REPORT

National Instrument 43-101 Technical Report, FireFly Metals Ltd., Ming Copper-Gold Project, Newfoundland

Submitted to:

Firefly Metals Ltd.

Submitted by:

Paul Palmer; P.Eng.

Brian Thomas; P.Geo.

Mireno Dhepaganon: P. Eng.

Brian Wolfe: BSc (Hons), MAIG.

WSP Canada Inc.

CA0037681.8442-001-R-Rev0

Report Effective Date: November 29, 2024

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Date and Signature Page

Qualified Person	Responsible for Parts
Paul Palmer; P.Eng. WSP Canada Inc. *Signed by* November 29, 2024	Items 1.1-1.7, 1.10, 1.11, 1.13.1, 1.13.3, 2.1, 2.2, 2.3.1, 2.4, 3, 4.4-4.6, 9, 10, 11, 12.1, 15-25, 26.1, 26.3, 27
Brian Thomas; P.Geo. WSP Canada Inc. *Signed by* November 29, 2024	Items 1.1-1.4, 1.12, 3, 4.1–4.3, 5, 6, 7, 8
Mireno Dhepaganon: P. Eng. WSP Canada Inc. *Signed by* November 29, 2024	Item 13
Brian R. Wolfe: BSc (Hons), MAIG. International Resources Solutions Pty Ltd. *Signed by* November 29, 2024	Items 1, 2, 12, 14, 25, and 26

NOTICE TO READERS:

This National Instrument 43-101 Technical Report for FireFly Metals Ltd. (FireFly) was prepared and executed by the Qualified Persons named herein as Authors. This report contains the expressions of professional opinions of the Authors based on (i) information available at the time of preparation, (ii) data supplied by FireFly, and (iii) the assumptions, conditions, and qualifications set forth in this report. The quality of information, conclusions, and estimates contained herein are consistent with the stated levels of accuracy as well as the circumstances and constraints under which the mandate was performed. This Report was prepared in accordance with a contract between WSP and FireFly which contract permits FireFly to file this report as a Technical Report with Canadian securities regulators pursuant to National Instrument 43-101 - Standards of Disclosure for Mineral Projects. Except for the purposes legislated under Canadian securities law, any use of this report by any third party is at that party's sole risk. The responsibility for this disclosure remains with FireFly. The user of this document should ensure that this is the most recent Technical Report for the Property as it is not valid if a new Technical Report has been issued.

Paul Palmer; P.Eng.

WSP Canada Inc.
36 Pippy Place, St. John's, Newfoundland
A1B 3X4

CONSENT OF QUALIFIED PERSON

I, Paul Palmer, state that I am responsible for preparing or supervising the preparation of a part of the technical report summary titled National Instrument 43-101 Technical Report; FireFly Metals Ltd., Ming Copper-Gold Project, Newfoundland; with an effective date of: November 29, 2024 (the "Technical Report").

Furthermore, I state that:

(a) I consent to the public filing of the Technical Report by FireFly Metals Ltd.;

(b) The document that the Technical Report supports is the November 29, 2024 Annual Information Form titled Firefly Metals Annual Information Form For the Year Ended June 30, 2024(the "Document");

(c) I consent to the use of my name in the document, or any quotation from or summarization, in the Document of the parts of the Technical Report for which I am responsible, and to the filing of the Technical Report as an exhibit to the Document; and

(d) I confirm that I have read the Document, and that the Document fairly and accurately reflects, in the form and context in which it appears, the information in the parts of the Technical Report for which I am responsible.

Dated at St. John's, Newfoundland this 29th of November, 2024.

Signed by Paul Palmer

Paul Palmer; P.Eng.

Brian Thomas; P.Geo.

WSP Canada Inc.
33 Mackenzie Street, Suite 100, Sudbury, Ontario

CONSENT OF QUALIFIED PERSON

I, Brian Thomas, state that I am responsible for preparing or supervising the preparation of a part of the technical report summary titled National Instrument 43-101 Technical Report; FireFly Metals Ltd., Ming Copper-Gold Project, Newfoundland; with an effective date of: November 29, 2024 (the "Technical Report").

Furthermore, I state that:

(a) I consent to the public filing of the Technical Report by FireFly Metals Ltd.;

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(c) I consent to the use of my name in the document, or any quotation from or summarization, in the Document of the parts of the Technical Report for which I am responsible, and to the filing of the Technical Report as an exhibit to the Document; and

(d) I confirm that I have read the Document, and that the Document fairly and accurately reflects, in the form and context in which it appears, the information in the parts of the Technical Report for which I am responsible.

Dated at Sudbury, Ontario this November 29, 2024.

Signed by Brian Thomas

Brian Thomas; P.Geo.

Mireno DhePaganon; P.Eng.

WSP Canada Inc.
1600 Rene-Levesque, Montreal,
Quebec

CONSENT OF QUALIFIED PERSON

I, Mireno DhePaganon, state that I am responsible for preparing or supervising the preparation of a part of the technical report summary titled National Instrument 43-101 Technical Report; FireFly Metals Ltd., Ming Copper-Gold Project, Newfoundland; with an effective date of: November 29, 2024 (the "Technical Report").

Furthermore, I state that:

(a) I consent to the public filing of the Technical Report by FireFly Metals Ltd.;

(b) The document that the Technical Report supports is the November 29, 2024 Annual Information Form titled Firefly Metals Annual Information Form for the Year Ended June 30, 2024 (the "Document");

(c) I consent to the use of my name in the document, or any quotation from or summarization, in the Document of the parts of the Technical Report for which I am responsible, and to the filing of the Technical Report as an exhibit to the Document; and

(d) I confirm that I have read the Document, and that the Document fairly and accurately reflects, in the form and context in which it appears, the information in the parts of the Technical Report for which I am responsible.

Dated at Montreal, Quebec this 29th of November, 2024.

Signed by Mireno DhePaganon

Mireno DhePaganon; P.Eng.

VIA SEDAR

29 November 2024

Ontario Securities Commission

British Columbia Securities Commission

Alberta Securities Commission

Saskatchewan Financial Services Commission

Dear Sirs/Mesdames:

RE: Consent of Qualified Person for "NI 43-101 Technical Report Firefly Metals Ltd Ming Copper Gold Project Newfoundland" (the "Report"), effective date 29 November 2024.

I hereby state:-

- The undersigned was responsible or jointly responsible for preparing or supervising the preparation of sections 1, 2, 12, 14, 25 and 26 of the Report.
- Pursuant to Section 8.3 of National Policy 43 101 - Standards of Disclosure for Mineral Projects, I consent to the public filing of the Report by Firefly Metals Ltd.
- The document that the Report supports is the November 29, 2024, Annual Information form titled Firefly Metals Annual Information Form for the year ended 30 June 2024 (the "News Release").
- The undersigned has read the News Release and hereby confirms that the News Release fairly and accurately represents the information (in the form and context in which it appears) contained in parts of the Report that I am responsible for.
- I consent to the use of my name in the News Release and extracts from or a summary of the Report in the News Release.

Sincerely,

Brian R Wolfe

Principal Resource Geologist

International Resources Solutions Pty Ltd

Abbreviations

Units of Measure

above mean sea level	amsl
acre	ac
ampere	A
annum (year)	a
billion	B
billion tonnes	Bt
billion years ago	Ga
British thermal unit	BTU
Centimetre	cm
cubic centimetre	cm^3
cubic feet per minute	cfm
cubic feet per second	ft^3/s
cubic foot	ft^3
cubic inch	in
cubic metre	m^3
cubic yard	yd^3
Coefficients of Variation	Cvs
day	d
days per week	d/wk
days per year (annum)	d/a
dead weight tonnes	DWT
decibel adjusted	Ba
decibel	dB
degree	°
degrees Celsius	°C
diameter	ø
dollar (American)	US$
dollar (Canadian)	CAN$
dry metric ton	mt
foot	ft
gallon	gal
gallons per minute	gpm
Gigajoule	GJ
Gigapascal	GPa
Gigawatt	GW
Gram	g
grams per litre	g/L
grams per tonne	g/t
greater than	>
hectare (10,000 m^2)	ha
hertz	Hz
horsepower	hp
hour	h
hours per day	h/d
hours per week	h/wk
hours per year	h/a
inch	in
kilo (thousand)	k
kilogram	kg
kilograms per cubic metre	kg/m^3
kilograms per hour	kg/h
kilograms per square metre	kg/m^2
kilometre	km
kilometre	km
kilometres per hour	km/h
kilopascal	kPa
kiloton	kt
kilovolt	kV
kilovolt-ampere	kVa
kilowatt	kW
kilowatt hour	kWh
kilowatt hours per tonne	kWh/t
kilowatt hours per year	kWh/a
less than	<
litre	L
litres per minute	L/m
megabytes per second	Mb/s
megapascal	MPa
megavolt-ampere	Mva
megawatt	MW
metre	m
metres above sea level	masl
metres Baltic sea level	mbsl
metres per minute	m/min
metres per second	m/s
microns	µm
milligram	mg
milligrams per litre	mg/L
millilitre	mL
millimetre	mm
million	M
million bank cubic metres	Mbm^3
million bank cubic metres per annum	Mbm^3/a
million tonnes	Mt
minute (plane angle)	'
minute (time)	min
month	mo
ounce	oz
pascal	Pa
centipoise	mPa·s
parts per million	ppm
parts per billion	ppb
percent	%
pound(s)	lb
pounds per square inch	psi
revolutions per minute	rpm
second (plane angle)	"
second (time)	s

short ton (2,000 lb)..st
short tons per day..st/d
short tons per year...st/y
specific gravity .... SG
square centimetre..cm^2
square foot... ft^2
square inch ....in^2
square kilometre ....km^2
square metre... m^2
three-dimensional 3D
tonne (1,000 kg) (metric ton) ....t
tonnes per day...t/d
tonnes per hour...t/h
tonnes per year...t/a
tonnes seconds per hour metre cubed.....ts/hm^3
volt V
week .... wk
weight/weight.. w/w
wet metric ton .... wmt

Acronyms

ABA .... Acid-Base Accounting

Actlabs .... Activation Laboratories Ltd

ARD .... Acid Rock Drainage

Au .... Gold

CDA .... Canadian Dam Association

CEAA .... Canadian Environmental Assessment Act

CIM .... Canadian Institute of Mining, Metallurgy and Petroleum

CIP .... Carbon-in-Pulp

COMEX .... New York Mercantile Exchange

CRML .... Consolidated Rambler Mines Limited

Cu .... Copper

DEXRT .... X-Ray Transmission

DFO .... Department of Fisheries and Oceans

DMS .... Dense Media Separation

DOEC .... Department of Environment and Conservation

DSI .... Dam Safety Investigation

DSR .... Dam Safety Review

EA .... Environmental Assessment

Eastern .... Analytical Ltd.

ECCC .... Environment and Climate Change Canada

EDGE .... Economic Diversification and Growth Enterprises

EEM .... Environmental Effects Monitoring

EIS .... Environmental Impact Statement

EM .... Electromagnetic

EPA .... Environmental Protection Act

EPR .... Environmental Preview Report

ETP .... Effluent Treatment Plant

FS .... Feasibility Study

GAP .... Gas and Associated Products

GRG .... Gravity Recoverable Gold

LFZ .... Lower Footwall Zone

LME .... London Metals Exchange

MIBC .... Methyl Isobutyl Carbinol

MMER .... Metal Mining Effluent Regulations

MMS .... Ming Massive Sulphide

MNDP .... Ming North Down Plungey

MSDP .... Ming South Down Plunge

MSUP .... Ming South Up Plunge

NL .... Newfoundland and Labrador

NLDECC .... Newfoundland and Labrador Department of Environment and Climate Change

NLDMAE .... Newfoundland and Labrador Department of Municipal Affairs and Environment

NLDNR .... Newfoundland and Labrador Department of Natural Resources

NPRI .... National Pollutant Release Inventory

NSR .... Net Smelter Revenue

ORCT .... Old Rambler Consolidated Tailings

PAG .... Potentially Acid Generating

PCB .... Polychlorinated Biphenyls

PFS .... Pre-Feasibility Study

PLC .... Programmable Logic Controller

QA/QC .... Quality Assurance and Quality Control

QP .... Qualified Person

RDC .... Research and Development Corporation

RMM .... Rambler Metals & Mining Canada

ROM .... Run-of-Mine

SAG .... Semi-Autogenous Grinding

SCC ..... Standards Council of Canada

TCLP ..... Toxicity Characteristic Leaching Procedure

TMF ..... Tailings Management Facility

UCS ..... Unconfined Compressive Strength

UFZ ..... Upper Footwall Zone

VEC ..... Valued Ecosystem Components

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1.0 SUMMARY

1.1 Introduction

The Ming Mine Copper-Gold Project, Green Bay (the Project or the Property), comprises the Ming Mine site; Nugget Pond milling facility; the Pine Cove deep water port (under a port access agreement with Maritime Resources Corp ('Maritime') and adjacent exploration claims recently acquired from the Gold Hunter Resources. The Little Deer land package located approximately 35 kilometres (km) to the south of the Mine is excluded from this Technical Report, as this project is covered under its own Technical Report. The Ming Mine Project is located on the north coast of Newfoundland and Labrador, Canada.

WSP Canada Inc. (WSP) and International Resources Solutions Pty Ltd. (IRS) have prepared this Technical Report (TR) on the Project at the request of FireFly to disclose the acquisition of the project, ongoing exploration activities and the maiden FireFly Mineral Resource Estimate (MRE). This report meets the standards set in National Instrument 43-101 (NI 43-101) and the Canadian Institute of Mining, Metallurgy and Petroleum ('CIM') guidelines.

This is the first TR issued by FireFly for the Ming Mine Copper-Gold Project and has an issue date of November 29, 2024 and a resource effective date of October 29, 2024.

1.2 Property Ownership

In a press release dated August 31, 2023 (AuTECO, 2023a), AuTECO Minerals Ltd. (AuTECO, precursor company to FireFly) announced a deal to acquire the Ming Mine Copper-Gold, Green Bay Project from Rambler Metals and Mining. The Green Bay Copper Project included the Little Deer Copper Complex.

On August 11, 2023, AuTECO bid for all of the business, property and assets of the Rambler Group under the sales and investment solicitation process ordered by the Supreme Court of Newfoundland and Labrador in Canada on March 15, 2023, as part of the restructuring proceedings of Rambler Group under the Companies' Creditors Arrangement Act (Canada). The SISP was conducted by the Rambler Group, with the assistance of and in consultation with Grant Thornton Limited acting as court-appointed monitor under the CCAA proceedings.

AuTECO's bid involved the offer to purchase the Target Assets by way of the cancellation of all outstanding issued capital in the Rambler Group and the issuance of new shares to AuTECO and a Reverse Vesting Order (RVO). AuTECO's bid was chosen as the preferred bid by the Rambler Group, in consultation with the Monitor, and was formalized with the signing of a binding subscription agreement.

The RVO will involve the transfer of undesirable assets and liabilities out of the Rambler Group, leaving the Rambler Group with only those assets and liabilities sought by AuTECO to facilitate its (or its nominee's) acquisition of the Sale Shares.

On completion of the Acquisition, the Rambler Group retained all Target Assets owned as of the date of the Subscription Agreement and any assets acquired by the Rambler Group up to the date of Completion, but excluding those assets, liabilities and contracts specifically excluded by AuTECO pursuant to the terms of the Subscription Agreement.

In a press release, dated October 20, 2023, AuTECO (AuTECO, 2023b) announced its acquisition of the Green Bay Copper-Gold Project, including the Little Deer Copper Complex Deposits, had been completed.

In a press release, dated November 27, 2023, AuTECO (AuTECO, 2023c) announced the company's name change to FireFly Metals Ltd., following shareholder approval and confirmation from the Australian Securities and Investments Commission. The Company commenced trading under its new name and ASX Code (ASX: FFM) on December 14, 2023.

1.3 Property Location and Description

The Project is located in Newfoundland and Labrador, Canada, and consists of three main sites, the Ming Mine, the Nugget Pond milling facility and the Pine Cove deep water port (newly acquired access rights to an export facility closer in proximity to the Ming Mine compared to the previously used Goodyear Cove port (Figure 1.1). It also includes landholdings adjacent to these sites acquired in early 2024 from Gold Hunter Resources Inc and a small land package approximately 35 km to the south of Ming Mine called Little Deer, and is to be reported in its own TR. The Pine Cove port is a signed Port Access Agreement with 'Maritime' under which FireFly can export up to 1Mtpa of mineral concentrate (FireFly, 2024a).

The Ming Mine site is located approximately 17 km by road east of the town of Baie Verte, on the north coast of Newfoundland, geographic coordinates 49°54' N latitude and 56°05' W longitude. The site is approximately 360 km by air northwest of St. John's, and 165 km by road northeast of Deer Lake.

The Nugget Pond milling facility is located approximately 6 km west of the community of Snook's Arm in the provincial district of Baie Verte, Green Bay, geographic coordinates 49°50' N latitude and 55°45' W longitude. The facility is located 44 km by an all-weather road from the Ming Mine site.

The Pine Cove deep water port is located only 6 km west of the Ming Mine and east of the town of Baie Verte, on the north coast of Newfoundland. Pine Cove deep water port can receive Panamax Vessels and provides a much closer export facility than the Goodyear's Cove Port previously available to the Project.

All permits and approvals to conduct operations at the mine, mill and port sites and the required Financial Assurance for rehabilitation and closure are currently in place.

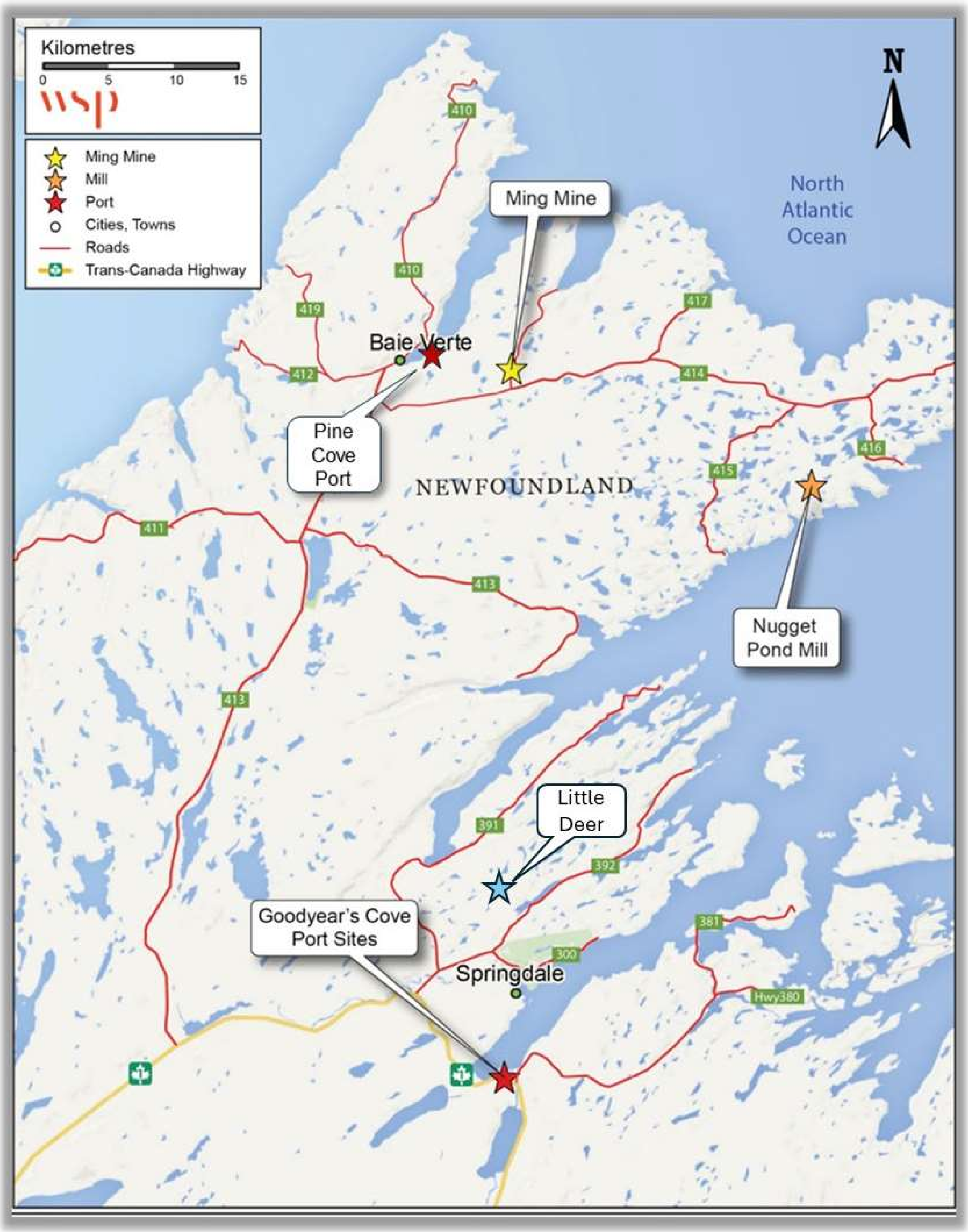


Figure 1.1: Project Location Map

1.4 Geology

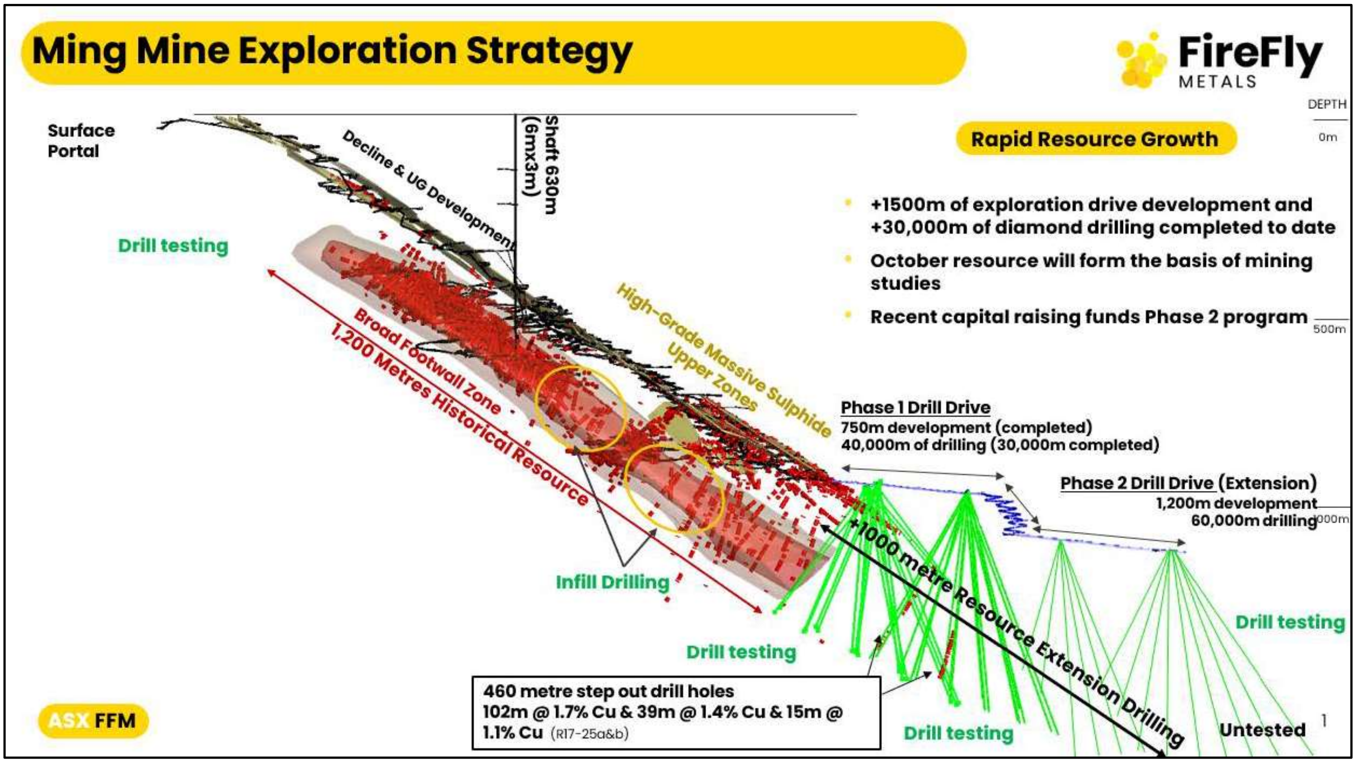
The Property is a Noranda-type VMS deposit hosted by Cambrian-Ordovician metavolcanic and metasedimentary rocks of the Pacquet Harbour Group. The style of mineralization, alteration, host rock, and tectonism most closely resemble other VMS deposits throughout the world. Geology within the Property area is comprised of two major lithological packages, the Hanging Wall Sequence, and the underlying Mineralized Sequence. The Hanging Wall Sequence consists mainly of basaltic flows with lesser volcaniclastic and volcanogenic sediments, including minor magnetic iron formation. The underlying Mineralized Sequence consists dominantly of altered and locally mineralized, quartz-phyric felsic volcanic rocks with minor quantities of altered basalt. Banded, pyritic massive sulphides on the Ming Massive Sulphide Horizon (MMS) occur directly below the sheared contact separating the Hanging Wall and Mineralized Sequences. More than one horizon of massive sulphide has been intersected in several drill holes; in these instances, the massive sulphide zones are separated by altered, pyritized felsic volcanic or by gabbroic intrusive rocks. Immediately below the MMS occurs a sericitized-pyritized felsic unit approximately 15 to 20 m thick. This unit is characterized by the variable presence of green mica and higher than normal gold concentrations. Gold concentrations diminish while moving deeper in the stratigraphy and away from the MMS horizon. Below this gold-enriched horizon lies a sequence of sericitized-pyritized felsic volcanics 100 m in thickness which separates the mineralization on the MMS horizon from that in the Lower Footwall Zone (LFZ), which consists of nebulous zones of disseminated and stringer chalcopyrite-pyrrhotite cutting chlorite altered felsic and lesser mafic volcanic rocks.

1.5 Exploration and Drilling

From 1977 to 2024 a total of 256,312 m of surface and underground exploration drilling has been completed at the Ming Mine. Historic drilling and more recent drilling completed by FireFly are summarized in Table 10.1 and Table 10.2. FireFly has drilled approximately 56 holes for a total of 22,648 m since 2023.

The Phase 1 exploration drill drift development was completed July 5, 2024, and Phase 2 exploration drift development has started in early July 2024, with additional 1,200 m exploration drill drift, following up on encouraging results from phase 1 drilling, as identified in Figure 1.2.

- **Phase 1 drilling program**. Growing VMS and Lower Footwall Zone:
  - ~40,000 m of resource and exploration drilling 75% completed ~ 30,000 m at October 3, 2024.
- **Phase 2 drilling program.** Expand VMS and Lower Footwall Zone and Increase resource & confidence:
  - ~60,000 m of resource growth, exploration and infill M&I drilling, pending Phase 2 development drift.



Source: Firefly, 2024b

Figure 1.2: FireFly Exploration Drilling

Additional exploration description is given in Items 9.0 and 10.0.

1.6 Sample Preparation, Analysis and Security

FireFly follows best practices and methodologies described by the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) for the collection of samples and preparation of data that is to be reported under National Instrument 43-101.

From 2003 to 2009, sample preparation and initial analytical analyses were completed by Eastern Analytical Ltd (Eastern) in Springdale, Newfoundland, whereas final analytical analyses were completed by Activation Laboratories Ltd. (Actlabs) of Ancaster, Ontario.

From 2009 to 2023, Eastern was the only laboratory utilized by Rambler for sample preparation and analytical analysis. Since late 2013, the Eastern laboratory has been accredited in accordance with the International Standards ISO/IEC 17025:2005 for a defined scope of procedures. Since full production, beginning in early 2012, up to the halting of mining activities in March 2023, Rambler has utilized both the Eastern laboratory and an in-house laboratory for sample preparation.

Eastern applies a fire assay method followed by acid digestion, and analyses by atomic absorption finish for copper, lead, zinc, nickel, and cobalt analyses.

Actlabs used a fire assay fusion followed by acid digestion and analyses by atomic absorption for gold analyses.

Since November 2023, Eastern has been the only lab used at the Project by FireFly. For gold analysis, Eastern applies a fire assay method for gold and 4 acid digest with Inductively Coupled Plasma-Optical Emission Spectrometry (ICP-OES) finish

The quality assurance and quality control program and procedures in use at the Property meet industry standards that exploration data collected adheres to NI 43-101 quality criteria and requirements. As part of the QA/QC program, duplicate, blank and Certeified Reference Material (CRM) samples are inserted at regular intervals.

Umpire lab check assays for the project are routinely conducted by SGS laboratory in Burnaby. FireFly is currently implementing a reporting system in acQuire for the third-party checks.

It is the QP's opinion that the sample preparation and analytical procedures used on the Property meet acceptable industry standards and that the information reviewed at the time of the site visit is suitable to support geological modeling and mineral resource estimation.

1.7 Data Verification

The data verification completed for this TR focused on the exploration activities completed by Firefly. The QPs conducted a review of the verification work on historical data completed by Firefly and previous third-party consultants as part of published NI 43-101 Technical Reports by the previous owners. The data verification of the exploration activities completed by Firefly in 2023 and 2024 included a WSP QP site visit completed on July 15 and 16, 2024 and QP independent checks of the drill hole data provided in databases against assay certificates and visualization of drill hole data in 3D modeling software. The International Resource Solutions QP conducted a site visit from July 23 to July 26 where independent checks and data review were completed on the Firefly and historical data.

1.8 Mineral Resources

The MRE for the Ming Mine Copper-Gold Projectwas prepared by independent consultant Mr. Brian Wolfe of International Resource Solutions. The effective date for the MRE is October 29, 2024.

Mineral Resources were estimated in conformity with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Mineral Reserves (MRMR) Best Practice Guidelines. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

The Ming Deposit MRE is comprised of two different mineralization zones, the Footwall stringer zone and the Volcanogenic Massive Sulphides (VMS) zone.

- Footwall Stringer-Style Mineralization: Centimetre-scale veins of pyrite and chalcopyrite interpreted to have formed as part of the hydrothermal feeder system below the sea floor. The sulphide stringers have been locally deformed and characteristically follow the foliation. The host rock is typically rhyolite that is intensely chlorite-altered reflecting the temperature and fluid pressure at formation. The zone of stringer mineralization can be up to 300m wide, 200m in height, with grades locally reaching beyond 2% copper.
- Volcanogenic Massive Sulphides: Polymetallic Cu-Au-Ag dominated massive sulphides lenses formed on the sea floor via the accumulation of precipitated sulphides around subaqueous volcanic vents. The sulphides are dominantly pyrite and chalcopyrite with lesser sphalerite. The channel-like geometry results in lenses that are between 3m and 15m in true thickness and widths of 100m laterally. The strike of these lenses at Ming now exceeds 2km and remains open.

Ming Deposit MRE Methodology: All lodes were estimated using Ordinary Kriging (OK) with the same domains used to estimate Cu, Au, Ag and Zn. OK estimation was completed using an oriented search ellipsoid and 2 m drill hole composites. A two-pass search strategy was employed for each estimated variable, with search directions aligned to the major, semi-major, and minor axes of the variogram. During the first pass, a search radius of 100 meters by 100 meters by 30 meters was utilized, with a requirement of a minimum of 8 and a maximum of 12 composites. A maximum of 3 composites per drill hole was allowed. For the second pass, the search radius was expanded to 400 meters by 400 meters by 120 meters, and the minimum sample requirement was reduced to 4 composites.

The block model is based on a 10mX by 10mY by 5mZ parent block size and sub-blocks of 2.5mX by 2.5mY by 2.5mZ. Block model volumes were compared to wireframe volumes to validate sub-blocking. The 2024 Ming Deposit MRE contains a total of 21.5Mt at 1.8% copper equivalent (CuEq) in the Measured and Indicated Resource categories and 28.3Mt at 2% CuEq in the Inferred Resource category, a summary of the MRE by resource category is shown in Table 1.1.

Table 1.1: The Ming Mine October 29, 2024 Mineral Resource Estimate

	MEASURED			INDICATED			INFERRED			TOTAL M&I RESOURCE		
	Tonnes	**Grade**	**Metal**	**Tonnes**	**Grade**	**Metal**	**Tonnes**	**Grade**	**Metal**	**Tonnes**	**Grade**	**Metal**
Copper	4.7Mt	1.7%	77kt	16.8Mt	1.6%	266kt	28.3Mt	1.7%	482kt	**21.5Mt**	**1.6%**	**343kt**
Gold		0.3g/t	45koz		0.3g/t	145koz		0.4g/t	338koz		**0.3g/t**	**190koz**
Silver		2.3g/t	0.3Moz		2.4g/t	1.3Moz		3.3g/t	3.0Moz		**2.4g/t**	**1.6Moz**
CuEq	**4.7Mt**	**1.9%**	**89kt**	**16.8Mt**	**1.8%**	**307kt**	**28.3Mt**	**2.0%**	**576kt**	**21.5Mt**	**1.8%**	**396kt**

Notes:

1. Mineral Resources were prepared in accordance with the CIM Definition Standards for Mineral Resources and Mineral Reserves (MRMR) (2014) and CIM MRMR Best Practice Guidelines (2019).
2. A copper price of US$8,750/t, Au price of US$2,500/oz and Ag price of US$25/oz with a USD:CAD exchange rate of 1.35 was utilized to derive the 1% Cu cut-off grade. Mining costs were CAD$50/t, processing costs were CAD$16/t. Mining costs assumed in the COG calculation assume a combination of transverse and longitudinal long hole open stoping (LHOS) with paste backfill. A 3 meter minimum mining width has been assumed for the VMS and a bulk mining scenario for LFZ. Processing costs were guided by benchmarked operations that utilize floatation to produce a copper-gold concentrate for external extraction. G&A cost assumption was CAD$12/t. Concentrate freight: mine to port USD$5/t, port to smelter ocean freight USD$60/t. Smelter treatment charges were USD$75/t, Cu refining was US$0.08/lb, $15 US/oz Au, and $0.5 US/oz Ag.
3. Metallurgical recoveries to concentrates are based on assumptions from the previous metallurgical performance at the Ming Mine and Nugget Pond processing plant. Metal recoveries are 95.0% Cu, 85% Au, and 85% Ag in the copper concentrate.
4. Metal equivalents for the Resource Estimate has been calculated at a copper price of US$8,750/t, gold price of US$2,500/oz and silver price of US$25/oz. Metallurgical recoveries have been set at 95% for copper and 85% for both gold and silver. CuEq(%) = Cu(%) + (Au(g/t) x 0.82190) + (Ag(g/t) X 0.00822)
5. Domain models were generated with Leapfrog software, based on geology, alteration, structural components and grade continuity. Grade interpolation was undertaken with industry standard software including Vulcan and Datamine software.
6. Treatment of extreme high grades were dealt with by using a cap grade strategy.
7. Mineral Resources were interpolated using Ordinary Kriging methods applied to 2m downhole assay composites.
8. Bulk density has been applied in accordance with specific lithologies and mineralization domains based on calculated mean and median derived from 12,467 field measurements.
9. Assays were analyzed at Eastern Analytical Limited of Springdale NL. A QAQC program of field and lab duplicates, certified standards and blanks was in place.

10. The Mineral Resource Estimate is based on a database containing 1,334 diamond drill holes from surface and underground totaling 233,380m.

1.9 Mineral Reserves

There are no current mineral reserves for the project. Refer to Item 6.0 for details of historical resources and reserves from RMM. Note that the Qualified Person ('QP') has not done sufficient work to classify estimates as a current reserve and FireFly is not treating the current resource as a reserve.

1.10 Metallurgy and Mineral Processing

The Nugget Pond Mill Site includes a conventional crushing, grinding and flotation process that recovers a copper-gold concentrate for sale to smelters. There is also a hydrometallurgical plant on site for leaching of gold ores and production of doré, but this part of the process is not currently in use for the Ming Mine ore. The Nugget Pond concentrator began processing reserve material from the MMS at a typical rate of 600 to 800 mtpd in 2012 and was transitioned to a blend of LFZ and MMS ore in 2016 with throughput ramping up to 1,250 mtpd in 2018 after the installation of a secondary crusher, new grinding classification cyclones and pumps, and allowing a coarser grind size in the flotation feed compared to the original grind specification.

Based on the Annual Report on Operations in 2022 for the Ming Mine the following mill production occurred in the Nugget Pond concentrator (Rambler, 2023):

- Milled a total of 372,645 tonnes (dmt) at 1.67% Cu, 0.32 g/t Au, and 2.69 g/t Ag. The recoveries were 94.84% for Cu, 69.49% for Au and 79.79% Ag.
- Concentrate produced was a total of 22,108.54 tonnes (dmt) 27.37% Cu, 4.04 g/t Au, and 37.23 g/t Ag. The copper metal contained 6062.59 tonne (dmt), gold metal contained 2678.53 oz and silver metal contained 26,153,87 oz.

The Nugget Pond Mill concentrator has not been in operation since February 2023 and is on cold care and maintenance. No reporting of mill production was included in the 2023 Annual Report on Operations for the Ming Mine (Ming Mine, 2024c).

1.11 Mining

Currently the Property is on care and maintenance is not actively mining or processing any ore.

The previous mining methods used were a combination of post pillar cut and fill and longhole mining methods, and backfilled with unconsolidated waste rock, with a transition to longhole bulk mining of the LFZ. Paste backfill augmented with waste rock from underground development will be the primary filling mechanism for the longhole stopes.

Access to each one of the zones is made possible through extensions of the existing ramps and raises and new development where required.

1.12 Environment

The current Green Bay Copper-Gold Project includes the Ming Mine Site and the Nugget Pond Mill Site. In October 2023, with the acquisition of the RMM assets, FireFly was assigned and transferred numerous permits, approvals and authorizations as owner and operator of these sites. The two key authorizations associated with the Project include:

- NL Environmental Protection Act Certificate of Approval (C of A) No. AA13-035580, issued March 13, 2013. Department of Environment and Climate Change (DECC) has been consulted with respect to the planned changes to the project and how they will impact the C of A, and a subsequently C of A No. AA18-065651 was issued and later renewed and replaced with C of A No. AA23-045695 that expires on April 13, 2028.
- NL Mining Act Mill License No. ML-RRM-05 was renewed on May 20, 2020, in association with NL Department of Industry, Energy and Technology (DIET, formerly NL DNR) required five-year update of the Project Development and Rehabilitation and Closure Plans.

Although production at the Ming Mine is paused and Nugget Pond Mill is on care and maintenance, FireFly has, and continues to operate these sites in accordance with the required Federal and Provincial Acts, Regulations, and Guidelines, and maintains an Environmental Management System which includes a number of environmental protection and response plans (e.g., Waste Management, Contingency, MMER Emergency Response, and others), environmental monitoring programs, and other environmental protection measures.

1.13 Conclusions and Recommendations

1.13.1 WSP Recommendations

WSP and IRS have completed the first TR for the FireFly Ming Mine Copper-Gold Project that included a summary of the Property and reviews of their 2023 and 2024 exploration activities. The QPs have completed site visits to confirm data collection procedures and completed independent data verification checks of the drill hole database against certificates and visualized the drill hole data in 3D modeling software. Observations from the site visit and validation checks that have been completed by the QPs confirm that Firefly is collecting exploration data to acceptable industry standard, and the current completed work is suitable for supporting geological modeling and Mineral Resource estimation.

The following are the WSP QP recommendations:

- QA/QC – The assay certificates provided by the assay laboratories should be password locked pdf documents prior to being provided to Firefly. Certificates provided to WSP were not secured documents.
- Data verification of historical Rambler drill hole data being used for Mineral Resource estimation will need to be completed. Currently, historical Rambler drill hole data in the LFZ has assay gaps. These assay gaps were not sampled by Rambler likely due lower grade sulphides. Firefly is drilling in these areas to further Mineral Resource estimation and is using continuous sampling. The following are recommendations:
  - Internal comparison study of historical Rambler drill assays against Firefly drill assays in areas where Mineral Resource estimation is planned.
  - Collect a selection of assays not previously sampled by Rambler, assuming this core is available in storage.
  - Consider twinning some of Ramblers' historical drill hole locations, specifically in higher grade areas that have been identified by Firefly exploration drilling.

1.13.2 IRS Recommendations

- The following are the ISR QP recommendations for the MRE:
  - Complete further infill drilling to fill the gaps in the historical drilling.

- Infill all the inferred areas in an approximate 35 to 40m by 35 to 40m spacing to support the potential upgrade to the indicated resource category.
- Review the current and future bulk density data to better understand the distribution and variation across the different domains.
- Refine the geological model and improve the gabbro dyke interpretation.
- Review and refine the high-grade mineralization domain in the LFZ.
- Revisit the estimation parameters and strategy once all the infill drilling has been completed.

1.13.3 Project Recommendations

Recommendations for the advancement of the project are as follows:

- Complete the Phase one diamond drill program
- Complete the Phase two exploration drift development
- Complete the Phase two diamond drill program
- Contingent on successful results of the exploration program, complete an updated MRE and Preliminary Economic Assessment (PEA).

Cost estimates for the recommended work in are summarized in Table 1.2.

Table 1.2: Cost Estimates for Recommended Work

Item	Description	Estimated Cost
Phase 1 diamond drill program	10,000 m	$1,500,000.0 CAD
Phase 2 exploration drift development	1,200 m underground drifting	$9,600,000.0 CAD
Phase 2 diamond drill program	60,000 m of infill and step out drilling	$9,000,000.0 CAD
MRE & PEA studies	Mineral Resource estimate and PEA	$400,000.0 CAD
Total Estimated Cost		$20,500,000.0 CAD

2.0 INTRODUCTION

2.1 Terms of Reference and Purpose of the Report

This report was prepared as a National Instrument 43-101 (NI 43-101) Technical Report, for FireFly Metals Ltd. (FireFly) (formerly AuTECO Minerals Ltd.) by WSP Canada Inc. (WSP) for the Ming Mine Copper-Gold Project located approximately 17 km east of the town of Baie Verte on the north coast of Newfoundland. This report has been prepared in accordance with NI 43-101, Form 43-101F1, and Companion Policy 43-101CP.

FireFly is the Property owner/operator who acquired the main Property sites in 2023. The mine is currently in care and maintenance and no mining or processing activities are occurring. The operations could be restarted in approximately two months with a mill capacity of up to 1,250 mtpd. The mineral claims and mining leases are currently owned 100% by FireFly. FireFly is a West Perth, Australian-based company, trading on the Australian Securities Exchange under the symbol FFM.

The purpose of this TR is to provide an update of the Project since FireFly has become the owner and operator of the Property following the Canadian standards of disclosure for mineral projects as well as compliance for future TSX listing purposes. The work covered since FireFly has become the operator includes the following key activities:

- Updating the status of property ownership and purchase of adjacent properties.
- Completed exploration drift development from the 1805 m level. FireFly has completed 750 m of drift development (Phase 1) including drilling stations to allow diamond drilling exploration. FireFly has proposed another 1200 m of development as part of a Phase 2 program.
- Update status of exploration drilling completed down plunge of the MMS and LFZ.
- Complete Mineral Resource Estimate (October 2024)
- Update status of infill drilling of the LFZ.
- Discuss the implementation of the standardized systems for data collection including drilling, exploration, geology logging, and quality control of all data collected using an acQuire database system.
- Including better controlled assay standards and the use of an umpire laboratory for assay sampling.
- Indicate status of Property infrastructures including Ming Mine, Nugget Pond Mill Site, buildings, tailings management facility, etc.
- Indicate status of the environmental permits.

2.2 Qualified Persons

The Consultants preparing this technical report are specialists in the fields of geology, exploration, Mineral Resource estimation, metallurgical testing, mineral processing, and processing design.

None of the Consultants or any associates employed in the preparation of this report has any beneficial interest in FireFly. The Consultants are not insiders, associates, or affiliates of FireFly. The results of this Technical Report are not dependent upon any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings between FireFly and the Consultants. The Consultants are being paid a fee for their work in accordance with normal professional consulting practice.

The following individuals, by virtue of their education, experience, and professional association, are considered independent Qualified Persons (QP) as defined in the NI 43-101 standard, for this report, and are members in good standing of appropriate professional institutions:

- Paul Palmer, P. Eng., Senior Principal Geological Engineer, WSP Canada Inc.
- Brian Thomas, P. Geo., Principal Resource Geologist, WSP Canada Inc.
- Mireno Dhepaganon: P. Eng., Senior Process Engineer, WSP
- Brian Wolfe BSc (Hons), MAIG, Principal Consultant International Resource Solutions Pty. Ltd.

2.3 Details of Inspection

2.3.1 WSP

Paul Palmer, P. Eng. (QP) visited the Property site from July 15th to July 16th, 2024. During the site visit the QP visited the two core logging facilities, core sawing and sample preparation building and the underground Ming Mine. During the underground Ming Mine visit the QP visited the new exploration drift areas completed by FireFly from the 805 m Level and two underground drilling stations accessed via the internal ramp. In addition, the underground visit including accessing past mining areas and two massive sulphide zones intersected in two ramp locations.

During the site visit the QP observed and discussed the following:

- Geological core logging and sample collection procedures.
- Specific Gravity testing machines (two).
- Sample preparation including storage of samples, transportation of samples and storage of sawed core and coarse rejects.
- Implementation of new standards and implementation procedure of blanks and duplicate.
- Discussion of umpire sample testing.
- Chain of custody of drill core and samples
- Drill hole collar layout and setup underground.
- Diamond drilling at two locations underground.
- Database storage system and implementation of acQuire database.
- The QP observed sulphide mineralization (primarily copper related minerals) and copper metals in several boreholes, drilled by FireFly, and they agree with the mineralization in the drill hole database. No check samples were collected during the site visit.
- No QP visit was completed to the Nugget Pond Mill Site or the Pine Cove Port Facility.

2.3.2 IRS

The Independent QP (MRE) Brian Wolfe, Principal Consultant of International Resource Solutions Pty. Ltd., visited the Ming Mine site and core logging/office facilities from the July 23 to the 26, 2024. The visit included an underground tour where three underground drill stations were visited, 2 in the 805mL exploration drift and one in the 750mL. During the tour exposures of the VMS mineralization were visited in the 805-drift access, 805 vent drift, and 820mL. The lower foot wall stringer mineralization was visited in the 730mL. A visit was completed to the Eastern Analytical Laboratory where lab practices and process were reviewed from sample preparation to the final assay reporting.

During the site visit the QP reviewed and discussed the following:

- Review of data collection, data validation, data entry and data management in the AcQuire database system.
- Core Logging, sampling and sample chain of custody procedures.
- Inspection of drill core.
- Bulk density stations and practices.
- Review of the core cutting facilities and practices.
- Historical data and previous NI 43-101 reports for the project.
- Current and historical QA/QC practices.
- Review of the third-party umpire lab check results.
- Review of the local geology, alteration and mineralization styles both underground and in the drill core included in the resource calculation.
- Review of the current geological and mineralization model.
- Laboratory sample preparation, assay methods and reporting.

2.4 Sources of Information

The sources of information include data and reports supplied by FireFly personnel as well as documents cited throughout the report and referenced in Item 27.0. The electronic database was compiled and transmitted by FireFly and included:

- Operations Annual Reports for Mine Mine from 2019 to 2023.
- FireFly press releases from 2023 and 2024.
- 2023 and 2024 Assay Certificates from Eastern Analytical.
- Ming Mine Drill hole database in CSV files.
- Ming Mine Datamine block model, 3D geometries of mineralization, lithology and structure, historical workings, and mined out zones .
- Information on environment and land tenure.

- Geological data collection procedures (drilling, logging, sampling, analytical and chain of custody procedures).
- QA/QC procedures and summary analyses.
- Metallurgical test work completed.
- Underground mining voids.

3.0 RELIANCE ON OTHER EXPERTS

In Items 4.2, Property Ownership, 4.3 Annual Fees and Royalties, 4.4 Environment, and Item 24.0 of this Technical Report, the QPs have fully relied upon, and believe there is a reasonable basis for this reliance on, information provided by FireFly regarding mineral tenure, surface rights, ownership details, agreements, taxation, royalties, environmental obligations, permitting requirements, applicable legislation relevant to the Project, environmental studies, and social or community impact. The QPs have not independently verified the information in these Items and have fully relied upon, information provided by FireFly in these Items.

4.0 PROPERTY LOCATION AND DESCRIPTION

4.1 Location

The Ming Copper-Gold Mine Project ('the Project' or 'the Property') is comprised of the Ming Mine site; Nugget Pond milling facility; and the Pine Cove deep water port as well as adjacent landholdings acquired from Gold Hunter Resource Inc. There is also a small land package approximately 35 km to the south of the Ming Mine site called Little Deer Copper Complex and will be reported in its own technical report. The Project is located in the Baie Verte district of north-east Newfoundland and Labrador, Canada.

The Ming Mine site is located approximately 17 km by road east of the town of Baie Verte, on the north-east coast of Newfoundland, geographic coordinates 49°54' N latitude and 56°05' W longitude (Figure 4.1). The site is approximately 360 km by air northwest of St. John's, and 165 km by road northeast of Deer Lake. The surface outcrop of the Ming deposit is at UTM coordinates 565,910 m E, 5,529,370 m N (NTS 12H/16 Baie Verte; NAD 83, Zone 21) (Figure 4.2).

The Nugget Pond milling facility is located approximately 6 km west of the community of Snook's Arm in the provincial district of Baie Verte, Green Bay, geographic co-ordinates 49°50' N latitude and 55°45' W longitude (Figure 4.2). The surface facilities are concentrated in a 10-hectare (ha) area. The ground surface is mostly rocky with moderate forest coverage, moderately rough terrain and elevations ranging from 90 to 140 m above sea level.

Access to the Nugget Pond site is via the La Scie Highway to Snook's Arm (Highways 414 and 416). From the Snook's Arm Highway junction, the site can be reached by gravel road running generally west for a distance of approximately 5 km. The facility is located 44 km by an all-weather road from the Ming Mine site.

The Pine Cove deep water port at Point Rousse Port is located just 6km from Ming Copper-Gold Mine Project in the Baie Verte Mining District, on the Point Rousse/Ming's Bight Peninsula. It is capable of receiving Panamax vessels (~50,000 tonnes). This port also has a causeway, a barge offloading facility, access road and laydown facilities, geographic coordinates. 49°57' N latitude, and 56°08' W longitude (Figure 4.2). Access to this port is provided in a Port Access Agreement with TSXV-listed Maritime Resources Corp (TSXV:MAE) under which FireFly can export up to 1Mtpa of mineral concentrate per year. The agreement gives FireFly free and uninterrupted passage over Maritime's Point Rousse tenements to provide access to the Pine Cove deep water Port for the purpose of transporting and exporting mineral concentrate. The agreement also includes the right to construct storage and handling facilities on the Property.

There are no serious environmental liabilities associated with the Properties. The site contains a fully permitted tailings facility. New tailings storage capacity is required at Nugget Pond and will be staged over the life of the Project.

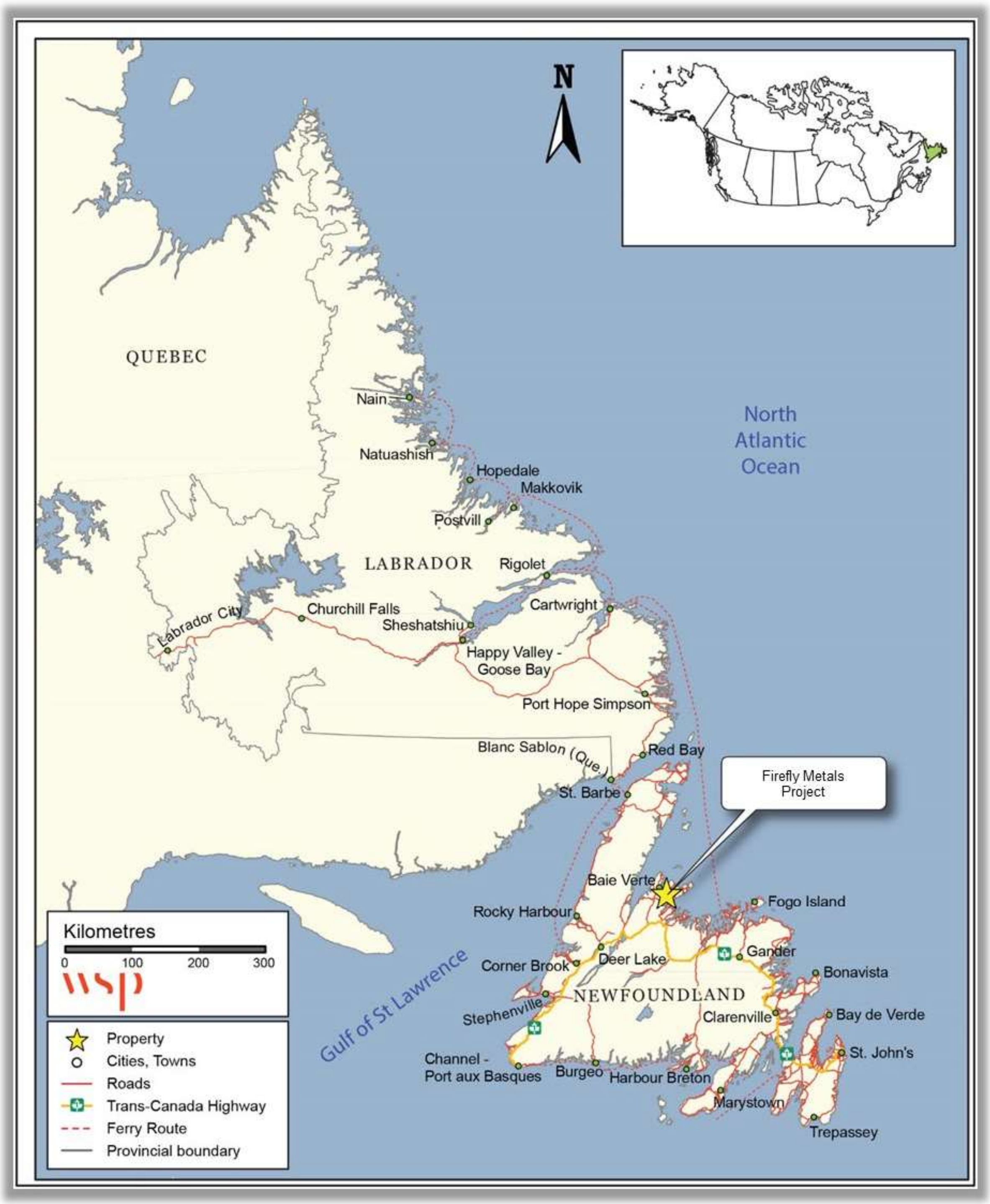


Figure 4.1: Project Location Map

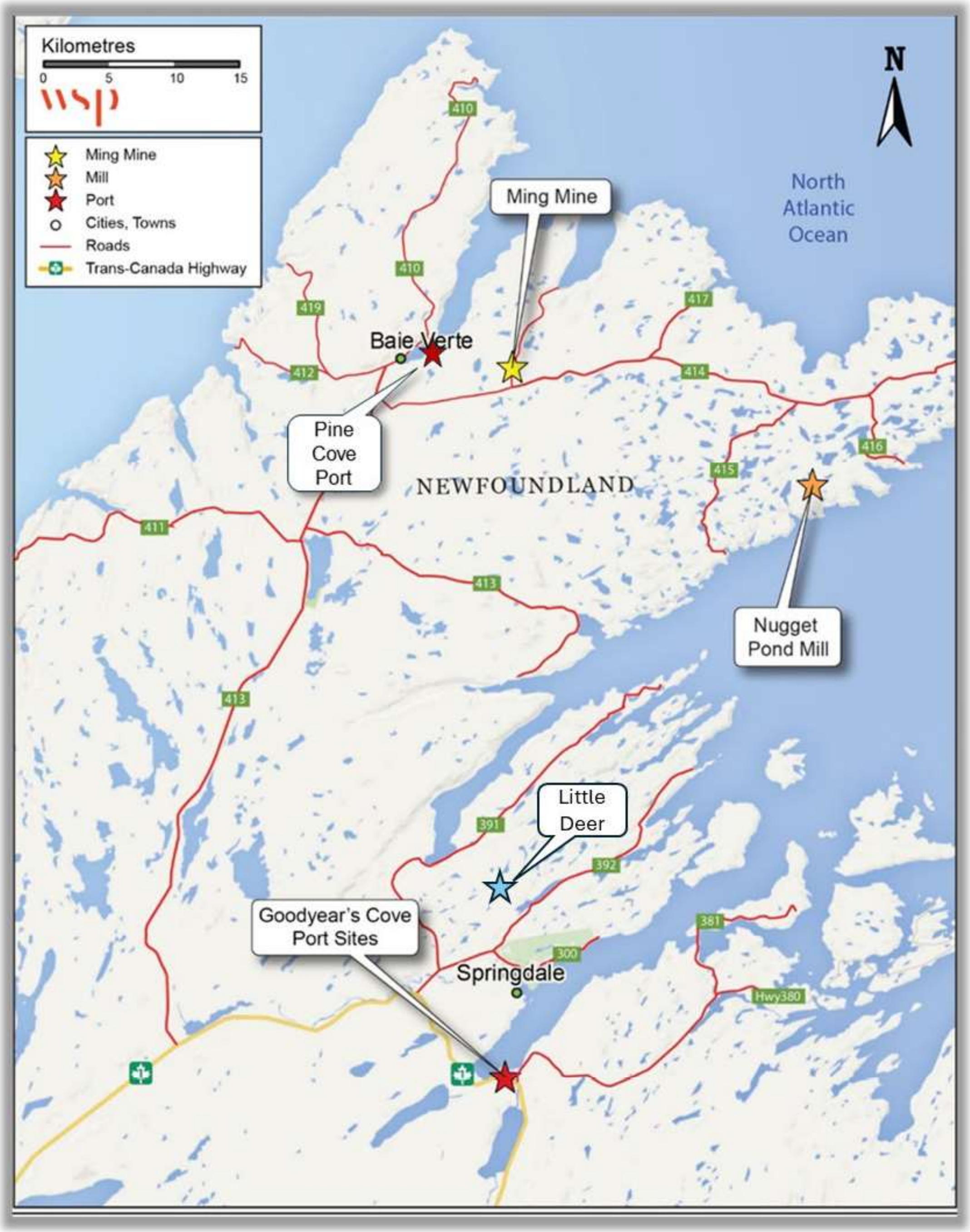


Figure 4.2: Ming Mine, Nugget Pond and Port Sites

4.2 Property Ownership

4.2.1 Ming Mine Site

FireFly owns a mineral land assembly consisting of one map-staked mineral license (023175M) and two mining leases (141L and 188L) totaling 955.4 ha and registered in the name of FireFly Metals Limited (Table 4.1). All of these mineral lands are contiguous and, in some cases, overlapping and are located in the area of the former Ming and Ming West mines (Figure 4.3). All lands are in good standing with the Provincial Government, and FireFly is up to date with respect to lease payments (for leases) and required exploration expenditure (for licenses).

4.2.2 Nugget Pond Mill Site

FireFly holds the surface rights for the Nugget Pond Milling Facility and tailings management facility through a lease with the Crown. The Nugget Pond Facility is also covered by mining lease 140 (4444) and mineral license (022791M) shown in Table 4.1 and Figure 4.4.

4.2.3 Pine Cove Port Site

The Pine Cove deep water port site is owned by Maritime Resources Corp under which FireFly can export up to 1Mtpa of mineral concentrate per year. The agreement also includes the right to construct storage and handling facilities on the property.

4.2.4 Adjacent Landholdings

Approximately 16500 ha of ground adjacent to the Property are also held by FireFly for exploration purposes. They are held under the wholly owned subsidiary of 1451366 B.C. Ltd (Figure 4.3 and Figure 4.4).

Table 4.1: Claim and Lease Summary

Name	License/Leases	# Claims	Hectares	NTS Map	Expiration dates (D-M-Y)	Maintenance costs
Nugget Pond Power Line	CL108189		7.32	02E13	04/22/2047	$ 115.00
Nugget Pond Gate House	CL103388			02E13	08/28/2046	$ 65.55
Nugget Pond Access Road	CL103359		19.19	02E13	11/14/2046	$ 28.75
Little Deer	010215M	20	500.00	12H09	09/01/2025	$ 4,000.00
Ming Northeast	023175M	13	325.00	12H16	19/06/2025	$ 2,600.00
Whalesback	027468M	142	7100.00	02E12,12H09	11/07/2025	$ 3,550.00
Nugget Pond	022791M	4	100.00	02E13	15/01/2025	$ 100.00
L5	023968M	21	525.00	12H16	02/06/2026	$ 525.00
L5	023971M	6	150.00	12H16	02/06/2026	$ 150.00
Ming Mine	141ML		280.00	12H16	30/10/2025	$ 33,600.00
Nugget Pond	140ML		131.45	02E13	28/11/2024	$ 15,774.00
Ming Mine	188ML		350.40	12H16	02/17/2025	$ 42,048.00
Nugget Pond	163SL		92.76	02E13	02/17/2025	$ 12,985.00
Ming Mine	121		47.03	12H16	22/10/2025	N/A
Ming Mine	122		192.44	12H16	22/10/2025	N/A

Name	License/Leases	# Claims	Hectares	NTS Map	Expiration dates (D-M-Y)	Maintenance costs
Rambler	011507M	10	250.00	12H16	22/12/2025	$ 2,000.00
Rambler	019026M	6	150.00	12H16	26/05/2026	$ 600.00
Rambler	019060M	5	125.00	12H16	03/06/2026	$ 500.00
Tilt Cove	019158M	9	225.00	02 E 13	21/07/2026	$ 900.00
Tilt Cove	020510M	13	325.00	02 E 13	18/10/2027	$ 1,300.00
Rambler expansion	023708M	3	75.00	12H16	28/01/2026	$ 150.00
Rambler expansion	023732M	11	275.00	12H16	02/02/2026	$ 550.00
Rambler	025546M	1	25.00	12H16	06/12/2027	$ 50.00
Rambler	025548M	32	800.00	12H16	07/12/2027	$ 1,600.00
Rambler	025547M	19	475.00	12H16	07/12/2027	$ 950.00
Rambler	025549M	24	600.00	12H16	07/12/2027	$ 1,200.00
Rambler	025552M	6	150.00	12H16	07/12/2027	$ 300.00
Rambler expansion	025853M	10	250.00	02E/13	23/03/2028	$ 500.00
Rambler expansion	026769M	4	100.00	12H16	17/01/2029	$ 200.00
Rambler expansion	026770M	4	100.00	12H16	17/01/2029	$ 200.00
Rambler expansion	027500M	2	50.00	12H16	05/12/2024	$ 50.00
Rambler	030871M	27	675.00	12H16	06/06/2025	$ 675.00
Rambler expansion	031375M	4	100.00	12H16	08/11/2025	$ 100.00
Rambler	031800M	23	575.00	12H16	31/12/2025	$ 575.00
Tilt Cove	032148M	30	750.00	02 E 13	12/03/2026	$ 750.00
Rambler	032685M	3	75.00	02 E 10	11/06/2026	$ 75.00
Rambler	034271M	7	175.00	12H09	14/04/2027	$ 175.00
Rambler	034282M	14	350.00	12H09, 12H10	14/04/2027	$ 350.00
Rambler expansion	034366M	15	375.00	12H16	28/04/2027	$ 375.00
Rambler expansion	034399M	1	25.00	12H16	28/04/2027	$ 25.00
Rambler expansion	034902M	2	50.00	12H16	04/08/2027	$ 50.00
Rambler expansion	035201M	20	500.00	12H16	10/11/2027	$ 500.00
Rambler expansion	035487M	2	50.00	02E13,	16/02/2028	$ 50.00
Rambler expansion	035654M	145	3625.00	02E13,12H16	05/02/2026	$ 3,625.00
Rambler expansion	036297M	224	5600.00	02E13,12H16	16/07/2025	$ 5,600.00

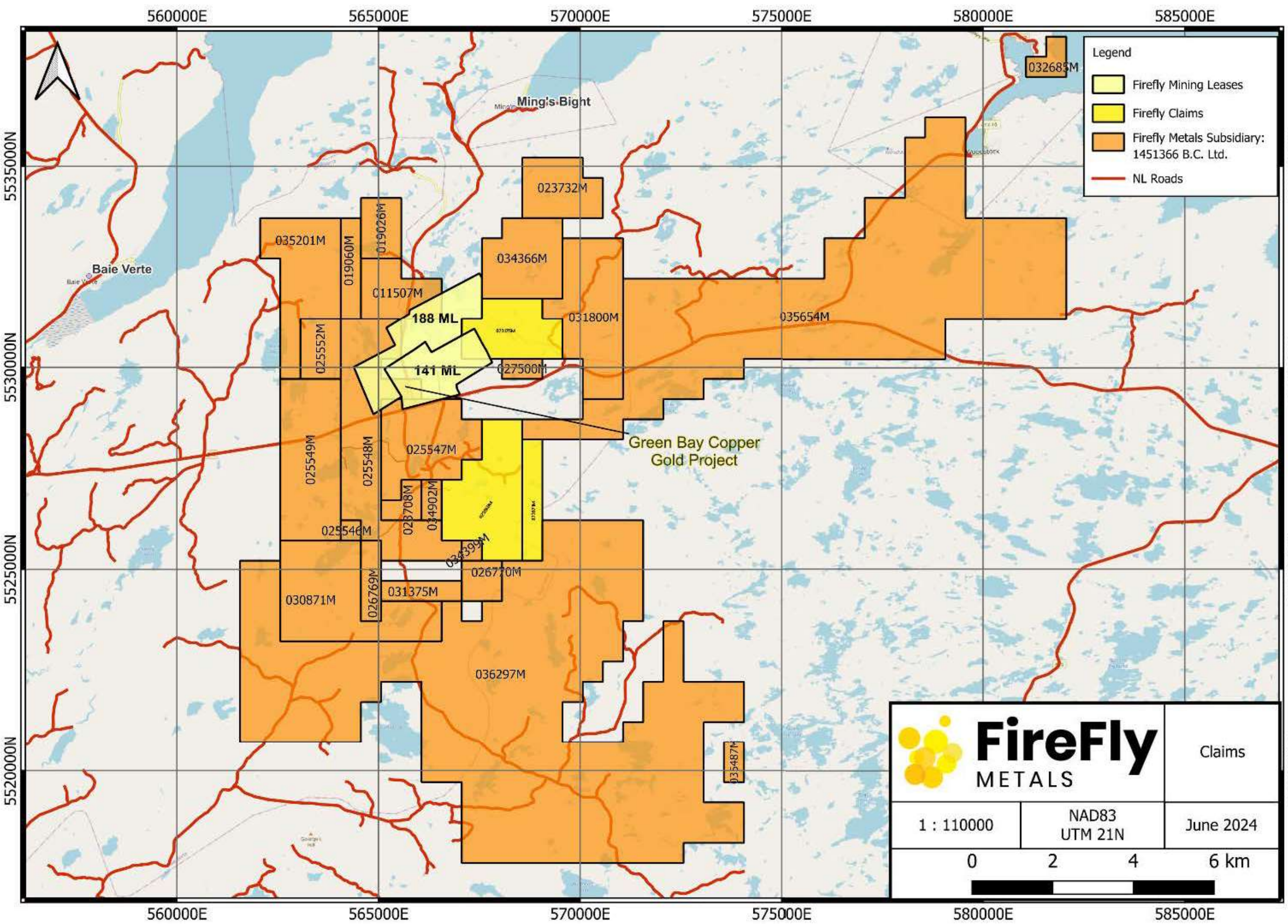


Figure 4.3: Ming Mine Claim and Lease Map

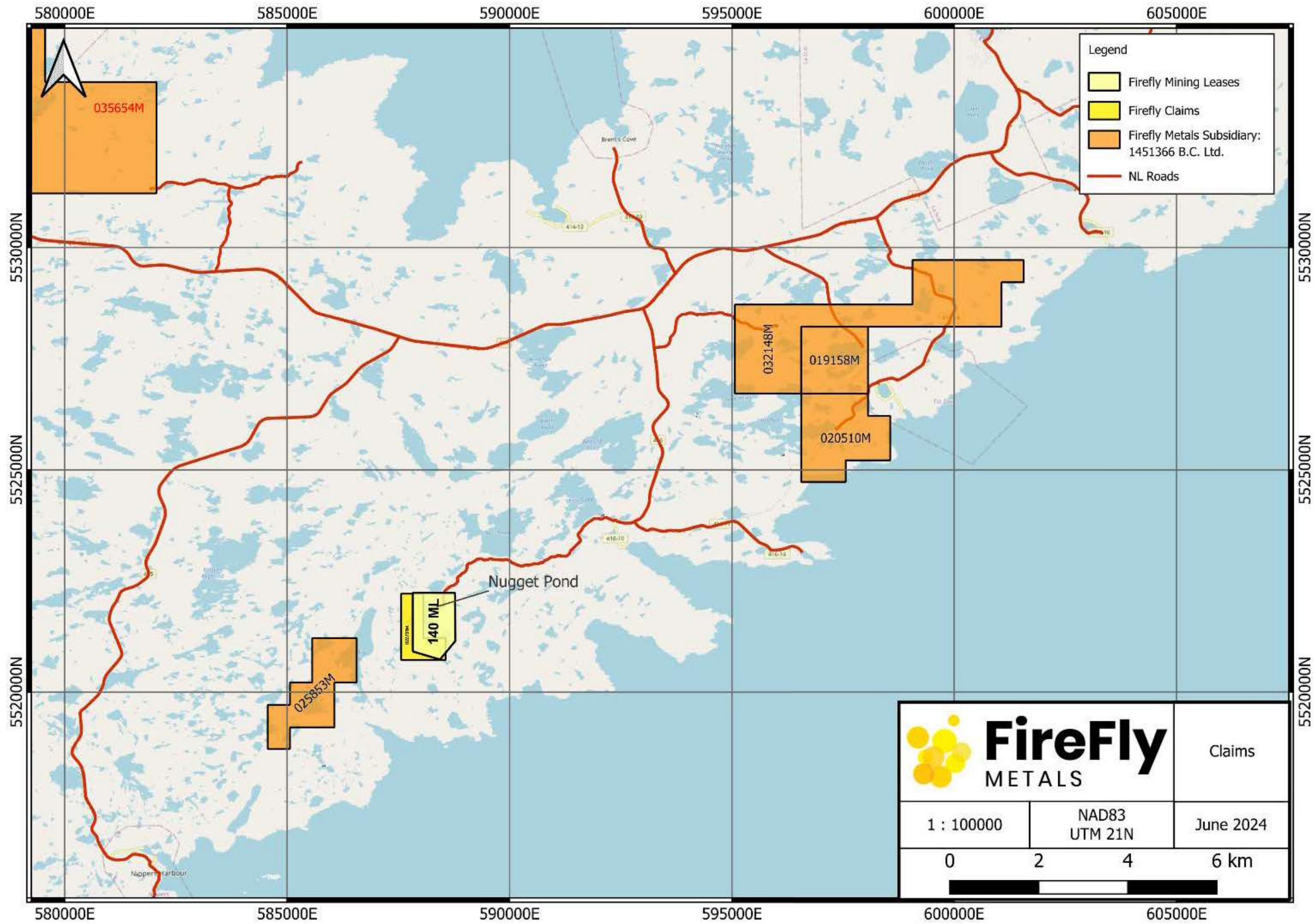


Figure 4.4: Nugget Pond Lease Map

4.3 Royalties and Related Rights

4.3.1 Ming Mine Site Royalties

- Royal Gold Canada Inc. 1% on mining lease 188L.

4.4 Environmental Liabilities

The two key authorizations associated with the Project include:

- NL Environmental Protection Act Certificate of Approval (C of A) No. AA13-035580, issued March 13, 2013. Department of Environment and Climate Change (DECC) has been consulted with respect to the planned changes to the project and how they will impact the C of A, and a subsequently C of A No. AA18-065651 was issued and later renewed and replaced with C of A No. AA23-045695 that expires on April 13, 2028.
- NL Mining Act Mill License No. ML-RRM-05 was renewed in May 20, 2020 in association with NL Department of Industry, Energy and Technology (DIET, formerly NL DNR) required five year update of the Project Development and Rehabilitation and Closure Plans.

FireFly has and continues to operate these sites in accordance with the required Federal and Provincial Acts, Regulations, and Guidelines, and maintains an Environmental Management System which includes a number of environmental protection and response plans (e.g., Waste Management, Contingency, MMER Emergency Response, and others), environmental monitoring programs, and other environmental protection measures.

Future increases in mineral resources and production, will require FireFly's to complete operational reviews and planning studies, these studies will determine the operational and infrastructure changes required over the potential future LOM.

The Project changes will require further environmental assessment and permitting and may require further tailings storage capacity to accommodate LOM tailings production based on the updated resource estimate and production. Other, less significant changes to buildings, infrastructure, and operational protocols may require some environmental assessment or permitting.

A Rehabilitation and Closure Plan (RCP) is mandated by the Newfoundland and Labrador Mining Act, chapter M-15.1, Sections (8), (9), and (10). The RCP outlines the process for rehabilitating a mining project at any stage, including when operations cease. Rehabilitation involves restoring the property as closely as possible to its original state, or to an alternative state approved by the Newfoundland and Labrador Department of Industry, Energy and Technology (NLDIET).

The previous operator did not complete or file the five-year updated RCP in 2023, and although the mine and mill are not in production, Firefly has committed to updating the RCP and revision 5 will be filed at the end of 2024. The previous operation did various progressive rehabilitation activities that are outlined in Section 24.2.3.3.

An approved RCP is necessary to obtain project development approval under the NL Environmental Protection Act. It must be submitted with or immediately after the Development Plan and forms the basis for establishing financial assurance for a project. NLDIET will review the submitted RCP only after the project has been released from the EA Process, which typically takes between four months to one year for review and approval.

See Section 24 for more details on progressive rehabilitation completed, cost estimate for closure based on the 2018 RCP, details on social and community impacts and the various regulatory provincial and federal environmental processes.

4.5 Permits

FireFly holds all the permits required to operate the Ming Mine and Nugget Pond Mill facilities; all permits are in good standing up to a maximum production rate of 1,250 mtpd.

4.6 Other Relevant Factors

The QPs is unaware of any other relevant factors that would impact the Project.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

5.1 Access

5.1.1 Ming Mine Site

Access to the Baie Verte Peninsula is provided via Route 410 (Dorset Trail) exiting the Trans-Canada Highway. The Property is accessed via the La Scie Highway (Route 414) and Ming's Bight Road (Route 418). The north-south trending Ming's Bight Road transects the western half of the Property. All surface facilities are located adjacent to this road. A gravel road exits Route 414 and extends northwards for a short distance to the Boundary Shaft. Several old trails and drill roads, as well as recent logging roads provide limited access to the interior of the Property (Figure 5.1).

Regularly scheduled passenger air service and charter flights are available at the town of Deer Lake located 165 km to the southwest on Highway 1.

5.1.2 Nugget Pond Mill Site

Access to the Nugget Pond Mill site is via the La Scie Highway to Snook's Arm (Highways 414 and 416). From the Snook's Arm Highway junction, the site can be reached by a gravel road running generally west for a distance of approximately 5 km (Figure 5.2). The mill is 44 km from the mine site.

5.1.3 Pine Cove Port Site

Access to Pine Cove Port is via Highway 418. A gravel access road runs north-northeast for approximately 5.5 km to the site (Figure 5.3). The port site is approximately 6 km from the mine site.

Figure 5.1: Ming Mine Access Map

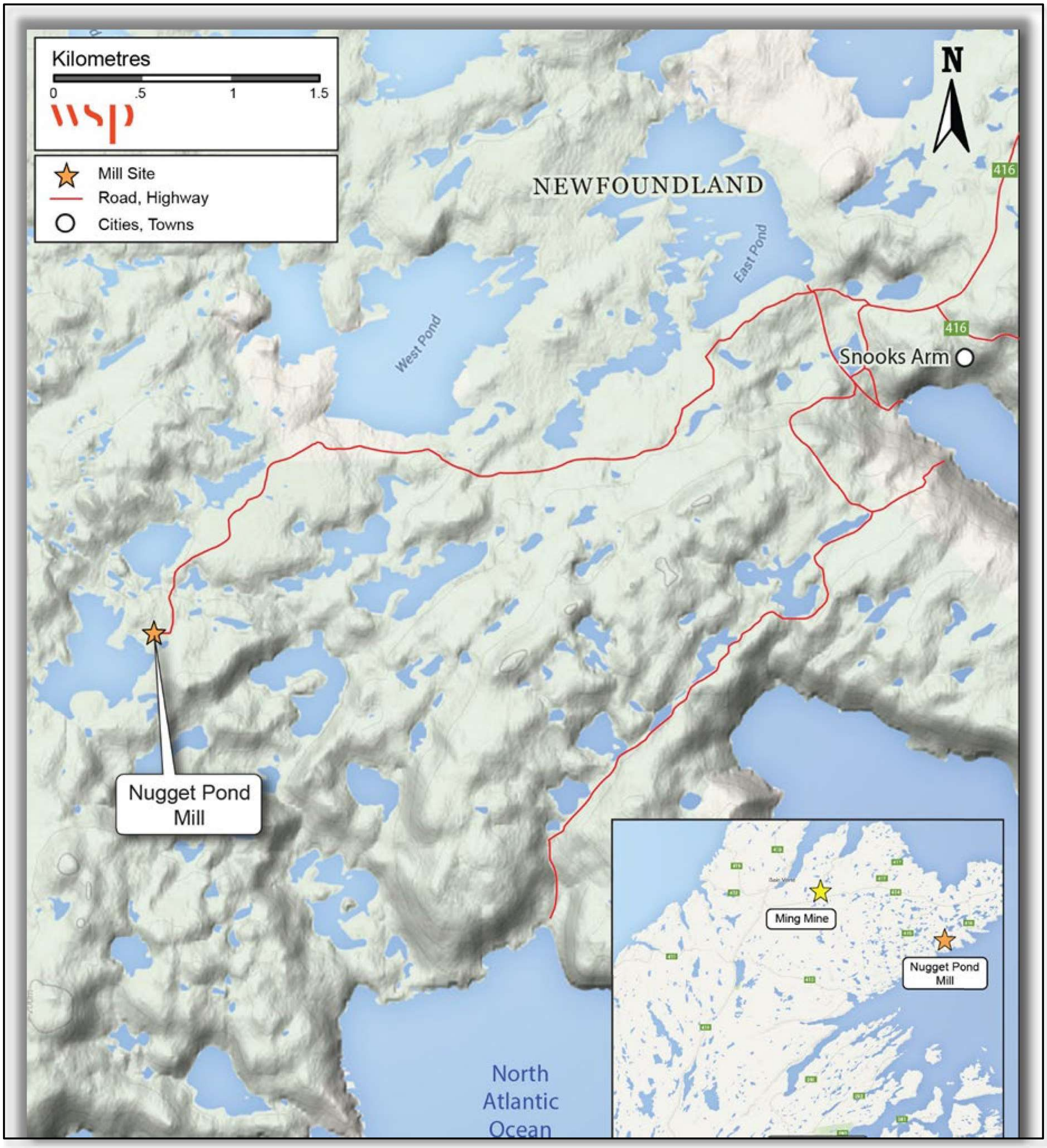
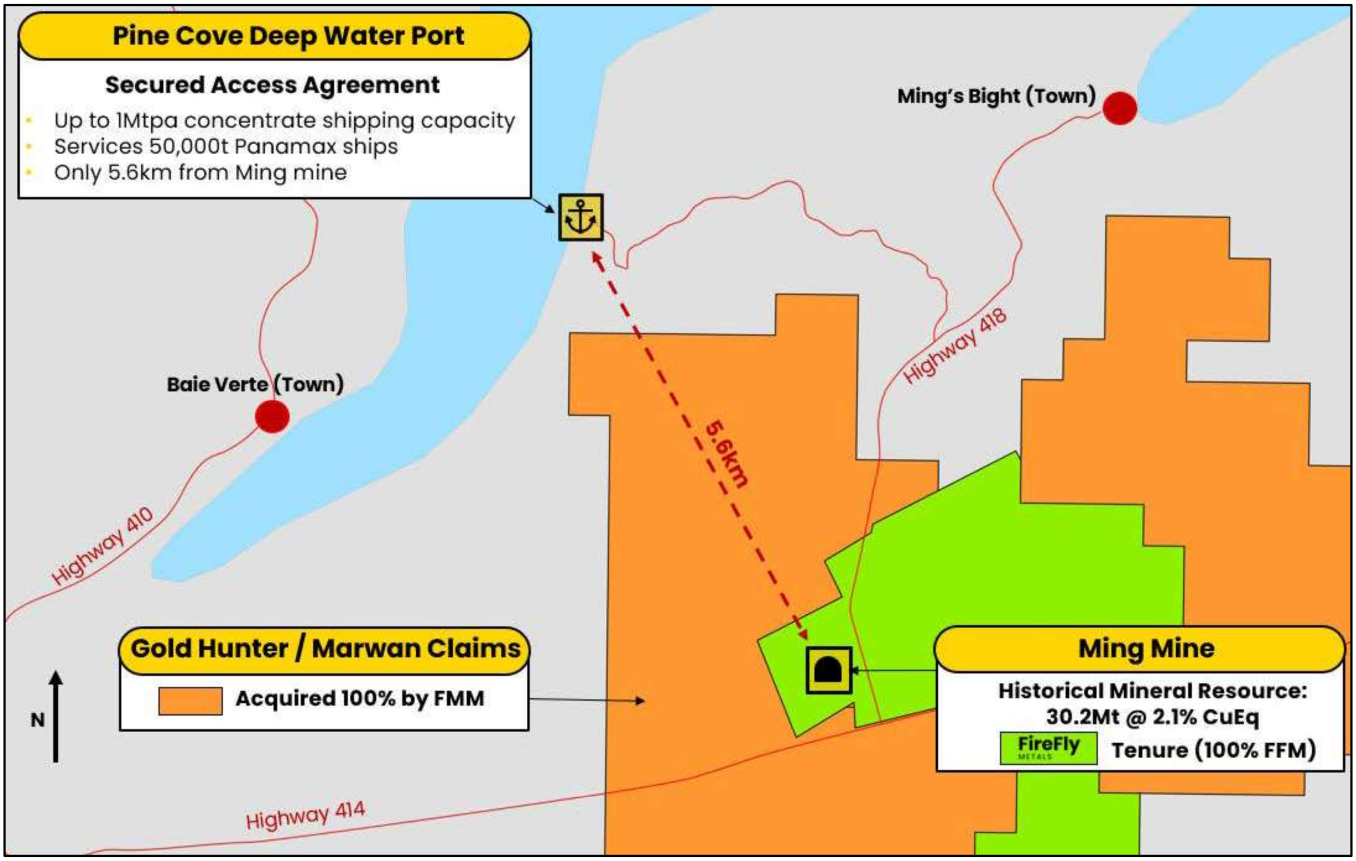


Figure 5.2: Nugget Pond Mill Access Map



Note: Figure not to scale.

Figure 5.3: Pine Cove Deep Water Port Site Access Map

5.2 Climate

The climate in this area is considered northern maritime. The mean summer temperatures are 16°C and mean winter temperatures are -8°C (www.worldweatheronline.com). Lakes and ponds freeze over in early December and are ice-free in mid-April. Annual precipitation can exceed 1,000 mm, primarily in the form of rain. Access to all the facilities is available year-round.

5.3 Infrastructure

The area has a history and culture of mining asbestos, gold, copper, and industrial minerals dating from the 1800s. The major center for the region is the town of Baie Verte (population 1,311), which offers several mining and exploration service providers, hotels, schools, shopping, medical facilities, firefighting, construction, and recreational facilities. Baie Verte and the nearby communities have an experienced mining work force.

5.4 Physiography

5.4.1 Ming Mine Site

Ming Mine lies at an elevation approximately 150 masl. Topography is gently rolling, rising to a series of north-west trending ridges with elevations at 180 to 190 masl in the north near Three Corner Pond. Outcrop exposure ranges from 0.5% to 5% owing to a persistent blanket of overburden averaging two metres in thickness. The

Property is dominated by mature black spruce and hardwood. Logging operations have been ongoing since the early eighties, and both clear cut and new growth forests are present. Small bogs and ponds associated with low lying depressions are common and constitute parts of the South Brook and England's Pond watersheds that flow northward to the coast.

5.4.2 Nugget Pond Mill Site

Nugget Pond is located on the east side of the Baie Verte Peninsula which is an undulating plateau. The coastline of Betts Cove-Tilt Cove area is bounded by sheer cliffs rising rather abruptly to the plateau level approximately 150 masl. The shoreline is indented by many fjord-like coves and inlets, the largest of which, Snook's Arm, is three kilometres long. The dissected plateau to the west is marked by parallel ridges and rounded hills. Soil is absent or extremely thin on the plateau, and the amount of drift present, even in the valleys, is small. To the north of the site and on much higher elevations, a thin layer of moss/lichen is common on the upland barrens. The larger areas, especially those underlain by granite and ultramafics, are devoid of vegetation. Locally and to the south of the site, the valley slopes support a thick, but low growth of spruce, birch, fir, aspen, and alder. The area is well drained and dotted with a myriad of small ponds and streams.

The Nugget Pond facility lies within the heart of the Fly Pond, Bobby's Cove watershed. This drainage basin is roughly an area of some 740 hectares. It is oriented southward and drains into the head of Bobby's Cove. The system comprises four main ponds: Fly Pond, Rocky Pond, Horseshoe Pond, and Bobby's Cove Pond. Camp Pond and approximately ten smaller unnamed ponds are also located within the drainage basin.

5.4.3 Pine Cove Deep Water Port Site

Pine Cove is situated at just 6km from FireFly's Ming Copper Gold Project in the Baie Verte Mining District, on the Point Rousse/Ming's Bight Peninsula. It is approximately 10 km west by road of the community of Ming's Bight. The coastline is rocky with small beaches and inland it is treed and sits near the Anaconda Mining infrastructure. Elevations rising to a maximum of 100 masl on either side of the cove.

6.0 HISTORY

The Project dates back to the early 1900s with the discovery of auriferous sulphide mineralization. Table 6.1 and Table 6.2 summarize the change in ownership, significant exploration and development activities on the Project from the date of discovery to the recent ownership change to Firefly.

Table 6.1: Significant Activities – Ming Mine

Year	Area	Company	Activity
1905	Ming Mine	Enos England	Auriferous sulphide discovered.
1907	Ming Mine	Enos England	Shaft sunk 20 m with a 15 m cross-cut.
1935	Ming Mine		Main Mine sulphide zone discovered 182 m north of the England discovery.
1940	Ming Mine	Newfoundland Government	Diamond drilled 18 holes totaling 1,524 m.
1944	Ming Mine	Rambler Mines Corp.	Optioned the Property, no recorded work.
1945	Ming Mine	Gold Mines	Optioned the Property. Diamond drilled 31 holes totaling 207.6 m. Optioned the Property to Falconbridge Nickel Mines.
1951	Ming Mine	Rambridge Mines	Acquired the Property. Diamond drilled a total of 4,359 m in an unknown number of holes.
1955 - 1956	Ming Mine	Rambridge Mines	Airborne electromagnetic survey flown over an undisclosed number of line km.
1960	Ming Mine	Newfoundland Government	Property reverted to the Crown under the Undeveloped Mineral Act.
1960	Ming Mine	Consolidated Rambler Mines Ltd.	Acquired the Property.
1961	Ming Mine	Consolidated Rambler Mines Ltd.	Started development of the Main Mine and commenced production
1970	Ming Mine	Consolidated Rambler Mines Ltd.	Ming Mine discovered by helicopter-borne AEM system. Deposit delineated with 36 diamond drill holes.
1982	Ming Mine	Consolidated Rambler Mines Ltd.	Ming Mine ceased production due to low copper price and mineralization crossing on to land held by BP Selco. Mined 4.1 million short tons averaging 2.17% Cu with gold, silver and zinc credits.
1987	Ming Mine	Newfoundland Government	Property reverted to the Crown under the Undeveloped Mineral Act.
1987	Ming Mine	Inco Ltd.	Acquired the Rambler Mill from Consolidated Rambler Mines in an anticipation of acquiring the mineral rights from the Crown.
1988	Ming Mine	Rambler Joint Venture Group	A consortium of Teck, Petromet Resources, and Newfoundland Exploration Company acquired the Property. Ming West discovered from ground geophysics and soil geochemistry. Diamond drilled 48 holes totaling 7,783 m. Attempted to acquire the Rambler Mill from Inco, which was sold to International Corona Corporation, who held the BP Selco extension of the Ming deposit.
1993	Ming Mine	Newfoundland Government	Property reverted to the Crown under the Undeveloped Mineral Act.
1993	Ming Mine	Ming Minerals Inc.	Ming Minerals formed with Sam Blagdon and Peter Dimmell as equal partners. Acquired the Rambler Mill and mineral rights to the BP Selco property from Homestake (formally Corona).
1994	Ming Mine	Ming Minerals Inc.	Acquired the Rambler Property minus the Ming Mine in a staking rush, then later acquired the Ming Mine from the Crown. First time all key Properties are consolidated under one ownership.
1995	Ming Mine	Ming Minerals Inc.	Ming West deposit accessed via the Ming ramp.

(table continues on next page)

Year	Area	Company	Activity
1996	Ming Mine	Ming Minerals Inc.	Ming West production ceased due to low copper prices and exhausting of near surface reserves. 142,200 short tons mined at a grade of 3.98% Cu, 0.17 opt Au and 0.44 opt Ag.
1997	Ming Mine	Ming Minerals Inc.	A feasibility study completed on the Rambler Property which concluded the resources would not support an economic operation and the Property was placed on care and maintenance.
2001	Ming Mine	Altius Mineral Corp.	Optioned the Rambler Property from Ming Minerals. Geochemical surveys and re-logging of historic diamond drill core.
2003	Ming Mine	Altius Mineral Corp.	Completed 2 diamond drill holes totaling 3,849 m and used down-hole geophysics to identify new mineralization 500 m beyond previous mining limits.
2004	Ming Mine	Altius Mineral Corp.	Drilled 2 diamond holes totaling 2,684 m and down-hole geophysics to identify the mineralization associated with the LFZ.
2005	Ming Mine	Rambler Metals & Mining	Purchased the interests on the Rambler Property from Altius Minerals. Completed 12 diamond drill holes totaling 12,947 m to test the MMS and LFZ. Downhole Pulse electromagnetic survey completed on 11 drill holes.
2006	Ming Mine	Rambler Metals & Mining	Completed 27 diamond drill holes totaling 29,401 m.
2007 - 2008	Ming Mine	Rambler Metals & Mining	Drilled 209 diamond drill holes totaling 58,789 m from surface and underground.
2008	Ming Mine	Rambler Metals & Mining	Bench scale lock cycle tests completed on material collected from the 1600 L MMS material. Thin section study completed 1806 zone by Dr. Piercey. Completed Titan-24 Deep geophysical survey over the Property; a total 77 anomalies were identified.
2009	Ming Mine	Rambler Metals & Mining	Second lock cycle test completed on material collected from 1600 L and 1807 zone to test variability on the ore. Drill tested titan anomaly A18-1 with two diamond drill holes totaling 1,062 m; the holes failed to explain the anomaly. 3D inversion of the Titan data was completed.
2010 - 2011	Ming Mine	Rambler Metals & Mining	Began construction of the Phase I operation. Drilled 6 diamond drill holes totaling 500 m on the MMS zones.
2012-2022	Ming Mine	Rambler Metals & Mining	Announced commercial production in November 2012.

*Note: Production based on the Rambler fiscal year for August to July, not the calendar year. Calendar year accounting implemented for 2017.

Table 6.2: Significant Activities - Nugget Pond

Year	Area	Company	Activity
1987 - 1990	Nugget Pond	Bitech Energy Resource Ltd.	Diamond drilling 116 holes totaling 2,200 m.
1992 - 1993	Nugget Pond	Bitech Energy Resource Ltd.	Resource estimation completed and bulk sample collected and development of the Project.
1995	Nugget Pond	Richmont Mines Inc.	Acquired 60% interest in the Nugget Pond project.
1996	Nugget Pond	Richmont Mines Inc.	Acquired the remaining 40% of the Project from Bitech Energy Resources.
1997	Nugget Pond	Richmont Mines Inc.	Completed construction of the mine, office, assay lab, hydromet mill, shop, and three warehouses.
2000	Nugget Pond	Richmont Mines Inc.	A 7,500-ton bulk sample from the Hammerdown deposit at King's Point was processed at the Nugget Pond mill.
2001 - 2004	Nugget Pond	Richmont Mines Inc.	Nugget Pond deposit was exhausted. Production from the Hammerdown deposit at King's Point commenced in the summer of 2001 and finished late 2004.
2005	Nugget Pond	Richmont Mines Inc.	The Nugget Pond mill is placed on care and maintenance.
2005	Nugget Pond	New Island Resources	Optioned the Nugget Pond mill and mining licenses from Richmont Mines.
2006	Nugget Pond	Crew Gold Corporation	Acquired the Nugget Pond mill and surface rights from New Island Resources.
2007	Nugget Pond	Crew Gold Corporation	Material from Crew's Nalunaq mine in Greenland was processed at the Nugget Pond mill.
2009	Nugget Pond	Crew Gold Corporation	Shipments of material from the Nalunaq mine stopped. Entered into a toll milling agreement with Anaconda Mining Inc. in June. Toll milling agreement was cancelled in December and plant placed on care and maintenance.
2009	Nugget Pond	Rambler Metals & Mining	Purchased the Nugget Pond mill from Crew for CAN$ 3.5 million.
2010 - 2011	Nugget Pond	Rambler Metals & Mining	Construction expansion of the Nugget Pond site to allow copper and gold rich sulphide ores from the Ming Mine to be processed.
2012-2022	Nugget Pond	Rambler Metals & Mining	Announced commercial production in November 2012.

6.1 Historical Mineral Resource Estimates

Previously reported Mineral Resource Estimates and Reserves for the Project as of December 31, 2017, can be found within the 2017 technical report. An updated Resource and Reserve statement was reported by Rambler in 2022 (Rambler, 2022) in a press release dated May 4, 2022, including depletion on March 31, 2022 and is summarized in Table 6.3 and Table 6.4 and are considered historical. They were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council. The effective date for the Mineral Resource Estimate is 31 March 2022. The effective date for the depleted Mineral Reserve Estimate is 31 March 2022. Mineral Resources and Reserves for the Ming Mine were estimated under the supervision of Mark Ross, P. Geo., who is a qualified person as defined by NI 43-101 (Rambler, 2022).

The historical 2022 Mineral Resource and Reserve estimates (Table 6.3 and Table 6.4) were derived using Inverse Distance Cubed for grade interpolation of the Lower Footwall Zone. All other zones at the Ming Mine (Ming North, Upper Footwall, Ming North, Ming South, 1807/06) used Ordinary Kriging for grade interpolation. Domain models were oriented along the trend of the mineralization and determined by selecting copper grades equal to or greater than 1.0% Cu with demonstrated continuity along strike and down dip. Grade interpolation was undertaken with Datamine software. Assays were analyzed at Rambler's Nugget Pond assay lab or third-party facility. All assays are verified through Rambler's QAQC program, including field and lab duplicates, certified standards, and blanks. The Mineral Resource Estimate was based on a database containing 1,388 diamond drill holes from surface and underground totaling 230,736m.

Note the QPs have not done sufficient work to classify the historical estimates as current Mineral Resources or Mineral Reserves and therefore these estimates should not be relied upon. The issuer is not treating the historical estimates as current Mineral Resources and Mineral Reserves.

Table 6.3: 2022 Historical Mineral Resource Summary

Classification	Quantity	Grades			Contained Metal		
	('000) tonnes	Copper (%)	Gold (g/t)	Silver (g/t)	Copper (M lbs)	Gold (K oz)	Silver (K oz)
Measured Total	8,408	1.71	0.46	3.56	317.6	144	961
Indicated Total	15,346	1.85	0.3	2.36	627.0	147	1,163
M&I Total	23,755	1.80	0.35	2.78	944.5	271	2,124
Inferred Total	6,430	1.86	0.38	2.60	263.5	78	538

Note: Historical Mineral Resources are not Mineral Reserves and have not demonstrated economic viability. All figures are rounded to reflect the accuracy of the estimate; numbers may not total due to this rounding. Resource is based on a 1% copper cut-off for the massive sulphides, 1.25 grammes per tonne gold for any gold zones and 1.0 % copper for the stringer sulphides have been used in the estimate. Resources are inclusive of reserves. Cut-offs are based on an NSR model and forecast long term metal prices of USD$2.99 per pound copper, USD$1,300 per ounce gold and USD$17.00 per ounce silver with a long-term USD/CDN FX rate of 1:0.80. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

Table 6.4: 2022 Historical Mineral Reserve Estimate Summary

Classification	Quantity	Grades			Contained Metal		
	('000) tonnes	Copper (%)	Gold (g/t)	Silver (g/t)	Copper (M lbs)	Gold (K oz)	Silver (K oz)
Total Proven Reserve (undiluted, unrecovered)	2,937	1.95	0.43	2.75	126	40	259
Total Probable Reserve (undiluted, unrecovered)	4,226	1.88	0.43	2.84	175	58	386
Unplanned Dilution (all sources)	1,074	0.64	0.06	0.73	15	2	25
Reserve (diluted and recovered)	7,413	1.74	0.38	2.53	290	94	645

Note: All figures are rounded to reflect the accuracy of the estimate; numbers may not total due to this rounding. This reserve statement reflects changes to reserves in the massive sulphides based on depletion due to mining and additions due to new exploration drilling results. The NSR for the reserve material was calculated using an all-in costs of US$72 (CAN$ 90 per tonne) per tonne.

6.2 Historical Production

Historical production from Rambler is summarized in Table 6.5 from 2013 to 2022.

Table 6.5: Historical Rambler Production

2012-2022	Ming Mine	Rambler Metals & Mining	Announced Commercial Production in November
2013*	Ming Mine	Rambler Metals & Mining	Milled 215,500 tonnes at 3.68% Cu, 1.59 g/t Au
2014*	Ming Mine	Rambler Metals & Mining	Milled 215,535 tonnes at 2.53% Cu, 1.18 g/t Au
2015*	Ming Mine	Rambler Metals & Mining	Milled 241,080 tonnes at 2.12% Cu, 1.40 g/t Au
2016*	Ming Mine	Rambler Metals & Mining	Milled 267,347 tonnes at 1.79% Cu, 1.14 g/t Au
2017	Ming Mine	Rambler Metals & Mining	Milled 339,631 tonnes at 1.27% Cu, 0.58 g/t Au
2018	Ming Mine	Rambler Metals & Mining	Milled 215,500 tonnes at 3.68% Cu, 1.59 g/t Au
2019	Ming Mine	Rambler Metals & Mining	Milled 364,176 tonnes at 1.24% Cu, 0.57g/t Au
2020	Ming Mine	Rambler Metals & Mining	Milled 261,355 tonnes at 1.52% Cu, 0.66 g/t Au
2021	Ming Mine	Rambler Metals & Mining	Milled 235,898 tonnes at 1.51% Cu, 0.44 g/t Au
2022	Ming Mine	Rambler Metals & Mining	Milled 372,645 tonnes at 1.67% Cu, 0.32 g/t Au

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geological Settings

The geology of the island of Newfoundland presents a cross-section through the northern portion of the Appalachian Orogen. Four major tectonostratigraphic zones, based on pre-carboniferous geology, have been identified and termed from west to east as Humber, Dunnage, Gander, and Avalon.

Together these zones represent volcano-sedimentary assemblages of oceanic suprasubduction zone (ophiolitic) and mature-arc derivations respectively (Szybinski and Jenner 1989; Kean et al. 1995) accreted to the ancient North American (Laurentian) continental margin during the Taconian Orogeny (Ordovician to Silurian) and further deformed during the Silurian-Devonian, post accretion, Acadian Orogeny.

The Dunnage consists of volcanic and sedimentary rocks of back-arc and island-arc affinity as ophiolitic sequences created during the opening and subsequent closure of the Lapetus Oceanic Basin. It also includes post-accretion, epicontinental volcanic, and molasses sequence sedimentation of Silurian age and a variety of Devonian intrusive rocks (Thurlow et al., 2005).

The Baie Verte region is located in the Dunnage Zone along the western margin of the predominantly volcanic, Lower Paleozoic, Central Mobile Belt of Newfoundland. At this location, the Dunnage is separated from the Humber by the Baie Verte lineament, a steep dipping regional structure that trends north to northeast up the centre of the Baie Verte Peninsula, where in the Baie Verte area it turns eastward and dissipates into a series of southerly dipping thrust faults.

The Baie Verte Peninsula regional geology was first mapped by Hibbard (1983). The Baie Verte Peninsula is underlain by two distinct structural and lithological belts, separated by a major arcuate, referred to as the Baie Verte Line. Rocks to the west of the Baie Verte Line belong to the Fleur de Lys Belt, a structural zone included as part of the Humber Tectonostratigraphic Zone. Rocks lying to the east of the Baie Verte Line belong to the Baie Verte Belt of the Dunnage Tectonostratigraphic Zone.

The Baie Verte Belt is comprised of four main lithological elements:

- Cabro-ordovician ophiolitic sequences of the Advocate, Point Rousse and Betts Cove Complexes, and the Pacquet Harbour Group;
- Ordovician volcanic cover sequences of the Snook’s Arm and Flat Water Pond Groups;
- Silurian terrestrial volcanic and sedimentary rocks of the Micmac Lake and Cape St. John Groups; and
- Siluro-devonian intrusive rocks, namely the Burlington Granodiorite and Cape Brule Porphyry.

Figure 7.1 presents the regional geology of the island of Newfoundland.

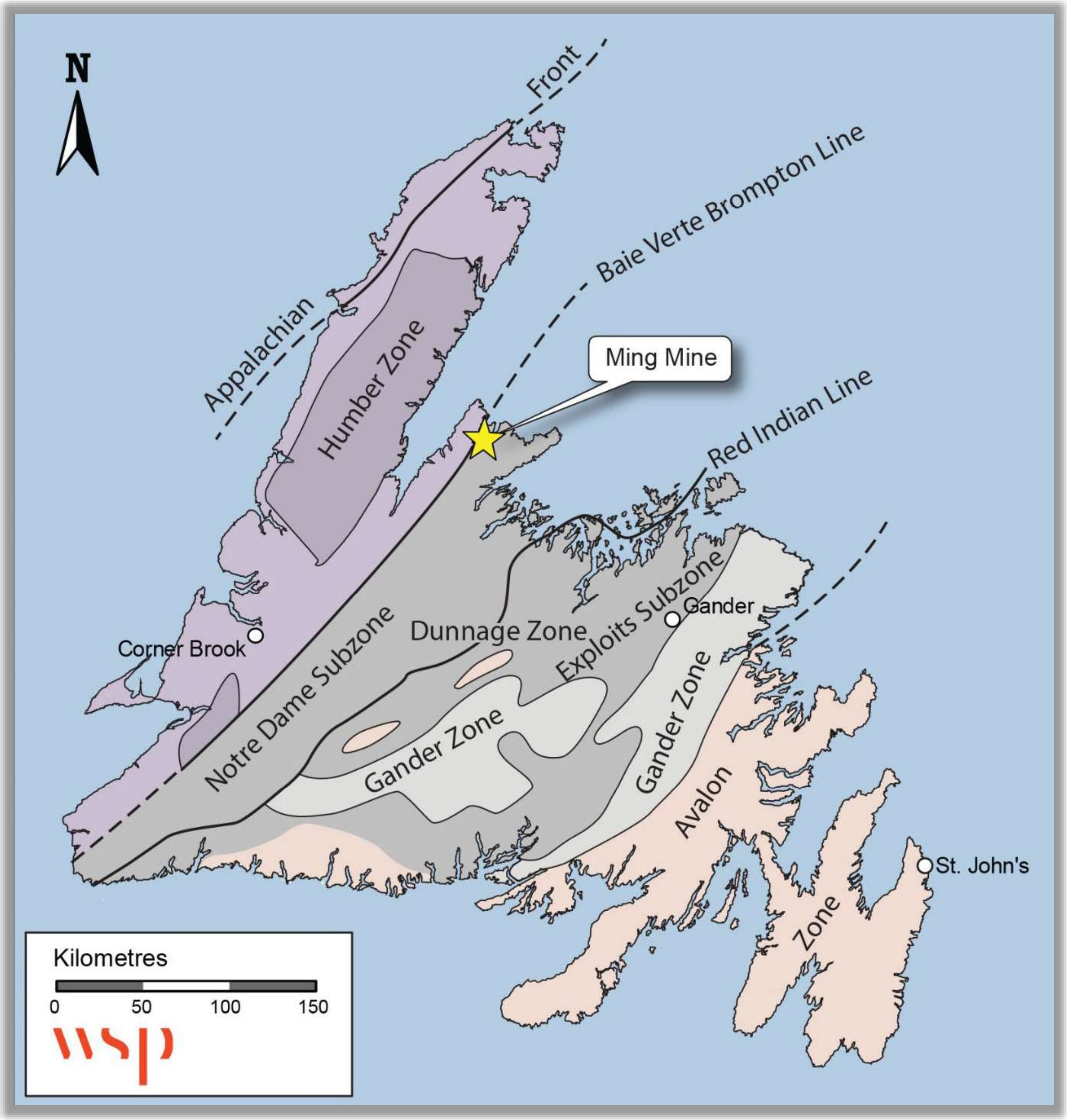


Figure 7.1: Regional Geology

The Pacquet Harbour Group is the main geological element of the FireFly Property. The Pacquet Harbour Group is an incomplete early Ordovician ophiolite, consisting dominantly of a moderately to steeply north dipping sequence of variably deformed and metamorphosed mafic volcanic rocks, lesser felsic volcanic rocks, mixed mafic and felsic volcaniclastics rocks, and shallow level intrusive rocks. The maximum outcrop width across the Group is approximately 15 km, but its base and top are not exposed therefore the true thickness is not known. Along its southern margin, the Group is unconformably overlain by, and in extensional fault contact with, sub-aerial felsic volcanic rocks of the Silurian Cape St. John Group. In its southern portion, the Pacquet Harbour Group is intruded by Silurian to Devonian, felsic plutonic rocks of the Burlington Granodiorite and Cape Brule Porphyry. Regional metamorphism in the Pacquet Harbour Group is lower greenschist with the exception of rocks proximal to the Burlington, where grades are upper greenschist to amphibolite in deformed lithologies.

Plutonic rocks in the region include the Burlington Granodiorite, Dunamagon Granite, and Cape Brule Porphyry which intrude the Pacquet Harbour on all sides. The largest intrusion to the south is the Middle Ordovician Burlington dated at 460 Ma. The Dunamagon Granite to the north has also been dated at the same age. Exposures of the Cape Brule Porphyry that intrude the Pacquet Harbour occur on the east side of the Group that includes igneous bodies that intrude the Burlington and extrusive lithologies elsewhere. The Cape Brule Porphyry has been dated at 404 Ma giving it a Late Silurian to Early Devonian age. Sangster and Thorpe (1975) have reported a 460 Ma age for the Pacquet Harbour Group based on sulphide isotope data obtained from galena samples collected from the Ming Mine. A similar Ordovician age seems reasonable for the volcanic or thermal event that generated regional felsic plutons, the host felsic volcanic and volcaniclastic rocks and related VMS mineralization in the Project's area.

Structure in the Pacquet Harbour Group near the Ming Mine is complex. Sequences in the Project area have undergone four phases of deformation (Table 7.1) (*Tuach and Kennedy, 1978*). The second phase, identified as D2, produced an intense, penetrative, transposition schistose fabric parallel to primary layering accompanied by a parallel extension lineation which resulted in northeast trending mineral, clast and pillow elongation with a plunge of 35 degrees towards an azimuth of 35 degrees northeast. This linear fabric has affected all the ore deposits and prospects in the Project area causing the deposits to elongate to ribbon-like forms parallel to the extension lineation.

Table 7.1: Deformation Phases

Deformation Phase	Fabric	Mesoscopic Folds
D4	NE Strike crenulation	NE plunge, open, upright
D3	NW Strike, strain slip, dips generally NE	Open, NE plunge, overturned
D2	NW striking L-S fabric, dips NE, strike E-W in central and southern parts, compressional banding	Tight to isoclinal, NE plunge, reclined
D1	L-S flattening preserved between 52 surfaces	No folds noted

The D2 structural fabric contains minor, tight to isoclinal, northeast plunging folds with axial planes parallel to D2 planar fabrics and fold axes parallel to the D2 extension lineation direction. The existence of larger scale D2 folds is thought to be probable, but the location of these structures has not been defined. The D2 structures are overprinted by a late, moderate to shallow northeast dipping crenulation cleavage interpreted as D4 which is parallel to the axial planes of planar to open, recumbent, shallow plunging folds that affect the main schistosity and primary layering *(Hibbard, 1983*).

In the Project area, the Pacquet Harbour Group has been further subdivided into the Uncles' and Rambler Sequences which are juxtaposed along a prominent east-west to northwest-southeast trending low angle (25° to 30°) thrust fault identified as the Rambler Brook Fault (*Coates, 1990*). The Uncles' Sequence, located approximately six kilometres southwest of the Ming Mine, is dominated by mafic volcanic with lesser felsic and intermediate volcanic rocks where it is host to the past producing East Mine.

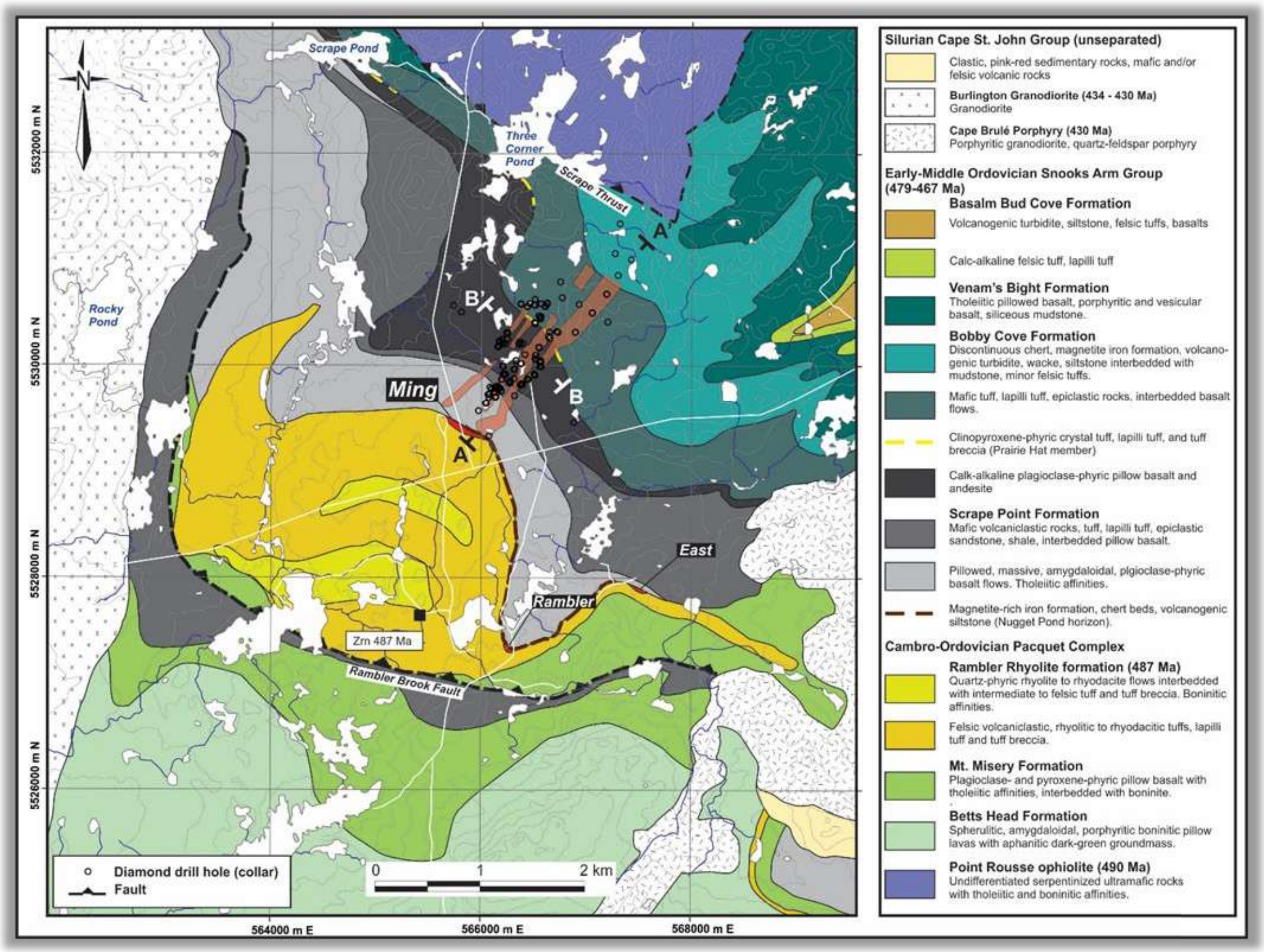
The Rambler Sequence is host to the Main, East, Ming, Ming Footwall, and Ming West massive ± stringer sulphide deposits (*Thurlow et al, 2005*). The felsic pile attains a maximum thickness of approximately 1,500 m south of the Project area pinching out further south. Along its flanks the felsic volcaniclastic units either pinch out or grade laterally to mixed felsic to intermediate or mixed felsic to mafic volcaniclastics rocks. Magnetite chert, sulphide impregnated chert, and banded polymetallic massive sulphides are noted locally. Within the pile, hydrothermally altered felsic volcaniclastics rocks occur as quartz-sericite and quartz-chlorite-sericite schists. These contain mineralization consisting of disseminated and stringer sulphide which occur proximal to massive sulphide.

7.2 Geology at Ming Mine

Geology within the Property area has been resolved as two major lithological packages, the Hanging Wall Sequence, and the underlying Mineralized Sequence. The contact between the two is a metre scale zone of significant brittle-ductile shearing which is parallel to the strong C-S fabric in the rocks below. The Hanging Wall Sequence consists mainly of basaltic flows with lesser volcaniclastic and volcanogenic sediments, including minor magnetic iron formation. The underlying Mineralized Sequence consists dominantly of altered and locally mineralized, quartz-phyric felsic volcanic rocks with minor quantities of altered basalt. Local structural fabrics are developed more strongly in the altered rocks of the Mineralized Sequence. Both the Hanging Wall and Mineralized Sequences are cut by significant volumes of gabbroic sills and dykes.

Banded, pyritic massive sulphides on the Ming Massive Sulphide Horizon (MMS) occur directly below the sheared contact separating the Hanging Wall and Mineralized Sequences. More than one horizon of massive sulphide has been intersected in several holes; in these instances, the massive sulphide zones are separated by altered, pyritized felsic volcanic or by gabbroic intrusive rocks. Immediately below the MMS occurs a sericitized-pyritized felsic unit approximately 15 to 20 m thick. This unit is characterized by the variable presence of green mica and higher than normal gold concentrations. Gold concentrations diminish while moving deeper in the stratigraphy and away from the MMS horizon. Below this gold-enriched horizon lies a sequence of sericitized-pyritized felsic volcanics 100 m in thickness which separates the mineralization on the MMS horizon from that in the Lower Footwall Zone (LFZ).

The LFZ consists of nebulous zones of disseminated and stringer chalcopyrite-pyrrhotite cutting altered felsic and lesser mafic volcanic rocks. Alteration is dominantly sericitic in less mineralized areas of the zone and distinctly chloritic in areas that contain higher copper concentrations. The gold to copper ratio in the MMS is approximately 1:2. The local geological setting of the deposit in relation to other deposits in the area is shown on Figure 7.2.



(Source: Pilote, et al, 2015)

Figure 7.2: Local Geology

7.3 Mineralization

The polymetallic sulphide deposits in the Ming Mine area are known to contain copper, zinc and minor lead, gold and silver along with traces of other metals. Mineralization in the deposits has been classified in the past as either massive sulphide, footwall stringer, or disseminated ore.

Exploration on the Ming deposit has identified distinct zones of sulphide mineralization. This, in conjunction with ongoing academic studies, imply a somewhat greater complexity in orogeny of the Ming Mine and other deposits in the area based on distinct alteration and sulphide assemblages, mineralogical and textural variations and the structural setting of mineralization. For the current documentation there remain two dominant types of mineralization in the Ming deposit:

- Stratiform volcanogenic massive sulphide (MMS); and
- Disseminated stringers of sulphides (LFZ).

The MMS is recognized as a series of horizons which are open at depth, thickness ranges between 2 m and 5 m, locally up to 10 m with a strike length of at least 100 m. Like other deposits in the area, it follows D2 planar fabric and is roughly parallel to the D2 extension lineation plunging 30 to 35 degrees northeast to a vertical depth of at least 1,200 m. Several textural varieties of mineralization are recognized in the MMS horizon including massive pyrite ore, banded ore, massive chalcopyrite-pyrrhotite ore, and breccia ore (Figure 7.3).

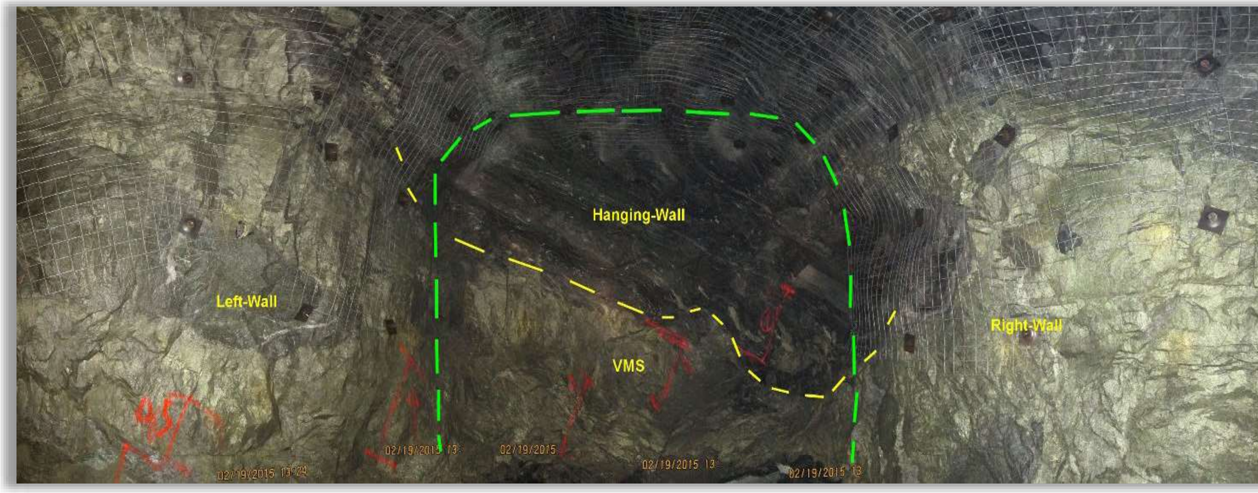


Figure 7.3: MMS Mineralization on 578 L

The MMS has three different ore types: i) massive pyrite ore, which is less than 70% pyrite, with chalcopyrite and minor amounts of galena, sphalerite, and silicate minerals, ii) banded ore consists of alternating bands of pyrite and chalcopyrite-quartz-actinolite-biotite and iii) Massive chalcopyrite-pyrrhotite ore occurs as lenses and layers with up to 80% chalcopyrite. Minor amounts of arsenopyrite, galena, tetrahedrite, native gold, tennantite, and cubanite occur locally. There is up to 10% disseminated pyrite in the immediate footwall.

The LFZ is another mineralized horizon that lies approximately 100 m below the MMS horizon. The LFZ strike length is approximately 1,700 m and has a thickness that varies from 200 m to 290 m. Base metal assays from drilling are variable indicating that there are clusters of chalcopyrite and pyrite / pyrrhotite stringers which are separated by less mineralized rock (Figure 7.4). Gold values in the LFZ are generally less than 0.5 g/t and only trace amounts of zinc have been reported. The LFZ is transected by fine to medium grained basic dykes interpreted as feeder dykes to a mafic sequence in the hanging wall above the MMS.

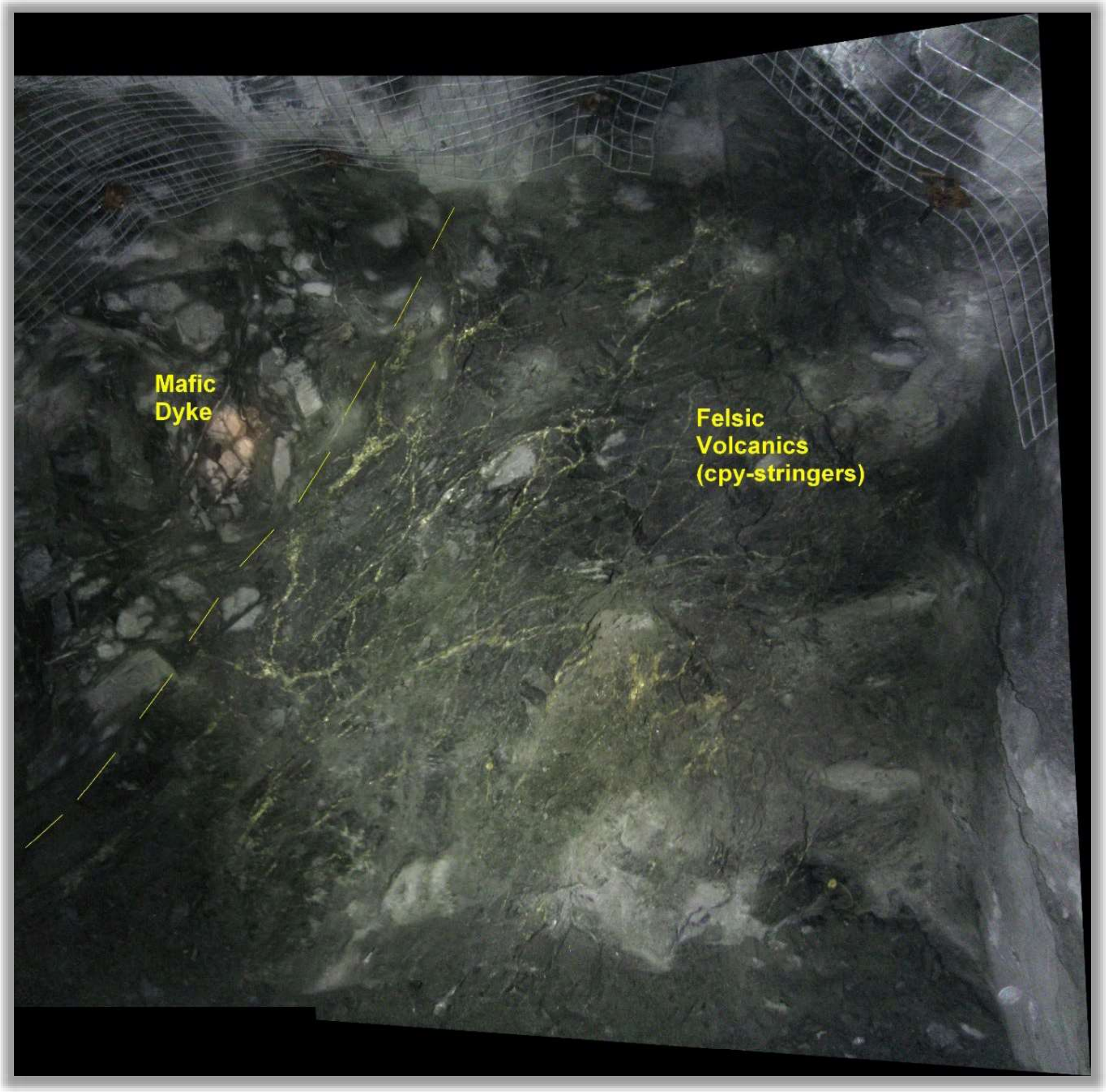


Figure 7.4: LFZ Mineralization on 1450 L

The LFZ is an alteration zone consisting dominantly of chloritic schist that contains varying percentages of chalcopyrite and pyrite which occur as stringers with lesser amounts of pyrrhotite and sphalerite. The LFZ is parallel to the D2 planar fabric and extension lineation, appears to be conformable to the overlying MMS and as such, can be interpreted as the feeder or stockwork alteration zone to the MMS a relationship consistent with the VMS model. The exact location of the hydrothermal conduit responsible for alteration in the LFZ and mineralization in the overlying MMS has been obscured through deformation; however, in its plunge direction, the LFZ itself may represent a structural conduit that allowed the ascent of hydrothermal fluid. The extent of the LFZ is unknown as it is open both up and down plunge. Recent drilling has traced mineralization 1,500 m down plunge.

8.0 DEPOSIT TYPES

The Property is a Noranda-type VMS deposit hosted by Cambrian-Ordovician metavolcanic and metasedimentary rocks of the Pacquet Harbour Group. The style of mineralization, alteration, host rock, and tectonism most closely resembles other VMS deposits throughout the world. This deposit type is referred to as type G06 by the British Columbia Ministry of Energy, Mines and Petroleum Resources Deposit Profiles (www.empr.gov.bc.ca).

Examples of this deposit type include:

- Myra Falls, British Columbia;
- Kidd Creek, Ontario;
- Buchans, Newfoundland;
- Bathurst, New Brunswick;
- Kuroko, Japan.

This deposit type is characterized by the following geologic elements.

- Geological setting:
  - Island arc;
  - Typically in a local extensional setting or rift environment within, or perhaps behind, an oceanic or continental margin arc Marine volcanism;
  - Commonly during a period of more felsic volcanism in an andesite (or basalt) dominated succession;
  - Locally associated with fine-grained marine sediments;
  - Also associated with faults or prominent fractures.
- Host rock types:
  - Submarine volcanic arc rocks: rhyolite, dacite associated with andesite or basalt;
  - Less commonly, in mafic alkaline arc successions;
  - Associated epiclastic deposits and minor shale or sandstone;
  - Commonly in close proximity to felsic intrusive rocks;
  - Ore horizon grades laterally and vertically into thin chert or sediment layers called informally exhalites.
- Deposit forms:
  - Concordant massive to banded sulphide lens which is typically metres to tens of metres thick and tens to hundreds of metres in horizontal dimension;
  - Sometimes there is a peripheral apron of "clastic" massive sulphides.
- Ore mineralogy:

- Upper massive zone: pyrite, sphalerite, galena, chalcopyrite, pyrrhotite, tetrahedrite, tennantite, bornite, arsenopyrite;
  - Lower massive zone: pyrite, chalcopyrite, sphalerite, pyrrhotite, magnetite.
- Alteration:
  - Footwall alteration pipes are commonly zoned from the core with quartz, sericite or chlorite to an outer zone of clay minerals, albite and carbonate (siderite or ankerite).

9.0 EXPLORATION

There has been no Property-wide exploration conducted on the Property during the expansion and since the 2018 Technical report (McCracken, et al, 2018) until Firefly Metals acquired the property in October 2023.

At the time of completing this report Firefly is currently completing a ground gravity survey. Firefly has scheduled a Down Hole Electromagnetic (DHEM) survey and an aerial Versatile Time Domain Electromagnetic (VTEM) survey for July and August 2024.

FireFly (formerly AuTECO Minerals) started underground development of a 750 m exploration drift from the 805 m Level (Phase 1) on November 16, 2023, and was completed on July 5, 2024. The second phase of 1200 m of exploration drift development was stared in early July. The underground development has allowed FireFly to better target down dip extensions of both the upper high-grade copper-gold VMS horizons and the bulk LFZ (FireFly, 2024b). The exploration drift was excavated by FireFly (and formely AuTECO Minerals) underground mining personnel utilizing a new twin boom Sandvik DD321 jumbo.

All exploration related to recent and ongoing diamond drilling is disclosed in Item 10.0, Drilling.

10.0 DRILLING

From 1977 to 2024 a total of 274,294m of surface and underground exploration drilling has been completed at the Ming Mine. Historic drilling and more recent drilling completed by FireFly are summarized in Table 10.1 and Table 10.2.

The Phase 1 exploration drill drift development was completed July 5, 2024, and Phase 2 exploration drift development has started in early July 2024, with additional 1,200 m exploration drill drift, following up on encouraging results from phase 1 drilling.

- **Phase 1 drilling program**. Growing VMS and Lower Footwall Zone:
  - ~40,000 m of resource and exploration drilling 75% completed ~ 30,000 m at the October 3rd, 2024.
- **Phase 2 drilling program.** Expand VMS and Lower Footwall Zone and Increase resource & confidence:
  - ~60,000 m of resource growth, exploration and infill M&I drilling, pending Phase 2 development drift

Table 10.1: Summary of Drilling at Ming Mine

Year	Company	Target	Type	# Holes	Metres
1977-1981	CRML	LFZ	UG	38	7,206
2003	Altius	LFZ	Surface	2	2,838
2004	Altius	LFZ	Surface	2	2,684
2005	RMM	LFZ	Surface	9	10,846
2005	RMM	MS	Surface	3	2,101
2006	RMM	LFZ	Surface	27	29,401
2007	RMM	LFZ	Surface	12	15,151
2007	RMM	MS	Surface	27	18,164
2008	RMM	LFZ	Surface	1	1,263
2008	RMM	MS	Surface	7	4,765
2007	RMM	LFZ	UG	2	427
2007	RMM	MS	UG	6	450
2008	RMM	LFZ	UG	68	14,206
2008	RMM	MS	UG	92	7,512
2009	RMM	MS	Surface	2	1,062
2010	RMM	MS	UG	6	501
2011	RMM	LFZ	UG	2	382
2011	RMM	MS	UG	31	1269
2012	RMM	LFZ	UG	1	1966.2
2012	RMM	MS	UG	41	2,069
2013	RMM	MS	UG	135	8,381
2014	RMM	LFZ	UG	6	921
2014	RMM	MS	UG	63	4,330
2014	RMM	MS	Surface	1	403
2015	RMM	LFZ	UG	21	1,469
2015	RMM	MS	UG	101	8,652
2016	RMM	LFZ	UG	33	3,862
2016	RMM	MS	UG	38	2,680
2017	RMM	LFZ	UG	88	7,083
2017	RMM	MS	UG	94	9,128
2017	RMM	LFZ/MS	Surface	2	3,319
2018	RMM	LFZ	UG	103	9,149
2018	RMM	MS	UG	48	5,695
2019	RMM	LFZ	UG	29	3,048
2019	RMM	MS	UG	44	6,985
2021	RMM	LFZ	UG	60	14,799
2021	RMM	MS	UG	24	3,750
2022	RMM	LFZ	UG	88	9,776
2022	RMM	MS	UG	52	5,971
2023	FF	LFZ	UG	10	2,524
2023	FF	MS	UG	4	995
2024*	FF	LFZ	UG	79	37,111
			TOTAL	**1,502**	**274,294**

10.1 Prior Owners

From 1977 to 1981 Consolidated Mines Limited (CML) completed 7,206 metres of un-surveyed drilling from underground platforms. There is little documentation available as to the procedures used in the drilling program.

From 2003 to 2004, Altius Minerals drilled a total of 5,522 meters to delineate the down-plunge extensions of the Lower Footwall Zone (LFZ) as well as the Ming Massive Sulphide horizon (MMS).

From 2005 to 2022, Rambler had completed 1,367 diamond drill holes totaling 220,936 metres to explore and delineate the MMS and LFZ. Core sizes drilled on the Project is a mix of BQ (36.5 mm diameter) and NQ (47.8 mm diameter).

Drilling was completed by a variety of local diamond drilling contractors, based in Newfoundland and Labrador.

10.2 FireFly Metals

From October 2023 to June 20, 2024, FireFly has completed 79 diamond drill holes totaling 37,111 m. The core size drilled on the Project is NQ (47.8 mm diameter). All of the drilling completed by FireFly was from underground and no surface drilling has been completed to date under FireFly ownership. The core is oriented using a REFLEX ACT-IQ tool and an orientation mark is initially made by the drillers after the core is retried. The geologists review the orientation mark and confirm if it is useable for structural orientation measurements during logging.

The drilling was completed by local contractor Springdale Forestry Resources (SFR) and Orbit Garant form Val-d'Or, Quebec.

Core recovery is generally 99% to 100% except small discrete shear zones with broken ground and altered geological unit contacts where a times small of intervals of core are lost, this is recorded during logging.

Drill lengths from underground exploration vary between 52 m to 750 m.

Main drill hole intercepts completed by the Firefly exploration program are provided in Table 10.3. The majority of the drill holes are perpendicular or sub-perpendicular to mineralization, approximately true width except for drill holes MUG23_003, MUG23_004 and MUG2023_006 where true width (perpendicular to mineralization) is represented for approximately 40% of the downhole width.

Example plan and sections drawings of Firefly drilling from 2023 and 2024 are provided in Figure 10.1 to Figure 10.5.

Table 10.2 2023 and 2024 Drill Holes by FireFly (coordinates in local mine grid)

Hole_ID	X	Y	Z	Depth, m	Dip°	Azimuth°
MUG23_001	903.4	335.7	-71.7	269.9	26.1	21.3
MUG23_002	903.5	332.2	-71.0	239.9	51	176.2
MUG23_003	1092.0	1565.2	-805.7	231.0	26.1	21.3
MUG23_004	1091.4	1565.7	-805.7	246.0	24.1	11.3
MUG23_005	1091.5	1565.6	-806.0	173.6	29.7	11.3
MUG23_006	1091.2	1565.8	-805.9	345.0	29.1	11.7
MUG23_007	1091.2	1564.7	-806.6	59.1	73.2	19.4
MUG23_008	1091.3	1564.6	-806.7	60.2	73.1	19.7
MUG23_009	1091.1	1564.3	-806.6	52.3	73.2	19.8
MUG23_010	1060.2	1509.5	-806.2	417.0	30.9	159.4
MUG23_011	1060.1	1509.9	-806.5	360.3	46	158.0
MUG23_012	1060.4	1510.3	-806.8	438.0	57.1	145.5
MUG23_013	1074.3	1381.4	-764.1	325.0	28.12	171.5
MUG23_014	1074.6	1381.5	-764.3	303.1	35.9	166.1
MUG24_001	1074.7	1381.6	-764.8	360.3	50.2	162.2
MUG24_002	992.9	1242.0	-608.4	465.0	12	162.4
MUG24_003	1093.1	1564.6	-806.2	408.3	73	28.3
MUG24_004	992.9	1242.0	-608.4	390.3	57.56	130.7
MUG24_005	1093.1	1564.6	-805.1	164.1	50.9	20.1
MUG24_006	992.9	1242.0	-608.4	417.1	13	173.2
MUG24_007	1093.1	1564.6	-805.1	99.0	44.2	20.3
MUG24_008	1093.0	1564.8	-806.4	136.7	44	327.3
MUG24_009	1005.7	1248.3	-609.8	366.1	43.2	131.7
MUG24_010	1061.1	1512.4	-806.8	360.2	58	119.1
MUG24_011	1105.4	1721.8	-823.9	465.0	83.9	174.2
MUG24_012	1060.1	1511.4	-806.1	339.3	79.9	180.0
MUG24_013	1061.8	1513.2	-806.8	431.9	70	23.1
MUG24_014	1105.7	1725.3	-824.5	492.3	71.8	14.6
MUG24_015	1193.6	1725.1	-826.1	552.6	77	51.1
MUG24_016	1155.2	1716.5	-825.4	346.5	68.9	15.1
MUG24_017	1193.4	1722.3	-826.1	468.6	85.4	147.0
MUG24_018	1155.0	1716.2	-825.4	501.0	82.9	13.1
MUG24_019	1191.4	1724.0	-825.6	414.0	70	174.1
MUG24_020	1154.4	1713.2	-822.9	431.8	80.9	184.0
MUG24_021	1154.6	1716.6	-825.4	411.0	69.1	10.3
MUG24_022	1239.9	1717.2	-824.6	548.4	77	44.1
MUG24_023	1154.2	1712.4	-825.3	663.4	63.2	183.8
MUG24_024	1242.8	1714.1	-825.4	501.3	86	146.4
MUG24_025	1126.1	1720.8	-824.9	516.0	88.1	352.0
MUG24_026	1242.7	1713.1	-825.4	453.0	72	175.0
MUG24_027	1242.5	1712.4	-825.4	483.0	56	180.7
MUG24_028	1244.1	1715.2	-825.3	750.0	52	100.0
MUG24_029	1126.6	1721.3	-824.9	549.0	70.1	10.1
MUG24_030	1126.9	1720.8	-824.8	561.4	85.2	22.0
MUG24_031	1191.7	1722.1	-825.4	453.0	58	176.7
MUG24_032	1103.1	1723.5	-823.7	600.0	55	258.0
MUG24_033	1191.4	1724.0	-825.6	480.0	86	210.0
MUG24_034	1191.4	1724.0	-825.6	580.0	86	190.9
MUG24_035	1130.2	1719.2	-825.1	492.0	84.4	184.1

Hole_ID	X	Y	Z	Depth, m	Dip°	Azimuth°
MUG24_036	1191.4	1724.0	-825.6	543.0	65	190.0
MUG24_037	1191.25	1722.5	-826.1	580.0	81	348.0
MUG24_038	1156.0	1717.0	-823.8	480.0	59.9	190.0
MUG24_039	1136.7	1973.1	-842.1	680.5	31.9	256.0
MUG24_040	1217.1	1719.9	-825.6	15.0	72	30.08
MUG24_041	1217.1	1719.9	-825.6	500.0	73.3	29.99
MUG24_042	1197.9	1966.9	-844.7	680.0	64.9	12.01
MUG24_043	998.87	1251.5	-609.5	15.2	66	108.1
MUG24_044	998.87	1251.5	-609.5	489	66	107.9
MUG24_045	1218.82	1719.6	-821.2	324	80	99.7
MUG24_046	1218.82	1719.6	-821.	168	80	100.8
MUG24_047	1065.87	1388.2	-765.1	432	28	182.9
MUG24_048	998.87	1251.5	-609.5	462	57.6	103.3
MUG24_049	1233.54	1974.1	-845.7	672	71.1	11.8
MUG24_050	1218.82	1719.6	-821.2	477.07	67	144.9
MUG24_051	1127.11	1358.8	-757.3	345	50	99.0
MUG24_052	998.35	1250.9	-605.3	414.7	71	0.94
MUG24_053	1199.69	1965.6	-844.2	489	41	169.0
MUG24_055	1127.11	1358.8	-757.3	315.2	80.2	50.1
MUG24_057	1233.54	1974.1	-845.7	633	81	14.9
MUG24_058	1199.71	1964.7	-839.25	623	64.7	180.0
MUG24_060	1222.87	1924.1	-841.6	574	82.7	148.1
MUG24_062	1233.54	1974.1	-845.7	600	84.8	168.9
MUG24_063	1199.71	1964.7	-839.2	561	76.1	165.9
MUG24_066	1222.87	1924.1	-841.5	600	83	14.9
MUG24_067	1233.54	1974.1	-845.7	660	66	108.1
MUG24_068	1199.71	1964.7	-839.25	15.15	-73	174.8
MUG24_069	1070.7	1383.9	-765.0	384	-63	110.0
MUG24_070	1199.75	1962.1	-845.0	531	-73.05	175
MUG24_071	1073.18	1383.3	-764.8	351.4	-58.1	105.0
MUG24_072	1291.89	1963.6	-842.9	553.15	-70.1	162.9
MUG24_073	1143.23	1975.7	-843.6	609	-71.1	2.03
MUG24_074	1072.05	1382.2	-765.0	420	-69.1	148.9
MUG24_075	997.68	1248.7	-611.2	420.3	-41	127.2

Table 10.3 2023 and 2024 Main Drill Intercepts

Hole Number	Easting	Northing	RL	Azi	Dip	Drilled Length (m)	From (m)	To (m)	Downhole Width (m)	Assay			
										Cu %	Au g/t	Ag g/t	Zn %
MUG23_003	1,092	1,565	-805	22	-26	231	27.3	28.0	0.7	2.56	2.6	14.8	0.81
MUG23_003							33.8	40.3	6.6	2.67	3.4	22.2	2.19
MUG23_003							91.4	94.4	2.9	1.07	0.3	3.3	0.04
MUG23_003							97.5	100.5	3.0	2.38	0.5	7.7	0.04
MUG23_003							123.0	129.9	7.0	1.38	0.2	1.7	0.02
MUG23_003							137.6	155.4	17.8	4.43	2.2	18.8	0.92
MUG23_003							159.5	169.8	10.4	3.21	2.0	17.4	1.47
MUG23_004							29.6	30.7	1.1	1.21	1.2	13.9	5.45
MUG23_004	1,091	1,566	-805	12	-24	246	31.8	46.5	14.7	2.63	5.5	24.2	1.20
MUG23_004							69.7	83.0	13.4	1.33	0.2	1.9	0.02
MUG23_004							86.2	95.1	8.9	3.05	0.3	3.4	0.02
MUG23_004							99.7	100.8	1.1	1.81	0.4	2.5	0.05
MUG23_004							159.1	164.1	5.0	4.83	0.3	6.1	0.03
MUG23_004							171.4	182.6	11.2	4.90	2.3	9.7	0.43
MUG23_004							187.8	192.6	4.8	6.41	3.4	29.2	0.68
MUG23_005	1,090	1,566	-805	12	-29	174	99.3	99.9	0.6	1.95	0.5	10.5	0.07
MUG23_005							111.8	113.0	1.3	8.49	3.7	54.7	0.50
MUG23_005							138.0	146.0	8.0	2.65	1.3	13.3	0.12
MUG23_005							150.0	158.0	8.0	1.92	1.0	7.4	0.06
MUG23_005							164.7	166.6	1.9	2.23	0.7	7.0	0.07
MUG23_006							15.1	17.8	2.7	1.98	1.1	14.1	0.18
MUG23_006							34.5	36.7	2.2	3.38	1.5	21.0	0.62
MUG23_006	1,090	1,566	-805	12	-29	345	50.7	78.1	27.5	1.50	1.6	22.5	0.64
MUG23_006							88.1	89.3	1.2	1.85	1.5	14.8	0.25
MUG23_006							106.8	121.5	14.8	1.86	2.5	11.0	0.04

Hole Number	Easting	Northing	RL	Azi	Dip	Drilled Length (m)	From (m)	To (m)	Downhole Width (m)	Assay			
										Cu %	Au g/t	Ag g/t	Zn %
MUG23_006							134.5	146.5	12.0	1.38	0.4	3.4	0.05
MUG23_006							165.0	169.0	4.0	1.15	0.1	1.8	0.02
MUG23_006							177.0	181.0	4.0	1.44	0.2	1.8	0.02
MUG23_006							206.0	207.0	1.0	1.93	0.6	4.0	0.04
MUG23_006							227.3	273.7	46.4	4.57	1.2	7.5	0.12
MUG23_006							280.8	283.5	2.7	13.46	7.0	33.0	0.42
MUG23_008	1,093	1,565	-805	20	-73	60	10.6	11.6	1.0	1.16	0.2	2.4	0.33
MUG23_008							14.5	16.5	2.0	1.69	0.3	2.7	0.11
MUG23_008							53.1	53.9	0.8	1.73	0.2	2.9	0.14
MUG23_010							0.8	2.8	2.0	1.40	0.3	2.7	0.12
MUG23_010	1066.0	1492.0	-808.0	160	-33	417	14.8	24.7	9.9	2.12	0.2	2.7	0.24
MUG23_010							117.1	184.9	67.8	1.53	0.1	2.9	0.02
including							*117.1*	*139.9*	*22.8*	*2.31*	*0.1*	*2.5*	*0.01*
MUG23_010							*143.9*	*144.9*	*1.0*	*2.07*	*0.1*	*2.3*	*0.01*
MUG23_010							*146.9*	*148.9*	*2.0*	*1.28*	*0.0*	*1.4*	*0.01*
MUG23_010							*169.3*	*175.9*	*6.6*	*2.60*	*0.1*	*2.7*	*0.04*
MUG23_010							*181.8*	*184.9*	*3.1*	*2.94*	*0.2*	*2.8*	*0.03*
MUG23_010							195.4	198.2	2.8	2.01	0.1	2.1	0.01
MUG23_010							204.2	245.3	41.1	2.18	0.1	2.0	0.01
including							*226.2*	*244.2*	*18.0*	*3.16*	*0.2*	*3.0*	*0.01*
MUG23_010							272.0	277.0	5.0	1.25	0.1	1.4	0.01
MUG23_011	1059.0	1510.0	-806.0	158	-46	360	12.9	23.5	10.6	2.49	0.2	2.6	0.24
MUG23_011							103.0	109.0	6.0	1.65	0.1	1.7	0.02
MUG23_011							127.5	142.8	15.3	1.63	0.1	1.7	0.02
MUG23_011							150.3	156.4	6.1	1.14	0.1	1.1	0.01
MUG23_011							193.7	199.7	6.0	1.27	0.0	0.8	0.01

Hole Number	Easting	Northing	RL	Azi	Dip	Drilled Length (m)	From (m)	To (m)	Downhole Width (m)	Assay			
										Cu %	Au g/t	Ag g/t	Zn %
MUG23_011							212.6	225.5	12.9	1.78	0.1	1.9	0.01
including							*217.5*	*222.5*	*5.0*	*2.19*	*0.1*	*2.7*	*0.01*
MUG23_011							239.8	266.0	26.2	1.47	0.1	1.4	0.01
MUG23_011							274.0	284.0	10.0	1.54	0.1	1.6	0.02
including							*274.0*	*279.0*	*5.0*	*2.15*	*0.1*	*2.1*	*0.02*
MUG23_012	1059.0	1510.0	-807.0	146	-57	438	11.0	24.4	13.4	2.11	0.2	2.6	0.21
MUG23_012							114.2	117.2	3.1	1.63	0.1	2.0	0.01
MUG23_012							127.0	131.2	4.2	2.53	0.1	3.3	0.02
MUG23_012							138.2	168.0	29.8	1.56	0.1	1.7	0.03
including							*147.0*	*158.2*	*11.2*	*2.57*	*0.1*	*2.8*	*0.05*
MUG23_012							188.2	194.2	6.0	1.07	0.1	1.1	0.01
MUG23_012							207.2	237.7	30.5	1.79	0.1	2.0	0.01
including							*214.0*	*229.6*	*15.6*	*2.32*	*0.2*	*2.6*	*0.01*
MUG23_012							257.8	267.8	10.0	1.04	0.1	1.3	0.01
MUG23_013	1073.0	1382.0	-765.0	172	-29	325	59.6	90.4	30.8	1.29	0.1	1.5	0.01
including							*59.6*	*73.6*	*14.0*	*1.63*	*0.1*	*1.9*	*0.02*
including							*79.6*	*90.4*	*10.9*	*1.41*	*0.1*	*1.6*	*0.01*
MUG23_013	1073.0	1382.0	-765.0	172	-29	325	110.4	114.2	3.8	3.05	0.2	2.8	0.04
MUG23_013							133.8	142.8	8.9	2.57	0.1	2.3	0.02
MUG23_013							158.0	172.0	14.0	1.71	0.1	1.6	0.01
Including							*163.0*	*168.8*	*5.8*	*2.34*	*0.1*	*2.2*	*0.02*
MUG23_013							179.6	184.4	4.8	2.66	0.2	3.3	0.02
MUG23_013							190.0	224.7	34.8	1.50	0.1	1.4	0.01
MUG23_013							247.7	249.9	2.2	2.43	0.3	3.2	0.01
MUG23_013							306.9	309.9	3.0	1.92	0.1	1.7	0.02
MUG23_014	1073.0	1382.0	-765.0	167	-36	303	65.2	72.0	6.8	1.63	0.1	2.1	0.02

Hole Number	Easting	Northing	RL	Azi	Dip	Drilled Length (m)	From (m)	To (m)	Downhole Width (m)	Assay			
										Cu %	Au g/t	Ag g/t	Zn %
MUG23_014							93.9	104.7	10.8	2.09	0.1	2.2	0.01
MUG23_014							114.7	115.8	1.1	2.62	0.1	2.6	0.02
MUG23_014							137.5	151.6	14.1	2.69	0.1	2.8	0.01
MUG23_014							169.8	216.9	47.1	2.26	0.2	2.8	0.01
Including							*188.4*	*207.2*	*18.8*	*3.24*	*0.3*	*4.1*	*0.01*
MUG24_001	1075.0	1381.0	-764.0	163	-50	360	46.3	48.0	1.7	1.78	0.2	3.5	0.06
MUG24_001							68.0	83.0	15.0	2.02	0.1	2.3	0.02
MUG24_001							100.0	113.0	13.0	1.19	0.1	1.3	0.03
MUG24_001							126.7	163.7	37.1	1.93	0.1	2.2	0.02
MUG24_001							171.4	175.4	3.9	2.24	0.1	2.9	0.01
MUG24_001							183.5	187.7	4.2	4.10	0.2	5.1	0.01
MUG24_001							193.7	198.7	5.0	2.46	0.1	2.4	0.01
MUG24_001							211.7	227.5	15.8	1.90	0.2	2.1	0.01
MUG24_002	993	1242	-608	163	-12	465	24.9	30.0	5.1	2.03	0.6	4.6	0.40
MUG24_002							212.0	216.9	5.0	1.83	0.1	1.9	0.03
MUG24_002							222.9	244.9	22.0	1.82	0.1	1.7	0.04
MUG24_002							260.3	273.4	13.1	1.91	0.1	1.7	0.01
MUG24_002							299.0	307.0	8.0	1.30	0.1	1.0	0.01
MUG24_002							325.0	327.0	2.0	2.98	0.1	2.2	0.04
MUG24_002							342.3	343.6	1.3	2.89	0.1	3.2	0.03
MUG24_003	1093	1565	-806	20	-71	481	12.0	18.0	6.0	1.49	0.2	2.6	0.11
MUG24_003							28.5	32.9	4.4	1.51	0.3	2.1	0.05
MUG24_003							135.4	141.8	6.4	1.62	0.1	2.3	0.01
MUG24_003							162.6	180.0	17.4	1.58	0.2	2.0	0.02
MUG24_003							354.3	364.0	9.8	3.48	0.2	4.8	0.02
MUG24_003							381.0	394.3	13.3	1.35	0.1	2.2	0.01

Hole Number	Easting	Northing	RL	Azi	Dip	Drilled Length (m)	From (m)	To (m)	Downhole Width (m)	Assay			
										Cu %	Au g/t	Ag g/t	Zn %
MUG24_003							406.3	408.3	1.9	1.43	0.1	2.5	0.01
MUG24_004	993	1242	-608	21	-57	390	99.6	104.0	4.5	1.09	0.2	1.3	0.02
MUG24_004							172.3	176.1	3.8	1.21	0.1	0.5	0.02
MUG24_004							191.6	254.7	63.1	2.03	0.1	2.0	0.01
Including							*191.6*	*204.0*	*12.4*	*2.95*	*0.2*	*3.0*	*0.02*
Including							*232.5*	*241.5*	*9.0*	*3.78*	*0.2*	*3.6*	*0.02*
MUG24_004							279.5	281.5	2.0	2.68	0.3	3.4	0.02
MUG24_004							304.7	308.7	4.0	1.28	0.0	1.0	0.01
MUG24_004							359.0	360.0	1.0	5.72	0.1	5.3	0.04
MUG24_005	1093.14	1564.571	-805.1	55.05	-50.9	164.05	28.0	32.0	4.0	1.70	0.3	3.0	0.06
MUG24_005							62.2	74.2	12.0	1.07	0.2	1.8	0.01
MUG24_005							95.3	101.3	6.0	2.43	0.3	2.9	0.42
MUG24_006	992.93	1241.952	-608.4	208.16	-13	417.1	98.1	105.4	7.3	1.07	0.2	1.7	0.04
MUG24_006							167.1	171.1	4.0	1.90	0.2	2.7	0.03
MUG24_006							178.1	189.4	11.3	1.44	0.1	1.5	0.03
MUG24_009							85.2	87.1	1.9	1.56	0.4	2.0	0.04
MUG24_009							204.2	205.8	1.7	3.10	0.3	4.9	0.10
MUG24_009							213.3	264.3	51.0	2.07	0.1	2.2	0.02
Including							*222.3*	*227.3*	*4.9*	*3.12*	*0.1*	*3.4*	*0.02*
Including							*242.6*	*247.9*	*5.3*	*3.15*	*0.2*	*3.3*	*0.02*
MUG24_009							272.3	277.3	5.0	1.88	0.1	1.6	0.01
MUG24_009							297.3	307.3	10.0	1.52	0.1	1.7	0.01
MUG24_009							335.3	339.6	4.3	2.02	0.3	2.6	0.01
MUG24_010	1061.22	1513.2					20.1	25.1	5.0	1.58	0.2	1.8	0.10
MUG24_010							117.5	122.2	4.7	1.57	0.5	2.6	0.01
MUG24_010							130.8	137.7	6.9	1.50	0.2	2.4	0.01

Hole Number	Easting	Northing	RL	Azi	Dip	Drilled Length (m)	From (m)	To (m)	Downhole Width (m)	Assay			
										Cu %	Au g/t	Ag g/t	Zn %
MUG24_010							203.0	205.1	2.2	2.28	0.1	2.4	0.02
MUG24_010							216.3	221.3	4.9	1.90	0.4	3.4	0.01
MUG24_010							229.0	231.7	2.7	1.58	0.1	2.7	0.01
MUG24_010							237.4	245.5	8.1	1.90	0.3	3.2	0.01
MUG24_010							260.9	279.7	18.9	1.93	0.1	2.5	0.01
Including							261.9	268.9	7.0	2.82	0.3	3.9	0.01
MUG24_011							61.8	64.8	3.0	1.85	0.3	2.7	0.03
MUG24_011							89.4	91.4	2.0	1.23	0.2	3.2	0.13
MUG24_011							374.4	383.0	8.6	2.19	0.2	4.9	0.02
MUG24_012							8.8	12.5	3.8	1.56	0.2	1.6	0.13
MUG24_012							67.3	75.4	8.1	1.91	0.2	3.1	0.09
MUG24_012							79.7	95.0	15.3	1.36	0.1	2.1	0.06
MUG24_012							108.3	110.3	2.0	1.21	0.1	2.0	0.06
MUG24_012							117.4	123.4	6.0	1.39	0.1	2.4	0.06
MUG24_012							135.9	137.9	2.0	1.81	0.6	4.4	0.08
MUG24_012							142.9	144.9	2.0	1.44	0.2	3.7	0.03
MUG24_012							278.9	286.0	7.1	3.26	0.2	4.4	0.02
MUG24_013							19.1	23.1	4.0	2.36	0.2	2.8	0.20
MUG24_013							389.2	393.0	3.8	1.24	0.1	1.6	0.01
MUG24_013							427.0	431.9	4.9	1.92	0.1	3.8	0.02
MUG24_014							59.2	61.2	2.0	3.28	1.2	6.0	0.38
MUG24_014							72.3	85.3	13.0	3.73	0.8	6.0	0.11
MUG24_014							121.7	128.2	6.5	1.41	0.3	3.9	0.06
MUG24_014							195.3	198.3	3.0	1.68	0.2	2.0	0.13
MUG24_014							235.0	258.2	23.2	1.86	0.1	2.4	0.13
including							247.2	251.2	4.0	3.74	0.3	4.9	0.06

Hole Number	Easting	Northing	RL	Azi	Dip	Drilled Length (m)	From (m)	To (m)	Downhole Width (m)	Assay			
										Cu %	Au g/t	Ag g/t	Zn %
MUG24_015							88.7	92.8	4.1	0.82	2.1	20.5	0.59
MUG24_015							103.4	114.4	11.0	1.15	3.8	11.3	0.72
Including							103.4	104.7	1.4	2.83	20.6	24.9	0.19
MUG24_015							231.9	235.9	4.0	1.54	0.1	2.3	0.10
MUG24_015							241.0	245.7	4.8	1.50	0.2	2.4	0.08
MUG24_015							339.1	401.6	62.5	1.30	0.0	1.8	0.01
Including							339.1	351.1	12.0	1.95	0.0	2.7	0.01
MUG24_015							357.4	371.1	13.8	2.22	0.0	3.0	0.01
MUG24_015							380.1	389.7	9.5	1.54	0.1	2.3	0.01
MUG24_015							396.5	401.6	5.1	1.35	0.0	1.8	0.01
MUG24_015							414.2	418.1	3.9	1.83	0.1	2.8	0.02
MUG24_016							95.5	97.5	2.0	3.77	6.8	24.0	2.37
MUG24_016							136.7	138.7	2.0	3.07	0.3	5.6	0.25
MUG24_016							303.6	341.0	37.4	2.55	0.1	2.8	0.04
Including							312.5	324.4	12.0	4.52	0.3	4.8	0.09
MUG24_017							71.5	73.7	2.2	1.04	1.7	15.0	0.85
MUG24_017							80.3	82.5	2.2	1.10	1.8	14.3	2.23
MUG24_017							104.2	109.5	5.3	1.38	1.7	8.3	0.70
MUG24_017							114.5	121.4	6.9	2.05	1.2	5.4	0.13
MUG24_017							237.2	276.8	39.6	1.34	0.0	1.6	0.01
Including							237.2	248.2	11.0	2.09	0.0	2.5	0.03
MUG24_017							304.8	306.8	2.0	1.91	0.1	2.6	0.01
MUG24_017							310.95	319.0	8.1	1.92	0.1	2.7	0.01
MUG24_017							340.1	342.7	2.6	1.74	0.1	2.6	0.01
MUG24_017							346.6	348.0	1.4	1.42	0.2	2.5	0.01
MUG24_017							357.4	366.9	9.5	1.69	0.1	2.9	0.01

Hole Number	Easting	Northing	RL	Azi	Dip	Drilled Length (m)	From (m)	To (m)	Downhole Width (m)	Assay			
										Cu %	Au g/t	Ag g/t	Zn %
MUG24_017							416.0	419.0	3.0	1.50	0.1	2.8	0.03
MUG24_018							65.3	74.4	9.1	3.08	2.4	22.3	0.63
MUG24_018							82.5	84.5	2.0	1.44	0.8	3.6	0.14
MUG24_018							128.1	148.6	20.5	1.25	0.1	1.6	0.01
MUG24_018							176.8	184.8	8.1	1.38	0.2	1.5	0.02
MUG24_018							244.3	247.3	3.0	2.85	0.2	3.3	0.01
MUG24_018							253.5	264.5	11.0	2.06	0.1	2.5	0.05
MUG24_018							341.2	347.2	6.0	1.19	0.1	1.8	0.01
MUG24_018							417.4	421.4	4.0	1.37	0.1	2.0	0.01
MUG24_019	1191	1724	-826	174	-65	420	64.8	66.0	1.2	0.98	2.0	13.5	1.50
MUG24_019							71.8	73.9	2.2	1.05	2.3	13.1	2.93
MUG24_019							92.5	104.0	11.6	1.30	2.3	11.6	0.26
MUG24_019							176.4	178.4	2.0	1.56	0.2	2.0	0.18
MUG24_019							222.5	227.5	5.0	2.02	0.1	2.4	0.03
MUG24_019							250.8	255.8	5.0	1.20	0.2	1.5	0.01
MUG24_019							284.3	331.4	47.1	1.36	0.2	2.0	0.01
Including							*284.3*	*291.8*	*7.4*	*2.00*	*0.2*	*2.7*	*0.01*
Including							*297.9*	*302.0*	*4.1*	*2.96*	*0.3*	*4.1*	*0.02*
Including							*305.7*	*322.0*	*16.3*	*1.70*	*0.1*	*2.4*	*0.01*
Including							*327.5*	*331.4*	*3.9*	*2.11*	*0.4*	*3.8*	*0.01*
MUG24_020	1154	1715	-825	184	-71	432	50.7	63.3	12.6	3.01	1.4	13.2	1.49
Including						*Including*	*50.7*	*58.8*	*8.2*	*4.18*	*2.0*	*18.7*	*2.28*
MUG24_020							83.0	93.0	10.0	1.48	0.3	1.9	0.03
MUG24_020							133.0	135.1	2.1	1.46	0.2	1.9	0.03
MUG24_020							232.0	234.7	2.7	2.91	0.2	4.4	0.02
MUG24_020							268.6	277.0	8.4	1.47	0.1	2.0	0.01

Hole Number	Easting	Northing	RL	Azi	Dip	Drilled Length (m)	From (m)	To (m)	Downhole Width (m)	Assay			
										Cu %	Au g/t	Ag g/t	Zn %
MUG24_020							280.6	283.6	3.0	1.43	0.1	2.0	0.01
MUG24_020							338.0	340.9	2.9	1.92	0.4	5.6	0.02
MUG24_020							365.8	370.8	5.0	1.45	0.0	2.3	0.01
MUG24_020							411.8	414.8	3.0	2.23	0.1	3.5	0.01
MUG24_021	1154	1715	-825	10	-69	411	96.2	99.0	2.8	2.17	1.7	12.9	2.17
MUG24_021							134.5	139.5	5.0	3.32	0.4	6.3	0.18
MUG24_021							199.0	203.0	3.9	1.37	0.3	2.3	0.04
MUG24_021							302.0	321.4	19.5	2.20	0.1	2.2	0.04
MUG24_021							358.0	365.0	7.0	1.98	0.1	2.1	0.02
MUG24_021							373.3	409.0	35.8	1.41	0.0	1.4	0.03
Including						*including*	*373.3*	*378.2*	*4.9*	*2.12*	*0.1*	*2.0*	*0.04*
Including						*including*	*384.2*	*389.0*	*4.8*	*2.22*	*0.0*	*1.9*	*0.01*
MUG24_022	1,243	1,716	-826	44	-77	549	380.3	383.3	3.0	2.60	0.1	3.8	0.01
MUG24_023	1154	1715	-825	185	-63	663	47.4	52.8	5.4	8.56	4.0	29.1	0.85
MUG24_023							75.0	79.0	4.0	1.86	0.4	2.6	0.06
MUG24_023							119.7	121.7	2.0	1.10	0.2	1.1	0.02
MUG24_023							148.4	150.4	2.0	1.31	0.1	1.1	0.05
MUG24_023							195.4	221.9	26.5	1.28	0.1	2.0	0.02
Including							*206.5*	*208.5*	*2.0*	*2.69*	*0.3*	*3.8*	*0.05*
Including							*219.6*	*221.9*	*2.3*	*2.64*	*0.2*	*3.8*	*0.03*
MUG24_023							272.0	286.0	14.0	1.27	0.1	2.0	0.03
Including							*272.0*	*275.0*	*3.0*	*1.54*	*0.1*	*2.3*	*0.03*
Including							*285.0*	*286.0*	*1.0*	*7.12*	*0.4*	*11.0*	*0.07*
MUG24_023							322.4	329.3	6.9	1.84	0.2	2.8	0.01
MUG24_023							416.9	422.9	6.0	3.47	0.2	5.2	0.03
MUG24_024	1243	1716	-826	146	-86	501	119.5	121.9	2.3	1.71	3.6	12.3	0.76

Hole Number	Easting	Northing	RL	Azi	Dip	Drilled Length (m)	From (m)	To (m)	Downhole Width (m)	Assay			
										Cu %	Au g/t	Ag g/t	Zn %
MUG24_024							292.0	347.0	55.0	1.69	0.1	2.4	0.01
Including							*298.1*	*307.0*	*8.9*	*2.95*	*0.1*	*3.6*	*0.02*
Including							*310.0*	*322.1*	*12.1*	*2.22*	*0.0*	*2.8*	*0.01*
Including							*337.4*	*341.4*	*4.0*	*2.61*	*0.2*	*4.6*	*0.01*
MUG24_025	1130	1719	-825	352	-89	516	48.8	66.8	18.0	3.43	1.7	9.8	0.19
Including							*54.8*	*60.8*	*6.0*	*4.85*	*3.4*	*14.3*	*0.20*
MUG24_025							96.5	103.0	6.6	2.77	0.3	4.2	0.06
MUG24_025							178.5	182.2	3.7	1.73	0.2	2.5	0.28
MUG24_025							191.2	192.8	1.6	2.41	0.3	3.5	0.23
MUG24_025							239.4	245.4	6.0	1.97	0.2	3.3	0.08
MUG24_025							252.4	258.0	5.6	2.32	0.2	2.8	0.06
MUG24_025							263.0	265.0	2.0	2.74	0.2	4.0	0.09
MUG24_025							389.4	392.4	3.0	1.57	0.1	2.6	0.02
MUG24_026	1243	1716	-826	175	-71	453	79.4	80.8	1.4	3.40	5.0	17.8	0.63
MUG24_026							100.5	108.0	7.6	1.57	2.3	10.6	0.64
MUG24_026							263.0	294.5	31.5	1.54	0.1	2.1	0.02
Including							*263.0*	*266.1*	*3.1*	*3.55*	*0.1*	*4.6*	*0.08*
Including							*272.7*	*294.5*	*21.9*	*1.67*	*0.1*	*2.3*	*0.01*
MUG24_027	1243	1716	-826	181	-56	483	99.9	102.0	2.1	1.61	2.5	13.1	0.81
MUG24_027							242.7	244.7	2.0	1.40	0.1	2.5	0.03
MUG24_027							250.3	261.3	11.0	1.53	0.1	2.5	0.01
MUG24_027							286.0	288.4	2.4	1.39	0.2	3.2	0.02
MUG24_027							292.7	296.1	3.5	1.16	0.2	2.7	0.01
MUG24_029	1130	1719	-825	10	-70	549	71.7	85.2	13.5	5.28	2.6	16.5	0.35
MUG24_029							100.6	102.6	2.0	3.32	1.5	6.4	0.40
MUG24_029							122.2	143.0	20.8	3.98	0.3	4.9	0.07

Hole Number	Easting	Northing	RL	Azi	Dip	Drilled Length (m)	From (m)	To (m)	Downhole Width (m)	Assay			
										Cu %	Au g/t	Ag g/t	Zn %
MUG24_029							156.5	158.5	2.0	1.62	0.4	3.9	0.07
MUG24_029							182.7	185.7	3.0	1.13	0.1	1.6	0.01
MUG24_029							303.0	313.1	10.1	1.82	0.1	2.1	0.02
MUG24_029							319.1	322.9	3.8	1.19	0.1	1.5	0.06
MUG24_029							330.0	334.8	4.8	2.07	0.1	2.4	0.02
MUG24_029							350.4	359.2	8.8	1.22	0.2	2.6	0.04
MUG24_030							47.8	73.8	26.0	6.09	2.4	16.0	0.36
Including							*48.8*	*61.8*	*13.1*	*10.66*	*4.1*	*28.2*	*0.65*
MUG24_030							78.8	80.8	2.0	1.71	0.2	2.9	0.04
MUG24_030							90.4	110.6	20.3	2.97	0.4	3.8	0.05
Including							*90.4*	*97.3*	*6.9*	*4.82*	*0.6*	*5.8*	*0.06*
Including							*103.2*	*110.6*	*7.4*	*3.43*	*0.5*	*4.5*	*0.06*

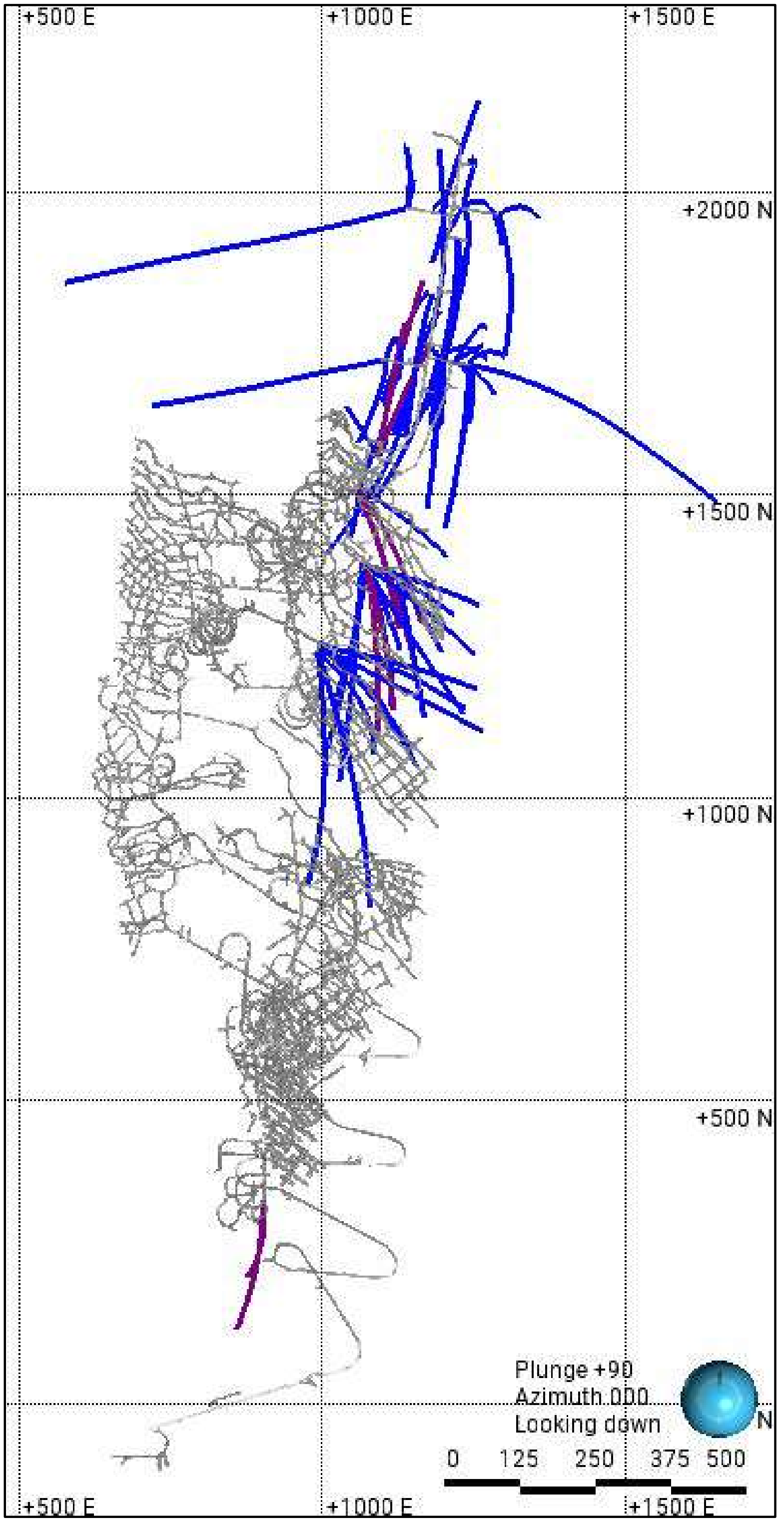
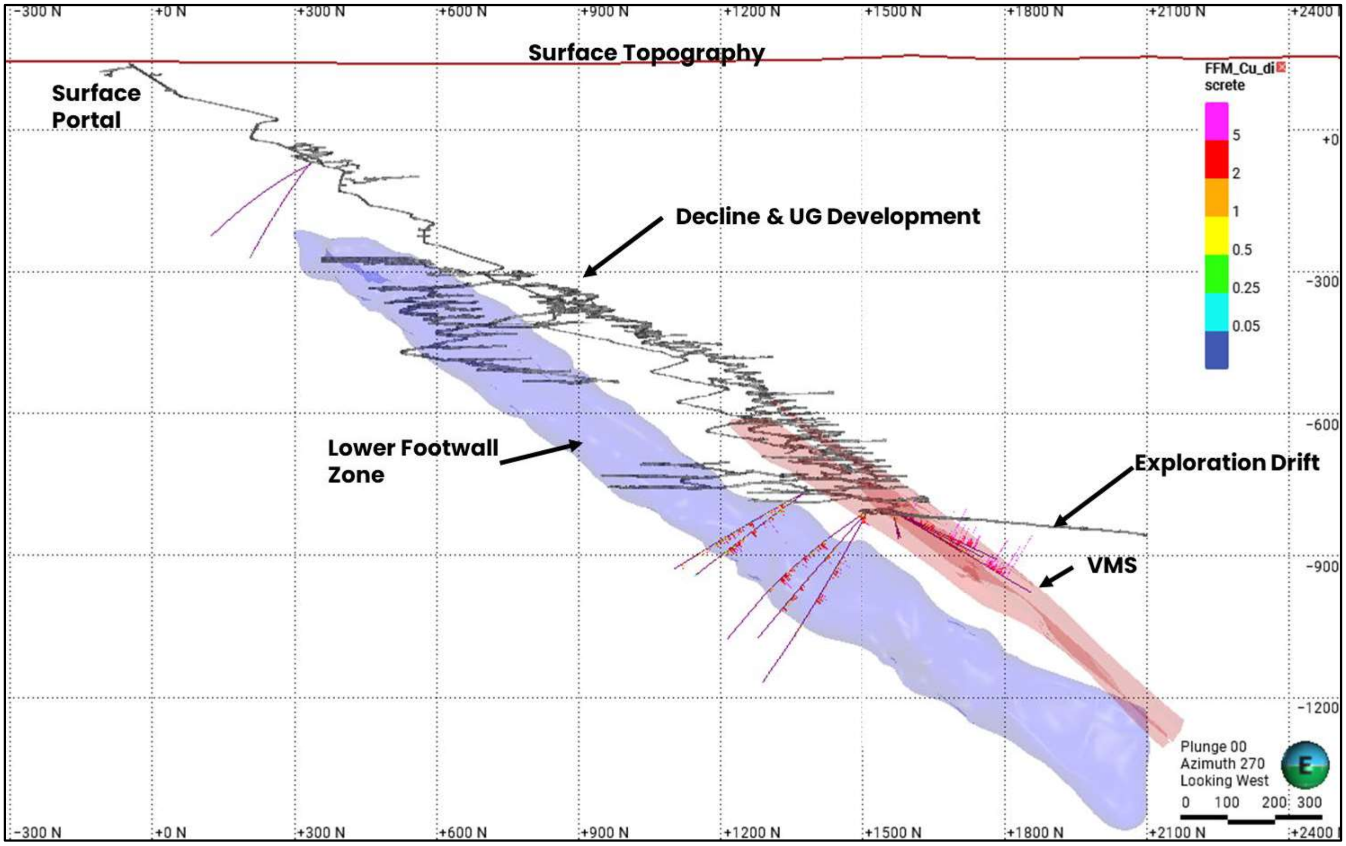
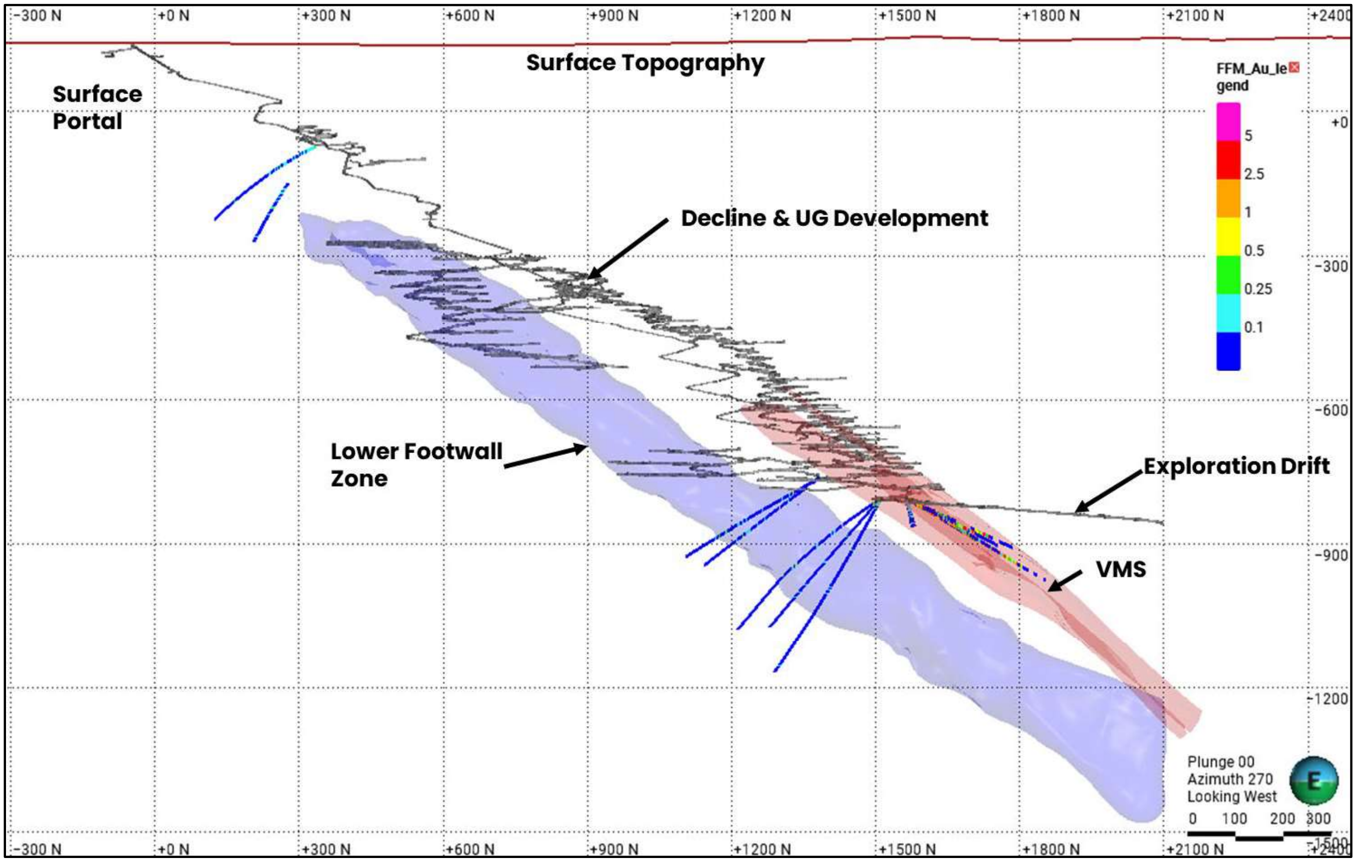


Figure 10.1:Plan View of Firefly Drilling with Ming Underground Mine Development



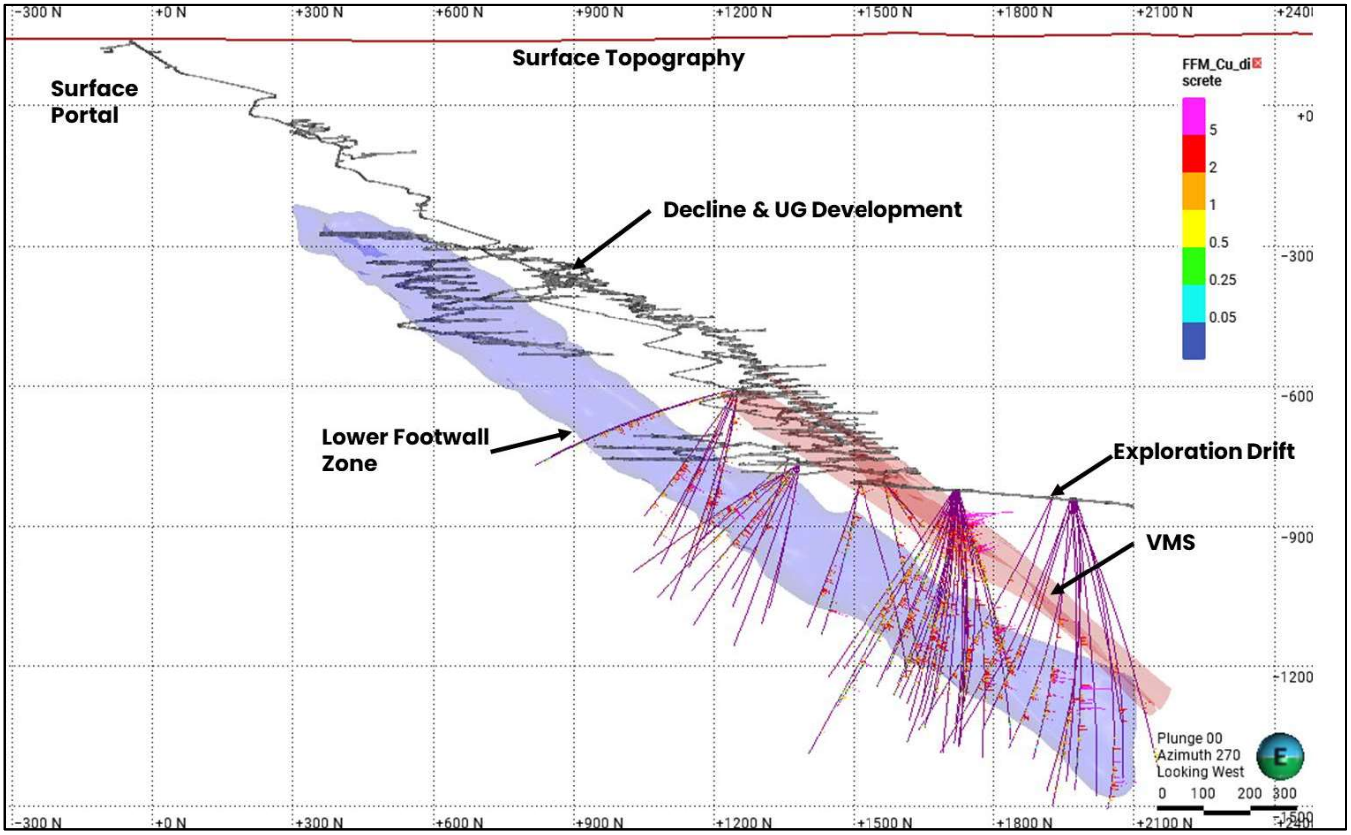
Note: Isometric view looking southwest

Figure 10.2: 2023 FireFly Drilling, Cu Results



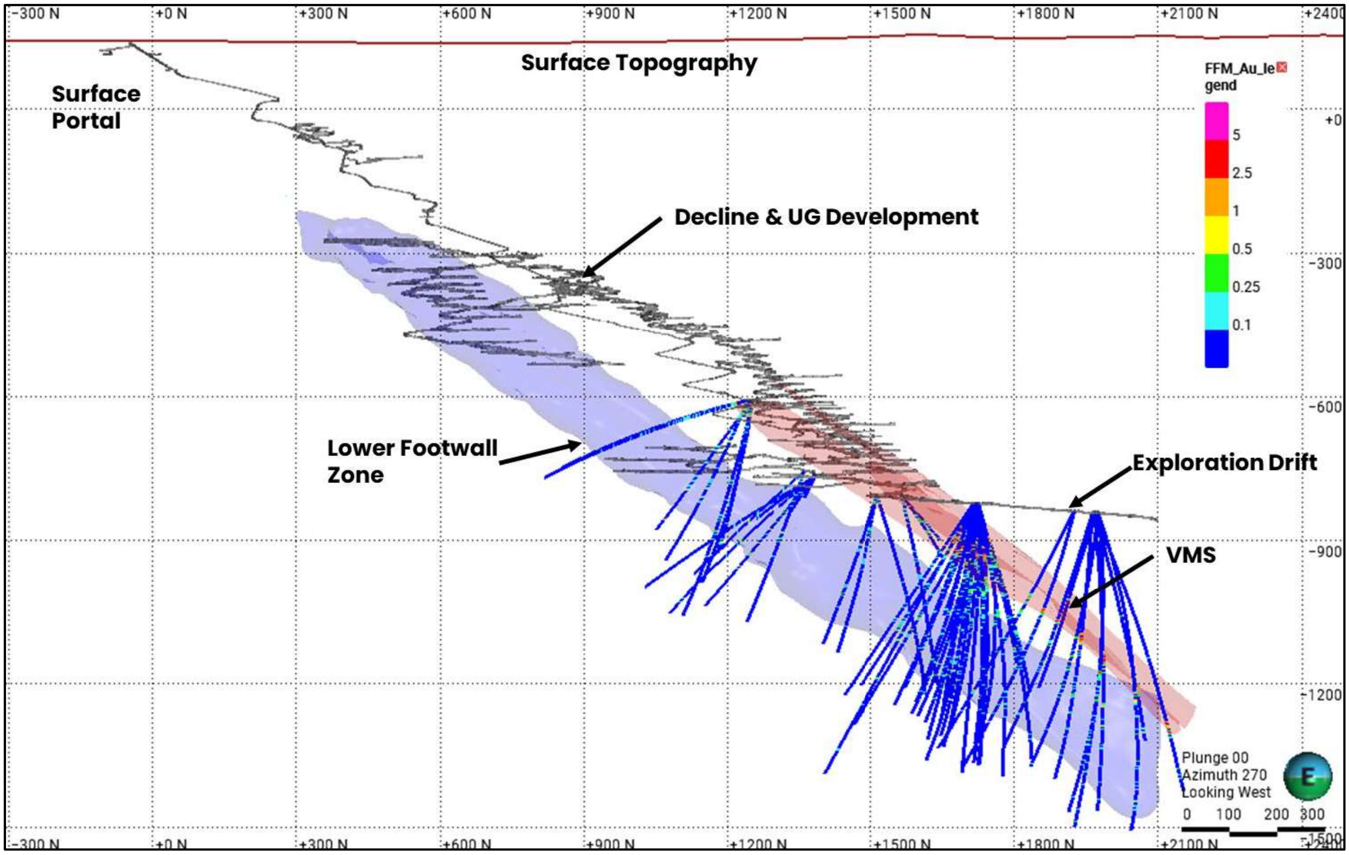
Note: Isometric view looking southwest.

Figure 10.3: 2023 FireFly Drilling, Au Results



Note: Isometric view looking southwest.

Figure 10.4. 2024 FireFly Drilling, Cu Results



Note: Isometric view looking southwest.

Figure 10.5. 2024 FireFly Drilling, Au Results

10.3 Surveying

10.3.1 Collar Survey

The set-ups for the underground drill collars were marked by FireFly's mine survey department, and the drilling contractor used a REFLEX TN14 gyrocompass to align the drill rig. A FireFly geologist regularly checks the underground drill set-up during the drilling program to ensure accuracy. After the drill hole has been completed, the final collar is recorded by FireFly's survey department.

10.3.2 Downhole Survey

Downhole surveys are completed using a REFLEX GYRO SPRINT-IQ™ and occasionally a Reflex EZ-Shot® single-shot instrument to provide azimuth and dip readings down the hole. Single shot gyro readings were collected every 30m during drilling and a continuous gyro downhole survey is completed at the end of the hole.

10.3.3 Core Delivery

The core is placed in wooden core boxes close to the drill rig by the drilling contractor. The core is collected daily by the drilling contractor and delivered to the secure core logging facility on the Ming Mine site (Figure 10.6).

Access to the core logging facility is limited to FireFly employees or designates. There is 24/7 security at the site facilities.

10.3.4 Core Logging Procedure

All sample collection, core logging, and specific gravity determinations are completed by FireFly personnel under the supervision of a professionally qualified registered geologist to meet the requirements of NI 43-101. The following steps are completed during the core logging procedure:

- Sample security and chain of custody start with the removal of core from the core tube and boxing of drill core at the drill site.
- The boxed core remains under the custody of the drill contractor until it is transported from the drill to the secure onsite core facility (Figure 10.6).
- Core boxes are opened and inspected to ensure correct boxing and labeling of the core by the drill contractor.
- The end depths of each core box are recorded on a box end sheet for each respective drill hole, the record includes box number and core interval in the box.
- The geologist completes a high-level summary geology log using the software acQuire.
- After the summary log, metal tags are stapled to the box end with hole ID, box number, start and end depths engraved on them.
- The core is measured, and meter marks written on the surface at the same time the core is oriented using the orientation marks form the REFLEX ACT-IQ™ tool and the orientation line is drawn on the core surface.
- The core is marked up at regular intervals downhole for the collection of Specific Gravity measurements.
- After the core has been oriented, marked up and cleaned, a geologist completes the logging of geological features including lithology, alteration, and mineralization. These are recorded in the acQuire database using laptops.
- Structural measurements for geological contacts, foliation, faults, shears, veins and other structures are recorded as alpha and beta measurements taken using a kenometer (Figure 10.7).
- Geotechnical logging of the Rock Quality Designation (RQD) is completed for each core run in 3m intervals and recorded in acQuire.
- Data associated with core other downhole information including orientation, surveys and quality are recorded in the acQuire database system.
- In the final step, sample intervals are marked in the core and recorded into acQuire. Each core sample is assigned a tag with a unique identifying number. Sample lengths are typically one meter but can be smaller, down to minimum of 0.3m to honor geological and mineralization contacts (Figure 10.8).
- Core is photographed after logging and prior to sawing the core for sampling. The core photographs are stored in a Seequent Imago system.

Figure 10.6: Core Logging Facility

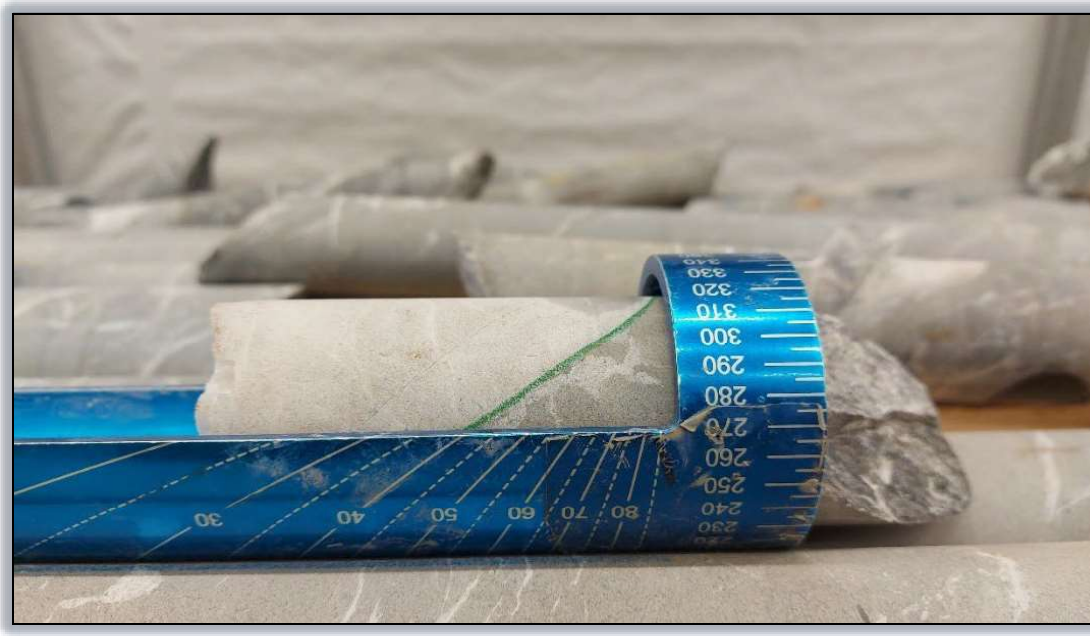


Figure 10.7: Structural Data Collection Using a Kenomneter

Figure 10.8: Example of Sample Tags and Sample Intervals Marked in Red

10.3.5 Sampling Approach

The sampling intervals are determined by the geologist. All the core is sampled in one meter intervals with some smaller samples down to minimum of 0.3m to accommodate geological and mineralization contacts. The core is sawn in half following a sample cutting line determined by the geologists during logging using the core orientation mark form the REFLEX ACT III core orientation tool.

After cutting, one half of the core is bagged, labelled and sealed in a plastic bag with a waterproof label with a zip tie or staples after one part of the three-part sample tag was placed inside. The second part of the sample tag is stapled into the core box at the beginning of each sample. The third part of the tag is kept in the sample tag book as a permanent record. The remaining half core is placed in core boxes to serve as a permanent record and stored in a secure onsite facility.

The following is a summary of the FireFly Metals core sampling procedure:

- Prior to sampling, Specific Gravity (SG) determinations are completed by FireFly personnel using the Arquimedes method. SG is determined by the weight of sample divided by weight of sample in air, minus the weight of sample in water (Figure 10.9).
- Core marked for splitting is sawn thru a line approximately one centimeter from the core orientation drawn line (Figure 10.10) using an Almonte diamond core saw (Figure 10.11), the core is cut lengthwise into equal halves.
- Half of the cut core is placed in clean individual plastic bags with on part of the appropriate sample tag. The other half is placed back into the box with the second part of the sample tag stapled to the inside bottom of the box where the core rests corresponding to the location where the sample interval started (Figure 10.12).
- QA/QC samples are inserted into the sample stream at prescribed intervals. Full description of the QA/QC program is provided in Item 11.0.
- The samples are then placed in rice bags and closed with a zip tie. About 5 to 10 samples are placed into a single rice bag for shipment to the offsite laboratories' facility (Figure 10.13).
- The remaining half of the core is retained and incorporated into FireFly's secure, core library located on the Property (Figure 10.14).

Figure 10.9: Specific Gravity Set-up

Figure 10.10: Core Cut Line Example

Figure 10.11: Core Cutting Facility

Figure 10.12: Cut Core Sample Placement

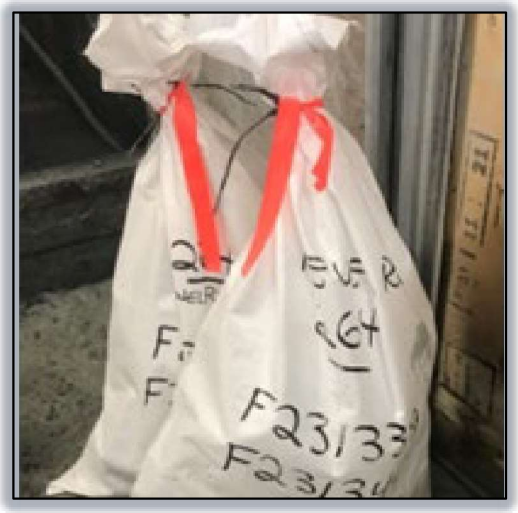


Figure 10.13: Example of Rice Bags with Samples Ready for Lab Dispatch

Figure 10.14: FireFly Core Library

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

FireFly follows best practices and methodologies described by the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) for the collection of samples and preparation of data that is to be reported under National Instrument 43-101. All exploration that is conducted at the Ming Mine site is completed under the supervision of a registered professional geologist as a Qualified Person (QP) who is responsible and accountable for the planning, execution, and supervision of all exploration activity as well as the implementation of quality assurance programs and reporting.

11.1 Historical Sampling

The following is a summary of the sampling approach and methodology employed by Rambler from 2005 to 2023. The sampling methodologies employed by Consolidated Rambler Mines Limited (CRML) from 1977 to 1981 are not documented.

From 2003 to 2009, two analytical laboratories were used to undertake sample preparation and analytical analyses of Rambler sampled drillcore. Sample preparation and initial analytical analyses were completed by Eastern Analytical Ltd (Eastern) in Springdale, Newfoundland, whereas final analytical analyses were completed by Activation Laboratories Ltd. (Actlabs) of Ancaster, Ontario.

Sample rejects and pulps generated by Eastern during sample preparation were retrieved by Rambler personnel and brought back to the mine and stored on site as a physical record of the samples that were submitted for analysis. The sample pulps returned from Eastern are sent to Actlabs in Ancaster, Ontario for analysis. During the 2003 to 2009 period, Eastern was not ISO certified However, quick results from a local laboratory were useful during drilling when grade estimates are required for planning, and the interpretation and generation of exploration targets. Data returned from the analysis of pulps sent to Actlabs were considered final for the purposes of resource calculation in compliance with NI 43-101 specification.

From 2009 to 2023, Eastern was the only laboratory utilized by Rambler for sample preparation and analytical analysis. The diamond drilling completed during this period was predominantly delineation drilling and represents only 4% of the total drilling completed on the Project since 2003. Since late 2013, the Eastern laboratory has been accredited in accordance with the International Standards ISO/IEC 17025:2005 for a defined scope of procedures. These scope of procedures covers the analytical methods required by Rambler for its operations and follow the best practices described by CIM for the collection of samples and preparation of data that is to be reported under National Instrument 43-101.

Since full production, beginning in early 2012, up to the halting of mining activities in March 2023 Rambler has utilized both the Eastern laboratory and an in-house laboratory for sample preparation. In addition, the in-house laboratory has been used for base metal analysis for selective samples with the Rambler QA/QC program fully implemented.

11.2 FireFly Sampling

Upon FireFly acquiring the Ming Mine in October 2023, Eastern Analytical Lab (‘Eastern’) has been used for all sample preparation and analytical analyses of sampled drill core. Eastern became ISO certified in 2013 and has been used as the sole laboratory for sample prep and analysis to date.

11.2.1 Sample Preparation, Analytical Procedures, and Security

Samples are delivered to Eastern in Springdale, Newfoundland and Labrador by FireFly employees, where the samples are dried, crushed, and pulped in the following steps:

- Samples are organized and labelled when they enter the lab. Then they are dried at approximately 60°C.
- After drying is complete, samples are crushed in a Rhino jaw crusher to approximately 80% -10mesh sized material.
- The complete sample is riffle split down to approximately 250g of material. The remainder of the sample is bagged, labelled and stored as coarse reject.
- The 250g split is pulverized using a ring mill pulverizer to approximately 95% -150 mesh sized material.
- The ring pulverizers and jaw crushers are cleaned with silica sand and compressed air between clients and inspected and cleaned with silica sand when required between samples as well.

Sample pulps and rejects are picked up at Eastern by FireFly staff and returned directly to the Project site. Sample rejects are securely stored at the FireFly site.

11.3 Analytical Methodology

11.3.1 Historical Methodology

Eastern applies a fire assay method followed by acid digestion, and analyses by atomic absorption finish for copper, lead, zinc, nickel, and cobalt analyses. The results received from Eastern during the 2003 to 2009 period were used for initial grade estimates only.

Actlabs used a fire assay fusion followed by acid digestion and analyses by atomic absorption for gold analyses (Actlabs - Code 1A2). If a gold assay exceeded 3,000 ppb and/or silver exceeded 100 ppm a re-analysis of a fire assay fusion with gravimetric finish was conducted (Actlabs - Code 1A3). Other metals were analyzed by applying an acid digestion and 34 element ICP analysis finish (Actlabs- Code 1E3).

The Actlabs Quality System is accredited to international quality standards through International Organization for Standardization/International Electrotechnical Commission (ISO/IEC) 17025 (ISO/IEC 17025 includes ISO 9001 and ISO 9002 specifications) with CAN-P- 1579 (Mineral Analysis) for specific registered tests by the Standards Council of Canada (SCC).

11.3.2 FireFly Methodology

Since November 2023, Eastern has been the only lab used at the Project by FireFly. For gold analysis, Eastern applies a fire assay method with a 30 gram charge followed by acid digestion, and analyses by atomic absorption finish (AA), lower detection limit is 5 ppb. At times gold is assayed with platinum and palladium by fire 30 gram charge fire assay with Inductively Couple Plasma (ICP) OES finish. Multi-element assay analysis including copper, silver and zinc is completed by using 4 acid digestion and Inductively Couple Plasma (ICP) OES finish with a 34 elements package. Overlimit for copper, lead, zinc, iron, nickel, cobalt, tin and silver are digested in acid (nitric and perchloric acid) and analyzed by atomic absorption (AA).

The chain of custody regarding assay data from Eastern is a PDF document and excel file of the assays that are directly emailed to a group of senior Firefly staff including senior geologists, chief geologist and other management including the IT manager. The data is uploaded into acQuire with protocols that identify any upload errors. The assay certificates and excel files are saved on a secure server.

11.4 FireFly QA / QC Program

The quality assurance and quality control program and procedures in use at the Property meet industry standards that exploration data collected adheres to NI 43-101 quality criteria and requirements. FireFly maintains written field procedures and has had internal verifications check on drill collar location, in-hole surveying, sampling and assaying, database management and database integrity.

As part of the QA/QC program, duplicate, blank and Certified Reference Material (CRM) samples are inserted at regular intervals. Field duplicates are taken approximately one every 40 samples, blanks are inserted at a frequency of one every 50 samples and CRMs are inserted every 20 samples. Blanks and CRMs are also randomly inserted in zones of suspected high grades. The minimum insertion rate for CRMs are 5%, which FireFly's adheres to.

Analytical control measures in use at the Property involve both internal and external laboratory measures implemented to ensure that data received from outside sources are accurate and reliable. Until November 2023 Rambler used the database management program Fusion. Since November 2023, FireFly has used the acQuire database management program which is very effective and efficient at managing assay data as well as QA/QC tracking and reporting.

FireFly's senior personnel review the CRMs, blank and field duplicates assays on a daily basis prior to being imported into the acQuire database. Any issues are immediately investigated and sample batch re-assay's requested to the lab if considered necessary. QA/QC results are summarized in an internal monthly QA/QC report.

Umpire lab check assays for the project are routinely conducted by SGS laboratory in Burnaby. Between 2.5% and 5% of the sample pulps are delivered directly from Eastern analytical to the SGS facilities in Gander on a monthly basis, where the pulps are shipped via air freight to Burnaby laboratory for assays. FireFly is currently implementing a reporting system in acQuire for the third-party check but preliminary results show a good correlation between Eastern and SGS laboratories for copper.

A variety of copper and gold external standards from CDN laboratories and OREAS laboratories have been inserted by FireFly staff. These standards and values have been tabulated in Table 11.1.

The majority of data plots within two standard deviations of the certified value, however a series of trends and bias and CRM fails were identified in the CDN CRMs. FireFly started using the existing site CRMs when the project was acquired but after an investigation, FireFly concluded that the CDN CRMs on site were not performing as expected due to quality issues and potentially due to segregation as the CDN CRMs were packaged in 5 Kg tubs rather than individual packages. As a result, FireFly stopped using CDN standards and starting using OREAS CRMs, individually packaged in 60g packets.

FireFly submitted a total of 1,084 CRMs, 453 blanks and 501 field duplicates to Eastern. Plots showing the comparative results for copper from Eastern are presented in the following sections. Although the following sections are focused on copper, FireFly personnel monitors the performance of gold and other elements. Gold shows similar performance to copper but higher dispersion in the field duplicates and umpire checks.

A total of 453 blanks were inserted into the sample stream. Low level contamination is observed at times and is communicated to the lab. Overall, the laboratory performed satisfactorily with cleanliness and blank performance.

FireFly personnel has visited the Eastern analytical facilities on several occasions and observed that lab practices, equipment overall cleanliness meets industry standards.

Table 11.1: Summary of Certified Reference Material

Standard	Company Used	Cu%	Std Dev.	Au gpt	Std Dev.
CDN-CM-18	FireFly	2.42	0.11	5.28	0.18
CDN-CGS-26	FireFly	1.58	0.035	1.64	0.055
CDN-CM-36	FireFly	0.23	0.005	0.32	0.02
CDN-CM-40	FireFly	0.56	0.016	1.31	0.06
CDN-CM-41	FireFly	1.71	0.025	1.6	0.075
CDN-CM-46	FireFly	1.13	0.02	2.25	0.13
CDN-CM-51	FireFly	0.26	0.005	0.46	0.026
OREAS-625	FireFly	0.17	0.006	0.67	0.02
OREAS-627	FireFly	048	0.02	1.88	0.063
OREAS-628	FireFly	1.74	0.041	0.87	0.025
OREAS-629	FireFly	312	0.076	1.18	0.038

11.5 Certified Reference Material

Standards from CDN Laboratories of Vancouver were purchased and used between 2008 and April 2024 (see listed samples below). After an investigation by FireFly into a number of failed standards, biases and trends observed in the performance of the CDN CRMs, it was decided to change to prepackaged CRMs provided by OREAS in Australia since April of 2024. As significant improvement with the CRM performance can be observed after FireFly implemented the use of OREAS certified material. A review of the CRMs used by FireFly is listed below.

11.5.1 CDN-CM-18

The expected copper value for CDN-CM-18 is 2.42%. FireFly submitted 83 samples between November 2023 and June 2024 which averaged 2.34%. There is an overall low bias trend with 6 samples coming close to two standard deviation failure (Figure 11.1).

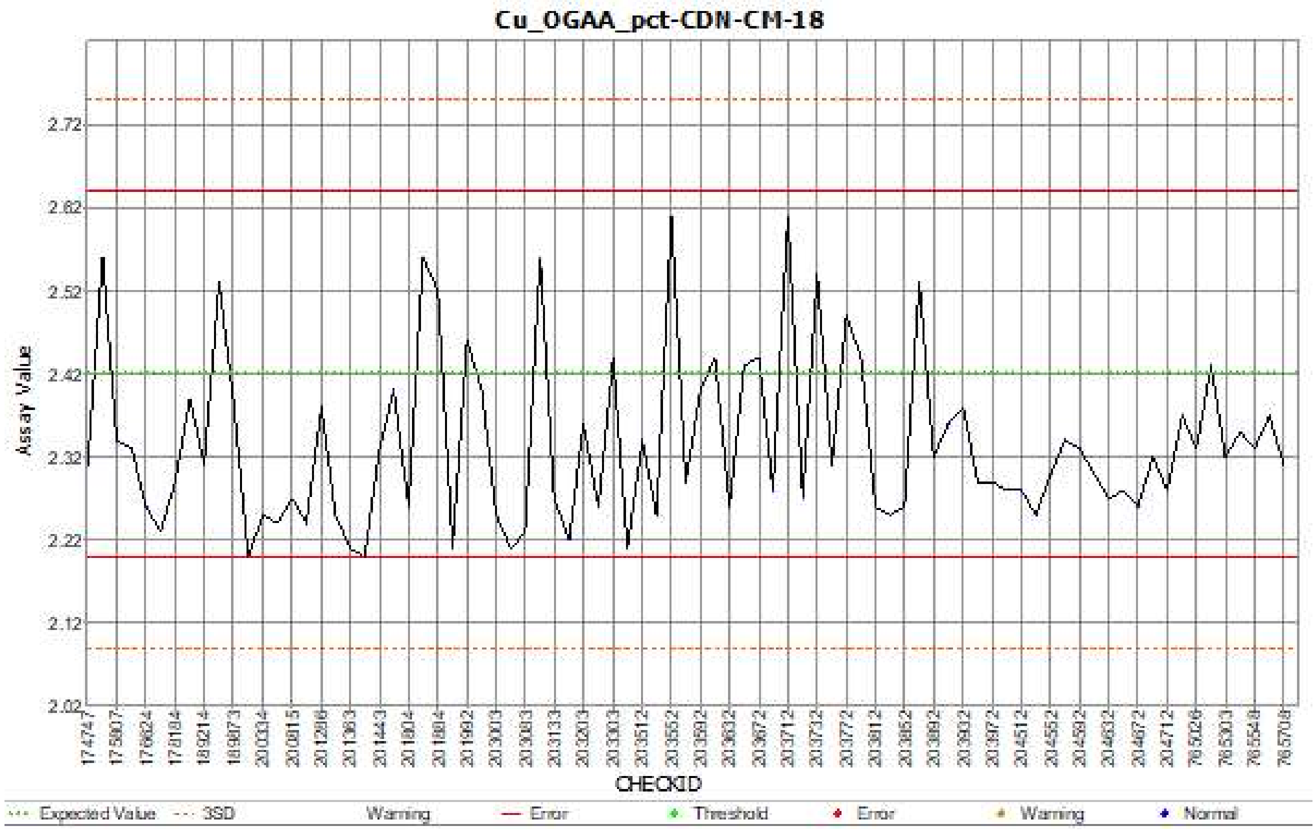


Figure 11.1: CDN-CM-18 Performance Chart

11.5.2 CDN-CGS-26

The expected copper value for CDN-CGS-26 is 1.58%. FireFly submitted 143 samples between November 2023 and June 2024 which averaged 1.62%. Overall, there is a high bias with 34 samples above the accepted 2 STD threshold of failure (24%) (Figure 11.2). The number of failed samples were investigated, and it was determined that there were issues with the CRM quality and not the analytical methods.

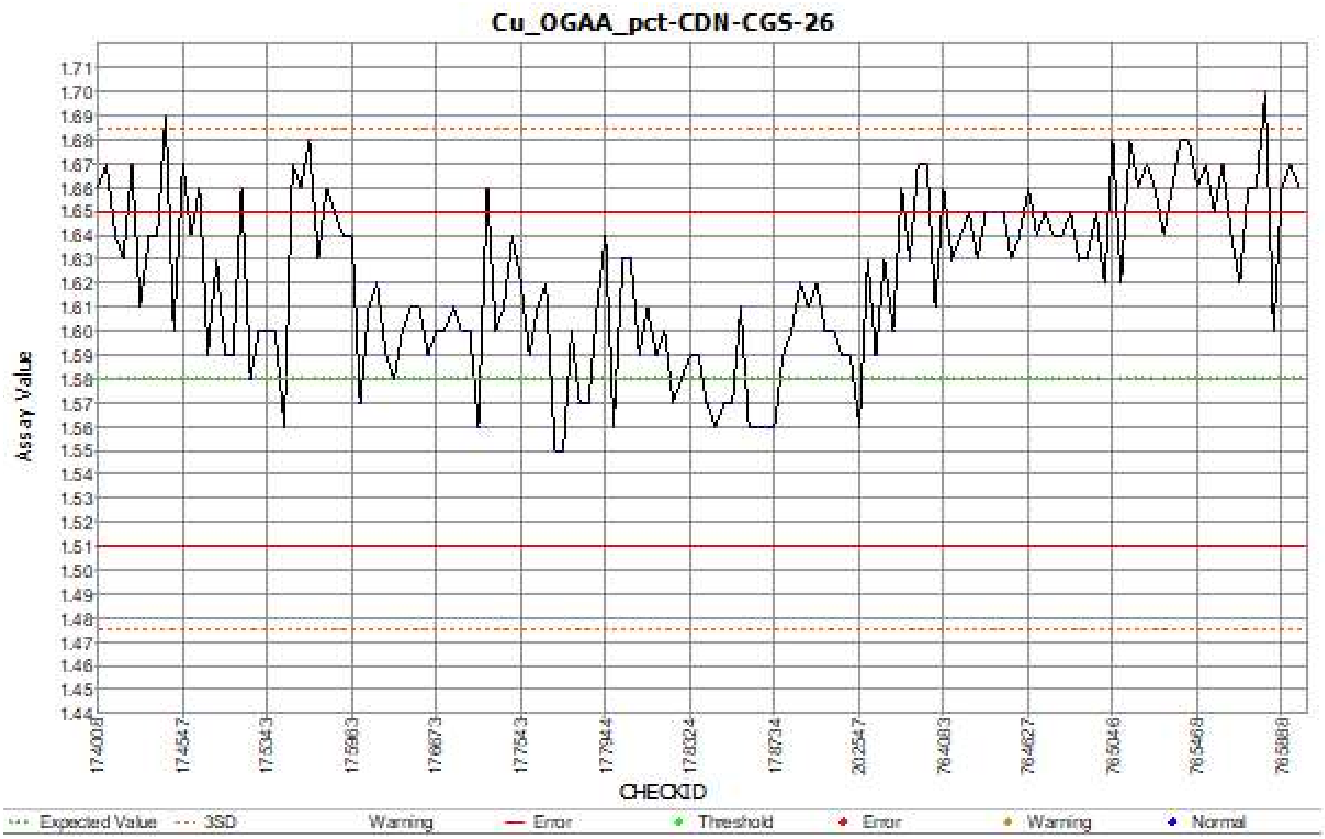


Figure 11.2: CDN-CM-26 Performance Chart

11.5.3 CDN-CM-36

The expected copper value for CDN-CM-36 is 0.23%. FireFly submitted 98 samples between November 2023 and June 2024 which averaged 0.2192%. Overall, there is a low bias with 38 samples above the accepted 2 STD threshold of failure (39%) (Figure 11.3). The number of failed samples was investigated, and it was determined that there were issues with the standards and not the analytical methods.

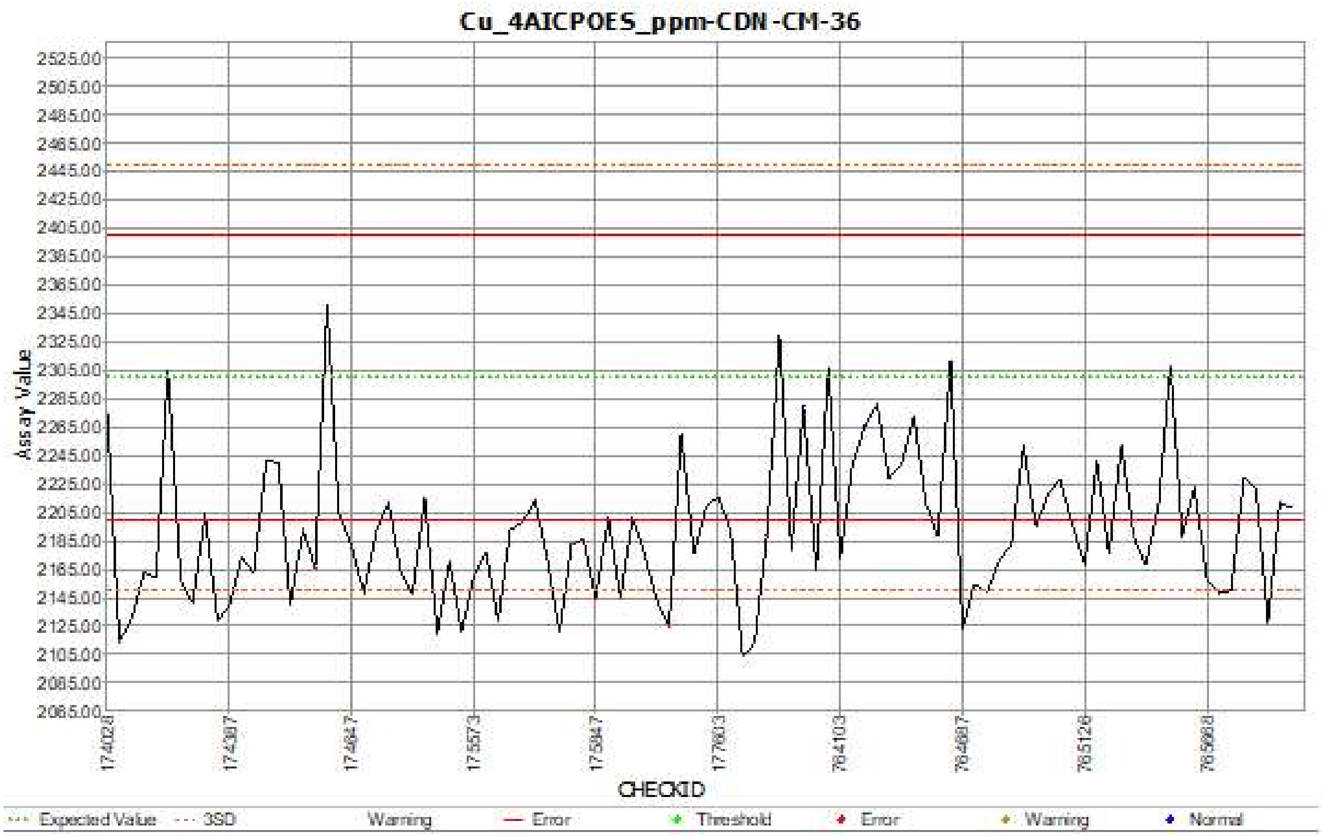


Figure 11.3: CDN-CM-36 Performance Chart

11.5.4 CDN-CM-40

The expected copper value for CDN-CM-40 is 0.56%. FireFly submitted 202 samples between November 2023 and June 2024 and averaged 0.55% with a low bias. A total of five standards failed outside of the acceptable 2 STD (2.5%) with four of them failing low and one failed high (Figure 11.4).

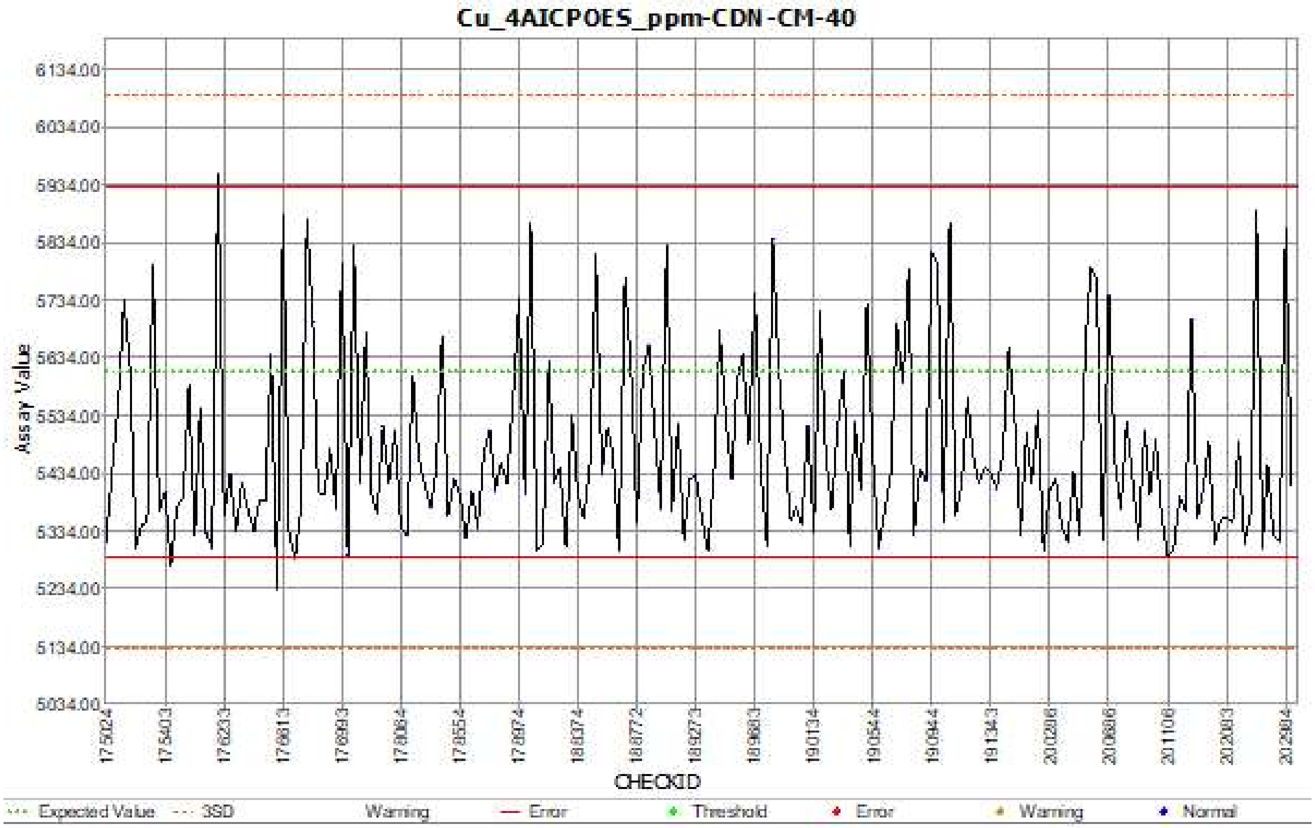


Figure 11.4: CDN-CM-40 Performance Chart

11.5.5 CDN-CM-41

The expected copper value for CDN-CM-41 is 1.71%. FireFly submitted 33 samples between November 2023 and June 2024 and averaged 1.7142% with a slightly on the high bias with a couple of outliers on the low side of the threshold (Figure 11.5). All standards passed within the accepted 2 STD.

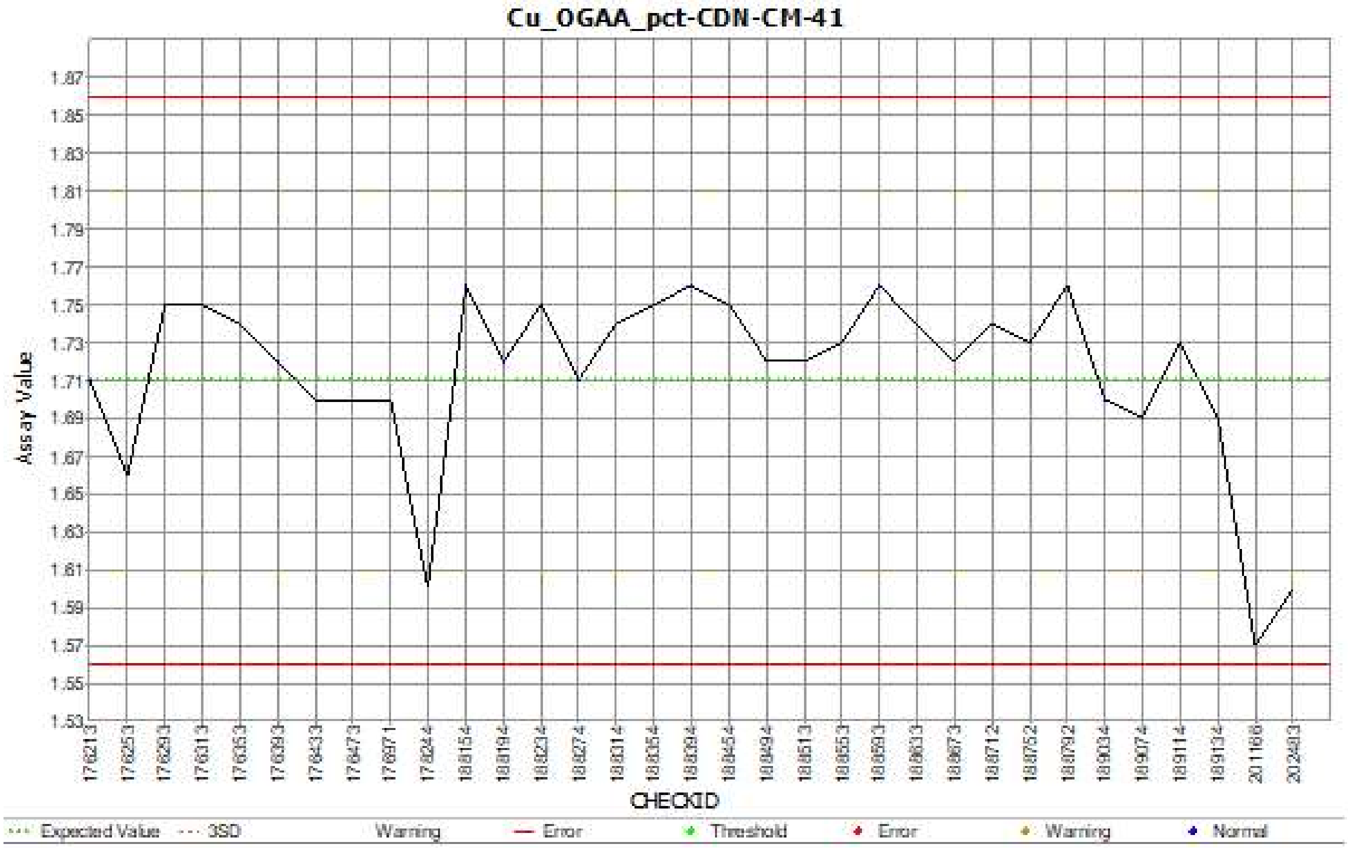


Figure 11.5: CDN-CM-41 Performance Chart

11.5.6 CDN-CM-46

The expected copper value for CDN-CM-46 is 1.13%. FireFly submitted 104 samples between November 2023 and June 2024 and averaged 1.15% with a high bias (Figure 11.6). All standards passed within the accepted 2 STD.

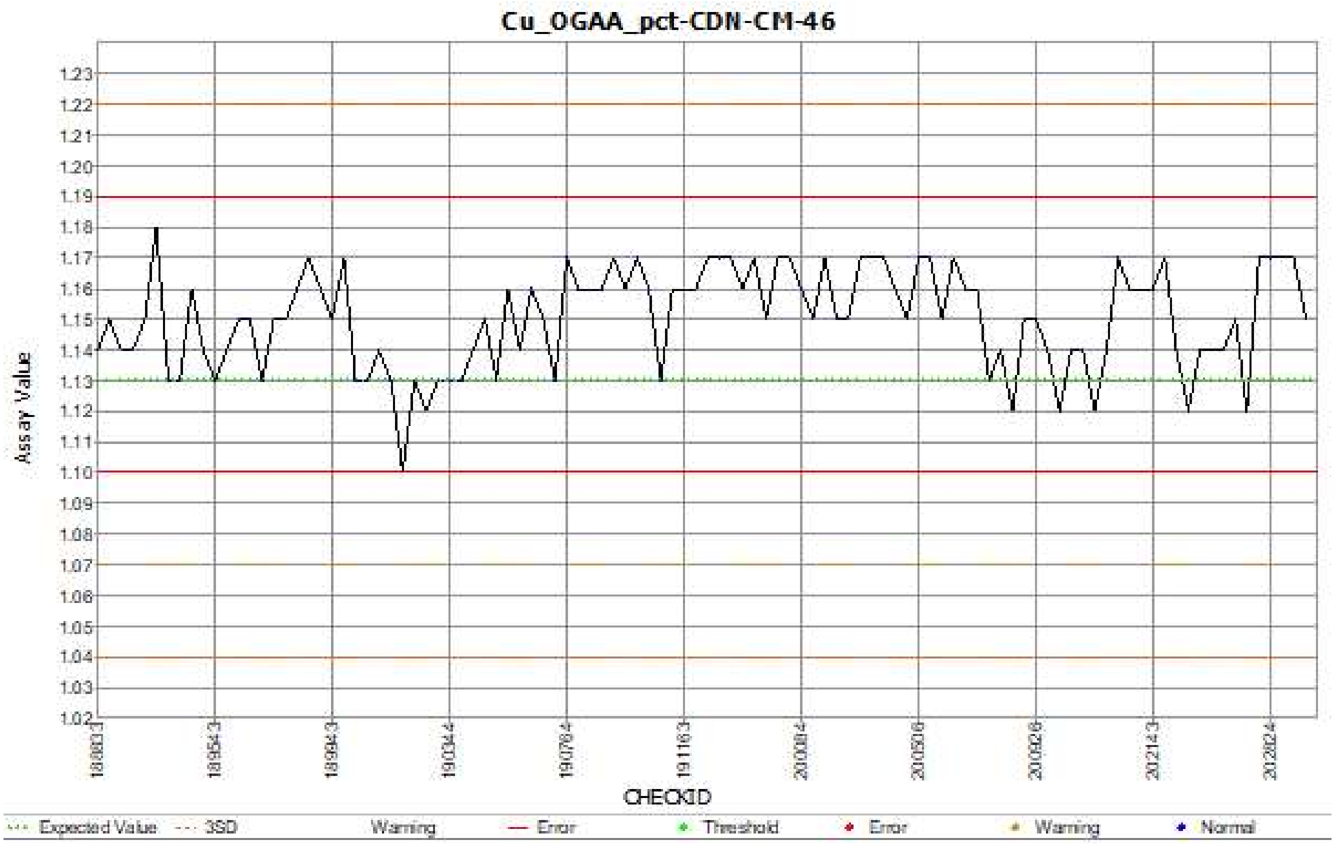


Figure 11.6: CDN-CM-46 Performance Chart

11.5.7 CDN-CM-51

The expected copper value for CDN-CM-51 is 0.258%. FireFly submitted 42 samples between November 2023 and June 2024 and averaged 0.2547% with a low bias, two samples fell outside the acceptable 2 STD (4.8%) (Figure 11.7).

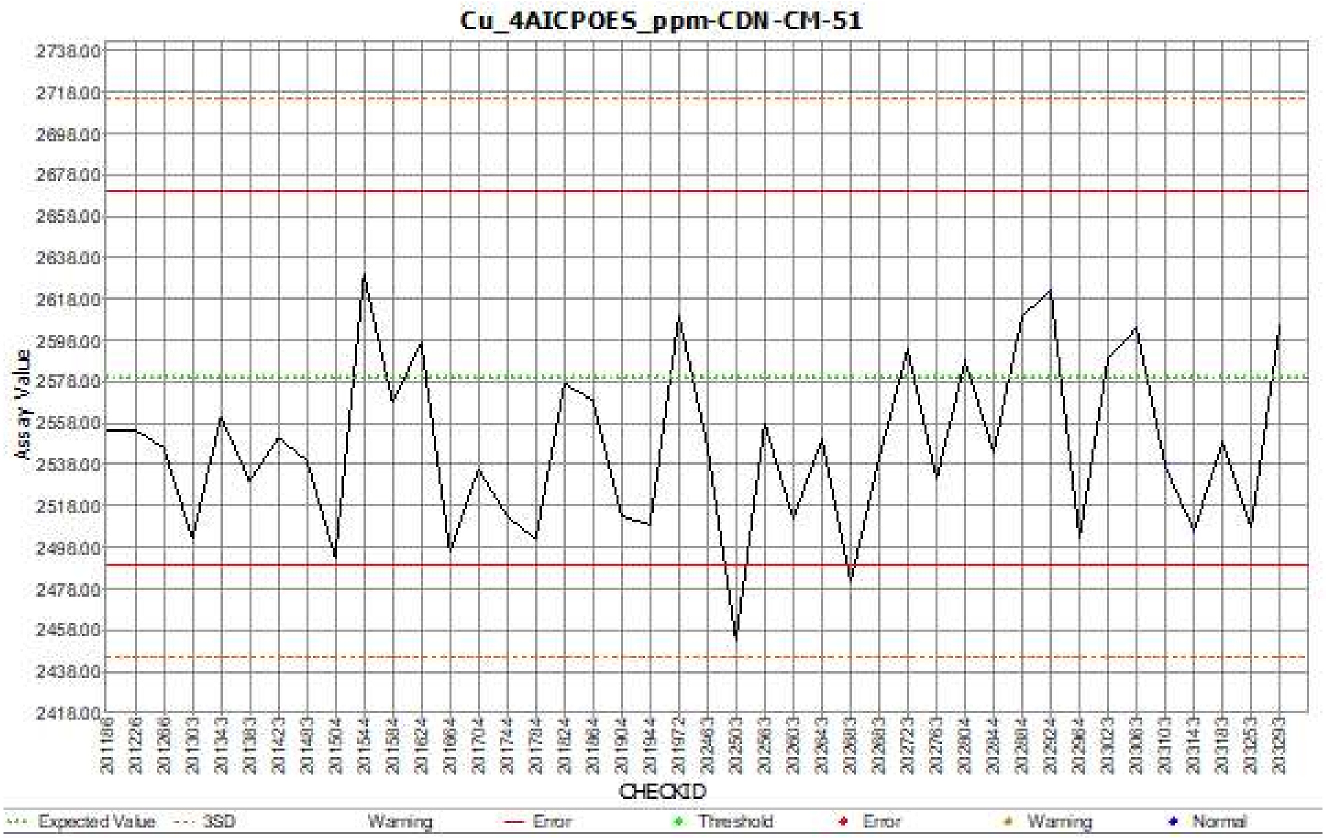


Figure 11.7: CDN-CM-51 Performance Chart

11.5.8 OREAS – 625

The expected copper value for OREAS - 625 is 0.17%. FireFly submitted 182 samples between November 2023 and June 2024 and averaged 0.17% (Figure 11.8). All standards passed within the accepted 2 STD.

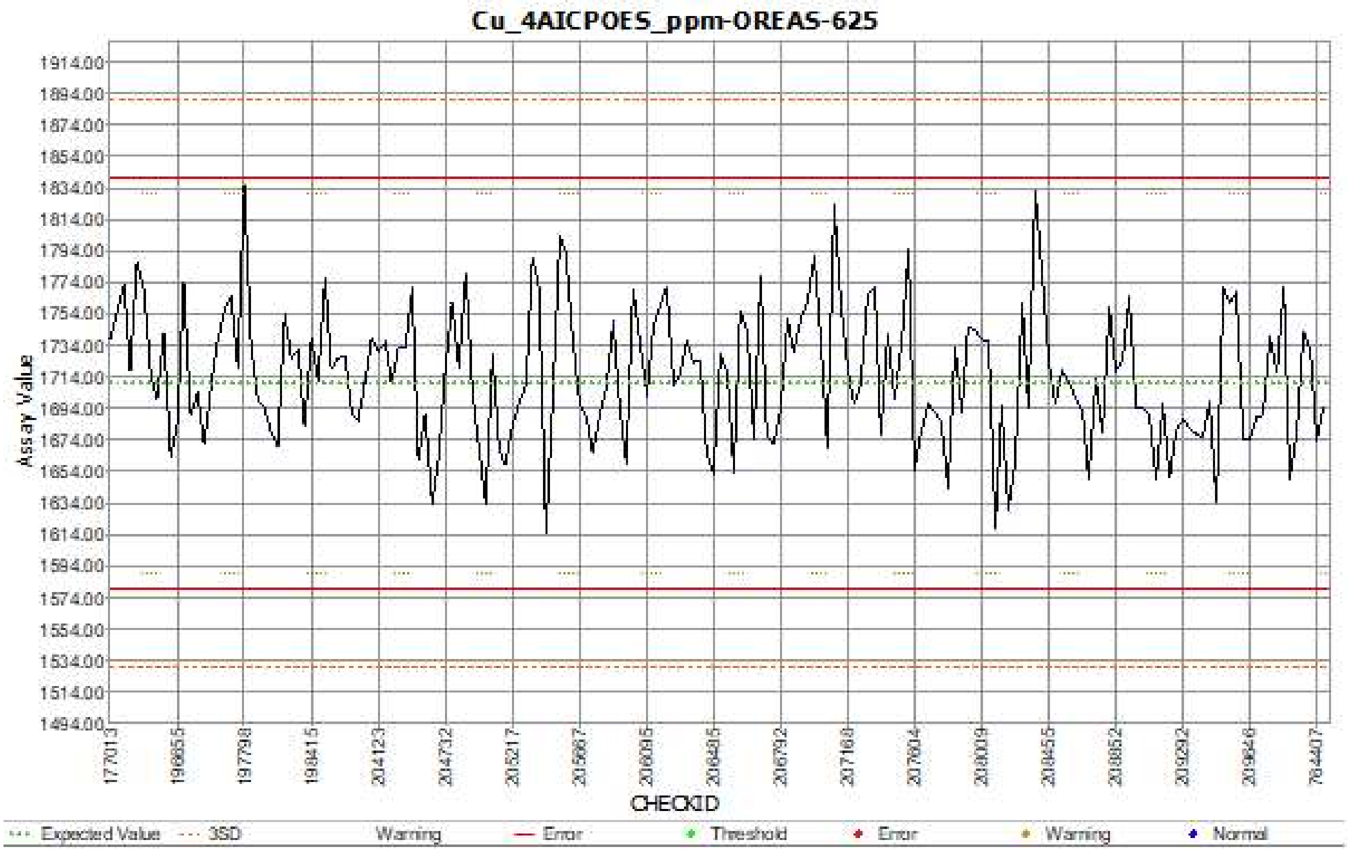


Figure 11.8: OREAS – 625 Performance Chart

11.5.9 OREAS – 627

The expected copper value for OREAS - 627 is 0.48%. FireFly submitted 181 samples between November 2023 and June 2024 and averaged 0.48%. One standard fell outside the acceptable 2 STD (0.55%) (Figure 11.9).

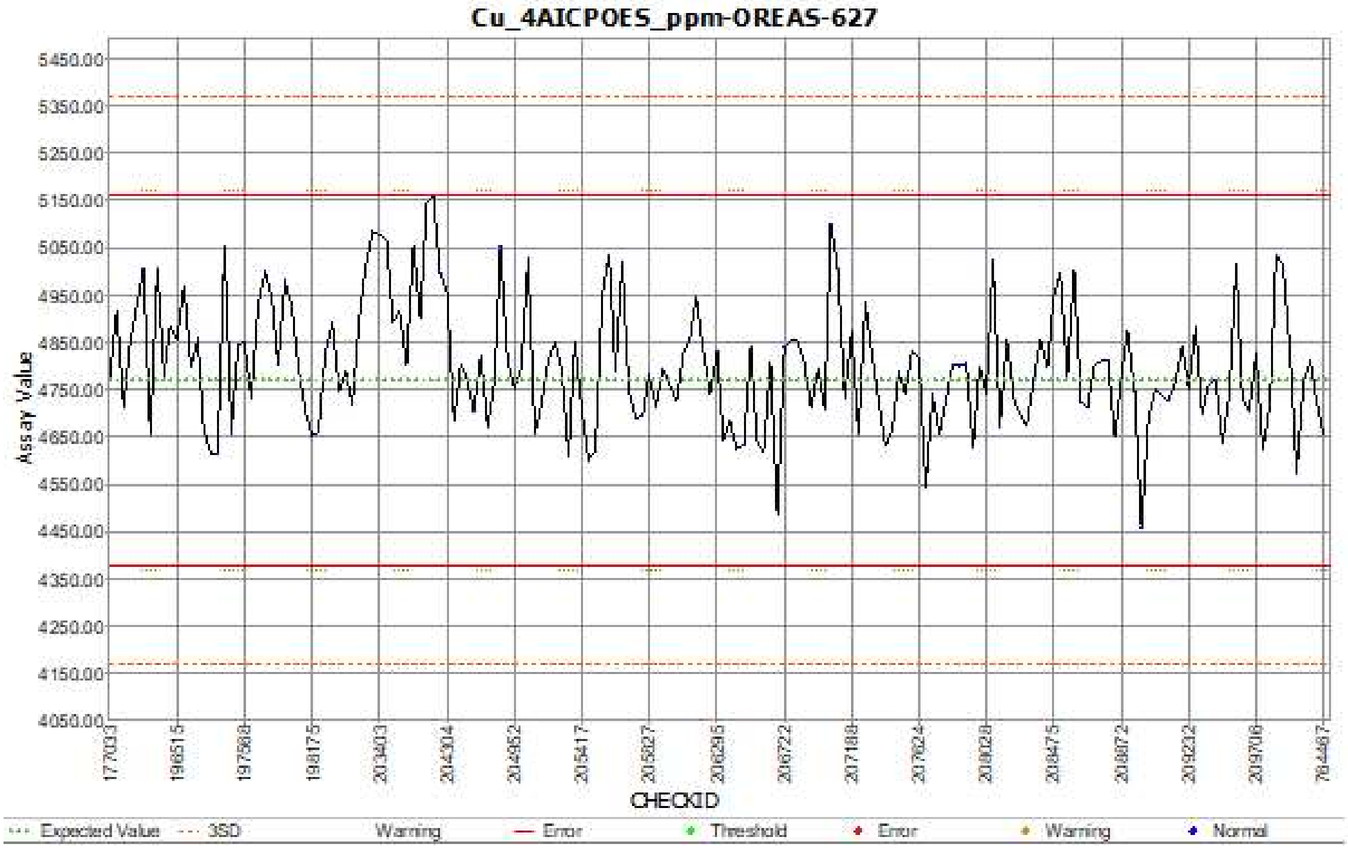


Figure 11.9: OREAS – 627 Performance Chart

11.5.10 OREAS – 628

The expected copper value for OREAS - 628 is 1.74%. FireFly submitted 16 samples between November 2023 and June 2024 and averaged 1.75% with a slightly high bias (Figure 11.10). All standards passed within the accepted 2 STD.

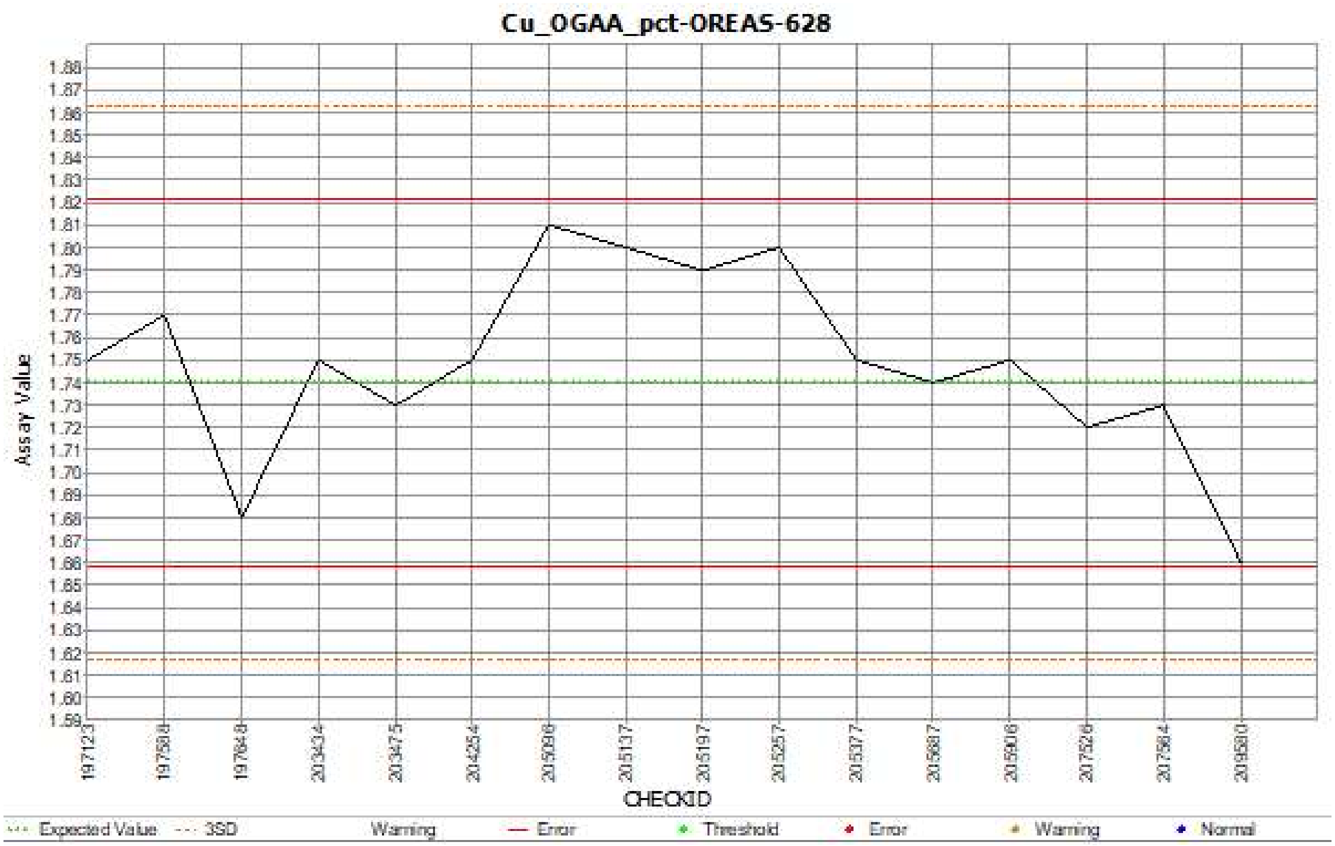


Figure 11.10: OREAS – 628 Performance Chart

11.6 Blanks

A total of 453 samples were submitted as blanks from November 2023 to June 2024. Low level contamination has been identified and reported to the laboratory after these discussions the low-level contamination appear to be in a decreasing trend. The majority of the batches with low levels of contamination are below 40 ppm Cu, these low levels are not material (Figure 11.11).

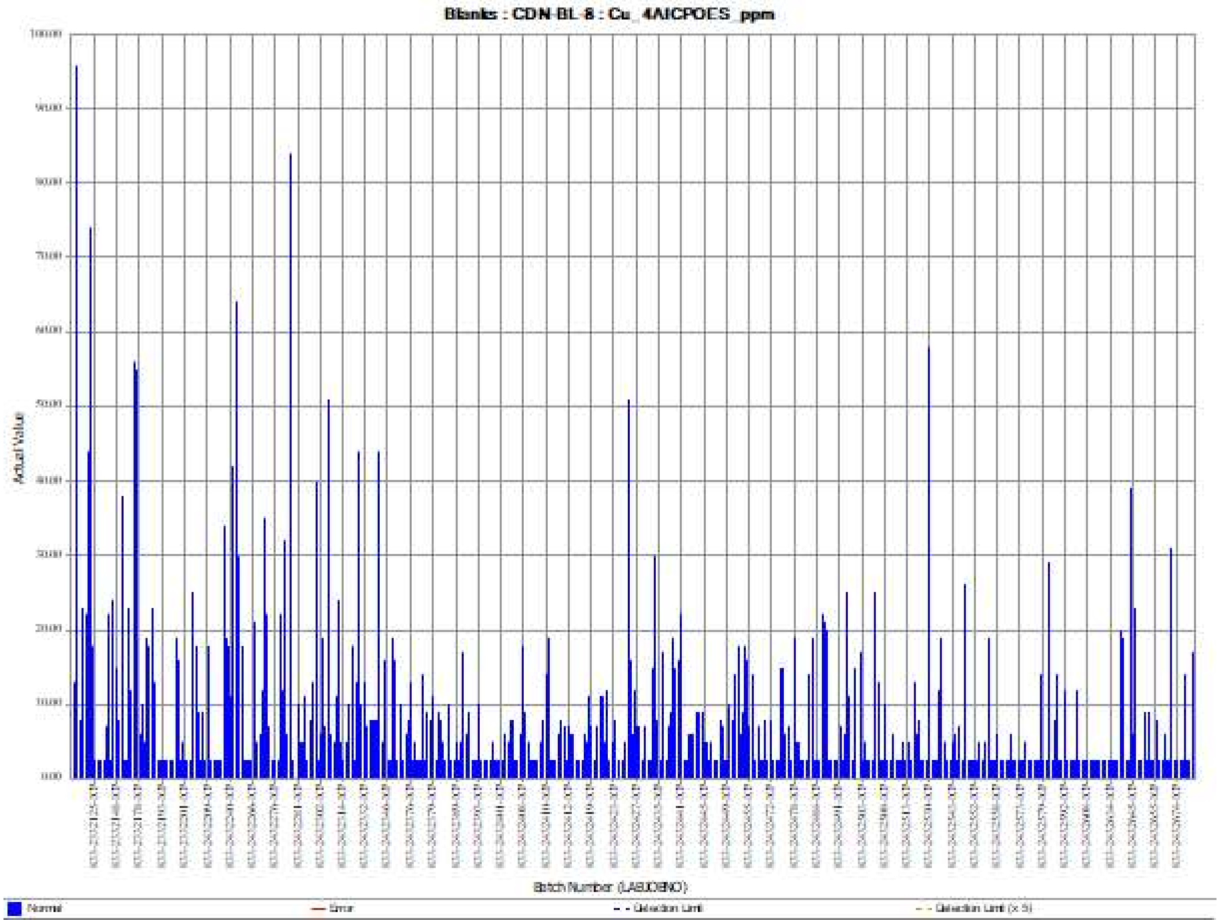


Figure 11.11: FireFly Blanks Performance Chart with Copper Results

11.7 Duplicates

A total of 501 field quarter core duplicates samples were collected between November 2023 and June 2024. Scatter plots and mean relative percent difference (MRPD) plots for field duplicates are shown in Figure 11.12 to Figure 11.14. MRP results show that 85% are below 40% relative difference for samples assayed by ICP below 10,000ppm Cu.

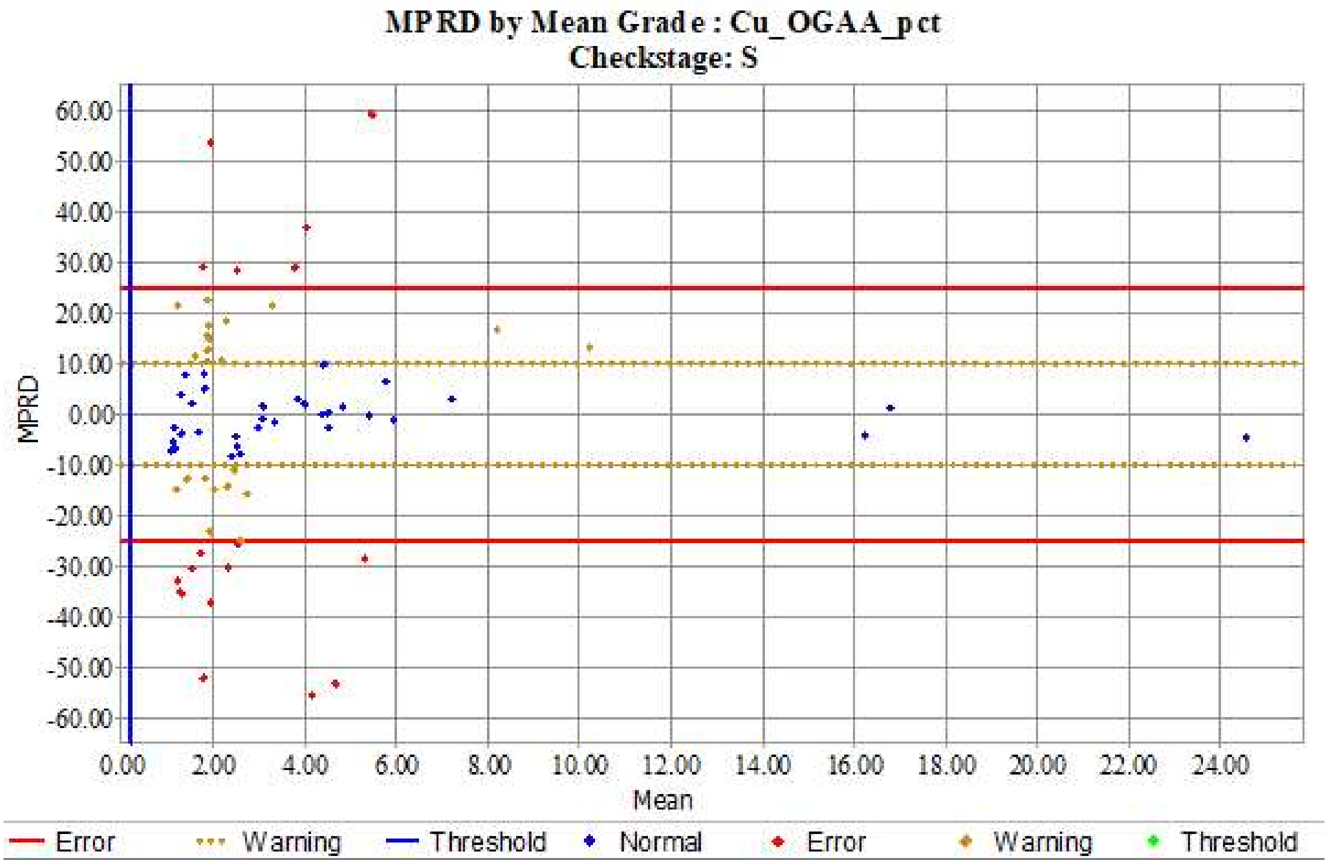


Figure 11.12: Field Duplicates MPRD Graph for Ore Grade Cu Assays Above 1% Cu

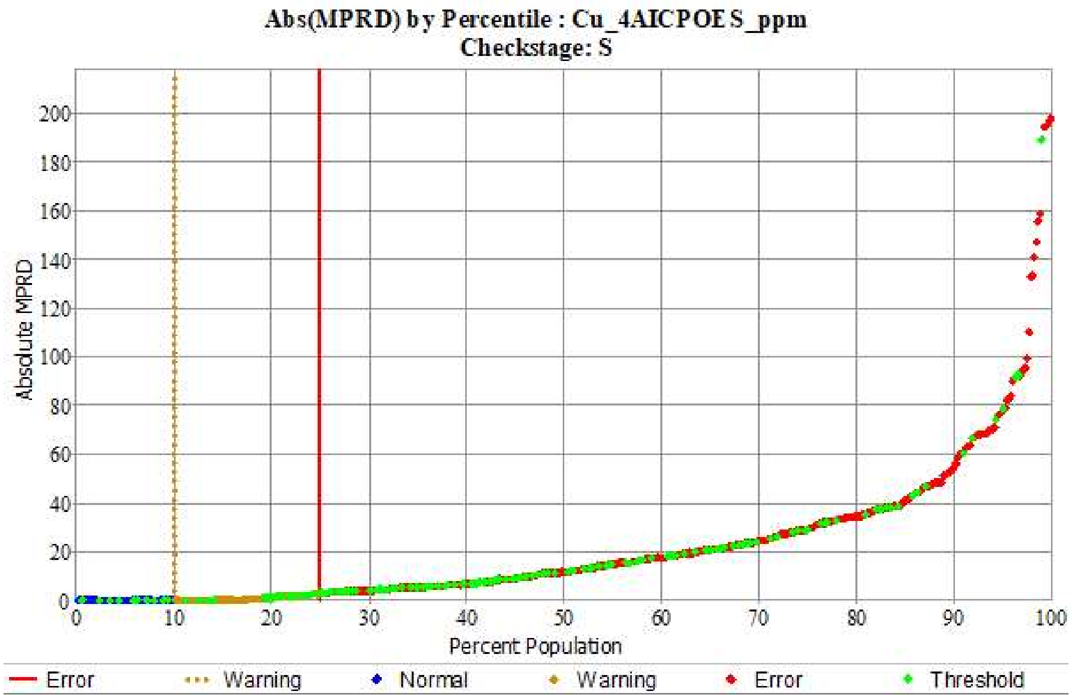


Figure 11.13: Field Duplicates Ranked MPRD Graph Field Duplicates Below 10,000 ppm Copper Completed by ICP

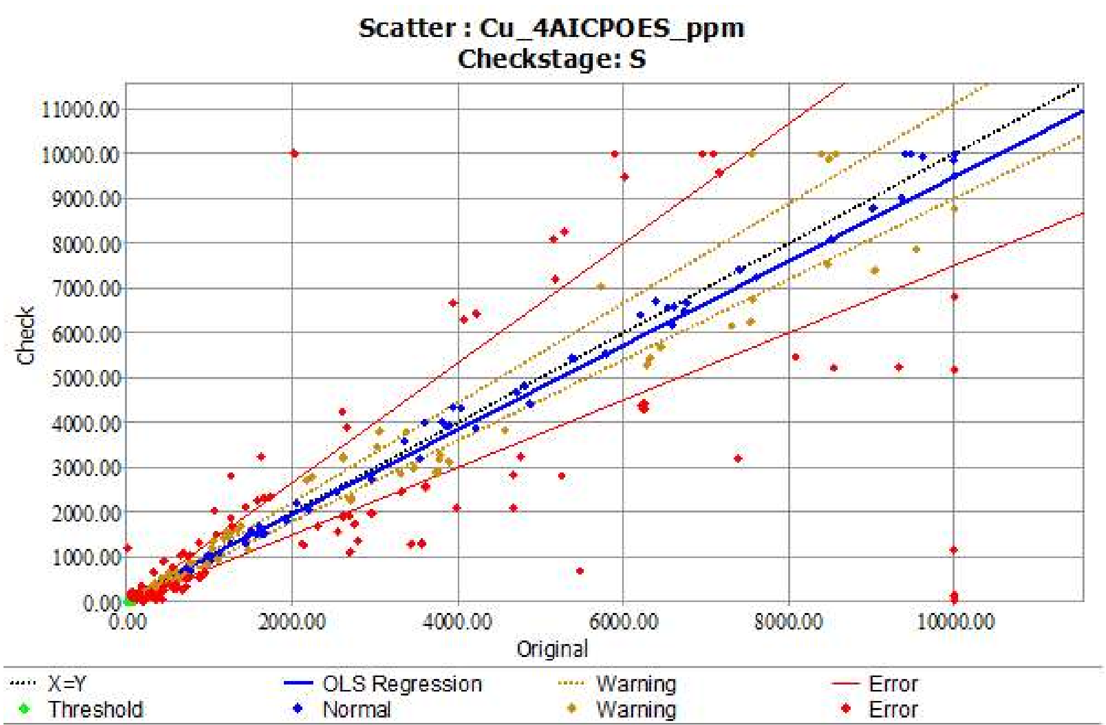


Figure 11.14: Scatter Plot for Field Duplicates Below 10,000 ppm Copper Completed by ICP

11.8 Umpire Lab Checks

A total of 597 samples have been select for independent umpire lab check since January 2024. At the time of writing this report, FireFly is working on a reporting system for umpire lab results and approximately half of the pulp assay results are still outstanding from the lab. Preliminary results from the first 151 umpire assay shows a very good correlation for copper between Eastern Analytical and SGS, (Figure 11.15).

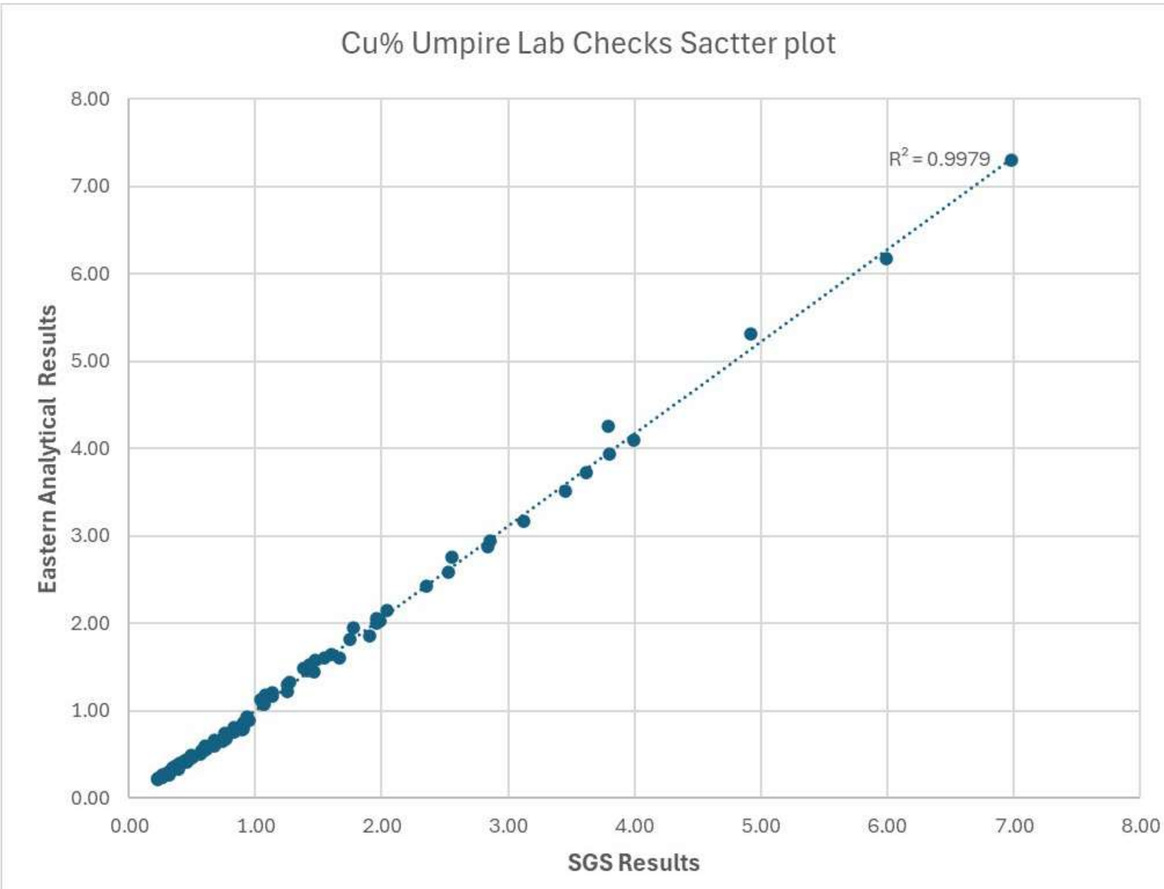


Figure 11.15: Scatter Plot for Field Duplicates Below 10,000 ppm Copper Completed by ICP

11.9 QP's Opinion

It is the WSP QP's opinion that the sample preparation and analytical procedures used on the Property meet acceptable industry standards and that the information reviewed at the time of the site visit is suitable to support geological modeling and mineral resource estimation.

11.10 QP Recommendations

The QP recommends that FireFly request secured assay certificates from Eastern as the current certificates were observed to be unsecured.

11.11 Historical QA/QC

The Historical quality assurance and quality control programs and procedures used at the property were consistent with standard industry practice. Prior owners maintained written field procedures and has had independent verifications of aspects such as drilling, surveying, sampling and assaying, database management and database integrity.

Below is a summary form the Technical Report Ming Copper Gold Mine by WSP, GEMTEC and Thibault & Associates (April 23, 2018) and the Technical Report Mineral Resource Estimate for the Ming Mine by SRK Consulting (June 12, 2008). The mineral resource QP completed an extensive internal review of Rambler's drill hole database and QA/QC practice and procedures.

11.11.1 RAMBLER 2018-2023 QA/QC Review

Historically at Rambler, quality control samples were inserted into the sample stream at a 1 in 30 ratio and every 10 samples there is a quality control sample.

Three standards were used between 2019 and 2023: CDN-CM-18, CDN-CM-40, and CDN-CGS-26 with copper and gold grades and standard deviations provided in Table 11.2. These standards are prepared by CDN Resource Laboratories Ltd. Standards and were assigned for best fit depending on the mineralization style and expected grades.

Table 11.2: External Standards Used by Rambler at the Ming Exploration Program

Standard	Cu%	Std Dev.	Au gpt	Std Dev.
CDN-CM-18	2.42	0.22	5.32	0.35
CDN-CGS-26	1.58	0.07	1.64	0.11
CDN-CM-41	1.71	0.05	1.60	0.15

Below is a summary and control charts from the Rambler 2022 QA/QC report

11.11.1.1 CDN-CM-18

The expected copper value for CDN-CM-18 is 2.42%. Rambler submitted nine samples in the year 2022 and averaged 2.33%. Nine samples returned within the acceptable accuracy and precision range (Figure 11.16).

11.11.1.2 CDN-CGS-26

The expected copper value for CDN-CGS-26 is 1.58%. Rambler submitted 316 samples in the year 2022 and averaged 1.51%. 305 samples returned within the acceptable accuracy and precision range (Figure 11.17).

11.11.1.3 CDN-CM-41

The expected copper value for CDN-CM-41 is 1.71%. Rambler submitted 102 samples in the year 2022 and averaged 1.65%. 86 samples returned within the acceptable accuracy and precision range (Figure 11.18).

11.11.1.4 BLANKS

A total of 392 samples were submitted as blanks in the year 2022, with two samples failing outside of the 3SD range (Figure 11.20).

11.11.1.5 DUPLICATES

A total of 54 duplicate samples were processed for copper in the year 2022. There is a strong correlation between the original and duplicates with only 5 samples above 100ppm exceeding the +/- 20% threshold (Figure 11.19).

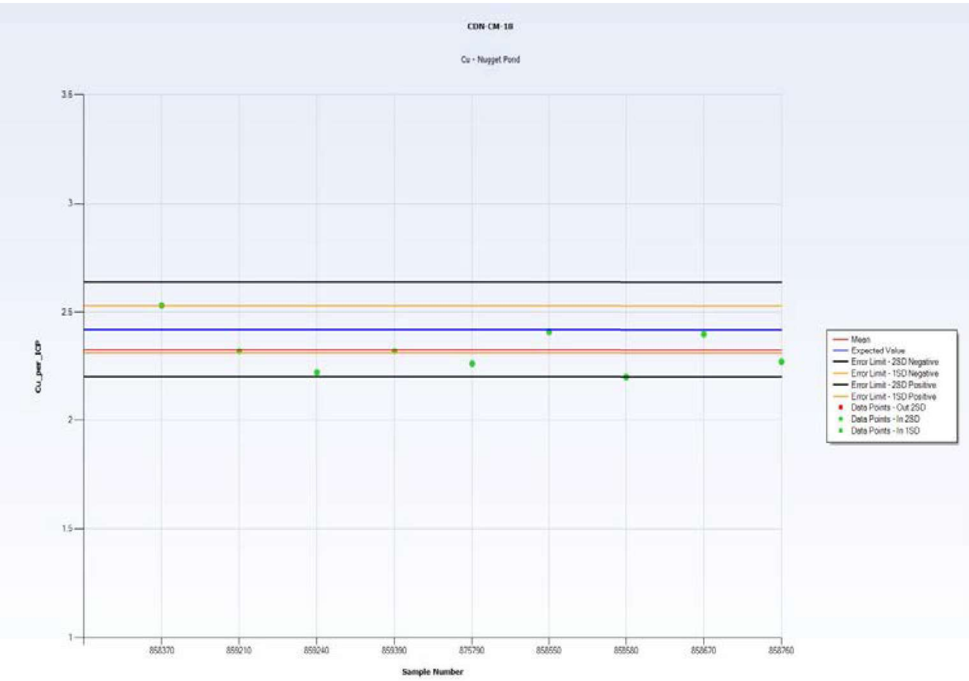


Figure 11.16: Historical Standard Control Charts for CDN- CM-18

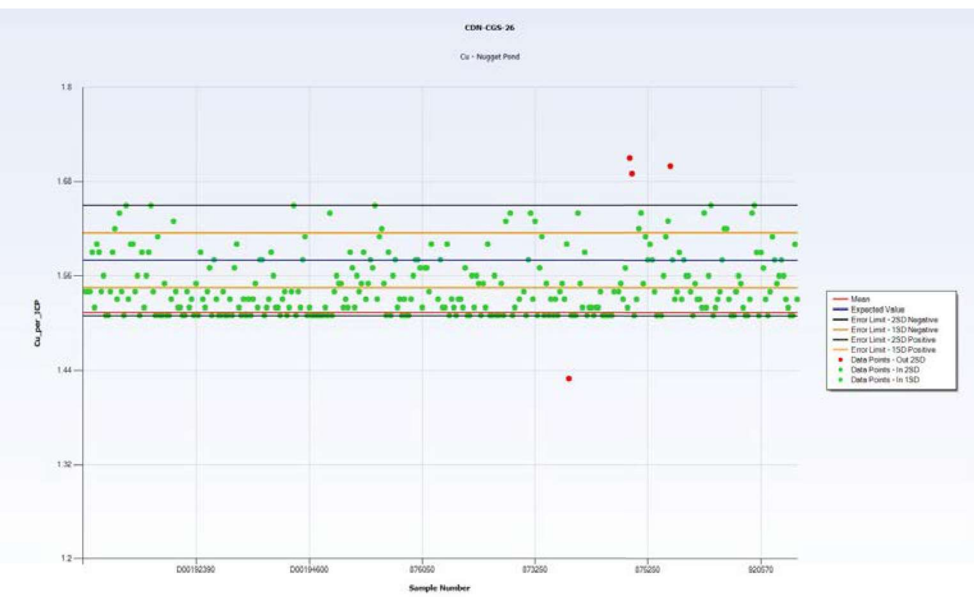


Figure 11.17: Historical Standard Control Charts for CDN- CGS-26

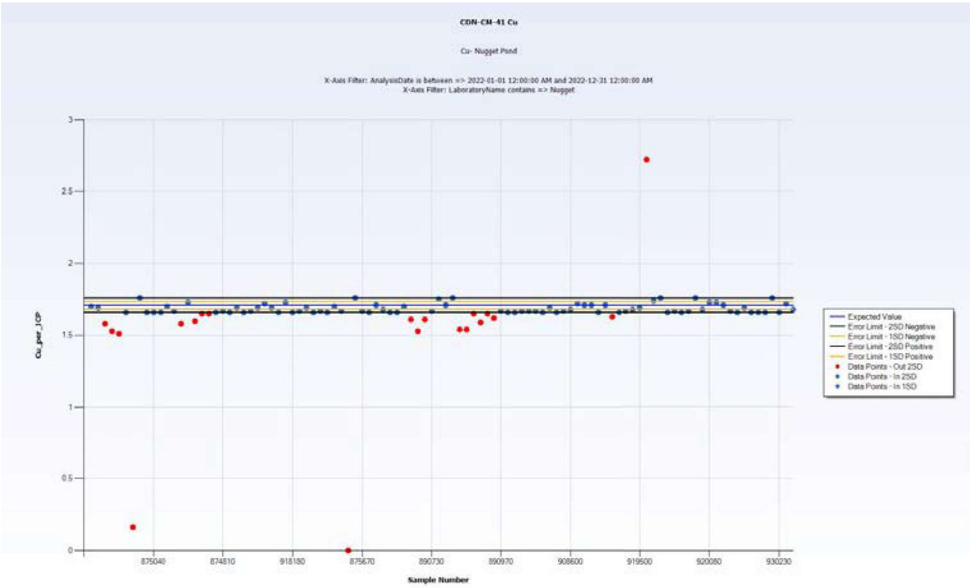


Figure 11.18: Historical Standard Control Charts for CDN-CM-41

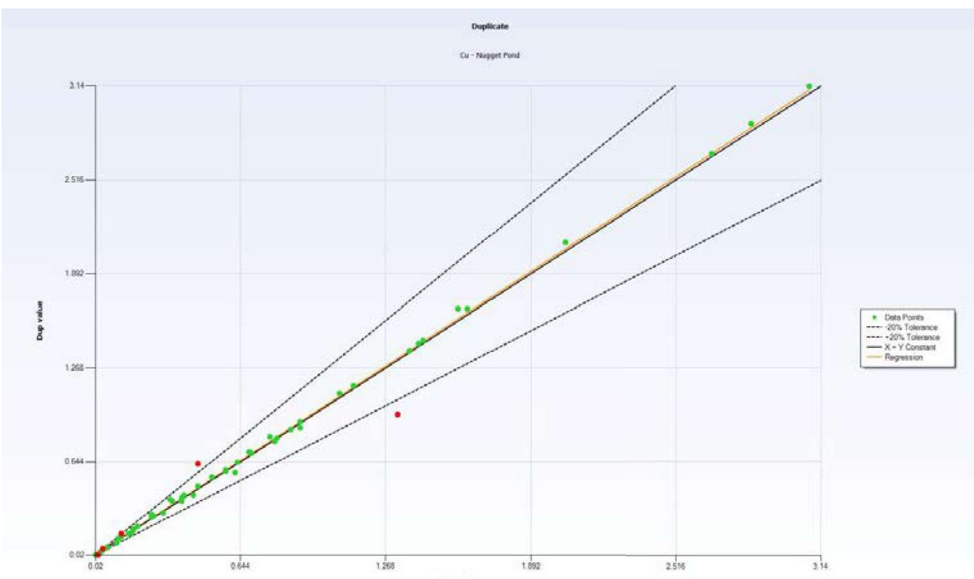


Figure 11.19: Rambler 2022 Historical Scatter Plot for Copper Duplicates

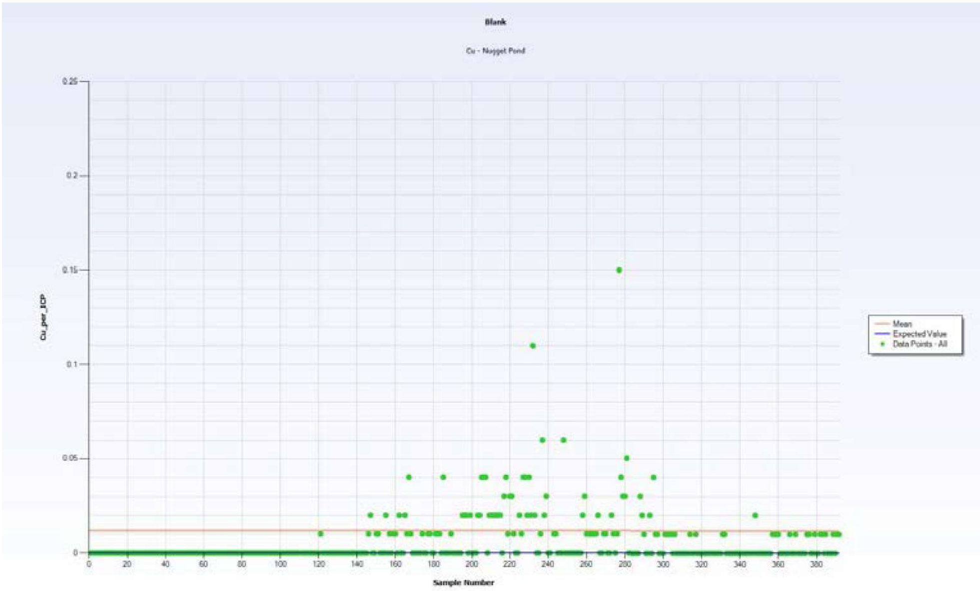


Figure 11.20: Rambler 2022 Historical Blanks Performance Chart with Copper Results

11.11.2 2008-2018 WSP Technical Report QA/QC Review

As part of the QA/QC program duplicate, blank and standard samples were inserted alternately, one per ten samples.

Analytical control measures in use at the Property involved both internal and external laboratory measures implemented to ensure that data received from outside sources are accurate and reliable. Rambler used the database management program MX Deposit which is very effective and efficient at managing assay data as well as QA/QC tracking and reporting. A representative number of assay certificates were compared to digital assay database for the 2018 Technical Report.

Check assays for the Property are routinely conducted by both the in-house laboratory and Eastern Analytical.

A series of three certified copper and gold external standards were inserted by Rambler staff. These standards and values have been tabulated in Table 11.3.

Table 11.3: Summary of Standard Reference Material

Standard	Cu%	Std Dev.	Au gpt	Std Dev.
CDN-CGS-15	0.451	0.02	0.57	0.06
CDN-CM-2	1.013	0.043	1.42	0.13
CDN-HC-2	4.63	0.26	1.67	0.12

The majority of data plots within two standard deviations of the certified value. Standards CDN-CGS-15 and CDN-CM-2 contain numerous samples that are more than two standard deviations below the accepted value. It is noted that a value average was calculated and demonstrates that copper values for this standard assay are consistently lower than the accepted value. Standard CDN-CGS-10, CDN-CGS-12, CDN-CGS-15, and CDN-HC-2 contained several gold values that exceed two standard deviations from the certified values. Given the high number of assays completed annually, Rambler did not consider the small number of exceedances significant.

Rambler submitted a total of 11,357 samples to both Eastern and Actlabs. The Eastern grades are used for initial reporting purposes, whereas the Actlabs certified results overwrite Eastern results when available and are used for resource estimation purposes. Plots showing the comparative results for copper and gold from Eastern and Actlabs. As expected, copper grades compare well, whereas a higher variance exists for gold.

A total of 186 blanks were inserted into the sample stream. The laboratories performed satisfactorily against these blanks.

11.11.2.1.1 STANDARD REFERENCE MATERIAL

Three standards from CDN Laboratories of Vancouver have been purchased and used since 2008. The control charts show accuracy on the top (how close to the expected value) and precision on the bottom (repeatability from one sample to the next).

11.11.2.2 CDN-CGS-15

The expected copper value for CDN-CGS-15 is 0.451%. Rambler submitted 39 samples between 2008 and 2014 and averaged 0.452%. All samples returned within the acceptable accuracy range and two sample pairings exceeded the precision threshold (Sample 8 and Sample 23). There is an upward shift in the accuracy after Sample 16. There is an unexpected high variability on the precision chart, which is likely attributed to the analytical method and the grade of the standard (Figure 11.21).

The expected gold value for CDN-CGS-15 is 0.570 g/t. Rambler submitted 39 samples between 2008 and 2014, and averaged 0.563 g/t. All samples returned within the acceptable accuracy and precision range. There is a slight downward drift of the results in accuracy chart. There is an unexpected high variability on the precision chart.

11.11.2.3 CDN-CM-2

The expected copper value for CDN-CM-2 is 1.013%. Rambler submitted 86 samples between 2008 and 2014 and averaged 0.983%. Six of the samples were mislabelled and removed from the dataset. The first 18 samples in the dataset are biased low and are highly variable. Samples 24 to 30 are all biased high and almost all fail. There is a shift in the data after Sample 29 which is the start of a new batch and likely a recalibration of the analytical instruments.

The expected gold value for CDN-CM-2 is 1.42 g/t. Rambler submitted 86 samples between 2008 and 2014, and averaged 1.358 g/t. Several samples were removed due to mislabelling. There are four failures in the dataset, two at the beginning, which is not uncommon. There is considerable variation in the precision graph, which would indicate the laboratory is having some difficulty with this particular standard. This standard is no longer in use.

11.11.2.4 CDN-HC-2

The expected copper value for CDN-HC-2 is 4.63%. Rambler submitted 19 samples between 2008 and 2014 and averaged 4.63%. All samples returned within the acceptable accuracy range and one sample pairing exceeded the precision threshold (Sample 11 and Sample 12). Between 2016 and 2017, Rambler submitted an additional 19 samples with an average of 4.79 %. This is influenced by two samples that returned grades over 5%.

The expected gold value for CDN-HC-2 is 1.67 g/t. Rambler submitted 19 samples between 2008 and 2014, and averaged 1.62 g/t. All samples returned within the acceptable accuracy and precision range.

11.11.2.5 CDN-CM-18

The expected copper value for CDN-CM-18 is 2.42%. Rambler submitted 57 samples between 2016 and 2017 and averaged 2.45% when one of the failed samples (11.6%) is removed from the dataset.

11.11.2.6 BLANKS

A total of 83 samples were submitted as blanks from 2008 to 2014. A total of 69 samples were submitted between 2016 and 2017 (Figure 11.22).

11.11.2.7 DUPLICATES

A total of 113 pulp duplicate samples were processed for copper between 2008 and 2014 and 69 duplicates were submitted between 2016 and 2017. There is a strong correlation between the original and duplicates with only one sample above 100 ppm exceeding the + /- 20% threshold resulting in a R2 value of 0.998.(Figure 11.23).

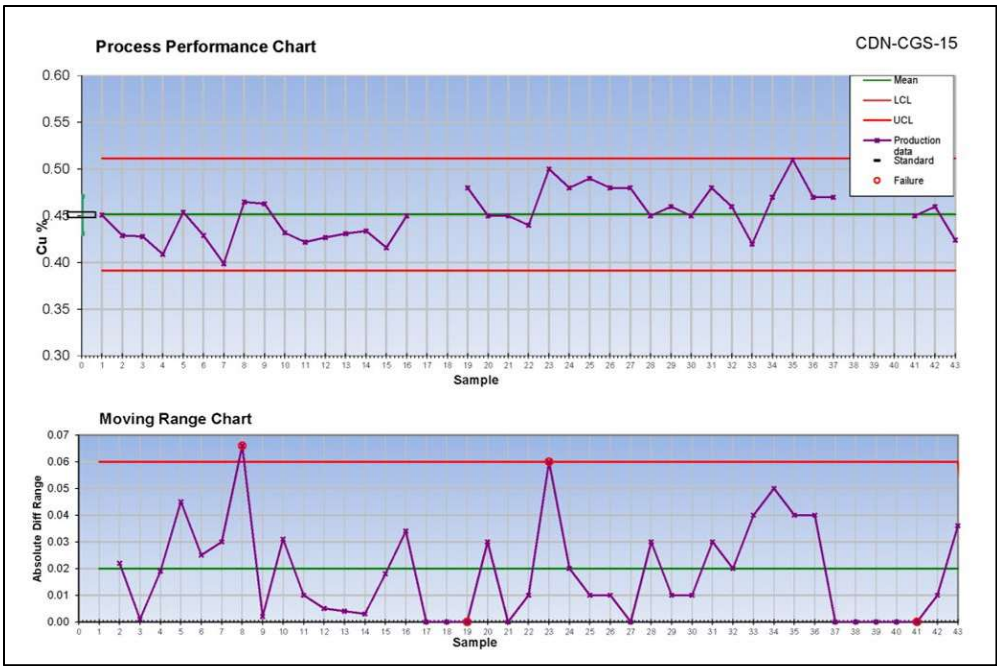


Figure 11.21: Historical Standard Control Charts for CDN-CGS-15 WSP Technical Report

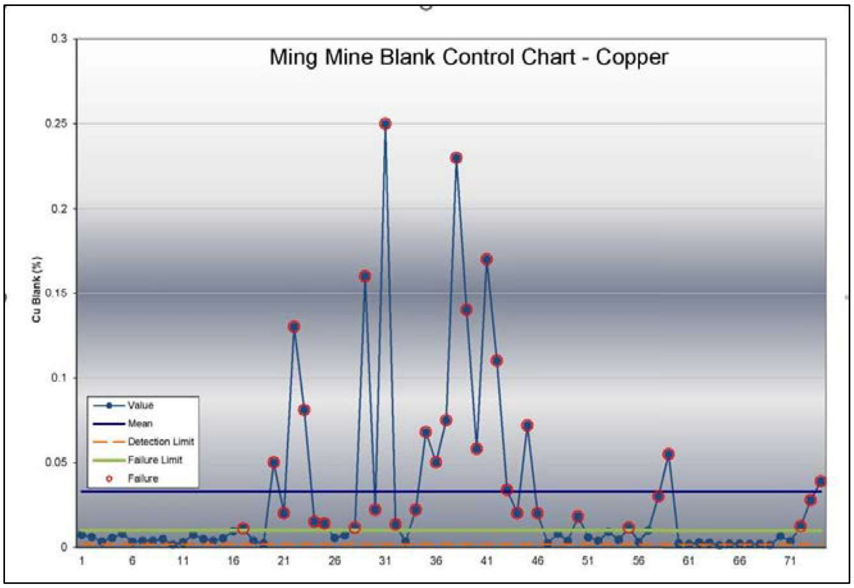


Figure 11.22: Historical Blanks Performance Chart with Copper Results WSP Report

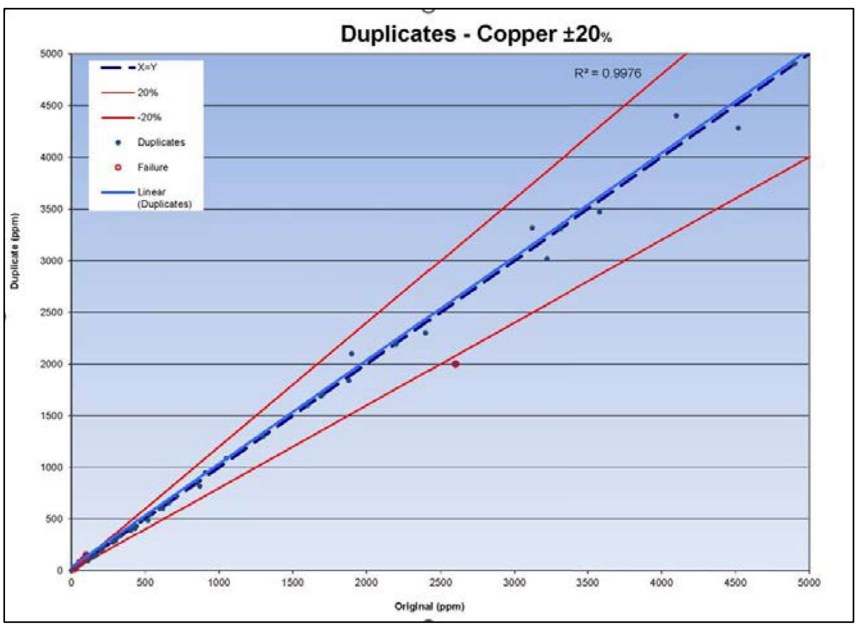


Figure 11.23: Rambler 2022 Historical Scatter Plot for Copper Duplicates

11.11.3 2004-2008 SRK TECHNICAL REPORT QA/QC REVIEW

Analytical control measures typically involve internal and external laboratory measures implemented to monitor the precision and accuracy of the sampling, preparation and assaying process. They are also important to prevent and monitor the voluntary or inadvertent contamination of samples. Randomly selected assay certificates and Quality Assurance and Quality Control Reports from Eastern Analytical and Actlabs were reviewed by SRK with no discrepancies between assay certificates and the digital assay database found.

Check assays for the Rambler property had also been conducted by ALS Chemex, using industry-standard techniques posted on their website. Check assays were routinely performed at Eastern Analytical. It was reported that only one batch of samples was been rerun by Actlabs, which did so on their own initiative because of failure to produce the proper values on their own internal standards.

Table 11.4: External Standards Used by Rambler at the Ming Exploration Program

Standard	Cu%	Std Dev.	Au gpt	Std Dev.
CDN-CGS-4	1.947	0.062	2.09	0.15
CDN-CGS-3	0.646	0.031	0.53	0.048
CDN-CGS-6	0.318	0.018	0.26	0.03
CDN-CGS-2	1.177	0.046	0.97	0.092
CDN-CGS-12	0.265	0.015	0.29	0.04
CDN-CGS-10	1.55	0.07	1.73	0.15

Various plots showing the performance of the laboratories against these standards is presented in Figure 11.27 below with the standards copper and gold value with standards deviations provided in Table 11.4. It can be noted from these plots that the majority of the standard data plot within two standard deviations of the certified value. It is only for standard CDN CGS-2 that five copper values exceeded the two standard deviation limits. SRK did not however regard this as significant.

Rambler had submitted a total of 2571 samples to both Eastern and Actlabs. The Eastern grades were used for initial reporting purposes, whereas the certified laboratory Actlabs results have overwritten that of Eastern when available and were subsequently used for resource estimation purposes. Plots showing the comparative results for copper from Eastern and Actlabs are presented in Figure 11.24. As expected, copper grades compare well whereas a higher variance exists for gold plots. A total of 111 blanks were inserted into the sample stream. The laboratories performed satisfactorily against these blanks. Plots for these blanks (for gold and copper) are presented in Figure 11.25 and Figure 11.26.

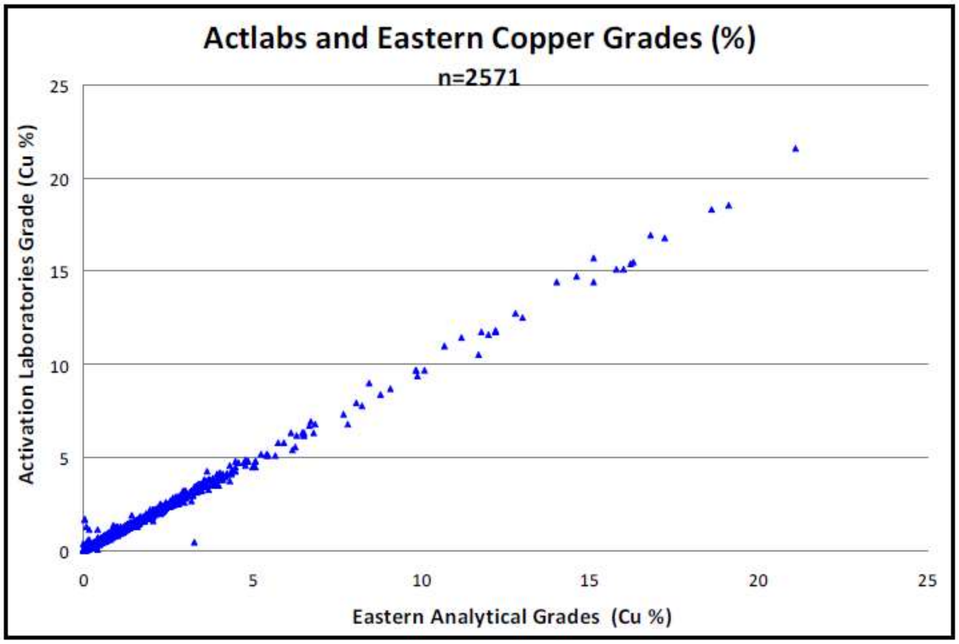


Figure 11.24: Historical Scatter Plot for Copper from Eastern and Actlabs

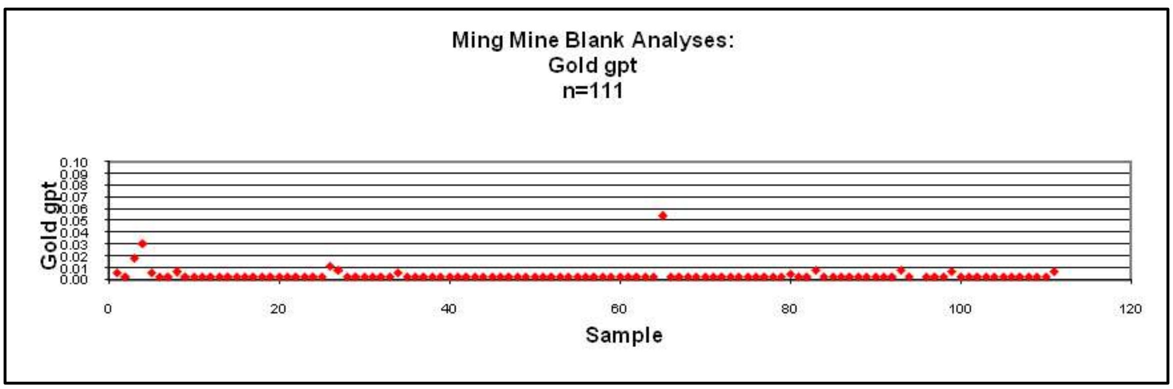


Figure 11.25: Historical Blanks Performance Chart with Gold Results

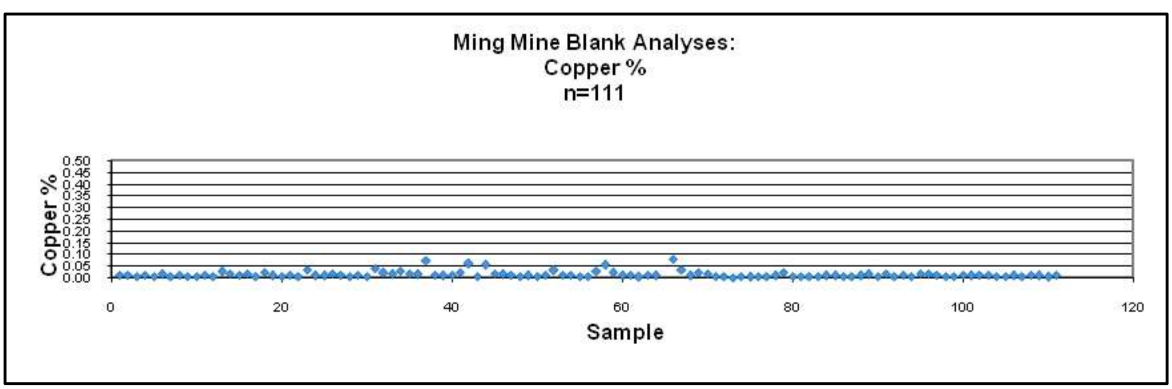


Figure 11.26: Historical Blanks Performance Chart with Copper Results

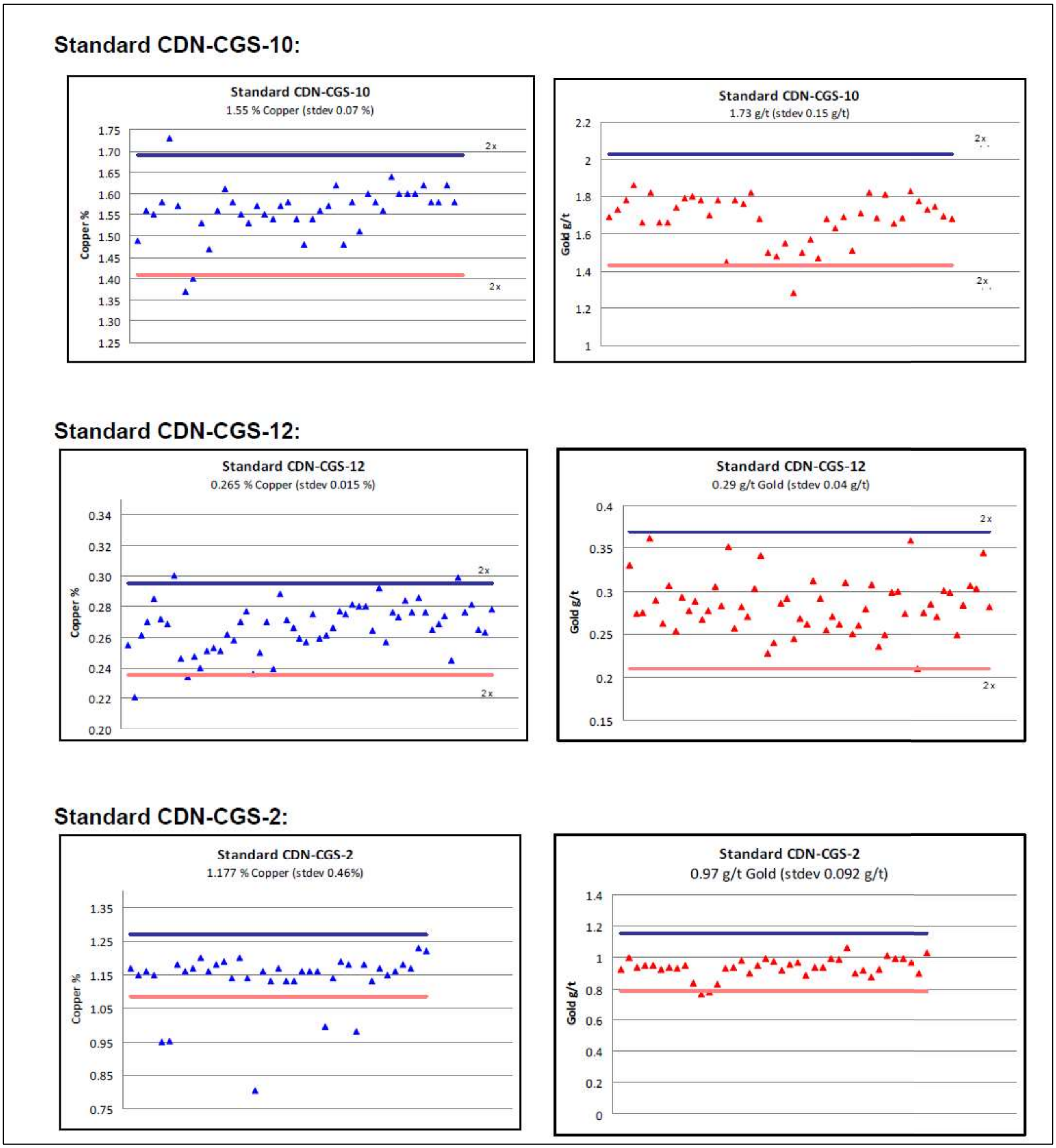


Figure 11.27: Historical Standard Control Charts SRK Technical Report

11.12 Historical QA / QC QPs Opinion

It is WSP QP's opinion that the historical sample preparation, analytical and QA/QC procedures used on the Property were reviewed by previous SRK and WSP QPs and were considered acceptable industry standards at the time and that the information can be used for geological and resource modelling.

It is International Resource Solutions QP opinion that the historical sample preparation and QA/QC procedures used on the property met industry standards at the time and that the information can be used for geological and resource modelling.

12.0 DATA VERFICATION

12.1 WSP

FireFly carries out ongoing validation processes of the diamond drill data collection system using the acQuire database and Seequent Imago photograph systems.

12.1.1 Site Visit

The WSP QP visited the Property site from July 15, 2024, to July 16, 2024, and is summarized in Item 2.3. During the site visit the QP visited the core logging facilities, core sawing and sample preparation building and the underground Ming Mine. During the underground Ming Mine visit the QP visited the new exploration drift areas completed by FireFly from the 805 m Level and two underground drilling stations accessed via the internal ramp.

The WSP QP did not collect independent samples of sulphide Cu-Au-Ag mineralization. The QP did observe sulphide mineralization in core in the core logging facility including MMS and LFZ. MMS was also observed underground in two locations along the ramp during the underground site visit.

During the site visit the QP observed all the data collection processes, as outlined in Item 2.3, procedures, including drill hole surveying, core logging, assaying, sample preparation, and QA/QC systems.

The QP also carried out internal validation of the diamond drill hole database against original assay certificates provided by Firefly. Approximately 10% (2,150 assay checks against 93,981 assay samples) of assays values provided for copper and gold were reviewed and no significant discrepancies were identified.

12.1.2 Historical Drill Hole Database Verification

Firefly has completed an extensive review of Rambler's historical drilling assay data to validate for use in geological modeling and resource evaluation. All historical data was imported into an acQuire database with various confidence flags. The following procedures were completed by Firefly or consultants supervised by Firefly (MapIT and Geodex) to validate historical drill hole data:

- Drill hole collars – confirmed collar coordinates in the database in 3D against as-built survey data.
- Drill hole down hole surveys – review deviations of data and flagged unrealistic deviations via a spreadsheet filter, confirmed surveys in mine grid and confirmed the dip of the downhole surveys was correct based on position of collar to as built on surface or in underground drive.
- Assays – 280 historical assays were checked against the original assay laboratory certificates. This was a macro in the acQuire database that flagged differences between laboratory certificate and assay value in the database. No differences were identified between the certificates and the assays values stored in the database.
- Lithology – updated the Rambler lithology codes and modified to match the Firefly lithology coding system.

The confidence levels that were developed to define if historical drill hole data could be used for geological modeling and resource evaluation included the following:

- Conf 1 – No known issues with data and can be used for geological modeling and resource evaluation.
- Conf 2 – Minor data discrepancies such as sparse downhole survey data or the use of planned collar coordinates vs as-built. Can be used for geological modeling and resource evaluation.

- Conf 3 – Only planned drill hole survey or no assays or mineral interpretation did not match data from surrounding boreholes. These holes are excluded from the acQuire database and not used for geological modeling and resource evaluation. Note 72 drill holes were flagged as Conf 3.
- Conf 4 – Underground chip samples (CL) that are excluded from resource evaluation.
- Conf 9 – Drill holes with no downhole surveys or collar coordinates are flagged in acQuire database and excluded from geological modeling and resource evaluation.

Upon completion of this data verification Firefly completed a statistical review of the data in acQuire and 3D visual review of historical drill holes to flag data that did not match surrounding historical drill holes or Firefly drill holes.

In addition to the drill hole database verification completed by Firefly previous third-party consultants also completed data verification checks as part of published NI 43-101 Technical Reports including the following:

- Technical Report Mineral Resource Estimate for the Ming Mine by SRK Consulting (June 12, 2008) – SRK completed copper QQ plots of historical underground historical drilling data (1977-1981 for a total of 38 drill holes) vs Rambler data (drilling between 2003 to 2007 for a total of 124 drill holes) for the Lower Footwall Zone and found the datasets were similar in geotechnical signature. This supported SRK using the 1977 to 1981 historical data for resource estimation. Additionally, SRK did identify they were not confident in the historical down hole survey dataset. SRK also did a random review of the drilling and other geological databases and compared them against digital and paper logging sheets and identified the checks that matched. SRK completed independent verification on Rambler's data at that time and did not identify any key differences. The following checks were completed:
  - Verified a selection of surface and underground drill collar positions.
  - Logged 5 drill holes at a high level to compare against the drill hole database.
  - Collected 8 independent core samples for gold and copper comparative assaying (low- and high-grade samples).
- Technical Report Ming Copper Gold Mine by WSP, GEMTEC and Thibault & Associates (April 23, 2018) – The mineral resource QP completed an extensive internal review of Rambler's drill hole database by comparing the drill hole file against original drill hole logs and assay certificates in 2015. The reviews included checks again collar coordinates, end of hole depth, down hole survey, lithological codes and any errors identified were less than 1% of the dataset reviewed. Drill hole data checks were completed when data was entered into Geovia Surpac geological modeling software. Additionally, the mineral resource QP completed the following independent checks:
  - Visually observed drill hole setups underground during a February 2018 site visit.
  - Collected 26 independent samples of mineralized drill core from 2015. The results of the validation check samples for copper, gold, silver and zinc indicate that the results emphasized the highly variable nature of the grade distribution for the mineralization style.
  - The mineral resource QP indicated that the sampling practice reviewed at the time met industry standards and the database was suitable for mineral resource estimation.

The WSP QP completed the following reviews regarding the historical drill hole data (not collected by Firefly):

- Reviewed the verification checks that were provided in previous technical reports for the Ming Mine.
- Reviewed the in-depth database verification procedure that was completed by Firefly when uploading historical data into the acQuire database.
- Checked the drill hole database provided by Firefly to confirm the various flags were applied to the data as prescribed in the historical drill hole verification acQuire database.
- Visually reviewed historical drill hole data against nearby historical data and Firefly drill hole data to identify and discrepancies.

The WSP QP is of the opinion that the historical data has been reasonably validated by Firefly and is suitable to support geological modeling and mineral resource estimation. As Firefly drill hole data is collected near historical drilling more weighting should be applied to Firefly's data since some of the historical data has sampling gaps in the LFZ.

12.1.3 WSP Data Verification QP Conclusions and Recommendations

Based on the site visit observations and data verification results, the WSP QP concludes that the FireFly data collection procedures meet current industry standards and that the FireFly sample database, at the time of the site visit, is suitable to support geological modeling and mineral resource estimation.

During the site visit the WSP QP reviewed the Firefly exploration drilling campaign against areas that were previously drilled by Rambler. These areas were mostly in the upper LFZ. Firefly is sampling continuously through the alteration zones and mineralization with no gaps while Rambler only sampled in areas with observed higher grade sulphide mineralization. Therefore, there will be sample gaps in some drilling locations where the Rambler drill holes and the Firefly drill holes are near each other.

The WSP QP recommends further data verification, including either assaying of historical Rambler drill hole samples, if available, and completing comparisons of the two data sets during the Mineral Resource estimation process to determine the best approach when working against historical data sets.

12.2 IRS

12.2.1 Database and Drill Hole Verification

The Independent QP (Resource Geologist MRE) Brian Wolfe, Principal Consultant of International Resource Solutions Pty. Ltd., visited the Ming Mine site and core logging/office facilities from July 23, to July 26, 2024. The visit included an underground tour where three underground drill stations were visited, 2 in the 805mL exploration drift and one in the 750 mL. During the tour, exposures of the VMS mineralization were visited in the 805-drift access, 805 vent drift, and 82 0mL. The lower foot wall stringer mineralization was visited in the 730 mL. A visit was completed to the Eastern Analytical Laboratory where lab practices and process were reviewed from sample preparation to the final assay reporting.

During the site visit the and in preparation for the MRE, the IRS QP compared and reviewed the historical drill holes against the recently drilling completed by FireFly. The IRS QP inspected the current FireFly drill core and some of the stored historical drill core were sulphide mineralization was observed.

The IRS QP reviewed the historical technical reports as well the validation steps completed by FireFly personnel, as described in Section 12.1.2.

The International Resource Solutions QP is of the opinion that the historical dataset provided by Firefly is of an appropriate standard to use for resource estimation work.

Eastern Analytical and SGS is accredited to international quality standards through ISO/IEC 17025 (ISO/IEC 17025 includes ISO 9001 and ISO 9002 specifications) with CAN-P-1579 (Mineral Analysis).

The International Resource Solutions QP visited Eastern Analytical laboratory on July 25, 2024, and reviewed lab practices and procedures. The lab procedures and QA/QC management observed by the QP are consistent with good industry practice and are deemed fit for purpose.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Introduction

While there is no current mineral processing occurring at the Property, bench scale metallurgical testing has been completed on the Ming Massive Sulphide (MMS) and Lower Footwall Zone (LFZ) of the Property in the past. In addition, operational data from the Nugget Pond concentrator since 2012, processing both ore types, is available for concentrator metallurgical performance studies.

13.2 Mineralogy of Lower Footwall and Massive Sulphide Zones

Historical sampling was completed by Rambler in 2007. Three metallurgical samples were submitted to SGS Mineral Services for detailed mineralogical examination using the QEMSCANTM method (*SGS, 2007*).

The three samples were identified as 1807 Zone, MMS, and LFZ. The 1807 and MMS samples were dominated by massive sulphide mineralization, while the LFZ sample consists mainly of stringer sulphides in chlorite and quartz gangue.

In the 1807 and MMS samples, copper occurred almost exclusively as chalcopyrite ($CuFeS_2$) with trace enargite (Cu_3AsS_4). Trace tetrahedrite ($(Cu,Fe)_{12}Sb_4S_{13}$) was also identified in the 1807 Zone. Zinc occurred exclusively as sphalerite ((Zn,Fe)S) in the 1807 and MMS samples. Iron sulphides were the most abundant mineral group in the 1807 and MMS samples, occurring mainly as pyrite (FeS_2). Trace galena (PbS) was found in both the 1807 and MMS samples while trace arsenopyrite (FeAsS) occurred in the 1807 Zone sample. There were only small amounts of non-sulphide minerals observed in the 1807 and MMS samples including quartz with trace micas, chlorites and carbonates.

The LFZ sample contained copper exclusively as chalcopyrite. Iron sulphides made up only 3.5% of the LFZ sample occurring as roughly equal amounts of pyrite and pyrrhotite ($Fe_{1-0.8}S$). There was no significant sphalerite content in the LFZ sample and other sulphide minerals did not occur in significant amounts. The most abundant mineral in the LFZ sample was chlorites, followed closely by quartz. Other non-sulphides included minor feldspars, micas, oxides and trace amphiboles.

13.3 Process Recovery Trends

The Nugget Pond mill has been processing the Ming Mine ore since 2012, and the metallurgy and processing of the ore is well understood. Since 2016 the ore feed has been predominantly Lower footwall (LFZ) and Ming North VMS ore types blended and mixed based on ore availability. Copper recoveries for the period 2016-2023 were relatively consistent and above 95% recovery. Average yearly recoveries for Copper, Gold and Silver are shown in Figure 13.1.

The process plant achieved relatively high recoveries through a generic flowsheet where run-of-mine ore was crushed through a 2-stage crushing plant down to (-10mm) P80 size. Milling was through a 2 series SAG and Ball mill with a P80 of (-75µm). This was pumped and processed through a copper-gold floatation circuit in a conventional configuration consisting of rougher, rougher-scavenger, primary/secondary/tertiary cleaner floatation cell banks. Figure 13.2 shows the process flow sheet for the Nugget Pond milling circuit.

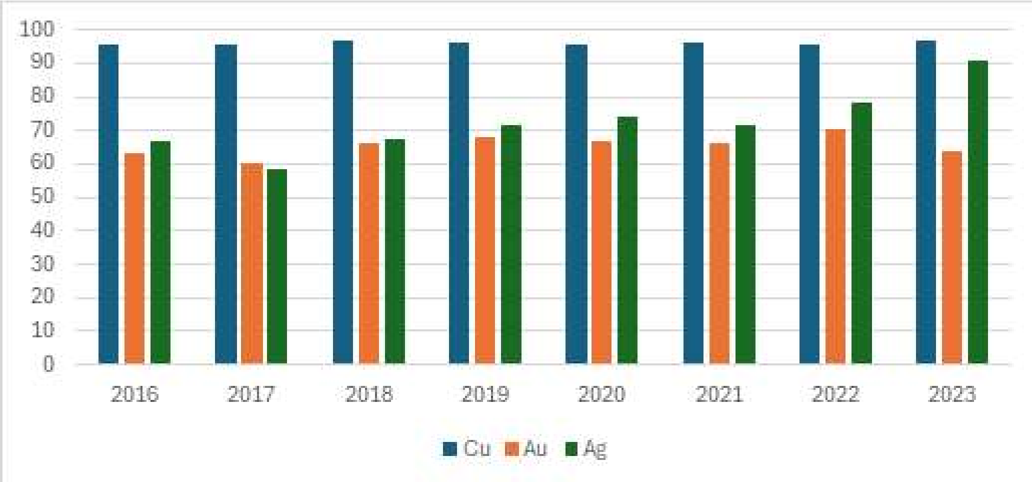


Figure 13.1: Monthly Average Nugget Pond Recoveries in 2016

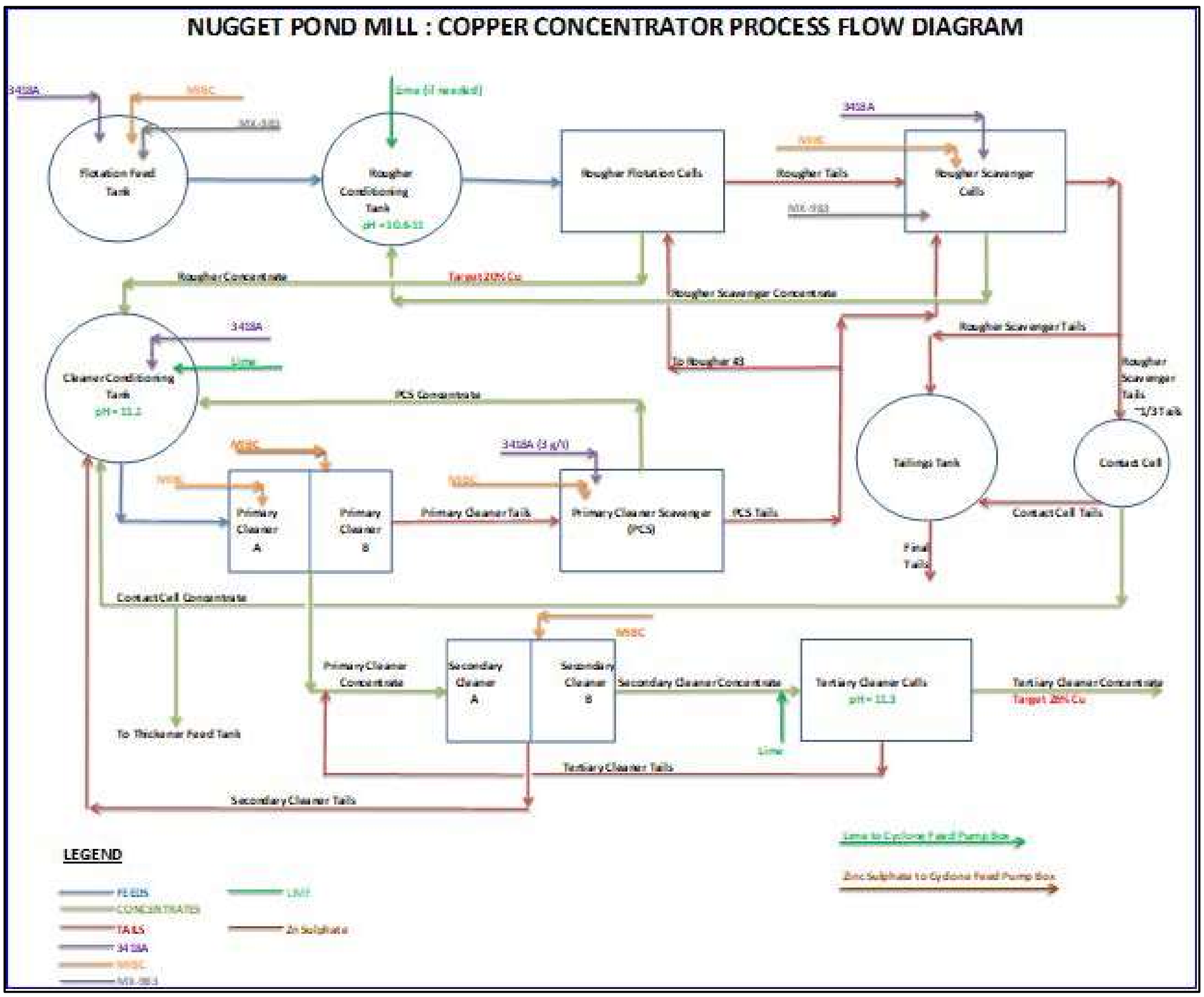


Figure 13.2: Nugget Pond Mill Process Flow Diagram

13.3.1 Effect of Throughput and Head Grades on Recoveries

Significant data was collected over the years which shows that coarser grind and ore feed rate to the mill had moderate impact on the overall recoveries. The grind size averaged about 60% passing 200 mesh, which is equivalent to the target grind size of 80% passing 120 microns determined in bench scale testing. Figure 13.3 presents a summary of the ore feed rate against recovery for the period between 2016 and 2023.

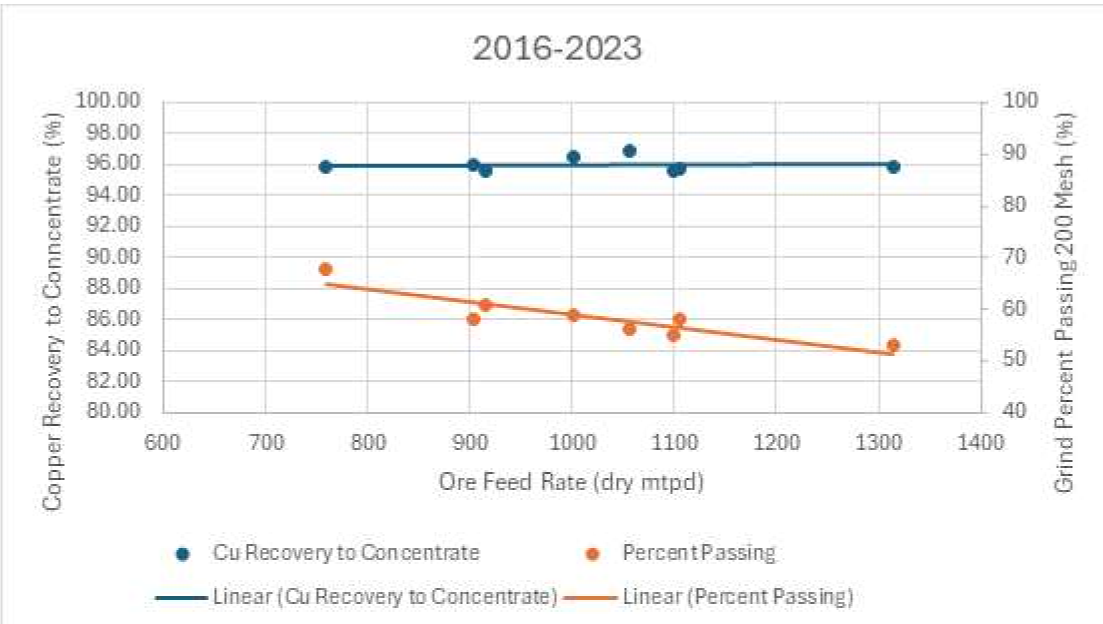


Figure 13.3: Grind Size and Copper Recovery with Varying Ore Feed Rate 2016-2023

Figure 13.4 to Figure 13.6 show the effect of head grades on recoveries in the Nugget Pond concentrator over a period from 2016 to 2023 before the operation was put on care and maintenance. In general, copper recovery did not vary with head grade and is generally constant between 95%- 97% copper. Gold and silver recoveries increased as head grades increased. This relationship can be used to estimate gold and silver recoveries with varying feed grades to the mill.

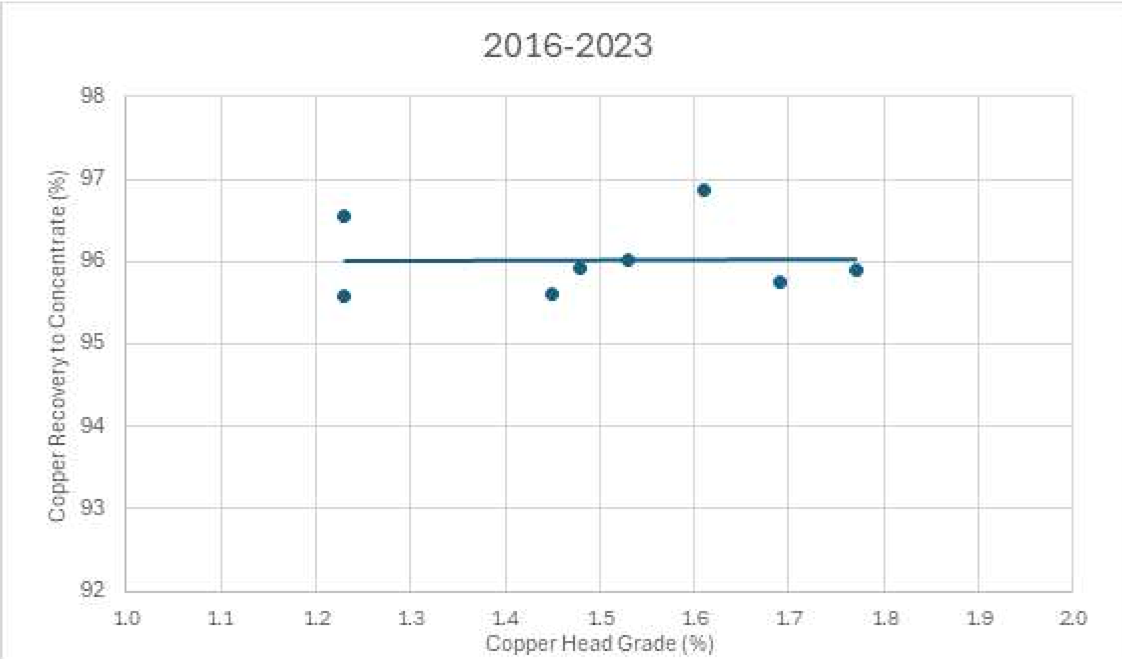


Figure 13.4: Copper Recovery Variation with Head Grade 2016-2023

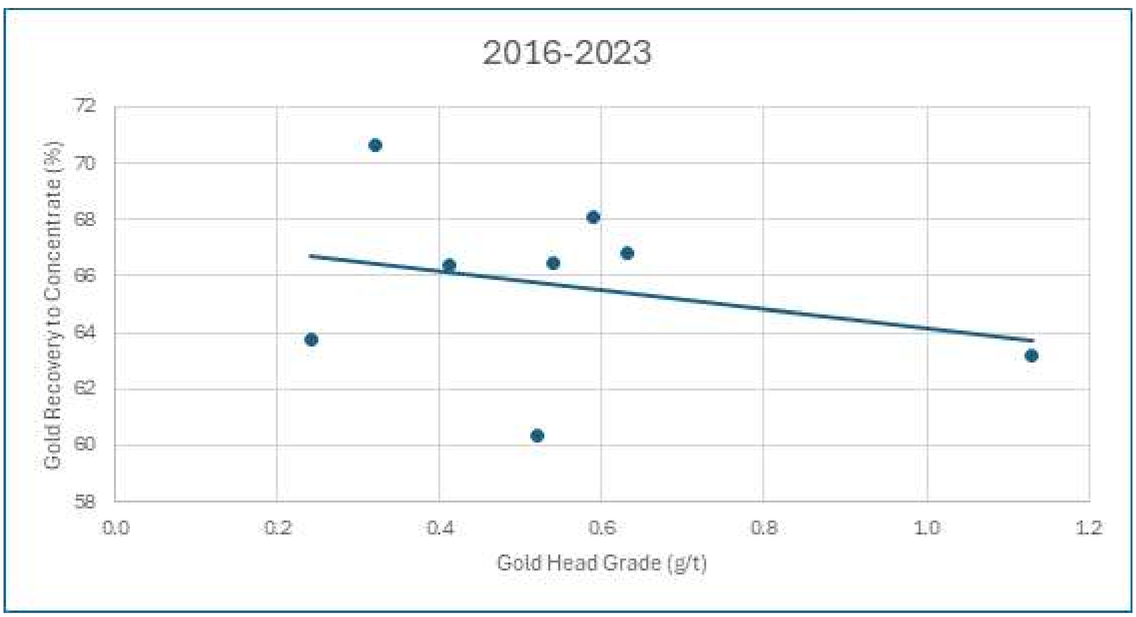


Figure 13.5: Gold Recovery Variation with Head Grade 2016-2023

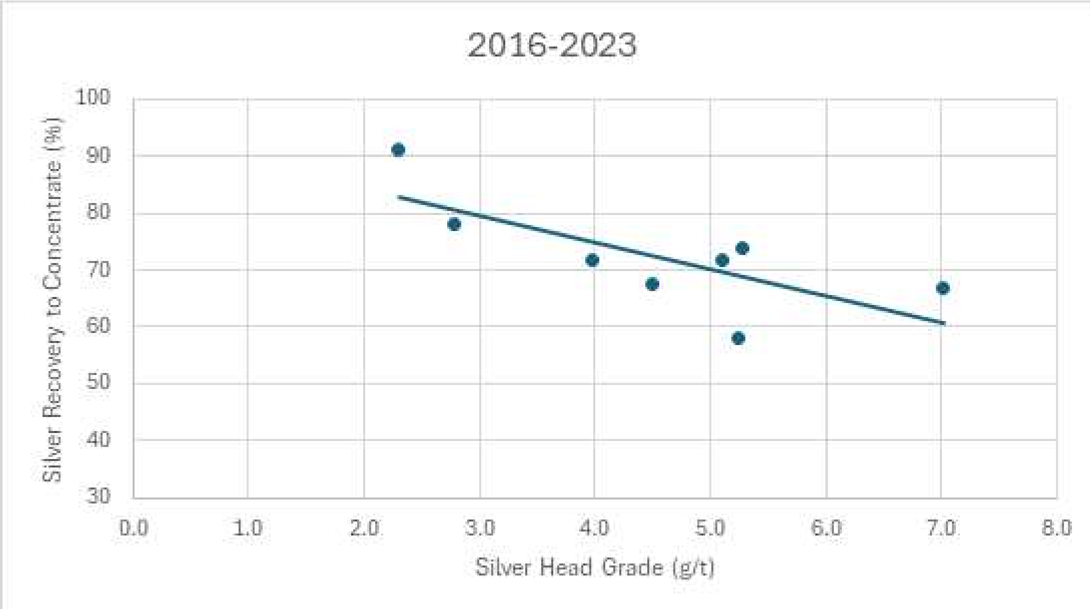


Figure 13.6: Silver Recovery Variation with Head Grade 2016-2023

13.3.2 Average Concentrator Grade and Recovery

Significant history exists for the concentrator copper recovery performance over the years. The results presented in Table 13.1 show the average metallurgical performance from 2019. Recoveries have remained consistent with minor increases in 2022 and 2023 due to higher feed grades to the mill.

Table 13.1: Average Grades and Recoveries - Nugget Pond Concentrator 2019-2023

	Mill Feed Grades			Recovered Conc Grades			% Average Recoveries		
	Copper %	Gold (g/t)	Silver (g/t)	Copper %	Gold (g/t)	Silver (g/t)	Copper %	Gold (g/t)	Silver (g/t)
2019	1.48	0.59	5.11	27.53	7.70	69.06	95.91	68.09	71.76
2020	1.45	0.63	5.27	26.69	8.16	72.79	95.60	66.80	74.05
2021	1.53	0.41	3.97	27.69	5.59	55.69	96.02	66.37	71.81
2022	1.69	0.32	2.78	27.39	3.99	37.24	95.74	70.62	77.96
2023	1.61	0.24	2.30	27.75	2.64	34.20	96.86	63.73	91.09

Note: Gold and silver grades and recoveries in the concentrate will vary as the grade of gold and silver change in the feed

Based on the Annual Report on Operations in 2022 for the Ming Mine the following mill production occurred in the Nugget Pond concentrator (Rambler, 2023):

- Milled a total of 372,645 tonnes (dmt) at 1.67% Cu, 0.32 g/t Au, and 2.69 g/t Ag. The recoveries were 94.84% for Cu, 69.49% for Au and 79.79% Ag.

- Concentrate produced was a total of 22,108.54 tonnes (dmt) 27.37% Cu, 4.04 g/t Au, and 37.23 g/t Ag. The copper metal contained 6062.59 tonne (dmt), gold metal contained 2678.53 oz and silver metal contained 26,153,87 oz.

13.3.3 Historical Test Work

The following Metallurgical tests were conducted:

- Lower Footwall Zone and Massive Sulphide Blends (2016-2017). Tests included:
  - Dense Media Separation (DMS) demonstration plant trials (2016)
  - Bench scale flotation test program (2017)
- Lower Footwall Zone Samples (2007 – 2015). Tests included:
  - Batch Flotation
  - Batch Gravity Separation
  - Batch Flotation and Dense Media Separation
  - Batch Flotation, Dense Media Separation, and Ore Sorting
- Massive Sulphide Zone Samples (2008 – 2011), Tests included:
  - Sample Characterization Description
  - Crushing and Grinding Indices
  - Flotation Testing
  - Gravity Gold Recovery
  - Flotation Tailings Mineralogy
  - Flotation Tailings Gold Cyanide Leaching
  - Dewatering Tests
  - Copper Flotation Wastewater Analysis
  - Flotation Tailings Characterization

Test results and discussions are outlined in the WSP, Thibault & Associates and Gemtec report, *Ming Copper-Gold Mine Technical Report Update*, April 2018.

14.0 MINERAL RESOURCE ESTIMATES

The MRE for the Ming Mine has been completed by International Resource Solutions Pty Ltd with an effective date of October 29th, 2024. The updated resource was prepared during October 2024 incorporating historical drilling completed by Rambler Metals and Mining PLC (Rambler) and FireFly drill results from December 2023 to October 2024. The estimation approach was considered appropriate based on the review of a number of factors, including the quantity and spacing of available data, the interpreted controls on mineralization, and the style, geometry and tenor of mineralization. The estimation was constrained with geological and mineralization interpretations.

The MRE preparation included the following aspects:

- Loading, review and validation of the drill hole database and correction of any data identified as erroneous.
- Review geology mineralization domains based on geological logging, alteration structural data and grade continuity provided by FireFly.
- Exploratory Data Analysis (EDA) and Variography of raw data and 2-meter composites.
- Block model generation.
- Grade interpolation by Ordinary Kriging.
- Grade estimate classification.
- Validation and checks of the resource model final estimate.

14.1 Database Validation

The resource estimation was based on the available exploration drill hole database which was compiled in-house by FireFly. The database was reviewed and validated prior to commencing the resource estimation study.

The database includes assay results from historical drilling completed by Rambler and recent drilling completed by FireFly Metals. The resultant database was extensively validated. Checks made to the database prior to use included the following:

- Check for overlapping sample intervals.
- Check downhole surveys.
- Review consistency of depths between different data tables.
- Check for any gaps in the data.
- Replace less than detection assays with half detection limit.
- Replace intervals with no sample with -999.0.

A summary of the Historical data validation completed by FireFly is detailed in Sections 11 and 12 of this report.

14.2 Summary of Data Used in Estimate

The Ming deposit has been sampled exclusively by diamond drilling. A total of 1,328 holes for a total drilled meterage of 233,380m was used to inform the October 2024 resource model and is summarized in Table 14.1. The database includes both surface and underground drilling, all the FireFly drilling has been completed from underground platforms. The MRE included all the assay and drilling data received up to the 3rd of October 2024.

Table 14.1:Dril Hole Summary

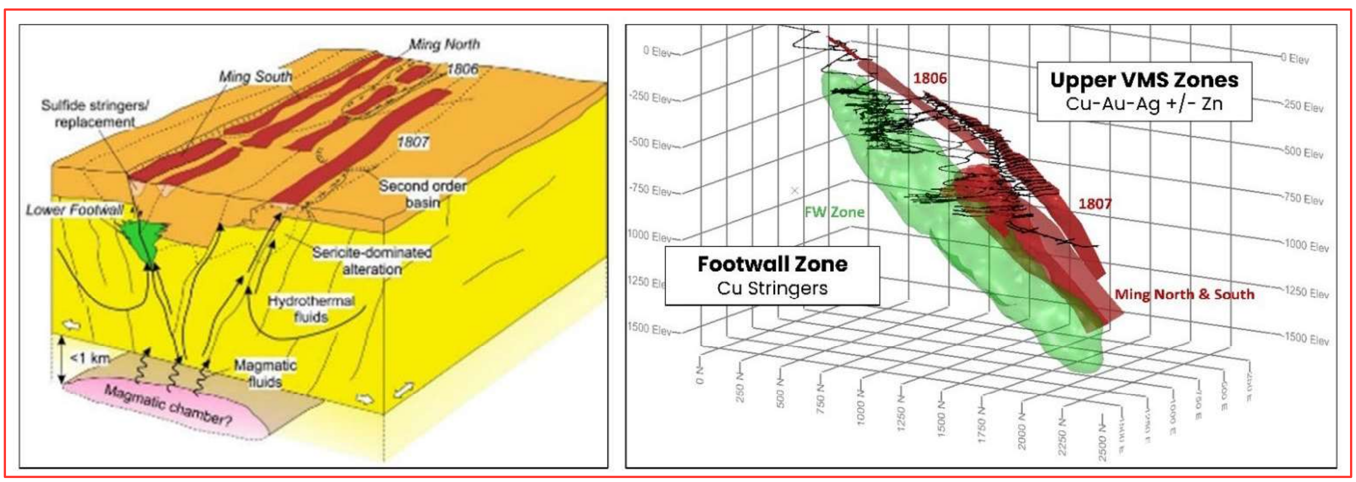
Company	Period	Holes	Metres	% of Total
Rambler	2004-2022	1,256	202,740	86.9%
FireFly	2023-2024	72	30,640	13.1%

14.3 Interpretation and Modelling

The Ming deposit is classified geologically as a volcanogenic massive sulphide (VMS) mineralized system. The Ming mineralization is located at the regional contact between Cambrian-Ordovician aged felsic volcanics (rhyolite) and mafic volcanics.

Hydrothermal fluids migrated towards the surface via deep-tapping growth faults, driven by the heat generated from the tectonic collision and subduction of ancestral North America (Laurentia) beneath proto-Europe (Gondwana). The conceptual deposit model proposed by Pilote et al. (2016) is presented in Figure 14.1 along with the current mineralization domains for the October 2024 resource model.

Mineralization is locally intersected by post-mineral mafic gabbro dykes which can contain structurally controlled quartz-carbonate veins with remobilized sulphides.



Note: The copper-dominated stringer style Footwall mineral zones are shown in green. The upper high-grade Cu-Au-Ag massive sulphides lenses are shown in red. (Left) Conceptual geological model for the Ming Deposit proposed in Pilote et. al (2016). (Right) Mineralization domains for the October 2024 resource model.

Figure 14.1: Ming Mineralization Model and Interpretation for the October 2024 Resource Update

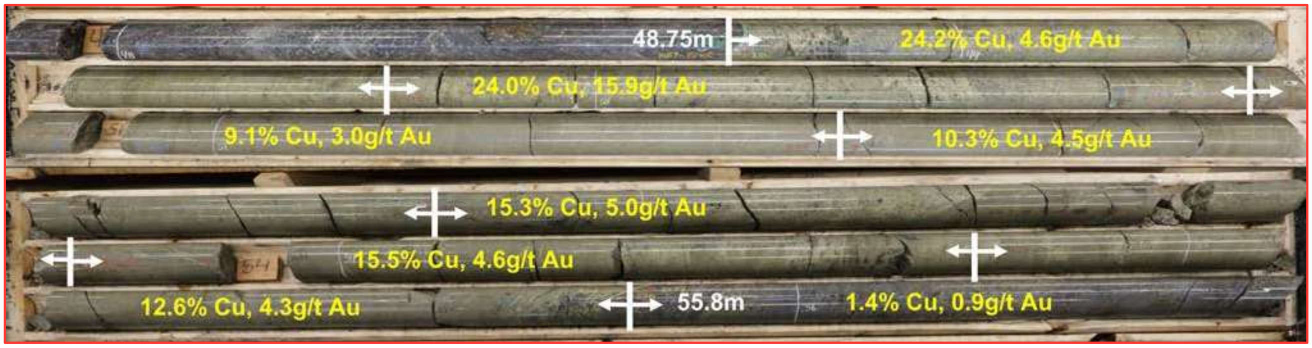
There are two distinct styles of mineralization at the Ming Deposit**:**

- Broad Footwall Stringer-Style Mineralization: centimetre-scale veins of pyrite and chalcopyrite interpreted to have formed as part of the hydrothermal feeder system below the sea floor (Figure 14.2). The sulphide stringers have been locally deformed and characteristically follow the foliation. The host rock is typically rhyolite that is intensely chlorite-altered reflecting the temperature and fluid pressure at formation. The zone of stringer mineralization can be up to 300m wide, 200m in height, with grades locally reaching beyond 2% copper.

Note: The mineralization consists of individual mm to cm scale chalcopyrite-pyrite veins hosted within highly chloritized rhyolite.

Figure 14.2: Stringer-style Footwall Mineralization from the 735 Level in the Ming Mine)

- Polymetallic Volcanogenic Massive Sulphides: Polymetallic Cu-Au-Ag dominated massive sulphides lenses formed on the sea floor via the accumulation of precipitated sulphides around subaqueous volcanic vents. The sulphides are dominantly pyrite and chalcopyrite with lesser sphalerite. The channel-like geometry results in lenses that are between 3m and 15m in true thickness and widths of 100m laterally. The strike of these lenses at Ming Mine now exceeds 2km and remains open. Mineralization from the Ming North mineralization is shown in Figure 14.3.



Note: The core photograph shown (48.75m to 55.8m) is part of a broader reported intersection of 13.1m @ 14.3% CuEq (10.7% Cu & 4.1g/t Au) true thickness. The mineralization is predominantly pyrite and chalcopyrite with lesser local sphalerite.

Figure 14.3: Massive Sulphide Copper-Gold Rich Mineralization Intersected in Firefly Resource Extension Drilling (MUG24-030)

FireFly geological staff used Leapfrog software for lithology and mineralization domain wireframing. The subsequent wireframe interpretations were reviewed and validated by the QP and minor adjustments were made prior to using the interpretations as input to MRE.

The Geology comprises two major lithological packages:

- Polymetallic Hanging Wall Sequence: Scrape Point formation of primarily basaltic flows with lesser volcaniclastic units and minor magnetite iron formation.
- Footwall Felsic Sequence: Rambler Rhyolite dominantly altered and mineralized, quartz-phyric felsic volcanic rocks.

The Lithology model comprises a surface that delineates the boundary between the hanging wall mafic and footwall felsic packages, along with twenty gabbro dykes and three felsic intrusives. It should be noted that the gabbro dykes and felsic intrusives represent post mineralization events and as such are unmineralized and therefore excluded from the overall mineralized volume interpretations.

Twenty-two mineralization domains are defined in the current model:

- Twelve of these represent massive sulphide and stringer deposits along and below the felsic contact (vein style domains).
- Six east dipping feeder structures (vein style domains).
- Two envelopes to capture the lower grade stringer mineralization around massive sulphide and feeder zones described above (intrusion style domains).
- Two lower footwall zone (LFZ) domains, including an inner core of high-grade (LFZ_HG) and an outer medium-grade (LFZ_MG) domain.
- The overall stockwork zone is delineated based on logged alteration and sulphide content. A high-grade shell was generated within the stockwork zone using a 0.7% Cu lower cut-off to delineate the core of the higher-grade mineralization.

A schematic cross section with the geology and mineralization domains is shown in Figure 14.4.

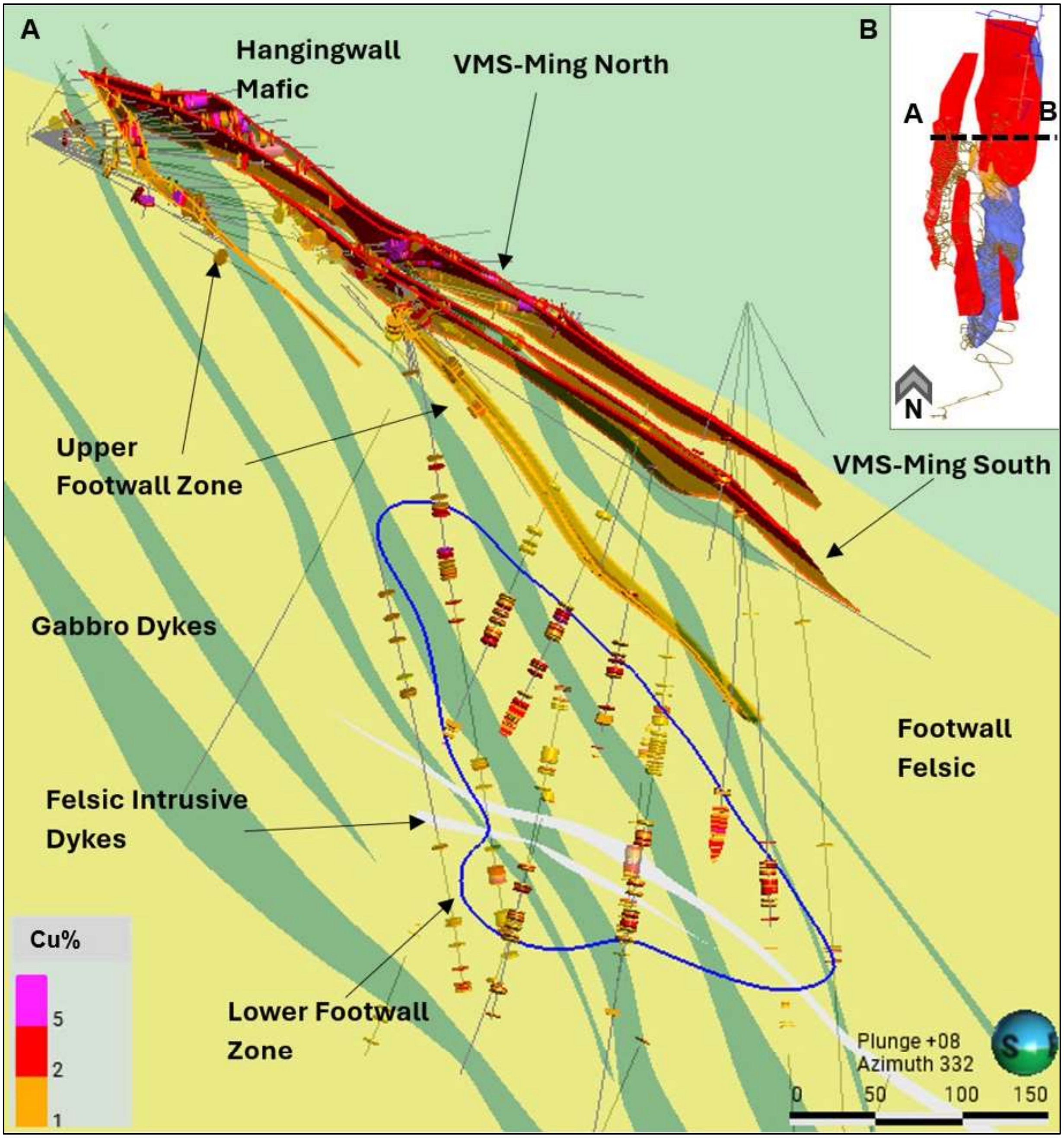


Figure 14.4: Schematic Cross Section of the Ming Geology and Mineralized Domain Looking North

14.4 Data Flagging and Compositing

Drill hole samples were flagged with the relevant mineralization wireframes or shells, lithological wireframes and other relevant surfaces. Coding was undertaken on the basis that if the individual sample centroid fell within the grade shell boundary it was coded as within the grade shell. Each domain has been assigned a unique numerical code to allow the application of hard boundary domaining if required during grade estimation.

The drill hole database coded within each grade shell or mineralization wireframe was then composited as a means of achieving a uniform sample support. It should be noted, however, that equalizing sample length is not the only criteria for standardizing sample support.

After consideration of relevant factors relating to geological setting and mining, including likely mining selectivity and stope width and height, a regular 2m run length (downhole) composite was selected as the most appropriate composite interval to equalise the sample support at the Ming Deposit. Compositing was broken when the routine encountered a change in flagging (grade shell boundary) and composites with residual intervals of less than 0.3m were not used in the estimation.

14.5 Statistical Analysis

The composites flagged as described in the previous section were used for subsequent statistical, geostatistical and grade estimation investigations. Two-meter composite summary statistics within mineralization domains for Cu, Au, Ag, and Zn are presented in Table 14.2.

Table 14.2: Mineralized Domains Raw Samples vs 2m Composites Statistics

Element	Raw Count	Comp Count	Raw Mean	Comp Mean	Raw metal	Comp metal	% change
Cu	73,470	34,962	0.89	0.87	57,175	57,097	0.14%
Au	46,655	21,294	0.59	0.52	19,896	19,864	0.16%
Ag	42,361	19,385	3.86	3.35	118,940	118,762	0.15%
Zn	62,272	29,172	0.11	0.10	5,240	5,230	0.19%

14.5.1 High Grade Outlier Analysis

A high-grade outlier analysis has been undertaken for the 2m composite gold grades. A comparison analysis was also undertaken on the raw samples, however negligible differences were observed and all further statistical analysis relates to the 2m composites. The effects of the highest-grade composites on the mean grade and standard deviation of the copper and gold dataset for each of the estimation domains have been investigated by compiling and reviewing statistical plots (histograms and probability plots). The resultant plots were reviewed together with cumulative distribution probability plots of the sample populations and an upper cut for each dataset was chosen coinciding with a pronounced inflection or increase in the variance of the data. Top cut statistics are presented in Table 14.3 to Table 14.6.

Table 14.3: Copper Summary Statistics and Top Cuts by Domain

Domain	DOMID	Type	Count	Mean Cu	Max Cu	CV	Top Cut	New mean	New CV	Metal cut %	Samples cut
1806_upper	101	VMS	992	0.19	6.59	2.02	4	0.19	1.93	0.8	2
1806_upper_mss	102	VMS	88	1.86	11.7	1.01					
1806_lower	103	VMS	191	0.6	3.88	1.33					
1807_all	104	VMS	687	2.35	25.8	1.33					
ezekiel_ufz	105	UFZ	201	1.39	6.63	0.75					
mnz_lower_lens	106	UFZ	611	1.27	8.54	0.97					
mnz_upper_lens	107	VMS	1230	2.6	23.03	1.32					
msz_main	108	VMS	659	1.25	13.38	1.2					
msz_offshoot_01	109	VMS	29	1.79	11.7	1.26					
msz_offshoot_02	110	VMS	10	0.54	2.32	1.36					
msz_up_plunge	112	VMS	40	2.15	11.32	1.29					
ufz_02	113	UFZ	397	1.84	15.6	1.32					
ufz_03	114	UFZ	39	1.3	3.27	0.61					
ufz_04	115	UFZ	42	0.62	4.86	1.28					
ufz_06	116	UFZ	79	1.34	6.49	0.84	4	1.29	0.72	4.1	2
mnz_offshoot_01	117	VMS	6	1	5.11	1.37					
lfz_LG	201	LFZ	8435	0.34	8.75	1.25					
lfz_MG	202	LFZ	3946	0.54	9.71	1.06					
lfz_soft	203	LFZ	2938	0.71	8.19	1					
lfz_HG	204	LFZ	9860	1.42	13.67	0.72					
mn_lower_env	301	ENV	2712	0.25	5.48	1.71					
vms_env	302	ENV	1770	0.27	11.9	2.22	7	0.27	6.2	0.9	4

Table 14.4: Gold Summary Statistics and Top Cuts by Domain

Domain	DOMID	Type	Count	Mean Au	Max Au	CV	Top Cut	New mean	New CV	Metal cut %	Samples cut
1806_upper	101	VMS	1225	1.53	56.1	1.74	25	1.5	1.54	1.7	3
1806_upper_mss	102	VMS	118	22.82	328.35	1.99	60	16.63	0.93	27.1	6
1806_lower	103	VMS	194	2.24	65.4	2.52	15	1.9	1.52	15.0	3
1807_all	104	VMS	687	2.17	38.25	1.35	20	2.13	1.21	1.9	4
ezekiel_ufz	105	UFZ	88	0.11	0.63	0.86					
mnz_lower_lens	106	UFZ	599	0.51	6.59	1.4	4	0.51	1.32	1.6	2
mnz_upper_lens	107	VMS	1050	1.43	38.24	1.49	15	1.41	1.34	1.5	4
msz_main	108	VMS	586	1.25	28.31	1.87	15	1.2	1.6	3.7	3
msz_offshoot_01	109	VMS	29	2.47	13.5	1.05					
msz_offshoot_02	110	VMS	10	1.05	3.17	0.92					
msz_up_plunge	112	VMS	40	1.33	8.05	1.19	5	1.23	0.99	7.3	1
ufz_02	113	UFZ	338	0.2	2.62	1.31	1.7	0.2	1.2	1.7	2
ufz_03	114	UFZ	16	0.11	0.2	0.49					
ufz_04	115	UFZ	42	2.46	13.4	0.75	10	2.45	0.72	0.7	1
ufz_06	116	UFZ	79	0.08	0.47	1.02					

Domain	DOMID	Type	Count	Mean Au	Max Au	CV	Top Cut	New mean	New CV	Metal cut %	Samples cut
mnz_offshoot_01	117	VMS	6	1.02	2	0.78					
lfz_LG	201	LFZ	5099	0.05	1.16	1.4					
lfz_MG	202	LFZ	1343	0.05	0.72	1.11					
lfz_soft	203	LFZ	1073	0.07	2.32	1.65	2	0.07	1.6	0.3	1
lfz_HG	204	LFZ	4616	0.1	4.91	1.33	2	0.1	1.22	0.4	2
mn_lower_env	301	ENV	2542	0.24	12.68	2.1	6	0.24	1.67	2.4	4
vms_env	302	ENV	1514	0.19	8.84	2.55	4	0.18	2.14	3.8	5

Table 14.5: Silver Summary Statistics and Top Cuts by Domain

Domain	DOMID	Type	Count	Mean Ag	Max Ag	CV	Top Cut	New mean	New CV	Metal cut %	Samples cut
1806_upper	101	VMS	992	9.12	421	1.67	100	8.95	1.42	1.9	4
1806_upper_mss	102	VMS	88	138.75	459.5	0.83					
1806_lower	103	VMS	194	14.77	207.01	1.56	100	14.16	1.34	4.1	2
1807_all	104	VMS	687	13.84	99.99	0.84	70	13.76	0.81	0.5	2
ezekiel_ufz	105	UFZ	70	1.37	5.67	0.77					
mnz_lower_lens	106	UFZ	591	3.17	31.64	1.18	20	3.12	1.11	1.4	4
mnz_upper_lens	107	VMS	886	9.84	84.65	1.15	60	9.81	1.13	0.3	3
msz_main	108	VMS	513	8.37	85.52	1.27					
msz_offshoot_01	109	VMS	29	21.89	56.6	0.64					
msz_offshoot_02	110	VMS	10	7.02	21.47	0.93					
msz_up_plunge	112	VMS	40	10.66	41.08	1					
ufz_02	113	UFZ	338	2.16	23.4	1.17	17	2.14	1.11	0.9	1
ufz_03	114	UFZ	16	1.42	2.63	0.55					
ufz_04	115	UFZ	42	16.45	89.99	1	50	15.12	0.76	8.0	3
ufz_06	116	UFZ	79	1.95	8.56	0.86					
mnz_offshoot_01	117	VMS	6	11.71	52.6	1.2					
lfz_LG	201	LFZ	4874	0.57	25.6	1.27	8	0.56	1.1	0.8	2
lfz_MG	202	LFZ	1304	0.72	16.5	1.16	10	0.71	1.04	0.8	1
lfz_soft	203	LFZ	1002	0.79	7.15	1.12					
lfz_HG	204	LFZ	4324	1.5	11.07	0.74					
mn_lower_env	301	ENV	2081	1.5	38.79	1.61					
vms_env	302	ENV	1219	1.05	67.1	3.05					

Table 14.6: Zinc Summary Statistics and Top Cuts by Domain

Domain	DOMID	Type	Count	Mean Zn	Max Zn	CV	Top Cut	New mean	New CV	Metal cut %	Samples cut
1806_upper	101	VMS	992	0.35	6.6	1.91					
1806_upper_m	102	VMS	88	3.33	19.42	1.53					
1806_lower	103	VMS	189	0.48	4.3	1.68					
1807_all	104	VMS	672	0.3	5.97	1.8					
ezekiel_ufz	105	UFZ	196	0.06	0.29	0.94					
mnz_lower_lens	106	UFZ	602	0.21	3.22	1.32					
mnz_upper_lens	107	VMS	1220	0.39	13.02	2.12	10	0.38	2	1.0	2
msz_main	108	VMS	637	0.45	28.7	3.45	10	0.41	2.37	8.9	2
msz_offshoot_01	109	VMS	29	1.1	41.7	4.15	10	0.73	2.11	34.0	1
msz_offshoot_02	110	VMS	10	0.06	0.28	1.41					
msz_up_plunge	112	VMS	40	0.31	0.96	0.97					
ufz_02	113	UFZ	393	0.05	0.92	1.25					
ufz_03	114	UFZ	37	0.03	0.11	0.63					
ufz_04	115	UFZ	42	1.25	3.14	0.73					
ufz_06	116	UFZ	79	0.01	0.04	0.57					
mnz_offshoot_01	117	VMS	6	0.83	2.92	1.07					
lfz_LG	201	LFZ	7482	0.02	0.7	1.46					
lfz_MG	202	LFZ	2797	0.02	0.32	1.15					
lfz_soft	203	LFZ	2079	0.03	0.76	1.43					
lfz_HG	204	LFZ	7199	0.03	1.55	1.5					
mn_lower_env	301	ENV	2642	0.13	8.4	2.28	4	0.13	2.19	0.5	2
vms_env	302	ENV	1741	0.06	1.6	1.87					

14.6 Variography

Variography is used to describe the spatial variability or correlation of an attribute (copper, gold, silver etc.). The spatial variability is traditionally measured by means of a variogram, which is generated by determining the averaged squared difference of data points at a nominated distance (h), or lag. The averaged squared difference (variogram or γ(h)) for each lag distance is plotted on a bivariate plot, where the X-axis is the lag distance and the Y-axis represents the average squared differences (γ(h)) for the nominated lag distance.

The variography was calculated and modelled in the geostatistical software, Isatis. The rotations are tabulated as dip and dip direction of major, semi-major and minor axes of continuity and summarized in Table 14.7 to Table 14.10. Modelled variograms were generally shown to have moderate to good structure and were used for the estimation.

Variograms were generated in the directions of interpreted continuity. Interpreted anisotropy directions correspond well with the modelled geology and overall geometry of the interpreted domain. For domains with insufficient data, variography data from domains with similar orientations and ore types were utilized.

Table 14.7: Copper Variogram Parameters by Domain

Domain	DOMID	Var	Nugget (C0)	Rotation (dip->dip dir)			Structure 1				Structure 2			
				Major	Semi-major	Minor	Spatial Variance (C1)	Range (A1)			Spatial Variance (C2)	Range (A2)		
								Dir 1	Dir 2	Dir 3		Dir 1	Dir 2	Dir 3
1806_upper	101	Cu	0.16	30 -> 000	0 - > 090	60 - > 180	0.48	25	15	5	0.36	65	60	15
1806_upper_mss	102	Cu	0.16	30 -> 000	0 - > 090	60 - > 180	0.48	25	15	5	0.36	65	60	15
1806_lower	103	Cu	0.16	30 -> 000	0 - > 090	60 - > 180	0.48	25	15	5	0.36	65	60	15
1807_all	104	Cu	0.28	30 -> 000	0 - > 090	60 - > 180	0.3	30	25	3	0.42	210	100	10
ezekiel_ufz	105	Cu	0.33	39 -> 009	32 - > 309	35 - > 065	0.25	10	7	7	0.42	70	50	13
mnz_lower_lens	106	Cu	0.33	39 -> 009	32 - > 309	35 - > 065	0.25	10	7	7	0.42	70	50	13
mnz_upper_lens	107	Cu	0.18	34 -> 007	009 - > 283	55 - > 025	0.31	40	30	8	0.51	210	100	15
msz_main	108	Cu	0.18	34 -> 007	009 - > 283	55 - > 025	0.31	40	30	8	0.51	210	100	15
msz_offshoot_01	109	Cu	0.18	34 -> 007	9 - > 283	55 - > 025	0.31	40	30	8	0.51	210	100	15
msz_offshoot_02	110	Cu	0.18	34 -> 007	9 - > 283	55 - > 025	0.31	40	30	8	0.51	210	100	15
msz_up_plunge	112	Cu	0.18	34 -> 007	9 - > 283	55 - > 025	0.31	40	30	8	0.51	210	100	15
ufz_02	113	Cu	0.33	39 -> 009	32 - > 309	35 - > 065	0.25	10	7	7	0.42	70	50	13
ufz_03	114	Cu	0.33	39 -> 009	32 - > 309	35 - > 065	0.25	10	7	7	0.42	70	50	13
ufz_04	115	Cu	0.33	39 -> 009	32 - > 309	35 - > 065	0.25	10	7	7	0.42	70	50	13
ufz_06	116	Cu	0.314	39 -> 009	32 - > 309	35 - > 065	0.25	10	7	7	0.42	70	50	13
mnz_offshoot_01	117	Cu	0.18	34 -> 007	9 - > 283	55 - > 025	0.31	40	30	8	0.51	210	100	15
lfz_LG	201	Cu	0.26	34 - > 008	19 - > 111	50 - > 225	0.45	10	7	6	0.29	75	50	35
lfz_MG	202	Cu	0.21	34 - > 008	19 - > 111	50 - > 225	0.59	17	13	9	0.2	78	42	31
lfz_soft	203	Cu	0.21	34 - > 008	19 - > 111	50 - > 225	0.59	17	13	9	0.2	78	42	31
lfz_HG	204	Cu	0.21	34 - > 008	19 - > 111	50 - > 225	0.59	17	13	9	0.2	78	42	31
mn_lower_env	301	Cu	0.267	44 - > 024	19 - > 313	40 - > 060	0.359	10	11	10	0.374	55	55	29
vms_env	302	Cu	0.256	35 - > 024	3 - > 296	55 - > 030	0.429	22	7	7	0.315	59	39	21

Table 14.8: Gold Variogram Parameters by Domain

Domain	DOMID	Var	Nugget (C0)	Rotation (dip->dip dir)			Structure 1				Structure 2			
				Major	Semi-major	Minor	Spatial Variance (C1)	Range (A1)			Spatial Variance (C2)	Range (A2)		
								Dir 1	Dir 2	Dir 3		Dir 1	Dir 2	Dir 3
1806_upper	101	Au	0.33	30 -> 000	0 - > 090	60 - > 180	0.38	15	10	3	0.29	50	25	12
1806_upper_mss	102	Au	0.33	30 -> 000	0 - > 090	60 - > 180	0.38	15	10	3	0.29	50	25	12
1806_lower	103	Au	0.33	30 -> 000	0 - > 090	60 - > 180	0.38	15	10	3	0.29	50	25	12
1807_all	104	Au	0.39	30 -> 000	0 - > 090	60 - > 180	0.19	15	10	3	0.42	90	60	10
ezekiel_ufz	105	Au	0.24	39 -> 009	32 - > 309	35 - > 065	0.17	40	40	5	0.59	100	80	12
mnz_lower_lens	106	Au	0.24	39 -> 009	32 - > 309	35 - > 065	0.17	40	40	5	0.59	100	80	12
mnz_upper_lens	107	Au	0.28	34 -> 007	009 - > 283	55 - > 025	0.41	40	30	7	0.31	150	70	15
msz_main	108	Au	0.28	34 -> 007	009 - > 283	55 - > 025	0.41	40	30	7	0.31	150	70	15
msz_offshoot_01	109	Au	0.28	34 -> 007	9 - > 283	55 - > 025	0.41	40	30	7	0.31	150	70	15
msz_offshoot_02	110	Au	0.28	34 -> 007	9 - > 283	55 - > 025	0.41	40	30	7	0.31	150	70	15
msz_up_plunge	112	Au	0.28	34 -> 007	9 - > 283	55 - > 025	0.41	40	30	7	0.31	150	70	15
ufz_02	113	Au	0.24	39 -> 009	32 - > 309	35 - > 065	0.17	40	40	5	0.59	100	80	12
ufz_03	114	Au	0.24	39 -> 009	32 - > 309	35 - > 065	0.17	40	40	5	0.59	100	80	12
ufz_04	115	Au	0.24	39 -> 009	32 - > 309	35 - > 065	0.17	40	40	5	0.59	100	80	12
ufz_06	116	Au	0.24	39 -> 009	32 - > 309	35 - > 065	0.17	40	40	5	0.59	100	80	12
mnz_offshoot_01	117	Au	0.28	34 -> 007	9 - > 283	55 - > 025	0.41	40	30	7	0.31	150	70	15
lfz_LG	201	Au	0.25	34 - > 008	19 - > 111	50 - > 225	0.35	30	20	5	0.4	100	60	20
lfz_MG	202	Au	0.25	34 - > 008	19 - > 111	50 - > 225	0.35	30	20	5	0.4	100	60	20
lfz_soft	203	Au	0.25	34 - > 008	19 - > 111	50 - > 225	0.35	30	20	5	0.4	100	60	20
lfz_HG	204	Au	0.25	34 - > 008	19 - > 111	50 - > 225	0.35	30	20	5	0.4	100	60	20
mn_lower_env	301	Au	0.269	44 - > 024	19 - > 313	40 - > 060	0.488	48	7	9	0.243	52	30	24
vms_env	302	Au	0.215	35 - > 024	3 - > 296	55 - > 030	0.628	11	12	12	0.157	64	41	21

Table 14.9: Silver Variogram Parameters by Domain

Domain	DOMID	Var	Nugget (C0)	Rotation (dip->dip dir)			Structure 1				Structure 2			
				Major	Semi-major	Minor	Spatial Variance (C1)	Range (A1)			Spatial Variance (C2)	Range (A2)		
								Dir 1	Dir 2	Dir 3		Dir 1	Dir 2	Dir 3
1806_upper	101	Ag	0.29	30 -> 000	0 - > 090	60 - > 180	0.4	24	24	5	0.31	60	50	12
1806_upper_mss	102	Ag	0.29	30 -> 000	0 - > 090	60 - > 180	0.4	24	24	5	0.31	60	50	12
1806_lower	103	Ag	0.29	30 -> 000	0 - > 090	60 - > 180	0.4	24	24	5	0.31	60	50	12
1807_all	104	Ag	0.39	30 -> 000	0 - > 090	60 - > 180	0.39	15	10	4	0.22	80	60	10
ezekiel_ufz	105	Ag	0.24	39 -> 009	32 - > 309	35 - > 065	0.17	40	40	5	0.59	100	80	12
mnz_lower_lens	106	Ag	0.24	39 -> 009	32 - > 309	35 - > 065	0.17	40	40	5	0.59	100	80	12
mnz_upper_lens	107	Ag	0.21	34 -> 007	009 - > 283	55 - > 025	0.5	40	30	10	0.29	90	60	15
msz_main	108	Ag	0.21	34 -> 007	009 - > 283	55 - > 025	0.5	40	30	10	0.29	90	60	15
msz_offshoot_01	109	Ag	0.21	34 -> 007	9 - > 283	55 - > 025	0.5	40	30	10	0.29	90	60	15
msz_offshoot_02	110	Ag	0.21	34 -> 007	9 - > 283	55 - > 025	0.5	40	30	10	0.29	90	60	15
msz_up_plunge	112	Ag	0.21	34 -> 007	9 - > 283	55 - > 025	0.5	40	30	10	0.29	90	60	15
ufz_02	113	Ag	0.24	39 -> 009	32 - > 309	35 - > 065	0.17	40	40	5	0.59	100	80	12
ufz_03	114	Ag	0.24	39 -> 009	32 - > 309	35 - > 065	0.17	40	40	5	0.59	100	80	12
ufz_04	115	Ag	0.24	39 -> 009	32 - > 309	35 - > 065	0.17	40	40	5	0.59	100	80	12
ufz_06	116	Ag	0.24	39 -> 009	32 - > 309	35 - > 065	0.17	40	40	5	0.59	100	80	12
mnz_offshoot_01	117	Ag	0.21	34 -> 007	9 - > 283	55 - > 025	0.5	40	30	10	0.29	90	60	15
lfz_LG	201	Ag	0.25	34 - > 008	19 - > 111	50 - > 225	0.27	45	40	6	0.48	170	110	30
lfz_MG	202	Ag	0.25	34 - > 008	19 - > 111	50 - > 225	0.27	45	40	6	0.48	170	110	30
lfz_soft	203	Ag	0.25	34 - > 008	19 - > 111	50 - > 225	0.27	45	40	6	0.48	170	110	30
lfz_HG	204	Ag	0.25	34 - > 008	19 - > 111	50 - > 225	0.27	45	40	6	0.48	170	110	30
mn_lower_env	301	Ag	0.175	44 - > 024	19 - > 313	40 - > 060	0.429	21	4	5	0.429	65	53	34
vms_env	302	Ag	0.089	35 - > 024	3 - > 296	55 - > 030	0.672	59	69	28	0.239	90	80	38

Table 14.10: Zinc Variogram Parameters by Domain

Domain	DOMID	Var	Nugget (C0)	Rotation (dip->dip dir)			Structure 1				Structure 2			
				Major	Semi-major	Minor	Spatial Variance (C1)	Range (A1)			Spatial Variance (C2)	Range (A2)		
								Dir 1	Dir 2	Dir 3		Dir 1	Dir 2	Dir 3
1806_upper	101	Zn	0.188	30 -> 000	0 - > 090	60 - > 180	0.549	22	7	6	0.263	42	30	15
1806_upper_mss	102	Zn	0.112	30 -> 000	0 - > 090	60 - > 180	0.435	21	3	7	0.453	40	22	14
1806_lower	103	Zn	0.131	30 -> 000	0 - > 090	60 - > 180	0.538	37	6	5	0.331	39	20	14
1807_all	104	Zn	0.14	30 -> 000	0 - > 090	60 - > 180	0.536	45	5	4	0.325	63	41	16
ezekiel_ufz	105	Zn	0.244	39 -> 009	32 - > 309	35 - > 065	0.301	11	14	5	0.455	63	45	23
mnz_lower_lens	106	Zn	0.244	39 -> 009	32 - > 309	35 - > 065	0.301	11	14	5	0.455	63	45	23
mnz_upper_lens	107	Zn	0.239	34 -> 007	009 - > 283	55 - > 025	0.556	12	18	4	0.205	136	45	19
msz_main	108	Zn	0.239	34 -> 007	009 - > 283	55 - > 025	0.556	12	18	4	0.205	136	45	19
msz_offshoot_01	109	Zn	0.239	34 -> 007	9 - > 283	55 - > 025	0.556	12	18	4	0.205	136	45	19
msz_offshoot_02	110	Zn	0.239	34 -> 007	9 - > 283	55 - > 025	0.556	12	18	4	0.205	136	45	19
msz_up_plunge	112	Zn	0.131	34 -> 007	9 - > 283	55 - > 025	0.538	37	6	5	0.331	39	20	14
ufz_02	113	Zn	0.244	39 -> 009	32 - > 309	35 - > 065	0.301	11	14	5	0.455	63	45	23
ufz_03	114	Zn	0.244	39 -> 009	32 - > 309	35 - > 065	0.301	11	14	5	0.455	63	45	23
ufz_04	115	Zn	0.244	39 -> 009	32 - > 309	35 - > 065	0.301	11	14	5	0.455	63	45	23
ufz_06	116	Zn	0.244	39 -> 009	32 - > 309	35 - > 065	0.301	11	14	5	0.455	63	45	23
mnz_offshoot_01	117	Zn	0.239	34 -> 007	9 - > 283	55 - > 025	0.556	12	18	4	0.205	136	45	19
lfz_LG	201	Zn	0.144	34 - > 008	19 - > 111	50 - > 225	0.534	23	10	13	0.322	93	48	36
lfz_MG	202	Zn	0.148	34 - > 008	19 - > 111	50 - > 225	0.663	14	14	17	0.189	122	57	40
lfz_soft	203	Zn	0.148	34 - > 008	19 - > 111	50 - > 225	0.663	14	14	17	0.189	122	57	40
lfz_HG	204	Zn	0.148	34 - > 008	19 - > 111	50 - > 225	0.663	14	14	17	0.189	122	57	40
mn_lower_env	301	Zn	0.157	44 - > 024	19 - > 313	40 - > 060	0.526	15	7	3	0.317	58	56	26
vms_env	302	Zn	0.163	35 - > 024	3 - > 296	55 - > 030	0.517	60	36	21	0.32	60	36	21

14.7 Block Modelling

A 3-D block model was created in the local mine grid using industry standard software including Vulcan. The parent block size was selected on the basis of the average drill spacing together with consideration of potential mining parameters. A parent cell size of 10mX by 10mY by 5mZ was sub-blocked down to 2.5mX by 2.5mY by 2.5mZ (to ensure adequate volume representation). The models covered all the interpreted mineralization zones and included suitable additional waste material to allow later mining engineering studies. Block coding was completed on the basis of the block centroid, wherein a centroid falling within any wireframe was coded with the wireframe solid attribute. The block model is unrotated.

The main block model parameters are summarized below in Table 14.11. Variables were coded into the block models to enable Ordinary Kriging estimation and grade tonnage reporting. A visual review of the wireframe solids and the block model indicated correct flagging of the block model. Additionally, a check was made of coded volume versus wireframe volume which confirmed the above.

Table 14.11: Block Model Parameters

<table>
<tr><th rowspan="5">Model Extents</th><th colspan="3">Model Grid System</th><th colspan="3">Model Rotation</th></tr>
<tr><td colspan="3">Local mine grid</td><td colspan="3">No Rotation Applied</td></tr>
<tr><th colspan="3">Model Origin (m)</th><th colspan="3">Model Maximum (m)</th></tr>
<tr><td>X</td><td>Y</td><td>Z</td><td>X</td><td>Y</td><td>Z</td></tr>
<tr><td>500m</td><td>-100m</td><td>-1,600m</td><td>1,600m</td><td>2,300m</td><td>200m</td></tr>
<tr><th rowspan="3">Block Size</th><th colspan="3">Parent Cell Size (m)</th><th colspan="3">Sub-cell Size (m)</th></tr>
<tr><td>X</td><td>Y</td><td>Z</td><td>X</td><td>Y</td><td>Z</td></tr>
<tr><td>10m</td><td>10m</td><td>5m</td><td>2.5m</td><td>2.5m</td><td>2.5m</td></tr>
</table>

14.8 Bulk Density Data

A dry bulk density database, comprising a total of 12,467 measurements, was used to inform densities used in the model. Of these, 8,070 were collected historically and 4,397 collected by FireFly.

FireFly employed the water displacement method to determine bulk density, a sample is weighted to determine the dry mass and weighted submerged in water to determine the volume using the Archimedes principle. The data was categorized into groups based on mineralization and lithological domains, and statistical analysis was conducted to compare historic and FireFly datasets. The results demonstrated good consistency between the two datasets, with any differences likely attributable to biases stemming from varied predominant orebody sampling locations.

Summary statistics subdivided by groupings are presented in Table 14.12. Mean and median values have been employed to guide assigned densities for domains.

Table 14.12: Bulk Density Statistics and Assigned Values

Category	Count	Mean	Median	Std Dev	Assigned Value
Felsic Intrusive	110	2.76	2.75	0.12	2.75
FW_Felsic	3,317	2.89	2.83	0.09	2.83
Gabbro	1,297	2.94	2.96	0.14	2.92
HW_Mafic	435	2.90	2.90	0.12	2.9
LFZ_LG	2,213	2.85	2.82	0.14	2.83
LFZ_MG/HG	3,895	2.84	2.82	0.13	2.83
UFZ/Envelopes	492	2.97	2.92	0.22	2.92
VMS_excl_Ming North	417	3.48	3.1	0.71	3.2
VMS_Ming North	168	3.77	3.75	0.74	3.5

14.9 Grade Estimation

OK was selected as the most suitable estimation technique. Estimation was completed in industry standard software including Vulcan.

All domains were estimated using OK with the same domains used to estimate Cu, Au, Ag and Zn. OK estimation was completed using an oriented search ellipsoid. A two-pass search strategy was employed for each estimated variable, with search directions aligned to the major, semi-major, and minor axes of the variogram. During the first pass, a search radius of 100 meters by 100 meters by 30 meters was utilized, with a requirement of a minimum of 8 and a maximum of 12 composites. A maximum of 3 composites per drill hole was allowed. For the second pass, the search radius was expanded to 400 meters by 400 meters by 120 meters, and the minimum sample requirement was reduced to 4 composites.

14.10 Estimate Validation

All relevant statistical information was recorded to enable validation and review of the OK estimates. The recorded information included:

- Number of samples used per block estimate.
- Number of drill holes from which samples selected.
- Average distance to samples per block estimate and distance to nearest sample.
- Estimation flag to determine in which estimation pass a block was estimated.

The estimates were reviewed visually and statistically prior to being accepted. The review included the following activities:

- Visual checks of cross sections, long sections, and plans (example for domain 1807 in Figure 14.5).
- Production of swath plots comparing input composite grades versus block grades (example for domain 1807 in Figure 14.6)
- Comparison of declustered and top-cut input composite mean grades versus block grades for all domains. Most domains fall within ±10%. Variations outside this range are generally related to a lower confidence inferred resource classification.

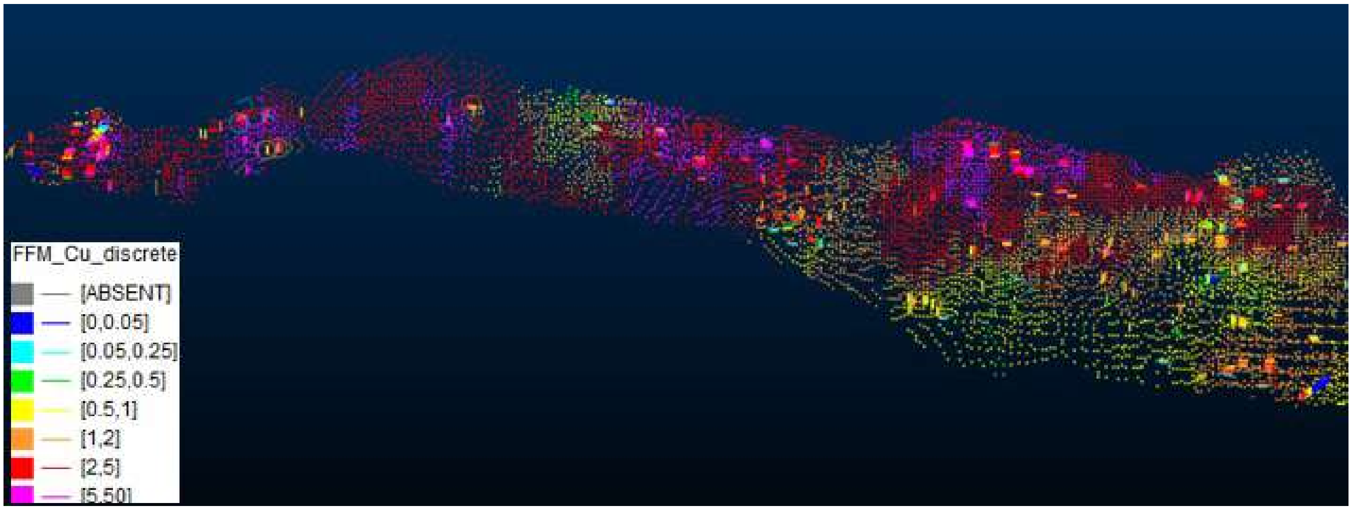


Figure 14.5: Block Copper Grades Compared to Composite Grades for Domain 1807

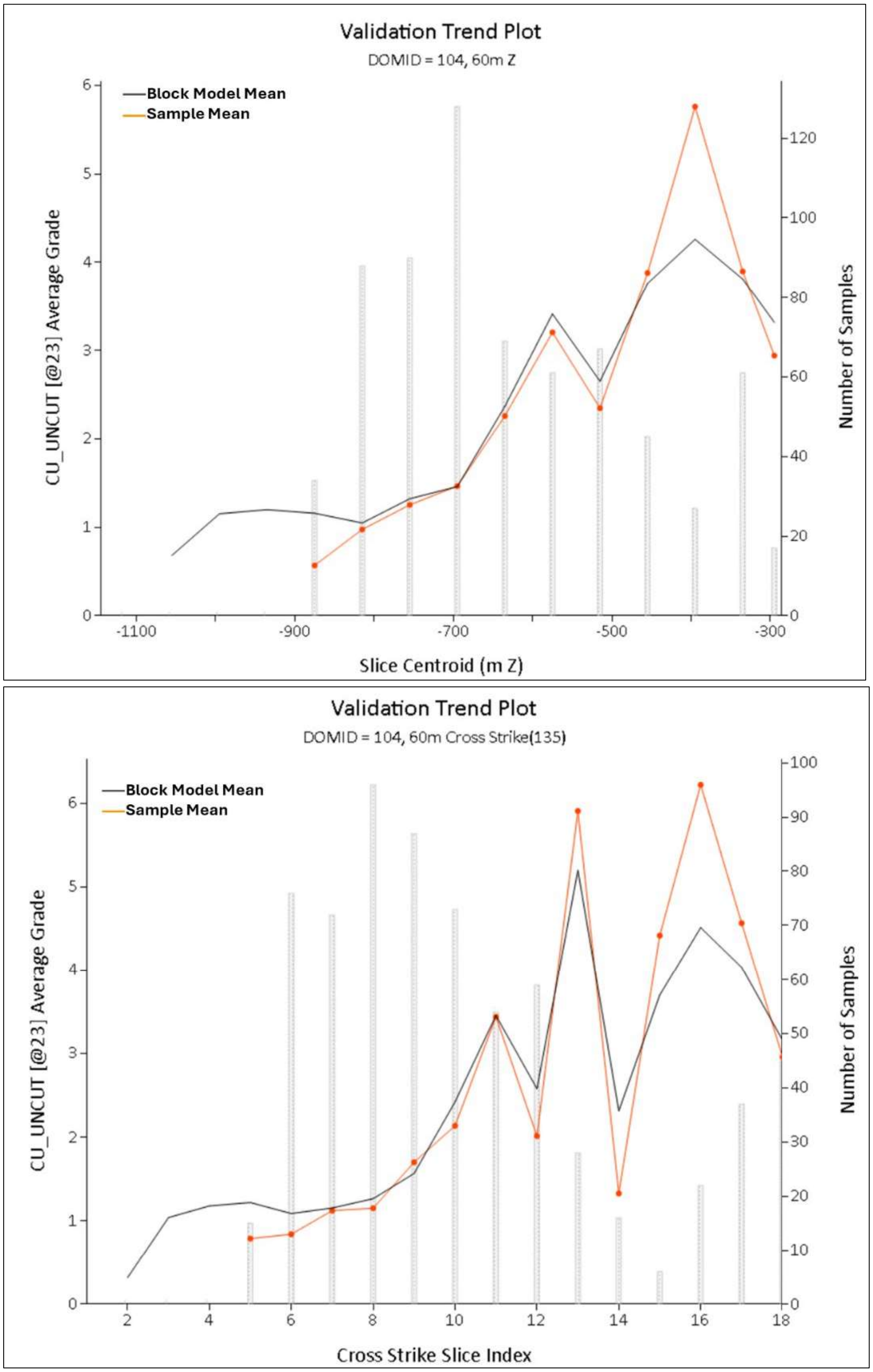


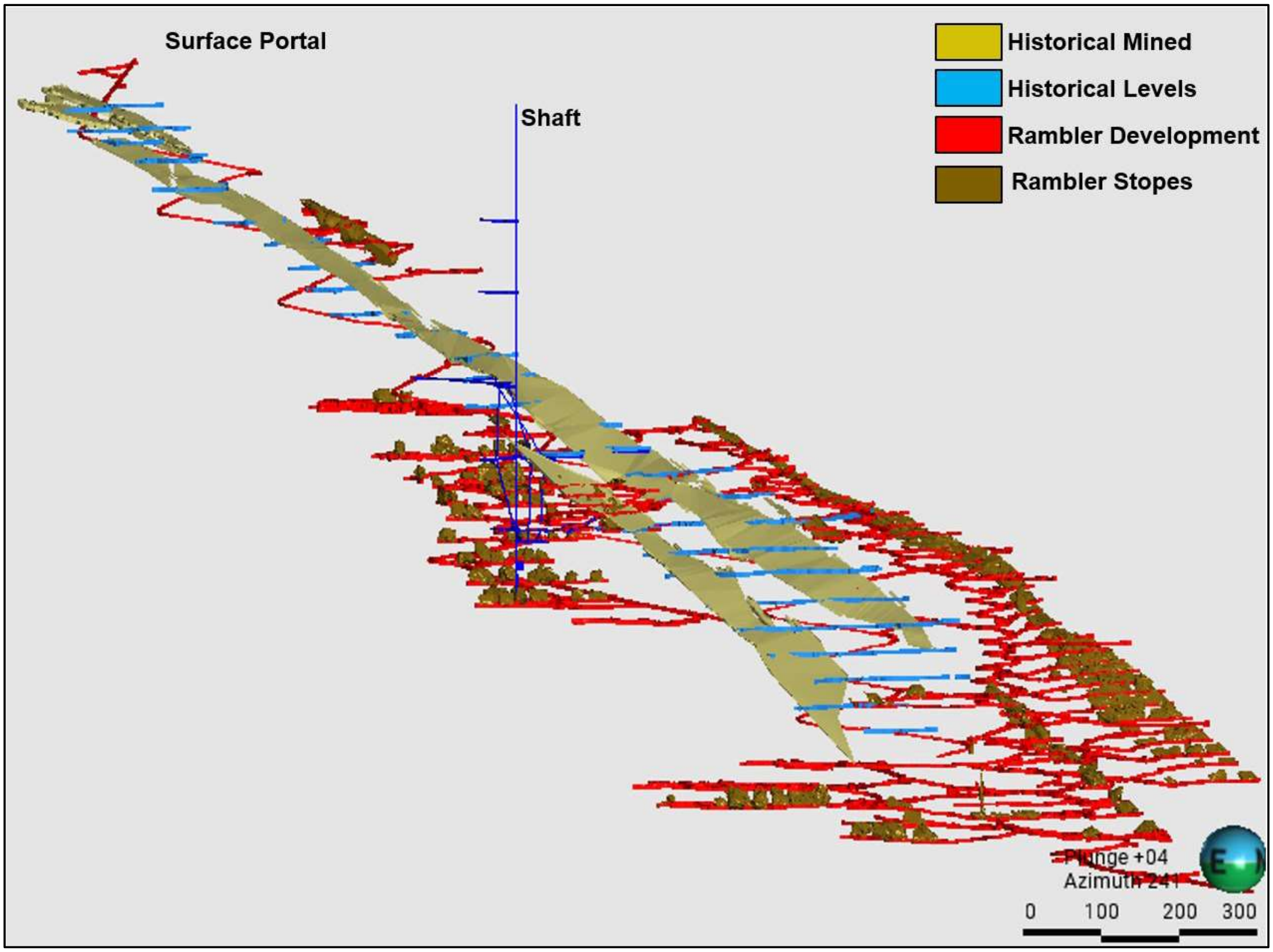
Figure 14.6: Copper Swath Plots for Domain 1807

14.11 Depletion for Mining Activity

The resource model has been depleted using as-built wireframes, which incorporate the following elements:

- Historical levels and boundaries delineating massive sulphides mined between 1970 and 1982.
- Contemporary underground development completed by Rambler, including decline, levels, stopes, and shaft infrastructure.

These volumetric adjustments reflect the most accurate current understanding of depletion at the Ming Deposit, where previous mining operations employed a combination of post-pillar cut and fill, as well as long hole stoping mining methods. All the underground workings used in the block model depletion are shown in Figure 14.7.



Note: Includes historical levels (light blue), historically mined VMS (bronze), decline and modern development (red), stopes (brown) and shaft infrastructure (dark blue).

Figure 14.7: Isometric View Looking South-west Showing as-builts Used in Depletion of Block Model

14.12 Resource Classification

Mineral Resources have been classified based on confidence in the geological and grade continuity using the drilling density and the distance to sample selections. These were evaluated individually for each mineralization domain and are illustrated on Figure 14.8.

- Measured Mineral Resources have been defined generally where the closest drill hole sample is within 15m and the average distance to samples used for estimation within 20m.
- Indicated Mineral Resources where the closest drill hole sample is within 30m and the average distance to samples used for estimation within 40m
- Inferred Mineral Resources where the closest drill hole sample is within 90m or greater if there is enough geological and grade continuity.

Resources more than 90m have been flagged as unclassified resource category. Proximity to historical workings have been used to downgrade the resource category where required.

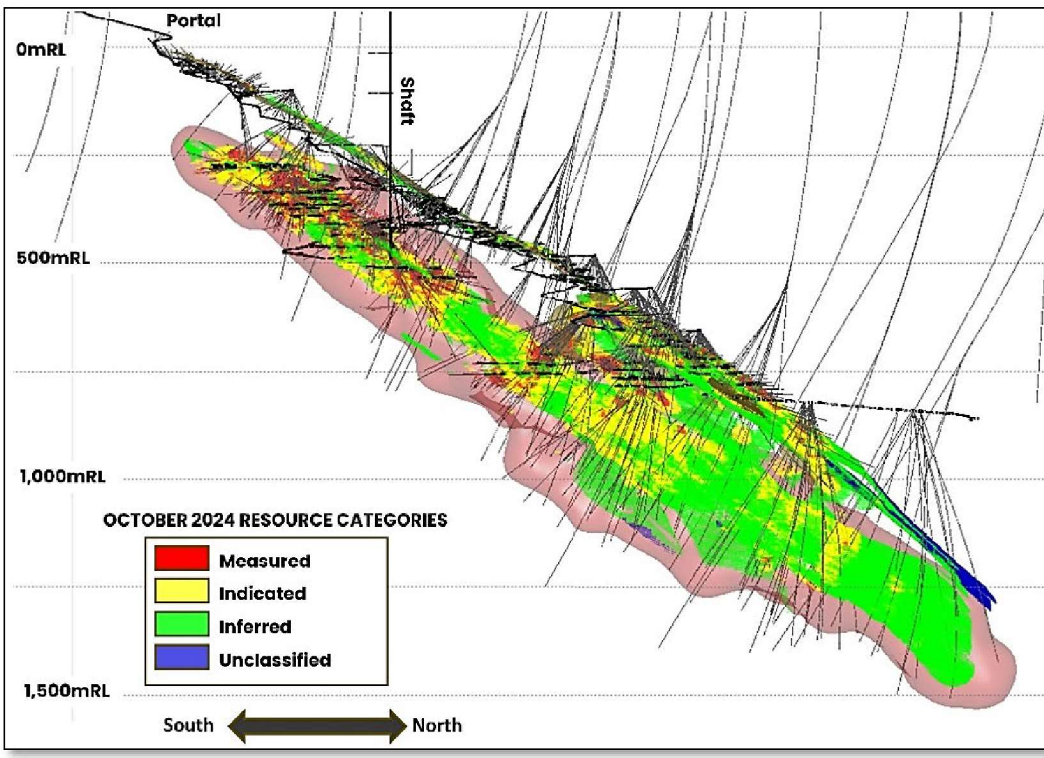


Figure 14.8: Resource Categories and Drill Data in Long Section for the Ming October 2024 MRE

14.13 Resource Reporting

The summary total Mineral Resource for the Ming Deposit is provided in Table 14.13. The Mineral Resource is reported at cut-off grade of 1% Cu as summarized in Table 14.13 and illustrated on Figure 14.9. The effective date of this Mineral Resource is October 29, 2024.

The cut-off grade of 1% Cu has been calculated based on the key input components of mining, processing, recovery and administration costs. Benchmark industry averages and forward-looking forecast costs and physicals form the basis of the cut-off grade calculations including: copper price of US$8,750t, Au price of US$2,500oz and Ag price of US$25oz with a USD:CAD exchange rate of 1.35. Mining costs were CAD$50/t, processing costs were CAD$16/t. Mining costs assumed in the COG calculation assume a combination of transverse and longitudinal long hole open stoping (LHOS) with paste backfill. A 3 meter minimum mining width has been assumed for the VMS and a bulk mining scenario for the LFZ. Processing costs were guided by benchmarked operations that utilize floatation to produce a copper-gold concentrate for external extraction. G&A cost assumption was CAD$12/t. Concentrate freight: mine to port USD$5/t, port to smelter ocean freight USD$60/t. Smelter treatment charges were USD$75/t, Cu refining was US$0.08/lb, $15 US/oz Au, and $0.5 US/oz Ag. Metallurgical recoveries to concentrates are based on assumptions from the previous metallurgical performance at the Ming mine and Nugget Pond processing plant. Metal recoveries are 95.0% Cu, 85% Au, and 85% Ag in the copper concentrate. In view of the nature and style of the mineralization and potential mining approach and method, these are considered appropriate cut-off grades.

It is not anticipated that this Mineral Resource estimate will be materially affected, to any extent, by any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors.

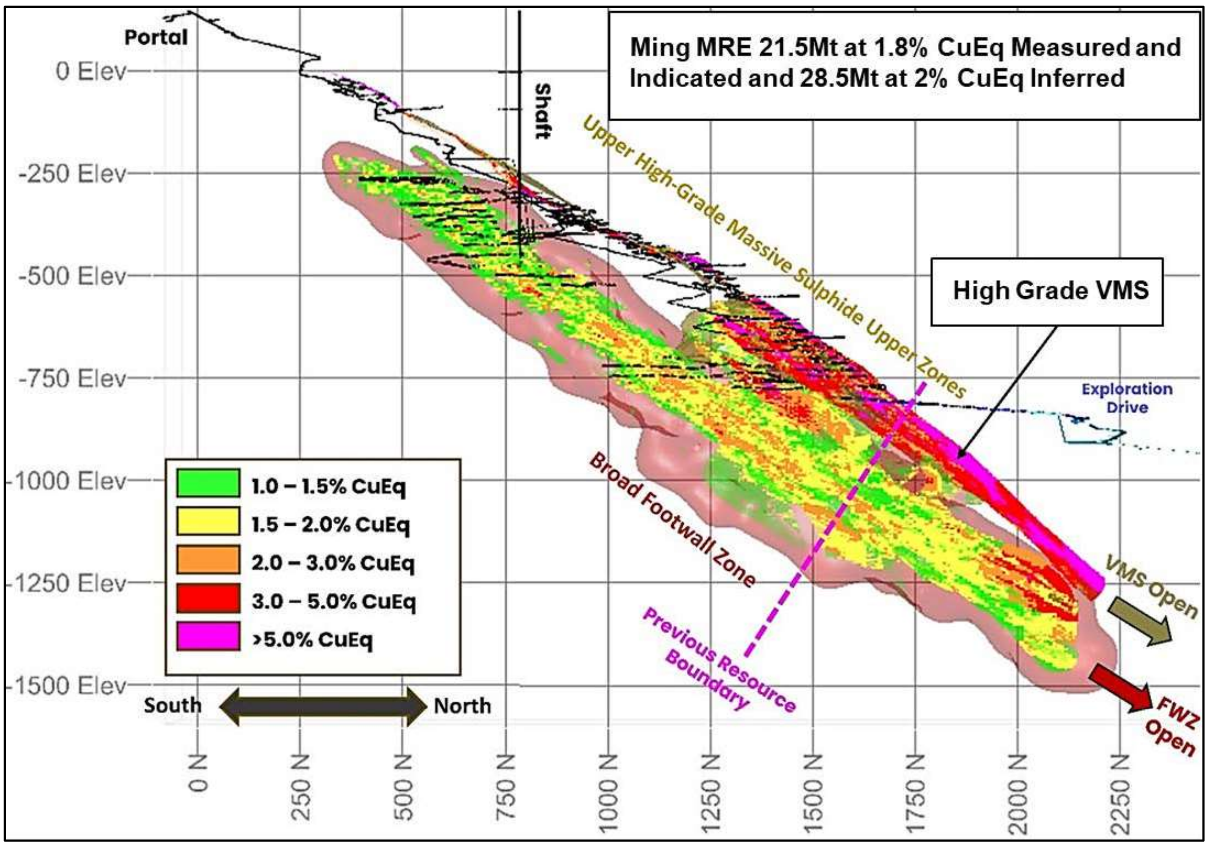
Table 14.13: The Ming Mine October 2024 Mineral Resource Estimate

	MEASURED			INDICATED			INFERRED			TOTAL M&I RESOURCE		
	Tonnes	**Grade**	**Metal**	**Tonnes**	**Grade**	**Metal**	**Tonnes**	**Grade**	**Metal**	**Tonnes**	**Grade**	**Metal**
Copper	4.7Mt	1.7%	77kt	16.8Mt	1.6%	266kt	28.3Mt	1.7%	482kt	**21.5Mt**	**1.6%**	**343kt**
Gold		0.3g/t	45koz		0.3g/t	145koz		0.4g/t	338koz		**0.3g/t**	**190koz**
Silver		2.3g/t	0.3Moz		2.4g/t	1.3Moz		3.3g/t	3.0Moz		**2.4g/t**	**1.6Moz**
CuEq	**4.7Mt**	**1.9%**	**89kt**	**16.8Mt**	**1.8%**	**307kt**	**28.3Mt**	**2.0%**	**576kt**	**21.5Mt**	**1.8%**	**396kt**

Notes:

1. Mineral Resources were prepared in accordance with the CIM Definition Standards for Mineral Resources and Mineral Reserves (MRMR) (2014) and CIM MRMR Best Practice Guidelines (2019).
2. A copper price of US$8,750, Au price of US$2,500 and Ag price of US$25 with a USD:CAD exchange rate of 1.35 was utilized to derive the 1% Cu cut-off grade. Mining costs were CAD$50/t, processing costs were CAD$16/t. Mining costs assumed in the COG calculation assume a combination of transverse and longitudinal long hole open stoping (LHOS) with paste backfill. A 3 meter minimum mining width has been assumed for the VMS and a bulk mining scenario for the LFZ. Processing costs were guided by benchmarked operations that utilize floatation to produce a copper-gold concentrate for external extraction. G&A cost assumption was CAD$12/t. Concentrate freight: mine to port USD$5/t, port to smelter ocean freight USD$60/t. Smelter treatment charges were USD$75/t, Cu refining was US$0.08/lb, $15 US/oz Au, and $0.5 US/oz Ag.
3. Metallurgical recoveries to concentrates are based on assumptions from the previous metallurgical performance at the Ming mine and Nugget Pond processing plant. Metal recoveries are 95.0% Cu, 85% Au, and 85% Ag in the copper concentrate.
4. Metal equivalents for the Resource Estimate have been calculated at a copper price of US$8,750/t, gold price of US$2,500/oz and silver price of US$25/oz. Metallurgical recoveries have been set at 95% for copper and 85% for both gold and silver. CuEq(%) = Cu(%) + (Au(g/t) x 0.82190) + (Ag(g/t) X 0.00822)

5. Domain models were generated with Leapfrog software, based on geology, alteration, structural components and grade continuity. Grade interpolation was undertaken with Datamine software.
6. Treatment of extreme high grades were dealt with by using a cap grade strategy.
7. Mineral Resources were interpolated using Ordinary Kriging methods applied to 2m downhole assay composites.
8. Bulk density has been applied in accordance with specific lithologies and mineralization domains based on calculated mean and median derived from 12,467 filed measurements.
9. Assays were analyzed at Eastern Analytical Limited of Springdale NL. A QAQC program of field and lab duplicates, certified standards and blanks was in place.
10. The Mineral Resource Estimate is based on a database containing 1,334 diamond drill holes from surface and underground totaling 233,380m.



Note: The resource consists of a very high-grade upper volcanogenic massive sulphide (VMS) zone of 6Mt @ 4.3%CuEq and broad footwall copper stringer style mineralized zone (FWZ)

Figure 14.9: Isometric View of the Ming Mine Resource Model Showing all Blocks Above 1% Copper

The Ming Copper-Gold Project was reported using a 1% copper cut-off grade, the same as the previous historic Foreign Estimate reported in August 2023. Sensitivity analysis Table 14.14 and Table 14.15 demonstrates that the potential scale of the project increases significantly as the cut-off grade is lowered. At a 0.5% copper cut-off, the estimate increases to 39.2Mt at 1.4% CuEq for ~0.5Mt of copper Measured and Indicated and 41.8Mt at 1.7% CuEq for ~0.7Mt of copper Inferred. Both bulk and selective mining options will be contemplated as part of future economic evaluations. It needs to be noted that scenarios below the 1% copper cut-off in the sensitivity table do not meet the RPEE criteria stated above and are shown for informational purposes only. The QP has assessed the MRE for mining continuity and is of the opinion that it meets the criteria for reasonable prospects for economic extraction.

The quantity and grade of reported Inferred mineral resources in this MRE are uncertain in nature and there has been insufficient exploration to define these resources as Indicated or Measured; however, it is reasonably expected that the majority of Inferred mineral resources could be upgraded to Indicated mineral resources with continued infill drilling.

Inferred Mineral Resource:

- An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.
- An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

Indicated Mineral Resource:

- An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.
- Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

Measured Mineral Resource:

- A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.
- Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation.
- A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

Table 14.14: Cut-off Grade Sensitivity for the Ming Mine Copper-gold October 2024 Measured and Indicated Resource

MEASURED AND INDICATED									
		Grade			Metal			CuEq	
Cut-off (Cu %)	**Tonnes**	**Cu (%)**	**Au (g/t)**	**Ag (g/t)**	**Cu (kt)**	**Au (koz)**	**Ag (Moz)**	**Grade (%)**	**Metal (kt)**
0.5	39.2	1.2	0.2	1.8	477	267	2.3	**1.4**	**551**
0.6	36.0	1.3	0.2	1.9	460	253	2.2	**1.5**	**530**
0.7	32.5	1.3	0.2	2.0	437	239	2.1	**1.5**	**503**
0.8	28.9	1.4	0.2	2.1	410	223	2.0	**1.6**	**472**
0.9	25.2	1.5	0.3	2.2	378	206	1.8	**1.7**	**436**
1.0	21.5	1.6	0.3	2.4	343	190	1.6	**1.8**	**396**
1.1	18.1	1.7	0.3	2.5	308	170	1.5	**2.0**	**355**
1.2	15.1	1.8	0.3	2.7	274	152	1.3	**2.1**	**316**
1.3	12.6	1.9	0.3	2.9	242	136	1.2	**2.2**	**279**
1.4	10.3	2.0	0.4	3.1	211	122	1.0	**2.4**	**245**
1.5	8.4	2.2	0.4	3.3	184	108	0.9	**2.5**	**214**
1.6	7.0	2.3	0.4	3.5	162	96	0.8	**2.7**	**188**
1.7	5.7	2.5	0.5	3.8	140	87	0.7	**2.9**	**164**
1.8	4.6	2.6	0.5	4.1	122	78	0.6	**3.1**	**144**
1.9	3.8	2.8	0.6	4.5	107	72	0.6	**3.3**	**127**
2.0	3.2	3.0	0.6	4.9	94	66	0.5	**3.5**	**112**

Note: The current Resource has been reported at the 1% copper cut-off. Scenarios below the 1% copper cut-off do not meet the RPEE criteria and are shown for informational purposes only.

Table 14.15: Cut-off Grade Sensitivity for the Ming Mine Copper-gold October 2024 Inferred Resource

INFERRED									
		Grade			Metal			CuEq	
Cut-off (Cu %)	**Tonnes**	**Cu (%)**	**Au (g/t)**	**Ag (g/t)**	**Cu (kt)**	**Au (koz)**	**Ag (Moz)**	**Grade (%)**	**Metal (kt)**
0.5	41.8	1.4	0.3	2.8	586	418	3.7	**1.7**	**702**
0.6	39.6	1.4	0.3	2.9	573	407	3.6	**1.7**	**687**
0.7	37.2	1.5	0.3	2.9	558	393	3.5	**1.8**	**667**
0.8	34.6	1.6	0.3	3.0	538	376	3.3	**1.9**	**643**
0.9	31.6	1.6	0.4	3.1	512	358	3.2	**1.9**	**612**
1.0	28.3	1.7	0.4	3.3	482	338	3.0	**2.0**	**576**
1.1	25.0	1.8	0.4	3.4	447	318	2.8	**2.1**	**535**
1.2	21.7	1.9	0.4	3.6	409	296	2.5	**2.3**	**491**
1.3	18.8	2.0	0.5	3.9	373	273	2.3	**2.4**	**449**
1.4	16.0	2.1	0.5	4.1	334	248	2.1	**2.5**	**403**
1.5	13.3	2.2	0.5	4.3	296	218	1.8	**2.7**	**356**
1.6	11.0	2.4	0.6	4.6	259	194	1.6	**2.9**	**313**
1.7	9.0	2.5	0.6	5.0	226	178	1.4	**3.1**	**276**
1.8	7.5	2.7	0.7	5.5	201	164	1.3	**3.3**	**246**
1.9	6.3	2.8	0.8	6.0	179	154	1.2	**3.5**	**221**
2.0	5.3	3.0	0.8	6.5	160	144	1.1	**3.7**	**199**

Note: The current Resource has been reported at the 1% copper cut-off. Scenarios below the 1% copper cut-off do not meet the RPEE criteria and are shown for informational purposes only.

14.14 Risks and Opportunities

The IRS QP addresses that there are risks that could potentially affect the accuracy of the estimate including: the quality of the historical data, the geological interpretation including the presence of gabbro dykes and the assumptions made to compete the MRE. It is considered that additional diamond drilling would reduce these risks and upgrade most of material in the Inferred Resource category to the Indicated Resource category.

15.0 MINERAL RESERVE ESTIMATES

Item not applicable to this Technical Report.

16.0 MINING METHODS

Item not applicable to this Technical Report.

17.0 RECOVERY METHODS

Item not applicable to this Technical Report.

18.0 PROJECT INFRASTRUCTURE

This item 18 is not required because the Ming Copper Gold project is not and advanced property

19.0 MARKET STUDIES AND CONTRACTS

Item not applicable to this Technical Report.

20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

Item not applicable to this Technical Report.

21.0 CAPITAL AND OPERATING COSTS

Item not applicable to this Technical Report.

22.0 ECONOMIC ANALYSIS

Item not applicable to this Technical Report.

23.0 ADJACENT PROPERTIES

Item not applicable to this Technical Report.

There are no adjacent properties that are material to this report.

24.0 OTHER RELEVANT DATA AND INFORMATION

The following sections are based on the existing Property infrastructure and environmental studies and permits.

24.1 Infrastructure

Figure 24.1 shows the Ming Mine site, the Nugget Pond Mill site (including the tailings management facility), and the Pine Cove Deep water port facility. For a detailed description of the Project infrastructure refer to the 2018 TR (Rambler Metals and Mining Canada Ltd., 2018). The following is a summary of the Project infrastructure and does not contain all infrastructure facilities. The QPs completed a site visit of the Ming Mine underground and nearby surface buildings but did not complete a site visit of the Nugget Pont Mill site area or the Pine Cove Deep water port facility.

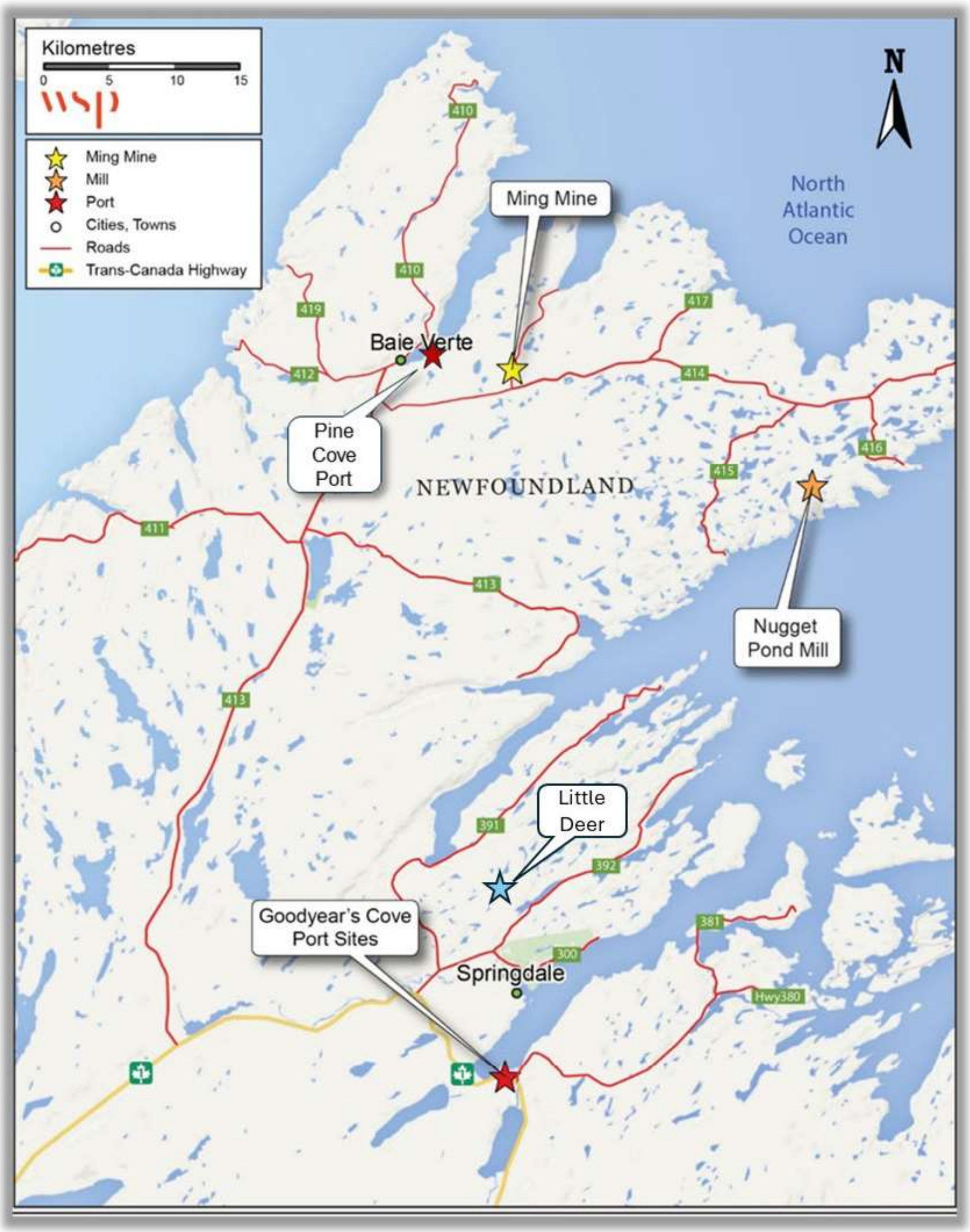


Figure 24.1: Project Site Locations

24.1.1 Ming Mine Site

The Ming Mine site is currently on cold care and maintenance and is not actively mining or processing any ore. Active underground exploration has been occurring since 2023, including development drifting for diamond drilling. During the time of the site visit underground diamond drilling was occurring at four locations targeting the MMS and LFZ sulphide zones. On surface geology staff are logging and sampling underground exploration core. Most of the infrastructure at the Ming Mine site is in support of the exploration and maintaining the infrastructure on site.

The following Items are based on the 2018 TR and updated where changes have occurred.

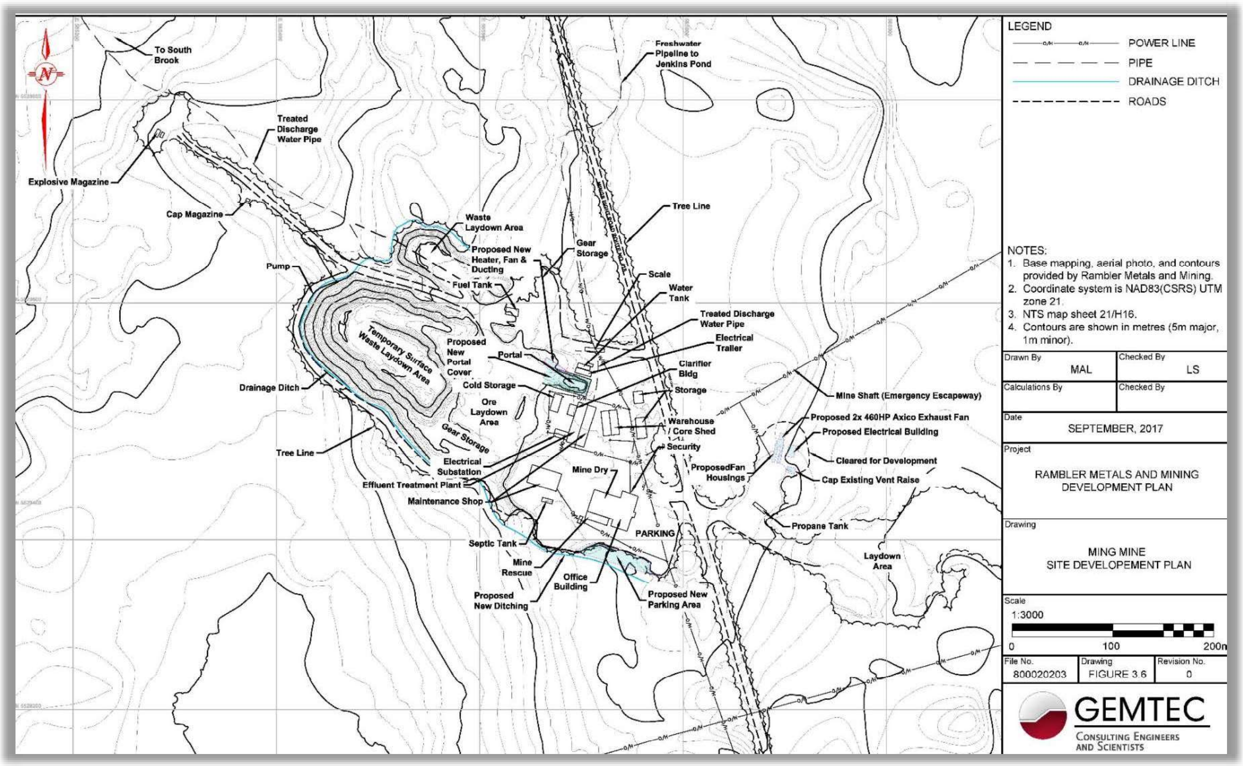
The Ming Mine site is connected to the provincial electrical power grid and is well equipped with mine related infrastructure (Figure 24.2) and includes the following infrastructure:

- Roads, parking, and laydown areas;
- Effluent Treatment Plant (ETP);
- Maintenance shops;
- Surface electrical substation;
- Two core storage building;
- Office building and mine dry/rescue;
- 50 rooms accommodation camp
- Mine portal;
- Scale/scale house;
- Waste rock storage;
- Ore storage pad;
- Ventilation raises;
- Fuel tank storage;
- Boundary shaft.

The site has an existing basic road network in place for access to the existing buildings and services supporting the previous mining operation. The existing main access road from Ming's Bight Road (Route No. 418) enters the site westward and extends past the core building and water treatment building northward to the mine portal. There are other existing roadways to the office building, dump areas, and core storage areas.

The mine dry, rescue, and office building is located near the south entrance. The building is an engineered wooden structure supported on reinforced concrete foundations. The ground floor consists of a reinforced concrete slab-on-grade.

Currently the boundary shaft is used as a secondary egress and ventilation from the 1800 ft. level to surface. The existing headframe and collar house are only used for storage.



Note: Rambler Metals and Mining Canada Ltd., 2018

Figure 24.2: Ming Mine Site Layout

24.1.1.1 Main Access and Site Roads

Primary access to the Ming Mine site, which is located approximately 17 km by road east of the town of Baie Verte on the north coast of the island of Newfoundland, is by the existing La Scie Highway (Route 414) and the Ming's Bight Road (Route 418). Access to the Baie Verte Peninsula is via Route 410 (Dorset Trail) exiting the Trans-Canada Highway. Access roads currently have proper signage, including posted speed limits and caution signs.

The site has an existing basic road network in place for access to the existing buildings and services supporting the mining operation. The existing main gated access road (south entrance) from Ming's Bight Road (Route No. 418) enters the site westward and extends past the mine dry and office building, and then the maintenance shop and cold storage, and heads northward to the mine portal. Trucks enter and exit the site from the north entrance north of the portal where the scales are located. There are other existing roadways to the other maintenance shop, dump areas, and laydown and storage areas. The ventilation setup at the boundary site is accessed by an existing road across from the main gate at the Ming Mine.

24.1.1.2 Parking and Laydowns

Site buildings have limited space available adjacent to each of the buildings for parking, temporary or otherwise, of mine service vehicles.

Mine employees and visitors enter the Ming Mine site from the south entrance and proceed to the 2,000 m^2 parking space south of the office/dry building where there is space for approximately 40 passenger-car size vehicles.

24.1.1.3 Ore and Waste Stockpiles

Previously during mine operations, the mine waste was hauled from underground to surface and placed in the existing 1.8 ha waste rock stockpile located to the west of the portal. This waste will eventually be placed below ground, either as progressive or final closure, in accordance with the closure plan.

Waste rock that has been generated during Phase 1 underground drift development for diamond drilling exploration has been placed in underground historical underground stopes where available.

The waste dump has remained the same since operations ceased in 2022. FireFly has provided a survey of the waste pile in their Operations Annual Report 2023 Ming Mine, FireFly Metals Resource, 2024c. Additional details of the stockpiles are provided in the 2018 TR.

24.1.1.4 Surface Buildings and Infrastructure

A list of the surface buildings and infrastructure is provided in the 2018 TR.

24.1.1.5 Underground Mine

The mine portal is located near the center of the site. The portal provides access to the underground mine. The following infrastructure is located below the surface:

- Maintenance Garage;
- Mine Dewatering System;
- Mine Electrical Distribution System;

- Compressed Air and Process Water Supply;
- Communication System;
- Consumable Supply and Storage.

Descriptions of these underground infrastructure is provided in the 2018 TR.

24.1.1.6 Boundary Shaft

The Boundary Shaft is composed of three timbered compartments, two of which were used as hoisting compartments and one of which is a manway compartment. The shaft is 2,050 feet in depth and is located on the eastern edge of the previously mined orebodies. Other than the collar house, the shaft timbers, and the refurbished manway compartment, none of the previous fixtures of the shaft (e.g. headframe, hoist, electrical equipment, and underground crusher) are in existence.

The existing Boundary Shaft was used for ore extraction during historical mining operations. Currently the shaft is used as a secondary egress from the 1800 Level underground to surface. The existing collar house is only used for storage. The shaft below 1800 Level is currently flooded.

24.1.1.7 Security

Security provisions at the Ming Mine site include gates, fencing, gate houses, signage, barriers, and lighting. The mine is generally operated on a 24-hour basis and area lighting is provided for all roadway, parking, and yard areas throughout the site. The south and north entrances from Ming's Bight Road have sliding, electric-operated gates controlled by a security person in a gate house facility. Fencing, barriers and signage are in place to supplement the intended functioning of the gates, to secure property and materials, and to direct staff/visitors to the proper areas.

24.1.1.8 Power

Electrical power for the Ming Mine is provided by Newfoundland Hydro (Hydro) via the existing 25 kV transmission line. Power from the 25 kV transmission line is routed to the electrical substation where the voltage is transformed from 25 kV to 4,160 V. The substation is located adjacent to the north maintenance shop.

The backup diesel generator plant at Ming's Bight is sized at 1000 kW ((138 amps at 4160 v) approximately 950 amps at 600 v) and is sized to operate 6 x 60 HP Flygt pumps. The diesel generator plant is connected via a separate 5000 Volt Load break switch (manual transfer) to permit either normal electric utility power or the diesel generator power to operate these six pumps. The diesel generator is self-contained with an integral fuel day tank for 24-hour operation.

24.1.1.9 Water Use / Supply

Fresh water requirements for the mine site are supplied via pump and pipeline from V Pond Brook. Fresh water is required for potable water supply and underground mine and process supply. A fresh water intake consisting of a small wet-sump arrangement is located on the shoreline and protected by a small pump house. The in-water intake uses intake screens and arrangements as recommended by the Department of Fisheries and Oceans (DFO) to protect fish and fish habitat.

24.1.1.10 Waste Management

Discussions regarding waste management including chemicals, fuel and oil, explosives, domestic waste, sewage waste and hazardous waste is provided in the 2018 TR.

24.1.2 Nugget Pond Mill Site

The mill facility at Nugget Pond is on cold care and maintenance since 2023 and is not actively processing any ore. The following Item is based on the 2018 TR and updated where changes have occurred. The QP did not visit the Nugget Pond Mill Site.

The mill is a fully permitted base metal and gold mill with historical nominal throughput rate of 1,250 mtpd (Figure 24.3). All existing infrastructure has been well maintained and is able to be started with approximately two months of preparation.

The Nugget Pond property covers approximately 30 hectares and includes the following:

- Road and yard area;
- Office building;
- Assay laboratory;
- Sewage treatment plant;
- A large maintenance garage;
- Cold storage buildings;
- Mill building including crusher, ore bin, and thickener and leach tanks;
- Ore stockpile area;
- Fuel storage and dispensing facilities;
- Security house and gate;
- Reclaim and fire pump house;
- Emergency generator;
- Tailings pond, polishing pond, and associated infrastructure (TMF).

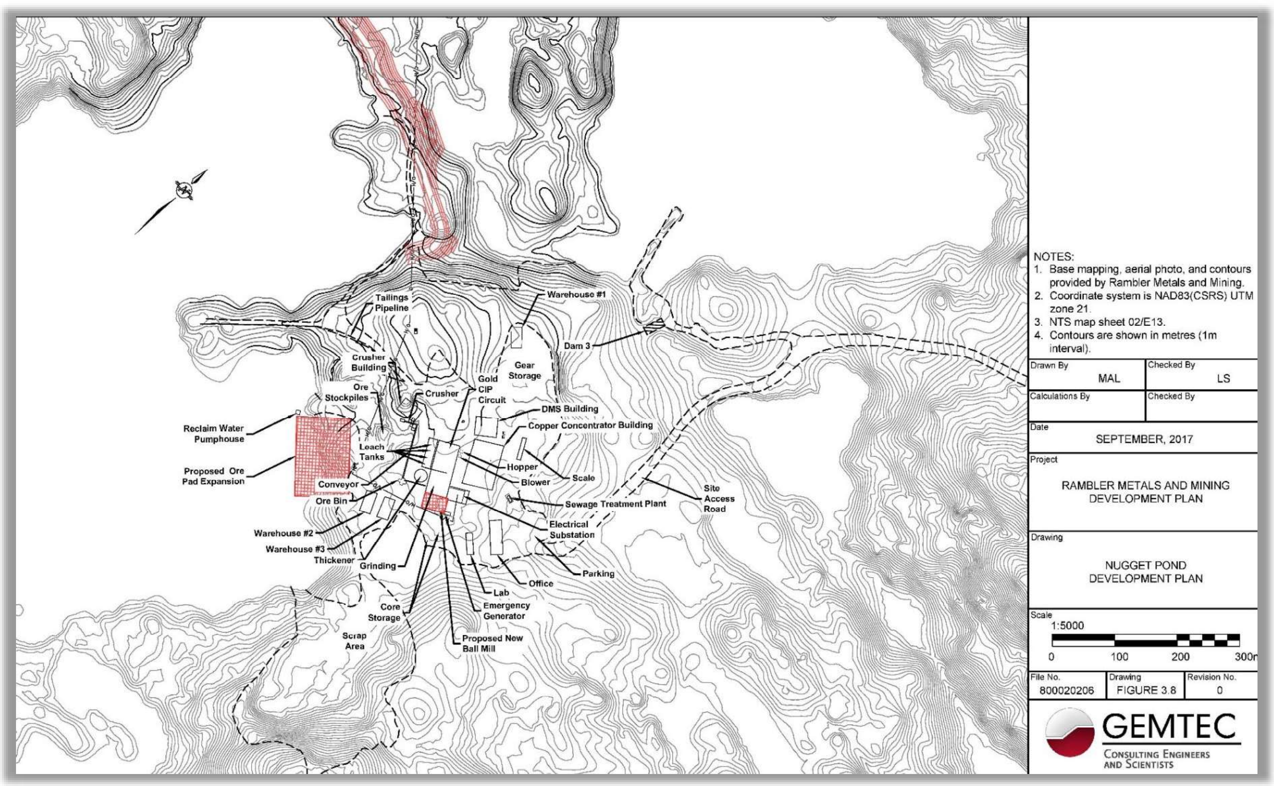


Figure 24.3: Nugget Pond Site Layout

24.1.2.1 Tailings Management

The TMF is located at the Nugget Pond mill site and is made up of the Tailings Impoundment and the Polishing Pond. The TMF was constructed in 1996 by Richmont Mines Inc., the first owner and operator of the Nugget Pond site, and came into operation in 1997. The tailings deposited to date are potentially acid generating (PAG), and therefore must be deposited and retained under water cover. Additional details regarding the TMF is provided in the 2018 TR.

24.1.2.2 Main Access and Site Roads

The Nugget Pond site is accessed via an existing road (Route 416 - Round Harbour Road) that leaves the La Scie highway (Route 414) and travels south towards Snook's Arm for approximately 5 km before heading west for another 5 km. The access roads have proper signage, including posted speed limits and caution signs.

The site has a road network in place for access to the existing buildings and services supporting the milling operation. The main access road (Route 416) enters the site from the northeast and extends throughout the operational areas. It is used for ore delivery to the ore laydown area and for concentrate removal from the concentrator building. Additional roadways and yard areas provide access around the concentrator building including provision for building services, concentrate load-out, and truck scale operations.

24.1.2.3 Site Buildings and Infrastructure

A list of stationary equipment at the Nugget Pond mill site is provided in Table 24.1 with details provided in the 2018 TR.

Table 24.1: Nugget Pond Stationary Equipment Inventory (from 2018 TR)

Nugget Pond Stationary Equipment Inventory	
Ore Handling	**Flotation Tailings Dewatering / Filtration**
Vibrating Grizzly Feeder	Thickener
Primary Crusher	Thickener U/F Pump
Primary Crusher Discharge Conveyor	Filter Feed Storage Tank Agitator
Crushed Ore Stockpile Feed Conveyor	Filter Feed Pump
Plant Feed Conveyor	Filter
Secondary Crusher	Filtrate Pump
Crushed Ore Silo	Filter Cake Conveyor
Feed Delivery Conveyors	Dewatering Area Sump Pump
Vibrating Screen	
Grinding & Flotation	**Water and Air Services**
Cyclone Feed Pump 1	Process Water Pump 1
Cyclone Feed Pump 2	Process Water Pump 2
Cyclone Cluster	Fire Water Pump Module
Ball Mill	Fresh Water Pump
Grinding Area Sump Pump	Gland Seal Water Pump
Rougher Conditioner Agitator	Plant Air Compressor
Rougher Flotation Cell 1	Flotation Air Blower
Rougher Flotation Cell 2	
Rougher Flotation Cell 3	**Plant Services**
Rougher Flotation Cell 4	Plant Control System
Rougher Concentrate Pump 1	Process Plant HVAC
Rougher Concentrate Pump 2	
Rougher Tailings Pump 1	**Dense Media Separation**
Rougher Tailings Pump 2	DMS Feed Conveyor
Flocculant Dosing System	DMS Separator
Lime Dosing System	Sinks Screen 1
MIBC Dosing System	Sinks Screen 2
3418A Dosing System	DMS Concentrate Conveyor
Flotation Area Sump Pump	Floats Screen
	DMS Tailings Conveyor
Flotation Concentrate Dewatering/Filtration	
Thickener	**Correct Medium Pump**
Thickener U/F Pump	Densifier Feed Pump
Filter Feed Storage Tank Agitator	Densifier
Filter Feed Pump	Dilute Medium Pump
Filter	Magnetic Separator
Filtrate Pump	DMS Effluent Pump
Filter Cake Conveyor	DMS Spillage Pump
Dewatering Area Sump Pump	Correct Medium Pump

24.1.2.4 Ore Stockpile Area

During mill operations run-of-mine (ROM) mill feed was stored in the ore stockpile area located between the mill building and the Tailing Pond. The stockpile was reported to accommodate approximately 6,000 tonnes of ore as reported in the 2018 TR.

24.1.2.5 Other Items

Descriptions of water supply, fuel storage, power supply, waste management are detailed in the 2018, TR.

24.1.3 Pine Cove Port Site

The Pine Cove deep water port at Point Rousse Port is located just 6km from FireFly's Ming Copper Gold Project in the Baie Verte Mining District, on the Point Rousse/Ming's Bight Peninsula. It is capable of receiving Panamax vessels (~50,000 tonnes). This port also has a causeway, a barge offloading facility, access road and laydown facilities, geographic coordinates. 49°57' N latitude, and 56°08' W longitude (Figure 4.2). Access to this port is provided in a Port Access Agreement with TSXV-listed Maritime Resources Corp (TSXV:MAE) under which FireFly can export up to 1Mtpa of mineral concentrate per year. The agreement gives FireFly free and uninterrupted passage over Maritime's Point Rousse tenements to provide access to the Pine Cove deep water Port for the purpose of transporting and exporting mineral concentrate. The agreement also includes the right to construct storage and handling facilities on the Property.

24.2 Environmental

24.2.1 Environmental Background

The Ming Mine Copper-Gold Project, Green Bay, includes the Ming Mine Site, the Nugget Pond Mill Site and the Pine Cove deep water port. In October 2023, with the acquisition of the RMM assets, FireFly was assigned and transferred numerous permits, approvals and authorizations as owner and operator of these sites. The two key authorizations associated with the Project include:

- NL Environmental Protection Act Certificate of Approval (C of A) No. AA13-035580, issued March 13, 2013. Department of Environment and Climate Change (DECC) has been consulted with respect to the planned changes to the project and how they will impact the C of A, and a subsequently C of A No. AA18-065651 was issued and later renewed and replaced with C of A No. AA23-045695 that expires on April 13, 2028.
- NL Mining Act Mill Licence No. ML-RRM-05 was renewed in May 20, 2020 in association with NL Department of Industry, Energy and Technology (DIET, formerly NL DNR) required five year update of the Project Development and Rehabilitation and Closure Plans.

Although production at the Ming Mine is paused and Nugget Pond Mill is on care and maintenance, FireFly has, and continues to operate these sites in accordance with the required Federal and Provincial Acts, Regulations, and Guidelines, and maintains an Environmental Management System which includes a number of environmental protection and response plans (e.g., Waste Management, Contingency, MMER Emergency Response, and others), environmental monitoring programs, and other environmental protection measures.

24.2.2 Regulatory and Permitting Framework

24.2.2.1 Provincial Environmental Assessment Process

The Environmental Assessment Division of the Newfoundland and Labrador Department of Environment and Climate Change is responsible for administering the environmental assessment process for mining projects in NL.

According to the NL Environmental Protection Act (Chapter E-14.2) and the Environmental Assessment Regulations, any mining projects or modifications to existing projects in NL may be subject to Environmental Assessment (EA). Additional EA review may be necessary if operating mines plan to increase production beyond their original approved limit significantly or if new components, such as a new Tailings Management Facility and new Process Plant, are added to the mining footprint.

The provincial EA process involves several steps and allows for public review and defined decision points. While the process has specific timelines for review periods and decision steps, it's common for extensions to be granted.

The first step in the NL EA process is to submit an EA Registration document to the Environmental Assessment Division of the Newfoundland and Labrador Department of Environment and Climate Change (NLDECC). After the submission of the EA Registration document, the process proceeds with a prescribed 45-day period. Following government agency and public review, the Minister of the NLDECC will issue a decision or recommendation on the proposed development. The decision or recommendation will fall into one of the following categories:

- Release, with or without conditions;
- Further review in the form of an Environmental Preview Report (EPR) or an Environmental Impact Statement (EIS); or
- Rejection of the proposed undertaking via a recommendation to Cabinet.

The completion of an Environmental Project Report (EPR) or an Environmental Impact Statement (EIS) is necessary if the initial Environmental Assessment (EA) review indicates that information gaps are preventing the Minister from making an informed decision based on the submitted Registration document. Both an EPR and an EIS require the submission of additional information and have project-specific guidelines issued by the provincial EA Division. The preparation of EPR and EIS guidelines takes up to 120 days and is developed based on feedback from the government, the proponent, and the public.

Writing an EPR is guided by Guidelines issued by the EA Division and typically requires the inclusion of existing information and/or the completion of further studies, along with proponent-driven public consultation. At the end of the EPR review period, the Minister will issue a decision on whether the project may be released, with or without conditions, or if it may require an EIS.

An EIS is necessary when there is the potential for a project to cause significant adverse environmental effects. The project proponent is responsible for preparing a project-specific EIS and conducting the necessary component or baseline studies according to the government-issued guidelines. At the end of the review period, the Minister decides if the component studies and/or EIS are sufficient. If they are deemed insufficient, the proponent is required to revise and/or amend the document.

Upon determining sufficiency, Cabinet will either release the project, conditionally release the project, or not release it. Once the project is released from the EA process and prior to construction, the proponent can proceed with obtaining the necessary permits and authorizations. A release from the provincial EA process is valid for three years.

24.2.2.2 Federal Environmental Assessment Process

Federally, the Impact Assessment Act Assessment Act (IAA 2019) is triggered if a proposed activity appears on the Schedule of Physical Activities under the Regulations Designating Physical Activities. The Act also has a provision whereby the Minister can exercise discretion in choosing to subject a particular activity to federal EA review even if it doesn't appear in the Schedule of Physical Activities.

In October 2023, the Supreme Court of Canada announced that IAA 2019, in part constitutes an impermissible intrusion by the federal government into areas of provincial jurisdiction and thus unconstitutional.

Consequently, in 2024 the federal government announced amends such as limiting the Minister's ability to designate projects, revising definitions to ensure federal purview is limited to projects with "adverse effects within federal jurisdiction", and allowing substitution of assessment processes by other jurisdictions. These and other amendments to IAA 2019 came into force on June 20, 2024, through the Budget Implementation Act to address the Supreme Court's concerns, including by clarifying that IAA is only required when a project may have adverse effects within federal jurisdiction.

It should be noted that the Designated Projects list in IAA 2019 are set to undergo a five-year review in the next few months. and changes are anticipated to be announced by the end of 2024. Any changes made may affect future regulatory requirements.

In general, when a proponent considers undertaking a project that may require a federal review, i.e., it is listed on the Schedule of Physical Activities under the Regulations Designating Physical Activities, it is recommended that they engage formally with the Canadian Impact Assessment Agency (the Agency). The proponent will need to provide the Agency with project information sufficient for a determination relative to the need for a federal EA review.

The Agency may require that the proponent provide a Project Description in accordance with the Prescribed Information for the Description of a Designated Project Regulations (SOR/2012-148). When the Project description is provided to the Agency, there are legislated timelines that will be followed.

The two types of impact assessments for designated projects are those led by the Impact Assessment

Agency of Canada (Agency) and those led by an independent review panel. Most impact assessments in Canada are led by the Agency and the regional Office, which in this case is the Atlantic Regional Office representing St. John's, Newfoundland, and Labrador. The second type are review panels made up of groups of independent experts appointed by the Agency to conduct impact assessments. Panel members are private professional (i.e., non-government employees) selected for their knowledge, experience, and expertise relative to a project and its potential effects. They provide advice to the Minister an Agency staff support the work of the panel which operates independently of the government.

The impact assessment process includes the following main components.

- Planning phase – approximately 180 days where the Project list is identified, the initial project description is proposed and reviewed by stakeholder and the project is listed in the online registry. A summary of issues is provided, and responses given. Then a detailed project description is submitted, and a public participation plan is outlined as well as an indigenous engagement plan, impact assessment cooperation plan, permitting plan and notice of commencement before the 180 days ends.

- Impact Statement phase – up to 3 years where the Tailored Impact Statement Guidelines are followed for information and studies required for the IA. The Terms of Reference (ToR) is established, and the Integrated Review Panel is designated.
- Impact Assessment phase – up to 300 days where the registry is updated and maintained, the Impact statement is prepared and external technical reviews are initiated as well as the IA report, conditions, Agency's consultation report, joint review panel agreement, review panels report and public hearing.
- Decision-making phase – up to 90 days, where the conditions are issued, the Governor in Council provides advice, and a Decision Statement is issued.
- Post Decision phase – ongoing follow up and monitoring based on the decision statement and conditions issued.

In the event that a project does not trigger the Federal IA, the process would fall to the provincial process if it triggered the requirements for a Provincial EA.

24.2.2.3 Other Legislation

24.2.2.3.1 Fisheries Act, 2019

The federal government amended the Fisheries Act in 2019 whereby many of the provisions from the pre-2012 Fisheries Act have been reinstated, reverting in large part to the concept of fish habitat protection, prohibiting harmful alteration and disruption or destruction of fish habitat (HADD).

24.2.2.3.2 Metal and Diamond Mining Effluent Regulations

The Metal and Diamond Mining Effluent Regulations (MDMER), authorize the use of water frequented by fish for mine waste disposal. The MDMER also establish limits for certain deleterious substances and pH levels, forbids the release of effluent that can immediately kill rainbow trout, and specifies the rules for conducting effluent sampling, reporting, and monitoring its impact on the environment.

Any water released from the site will comply with the MDMER guidelines (MDMER, 2002) and meet the final discharge point (FDP) requirements. Water quality testing at the FDP will be carried out throughout operations, during the site closure, and will continue until it meets the MDMER criteria.

The MDMER are rules created under the Canada Fisheries Act, and when checking compliance with the regulations, enforcement personnel act according to the Compliance and Enforcement Policy for the Habitat Protection and Pollution Prevention Provisions of the Fisheries Act.

24.2.2.4 Provincial Permits, Approvals and Authorizations

Following release from the NL EA process for any phase of the project expansion, a Project will require new or updated permits, approvals and authorizations from NL, and potentially from nearby municipalities (e.g., Baie Verte or others), to reflect any changes in the mine operation. Table 24.2 summarizes the permits, approvals and authorizations that are currently in place for Firefly.

Table 24.2: Environmental Approvals, Authorization and Permits Currently in Place

Environmental Permit, Approval or Authorization	Issuing/Approval Agency
Release from EA Process	EA Division & Minister - DECC
Certificate of Approval for Construction and Operation Waste Management Plan Environmental Contingency Plan (Emergency Spill Response) Environmental Protection Plan	Pollutions Prevention Division (PPD) - DECC
Development Plan Rehabilitation and Closure Plan Financial Assurance Surface and Mining Lease Mineral License Quarry Development Permit Exploration Permit	Department of Industry Energy and Technology
Blasters Safety Certificate Magazine License Approval for Storage and Handling Gasoline Miners Medical – ensure a copy is available onsite	Occupational Health and Safety Division – Digital Government and Service NL
Permit to construct a Non-domestic well Water Resources Real-Time Monitoring Permit to alter a Body of Water Culvert Installation Fording Stream modification or Diversion Other works within 15 meters of a body of water Water Use License	Water Resources Management Division - DECC

24.2.3 Rehabilitation and Closure

24.2.3.1 Regulatory Requirements

A Rehabilitation and Closure Plan (RCP) is mandated by the Newfoundland and Labrador Mining Act, chapter M-15.1, Sections (8), (9), and (10). The RCP outlines the process for rehabilitating a mining project at any stage, including when operations cease. Rehabilitation involves restoring the property as closely as possible to its original state, or to an alternative state approved by the Newfoundland and Labrador Department of Industry, Energy and Technology (NLDIET). An approved RCP is necessary to obtain project development approval under the NL Environmental Protection Act. It must be submitted with or immediately after the Development Plan, and forms the basis for establishing financial assurance for a project. NLDIET will review the submitted RCP only after the project has been released from the EA Process, which typically takes between four months to one year for review and approval.

The RCP is a "live" document, directly linked to mine development and operation over the mine's lifespan. It requires periodic reviews and revisions throughout the project's development and operational stages to accommodate operational and planning changes. These reviews and revisions ordinarily take place once every five years or with all major project changes.

24.2.3.2 Objectives and Approach

Green Bay Copper-Gold Project to date have included mining and milling of relatively high-grade massive sulphide copper ore at an initial rate of 650 mtpd to production read of 1,250 mptd in 2018, including lower footwall zone material. The increase in production rate in 2018 required improvements such as:

- Upgrading underground mine ventilation
- Optimization of the existing mill processing and installation of new grinding mill;

- Extension of the existing ore pad adjacent to the mill
- A small dam raise and new saddle dam to increase the storage in the existing TMF;

No new infrastructure was required at Goodyear's Cove for the increase in production in 2018. With the expansion, an Updated Rehabilitation and Closure plan Revision 4 (RCP) was filed with NL DIET. The previous operator did not complete or file the five-year updated Rehabilitation and Closure Plan in 2023, and although the mine and mill are not in production, Firefly has committed to updating the Rehabilitation and Closure Plan and revision 5 will be filed at the end of 2024.

The overall objectives of the RCP proposed for the Green Bay Copper Gold Project include:

- Restoration of the health and fertility of the land to a self-sustaining, natural state;
- Provision of an agreeable habitat for wildlife (including fish) in a balanced and maintenance-free ecosystem;
- Creation of a landscape which is visually acceptable and compatible with the surrounding terrain,
- Physical and chemical stability of the entire project area
- Mitigation and control to within acceptable levels, for the potential sources of pollution, fire risk and public liability; and
- Provide a safe environment for long-term public access.

24.2.3.3 Progressive Rehabilitation

The primary objective is to return the site to near pre-mining land contours and drainage patterns, matching the adjacent lands as closely as practical while maintaining long-term physical and chemical stability. Since 2011, various progressive rehabilitation activities have been carried out:

- Rehabilitation of ARD issues due to historical mining operations (i.e. controlling effects of PAG material places on site by spreading non-PAG capping material, controlling/treating drainage);
- Backfilling of Mine West open pit;
- Development and implementation of a Waste Management Plan;
- Boundary Shaft head frame removal;
- East pit vent raise capping;
- Reclamation of exploration trails;
- Removal of ore bin at Boundary Shaft area; and
- Revegetated the area where the former underground crown pillar was removed at Nugget Pond
- Removal of polychlorinated biphenyls (PCB) transformers that were in place before 2008

24.2.3.4 Closure, Post-Closure, and Long-Term Monitoring

Once it is no longer economical to mine the deposit or when all economic resources have been exhausted, final closure rehabilitation activities will be initiated. The filed and accepted RCP was developed based on guidelines set out by the NL DIET. As per NL DIET requirements, no salvage value from the sales of equipment or machinery is included in closure cost estimates. Closure rehabilitation is summarized follows:

- Removal of hazardous chemicals, reagents and materials. This includes materials in reagent mixers and tanks, pipelines, unused stocks, and laboratory chemicals. The hazardous materials will be for re-sale, if possible, and if not properly disposed of at an approved facility;
- A formal phased Environmental Site Assessment (ESA) will be conducted on the site to identify potential contaminated areas and carry out required remediation
- Equipment will be disconnected, drained and cleaned, disassembled and sold for reuse or to a licensed scrap dealer. This includes tanks, mechanical equipment, electrical switchgear, pipes, pumps, vehicles, equipment and office furniture;
- Dismantling and removal/disposal of all buildings and surface infrastructure, including the new ventilation, exhaust, and heating equipment at the portal, boundary shaft, and exhaust raise. This
- Plan assumes that all surface buildings and infrastructure to be demolished or removed have been cleaned of process materials and after all potentially hazardous materials have been removed;
- Material and equipment with salvage value will be removed and sold for its value. The expected Salvage value has not been used to reduce the decommissioning cost estimate provided herein. Equipment and demolition material with no marketable value will be disposed of in a manner consistent with the disposal of other building demolition waste;
- It is anticipated that surface infrastructure and demolished buildings that are not salvaged for scrap metal or re-use will be deposited in the Baie Verte municipal landfill, as this is the closest facility that can handle this waste.
- Removal of the septic system;
- Demolishing all concrete foundations to 0.3 m below surface grade, at a minimum and disposal of concrete debris underground or in an appropriate landfill;
- Backfilling/capping mine openings;
- Removal of metal portal cover, demolition or removal of all portal ventilation and heating equipment;
- Removing the fresh water intake pumphouse and equipment:
- Removing of Effluent treatment plant (EFT) discharge lines;
- Removal of fuel storage and dispensing facilities;
- Removing the reclaim water intake pumphouse and equipment;
- Removing the tailings discharge lines;
- The TMF dams will be left in place and the decant system removed and replaced with a permanent spillway to ensure a permanent water cover of over the impounded tailings. The Polishing Pond dam and associated decant structure will be removed and the area re-graded and stabilized against erosion. The proposed new saddle dam will be left in place;

- Assessing soil and groundwater conditions in areas that warrant assessment (i.e. fuel dispensing facility, ore and waste rock stockpile locations etc.) and implementing remedial measures where necessary;
- In general, site drainage patterns will be re-established, as near as practical, to natural, pre-mining conditions;
- Grading and/or scarification of disturbed areas and/or the placement and grading of overburden for re-vegetation in areas where natural re-vegetation is not sufficiently rapid to control erosion and sedimentation; and
- Attending to any rehabilitation requirements associated with the site such as removal of culverts and power lines, and infilling of any drainage or diversion ditches which are no longer required.

Upon completion of mining operations, Firefly will request to enter the post-closure monitoring phase. Monitoring will continue for an estimated five additional years after all closure activities are finished. The duration of post-closure monitoring will be determined by the recommendations and requirements of regulatory authorities. Once the site is determined to be physically and chemically stable and approved by the appropriate regulators, it will be relinquished to the Crown.

Closure monitoring plans are similar to operational monitoring plans, ensuring the continuity of data for robust comparisons. Post-closure monitoring will include physical monitoring of vegetation efforts, slope stability, and public safety measures, as well as chemical monitoring of surface water and groundwater, and reporting. Firefly will take appropriate action to address any concerns such as re-seeding or slope adjustments during the post-closure monitoring phase. It is anticipated that post-closure monitoring requirements will decrease over time until they are no longer necessary.

24.2.3.5 Cost Estimate for Closure

In July 2019, the NL DIET issued a letter accepting the 2018 RCP, with a financial assurance of $4,523,992 in Canadian Funds. The closure costs include the applicable percentages for project management, engineering, and contingency, as outlined in the Mining Act. Any associated credit for salvageable materials and equipment is not accounted for in the cost estimate, as outlined in the Mining Act; however, these options will be pursued upon closure.

24.2.4 Social or Community Impact

The Baie Verte Peninsula encompasses 21 communities, including Baie Verte and Ming's Bight, which are located near the Green Bay Copper-Gold Project. As per a 2011 survey by Statistics Canada, the population of the Baie Verte Peninsula was 5,470, with Baie Verte being the largest town with a population of 1,370.

The economy of the Baie Verte Peninsula is primarily based on mining, with additional contributions from the forestry and fishing industries. Significant mining-related employers in the area include Maritime Resources, Shoreline Aggregate, and Guy J Bailey Inc.

25.0 INTERPRETATION AND CONCLUSIONS

WSP and IRS have completed the first TR for the FireFly Ming Mine Copper-Gold Project that included a summary of the Property and reviews of their 2023 and 2024 exploration activities. The QPs completed a site visit to confirm data collection procedures and also completed independent data verification checks of drill hole database against certificate and visualized the drill hole data in 3D modeling software.

The observations from the site visit and validation checks that have been completed by the QPs confirm that FireFly is collecting exploration data to acceptable industry standard, and the current completed work is suitable for supporting geological modeling and Mineral Resource estimation.

The IRS QP considers this report and the MRE to be reliable and thorough, based on the quality of the data, reasonable assumptions, and parameters, which follow the CIM best practice guidelines .The IRS QP addresses that there are risks that could potentially affect the accuracy of the estimate including: the quality of the historical data, the geological interpretation including the presence of gabbro dykes and the assumptions made to compete the MRE. It is considered that additional diamond drilling would reduce these risks and upgrade most of material in the Inferred resource category to the Indicated resource category.

26.0 RECOMMENDATIONS

On completion of this MRE and Technical Report, the QPs have the following recommendations.

26.1 WSP

- QA/QC – The assay certificates provided by the assay laboratories should be password locked pdf documents prior to being provided to Firefly. Certificates provided to WSP were not secured documents.
- Data verification of historical Rambler drill hole data has been completed by Firefly and is used for Mineral Resource estimation. Currently, historical Rambler drill hole data in the LFZ has assay gaps. These assay gaps were not sampled by Rambler likely due lower grade sulphides. Firefly is drilling in these areas to further Mineral Resource estimation and is using continuous sampling. The following are recommendations
  - Internal comparison study of historical Rambler drill assays against Firefly drill assay in areas where Mineral Resource estimation is planned.
  - Collect a selection of assays not previously sampled by Rambler assuming this core is available in storage.
  - Consider twinning some of Ramblers' historical drill hole locations, specifically in higher grade areas that have been identified by Firefly exploration drilling.
  - Mineral Resource QP to define appropriate resource classification in areas with higher density of historical data.

26.2 IRS

The following are the ISR QP recommendations for the MRE:

- Complete further infill drilling to fill the gaps in the historical drilling.
- Infill all the inferred areas in an approximate 35 to 40m by 35 to 40m spacing to support the potential upgrade to the indicated resource category.
- Review the current and future bulk density data to better understand the distribution and variation across the different domains.
- Refine the geological model and improve the gabbro dyke interpretation.
- Review and refine the high-grade mineralization domain in the LFZ.
- Revisit the estimation parameters and strategy once all the infill drilling has been completed.

26.3 Project Recommendations

Recommendations for the advancement of the project are as follows:

- Complete the Phase one diamond drill program
- Complete the Phase two exploration drift development
- Complete the phase two diamond drill program

- Contingent on successful results of the exploration program, complete an MRE and a PEA.

Cost estimates for the recommended work are summarized in Table 26.1.

Table 26.1: Cost Estimates for Recommended Work

Item	Description	Estimated Cost
Phase 1 diamond drill program	10,000 m	$1,500,000.0 CAD
Phase 2 exploration drift development	1,200 m underground drifting	$9,600,000.0 CAD
Phase 2 diamond drill program	60,000 m of infill and step out drilling	$9,000,000.0 CAD
MRE & PEA studies	Mineral Resource estimate and PEA	$400,000.0 CAD
Total Estimated Cost		$20,500,000.0 CAD

27.0 REFERENCES

27.1 General

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27.2 Geology

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- Tuach, J. and Kennedy, J.J., 1978: The Geologic setting of the Ming and other sulphide deposits, Consolidated Rambler Mines, northeast Newfoundland, in Economic Geology, Vol. 73, pp. 192-206

27.3 Websites

- http://www.worldweatheronline.com/Baie-Verte-weather-averages/Newfoundland-And-Labrador/CA.aspx
- http://www.empr.gov.bc.ca/Mining/Geoscience/MineralDepositProfiles/ListbyDepositGroup/Pages/GMarineVolcanicAssociation.aspx#G06

27.4 Metallurgy

- SGS Mineral Services, “An Investigation by QEMSCANTM into the Mineralogical Characteristics of Three Ore Zones from the Baie Verte Peninsula Project", November 8, 2007.
- SGS Canada Inc., "An Investigation into the Grindability Characteristics of Two Samples from the Rambler Project", Project 12348-001 Revision 3, May 20, 2010.
- SGS Canada Inc., “An Investigation into the Recovery of Base Metals from Ore Samples of the Ming Deposit”, November 12, 2007.
- WSP, Thibault & Associates and Gemtec report, *Ming Copper-Gold Mine Technical Report Update*, April 2018.

28.0 CERTIFICATES OF QUALIFIED PERSONS

CERTIFICATE OF QUALIFIED PERSON PAUL PALMER

I, Paul Palmer, state that:

(a) I am a Principal Geological Engineer at:
WSP Canada Inc.
36 Pippy Place, Suite 100
St. John's, Newfoundland, A1B 3X4

(b) This certificate applies to the technical report titled National Instrument 43-101 Technical Report; FireFly Metals Ltd., Ming Copper-Gold Project, Newfoundland; with an effective date of: November 29, 2024 (the "Technical Report").

(c) I am a "qualified person" for the purposes of National Instrument 43-101 ("NI 43-101"). My qualifications as a qualified person are as follows. I am a graduate of University of Toronto with a B.ASc. in Geological Engineering from 1994, I am a member in good standing of the Professional Engineers of Ontario (#100050189) and Professional Engineers and Geoscientists Newfoundland and Labrador (#11387). My relevant experience after graduation, for the purpose of the Technical Report, includes over 29 years of experience in mine geology and mineral resource evaluation of mineral projects nationally and internationally in a variety of commodities including 2.5 years of direct working experience in gold mining operations located in northern Manitoba, 2.5 years of experience in base metals operation in Northern Manitoba, and 24 years of consulting experience with a strong focus on gold and base metals related projects.

(d) I completed a personal inspection of the property described in the Technical Report on July 15-16, 2024.

(e) I am responsible for Item(s) 1.1-1.7, 1.10, 1.11, 1.13.1, 1.13.3, 2.1, 2.2, 2.3.1, 2.4, 3, 4.4-4.6, 9, 10, 11, 12.1, 15-25, 26.1, 26.3, 27 of the Technical Report.

(f) I am independent of the issuer as described in section 1.5 of NI 43-101.

(g) I have had no prior involvement with the property that is the subject of the Technical Report.

(h) I have read NI 43-101 and the parts of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101; and

(i) At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the parts of the Technical Report for which I am responsible, contain(s) all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at St. John's, Newfoundland this 29th of November 2024.

Signed by Paul Palmer

Paul Palmer; P.Eng.

CERTIFICATE OF QUALIFIED PERSON BRIAN THOMAS

I, Brian Thomas, state that:

(a) I am a Principal Geologist at:
WSP Canada Inc.
33 Mackenzie Street, Suite 100
Sudbury, Ontario, P3C 4Y1

(b) This certificate applies to the technical report titled National Instrument 43-101 Technical Report; FireFly Metals Ltd., Ming Copper-Gold Project, Newfoundland; with an effective date of: November 29, 2024 (the "Technical Report").

(c) I am a "qualified person" for the purposes of National Instrument 43-101 ("NI 43-101"). My qualifications as a qualified person are as follows. I am a graduate of Laurentian University with a B.Sc. in Geology from 1994, I am a member in good standing of the Association of Professional Geoscientists of Ontario (#1366). My relevant experience after graduation, for the purpose of the Technical Report, includes over 30 years of experience in mine geology and mineral resource evaluation of mineral projects nationally and internationally in a variety of commodities including 8 years of direct working experience in gold mining operations located in northern Ontario, 9 years of experience in base metals operations in Sudbury, Ontario, and 13 years of consulting experience with a strong focus on gold and base metals related projects.

(d) I have not completed a personal inspection of the property described in the Technical Report.

(e) I am responsible for Item(s) 1.1-1.4, 1.12, 3, 4.1–4.3, 5, 6, 7, 8, of the Technical Report.

(f) I am independent of the issuer as described in section 1.5 of NI 43-101.

(g) My prior involvement with the property that is the subject of the Technical Report consists of internal grade estimation for the Lower Footwall Zone completed in 2019 for Rambler Metals and Mining.

(h) I have read NI 43-101 and the parts of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101; and

(i) At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the parts of the Technical Report for which I am responsible, contain(s) all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Sudbury, Ontario this 29th of November 2024.

Signed by Brian Thomas

Brian Thomas; P.Geo.

CERTIFICATE OF QUALIFIED PERSON MIRENO DHEPAGANON

I, Mireno DhePaganon, state that:

(a) I am a Process Engineer at:

WSP Canada Inc.
1600 Rene-Levesque
Montreal, Quebec, H3H 1P9

(b) This certificate applies to the technical report titled National Instrument 43-101 Technical Report; FireFly Metals Ltd., Ming Copper-Gold Project, Newfoundland; with an effective date of: November 29, 2024 (the "Technical Report").

(c) I am a "qualified person" for the purposes of National Instrument 43-101 ("NI 43-101"). My qualifications as a qualified person are as follows. I am a graduate of McGill University with a B.ASc. in Metallurgical Engineering from 1992, I am a member in good standing of the Order of Engineers of Quebec (#118862). My relevant experience after graduation, for the purpose of the Technical Report, includes over 30 years of experience in mineral processing and mineral projects nationally and internationally in a variety of commodities including 14 years of consulting engineering services with a focus on process design, and 17 years of experience with process equipment suppliers with a focus on applications engineering and equipment life cycle support services.

(d) I have not completed a personal inspection of the property described in the Technical Report.

(e) I am responsible for Item(s) 13 of the Technical Report.

(f) I am independent of the issuer as described in section 1.5 of NI 43-101.

(g) I have had no prior involvement with the property that is the subject of the Technical Report.

(h) I have read NI 43-101 and the parts of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101; and

(i) At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the parts of the Technical Report for which I am responsible, contain(s) all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Montreal, Quebec this 29th of November 2024.

Signed by Mireno DhePaganon

Mireno DhePaganon; P.Eng.

Certificate of Qualified Person

I am an author of the report entitled "NI 43-101 Technical Report Firefly Metals Ltd Ming Copper Gold Project Newfoundland" (the "Report"), effective date 29 November 2024, and I hereby state:-

1. My name is Brian Richard Wolfe and I am the Principal Resource Geologist of the firm of International Resource Solutions Pty Ltd of 71 Watkins St, White Gum Valley, WA 6162, Australia.
2. I am a practicing geologist registered with the Australian Institute of Geoscientists. My membership number is 4629.
3. I graduated with a BSc Degree (Hons) in Geology in 1992 from the National University of Ireland, Dublin, and hold a Postgraduate Certificate in Geostatistics from Edith Cowan University (2007).
4. I have practiced my profession for a total of 30 years since 1993. I have experience in exploration geology, mining geology and geostatistical modelling and estimation of mineral resources.
5. I am a "qualified person" as that term is defined in National Instrument 43-101 (Standards of Disclosure for Mineral Projects) (the "Instrument").
6. I have personally visited the Ming Copper Gold Project for 3 days during July 2024.
7. I have not previously been engaged with respect to the Ming Copper Gold Project by Firefly Metals Ltd or any other company in any capacity.
8. I am responsible or jointly responsible for preparing or supervising the preparation of sections 1, 2, 12, 14, 25 and 26 of the Report.
9. I am not aware of any material fact or material change with respect to the subject matter of the Report which is not reflected in the Report, the omission of which would make the Report misleading.
10. I am independent of the Ming Copper Gold Project and the Issuer (Firefly Metals Ltd) pursuant to section 1.5 of the Instrument.
11. I have read the National Instrument and Form 43-101F1 (the "Form") and the parts of the Study for which I am responsible have been prepared in compliance with the Instrument and the Form.
12. I do not have, nor do I expect to receive a direct or indirect interest in the Ming Copper Gold Project of Firefly Metals Ltd or, and I do not beneficially own, directly or indirectly, any securities of Firefly Metals Ltd or any associate or affiliate of such company.
13. At the effective date of the Report, to the best of my knowledge, information and belief, the parts of the Report for which I am responsible for preparing or supervising the preparation thereof, contains all scientific and technical information that is required to be disclosed to make the Report not misleading.

Dated at Perth, Western Australia, on 29 November 2024.

____

Principal Resource Geologist

International Resources Solutions Pty Ltd wsp.com