

NATIONAL INSTRUMENT 43-101
TECHNICAL REPORT
on the
YORK HARBOUR PROPERTY
WESTERN NEWFOUNDLAND, CANADA

Located Within:
NTS Map Sheet: 12G/01
Report Prepared for:



YORK HARBOUR
M E T A L S

York Harbour Metals Inc.
1518–800 West Pender Street
Vancouver, BC Canada V6C 2V6

Report Prepared by:
Longford Exploration Services Ltd.

Luke van der Meer, BSc, P. Geo.
1680–355 Burrard Street
Vancouver, BC Canada V6C 2G8

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1 EXECUTIVE SUMMARY

1.1 Introduction

This technical report has been prepared for York Harbour Metals Inc. (York Harbour Metals or the Company) (TSXV: PXA) of 1518 – 800 West Pender Street, Vancouver, BC, Canada V6C 2V6. York Harbour Metals is a Canadian company involved in mineral exploration and development.

This technical report describes the results of the 2021 exploration program completed on the York Harbour Property, as described below (the Property). The program included a preliminary phase of prospecting and reconnaissance mapping and sampling, channel sampling, 3D modelling, surface and downhole electromagnetic surveys, and culminated in a two-phase diamond drilling program totalling 38 drill holes for 5,784 m of core. This work was commissioned and coordinated by York Harbour Metals.

1.2 Property Ownership

York Harbour Metals holds the exclusive right to explore for minerals within the boundaries of the claims comprising the Property pursuant to the option agreement (the "Option Agreement"). The Company acquired the right and option to acquire 100% ownership of the mineral properties known as the York Harbour Property in western Newfoundland (the "Property") pursuant to an option agreement dated February 26, 2021 (the "Option Agreement") between the Company and the WBN Prospecting Group (the "Optionor"), comprised of Grassroots Prospecting & Prospect Generation Inc. (31.67%), United Gold Inc. (31.67%), G2B Gold Inc. (31.67%), Newton Bell Holdings Ltd. (2.5%), and J Fahmy Consulting Inc. (2.5%).

The Property consists of five (5) Newfoundland and Labrador mineral licenses comprised of 156 Newfoundland and Labrador mineral claims and covers an area of approximately 3,900 hectares, all held beneficially in trust for the Optionor by Robert Keats, Wesley Keats, and Dustin Keats, of Newfoundland and Labrador, as shown below in Table 1.2.

Table 1-1: York Harbour Mineral Tenures

License No.	Registered Title Holder	No. of Claims	License Expiry Date	Anniversary Date	Area (ha)
031681M	Robert Keats	4	2025-12-14	2021-12-14	100.00
031682M	Wesley Keats	124	2025-12-14	2022-12-14	3100.00
026938M	Dustin Keats	1	2024-03-07	2025-03-07	25.00
026561M	Wesley Keats	2	2023-11-12	2028-11-12	50.00
026228M	Wesley Keats	25	23023-08-02	2030-08-02	625.00
		156			3,900.00

Pursuant to the Option Agreement, the Company acquired the right and option to acquire 100% of the Property by exercising the option under the Option Agreement, as follows:

- (1) paying \$95,000 cash to the Optionor, which was done on February 26, 2021;
- (2) issuing 1,485,566 common shares of the Company to the Optionor, which was done on March 19, 2021;
- (3) incurring \$3,000,000 in exploration expenditures as follows:
 - (a) \$250,000 on or before February 26, 2022, which has been done;
 - (b) \$750,000 aggregate cumulative total on or before February 26, 2023, which has been done; and
 - (c) \$3,000,000 aggregate cumulative total on or before February 26, 2024.

Upon exercise of the option to acquire the Property under the Option Agreement, the Company will own 100% of the Property, which will be subject to a 2% net smelter returns ("NSR") royalty which is subject to a right of the Company to repurchase 50% (amounting to a 1% NSR) for a purchase price of \$1,000,000 within one year of commencement of commercial production.

The mineral licenses and claims comprising the Property do not include surface rights, but the Company has obtained surface rights for access to the Property for all of the Company's exploration on the Property to date, as well as for the third phase of drilling exploration scheduled for 2022, through exploration permits granted by the government of Newfoundland and Labrador. For any other future exploration work contemplated, exploration permit approval must be obtained from the government of Newfoundland and Labrador.

1.3 Property Description

The York Harbour Property is located on the west coast of the province of Newfoundland and Labrador in Western Newfoundland on the south shore of the Bay of Islands. The Property is located on the National Topographic System (NTS) map sheet 12H/10, Universal Transverse Mercator (UTM) Zone 21.

The Property is 27 km west of the city of Corner Brook, which serves as a regional service centre for Western Newfoundland, 3 km east of the village of York Harbour, and ~650 km northwest of the provincial capital in St. John's.

The Property consists of five mineral licences comprising 156 mineral claims and covers an approximate area of 3,900 ha. Titles to these mineral licences are 100% held by the title holders shown in Table 1.1, and these titles are under option to York Harbour Metals.

1.4 Status of Exploration

Since late April 2021, the Company has conducted an aggressive multi-disciplined program to assess the exploration potential of the York Harbour Property. The 2021 exploration program has included:

- several prospecting and rock geochemical sampling traverses
- examination and sampling of historical drill core stored at the Government's Pasadena warehouse

- review, data compilation, and three-dimensional modelling of historical surface and underground drilling and assay data
- surface and borehole electromagnetic survey (BHEM)
- LiDAR drone survey of the 4th Level adit; and
- two phases of NQ-size diamond drilling with concurrent BHEM surveying

The last drill hole of the 2021 exploration program was completed on December 12, and the drilling and exploration equipment is stored in a York Harbour warehouse for the start of the 2022 program. As of the date of this report, the 2022 drilling program is underway.

1.5 Geology and Mineralization

The York Harbour Property is located within the Bay of Islands Ophiolite Complex hosted within the Humblar Arm Allochthon of the Humblar Laurentia Zone, located on the western margin of Newfoundland.

The geology of the host ophiolite is dominated by thick sequences of mapped lower basaltic pillow sequences and upper basaltic flow rocks similar to other prospective VMS belts in the Newfoundland. The basaltic sequences are locally folded into a broad recumbent synform structure that encompasses the Property boundaries.

The initial drill targets at the 4th Level adit area and other prospective target areas on the Property are hosted adjacent to the contact between lower basaltic pillow sequences and upper basaltic flow rocks. The most economically important mineralization encountered at the York Harbour Project is volcanogenic hosted massive sulphide horizons that are generally controlled by lithologic contacts within the mostly low-strained basaltic complex.

Sulphide mineralization is dominated by multiple, irregular horizons of massive and semi-massive pyrite, sphalerite, chalcopyrite with minor magnetite pyrrhotite and rare galena. Additional lower grade mineralization has been deposited within the stockwork veining and disseminated within the wall rock alteration halo.

The highest grade intervals for lead and zinc are strongly associated within a predominance of chalcopyrite and sphalerite.

1.6 Conclusions and Recommendations

Mineralization at the York Harbour Property has been confirmed by systematic data research and followed up by successful Phase 1 confirmation drilling.

Reconnaissance-stage prospecting and exploration work has highlighted several target areas which warrant follow-up programs. The regional targets are considered early stage and will require additional surface exploration efforts to better define possible drill targets.

The Phase 1 and Phase 2 diamond drilling programs on the York Harbour Property have intersected significant Cu+Zn±Ag±Au±Co mineralization over numerous horizons and zones preliminarily in the area of the 4th Level adit. Grade and mineralization continuity demonstrates excellent potential.

The quality control (QC) programs used during exploration programs on this Property were overseen by appropriately qualified professional geologists using adequate QC procedures that meet industry best practices for an exploration-stage property.

The York Harbour Property is a development drilling project, which requires further systematic exploration and evaluation studies. A Phase 3, development and exploration drilling program is recommended to increase potential mineral resource volume and grade and to extend areas of known mineralization at the 4th Level adit drilling area and at the No. 4 Brook zone approximately 2 km west of 4th Level adit. Drilling will commence in Q1-2022.

The Phase 3 development drilling program is essentially a continuation of the 2021 Phase 1 and Phase 2 drilling programs at site. The development drilling will comprise 4,000 m of NQ core, including analysis and test work to support future mineral resource estimations. Specifically, this will include systematic characterization of the deposit potential, with complimentary metallurgical, geotechnical, and physical properties test work to facilitate ongoing mineral resource evaluation work.

The focus is to step-out from existing mineralization and define the extents of known bodies of massive sulphide mineralization at the 4th Level adit area where the 2021 drilling was concentrated. The estimated budget for this work is approximately CAD\$2.0 million.

The Phase 3 exploration drilling program will also comprise a step-out extension of the 2021 drilling programs at site. The exploration drilling will comprise 1,500 m of NQ core, including analysis and test work to support future mineral resource estimations. Specifically, this will include systematic characterization of the deposit potential, with complimentary metallurgical, geotechnical, and physical properties test work. The estimated budget for this work is approximately CAD\$1.5 million.

2 INTRODUCTION

2.1 Purpose of Report

This technical report has been prepared for York Harbour Metals Inc. (York Harbour Metals or the Company) (TSXV: PXA) of 1518 – 800 West Pender Street, Vancouver, BC, Canada V6C 2V6. York Harbour Metals is a Canadian company involved in mineral exploration and development.

On December 1, 2021, York Harbour Metals engaged the services of the author, Luke van der Meer, through Longford Exploration Services Ltd. (Longford Exploration) to prepare an independent National Instrument 43-101 Technical Report (NI 43-101) on the York Harbour Property located in the Western Newfoundland, Canada.

Luke van der Meer is an independent qualified person (QP) as defined by Canadian Securities Administrators pursuant to *NI 43-101 Standards of Disclosure for Mineral Projects*, and van der Meer fulfills the requirements of an “independent qualified person” as described in Section 28 (Date and Signature Page) of this report.

This technical report describes the results of the 2021 exploration program completed on the York Harbour Property. The program included a preliminary phase of prospecting and reconnaissance mapping and sampling, channel sampling, 3D modelling, surface and downhole electromagnetic surveys, and culminated in a two-phase diamond drilling program totalling 38 drill holes yielding 5,784 m of core. This work was commissioned and coordinated by York Harbour Metals.

Van der Meer is responsible for all sections of this technical report. This report has been prepared in accordance with NI 43-101 guidelines and is in compliance with Form 43-101F1, and its purpose is to provide the basis for an informed opinion as to the status and nature of mineralization on the York Harbour Property.

2.2 Sources of Information

Reports and documents listed in Section 27 References were used to support the preparation of this technical report. Additional information was requested from the Company where required.

The author has also reviewed geological data obtained from Newfoundland and Labrador government reports and has used publicly available information from GeoScience Online Atlas and GeoFiles website found online at <https://gis.geosurv.gov.nl.ca/> and for historical property assessment reports and mineral tenure information as well as its digital publication database for regional geological data and mineral occurrence information. Climate information was obtained from Environment Canada, and population and local information for the project area was obtained from Wikipedia.

This report is based on the personal examination by the QP of all available reports and data on the York Harbour Property. As of the date of this report, the QP is not aware of any material fact or material change with respect to the subject matter of this technical report that is not presented herein, or which the omission to disclose could make this report misleading.

2.3 Site Visit

The QP, Luke van der Meer, conducted a site visit to the Property by road on December 6 to 8, 2021 to evaluate the geological environment, assess the Property, and confirm the technical and geological information presented herein.

2.4 Abbreviations and Units of Measurement

Metric units are used throughout this report, and all currency is reported in Canadian dollars (CAD\$) unless otherwise stated. Coordinates within this report use NAD83 UTM Zone 21 unless otherwise stated.

A list of abbreviations and acronyms are shown in Table 2.1.

Table 2-1: Abbreviations and Units of Measurement

Description	Abbreviation or Acronym
percent	%
three dimensional	3D
atomic absorption	AA
silver	Ag
above mean sea level	amsl
all-terrain vehicle	ATV
gold	Au
borehole electromagnetic survey	BHEM
degrees Celsius	°C
Canadian dollar	CAD\$
chlorite	Cl
centimetre	cm
Canadian Institute of Mining, Metallurgy and Petroleum	CIM
cobalt	Co
copper	Cu
diamond drill hole	DDH
east	E
electromagnetic	EM
degrees Fahrenheit	°F
fire assay	FA
iron	Fe
fluxgate magnetometer	FGM
feet	ft
gram	g
grams per tonne	g/t
billion years ago	Ga
geographic information system	GIS
Global Positioning System	GPS
Geological Survey of Canada	GSC
hectare	ha
inductively coupled plasma	ICP
induction magnetometer	IM
induced polarization	IP
International Organization for Standardization	ISO
kilogram	kg

Description	Abbreviation or Acronym
kilometre	km
light detection and ranging	LiDAR
metre	m
million years ago	Ma
millilitre	ml
millimetre	mm
north	N
not applicable	n/a
North American Datum	NAD
National Instrument 43-101	NI 43-101
National Topographic System	NTS
lead	Pb
York Harbour Metals Inc	The Company
Professional Geoscientist	P. Geo.
Parts per billion	ppb
parts per million	ppm
York Harbour Property	the Property
quality assurance/quality control	QA/QC
qualified person	QP
rock quality designation	RQD
south	S
Standards Council of Canada	SCC
tonne	t
time-domain electromagnetic	TDEM
Universal Transverse Mercator	UTM
volcanogenic massive sulphide	VMS
west	W
zinc	Zn

3 RELIANCE ON OTHER EXPERTS

The technical report was prepared by Mr. Luke van der Meer, P. Geo. Mr. van der Meer is a qualified person (QP) for the purposes of NI 43-101 and fulfills the requirements of an “independent qualified person”.

The QP has not independently researched the property title or mineral rights for the York Harbour Property and expresses no legal opinion as to the ownership status of the property. For disclosure relating to these matters in Section 4, the author has relied on information provided by York Harbour Metals in a document titled “Mineral Property Option Agreement” dated February 26th, 2021 between WBN Prospecting Group, and York Harbour Metals. that describes the mineral rights and the Company’s ownership interest in the Property.

The QP believes the data and information provided by York Harbour Metals. is essentially complete and correct to the best of his knowledge and that no information was intentionally withheld that would affect the conclusions made herein.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

The York Harbour Property is located on the west coast of the province of Newfoundland and Labrador on the south shore of the Bay of Islands, 27 km west of the city of Corner Brook and 3 km east of the village of York Harbour (Figure 4-1).

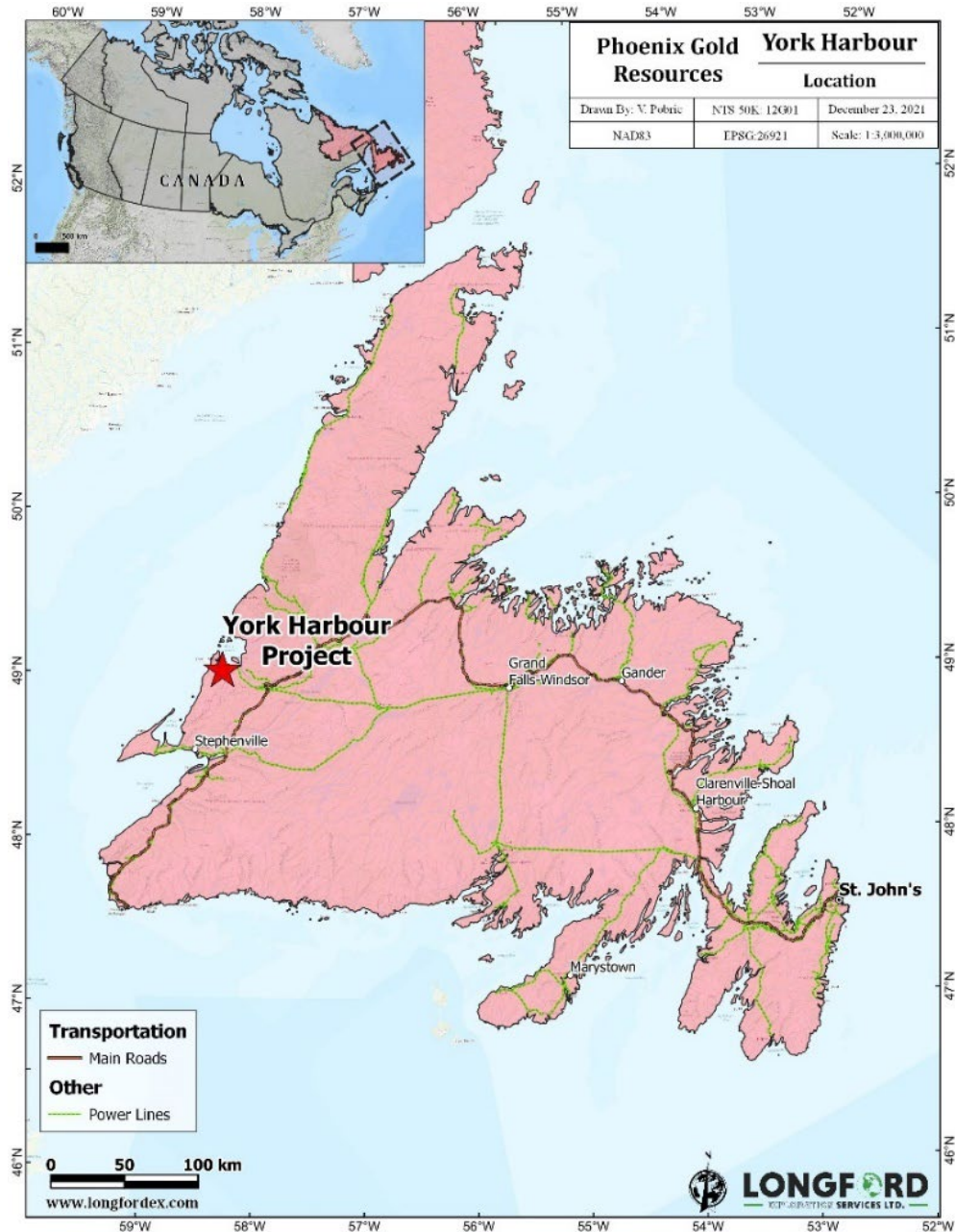


Figure 4-1: York Harbour Property Location, Western Newfoundland, Canada

4.2 Mineral Titles

The Property consists of five (5) Newfoundland and Labrador mineral licenses comprised of 156 Newfoundland and Labrador mineral claims and covers an area of approximately 3,900 hectares, all held beneficially in trust for the Optionor by Robert Keats, Wesley Keats, and Dustin Keats, of Newfoundland and Labrador, as shown below in Table 4.1.

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026561M	Wesley Keats	2	2023-11-12	2028-11-12	50.00
026228M	Wesley Keats	25	2023-08-02	2030-08-02	625.00
		156			3,900.00

Pursuant to the Option Agreement, the Company acquired the right and option to acquire 100% of the Property by exercising the option under the Option Agreement, as follows:

- (1) paying \$95,000 cash to the Optionor, which was done on February 26, 2021;
- (2) issuing 1,485,566 common shares of the Company to the Optionor, which was done on March 19, 2021;
- (3) incurring \$3,000,000 in exploration expenditures as follows:
 - (a) \$250,000 on or before February 26, 2022, which has been done;
 - (b) \$750,000 aggregate cumulative total on or before February 26, 2023, which has been done; and
 - (c) \$3,000,000 aggregate cumulative total on or before February 26, 2024.

Upon exercise of the option to acquire the Property under the Option Agreement, the Company will own 100% of the Property, which will be subject to a 2% net smelter returns ("NSR") royalty which is subject to a right of the Company to repurchase 50% (amounting to a 1% NSR) for a purchase price of \$1,000,000 within one year of commencement of commercial production.

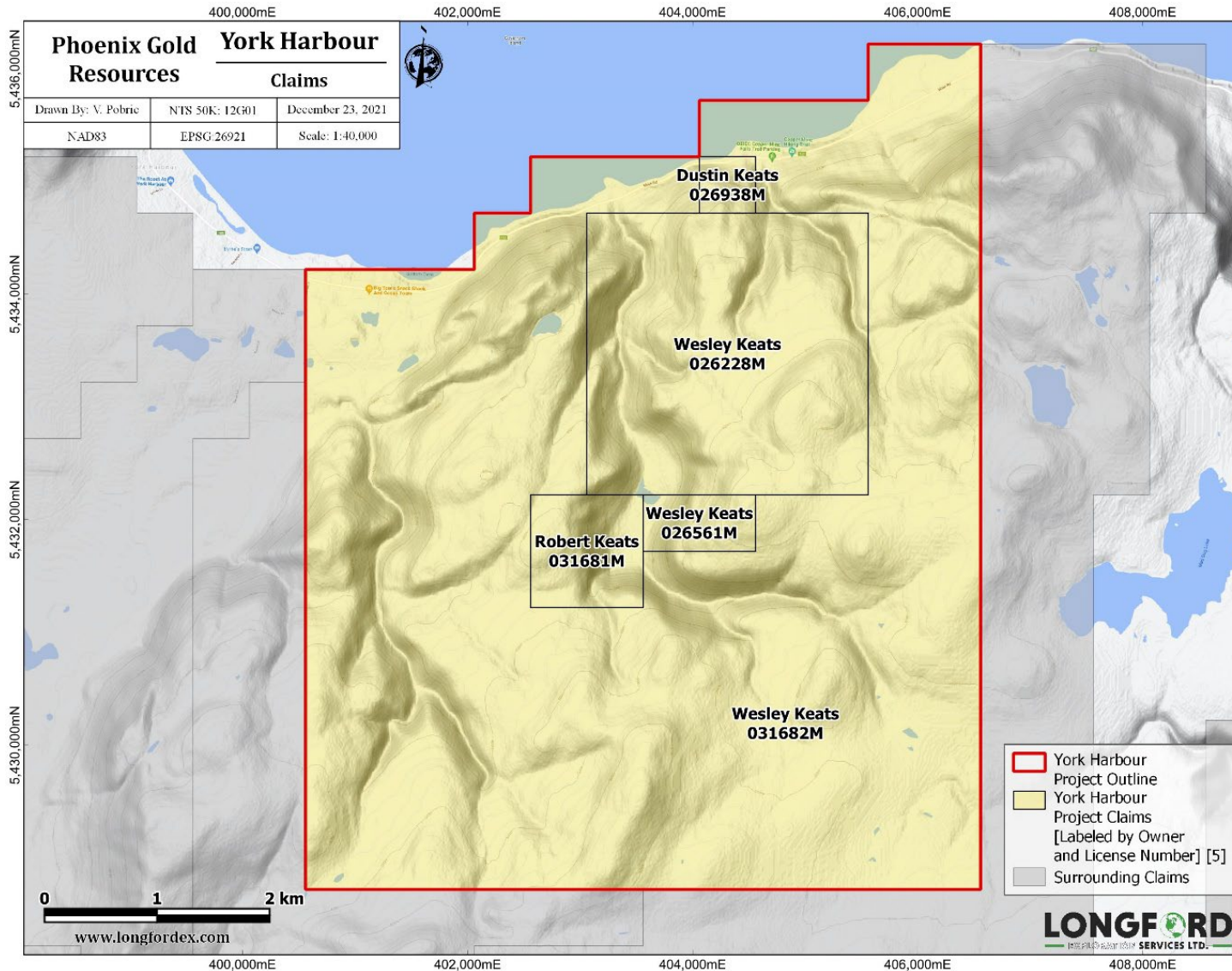


Figure 4-2: York Harbour Property Claims Disposition

4.3 Mineral Rights in Newfoundland

Mineral exploration licences are issued by the Newfoundland and Labrador Department of Natural Resources and must be registered with the Mineral Claims Recorders Office. Licences comprise 500 m² single claim blocks which are based on one-quarter of a Universal Transverse Mercator (UTM) grid square.

Licences are acquired via map-staking using an online system and are referenced using UTM coordinates for the corner points in a relevant map projection. A maximum of 256 contiguous claims can be covered by one exploration licence. The fees for staking include a \$10/claim staking fee as well as a \$50/claim security deposit, which is refunded upon completion of the first year assessment requirements. Each licence is issued for a five-year term and may be held for a maximum of 30 years, with renewal fees due on the anniversary date in assessment years 5, 10, 15, 20, 25 and 30. For claims to remain in good standing,

assessment expenditures must be met for each year, and a summary work report must be prepared annually.

Table 4.2 shows a summary of the claim renewal fees and expenditure requirements.

Table 4-2: Summary of Claim Renewal Fees and Expenditure Requirements

Assessment Year	Renewal Fees	Minimum Expenditure
1	N/A	\$200.00
2	N/A	\$250.00
3	N/A	\$300.00
4	N/A	\$350.00
5	\$25/claim	\$400.00
6 through 10	\$50/claim (year 10)	\$600.00
11 through 15	\$100/claim (year 15)	\$900.00
16 through 20	\$200/claim (year 20)	\$1,200.00
21 through 25	\$200/claim/year	\$2,000.00
26 through 30	\$200/claim/year	\$2,500.00

4.4 Property Legal Status

York Harbour Metals holds the exclusive rights to explore for minerals within the boundaries of the claims listed in Table 4.1, but it does not hold the surface rights to the Property. Access to the property is provided through exploration permits issued by the government of Newfoundland and Labrador to exploration companies for their respective mineral licences and claims.

4.5 Surface Rights in Newfoundland

Surface rights are not included with minerals rights in the province of Newfoundland and Labrador.

4.6 Permitting

To the author's knowledge, there are no environmental liabilities applicable to this Property. The company has obtained permits from the government of Newfoundland and Labrador for all exploration to date as well as for third phase of drilling scheduled for 2022.

With respect to any planned future work, exploration permit approval must be obtained from the provincial Department of Natural Resources, and all provincial and federal conditions, acts or regulations must be complied with. Exploration approval for this Property has always been granted in the past, and there is no reason to assume that exploration approval would be denied in the future.

The following approvals may be required, and it should be noted that four to six weeks should be allowed to acquire the necessary approvals:

- Exploration Approval Permit: This permit would cover prospecting, rock and soil geochemistry, line cutting, trenching, bulk sampling, airborne and/or ground geophysical surveys, fuel storage, ATV usage, diamond drilling, etc.

This permit has been obtained of behalf of the company and is currently active.

- Timber Rights Permit: This permit would cover the removal of timber for line cutting, diamond drilling site preparation, trenching, etc.
- Temporary Water Use Permit: This permit would allow the use of water, from a specified location, for camp and drilling-related needs.
- Licence to Occupy: This permit would be required if a camp location was to be used for a period of time longer than what was allowed as part of the Exploration Approval Permit. This permit is obtained from the Provincial Department of Crown Lands.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility, Local Resources, and Infrastructure

The Property is located in Western Newfoundland on National Topographic System (NTS) map sheet 12H/10, Universal Transverse Mercator Zone 21, northwest of the city of Corner Brook, which serves as a regional service centre for Western Newfoundland. The Property is located approximately 650 km northwest of the provincial capital in St. John's. Figure 5-1 shows the Property location and access points, including roads and major power transmission lines.

The town of Deer Lake, located 95 km southwest of the Property, has an airport with connecting flights to most major Canadian centers. Amenities such as hotels, restaurants, airstrips, medical clinics, helicopter pads, fuel, groceries, and supplies are available in numerous small communities in the area, with more extensive services, including a fully staffed hospital, available in Corner Brook. Access to the Property is excellent; Newfoundland Route 420 passes through the Property which allows for further access via an extensive network of abandoned logging roads.

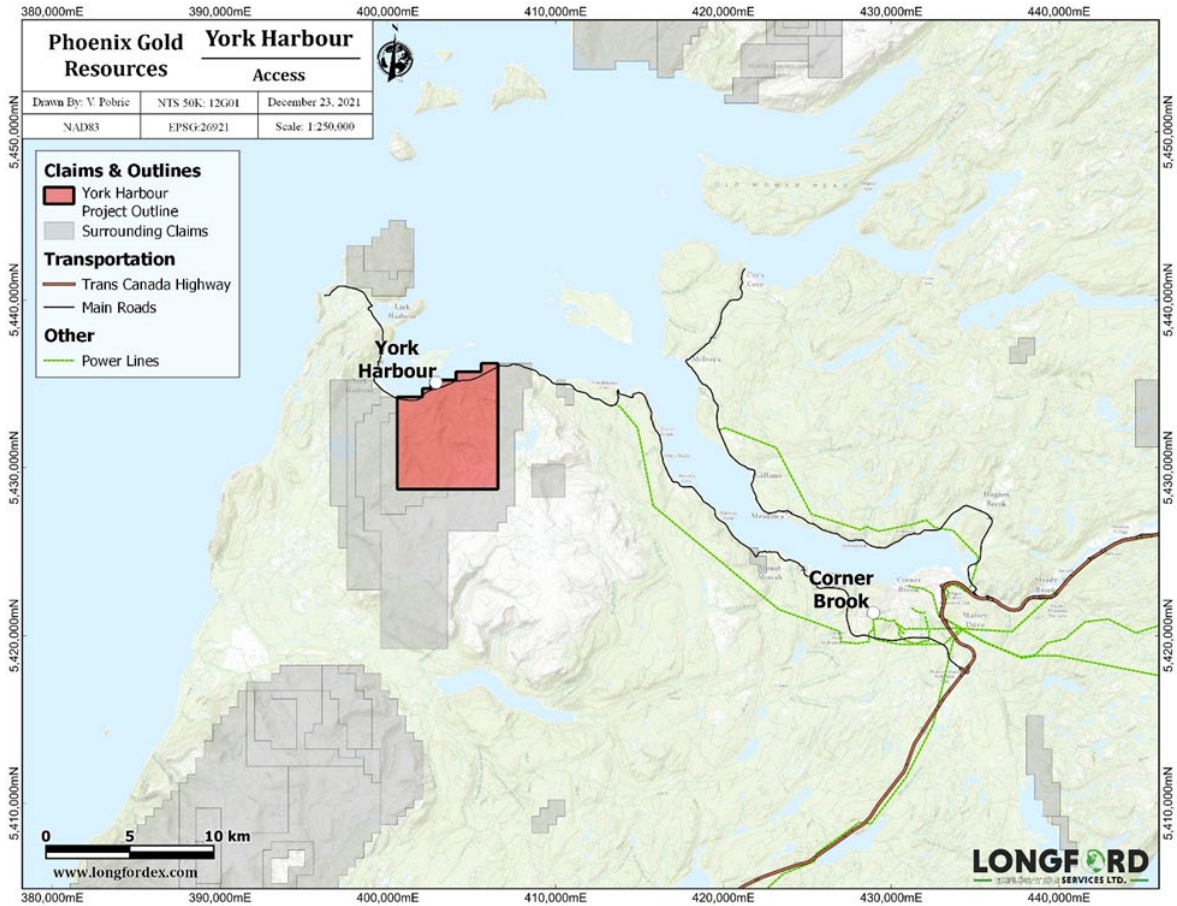


Figure 5-1: York Harbour Property Location and Access

The Property has excellent local infrastructure. Corner Brook is a regional centre for industry and government with established pulp and paper mills, regional hospital and health care facilities, a deep-water shipping port with container-handling facilities, and a population of approximately 20,000. Most field supplies, labour and heavy equipment can be readily obtained in York Harbour and Corner Brook.

A power line from Corner Brook, serving York Harbour and Lark Harbour, passes through the north end of the Property claims and lies along the York Harbour highway and adjacent to the lower Sea Level adit, approximately 1.5 km north of the old mine-workings.

Abundant sources of water are available from local streams and ponds which are subject to water use permitting from the government of Newfoundland and Labrador.

A drill-skidder road leading to the old mine workings is approximately 2,000 m to 3,000 m long and was repaired and upgraded in September 2004 to enable access for ATVs and drill equipment. A useable 400 ft long gravel road off the York Harbour highway gives direct access to the Sea Level adit portal. Currently, a rebar-concrete door covers the portal which makes this adit inaccessible. The York Harbour mine portals (the 4th Level adit and the Main shaft) were backfilled by the Newfoundland government and are inaccessible without permission and excavation.

As noted above in section 4, surface rights are not included in the mineral licenses and claims comprising the project. However, exploration companies may apply to the Newfoundland and Labrador government for permits for access and surface rights for exploration and mining activities.

5.2 Climate and Physiography

The area has a humid climate with relatively long frost-free periods due to the mountainous terrain, which provides protection from cold northeasterly winds. Generally, the region experiences warm summers and cold winters and is considered climatically favourable for plant growth with its mountainous terrain leading to high rainfall amounts, as winds off the Gulf of St. Lawrence drop their moisture when they ascend the slopes. Winter temperatures generally range from -4 to -12 °C with 350 mm to 400 mm of precipitation, spring temperatures range from -2 to 8 °C with 200 mm to 250 mm of precipitation, summer temperatures range from 12 to 16 °C with 300 mm of precipitation, and fall temperatures range from -2 to 8 °C with 350 mm to 400 mm of precipitation (Table 5.1).

Table 5-1: Climate Data for Corner Brook Weather Station

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year Total
Daily Average (°C)	-6.1	-6.8	-3.2	2.6	8	12.8	17.3	17.3	13	7.5	2.3	-2.5	5.2
Record High (°C)	16.5	14	20.5	22.5	27.2	35	34.4	34.4	31.1	25	21.7	16.7	-
Record Low (°C)	-31.7	-31.7	-29.4	-18.5	-7.5	-4.4	1.1	0	-2.8	-7.8	-16.1	-20.6	-
Avg Precipitation (mm)	144.8	105.6	93.3	80.4	86.3	87	91.8	107.2	105.5	112.2	122.4	149.2	1285.8
Avg Rainfall (mm)	39.3	28	41.8	56.1	81.1	86.8	91.8	107.2	105.5	106	85.7	55.3	884.5
Avg Snowfall (cm)	105.5	77.6	51.6	24.3	5.2	0.2	0	0	0.1	6.2	36.7	94	401.3

Source: 1981 to 2010 Canadian Climate Normals station data

Topographically, the area is very rugged and steep. The northern portion of the claims are near sea level and the centre and southern parts are up to 320 m (1,050 ft) above sea level (Figure 4-2). Steep slopes are generally tree covered with black spruce as the dominant forest cover, although yellow birch is common. The tops of the mountains tend to be scrub-covered or barren. Overburden is generally shallow, probably in the range of 1 m to less than 5 m and contains fairly well developed B and C soil horizons. Outcrop makes up less than 5% of the area, except along very steep slopes and streams where steep rock walls provide relatively good bedrock exposures.

The nearest active weather station to the Property is 43 km southeast at the Corner Brook Weather Station.

6 HISTORY

Information in this section is derived from Newfoundland Department of Natural Resources open file reports for the York Harbour Property.

6.1 Historical Exploration Activity (after “Tallman 2010”)

The York Harbour Property copper-zinc mineralization was first discovered in 1893.

Since then, a significant amount of underground exploration and development as well as surface diamond drilling exploration and underground diamond drilling delineation has been completed with positive results.

Since 1897, a total of 2,134 m of underground drifting and development have been completed at the York Harbour mine. Eleven “Zones” (A through K) of copper-zinc-silver-gold (Cu-Zn-Ag±Au) massive sulphide mineralization have been discovered; a portion of the A Zone was developed between 1897 and 1913 (Figure 6-1) and produced copper ore that was shipped directly to England or the United States during the period. Part of the A Zone and the B to K Zones remain and have been accessed by underground drifting and development and tested by surface and underground drilling.

From 1969 to 2004, 10,994.34 m (210 holes) of underground and 8,235.25 m (45 holes) of surface diamond drilling have been completed totalling 19,229.59 m, and Messina Minerals Inc. has located at least some documentation (Tallman, 2010). See Figure 6-2.



Figure 6-1: York Harbour “A” Zone Shaft and Mine Buildings (ca. 1899–1913)

Source: Messina Minerals Inc - Tallman, P., 2010. 9th Year Assessment Report (2009 Work) Compilation, Prospecting, from June 2009 to February 2010, York Harbour Property, Western Newfoundland.

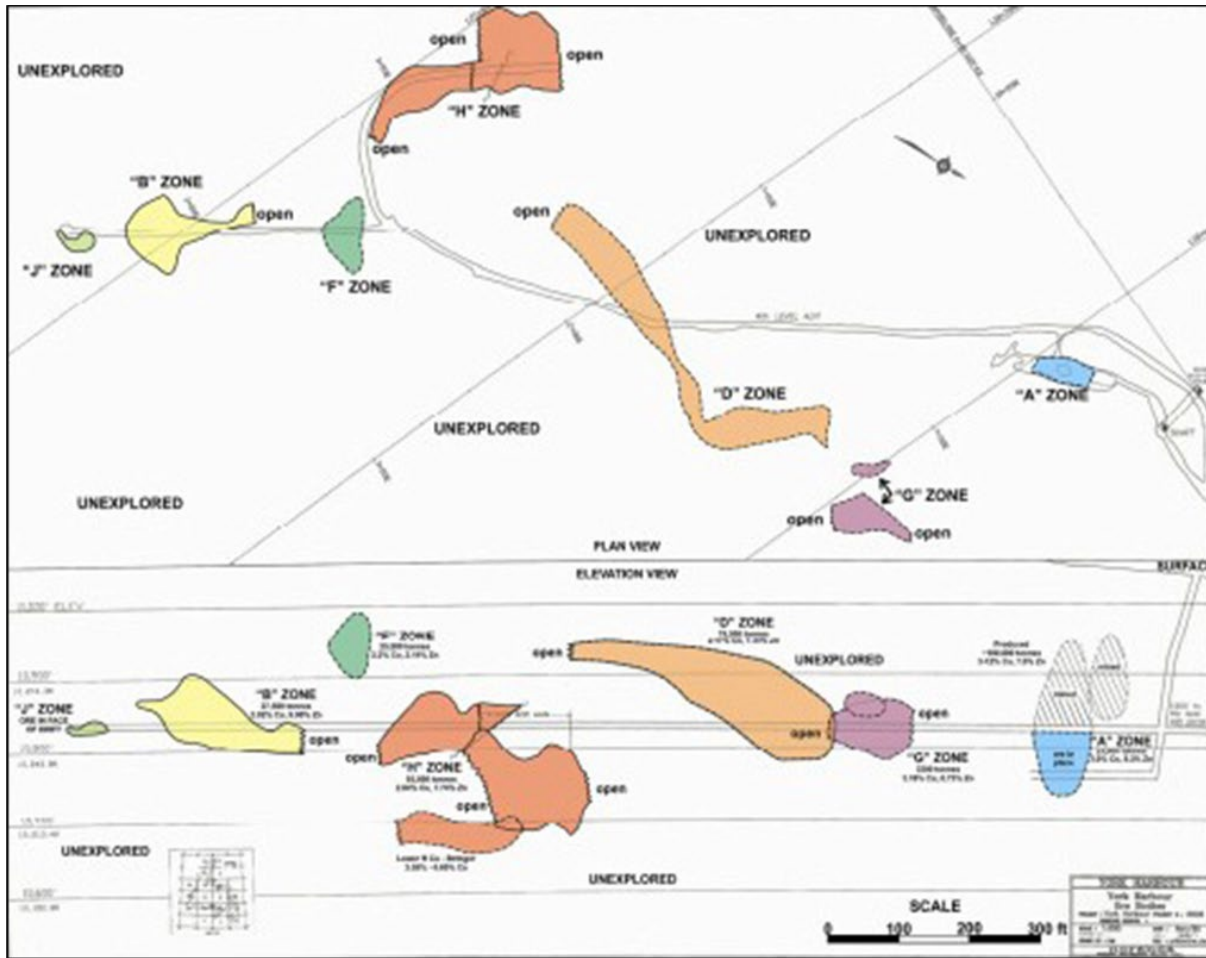


Figure 6-2: Plan and Cross Section of Known York Harbour A through K Zone mineralized horizons.

Source: Tallman, P., 2010. 9th Year Assessment Report (2009 Work) Compilation, Prospecting, June 2009 to February 2010, York Harbour Property, Western Newfoundland.

As stated, underground exploration and development combined with surface drilling documented eleven irregular zones of Cu-Zn-Ag±Au-rich volcanogenic massive sulphide mineralization occurring as stratabound lenses within the upper portion of the altered lower basalt unit immediately below the contact with the generally unaltered upper basalt unit. Massive sulphide mineralization occurs along a 600 m strike length. However, over 85% of the past exploration work (surface and underground drilling and development) was carried out in less than 350 m of strike length and to 150 m below surface.

Table 6.1 shows representative underground drill hole intersections and copper-zinc assays for each mineralized zone. Figure 6-3 shows historical drill locations from surface and underground diamond drill holes.

Table 6-1: Representative Underground Drill Hole Intersections and Copper-Zinc Assays for Each Mineralized Zone (south to north).

Hole ID	Interval (m)	Copper (%)	Zinc (%)	Zone
LU-33	6.4	1.53	5.01	J
LU-110	7.8	1.11	17.23	B
S-13	14.9	3.68	0.31	F
LU-75	10.5	2.33	12.15	H
D-59	14.6	3.54	8.57	D
4-34	3.6	0.89	3.12	G

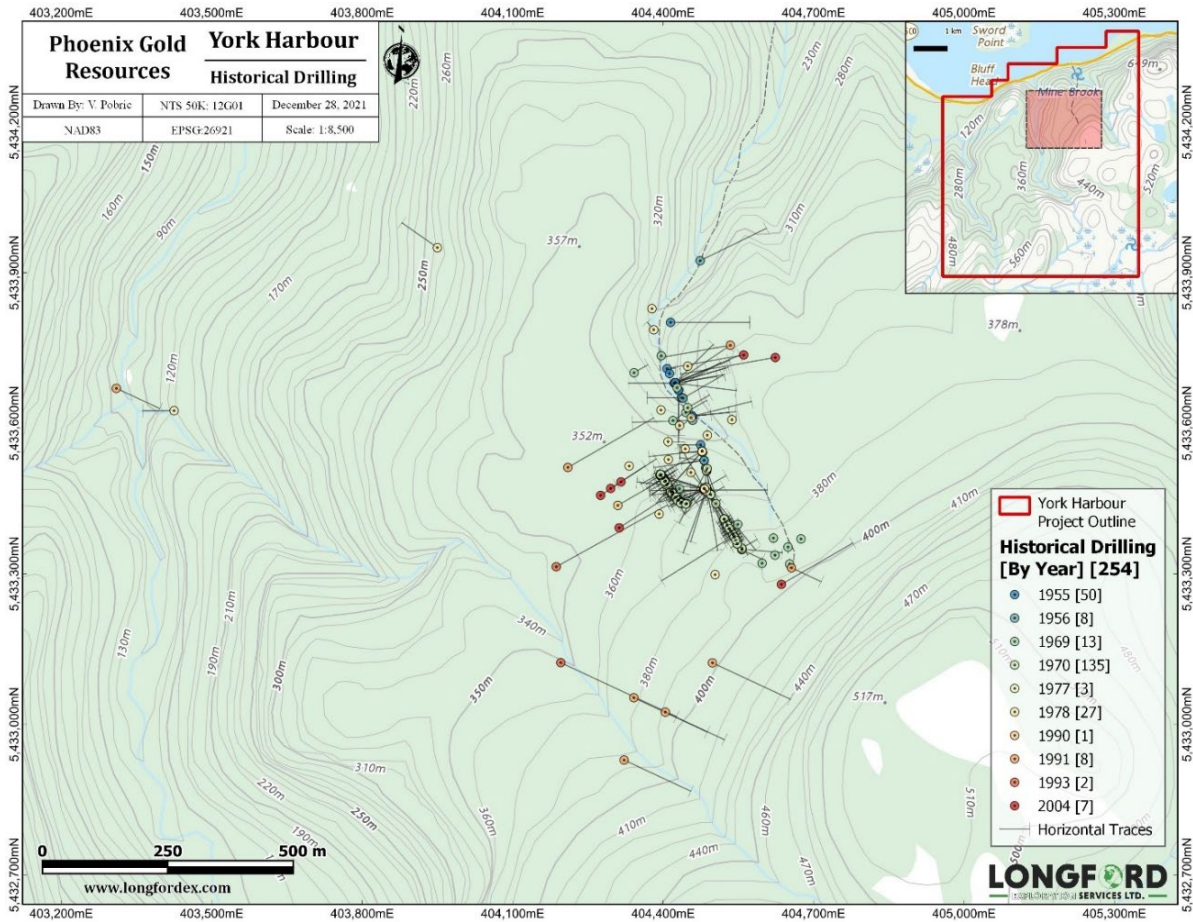


Figure 6-3: Historical Drill Hole Locations from Surface and Underground Diamond Drill Holes

Several of the deepest drill holes on the Property (~150 m below surface) had some of the better intersections (e.g., drill hole D-55: 3.6% Cu, 8.5% Zn over 9.1 m and drill hole D-57: 1.7% Cu, 16.1% Zn over 3.2 m).

The 4th Level adit, at the main exploration level, was stopped to the south in copper-zinc massive sulphides of the J Zone in the face of the drift. Underground hole LU-33 intersected 6.4 m of J Zone massive sulphides containing 1.53% Cu and 5.01% Zn 10 m beyond the face of the drift. Several of the other lenses of copper-zinc mineralization also remain open in one or more directions, such as the B, D, G, H and F Zones. Much of the intervening area between lenses is untested.

The K Zone, the eleventh zone discovered to date, was intersected in hole YH91-5 drilled from surface by Noranda in 1991 (1990 to 1993 field work) during follow-up of EM-37 and copper-zinc soil anomaly targets located south of the known copper-zinc sulphide zones. Hole YH91-5 intersected massive sulphide mineralization over 0.6 m assaying 0.3% Cu, 3.2% Pb, 26.2% Zn, and as high as 583 g/t Ag and 16.9 g/t Au.

Figures 6-4 to 6-7 show the copper, lead, zinc and silver geochemical anomalism in soils on the Property.

With respect to the history of mineral tenure following the discovery of massive sulphides in 1893, the York Harbour Property was optioned to Harvey and Company in 1897. Harvey and Company retained title to the property for 103 years until 2001 when the Company neglected to pay the annual taxes owing and the Fee Simple mining concession was cancelled. The property came open for staking and was acquired by South Coast Ventures Inc., which is now Tenacity Gold Mining Company Ltd. (Tenacity Gold).

In 2010, Messina Minerals had an agreement to option this property from Tenacity Gold. Messina's work between 2009-2010 comprised predominantly of a detailed compilation of the history of exploration at the York Harbour property. The objective was not only to create an accurate history of exploration (and results) and also to identify the timing and nature of various phases of work which would enable Messina to locate exploration records; and in particular locate historical drill collars, drill logs, and assay data or summary references containing same.

The results summarized capture much of the historical exploration performed since the 1960's however these should be regarded as incomplete and much of the information is still missing.

In 2018 Prospectors Wesley Keats and Co staked the property and completed minor prospecting and exploration filed work.

Historical work on the Property is summarized in Table 6.2.

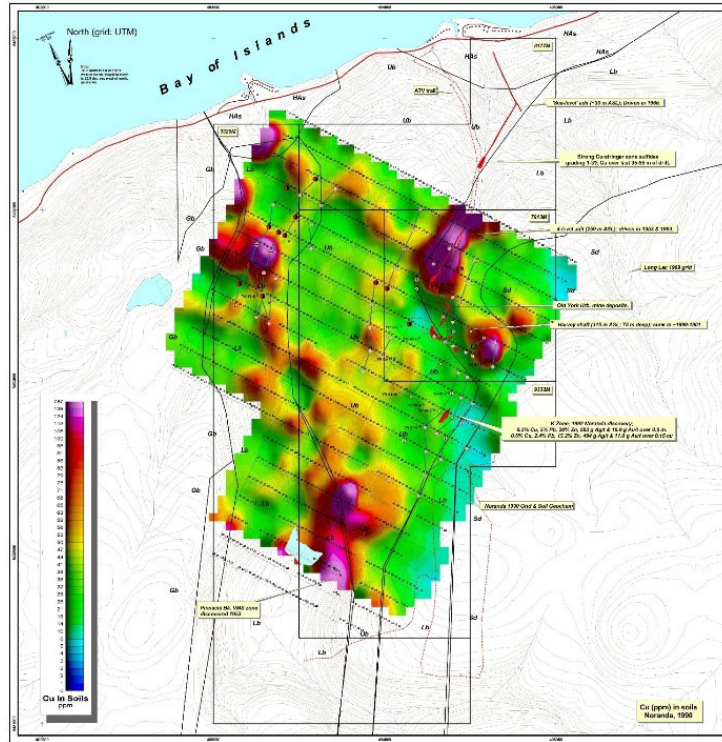


Figure 6-4: Copper in Soils

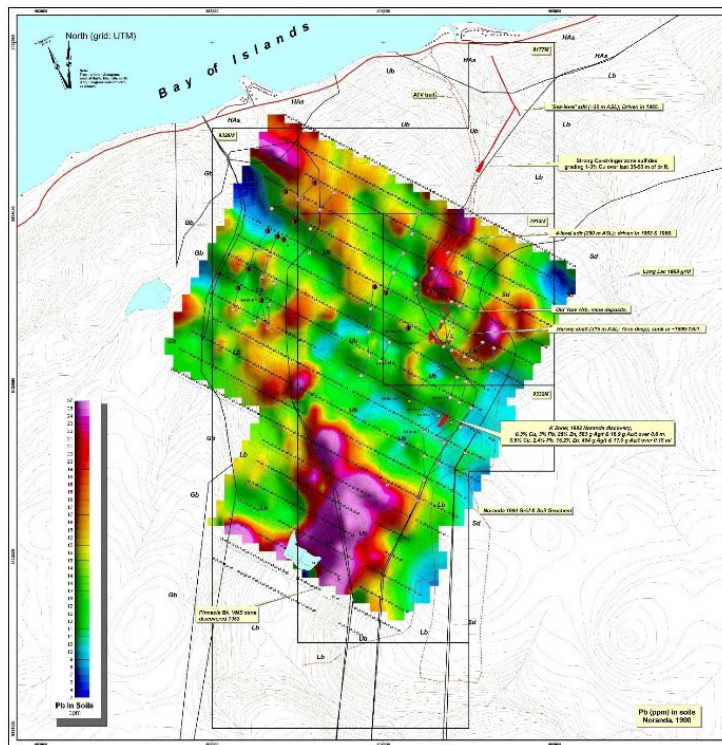


Figure 6-5: Lead in Soils

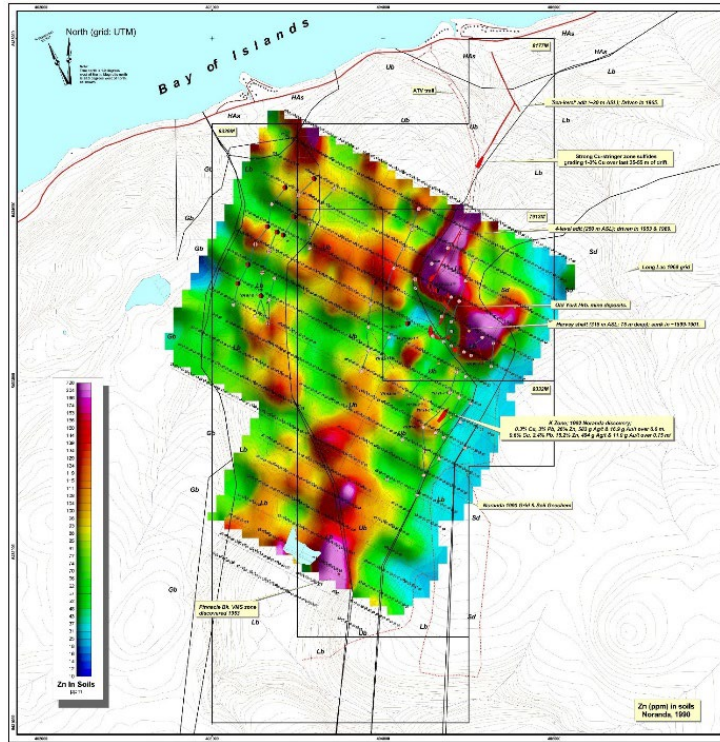


Figure 6-6: Zinc in Soils

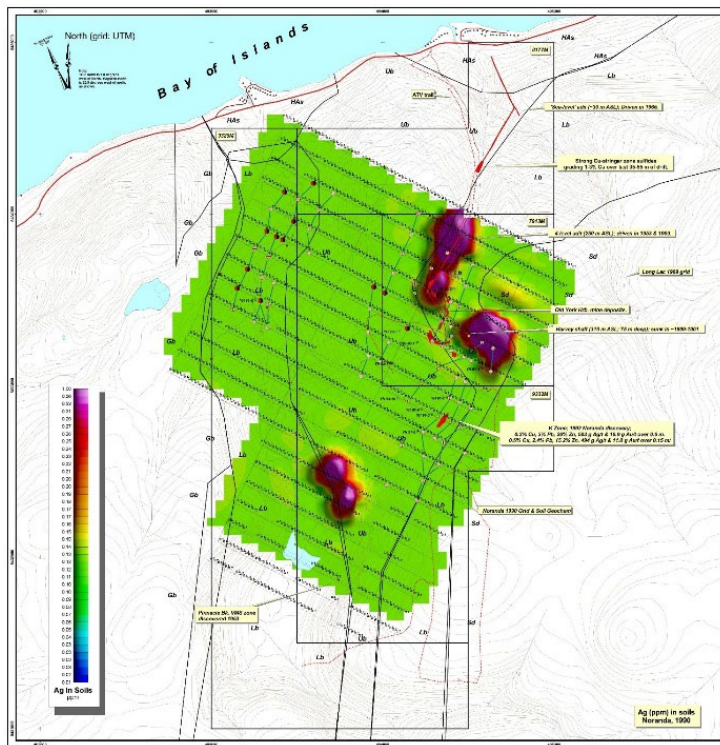


Figure 6-7: Silver in Soils

Source: Geochemical Plan of 1990 Zinc-In-Soil Sampling Results (After Noranda, 1990; Dearin, 2003)

Table 6-2: Historical Work Summary on the Property

Year	Historical Work
1893	Boulders and outcroppings of copper-zinc massive sulphides are discovered and staked by Daniel Henderson approximately "1,000 feet upstream" along Copper Mine Brook (Martin, 1983).
1897–1899	Henderson options the property to A.J. Harvey of St. John's who begins shaft sinking and mining and produced 500 tons of ore (unsold) in the period (Martin, 1983). Four shafts (the Randell, Keating, Main and Harvey shafts) were sunk. Six levels were developed, all from the Main shaft [at depths below surface of 20 m (first level or 960' asl), 39 m (second level or 900' asl), 57 m (third level or 865' asl), 67 m (fourth level or 830' asl), 85 m (fifth level 710' asl), and 104 m (sixth level or 650' asl)].
1900	Harvey leased the property to York Harbour Copper Company of Manchester, England; mining during 1900 produces 100 tons which was sold (to England?) before the lease expired.
1902	Harvey forms the Western Copper Company Limited which leases the property to the Humber Consolidated Mining and Manufacturing Company ("Humber Mining").
1902–1905	Humber Mining opened up an ore lens in the lower levels over 57 feet long with an average grade of 7% Cu. Another lens grading 10 to 12% Cu over 4 feet wide was mined (the A Zone). From 1902–1905 approximately "15,000 tons of ore left York Harbour for the United States (Martin, 1983). Early in 1905 Humber Mining violated a condition of the lease agreement by mortgaging the property. Following the 1905 year of production, continued production at the mine was assessed to be uneconomic. Exploration along strike was recommended.
1906	Western Copper Company is awarded title to the property.
1909–1913	In 1909, the property is optioned to "a group of London mining engineers and merchants constituting the York Harbour Mine (Newfoundland) Limited (YHMNL), and mining work resumed (Martin, 1983). "By 1913, upper levels of the mine were either collapsed or depleted of ore; and as excavations began on deeper levels, word arrived that the company (YHMNL) was pulling out. The last load of ore left York Harbour for the United States in July 1913, bringing the company's (YHMNL?) total shipments to 15,000 tons" (Martin, 1983). It is unclear if this is the same 15,000 tons as for 1902–1905 or additional.
1913–1951	The property was returned to Harvey & Co. (successor of Western Copper Company) and retained as a Fee Simple Mining Grant (Fee Simple). It remained idle with little exploration work done during this time. (Outerbridge, 1923) concluded that original mining infrastructure was deteriorated but salvageable and the future of mining was prosperous. Self-potential survey covering approximately 0.4 km ² completed in 1949 (Beavan, 1955, and references within)
1951–1955	Independent Mining Corp. optioned the property, dewatered the Main shaft and drove the 4th Level adit 434 m to the north and established a portal entrance. The 4th Level was advanced some 300 m to the south for exploration purposes and stopped with copper-zinc mineralization (the J Zone?) in the face. EM surveying located several weak to moderate conductors near the drift. Diamond drilling discovered the D and H mineralized Zones. A large EM conductor was located to the SE of the workings but was not drilled. Underground drilling totalled 1,522 m; an additional 2,000 m were drilled in 1954. Surface drilling totalled 5,462 m.
1952	Halet (1952) identified future exploration opportunities and recommended testing the ore-bearing structure southward by drilling from surface and from the 6th level. Extending the underground workings on the 4th level for drilling exploration purposes was also recommended.

Year	Historical Work
	Detailed petrographic descriptions of rocks from the ore zones and host stratigraphy were summarized in a 1954 technical report (Hawley, 1954).
1954	Beavan (1954) recommended future surface exploration and underground development in addition to structural mapping and further application of geophysical methods
1955	Beavan (1955) recommended surface exploration to the south of the mine workings.
	The property was optioned from Independent Mining and Harvey & Co by Big Nama Creek Mines Ltd. A total of 5,181 m of surface and underground drilling was done.
1962–1963	British Newfoundland Exploration Ltd. carried out surface mapping, trenching, diamond drilling, and a reconnaissance geochemical survey on their adjoining Brooms Bottom area property, south-southwest of the York Harbour Property. A portion of the trenching and mapping programs covered the No. 4 Brook and Pinnacle Brook area within the current York Harbour Property.
1965–1969	<p>Exploration by Big Nama Creek on claims north of the mine workings for purposes of adit construction.</p> <p>Construction of the 400-foot-long access road to the Sea Level adit location (approximately 100 feet south of the York Harbour highway) as well as roads to the powder magazine and pump house.</p> <p>The new adit was at a grade of +0.5% and was designed to intercept the down-dip extensions of the known ore zones approximately 675 feet below the No. 4 Level. The adit had advanced 2,101 feet by June 30, 1966 and had reached a maximum length of around 2,571 feet before shutting down latter in 1966. The current adit face is within 2,600 feet north of the closest copper-zinc VMS zone – the ‘D’ zone, and within 3,300 feet of the most distant zone - the ‘B’ zone (Ritchie, 1969).</p> <p>Ten drill holes, totaling 4,048 feet (1,234 m) of underground drilling was completed in the adit. All holes were drilled lateral to the adit, none of which adequately tested for the favorable VMS horizon along strike to the south.</p>
1968	British Newfoundland Exploration Ltd. carried out a small drilling program on the Pinnacle Brook massive sulphide showing at No. 4 Pond approximately 1,800 m south of and along strike with the known A to J Zone copper-zinc deposits. Results are unknown, but the Pinnacle Brook showing reportedly contained significant Cu-Zn-Pb anomalism. (This was located by Messina in 2009 with negative results as reported herein.)
1969	<p>ROW (Ritchie, 1969) proposed extending the sea level adit into the vicinity of the known copper-zinc mineralized zones and to raise up to the 4th level adit with a manway raise and a parallel ore pass raise.</p> <p>Additional development work and underground drilling was proposed. None of this proposed work was carried out.</p>
1969–1970	<p>Long Lac Mineral Exploration Ltd. optioned the property from Big Nama and Harvey & Co and did the following work:</p> <p>Cut a 112 km grid over and adjacent to the known deposits and carried out geological mapping and geophysical surveys (magnetics and IP).</p> <p>The IP outlined the favorable mineralized horizon over 1,100 m of strike length and up to 120 m wide.</p> <p>Underground geophysics was tried using both gravity and SP (self potential) around the known deposits.</p> <p>The SP defined strike extensions to several deposits including the B and H Zones.</p> <p>The 4th Level adit was extended 500 m in the B and H drifts and a series of drill holes tested the B and H deposits.</p> <p>Surface and underground drilling totaled 5,321 m around the known deposits.</p> <p>No deep drilling (i.e. < 30 m below the old workings) was done.</p>
1970	Long Lac dropped the option.

Year	Historical Work
1974	Noranda staked adjoining claims to the west around the No. 4 Brook showing and carried out reconnaissance soil geochemical (91 samples) and magnetic, VLF-EM and EM surveys. The previously defined EM conductor was confirmed, and soils returned up to 390 ppm Cu and 240 ppm Zn adjacent to the conductor. Hand trenching in one area over the conductor exposed semi-massive sulphides (pyrite) in a chert horizon located ~200 m south of the original No. 4 Brook showing (Dimmell, 1974).
1974–1975	Labrador Mining & Exploration Company Ltd. staked several claims around the Fee Simple property and carried out geological mapping, and geochemical and geophysical surveys on three small grids; the most significant results came from the No. 4 Pond grid (in the bowl beneath the Pinnacle Brook zone) located approximately 1,800 m SSW of the main deposits. Widespread alteration (similar to the known deposits alteration) with soil values > 4,000 ppm Cu and coincident IP anomalies were defined. No follow up work or drilling was done (Sterling, 1974).
1977	York Consolidated Exploration Ltd. (previously Big Nama Creek Mining) carried out 2,193 m of surface drilling and 1,616 m of underground drilling around the B and H deposits. Two holes (316 m) were drilled near No. 4 Brook; several zones of massive pyrite up to 4 m wide were cut. All claims expired in 1984 and the Fee Simple returned again to Harvey & Co.
1987–1989	Corona Gold Corp. staked claims around the Fee Simple and carried out stream silt sampling and outcrop lithochemical sampling.
1990–1991	Cut 45 km of line grid with B-horizon soil (1,320 samples, zinc-in-soil results, and copper-in-soil results, and lithochemical (31 samples) sampling, magnetics and VLF-EM (29.1 line km) were carried out. Zinc- and copper-soil anomalies extend 500 meters north of and 1,800 meters south of the known mineralization. Drilled three holes totaling 759.1 m around the Main zone deposits (MacDougall, 1990).
1990–1993	Noranda Exploration optioned the Fee Simple from Harvey & Co and staked claims around the property (again).
1992	Extended the grid and carried out geological mapping, soil sampling (100 samples) and transient EM-37 over the northern part of the grid. EM-37 detects new conductive anomalies with coincident zinc-copper soil anomalies. Six diamond drill holes (totaling 1,209.7 m) tested geochemical and geophysical targets and was the first ever conducted to test for a southward continuation of the mineralized horizon (Huard, 1992a&b).
1992–1993	Drilled eleven holes with good alteration and mineralization intersected; several holes cut good grades of Cu-Zn-Ag. Several thin intersections of Zn (to 26.2% Zn) with unusually high Ag (as high as 583 g/t Ag) and Au (as high as 16.9 g/t Au). This discovery was called the “K” Zone.
1994	Noranda dropped all claims in the area and returned the Fee Simple.
1994–2000	No exploration work was carried out in the area.
2000	Harvey & Co neglected to pay the annual Fee Simple tax and the claims came open for staking.
2001–2003	South Coast Ventures Inc. acquired the original Fee Simple property by staking on January 24, 2001; title was granted on February 26, 2001. During 2001 and 2002 South Coast staked another 22 claims in three Licenses surrounding the core license. South Coast spent \$11,052 on an initial digital compilation of historical data at this time. South Coast is now Tenacity Gold Mining Company Ltd.
2004–2005	South Coast optioned the York Harbour Project to Wolfden Resources Inc. who drilled seven holes totaling 1,586 m. The drilling was done with very little compilation of previous data, results or drilling locations. Despite geologically encouraging results, Wolfden dropped the option by the end of the year.

Year	Historical Work
2005	South Coast re staked a four claim License (10770M) dropped by Wolfden, and in 2009 changed its corporate name to Tenacity Gold Mining Company Ltd.
2009-2010	Messina acquired the right to earn a 100% interest in the York Harbour property from Tenacity Gold. Messina completed a comprehensive compilation of project data, including 135 drillholes, GPS surveying of Collars, geophysics review, as well as prospecting and collection of 21 rock samples from across the property.
2018-2021	W. Keats and co prospected their claims, located reported grids, and known mineral showings throughout the property, especially in the vicinity of the old York Harbour mine workings.

6.2 Historical Production

The York Harbour mine operated between 1897 and 1913 and produced hand-sorted material grading between 3% to 12% Cu (and 7% Zn) from the A Zone; this was primarily shipped to the United (Martin, 1983) and anecdotally to England (100 tons from 1900 or 600 tons, including unsold from 1897–1899 production) for processing.

Martin (1983) reports that by 1899 “500 tons of ore lay unsold on the shores of the Bay of Islands”. An additional 100 tons was “raised and exported” by the York Harbour Copper Company in 1900. “Between 1902 and 1905, about 15,000 tons of ore left York Harbour for the United States”. Also “the last load of ore left York Harbour for the United States in July 1913, bringing the company’s (YHMNL) total shipments to 15,000 tons” (Martin, 1983).

Hill (1905; GSB File #12G-1) reports two shipments of 1.5 tons each with the former containing 3.52% Cu and 7% Zn and the latter containing 2.7% Cu (zinc not indicated) made early in 1905 under a contract to deliver “15,000 tons”. No gold or silver assaying is noted in this report.

Outerbridge (1923; GSB File #12G-3) describes the mining operation ten years after mining ceased in 1913. Outerbridge reports that between “1900 and 1913” a total of “fourteen [steam-ship] shiploads of ore [not including] sailing vessels cargoes have been taken out of the Mine” including in 1913 (citing the last Mine Manager), the last two (steam-ship) shiploads of ore were shipped. Outerbridge estimates 2,000 tons per shipload; therefore, approximately 30,000 tons of ore was produced over the life-of-mine. No gold or silver assaying is noted in this report.

More recent references of work (e.g., Noranda, 1991; Wolfden, 2004) cite up to 90,000 tonnes of material was produced which contained “significant gold and silver”, but no documentation or source has been located for this estimate.

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The York Harbour Property is situated regionally within the Dunnage tectonic zone of the Appalachian geological province. Its underlying country rocks belong to the Lower Ordovician Bay of Islands Complex that includes an ophiolitic sequence of basaltic, gabbroic and ultramafic rocks with their fragmental equivalents plus pyroclastic sedimentary rocks (Figures 7-1 and 7-2).

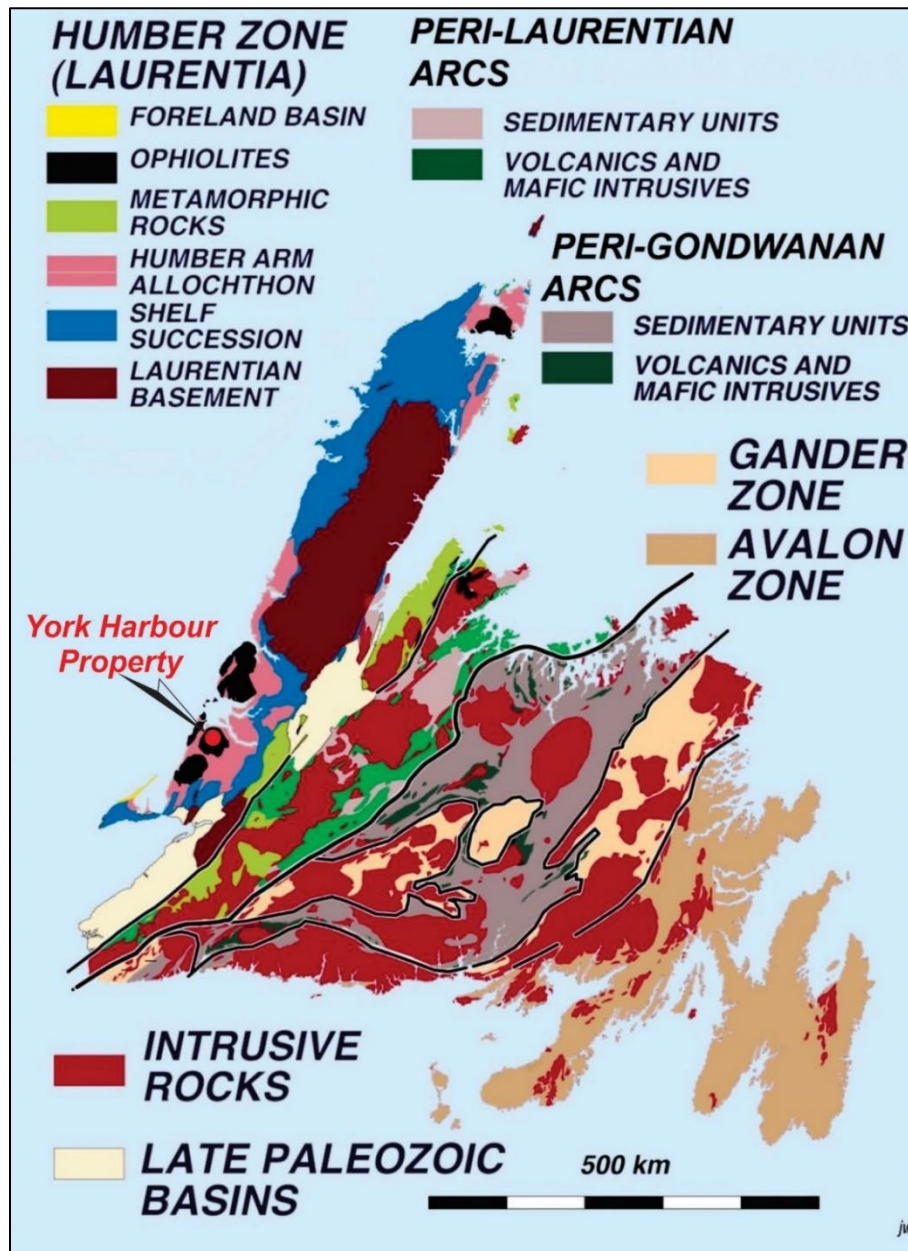


Figure 7-1: Tectonic Map of Newfoundland

Source: after Hicks and Conliffe, 2015

The Humber Arm Allochthon is 200 km long by about 50 km at its widest along the western coast of Newfoundland. Its structural thickness is approximately a few kilometres. Post-emplacement deformation increases eastward across the allochthon.

Sedimentary rocks of lower structural slices of the Humber Arm Allochthon are assigned to the Humber Arm Supergroup. Four volcanic and plutonic units occur in higher slices of the allochthon. From structurally lowest to highest, these are: 1) Skinner Cove Formation, Fox Island Group and related volcanic rocks, 2) Old Man Cover Formation, 3) Little Fort Complex and related Mount Barren Complex, and 4) Bay of Islands Complex” (Newfoundland Mines and Resources, 2010).

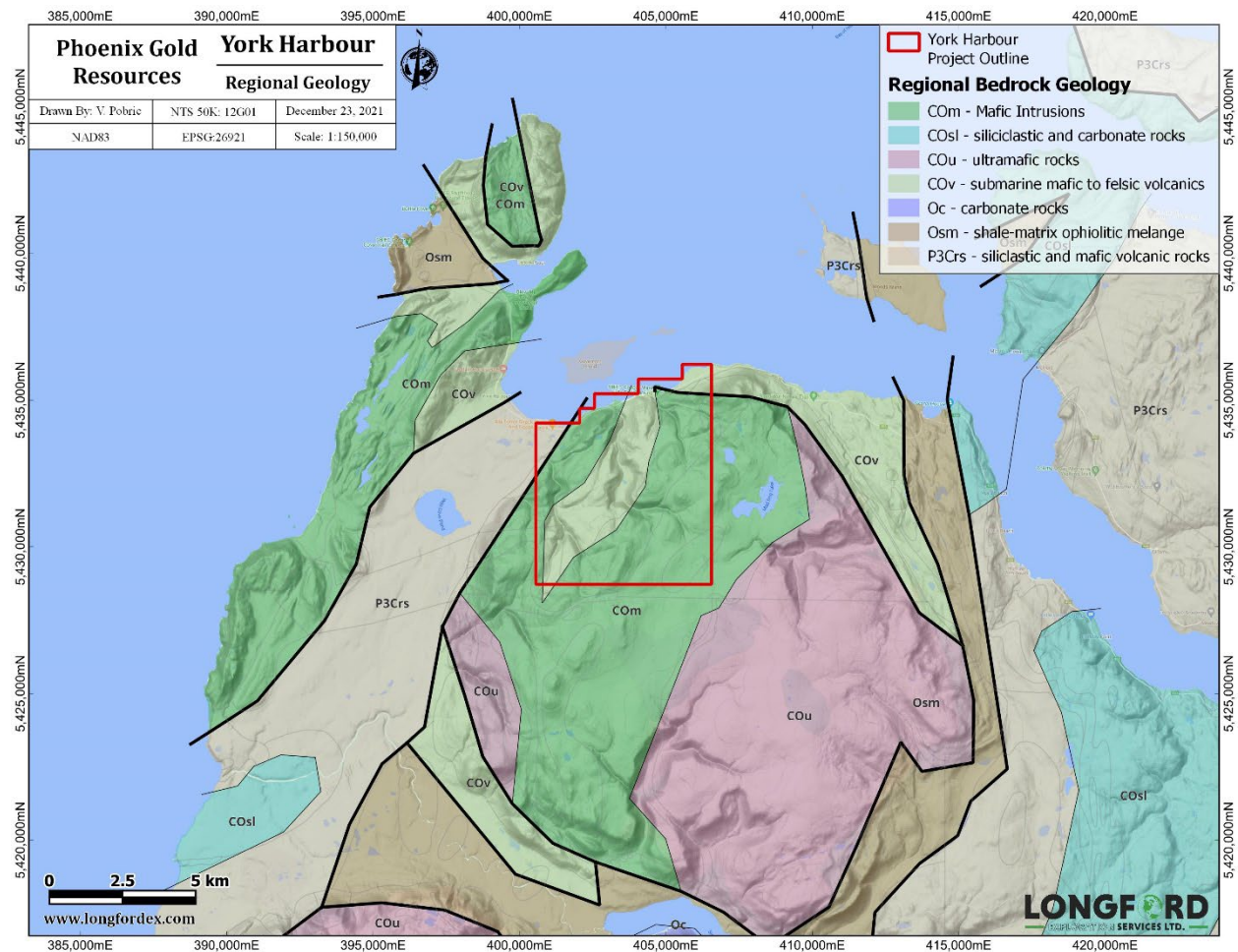


Figure 7-2: Regional Geology of the York Harbour Area

The York Harbour and Bay of Islands area is underlain by the Lower Ordovician Humber Arm Allochthon comprising lower structural slices of Humber Arm Supergroup sedimentary rocks; a metamorphic sole; and poly-deformed mafic amphibolites and greenschists that formed during westward obduction. This sequence is structurally overlain by the Lower Ordovician Bay of Islands Ophiolite Complex comprising a complete ophiolite suite of rock units from ultramafic rocks, through gabbros and sheeted dykes to mafic and greenschists welded to the stratigraphic base of its ultramafic unit. Both the Humber Arm Supergroup

and Bay of Islands Complex were thrust westward over Lower Ordovician carbonate rocks during the mid-Ordovician Taconian Orogeny.

7.2 Property Geology

Metamorphosed sedimentary rocks of the Humber Arm Supergroup occur along the northern boundary of the Property. A major shallow southerly dipping thrust fault separates these rocks from the overlying obducted Bay of Islands Ophiolite Complex. Bay of Islands Ophiolite Complex serpentinized ultramafic rocks occur on the northwest side of the Property. A mixed assemblage of ophiolitic volcanic, pyroclastic, and sedimentary rocks of the Lower Ordovician Bay of Islands Ophiolite Complex underlie the remainder of the Property. These rocks are interpreted to form a north-northeast-trending recumbent synclinal feature throughout the Property with gabbroic and brecciated sheeted dykes forming the western and eastern sides of the Property. The axis of the syncline is interpreted to lie approximately 600 m west of the York Harbour mine area. The central part of the syncline consists of conformable and extrusive (flow) equivalents to the gabbroic dykes, mafic flows and pillow lavas with some pyroclastics, and minor sedimentary rocks. North-northeast-trending shears and fault zones cut and moderately displace the mafic volcanics in the mine area.

The local volcanic stratigraphy of the Bay of Islands Ophiolite Complex has been divided into three main units by several geologists, most recently by Piercey (2021). The following is a quote from the July 2021 report by Dr. Stephen Piercey who examined cores from drill holes WLF-04-13 to -18 stored in the Government's core warehouse in Pasadena, Newfoundland, part of the 2004 drilling campaign by Wolfden Resources Inc. on the York Harbour Property.

7.2.1 Upper Basalt

The upper basalt unit contains basalts that are olive green to dark green in colour and contain abundant magnetite and/or hematite depending on the degree of alteration in the units. The basalts often are pillowed with well-developed pillow rinds that are variably altered to chlorite, hematite, and/or pyrite. Pillows often grade into hyaloclastite-rich zones that contain angular to subrounded, jigsaw-fit fragments that range from being clast-supported with clasts touching, to those supported within a matrix of chlorite-rich ash-sized material. Locally, these clast-rich zones are altered completely to hematite. In other cases, the basaltic hyaloclastite fragments have perlitic cracking with concentric alteration with rims containing hematite and cores with basalt or chlorite. These features are very common in submarine pillow sequences and reflect the complex interaction of water with basalt during eruption forming clastic rocks on pillow margins (hyaloclastite formation), coupled with overprinting alteration due to hydrothermal fluids (e.g., chlorite and hematite).

A feature of this unit that is unique compared to the lower basalts is that it has varying hematite and/or magnetite. Where magnetite is present, the units can range from very magnetic to no magnetism whatsoever. In many cases, there are entire flow units that range from hyaloclastite down to the base of a flow, and only portions of such flow units have magnetism (i.e., magnetics cannot be used to delineate specific stratigraphic units in the upper basalts). In less altered holes, magnetite has greater preservation (e.g., WLF-04-18), whereas in the holes that have abundant hematite, the magnetite is less preserved, and it is possible that the abundance of hematite is due to VMS hydrothermal fluid reaction with existing

magnetite converting it to hematite. Notably, there are basalt sequences that go from more siliceous on the margins to more granular in the interior or base of the units and have magnetic features in both the more siliceous portions and the granular parts.

Sedimentary/volcaniclastic units are not common in the upper basalts; however, locally the hyaloclastite zones form meter-scale units in between flows. These units are generally monolithic and dominated by basaltic clasts, range from matrix- to clast-supported, and contain variably chlorite- and hematite-altered ash material in between the fragments. These units are restricted to pillow sequences and distinct from the marker unit in the lower basalts.

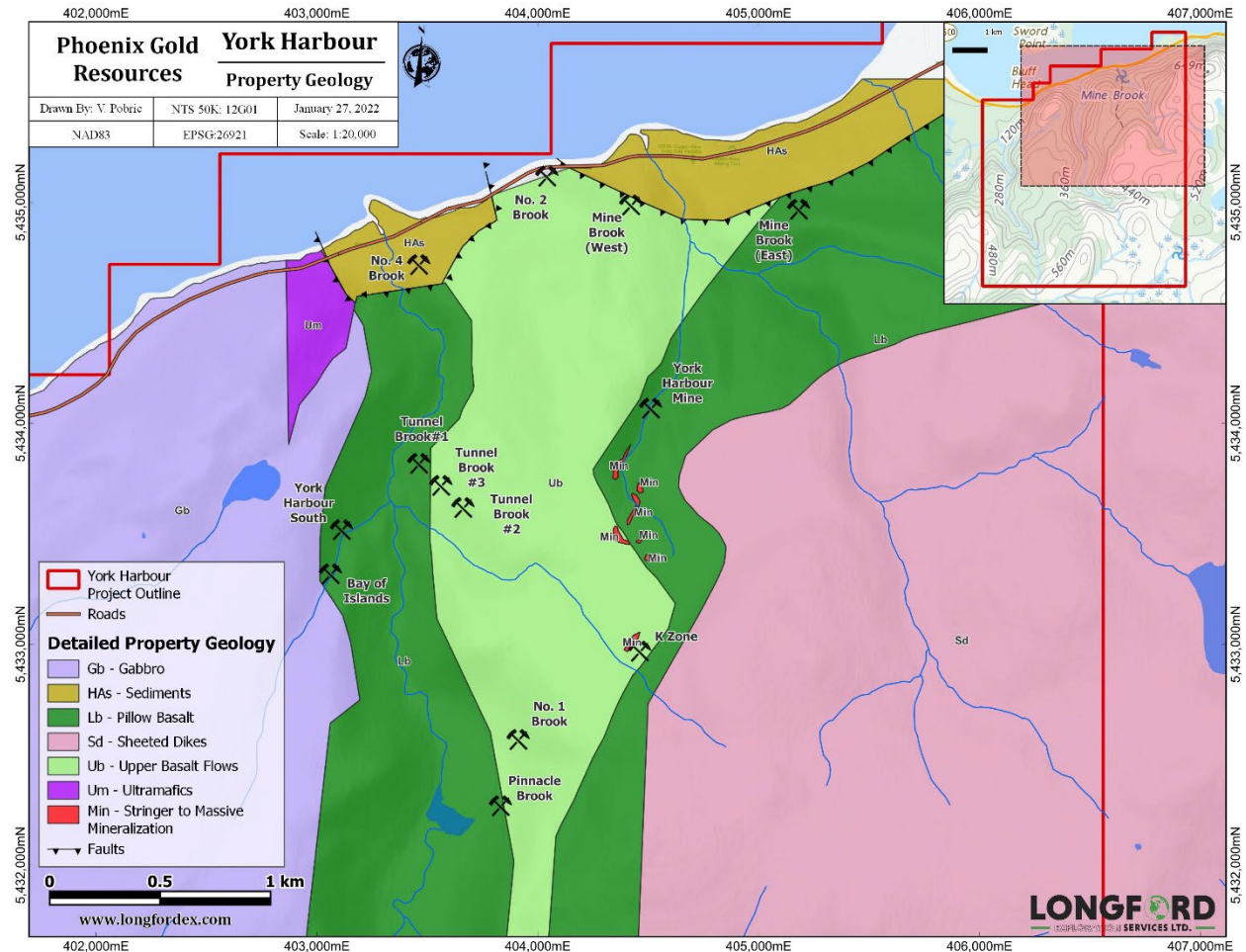


Figure 7-3: Property Geology of the York Harbour Property Geology.

Source: after Tallman, 2010

7.2.2 Marker Unit

The marker unit is present in some, but not all drill holes, but in the H Zone, the unit delineates the upper basalts from the lower basalts. This unit varies in thickness but is generally <10 m thick and is black to grey to grey-green in colour. It contains predominantly basaltic clasts that are variably altered and ranges from a matrix- to clast-supported unit with predominantly lapilli-sized (2 mm to 64 mm) fragments that are subangular to subrounded. Locally, there are larger fragments up to 60 cm in diameter and in some parts have very densely packed larger fragments. The ash matrix consists of mafic ash (<2 mm in size) that is variably altered to chlorite and has varying amounts of pyrite (see alteration/mineralization below). The clasts also have varying alteration that ranges from chlorite to quartz. The unit has relatively sharp upper contacts and grades downwards into the underlying basalts. This suggests that the unit represents a potentially flow top breccia and/or a debris flow, but with clast derivation similar to the underlying basalts.

7.2.3 Lower Basalt

The lower basalt unit is the main host to mineralization or mineralization occurs on the contact of this unit and the overlying marker unit. The unit ranges from black to olive green to grey and is highly texturally variable. Aphyric (no crystals) pillow lavas are common, and these often exhibit well-developed pillow margins/rinds that are altered to either quartz or more commonly chlorite, and these rinds often grade outwards into hyaloclastite. The hyaloclastite consists of subangular to subrounded basalt fragments that have a jigsaw-fit and result in units where the clasts are supporting one another, or they are matrix-supported within a matrix of chlorite-rich ash. The aphyric lavas often have well-developed perlitic fracturing related to volcanic glass devitrification that is variably altered and locally yields concentric alteration patterns.

There are also some sections where the lavas contain rounded spherulites related to rapid quench crystallization of the basalt; these spherulites are interpreted to mark the edges of the pillows and glassy rinds of the lava. There are minor variants on the aphyric lavas, including grainy lavas that appear to have micro-crystalline plagioclase phenocrysts and that locally contain plagioclase porphyritic textures. In some cases, these grainy basalts have sharp margins and potentially represent massive flows, whereas in other locations they have well-developed pillow rinds and grade into hyaloclastite, suggesting they are just coarser grained flows.

7.2.4 Alteration and Mineralization

In general, mineralization and alteration are greatest in the lower basalts and related units. A zone of mineralization occurs at the contact between the upper and lower basalts both atop the upper basalts and partly replacing rocks of the marker unit. In hole WLF-04-15, which contains the largest (~2 to 3 m) intersection of massive to semi-massive sulphide, the mineralization contains pyrite, chalcopyrite, and sphalerite with chlorite and quartz gangue. This same hole has a second weaker mineralized zone approximately 70 m below the above unit with a similar mineralization style, but with a little more chalcopyrite. In hole WLF-04-13, the mineralization occurs within the lower basalts along a pillow margin with hyaloclastite and includes numerous pyrite-chalcopyrite stringers and buckshot associated with chlorite-altered tuff and basalt fragments; mineralization here also looks partly replacement in origin and forming in the interstices of clasts and replacing ash layers. Throughout the entire sequence in the

footwall, however, pillow rinds and hyaloclastite have pyrite stringers and locally chalcopyrite-pyrite-rich stringers (e.g., holes WLF-04-17 and -18).

Alteration within the holes depends on permeability and stratigraphic position. The upper basalts are generally less altered than the lower basalts, but commonly have hematite alteration (replacing magnetite?) and weaker chlorite and quartz alteration; locally there are zones of pyrite-chlorite mineralization on pillow edges. In the footwall, the alteration style that is most prevalent is pyrite-chlorite alteration of pillow rinds, inter-pillow hyaloclastite, and sedimentary units, including the marker unit. Whenever there is appreciable mineralization, both the inter-pillow material and the pillows are altered to chlorite, and the alteration is more pervasive. In less altered zones, the pillow rinds exhibit quartz alteration and some chlorite alteration is associated with quartz as well. All of the rocks in the stratigraphy are cut by late (deformation related and non-VMS?) calcite-(quartz) veinlets that are throughout the entire stratigraphy.

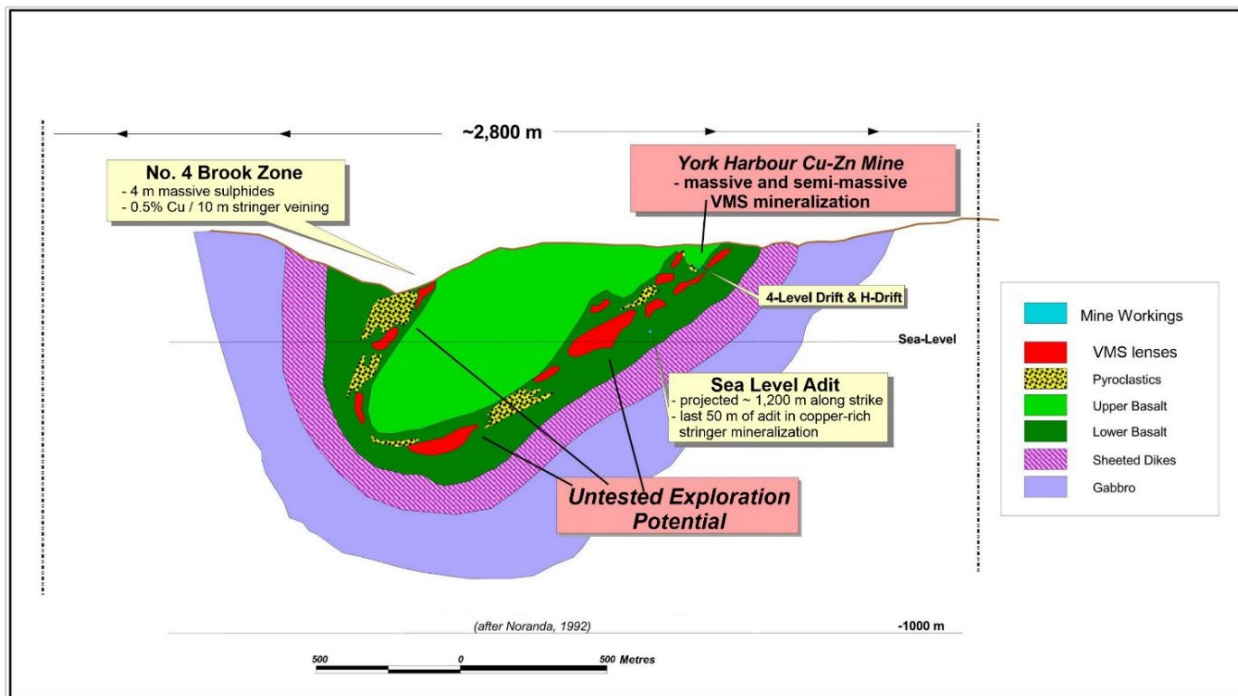


Figure 7-4: Inferred Geological Cross Section of York Harbour VMS Mineralization

Source: Modified after Dearin, 2003

7.3 Mineralization

The following text has been summarized from reports by Dearin (2003), Tallman (2010) and the property summary report by Newfoundland Mines and Resources (2010).

Volcanogenic massive sulphide mineralization is widespread in the ophiolitic rocks of central and western Newfoundland, including more than 175 showings, prospects, and 14 past-producing deposits. For a brief period in the late 1800s, production from ophiolite-hosted deposits, including the York Harbour mine, made Newfoundland the world's third-largest copper producer (Swinden and Kean, 1984).

Volcanogenic mineralization generally occurs at all stratigraphic levels within the ophiolitic complexes. Some major showings and former producing mines in Newfoundland occur geologically near the sheeted dyke – pillow lava contact with the most significant mineralization confined to the pillow lavas, such as: the Tilt Cove, Betts Cove, Little Bay, Whalesback, Miles Cove and York Harbour past-producing mines. The Tilt Cove mine produced 9 million tons grading 1% to 12% Cu with 42,000 ounces of gold from disseminated and stringer stockwork and stratiform copper-enriched massive sulphides (Tallman, 2010).

The Bay of Islands Ophiolite Complex is host to approximately 50 early-stage copper prospects and showings, including copper-lode, quartz-vein deposits and the mafic-type VMS deposits, in addition to copper-zinc-silver-gold massive and disseminated sulphide mineralization in the York Harbour mine area.

The alteration and mineralization within York Harbour is typical of volcanogenic massive sulphide (VMS) deposits in mafic-dominated settings (i.e., Cyprus-type systems), and the presence of both chlorite and chalcopyrite indicates that locally there was high temperature alteration (i.e., >300 °C). The presence of multiple sulphide horizons at different stratigraphic levels, and the hematite alteration plus local chlorite-pyrite mineralization in the upper basalts, indicates that hydrothermal activity was ongoing during the deposition of the entire stratigraphic package, including the upper basalts above mineralization (Piercey, 2021).

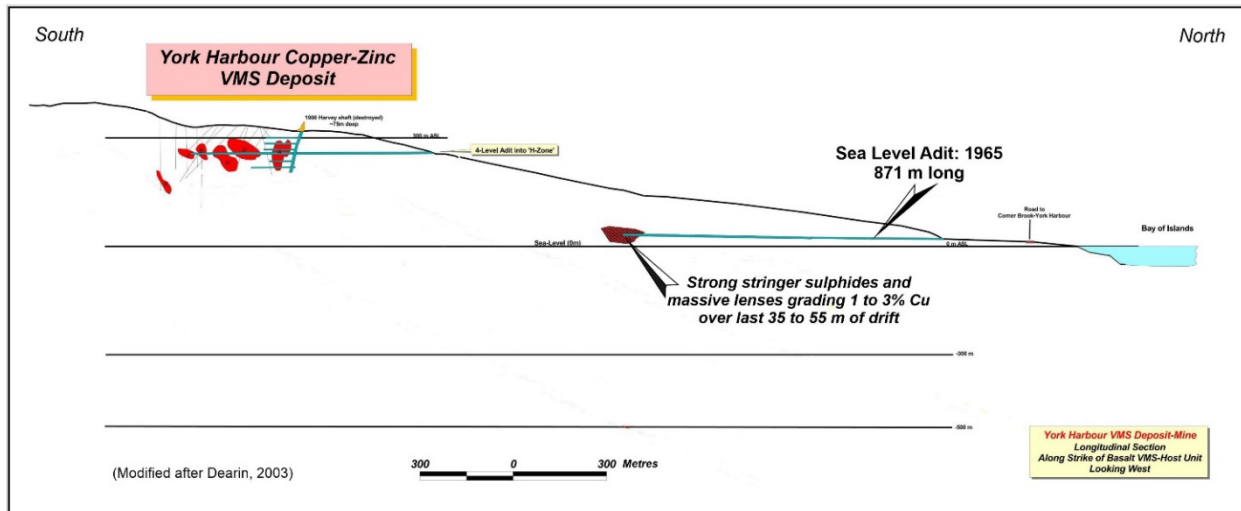


Figure 7-5: Long Section of York Harbour Mine Workings and Known VMS Mineralization Looking West

Source: Modified after Dearin, 2003

Mineralization at the York Harbour mine area consists of multiple, irregular horizons of massive and semi-massive pyrite, sphalerite, chalcopyrite with minor pyrrhotite and rare galena (see figure 7.4 above). Colloform textures are commonly preserved, and the lenses are commonly bounded by narrow hanging wall and footwall shear zones. The massive sulphide lenses are often brecciated and are underlain by a variably developed copper- to zinc-rich stringer zone typically associated with intense hydrothermal brecciation (see figures 7.6 to 7.9 below). Hanging wall contacts are often sharp with the overlying upper basalt unit containing less than 1% pyrite (Newfoundland Mines and Resources, 2010).

There are eleven partially drill-tested VMS deposits, named A Zone through K Zone, in the vicinity of the York Harbour mine area (see figure 7.5 above), and several more reported VMS showings elsewhere on the Property. Most of the historical mining and exploration drilling had only tested four of the known VMS Zones: A, B, D, and H. Past exploration work has shown that the favourable horizon for mineralization can be traced for 300 m north of the old mine site, at the end of the Sea Level adit, and for at least 1,800 m south where massive sulphide mineralization occurs at the Pinnacle Brook showing within the present-day property boundaries. Surface and underground drilling has only been carried out within less than 350 m of this strike length and within 150 m below surface.

The VMS mineralization of the old mine area occurs near the lower basalt-upper basalt contact on the eastern limb of a north-northeasterly trending, slightly overturned, southerly closing recumbent synform. This same favourable horizon also occurs on the western limb of the syncline in the No. 4 Brook zone, where a 10 m wide zone with variable copper, zinc and silver values are hosted by a pyroclastic unit with chert-pyrite beds and hematite-jasper iron formation (MacDougall, 1991b).



Figure 7-6: Banded and Brecciated Massive Sulphide Mineralization

Source: Duke collection, after Tallman, 2010



Figure 7-7: Pyrite and Chalcopyrite Stringer Mineralization

Source: Duke collection, after Tallman, 2010



Figure 7-8: Massive Pyrite, Chalcopyrite, Sphalerite and Pyrrhotite Mineralization

Source: Close-up photo from 24.3 m-long VMS intersection in DDH YH21-18 from 93.7 to 118.00 m)

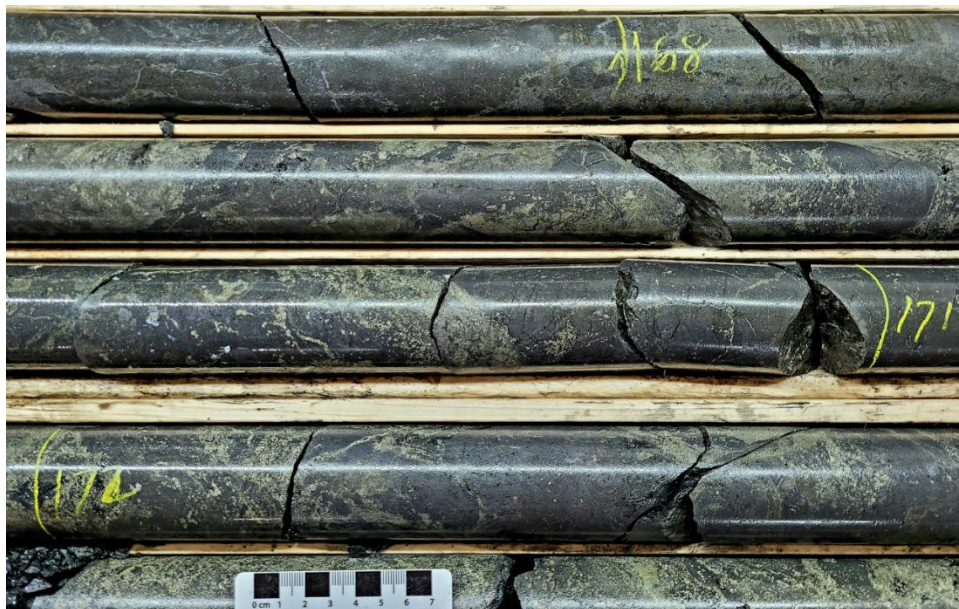


Figure 7-9: Massive Pyrite, Chalcopyrite and Sphalerite Mineralization

Source: Close-up photo from 7.4 m-long VMS intersection in DDH YH21-22 from 166.6 to 174.00 m)

8 DEPOSIT TYPES

8.1 Volcanogenic Hosted Massive Sulphides Exploration Model

The York Harbour volcanogenic massive sulphide mineralization occurs within the mafic flow level of a structural slice of oceanic crust belonging to the Lower Ordovician Bay of Islands Ophiolite Complex; its mineralization and geologic setting are analogous to deposits currently forming on ocean floors in back-arc basin and mid-ocean ridge rifting environments.

The deposit model was once named “Cyprus-type” after the famous copper deposits in the Troodos Ophiolite of Cyprus in the Mediterranean where copper and gold have been mined for over 5,000 years. The largest of these Cyprus deposits, at Mavrovouni, had estimated production of 15 million tonnes of mineralized material containing 4% Cu and unreported zinc and gold grades (Tallman, 2010).

The York Harbour Property is prospective for volcanogenic massive sulphide (VMS) base metal deposits enriched in copper (Cu), lead (Pb), zinc (Zn), silver (Ag) and gold (Au). VMS mineralization and deposits are well known in Newfoundland, and the geological setting is highly prospective for these types of deposits. These deposits follow the classic ocean-floor exhalative and/or replacement models which are well described in the literature (Franklin et al., 1981; Franklin, 1993; Franklin et al., 2005; Gibson et al., 1999; and Barrie and Hannington, 1999).

Recent studies by these geologists and others have derived a simple, five-fold lithostratigraphic classification of VMS base metal deposits (Figure 8-1) using sequence boundaries defined by major time-stratigraphic breaks, faults or major subvolcanic intrusions (Franklin et al., 2005). This classification is based on pre-altered host rock composition of some 880 VMS deposits with known ancient and modern day VMS settings (Barrie and Hannington, 1999). The following summarizes the classification hierarchy:

- **Mafic Type:** a predominantly (>75%) mafic host rock stratigraphic succession with rare to absent (<1%) felsic volcanic rocks and with minor (<10%) siliciclastic or ultramafic rocks or both. The mafic-type includes ophiolitic settings and are found in oceanic ridge, primitive oceanic back-arc rift and supra-subduction zone nascent-arc settings. The host rock basalts are tholeiitic and locally boninitic. These types are generally Cu-rich and Pb-poor and are the highest on average Au grades (2.6 g/t Au) and form about 8% of all VMS deposits (Barrie and Hannington, 1999). Average sizes are approximately 2.8 million tonnes. Deposits include the Cyprus and Oman VMS deposits and Tilt Cove, Newfoundland. The York Harbour mineralization is an example of this VMS type.
- **Bimodal-Mafic Type:** mainly mafic rocks (>50%) and >3% to <25% felsic rocks (in a ratio of >3:1 mafic:felsic) in a host stratigraphic succession with subordinate siliciclastic rocks. The felsics are commonly the immediate mineralization host rocks. The host rock composition is reflective of primitive volcanic arc or incipient-rifted supra-subduction oceanic arcs typified by flows and felsic strata. The basalts are generally tholeiitic and the felsics are commonly high-silica rhyolites. The bimodal-mafic type is the most common (~35%) of VMS deposits and Cu is the next highest grade after the mafic types. Average sizes are approximately 5.1 million tonnes.
- **Mafic-Siliciclastic Type:** these deposits have subequal proportions of mafic volcanic and intrusive rocks and turbiditic siliciclastic rocks. Felsics are minor to absent. These deposit types form about

14% of all VMS deposits, but they form on average the second largest deposits (~11 million tonnes) after the Bimodal-Siliciclastic Type. Their geological setting is in mature oceanic back-arcs, typified by sub-equal amounts of pelite and basalt (including mafic sills). Deposits include Besshi, Japan and Windy Craggy, British Columbia.

- **Bimodal-Felsic Type:** is defined as having either >50% felsic volcanics and/or 35-50% felsic volcanoclastics strata and <15% siliciclastic rocks in the host stratigraphic succession with mafic volcanics and intrusive rocks forming the remainder. The felsics are principally calc-alkaline and they are found generally in compositionally more mature volcanic arcs or rifted volcanic arc settings than the 'Bimodal-Mafic Type'. This VMS deposit class forms about 31% of all VMS deposit types, are usually more Ag- and Zn-rich than the other VMS types, carry an average gold grade of 2.1 g/t Au and are commonly baritic. Average deposit size is approximately 5.2 million tonnes. The Kuroko, Japan and Buchans, Newfoundland VMS deposits belong to this category.
- **Bimodal-Siliciclastic Type:** this VMS-host type has approximately equal proportions of volcanic and siliciclastic rocks. Felsics are generally more abundant than mafics and are usually calc-alkaline, a reflection of mature epicontinental back-arcs, typified by continent-derived sedimentary and volcanoclastic strata. The mafic rocks are generally tholeiitic but may also be mildly alkaline as at Bathurst, New Brunswick and the Iberian pyrite belt in Spain. These deposit types make up about 12% of the number of VMS deposits but form the largest of all VMS deposits averaging ~24 million tonnes. They have on average the lowest Cu content and the highest Pb content of the five deposit types.

Volcanogenic massive sulphide deposits typically form from hot, metal-rich fluids associated with seafloor hydrothermal convection that escape to the seafloor from vents along shallow crustal faults. These "exhalative" deposits form during the emplacement of the host volcanics and are, therefore, considered synvolcanic (Galley et al., 2007). Mafic-type VMS deposits typically grow upon the mafic flows as mounds of sulphide breccias comprising collapsed sulphide/sulphate chimneys, often referred to as "black smokers". These sulphide/sulphate mounds grow, self-seal, reheat, and the base and precious metals become zoned within the growing lens, often leading to grade enrichment and destruction of primary textures. Gradual replacement and enrichment of the brecciated footwall mafic flows along the discordant vent "pipes" due to the temperature increases and fluid build-ups beneath the growing massive sulphide lens may also form altered stringer zones containing significant base and precious metals. Some mafic-type VMS deposits are accompanied by large-scale hypabyssal intrusions which support high-temperature hydrothermal systems that generate higher grade Cu, Cu-Zn and Zn-Cu- (Pb) VMS deposits with variable Au and Ag (Galley et al., 2007).

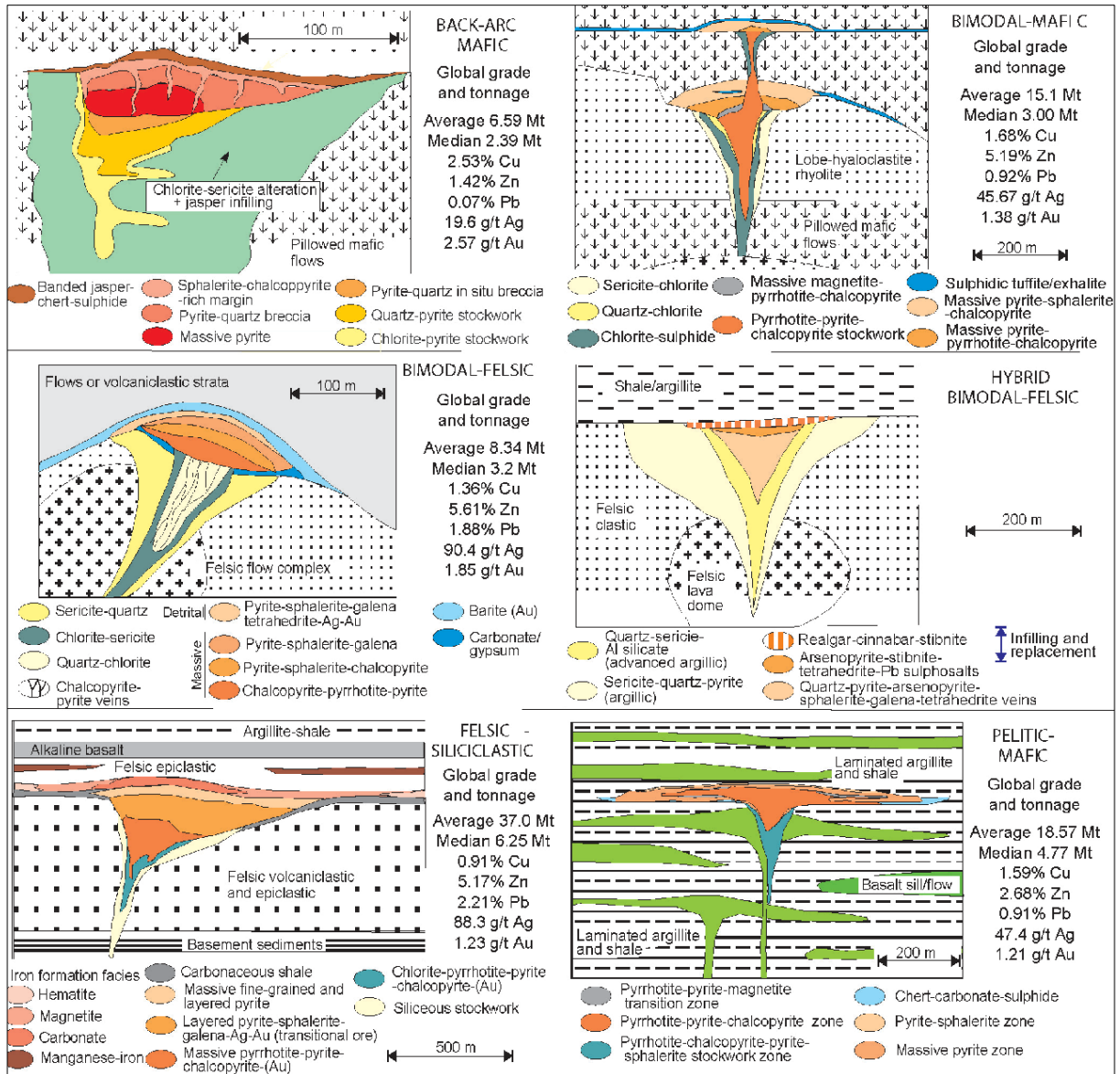


Figure 8-1: Schematic Cross Sections of the Various Volcanogenic Massive Sulphide Deposit Types

Source: Depicting host rocks, hydrothermal alteration, and mineralization from Galley et al. (2007b), after the classifications of Barrie and Hannington (1999) and Franklin et al. (2005). Also presented are the average and median tonnages, and average grades of different sub-types of VMS updated using the database of Franklin et al. (2005), as modified and updated by Galley et al. (2007b) and Huston et al. (2010).

9 EXPLORATION

York Harbour Metals commenced exploration in late April 2021, and has since conducted a multi-disciplined program to assess the exploration and resource potential of the York Harbour Property.

The 2021 exploration program included:

- several prospecting and rock geochemical sampling traverses
- examination and sampling of historical drill core stored at the Government of Newfoundland's Pasadena warehouse
- review, data compilation and three-dimensional modelling of historical surface and underground drilling and assay data
- surface and borehole electromagnetic surveys (BHEM)
- two phases of NQ-size diamond drilling with concurrent BHEM surveying
- LiDAR drone survey of the 4th Level adit.

The last drill hole of the 2021 exploration program was completed on December 12, and the drilling and exploration equipment was stored in a York Harbour warehouse for the start of the 2022 program.

9.1 Field Program

Between April 27 and May 1, 2021, a geologist and field assistants employed by Planet X Exploration Services Ltd. (Planet X Exploration), based in Gander, Newfoundland, prospected and collected rock geochemical samples from mineralized rock float and exposed bedrock along Mine Creek, in the immediate vicinity of the historical A Zone near the portal to the 4th Level adit (see figure 9.1 below). Eleven grab samples and three 1 m channel samples were collected along a 100 m section of the creek where the bedrock was exposed in its banks. Approximately 25 m south of the historical Main shaft, there is an outcrop of massive sulphide mineralization on the eastern creek bank which was likely the discovery outcrop for the historical York Harbour mine. Pyrite, chalcopyrite, sphalerite and bornite were reported in the oxidized VMS mineralization.

Fourteen rock geochemical samples were collected there, and those samples, accompanied by blank and standard quality assurance/quality control (QA/QC) samples, were submitted for 35-element ICP analysis to Eastern Analytical Ltd., an ISO 17025-accredited assay laboratory located in Springdale, Newfoundland. There, the samples were analyzed by conventional ICP methods, and samples with over-limit elements, such as those with high copper, lead, zinc, silver and cobalt, were later assayed. In addition to the field QA/QC samples, the laboratory also analyzed its own QA/QC samples during the procedures.

The analytical results from all grab and channel samples returned significant values ranging from 1.11% to 16.60% Cu, 0.27% to 28.30% Zn and 8.7 g/t to 119.6 g/t Ag. From the preliminary assay results, anomalous cobalt values were also identified. Cobalt values ranged from 4 ppm Co to 0.116% Co with higher cobalt values associated with high copper grades in the oxidized materials. Lead values from outcrop samples were less than 73 ppm Pb, and gold values were mostly less than 32 ppb Au, with one grab sample grading 536 ppb Au.

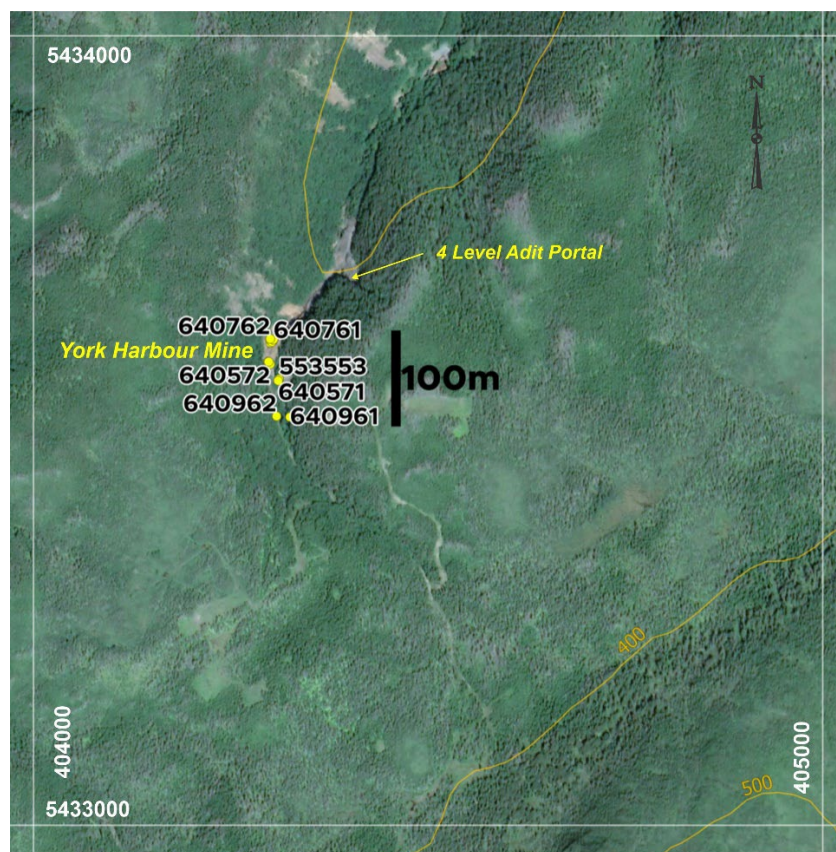


Figure 9-1: York Harbour Main Zone with 2021 Rock Geochemical Sample Sites

Source: York Harbour Metals.

On October 26, 2021, two prospecting traverses were carried out to first locate the access route to the No. 4 Brook VMS showing and then later to map the structure and mineralization at the showing (see Figure 7-3). Rock geochemical samples were collected from both the pyritized bedrock and the rounded float of chert-hosted massive sulphide mineralization found near the sloughed-in portal of the No. 4 Brook adit. Due to exceedingly long assay wait times, the results of this sampling are not available for this report (see Figure 7-3 for location of this showing).

9.2 Historical Drill Hole Review

In June 2021, Dr. Stephen Piercey, of SJP GeoConsulting and Memorial University, examined and sampled stored drill core from the 2004 drilling campaign by Wolfden Resources Inc. The core from Wolfden's diamond drill holes WLF-04-14 to -18 were completely logged, and those from drill holes WLF-04-13 were partially logged. Dr. Piercey was assisted during his logging and sampling work by geologist, Aaron Winter, an employee of Planet X Exploration.

The goal of this work was to understand the general stratigraphy, alteration and mineralization styles at York Harbour; to obtain a suite of samples for litho-geochemical work to see if it could be used for both chemostratigraphy and alteration fingerprinting; and to familiarize Winter with VMS, volcanic stratigraphy

and alteration, and the process of logging core in a VMS environment. The results of Dr. Piercey's geological observations were previously described in the Section 7.2 Property Geology of this report.

Fifty-seven lithogeochemical samples were collected during Dr. Piercey's work to test if lithogeochemistry can be used to understand chemostratigraphy and the alteration footprint of mafic-type VMS mineralization. Samples were taken from the various stratigraphic units to see if there are distinct immobile element signatures and/or trace element signatures in the various basalts (e.g., upper vs. lower basalts). Furthermore, samples were collected downhole, as a function of various alteration types, and spatially proximal and distal to mineralization, to see if there are both spatial-, lithological-, and alteration-related variations in mobile elements that can be used for vectoring. The results of this work are ongoing.

Several recommendations are provided to follow up this work including 1) determine the mineralogical differences between the upper and lower basalt units; 2) correlate any distinct lithological units between drill holes; 3) model the stratigraphy using the historical drilling results; 4) be aware that there may be structurally stacked horizons, both in the lower and upper basalt units, favourable for VMS deposition; and 5) thin-section petrography and potentially mineral chemistry (e.g., SEM, microprobe) may be useful to delineate chlorite types from mineralization vs. chlorite from background rocks. This work is ongoing by the company and has not been completed.

9.3 Three-Dimensional Modelling

In 2010, Messina Minerals completed the compilation of a digital drill hole database for the York Harbour Property that included the information for a total of 254 drill holes that had been located each with GPS UTM NAD 83 coordinates. The sites of the underground drill holes were determined from archived underground survey information and correlated with present UTM positioning. A total of 19,323.13 m of surface and underground drilling information were entered into the database. In addition, a total of 1,450 individual assay intervals were also entered from 135 of the 254 drill holes with at least one recorded assay per hole. According to Tallman (2010), most of the earlier records just reported copper and zinc assays and no other metals, and most of the samples were collected from massive sulphides with visually significant base metals rather than less mineralized stringer or vein-type mineralization.

York Harbour Metals carried out three-dimensional modelling using the drilling and assay database compiled by Messina Minerals. The purpose of this work was to first visualize the drill-tested subsurface mineralization and then to better site proposed diamond drill locations, and to also use the results of a surface and borehole electromagnetic survey that was carried out at the same time as the modelling study.

Messina Minerals' drilling and assay data were subsequently error-proofed and corrected with original, available geologic logs and reported assay results prior to importing into 3D modelling software for visualization and drill hole targeting purposes.

Significant mineralized drill intersections from the historical data were outlined on vertical sections spaced 10 m apart over a strike length of 1,100 m. The drill targeting exercise resulted in nine proposed drilling locations for Phase 1 diamond drilling to confirm reported VMS mineralization in the A, D and H Zones (See figures 10.3 to 10.6 below).



Figure 9-2: 2021 Historical Surface and Underground Drill Hole Traces with Historically Reported Copper Results

Note: Geology overlain and draped to topography. Perspective view down toward the northeast.

Source: Longford Exploration Services 3D Leapfrog model, based on historical Messina Minerals historic drillhole compilation.

This work is ongoing, and the results are pending. A completed analysis and interpretation of the data have not been completed yet.

9.4 Surface and Borehole Electromagnetic Surveying

York Harbour Metals commissioned two borehole electromagnetic (BHEM) surveys during the 2021 field season.

The field work for the first survey was carried out between May 17 and June 19 by Eastern Geophysics Limited of Corner Brook, Newfoundland, and Dave Campbell of Crone Geophysics & Exploration Ltd. of Toronto, Ontario completed the interpretative work and documented the results.

Two field personnel from Eastern Geophysics Limited used four transmitter loops, 14 surface lines, and three transmitter loops covering 9.925 sq km to survey nine drill holes. A Crone Pulse-EM, a time-domain electromagnetic method, was used to survey the surface; a precise pulse of current with a controlled linear shut-off was transmitted through a large loop of wire on the ground and the rate of decay (dB/dt) of the induced secondary field was measured across a series of time windows during the off-time. The electromotive force (EMF) created by the sudden turn-off of the current induces eddy currents in nearby conductive material generating a secondary electromagnetic field. When the primary field is terminated, this electromagnetic field will decay with time. The amplitude of the secondary field and the decay rate are dependent on the quality and size of the conductor.

The boreholes were surveyed with a 3D borehole Pulse-EM system in which the axial component (Z) and cross component (XY) of the induced secondary field were measured with a Crone borehole induction coil probe. The Z component detects any in-hole or off-hole anomalies and gives information on size, conductivity, and distances to the edge of conductors. The XY components measure two orthogonal

components of the EM field in a plane orientated at right angles to the borehole. These results give directional information to the centre of the conductive body.

Surface and Borehole TDEM surveys have yielded several anomalous responses showing that TDEM and BHEM, which can be an effective tool in VMS environments, and follow-up drilling of the identified off-hole anomalies were warranted (Figure 9-3).

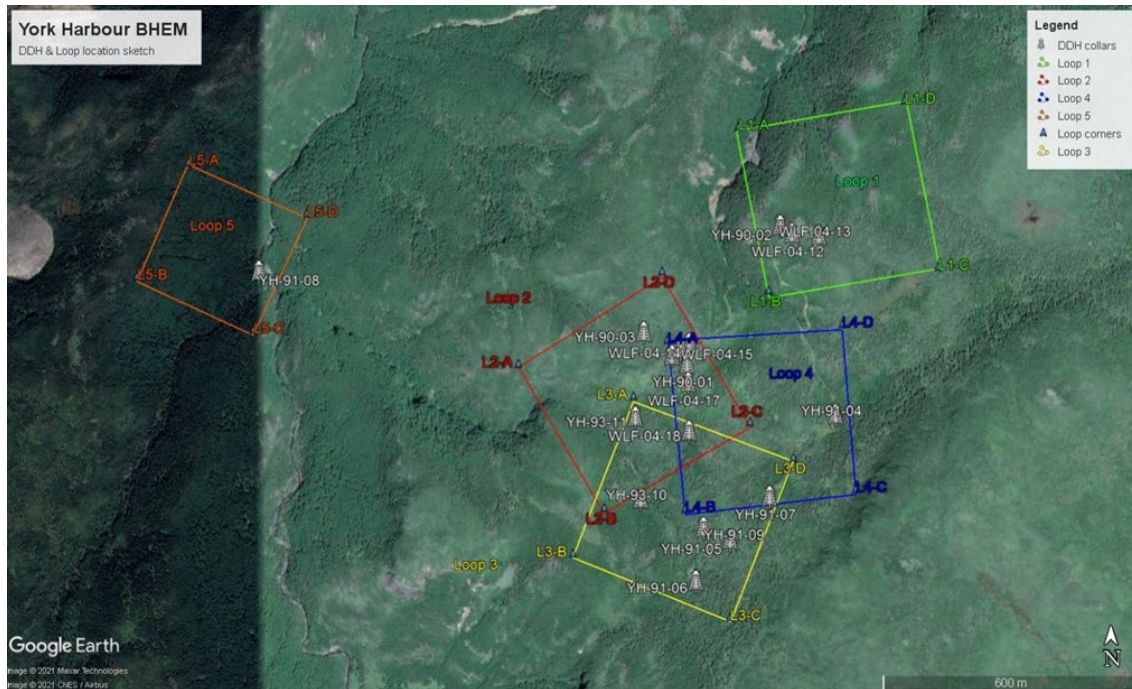


Figure 9-3: Configuration of the EM Loop for the Eastern Geophysics BHEM Survey

Source: After Deon, 2021

Given the somewhat subtle nature though of the off-hole anomalies identified in holes WLF-04-12 and WLF-04-13, these become difficult targets for a surface TDEM program, and indeed despite being surveyed from two transmit loops, these BHEM anomalies were not identified from the surface TDEM surveys.

The results of the surface and downhole Pulse-EM surveying positively identified only one off-hole conductor using the surface loop S3. This conductor was later tested by the Phase 1 drill hole YH21-08 which had been initially sited by 3D modelling to test documented VMS mineralization from old underground drill holes without assay results.

The second BHEM survey, called a “Volterra” EM survey, is being carried out by SJ Geophysics Ltd. that is based in Delta, BC. SJ Geophysics Ltd, assisted by Planet X Exploration field personnel. Two separate surface loops were prepared, and six drill holes were surveyed during the period of November 24 to December 15, 2021.

The work is ongoing and the results from some of the surveys are pending; a complete analysis and interpretation of the data has not yet been completed.

9.5 Diamond Drilling

This section summarizes the two phases of diamond drilling carried out on the Property during the 2021 exploration season (Figures 9-4 and 9-5).

Section 10 of this technical report documents this drilling in detail.

9.5.1 Phase 1

Phase 1 diamond drilling was carried out between from July 24 and August 8, 2021; it followed the completion of a 3D modelling study and the first BHEM survey by Eastern Geophysics.

Figure 9.4 shows the plan for Phase 1 diamond drill holes relative to the modelled VMS mineralization projected to surface.

9.5.2 Phase 2

Phase 2 diamond drilling was carried out between October 17 and December 12, 2021.

Figure 9.5 shows the plan for Phase 2 diamond drill holes relative to the modelled VMS mineralization projected to surface.

The work is ongoing and the results from some of the drill hole surveys are pending; a completed analysis and interpretation of the data has not yet been completed.

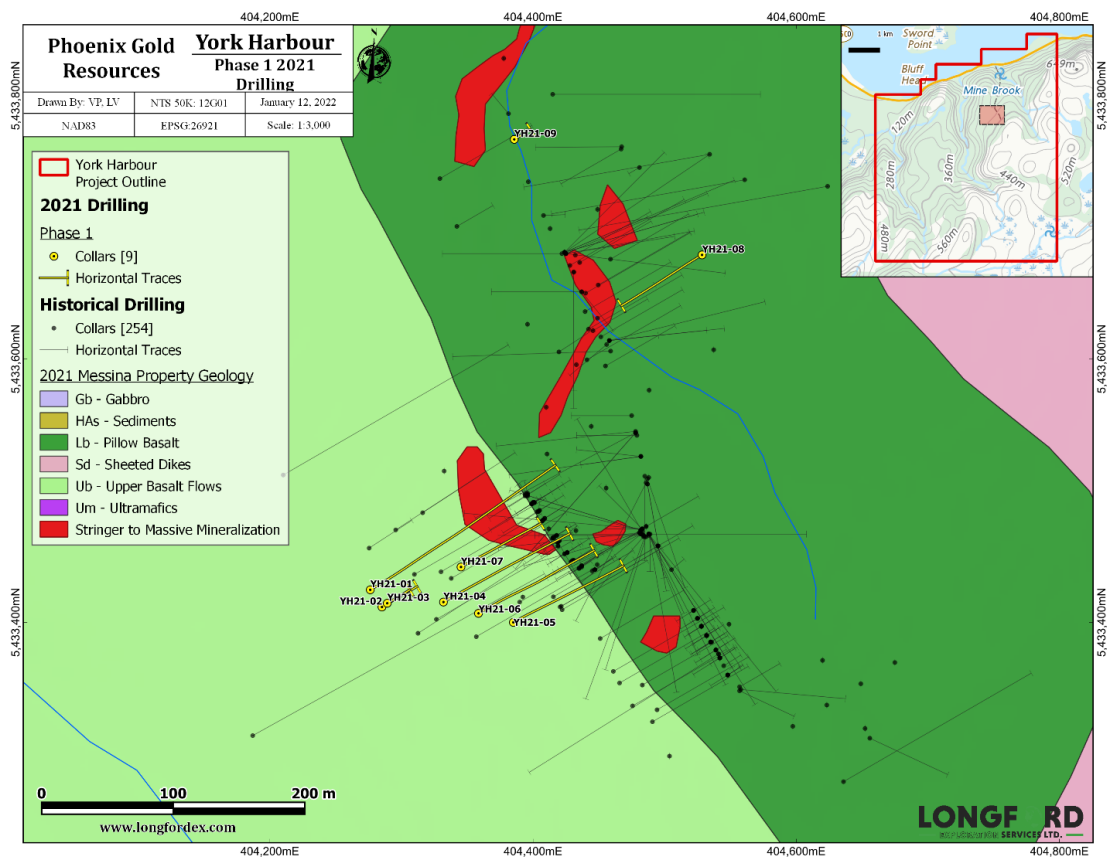


Figure 9-4: Proposed Drill Hole Locations and Downhole Traces for Phase 1 Drilling

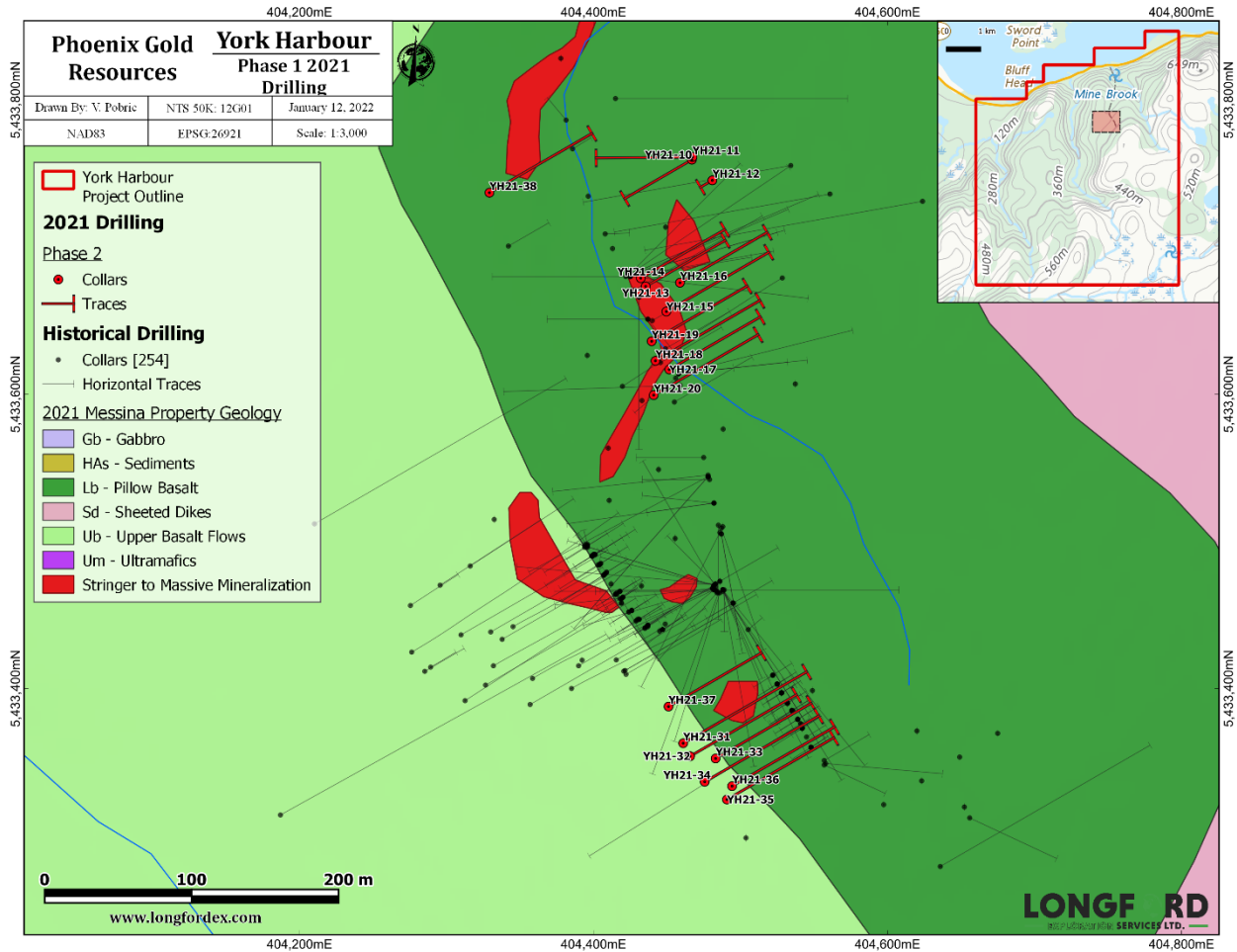


Figure 9-5: Proposed Drill Hole Locations and Downhole Traces for Phase 2 Drilling

9.6 Drone Survey of 4th Level Adit

York Harbour Metals engaged the engineering firm GEMTEC, with offices in Paradise, Newfoundland, to develop a Ground Control Management Plan for entry into the 4th Level adit. The intent of this plan was to serve as a foundation for the applications required to gain permit approval to allow entry of geological and engineering personnel into the 4th Level adit to both map and sample the various mineralized zones for future mineral resource estimation.

When underground mine workings in Newfoundland are abandoned, they become the property and responsibility of the Newfoundland-Labrador Government. Therefore, any entry into these workings requires approval from the Mineral Lands and Mineral Development Division, Department of Industry, Energy and Technology (DIET), in addition to the Department of Digital Government and Service Newfoundland, Occupational Health and Safety Division (OHS).

After receiving OHS approval on November 26, 2021 to open the adit portal, an excavator uncovered the portal on December 7, 2021, and a pilot and assistant from Unmanned Aerial Services (UAS), based in Sudbury, Ontario, carried out several test flights into the adit. The drone was able to penetrate the 4th Level adit for over 100 m, collecting imagery of the wall rock conditions, state of timber supports,

obstacles left in the drift, and finally a large sloughed-in section near its intersection with the historical Main shaft.

The work is ongoing, and the results from the survey are pending. A completed analysis and interpretation of the data have not yet been completed.

10 DRILLING

10.1 Historical Drilling Programs

Various operators have carried out surface and/or underground drilling programs since Independent Mining Corp.'s original development in 1953. According to the drilling and assay compilation (Messina Minerals, 2010), there were at least 254 drill holes completed on the Property for a total of 19,323.23 m of surface and underground drilling (Figures 10-1 through 10-6). A reported 135 of the 254 drill holes had at least one recorded assay, and the 2010 Messina Minerals database included 1,450 individual intervals with assay values (Tallman, 2010).

Most of the earlier records reported only copper and zinc assays and no other metals, and most of the samples were collected from massive sulphides with visually significant base metals rather than less mineralized stringer or vein-type mineralization (Tallman, 2010).

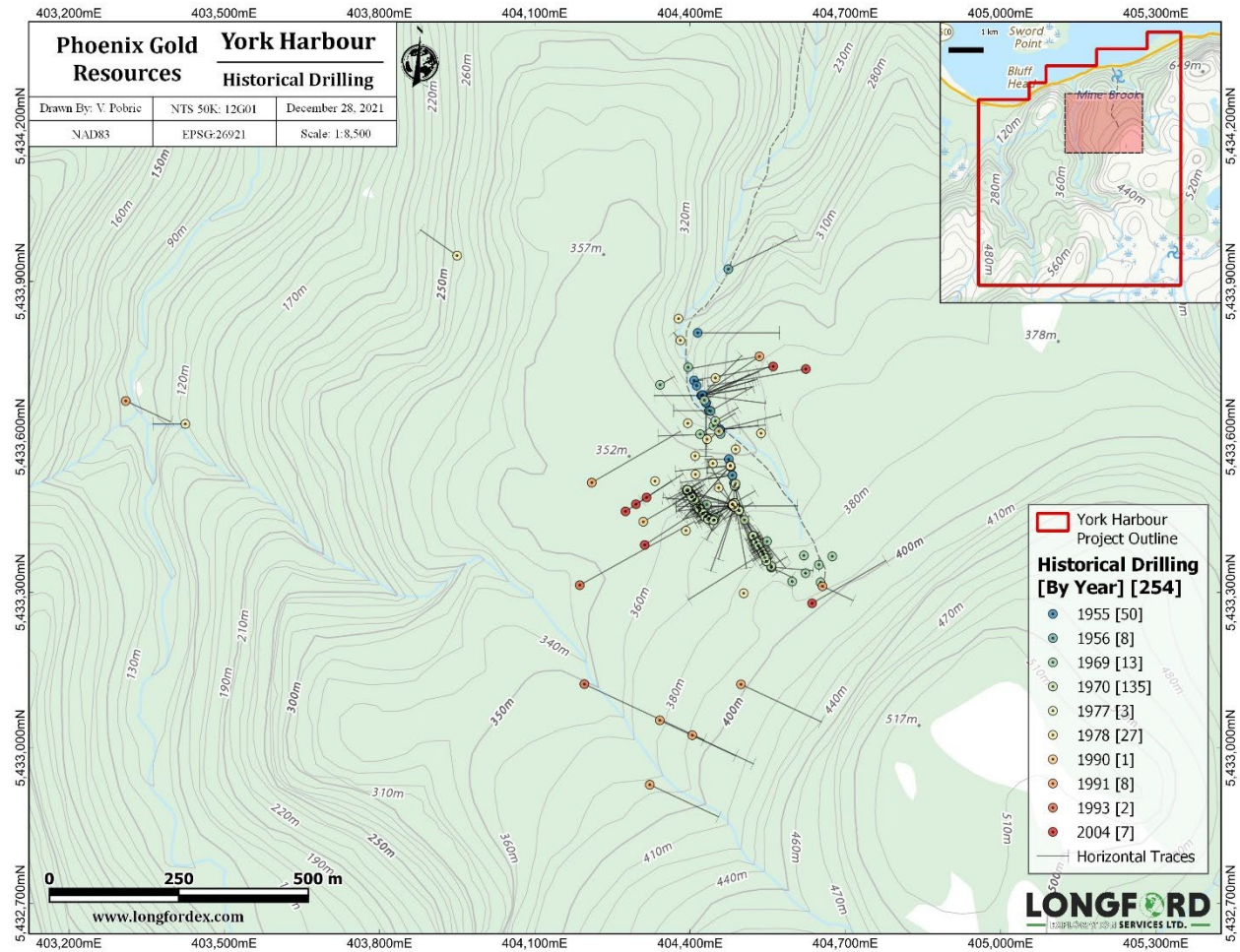


Figure 10-1: Historical Drilling Collar Location and Downhole Traces

Source: Modified after Messina, 2010

Prior to the start of the three-dimensional modelling study, the existing drill hole data were evaluated and validated. Some of the GIS files included in the Messina Minerals' 2010 assessment report were in UTM NAD 27, a coordinate system requested by the Newfoundland-Labrador Government. However, the drill hole locations and other topographic and infrastructure files in the database were in UTM NAD 83. All the drill hole locations, infrastructure, topographic and mine working files have since been standardized with UTM NAD 83 coordinates, and all 2021 surveying coordinates are in the UTM NAD 83 coordinate system.

10.2 2021 Diamond Drilling Programs

The Property was drill tested in 2021 with two phases of diamond drilling; the first was carried out from July 24 to August 8, 2021 and the second from October 17 to December 12, 2021.

The Phase 1 diamond drilling was contracted to Logan Drilling Limited, based in Stewiacke, Nova Scotia, and Phase 2 was contracted to Fusion Drilling Ltd., based in Springdale, Newfoundland. Both phases of diamond drilling were conducted with drill rigs and support equipment capable of recovering NQ-size core.

10.2.1 2021 Phase 1

The Phase 1 drilling program was intended to confirm the locations and grades of several of the documented VMS zones within the main York Harbour mine area, including the A, D and H Zones. Nine diamond drill holes, designated YH21-01 to -09, were completed during the first phase of confirmation drilling, totalling 1,222.25 m.

Logan Drilling Limited, based in Stewiacke, Nova Scotia, provided the drill rig, support equipment, and drilling personnel capable of completing an estimated 1,000 m of NQ-core size diamond drilling. Nine diamond drill holes were completed totalling 1,222.25 m. Upon completion, all of the Phase 1 drill hole collars were surveyed by a qualified surveyor based in Corner Brook, Newfoundland using (differential global positioning system) DGPS equipment.

The pertinent drilling information for the Phase 1 drilling program is shown in Table 10.1.

Table 10-1: Phase 1 Diamond Drilling Location and Downhole Specification Information

Hole-ID	Easting (UTM NAD 83)	Northing (UTM NAD 83)	Elevation (m amsl)	Length (m)	Azimuth (degree)	Dip (degree)
YH21-01	404276.33	5433424.70	355.04	248.00	60.00	-45.00
YH21-02	404285.23	5433411.64	356.10	44.00	60.00	-45.00
YH21-03	404289.23	5433414.48	356.47	27.25	60.00	-45.00
YH21-04	404331.94	5433415.40	359.19	218.00	60.00	-60.00
YH21-05	404385.07	5433399.98	368.02	185.00	60.00	-60.00
YH21-06	404358.57	5433406.81	361.81	206.00	60.00	-60.00
YH21-07	404345.28	5433442.01	359.34	134.00	60.00	-60.00
YH21-08	404528.52	5433679.03	360.65	140.00	240.00	-60.00
YH21-09	404385.79	5433766.81	309.23	20.00	60.00	-45.00

10.2.2 2021 Phase 2

Following the successful confirmation of documented VMS mineralization in the Main mine area, York Harbour Metals proceed with a second phase of diamond drilling (Phase 2) to better delineate the untested VMS zones for possible future mineral resource evaluation purposes.

Many of the historical drill logs documented VMS mineralization but had not reported any assay grades. According to Tallman (2010), the miners often only assayed copper-zinc massive mineralization and only reported the occurrence of semi-massive and/or stringer mineralization. There were also several sections between the documented VMS zones within the Main mine area that had the potential to host additional mineralization.

Forage Fusion Drilling Ltd., based in Springdale, Newfoundland, provided the drill rig, support equipment, and drilling personnel capable of completing an estimated 4,000 m of NQ-core size diamond drilling. The goal of this second phase of drilling was to better delineate the partially tested VMS horizons for a possible future mineral resource estimate and drill test the suspected, additional areas of mineralization where historical drill logs documented VMS mineralization (but without reported assay grades).

The completed Phase 2 drilling program included 29 diamond drill holes totalling 4,562 m.

SJ Geophysics Ltd. carried out the second BHEM survey during the drilling of the last seven drill holes. The geophysical probe was inserted into the drill rods after the drilling had been completed, and the electromagnetic readings were continuously recorded as the rods were pulled from the hole. The preliminary results of the BHEM survey work were considered worthy of continuing such work in future drilling programs.

The pertinent drilling information for the Phase 2 drilling program is shown in Table 10.2.

Planned drill hole sites were located with a handheld GPS instrument, and an excavator was used to prepare the drill pads. After the pads were prepared the collars, foresights and backsights were pegged by re-using the GPS instrument for the collar locations and then the compass was used to establish the

foresights and backsights. The skid-mounted drill rigs were maneuvered into place and aligned with the foresights and backsights.

A Devitool GPS instrument, which attaches to the drill rig mast, was used for each hole to confirm the collar location and orientation of each hole. If the drill rig moved slightly while in operation, the drillers could easily re-align the rig using this instrument. Downhole deviation measurements were scheduled to be measured every 30 m, and at the completion length of every hole with a Boart downhole instrument that was lowered down the drill rods and through the drill bit beyond the metal effect of the drill rods. The downhole measurements were recorded by the drillers and given to the project geologist on a shift-by-shift basis.

Due to the prevailing winter storms and snow cover at the time, an accurate survey of the Phase 2 drill collars has been postponed until better weather conditions and a qualified surveyor is available in early 2022.

Table 10-2: Phase 2 Diamond Drilling Location and Downhole Specification Information

Hole-ID	Easting (UTM NAD 83)	Northing (UTM NAD 83)	Elevation (m AMSL)	Length (m)	Azimuth (degree)	Dip (degree)
YH21-10	404467.00	5433759.40	354.40	204.00	240.00	-75.00
YH21-11	404467.40	5433761.20	354.20	102.00	270.00	-50.00
YH21-12	404480.90	5433745.40	356.10	36.00	240.00	-75.00
YH21-13	404435.50	5433673.30	343.80	125.00	60.00	-60.00
YH21-14	404432.20	5433678.90	345.90	132.00	60.00	-60.00
YH21-15	404449.60	5433656.20	341.10	161.00	60.00	-60.00
YH21-16	404458.90	5433675.80	348.70	137.00	60.00	-60.00
YH21-17	404451.60	5433616.80	344.60	143.00	60.00	-60.00
YH21-18	404442.20	5433622.70	341.90	164.00	60.00	-60.00
YH21-19	404439.60	5433636.00	336.00	150.00	60.00	-60.00
YH21-20	404441.00	5433599.40	352.70	164.00	60.00	-60.00
YH21-21	404455.10	5433594.70	351.50	122.00	60.00	-60.00
YH21-22	404326.60	5433402.30	361.80	236.00	60.00	-60.00
YH21-23	404337.90	5433433.40	361.80	200.00	60.00	-60.00
YH21-24	404327.10	5433401.90	359.30	176.00	60.00	-60.00
YH21-25	404356.90	5433389.10	364.30	209.00	60.00	-60.00
YH21-26	404389.90	5433415.40	369.50	161.00	60.00	-60.00
YH21-27	404415.50	5433419.40	368.70	140.00	60.00	-60.00
YH21-28	404420.60	5433411.70	373.00	179.00	60.00	-60.00
YH21-29	404421.50	5433412.20	374.40	146.00	60.00	-45.00
YH21-30	404422.15	5433409.57	368.60	149.00	60.00	-60.00
YH21-31	404461.07	5433362.75	378.74	194.00	60.00	-60.00
YH21-32	404465.79	5433353.93	375.64	167.00	60.00	-60.00

Hole-ID	Easting (UTM NAD 83)	Northing (UTM NAD 83)	Elevation (m AMSL)	Length (m)	Azimuth (degree)	Dip (degree)
YH21-33	404483.10	5433352.38	377.01	150.00	60.00	-60.00
YH21-34	404475.69	5433336.56	377.35	179.00	60.00	-60.00
YH21-35	404490.80	5433324.50	384.00	168.00	60.00	-60.00
YH21-36	404494.30	5433333.60	383.50	161.00	60.00	-60.00
YH21-37	404451.10	5433387.70	375.50	146.00	60.00	-60.00
YH21-38	404329.26	5433736.99	335.63	161.00	60.00	-60.00

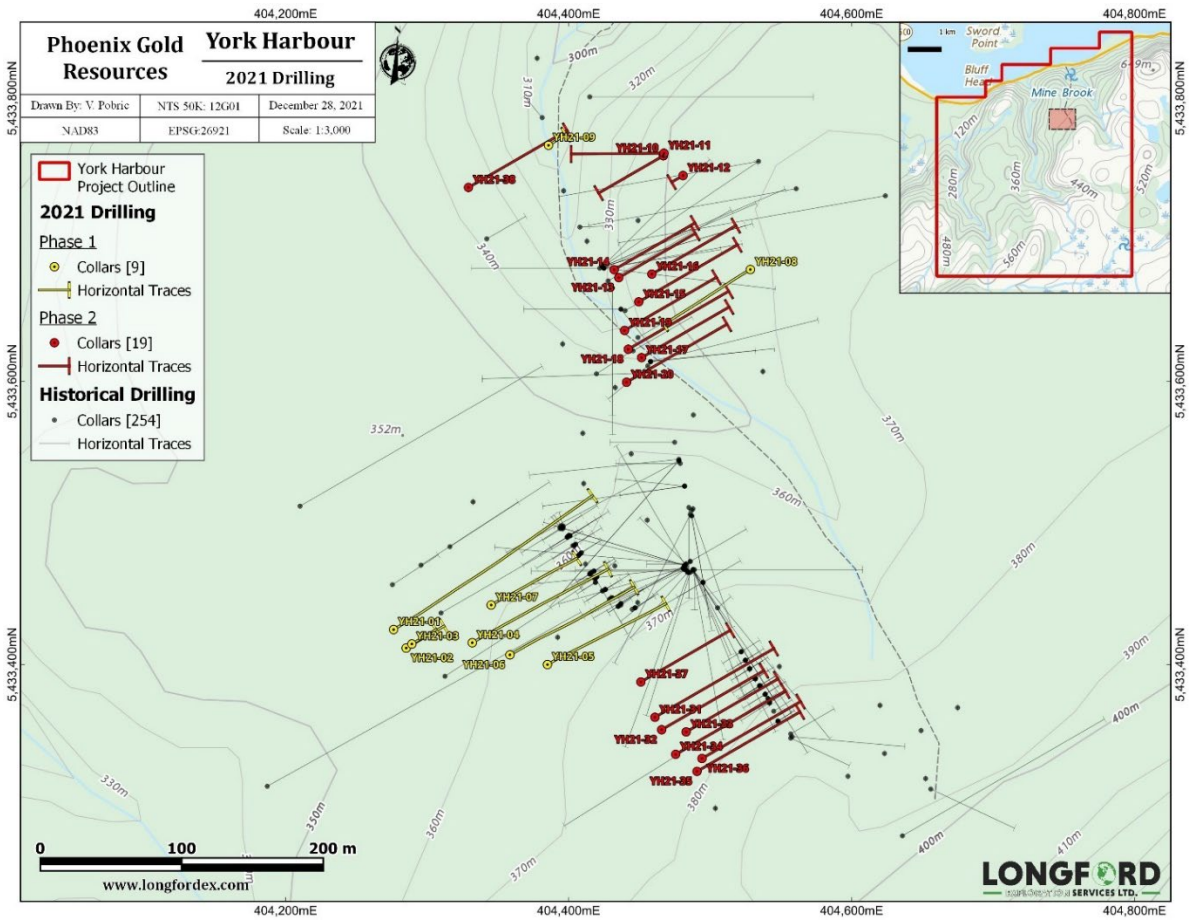


Figure 10-2: 2021 Phase 1 and Phase 2 Drill Hole Collar Locations and Downhole Traces overlain on Previous Historical Drilling

10.3 Results of the 2021 Diamond Drilling Programs

York Harbour Metals received the analytical and over-limit assay results for all of the 300 drill core samples that were collected during the Phase 1 drilling program, and one batch of rushed assays from phase 2 drilling.

The first shipment of 100 core samples included massive and semi-massive sulphide intercepts within drill holes YH21-04, -06, -08 and -09, plus the inserted blank and standard QA/QC samples. The balance of the

Phase 1 drill core samples, totalling 200, included those drill cores with disseminated and stringer sulphide mineralization plus the inserted blank and standard QA/QC samples.

The weighted average grades of mineralized intercepts encountered during Phase 1, and one hole from phase 2 of the drilling are shown in Table 10.3.

Table 10-3: Phase 1 Drill Hole Weighted Average Grade Intercepts

Type	From (m)	To (m)	Interval (m)	Cu (%)	Zn (%)	Ag (g/t)	Au (g/t)	Co (g/t)
YH21-01	37.9	38.79	0.9	1.38	11.72	24.49	0.12	35.07
	38.34	38.79	0.4	1.63	13.20	27.90	0.14	41.00
	62.75	64.05	1.3	0.02	0.23	7.56	0.24	34.38
	119	120	1.0	0.09	0.45	0.75	0.02	37.00
	151.8	152	0.2	1.26	12.00	4.20	0.02	123.00
	156.52	157.82	1.3	0.40	2.66	1.27	0.01	67.00
	171.81	171.91	0.1	0.84	0.80	2.60	0.01	48.00
	210.27	212	1.7	0.71	17.65	15.79	0.16	31.92
	210.57	210.87	0.3	0.70	36.80	24.00	0.18	17.00
	211.47	212	0.5	1.25	22.00	17.70	0.10	31.00
	215.43	216.03	0.6	0.09	0.29	0.77	0.01	38.00
	226.68	227.38	0.7	0.09	1.95	0.85	0.04	41.37
235.2	235.31	0.1	0.17	1.70	3.70	0.05	51.00	
YH21-02	38	44	6.0	0.63	2.44	6.15	0.06	45.44
including	39.38	44	4.6	0.75	2.66	7.00	0.06	50.17
YH21-03	26.36	27.25	0.9	0.90	2.17	7.62	0.15	68.47
YH21-04	140.5	143.74	3.2	0.09	0.08	0.64	0.02	41.65
	146	146.44	0.4	0.10	1.25	0.80	0.03	56.00
Including	166.11	173.57	7.5	0.58	0.03	1.13	0.01	95.18
	166.61	169.12	2.5	1.36	2.37	2.37	0.01	138.97
Including	179.45	213.46	34.0	0.91	0.66	1.35	0.03	79.74
	180.03	182	2.0	3.68	0.08	3.59	0.01	257.80
And	188	197.25	9.3	1.57	0.05	1.14	0.01	131.82
And incl	188.97	189.54	0.6	8.68	0.11	3.90	0.01	424.00
And	197.25	199.69	2.4	0.80	2.67	2.44	0.02	81.77
And	201.56	207.03	5.5	0.51	1.24	13.11	0.02	40.23
And	209.66	213.37	3.7	0.71	1.75	10.66	0.04	46.30
YH21-05	146.2	147.2	1.0	0.83	0.05	1.35	0.02	88.00
	147.8	166.87	19.1	0.27	0.35	1.49	0.02	59.50
	148.23	149.38	1.2	0.59	3.13	6.67	0.24	61.48
Including	175.06	178.06	3.0	0.59	0.04	2.16	0.01	58.67
YH21-06	145.36	197.6	52.2	0.85	0.53	1.75	0.01	91.81
	146.26	148.06	1.8	1.19	5.09	13.47	0.21	67.00
	156.95	159.55	2.6	0.59	0.09	2.13	0.02	102.42
	178.35	184.15	5.8	3.52	0.09	2.80	0.01	283.03

Type	From (m)	To (m)	Interval (m)	Cu (%)	Zn (%)	Ag (g/t)	Au (g/t)	Co (g/t)
And incl	178.7	181.3	2.6	6.31	0.13	4.67	0.01	450.65
And	190.15	193.2	3.0	3.34	0.13	2.77	0.01	211.15
And incl	191.9	192.3	0.4	9.91	0.27	7.50	0.01	568.00
And	194.05	198.5	4.4	0.84	0.16	4.15	0.00	91.71
YH21-07	115.75	121.39	5.6	0.01	0.07	1.95	0.02	39.13
YH21-08	121.3	130.7	9.4	0.46	0.53	2.67	0.08	60.09
including	122.3	128.9	6.6	0.62	0.65	3.37	0.11	66.92
YH21-09	5.0	16.6	11.6	1.41	0.10	2.41	0.00	202.94
YH21-18	93.0	118.0	25.0	2.70	9.04	17.78	0.15	164
including	108.0	118.0	10.0	2.47	16.52	36.43	0.31	93

Other than hole YH21-18, none of the analytical results for the Phase 2 drill cores have not been received from Activation Laboratories Ltd Table 10.4 summarizes those mineralized intercepts in drill holes YH21-10 to YH21-38 with observed sulphide mineralization and logged by the project geologists.

Table 10-4: Visual Estimate of Sulphide Mineralization in Phase 2 Drill Hole Intercepts

DDH No.	From (m)	To (m)	Interval (m)	Range of Visual Estimates (%)				
				Pyrite	Chalcopyrite	Sphalerite	Magnetite	Pyrrhotite
YH21-10	75.05	75.16	0.11	65	-	5	-	Tr
YH21-10	123.97	204.00	80.03	Tr – 20	Tr – 5	-	Weak – Tr	-
YH21-11	14.20	71.25	57.05	Tr – 5	-	-	-	-
YH21-12	14.61	36.00	21.39	Tr – 30	-	-	V Weak – Tr	-
YH21-13	103.66	106.00	2.34	25	-	5	-	-
YH21-13	109.53	112.41	2.88	10- 60	Tr – 20	Tr – 5	V Weak – Tr	-
YH21-14	11.00	34.51	23.51	3 – 30	-	Tr – 5	-	-
YH21-14	106.08	116.00	9.92	3 – 40	1 – 40	Tr – 5	-	-
YH21-15	112.64	142.00	29.36	2 – 50	Tr – 10	Tr – 5	V Wk – Med	Tr – 5
YH21-16	104.15	127.50	23.35	1 – 30	Tr – 15	1 – 10	VWk – Med	1 – 4
YH21-17	89.59	126.51	36.92	Tr – 30	2- 3	Tr – 5	V Weak	-
YH21-18	93.70	118.00	24.30	20-50	1 – 15	2 – 30	VWk – Med	2 – 20
YH21-19	97.59	112.50	14.91	20-50	20 – 40	Tr – 50	VWk – Med	1 – 15
YH21-20	109.40	129.46	20.06	20-60	Tr – 20	Tr – 30	-	Tr – 5
YH21-21	92.20	92.39	0.19	40	Tr – 20	Tr – 2	-	Tr – 2
YH21-22	166.62	184.17	17.55	5 – 50	1 – 15	10 – 40	-	Tr – 10
YH21-22	218.29	218.72	0.43	30-40	2	-	-	-
YH21-23	164.14	168.04	3.90	3 – 20	2 – 15	Tr	-	-
YH21-23	183.48	191.25	7.77	Tr – 30	Tr – 20	-	VWk – Wk	Tr – 3

DDH No.	From (m)	To (m)	Interval (m)	Range of Visual Estimates (%)				
				Pyrite	Chalcopyrite	Sphalerite	Magnetite	Pyrrhotite
YH21-24	134.36	176.00	41.64	Tr – 50	Tr – 30	Tr – 10	VWk – Med	Tr – 20
YH21-25	169.79	182.00	12.21	1 – 50	Tr	Tr – 25	VWk – Med	1 – 10
YH21-26	132.33	151.00	18.67	1 – 50	Tr – 4	Tr – 5	V Weak – Tr	2 – 3
YH21-27	110.00	123.94	13.94	1 – 45	Tr – 25	Tr – 30	VWk – Med	1 – 3
YH21-28	123.64	157.35	33.71	Tr – 50	Tr – 25	Tr – 5	-	-
YH21-29	124.78	135.60	10.82	Tr – 30	Tr – 10	Tr – 5	Weak	-
YH21-30	142.45	142.96	0.51	70	5	-	-	5
YH21-31	150.57	153.31	2.74	5 – 10	1 – 10	Tr – 5	-	-
YH21-32	139.00	153.92	14.92	5 – 30	1 – 10	Tr – 2	-	Tr – 10
YH21-33	139.78	144.31	4.53	1 – 30	Tr – 10	Tr – 5	-	Tr
YH21-34	135.50	179.00	43.50	Tr – 5	-	Tr – 2	-	-
YH21-35	91.48	93.15	1.67	2 – 4	Tr – 2	-	-	-
YH21-36	153.72	156.40	2.68	Tr – 10	-	-	-	Tr – 10
YH21-37	132.41	144.00	11.59	Tr – 5	-	-	-	-
YH21-38	107.46	110.85	3.39	Tr – 20	-	1	-	5

Note: Tr (trace); V Weak (very weak); VWk (very weak); Med (medium)

The work is ongoing and the results from some of the drill hole surveys are pending; a completed analysis and interpretation of the data have not yet been completed.

To the QP's knowledge, the data acquisition procedures were suitable and typical for this type of survey work. The technical work was carried out by appropriately qualified independent industry professionals according to best practice standards.

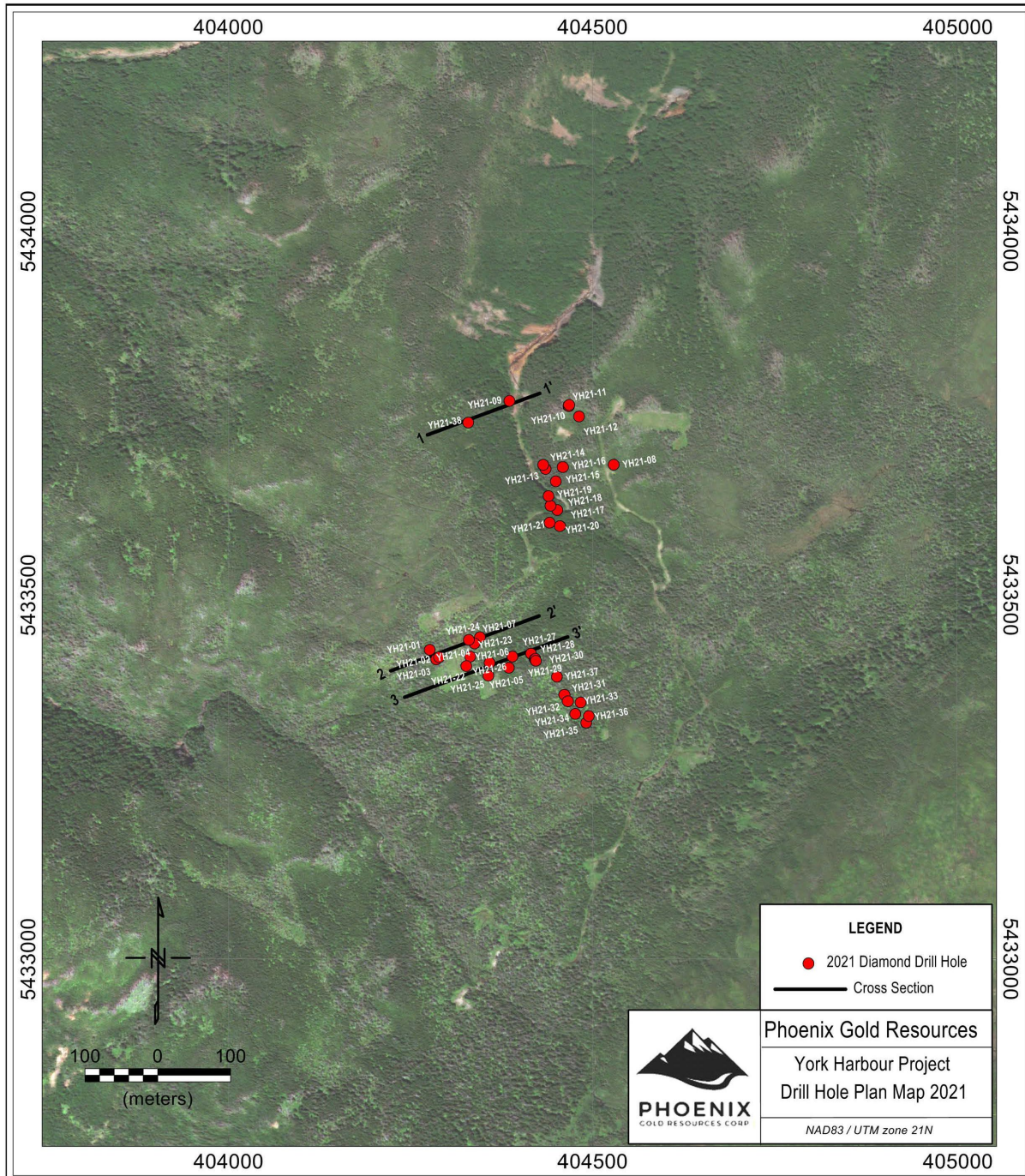


Figure 10-3: Phase 1 and Phase 2 Drilling Locations and Preliminary Section Lines

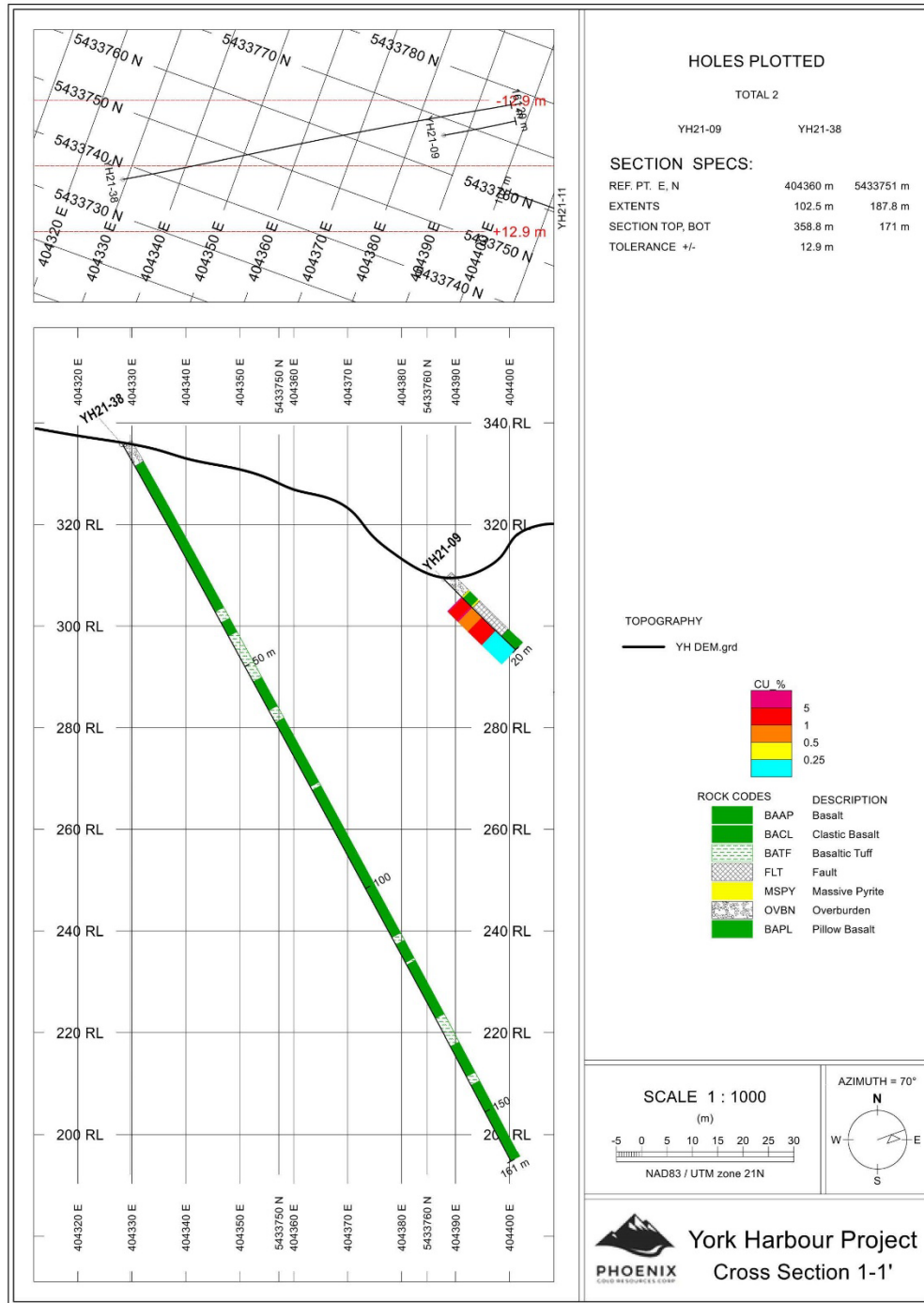


Figure 10-4: Cross Section 1-1' including YV21-09 and YH21-38

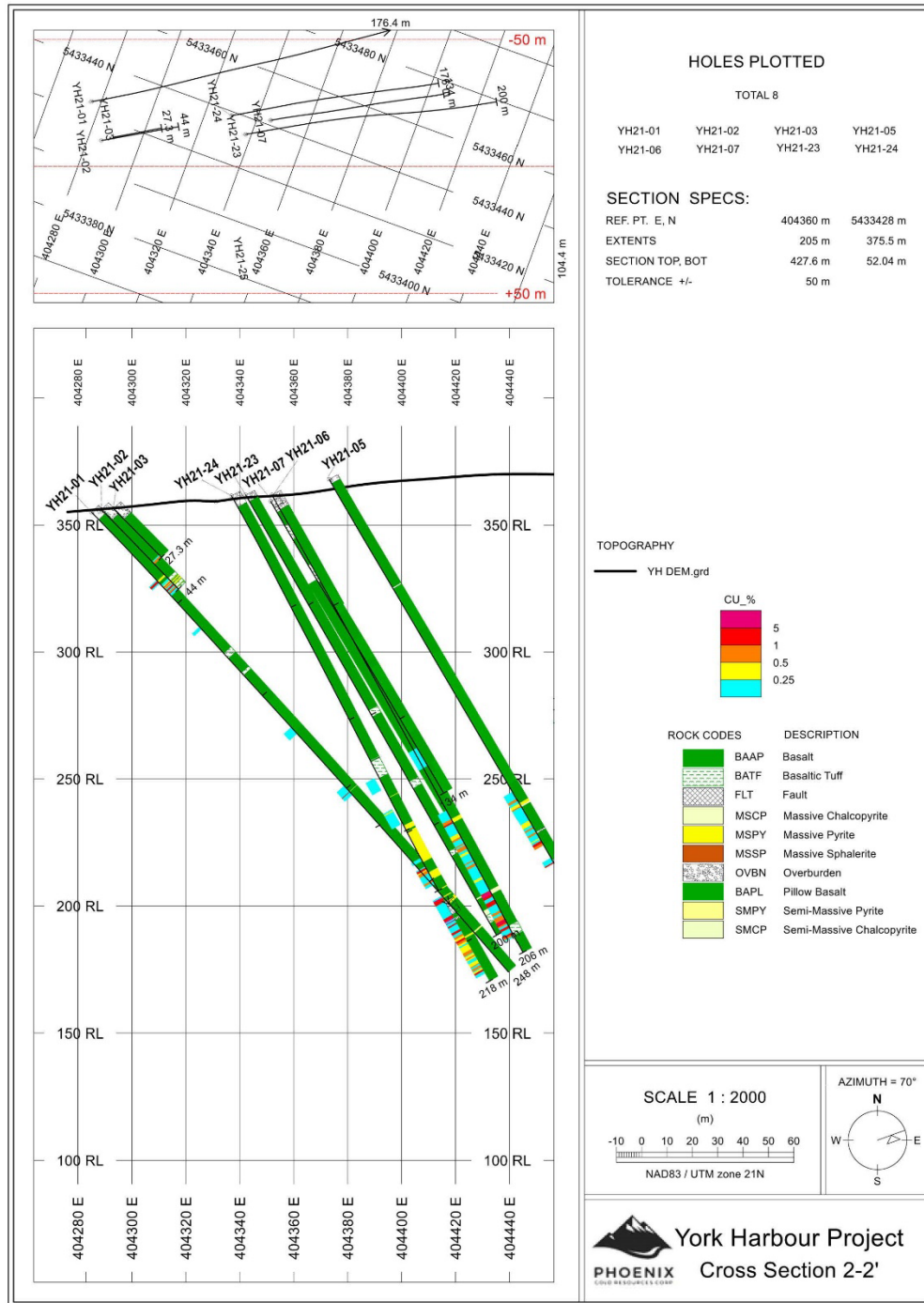


Figure 10-5: Cross section 2-2' including YH21-01, -02, -03, -07, and YH21-23, -24

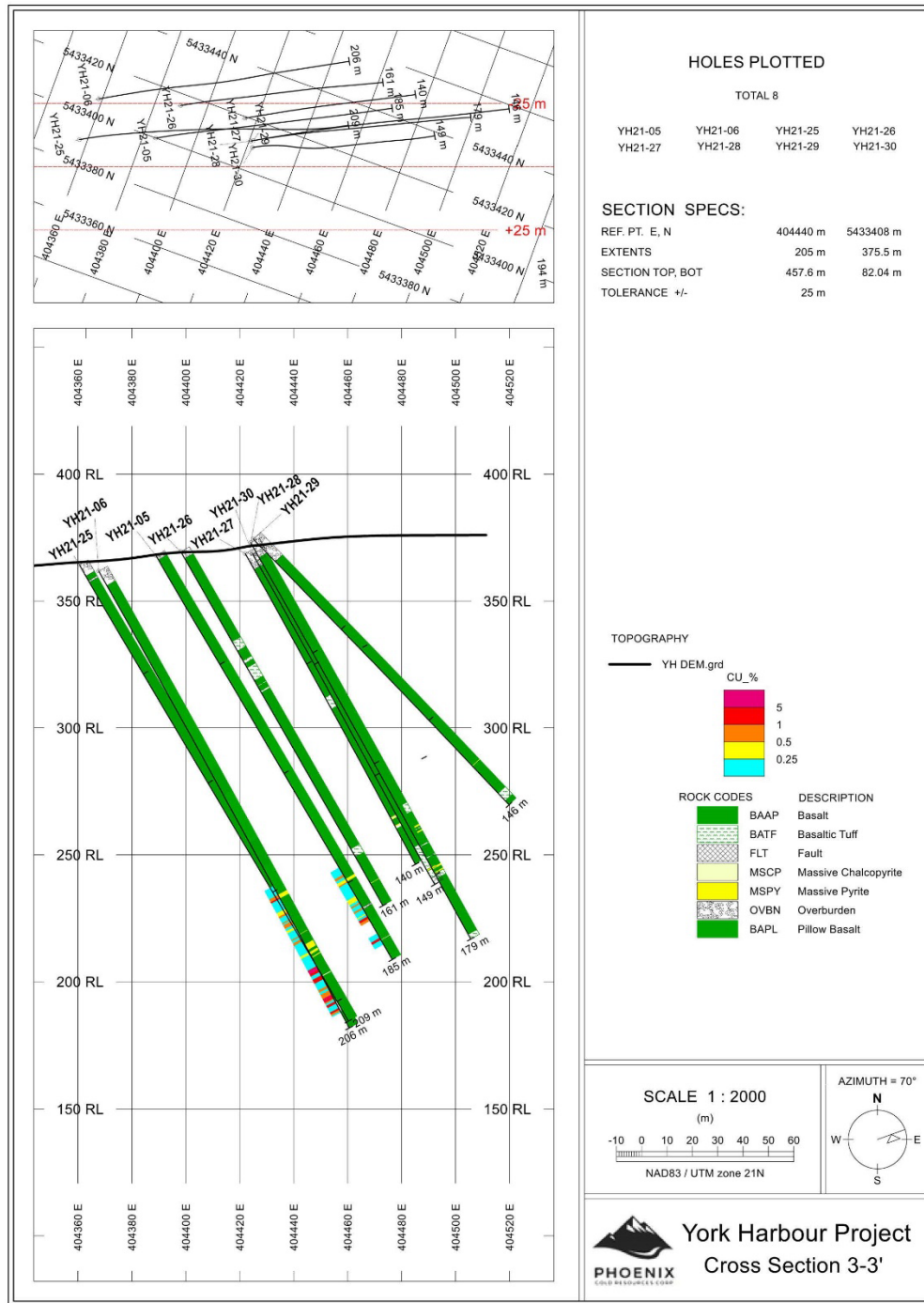


Figure 10-6: Cross section 3-3' including YH21-05, -06 and YH21-25, -26, -27, -28, -29, -30

11 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Sample Preparation

The 2021 surface sample and diamond drilling program used handling, logging, sampling, QA/QC, security, and storage procedures compliant with current, industry standard practices and generally conform with CIM guidelines.

11.1.1 Rock Sampling

During the 2021 field season, both grab and channel rock samples were collected from the float and outcrop in the Main mine area and later from the No. 4 Brook zone mineral showing. The lithology, alteration and mineralogy of the grab samples were recorded by the lead prospector or geologist; the samples were placed in marked plastic bags, and secured with cable ties. The location of each sample was measured with a handheld GPS instrument, and any additional information was recorded in a notebook and digitized later.

11.1.2 Channel Sampling

The channel samples were cut using a portable rock saw. The channels were usually 1 m long by several centimetres both wide and deep. The intervening rock was chiselled out into marked plastic bags, and the bags were secured with cable ties after inserting laboratory assay tags. The start and finish of the channel was located with a handheld GPS instrument, and the angle of the channel was measured with a compass.

Shipments of both the grab and channel samples included standard and blank QA/QC samples representing approximately 5% of the total sample shipment. All of the sample bags were then placed in sacks and shipped directly to Activation Laboratories Ltd. in Ancaster, Ontario for analysis and/or assay.

11.1.3 Core Logging

Drill core from both phase 1 and 2 was logged at the company's core logging facility in York Harbour. All data was recorded in to preprepared excel logging forms. Initially the core meter marks were recorded onto the core according to typically accepted best practice. Rock Quality Designation (RQD) was calculated between the original driller's blocks. Additional geotechnical information collected included breakage, hardness, weathering, cross-jointing, shape of fracturing, and roughness of the drill core between each driller's run. The lithology and rock type were identified logged and marked onto the core accordingly, significant, and relevant structure, alteration, and other characteristics of the drill core were also recorded.

11.1.4 Core Processing and Sampling

The core sampling intervals were marked to respect lithological boundaries and the occurrence and type of sulphide mineralization. The maximum sample length was generally kept to less than 1 m through mineralized zones, where zones of weakly mineralized material were encountered longer sections up to 1.5 m were sampled. Sampling intervals within semi-massive and massive sulphide mineralization were commonly less than 0.5 m. All sampling was completed in a selective manner and extended for between 3 – 5 m into the hanging wall and foot wall of the intersected zones. A complete sampling of the core from top to bottom was not undertaken.

All sample intervals were marked onto the core and the corresponding intervals were marked into sample ticket books; a corresponding sample tag was affixed to the core box for reference.

After Logging the whole core boxes to be sampled were covered and placed on pallet for transport in a covered and locked trailer, core transportation was completed by company contractors, no particular security measures were employed. The Whole core samples were transported to a core cutting facility in Gander, Newfoundland. Each drillhole was then photographed. The marked core intervals were then fitted and cut lengthwise in half using a “wet” rock saw. Field duplicate samples were quarter cut. The half core (and quarter core duplicates) samples were placed sequentially into pre-numbered plastic bags with corresponding sample tickets.

The bagged samples were then placed on a pallet, completely covered with large sheets of saran wrap to prevent spillage or mishandling and shipped on pallets directly to Activation Laboratory Ltd. in Ancaster, Ontario.

11.1.5 Core QAQC Samples.

During Phase 1 of the drilling a basic QAQC was performed. A total of 321 samples were prepared for geochemical analysis for a total of 209 meters of core in 297 sampled intervals. The QAQC comprised of insertion of 12 blank samples, and 12 certified reference material (CRM) samples. The CRM and Blank samples were inserted sequentially for an average insertion of 6% during Phase 1, the QAQC Insertion was completed according to Table 11.1 below. York Harbour Metals submitted a further 29 check samples from selected known-grade intervals from the Phase 1 results. The samples were sourced and transported to AGAT laboratories of Mississauga, Ontario for geochemical analysis by 4 Acid Digest - Metals Package, ICP/ICP-MS finish. The results of the comparison of the two data results is analyzed by the author and is further discussed in Section 12 of this report.

During Phase 2 of the drilling a more robust QAQC was performed. A total of 2,383 samples were prepared for geochemical analysis for a total of 1,666 meters of core in 2,161 sampled intervals. The QAQC comprised of insertion of 11 blank samples, 112 certified reference material (CRM) samples, and 110 Field Duplicate samples prepared from ¼ cut core. The CRM, Blank, and field duplicate samples were inserted systematically every 5-6 samples for an average insertion of 14% during Phase 2, the QAQC Insertion was completed according to Table 11.1 below.

During both phases of drilling the blanks consisted of two types of decorative quartz rock, placed into the prenumbered sample bags, and inserted into the sample stream. The CRM samples used included CMD-ME-1707, OREAS239 and OREAS229b, which were placed into the sample bags and inserted into the sample stream.

During Phase 2 duplicate coarse rejects were designated in samples, and instruction was conveyed to the laboratory, after initial crushing of the respective samples, coarse reject material was resampled and inserted as a duplicate into the prenumbered sample stream prior to analysis.

Table 11-1: Phase 1 and Phase 2 QAQC insertion rates.

Phase	HOLE-ID	Samples Collected	Intervals Sampled	Total meters Sampled	CRM Samples	Blank Samples	Duplicate Samples	Check Samples	Total QAQC Samples	Total % QAQC
P1	YH21-01	54	50	22.1	2	2	0	1	4	7%
P1	YH21-02	13	13	6.0	0	0	0	1	0	0%
P1	YH21-03	3	3	1.4	0	0	0	0	0	0%
P1	YH21-04	92	84	56.8	4	4	0	4	8	9%
P1	YH21-05	38	36	30.3	1	1	0	4	2	5%
P1	YH21-06	78	72	56.6	3	3	0	11	6	8%
P1	YH21-07	11	9	8.1	1	1	0	0	2	18%
P1	YH21-08	22	20	12.4	1	1	0	6	2	9%
P1	YH21-09	10	10	15.0	0	0	0	2	0	0%
Total	9	321	297	209	12	12	-	29	24	6%
P2	YH21-10	31	28	19.0	1	2	1	0	4	13%
P2	YH21-11	40	36	31.3	2	2	2	0	6	15%
P2	YH21-12	33	30	26.2	2	1	2	0	5	15%
P2	YH21-13	140	126	99.3	7	7	6	0	20	14%
P2	YH21-14	141	128	91.1	6	7	7	0	20	14%
P2	YH21-15	210	190	154.8	10	10	10	0	30	14%
P2	YH21-16	146	132	104.2	7	7	7	0	21	14%
P2	YH21-17	145	132	99.0	7	6	7	0	20	14%
P2	YH21-18	150	135	101.2	7	8	7	0	22	15%
P2	YH21-19	137	125	100.9	7	6	6	0	18	13%
P2	YH21-20	124	112	86.4	6	6	6	0	18	15%
P2	YH21-21	20	18	13.3	1	1	1	0	3	15%
P2	YH21-22	72	65	50.1	3	4	3	0	10	14%
P2	YH21-23	109	98	65.7	6	5	5	0	16	15%
P2	YH21-24	116	106	63.3	5	5	6	0	16	14%
P2	YH21-25	84	76	49.0	4	4	4	0	12	14%
P2	YH21-26	102	92	68.5	5	5	5	0	15	15%
P2	YH21-27	80	72	52.7	4	4	3	0	11	14%
P2	YH21-28	120	109	84.0	5	6	6	0	17	14%

Phase	HOLE-ID	Samples Collected	Intervals Sampled	Total meters Sampled	CRM Samples	Blank Samples	Duplicate Samples	Check Samples	Total QAQC Samples	Total % QAQC
P2	YH21-29	62	56	40.1	3	3	3	0	9	15%
P2	YH21-30	25	22	19.2	2	1	1	0	4	16%
P2	YH21-31	39	36	25.8	1	2	2	0	5	13%
P2	YH21-32	41	37	32.0	2	2	2	0	6	15%
P2	YH21-33	21	19	18.0	1	1	1	0	3	14%
P2	YH21-34	58	55	46.7	2	1	2	0	5	9%
P2	YH21-35	59	56	52.9	2	1	2	0	5	8%
P2	YH21-36	35	31	36.5	2	2	1	0	5	14%
P2	YH21-37	21	19	16.5	1	1	1	0	3	14%
P2	YH21-38	22	20	18.4	1	1	1	0	3	14%
Total	29	2,383	2,161	1,666	112	111	110	0	332	14%

11.2 Sample Analyses and Assays

Numerous shipments drill core and QA/QC samples were delivered to the SCC-accredited Activation Laboratories Ltd. (ActLabs) in Ancaster, Ontario. The surface and drill core sample bags were opened, the sample information was recorded into the laboratory database, and the contents were dried in ovens at a low temperature. Dried samples were then weighed before they were crushed in a jaw crusher to 70% less than 8 mesh, and 250 g to 500 g of the crushed material from each sample was split off using a Jones Riffle Splitter. The remaining “reject” crushed rock was returned to its original plastic sample bag, or used for coarse duplicate sampling. The split sub-sample from each crushed rock sample was then pulverized to 85% less than -200 mesh and the +200 mesh material was re-pulverized and re-screened, and a 30 g portion was then extracted to use as a sample aliquot. Non-silica-based sand was used to clean out the pulverizing dishes between each sample preparation to prevent cross contamination.

All of the surface and drill core samples were initially analysed for 35 elements using conventional induced coupled plasma (ICP) procedures, and the analyses for gold were carried out using fire assay preparation and atomic absorption analytical procedures (FA/AA). These procedures are stated as follows:

“For the gold analyses, each sample is mixed with a lead-based flux and fused for one hour and fifteen minutes. Each sample has a silver solution added to it prior to fusion which allows each sample to produce a precious metal bead after cupellation. The fusing process results in lead buttons that contain all of the gold from the samples as well as the silver that is added. The buttons are then placed in a cupelling furnace where all of the lead is absorbed by the cupels and a silver bead, which contains any gold, is left in each cupel. The cupels are removed from the furnace and allowed to cool. Once the cupels have cooled sufficiently, the silver bead from each is placed in an appropriately labelled test tube and digested using aqua regia. The samples are bulked up to 5 ml with a combination of distilled de-ionized water and a 1% digested lanthanum solution. The samples are allowed to cool and are mixed to ensure proper homogeneity of the solutions. After the samples have settled, they are analyzed for gold using atomic absorption (air-acetylene flame) or ICP spectroscopy. The atomic absorption or ICP instrument is calibrated for each element using the appropriate ISO 9002 certified standards. The results for the instrumental analysis are checked by the technician and then forwarded to data entry by means of electronic transfer, and a certificate is produced. The Laboratory Manager checks the data, validates the certificates, and issues the results in the client requested format.”

Any geochemical sample that contained a concentration of greater than 10,000 ppm of any element was returned for an assay of that element. This assaying procedure is similar to a geochemical assay, but it requires a greater sample mass and final volume. There were a number of drill core samples with copper, zinc and silver over-limit ICP results. No initial lead or gold results were over limits and, therefore, none were returned for assaying.

Check assays were completed by AGAT Laboratories and included a 4 Acid Digest - Metals Package, with ICP/ICP-MS finish, and a Sodium Peroxide Fusion - ICP-OES finish for 48 elements. AGAT Laboratories are accredited and have their own Quality Control and Quality Assurance protocols for sample preparation and assaying.

11.3 Sample Security

The 2021 surface and drill core samples were stored at the contractors locked sample handling warehouse in Gander prior to their shipment directly to Activation Laboratories Ltd. in Ancaster, Ontario. All of the samples were securely sealed, and chain-of-custody documents accompanied the shipments. The analytical results from these samples were received by authorized Company consultants using secure digital transfer transmissions, and these results were restricted to qualified Company-authorized personnel prior to their publication.

After all the analyses and assays have been completed, the diamond drill core and assay sample rejects will be catalogued and securely stored in Planet X Exploration's core storage facility in Gander.

11.4 Adequacy of Sample Preparation and QAQC

At this early stage of the project, the level of QAQC and sample security undertaken by York Harbour Metals prior to sample dispatch is adequate and inline with typical best practice. Activation Laboratory Ltd are accredited and have their own Quality Control and Quality Assurance protocols for sample preparation and assaying. The author is of the opinion that the QA/QC use by the laboratory is sufficient for the size of the project.

Basic QAQC insertion during phase 1 was adequate considering the preliminary nature of the work, a significant improvement of QAQC insertion is noted during phase 2. Further improvements in QAQC should include use of appropriate multi element CRMs suitable for high-grade VMS deposit mineralogy. Core duplicate sampling is adequate; however, field ¼ core duplicates should also be contemplated for future drilling programs.

Overall, the drilling programs appear to have been completed to industry standards and QA/QC procedures were adequate for purposes of the exploratory work completed. No significant operational or logistical problems were identified during the site visit.

12 DATA VERIFICATION

12.1 Legacy Data Verification

Much of the data presented in this report has been compiled from assessment reports retrieved from the Newfoundland Public Domain resources, various publications, news releases and technical raw technical data and reports, presented to the QP by the Issuer.

The historical data obtained from previous assessment reports were reviewed, and the information therein was deemed as generated using proper procedures by the QP and extracted; all relevant data were tabulated or georeferenced and plotted to confirm the information was relevant to the Property. Where available, assay certificates were reviewed to confirm the reported grades and validate the data where possible. The data from 5 drill holes, representing about 10% of the database at that time, were randomly selected and the grades for Copper and Zinc were manually compared to the certified assay certificates. No significant errors were found.

The information and data were compiled in a project GIS and 3D model and further reviewed by the QP for general validity. Based on these reviews, it is the QP's opinion that the information has been accurately transcribed from the original source and is suitable for use. The QP is of the opinion that the datasets are adequate and reliable for the purposes of this technical report.

12.2 2021 Data Verification

An analysis for the 2021 QAQC data was completed by the author to supplement this report. A total of three (3) assay certificates received for the Phase 1 and Phase 2 drilling. The total number of samples analysed was 470. The SRM data was analysed and the Z-Score was calculated using MX Deposit software, and was found to fall within acceptable precision tolerances. The check assays were received from AGAT Laboratories and original analysis completed by Activation Laboratories Ltd, a comparison of the results for 31 samples is presented in table 21.1 below.

The preliminary analysis of the limited phase 1 data set for the 30 samples tested shows a good overall comparison of samples analysed by the respective laboratories. A number of samples exhibiting particularly high grade appear to show larger differences, and further investigation into these discrepancies should be completed to determine their significance.

To the QP's knowledge, the data acquisition procedures used during the company's 2021 field exploration program were suitable and typical for this type of survey work. The following technical work was carried out by appropriately qualified independent industry professionals according to best practice standards:

- preliminary rock geochemical and rock channel sampling
- surface and borehole electromagnetic surveys

No limitations were placed on the QP with respect to data verification, in the QP's opinion, the data used in this report are adequately reliable for the purposes of this technical report.

Table 12-1: Comparison of original results from Activation Laboratories vs check results from AGAT Laboratories.

Hole ID	Interval		Sample ID	orig_Ag			orig_Cu			orig_Co			orig_Zn			Cu % FUS			Zn % FUS		
	From_m	To_m		ppm	ppm	Delta_ppm	ppm	ppm	Delta_ppm	ppm	ppm	Delta_ppm	ppm	ppm	Delta_ppm	Na2O2	pct	Delta_pct	Na2O2	pct	Delta_pct
YH21-01	210.57	210.87	0.3 641737	24	22.6	-1.4	6990	6930	-60	17	19	2	10000	10000	0				36.8	35.4	1.4
YH21-02	39.38	39.69	0.31 641758	9.9	9.75	-0.15	10000	10000	0	96	116	20	10000	10000	0	3.08			7.43	3.6	3.83
YH21-02	39.69	39.95	0.26 641759	2.1	1.96	-0.14	4970	4790	-180	24	34.3	10.3	10000	10000	0				3.18	2.95	0.23
YH21-04	172.17	173	0.83 641808	1.2	1.03	-0.17	6020	6130	110	114	151	37	292	289	-3						
YH21-04	190.08	190.39	0.31 641821	2.4	2.3	-0.1	10000	10000	0	313	393	80	757	759	2	5.28	5.64	-0.36			
YH21-04	206.55	206.79	0.24 641847	1.3	1.23	-0.07	3010	3100	90	27	34.5	7.5	4100	4280	180						
YH21-04	210.01	210.72	0.71 641856	0.7	0.63	-0.07	2080	2030	-50	29	39.1	10.1	1370	1380	10						
YH21-05	146.2	146.7	0.5 726113	1.2	1.09	-0.11	7680	8390	710	84	105	21	522	534	12						
YH21-05	156	157	1 726129	1.1	1.16	0.06	3380	3340	-40	47	66.9	19.9	1010	958	-52						
YH21-05	175.06	176.06	1 726145	5.4	5.48	0.08	10000	10000	0	105	145	40	820	787	-33	1.53	1.57	-0.04			
YH21-05	176.36	177.06	0.7 726147	0.6	0.54	-0.06	1240	1500	260	35	53.3	18.3	239	254	15						
YH21-06	152.53	153.6	1.07 726014	1.4	1.37	-0.03	4290	4510	220	47	62.2	15.2	2410	2350	-60						
YH21-06	156.95	157.45	0.5 726019	2.5	2.32	-0.18	6580	6920	340	93	121	28	559	541	-18						
YH21-06	160.55	161.55	1 726027	0.9	0.59	-0.31	2580	2560	-20	48	60.4	12.4	3110	2990	-120						
YH21-06	165.05	166.05	1 726032	0.3	0.33	0.03	1430	1420	-10	44	60.4	16.4	3090	2890	-200						
YH21-06	178.7	179.2	0.5 726047	11.9	13.2	1.3	10000	10000	0	918	1500	582	2920	3000	80	14	15.1	-1.1			
YH21-06	180.95	181.95	1 726052	0.4	0.26	-0.14	1880	1830	-50	46	62.9	16.9	329	309	-20						
YH21-06	181.95	182.4	0.45 726053	0.5	0.34	-0.16	2420	2410	-10	77	111	34	245	296	51						
YH21-06	191.5	191.9	0.4 726065	1.3	1.18	-0.12	10000	10000	0	135	190	55	612	639	27	1.73	1.75	-0.02			
YH21-06	192.3	192.7	0.4 726067	2.2	2.21	0.01	10000	10000	0	177	245	68	923	916	-7	2.69	2.87	-0.18			
YH21-06	194.05	195.05	1 726071	2.5	2.57	0.07	10000	10000	0	118	160	42	974	979	5	1.2	1.22	-0.02			
YH21-06	197.8	198.5	0.7 726077	9.9	10.2	0.3	9520	10000	480	93	123	30	5740	5620	-120	0.967	1.05	-0.083			
YH21-08	122.3	122.9	0.6 726082	4.3	4.28	-0.02	8860	9540	680	114	134	20	8250	7660	-590						
YH21-08	122.9	123.4	0.5 726083	3.5	3.34	-0.16	8460	9080	620	123	148	25	5170	5640	470						
YH21-08	123.4	124	0.6 726084	4.8	5.26	0.46	10000	10000	0	113	141	28	3920	3560	-360	1.29	1.3	-0.01			
YH21-08	124.75	125.25	0.5 726086	2.3	2.16	-0.14	7230	8030	800	129	148	19	919	859	-60						
YH21-08	128.28	128.9	0.62 726093	5.5	5.88	0.38	5390	5920	530	39	47.1	8.1	10000	10000	0				2.14	2.09	0.05
YH21-08	129.4	129.9	0.5 726095	1	1.04	0.04	990	1010	20	40	51.9	11.9	1720	1810	90						
YH21-09	5	5.3	0.3 726101	15.1	17.1	2	10000	10000	0	661	1070	409	3160	3120	-40	7.6	7.82	-0.22			
YH21-09	5.3	7.66	2.36 726102	4.2	4.46	0.26	10000	10000	0	292	399	107	1410	1370	-40	2.05	2.03	0.02			

12.3 2021 Site Visit









The QP, Luke van der Meer, conducted a three-day site visit to the Property by road on December 6 to 8, 2021 to review the general geology and assess the Property's mineral potential. Steps taken to evaluate the Property included general geological and prospecting activities which focused on confirming favourable geology, mineralization, and confirming the general geological environment. Mr. van der Meer inspected the core storage facilities and core logging facilities, examined selected drill core from York Harbour – 4th Level adit area, and visited the drilling site.

A number of locations were visited at the site, including the 4th Level adit, former Shaft and mill site, VMS outcroppings where the previous 2021 channel sampling was completed, as well as areas where historical and 2021 Phase 1 and Phase 2 drilling programs had been completed. Where access was possible and outcrop visible, the QP completed localized geology traverses to more fully understand the local geological environment.

An inventory of drill hole location verification was made by handheld Garmin GPS and GPS-enabled photography. Nine drill hole locations were reviewed, and the results of the comparison are shown in Table 12.2. Generally, the QP's GPS survey correlates well enough with the surveyed collar coordinates and elevations provided by the Company and confirms collar locations from both the historical and 2021 Phase 1 and Phase 2 drilling programs. Any outlier data in Table 12.2 are attributed to the inherent accuracy deficiencies of the handheld Garmin GPS.

The collar locations and stated drill hole orientation credentials (dip, azimuth, and depth) were confirmed from all the drill hole casings and labels for the historical drilling and Phase 1 locations that were reviewed.

Table 12-2: Comparative Location Data from the Nine York Harbour Drill Holes

Collar	Hole ID	YH90-1	YH21-04	YH21-07	YH21-18	YH21-19	YH21-22	YH21-23	YH21-24	WLF-04-17
Summary	East m	404312.62	404331.94	404345.28	404442.2	404439.6	404326.6	404337.9	404327.1	404312.62
	North m	5433391.68	5433415.4	5433442.01	5433622.7	5433636	5433402.3	5433433.4	5433401.9	5433391.68
	Elev m	357.5	359.19	359.34	341.9	336	361.8	361.8	359.3	357.5
	Length m	274.3	218	134	164	150	236	200	176	274.3
	Azi	57	60	60	60	60	60	60	60	60
	Dip	-65	-60	-60	-60	-60	-60	-60	-60	-60
Photo Meta Data	Name	IMG_0215.JPG	IMG_0217.JPG	IMG_0216.JPG	IMG_0221.JPG	IMG_0222.JPG		IMG_0214.JPG	IMG_0212.JPG	IMG_0218.JPG
	Date	2021-12-08	2021-12-08	2021-12-08	2021-12-08	2021-12-08		2021-12-08	2021-12-08	2021-12-08
	Time	11:32:42	11:28:24	11:27:10	11:37:32	11:37:50		11:24:00	11:23:27	11:32:42
	Lon	-58.30945556	-58.30922778	-58.30903333	-58.30781944	-58.30777778		-58.30915	-58.30929167	-58.30945556
	Lat	49.045975	49.04621111	49.04644722	49.04811111	49.04815556		49.04636667	49.04639444	49.045975
	Altitude m	358.3	363.3	361.7	335.4	333.6		360.8	362.5	358.3
Garmin GPS Data	id	5	2	1	9	10	7	3	4	6
	Casing ID	YH90-1	YH21-04	YH21-07	YH21-18	YH21-19	YH21-22	YH21-23	YH21-24	WLF-04-17
	Elevation	1,172.44	1172.44	1172.44	1,111.06	1,097.41	1,179.27	1172.44	1,172.44	1,172.44
	Lat	49.046358	49.046198	49.046455	49.048055	49.048161	49.04608	49.046348	49.04638	49.045973
	Long	-58.309506	-58.309185	-58.309013	-58.30777	-58.307833	-58.309271	-58.309121	-58.30925	-58.309443
	East m	404309.51	404332.66	404345.72	404439.62	404435.22	404326.15	404337.63	404328.26	404313.38
	North m	5433435.13	5433416.94	5433445.29	5433621.59	5433633.45	5433403.93	5433433.54	5433437.26	5433392.26
Elev m	357.36	357.36	357.36	338.65	334.49	359.44	357.36	357.36	357.36	
Garmin Collar Delta	East m	-3.11	0.72	0.44	-2.58	-4.38	-0.45	-0.27	1.16	0.76
	North m	43.45	1.54	3.28	-1.11	-2.55	1.63	0.14	35.36	0.58
	Elev m	-0.14	-1.83	-1.98	-3.25	-1.51	-2.36	-4.44	-1.94	-0.14
Garmin Photo Delta	Lat	0.000383	-1.31111E-05	7.77778E-06	-5.61111E-05	5.44444E-06		-1.86667E-05	-1.44444E-05	-2E-06
	Long	-5.04444E-05	4.27778E-05	2.03333E-05	4.94444E-05	-5.52222E-05		2.9E-05	4.16667E-05	1.25556E-05
	Elev m	-0.94	-5.94	-4.34	3.25	0.89		-3.44	-5.17	-0.94
Photo										

The QP also reviewed the core-logging and processing facilities, and incorporated core-processing methods, including core mark up, preliminary geotechnical logging, geological and mineralization logging, sample mark up, QA/QC insertion, core photography, sample cutting and sample preparation. The methods and practices observed at this time were found to be in general accordance with best practice standards as defined by CIM.

To the QP’s knowledge, the data acquisition procedures were suitable and typical for this type of work. The technical work was carried out by appropriately qualified independent industry professionals according to best practice standards.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

This is an early-stage exploration project. No mineral processing or metallurgical testing have been carried out at this time.

14 MINERAL RESOURCE ESTIMATES

This is an early-stage exploration project. There are no NI 43-101 compliant estimates of mineral resources on the York Harbour Property.

15 MINERAL RESERVE ESTIMATES

This is an early-stage exploration project. No mineral reserve estimates have been completed at the York Harbour Property.

16 MINING METHODS

This is an early-stage exploration project. Mining methods are not relevant to the York Harbour Property at this time.

17 RECOVERY METHODS

This is an early-stage exploration project. Recovery methods are not relevant to the York Harbour Property at this time.

18 PROJECT INFRASTRUCTURE

This is an early-stage exploration project. Specific project infrastructure requirements are currently not material to the York Harbour Property at this time.

19 MARKET STUDIES AND CONTRACTS

This is an early-stage exploration project. Market studies and contracts are not relevant to the York Harbour Property at this time.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

This is an early-stage exploration project. Environmental studies, permitting and social or community impact are not relevant to the York Harbour Property at this time.

21 CAPITAL AND OPERATING COSTS

This is an early-stage exploration project. Capital and operating costs are not relevant to the York Harbour Property at this time.

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22 ECONOMIC ANALYSIS

This is an early-stage exploration project. Economic analysis is not relevant to the York Harbour Property at this time.

23 ADJACENT PROPERTIES

There are no other projects of significance in the immediate York Harbour Property area. However, Playfair Mining Ltd. previously completed minor exploration work at the Gregory River property located 40 km north of York Harbour (see Figure 23-1) encompassing several copper-lode and five Cyprus-type (Mafic-type) VMS prospects and showings (Dearin, 2004). The Cyprus-type copper prospects, in particular, are described as being in a similar setting and have a reportedly similar style of mineralization to that found at York Harbour.

The QP has been unable to verify the information, and the information is not necessarily indicative of the mineralization on the York Harbour Property that is the subject of this technical report.

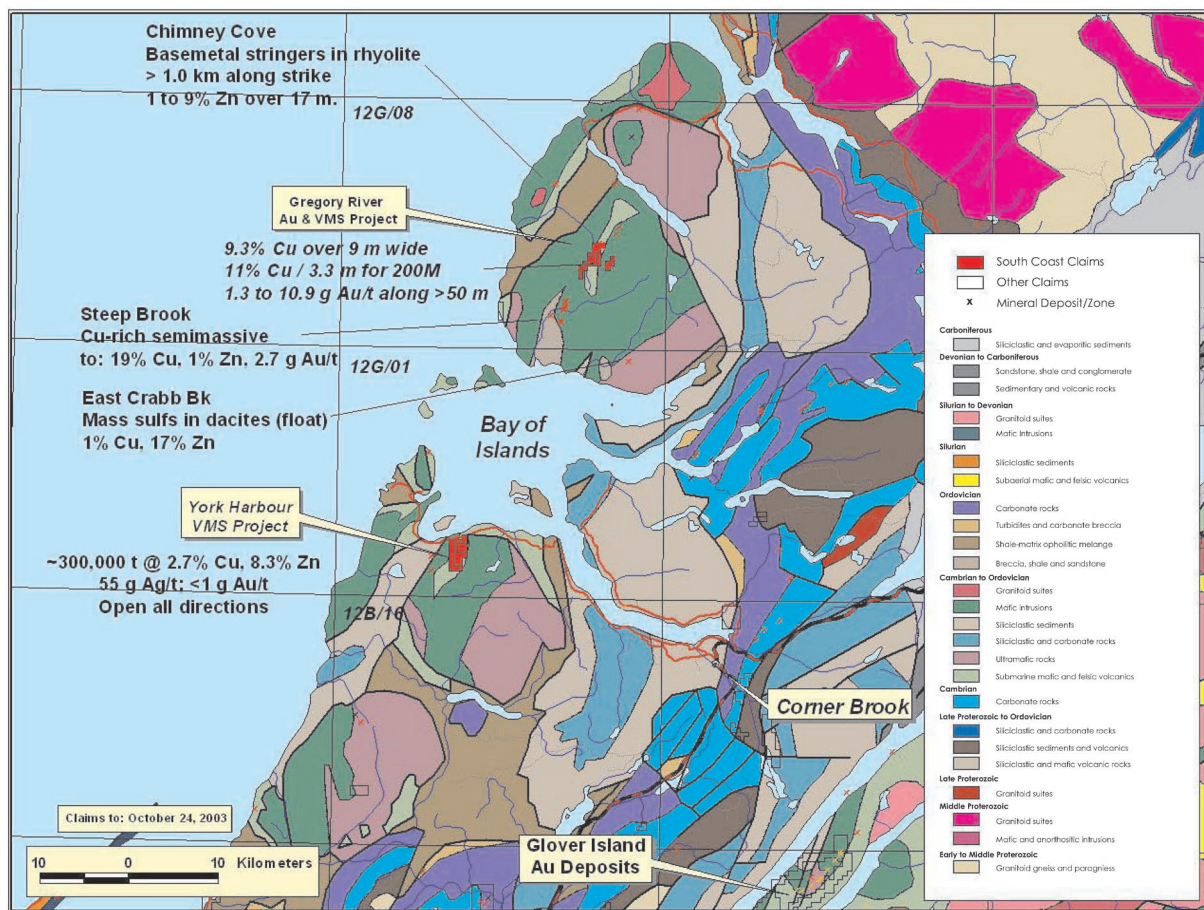


Figure 23-1: Regional Geological Setting and Copper + Zinc Showings and Reported Anomalism

Source: After Dearin 2003a

24 OTHER RELEVANT DATA AND INFORMATION

To the QP's best knowledge, all the relevant data and information have been provided in the preceding text.

25 INTERPRETATION AND CONCLUSIONS

The York Harbour Property comprises an exploration-stage project of significant merit that warrants further work. The QP's interpretation and conclusions are summarized here:

Geology

- The York Harbour Property is located within the Bay of Islands Ophiolite Complex hosted within the Humblar Arm Allochthon of the Humblar Laurentia Zone, located on the western margin of Newfoundland.
- The geology of the host ophiolite is dominated by thick sequences of mapped, lower basaltic pillow sequences and upper basaltic flow rocks similar to other prospective VMS belts found in Newfoundland. The basaltic sequences are locally folded into a broad recumbent synform structure that encompasses the Property boundaries.
- The initial drill targets at the 4th Level adit area and other prospective target areas on the Property are hosted adjacent to the contact between lower basaltic pillow sequences and upper basaltic flow rocks and are often coincident with mapped structural breaks or faults along the mineralized trend.

Mineralization

- The most economically important mineralization encountered at York Harbour is volcanogenic massive sulphide horizons that are generally controlled by lithologic contacts within the mostly low-strained basaltic complex.
- Sulphide mineralization is dominated by multiple, irregular horizons of massive and semi-massive pyrite, sphalerite, chalcopyrite with minor magnetite pyrrhotite and rare galena. Additional lower grade mineralization has been deposited within the stockwork veining and disseminated within the wall rock alteration halo.
- The highest-grade intervals for lead and zinc are strongly associated within a predominance of chalcopyrite and sphalerite.

Exploration

- Mineralization at York Harbour has been confirmed by systematic data research and follow-up by successful 2021 Phase 1 confirmation drilling.
- Reconnaissance-stage prospecting and exploration work has highlighted several target areas which warrant follow-up programs. Other targets on the property are considered early stage and will require additional surface exploration efforts to better define possible drill targets.
- The 2021 Phase 1 and Phase 2 diamond drilling programs at York Harbour have intersected significant Cu+Zn±Ag±Au±Co mineralization over numerous horizons and zones preliminarily in the area of the 4th Level adit. Grade and mineralization continuity demonstrates excellent potential.

QA/QC

- The QA/QC programs used during exploration on this Property were overseen by appropriately qualified professional geologists using adequate quality control procedures that meet industry best practices for an exploration-stage property. Further refinement of QA/QC at the project drilling is recommended.

Mineral Tenure

- Mineral tenure appears to be in good standing, and access to the Property has been established to the northeast along unmaintained forestry service roads. The Property is currently amenable to year-round operations for drilling and exploration work.

Other Considerations

- The York Harbour Property is situated in an economically and socio-politically stable area, and there are currently no known factors that would prevent further exploration or any future potential project development.

26 RECOMMENDATIONS

26.1 2022 Phase 3 Drilling Program

26.1.1 Proposed Exploration Budget

The York Harbour Property is a development drilling project, which requires further systematic exploration and evaluation studies.

A two-phase drilling program is proposed to increase potential mineral resource volume and grade and to extend areas of known mineralization at the 4th Level adit drilling area, and at the No. 4 Brook zone approximately 2 km west of 4th Level adit.

Drilling will commence in Q1-2022.

26.1.2 Development Drilling

The Phase 3 development drilling program is essentially a continuation of the 2021 Phase 1 and Phase 2 drilling programs at site. The focus is to step out from existing mineralization and define the extents of known bodies of massive sulphide mineralization at the 4th Level adit area where the 2021 drilling was concentrated.

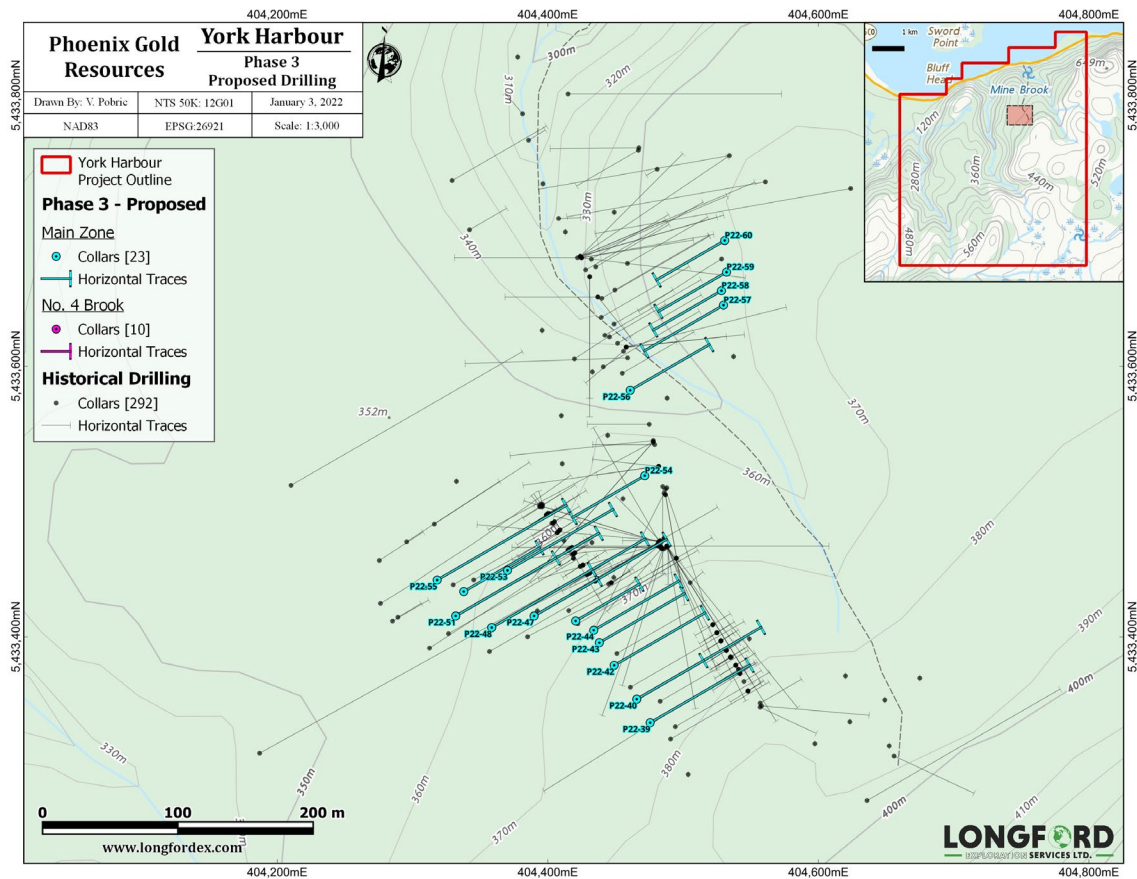


Figure 26-1: 2022 Phase 3 Proposed Diamond Drill Hole Locations and Traces at the No. 4 Adit Zone

Phase 3 consists of a diamond drilling development program comprising 4,000 m of NQ core, including analysis and test work to support future mineral resource estimations (Figure 26-1). Specifically, this will include systematic characterization of the deposit potential, with complimentary metallurgical, geotechnical, and physical properties test work to facilitate ongoing mineral resource evaluation work

26.1.3 Exploration Drilling

The Phase 3 exploration drilling program is a step-out extension of the 2021 drilling at the site at the No. 4 Brook zone approximately 2 km west of 4th Level adit.

Phase 3 consists of a diamond drilling exploration program comprising 1,500 meters of NQ core, including analysis and test work to support future mineral resource estimation (Figure 26-2). Specifically, this will include systematic characterization of the deposit potential, with complimentary metallurgical, geotechnical, and physical properties test work to facilitate ongoing mineral resource evaluation work.

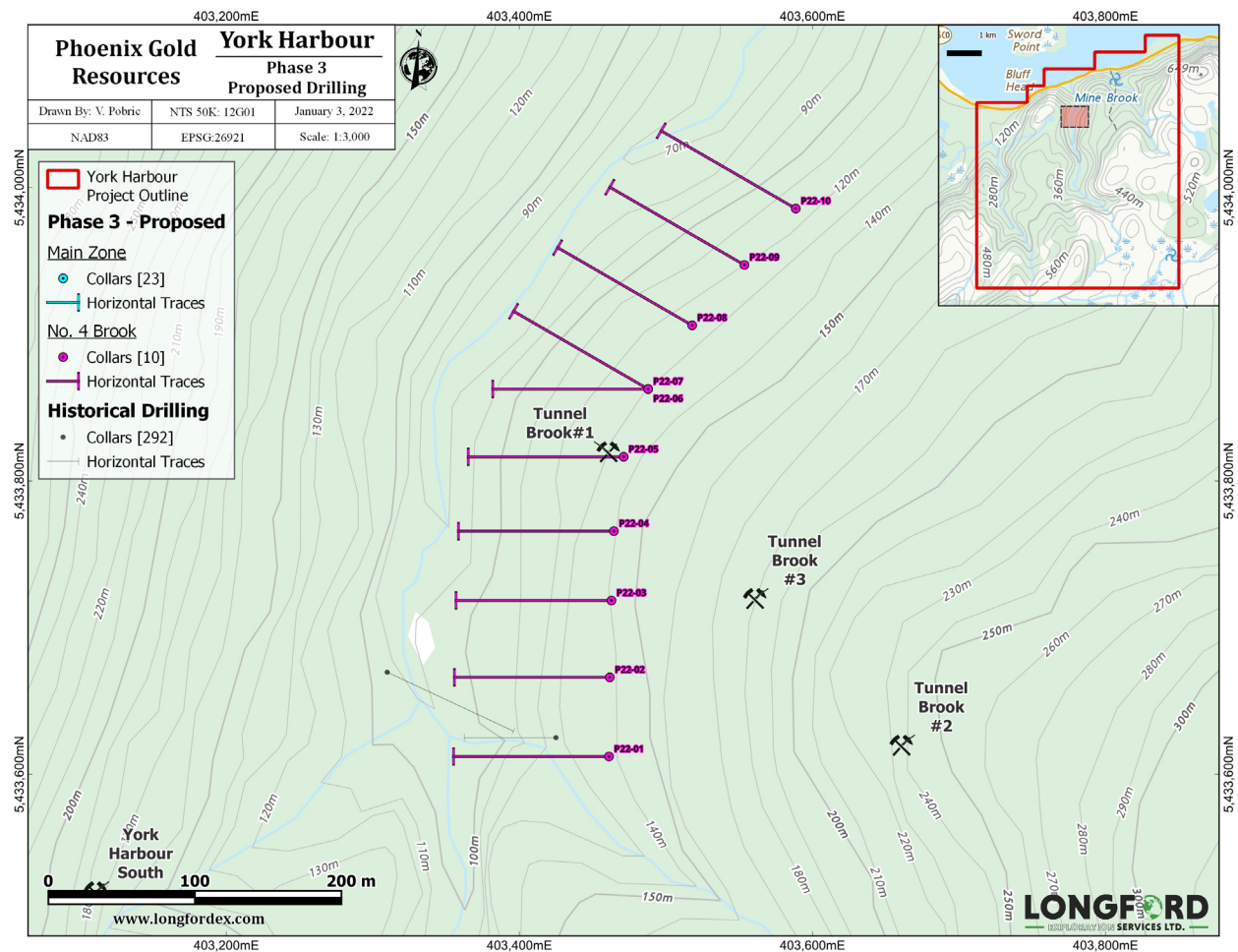


Figure 26-2: 2022 Phase 3 Proposed Diamond Drill Hole Locations and Traces at the No. 4 Brook Zone

26.2 Supplementary Recommendations

The QP also recommends the following for the York Harbour Property:

- Refine the QAQC protocols and analysis to better understand any potential grade discrepancies identified in check analysis precision.
- Conduct a field program of mapping and lithogeochemical rock chip sampling and characterization as well as soil sampling. The areas of initial focus should encompass areas of known mineralization on the Property and be expanded to other unexplored areas on the Property.
- Complete a comprehensive metallurgical investigation preliminarily using available drill core rejects to develop a base line for characterization, followed by bulk samples from other sources on the Property.
- Maintain ongoing modelling and mineral resource estimation to assist with drill hole targeting and mineral resource definition and expansion.
- Complete environmental baseline studies; these should include typical environmental surveys and studies, including wildlife and habitat investigations. A environmental specialist should be consulted.
- Gain access to the existing 4th Level adit underground workings and complete LiDAR surveying of the underground workings and depleted stopes to advance mining and engineering investigations and scoping studies. (Note: York Harbour Metals has engaged the services of GEMTEC consulting engineers and scientists of St. Johns, Newfoundland to facilitate the necessary permitting requirements for access to the underground workings.)
- Conduct additional programs of ground, air, and downhole techniques to assist in exploration targeting and for due diligence purposes. Continue the existing downhole EM surveying work. Additional scopes to be considered may include a heliborne tri-axial magnetometer survey and a ground-based induced polarization (IP) orientation survey across areas of known mineralization and exploration prospectivity.
- Upgrade the existing site-access roads to provide access to the 4th Level adit portal area and other areas on site to facilitate drill rig and vehicular access to the Property.

26.3 Proposed Budget

The preliminary proposed budget has been combined into an ongoing cost expenditure budget (Table 26.1). It is likely that the cost of budgeted items will fluctuate based on current market rates and availability of staff, contractors, and consultants.

Table 26-1: Proposed Q1-Q2 Budget for the York Harbour Property

Q1-Q2 2022 York Harbour				
Personnel/VPX		Days	Rate	Line Total
Project Manager	(QP & VPX)	90	\$ 800.00	\$ 72,000.00
Core Processing Staff	2 x Geologist 2 x Geotech (3 month program)	360	\$ 400.00	\$ 144,000.00
Camp and Ancillary Staff	2 Camp and maintenance (3 month program)	360	\$ 200.00	\$ 72,000.00
Mapping and Sampling Program	4 Technicians, 2 Geologists (6week program)	270	\$ 400.00	\$ 108,000.00
			Cat. Total	\$ 396,000.00
Diamond Drilling		Units	Rate	Line Total
Mobilization	Ex Gander to York Harbour	4	\$ 10,000.00	\$ 40,000.00
Drilling (No4 Adit)	Approximatley 3 months drilling (4000m)	4000	\$ 150.00	\$ 600,000.00
Drilling (No4 Brook)	Approximatley 1-2 months drilling (1500m)	1500	\$ 200.00	\$ 300,000.00
Road/Access construction	Main Road and Drill Access (3 months)	3	\$ 10,000.00	\$ 30,000.00
DH Geophysics	Downhole Geophysics (90 days)	90	\$ 2,000.00	\$ 180,000.00
			Cat. Total	\$ 1,150,000.00
Food and Lodging		Days	Rate	Line Total
Food and Groceries	per diem per man day	1170	\$ 50.00	\$ 58,500.00
Lodging	York and Lark Harbour	1170	\$ 100.00	\$ 117,000.00
			Cat. Total	\$ 175,500.00
Transportation		Units	Unit Price	Line Total
Trucks x 1	1 ton with safety and recovery gear	100	\$ 175.00	\$ 17,500.00
ATV/Snowm Mobile	3 x vehicles for site access	300	\$ 125.00	\$ 37,500.00
Fuel	per km for truck & atv's	11000	\$ 0.65	\$ 7,150.00
			Cat. Total	\$ 62,150.00
Facilities and Maintenance		Units	Unit Price	Line Total
Core Logging Facility	Double bay over height garage	6	\$ 3,000.00	\$ 18,000.00
Hardware Maintenance	Geological Tool and Computers	6	\$ 2,500.00	\$ 15,000.00
Environmental review/report	Consultant TBA	15	\$ 1,000.00	\$ 15,000.00
Software Maintenance	Software Licensing and Subscriptions 3D modelling	6	\$ 5,000.00	\$ 30,000.00
			Cat. Total	\$ 78,000.00
Consumable		Units	Unit Price	Line Total
Field / Office Consumables	per field man day	1170	\$ 10.00	\$ 11,700.00
			Cat. Total	\$ 11,700.00
Analytical		Units	Unit Price	Line Total
Analysis - Rock Core	Bureau Veritas: PRP70-250, AQ201 + overlimits (54 Element)	5500	\$ 50.00	\$ 275,000.00
Analysis - Rock Chip	Bureau Veritas: PRP70-250, AQ201 + overlimits (54 Element +	3000	\$ 50.00	\$ 150,000.00
Analysis - Soil	Bureau Veritas: PRP70-250, AQ201 + overlimits (34 Element =	3000	\$ 45.00	\$ 135,000.00
Analysis - ABA	TBA: Acid base accoutiing	100	\$ 200.00	\$ 20,000.00
Analysis - Core Resampling	Bureau Veritas: PRP70-250, AQ201 + overlimits (54 Element)	1000	\$ 50.00	\$ 50,000.00
Sample Shipment		12	\$ 1,000.00	\$ 12,000.00
			Cat. Total	\$ 642,000.00
Pre and Post Field		Units	Unit Price	Line Total
Post Field	Assessment report with work filing	1	\$ 10,000.00	\$ 10,000.00
Airborne Geophysics	Heliborne Tri Axial Mag	1	\$ 80,000.00	\$ 80,000.00
UG Geotechnical & Permitting	Gemtek - St Johns	15	\$ 1,500.00	\$ 22,500.00
Ground Geophysics	IP Survey	10	\$ 2,500.00	\$ 25,000.00
Metallurgical Testwork	Scope and Consulting TBA	25	\$ 5,000.00	\$ 125,000.00
			Cat. Total	\$ 262,500.00
			Over-all Contingency (10%)	\$ 277,785.00
			Estimated Sub Total	\$ 3,055,635.00
			-15%	\$ 458,345.25
			Sub total	\$ 3,513,980.25

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The following is a comprehensive list of the publicly available references that were used in the preparation of this report. Some may not be directly cited within the text of the report; however, they would have been consulted for compilation of data.

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28 DATE AND SIGNATURE PAGE

This report titled, “National Instrument 43-101 Technical Report on the York Harbour Property, Western Newfoundland, Canada” and dated March 10th, 2022 was prepared by the following author:

Dated this 10th day of March, 2022



Luke van der meer

(Original Signed and Sealed) “Luke van der Meer”

Luke van der Meer, BSc, P. Geo.
Geologist

CERTIFICATE OF QUALIFIED PERSON

Luke van der Meer, P. Geo.

I, Luke van der Meer do hereby certify the following:

1. I am a Professional Geoscientist and a member, in good standing, and registered with the Professional Engineers and Geoscientists Newfoundland & Labrador (PEGNL) (registration number 10677), and Engineers and Geoscientist British Columbia (license number 37848).
2. For the purposes of the Technical Report titled “National Instrument 43-101 Technical Report on the York Harbour Property, Western Newfoundland, Canada” dated March 10th, 2022, with an effective date of February 24th, 2022. I am the author and responsible person. I have read the definition of “qualified person” set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101), and past relevant work experience, I fulfil the requirements to be a “qualified person” for the purposes of NI 43-101.
3. I am responsible for the preparation of all sections in the Technical Report titled “National Instrument 43-101 Technical Report on the York Harbour Property, Western Newfoundland, Canada” dated March 10th, 2022, with an effective date of February 24th, 2022.
4. I have had no prior involvement with the Company or the Property that is the subject of this technical report”, as per NI 43-101, Section 8.1, 2 (g).
5. I am independent of the issuer, York Harbour Metals Inc., the Property, the optionors of the Property, Grassroots Prospecting & Prospect Generation Inc., United Gold Inc., G2B Gold Inc., Newton Bell Holdings Ltd., and J Fahmy Consulting Inc., and the registered holders of the Property, Robert Keats, Wesley Keats and Dustin Keats, as described in section 1.5 of NI 43-101.”
6. I most recently completed a three-day site visit to the York Harbour Property on December 6 to 8, 2021. I have read the NI 43-101, Form 43-101F1 Technical Report (Form 43-101F1) and the Technical Report and confirm that it has been prepared in compliance with NI 43-101 and Form 43-101F1.
7. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
8. I graduated from Otago University in New Zealand in 2001 with a Bachelor of Science with a double major in Geology and Geography. I have been employed continuously in the mineral exploration and mining industry since 2001, and I have been practicing as a Professional Geologist in British Columbia, continuously, since 2012.
9. I have been employed or contracted by numerous mineral exploration and mining companies. I have worked on precious metals; VHMS base metals, including copper porphyry systems, exploration, and mining; and also exploration for uranium and bulk commodities, including coal and iron ore. This has included experience in North America, Australia, Africa, Europe and Asia.

My experience includes exploration and project generation in both Greenfields and Brownfields exploration methods. I have typically been involved with commissioning third-party exploration work, and I have supervised many field exploration programs, including soil and geochemical sampling, exploratory drilling via numerous methods, and advanced mineral resource definition drilling for mineral resource evaluation.

10. I have previously completed technical evaluations and project work, including exploration, and underground mining assignments on VMS projects. This includes experience in Australia, Turkey, Ontario, and British Columbia, and elsewhere in Newfoundland, including Gregory River and various deposits on the Baie Verte Peninsula, for numerous clients and employers in the past.
11. As of February 24th, 2022, to the best of my knowledge, information and belief, the Technical Report contains all the scientific and technical information that is required to be disclosed to make the Technical Report not misleading.



Luke van der Meer

Dated this 10th day of March, 2022.

(original signed and sealed) "Mr. Luke van der Meer"

Luke van der Meer, BSc, P. Geo.