NI 43-101 RESOURCE ESTIMATE UPDATE
FOR THE
MERRY WIDOW DEPOSIT, EMPIRE MINE PROPERTY

Nanaimo Mining Division
Vancouver Island, BC
Centered at 5,579,000 N and 625,000 E
(UTM ZONE 9 NAD 83) NTS 92L/06

Submitted to:
Coast Copper Corp.
904 - 409 Granville St.
Vancouver, B.C., V6C 1T2, Canada

Effective Date: 26 April 2023
Date of Issue: 7 July 2023

Moose Mountain Technical Services
Sue Bird, P. Eng.

DATE & SIGNATURE PAGES

Herewith, our report entitled 'Resource Estimate for the Merry Widow Deposit, Empire Mine Property" with an effective date of 26 April 2023.

"Signed and Sealed"

Sue Bird, P. Eng.
Moose Mountain Technical Services
Principal and V.P. of Resources

Dated: 7 July 2023

CERTIFICATE OF QUALIFIED PERSON – SUE BIRD

I, Sue Bird, P.Eng., am employed as a Geological Engineer with Moose Mountain Technical Services, with an office address of #210 1510 2nd Street North Cranbrook, BC V1C 3L2.

This certificate applies to the technical report titled "NI 43-101 Resource Estimate for the Merry Widow Deposit, Empire Mine Property" that has an effective date of 26 April 2023 (the "technical report").

1. I am a member of the self-regulating Association of Professional Engineers and Geoscientists of British Columbia (#25007). I graduated with a Geologic Engineering degree (B.Sc.) from the Queen's University in 1989 and a M.Sc. in Mining from Queen's University in 1993.
2. I have worked as an engineering geologist for over 25 years since my graduation from university. I have worked on precious metals, base metals and coal mining projects, including mine operations and evaluations. Similar resource estimate projects specifically include those done for Artemis' Blackwater Gold project, Ascot's Premier Gold Project, Spanish Mountain Gold, all in BC; O3's Marban and Garrison, gold projects in Quebec and Ontario, respectively, as well as numerous due diligence gold projects in the southern US done confidentially for various clients.
3. As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 Standards of Disclosure for Mineral Projects (NI 43–101).
4. I visited the property on 8 June 2023.
5. I am responsible for all Sections of the technical report, including Sections 1 through 27.
6. I am independent of Coast Copper Corp. as independence is described by Section 1.5 of NI 43–101.
7. I have not previously prepared any technical reports for Coast Copper Corp.
8. I have read NI 43–101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated: 7 July 2023

"Signed and Sealed"

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Signature of Qualified Person
Sue Bird, P.Eng.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1.0 Summary

Moose Mountain Technical Services ("MMTS") has prepared a Technical Report (the "Report") for Coast Copper Corp. ("Coast Copper") which includes a Resource Estimate of the Merry Widow deposit.

Coast Copper is a Canadian-based based mineral exploration company actively engaged in exploration of several gold and copper-gold projects in B.C.

The Merry Widow deposit lies within the Empire Mine Property (the "Property" or "Project"), a resource property with several past producers located on northern Vancouver Island approximately 28 kilometres ("km") southwest of Port McNeill and 19 km east of Port Alice within the Nanaimo Mining Division. The Property lies within the traditional territory of the Quatsino First Nation.

1.1 Mineral Resource Estimate

The Mineral Resource Estimate ("MRE") for the Merry Widow deposit has an effective date of 26 April 2023. The copper-gold ("Cu-Au") resource estimate is summarized in the Table below with the base case cutoff grade of CDN$30 /tonne Net Smelter Return ("NSR") highlighted. The resource estimate has been confined to an open pit with "reasonable prospects of eventual economic extraction". The base case cutoff grade covers the Processing + General and Administrative ("G&A") costs using the prices and smelter terms as detailed in the Notes to Table 1-1 below.

Table 1-1 Merry Widow Mineral Resource Estimate

NSR Cutoff ($CDN)	Tonnage	NSR ($CDN)	Cu (%)	Au (gpt)	CuEq (%)	AuEq (gpt)	Cu (Klbs)	Au (Oz)	AuEq (Oz)
25	605,340	191.22	0.497	3.458	2.844	4.190	6,635	67,302	81,544
30	594,019	194.33	0.505	3.515	2.890	4.258	6,611	67,132	81,322
35	579,143	198.48	0.515	3.591	2.952	4.349	6,579	66,857	80,978
40	563,577	202.92	0.526	3.673	3.018	4.446	6,530	66,544	80,563
45	540,764	209.69	0.541	3.799	3.119	4.595	6,445	66,046	79,882
50	525,090	214.53	0.552	3.889	3.191	4.701	6,388	65,646	79,357
55	508,911	219.69	0.561	3.987	3.268	4.814	6,299	65,241	78,759
60	497,215	223.50	0.567	4.062	3.324	4.897	6,216	64,941	78,284

Notes to Table 1-1:

1. The Mineral Resource Estimate was prepared by Sue Bird, P.Eng., an independent Qualified Person.
2. The Mineral Resource Estimate has an effective date of 26 April 2023.
3. Mineral Resources are reported using the 2014 CIM Definition Standards and were estimated in accordance with the CIM 2019 Best Practices Guidelines.
4. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability, and there is no certainty that any Mineral Resources will be converted into Mineral Reserves.
5. These Mineral Resource estimates include Inferred Mineral Resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Measured or Indicated Mineral Resource with continued exploration.
6. The Mineral Resource Estimate has been confined by a "reasonable prospects of eventual economic extraction" pit using the following assumptions, which were estimated from comparable projects:
    a. 77% Cu metallurgical recovery, 29% Cu concentrate grade, 100$US/tonne concentrate transport, 100 $US/tonne concentrate treatment, 1% unit concentrate grade deduction, and 0.1 $US/lb Cu refining cost.
    b. 60% Au metallurgical recovery, 99% payable Au, and 8 US$/oz Au refining cost.
    c. Mining costs of CDN$15/tonne;

d. Processing + G/A Costs of CDN$25/tonne;
e. Pit slopes of 50 degrees.

7. The resulting NSR equation is: NSR (CDN$) = (Cu%/100) x 3.96 x 2204.6 x 0.77 + Au x 76.05 x 0.6.
8. The bulk density of the deposit is interpolated from sample data. The average value specific gravity used for the Mineral Resource Estimate is 3.45 at the base case cutoff.
9. The QP is not aware of political, environmental, or other risks that could materially affect the potential development of Mineral Resources.

1.2 Terms of Reference

All measurement units used in this report are metric, and currency is expressed in Canadian dollars ($CDN) unless stated otherwise. Mineral Resources and Mineral Reserves are estimated using the 2019 edition of the Canadian Institute of Mining, Metallurgy and Exploration (CIM) Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines (2019 CIM Best Practice Guidelines) and are reported using the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves (2014 CIM Definition Standards).

1.3 Project Description and Location

1.3.1 Location

The Property is located approximately 28 km southwest of Port McNeill and 19 km east of Port Alice, on Vancouver Island as shown on Figure 4-1. The Property's is centered at 50.35° latitude and -127.15° longitude.

1.3.2 Mineral Tenure

The total Project is comprised of 33 mineral claims and 57 fee-simple crown grants covering approximately 15,746 hectares ("ha").

1.3.3 Underlying Agreements

Coast Copper is exploring the Empire Mine Property by way of the Empire Option Agreement ("the Agreement") dated 24 September 2020, whereby Coast Copper can acquire a 100% interest, subject to the underlying net smelter royalty in the Property from Mirva Properties Ltd. Details are discussed in Section 4.

1.4 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Merry Widow deposit is accessible by well-maintained gravel roads, approximately one hour driving from Port McNeill, Port Alice, or Port Hardy. Port Hardy has a regional airport with daily service to Vancouver.

Monthly average temperatures range from 4°C in January to 16.4°C in August, and precipitation averages over 340 centimeters ("cm") per year, including about 38 cm of snow between December and March.

The Property lies within the Nanaimo Mining Division in an area with a rich resource extraction history including mining, forestry, and fishing operations. Either Port Alice or Port McNeill provides suitable lodging, food, and fuel for exploration activities and Port Hardy is the main distribution center for the north end of Vancouver Island with a regional airport, a hospital, schools, and a college.

1.5 History

The Empire Mine Property has over 100 years of exploration and mining history including 23 mineral occurrences, including four past producing open pits mining magnetite (Merry Widow, Raven, and Kingfisher north and south pits) and three underground past producing mines for magnetite (Merry Widow and Kingfisher Underground) and for copper and gold (Benson Lake Mine).

Copper occurrences along the Old Sport Horizon were reportedly discovered in 1897 near the Benson River on the east slope of Merry Widow Mountain, leading to claim staking that eventually covered the entire Property area.

In 1911, several claims were staked and awarded via crown grants. In 1916, Consolidated Mining and Smelting Company of Canada (later known as Cominco Ltd. ("Cominco")) acquired the claims adjoining and to the north of the current Property and began exploration and underground development of the Old Sport Horizon at the Coast Copper Mine through their subsidiary Coast Copper Company Ltd.

From 1929 – 1931, Quatsino Copper-Gold Mines ("Quatsino") held the Property and explored the claims aggressively. Work was interrupted because of the depression and later the Second World War. Eventually, Quatsino discovered magnetite at the Merry Widow pit area and blocked out a substantial tonnage of magnetite ore between 1930 and 1952 (Travis et al., 2022).

1.5.1 Empire Mine

In 1956, the Empire Development Company Ltd. ("EDC") was formed to mine the Merry Widow magnetite deposit.

From 1957 – 1962, the Kingfisher, Raven, and Merry Widow Pits were mined to their economic limits. Extraction from the Raven pit capped at 22,000 tons due to high sulphide content of the iron ore; the pit was subsequently backfilled with waste rock from the Merry Widow pit (Berkshire & Hume, 2019).

In 1964, the Kingfisher Adit, which had been driven under the Kingfisher Pit to mine the lower sections of the ore bodies, was extended to the Merry Widow ore zone. Extraction of magnetite ore from underground draw points continued until 1967.

A total of 3,371,815 tonnes, which yielded 1.68 million metric tonnes ("Mt") of magnetite, was extracted from the Empire Mine development.

1.5.2 Benson Lake

In 1959, Cominco drilled 2,743 meters ("m") to follow up on a high-grade drill intercept made by Quatsino in 1930. The campaign successfully identified a copper-rich ore body below Empire Development's camp, which then became the Benson Lake Mine. Production ran from 1962 through 1972. During this time Cominco extracted 2,621,131 tonnes of ore yielding 90,814,161 pounds of copper, 377,165 oz of silver, and 124,386 oz of gold (between both the Benson Lake and the Old Sport Mines).

1.5.3 Post-mining History

In the mid-1980s, regulatory changes to the crown grant system enabled Equinox Resources Ltd. ("Equinox") to acquire a large land position including all known deposits of the Merry Widow skarn camp. Equinox's involvement is restricted to rock sampling in the Merry Widow pit in 1988 and 1989. In 1989 Taywin Resources Ltd. ("Taywin") successfully recovered ownership of crown grants that had belonged to Quatsino and commenced exploration on the Merry Widow property, which culminated in 42 diamond drillholes (2,850 m) in 1989.

In August 1990, Noranda Exploration options, the Merry Widow Property from Taywin. A year later, as part of its general withdrawal from Western Canada, Noranda terminated its option agreement with Taywin and transferred back the Merry Widow Crown grants. In 1992- 1993 Taywin completed some metallurgical studies in anticipation of making a production decision but work by Taywin ended on the Merry Widow Property during the company's

reorganization. From 1994-2004, the property changed hands a number of times, ultimately falling under the control of Arbutus Resources. In 2004, Grande Portage Resources Ltd. optioned the property from Arbutus Resources.

Between 2005 and 2008, Grande Portage Resources Ltd ("Grande Portage") completed large exploration programs on the Property, including ground and airborne geophysical surveys, geochemical sampling, and completion of 92 diamond drillholes. Details of these programs can be found in the Exploration and Drilling sections of this report.

Exploration work including diamond drilling, geophysics and soil and rock sampling has been conducted by Coast Copper from 2020 to present.

1.6 Geology

1.6.1 Regional Geology

Northern Vancouver Island is underlain by rocks of the Wrangellia Terrane, an assemblage of flood basalts and subsequent arc sequences that were accreted to the western edge of North America during the Jurassic – Cretaceous (Greene et al., 2005). The region is tilted to the southwest, such that the northwest-trending stratigraphy generally youngs towards the southwest. Several NNW- to north-trending km-scale high-angle faults cut stratigraphy in the region and are in turn disrupted by north- and northeast-trending faults (Figure 7-1). This structural domain is truncated by the east-west trending Holberg fault approximately 20 km north of the property (Nixon et al., 2011).

The oldest exposed rocks in the region are volcanic and lesser sedimentary strata of the Late Triassic Vancouver Group, which occur along the northeast side of Vancouver Island.

The northwest edge of northern Vancouver Island is dominated by a corridor of mixed volcanic and sedimentary rocks of the Upper Triassic to Lower Jurassic Bonanza Group (uTrlJB). The base of this sequence consists of limestone, mudstone, and siltstone of the Upper Triassic Parson Bay Formation (uTrBPlc), which is exposed in northwest-trending bands 100s of metres wide. Mafic volcanic breccia and lapilli tuff units also occur near the base of the Bonanza Group within the Parson Bay Formation (Nixon et al., 2011).

The volcanic and sedimentary stratigraphy of the Vancouver and Bonanza Groups are intruded by several generally northwest-elongate bodies of granodiorite, granite, quartz-diorite, and diorite assigned to the Early to Middle Jurassic Island Plutonic Suite (Nixon et al., 2011). One such body is the Merry Widow Mountain Pluton, on which the Empire Mine Property is centered.

1.6.2 Property Geology

The Property is underlain by northwest-trending belts of Vancouver and Bonanza Group volcanic and sedimentary stratigraphy, which are folded and faulted, and intruded in the center of the Property by the Early to Middle Jurassic Island Plutonic Suite Merry Widow Pluton (Nixon et al., 2011). Bedding generally dips moderately (20 – 50 °) westward, with some open flexural folds developed locally and tighter folding near the margin of the Merry Widow Pluton (Nixon et al., 2011).

Recent work by Dr. James Oliver in 2022 identified the significance of planar features, such as the Quatsino Thrust (QT) and the Old Sport Horizon (OSH), to regional-scale fluid transport. Field observations and historical data interpretation indicate that the intersection of these features with other steeply dipping faults and discordant dikes, can lead to the enhancement of mineralized zones which could represent significant exploration targets.

1.6.3 Mineralization and Deposit Type for Merry Widow

The Merry Widow deposit is characterized by abundant coarse crystalline magnetite, minor colloform magnetite, and sporadic pyrrhotite, pyrite, arsenopyrite, cobaltite, erythrite, sphalerite, and gold in a gangue comprising garnet, epidote, actinolite, clinopyroxene, carbonate, and quartz (Ray & Webster, 1991). Magnetite ore forms lenses, sheets, and discontinuous breccia zones, the latter comprising magnetite-calcite fragments rimmed by coarse garnet (Lund, 1966). The material mined at Merry Widow comprises massive to semi-massive magnetite ± calcite replacement bodies formed proximal to the Merry Widow pluton intrusive contact and locally along hanging wall or footwall contacts of extensional dykes (Oliver, 2022).

The West Pipe dyke, a xenolithic Keystone suite intrusion, has associated gold-rich ore along its hanging wall (Figure 7-5). Gold occurs in sulphide-rich zones with associated chalcopyrite, cobaltite, and telluro-bismuthite (Oliver, 2022). The immediate vicinity of the Merry Widow pit contains low copper-gold grades and limited calc-silicate skarn assemblages, which could potentially form stacked lenses or zones extending for significant distances down the plane of intrusive-volcanic or intrusive-carbonate contacts (Oliver, 2022). Mineralization at Merry Widow has been dated by K-Ar analysis of skarn-related phlogopite at 181 Ma (Carson, 1973) and more recently by Nixon et al. (2000) at 197.9 ± 1.3 Ma, contemporaneous with granodiorite of the Merry Widow pluton.

While traditionally understood as a precious-metal bearing magnetite skarn mineralizing system, previous workers have noted similarities to iron-oxide-copper-gold ("IOCG") mineralization models (Oliver, 2022). The current interpretation is of skarn mineralization associated predominantly with intrusive-carbonate contact zones, which often exhibit structural control in the form of faults or unconformities.

1.7 Drilling

Between 1961 and 2022, various operators completed at least 15 drill campaigns on the Empire Property, resulting in the recovery of 36,184.59 m of diamond drill core from 288 drillholes. Assay data is available for 151 of these drillholes; assay certificates are available for a small subset of the 1982 drilling (DDH 5), the first portion of 1989 drilling (DDH89-001 through DDH89-008), 2004-2005 drilling, 2006, 2007, 2021, and 2022 as summarized in Table 10-1. Due to a lack of historical QA/QC and potential validation issue it has been decided not to use the pre-2000 data in the resource modelling.

1.8 Sampling and Analysis

Samples from the four years of significant drill programs used in the Resource Estimate (2006, 2007, 2021, 2022) were all taken from core cut in half with a diamond saw under the direction of qualified geologists and engineers. Samples are then labeled, placed in plastic bags, sealed with interval and sample numbers recorded.

In 2006 and 2007, samples were shipped to ALS Chemex in North Vancouver, BC, and all samples from 2021 and 2022 were sent to MSA Labs in Langley, BC. Both labs used similar methods of 4 acid-digestion, ICP analyses, and fire assay. MMTS has cross-referenced 100% of the provided geochemical information against available assay certificates.

QA/QC data is not available for pre-2006 drilling. QC samples inserted in 2006 and 2007 consisted of certified reference material (CRM) pulps from CDN Resource Laboratories, rock blanks, and quarter-core duplicates with quarter-core parent samples. A total of 5.60% of the 2006 assays and 10.95% of the 2007 assays were QC insertions by Grande Portage.

QC samples inserted in 2021 and 2022 consisted of a variety of pulp CRMs from CDN Resource Laboratories, CRM pulp blanks, pulp blanks requested from MSA Labs, and quarter-core duplicates with both quarter-core and half-core parent samples.

Overall, QC samples are sufficiently well distributed across the dataset, but the insertion rate of duplicates in 2006 and 2007 is below industry standard.

1.9 Data Verification

Overall, the QP has not identified any meaningful contamination, precision, or accuracy issues in Coast Copper's Merry Widow project drill sample QC data from 2006, 2007, 2021, or 2022. Historical data was compared to more recent drilling, and it was decided not to use the pre-2000 data due to lack of QA/QC.

1.10 Mineral Processing and Metallurgical Testing

There are 3 known rounds of Metallurgical Testing that have been conducted on the Merry Widow deposit material. Taywin Resources in 1989, BHP Minerals Island Copper in 1993, and Grande Portage in 2007.

In 1989, Taywin Resources sent 10 samples to Coastech Research Inc. Testing was done on a composite of Merry Widow drill rejects which come from holes 1989-001 with depth from 24 m to 70 m (Giroux, 2008) with copper recovery of 95.1% reported.

In July 1992, two composite samples from the M-750 and M-690-707 zones were shipped to BHP Minerals Island Copper metallurgical lab. Two sets of flotation tests were performed on each composite sample, with Au recoveries of 39% and 49% and cu grade recoveries of 90% reported for both tests. The results are not considered relevant currently due to the unrepresentative high grade of the samples (Giroux, 2008).

Grande Portage initiated preliminary metallurgical testing of selected core samples in late 2007 with results received in 2008. The test work was done by Westcoast Mineral Testing Inc. Bench scale flotation testing and microscopy analysis was done (Hawthorn, 2008). Results showed that 77% of the copper and 60% of the gold (from an inappropriately high-grade composite) could be recovered into a high-grade flotation concentrate grading 29% Cu and 348 g/t Au.

In 2010 Grande Portage did another bulk sample test on Copper Knob material with results yielding gold recoveries of 95.1% at a 9.9 g/t head grade. The test also indicated the possibility of improved copper recovery of 88.0% at a 5.9% head grade. The test work was done by West Coast Mineral Testing Inc.

The results of the above-mentioned test programs are preliminary and based on largely un-representative samples. However, for the purpose of evaluating Mineral Resources it is reasonable to assume a flotation concentrate with 77% Cu recovery and 60% Au recovery as described by West Coast Minerals.

1.11 Conclusions and Recommendations

The QP interprets the geology and modelling done for this report and concludes the following:

- The QA/QC procedures for the 2006-2007 and the 2021 and 2022 drilling at Merry Widow are within industry standards and illustrate that the assaying is suitable for mineral resource estimation.
- The Mineral Resource estimate for the Merry Widow deposit contained in this Report warrants further exploration as the deposit remains open along strike and down-dip.

Recommendations for further drilling, metallurgical studies, geophysics, and sampling include:

- A drilling and metallurgy budget of $4,100,000 to test the extension of the mineralization at depth and along strike as well as to complete metallurgical testing to improve the Au and Cu recovery and to be able to potentially include recoveries of silver ("Ag"), cobalt ("Co"), and iron ("Fe") in future resource estimates.
- An additional exploration budget of $350,000 to complete a geochemical and geophysical program.

List of Abbreviations used throughout the report:

- *t* *tonnes (Metric)*
- *M* *millions*
- *Mt* *Millions of tonnes*
- *k* *thousands*
- *ROM* *Run of Mine*
- *S/R* *Strip Ratio*
- *LoM* *Life of Mine*
- *NPV* *Net Present Value*
- *Ktpa* *kilo tonnes per annum*
- *G&A* *General and Administrative Costs*
- *USD* *US Dollars*
- *CDN* *Canadian Dollars*
- *BC* *British Columbia*
- *UTM* *Universal Transverse Mercator*
- *SG* *Specific Gravity*
- *RC* *Reverse Circulation*
- *DH* *Drillhole*
- *GSC* *Geological Survey of Canada*
- *PEA* *Preliminary Economic Assessment*
- *PFS* *Preliminary Feasibility study*
- *EA* *Environmental Assessment*

2.0 Introduction

Coast Copper is a mineral exploration company based in Vancouver, British Columbia ("B.C."), Canada, and trades on the TSX Venture Exchange (TSX-V) under the Symbol COCO. Coast Copper optioned the Empire Mine Property from Mirva Properties Ltd ("Mirva") in 2020 and has an option to purchase a 100% interest in the Property by making staged cash and share payments. The Merry Widow deposit is within the Empire Property bounds.

This National Instrument 43-101 ("NI 43-101") resource estimate has been prepared by MMTS Technical Services and is based on research of historical records related to the Project, publications related to the geology of the region, and verification of technical work completed by Coast Copper.

2.1 Terms of Reference

The report is being completed for Coast Copper, a Canadian-based based mineral exploration company actively engaged in exploration of several gold and copper-gold projects in B.C.

All measurement units used in this report are metric, and currency is expressed in Canadian dollars ($CDN) unless stated otherwise. Mineral Resources and Mineral Reserves are estimated using the 2019 edition of the Canadian Institute of Mining, Metallurgy and Exploration (CIM) Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines (2019 CIM Best Practice Guidelines) and are reported using the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves (2014 CIM Definition Standards).

2.2 Qualified Persons

Sue Bird, P.Eng. of MMTS serves as the qualified person ("QP") for this Technical Report as defined in National Instrument 43-101, Standards of Disclosure for Mineral Projects, and in compliance with Form 43-101F1.

2.3 Site visit and Scope of Personal Inspection

Sue Bird, P.Eng., of MMTS, visited the Merry Widow Property site on 8 June 2023, and the core storage area on 9 June 2023. During the site visit collar locations were validated, the core storage area was toured, core was examined for mineralization, and the overall deposit geology and previous mining was examined.

2.4 Effective Date

The effective date of the Merry Widow deposit Resource Estimate is 26 April 2023.

2.5 Information Sources

Information sources used in compiling this Report are included in Section 27.

2.6 Previous Technical Reports

The most recent technical report on Merry Widow was filed on behalf of Grande Portage Resources Ltd. in 2008, entitled: "Technical Report on the Copper-Gold Resource for the Merry Widow Property." (Giroux, G.H. & Raven, W., 2008)

3.0 Reliance on Other Experts

The QP of this Report states that they are qualified people for those areas as identified in the "Certificate of Qualified Person" for the QP, as included in this Report. The QP has relied and believes there is a reasonable basis for this reliance upon other expert reports, which provided information regarding mineral rights, surface rights, and environmental status in sections of this Report as noted below.

3.1 Mineral Tenure and Surface Rights

The QP has not reviewed the mineral tenure nor independently verified the legal status, ownership of the Project area or underlying property agreements. The QP has fully relied upon, and disclaims responsibility for, information supplied by Coast Copper Corp. (Coast Copper, 2020)

This title information is used in Sections 4.0 and 4.1 of the Report.

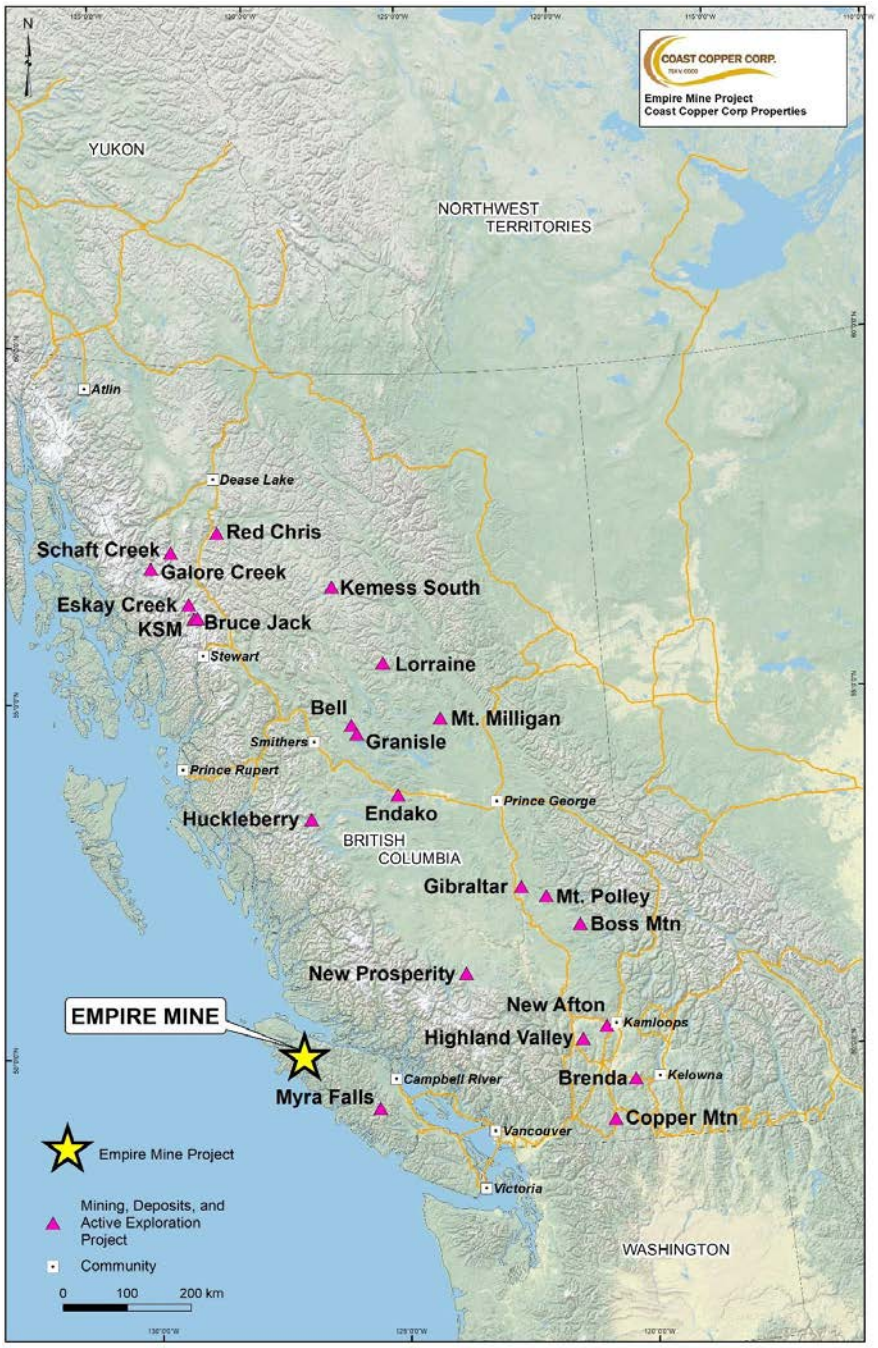
3.2 Royalties and Incumbrances

The QP has not reviewed the royalty agreements nor independently verified the legal status of the royalties and other potential incumbrances. The QP has fully relied upon, and disclaims responsibility for, information supplied by Coast Copper Corp. (Coast Copper, 2020).

This title information is used in Section 4.1 of the Report.

4.0 Property Description and Location

The Merry Widow Deposit lies within the Empire Mine Property, an exploration stage property with several past producers which lie on northern Vancouver Island approximately 28 km southwest of Port McNeill and 19 km east of Port Alice within the Nanaimo Mining Division, as shown in Figure 4-1. The Property lies within the traditional territory of the Quatsino First Nation.



(Source: Collison & Paynton, 2023)

Figure 4-1 Location of Empire Mine Property

4.1 Mineral Claims

The Empire Mine Property is comprised of 33 mineral claims and 57 fee-simple crown grants covering approximately 15,746 ha. The list of claims and crown grants are summarized in Table 4-1.

Table 4-1 List of Claims & Crown Grants for the Empire Mine Property

Claims

Title Number	Claim Name	Owner*	Title Type	Map Number	Issue Date	Good To Date	ha
1096639	MW-REL8	286868 (100%)	Mineral	092L	13-Jul-22	20-Sep-30	82.4224
1098483	MW-REL9	286868 (100%)	Mineral	092L	20-Oct-22	20-Sep-30	20.64
379747	WHITE MARBLE	280542 (100%)	Mineral	092L	12-Aug-00	20-Sep-30	25.9
1070167	LUCKY C	280542 (100%)	Mineral	092L	08-Aug-19	20-Sep-30	226.974
1057860	BENSON LAKE NORTH	280542 (100%)	Mineral	092L	23-Jan-18	20-Sep-30	20.6094
1091011	Empire Bridge	286868 (100%)	Mineral	092L	26-Jan-22	20-Sep-30	185.68
1072375	GW1	280542 (100%)	Mineral	092L	02-Nov-19	20-Sep-30	226.6
1072381	GW10	280542 (100%)	Mineral	092L	02-Nov-19	20-Sep-30	371.287
1072380	GW11	280542 (100%)	Mineral	092L	02-Nov-19	20-Sep-30	371.2917
1072382	GW12	280542 (100%)	Mineral	092L	02-Nov-19	20-Sep-30	247.621
1072379	GW13	280542 (100%)	Mineral	092L	02-Nov-19	20-Sep-30	123.8087
1072377	GW14	280542 (100%)	Mineral	092L	02-Nov-19	20-Sep-30	123.809
1072378	GW2	280542 (100%)	Mineral	092L	02-Nov-19	20-Sep-30	247.2541
1072383	GW3	280542 (100%)	Mineral	092L	02-Nov-19	20-Sep-30	412.2157
1072384	GW4	280542 (100%)	Mineral	092L	02-Nov-19	20-Sep-30	206.1374
1072385	GW5	280542 (100%)	Mineral	092L	02-Nov-19	20-Sep-30	412.368
1072386	GW6	280542 (100%)	Mineral	092L	02-Nov-19	20-Sep-30	309.2876
1072387	GW7	280542 (100%)	Mineral	092L	02-Nov-19	20-Sep-30	206.2366
1072388	GW8	280542 (100%)	Mineral	092L	02-Nov-19	20-Sep-30	268.103
1072376	GW9	280542 (100%)	Mineral	092L	02-Nov-19	20-Sep-30	247.5774
1070165	LUCKY D	280542 (100%)	Mineral	092L	08-Aug-19	20-Sep-30	165.0135
1070166	LUCKY K	280542 (100%)	Mineral	092L	08-Aug-19	20-Sep-30	474.5477
1071050	MWE	280542 (100%)	Mineral	092L	14-Sep-19	20-Sep-30	144.2771
1076841	MW-REL1	286868 (100%)	Mineral	09L	19-Jun-20	20-Sep-30	1799.0102
1076843	MW-REL2	286868 (100%)	Mineral	09L	19-Jun-20	20-Sep-30	1978.4174

Title Number	Claim Name	Owner*	Title Type	Map Number	Issue Date	Good To Date	ha
1076845	MW-REL3	286868 (100%)	Mineral	09L	19-Jun-20	20-Sep-30	845.6717
1076842	MW-REL4	286868 (100%)	Mineral	09L	19-Jun-20	20-Sep-30	1899.0034
1076844	MW-REL5	286868 (100%)	Mineral	09L	19-Jun-20	20-Sep-30	1156.0438
1080473	MW-REL6	286868 (100%)	Mineral	092L	07-Jan-21	20-Sep-30	618.37
1090780	MW-REL7	286868 (100%)	Mineral	092L	24-Jan-22	20-Sep-30	20.6379
1075657	NEW MERRY WIDOW	280542 (100%)	Mineral	092L	09-Apr-20	20-Sep-30	1257.6892
1075659	NEW OLD SPORT	280542 (100%)	Mineral	092L	09-Apr-20	20-Sep-30	866.0872
1070955	NICKEL BACK 2	280542 (100%)	Mineral	092L	10-Sep-19	20-Sep-30	185.6357

*FMC 286868- Coast Copper Corp., 280542- Denis Pelletier (Mirva Properties Ltd)

Crown Grants

Pin Sid	Distr Lot	Lot Status	Mining Div	Land Distr	Lot Id	Claim Name	Crwn Grnt No	Ha
1053200	1529	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804100	MERRY WIDOW NO. 1	7013/402	20.8395996
1053330	1530	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804101	MERRY WIDOW NO. 2	7141/416	20.8029995
1053460	1531	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804102	YOUNG SPORT NO 1	7172/416	7.0671401
1053590	1532	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804103	KINGFISHER FRACTION	7014/402	7.9822302
1053620	1533	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804104	MERRY WIDOW NO. 5	7154/416	20.8491993
1053750	1534	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804105	MERRY WIDOW NO. 6	7140/416	14.5649004
1053880	1535	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804106	SNOWLINE	7124/416	13.4197998
1053910	1536	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804107	HEMLOCK	7125/416	10.1561003
1054080	1537	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804108	RAMBLER FRACTION	7744/467	1.39791
1054110	1538	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	803789	BLUEBIRD NO. 1	7126/416	18.3213997
1054240	1539	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	803790	BLUEBIRD NO. 2	7127/416	15.4404001
1054370	1540	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804109	MERRY WIDOW NO. 3	7142/416	12.1532001
1054400	1541	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	803791	MERRY WIDOW NO. 4	7155/416	13.1471004
1054530	1542	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	803792	BLUEBIRD NO. 3 FR.	7171/416	17.7432003
1054660	1543	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	803793	SIDEHILL FRACTION	1815/489	11.9863005
1054790	1544	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804110	SNOWLINE FRACTION	1816/489	2.72507
1054820	1545	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804111	BLACKBIRD FRACTION	1814/489	0.972729
1055150	1548	CROWN	NANAIMO	RUPERT	804113	DRY HILL	7746/467	16.6571007

Pin Sid	Distr Lot	Lot Status	Mining Div	Land Distr	Lot Id	Claim Name	Crwn Grnt No	Ha
		GRANTED		DISTRICT				
1055280	1549	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804114	DASHER FRACTION	7720/458	4.2070098
1055310	1550	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804115	INDEPENDENT	7722/467	20.8061008
1055440	1551	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804116	INDEPENDENT NO. 1	7721/467	11.3888998
1055570	1552	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804117	BY JOE FRACTION	7706/458	0.355508
1055600	1553	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804118	LIMIT FRACTION	7709/458	5.38694
1055730	1554	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804119	SUMMIT FRACTION	7738/467	3.9949501
1055860	1555	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804120	INDEPENDENT NO. 2	2474/495	10.6318998
1055990	1556	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804121	YOUNG SPORT NO. 4	7470/443	16.6532001
1056060	1557	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804122	INDEPENDENT NO. 3	7747/467	11.835
1056190	1558	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804123	INDEPENDENT NO. 5	2473/495	17.4386997
1056220	1559	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804124	INDEPENDENT NO. 4	7745/467	11.5096998
1056350	1562	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804126	BOULDER CANYON FRACTION	9627/867	4.53543
1057390	1585	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	803794	OWL	624/877	15.3518
1057420	1587	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	803795	SNOWBIRD NO. 1	625/877	17.4563999
1057550	1588	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	803796	SNOWBIRD NO. 2	620/877	20.6315002
1059660	1625	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804127	RADIO NO. 1 FRACTION	3832/609	15.4048996
1059790	1626	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804128	RADIO NO. 2 FRACTION	3833/609	20.2206993
1059820	1627	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804129	RADIO NO. 3	3834/609	20.9925003
1059950	1628	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804130	RADIO NO. 4	3835/609	16.0618992
1060070	1629	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804131	RADIO NO. 5	3836/609	20.8668995
1060100	1630	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804132	RADIO NO. 6	3837/609	20.8642998
1060230	1631	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804133	RAINIER	3838/609	17.9962997
1060360	1634	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804134	QUATSINO NO. 3	3839/609	16.3376007
1060490	1635	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804135	QUATSINO NO. 4	3840/609	18.4262009
1060520	1638	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804136	QUATSINO NO. 1	3841/609	20.9164009
1060650	1639	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804137	QUATSINO NO. 2	3823/609	20.8773994

Pin Sid	Distr Lot	Lot Status	Mining Div	Land Distr	Lot Id	Claim Name	Crwn Grnt No	Ha
1060780	1640	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804138	SLIM	3843/609	20.8873005
1060810	1641	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804139	A	3844/609	20.9048996
1060940	1642	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804140	RADIO NO. 7	3845/609	16.5592003
1061010	1643	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804141	RADIO NO. 8 FRACTION	3846/609	10.7469997
1142560	1095	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804145	ROBIN	4515/516	18.4676991
1142690	1096	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804146	RED BIRD	4705/518	18.2856998
1143180	1101	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804151	WREN	8088/951	18.9473991
1143470	1104	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804154	HEMLOCK NO.2	618/877	20.2581997
1143630	1106	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804156	SPRUCE NO.2	622/877	19.4491997
1143760	1107	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804157	TAMARACK NO. 2	8912/960	19.5869999
1144670	1116	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804165	LONG FR.	6191/877	12.8295002
1144830	1118	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804167	HAWK FRACTION	6231/877	20.8272991
10545370	1105	CROWN GRANTED	NANAIMO	RUPERT DISTRICT	804155	CEDAR NO. 2	621/877	13.6041002

4.2 Underlying Agreements

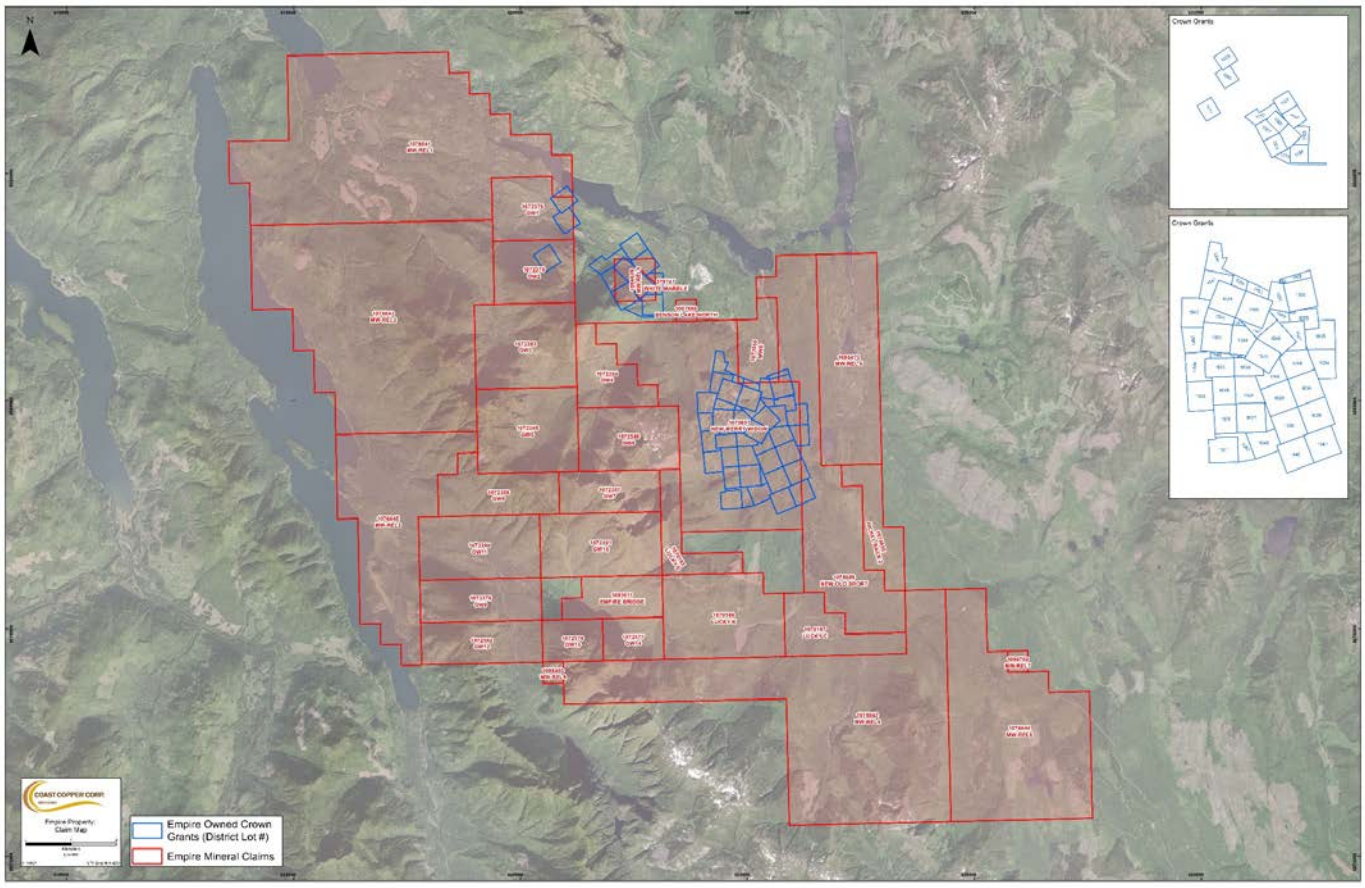
Coast Copper is exploring the Empire Mine Property by way of the *Empire Option Agreement* dated 24 September 2020 (Coast Copper, 2020) whereby Coast Copper can acquire a 100% interest in the Property from Mirva Properties Ltd. ("Mirva") by making aggregate cash payments of $1,250,000 and issuing 3,000,000 common shares of the Company and undertaking work commitments totalling $2,000,000 over a five (5) year period, including making an initial cash payment of $50,000 and issuing 200,000 common shares of the Company upon receiving final TSX Venture Exchange approval.

Mirva will retain a 2% NSR on the Property of which 1% may be purchased for $1,000,000 at any time up to 120 days after commencement of commercial production. The agreement was structured such that this NSR plus all other NSRs which may currently exist and be payable on the Property do not exceed in aggregate 2.5% before buydowns.

To earn a 100% interest in the Quatsino Crown Grants, the Corporation must pay Mirva the equivalent of $500,000 with either a cash payment or equivalent value in common shares of the Corporation, at the Corporation's election, on or before 22 September 2025. The Corporation has the option to extend the Quatsino Crown Grants payment date to 22 September 2026, for an additional payment of $35,000, to 22 September 2027 for a further additional payment of $55,000 and to 22 September 2028 for a further additional payment of $75,000.

On 8 October 2020, Coast Copper received TSX Venture Exchange approval for the Empire Mine Property transaction.

Claim details can be found in Figure 4-2.



(Source: Collison & Paynton, 2023)
Figure 4-2 Claim Details

4.3 Environmental Considerations

The Merry Widow deposit was mined for magnetite during the period 1957 – 1962. In 1964, the Kingfisher adit, which had been driven under the adjoining Kingfisher pits to mine the lower sections of those ore bodies, was extended to the Merry Widow zone. Magnetite was extracted from underground draw points until 1967. The waste rock material that was removed from the Merry Widow, Raven and Kingfisher pits was stored in waste rock dumps on site. To date, the Kingfisher underground adit remains in very good condition.

The author is not aware of any other environmental considerations.

Prior to commencing further exploration on the Property, a Notice of Work is required to be submitted to the Mining and Minerals Department of the BC Ministry of Energy and Mines. Work can only commence once approval has been received.

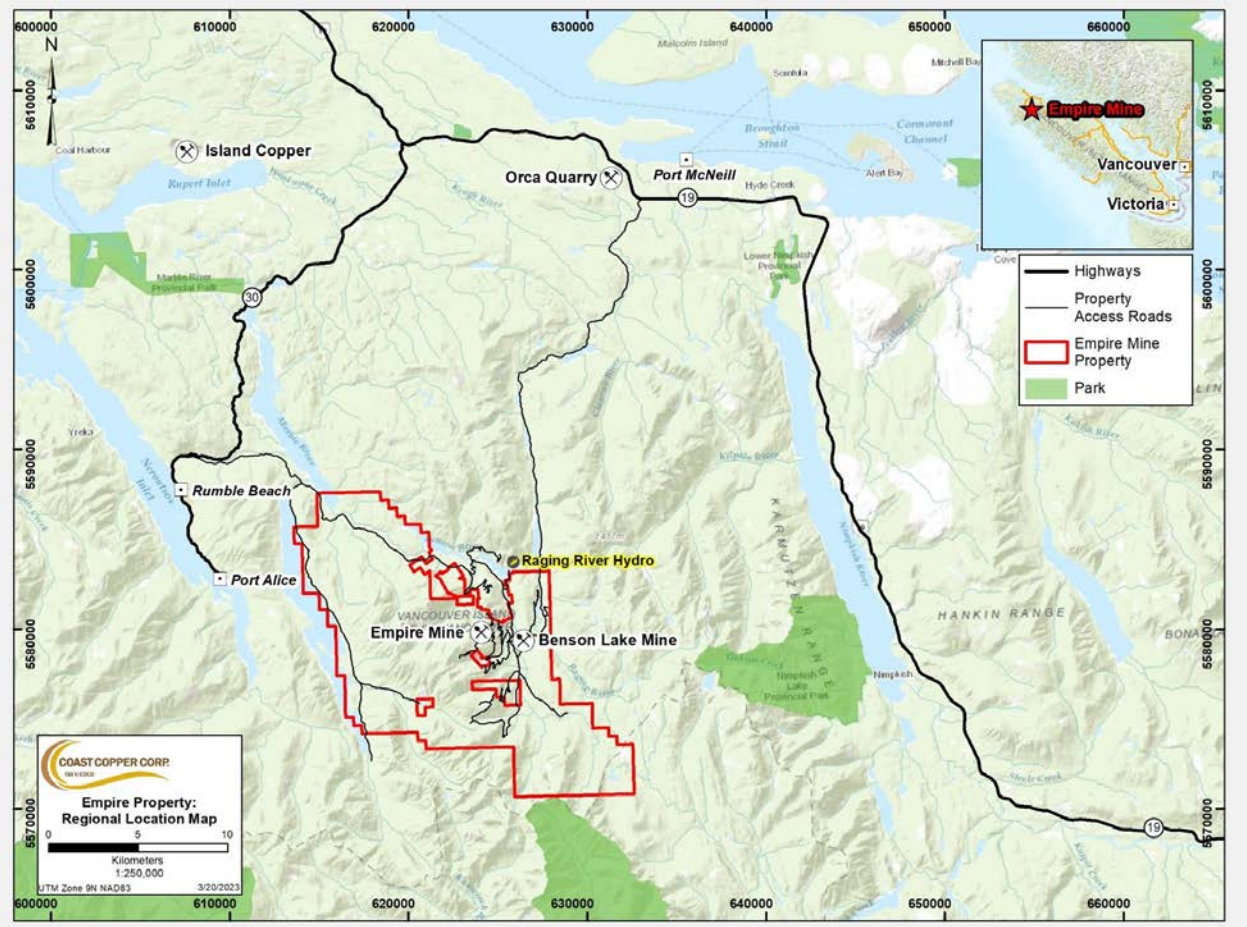
The Ministry of Energy, Mines and Low Carbon Innovation issued Coast Copper Corp a Mines Act Permit on 21 May 2021. The Permit Number is MX-100000050 under Mine Number 1610794. The expiry date for the permit is 21 May 2025. The approved activities included under this permit are:

- Surface Drilling: 100 of sites, 0.64 ha disturbed,
- Existing Access Modification: 10 km, 4.00 ha disturbed,
- 65-line km of IP geophysical survey.

5.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Accessibility

The Merry Widow deposit is accessible by well-maintained gravel roads, approximately one hour driving from Port McNeill, Port Alice, or Port Hardy. Port Hardy has a regional airport with daily service to Vancouver as illustrated in Figure 5-1.



(Source: Collison & Paynton, 2023)

Figure 5-1 Location of Empire Mine Property showing Accessibility and Infrastructure

5.2 Climate

Monthly average temperatures range from 4°C in January to 16.4°C in August, and precipitation averages over 340 cm per year, including about 38 cm of snow between December and March.

5.3 Local Resources & Infrastructure

The Property lies within the Nanaimo Mining Division in an area with a rich resource extraction history including mining, forestry, and fishing operations. The Property lies within the territory of the Quatsino First Nation. Work on the Empire Mine Property can be based out of either Port McNeill, Port Alice, or Port Hardy with a travel time of approximately one hour to the Property on well-maintained gravel roads. Either Port Alice or Port McNeill provides suitable lodging, food, and fuel for exploration activities

and Port Hardy is the main distribution center for the north end of Vancouver Island with a regional airport, a hospital, schools, and a college.

Between the Maynard and Benson lakes north of the Property, lies the Raging River 8 MW run-of-river hydroelectric dam currently owned by Fiera Infrastructure. Currently, Western Forest Products conducts most of the logging in the area through their North Island Forest Operation and has been quite active in the region over the past decade. Industrial operations including both mining and forestry have led to many roads and trails traversing the Empire Mine Property providing excellent access. It is possible to conduct exploration on the property year-round.

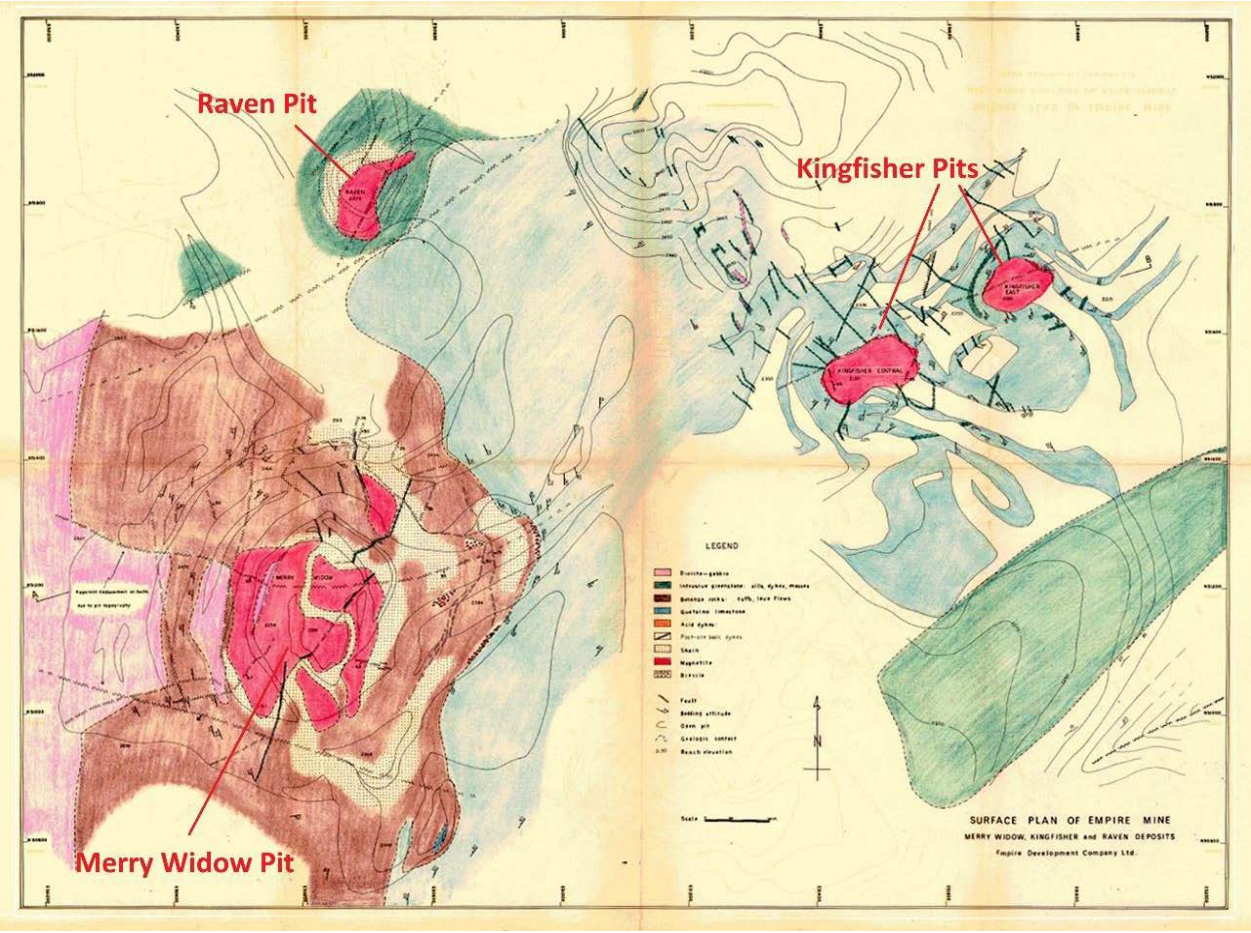
5.4 Physiography

The Empire Mine Property is situated directly south of Maynard and Benson Lakes in an area with moderate to rugged terrain. Elevation spans from about 110 to 1,370 m above sea level at the top of Merry Widow Mountain, which is in the center of the Property.

The Property is well forested, with mature stands of Douglas Fir, Western Hemlock, and Western Red Cedar, and dense undergrowth of salal, salmonberry, blackberry, and other shrubs and ferns. The area has been actively harvested and forested since the mining companies have accessed the area. Logging ranges from active new logging to reforested areas with dense underbrush to mature second growth timber starting to be harvested again.

6.0 History

The Empire Mine Property has over 100 years of exploration and mining history including development of the Empire Mine (from which magnetite was extracted at the Merry Widow, Kingfisher, and Raven pits and the Kingfisher adit) and the Old Sport Horizon (OSH), which was mined for copper and gold at the Benson Lake underground mine as illustrated in Figure 6-1.



(Source: Travis et al., 2022, after Empire Development Company, 1963)

Figure 6-1 Merry Widow, Raven, and Kingfisher Pits

6.1 Old Sport Horizon – Coast Copper & Benson Lake Mines

Copper occurrences along the Old Sport Horizon were reportedly discovered in 1897 near the Benson River on the east slope of Merry Widow Mountain, leading to claim staking that eventually covered the entire Property area (Giroux & Game, 2007; Lund, 1966). In 1911, several claims were staked and awarded via crown grants.

From 1929 – 1931, Quatsino Copper-Gold Mines ("Quatsino") held the Property and explored the claims aggressively. Work was interrupted because of the depression and later the Second World War. Eventually, Quatsino discovered magnetite at the Merry Widow pit area and blocked out a substantial tonnage of magnetite ore between 1930 and 1952 (Travis et al., 2022).

In 1956, Cominco conducted a 1663 m underground drill program from the Coast Copper Mine's 500 level adit. The drill program validated Coast Copper's early work (1915-1931) and demonstrated that high-grade gold zones occur within the Old Sport Horizon in massive magnetite displaying low copper values.

In 1958, Cominco signed a mining agreement with Empire Development which allowed them to mine copper-gold ore from within the boundaries of Quatsino's crown grants. In 1959, Cominco drilled 2,743 m to follow up on a high-grade drill intercept made by Quatsino in 1930. The campaign successfully identified a copper-rich ore body below Empire Development's camp, which then became the ***Benson Lake Mine***. The Benson Lake deposit comprises a semicircular high-grade ore body in the footwall of the Old Sport Horizon and a near-vertical high-grade ore shoot along an intersection of a fault with the southern extension of the Old Sport Horizon. The fault had long been known and explored by hand trenches at surface prior to 1930. Due to its near-vertical nature, Cominco mined the ore shoot from two levels but didn't follow it to surface as it appears to have narrowed to less than an optimal mining width.

In 1960, Cominco began preparing its old mine workings for production while building a new camp and processing facility close to the Quatsino crown grant boundaries. This new location provided a central site from which to access, service, and process ore from both the old Coast Copper Mine and the planned Benson Lake Mine. The main access portal to the Benson Lake ore body was collared in 1967 with production beginning from Quatsino's ground in 1968.

Between 1962 and 1973, Cominco extracted 2,621,131 tonnes of ore yielding 90,814,161 pounds of copper, 377,165 oz of silver, and 124,386 oz of gold from the Old Sport Horizon. Production from 1968 to 1972 was derived almost exclusively from the Benson Lake Mine. (MINFILE 092L 091)

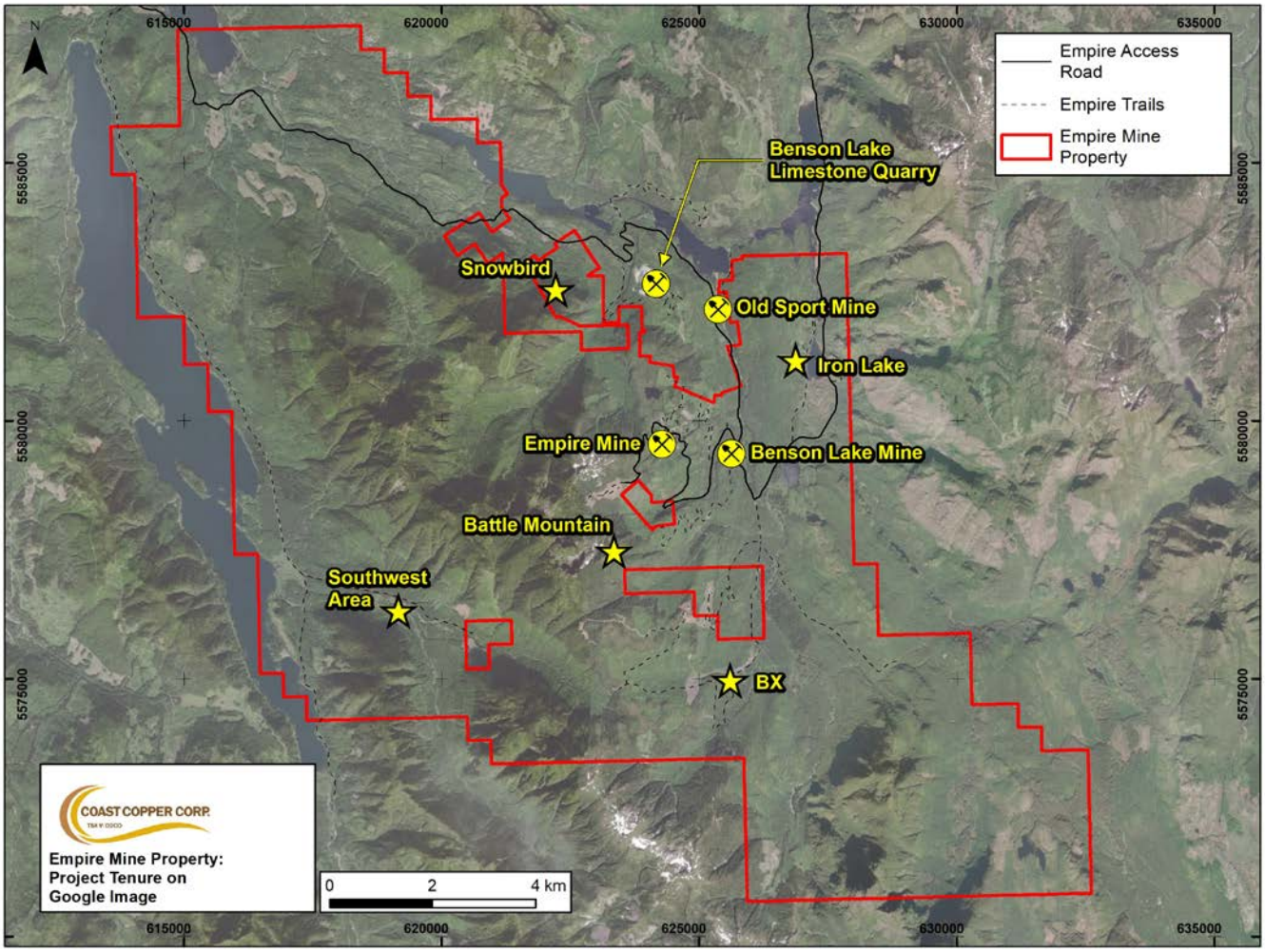
In December 1972, after closing operations at the Benson Lake Mine, Cominco reported remaining developed reserves of 454,449 metric tonnes (501,000 tons) averaging 1.3% Cu, 0.019 oz/ton (0.65 g/t) Au, and 33% Fe. Although credibly reported by Cominco, these figures pre-date current NI 43-101 standards (Berkshire and Hume, 2019). The qualified person has not done sufficient work to classify the historical estimate as a current mineral resource. The issuer is not treating the historical estimate as current mineral resources or mineral reserves.

6.2 Empire Mine Development 1957-1962

In 1956, the Empire Development Company Ltd. ("EDC") was formed to mine the Merry Widow magnetite deposit. Ownership of the mine was 60% Mannix Ltd. ("Mannix") and 40% Quatsino Copper-Gold Mines (Figure 6-2).

From 1957 – 1962, the Kingfisher, Raven, and Merry Widow Pits were mined. Extraction from the Raven pit capped at 22,000 tons due to high sulphide content of the iron ore; the pit was subsequently backfilled with waste rock from the Merry Widow pit (Berkshire & Hume, 2019). In 1964, the Kingfisher Adit, which had been driven under the Kingfisher Pit to mine the lower sections of the ore bodies, was extended to the Merry Widow ore zone. Extraction of magnetite ore from underground draw points continued until 1967. In 2022, Coast Copper Corp. commissioned a survey of the underground workings (Collison & Paynton, 2023).

A total of 3,371,815 tonnes, which yielded 1.68 Mt of magnetite, was extracted from the Empire Mine development.



(Source: Coast Copper, 2023)

Figure 6-2 Empire Mine Property with mineralized occurrences, Geoscience B.C. (2012) Airborne 1VD imagery.

6.3 Equinox Resources and Taywin Resources 1980s

In the mid-1980s, regulatory changes to the crown grant system enabled Equinox Resources Ltd. ("Equinox") to acquire a large land position including all known deposits of the Merry Widow skarn camp. Equinox's involvement is restricted to rock sampling in the Merry Widow pit in 1988 and 1989. In 1989, Taywin Resources Ltd. ("Taywin") successfully recovered ownership of crown grants that had belonged to Quatsino and commenced exploration in the vicinity of the Merry Widow pit, which culminated in 42 diamond drillholes in 1989.

6.4 Empire Mine Property 1990 – 2004

In August 1990, Noranda Exploration options, the Merry Widow Property from Taywin. A year later, as part of its general withdrawal from Western Canada, Noranda terminated its option agreement with

Taywin and transferred back the Merry Widow Crown grants. In 1992- 1993 Taywin completed some metallurgical studies in anticipation of making a production decision but work by Taywin ended on the Merry Widow Property during the company's reorganization. From 1994-2004, the property changed hands a number of times, ultimately falling under the control of Arbutus Resources. In 2004, Grande Portage Resources Ltd. optioned the property from Arbutus Resources.

6.5 Grande Portage Resources 2005-2008

Between 2005 and 2008, Grand Portage completed large exploration programs on the Empire Mine Property, including ground and airborne geophysical surveys, geochemical sampling, and completion of 92 diamond drillholes. Details of these programs can be found in the Exploration and Drilling sections of this report.

7.0 Geological Setting and Mineralization

7.1 Regional Geology

Northern Vancouver Island is underlain by rocks of the Wrangellia Terrane, an assemblage of flood basalts and subsequent arc sequences that were accreted to the western edge of North America during the Jurassic – Cretaceous (Greene et al., 2005). The region is tilted to the southwest, such that the northwest-trending stratigraphy generally youngs towards the southwest. Several NNW- to north-trending km-scale high-angle faults cut stratigraphy in the region and are in turn disrupted by north- and northeast-trending faults (Figure 7-1). This structural domain is truncated by the east-west trending Holberg fault approximately 20 km north of the property (Nixon et al., 2011).

The oldest exposed rocks in the region are volcanic and lesser sedimentary strata of the Late Triassic ***Vancouver Group***, which occur along the northeast side of Vancouver Island. The ***Karmutsen Formation*** basalt, which formed in the Late Triassic as an oceanic plateau, is aerially extensive, spanning from Alaska to Vancouver Island (Greene et al., 2005). A cease in volcanism and subsidence led to the deposition of the Quatsino Formation limestone atop Karmutsen basalt. The Quatsino Formation is 600 – 1200 m thick and contains argillaceous layers in the upper third (Giroux & Raven, 2007). This limestone unit hosts significant base- and precious-metal skarn occurrences, including the former Merry Widow and Old Sport mines, near its contact with later intrusions.

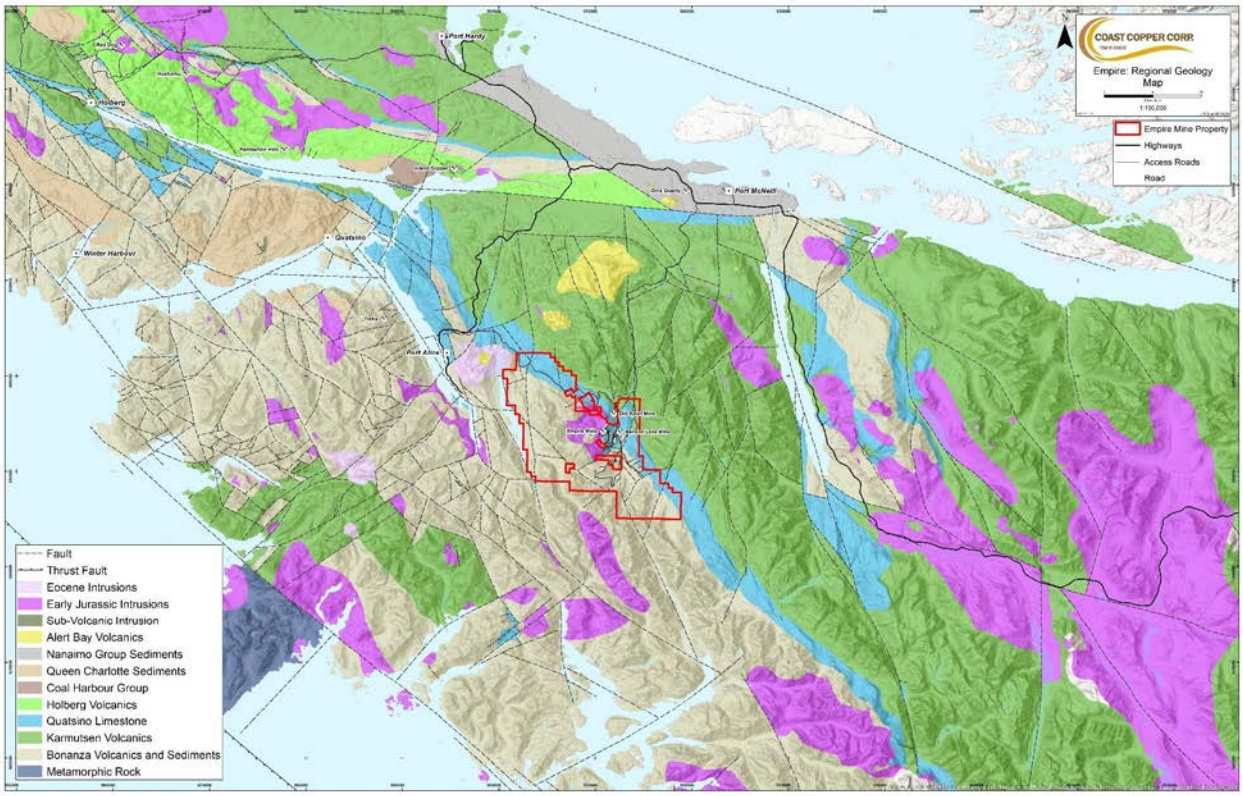
Sedimentation within the Wrangellia Terrane lasted until the Early Jurassic, when the resurgence of arc volcanism developed in response to subduction, forming the ***Bonanza Arc*** (Greene et al., 2005). The Bonanza Arc formed along the length of Vancouver Island during the accretion of Wrangellia. Subsequent tilting allowed for preservation of products of the arc from various crustal depths including rocks of the Westcoast Crystalline Complex, the Island Intrusions, and the Bonanza Group volcanic rocks, all of which have similar ages (ca. 190 to 169 Ma) and geochemical signatures (DeBari et al., 1999).

The northwest edge of northern Vancouver Island is dominated by a corridor of mixed volcanic and sedimentary rocks of the Upper Triassic to Lower Jurassic ***Bonanza Group*** (uTrlJB). The base of this sequence consists of limestone, mudstone, and siltstone of the Upper Triassic ***Parson Bay Formation*** (uTrBPlc), which is exposed in northwest-trending bands 100s of metres wide. Mafic volcanic breccia and lapilli tuff units also occur near the base of the Bonanza Group within the Parson Bay Formation (Nixon et al., 2011). A unit of volcanic sedimentary rocks overlies Parson Bay Formation and is in turn overlain by mafic volcanic rocks of the ***LeMare Lake volcanic unit*** (lJBLmv).

The volcanic and sedimentary stratigraphy of the Vancouver and Bonanza Groups are intruded by several generally northwest-elongate bodies of granodiorite, granite, quartz-diorite, and diorite assigned to the Early to Middle Jurassic ***Island Plutonic Suite*** (Nixon et al., 2011). One such body is the Merry Widow Mountain Pluton, on which the Empire Mine Property is centered (Figure 7-1). Other Island Plutonic Suite plutons in the region host the former Island Copper porphyry Cu-Mo mine and the porphyry Cu-Mo-Au deposits of Hushamu and Red Dog (Nixon et al., 2020).

Approximately 10 km northwest of the Merry Widow Mountain Pluton, the Victoria Lake Pluton granodiorite and plagioclase ± hornblende porphyry of the Miocene to Pliocene ***Klaskish Plutonic Suite*** intrudes older stratigraphy and is associated with basalt to rhyolite flow and pyroclastic breccia, intermediate volcanics, and minor sediments of the contemporaneous ***Alert Bay Volcanic Group***

(MiPiAv) (Nixon et al., 2020). The Klaskish Plutonic Suite and Alert Bay volcanic suite are together termed the ***Brooks magmatic suite***, which occur along a 65-km northeast-trending tract associated with plate-edge effects and the Brooks Peninsula Fault Zone (Nixon et al., 2020). The Klaskish Plutonic Suite are some of the youngest intrusions in the Cordillera and are spatially associated with mineral occurrences including skarn/contact mineralization, base- and precious-metal stockwork/vein systems, porphyry Cu-Mo (± Ag ± Au) mineralization (Nixon et al., 2020).



(Source: Coast Copper, 2023)

Figure 7-1 Regional Geology

7.2 Property Geology

The Empire property is underlain by northwest-trending belts of Vancouver and Bonanza Group volcanic and sedimentary stratigraphy, which are folded and faulted, and intruded in the center of the property by the Early to Middle Jurassic Island Plutonic Suite Merry Widow Pluton (Nixon et al., 2011). Bedding generally dips moderately (20 – 50 °) westward, with some open flexural folds developed locally and tighter folding near the margin of the Merry Widow Pluton (Nixon et al., 2011).

The oldest rocks on the property, occurring along the northeast margin of the property, are massive to pillowed volcanic rocks and subvolcanic gabbroic intrusions of the upper Triassic Upper ***Karmutsen Formation (Flow Member) (uTrVKFvb.f)***. The volcanics represent tholeiitic basalts deposited in an oceanic environment and are described as aphanitic to plagioclase-phyric and minor plagioclase-megacrystic flows; commonly amygdaloidal and locally exhibiting laminar flow textures (vesicle trains) and pipe vesicles (Nixon et al., 2011).

The Karmutsen Formation basalts are conformably overlain by 600 – 1200 m of Upper Triassic ***Quatsino Formation*** limestone ***(uTrVQls)***. This unit is described as massive to thinly bedded or laminated, micritic to bioclastic limestone with minor localized silica replacement and chert nodules; rare laminated or graded interbeds and oolitic layers; locally fossiliferous (Nixon et al., 2011). Adjacent to the larger intrusions, limestone is altered to white marble, which is the host unit for the skarns on the property.

Quatsino Formation limestone is in turn overlain by volcanic stratigraphy of the lower Jurassic ***Bonanza Group***. The base of this package comprises limestone, mudstone, siltstone, and shale (*uTrBPlc*) and lesser augite-phyric basaltic volcaniclastic breccia and lapilli tuff (*uTrBPvb.vcx*) of the Upper Triassic ***Parson Bay Formation***. This contact is commonly a major, possibly regional-scale moderately (45 – 55°) east-dipping thrust termed the Quatsino Thrust ("QT") (Oliver, 2022). Bedding of Quatsino Limestone generally dips east, and locally overlies Parsons Bay Formation (Oliver, 2022).

A relatively narrow unit of undivided volcanic and sedimentary rocks overlies Parson Bay Formation rocks and is in turn overlain by voluminous mafic volcanics of the ***LeMare Lake volcanic unit*** (lJBLvm) which dominates the west side of the property.

Small subvolcanic intrusions, dykes, and sills of diabase and basaltic composition (*TrJBdb*) or augite ± plagioclase ± olivine porphyry (TrJBap) intrude Parson Bay Formation and Quatsino Formation rocks in the east-central part of the property (Figure 7-3). This intrusive suite is referred to as the ***Keystone Suite*** and is thought to have formed as feeders and subvertical breccia pipes to the overlying tuffs and breccias of the Bonanza Group (Morris & Canil, 2019; Ray & Webster, 1991). The largest pipe, the Keystone intrusion, reaches 600 m in diameter. Keystone Suite dykes and sills that cut the Quatsino limestone are associated with skarn alteration and mineralization and the margins of some intrusions are bleached, enriched in sodium, and depleted in iron and potassium (Morris & Canil, 2020).

The second major intrusive episode in the Early to Middle Jurassic resulted in the emplacement of the ***Coast Copper stock*** (Merry Widow Pluton), a multiphase intrusive complex of the Island Plutonic Suite (Nixon et al., 2011). The Merry Widow Pluton is one of the older intrusive bodies on Vancouver Island, with quartz diorite and granodiorite phases yielding U-Pb zircon dates of 197.4 (±0.5) Ma and 197.1 (±0.3) Ma, respectively (Nixon, 2011). The pluton (Jlgb-qdi, Jlqdi-gd) includes phases of predominantly gabbro, quartz diorite, and granodiorite, with minor monzonite; contacts between intrusive phases are both sharp and angular and ductile (mingling) (Morris & Canil, 2019).

The contact between the Coast Copper stock and Quatsino limestone is not exposed at service, but in drill core comprises ~100 m of exoskarn (within the limestone), 10-60 m of volcanic breccia, 3 – 10 m of recrystallized limestone, and ~20 + m of magmatic skarn (Morris & Canil, 2020). Magmatic skarn is formed by dissolution of carbonate wallrock into the intrusion, resulting in mafic cumulates and distinct geochemistry along the pluton margin (Morris & Canil, 2020).

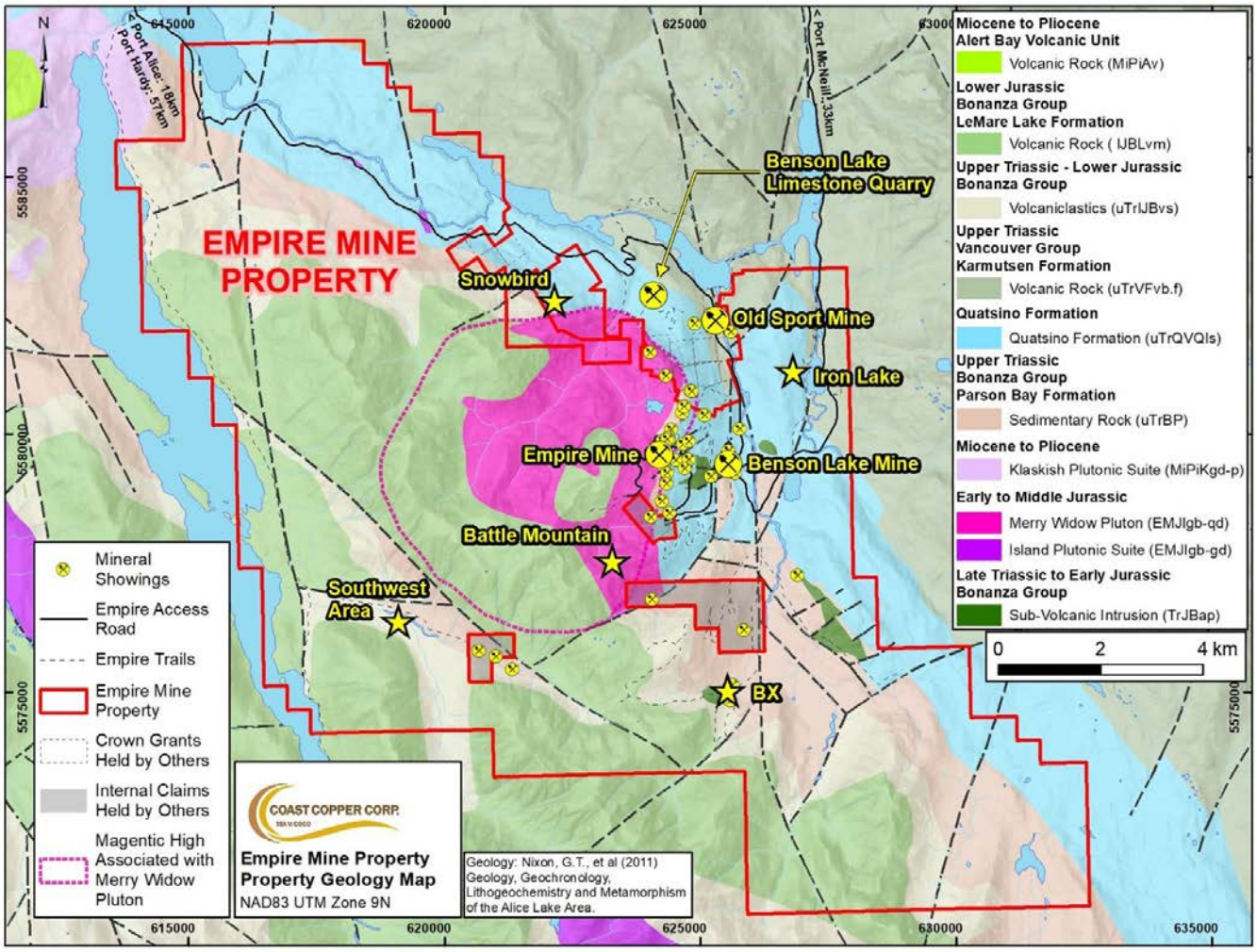
Previous workers considered the oldest fault set in the area to include the north-trending Merry Widow Fault, which may represent a splay off the major north-trending Benson River Fault that cuts through the east side of the property. The Benson River fault has an estimated sinistral movement of 1.5 km and an easterly downthrow of 1.2 km (Lund, 1966).

Oliver (2022) recognizes at least three principal structural elements in the Merry Widow area:

1) Thrust faults: The Quatsino Thrust ("QT"). Often, dominant contact between Quatsino Limestone and Parson Bay Formation occurs across an east-dipping thrust. The QT is repeatedly mineralized with calc-silicate assemblages and sulphides; mineralization occurs at the immediate contact, up to 10's of metres into the hanging wall or footwall. The QT is interpreted as a pre-mineral structure that acted as a fluid pathway for development of calc-silicate – copper/gold – magnetite bodies. Regionally, this contact is offset along major faults as well as several smaller north to northeast-trending structures (Nixon et al., 2011).

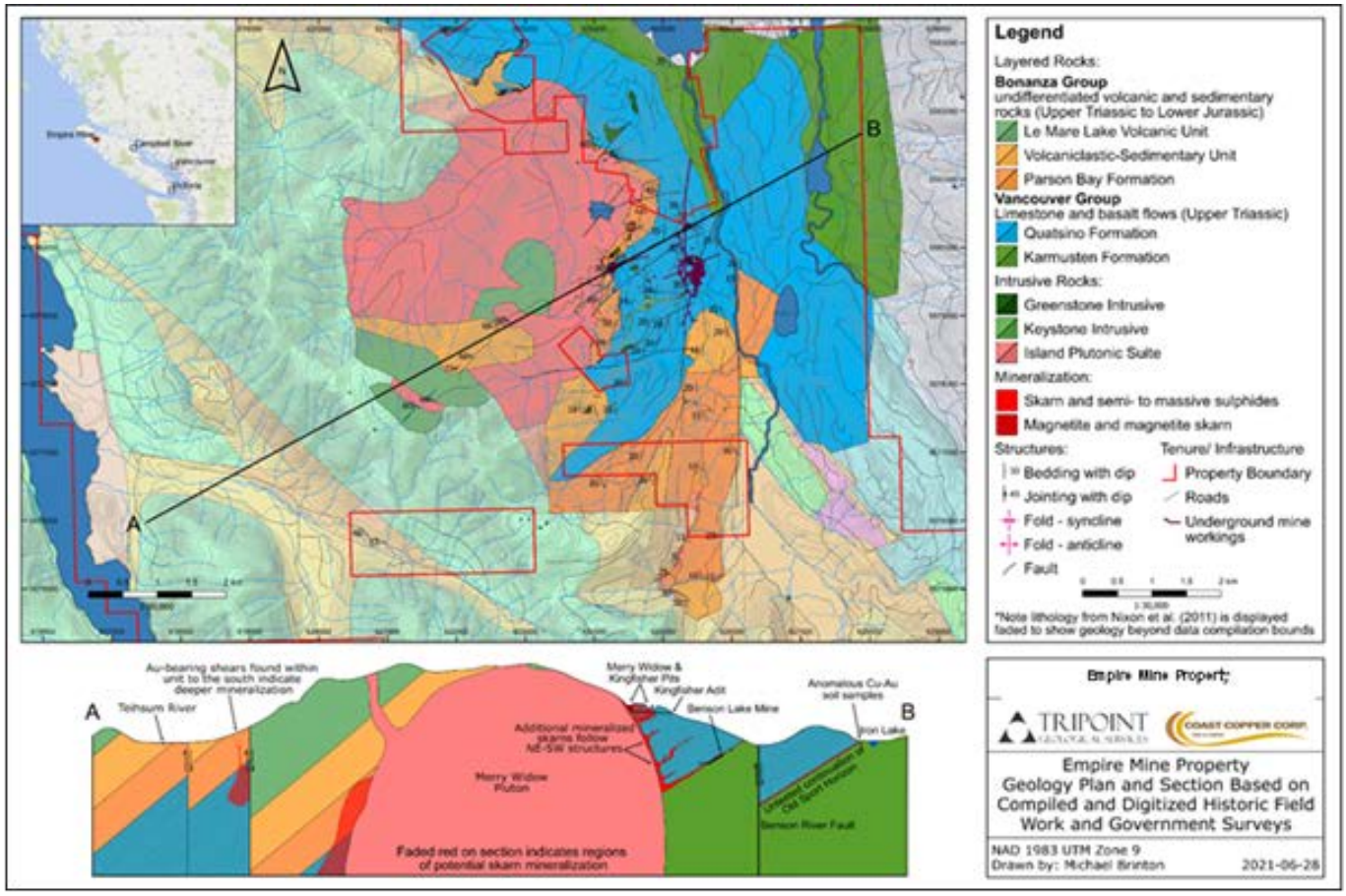
2) ENE-trending (steeply S-dipping) strike-slip and horst-graben faults with inferred dextral trans-tensional kinematics, exhibiting a few – 10's of metres displacement. These post-date QT. Oxide-rich shear surfaces, may localized calc-silicate and sulphide development, dominantly syn-mineral. Previous geologists have mapped the Kingfisher, Marten, Gorge, and Keystone faults in this general orientation. The Kingfisher Fault apparently controlled the distribution of the Kingfisher magnetite ore bodies, although minor post mineralization movement also took place along the structure (Lund, 1966). The northeast-trending Rainer Creek Fault abuts the south edge of the Merry Widow Pluton (Nixon et al., 2011).

3) Raven Fault: a high-angle reverse fault with northwest-side up ~50 m, syn-mineral, offsets QT, may localize significant sulphide-Cu-Au mineralized zones. NNW-trending extensional faults and dyke swarms.



(Source: Travis et al., 2021)

Figure 7-2 Regional-scale geology and stratigraphy of the Empire Mine Property



(Source: Travis et al., 2021)

Figure 7-3 Property Geology and Cross-section

7.3 Mineralization

The Empire Mine property hosts several magnetite skarns and associated semi-massive to massive sulphide mineralization hosting gold, copper, silver, cobalt, and minor zinc. Mineralization exhibits both stratigraphic and structural control, generally occurring along the margins of skarn-altered dykes and near the base and top of the Quatsino Formation limestone in proximity to significant unconformities (e.g., Old Sport Horizon) or discordant structural zones (e.g., Quatsino Thrust and high-angle trans-tensional faults). Within the large planar surface and fluid pathways at both QT and Old Sport Horizon, enhancement of calc-silicate Cu-Au skarn mineralization is associated with steeply dipping extensional faults and the contacts of discordant mafic dykes coming off the QT and Old Sport Horizon (Oliver, 2022). Chalcopyrite and pyrite, which appear to be replacing pyrrhotite, are important sulphide phases and are commonly focused along the higher angle faults which may cut the QT.

In the Empire and Benson Lake mine areas, most mineralized zones have iron-rich magnetite-calcite replacement zones proximal to intrusive contacts of the Merry Widow pluton, and associated sulphide-rich mineralized zones which often post-date magnetite replacement zones (Oliver, 2022). Calc-silicate replacement bodies form external to magnetite-calcite bodies, often with a structural or dyke association, and host Strong Cu-Au mineralization is concentrated 10s – 100s of metres outboard of massive magnetite replacement bodies (Oliver, 2022).

7.3.1 Empire Mine Area (Merry Widow, Kingfisher, and Raven Deposits)

The Merry Widow, Kingfisher, and Raven deposits occur near the top, western margin of the Quatsino Formation, and are collectively referred to as the Empire Mine. The contact between the base of the Bonanza Group and the underlying Quatsino Formation is the locus of the Quatsino Thrust fault, extensive skarn alteration, and mineralization at the Merry Widow deposit (Oliver, 2022). The top of the Quatsino Limestone is also associated with the Marten, Bluebird 1, and Bluebird 2 occurrences to the south of the Merry Widow deposit, which have been described as manto style with massive pyrrhotite, pyrite, and chalcopyrite and sporadic arsenopyrite, sphalerite, magnetite, marcasite, and cobaltite (Wilton, 1990). The Quatsino Thrust is interpreted as a regional-scale pre-mineral structure with a loose spatial relationship to the Merry Widow pluton that acted as a fluid pathway for development of calc-silicate – copper/gold – magnetite bodies (Oliver, 2022).

The ***Merry Widow*** and ***Raven*** deposits are hosted by the Keystone Suite andesitic intrusion and Bonanza Group volcanic rocks near their contact with the Quatsino limestone and the Merry Widow Pluton, whereas the ***Kingfisher*** deposit is hosted entirely in Quatsino Formation limestone.

The ***Kingfisher*** deposit consists of two steeply plunging, sub-circular pipes of massive magnetite up to 50 m in diameter and connected at depth (Travis et al., 2021). The deposit is structurally controlled along the Kingfisher Fault and contains abundant colloform magnetite, which is believed to indicate magnetite deposition as a gel by colloidal processes (Travis et al., 2021). The Kingfisher deposit is reported to locally host fluorite mineralization; skarn development is weak relative to the Merry Widow deposit.

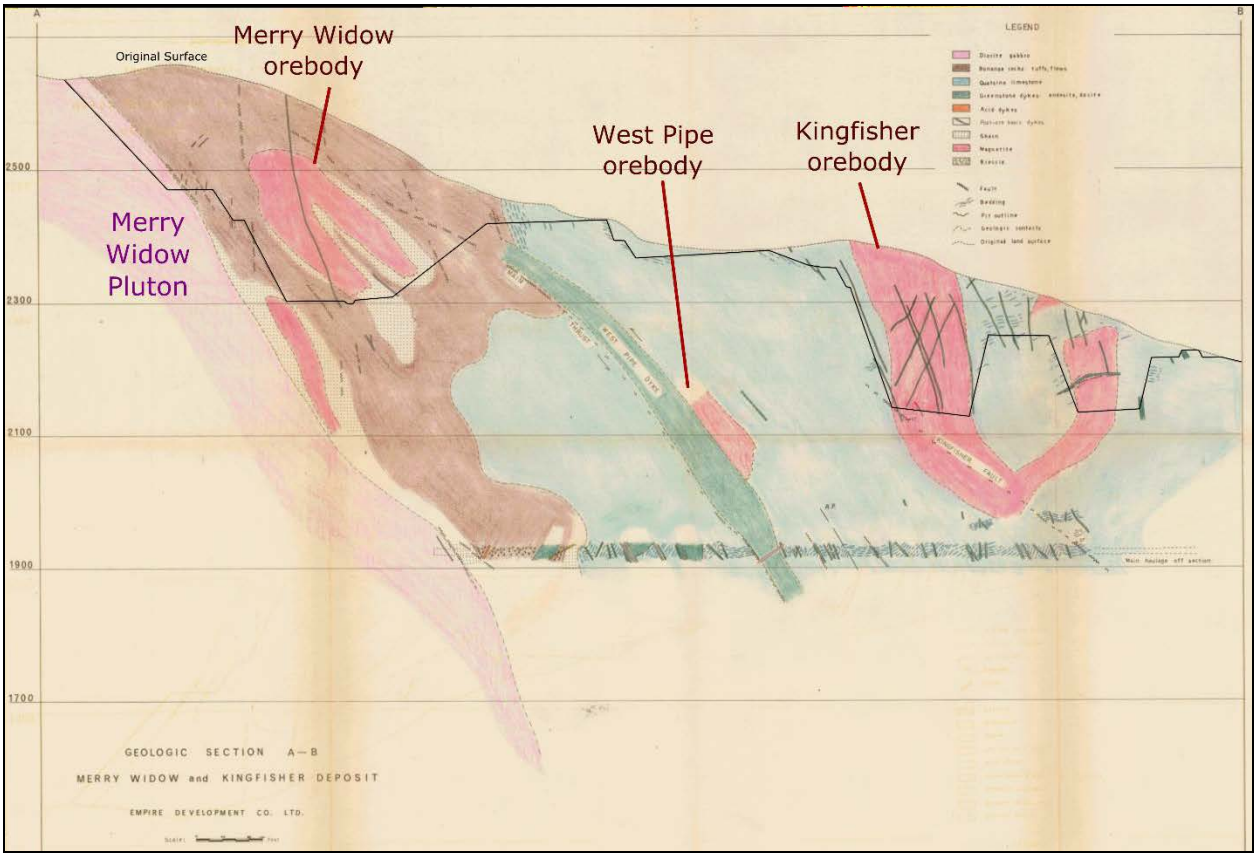
The ***Merry Widow*** deposit is characterized by abundant coarse crystalline magnetite, minor colloform magnetite, and sporadic pyrrhotite, pyrite, arsenopyrite, cobaltite, erythrite, sphalerite, and gold in a gangue comprising garnet, epidote, actinolite, clinopyroxene, carbonate, and quartz (Ray & Webster, 1991). Magnetite ore forms lenses, sheets, and discontinuous breccia zones, the latter comprising

magnetite-calcite fragments rimmed by coarse garnet (Lund, 1966). The material mined at Merry Widow comprises massive to semi-massive magnetite ± calcite replacement bodies formed proximal to the Merry Widow pluton intrusive contact and locally along hanging wall or footwall contacts of extensional dykes (Oliver, 2022).

The West Pipe dyke, a xenolithic Keystone suite intrusion, has associated gold-rich ore along its hanging wall (Figure 7-4). Gold occurs in sulphide-rich zones with associated chalcopyrite, cobaltite, and tellurobismuthite (Oliver, 2022). The immediate vicinity of the Merry Widow pit contains low Cu-Au grades and limited calc-silicate skarn assemblages, which could potentially form stacked lenses or zones extending for significant distances down the plane of intrusive-volcanic or intrusive-carbonate contacts (Oliver, 2022). Mineralization at Merry Widow has been dated by K-Ar analysis of skarn-related phlogopite at 181 Ma (Carson, 1973) and more recently by Nixon et al. (2000) at 197.9 ± 1.3 Ma, contemporaneous with granodiorite of the Merry Widow pluton.

North of the Merry Widow pit by 100 – 200 m, sulphide-rich gold mineralization occurs at the ***Raven*** deposit, which is associated with the mineralized northeast-trending Raven Fault and greenstone corridor. The ore body consists of magnetite with pyrrhotite, pyrite, sphalerite, and chalcopyrite in a tabular mass plunging steeply to the southeast and surrounded in part by a garnet and epidote skarn (Lund, 1966).

Figure 7-5 is an outcrop showing the magnetite -calcite replacement with Figure 7-6 showing the light grey limestone in contact with sulphide-rich calc-silicate body, both overlying younger bedded crystal tuffs (Parson Bay Formation).



(Source: Travis et al., 2022 after Lund, 1966)

Figure 7-4 Empire Mine Historical Geological Section

(Source: Oliver, 2022)

Figure 7-5 Magnetite-calcite replacement bodies.

(Source: Oliver, 2022)

Figure 7-6 Contact relationships at Copper Knob

7.3.2 Old Sport Horizon (Coast Copper and Benson Lake Mines)

The extensive Old Sport Horizon was the focus of the Old Sport Mine (also known as the Coast Copper Mine) and Benson Lake Mine, northeast and east of the Empire Mine, respectively. The Old Sport Horizon is located stratigraphically between the Karmutsen volcanic-Quatsino limestone unconformity at an elevation more than 750m below that of the Empire Mine. Discontinuous ore lenses dip about 40 degrees to the west, towards the Merry Widow Pluton. The horizon is predominately localized in a single limy tuff or limestone layer (approximately 31m thick) located at the top of the Karmutsen volcanic sequence just below or above a sill of basic composition (known as the Included Diorite).

Mineralization consists mainly of magnetite, garnet, epidote, calcite, with chalcopyrite and bornite occurring as veins, lenses, and disseminations in silicates and massive magnetite. Magmatic hydrothermal sulphides appear to overprint earlier massive iron oxide and skarn replacement bodies. The horizon also contains lesser amounts of amphibole, chlorite, quartz, pyrrhotite, and pyrite. At the lower levels of the Old Sport Horizon (near the Merry Widow Pluton), bornite and increased pyrrhotite were found in the Coast Copper Mine in combination with chalcopyrite. Alteration along the Old Sport Horizon has been so complete as to render its original protolith unrecognizable in many areas. External to the magnetite masses, both limestone and the volcanic rocks have been extensively altered to epidote and chlorite (Berkshire and Hume, 2019).

Narrow zones of high-grade copper mineralization (>15% Cu) were described locally, and zones of >2% Cu are reported in the older workings to have varied from 0.6 to 30 m in thickness. The higher-grade ore shoots, as mined by Cominco, were discontinuous while lower-grade copper-gold mineralization appears to be disseminated throughout most of the Old Sport Horizon.

Figure 7-7 is a photo of the mineralization at Old Sport showing relict compositional bands visible in fine grained silica-epidote-garnet with pyrrhotite-chalcopyrite. A generalized cross section of geology mineralization can be seen in Figure 7-8, historical Cominco interpretation.

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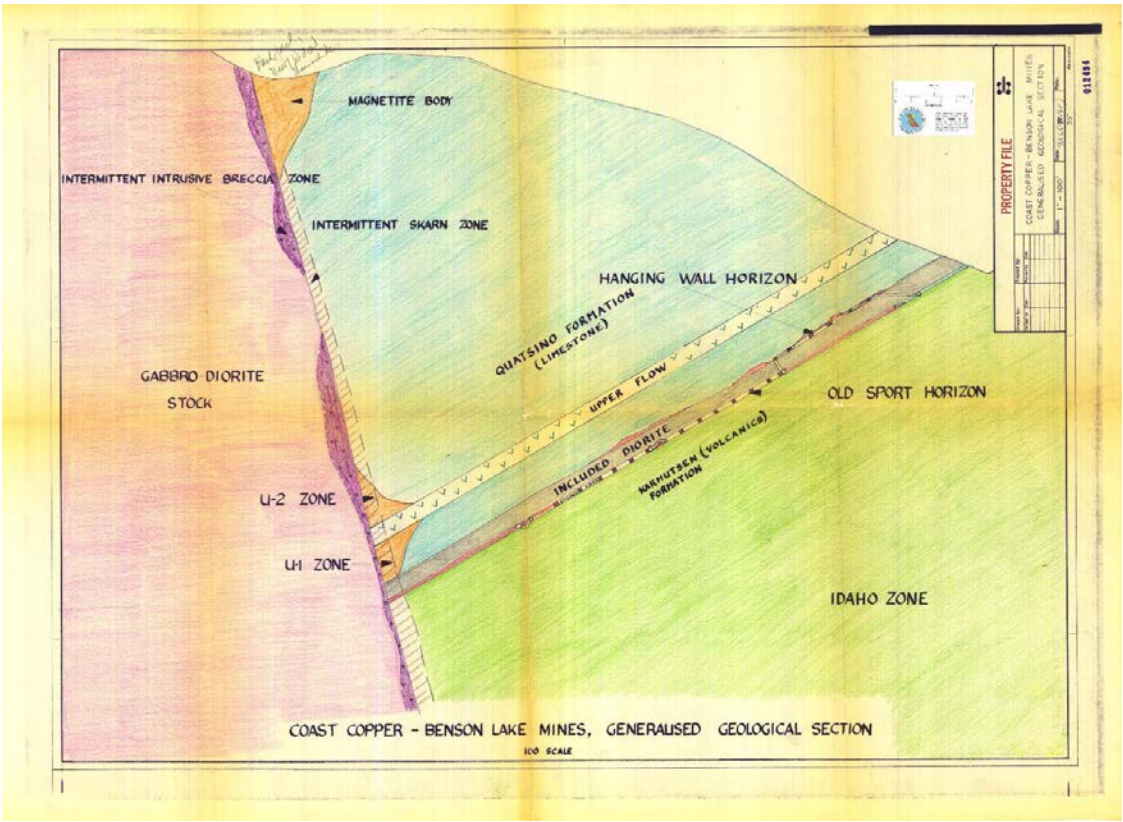
(Source: Oliver, 2022)

Figure 7-7 Assumed OSH mineralized material found at entrance to the Decline No.1 Portal



(Source: B.C. Property File 014294, Travis et al., 2022)

Figure 7-8 Generalized geological section of old sport horizon, historical Cominco interpretation

7.3.3 Battle Mountain Gold Zone

South of the Merry Widow pit by 1800 – 2700 m, an intrusion breccia comprising fragments of limestone and fine-grained mafic dyke material within an epidote-magnetite matrix trends north-northeast and is inferred to be 100 – 125 m-wide (Travis et al., 2022). As illustrated in Figure 7-2, it is the southerly extension along the same contact between the Merry Widow pluton and the top of the Quatsino limestone along the southerly projection of the Quatsino. Soil (B-horizon) geochemistry yields anomalous gold (223 – 1175 ppb) and localized cobalt (up to 261 ppm) over > 800 m strike length and open to the northeast and southwest.

8.0 Deposit Types

While traditionally understood as a precious-metal bearing magnetite skarn mineralizing system, previous workers have noted similarities to iron-oxide-copper-gold ("IOCG") mineralization models (Oliver, 2022). The current interpretation is of skarn mineralization associated predominantly with intrusive-carbonate contact zones, which often exhibit structural control in the form of faults or unconformities.

9.0 Exploration

9.1 Historical Exploration

This section is taken directly from Travis et al., (2022); the chronological summary is largely sourced from assessment reports contained in the B.C. Ministry of Energy, Mines, and Petroleum Resources' Assessment Report Database ("ARIS").

In 1968, Cohen completed an airborne magnetic and electromagnetic ("EM") survey on behalf of McAlpine and Quatsino in the vicinity of Trout Lake in the eastern portion of the Empire Mine Property (Cohen, 1969). In 1970, Crosby completed an airborne magnetic survey south of Trout Lake, in the southeastern portion of the current Property, and south of Benson Lake (Crosby, 1970).

In 1984, Smitheringale collected 21 stream sediment samples on the Ben claims just east of the Property boundary and 21 stream sediment samples over the VIC claims in the southwestern portion of the Property (Smitheringale, 1984a, b). One sample west of the Property was anomalous in copper, and multiple samples in the southwestern area of the Property were anomalous in copper, arsenic, and gold. In 1985, Westmin Resources collected 143 soil and 60 silt samples in the south-central area of the Property (Dykes, 1985). Some zones of anomalous gold, copper, and arsenic were detected. Also in 1985, Homestake Mineral Development Co. collected 20 rock samples of the Merry Widow Pluton in the central portion of the Property. Two of the samples were anomalous in mercury with concentrations of 630 and 660 ppb Hg (Verley, 1985).

In 1989, Equinox reported on two short programs on the VIC and BEN claims before they left the area following Taywin's re-activation of the crown grants. The VIC claims, in the southwestern portion of the Property, were subject to a limited stream sediment and prospecting program (Culbert, 1989a). On the BEN claims, overlying the former Empire Mine, Equinox completed a program of rock sampling in the Merry Widow pit and Kingfisher pits and adit (Culbert, 1989b). Multiple sample assays from this program exceed 5.0% Cu, 100 g/t Ag, and/or 20 g/t Au.

Between 1989 and 1990, Taywin reported on five small programs within and around the Empire Mine Property which are found in the assessment database:

- A small soil survey east of Benson River in the northern portion of the Property outlined a zone of elevated copper (ARIS #18619).
- A small soil survey near Rainier Creek outlined some anomalous zinc, copper, and gold (ARIS #18659).
- A survey near Blue Ox Creek in the southern portion of the Property did not present any anomalies in the soil samples. However, four anomalous rock samples were collected during the program that returned up to 13.5% Cu and 72 g/t Ag (ARIS #19217).
- A small program recovered a single rock sample that assayed 8.32% Cu, 42.85 g/t Ag, and 1.3 g/t Au north of the Property (ARIS #19530).
- A small geological mapping program was completed south of Benson Lake (ARIS#19536).

Meanwhile, in 1989 and 1990, Battle Mountain completed two soil sampling programs on their property that was directly south of the main block of crown grants (ARIS #19151 and #20327). The two programs

resulted in the collection of 478 soil samples and the discovery of a significant 600x300 m soil Au-Co-As anomaly south of Merry Widow Creek.

Noranda reported on three programs in 1991. A small soil sampling program was completed west of Iron Lake, just east of the Property, but no significant anomalies were discovered (ARIS #21074). A small prospecting and mapping program was completed near Rainier Creek where a single rock sample from a "greenstone" dyke returned 2.13% Zn (ARIS #21129). Another prospecting and mapping program near the White Marble claim in the northern portion of the Property discovered two angular boulders of carbonaceous sediments hosting massive sulphide mineralization that assayed up to 1.75 g/t Au, 3.77 g/t Ag, 53.37% Fe, and 0.24% Cu (ARIS #21130). The historic magnetite-rich Snowbird Showing is in the vicinity of the boulders.

In 1992, Granges Inc. completed a program of silt, soil, and rock sampling in the southwestern portion of the Empire Mine Property. Unfortunately, no detailed maps show the location of the samples, but assay results indicated generally low metal values. Within the report, realgar and orpiment mineralization is described to exist north of Teihsum River (ARIS #22375). In 1994, James Laird discovered the Road Zone (20.8 g/t Au), Gold Creek Zone (9.46 g/t Au), and the Bridge Zone (6.96 g/t Au, 25.8% Zn) in limestone proximal to the Merry Widow Pluton within the southwestern claim enclave (ARIS #23645). In 1996, Raging River Power and Mining completed 8 short diamond drillholes north of the Property with the purpose of exploring for white marble for ground calcium carbonate production. The core was not assayed for metals, but many of the drillholes were described to intersect dykes and associated "alteration zones" (ARIS #24802).

In 1996, Cascade Metals Inc. completed detailed work on the Teihsum Gold Project (ARIS #24971) including prospecting and mapping, soil sampling, and magnetic and VLF-EM surveys, following up on James Laird's work in 1994.

In 2001, Arbutus Resources spent a single day on the White Marble claim assessing the potential for building or industrial limestone (ARIS #26648).

In 2003, Warren Geiger completed a report and collected some additional rock samples on the Teihsum River Property which was mostly based on James Laird's work in 1994 (ARIS #27332).

In 2005, Red Lake Resources completed 407.8 m of diamond drilling in 6 drillholes on the Teihsum River Property with 2 drillholes at the Road Zone, 1 drillhole at the Gold Creek Zone, and three drillholes at the Bridge Zone all within the southwestern claim enclave. The Bridge Zone drillholes encountered gold mineralization of up to 4.10 g/t Au over 4.58 m along the gabbro-limestone contact (ARIS #27807).
Between 2006 and 2008, Grande Portage committed extensive exploration efforts on the Empire Mine Property, including airborne and ground geophysics, extensive rock, silt, and soil sampling, and the completion of 92 diamond drillholes.

In 2006, Grande Portage commissioned Aeroquest Ltd. to fly a 1,495 line-km (50 m line spacing) airborne AeroTEM II EM and magnetometer survey over the central part of the Property (ARIS #28802). Then in 2007, an extension of the survey was completed to the northwest and west of the Property, with similar parameters, totaling 1,724 line-km (Aeroquest, 2007).

In 2007, Grande Portage completed an extensive field program which resulted in the collection of 31 rock samples, 790 silt samples, and 466 soil samples (Raven & Nelson, 2008). Five rock samples of gabbro and basalt were collected south of Trout Lake and returned anomalous chromium, cobalt, and nickel. Seven rock samples were collected from the South Pit Showing and returned up to 9.73 g/t Au and 1,790 ppm Co. Nine rock samples from the Bluebird 2 Showing returned gold values up to 7.78 g/t. The silt and soil sampling program highlights anomalous arsenic values in the southwestern portion of the Property, along with all the anomalies produced by historical surface sampling.

Grande Portage completed two large drilling campaigns in 2006 and 2007, drilling a total of 12,450 m in 92 diamond drillholes (Nicholson & Robb, 2006; Raven & Nelson, 2008). Much of the drilling was completed within and north of the Merry Widow pit, especially in the 2006 program. Significant intervals of gold, silver, copper, cobalt, and iron mineralization hosted in massive to semi-massive sulphides were intersected by the drilling directed north of the Merry Widow pit.

Based on the 2006 drilling, Grande Portage contracted Giroux Consultants Ltd. to complete a maiden NI 43-101 resource estimate on the Empire Mine Property (Giroux & Game, 2007). In 2008, the resource report was updated to include the 2007 exploration activities with no change to the resource values (Giroux & Raven, 2008). A measured and indicated resource of 960,000 tonnes at 2.03 g/t Au, 5.64 g/t Ag, 0.34% Cu, 0.013% Co, and 16.1% Fe was calculated using a 0.50 g/t Au cutoff. An additional 120,000 tonnes at 1.19 g/t Au, 2.77 g/t Ag, 0.13% Cu, 0.008% Co, and 16.2% Fe was inferred (using a 0.50 g/t Au cutoff). In the resource calculation 18 assays were capped at 32.0 g/t Au, 9 assays were capped at 165 g/t Ag, 7 assays were capped at 11.7% Cu, and 5 assays were capped at 0.48% Co.

In 2011, Grande Portage invited Ridgemont Iron Ore Corp. ("Ridgemont") to the Empire Mine Property to complete an evaluation of the magnetite potential on the Property. Ridgemont completed a limited ground magnetic survey and 5 channel samples from the Merry Widow pit returned between 79.7% and 94.0% magnetite with low sulphur values (ARIS #33043). In 2012, Grande Portage completed an unconventional "geophysical" survey and found no significant results when the anomalies were investigated (ARIS #33961). The final report for Grande Portage in the assessment database describes two days of work in 2015, assessing the limestone potential on the White Marble claim by Don Graham in 2015, which was owned by Grande Portage at the time (ARIS #35666). Homegold Resources Inc. (Johan Shearer) completed 6 small programs involving prospecting, rock sampling, and soil sampling in the southern portion of the Property between 2011 and 2018 (ARIS #32826, #33925, #34281, #34438, #34741, and #37609).

In 2016, Bridgeland Minerals commissioned Auracle Geospatial Science Inc. to complete a satellite based remote sensing study to differentiate apparent geology, non-apparent geology, lithology, and structures on the Property (ARIS #36359).

In 2017, Bridgeland Minerals hired Eagle Mapping Ltd. to fly a 31 km^2 LiDAR (accurate to within ±5 cm vertically and ±30 cm horizontally) and aerial photography survey (ARIS #37471).

In 2019, Mirva engaged Connor Malek (First Geolas Consulting) to complete a limited field program that collected 27 rock samples, 17 lithogeochemical samples, and 14 rock samples for petrographic analysis (Malek, 2019).

9.2 Government & Academic Studies

Both the Geological Survey of Canada ("GSC") and the British Columbia Geological Survey ("BCGS") have completed geological mapping and research at various scales in the Empire Mine property area from 1962 to 2020.

In 2012, Geoscience BC completed an extensive project on northern Vancouver Island which comprised an airborne magnetic survey and a stream sediment geochemical sampling and till reanalysis program:

In 2018, Geoscience BC instigated another regional project, including an airborne magnetic and radiometric survey that covers the entirety of the Empire Mine Property (Geoscience BC Report 2020-05; Fig. 6-2).

University of Victoria PhD. candidate Rebecca Morris has published two papers detailing skarn mineralization and metasomatism associated with magma-carbonate contacts in the Merry Widow area (Morris & Canil, 2020; Morris & Canil, 2021).

9.3 2021 & 2022 Exploration Programs

Coast Copper conducted significant ground exploration and diamond drilling campaigns in 2020, 2021, and 2022. In late 2020, channel sampling across the Copper Knob mapped Cu-bearing magnetite and pyrrhotite skarn yielded results up to 9.77 g/t Au and 2.35% Cu across 10.5 m.

In 2021, over the course of 41 field days in five phases, a total of 229 soil samples, 85 rock samples, 7.5 line-km of Induced Polarization ("IP"), and mapping was completed by crews from Tripoint Geological Services Ltd. and Peter E. Walcott & Associates Limited over a large portion of the property.

Diamond drilling in the winter of 2021 tested:

1) The Merry Widow pit area, within gaps, down-dip and to the north and south of the existing NI-43-101 resource area (Giroux, 2007).
2) Below the past producing Raven Pit.
3) Remaining Cominco reserve blocks for Benson Lake Mine and along-trend targets.

In 2022, three phases of surface geochemical and geological work resulted in a total of 229 soil samples and 85 rock samples. A total of 7.5 line-km of IP surveys were conducted in two phases.

10.0 Drilling

Between 1961 and 2022, various operators completed at least 15 drill campaigns on the Empire property, resulting in the recovery of 36,184.59 m of diamond drill core from 288 drillholes. Assay data are available for 151 of these drillholes; assay certificates are available for a small subset of the 1982 drilling (DDH 5), the first portion of 1989 drilling (DDH89-001 through DDH89-008), 2004-2005 drilling, 2006, 2007, 2021, and 2022 as summarized in Table 10-1. Lack of QA/QC and potential validation issue it has been decided not to use the pre-2000 data in the resource modelling.

Drilling in 2006 and 2007 (12,449.51 m in 92 diamond drillholes) was carried out by Grande Portage Resources Inc. using Westcore Drilling of Hope, B.C.. In 2006, all holes were BQTK in diameter; in 2007 a few holes were BTW but the majority were NQ, often transitioning to BQTK at depth (AR 30002a). The 2006 drilling was carried out in two campaigns: a summer program drilled MW06-01 – -27 and a winter program (MW06-28 – -46) for which no report is available and assay certificates are available only as Excel files, which do not include received weights. Campaign MW2006-1 holes were down-hole surveyed from the bottom of hole using acid tests; campaign MW2006-2 and the 2007 program (MW2007-1) used the magnetic Reflex EZ-shot for downhole surveys. The location of the historical core for these programs is unknown.

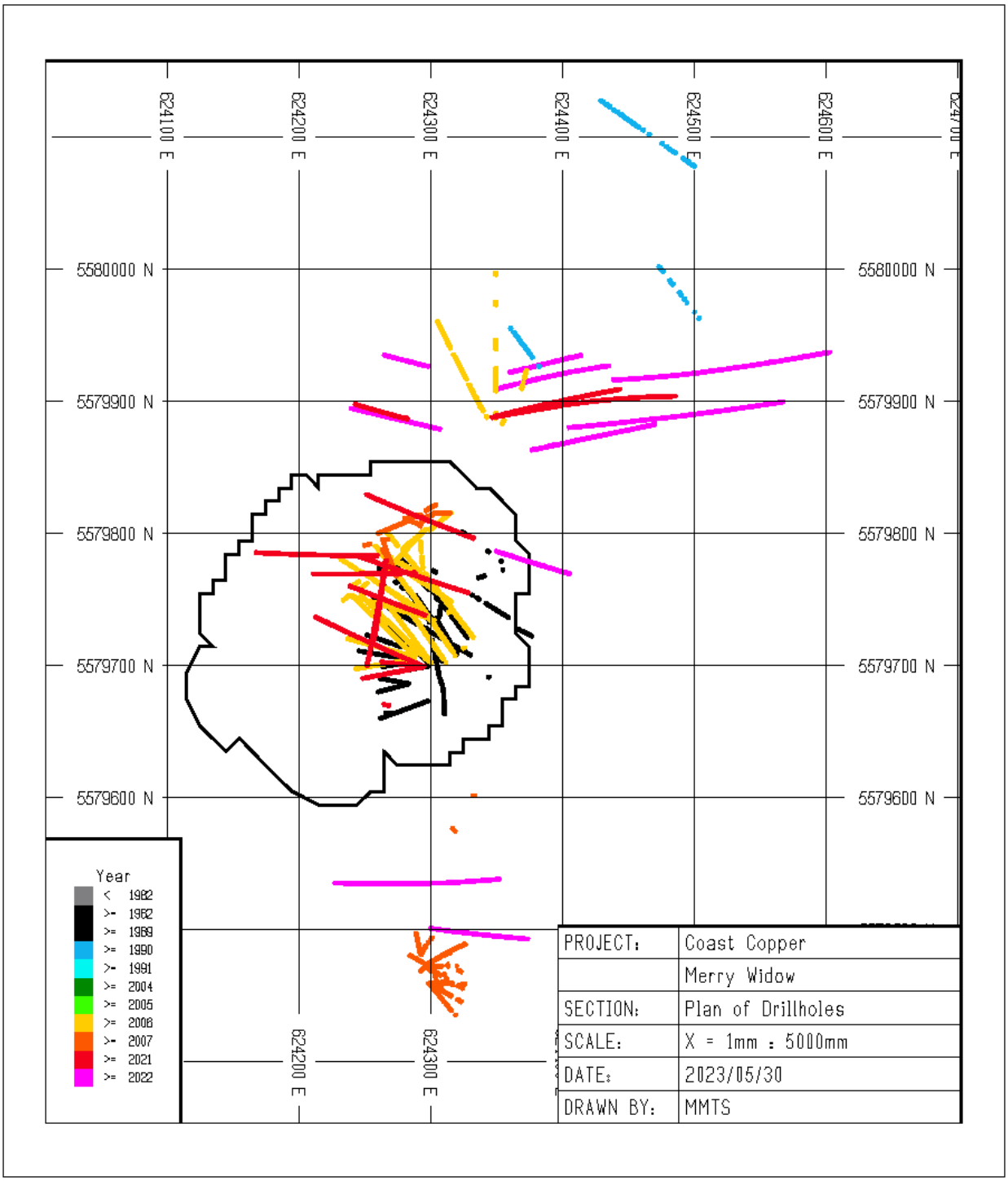
Drilling in 2021 and 2022 was conducted by Coast Copper Corp. using Tripoint Geological Services Ltd. for core logging and project management and Full Force Drilling as a drill contractor. All core from 2021 and 2022 is NQ diameter. Downhole surveys were conducted on 2021 and 2022 drillholes using the non-magnetic Reflex Gyro tool, which collected dip and azimuth measurements every 5 m.

Hole depth varies between 2.78 and 789.12 m, with a planned dip between -34 and -90 degrees. Core recovery data is available for 2021 and 2022 drillholes and averages >93%. Intervals with low recovery are most commonly in the upper 10 – 20, or less commonly 40 m of a drillhole. Occasionally a single interval with poor recovery deeper in holes represents rubbly, low-RQD material or void spaces from historic workings.

Table 10-1 Data Quality Summary

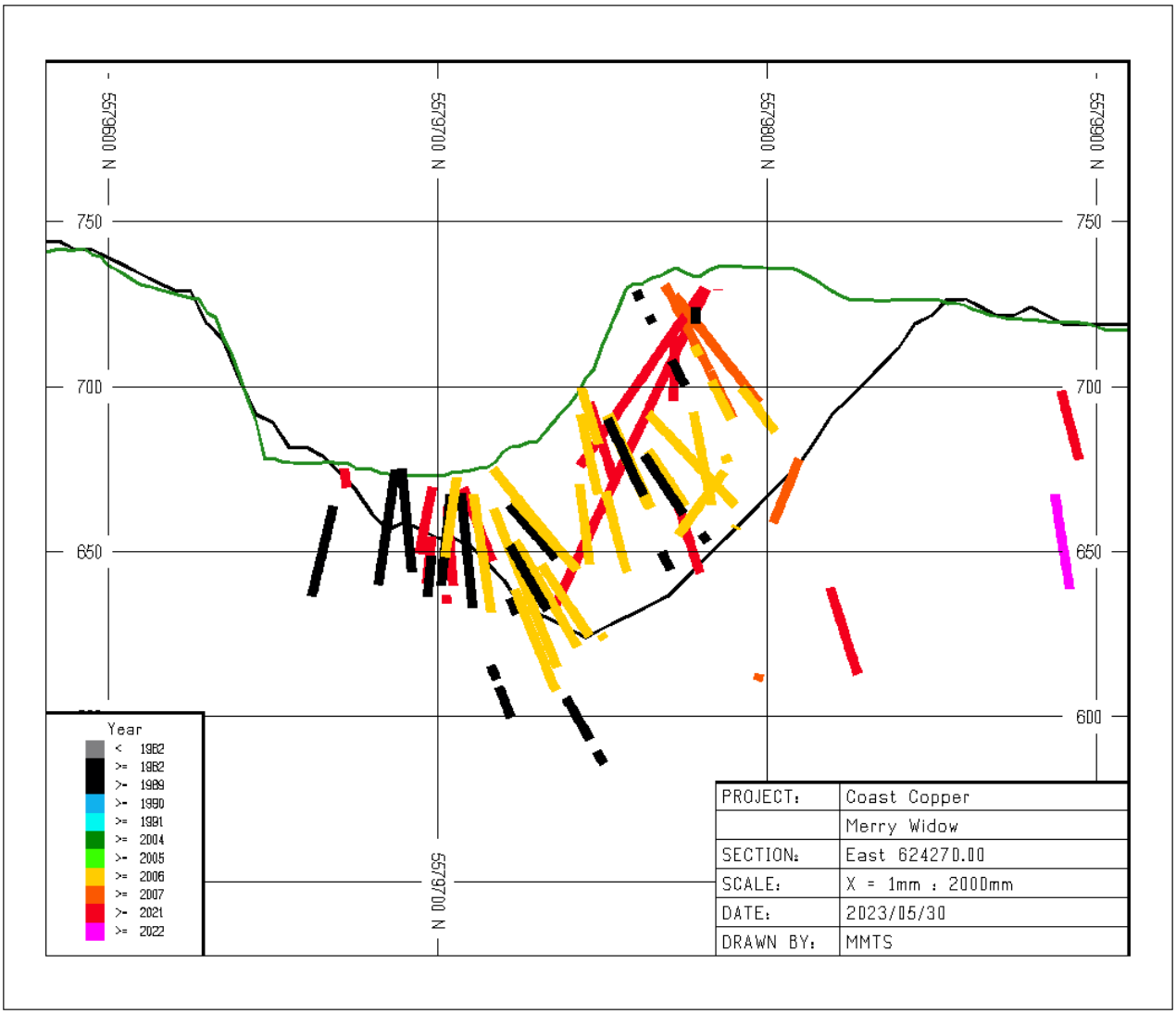
Year	Holes	Certificate Status	Comment	# of Samples	QA/QC %	QA/QC Comment
1982	DDH 5	Yes	Assay cert with intervals in AR a bit blurry.	8	0	
1982	DDH 6	No	Assay cert not found.	1	0	
1989	DDH89-001 -- -008	Yes	Intervals hand-written in PF012364, Overlimits not on assay certs not included here	379	0	
1989	DDH89-009 -- -031	No	Assays and intervals were taken from scanned sections from Paul Reynolds who worked for Taywin. Some assays were difficult to read and should not be used for any resource calculation. Sample intervals labeled with no assays were stated as being below 0.002 oz/t Au and less than 500 ppm copper.	768	0	
1990	NMW-44 -- 47	No	All drillhole data from 1991 Noranda sections.	198	0	
1991	NMW-48 -- 49	No	All drillhole data from 1991 Noranda sections.	81	0	
2004 - 2005	TR-01 -- 06	Yes	Collar locations in table do not match map, possible conversion error between NAD27 and NAD83(?), used coordinates in table, assumed NAD83; Certs are in AR, intervals in AR digital	47	0	
2006	MW06-01 -- 27	Yes	PDFs certs taken from AR	1574	6	Standards are CDN pulps but type not recorded, blank type not recorded (likely limestone).
2006	MW06-28 -- 47	Yes - Excel only	No report found on this drill campaign - we have Excel certificates and pdf drill logs (from client) with assay results inserted (Au, Ag, etc).	854		Standards are CDN pulps but type not recorded, blank type not recorded (likely limestone).
2007	MW07-48, -49, -57 -- 92	Yes - Excel only	Excel certs provided by client, not in AR. We have drill logs with assays (from AR).	898	11	Standards are CDN pulps but type not recorded, limestone blanks
2007	MW07-51 -- 54; -56	Yes	PDF certs provided by client, not in AR. We have drill logs with assays (from AR).	224		Standards are CDN pulps but type not recorded, limestone blanks
2021	MW21-001 -- 019	Yes	PDFs and Excel and AR.	1463	20	
2022	MW22-20 -- 29	Yes	PDFs and Excel	694	18	

A plan view of the drillholes is illustrated in Figure 10-1 by year, with a section through the center of the pit also showing the drilling by year (Figure 10-2).



(Source: MMTS, 2023)

Figure 10-1 Plan View of Drilling by Year



(Source: MMTS, 2023)

Figure 10-2 Section through Pit of the Drillholes by Year

It is unknown where the 2006 and 2007 core was logged. Geologists defined lithology intervals and sample intervals, which were not to exceed 1.5 m in length in mineralized sections but were to be up to 2.0 m in unmineralized lithologies. Samples from 2006 and 2007 (n=3554) ranged from 0.08 – 7.03 m, with a mean of 1.29 m. Core was halved by gas or electric rock saw for sampling. Core logs are included in the filed Assessment Report and include basic lithological intervals and descriptions as well as sample intervals and assay values (Au, Ag, Cu, Co, Fe). Digital photographs were reportedly taken of all core, though these photographs are no longer available. Drill core from these programs has not been found. Specific gravity was calculated from wet and dry weights of 10 cm intervals of core from most 2006 drillholes for a total of 275 measurements.

In 2021 and 2022, core was logged for lithology and geotechnical parameters, and then sampled at North Island Rockpro Inc.'s facility at 5985 Hardy Bay Road, in Port Hardy, B.C., where it is currently accessible in storage.

Geologists logged the core with respect to lithology (including skarn types by mineralogy), mineralization, alteration, and structures. Alteration was logged by designating up to 5 minerals with corresponding styles and intensities (trace, weak, moderate, strong, pervasive (P)).

Magnetic Susceptibility was measured at 50 cm intervals throughout the 2021 and 2022 holes (n=6833). Specific gravity was calculated from wet and dry weights for intervals of whole core ranging from 4 – 28 cm with an average of 13.37 cm (n=971).

11.0 Sample Preparation, Analyses and Security

Samples from the four years of significant drill programs (2006, 2007, 2021, 2022) were all taken from core cut in half with a diamond saw under the direction of qualified geologists and engineers. Samples are then labeled, placed in plastic bags, sealed and with interval and sample numbers recorded. Half core at BQTK diameter for 1 m sample interval (intervals varied) results in approximately 2 kg of sample material, while a 1 m sample of NQ core produces around 2 – 2.2 kg; 2 m NQ samples are generally 4.0 – 4.5 kg. Samples for which only Excel assay certificates are available (campaign MW2006-2 and most of the 2007 holes) do not have Received Weight values from the lab.

11.1 Merry Widow 2006 & 2007 Analytical Procedures

In 2006 and 2007, samples were shipped to ALS Chemex in North Vancouver, B.C., where they were prepared and analyzed by ICP methods, ME-ICP61m. This involves four-acid digestion of the sample and analysis of 33 elements plus mercury with a mass spectroscopy finish. The four-acid digestion involves dissolving the sample in a mixture of nitric-perchloric-hydrofluoric acids with the resulting "cake" leached with hydrochloric acid. Gold was analyzed by fire assay of a 30-gram pulp with a gravimetric finish (Au-GRA21).

For samples which Ag, Co, and Cu report higher results in the ICP analysis than the threshold values listed below these elements are then fire assayed by methods more suitable for high-grade materials, utilizing a four-acid digestion of the sample. The codes listed are ALS Chemex's codes for the respective assay procedures.

- If Cu > 1000 ppm then fire assay by Cu-AA62 and express in %
- If Ag > 10 ppm then fire assay by Ag-AA62 and express in g/t
- If Co > 500 ppm then fire assay by Co-AA62 and express in %

Grande Portage implemented a QA/QC program which involved the insertion of rock blanks (unspecified in 2006, limestone in 2007) and pulp certified reference materials (“CRMs”) which were reported as being sourced from CDN Resource Laboratories Ltd. of Delta, B.C. (“CDN”). The 2006 procedure involved insertion of a standard or blank randomly at an interval of approximately one per 20 samples. In 2006, one (1) quarter-core field duplicate was recorded; the parent sample was also a quarter-core sample. In 2007, three (3) quarter-core field duplicates were recorded. The 2006 drillholes had an overall QA/QC insertion rate (standards, blanks, duplicates) of 5.60% (144 of 2572 samples). 2007 drillholes had an insertion rate of 10.95% (144 of 1260 samples) (Table 11-1).

11.2 2021 & 2022 Coast Copper Analytical Procedures

All samples from 2021 and 2022 were sent to MSA Labs in Langley, B.C., for preparation, assay, and analyses. At MSA Labs, core samples were dried, crushed to 2 mm, split to a 250-gram sub-sample, and then pulverized to pass a 75 µm screen (PRP-910). When specified, the crusher or pulverizer was washed with barren material between each sample (PWA-200 and PWA-500). Samples were analyzed by 4-acid digestion and ICP-AES/MS (IMS-230), with gold analyses done using fire assay lead collection and AAS (FAS-111). Iron ore analyses were done by borate fusion and ICP-MS (WRX-610). In 2021, a small subset of samples was re-analyzed for Au using metallic screening of 500 g, fire-assay, and 50 g fusion (MSC-550). These samples were prepared by dry-crushing 1 kg of rock to 2 mm, splitting a 500 g sub-sample, pulverizing, and sieving past a 106-micron mesh in order to obtain plus and minus fractions (PRP-915-MET).

11.3 QA/QC

Table 11-1 summarizes QA/QC insertion (by the operator, not including lab-inserted checks). Overall, QC samples are sufficiently well distributed across the dataset, but the insertion rate of duplicates in 2006 and 2007 is well below industry standard. 2006 data has only one field duplicate out of the total 2572 samples submitted for analysis (0.04%); 2007 data has 3 quarter-core duplicates of the total 1260 samples (0.24%).

QC samples inserted in 2006 and 2007 consisted of certified reference material (CRM) pulps from CDN Resource Laboratories (though the type was not specified), rock blanks (specified as limestone in 2007, unspecified in 2006), and very sparse quarter-core duplicates with quarter-core parent samples. A total of 5.60% of the 2006 assays and 10.95% of the 2007 assays were QC insertions by Grande Portage.

QC samples inserted in 2021 and 2022 consisted of a variety of pulp CRMs from CDN Resource Laboratories, CRM pulp blanks (CDN-BL-10), pulp blanks requested from MSA Labs, and quarter-core duplicates with both quarter-core and half-core parent samples.

Table 11-1 QA/QC Insertion by Year

Sample Type	Material	2006		2007		2021		2022		2006-2007-2021-2022	
		Count	% of total	Count	% of total	Count	% of total	Count	% of total	Count	% of total
ORIG-HCORE	Original half-core sample	2427	94.36%	1119	88.81%	1461	88.55%	679	87.95%	5686	90.92%
ORIG-QCORE	Original quarter-core sample	1	0.04%	3	0.24%	2	0.12%	15	1.94%	21	0.34%
Total Original Samples:		2428	94.40%	1122	89.05%	1463	88.67%	694	89.90%	5707	91.25%
DUP-QCORE	Quarter duplicate, field	1	0.04%	3	0.24%	32	1.94%	15	1.94%	51	0.82%
LABCHCK-	sample intervals with PD after - inserted by geos as pulp dups? (e.g., CxxxxxPD)	0	0.00%	0	0.00%	59	3.58%	30	3.89%	89	1.42%
Total Duplicates:		1	0.04%	3	0.24%	91	5.52%	45	5.83%	140	2.24%
BLANK-2006	Limestone? Unspecified rock blanks	73	2.84%	0	0.00%	0	0.00%	0	0.00%	73	1.17%
BLANK-LIMESTONE	Limestone	0	0.00%	60	4.76%	0	0.00%	0	0.00%	60	0.96%
BLANK-2022	Unknown - 0.3 kg	0	0.00%	0	0.00%	0	0.00%	1	0.13%	1	0.02%
CDN-BL-10	COCO inserted pulps	0	0.00%	0	0.00%	32	1.94%	10	1.30%	42	0.67%
Total Blanks:		73	2.84%	60	4.76%	32	1.94%	11	1.42%	176	2.81%
CDN pulp 2006	CDN pulp unrecorded	70	2.72%	0	0.00%	0	0.00%	0	0.00%	70	1.12%
CDN pulp 2007	CDN pulp unrecorded	0	0.00%	75	5.95%	0	0.00%	0	0.00%	75	1.20%
CDN-CGS-30	COCO inserted pulps	0	0.00%	0	0.00%	8	0.48%	3	0.39%	11	0.18%
CDN-CM-18	COCO inserted pulps	0	0.00%	0	0.00%	0	0.00%	5	0.65%	5	0.08%
CDN-CM-41	COCO inserted pulps	0	0.00%	0	0.00%	0	0.00%	4	0.52%	4	0.06%
CDN-GS-15C	COCO inserted pulps	0	0.00%	0	0.00%	11	0.67%	3	0.39%	14	0.22%
CDN-ME-1708	COCO inserted pulps	0	0.00%	0	0.00%	22	1.33%	4	0.52%	26	0.42%
CDN-ME-1808	COCO inserted pulps	0	0.00%	0	0.00%	23	1.39%	3	0.39%	26	0.42%
Total Standards:		70	2.72%	75	5.95%	64	3.88%	22	2.85%	231	3.69%
Total		**2572**	**100.0%**	**1260**	**100.0%**	**1650**	**100.0%**	**772**	**100.0%**	**6254**	**100.0%**
Total intervals sampled		**2428**	**94.40%**	**1122**	**89.05%**	**1463**	**88.67%**	**694**	**89.90%**	**5707**	**91.25%**
Total QC		**144**	**6%**	**138**	**11%**	**187**	**11%**	**78**	**16%**	**547**	**9%**

11.3.1 Blanks

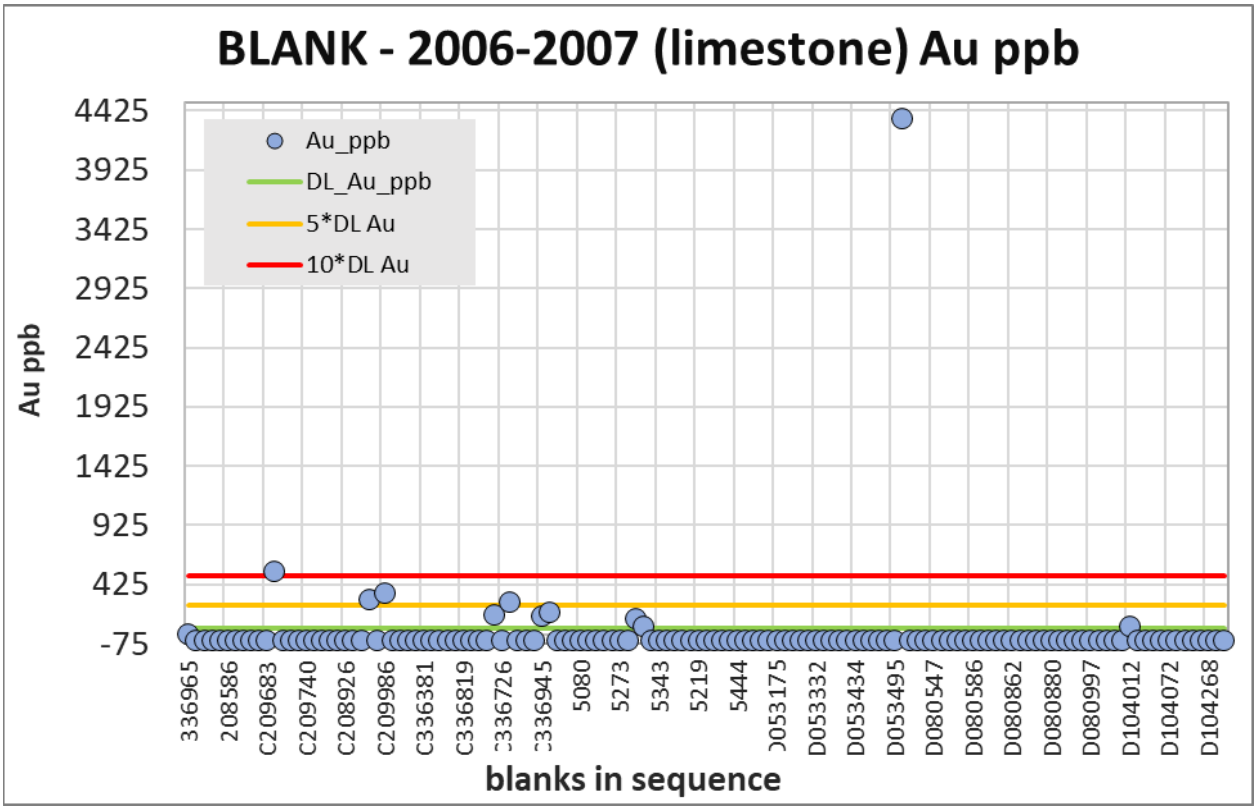
In 2006 and 2007, Grand Portage inserted rock blanks at a rate of 2.84% and 4.76%, respectively. The 2007 blank material was reported as barren limestone, while 2006 material is unknown.

Five (5) of the 133 blanks (3.76%) exceeded the 5*detection limit ("DL") threshold for Au (250 ppb) including two which exceeded the 10*DL threshold for Au (500 ppb): C209596 (530 ppb) and C209955

(2006, 0.54 kg received weight) which yielded 3980 ppb Au, 22.1 g/t Ag, and 1.37% Cu (VA06086893) as show in Figure 11-1. A second analysis from a check assay certificate (VA07067847) returned 4360 ppb Au, 23.3 g/t Ag, and 1.31 % Cu, implying that this is a sample insertion/recording error rather than an analysis issue.

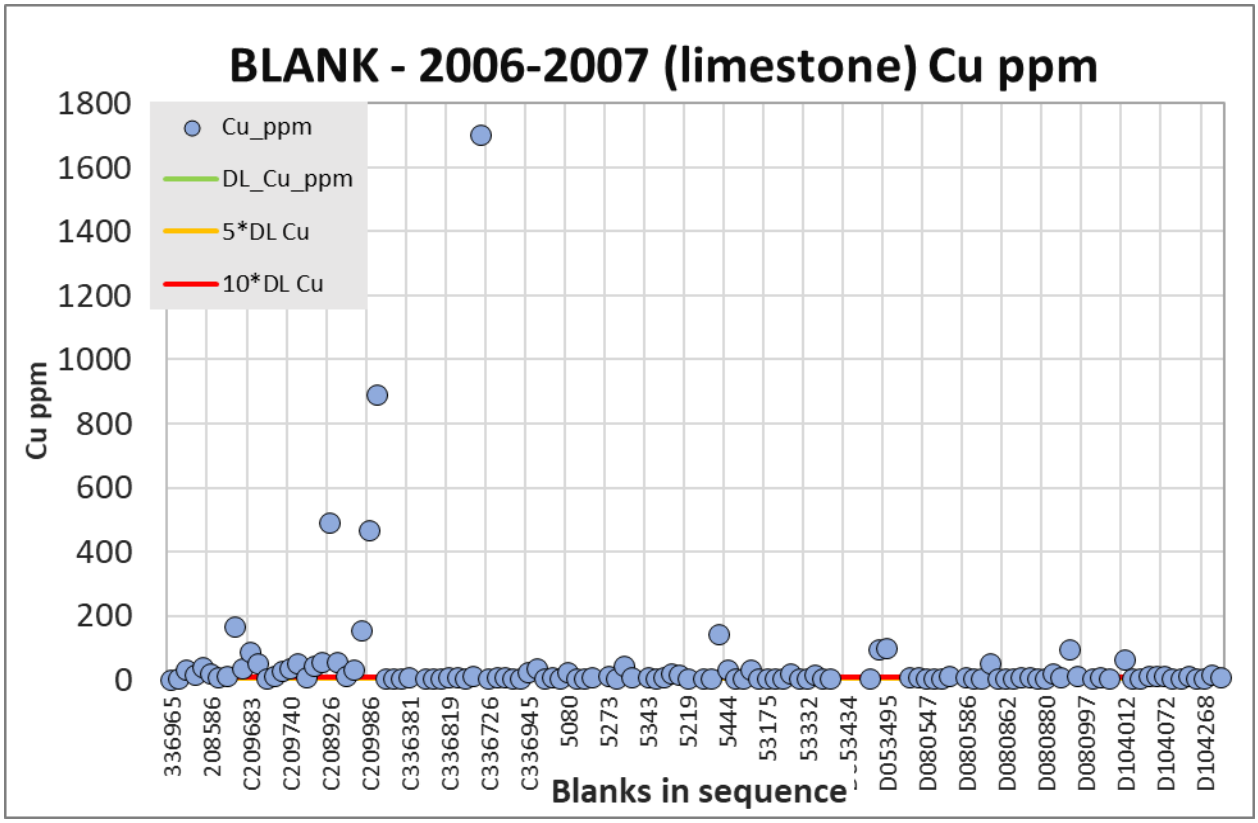
Two blanks exceeded the 5*DL threshold for Ag (2.5 g/t): C209955 (as above) and sample D080997, which yielded 3.6 g/t Ag (Figure 11-2).

In 2021 and 2022, Coast Copper used pulp blanks (CDN-BL-10), at an insertion rate of 1.94% and 1.30%, respectively. A single unspecified blank with a received weight of 0.3 kg was used in 2022. All blanks used in 2021 and 2022 performed well for Au and Ag (Figure 11-3 and Figure 11-4), with only two exceeding the DL for Au (5 ppb) and one meeting the 5* DL for Ag (0.05 ppm).



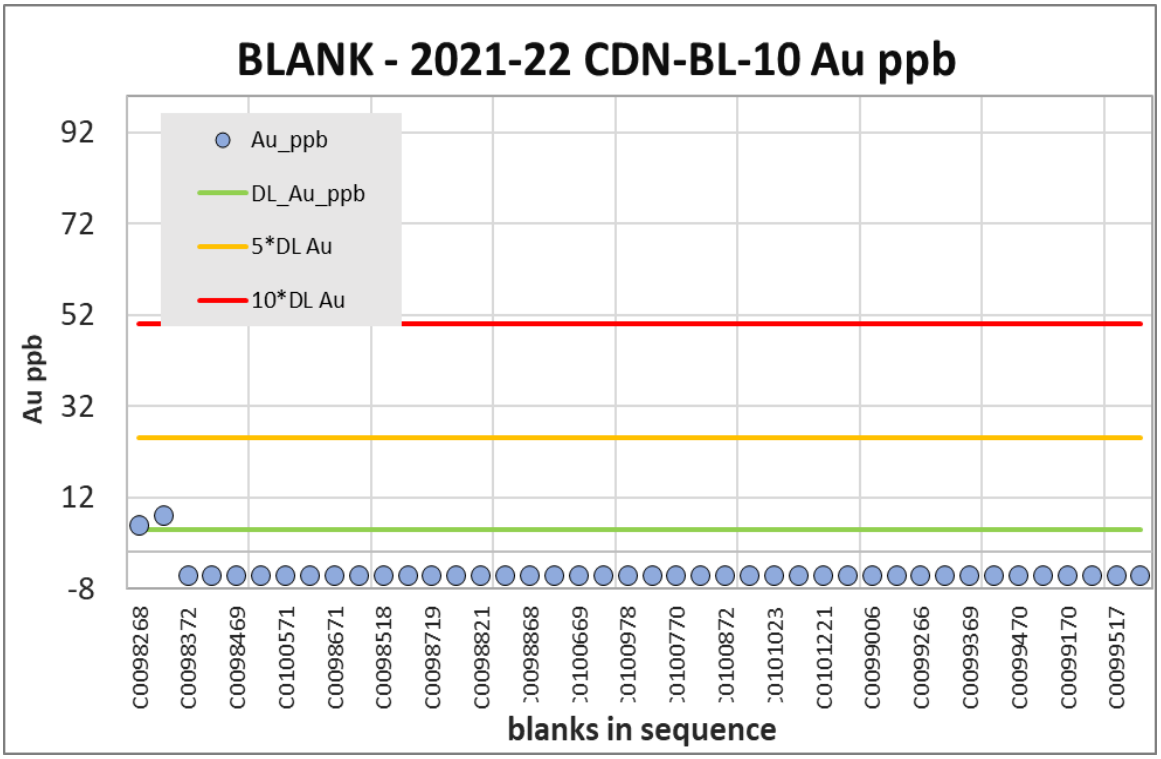
(Source: MMTS, 2023)

Figure 11-1 Au (ppb) in Rock Blank Samples from 2006-2007



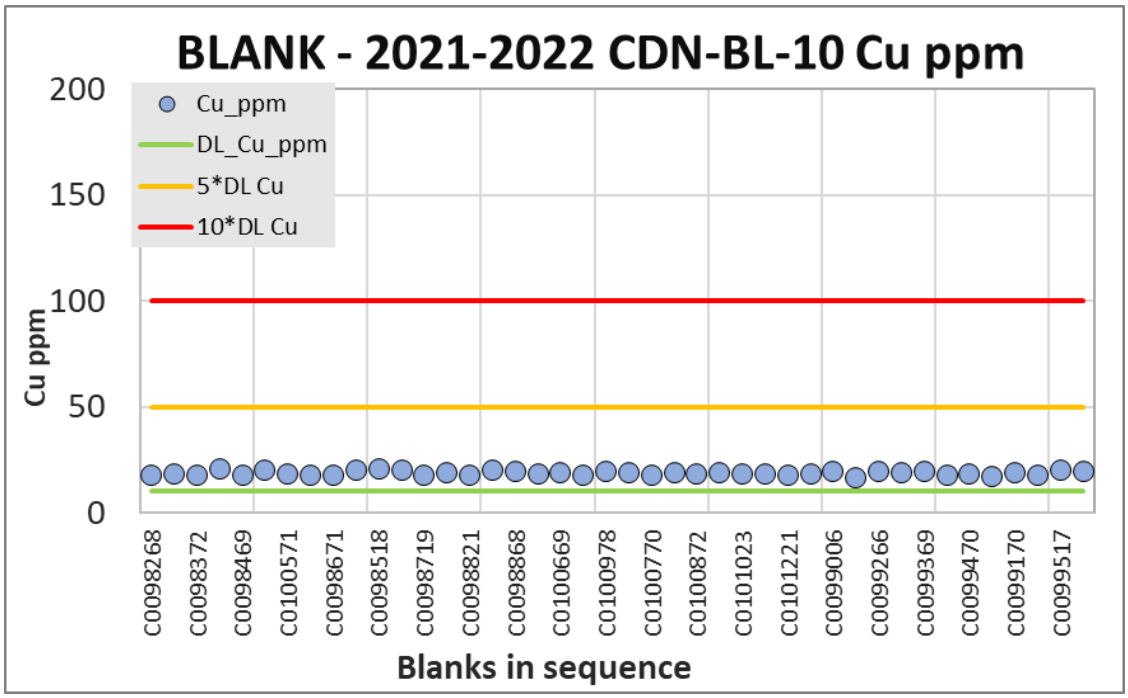
(Source: MMTS, 2023)

Figure 11-2 Cu (ppm) in Rock Blank Samples from 2006-2007



(Source: MMTS, 2023)

Figure 11-3 Au (ppb) in Pulp Blanks CDN-BL-10 from 2021-2022



(Source: MMTS, 2023)

Figure 11-4 Cu (ppm) in Pulp Blanks CDN-BL-10 from 2021-2022

11.3.2 Certified Reference Materials

In 2006 and 2007, Grande Portage inserted CRM pulps at a rate of 2.72% and 5.95% respectively but did not specify which CRMs were used. Most standards seem to be the CDN-CGS-7 CRM, for which a certificate was found in a related data folder. However, several of the 2006 and 2007 CRMs have Au > 3SD threshold for CDN-CGS-7 but return ~1% Cu. An additional CRM that these samples may represent has not been identified. The identification of other CRMs in this dataset is speculative at best.

In 2021 and 2022, Coast Copper inserted CRM pulps at a rate of 3.88% and 2.85%, respectively. A variety of CRMs were used, including multi-element, copper-gold, gold, and copper-molybdenum. Details of expected values ("EV"s) and standard deviations (SDs) are given Table 11-2. The 2-SD represents an inter-lab SD involving 11- 15 labs in Canada.

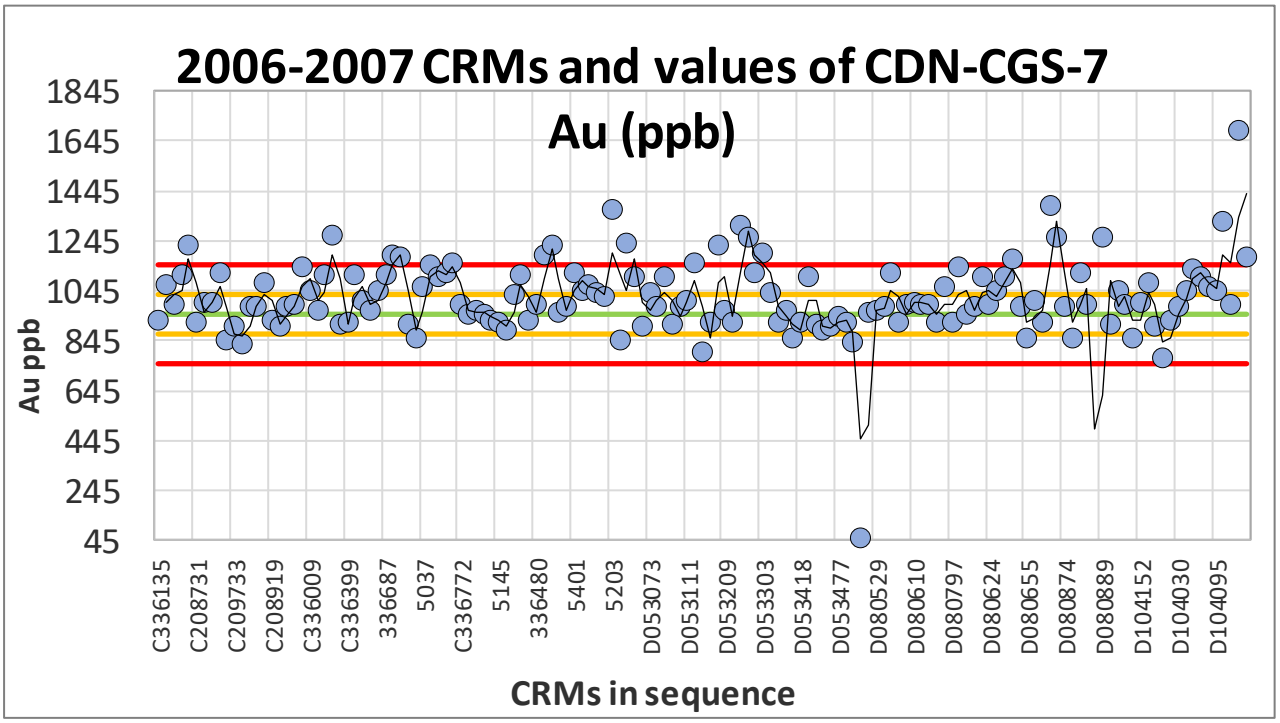
Table 11-2 Expected Values (EV) and Inter-Lab Two Standard Deviations (2SDs) for CRMs.

CRM	Au (g/t)	2-SD	Ag (g/t)	2-SD	Cu (%)	2-SD	Mo (%)	2-SD	Pb (%)	2-SD	Zn (%)	2-SD
CDN-CGS-30	0.338	0.048			0.154	0.007						
CDN-CM-18	5.32	0.35			2.42	0.22	0.247	0.03				
CDN-CM-41	1.6	0.15	8	1	1.71	0.05						
CDN-GS-15C	15.62	0.74										
CDN-ME-1708	6.96	0.5	53.9	4	2	0.07			0.171	0.012	0.484	0.026
CDN-ME-1808	2.31	0.28	39	2.6	0.212	0.01			0.6	0.02	3.85	0.15
CDN-CGS-7	0.95	0.08			1.01	0.07						
CDN-CGS-13	1.01	0.11			0.329	0.018						

Figure 11-5Figure 11-5 summarize performance of all CRMs for which data is available in 2006-2007 for Au and Figure 11-6 summarizes the CRM performance for Cu in 2006-2007. Blue dots represent the element value (y axis) of the specified sample number (x axis). Horizontal green lines represent the EV; yellow lines represent 2 SDs and red lines represent 3SDs for which data should typically be re-examined.

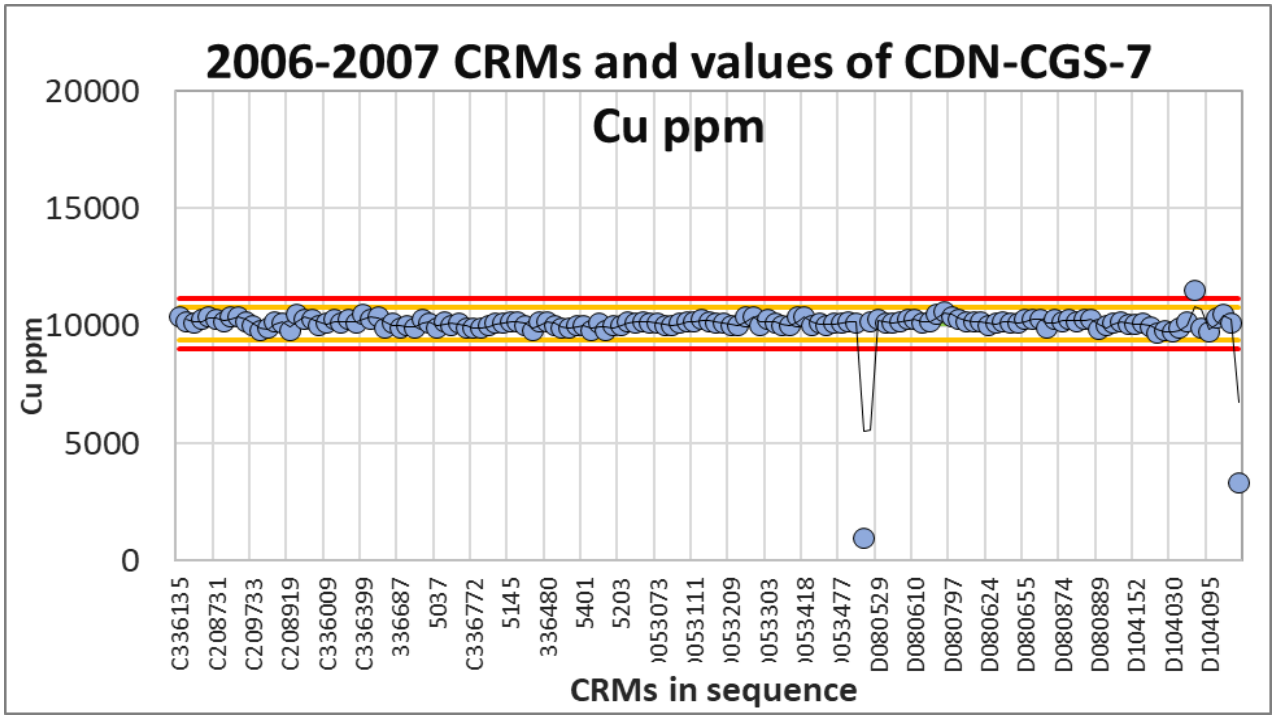
Figure 11-7 and Figure 11-8 illustrate the performance of Au and Cu for the 2021-2022 drill program respectively.

All standards performed with acceptable levels for these two elements, with few "fails" overall. Au had more failures than Cu, but this is due to the relatively low Au grades of the standards.



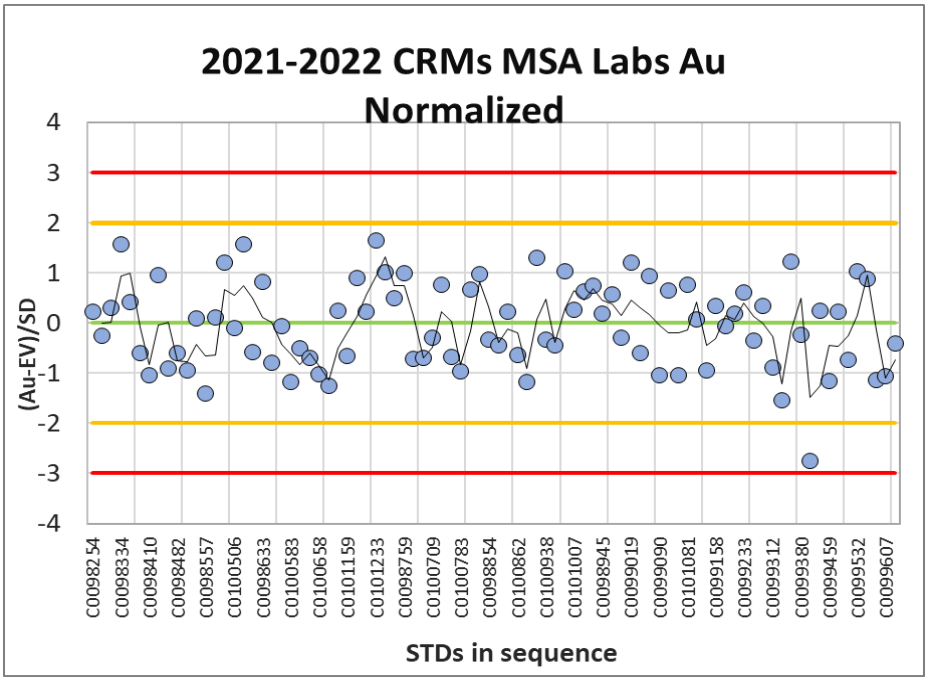
(Source: MMTS, 2023)

Figure 11-5 CRM Performance for 2006 - 2007 Drilling - Au (ppb)



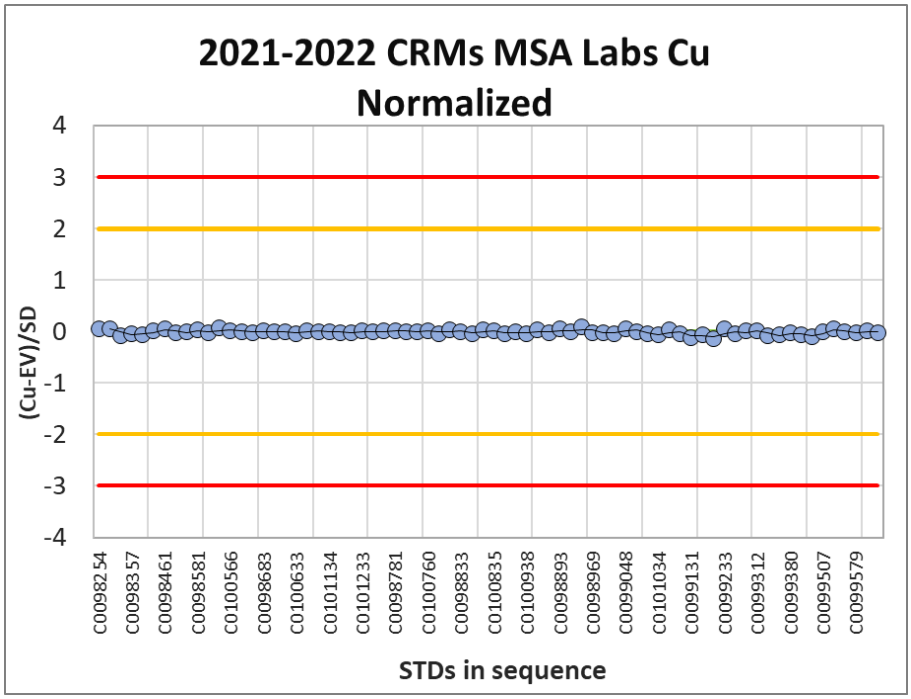
(Source: MMTS, 2023)

Figure 11-6 CRM Performance for 2006 - 2007 Drilling - Cu (ppm)



(Source: MMTS, 2023)

Figure 11-7 CRM Performance for 2021-2022 Drilling - Au (ppb)



(Source: MMTS, 2023)

Figure 11-8 CRM Performance for 2021-2022 Drilling - Cu (ppm)

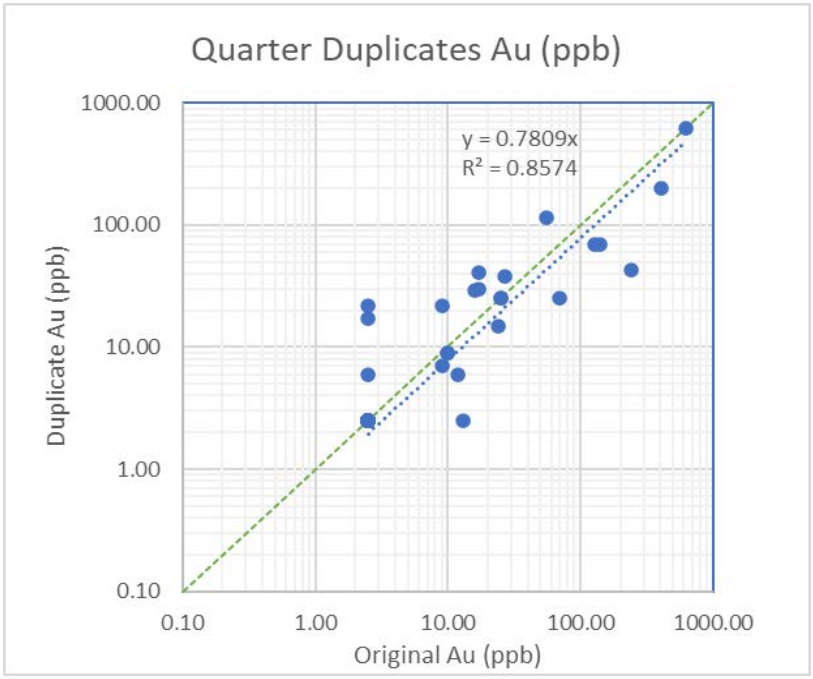
11.3.3 Duplicates

Field Duplicates

A total of 51 quarter-core field duplicate samples were sent for analysis in 2006 (n=1), 2007 (n=3), 2021 (n=32), and 2022 (n=15).

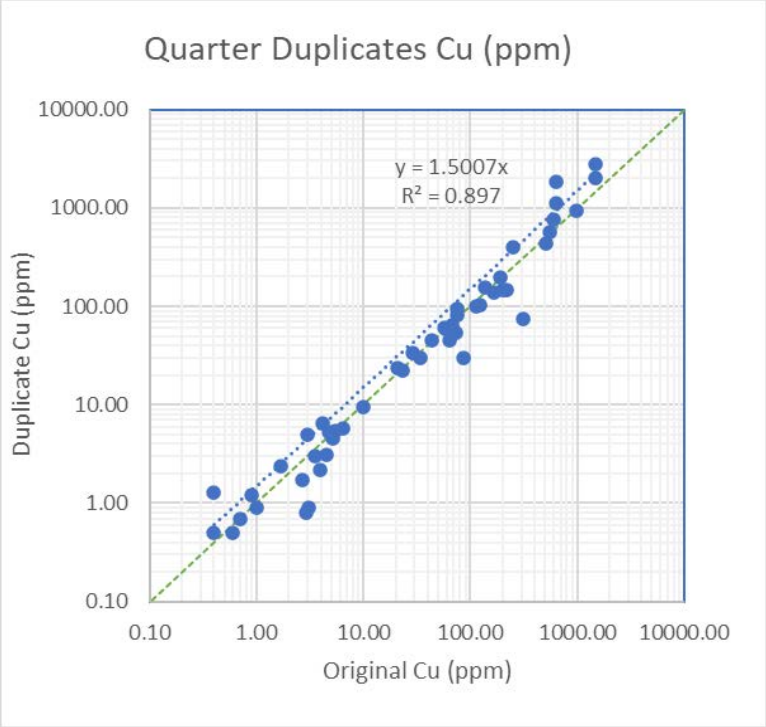
Field duplicate (quarter-core) duplicate performance or sample precision, is illustrated in Figure 11-9 and Figure 11-10 which provide logarithmic scatter plots that show the original half-core or quarter-core sample on the x axis and the field duplicate quarter-core sample on the y axis for Au and Cu.

One field duplicate yielded a large discrepancy in Cu values, with the quarter-core parent sample C0098791 (3.13 kg) returning 4410.3 ppm Cu while the parent sample returned only 138.9 ppm Cu. This outlier has been removed from the plot. The samples are from a 2 m interval of NQ core within a sulphide-rich section; there is no indication of a sample mix-up, the discrepancy in Cu values may just indicate the spatial variability of these elements within sulphide-rich zones.



(Source: MMTS, 2023)

Figure 11-9 Au (ppb) in Quarter-Core Duplicates vs Parent Samples (2006-2007 and2021-2022)

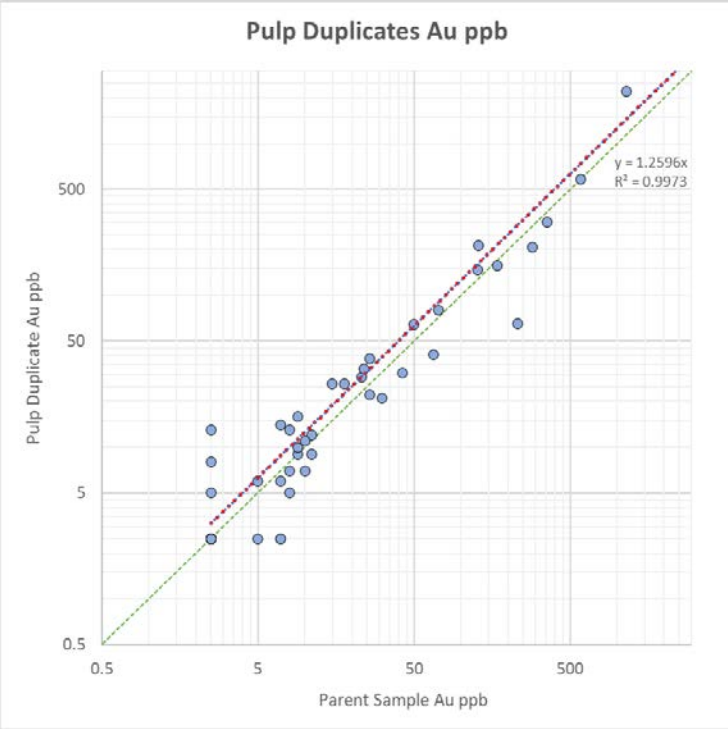


(Source: MMTS, 2023)

Figure 11-10 Cu (ppm) in Quarter-Core Duplicates vs Parent Samples (2006-2007 and 2021-2022)

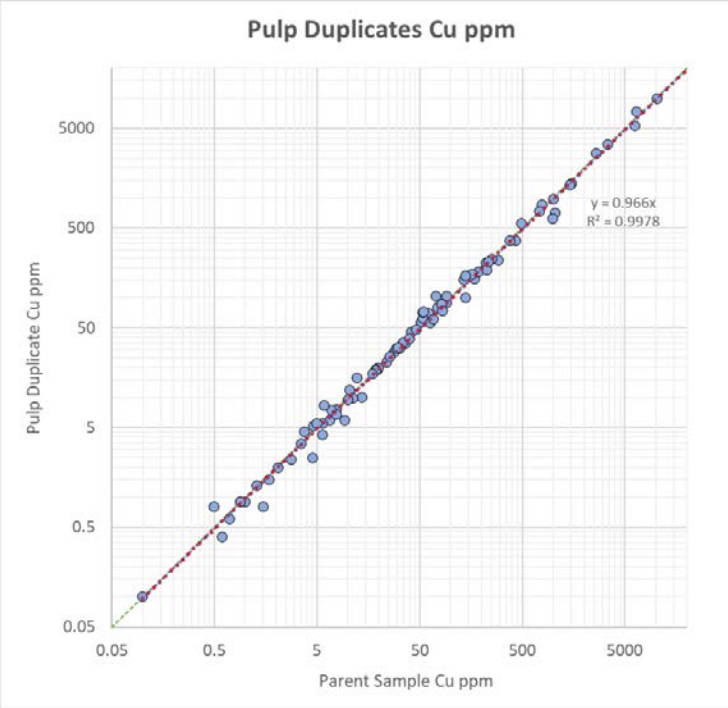
11.3.4 Pulp Duplicates

A total of 89 pulp duplicates were assayed in 2021 (n=59) and 2022 (n=30), designated by PD after the parent sample number (e.g., CxxxxxxxPD). Pulp duplicates are prepared as splits from the pulverized material to control the analyses error only. The plots below represent pulp duplicates vs parent sample values, which correlate very well for all elements of interest, indicating negligible analytical error (Figure 11-11 and Figure 11-12).



(Source: MMTS, 2023)

Figure 11-11 Au (ppb) of Pulp Duplicates vs Parent Samples



(Source: MMTS, 2023)

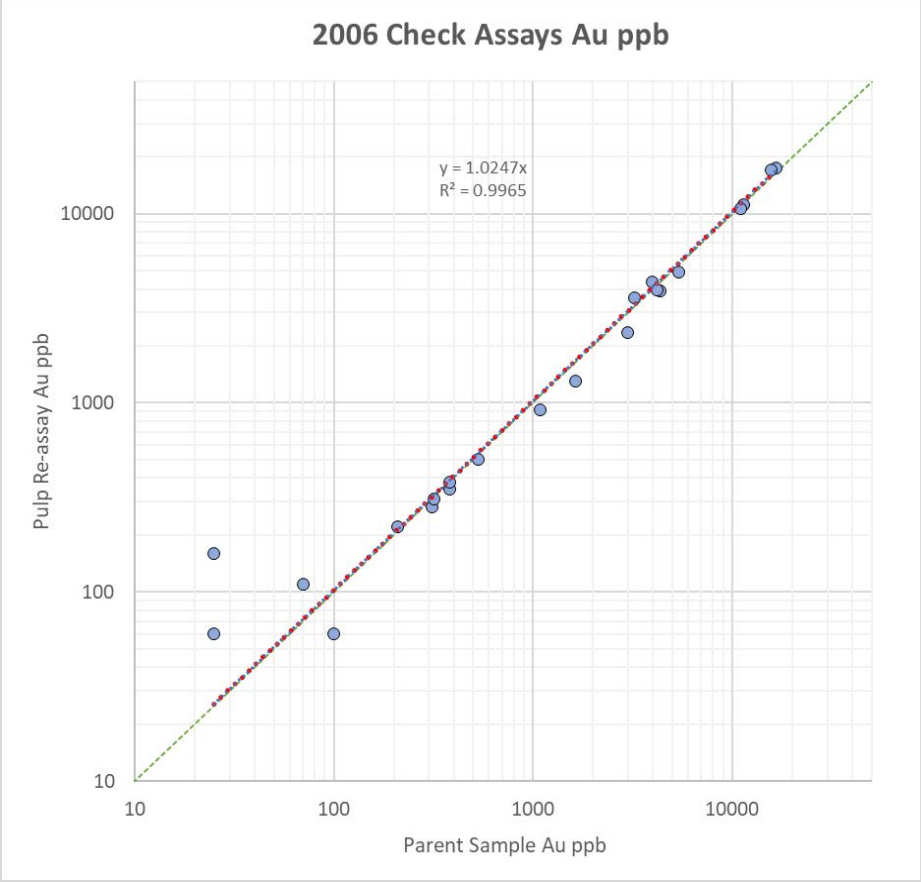
Figure 11-12 Cu (ppm) of Pulp Duplicates vs Parent Samples

11.3.5 Check Assays

No formal check-assay program using a secondary lab is known. However, small re-assay orders in 2006 and 2021 offer some data validation.

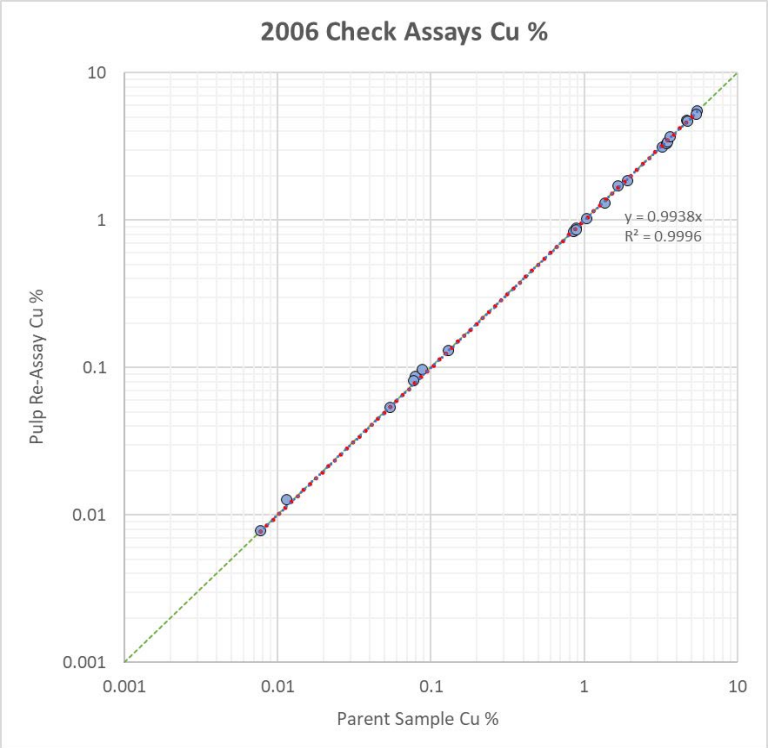
In 2006, pulps from 22 samples from hole MW06-16 were re-assayed using the same methods and same lab (ALS Chemex). This re-assay was likely due to sample number errors which caused incorrect values for a standard (C209952) and a blank (C209956) from 32 – 34 m (as discussed above). The results from this small check assay program correlate very well for all elements. Results for Au and Cu are provided in Figure 11-13 and Figure 11-14 respectively.

In 2021, MSA Labs certificate YVR2210134 reports Au assay checks from 73 pulp samples originally from certificates YVR2111154, YVR2111166, YVR2111196, YVR2111185, YVR2111187, and YVR2111203. Re-assays were done using the same methods as original assays: FAS-111 (AAS, trace level) with FAS-415 (gravimetric) for those > 10 g/t Au with results plotted in Figure 11-15.



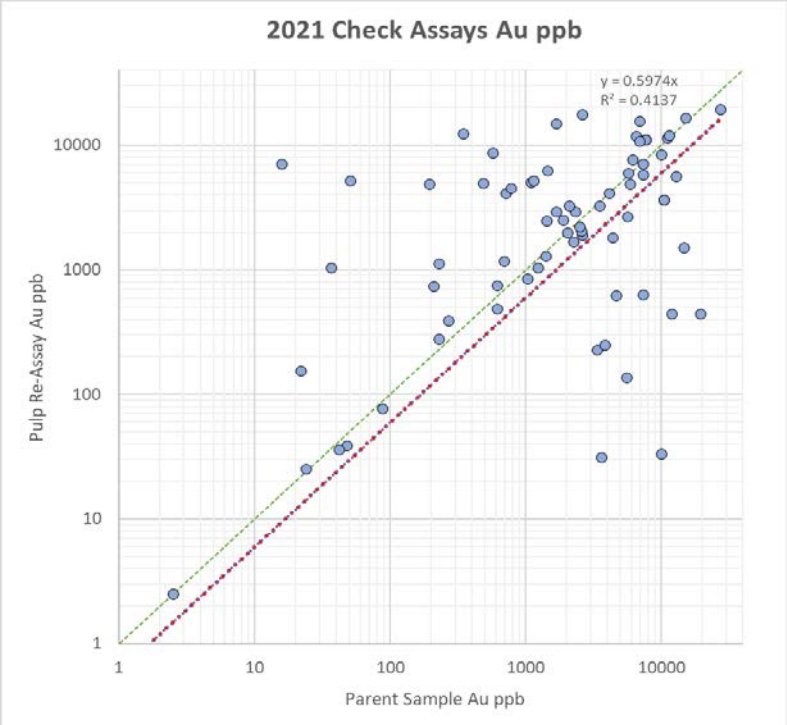
(Source: MMTS, 2023)

Figure 11-13 Au (ppm) in 2006 Check-Assays from MW06-16



(Source: MMTS, 2023)

Figure 11-14 Cu (%) in 2006 Check-Assays from MW06-16.



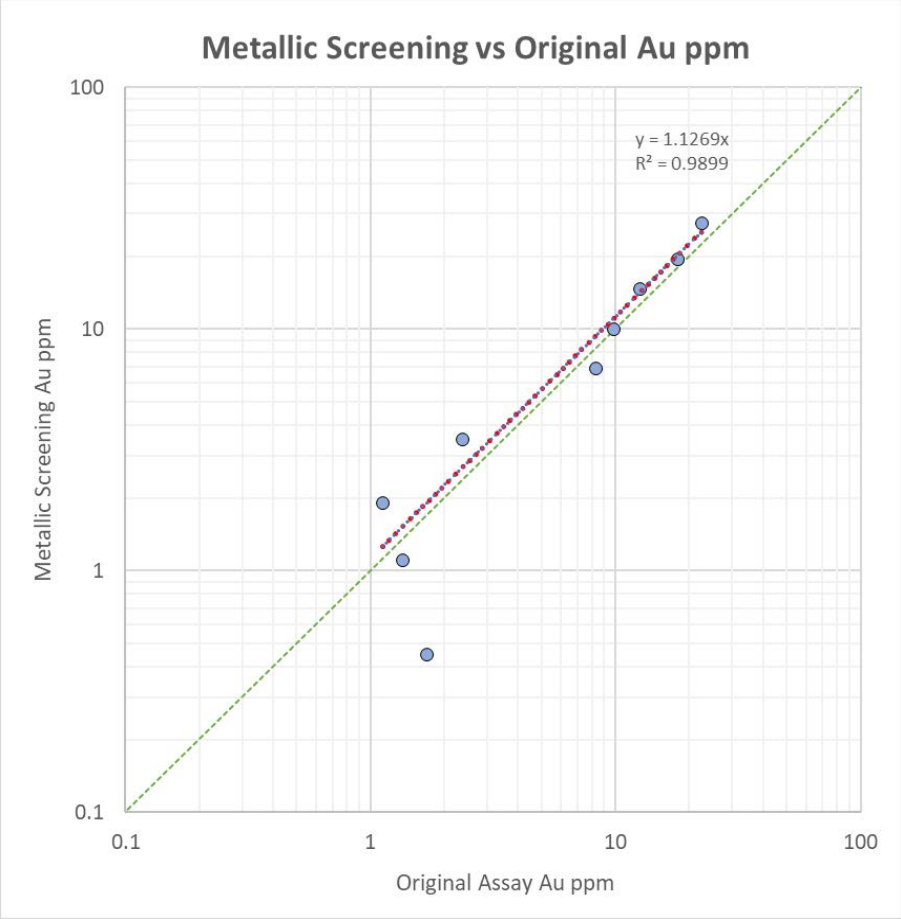
(Source: MMTS, 2023)

Figure 11-15 Au (ppb) in 2021 Check Assays

Metallic Screening

In 2021, seven (7) MSA Labs assay certificates (YVR2111154, YVR2111166, YVR2111195, YVR2111196, YVR2111197, YVR2111200, and YVR2210134) advised of possible coarse gold. Certificate YVR2210157 reports on metallic screening of coarse material from nine (9) samples originally reported on certificates YVR2111154, YVR2111196, YVR2111166, and YVR2111185 (three of those listed above and an additional certificate). Samples sent for metallic screening do not necessarily seem to be those with the highest Au grade on the respective certificates and the rationale for which samples to perform metallic screening on is unknown. Results show excellent correlation, with an increase of ~10% for metallic screening results (Figure 11-16).

None of the 2006 or 2007 assay certificates advised of possible coarse gold, and no metallic screening appears to have been done in these years, despite several samples yielding high Au grades (123 samples > 10 g/t Au, up to 95.2 g/t Au). In 2022, assay certificate YVR2210378 advised of possible coarse gold however metallic screening results are not available.



(Source: MMTS, 2023)

Figure 11-16 Au (ppm) in 2021 Samples for which Metallic Screening was Done

11.4 QA/QC Conclusions and Recommendations

Overall, the QP has not identified any meaningful contamination, precision, or accuracy issues in Coast Copper's Merry Widow project drill sample QC data from 2006, 2007, 2021, or 2022.

If pulps from 2022 exist, a set should be sent to a second lab for check assays. MMTS recommends performing metallic screening on any existing pulps where assay certificates advised of possible coarse gold, and where Au > 10 g/t. Metallic screening should be considered on samples yielding > 10 g/t Au in future drill programs.

MMTS recommends twinning 1989 drillholes for which certificates are not available (e.g., DDH89-017) as well as DDH89-007 to verify a 1 m interval that yielded > 200 g/t Au.

MMTS also recommends twinning select 2006 drillholes to verify assay data and for larger sample size (2006 holes were drilled BQTK = 4.045 cm core diameter). Hole MW06-16 would be a good candidate as it has uncertain sample designation within a mineralized interval. *Switch sample values of C209952 and C209953, as the lab received weight of 0.08 kg indicates that C209953 is the CRM. *

Occasional sporadic results in quarter-core duplicate samples suggest high spatial variability in Ag and Cu. MMTS recommends using larger core diameter for larger sample size in select resource-refining drillholes (e.g., HQ diameter). Effort should be made to increase duplicate samples taken within high-grade material.

The insertion rate of QC samples should be increased to compensate for low rates in 2006-2007. A reasonable target would be 5% for blanks, 5% for CRM, 5% for field duplicates, and 5% for pulp duplicates.

A total of 264 samples has Fe values over the ICP analytical limit (>50%). Therefore, the QP recommends assaying high Fe content samples by a Fe titration method that has a higher limit and calculates the loss on ignition (LOI), which includes H_2O+, CO_2, S, and other volatiles.

12.0 Data Verification

12.1 Data Audit

MMTS has cross-referenced 100% of the provided geochemical information against available assay certificates. Utilizing the lab-reported sample weights as a reference where available (3556 samples), MMTS has identified 24 intervals with very low sample weights (calculated SG < 1), which correspond to intervals with low core recovery where data is available (2021, 2022). A total of 123 samples yielded low sample weights (calculated SG <2), from which most correspond to poor recovery. Thirty-eight (38) samples have lower than expected weight (calculated SG < ~1.5) with adequate recovery (>88%) or no recovery data available (n=12). MMTS does not believe this to have any material effect on resource modelling.

12.2 Site Visit

The QP (Sue Bird) visited the site on 8 June 2023, and visited the core logging / core storage site in Port Hardy on 9 June 2023. While at site the QP toured the property with the chief exploration geologist and received an overview of the geology of the area and deposits. The QP also went underground to examine the workings, the geology below the pit and the overall rock competency. The drillhole collar locations were validated where possible. The core shack, sample preparation and security were examined in Port Hardy with intervals of mineralized rock made available.

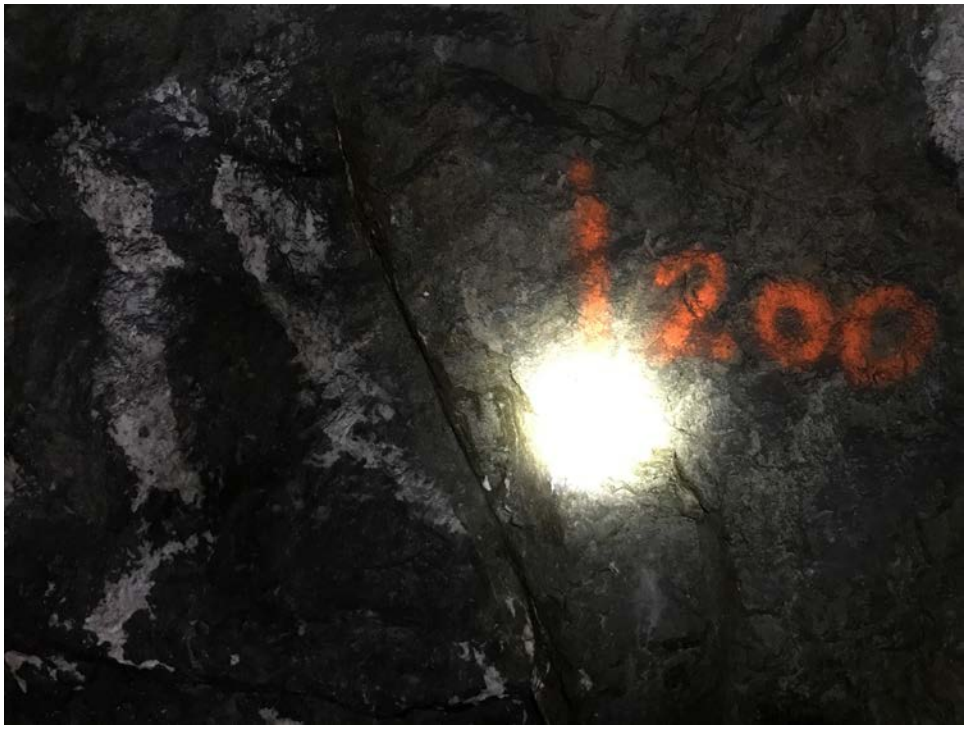
Photos below illustrate the pit and existing ramp (Figure 12-1*(Source: MMTS, 2023)*
Figure 12-1), illustrating the extremely competent rock with the high wall in the background. Based on these observations, pit wall slopes used in the resource shape of 50 degrees may be conservative. The adit to the underground is pictured in *(Source: MMTS, 2023)*
Figure 12-2 Adit to Underground WorkingsFigure 12-2, with mineralization of magnetite-calcite replacement encountered in the underground workings (Figure 12-3). The core shack and core storage area in Port Hardy is shown in Figure 12-4, with the mineralization in the core within drillhole MW21-15 pictured in Figure 12-5, which had grades of 6.15 g/t Au and 2.99% Cu.

(Source: MMTS, 2023)

Figure 12-1 Ramp to Existing Pit

(Source: MMTS, 2023)

Figure 12-2 Adit to Underground Workings



(Source: MMTS, 2023)

Figure 12-3 Magnetite-Calcite Replacement

(Source: MMTS, 2023)

Figure 12-4 Core Shack and Core Storage Area – Port Hardy

Figure 12-5 Mineralization in Drillhole: MW21-015

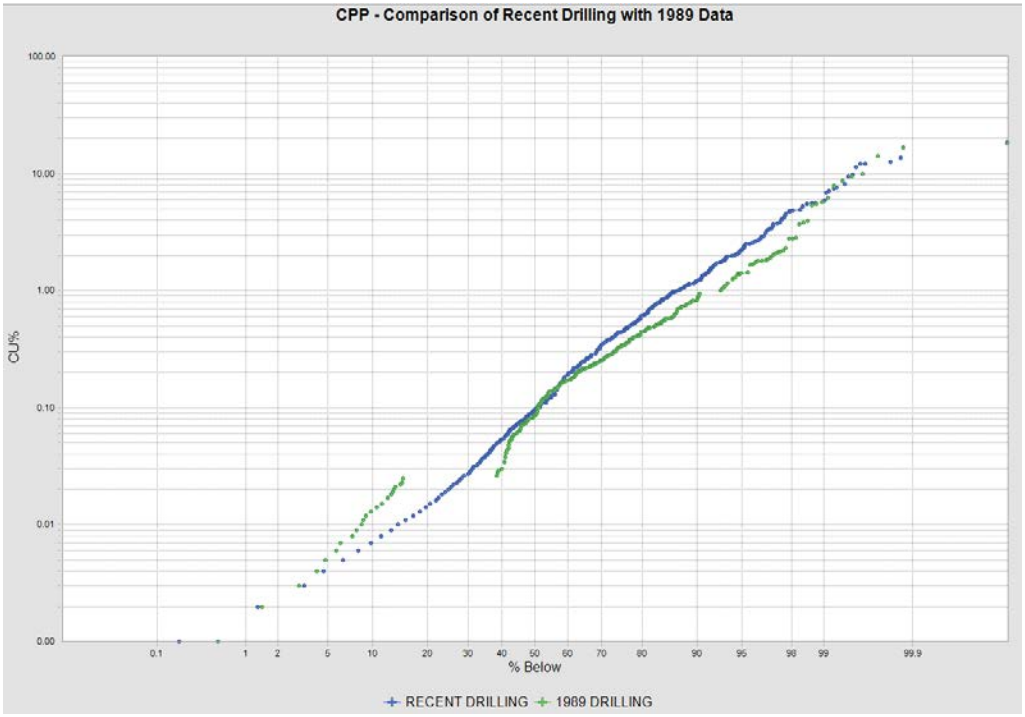
12.3 Historic Data Validation

Drilling prior to 2006 did not have any available QA/QC and the core cannot be located. The 1989 and earlier data consists primarily of only 1989 data with assays within the deposit modelled. This data was compared to the more recent drill data. It is shown in the following two plots that the Cu data generally

under-estimates the Cu grade while the Au grade is potentially slightly over-estimated in the 1989 data at the high cutoffs. This variation may be due to variations in location of drilling; however, it has been decided not to use the 1989 data for this resource estimate.

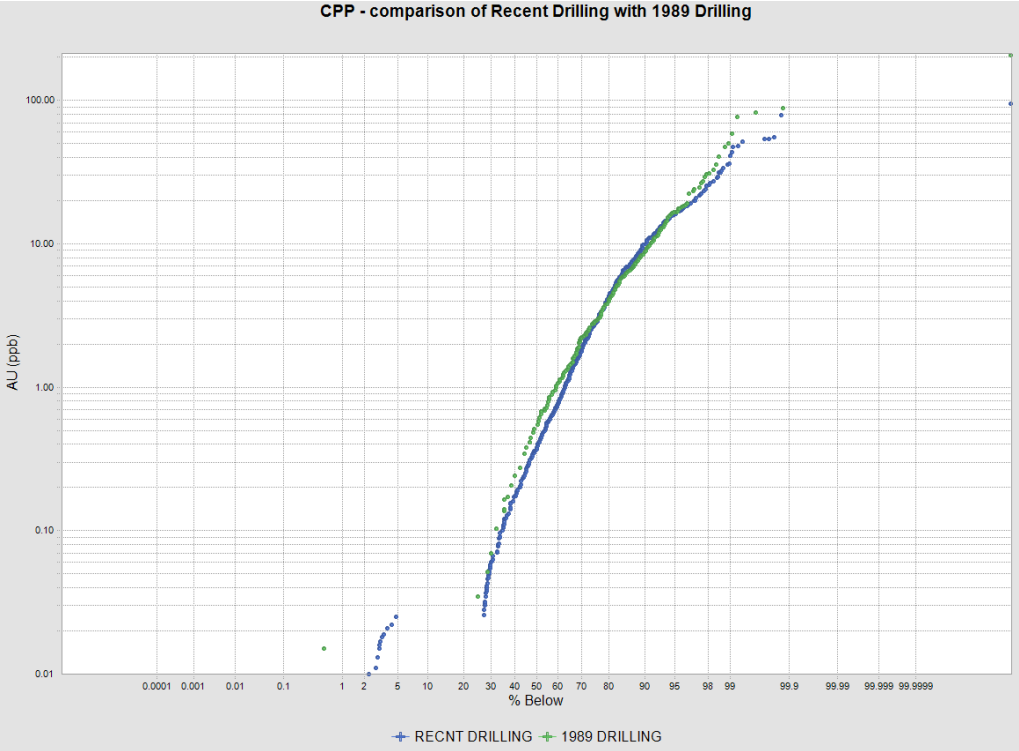
12.4 QP Statement – Data Validation

The data supplied by Coast Copper has been validated by comparing it to certificates and/or drill logs. Older data which did not verify well (1989 data) has not been used in the resource estimate (Figure 12-6 and Figure 12-7). Based on the existence of past mining and general geology of the area, the continuity in mineralization from surface to underground appears plausible and supports the resource estimate.



(Source: MMTS, 2023)

Figure 12-6 Comparison of 1989 Drilling with Recent Drilling – Cu



(Source: MMTS, 2023)

Figure 12-7 Comparison of 1989 Drilling with Recent Drilling – Au

13.0 Mineral Processing and Metallurgical Testing

There are three known rounds of Metallurgical Testing have been conducted on the Merry Widow deposit; Taywin Resources in 1989, BHP Minerals Island Copper in 1993, and Grande Portage in 2007.

13.1 Taywin Resources

In 1989 by Taywin Resources sent 10 samples to Coastech Research Inc. Testing was done on a composite of Merry Widow drill rejects from the following samples: 4022, 4028, 4029, 4040, 4042, 4043, 4056, 4057, 4058 and 4067 which come from holes 1989-001 with depth from 24m to 70m (Giroux, 2008).

A 2-kilogram batch grind was employed to produce a slurry of 84.4% minus 200 mesh for gravity and flotation testing. A Nelson concentrator was used for free gold gravity recovery. The rougher gravity concentrate was panned to approximately one gram and the pan tails added to the Nelson concentrator tails for flotation testing. Flotation testing was conducted using a Denver 5 litre bench scale flotation machine (Giroux 208).

13.1.1 Au Results - Taywin

The recovery of free gold to a gravity product was approximately 10% with gravity concentrate grade of 1,425 g/t Au. However, data regarding over-all Au recovery by flotation is not available. It is suggested that the free gold is probably relatively fine. Magnetic separation with a hand magnet was completed on all rougher flotation products to produce a magnetic concentrate and a non-magnetic flotation concentrate. The large weight percent of magnetic concentrates indicates that sulphide minerals and magnetic minerals are probably finely intergrown. Magnetic products were reported to be consistently lower grade than the non-magnetic products in terms of precious metals. However, it was also concluded that magnetic separation will not produce a discardable tailings product (Giroux 2008).

13.1.2 Cu Results - Taywin

It is reported that copper recoveries were very good considering the relatively low copper grade of the sample (approximately 0.17% Cu). Liberation of copper minerals in rougher flotation was considered good as the overall copper recovery was 95.1% (Giroux 2008). However, the concentrate grade is not reported.

13.2 BHP Island Copper

In July 1992, two composite samples from the M-750 and M-690-707 zones were shipped to BHP Minerals Island Copper metallurgical lab. Two sets of flotation tests were performed on each composite sample. The first set of tests determined the recoveries to rougher concentrate while the second set dealt with the overall recoveries of gold and silver. Results are shown in Table 13-1, but they are not considered relevent at this time due to unrepresentave high grade of the samples (Giroux, 2008).

Table 13-1 Flotation Test Results Merry Widow Ore Samples M-750 and M-690-707 (Giroux, 2008)

Feed	Sample M-750	Sample M-690-707
Specific Gravity	3.00 g/cc^3	3.05 g/cc^3
Copper Grade	2.00 % Cu	1.41 % Cu
Gold Grade	11.45 g/t Au	15.4 g/t Au
Rougher Flotation		
Cum. Grade – Cu	13.94 % Cu	5.83 % Cu
Cum. Recovery – Cu	96.11 %	97.73 %
Cum. Grade – Au	43.69 g/t Au	46.91 g/t Au
Cum. Recovery – Au	62.23 %	72.27 %
Third-Cleaner Concentrate		
Grind (+100 Mesh)	18 %	18 %
Copper Grade	31.2 % Cu	29.6 % Cu
Gold Grade	50.0 g/t Au	111.0 g/t Au
Interpolated Grades and Recoveries (24% Cu Concentrate)		
Copper Recovery	90 %	90 %
Gold Grade	68 g/t Au	103 g/t Au
Gold Recovery	49 %	39 %

13.3 Grande Portage

Grande Portage initiated preliminary metallurgical testing of selected core samples in late 2007 with results received in 2008. The test work was done by West Coast Mineral Testing Inc.

The material tested comprised four composite samples created by compositing the coarse rejects from drill core samples. The composites were received by ALS Chemex and homogenized by the lab prior to shipment to Westcoast Mineral Testing Inc. The samples comprising the composites are shown in Table 13-2.

These four composites were then blended into one larger "master composite" by Westcoast, homogenized and then 1–2-kilogram samples were split from the master composite and processed. The weighted average for the master composite is also shown on Table 13-2.

Bench scale flotation testing and microscopy analysis was done. The tests determined that 77% of the copper and 60% of the gold (from an inappropriately high-grade composite) could be recovered into a high-grade flotation concentrate grading 29% Cu and 348 g/t Au. An additional 10% of the copper and 22% of the gold is recoverable into a low grade (at 10% Cu and 34 g/t Au) mainly iron sulphide concentrate. The gold distribution suggests that although it is mainly associated with Chalcopyrite, a significant portion is binary with iron sulphides (Hawthorne, 2008).

In 2010, Grande Portage completed additional metallurgical test work on a bulk sample of material from an area locally referred to as “Copper Knob”. The results yielded very good gold recoveries (95.1% at a 9.9 g/t head grade) and indicated the possibility of improved copper recovery (88.0% at a 5.9% head grade). The test work was done by West Coast Mineral Testing Inc.

Table 13-2 West Coast Minerals Inc Composite Samples (Hawthorne, 2008)

Hole No.	Sample No.	From	To	Length (m)	Au g/t	Ag g/t	Cu %
MW06-01	208516	50.97	52.00	1.03	13.45	5.0	0.32
	208517	52.00	53.00	1.00	4.44	13.7	0.95
	208518	53.00	54.00	1.00	5.36	9.4	0.66
	208519	54.00	55.00	1.00	1.65	4.6	0.27
	208520	55.00	56.00	1.00	1.26	8.9	0.63
	208522	56.00	56.74	0.74	3.87	43.5	2.89
Wtd.Avg.		**50.97**	**56.74**	**0.96**	**5.10**	**12.8**	**0.86**
MW06-06	208679	5.95	6.95	1.0	20.10	48.0	2.78
	208680	6.95	7.95	1.0	2.22	19.0	1.27
	208681	7.95	8.95	1.0	9.23	40.0	2.43
Wtd.Avg.		**5.95**	**8.95**	**1.0**	**10.52**	**35.7**	**2.16**
MW06-07	209570	5.99	7.51	1.52	0.32	17.0	1.14
	209571	7.51	8.45	0.94	0.96	27.0	1.62
Wtd.Avg.		**5.95**	**8.45**	**1.23**	**0.56**	**20.5**	**1.30**
MW06-21	336565	27.91	29.00	1.09	14.70	228.0	13.65
	336567	29.00	30.10	1.10	10.80	259.0	15.40
	336568	30.10	31.09	0.99	1.54	41.0	2.37
	336569	31.09	32.04	0.95	5.19	220.0	12.65
	336570	32.04	33.00	0.96	3.42	160.0	9.47
	336571	33.00	33.85	0.85	9.03	83.0	4.89
	336572	33.85	34.55	0.70	1.09	35.0	1.97
Wtd.Avg.		**27.91**	**34.55**	**0.95**	**6.94**	**155.4**	**9.16**
Master Composite					**6.06**	**70.57**	**4.22**

13.4 Conclusions

Results to date are based on preliminary testing of largely un-representative samples and have produced variable results. The high Fe content and skarn mineralogy will likely be challenging, but there is also potential for recovery of Ag, Co, and magnetite. For evaluating Mineral Resources, it is reasonable to assume a flotation concentrate with 77% Cu recovery and 60% Au recovery as described above.

Further metallurgical testing of representative samples is recommended.

14.0 Mineral Resource Estimates

14.1 Summary

The Mineral Resource Estimate (MRE) for the Merry Widow deposit has an effective date of 26 April 2023. The Cu-Au resource estimate is summarized in Table 14-1 below with the base case cutoff grade of CDN$30 /tonne Net Smelter Return (NSR) highlighted. The resource estimate has been confined to an open pit with "reasonable prospects of eventual economic extraction". The base case cutoff grade covers the Processing + General and Administrative ("G&A") costs using the prices and smelter terms as detailed in the Notes to the Table.

Table 14-1 Merry Widow Mineral Resource Estimate

NSR Cutoff ($CDN)	Tonnage	NSR ($CDN)	Cu (%)	Au (gpt)	CuEq (%)	AuEq (gpt)	Cu (Klbs)	Au (Oz)	AuEq (Oz)
25	605,340	191.22	0.497	3.458	2.844	4.190	6,635	67,302	81,544
30	594,019	194.33	0.505	3.515	2.890	4.258	6,611	67,132	81,322
35	579,143	198.48	0.515	3.591	2.952	4.349	6,579	66,857	80,978
40	563,577	202.92	0.526	3.673	3.018	4.446	6,530	66,544	80,563
45	540,764	209.69	0.541	3.799	3.119	4.595	6,445	66,046	79,882
50	525,090	214.53	0.552	3.889	3.191	4.701	6,388	65,646	79,357
55	508,911	219.69	0.561	3.987	3.268	4.814	6,299	65,241	78,759
60	497,215	223.50	0.567	4.062	3.324	4.897	6,216	64,941	78,284

Notes to Table 14-1:

1. The Mineral Resource Estimate was prepared by Sue Bird, P.Eng., an independent Qualified Person.
2. The Mineral Resource Estimate has an effective date of 26 April 2023.
3. Mineral Resources are reported using the 2014 CIM Definition Standards and were estimated in accordance with the CIM 2019 Best Practices Guidelines.
4. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability, and there is no certainty that any Mineral Resources will be converted into Mineral Reserves.
5. These Mineral Resource estimates include Inferred Mineral Resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Measured or Indicated Mineral Resource with continued exploration.
6. The Mineral Resource Estimate has been confined by a "reasonable prospects of eventual economic extraction" pit using the following assumptions, which were estimated from comparable projects:
    a. 77% Cu metallurgical recovery, 29% Cu concentrate grade, 100$US/tonne concentrate transport, 100 $US/tonne concentrate treatment, 1% unit concentrate grade deduction, and 0.1 $US/lb Cu refining cost;
    b. 60% Au metallurgical recovery, 99 % payable Au, and 8 US$/oz Au refining cost.
    c. Mining costs of CDN$15/tonne;
    d. Processing + G/A Costs of CDN$25/tonne;
    e. Pit slopes of 50 degrees;
7. The resulting NSR equation is: NSR (CDN$) = (Cu%/100) x 3.96 x 2204.6 x 0.77 + Au x 76.05 x 0.6.
8. The bulk density of the deposit is interpolated from sample data. The average value specific gravity used for the Mineral Resource Estimate is 3.45 at the base case cutoff.
9. The QP is not aware of political, environmental, or other risks that could materially affect the potential development of Mineral Resources.

14.2 Key Assumptions and Data used in the Resource Estimate

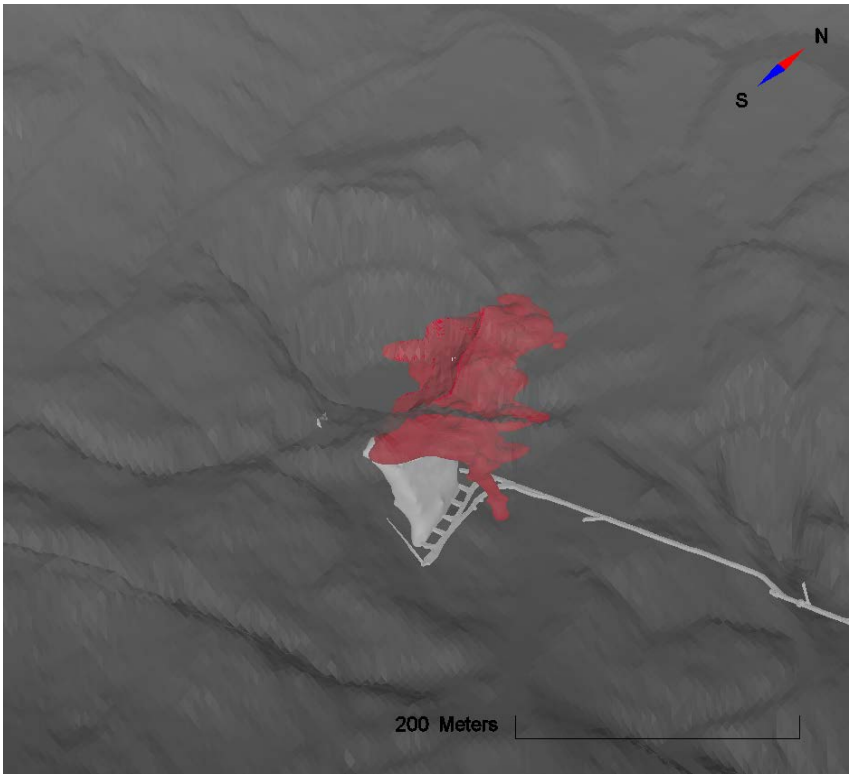
A summary of the drillholes used for the resource estimate of the Merry Widow deposit is in Table 14-2 below. Due to data quality issues discussed in earlier sections drillholes from 1989 were considered for geological modeling but were omitted from grade interpolations.

Table 14-2 Summary of Drillholes used in the Merry Widow Resource Estimate

YEAR	#DH	Total Length (m)	Assayed Length (m)	% Assayed
1989	24	2,253	1,152	51%
2006	37	3,596	2,793	78%
2007	3	455	157	35%
2021	13	1,245	1,198	96%
Total	77	7,549	5,300	70%

14.3 Underground Workings and Topography

Underground workings and topography have been provided as solids and surfaces. The modeled resource is adjacent to the Merry Widow Pit and underground mine which has been previously mined for magnetite. There resource area has limited overburden. The underground workings consist primarily of mined out stopes and stoping development levels used for historic long hole mining. The topography and underground workings are shown in Figure 14-1.



(Source: MMTS, 2023)

Figure 14-1 Merry Widow Pit Topography and Underground Mine Survey

14.4 Geological Modeling

The deposit is interpreted as a skarn mineralizing system associated with the contact between the Coast Copper Stock, dykes, and the Quatsino Limestone. Economic Cu and Au enrichment is primarily associated with massive sulphides but also crosses lithological boundaries to be observed within Coast Copper Stock near its margin and the calc-silicate skarns.

Implicit modeling tools were used to develop a mineralization envelope which targets 20$ Net Smelter Return (NSR) value cutoff in a smooth and continuous shape. Dykes have been modeled but they are considered too thin for the expected mining selectivity and are included as dilution. The shape is clipped away from mined out areas. The clipping distance is 10m in plan and 20m vertical from the provided underground stope survey.

NSR is calculated from assay grades, metallurgical recovery, and the Net Smelter Prices (NSP). The Net Smelter Prices are derived from the following parameters (Table 14-3). The parameters assume a Cu concentrate with gold credits as per the reported Metallurgical testing.

Table 14-3 Net Smelter Price (NSP) Parameters

CDN: USD	0.75	
	Au	
Price	1800	USD/oz
Recovery	60%	
Payable	99%	
Refining	8	USD/oz
Net Smelter Price	76.05	CDN/ gram
		Cu
Price	3.5	USD/lb
Recovery	77%	
Concentrate Grade	29%	
Transport	100	$US/tonne dry concentrate
Treatment	100	$US/tonne dry concentrate
Payable deduct	1	%unit
Refining	0.1	USD/lb Cu
Net Smelter Price	3.96	CDN/ lb

The Net Smelter Return (NSR) is calculated using the following formula:

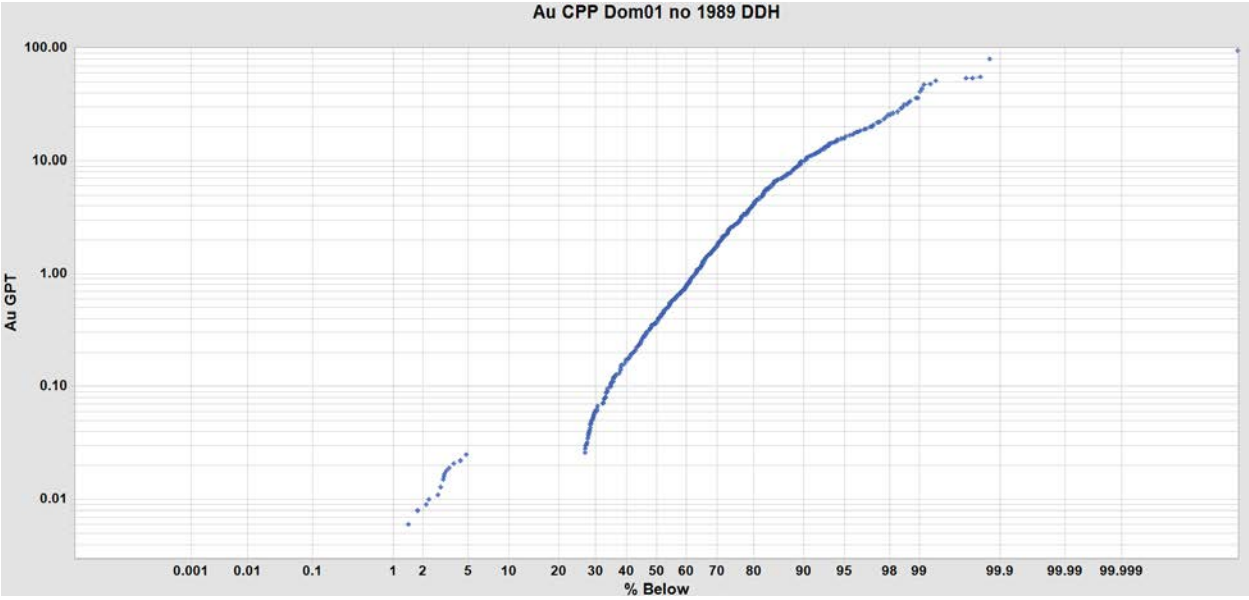
$$NSR = (Cu\%/100) \text{ X } 3.96 \text{ x } 2204.6 \text{ x } 0.77 + AU \text{ x } 76.05 \text{ x } 0.6$$

14.5 Assay Statistics, Capping, and Outlier Restriction

The assay statistics have been examined using boxplots, histograms, and cumulative probability plots (CPPs). The capping values are summarized in Table 14-4 and are derived from Figure 14-2 and Figure 14-3. Also summarized in this Table are the Outlier Restriction values used during interpolation. These are shown here for clarity on how the high-grade outliers have been confined during interpolations. This is discussed further in 14.8 which summarizes the block modelling parameters.

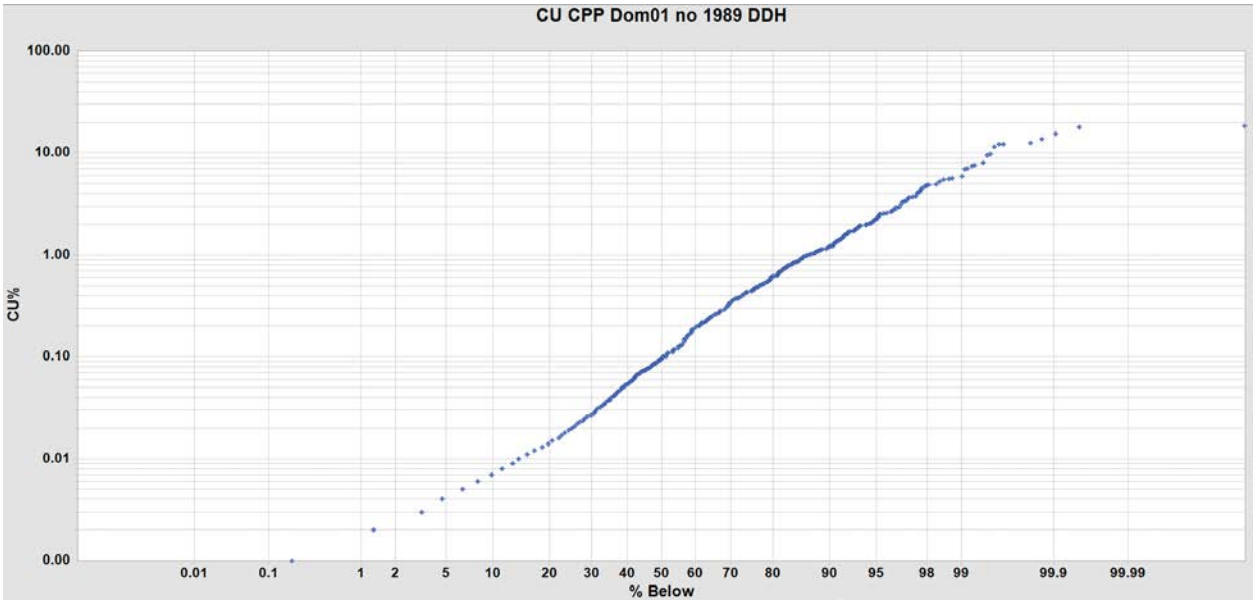
Table 14-4 Summary of Capping and Outlier Restriction during Interpolations

	Capping	Outlier
Au (g/t)	50	40
Cu (%)	N/A	10



(Source: MMTS, 2023)

Figure 14-2 CPP of Au Composites in the Modeled Domain



(Source: MMTS, 2023)

Figure 14-3 CPP of Cu Composites in the Modeled Domain

Assay and composite statistics for the capped gold and copper grades are summarized in Table 14-5, illustrating that the composited grades equal assayed grade and therefore compositing has not introduced a bias. Un-assayed intervals within the modeled domain typically are from barren dykes so

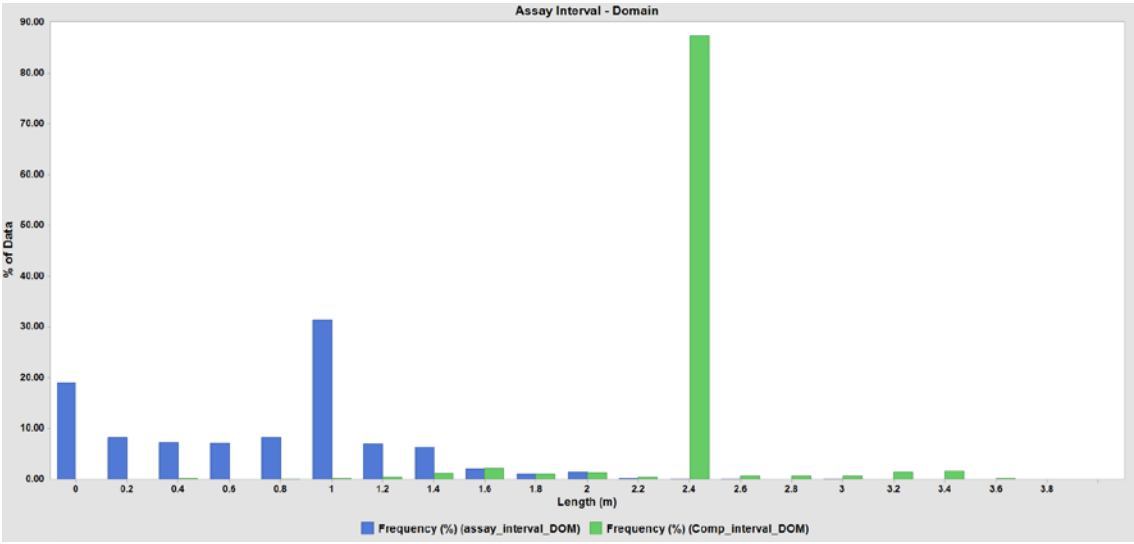
they have been replaced with zero grade. Also illustrated is that the grade distribution is generally lognormal. The Coefficient of Variation (C.V.) is further reduced during interpolation by Outlier Restrictions.

Table 14-5 Assay Statistics Compared to Composite Statistics

	Parameter	Capped Au, g/t	Capped Cu, %
Assays	Num Samples	2149	2149
	Num Missing Samples	10	10
	Min Grade	0.002	0
	Max Grade	50	18.35
	Weighted Mean Grade	2.6274	0.4384
	Weighted CV	2.4154	2.8327
Composites	Num Samples	692	692
	Num Missing Samples	0	0
	Min Grade	0	0
	Max Grade	44.838	12.149
	Weighted Mean Grade	2.6275	0.4384
	Weighted CV	1.9288	2.2457

14.6 Compositing

Compositing has been done on 2.5m composites, honoring the domain boundaries. This length is chosen to be larger than most existing assay intervals within the domain and is also half the block size, as illustrated in the histogram below (Figure 14-4). Assay intervals less than 1.25 m have been added to the previous composite when possible.

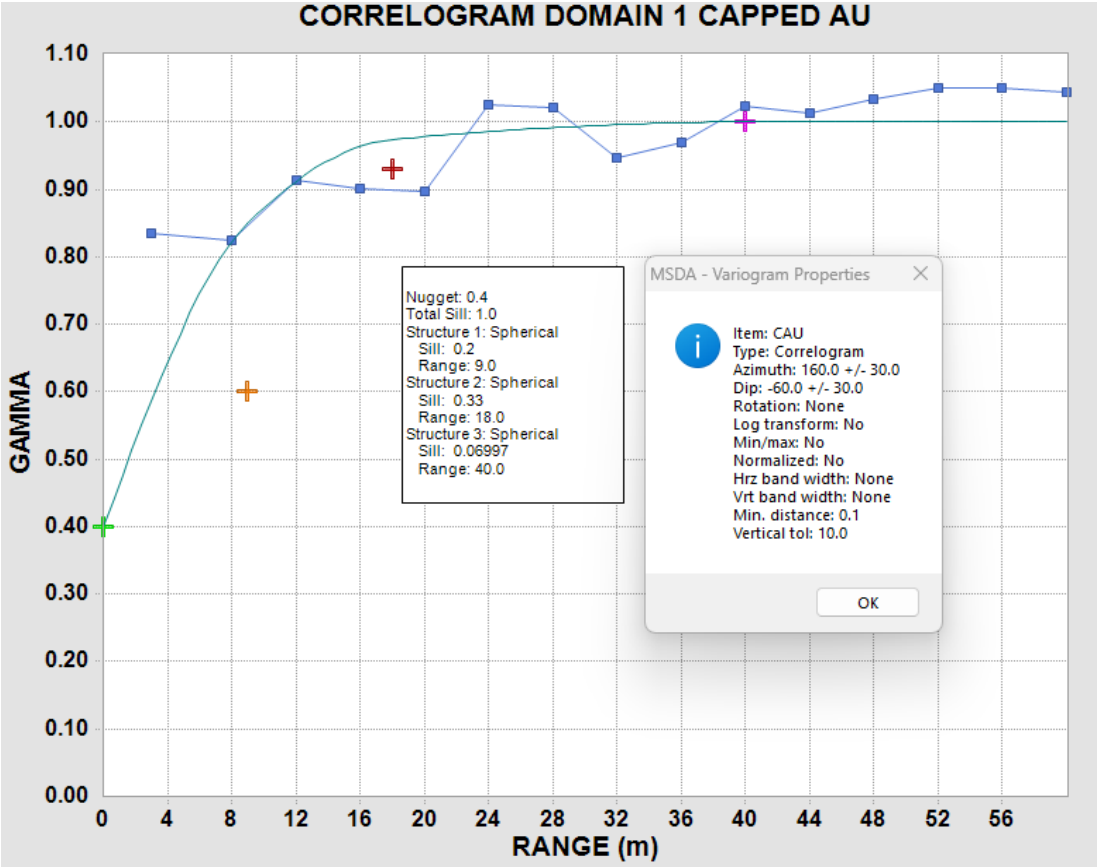


(Source: MMTS, 2023)

Figure 14-4 Histogram of Assay and Composite Lengths

14.7 Variography

Variography has been done on the modeled domain to determine the primary anisotropy and aid in establishing search distances to be used during interpolations. Figure 14-5 below illustrates the variogram models for Au with the principal axes at azimuth 160 degrees dipping 60 degrees.



(Source: MMTS, 2023)

Figure 14-5 Variography of Au in the Modeled Domain

14.8 Block Modelling

Block dimensions are 10m x 10m x 5m with the extent of the block model summarized in Table 14-6.

Table 14-6 Merry Widow Block Model Extents

Direction	Minimum	Maximum	Size (m)	# Blocks
Easting	623000	625650	10	265
Northing	5578500	5583000	10	450
Elevation	180	850	5	134

Interpolation search parameters are based on the variography discussed above. However, due to the nuggety nature of the deposit multiple passes of Inverse Distance Cubed interpolation was chosen. The

search parameters summarized in Table 14-7 are used with a search ellipse direction of 160 dipping 60 degrees.

Table 14-7 Interpolation Search Parameters – Cu and Au

	Search Parameter	Pass1	Pass2	Pass3	Pass4
Search Distance (m)	Major	10	20	40	40
	Minor	10	20	40	40
	Vertical	3.3	6.6	13.3	13.3
Number of Composites	Minimum	9	9	6	1
	Maximum	12	12	12	9
	Maximum/DH	3	3	3	3
	Maximum/Quadrant	6	6	6	N/A

The interpolations have also restricted the high-grade outliers to ensure that metal content is not overestimated. The outlier values are summarized in Table 14-4 along with the capping values, for clarity on how the high grades are constrained. Composite values above the Outlier values are used in the interpolations only up to 5m from the composite. For composite grades above the Outlier value provided, and at distances greater than 5m from the data, the value is essentially capped.

14.9 Specific Gravity

Specific Gravity (SG) is variable within the mineralization envelope due to the presence of both lower SG dykes which are too thin to model and areas of higher SG sulfides and magnetite.

There are 316 SG measurements within the modeled domain. SG values were capped at 4.6 prior to interpolation. SG was interpolated using 2 passes of Inverse Distance Squared interpolation using the same search parameters as Pass 3 and 4 of the Au/ Cu interpolation. Any blocks not reached by the interpolation were assigned SG of 3.35 which is the median of the capped values.

14.10 Classification

The current resource estimate is classified as Inferred. Although variography of Au grades suggests the current drillhole spacing could support a portion of the deposit to be an Indicated classification, the resource is considered Inferred due to reliance on historic data, and uncertainties in the recoverable material of the mineralization.

14.11 Model Validation

To validate the block model, a Nearest Neighbor model has been created (NN) to compare the de-clustered composite data to the interpolated grades. The following tables, Table 14-8 and Table 14-9, compares the relative metal content across grade-bins first within the total block model and then within the pit constrained portion (see section 14.13). Decreasing relative metal content as the grade increases show increased smoothing (reduced grades and increased tonnage) compared to the NN grade curves and confirm that interpolated grades are conservative compared to de-clustered composite values.

Table 14-8 Summary of Model Comparison to De-clustered Composites – Total Model

Cu		Au	
Cutoff, Cu%	**CUID3 / CUNN Metal Content Difference 1-(ID3/NN)**	**Cutoff, Au g/t**	**AUID3 / AUNN Metal Content Difference 1-(ID3/NN)**
>= 0.0	2%	>= 0.0	-2%
>= 0.2	1%	>= 1.0	-3%
>= 0.5	-12%	>= 3.0	-17%
>= 0.8	-22%	>= 5.0	-20%
>= 1.0	-10%	>= 10.0	-39%

Table 14-9 Summary of Model Comparison to De-clustered Composites – Pit Constrained

Cu		Au	
Cutoff, Cu%	**CUID3 / CUNN Metal Content Difference 1-(ID3/NN)**	**Cutoff, Au g/t**	**AUID3 / AUNN Metal Content Difference 1-(ID3/NN)**
>= 0.0	3%	>= 0.0	-1%
>= 0.2	2%	>= 1.0	-2%
>= 0.5	-11%	>= 3.0	-17%
>= 0.8	-23%	>= 5.0	-22%
>= 1.0	-8%	>= 10.0	-63%

14.12 Visual Comparisons

Comparison of the modelled grades and assay grades has been done throughout the mineralization. Figure 14-6 and Figure 14-7 below illustrate examples of the modelled Cu and Au grades compared to the assay grades. Both sections also show the resource pit and previous underground stope (both in black). The modelled grades compare to the assay grades and are appropriately confined by the drilling to date.

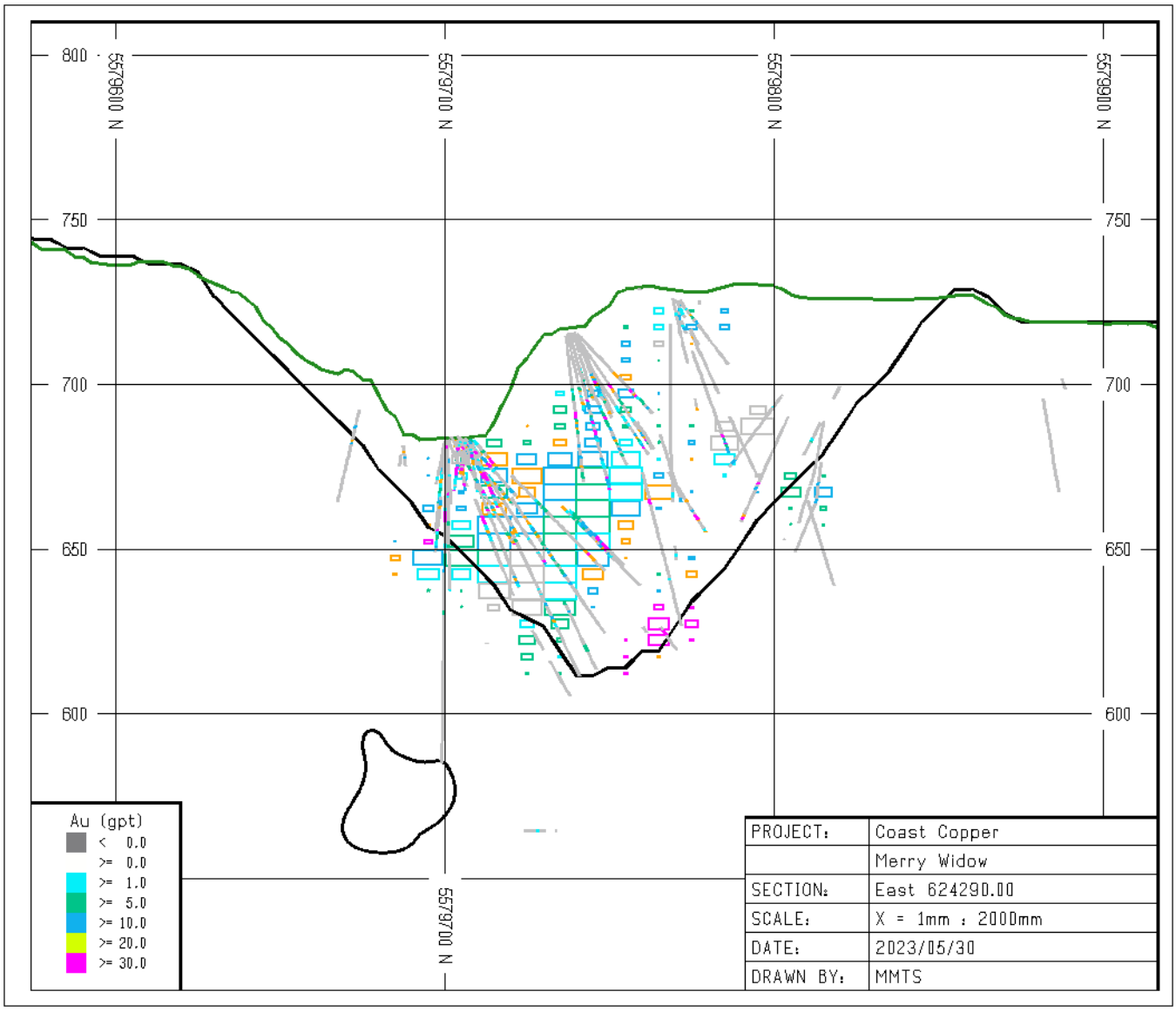


Figure 14-6 Modelled and Assay Grades at 624290E – Au

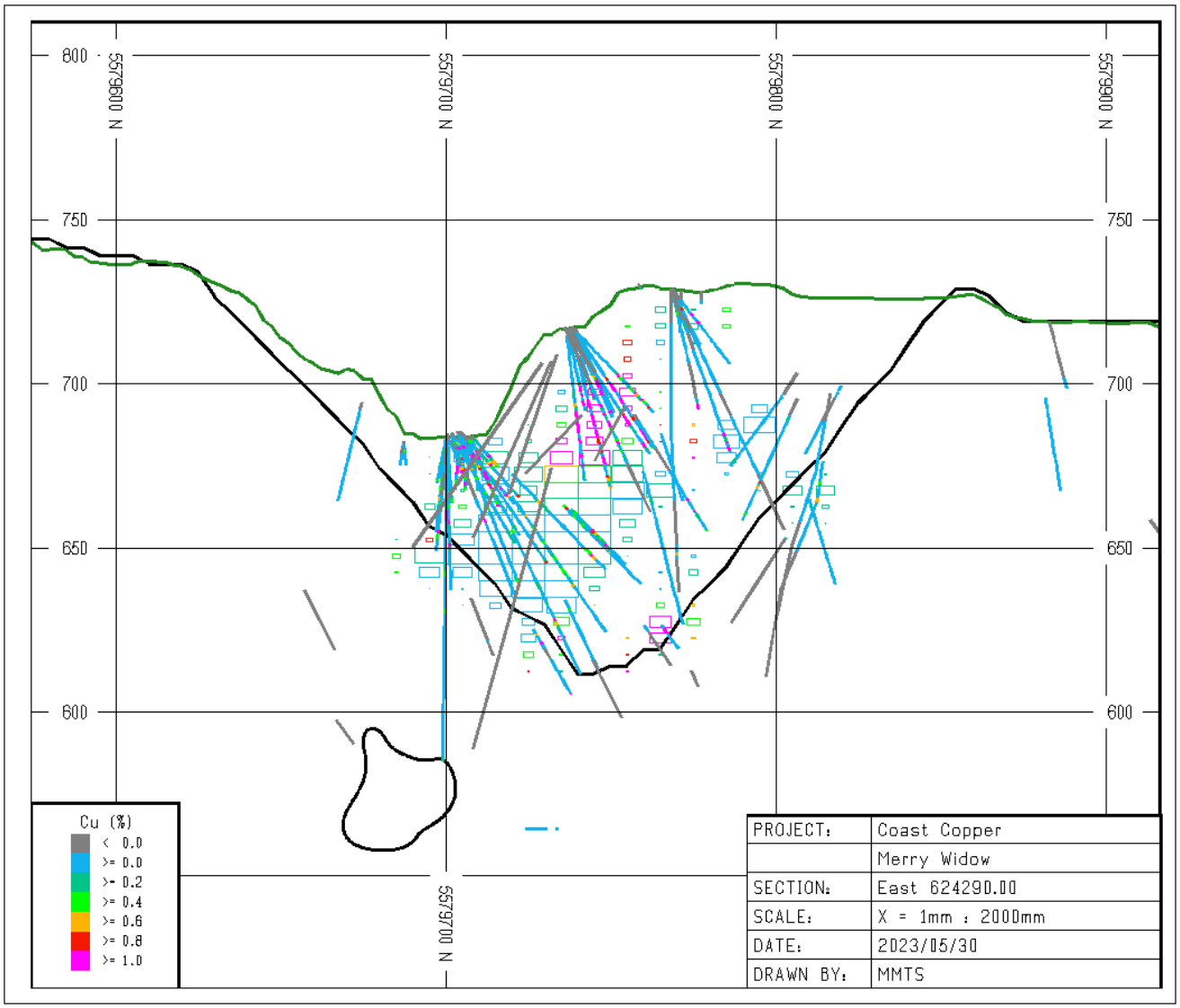


Figure 14-7 Modelled and Assay Grades at 624290E – Cu

14.13 Reasonable Prospects of Eventual Economic Extraction

Open pit resources are confined by a "reasonable prospects of eventual economic extraction" shape defined by a Lerchs-Grossman pit using the NSP and NSR parameters defined earlier and the additional mining parameters in Table 14-10 below.Table 14-3

Table 14-10 LG Pit Parameters

Parameter	Value	Units
NSR Price Factor	140%	
Mining Cost	15	CDN/tonne
Processing Cost	25	CDN/tonne
Ore SG	as per Interpolation	
Waste SG	3.35	
Pit Slope	50	degrees

The final resource pit with modelled NSR values is illustrated in Figure 14-8.

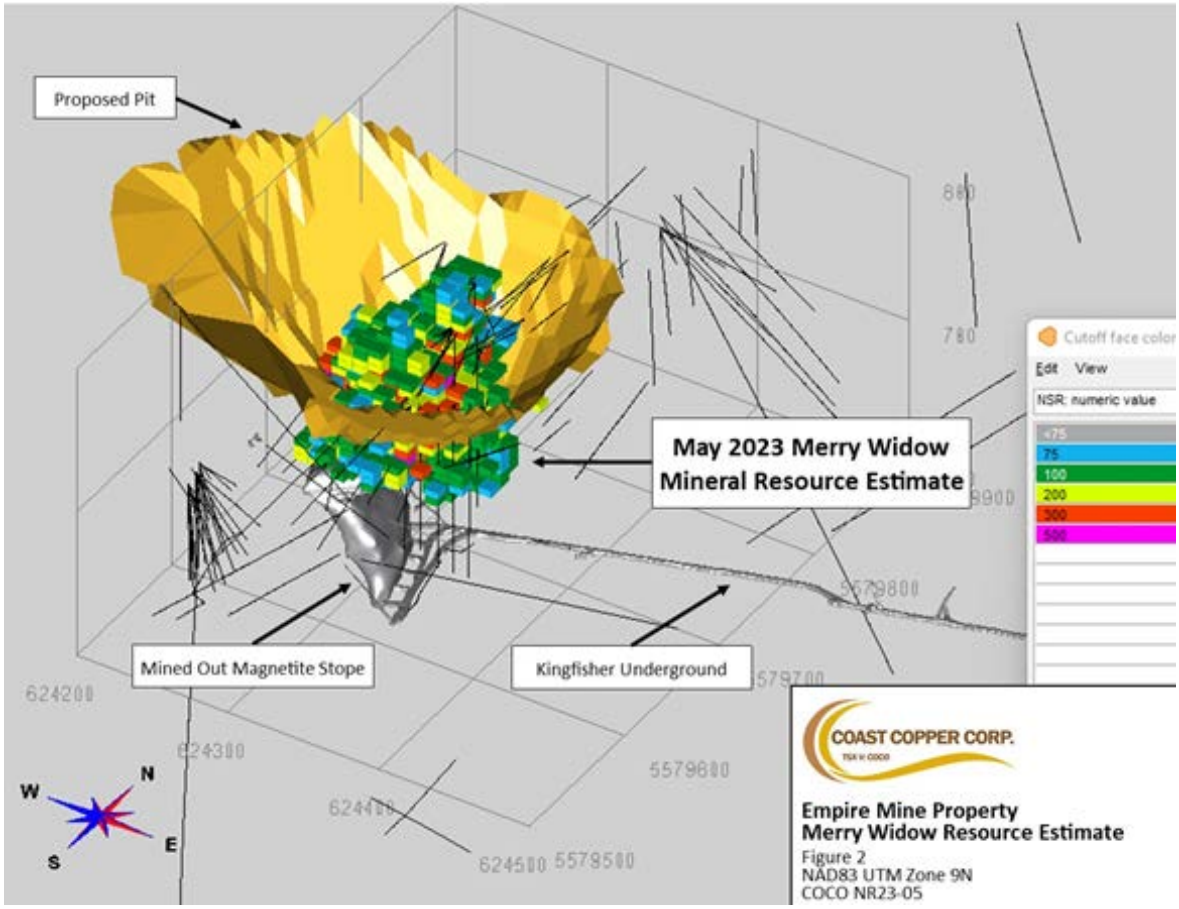


Figure 14-8 Three-Dimensional View Looking NW of the Resource Pit and Modelled NSR $/tonne Values

14.14 Independent Checks

An independent check on the modelling has been done by George Dermer, P.Eng of MMTS who checked:

- the resource shapes
- the model coding
- the interpolation runs
- the “reasonable prospect” pit shapes and inputs

14.15 Risk Assessment

A description of potential risk factors is given in Table 14-11 along with either the justification for the approach taken or mitigating factors in place to reduce any risk.

Table 14-11 List of Risks and Mitigations/Justifications

#	Description	Justification/Mitigation
1	Classification Criteria	Considered Inferred due to reliance on historical data
2	Geologic Model	Dilution has been added to smooth the shape to align with mining selectivity
3	Metal Price Assumptions	Cutoff is based on US$1800/oz Au, and US$3.5/lb Cu which are all below the current prices and based on 3-year trailing average.
4	High Grade Outliers	Capping and outlier restriction applied to ensure mean grades match data. Grade-tonnage curves show model validates well with de-clustered composite data throughout the grade distribution.
5	Metallurgy	Parameters used are lower than industry standards
6	Processing and Mining Costs	Parameters used are considered appropriate and are higher than industry standards due to size of the known deposit.
7	Previous underground mining	Drilling did not hit un-expected voids.

15.0 Mineral Reserve Estimates
Not applicable.

16.0 Mining Method
Not applicable.

17.0 Recovery Methods
Not applicable.

18.0 Project Infrastructure
Not applicable.

19.0 Market Studies and Contracts
Not applicable.

20.0 Environmental Studies, Permitting and Social or Community Impact
Not applicable.

21.0 Capital and Operating Costs
Not applicable.

22.0 Economic Analysis
Not applicable.

23.0 Adjacent Properties

The Old Sport Mine, located to the north of the Empire Mine Property, was developed by Coast Copper Mine beginning in 1916. Development at Old Sport continued until 1931 (with a hiatus in 1921-1922, when economic conditions forced closure). At that time, development included approximately 8 km of underground workings and 1000s of metres of diamond drilling (Lund, 1966; Nicholson & Robb, 2006). There was an established camp, a hydroelectric generating system on the Raging River that provided all power, including Jeune Landing at tidewater on the west coast of Vancouver Island. Following 1931, these assets fell into decay (Giroux & Game, 2007). Between 1968 – 1972, production at the Benson Lake Mine, which forms part of the current Empire Mine Property, yielded ~1.1 Mt averaging 1.0 grams per tonne gold, 1.6 percent copper and 30 percent iron (MINFILE 092L 091).

Approximately 30 km to the northwest of the Property lies the past producing Island Copper Mine which was operated by BHP Minerals Canada Ltd. between 1970 and 1995. Island Copper produced 345 Mt of 0.41% Cu, 0.017% Mo, 0.19 g/t Au and 1.4 g/t Ag from more than 1 billion tons of material (MINFILE 092L 158). Another historical mine, the Yreka Mine, lies approximately 25 km to the northwest of the Property and produced 145,334 tonnes of copper, silver, and gold ore between 1903 and 1979 (MINFILE 092L 052). Just north of the Property boundary is the recently shut-down Benson Lake calcium carbonate quarry currently owned by Columbia River Carbonates.

A current major exploration project in the vicinity of the Island Copper Mine is the North Island Project owned by North Isle Copper and Gold Inc. The North Island Project is host to the Hushamu deposit with indicated resources of 1.4 billion pounds of copper, 2.8 million ounces of gold, and 65.7 million pounds of molybdenum (MINFILE 092L 240).

24.0 Other Relevant Data and Information

There is no other relevant data or information.

25.0 Interpretation and Conclusions

The QP interprets the geology and modelling done for this report and concludes the following:

- The QA/QC procedures for the 2006-2007 and the 2021 and 2022 drilling at Merry Widow are within industry standards and illustrate that the assaying is suitable for mineral resource estimation.
- The mineral resource estimate for the Merry Widow deposit contained in this Report warrants further exploration as the deposit remains open along strike and down-dip.

26.0 Recommendations

The Merry Widow Resource is only 200 m of the 2 km prospective Merry Widow (or Upper) Trend which warrants further studies. The budget for Phase 1 and Phase 2 of the recommendations is presented in Table 26-1 and Table 26-2. Recommendations include additional metallurgical testing, soil sampling, channel sampling, IP, and ground geophysics, as outlined in the sections below.

- Metallurgical testing has been included in Phase 1 of the recommendations as it is dependent on drill core produced from exploration drilling.
- The Phase 2 exploration activities outlined below are independent of the Phase 1 program and should be executed as budget permits.

Table 26-1 Phase 1 Budget for Exploration and Metallurgical Testing

Activity	Description	Cost
Diamond Drilling (road supported) ~10630 m @ $350/m all in cost	All in cost Includes budget for geochemical assay	$3,720,500
Geological – Core Logging / Sampling	Estimate for 1 site geologist / 2 core loggers / 2 core splitters @ $600/day	$300,000
Merry Widow Metallurgical Test Program	Preliminary metallurgical test work on representative ore material	$79,500
Total		**$4,100,000**

Table 26-2 Phase 2 Budget for Exploration

Activity	Description	Cost
Soil Sampling along Upper and Middle Merry Widow Trend	500 soils @ $100 all in cost	$50,000
Drone Magnetic Resonance Survey	Low-level drone magnetic survey across structures along Upper Trend	$30,000
Magnetotellurics (MT) Survey	Deep sensing MT survey to test mineralization across structures at depth	$70,000
Channel Sample Kingfisher Underground	100m section of adit wall to be channel sampled @ $500/m all in cost	$50,000
Benson Lake Mine Underground Survey	Provide safe access to underground, complete geotechnical underground assessment and perform survey of accessible underground workings	$150,000
Total		**$350,000**

26.1 Soil / Channel Sampling

26.1.1 Sampling within Merry Widow Area

There are several untested soil anomalies along the Upper Trend to the north and south of the Merry Widow Area. Follow-up soil sampling and infill soil sampling are recommended in this area. Additionally, there are several untested IP anomalies along the Upper Trend to the south in the Bluebird area and to the north in the area including the Whiskey and Summit showings. Grid soil and chip sampling are recommended in these areas.

26.1.2 Sampling between Upper Merry Widow and Old Sport Trends

To date, there has been little to no soil sampling completed in the area between the Upper and Lower Trends, noted as the Middle Trend. Grid soil sampling is recommended across this area to develop a preliminary baseline for soil geochemistry in the area.

26.1.3 Channel Sampling along Upper Merry Widow and Kingfisher Underground

Channel sampling is recommended for an approximately 100 m section of the Kingfisher Underground adit from which select chip samples have historically been taken. A continuous channel sample across this area would provide valuable data for future resource estimation and potentially guide future drill targeting.

26.2 Geophysics

To date there has been no IP or ground geophysics completed on the Middle Trend ground between the Upper (Merry Widow) Trend and the Lower (Old Sport Horizon) Trend. Recommendations for this area include a magnetotellurics (MT) survey to sense for deeper seated structures such as imbricate thrust sheets as well as down dip mineralization beneath adit level and possibly down dip on Old Sport Horizon.

26.3 Drilling

Recommendations for further drilling and metallurgical studies are summarized below in Table 26-3 with the estimated budget presented in Table 26-1.

Table 26-3 represents targets that have been identified through historical drilling and desktop studies. Drilling priority may change based on observations made in the field. Exact depths, collar locations and dips will be determined in the field as access allows. Diamond drilling should be completed with NQ core to minimize hole deviation and all core should be orientated to allow for determination of accurate structural measurements.

Table 26-3 Summary of Exploration Drill Targets

Priority	Target	Description	Holes	Meters
1	Merry Widow Resource Area	Potential to expand upon the 2023 MRE	17	2,460
2	Raven Bluff	Targeting mineralization across Quatsino Thrust and along northern trend	4	620
3	Merry Widow at Depth Down Dip	Targeting mineralization open at depth below current resource	3	2,100
4	Marten	Targeting mineralization across Quatsino Thrust and along southern trend	3	450
Merry Widow Area Subtotal			**23**	**5,630**
6	Benson Lake / Old Sport Horizon	Confirm historical drill / assay results and test continuity of OSH mineralization	9	5,000
Total			**32**	**10,630**

26.4 Metallurgy

It is recommended to obtain representative metallurgical samples both within and outside the magnetite mineralized zone. Metallurgical recoveries for Ag, Co, and Fe should be done as well as for Cu and Au. This is expected to allow the inclusion of these elements in the economics of the resource estimate. Testing of Fe should include Loss on Ignition (LOI) and impurities including: SiO2, Mn and Al2O3.

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