

**TECHNICAL REPORT FOR THE
TURGEON PROPERTY, NORTHEAST NEW BRUNSWICK, CANADA**



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1 Summary

This Technical Report has been prepared by APEX Geoscience Ltd. (“APEX”) and Terrane Geoscience Inc. (“Terrane”), for the Issuer, Melius Metals Corp. (“Melius” or the “Company”), a Toronto, Ontario (ON), Canada, based, privately owned, junior mineral exploration company. Melius recently signed, on June 30th, 2021, an option agreement with Puma Exploration Inc. (“Puma”) that gives the Company an option to acquire an undivided 100 per cent (%) right, title and interest in the Turgeon Property (the “Property”) from Puma. The Turgeon Property is in northeast New Brunswick (NB) and lies over the boundary of Gloucester County with Restigouche County. The Turgeon Property is located approximately 30 kilometres (km) northwest of the City of Bathurst, NB, and 3 km southwest of the Village of Belledune, NB. The Turgeon Property covers a total area of 714.9 hectares (ha) and is defined by Tenure Blocks 1813 and 5594. The two tenure blocks are not contiguous, Tenure Block 5594 lies 2 km to the southeast of Tenure Block 1813.

The intent and purpose of this Technical Report is to provide a geological introduction to the Turgeon Property, to summarize historical work conducted on the Property from 1957 to 2018 and to provide recommendations for future exploration work programs. This Technical Report has been prepared in accordance with the Canadian Securities Administration’s (CSA’s) National Instrument 43-101 (NI 43-101) Standards of Disclosure for Mineral Projects and guidelines for technical reporting Canadian Institute of Mining, Metallurgy and Petroleum (CIM) “Best Practices and Reporting Guidelines” for disclosing mineral exploration. The effective date of this Technical Report is August 17th, 2021.

The authors of this Technical Report are Mr. Michael B. Dufresne M.Sc., P. Geol., P. Geo., of APEX, Dr. Stefan Kruse Ph.D., P. Geo., of Terrane Geoscience Inc., and Ms. Fallon T. Clarke, P. Geo., of APEX. The authors are fully independent of Melius and are Qualified Persons (QPs) as defined in NI 43-101. Mr. Dufresne takes responsibility for the preparation and publication of Sections 1, 2, 9 to 11 and 13 to 19 of this Technical Report. Mr. Dufresne is a Professional Geologist with the Association of Professional Engineers and Geoscientists of Alberta (APEGA), a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia (EGBC). Dr. Kruse takes responsibility for Section 12 and contributed to Sections 1, 4.5, 6, 7, 17 and 18 of this Technical Report. Dr. Kruse is a Professional Geologist with the Association of Professional Engineers and Geoscientists of New Brunswick, Professional Engineers and Geoscientists of Newfoundland and Labrador (PEGNL) and EGBC. Ms. Clarke is a Professional Geologist with the Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS). Ms. Clarke takes responsibility for the preparation and publication of Sections 3 to 8. Ms. Clarke contributed to Sections 1, 2, 9 to 11 and 13 to 19 of this Technical Report.

The Turgeon Property lies in a favorable geological setting within the Bathurst Mining Camp (BMC) in the northeastern part of the Appalachian Orogen. On a regional scale, the Property occurs within the Middle to Late Ordovician Fournier Supergroup of the Elmtree - Belledune Inlier. Recent geological mapping of the Property by McCutcheon

(2018) identified five major rock units within Tenure Block 1813, including: the Ordovician Madran Formation of the Pointe Verte Group, the Ordovician Turgeon Road Formation of the Devereaux Complex, an un-named unit, the Early Silurian Weir Formation and the Early Silurian La Vielle Formation. Tenure Block 5594 is underlain by the Black Point Gabbro of the Devereaux Complex.

Historical exploration conducted on the Property has included geological mapping and prospecting, geophysical surveys, soil geochemical surveys, trenching and drilling by several companies from 1958 to 2018. The historical exploration has led to the identification of six sulphide zones on the Property, including: the Beaver Pond Zone, the Power Line Zone, the Zinc Zone, the “48-49” Zone, the Dragon Zone and the Bern Zone. The Zinc Zone and the Power Line Zone are collectively referred to as the Turgeon Copper (Cu) – Zinc (Zn) Deposit and are situated on Tenure Block 1813.

From 1958 to 2000, approximately 150 drillholes were completed in the Turgeon Deposit area. Highlights from historical drill programs (provided as core length) include 12.4% Zn and 1.8% Cu over 8.7 m, as well as 10.7% Zn and 0.7% Cu over 10.1 m in one of the main mineralized zinc lenses. Copper highlights include 2.5% over 34.1 m in drillhole E82-77, 2.7% Cu over 36.2 m in drillhole E82-54 and 7.9% Cu over 7.5 m in drillhole E82-46.

Several historical mineral resource estimates (MRE’s) have been calculated for the Turgeon Deposit. The historical MRE’s discussed in this report were calculated prior to the implementation of the standards set forth in NI 43-101 and CIM Definition Standards for Mineral Resources and Mineral Reserves (May, 2014) and CIM Estimation of Mineral Resources & Mineral Reserves Best Practices Guidelines (November, 2019). The authors of this Technical Report have not done sufficient work to classify these historical estimates as a current mineral reserves or mineral resources. The authors have referred to these estimates as “historical resources” and the reader is cautioned not to treat them, or any part of them, as a current MRE. There is insufficient information available to properly assess the data quality, estimation parameters and standards by which the estimates were categorized. The historical MRE’s summarized below have been included to demonstrate the mineral potential of certain target mineralized zones at the Turgeon Property and to provide the reader with a complete exploration history of the Property. A thorough review of all historical data performed by a Qualified Person, along with additional exploration work to confirm results, would be required in order to produce a current MRE for the Turgeon Deposit.

Historical MRE’s reported by Esso Minerals Canada (Esso) include the following:

- In 1979, Esso estimated 500,000 tons (453,592 tonnes) of 2% Cu and 2% Zn for the Turgeon Deposit (Gashinski and Regan, 1982);
- In 1981, Esso estimated 1.3 million tonnes grading approximately 2% Cu and 2% Zn in mineralized pods and lenses for the Power Line Zone (Gashinski and Regan, 1982); and

- In 1983, Esso estimated 2.5 million tonnes of 1 to 1.5% Cu and 4 to 5% Zn for the Power Line and the Beaver Pond zones (Kettles, 1987).

In 1993, Phelps Dodge Corp. (Phelps Dodge) completed a recalculation of the approximate tonnage and grade of the Power Line, 100 m Zinc and “48-49” zones based upon different geometries and geological correlations than the historical estimate of 1.3 million tonnes at 2% Cu and 2% Zn by Esso in 1981 (Gashinski and Regan, 1982). Phelps Dodge estimated a total historical MRE of 450,000 tonnes of 1.5% Cu and 2.5% Zn in the main lens of the Power Line Zone, the 100 m Zinc Zone and the “48-49” Zone. The historical MRE reported in Thurlow (1993) is based on undiluted “geological reserves” of massive sulphide sections only and is considered to be accurate to +/-50%. The reader is cautioned that the use of the term “geological reserves” in the Phelps Dodge estimation of mineralized material is simply a reproduction of the original terminology used in Thurlow (1993) and does not reflect the current definition of the term “reserve” or imply that there are current reserves defined within the Property.

Puma completed 45 drillholes, totalling 12,232 m, on the Turgeon Property from 2008 to 2018. Early drilling by Puma at the Turgeon Deposit in 2008 and 2009 confirmed and expanded the mineralization at the Power Line Zone. Drilling by Puma in 2010 and 2011 tested geophysical anomalies identified in an InfiniTEM survey. Drillhole FT10-02 intersected high grade copper mineralization and a massive sulphide lens of zoned copper and zinc mineralization. Drilling by Puma in 2013 resulted in the discovery of the Dragon Zone, located approximately 200 m south of the Power Line and Zinc mineralized zones. The Dragon Zone discovery hole included a massive sulphide intersection with 169.5 m core length of 0.05% Cu, 0.12% Zn and 0.30 g/t Ag from 3 m depth, including 1.01% Cu and 0.78% Zn over 4 m core length from 151 m depth. A follow up drill program in 2014 intersected 293.2 m core length of 0.3% Zn from 48.8 m depth, including 5.66% Zn and 0.38% Cu over 6.8 m core length from 219.1 m depth.

Drilling by Puma in 2015 tested the extension of the Dragon Zone. The drill program intersected several intervals of semi-massive to massive sulphides and returned significant intervals of copper and zinc mineralization. The 2016 drill program tested targets identified by geophysical surveying and was designed to test for extensions of the Dragon Zone. Drillhole FT16-03 extended the mineralization at the Dragon Lens with a core interval of 7 m of massive to semi massive sulphides from 107.2 m, including 1.6% Cu and 0.8% Zn over 1.4 m core length. Drillhole FT16-05 intersected 15 m core length of massive to semi massive sulphide of pyrite and chalcopyrite from 234 m depth and 1.7 m core length of 1.5% Zn from a depth of 318 m. Finally, Puma’s 2018 drill program targeted potential mineralized extensions of known deposits and tested geophysical targets identified in the 2018 borehole electromagnetic (BHEM) and induced polarization (IP) geophysical surveys. Two of the drillholes returned significant Cu-Zn mineralization; however, no significant base or precious metal mineralization was intersected in the drillholes that tested the geophysical anomalies.

In addition to drilling, Puma completed six trenching programs from 2008 to 2018. The trenching programs include 41 trenches, totalling 2,715 linear meters of excavation, on Tenure Block 1813 and 9 trenches, totalling 1,840 m, on Tenure Block 5594. Trenching by Puma at the Bern Zone on Tenure Block 5594 identified and extended copper, silver (Ag) and zinc mineralization at the Bern Zone showing. Significant results from the channel samples collected at the Bern Zone are presented in Table 1.1. Additionally, significant results from rock grab samples collected at the Bern Zone include 9.18 g/t Ag, 5.78% Cu and 2.08% Zn from sample M045918 and 4.38 g/t Ag and 6.46% Cu from sample M045918.

Table 1.1. Significant results from trench work completed at the Bern Zone, Turgeon South (from Puma Exploration, 2021)

Trench Number	From (m)	To (m)	Length (m)	Cu (%)	Ag (g/t)
R14-01	3.0	6.0	3.0	1.2	1.1
Including	4.0	5.0	1.0	1.8	2.0
R14-02	1.7	8.7	7.0	1.1	1.8
Including	1.7	2.7	1.0	2.1	5.2
R14-03	1.9	6.9	5.0	1.0	1.4
R14-04	2.0	10.0	8.0	1.1	2.3
Including	3.0	7.0	4.0	1.6	2.5
Including	3.0	5.0	2.0	2.4	4.1
R14-05	1.0	9.0	8.0	1.5	2.4
Including	3.0	9.0	6.0	2.0	3.2
Including	3.0	5.0	2.0	3.0	5.0
R14-06	2.0	6.0	4.0	0.8	1.8
Including	4.0	6.0	2.0	1.1	2.9

Dr. Kruse conducted a site inspection of the Turgeon Property for data verification purposes on June 6th, 2021. The objectives of the site visit included: 1) verification of selected drillhole collar locations; 2) observation and sampling of historical showings in outcrop; 3) examination of drill core and observation of mineralized intercepts; and 4) collection of verification samples. Dr. Kruse observed and collected samples from several lenses of in-situ massive sulphide hosted in vesicular basalts. The mineralized outcrops were consistent with the previously reported descriptions of the Property geology. Rock grab samples collected from these massive sulphide horizons contained anomalous Ag, Cu and Zn consistent with the style and tenor of mineralization previously described on the Property. Dr. Kruse observed mineralized intercepts in historical core and verified that the intervals contained massive to semi-massive pyrite, chalcopyrite and sphalerite hosted in mafic volcanic rocks, consistent with logged descriptions of the core. Finally, Dr. Kruse compared select field-verified drill collars with database values. The comparison did not yield any significant discrepancies.

Based upon Dr. Kruse's site visit and the historical exploration work discussed in this Technical Report, it is the opinion of the authors of this Technical Report that the Turgeon Property is a "Property of Merit" warranting future exploration work.

The authors recommend a staged exploration program for the Turgeon Property. Warranted exploration for Stage 1 work includes drillhole database validation, prospecting, trenching, soil and rock sampling along with an airborne VTEM survey. Consideration should also be given to conducting a lidar survey to obtain an accurate digital terrain model. Stage 2 work should include confirmation and infill drilling in order to obtain fresh core for metallurgical samples, additional exploration drilling and the construction of an initial mineral resource estimate for the Power Line and the Zinc Zone, also known as the Turgeon Cu-Zn Deposit. The estimated cost for the Stage 1 exploration is CDN\$150,000. The Stage 2 work is dependent upon the results of the Stage 1 work and is estimated at a total cost of \$600,000 based upon 10 holes and 2,000 m of core drilling and includes costs for metallurgical work and mineral resource modelling.

Any future exploration work and/or subsequent technical reports should be prepared in accordance with guidelines established by the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (2019), CIM Definition Standards for Mineral Resources and Mineral Reserves (2014), and NI 43-101 Standards of Disclosure for Mineral Projects, Form 43-101F1 Technical Report and related consequential amendments. Future Technical Reports that capture any new exploration work conducted by Melius should discuss any significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information, mineral resource or mineral reserve estimates, or projected economic outcomes.

2 Introduction

2.1 Issuer and Purpose

This Technical Report has been prepared by APEX Geoscience Ltd. (“APEX”) and Terrane Geoscience Inc. (“Terrane”), for the Issuer, Melius Metals Corp., (“Melius” or the “Company”), a Toronto, Ontario (ON), Canada, based, privately owned, junior mineral exploration company. Melius recently signed, on June 30th, 2021, an option agreement with Puma Exploration Inc. (“Puma”) that gives the Company an option to acquire an undivided 100 per cent (%) right, title and interest in the Turgeon Property (the “Property”) from Puma.

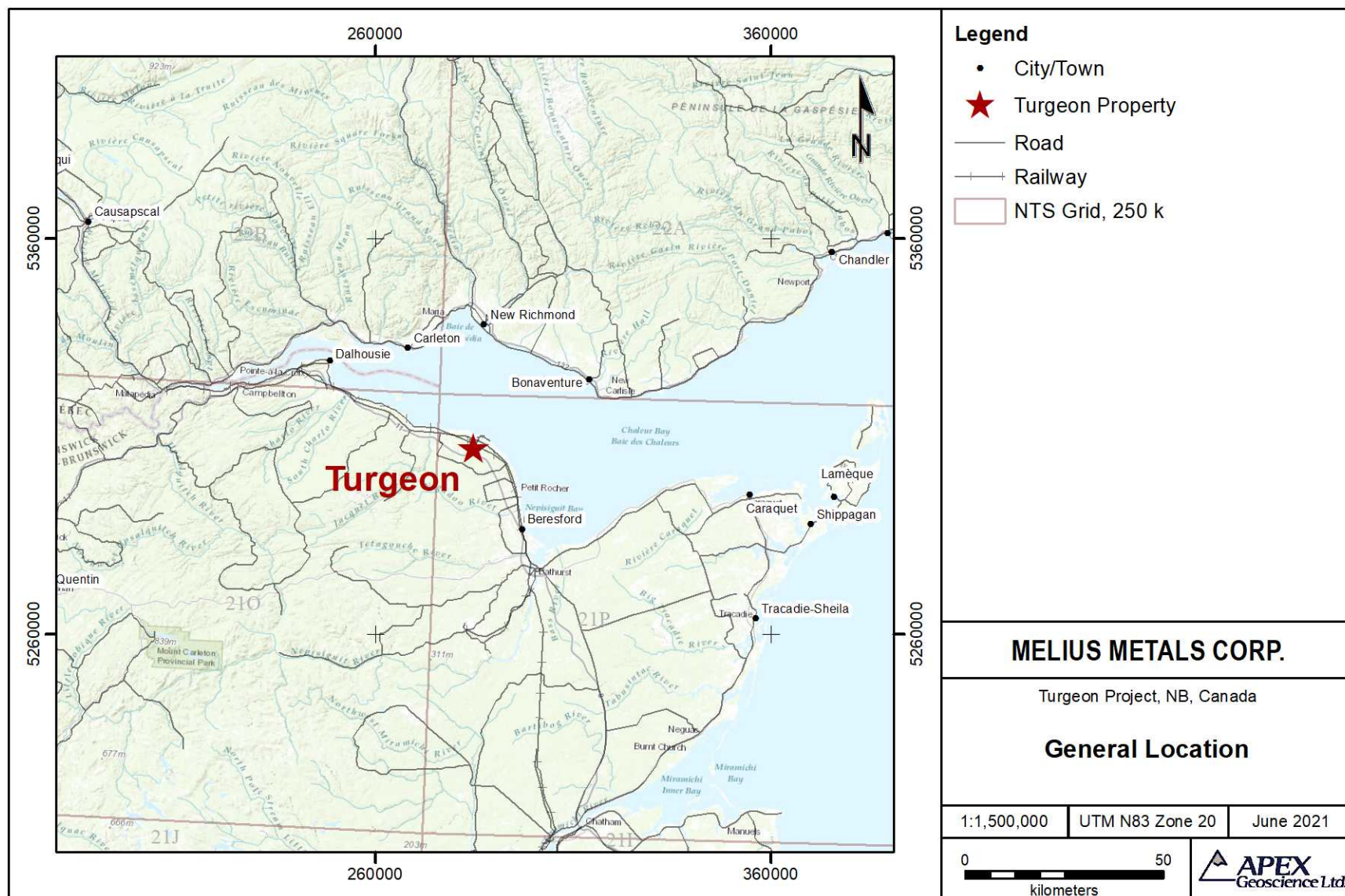
The Turgeon Property is in northeast New Brunswick (NB) and lies over the boundary of Gloucester County with Restigouche County. The Turgeon Property is located approximately 30 kilometres (km) northwest of the City of Bathurst, NB, and 3 km southwest of the Village of Belledune, NB (Figure 2.1). Melius has recently secured the right to acquire the Turgeon Property and has yet to conduct any exploration work. Accordingly, the intent of this geological introduction Technical Report is to provide: 1) a geological introduction to the Turgeon Property; 2) a summary of the historical exploration work conducted on the Property; and 3) recommendations for future exploration work programs.

The Technical Report has been prepared in accordance with the Canadian Securities Administration’s (CSA’s) National Instrument 43-101 (NI 43-101) Standards of Disclosure for Mineral Projects and guidelines for technical reporting Canadian Institute of Mining, Metallurgy and Petroleum (CIM) “Best Practices and Reporting Guidelines” for disclosing mineral exploration. The effective date of this Technical Report is August 17th, 2021.

2.2 Authors and Site Inspection

The authors of this Technical Report are Mr. Michael B. Dufresne M.Sc., P. Geol., P. Geo., of APEX, Dr. Stefan Kruse Ph.D., P. Geo., of Terrane and Ms. Fallon T. Clarke, B.Sc., P. Geo., of APEX. The authors are fully independent of Melius and are Qualified Persons (QPs) as defined in NI 43-101. The CIM defines a QP as “an individual who is a geoscientist with at least five years of experience in mineral exploration, mine development or operation or mineral project assessment, or any combination of these; has experience relevant to the subject matter of the mineral project and the technical report; and is a member or licensee in good standing of a professional association.” The authors have been involved in all aspects of mineral exploration and mineral resource estimations for precious and base metal mineral projects and deposits in Canada and internationally.

Figure 2.1. General location of the Turgeon Property



Mr. Dufresne takes responsibility for the preparation and publication of Sections 1, 2, 9 to 11 and 13 to 19 of this Technical Report. Mr. Dufresne is a Professional Geologist with the Association of Professional Engineers and Geoscientists of Alberta (APEGA; membership number 48439), a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia (EGBC; membership number 37074) and has worked as a mineral exploration geologist for more than 35 years since his graduation from university. Mr. Dufresne has been involved in all aspects and stages of mineral exploration in North America, including volcanogenic massive sulphide (VMS) type base metal exploration in western and eastern Canada.

Dr. Kruse takes responsibility for Section 12 and contributed to Sections 1, 4.5, 6, 7, 17 and 18 of this Technical Report. Dr. Kruse has worked continuously as a geologist for more than 20 years since his graduation from university and has been registered as a Professional Geologist with the Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB; membership number M6806) since 2009, Professional Engineers and Geoscientists of Newfoundland and Labrador (PEGNL; membership number 05330) and the Engineers and Geoscientists of British Columbia (EGBC; membership number 206205). Dr. Kruse is co-founder of Terrane Geoscience Inc., and a structural geologist specializing in structural and tectonic controls of orogenic and magmatic gold systems.

Ms. Clarke is a Professional Geologist with the Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS; membership number 27238) and has worked as a geologist for more than nine years since her graduation from the University of Saskatchewan. Ms. Clarke is a Qualified Person and has experience with exploration for precious and base metal deposits of various deposit types in North America and Australia. Ms. Clarke takes responsibility for the preparation and publication of Sections 3 to 8. Ms. Clarke contributed to Sections 1, 2, 9 to 11 and 13 to 19 of this Technical Report.

Dr. Kruse conducted a site inspection of the Turgeon Property for data verification purposes on June 6th, 2021. The objectives of the site visit included:

- Verification of selected drillhole collar locations.
- Observation and sampling of historical showings in outcrop.
- Examination of drill core and observation of mineralized intercepts.
- Collection of verification samples.

In the course of the Property tour, several lenses of in-situ massive sulphide hosted in vesicular basalts were observed, consistent with the previously reported descriptions of the Property geology. Rock grab samples collected from these massive sulphide horizons contained anomalous Ag, Cu and Zn consistent with the style and tenor of mineralization previously described on the Property.

Core from mineralized intervals in selected mineralized holes from the 2018 drill program contained massive to semi-massive pyrite, chalcopyrite and sphalerite hosted in mafic volcanic rocks, consistent with logged descriptions of the core. Verification sampling of core demonstrated reasonable agreement between the original assay results and verification sample results.

Comparison of selected field-verified drill collars with database values did not yield any significant discrepancies.

2.3 Sources of Information

A complete bibliography of all references cited in this Technical Report is presented in Section 19, References. The authors reviewed surface geochemistry, geophysical interpretations and drill results from numerous assessment reports filed as reports of work with the New Brunswick Department of Natural Resources and Energy Development, Mineral and Petroleum Branch (e.g., Baldwin (2000); Bernier and Gagné (2012a;b); Bernier and Richer (2014a;b); Bernier and Richer (2015); Bernier and Gagné (2016); Broome (1981); Burton (1992); Gagné (2010); Gashinski (1982); Gashinski and Regan (1982); Lloyd (2012a;b); Martin (2018); McConnell (1992); Paterson (1974); Porter (1989); Robillard (2008;2009); Thurlow (1993) and Wilson (1978)). Government publications, journal manuscripts, news releases, and internal reports were used to corroborate background geological information regarding the geological setting and mineral deposit potential of the Turgeon Property and area. Selected references for these sources of information categories include:

- Journal manuscripts (e.g., Barr and White (1996); Barrie and Hannington (1999); Colman-Sadd et al. (1992); Franklin et al. (2005); Galley et al. (2007); Lalonde (2014); Lalonde and Beaudoin (2015); Piercey (2010); van Staal et al. (1996); van Staal et al. (2009); Williams (1995a;b); Wilson et al. (2015); Winchester et al. (1992) and Zagorevski et al, (2011)).
- News releases (e.g., Puma (2011; 2013; 2015; 2016; 2017; 2019; 2021)).
- Internal reports (e.g., Lalande (2010); Mai (2011); McCutcheon (2018); Tshimbalanga (2015)).

The authors have reviewed all government and miscellaneous reports. Mr. Dufresne, Dr. Kruse and Ms. Clarke, the authors, have deemed that these reports and information, to the best of their knowledge, are valid contributions. The information was used as background information to provide a geological introduction to the Turgeon Property. The senior author takes ownership of the ideas and values as they pertain to this current Technical Report.

The authors verified the status of the mineral claims in the name of Puma Exploration Inc. as of July 30th, 2021, using the New Brunswick, Department of Natural Resources and Mineral Development on-line mineral claim administration program, NB e-CLAIMS.

2.4 Units of Measure

With respect to units of measure, unless otherwise stated, this Technical Report uses:

- Abbreviated shorthand consistent with the International System of Units (International Bureau of Weights and Measures, 2006);
- ‘Bulk’ weight is presented in both United States short tons (“tons”; 2,000 lbs or 907.2 kg) and metric tonnes (“tonnes”; 1,000 kg or 2,204.6 lbs.);
- Geographic coordinates are projected in the Universal Transverse Mercator (UTM) system relative to Zone 20 of the North American Datum (NAD) 1983; and
- Currency in Canadian dollars (CDN\$), unless otherwise specified (e.g., U.S. dollars, US\$, Euros, €).

3 Reliance of Other Experts

This Technical Report was prepared by the authors for Melius. The authors are not qualified to provide an opinion or comment on issues related to legal agreements, royalties, permitting and environmental matters. Accordingly, the authors of this Technical Report disclaim portions of the Technical Report particularly in Section 4, Property Description and Location. The authors have relied upon information provided by Jean-Francois Perras on behalf of Melius and Marcel Robillard on behalf of Puma regarding information on legal agreements, royalties, mineral claims, environmental matters and access to the Property, as described in Section 4 of this Technical Report. Jean-Francois Perras and Marcel Robillard confirmed via e-mail correspondence dated July 7, 2021, that there are no environmental liabilities or other known significant factors, or risks related to the Turgeon Property that may affect access, title or the right or ability to perform work on the Turgeon Property.

The authors relied entirely on background information and details regarding the nature and extent of Mineral Tenure (in Section 4.1) provided by Melius on June 1, 2021. On June 17, 2021, the authors confirmed the claims are active and in good standing as shown on the New Brunswick Department of Energy and Mines web site (<https://nbeclaims.gnb.ca/nbeclaims/page/home.jsf>).

4 Property Description and Location

4.1 Description and Location

The Turgeon Property is in northeast New Brunswick and lies over the boundary of Gloucester County with Restigouche County. The Turgeon Property is located approximately 30 km northwest of the City of Bathurst, NB, and 3 km southwest of the

Village of Belledune, NB. The Turgeon Property covers a total area of 714.9 ha and is defined by Tenure Blocks 1813 and 5594. The two tenure blocks are not contiguous, Tenure Block 5594 is situated 2 km to the southeast of Tenure Block 1813. Tenure Block 1813 encompasses 31 contiguous Mineral Claims that collectively encompass 671.5 ha and Tenure Block 5594 encompasses 2 contiguous Mineral Claims that collectively encompass 43.4 ha (Figures 4.1 and 4.2; Table 4.1). The Mineral Claims of Tenure Block 1813 were issued on August 31, 1984 and are set to expire on August 31, 2022. The Mineral Claims of Tenure Block 5594 were issued on May 22, 2009 and are set to expire on May 22, 2022. The Mineral Claims are designated as active and in good standing.

The Turgeon Property is in National Topographic System Map Sheet 21P/13W within North American Datum 83, UTM Zone 20. In UTM N83 Z20 coordinates, the centre of Tenure Block 1813 of the Turgeon Property is: 284724 m Easting and 5306517 m Northing. In UTM N83 Z20 coordinates, the centre of Tenure Block 5594 of the Turgeon Property is centered at: 285832 m Easting and 5302905 m Northing.

4.2 Agreements and Royalties

The registered owner of the Mineral Claims comprising the Turgeon Property is Puma. The acquisition of the Turgeon Property is part of a larger deal with Puma that includes the acquisition of the Chester Property, the Legacy Project, the Murray Brook West Project and the Brunswick Cards Project, all in the Bathurst area of New Brunswick.

Puma (Puma Exploration Inc. news release dated July 6, 2021) has granted Melius the sole and exclusive right and option to acquire 100% of Puma's respective rights and interest in the Turgeon Property, the Chester Property and the Legacy, Murray Brook West and Brunswick Cards Projects. The option includes the terms below:

- a) Melius will make the following payments to Puma:
 - (i) Issuance of 6,000,000 Melius Shares to Puma at a deemed price of \$0.10 per share on closing of the Proposed Transaction (the "Closing Shares");
 - (ii) Issuance of 6,000,000 Melius Shares to Puma at a deemed price of \$0.10 per share prior to the Listing (the "Listing Shares");
 - (iii) \$2,300,000 payable at Melius' option in cash or Melius shares as follows:
 - \$300,000 on or before the first (1st) anniversary of the Listing;
 - \$1,000,000 on or before the second (2nd) anniversary of the Listing; and
 - \$1,000,000 on or before the third (3rd) anniversary of the Listing.

The period between the execution of the Definitive Agreements and the third (3rd) anniversary requirements are fulfilled is hereinafter referred to as the "Option Period".

Figure 4.1. Mineral Tenure Blocks 1813 and 5594 of the Turgeon Property

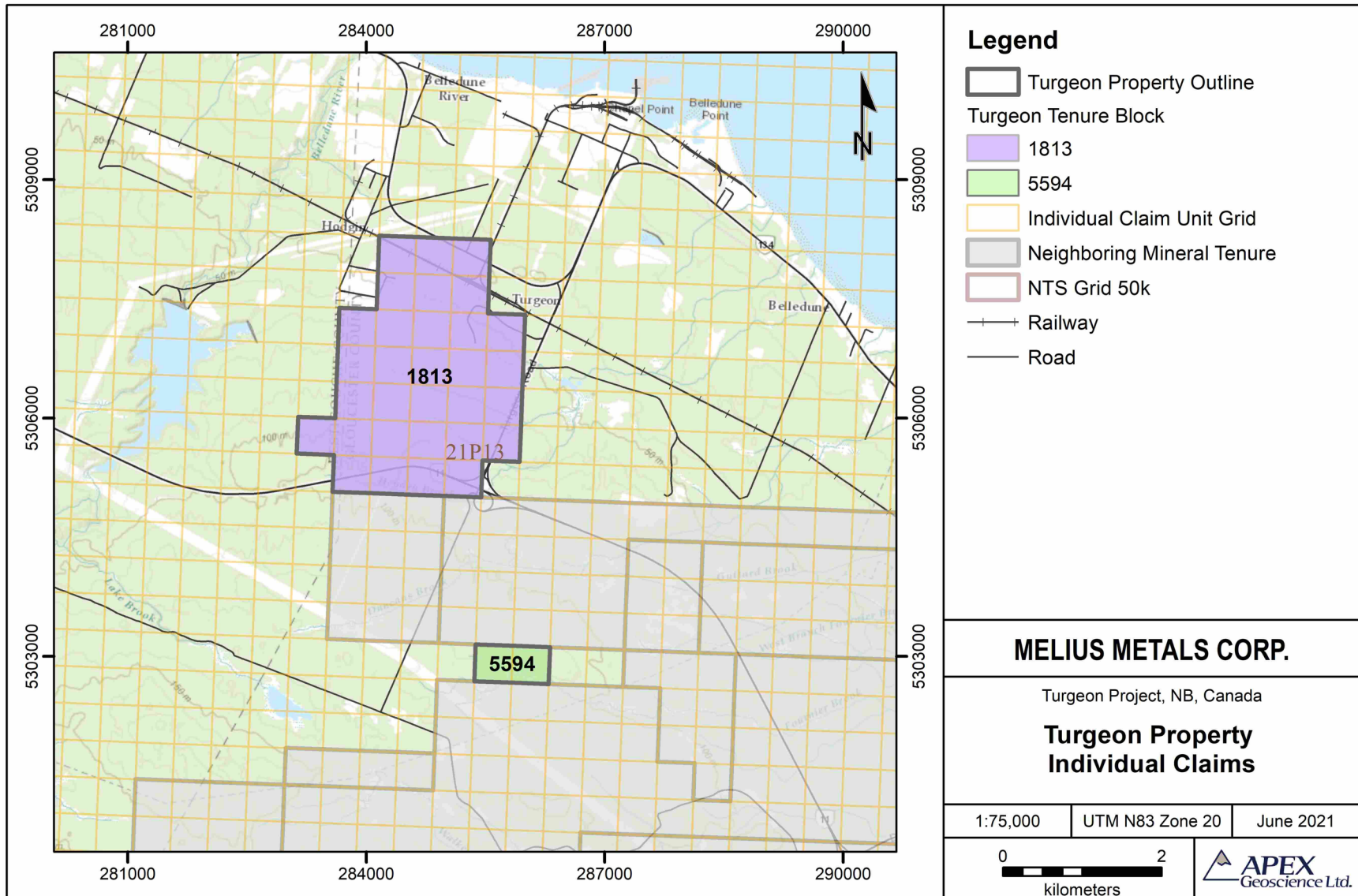


Figure 4.2 Mineral claims within Mineral Tenure Blocks 1813 and 5594

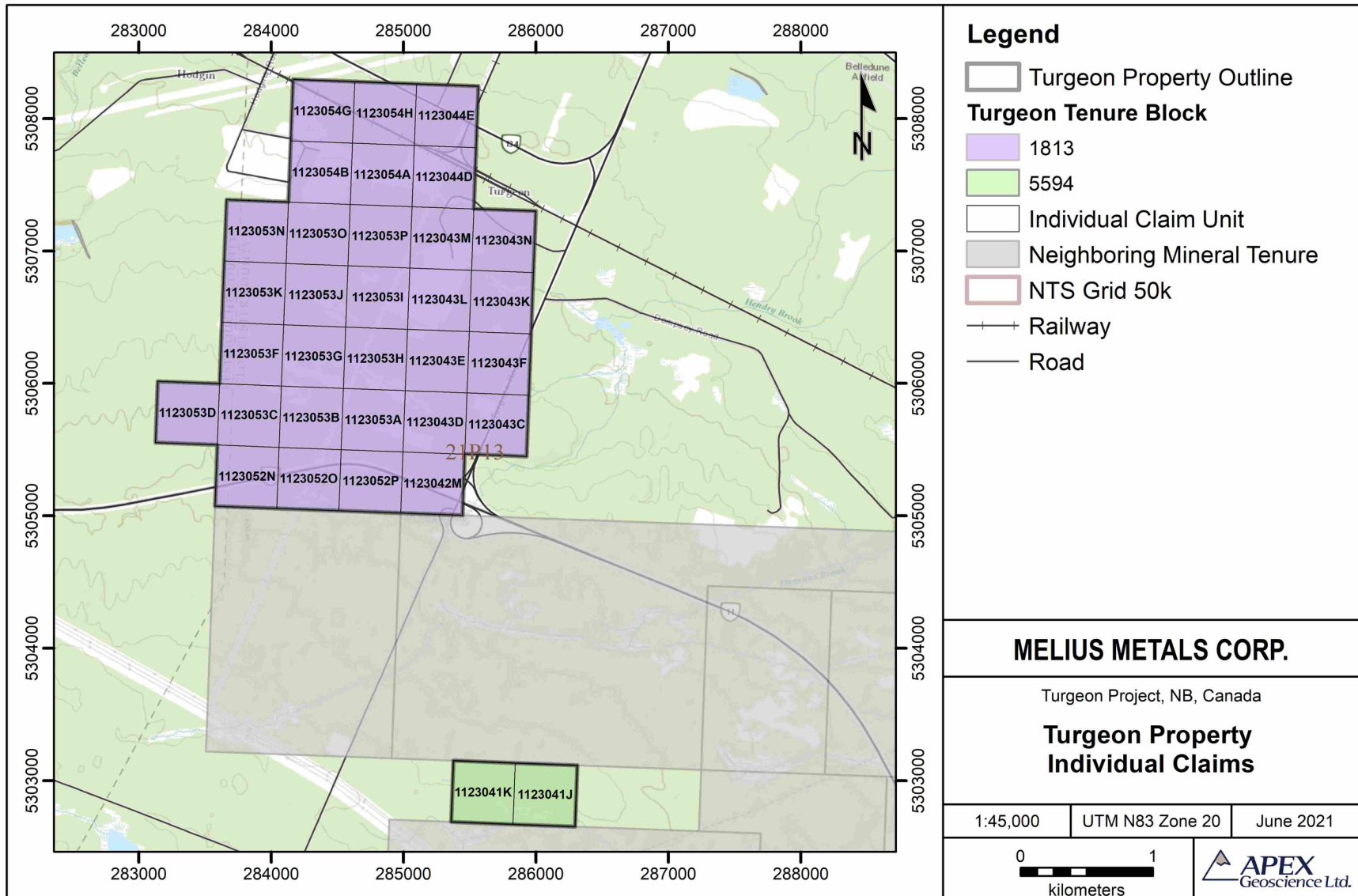


Table 4.1. Mineral tenure block and individual claim descriptions and status for the Turgeon Property
A) Summary of the mineral tenure block

Tenure Block Number ID	UTM N83 Z20 Easting Unit Centroid	UTM N83 Z20 Northing Unit Centroid	Claim type / sub-type	Status	Area (hectares)	Issue date	Expiry date	Owner
1813	284724	5306517	Mineral / Claim	Active	671.5	31-Aug-84	31-Aug-22	Puma Exploration
5594	285832	5302905	Mineral / Claim	Active	43.4	22-May-09	22-May-22	Puma Exploration

B) Summary of the individual claim units in Tenure Block 1813

Claim Unit Key ID	UTM N83 Z20 Easting Unit Centroid	UTM N83 Z20 Northing Unit Centroid	Grid number	Section number	Area (hectares)
1123042 M	285220	5305243	1123	42	21.667
1123052 N	283818	5305295	1123	52	21.667
1123052 O	284285	5305278	1123	52	21.668
1123052 P	284753	5305260	1123	52	21.667
1123043 C	285704	5305688	1123	43	21.666
1123043 D	285237	5305706	1123	43	21.666
1123043 E	285254	5306169	1123	43	21.664
1123043 F	285722	5306151	1123	43	21.664
1123043 K	285739	5306614	1123	43	21.662
1123043 L	285272	5306632	1123	43	21.662
1123043 M	285289	5307095	1123	43	21.660
1123043 N	285756	5307077	1123	43	21.660
1123053 A	284770	5305723	1123	53	21.666
1123053 B	284302	5305741	1123	53	21.665
1123053 C	283835	5305758	1123	53	21.666
1123053 D	283368	5305776	1123	53	21.665
1123053 F	283852	5306221	1123	53	21.663
1123053 G	284320	5306204	1123	53	21.664
1123053 H	284787	5306186	1123	53	21.664
1123053 I	284804	5306649	1123	53	21.663
1123053 J	284337	5306667	1123	53	21.662
1123053 K	283870	5306684	1123	53	21.662
1123053 N	283887	5307147	1123	53	21.660
1123053 O	284354	5307130	1123	53	21.660
1123053 P	284822	5307112	1123	53	21.661
1123044 D	285306	5307558	1123	44	21.659
1123044 E	285323	5308021	1123	44	21.658
1123054 A	284839	5307575	1123	54	21.659
1123054 B	284372	5307593	1123	54	21.658
1123054 G	284389	5308056	1123	54	21.656
1123054 H	284856	5308038	1123	54	21.657
Total hectares					671.539

C) Summary of the individual claim units in Tenure Block 5594

Claim Unit Key ID	UTM N83 Z20 Easting Unit Centroid	UTM N83 Z20 Northing Unit Centroid	Grid number	Section number	Area (hectares)
1123041 K	285601	5302910	1123	41	21.68
1123041 J	286069	5302893	1123	41	21.68
Total hectares					43.35

A local prospector, Mr. Andrew Baldwin, retains a Net Smelter Returns (NSR) royalty of 2% for gold and silver and 1% on other metals with Puma holding the right to buy back the entire NSR for \$1 million in cash. Melius will have the same option as Puma and will be able to buy back the entire NSR for \$1,000,000 in cash.

To the knowledge of the authors of this Technical Report, there are no other royalties or other encumbrances regarding the Mineral Claims that comprise the Turgeon Property.

4.3 Tenure Maintenance

In New Brunswick, the holder of the mineral claim has the right of free access by any reasonable means to/from the claim area, and the exclusive right to prospect for minerals and carry-on mining in or on the claim area and to remove minerals from the claim area for purposes of sampling and testing (Mining Act, SNB 1985, c M-14.1).

Retention of claims in good standing from year to year requires payment of a renewal fee for each claim plus submission of documentation to the government describing work programs and associated costs applicable to the Property during the reporting year. Table 4.2 summarizes the work commitments and renewal fees.

Table 4.2 Mineral assessment work requirements in New Brunswick.

Year of issue ¹	Required work per claim (CDN\$)	Renewal period	Renewal fees per claim (CDN\$)
Year 1	\$100	1 to 5	\$10.00
Year 2	\$150	6 to 10	\$20.00
Year 3	\$200	11 to 15	\$30.00
Year 4	\$250	16 and more	\$50.00
Years 5 to 10	\$300		
Years 11 to 15	\$500		
Years 16 to 25	\$600		
Years 26 and over	\$800		

¹ Per Mineral Claim unit and per year

Reports of Work (mineral assessment reports) are received and processed by the New Brunswick Department of Natural Resources (DNR) and Energy Development, Mineral and Petroleum Branch (NBDNRED). The reports are kept for a confidential period

of 2 years from the date of submission. The reports are made public once the confidential period is finished or once all claims in a report have lapsed or were surrendered. The work can be performed on any one or more claims. Mineral claims must be contiguous, are held in the name of one person or company and have the same recording date.

4.4 Permitting

The Company will be required to obtain the following permits and licences to conduct mineral exploration in New Brunswick:

- A prospecting licence is required to prospect or register mineral claims. Application is made through NB e-CLAIMS and is valid for a lifetime.
- Notification requirements prior to performing exploration work and general prospecting must notify private landowners; Recorder, DNR; District Forest Ranger, DNR; Work Safe NB; and Offices of the Recorder (Bathurst in this case).
- Prior to commencing work that would cause actual damage to or interference with the use and enjoyment of Crown lands; the following procedures must be followed:
 - Submit to the Recorder the completed Notice of Planned Work on Crown Land-Form 18.1, listing the proposed work and enclosing a map showing the area of work and the claims.
 - The Recorder will review the submitted form and give permission on behalf of the DNR for the work to proceed.
 - In some cases, the Recorder will advise the person planning the work that a reclamation plan and security are required before the work commences.
 - Obtain the consent of the lessee if work is done on a Crown land lease.
- A lease or a right to occupy as issued under the *Crown Lands and Forests Act* is required to erect a permanent camp, building or other structure on Crown Land.
- Review the Mining Act for standard conditions for mineral exploration.
- Claim holders wishing to conduct advanced exploration on mineral claims may require additional approvals beyond a Form 18 under the *Mining Act* depending on the scope of work involved.

Anyone with a Mineral Claim in New Brunswick who has decided to produce minerals from the Mineral Claim can apply for a Mining Lease. A Mining Lease allows mineral production and requires an application fee, rent per hectare per of \$6.00 and a minimum dollar value of work required per hectare per year of \$60.00. Guides to the Mine Approval Process, and Development of a Mining and Reclamation Plan are provided by the DNRED(https://welcomenb.ca/content/gnb/en/departments/erd/energy/content/minerals/content/Minerals_exploration.html).

4.5 Environmental Liabilities and Significant Factors

The QPs are not aware of any environmental liabilities, or any other known significant factors or risks related to the Turgeon Property that may affect access, title or the right or ability to perform work on the Turgeon Property. Roy's Quarry, an aggregate quarry owned by Roy's Trucking and Landscaping Ltd. lies in proximity to the Power Line Zone. The Power Line Zone can be accessed using the quarry entrance; however, alternate access to the Power Line Zone is available via historical drill access roads within the Property. The aggregate quarry within Tenure Block 1813 holds a separate permit for quarry activities and will not affect future development of the Power Line Zone.

If the Company were to advance the Turgeon Property to Pre-Feasibility Study or Feasibility Study, the Company would have to consider preparing a comprehensive EIS to ensure the project is considered in a careful and precautionary manner such that the project does not cause significant adverse environmental effects.

There are no other significant factors or risks that the authors are aware of that would affect access, title or the ability to perform work on the Property.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Accessibility

The Turgeon Property is in northeast New Brunswick and lies over the boundary of Gloucester County with Restigouche County (Figure 5.1). The Turgeon Property is located approximately 30 km northwest of the City of Bathurst, NB, and 3 km southwest of the Village of Belledune, NB. The Turgeon Property can be accessed from Belledune, NB, by travelling northwest on Main Street/New Brunswick Route 134 for 5 km to Turgeon Road. Travel south on Turgeon Road for approximately 1.5 km to reach the eastern Property boundary. To access the northern portion of the Property, travel south on Turgeon Road for approximately 700 m and turn westward on Belledune Road. Belledune Road transects the northern portion of the Property and leads to Roy's Quarry, an aggregate quarry owned by Roy's Trucking and Landscaping Ltd. The Turgeon Property Powerline Zone lies in proximity to Roy's Quarry and can be accessed using the quarry entrance; however, alternate access to the Powerline Zone is available via historical drill access roads within the Property.

Alternately, New Brunswick Route 11 transects the southern portion of the Property and can be reached by travelling south on Turgeon Road for 2.5 km then following the New Brunswick Route 11 north ramp. Historical drill access roads stem from the power transmission line and provide suitable access to the Turgeon Property showings.

The Canadian National (CN) Railway passes through the northern portion of the Turgeon Property and serves the Port of Belledune which is located approximately 3 km northeast of the Property. The Port of Belledune is an artificial, year-round, deep-sea

harbour strategically located near the mouth of the St. Lawrence River on the south shore of the Bay of Chaleur, about 40 km north of Bathurst, NB. The Port of Belledune has three terminals that serve a vast industrial park linked to Canada's road and rail networks, and as such, has good growth potential. The Port serves a wide variety of regional manufacturing and resource-extraction industries. In 2015, the Port of Belledune handled over 1.7 million tonnes of a variety of bulk and breakbulk cargo ranging from metallurgical coke to wood pellets and aggregate.

Bathurst is the nearest major centre in the region and can be accessed by plane, train, sea and road. The Bathurst Regional Airport is about 10 minutes by vehicle west of Bathurst on Highway 180 and has current air service with Air Canada. The Bathurst Regional Airport is managed by the Northern New Brunswick Airport Authority. The regional airport accommodates approximately 50,000 passengers a year. Future developments for the Airport include an expansion of the existing terminal building and a runway extension to 1,798 m, which will allow for unrestricted use of the Dash-8 aircraft; additionally, it will accommodate larger aircraft such as the Q-400.

Bathurst is also served by Via Rail's Montreal-Halifax train, the Ocean. The Bathurst Station is a Via Rail staffed station located at Kilometre 842 (from the Montreal Central Station). The Ocean is the oldest continuously operated named passenger train in North America. The rail line is important to growing local industries that rely on efficient and reliable freight to move products interstate and to ports and depots.

5.2 Site Topography, Elevation and Vegetation

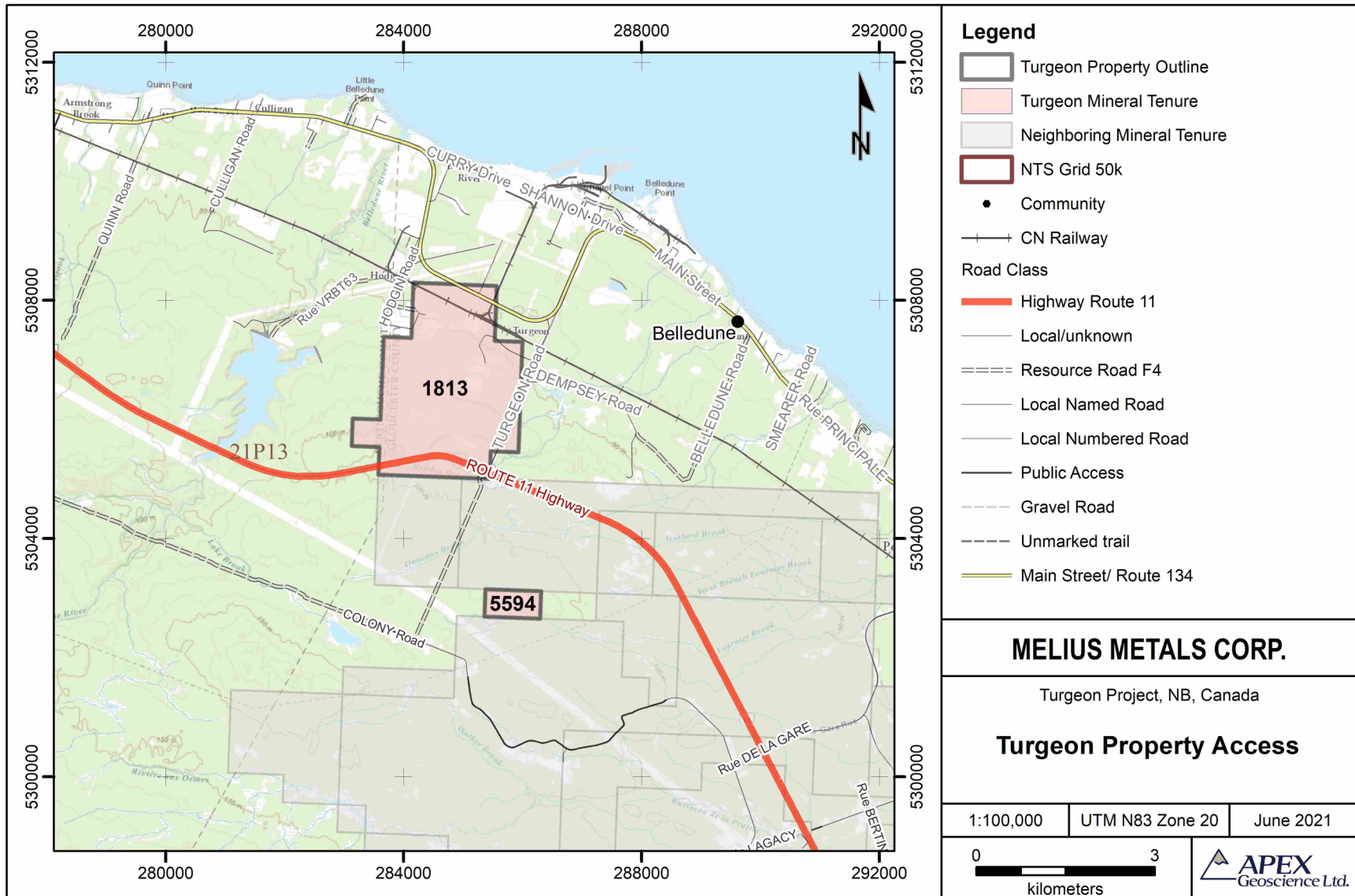
Physiography at the Turgeon Property is characterized by low topographic relief. The highest elevation point within the Property occurs in the southwest corner of the claim block, with a maximum elevation of 100 m above sea level (m asl), sloping gently to 40 m asl in the northern portion of the Property. The vegetation of the Property is characterized by a diversity of habitats and forest class ages consistent with the Acadian Forest. The forest habitats are dominated by mixed wood and coniferous forest followed by deciduous trees.

5.3 Climate

Despite its coastal position on the Atlantic Ocean, Bathurst experiences a warm-summer humid continental climate (Köppen climate classification Dfb) with seasonal differences in temperature. Summers are warm and humid. Winters are often cold, windy and snowy. Spring and Fall bring chilly to warm temperatures. During winter, snow generally stays on the ground from December to April.

The warmest month with the highest average high and low temperature is July (24°C and 13°C; Figure 5.2a). The month with the lowest average high and low temperature is January (-6°C and -16°C).

Figure 5.1. Turgeon Property access

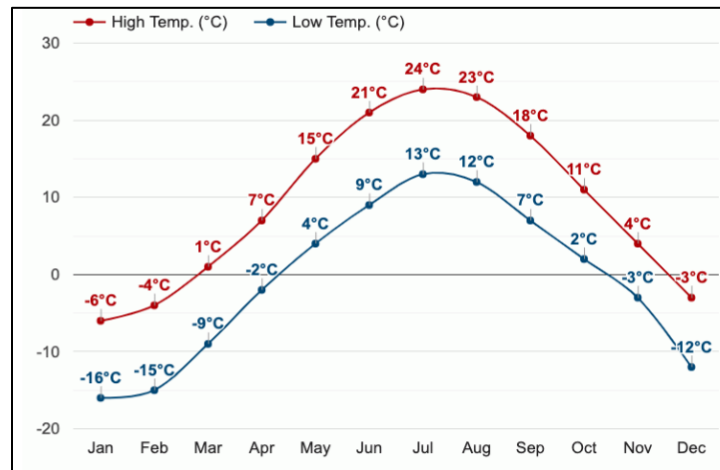


Throughout the year, there are 146 rainfall days with 1,027 mm of average precipitation accumulated (Figure 5.2b). The wettest month occurs in December (106 mm). The driest month is February (63 mm). Months with the highest number of rainy days occur in May, June, July, August, and December (13 days). The month with the lowest number of rainy days is February (10 days).

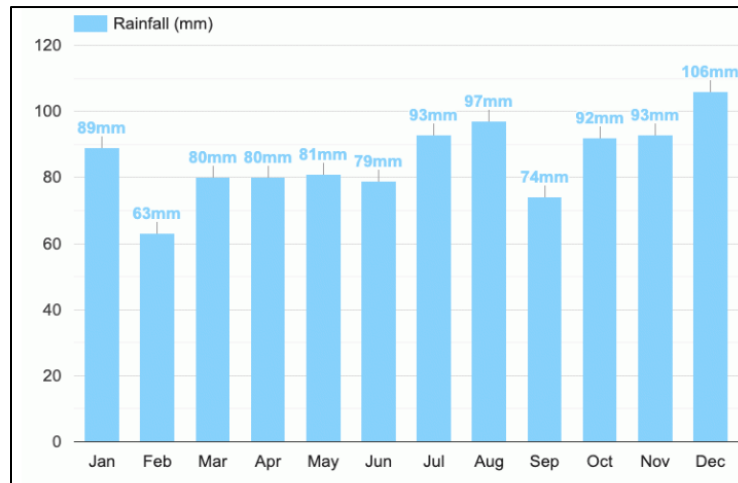
June typically has the longest days with average daylight of 15.9 hours. December has the shortest days with average daylight of 8.5 hours. June and July have the most sunshine with 8 hours of average sunshine. November and December have the least sunshine are with 3 hours of average sunshine.

Figure 5.2 Average temperature and rainfall in Bathurst, NB

A) Average temperature in Bathurst, NB



B) Average rainfall in Bathurst, NB



5.4 Local Resources and Infrastructure

Gloucester County in the northeastern corner of New Brunswick has a 2016 population listed at 78,444 inhabitants over an area of 4,744 km². Fishing, mining, and forestry are the major industries in the County. The eastern section of the County is known for its Acadian culture. Bathurst is officially bilingual with Mi'gmaq, French, Irish, Scottish, and English heritage. Most of the population is fluid in French with the remaining speaking predominantly English or French and English. There are 19 communities within Gloucester County. The Eel River Bar Ugpi'ganjig First Nations Reservation is located approximately 50 km to the northwest of Belledune and hosts a population of 733 Mi'gmaq community members (Ugpi'ganjig, 2019). The Pabineau 11 First Nations Reservation in the parish of Bathurst is located approximately 45 km to the south of Belledune and covers an area of 4.92 km² with a population of about 134.

Bathurst is the seat of government of Gloucester County, New Brunswick, and is at the estuary of the Nepisiguit River. The city has a 2016 population of 11,897. The economy in the Bathurst region is primarily focused on mining, fishing, and forestry. Other sectors include tourism, phone call centres, manufacturing, and provincial and federal government. The service sector is Bathurst's largest employer. Bathurst is serviced by one health care facility, Chaleur Regional Hospital.

The Bathurst Mining Camp (BMC) provided jobs to the regional economy for nearly 50-years. Lead, zinc, and copper production in the Bathurst area includes:

- The Brunswick 6 Mine operated by the Brunswick Mining and Smelting Company between 1966 and 1983.
- The Brunswick 12 Mine was operated by Xstrata between 1964 and 2013.

As a result of the Xstrata mine closure, unemployment in the Bathurst area soared to over 20% in northern New Brunswick in March 2013.

The BMC is centred in the Nepisiguit River valley near Bathurst. The camp hosts approximately 45 known volcanogenic massive sulfide (VMS) deposits. Although the primary commodity is zinc, the massive-sulphide mineralized bodies have produced lead (Pb), zinc (Zn), copper (Cu), silver (Ag), gold (Au), bismuth (Bi), antimony (Sb) and cadmium (Cd). Some of the mineralized material was smelted at a facility in Belledune, which is now owned by Glencore Zinc. In the 2010's, the smelter was used to extract silver from its imported silver lead concentrates, and in 2011 produced 400 mt of pure silver valued at \$448M. In 2019, Glencore Zinc announced the closure of the Brunswick Smelter due to changing global markets and the completion of mining at the Brunswick Mine six years earlier (Glencore Zinc, 2019).

The Smurfit-Stone paper mill, which was formerly part of the Power Corporation of Canada empire, ceased operations in 2009, and the plant is in process of being demolished. The 225 acre of industrial lands was sold in January 2010 to the Green

Investment Group partners. Their goal is to create innovative, alternative energy projects that enhance the Bathurst region and Northern New Brunswick.

GDF Suez operates the inland Caribou Wind Park energy farm approximately 70 km west of Bathurst under a power purchase agreement scheme contracted with NB Power, with a nominal power output of 100MW.

To conclude, the Turgeon Property area has a rich history of exploration and metallic mineral mining. The region has experience in delegating sufficiency of surface rights for mining operations, the availability and sources of power, water, and mining personnel.

The Project can be accessed year round. Most exploration activities associated with fieldwork and drilling can likely be conducted year round, although there may be periods in December to March, where snow conditions may temporarily impede fieldwork.

In the opinion of the authors, the Property is of sufficient size to accommodate potential exploration and mining facilities, including waste rock disposal and processing infrastructure. There are no other significant factors or risks that the authors are aware of that would affect access or the ability to perform work on the Property.

6 History

6.1 Introduction and Previous Ownership

The authors conducted a search of mineral assessment reports via the New Brunswick Natural Resources and Energy Development Mineral Report of Work search tool (<http://dnr-mrn.gnb.ca/ParisWeb/AssessmentReportSearch.aspx>). Search criteria included NTS map sheet (21P/13W), tenure block numbers (1813 and 5594) and/or several Property names for which the Turgeon Property has been historically labelled (e.g., Belledune, Belledune-Heron, Heron Prospect, Heron Option, Hodgins, Power Line Zone, Turgeon/Belledune, Turgeon Deposit, Turgeon Station and Turgeon Sud). The results of the historical exploration work search are presented in Table 6.1.

Numerous exploration programs have been conducted in the Property area since the discovery of copper mineralization at the Beaver Pond showing in 1957. Historical exploration on the Turgeon Property was completed by Geological Survey of Canada (1950), M.J. Boylen Engineering (1958), Noranda Mines Ltd. (1958), New Brunswick Dept. of Mines (1959), Noranda Mines Ltd. (1959), Rio Tinto (1960), Industrial Minerals Exploration Co. (1964-1967), Heron Mines Ltd. (1971-1977), Esso Minerals Canada (Esso) (1978-1982), Heron Mines Ltd. (1988-1989), Phelps Dodge Corp. (1991-1992), Phelps Dodge Corp. and Heron Mines Ltd. (1992-1993), Heron Mines Ltd. (2000-2001) and Puma (2008-2018). The historical work conducted on the Property included geological mapping and prospecting, geophysical surveys, soil geochemical surveys, trenching and drilling.

Several mineral deposits/occurrences are situated within the Turgeon Property and include, from north to south, Turgeon, Turgeon Dragon Zone, Turgeon Beaver Pond Zone, Turgeon South and Bern Zone (Figure 6.1). These mineral occurrences are recorded in the New Brunswick Mineral Occurrence Database, which can be viewed at <http://dnr-mrn.gnb.ca/MineralOccurrence/default.aspx?componentID=28>.

6.2 Surface Exploration and Trench Work

Several phases of surface exploration, including geological mapping, prospecting, geochemical sampling and trenching programs have been completed at the Turgeon Property (Table 6.1).

From 2008 to 2018, 41 trenches, totalling 2,715 linear meters of excavations were completed on Tenure Block 1813 and 9 trenches, totalling 1,840 linear metres of excavation, were completed on Tenure Block 5594.

The historical surface exploration and trench work completed by Puma at the Turgeon Property in Tenure Blocks 1813 and 5594 is summarized in Tables 6.2 and 6.3, respectively. The analytical results of copper and zinc from rock sampling programs conducted from 2007 to 2018 in Tenure Block 1813 are shown in Figures 6.2 and 6.3. The analytical results of copper and zinc of select trench programs conducted in Tenure Block 1813 are shown in Figure 6.4.

Table 6.1. Historical summary of exploration work for the Turgeon Property area (NTS 21P/13W)

Claim holder	Property name	Year submitted	Trench	Trench length (m)	Drillhole	Total drilling (m)	Geochem. samples	Geophysics ground survey (km)	Geophysics air survey (km)
Willett, Claude A.	Turgeon	1967	0	0	2	381	0	0	0
Heron Mines Ltd.	Turgeon Station	1971	0	0	4	262	0	0	0
Esso Minerals Canada	Heron Prospect	1979	0	0	0	0	8412	0	0
Esso Minerals Canada	Heron Prospect	1980	0	0	13	2348	700	69	0
Esso Minerals Canada	Heron Prospect	1981	0	0	0	0	0	0	430
Esso Minerals Canada	Heron Option	1982	0	0	0	0	0	3	0
Heron Mines Ltd.	Hodgin	1989	0	0	9	844	0	0	0
Heron Mines Ltd.	Turgeon Deposit	1992	0	0	0	0	0	21	0
Heron Mines Ltd.	Turgeon Deposit	1992	0	0	8	1656	0	0	0
Phelps Dodge Corp. (Canada) Ltd.	Turgeon/Belledune	1992	0	0	0	0	0	328	0
Heron Mines Ltd.	Turgeon Deposit	1993	0	0	13	3529	0	0	0
Heron Mines Ltd.	Turgeon Deposit	2000	0	0	5	1515	0	0	0
Exploration Puma	Turgeon	2008	1	70	0	0	41	0	0
Exploration Puma	Turgeon	2009	0	0	4	369	252	0	0
Exploration Puma	Turgeon	2013	0	0	0	0	32	0	0
Exploration Puma	Turgeon	2014	0	0	15	2017	0	0	0
Exploration Puma	Turgeon	2015	19	847	6	1378	0	0	0
Exploration Puma	Turgeon	2016	6	280	4	1620	243	18	0
Exploration Puma	Turgeon	2016	0	0	5	2569	0	0	0
Exploration Puma	Turgeon Sud	2011	0	0	0	0	0	0	100
Exploration Puma	Turgeon Sud	2013	0	0	0	0	171	0	0
Exploration Puma	Turgeon Sud	2014	2	200	0	0	0	0	0
Exploration Puma	Turgeon Sud	2015	7	1640	0	0	0	0	0
Totals			35	3,037	88	18,488	9,851	439	530

Figure 6.1. Turgeon Property mineral deposits and occurrences, as recorded in the New Brunswick Mineral Occurrence Database

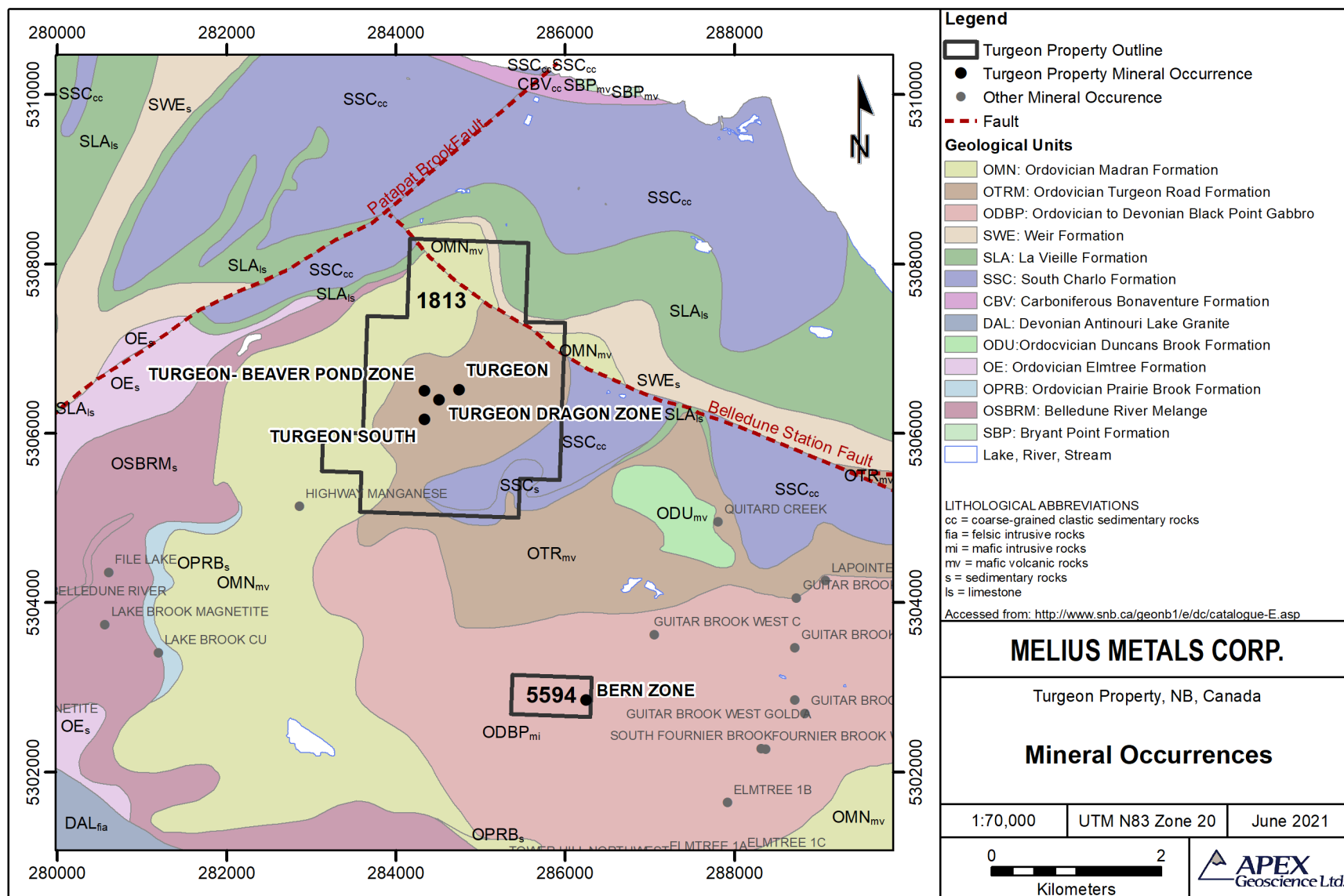


Table 6.2. A summary of surface exploration completed by Puma on Tenure Block 1813.

Year	Surface Exploration	Results of Exploration	References
2007	Rock grab geochemical sampling	The sampling program confirmed the presence of Zn and Cu mineralization at the Power Line and Beaver Pond showings. Of 16 rock grab samples, 6 samples returned from 1 to 6.8% Cu and 0.01 to 8.79% Zn.	Robillard and Lalonde, 2008
2008	Trench work: rock grab and channel sampling	A total of 25 rock grab and channel samples were collected and analysed for gold and multi-element via fire assay (FA) and inductively coupled plasma atomic emission spectroscopy (ICP-AES). Highlights of the sampling program included 2.7% Cu over 0.5 m from channel sample 910573 and 1.57% Cu and 3.4% Zn over 0.3 m from channel sample 910574 at the Power Line Zone and 3.7% Cu from rock grab sample 910559 at the Beaver Pond Zone.	Robillard and Lalonde, 2008
2011	Computer Aided Resources Detection System (CARDS) evaluation	Three prediction models and three validation models were generated from the evaluation.	Bernier and Gagné, 2012b; Mai, 2011
2012	Rock grab geochemical sampling	32 samples were collected from several geological formations to define economic indices of base and precious metals. The program was unsuccessful in defining apparent mineralized zones.	Bernier and Gagné, 2012b
2014	Prospecting, geological mapping, rock grab geochemical sampling, trench work	6 rock grab samples were collected. No significant mineralization was returned. 19 trenches, totalling 847 linear metres, were excavated and 49 rock grab samples were collected and sent for Au and multi-element analysis by fire assay and ICP. Results are listed in Table 6.4.	Bernier and Richer, 2015
2015	Rock grab geochemical sampling, trench work	A total of 243 rock grab samples were collected from outcrops using a sampling grid of 12 lines spaced 500 m apart over the Power Line and Zinc zone. Samples were sent for multi-element analysis and x-ray fluorescence (XRF) whole rock analysis. The program mapped the surface alteration pattern to west of the Turgeon Property mineralization. Two grab samples returned 21.1 and 26.2% Cu. 6 trenches and 4 small stripped areas, totalling 280 linear meters, were excavated. 30 rock grab samples were collected and sent for Au and multi-element analysis via FA and ICP. Significant results include 0.82% and 0.40% Zn in a silicified brecciated basalt in proximity to a gabbro dyke in rock grab samples P160676 and P160677 from Trench 1; 0.97%, 0.89% and 0.28% Zn in flow top breccia rock grab samples P160687, P160686 and P160687 from Trench 2, respectively; and 0.1 up to 3.72% Cu in 6 rock grab samples from Trench 3.	Bernier and Gagné, 2016
2018	Regional geological mapping and prospecting, trench work	The program was focused on the lesser explored southwest portion of the Property. The mapping identified a silicified cap zone and resulted in the division of the Turgeon Road Formation into three episodes of volcanism (see Section 7.3, Property Geology). 15 trenches, totalling 1,518 linear meters, were excavated to test geophysical anomalies. 152 samples were analysed for gold and multi-element via FA and ICP- mass spectrometry (MS). The trench work successfully identified lithological contacts, sulphide mineralization, fault structures and delineated the extent of a known silica cap. The 2018 trench results discovered an extension of the Beaver Pond mineralization with 3 rock grab samples grading from 2.8 up to 12% Cu in trenches T18-09 and T18-10	Hupé and Forbes, 2018

Table 6.3. A summary of surface exploration completed by Puma on Tenure Block 5594.

Year	Surface Exploration	Results of Exploration	References
2012	Prospecting and geochemical sampling.	The objective of the sampling was to define economic indices of base and precious metals in the field. The program assisted in the definition of mineralized zones within the Property.	Bernier and Gagné, 2012b
2014	Prospecting and trench work.	<p>2 trenches, totalling 200 linear meters, were excavated in the spring to verify the extent of the Bern Zone. 17 rock grab samples were analysed for Au and multi-element analysis via FA and ICP. 11 rock grab samples returned values ranging from 1.1 up to 6.46% Cu. Highlights included 9.18 g/t Ag, 5.78% Cu and 2.08% Zn from sample M045918 and 4.38 g/t Ag and 6.46% Cu from sample M045918.</p> <p>A follow up prospecting and trenching program was completed in the fall to verify targets identified in DIAGNOS Inc.'s CARDS evaluation. Five grab samples that were collected from the eastern extension of the Bern vein returned copper values ranging from 0.17% to 0.79% Cu. Results of two grab samples taken from the Bern vein included 4 g/t Ag and 13.4% Cu, and 0.16 g/t Au, 10.1 g/t Ag and 9.74% Cu. 7 trenches, totalling 1,640 linear metres, were excavated and 28 rock grab and 65 channel samples were collected from 'grooves' stripped from the Bern Zone. The samples were analysed for Au and multi-element analysis via FA and ICP. The trenching program extended mineralization 125 m to the east of the Bern Zone (see Table 6.5).</p>	Bernier and Richer, 2014a; b

Figure 6.2. A summary of copper assays from geochemical rock sampling programs conducted in Tenure Block 1813

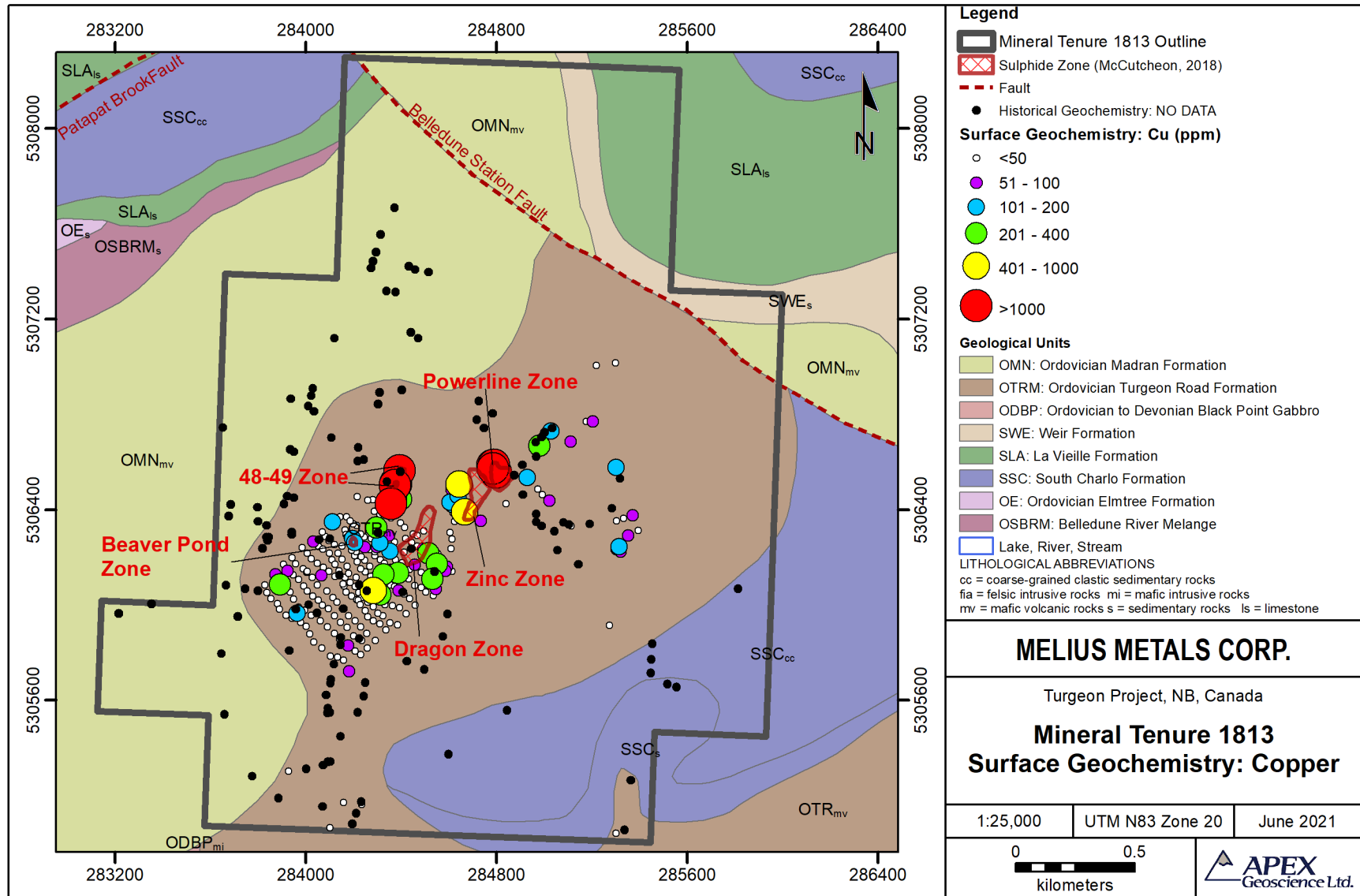


Figure 6.3. A summary of zinc assays from geochemical rock sampling programs conducted in Tenure Block 1813

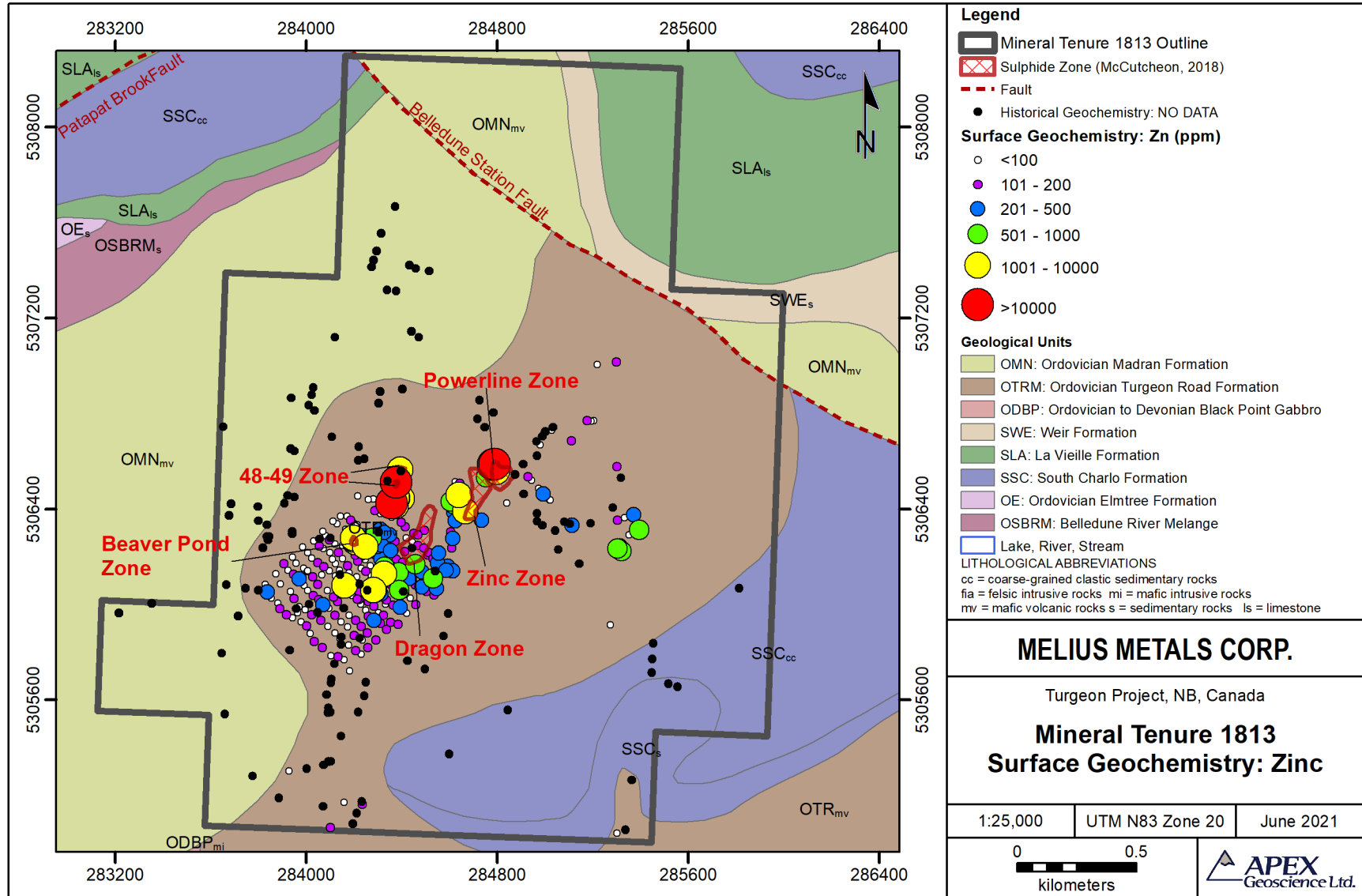


Figure 6.4. Copper and zinc geochemical results for trenchwork conducted in Tenure Block 1813

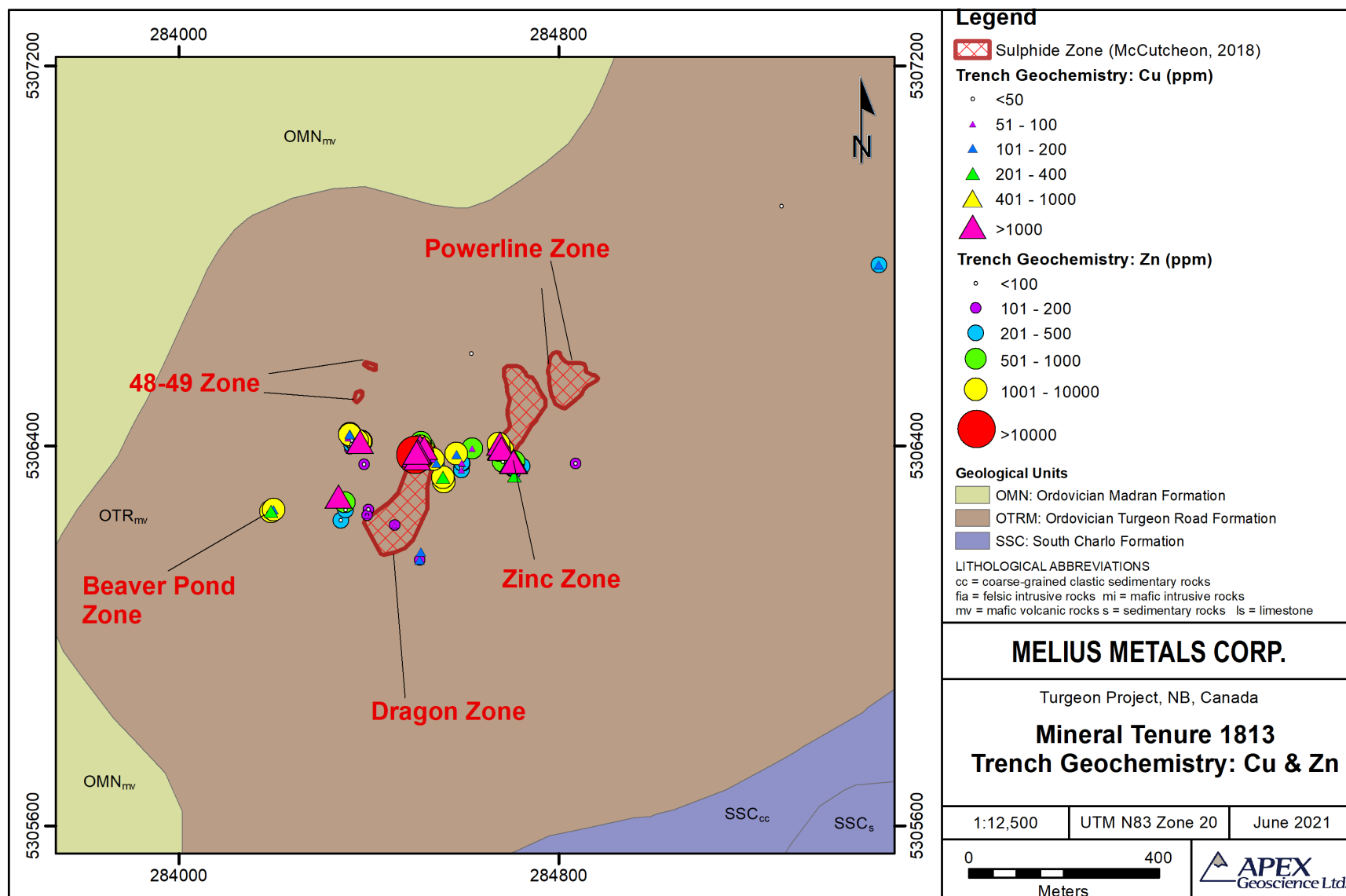


Table 6.4. Highlights from trench work completed in the Turgeon deposit area in 2014 (modified from Bernier and Richer, 2015)

Trench Number	Lithology	Sample Number	Ag (g/t)	Cu (%)	Zn (%)
TT14-04	Altered Basalt	P160857	0.3	0.01	0.28
TT14-04	Basalt Amygdaloidal	P160858	1.1	0.01	0.34
TT14-05	Basalt	P160863	4.0	0.04	0.18
TT14-06	Brecciated Basalt	P160866	3.8	0.12	0.34
TT14-06	Basalt	P160868	0.4	0.01	0.13
TT14-08	Basalt/Sheeted dyke	P160870	0.6	0.03	0.16
TT14-11	Brecciated Basalt	P160873	0.2	0.01	0.24
TT14-11	Brecciated Basalt	P160874	0.4	0.2	0.07
TT14-11	Basalt	P160875	3.1	3.04	0.08
TT14-11	Basalt	P160876	2.3	2.05	0.04
TT14-11	Basalt	P160877	0.3	0.01	0.21
TT14-05	MS/SMS	P160884	6.1	0.97	0.16
TT14-05	MS	P160885	29.5	0.07	0.1
TT14-05	MS	P160886	21.4	0.07	0.08
TT14-05	MS/SMS	P160887	5.3	0.71	0.33
TT14-05	MS	P160888	1.8	0.16	0.18
TT14-05	MS	P160889	4.6	0.11	0.06
TT14-05	MS	P160890	8.4	0.87	1.63
TT14-05	MS	P160891	1.1	0.06	0.23
TT14-05	Brecciated Basalt	P160892	9.2	0.35	0.10
TT14-16	Basalt	P160899	<0.2	0.01	0.11

Table 6.5. Channel sample highlights from trench work completed at the Bern Zone, Turgeon South (from Puma Exploration, 2021)

Trench Number	From (m)	To (m)	Length (m)	Cu (%)	Ag (g/t)
R14-01	3	6	3	1.2	1.1
Including	4	5	1	1.8	2.0
R14-02	1.7	8.7	7	1.1	1.8
Including	1.7	2.7	1	2.1	5.2
R14-03	1.9	6.9	5	1	1.4
R14-04	2	10	8	1.1	2.3
Including	3	7	4	1.6	2.5
Including	3	5	2	2.4	4.1
R14-05	1	9	8	1.5	2.4
Including	3	9	6	2	3.2
Including	3	5	2	3	5
R14-06	2	6	4	0.8	1.8
Including	4	6	2	1.1	2.9

6.3 Geophysical Surveys

Numerous historical airborne and ground geophysical surveys have been conducted at the Turgeon Property from 1950 to 2018 (e.g., Table 6.1). Limited details are available regarding the earliest geophysical surveys conducted over the Property area. A summary of the geophysical surveys conducted at the Turgeon Property is as follows:

- In 1950, an aeromagnetic survey was completed by the Geological Survey of Canada (Burton, 1992; Gashinski and Regan (1982) as cited in Porter, 1989).
- Two electromagnetic surveys were completed by M.J. Boylen Engineering and Noranda Mines Ltd. in 1958 and 1959, respectively (Burton, 1992; Gashinski and Regan (1982) as cited in Porter, 1989).
- An induced polarization (IP) geophysical survey was completed by Industrial Minerals Company in 1967 (Burton, 1992; Paterson, 1974).
- In 1974, Heron Mines Ltd. completed very low frequency electromagnetic (VLF EM) and gravity geophysical surveys in 1974 (Paterson, 1974).
- From 1978 to 1981, Esso Minerals Canada (Esso) completed mise-a-la-masse borehole and surface surveying, Horizontal Loop Electromagnetics (HLEM), magnetics, gravity and IP surveys (Broome, 1982; Gashinski, 1982; Wilson, 1978).
- In 1991, Phelps Dodge Corp. completed ground magnetic and VLF EM surveys, as well as mise-a-la-masse IP and resistivity surveys on surface lines and 6 drillholes. In 1992, Phelps Dodge Corp. completed downhole transient electromagnetics (TEM) on surface lines and 14 drillholes, as well as a heliborne DIGHEM[®] EM/resistivity/magnetic/VLF survey (Burton, 1992; McConnell, 1992).
- In 2010, Abitibi Geophysics, on behalf of Puma, conducted a surface and borehole TDEM geophysical survey that covered a total of 4.1-line km and 3 drillholes (T10-01, F09-01 and F00-1). Seven anomalies were highlighted in the ground survey and the borehole survey identified new conductors and better ore lens delineation of anomalies within the Property (Lalande, 2010).
- In late 2014 and early 2015, Geosig Inc., on behalf of Puma, conducted a Pulse-EM electromagnetic survey and an IP survey on 6 drillholes. The survey identified two strong electromagnetic anomalies and several areas with increased chargeability. The IP survey identified several zones of increased chargeability, with many associated with conductive zones (Tshimbalanga, 2015).

- In 2015, an IP geophysical survey was conducted by Abitibi Geophysics on behalf of Puma. The survey was completed along northeast-southwest oriented lines spaced 100 m apart and covered a total of 18 km. The survey utilized the Orevision method and identified three anomalies within the Property (Bernier and Gagné, 2016). Plan views of the IP survey showing chargeability at depths of 100 and 200 m are presented in Figure 6.5a; b. Cross sections of survey lines 1+00E and 4+00E illustrating the resistivity and chargeability of priority anomalies TU-02 and TU-03 are presented in Figure 6.6a; b.
- Eastern Geophysics Ltd. on behalf of Puma completed a borehole electromagnetic (BHEM) survey on four drillholes in 2018. The aim of the survey was to produce targets for extensions to the Dragon and Zinc mineralized zones (Hupé and Forbes, 2018).

In addition, Natural Resources Canada has completed regional geophysical surveys that are part of the national thematic Open File map series and Geoscience Data Repository (<http://gdr.aggr.nrcan.gc.ca/gdrdap/dap/search-eng.php>). One regional GSC airborne geophysical examples is presented in this sub-section (Figure 6.7). The anomalies identified in the Residual Magnetic Intensity (RMI) first vertical derivative airborne survey by Dalhousie-Heath Steele correlate with the anomalies highlighted by Puma's 2010 TDEM geophysical ground survey and provides insight into the geological and tectonic features of the Property (Figures 6.7 and 6.8).

Figure 6.5. Results from Puma’s 2015 IP Orevision ground geophysical survey: a) Chargeability at 100 m depth; and b) Chargeability at 200 m depth.

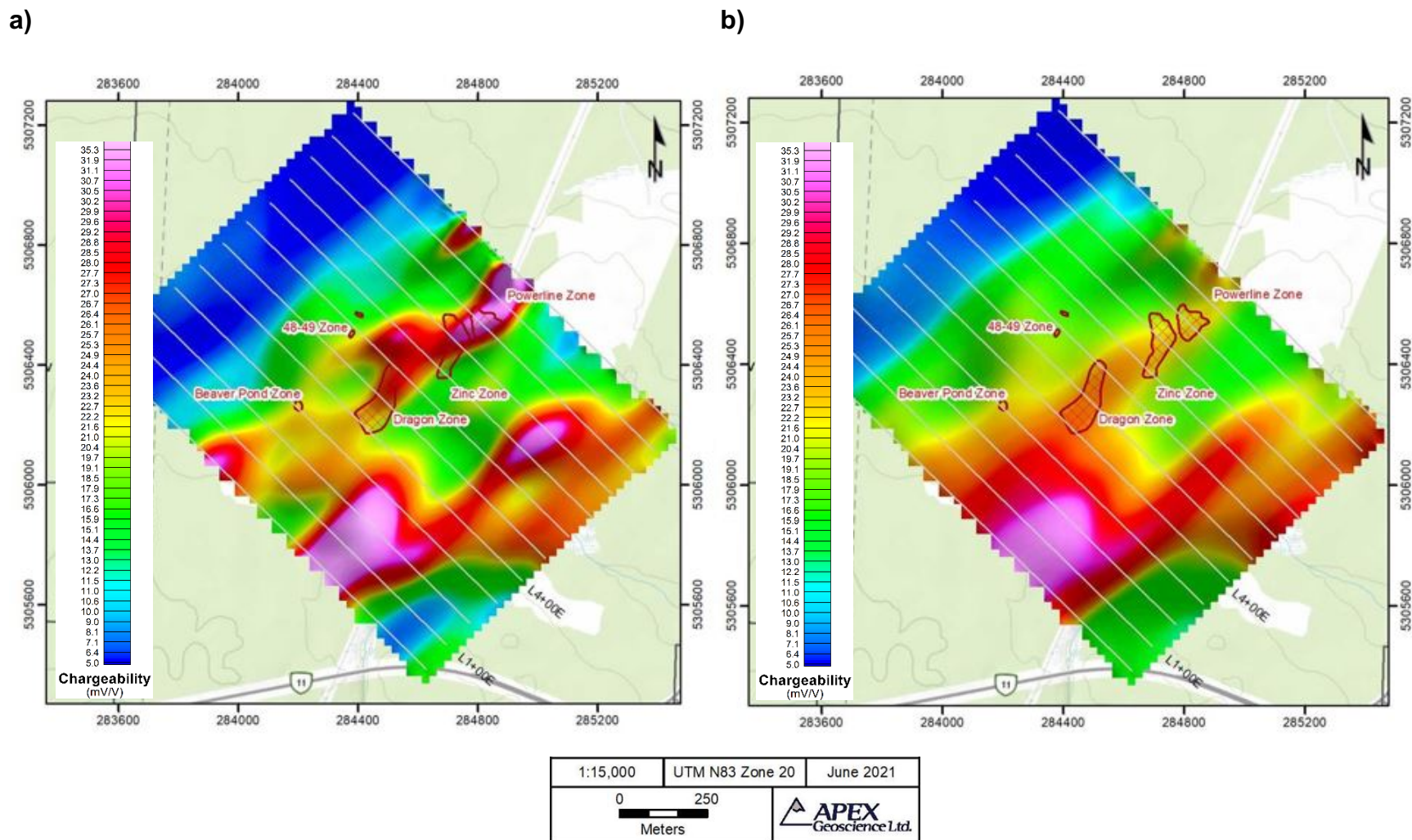
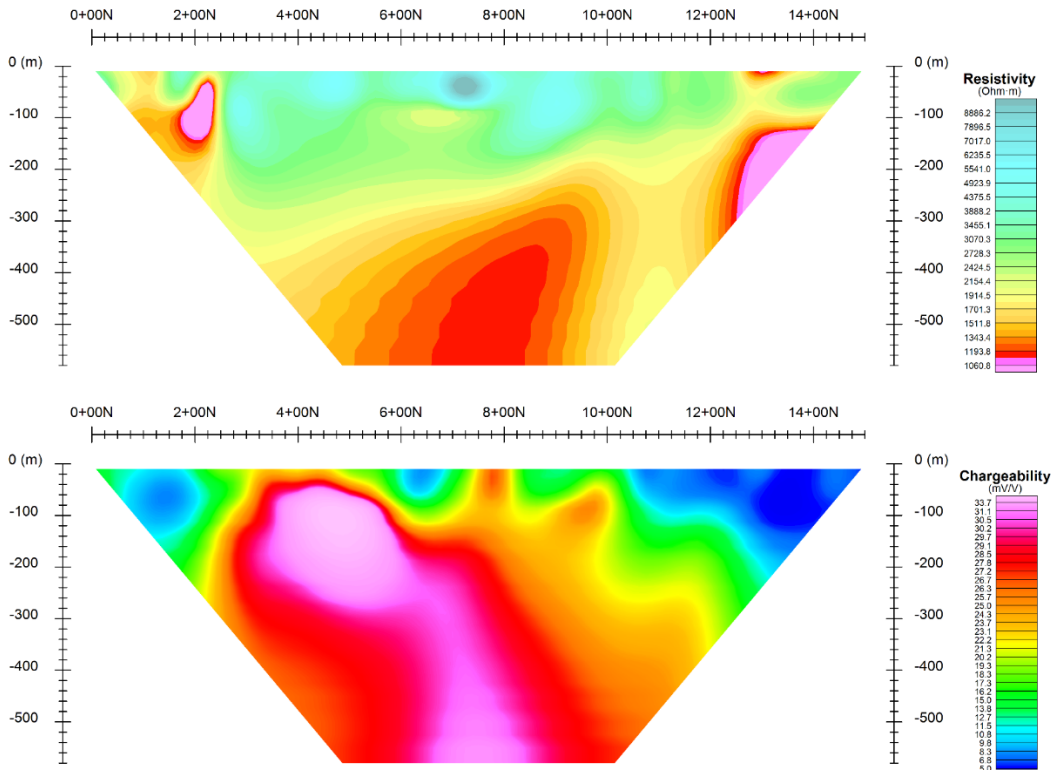


Figure 6.6. Results from Puma’s 2015 IP Orevision ground geophysical survey: a) Resistivity and chargeability along section L 1 + 00E; and b) Resistivity and chargeability along section L 4 + 00E

a)



b)

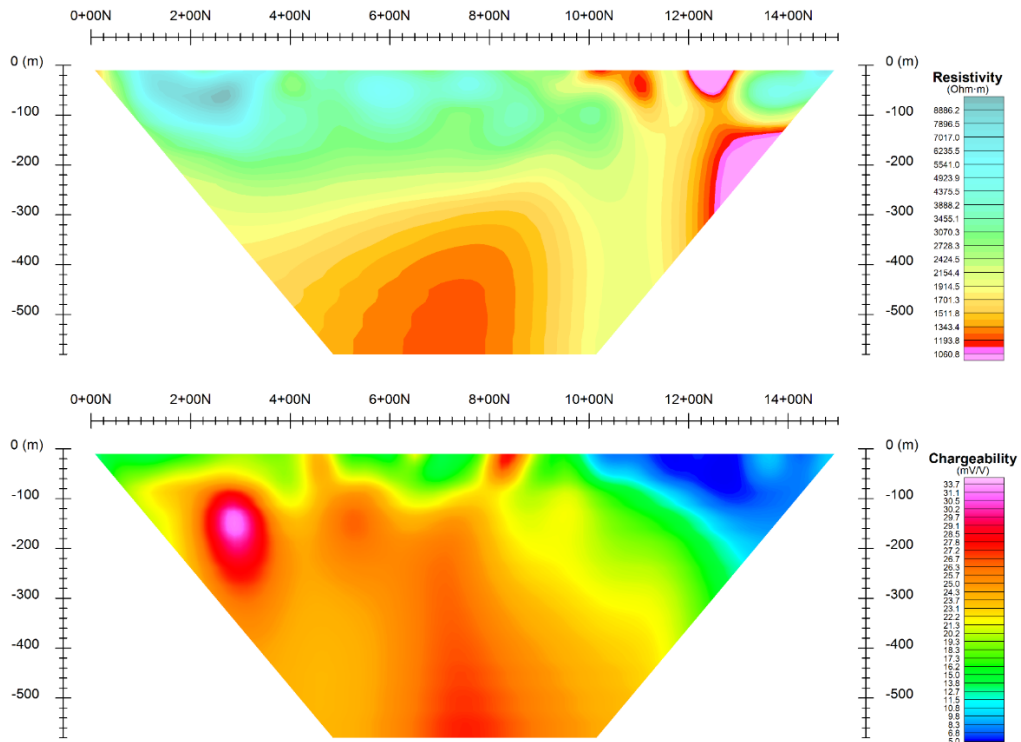


Figure 6.7. Residual Magnetic Intensity (RMI) of Puma's 2010 TDEM ground geophysical survey

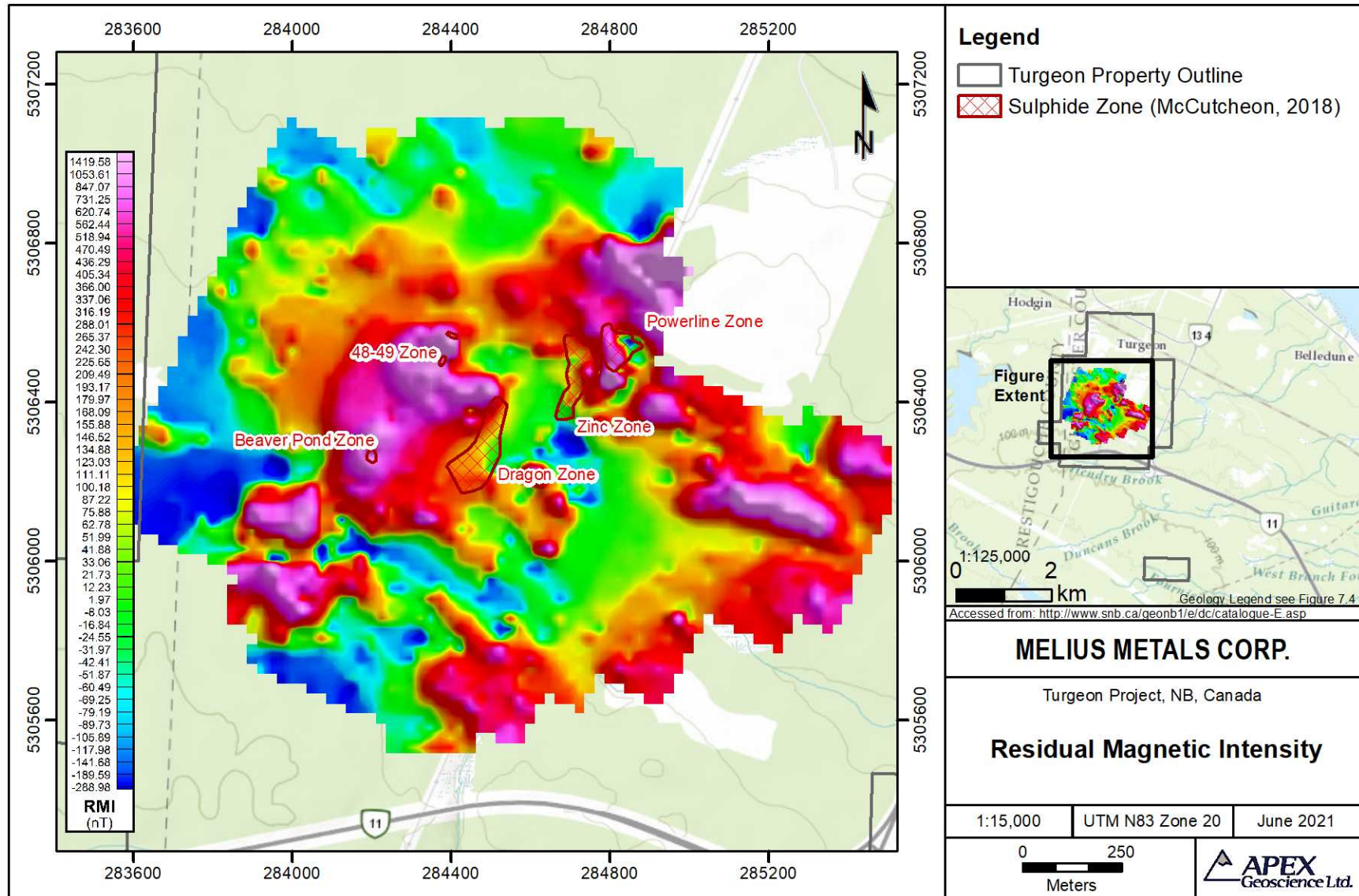
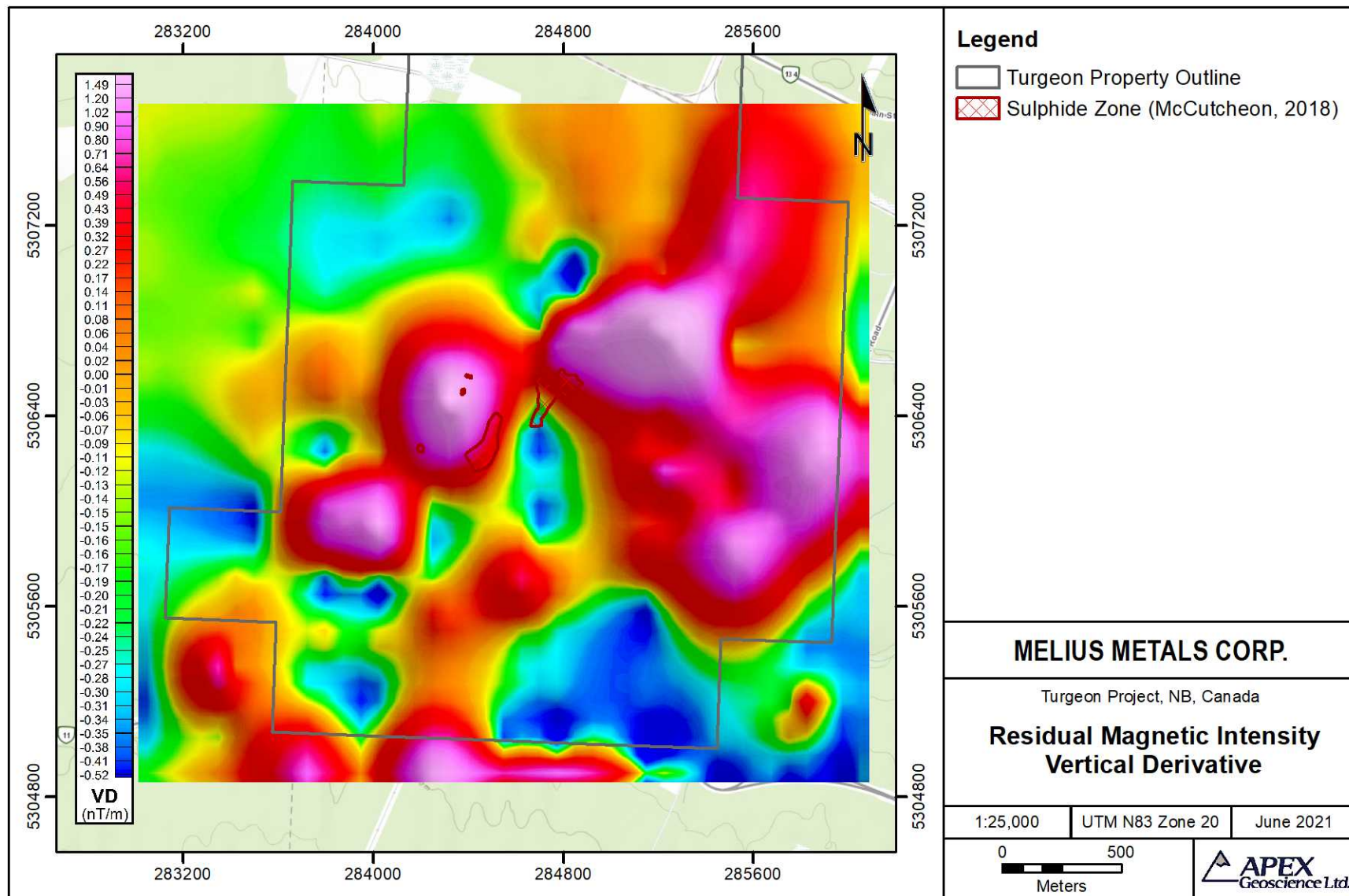


Figure 6.8. Airborne magnetic image of the RMI – First Vertical Derivative. Source: Dalhousie Heath Steele



6.4 Historical Drilling

Historical drilling at the Turgeon Property has been conducted by several companies from 1958 to 2018. From 1958 to 2000, approximately 150 drillholes were completed in the Turgeon deposit area. Puma Exploration Inc. (Puma) completed 45 drillholes, totalling 12,232 m, at the Turgeon Property from 2008 to 2018. The Turgeon drillhole database contains data for 178 historical drillholes, totalling 38,927 m (Table 6.6).

Table 6.6. Summary of historical drilling from the Turgeon drillhole database

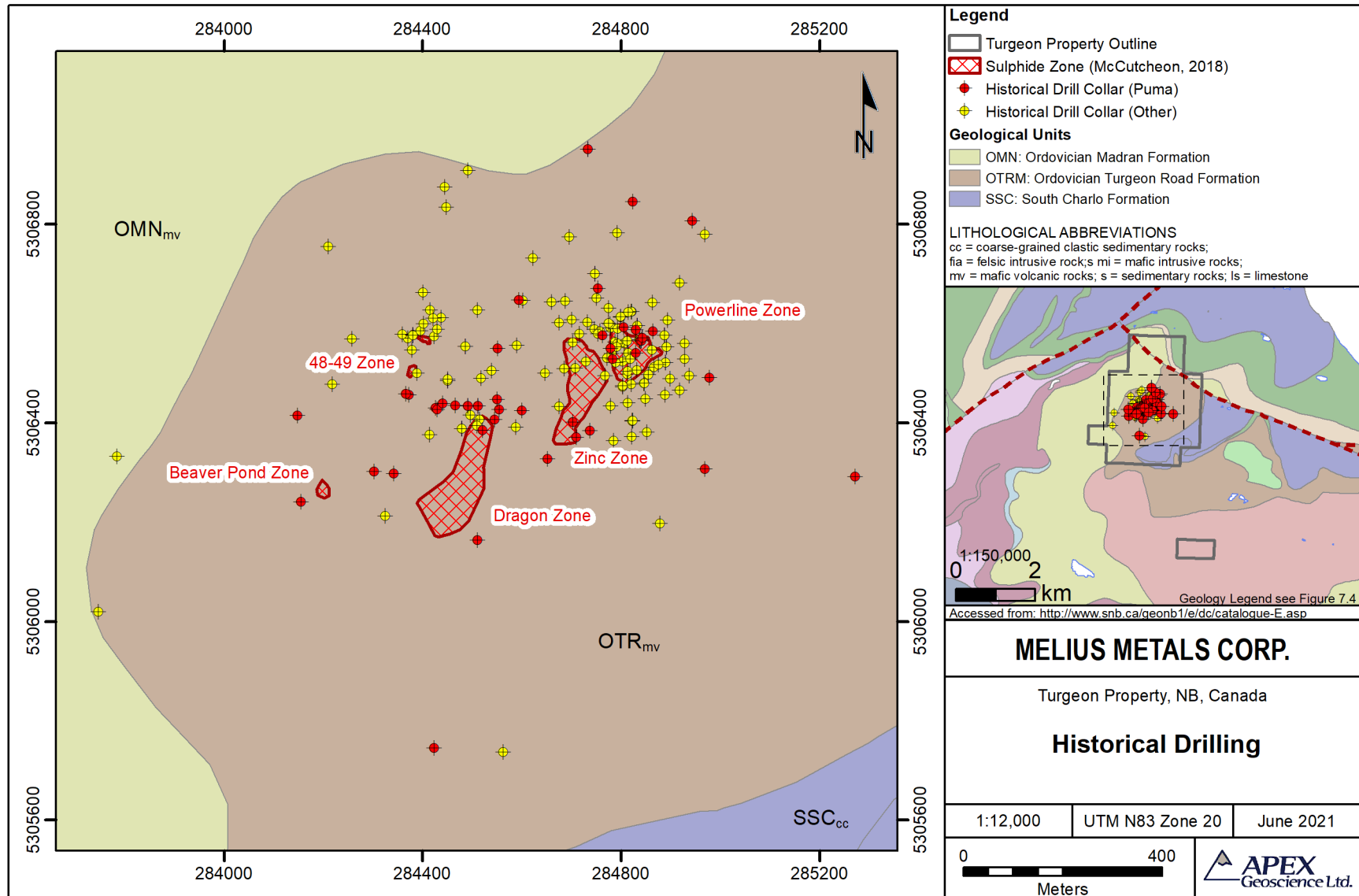
Company	Year	Total drillholes	Dip (degrees)	Orientation (Azimuth)	Total length (m)
Noranda Mines Ltd.	1958	2	-50	210 to 220	185
Rio Tinto	1960	4	-45	33 to 213	267
Industrial Minerals Exploration Co.	1967	2	-45,-60	22	381
Heron Mines Ltd.	1971	4	-45 to -90	0 to 225	263
Heron Mines Ltd.	1977	4	-45 to -90	0 to 337	413
Esso Minerals Canada	1979	13	-45 to -90	0 to 337	2,276
Esso Minerals Canada	1981	54	-42 to -80	75 to 255	12,801
Esso Minerals Canada	1982	15	-45 to -90	0 to 255	2,565
Heron Mines Ltd.	1988	9	-45 to -90	0 to 336	845
Phelps Dodge	1991-1992	21	-45 to -90	0 to 290	5,184
Heron Mines Ltd.	2000	5	-50	20 to 200	1,515
Puma Exploration Inc.	2008-2018	45	-45 to -70	10 to 310	12,232
		178			38,927

The results of historical drilling campaigns completed at the Turgeon Property from 1958 to 2000 are presented in Table 6.7. The historical drill collar locations are illustrated in Figure 6.9. Drilling completed on the Property by Puma from 2008 to 2018 is discussed in Section 10.

Table 6.7. A summary of the historical drilling completed at the Property from 1958 to 2000

Year	Company	Results of Drilling	References
1965	Heron Mines	Approximately 800 tons of high-grade zinc mineralization were intersected at the Turgeon Deposit. Turgeon Deposit significant results include 12.4% Zn and 1.8% Cu over 8.7 m core length, as well as 10.7% Zn and 0.7% Cu over 10.1 m core length in one of the main mineralized zinc lenses.	Hannon, 1980; Robillard and Lalonde, 2008
1979-1983	Esso	Copper highlights from the Turgeon Deposit include 2.5% Cu over 34.1 m core length in drillhole E82-77, 2.7% Cu over 36.2 m core length in drillhole E82-54 and 7.9% Cu over 7.5 m core length in drillhole E82-46. Early drill programs led to the calculation of historical mineral resource estimates (MRE's) in 1979, 1981 and 1983 (see Section 6.5). Esso interpreted the sulphide zones as volcanogenic and possibly of ophiolitic origin.	Thurlow, 1993; Robillard and Lalonde, 2008
1988	Heron Mines	Drilling by Heron Mines defined the Zinc Zone as a separate mineralized zone. The drilling by Heron Mines indicated that most of the drilling conducted at the Turgeon Deposit by Esso was not optimally directed and followed strike and/or was directed down dip of the volcanic stratigraphy.	Porter, 1989; Thurlow, 1993
1991-1993	Phelps Dodge	Drilling in 1991 moderately expanded the mineralization at the Zinc Zone. Follow up drill programs in 1991-1992 placed partial limits on the extent of mineralization. In 1993, Phelps Dodge recalculated a historical MRE for the Power Line, 100 m Zinc and "48-49" mineralized zones (see Section 6.5).	Thurlow, 1993
2000	Heron Mines	Drilling in the Turgeon deposit area intersected a series of altered volcanic flows, ranging from basalt through andesite, dacite to rhyolite and rhyolite breccia. Drillhole F00-1 intersected significant Cu-Zn mineralization, and lesser but significant similar mineralization in drillhole F00-2.	Baldwin, 2000

Figure 6.9. Historical drilling at the Turgeon Property



6.5 Historical Mineral Resource Estimates

The historical mineral resource estimates (MRE's) discussed in this section were calculated prior to the implementation of the standards set forth in NI 43-101 and Canadian Institute of Mining (CIM) Definition Standards for Mineral Resources and Mineral Reserves (May, 2014) and CIM Estimation of Mineral Resources & Mineral Reserves Best Practices Guidelines (November, 2019). The authors of this Technical Report have not done sufficient work to classify these historical estimates as a current mineral reserves or mineral resources. The authors have referred to these estimates as "historical resources" and the reader is cautioned not to treat them, or any part of them, as current MRE. There is insufficient information available to properly assess the data quality, estimation parameters and standards by which the estimates were categorized. The historical resources summarized below have been included to demonstrate the mineral potential of certain target mineralized zones at the Turgeon Property and to provide the reader with a complete exploration history of the Property. A thorough review of all historical data performed by a Qualified Person, along with additional exploration work to confirm results, would be required in order to produce a current MRE for the Turgeon Deposit.

The following text summarizes historical MRE's for the Turgeon Property completed by previous operators. The authors of this Technical Report have reviewed the information in this section, as well as that within the cited references, and have determined that it is suitable for disclosure.

Historical MRE's reported by Esso include the following:

- In 1979, Esso estimated 500,000 tons (453,592 tonnes) of 2% Cu and 2% Zn for the Turgeon Deposit (Gashinski and Regan, 1982);
- In 1981, Esso estimated 1.3 million tonnes grading approximately 2% Cu and 2% Zn in mineralized pods and lenses for the Power Line Zone (Gashinski and Regan, 1982); and
- In 1983, Esso estimated 2.5 million tonnes of 1 to 1.5% Cu and 4 to 5% Zn for the Power Line and the Beaver Pond zones (Kettles, 1987).

In 1993, Phelps Dodge completed a recalculation of the approximate tonnage and grade of the Power Line, 100 m Zinc and "48-49" zones based upon different geometries and geological correlations than the historical estimate of 1.3 million tonnes at 2% Cu and 2% Zn by Esso in 1981 (Gashinski and Regan, 1982). Phelps Dodge estimated a total historical MRE of 450,000 tonnes of 1.5% Cu and 2.5% Zn in the main lens of the Power Line Zone, the 100 m Zinc Zone and the "48-49" Zone. The historical MRE reported in Thurlow (1993) is based on undiluted "geological reserves" of massive sulphide sections only and is considered to be accurate to +/-50%. *"Mineable reserves would be considerably less due to local poor ground conditions, dimensions, attitude and location of lenses. Due to correlation uncertainties, smaller massive sulphide zones, especially at*

Powerline and 48-49 Zones are not included in the estimates nor are zones of high grade (Cu) stringer mineralization, mainly in the Powerline Block. Precious metal contents are very low; of 1874 assays only four Au assays exceed 0.02 oz/ton and only four Ag assays exceed 1.0 oz/ton (Thurlow, 1993).” The reader is cautioned that the use of the term “geological reserves” in the Phelps Dodge estimation of mineralized material is simply a reproduction of the original terminology used in Thurlow (1993) and does not reflect the current definition of the term “reserve” or imply that there are current reserves defined within the Property.

7 Geological Setting and Mineralization

7.1 Northern Appalachian Orogen: Geological Framework

The Turgeon Property lies within the Bathurst Mining Camp (BMC) in the northeastern part of the Appalachian Orogen. The Northern Appalachian Orogen in eastern Canada records the complex Late Cambrian to Late Silurian closure of the Iapetus Ocean that is associated with significant outboard growth of the Laurentian margin. The geological framework of the Northern Appalachians consists of broad tectonic zones that include, from northwest to southeast, the Grenville, Humber, Gander–Dunnage, Avalon, and Meguma tectonic zones (Figure 7.1).

The Humber Zone represents the remnants of a passive margin built upon the leading edge of Laurentia during the Cambrian and Early-Middle Ordovician, whereas the Gander, Avalon and Meguma zones represent micro-continental slivers derived from Gondwana (Figure 7.2). The Dunnage zone preserves the remnants of predominantly supra-subduction zone terranes that developed in the Cambro-Ordovician Iapetus Ocean, and accordingly, is comprised of fragments of forearc, arc, back-arc, and rare seamount crust and mantle.

In northeastern New Brunswick, Ordovician outboard growth was achieved through the progressive accretion of peri-Laurentian and peri-Gondwanan arc, rifted arc, and supra-subduction zone ophiolite terranes. To the east of the main Iapetus Ocean tract, the Ordovician Popelogan-Victoria Arc – Tetagouche-Exploits back-arc system was built on a Cambrian to Early Ordovician Penobscot arc founded on peri-Gondwanan Neoproterozoic basement (Figure 7.2; e.g., Colman-Sadd et al., 1992; van Staal et al., 1996). The Popelogan-Victoria Arc is the first peri-Gondwanan terrane to dock at the Laurentian margin following the closure of the main tract of the Iapetus Ocean. Accretion of the Popelogan-Victoria Arc marks the end of the peri-Laurentian Taconic Orogeny (e.g., van Staal et al., 2009).

Figure 7.1 Tectonic zones of Atlantic Canada. Source: Zagorevski et al. (2011) after Williams (1995a); Barr and White (1996)

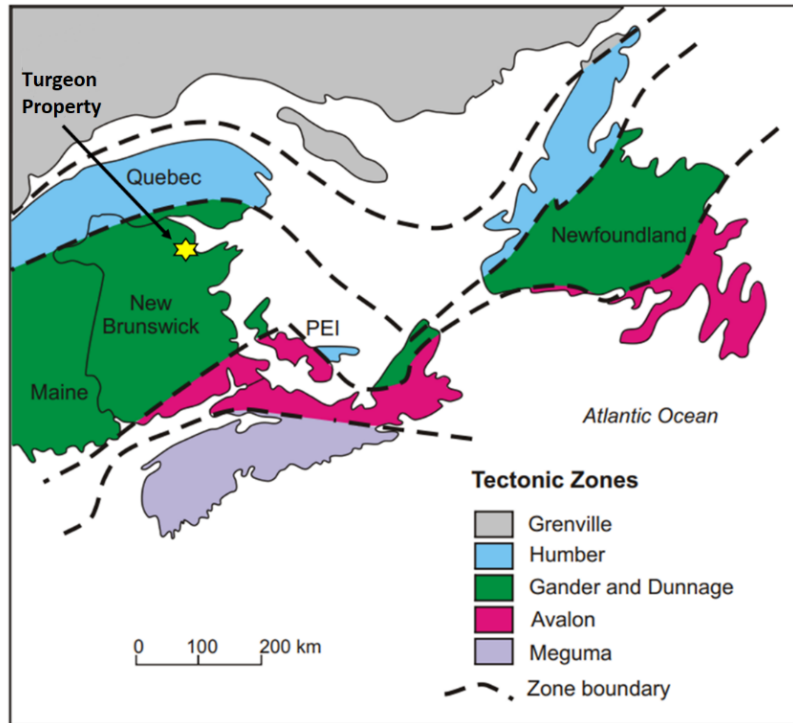
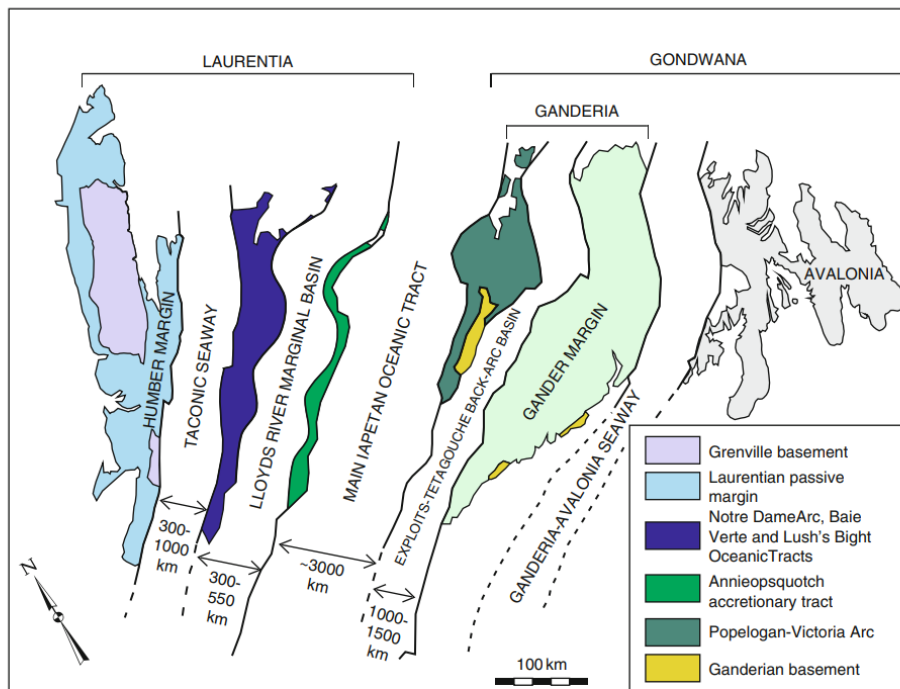


Figure 7.2 Expanded tectono-stratigraphic subdivisions of the northern Appalachians. Source: Zagorevski et al. (2011) after Williams (1995b)



Paleozoic rocks in northeastern New Brunswick belong to major tectonostratigraphic zones that include from east to west, the Aroostook – Percé Anticlinorium, the Chaleur Bay Synclinorium, the Miramichi Inlier and the Elmtree-Belledune Inlier (Wilson et al., 2015). Volcanic and sedimentary rocks of the Middle to Upper Ordovician Tetagouche back-arc basin are exposed in the Miramichi Highlands and Elmtree-Belledune inlier, whereas dominantly volcanic rocks of the Popelogan Arc are exposed in the Lower to Upper Ordovician Popelogan arc rocks. The Turgeon Property occurs within the Elmtree-Belledune Inlier with the Miramichi Highlands Popelogan Arc (Figures 7.2 and 7.3).

Volcanic and sedimentary rocks associated with extension and rifting of the Popelogan arc, and spreading in the Tetagouche back arc basin, are assigned, respectively, to the Bathurst and Fournier supergroups in the Miramichi and Elmtree-Belledune inliers of northern New Brunswick.

Their distinct depositional settings are associated with progressive crustal extension and arc rifting such that:

1. The Bathurst Supergroup represents the products of crustal extension and rifting of the Popelogan arc (continental domain); and
2. The Fournier Supergroup represents a phase of oceanic lithosphere formation (oceanic domain).

7.2 Regional Geology

The Turgeon Property lies within the Middle to Late Ordovician Fournier Supergroup of the Elmtree-Belledune Inlier. The Elmtree-Belledune Inlier is a volcano-sedimentary terrane that is separated from the Miramichi Highlands by the Rocky Brook-Millstream Fault (Figure 7.3). In the Elmtree-Belledune Inlier, the Fournier Supergroup consists of the Pointe Verte Group and Devereaux Complex.

The Pointe Verte Group is composed of alkaline basalts associated with wackes and siltstone and pillow basalts with minor feldspar phenocrysts and calcite amygdule's (Hupé and Forbes, 2018). The Pointe Verte Group consists of the lower sedimentary Prairie Brook Formation and overlying volcanic dominated Madran Formation. The Devereaux Complex consists of tholeiitic basalts (Belledune Tholeiite), andesites, wackes and shales, and the younger Black Point Gabbro (Winchester et al., 1992; Thurlow, 1993; Lalonde, 2014). The Silurian Chaleur Group is situated to the north of the Devereaux Complex and comprises mainly Ordovician volcanic rocks overlain by Silurian sedimentary rocks (Hupé and Forbes, 2018).

Three main geological units underlie the Turgeon Property, these include: the Ordovician Madran Formation, Ordovician Turgeon Road Formation and the Late Silurian South Charlo Formation (Figure 7.4; Wilson, 2013). The regional stratigraphy of the Property area trends to the north-south and dips steeply to the west. A syn-volcanic fault complex runs parallel to the Rocky Brook-Millstream Shear Zone, trending to the east-

west with a variable dip orientation. The Rocky Brook-Millstream Shear Zone was likely emplaced during a phase of large-scale transpressional movement and is associated with numerous smaller oblique faults in the area (Hupé and Forbes, 2018).

Figure 7.3 Geological map showing the location of the Turgeon Property within the Elmtree-Belledune Inlier (from: Lalonde, 2014; modified from van Stall et al., 2003)

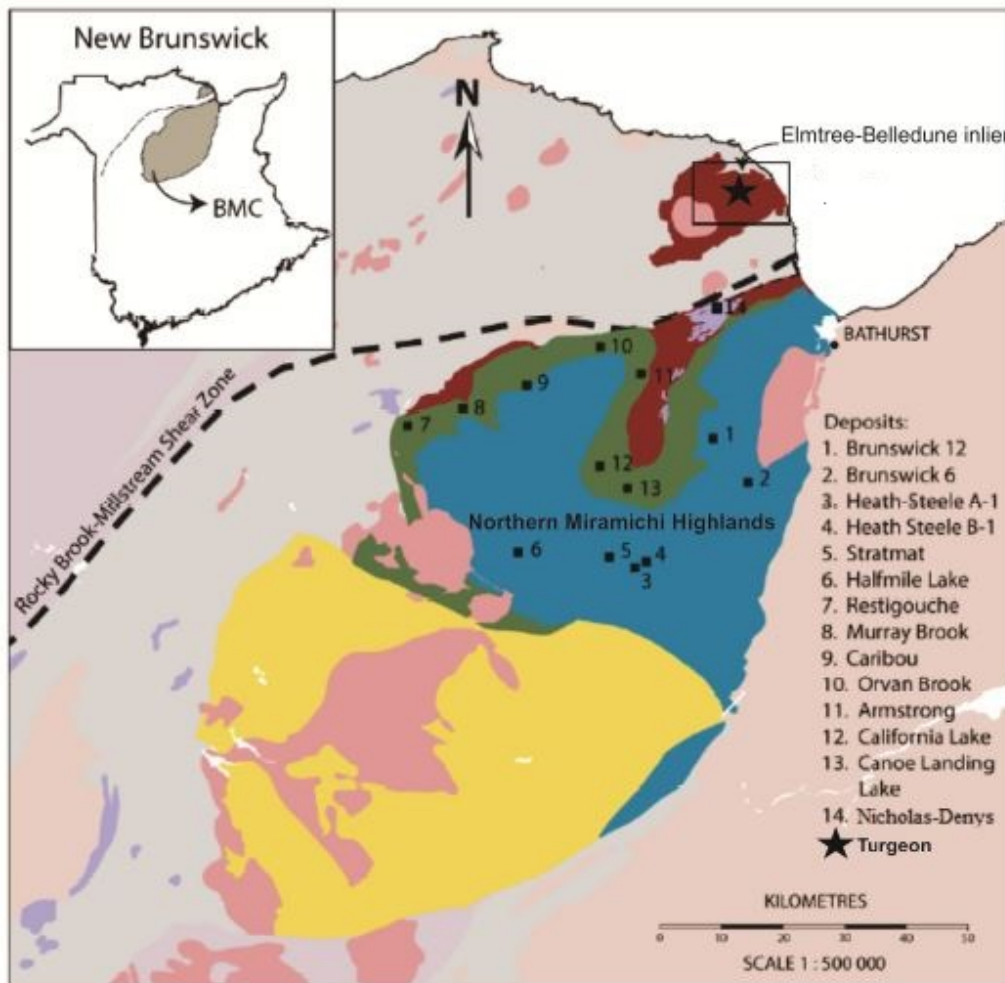
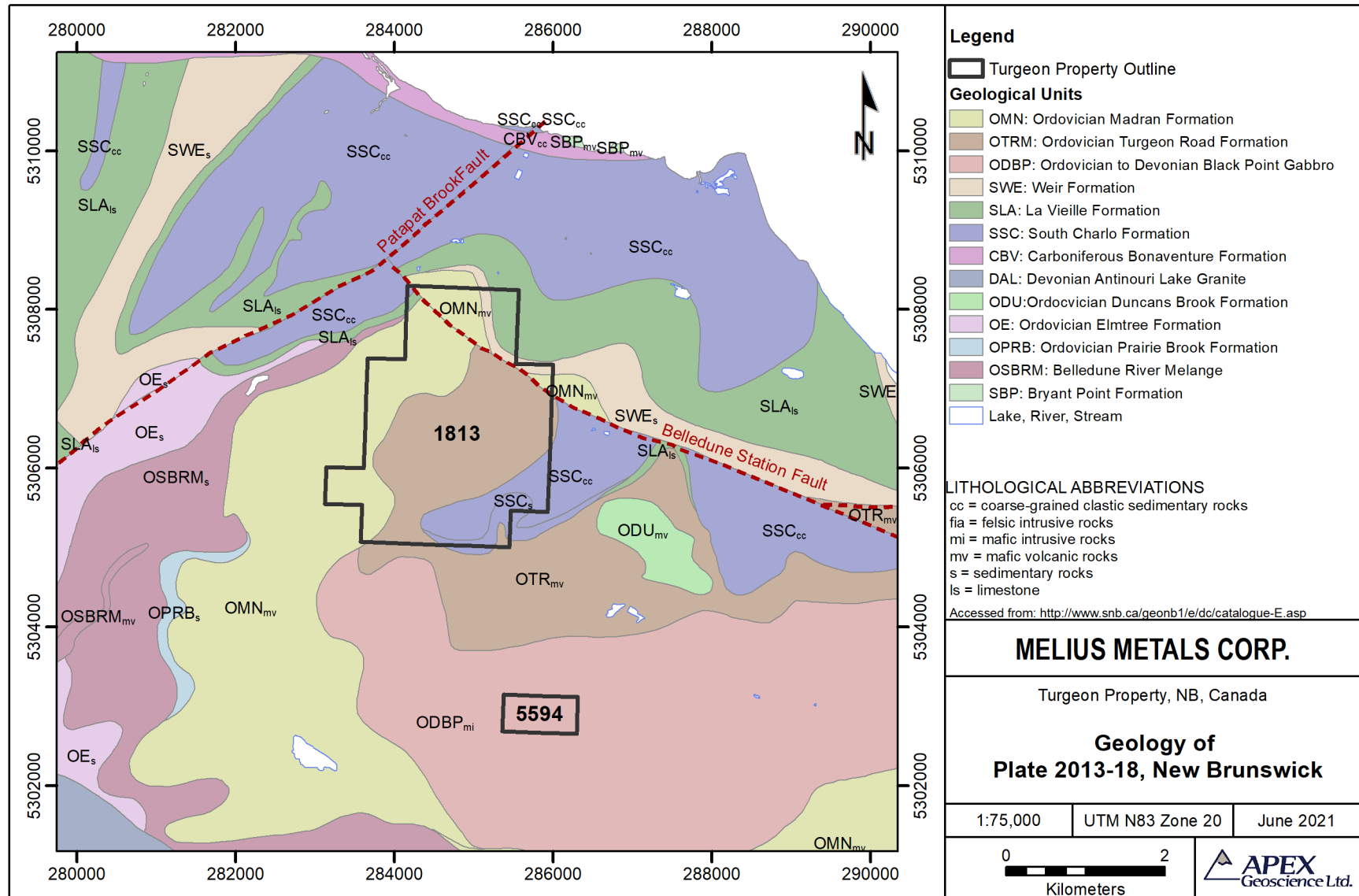


Figure 7.4. Geology map of Plate 2013-18 from GeoNB data catalogue (from: Wilson, 2013)



7.3 Property Geology

The Turgeon Property comprises two separate claim blocks: Tenure Block 1813 to the north and Tenure Block 5594 to the southeast. The following text on the Property geology and mineralization of the Turgeon Property has been largely sourced from reports written on the Property area by Lalonde (2014), McCutcheon (2018), Wilson (2013) and Wilson et al. (2014). The bedrock geology of Tenure Block 1813 is presented in Figure 7.5.

7.3.1 Geology of Tenure Block 1813 of the Turgeon Property

Five major rock units underlie Tenure Block 1813, these include: the Ordovician Madran Formation of the Pointe Verte Group, the Ordovician Turgeon Road Formation of the Devereaux Complex, an un-named unit, the Early Silurian Weir Formation and the Early Silurian La Vielle Formation (Figure 7.5; McCutcheon, 2018). The un-named unit disconformably overlies the Turgeon Road Formation and is interpreted to structurally overlie the Madran Formation to the west of the Property. To the southeast of the Property, the Turgeon Road Formation is unconformably overlain by sedimentary rocks belonging to the Early Silurian Weir Formation, as interpreted by McCutcheon (2018). Previous geological mapping in the area assigned these sedimentary rocks to the Late Silurian South Charlo Formation, as shown above in Figure 7.4. In this Technical Report, the arcuate trending beige unit of sedimentary rocks that occur in the south and north of the Property will be referred to as the Weir Formation (Figure. 7.5).

7.3.1.1 Madran Formation

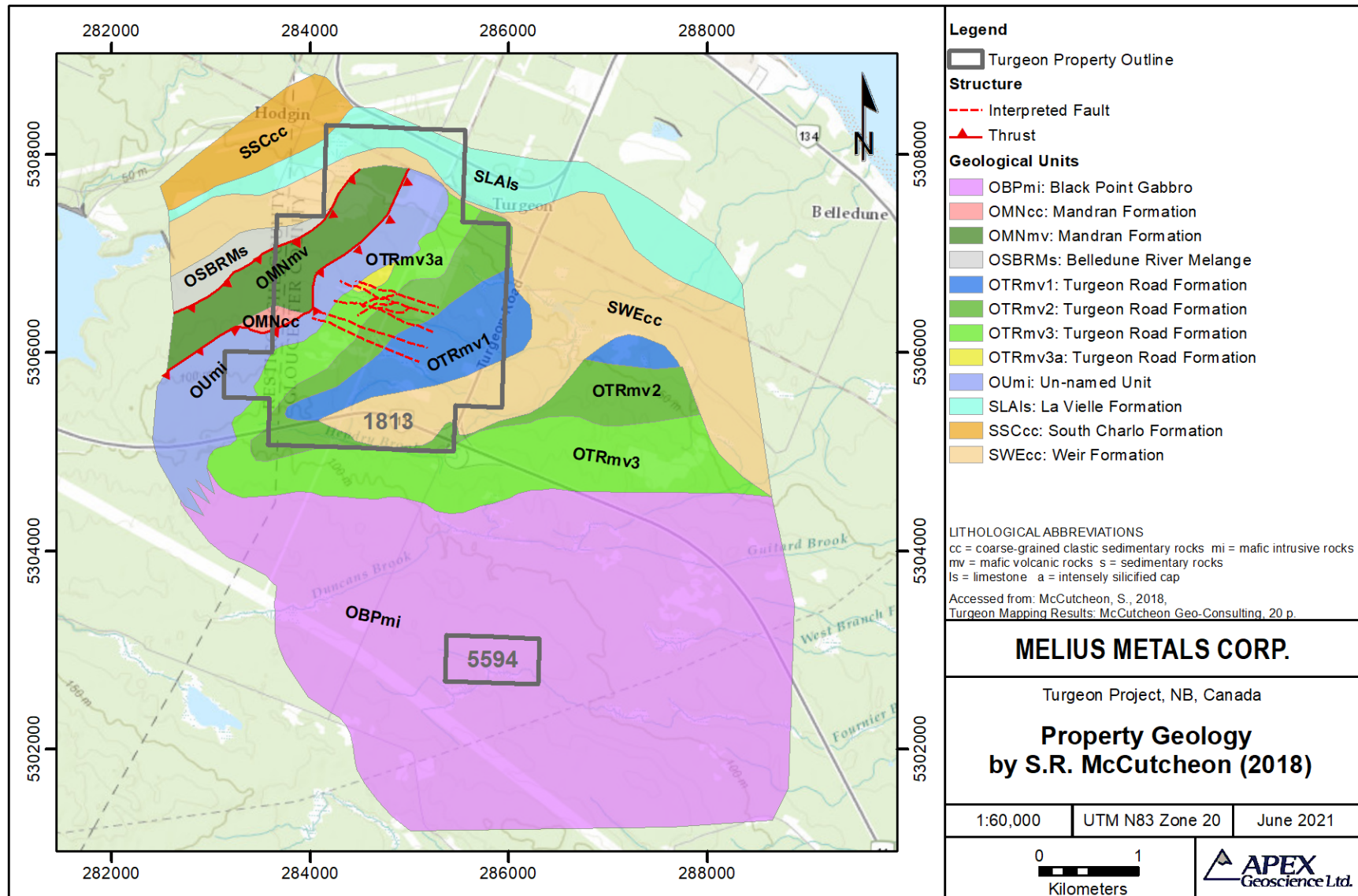
The Ordovician Madran Formation, located mainly in the western area of the Property, comprises greenish grey, alkali pillow basalt and related hyaloclastic breccia, with minor red shale, dark grey to black shale and inter-pillow limestone (McCutcheon, 2018). The Madran Formation is intruded by mafic dykes. The younging direction of the Madran Formation is unknown. Oxidized clasts are observed in some of the fragmental rocks of the Madran Formation, suggesting subaerial exposure and a shallow water depositional environment.

7.3.1.2 Turgeon Road Formation

The Ordovician Turgeon Road Formation is divisible into three units on the Property: the “lower” unit, the “middle” unit and the “upper” unit (McCutcheon, 2018). The descriptions of these units are based on each unit’s relative placement with each other and not due to a chronological order. To clearly state which unit is being described, in this Technical Report, the “lower” unit is referred to as OTR1, the “middle” unit is referred to as OTR2 and the “upper” unit is referred to as OTR3.

OTR3 (the “upper” unit) comprises amygdaloidal pillow basalt, hyaloclastite and pillow breccia, inter-pillow jasper and chert (McCutcheon, 2018). OTR3 is characterized by a curvilinear magnetic high. Considering that hyaloclastite and pillow breccia are not pyroclastic, OTR3 is interpreted to have been deposited in a deep-water depositional

Figure 7.5 Property geology of Tenure Block 1813 (from: McCutcheon, 2018)



environment. The rocks in this unit are locally cut by mafic dykes and/or sills. Alteration in this unit includes weak to strong silicification. An intensively silicified cap exists in OTR3 and is depicted as the yellow unit in Figure 7.5. OTR2 (the “middle” unit) is characterized by a magnetic low and is similar in geology to OTR3 but lacks inter-pillow jasper and does not exhibit silicification. Alteration in this unit includes epidote alteration (\pm minor Cu mineralization). Minor sedimentary rocks have been observed in this unit in the vicinity of the Power Line Zone (McCutcheon, 2018). OTR1 (“lower” unit) is characterized by another magnetic high and is predominantly made up of mafic dyke rocks (McCutcheon, 2018).

7.3.1.3 Un-named Unit

The un-named unit disconformably overlies the Turgeon Road Formation and is also interpreted to structurally overlie the Madran Formation to the west of the Property. This unit is made up of mafic sills and sedimentary rocks that comprise greenish grey to dark grey mudstone, quartzo-feldspathic wacke and conglomerate. The conglomerate occurs locally and is clast-supported, containing pebble- to cobble-sized clasts of wacke, altered gabbro and mudstone (McCutcheon, 2018). Historical drill core from the Turgeon Property suggests that the un-named unit dips northerly at an intermediate angle, and graded bedding indicates tops are to the north (McCutcheon, 2018). The mafic sills in this unit comprise diabase and fine to medium grained gabbro that are cut by younger dykes. Some sills show pepperitic-type margins, and the gabbro is lithologically similar to Black point Gabbro. The Black Point Gabbro outcrops approximately 1 km south of the Property and is underlain by the Turgeon Road Formation. McCutcheon (2018) suggests that the gabbro sills of the un-named unit may be correlative to the Black Point Gabbro, supporting the current interpretation that the Turgeon Road Formation is older than the Black Point Gabbro.

7.3.1.4 Weir Formation

Toward the base of the Early Silurian Weir Formation is thinly bedded, dark greenish grey mudstone and fine-grained sandstone while the apparent top is dark grey, pebble to cobble conglomerate with locally calcareous matrix (McCutcheon, 2018). Its unconformable contact with the Turgeon Road Formation is marked by a mud-clast conglomerate. Bedding-cleavage relationships in the Weir Formation indicate a gentle fold about northerly to northwesterly trending fold axes, almost perpendicular to the trend in the rocks of the Madran and Turgeon Road Formations (McCutcheon, 2018).

7.3.1.5 La Vielle Formation

The northern part of the Turgeon Property is underlain by limestone of the Early Silurian La Vielle Formation. The limestone conformably overlies the older clastic rocks of the Weir formation and locally appears to directly overlie the Madran and Turgeon Road Formations (McCutcheon, 2018).

7.3.1.6 Intrusive Rocks

There are numerous mafic intrusive rocks on the Property that range from diabase to medium grained gabbro in composition. The oldest known mafic dykes and sills on the Property are confined to the Turgeon Road Formation. These dykes and sills exhibit alteration and mineralization. The un-named unit is intruded by mafic dykes and sills, including some medium grained gabbro. These have little or no alteration, but exhibit deformation. The youngest mafic dykes/sills observed on the Property are fine grained and are described as relatively pristine and undeformed (McCutcheon, 2018).

7.3.2 Geology of Tenure Block 5594 of the Turgeon Property

Tenure Block 5594 is situated 2 km to the southeast of Tenure Block 1813. Geological mapping has not been conducted over Tenure Block 5594; however, the geological map of Plate 2013-18 accessed from the New Brunswick's Department Energy and Mines extends to the area (Wilson, 2013; Figure 7.4). Tenure Block 5594 is underlain by the Black Point Gabbro of the Devereaux Complex. The Devereaux Complex comprises, from base to top, the Black Point Gabbro (including minor pyroxenite and trondhjemite), the Belledune Point sheeted dikes, and pillow basalt of the Turgeon Road Formation (Wilson et al., 2014). The tectonic contact between the Devereaux Complex and the structurally underlying Pointe Verte Group is marked by a zone of *mélange* (Wilson et al., 2014). The Turgeon Road Formation conformably overlies the Black Point Gabbro and is considered to be close in age as evident from the trondhjemite dykes associated with the Black Point Gabbro, yielding ages of Middle to Late Ordovician.

7.3.3 Structural Geology

Interpretation of the geology of the Turgeon Property by Wilson (2013) includes the Belledune Station Fault trending northwest to southeast to the northeast corner of the Property (Figure 7.5). Recent mapping by McCutcheon (2018) indicates that the Belledune Station Fault is non-existent if the South Charlo rocks in the eastern part of the Property (south of the Belledune Station fault) belong to the Weir Formation.

The Turgeon Property lies on the north limb of a west-southwest trending anticline that plunges to the southwest. The anticline is suggested by a formational magnetic anomaly highlighted from a historical airborne magnetic survey that reflects the upper part of the Turgeon Road Formation and is confirmed by the geology on the ground (McCutcheon, 2018). Within the mineralized area of the Turgeon Property, the volcanic rocks have been dissected into several fault blocks by a series of east to northeast striking, anastomosing brittle faults (Thurlow, 1993). Lalonde (2014) divides the Turgeon deposit area into three blocks based on these fault separations: Southern block, Power Line block and Northern block. These brittle faults are interpreted as post-volcanic and related to Devonian wrench faulting attributed to the Rocky-Brook Millstream Fault (Figure 7.3). McCutcheon notes that there are many late-stage faults on the Property, as indicated by the hematite and calcite fill on the Property; however, McCutcheon (2018) suggests that these do not control the distribution of the mineralization on the Property.

McCutcheon (2018) suggests that the mineralization is centered upon an early, northerly trending alteration pipe with an intensely silicified cap.

7.4 Mineralization

Six known sulphide zones occur within the Turgeon Property, these include: the Beaver Pond Zone, the Power Line Zone, the Zinc Zone, the “48-49” Zone, the Dragon Zone and the Bern Zone (Figure 7.6). The Zinc Zone and the Power Line Zone are collectively referred to as the Turgeon Cu-Zn deposit and are situated on Tenure Block 1813. A three-dimensional (3D) model of the mineralization at the Zinc, Power Line and Dragon zones is shown in Figure 7.7.

Mineralization at the Turgeon Cu-Zn Deposit consists of two sulphide stockwork zones and two underlying massive sulphide lenses, hosted in the Belledune tholeiite suite of the Devereaux Formation (Lalonde, 2014). More specifically, a recent study by McCutcheon (2018) indicates that the OTR3 and OTR2 units of the Turgeon Road Formation host the mineralization at Turgeon. The massive sulphide lenses of the Turgeon Deposit occur at the contact between the sheeted dykes and pillow basalt units and are hosted in hyaloclastic basalt flows and interstitial to chlorite altered volcanic glass fragments. Amygdule’s in the pillow basalts directly overlying mineralization are commonly filled by quartz, calcite, pyrite, and chalcopyrite (Lalonde, 2014). The massive sulphide lenses of the Turgeon Deposit comprise four sulphide phases: “(i) a chalcopyrite–pyrite stockwork, which abruptly grades into massive sulfide; (ii) massive chalcopyrite ± pyrrhotite ± pyrite; (iii) massive pyrite; and (iv) a pyrite–chalcopyrite–sphalerite breccia, which occurs in the central portion of the “100m Zn” lens, as well as on the northern side of the Power Line showing (Lalonde and Beaudoin, 2015).”

The Zinc Zone (historically referred to as the “100 m Zinc” Zone) massive sulphide lens has a maximum thickness of 50 m and extends 150 m along strike (Thurlow, 1993). The chalcopyrite-pyrite stockwork zone of the Zinc Zone grades into a massive sulphide lens at depth (Lalonde, 2014). The sulphide lens is faulted by the 100 m Zinc Fault and is considerably sheared (Thurlow, 1993). The Zinc Zone massive sulphide lens strikes east-west, while the other sulphide zones have a northerly trend that are oblique to the contact between the Turgeon Road Formation and the un-named unit (Lalonde, 2014; McCutcheon, 2018). The transverse trend of the Zinc Zone can be explained if the host breccia is of volcanic origin and part of the stratigraphy, rather than a fault breccia. Considering that the mineralization at the Turgeon Property is largely stockwork type, the northerly trend of the zones and the “silica cap” in the OTR3 (Turgeon Road Formation “upper” unit) are consistent with a cross-cutting, northerly trending feeder system that originally dipped steeply west (approximately 70°; McCutcheon, 2018). In this case, the breccia of the Zinc Zone acted as the permeable horizon along which the mineralizing fluids moved laterally away from the feeder system and into the volcanic pile.

Figure 7.6 Mineralized sulphide zones of the Turgeon Property (from: McCutcheon, 2018)

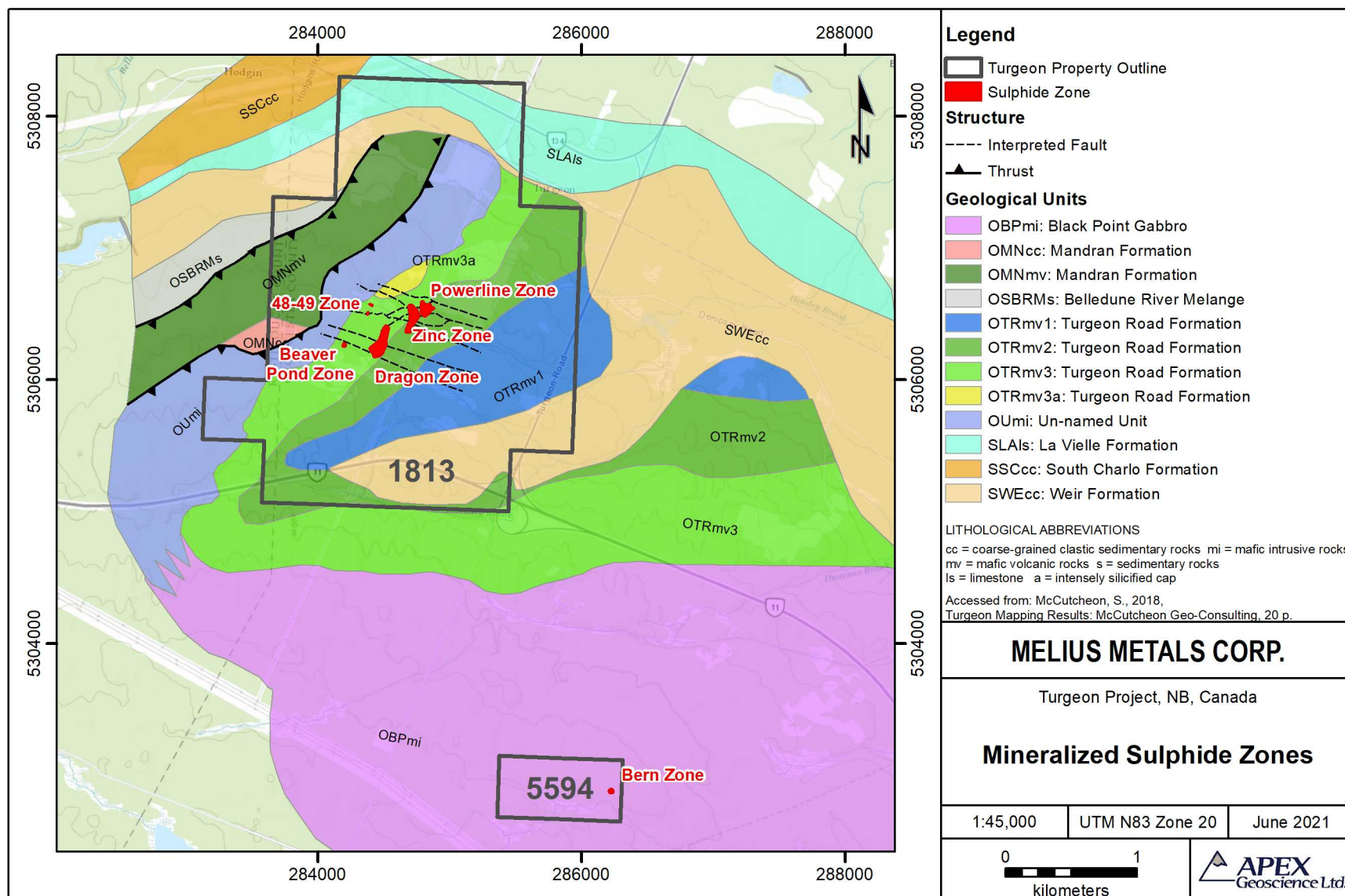
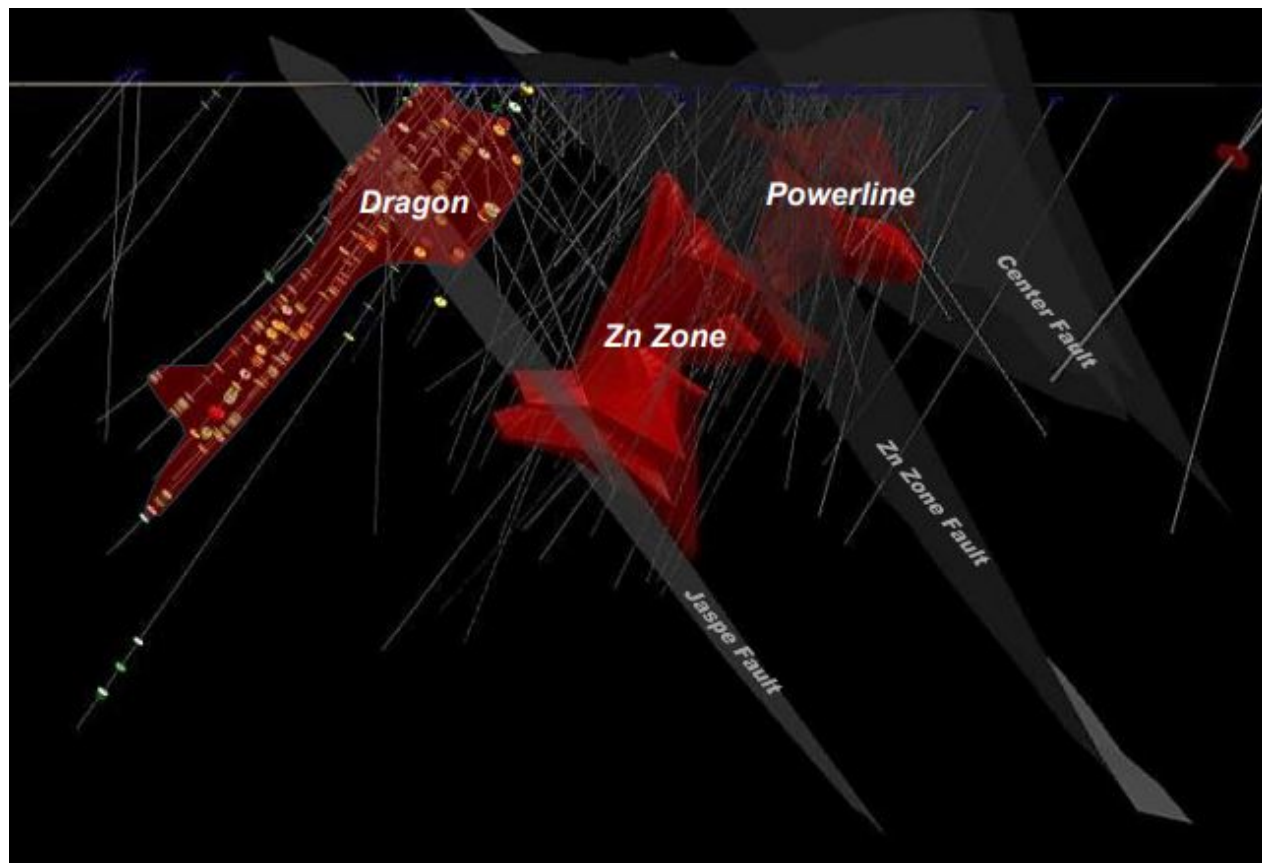


Figure 7.7. An internal 3D model showing the copper and zinc mineralization at the Dragon, Zinc and Power Line mineralized sulphide zones (from: Puma Exploration, 2019b)



The massive sulphide lens of the “48-49” Zone strikes north-south, dips steeply to the west and occurs in proximity to the contact of the sheeted dyke complex and overlying pillow basalts (Lalonde, 2014; Lalonde and Beaudoin, 2015). The mineralization of the “48-49” Zone comprises chalcopyrite-pyrite veins in a stockwork zone that comes into abrupt contact with a massive sulphide lens. The massive sulphide lens has a maximum thickness of 40 m (Lalonde, 2014).

The Beaver Pond Zone is a copper showing located approximately 200 m northwest of the Turgeon Deposit and comprises variolitic pillow lavas with inter-pillow veins of jasper-epidote-pyrite and hyaloclastite breccia (Lalonde, 2014; Lalonde and Beaudoin, 2015). The mineralization at Beaver Pond forms quartz-pyrite veins with minor chalcopyrite, chalcocite, bornite and sphalerite. The mineralized veins cross-cut a massive (4 x 7 m) saucer shaped body of jasper (Lalonde, 2014). Historical drilling indicates that the mineralization at Beaver Pond does not extend at depth (Thurlow, 1993).

The Power Line Zone comprises a network of chalcopyrite-pyrite veins cross-cutting intensely chloritized basalt and andesite. The Power Line Zone mineralization is observed

on surface as east-west oriented elongated pyrite chlorite sulphide lenses bordered by basalt. A massive sulphide breccia occurs at the north of the Power Line outcrop and consists of angular to sub-rounded, poorly sorted, pyrite, chalcopyrite and sphalerite sulphide fragments, as well as amygdular basalt fragments up to 20 cm in diameter, cemented in a pyrite-chlorite-silica matrix (Lalonde, 2014).

The Beaver Pond Zone, the Power Line Zone and the Dragon Zone mineralization crops out at surface and the Zinc Zone and “48-49” Zone massive sulphide lenses have only been observed in drill core (Lalonde, 2014; McCutcheon, 2018).

The Bern Zone is situated on Tenure Block 5594 of the Turgeon Property. The Bern Zone was discovered in 2013 and is located 4 km to the south of the Turgeon Cu-Zn Deposit. The thickness of the mineralized zone ranges from 5 to 10 m. The mineralization at the Bern Zone comprises quartz-chalcopyrite-bornite veins alternating with chlorite-quartz-chalcopyrite shale enclosed in a silicified gabbro (Puma Exploration Inc., 2016).

Three types of sulphide mineralization are evident in the Turgeon Property: replacement, vein, and exhalative deposits (Thurlow, 1993). Replacement sulphides form the larger mineralized bodies at Turgeon and have gradational contacts with chloritized host rocks over widths of several centimeters to a few meters. Vein sulphides are common in the Property, occurring in quartz-chlorite veins and veinlets with a range of thickness from millimeters to tens of centimeters. At the Power Line Zone, the vein sulphides constitute a typical VMS stockwork (Thurlow, 1993). Exhalative sulphides are rare and only occur with inter-pillow jasper at the Beaver Pond Zone.

Proximal chloritization and distal silicification are the two types of hydrothermal alteration that are evident at the Turgeon Property. Within a few metres of the mineralization, black chloritic alteration with various amount of disseminated and fracture-filling pyrite is observed and is interpreted as high-temperature alteration (McCutcheon, 2018). Farther away from the mineralization is lower temperature silicification manifested as inter-pillow jasper and chert that cements hyaloclastite. A prograding hydrothermal system is suggested to be present at the Property due to observed chloritic alteration and sulphide veinlets that locally overprint bleached and silicified rocks (Thurlow, 1993). The prograding hydrothermal system implies a long-lived system that allowed temperature geotherms to move up through the volcanic pile as deposition continued through time. Consistent with a long-lived system are multiple phases of brecciation and silicification in the “silica cap” located in OTR3 (McCutcheon, 2018).

8 Deposit Types

The Turgeon deposit is a mafic-type Cu-Zn volcanogenic massive sulphide (VMS) deposit. VMS and specifically mafic-type VMS deposits are discussed in the following subsections.

8.1 Volcanogenic Massive Sulphide

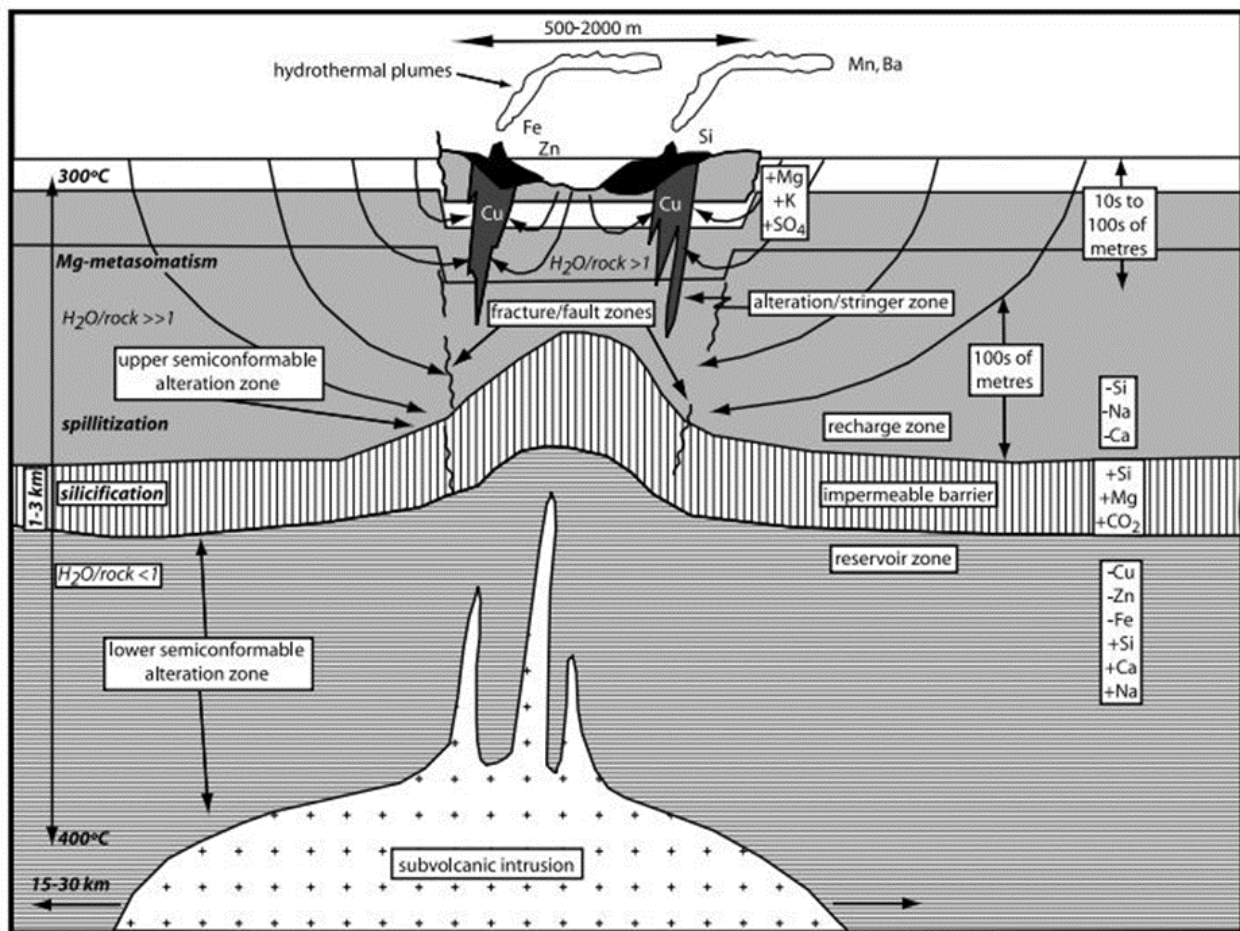
VMS deposits typically occur as lenses of polymetallic massive sulphides forming at or near the seafloor in a submarine volcanic setting. VMS deposits are classified as “exhalative” and are syn-genetic stratabound deposits formed through the focused discharge of hydrothermal fluids and precipitation of sulphide minerals in predominately stratiform accumulations (Barrie and Hannington, 1999; Galley et al., 2007). Typical characteristics of VMS deposits are listed as follows (adapted from Galley et al., 2007):

- Typical VMS deposit is a stratabound body, mound to tabular in shape, composed of predominately massive (>40%) sulphide, quartz and lesser phyllosilicates, iron oxide minerals and altered silicate wallrock.
- The stratabound body is commonly underlain by discordant to semi-discordant stockwork veins and disseminated sulphides.
- The stockwork vein systems are enveloped in distinct alteration halos. The alteration halos may extend into the hanging-wall strata above the deposit.
- Deposits often form in clusters or stacked lenses.

A model for the generalized setting and genesis of VMS deposits is shown in Figure 8.1. Due to the complexity and differences in the style and settings of VMS deposits, a six-fold classification scheme has been defined based on deposit rock types and associations (Barrie and Hannington, 1999; Franklin et al., 2005; Galley et al., 2007):

- 1) Mafic (Cyprus-type)
- 2) Bimodal Mafic (Noranda-type)
- 3) Mafic Siliciclastic (Besshi-type)
- 4) Bimodal Felsic (Kuroko-type)
- 5) Felsic Siliciclastic (Bathurst-type)
- 6) Hybrid Bimodal Felsic/Siliciclastic (Eskay Creek-type)

Figure 8.1. Model for the setting and genesis of VMS deposits (from Galley, 1993; Piercey, 2010)



8.1.1 Mafic Type VMS deposits

The Turgeon VMS deposit is a mafic type VMS deposit, similar to other mafic type VMS deposits discovered in Newfoundland, Canada, such as the Tilt Cove and Betts Cove VMS deposits. The Tilt Cove Mine was in production from 1864 to 1917 and 1957 to 1967 and was the largest mafic type VMS deposit in the Appalachian Orogen. Tilt Cove Mine is reported to have produced approximately 8.2 million tonnes with copper grades ranging from 4 to 12% Cu in the early years and 2% Cu in the 1960's (Saunders, 1985). Approximately 42,000 ounces of gold was produced from 1957 into the 1960s with an average grade of 2.5 g/t Au (DeGrace et al., 1976, as cited in Saunders, 1985). The mineralization at Tilt Cove is hosted in chloritized, sheared and brecciated pillow lavas and agglomerates (Saunders, 1985).

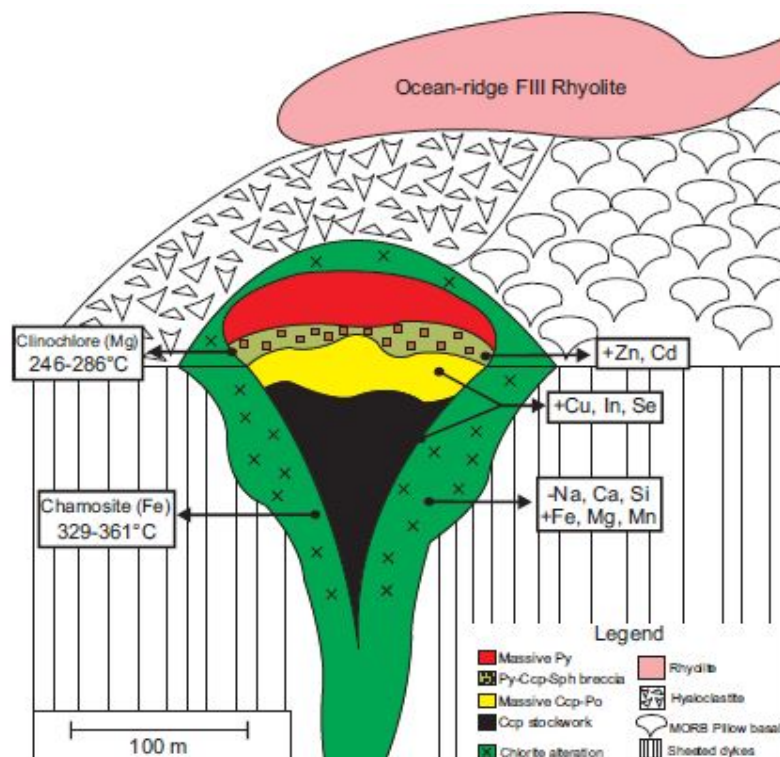
The Betts Cove VMS deposit is hosted within the Betts Cove Complex, an Ordovician ophiolite sequence. The mineralization occurs as massive lenses, stringers and disseminations characterized by chloritic shear zones in proximity to the sheeted dyke-pillow lava contact. Mining at Betts Cove occurred from 1875 to 1885 with production

totalling approximately 118,000 tonnes of ore with an average grade of 10% Cu (Saunders, 1985).

A mafic type VMS deposit is defined by two principal criteria: a predominantly mafic host rock (e.g., >75%) stratigraphic succession, and rare or absent felsic volcanic rocks (<1%) (Barrie and Hannington, 1999). The mafic host rock has minor siliciclastic (<10%) or ultramafic rocks, or both. Mafic type VMS deposits are fewer in number, smaller, but Cu-rich and Pb-poor in comparison to all other VMS deposit types (Barrie and Hannington, 1999). Examples of mafic type VMS deposits are found exclusively in Phanerozoic rocks and encompassing ophiolitic settings (Barrie and Hannington, 1999). Modern analogs of mafic type VMS deposit be found in ocean ridge, advanced back-arc rift, and supra-subduction zone nascent arc settings.

The pillow lavas and hyaloclastite that host the Turgeon Deposit are interpreted to have formed by effusive submarine volcanism and fall within the flow lithofacies association. VMS deposits in the flow lithofacies association are characterized by extensive vertical alteration zones of up to one km depth and laterally restrictive alteration zones (Gibson, 1997). The chlorite footwall alteration zones of the massive sulphide lenses at Turgeon are vertically extensive and cover hundreds of metres. The relatively high aspect ratios of length to width is consistent with the interpretation of their formation in a flow-dominated succession in an ocean floor environment (Lalonde and Beaudoin, 2015). A reconstruction of the Turgeon deposit and its geological environment is presented in Figure 8.2.

Figure 8.2. A reconstruction of the Turgeon deposit (from Lalonde and Beaudoin, 2015)



9 Exploration

The Company has yet to conduct exploration work at the Turgeon Property. A summary of the historical exploration work completed by companies other than Melius is presented in Section 6. None of this work was conducted by or on behalf of Melius.

10 Drilling

Melius has yet to conduct any drilling at the Turgeon Property. A summary of the historical drilling conducted at the Turgeon Property from 1958 to 2000 by companies other than Melius is presented above in Section 6.4. Drilling and drill core re-sampling programs completed by Puma from 2008 to 2018 is summarized in the following text and illustrated in Figure 6.9.

10.1 Drilling by Puma Exploration Inc. (2008 to 2018)

Puma completed 45 drillholes, totalling 12,232 m, on the Turgeon Property from 2008 to 2018. Puma's first drilling campaign was completed in September 2008. Four core holes, totalling 369 m, were completed at the Power Line Zone. The objective of the drilling was to characterize the mineralization at Power Line and to define the metallogenic model of the Turgeon Deposit to assist with future targeting. Two of the drillholes were confirmation holes and two of the drillholes tested new geophysical anomalies. The drilling intersected basalts, andesites and black mudstones. Highlights from this drill program included 2.4% Cu over 31 m core length from 31 m in drillhole F08-01 and 40 m core length of 1.0% Cu and 2.9% Zn from 50 m in drillhole F08-03 (Robillard, 2009).

The second drill campaign was completed in September 2009 and consisted of 3 core holes, totalling 435 m, drilled at the Power Line Zone. The objective of the drilling was to confirm the geological model of the Turgeon Deposit, to specify the layout of the volcanogenic massive sulphide (VMS) volcanic model and to validate the continuity of the mineralization present. Drillhole F09-01 intersected a mineralized network of veins and veinlets rich in copper minerals, drillhole F09-02 intercepted the massive sulphide zone of the Power Line Zone and drillhole F09-03 defined the continuity of the mineralized lens at surface (Gagné, 2010). Highlights of the 2009 drill program are presented in Table 10.1.

Drilling by Puma in 2010 and 2011 tested geophysical anomalies identified in an InfiniTEM survey. Five drillholes were completed in late 2010 and early 2011 for a total metreage of 1,860 m. Drillhole FT10-02 intersected high grade copper mineralization and a massive sulphide lens of zoned copper and zinc mineralization with 10.1% Cu and 54 g/t Ag over 7.5 m core length from 135.2 m, including 2.4 m of 14.9% Cu and 137 g/t Ag from 135.2 m, followed by 42 m core length of 0.8% Cu and 1.7% Zn from 166 m depth (Puma Exploration, 2011).

Table 10.1. Highlights of Puma's 2009 drilling program

Drillhole #	From (m)	To (m)	Length* (m)	Cu (%)	Zn (%)
F09-01	37.3	160.0	122.0	0.80	-
F09-01	37.3	134.5	97.0	1.00	-
F09-01	46.3	109.0	63.0	1.50	-
F09-01	46.3	76.3	30.0	1.87	-
F09-01	46.3	52.7	6.4	2.68	-
F09-01	53.0	61.0	8.0	2.04	-
F09-01	67.0	69.0	2.0	2.17	-
F09-01	71.0	76.0	5.0	2.30	-
F09-01	85.0	103.0	18.0	1.82	-
F09-01	85.0	87.0	2.0	2.70	-
F09-01	92.3	103.0	10.7	2.35	-
F09-01	107.0	109.0	2.0	1.86	-
F09-02	3.0	10.1	7.1	-	1.16
F09-02	29.0	33.0	4.0	2.35	-
F09-02	49.9	58.5	8.6	0.97	1.05
F09-02	62.4	70.3	7.9	0.72	0.55
F09-02	70.8	73.2	2.4	1.00	-
F09-02	77.9	85.1	7.2	1.40	-
F09-02	103.0	105.3	2.3	2.16	-
F09-03	11.0	13.0	2.0	-	1.25
F09-03	21.0	28.4	8.4	1.05	-

*The true width of mineralized intercepts is not known.

Two exploration drilling campaigns were completed by Puma outside of the known mineralized zones in 2013 and 2014. The first of these campaigns resulted in the discovery of the Dragon Zone. Fifteen drillholes, totalling 2,017 m, were completed on Tenure Block 1813 from December 2013 to February 2014. The objective of the drilling was to test IP chargeability anomalies on the Property and to provide geological information on the mineralization model of the Turgeon Deposit (Bernier et al., 2014). The results of the first drilling program are presented in Table 10.2.

The second campaign was completed in late 2014 and consisted of 6 drillholes, totalling 1,378 m. The objective of the drilling was to test the most prospective volcanic sequence established by Puma and identify potential extensions of the "Dragon" lens (Bernier and Richer, 2015). The samples were sent to ALS Chemex in Sudbury, ON, for multielement analysis. A total of 115 m of sulphide mineralization was observed in drillhole FT14-05 including massive sulphide from 217.7 to 225.9 m depth. FT14-05 yielded 5.66% Zn, 0.38% Cu and 2.28 ppm Ag over 6.8 m core length from 219.1 m to 225.9 m.

Table 10.2. Highlights of Puma's drill program (2013-2014)

Drillhole #	From (m)	To (m)	Length* (m)	Ag (g/t)	Cu (%)	Zn (%)
FT13-01	4.3	144.1	139.8	0.40	0.03	0.23
Including	4.3	8.2	3.9	1.60	0.08	1.56
Including	71.3	106.2	34.9	1.10	0.10	0.37
Including	89.2	92.8	3.6	3.10	0.25	0.57
FT13-04	40.0	70.4	30.4	0.00	0.01	0.12
FT13-08	76.5	86.9	10.4	0.40	0.11	0.16
FT13-10	8.3	73.8	65.5	0.20	0.02	0.20
Including	14.8	25.4	10.6	0.40	0.01	0.38
Including	57.2	67.6	10.4	0.20	0.06	0.43
FT13-12	4.0	165.0	161.0	0.30	0.05	0.16
Including	4.0	24.2	20.2	0.50	0.02	0.28
FT13-13	3.0	172.5	169.5	0.30	0.05	0.12
Including	37.4	41.8	4.4	4.00	0.52	0.66
Including	151.0	155.0	4.0	0.60	1.01	0.79
FT13-15	9.5	124.4	114.9	0.20	0.04	0.11
FT14-05	48.8	342.0	293.2	-	-	0.30
Including	219.1	225.9	6.8	-	0.38	5.66
Including	223.2	225.9	2.7	-	0.23	10.05
Including	48.8	97.0	48.2	-	-	0.34
FT13-13 extension	37.4	155.0	117.6	-	-	0.17
FT14-04	7.0	50.6	43.6	-	-	0.15

*The true width of mineralized intercepts is not known.

Drilling by Puma in 2015 tested the extension of the Dragon Zone discovered in 2013. Four core holes, totalling 1,378 m, were completed. The geological units intersected in the drilling were typical of ophiolitic mafic VMS deposits with several intervals of semi-massive to massive sulphides. Additionally, small zones of chloritized stockwork containing copper mineralization were observed in the drill core (Bernier, 2016). The drilling delineated a persistent alteration and mineralization halo suggesting a major hydrothermal system (Puma Exploration, 2015). The best results of this drilling program were intersected in drillholes FT15-03 and FT15-04 and include:

- FT15-03: 3.25% Zn, 0.38% Cu and 4.2 ppm Ag over 1.8 m core length from 94.2 m; 0.03% Zn, 0.84% Cu and 2.16 ppm Ag over 5.7 m core length from 158 m; and 0.02% Zn, 1.16% Cu and 0.6 ppm Ag over 2.4 m core length from 179.2 m depth.
- FT15-03 mineralized halo: 0.43% Zn, 0.11% Cu and 0.43 ppm Ag over 116.4 m core length from 221.8 m, including 4.4% Zn, 0.46% Cu and 2.51 ppm Ag over 4 m core length from 228.9 m; 1.14% Zn, 0.16% Cu and 1 ppm Ag over

7.4 m core length from 251.4 m; and 1% Zn, 0.03% Cu and 0.18 ppm Ag over 10.2 m core length from 312.5 m.

- FT15-04: 2.35% Zn, 0.27% Cu and 0.77 ppm Ag over 2.3 m core length from 95.9 m.
- FT15-04 mineralized halo: 1.15% Zn, 0.41% Cu and 0.97 ppm Ag over 23.1 m core length from 129.4 m, including 4.63% Zn, 2.64% Cu and 2.66 ppm Ag over 3.2 m core length from 132.5 m; and 1.21% Zn, 0.76% Cu and 1.48 ppm Ag over 7.9 m core length from 144.6 (Bernier and Gagné, 2016).

Puma's 2016 drill program tested targets identified by geophysical surveying and was designed to test for extensions of the Dragon Zone. Five core holes, totalling 2,569 m, were completed with 3 holes testing a geophysical target located 500 m to the southwest of the Dragon Lens and 2 holes testing for extensions at the Dragon Zone. Samples were sent to ALS for preparation and multielement analysis using aqua regia with ICP-AES finish. Drillhole FT16-03 extended the mineralization at the Dragon Lens with an interval of 7 m core length of massive to semi massive sulphides from 107.2 m, including 1.6% Cu and 0.8% Zn over 1.4 m core length. Drillhole FT16-05 intersected 15 m core length of massive to semi massive sulphide zone of pyrite and chalcopyrite from 234 m depth and 1.7 m core length of 1.5% Zn from 318 m (Puma Exploration, 2017).

Puma's 2018 drill program tested geophysical targets identified in the 2018 BHEM survey and IP borehole survey and targeted potential mineralized extensions of known deposits (Puma Exploration, 2019). Five drillholes, totalling 1,809 m were completed. The drill samples were sent to ALS in Sudbury, ON, for preparation and shipped to ALS in Vancouver, BC, for multielement analysis using four acid digestion with ICP-MS finish. Highlights from the 2018 drill program included: 0.6% Cu and 0.26% Zn over 7.2 m core length from 207 m in FT18-01; 2.89% Zn over 0.5 m core length from 128 m in FT18-01; 0.75% Cu over 0.5 m core length from 128 m in FT18-03; and 1.23% Cu over 0.7 m core length from 132.65 in FT18-03 (Hupé and Forbes, 2018). No significant base or precious metal mineralization was returned from the drillholes that tested the geophysical anomalies (Puma Exploration, 2019).

10.2 Core Re-Sampling by Puma Exploration Inc. (2009)

In 2009, Puma completed a verification re-sampling program on historical core from three drillholes completed by previous companies at the Property (H88-106, H88-107 and PD-11). A total of 171 samples were collected from the drillholes and sent to ALS Chemex in Val D'Or, QC, for multielement analysis. Puma reported minimal variation in the mineralization grades. In addition, Puma observed un-sampled mineralized zones in the historical core; Puma's re-sampling program increased the thickness of the initial mineralized zones returned from the historical core (Gagné, 2010).

In 2012, Puma completed a re-sampling program on historical core drilled by previous companies at the Property from 1977 to 2000. A total of 2,200 samples were collected

and analysed from core drilled by previous operators from 1977 to 2000, as well as core drilled by Puma from 2008 to 2011 (Puma Exploration, 2013). Significant new mineralization was returned from the re-sampling program and is shown in Table 10.3.

Table 10.3. Highlights from Puma’s resampling program of previous diamond holes drilled by other companies at the Turgeon Property from 1977 to 2000 (from Puma Exploration, 2013)

Hole	From m	To m	Long m	Cu %	Ag g/t	Zn %
H77-03	27.40	44.20	16.80	0.04	0.15	0.32
E79-30	83.90	89.90	6.00	0.19	0.19	0.05
E79-56	57.00	71.00	14.00	0.13	1.07	0.23
E79-56	171.65	176.30	4.65	0.27	6.93	0.38
E79-56	180.00	187.40	7.40	0.22	1.33	0.25
E81-60	188.50	193.50	5.00	0.41	8.48	0.07
E81-65	198.70	210.00	11.30	0.20	0.67	0.02
E81-69	331.00	344.00	13.00	0.27	0.27	0.01
E82-103	130.00	140.00	10.00	0.22	0.93	0.02
E82-94	156.30	160.00	3.70	0.48	7.70	0.09
H88-105	99.80	105.50	5.70	0.06	1.24	0.51
H88-109	39.00	60.00	21.00	0.02	0.14	0.35
H88-112	53.00	59.44	6.44	0.27	0.91	0.08
PD-14	105.00	113.35	8.35	0.05	0.60	0.36
PD-02	144.60	150.20	5.60	0.39	4.00	0.27
F00-02	156.60	228.70	72.10	0.12	1.43	0.05
F00-02	220.70	228.70	8.00	0.43	0.94	0.01
F00-04	120.00	145.00	25.00	0.07	0.24	0.24

*The true width of mineralized intercepts is not known.

11 Sample Preparation, Analyses and Security

The Company has yet to conduct exploration work at the Turgeon Property. Limited information on the sample preparation and analyses of historical exploration programs conducted on the Property by other companies is provided in Sections 6 and 10.

12 Data Verification

12.1 Data Verification Procedures

Stefan Kruse, Ph.D., P. Geo., conducted a site inspection of the Turgeon Property (Tenure Block 1813) for data verification purposes on June 6th, 2021. Verification samples were collected from outcrop and selected 2018 drillholes completed by Puma. Drillhole verification sample results were compared with database values for the commodities of interest.

Selected drill collar locations and orientations were verified and cross-checked against the exploration database.

The general geology, mineralization style and alteration were observed and compared with published interpretations.

Core handling, sampling and QA/QC procedures were discussed with Mr. Forbes, the project geologist in charge of the 2018 drill program completed by Puma.

Verification of the drillhole database included a review of the various digital drillhole tables provided by Puma were compared against scans of hard copy logs, surveys and collar files. This was possible for the 2008 to 2018 drillholes completed by Puma, but much of the original pre 2008 historical data was not available to review.

12.2 Validation Limitations

No pre-2018 drillholes were available at the time of the site visit for inspection.

12.3 Adequacy of the Data

The QPs reviewed the adequacy of the exploration information and the visual, physical, and geological characteristics of the Property and found no significant issues or inconsistencies that would cause one to question the validity of the data.

The senior author is satisfied, and takes responsibility, to include the exploration data including geochemical surveys and drill information as background information for this geological introduction and qualifying Technical Report.

In the future, the authors recommend that the sample collection, preparation, security, analytical procedures and QA/QC procedures of any Turgeon exploration program is current with CIM definition standards and guidelines and robust enough to develop confidence for any future mineral resource/reserve modelling and estimations.

Currently the Project data are captured in a mix of data formats including MapInfo™ TAB files, Excel™ spreadsheets and CSV files. It is recommended, going forward, that

the Project database be upgraded to a relational database system with built-in data verification and QA/QC functionality.

Spot checks of assay values from original lab certificates against drill logs and drill tables were conducted for the Puma drillholes. A total of 647 assays were checked and no significant discrepancies were noted. However, in one drill table provided (“Assays Turgeon.xlsx”) sample intervals were rounded to one decimal place, potentially introducing minor systematic error into the data. A total of 31 rounding errors were identified, 2 typographical errors and 77 assays there were no assay certificates for.

Nearly half (47%) of the digital collar files for the Puma drillholes were reviewed against the original logs. Many of the original logs did not contain collar information. Where collar information was present, a few minor errors or discrepancies were noted on the order of a few meters. The digital collar file information for Puma’s 2018 drill program was reviewed against a Geotic Excel™ spreadsheet dated January 30, 2019, with two significant (400 m) discrepancies identified in the northing column for drillholes FT18-03 and FT18-04 in the Geotic Excel™ spreadsheet. However, the digital collar file information for Puma’s 2018 drill program was found to be consistent with the information provided in the original logs appended in Hupé and Forbes (2018).

Data verification was completed on select historical data to ensure the validity of the historical data contained in the Issuer’s database, and subsequently reported in Section 6 and 10 of this Technical Report. The Issuer intends to use this data to assist in the geological understanding of the Property, in future exploration targeting and to guide future drill programs. In order to use the historical drill data in future mineral resource estimate calculations, a more thorough review by a Qualified Person is required to verify the historical assays and ascertain the validity and availability of the historical data.

12.4 Qualified Person Site Inspection

Stefan Kruse, Ph.D., P. Geo., conducted a site inspection of the Turgeon Property for data verification purposes on June 6th, 2021. The site visit included a Property tour facilitated by Étienne Forbes, a geologist with Geominex Consulting Inc., and former project geologist on the Turgeon Project. Additionally, time was spent at the Puma core library in Bathurst, NB observing the historical core stored at that facility, and collecting verification samples. Access to the site was via active quarry roads, operated by an independent quarry operator, with permission arranged by Mr. Forbes.

The objectives of the site visit included:

- Verification of selected drillhole collar locations.
- Observation and sampling of historical showings in outcrop.
- Examination of drill core and observation of mineralized intercepts.

- Collection of verification samples.

All verification samples were submitted for analysis to ALS Limited’s (ALS) facility in Moncton, NB. ALS is an International Standard ISO/IEC 17025:2005 certified laboratory and is independent of the Company and the authors of this Technical Report. Samples were analysed using ALS’s ME-MS61 48 element, four-acid ICP-MS package. Copper and zinc overlimit samples were processed using the OG62 four-acid ICP package.

The Property site visit included stops at the historical Power Line Zone mineral occurrence (NB Mineral Occurrence File Reference #16) and several historical drill collars. Several lenses of in-situ massive sulphide hosted in vesicular basalt were observed, consistent with the previously reported descriptions of the mineral occurrence (Lalonde and Beaudoin, 2015).

Rock grab samples collected from massive sulphide horizons contained anomalous Ag, Cu and Zn consistent with the style and tenor of mineralization previously described on the Property. Verification grab sample results are shown below in Table 12.1.

Table 12.1. Verification grab sample results from the Power Line mineral occurrence. NAD83 Z20 coordinates.

SAMPLE	ZONE	EASTING	NORTHING	Ag ppm	Cu ppm	Zn ppm
612350	Power Line	284794	5306587	6.80	7990	1830
612351	Power Line	284820	5306841	6.98	8680	1180

Verification samples were collected from 2018 core stored at the core storage and logging facility in Bathurst, NB. Core from mineralized intervals from holes FT18-01 and FT18-03 contained massive to semi-massive pyrite, chalcopyrite and sphalerite hosted in mafic volcanic rocks, consistent with logged descriptions of the core (Hupé and Forbes, 2019). No core from pre-2018 holes was available for inspection.

In general, there is reasonable agreement between the original assay results and verification sample results (Table 12.2), despite difference in sample size (half-core vs. quarter core). Additionally, the location of original assay tags and run blocks was likely disturbed for some of the sampled intervals.

In the opinion of the Qualified Person, visual inspection and verification sampling confirm the presence and style of historically reported mineralization.

Table 12.2. Drillhole verification samples

Drill Hole	From	To	Sample (orig)	Sample (ver)	Ag ppm (orig)	Ag ppm (ver)	Cu ppm (orig)	Cu ppm (ver)	Zn ppm (orig)	Zn ppm (ver)
FT18-01	208.15	208.55	X363364	612352	0.51	1.9	2600	3150	618	1900
FT18-01	211.27	211.72	X363368	612353	4.31	3.81	21900	18300	7820	15100
FT18-01	215.6	216.7	X363377	612354	0.43	0.6	125	412	3590	9180
FT18-03	128	128.5	X363610	612355	0.51	0.3	7540	4900	122	169
FT18-03	132.65	133.35	X363616	612356	1.78	0.98	12250	8290	178	181
FT18-03	134.13	134.7	X363618	612357	1.29	0.54	2420	1380	104	111

Drill collars encountered during the site visit were located using a hand-held GPS and casing dip and azimuth measured using a standard geological compass. Comparison of field-verified collars with database values did not yield any significant discrepancies.

13 Mineral Processing and Metallurgical Testing

The Company has yet to conduct mineral processing and/or metallurgical testing at the Turgeon Property.

In 2009, Puma commissioned LTM Inc., of Val D'Or, QC, to conduct metallurgical test work on samples of Turgeon mineralization intersected in the 2009 drill program to test the copper and zinc recovery. The samples were sub-divided in relation to the zonation of the deposit; the first group contained copper-rich stockwork type zonation and the second group contained zinc-rich massive sulphide mineralization. Flotation tests for copper were completed on 12 samples totalling 16.9 kilograms (kg) and flotation tests for zinc were completed on 6 samples totalling 22.67 kg. The samples for copper were homogenized and divided into five 3 kg fractions. The samples for zinc were homogenized and divided into seven 3 kg fractions.

According to the metallurgical testwork, the copper concentrates contained greater than 20% Cu with a recovery of nearly 95% and a possible zinc recovery of 90 and 94% Zn (Gagné, 2010).

The QPs have not verified the results of the metallurgical test work, and therefore, the QPs and the issuer do not view the metallurgical test work as current or relevant going forward.

14 Mineral Resource Estimates

The Company has yet to conduct mineral resource/reserve modelling or estimations. There are no known mineral resources or reserves outlined at the Turgeon Property.

15 Adjacent Properties

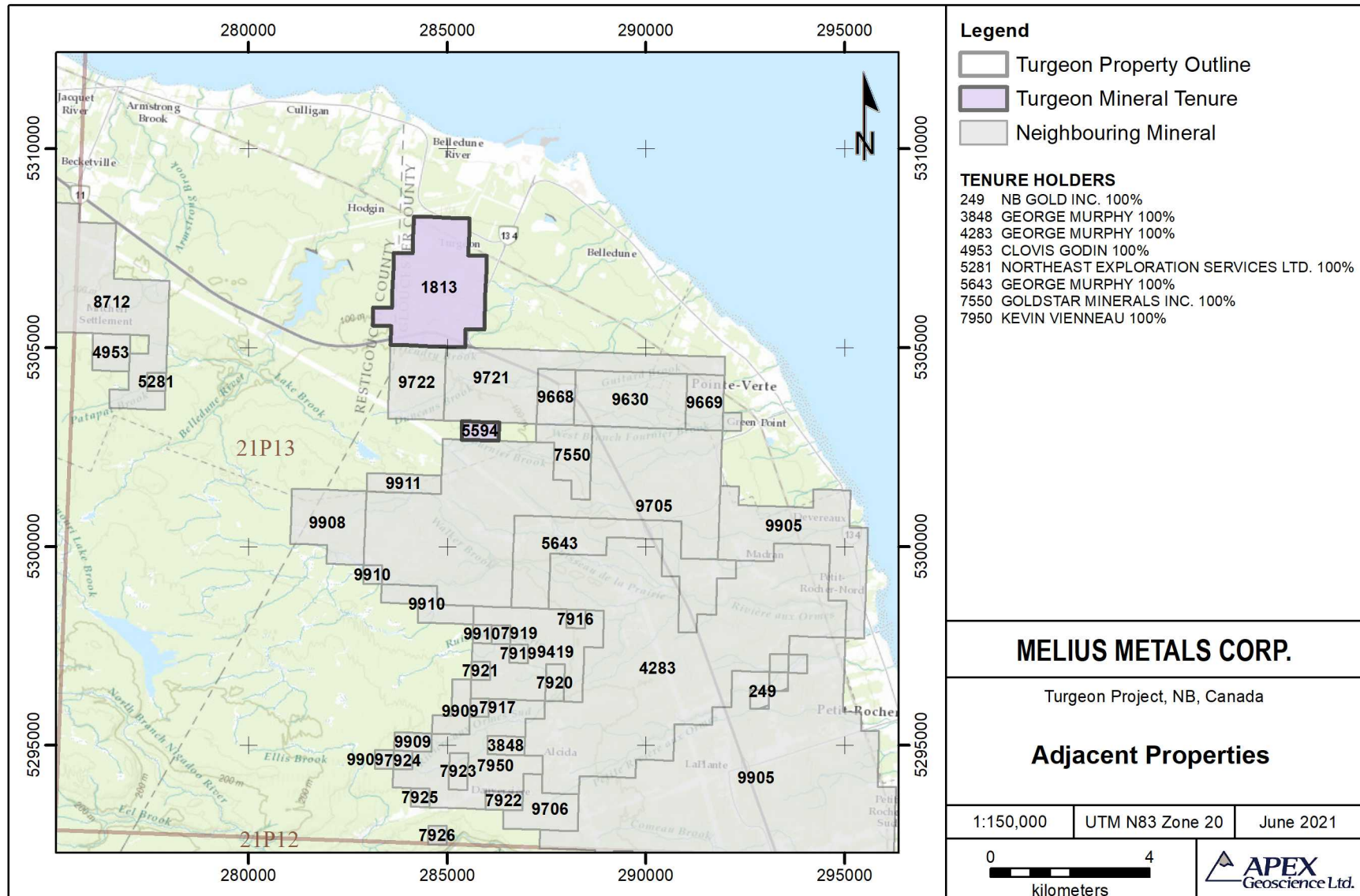
With respect to adjacent properties, the authors have reviewed the Government of New Brunswick electronic mineral claim administration program (NB e-CLAIMS), Natural Resources and Energy Development Mineral Reports of Work, and various company websites.

A diagram of mineral Tenure Blocks that occur adjacent to the Turgeon Property is presented in Figure 15.1. The adjacent properties are discussed in the text that follows. The QPs have been unable to verify the adjacent properties information and therefore the information is not necessarily indicative of the mineralization on the Turgeon Property that is the subject of this Technical Report.

The most active adjacent property work is being completed on Tenure Blocks 7950 and 9419, situated approximately 4 km south of the Turgeon Property by Founders Metals Inc., formerly Avalon Works Corp. Avalon Works Corp. acquired the Elmtree Property in February, 2021 (Avalon Works Corp., 2021). The Elmtree Property hosts gold and polymetallic mineralization that straddles the unconformable contact between the poly-deformed Middle Ordovician clastic sedimentary rocks and subordinate mafic intrusions of the Elmtree Inlier (Fournier Supergroup, Sormany Group, Elmtree Formation) and the overlying lower Silurian clastic and carbonate sedimentary rocks of the Chaleurs Group within the Nigadoo River Syncline. The Elmtree Property contains at least two gold-bearing zones, the higher-grade West Gabbro Zone, and the original Discovery Zone. The West Gabbro Zone primarily hosts gold mineralization, and the Discovery Zone contains both gold and polymetallic (antimony (Sb), Zn, Pb, Ag) veins. The mineralization is structurally controlled by an easterly trending fault zone(s) situated at the southern tectonic boundary of the Elmtree Inlier (Eccles and Kruse, 2021).

Three historical mineral resource estimations have been completed at the Elmtree Property: two at the West Gabbro Zone for Au; and one at the Discovery Zone for Au and combined Au, Ag, Pb and Zn (Cullen and Harrington, 2008; Murahwi et al., 2011). Cullen and Harrington (2008) reported an Indicated Resource of 525,000 tonnes of high-grade and low-grade gold (averaging 2.45 g/t Au) with an Inferred Resource of 1,556,000 tonnes of high-grade, low-grade and peripheral gold (averaging 2.01 g/t Au) at the West Gabbro Zone. Murahwi et al. (2011), reported an Indicated Resource of 1,611,000 tonnes at 1.91 g/t Au with an Inferred Resource of 2,053,000 tonnes at 1.67 g/t Au. The authors caution that the resources presented above lack key assumptions and parameters and are only provided to illustrate the type and magnitude of mineralization that could be present in the vicinity of the Turgeon Property. The authors have not visited these properties an/or verified the historical estimates. The historical estimates were constructed prior to the most recent CIM Definition Standards and do not meet the requirements of the CIM Definition Standards on Mineral Resources and Mineral Reserves as prescribed by NI 43-101. More work by a QP would be necessary to verify the historical estimates. The authors have not done sufficient work to classify the historical estimates as current MREs or current mineral reserves, and the Company is not treating the historical estimates as current MREs or current mineral reserves.

Figure 15.1 Adjacent properties in the Turgeon Property area



Recent work has been conducted on the George Murphy Tenure Blocks 4283 and 5643 where Great Atlantic Resources Corp. (Atlantic) is exploring their Keymet Property. Atlantic has consistently submitted assessment work from 2007 onwards, and is exploring multiple Pb, Zn, Cu and Ag vein systems at the historical Keymet Mine and Elmtree 12 deposits (Great Atlantic Resources Corp., 2020). In 2018, Atlantic completed 13 drillholes totalling 1,484 m in the northwest portion of Tenure Block 4283. The drill program confirmed significant levels of Zn, Cu, Pb and/or Ag in veining and a zone of anomalous to low grade gold in proximity and east of the polymetallic veins (Martin, 2018).

A Mineral Report of Work query search showed exploration work was completed on Tenure Block 4953, the Mitchell (Silverjack) Property, by Slam Exploration in 2012. Tenure Block 4953 hosts the Silverjack Deposit, a manto type Ag-Pb-Zn-Cu deposit associated with La Vielle Formation carbonates and clastic sediments of the Weir Formation. Sphalerite and galena mineralization of the Silverjack Deposit occurs as coarse-grained narrow seams flanked by disseminated mineralization over 1,600 m. Work completed on Tenure Block 4953 confirmed copper and silver mineralization at the Mitchell project; results reported by Slam Exploration Ltd. included 2.4% and 2.08% Cu from trench grab samples (Lloyd, 2012b). Slam Exploration Ltd. completed two drilling programs on Tenure Block 5281, the Mitchell Extension Property, in 2009-2010. Drill results reported by Lloyd (2012a) include 5.4 m core length of 0.82% Cu, 2.18% Zn, 1.52% Pb and 128.3 g/t Ag including 592 g/t Ag over 0.80 m from a depth of 59.60 m.

16 Other Relevant Data and Information

The Company has only recently acquired the Turgeon Property and there is no other relevant data and information to report at this time.

17 Interpretation and Conclusions

This Technical Report on the Turgeon Property has been prepared by APEX Geoscience Ltd. of Edmonton, Alberta, Canada, and Terrane Geoscience Inc. of Fredericton, New Brunswick, Canada. The intent and purpose of this Technical Report is to provide a geological introduction to the Turgeon Property, to summarize historical work conducted on the Property from 1957 to 2018 and to provide recommendations for future exploration work programs.

The Turgeon Property is in northeast New Brunswick and is situated over the boundary of Gloucester County with Restigouche County. The Turgeon Property is located approximately 30 km northwest of the City of Bathurst, NB, and 3 km southwest of the Village of Belledune, NB. The Turgeon Property covers a total area of 714.9 ha and is defined by Tenure Blocks 1813 and 5594. The two tenure blocks are not contiguous, Tenure Block 5594 is situated 2 km to the southeast of Tenure Block 1813.

The Turgeon Property lies in a favorable geological setting within the Bathurst Mining Camp (BMC) in the northeastern part of the Appalachian Orogen. On a regional scale, the Property occurs within the Middle to Late Ordovician Fournier Supergroup of the Elmtree-Belledune Inlier. Recent geological mapping of the Property by McCutcheon (2018) identified five major rock units within Tenure Block 1813, including: the Ordovician Madran Formation of the Pointe Verte Group, the Ordovician Turgeon Road Formation of the Devereaux Complex, an un-named unit, the Early Silurian Weir Formation and the Early Silurian La Vielle Formation. Tenure Block 5594 is underlain by the Black Point Gabbro of the Devereaux Complex.

Historical exploration conducted on the Property has included geological mapping and prospecting, geophysical surveys, soil geochemical surveys, trenching and drilling by several companies from 1958 to 2018. The historical exploration has led to the identification of six VMS related sulphide zones on the Property, including: the Beaver Pond Zone, the Power Line Zone, the Zinc Zone, the “48-49” Zone, the Dragon Zone and the Bern Zone. The Zinc Zone and the Powerline Zone are collectively referred to as the Turgeon Cu-Zn Deposit and are situated on Tenure Block 1813.

From 1958 to 2000, approximately 150 drillholes were completed in and around the Turgeon Deposit area. Highlights from historical drill programs (provided as core length) include 12.4% Zn and 1.8% Cu over 8.7 m, as well as 10.7% Zn and 0.7% Cu over 10.1 m in one of the main mineralized zinc lenses. Copper highlights include 2.5% over 34.1 m in drillhole E82-77, 2.7% Cu over 36.2 m in drillhole E82-54 and 7.9% Cu over 7.5 m in drillhole E82-46.

Several historical MRE’s have been calculated for the Turgeon Deposit. The historical MRE’s discussed in this report were calculated prior to the implementation of the standards set forth in NI 43-101 and CIM Definition Standards for Mineral Resources and Mineral Reserves (May, 2014) and CIM Estimation of Mineral Resources & Mineral Reserves Best Practices Guidelines (November, 2019). The authors of this Technical Report have not done sufficient work to classify these historical estimates as a current mineral reserves or mineral resources. The authors have referred to these estimates as “historical resources” and the reader is cautioned not to treat them, or any part of them, as a current MRE. There is insufficient information available to properly assess the data quality, estimation parameters and standards by which the estimates were categorized. The historical MRE’s summarized below have been included to demonstrate the mineral potential of certain target mineralized zones at the Turgeon Property and to provide the reader with a complete exploration history of the Property. A thorough review of all historical data performed by a Qualified Person, along with additional exploration work to confirm results, would be required in order to produce a current MRE for the Turgeon Deposit.

Historical MRE’s reported by include the following:

- In 1979, Esso estimated 500,000 tons (453,592 tonnes) of 2% Cu and 2% Zn for the Turgeon Deposit (Gashinski and Regan, 1982);

- In 1981, Esso estimated 1.3 million tonnes grading approximately 2% Cu and 2% Zn in mineralized pods and lenses for the Power Line Zone (Gashinski and Regan, 1982); and
- In 1983, Esso estimated 2.5 million tonnes of 1 to 1.5% Cu and 4 to 5% Zn for the Power Line and the Beaver Pond zones (Kettles, 1987).

In 1993, Phelps Dodge completed a recalculation of the approximate tonnage and grade of the Power Line, 100 m Zinc and “48-49” zones based upon different geometries and geological correlations than the historical estimate of 1.3 million tonnes at 2% Cu and 2% Zn by Esso in 1981 (Gashinski and Regan, 1982). Phelps Dodge estimated a total historical MRE of 450,000 tonnes of 1.5% Cu and 2.5% Zn in the main lens of the Power Line Zone, the 100 m Zinc Zone and the “48-49” Zone. The historical MRE reported in Thurlow (1993) is based on undiluted “geological reserves” of massive sulphide sections only and is considered to be accurate to +/-50%. The reader is cautioned that the use of the term “geological reserves” in the Phelps Dodge estimation of mineralized material is simply a reproduction of the original terminology used in Thurlow (1993) and does not reflect the current definition of the term “reserve” or imply that there are current reserves defined within the Property.

Puma completed 45 drillholes, totalling 12,232 m, on the Turgeon Property from 2008 to 2018. Early drilling by Puma at the Turgeon Deposit in 2008 and 2009 confirmed and expanded the mineralization at the Power Line Zone. Drilling by Puma in 2010–2011 tested geophysical anomalies identified in an InfiniTEM survey. Drillhole FT10-02 intersected high grade copper mineralization and a massive sulphide lens of zoned copper and zinc mineralization. Drilling by Puma in 2013 resulted in the discovery of the Dragon Zone, located approximately 200 m south of the Power Line and Zinc mineralized zones. The Dragon Zone discovery hole included a massive sulphide intersection with 169.5 m core length of 0.05% Cu, 0.12% Zn and 0.30 g/t Ag from 3 m depth, including 1.01% Cu and 0.78% Zn over 4 m core length from a depth of 151 m. A follow-up drill program in 2014 intersected 293.2 m core length of 0.3% Zn from 48.8 m depth, including 5.66% Zn and 0.38% Cu over 6.8 m from a depth of 219.1 m.

Drilling by Puma in 2015 tested the extension of the Dragon Zone. The drill program intersected several intervals of semi-massive to massive sulphides and returned significant intervals of copper and zinc mineralization. The 2016 drill program tested targets identified by geophysical surveying and was designed to test for extensions of the Dragon Zone. Drillhole FT16-03 extended the mineralization at the Dragon Lens with a core interval of 7 m of massive to semi massive sulphides from 107.2 m, including 1.6% Cu and 0.8% Zn over 1.4 m core length. Drillhole FT16-05 intersected 15 m core length of massive to semi massive sulphide of pyrite and chalcopyrite from 234 m depth and 1.7 m core length of 1.5% Zn from a depth of 318 m. Finally, Puma’s 2018 drill program targeted potential mineralized extensions of known deposits and tested geophysical targets identified in the 2018 borehole electromagnetic (BHEM) and induced polarization (IP) geophysical surveys. Two of the drillholes returned significant Cu-Zn mineralization;

however, no significant base or precious metal mineralization was intersected in the drillholes that tested the geophysical anomalies.

In addition to drilling, Puma completed six historical trenching programs from 2008 to 2018. The trenching programs include 41 trenches, totalling 2,715 m, on Tenure Block 1813 and 9 trenches, totalling 1,840 m, on Tenure Block 5594. Trenching by Puma on Tenure Block 1813 identified numerous massive sulphide zones and lenses with anomalous Cu, Pb, Zn and Ag comparable to the results of drilling, including 1.57% Cu and 3.4% Zn over 0.3 m from channel sample at the Power Line Zone and numerous high grade Cu, Zn and Ag rock grab and channel sample results from the Turgeon Deposit area and the Beaver Pond Zone. Trenching by Puma at the Bern Zone on Tenure Block 5594 identified and extended copper, silver and zinc at the Bern Zone showing. Highlights from the program include 9.18 g/t Ag, 5.78% Cu and 2.08% Zn from rock grab sample M045918 and 4.38 g/t Ag and 6.46% Cu from rock grab sample M045918.

Based upon Co-author Dr. Kruse's site visit and the historical exploration work discussed in this Technical Report, it is the opinion of the QPs that the Turgeon Property is a "Property of Merit" warranting future exploration work with at least six VMS type semi-massive to massive sulphide zones. The QPs are not aware of any environmental liabilities, or any other known significant factors or risks related to the Turgeon Property that may affect access, title or the right or ability to perform work on the Turgeon Property. Roy's Quarry, an aggregate quarry owned by Roy's Trucking and Landscaping Ltd. lies in proximity to the Power Line Zone of the Turgeon Property. The Power Line Zone can be accessed using the quarry entrance; however, alternate access to the showing is available via historical drill access roads within the Property. The aggregate quarry within Tenure Block 1813 holds a separate permit and will not affect future development of the Power Line Zone.

With respect to risks and uncertainties, the authors have not done sufficient work to verify or classify the historical MRE's presented in Section 6, as a current MRE. Therefore, the QPs and Issuer, Melius, are treating the MRE's as historical in nature. In addition, the metallurgical test work information presented in Section 13 is for background historical information only. The QPs have not verified the results of the metallurgical test work, and therefore, the QPs and the issuer do not view the metallurgical test work as current or relevant going forward.

Any future exploration work and/or subsequent technical reports should be prepared in accordance with guidelines established by the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (2019), CIM Definition Standards for Mineral Resources and Mineral Reserves (2014), and NI 43-101 Standards of Disclosure for Mineral Projects, Form 43-101F1 Technical Report and related consequential amendments. Future Technical Reports that capture any new exploration work conducted by Melius should discuss any significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information, mineral resource or mineral reserve estimates, or projected economic outcomes.

18 Recommendations

Based upon Dr. Kruse’s site visit and the historical exploration work discussed in this Technical Report, it is the opinion of the authors of this Technical Report that the Turgeon Property is a “Property of Merit” warranting future exploration work.

The authors recommend a staged exploration program for the Turgeon Property. Warranted exploration for Stage 1 work includes drillhole database validation, prospecting, trenching, soil and rock sampling along with an airborne VTEM survey (Table 18.1). Consideration should also be given to conducting a lidar survey to obtain an accurate digital terrain model. Stage 2 work should include confirmation and infill drilling in order to obtain fresh core for metallurgical samples, additional exploration drilling and the construction of an initial mineral resource estimate for the Power Line Zone and Zinc Zone, also known as the Turgeon Cu-Zn Deposit (Table 18.1). The estimated cost for the Stage 1 exploration is CDN\$150,000. The Stage 2 work is dependent upon the results of the Stage 1 work and is estimated at a total cost of \$600,000 based upon 10 holes and 2,000 m of core drilling and includes costs for metallurgical work and mineral resource modelling (Table 18.1).

Table 18.1. Proposed budget for the recommended exploration at the Turgeon Property

Phase 1			
Activity Type	Cost		
Phase 1			
Heli-borne VTEM Survey	\$90,000		
Data Compilation/Verification	\$5,000		
Surface Exploration Program including prospecting, trenching, soil and rock sampling	\$40,000		
Lidar Survey	\$15,000		
	Contingency	\$0	
	Phase 1 Total Activities Subtotal	\$150,000	
Phase 2			
Activity Type	Total (m)	Estimated Cost per metre	
Diamond Drilling	2,000	\$250	\$500,000
Metallurgical Studies			\$40,000
Mineral Resource Estimation			\$54,000
		Contingency	\$6,000
	Phase 2 Activities Subtotal	\$600,000	
	Grand Total	\$750,000	

APEX Geoscience Ltd.

Terrane Geoscience Inc.

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Edmonton, Alberta, Canada
Effective Date: August 17th, 2021
Signing Date: March 30th, 2022

PERMIT TO PRACTICE APEX GEOSCIENCE LTD.	
RM SIGNATURE	(signed) "Michael Dufresne"
RM APEGA ID #:	48439
DATE:	August 17, 2021
PERMIT NUMBER: P005824	
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)	

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20 Certificate of Authors

I, Michael Dufresne, M. Sc., P. Geol., P. Geo. do hereby certify that:

1. I am President and a Principal of APEX Geoscience Ltd., 11450 - 160 St NW #100, Edmonton, AB, Canada, T5M 3Y7.
2. I graduated with a B.Sc. Degree in Geology from the University of North Carolina at Wilmington in 1983 and a M.Sc. Degree in Economic Geology from the University of Alberta in 1987.
3. I am and have been registered as a Professional Geologist with the Association of Professional Engineers and Geoscientists (“APEGA”) of Alberta since 1989 and a Professional Geoscientist with the Association of Professional Engineers and Geoscientists (“EGBC”) of British Columbia since 2012.
4. I have worked as a geologist for more than 35 years since my graduation from University and have extensive experience with exploration for, and the evaluation of, base and precious metal deposits of various types, including volcanogenic massive sulphide deposits.
5. I have read the definition of “Qualified Person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for the purposes of NI 43-101.
6. I am responsible for and have supervised the preparation of Sections 1, 2, 9 to 11 and 13 to 19 of the **Technical Report For The Turgeon Property, Northeast New Brunswick, Canada**, with an effective date of August 17, 2021 (the “Technical Report”). I have not visited the Turgeon Property.
7. To the best of my knowledge, information and belief, the Technical Report contains all relevant scientific and technical information that is required to be disclosed, to make the Technical Report not misleading.
8. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
9. I am independent of the issuer, the vendor and the Property applying all of the tests in section 1.5 of both NI 43-101 and 43-101CP.
10. I have not had any prior involvement with the Property that is the subject of the Technical Report.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.

Effective Date: August 17th, 2021

Signing Date: March 30th, 2022

Edmonton, Alberta, Canada

(signed) “*Michael Dufresne*”

Michael B. Dufresne, M.Sc., P.Geol., P.Geo.

I, **Stefan Kruse**, P. Geo., do hereby certify that:

1. I am a Principal and Senior Structural Geologist of Terrane Geoscience Inc., Suite 207 – 390 King St. Fredericton, NB E3B 1E3 Canada.
2. I graduated with a B.Sc. Honors, Cum Laude – Geology from the University of Ottawa in 1999, and a Ph.D. in Geology from the University of New Brunswick in 2007.
3. I am and have been registered as a Professional Geologist with the Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB; Member Number: M6806) since 2009; Professional Engineers and Geoscientists of Newfoundland and Labrador (PEGNL; membership number 05330) and the Engineers and Geoscientists of British Columbia (EGBC; membership number 206205).
4. I have worked as a geologist for more than 20 years since my graduation from university and have been involved in structural and tectonic characterization of tectonically modified, orogenic, magmatic and epithermal gold systems and porphyry and volcanogenic massive sulphide systems.
5. I have read the definition of “Qualified Person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for the purposes of NI 43-101. My technical experience includes structural geological evaluation of gold deposits and underground and open pit structural characterization for mining optimization and geotechnical purposes.
6. I am responsible for Section 12 and contributed to Sections 1, 4.5, 6, 7, 17 and 18 of the “**Technical Report For The Turgeon Property, Northeast New Brunswick, Canada**”, with an effective date of August 17, 2021 (the “Technical Report”). I visited the Turgeon Property on June 6, 2021, and can verify the mineral tenure, mineralization and the infrastructure at the Turgeon Property.
7. To the best of my knowledge, information and belief, the Technical Report contains all relevant scientific and technical information that is required to be disclosed, to make the Technical Report not misleading.
8. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
9. I am independent of Melius Metals Corp., the vendors of the Turgeon Property, and the Turgeon Property applying all the tests in section 1.5 of NI 43-101 and Companion Policy 43-101CP.
10. I have not had any prior involvement with the Turgeon Property that is the subject of the Technical Report.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.

Effective Date: August 17th, 2021

Signing Date: March 30th, 2022

Fredericton, NB, Canada

(signed) “*Stefan Kruse*”

Stefan Kruse, Ph.D., P. Geo.

I, **Fallon Clarke**, B. Sc., P. Geo., do hereby certify that:

1. I am a Consulting Geologist with APEX Geoscience Ltd., Suite 110, 8429 – 24th Street, Edmonton, AB, Canada, T6P 1L3.
2. I graduated with a B.Sc. Degree in Geology from the University of Saskatchewan in 2010.
3. I am and have been registered as a Professional Geologist with the Association of Professional Engineers and Geoscientists (“APEGS”) of Saskatchewan since 2015.
4. I have worked as a geologist for more than nine years since my graduation from university and have experience with exploration for precious and base metal deposits of various types throughout North America and Australia.
5. I have read the definition of “Qualified Person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for the purposes of NI 43-101.
6. I am responsibility for the preparation and publication of Sections 3 to 8 and contributed to Sections 1, 2, 9 to 11 and 13 to 19 of the Technical Report titled “**Technical Report For The Turgeon Property, Northeast New Brunswick, Canada**” with an effective date of August 17, 2021, (the “Technical Report”). I have not visited the Turgeon Property.
7. To the best of my knowledge, information and belief, the Technical Report contains all relevant scientific and technical information that is required to be disclosed, to make the Technical Report not misleading.
8. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
9. I am independent of the issuer, the vendor and the Property applying all of the tests in Section 1.5 of both NI 43-101 and 43-101CP.
10. I have not had any prior involvement with the Property that is the subject of the Technical Report.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files or their websites.

Effective date: August 17th, 2021

Signing Date: March 30th, 2022

Edmonton, Alberta, Canada

(signed) “*Fallon Clarke*”

Fallon T. Clarke, B.Sc., P.Geo.

