by Garmin 60Cx GPS receiver and considered accurate to within 3-5 meter accuracy for northing and easting (elevations are considered estimates plus or minus several meters).

A description of rock chip samples (2023) are summarized (Analysis certificate VA23177512):

Sample ID	Easting NAD 83	Northing NAD 83	Elev (m)	Zone name	MTO ID	Lithology
23CIR-1	337153	5554746	215	Pomeroy 1	848551	amygdaloidal basalt-andesite
23CIR-2	336922	5554901	225	Pomeroy 1	848551	amygdaloidal basalt-andesite
23CIR-3	336926	5554876	215	Pomeroy 1	848551	amygdaloidal basalt-andesite
23CIR-4	336860	5554879	221	Pomeroy 1	848551	amygdaloidal basalt-andesite
23CIR-5	336826	5554894	220	Pomeroy 1	848551	amygdaloidal basalt-andesite
23CIR-6	336796	5554851	231	Pomeroy 1	848551	amygdaloidal basalt-andesite
23CIR-7	338311	5554939	165	Copper Bell	848551	amygdaloidal basalt-andesite
23CIR-8	338254	5554836	189	Copper Bell	848551	amygdaloidal basalt-andesite

Sample ID	Alteration	Mineralization	Sample	vn strike	vein dip
23CIR-1	quartz, chlorite		outcrop	135	12 SW
23CIR-2	quartz, chlorite, calcite	chalcocite, malachite	outcrop	130	69 SW
23CIR-3	quartz, chlorite, prehnite, calcite	chalcocite, malachite, bornite, chalcopyrite	outcrop	120	70 SW
23CIR-4	quartz, chlorite, prehnite, calcite	chalcocite, malachite, bornite, chalcopyrite	outcrop	80	68 SW
23CIR-5	quartz, chlorite, prehnite, calcite	chalcocite, malachite, azurite	outcrop		
23CIR-6	quartz, chlorite, prehnite, calcite	chalcocite, malachite, azurite	outcrop	90	15 S
23CIR-7	quartz, chlorite, prehnite, calcite	chalcocite, malachite, bornite, chalcopyrite	outcrop	133	60 SW
23CIR-8	quartz, chlorite, prehnite, calcite	chalcocite, malachite, chalcopyrite	subcrop		

Sample ID	CuT-SEQ06 Total Cu %	AA06s sulphuric % Cu	% oxide	AA16s cyanide % Cu	% sulphide	AA62s residual % Cu	% residual
23CIR-1	0.01	0.01	na	0.01	na	0.01	na
23CIR-2	0.38	0.24	63	0.12	32	0.02	5
23CIR-3	7.46	1.59	21	5.79	78	0.08	1
23CIR-4	8.48	1.15	14	7.17	84.5	0.16	1.5
23CIR-5	4.51	1.96	43	2.48	55	0.07	2
23CIR-6	3.28	1.77	54	1.44	44	0.07	2
23CIR-7	14.7	1.35	9	13.3	90	0.05	1
23CIR-8	3.42	1.21	35	2.15	63	0.06	2

Rock samples 23CIR-3 to 6 (averaging 5.93 % Cu) were taken from the west part of the

**Pomeroy 1** zone contains an average of:

33 % oxide Cu,

65.4% sulphide Cu, &

1.6 % residual Cu (native copper).

Rock samples 23CIR-7 to 8 (averaging 9.06 % Cu) taken from the east part of the **Copper Bell** zone contains an average of:

22 % oxide Cu,  
76.5 % sulphide Cu, &  
1.5 % residual Cu (native copper).

Rock samples 22CIR-1, 2, & 4 (2022 rock sampling by the writer) were taken from the east part of the **Pomeroy 3** zone contains an average of:

47.6% oxide Cu,  
33.4% sulphide Cu, &  
13% residual Cu (native copper).

Rock sample 22CIR-3 (2022 rock sampling) was taken from the north-central part of the **Pomeroy 2** zone and this rock sample contains an average of:

29.1% oxide Cu,  
69.1% sulphide Cu, &  
0.02% residual Cu (native copper).

The Pomeroy 3 rock samples contain relatively higher oxide (malachite/azurite/cuprite) and residual copper (native copper) mineralization. The Pomeroy 1, 2 and Copper Bell rock sample contains relatively high sulphide (chalcocite, chalcopyrite), and low oxide and residual type copper mineralization. Geological mapping identified Pomeroy 3, & 4 with extensive quartz-carbonate-chlorite-prehnite alteration, and strong supergene (increased oxides) alteration in comparison to Pomeroy 1, 2 & Copper Bell (increased sulphides). The well-defined SGH 'Rabbits Ear' Anomaly correlates with the amygdaloidal altered basalt in the Pomeroy 3, 4 zone rock samples (ID 22CIR-1, 2, & 4). The SGH anomaly correlates with relatively higher oxide and residual copper mineralization, with increased quartz-carbonate-chlorite-prehnite alteration. Core drilling of the SGH anomaly (Pomeroy 3, 4) as primary target, and Pomeroy 1 (west mag anomaly) as a secondary target, in a 30 m grid pattern in area of main copper showings is recommended. Also, historical data should be converted to digital format and plotted on a common GIS base showing results of historic surveying and drilling/trenching. Digitizing will assist in identifying targets for follow-up work.

## **2 Introduction**

The following report contains geochemical rock sampling and magnetometer geophysical information on the Pomeroy, Copper Bell, Colleen & Beaver showings located within the Copper Island mineral property. The information in this report covers surveys & geochemical sampling carried out by the writer done on March 6-10, 2023

This technical report has been prepared to conform with requirements for reporting assessment work with MEMPR. The writer has reviewed data pertaining to the property and has prepared a technical report that describes historical work completed on the property, reviews the results of recent geochemical surveys and makes recommendations for further work if warranted.

### **3 Reliance on Other Experts**

The writer has researched previous work by examining MEMPR assessment reports, property files, annual reports, and corporate files. Work done by Sheppard (1973-74, AR 5,076), and Property File has been heavily relied on.

### **4 Property Description and Location**

#### **4.1 Mineral Tenures**

Details of the status of tenure ownership for the Copper Island - Pomeroy, Beaver, Copper Bell property were obtained from the Mineral-Titles-Online (MTO) electronic staking system managed by the Mineral Titles Branch of the Province of British Columbia. This system is based on mineral tenures acquired electronically online using a grid cell selection system. Tenure boundaries are based on lines of latitude and longitude. There is no requirement to mark claim boundaries on the ground as these can be determined with reasonable accuracy using a GPS. The Copper Island - Pomeroy, Beaver, Copper Bell claims have not been surveyed.

The mineral tenures comprising the Copper Island - Pomeroy, Beaver, Copper Bell property are shown in Figure 2 and listed in the table below. The claim map shown in Figure 2 was generated from GIS spatial data downloaded from the Government of BC, Integrated Land Management Branch (ILMB), Land and Resource Data Warehouse (LRDW) (<http://archive.ilmb.gov.bc.ca/lrdw/>). These spatial layers are generated by the Mineral-Titles-Online (MTO) electronic staking system that is used to locate and record mineral tenures in British Columbia.

The property consists of five (5) contiguous mineral claims that cover an area of 1,056.62 hectares. Mineral tenures are held by Jared Lazerson (Copper Island Mines Ltd.)

Claim details given in Table 1 were obtained using an online mineral tenure search engine available on the MTO web site. All claims listed in the table are in the Nanaimo Mining Division within NTS map sheet 92K/03W, BCGS 092K.014.



Table of mineral claims (registered MTO titles):

<u>Tenure Number</u>	<u>Type</u>	<u>Claim Name</u>	<u>Issue Date</u>	<u>Good Until</u>	<u>Area (ha)</u>
808082	Mineral	Pomeroy 1	03 JUL 2010	25 JUN 2024	20.72
844515	Mineral		26 JAN 2011	25 JUN 2024	41.4161
848551	Mineral		10 MAR 2011	25 JUN 2024	331.5079
848942	Mineral		15 MAR 2011	25 JUN 2024	207.1898
848943	Mineral		15 MAR 2011	25 JUN 2024	455.7849

Area Total= 1,056.6187 Ha

## 4.2 Claim Ownership

Information posted on the MTO website indicates that all of the five claims listed are owned 100% by Jared Lazerson (President- Copper Island Mines Ltd).

## 4.3 Required Permits and Reporting of Work

In British Columbia, an individual or company holds the available mineral or placer mineral rights as defined in section 1 of the Mineral Tenure Act by acquiring title to a mineral tenure. This is now done by electronic staking as described above. In addition to mineral or placer mineral rights, a mineral title conveys the right to use, enter and occupy the surface of the claim or lease for the exploration and development or production of minerals or placer minerals, including the treatment of ore and concentrates, and all operations related to the business of mining providing the necessary permits have been obtained.

In order to maintain a mineral tenure in good standing exploration work or cash in lieu to the value required must be submitted prior to the expiry date. The amount required is specified by Section 8.4 of the British Columbia Mineral Tenure Act Regulation.

Up to 10 years of work or cash in lieu can be applied on a claim. A change in anniversary date can be initiated at anytime and for any period of time up to 10 years. In order to obtain credit for the work done on the Copper Island - Pomeroy, Beaver, Copper Bell property, a Statement of Work (SOW) is submitted and Assessment Report documenting the results of the work done on the property (report must also include an itemized statement of costs).

For mineral claims, the assessment work requirement is a 4 tier structure. Assessment work requirements are:

- \$5.00 per hectare for anniversary years 1 and 2;
- \$10.00 per hectare for anniversary years 3 and 4;
- \$15.00 per hectare for anniversary years 5 and 6; and
- \$20.00 per hectare for subsequent anniversary years.

Prior to initiating any physical work such as drilling, trenching, bulk sampling, camp construction, access upgrading or construction and geophysical surveys requiring line-cutting for electrical current contact points (induced polarization, IP) on a mineral property, a Notice of Work permit application must be filed with and approved by the Ministry of Energy and Mines (FrontCounter). The digital filing of the Notice of Work initiates engagement and consultation with all other stakeholders including First Nations.

The property falls within the K'omoks First Nations land claims. There may be various First Nation Band claims involved also. These treaties have not yet been fully ratified, but for any physical work that would involve surface disturbance, the appropriate First Nations should be consulted. The First Nations could make claim to the surface rights, but sub-surface mineral rights would not be affected. The property is not affected by any registered Indian Reserves. TimberWest holds logging rights on most of the property but is not actively logging in the area.

#### **4.4 Environmental Liabilities**

There has not been any commercial scale mining or mineral processing related physical disturbances on the Copper Island property to date. Most of the roads built to access forestry cut blocks have been decommissioned and have grown over and are no longer passable. Roads built for logging activities are not the responsibility of the mineral tenure holder. The author is not aware of any environmental issues or liabilities related to historical exploration or mining activities that would have an impact on future exploration of the property.

### **5 Accessibility, Climate, Local Resources, Infrastructure, and Physiography**

#### **5.1 Access**

The Copper Island property is situated 10 kilometers north of Campbell River, B.C., in the Nanaimo Mining Division of southwest British Columbia, Canada. Access to Quadra Island is via 10 minute (3 kilometers) ferry from Campbell River to Quathiaski Cove. The property is 4

kilometers northwest of the Community of Heriot Bay, Quadra Island. There are numerous secondary forestry and logging roads from Heriot Bay that give good access to most parts of the property.

The property is located on Quadra Island 10 kilometers north from Campbell River, Vancouver Island, British Columbia and 4 kilometers northwest from Heriot Bay, Quadra Island. The centre of the property is approximately geographically 50° 07' 15" N, 125° 16' 15" W; or UTM Zone 10, 5,554,480 N, 337,645 E (NAD<sup>83</sup>). The claims are located on NTS map sheet 092K03 or BCGS sheet 092K.014. The property is easily accessible from Campbell River, B.C. by ferry and then paved and secondary roads. Numerous secondary forestry and logging roads from Heriot Bay give access to most parts of the property. Vehicle access is available year round except temporarily during the winter months after occasional heavier snowfalls.

## **5.2 Climate & Physiography**

The area has undergone several periods of logging. Most of the timber on the property is second growth fir, some hemlock, cedar and with a scattering of alder and poplar. The timber on most of the property is still too immature for commercial logging in the near future. Tree planting on a small scale is being undertaken on parts of the property. Underbrush in the main areas of interest is negligible except for some salal. Underbrush in the main valleys and surrounding the small lakes and ponds can be heavier. Although parts of the property that are in the main valleys may have significant overburden cover, large parts of the current main known areas of interest have abundant rock exposure with insignificant overburden cover.

Logging and forestry roads exist on the property and provide a good network of vehicle access to most parts of the property. The old system of logging roads as shown on government maps and in previous property reports has been almost obliterated and overgrown from lack of use. The current roads are accessible most of the time year-round except during occasional heavier snow falls in winter. In general the winters are mild due to the low elevation and proximity to the ocean.

## **5.3 Local Resources**

Resources are somewhat limited on Quadra Island, which is primarily a tourist and retirement center, but Campbell River is a city that can provide a wide variety of services and facilities that include international airports, health and emergency services, mechanical, equipment, lumber, transportation and retail stores.

## **5.4 Infrastructure**

The property area is accessible via logging and forestry service roads. The nearest community is Heriot Bay, B.C., which is approximately 7 kilometres east-southeast of the property centre. If required, loading and handling industrial scale shipments of goods and mined materials can be handled by personnel of maritime vessels.

## **5.5 Physiography**

The Copper Island-Pomeroy, Beaver, Copper Bell property is located in an area of well-defined mountains and intervening, u-shaped glacial valleys. Elevations on the property vary between 0 and 260 metres above mean sea level. The mountain sides are moderately steep with steeper sections found in the southern portion of the property near Copper Cliff. Bedrock exposure is greater than 30 percent on steep slopes near the ridge tops, but it is very limited at lower elevations in valleys. Overall, the topography (ridge tops) trend north to northwest.

## **6 History.**

### **6.1 Historic Exploration and Development Work**

Considerable previous work has been performed on the Pomeroy Group copper-silver bearing mineralization. The first recorded mining in the project area was in 1906- 1907, when high grade ores from the Copper Cliff deposit were mined from an adit in the cliff face and shipped to a smelter at Ladysmith B.C. This smelter has since closed. The next period of activity was between 1915 and 1919 when ores from the Pomeroy area were mined by the Valdez Copper Company and shipped to the smelter at Anyox B.C. Samples from the Senator claim in the Pomeroy area were tested for Radium in 1922. Testing was done on siliceous carbonaceous thin-bedded sediments with an electroscope, the instrument used to detect radioactivity at that time. No radioactivity was detected. In 1929 the Pomeroy area was acquired as the Hercules 1-10 Claims by the Hercules Consolidated Mining Smelting and Power Company. Samples collected by Gunning identified acid leachable vanadium which contain the highest V values in a black siliceous sediment, overlying a copper mineralized flow. In 1952-53, Dodge Copper Mines

Limited carried out a detailed exploration program of trenching and diamond drilling. Dodge Copper Mines drilled 145 holes totaling 8800 feet on various deposits. The Quadra Mining Company acquired the property in 1968. In 2011, the Pomeroy Group of mineral claims were acquired by Copper Island Mines Ltd. A program of geochemical sampling was carried out and identified several zones of high grade copper located in the Pomeroy 1-4 mineralized zones, as well as new showings adjacent to the known occurrences.

The known ore deposits occur mainly on the surface and have been drilled, trenched and sampled in by Prince Stewart Mines Ltd (Sheppard, 1974). Ore tonnage estimates have been made by previous operators (Note-estimates are non-compliant with NI 43-101 standards & guidelines)

In 1973 Prince Stewart Mines Ltd. optioned the properties from Quadra and Quadra Bell and carried out intensive work including 392 metres of diamond drilling. A report of the drilling of one vertical hole to 33.6 metres on the Bit1 claim encountered no visible sulphide mineralization and the remaining holes were recommended to be inclined. Results from the remaining holes are unknown. Prince Stewart estimated indicated reserves from several mineralized zones:

<b>ZONE</b>	<b>TONS*</b>	<b>% COPPER</b>
Pomeroy 1	12,300	3.55
Pomeroy 2 North	5,000	2.70
Pomeroy 2 South	25,000	2.11
Pomeroy 3	194,500	0.67
Pomeroy 4	10,500	2.69
Beaver 1	18,000	1.73

*\* These reserves probably should be considered as inferred by current standards.*

In 1996 the property was acquired by Ms. Elisa Reyes as the Copper Bell, Copper Cliffs and VC claims. Reyes had Minestart Management Inc. evaluate the property based on property history, review of mineralization, mineralized zones and inferred reserves. Reyes also contracted a mine technologist to review the feasibility of acid leaching 3,000 tons of broken mineralized material extracted previously by Quadra and Quadra Bell. In 1997 the claims were forfeited.

In 2011, the claims were acquired by Copper Island Mines Ltd, and a program of geochemical sampling was carried out on the Pomeroy, Beaver and Colleen Zones. A significant portion of geochemical sampling returned >2% Cu from numerous new & historic copper-silver bearing mineral occurrences (Betmanis, 2012).

In 2020, Copper Island carried out geochemical sampling over the Pomeroy 2, 3 & 4 Zones. Results of rock sampling in 2020 are summarized as follows:

Sample ID	Easting NAD 83	Northing NAD 83	Elev (m)	Sample Type	Lithology
19CIR-1	337701	5554153	127	outcrop	amygdaloidal basalt
19CIR-2	337688	5554183	128	outcrop	amygdaloidal basalt
19CIR-3	337472	5554583	168	outcrop	amygdaloidal basalt
19CIR-4	338102	5553605	98	outcrop	amygdaloidal basalt

Sample ID	Alteration	Mineralization	Cu ppm	Ag ppm	As ppm
19CIR-1	quartz, chlorite, prehnite, calcite	chalcocite, malachite	76400	24	16
19CIR-2	quartz, chlorite, prehnite, calcite	chalcocite, malachite	66400	24.8	16
19CIR-3	quartz, chlorite, prehnite, calcite	chalcocite, malachite	59500	19.8	3
19CIR-4	quartz, chlorite, prehnite, calcite	chalcocite, malachite	56400	29.4	2

Sample ID	Pb ppm	Zn ppm	Fe %	S %	Ca %	P ppm	Mn ppm	V ppm	Cr ppm	Cu %
19CIR-1	3	59	6.81	1.79	1.62	530	923	354	112	7.64
19CIR-2	4	80	7.21	1.65	2.81	430	1120	344	159	6.64
19CIR-3	<2	80	9.15	1.28	1.44	560	1335	398	155	5.95
19CIR-4	11	102	9.8	1.18	1.81	580	1480	757	216	5.64

Each of the 4 rock chip samples were taken across a sample interval width of 30 cm (from outcrop). The results indicate that high-grade copper values (ranging from 5.64-7.64% Cu) with significant silver (19.8-29.4 g/t Ag) values were obtained from rock chip samples from the Pomeroy 2, 3, & 4 mineral zones. Vanadium content of up to 757 ppm V suggests that vanadium bearing minerals are present, and likely linked with increased Fe.

Soil sampling carried out in 2020 is described (with geochemically analysis) as follows:

Project	Sample ID	UTM E	UTM N	Depth	Colour	Cu ppm	Ag ppm	Zn ppm
CI Pomeroy 3, 4	20CIS-1	337600	5554050	25 cm	red-brown	95	0.3	47
CI Pomeroy 3, 4	20CIS-2	337650	5554050	25 cm	red-brown	56	<0.2	67
CI Pomeroy 3, 4	20CIS-3	337700	5554050	25 cm	red-brown	7870	2.1	82
CI Pomeroy 3, 4	20CIS-4	337750	5554050	25 cm	red-brown	1210	0.5	128
CI Pomeroy 3, 4	20CIS-5	337800	5554050	30 cm	red-brown	421	<0.2	48
CI Pomeroy 3, 4	20CIS-6	337600	5554100	25 cm	brown	108	<0.2	52
CI Pomeroy 3, 4	20CIS-7	337650	5554100	30 cm	brown	85	0.3	88
CI Pomeroy 3, 4	20CIS-8	337700	5554100	25 cm	brown	742	0.2	52
CI Pomeroy 3, 4	20CIS-9	337750	5554100	25 cm	red-brown	5100	1.3	147
CI Pomeroy 3, 4	20CIS-10	337800	5554100	30 cm	red-brown	203	<0.2	108
CI Pomeroy 3, 4	20CIS-11	337600	5554150	25 cm	brown	300	0.2	43
CI Pomeroy 3, 4	20CIS-12	337650	5554150	25 cm	brown	57	<0.2	93
CI Pomeroy 3, 4	20CIS-13	337700	5554150	25 cm	red-brown	4420	1.1	40

CI Pomeroy 3, 4	20CIS-14	337750	5554150	25 cm	red-brown	2770		0.4	38
CI Pomeroy 3, 4	20CIS-15	337800	5554150	30 cm	brown	426	<0.2		43
CI Pomeroy 3, 4	20CIS-16	337600	5554200	25 cm	red-brown	64		0.2	77
CI Pomeroy 3, 4	20CIS-17	337650	5554200	30 cm	red-brown	38	<0.2		87
CI Pomeroy 3, 4	20CIS-18	337700	5554200	25 cm	red-brown	9560		4.2	79
CI Pomeroy 3, 4	20CIS-19	337750	5554200	25 cm	red-brown	1010		0.4	74
CI Pomeroy 3, 4	20CIS-20	337800	5554200	30 cm	brown	573		0.2	73
CI Pomeroy 2	20CIS-21	337400	5554500	25 cm	red-brown	113		0.2	59
CI Pomeroy 2	20CIS-22	337450	5554500	25 cm	red-brown	247		0.4	97
CI Pomeroy 2	20CIS-23	337500	5554500	25 cm	red-brown	127	<0.2		62
CI Pomeroy 2	20CIS-24	337550	5554500	25 cm	red-brown	309	<0.2		77
CI Pomeroy 2	20CIS-25	337600	5554500	30 cm	red-brown	45	<0.2		45
CI Pomeroy 2	20CIS-26	337400	5554550	25 cm	brown	33	<0.2		35
CI Pomeroy 2	20CIS-27	337450	5554550	30 cm	red-brown	160	<0.2		101
CI Pomeroy 2	20CIS-28	337500	5554550	25 cm	brown	24	<0.2		23
CI Pomeroy 2	20CIS-29	337550	5554550	25 cm	brown	95	<0.2		85
CI Pomeroy 2	20CIS-30	337600	5554550	25 cm	brown	268	<0.2		78
CI Pomeroy 2	20CIS-31	337400	5554600	25 cm	red-brown	279		0.2	80
CI Pomeroy 2	20CIS-32	337450	5554600	25 cm	brown	45	<0.2		39
CI Pomeroy 2	20CIS-33	337500	5554600	30 cm	brown	127		0.2	29
CI Pomeroy 2	20CIS-34	337550	5554600	25 cm	brown	1080		0.5	90
CI Pomeroy 2	20CIS-35	337600	5554600	30 cm	red-brown	847		0.6	295
CI Beaver 1	20CIS-36	337650	5554600	25 cm	brown	80	<0.2		109
CI Beaver 1	20CIS-37	337950	5553500	25 cm	red-brown	1030		0.6	60
CI Beaver 1	20CIS-38	338000	5553500	25 cm	red-brown	93		0.2	79
CI Beaver 1	20CIS-39	338050	5553500	25 cm	red-brown	569		0.2	63
CI Beaver 1	20CIS-40	337950	5553550	30 cm	red-brown	811		0.3	88
CI Beaver 1	20CIS-41	338000	5553550	25 cm	red-brown	167	<0.2		59
CI Beaver 1	20CIS-42	338050	5553550	30 cm	brown	167	<0.2		38
CI Beaver 1	20CIS-43	338000	5553600	25 cm	brown	32	<0.2		50
CI Beaver 1	20CIS-44	338050	5553600	25 cm	brown	127	<0.2		67
CI Beaver 1	20CIS-45	338100	5553600	25 cm	red-brown	2670		0.6	37
CI Beaver 1	20CIS-46	338150	5553600	30 cm	red-brown	693		0.5	658
CI Beaver 1	20CIS-47	338000	5553650	25 cm	red-brown	36		0.2	79
CI Beaver 1	20CIS-48	338050	5553650	30 cm	red-brown	290		0.2	96
CI Beaver 1	20CIS-49	338100	5553650	25 cm	brown	86	<0.2		78
CI Beaver 1	20CIS-50	338150	5553650	25 cm	brown	279	<0.2		27

Project	Sample ID	UTM E	UTM N	Depth	Colour	Cu ppm	Ag ppm	Zn ppm	
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Project	Sample ID	Pb ppm	As ppm	P ppm	Mn ppm	Co ppm	Cr ppm	V ppm	% Fe	% Ca	% Ti
Cl Pomeroy 3, 4	20CIS-1	5	6	440	558	16	40	306	5.95	0.84	0.54
Cl Pomeroy 3, 4	20CIS-2	28	4	420	875	25	55	293	7.29	1.66	0.66
Cl Pomeroy 3, 4	20CIS-3	12	36	800	1925	35	101	293	6.88	2.09	0.44
Cl Pomeroy 3, 4	20CIS-4	27	6	700	3070	35	108	247	7.47	2.1	0.51
Cl Pomeroy 3, 4	20CIS-5	36	7	560	1015	12	53	227	5.66	1	0.45
Cl Pomeroy 3, 4	20CIS-6	11	6	450	570	12	29	186	4.03	0.8	0.34
Cl Pomeroy 3, 4	20CIS-7	43	7	670	2660	27	56	182	5.08	1.7	0.4
Cl Pomeroy 3, 4	20CIS-8	52	8	640	801	8	29	58	1.61	0.68	0.09
Cl Pomeroy 3, 4	20CIS-9	40	18	840	6910	35	96	213	6.01	3.19	0.38
Cl Pomeroy 3, 4	20CIS-10	16	3	650	1870	37	125	299	8.32	2.02	0.62
Cl Pomeroy 3, 4	20CIS-11	17	5	380	898	17	33	132	3.69	0.73	0.3
Cl Pomeroy 3, 4	20CIS-12	54	7	750	7090	28	37	171	4.97	1.03	0.34
Cl Pomeroy 3, 4	20CIS-13	29	9	630	635	13	77	109	2.25	2.46	0.15
Cl Pomeroy 3, 4	20CIS-14	7	7	480	595	14	32	156	3.71	0.98	0.28
Cl Pomeroy 3, 4	20CIS-15	6 <2		7190	81	5	72	91	1.32	0.73	0.15
Cl Pomeroy 3, 4	20CIS-16	50	9	1480	2590	33	40	164	5.48	0.81	0.43
Cl Pomeroy 3, 4	20CIS-17	15	5	1050	1505	18	54	225	7.97	0.55	0.49
Cl Pomeroy 3, 4	20CIS-18	7	15	570	1785	36	145	249	6.67	2.8	0.43
Cl Pomeroy 3, 4	20CIS-19	7	7	610	772	25	59	444	8.51	0.91	0.71
Cl Pomeroy 3, 4	20CIS-20	61	6	1150	915	19	89	167	6.53	1.01	0.33
Cl Pomeroy 2	20CIS-21	3	2	410	410	12	37	127	4	0.68	0.34
Cl Pomeroy 2	20CIS-22	14 <2		620	1130	26	86	309	8.58	1	0.6
Cl Pomeroy 2	20CIS-23	46	10	490	1710	20	47	216	6.46	1.04	0.39
Cl Pomeroy 2	20CIS-24	19	3	380	1315	41	31	159	5.44	0.4	0.37
Cl Pomeroy 2	20CIS-25	8	3	380	386	11	36	221	6.26	1.26	0.36
Cl Pomeroy 2	20CIS-26	20	3	240	857	10	26	125	3.28	0.38	0.28
Cl Pomeroy 2	20CIS-27	11	2	610	1115	21	79	315	8.08	0.63	0.72
Cl Pomeroy 2	20CIS-28	17	6	310	335	4	16	101	2.26	0.64	0.26
Cl Pomeroy 2	20CIS-29	131	8	870	2140	22	16	75	2.68	0.81	0.14
Cl Pomeroy 2	20CIS-30	54	6	910	5550	123	31	64	3.11	0.61	0.16
Cl Pomeroy 2	20CIS-31	25	5	580	1375	106	34	93	4.56	0.37	0.27
Cl Pomeroy 2	20CIS-32	44	8	390	577	6	27	151	4.15	1.17	0.35
Cl Pomeroy 2	20CIS-33	60	7	860	125	3	25	56	1.06	0.72	0.1
Cl Pomeroy 2	20CIS-34	58	6	760	3280	16	42	184	4.57	0.48	0.5
Cl Pomeroy 2	20CIS-35	87	15	1220	13300	27	57	91	3.66	2.03	0.17
Cl Beaver 1	20CIS-36	50	5	1220	3030	22	51	157	5.38	0.59	0.49
Cl Beaver 1	20CIS-37	20	6	790	4200	55	47	115	4.11	0.91	0.23
Cl Beaver 1	20CIS-38	27	6	550	1430	24	51	204	5.39	1.29	0.46
Cl Beaver 1	20CIS-39	12	3	530	969	17	50	200	5.35	0.94	0.45
Cl Beaver 1	20CIS-40	26	7	1340	1010	36	69	130	5.56	0.81	0.28
Cl Beaver 1	20CIS-41	7	2	460	593	21	73	301	7.48	1.14	0.72
Cl Beaver 1	20CIS-42	24	5	430	468	14	32	165	3.92	0.55	0.36
Cl Beaver 1	20CIS-43	10	3	350	328	10	27	167	4.44	0.74	0.39



Cl Beaver 1	20CIS-44	13	11	1890	414	11	41	119	4.17	0.37	0.31
Cl Beaver 1	20CIS-45	24	8	1080	741	10	38	195	4.54	1.04	0.41
Cl Beaver 1	20CIS-46	51	19	1780	17550	49	79	137	6.2	2.61	0.26
Cl Beaver 1	20CIS-47	51	10	1290	7100	35	40	170	6.73	1.43	0.41
Cl Beaver 1	20CIS-48	66	10	1190	7110	28	68	152	4.56	1.66	0.34
Cl Beaver 1	20CIS-49	19	3	470	751	12	33	106	3.74	0.37	0.26
Cl Beaver 1	20CIS-50	11	4	340	229	6	25	97	2.87	0.34	0.18
Project	Sample ID	Pb ppm	As ppm	P ppm	Mn ppm	Co ppm	Cr ppm	V ppm	% Fe	% Ca	% Ti

Soil sample results (from 2020) indicate a strong positive copper in soil anomaly located along a N-S trend on the Pomeroy 3, 4 zone between 337,675 E and 337,775 E. The anomalous copper in soil anomaly is shown in Fig 9, and occurs between 5,554,025 N and 5,554,225 N (note- the anomaly is open to the north and south. The Pomeroy 2 (Copper Flats) zone and Beaver 1 analysis results show strong positive copper in soil anomalies however they are more erratically distributed. Silver in soil values closely follow anomalous copper in soil values. There appears to be peripheral manganese in soil anomalies in close proximity to the copper zones and may indicate a sea-floor spreading (rifting) environment of deposition. The high manganese content does not correlate with high Cu-Ag values but the close proximity of high Mn, and localized concentrations of vanadium (up to 444 ppm V) in soil suggests that pyrolusite (MnO<sub>2</sub>) and vanadium bearing minerals may be present in the highly differentiated, amygdaloidal basalts, and inter-layered (thin-bedded) siliceous, carbonaceous clastic sediments (submarine black smoker environment of deposition).

Fieldwork in 2020 consisted of soil sampling of the Pomeroy 2, 3, & 4 zones (total number = 50), and rock sampling (total number = 4). Geochemical soil sampling was carried out on the central portion of MTO ID# 848551.

Work carried out in 2022 consisted of SGH soil sampling and rock chip samples covering the Pomeroy 2, 3, & 4 mineral zones (similar to 2020 soil sampling which covered the Pomeroy 2, 3, & 4 and Beaver zones). The geochemical surveys focused on areas that returned relatively high copper and silver values from previous work. Soil samples were taken in a 50 m spacing grid pattern using Garmin 60Cx GPS receiver for survey control. Samples were shipped to Actlabs, Ancaster, ON for SGH sampling (analyzes hydrocarbon chemistry to identify ‘deep-sourced’ metallic concentrations by measuring compounds in the C5-C17 range over 160 hydrocarbon compounds down to low parts per trillion), having the advantage of delineating mineral targets through thick layers of cover and overburden. The results of SGH sampling identified a ‘Rabbit-Ear Anomaly’ (337,425E to 337,675 E and 5,554,225 N to 5,554,275 N) roughly covering a 250 X 50 meter area in the area of the Pomeroy 3 & 4 zones. A subjective 4.0 out of 6.0 confidence rating is given to the Rabbit-Ear shaped SGH anomaly (A22-02196 Actlabs SGH Report). This SGH anomaly zone corresponds to Pomeroy 3 & 4 zones that are characterized by sheared and fractured sulphide and carbonate oxide mineralization. Previous soil sample geochemistry in 2020 identified highest Cu-Ag soil anomalies in the area southeast of the SGH Rabbit-Ear anomaly. SGH soil samples taken in 2022 are described as follows:

ID number	northing UTM	easting UTM	colour	depth cm	texture
101	5554050	337700	red-brown	20	silt-sand, trace clay
102	5554050	337750	red-brown	20	silt-sand, trace clay
103	5554050	337800	red-brown	20	silt-sand, trace clay
104	5554050	337850	red-brown	20	silt-sand, trace clay
105	5554100	337700	red-brown	20	silt-sand, trace clay
106	5554100	337750	red-brown	20	silt-sand, trace clay
107	5554100	337800	red-brown	20	silt-sand, trace clay
108	5554100	337850	red-brown	20	silt-sand, trace clay
109	5554150	337550	red-brown	20	silt-sand, trace clay
110	5554150	337600	red-brown	20	silt-sand, trace clay
111	5554150	337650	red-brown	20	silt-sand, trace clay
112	5554150	337700	red-brown	20	silt-sand, trace clay
113	5554150	337750	red-brown	20	silt-sand, trace clay
114	5554200	337500	red-brown	20	silt-sand, trace clay
115	5554200	337550	red-brown	20	silt-sand, trace clay
116	5554200	337600	red-brown	20	silt-sand, trace clay
117	5554200	337650	red-brown	20	silt-sand, trace clay
118	5554200	337700	red-brown	20	silt-sand, trace clay
119	5554250	337450	red-brown	20	silt-sand, trace clay
120	5554250	337500	red-brown	20	silt-sand, trace clay
121	5554250	337550	red-brown	20	silt-sand, trace clay
122	5554250	337600	red-brown	20	silt-sand, trace clay
123	5554250	337650	red-brown	20	silt-sand, trace clay
124	5554300	337350	brown	20	silt-sand, trace clay
125	5554300	337400	brown	20	silt-sand, trace clay
126	5554300	337450	brown	20	silt-sand, trace clay
127	5554300	337500	red-brown	20	silt-sand, trace clay
128	5554300	337550	red-brown	20	silt-sand, trace clay
129	5554350	337300	brown	20	silt-sand, trace clay
130	5554350	337350	brown	20	silt-sand, trace clay
131	5554350	337400	brown	20	silt-sand, trace clay
132	5554350	337450	red-brown	20	silt-sand, trace clay
133	5554350	337500	red-brown	20	silt-sand, trace clay
134	5554400	337500	brown	20	silt-sand, trace clay
135	5553450	337500	brown	20	silt-sand, trace clay
136	5553450	337550	brown	20	silt-sand, trace clay
137	5553450	337600	red-brown	20	silt-sand, trace clay
138	5553450	337650	red-brown	20	silt-sand, trace clay
139	5553450	337700	red-brown	20	silt-sand, trace clay
140	5553500	337500	red-brown	20	silt-sand, trace clay

141	5553500	337550	red-brown	20	silt-sand, trace clay
142	5553500	337600	red-brown	20	silt-sand, trace clay
143	5553500	337650	brown	20	silt-sand, trace clay
144	5553500	337700	brown	20	silt-sand, trace clay
145	5553550	337450	red-brown	20	silt-sand, trace clay
146	5553550	337500	red-brown	20	silt-sand, trace clay
147	5553550	337550	red-brown	20	silt-sand, trace clay
148	5553550	337600	brown	20	silt-sand, trace clay
149	5553550	337650	brown	20	silt-sand, trace clay
150	5553550	337700	brown	20	silt-sand, trace clay
ID number	northing	easting	colour	depth cm	texture

SGH follow up target for drilling in the area described as follows:

**Pomeroy 3 & 4 zones** SGH (2022) ‘Rabbit- Ear Anomaly’ (337,425E to 337,675 E and 5,554,225 N to 5,554,275 N) roughly covering a 250 X 50 meter area.

Previous soil sample geochemistry in 2020 identified highest Cu-Ag soil anomalies in the area southeast of the SGH Rabbit-Ear anomaly. 2020 soil sample Cu-Ag anomalies, indicate follow up work (drilling/trenching) in the area described as follows:

**Pomeroy 3 zone** soil sample survey (2020) Cu in soil anomaly >1,000 ppm (337,675E to 337,775 E and 5,553,025 N to 5,553,225 N) roughly covering a 100 X 200 meter area. Also; **Pomeroy 2 zone** (2020) Cu in soil anomaly >845 ppm (337,525E to 337,625 E and 5,554,575 N to 5,554,625 N) roughly covering a 100 X 50 meter area.

The rock chip sampling done in 2022 consisted of sequential leach for oxide, sulphide and residual geochemical analysis. A total of 4 rock samples, ranging from 1.07-1.77 kilograms in weight, of acorn sized rock chips were taken with rock hammer and moil, and placed in marked poly bags and shipped to ALS Chemex Labs Ltd, North Vancouver, BC for Prep-31 & Cu-PKG06LI sequential leach for oxide, sulphide and residual geochemical analysis, (Appendix A). Location was aided by maps from [www.Mapplace](http://www.Mapplace) and Google Earth. Locations were marked by waypoints generated by Garmin 60Cx GPS receiver and considered accurate to within 3-5 meter accuracy for northing and easting (elevations are considered estimates plus or minus 20 meters, and can not be relied upon).

A description of rock chip samples (2022) are summarized (Analysis certificate VA22039722):

ID No	Easting	Northing	Elev (m)	Sample Type	Lithology	Alteration
22CIR-1	337698	5554192	126	outcrop	amygdaloidal basalt	quartz, chlorite, prehnite, calcite
22CIR-2	337683	5554133	130	outcrop	amygdaloidal basalt	quartz, chlorite, prehnite, calcite
22CIR-3	337545	5554456	170	outcrop	amygdaloidal basalt	quartz, chlorite, prehnite, calcite
22CIR-4	337690	5554159	128	outcrop	amygdaloidal basalt	quartz, chlorite, prehnite, calcite

ID No	Mineralization	Zone Name	strike	dip	CuT-SEQ06 Total Cu %
22CIR-1	chalcocite, malachite, native Cu	Pomeroy 3	160	77 W	5.56
22CIR-2	chalcocite, malachite, chalcopyrite	Pomeroy 3	166	70 W	2.23
22CIR-3	chalcocite, malachite, bornite, chalcopyrite	Pomeroy 2	115	88 N	4.99
22CIR-4	chalcocite, malachite, azurite	Pomeroy 3	163	75 W	4.29

ID No	AA06s sulphuric % Cu	% oxide	AA16s cyanide % Cu	% sulphide	AA62s residual % Cu	% residual
22CIR-1	2.18	39.2	1.22	21.9	2.16	38.8
22CIR-2	1.21	54.3	0.97	43.5	0.05	0.04
22CIR-3	1.45	29.1	3.45	69.1	0.09	0.02
22CIR-4	2.11	49.2	1.49	34.7	0.69	0.16

Rock samples 22CIR-1, 2, & 4 were taken from the east part of the **Pomeroy 3** zone contains an average of:

47.6% oxide Cu,  
33.4% sulphide Cu, &  
13% residual Cu (native copper).

Rock sample 22CIR-3 was taken from the north-central part of the **Pomeroy 2** zone and this rock sample contains an average of:

29.1% oxide Cu,  
69.1% sulphide Cu, &  
0.02% residual Cu (native copper).

The Pomeroy 3 rock samples contain relatively higher oxide (malachite/azurite/cuprite) and residual type copper (native copper) mineralization. The Pomeroy 2 rock sample contains relatively high sulphide (chalcocite, chalcopyrite), and low oxide and residual type copper mineralization.

## 7 Geological Setting and Mineralization

### 7.1 Regional Geology

Quadra Island is underlain by Triassic & Jurassic volcanic, sedimentary & intrusive rocks. The predominant rocks are Triassic Karmutsen Formation volcanics, Quatsino formation limestones and Island intrusives of Middle Jurassic age, part of the Coast Intrusive complex. The southern part of the island is covered by Quaternary glacial debris. Glacio-alluvial deposits cover low-lying contacts and fault zones. The Karmutsen and Quatsino Formations host numerous mineral deposits on Vancouver Island such as magnetite (Fe<sub>3</sub>O<sub>4</sub>), gold-silver, and copper-lead-zinc-silver-gold deposits such as Buttle Lake. Porphyry type copper, molybdenum-rhenium deposits of Island Copper at the north end of Vancouver Island, and the iron, copper, and high-calcium limestone deposits on Texada Island. The claim area is underlain by Karmutsen volcanics, which consist chiefly of amygdaloidal, fine to medium-grained, heavily fractured basaltic lava.

## 7.2 Structure

Steep to moderate dipping fracturing and faulting are evident in the basaltic volcanic host rocks. Northwest-trending structures are most common with north and east trending structures being subordinate. Quartz-calcite veins and veinlets trend in multiple directions. It is indicated that cross faults are loci for mineralization and fracture & fault zones that can repeat in multiple directions, especially in altered and silicified zones hosted in Karmutsen Fm basalt-andesite.

## 7.3 Property Geology and Mineral Occurrences

The Pomeroy 3, 4 Zone occurs over a strike length of approximately 600 feet (183 meters) of a northwest to north trending formation of volcanic flows. Several parallel zones have been identified (e.g. Copper Valley, Butte, Copper Bell, Colleen, Vanadium & Ingersoll). The Pomeroy zones have been trenched and sampled. Copper mineralization occurs in calcite filled amygdules and veinlet stockwork that is evident throughout the property. The other mineralized zones consist of increased quartz, calcite veining, and copper sulphides in 1-10 meter wide altered and fractured zone traced intermittently for approximately 20-200 meters on surface.

The following list describes geology & mineralization of nine Minfile occurrences located within Copper Island mineral claims (note- Appendix E lists all 13 Minfile occurrences):

### **POMEROY 1: 336900E, 5554850N**

Area is highly disturbed from previous workings with blasted material covering up most of the bedrock. There is a 4m long x 3m wide x 3m deep pit. Neighboring outcrop is light-dark green fgr mafic with angular clastic fragments of quartz, epidote, chlorite up to 1cm in a fine grained matrix. There are amygdules present however the majority are angular. This indicates a fault zone breccia or possible pyroclastic flow west of the main pit, in the forest are a series of small trenches (3m x 2m) and blast sites with visible blebs of chalcocite up to 2cm. Malachite staining seen throughout blasted rock. Area of bedrock open cuts with observed mineralization is 25m x 15m. Historic estimates for Pomeroy 1 mineral zone are 16,500 short tons @3.67% Cu (Sheppard, 1974). Note that historic estimates are not compliant with NI 43-101 and are not to be relied upon.

East of Pomeroy 1 there is a normal fault trending 315 (Fig 3) with the hanging wall on the NE side with a potential vertical displacement of 10m. Mineralization is observed along an E-W trending ridge structure up to 200m long. The structure has potential to be mineralized 200m long x 25m wide x 5m thick. The host rock is a medium green fine grained mafic flow with amygdules up to 5mm. Rock is weathered red-brown and has crackled brecciated appearance. Malachite staining is visible on weathered surface. The dominant rock type is green fine grained basalt with quartz & black amygdules. Coarse disseminated blebs of chalcocite up to 3cm noted.

**POMEROY 2:** 337540E, 5554480N

**North Zone:**

Host rock is a fine grained dark green vesicular mafic with 1-3mm amygdules filled with qtz, epidote and chalcocite stained with malachite. Mineralization in pit extends approximately 5m wide x15m long x2m deep. Flows at pit have a shallow dip of 10-15 degrees to south. Rock has crackled weathered appearance, minor brecciation.

Sheppard, 1974: PROVEN: 5,000 short tons @ 2.70% Cu

INDICATED: 17,000 short tons @ 2.70% Cu

**POMEROY 3:** 337750E, 5554300N

Pomeroy 3 is a series of discontinuous mineralized outcrops, trenches and blast pits along the western edge of a flow structure, east of Pomeroy 2 and 4. Mineralization is also seen in trenches in the low lying area between Pomeroy 2 and Pomeroy 3, which is interpreted as a N-S fault extending southward between Pomeroy 3 and 4. Outcrops are medium-dark green fine-grained mafic dominated by quartz amygdules up to 1cm, black amygdules also present. Moderate silicification with some quartz veining. At Pomeroy 3 north, there is an intensely brecciated outcrop, rock is soft and friable, malachite and chalcocite occur as disseminations and fracture fillings. Clasts are angular-subangular and vary from 1-10cm. Mineralization is dominant in the matrix but also coating the clasts. This feature supports that there is a N-S trending fault potentially being the control on mineralization of Pomeroy 2, 3 and 4. Above the mafic, silicified breccia on top of the fault structure, is chalcocite, chalcopyrite and malachite mineralisation. Apparent dip of the Pomeroy 3 mineralized flow is 20 degrees south. From mineralized outcrops and neighboring mineralized pits Pomeroy 3 has a potential thickness of 7 meters.

**POMEROY 4:** 337650E, 5554150N

Pomeroy 4 is a 200m long x 100m wide structure dipping approximately 15-20o to the south. Mineralization is most apparent on the eastern flank of the structure where there is series of historic pits that extend N-S approximately 70 meters long. The most northerly pit is the site where a historic bulk sample was taken for the Mill. The outcrop contains near vertical fractures that are filled with Chalcocite minor native copper and quartz. Chaotic quartz-carbonate veins and epidote stringers throughout outcrop. Chalcocite is seen disseminated throughout the rock, most noticeably next to veins. Rock has dull grey look, friable, weathered crackled appearance. The southern pit is much larger, 20m long x 15m wide x 10m+ high. Pit has disseminated chalcocite blebs throughout a dark green mafic with small <1mm black amygdules and larger <1cm quartz amygdules. Across the structure along strike is a series of pits and outcrops with weathered, friable malachite stained rock (Photo 18). The top of Pomeroy 4 structure is covered by pods and ridges of dark grey coarse grained mafic (cap flow?).

**Pomeroy 3+4**

Sheppard, 1974: PROVEN: 972,400 short tons @ 1.22% Cu

INDICATED: 472,000 short tons @ 1.62% Cu

**POMEROY 5: 337620E, 5554490N**

Pomeroy 5 is east of Pomeroy 2 across the new logging road on the adjacent structure. The mineralized area is 10m long x 2m wide x 2m high. The surrounding rock is a fine grained dark green blocky mafic, whereas at the showing the rock is crackled and weathered as seen in other mineralized zones. Continuous mineralization is not observed, however a NW trending fault contained malachite staining and was traced SE to a series of small mineralized prospects with crackled weathered outcrops with malachite staining. Chalcocite mineralization is hosted about 10% of the small black 1mm amygdules. The rest of the amygdules are quartz.

Mineral Potential:  $100\text{m} \times 100\text{m} \times 2\text{m} \times 2.66 \text{ ton/m}^3 = 53,200 \text{ metric tons @ } 1.00\% \text{ Cu}$

**Beaver 1: 338100E, 5553560N**

Turtle back structure 100m long (N-S) x 30m wide (E-W). Dark green-grey fine grained mafic with large amounts of Mn staining and high Fe content, highly magnetic on top of ridge. Thin 5mm quartz and epidote veins and stringers throughout outcrop. Three trenches on top of central structure, 2 meters wide 2 meters deep. Chalcocite mineralization is visible at the bottom of trenches indicating thickness of 2m+. Malachite staining throughout. Mineralization observed at north end of structure, could entire structure potentially be mineralized. The mineral zone is estimated to contain 19,375 short tons @ 1.74% Cu (Sheppard, 1974). Note that historic estimates are not compliant with NI 43-101 and are not to be relied upon.

**Hall: 336915E, 5555595N**

Small blasted pits 3m x 10m on top of a small structure 60m x 30m next to logging road. Mineralization is seen locally within the blasted pits as chalcocite, malachite and azurite. Rock is a dark green fine grained mafic with quartz, chlorite, epidote, chalcocite amygdules 1-3mm in size. Minor Fe and Mn staining. No visible mineralization on neighboring structures which host dark green-grey coarse grained dense mafic flows. West of Hall showing outcrop with 30cm thick quartz veins cutting through mafic flows with epidote stringers.

Sheppard, 1974: PROVEN: 5,000 short tons @ 3.45% Cu

INDICATED: 50,000 short tons @ 2.40% Cu Note that historic estimates are not compliant with NI 43-101 and are not to be relied upon.

**Copper Bell 1: 338290E, 5555028N**

Series of small blasts and small pits in an area 15m x 15m. One blast trench found 6m long x 2m wide x 2m deep. Mineralization in this area is found within chaotic quartz-carbonate veins and disseminations in the wallrock proximal to veining. Veins are up to 10cm thick with mafic inclusions up to 5cm. Chalcocite and bornite are the dominant form of copper mineralization within the veins and along selvages. Chalcocite is seen disseminated in the mafic host rock especially noticeable next to veining. Hostrock is a medium-dark green fine grained mafic that has crackled, brecciated, weathered appearance.

**Copper Bell 2: 337920E, 5555150N**

Structure is 230m long x 50m wide x 3m thick. Light-medium green amygdaloidal fine grained andesite? It has chl, qtz, and black amygdules. Vuggy quartz clasts and amygdules. 5-10cm

quartz veins with visible bornite and malachite. Veins are both vuggy and comb with comb crystal up to 2-2.5cm in length. Epidote stringers throughout. Host rock is moderately silicified giving it lighter appearance. Localized areas have crackled brecciated appearance.

Copper Bell 1 & 2: An estimate of the combined Copper Bell 1 & 2 mineral zones are 112,000 short tons @ 2.55% Cu (Sheppard, 1974). Note that historic estimates are not compliant with NI 43-101 and are not to be relied upon.

## **8 Deposit Types**

Copper Island property Cu-Ag bearing mineral showings on the property have been classified as a volcanic redbed copper (silver) deposit types. The Pomeroy Zones are a primary target for these redbed type deposits. In general, the Cu-Ag deposits tend to be crudely stratified along lithological basaltic flow contacts, forming clusters (lenses) along NW to N (minor E) trending fracture/fault zones along S to SW dipping basalt flow contacts. Volcanic redbed Cu-Ag occurrences are also known as basaltic Cu, volcanic-hosted copper, and copper mantos (Lefebvre, 1996). Examples in British Columbia include Sustut Copper (094D063), Shamrock (092HNE092), NH (093L082), North Star (094D032). Outside of BC examples of volcanic redbed Cu includes White River (Yukon, Canada), 47 Zone and June, Coppermine River area (Northwest Territories, Canada) Mountain Grill and Radovan (Alaska, USA), Calumet-Hecla and Kearsarga, Keweenaw Peninsula (Michigan, USA), Mantos Blancos, Ivan and Altamira (Chile).

Mineralogy of volcanic redbed Cu deposits includes chalcocite, bornite and/or native copper occur in mafic to felsic volcanic flows, tuff and breccia and related sedimentary rocks as disseminations, veins and infilling amygdaloids, fractures and flowtop breccias. Some deposits are tabular, strata bound zones, while others are controlled by structures and crosscut stratigraphy.

These deposits occur in intracontinental rift tectonic settings with subaerial flood basalt sequences and near plate margins with island-arc and continental-arc volcanics. Amygdaloidal basaltic lavas, breccias and coarse volcanoclastic beds with associated volcanic tuffs, siltstone, sandstone and conglomerate are the most common host rocks. The volcanics may cover the spectrum from basalt to rhyolite composition, typically it is the mafic volcanics that have widespread elevated background values of copper due to the presence of native copper or chalcocite in amygdaloids, flow breccias or minor fractures. Many volcanic redbed Cu deposits are tabular lenses from a few to several tens of metres thick which are roughly concordant with the host strata over several hundred metres. Other deposits are strongly influenced by structural controls and crosscut the stratigraphy as veins, veinlets, fault breccias and disseminated zones. Open spaces may be amygdaloids, cavities in flowtop breccias or fractures. Mineralization is commonly fine-grained, although spectacular examples of copper “nuggets” are known (Lefebvre, 1996).

Mineralogy of volcanic redbed Cu deposits are characterized by a suite of minerals including chalcocite, bornite, native copper, and digenite, with lesser amounts of djurleite, chalcopyrite,



covellite, native silver and greenockite in a gangue of hematite, magnetite, calcite, quartz, epidote, chlorite and zeolite minerals. Iron sulphides, including pyrite, typically peripheral to the ore. Some deposits are zoned from chalcocite through bornite and chalcopyrite to fringing pyrite. Copper-arsenic minerals, such as domeykite, algodonite and whitneyite, occur in fissure veins in the Keewenaw Peninsula. Deposits appear to be confined to subaerial to shallow-marine volcanic sequences commonly with intercalated redbeds. Geochemically, volcanic redbed Cu deposits produce a very specific geochemical signature for Cu and usually Ag. Litho-geochemical and stream sediment samples may return high values of Cu and Ag, typically high Cu/Zn ratios and low gold values. Geophysical induced polarization (IP) surveys can be effectively used to delineate disseminated sulphide mineralization.

Typical grade and tonnage of volcanic redbed Cu deposits range in size from hundreds of thousands to hundreds of millions of tonnes grading from less than 1% Cu to more than 4% Cu. Silver values are only reported for some deposits and vary between 6 and 80 g/t Ag. Sustut (located approximately 250 km NW of Prince George, BC) has been estimated to contain 43.5 Mt grading 0.82% Cu. The Calumet conglomerate (Hecla and Kearsarga, Keweenaw Peninsula, Michigan, USA) produced 72.4 Mt grading 2.64% Cu. Only a few deposits have been high enough grade to support underground mines and the majority of occurrences are too small to be economic as open pit operations. The Keweenaw Peninsula deposits in Michigan produced 5 Mt of copper between 1845 and 1968. Currently, operating mines in Chile are producing significant copper from Mantos Blancos, Ivan and Altamira volcanic redbed Cu deposits (Lefebure, 1996).

## **9 Exploration**

A total of 3.3 line-kilometers of magnetometer surveying, was carried out on MTO tenure numbers 848551, 808082, & 848942. The magnetometer survey is located in 4 separate areas in the central portion of the claims. Survey lines are oriented E-W along grid lines. Survey control for the grid was done using Garmin 60Cx GPS receiver (WAS enabled) for survey control (variable from 3-7 meter accuracy of GPS readings, Appendix C). A GEM GSM-19T v 7.0 proton precession magnetometer was used for the survey. Sensor was oriented to measure vertical component of total field. The readings were taken at 12.5 meter intervals using a Garmin 60Cx GPS for survey location. Raw data was corrected for diurnal variation by looping. This was done by returning to a common point and verifying reading over time intervals, and comparing the corrections with diurnal changes recorded by magnetic observatories reporting in Victoria, BC (NRC). The vertical component of total field variations in field readings of repeat readings were compared and corrected. Geophysical fieldwork in 2023 included 3.3 line-kilometers of magnetometer ground surveying. Ground magnetometer surveys carried out in March, 2023 (3.3 line-km, 264 readings taken @ 12.5 m spacing) covered a section of the claims that are underlain by Vancouver Group Karmutsen Formation basaltic and andesitic rocks. The magnetometer survey objective is to locate concentrations of magnetic minerals (e.g. magnetite, ilmenite). Variation in magnetic total field strength can be linked to change in lithology. Results of the ground magnetometer survey identified values ranging from a low of 51,993 nT to a high of 55,157 nT (range of 3,164 nT). Most of the readings were high quality (99 ranking) and a small portion (< 5%) were ranked between 29-78 quality of readings. The 2023 magnetometer survey covered 4 areas (Fig 9). Magnetometer positive anomalous values are associated with silicified basalt-andesite (increased magnetite) and significant positive anomalies (and copper-

silver bearing mineralization) that require detailed mapping/sampling are described for each of the 4 surveyed areas:

1)Pomeroy 1 (Fig 10): L 54800 N, stn 36837 E to 36750 E,

L 54850 N, stn 36587 E to 36600 E

2)Copper Bell (Fig 11): L 54900 N, stn 38100 E to 38212 E, L 54900 N, stn 38300 E to 38350 E,

3)Beaver, Ingersoll (Fig 12): L 53500 N, stn 38050 E to 38150 E

L 53500 N, stn 37862 E to 37900 E

L 53600 N, stn 38125 E to 38200 E

4)Colleen (Fig 13): L 55300 N, stn 36612 E, stn 36662 E, stn 36687 E, stn 36825 E

L 55350 N, stn 36950 E, stn 36750 E, stn 36700 E, stn 36637 E

Geochemical fieldwork carried out in 2023 consisted of 8 rock chip samples covering the Pomeroy 1 and Copper Bell mineral zones. The rock chip sampling done in 2023 consisted of sequential leach for oxide, sulphide and residual geochemical analysis (Fig 5-10). Copper sequential leach (ALS method Cu-PKG06LI involving sulfuric & cyanide leach) identifies oxide, sulphide and residual copper geochemistry. A total of 8 rock samples, ranging from 0.68-1.84 kilograms in weight, of acorn sized rock chips were taken with rock hammer and moil, and placed in marked poly bags and shipped to ALS Chemex Labs Ltd, North Vancouver, BC for Prep-31 & Cu-PKG06LI sequential leach for oxide, sulphide and residual geochemical analysis, (Appendix A). Location was aided by maps from [www.Mapplace](http://www.Mapplace) and Google Earth. Locations were marked by waypoints generated by Garmin 60Cx GPS receiver and considered accurate to within 3-5 meter accuracy for northing and easting (elevations are considered estimates plus or minus several meters).

A description of rock chip samples (2023) are summarized (Analysis certificate VA23177512):

Sample ID	Easting NAD 83	Northing NAD 83	Elev (m)	Zone name	MTO ID	Lithology
23CIR-1	337153	5554746	215	Pomeroy 1	848551	amygdaloidal basalt-andesite
23CIR-2	336922	5554901	225	Pomeroy 1	848551	amygdaloidal basalt-andesite
23CIR-3	336926	5554876	215	Pomeroy 1	848551	amygdaloidal basalt-andesite
23CIR-4	336860	5554879	221	Pomeroy 1	848551	amygdaloidal basalt-andesite
23CIR-5	336826	5554894	220	Pomeroy 1	848551	amygdaloidal basalt-andesite
23CIR-6	336796	5554851	231	Pomeroy 1	848551	amygdaloidal basalt-andesite
23CIR-7	338311	5554939	165	Copper Bell	848551	amygdaloidal basalt-andesite
23CIR-8	338254	5554836	189	Copper Bell	848551	amygdaloidal basalt-andesite

Sample ID	Alteration	Mineralization	Sample	vn strike	vein dip
23CIR-1	quartz, chlorite		outcrop	135	12 SW
23CIR-2	quartz, chlorite, calcite	chalcocite, malachite	outcrop	130	69 SW
23CIR-3	quartz, chlorite, prehnite, calcite	chalcocite, malachite, bornite, chalcopyrite	outcrop	120	70 SW
23CIR-4	quartz, chlorite, prehnite, calcite	chalcocite, malachite, bornite, chalcopyrite	outcrop	80	68 SW
23CIR-5	quartz, chlorite, prehnite, calcite	chalcocite, malachite, azurite	outcrop		
23CIR-6	quartz, chlorite, prehnite, calcite	chalcocite, malachite, azurite	outcrop	90	15 S
23CIR-7	quartz, chlorite, prehnite, calcite	chalcocite, malachite, bornite, chalcopyrite	outcrop	133	60 SW
23CIR-8	quartz, chlorite, prehnite, calcite	chalcocite, malachite, chalcopyrite	subcrop		

Sample ID	CuT-SEQ06 Total Cu %	AA06s sulphuric % Cu	% oxide	AA16s cyanide % Cu	% sulphide	AA62s residual % Cu	% residual
23CIR-1	0.01	0.01	na	0.01	na	0.01	na
23CIR-2	0.38	0.24	63	0.12	32	0.02	5
23CIR-3	7.46	1.59	21	5.79	78	0.08	1
23CIR-4	8.48	1.15	14	7.17	84.5	0.16	1.5
23CIR-5	4.51	1.96	43	2.48	55	0.07	2
23CIR-6	3.28	1.77	54	1.44	44	0.07	2
23CIR-7	14.7	1.35	9	13.3	90	0.05	1
23CIR-8	3.42	1.21	35	2.15	63	0.06	2

Rock samples 23CIR-3 to 6 (averaging 5.93 % Cu) were taken from the west part of the **Pomeroy 1** zone contains an average of:

33 % oxide Cu,  
65.4% sulphide Cu, &  
1.6 % residual Cu (native copper).

Rock samples 23CIR-7 to 8 (averaging 9.06 % Cu) taken from the east part of the **Copper Bell** zone contains an average of:

22 % oxide Cu,  
76.5 % sulphide Cu, &  
1.5 % residual Cu (native copper).

Rock samples 22CIR-1, 2, & 4 (2022 rock sampling by the writer) were taken from the east part of the **Pomeroy 3** zone contains an average of:

47.6% oxide Cu,  
33.4% sulphide Cu, &  
13% residual Cu (native copper).

Rock sample 22CIR-3 (2022 rock sampling) was taken from the north-central part of the **Pomeroy 2** zone and this rock sample contains an average of:

29.1% oxide Cu,  
69.1% sulphide Cu, &  
0.02% residual Cu (native copper).

## **10 Drilling**

There has been considerable drilling in the Pomeroy 3, 4 area with shallow drill holes, and several thousand tonnes of 1-3% Cu has been outlined in 1-6 meter wide zones. Plotted drill holes indicate 2 mineralized zones, an upper zone dipping 20-25 degrees into hillside (north dip), and a lower zone dipping 10 degrees into hillside (north dip). The upper & lower zones are separated by about 18 meters of altered (calcite, quartz, chlorite, actinolite, prehnite), highly amygdaloidal basalt. The mineralogy of copper mineralization consists mainly of chalcocite with minor malachite-azurite, chalcopyrite and native copper. This mineralogy suggests the ore has a portion of copper oxide (carbonate oxides such as malachite, azurite, and minor cuprite), and copper sulphide (chalcocite, minor chalcopyrite, trace bornite), and minor native copper as residual. This 'high oxide/residual Cu' is the principal target that is shown in Block D-1, 2, & 3 (Pomeroy 4), and Block C & B (Pomeroy 3), based on DDH data from Dodge Copper Mines Ltd 1953 (source: Property File, Prince Stewart Mines Ltd, Sheppard, 1972). The 1953 drilling covers an area of 200 X 70 meters, elongated east-west, and this area coincides with the 2022 SGH hydrocarbon soil geochemical 'Rabbit- Ear Anomaly' (337,425E to 337,675 E and 5,553,225 N to 5,553,275 N).

## **11 Sample Preparation, Analyses, & Security**

Sample preparation is described in Appendix B, and geochemical analysis is shown in Appendix A. The samples were transported in secure conditions and were not tampered with.

## **12 Data Verification**

Quality Control for each sample analyzed is listed in Appendix A geochemical analysis certificates.

## **13 Mineral Processing and Metallurgical Testing**

Obtaining bulk samples by excavating surface mineralization from Pomeroy mineralization is relatively simple because of good access, and relatively shallow dipping mineralization.

## **14 Mineral Resource Estimates**

Not applicable.

## **15 Mineral Reserve Estimates**

Not applicable.

## **16 Adjacent Properties**

The area 2-12 km north of the subject property contains an assortment of Cu-Ag-Au-Zn(W) bearing vein, volcanic redbed Cu, skarn and manto deposit types. Notable Cu-Ag-Au-Zn(W) bearing mineral occurrences include Lucky Jim, Contact, Nat, WFP, Copper Road, Madison, Great Gold, Rebecca, Pelican, Plato, and Trilby. Of all the adjacent property mineral occurrences, only Copper Road is a volcanic redbed Cu (chalcocite, malachite, chalcopyrite) deposit type. All other adjacent properties (besides Copper Road) are classified as Cu-Ag vein, Cu skarn, and polymetallic vein deposit types.

## **17 Relevant Data**

The exploration & development work required to develop the resources of the Pomeroy and adjacent zones within the mineral titles can be done without conflicting with recreational trail use of the area.

## **18 Interpretations and Conclusions**

Soil sample results from 2020 fieldwork indicate a strong positive copper in soil anomaly located along a N-S trend on the Pomeroy 3, 4 zone between 337,675 E and 337,775 E. The anomalous copper in soil anomaly occurs between 5,554,025 N and 5,554,225 N (note- the anomaly is open to the north and south. The Pomeroy 2 (Copper Flats) zone and Beaver 1 analysis results show strong positive copper in soil anomalies however they are more erratically distributed. Silver in soil values closely follow anomalous copper in soil values. There appears to be peripheral manganese in soil anomalies in close proximity to the copper zones and may indicate a sea-floor spreading (rifting) environment of deposition. The high manganese content does not correlate with high Cu-Ag values but the close proximity of high Mn, and localized concentrations of vanadium (up to 444 ppm V) in soil suggests that pyrolusite (MnO<sub>2</sub>) and vanadium bearing minerals may be present in the highly differentiated, amygdaloidal basalts, and inter-layered (thin-bedded) siliceous, carbonaceous clastic sediments.

The Pomeroy 3 rock samples contain relatively higher oxide (malachite/azurite/cuprite) and residual copper (native copper) mineralization. The Pomeroy 1, 2 and Copper Bell rock sample contains relatively high sulphide (chalcocite, chalcopyrite), and low oxide and residual type copper mineralization. Geological mapping identified Pomeroy 3, & 4 with extensive quartz-carbonate-chlorite-prehnite alteration, and strong supergene (increased oxides) alteration in comparison to Pomeroy 1, 2 & Copper Bell (increased sulphides). The 1953 drilling also confirms steeper dipping mineralization along fracture/fault zones with an apparent N-S trend. The 2022 SGH anomaly correlates with shallow dipping mineralization in highly amygdaloidal basalt with moderate to intense alteration (calcite-prehnite-quartz-chlorite). The 2020 soil Cu-Ag

in soil geochemical anomalies correlate with steeper dipping mineral zones. A combination of steep and shallow dipping mineral zones (infilling fracture/fault structures) occur in altered basaltic host rock. It is envisioned that sea-floor spreading rift tectonics led to complex submarine, and oxidized flow-top lava flows with fractured and faulted related infill Cu-Ag bearing mineralization. The well-defined SGH 'Rabbits Ear' Anomaly correlates with the amygdaloidal altered basalt in the Pomeroy 3, 4 zone rock samples (ID 22CIR-1, 2, & 4). The SGH anomaly correlates with relatively higher oxide and residual copper mineralization, with increased quartz-carbonate-chlorite-prehnite alteration.

## **19 Recommendations**

Core drilling of the 2022 SGH anomaly (Pomeroy 3, 4) as primary target, and Pomeroy 1 (2023 west mag anomaly) as a secondary target, in a 30 m grid pattern in area of main copper showings is recommended. Also, historical data should be converted to digital format and plotted on a common GIS base showing results of historic surveying and drilling/trenching. Digitizing will assist in identifying targets for follow-up work.

Digitizing will assist in identifying targets for follow-up work. In order to assess the economic potential of the property, geophysics is recommended on the Pomeroy, Beaver, Colleen, Copper Valley, Copper Valley, Butte and Doe Zones. Based on results of drilling additional follow-up drilling, trenching, & bulk sample testing (beyond Pomeroy 1, 3, & 4 zones), may be recommended. Based on results of drilling, trenching & bulk sample testing may be recommended.

## 20 References

- Betmanis, A, 2012, Geochemical Report on Copper Island Mines Ltd (Pomeroy) Property, MEMPR assessment report AR # 33,093
- Ford, G.M., 1992, Quadra Copper Project, Photo Linear Analysis, for Mintek Res Ltd, Assessment Report 22,246.
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- Lefebure, D.V. and Church, B.N. (1996): Volcanic Redbed Cu, in Selected British Columbia Mineral Deposit Profiles, Volume 1 - Metallic Deposits, Lefebure, D.V. and Höy, T, Editors, British Columbia Ministry of Employment and Investment, Open File 1996-13, pages 5-7.
- McManus, M (2012), Geological Mapping Report Copper Island Property Pomeroy 1-5, Beaver, Copper Bell Deposits Quadra Island, B.C. Nanaimo Mining District, for Overland Resources.
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- Schuss, M. 1989, Prospecting Report of Copper Cliff, Ran 1-3 Claims, for Heyman, D, Assessment Report 1,989.
- Sheppard, E.P., 1974, Geological Report on the Beaver Dam 1 & 2, Colleen 1 & 2 Claims, for Quadra Mining Company Ltd, Assessment Report 5,076.
- Skoda, E., 1997, Report on Copper Cliff Property, for Reyes, E., Assessment Report 24,999.
- Slim, B.A, 1997, Copper Cliffs, Project Review, for Reyes, E., Assessment Report 24,999.

## **CERTIFICATE AND DATE**

I, Andris Kikauka, of 4199 Highway, Powell River, BC am a self-employed professional geoscientist. I hereby certify that:

- 1.** I am a graduate of Brock University, St. Catharines, Ont., with an Honours Bachelor of Science Degree in Geological Sciences, 1980.
- 2.** I am a Fellow in good standing with the Geological Association of Canada.
- 3.** I am registered in the Province of British Columbia as a Professional Geoscientist.
- 4.** I have practiced my profession for forty years in precious and base metal exploration in the Cordillera of Western Canada, U.S.A., Mexico, Central America, and South America, as well as for three years in uranium exploration in the Canadian Shield.
- 5.** The information, opinions, and recommendations in this report are based on fieldwork carried out in my presence on the subject property during which time a technical evaluation consisting of rock sampling and geophysical surveys, carried out in March, 2023.
- 6.** I have no interest in the Copper Island mineral claims. The recommendations in this report are for the purpose of describing future exploration work, and cannot be used for the purpose of public financing.
- 7.** I am not aware of any material fact or material change with respect to the subject matter of this Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
- 8.** This technical work report supports requirements of BCEMPR for Exploration and Development Work/Expiry Date Change.

Andris Kikauka, P. Geo.,

August 31, 2023



**ITEMIZED COST STATEMENT-**

**Copper Island (Pomeroy, Beaver, Colleen, Copper Bell, Copper Cliff, Doe)**

**MINERAL TENURE NUMBERS OF ALL CLAIMS LISTED**

808082

844515

848551

848942

848943

**GEOCHEMICAL, GEOPHYSICAL FIELDWORK DONE: MARCH 6-10, 2023,**

**WORK PERFORMED ON MINERAL TENURE 848551, 808082, 848942**

**NANAIMO MINING DIVISION, NTS 92K 3W (TRIM 092K 014)**

**FIELD CREW:**

**A Kikauka (Geologist) 5 days (surveying, mapping, sampling) \$ 3,250.00**

**FIELD COSTS:**

**Mob/demob/preparation 300.90**

**Meals and accommodations 520.95**

**Truck mileage & fuel 328.75**

**Equipment & safety supplies (first aid, bags, flags, tags) 45.15**

**Magnetometer rental (GEM GSM 19T proton precession v 7.0)  
for 3.3 line-km magnetometer survey 375.00**

**ICP AES (ALS ME-MS) geochemical analysis sequential leach for copper,  
ALS Cu-PKG06LI oxide/sulphide geochemistry (8 rock samples) 585.60**

**Communications (VHF radio, cell phone) 45.00**

**Shipping 68.95**

**Report 1,150.00**

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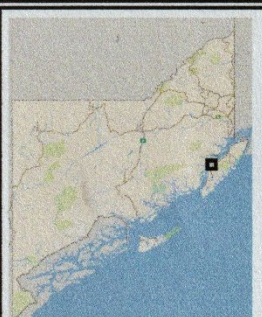
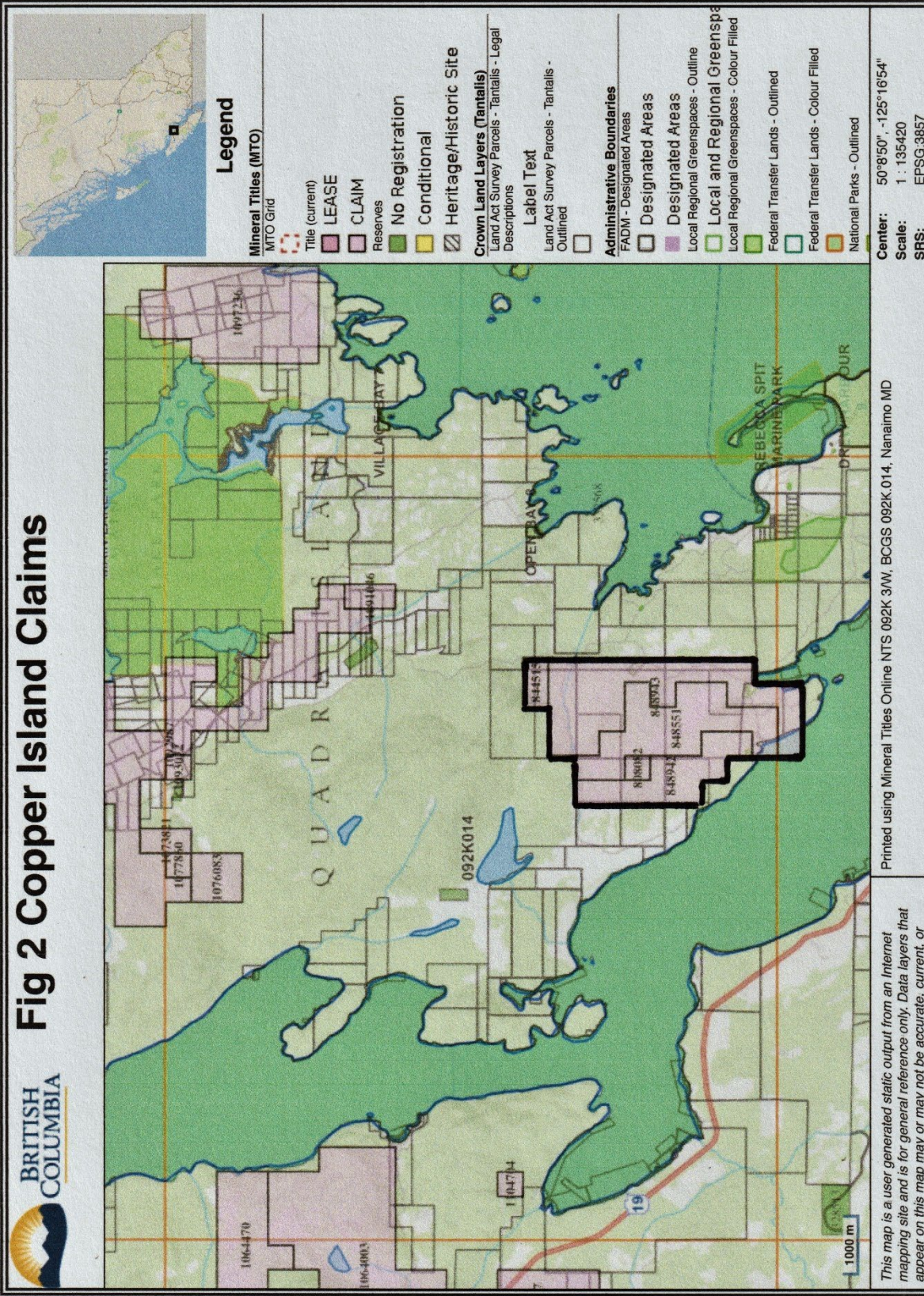
**Total= \$ 6,670.30**



**Fig 1 Copper Island (Pomeroiy) Claims General Location**  
 NTS 092K 3/W, BCGS 092K.014, Nanaimo Mining Division  
 MTO Mineral Claims, Crown Grants, & Minfile Names Indicated



# Fig 2 Copper Island Claims



**Legend**

**Mineral Titles (MTO)**  
MTO Grid

- Title (current)
- LEASE
- CLAIM
- Reserves
- No Registration
- Conditional
- Heritage/Historic Site

**Crown Land Layers (Tantalis)**  
Land Act Survey Parcels - Tantalis - Legal Descriptions

**Label Text**  
Land Act Survey Parcels - Tantalis - Outlined

**Administrative Boundaries**  
FADM - Designated Areas

- Designated Areas
- Designated Areas
- Local Regional Greenspaces - Outline
- Local Regional Greenspaces - Colour Filled
- Local Regional Greenspaces - Colour Filled
- Federal Transfer Lands - Outlined
- Federal Transfer Lands - Colour Filled
- National Parks - Outlined

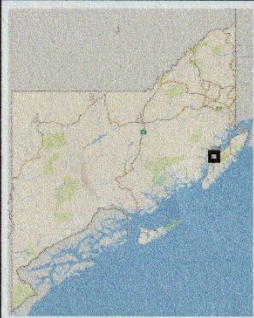
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 Scale: 1 : 135420  
 SRS: EPSG:3857

Printed using Mineral Titles Online NTS 092K 3/W, BCGS 092K.014, Nanaimo MD

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or



# Fig 2B Cu Island Claim Detail



### Legend

**Mineral Titles (MTO)**  
MTO Grid

- Title (current)
- LEASE
- CLAIM

**Reserves**

- No Registration
- Conditional
- Heritage/Historic Site

**Other Mining Layers**  
Mineral Occurrences (MINFILE)

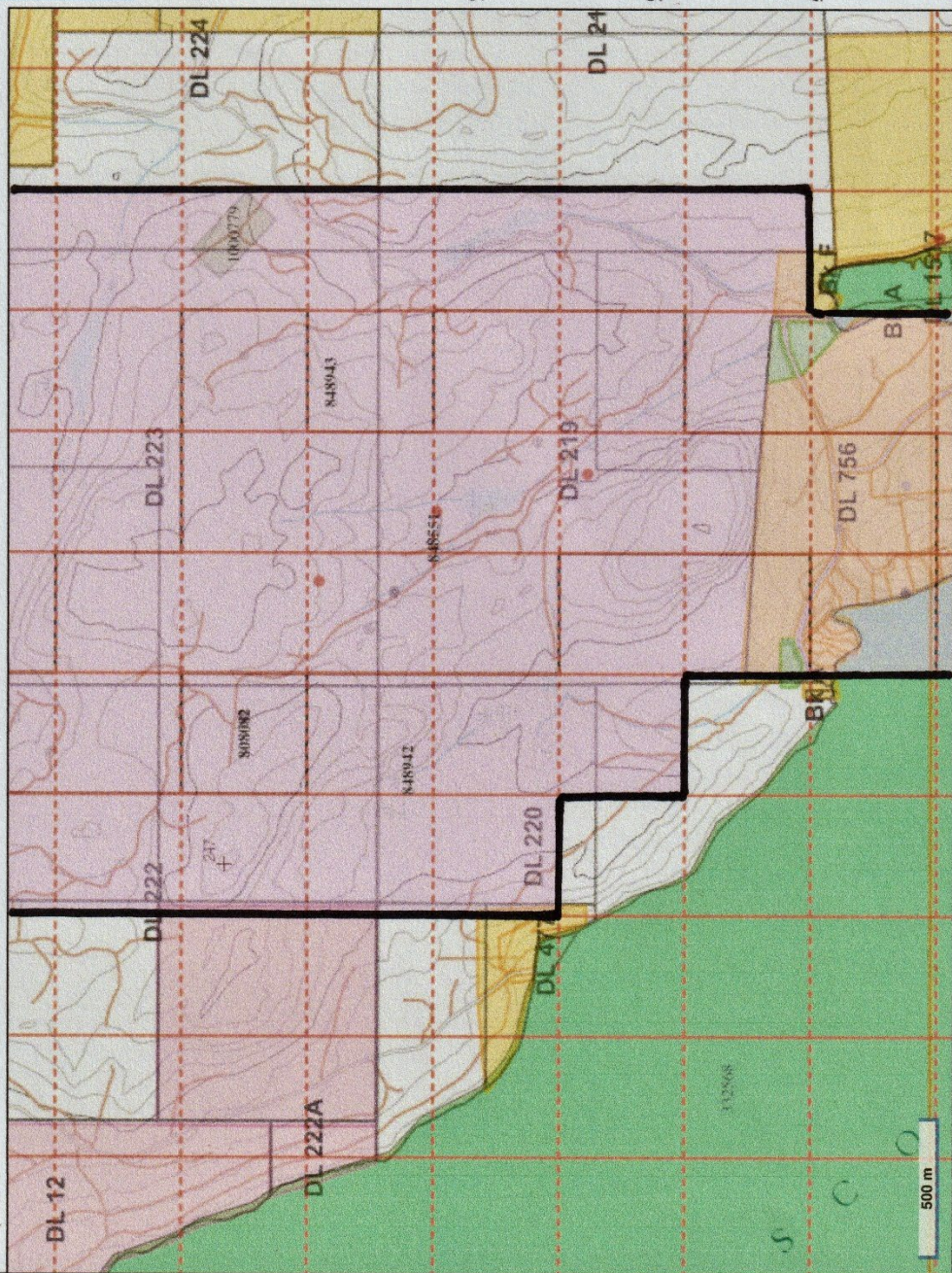
- Producer
- Past Producer
- Developed Prospect
- Other

**Crown Land Layers (Tantalis)**  
Land Act Survey Parcels - Tantalis - Legal Descriptions

**Label Text**  
Land Act Survey Parcels - Tantalis - Outlined

**Administrative Boundaries**  
FADM - Designated Areas

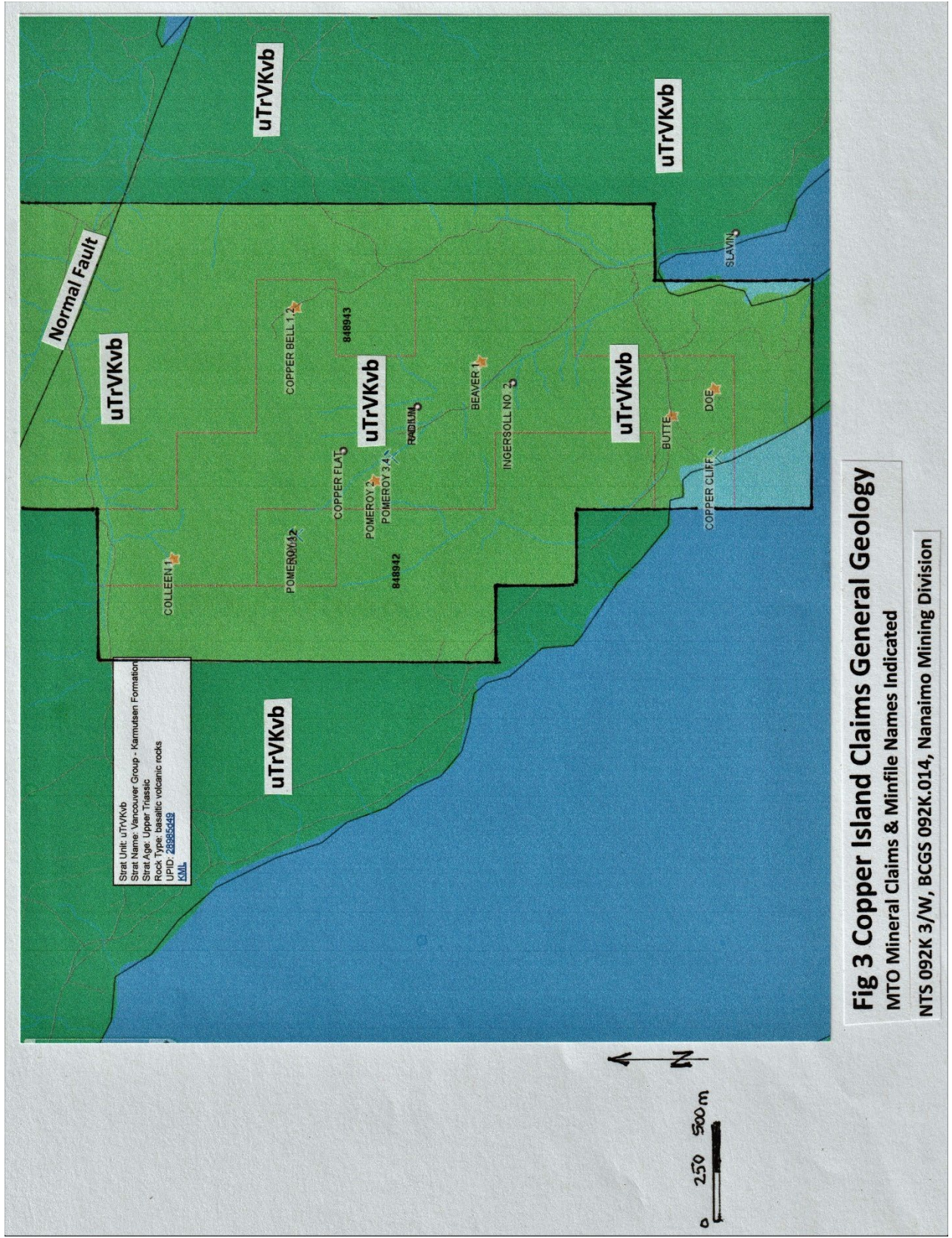
- Designated Areas
- Designated Areas
- Local Regional Greenspaces - Outline
- Local and Regional Greenspaces



Center: 50°6'54", -125°16'29"  
 Scale: 1 : 33855  
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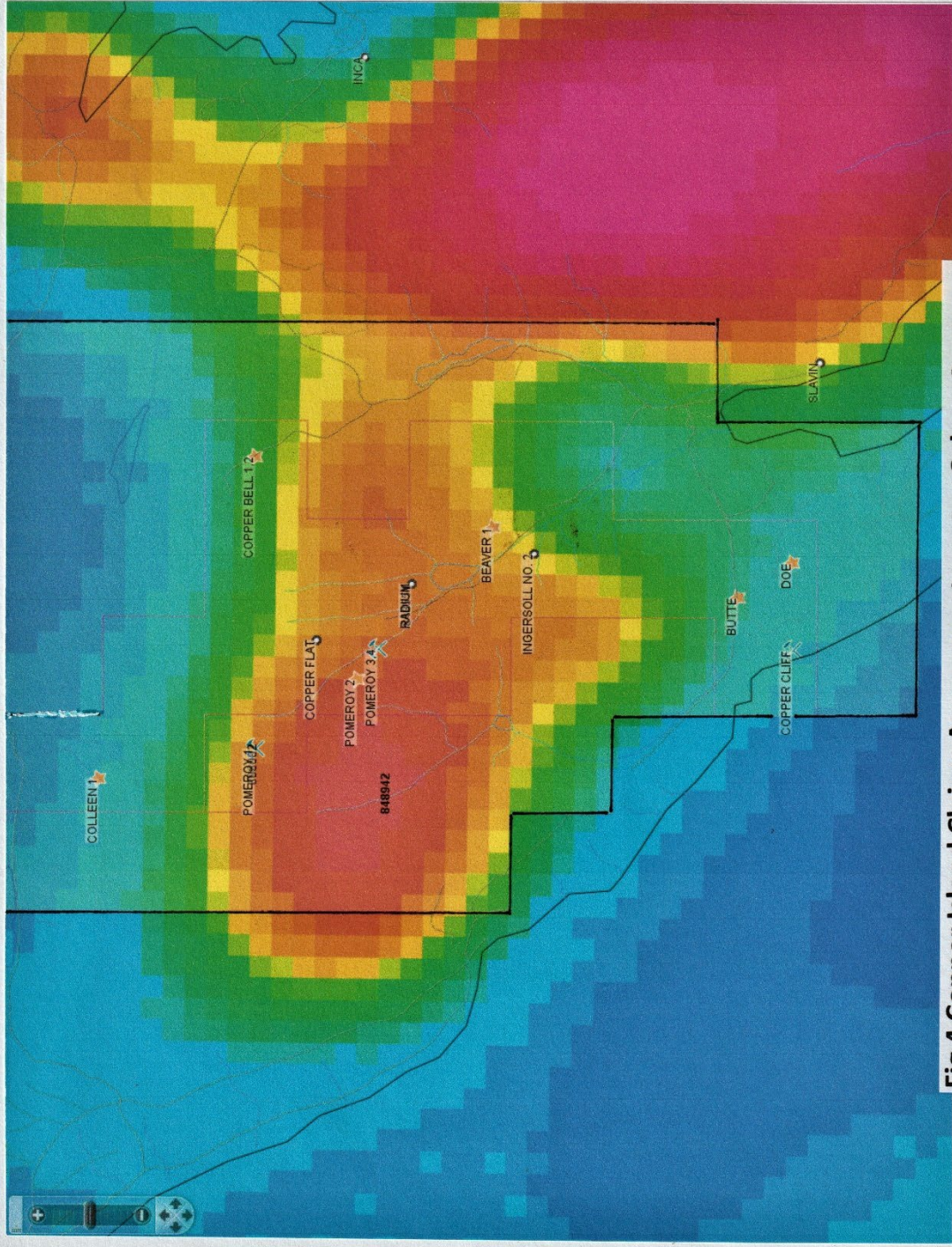
Printed using Mineral Titles Online NTS 092K 3W, BCGS 092K.014, Nanaimo MD

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or



Strat Unit: uTrVKvb  
 Strat Name: Vancouver Group - Karmutsen Formation  
 Strat Age: Upper Triassic  
 Rock Type: basaltic volcanic rocks  
 UPID: 28985449  
 KML

**Fig 3 Copper Island Claims General Geology**  
 MTO Mineral Claims & Minefile Names Indicated  
 NTS 092K 3/W, BCGS 092K.014, Nanaimo Mining Division



**Fig 4 Copper Island Claims Aeromagnetometer Colour Contours**

MTO Mineral Claim Outline & Minifile Names Indicated

Source: Mappace (1<sup>st</sup> Derivative aero-magnetometer geophysics)

Red, Yellow Colour= Aeromag High

Green, Blue Colour= Aeromag Low

# Copper Island (Pomeroy) Rock Chip Samples

Rock Chip ID # 22CIR-1 to 4 (2022), ID # 23CIR-1 to 8 (2023)

Fig 5

NTS 092K 3/W, BCGS 092K.014, Nanaimo Mining Division

## Legend



Rock Chip Sample



ID No	Mineralization	Zone Name	strike	dip	CUT-SEC08 Total Cu %
22CIR-1	chalcoite, malachite, native Cu	Pomeroy 3	160	77 W	5.56
22CIR-2	chalcoite, malachite, chalcopryite	Pomeroy 3	166	70 W	2.23
22CIR-3	chalcoite, malachite, bornite, chalcopryite	Pomeroy 2	115	88 N	4.90
22CIR-4	chalcoite, malachite, azurite	Pomeroy 3	168	75 W	4.25

ID No	AAGS sulphuric % Cu	% oxide	AALEs cyanide % Cu	% sulphide	AAGS residual % Cu	% residual
22CIR-1	2.18	39.2	1.22	21.9	2.16	38.8
22CIR-2	1.21	54.3	0.97	43.5	0.05	0.04
22CIR-3	1.45	28.1	3.45	89.1	0.09	0.02
22CIR-4	2.11	49.2	1.49	34.7	0.69	0.16

Alteration	Mineralization	Sample	strike	dip
quartz, chlorite	chalcoite, malachite	outcrop	135	12 SW
quartz, chlorite, calcite	chalcoite, malachite, bornite, chalcopryite	outcrop	130	69 SW
quartz, chlorite, prehnite, calcite	chalcoite, malachite, bornite, chalcopryite	outcrop	120	70 SW
quartz, chlorite, prehnite, calcite	chalcoite, malachite, bornite, chalcopryite	outcrop	80	68 SW
quartz, chlorite, prehnite, calcite	chalcoite, malachite, azurite	outcrop	90	15 S
quartz, chlorite, prehnite, calcite	chalcoite, malachite, bornite, chalcopryite	outcrop	133	60 SW
quartz, chlorite, prehnite, calcite	chalcoite, malachite, chalcopryite	subcrop		

Sample ID	CUT-SEC08 Total Cu %	AAGS sulphuric % Cu	% oxide	AALEs cyanide % Cu	% sulphide	AAGS residual % Cu	% residual
22CIR-1	0.01	0.01	na	0.01	na	0.01	na
22CIR-2	0.38	0.24	63	0.12	32	0.02	5
22CIR-3	7.46	1.59	21	5.79	78	0.08	1
22CIR-4	8.48	1.15	14	7.17	84.5	0.16	1.5
22CIR-5	4.51	1.96	43	2.48	55	0.07	2
22CIR-6	3.28	1.77	54	1.44	44	0.07	2
22CIR-7	14.7	1.35	9	13.3	90	0.05	1
22CIR-8	3.42	1.21	35	2.15	63	0.06	2

# Copper Island (Pomeroy) Rock Samples & Magnetometer Survey

Rock Chips ID # 22CIR-1 to 4 (2022), ID # 23CIR-1 to 8 (2023), magnetometer survey 8 E-W lines, total 3.6 line-km  
NTS 092K 3/W, BCGS 092K.014, Nanaimo Mining Division

## Legend

### Fig 6

- Mag survey end point
- Rock Chip Sample

**Colleen**  
L55350N,36450E  
L55300N,36500E  
L55300N,36950E

**Pomeroy 1**  
L54850N,36750E  
L54800N,36750E  
L54850N,37300E  
L54800N,37300E

23CIR-7  
L54900N,38100E  
L54850N,38100E  
23CIR-8  
**Copper Bell**

**Copper Flat**  
22CIR-3

22CIR-1  
22CIR-2

**Pomeroy 2, 3, 4**

**Beaver, Ingersoll**  
L53600N,37675E  
L53500N,37675E  
L53600N,38200E  
L53500N,38200E



1 km

Google Earth




# Copper Island (Pomeroy) Rock Chip & Magnetometer Survey N

Rock Chip ID # 22CIR-1 to 4 (2022), ID # 23CIR-1 to 8 (2023), magnetometer survey 6 E-W lines (2.6 line-km)  
NTS 092K 3/W, BCGS 092K.014, Nanaimo Mining Division

Miner Lake

## Legend Fig 7

 Rock Chip Sample

### Colleen

L55350N,36450E L55350N,36950E  
L55300N,36500E L55300N,36950E

### Pomeroy 1

23CIR-2 23CIR-3  
L54850N,36750E 23CIR-6 23CIR-3  
L54800N,36750E L54800N,37300E  
23CIR-1

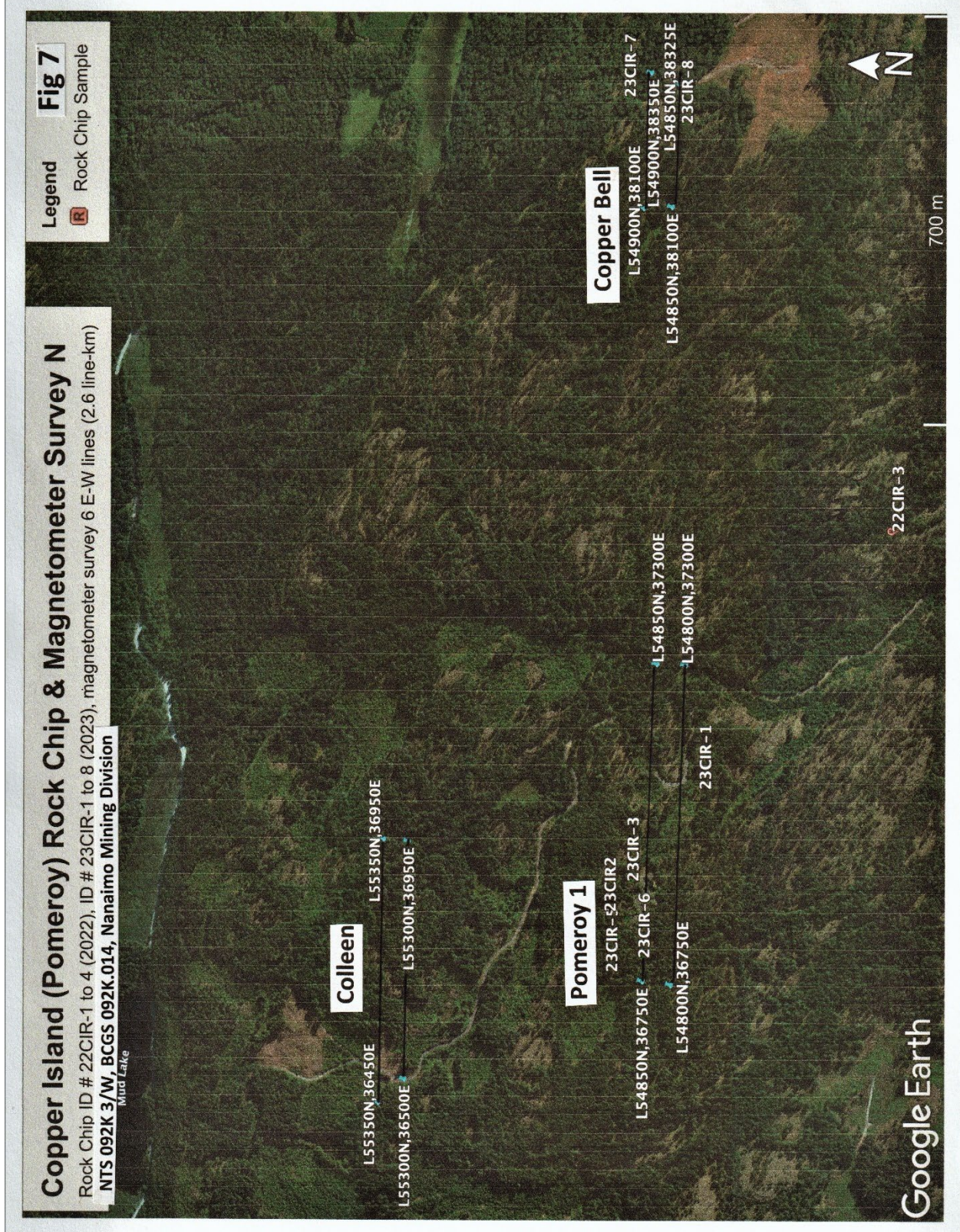
### Copper Bell

L54900N,38100E 23CIR-7  
L54900N,38350E  
L54850N,38100E L54850N,38325E  
23CIR-8

22CIR-3

Google Earth

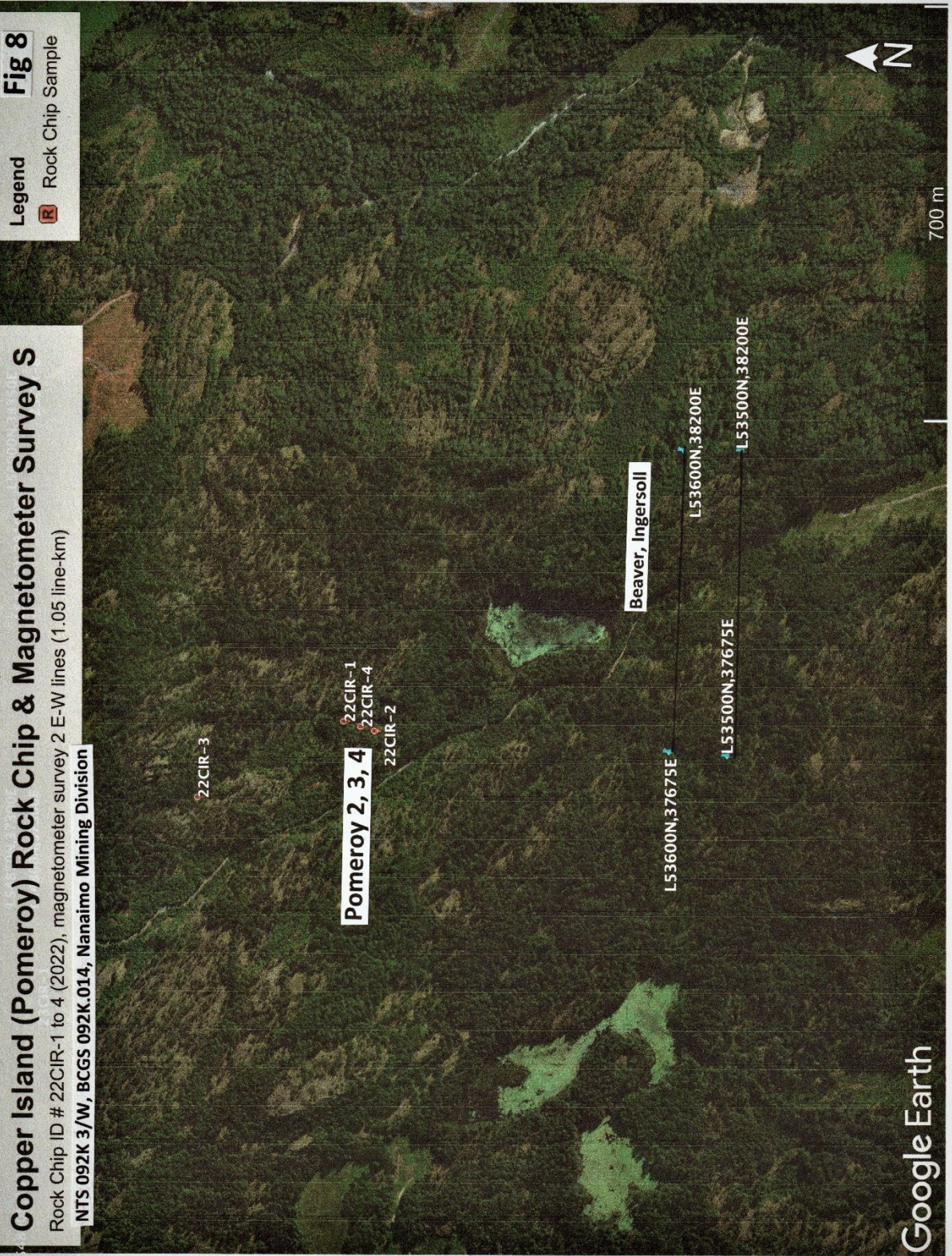
700 m



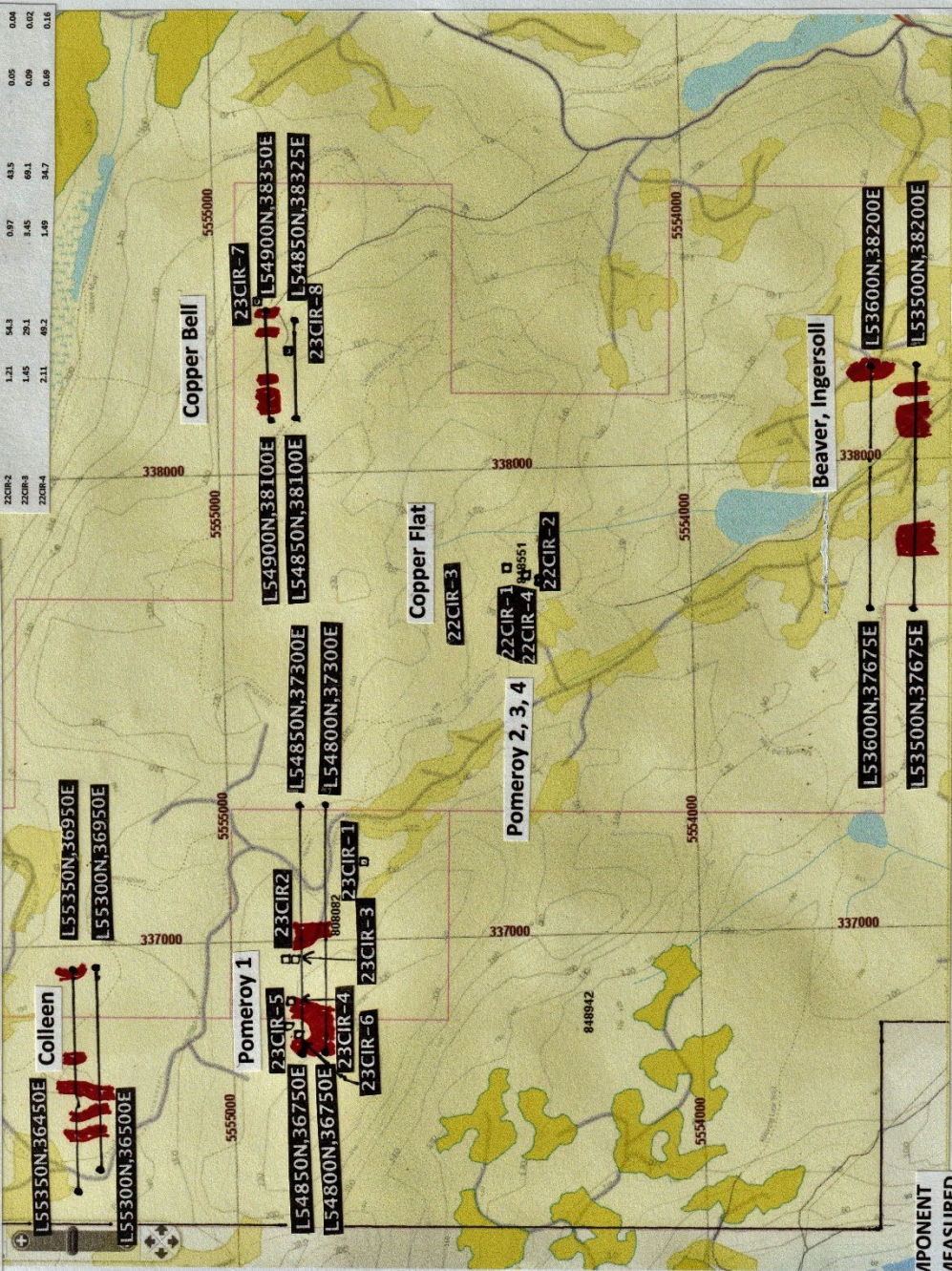
# Copper Island (Pomeroy) Rock Chip & Magnetometer Survey S

Rock Chip ID # 22CIR-1 to 4 (2022), magnetometer survey 2 E-W lines (1.05 line-km)  
NTS 092K 3/W, BCGS 092K.014, Nanaimo Mining Division

**Fig 8**  
Legend  
Rock Chip Sample



**Fig 9 Magnetometer Survey & Rock Chip Samples**

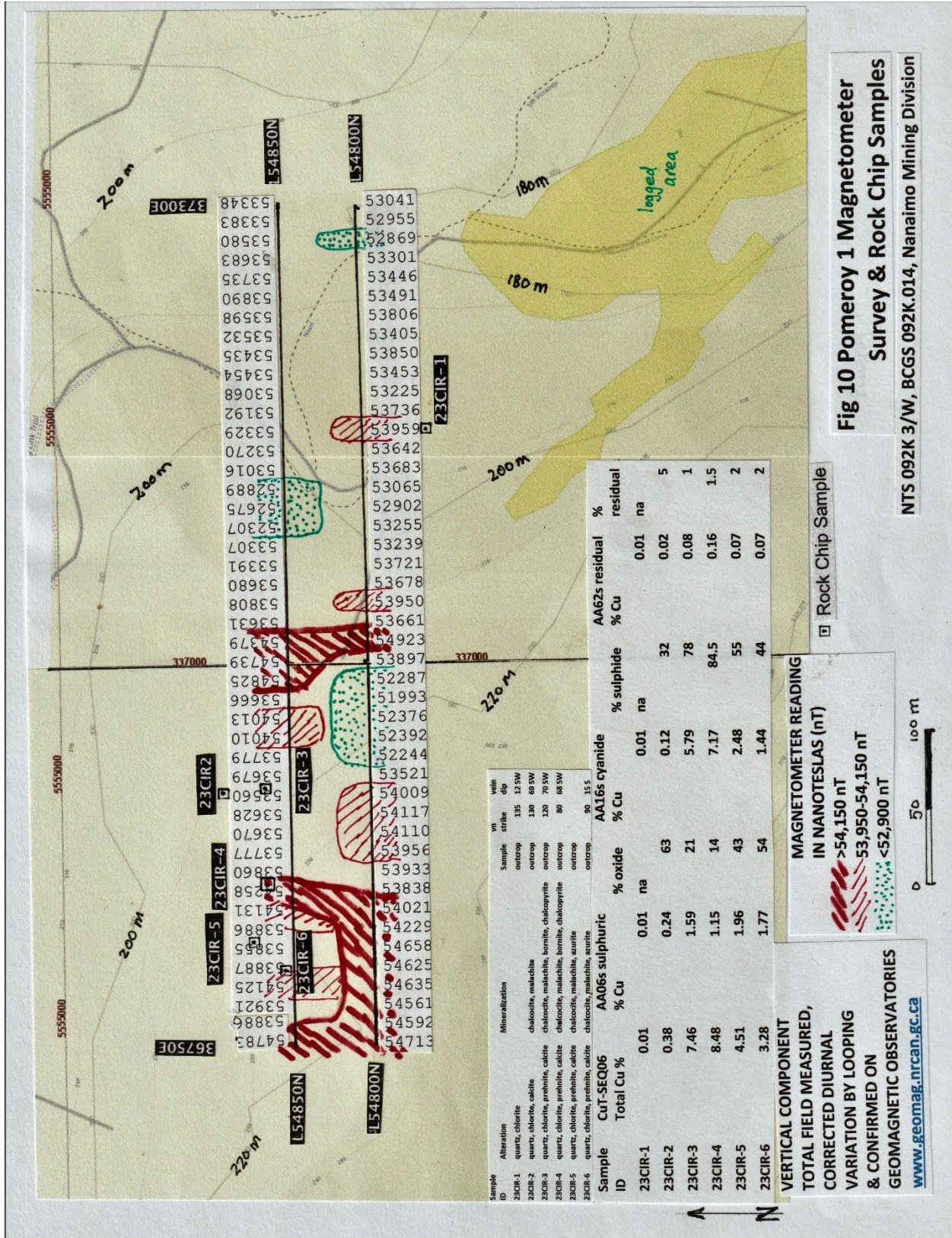


ID No	AM05 sulphuric % Cu	% oxide	AAL16 cyanide % Cu	% sulphide	AM05 residual % Cu	% residual
Z2CIR-1	2.18	39.2	1.22	21.9	2.16	38.8
Z2CIR-2	1.21	54.3	0.97	43.5	0.95	0.94
Z2CIR-3	1.65	39.1	1.45	69.1	0.99	0.02
Z2CIR-4	2.11	49.2	1.49	34.7	0.69	0.16

Sample ID	CIF-SEC06 Total Cu %	AM05 sulphuric % Cu	% oxide	AAL16 cyanide % Cu	% sulphide	AM05 residual % Cu	% residual
Z2CIR-1	0.01	na	na	0.01	na	0.01	na
Z2CIR-2	0.24	0.24	63	0.12	32	0.02	5
Z2CIR-3	7.46	1.59	21	5.79	78	0.08	1
Z2CIR-4	8.48	1.15	14	7.17	84.5	0.16	1.5
Z2CIR-5	4.51	1.96	43	2.48	55	0.07	2
Z2CIR-6	3.38	1.77	54	1.44	44	0.07	2
Z2CIR-7	14.7	1.35	9	13.3	90	0.05	1
Z2CIR-8	3.42	1.21	35	2.15	63	0.06	2

**MAGNETOMETER READING  
IN NANOTESLAS (nT)  
>54,150 nT**

**Rock Chip Sample**  
VERTICAL COMPONENT  
TOTAL FIELD MEASURED,  
CORRECTED DIURNAL  
VARIATION BY LOOPING  
& CONFIRMED ON  
GEOMAGNETIC OBSERVATORIES  
[www.geomag.nrcan.gc.ca](http://www.geomag.nrcan.gc.ca)



**Fig 10 Pomeroy 1 Magnetometer Survey & Rock Chip Samples**

NTS 092K 3/W, BCGS 092K.014, Nanaimo Mining Division

Sample ID	Alteration	Mineralization	Sample	in	with
			litre	litre	dip
23CIR-1	quartz, chlorite	chlorite, malachite	outcrop	135	12 SW
23CIR-2	quartz, chlorite, calcite	chlorite, malachite, malachite, bornite, chalcocite	outcrop	130	69 SW
23CIR-3	quartz, chlorite, prehnite, calcite	chlorite, malachite, malachite, bornite, chalcocite	outcrop	120	70 SW
23CIR-4	quartz, chlorite, prehnite, calcite	chlorite, malachite, malachite, bornite, chalcocite	outcrop	80	68 SW
23CIR-5	quartz, chlorite, prehnite, calcite	chlorite, malachite, malachite, bornite, chalcocite	outcrop	90	15 S
23CIR-6	quartz, chlorite, prehnite, calcite	chlorite, malachite, malachite, bornite, chalcocite	outcrop	90	15 S

Sample ID	CuT-SEQ06 Total Cu %	AA06s sulphuric % Cu	% sulphuric	% oxide	AA16s cyanide % Cu	% sulphide	AA62s residual % Cu	% residual
23CIR-1	0.01	0.01	na	0.01	0.01	na	0.01	na
23CIR-2	0.38	0.24	63	0.12	0.12	32	0.02	5
23CIR-3	7.46	1.59	21	5.79	78	78	0.08	1
23CIR-4	8.48	1.15	14	7.17	84.5	84.5	0.16	1.5
23CIR-5	4.51	1.96	43	2.48	55	55	0.07	2
23CIR-6	3.28	1.77	54	1.44	44	44	0.07	2

**MAGNETOMETER READING IN NANOTESLAS (nT)**

>54,150 nT

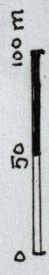
53,950-54,150 nT

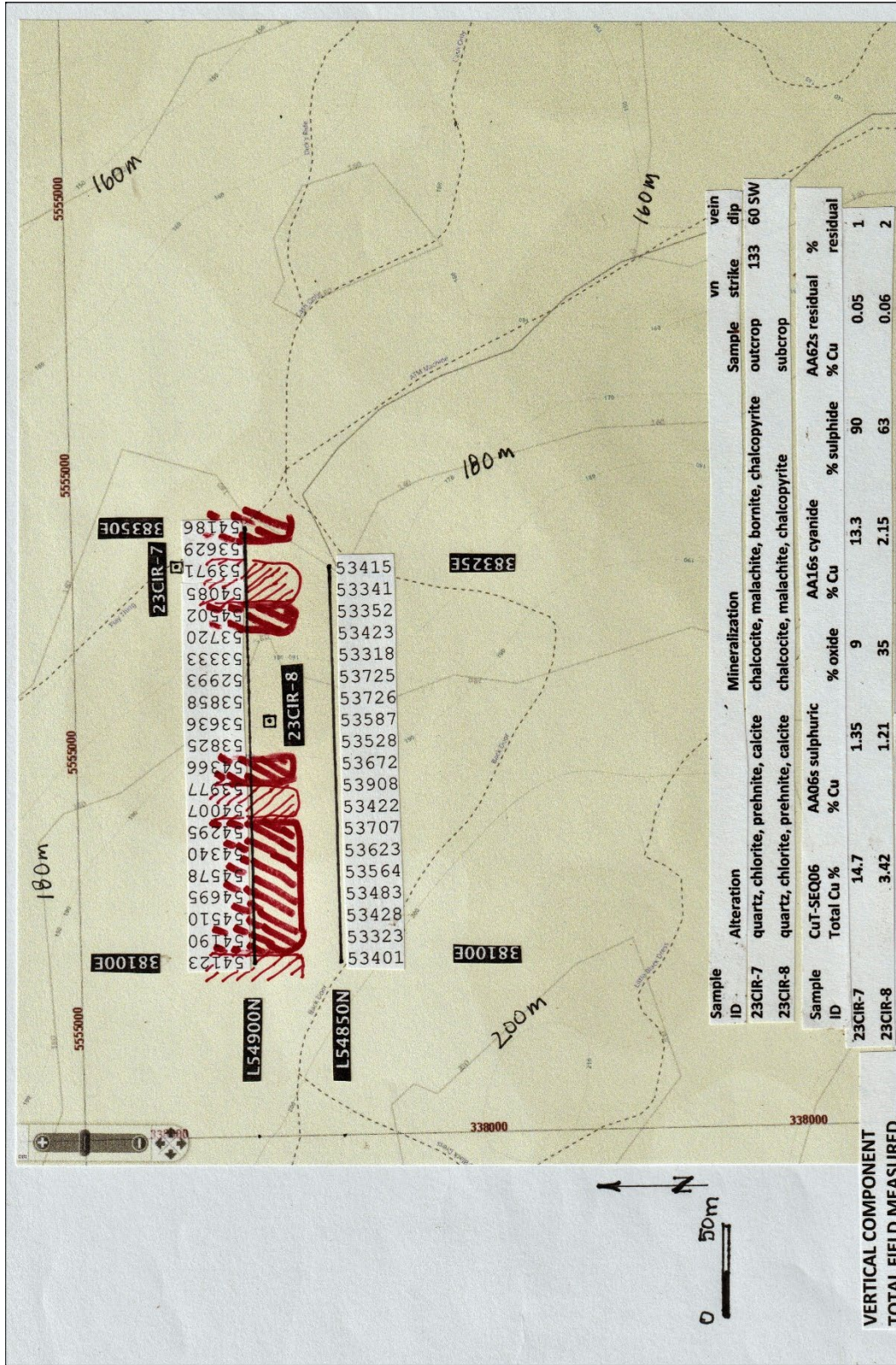
<52,900 nT

**VERTICAL COMPONENT TOTAL FIELD MEASURED, CORRECTED DIURNAL VARIATION BY LOOPING & CONFIRMED ON GEOMAGNETIC OBSERVATORIES**

[www.geomag.nrcan.gc.ca](http://www.geomag.nrcan.gc.ca)

Rock Chip Sample





VERTICAL COMPONENT  
TOTAL FIELD MEASURED,  
CORRECTED DIURNAL  
VARIATION BY LOOPING  
& CONFIRMED ON  
GEOMAGNETIC OBSERVATORIES  
[www.geomag.nrcan.gc.ca](http://www.geomag.nrcan.gc.ca)

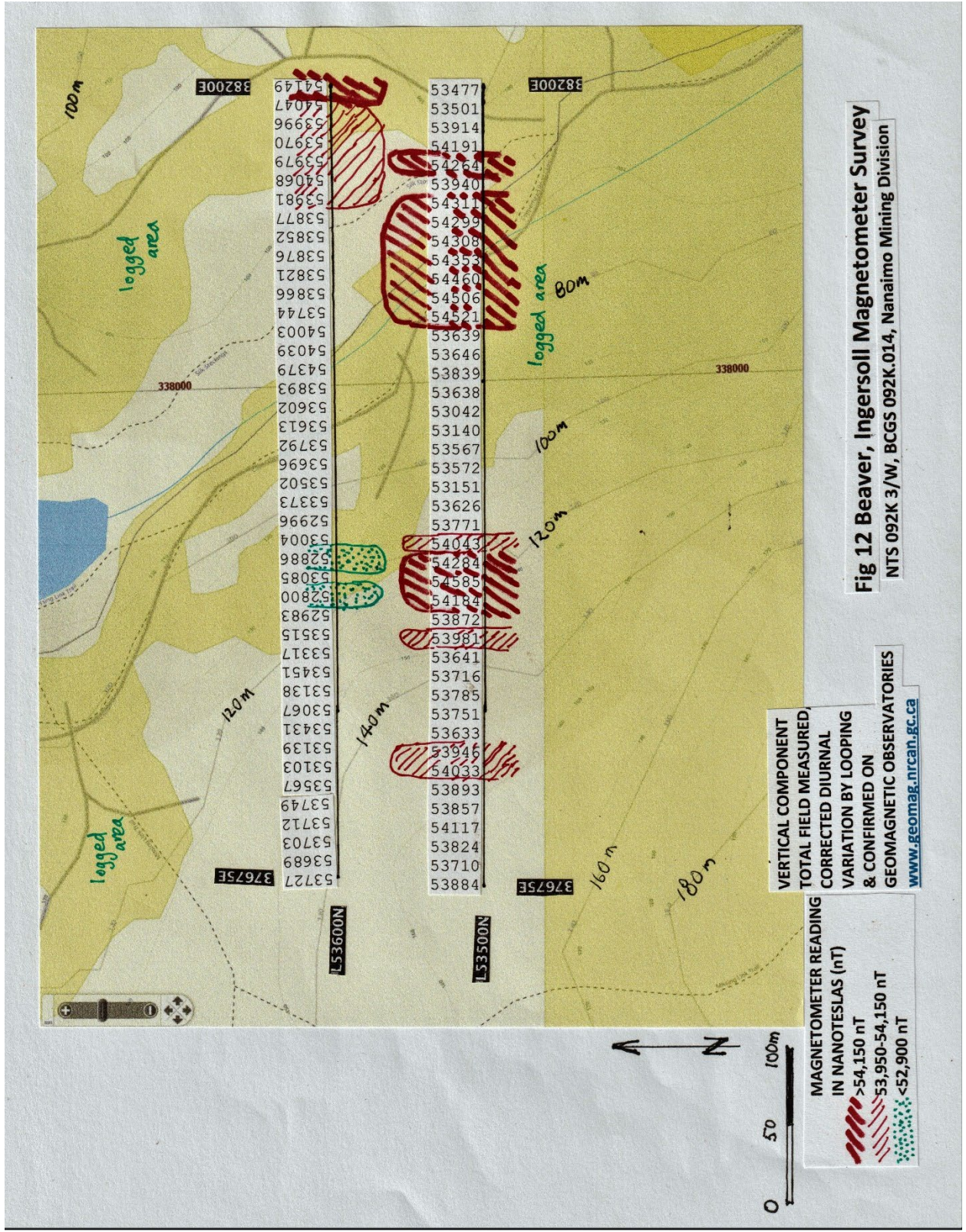
Sample ID	Alteration	Mineralization	vn strike	vein dip
23CIR-7	quartz, chlorite, prehnite, calcite	chalcocite, malachite, bornite, chalcopyrite	133	60 SW
23CIR-8	quartz, chlorite, prehnite, calcite	chalcocite, malachite, chalcopyrite		

Sample ID	CuT-SEQ06 Total Cu %	AA06s sulphuric % Cu	% sulphide	AA62s cyanide % Cu	AA62s residual %
23CIR-7	14.7	1.35	90	0.05	1
23CIR-8	3.42	1.21	63	0.06	2

**Fig 11 Copper Bell Magnetometer Survey & Rock Chip Samples**

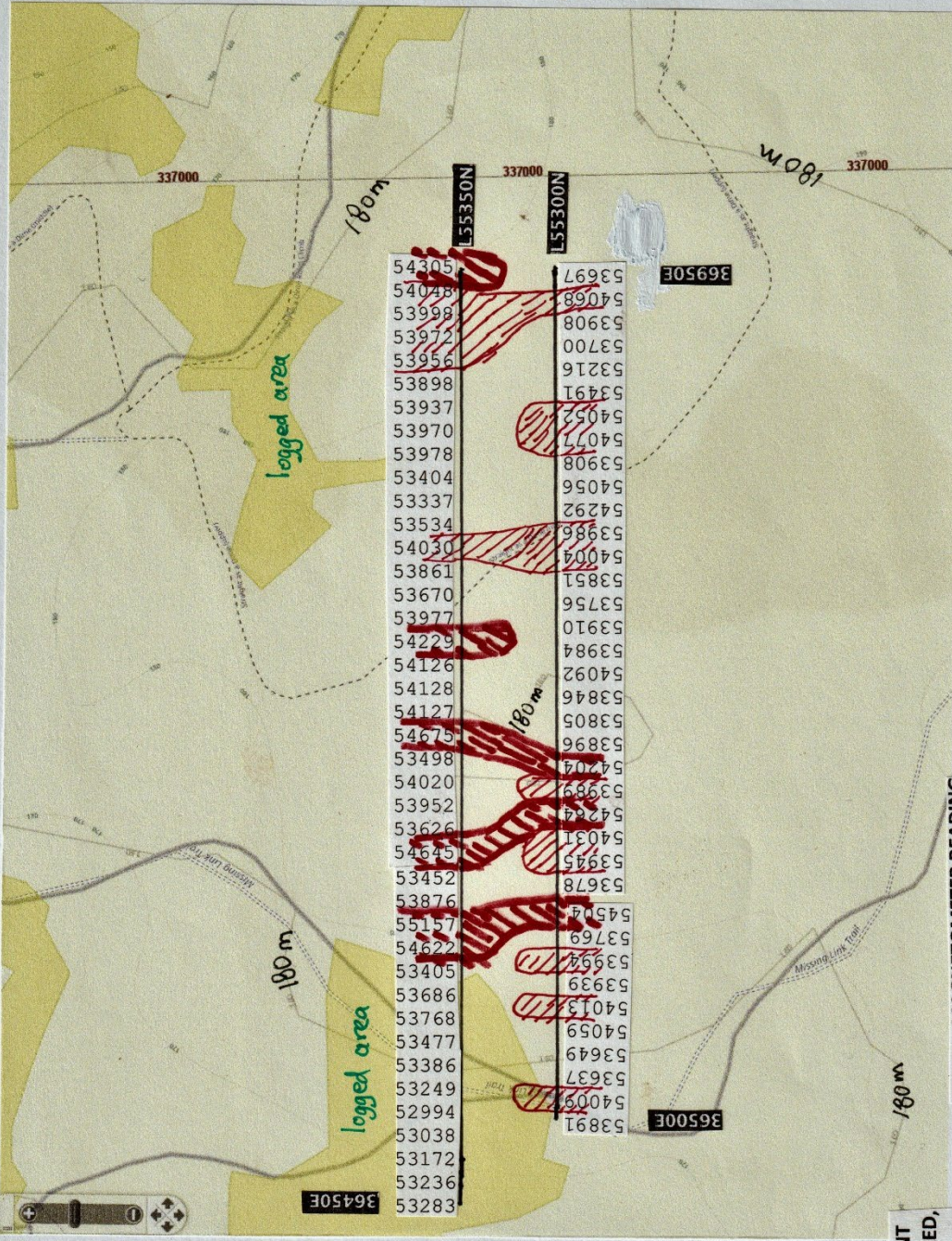
NTS 092K 3/W, BCGS 092K-014, Nanaimo Mining Division



**Fig 12 Beaver, Ingersoll Magnetometer Survey**  
NTS 092K 3/W, BCGS 092K.014, Nanaimo Mining Division




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53970	53970	53970
53996	53996	53996
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54149	54149	54149

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53710	53710	53710
53824	53824	53824
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18665	18665	18665
53872	53872	53872
54184	54184	54184
54585	54585	54585
54284	54284	54284
54043	54043	54043
53771	53771	53771
92626	92626	92626
53151	53151	53151
53572	53572	53572
53567	53567	53567
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53042	53042	53042
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54299	54299	54299
54311	54311	54311
53940	53940	53940
54264	54264	54264
54191	54191	54191
53914	53914	53914
53501	53501	53501
53477	53477	53477



VERTICAL COMPONENT  
TOTAL FIELD MEASURED,  
CORRECTED DIURNAL  
VARIATION BY LOOPING  
& CONFIRMED ON  
GEOMAGNETIC OBSERVATORIES  
[www.geomag.nrcan.gc.ca](http://www.geomag.nrcan.gc.ca)

MAGNETOMETER READING  
IN NANOTESLAS (nT)




 >54,150 nT  
 53,950-54,150 nT  
 <52,900 nT

**Fig 13 Colleen Magnetometer Survey**  
NTS 092K 3/W, BCGS 092K.014, Nanaimo Mining Division

**APPENDIX C: MAGNETOMETER DATA COPPER ISLAND  
(3.3 LINE-KM TOTAL, MTO ID # 848551, 808082, 848942)**

/Gem Systems GSM-19T 6112151 v7.0 7 XI 2006 M t-e2.v7  
/ID 1 file 01survey.m 15 II 00  
/

/X	Y	nT	sq	cor-nT	time		
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54800N	37287.50E	52955.83	99	000000.00	000418.0		
54800N	37275.00E	52869.63	99	000000.00	000450.0		
54800N	37262.50E	53301.22	99	000000.00	000518.0		
54800N	37250.00E	53446.45	99	000000.00	000618.0		
54800N	37237.50E	53491.68	99	000000.00	000746.0		
54800N	37225.00E	53806.11	99	000000.00	000850.0		
54800N	37212.50E	53405.84	99	000000.00	000938.0		
54800N	37200.00E	53850.32	99	000000.00	001122.0		
54800N	37187.50E	53453.47	69	000000.00	001206.0		
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54800N	37162.50E	53736.05	99	000000.00	003234.0		
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54800N	37137.50E	53642.23	99	000000.00	003342.0		
54800N	37125.00E	53683.03	99	000000.00	003414.0		
54800N	37112.50E	53065.27	99	000000.00	003442.0		
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54800N	37075.00E	53239.75	99	000000.00	003650.0		
54800N	37062.50E	53721.43	99	000000.00	003802.0		
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54800N	36975.00E	51993.51	99	000000.00	004654.0		
54800N	36962.50E	52376.97	99	000000.00	004730.0		
54800N	36950.00E	52392.60	19	000000.00	004842.0		
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54800N	36912.50E	54009.60	99	000000.00	011218.0		
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54800N	36812.50E	54658.89	99	000000.00	025054.0		
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54800N	36762.50E	54592.04	99	000000.00	025226.0		
54800N	36750.00E	54713.41	99	000000.00	025246.0		
54850N	36750.00E	54783.10	99	000000.00	025442.0		
54850N	36762.50E	53886.70	99	000000.00	025602.0		

**MAGNETOMETER READING  
IN NANOTESLAS (nT)**  
 **>54,150 nT**  
 **53,950-54,150 nT**  
 **<52,900 nT**  
**VERTICAL COMPONENT  
TOTAL FIELD MEASURED,  
CORRECTED DIURNAL  
VARIATION BY LOOPING  
& CONFIRMED ON  
GEOMAGNETIC OBSERVATORIES**  
[www.geomag.nrcan.gc.ca](http://www.geomag.nrcan.gc.ca)



55300N	36625.00E	53678.29	99	000000.00	042122.0
55300N	36637.50E	53945.97	99	000000.00	042146.0
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55300N	36787.50E	53851.44	99	000000.00	042938.0
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55300N	36812.50E	53986.91	99	000000.00	043122.0
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55350N	36875.00E	53937.73	99	000000.00	045342.0
55350N	36862.50E	53970.62	99	000000.00	045402.0
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55350N	36837.50E	53404.09	99	000000.00	045514.0
55350N	36825.00E	53337.57	99	000000.00	045602.0
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**MAGNETOMETER READING  
IN NANOTESLAS (nT)**

**>54,150 nT**

**53,950-54,150 nT**


**<52,900 nT**


**VERTICAL COMPONENT  
TOTAL FIELD MEASURED,  
CORRECTED DIURNAL  
VARIATION BY LOOPING  
& CONFIRMED ON  
GEOMAGNETIC OBSERVATORIES**


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55350N	36625.00E	53452.78	99	000000.00	052202.0
55350N	36612.50E	53876.18	99	000000.00	052230.0
55350N	36600.00E	55157.37	99	000000.00	052422.0
55350N	36587.50E	54622.25	99	000000.00	052454.0
55350N	36575.00E	53405.19	99	000000.00	052718.0
55350N	36562.50E	53686.73	99	000000.00	052746.0
55350N	36550.00E	53768.81	99	000000.00	052854.0
55350N	36537.50E	53477.06	99	000000.00	053010.0
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55350N	36487.50E	53038.43	99	000000.00	053714.0
55350N	36475.00E	53172.11	99	000000.00	053734.0
55350N	36462.50E	53236.82	99	000000.00	053746.0
55350N	36450.00E	53283.72	99	000000.00	053802.0
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54850N	38300.00E	53352.41	99	000000.00	211234.0
54850N	38287.50E	53423.25	99	000000.00	211254.0
54850N	38275.00E	53318.45	99	000000.00	211334.0
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54850N	38162.50E	53623.35	99	000000.00	212130.0
54850N	38150.00E	53564.82	99	000000.00	212150.0
54850N	38137.50E	53483.02	99	000000.00	212238.0
54850N	38125.00E	53428.95	99	000000.00	212310.0
54850N	38112.50E	53323.38	99	000000.00	212338.0
54850N	38100.00E	53401.71	99	000000.00	212402.0
54900N	38100.00E	54123.50	99	000000.00	212606.0
54900N	38112.50E	54190.45	99	000000.00	212706.0
54900N	38125.00E	54510.28	99	000000.00	212734.0
54900N	38137.50E	54695.21	99	000000.00	212850.0
54900N	38150.00E	54578.08	99	000000.00	212910.0
54900N	38162.50E	54340.74	99	000000.00	212930.0
54900N	38175.00E	54295.03	99	000000.00	213002.0
54900N	38187.50E	54007.97	99	000000.00	213030.0
54900N	38200.00E	53977.43	99	000000.00	213122.0
54900N	38212.50E	54366.18	99	000000.00	213210.0
54900N	38225.00E	53825.89	99	000000.00	213246.0
54900N	38237.50E	53636.30	99	000000.00	213322.0
54900N	38250.00E	53858.49	99	000000.00	213358.0
54900N	38262.50E	52993.38	99	000000.00	213542.0
54900N	38275.00E	53333.53	99	000000.00	213642.0
54900N	38287.50E	53720.37	99	000000.00	213706.0
54900N	38300.00E	54502.91	99	000000.00	213738.0
54900N	38312.50E	54085.19	99	000000.00	213802.0
54900N	38325.00E	53971.93	99	000000.00	213850.0
54900N	38337.50E	53629.87	99	000000.00	213918.0
54900N	38350.00E	54186.36	99	000000.00	213954.0

**MAGNETOMETER READING  
IN NANOTESLAS (nT)**

 >54,150 nT

 53,950-54,150 nT

 <52,900 nT

**VERTICAL COMPONENT  
TOTAL FIELD MEASURED,  
CORRECTED DIURNAL  
VARIATION BY LOOPING  
& CONFIRMED ON  
GEOMAGNETIC OBSERVATORIES**

[www.geomag.nrcan.gc.ca](http://www.geomag.nrcan.gc.ca)

54850N	36775.00E	53921.16	99	000000.00	030434.0
54850N	36787.50E	54125.37	99	000000.00	031102.0
54850N	36800.00E	53887.19	99	000000.00	031126.0
54850N	36812.50E	53855.95	99	000000.00	031146.0
54850N	36825.00E	53886.57	99	000000.00	031210.0
54850N	36837.50E	54131.83	99	000000.00	031254.0
54850N	36850.00E	54258.30	99	000000.00	031318.0
54850N	36862.50E	53860.16	99	000000.00	031406.0
54850N	36875.00E	53777.12	99	000000.00	031534.0
54850N	36887.50E	53670.99	99	000000.00	031738.0
54850N	36900.00E	53628.10	99	000000.00	031754.0
54850N	36912.50E	53560.53	99	000000.00	031822.0
54850N	36925.00E	53679.82	99	000000.00	031850.0
54850N	36937.50E	53779.94	99	000000.00	032038.0
54850N	36950.00E	54010.72	99	000000.00	032058.0
54850N	36962.50E	54013.70	99	000000.00	032126.0
54850N	36975.00E	53666.08	99	000000.00	032226.0
54850N	36987.50E	54825.52	99	000000.00	032406.0
54850N	37000.00E	54739.70	99	000000.00	032426.0
54850N	37012.50E	54379.84	99	000000.00	032446.0
54850N	37025.00E	53631.36	99	000000.00	032502.0
54850N	37037.50E	53808.31	99	000000.00	032518.0
54850N	37050.00E	53680.59	99	000000.00	032534.0
54850N	37062.50E	53391.91	99	000000.00	032602.0
54850N	37075.00E	53307.76	99	000000.00	032622.0
54850N	37087.50E	52307.83	49	000000.00	032650.0
54850N	37100.00E	52675.97	99	000000.00	032714.0
54850N	37112.50E	52889.08	99	000000.00	032742.0
54850N	37125.00E	53016.44	99	000000.00	032806.0
54850N	37137.50E	53270.77	99	000000.00	032838.0
54850N	37150.00E	53329.88	99	000000.00	032910.0
54850N	37162.50E	53192.57	99	000000.00	032934.0
54850N	37175.00E	53068.51	99	000000.00	032958.0
54850N	37187.50E	53454.21	99	000000.00	033426.0
54850N	37200.00E	53435.01	69	000000.00	033442.0
54850N	37212.50E	53532.96	99	000000.00	033458.0
54850N	37225.00E	53598.68	99	000000.00	033514.0
54850N	37237.50E	53890.28	99	000000.00	033534.0
54850N	37250.00E	53735.49	99	000000.00	033554.0
54850N	37262.50E	53683.37	99	000000.00	033630.0
54850N	37275.00E	53580.45	99	000000.00	033646.0
54850N	37287.50E	53383.73	99	000000.00	033706.0
54850N	37300.00E	53348.74	99	000000.00	033726.0
55300N	36500.00E	53891.19	99	000000.00	041438.0
55300N	36512.50E	54009.52	99	000000.00	041458.0
55300N	36525.00E	53637.89	99	000000.00	041526.0
55300N	36537.50E	53649.47	99	000000.00	041546.0
55300N	36550.00E	54059.31	69	000000.00	041614.0
55300N	36562.50E	54013.24	99	000000.00	041626.0
55300N	36575.00E	53939.68	99	000000.00	041718.0
55300N	36587.50E	53994.01	99	000000.00	041758.0
55300N	36600.00E	53769.20	99	000000.00	041938.0
55300N	36612.50E	54504.92	79	000000.00	042046.0

**MAGNETOMETER READING  
IN NANOTESLAS (nT)**

**>54,150 nT**

**53,950-54,150 nT**

**<52,900 nT**

**VERTICAL COMPONENT  
TOTAL FIELD MEASURED,  
CORRECTED DIURNAL  
VARIATION BY LOOPING  
& CONFIRMED ON  
GEOMAGNETIC OBSERVATORIES**


[www.geomag.nrcan.gc.ca](http://www.geomag.nrcan.gc.ca)


/Gem Systems GSM-19T 6112151 v7.0 7 XI 2006 M t-e2.v7  
/ID 1 file 01survey.m 15 II 00


/

/X	Y nT	sq	cor-nT	time		
53500N	38200.00E	53477.89	99	000000.00	000242.0	
53500N	38187.50E	53501.19	99	000000.00	001106.0	
53500N	38175.00E	53914.14	99	000000.00	001130.0	
53500N	38162.50E	54191.20	99	000000.00	001146.0	
53500N	38150.00E	54264.08	99	000000.00	001206.0	
53500N	38137.50E	53940.28	99	000000.00	001234.0	
53500N	38125.00E	54311.30	99	000000.00	002446.0	
53500N	38112.50E	54299.52	99	000000.00	003734.0	
53500N	38100.00E	54308.53	99	000000.00	004254.0	
53500N	38087.50E	54353.98	99	000000.00	004318.0	
53500N	38075.00E	54460.42	99	000000.00	004342.0	
53500N	38062.50E	54506.00	99	000000.00	004714.0	
53500N	38050.00E	54521.87	99	000000.00	004810.0	
53500N	38037.50E	53639.25	99	000000.00	005026.0	
53500N	38025.00E	53646.17	99	000000.00	005202.0	
53500N	38012.50E	53839.32	99	000000.00	005246.0	
53500N	38000.00E	53638.00	99	000000.00	005350.0	
53500N	37987.50E	53042.95	99	000000.00	005838.0	
53500N	37975.00E	53140.78	99	000000.00	005946.0	
53500N	37962.50E	53567.15	99	000000.00	010154.0	
53500N	37950.00E	53572.49	99	000000.00	010234.0	
53500N	37937.50E	53151.87	99	000000.00	010514.0	
53500N	37925.00E	53626.91	99	000000.00	010658.0	
53500N	37912.50E	53771.72	99	000000.00	010738.0	
53500N	37900.00E	54043.68	99	000000.00	010950.0	
53500N	37887.50E	54284.06	99	000000.00	011018.0	
53500N	37875.00E	54585.03	99	000000.00	011054.0	
53500N	37862.50E	54184.47	99	000000.00	011130.0	
53500N	37850.00E	53872.21	99	000000.00	011214.0	
53500N	37837.50E	53981.65	99	000000.00	011246.0	
53500N	37825.00E	53641.67	99	000000.00	011306.0	
53500N	37812.50E	53716.74	99	000000.00	011342.0	
53500N	37800.00E	53785.19	99	000000.00	011426.0	
53500N	37787.50E	53751.15	99	000000.00	011450.0	
53500N	37775.00E	53633.37	99	000000.00	011522.0	
53500N	37762.50E	53946.58	99	000000.00	011630.0	
53500N	37750.00E	54033.20	99	000000.00	011710.0	
53500N	37737.50E	53893.47	99	000000.00	011742.0	
53500N	37725.00E	53857.60	99	000000.00	011814.0	
53500N	37712.50E	54117.93	99	000000.00	011846.0	
53500N	37700.00E	53824.21	99	000000.00	011910.0	
53500N	37687.50E	53710.01	99	000000.00	012002.0	
53500N	37675.00E	53884.36	99	000000.00	012022.0	
53600N	37675.00E	53727.92	99	000000.00	013234.0	
53600N	37687.50E	53689.31	99	000000.00	013306.0	
53600N	37700.00E	53703.53	99	000000.00	013346.0	
53600N	37712.50E	53712.20	99	000000.00	013430.0	
53600N	37725.00E	53749.56	99	000000.00	013538.0	

**MAGNETOMETER READING  
IN NANOTESLAS (nT)**

 >54,150 nT

 53,950-54,150 nT

 <52,900 nT

**VERTICAL COMPONENT  
TOTAL FIELD MEASURED,  
CORRECTED DIURNAL  
VARIATION BY LOOPING  
& CONFIRMED ON  
GEOMAGNETIC OBSERVATORIES**

[www.geomag.nrcan.gc.ca](http://www.geomag.nrcan.gc.ca)

53600N	37737.50E	53567.26	99	000000.00	013638.0
53600N	37750.00E	53103.48	99	000000.00	013722.0
53600N	37762.50E	53139.62	99	000000.00	013846.0
53600N	37775.00E	53431.25	99	000000.00	013914.0
53600N	37787.50E	53067.50	99	000000.00	013942.0
53600N	37800.00E	53138.26	99	000000.00	014010.0
53600N	37812.50E	53451.09	99	000000.00	014042.0
53600N	37825.00E	53317.53	99	000000.00	014214.0
53600N	37837.50E	53515.87	99	000000.00	014518.0
53600N	37850.00E	52983.33	99	000000.00	014626.0
53600N	37862.50E	52800.78	99	000000.00	014654.0
53600N	37875.00E	53085.53	99	000000.00	015434.0
53600N	37887.50E	52886.79	99	000000.00	015622.0
53600N	37900.00E	53004.26	99	000000.00	015902.0
53600N	37912.50E	52996.08	99	000000.00	015922.0
53600N	37925.00E	53373.58	99	000000.00	020058.0
53600N	37937.50E	53502.97	99	000000.00	020130.0
53600N	37950.00E	53696.03	19	000000.00	020154.0
53600N	37962.50E	53792.42	99	000000.00	020242.0
53600N	37975.00E	53613.65	99	000000.00	020350.0
53600N	37987.50E	53602.04	99	000000.00	020430.0
53600N	38000.00E	53893.13	99	000000.00	020502.0
53600N	38012.50E	54379.03	99	000000.00	020546.0
53600N	38025.00E	54039.11	29	000000.00	020642.0
53600N	38037.50E	54003.26	49	000000.00	021426.0
53600N	38050.00E	53744.89	99	000000.00	021622.0
53600N	38062.50E	53866.77	99	000000.00	022146.0
53600N	38075.00E	53821.95	99	000000.00	022206.0
53600N	38087.50E	53876.46	99	000000.00	022222.0
53600N	38100.00E	53852.03	99	000000.00	022306.0
53600N	38112.50E	53877.40	99	000000.00	022614.0
53600N	38125.00E	53981.83	99	000000.00	022638.0
53600N	38137.50E	54068.56	99	000000.00	022654.0
53600N	38150.00E	53979.81	99	000000.00	022710.0
53600N	38162.50E	53970.23	99	000000.00	022730.0
53600N	38175.00E	53996.87	99	000000.00	022750.0
53600N	38187.50E	54047.53	99	000000.00	022822.0
53600N	38200.00E	54149.32	99	000000.00	022842.0

**MAGNETOMETER READING  
IN NANOTESLAS (nT)**



**>54,150 nT**



**53,950-54,150 nT**



**<52,900 nT**

**VERTICAL COMPONENT  
TOTAL FIELD MEASURED,  
CORRECTED DIURNAL  
VARIATION BY LOOPING  
& CONFIRMED ON  
GEOMAGNETIC OBSERVATORIES**  
[www.geomag.nrcan.gc.ca](http://www.geomag.nrcan.gc.ca)