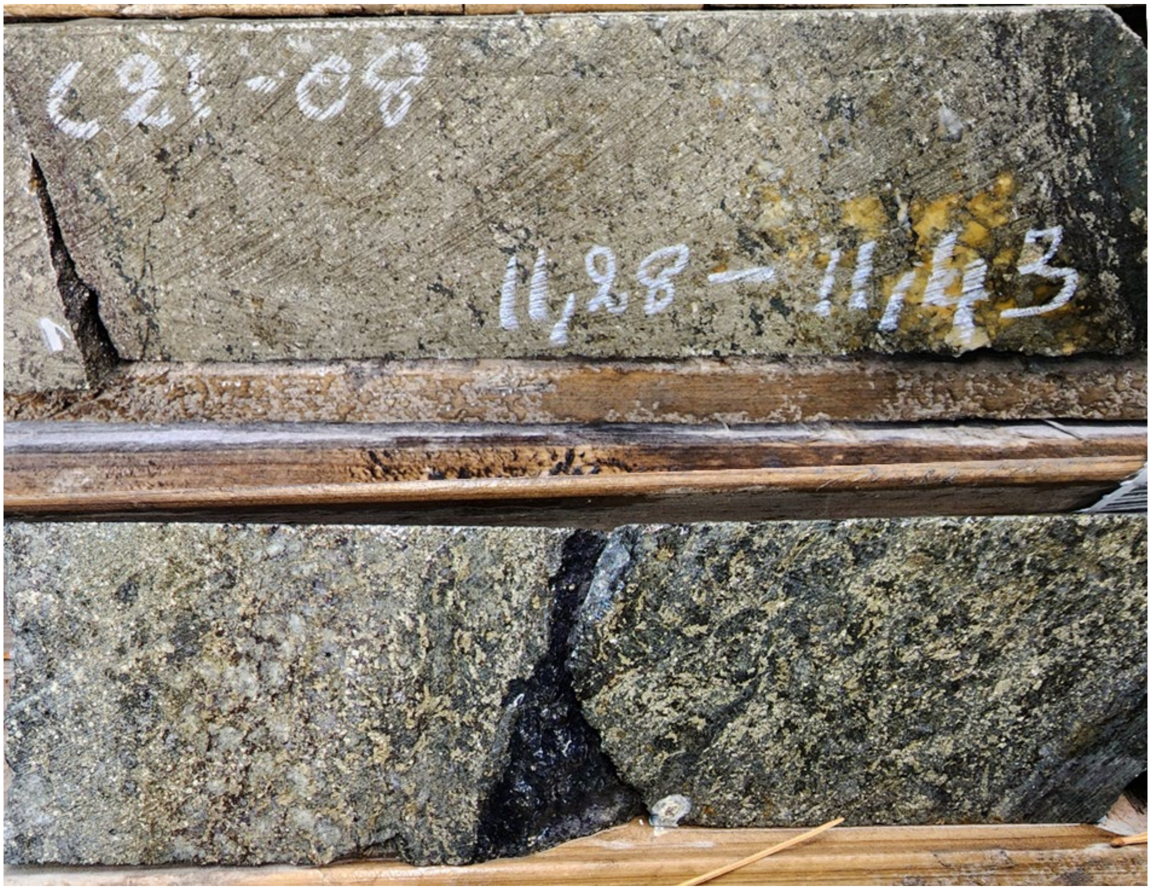
TECHNICAL REPORT AND INITIAL MINERAL RESOURCE ESTIMATE FOR THE CHESTER PROPERTY, NORTHEAST NEW BRUNSWICK, CANADA



Prepared For: Canadian Copper Inc.
82 Richmond Street East
Toronto, Ontario
M5C 1P1

Prepared by: APEX Geoscience Ltd.[1]
#100,11450 - 160th Street NW
Edmonton, Alberta
T5M 3Y7 Canada

Terrane Geoscience Inc.[2]
Suite 207 – 390 King Street
Fredericton, New Brunswick
E3B 1E3 Canada

Michael Dufresne[1], M.Sc., P. Geol., P.Geo
Stefan Kruse[2], Ph.D., P.Geo.
Anetta Banas[1], M.Sc., P.Geol.

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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, Canadian Copper Inc., (“Canadian Copper” or the “Company”), a Toronto, Ontario (ON), Canada, based mineral exploration company with a copper and base metals portfolio focused on the prolific Bathurst Mining Camp (BMC) of New Brunswick, Canada. The Company, formerly Melius Metals Corp., signed an option agreement with Puma Exploration Inc. (“Puma”) and its wholly-owned subsidiary Murray Brooks Minerals Inc. (“MBM”), who are collectively called the “Puma Parties” (Puma and MBM), that grants the Company sole and exclusive right and option to acquire an undivided 100 per cent (%) of their respective rights and interest in the Chester Property (“Chester Property”).

The Chester Property is located in north central New Brunswick (NB), 70 km southwest of the city of Bathurst, NB and 50 km west-northwest of the city of Miramichi, NB. The Property is in Northumberland County located in the south part of the Bathurst Mining Camp. The Chester Property comprises 3 contiguous Tenure Blocks that consist of 281 claim units covering a total area of 6,176 ha.

The intent and purpose of this Technical Report is to summarize the 2021 drill program and historical drill programs, to disclose an initial mineral resource estimate 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 November 1st, 2022.

The authors of this Technical Report are Mr. Michael B. Dufresne M.Sc., P. Geol., P. Geo., and Ms. Anetta Banas M.Sc., P.Geol., of APEX and Dr. Stefan Kruse Ph.D., P. Geo., of Terrane. The authors are fully independent of Canadian Copper and are Qualified Persons (QPs) as defined in NI 43-101. Mr. Dufresne takes responsibility for the preparation and publication of sections 1, 2, 12.3 and 13 to 28 and contributed to Section 12.4 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) and New Brunswick (APEGNB). Dr. Kruse takes responsibility for sections 7, 12.1, 12.2, 12.4, 12.5 and contributed to sections 1, 2, 4.5, 6, 25, 26 and 28 of this Technical Report. Dr. Kruse is a Professional Geologist with the Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB), Professional Engineers and Geoscientists of Newfoundland and Labrador (PEGNL) and the Engineers and Geoscientists of British Columbia (EGBC). Ms. Banas is a Professional Geologist with the Association of Professional Engineers and Geoscientists of Alberta (APEGA). Ms. Banas takes responsibility for the preparation and publication of sections 3 to 6 and 8 and contributed to Sections 1, 2.2, 2.3, 9 to 11 and 13 to 28 of this Technical Report.

The Chester Property lies in a favorable geological setting within the Bathurst Mining Camp (BMC) in the northeastern part of the Appalachian Orogen. The Bathurst Mining Camp is host to over 45 volcanogenic massive sulphide (VMS) base metal deposits including the world-class Brunswick No. 12 (Difrancesco, 1996). The area is underlain by rocks of the Bathurst Super Group: a Middle Ordovician – Lower Silurian sequence of felsic volcanic, mafic volcanic and sedimentary rocks, which overlie the Miramichi Group: a Cambrian to Lower Ordovician sequence of sedimentary rocks. The east-west trending Moose Lake-Tomogonops fault system divides the BMC into northern and southern structural and stratigraphic domains. The Chester Deposit is located in the southern domain. The southern part of the Chester Property is underlain by the Miramichi Group while the northern and central part of the Property is underlain by the Sheephouse Brook Group of the Bathurst Super Group.

VMS deposits in the BMC occur at various stratigraphic positions and deposits are known to occur in the Tetagouche Group, California Lake Group and the Sheephouse Brook Group. The Chester Deposit, which is located on the Property, consists of massive, disseminated and stringer sulphide mineralization that lies within dacitic volcanic rocks of the Clearwater Stream Formation (Sheephouse Brook Group). Three mineralized zones have been delineated at the Chester Deposit: the Stringer Zone (West Zone), Central Zone and East Zone.

Historical exploration conducted on the Property has included geological mapping and prospecting, geophysical surveys, soil geochemical surveys, trenching and drilling by several companies from 1955 to 2019. The Chester Deposit was discovered in 1955 by Kennco Explorations (Canada) Ltd. (“Kennco”). Subsequently, various companies carried out exploration programs on the Property including Chesterville Mines Ltd., Newmont Mining Corp. of Canada, Sullivan Mining Group, Sullico Mines Ltd. (“Sullico”), Teck Resources Ltd. (“Teck”), First Narrows Resources Corp. (“FNR”), Brunswick Mining and Smelting (“BMS”) and Explor. In the 1960-70’s Sullico drilled more than 400 holes to delineate the massive sulphide zones as well as the Stringer Zone and attempted to bring the deposit into production. Development was postponed and later abandoned, reportedly due to low copper prices. Since that time exploration has focused on: the massive sulphide zones to locate high grade lenses, the overlying gossan for potential gold and silver enrichment, and the volcanic terrain beyond the deposit area. In 2004, FNR completed a Versatile Time Domain Electromagnetic (“VTEM”) survey over the Property that delineated the Chester Deposit and identified further exploration targets on the Property. FNR additionally drilled 198 holes on the Property, of which 179 targeted the near-surface copper-rich Stringer Zone. Between 1955 and 2008, approximately 800 drill holes and in excess of 70,000 m were completed on the Chester Property.

In 2021, two diamond drill programs were completed on the Property by the Company and Puma Exploration Inc. (Puma), the vendor of the Project. The drill programs consisted of a total of 33 NQ-sized diamond drill holes totalling 3,324 m. In March 2021, Phase one was completed by Puma consisted of seven (7) holes totalling 1,785 m. In November and

December 2021, Phase two (2) was completed by the Company and consisted of 26 holes totalling 2,139 m.

Phase 1 holes targeted Computer Aided Resources Detection System (CARDS) Artificial Intelligence (AI) anomalies, VTEM conductors, gossanous mineralization and the extension of known copper stringer mineralization. Three holes were drilled southwest of Clearwater Stream targeting VTEM anomalies (C21-01) and a CARDS anomaly (C21-02) and the continuity of the Stringer (West) Zone, (C21-07). All three holes intersected mineralization which explained the anomalies and extended the Stringer (West) Zone. Significant core length intersections include: 0.8 m at 1,510 parts per million (ppm) zinc (Zn) with 530 ppm copper (Cu) in hole C21-01 and 0.65 m at 8,600 ppm Cu and 2,910 ppm Zn in hole C21-02. Hole C21-07 returned two intervals with significant average grades including 7.25 m from 356.75 m to 364.0 m averaging 0.46% Cu, and 12.5 m from 383.5 m to 396.0 m averaging 0.38% Cu. Four core drill holes were drilled east of Clearwater Stream targeting the historical CN-12 area (C21-03 and -04) and the potential of the gossan and massive sulphide mineralization to host significant gold (C21-05 and 06). Hole C21-04 intersected several intervals of mineralization including 31.4 m from 43 m to 74.4 m averaging 0.63 ppm silver (Ag), 1,313 ppm lead (Pb) and 1,720 ppm Zn. Holes C21-05 and -06 intersected notable gold (Au) in the gossan beneath the overburden including gold averaging 0.17 grams per tonne (g/t) Au over 3.95 m in hole C21-05, and gold values ranging from 0.013 g/t up to 0.955 g/t from 4 to 7.6 m in hole C21-06. The underlying massive to semi-massive mineralization returned expected values in Ag, Cu, Pb and Zn.

Phase 2 drilling was successful in delineating additional mineralization between the Central and East Zone and validating historical results in all three primary zones, Central, East, and West Zone (Copper Stringer). Additionally Phase 2 drill holes intersected near surface gold and silver mineralization within the gossanous Central and East zones. Assay highlights from the Phase 2 drill program include: a 25.7 m intersection returning an average grade of 0.69% Cu in hole C21-14 which includes 11.25 m of a continuous mineralized envelope grading 1.44% Cu, a 13 m intersection returning an average grade of 0.92% Cu in Hole C21-15 including 2.48% Cu over 2 m in a continuous mineralized envelope, 111 m intersection returning an average grade of 0.39% Cu in Hole C21-23 starting 10 m below the surface including 6.16% Cu over 2 m in a continuous mineralized envelope, a 25.25 m intersection returning an average grade of 0.41% Cu in Hole C21-26, including 0.73% Cu, 4% Zn, 0.11 g/t Au and 18.84 g/t Ag over 13 m in a continuous mineralized envelope, a 2 m intersection returning an average grade of 3.82% Cu in Hole C21-28 including 1.16% Cu over 9.85 m.

The Chester Project MRE is reported in accordance with the CSA NI 43-101 rules for disclosure and has been estimated using the CIM “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines” dated November 29, 2019 and CIM “Definition Standards for Mineral Resources and Mineral Reserves” dated May 10, 2014. This MRE for Chester is based on data with a cut-off date of August 31, 2022. The MRE is reported with an effective date of November 01, 2022 and presented in Table 1.1. The Indicated and Inferred MRE is undiluted and constrained within an optimized pit shell. The

Indicated resource includes 4.8 million tonnes of mineralized material at an average copper grade of 1.127% for a total of 120.3 million pounds (Mlbs) of Cu with potential secondary metals of 13.7 Mlbs of lead, 10.5 Mlbs of zinc and 69,000 ounces of silver. The Inferred resource includes 1.8 million tonnes of mineralized material at an average copper grade of 1.014% for a total of 38.4 million pounds of Copper.

Table 1.1: The recommended reported resource estimate constrained within the $3.5/lb pit shell for copper at cut-off grade 0.5% copper*

Cu cut-off (%)	Tonnes (1000 kg)	Cu (lbs)	Cu (kg)	Avg Cu Grade (%)	Classification
0.5	4,866,000	120,285,000	54,560,000	1.127	Indicated
0.5	1,819,000	38,355,000	17,398,000	1.014	Inferred

**Notes to Table 1.1:*

1. *Mineral resource estimates are reported at a cut-off grade of 0.5% Cu.*
2. *The unconstrained resource block model was estimated using ordinary kriging utilizing blocks at 3m(X) x 3m(Y) x3m (Z) and was subject to several open pit optimization scenarios utilizing a number of copper prices, mining cost scenarios and recovery factors typical of copper mining operations and advanced projects. The Chester final MRE pit shell utilized a copper price of US$3.50/lb and recoveries of 95% with appropriate mining and processing costs typical of near surface open pitable resources in Eastern Canada. Mr. Dufresne considers the pit parameters presented below to be appropriate to evaluate the reasonable prospect for potential future economic extraction at the Chester Project for the purpose of providing a MRE.*
3. *The updated resources presented are not mineral reserves, and they do not have demonstrated economic viability. There is no guarantee that any part of the resources defined by the MRE will be converted to a mineral reserve in the future.*
4. *The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could potentially be upgraded to an Indicated Mineral Resource with continued exploration.*
5. *Historical mined areas were removed from the block modelled resources.*
6. *The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.*
7. *Tonnage estimates are based on bulk densities individually measured and calculated for each of the deposit areas. Resources are presented as undiluted and in situ*
8. *The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.*
9. *This mineral resource estimate is dated November 1, 2022. The effective date for the drill-hole database used to produce this mineral resource estimate is August 31, 2022.*
10. *Mr. Michael Dufresne, M.Sc., P.Geol., P.Geo. of APEX Geoscience Ltd., who is deemed a qualified persons as defined by NI 43-101 is responsible for the completion of the mineral resource estimation.*
11. *Totals may not sum due to rounding.*

Dr. Kruse conducted a site inspection of the Chester Property for data verification purposes on June 5th to 6th, 2021 and on December 12th, 2022 following the Phase 1 and 2 drilling programs, respectively. The objectives of the site visits included: 1) verification of selected Phase 1 and 2 drill hole 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.

During the Property visit, evidence for historical work including the underground access portal, historical drill collars and reclaimed trenches was observed. Extensive disturbed ground containing float and sub-crop with disseminated and massive sulphide was observed, consistent with the previously reported descriptions of the Property geology. Grab samples collected from disturbed surface material contained anomalous

Ag, Cu, Pb 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 2021 drill program contained massive to semi-massive pyrite, chalcopyrite, sphalerite and galena hosted in intermediate volcaniclastic and metasedimentary rocks, consistent with logged descriptions of the core. Verification sampling of Phase 1 drill core demonstrated reasonable agreement between the original assay results and verification sample results.

Some minor discrepancies between field-verified drill collars with database values were noted. A thorough drillhole database review was completed by APEX personnel. The drill hole database was verified against all available historical drill hole and assay data. All database errors were rectified, and missing data was added to the database. 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 authors of this Technical Report that the Chester Property is a "Property of Merit" warranting future exploration work.

The authors recommend an exploration program for the Chester Property that includes: targeted infill and verification drilling of certain priority domains (West Stringer Zone, Central and Eastern massive sulphide zones), twinning or infill around certain historical holes to better assess the potential for secondary metals in the resource area and to increase confidence in the geological model, along with resource expansion drilling and a number of metallurgical holes across the deposit. Phase 1 drilling is estimated to cost CDN$892,000. Additional Phase 1 work should consist of flotation test work on core samples from the Stringer, Central and West zones at an estimated cost of CDN$50,000 and ore sorting test work with an estimated cost CND$50,000, planning and design work for a conceptual open pit mine leading to an eventual Preliminary Economic Study (PEA) estimated to cost CDN$60,000; The total cost for the recommended Phase 1 program is approximately CDN$1,100,000 including contingency but not including GST.

A Phase 2 exploration program would be contingent on the results of Phase 1 and should include a further CDN$1,505,000 in additional infill and MRE expansion drilling along with exploration drilling, additional metallurgical test work CDN$200,000, along with initiation of geotechnical work and baseline environmental studies. The total cost for the recommended Phase 2 program is approximately $1,900,000 including contingency but not including GST.

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, Canadian Copper Inc., (“Canadian Copper” or the “Company”), a Toronto, Ontario (ON), Canada, based mineral exploration company publicly listed on the Canadian Securities Exchange (CSE) with a copper and base metals portfolio focused on the prolific Bathurst Mining Camp (BMC) of New Brunswick (NB), Canada. The Company, formerly Melius Metals Corp., signed a purchase agreement with Puma Exploration Inc. (“Puma”) and its wholly-owned subsidiary Murray Brooks Minerals Inc. (“MBM”), who are collectively called the “Puma Parties” (Puma and MBM), that grants the Company sole and exclusive right and option to acquire an undivided 100 per cent (%) of their respective rights and interest in the Chester Property (“Chester Property”).

The Chester Property is located in north-central New Brunswick, 70 km southwest of the city of Bathurst, NB and 50 km west-northwest of the city of Miramichi, NB. The Property is in Northumberland County located in the south part of the Bathurst Mining Camp (Figure 2.1).

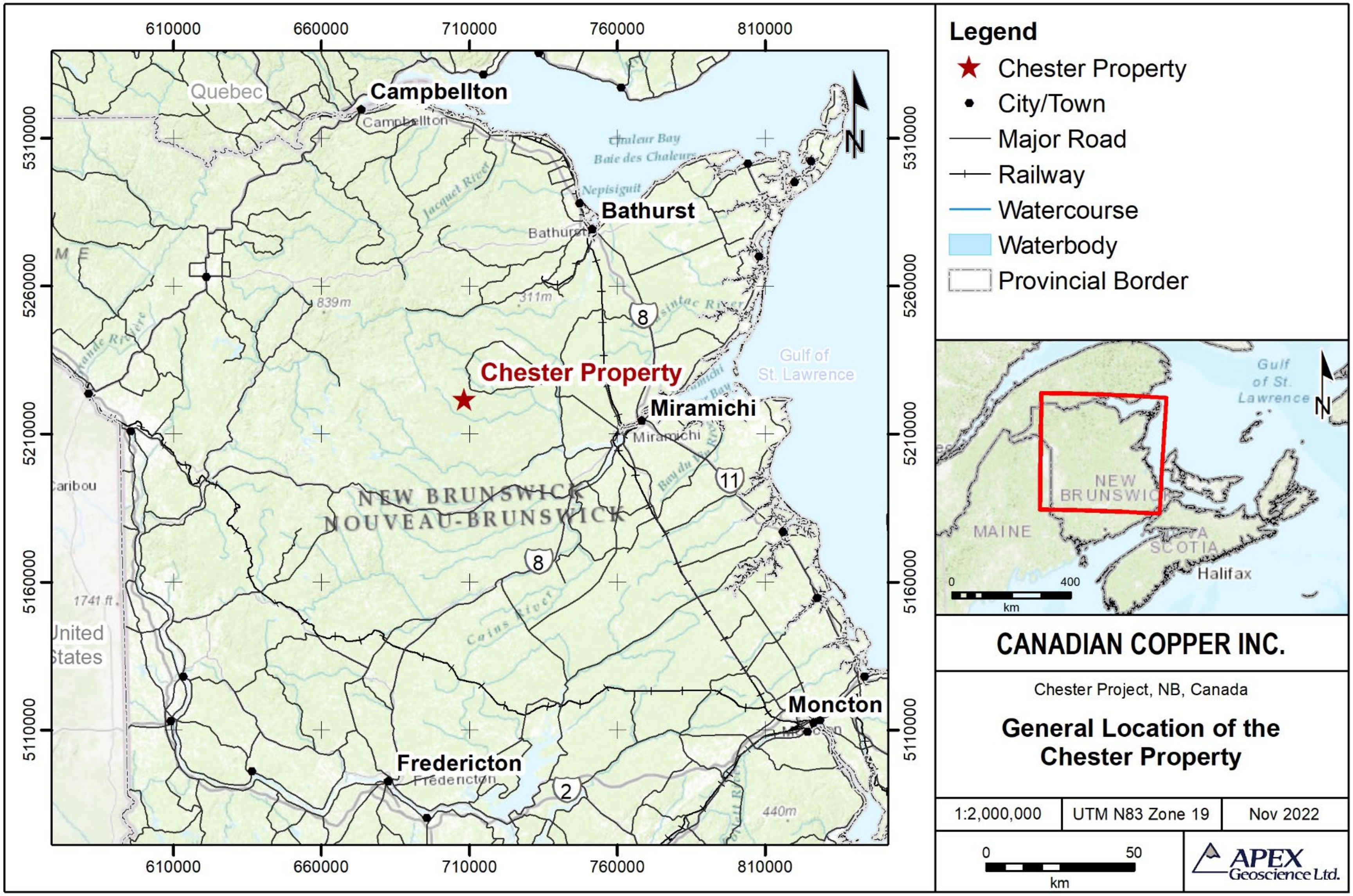
This Technical Report discloses a mineral resource estimate (MRE) for the Chester Property, summarizes the historical and recent exploration work conducted on the Property and provides recommendations for future exploration work programs.

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 November 1st, 2022.

2.2 Authors and Site Inspection

The authors of this Technical Report are Mr. Michael B. Dufresne M.Sc. P. Geol., P. Geo., and Ms. Anetta Banas M.Sc., P.Geol., of APEX and Dr. Stefan Kruse Ph.D., P. Geo., of Terrane. Contributors to this report include APEX staff Mr. Tyler Acorn, M.Sc. and Mr. Warren Black, M.Sc., P.Geo., who completed the mineral resource estimate (MRE) for the Chester Deposit under the direct supervision of Mr. Dufresne. The resource has been reviewed by Mr. Dufresne and he takes responsibility for the MRE reported herein. The authors are fully independent of Canadian Copper and are Qualified Persons (QPs) as defined in NI 43-101. The CIM and Ni 43-101 define 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

Figure 2.1 General location of Canadian Copper's Chester Property.



estimations for precious and base metal mineral projects and deposits in Canada and internationally.

Mr. Dufresne takes responsibility for the preparation and publication of sections 1, 2, 12.3, and 13 to 28 and contributed to Section 12.4 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 New Brunswick (APEGNB; Membership Number L6534). Mr Dufresne has worked as a geologist for more than 35 years since his graduation from university and has been involved in all aspects and stages of mineral exploration, including resource modelling, in North America, including exploration for volcanogenic massive sulphide (“VMS”) type base metal deposits in eastern and western Canada.

Ms. Banas is a Professional Geologist with APEGA (APEGA; Membership Number 70810) and has worked as a geologist for more than 15 years since her graduation from the University of Alberta. Ms. Banas is a QP and has experience with exploration for precious and base metal deposits of various deposit types in North America. Ms. Banas takes responsibility for the preparation and publication of sections 3 to 6, 8 and contributed to Sections 1, 2.2, 2.3, 9 to 11 and 13 to 28 of this Technical Report.

Dr. Kruse takes responsibility for sections 7, 12.2, 12.4, 12.5 and contributed to Sections 1, 2, 4.5, 6, 25, 26 and 28 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 EGBC (EGBC; membership number 206205). Dr. Kruse P. Geo. Is co-founder of Terrane, and a structural geologist specializing in structural and tectonic controls of orogenic and magmatic metal systems.

Dr. Kruse conducted a site inspection of the Chester Property for data verification purposes on June 5th to 6th, 2021 and December 12th, 2022, following completion of the Phase 1 and 2 drill programs, respectively. The objectives of the site visit included:

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

During the property tours, evidence for historical work including the underground access portal, historical drill collars and reclaimed trenches was observed. Extensive disturbed ground containing float and sub-crop with disseminated and massive sulphide was observed, consistent with the previously reported descriptions of the property geology. Grab samples collected from disturbed surface material contained anomalous Ag, Cu, Pb 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 2021 drill program contained massive to semi-massive pyrite, chalcopyrite, sphalerite and galena hosted in intermediate volcaniclastic and metasedimentary rocks, consistent with logged descriptions of the core. Verification sampling of Phase 1 drill core demonstrated reasonable agreement between the original assay results and verification sample results.

2.3 Sources of Information

A complete bibliography of all references cited in this Technical Report is included in Section 19. The authors reviewed soil and rock 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. 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 Chester Property and area.

The authors have reviewed all government and miscellaneous reports. 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 Chester Property. The authors take ownership of the ideas and values herein as they pertain to this current Technical Report.

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 19 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 on Other Experts

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. This limited disclaimer of responsibility includes the following:

- The QP relied entirely on background information and details regarding the nature and extent of Mineral Tenure (in Section 4.1) provided by Canadian Copper via email on November 11, 2022. On December 1, 2022, 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 Chester Property is located in north-central NB, 70 km southwest of the city of Bathurst, NB and 50 km west-northwest of the city of Miramichi, NB. The Property lies in National Topographic System Map Sheet 21 O/01 within North American Datum 83, UTM Zone 19. The approximate centre of the property is located at 708861m E 5221606m N. The Chester Property comprises 3 Tenure Blocks: 7045, 6003, and 1571 covering a total area of 6,176 ha (Table 4.1; Figure 4.1). The claim units comprising each tenure block are listed in Table 4.2 and are shown on Figure 4.2.

Table 4.1: Mineral block tenures for Canadian Copper's Chester Property.

Block Claim	Owner	Issue Date	Exp. Date	# Units	Area (Ha)
1571	Puma Exploration Inc. 100%	1987-03-23	2023-03-23	19	418
6003	Puma Exploration Inc. 100%	2011-04-14	2023-04-14	95	2,088
7045	Puma Exploration Inc. 100%	2014-02-04	2023-02-04	167	3670
Total				**281**	**6,176**

Table 4.2: Claim Units per claim block of Canadian Copper's Chester Property.

1571 Claim Units	6003 Claim Units		7045 Claim Units			
1622086K	1621006A	1621018G	1621008I	1621019G	1622078I	1622089I
1622086L	1621006B	1621018H	1621008J	1621019H	1622078J	1622089J
1622086M	1621006C		1621008K	1621019I	1622078K	1622089K
1622086N	1621006D	1622086D	1621008L	1621026I	1622078L	1622089N
1622087C	1621006E	1622086E	1621008M	1621026J	1622078M	1622089O
1622087D	1621006F	1622086F	1621008N	1621026K	1622078N	1622089P

1571 Claim Units	6003 Claim Units		7045 Claim Units			
1622087E	1621006G	1622086G	1621008O	1621026N	1622078O	1622098A
1622096I	1621006H	1622086J	1621008P	1621026O	1622078P	1622098G
1622096J	1621006I	1622086O	1621009A	1621026P	1622079A	1622098H
1622096K	1621006J	1622087B	1621009B	1621027A	1622079B	1622098I
1622096N	1621006K	1622087F	1621009C	1621027B	1622079C	1622098J
1622096O	1621006L	1622087G	1621009D	1621027C	1622079D	1622098K
1622096P	1621006M	1622087J	1621009E	1621027F	1622079E	1622098L
1622097A	1621006N	1622087K	1621009F	1621027G	1622079F	1622098M
1622097B	1621006O	1622087L	1621009G	1621027H	1622079G	1622098N
1622097C	1621006P	1622095J	1621009H	1621027I	1622079H	1622099D
1622097F	1621007A	1622095K	1621009J	1621027J	1622079I	1622099E
1622097G	1621007B	1622095L	1621009K	1621027K	1622079J	
1622097H	1621007C	1622095M	1621009L	1621027N	1622079K	
	1621007D	1622095N	1621009O	1621027O	1622079L	
	1621007E	1622095O	1621016I	1621027P	1622079M	
	1621007F	1622096A	1621016J	1621028A	1622079N	
	1621007G	1622096B	1621016K	1621028B	1622079O	
	1621007H	1622096C	1621016L	1621028C	1622079P	
	1621007I	1622096D	1621016M	1621028F	1622086I	
	1621007J	1622096E	1621016N	1621028G	1622086P	
	1621007K	1622096F	1621016O	1621028H	1622087A	
	1621007L	1622096G	1621017B	1621028I	1622087H	
	1621007M	1622096H	1621017C	1621028J	1622087I	
	1621007N	1622096L	1621017D	1621028K	1622087M	
	1621007O	1622096M	1621017E	1621028N	1622087N	
	1621007P	1622097D	1621017F	1621028O	1622087O	
	1621008A	1622097E	1621017G	1621028P	1622087P	
	1621008B	1622097I	1621017K	1622076L	1622088A	
	1621008C	1622097J	1621017L	1622076M	1622088B	
	1621008D	1622097K	1621017M	1622077D	1622088C	
	1621008E	1622097L	1621018C	1622077E	1622088D	
	1621008F	1622097M	1621018D	1622077L	1622088E	
	1621008G	1622097N	1621018E	1622077M	1622088F	
	1621008H	1622097O	1621018F	1622077N	1622088G	
	1621016P	1622097P	1621018I	1622077O	1622088H	
	1621017A	1622098B	1621018J	1622077P	1622088I	
	1621017H	1622098C	1621018K	1622078A	1622088J	
	1621017I	1622098D	1621018L	1622078B	1622088O	
	1621017J	1622098E	1621018M	1622078C	1622088P	
	1621017N	1622098F	1621018N	1622078D	1622089A	
	1621017O		1621018O	1622078E	1622089B	

1571 Claim Units	6003 Claim Units	7045 Claim Units		
	1621017P	1621018P	1622078F	1622089F
	1621018A	1621019A	1622078G	1622089G
	1621018B	1621019B	1622078H	1622089H

4.2 Royalties and Agreements

The registered owner of the 3 Mineral Claims (1571, 6003, 7045) comprising the Chester Property is Puma Exploration Inc. Previously the Chester property encompassed 6 Mineral Claims: 9036, 9886, 1571, 6003, 7045, and 9026 as described in Dufresne et al. (2022). The claims were merged and consolidated into 3 claims on October 20, 2022. The merger included the grouping of the 6 Mineral Claims into 3 Mineral Claims as shown in Table 4.3.

Table 4.3: Merger and consolidation of the Chester Mineral Claims

Original Block Claim	Original Owner	Current Block Claim	Current Owner
1571	Explor Resources Inc. 100%	1571	Puma Exploration Inc.
6003	Explor Resources Inc. 100%	6003	Puma Exploration Inc.
7045	Explor Resources Inc. 100%	7045	Puma Exploration Inc.
9026	Explor Resources Inc. 100%	7045	Puma Exploration Inc.
9036	Murray Brooks Minerals Inc. 100%	7045	Puma Exploration Inc.
9886	Murray Brooks Minerals Inc. 100%	7045	Puma Exploration Inc.

MBM was the previous 100% owner of the 2 claim blocks 9036 and 9886. Explor was the previous owner of the 4 claim blocks: 1571, 6003, 7045, and 9026. MBM is a wholly owned subsidiary of Puma. Puma and Explor had an option agreement (“Chester Option Agreement”) regarding the mineral claims that were owned by Explor. Under the Chester Option Agreement, Puma could acquire 100% interest in the Chester Optioned Claims for $100,000 in cash and incurring $500,000 in exploration work by January 17, 2022. The option has been fully exercised and Puma is now the 100% owner of the mineral claims.

Figure 4.1 Chester Property mineral block tenures.

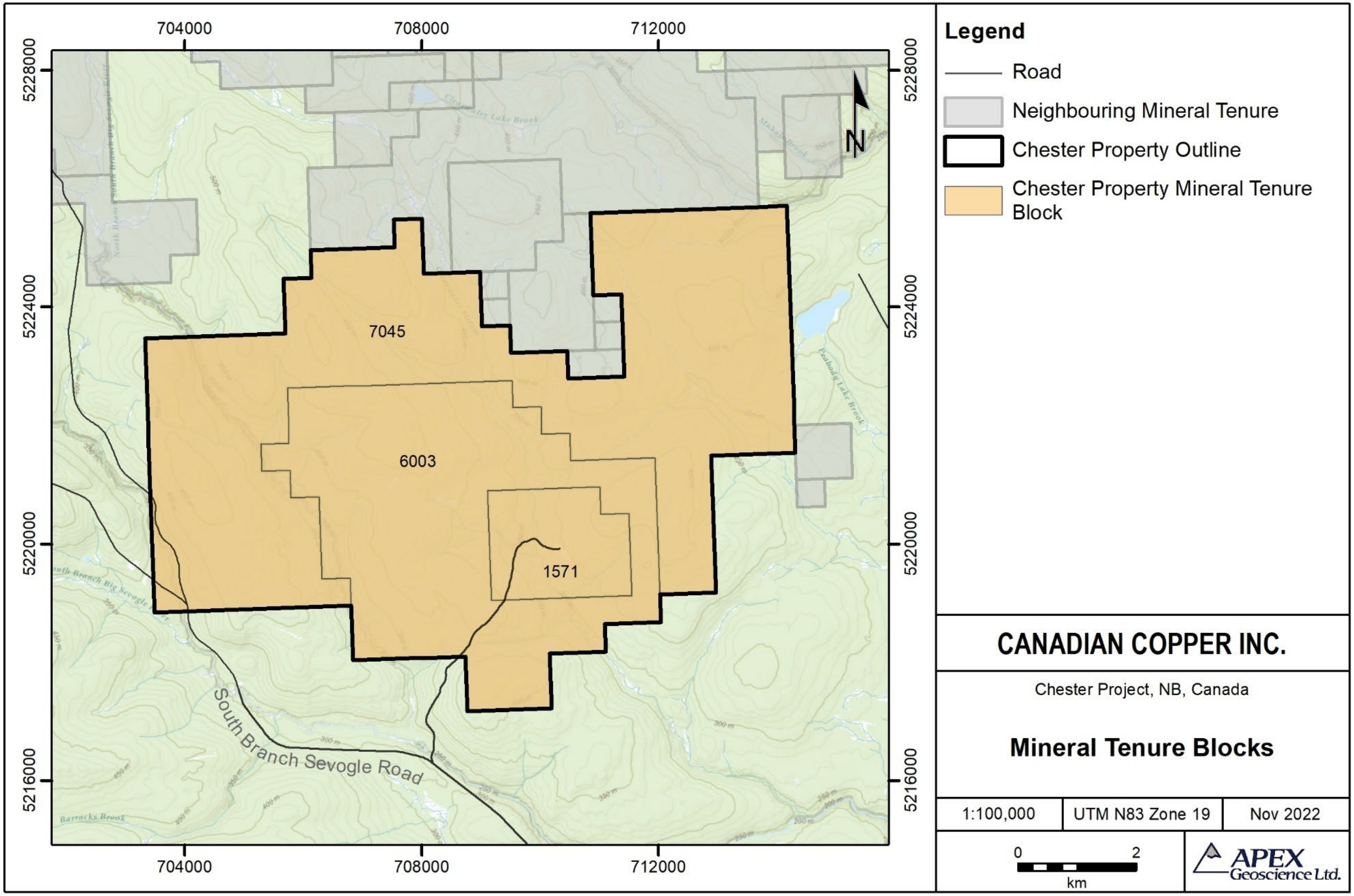
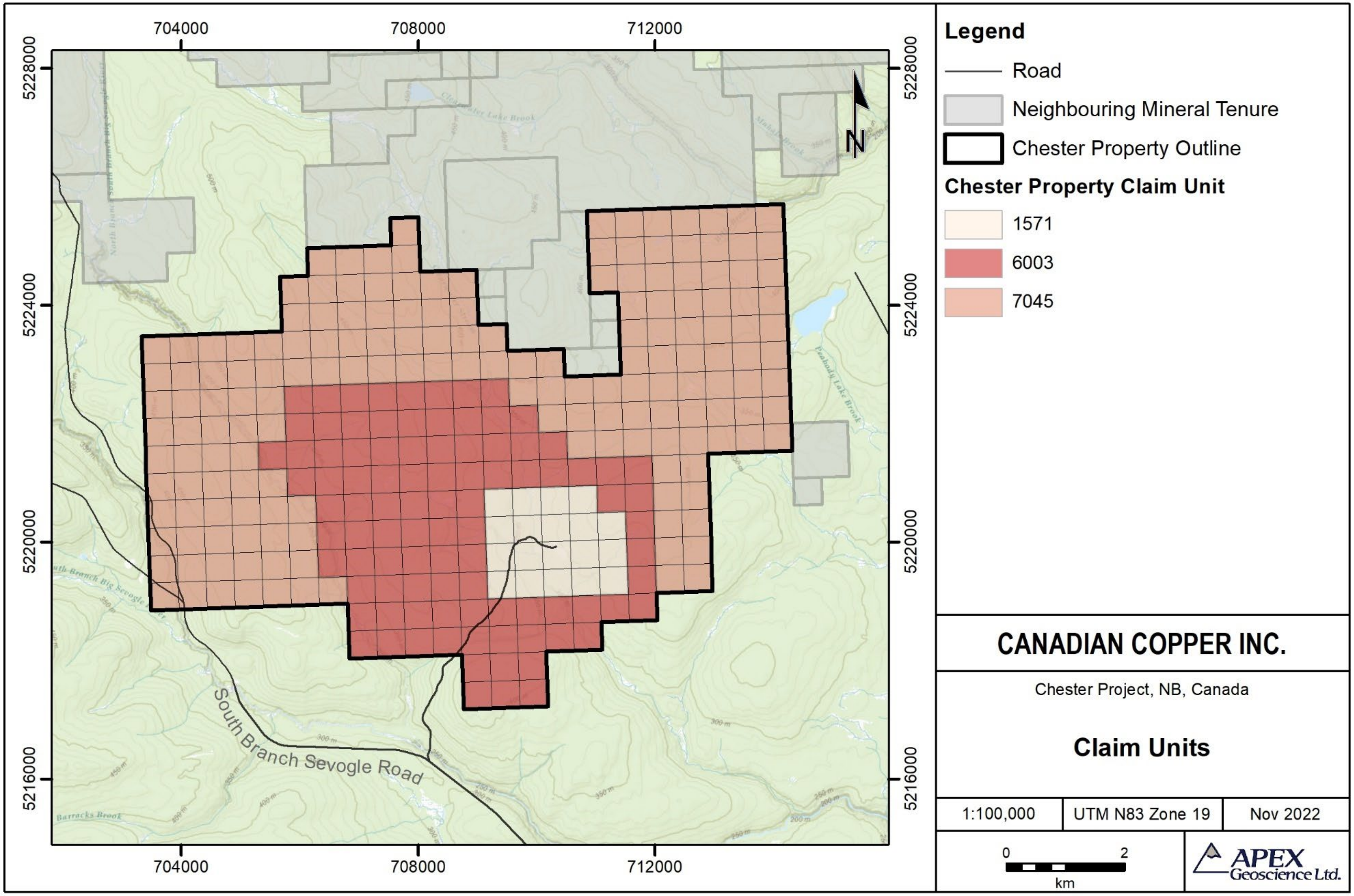


Figure 4.2 Chester Property individual claim units.



Canadian Copper entered into an option agreement dated June 30, 2021 with the Puma Parties that grants Canadian Copper the sole and exclusive right and option to acquire 100% of their respective rights and interest in the Chester Property upon completion of the following terms:

a) Canadian Copper will make the following payments to Puma:

    (i) Issuance of 6,000,000 Canadian Copper Shares to Puma at a deemed price of $0.10 per share on closing of the Proposed Transaction (the “Closing Shares”); (Canadian Copper has met this requirement)

    (ii) Issuance of 6,000,000 Canadian Copper Shares to Puma at a deemed price of $0.10 per share prior to the Listing (the “Listing Shares”); (Canadian Copper has met this requirement)

    (iii) $300,000 on or before the first (1st) anniversary of the listing;

    (iv) $1,000,000 on or before the second (2nd) anniversary of the listing; and

    (v) $1,000,000 on or before the third (3rd) anniversary of the listing.

Canadian Copper was listed on the CSE under the ticker “CCI” and active trading on July 26, 2022.

As per the Option Agreement, Canadian Copper will have the option to acquire 100% of Puma’s Copper Projects once the remaining CAD$2.3M is paid in cash or Canadian Copper shares over 3 years to Puma.

The period between the execution of the Definitive Agreements and the third (3rd) anniversary requirements is hereinafter referred to as the “Option Period”. Royalties pertaining to the Chester Property are as described below. All royalties have been transferred to the merged claims as per Table 4.3

(9036) Chester West: Puma retains a 2% Net Smelter Returns (“NSR”) royalty. Of the NSR royalty, 50% may be purchased by Canadian Copper for $1,000,000.

(1571) Chester: Explor will retain a 2% NSR royalty on any saleable production from the property. Of the NSR royalty, 50% may be purchased by the Company for $1,000,000.

(6003) Chester EAB: Explor will retain a 2% NSR royalty on any saleable production from the property. Of the NSR royalty, 50% may be purchased by the company for $1,000,000.
(9026) Big Sevogle River: Explor will retain a 2-per-cent net smelter return (NSR) royalty on any saleable production from the property. Of the NSR royalty, 50 per cent may be purchased by the company for $1,000,000.

(7045) Big Sevogle River: Explor will retain a 2-per-cent net smelter return (NSR) royalty on any saleable production from the property. Of the NSR royalty, 50 per cent may be purchased by the company for $1,000,000.

Prior to the Option Agreement between Explor and Puma Exploration, the following existing NSR royalties were granted on specific areas of the Project and can be viewed on the option agreements between Explor and Puma and are summarised below:

The Existing Royalties on the Property areas described in the following:

1. A 2% NSR royalty payable to Frank Ross, Delbert Johnson and Anthony Johnston, pursuant to the attached agreement dated April 9, 2013 (the “Ross Agreement”). Such 2% NSR is on the 39 claims identified in the Ross Agreement and half of it can be bought back for a consideration of $900,000. There is also a right of first refusal (“ROFR”) for the second half.

2. A 1% NSR royalty payable to Earnest Brooks, pursuant to the attached agreement dated February 26, 2013 (the “Brooks Agreement”). Such 1% NSR is on the 75 claims identified in the Brooks Agreement and can be bought back in its entirety for a consideration of $1,000,000.

3. A 1% NSR royalty payable to Northeast Exploration Services Inc. (“NES”) pursuant to the attached agreement dated May 4, 2002 between NES, Bathurst Silver Mining Ltd. and Earnest Brooks (the “Northeast Agreement”). Such 1% NSR is on the mineral claims 000031 and 000032 of claim block 1571 and mineral claims 362129 and 362130 of claim block 2428 identified in the Northeast Agreement and half of it can be bought back for a consideration of $500,000.

4. A 1% NSR royalty payable to Granges Inc. (as to 0.557%) and Outokumpu Mines Ltd. (as to 0.443%) pursuant to the agreement dated November 6, 1995 between Granges Inc., Outokumpu Mines Ltd. and NES (the “Granges Agreement”) which is attached as Appendix E of the Northeast Agreement. Such 1% NSR is on the mineral claims 000031 and 00032 of claim block 1571 identified in the Granges Agreement.

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 4.4 summarizes the work commitments and renewal fees.

Reports of Work (mineral assessment reports) are received and processed by the New Brunswick Department of Natural Resources and Energy Development, Mineral and Petroleum Branch. 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.

Table 4.4: 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

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 are that Company must notify private landowners; Department of Natural Resources; District Forest Ranger; Work Safe NB; and Offices of the Recorder (Bathurst in this case).

- Prior to commencing work that would cause actual disturbance 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 Department of Natural Resources 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 Department of Natural Resources and Energy Development (https://welcomenb.ca/content/gnb/en/departments/erd/energy/content/minerals/content/Minerals_exploration.html).

4.5 Environmental Liabilities and Significant Factors

Co-author, Dr. Kruse visited the Chester Property in order to assess mineralization and the surface conditions of the Property. In addition, the authors have performed a search of various reports and literature.

In 1993 the New Brunswick Department of Environment (NBDE) completed an inspection of the Chester Mine site to assess environmental liabilities (Hamilton, 2003). Their assessment reported that the site was reclaimed upon cessation of exploration activities and re-sloped such that erosion and safety were not a major concern. Two ponds that were part of the treatment plant were allowed to remain as well as a diversion ditch and a culvert. Signs of acid drainage (springs) were evident, however the clearwater creek was tested and was not affected. The audit concluded that there were no outstanding liabilities associated with the site at that time.

During the site visit Dr. Kruse observed the presence of un-remediated historical workings on the Property including historical artesian drill holes, man-made settling ponds, unsecured historical infrastructure (old foundations, debris, drill casing etc.), a fenced but open and unsecured portal, along with roadways and disturbed areas covered with sulphide-bearing rock. It is not clear if there are any potential liabilities that could be associated with the exploration completed before 1993 based upon the inspection by NBDE, or if there are any liabilities for work conducted after 1993 including drilling and trenching. However, an environmental baseline study is recommended to assess the current state of the property and any remediation and/or reclamation work that might be required.

No other known significant factors or risks related to the Chester Property that may affect access, title or the right or ability to perform work on the Chester Property are known.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Accessibility

The Chester Property is located in Northumberland County, NB, 50 km west-northwest of Miramichi, NB and 70 km southwest of Bathurst, NB (Figure 5.1). The Property is readily accessible by car or truck in the summer months by road from Miramichi. Access to the western portion of the Property is gained by travelling west from Miramichi, along highway 425 to Sunny Corner, then north along the northwest road to the New Mullin Stream gravel road. The New Mullin Stream road provides access to the south central and southwest corner of the Property. The eastern part of the Property is accessible by travelling north from Miramichi along highway 430 to Fraser Burchill gravel road. Driving west along Fraser Burchill gravel road for ~20 km leads to a logging road that provides access to the northeast part of the Property. Additional logging roads provide access throughout the Property. The main CN railroad line from Moncton to Quebec and Western Canada passes through Miramichi and Bathurst.

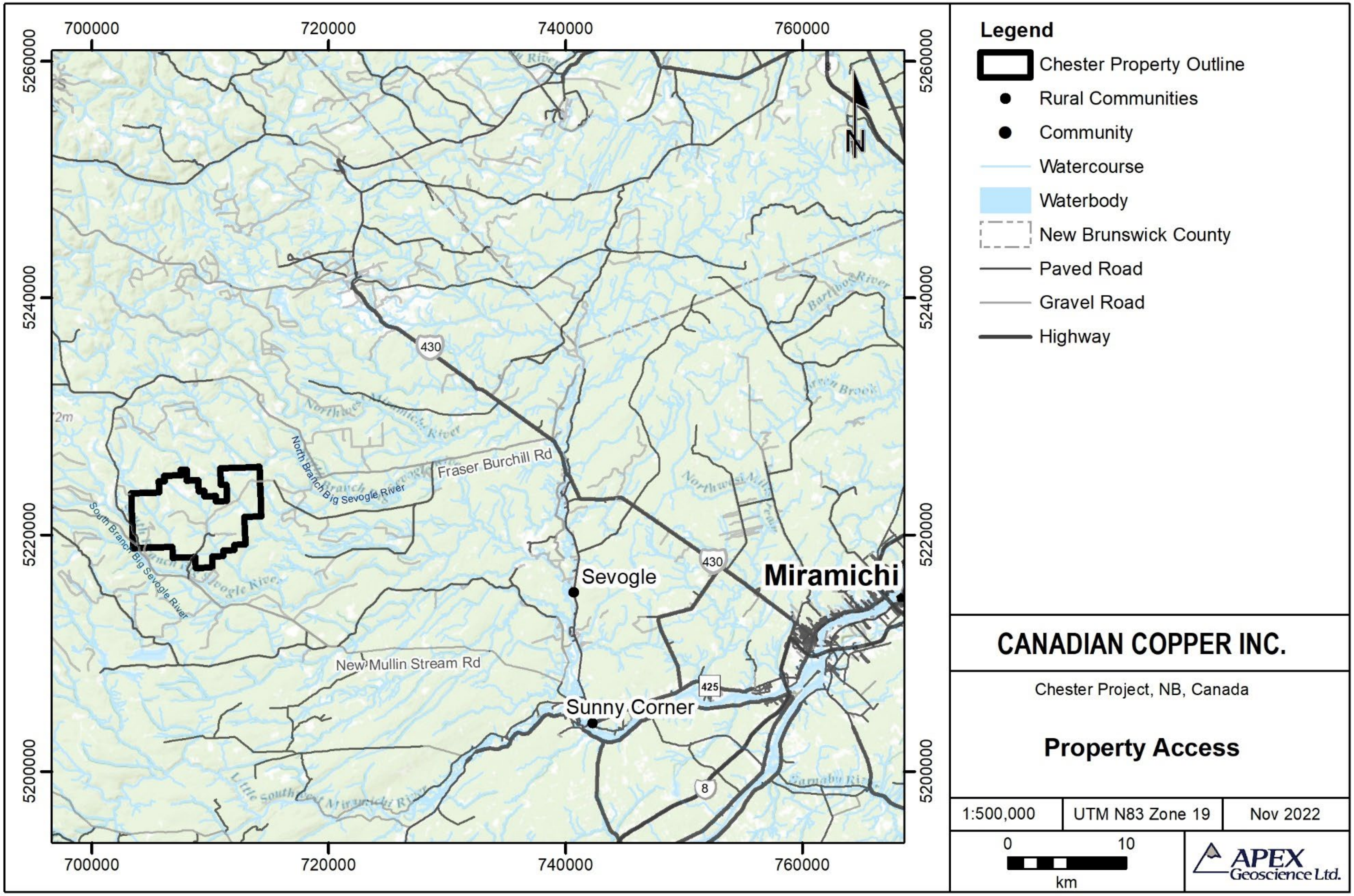
5.2 Site Topography, Elevation and Vegetation

Physiography at the Chester Property is characterized by high topographic relief with the lowest topographic relief defined by the cut valley of the Clearwater Stream valley. Topographic maps indicate that the stream valleys have very steep sides. The topography varies between 300 m at the Northeast Claims to 450 m above mean sea level. An active gravel pit, with a relief of 50 m, is located in the wester portion of the property and is actively used by local lumbering companies on an as-required basis.

The Property lies within the surface watershed of the South Branch of the Big Sevogle River, which is a tributary to the Northwest Miramichi River drainage system. The moderate-sized Clearwater Stream runs through the middle of the Property and drains into the Big Sevogle River that is located 7 km downstream from the centre of the Property.

Based on historical mapping and drilling, the Property is overlain by a glacial till that ranges between 0.5 m to 9 m in thickness. Recent mapping in the stream valleys and in the logging roads showed a lot of exposed bedrock indicating shallow depths of overburden in these areas. The vegetation of the Property is characterized by a diversity of habitats and forest class ages consistent with a boreal forest (e.g., spruce, balsam, fir, etc.). More than 35-60% of the forest has been clear cut since the 1980’s but a large area has been replanted and/or thinned.

Figure 5.1 Access to the Chester Property.



5.3 Climate

The climate in the area is cold and temperate. Winters are often cold, windy and snowy. Summers are warm and humid. Spring and fall bring chilly to warm temperatures. During winter, snow generally stays on the ground from November to April.

The warmest month with the highest average high and low temperature is July (24°C and 16°C. The month with the lowest average high and low temperature is January (-5°C and -14°C).

Throughout the year, there are 97 precipitation days with 1,139 mm of average precipitation accumulated. The wettest month occurs in December (109 mm). The driest month is February (82 mm). Precipitation is common throughout the year even in the driest months.

The majority of exploration, with the exception of geological mapping, prospecting, and trenching, can be carried out year-round. During spring melting, field work may be limited.

5.4 Local Resources and Infrastructure

The Property is located in Northumberland County, which has population 44,952 (ca. 2016) and covers an area of 12, 869 km^2. Fishing, and forestry are the major industries in the County. The County is a mostly an English-speaking region in the otherwise Francophone northeastern New Brunswick. There are five First Nations reservations in Northumberland County. Three communities in the County are part of the Mi'kmaq Nation: Metepenagiag Mi'kmaq Nation, at the junction of the Northwest Miramichi River and the Little Southwest Miramichi River; Eel Ground First Nation, close to the junction of the Northwest and Southwest Miramichi Rivers near Newcastle; and Burnt Church First Nation on the northern shore of Miramichi Bay.

Miramichi is the largest municipality in the County with a population of 17,537 (ca. 2016). It is situated at the mouth of the Miramichi River where it enters Miramichi Bay. The Miramichi area’s economy is primarily focused on mining, fishing and forestry. Other sectors include tourism, customer contact centres, manufacturing, and the provincial and federal government. The service sector is the city's largest employer. The Miramichi Regional Hospital is a full-service hospital located in Miramichi, providing services to the city and surrounding communities.

The nearest international airports with scheduled domestic and international flights are located within a 90-minute drive of Miramichi in Fredericton and Moncton. A regional airport with regular scheduled domestic flights is located in Bathurst, 50 minutes north of Miramichi. In addition, the Miramichi Airport is located 3 km south of Miramichi on the former site of CFB Chatham. The airport is maintained year-round but has no regular schedule flights.

Since the mid-1960s, mining has been a major industry in the cities of Bathurst and Miramichi and locals are experienced personnel. Approximately 24 km northeast of the Chester Property is the Heath Steele Mine that operated from 1957 to 1999 (with occasional shut-down periods). The mine processed approximately 25 million tonnes of VMS ore at its on-site concentrator.

The Bathurst Mining Camp (BMC) provided jobs to the regional economy for nearly 50-years. Lead, zinc, and Cu 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 sulphide (VMS) deposits. Although the primary commodity is zinc, the massive-sulphide mineralized bodies produced lead, zinc, Cu, silver, gold, bismuth, antimony, and cadmium. Some of the mineralized material was smelted at a facility in Belledune, which is now owned by Glencore Zinc. In the 2010s, 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).

To conclude, the Chester 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 all kinds of infrastructure critical for mining including power, water, roads, rail, ports and skilled mining personnel.

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

In the opinion of the Authors of this Technical Report, 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 Historical Exploration

Historical exploration conducted on the Property has included geological mapping and prospecting, geophysical surveys, soil geochemical surveys, trenching and drilling by several companies from 1955 to 2019. The Chester Deposit was found in 1955 by Kennco Explorations (Canada) Ltd. ("Kennco") during ground follow-up of an airborne electromagnetic ("EM") survey anomaly that resulted in the discovery of disseminated Cu and related massive pyrite with zinc-lead-Cu east of the Clearwater stream (von der Poll, 1963). Subsequent drilling by Kennco defined a massive lens of pyrite containing lesser amounts of sphalerite and chalcopyrite, which returned average grades of 3.4% zinc (Zn), 1.62% lead (Pb), 0.92% Cu (Cu) and 0.308 troy ounce per ton (oz/t) (10.56 g/t) silver (Ag). The lens was approximately 650 feet (198.1 m) in diameter, averaging 35 feet (10.7 m) thick. A zone of disseminated chalcopyrite and pyrrhotite extended east and west from the lens (Black, 1956; von der Poll, 1963).

Following the discovery of the Chester Deposit, various companies carried out exploration programs on the Property including Chesterville Mines Ltd., Newmont Mining Corp. of Canada, Sullivan Mining Group, Sullico Mines Ltd. ("Sullico"), Brunswick Mining and Smelting ("BMS"), Granges Exploration Ltd., Teck Resources Ltd. ("Teck"), Bathurst Silver Mines Ltd., Black Bull Resources Ltd., First Narrows Resources Corp. ("FNR"), Noranda Exploration, Earnest Brooks, Explor and Brunswick Resources Inc. and Puma.

A summary of the Chester Property exploration history is presented in Table 6.1. A summary of the historical drilling conducted on the Property is illustrated in Figures 6.1 to 6.3, and the mineralized zones of the Chester Deposit are shown in Figure 6.4.

Table 6.1. Summary of historical exploration completed at the Chester Property (1955 to 2016).

Year	Operator	Surface Exploration and Development	Results of Exploration	References
1955-1957	Kennco	Drilling, airborne EM geophysical survey	Discovery of disseminated Cu and related massive pyrite with zinc-lead-Cu east of the Clearwater stream. Drilling defined a massive lens of pyrite containing lesser amounts of sphalerite and chalcopyrite, which returned average grades of 3.4% Zn, 1.62% Pb, 0.92% Cu and 0.308 oz/t (10.56 g/t) Ag.	Black, 1956; von de Poll, 1963
1959	Chesterville Mines Ltd.	Drilling		
1963	Newmont Mining Corp.	Drilling		
1966-1975	Sullico/Sullivan Mining Group	Drilling, geochemical sampling, ground EM geophysical survey. Initiated development of the Cu Feeder Zone and constructed 470 m decline into the Chester deposit (Stringer West Zone)	Over 400 diamond drill holes (S-series) exceeding 110,000 feet in total length, were completed to delineate the deposit and further explore the Property. The decline was intended to test the disseminated and Stringer Zone (Figure 6.4), confirm diamond drill indicated grade and tonnage and check water flows for a potential underground mining operation. The grade of the underground material was reported as 2.05% Cu versus the grade of 1.58% Cu estimated by the historical resource estimate. Drill core from the pre-1980's was analysed almost exclusively for Cu, with the exception of 2 holes (S-138 and S-436). None of the pre-1980's drill core was preserved.	Sullico, 1968; Hamilton, 2003; Hamilton and Brooks, 2004
1981-1994	BMS	Drilling, stream sediment geochemical surveys.	The drill program was planned to test the precious and base metal content of the gossan cap. Results were considered disappointing.	Frankland, 1987
1988-1995	Granges Exploration Ltd.	Soil geochemical sampling	The soil program identified mildly anomalous areas down slope from the Central Zone (Figure 6.4).	O'Donnell, 1988
1992-1997	Teck	Drilling, trenching, stream and lithogeochemical sampling, Very Low Frequency Electromagnetic (VLF-EM), magnetometer, Time Domain Electromagnetic (TDEM) surveying and geological mapping.	Magnetic anomalies were interpreted to be associated with mafic volcanic rocks or magnetite-bearing sedimentary rocks of the Miramichi Group and a magnetic anomaly was associated with the Chester Deposit. Conductive zones identified by the VLF-EM surveys were common in the Miramichi Group sedimentary rocks, but the mafic and felsic rocks were found to be poorly conductive. The Chester Deposit was associated with a conductive anomaly; weakly conductive zones which were detected in the vicinity, and along strike, of the deposit were interpreted to represent weak mineralization along the Chester horizon. Two drill holes targeting geophysical anomalies outside of the area of VMS and Cu zones intersected thin zones of massive sulphides. Two drill holes completed to the north of the Central Zone intersected disseminated sulphides and anomalous base metals. Drill hole CH-97-01 and trench TR-97-01A targeted a moderately strong chargeability and coincident apparent resistivity anomaly, located to the northwest of the Chester Deposit. No significant mineralization was found in the drill hole but a 15-metre-wide zone of 5% disseminated pyrite/pyrrhotite with grab samples assaying up to 958 ppb Pb and 1,014 ppb Zn was	Moore, 1995; Clark, 1996; 1997

Year	Operator	Surface Exploration and Development	Results of Exploration	References
			found in the trench. A second hole (CH-97-02) was drilled to test for a possible repetition of the Chester Deposit beneath the East Zone of the deposit and had negative results (Figure 6.3)	
1994-1999	Bathurst Silver Mines Ltd.	Drilling, Max-Min I EM survey, VLF and Magnetometer survey, and a gravity geophysical survey.	The objective was to outline a small high-grade lead zinc zone within the known deposit for potential mill feed for the Heath Steele Mine, located 24 km to the north. The drilling outlined a lens of massive sulphide mineralization, which was significantly higher grade than the overall grade of the Central massive sulphide zone. The most significant intersection was in BSM-3 that returned 7.8 metres averaging 8.37% Zn, 5.05% Pb, 0.25% Cu, 38.9 g/t Ag and 0.28 g/t Au, which included 4.0 metres averaging 10.21% Zn, 6.88% Pb, 0.33% Cu, 50.0 g/t Ag and 0.28 g/t Au. The geophysical surveys identified anomalies associated with the Chester Deposit.	Hamilton and Brooks, 2004; Mersereau, 1995; 1999A
1998-2000	Black Bull Resources Ltd.	Drilling, geochemical sampling, VLF-EM, gravity and IP geophysical surveys	Several IP anomalies were identified. Two drill holes tested an anomaly extending northwest from the Chester Deposit: CH-99-1 encountered very poorly mineralized felsic tuffs, which were not considered to be the source of the IP anomaly. Hole CH-99-2, drilled 100 metres north of CH-99-1, intersected minor mineralization, locally up to 25% pyrite-pyrrhotite with maximum Cu values of 819 ppm and maximum zinc of 1838 ppm.	Mersereau, 1999B
2002-2008	First Narrows	Drilling, geochemical sampling, geological mapping, airborne (VTEM) and ground geophysical surveys.	Interpretation of the VTEM data identified 13 target areas. The results of the exploration completed by FNR are presented in Section 6.1.1.	Brooks, 2005; 2006
2004	Noranda Exploration	Airborne MegaTEM II survey over the entire Bathurst camp	The data for the Chester block was provided to FNR and defined several anomalies.	Brooks, 2005
2012-2014	Earnest Brooks	Line cutting, soil, rock and stream sampling, geological mapping and ground geophysical surveying (Mag and VLF)	Geological mapping discovered significant outcrops of Clearwater Stream Formation rocks that were not previously documented.	Brooks, 2013
2013-2016	Explor and Brunswick Resources Inc.	Drilling, geological mapping, ground magnetics and VLF surveys were conducted east of the East Zone	The results of exploration completed by Explor and Brunswick Resources Inc. are presented in Section 6.1.2.	Sim, 2014; Brooks, 2015
2019	Puma	Reprocessing of the 2004 MegaTEM and VTEM geophysical surveys, Computer Aided Resources Detection System (CARDS) evaluation sampling, prospecting, trenching.	The geophysical data reprocessing aided in target identification. The CARDS evaluation generated 29 exploration targets. The results of exploration conducted by Puma are presented in Section 6.1.3.	Hupé and Gagné, 2020

Figure 6.1 Historical drilling Chester Property pre-1980.

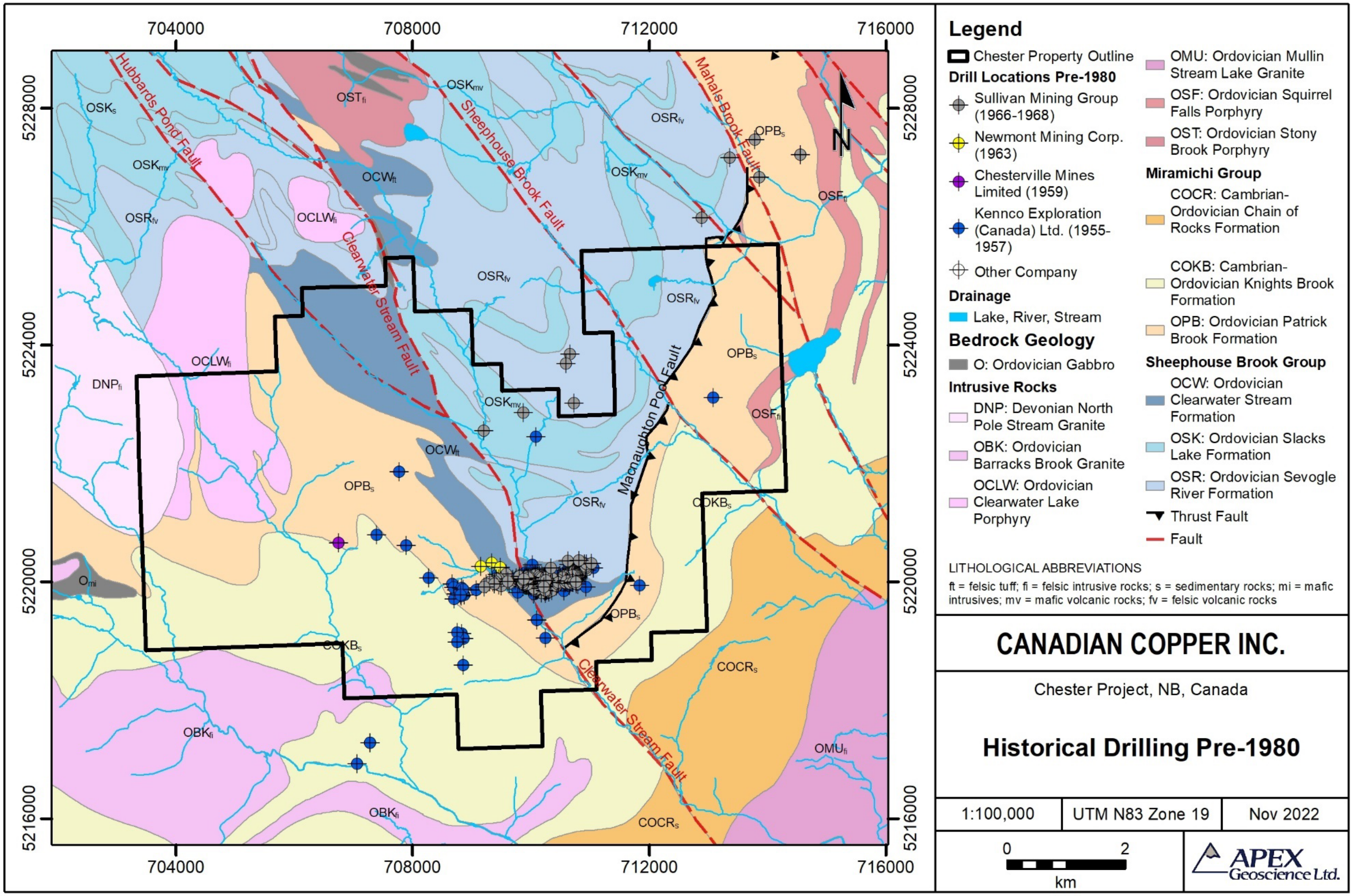


Figure 6.2 Historical drilling Chester Property post-1980.

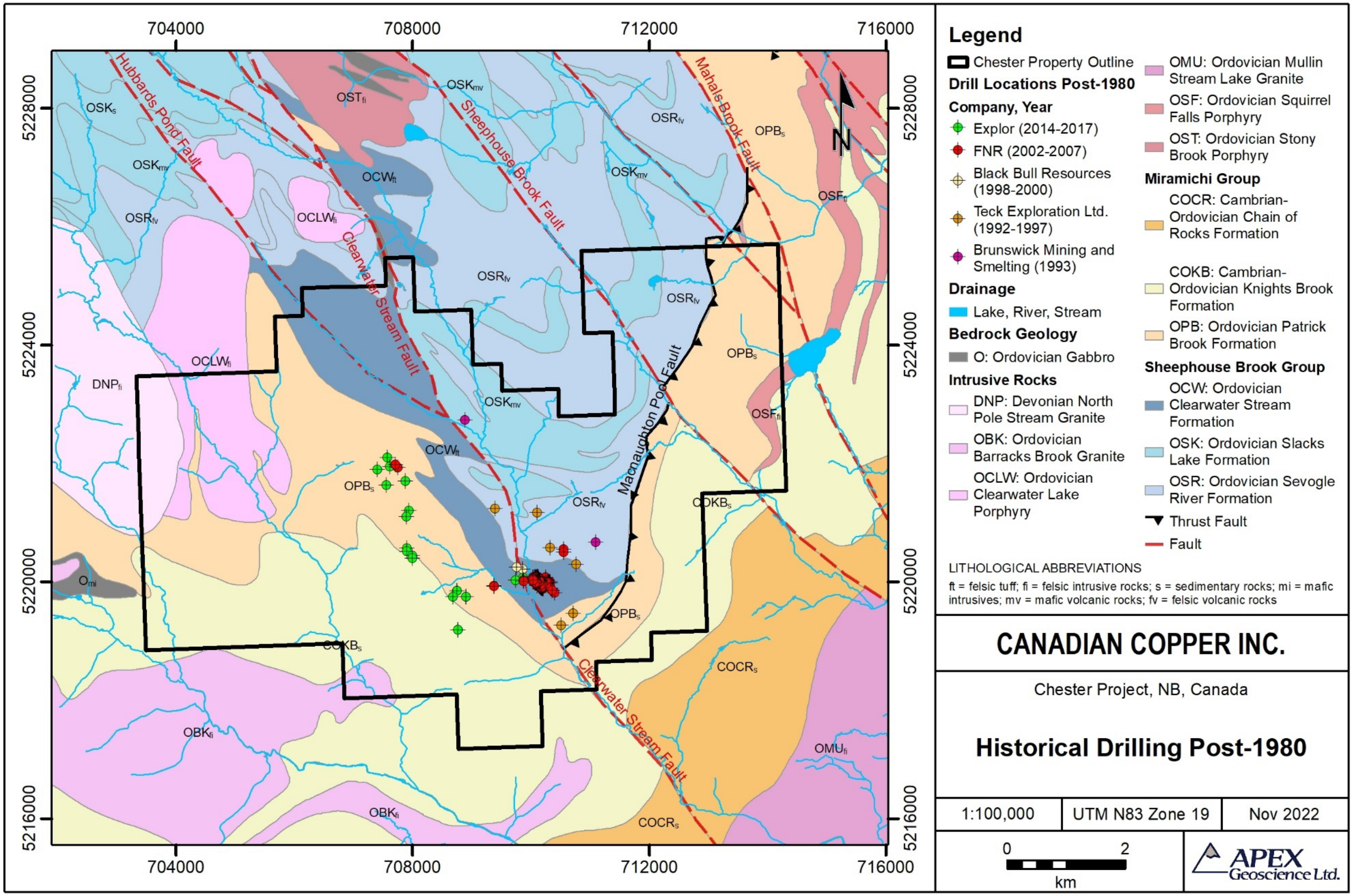


Figure 6.3 Historical drilling post-1980 – Chester Deposit.

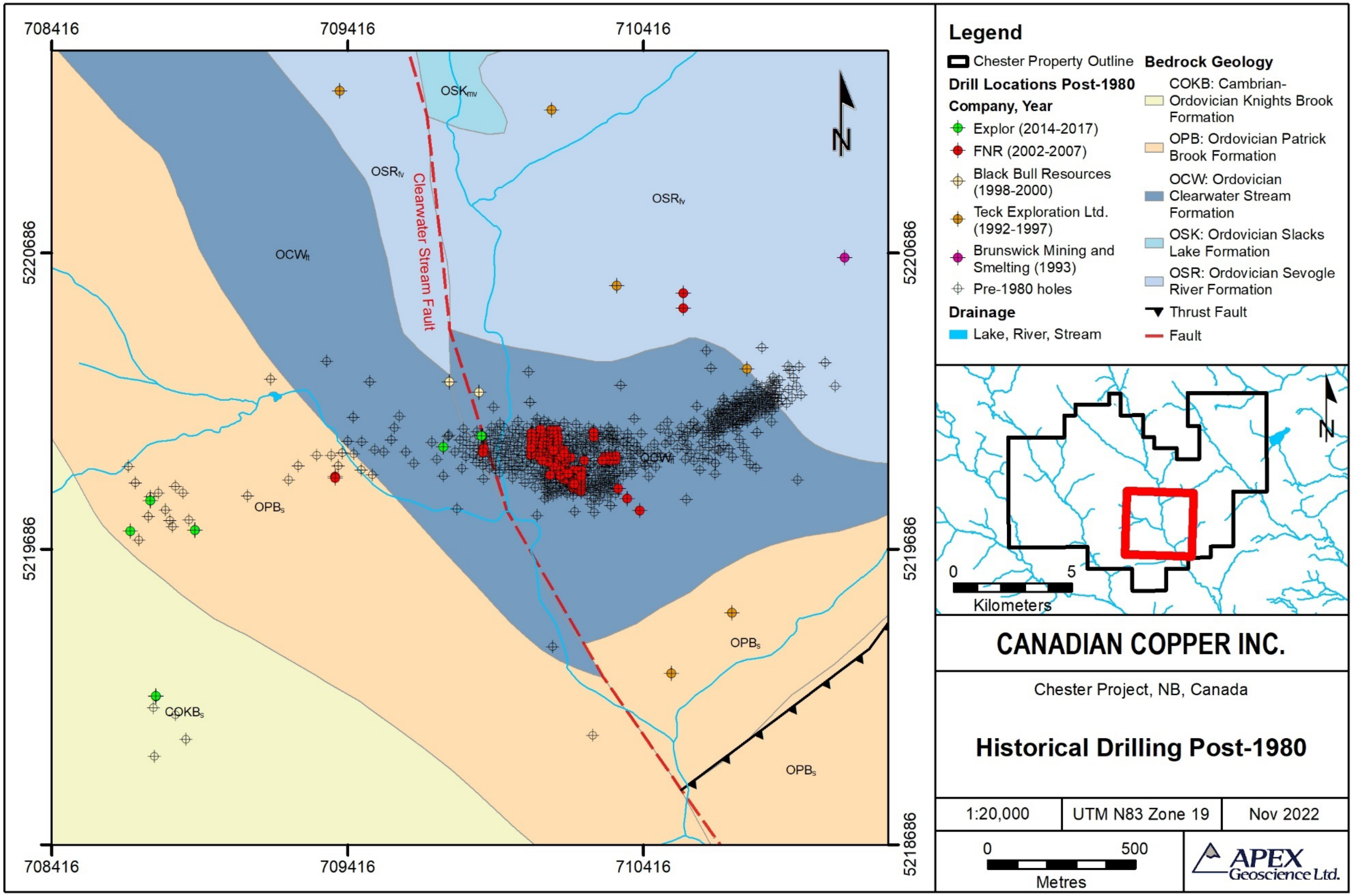
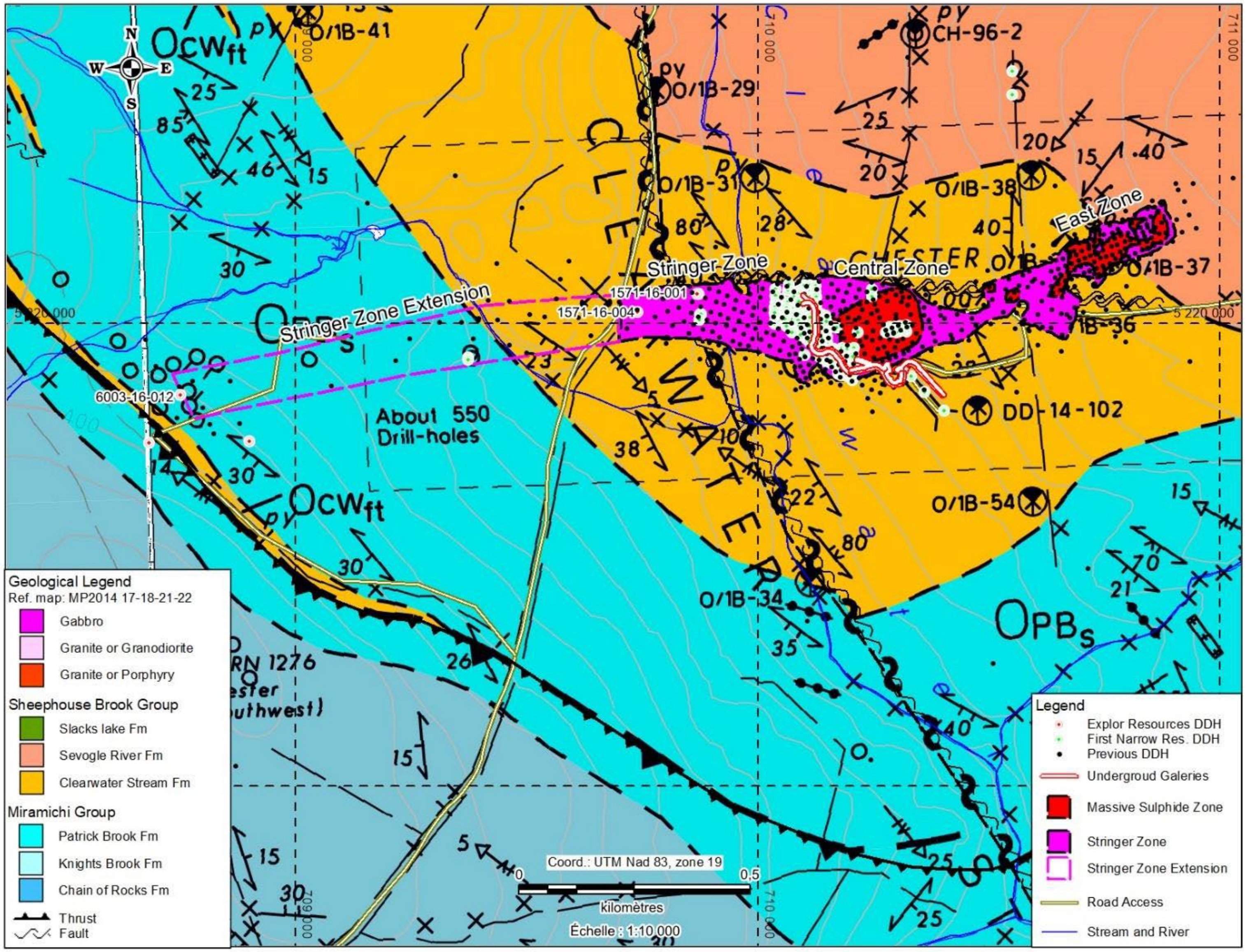


Figure 6.4 Mineralized zones of the Chester Deposit.



Source: Hupé and Gagné, 2020

6.1.1 First Narrows Exploration History (2003 to 2008)

In 2003, First Narrow Resources Corp. ("FNR") optioned four claims within claim blocks 1571 and 2428 from NES and Bathurst Silver, as well as an additional claim from Teck. Between 2002 and 2008, FNR completed geochemical sampling, geological mapping, airborne and ground geophysical surveys and drilling. In 2004, Noranda Exploration flew a MegaTEM II survey over the entire Bathurst camp and provided the data over the Chester block to FNR. FNR subsequently commissioned a Geotech Versatile Time Domain Electromagnetics ("VTEM") helicopter-borne survey to follow up on several unexplained geophysical anomalies from the Noranda MegaTEM II survey. The survey included 675.2-line kilometres covering an area of 31 km^2 (Figure 6.5; Brooks, 2005).

FNR contracted Condor Consulting ("Condor") to complete processing, analysis and interpretation of the VTEM data (Brooks, 2006). Interpretation of the VTEM survey data identified 13 target zones for follow-up.

The data delineated a gently dipping semi horizontal conductive horizon from outcrop depth to greater than 500 m, interpreted by Condor (2005) to be in part preserved sea floor sulphide depositional layers, or related to graphite zones. The dominant pattern in the magnetic data is an elevated magnetic shelf in the southwestern portion of the Property. The magnetic grain for Chester trends to the east-west. Elsewhere in the shelf the magnetic grain varies to northwest-southeast to semi-arcuate. The Chester Deposit itself is characterized by coincident strong EM and magnetic responses (Figures 6.5 and 6.6). However, other strong EM zones only partially overlap with magnetic highs (Condor, 2005).

The EM features with the greatest conductivity are highlighted in the AdTau image in Figure 6.6. Condor (2005) reports that these features typically contain the greatest amounts of metallic sulphides. All major EM features also show anomalous AdTau response, with the exception of targets that are too deep for proper assessment of the conductivity (Condor, 2005).

A re-interpretation of the VTEM data by Brooks (2006) concluded:

- The Clearwater Stream Formation dips shallowly to the west and is likely over thrusted by weakly mineralized or weakly graphitic sediments.

- Lines to the east of the Western Deeps area indicate that the Chester Horizon, or the Clearwater Stream Formation, dips to the south, up to 40-45° of an east-west line (fiducial line T9020), with the Chester VMS zone at the crest of an anticlinal fold with the north limb dipping to the north.

- The Chester Deposit is on the crest, and the Cu Stringer zone lies along the west, of an east-west trending, westerly plunging, open anticlinal fold structure. The east-west trending hinge line lies along fiducial line T9020.

Figure 6.5 2004 VTEM Survey - Total Magnetic Intensity (TMI).

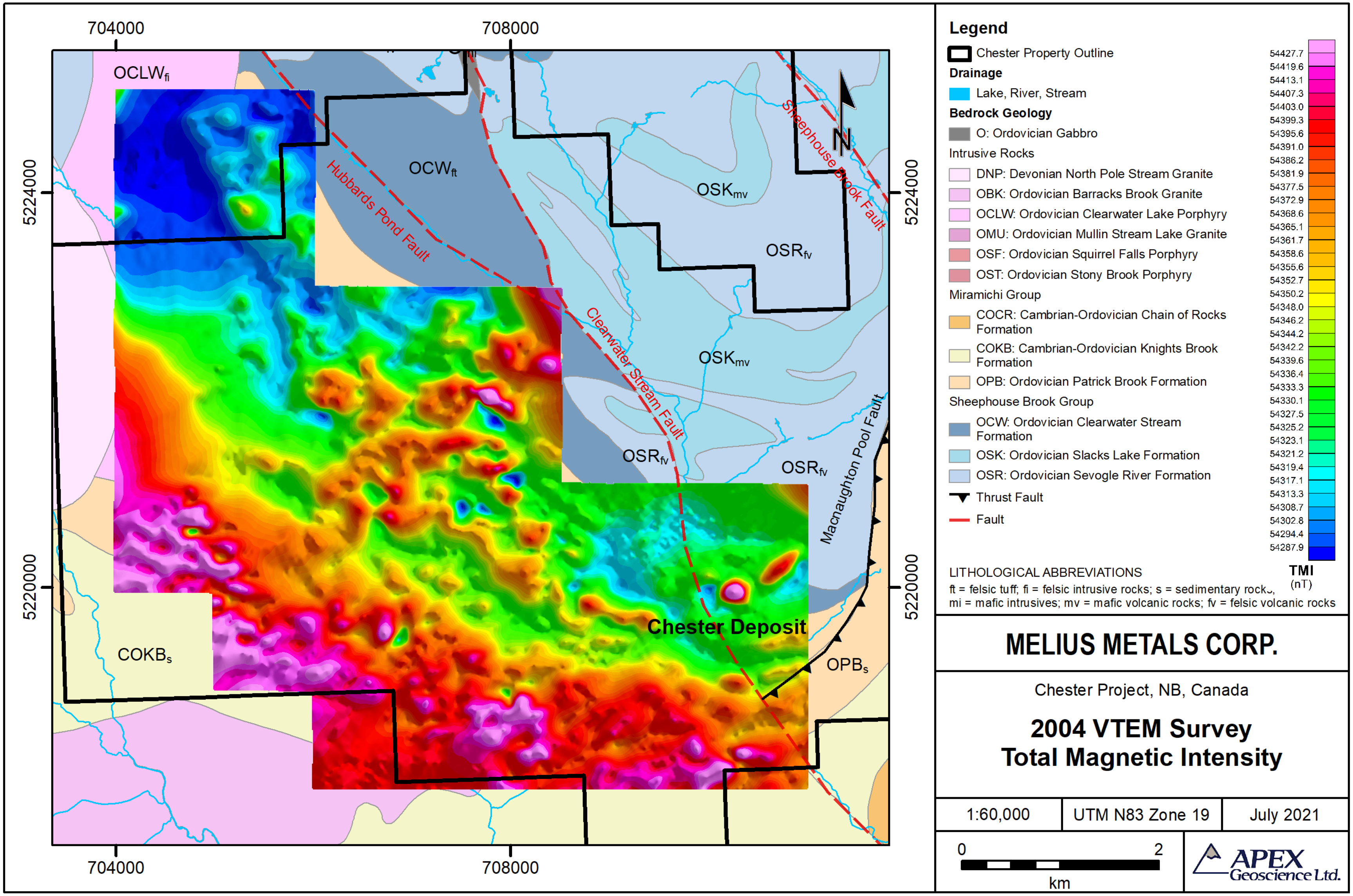
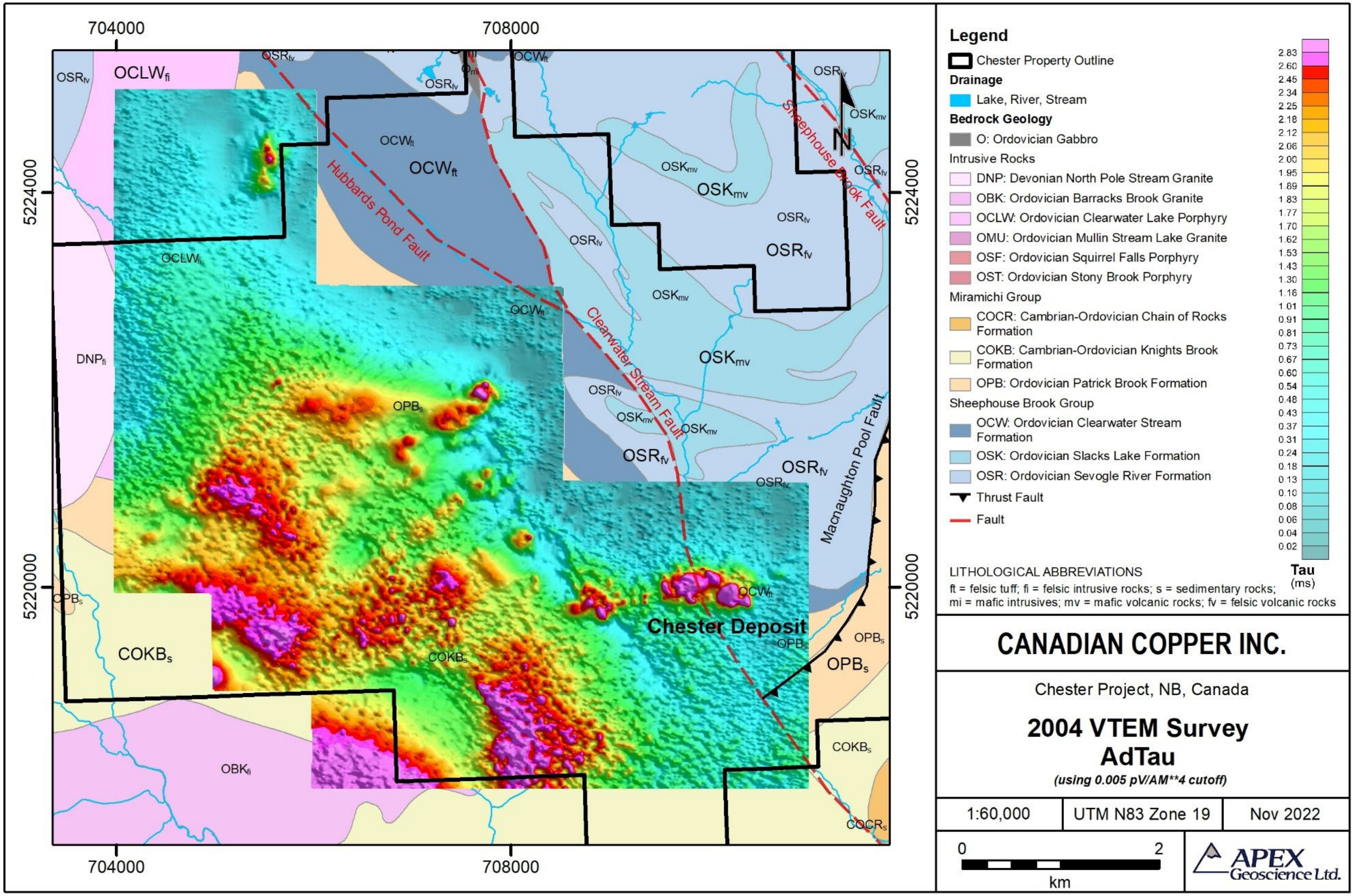


Figure 6.6 2004 VTEM Survey – AdTau.



- Geological information from drill holes C-04-014 and C-04-015 confirm the south dip of the structure, using the rhyolite unit that is the footwall of the chloritic altered Cu stringer mineralized zone (the Western Deeps), and the mineralized chloritic altered feeder zone. The north limb is interpreted to dip to the north.

- The vertical slices highlight several separate layers of conductive material dipping roughly to the southwest. The deepest is situated in the Main Zone (Main Chester VMS and Cu Stringer zones).

- Three stacked layers, including the Main Chester VMS and the Cu String zones, are shown on fiducial line T9020. The stacked layers are interpreted as the result of numerous layers of felsic rocks, Clearwater Stream Fm., being overthrust in a series of thrust faults. Drill hole CNW-04001 intersected the annealed quartz vein at the contact between the sediments and lower felsic volcanic unit at 176 m depth. The felsic unit is the same age as the Clearwater Stream Fm. at the base of drill hole S-040015, which is the same age as the Nepisiguit Falls Fm., host of the BMS 6 and BMS 12 VMS deposits (Brooks, 2006).

FNR drilled a total of 198 core holes on the Property. A total of 179 holes targeted the near-surface Cu Stringer (West) Zone (Figure 6.4), the remaining 19 holes targeted the Central VMS zone and other targets away from the main deposit (Figures 6.3 and 6.4). FNR completed methodical confirmation and delineation drilling on the deposit with drill holes variably spaced at 6.25-metre spacing (and locally 3.25 m) in the upper part of the Stringer zone to an average of 12.5-metre spacing throughout most of the drilled area and expanding to 25-metre spacing at the western limits of the program. The vast majority of both FNR and pre-FNR drill holes are oriented vertically which result in favourable pierce angles with the shallow-dipping mineralized zone.

Validated FNR drill results were compared with the pre-FNR drilling data over a restricted “test” area. Sim and Davis (2008) report that the test involved an interpretation of +0.5% Cu in Stringer Zones 2 and 3 derived from each data set and then comparisons of de-clustered sample data within each domain. The results showed similar grades in each zone but the pre-FNR drilling generated a higher volume of lower-grade material. It should be noted that the pre-FNR drill holes average 25-metre spacing through the test area compared to <12.5-metre spaced FNR holes. It was concluded that the results between the two vintages of drilling were sufficiently similar and the pre-FNR drilling could be considered reliable for use in estimating mineral resources (Sim and Davis, 2008).

The FNR diamond drilling was completed by Maritime Diamond Drilling Ltd. of Truro, Nova Scotia using a Longyear Model 38. All FNR holes used NQ-sized drill core. The core from pre-FNR drilling is a combination of AXT, BQ and NQ sizes. Logging and sampling procedures along with a discussion of QA/QC protocols and results for the FNR program are described in detail in technical reports by Sim and Davis (2008) and Sim (2014). Following the insolvency of FNR in 2011, some of the FNR core was moved to the government facility in Madran, (located northwest of Bathurst). Additionally, approximately 40 trays were stored on Mr. Brooks' property in Bathurst. The remainder of the core was dumped in the Bathurst No. 12 Mine tailings pond (Sim, 2014).

Drilling by FNR in 2003 targeted the upper part of the Stringer Zone and select portions of the VMS zone with the results of the drilling confirming the mineralization intersected in the pre-FNR drilling data and resulting in the discovery of new zones of Cu-polymetallic mineralization (Sim and Davis, 2008). Select results of the FNR drilling completed in 2003 are presented in Table 6.2.

Exploration drilling by FNR in 2004 included two holes (C-04-014 and C-04-015) drilled 600 m to the west of the known limit of the Stringer Zone historical resource and mineralized area. The two drill holes targeted mineralization intersected in pre-FNR drill hole S-436, which reported 0.91 m of 2.30% Cu, 1.40% Pb and 1.11% Zn from 315.15 m and 23.16 m of 1.53% Cu, 1.64% Pb and 0.94% Zn from 324.6 m. Drill hole C-04-014 intersected 1.3 m of 2.23% Cu from 325.5 m depth and 2.75 m of 1.84% Cu from 336.5 m. The results did not exactly replicate the intersections reported in S-436; however, they confirmed the presence of Stringer Zone mineralization over a total strike length of 800 m.

Additional exploration drilling on the Property in 2004 included 3 holes testing the upper part of the Stringer Zone and 2 holes targeting a VTEM/soil geochemical anomaly situated approximately 3.5 km to the northwest of the underground portal. Felsic volcanic rocks with local disseminated to massive pyrrhotite-pyrite and local chalcopyrite were observed in both drill holes (CNW-04-001 and CNW-04-002) testing the geophysical/soil anomaly. Drill hole CNW-04-001 returned 0.9 m of 0.31% Cu from 3.0 m depth and CNW-04-002 returned 5.2 m of 0.28% Cu from 3.0 m depth (Sim and Davis, 2008).

Table 6.2: FNR 2003 drilling highlights.

Drill Hole	Mineralized Zone	From (m)	To (m)	Length (m)	Cu (%)	Ag (g/t)	Au (g/t)	Co (g/t)	Bi (g/t)	Ga (g/t)	In (g/t)	Sc (g/t)
C-03-06	Upper Zone	84.28	89.70	5.42	1.17	5.60	0.086	108	29	17.60	0.4	trace
Including	Upper Zone	86.00	88.80	2.80	1.95	7.80	0.131	127	40	23.70	0.7	trace
C-03-10	Upper Zone	72.54	78.02	5.48	1.56	2.30	0.300	92	131	18.70	8.8	11.6
Including	Upper Zone	73.00	74.06	1.06	4.09	7.20	1.250	117	315	11.30	20.8	6.6
C-03-10	Lower Zone	92.96	101.80	8.84	1.56	2.10	0.117	111	100	24.60	11.2	14.7
Including	Lower Zone	98.20	101.60	3.40	2.51	3.30	0.194	153	187	27.80	15.8	15.3
C-03-11	Lower Zone	95.90	107.40	11.50	0.76	1.00	0.054	72	62	20.20	4.7	14.8
C-03-13	Upper Zone	131.80	141.20	9.40	0.39	trace	0.012	40	20	33.60	3.7	21.6

(Modified from First Narrows Resource Corp., 2004)

Age dating using the Pb/Zr method was completed by Activation Laboratories Ltd. of Ancaster, ON on core samples collected from felsic volcanic rocks near the bottom of holes C-04-015 and CNW-04-001. The age dating analysis resulted in an age of 469 +/- 0.3 Ma for both core samples, which correlates to the age obtained from a Clearwater Stream Formation surface sample collected to the west of Chester. The results of the age dating analysis indicate that greater than 580 m of Clearwater Stream Formation lies within the Chester Property. The Clearwater Stream Formation is known to host significant mineral deposits of the Bathurst Mining Camp (Sims and Davis, 2008).

FNR also completed a soil geochemical survey over the property in 2004. The results were consistent with the known mineralization at Chester and identified several anomalous areas west and northwest of the Chester Deposit (Sim and Davis, 2008).

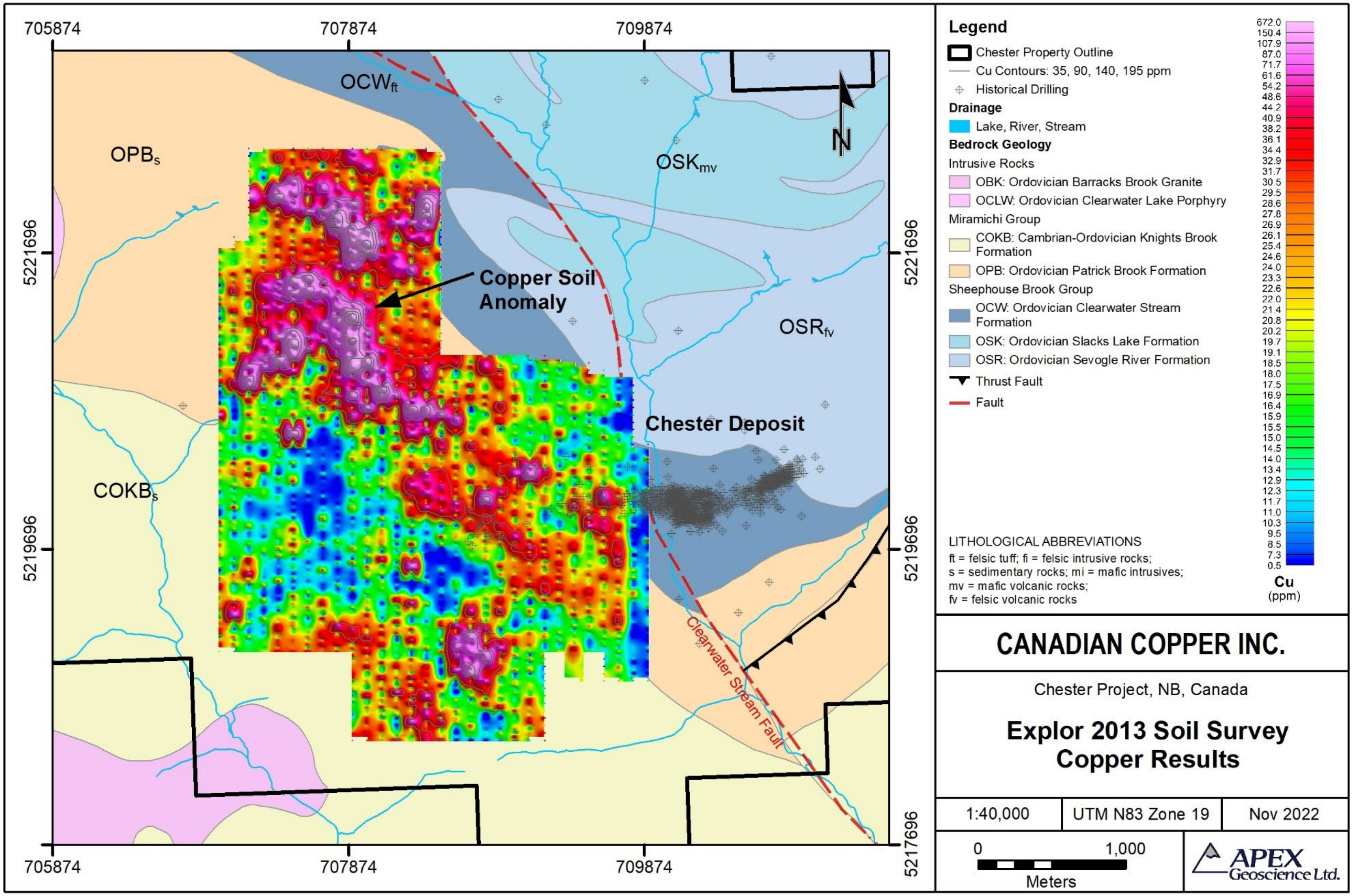
Most of the drilling completed by FNR in 2006 and 2007 focused on near-surface Stringer Zone mineralization of the Chester Deposit. Exploration drilling by FNR in 2007 was completed in proximity to, and north of, the underground portal. Felsic volcanic rocks with rare traces of sulphides were observed in the drill core. Felsic tuffaceous and rhyolitic rocks of the Clearwater Stream Formation with local zones of sericite and/or chlorite alteration was observed in drill hole C-07-P1X, collared next to the underground portal (Sims and Davis, 2008).

6.1.2 Explor Exploration History (2013 to 2016)

In 2013-2014, the northwestern part of the Chester Property was explored by Explor and Brunswick Resources Inc. (“Brunswick Resources”). Explor concentrated their exploration program on the west side of Clearwater Stream in an area that had seen little exploration since the 1950’s. Ten short diamond drill holes totalling 1,103 m were drilled and intersected Cu mineralization associated with disseminated chalcopyrite in a layer of altered felsic volcanics that were interpreted to be of the Clearwater Stream Formation (Figures 6.2 and 6.3). Additionally, geological mapping, ground magnetics and VLF surveys were conducted east of the East Zone (Figure 6.4). The geophysical results identified a fairly large magnetic source associated with a VLF anomaly in the centre of the south grid. A preliminary field examination of the area showed that the magnetic anomaly is associated with a fairly flat-lying bed of black sediments, probably of the Miramichi Group. (Brooks, 2015). Several anomalous areas with elevated Cu, Zn and Pb levels were identified including an area located about 1 km northwest of the current Chester Deposit (Figure 6.7). The anomalous area (labeled “Anomalous Soil Cu Anomaly” in Figure 6.7 is coincident with anomalous magnetometer and VLF results. Geological mapping indicated the potential presence of sericite-altered volcanic host rocks in the area (Sim, 2014).

In 2016, Explor targeted the westward continuity of the Cu Stringer Zone under Clearwater stream with 4 drill holes (Figure 6.3). Three holes were drilled in a fan pattern and intersected five zones of significant mineralization. Significant intersections from hole 1571-15-1 included 3.55 m averaging at 7.97% Cu, 113 ppb Au, 6.65 ppm Ag, 932 ppm Zn and 86 ppm Pb and 1.31 m averaging at 13.81% Cu, 416 ppb Au, 9.55 ppm Ag, 710 ppm Zn and 91 ppm Pb. The fourth hole (1571-16-004) was collared 139 m to the west and 30 m south. It also intersected mineralization with 11.5 m averaging at 2.36% Cu including 3.7 m at 3.88% Cu or 7.6 m at 3.06% Cu. The drilling confirmed the continuity of the Cu Stringer Zone to the west of Clearwater Stream. Based on the drill data, the Cu Stringer Zone was interpreted to be on the stratigraphic horizon between the

Figure 6.7 Explor 2013 soil samples - Cu in soil geochemistry.



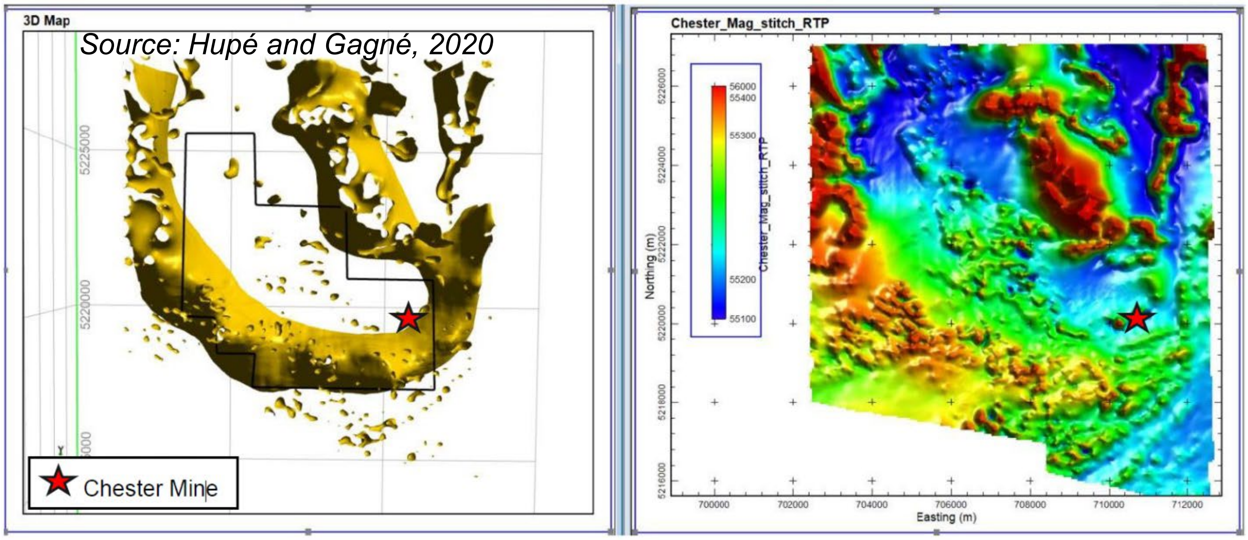
lower Clearwater Stream Formation and the overlying Sevogle River Formation (as described by Brooks, 2017a). This interpretation is in discrepancy with the previous overturned recumbent syncline model (Hupé and Gagné, 2020).

In fall 2016, an additional 8 holes totalling 1,320 m, were drilled. Three holes (6003-16-012, 013 and 016) targeted a near surface soil geochemical anomaly and a coincident VTEM anomaly (from the 2004 survey). The three holes intersected a thin mineralized layer within a thicker zone of sediments consisting of various siltstones, shaley sediments and possibly resedimented felsic tuffs and sediments. Foliation fabrics in the Clearwater Stream Formation intersected in 2 of the holes seem to support the existence of a recumbent isoclinal fold structure (Hupé and Gagné, 2020). Two additional holes (6003-16-014, 015) were drilled to test the continuity of the mineralized zone eastward. Both holes intersected mineralization. Hole 6003-15-017 was drilled 2.5 km north of hole 6003-16-012 and intersected scattered sulphide mineralization. Holes 6005-16-01 and 02 targeted a Cu-in-soil geochemical anomaly in an area of historical drilling that returned significant Cu mineralization located approximately 500 m south of the above holes. These 2 holes failed to intersect mineralization, further exploration in the area was recommended (Brooks, 2017b).

6.1.3 Puma Exploration History (2019)

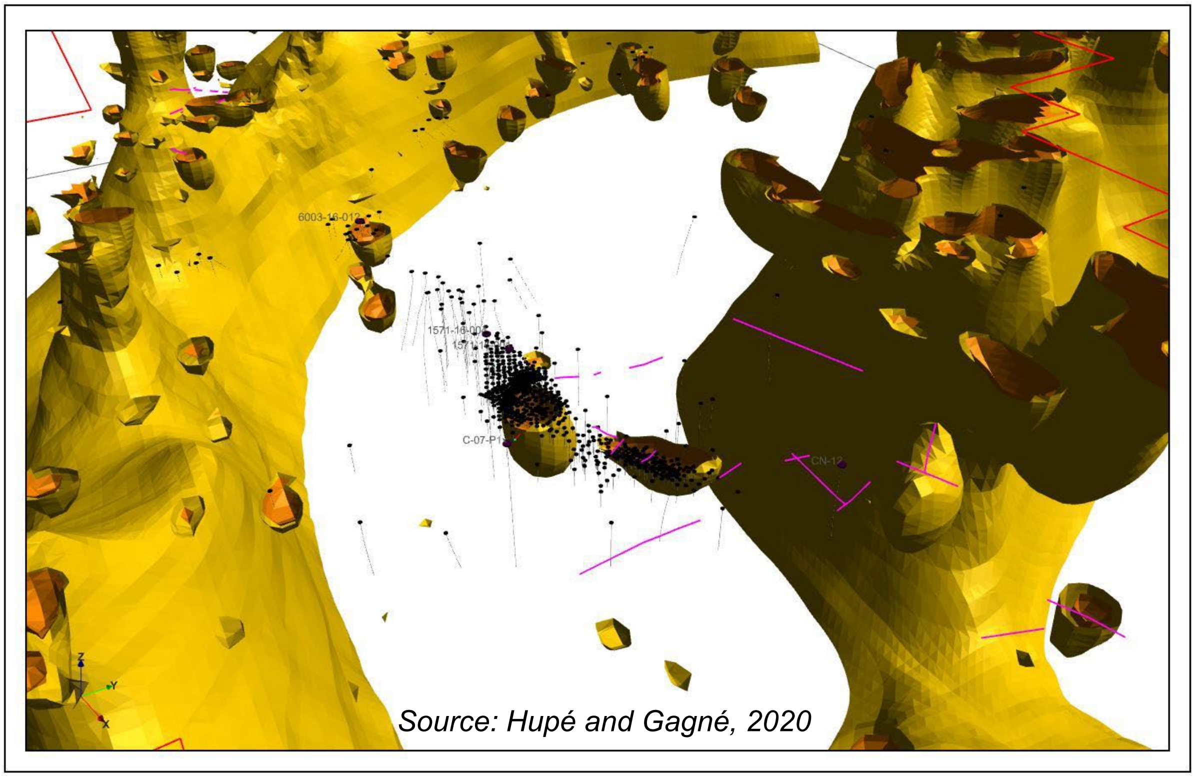
In 2019, Puma optioned the Chester Property from Explor. Puma commissioned the reprocessing of the 2004 MegaTEM and VTEM surveys which resulted in a 3D geophysical model of the Chester Deposit (Figures 6.8 and 6.9) and aided in target identification. A Computer Aided Resources Detection System (CARDS) evaluation was completed that generated 29 exploration targets. Targets in poorly explored areas were followed up by prospecting, sampling and excavation of 22 trenches totalling 3,940 m (Figure 6.10). The geology in the trenches did not explain the CARDS anomalies. Further trenching, sampling and channel sampling was recommended (Hupé and Gagné, 2020).

Figure 6.8 Example of the magnetic 3D inversion.



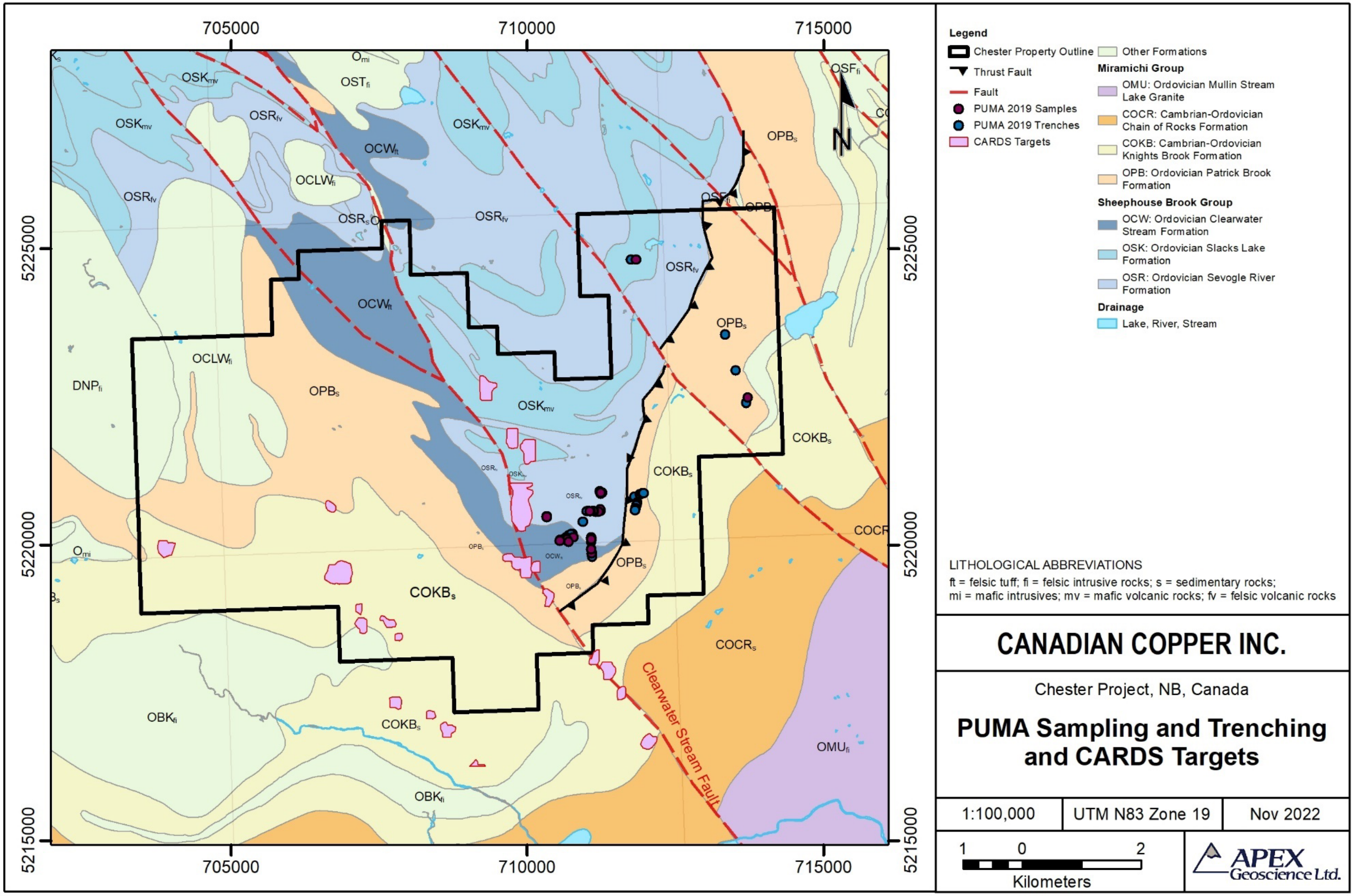
Source: Hupé and Gagné, 2020

Figure 6.9 MegaTEM-Magnetic 3D inversion for Chester Deposit.



Source: Hupé and Gagné, 2020

Figure 6.10 2019 PUMA samples and trenches and CARDS targets.



6.2 Historical Drilling and Historical Mineral Resources

6.2.1 Historical Drilling Summary

Historical drilling on the Property has been conducted by several companies from 1956 to 2016 as discussed in Section 6.1. The current drill hole database contains information for 804 drill holes, totalling 70,803 m, located within the confines of the current Chester Property. The majority of these drill holes, 761 drill holes totalling 64,690 m, targeted the Chester Deposit and possible extensions of the deposit. A summary of the historical drilling conducted at the Chester Property is presented in Table 6.3. Table 6.4 provides a summary of the holes targeting the Chester Deposit. Select historical highlights showing core length intercepts from the Feeder Zone and Massive Sulphide Zone of the Chester deposit are listed in Table 6.5.

Table 6.3: Summary of historical drilling at the Chester Property.

Company	Year(s)	Total drill holes	Dip (degrees)	Orientation (azimuth)	Total length (m)
Kennco Explorations Ltd.	1955-1957	134	-45 to -90	0 to 285	12,675
Chesterville Mines Ltd.	1959	1	-90	0	91
Newmont Mining Corp.	1963	3	-60 to -90	0 to 23	712
Sullivan Mining Group/Sullico	1966-1968	430	-90	0	32,659
Teck Exploration Ltd.	1995-1997	6	-70 to -90	19 to 247.5	2,160
Brunswick Mining and Smelting	1993	2	-50 to -90	113 to 218	532
Black Bull Resources	1999	2	-88 to -90	144 to 278	583
Unknown operator (pre-FNR)		7	-90	0	111
First Narrows Resources	2002-2007	197	-45 to -90	0 to 355	18,023
Explor	2014-2016	22	-45 to -90	0 to 180	3,257
TOTALS		**804**			**70,804**

Table 6.4: Summary of historical drilling targeting the Chester Deposit.

Company	Year(s)	Total drill holes	Dip (degrees)	Orientation (azimuth)	Total length (m)
Kennco Explorations Ltd.	1955-1957	120	-45 to -90	0 to 218	11,878
Chesterville Mines Ltd.	1959	1	-90	0	91
Sullivan Mining Group/Sullico	1966-1968	428	-90	0	32,490
Teck Exploration Ltd.	1992-1997	1	-70 to -70	145 to 145	389
Black Bull Resources	1999	2	-88 to -90	144 to 278	583
Unknown operator (pre-FNR)		7	-90	0	111
First Narrows Resources	2002-2007	193	-45 to -90	0 to 355	17,324
Explor	2014-2016	9	-45 to -90	0 to 180	1,824
TOTALS		**761**			**64,690**

Table 6.5: Chester Deposit historical drilling highlights.

Feeder Zone (Surface to 50 m)	Massive Sulphide Zone (Surface to 50 m)
4.8% Cu over 20.3 m	10.8% Zn and 4.5% Pb over 5.6 m
3.4% Cu over 25.0 m	7.4% Zn + 2.3% Pb over 6.1 m
6.0% Cu over 13.1 m	8.0% Zn + 3.9% Pb over 7 m
8.0% Cu over 5.2 m	8.5% Zn + 4.0% Pb over 7.9 m
4.9% Cu over 14.2 m	7.0% Zn + 2.6% Pb over 15.6 m

Source: Puma Exploration Inc., 2019

Several of 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 mineral resources. 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 simply to demonstrate the mineral potential of the main target area of the Chester Property. All of the historical mineral resources herein are superseded by the current mineral resource estimate for the Chester Deposit presented in Section 14 below.

The following text summarizes historical MRE's for the Chester 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.

6.2.2 1973 Sullivan Mining Group Historical Mineral Resource

Historical resource estimates for the Chester Deposit have been documented in various published papers (Irrinki, 1986; Fyffe, 1995; Wilson and Fyffe, 1996), New Brunswick Mineral Occurrence Database Chester Deposit (reference number 71), a report by Montreal Engineering Company Ltd. (1970), and various documents by Sullivan Mining Group Ltd. (or subsidiary Sullico) that are now in the archives of New Brunswick Department of Natural Resources and Energy Development (NBDNRED). These previously reported estimates were either identical or quite similar. Historical mineral resources were reported by the Sullivan Mining Group Ltd. in 1973 and were included in more recent Technical Reports (Hamilton, 2003; Sim and Davis 2008; Sim, 2014):

- East Zone – 0.5 million tonnes of massive and disseminated sulphide grading 0.78% Cu, 0.36% Pb, and 1.14% Zn;
- Central Zone – 1.1 million tonnes of massive sulphide grading 0.47% Cu, 0.90% Pb, and 2.22% Zn; and

- West Zone (Cu Stringer Zone) – 15.2 million tonnes of disseminated and stringer sulphides grading 0.78% Cu, including 3.4 million tonnes grading 1.58% Cu.

No information regarding the methods or parameters used to calculate these historical MRE's is available. The cut-off grade is not reported. The methods of estimation nor any statistical data are provided. The historical MRE's presented above were calculated prior to the implementation of the standards set forth in NI 43-101 and current CIM standards for mineral resource estimation.

6.2.3 2008 First Narrows Resources Historical Mineral Resource

FNR released a historical MRE for the Stringer Zone portion of the Chester Deposit in 2008 (Sim and Davis, 2008). The historical MRE was prepared based on a potential underground mining scenario. The historical MRE was prepared in accordance with NI 43-101 and CIM standards at that time and uses acceptable classes of mineral resources (CIM, 2005). The historical resource estimate for the base cut-off grade of 2.0% Cu is presented in Table 6.6.

Table 6.6: 2008 FNR historical mineral resource estimate for the Stringer Zone (cut-off 2% Cu).

Category	ktonnes	Cu (%)	Zn (%)	Ag (g/t)	SG (t/m3)
Measured	44	3.05	0.22	10.2	3.17
Indicated	240	2.73	0.11	6.8	3.09
Inferred	298	2.51	*	*	3.07

**Note: Inferred resources are based primarily on older drilling results which do not have sufficient zinc and silver analysis to generate resource grades for these elements.*

The historical MRE was generated from drill hole sample assay results and the interpretation of a geological model which relates to the spatial distribution of Cu, Zn and Ag at the Chester Deposit. The historical MRE included only the Cu rich West "Stringer" Zone and did not include resources for the Central and Eastern massive sulphide zones. The 2008 historical mineral resource estimate is superseded by the updated MRE presented herein.

6.2.4 2014 Explor Resources Historical Mineral Resource

In 2014, Explor released an updated historical MRE based on the 2008 FNR historical mineral resource to reflect 2014 metal prices and re-evaluation using combinations of open pit and underground extraction options in order to demonstrate a reasonable prospect for economic extraction (Sim, 2014). Between 2008 and 2014 no work or drilling that affected the 2008 resource estimate was completed, therefore, the 2008 model was considered valid for the 2014 Chester MRE. The dataset and parameters used in the 2014 resource remained the same as in 2008 with a change in lower cut-off. The resource was prepared in accordance with NI 43-101 and CIM standards at that time (CIM, 2005). The 2014 historical MRE is presented in Table 6.7.

Table 6.7: 2014 Explor historical mineral resource estimate for the Stringer Zone.

Class	Cut-off (Cu%)	Ktonnes	Cu (%)	Zn (%)	Ag (g/t)
In-Pit					
Measured	0.5	101	1.87	0.14	6.7
Indicated	0.5	1,296	1.34	0.06	3.3
Measured and Indicated	0.5	1,397	1.38	0.06	3.5
Inferred	0.5	2,060	1.25	n/a	n/a
Below Pit					
Inferred	2.0	29	2.33	n/a	n/a
Combined					
Measured	0.5	101	1.87	0.14	6.7
Indicated	0.5	1,299	1.34	0.06	3.3
Measured and Indicated	0.5	1,400	1.38	0.06	3.5
Inferred	variable	2,089	1.26	n/a	n/a

Source: Sim, 2014

The 2014 historical mineral resource was calculated to include a combination of open-pit and underground extraction options. An open pit cut-off grade of 0.5% Cu and an underground cut-off grade of 2% Cu were considered appropriate based on assumptions derived from operations with similar characteristics, scale and location at that time. The historical MRE included only the Cu rich West "Stringer" Zone and did not include resources for the Central and Eastern massive sulphide zones. The 2014 historical mineral resource estimate is superseded by the updated MRE presented herein.

6.2.5 Historical Metallurgical Studies

FNR submitted several sets of drill core samples from the Chester deposit to RPC (Research and Productivity Council) Laboratory in Fredericton, NB for metallurgical test work. Samples submitted for metallurgical testing were selected to be representative of the Stringer zone mineralization present in the Chester deposit. The test work indicated that concentrates grades in the range of 27-28% Cu can be produced at copper recoveries of 97-98%. Testing also showed that the tailings contain very low levels of contained sulphur (Sim and Davis, 2008). No metallurgy has been completed to assess Zn or Pb recoveries.

Results of the metallurgical test work completed on samples from the Stringer Zone mineralization are summarized from Sim and Davis (2008), as follows:

- Initial test work was conducted on samples from drill holes C03-001, 010 and 013, with samples containing VMS and Stringer Zone mineralization. The test results from these samples were likely compromised due to oxidation of the core in storage over a period of 3 years.

- In January 2007, fresh core samples were submitted from drill holes C-07-042, 043, 044 from near surface Stringer Zone mineralization (middle and lower Stringer Zone domains with Cu grades ranging from 1.20 to 17.11% Cu).
    - A blended sample (200 kg) averaged 3.5% Cu, 19% Fe, 0.03% Pb, 0.36% Zn, 15 g/t Ag and 21 ppm In.
    - Two floatation tests were conducted using different grind sizes (P80 <74.2 µm and P80 <89.9 µm). Bulk sulphide concentrates from both tests contained 10% Cu with Cu recoveries over 99%, with a total bulk sulphur level of 0.06% S of the rougher tails.
- In September 2007, fresh core samples were submitted from drill holes C-07-180, 181, 182 from upper and middle Stringer Zone mineralization with Cu grades ranging from 1.65 to 8.50% Cu (located approximately 100 m down dip of the previous metallurgical samples).
    - Individual bulk sulphide floatation tests were completed on the 4 samples. Recoveries were unaffected by the range of head grades, averaging over 99%. The rougher concentrate grades ranged from 10.4% from the low head grades to as high as 24% Cu from the higher-grade samples. Bulk sulphur levels of the rougher tails averaged 2.1% S.
- In October 2007, fresh core samples from drill holes C-07-186, 187, 188, completed in the upper Stringer Zone with Cu grades ranging from 2.46 to 10.85% Cu, were combined with samples from the September 2007 metallurgical drill holes to produce a composite sample for locked cycle and concentrate cleaning tests.
    - The combined sample (58 kg) averaged 2.41% Cu, 15.9% Fe, 0.04% Pb, 0.35% Zn, 12 g/t Ag and 11 ppm In.
    - Rougher and cleaner testing showed that regrinding is not required (P80 <76.8µm) and that one stage of cleaning was necessary to produce saleable concentrates. The rougher concentrate grade was 12.1% Cu (99.4% recovery) using 3418A and PAX as rougher reagents and 18.0% Cu (98.4% second stage increased the grade to 27-28% Cu (96-97% recoveries).
- Locked cycle tests were completed on a series of 10 (1,760 g) samples split from the 58 kg composite sample. The results of the testing showed that the batch floatation tests achieved the best performance (27% Cu concentration with 97% recovery) as compared to the locked cycle tests (25% Cu concentration with 100% recovery). The increased residential time in the locked cycle tests resulted in higher recoveries but a lower concentrate grade due to dilution (floating) of low-grade intermediate products.

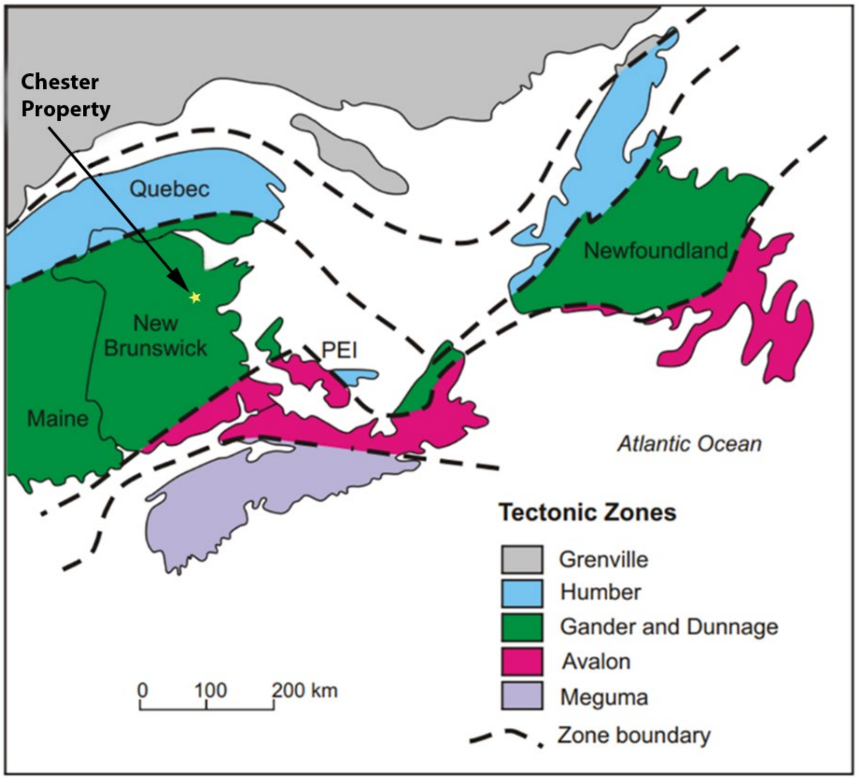
7 Geological Setting and Mineralization

7.1 Northern Appalachian Orogen: Geological Framework

The Chester 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 Humber, Gander–Dunnage, Avalon, and Meguma tectonic zones (Figure 7.1).

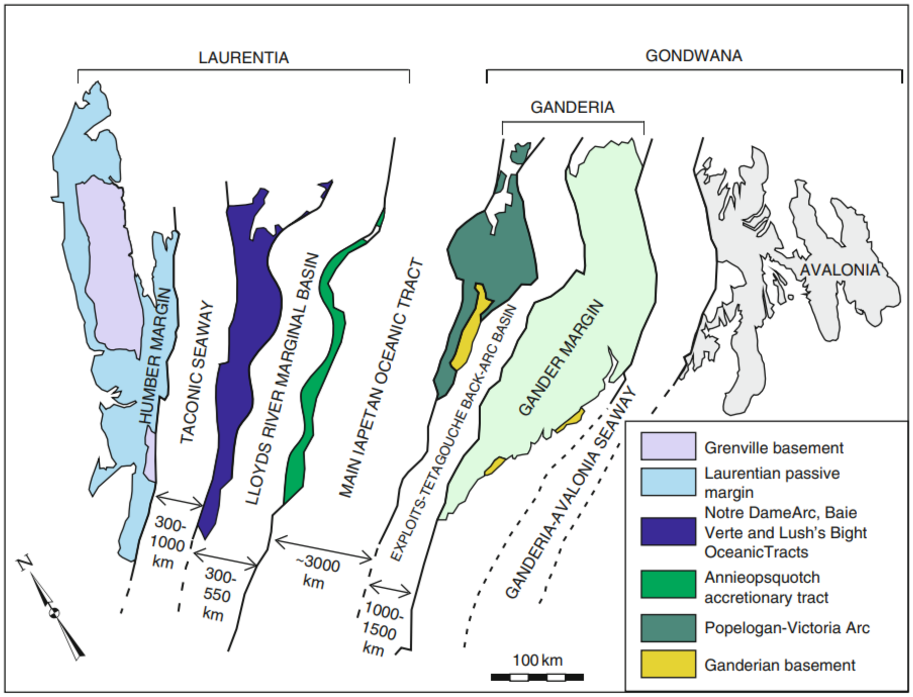
The Humber Zone represents the remnants of a passive margin built upon the leading edge of Laurentia during the Cambrian and Early-Middle Ordovician, whereas the Gander, Avalon and Meguma zones represent micro-continental slivers derived from Gondwana (Figure 7.2). The Dunnage zone preserves the remnants 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.

Figure 7.1 Tectonic zones of Atlantic Canada.



Source: Zagorevski and van Staal (2011) after Williams (1995a), and Barr and White (1996).

Figure 7.2 Expanded tectono-stratigraphic subdivisions of the northern Appalachians.

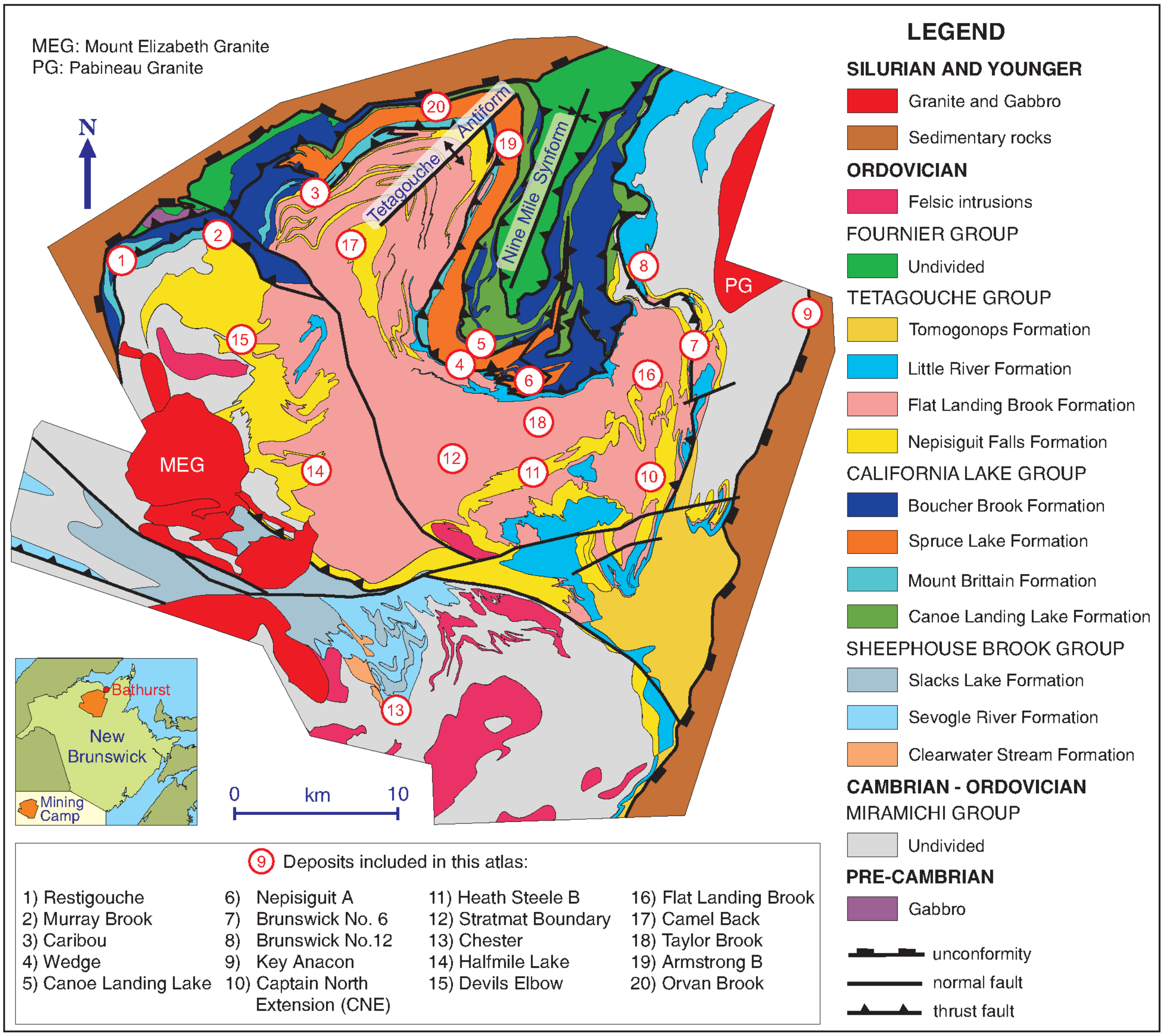


Source: Zagorevski and van Staal (2011) after Williams (1995b).

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).

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 Chester Property lies within the Sheephouse Brook block south of the Moose Lake-Tomogonops fault system (Figure 7.3).

Figure 7.3 Geological map showing the location of the Chester Property within the Sheephouse Brook Block.



Source: Thomas et al., 2000

7.2 Regional Geology

The regional geology of the area is summarized from Thomas et al. (2000).

The Bathurst Mining Camp (BMC) stratigraphy comprises an Ordovician sequence of felsic and mafic volcanic rocks and sedimentary rocks (Figure 7.4). The volcanic rocks were erupted onto an older sequence of Cambrian-Ordovician clastic sedimentary rocks (Miramichi Group) on the Gondwanan continental margin. Sedimentary rocks are intercalated with the volcanic rocks, and there is a distinctive post-volcanic sedimentary succession (Tomogonops Formation). The Moose Lake-Tomogonops fault system is a major high-strain zone, trending east-west, that divides the Bathurst mining camp into northern and southern structural and stratigraphic domains (Wilson and Fyffe, 1996). The Chester deposit is located in the southern domain. The tectonostratigraphic framework of the Bathurst Mining Camp is illustrated in Figure 7.5.

The Cambrian-Ordovician Miramichi Group is divided into 3 formations: Chain of Rocks, Knights Brook, and Patrick Brook; and comprises a thick sequence of quartz wacke and shale of unknown thickness. These rocks have been interpreted as a flysch apron on the Avalon continental margin (Rast and Stringer, 1974; van Staal and Fyffe, 1991).

The Miramichi Group is conformably to disconformably overlain by the Tetagouche Group which is divided into four formations: Nepisiguit Falls, Flat Landing Brook, Little River and Tomogonops. The Tetagouche Group hosts most of the Bathurst Mining Camp base metal massive sulphide deposits. The Nepisiguit Falls Formation consists of massive, quartz-feldspar porphyritic (2-15 mm) tuff lava, and medium- to coarse-grained, granular, quartz-feldspar-rich volcaniclastic rocks with minor intercalated ash tuff. The Flat Landing Brook Formation consists of feldspar-phyric (+/- quartz) rhyolite flows, hyaloclastic, pyroclastic rocks and minor sedimentary rocks, including some iron formation. The Little River Formation conformably overlies the Flat Landing Brook Formation and comprises mafic volcanic and associated sedimentary rocks. The Tomogonops Formation consists of light grey, thinly bedded, commonly calcareous siltstone (+/- limestone) and fine-grained sandstone.

South of the Moose Lake-Tomogonops fault system the Miramichi Group sedimentary rocks are overlain by volcanic and associated sedimentary rocks of the Sheephouse Brook Group. Ordovician and Devonian felsic intrusives are common in this area. The Moose Lake - Tomogonops Fault and the Mountain Brook Fault separate the Sheephouse Brook Group from the Tetagouche Group to the north. According to Wilson et al., (1999), the petrographic and geochemical diversity of the Tetagouche and Sheephouse Brook groups suggests that the formations were emplaced in separate basins and derived from separate magma sources. The Sheephouse Brook Group consists of the Clearwater Stream, Sevogle River, and Slacks Lake formations in ascending stratigraphic order.

The Clearwater Stream Formation consists of medium to dark green, strongly foliated plagioclase-phyric volcanic rocks of dominantly dacitic composition that overlie the Patrick Brook Formation (Miramichi Group). Muscovite and biotite (partially altered to chlorite) define the schistosity, and porphyroblasts of carbonate are characteristic of the unit. Primary volcanic structures and textures have generally been destroyed by structural and metamorphic overprinting (i.e. up to biotite grade), however the high abundance of plagioclase crystals and crystal fragments (10 to 45%), and local rare bedding indicate pyroclastic emplacement (Wilson and Fyffe, 1996). In the past, the contact of the Clearwater Stream Formation with the underlying Patrick Brook Formation had been interpreted as highly strained or as a thrust fault (MacNaughton Pool; Wilson and Fyffe, 1996). As well, local subordinate rhyolites were also noted to be present in the Clearwater Stream Formation.

The Clearwater Stream Formation is overlain by the Sevogle River Formation, which consists of light greenish grey to greyish pink, massive to well-foliated, potassium-feldspar-phyric rhyolite (Wilson and Fyffe, 1996). Feldspar phenocrysts range from 0.2 to 2.0 mm and may constitute up to 15% of the rock. Local intercalated sedimentary rocks occur within the Sevogle River Formation, including dark grey siltstones and shales, minor carbonaceous shale and rare lenses of crystalline limestone. The Sevogle River Formation is conformably overlain by the Slacks Lake Formation, which consists of basalt with interbedded sedimentary rocks and minor rhyolite. Sedimentary rocks include dark grey, locally graphitic, shale, and red and green chert. Chemical similarities between felsic volcanic rocks and felsic intrusive rocks in the Chester area suggests that rocks of the Clearwater Stream and Sevogle River formations may be the volcanic counterparts of the Squirrel Falls Porphyry and the Clearwater Lake Porphyry, respectively.

7.2.1 Regional Structure

The structural geometry of the Bathurst Camp reflects an interference pattern produced by polyphase deformation. Four, locally five, phases of deformation (Van Staal, 1985) are recognised:

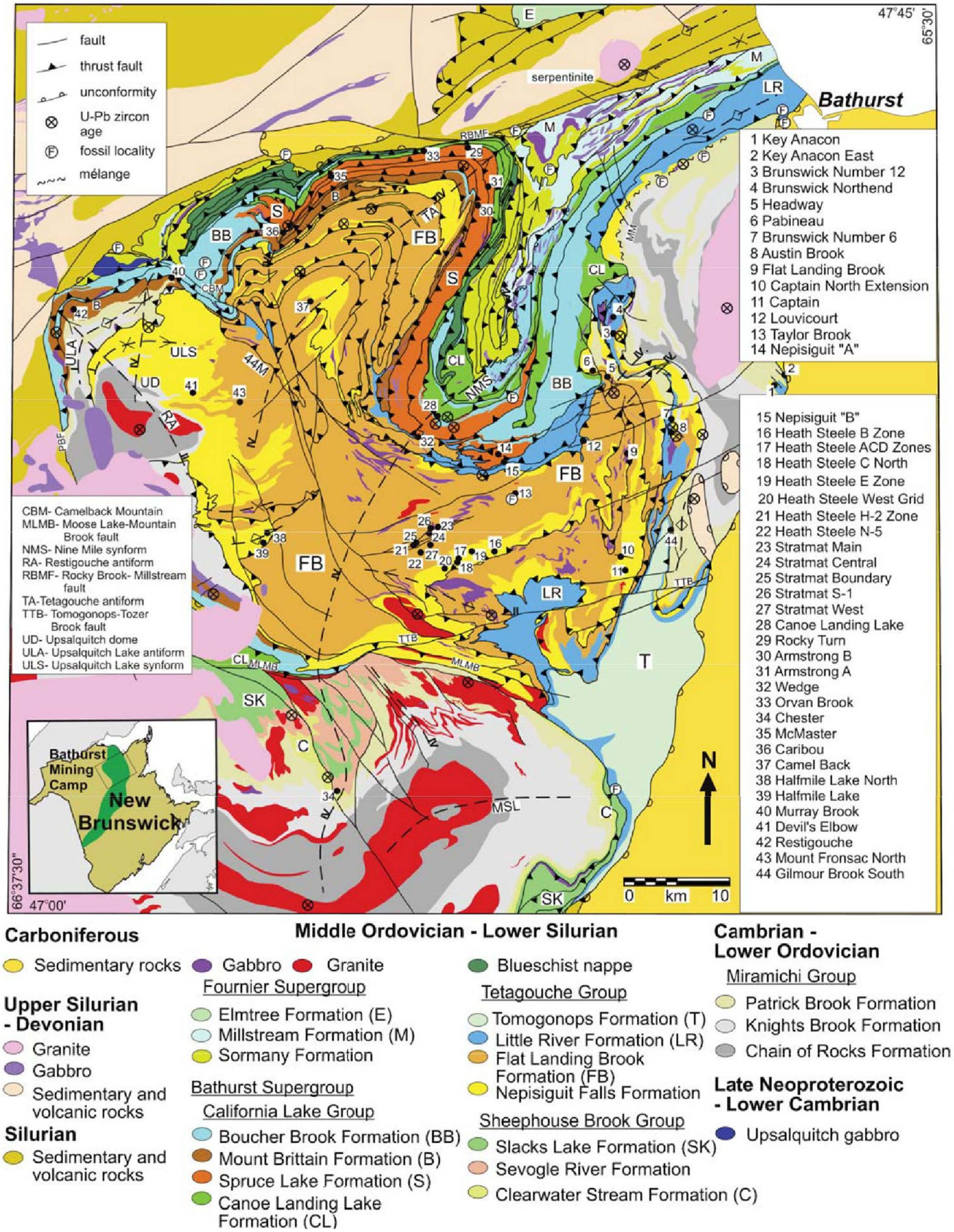
1. D1 - Late Ordovician-Early Silurian D1 deformation thrusting and layer-parallel shear resulting in major thrust faults, narrow ductile high strain zones, and steeply inclined to recumbent, non-cylindrical folds.

2. D2 - Early Silurian horizontal crustal shortening producing tight to isoclinal folds with generally shallow plunge, and out-of-sequence thrusts, which are commonly marked by zones of tectonic melange. Interference between D1 and D2 folds are responsible for large-scale dome and basin style folds in the region.

3. D3 - Late Silurian extensional collapse resulting in the refolding of D1 and D2 structures by recumbent folds.

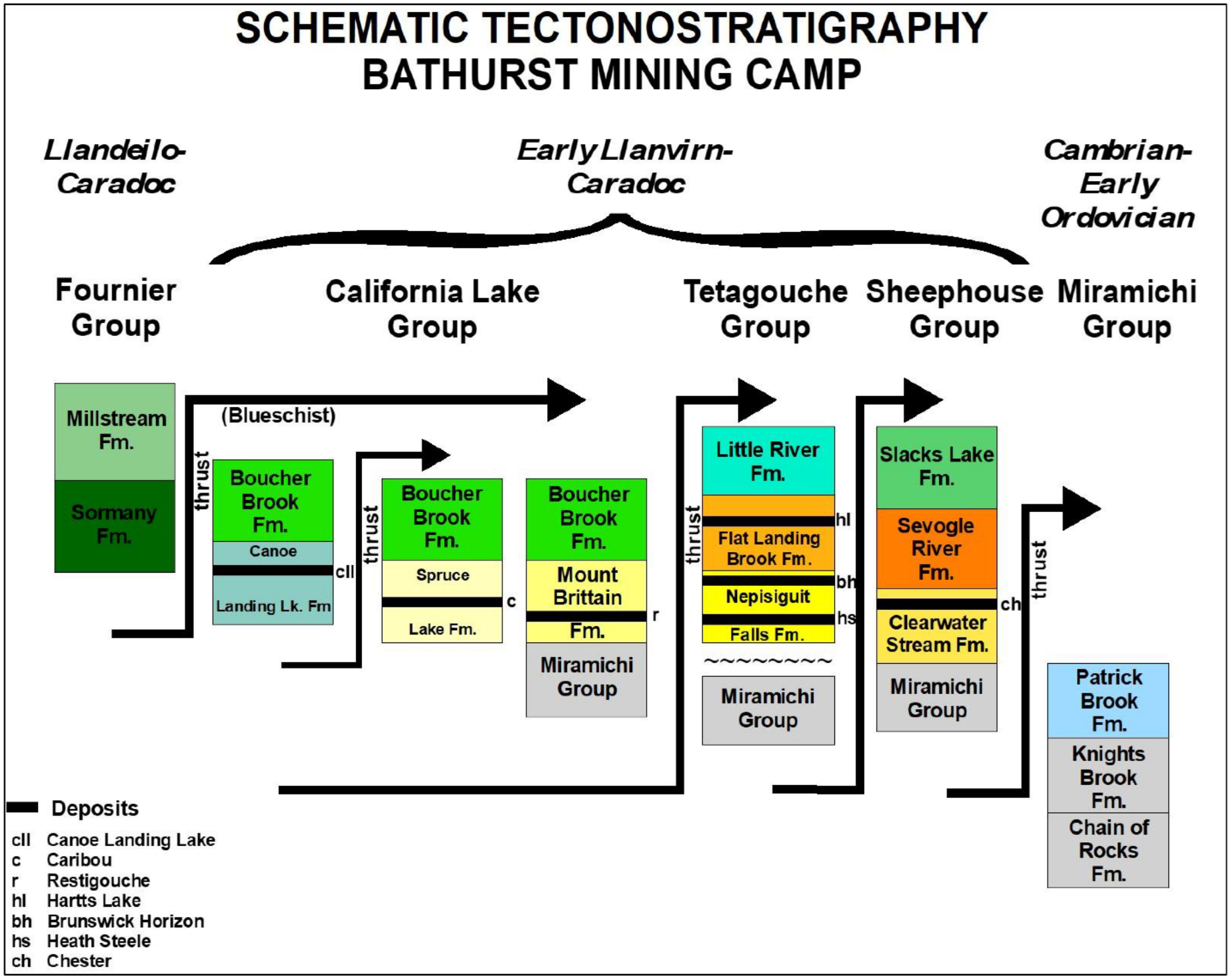
4. F4 and F5 - Middle Devonian dextral transpression producing F4 and F5 folds and faults. F4 and F5 folds range in scale from millimetres to kilometres and commonly have or produce kink-band geometry.

Figure 7.4 Bathurst Mining Camp Geology.



Source: McCutcheon and Walker, 2020

Figure 7.5 Schematic tectonostratigraphy of the Bathurst Mining Camp.



Source: Hupé and Gagné, 2020

7.3 Property Geology

The following text on the Property geology and mineralization of the Chester Property has been largely sourced from reports written on the Property area by Sim (2014) and Hupé and Gagné (2020).

The Chester Property is located south of the east-west trending Moose Lake - Tomogonops fault system. The southern part of the Chester Property is underlain by the Miramichi Group while the northern and central parts of the Property are underlain by the Sheephouse Brook Group of the Bathurst Super group (Figure 7.6). All rock types display mineralogy that is consistent with greenschist facies metamorphism.

7.3.1 The Miramichi Group

The Miramichi Group consists of the Knights Brook and Patrick Brook formations. The Knights Brook Formation comprises moderately to strongly foliated, interbedded dark grey shale and greyish sandstone. This formation conformably underlies the Patrick Brook Formation.

Within the Patrick Brook Formation, felsic volcanic rocks similar to those of the overlying Clearwater Stream and Sevogle River Formations have been observed on the west side of Clearwater Stream; these rocks have been referred to as 'volcanic outliers'. West of the Clearwater stream, the contact between the Patrick Brook Formation and the overlying rocks of the Clearwater Stream Formation appears to be conformable. This is also the contact between the Miramichi Group and overlying Sheephouse Brook Group.

7.3.2 The Sheephouse Brook Group

The Sheephouse Brook Group consists of the Clearwater Stream, Sevogle River, and Slacks Lake formations in ascending stratigraphic order.

The Clearwater Stream Formation consists of moderately to strongly foliated, dark grey-green, plagioclase-phyric dacitic tufts. Samples contain ~10% subhedral to euhedral plagioclase phenocrysts. These phenocrysts often show sigma-type phenocryst geometry that is consistent with sinistral shear. The plagioclase phenocrysts are set in a fine-grained recrystallized matrix of quartz, muscovite/sericite, plagioclase and chlorite with minor traces of biotite, accessory zircon and opaque minerals. The penetrative foliation is defined by the muscovite and chlorite. The Clearwater Stream Formation conformably underlies the Sevogle River Formation (Wilson and Kamo, 2007).

The Sevogle River Formation consists of weakly to moderately foliated, light grey to grey-pink rhyolites. Samples contain alkali and plagioclase feldspar phenocrysts (0-5%) showing evidence for sinistral rotation, within a fine-grained recrystallized matrix of 60-80% quartz, 5-40% muscovite/sericite (typically 15-30%), 0-5% biotite, minor chlorite and accessory zircon, and opaque minerals. The Sevogle River Formation conformably underlies the Slacks Lake Formation.

The Slacks Lake Formation consists of moderately to strongly foliated dark green, metamorphosed mafic volcanic rocks.

Historically, substantial differences in ages were reported for the Sevogle River (466 ± 2 Ma) and Clearwater Stream (478 +3/-1 Ma) formations. This was interpreted to suggest that a depositional hiatus or tectonic break existed between the formations (Wilson et al., 1999). However, age dating completed by FNR on core samples from the Clearwater Stream Formation yielded an age of 469 +/- 0.3 Ma for each sample. Subsequently, the GSC dated another sample from their type section for Clearwater Stream and that sample confirmed the results of FNR of 469+/- 0.3 Ma. These age dates indicate that the Clearwater Stream Formation is the same age as the Nepisiguit Falls Formation and therefore the same age as the stratigraphic unit that hosts the majority of the massive sulphide deposits in the Bathurst Mining Camp. This places the Chester VMS deposit in the same time frame as the biggest VMS deposits in the camp. Age dating indicates that the Sevogle River Formation is coeval with the Flat Landing Brook Formation (465 +2/-1 Ma) of the Tetagouche Group (Sim, 2014).

7.3.3 Pleistocene Geology

Northern New Brunswick was completely covered by ice during the last glacial maximum (75 ka to 10 ka) and most of its glacial deposits were formed during this glacial period. (Wilson et al., 2005). Parts of the Northern Miramichi Highlands were probably glaciated prior to the Late Wisconsinan, between 22 ka and 10 ka (Rampton et al., 1984) and remained ice-free during the Late Wisconsinan.

The oldest ice flows identified in the area were Early- to Mid-Wisconsinan in age. They are associated with the Laurentide ice sheet flowing eastward and southeastward into New Brunswick (Rampton et al., 1984; Wilson et al., 2005). Late Wisconsinan glacial flows are divided into six phases. The Jacquet Plateau and ice flow was east directed from the Escuminae to Banalor phase under the influence of the Northern Maine–Notre Dame ice divide. During the Millville / Dungarvon phase, as the ice retreated towards the west, meltwaters in western New Brunswick formed a glacial lake that drained into Lake Nictau near Mount Carleton south of the property (Wilson et al., 2005; Rampton et al., 1984). Ice continued to retreat towards the west and northwest and the Northern Maine–Notre Dame ice complex started to disintegrate into small, shrinking but active ice caps, these ice caps radiated from the St Quentin ice centre and began to disintegrate during the Plaster Rock–Chaleur phase (Rampton et al., 1984). Ice retreated continuously and northern New Brunswick became eventually ice-free at approximately 12.1ka

Evidence of glaciation including kames, eskers, glacial striae and glacial erratic’s has been reported in the area (Petruk, 1959). Stratified sands and gravels are present but generally not thick enough to produce visible topographic features. The most prominent feature is a hill of stratified gravel just west of the Main Zone of the Chester Deposit but on the west side of Clearwater Stream. More recent mapping in the area has not reported much on the glaciation of the area, other than Black Bull Resources who reported problems with the gravity survey data due to terrain effects caused by local eskers.

7.3.4 Structural Setting

The regional structure of the Property is interpreted as a large scale, overturned, recumbent syncline (Wilson and Fyffe, 1996; Irrinki, 1986). Multiple drill holes from the Property showed repeated stratigraphy down hole and no obvious faulting which is consistent with an overturned recumbent syncline model (Figures 7.6 and 7.7). This interpretation is supported by the map pattern west of Clearwater Stream, where a syncline cored by the Slacks Lake Formation is observed northwest of the Chester deposit. During 2014 to 2017, this interpretation of the regional structure was questioned by First Narrows Resources and E. Brooks from Explor Resources. Drill holes from the Sevogle River and

Figure 7.6 Chester Property Geology

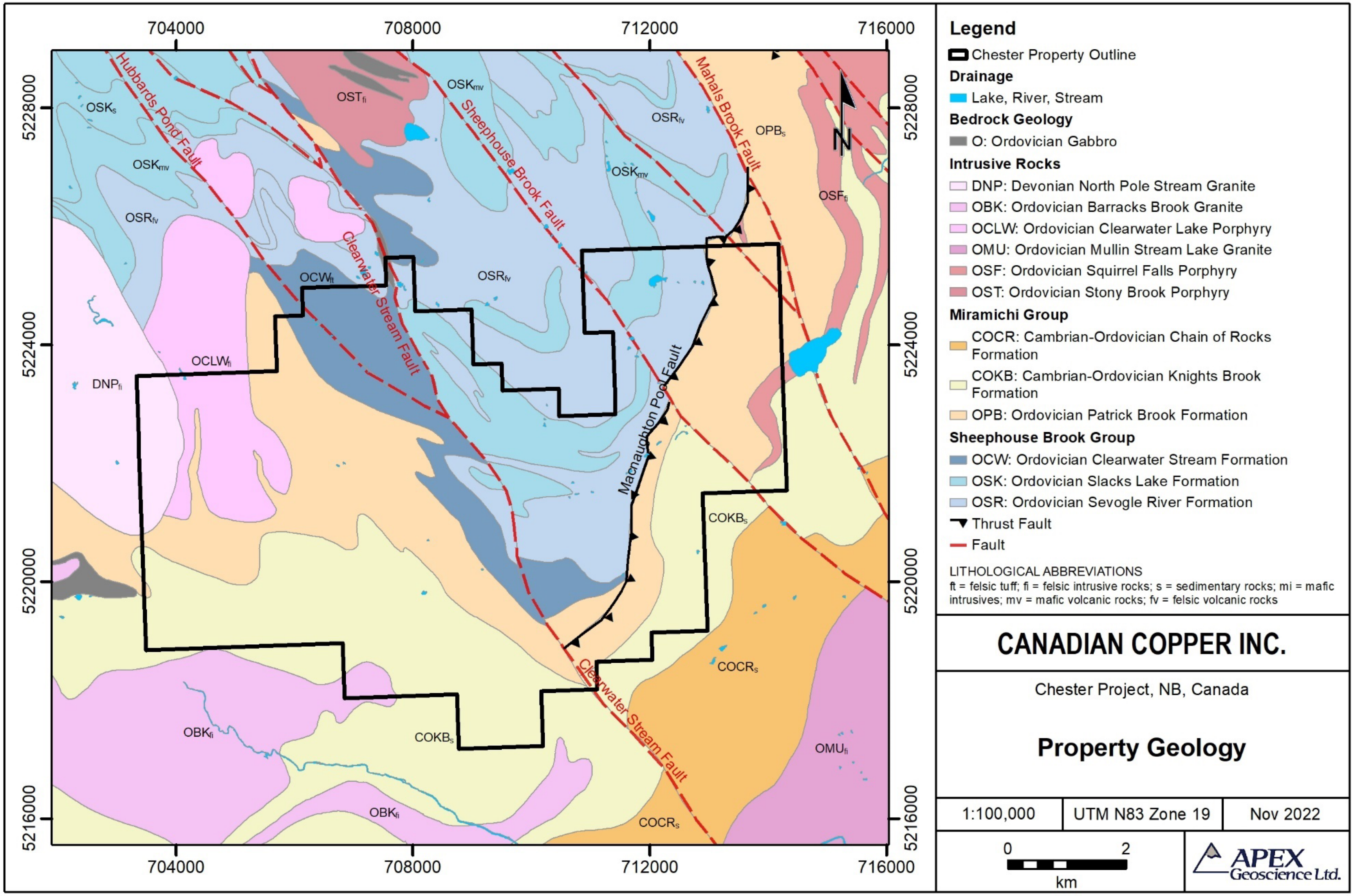
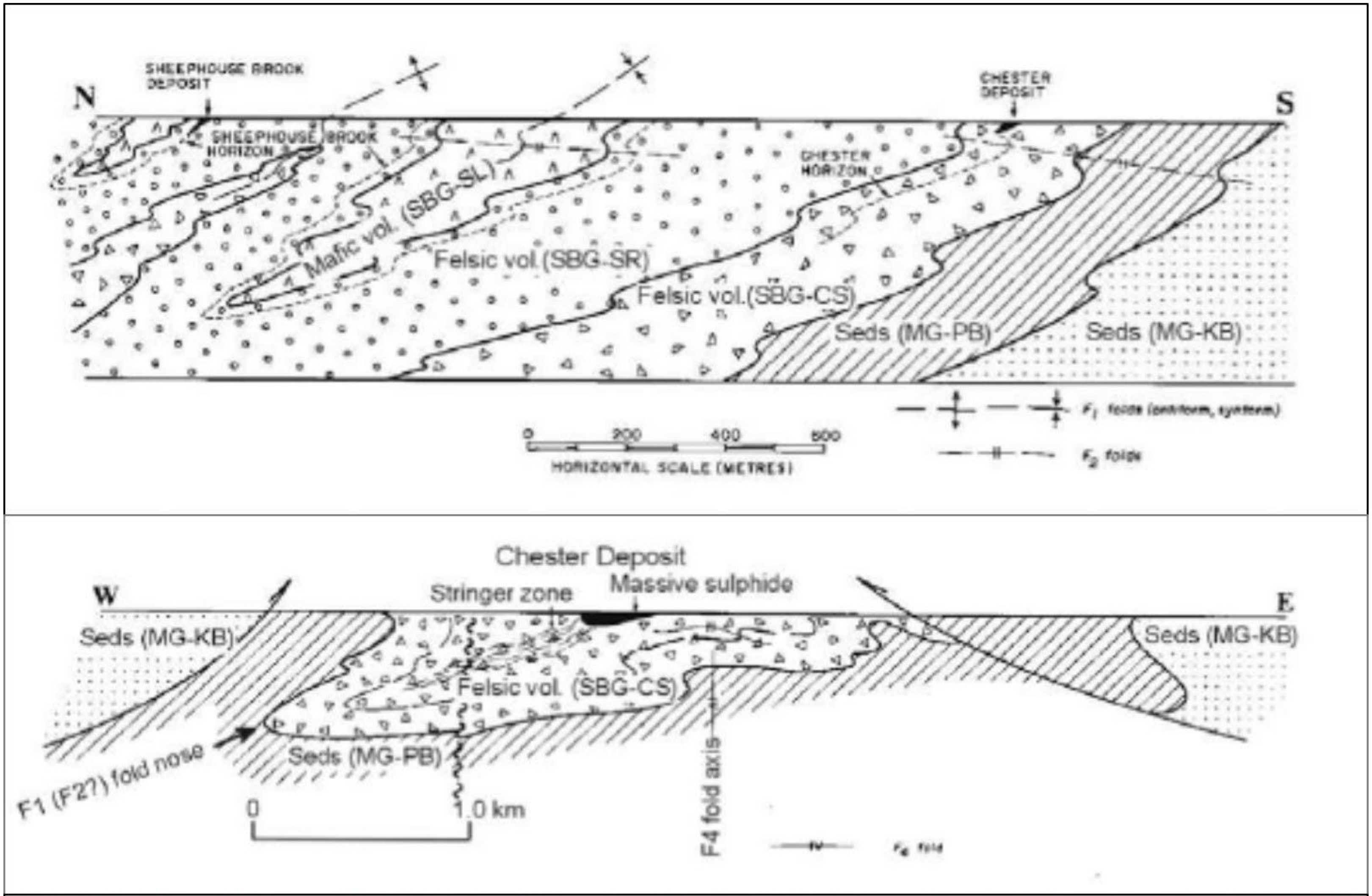


Figure 7.7 Interpreted Cross Section of the Chester Property.



Note: MG = Miramichi Group; KB = Knights Brook Formation; PB = Patrick Brook Formation; SBG = Sheephouse Brook Group; CS = Clearwater Stream Formation; SR = Sevogle River Formation; SL = Slacks Lake Formation. (After Wilson & Fyffe, 1996)

Source: Wilson and Fyffe, 1996

Clearwater Stream produced lithological descriptions of the felsic rock that led to diverging interpretations. It was suggested that the Chester Property may not be a recumbent fold structure. The presence of potentially mineralized Clearwater Stream formation rocks, located above the Patrick Brooks sediments in the western part of the property has alternatively been interpreted to be the result of thrust faulting. Notwithstanding, rocks interpreted to be part of the Clearwater Formation have been intersected in several deep drill holes (Hupé and Gagné, 2020).

7.4 Mineralization

The mineralization at the Chester Deposit is interpreted to be feeder or stringer-zone sulphide mineralization that is associated with a volcanogenic massive sulphide (VMS) deposit. Three mineralized zones have been delineated at the Chester Deposit: Stringer Zone (West Zone), Central Zone and East Zone (Figure 6.4; Sim, 2014).

The Stringer Zone (West Zone) is the most extensive and has been traced through drilling over an area measuring almost 300 m by 1000 m. Vein and disseminated chalcopyrite-pyrrhotite-pyrite mineralization is concentrated in at least three sub-parallel zones that dip 15-20° to the west. The individual zones range from less than 1 m thick to greater than 20 m thick and are separated by 10 m to 15 m of patchy mineralized chlorite-altered rhyolite. The zone is characterized by 5% to 10% stringer and disseminated sulphides, in order of relative abundance: chalcopyrite, pyrrhotite, pyrite, with minor amounts of galena and sphalerite occurring in a host rock of quartz chlorite schist.

The Central Zone is exposed at the surface and overlain by 1 m to 15 m of gossan and overburden. It is 130 m wide and 200 m long with disseminated mineralization covering an area of up to 350 m. The Central Zone consists of 4 m to 13 m thick, massive sulphide (mostly pyrite) and disseminated sulphide mineralization that plunges gently to the west. Pyrite, pyrrhotite, sphalerite, chalcopyrite, and galena are the major minerals in the massive sulphide zones (Irrinki, 1986). The zonation in the massive sulphide lenses are denoted with Cu-rich, lead/zinc-rich, lead/zinc/Cu-rich zones, and pyrite or pyrrhotite zones with minor base metal mineralization.

The East Zone is mostly flat lying and measures 60 m wide and 300 m long. The disseminated mineralization of this zone covers an area approximating 220 m wide and 450 m long. The massive sulphide zone is exposed at the surface and is overlain by up to 7.5 m of gossan and glacial sediments. The East Zone consists of 3 m to 15 m thick, intermixed and disseminated sulphides (mostly pyrite).

The 2021 drilling has confirmed the lateral and depth extent of the mineralization in all three zones. Oxidation and gossanous material was noted during the 2021 core logging program but it is considered minimal for near surface mineralization and is not pervasive throughout the deposit. Massive and semi massive sulphides were commonly observed at very shallow depths including just below casing and/or overburden.

8 Deposit Types

The Chester Deposit is a mafic-type Cu-Zn VMS deposit with associated feeder or stringer-zone sulphide mineralization. Volcanogenic massive sulphide 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 wall rock.

- 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.

Feeder zones associated with VMS deposits are characterized by intense alteration and disseminated and stringer sulphide mineralization. The Cu Stringer Zone of the Chester Deposit is considered to be a feeder zone associated with the volcanogenic massive sulphide lenses of the Chester Deposit. This is supported by the occurrence of talc, sericite, silicification, intense chlorite alteration, and disseminated and stringer chalcopyrite, pyrrhotite (+/- pyrite) in the Cu Stringer Zone (Sim, 2014).

9 Exploration

The Company and Puma completed a drill program on the Chester Property in 2021, which is described in Section 10.

10 Drilling

Historical drilling has been completed on the Chester Property from 1955 to 2016 by several operators (Table 10.1). The drill programs are discussed in detail in Section 6 and summarized below in 10.1. During 2021, the Company and its predecessor operator

Puma Exploration Inc. ("Puma") completed 33 holes on Claim Blocks 1571 and 6003 for a total of 3,324 meters at the Chester Property. The drilling was carried out by Logan Drilling Limited based in Nova Scotia and supervised by a geological consultant Geominex Inc. based at Rimouski, Quebec. Phase 1 drilling was completed between February 8th to March 30th, 2021, and Phase 2 drilling was completed between November and December 2021. The Phase 1 program consisted of seven (7) NQ-sized core drill holes totalling 1,785 m and is described in Section 10.2. The Phase 2 program consisted of 26 holes totaling 2,139 metres and is described in 10.3.

Total drilling on the Chester property comprises 838 holes. A total of 712 drill holes that contain useable downhole data are included in the Chester drill hole database. A total of 664 drillholes that intersected the estimation domains were used in the 2022 MRE calculation as described in Section 14. For the purposes of the MRE the historical drilling is considered in 4 vintages: pre-FNR drilling, FNR drilling, Explor drilling and Puma-Canadian Copper drilling (Table 10.1).

Table 10.1: Historical drill hole summary.

Year(s)	Total number of holes	Number of holes included in MRE	Company
1955-1999	585	450	Various
2003-2007	198	182	FNR
2013-2016	22	4	Explor
2021	33	28	Puma/Canadian Copper
Totals	**838**	**664**	

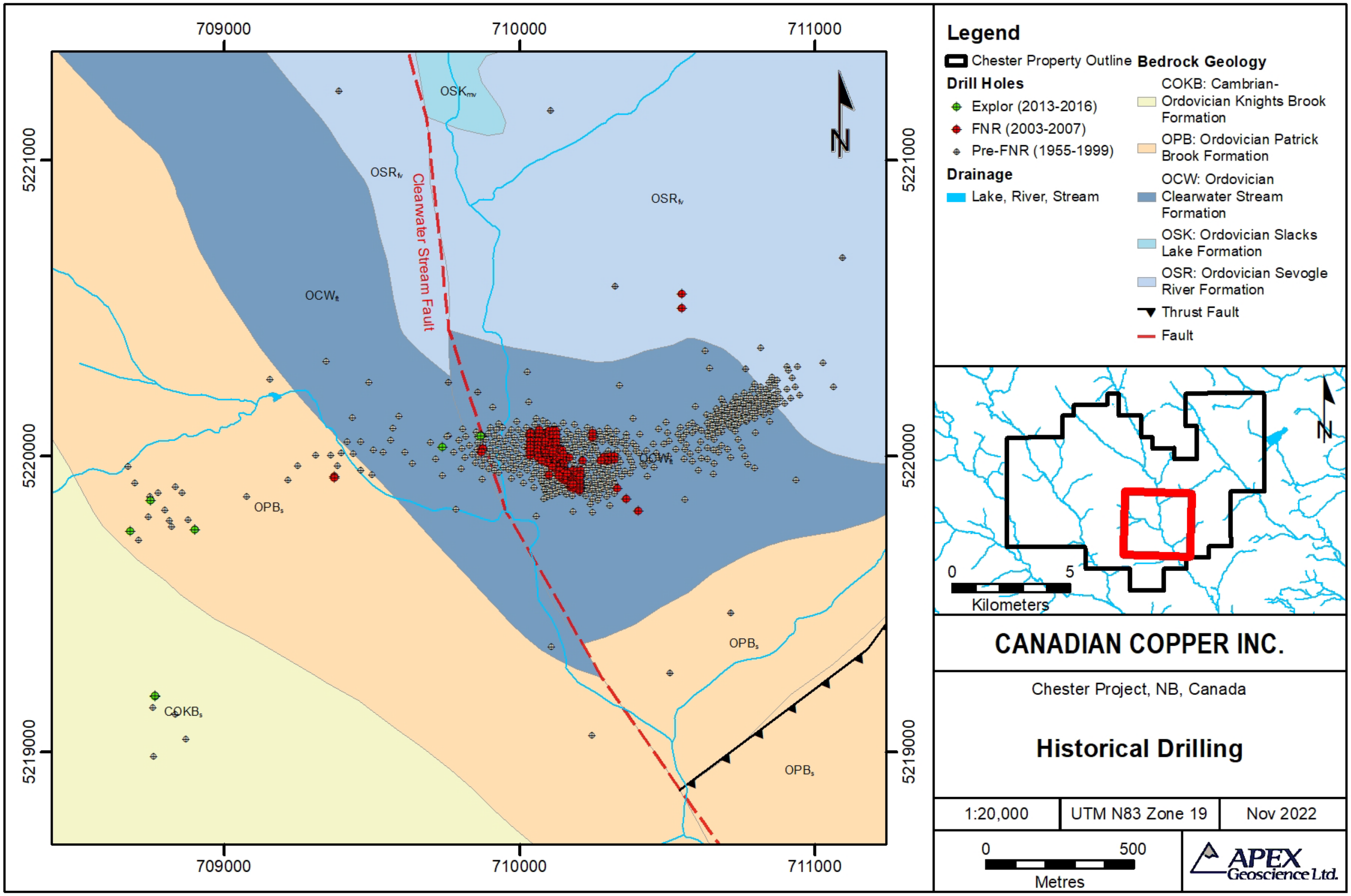
10.1 Historical Drilling Summary

Historical drilling has been completed on the Chester Property from 1955 to 2016 by several operators (Figure 10.1). The drill programs are discussed in detail in Section 6 and summarized below.

10.1.1 Pre-FNR drilling – 1955 to 1999

Most of the drilling on the Property (i.e., > 500 holes) was completed prior to 1999. Core sizes for the historical drilling are variable, in the 1950's and 1960's, drilling included AXT core. Subsequently BQ and NQ drill core sizes were used. The historical drill logs do not record the core size that was drilled. The core from the pre-FNR drilling was dumped after the site was abandoned in 1977. The majority of the core for the 1977 and older drill holes was found by Brooks in November 2002 located in a pile beside the creek (709950E, 5220100N) which is the reported location of Kennco and Sullivan Mining Group's field campsite. Most of the assay results from the pre-FNR drilling were documented in historical drill logs. These logs and assay results have been digitized and compiled into a digital drill hole database. The vast majority of pre-FNR drill holes are oriented vertically which result in favourable pierce angles with the shallow-dipping

Figure 10.1 Historical Drill hole locations



mineralized zone. In 2003 FNR put in significant effort to confirm the locations of pre-FNR drill holes using locations of historical landmarks and historical maps. Once the location of the pre-FNR drill holes was finalized a comparison between the pre-FNR drill holes and FNR drill holes found that the geology and assay results showed a good correlation.

It is apparent from the pile of discarded drill core that the core was, at least in part, split for assay. The sample interval for drilling by Sullico (1965-1976) varied from 3 m to 12.5 m and the interval length was, to some extent, adjusted for grade variations. The small diameter of the core (AXT, AQ, and BQ core) from the pre-1977 drilling would have had some impact on the accuracy of the sampling, notably within the disseminated and Stringer zones where, on a small scale, mineral distribution is quite variable. Samples collected from drill holes between 1985 and 2002 were split and any core retained is stored at the New Brunswick Government’s central core storage facility in Madran. Most of these later holes were drilled into the massive sulphide zone.

10.1.2 FNR Drilling – 2003 to 2007

FNR completed FNR drilled a total of 198 core holes on the Property between 2004 and 2007. A total of 179 holes targeted the near-surface Cu Stringer (West) Zone, the remaining 19 holes targeted the Central VMS zone and other targets away from the main deposit. Initial FNR Drilling in 2003 included 13 holes that primarily tested the upper part of the Stringer zone mineralization (the “West” zone) and parts of the VMS zone (referred to at the time as the “Central” zone). The results of the 2003 drilling confirmed the location, thickness and grades present in the pre-FNR drilling data. Overall, the FNR drilling was completed methodically to confirm historical results and further delineate the deposit. FNR drill holes were variably spaced at 6.25 m, locally at 3.25 m, in the upper part of the Stringer zone widening to an average of 12.5 m spacing throughout most of the drilled area and expanding to 25 m spacing at the western extent of the drill program. The vast majority of FNR drill holes are oriented vertically which result in favourable pierce angles with the shallow-dipping mineralized zone.

The FNR diamond drilling was completed by Major Drilling in 2004 and Maritime Diamond Drilling Ltd. Of Truro, Nova Scotia using a Longyear Model 38 drill in 2006 and 2007. All FNR holes were NQ sized. All FNR drill core was originally stored indoors in a clean and well-organized office facility in Bathurst. Initial core logging was done on site at the Chester Property, then transported to FNR’s facility in Bathurst for sampling. Following the insolvency of FNR in 2011, some of the FNR core was moved to the government facility in Madran, (located northwest of Bathurst). Additionally, approximately 40 trays were stored on Mr. Brooks’ property in Bathurst. The remainder of the core was dumped in the Bathurst No. 12 Mine tailings pond (Sim, 2014).

Recoveries, calculated from only a handful of the FNR drill holes which have tabulated recovery data, average 96%. FNR personnel estimate that overall core recovery was in excess of 99% (Sim, 2014).

In 2008 ten (10) drill holes, representing approximately 6% of the database, were randomly selected and manually verified against original sources by Sim and Davis

(2008) on behalf of FNR. Collar locations were verified against original survey reports, sample intervals were verified against sample books and assay results were verified against original assay certificates. No errors identified in the collar locations. Two minor transcription errors were identified in the assay results. The resulting error rate of less than 0.1% was considered excellent. Subsequently, a comparison was conducted between the validated FNR drill results and the pre-FNR drilling results over a restricted "test" area. Sim and Davis (2008) report that the test involved an interpretation of +0.5% Cu in Stringer Zones 2 and 3 derived from each data set and comparisons of de-clustered sample data within each domain. The results showed similar grades in each zone but the pre-FNR drilling generated a higher volume of lower-grade material. The pre-FNR drill holes had an average 25 m spacing through the test area as compared to <12.5 m spacing of the FNR holes. Sim and Davis, (2008) concluded that the results between the two vintages of drilling were sufficiently similar and the pre-FNR drilling could be considered reliable for use in estimating mineral resources.

10.1.3 Explor Resources Drilling

Explor completed drill programs on the Property between 2014 and 2016 comprising 22 drill holes totalling 3,257 m.

In 2014, ten short diamond drill holes totalling 1,103 m were drilled and intersected Cu mineralization associated with disseminated chalcopyrite in a layer of altered felsic volcanics that were interpreted to be of the Clearwater Stream Formation. In 2016, four (4) holes targeted and confirmed the westward continuity of the Cu Stringer Zone under Clearwater stream.

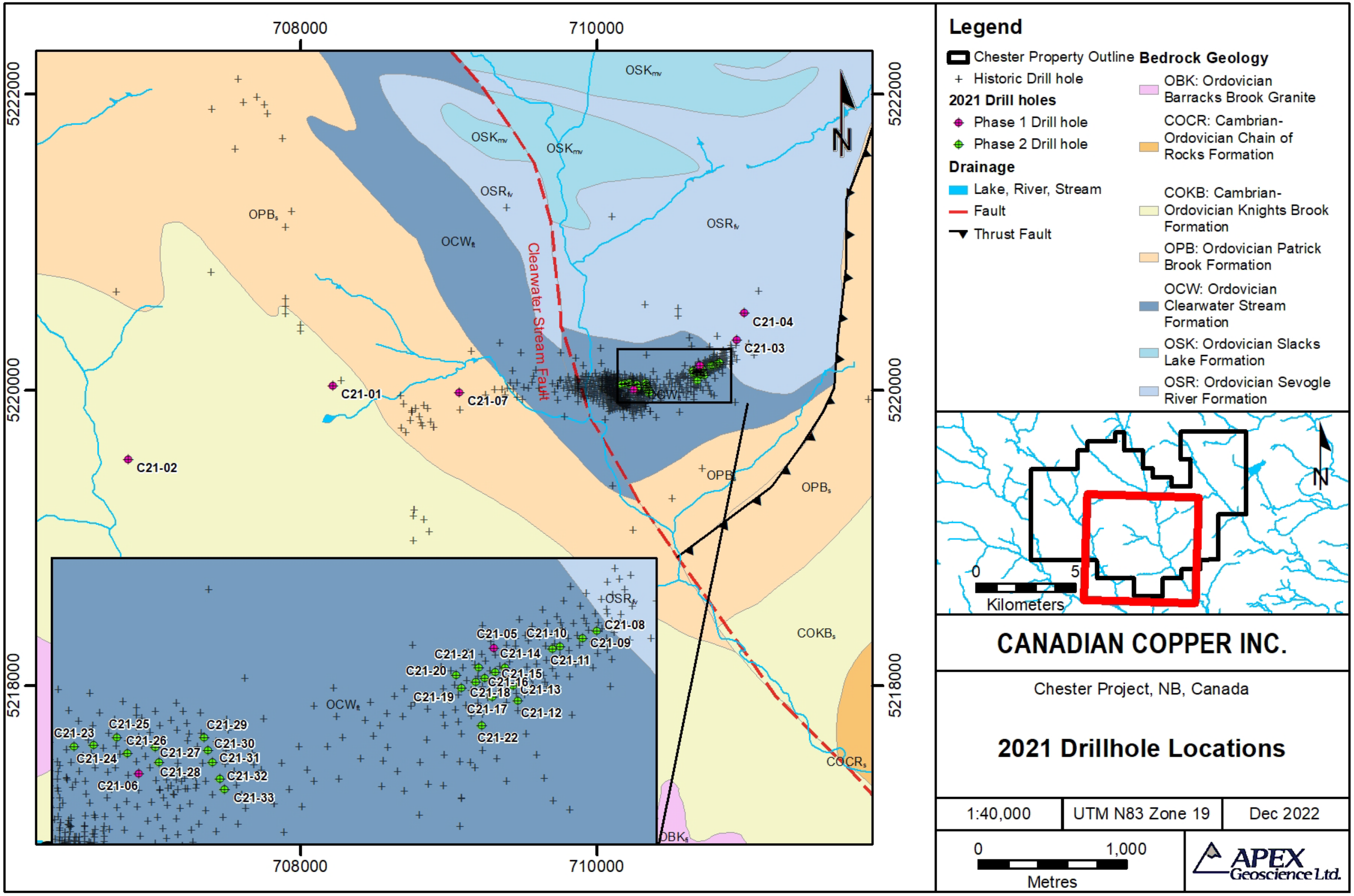
In 2014 Explor used Maritime Diamond Drilling of Truro, NS and in 2016 they used NPLH Drilling Ltd. from Timmins, Ontario, to complete the drilling. No core logging or sampling procedures are described in the Explor Assessment reports. Detailed core logs are however included in the assessment reports. At the time of assessment filing all diamond drill core was stored at the company's location in Salmon Beach near Janeville, NB.

10.2 2021 Phase 1 Drilling Program

During 2021, the Company and the former operator Puma Exploration Inc. ("Puma") completed a 33 drill hole program totalling 3,324 metres at the Chester Property. The drill program was completed in two Phases. Phase 1 was completed between February 8th to March 30th, 2021. The Phase 1 program consisted of seven (7) NQ-sized core drill holes totalling 1,785 m (Figure 10.2; Table 10.2). The majority of the Phase 1 drill holes are outside of the resource area. Geominex Inc., of Rimouski, Quebec (QC) managed the drill program and Logan Drilling Ltd, of Moncton, NB, conducted the drilling. The 2021 Phase 1 drill holes targeted CARDS Artificial Intelligence (AI) anomalies, VTEM EM conductors, gossanous mineralization and the extension of known Cu stringer Zone.

Holes C-21-01 and 02 were drilled southwest of the Clearwater Stream targeting VTEM anomalies and a CARDS anomaly, respectively. Mineralization consisted of disseminated pyrite, pyrrhotite with rare sphalerite and chalcopyrite. The majority of

Figure 10.2 2021 Phase 1 and 2 Drill hole locations.



mineralization occurred in sediments with minor occurrences of mineralization intersected in the felsic tuff of the Clearwater Stream Formation. Significant intersections include: 0.6 m at 775 ppm Cu and 0.8 m at 1,510 ppm Zn and 530 ppm Cu in hole C21-01; and 0.65 m at 8,600 ppm Cu and 2,910 ppm Zn in hole C21-02 (Table 10.3). The occurrence of this mineralization is interpreted to explain the targeted VTEM and CARDS anomalies.

Table 10.2: Summary of the 2021 Phase 1 drill program.

DDH #	Easting	Northing	Azimuth	Dip	Length (m)	Target
C21-01	708220	5220030	360	-90	233	VTEM (L1850) 40 m and 250 m
C21-02	706834	5219531	360	-90	289	Cards T-1 (706834/5219531)
C21-03	710945	5220340	360	-60	257	CN-12 area
C21-04	711000	5220520	360	-45	251	CN-12 area
C21-05	710700	5220165	360	-90	86	Massive sulphides-East
C21-06	710250	5220005	360	-90	137	Massive sulphides-Centre
C21-07	709072	5219982	90	-80	532	Stringer mineralization style
				Total	**1,785**	

Four core holes were drilled east of the Clearwater Stream. Two holes (C21-03 and 04) targeted the area southwest of the historical CN-12 drill hole as well as the 2019 trenched area. Holes C21-03 and 04 intersected mostly rhyolite of the Sevogle River Formation followed by mafic tuff and mafic volcanics of the Slack Lake Formation. Hole C21-04 intersected several intervals of disseminated pyrite-sphalerite and galena returning anomalous zinc, lead and silver over significant intervals. Highlights include 31.4 m from 43 m to 74.4 m averaging 0.63 ppm Ag, 1,313 ppm Pb and 1,720 ppm Zn in hole C21-04 (Table 10.3).

Two holes (C21-05 and C21-06) targeted the gossan and massive sulphide mineralization. Holes C21-05 and C21-06 were drilled to test for anomalous gold in the gossan. Beneath the overburden from 5.5 m to 9.45 m, hole C21-05 intersected gold values ranging from 0.139 g/t up to 0.193 g/t Au, averaging 0.17 g/t gold over 3.95 m (Table 10.3). Hole C21-06 intersected gold values ranging from 0.013 g/t up to 0.955 g/t Au from 4 to 7.6 m. Massive to semi-massive sulphide mineralization returned expected high-grade values in Ag-Cu-Pb-Zn (Table 10.3).

C21-07 tested the continuity of the Stringer Zone in an area southwest of the Clearwater Stream and well west of the resource area that had not been tested previously. The stringer zone was intersected between 344 m to 431 m hosted in chloritized Clearwater Stream felsic volcaniclastics. Mineralization consisted of disseminated to semi-massive pyrite, pyrrhotite, chalcopyrite and minorly sphalerite. Highlights from two thicker intervals include: 7.25 m from 356.75 m to 364 m with an average grade of 0.46% Cu and 12.5 m from 383.5 m to 396 m with an average grade of 0.38% Cu including 2.65 m with an average grade of 1.31% Cu (Table 10.3) including a single sample with an assay of 3.55% Cu over 0.75 core length.

Table 10.3: Assay highlights from the 2021 Phase 1 drill program.

DDH #	From (m)	To (m)	Length (m)	Cu (ppm)	Zn (ppm)	Pb (ppm)	Ag (ppm)	Au (ppm)
C21-01	25.5	26.1	0.6	775	118	31	0.33	0.026
C21-01	37.8	38.6	0.8	530	1510	34	0.13	
C21-02	60.6	61	0.4	720	898	11	0.51	
C21-02	124.6	125.25	0.65	**8,600**	**2,910**	653	**11.75**	
C21-03	180.5	181.25	0.75	53	**6,390**	338	0.54	
C21-04	43	74.4	31.4	86	**1,720**	**1,313**	0.63	
incl.	60	74.4	14.4	115	**1,956**	**1,578**	0.83	
C21-04	145	147	2	257	**6,490**	**3,594**	2.60	
C21-04	154	164	10	103	**2,351**	370	0.34	
C21-05	5.5	9.45	3.95	936	356	**3,044**	7.56	0.17
C21-05	9.45	28	18.55	**9,500**	**11,300**	**2,501**	4.54	0.06
incl.	15.5	20.75	5.25	**11,600**	**16,600**	**2,440**	4.99	0.05
C21-06	4	8	4	**1,718**	422	**1,040**	2.14	0.28
C21-06	12	25	13	**8,357**	**38,000**	**15,176**	**17.79**	0.11
incl.	17	24.5	7.5	**3,525**	**59,000**	**24,092**	**21.71**	0.13
C21-06	25	32.6	7.6	**2,784**	991	229	1.58	0.02
C21-06	57.9	70	12.1	**3,968**	198	23	1.05	0.03
incl.	61	70	9	**4,522**	199	20	0.96	0.03
C21-06	107.4	110	2.6	**7,107**	201	39	2.05	0.07
C21-06	126.6	129.2	2.6	83	**2,037**	**1,294**	0.66	
C21-07	301.3	304.15	2.85	127	**3,133**	686	0.45	
C21-07	323	325.2	2.2	250	**4,527**	2,180	0.95	
C21-07	344.1	347.7	3.6	**2,940**	111	9	0.63	0.013
C21-07	356.75	364	7.25	**4,630**	158	17	0.94	
incl.	360	362.95	2.95	**5,290**	164	22	1.09	
C21-07	371	377.75	6.75	**3,385**	101	4	0.56	
C21-07	383.5	396	12.5	**3,799**	176	9	0.75	
incl.	385.1	387.75	2.65	**13,100**	267	7	2.61	
C21-07	415	422.3	7.3	**1,965**	116	5	0.34	
C21-07	426.3	428	1.7	832	**1,920**	80	0.28	0.006

* Widths as shown are drilled core length, and do not represent true widths, however, the core lengths for the majority of the 2021 holes are in the range of 70 to 90% of true width.

10.3 2021 Phase 2 Drilling Program

Phase 2 drilling on the Chester Property was completed from November to December, 2021. The Phase 2 program consisted of 26 holes totaling 2,139 m (Table 10.4). Geominex Inc., of Rimouski, QC managed the drill program and Logan Drilling Ltd. of Moncton, NB, conducted the drilling. All 26 holes of the Phase 2 drill program intersected near-surface massive sulphide mineralization validating the historical resource and geological model from the Central, East and West (Cu Stringer) Zones. Additionally, the holes outlined additional resources in gaps between the Central and East Zones and intersected continuous silver and gold mineralization in the Central and East Zones.

Assay highlights from the Phase 2 drill program are presented in Table 10.4 and include: a 25.7 m intersection returning an average grade of 0.69% Cu in hole C21-14 which includes 11.25 m of a continuous mineralized envelope with 1.44% Cu, a 13 m intersection returning an average grade of 0.92% Cu in Hole C21-15 including 2.48% over 2 m in a continuous mineralized envelope, 111 m intersection returning an average grade of 0.39% Cu in Hole C21-23 starting 10 m below the surface including 6.16% Cu over 2 m in a continuous mineralized envelope, a 25.25 m intersection returning an average grade of 0.41% Cu in Hole C21-26 including 0.73% Cu, 4% Zn, 0.11 g/t Au, 18.84 g/t Ag over 13 m in a continuous mineralized envelope, a 2 m intersection returning an average grade of 3.82% Cu in Hole C21-28 including 1.16% Cu over 9.85 m.

Table 10.4: Summary of the 2021 Phase 2 drill program.

DDH #	Easting	Northing	Azimuth	Length (m)	Dip	Target
C21-08	710830	5220187	391	41	360	MS Zone
C21-09	710813	5220177	389	41	360	MS Zone
C21-10	710784	5220167	389	44	360	MS Zone
C21-11	710774	5220163	388	62	360	MS Zone
C21-12	710731	5220098	384	44	360	MS Zone
C21-13	710725	5220117	384	53	360	MS Zone
C21-14	710714	5220140	382	50	360	MS Zone
C21-15	710702	5220134	381	47	360	MS Zone
C21-16	710688	5220127	379	41	360	MS Zone
C21-17	710698	5220103	381	41	360	MS Zone
C21-18	710677	5220121	377	101	360	MS Zone
C21-19	710659	5220114	375	44	360	MS Zone
C21-20	710653	5220131	375	80	360	MS Zone
C21-21	710681	5220140	379	68	360	MS Zone
C21-22	710685	5220066	378	50	360	MS Zone
C21-23	710168	5220040	336	134	360	MS Zone
C21-24	710192	5220042	338	116	360	MS Zone
C21-25	710222	5220051	340	107	360	MS Zone
C21-26	710236	5220031	341	136	360	MS Zone
C21-27	710271	5220038	343	137	360	MS Zone
C21-28	710276	5220019	342	152	360	MS Zone
C21-29	710333	5220051	346	98	360	MS Zone
C21-30	710338	5220035	345	101	360	MS Zone
C21-31	710343	5220020	344	101	360	MS Zone
C21-32	710353	5219999	345	128	360	MS Zone
C21-33	710359	5219985	346	122	360	MS Zone
			Total	**2,139**		

Table 10.5: Assay highlights from the 2021 Phase 2 drill program.

DDH #	From (m)	To (m)	Length (m)	Au (ppm)	Ag (ppm)	Cu (%)	Pb (%)	Zn (%)
C21-08	9.6	12.65	3.05	0.14	10	0.35	1	1.6
incl.	9.6	10	0.4	0.22	24.8	0.29	3.05	5.21
C21-14	6.3	32	25.7	0.04	2.06	0.69	0.08	0.25
incl.	9.5	20.75	11.25	0.07	3.28	1.44	0.02	0.21
incl.	15.75	19.75	4	0.13	5.1	2.67	0.02	0.21
C21-15	13	21.8	8.8	0.04	2.06	0.92	-	0.1
incl.	16	18	2	0.12	4.46	2.48	0.01	0.12
C21-23	10	121	111	-	-	0.39	-	-
incl.	12	16	4	0.06	9.15	3.68	-	0.11
incl.	39	53	14	0.04	2.43	0.98	-	-
incl.	49	51	2	0.18	8.79	3.55	-	-
C21-24	33.9	35.6	1.7	0.04	6.15	0.74	3.67	6.24
C21-25	17	35	18	0.07	5	0.05	0.69	1.43
incl.	18	21	3	0.37	17.36	0.19	3	6.12
C21-26	4.2	29.45	25.25	0.11	11.7	0.41	1.05	2.18
incl.	4.2	10.75	6.55	0.18	6.77	0.08	0.35	-
incl.	16.15	29.45	13.3	0.11	18.48	0.73	1.76	4.04
C21-26	61.15	79.4	18.25	0.07	1.39	0.48	-	-
incl.	66.2	67.2	1	0.26	11.6	4.54		
incl.	76.15	76.75	0.6	0.13	5.53	1.77		
C21-27	7	21	14	0.12	13.62	0.16	1.18	2.87
incl.	7.5	11	3.5	0.24	25.44	0.25	2.99	6.55
C21-28	7	17	10	0.25	22.44	0.46	1.57	2.67
incl.	9	15.8	6.8	0.28	29.02	0.62	2.11	3.84
C21-28	46	55.85	9.85	0.06	14.96	1.16	-	0.06
incl.	53	55	2	0.2	46.85	3.82	0.04	0.15
C21-30	18	43	25	0.02	1.73	0.36	-	-
incl.	39	39	0.9	0.19	28	4.03	-	-
C21-31	17	31.65	14.65	0.04	2.88	0.63	-	-
incl.	27	31.65	4.65	0.11	7.18	1.4	-	-
incl.	28.35	30.15	1.8	0.2	11.31	2.23	-	-
C21-32	26	55	29	0.03	3.11	0.53	-	-
incl.	44	51	7	0.08	8.03	1.22	-	-
incl.	49	50	1	0.26	34.5	4.61	-	-

* Widths as shown are drilled core length, and do not represent true widths, however, the core lengths for the majority of the 2021 holes are in the range of 70 to 90% of true width.

Longitudinal cross-sections for the Chester deposit are presented in Figures 10.3 and 10.4 showing the continuity in mineralization as confirmed by the 2021 drill programs.

Figure 10.3 Longitudinal cross-section over the Chester Deposit

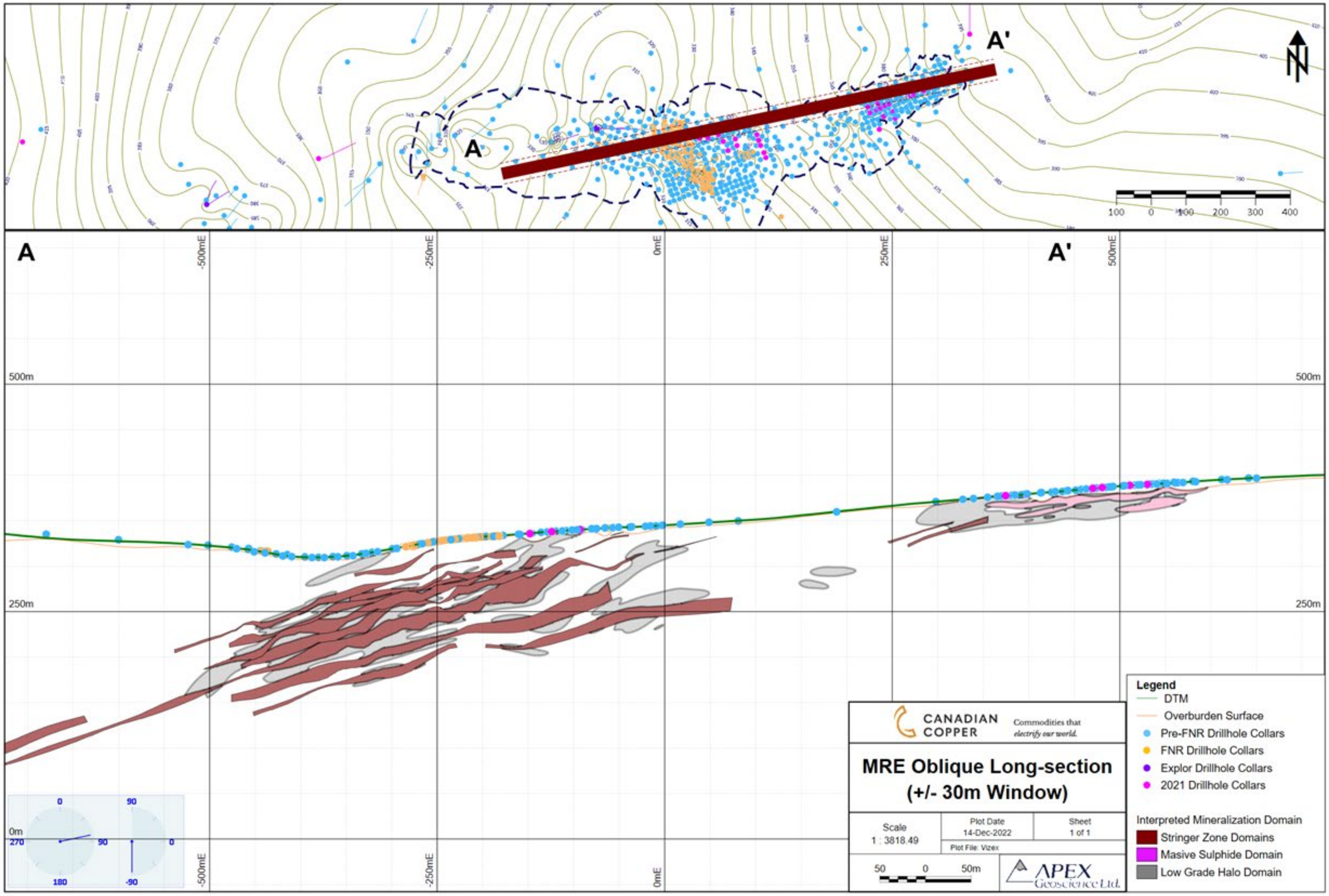
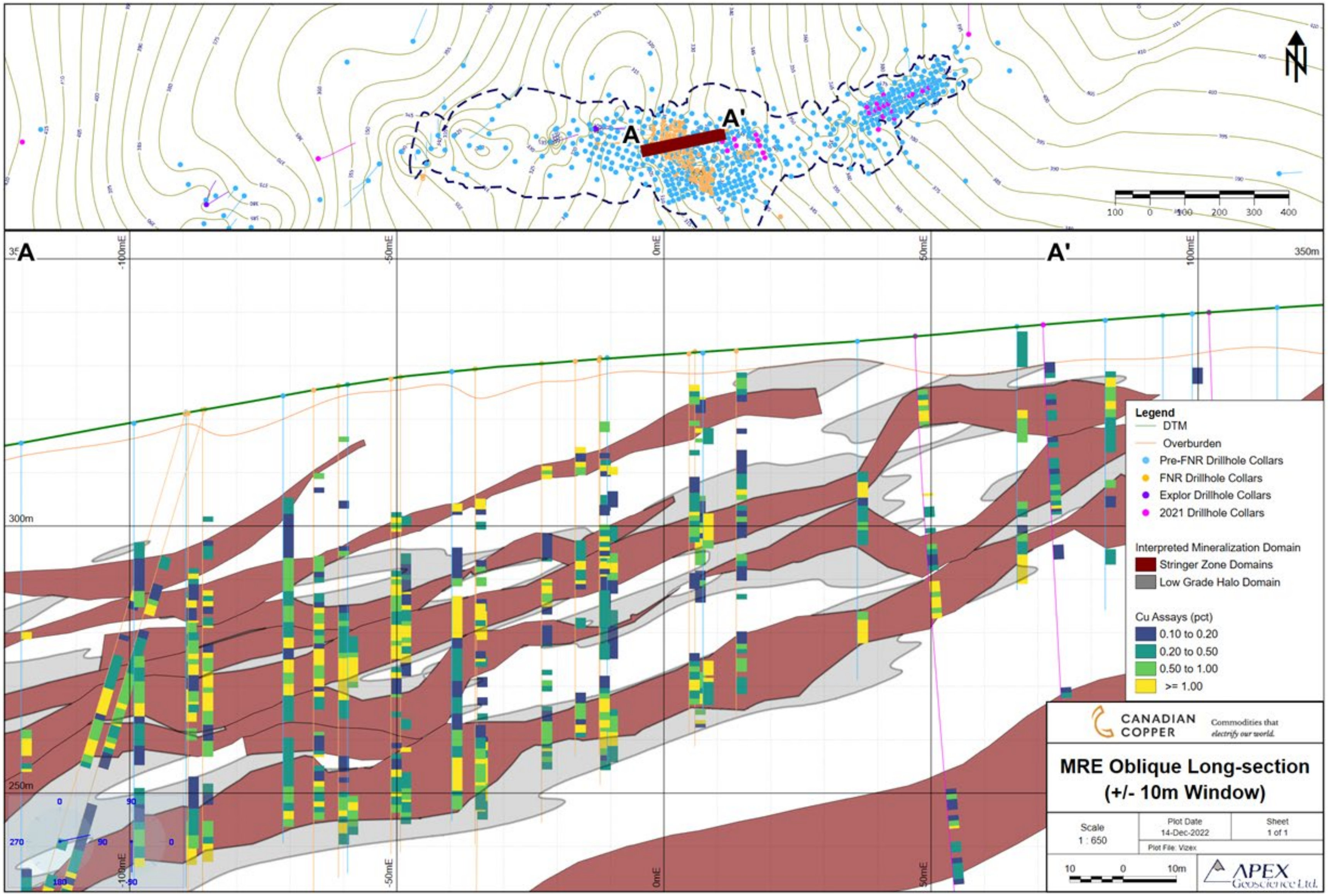


Figure 10.4 Longitudinal cross-section over the Central Zone of the Chester Deposit



11 Sample Preparation, Analyses and Security

11.1 Pre-FNR Drilling

For all diamond drilling conducted before 1999 (i.e., prior to implementation of NI 43-101) assessment reports filed with the NBDNR-GSB were the source for information regarding drill hole sampling and procedures. The assessment reports filed prior to 1986 had no details of sample preparation or security measures taken to ensure validity and integrity of the samples collected. No information about where analyses were completed is available for the S-Series drill holes. Most of the staff working on the Chester Project at the time were also Nigadoo Mine staff and the Chester Project was a project of the Sullivan Mining Group. Therefor it is assumed that samples collected in the decline in the mid-1970’s by the Sullivan Mining Group were analysed at the Nigadoo Mine, just northwest of Bathurst. The mine was operating at the time and it has been confirmed by personal communication (by Brooks) with the metallurgist at the mine at the time that the “ore” from the decline was run through the Nigadoo mill. Only a small number of higher grade assays from the early drilling by Kennco are plotted on some of the few drill sections that were found.

There are no known reasons to dispute historical analytical data reported for the Property, since it was done by, or on behalf of, reputable mining companies. However, diamond drilling and analytical techniques of the 1950’s and 1960’s are different than they are today. Drill core today is generally larger in diameter and analyses usually include multi-element analytical techniques. Typically, drill core samples in the Bathurst Mining Camp were only analyzed for copper, lead, and zinc, and occasionally for silver during the period that the Chester deposit delineation drilling was conducted.

Various operators conducted more recent sampling in the 1980’s and 1990’s, but none of them detailed their sampling and analytical techniques in their reports. Noranda, Brunswick Mining and Smelting, and Heath Steele Mines Ltd. had their own geochemical and assay laboratories in the area and most of the analyses were done in-house. Some other analyses may have been done at a local assay lab, Custom Laboratories Limited (also known as Stairs Laboratories Ltd.), in Bathurst.

Sim and Davis (2008) and Sim (2014) concluded that the Pre-FNR data were sufficiently validated through comparisons with the FNR sample data and were deemed reliable for use in mineral resource estimation. Current verification and validation of the drill hole database was completed by APEX personnel and is described in section 12.3.

11.2 FNR Drilling

11.2.1 Sample Collection, Preparation and Security

The FNR drill core was initially logged at the core facilities set up on the Property. Samples were typically no greater than 1 m in length in mineralized zones and up to 2 m in length in barren zones. Sample intervals adhered to geology contacts where these were identified. The core was bundled with lids and driven to FNR's office facility in Bathurst for detailed logging and sampling. Marked sample intervals were identified and recorded in a master spreadsheet. Sample numbers were assigned and the sample information (e.g., drill hole number, from, to, etc.) was recorded in sample books. Core was aligned in the core trays for cutting so that the same side of the entire hole was sent for assay. Core was split using a Vancon diamond core saw along the length of the core. Core samples consisted of sawed half core based on intervals marked by the logging geologist. Drill core samples were bagged with sample tags, and tied up with packing tape. Bags were packed in shipping boxes, and the boxes were sealed. The other half of the core was kept in the core tray and stored in racks for future reference. Core trays were labelled with Dymo aluminum tape stapled onto the end of the tray. The drill hole number, box number, and the "from-to" distance down-the-hole was embossed onto the metallic tape.

Quality control samples were inserted into the sample stream (standards and blanks) and duplicate samples were identified.

Upon receipt of assay results, higher grade core was reviewed again and spot checks were made on low grade samples, especially on the boundaries of the higher grade sections to ensure analysis grades correlated with observed quantities of sulphide mineralization.

Samples collected by FNR were sent for analysis to Activation Laboratories Ltd. (Actlabs) in Ancaster ON. Actlabs is accredited to ISO/IEC 17025 and ISO 9001:2015, and is independent of the issuer and the authors of this report.

During drilling, sample shipments to the lab were sent once a week and up to 4 times a week, or once after approximately every 60 – 100 samples of material had accumulated in the sampling facility. Careful attention was taken to make sure complete holes were not split between two or more batches. Shipping was via contracted carrier, Day and Ross Transportation Group (Day and Ross), from its warehouse in Bathurst, NB, to the Actlabs facility in Ancaster, Ontario. No irregularities in the sample shipment process were reported.

11.2.2 Analytical procedures

The 2021 core samples were prepared for analysis at the ALS 'sample prep' facility in Moncton, NB, where the samples were logged into the ALS computer-based tracking system, weighed and dried. The 2021 core samples were crushed to 70% less than 2 mm, and the sample was riffle split. A 1,000 g split sample was pulverised to better than 85% passing 75 microns (μm) (Prep-31B).

At Actlabs' sample preparation facility in Ancaster, Ontario the samples were logged, weighed and dried at 60°C. The samples were crushed using a Terminator jaw crusher to > 85% passing -10 mesh. The crusher was cleaned with barren river rock and compressed air after each order was processed. A 250 g sample was split using riffle splitter. The 250 g split was pulverized to 95% passing -150 mesh. The pulverizer mill was cleaned with cleaner sand between each sample. Rejects were bagged with the original sample tag and Actlabs label. A new pulp was made from another split of reject for every order more than 40 samples (internal lab pulp duplicates). Actlabs takes 3.5% pulp duplicates and checks grain size of crusher and pulverizer daily.

Two analytical techniques were used: an Aqua Regia digestion ICP-OES for the majority of elements, and an AR Ultratrace 1 (UT-1) for additional trace elements. These analyses were completed on 0.5 g samples.

11.2.3 Quality Assurance – Quality Control

Quality control samples were inserted into the sample stream (standards and blanks) and duplicate samples were identified.

FNR staff inserted blind standards and blanks as specified in the quality sample handling procedure memo. Approximately 13% of all samples were check samples. There was every indication that the procedure was being strictly followed and QC sample coverage was adequate for the drilling.

Blank material was inserted randomly using a pre-assigned tag number at the rate of one in every 30 samples. Blank material was pre-purchased swimming pool filter sand with no visible mineralization; this was supported by the analysis results.

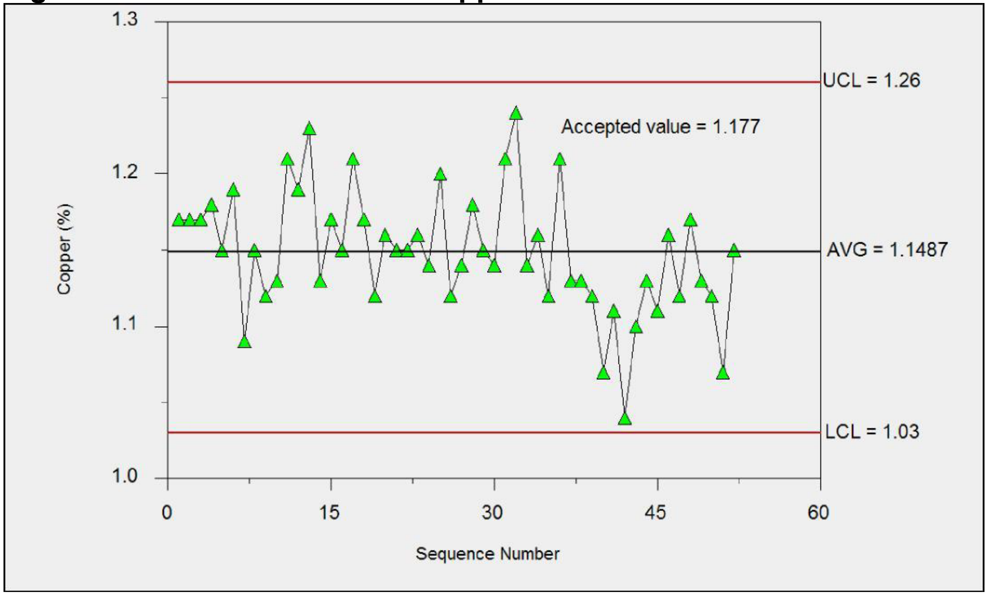
11.2.3.1 Standard Reference Material (SRM)

FNR purchased standard reference material (SRM or standard) for insertion into the sample stream. The copper/gold standard reference material was purchased from CDN Resource Laboratories Ltd. in Delta, BC, Canada. Five certified copper SRMs were used: CGS-2, CGS-4, CGS-7, CGS-10, and CDN-FCM-2. The performance of the standards was evaluated using the criterion that 90% of the results must fall within ±10% of the accepted value.

Results are presented using statistical process control charts (control charts, for short). In the chart the “accepted” or average value appears as a black horizontal line. Control limits at ±10% of the accepted value appear as red lines above and below the line showing the accepted value. The assay result values for the standard appear on the chart as green triangles.

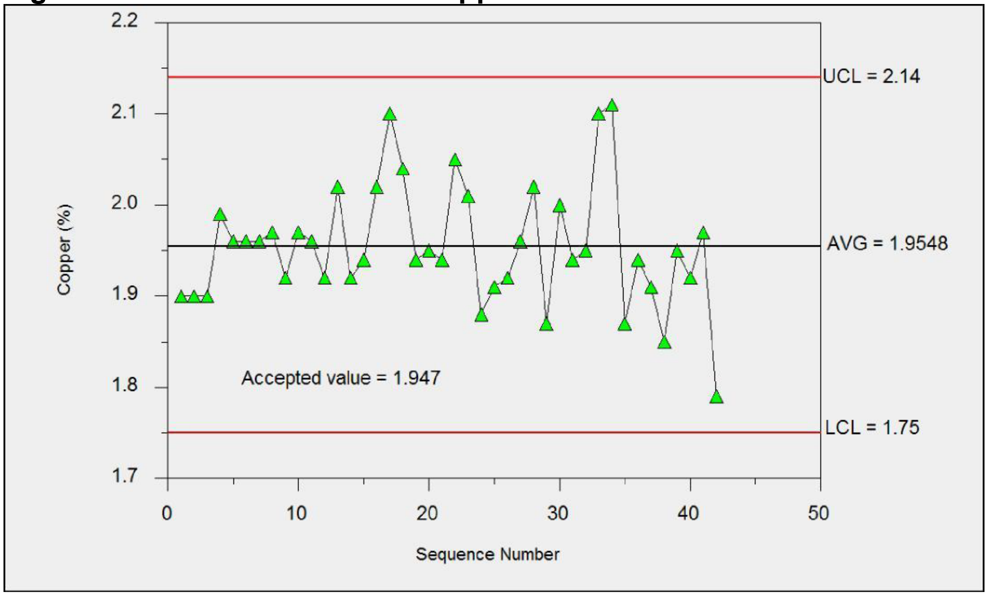
Results for all standards fall within control limits more frequently than the prescribed rate (Figures 11.1 to 11.5). There is no indication of systematic assaying problems in the copper values.

Figure 11.1 Standard CGS-2 – copper results.



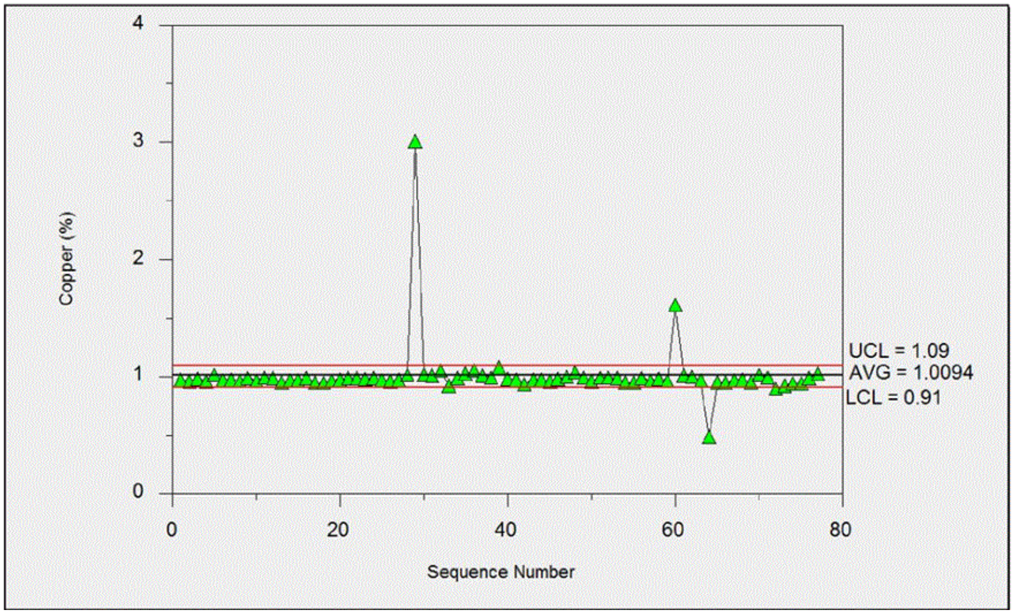
Source: Sim, 2014

Figure 11.2 Standard CGS-4 – copper results.



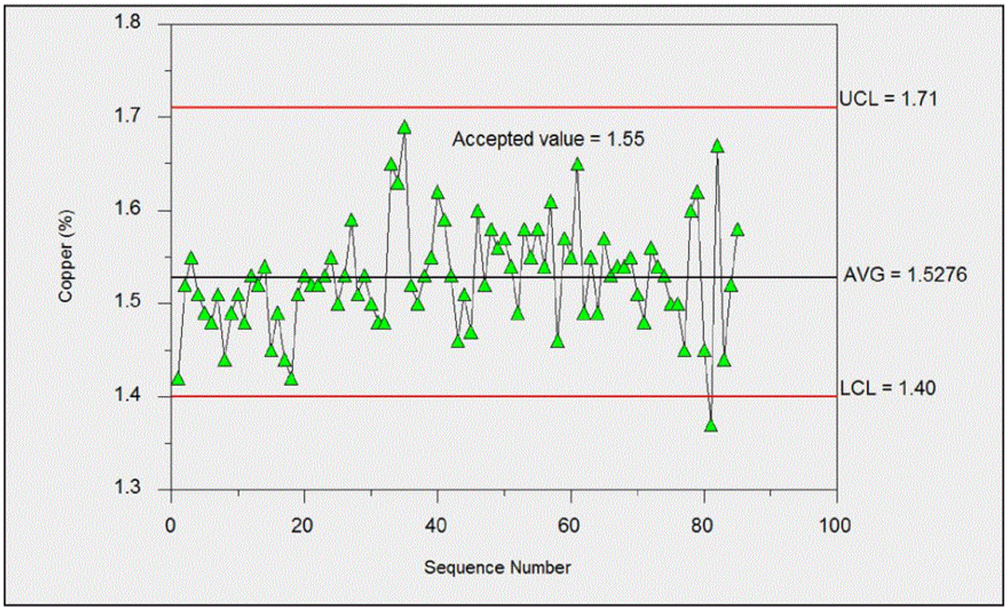
Source: Sim, 2014

Figure 11.3 Standard CGS-7 – copper results.



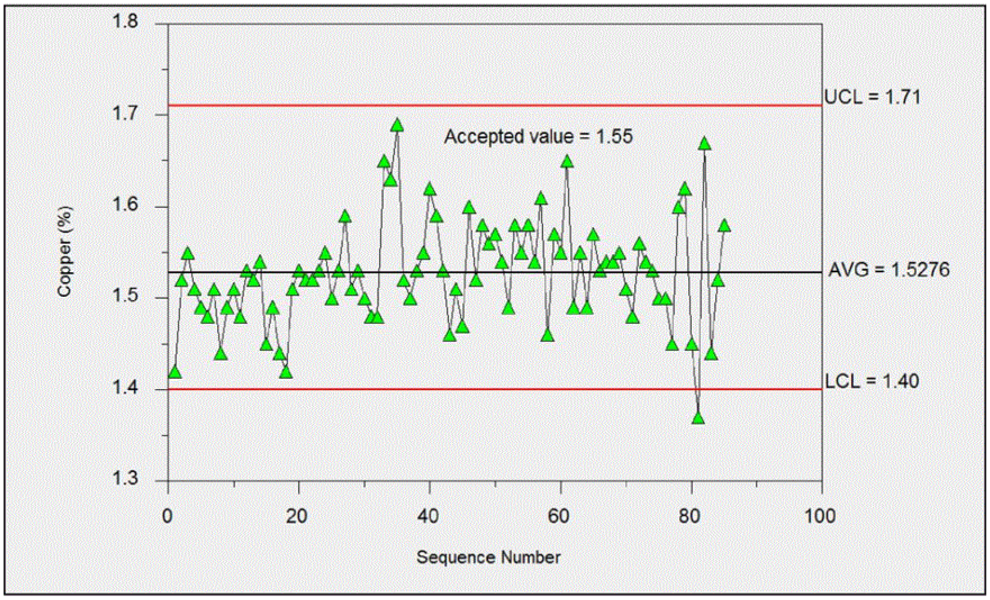
Source: Sim, 2014

Figure 11.4 Standard CGS-10 – copper results.



Source: Sim, 2014

Figure 11.5 Standard CDN-FCM-2 – copper results.

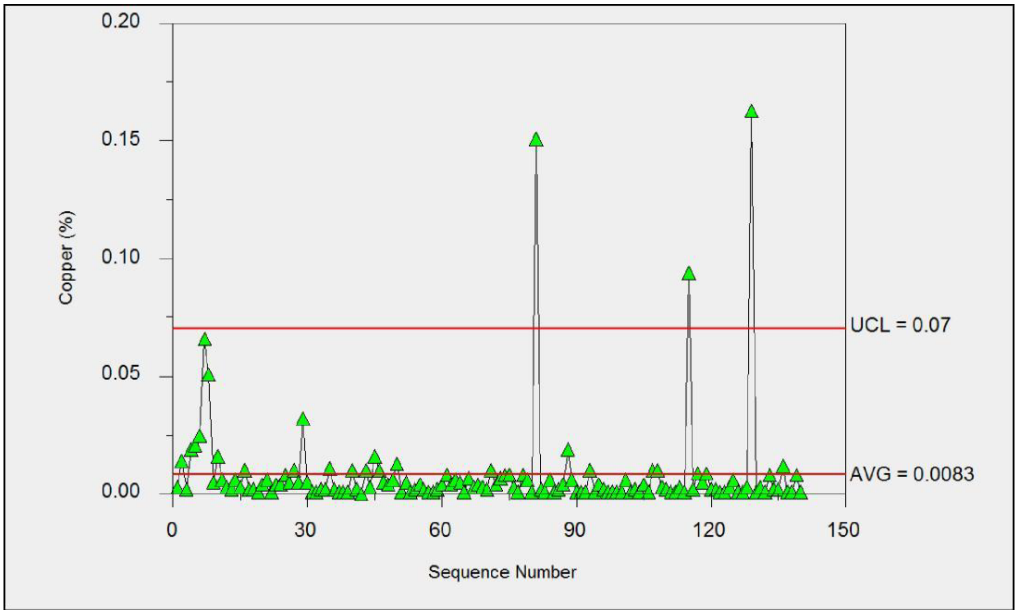


Source: Sim, 2014

11.2.3.2 Blank Samples

Control results exceeded the control limit for the blank material assays less than 5% of the time (Figure 11.6).

Figure 11.6 Blank Samples – copper results.

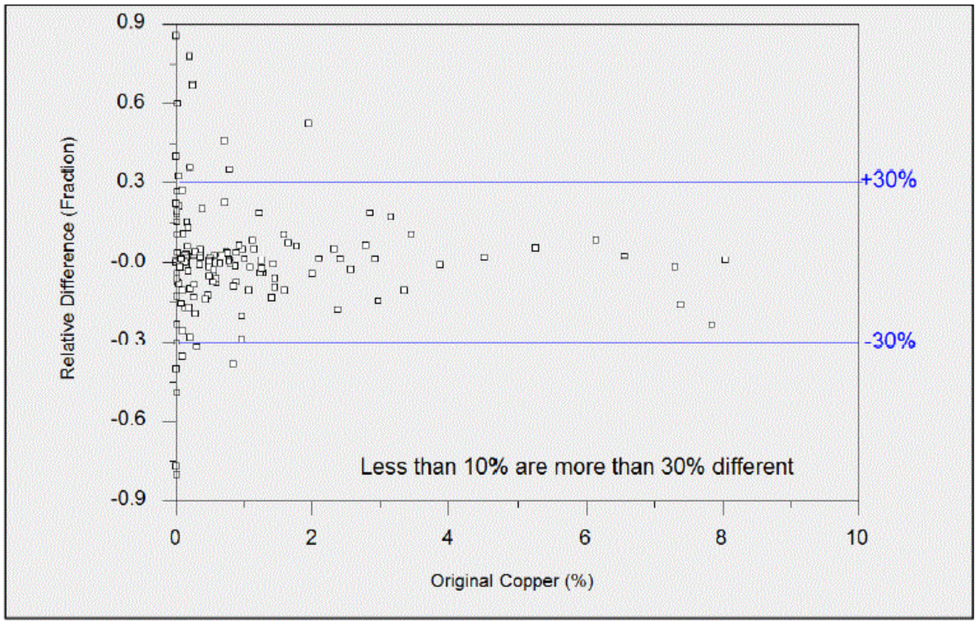


Source: Sim, 2014

11.2.3.3 Coarse Duplicate Samples

Duplicate samples of coarse reject material were assayed to check the sample preparation protocol. If the protocol is adequate, 90% of the duplicate pairs of assays should fall within ± 30% of each other. More than 90% of the pair duplicates fell within the control limits (Figure 11.7).

Figure 11.7 Coarse duplicates.



Source: Sim, 2014

11.3 Explor Drilling

11.3.1 Sample Collection, Preparation and Security

Explor did not detail their sampling protocols in the filed assessment reports. Core samples from the Explor drilling programs were transported to the analytical laboratories by Day and Ross Transports from local offices in the Bathurst Industrial Park. For the 2016 samples analyses were completed by LabEXperts in Val D'Or, Quebec, and Activation Laboratories Inc. (Actlabs) of Ancaster, Ontario. Actlabs is accredited to ISO/IEC 17025 and ISO 9001:2015, and is independent of the issuer and the authors of this report.

11.3.2 Analytical procedures

No information is available for the analytical procedures for the 2014 samples.

The 2016 core samples were prepared for analysis at the LaEXpert facility in Val D'Or, Quebec. Samples were dried if necessary and then reduced to -1/4 inch with a jaw crusher. The jaw crusher was cleaned with compressed air between samples and barren material between sample batches. The sample was reduced to 90% passing through a-10 mesh with a rolls crusher. The rolls crusher was cleaned between samples with a wire brush and compressed air and barren material between sample batches. The sample was riffled using a Jones type riffle splitter to obtain an approximately 300 g sample. Excess material was stored as a crusher reject. The 300 g portion was pulverized to 90% passing through a -200 mesh in a ring and puck type pulverizer. The pulverizer was cleaned between samples with compressed air and silica sand between batches.

A 29.166 g sample was analysed using fire assay with an atomic absorption spectrometry (AAS) finish. All samples assaying greater than 1.0 g/t Au were re-assayed using a gravimetric finish.

A 0.5 g sample was submitted for base metals (Cu, Ni, Zn, Pb, Co) and silver (Ag) analyses using partial of total nitric and hydrochloric acid digestion followed by atomic absorption spectrometry. For the partial digestion the detection limit was 2 ppm for all metals except for silver which was 0.2 ppm. For the total digestion the detection limit was 0.01% for all metals except for silver which was 3 ppm.

Multi-element ICP (TD-MS procedure) analyses were completed at Actlabs Inc. of Ancaster, Ontario. These analyses were completed only on the first drill hole and part of the second hole (the first shipment of samples) and did not include any of the overages. From the first shipment to the second shipment the second samples were lost or misplaced because only gold was reported and the base metals had to be re-ordered.

11.3.3 Quality Assurance – Quality Control

No information is available about the QA/QC procedures used by Explor during their drill programs.

11.4 2021 Puma and Canadian Copper Drilling

11.4.1 Sample Collection, Preparation and Security

Drill core was placed in wooden core boxes beside the drill. Core boxes were picked up once or twice a day from the drill site by the drilling company or Geominex staff and delivered directly to Geominex secure core logging facility at St-Quentin, NB. Once the core was received, a Geominex technician verified the hole and box numbers marked on the core boxes and organised the boxes in order on the logging tables. The technician measured the core box intervals and recorded the information. A labeled aluminum tag was stapled on the left side of each core boxes with the project number, hole name, and box numbers. Subsequently all core boxes were photographed.

Preliminary logging included recovery and RQD measurements. Drill core was logged geologically, and results recorded in an Excel format. This detailed core logging included descriptions of lithology, sub-lithology, mineralogy, structure, vein, alteration and mineralization. All core logging data was entered into Geotic® Software. Sample preparation consisted of selecting core samples based on visual identification of the mineralization, (i.e., based on the presence of sulphides). A geologist selected and marked the sample interval with a core marker on the core and stapled a sample tag at the beginning of each sample. Samples were usually 1.0 m long unless lithologic contacts make for more logical breaks. Short intervals (< 20 cm) of country rock may have been included in sulphide samples; larger intervals were sampled separately. Tags were placed in the core boxes to indicate where a standard or blank should be inserted in the sample stream. A line was drawn on the core to indicate to the sampler where to cut the core. When the core was marked-up and assay tags positioned, it was photographed to preserve a record of the core box and intervals before it was sawn.

Phase 1 drill core was moved to Bathurst, NB, by a Geominex employee. In Bathurst, NB, systematic magnetic susceptibility (MPP probe), and portable XRF analysis were conducted. Core samples were sawn in half along their long axis using a hydraulic core saw. One half of the core was retained and placed back into the core box in the original orientation and position with the accompanying sample tag stapled in the core box at the beginning of each sample interval. The other half was placed in a plastic sample bag together with the sample tag. The individual sample bags were sealed with an industrial adhesive tape and placed in a numbered rice bags which were sealed with cable-ties. The rice bags were shipped by Armour Courier Service (ACS) to ALS Geochemistry Laboratory in Moncton, NB, for sample preparation. No issues were reported by the lab with respect to sample shipments.

Phase 2 drill core was delivered directly to Geominex secure core logging facility at St-Quentin, NB. Core was aligned, measured and checked for core recovery and RQD. Magnetic susceptibility and conductivity were measured by scanning the core using a MPP equipment meter by Geominex staff. Core was sawn in half using a pneumatic diamond saw. One half of the core was placed in a standard plastic sample bag and tagged for analysis, and the other half returned to the core box for reference at the Geominex Core shack St-Quentin, NB. The samples collected were placed in large polypropylene ‘rice bags’ which were tied with a numbered plastic security tag. These were placed in a 20-litre plastic pail and capped. Samples were shipped and picked up at the core facility at St-Quentin by Manitou transport and driven to ALS Laboratories (ALS) in Moncton, NB. ALS is accredited to ISO/IEC 17025 and is independent of the issuer and the authors of this report.

11.4.2 Analytical procedures

The 2021 core samples were prepared for analysis at the ALS ‘sample prep’ facility in Moncton, NB, where the samples were logged into the ALS computer-based tracking system, weighed and dried. The 2021 core samples were crushed to 70% less than 2 mm, and the sample was riffle split. A 1,000 g split sample was pulverised to better than 85% passing 75 microns (µm) (Prep-31B).

Phase 1 core samples: an aliquot of the resulting pulp from each sample was then shipped for analysis to ALS’ main (analytical) laboratory in North Vancouver, BC. The core samples were submitted for multi-element (48 element) geochemical analysis (ALS laboratory code: ME-MS61) using ICP-MS analysis following a near-total, four acid, digestion of a 0.25 g sample aliquot. Multielement “overlimit” results were analysed by a follow-up, “ore grade” ICP technique (OG62) for Cu, Ni, Zn and other elements as required. The “ore grade” analyses also involved a 4-acid digestion on a 0.4 g sample aliquot with a ICP finish. The samples were also analyzed for gold by a standard fire assay (ALS laboratory code: Au-AA24), which involved the fusion of a 50 g sample aliquot and analysis by Atomic Absorption spectroscopy.

Phase 2 core samples: a 30-gram sub-split from the resulting pulp was then subjected to a fire assay (Au-ICP21). Rock sample ICP results with gold >1g/t were subjected to a metallic screening (Au-SCR24) 1kg pulp screened to 100 microns. Other screen sizes available. Duplicate 50 g assay on screen undersize. Assay of entire oversize fraction.

Additionally, whole rock analyses were completed on a 0.7 g sample (ALS laboratory code: ME-XRF26) using whole rock fusion followed by XRF (X-Ray Fluorescence) analysis. As well as Loss-on-Ignition (LOI) analyses on a 1 g sample (ALS laboratory code: OA-GRA05x). LOI samples were pre-dried at 105°C with LOI completed at 500°C.

11.4.3 Quality Assurance – Quality Control

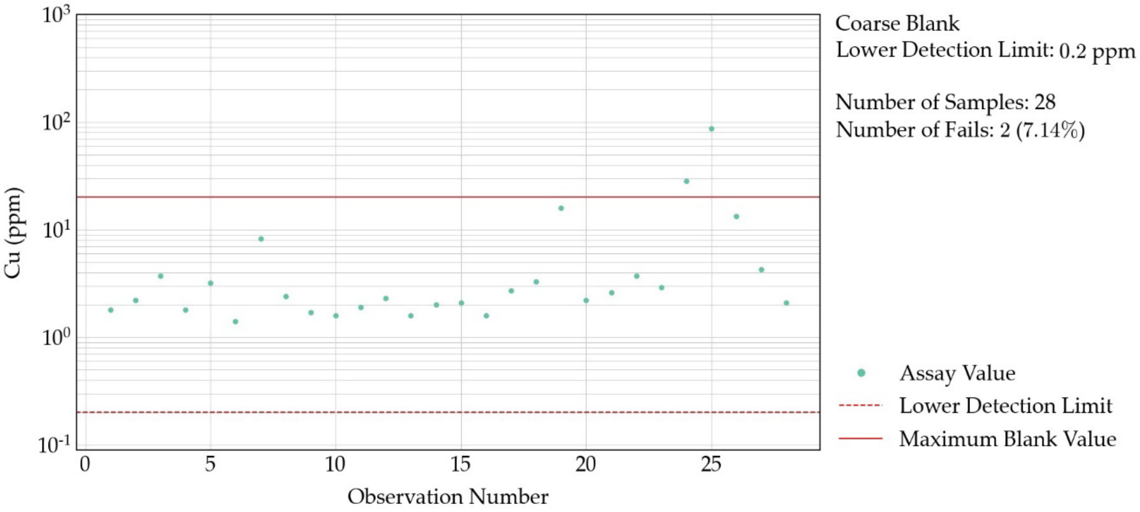
For the 2021 Phase 1 drilling program, data verification included the insertion of blanks, standards and field duplicates into the sample stream at a rate of 10%. Duplicate core samples were taken at random approximately every 25th sample. For the 2021 Phase 2 drilling program, standard reference material, (i.e., standards) and one blank sample was inserted into the sample stream at the rate of 8%. For the Phase 2 drill program, no duplicate core sample was submitted.

The Quality Assurance – Quality Control (QA/QC) results are described below.

11.4.3.1 Phase 1 Blank Samples

A total of 28 blank samples were inserted into the Phase 1 sample stream to assess the laboratory’s cleaning procedures. The standard material was a decorative white stone (DWS) bought in a local hardware store that consisted of white marble. Analyses of the material by ALS returned no significant Cu, Zn, Ag, or Au results. The majority of the blank samples (n=26) returned Cu assays below detection (20 ppm). Two samples returned values above 20 ppm but still well below medium to high grade Cu values (Figure 11.8).

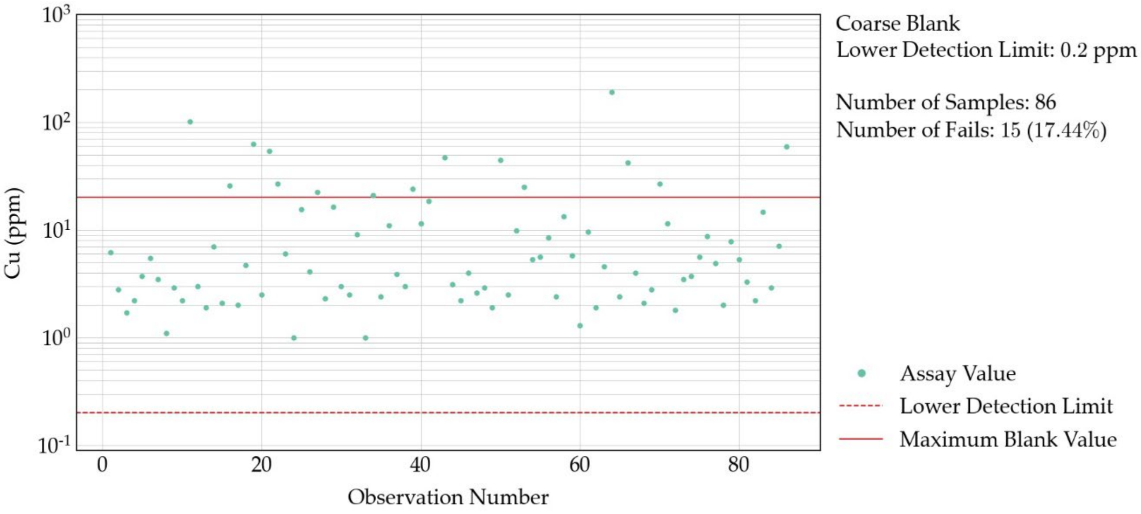
Figure 11.8 Phase 1 Cu assays for blank samples.



11.4.3.2 Phase 2 Blank Samples

A total of 85 blank samples were inserted into the sample stream to assess the laboratory's cleaning procedures. The standard material was a decorative white stone (DWS) bought in a local hardware store that consisted of white marble. A total of 69 samples returned Cu assays below detection (20 ppm). Of the 15 blanks that returned >20 ppm Cu, 13 samples fell between 20 and 100 ppm Cu and 2 samples returned >100 ppm Cu (Figure 11.9). Although these are technically considered failures the Cu results are still well below medium to high grade Cu values. It is recommended that a certified blank standard be used for future exploration programs.

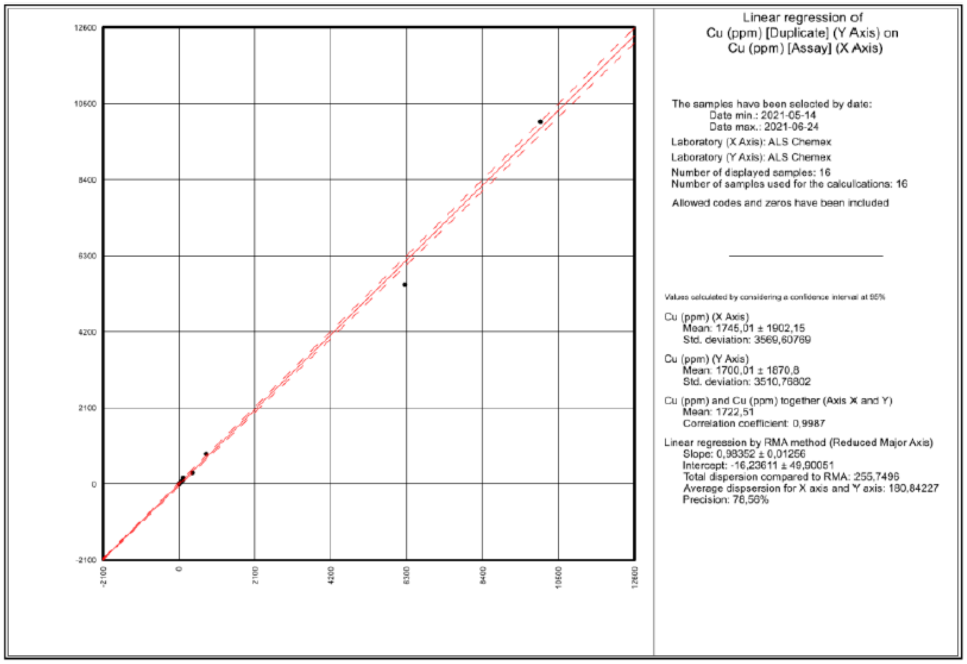
Figure 11.9 Phase 2 Cu assays for blank samples.



11.4.3.3 Phase 1 Duplicate Samples

A total of 16 duplicate core samples were collected to assess sample preparation bias. Figure 11.10 shows the Cu assays for original samples vs. field duplicates. Duplicate core samples were taken at random approximately every 25th sample by sawing the remaining core in half, leaving one quarter core for reference in the core box. The comparison returned a slope of 0.98352 and a correlation coefficient of 0.9987 was obtained indicating the there was no bias in the sample preparation procedures.

Figure 11.10 Phase 1 Cu assays of duplicate samples vs. original samples.



Linear regression of
Cu (ppm) [Duplicate] (Y Axis) on
Cu (ppm) [Assay] (X Axis)

The samples have been selected by date:
Date min.: 2021-05-14
Date max.: 2021-06-24
Laboratory (X Axis): ALS Chemex
Laboratory (Y Axis): ALS Chemex
Number of displayed samples: 16
Number of samples used for the calculations: 16
Allowed codes and zeros have been included

Values calculated by considering a confidence interval at 95%
Cu (ppm) (X Axis)
Mean: 1745,01 ± 1902,15
Std. deviation: 3569,60769
Cu (ppm) (Y Axis)
Mean: 1700,01 ± 1670,8
Std. deviation: 3510,76802
Cu (ppm) and Cu (ppm) together (Axis X and Y)
Mean: 1722,51
Correlation coefficient: 0,9987
Linear regression by RMA method (Reduced Major Axis)
Slope: 0,98352 ± 0,01256
Intercept: -16,23611 ± 49,90051
Total dispersion compared to RMA: 255,7496
Average dispsersion for X axis and Y axis: 180,84227
Precision: 76,56%

Source: Forbes and Gagné, 2021

11.4.3.4 Phase 2 Duplicate Samples

No duplicates were collected during the sampling of Phase 2 drill core.

11.4.3.5 Phase 1 Standards

Three different standards materials were inserted into the sample stream during the 2021 Phase 1 program to assess different grades in Au, Ag, Cu, Pb and Zn. The standards used for the 2021 Phase 1 drill program included: CDN-ME-1208, CDN-ME-1410 and CDN-ME-1706. Each standard is discussed individually below.

11.4.3.6 Phase 1 - Standard CDN-ME-1208

Standard CDN-ME-1208 was used to assess Au, Ag and Cu. The reported value and 3SD (3 standard deviations) for this standard are: 0.246 ppm Au ± 0.072 ppm Au, 3.8 ppm Ag ±1.0 ppm Ag and 1.635% Cu ± 0.126% Cu. All assay results for this standard during the 2021 Phase 1 drill program fell within 3 standard deviations from the certified value based on the standard deviation reported by the manufacturer. Silver assays returned values between 3.81 and 4.28 ppm Ag which is within the acceptable limits for this standard (Figure 11.11). Cu assays returned values between 1.595% Cu and 1.617% Cu which is within the acceptable limits for this standard (Figure 11.12).

Figure 11.11 Phase 1 - Standard CDN-ME-1208 Ag assays.

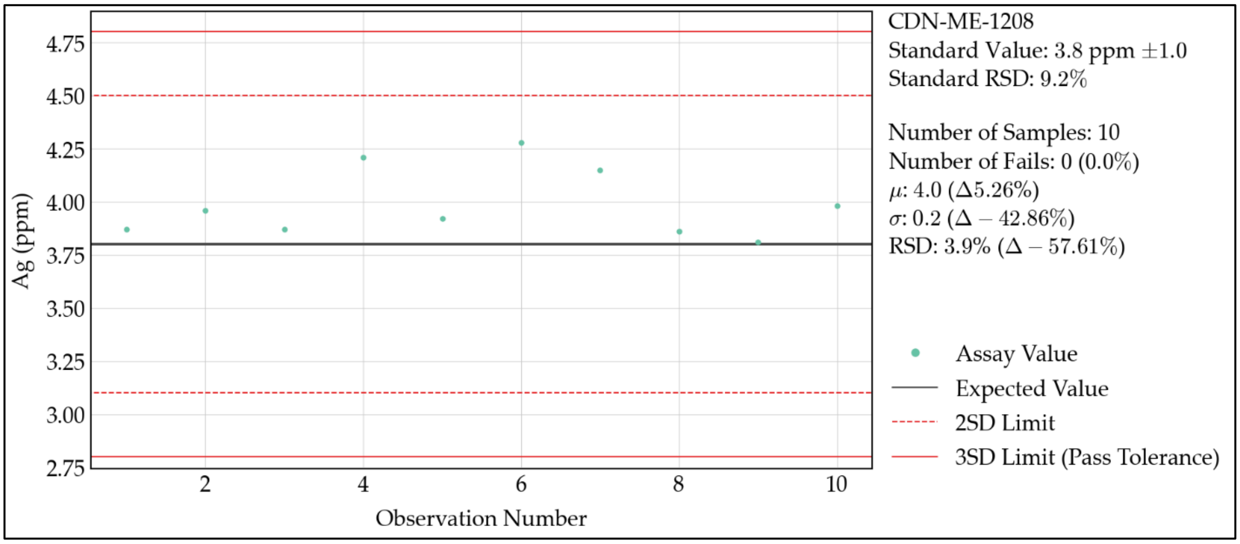
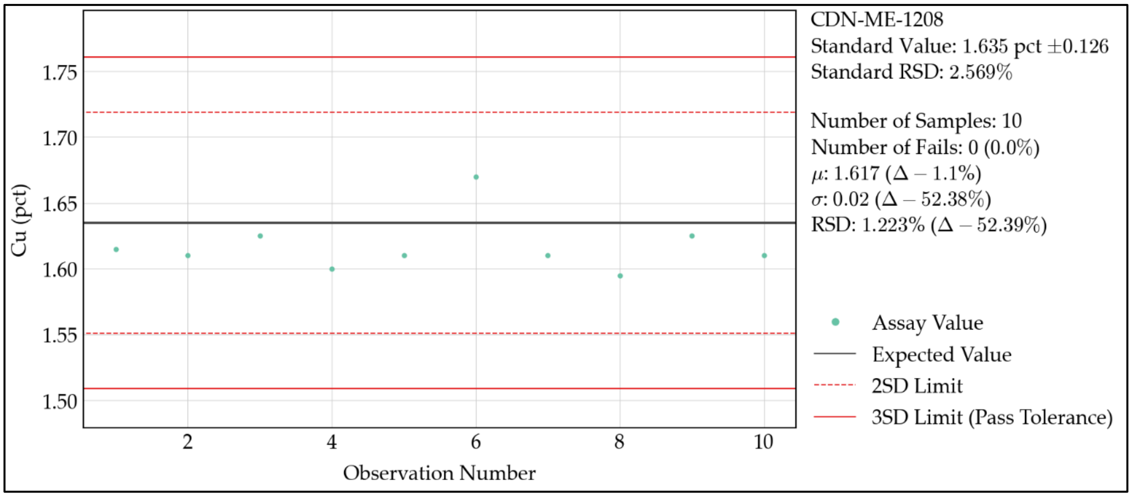


Figure 11.12 Phase 1 - Standard CDN-ME-1208 Cu assays.



11.4.3.7 Phase 1 - Standard CDN-ME-1410

Standard CDN-ME-1410 was used to assess the high-grade Cu, Zn and Ag assays. The reported value and 3SD (3 standard deviations) for this standard are: 3.8% Cu ± 0.26% Cu, 3.682% Zn ± 0.126% Zn and 69.0 ppm Ag ± 5.7 ppm Ag. The majority of assay results for this standard during the 2021 Phase 1 drill program fell within 3 standard deviations from the certified value based on the standard deviation reported by the manufacturer. Copper assays returned values between 3.36% Cu and 3.99% Cu with 7 out of the 8 samples falling within the recommended range of 3.54% Cu and 4.06% Cu. One sample returned an assay below the expected range (Figure 11.13). Zinc assays returned values between 3.44% Zn and 3.87% Zn with 4 of the 8 samples falling within the recommended range of 3.554% Zn and 3.806% Zn. Four samples returned assay outside of the expected range (Figure 11.14). All Ag assays returned values falling within the recommended range (Figure 11.15).

Figure 11.13 Phase 1 - Standard CDN-ME-1410 Cu assays.

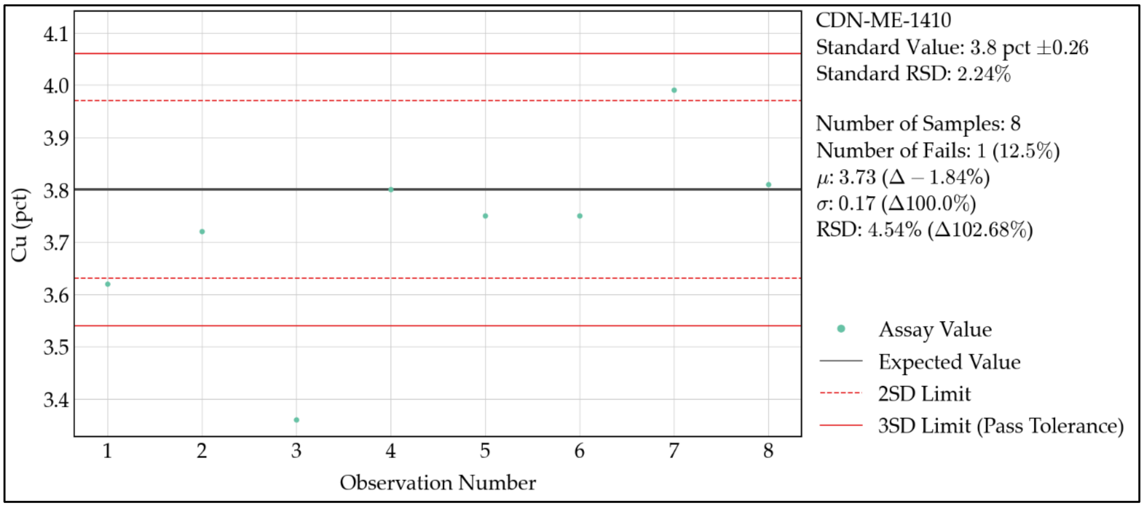


Figure 11.14 Phase 1 - Standard CDN-ME-1410 Zn assays.

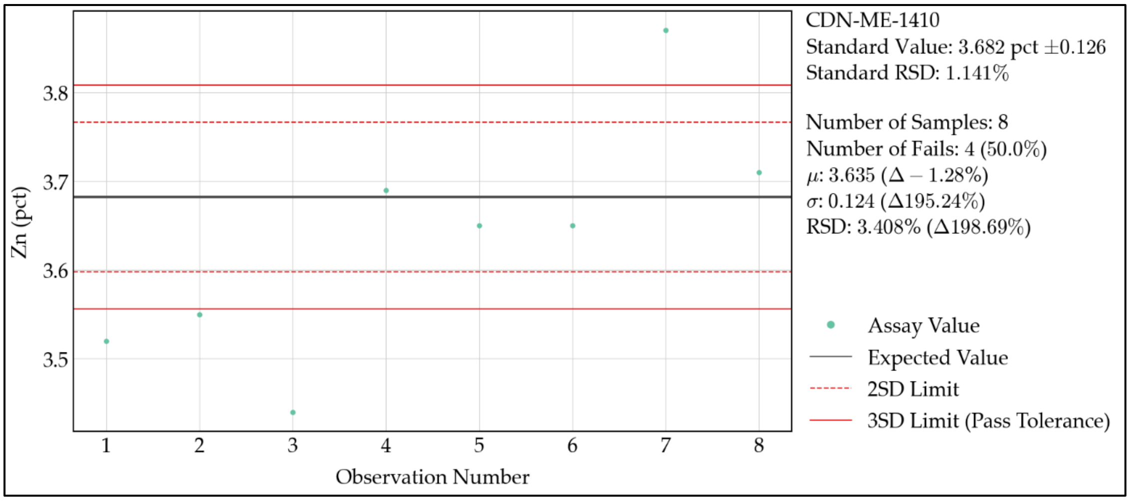
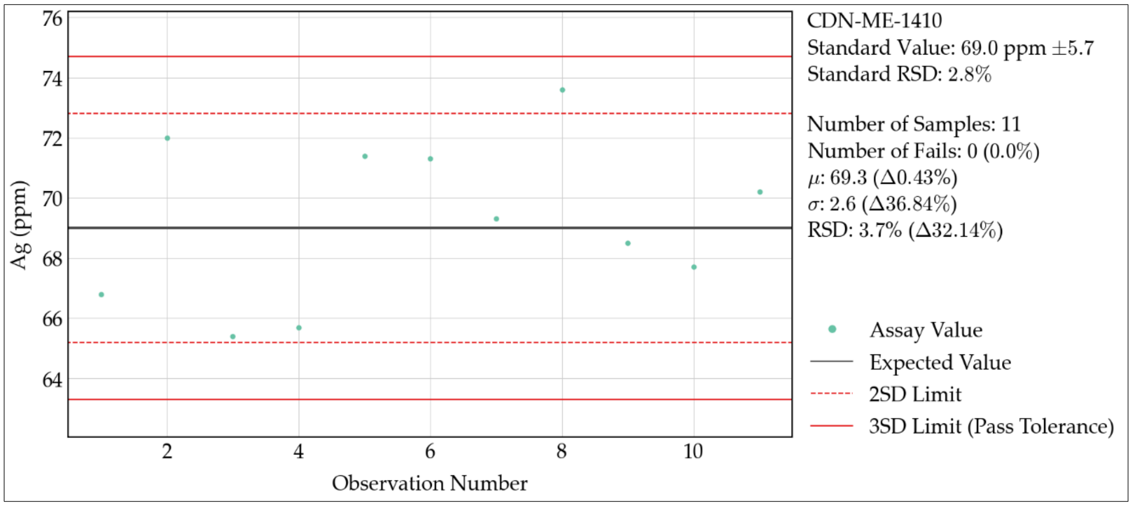


Figure 11.15 Phase 1 - Standard CDN-ME-1410 Ag assays.



11.4.3.8 Phase 1 - Standard CDN-ME-1706

Standard CDN-ME-1706 was used to assess the low-grade assay for Cu, Zn and Pb. This reported values for this standard are 0.831% Cu ± 0.036% Cu, 0.291% Zn ± 0.01% Zn and 630 ppm Pb ± 60 ppm Pb. The majority of assay results for this standard during the 2021 Phase 1 drill program fell within 3 standard deviations from the certified value based on the standard deviation reported by the manufacturer. Two samples returned Cu assays below the expected range (Figure 11.16). Four (4) samples returned Zn assays below the accepted value and one sample returned a Zn assay above the accepted value (Figure 11.17). All Pb assays fell within two standard deviations of the certified value (Figure 11.18)

Figure 11.16 Phase 1 - Standard CDN-ME-1706 Cu assays.

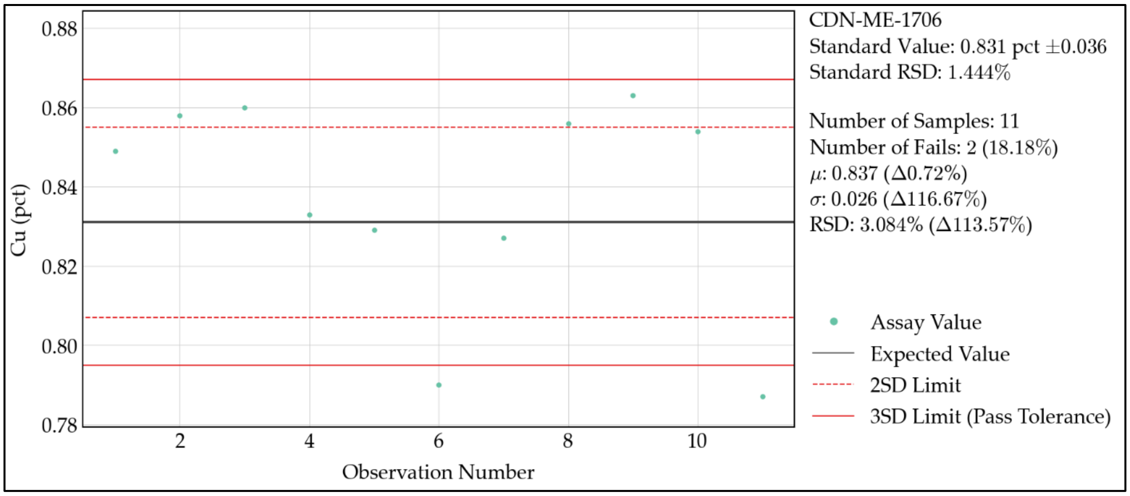


Figure 11.17 Phase 1 - Standard CDN-ME-1706 Zn assays.

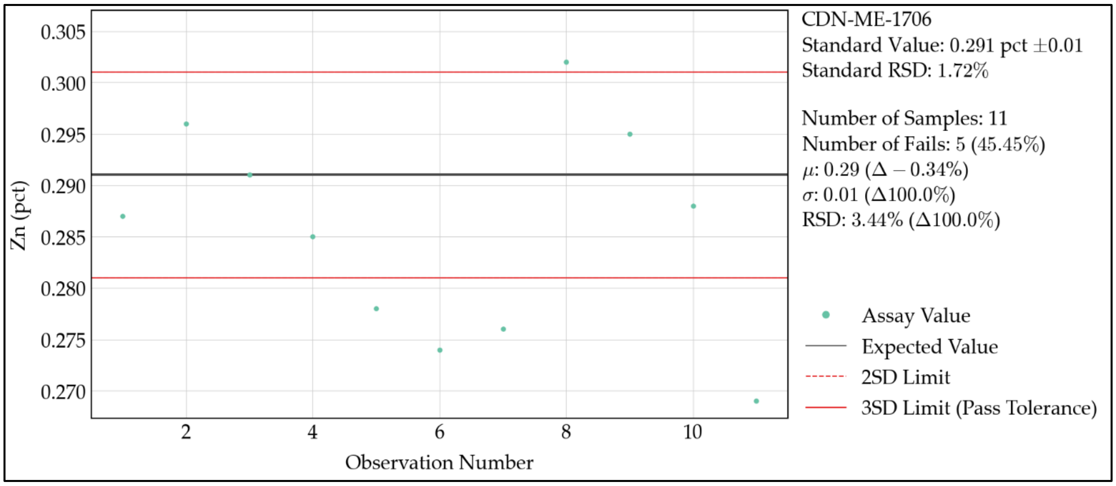
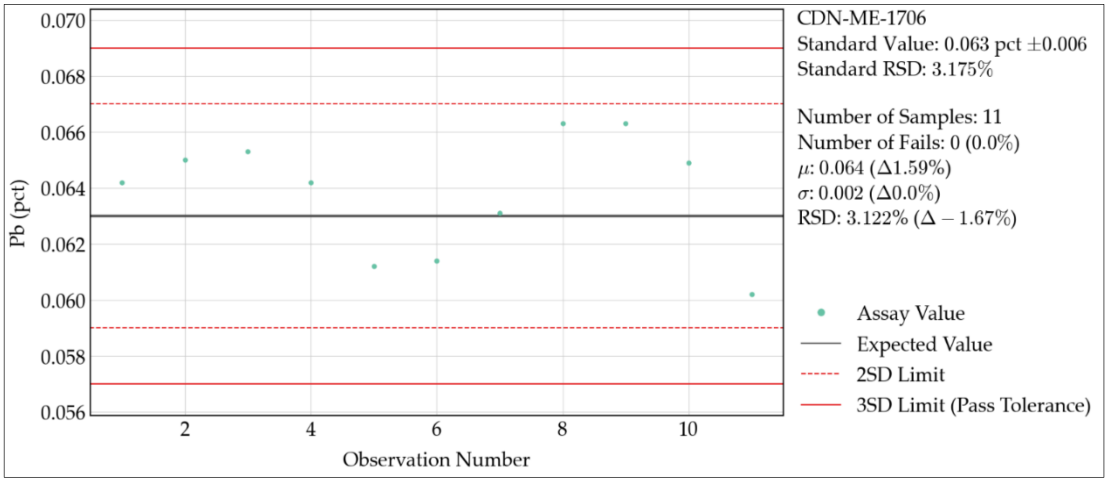


Figure 11.18 Phase 1 - Standard CDN-ME-1706 Pb assays.



11.4.3.9 Phase 2 Standards

Two different standards materials were inserted into the sample stream during the 2021 Phase 2 program to assess different grades in Au, Ag, Cu, Pb and Zn. The standards used for the 2021 Phase 2 drill program included: CDN-ME-1201 and CDN-ME-1706. Each standard is discussed individually below.

11.4.3.10 Phase 2 - Standard CDN-ME-1201

Standard CDN-ME-1201 was used to assess Au, Ag, Cu, Pb and Zn. The reported value and 3SD (3 standard deviations) for this standard are: 0.125 ppm Au ± 0.045 ppm Au, 37.6 ppm Ag ± 5.1 ppm Ag, 1.572% Cu ± 0.129% Cu, 0.465% Pb ± 0.048% Pb, and 4.99% Zn ± 0.435% Zn. Figure 11.19 and 11.23 show assays for this standard. Cu, Ag and Zn returned assays within the acceptable range for these elements (Figures 11.19-11.21). Two (2) samples returned Au assays outside of 3 standard deviations from the certified value (Figure 11.22). One sample returned a Pb assay outside of 3 standard deviations from the certified value (Figure 11.23)

Figure 11.19 Phase 2 – Standard CDN-ME-1201 Cu assays.

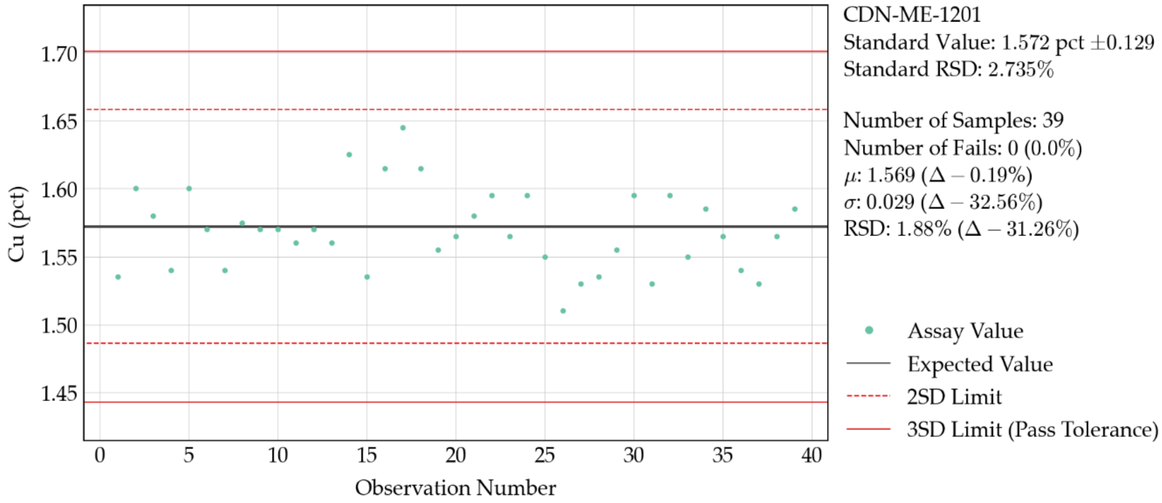


Figure 11.20 Phase 2 – Standard CDN-ME-1201 Ag assays.

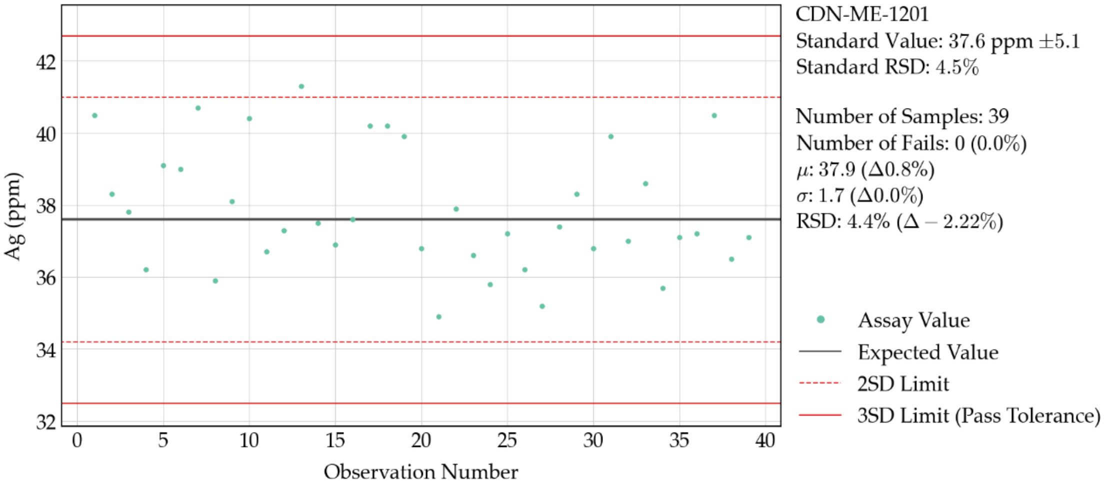


Figure 11.21 Phase 2 – Standard CDN-ME-1201 Zn assays.

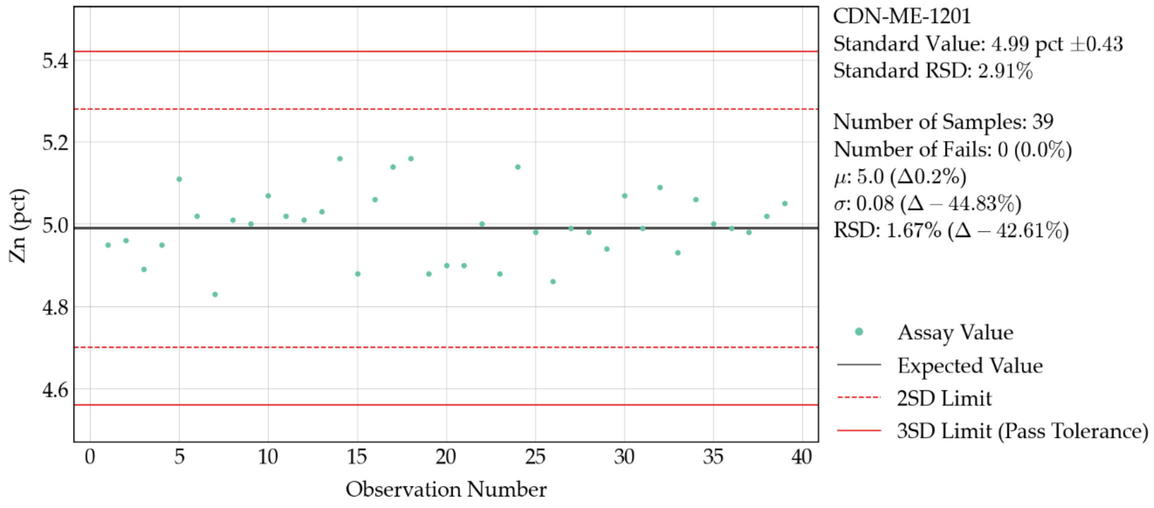


Figure 11.22 Phase 2 – Standard CDN-ME-1201 Au assays.

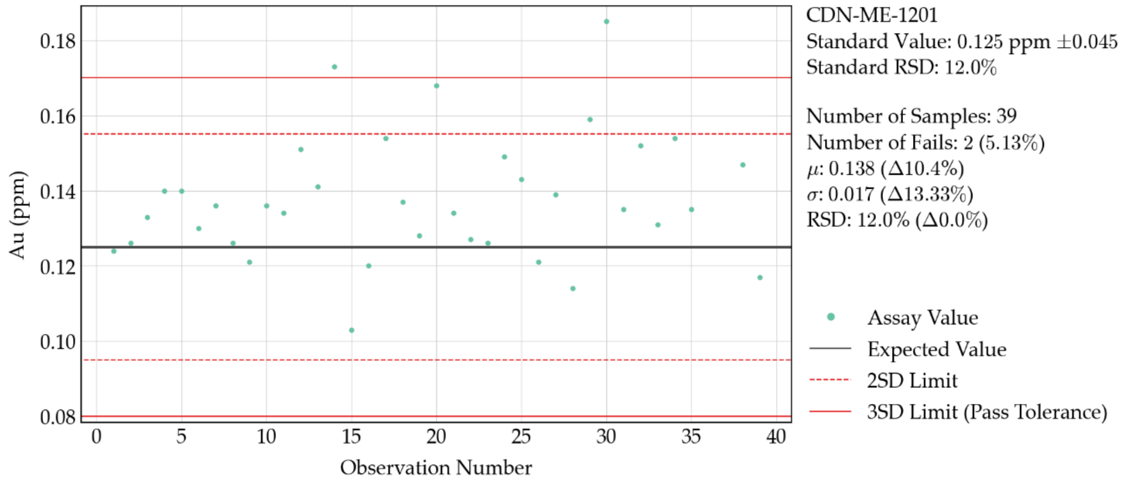
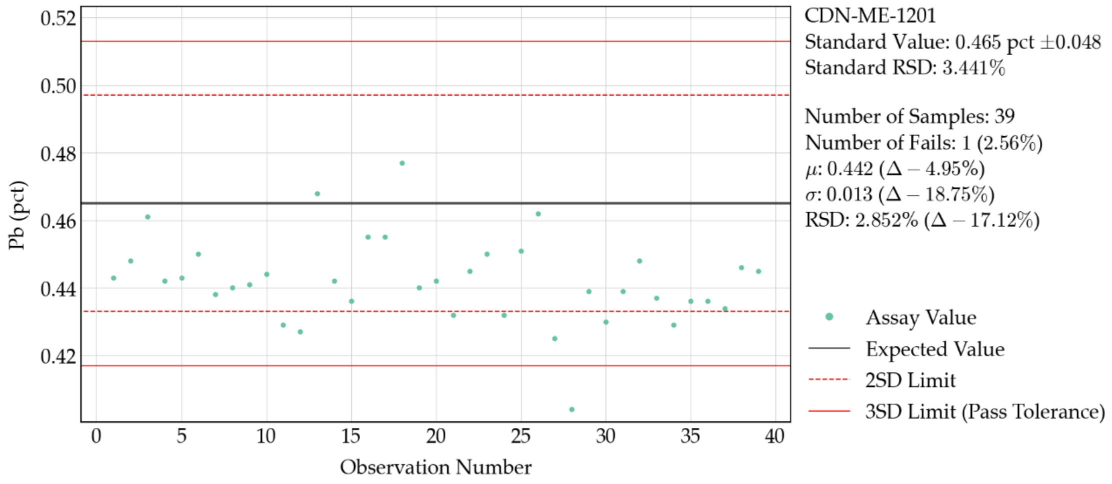


Figure 11.23 Phase 2 – Standard CDN-ME-1201 Pb assays.



11.4.3.11 Phase 2 – Standard CDN-ME-1706

Standard CDN-ME-1706 was used to assess the low-grade assay for Cu, Zn and Pb. This reported values for this standard are 0.831% Cu ± 0.036% Cu, 0.291% Zn ± 0.01% Zn and 630 ppm Pb ± 60 ppm Pb. A total of seven (7) Cu assay results for this standard failed to fall within 3 standard deviations from the certified value (Figure 11.24). One sample returned a Zn assay results outside of 3 standard deviations from the certified value (Figure 11.25). All samples returned Pb assays within the acceptable range for this standard (Figure 11.26).

Figure 11.24 Phase 2 - Standard CDN-ME-1706 Cu assays.

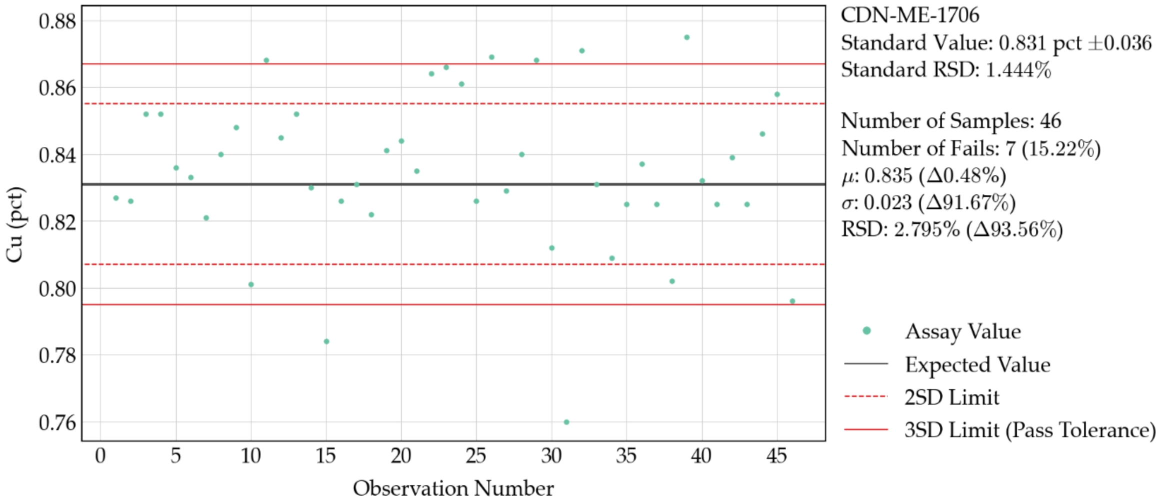


Figure 11.25 Phase 2 - Standard CDN-ME-1706 Zn assays.

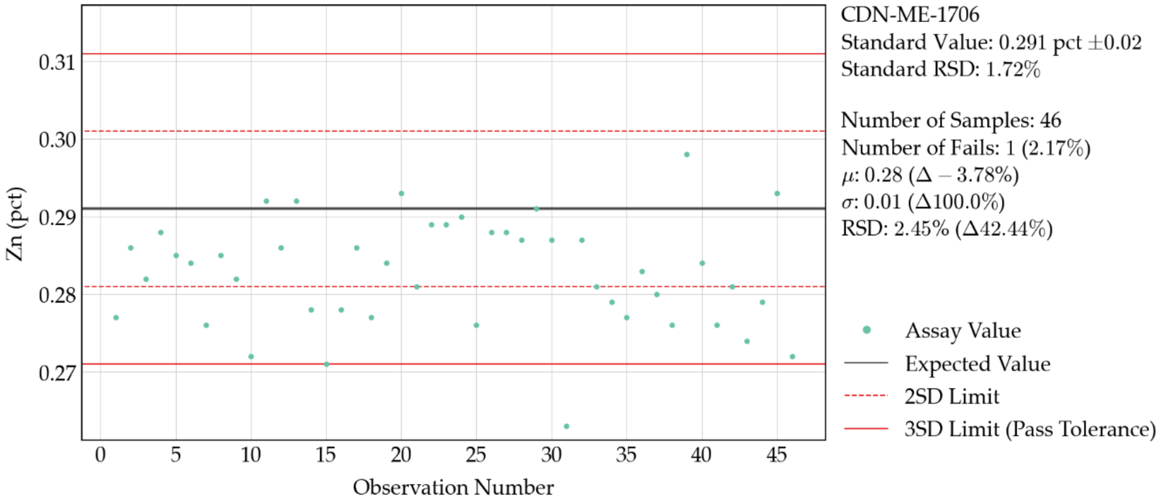
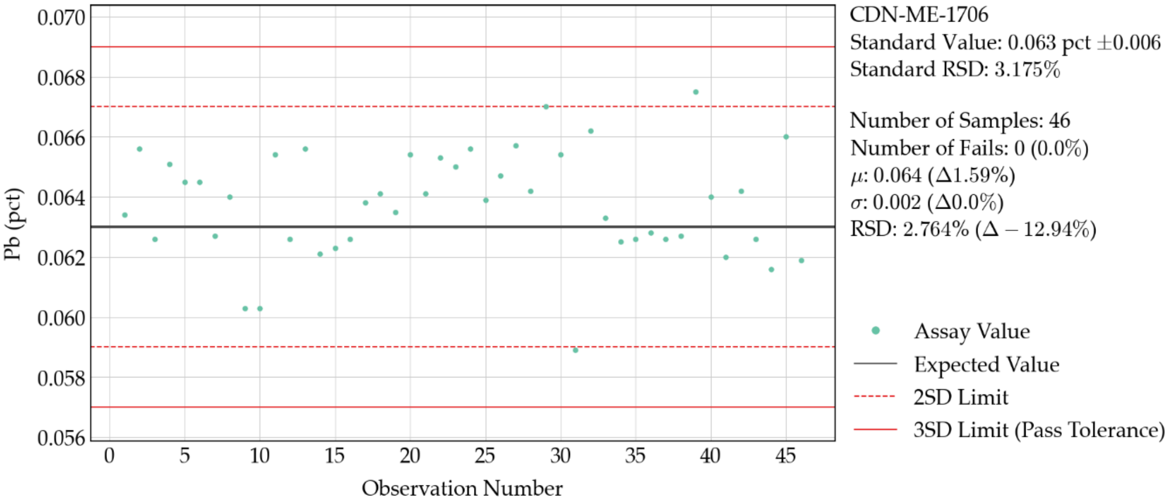


Figure 11.26 Phase 2 - Standard CDN-ME-1706 Pb assays.



11.5 Adequacy of Sample Collection, Preparation, Security and Analytical Procedures

Based upon a review of Canadian Copper's and other company's 1955 to 2021 sample collection, sample preparation, security, analytical procedures, and QA/QC procedures used at the Chester Project, it is the opinion of the author and QP that they are appropriate for the type of mineralization that is being evaluated and the stage of the project. Assay results from modern drilling including FNR, Explor and Canadian Copper agree with and confirm results from the historical pre-FNR drillholes. The QA/QC measures, including the insertion rates and performance of blanks, standards, and duplicates for the 2021 drilling indicate the observed failure rates are within expected ranges and no significant assay biases were apparent. For future infill and delineation drilling programs it is recommended that a comprehensive follow-up QA/QC program be employed. The QA/QC program should include the re-analysis of failures outside of the accepted ranges for standards that are within anomalous mineralized zones. The re-runs should include 10 samples above the failed standard, the standard, and 10 samples below the failed standard.

Based upon the evaluation of the drilling, sampling and QA/QC programs completed by Canadian Copper and reviewed by APEX personnel, it is Mr. Dufresne's opinion that the Chester Project's drill and assay data are appropriate for use in the resource modelling and estimation work discussed in Section 14.

12 Data Verification

12.1 Data Verification Procedures

Stefan Kruse, Ph.D., P. Geo., a co-author, conducted a site inspection of the Chester Property for data verification purposes on June 5th to 6th, 2021 following the Phase 1 drill program. A second site visit was conducted on December 12th, 2022 after the Phase 2 drill program. Verification samples were collected from float and selected Phase 1 2021 core holes. Drill hole 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 and Mr. Hupé, senior geologists with Geominex in charge of the 2021 drill programs.

Verification of the drill hole database included a review of the various digital drill hole tables provided by Puma which were compared against scans of hard copy logs, surveys and collar files. This was possible for the FNR drill holes completed between 2006 and 2007 drill holes. Drill logs for pre-FNR holes are not available. Original assay certificates were provided for a wider range of drilling, however, tables relating sample number to drill hole were scarce. All of the available assay certificates were reviewed and compared against the drill hole database. There were a few errors associated with the detection limits, there errors were corrected in the database. There were a number of omissions of a data, particularly for secondary metals, which were all added to the database.

12.2 Validation Limitations

No pre-2021 drill holes were available at the time of the site visit for inspection.

12.3 Drill Hole Database Verification

12.3.1.1 Initial Drill Hole Database Verification

In Fall 2021, an initial data verification was completed on select historical data, including the First Narrows drill hole data by APEX personnel under the supervision of Mr. Dufresne. The data verification was completed to ensure the validity of the historical data contained in the Issuer's database and reported in Section 6 of this Technical Report. The Issuer intended to use the FNR drill hole data to assist in the geological understanding of the Property, in future exploration targeting, to guide future drill programs and possibly for use in future mineral resource estimate calculations.

Drill logs were provided for the majority of FNR drill holes. Twenty out of 173 holes were spot checked for collar location accuracy. Minor discrepancies in the location were noted for 2 holes and 1 error in the dip. Some drill logs incorrectly state the coordinates are in Zone 20, whereas the Chester Project lies in NAD 83 Zone 19. The zone was correctly entered in the database and was left as such.

Spot checks of assay values for Cu%, Pb% and Zn% from original lab certificates against drill logs and drill tables were conducted for the FNR drill holes. A total of 167 assays were checked and only minor discrepancies were noted. The errors were partially due to rounding on the 2nd decimal place or entry in low assay samples (i.e., 0.01 entered instead of 0.001). A total of 5 rounding errors were identified, and 10 minor typographical errors were identified. Two sets of assays were entered incorrectly.

12.3.1.2 Extended Drill Hole Database Verification

In 2022, a thorough review of the entire drill hole database was completed by APEX Personnel under the direct supervision of Mr. Dufresne. The purpose of database verification was to verify the historical assays, ascertain the validity and availability of the historical data and compile missing and recent drilling results. A total of 805 historical drill holes totalling 70,804 m have been completed at the Property from 1955 to 2016. An additional 33 holes were completed in 2021. The drill hole data was imported into Micromine software to create a drill hole database (DHDB). Validation tools of the software were used to assist in the data verification. Issues identified during the validation included: duplicate intervals, overlapping intervals, missing assays, missing collars, missing downhole surveys. All issues where background data was available were checked and rectified. All duplicate intervals were removed from the final database.

The database verification of the historical data entailed an extensive check program that compared the historical data to available original drill logs, cross-sections, assay certificates, collar coordinates and location maps. Each vintage of drill holes: pre-FNR drilling, FNR drilling, and Explor drilling was reviewed and verified. All assays were reviewed and verified against available data. For the pre-FNR holes it was noted that numerous historical assays for Ag, Au and Zn were not captured in the database provided by the client. All available assay data for Ag, Au and Zn was added to the database along with any missing Cu and Pb data that was identified. All transcription errors identified in the database were rectified. Effectively the entire historical database was checked against all available original paper (pdf) documents.

The drilling and assay data for the 2021 drill holes was received directly from the client as digital excel files and assay certificates which were entered directly into the database. Dr. Kruse conducted spot checks of 5% of the Phase 2 drill hole database results against original assay certificates and not discrepancies were noted.

A concise comparison of assays from pre-FNR drill holes versus FNR and recent drill hole data was completed. APEX Personnel under the direct supervision of Mr. Dufresne compared 10 pairs of pre-FNR holes against nearby FNR and more recent drilling. Taking into account the unsampled intervals for the pre-FNR drill holes the overall mineralization and geological information was found to be comparable between the various vintages of drilling within the Stringer zone. This confirms the assessment presented in Sims, 2014 who concluded that the results between the pre-FNR and FNR drilling were sufficiently similar. Based on this review, the author and QP considers the pre-FNR drilling to be reliable for use in estimating mineral resources. A further robust validation of twinned and closely spaced holes of various vintages of drilling is recommended.

Secondary metals were not analysed consistently across all generations of drilling. Each domain was reviewed to determine if there were sufficient numbers of assays present for the secondary metals to be included in the mineral resource estimation. For each of the secondary metals, all intervals with missing assays were assigned a nominal waste value. The secondary metal was estimated for each domain where that element had <50% nominal waste. This should provide a conservative indication of the potential for secondary metals within that domain. It was found that Au should not be estimated for any of the domains, whereas sufficient analyses were present for Pb, Zn and Ag to be estimated in some of the domains as shown in Table 12.1. Examples of the cumulative frequency plots highlighting the percentage of assays above a nominal waste value are shown for two domains in Figures 12.1 and 12.2.

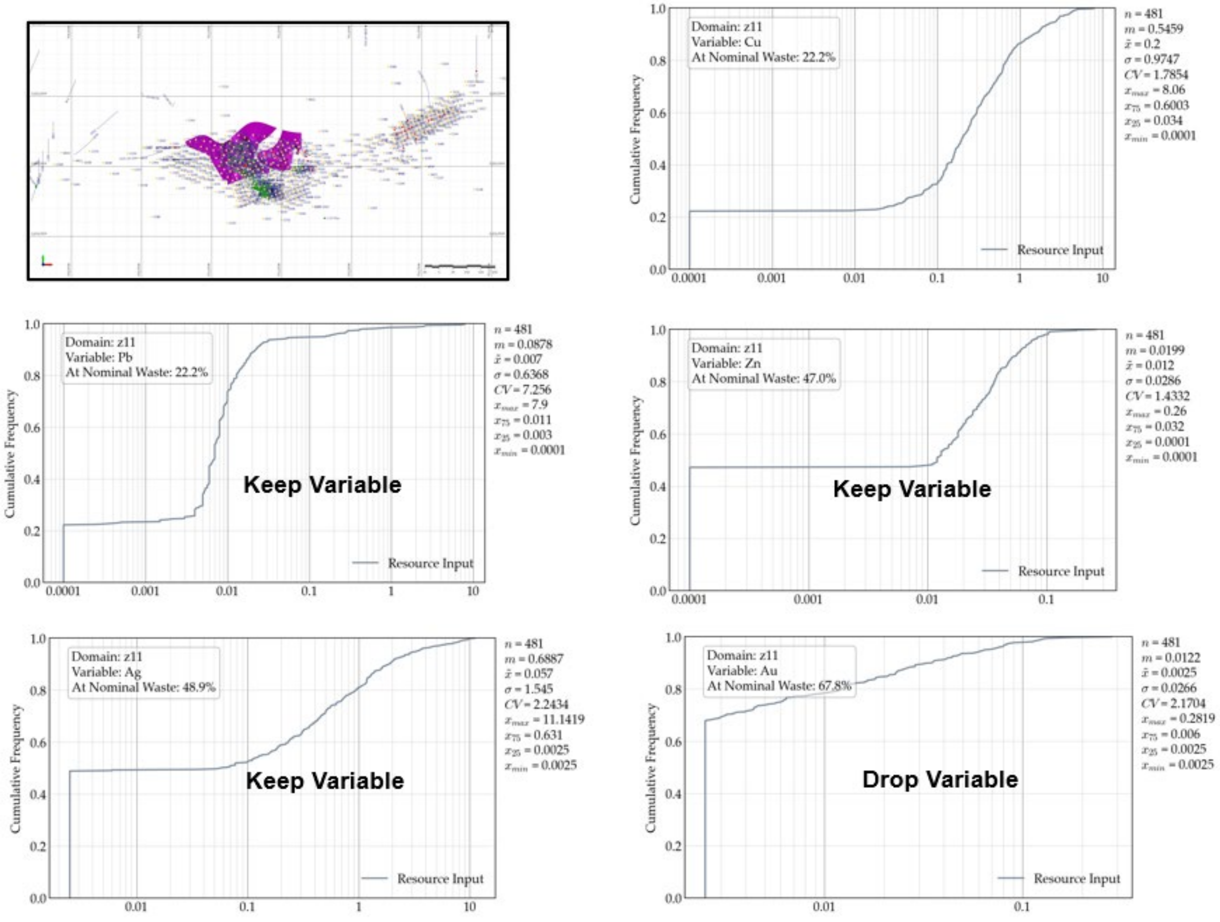
Table 12.1: Assessment for inclusion of secondary metals in resource estimation domains.

Domain	Number of Composite samples	Cu	Pb	Zn	Ag	Au
z3	1658	Yes	Yes	-	-	-
z4	1593	Yes	Yes	-	-	-
z2	1439	Yes	Yes	-	-	-
z8	904	Yes	Yes	Yes	Yes	-
z1	901	Yes	Yes	-	-	-
MS2	847	Yes	Yes	Yes	-	-
z7	845	Yes	Yes	-	-	-
z11	466	Yes	Yes	Yes	Yes	-
z13	463	Yes	Yes	-	-	-
z5	396	Yes	Yes	-	-	-
z6	340	Yes	-	-	-	-
LG	7399	Yes	-	-	-	-

12.4 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.

Figure 12.1 Domain Z11 – 466 Composites

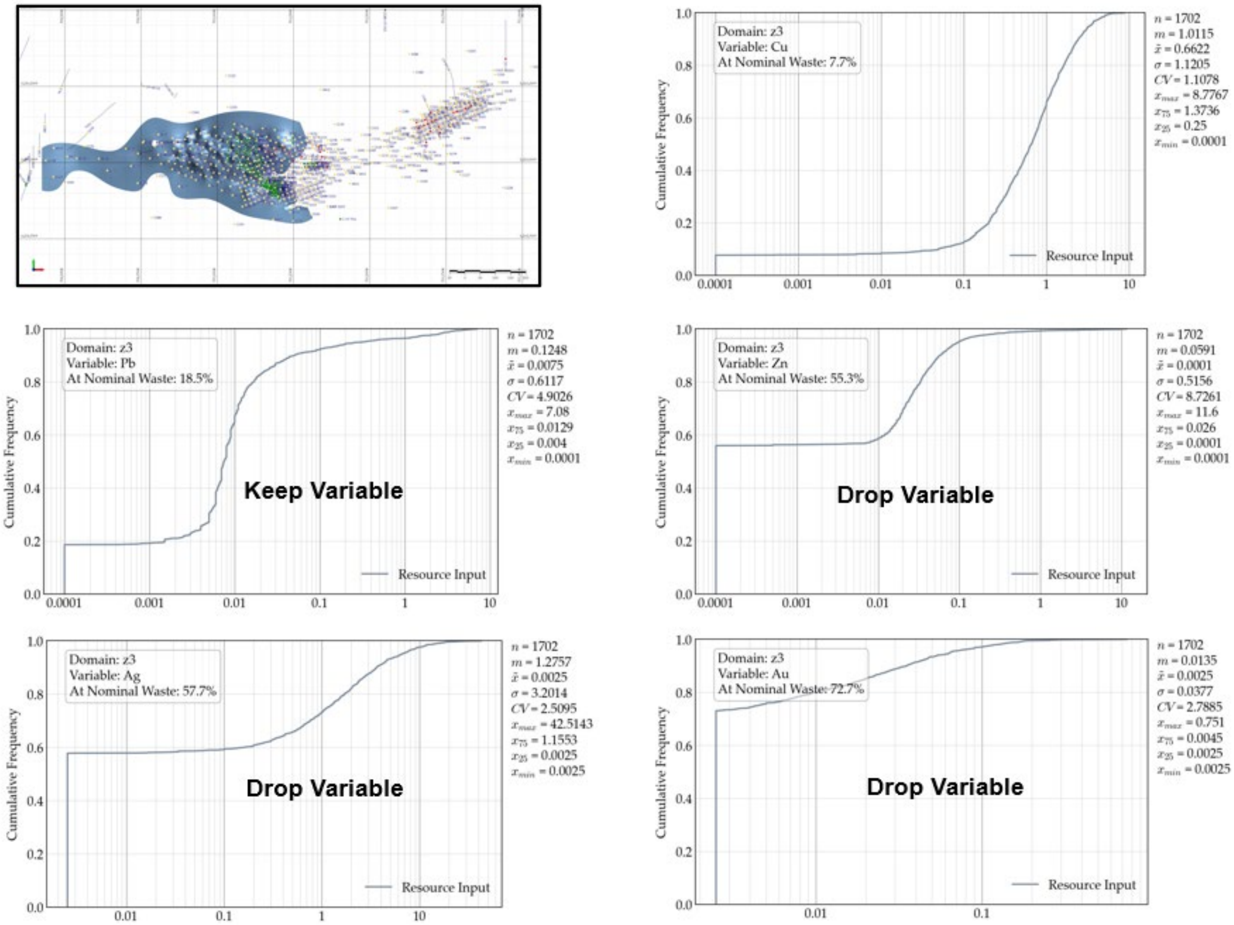


The authors are satisfied, and take responsibility, to include the exploration data including geochemical surveys and drill information as background information for this Technical Report.

In the future, the authors recommend that the sample collection, preparation, security, analytical procedures and QA/QC procedures of any Chester 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^{TM} TAB files, Excel^{TM} 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.

Figure 12.2 Domain Z3 – 1658 Composites



12.5 Qualified Person Site Inspection

Stefan Kruse, Ph.D., P. Geo., a co-author, conducted an initial site inspection of the Chester Property for data verification purposes on June 5th to 6th, 2021 following the completion of the Phase 1 drill program. A second site visit was conducted on December 12th, 2022 following the completion of the Phase 2 drill program. The site visits included Property tours facilitated by Mr. Étienne Forbes, a geologist with Geominex., and former project geologist on the Chester Project and Mr. Alain Hupé, senior geologist with Geominex. Additionally, time was spent at the former Puma core library in Bathurst, NB, observing the historical core stored at that facility, and collecting verification samples. During the second site visit, Dr. Kruse visited the current core logging and sampling facility in St. Quentin, NB. Access to the site was via secondary highways and logging roads.

The objectives of the site visit included:

- Verification of selected drill hole 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. Cu and Zn overlimit samples were processed using the OG662 four-acid ICP package.

The Property site visits included stops at the West Stringer Zone, Central Zone and East Zone. The historical portal and remnants of development infrastructure were also observed (Figure 12.3). Numerous historical drill collars are present, marked with cemented drill rods. Areas of disturbed ground due to trenching, drilling or road building are characterized by significant amounts of massive or disseminated sulphide bearing rock and gossanous material. Pyrite, pyrrhotite, chalcopyrite and sphalerite were observed in sub-crop and float.

Figure 12.3 Historical portal to underground workings from the June Site visit.

Grab samples collected from massive sulphide horizons contained anomalous Ag, Cu, Pb and Zn consistent with the style and tenor of mineralization previously described on the Property (Figure 12.4). Verification grab sample results are shown in Table 12.2.

Verification samples were collected from the Phase 1 2021 core stored at the core storage and logging facility in Bathurst, NB. Core from mineralized intervals from holes C21-05 and C21-07 contained massive to semi-massive pyrite, chalcopyrite, sphalerite and galena hosted in intermediate volcaniclastic or metasedimentary rock, consistent with logged descriptions of the core. No core from pre-2021 holes was available for inspection.

Table 12.2: Verification grab sample results from the Chester Property.

Sample	Easting N83Z20	Northing N83Z20	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Comments
986488	710700	5220165	1.03	1110	358	333	Gossanous float from an area of reclaimed trenches
986489	710435	5219862	58.6	123000	218	5870	Massive sulphide in waste rock pile near main portal

In general, there is reasonable agreement between the original assay results and verification sample results (Table 12.3), 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.

During the December 12th site visit, selected intervals of mineralized core from the Phase 2 program (holes C21-08; C21-09; C21-10; C21-14; C21-26) were examined at the St. Quentin facility. The observed geology was consistent with the drill database descriptions. Additionally, the intervals examined contained sulphide assemblages and/or gossan consistent with the reported mineralization.

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

Table 12.3: Phase 1 drill hole verification samples.

Drill Hole	From	To	Sample (orig)	Sample (ver)	Cu_ppm (orig)	Cu_ppm (ver)	Zn_ppm (orig)	Zn_ppm (ver)	Pb_ppm (orig)	Pb_ppm (ver)
C21-07	386	386.75	C098867	986490	35500	36700	553	583	14	13.9
C21-07	325	325.2	C098810	986491	580	754	7870	9130	4530	6010
C21-07	398	398.55	C098882	986492	627	2310	121	145	<0.5	12.5
C21-05	7	8	C098444	986493	907	1040	333	357	692	755
C21-05	14.5	15.5	C098449	986494	10350	9990	468	444	175	182.5
C21-05	23	24.9	C098613	986495	3690	4260	1850	1330	278	157

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. Some minor discrepancies were noted (i.e. hole C-07-186; see Table 12.4). Historical drill collars are marked with cemented drill rods (Figure 12.5), most of which are in good condition. The 2021 drill holes are marked with wooden stakes and with capped and labelled casing.

Figure 12.4 2021 Site visit locations and verified collar locations.

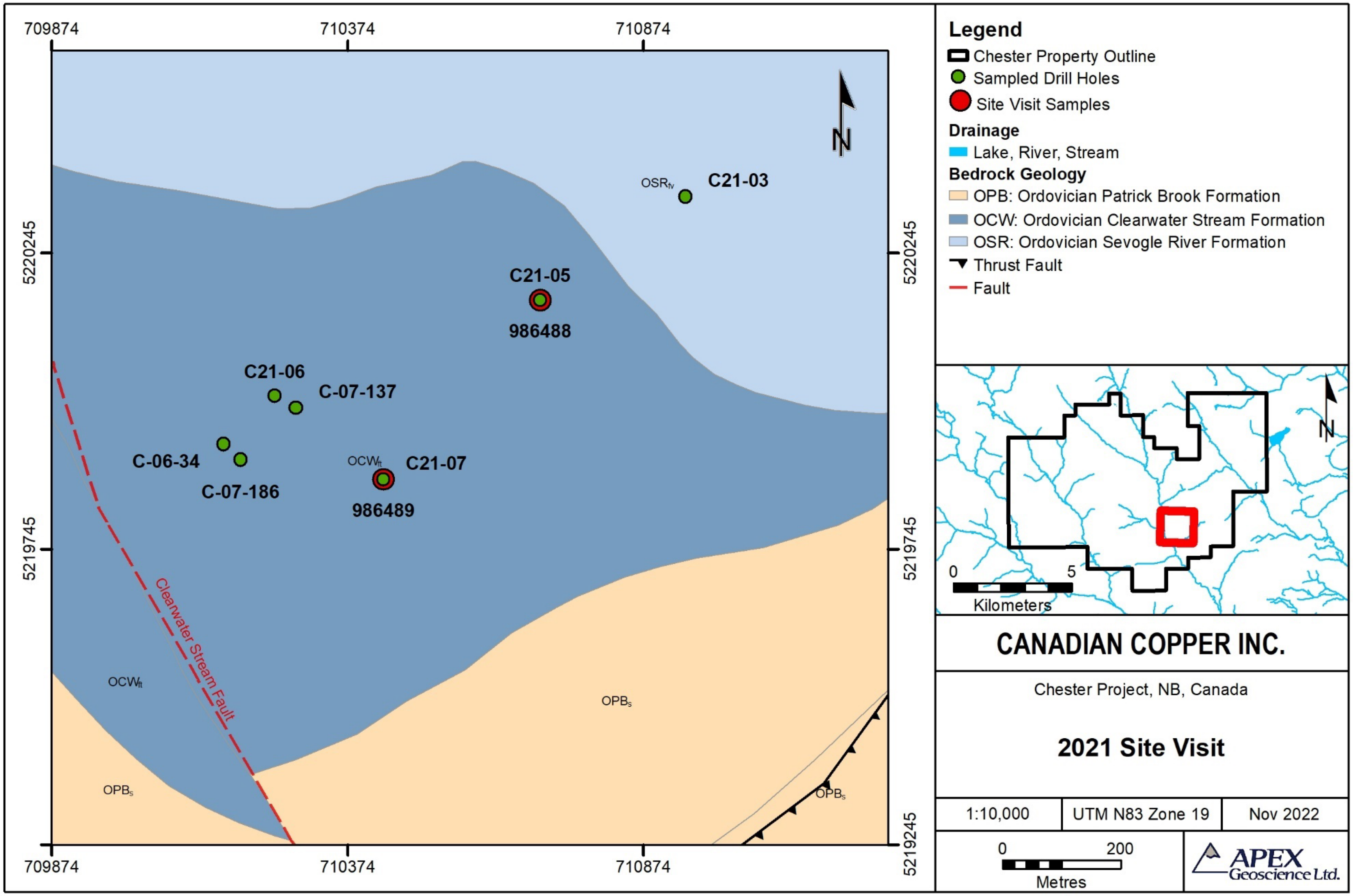


Table 12.4: Drill hole collar verification locations.

HOLE ID	Site Visit Observations				Database Values			
	EAST NAD83Z20	NORTH NADZ20	Azimuth	Dip	EAST NAD83Z20	NORTH NADZ20	Azimuth	Dip
C-07-186	710194	5219896	310	-45	Not in DB			
C-06-34	710165	5219922	N/A	N/A	710168	5219920	0.00	-90
C21-06	710251	5220003	N/A	N/A	710250	5220005	360	-90
C-07-137	710287	5219983	N/A	N/A	710287.5	5219987.5	0.00	-90
C21-05	710700	5220165	360	-90	710700	5220165	360	-90
C21-03	710945	5220340	360	-60	710945	5220340	360	-60
C21-18	710680	5220122	360	-60	710677	5220121	360	-60
C21-19	710663	5220115	360	-60	710659	5220114	360	-60
C21-22	710688	5220067	360	-60	710685	5220066	360	-60
C21-32	710355	5219997	360	-60	710353	5219999	360	-60
C21-33	710360	5219983	360	-60	710359	5219985	360	-60

Figure 12.5 Historical drill hole collar in the West Stringer Zone.

13 Mineral Processing and Metallurgical Testing

No Mineral Processing or Metallurgical Testing has been completed for the Chester Property by the current Issuer. Historical Metallurgical Testing is discussed in detail in Section 6.2.5 and summarized briefly below.

FNR submitted several sets of drill core samples from the 2003 and 2007 drill programs to RPC (Research and Productivity Council) Laboratory in Fredericton, NB for metallurgical test work. The samples selected for metallurgical testing were selected to be representative of the Stringer Zone mineralization present at the Chester Deposit. The historical metallurgical test work indicated that concentrates grades in the range of 27-28% Cu can be produced at overall copper recoveries of 97-98%. Testing also showed that the tailings contain very low levels of contained sulphur (Sim and Davis, 2008). No metallurgical test work has been completed to assess Zn, Pb, Ag or Au metal recoveries.

14 Mineral Resource Estimates

The Mineral Resource Estimate (MRE) herein is based upon the historical drilling and drilling conducted during 2021 and supersedes all of the prior resource estimates for the Chester Copper Project ("Chester"). Other older resource estimates constructed for other companies summarized in Section 6 are considered historical in nature.

This section details an updated MRE completed for the Chester Copper Project by APEX Geoscience Ltd. (APEX) of Edmonton, Alberta, Canada. Mr. Tyler Acorn, M.Sc. completed the mineral resource estimate, with assistance from Mr. Warren Black, M.Sc., P.Geo., under the direct supervision of Mr. Michael Dufresne, M.Sc., P.Geol., P.Geo. Mr. Dufresne is an independent Qualified Person (QP) with APEX and has supervised all aspects of the preparation of the MRE takes responsibility for the MRE herein.

Definitions used in this section are consistent with those adopted by the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Council in "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" dated November 29, 2019 and "Definition Standards for Mineral Resources and Mineral Reserves" dated May 10th, 2014, and prescribed by the Canadian Securities Administrators' NI 43-101 and Form 43-101F1, Standards of Disclosure for Mineral Projects. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

14.1 Introduction

Statistical analysis, three-dimensional (3D) modelling and resource estimation was completed by Mr. Tyler Acorn, M.Sc. with assistance from Mr. Warren Black, M.Sc., P.Geo., of APEX (under the direct supervision of Mr. Michael Dufresne, M.Sc., P.Geol., P.Geo.). Mr. Dufresne supervised all aspects of the preparation of the MRE and takes full responsibility for Section 14 of the Technical Report. The workflow implemented for the calculation of the Chester MRE was completed using the commercial mine planning software MICROMINE (v 22.5), commercial resource estimation software Resource Modeling Solutions Platform (v.1.9.2), and commercial pit optimization software Deswik (v2022.2). Supplementary data analysis was completed using the Anaconda Python distribution (Continuum Analytics, 2017) and a custom Python package developed by Mr. Black and Mr. Acorn.

Canadian Copper provided APEX with the Chester Project drillhole database that consists of analytical, geological, density, collar survey information and downhole survey information. The provided data was reviewed by APEX personnel and used to conduct a Chester Resource Estimate in 2022. In the opinion of the APEX authors, the current Chester drillhole database is deemed to be in good condition and suitable to use in ongoing resource estimation studies.

The MRE was calculated using a block model size of 3 m (X) by 3 m (Y) by 3 m (Z). The copper grade was estimated for each block using Ordinary Kriging with locally varying anisotropy to ensure that grade continuity in various directions is reproduced in the block model. The percentage of the volume of each block below the bare earth surface and within the mineralization domain was calculated using the 3D geological models and a 3D surface model. Details regarding the methodology used to calculate the MRE are documented in this section. The mineral resources defined in this section are not mineral reserves.

Modelling was conducted in the Universal Transverse Mercator system relative to Zone 19 of the North America Datum 1983 (EPSG:26919). The database consists of 712 drillholes containing useable downhole data completed at the Chester Project between 1960 to 2021, of which 664 were used in the 2022 resource modelling. Estimation domains were constructed using a combination of copper grade and all available geological information that helped constrain different controls on mineralization. The estimation domains were used to subdivide the deposit into volumes of mineralized zones and the measured sample intervals within those volumes for geostatistical analysis.

14.1.1 Secondary By-Product Metals

APEX personnel evaluated multiple secondary metals at the Chester Project, including Lead (Pb), Zinc (Zn), Silver (Ag) and Gold (Au). Due to inconsistent assaying of the secondary metals by historical drilling operators, the secondary metals are not included in the 2022 Mineral Resource Estimate.

Modelling of potential secondary metals was conducted by APEX personnel for some of the interpreted mineralization domains where the majority of the sample intervals inside the domains were assayed for the secondary metal. The secondary metal estimations are used to show the potential upside for some mineralization domains for the Chester Project and are discussed below in Section 14.12.

14.2 Drill Hole Data Description

14.2.1 Drill Hole Data

During 2021, Canadian Copper and the former operator Puma Exploration Inc. (“Puma") completed a two-phase drill program. Data from the 2021 drilling program was captured and validated on-site during the drill program. At the conclusion of the 2021 program, APEX personnel compiled the results with the newly validated historical data, as discussed in Sections 11 and 12. In the opinion of Mr. Dufresne, the current Chester drill hole database is deemed to be in good condition and suitable to use in ongoing resource estimation studies.

The Chester database contains a total of 712 exploration drill holes (collars and assays) totalling 71,582 m for drill holes completed between 1951 and 2016 by previous operators and in 2021 by Puma and Canadian Copper (33 holes totalling 3,324 m). Of the 712 drill holes, 664 holes intersected the estimation domains and were used in the MRE. The portion of the drill hole database used in the MRE consists of a total of 16,069 unique sample/interval entries of which 14,737 sample/interval entries are within the estimation domains and were used in the Mineral Resource Estimation.

14.2.2 Mineral Resource Estimate Drill Hole Database

For the 664 drill holes that intersect the mineralization domains, 64,787 m were drilled and there are a total of 16,069 samples in the database that were assayed for copper (Table 14.1). A total of 38,959 m were not analyzed, and it is assumed that they were selectively not analyzed likely due to low sulphide content and therefore were classified as "no sample" (NS). A total of 67 drill hole sample intervals have explicit documentation that drilling did not return enough material to allow their analysis and are classified as "insufficient recovery" (IR). It is essential to distinguish between these two cases as they are treated differently during resource estimation. Intervals classified as "no sample" (NS) are assigned a nominal waste value of 0.0001% Cu, half the value of the lower detection limit of modern analyses. Samples that returned assays less then detection limit were assigned values of half the detection limit. Samples with unknown detection limits and/or assay methodologies and in the database as zero were assigned a value of 0.0001% Cu. Intervals classified as "insufficient recovery" (IR) were left blank.

Table 14.1: Summary of Drill Holes that intersect the interpreted mineralization domains.

	Pre-FNR	FNR	Explor	Puma	Canadian Copper
No. Holes	450	182	4	2	26
Total Samples	6,815	6,730	270	152	2,102
Meters Not Sampled/Missing	24,519.4	6,637.0	551.0	92.1	88.3
Total Meters	35,383.3	15,201.9	816.0	223.0	2,139.0
No. Cu Assays	5353	6082	232	139	2073
Drilling Years	1963-1999	2003-2007	2014-2016	2021	2021

All data was validated using the Micromine validation tools when the data was imported into the software. Validation errors that were encountered include data entry errors rectified by consulting original documentation. Mr. Dufresne recommends in section 14.12 that further drilling in and around areas dominated by historical drill holes should be completed to determine if a more appropriate and less conservative background value for copper and other secondary metals should or could be applied to non-sampled and non-assayed intervals. A detailed discussion on the verification of historical (pre-2000) and modern drill hole data is provided in Section 12 of this report. Mr. Dufresne considers the current Chester drill hole database to be in good condition and suitable for ongoing resource estimation studies and take responsibility for the database.

14.2.3 Secondary Metals Pb, Zn and Ag Drill Hole Data

Potential secondary metals Pb, Zn, and Ag were evaluated within the Chester drill hole database. Historical analysis of some of the secondary metals was highly inconsistent. Overall, lead (Pb) was analysed for the majority of the historical drill hole samples, however Zn and Ag analyses were less consistent and only completed in a few of the interpreted mineralization domains. Table 14.2 summarizes the samples inside the interpreted domains that were assayed for the secondary metals by different historical drilling operators. Samples from drilling by pre-FNR drilling operators were rarely assayed for Zn or Ag, but Pb assays were completed for 54% of the sampled meterage. The majority of the samples collected from drilling by post-2000 drilling operators that fell within the interpreted mineralization domains had assays for all 3 secondary metals Pb, Zn, and Ag. However, the FNR drilling was focused on the core Cu Stringer Zone and only more recent drilling by the Issuer has targeted the Central and Eastern Massive Sulphide Zones where significant secondary metals are known to be present. Additional drilling across the Chester Deposit focused on areas dominated by historical drilling is required to better delineate and identify areas of important secondary metals.

Table 14.2: Drilling summary by drilling operators of secondary metal sampled intervals inside all of the interpreted mineralization Domains.

	Pre-FNR	FNR	Explor	Puma	Canadian Copper
No. Holes	450	182	4	2	26
Total Meters Drilled	14,867.3	7,529.7	260.7	54.9	502.7
Pb: Meters Not Sampled/Missing	8,019.4	1,449.6	120.4	0.0	2.9
Pb: % Not Sampled	53.90%	19.30%	46.20%	0.00%	0.60%
Zn: Meters Not Sampled/Missing	13,109.9	1,390.3	120.4	0.0	1.9
Zn: % Not Sampled	88.20%	18.50%	46.20%	0.00%	0.40%
Ag: Meters Not Sampled/Missing	14,160.8	1,657.1	120.4	0.0	1.9
Ag: % Not Sampled	95.20%	22.00%	46.20%	0.00%	0.40%
Drilling Years	1963--1999	2003-2007	2014-2016	2021	2021

APEX personnel evaluated the distribution of sampled intervals for each of the secondary metals within each of the 12 interpreted mineralization domains, the percentage of metres assayed for each secondary metal, by domain, is shown in Tables 14.3 and 14.4. Lead (Pb) was adequately analysed in many of the domains, however Zn and Ag were only analysed adequately in a smaller subset of domains. After reviewing the distribution of assayed samples within the domains, APEX personnel conducted modelling of the secondary metals within the subsets of domains shown in Table 14.5. Due to the lack of assayed samples for the secondary metals within the historical data, the secondary metals are not incorporated into the current Mineral Resource Estimate. APEX personnel have recommended infill drilling be completed to supplement the distribution of available assays for the secondary metals in order to potentially remedy this situation in future. Further discussion of the secondary metals is presented below and in Section 14.12 and 25.2 as potential future upside to the Chester Deposit MRE.

Table 14.3: Summary of sampled intervals with secondary metal assays inside each of the interpreted mineralization domains. (Table 1 of 2)

	z1	z2	z3	z4	z5	z6
No. Holes	196	301	331	357	99	67
Total Meters Drilled	1,261.1	2,180.9	2,557.7	2,340.1	561.5	442.4
Pb: Meters Not Sampled/Missing	381.8	327.4	530.8	456.8	248.1	211.3
Pb: % Not Sampled	30%	15%	21%	20%	44%	48%
Zn: Meters Not Sampled/Missing	773.2	1,172.5	1,452.0	1,177.9	447.7	311.7
Zn: % Not Sampled	61%	54%	57%	50%	80%	71%
Ag: Meters Not Sampled/Missing	814.8	1,212.9	1,497.9	1,317.8	458.7	327.2
Ag: % Not Sampled	65%	56%	59%	56%	82%	74%

Table 14.4: Summary of sampled intervals with secondary metal assays inside each of the interpreted mineralization domains. (Table 2 of 2)

	z7	z8	z11	z13	MS2	LG
No. Holes	168	183	113	85	98	580
Total Meters Drilled	1,232.6	1,335.3	688.9	687.8	1,138.4	8,788.4
Pb: Meters Not Sampled/Missing	546.5	233.2	128.7	338.1	513.2	5,676.2
Pb: % Not Sampled	44%	18%	19%	49%	45%	65%
Zn: Meters Not Sampled/Missing	716.7	587.9	309.5	436.6	536.3	6,700.3
Zn: % Not Sampled	58%	44%	45%	64%	47%	76%
Ag: Meters Not Sampled/Missing	800.9	644.9	321.3	495.8	889.2	7,158.7
Ag: % Not Sampled	65%	48%	47%	72%	78%	82%

Table 14.5: Interpreted Mineralization Domains that were modelled for each Secondary Metal

Secondary Metal	Domains with adequate Sampling for Estimation
Pb	z1, z2, z3, z4, z5, z7, z8, z11, MS2
Zn	z8, z11, MS2
Ag	z8, z11

14.3 Estimation Domain Interpretation

14.3.1 Geological Interpretation of Mineralization Domains

At Chester, the Stringer Zone mineralization occurs in a series of ten sub-parallel lenses or zones which show a reasonable degree of consistency in location, thickness, and grade. It is believed that these represent paleo-structures through which the mineralizing fluids were channelled during the formation of the MS Zone. This consistency has allowed for the interpretation of ten mineralized horizons which are used as distinct domains during the development of the resource model.

Stringer Zone mineralization occurs in veins ranging from less than one centimetre to several decimetres thick, containing varying amounts of chalcopyrite, pyrrhotite, and pyrite in a matrix typically comprised of chlorite (+/- biotite). The host rocks are most likely pervasively altered dacitic volcanics. Immediately east of the Stringer Zone domains there exists a lens of massive sulphides (MS Zone) comprised of varying amounts of pyrite, pyrrhotite, sphalerite, galena, and chalcopyrite.

The mineralization domains consist of 12 modelled domains that include 10 “stringer” zones, which occur as a network of dendritic veins that often show a very erratic distribution of mineralization, an upper massive sulfide (MS) domain, and a low-grade halo domain surrounding the other domains. These zones strike 200 degrees and dip at -20 degrees to the west-northwest and range from 1 m up to 30 m thick, with individual zones separated by 10 m to 15 m of barren to patchy mineralized chlorite schist. However, these zones merge with each other at some points and the total thickness of such intersections reaches 40 m.

The upper zone (Zone 11) is the smallest lens of mineralization existing between Zone 1 and Zone 2, averaging about 3 m thick, and measuring about 170 m in diameter. Based on a combination of FNR and historical drilling results, the middle (Zones 2, 4, 8) and lower (Zones 3, 7, 13) Stringer Zone domains extend for about 200 m along strike and approximately 500 m down plunge. Wider spaced drilling farther down-dip indicates that copper mineralization continues for up to an additional 500 m, however this is based on limited data and it appears to be characterized by narrow and somewhat irregularly distributed mineralization although this is based upon limited historical drilling. Stringer domain Zone 3, the lower domain, increases in thickness and grade on the eastern extents where it ultimately transitions into the MS Zone. This feature indicates that this may be the primary feeder zone for the MS Zone and that additional lenses related to Stringer Zones 1 and 2 may be eroded away.

14.3.2 Estimation Domain Interpretation Methodology

APEX personnel used an implicit modelling approach for constraining 12 estimation domains to a copper grade shell while still honouring interpretations of local geological controls on mineralization. The raw drill hole analytical data were composited and classified as either mineralized or waste. Those composites were then used as input by implicit modelling to generate the 3-D estimation domain wireframes that honour the observed geological controls on mineralization.

The mineralization domain construction utilized an approximate lower cut-off of 0.15% Cu for the interpretation and joining of mineralization shapes. Within the stringer and the MS mineralization zones, a total of about 16% of the total drilled meters inside the mineralization wireframes were not sampled, assumed to be waste, and assigned a nominal waste value of half the detection limit of modern assay methods (0.0001% Cu). Within the low-grade halo mineralization domain, a total of 55% of the total drilled meters inside the mineralization wireframe was not sampled, assumed to be waste, and assigned a nominal waste value of half the detection limit of modern assay methods (0.0001% Cu).

The estimation domains were evaluated in 3D and on a section basis. Control points were inserted to constrain spurious features in the generated wireframes and ensure that the underlying geology was honoured. The control points were used in a second pass of the implicit model to construct the final estimation domains. Plan view of the extents of the estimation domains projected to surface with the drill hole collar locations is shown in Figure 14.1, and an oblique cross-section showing the estimation domains, and drill strings are shown in Figure 14.2 along with a east-west section in Figure 14.3.

Figure 14.1 Plan View of the estimation domains extents projected to surface.

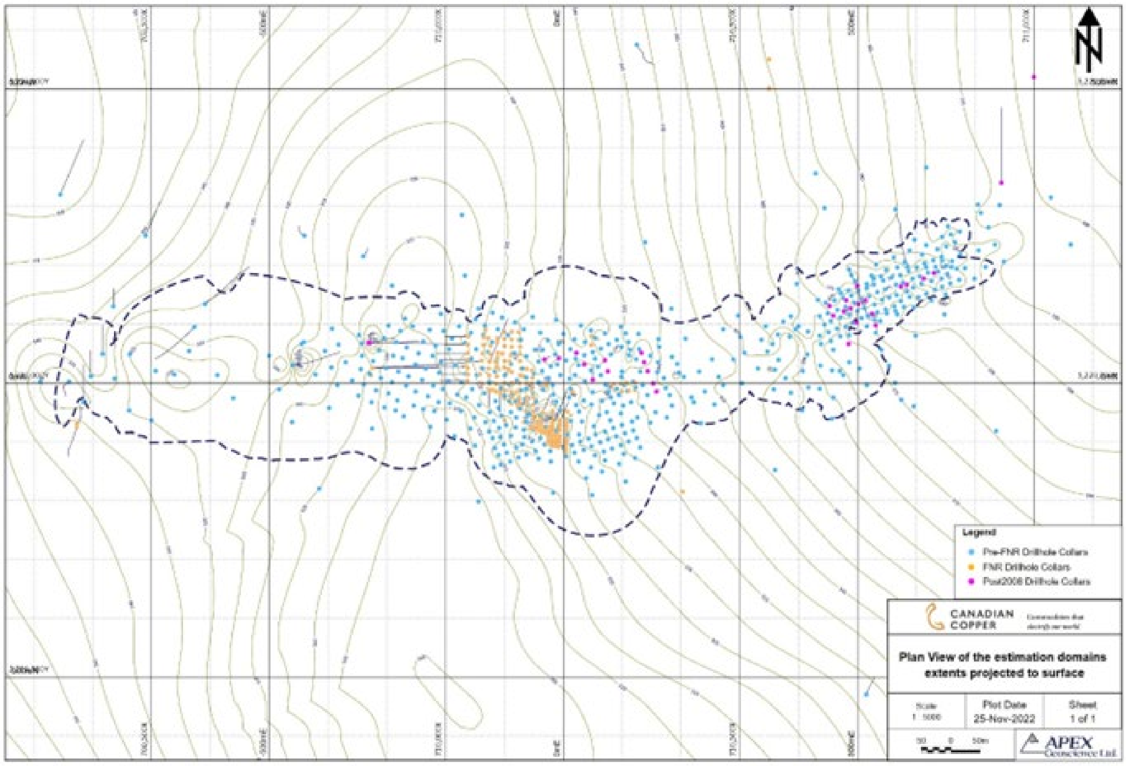


Figure 14.2 Example of the estimation domains outline in an oblique cross-section looking northeast (section window extends +/- 15 m).

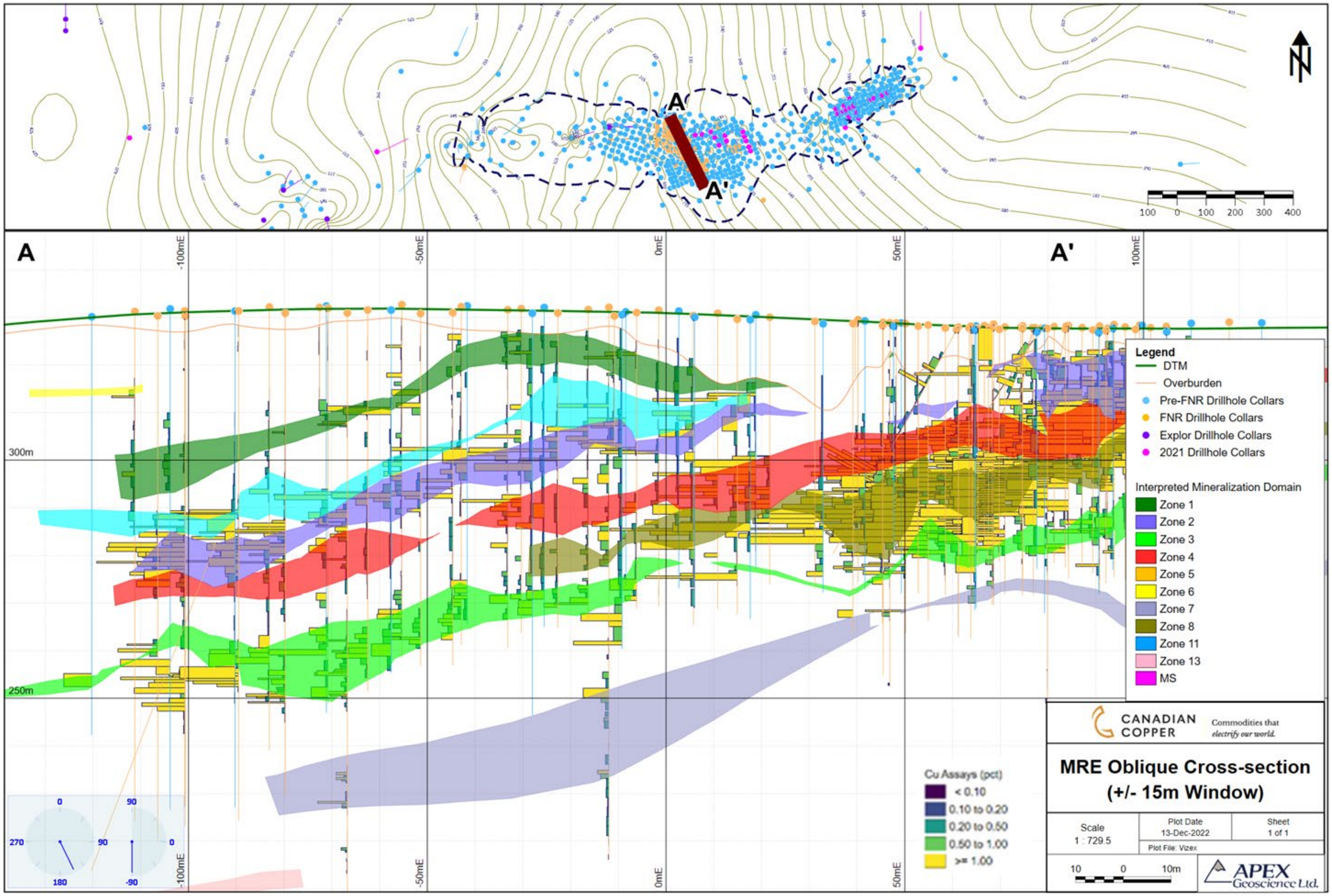
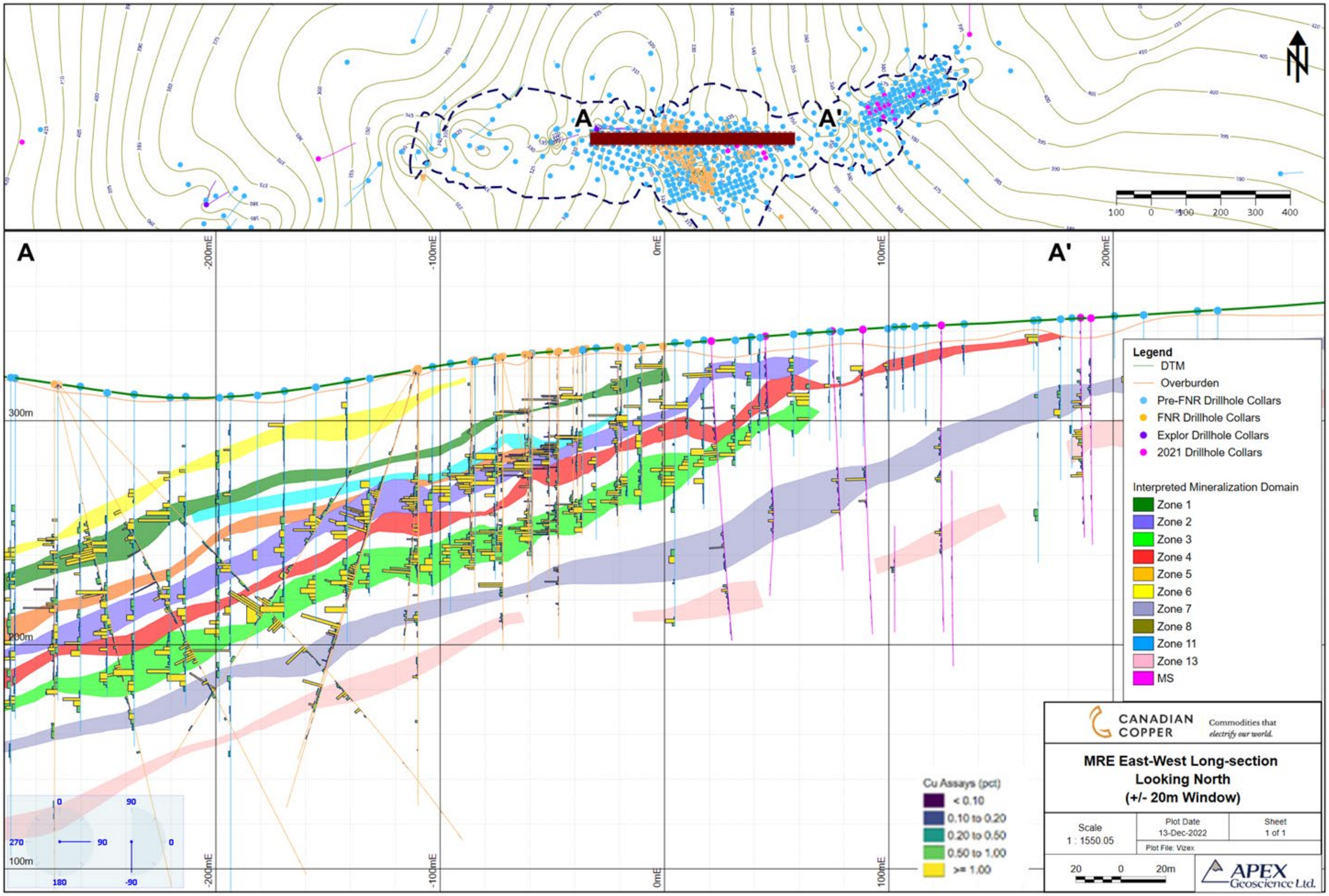


Figure 14.3 Example of the estimation domains outline in an east-west cross-section looking north (section window extends +/- 20 m).



14.4 Exploratory Data Analysis and Compositing

14.4.1 Bulk Density

Density measurements were acquired on 218 core samples in 2021. Table 14.6 summarizes the various density measurements. Statistical T-tests preformed on the Felsic tuff (mineralized and not mineralized, trace sulfide), rhyolite (not mineralized and trace sulfide) gossan (no plastic and plastic), semi-massive sulphide and massive sulphide showed differences in the density distributions. Median densities were applied to the block model based on the various rock types as detailed below.

Table 14.6: Average densities of the samples from different types of rocks

Rock types	Median Bulk density (g/cm^3)
Felsic tuff	2.78
Gossan	2.48
Massive Sulphide	4.38
Semi-Massive Sulphide	3.30

14.4.2 Raw Analytical Data

Cumulative histograms and summary statistics for the raw (un-composited) assays from sample intervals contained within the estimation domains are presented in Figure 14.4 and tabulated in Table 14.7 and Table 14.8. The assays within the estimation domains appear to exhibit a single coherent statistical population.

Figure 14.4 Cumulative frequency plot of raw copper assays (in %) from sample intervals flagged within the 12 estimation domains.

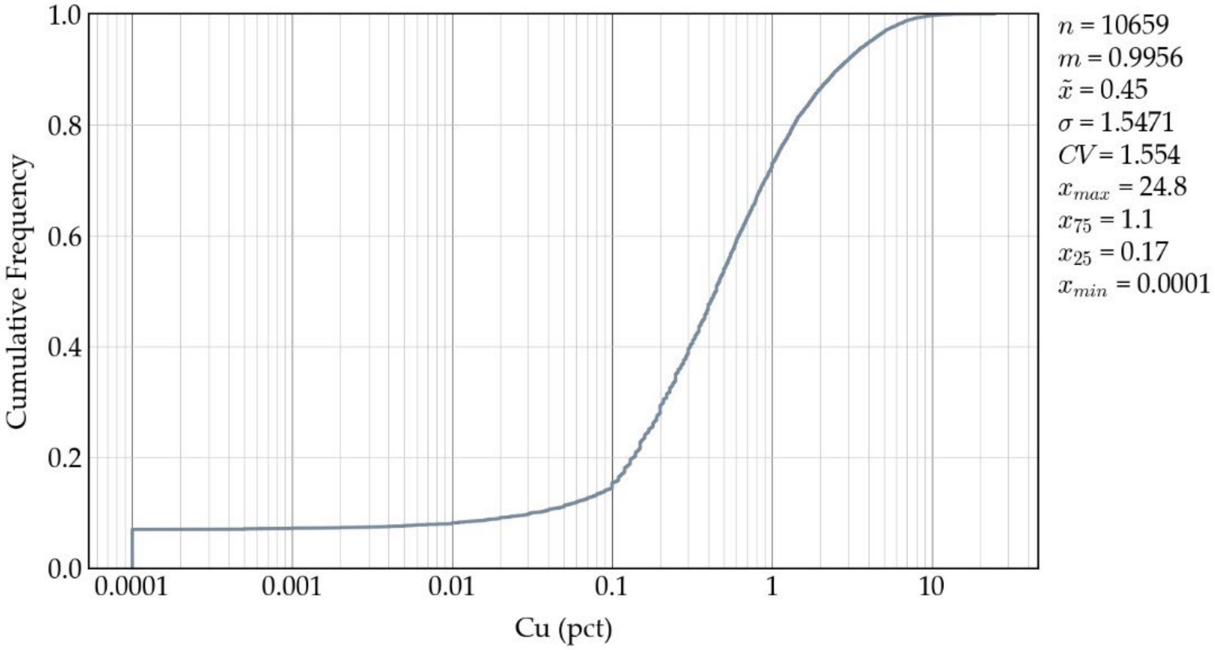


Table 14.7: Summary statistics of raw copper assays from sample intervals flagged within the estimation domains (Table 1 of 2).

	Global	z3	z2	z4	z8	z7	z1
count	10659	1546	1323	1318	907	686	648
mean	0.996	1.263	1.576	1.008	1.660	0.721	0.913
median	0.450	0.770	0.850	0.489	0.890	0.415	0.400
Standard deviation	1.547	1.613	1.966	1.506	2.006	1.218	1.441
variance	2.394	2.603	3.865	2.267	4.026	1.483	2.075
Coef variation	1.554	1.277	1.247	1.494	1.208	1.688	1.579
min	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25%	0.170	0.287	0.350	0.220	0.373	0.150	0.140
50%	0.450	0.770	0.850	0.489	0.890	0.415	0.400
75%	1.100	1.570	1.870	1.090	2.130	0.827	1.000
max	24.800	24.800	14.800	20.000	12.700	13.300	10.800

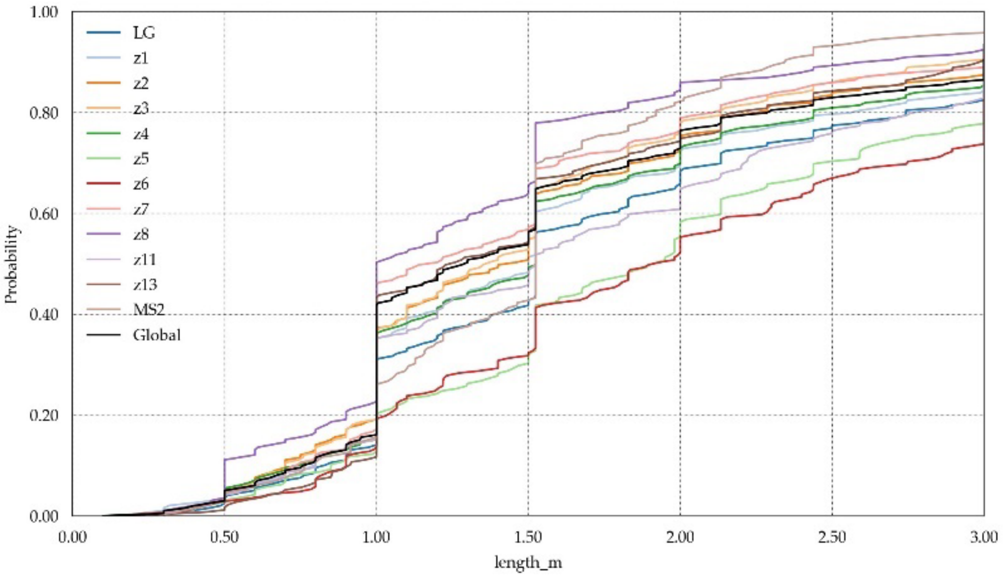
Table 14.8: Summary statistics of raw copper assays from sample intervals flagged within the estimation domains (Table 2 of 2).

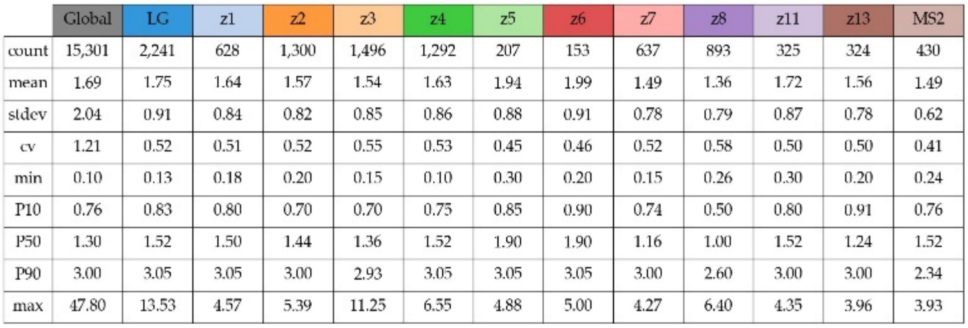
	Global	MS2	z13	z11	z5	z6	LG
count	10659	479	339	334	221	163	2695
mean	0.996	0.576	0.620	0.901	0.855	0.776	0.575
median	0.450	0.380	0.376	0.378	0.490	0.310	0.230
Standard deviation	1.547	0.657	0.804	1.455	1.349	1.060	1.221
variance	2.394	0.432	0.646	2.118	1.819	1.123	1.491
Coef variation	1.554	1.141	1.297	1.615	1.578	1.366	2.122
min	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25%	0.170	0.129	0.130	0.130	0.153	0.120	0.108
50%	0.450	0.380	0.376	0.378	0.490	0.310	0.230
75%	1.100	0.795	0.803	0.879	0.827	1.140	0.450
max	24.800	4.770	5.110	10.100	8.800	5.550	13.200

14.4.3 Compositing Methodology

Downhole sample length analysis shows sample lengths range from 0.1 m to 47.8 m, with the dominant sample length being 1.0 to 2.0 m as shown in Figure 14.5. A composite length of 1.5 m is selected as it provides adequate resolution for potential mining purposes and estimating for the resource within the estimation domains and block model. In Figure 14.5, intervals that were not sampled or had insufficient recovery are not considered.

Figure 14.5 Cumulative histogram of the sample interval lengths analyzed within the estimation domains*.





	Global	LG	z1	z2	z3	z4	z5	z6	z7	z8	z11	z13	MS2
count	15,301	2,241	628	1,300	1,496	1,292	207	153	637	893	325	324	430
mean	1.69	1.75	1.64	1.57	1.54	1.63	1.94	1.99	1.49	1.36	1.72	1.56	1.49
stdev	2.04	0.91	0.84	0.82	0.85	0.86	0.88	0.91	0.78	0.79	0.87	0.78	0.62
cv	1.21	0.52	0.51	0.52	0.55	0.53	0.45	0.46	0.52	0.58	0.50	0.50	0.41
min	0.10	0.13	0.18	0.20	0.15	0.10	0.30	0.20	0.15	0.26	0.30	0.20	0.24
P10	0.76	0.83	0.80	0.70	0.70	0.75	0.85	0.90	0.74	0.50	0.80	0.91	0.76
P50	1.30	1.52	1.50	1.44	1.36	1.52	1.90	1.90	1.16	1.00	1.52	1.24	1.52
P90	3.00	3.05	3.05	3.00	2.93	3.05	3.05	3.05	3.00	2.60	3.00	3.00	2.34
max	47.80	13.53	4.57	5.39	11.25	6.55	4.88	5.00	4.27	6.40	4.35	3.96	3.93

**Intervals that were not sampled or had insufficient recovery are not considered*

The length-weighted compositing process starts from the drill hole collar and ends at the bottom of the hole. However, the final composite intervals along the drill hole cannot cross contacts between estimation domains that demonstrate a hard boundary. Therefore, composites extending downhole are truncated when one of these contacts are intersected. A new composite begins at these contacts and continues to extend downhole until the maximum composite interval length is reached, or another truncating contact is intersected.

14.4.4 Orphan Analysis

Compositesthat do not reach their maximum allowed length are called orphans. Orphans are created during the truncation processes at contacts, as described in Section 14.4.3 or when a drill hole ends before the last composite reaches its final length. Considering all the orphans during the estimation process may introduce a bias. Therefore, copper's distribution was examined with and without orphans to determine if they should be deemed equivalent in importance to the full-length composite's estimation process.

Three configurations are examined for this analysis:

1. Composites that are 1.5 m in length without any orphans
2. Composites and orphans greater than or equal to 0.75 m in length; and
3. All composites and orphans

It is common to observe a decrease in the mean when comparing the composite values to the original raw assay statistics. This decrease in the mean is typical as large un-sampled intervals (that are assigned a nominal waste value, as discussed in Section 14.2.2) are split into multiple smaller intervals. Also, by not snapping truncating contacts of the estimation domain wireframes to the start or end of raw sample intervals, many orphans can be created that are redundant data that is not representative that may skew the resource estimate. However, the boundaries of the estimation domains constructed occur at the start or end of raw sample intervals, which will reduce the number of orphan samples significantly.

The completed orphan analysis for all copper assay composite samples contained within the estimation domain is presented in Figure 14.6 and Table 14.9. Figure 14.6 illustrates little difference between the distribution of composited metal grade with the various composite length scenarios. When comparing only the composites equal to 1.5 m to all composites, including the orphans, copper assays illustrate a mean change of ±3% when orphans are considered, Table 14.9. The 1,668 orphans that are ≥ 0.75 m in length are used when calculating the MRE. However, the 1,883 orphans that are < 0.75 m in length are not used to calculate the MRE as they are considered redundant.

Figure 14.6 Orphan analysis comparing global cumulative histograms of raw assays and uncapped composites with and without orphans contained within the estimation domain.

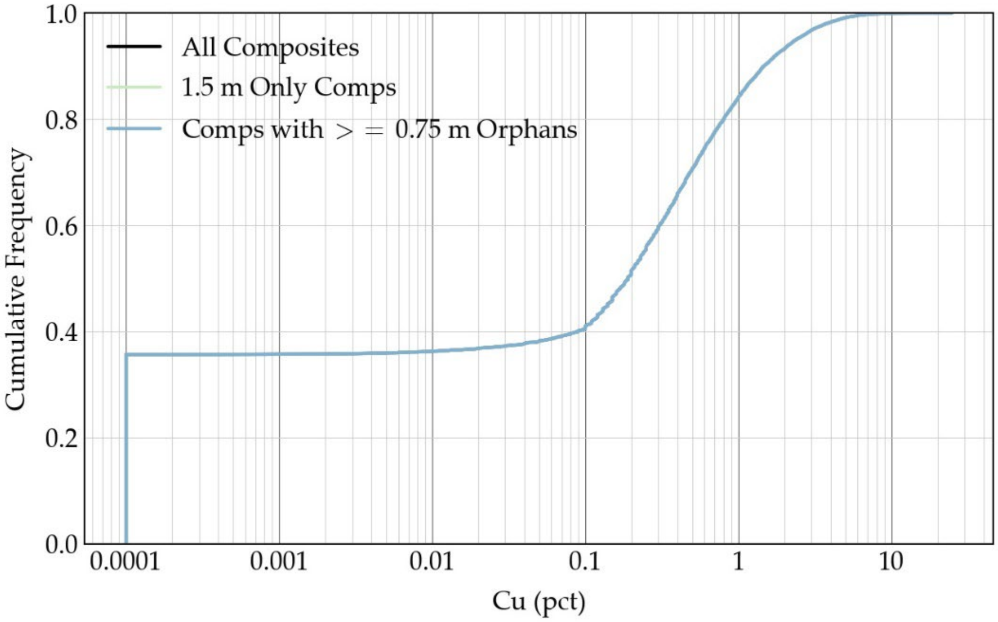


Table 14.9: Orphan analysis comparing the copper statistics of raw assays and uncapped composite samples with and without orphans.

	Cu (pct)			
	Uncomposited	**Composited**	**1.5 m Only**	**Comps with >= 0.75 m Orphans**
count	10659	19061	15510	17178
mean	0.9956	0.5419	0.5113	0.5273
median	0.4500	0.1900	0.1660	0.1800
Standard deviation	1.5471	1.0022	0.9534	0.9712
variance	2.3936	1.0045	0.9089	0.9432
Coef variation	1.5540	1.8496	1.8644	1.8418
min	0.0001	0.0001	0.0001	0.0001
25%	0.1700	0.0001	0.0001	0.0001
50%	0.4500	0.1900	0.1660	0.1800
75%	1.1000	0.6120	0.5806	0.6000
max	24.8000	24.8000	13.2067	13.2067

14.4.5 Capping

To ensure metal grades are not overestimated by including outlier values during estimation, composites are capped to a specified maximum value. Probability plots illustrating each composite's values are used to identify outlier values that appear higher than expected relative to each estimation domain's copper distribution. Composites identified as potential outliers on the probability plots are evaluated in three dimensions (3-D) to determine if they are part of a high-grade trend or not. If identified outliers are deemed part of a high-grade trend that still requires a capping level, the level used on them may not be as aggressive as the capping level used to control isolated high-grade outliers.

The twelve domains were grouped into two statistical domain groups based on similar distributions of copper assay data. The probability plot illustrated in Figure 14.7 and Figure 14.8 of composited values indicate the capping levels detailed in Table 14.10. Visual inspection of the potential outliers revealed they have no spatial continuity with each other. Therefore, the capping levels detailed in Table 14.10 are applied to all composites used to calculate the MRE.

Figure 14.7 Probability plot of the composited copper values in higher grade domains before capping. Capped values highlighted in red.

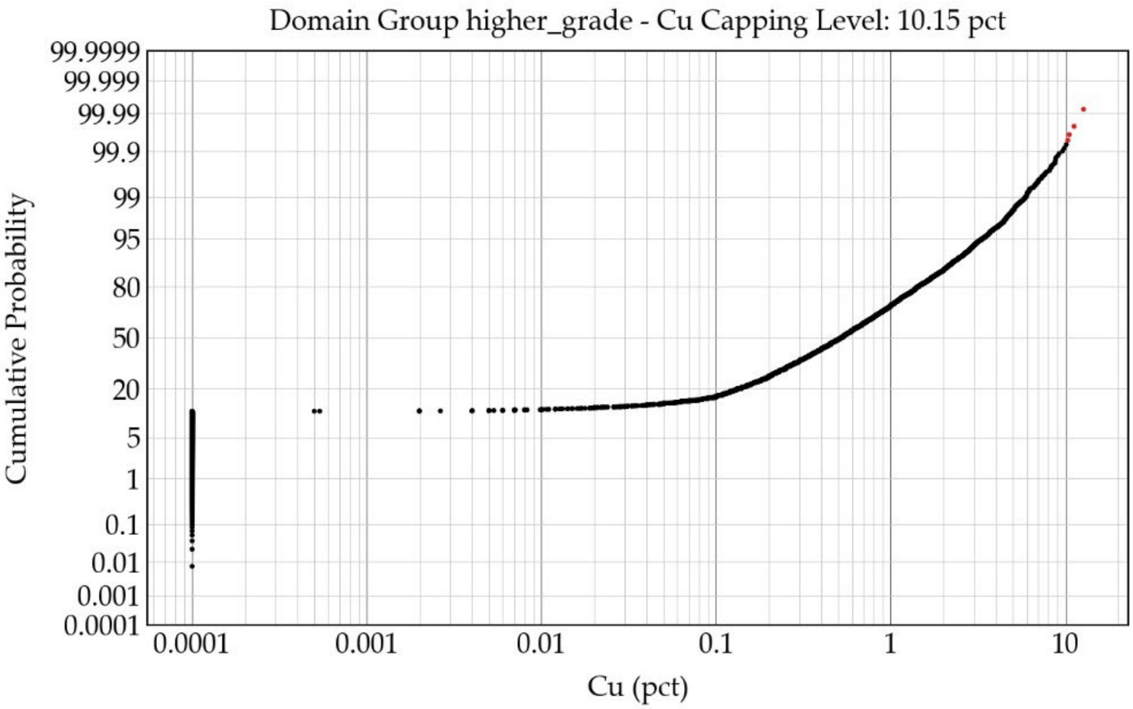


Figure 14.8 Probability plot of the composited copper values in mid grade domains before capping. Capped values highlighted in red.

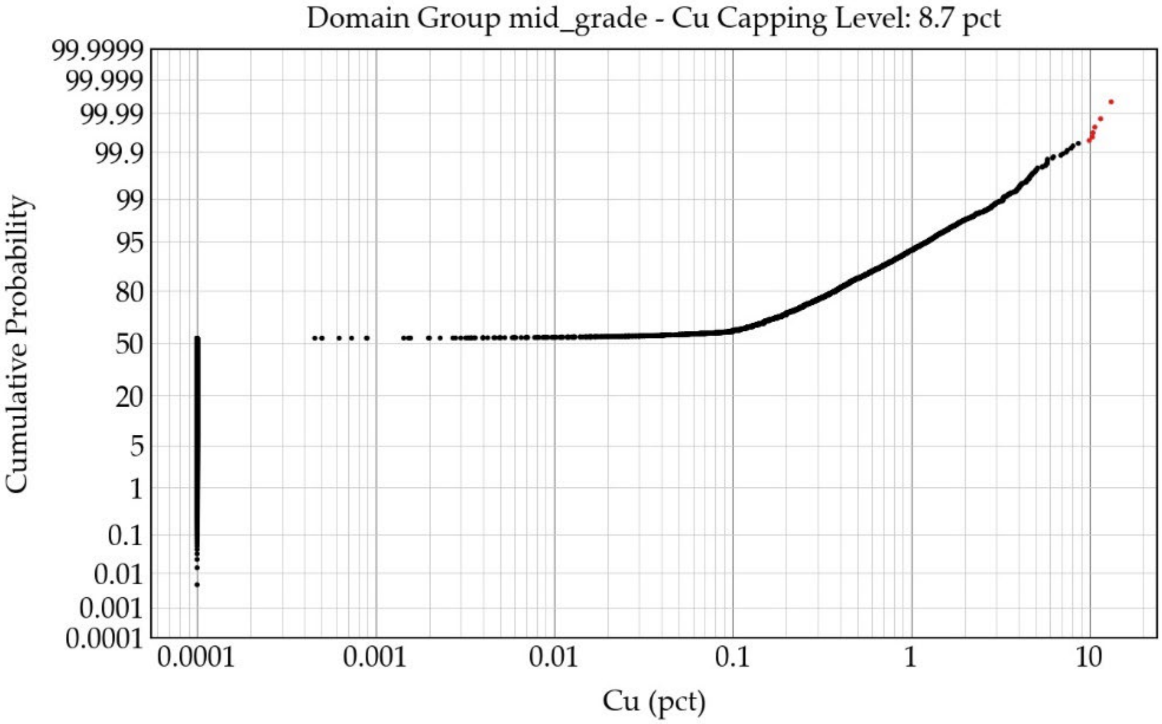


Table 14.10: Capping levels applied to composites before estimation.

Capping Levels Per Domain		
Domain	Cu (%)	# Samples Capped
z1	10.15	0
z2	10.15	2
z3	10.15	0
z4	10.15	1
z8	10.15	1
LG	8.7	4
MS2	8.7	0
z11	8.7	0
z13	8.7	0
z5	8.7	0
z6	8.7	0
z7	8.7	2

14.4.6 Declustering

It is typical to collect data in a manner that preferentially samples high valued areas over low-value areas. This preferential sampling is an acceptable practice; however, it produces closely spaced measurements that are likely statistically redundant, which results in under-represented sparse data compared to the over-represented closer-spaced data. Therefore, it is desirable to have spatially representative (i.e., declustered) statistics for global resource assessment and to check estimated models. Declustering techniques calculate a weight for each datum that results in sparse data having a higher weight than closely spaced data. The calculated declustering weights allow spatially repetitive summary statistics to be calculated, such as a declustered mean.

Cell declustering is performed globally on all composites within the estimation domains, which calculates a declustering weight for each composite. Cell declustering works by discretizing a 3-D volume into cells that are the same size. The sum of the weights of all the composites within the cell must equal 1. Therefore, the weight assigned to each composite is proportional to the number of composites within each cell. For example, if there are four composites within a cell, they are all assigned a declustering weight of 0.25.

As a general rule of thumb, the cell size used to calculate declustering weights will ideally contain one composite per cell in the sparsely sampled areas. Visual evaluation of the sparsely sampled areas in a 3-D visualization software gives a rough idea of this size. Additionally, a high-resolution block model populated with the distance to each block nearest composite can help guide the declustering of the cell size. The 90-percentile of the distance block model, with a cell size much lower than the final declustering cell size, approximates the optimal cell size.

Finally, plotting a series of declustered means for a range of declustering cell sizes will help determine the optimal cell size. The optimal cell size will likely be when the declustered mean in the plot is locally low or high at a cell size that is very close to the two potential cell sizes that were determined from the visual review and calculated 90-percentile distance. Preferential sampling in high-grade zones results in a declustered mean that is likely within a local minimum. In contrast, preferential sampling in low-grade zones results in a declustered mean that is expected within a local maximum.

Calculated declustering weights for the estimation domain were constructed. Visual evaluation of the sparsely sampled areas in Micromine suggests similar cell sizes as the 90-percentiles from the distance block model for each estimation domain. Plots comprised of a series of declustered means for a range of declustering cell sizes were utilized to inform the final cell sizes. Table 14.11 details the cell size used, which was very close to the size indicated by the visual evaluation and distance block model.

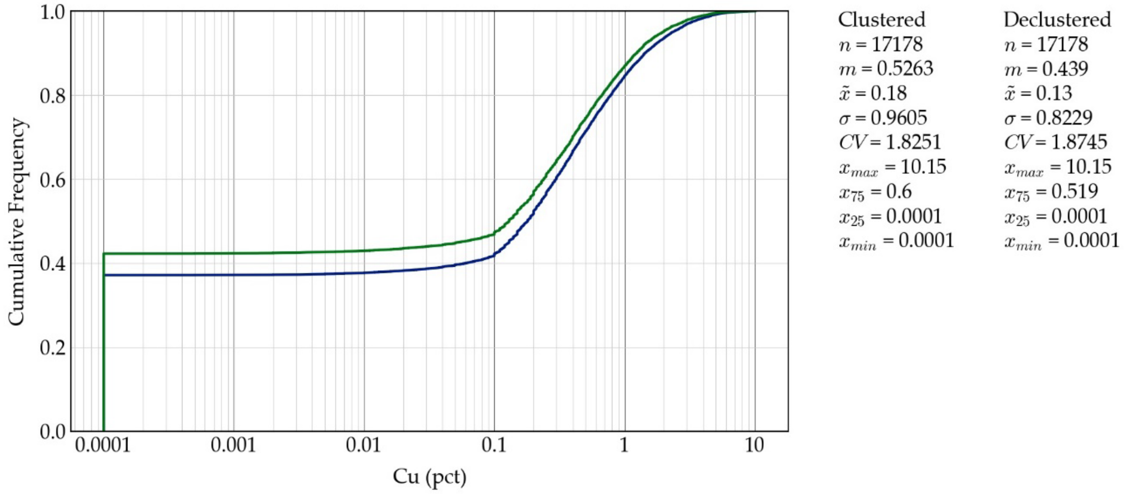
Table 14.11: Declustered composites summary including cell sizes used to calculate declustering weights in the estimation domain.

	Cu (pct)		
	Clustered	**Cell Declustered**	**Diff.(%)**
count	17,178	17,178	0
mean	0.53	0.44	-16.58
stdev	0.96	0.82	-14.33
cv	1.83	1.87	2.7
min	0	0	0
P10	0	0	0
P50	0.18	0.13	-28.05
P90	1.44	1.24	-14.02
max	10.15	10.15	0
Cell Size		15	

14.4.7 Final Composite Statistics

Cumulative histograms and summary statistics for the declustered and capped composites contained within the interpreted estimation domains, without orphans < 1.5 m, are presented in Figure 14.9. The Copper assays within the estimation domain generally exhibit a single coherent statistical population.

Figure 14.9 Cumulative histogram of clustered and declustered Cu composites inside global domain.



14.5 Variography and Grade Continuity

Experimental semi-variograms for each domain are calculated along the major, minor, and vertical principal directions of continuity that are defined by three Euler angles. Euler angles describe the orientation of anisotropy as a series of rotations (using a left-hand rule) that are as follows:

1. Angle 1: A rotation about the Z-axis (azimuth) with positive angles being clockwise rotation and negative representing counter-clockwise rotation;
2. Angle 2: A rotation about the X-axis (dip) with positive angles being counter-clockwise rotation and negative representing clockwise rotation; and

3. Angle 3: A rotation about the Y-axis (tilt) with positive angles being clockwise rotation and negative representing counter-clockwise rotation.

14.5.1 Estimation Domain Variography

The estimation domains were evaluated and grouped into similar variography groups and a representative domain from each group was used to calculate the experimental variograms used in modeling the final variogram model parameters used by the OK estimation. A variogram was modeled for each variography group. Within the 10 Stringer zone mineralization domains, 8 of the 10 domains are similar in continuity and are stacked on top of each other vertically. These domains (“Z1”, “Z2”, “Z3”, “Z4”, “Z5”, “Z6”, “Z7”, “Z13”) were grouped into one group and the largest domain, “Z2”, was used as the representative domain. The two remaining Stringer Zone domains (“Z8” and “Z11”) exhibited shorter range continuity and domain “Z8” was chosen as the representative domain. The Massive Sulfide domain (“MS2”) is a different style of mineralization and was evaluated on its own. The lower grade halo domain (“LG”) encompassing all the domains was also treated separately.

As described in Section 14.7, grade estimation uses locally varying anisotropy (LVA) that defines the variogram's orientation on a per-block basis. The three Euler angles described in Table 14.12 are not used during estimation, as they are only used to calculate the experimental variogram. Figures 14.10 to 14.13 show the final modeled variograms for each variography group.

Table 14.12: Variogram model parameters per domain and per element estimated*.

	Orientation							Range Structure 1					Range Structure 2		
Domain	Ang1	Ang2	Ang3	Sill	C0	Type-1	C-1	Maj	Min	Vert	Type-2	C-2	Maj	Min	Vert
LG	277	-11	-3	0.324	0.032	exp	0.097	55	20	20	exp	0.194	80	35	20
z1	276	-21	5	0.925	0.185	exp	0.416	30	35	15	exp	0.324	100	80	15
z2	276	-21	5	1.786	0.357	exp	0.804	30	35	15	exp	0.625	100	80	15
z3	276	-21	5	1.256	0.251	exp	0.565	30	35	15	exp	0.440	100	80	15
z4	276	-21	5	1.051	0.210	exp	0.473	30	35	15	exp	0.368	100	80	15
z5	276	-21	5	0.641	0.128	exp	0.289	30	35	15	exp	0.224	100	80	15
z6	276	-21	5	0.496	0.099	exp	0.223	30	35	15	exp	0.174	100	80	15
z7	276	-21	5	0.618	0.124	exp	0.278	30	35	15	exp	0.216	100	80	15
z8	277	-11	-3	2.302	0.230	exp	1.151	10	15	15	exp	0.921	60	35	15
z11	277	-11	-3	0.952	0.095	exp	0.476	10	15	15	exp	0.381	60	35	15
z13	276	-21	5	0.354	0.071	exp	0.160	30	35	15	exp	0.124	100	80	15
MS2	248	-5	2.5	0.288	0.029	exp	0.144	40	30	15	exp	0.115	120	45	15

** sph: spherical, exp: exponential; C0: nugget effect; C1: covariance contribution of structure 1; C2: covariance contribution of structure 2; LVA - locally varying anisotropy*

Figure 14.10 Final Cu Variogram Model from domain Z2

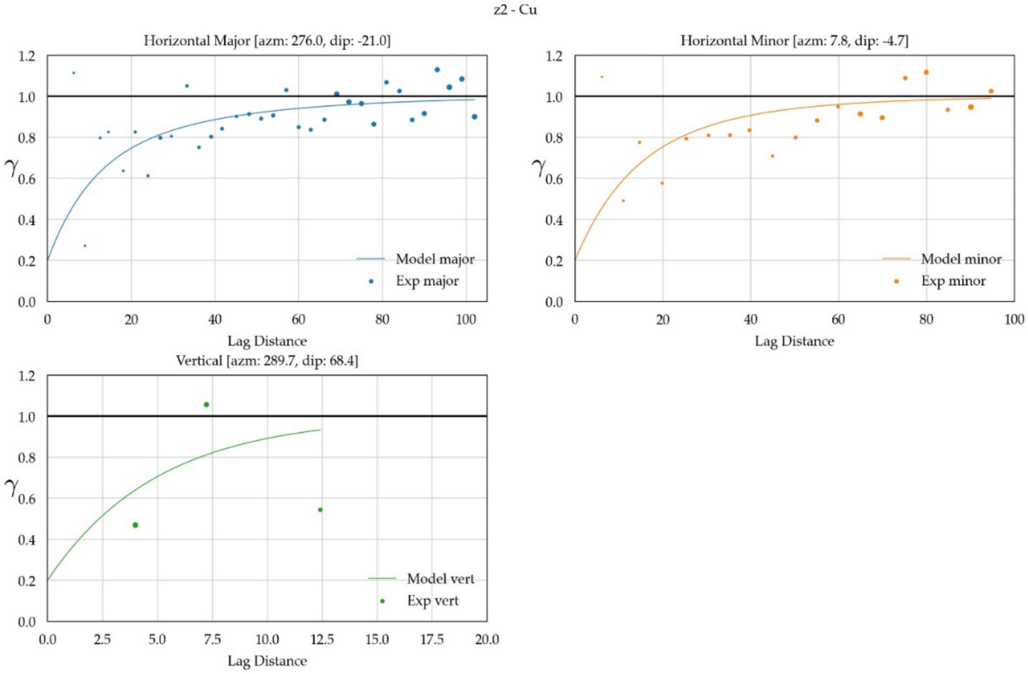


Figure 14.11 Final Cu Variogram Model from domain Z8

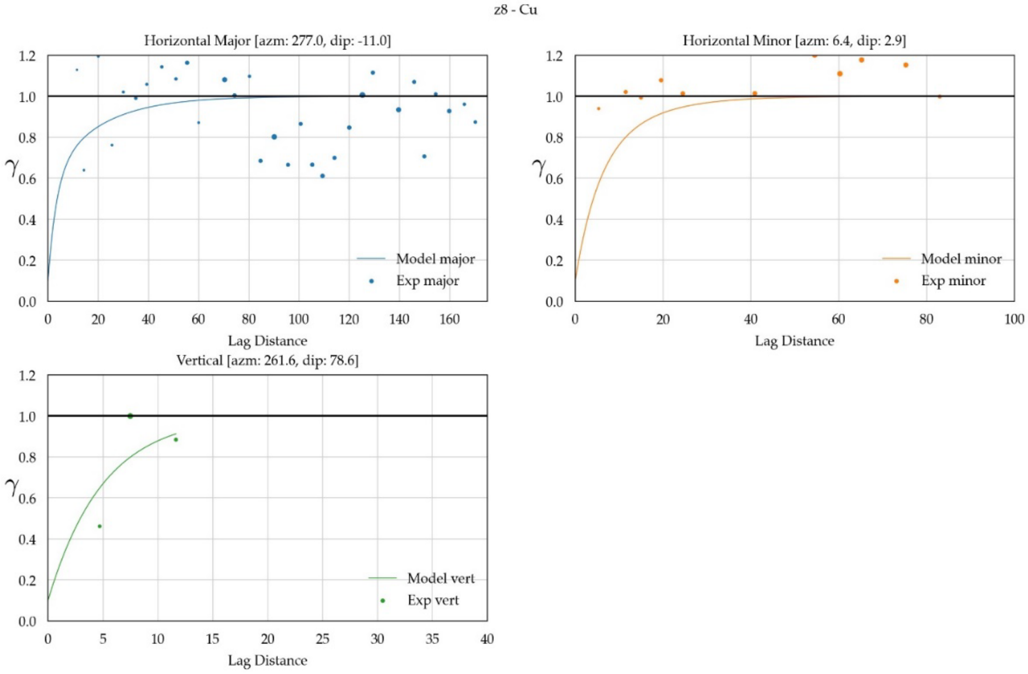


Figure 14.12 Final Cu Variogram Model from domain MS2

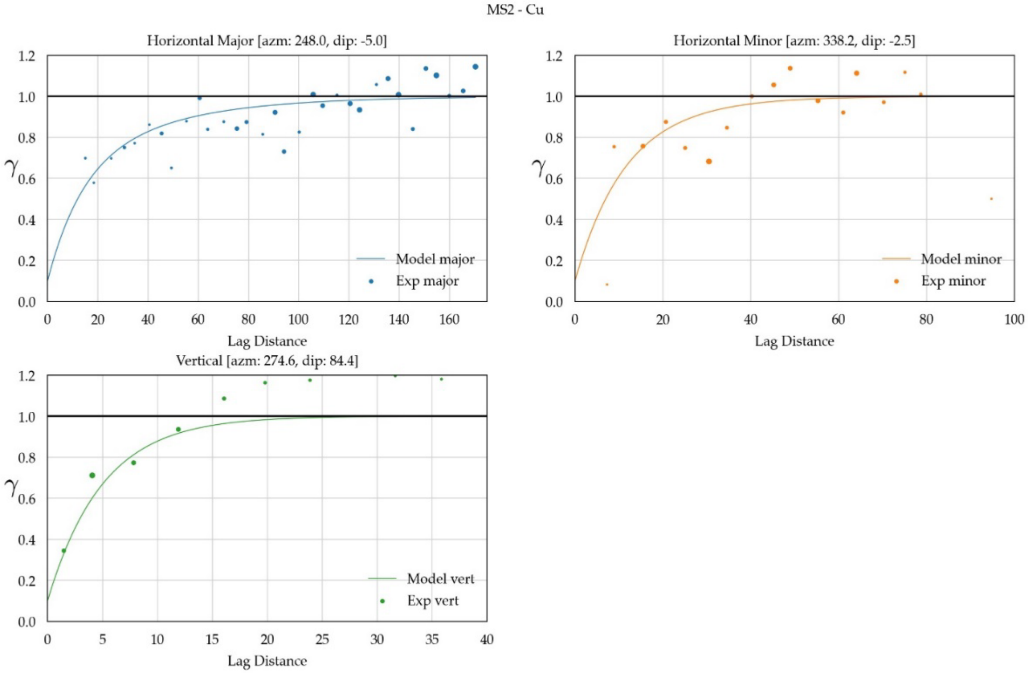
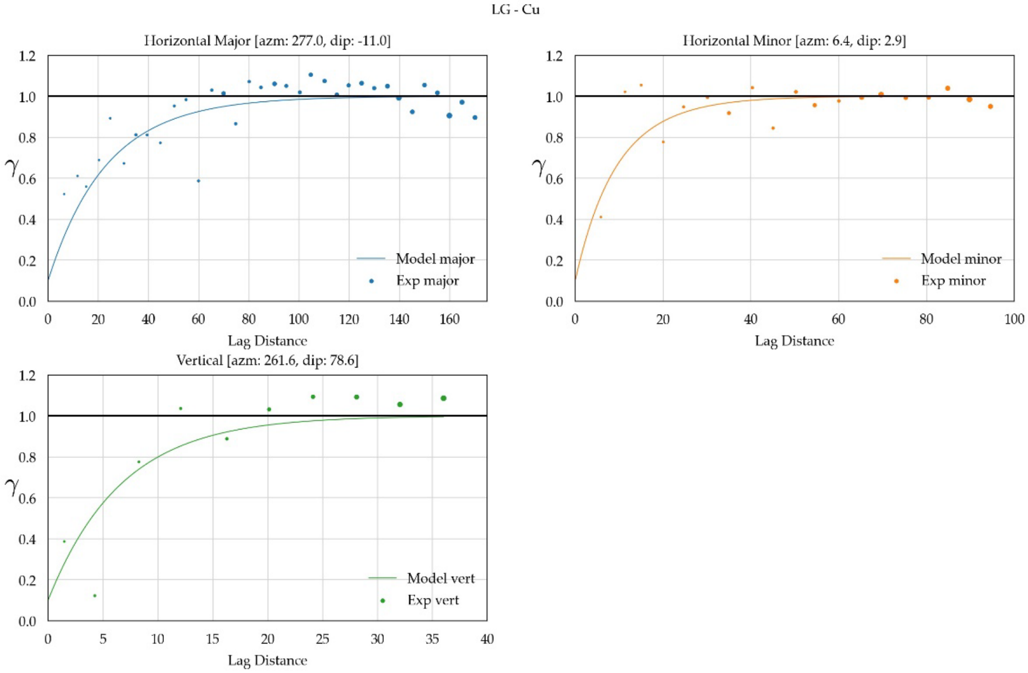


Figure 14.13 Final Cu Variogram Model from domain MS2

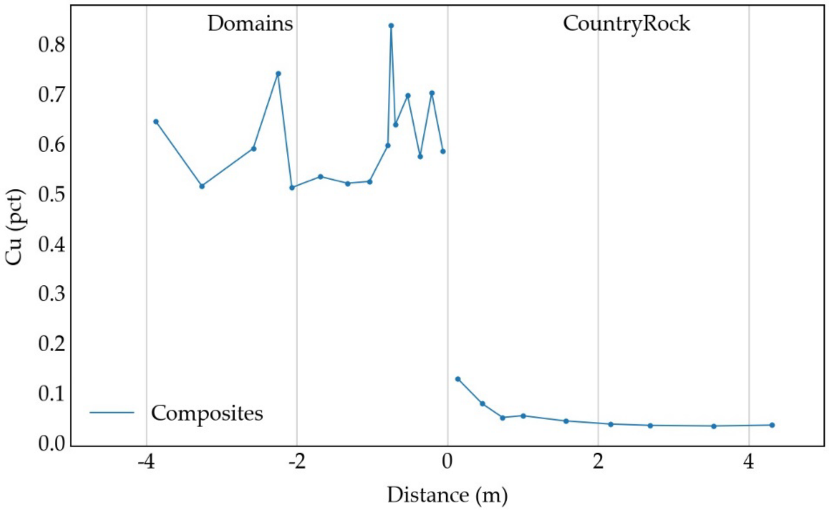


14.5.2 Contact Analysis

The mineralization profile at the contact between the estimation domain and the waste rock can occur in a soft, hard, or semi-soft manner. Soft boundaries occur when mineralization at the contact gradually changes from high to low as you cross into the neighbouring domain. Hard boundaries occur when mineralization at the contact abruptly changes as you cross into the neighbouring domain. Semi-soft boundaries occur when mineralization changes gradually within a small window as you cross into the neighbouring domain.

If possible, the final block model should reproduce the mineralization profile observed in the drill hole data at contacts between domains. A contact analysis was completed to evaluate the mineralization profile at the estimation domain and waste rock contact using plots of grade as a function of distance to the contact to determine the type of mineralization profile as shown in Figure 14.14**.** The resultant analysis illustrates a hard boundary.

Figure 14.14 Contact Analysis. Average copper grade (blue line) as a function of the distance* to the edge of the estimation domain.



*Negative distance is inside domain and positive distances represent outside of the domain and into waste model.

14.6 Block Model

14.6.1 Block Model Parameters

The block model used for the calculation of the Chester Project Mineral Resource Estimate fully encapsulates the estimation domains used for resource estimation described in Section 14.3. When determining block model parameters, data spacing is the primary consideration. Additionally, the volume of the 3-D estimation domain wireframes need to be adequately captured and potential mining equipment parameters need to be considered.

The data spacing of irregularly spaced drilling can be approximated by calculating the 90th percentile of a high-resolution block model of the distance from each block's centroid to the nearest sample. Estimation errors are introduced when kriging is used to estimate a grade for blocks with a size larger than 25% of the data spacing. As illustrated in Figure 14.15, the 90th percentile is 37 meters. A block size of 3 m (x) by 3 m (y) by 3 m (y) is used, as it is less than 25% of the approximated data spacing and it provides good resolution for the mineralization domains. A six meter block model was evaluated; however, it did not adequately capture smaller scale features in the estimation domains. The coordinate ranges and block size dimensions used to build the Chester 3D block model are presented in Table 14.13.

A block factor (BF) that represents the percentage of each block's volume that lies within the LG and HG lodes is calculated and used to:

- flag the dominant lode, by volume, for each block; and
- calculate the percentage of mineralized material and waste for each block

Figure 14.15 Cumulative frequency plot illustrating the distance from each block's centroid to the nearest composite sample in meters.

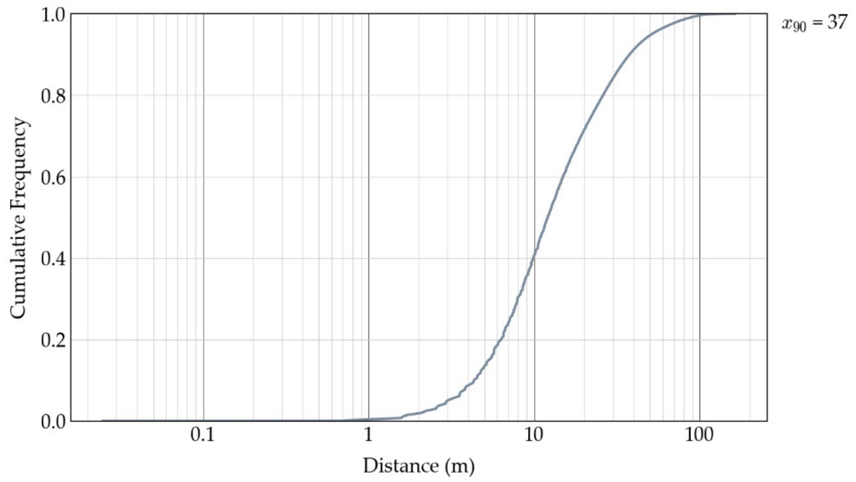


Table 14.13: Chester block model size and extents.

	X (Easting)	Y (Northing)	Z (Elevation)
Minimum Extents (m)	708915	5219380	-30
Maximum Extents (m)	711330	5220640	405
Block Size (m)	3	3	3
Number of Blocks	805	420	145

14.6.2 Volumetric Checks

A comparison of wireframe volume versus block model volume is performed to ensure there is no considerable over- or understating of volume and tonnages (Table 14.14). The calculated block factor for each block is used to scale its volume when calculating the total volume of the block model.

Table 14.14: Wireframe versus block model volume comparison.

Wireframe	Wireframe Volume (m3)	Block Model Volume with Block Factor (m3)	Volume Difference (%)
LG	5,035,733	5,035,754	0.000%
z1	567,599	567,611	-0.002%
z2	577,747	577,751	-0.001%
z3	931,005	930,998	0.001%
z4	915,273	915,274	0.000%
z5	303,506	303,495	0.004%
z6	249,985	249,983	0.001%
z7	1,035,206	1,035,200	0.001%
z8	186,380	186,384	-0.002%
z11	95,463	95,467	-0.004%
z13	904,566	904,562	0.000%
MS2	418,092	418,089	0.001%

14.7 Grade Estimation Methodology

Ordinary Kriging (OK) was used to estimate copper grades for the Chester block model and Inverse Distance Weighting (IDW) was completed as one of the model validation checks. Estimation of blocks for OK is completed with locally varying anisotropy (LVA), which uses different rotation angles to define the principal directions of the variogram model and search ellipsoid on a per-block basis. IDW does not utilize a variogram model and therefore during the IDW estimation, the LVA is used to only modify the search ellipsoid orientations. Blocks within the estimation domain are assigned rotation angles using a trend surface wireframe. This method allows local structural complexities to be reproduced in the estimated block model. Variogram and search ranges are defined by the variogram model described in Section 14.5.

To ensure that all blocks within the estimation domains are estimated, and to control the smoothing inherent in OK Estimation, a three-pass method was used for each domain that utilizes three different search ellipsoid configurations, Table 14.15.

All three passes use the variogram models as detailed in Section 14.5.

Table 14.15: Estimation Search and Kriging Parameters By Domain for Cu Estimation.

Domains	Estimation Pass	Variogram Orientation	Max Variogram Range			Search Range			Min Samples	Max Samples Per DH	Max Samples per Octant	Max No. Samples
			Major	Minor	Vertical	Major	Minor	Vertical				
z1, z2, z3, z4, z5, z6, z7, z13	Pass 1	LVA	180	80	15	30	20	4	1	NA	1	20
z1, z2, z3, z4, z5, z6, z7, z13	Pass 2	LVA	180	80	15	60	40	8	2	NA	2	20
z1, z2, z3, z4, z5, z6, z7, z13	Pass 3	LVA	180	80	15	140	100	15	2	NA	3	20
z8, z11	Pass 1	LVA	60	35	15	20	20	4	1	2		20
z8, z11	Pass 2	LVA	60	35	15	40	35	8	1	4		20
z8, z11	Pass 3	LVA	60	35	15	80	50	15	1	6		20
MS2	Pass 1	LVA	120	45	15	15	15	5	1	2		20
MS2	Pass 2	LVA	120	45	15	35	35	8	1	4		20
MS2	Pass 3	LVA	120	45	15	80	50	15	1	5		20
LG	Pass 1	LVA	80	35	20	30	30	4	1	2		20
LG	Pass 2	LVA	80	35	20	60	40	8	1	4		20
LG	Pass 3	LVA	80	35	20	120	100	20	1	6		20

The correct volume-variance relationship is enforced by restricting the maximum number of conditioning data (composites) and the search ranges in the major, minor, and vertical direction. These restrictions are implemented to ensure the estimated models are not over smoothed, which would lead to inaccurate estimation of global tonnage and grade. The parameters used to enforce the right volume-variance relationship cause local conditional bias but ensure the global estimate of grade and tonnes is accurately estimated.

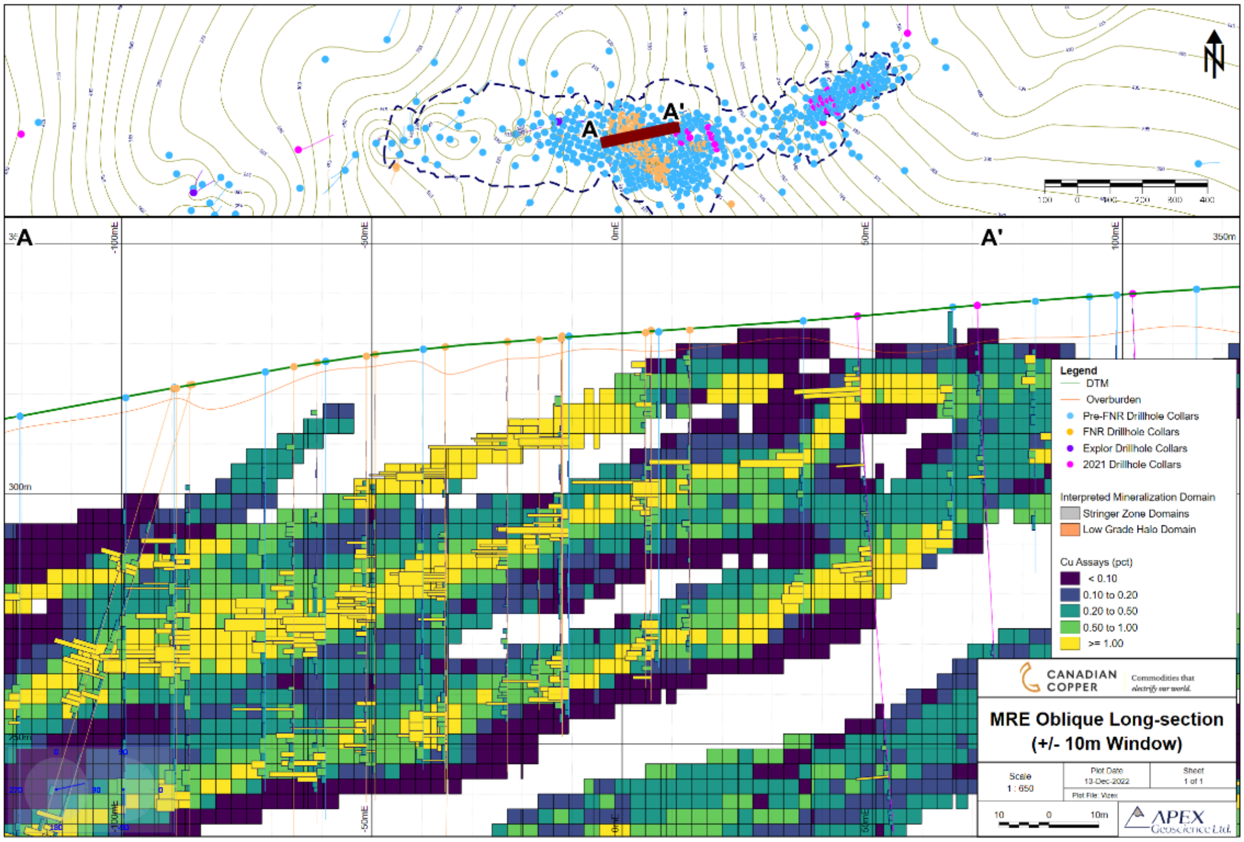
Blocks that contain more than or equal to 1.56% waste by volume are diluted using a nominal waste value that is volume-weight averaged with the estimated grade. It is desired that the behaviour of estimated grade at the boundary between the estimation domain and waste beyond its boundary is reproduced. The nature of mineralization at the mineralized/waste contact is evaluated to ensure adequate block dilution is occurring.

As illustrated in Section 14.5.2, copper behaves in a hard manner, where the grade of the composite centroids flagged within an estimation domain sharply transitions from mineralized to waste over a short window. Blocks containing waste values are assigned a volume weighted grade for the pseudoflow algorithm pit optimizations. The MRE is reported undiluted and with the waste tonnage removed.

14.8 Model Validation

Visual and statistical validation was completed to ensure that the estimated block model honours directional trends observed in the composites and that the block model is not over-smoothed or over- or under-estimated with respect to grade. The main tools to validate the estimation are swath plots, volume-variance plots and contact zone plots as illustrated and discussed below. The estimated block model was evaluated visually on a section-by-section basis. An example of the section review comparing the block model estimated grades to the composited assay grades is shown in Figure 14.16.

Figure 14.16 Oblique section looking northwest comparing block model estimated grades to drill hole assay composited copper values.



14.8.1 *Statistical Validation*

<u>Swath Plots</u>

Swath plots verify that the estimated block model honours directional trends and identifies potential areas of over- or under-estimation in grade. They are generated by calculating the average metal grades of the declustered composites, the OK estimated blocks and IDW estimated blocks within directional slices. A window of 100 m is used in east-west slices, 30 m in north-south slices, and 20 m in vertical slices. The estimated grade for the block model is presented as OK and IDW calculated model grades.

The block model was visually validated in plan view and in cross-section to compare the estimated metal values versus the conditioning composites using swath plots (Figures 14.17 to 14.19). Overall, the OK and IDW grades of the block model compares well with the declustered composites. There is some local over- and under-estimation observed. Due to the limited number of conditioning data available for the estimation in those areas, this is the expected result.

Figure 14.17 Swath plot along Easting sections with a +/- 100 m section window.

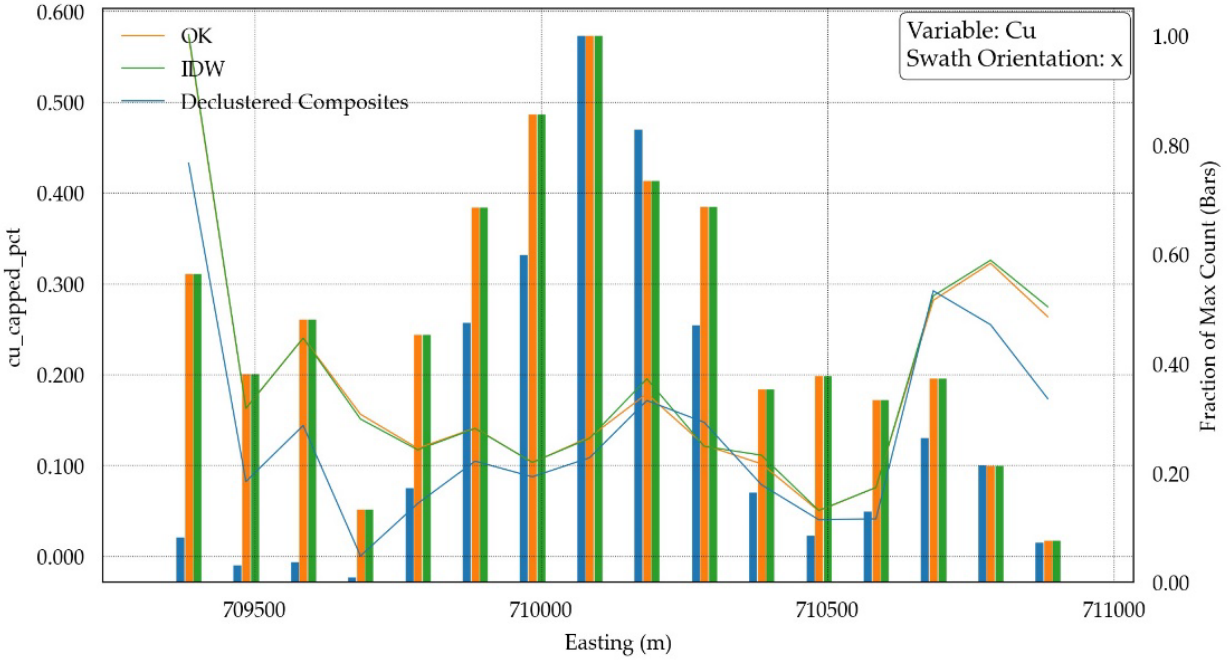


Figure 14.18 Swath plot along Northing sections with a +/- 30 m section window.

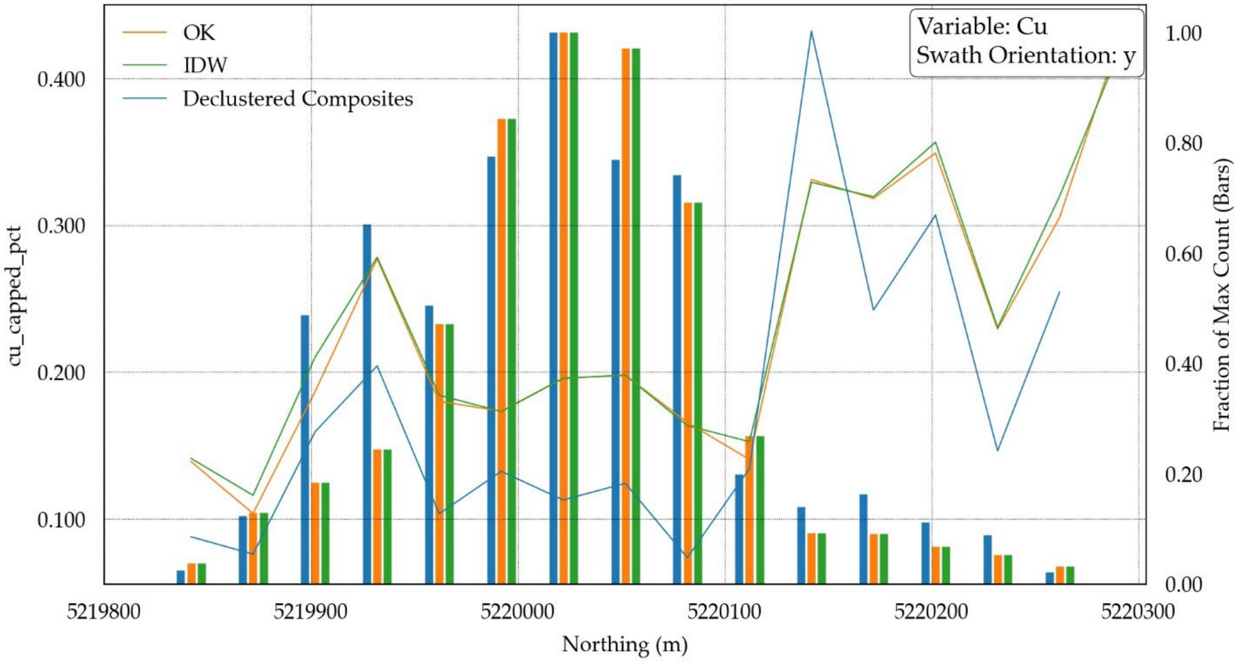
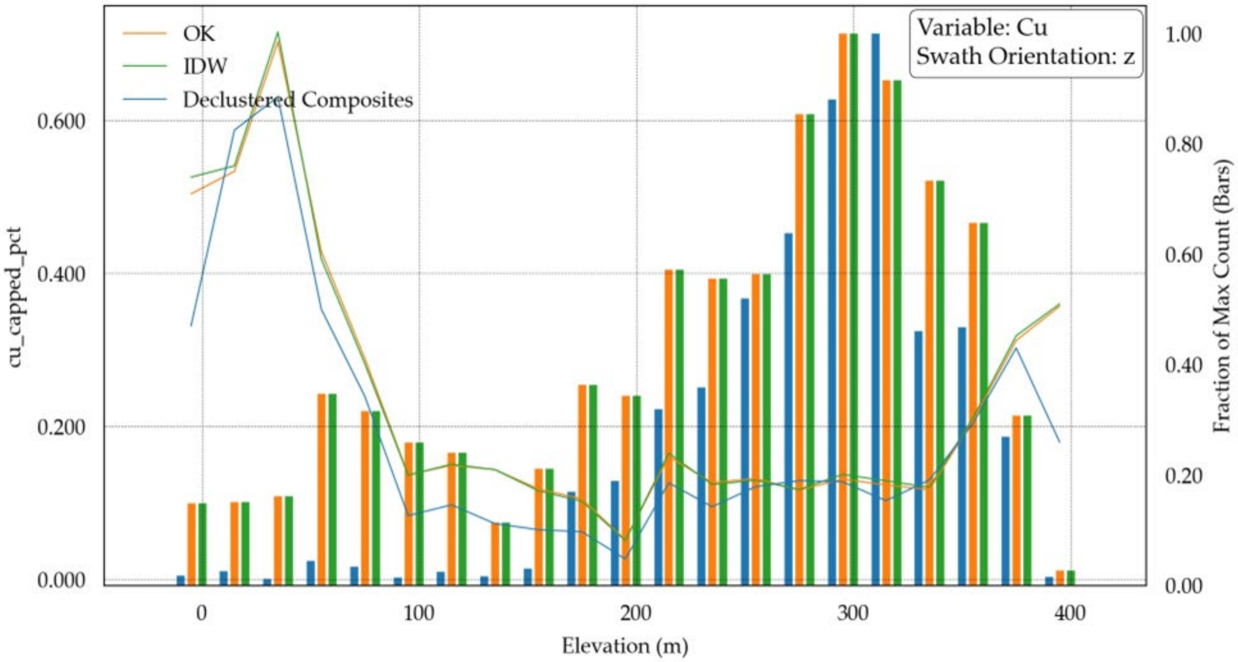


Figure 14.19 Swath plot along Elevation sections with a +/- 20 m section window.



Volume-Variance Validation

Smoothing is an intrinsic property of Kriging, and as described in Section 14.7 volume-variance corrections are used to help reduce its effects. To verify that the correct level of smoothing is achieved, theoretical histograms that indicate each estimated metal's anticipated variance and distribution at the selected block model size are calculated and plotted against the estimated final block model in Figure 14.20 to Figure 14.23. The theoretical histograms are calculated using the variogram model, therefore the domains within each of the four variography groups were merged and evaluated together. The "Vein" group consists of domains Z1, Z2, Z3, Z4, Z5, Z6, Z7, and Z11 (Figure 14.20). The "Vein-Shortrange" group consists of domains Z8, and Z11 (Figure 14.21). The Massive Sulfide group contains the domain "MS2" (Figure 14.22). The final variography group is the low-grade halo domain, LG (Figure 14.23).

Smoothing is observed; however, further modifications of the search strategy to help control the smoothing will degrade the quality of the copper estimates. The theoretical models and the estimated model are similar in distribution with slight over estimation of grade in the estimated block model.

Figure 14.20 Volume variance cumulative histogram comparison: Vein Group. Cumulative histograms of declustered composited data, volume variance corrected models, and the block model estimates.

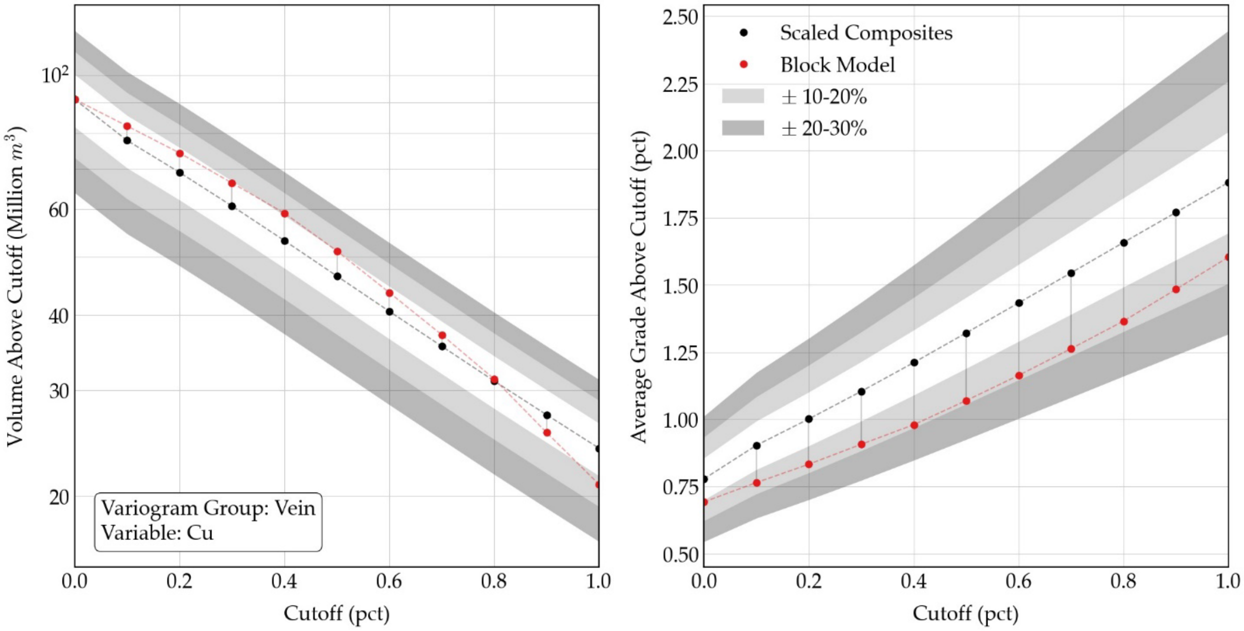


Figure 14.21 Volume variance cumulative histogram comparison: Vein-Shortrange Group. Cumulative histograms of declustered composited data, volume variance corrected models, and the block model estimates.

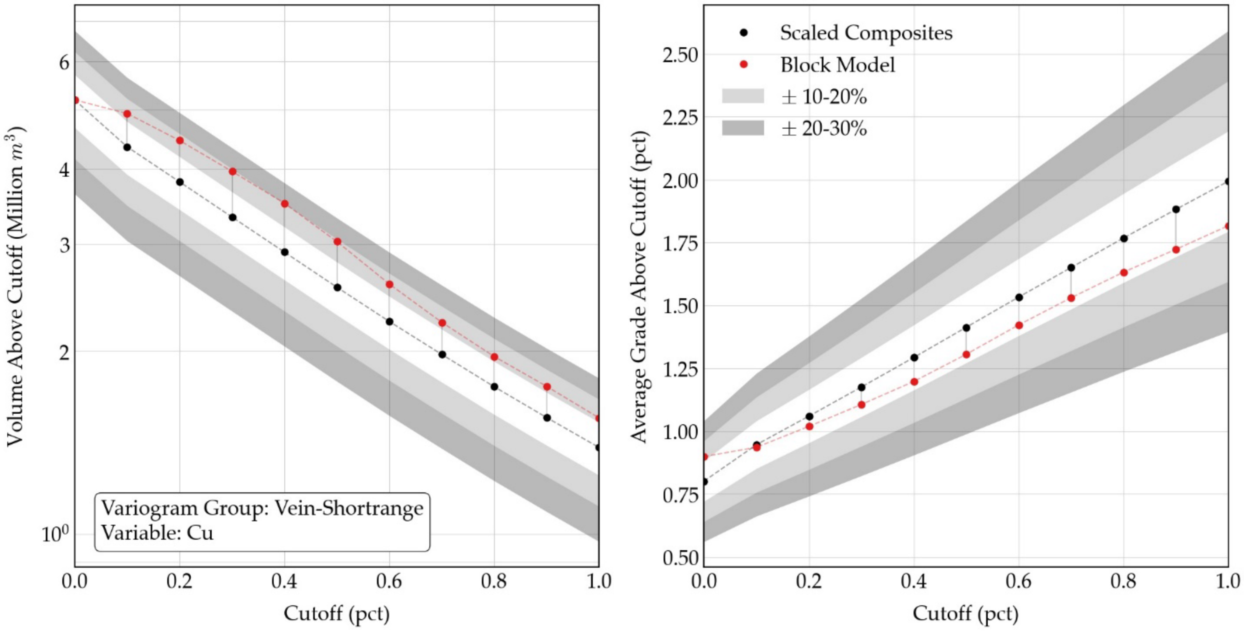


Figure 14.22 Volume variance cumulative histogram comparison: Massive Sulfide Group. Cumulative histograms of declustered composited data, volume variance corrected models, and the block model estimates.

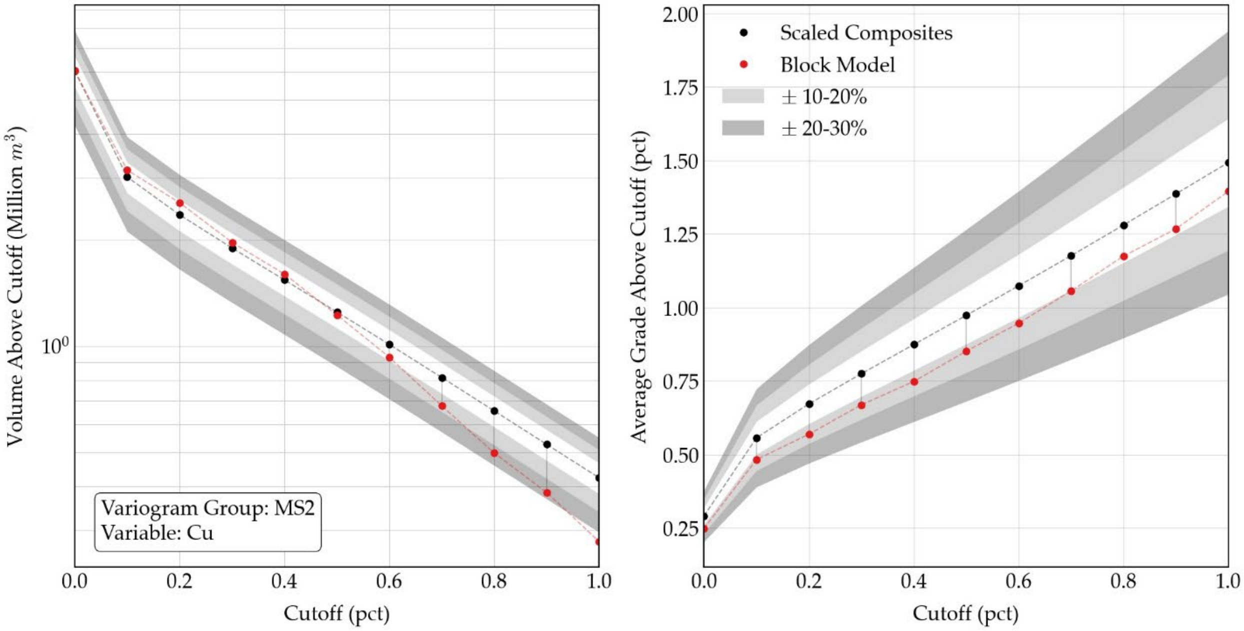
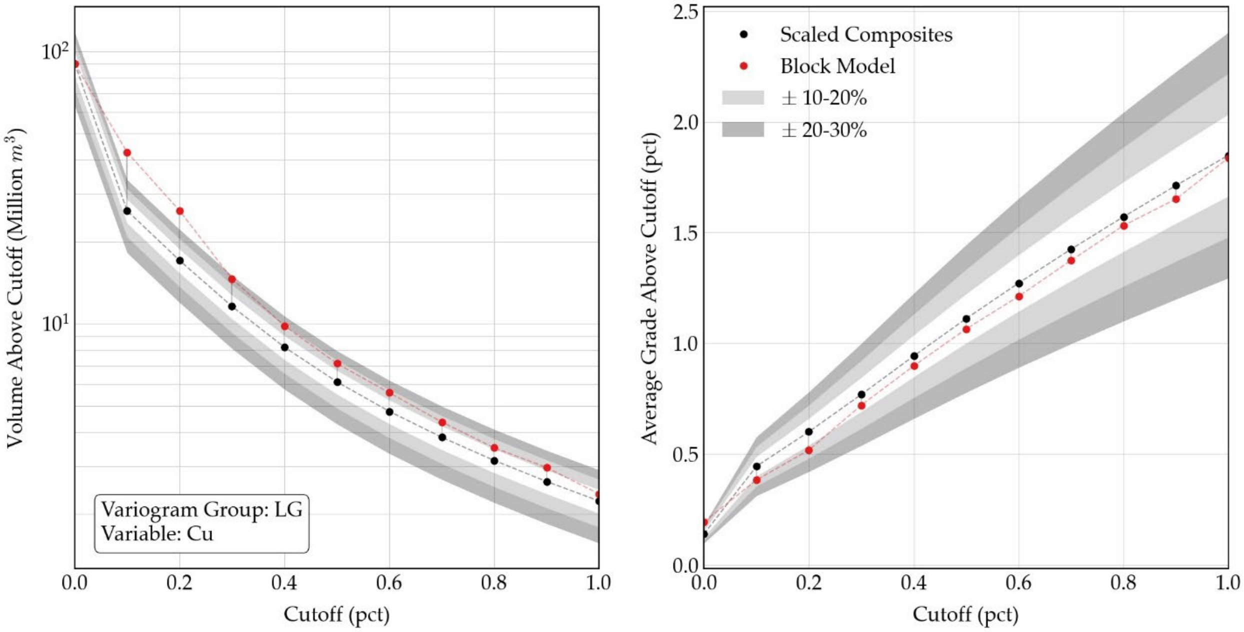


Figure 14.23 Volume variance cumulative histogram comparison: Low Grade Halo Group. Cumulative histograms of declustered composited data, volume variance corrected models, and the block model estimates.

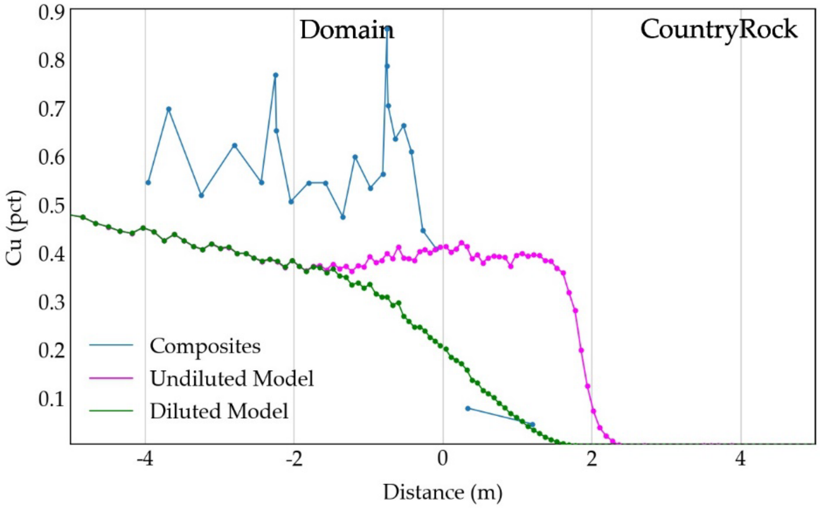


Contact Analysis Reproduction

As described in Section 14.7, blocks within the Chester block model that contain more than or equal to 1.56% waste by volume are diluted for the pit optimization algorithm. The MRE is reported undiluted with only the tonnages inside the mineralization domains. Ideally, the nature of copper mineralization at the mineralized zone/waste contact observed in the composites is reproduced in the block model.

A contact analysis plot checking contact profile reproduction is illustrated in Figure 14.24. The mineralized zone/waste contact profile (Diluted Model) is adequately reproduced for the block model utilized by the pit optimization algorithm with some over-estimation into waste and under-estimation into the mineralized zone.

Figure 14.24 Contact analyses showing average copper grade (%) by distance* to the domain edge of composite data, undiluted block model and diluted block model.



*Negative distance is inside domain and positive distances represent outside of the domain and into waste model.

14.9 Mineral Resource Classification

The Chester updated MRE discussed in this report has been classified in accordance with guidelines established by the CIM “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines” dated November 29, 2019 and CIM “Definition Standards for Mineral Resources and Mineral Reserves” dated May 14th, 2014.

A ‘Measured Mineral Resource’ is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.

An ‘Indicated Mineral Resource’ is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

An ‘Inferred Mineral Resource’ is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

The 2021 Chester MRE is classified as Indicated and Inferred according to the CIM definition standards. The classification of the Indicated Resources utilizes only post-2003 drill hole data and is based on geological confidence, data quality and grade continuity of that data. In areas of the MRE dominated by pre-2003 drill hole data, the classification has been kept at a lower classification (Inferred), even where the pre-2003 data density might have indicated a higher classification was justified. The most relevant factors used in the classification process were:

- density of conditioning data;
- level of confidence in historical drilling results and collar locations;
- level of confidence in the geological interpretation; and
- continuity of mineralization.

Resource classification was determined using a multiple-pass strategy that consists of a sequence of runs that flag each block with the run number a block first meets a set of search restrictions. With each subsequent pass, the search restrictions are decreased, representing a decrease in confidence and classification from the previous run. For each run, a search ellipsoid is centred on each block and orientated in the same way described in Section 14.7.

Table 14.16 details the range of the search ellipsoids and the number of composites that must be found within the ellipse for a block to be flagged with that run number. The runs are executed in sequence from run 1 to run 2. Classification is then determined by relating the run number that each block is flagged as to indicated (run 1) or inferred (run 2).

Table 14.16: Search restrictions applied during each run of the multiple-pass classification strategy.

Run No.	Classification	Min No. Holes	Min No. Comp	Major Range (m)	Minor Range (m)	Vertical Range (m)
Run 1	Indicated	3	9	80	60	15
Run 2	Inferred	2	2	100	100	15

14.10 Evaluation of Reasonable Prospects for Eventual Economic Extraction

To demonstrate that the Chester MRE has the potential for future economic extraction, the unconstrained and partially diluted resource block model was subjected to several pit optimization scenarios to look at the prospectivity for eventual economic extraction. Pit optimization was performed in DESWIK using the Pseudoflow pit optimization algorithm.

All mineral resources reported below are reported within an optimized pit shell using $US3.5/lb for copper and was defined using blocks classified as Indicated or Inferred. The criteria used for the $US3.5/lb pit shell optimization are shown in Table 14.17. Equation 14.1 shows the cut-off grade of 0.23% based on a mining cut-off grade calculation using the mining parameters in Table 14.17.

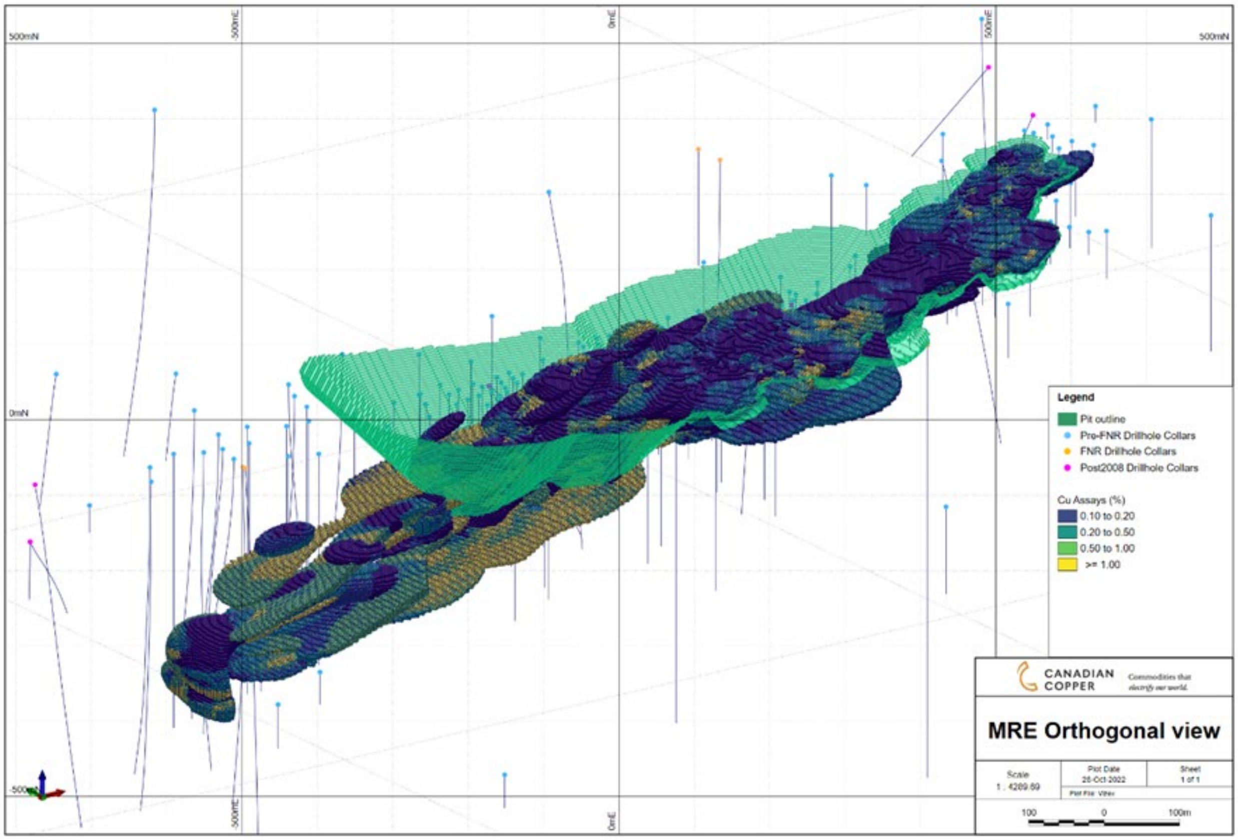
$$COG_{mining} = {Cost_{processing} + Cost_{mining\ ore}} \Big/ {Recovery_{ore} * (SalePrice - RefiningUnitCost)} \qquad (14.1)$$

The QP and lead author of this report considers the pit parameters presented in Table 14.17 appropriate to evaluate the reasonable prospect for eventual future economic extraction at the Chester Copper Project for the purpose of providing an MRE. The resources presented herein are not mineral reserves, and they do not have demonstrated economic viability. There is no guarantee that any part of the resources identified herein will be converted to a mineral reserve in future. An orthogonal view showing the extents of the optimized pit shell and the estimated block model is shown in Figure 14.25.

Table 14.17: Parameters for pit optimization for the Mineral Resource Estimate.

Parameters	Units	Unit Cost
CAD to USD Conversion		0.78
Ore Mining Cost	CAD$/tonne Ore	$3.00
Waste Mining Cost	CAD$/tonne Waste	$3.00
G&A Cost	CAD$/tonne Ore	$2.00
Process Cost	CAD$/tonne Ore	$15.00
Recovery	%	95.00%
Cut-off grade	Cu %	$0.27
Copper price	US$/lb	$3.50
Pit Slope	Degrees	45.0
Density	g/m3	Variable

Figure 14.25 Orthogonal view of conceptual open pit and Chester block model showing copper values.



14.11 Mineral Resource Reporting

The Chester MRE is reported in accordance with the CSA NI 43-101 rules for disclosure and has been estimated using the CIM “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines” dated November 29, 2019 and CIM “Definition Standards for Mineral Resources and Mineral Reserves” dated May 10th, 2014.

The MRE was estimated within three-dimensional (3-D) solids that were created from the implicit modeling interpretation of geology and grade shells. The upper contact has been cut by the topographic surface. Where there is overburden modeled, the upper contact was subsequently cut by the overburden surface. Grade was estimated into a block model with a block size of 3 m (X) by 3 m (Y) by 3 m (Z).

Grade estimation of copper was performed using Ordinary Kriging (OK). For the purposes of the pit shell optimization, blocks that contain waste were diluted by estimating a waste value using composites within a transition zone along the outer boundary of the estimation domains. The final diluted copper grade for the diluted model assigned to each block is a volume-weighted average of the estimated copper and waste grade values. The diluted model was utilized for the pit optimization. The MRE is reported within the final conceptual pit shell and is undiluted and only reports the tonnage within the modelled domains.

This MRE for Chester is based on data with a cut-off date of August 31, 2022. The MRE is reported with an effective date of November 01, 2022 and is presented in Table 14.18. The Indicated and Inferred MRE is undiluted and constrained within an optimized conceptual pit shell. The Indicated resource includes 4.8 million tonnes of mineralized material at an average copper grade of 1.127% for a total of 120.3 million pounds utilizing a 0.5% lower cut-off grade. The Inferred resource includes 1.8 million tonnes of mineralized material at an average copper grade of 1.014% for a total of 38.4 million pounds using a lower cut-off grade of 0.5% Cu.

Table 14.18: The recommended reported resource estimate constrained within the $3.50/lb pit shell for copper at cut-off grade 0.5% copper*

Cu Cut-off (pct)	Tonnes (1000 kg)	Cu (lbs)	Cu (kg)	Avg Cu Grade (pct)	Classification
0.5	4,866,000	120,285,000	54,560,000	1.127	Indicated
0.5	1,819,000	38,355,000	17,398,000	1.014	Inferred

**Notes to Table 14.18:*

1. *Mineral resource estimates are reported at a cut-off grade of 0.5% Cu.*
2. *The unconstrained resource block model was estimated using ordinary kriging utilizing blocks at 3m(X) x 3m(Y) x3m (Z) and was subject to several open pit optimization scenarios utilizing a number of copper prices, mining cost scenarios and recovery factors typical of copper mining operations and advanced projects. The Chester final MRE pit shell utilized a copper price of US$3.50/lb and recoveries of 95% with appropriate mining and processing costs typical of near surface open pitable resources in Eastern Canada. Mr. Dufresne considers the pit parameters presented below to be appropriate to evaluate the reasonable prospect for potential future economic extraction at the Chester Project for the purpose of providing an MRE.*
3. *The updated resources presented are not mineral reserves, and they do not have demonstrated economic viability. There is no guarantee that any part of the resources defined by the MRE will be converted to a mineral reserve in the future.*
4. *The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could potentially be upgraded to an Indicated Mineral Resource with continued exploration.*
5. *Historical mined areas were removed from the block modelled resources.*
6. *The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.*
7. *Tonnage estimates are based on bulk densities individually measured and calculated for each of the deposit areas. Resources are presented as undiluted and in situ*
8. *The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.*
9. *This mineral resource estimate is dated November 1, 2022. The effective date for the drill hole database used to produce this mineral resource estimate is August 31, 2022.*
10. *Mr. Michael Dufresne, M.Sc., P.Geol., P.Geo. of APEX Geoscience Ltd., who is deemed a QP as defined by NI 43-101 is responsible for the completion of the mineral resource estimation.*
11. *Totals may not sum due to rounding.*

Mineral Resources can be sensitive to the selection of the reporting cut-off grade. For sensitivity analysis other cut-off grades are presented in Table 14.19 for review, ranging from 0.1% to 1.0% Cu cut-off grades. Table 14.20 provides the current copper MRE at 0.5% Cu cut-off by groups of domains and the potential secondary metals that could be present.

Table 14.19: Sensitivity analysis of the undiluted resource estimate constrained within the $3.5/lb pit shell for copper at various cut-off grades

Cu Cut-off (pct)	Tonnes (1000 kg)	Cu (lbs)	Cu (kg)	Avg Cu Grade (pct)	Classification
0.1	10,025,000	152,259,000	69,063,000	0.679	Indicated
0.2	8,542,000	147,354,000	66,839,000	0.784	
0.3	7,053,000	139,187,000	63,134,000	0.899	
0.4	5,830,000	129,805,000	58,879,000	1.014	
0.5	**4,866,000**	**120,285,000**	**54,560,000**	**1.127**	
0.6	4,107,000	111,129,000	50,407,000	1.234	
0.7	3,473,000	102,053,000	46,290,000	1.342	
0.8	2,942,000	93,295,000	42,318,000	1.450	
0.9	2,505,000	85,129,000	38,614,000	1.554	
1	2,147,000	77,645,000	35,219,000	1.655	
0.1	4,461,000	54,307,000	24,633,000	0.592	Inferred
0.2	3,623,000	51,567,000	23,390,000	0.697	
0.3	2,874,000	47,472,000	21,533,000	0.807	
0.4	2,286,000	42,973,000	19,492,000	0.912	
0.5	**1,819,000**	**38,355,000**	**17,398,000**	**1.014**	
0.6	1,432,000	33,699,000	15,286,000	1.119	
0.7	1,124,000	29,294,000	13,287,000	1.227	
0.8	874,000	25,188,000	11,425,000	1.344	
0.9	691,000	21,760,000	9,870,000	1.466	
1	545,000	18,692,000	8,479,000	1.592	

**Notes to Table 14.19:*

1. *Mineral resource estimates are reported at a cut-off grade of 0.5% Cu.*
2. *The unconstrained resource block model was estimated using ordinary kriging utilizing blocks at 3m(X) x 3m(Y) x3m (Z) and was subject to several open pit optimization scenarios utilizing a number of copper prices, mining cost scenarios and recovery factors typical of copper mining operations and advanced projects. The Chester final MRE pit shell utilized a copper price of US$3.50/lb and recoveries of 95% with appropriate mining and processing costs typical of near surface open pitable resources in Eastern Canada. Mr. Dufresne considers the pit parameters presented below to be appropriate to evaluate the reasonable prospect for potential future economic extraction at the Chester Project for the purpose of providing a MRE.*
3. *The updated resources presented are not mineral reserves, and they do not have demonstrated economic viability. There is no guarantee that any part of the resources defined by the MRE will be converted to a mineral reserve in the future.*
4. *The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could potentially be upgraded to an Indicated Mineral Resource with continued exploration.*
5. *Historical mined areas were removed from the block modelled resources.*
6. *The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.*
7. *Tonnage estimates are based on bulk densities individually measured and calculated for each of the deposit areas. Resources are presented as undiluted and in situ*

8. *The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.*
9. *This mineral resource estimate is dated November 1, 2022. The effective date for the drill hole database used to produce this mineral resource estimate is August 31, 2022.*
10. *Mr. Michael Dufresne, M.Sc., P.Geol., P.Geo. of APEX Geoscience Ltd., who is deemed a QP, as defined by NI 43-101 is responsible for the completion of the mineral resource estimation.*
11. *Totals may not sum due to rounding.*

Table 14.20: Chester Mineral Resources and Secondary Metals by Domain within the MRE Conceptual Pit Shell

Domain Groups	Class	Cu cut-off %	Tonnes '000	In Situ Cu lbs '000	Cu grade %	In-Situ Pb lbs '000	Pb grade %	In Situ Zn lbs '000	Zn grade %	In Situ Ag g '000	Ag grade g/t	In Situ CuEq Cu lbs '000
Cu Only - Z6 & LG	**Indicated**	0.5	661	13,902	0.958							13,902
	Inferred	0.5	365	6,852	0.906							6,852
Cu Pb - Z1, Z2, Z3, Z4, Z5 & Z7	**Indicated**	0.5	3,648	92,510	1.159	10,108	0.104					95,110
	Inferred	0.5	1,293	28,248	1.048	2,294	0.181					28,838
Cu Pb Zn - MS2	**Indicated**	0.5	184	3,614	0.864	1,814	0.427	5,872	1.371			6,095
	Inferred	0.5	61	938	0.699	501	0.346	880	0.656			1,370
Cu Pb Zn Ag - Z8 & Z11	**Indicated**	0.5	371	10,257	1.226	1,732	0.167	4,645	0.404	2,144	4.48	12,689
	Inferred	0.5	98	2,316	1.066	374	0.131	690	0.237	2	0.02	2,650

**Notes to Table 14.20:*

1. *The unconstrained resource block model was estimated using ordinary kriging utilizing blocks at 3m(X) x 3m(Y) x3m (Z) and was then subjected to several open pit optimization scenarios utilizing a number of copper prices, mining cost scenarios and recovery factors typical of copper mining operations and advanced projects. The Chester final MRE pit shell utilized a copper price of US$3.50/lb and recoveries of 95% with appropriate mining and processing costs typical of near surface open pitable resources in Eastern Canada. Mr. Dufresne considers the pit parameters presented below are appropriate to evaluate the reasonable prospect for potential future economic extraction at the Chester Project for the purpose of providing an MRE.*
2. *The updated resources presented are not mineral reserves, and they do not have demonstrated economic viability. There is no guarantee that any part of the resources defined by the updated MRE will be converted to a mineral reserve in future.*
3. *The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could potentially be upgraded to an Indicated Mineral Resource with continued exploration.*
4. *The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.*
5. *Historical mined areas were removed from the block modelled resources.*
6. *The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.*
7. *Totals may not sum due to rounding.*
8. *Ratios used to calculate In Situ Cu equivalent lbs for Pb, Zn and Ag are Pb x 0.257, Zn x 0.342, Ag x 83.333. Prices used are Cu $3.5/lb, Pb $0.9/lb, Zn $1.2/lb, Ag $20/oz. Recovery factors considered were 95% for Cu, 85% for Pb-Zn and 75% for Ag.*

14.12 Discussion of the Mineral Resource Estimate along with Risks and Opportunities

The lead author Mr. Dufresne, the QP for Section 14, has reviewed and takes responsibility for the Chester MRE and considers there to be both risks and opportunities to the estimation of the Chester Mineral Resource and the evaluation of the reasonable prospects for eventual future economic extraction. Mr. Dufresne considers the following to be the main risks and opportunities associated with the Chester MRE.

The drillhole spacing in general is excellent for a significant portion of the Chester Deposit, however the QP considers the most significant risk to be the incorporation of a large amount of historical drilling data. Mr. Dufresne considers there to be two main concerns with the historical data. The lack of any kind of QA/QC information for the historical data and the incompleteness of the historical drill hole data.

The historical drill hole data was completed before modern QA/QC standards, such as the QA/QC program discussed in Section 11 for the 2021 drilling, became common in drill programs. The standard QA/QC employed in historical drilling did not always catch concerns with sampling and the analytical procedures.

A second risk associated with the use of large amounts of historical drilling data is the incomplete state of the data. During the pre-FNR, FNR, and Explor drill programs, samples were not collected or submitted for analysis over intervals assumed to be non-mineralized, therefore a nominal waste value was applied to all such intervals. The QP recommends that additional drilling should be completed in areas of highly concentrated historical drilling to determine if a more appropriate background value should be applied.

Additionally, the historical data is incomplete with respect to other potential secondary metals including Pb, Zn, Ag, and Au. The incomplete assay database with respect to Pb, Zn, Ag, Au, and, in some cases Indium (In), represents a future opportunity. Future infill drilling with all these metals analysed could improve the outlook on the secondary metal potential for the Chester Deposit thereby increasing the potential for future economic extraction.

Mineralization continuity in areas of inferred resources is an area of concern until further drilling is conducted. Further drilling within or near the areas of the inferred resources, in particular the stringer zone mineralization, would increase the confidence in the mineralization boundaries and the estimated grades.

No potential underground resources have been delineated in this MRE. This should be reviewed for both “In Pit” and “Outside of Pit” resources for future economic trade off studies. The potential out of pit underground resources are currently dominated by historical drilling and likely would require further modern drilling prior to any underground out of pit resource being established.

Oxidation has been logged and is considered minimal for near surface mineralization, however additional mineralogical and metallurgical studies are needed to confirm the effect of the oxidized areas on the potentially recoverable mineral resources.

Sections 15-22 are not included in this Technical Report for the Chester Property as the report provides a Mineral Resource Estimate only.

23 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.

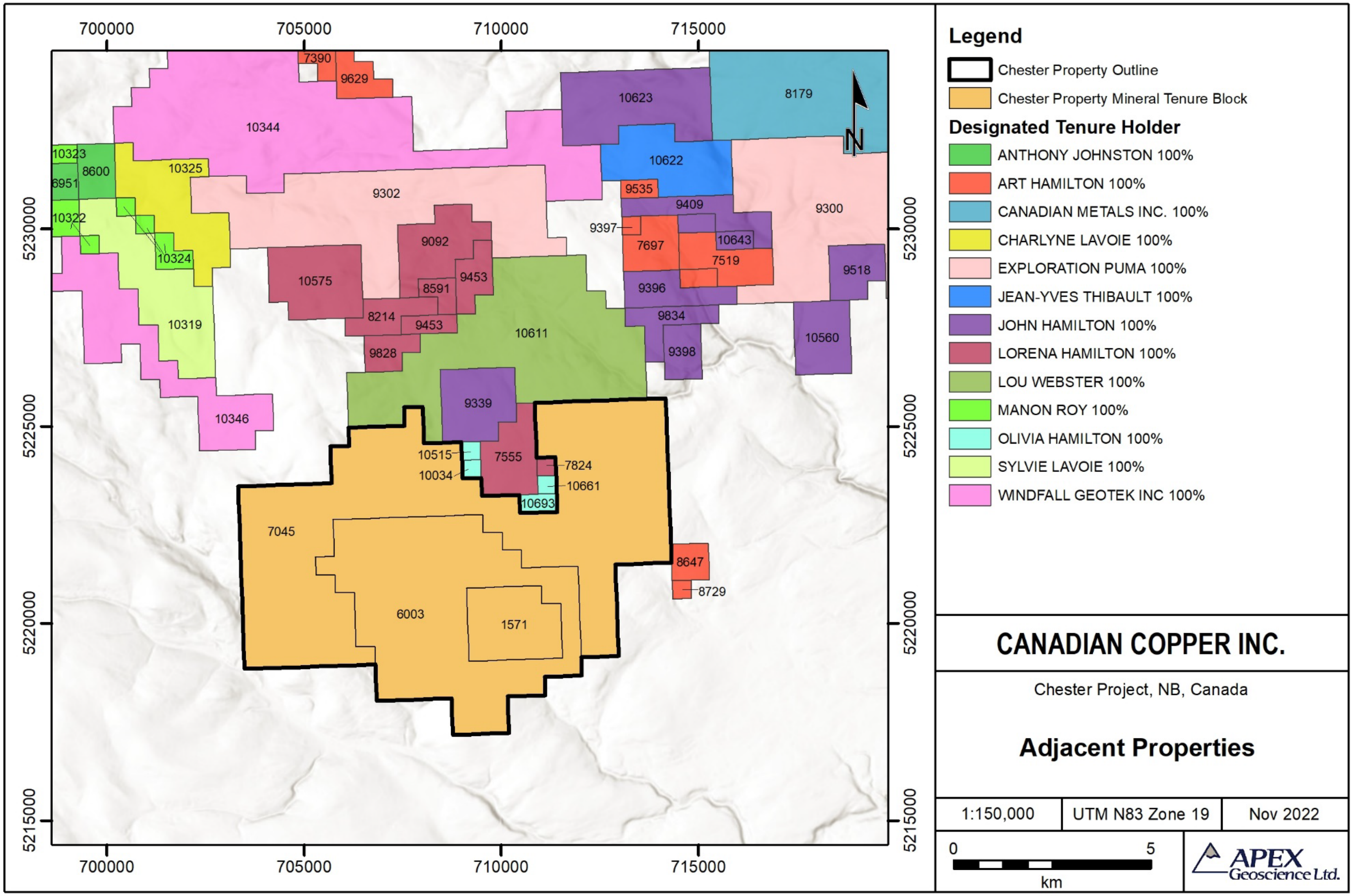
Figure 23.1 shows the mineral Tenure Blocks that occur adjacent to the Chester Property. The adjacent properties are discussed below. The QPs have been unable to verify the adjacent properties information and therefore the information is not necessarily indicative of or related to the mineralization on the Chester Property that is the subject of this Technical Report.

There are several tenure holders that hold claims in the vicinity of the Chester Property. For the majority of claims either no assessment reports have been filed or assessment reports are still held in confidentiality. In New Brunswick, assessment reports remain confidential for two years after they have been electronically submitted. Properties which have recently reported work are described below.

23.1 Active Adjacent Properties

Claim blocks 8647 (Peabody Lake Brook Property) and 8729 (Peabody Lake Brook South Property) are owned by Art Hamilton 100%. The claims are underlain by sedimentary rocks of the Knights Brook Formation and Chain of Rocks Formation from the Miramichi Group. The Peabody Brook mineral occurrence is located on claim 8647. The occurrence is a silicified zone measuring 27 m wide, 100 m long and open to the north. The zone cuts quartzites and phyllites from the Knights Brook Formation. Silicified boulders are also evident in this zone. The sedimentary rocks in the formation are limonitic and have Mn coating on fractures, as well as specks of chalcopyrite and galena in the rubble. The felsic dykes observed in the zone are spatially related to north-south trending felsic dykes of the NW-SE trending Sheephouse Brook and Peabody Lake faults. These structures are thought to be related to D4-sinistral extensional deformation observed in the area. In 2018, a soil geochemical survey was carried out to follow up anomalous soil identified in reconnaissance soil sampling by a previous claim holder. In 2018, a significant arsenic and gold anomaly, with up to 770 ppm As and 40.9 ppm Au, was identified by a soil sampling survey. The survey indicated the mineralized zone continued to the south and the soil anomaly remained open to the south (Hamilton, 2019a, c).

Figure 23.1 Adjacent Properties to the Chester Property.



Claims 7824 (Sheephouse Brook Southeast Property) and 7555 (Sheephouse Brook Property) are owned by Lorena Hamilton 100%. The claims are underlain by the volcanic rocks of the Sevogle River Formation (felsic) and the Slacks Lake Formation (mafic). The Sheephouse Brook Group mineral occurrence is located on claims 7824 and 7555. Sheephouse Brook Group mineral occurrence consists of disseminated Zn-Pb-Cu sulphide of disseminations and stringers of Zn-Pb-Cu sulphides hosted by silicified and sericitized felsic lavas, fragmentals, and minor dark grey sedimentary rocks of the Sevogle River Formation. The Sheephouse Brook mineral occurrence includes a 7.6 m (25-foot) intersection grading 1.54% Pb, 3.95% Zn, 0.32% Cu and 20.57 g/t Ag reported in the Upper Horizon and a 6 m (20-foot) intersection grading 0.47% Pb, 1.45% Zn and 6.86 g/t Ag in the Lower Horizon (Hamilton, 2017, 2018).

Claim 7519 (Sevogle Air Strip Property) is owned by Art Hamilton. Claim 7519 is largely underlain by sedimentary rocks of the Patrick Brook Formation of the Miramichi group and felsic volcanic rocks of the Sevogle River of the Sheephouse Brook Group. Historical Ag soil geochemical anomalies from silicified, altered rock and quartz veins were tested in this claim in 2015 and resulted in up to 10ppm Ag. However, the mineral occurrences discovered during the 2015 work program did not sufficiently explain the soil anomalies. The mineral occurrence, Sevogle Strip Silver, is located in claim 7697 (3.2 km northwest of the Chester Property) and has returned grades up to 24.8 oz/t Ag. The occurrence consists of Ag-bearing quartz veins that are massive, vuggy, and contains pyrite, arsenopyrite, and native silver (Hamilton, 2019d).

Claim 8179 (Mountain Brook Property) is owned by Canadian Metals Inc. 100%. The claim is mostly underlain by metamorphosed quartz-feldspar crystal tuff, metasedimentary rocks, iron formation and mafic volcanic rocks of the Ordovician Tetagouche Group. An Ordovician deformed granitic intrusion is exposed in the northwestern area of the claim. In the southwestern area of the property, the stratigraphy steeply dips to the south and is folded into a northwest plunging F1 antiform. Major east-west trending shear zones, displaying minimal evidence of lateral movement, truncate the geology in the northern area of the property and cut two parallel northwest striking faults. A helicopter magnetic and TDEM survey was completed over the Property in 2018. Processing and interpretation of the survey identified nine anomalous zones. Follow-up using IP surveying and trenching was recommended (Lavoie, 2019).

24 Other Relevant Data and Information

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

25 Interpretation and Conclusions

This Technical Report on the Chester 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 Chester Property, to summarize historical work conducted on the Property from 1955 to 2019, to provide an initial mineral resource estimate based upon extraction by potentially and open pit mining scenario and to provide recommendations for future exploration work programs.

The Chester Property is located in north central New Brunswick, 70 km southwest of the city of Bathurst, NB and 50 km west-northwest of the city of Miramichi, NB. The Property is in Northumberland County located in the south part of the Bathurst Mining Camp (BMC). The Chester Property comprises 3 contiguous Tenure Blocks that consist of 281 claim units covering a total area of 6,176 ha.

The Chester Property lies in a favorable geological setting within the BMC in the northeastern part of the Appalachian orogen. The BMC is host to over 45 VMS deposits including the world-class Brunswick No. 12. The area is underlain by rocks of the Bathurst Super Group: a Middle Ordovician – Lower Silurian sequence of felsic volcanic, mafic volcanic and sedimentary rocks, which overlie the Miramichi Group: a Cambrian to Lower Ordovician sequence of sedimentary rocks. The east-west trending Moose Lake - Tomogonops Fault system divides the BMC into northern and southern structural and stratigraphic domains. The Chester Deposit is located in the southern domain. The southern part of the Chester Property is underlain by the Miramichi Group while the northern and central part of the Property is underlain by the Sheephouse Brook Group of the Bathurst Super Group.

VMS deposits in the BMC occur at various stratigraphic positions and are known to occur in the Tetagouche, California Lake and the Sheephouse Brook groups. The Chester Deposit, which is located on the Property, consists of massive, disseminated and stringer sulphide mineralization that lies within dacitic volcanic rocks of the Clearwater Stream Formation (Sheephouse Brook Group). Three mineralized zones have been delineated at the Chester Deposit: Stringer (West) Zone, Central Zone and East Zone.

Historical exploration conducted on the Property has included geological mapping, prospecting, geophysical surveys, soil geochemical surveys, trenching and drilling by several companies from 1955 to 2019. The Chester Deposit was found in 1955 by Kennco. Subsequently, various companies carried out exploration programs on the Property including Chesterville Mines Ltd., Newmont, Sullivan Mining Group, Sullico, Teck, FNR, BMS and Explor. In the 1960-70's Sullico drilled more than 400 holes to delineate the massive sulphide zones as well as the Stringer Zone and constructed a decline into the deposit. Development was postponed and later abandoned, reportedly due to low Cu prices. Since that time, exploration has focused on: the massive sulphide zones to locate high grade lenses, the overlying gossan for potential gold and silver enrichment, and the volcanic terrain beyond the deposit area. In 2004, FNR completed a VTEM survey over the Property that delineated the Chester Deposit and identified further exploration targets on the Property. FNR additionally drilled 198 holes on the Property, of which 179 targeted the near-surface Stringer Zone. From 1955 to 2008, approximately over 800 drill holes and in excess of 70,000 m were completed on the Chester Property.

A historical MRE was reported by Explor in 2014 for the Stringer (West) Zone. The historical MRE did not include resources for the Central and Eastern massive sulphide zones. This historical MRE is superseded by the current MRE presented in this report.

In 2021, two diamond drill programs were completed on the Property by the Company and Puma Exploration Inc. (Puma), the vendor of the Project. The drill programs consisted of a total of 33 NQ-sized diamond drill holes totalling 3,324 m. In March 2021, Phase one was completed by Puma and consisted of seven (7) holes totalling 1,785 m. In November and December 2021, Phase two (2) was completed by the Company and consisted of 26 holes totalling 2,139 m.

Phase 1 holes were exploration based and targeted Computer Aided Resources Detection System (CARDS) Artificial Intelligence (AI) anomalies, VTEM conductors, gossanous mineralization and the extension of known copper stringer mineralization. Three holes were drilled southwest of Clearwater Stream targeting VTEM anomalies (C21-01) and a CARDS anomaly (C21-02) and the continuity of the Stringer (West) Zone, (C21-07). All three holes intersected mineralization which explained the anomalies and extended the Stringer (West) Zone. Significant core length intersections include: 0.8 m at 1,510 ppm Zn with 530 ppm Cu in hole C21-01 and 0.65 m at 8,600 ppm Cu and 2,910 ppm Zn in hole C21-02. Hole C21-07 returned two intervals with significant average grades including 7.25 m from 356.75 m to 364.0 m averaging 0.46% Cu, and 12.5 m from 383.5 m to 396.0 m averaging 0.38% Cu. Four core drill holes were drilled east of Clearwater Stream targeting the historical CN-12 area (C21-03 and -04) and the potential of the gossan and massive mineralization to host significant gold (C21-05 and 06). Hole C21-04 intersected several intervals of mineralization including 31.4 m from 43 m to 74.4 m averaging 0.63 ppm Ag, 1,313 ppm Pb and 1,720 ppm Zn. Holes C21-05 and -06 intersected notable gold in the gossan beneath the overburden including gold averaging 0.17 grams per tonne (“g/t”) gold (“Au”) over 3.95 m in hole C21-05, and gold values ranging from 0.013 g/t up to 0.955 g/t from 4 to 7.6 m in hole C21-06. The underlying massive to semi-massive mineralization returned expected values in Ag, Cu, Pb and Zn.

The Phase 2 program targeted the main mineral resource areas with infill and delineation type drillholes. All 26 holes of the Phase 2 drill program intersected near-surface massive sulphide or stringer type mineralization validating the historical resource and geological model from the Central, East and West (Cu Stringer) Zones. Additionally, the holes outlined additional resources in gaps between the Central and East Zones and intersected continuous silver and gold mineralization in the Central and East Zones.

Phase 2 drilling was successful in delineating additional mineralization between the Central and East Zone and validating historical results in all three primary zones, Central, East, and West Zone (Copper Stringer). Additionally Phase 2 drill holes intersected near surface gold and silver mineralization within the gossanous Central and East zones. Assay highlights from the Phase 2 drill program include: a 25.7 m intersection returning an average grade of 0.69% Cu in hole C21-14 which includes 11.25 m of a continuous mineralized envelope grading 1.44% Cu, a 13 m intersection returning an average grade of 0.92% Cu in Hole C21-15 including 2.48% over 2 m in a continuous mineralized envelope, 111 m intersection returning an average grade of 0.39% Cu in Hole C21-23 starting 10 m below the surface including 6.16% Cu over 2 metres in a continuous mineralized envelope, a 25.25 m intersection returning an average grade of 0.41% Cu in Hole C21-26 including 0.73% Cu, 4% Zn, 0.11 g/t Au, 18.84 g/t Ag over 13 m in a continuous mineralized envelope, a 2 m intersection returning an average grade of 3.82% Cu in Hole C21-28 including 1.16% Cu over 9.85 m.

The Chester Project MRE is reported in accordance with the CSA NI 43-101 rules for disclosure and has been estimated using the CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" dated November 29, 2019 and CIM "Definition Standards for Mineral Resources and Mineral Reserves" dated May 10, 2014. This MRE for Chester is based on data with a cut-off date of August 31, 2022. The MRE is reported with an effective date of November 01, 2022 and presented in Table 25.1. The Indicated and Inferred MRE is undiluted and constrained within an optimized conceptual pit shell. The Indicated resource includes 4.8 million tonnes of mineralized material at an average copper grade of 1.127% for a total of 120.3 Mlbs of Cu with potential secondary metals of 13.7 Mlbs of lead (Pb), 10.5 Mlbs of zinc (Zn) and 69,000 ounces of silver (Ag). The Inferred resource includes 1.8 million tonnes of mineralized material at an average copper grade of 1.014% for a total of 38.4 million pounds of Cu.

Table 25.1: The recommended reported resource estimate constrained within the $3.5/lb pit shell for copper at cut-off grade 0.5% copper*

Cu cut-off (%)	Tonnes (1000 kg)	Cu (lbs)	Cu (kg)	Avg Cu Grade (%)	Classification
0.5	4,866,000	120,285,000	54,560,000	1.127	Indicated
0.5	1,819,000	38,355,000	17,398,000	1.014	Inferred

**Notes to Table 25.1:*

1. *Mineral resource estimates are reported at a cut-off grade of 0.5% Cu.*
2. *The unconstrained resource block model was estimated using ordinary kriging utilizing blocks at 3m(X) x 3m(Y) x3m (Z) and was subject to several open pit optimization scenarios utilizing a number of copper prices, mining cost scenarios and recovery factors typical of copper mining operations and advanced projects. The Chester final MRE pit shell utilized a copper price of US$3.50/lb and recoveries of 95% with appropriate mining and processing costs typical of near surface open pitable resources in Eastern Canada. Mr. Dufresne considers the pit parameters presented below to be appropriate to evaluate the reasonable prospect for potential future economic extraction at the Chester Project for the purpose of providing a MRE.*
3. *The updated resources presented are not mineral reserves, and they do not have demonstrated economic viability. There is no guarantee that any part of the resources defined by the MRE will be converted to a mineral reserve in the future.*
4. *The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could potentially be upgraded to an Indicated Mineral Resource with continued exploration.*
5. *Historical mined areas were removed from the block modelled resources.*
6. *The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.*
7. *Tonnage estimates are based on bulk densities individually measured and calculated for each of the deposit areas. Resources are presented as undiluted and in situ*
8. *The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.*
9. *This mineral resource estimate is dated November 1, 2022. The effective date for the drill-hole database used to produce this mineral resource estimate is August 31, 2022.*
10. *Mr. Mike Dufresne, P.Geol., P.Geo. of APEX Geoscience Ltd., who is deemed a QP as defined by NI 43-101 is responsible for the completion of the mineral resource estimation.*
11. *Totals may not sum due to rounding.*

Based upon co-author Dr. Kruse's site visits, the historical and current exploration work and the current MRE discussed in this Technical Report, it is the opinion of the authors and QPs that the Chester Property is a "Property of Merit" warranting future exploration work.

25.1 Risks and Uncertainties

A 1993 environmental audit completed by the New Brunswick Department of Environment (NBDE) concluded that there were no outstanding liabilities associated with the Chester site at that time. During the site visit Dr. Kruse observed the presence of un-remediated historical workings on the Property. It is not clear if there are any potential liabilities that could be associated with the exploration completed before 1993 based upon the inspection by NBDE, or if there are any liabilities for work conducted after 1993 including drilling and trenching. To this point, an environmental baseline study is recommended to assess the current state of the property and any remediation and/or reclamation that might be required.

The Chester Project is subject to the typical external risks that apply to all mining projects, such as changes in metal prices, availability of investment capital, changes in government regulations, community engagement and general environmental concerns.

The most significant risk associated with the Chester Project MRE is the use and incorporation of a large amount of historical drilling data in the MRE. The historical drill programs were completed prior to the implementation of modern QA/QC standards, such as the QA/QC program discussed in Section 11 for the 2021 drilling. The standard QA/QC protocols used during historical drill programs did not always identify concerns with sampling and analytical procedures. Another risk associated with the use of large amounts of historical drilling data is the incomplete state of the data with respect to the presence of other potential secondary metals including Pb, Zn, Ag, and Au and the lack of assay data over unmineralized intervals.

Mineralization continuity in areas of inferred resources is an area of concern until further drilling is conducted. Further drilling within or near the areas of the inferred resources, in particular the stringer zone mineralization, would increase the confidence in the mineralization boundaries and the estimated grades.

No potential underground resources have been delineated in this MRE. This should be reviewed for both "In Pit" and "Outside of Pit" resources for future economic trade off studies. The potential "out of pit" underground resource is currently dominated by historical drilling and likely would require further modern drilling prior to any out of pit underground resource being established.

Oxidation has been logged and is considered minimal for near surface mineralization, however additional mineralogical and metallurgical studies are needed to confirm the effect of the oxidized areas on the potentially recoverable mineral resources.

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 Canadian Copper 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.

No other known significant factors or risks related to the Chester Property that may affect access, title or the right or ability to perform work on the Chester Property are known.

26 Recommendations

Based upon co-author Dr. Kruse’s site visits, the historical exploration work discussed in this Technical Report, the current drilling completed by Canadian Copper, and the initial MRE it is the opinion of the authors of this Technical Report that the Chester Property is a “Property of Merit” warranting future exploration work.

The authors recommend an exploration program for the Chester Property that includes: targeted infill and verification drilling of certain priority domains (West Stringer Zone, Central and Eastern massive sulphide zones), twinning or infill around certain historical holes to better assess the potential for secondary metals in the resource area and to increase confidence in the geological model, along with resource expansion drilling and a number of metallurgical holes across the deposit. Phase 1 drilling is estimated to cost $892,000. Additional Phase 1 work should consist of flotation test work on core samples from the Stringer, Central and West zones at an estimated cost of $50,000 and ore sorting test work with an estimated cost $50,000, planning and design work for a conceptual open pit mine leading to an eventual Preliminary Economic Study (PEA) estimated to cost $60,000; The total cost for the recommended Phase 1 program is approximately $1,100,000 including contingency but not including GST (Table 26.1).

A Phase 2 exploration program would be contingent on the results of Phase 1 and should include a further $1,505,000 in additional infill and MRE expansion drilling along with exploration drilling, additional metallurgical test work $200,000, along with initiation of geotechnical work and baseline environmental studies. The total cost for the recommended Phase 2 program is approximately $1,900,000 including contingency but not including GST (Table 26.1).

Table 26.1: Proposed budget for the recommended exploration.

Activity Type				**Cost**
Phase 1				
Activity Type	**Drillholes**	**Total (m)**	**Cost per m**	
Diamond Drilling: Infill, MRE Expansion	17	2,110	$275	$580,000
HQ/PQ Met Holes	12	960	$325	$312,000
Flotation Testwork				$50,000
Ore Sorting Testwork				$50,000
Open Pit Planning and Design				$60,000
			Contingency	$48,000
			Phase 1 Total Activities Subtotal	$1,100,000
Phase 2				
Diamond Drilling Infill, MRE Expansion & Exploration	29	5,470	$275	$1,505,000
Additional Metallurgical Testwork				$100,000
Geotechnical & Baseline Environmental Work				$200,000
			Contingency	$95,000
			Phase 2 Activities Subtotal	$1,900,000
			Grand Total	$3,000,000

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EGBC Licence # 1003016

"Signed and Sealed"

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

"Signed and Sealed"

Anetta Banas, M.Sc., P.Geo.

Terrane Geoscience Inc.

"Signed and Sealed"

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

Edmonton, Alberta, Canada
Fredericton, New Brunswick, Canada
Effective Date: November 1, 2022
Signing Date: December 16, 2022

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28 Certificate of Author

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 – 160th Street 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 ("APEGBC") of British Columbia since 2012. I have recently been accepted as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB) in 2022.
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 (including resource estimation), 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 Sections 1, 2, 12.3, and 13 to 28 and contributed to Section 12.4 of the Technical Report titled "***Technical Report and Initial Mineral Resource Estimate for the Chester Property, Northeast New Brunswick, Canada***", with an effective date of November 1, 2022(the "Technical Report"). I have not visited the Chester 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: November 1, 2022
Signing Date: December 16, 2022
Edmonton, Alberta, Canada

"Signed and Sealed"

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

I, **Stefan Kruse**, Ph.D., 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 Colombia (APEGBC; 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 7, 12.1, 12.2, 12.4, 12.5 and contributed to Sections 1, 4.5, 6, 25, 26 and 28 of the Technical Report titled *"**Technical Report and Initial Mineral Resource Estimate for the Chester Property, Northeast New Brunswick, Canada**"*, with an effective date of November 1, 2022 (the "Technical Report"). I visited the Chester Property on June 5 and 6, 2021, and December 12, 2022 and can verify the mineral tenure, mineralization and the infrastructure at the Chester 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 Canadian Copper Inc., the vendors of the Chester Property, and the Chester 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 Chester 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: November 1, 2022
Signing Date: December 16, 2022

Fredericton, NB, Canada

"Signed and Sealed"

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

I, **Anetta Banas**, M.Sc., P.Geol., do hereby certify that:

1. I am a Senior Staff Geologist with APEX Geoscience Ltd. Suite 100, 11450 – 160th Street, Edmonton, AB, Canada, T5M 3Y7.
2. I graduated with a B.Sc. Degree in Geology from the University of Alberta in 2002 and with a M.Sc. Degree in Geology from the University of Alberta in 2005.
3. I am and have been registered as a Professional Geologist with the Association of Professional Engineers and Geoscientists of Alberta since 2009 (Licence# 70810).
4. I have worked as a geologist for more than 15 years since my graduation from university and have extensive experience with the exploration for, and the evaluation of, base and precious metals 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 Sections 3 to 8 and contributed to Sections 1, 2.2, 2.3, 9 to 11 and 13 to 28 of the Technical Report titled *"**Technical Report and Initial Mineral Resource Estimate for the Chester Property, Northeast New Brunswick, Canada**"*, with an effective date of November 1, 2022 (the "Technical Report"). I have not visited the Chester 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: November 1, 2022
Signing Date: December 16, 2022
Edmonton, Alberta, Canada

"Signed and Sealed"

Anetta Banas, M.Sc., P.Geol.