

## NI 43-101 TECHNICAL REPORT

## ON THE

## GASPÉ COPPER PROJECT MINERAL RESOURCE ESTIMATE MOUNT COPPER DEPOSIT, QUEBEC, CANADA

UTM NAD83 Zone 20 – 315,800 m E / 5,427,000 m N Latitude 48°57'58" N, Longitude 65°31'11" W

Prepared for:

Osisko Metals Incorporated 1100, Avenue des Canadiens-de-Montreal (Bureau 300) Montreal, Quebec Canada, H3B 2S2

> Report Date: June 12<sup>th</sup>, 2022 Effective Date: April 12<sup>th</sup>, 2022

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## **CERTIFICATE OF QUALIFIED PERSON – YANN CAMUS**

To accompany the report entitled: NI 43-101 Technical Report on the Gaspé Copper Project Mineral Resource Estimate, Mount Copper, Quebec, Canada, dated June 12<sup>th</sup>, 2022 and with an effective date of April 12<sup>th</sup>, 2022.

I, Yann Camus, P. Eng. of Val-David, Quebec, hereby certify that:

- a) I am a Mineral Resource Estimation Engineer for SGS Canada Inc, SGS Geological Services with an office at 10 Boul. de la Seigneurie Est, Suite 203, Blainville Quebec Canada, J7C 3V5.
- b) I am a graduate of the École Polytechnique de Montréal (B.Sc. Geological Engineer, in 2000). I am a member of good standing, No. 125443, of the l'Ordre des Ingénieurs du Québec (Order of Engineers of Quebec). My relevant experience includes continuous mineral resource estimation since my graduation from University including many copper projects. I am a "Qualified Person" for purposes of National Instrument 43-101 (the "Instrument").
- c) I have not personally inspected the subject property.
- d) I am an author of this report and responsible for Sections 1 to 11, and Sections 13 to 27, excluding Section 2.2. I have reviewed these sections and accept professional responsibility for these sections of this technical report.
- e) I am independent of Osisko Metals Incorporated as defined in Section 1.5 of National Instrument 43-101.
- f) I have had no prior involvement with the subject property.
- g) I have read the definition of qualified person set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association, and past relevant work experience, I fulfill the requirements to be a qualified person for the purposes of National Instrument 43-101.
- As at the effective date of the technical report, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
- i) I have read National Instrument 43-101, Form 43-101F1 and confirm that this technical report has been prepared in accordance therewith.

Signed and dated this 12<sup>th</sup> day of June 2021 at Val-David, Quebec.

"Original Signed and Sealed"

Yann Camus, P.Eng., SGS Canada Inc.



## **CERTIFICATE OF QUALIFIED PERSON – MAXIME DUPÉRÉ**

To accompany the report entitled: NI 43-101 Technical Report on the Gaspé Copper Project Mineral Resource Estimate, Mount Copper, Quebec, Canada, dated June 12<sup>th</sup>, 2022 and with an effective date of April 12<sup>th</sup>, 2022.

I, Maxime Dupéré, géo., of Blainville, Quebec, do hereby certify that:

- a) I am a geologist with SGS Canada Inc, SGS Geological Services, with an office at 10 Boul. de la Seigneurie Est, Suite 203, Blainville Quebec Canada, J7C 3V5.
- b) I am a graduate from the Université de Montréal, Québec in 1999 with a B.Sc. in geology. I am a member in good standing of the Ordre des Géologues du Québec (#501, 2006). I have practiced my profession continuously since 2001. I have 19 years of experience in mining exploration in diamonds, gold, silver, base metals, and iron ore. I have prepared and made several mineral resource estimations for different exploration projects including lithium at different stages of exploration. I am aware of the different methods of estimation and the geostatistics applied to metallic, non-metallic and industrial mineral projects.
- c) I visited the property site on September 21<sup>st</sup>, 2021.
- d) I am an author of this report and am responsible for Section 2.2 and Section 12. I have reviewed these sections and accept professional responsibility for these sections of this technical report.
- e) I am independent of Osisko Metals Incorporated as defined in Section 1.5 of National Instrument 43-101.
- f) I have had no prior involvement with the subject property.
- g) I have read the definition of "qualified person" set out in the National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfil the requirements to be an independent qualified person for the purposes of NI 43-101.
- As at the effective date of the technical report, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
- i) I have read National Instrument 43-101, Form 43-101F1 and confirm that this technical report has been prepared in accordance therewith.

Signed and dated this 12<sup>th</sup> day of June 2022 at Blainville, Québec.

"Original Signed and Sealed"

Maxime Dupéré, géo., SGS Canada Inc.



## 1 SUMMARY

SGS Geological Services ("SGS") was contracted by Osisko Metals Incorporated ("Osisko Metals") to complete a Mineral Resource Estimate (MRE) for their Gaspé Copper Project ("Gaspé Copper Project" or the "Property") and to prepare a technical report written in support of the current MRE. The reporting of the MRE complies with all disclosure requirements for Mineral Resources set out in the NI 43-101 Standards of Disclosure for Mineral Projects (2016). The classification of the MRE is consistent with current CIM Definition Standards - For Mineral Resources and Mineral Reserves (2014). In March 2022, Osisko Metals obtained an option to acquire 100% interest in the past-producing Gaspé Copper Mine from Glencore Canada Corporation ("Glencore").

The Gaspé Copper Property is located in the north central part of the Gaspé Peninsula along the northern limb of the Connecticut Valley-Gaspé Synclinorium and is related to the hydrothermal activity generated by Acadian age intrusions. The property is located adjacent to and in part within the municipality of Murdochville, Québec. The principal access road to and from Murdochville and the Gaspé property is paved Highway. All necessary support infrastructure for a potential re-opening of Gaspé Copper is already in place. The former mine site benefits from paved road access and is adjacent to the community of Murdochville. Highway 198 links Murdochville with the coastal community of Gaspé. Port access to the St. Lawrence Seaway is nearby at Sainte-Anne-des-Monts. The site is also well-served by Hydro-Quebec, with an electrical substation located on-site to provide power. The Property is composed of two (2) Mining Concessions (388 and 404), and 320 mining claims, covering a total of 14,375 ha.

Osisko Metals is a Canadian exploration and development company with a focus on copper and zinc mineral assets. The Company is a reporting issuer and trades on the TSX Venture Exchange ("TSX-V") in Canada under the symbol "OM", in the United States on the OTC Markets under the symbol "OMZNF" and the Frankfurt Stock Exchange under the symbol "0B51". Their current business address is 1100, Avenue des Canadiens-de-Montreal, Bureau 300, Montreal, Quebec, Canada, H3B 2S2.

This technical report will be used by Osisko Metals in fulfillment of their continuing disclosure requirements under Canadian securities laws, including National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101"). This technical report is written in support of the resource estimate for the Gaspé Copper Project released by the Company on April 28, 2022. Osisko Metals reported that the deposit of the Gaspé Copper Project contains 1.412 Mt of copper in Sulphide minerals in the Inferred category, grading 0.310% Cu in sulphide minerals (0.351% Total Cu). The effective date of the resource estimate is April 12, 2022. Details of the MRE is presented in Section 14.

Yann Camus P.Eng., ("Camus"), a Resource Estimation Engineer with SGS Geological Services was responsible for the MRE and is the primary Author of this report, except where detailed in the Certificate of Qualified Person.

## 1.1 **Property Description, Location, Access, and Physiography**

The Property is located in the north central part of the Gaspé Peninsula at an elevation of 575 metres above sea level. The property is located adjacent to and in part within the municipality of Murdochville, Québec. The principal access road to and from Murdochville and Property is paved Highway (Hwy) 198 which links up to the town of Gaspé (95 km) to the east and to the coastal village of Anse Pleureuse (40 km) to the north. Murdochville can also be accessed from Hwy 299 to the west through Route du Lac St-Anne which links up to Hwy 198 just north of Murdochville.

The Property is composed of two (2) Mining Concessions (388 and 404), and 320 mining claims, covering a total of 14,375 ha. The claims are all owned 100% by Glencore Canada, except for 6 mining claims that are on the record with the Québec Government as being 33.333% Glencore Canada, 33.333% WMC and



33.333% Hudbay Minerals Inc. The Mining Concessions include surface, mining and timber rights. The surface rights for the unpatented claims can be leased for the surface as well as mining rights.

#### 1.2 History

Copper mineralization was first discovered in the area in 1909 by Alfred Miller. Further exploration in 1921 resulted in the discovery of Mount Copper (formerly Copper Mountain) on what became the Gaspé Copper Mine and is today called Mount Copper.

Exploration from 1938 until 1952 resulted in more than 66.0 Mt of reserves at a grade of 1.44% Cu content. In 1951, Noranda Mines Ltd made the decision to initiate underground and surface mining as well as the construction of a smelter on the site.

The mine began production in 1955 and operated until 1999 with a brief closure between 1982 and 1984. During the life of the mine, it was owned by Noranda Mines Ltd, Falconbridge Ltd., Xstrata Canada Corp., and finally Glencore Canada through a series of progressive takeovers. The mine produced a total of 150 million tonnes of ore with an average grade of 0.87 % Cu.

#### 1.3 **Geology and Mineralization**

The Property is located along the northern limb of the Connecticut Valley-Gaspé Synclinorium. These easttrending and moderately dipping sedimentary rocks are intruded by numerous multi-phase syn-post orogenic Acadian age Intrusions (Allcock, J.B., 1982). The epigenetic deposits of the Gaspé Peninsula (Mines Gaspé, Sullipek, Mines Madeleine, Reboul, Patapédia and Ste-Marguerite) are related to the hydrothermal activity generated by these Acadian age intrusions. Abundant felsic dykes and QFP are mapped in the area, and the sedimentary rocks host extensive alteration (skarn) halos. The re-activation of the Shick Shock South Fault developed a dense and complex network of faults (N-NW Reidel) which played a major role in the control of the mineralization.

The stratigraphic and intrusive units of the Property include: skarns, porcellanites, hornfels and unaltered sedimentary rocks as well as porphyritic quartz-feldspar intrusive rocks, both altered and unaltered. The altered sediments on the Property include porcellanites that are classed into three categories. These three categories, in increasing order of alteration and/or metasomatism are porcellanites, bleached porcellanites and diopsidic porcellanites (sometimes classified as being a skarn). Porcellanites are encountered in almost all holes surrounding the deposits. Bleached porcellanites were encountered in most holes and appeared to be increasing in depth. Skarns are by far the most interesting rocks of the deposit by grade but represent a smaller volume of the deposit.

The Mount Copper porphyry Cu-Mo ore body consisted of a 700 m diameter cylinder of low grade mineralization in the metasomatized Indian Cove sediments that surrounded a low grade porphyry intrusive. It is surrounded by a donut-like concentric, lean Cu skarn rich zone (> 1% Cu) only 100-150 m wide.

At Mount Copper, chalcopyrite is the major sulphide in the primary zone (MacIsaac, 1969). It is vein material in association with calcite and /or quartz and as replacement or disseminated sulfides in skarn and quartz-feldspar porphyry. Chalcopyrite occurs as subhedral to anhedral crystals or as interlocking irregular blebs. The size of the chalcopyrite grain can be generalized into two fractions: coarse, 0.5 to 10.0 mm, which is characteristic of the vein materiel; and fine, 0.1 to 0.9 mm, which is characteristic of the disseminated chalcopyrite. Fine grains of chalcopyrite occur as inclusions in other minerals. Other copper minerals present in the primary sulphide zone are bornite and tetrahedrite.

Pyrite is the most abundant sulphide. It is widely distributed and extends south almost to the needle Mountain Deposits. Within the orebody, the pyrite is always associated with the copper sulphides and the



pyrite-chalcopyrite ratio is approximately 1:3. Pyrrhotite is found in the eastern portion of the Mount Copper orebody, usually mixed with pyrite, and a rim of pyrrhotite marks the limits of the Copper Brook aureole. Other minerals found within the deposit are galena, sphalerite, magnetite, arsenopyrite and scheelite, all in minor amounts and with a fairly even distribution.

The most important metallogenic deposits in the north central part of the Gaspé Peninsula have been interpreted as epigenetic Cu, Cu-Mo and Pb-Zn-(Ag) deposits resembling in many points to the Andean cupriferous porphyry deposits and their frequently associated manto-skarn and polymetallic vein deposits (Wares, 1988). Porphyry Mountain Cu-Mo porphyry, Mount Copper and Needle Mountain Cu-Skarns are all deposits of this type.

Porphyry deposits are large, low- to medium-grade deposits in which primary (hypogene) ore minerals are dominantly structurally controlled and which are spatially and genetically related to felsic to intermediate porphyritic intrusions (Kirkham, 1972). In the Gaspé Peninsula, in contrast, mineralization is mainly hosted in calcareous terrigenous and carbonate rocks. While hydrothermal systems evolve in calcareous sedimentary sequences, calc-silicate (porcellanites) and skarn type deposits are formed. As the magma cooled from the interaction with wallrocks, silicates formed. The residual hydrothermal fluid metasomatized the calcareous sediments and overprinted the metamorphism while precipitating metals.

## 1.4 **Exploration and Drilling**

Recent exploration, from the period of summer 2015, to the time of this report, has focused on high resolution topographic surveys, on sampling various stockpiles of waste rock, mineralized material and minor slag found in the vicinity of the Needle and Mount Copper Pits. As historical assay data from these stockpiles were not preserved, and the objectives were to measure the copper concentrations and their potential economic interest in the event future development would occurs. In general, the grades were rather low in the 0.1 to 0.2% Cu range.

Exploration also included sampling the Mount Copper Oxides stockpiles to confirm the copper concentration and degree of oxidation. The Mount Copper Copper oxide stockpiles, mined out in 1963 to 1965 and totaling about 33 Mt, were divided and piled into three grade categories namely a high, a medium and a low-grade oxide stockpile. Pit sampling (66 pits) using an excavator was completed, every two metres from surface to six metres depth and sampled to confirm and measure potential copper grade variation with depth. Particle size analysis from the stockpile sub-surface was also conducted in order to define the most abundant fractions, their copper concentrations and their degree of oxidation. This work confirmed that the Cu concentrations, either total copper and leachable copper coincides well with the stockpile categories historically defined.

Trenching in 2017 and 2018 was completed 860 metres ESE of the Needle Mountain pit to follow up on three (3) grab samples from copper oxide-bearing metasomatized and rusty metasediment that returned 2.7% total copper of which 2.2% Cu is leachable or 84% (relative). One hundred and forty (140) samples were collected and returned in average grade of 0.5% total copper of which more than 80% (relative) is leached. As the extent of this oxidized zone is unknown, it is the QP's opinion that some drilling should be conducted. If positive, a certain volume of oxidized material could be added to the Mount Copper oxide stockpiles.

In 2019, 17 drillholes totalling 3,658 metres were drilled. Most of the holes were directed near and south of the Mount Copper Pit among which 2 were drilled farther southeast targeting the L1 skarn horizon. The drill program was largely designed to measure the copper grade and degree of oxidation. For all 17 holes, the median Cu concentration is 0.16% while the mean is 0.32% total Cu. Of note, holes 30-974 and 30-975 targeting the L1 horizon returned 1.2% and 1.13% total Cu over near 30 m respectively. From the sequential analysis, the copper minerals are 90% leachable above 34.4 m depth in general while 50% of the leachable



Cu is found above 62.2m depth. It is the QP's opinion that adding these holes provide more robust information of the degree of oxidation and how it varies with depth south of the Mount Copper Pit.

Exploration programs between 2010 and 2015 have also incorporated various studies including, Induced Poralization and Magnetotelluric survey; a helicopter-borne Z-Axis Tipper Electromagnetic (ZTEM) and aeromagnetic geophysical survey, a geological re-evaluation of the historical drill hole data and a Porphyry Mountain Gocad model among other things.

#### 1.5 Gaspé Copper Project Mineral Resource Statement

Completion of the current Mineral Resource Estimate involved the assessment of a drill hole database, which included all data for drilling completed through April 12<sup>th</sup>, 2022, a three-dimensional (3D) gradecontrolled wireframe model, pit optimization, review of the classification of the mineral resource estimate (Inferred) and review of available written reports.

Kriging restricted to a grade-controlled wireframe model was used to interpolate copper grades (%Cu) and estimate the sulphides copper grades (%Cu\_Sx) into a block model. Inferred mineral resources are reported in detail in the tables in Section 14.12. The base case summary is presented in Table 1-1. The Mineral Resource Estimate (MRE) takes into consideration that the current deposit will be mined by open pit methods.

## Table 1-1Gaspé Copper Project Mineral Resource Estimate Base Case at a 0.16%Sulphide Copper Cut-Off, Effective April 12th, 2022

Category	Tonnage	Grade	Copper	Strip Ratio	Contained Copper Metal*		
e le gery	Jennege	Total (%) *	Sulphide (%)		Pounds	Metric Tonnes	
Inferred	456 Mt	0.351	0.310	1.98	3,113,000,000	1,412,000	

(1) The Independent QP for this Mineral Resource Estimate statement is Yann Camus, P.Eng., Geological Services of SGS Canada Inc.

- (2) The effective date is April 12, 2022.
- (3) CIM (2014) definitions were followed for Mineral Resource Estimate.
- (4) No economic evaluation of the Mineral Resource Estimate has been produced.
- (5) SGS is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issues that could materially affect the Mineral Resource Estimate.
- (6) All reported figures are rounded to reflect the relative accuracy of the estimate. Totals may not add up due to rounding.
- (7) \*Total copper includes acid-soluble oxidized copper plus sulphide copper. Contained copper includes sulphide copper only.

Highlights of the Gaspé Copper Project Mineral Resource Estimate are as follows:

- 1.41 million tonnes (3.1 billion pounds) of contained copper.
- The mineralization geometry surrounds the former open pit mine with a strip ratio that is currently estimated at 1.98.



- The Whittle pit-constrained Mineral Resource Estimate is limited to the sulphide copper mineralization only that surrounds the Mount Copper historical open pit. All oxide mineralization is being treated as zero value waste at the present time.
- The current 30,000 metre drill program may reduce strip ratio, reduce the oxide/sulphide ratio in the resource model and hence improve the sulphide grade. Additionally, potential for by-product silver and molybdenum exists and will be defined with the current drill program.

The Table 1-2 shows the resources reported at various cut-off grades, the base case cut-off grade is 0.16% copper and is shown in bold:

Classification	Sulphide Copper	Tonnage	Grade	e Copper	Copper Tonnage		
Classification	Cut-Off (%)	(Mt)	Total (%) *	Sulphide (%)	Pounds	Tonnes	
	0.12	533	0.326	0.285	3,353,000,000	1,521,000	
	0.14	498	0.337	0.296	3,253,000,000	1,475,000	
	0.16	456	0.351	0.31	3,113,000,000	1,412,000	
Informed	0.18	414	0.366	0.324	2,957,000,000	1,341,000	
merrea	0.20	374	0.381	0.338	2,788,000,000	1,265,000	
	0.30	193	0.473	0.422	1,799,000,000	816,000	
	0.40	90	0.572	0.514	1,016,000,000	461,000	
	0.50	43	0.656	0.59	555,000,000	252,000	

# Table 1-2 Gaspé Copper Project Mineral Resource Estimate at Variable Cut-Off Grades, Effective April 12<sup>th</sup>, 2022

- (1) The Independent QP for this Mineral Resource Estimate statement is Yann Camus, P.Eng., Geological Services of SGS Canada Inc.
- (2) The effective date is April 12, 2022.
- (3) CIM (2014) definitions were followed for Mineral Resource Estimate.
- (4) No economic evaluation of the Mineral Resource Estimate has been produced.
- (5) SGS is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issues that could materially affect the Mineral Resource Estimate.
- (6) All reported figures are rounded to reflect the relative accuracy of the estimate. Totals may not add up due to rounding.
- (7) \*Total copper includes acid-soluble oxidized copper plus sulphide copper. Contained copper includes sulphide copper only.

In order to determine the quantities of material offering "reasonable prospects for eventual economic extraction" by an open pit, Whittle<sup>™</sup> pit optimization software and reasonable mining assumptions and metal recovery assumptions were used. The pit optimization was completed by SGS. Based on SGS's experience with open pit exploration projects and mining operations, Camus considers the assumptions used for the pit optimization to be appropriate reporting assumptions for the purposes of the current report.

A Whittle pit shell at a revenue factor of 1.0 was selected as the ultimate pit shell for the purposes of the current Mineral Resource Estimate. The corresponding stripping (waste/ore) ratio is 1.98.



The reader is cautioned that the results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a mineral resource statement and to select an appropriate resource reporting cut-off grade.

All geological data has been reviewed and verified by SGS as being accurate to the possible extent. SGS considers that the available assay sampling of core by Noranda, Xstrata and Glencore provides adequate and good verification of the data and Camus and Dupéré believe is of sufficient quality to be used for the current resource estimate.

All relevant data and information regarding the Project are included in other sections of this Technical Report. There is no other relevant data or information available that is necessary to make the technical report understandable and not misleading. Camus is not aware of any known mining, processing, metallurgical, environmental, infrastructure, economic, permitting, legal, title, taxation, socio-political, or marketing issues, or any other relevant factors not reported in this technical report, that could materially affect the Mineral Resource Estimate.

#### 1.6 **Recommendations**

Previous mining at the Mount Copper open pit resulted in the stockpiling of oxidized copper mineralization approximately 1100 metres to the NW of the center of the open pit. The stockpiles cover an area measuring 470,000 square metres with an average height of 25 metres. This material is potentially amenable to heap leaching and SX-EW recovery techniques and could eventually represent a low-cost opportunity for additional copper production if a heap leach operation can be successfully permitted.

The Mount Copper Deposit of the Gaspé Copper Project contains within-pit Inferred Mineral Resources. Camus considers that the Project has potential for delineation of additional economic copper mineralization although a thorough investigation of historical data and knowledge along with some new drilling will have to be completed.

Osisko Metals is currently drilling on the Property and results have not been made available since the drill campaign has not been finished. The exploration comprises 30,000 m of diamond drilling. The total cost of the recommended work program is estimated at CAN\$ 10,575,000.

Given the prospective nature of the Gaspé Copper Property, it is Camus's opinion that the Gaspé Copper Property merits further exploration and that the proposed 2022 plan for further work by Osisko Metals is justified. The proposed work program by Osisko Metals will help advance the deposit and will continue to provide key inputs required to further evaluate the economic viability of the Gaspé Copper Project.

## 2 INTRODUCTION

SGS Geological Services ("SGS") was contracted by Osisko Metals Incorporated ("Osisko Metals") to complete a Mineral Resource Estimate (MRE) for their Gaspé Copper Project ("Gaspé Copper Project" or the "Property") and to prepare a technical report written in support of the current MRE. The reporting of the MRE complies with all disclosure requirements for Mineral Resources set out in the NI 43-101 Standards of Disclosure for Mineral Projects (2016). The classification of the MRE is consistent with current CIM Definition Standards - For Mineral Resources and Mineral Reserves (2014). In March 2022, Osisko Metals obtained an option to acquire 100% interest in the past-producing Gaspé Copper Mine from Glencore Canada Corporation ("Glencore").

The Property is located in the north central part of the Gaspé Peninsula along the northern limb of the Connecticut Valley-Gaspé Synclinorium and is related to the hydrothermal activity generated by these Acadian intrusions. The property is located adjacent to and in part within the municipality of Murdochville, Québec. The principal access road to and from Murdochville and the Property is paved highway. The former mine site benefits from paved road access and is adjacent to the community of Murdochville. Highway 198 links Murdochville with the coastal community of Gaspé. Port access to the St. Lawrence Seaway is nearby at Sainte-Anne-des-Monts. The site is also well-served by Hydro-Quebec, with an electrical substation located on-site to provide power. The Property is composed of two (2) Mining Concessions (388 and 404), and 320 mining claims, covering a total of 14,375 ha.

Osisko Metals is a Canadian exploration and development company with a focus on copper and zinc mineral assets. The Company is a reporting issuer and trades on the TSX Venture Exchange ("TSX-V") in Canada under the symbol "OM", in the United States on the OTC Markets under the symbol "OMZNF" and the Frankfurt Stock Exchange under the symbol "0B51". Their current business address is 1100, Avenue des Canadiens-de-Montreal, Bureau 300, Montreal, Quebec, Canada, H3B 2S2.

This technical report will be used by Osisko Metals in fulfillment of their continuing disclosure requirements under Canadian securities laws, including National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101"). This technical report is written in support of the resource estimate for the Gaspé Copper Project released by the Company on April 28, 2022. Osisko Metals reported that the deposit of the Gaspé Copper Project contains 1.412 Mt of copper in Sulphide minerals in the Inferred category, grading 0.310% Cu in Sulphide minerals (0.351% Total Cu). The effective date of the resource estimate is April 12, 2022. Details of the MRE is presented in Section 14.

Yann Camus P.Eng., ("Camus"), a Resource Estimation Engineer with SGS Geological Services was responsible for the MRE and is the primary Author of this report, except where detailed in the Certificate of Qualified Person.

## 2.1 Sources of Information

The data used in the estimation of the MRE and the development of this report was provided to SGS by Osisko Metals. Some information including the property exploration history and regional and property geology (Sections 5 to 9) have been sourced from previous technical reports and revised or updated as required. The current technical report also benefits from extensive discussions with Osisko Metals personnel regarding the geology of the deposit.

In order to complete the data review and validation, Osisko Metals provided SGS with the following:

- 1. 2018 Mines Gaspé Workshop (PDF) by Glencore Canada Corporation.
- 2. PowerPoint presentation: Gaspé Inferred QP ability, June 14, 2021 by Osisko Metals brief look at historic data vs 2019 Glencore data.



- 3. A Memo completed by Pierre Desautels, P. Geo. and Jay Melnyk, P. Eng (July 14, 2016): Due Diligence Audit on former Mines Gaspé Copper Mtn. and Needle Mtn.
- 4. A Recent memo completed by Pierre Desautels, P. Geo. and Jay Melnyk, P. Eng (May 18, 2021): Estimation of the Oxide Grade for the Mines Gaspé – Copper Mtn & Needle Mtn
- 5. Report on the Mount Porphyre Deposit 2005 Resource Estimate for Falconbridge Limited, Stanley Gordon Clemmer, Senior Resource Geologist for Falconbridge Limited, June 2005
- 6. A GEOVIA GEMS project (constructed by Pierre Desautels in 2016 and updated in 2021) comprising:
  - i. A complete drill hole database with header, survey, assay and lithology data (as of February 2021). 3,353 DDH completed through 2019. Including the Mount Copper area.
  - ii. Various generations of 3D topography surfaces (original and post open pit mining), 3D geology and mineralization surface and solid models (as of July 2016).
  - iii. Recently generated block models and optimized pits (2021).
  - iv. Scanned plan maps and sections of the Mount Copper area from 2012.

Additional data provided by Robert Banville:

- Discussion on 2015 Surficial Sampling around Mount Copper open pit.
- Discussion (2012) regarding calculation of Mo values from linear regression analysis of all Copper Mt intervals (Robert Banville).
- PowerPoint presentation looking at soluble copper in Copper Mt Hole 30-956.

Camus has carefully reviewed all of the Gaspé Copper Project information and assumes that all of the information and technical documents reviewed and listed in the "References" are accurate and complete in all material aspects.

Camus believes the information used to prepare the current Technical Report is valid and appropriate considering the status of the Gaspé Copper Project and the purpose of the Technical Report. By virtue of Camus technical review of the Gaspé Copper Project, Camus affirms that the work program and recommendations presented herein are in accordance with NI 43-101 requirements.

## 2.2 Site Visit

Maxime Dupéré, géo. ("Dupéré") conducted a site visit to the Gaspé Copper Project on September 28, 2021, accompanied by Victor Chapados, the site director. At the time of the site visit, there was no active exploration, including diamond drilling, and the site has been under care and maintenance since 2001.

Dupéré participated in a field tour of the project and visited the following areas:

- Mount Copper Pit
- Mount Needle Pit
- Mount Porphyry area, (although no access was possible)
- Oxidised Stockpiles
- Oxidised tailings

Dupéré examined historical drill core stored in outside core racks on the property. The core examined was labelled with metal tags and sample tags were still present in the boxes. Dupéré was able to validate sample



numbers and confirm the presence of mineralisation in witness half-core samples from the mineralised zones.

Dupéré did not have the opportunity to inspect the offices, core logging and sampling facilities, but was able to visit a number of recent and historical drill sites (casings unidentified) and view the overall property access.

## 2.3 Currency, Units, Abbreviations and Definitions

All units of measurement used in this technical report are International System of Units (SI) or metric, except for Imperial units that are commonly used in industry (e.g., ounces (oz.) and pounds (lb.) for the mass of precious and base metals). All currency is in US dollars, unless otherwise noted. Frequently used abbreviations and acronyms can be found in Table 2-1.

%	Percent sign	ICP	Induced coupled plasma		
0	Degree	kg	Kilograms		
°C	Degree Celsius	km	Kilometres		
Ag	Silver	m	Metres		
CAD\$	Canadian dollar	m <sup>3</sup>	Cubic metres		
cm	Centimetre	mm	Millimetre		
cm <sup>3</sup>	cubic centimetre	MRE	Mineral Resource Estimate		
Cu	Copper	Mt	Million tonnes		
Cu_Sx	Copper Sulphide	NAD 83	North American Datum of 1983		
Cu_PCT	Copper Total	ppm	Parts per million		
Cu_Sol	Copper Soluble	QA	Quality Assurance		
CuEq	Copper equivalent grade	QC	Quality Control		
DDH	Diamond drill hole	QP	Qualified Person		
g	Grams	SG	Specific Gravity		
g/t or gpt	Grams per Tonne	Tonnes or T	Metric tonnes		
GPS	Global Positioning System	US\$	US Dollar		
ha	Hectare	UTM	Universal Transverse Mercator		

Table 2-1 I	_ist of Abbreviations
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## 3 Reliance on Other Experts

Camus only reviewed the land tenure in a preliminary fashion and has not independently verified the legal status or ownership of the Property or any underlying agreements. However, Camus has no reason to doubt that the title situation is other than what is presented in this Technical Report. Camus is not qualified to express any legal opinion with respect to Property titles or current ownership.



## 4 PROPERTY DESCRIPTION AND LOCATION

## 4.1 **Property Description, Ownership and Royalty**

The Property is located within the Chick Chock Mountains in the north central part of the Gaspé Peninsula at an elevation of 575 m above sea level (Figure 4-1). The Chick Chock Mountains represent the highest mountain peaks in eastern Canada. The property is located adjacent to and in part within the municipality of Murdochville, Québec.



Figure 4-1 Regional Location

The Property is composed of two (2) Mining Concessions (388 and 404), and 320 mining claims, covering a total of 14,375 ha (Table 4-1). The Property is composed of two (2) Mining Concessions (388 and 404), and 320 mining claims, covering a total of 14,375 ha. The claims are all owned 100% by Glencore Canada, except for 6 mining claims that are on the record with the Québec Government as being 33.333% Glencore Canada, 33.333% WMC and 33.333% Hudbay Minerals Inc. The Mining Concessions include surface, mining and timber rights. The surface rights for the unpatented claims can be leased for the surface as well as mining rights. The option is for Osisko Metals to acquire 100 percent of Glencore's parts in all mining concessions and mining claims listed in Table 4-1. The surface rights for the unpatented claims can be leased for the surface as well as mining rights. The property is located in the NTS sheet 22A13, 22A14, 22H03 and 22H04 (Figure 4-2). It is to be noted that a large part of the MRE presented in this report is on Mining Concession 388 and a small part is on the north area of the Mining Concession 404.





Figure 4-2 Property Claims Map

Table 4-1	Property	Claim	Data
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NTS Sheet	Title No	Status	Туре	Date of Registration	Expiry Date	Area (Ha)	Work Required	Fees Required	Holder, Percent
NTS 22A13	2170721	Active	CDC	2008-08-26	2023-08-25	3.84	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2170722	Active	CDC	2008-08-26	2023-08-25	2.65	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2170723	Active	CDC	2008-08-26	2023-08-25	1.14	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2170724	Active	CDC	2008-08-26	2023-08-25	51.99	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2170729	Active	CDC	2008-08-26	2023-08-25	56.58	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2170730	Active	CDC	2008-08-26	2023-08-25	56.57	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2170731	Active	CDC	2008-08-26	2023-08-25	56.59	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2170732	Active	CDC	2008-08-26	2023-08-25	55.92	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2170733	Active	CDC	2008-08-26	2023-08-25	33.49	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2170734	Active	CDC	2008-08-26	2023-08-25	3.2	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2170735	Active	CDC	2008-08-26	2023-08-25	55.36	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2170736	Active	CDC	2008-08-26	2023-08-25	55.13	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2170737	Active	CDC	2008-08-26	2023-08-25	19.92	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2170738	Active	CDC	2008-08-26	2023-08-25	6.85	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2170739	Active	CDC	2008-08-26	2023-08-25	56.35	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2170740	Active	CDC	2008-08-26	2023-08-25	56.08	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2170741	Active	CDC	2008-08-26	2023-08-25	37.06	1000	68.75	Glencore Canada (100 %)
NTS 22A14	2170742	Active	CDC	2008-08-26	2023-08-25	1.9	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2170743	Active	CDC	2008-08-26	2023-08-25	24.26	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2170744	Active	CDC	2008-08-26	2023-08-25	28.76	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2170745	Active	CDC	2008-08-26	2023-08-25	54.57	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2170746	Active	CDC	2008-08-26	2023-08-25	44.59	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2170747	Active	CDC	2008-08-26	2023-08-25	0.02	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2170748	Active	CDC	2008-08-26	2023-08-25	8.73	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2170749	Active	CDC	2008-08-26	2023-08-25	9.1	1000	35.25	Glencore Canada (100 %)

NTS Sheet	Title No	Status	Туре	Date of Registration	Expiry Date	Area (Ha)	Work Required	Fees Required	Holder, Percent
NTS 22A14	2170750	Active	CDC	2008-08-26	2023-08-25	8.62	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2170751	Active	CDC	2008-08-26	2023-08-25	51.17	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2170752	Active	CDC	2008-08-26	2023-08-25	54.9	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2170753	Active	CDC	2008-08-26	2023-08-25	41.16	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2170754	Active	CDC	2008-08-26	2023-08-25	41.17	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2170755	Active	CDC	2008-08-26	2023-08-25	40.88	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2170756	Active	CDC	2008-08-26	2023-08-25	44.96	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2170757	Active	CDC	2008-08-26	2023-08-25	46.37	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2170758	Active	CDC	2008-08-26	2023-08-25	50.32	2500	68.75	Glencore Canada (100 %)
NTS 22H04	2170759	Active	CDC	2008-08-26	2023-08-25	55.49	2500	68.75	Glencore Canada (100 %)
NTS 22H04	2170760	Active	CDC	2008-08-26	2023-08-25	42.51	2500	68.75	Glencore Canada (100 %)
NTS 22H04	2170761	Active	CDC	2008-08-26	2023-08-25	42.16	2500	68.75	Glencore Canada (100 %)
NTS 22H04	2170762	Active	CDC	2008-08-26	2023-08-25	42.51	2500	68.75	Glencore Canada (100 %)
NTS 22H04	2170763	Active	CDC	2008-08-26	2023-08-25	42.98	2500	68.75	Glencore Canada (100 %)
NTS 22H04	2170764	Active	CDC	2008-08-26	2023-08-25	42.52	2500	68.75	Glencore Canada (100 %)
NTS 22H04	2170765	Active	CDC	2008-08-26	2023-08-25	42.44	2500	68.75	Glencore Canada (100 %)
NTS 22H03	2170766	Active	CDC	2008-08-26	2023-08-25	42.29	2500	68.75	Glencore Canada (100 %)
NTS 22H03	2170767	Active	CDC	2008-08-26	2023-08-25	42.15	2500	68.75	Glencore Canada (100 %)
NTS 22H03	2170768	Active	CDC	2008-08-26	2023-08-25	42.16	2500	68.75	Glencore Canada (100 %)
NTS 22H03	2170769	Active	CDC	2008-08-26	2023-08-25	53.82	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2170770	Active	CDC	2008-08-26	2023-08-25	54.97	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2170771	Active	CDC	2008-08-26	2023-08-25	54.86	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2170772	Active	CDC	2008-08-26	2023-08-25	56.52	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196807	Active	CDC	2009-12-08	2024-12-07	56.59	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196808	Active	CDC	2009-12-08	2024-12-07	56.59	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196809	Active	CDC	2009-12-08	2024-12-07	56.59	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196811	Active	CDC	2009-12-08	2024-12-07	56.58	2500	68.75	Glencore Canada (100 %)

SGS

NTS Sheet	Title No	Status	Туре	Date of Registration	Expiry Date	Area (Ha)	Work Required	Fees Required	Holder, Percent
NTS 22A14	2196812	Active	CDC	2009-12-08	2024-12-07	56.58	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196813	Active	CDC	2009-12-08	2024-12-07	56.58	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196814	Active	CDC	2009-12-08	2024-12-07	56.58	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196815	Active	CDC	2009-12-08	2024-12-07	56.57	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196816	Active	CDC	2009-12-08	2024-12-07	56.57	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196817	Active	CDC	2009-12-08	2024-12-07	56.57	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196818	Active	CDC	2009-12-08	2024-12-07	56.56	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196819	Active	CDC	2009-12-08	2024-12-07	56.56	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196820	Active	CDC	2009-12-08	2024-12-07	56.56	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196821	Active	CDC	2009-12-08	2024-12-07	56.56	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196822	Active	CDC	2009-12-08	2024-12-07	56.55	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196823	Active	CDC	2009-12-08	2024-12-07	56.55	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196824	Active	CDC	2009-12-08	2024-12-07	56.55	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196825	Active	CDC	2009-12-08	2024-12-07	56.51	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196826	Active	CDC	2009-12-08	2024-12-07	56.54	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196827	Active	CDC	2009-12-08	2024-12-07	56.54	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196828	Active	CDC	2009-12-08	2024-12-07	56.54	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196829	Active	CDC	2009-12-08	2024-12-07	56.53	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196830	Active	CDC	2009-12-08	2024-12-07	56.53	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196831	Active	CDC	2009-12-08	2024-12-07	56.53	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196832	Active	CDC	2009-12-08	2024-12-07	56.53	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196833	Active	CDC	2009-12-08	2024-12-07	56.52	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196834	Active	CDC	2009-12-08	2024-12-07	56.52	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196835	Active	CDC	2009-12-08	2024-12-07	56.52	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196836	Active	CDC	2009-12-08	2024-12-07	56.52	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196837	Active	CDC	2009-12-08	2024-12-07	56.51	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196838	Active	CDC	2009-12-08	2024-12-07	56.51	2500	68.75	Glencore Canada (100 %)

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NTS Sheet	Title No	Status	Туре	Date of Registration	Expiry Date	Area (Ha)	Work Required	Fees Required	Holder, Percent
NTS 22A14	2196839	Active	CDC	2009-12-08	2024-12-07	56.51	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196840	Active	CDC	2009-12-08	2024-12-07	56.51	2500	68.75	Glencore Canada (100 %)
NTS 22H03	2196841	Active	CDC	2009-12-08	2024-12-07	56.5	2500	68.75	Glencore Canada (100 %)
NTS 22H03	2196842	Active	CDC	2009-12-08	2024-12-07	56.5	2500	68.75	Glencore Canada (100 %)
NTS 22H03	2196843	Active	CDC	2009-12-08	2024-12-07	56.5	2500	68.75	Glencore Canada (100 %)
NTS 22H03	2196844	Active	CDC	2009-12-08	2024-12-07	56.5	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2196846	Active	CDC	2009-12-08	2024-12-07	48.99	2500	68.75	Glencore Canada (100 %)
NTS 22H03	2204700	Active	CDC	2010-02-09	2023-02-08	56.5	1800	68.75	Glencore Canada (100 %)
NTS 22H03	2204701	Active	CDC	2010-02-09	2023-02-08	56.5	1800	68.75	Glencore Canada (100 %)
NTS 22H03	2204702	Active	CDC	2010-02-09	2023-02-08	56.5	1800	68.75	Glencore Canada (100 %)
NTS 22H03	2204703	Active	CDC	2010-02-09	2023-02-08	56.5	1800	68.75	Glencore Canada (100 %)
NTS 22H03	2204704	Active	CDC	2010-02-09	2023-02-08	56.49	1800	68.75	Glencore Canada (100 %)
NTS 22H03	2204705	Active	CDC	2010-02-09	2023-02-08	56.49	1800	68.75	Glencore Canada (100 %)
NTS 22H03	2204706	Active	CDC	2010-02-09	2023-02-08	56.49	1800	68.75	Glencore Canada (100 %)
NTS 22H03	2204707	Active	CDC	2010-02-09	2023-02-08	56.48	1800	68.75	Glencore Canada (100 %)
NTS 22H03	2204708	Active	CDC	2010-02-09	2023-02-08	56.48	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204709	Active	CDC	2010-02-09	2023-02-08	56.5	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204710	Active	CDC	2010-02-09	2023-02-08	56.5	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204711	Active	CDC	2010-02-09	2023-02-08	56.5	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204712	Active	CDC	2010-02-09	2023-02-08	56.5	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204713	Active	CDC	2010-02-09	2023-02-08	56.5	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204714	Active	CDC	2010-02-09	2023-02-08	56.5	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204715	Active	CDC	2010-02-09	2023-02-08	56.5	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204716	Active	CDC	2010-02-09	2023-02-08	56.49	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204717	Active	CDC	2010-02-09	2023-02-08	56.49	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204718	Active	CDC	2010-02-09	2023-02-08	56.49	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204719	Active	CDC	2010-02-09	2023-02-08	56.49	1800	68.75	Glencore Canada (100 %)

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NTS Sheet	Title No	Status	Туре	Date of Registration	Expiry Date	Area (Ha)	Work Required	Fees Required	Holder, Percent
NTS 22H04	2204720	Active	CDC	2010-02-09	2023-02-08	56.49	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204721	Active	CDC	2010-02-09	2023-02-08	56.49	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204722	Active	CDC	2010-02-09	2023-02-08	56.49	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204723	Active	CDC	2010-02-09	2023-02-08	56.48	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204724	Active	CDC	2010-02-09	2023-02-08	56.48	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204725	Active	CDC	2010-02-09	2023-02-08	56.48	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204726	Active	CDC	2010-02-09	2023-02-08	56.48	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204727	Active	CDC	2010-02-09	2023-02-08	56.48	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204728	Active	CDC	2010-02-09	2023-02-08	56.48	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2204729	Active	CDC	2010-02-09	2023-02-08	56.48	1800	68.75	Glencore Canada (100 %)
NTS 22H03	2204730	Active	CDC	2010-02-09	2023-02-08	41.48	1800	68.75	Glencore Canada (100 %)
NTS 22H03	2204731	Active	CDC	2010-02-09	2023-02-08	18.59	750	35.25	Glencore Canada (100 %)
NTS 22H03	2204732	Active	CDC	2010-02-09	2023-02-08	37.11	1800	68.75	Glencore Canada (100 %)
NTS 22H03	2204733	Active	CDC	2010-02-09	2023-02-08	54.29	1800	68.75	Glencore Canada (100 %)
NTS 22H03	2204734	Active	CDC	2010-02-09	2023-02-08	55.32	1800	68.75	Glencore Canada (100 %)
NTS 22H03	2204735	Active	CDC	2010-02-09	2023-02-08	54.68	1800	68.75	Glencore Canada (100 %)
NTS 22H03	2204737	Active	CDC	2010-02-09	2023-02-08	18.52	750	35.25	Glencore Canada (100 %)
NTS 22H03	2204738	Active	CDC	2010-02-09	2023-02-08	24.65	750	35.25	Glencore Canada (100 %)
NTS 22H03	2204739	Active	CDC	2010-02-09	2023-02-08	54.76	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238964	Active	CDC	2010-06-30	2023-06-29	56.57	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238965	Active	CDC	2010-06-30	2023-06-29	56.57	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238966	Active	CDC	2010-06-30	2023-06-29	56.57	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238967	Active	CDC	2010-06-30	2023-06-29	56.56	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238968	Active	CDC	2010-06-30	2023-06-29	56.56	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238969	Active	CDC	2010-06-30	2023-06-29	56.56	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238970	Active	CDC	2010-06-30	2023-06-29	56.56	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238971	Active	CDC	2010-06-30	2023-06-29	56.56	1800	68.75	Glencore Canada (100 %)

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NTS Sheet	Title No	Status	Туре	Date of Registration	Expiry Date	Area (Ha)	Work Required	Fees Required	Holder, Percent
NTS 22A13	2238972	Active	CDC	2010-06-30	2023-06-29	56.55	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238973	Active	CDC	2010-06-30	2023-06-29	56.55	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238974	Active	CDC	2010-06-30	2023-06-29	56.55	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238975	Active	CDC	2010-06-30	2023-06-29	56.55	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238976	Active	CDC	2010-06-30	2023-06-29	56.54	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238977	Active	CDC	2010-06-30	2023-06-29	56.54	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238978	Active	CDC	2010-06-30	2023-06-29	56.54	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238979	Active	CDC	2010-06-30	2023-06-29	56.54	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238980	Active	CDC	2010-06-30	2023-06-29	56.53	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238981	Active	CDC	2010-06-30	2023-06-29	56.53	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238982	Active	CDC	2010-06-30	2023-06-29	56.53	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238983	Active	CDC	2010-06-30	2023-06-29	56.53	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238984	Active	CDC	2010-06-30	2023-06-29	56.52	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238985	Active	CDC	2010-06-30	2023-06-29	56.52	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238986	Active	CDC	2010-06-30	2023-06-29	56.52	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2238987	Active	CDC	2010-06-30	2023-06-29	56.52	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2238988	Active	CDC	2010-06-30	2023-06-29	56.51	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2238989	Active	CDC	2010-06-30	2023-06-29	56.51	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2238990	Active	CDC	2010-06-30	2023-06-29	56.51	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2238991	Active	CDC	2010-06-30	2023-06-29	56.51	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2238993	Active	CDC	2010-06-30	2023-06-29	56.5	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2238994	Active	CDC	2010-06-30	2023-06-29	56.5	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2238995	Active	CDC	2010-06-30	2023-06-29	56.5	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2238998	Active	CDC	2010-06-30	2023-06-29	56.49	1800	68.75	Glencore Canada (100 %)
NTS 22H04	2238999	Active	CDC	2010-06-30	2023-06-29	56.49	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239070	Active	CDC	2010-06-30	2023-06-29	56.62	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239071	Active	CDC	2010-06-30	2023-06-29	56.62	1800	68.75	Glencore Canada (100 %)

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NTS Sheet	Title No	Status	Туре	Date of Registration	Expiry Date	Area (Ha)	Work Required	Fees Required	Holder, Percent
NTS 22A13	2239072	Active	CDC	2010-06-30	2023-06-29	56.62	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239073	Active	CDC	2010-06-30	2023-06-29	56.62	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239074	Active	CDC	2010-06-30	2023-06-29	56.62	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239075	Active	CDC	2010-06-30	2023-06-29	56.61	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239076	Active	CDC	2010-06-30	2023-06-29	56.61	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239077	Active	CDC	2010-06-30	2023-06-29	56.61	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239078	Active	CDC	2010-06-30	2023-06-29	56.61	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239079	Active	CDC	2010-06-30	2023-06-29	56.61	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239080	Active	CDC	2010-06-30	2023-06-29	56.61	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239081	Active	CDC	2010-06-30	2023-06-29	56.61	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239082	Active	CDC	2010-06-30	2023-06-29	56.61	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239083	Active	CDC	2010-06-30	2023-06-29	56.6	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239084	Active	CDC	2010-06-30	2023-06-29	56.6	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239085	Active	CDC	2010-06-30	2023-06-29	56.6	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239086	Active	CDC	2010-06-30	2023-06-29	56.6	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239087	Active	CDC	2010-06-30	2023-06-29	56.6	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239088	Active	CDC	2010-06-30	2023-06-29	56.6	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239089	Active	CDC	2010-06-30	2023-06-29	56.6	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239090	Active	CDC	2010-06-30	2023-06-29	56.6	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239091	Active	CDC	2010-06-30	2023-06-29	56.59	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239092	Active	CDC	2010-06-30	2023-06-29	56.59	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239093	Active	CDC	2010-06-30	2023-06-29	56.59	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239094	Active	CDC	2010-06-30	2023-06-29	56.58	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239095	Active	CDC	2010-06-30	2023-06-29	56.58	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239096	Active	CDC	2010-06-30	2023-06-29	56.57	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2239097	Active	CDC	2010-06-30	2023-06-29	56.57	1800	68.75	Glencore Canada (100 %)
NTS 22A14	2239098	Active	CDC	2010-06-30	2023-06-29	56.62	1800	68.75	Glencore Canada (100 %)

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NTS Sheet	Title No	Status	Туре	Date of Registration	Expiry Date	Area (Ha)	Work Required	Fees Required	Holder, Percent
NTS 22A14	2239101	Active	CDC	2010-06-30	2023-06-29	56.61	1800	68.75	Glencore Canada (100 %)
NTS 22A14	2239102	Active	CDC	2010-06-30	2023-06-29	56.61	1800	68.75	Glencore Canada (100 %)
NTS 22A14	2239103	Active	CDC	2010-06-30	2023-06-29	56.61	1800	68.75	Glencore Canada (100 %)
NTS 22A14	2239104	Active	CDC	2010-06-30	2023-06-29	56.6	1800	68.75	Glencore Canada (100 %)
NTS 22A14	2239105	Active	CDC	2010-06-30	2023-06-29	56.6	1800	68.75	Glencore Canada (100 %)
NTS 22A14	2239106	Active	CDC	2010-06-30	2023-06-29	56.6	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2292334	Active	CDC	2011-06-01	2024-05-31	0.2	750	35.25	Glencore Canada (100 %)
NTS 22A13	2292335	Active	CDC	2011-06-01	2024-05-31	38.69	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2292336	Active	CDC	2011-06-01	2024-05-31	12.81	750	35.25	Glencore Canada (100 %)
NTS 22A13	2292337	Active	CDC	2011-06-01	2024-05-31	14.91	750	35.25	Glencore Canada (100 %)
NTS 22A13	2292338	Active	CDC	2011-06-01	2024-05-31	46.67	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2292339	Active	CDC	2011-06-01	2024-05-31	0.37	750	35.25	Glencore Canada (100 %)
NTS 22A13	2292340	Active	CDC	2011-06-01	2024-05-31	16.58	750	35.25	Glencore Canada (100 %)
NTS 22A13	2292341	Active	CDC	2011-06-01	2024-05-31	46.36	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2292342	Active	CDC	2011-06-01	2024-05-31	0.75	750	35.25	Glencore Canada (100 %)
NTS 22A13	2292343	Active	CDC	2011-06-01	2024-05-31	13.42	750	35.25	Glencore Canada (100 %)
NTS 22A13	2292344	Active	CDC	2011-06-01	2024-05-31	9.11	750	35.25	Glencore Canada (100 %)
NTS 22A13	2317131	Active	CDC	2011-11-02	2024-05-31	2.76	1000	35.25	Compagnie d'exploration et de développement de la Baie d'Hudson Ltee (33,333%) WMC International Ltd (33,333 %) Glencore Canada (33,333 %)
NTS 22A13	2317132	Active	CDC	2011-11-02	2024-05-31	9.84	1000	35.25	Compagnie d'exploration et de développement de la Baie d'Hudson Ltee (33,333%) WMC International Ltd (33,333 %) Glencore Canada (33,333 %)
NTS 22A13	2317133	Active	CDC	2011-11-02	2024-05-31	19.81	1000	35.25	Compagnie d'exploration et de développement de la Baie d'Hudson Ltee (33,333%) WMC International Ltd (33,333 %) Glencore Canada (33,333 %)

NTS Sheet	Title No	Status	Туре	Date of Registration	Expiry Date	Area (Ha)	Work Required	Fees Required	Holder, Percent
NTS 22A13	2317134	Active	CDC	2011-11-02	2024-05-31	18.88	1000	35.25	Compagnie d'exploration et de développement de la Baie d'Hudson Ltee (33,333%) WMC International Ltd (33,333%) Glencore Canada (33,333%)
NTS 22A13	2317135	Active	CDC	2011-11-02	2024-05-31	0.01	1000	35.25	Compagnie d'exploration et de développement de la Baie d'Hudson Ltee (33,333%) WMC International Ltd (33,333%) Glencore Canada (33,333%)
NTS 22A13	2320085	Active	CDC	2011-11-10	2024-05-24	6.46	1000	35.25	Compagnie d'exploration et de développement de la Baie d'Hudson Ltee (33,333%) WMC International Ltd (33,333 %) Glencore Canada (33,333 %)
NTS 22A14	2354196	Active	CDC	2012-08-24	2023-12-14	1.98	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2354197	Active	CDC	2012-08-24	2023-12-14	0.03	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2354198	Active	CDC	2012-08-24	2023-12-14	11.95	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2365400	Active	CDC	2012-10-01	2023-09-30	56.62	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2365401	Active	CDC	2012-10-01	2023-09-30	56.62	1800	68.75	Glencore Canada (100 %)
NTS 22A13	2365402	Active	CDC	2012-10-01	2023-09-30	56.62	1800	68.75	Glencore Canada (100 %)
NTS 22A14	2365403	Active	CDC	2012-10-01	2023-09-30	56.62	1800	68.75	Glencore Canada (100 %)
NTS 22A14	2365404	Active	CDC	2012-10-01	2023-09-30	56.62	1800	68.75	Glencore Canada (100 %)
NTS 22A14	2393805	Active	CDC	2013-12-04	2023-11-18	4.58	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2393806	Active	CDC	2013-12-04	2023-11-18	15.19	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393887	Active	CDC	2013-12-04	2024-01-13	56.55	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393888	Active	CDC	2013-12-04	2024-01-13	56.53	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393889	Active	CDC	2013-12-04	2024-01-13	56.52	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393890	Active	CDC	2013-12-04	2024-01-13	56.52	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2393891	Active	CDC	2013-12-04	2024-01-13	56.58	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2393892	Active	CDC	2013-12-04	2024-01-13	56.52	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2393893	Active	CDC	2013-12-04	2024-01-13	56.52	2500	68.75	Glencore Canada (100 %)

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NTS Sheet	Title No	Status	Туре	Date of Registration	Expiry Date	Area (Ha)	Work Required	Fees Required	Holder, Percent
NTS 22A14	2393894	Active	CDC	2013-12-04	2024-01-13	56.51	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2393895	Active	CDC	2013-12-04	2024-01-13	56.52	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2393896	Active	CDC	2013-12-04	2024-01-13	56.53	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393897	Active	CDC	2013-12-04	2024-01-13	56.55	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393898	Active	CDC	2013-12-04	2024-01-13	56.52	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393899	Active	CDC	2013-12-04	2024-01-13	56.52	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393900	Active	CDC	2013-12-04	2024-01-13	56.52	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393901	Active	CDC	2013-12-04	2024-01-13	56.52	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393902	Active	CDC	2013-12-04	2024-01-13	56.53	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393903	Active	CDC	2013-12-04	2024-01-13	56.53	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393904	Active	CDC	2013-12-04	2024-01-13	56.53	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393905	Active	CDC	2013-12-04	2024-01-13	56.53	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393906	Active	CDC	2013-12-04	2024-01-13	56.53	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393907	Active	CDC	2013-12-04	2024-01-13	56.54	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393908	Active	CDC	2013-12-04	2024-01-13	56.54	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393909	Active	CDC	2013-12-04	2024-01-13	56.53	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2393910	Active	CDC	2013-12-04	2024-01-13	50.96	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2393911	Active	CDC	2013-12-04	2024-01-13	56.54	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393912	Active	CDC	2013-12-04	2024-01-13	16.82	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393913	Active	CDC	2013-12-04	2024-01-13	16.03	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393914	Active	CDC	2013-12-04	2024-01-13	52.07	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393915	Active	CDC	2013-12-04	2024-01-13	22.95	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393916	Active	CDC	2013-12-04	2024-01-13	53.42	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393917	Active	CDC	2013-12-04	2024-01-13	1.64	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393918	Active	CDC	2013-12-04	2024-01-13	46.32	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2393919	Active	CDC	2013-12-04	2024-01-13	47.91	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393920	Active	CDC	2013-12-04	2024-01-13	55.8	2500	68.75	Glencore Canada (100 %)

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NTS Sheet	Title No	Status	Туре	Date of Registration	Expiry Date	Area (Ha)	Work Required	Fees Required	Holder, Percent
NTS 22A14	2393921	Active	CDC	2013-12-04	2024-01-13	56.57	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2393922	Active	CDC	2013-12-04	2024-01-13	5.35	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393923	Active	CDC	2013-12-04	2024-01-13	11.58	1000	35.25	Glencore Canada (100 %)
NTS 22H04	2393924	Active	CDC	2013-12-04	2024-01-13	13.99	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393925	Active	CDC	2013-12-04	2024-01-13	1.46	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2393926	Active	CDC	2013-12-04	2024-01-13	1.62	1000	35.25	Glencore Canada (100 %)
NTS 22H04	2393927	Active	CDC	2013-12-04	2024-01-13	14.07	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393928	Active	CDC	2013-12-04	2024-01-13	39	2500	68.75	Glencore Canada (100 %)
NTS 22H03	2393929	Active	CDC	2013-12-04	2024-01-13	14.21	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393930	Active	CDC	2013-12-04	2024-01-13	6.2	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393931	Active	CDC	2013-12-04	2024-01-13	10.1	1000	35.25	Glencore Canada (100 %)
NTS 22H04	2393932	Active	CDC	2013-12-04	2024-01-13	13.99	1000	35.25	Glencore Canada (100 %)
NTS 22H03	2393933	Active	CDC	2013-12-04	2024-01-13	14.36	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2393934	Active	CDC	2013-12-04	2024-01-13	1.73	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393935	Active	CDC	2013-12-04	2024-01-13	0.86	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393936	Active	CDC	2013-12-04	2024-01-13	0.01	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2393937	Active	CDC	2013-12-04	2024-01-13	3.72	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2393938	Active	CDC	2013-12-04	2024-01-13	13.66	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2393939	Active	CDC	2013-12-04	2024-01-13	27.79	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393940	Active	CDC	2013-12-04	2024-01-13	56.58	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2393941	Active	CDC	2013-12-04	2024-01-13	47.81	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393942	Active	CDC	2013-12-04	2024-01-13	0.21	1000	35.25	Glencore Canada (100 %)
NTS 22H04	2393943	Active	CDC	2013-12-04	2024-01-13	13.99	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2393944	Active	CDC	2013-12-04	2024-01-13	1.62	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393945	Active	CDC	2013-12-04	2024-01-13	1.06	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393946	Active	CDC	2013-12-04	2024-01-13	19.9	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393947	Active	CDC	2013-12-04	2024-01-13	10.16	1000	35.25	Glencore Canada (100 %)

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NTS Sheet	Title No	Status	Туре	Date of Registration	Expiry Date	Area (Ha)	Work Required	Fees Required	Holder, Percent
NTS 22A13	2393948	Active	CDC	2013-12-04	2024-01-13	43.17	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2393949	Active	CDC	2013-12-04	2024-01-13	2.59	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393950	Active	CDC	2013-12-04	2024-01-13	17.43	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2393951	Active	CDC	2013-12-04	2024-01-13	49.73	2500	68.75	Glencore Canada (100 %)
NTS 22H04	2393952	Active	CDC	2013-12-04	2024-01-13	14.35	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393953	Active	CDC	2013-12-04	2024-01-13	0.48	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393954	Active	CDC	2013-12-04	2024-01-13	48.59	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393955	Active	CDC	2013-12-04	2024-01-13	39.98	2500	68.75	Glencore Canada (100 %)
NTS 22H03	2393956	Active	CDC	2013-12-04	2024-01-13	2.69	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393957	Active	CDC	2013-12-04	2024-01-13	1.22	1000	35.25	Glencore Canada (100 %)
NTS 22H04	2393958	Active	CDC	2013-12-04	2024-01-13	13.53	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393959	Active	CDC	2013-12-04	2024-01-13	0.49	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393960	Active	CDC	2013-12-04	2024-01-13	36.67	2500	68.75	Glencore Canada (100 %)
NTS 22A14	2393961	Active	CDC	2013-12-04	2024-01-13	15.35	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393962	Active	CDC	2013-12-04	2024-01-13	15.67	1000	35.25	Glencore Canada (100 %)
NTS 22A14	2393963	Active	CDC	2013-12-04	2024-01-13	47.43	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393964	Active	CDC	2013-12-04	2024-01-13	0.07	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393965	Active	CDC	2013-12-04	2024-01-13	53.83	2500	68.75	Glencore Canada (100 %)
NTS 22H04	2393966	Active	CDC	2013-12-04	2024-01-13	1.01	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393967	Active	CDC	2013-12-04	2024-01-13	15.39	1000	35.25	Glencore Canada (100 %)
NTS 22H03	2393968	Active	CDC	2013-12-04	2024-01-13	14.34	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393969	Active	CDC	2013-12-04	2024-01-13	38.17	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393970	Active	CDC	2013-12-04	2024-01-13	35.91	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393971	Active	CDC	2013-12-04	2024-01-13	52.53	2500	68.75	Glencore Canada (100 %)
NTS 22A13	2393972	Active	CDC	2013-12-04	2024-01-13	0.4	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2393973	Active	CDC	2013-12-04	2024-01-13	0.18	1000	35.25	Glencore Canada (100 %)
NTS 22A13	2481592	Active	CDC	2017-02-27	2024-02-26	3.78	500	35.25	Glencore Canada (100 %)

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NTS Sheet	Title No	Status	Туре	Date of Registration	Expiry Date	Area (Ha)	Work Required	Fees Required	Holder, Percent
NTS 22A14	2481593	Active	CDC	2017-02-27	2024-02-26	15.98	500	35.25	Glencore Canada (100 %)
NTS 22A14	2516787	Active	CDC	2018-04-16	2023-04-15	56.62	1200	68.75	Glencore Canada (100 %)
NTS 22A14	2516788	Active	CDC	2018-04-16	2023-04-15	56.62	1200	68.75	Glencore Canada (100 %)
NTS 22A14	2516789	Active	CDC	2018-04-16	2023-04-15	56.62	1200	68.75	Glencore Canada (100 %)
NTS 22A14	2516790	Active	CDC	2018-04-16	2023-04-15	56.62	1200	68.75	Glencore Canada (100 %)
NTS 22A14	2516791	Active	CDC	2018-04-16	2023-04-15	56.62	1200	68.75	Glencore Canada (100 %)
NTS 22A14	2516792	Active	CDC	2018-04-16	2023-04-15	56.61	1200	68.75	Glencore Canada (100 %)
NTS 22A14	2516793	Active	CDC	2018-04-16	2023-04-15	56.61	1200	68.75	Glencore Canada (100 %)
NTS 22A14	2516794	Active	CDC	2018-04-16	2023-04-15	56.61	1200	68.75	Glencore Canada (100 %)
NTS 22A14	2516795	Active	CDC	2018-04-16	2023-04-15	56.6	1200	68.75	Glencore Canada (100 %)
NTS 22A14	2516796	Active	CDC	2018-04-16	2023-04-15	56.6	1200	68.75	Glencore Canada (100 %)
NTS 22A14	2516797	Active	CDC	2018-04-16	2023-04-15	56.59	1200	68.75	Glencore Canada (100 %)
NTS 22A14,22A13	388	Active	СМ	1951-03-29		353.61	0		Glencore Canada (100 %)
NTS 22A14,22A13	404	Active	СМ	1953-03-09		261.14	0		Glencore Canada (100 %)
					Total:	14,374.58			

Modified after GESTIM (Gestion des titres miniers – Gouvernement du Québec) June 1<sup>st</sup>, 2022.

#### 4.1.1 Ownership History

Noranda Mines Ltd optioned the Property between 1938 and 1940 and began surface and underground development in 1951, culminating in the processing of the first ore in 1955, The mine ran almost uninterrupted until closure of the mine in 1999 and the smelter in 2002. Noranda merged with Falconbridge in 2005 and in 2006 Falconbridge and the project was acquired by Xstrata. The project was owned specifically by its subsidiary, Xstrata Copper Canada. In 2013, Xstrata and the project was acquired by Glencore, specifically the Glencore Canada Corporation.

#### 4.2 Osisko Metals – Glencore Option Agreement

Osisko Metals has signed a binding term sheet with Glencore Canada Corporation, providing Osisko Metals with an option to acquire a 100 percent interest in the past-producing Gaspé Copper Mine for an up-front payment of US\$25 million, to be paid by Osisko Metals by way of a convertible note issued to Glencore upon the successful closing of the transaction, and a cash payment of US\$20 million, payable upon start of commercial production. The company must also incur drilling costs of C\$5 million before June 30, 2022, to test oxidation levels within the mineralization that surrounds the historical Mount Copper open pit deposit.

## 4.3 Underlying Agreements

Six mining claims (Table 4-1) are on the record with the Québec Government as being 33.333% Glencore Canada Corporation, 33.333% Western Mining Corporationand 33.333% Hudbay Minerals Inc.

#### 4.4 **Permits and Environmental Liabilities**

SGS is unaware of any other significant factors and risks that may affect access, title, or the right, or ability to perform the exploration work recommended for the Property.

## 4.5 Mining Rights in Quebec

As defined by the Ministère de l'Énergie et des Ressources naturelles (MERN) website (www.mrn.gouv.qc.ca) a claim is the only valid exploration right in Quebec. The claim gives the holder an exclusive right to search for mineral substances in the public domain, except within sand, gravel, clay and other loose deposits on the land subjected to the claim.

A claim can be obtained by map designation, henceforth the principal method for acquiring a claim, or by staking on lands that have been designated for this purpose. The accepted means to submit a notice of map designation for a claim is through GESTIM Plus (www.gestim.mines.gouv.qc.ca ).

The term of a claim is two years from the day the claim is registered, and it can be renewed indefinitely providing the holder meets all the conditions set out in the Mining Act (the "Act"), including the obligation to invest a minimum amount required in exploration work determined by the regulation. The Act includes provisions to allow any amount disbursed to perform work in excess of the prescribed requirements to be applied to the subsequent terms of the claim.

Any claim holder to specific mineral substances as described under Section 5 of the Mining Act can obtain a mining lease. The application must demonstrate that the deposit is mineable to a standard acceptable to the Province (feasibility or similar). The surface area of a mining lease must not exceed 100 ha unless the circumstances warrant an exception deemed acceptable by the MERN. A written application must be submitted that includes a report certified by a geologist or engineer describing the nature and extent of the



deposit and its likely value. Mining leases have a duration of 20 years and are renewable by 10-year periods.



## 5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

## 5.1 Accessibility

The principal access road to and from Murdochville and the Property is paved Highway (Hwy) 198 which links up to the town of Gaspé (95 km) to the east and to the coastal village of Anse Pleureuse (40 km) to the north. Murdochville can also be accessed from Hwy 299 to the west through Route du Lac St-Anne which links up to Hwy 198 just north of Murdochville (Figure 5-1). Local access within the property can also be obtained by all-weather gravel roads (orange line on the map) that are used for maintenance of the windmills.





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## 5.2 Climate

Murdochville sees average monthly temperatures as high as 16.6 °C in the summer and as low as -11.9 °C in the winter. This is about 1 °C colder than the outlying coastal regions of the Gaspé Peninsula. Average annual rainfall is 752 mm while average annual snowfall is 380 cm (Environment Canada, 2000). The above-average snowfall and blowing snow, due to the higher elevation and distance from the coast, can be one of the biggest challenges for doing exploration work in the winter. Mining operations can, however, run throughout the year. As reference, Table 5-1 provides monthly climate data for Murdochville.

	Climate data for Murdochville, Quebec [hide]												[hide]
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °C (°F)	8.5	15.6	16.7	23.5	29.4	33.0	33.5	32.8	28.9	24.0	20.0	10.6	33.5
	(47.3)	(60.1)	(62.1)	(74.3)	(84.9)	(91.4)	(92.3)	(91.0)	(84.0)	(75.2)	(68.0)	(51.1)	(92.3)
Average high °C (°F)	-9.1	-7.9	-1.7	5.2	12.5	18.2	21.0	20.2	14.3	7.3	0.5	-5.9	6.2
	(15.6)	(17.8)	(28.9)	(41.4)	(54.5)	(64.8)	(69.8)	(68.4)	(57.7)	(45.1)	(32.9)	(21.4)	(43.2)
Daily mean °C (°F)	-13.8	-12.7	-6.3	0.8	7.5	13.1	16.2	15.6	10.2	3.9	-2.8	-9.7	1.8
	(7.2)	(9.1)	(20.7)	(33.4)	(45.5)	(55.6)	(61.2)	(60.1)	(50.4)	(39.0)	(27.0)	(14.5)	(35.3)
Average low °C (°F)	-18.4	-17.3	-11.0	-3.6	2.4	7.9	11.4	10.9	6.0	0.5	-6.0	-13.5	-2.6
	(-1.1)	(0.9)	(12.2)	(25.5)	(36.3)	(46.2)	(52.5)	(51.6)	(42.8)	(32.9)	(21.2)	(7.7)	(27.4)
Record low °C (°F)	-36.1	-36.7	-29.0	-22.2	-12.8	-3.9	1.5	-1.7	-6.1	-15.0	-21.0	-30.5	-36.7
	(-33.0)	(-34.1)	(-20.2)	(-8.0)	(9.0)	(25.0)	(34.7)	(28.9)	(21.0)	(5.0)	(-5.8)	(-22.9)	(-34.1)
Average precipitation mm (inches)	101	73	102	80	64	87	111	96	79	87	111	127	1,118
	(4.0)	(2.9)	(4.0)	(3.1)	(2.5)	(3.4)	(4.4)	(3.8)	(3.1)	(3.4)	(4.4)	(5.0)	(44)
Average snowfall cm (inches)	91.1	68.5	91.4	56.7	10.6	0.3	0.0	0.1	0.5	23.4	77.3	111.5	531.4
	(35.9)	(27.0)	(36.0)	(22.3)	(4.2)	(0.1)	(0.0)	(0.0)	(0.2)	(9.2)	(30.4)	(43.9)	(209.2)
Average precipitation days	14.8	12.8	13.9	12.4	12.3	13.7	15.0	13.0	13.5	13.6	17.4	17.2	169.6
Average rainy days	1.3	0.6	1.9	4.7	10.7	13.7	15.0	13.0	13.3	10.0	5.2	2.0	91.4
Average snowy days	14.2	12.5	12.6	8.3	2.2	0.1	0.0	0.0	0.3	4.8	13.2	16.2	84.4
				Sour	ce: <sup>[8]</sup>								

	Table 5-1	Climate	Data for	Murdochville
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# 5.3 Local Resources

The town of Murdochville which once had a population of 5,000 in the 1970s currently has 651 residents based on the 2016 census. The town possesses a city hall, full-service maintenance department, post office, school, CLSC health centre and tourist office. Basic commercial infrastructure includes a hotel, grocery store, hardware store, pharmacy, bank, a restaurant and a gas station. Major industries and employers in the Murdochville area include several large wind farms in operation linked by connecting access roads. This includes more than 50 windmills that generate up to 162 Mw of wind energy. There are no windmills located on the nearby Needle Mountain and Mont-Porphyre mountains. Other economic activities in the area include a Société de l'Assurance Automobile du Québec call centre and a wind energy research and development centre. Tourism includes the Copper Interpretation Centre, a 9-hole golf course, downhill and cross-country skiing, snowmobile and ATV trails as well as camping, fishing and hunting activities. There are also aspirations to further develop geothermal heating, forestry and additional tourism. A small permanent Glencore office responsible for the environmental upkeep and remediation related to past mining activities is present in Murdochville. The nearest full-service hospital, airport, and railroad are located in the town of Gaspé. The town of Murdochville as well as the nearby cities of Gaspé, Ste-Annedes-Monts and New Richmond can supply part of a potential workforce. Power and water are available to the mine site as well as local housing in town.

# 5.4 Infrastructure

The Property includes infrastructure such as roads, buildings, and transmission lines as well as a past producing open Pit and underground mine and the town of Murdochville (Figure 5-2). Although much of the



smelter complex dating from the 1950s onward has been deconstructed, there remain several buildings

smelter complex dating from the 1950s onward has been deconstructed, there remain several buildings and infrastructure that are being used by the town and local businesses as an industrial park. This includes the administrative building as well as the lab, several storage and large workshops. Glencore Canada had rented a building which has been converted into a core shack for past drilling and exploration activities.



Figure 5-2 Access and Infrastructures

## 5.5 **Physiography**

The Property exhibits a moderate relief, with an elevation ranging from 413 m to 895 m above sea level. There are four prominent peaks located around the town of Murdochville: Needle Mountain, Mount Copper, Mont-Porphyre (870 m, Figure 5-3), and Miller Mountain. The various tailings ponds, located to the south of the town have been revegetated over time. The area is covered with a thin cover of overburden and organic material, at times nonexistent on the higher peaks. A stream and several small lakes follow the highway along the western flank of Mont Porphyre, flowing south towards the town of Murdochville. Vegetation in the area is composed of pine, spruce, popular and birch. Timber in the northeast part of the property has been harvested in part by local timber companies (Figure 5-4).



Figure 5-3 Mount Copper Pit Looking East towards Porphyry Mountain



Figure 5-4 Gaspé Copper Property General Physiography Looking West



# 6 HISTORY

#### 6.1 Early Exploration History (1909-1997)

The Gaspé region hosts the oldest mineral discovery in Canada known to European settlers. A document published in France recounts that the explorer Prévert was led inland in the early days of the 17<sup>th</sup> century by Indian guides and reported glistening mountains far back in the interior, from which he brought back samples. Doctor A.M. Bell of Noranda, commented on Prévert's journey into the interior "His description of a high mountain rising above the valley, with its bare slope glistening in the sun and malachite present at the bottom of the slope, fits Copper Mountain perfectly. No other site is known in these parts that would bear any resemblance to the account." Prévert's samples were carried back to France and may be seen in the museum at Versailles where King Louis had those stored (Roberts, 1956).

In 1909, a prospector named Alfred Miller discovered copper-bearing boulders in the York River near Wakeham. Several years later in 1921, Alfred Miller and his brothers organized an expedition that would lead them to Copper Mountain, where the source of the mineralization was exposed.

However, it was another sixteen years before the Miller brothers could persuade a major mining company to test the ground. T The drilling of Copper Mountain in 1938 was successful, but it was not long afterward that the Needle Mountain became the main focal point, while Copper Mountain was held as a reserve for the future. Exploration in the area continued through the depression and pre-war years and culminated in the discovery of disseminated and stratiform-type Cu mineralization beneath Copper and Needle Mountains, respectively. Preliminary ore reserves for these two areas at the time were estimated to be 19.5 Mt grading 0.93% Cu.

Exploration was interrupted in 1940 due to the Second World War and did not resume until 1946. In 1947, drilling at Needle Mountain was successful in defining a resource of 43.8 Mt of ore grading 1.54% Cu. Gaspé Copper Mines Limited was incorporated in September 1947 to exploit this significant resource. This discovery prompted James Murdoch, president of Noranda Mines Ltd, to initiate underground and surface mining as well as the construction of a smelter on the site in 1951.

By the end of 1952 there were in excess of 66.0 Mt of reserves, of which almost 50 Mt was in the Needle Mountain zones, estimated to average 1.44% Cu content. The town of Murdochville was incorporated in 1955, which included 115 dwellings, and coincided with the production of the first copper anode.

Other significant discoveries on the property would follow in 1961 and 1971, which resulted in the delineation of an additional 209 Mt of ore grading 0.40% Cu and 0.02% Mo at Copper Mountain. During its peak in the mid 1970s the mine employed some 2,000 workers, while the town had approximately 5,000 inhabitants.

Due to a drop in the price of copper, mining operations ended in December 1982. However, 2 years later in 1984, mining was re-established and resumed. Underground and open Pit mining would eventually cease completely in late 1999 after more than 141 Mt of 0.9% Cu had been extracted from two open pits and eight underground mining areas. More than 700 km of drilling had been completed on the property. The mine closure was a major economic blow to the town of Murdochville which was nearly abandoned as a result. The smelter complex was subsequently decommissioned.

During the production years in 1994, four exploration drill holes discovered a porphyry style Cu-Mo-Ag body to the northeast of the Copper Mountain Pit. 1100 m to 1700 m below Mont Porphyre. By 1996 a mineral resource estimate of more than 200 million tons grading 0.73% Cu and 0.08% Mo was established from 12 drill holes. A team was put together to evaluate the feasibility of mining the Mont Porphyre resource through derivatives of blocks caving and sublevel caving mining methods and a new drilling campaign in 1997 set out to quantify fracture frequency and orientation for this purpose.



However, it did not immediately prove to be a minable resource and the project was put on hold in 1997. A new resource estimate performed by Stanley Clemmer in 2005 focused on 44 select holes he used to define the Mont Porphyre orebody. The new resource estimate totalled 437 MT grading 0.89% CuEq. Despite the increase in tonnage from previous estimates, the resource did not yet have a demonstrated economic viability at the time due to uncertainty feasibility of potential exploitation methods (Clemmer, 2005).

#### 6.1.1 1994 Discovery of the Porphyry Mountain Deposit (Drilled Between 1994 and 2011)

The deep-seated Porphyry Mountain deposit was discovered by Noranda Inc. in 1994. Porphyry-style stockwork Cu-Mo mineralization forms a roughly vertical, cylindrical deposit (approx. 800 m high, 400 m long and 350 m wide) that is located deep under Porphyry Mountain (located 1,250 metres NE of the center of the Mount Copper open pit), at depths between 1,200 and 2,000 metres. The deposit remains open at depth. Approximately 24 subvertical holes were drilled into the deposit between 1994 and 2011, and significant intersections are shown in Table 6-1.

Vertical Drill Hole	From- To (m)	Length (m)	Cu %	Mo %
30-891	1144.81737.4	592.6	0.71	0.036
30-899	1120.71834.9	714.2	0.61	0.034
30-900	1269.01728.8	459.8	0.66	0.026
30-901	1207.01534.7	327.7	0.90	0.053
30-903	1264.01581.6	317.6	0.89	0.047
30-907	1488.01590.4	102.4	0.68	0.042
30-912	1471.61833.4	361.8	0.35	0.016
30-915	1362.52096.0	733.5	0.76	0.029
30-916	1211.61710.5	498.9	0.78	0.035
30-920B	1294.51817.2	522.7	0.67	0.071
30-923	1454.81757.5	302.7	0.58	0.033
30-927	1178.11563.6	385.5	0.84	0.053
30-928	1222.91719.7	496.8	0.69	0.073
30-943	1028.01850.0	822.0	0.94	0.071

#### Table 6-1 Significant Historical Drill Intersections, Porphyry Mountain

#### 6.1.2 High-grade Residual Mineralization Near Past Underground Operations

Residual underground skarn mineralization still remains in the form of pillars in the mined portion of the C Zone (grades of 1.5% to 2% copper), as well as massive sulphide/skarn mineralization in the deeper E Zone (grades of 3% to 4% copper) with residual resources reported in the E-38 zone. Furthermore, significant historical drill intersections scattered within the 1,600-metre-wide E Zone skarn aureole received limited follow-up and offer potential for further resource definition (reported intersections reflect true thicknesses, Table 6-2)

Vertical Drill Hole	From- To (m)	Length (m)	Cu %	Vertical Drill Hole	From- To (m)	Length (m)	Cu %
30-787	836.7-839.7	3.0	2.08	30-892	855.8-859.6	3.8	3.87
30-832	1010.1-1031.7	21.6	2.04	30-901	1302.1-1313.7	11.6	3.13
30-844	1115.6-1126.3	10.7	4.01	30-922	1043.9-1053.8	9.9	4.96
30-886	1314.7-1329.6	14.9	3.08	30-927	1332.6-1350.3	17.7	1.24

Table 6-2	Significant Historical Drill Intersections, E Zone, Outside Mined-Out Areas
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## 6.2 Recent History

In 2006 Xstrata Plc. purchased Falconbridge Ltd., (previously Noranda Inc.) and created a subsidiary, Xstrata Copper Canada, which looked after the copper assets of the company. Xstrata Copper completed a reclamation program over the Mines Gaspé property and the port facility in the town of Gaspé (Sandy Beach) along the coast which would span 4 years, finishing in 2010.

Xstrata Copper's exploration group initiated mineral exploration work on the Mines Gaspé property between April 30<sup>th</sup> and May 6<sup>th</sup>, 2009, by contracting Geotech Ltd. to carry out a helicopter-borne Z-Axis Tipper Electromagnetic (ZTEM) and aeromagnetic geophysical survey (Geotech, 2009). The survey covered the northern portion of the Mines Gaspé property which included the Mont-Porphyre deposit.

The ZTEM data, using resistivity contrasts and magnetometer data, helps to map the geology of the area. A total of 10 lines totalling 141,8 line-km were flown in an east-west direction with traverse line spacing of 300 m.

A geological re-evaluation of the historical drill hole data on the property was initiated in May of 2010. Thirtysix 1:2500 scale sections of the Mines Gaspé camp was printed for targeting purposes along with a reference plan view map. The sections were designed to show geology, structure, alteration and mineralization across the property. The major lithological units and contacts have been interpreted and traced on the sections. Interpretation of the alteration assemblages and metal grades were also completed.

A Gocad model was constructed for both the 44 holes of the Mont Porphyre area as well as a more regional model that covered the entire Mines Gaspé property. The model includes targeting tools such as drill hole traces, assays, lithology, intrusion, Cu block model, as well as various geophysical surveys (ZTEM and Titan 24). The Gocad model was also used on a daily basis to plan and follow the progress of a drill program that was initiated.

Between September 1<sup>st</sup> and September 15<sup>th</sup>, 2010, Quantec Geoscience Ltd. was contracted by Xstrata Copper to undertake a 22,8 line-km Direct Current (DC) – Induced Polarization (IP) & Magnetotelluric (MT) surveys over the Mont Porphyre deposit and parts of the Mines Gaspé property. The objective of the Titan 24 DC/IP & MT survey was to verify if the geophysical method could detect the Mont Porphyre deposit as well as map and detect additional potential porphyry copper mineralization at depth within the project area (Quantec, 2010).

In April 2011, with the goal of locating additional Porphyry Cu deposits, Xstrata initiated diamond drill testing on documented occurrences of known porphyry intrusions, historical mineralized zones and geophysical targets previously outlined either by Titan 24 DC/IP & MT surveys, ZTEM resistivity zones (Martin, 2011).

In summer 2011, Xstrata Copper personnel conducted a ground-based gravity survey on the Mines Gaspé property. Gravity readings were taken essentially on all roads and trails deemed accessible, with approximately 500 m spacing between stations.

Results from the gravity survey show a local gravity high where the Copper Mountain deposit was located, which could indicate that remaining rocks, such as skarns, are denser than the surrounding less altered host rocks.

Xstrata Copper drilled a total of 6,006 m from 6 holes in the Mines Gaspé project between April 22<sup>nd</sup> and October 26<sup>th</sup>, 2011. Drill holes were 30-0947 to 30-0952. Figure 6-1 provides the drill hole locations.



# Figure 6-1 Location of Xstrata Copper Drill Hole Collars over the Mining Concessions

Summarily, no sample was collected from holes 30-0947, 30-0948 and 30-0952 as no significant mineralization was observed. On the other hand, hole 30-949 sampled from 339 m to the bottom of the hole in 1,005 m returned 0.12% Cu. A zone of low-grade yet anomalous mineralization averaging 0.07% Mo was identified in the intrusion between 849.0 m and 888.0 m downhole.

Hole 30-950 completed to a final depth of 1,153 m was sampled from 523 m to the bottom of the hole. The best intersection was in sediments near the contact of the intrusion which assayed 0.85% CuEq over 186.0 m, including 1.06% CuEq over 112.5 m. The Cu-Mo mineralization was essentially all fracture controlled. The nearby intrusion was low-grade averaging 0.12% Cu and 0.19% Mo across its entire length of 350 m.

Hole 30-0951 completed to a final depth of 1,086 m was sampled from 278 m down the hole to the end of the hole. The most significant intersections included 0.50% Cu over 33.0 m (389.0 m - 422.0m) and 0.70% Cu, over 15 m (1,043.0 m - 1,058.0m), both zones from within the altered sediments on either side of the intrusion.



Subsequently in 2012, Xstrata Copper drilled 6 more holes for a total of 5,142.95 m peripheral to the Copper Mountain Pit. Drill holes were 30-953 to 30-0958 inclusive. Figure 6-2 provides the drill hole locations. Hole 30-953 completed to a final depth of 1,357 m was sampled from 98.6 m and returned 0.415% Cu over 511.5 m from 400.5 m to 912 m. Hole 30-954 completed to a final depth of 1,195.95 m and sampled from 368 m returned 0.25% Cu from 368 m to bottom including 0.471% Cu over 380.5 m from 690.5 m to 1,071 m.

Hole 30-955 completed to a final depth of 1,048 m and sampled from 60.5 m returned 0.449% Cu over 372 m from 669 m to 1,041 m.

Hole 30-956 completed to a final depth of 381 m returned 0.385% Cu from 12 m to bottom at 381 m.

Hole 30-957 completed to a final depth of 645 m and sampled from 12.7 m returned 0.470% Cu over 331.5 m from 313.5 m to 645 m.

Hole 30-958 completed to a final depth of 516 m and sampled from 3 m returned no significant copper concentration up to the bottom.

No more field work was completed until 2015.



Figure 6-2 Xstrata Copper Drill Hole Locations with Earth Image Overlay

#### 6.3 **Copper Oxides 2015 Sampling**

Rock geochemical sampling was carried out in 2015 at Mines Gaspé (Banville, 2016). Selected rock samples were collected to determine the degree of oxidation of surface rock samples, from around the



Copper Mountain Pit, might have undergone following several thousands of years of weathering. A total of 97 grab samples were collected. Sampling was mainly concentrated on the west, south and east side of Copper Mountain due to very good outcropping and a high degree of alteration and mineralization. Rock samples collected west, east and north of the Copper Mountain Pit shows limited alteration and mineralization. On average, all the selected grabs samples collected returned 0.33% total Cu (including copper oxide and primary copper sulphides). If all samples with less than 0.05% Cu mainly locates west, east and north of the average increases to 0.44% total Cu. On average the degree of oxidation reaches 56% leachable. Subtracting from the list, all samples with less than 0.05% copper, the degree of oxidation reaches 62%. For all samples, on average, the content of primary copper is as low as 0.17%.

## 6.4 **2016 Samplings**

Rock sampling and stockpile rock sampling programs were carried in 2016 (Banville, 2017). The objectives were to characterise the copper mineralisation and concentration and their potential economic interest. The sampling program comprised eight (8) selected samples from an oxide stockpile located on the north slope of the Needle Mountain; four (4) selected previously crushed samples from four (4) distinct flux stockpiles located southeast of the Needle Mountain; eight (8) samples from an old slag stockpile; thirteen (13) samples from a waste stockpile located north of the town of Murdochville; forty-four (44) samples from an old proposed (1997) leach pad; ten (10) samples from an oxidized stockpile located immediately east of the Needle Mountain Pit; fifty-six (56) selected grab samples from the bottom, the north and south sides of the Needle Mountain Pit; and finally sixty (60) pits dug with an excavator to collect successively every two (2) metres, oxidized stockpiles from the surface to six (6) metres depth for a total of two hundred seventeen samples (217), weighing about 10-15 kg. Figure 6-3 shows the general view where the samples were collected.



Figure 6-3 General View of the Work Completed in 2016



Later on in the field season additional samples were collected including forty-five (45) grab samples around the Needle Mountain Pit; twenty (20) more block samples collected at the base of the North Murdochville waste pile; sixty (60) samples from various slag stockpiles around the Copper Mountain Pit area; sixteen (16) samples from the Needle Mountain waste pile to the east; six (6) grab samples from the Needle Mountains to the west; six (6) block samples from the Needle Mountain waste pile to the west; six (6) more samples from the Needle Mountain oxide stockpile; nineteen (19) samples from various stockpiles at the north end of the Mines Gaspé property; twenty (20) grab samples from the east and south side of the Copper Mountain Pit and, sixty-eight (68), of 10-15 Kg oxidized stockpile samples, collected on the slopes of the oxidized stockpiles. Figure 6-4 shows the general view where the samples were collected.



Figure 6-4 General View of Additional Sampling completed in 2016

The fourteen (14) samples from Needle Mountain oxides stockpile returned an average of 1.07% Cu, of which 66% is leachable with 0.70% Cu as oxides.

The four (4) samples taken from the Needle Mountain flux returned an average 0.21% Cu varying from 0.15% to 0.26% and an average of 77.5%, 2.1% and 9.4 % for SiO<sub>2</sub>, MgO and CaO respectively.

The slag sampling comprising sixty-seven (67) samples returned a low concentration of precious and base metals. They returned an average of 0.55% Cu, 0.23% Mo, 1.12% Zn, 0.74% Pb, 32.8% Fe, 1.0% MgO, 4.4% CaO, 0.054% As and 4.5 g/t Ag. It must be pointed out here, that some abundance of Pb, Zn and As may come from custom ores treated historically at the Mines Gaspé smelter.

Thirty-three (33) blocks sample collected from the top and the bottom of the waste stockpile immediately north of the town of Murdochville returned 0.14% total Cu of which 0.07% is leachable or 42%.

The forty-four (44) samples taken from surface over the stockpile and where the Heap Pad was proposed returned an average of 0.21% Cu of which 59% is leachable or 0.12% Cu.

The ten (10) samples from the oxides stockpile (pyritic material) immediately east of the Copper Mountain Pit returned very low copper with 0.095% with 30% leachable.

Thirteen (13) samples taken from the bottom of the Needle Mountain pit returned in average 1.2% Cu of which 0.1% copper is leachable. If we remove the three most oxidized samples (90%, 56% and 45%), the leachable fraction falls to 8 %. The best eight (8) copper-rich samples (from 0.9 to 2.4%) give an average of 1.76% Cu and 4% leachable.

Eight (8) samples coming from accumulated muck on the south slope of the Needle Mountain pit returned 0.55% total Cu of which 0.08% Cu is leachable or 20%. The stockpile measures 190 m wide by 270 m long and is about 5 metres thick with a 30-40% stope.

Thirty-five (35) samples collected on the east and south walls of the Needle Mountain pit area returned 0.63% total Cu of which 0.39% is primary and 0.18% are leachable Cu or 34%. In average the four (4) samples collected only on the east wall of the Needle Mountain pit area returned 0.93% total Cu varying from 0.27% to 2.13% with 0.52% as primary Cu sulphide and 0.36% being Cu leachable or 49%.

On the north outcropping wall of the Needle Mountain where access is possible, twenty-seven (27) grab returned 0.25% total copper of which 0.17% Cu is leachable or 66%.

All sixty (60) pits and all 0, 2, 4 and 6m sampled layers returned an average 0.48% total Cu of which 0.38% Cu is leachable or 80%. Fourteen (14) pits from the high grade stockpile average 0.61% Total Cu of which 0.48% Cu is leachable or 81.4%. Twenty-three (23) pits from the medium grade stockpile average 0.53% Cu of which 0.43% Cu is leachable or 80.7% and twenty-three (23) pits from the low grade stockpile average 0.36% Cu of which 0.29% is leachable or 78.7%. These results confirmed that the Cu concentrations, either total copper and leachable copper coincides well with the stockpile categories historically defined. Two hundred seventeen (217) samples were analysed.

Twenty (20) grab samples were collected in the Needle Mountain periphery mainly west and south. In general, the sediments were not altered. Among them, seventeen (17) outcrops returned an average of 0.015% total copper.

Three (3) samples from a sub-cropping copper oxides-bearing metasomatized and rusty metasediment returned 2.7% total copper of which 2.2% is leachable or 84%. This mineralization is 860 metres ESE of the Needle Mountain pit. This area was subsequently trenched in 2017 and 2018 to define the extent and the control of the mineralization.



Twenty-six (26) samples were collected from three (3) Needle Mountain waste piles. Sixteen (16) samples collected from the Needle Mountain east waste pile returned in average 0.32% total copper of which 0.16% are primary sulphide and 0.13% Cu is leachable or a ratio of 50% leachable copper against total copper. Three (3) samples from a small stockpile south of the Needle Mountain pit returned 0.25% total copper from which 0.18% is primary and 0.023% is leachable or 10%. Seven (7) samples southwest of the Needle Mountain pit returned 0.15% total copper from which 0.03% is primary and 0.11% is leachable or 68%.

Eight (8) grab samples collected of the west and southwest walls of the Needle Mountain returned in average 0.07% total copper of which 52% is leachable. In general, the selected grab samples were weakly metamorphosed calcareous/siliceous mudstones with nodules limestone from the Indian Cove formation.

Seven (7) samples from a large stockpile southwest of the Needle Mountain pit returned 0.15% total copper from which 0.03% is primary and 0.11% Cu is leachable or 68%.

Twenty-one (21) samples from stockpile located on the north end of Mines Gaspé property and commonly called Mt-Louis stockpiles have returned 0.09% total Cu of which 0.018% is leachable or 13%. Farther south, three (3) samples from a waste stockpile west of the Copper Mountain pit returned in average 0.14% total Cu of which 0.06% Cu is leachable or 42%.

Twelve (12) grab samples from a bench on the east wall of Copper Mountain pit returned a low copper content of 0.02% Cu of which 10% is leachable.

Ten (10) grab samples collected on a bench on the south wall of the Copper Mountain pit returned 0.15% total Cu of which 68% is leachable. As a recall, ninety-seven (97) grab samples collected in 2015 on the west, south and east sides of Copper Mountain returned an average of 0.33% total Cu of which 54% is leachable. Nine (9) grab samples collected near and NW of the old smelter location returned 0.50% total copper in average of which 68% is leachable.

The sixty-seven (67) samples collected on the slopes of each oxidized stockpiles returned and confirmed the pit sampling assays for the high, medium and low grade stockpiles. Overall, all samples returned an average of 0.49% total Cu of which 0.40% Cu is leachable or 82%. Twenty (20) slope samples from the high-grade stockpile average 0.59% total Cu of which 0.49% Cu is leachable or 83%. Thirty-three (33) slope samples from the medium grade stockpile average 0.48% Total Cu of which 0.40% Cu is leachable or 83%. Fourteen (14) slope samples from the low-grade stockpile average 0.37% Cu of which 0.29% Cu is leachable or 78%.

#### 6.5 **2016 High Resolution Topographic Survey**

A high resolution airborne topographic survey was conducted between November 9<sup>th</sup> and November 11<sup>th</sup> with the help of a Trimble UX5 drone. The mounted 24 MP camera and its custom optics give the UX5 the ability to capture data down to 2.0 cm resolution. The contract surveying was granted to Roy, Roy & Connelly of Gaspé, Québec. The survey lasted four days including mobilization and demobilization. The survey covers 204.89 ha. Figure 6-5 shows the resulting ortho-mosaic photograph while Figure 6-6 shows a closer view of the stockpiles to better appreciate the degree of resolution.





Figure 6-5 Orthophoto from the Trimble UX5 Drone





Figure 6-6 Detail View of the Trimble UX5 Orthophoto showing a Typical Digging Pit Footprint

#### 6.6 **2017 Sampling**

The 2017 rock and pit sampling programs (Banville, 2018), were to supplement to the work done in 2016. Silica flux, pit sampling on the oxide stockpiles and a stockpile sampling program were carried out along with a trenching program.

#### 6.6.1 2017 Silica Flux Sampling

Twenty-four (24) samples were collected from the silica flux returning 0.25% total Cu of which 26% is leachable. Figure 6-7 gives the samples location and the total copper concentrations (Banville, 2018).





# Figure 6-7 Total Copper in Percent (%) from the Silica Flux Sampling

(The colored diamonds represent the sample locations and the total copper concentrations.)

# 6.6.2 2017 Needle Mountain East Stockpile Sampling

The five (5) blocks from the Needle Mountain East stockpile returned 0.22% total Cu with 58% leachable. Figure 6-8 gives the sample locations and the total copper concentrations (Banville, 2018).





# Figure 6-8 Total Copper in Percent (%) from the Needle Mountain East Stockpile Sampling

# 6.6.3 2017 Copper Mountain Oxides - Pit Sampling

Pit sampling, for a total of 22 samples, were performed on the Copper Mountain oxide stockpiles (Banville, 2018). At each station, the sample was collected inside one to two metres deep hole dug by an excavator. This sampling was realised to measure the average weight percentage of 16 rock fractions from less than 0.7 mm up to more than 200 mm. Each pit samples collected weighted about 45 kg. All samples were sent to Actlabs where they were sieved in 16 selected size fractions. Table 6-3 shows the weighted percentage



6-10 shows the pit locations and their sample numbers.

	percentage																	
Lab Code	ID	<0.7mm	0.7m m	1mm	2mm	3.35m m	4mm	4.75m m	6.3m m	8mm	12.5m m	25m m	53m m	63m m	90mm	125mm	>200mm	total wt
			1mm	2mm	3.35m m	4mm	4.75m m	6.3m m	8mm	12.5m m	25m m	53m m	63m m	90m m	125mm	200mm		
A17-07017-91	PSA-1	4.5	1.0	2.1	3.1	1.8	2.1	4.4	4.3	12.7	20.0	17.9	5.4	8.9	2.1	0.0	9.7	100.0
A17-07017-92	PSA-2	3.0	0.4	1.1	1.3	0.5	0.7	1.4	1.6	5.2	14.9	24.2	12.6	13.1	14.9	5.1	0.0	100.0
A17-07017-93	PSA-3	8.1	1.3	4.8	5.3	2.0	2.5	4.8	5.9	13.1	17.7	14.6	2.8	1.9	0.0	4.5	10.6	100.0
A17-07017-94	PSA-4	3.7	0.5	1.7	2.6	1.1	0.9	2.5	2.4	7.1	16.8	18.9	4.3	5.3	2.9	11.0	18.4	100.0
A17-07017-95	PSA-5	4.1	0.9	3.7	4.8	1.3	2.7	3.9	4.0	9.9	15.3	16.6	2.2	3.6	22.2	4.8	0.0	100.0
A17-07017-96	PSA-6	4.8	1.4	1.2	1.6	1.3	1.2	2.1	2.0	6.1	13.7	26.1	4.3	17.3	9.3	7.9	0.0	100.0
A17-07017-97	PSA-7	4.4	0.9	2.3	3.0	1.3	1.3	2.6	3.5	8.9	19.9	26.9	5.4	12.5	7.1	0.0	0.0	100.0
A17-07017-98	PSA-8	4.6	0.8	2.0	2.4	1.0	1.4	2.9	3.5	10.1	23.6	30.9	6.6	3.2	6.9	0.0	0.0	100.0
A17-07017-99	PSA-9	1.9	0.2	1.6	1.5	0.5	1.2	1.8	1.9	6.2	18.1	29.3	3.7	4.8	14.1	13.2	0.0	100.0
A17-07017-100	PSA-10	3.1	0.5	1.9	2.8	0.8	1.0	2.0	3.1	7.1	21.6	34.0	9.0	2.5	0.0	10.5	0.0	100.0
A17-07017-101	PSA-11	6.6	0.7	2.1	2.9	1.2	1.2	3.7	3.1	8.8	20.4	19.2	2.2	5.0	13.8	8.9	0.0	100.0
A17-07017-102	PSA-12	3.5	0.1	0.8	1.4	0.6	0.9	1.7	1.7	6.7	17.2	29.6	7.1	16.2	12.5	0.0	0.0	100.0
A17-07017-103	PSA-13	3.1	0.4	2.3	3.0	0.9	1.2	2.4	2.3	6.4	16.2	28.1	6.4	5.8	21.6	0.0	0.0	100.0
A17-07017-104	PSA-14	5.5	1.0	2.3	2.7	1.0	1.4	2.2	2.2	5.6	9.2	18.4	7.9	4.5	12.9	8.7	14.5	100.0
A17-07017-105	PSA-15	6.0	0.9	2.4	2.7	1.2	1.8	2.6	2.4	7.6	16.1	21.6	4.6	5.9	12.6	11.7	0.0	100.0
A17-07017-106	PSA-16	0.8	0.1	0.3	0.3	0.2	0.2	0.3	0.5	1.7	7.3	16.1	1.9	6.4	13.6	22.1	28.0	100.0
A17-07017-107	PSA-17	5.9	0.7	1.9	2.4	1.3	1.8	3.1	4.3	11.8	22.2	23.8	1.5	2.7	8.2	8.5	0.0	100.0
A17-07017-108	PSA-18	2.1	0.2	5.7	0.6	0.4	0.4	0.8	1.0	4.2	13.9	21.6	2.7	17.5	6.2	8.4	14.3	100.0
A17-07017-109	PSA-19	2.8	0.4	1.2	1.9	0.5	0.6	1.4	1.9	3.9	9.6	11.2	5.3	35.1	24.2	0.0	0.0	100.0
A17-07017-110	PSA-20	4.7	0.9	2.5	2.5	0.9	1.2	2.0	1.7	3.7	7.3	10.7	4.1	6.7	10.5	15.9	24.8	100.0
A17-07017-111	PSA-21	1.9	0.3	1.0	1.5	0.5	0.6	1.2	1.3	3.6	10.1	18.1	6.3	5.5	3.3	44.9	0.0	100.0
A17-07017-112	PSA-22	3.7	0.5	1.3	1.9	0.6	1.2	1.5	1.7	4.2	10.2	23.3	8.7	15.3	17.7	8.2	0.0	100.0
	Means	4.0	0.6	2.1	2.4	1.0	1.2	2.3	2.6	7.0	15.5	21.9	5.2	9.1	10.7	8.8	5.5	

## Table 6-3 Copper Mountain Copper-Oxide Stockpiles Particle Size Analyses





Figure 6-9 Copper Mountain Oxide Stockpile Fraction Size Distribution







Figure 6-10 Copper Oxides Pit Locations for the Particle Size Analyses (PSA)

# 6.6.4 2017 Trenching Program

The 2017 trenching program was carried out in order to follow up on three copper-rich and very oxidized samples collected in 2016. They were from copper oxides-bearing metasomatized and rusty metasediment that returned 2.7% total copper and of which 2.2% were leachable or 84%. This mineralization is found 860 metres ESE of the Needle Mountain pit.



Four trenches, about 10 m apart, were stripped orthogonally to the general geological trend oriented at 340° at Mines Gaspé (Banville, 2018). In general, there was very limited overburden although the surficial rock was heavily fractured making it hard to recognize some structural control. In average, all samples (58) returned 0.59% Cu of which 80% is leachable. This average total copper grade and leaching ratio is even with the Copper Mountain high grade copper-oxide stockpiles measured in 2016.

Copper distributions seem to indicate that the east side of all trenches are poorer in copper. Copper concentrations from the southernmost trench seem to indicate a N340 mineralized trend which is better mineralized and is open to the south. The mineralized southwest end of the same trench shows the best copper concentrations and remains open to the west. Further stripping was recommended both to the south and west. Figure 6-11 shows the sample locations and the total copper concentration.



Figure 6-11 Total Copper in ppm from the Needle Mountain Trenching Program

# 6.7 2018 Exploration

In 2018, a flux sampling, trenching and stockpile rock sampling programs were carried out in late May (Banville, R., 2019). Later in the year, a high-resolution topography survey, carried out in September, and an analytical program carried out in October from the Copper Mountain oxide stockpiles were supplemented to the 2018 field sampling program.

#### 6.7.1 2018 Flux Sampling

Fifty-four silica flux samples (54) were collected from a large crushed stockpile located 500 m southeast of the Needle Mountain Pit (Figure 6-13). The stockpile is about 150 m long, 60 m wide and 20 m high. The samples were first subject to a particle size analysis (PSA) and then assayed for the major (XRF with a Na Fusion) and trace elements (ICP with a 4-acid digestion as a nitric-hydrochloric-perchloric-hydrofluoric solution) to end with a sequential copper analyze (all leached sequentially by sulfuric acid, nitrate cyanide and 4 acids (nitric-hydrochloric-perchloric-hydrofluoric)) to extract the copper from the copper oxide minerals, the copper supergene minerals and the copper sulphide minerals respectively. Figure 6-12 shows the sample numbers and the sample locations.



Figure 6-12 Sample Numbers from the Silica Flux Sampling



Figure 6-13 Silica Flux Stockpile



#### 6.7.1.1 2018 Silica Flux Particle Size Analysis (PSA)

All silica flux samples, originating from the Needle Mountain Pit, were fine-grained, light grey porcellanite with trace to 1% chalcopyrite mainly in fractures. With the exception of sample F21, F24, F40, F51, F151, F251 and F78 that were between ¼ to ½ an inch, all others forty-seven (47) silica flux samples were between ¾ to 1½ inch in fragment sizes (Figure 6-14).



Figure 6-14 Silica Flux Coarse Fractions, Sample F61

The PSA indicated that 88% of the flux is between -1.5 inches to plus  $\frac{1}{2}$  inch. The dominant fraction is -1 to +  $\frac{3}{4}$  inch with 33% while there is 32% in the -1.5 to +1 inch fraction. On average there is 3% of finer than  $\frac{1}{4}$  inches.

The PSA for the fine fraction described as " $\frac{1}{4}$  inch" is composed of 73% less than  $\frac{1}{4}$  inches, 26% between -1/2 and +1/4 and 1% coarser than + $\frac{1}{2}$  inch. The variance is very low indicating a good homogeneity of this medium. On site, there is less than 5,000 tonnes of this material (visual estimate). Previous Figure 6-14 gives the sample locations and the sample numbers. Table 6-4 provides the PSA results for the fine fractions.

				percentage				
Sample ID	±2 12"	-2 12"+1 5"	-1 5"+1"	_1"_3/4"	-3//"+1/2"	_1/2" <b>_</b> 1///"	_1///"	total %
Sample ID	72.12	-2.12 +1.3	-1.5 +1	-1 +3/4	-3/4 +1/2	-1/2 +1/4	-1/4	iolai 70
F21	0.00	0.00	0.00	0.00	1.07	30.74	68.20	100
F24	0.00	0.00	0.00	0.00	1.73	36.31	61.96	100
F40	0.00	0.00	0.00	0.00	0.00	17.53	82.47	100
F51	0.00	0.00	0.00	0.00	3.01	22.81	74.18	100
F151	0.00	0.00	0.00	0.00	0.27	21.53	78.20	100
F251	0.00	0.00	0.00	0.00	0.00	21.40	78.60	100
F78	0.00	0.00	0.00	0.00	1.99	28.21	69.80	100
				mean	1.15	25.50	73.34	

Table 6-4	<b>PSA Results</b>	for the 7	<b>Fine Silica</b>	Flux
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#### 6.7.1.2 2018 Silica Flux Whole Rock Analyses (XRF)

Whole rock analyses were performed to measure the abundance of silica from the Needle Mountain silica flux stockpile. On average all 54 silica flux samples returned an average of 76.2 % SiO<sub>2</sub> varying from 76.2 to 79.9 % which indicates a very good homogeneity among the samples. CaO, MgO and Fe<sub>2</sub>O<sub>3</sub> as indicators of calcareous minerals in the porcellanite returned 10.0, 2.1 and 2.6 percent in average. Figure 6-15 shows the SiO<sub>2</sub> concentration for each sample.



Figure 6-15 SiO<sub>2</sub> Concentration (%) from the Silica Flux Sampling

#### 6.7.1.3 <u>2018 Silica Flux Trace Elements (ICP 34 Elements) and Deleterious Elements</u>

Minor or trace elements present within a mineral deposit may have positive or negative impact on the economics of the mining project. In order to identify the presence or not of some of these deleterious minor elements, all the silica flux samples were assayed for 35 trace elements by ICP following a 4-acid digestion. As, Be, Bi, Cd, Hg and Pb among others returned 11.2, <1, 10.4, 0.7, <1 and 25.3 ppm on average respectively. With these low concentrations, the Needle Mountain silica flux should not represent serious environmental, safety, or health issue in the event of future mining, processing, or tailings and waste disposal. Cu, Pb and Zn were also analyzed. On average all silica flux samples returned 0.25% total Cu varying from 0.07% to 0.59% Cu of which 21% is leachable and leaving 0.15% Cu as primary sulphide. There was no significant Pb and Zn concentrations.

#### 6.7.1.4 2018 Silica Flux Sequential Analyses

In the event the Needle Mountain silica flux stockpile would be used as flux and could generate some profits, sequential copper analyses were performed (all leached sequentially by sulfuric acid, nitrate cyanide and 4 acids (nitric-hydrochloric-perchloric-hydrofluoric)) to extract the copper from the copper oxide



minerals, the copper supergene minerals and the copper sulphide minerals respectively. In average 20% of the total copper is leachable.

#### 6.7.2 2018 Needle Mountain under Flux Pad Stockpile Sampling

A total of ten (10) block samples were collected under the silica flux pad some 50-100 m south of the Needle Mountain Silica flux stockpile. All samples were assayed for the major and trace elements and by sequential copper analyses. In average, all samples returned 0.33% total copper (Na Fusion) of which 72% is leachable. In general, the selected blocks were from moderately metasomatized calcareous/siliceous mudstones. In average, they contain 75.1% SiO<sub>2</sub>. Figure 6-16 shows the sample numbers and the sample locations while Figure 6-17 shows the total copper concentration.



Figure 6-16 Under Flux Sample Numbers and Sample Locations





Figure 6-17 Under Flux Total Copper Concentration (ppm)

# 6.7.3 2018 Needle Mountain East Stockpile Sampling

A total of thirty-two (32) block samples were collected from Needle Mountain East stockpile. On average, all samples returned 0.29% total Cu of which 60% is leachable. In general, the selected blocks were from moderately metasomatized calcareous/siliceous mudstones. On average, they contain 75.6% SiO<sub>2</sub>. Figure 6-18 shows the total copper concentrations. In comparison in 2016, sixteen (16) samples were collected from the same stockpile and returned in average 0.32% total copper of which 0.16% copper is primary sulphide or a ratio of 50% leachable copper against total copper.





Figure 6-18 Total Copper in Percent from the Needle Mountain East Stockpile Sampling

## 6.7.4 2018 Needle Mountain East Stockpile Sampling

A trenching program was carried out in 2018 in order to follow up on the 2017 trenching itself, following up a high grade oxides-bearing metasomatized and rusty metasediment that returned 2.7% total copper and of which 2.2% were leachable or 84%. This mineralization is 860 m ESE of the Needle Mountain Pit. From the 2017 results, it was considered possible, if well oxidized, that a certain volume of oxidized material could be added to the Copper Mountain oxide stockpiles.

For that reason, three (3) trenches were stripped; two (2) orthogonally to the general geological trend oriented at 340°, and one (1) across. In general, there was very limited overburden although the surficial rock was heavily fractured making it hard to recognize some structural control. On average, all eighty-two (82) samples from the three (3) trenches returned 0.40 % Cu of which 90% is leachable. Figure 6-19, Figure 6-20, and Figure 6-21 show the sample locations and the total copper concentration, the percentage of leachable copper and the ratio leachable against total copper respectively. In addition, Figure 6-22, Figure 6-23, and Figure 6-24 show the total copper concentration, the percentage of leachable copper and the ratio leachable against total copper respectively.





Figure 6-19 Total Copper in ppm from the 2018 Needle Mountain Trenching Program





Figure 6-20 Leachable Cu in ppm from the 2018 Needle Mountain Trenching Program





Figure 6-21 Ratio Soluble Cu against Total Cu from the 2018 Needle Mountain Trenching Program





Figure 6-22 Total Cu from the Needle Mountain 2017-2018 Trenching Programs





Figure 6-23 Leachable Cu from the Needle Mountain 2017-2018 Trenching Programs





Figure 6-24 Ratio Soluble Cu against Total Cu from the Needle Mountain 2017-2018 Trenching Programs



#### 6.7.5 2018 Pit Sampling Assay Results

Pit sampling, for a total of 22 samples, was performed in 2017 on the Copper Mountain oxide stockpiles. At each station, the sample was collected inside one to two m deep hole dug by an excavator. This sampling was realized to measure the average weight percentage of 16 rock fractions from less than 0.7 mm up to more than 200 mm. Each pit samples collected weighted about 45 kilograms. All samples were sent to Actlabs where they were sieved in 16 selected size fractions. The size distributions indicate that on average 38.8% of the Pit samples is smaller than 25 mm while 60.7% is smaller than 53 mm; the latest the most abundant fraction.

Sequential copper analyses were performed in 2018 for each of the 16 fractions (when present) for each of the 22 pit samples. Figure 6-25 shows the Pit locations and their sample numbers. Figure 6-26 and Figure 6-27 show the size fraction distributions and the copper distributions per fraction respectively.





Figure 6-25 Copper Oxides Pit Locations for the Particle Size Analyses (PSA)





Figure 6-26 Copper Mountain Oxide Stockpile, Fraction Size Distribution

SGS


Figure 6-27 Cu per Size Fractions, Finer is the fraction Higher is the Cu Grade



#### 6.7.6 2018 Topographic Survey (Drone)

In late September, a higher resolution topographic survey was performed in the Needle Mountain area. Using a wing drone, the survey was performed to detail the current topography of the Needle Mountain Pit for future resource estimation and includes the Needle Mountain stockpile survey to evaluate the current tonnage in the event the material could be used as silica flux. The survey, covering 262 ha, was supervised by Roy, Roy & Connolly of Gaspé, Québec. Figure 6-28 shows the area covered by the drone while Figure 6-29 shows a zoom of the same image to help visualize the degree of resolution.



Figure 6-28 Needle Mountain Orthophoto - Airborne (Drone) Topographic Survey



Figure 6-29 Needle Mountain Orthophoto Zoom - Airborne (Drone) Topographic Survey

## 6.8 **2019 Glencore Drilling**

Late in 2019 and early 2020, Glencore Canada performed a diamond drill program mainly near and south of the Copper Mountain pit in order to characterise the copper concentrations and the degree of oxidation of this area. The program comprised 17 drill holes for a total of 3,658 m of drilling. A total of 1,706 samples, including 167 control samples, were send to Agat Laboratories in Mississauga, Ontario where sequential copper analyses were performed (all leached sequentially by sulfuric acid, nitrate cyanide and 4 acids (nitric-hydrochloric-perchloric-hydrofluoric)) to extract the copper from the copper oxide minerals, the copper supergene minerals and the copper sulphide minerals respectively. Figure 6-30 shows the drill hole locations, while table 5 gives a sequential copper assays summary.

For all 17 holes, the median Cu concentration is 0.155% while the mean is 0.32% total Cu. Of note, hole 30-974 and 30-975 returned 1.2% and 1.13% Cu over near 30 m at the L1 or C-Zone horizon respectively.



From the sequential analysis, the copper minerals are 90% leached above 34.4 m in general while 50% of the leachable Cu is found above 62.2 m. As an example, Figure 6-31 shows the oxide copper distribution varying with depth.



Figure 6-30	2019 Drill Hole Locations
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				2019 Dia	amond Drilling	g Program - Se	lected Assay	Resulst				
	Soluble +90%		Soluble + 50%		Soluble - 50%		Total Copper entire hole					
Hole ID	From (collar)	То	% Sol Cu	From	То	% Sol Cu	From	То	% Total Cu	From	То	% Total Cu
30-959	12	30	0.26	12	60	0.22	60	228	0.21	12	228	0.21
30-960	12	54.7	0.19	12	78	0.128	78	222	0.157	12	222	0.16
30-961	6	75	0.13	6	106.5	0.111	106.5	147	0.169	6	147	0.148
30-962	12	39	0.6	12	45	0.561	45	166	0.582	12	166	0.596
30-963	15	27	0.39	15	54	0.213	54	126	0.263	15	126	0.278
30-964	12	69	0.18	12	111	0.159	111	192	0.267	12	192	0.245
30-965	6	27	0.23	6	66	0.161	66	186	0.39	6	186	0.338
30-966	6	30	0.17	6	30	0.169	30	129	0.148	6	129	0.157
30-967	6	6		6	33	0.147	33	117	0.132	6	117	0.147
30-968	No sequential	assays		No sequentia	al assays					3	108	0.02
30-969	No sequential	assays		No sequentia	al assays					21	162	0.25
30-970	9	24	0.11	9	36	0.11	36	204	0.116	9	204	0.118
30-971	10.5	57	0.19	10.5	96	0.203	96	201	0.196	10.5	201	0.22
30-972	6	15	0.14	6	30	0.337	30	105	0.096	6	105	0.1
30-973	9	9		9	69	0.038	69	201	0.085	9	201	0.086
30-974	6	6		6	51	0.315	51	300	0.318	6	300	0.299
30-975				including in t	he C Zone					244	273	1.2
30-975	14	48	0.26	14	67.5	0.155	67.5	300	0.406	14	300	0.376
30-975				including in t	he C Zone					267.4	291	1.13
		34.4			62.2							0.320

## Table 6-5Sequential Copper Summary per Hole





Figure 6-31 Example of Copper Oxides Distribution with Depth in Hole 30-971

# 7 GEOLOGICAL SETTING AND MINERALIZATION

## 7.1 Regional Geology

The Gaspé Peninsula is a segment of the Canadian Appalachians that formed as a result of terrane accretion to the North American craton during the Paleozoic (Williams and Hatcher 1983; Bourque et al. 1995). The Siluro–Devonian rocks of the Gaspé Peninsula are divided into three major structural zones; these, from north to south are (1) the Connecticut Valley Gaspé Synclinorium, (2) the Aroostook-Percé Anticlinorium, and (3) the Chaleurs Bay Synclinorium (Malo and Bourque 1993). The Connecticut Valley-Gaspé Synclinorium lies between the Cambro-Ordovician allochtonous rocks of the Taconian Orogen to the northwest and the Aroostook-Percé Anticlinorium to the southeast. It is bounded to the north by the Shick Shock-South fault, a dextral strike-slip fault (Malo and Bourque 1993), and by the Restigouche Fault to the south (Figure 7-1).

The stratigraphic succession in the Connecticut Valley-Gaspé Synclinorium consists of shallow marine clastic, carbonate and minor volcanic rocks assigned to the Chaleur Group. The Chaleur Group is overlain by the Upper Gaspé Limestone Group that consists of shallow to deep-water shelf carbonates deposited on a stable platform (Bourque et al. 1995). The Upper Gaspé Limestone group is overlain by the Gaspé Sandstones Group that represents a gradually shallowing basin in an intra-arc extensional setting and is accompanied by increasing bimodal volcanic activity (Bellehumeur and Valiquette 1993). The Siluro–Devonian rocks of the Connecticut Valley-Gaspé Synclinorium are intruded by dikes and plutons spatially associated with Acadian faults.



Figure 7-1 Regional Geology

## 7.2 **Property Geology**

The Property is located along the northern limb of the Connecticut Valley-Gaspé Synclinorium. These easttrending and moderately dipping sedimentary rocks are intruded by numerous multi-phase syn-post orogenic Acadian age Intrusions (Allcock, J.B., 1982). The epigenetic deposits of the Gaspé Peninsula (Mines Gaspé, Sullipek, Mines Madeleine, Reboul, Patapédia and Ste-Marguerite) are related to the hydrothermal activity generated by these Acadian age intrusions. Abundant felsic dykes and QFP are mapped in the area (Figure 7-2), and the sedimentary rocks host extensive alteration (skarn) halos. The reactivation of the Shick Shock South Fault developed a dense and complex network of faults (N-NW Reidel) which played a major role in the control of the mineralization.



Figure 7-2 Local Geology

The stratigraphic and intrusive units of the Property include skarns, porcellanites, hornfels and unaltered sedimentary rocks as well as porphyritic quartz-feldspar intrusive rocks, both altered and unaltered (Figure 7-3).



Figure 7-3 Gaspé Copper Schematic Cross Section

On the Property, the York River Formation sediments occur as well bedded siltstones with inter-bedded sandstones (Figure 7-4 for the stratigraphic colunm). Sandstone beds can range from well bedded to distorted, and lensoïdally shaped. Thickness and frequency of the lighter coloured sandstone vary significantly. Sediments are generally unaltered, and highly reactive to HCL.





Figure 7-4 Gaspé Copper Stratigraphic Column

Underlying Indian Cove siltstones can be hard to distinguish between York River sediments. Indian Cove siltstones are medium grey to black in colour with calcareous concretions that give it a distinctly less wellbedded appearance. All the mineralization at Mount Copper is found within the Indian Cove. Concretions occur as nodules which define a crackled and irregular bedding texture. There are three tuff horizons, T1, T2, T3 which are generally unaltered, fairly homogenous, beige brown in colour, non-reactive to hydrochloric acid, distinctly hard, and often strongly magnetic. Within the Shiphead formation, most of the mineralization seems to be confined to the units below the T2. W1 units are generally unaltered with distinct 5-10 cm patches of whitish-grey calcite. Whitish patches show a coarser effervescence reaction to HCL than surroundings.

The altered sediments on the Property include porcellanites that are classed into three categories. These three categories, in increasing order of alteration and/or metasomatism are porcellanites, bleached porcellanites and diopsidic porcellanites (sometimes classified as being a skarn). Porcellanites are encountered in almost all holes surrounding the deposits. Bleached porcellanites were encountered in most holes and appeared to be increasing in depth. A subclass can be introduced, as bleached porcellanite can also occur with a spotty diopsidic texture. Mineralization is not widely associated with this type of rock. Diopsidic porcellanite was encountered in holes situated closest to the intrusions. Most of the mineralization at Mont Porphyre was found within this unit.

Skarns are by far the most interesting rocks of the deposit by grade but represent a smaller volume of the deposit. They are mostly encountered within the "L1" and "L2" units (marbles) but have been observed within the "P3," "P4" and "P5" units. The most common skarns are garnet-rich (40-60%) with lesser amounts



of clinopyroxene (diopside). "L" units are generally heavily altered and associated with good mineralization. Likely due to a porosity change difference.

Multiple phases of intrusive rocks exist. Felsic intrusive rocks are found as non-altered sill like bodies higher up in the stratigraphy and as larger altered plug-like body in the core of the deposit. Unaltered porphyry generally has a greyish colour. Calcite and sericite altered porphyries tend to look chalky white to pale yellowish green, while potassic alerted porphyry varies from biotite bearing to pinkish orange or red.

Intense chlorite veining is widespread throughout the system but is most often encountered below the enriched mineralized zones usually the "L2" horizon.

#### 7.3 Structures

#### 7.3.1 Folding

The general structure is that of closed folding (Ford, 1959). The anticlinal axis is on the crest of Needle Mountain and the synclinal axis 800m north of Copper Mountain. The axis of the anticline strikes EW and plunges 15 degrees to the east. The north limb of the anticline has a general dip of 22 degrees but dips up to 40 degrees have been measured underground.

#### 7.3.2 Faulting

Four major normal fault systems have been encountered in underground workings (Figure 7-5). These faults are all pre-ore and were very important as channels for the mineralizers (Ford, 1959). Three of these faults dip approximately sixty (60) degrees south, the other and most northerly fault system dips steeply north. Reverse faults are rare, with minor displacements. They are important as mineralizers only when they are associated with the normal fault system.





Figure 7-5 Map showing Four Corridors of Intense Fracturing



#### 7.4 Mineralization

The Mount Copper porphyry Cu-Mo ore body consisted of a 700 m diameter cylinder of low grade mineralization in the metasomatized Indian Cove sediments that surrounded a low grade porphyry intrusive. It is surrounded by a donut-like concentric, lean Cu skarn rich zone (> 1% Cu) approximately 100 m - 150 m wide.

At Mount Copper, chalcopyrite is the major sulphide in the primary zone (MacIsaac, 1969). It occurs as a fracture filling, as vein material in association with calcite and /or quartz and as replacement or disseminated sulphides in skarn and quartz-feldspar porphyry. In polished sections, the chalcopyrite occurs as subhedral to anhedral crystals or as interlocking irregular blebs. The size of the chalcopyrite grains can be generalized into two fractions: coarse, 0.5 to 10.0 mm, which is characteristic of the vein materiel; and fine, 0.1 to 0.9 mm, which is characteristic of the disseminated chalcopyrite. Fine grains of chalcopyrite occur as inclusions in other minerals. Other copper minerals present in the primary sulphide zone are bornite and tetrahedrite.

The molybdenite is sparsely distributed over the entire Mount Copper Deposit. In general, it occurs as a subsidiary vein material or as a disseminated sulphide. In the centre of the orebody, the concentration of molybdenite was more abundant than on the edge, with most of it found in quartz veins. There appears to be a spatial relationship between molybdenite mineralization and the density of quartz veining and kaolinization of the quartz-feldspar porphyry. Under the microscope, the molybdenite is generally tabular or as rosettes. It is also found as inclusions in chalcopyrite and sphalerite. A poikilitic relationship between the molybdenite is commonly observed.

Pyrite is the most abundant sulphide. It is widely distributed and extends south almost to the needle Mountain Deposits. Within the orebody, the pyrite is always associated with the copper sulphides and the pyrite-chalcopyrite ratio is approximately 1:3. Pyrrhotite is found in the eastern portion of the Mount Copper orebody, usually mixed with pyrite, and a rim of pyrrhotite marks the limits of the Copper Brook aureole. Other minerals found within the deposit are galena, sphalerite, magnetite, arsenopyrite and scheelite, all in minor amounts and with a fairly even distribution.

A leached capping up to 150 m in thickness overlies much of the sulphide orebody. The pyrite and chalcopyrite content, intensity of fracturing and a varying water table were the major factors affecting the extent and shape of the zone of oxidation. Following are the major products of oxidation: limonite, malachite, chrysocolla, azurite, brochantite and copper hydroxide. The contact between the oxide and sulphide zones is generally well defined. However, a mixed sulphide-oxide zone does occur in some areas, particularly in the western portion of the orebody. A thin, poorly defined zone of secondary enrichment between the oxidation and sulphide mineralization contains mainly chalcocite, digenite and covellite.



## 8 DEPOSIT TYPES

The most important metallogenic deposits in the north central part of the Gaspé Peninsula have been interpreted as epigenetic Cu, Cu-Mo and Pb-Zn-(Ag) deposits resembling the Andean cupriferous porphyry deposits and their frequently associated manto-skarn and polymetallic vein deposits (Wares, 1988). Porphyry Mountain Cu-Mo porphyry, Mount Copper and Needle Mountain Cu-Skarns, Sullipek Fe-Au-Cu skarn, Puma, Castor and Mines Madeleine deposits are all deposits of this type (Figure 8-1).

Porphyry deposits are large, low- to medium-grade deposits in which primary (hypogene) ore minerals are dominantly structurally controlled and which are spatially and genetically related to felsic to intermediate porphyritic intrusions (Kirkham, 1972). The large size and structural control (e.g. veins, vein sets, stockworks, fractures, 'crackled zones', and breccias) serve to distinguish porphyry deposits from a variety of deposits that maybe peripherally associated, including skarns, high-temperature mantos, peripheral mesothermal veins, and epithermal precious-metal deposits.

In reaction with heat, porphyry deposits typically form a deep potassically altered core wrapped by a phyllic and propylithic aureole. The cupriferous mineralization is generally found near the contact between the potassic and the phyllic zones. This is enveloped by a broad pyritic halo that commonly invades the phyllic zone. Mineralization, disseminated in tight fractures veins, is found in both intrusions and the surrounding country rocks. Typically, these deposits contain Cu, Mo, Au and Ag found within or in close proximity of calc-alkaline subvocanic intrusions.

In the Gaspé Peninsula, in contrast, mineralization is mainly hosted in calcareous terrigenous and carbonate rocks. While hydrothermal systems evolve in calcareous sedimentary sequences, calc-silicate (porcellanites) and skarn type deposits are formed. As the magma cooled from the interaction with wallrocks, silicates formed. The residual hydrothermal fluid metasomatized the calcareous sediments and overprinted the metamorphism while precipitating metals.

At the Gaspé Copper Property, terrigenous and carbonate rocks reacted differently with the heat (contact isochimical metamorphism) or the orthomagmatic fluids. By metamorphic contact, detrital sediments formed calc-alkaline hornfels while the pure and impure limestones form calc-silicates marbles and pure marbles respectively. The calc-silicate hornfels form either sodic or potassic porcellanites. Because these rocks became very impermeable, mineralization then occurred dominantly in fractures as typical porphyry style stockwork. On the other hand, calc-silicate marbles, impure and pure marbles become diopsidic porcellanites and skarns. They tend to form tabular bodies controlled by the stratigraphy. Fluid migrates along sub-vertical conduits and reached porous marble horizons that are chemically reactive. Lateral migration of fluids in the marble units transformed them to diopsidic porcellanite or skarn where sulphide mineralization spreads laterally, typically a few hundreds of metres away from the core of the conduit which are often filled by apophysis late dykes, either mineralized or barren.







# 9 EXPLORATION

In the course of this project, no exploration was conducted by Osisko Metals.

Some exploration information can be found in Section 6 "HISTORY".

## 10 DRILLING

In the course of this project, no drilling was conducted by Osisko Metals.

Osisko Metals started a drilling program at the end of March 2022.

Some drilling information can be found in Section 6 "HISTORY" and Section 14 "MINERAL RESOURCE ESTIMATE".

On March 25, 2022, Osisko Metals signed an option agreement with Glencore Canada to acquire a 100% interest in the Gaspé Copper Project. As part of the agreement. Osisko Metals has started a 30,000 m drill program to test oxidation levels within the mineralization that surrounds the historical Mount Copper open pit deposit.



## 11 SAMPLE PREPARATION, ANALYSES, AND SECURITY

No sample protocols were available for the current MRE production as Osisko Metals started drilling after the effective date of this report.

Camus reviewed an internal memo (2021) from Desautels Geoscience Ltd. (DGL) describing the state of Gaspé Copper Project database and internal MRE. It was decided after a due diligence review of the information that the data provided by the Company can be accepted as is in respect to an inferred mineral resource statement only. There is no reason to believe that the data is not suitable or is misleading.

# 12 DATA VERIFICATION

#### 12.1 Project Database

Osisko Metals provided a project file created in GEOVIA GEMS consisting of a drill hole database containing 3,353 discrete drill holes drilled on the project, mineralised wireframes, 3D surface topographic files and recent block models and pit optimisations which were generated in 2021.

Dupéré reviewed an internal memo (2021) from Desautels Geoscience Ltd. (DGL) describing the state of Gaspé Copper Project database and internal MRE. It was decided after a due diligence review of the information that the data provided by the Company can be accepted as is in respect to an inferred mineral resource statement only. There is no reason to believe that the data is not suitable or is misleading.

The drill hole database contained drill hole collar location coordinates (NAD83 / UTM Zone 20N), downhole survey data, assay data and lithology data.

The data importation process in Genesis incorporates its own data verification, which checks for errors between the collar, survey, assay and lithology files. The software checks for overlaps, missing data, errors in end-of-hole (EOH) depth and suspect downhole surveys.

No significant errors within the drill hole database were detected.

The 3D wireframes, topographic data and pit optimisations were imported as .dxf files and inspected for self-intersections, manifold edges and holes. No significant errors were detected in the data.

The 2021 block models were imported as .csv files and used for comparison to the new block model. No issues were encountered in the importation of the 2021 block models.

Upon review of the data, it is the opinion of Dupéré that the drilling database is of sufficient quality to be used for the current Inferred MRE.

#### 12.2 Site Visit 2021

Maxime Dupéré, géo. ("Dupéré") conducted a site visit to the Gaspé Copper Project on September 28, 2021, accompanied by Victor Chapados, the site director. At the time of the site visit, there was no active exploration, including diamond drilling, and the site has been under care and maintenance since 2001.

Dupéré participated in a field tour of the project and visited the following areas:

- Mount Copper Pit
- Mount Needle Pit
- Mount Porphyry area, (although no access was possible)
- Oxidised Stockpiles (Figure 12-1)
- Oxidised tailings (Figure 12-2)

Dupéré examined historical drill core stored in outside core racks on the property (Figure 12-3). The core examined was labelled with metal tags and sample tags were still present in the boxes. Dupéré was able to validate sample numbers and confirm the presence of mineralisation in witness half-core samples from the mineralised zones (Figure 12-4).

Dupéré did not have the opportunity to inspect the offices, core logging and sampling facilities, but was able to visit a number of recent and historical drill sites (casings unidentified) and view the overall property access (Figure 12-5).





Figure 12-1 Oxidised Stockpiles



Figure 12-2 Oxidised Material Tailings and Settling Ponds (Water Treatment Downstream)





Figure 12-3 Drill Core on the Ground



Figure 12-4 Example of Half Core DDH 30-0953 (2012)





Figure 12-5 DDH (pt. 70): 3155587.8 m E, 5426232 m N (Handheld GPS), Azi: 335, Dip: 64 (Clino App on Smartphone)

# 13 MINERAL PROCESSING AND METALLURGICAL TESTING

No information was provided to SGS at the time of the writing of the report. It is believed that the mineralized rock is amenable to treatment since production occurred on the property.



## 14 MINERAL RESOURCE ESTIMATE

#### 14.1 Introduction

Completion of the MRE for the Gaspé Copper Project Mount Copper Deposit involved the assessment of a drill hole database, which included all data for surface drilling completed from the 1960's through the end of 2021, as well as available written reports.

Ordinary Kriging (OK) restricted to mineralized wireframes (3D solids) was used to Interpolate grades for Cu\_PCT (total copper in %) into block models. Inverse distance squared (ID<sup>2</sup>) restricted to mineralized wireframe (3D solid) was used to Interpolate density values into the block model. Copper Soluble (Cu\_Sol) was assigned based on a fraction based on elevation layers. Copper Sulphide (Cu\_Sx) was assigned as the difference between the Cu\_PCT and Cu\_Sol.

Inferred mineral resources are reported in the summary tables in Section 14.15. The current MRE take into consideration that the Project deposit may be mined by open pit.

### 14.2 **Drill Hole Database**

In order to complete the MRE for the Gaspé Copper Project, a database comprising a series of comma delimited spreadsheets containing drill hole information was provided by Osisko Metals. The database included diamond drill hole location information (with both Local Grid and NAD83 / UTM Zone 20 coordinates), survey data, assay data, lithology data, specific gravity data. The data in the assay table included assays for Cu\_PCT, AG\_PCT, CU\_P\_NACN, CU\_P\_H2SO4, MO\_PCT, AU\_GPT. The database was imported in the SGS proprietary software, Genesis. Genesis was used for 3D modeling, block modelling and resource estimation

Camus reviewed an internal memo (2021) from Desautels Geoscience Ltd. (DGL) describing the state of Gaspé Copper Project database and internal MRE. It was decided after a due diligence review of the information that the data provided by Osisko Metals can be accepted as is in respect to an inferred mineral resource statement only. There is no reason to believe that the data is not suitable or is misleading.

The database used in the estimate (in the vicinity of Mount Copper) contains approximately 3,353 drill holes; 283 were deemed unreliable and were rejected. A subset of 641 drill holes were used for the Mineral Resource Estimate and associated composite generation. Drill hole data included Noranda (1998 and earlier), Xstrata (2011-2012) and Glencore Canada (2019). Verification of the data has been possible mostly by verifying the coherence of the information but not its correctness; original logs and laboratory certificates were only available for 2011, 2012 and 2019 drill holes.

The database provided for the current MRE includes data for 3070 surface and underground drill holes totaling over 750,000 m completed on the Gaspé Copper Project. between 1998 and earlier through 1999 and 2011-2012, and 2019, and 2021. The focus of the current MRE is pit-constrained to mineralization surrounding the past-producing Mount Copper open pit mine ("Mount Copper Expansion Project"). A solid was made following geological and historical information, validated by Osisko Metals consultants and geological team. Within this solid data used for resource estimation is 684 drill holes totaling more than 17,500 metres of drilling (Table 14-1 and Figure 14-1).

The whole database reports total copper, and soluble copper data that are only available for 32 drill holes drilled between 2011 and 2019. It was estimated for the purposes of this report that only the copper contained in sulphides could have economical potential. Therefore, the soluble copper as oxides was removed and significant oxidized zones are all located in the south-west portion of the deposit. The proportion of the copper contained in oxides relative to sulphides is highly correlated to the depth of the



mineralization. Therefore, depth from original topographic surface was modeled and used to estimate the percentage of copper contained in oxides for the whole resource estimation.

Company	Year	No. Holes	Metres	Hold Type
Historical	1930s-1999	665	7,745.57	DDH
Xstrata (Now Glencore)	2011	3	3,244	DDH
Western Copper	2012	5	4,650.5	DDH
Western Copper	2019	11	1,918	DDH
Total		684	17,558.07	

 Table 14-1
 Drill Holes used in the Gaspé Copper MRE ( 3D Solid)



Figure 14-1 Isometric View Looking NE of the Gaspé Copper 3D Model and Database

## 14.3 **Topography**

Camus was provided by the Client with a 3D DXF surface of topography (Figure 14-2). The final MRE was clipped to the 3D DXF topography.



Figure 14-2 Isometric View Looking NE: Topographic Surface

### 14.4 Mineralized Intervals and Wireframing

Three-dimensional (3D) grade-controlled wireframe models, representing the selected mineralized structure restrained to the Mount Copper area, were originally constructed in GEMS version 6.7. The wireframe models (2019-2021) incorporated historical drilling and more recent drilling up to 2019.

The previous wireframe models (in DXF format) were imported into Genesis, reviewed by Camus and revised based on data and information from the client consultants and geological team. The revised 3D grade-controlled models were built in Genesis by visually interpreting mineralized intercepts and grade continuity, and explanations of geology and mineralisation from the Client's geological team and consultants. Interpretations on level plans polylines (prisms) of mineral intersections, representing a non-restrictive ~0.16% total copper (CU\_PCT) cut-off, were made on each level plan and these were wireframed together to create continuous resource wireframe models. Polylines of mineral intersections were constructed on 50 m spaced level plans with a 25 m sectional influence. The 3D grade-controlled wireframe model is estimated at 377,804,464 m<sup>3</sup>. The modeling exercise provided broad controls of the dominant mineralizing direction for the deposit. The deposit of the Gaspé Copper Project extends more than 1 km below the historical open pit surface, extends laterally (NW-SE) for approximately 1.2 km along strike narrowing to less than 800 m approximately 300 m below surface (below historical open pit) (Figure 14-3).





Figure 14-3 Extension of the Gaspé Copper Project



The deposit is defined as a steep SE-NW dipping structure which extends for 1 km along horizontal strike and reaches a maximum depth of approximately 800 m below bottom surface of historical open pit deposits.

#### 14.5 **Compositing**

The assay sample database available for the current resource modelling totals 122,794 drill core assay samples representing over 700,000 metres of drilling. Of these assays, 29,310 from 684 drill holes occur within the Mount Copper Deposit (3D Solid). A statistical analysis of the drill core assay data from within the mineralized domains is presented in Table 14-2. Average width of the assays within the mineralization models is 3.65 m and the median interval is 3.05 m, within a range of 0.01 m to 22.86 m. Of the total assay population approximately 72 % of samples are 5 m or less. To account for historical information and to minimize the dilution and over smoothing due to compositing, a composite length of 4.0 m was chosen as an appropriate composite length for the resource estimation.

For the Mount Copper Project resource estimates, composites were generated inside the mineralised part of the drill hole. The composites were used for statistical and geostatistical analysis and capping studies. The composites were constrained by the wireframe model. The wireframe model (3D solid) was considered a hard boundary and only those 4 m composites constrained by the wireframe were used to estimate the mineral resource. A total of 27,895 composite sample points occur within the resource grade-controlled model (

Table 14-3).

#### 14.6 Grade Capping

A statistical analysis of the cumulative composite database within the Mount Copper Deposit wireframe model (the "resource" population) was conducted to investigate the presence of high-grade outliers, which can have a disproportionately large influence on the average grade of a mineral deposit. High grade outliers in the composite data were investigated using statistical data (

Table 14-3), histogram plots, and cumulative probability plots of the composite data. The statistical analysis was completed using Genesis.

Analysis of the composite data for all zones indicate few outliers within the database. It is Camus's opinion that minimal capping of high-grade composites to limit their influence during the grade estimation is necessary. Camus believes that the impact of capping composites is negligible to the overall resource estimate for the Mount Copper Deposit. Capping value for Cu\_PCT was established at 1.8% (46 samples).



# Table 14-2Statistical Analysis of the Drill Core Assay Data from within Mount Copper<br/>Deposit Mineral Resource Model

Assays Mount Copper	Length	Cu_PCT
Min Value	0.01	0.00
Max Value	22.86	7.53
Average	3.65	0.400
Length Weighted Average	NA	0.366
Variance	2.95	0.09
Standard Deviation	1.72	0.30
% Variation	0.47	0.75
Median	3.05	0.328
First Quartile	3.04	0.2
Third Quartile	6.09	0.51
Count Available	28,577	
Count Missing	903	

Table 14-3	Summary of the 4.0 metre Composite Data Constrained by the Gaspé
	Copper Project – Mount Copper Deposit Mineral Resource Model

Composites Mount Copper	Length (m)	Cu_PCT (%Cu)	Cu_PCT Capped at 1.8% Cu
Min Value	2.96	0.00	0.00
Max Value	4.42	4.10	1.80
Average	4.00	0.341	0.340
Length Weighted Average	NA	0.341	0.340
Variance	0.001	0.07	0.07
Standard Deviation	0.04	0.26	0.26
% Variation	0.009	0.77	0.76
Median	4.00	0.29	0.29
First Quartile	3.98	0.17	0.17
Third Quartile	4.02	0.45	0.45
Count	27,895		
Count Missing	0		

## 14.7 **Specific Gravity**

The specific gravity database used in the estimate (in Mount Copper wireframe) contains approximately 25,571 records. Including drill hole data from Noranda (1998 and earlier), Xstrata (2011-2012) and Glencore Canada (2019). Verification of the data has been possible mostly by verifying the coherence of the information but not its correctness; original logs and laboratory certificates were only available for 2011, 2012 and 2019 drill holes.



The specific gravity (SG) data was provided by Osisko Metals. Statistics in Table 14-4 show specific gravity ranging from 2.65 g/cm<sup>3</sup> to 3.27 g/cm<sup>3</sup>, with a mean of 2.75 g/cm<sup>3</sup> and a median of 2.70 g/cm<sup>3</sup>. Specific gravity values were estimated using data available in the historical drill holes; the average value is 2.73 tonnes/cubic metre.

SGS strongly recommends validating historical specific gravity data with the current drilling program currently underway on the Project. Additional SG measurements may be collected on mineralized and unmineralized rocks from various locations and depths throughout the deposit.

Statistics Mount Copper	Specific Gravity
Min Value	2.65
Max Value	3.27
Average	2.75
Length Weighted Average	2.74
Variance	0.01
Standard Deviation	0.11
% Variation	0.04
Median	2.70
First Quartile	2.70
Third Quartile	2.80
Count Available	27,571
Count Missing	0

# Table 14-4Summary of Specific Gravity Data for the Gaspé Copper Project MountCopper Deposit

#### 14.8 Block Model Parameters

A block model was created with blocks of 20 x 20 x 15 m under the current topographic surface and inside the modeled mineralization.

The deposit grade-controlled wireframe model was used to constrain composite values chosen for interpolation, and the mineral blocks reported in the estimate of the mineral resource. A block model within NAD83 / UTM Zone 20 (Table 14-5) space (Figure 14-4) with block dimensions of  $20 \times 20 \times 15$  m in the x<sup>\*</sup> (east), y<sup>\*</sup> (north) and z (elevation) directions was placed over the wireframe model. The block size was selected based on borehole spacing, composite assay length, historical literature, the geometry of the deposit, and the selected reasonable mining methods (open pit). The model was intersected with a topographic surface to exclude blocks with centers above the bedrock surface. No partial blocks or subblocks were used.

Medel Nemo				
Model Name	X (East)*	Y (North)	Z (Elevation)	
Origin (Local grid)	6645	5048	-1001	
(Center of block 1,1,1)	0045	5040	1001	
Block Count	133	115	162	
Block Size	20	20	15	
Discretization (for the	Λ	Л	Λ	
Estimation)	4	4	4	
Rotation (clockwise)	0			

 Table 14-5
 Deposit Block Model Geometry



Figure 14-4 Isometric View Looking NE (Looking W (y), Looking N (X) and Looking Down (Z) of Mount Copper Deposit Wireframe Grade-Controlled Model

## 14.9 Copper Total (Cu\_PCT) Grade Interpolation

For Copper Total (Cu\_PCT), Both ordinary kriging (OK) and inverse square distance (ID<sup>2</sup>) interpolation methods were tested, resulting in no material difference in the Mineral Resource Estimates. Kriging was retained for this estimation.

The variography was completed using Genesis. The variogram is well modeled and shown in Figure 14-5. General assumptions were made as for the principal direction of grade continuity. An average direction of 147.7°, a general plunge of 81° and a lag of 56 m was established. The 2 other orthogonal directions were established at 57.7°, a plunge of 0° and a lag of 20 m; and 327.7°, a plunge of 9° and a lag of 20 m. A nugget effect of 0.08 was also added (Figure 14-5). A variogram model was established as follows:

Gamma=N(0.08,0/0/0,0/0/0)+E(0.180627,17.693/4.95867,147.74/81/270)+E0.0389143,162.544/5.79358/24.9375,147.74/81/270).

The search ellipsoids were assigned an azimuth of 58°, a dip of 90°, a spin of 0° and an azimuth2 of 10°. two passes were used to interpolate Cu\_PCT into all of the blocks in the deposit wireframe model (Table 14-6). For Pass 1 the search ellipse size (in metres) for all vein domains was set at 200 x 50 x 50 m; for Pass 2 the search ellipse size for each domain was set at 400 x 100 x 100 m.

Grades in Pass 1 were interpolated into blocks using a minimum of 4 and maximum of 15 composites to estimate block grades with a maximum of 3 composites per hole and Pass 2: a minimum of 3 and maximum of 15 composites to estimate block grades with a maximum of 3 composites per hole (Table 14-6).



Figure 14-5 Experimental Variogram and Model

Parameter	Mount Copper		
	Pass 1	Pass 2	
Search Type	Ellip	soid	
Azimuth	5	8	
Dip	90		
Spin	0		
Azimuth2	10		
Size X	200	400	
Size Y	50	100	
Size Z	50	100	
Min. Samples	4	3	
Max. Samples	15	15	
Max. Samples per Hole	3	3	

#### Table 14-6 Ordinary Kriging Grade Interpolation Parameters

### 14.10 Density Grade Interpolation by Inverse Distance Squared (ID<sup>2</sup>)

For the density (or Specific Gravity) inverse square distance (ID<sup>2</sup>) interpolation methods was used. The different densities present in the Mount Copper Deposit do not appear to have much variability and tend to stick to rock codes.

The ellipsoids were kept similar to the ellipsoids used for the Cu\_PCT MRE. The details are in Table 14-6. The search ellipsoids were attributed variable orientation, so they conform to local orientations of the thin veins. As for the large, low-grade volume, the general orientation of the veins was used for the orientation of the ellipsoids.

The details are in Table 14-6. The search ellipsoids were attributed variable orientation, so they conform to local orientations of the thin veins. As for the large, low-grade volume, the general orientation of the veins was used for the orientation of the ellipsoids.

Three passes were used to interpolate density into all of the blocks in the deposit wireframe model (Table 14-6). For Pass 1 the search ellipse size (in metres) for all vein domains was set at 200 x 50 x 50 m; for Pass 2 the search ellipse size for each domain was set at 400 x 100 x 100 m. The third pass was set at  $800 \times 200 \times 200 \text{ m}$ ,

Grades in pass 1 were interpolated into blocks using a minimum of 7 and maximum of 15 composites to estimate block grades with a maximum of 3 composites per hole and Pass 2: a minimum of 7 and maximum of 15 composites to estimate block grades with a maximum of 3 composites per hole. Pass 3: a minimum of 7 and maximum of 7 and maximum of 15 composites to estimate block grades with no maximum composites per hole. (Table 14-6).

## 14.11 Cu\_Soluble (Cu\_Sol) Grade Attribution

Camus reviewed the past reports by Desautel (2021) and identified that the Copper soluble fraction was linked to an equation. Camus revised this equation and came up with the following:

Cu-H<sub>2</sub>SO<sub>4</sub> ratio = -0.247 Ln (Relative elevation from the original surface) + 1.4219

It was concluded that a general trend can be applied to copper soluble and is as follow:

75% of the total copper is copper soluble between 0 and 30 m depth.
48% of the total copper is copper soluble between 30 and 60 m depth.
36% of the total copper is copper soluble between 60 and 90 m depth.
27% of the total copper is copper soluble between 90 and 120 m depth.
21% of the total copper is copper soluble between 120 and 150 m depth.
15% of the total copper is copper soluble between 150 and 190 m depth.
10% of the total copper is copper soluble between 150 and 190 m depth.

Several contact surfaces were created for the 30 m, 60 m, 90 m, 120 m, 150 m and 190 m elevation depths. A Copper soluble grade was attributed by assigning a factor according to the targeted elevation depth. Blocks falling inside the targeted elevation depths solids were assigned accordingly. See Figure 14-6.



Figure 14-6 Grade Elevation Depths Solids

### 14.12 Cu\_Sulphide (Cu\_Sx) Grade attribution

Based on the findings for the Copper Soluble (Cu\_Sol) findings and attributions, The copper sulphides (Cu\_Sx) was set with the following formula:

Cu\_Total = Cu\_Sol + Cu\_Sx. In other words, Cu\_Sx = Cu\_Total-Cu\_Sol.

#### 14.13 Mineral Resource Classification Parameters

The MRE presented in this Technical Report was prepared and disclosed in compliance with all current disclosure requirements for mineral resources set out in the NI 43-101 Standards of Disclosure for Mineral Projects (2016). The classification of the current Mineral Resource Estimate into Measured, Indicated and Inferred is consistent with current CIM Definition Standards for Mineral Resources and Mineral Reserves (2014), including the critical requirement that all mineral resources "have reasonable prospects for eventual economic extraction".

Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. An Inferred Mineral Resource has a lower level of confidence than that applied to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource.

A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction.

Interpretation of the word 'eventual' in this context may vary depending on the commodity or mineral involved. For example, for some coal, iron, potash deposits and other bulk minerals or commodities, it may be reasonable to envisage 'eventual economic extraction' as covering time periods in excess of 50 years. However, for many gold deposits, application of the concept would normally be restricted to perhaps 10 to 15 years, and frequently to much shorter periods of time.

The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

#### Inferred Mineral Resource

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.

An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

An Inferred Mineral Resource is based on limited information and sampling gathered through appropriate sampling techniques from locations such as outcrops, trenches, pits, workings and drill holes. Inferred Mineral Resources must not be included in the economic analysis, production schedules, or estimated mine life in publicly disclosed Pre-Feasibility or Feasibility Studies, or in the Life of Mine plans and cash flow models of developed mines. Inferred Mineral Resources can only be used in economic studies as provided under NI 43-101.

There may be circumstances, where appropriate sampling, testing, and other measurements are sufficient to demonstrate data integrity, geological and grade/quality continuity of a Measured or Indicated Mineral



Resource, however, quality assurance and quality control, or other information may not meet all industry norms for the disclosure of an Indicated or Measured Mineral Resource. Under these circumstances, it may be reasonable for the Qualified Person to report an Inferred Mineral Resource if the Qualified Person has taken steps to verify the information meets the requirements of an Inferred Mineral Resource.

#### 14.13.1 Classification Methodology

There are no Measured or Indicated mineral resources on the Mount Copper Deposit. The review of the QAQC results and interpretations of the drill hole data does not permit the use of a classification other than the Inferred category.

#### 14.14 Reasonable Prospects for Eventual Economic Extraction

The general requirement that all mineral resources have "reasonable prospects for economic extraction" implies that the quantity and grade estimates meet certain economic thresholds and that the mineral resources are reported at an appropriate cut-off grade taking into account extraction scenarios and processing recoveries. In order to meet this requirement, Camus considers that the Gaspé Copper deposit mineralization is amenable for open pit extraction.

#### 14.14.1 Pit Constrained Resources

In order to determine the quantities of material offering "reasonable prospects for eventual economic extraction" by an open pit, Whittle<sup>™</sup> pit optimization software and reasonable mining assumptions and metal recovery assumptions were used. The pit optimization was completed by SGS. The pit optimization parameters used are summarized in Table 14-7. Based on SGS's experience with open pit exploration projects and mining operations, Camus considers the assumptions listed in Table 14-7 to be appropriate reporting assumptions for the purposes of the current report.

The revised pit optimization parameters are based on the possibility of off-site custom milling ore rather than constructing and using an on-site mill.

A Whittle pit shell at a revenue factor of 1.0 was selected as the ultimate pit shell for the purposes of the current Mineral Resource Estimate (Figure 14-4; Table 14-7). The corresponding stripping (waste/ore) ratio is 1.98.

The reader is cautioned that the results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a mineral resource statement and to select an appropriate resource reporting cut-off grade.



Parameter	Value	<u>Unit</u>
Copper Price	\$3.80	US\$ per pound
Sell Cost	\$0.08	US\$ per pound
In-Pit Mining Cost	\$1.90	US\$ per tonne mined
Processing Cost + Smelter and Transport	\$7.10	US\$ per tonne milled
General and Administrative (G&A)	\$1.00	US\$ per tonne milled
Overall Pit Slope - Rock	50	Degrees
Copper Recovery	85	Percent (%)
Mining loss / Dilution (open pit)	5/3	Percent (%) / Percent (%)
Waste Avg. Specific Gravity	2.73	Tonnes / cubic metre
Mineralization Specific Gravity (variable)	Avg. 2.73	Tonnes / cubic metre
Block Size	20 x 20 x 15	Length, Width, Height (m)

Table 14-7	Whittle™ Pit	<b>Optimization Parameters</b>
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#### 14.15 Mineral Resource Statement

The general requirement that all mineral resources have "reasonable prospects for eventual economic extraction" implies that the quantity and grade estimates meet certain economic thresholds and that the mineral resources are reported at an appropriate cut-off grade taking into account extraction scenarios and processing recoveries. In order to meet this requirement, Camus considers that the Gaspé Copper Property, Mount Copper Deposit mineralization is amenable for open pit extraction.

In order to determine the quantities of material offering "reasonable prospects for eventual economic extraction" by an open pit, Whittle<sup>™</sup> pit optimization software and reasonable mining assumptions and metal recovery assumptions were used. The pit optimization for the Mount Copper Deposit was completed by SGS for the current MRE and the pit optimization parameters used are summarized in Table 14-7. Whittle pit shells at a revenue factor of 1.0 (i.e., 100 % of base case metal prices) were selected as the ultimate pit shells for the purposes of reporting the Mount Copper Deposit MRE. A selected base case cut-off grade of 0.16 % Cu\_sulphide is used to determine the in-pit MRE for the Mount Copper Deposit.

The reader is cautioned that the results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. There are no open pit mineral reserves on the Property. The results are used as a guide to assist in the preparation of a mineral resource statement and to select an appropriate resource reporting cut-off grade.

The 2022 Mineral Resource Estimate for the Mount Copper Deposit is presented in Table 14-8. Highlights of the Mount Copper Deposit Resource Estimate are as follows:

• The open pit MRE, at a base case cut-off grade of 0.16 % Cu\_sulphide within a conceptual pit shell holds 456 M tonnes in the Inferred category grading 0.351% Cu\_Total\*, 0.310% Cu\_Sulphide, (1.41 million tonnes (3.1 billion pounds) of contained copper).

The summary numbers of the base case scenario are shown in Table 14-8.
# Table 14-8Gaspé Copper Project Mineral Resource Estimate Base Case, Effective<br/>April 12th, 2022

Category	Tonnage	Grade Copper		Strip Ratio	Contained Copper Metal*	
		Total (%) *	Sulphide (%)		Pounds	Metric tonnes
Inferred	456 Mt	0.351	0.310	1.98	3,113,000,000	1,412,000

- (1) The Independent QP for this Mineral Resource Estimate statement is Yann Camus, P.Eng., Geological Services of SGS Canada Inc.
- (2) The effective date is April 12, 2022.
- (3) CIM (2014) definitions were followed for Mineral Resource Estimate.
- (4) No economic evaluation of the Mineral Resource Estimate has been produced.
- (5) SGS is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issues that could materially affect the Mineral Resource Estimate.
- (6) All reported figures are rounded to reflect the relative accuracy of the estimate. Totals may not add up due to rounding.
- (7) \*Total copper includes acid-soluble oxidized copper plus sulphide copper. Contained copper includes sulphide copper only.

### 14.16 Mineral Resources Sensitivity

The Table 14-9 shows the resources reported at various reasonable cut-off grades, the base case cut-off grade is 0.16% copper and shown in bold:

# Table 14-9Gaspé Copper Project Mineral Resource Estimate at Variable Cut-Off<br/>Grades, Effective April 12th, 2022

Classification	Sulphide Copper	Tonnage (Mt)	Grade Copper		Copper Tonnage	
	Cut-Off (%)		Total (%) *	Sulphide (%)	Pounds	Tonnes
	0.12	533	0.326	0.285	3,353,000,000	1,521,000
	0.14	498	0.337	0.296	3,253,000,000	1,475,000
	0.16	456	0.351	0.31	3,113,000,000	1,412,000
Inforrad	0.18	414	0.366	0.324	2,957,000,000	1,341,000
merrea	0.20	374	0.381	0.338	2,788,000,000	1,265,000
	0.30	193	0.473	0.422	1,799,000,000	816,000
	0.40	90	0.572	0.514	1,016,000,000	461,000
	0.50	43	0.656	0.59	555,000,000	252,000

(1) The Independent QP for this Mineral Resource Estimate statement is Yann Camus, P.Eng., Geological Services of SGS Canada Inc.

- (2) The effective date is April 12, 2022.
- (3) CIM (2014) definitions were followed for Mineral Resource Estimate.
- (4) No economic evaluation of the Mineral Resource Estimate has been produced.
- (5) SGS is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issues that could materially affect the Mineral Resource Estimate.
- (6) All reported figures are rounded to reflect the relative accuracy of the estimate. Totals may not add up due to rounding.
- (7) \*Total copper includes acid-soluble oxidized copper plus sulphide copper. Contained copper includes sulphide copper only.



Figure 14-7 Isometric View Looking NE with the Inferred Estimated Blocks (Cu\_Sx) in Current Whittle Pit, Blocks by Grade

### 14.17 Model Validation and Sensitivity Analysis

Different validation steps were taken to ensure the estimation is of good quality. The visual inspection of the model in many angles, with many colour legends, and many cross sections validated the process and the model. Visual checks of block grades against the composite data on vertical section showed fair to good correlation between block grades and drill intersections.

Also, the estimates were compared to the drill hole data and to the composite data and these corresponded well. As stated in the estimation settings part of this report, the inverse distance squared and the kriging estimates were compared and, at 0.0 g/t Cu cut-off grade, value compared well.

#### 14.18 Disclosure

All relevant data and information regarding the Project are included in other sections of this Technical Report. There is no other relevant data or information available that is necessary to make the technical report understandable and not misleading.

Camus is not aware of any known mining, processing, metallurgical, environmental, infrastructure, economic, permitting, legal, title, taxation, socio-political, or marketing issues, or any other relevant factors not reported in this technical report, that could materially affect the Mineral Resource Estimate.



## 15 MINERAL RESERVE ESTIMATES

There are no current Mineral Reserve estimates stated on this Property. This section does not apply to the Technical Report.



# **16 MINING METHODS**



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## **17 RECOVERY METHODS**



# **18 PROJECT INFRASTRUCTURE**



# **19 MARKET STUDIES AND CONTRACTS**



# 20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT



# 21 CAPITAL AND OPERATING COSTS



# 22 ECONOMIC ANALYSIS



## 23 ADJACENT PROPERTIES

Camus has been unable to verify the information and that the information is not necessarily indicative of the mineralization on the property that is the subject of the technical report

The Gaspé Mine has been the only operating mine in the immediate area. Gespeg Copper Resources Inc. has claims that tie on to the property located on the eastern side of the Murdochville around Mt. Miller and south of Mt. Miller.

Orbite Aluminae Inc. owns 100% of the mining rights of approximately 6,441 ha of the Grande-Vallée property, the site of an aluminous clay deposit (23.13% alumina) located 32 km to the Northeast of Murdochville, and a full-scale pilot plant in Cap Chat, in the Gaspé region. The NI 43-101 report issued in August 2011 has identified an Indicated Resource of about 1 billion tonnes of aluminous clay in part of the deposit (Levaque, 2011). The Company also owns the intellectual property rights to a unique Canada and U.S.-patented process for extracting alumina from aluminous ores and for which patents are also pending in other countries.

The Sullipek deposit located 30 km southwest of the Project is a Fe-Au-Cu skarn formed from pure marbles of the uppermost Silurian West Point Formation that was intruded by dacitic porphyries overprinted by strong potassic and sodic alteration (Wares, 1988). The Sullipek fault system controls skarn occurrences that contain 0.5 Mt grading 1.4% Cu, 0.025% Mo, and 7 g/t Ag (Wares, 1988, historical estimate).

Sixteen (16) kilometres farther north from the Sullipek Deposit, Mines Madelaine, located on the west margin of the Mc Gerrigle Mountain, has produced a copper concentrate back in the 70s that was trucked to Murdochville for treatment. At the Mine closure in the 1982, there was a near 1 Mt reserves at 0.9% Cu. About 8.7 Mt were produced at 1.15% Cu and 7.0 g/t Ag (Williams-Jones, A.E. 1984, historical estimate).



## 24 OTHER RELEVANT DATA AND INFORMATION

All relevant data and information regarding the Gaspé Copper Project has been disclosed under the relevant sections of this report. There is no other relevant data or information available that is necessary to make the current technical report understandable and not misleading. To Camus's knowledge, there are no significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information or Mineral Resource estimate.

## 25 INTERPRETATION AND CONCLUSIONS

SGS Geological Services was contracted by Osisko Metals Incorporated to complete a Mineral Resource Estimate (MRE) for their Gaspé Copper Project and to prepare a technical report written in support of the current MRE. The reporting of the MRE complies with all disclosure requirements for Mineral Resources set out in the NI 43-101 Standards of Disclosure for Mineral Projects (2016). The classification of the MRE is consistent with current CIM Definition Standards - For Mineral Resources and Mineral Reserves (2014). In March 2022, Osisko Metals obtained an option to acquire 100% interest in the past-producing Gaspé Copper Mine from Glencore Canada Corporation.

The Gaspé Copper Property is located in the north central part of the Gaspé Peninsula along the northern limb of the Connecticut Valley-Gaspé Synclinorium and is related to the hydrothermal activity generated by these Acadian intrusions. The Property is located in the north central part of the Gaspé Peninsula. The property is located adjacent to and in part within the municipality of Murdochville, Québec. The principal access road to and from Murdochville and the Property is paved Highway. All necessary support infrastructure for the potential re-opening of Gaspé Copper Project is already in place. The former mine site benefits from paved road access, and is adjacent to the community of Murdochville. Highway 198 links Murdochville with the coastal community of Gaspé. Port access to the St. Lawrence is nearby at Sainte-Anne-des-Monts. The site is also well-served by Hydro-Quebec, with an electrical substation located onsite to provide renewable hydroelectric power. The Property is composed of two (2) Mining Concessions (388 and 404), and 320 mining claims, covering a total of 14,375 ha.

Osisko Metals is a Canadian exploration and development company with a focus on copper and zinc mineral assets. The Company is a reporting issuer and trades on the TSX Venture Exchange ("TSX-V") in Canada under the symbol "OM", in the United States on the OTC Markets under the symbol "OMZNF" and the Frankfurt Stock Exchange under the symbol "0B51". Their current business address is 1100, Avenue des Canadiens-de-Montreal, Bureau 300, Montreal, Quebec, Canada, H3B 2S2.

This technical report will be used by Osisko Metals in fulfillment of their continuing disclosure requirements under Canadian securities laws, including National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101"). This technical report is written in support of the resource estimate for the Gaspé Copper Project released by the Company on April 28, 2022. Osisko Metals reported that the deposit of the Gaspé Copper Project contains 1.412 Mt of copper in Sulphide minerals in the Inferred category, grading 0.310% Cu in Sulphide minerals (0.351% Total Cu). The effective date of the resource estimate is April 12, 2022. Details of the MRE is presented in Section 14.

The Mineral Resource Estimate presented in this report was estimated by Yann Camus, P.Eng.

### 25.1 **2022 Gaspé Copper Project Mineral Resource Statement**

Completion of the current Mineral Resource Estimate involved the assessment of a drill hole database, which included all data for drilling completed through April 12<sup>th</sup>, 2022, a three-dimensional (3D) grade-controlled wireframe model, pit optimization, review of the classification of the mineral resource estimate (Inferred) and review of available written reports.

Kriging restricted to a grade-controlled wireframe model was used to interpolate copper grades (%Cu) and estimate the sulphides copper grades (%Cu\_Sx) into a block model. Inferred mineral resources are reported in detail in the tables in Section 14.12. The base case summary is presented in Table 1-1. The Mineral Resource Estimate (MRE) takes into consideration that the current deposit will be mined by open pit mining.



#### 25.2 Risks and Opportunities

The following risks and opportunities were identified that could affect the future economic outcome of the project. The following does not include external risks that apply to all exploration and development projects (e.g., changes in metal prices, exchange rates, availability of investment capital, change in government regulations, etc.).

There is no other relevant data or information available that is necessary to make the technical report understandable and not misleading. To Camus's knowledge, there are no additional risks or uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information or mineral resource estimate.

#### 25.2.1 Risks

#### 25.2.1.1 Mineral Resource Estimate

In Camus's opinion the risks to the current mineral resources is limited. The total amount of available drilling is substantial. The resources have not been given the indicated classification because of the missing information on the ratio between sulphides and oxides mineralization. The ongoing drilling will give more information about this distribution for the whole deposit. Also, the unavailability of QAQC data puts a risk on the correctness of the estimated grade. While no discrepancy was found in the database, it is possible that a small bias exists in the copper data. The ongoing drilling should help strengthen the confidence in the historical copper grade data. It is reasonably expected that the majority of Inferred Mineral resources could be upgraded to Indicated Minerals Resources with continued exploration.

The mineralized structures (mineralized domains) in all zones are relatively well understood and the mineralization grade distribution in each domain is generally consistent. A different interpretation from the current mineralization models may adversely affect the current MRE. Continued drilling will help define with more precision the shapes of the zones and confirm the geological and grade continuities of all mineralized zones.

#### 25.2.2 Opportunities

#### 25.2.2.1 Mineral Resource Estimate

For 2022, a total of 30,000 m of drilling is proposed to continue to focus on upgrading existing Inferred resources as well as possibly outlining more economical copper by refining the sulphide to oxide ratio. It is possible that the current estimation of sulphide mineralization is underestimated, the new drilling will enable to get more precision on this aspect of the Project.

## 26 RECOMMENDATIONS

As recent (post-2011) drilling is almost entirely located in one area of the pit-constrained resource, it is SGS' recommendation that additional infill drilling be completed across the entire pit volume to:

1) improve the oxide model, and

2) allow for conversion from the Inferred category to the Measured and Indicated categories.

Previous mining at the Mount Copper open pit resulted in the stockpiling of oxidized copper mineralization approximately 1100 metres to the NW of the center of the open pit. The stockpiles cover an area measuring 470,000 square metres with an average height of 25 metres. This material is potentially amenable to heap leaching and SX-EW recovery techniques and could eventually represent a low-cost opportunity for additional copper production if a heap leach operation can be successfully permitted.

Camus considers that the Mount Copper deposit contains a significant open pit Mineral Resource that is associated with a well-defined copper mineralized trend and model. The current Mineral Resource Estimate has shown that the Deposit can likely be mined by conventional open pit.

Camus considers the Property to have significant potential for delineation of additional economic copper and that further drilling and exploration is warranted. Osisko Metals's intentions are to continue to drill the Deposit in 2022 and plan to direct their exploration efforts towards resource confirmation and classification upgrade, with infill drilling on the existing deposit in order to convert portions of Inferred mineral resources into Indicated if confirmed.

Given the prospective nature of the Property, it is Camus's opinion that the Property merits further exploration and that a proposed plan for further work is justified. A proposed work program by SGS will help advance the Deposit towards a pre-development stage and will provide key inputs required to evaluate the economic viability of a mining project at a preliminary economic assessment study level.

SGS is recommending Osisko Metals conduct further exploration, subject to funding and any other matters which may cause the proposed exploration program to be altered in the normal course of its business activities or alterations which may affect the program as a result of exploration activities themselves. For 2022, a total of 30,000 m of drilling is proposed to continue to focus on upgrading existing Inferred resources as well as possibly outlining more economical copper by refining the sulphide to oxide ratio.

The total cost of the recommended work program is estimated at CAN\$10,575,000 (Table 26-1).

#### Table 26-1 Recommended 2021 Work Program for the Gaspé Copper Deposit

Item	Cost in CAD\$	
Drilling 30,000 m (\$350/m all inclusive)	\$10,500,000	
Metallurgical Testing and Analysis	\$75,000	
Total:	\$10,575,000	

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- Discussion on 2015 Surficial Sampling around Copper Mountain open pit.
- Discussion (2012) regarding calculation of Mo values from linear regression analysis of all Copper Mt intervals (Robert Banville).
- PowerPoint presentation looking at soluble copper in Copper Mt Hole 30-956.

