

Ministry of Energy and Mines
BC Geological Survey

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: GEOPHYSICAL RE-PROCESSING AND GEOLOGICAL TOTAL COST: \$14,447.13

AUTHOR(S): Jack Milton, Ph.D. SIGNATURE(S): Jack Milton, Ph.D.

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): MX-13-266 4th August 2015 through February 15th 2016 YEAR OF WORK: 2015/6

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5591068 February 16th 2016

PROPERTY NAME: Thor Property

CLAIM NAME(S) (on which the work was done): 518727, 518729, 518730, 518731, 518733, 518734, 518736, 518737, 518739, 953674, 517626, 1016144, 1016425, 953677, 601033, 1025283, 1025558, 1025687, 1025812, 1025887, 1026079, 1026197, 1026427, 1026576, 1026594, 1026683, 1026697, 1026709, 1029288, 1029289, 1029290, 1029291, 1029292, 1029293, 1029295, 1029296

COMMODITIES SOUGHT: Copper, gold, (molybdenum, silver)

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 094D 064; 094D 126; 094D 127; 094D 131

MINING DIVISION: Omineca NTS/BCGS: 094D 15E

LATITUDE: 56 ° 49 ' 00 " LONGITUDE: 126 ° 38 ' 00 " (at centre of work)

OWNER(S):
1) Electrum Resource Corporation 2) _____

MAILING ADDRESS:
Suite 912, 510 West Hastings St
Vancouver, BC, V6B 1L8

OPERATOR(S) [who paid for the work]:
1) Copper North Mining Corporation 2) _____

MAILING ADDRESS:
1120-1095 West Pender St.,
Vancouver, Canada, BC, V6E 2M6

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
Porphyry, early Jurassic, late Triassic, Takla Group, copper, gold, chalcopyrite, pyrite, bornite, molybdenite, Toodoggone, Au, Cu

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 29938, 28263, 25620, 25047, 24181, 31339, 35276, 4254,

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation	8,250 hectares	518729, 518727, 1026079, 953671, 518730	\$3,043.96
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic	13,220 hectares (re-processed)	Same as photo interpretation plus 1026079	\$10,143.17
Electromagnetic			
Induced Polarization	21.6 line km (re-processed)	518730, 1025283, 518734, 1016425, 518731	\$1,260.00
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
TOTAL COST:			14,447.13



2016 TECHNICAL ASSESSMENT REPORT ON THE GEOLOGY AND GEOPHYSICS OF THE THOR PROPERTY

Date submitted: April 5th 2016

Omineca Mining Division British Columbia

NTS 94D/11E

56° 49' N/126° 38' W

Tenure numbers:

518727, 518729, 518730, 518731, 518733, 518734, 518736, 518737, 518739, 953671, 517626, 1016144, 1016425, 953677, 601033, 1025283, 1025558, 1025687, 1025812, 1025887, 1026079, 1026197, 1026427, 1026576, 1026594, 1026683, 1026697, 1026709, 1029288, 1029289, 1029290, 1029291, 1029292, 1029293, 1029295, 1029296, 1034271, 1034272, and 1038442

Owner of claims: Electrum Resource Corp.

Operator of claims: Copper North Mining Corp.

Prepared by:

Jack Milton, Ph.D.

Copper North Mining Corp.

Vancouver, BC

February 2016

Table of contents

1. INTRODUCTION AND TERMS OF REFERENCE	2
2. PROPERTY DESCRIPTION AND LOCATION	3
3. ACCESSIBILITY AND INFRASTRUCTURE	4
4. MINERAL TENURE INFORMATION	4
5. PHYSIOGRAPHY AND CLIMATE	7
6. HISTORY	7
7. GEOLOGICAL SETTING	9
8. REGIONAL GEOLOGY	10
9. LOCAL GEOLOGY	10
10. MAGNETIC SURVEY DATA DIGITIZATION, LEVELLING AND INVERSION	11
11. INVERSION OF POLE-DIPOLE INDUCED POLARIZATION DATA	13
12. GEOLOGICAL AND GEOCHEMICAL DATA MAP COMPILATION AND REINTERPRETATION.....	17
13. INTERPRETATION OF GEOPHYSICAL INVERSIONS	19
14. CONCLUSIONS	25
15. RECOMMENDATIONS.....	25
16. STATEMENT OF COSTS	26
17. REFERENCES	27
18. STATEMENT OF QUALIFICATIONS	29
19. APPENDIX 1: HISTORIC MAGNETIC SURVEY LOCATIONS	30
20. APPENDIX 2: CONDOR CONSULTING MAGNETIC INVERSION METHODS AND PARAMETERS.....	32
21. APPENDIX 3: INVERTED IP SECTIONS	37

1. INTRODUCTION AND TERMS OF REFERENCE

The Thor mineral property is located in the Omineca Mining Division of north-central British Columbia (Latitude 56° 49' N, Longitude 126° 38' W; NTS map sheets 94D/11E) (Figure 1). It includes much of Moose valley, the western slopes of the McConnell Range, and extends northwards for approximately 7 km from the headwaters of Menard Creek to just north of Thorne Lake.

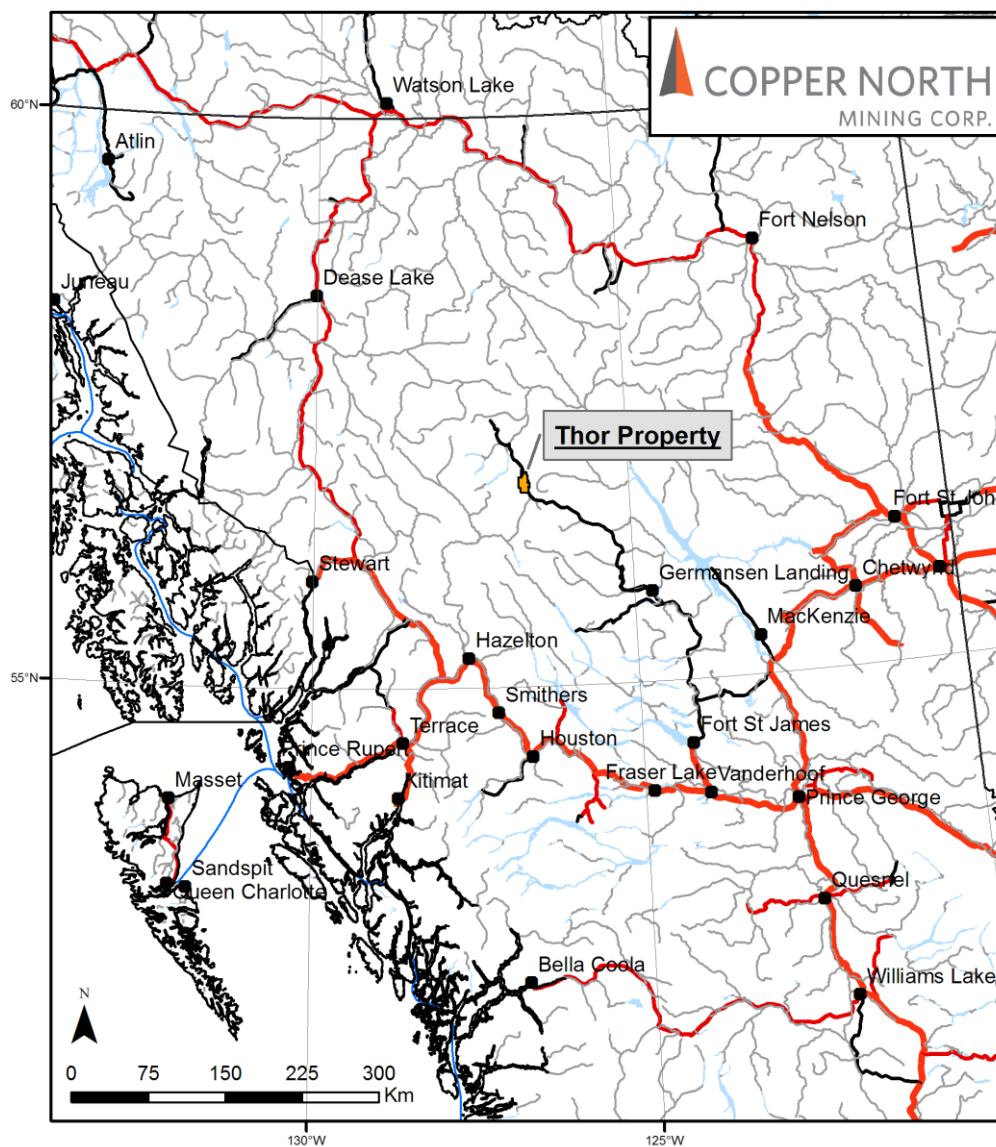


Figure 1 Location of Copper North's Thor property.

This report quotes from historical assessment reports of the area, as noted in the References section.

The Thor property comprises a series of porphyry copper-gold and gold occurrences and targets. This report details the work of new geophysical inversions performed on historic induced polarization data and magnetic data, and the new compilation and interpretation of geological, magnetic and geochemical data. The inversion of magnetic data required significant new digitizing of historic data from the 1973 airborne survey. The re-processing of the geophysical data has led to a significant re-interpretation of the geology, resulting in the identification of several large, potentially highly significant porphyry Cu-Au targets.

2. PROPERTY DESCRIPTION AND LOCATION

The property is located on NTS map sheet 94D/10 and 094/D15 in the Omineca Mining Division, approximately 20 km south of the past-producing Kemess Mine in north-central B.C. The geographic coordinates of the approximate property center are 56° 49' N latitude 126° 38' W longitude or 643,000 mE – 6,296,000 mN NAD83-UTMZ9N (Figures 2 and 3). The property is located to the immediate east and south of Thorne Lake. The western side of the property is within Moose Valley and the eastern side comprises mountains of the McConnell Range.

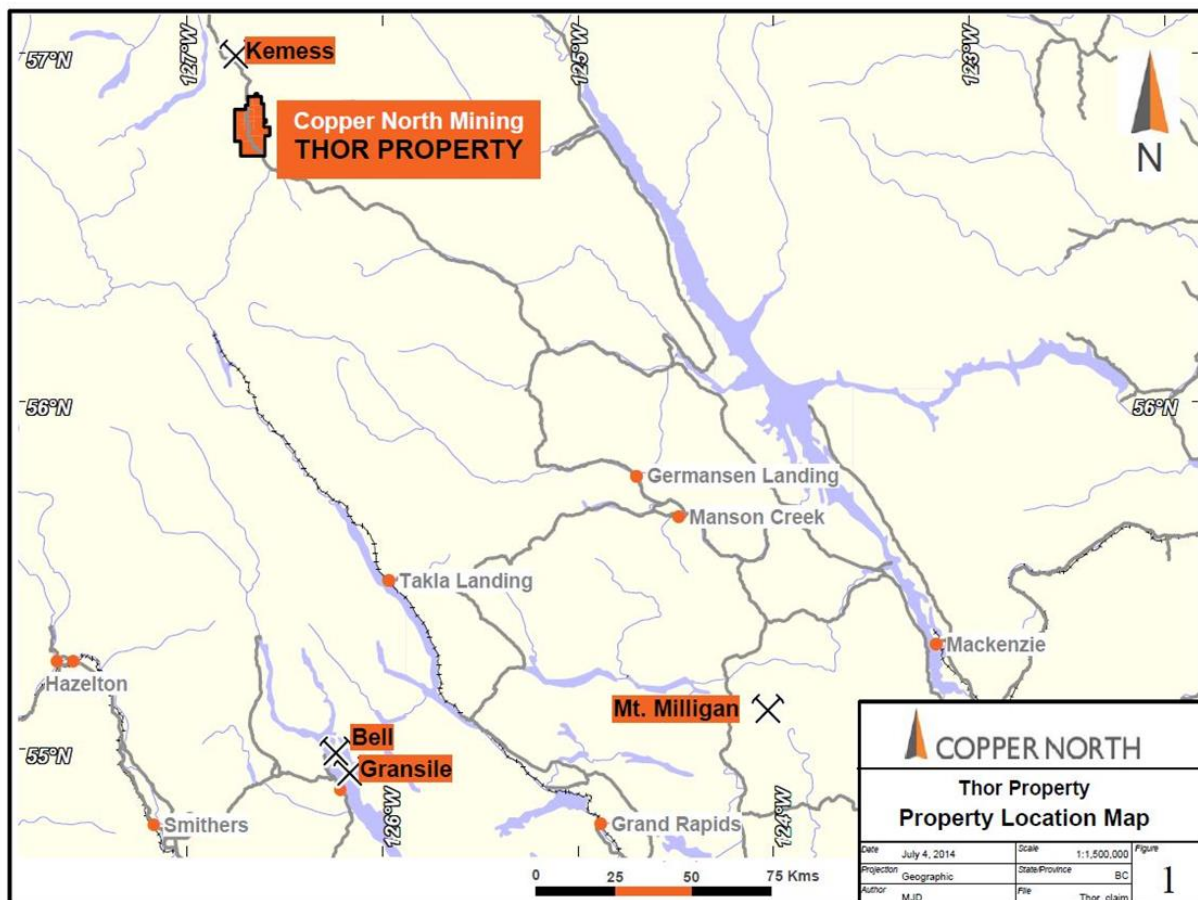


Figure 2 Location of Copper North's Thor property and close proximity to the Kemess South mine that went on care and maintenance in 2011 after exhausting ore in the open pit.

3. ACCESSIBILITY AND INFRASTRUCTURE

Access to the property is via highway 97, north from Prince George to the Mackenzie turn-off, then approximately 30 km north to Mackenzie and then by the Omineca Resource Access Road for approximately 270 kilometres. An alternate route from near Fort St James and thru Germansen Landing up to the claim group also exists; however, road conditions here are not as good. The Omineca Resource Access Road passes through the entire length of the property, providing excellent access to the targets in Moose Valley.

4. MINERAL TENURE INFORMATION

The Thor property consists of thirty-nine (39) mineral claims totaling 16,058.5 ha (Figure 3 and Table 1).

Tenure#	Issue date	Good to date	Claim Name	Hectares
518727	2005-08-04	2017-08-03	THOR 1	424.5
518729	2005-08-04	2017-08-04	THOR 2	424.5
518730	2005-08-04	2017-08-05	THOR 3	371.6
518731	2005-08-04	2017-08-06	THOR 4	354.1
518733	2005-08-04	2017-08-07	THOR 5	425.1
518734	2005-08-04	2017-08-08	THOR 6	425.2
518736	2005-08-04	2017-08-09	THOR 7	425.4
518737	2005-08-04	2017-08-10	THOR 8	425.5
518739	2005-08-04	2017-08-11	THOR 9	354.7
953671	2012-03-01	2018-09-10	THOR MARMOT 1H	70.8
517626	2005-07-13	2018-01-17		17.7
1016144	2013-01-19	2017-01-18	THOR MARMOT 11	478.0
1016425	2013-01-30	2017-01-29	THOR MARMOT 11	354.1
953677	2012-03-01	2018-09-07	THOR MARMOT 1K	35.4
601033	2009-03-13	2018-09-12	THOR 10	17.7
1025283	2014-01-19	2017-01-18	THOR MARMOT 12	495.5
1025558	2014-01-29	2017-01-28	THOR MARMOT 13	496.0
1025687	2014-02-04	2017-02-03	THOR MARMOT 2G	212.4
1025812	2014-02-09	2017-02-08	THOR MARMOT 14	620.3
1025887	2014-02-11	2017-02-10	THOR MARMOT 2J	159.4
1026079	2014-02-19	2017-02-18	THOR MARMOT 1B	318.4
1026197	2014-02-22	2017-02-21	THOR MARMOT 17	372.3
1026427	2014-03-03	2017-03-02	THOR MARMOT 1J	177.1
1026576	2014-03-09	2017-03-08	THOR MARMOT 1F	70.9
1026594	2014-03-10	2017-03-09	THOR MARMOT 1M	35.4
1026683	2014-03-14	2017-03-13	THOR MARMOT 2H	212.7
1026697	2014-03-15	2017-03-14	THOR MARMOT 18	53.0
1026709	2014-03-16	2017-03-15	THOR MARMOT 2I	159.4

1029288	2014-06-30	2017-06-29	CN 2	531.9
1029289	2014-06-30	2017-06-29	CN 3	796.9
1029290	2014-06-30	2017-06-29	CN 4	797.7
1029291	2014-06-30	2017-06-29	CN 5	354.8
1029292	2014-06-30	2017-06-29	CN 5	1135.1
1029293	2014-06-30	2017-06-29	CN 7	1420.5
1029295	2014-06-30	2017-06-29	CN 8	1278.6
1029296	2014-06-30	2017-06-29	CN 1	1348.7
1034271	2015-02-21	2016-02-20	CN 9	17.7
1034272	2015-02-21	2016-02-20	CN 10	124.2
1038442	2015-09-08	2016-09-07	CN 9	265.2

Table 1 Mineral tenure information for the Thor property, prior to this assessment work being applied to the claims.

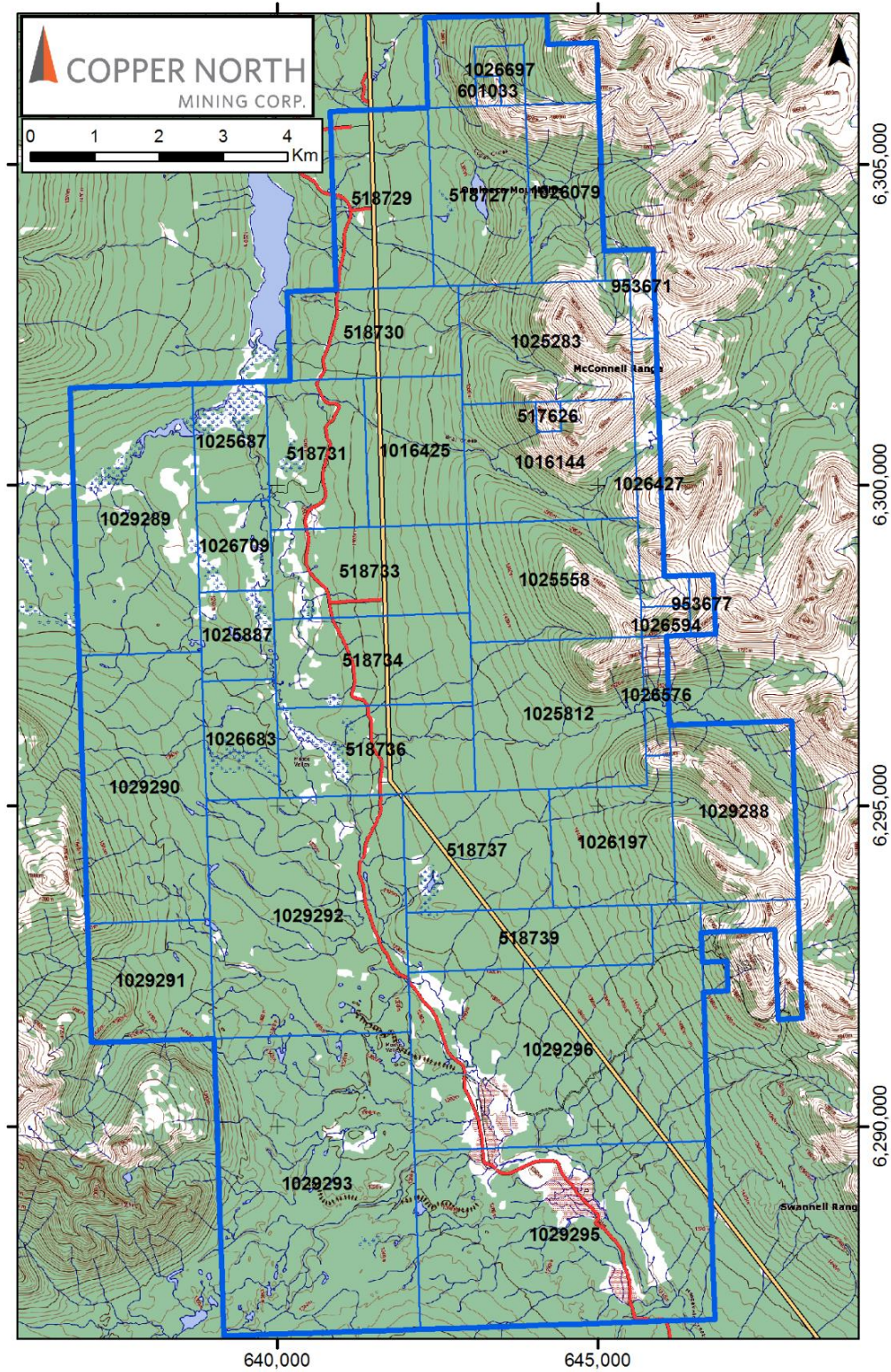


Figure 3 Topography, access road (red), power transmission line (yellow) and claims (blue).

5. PHYSIOGRAPHY AND CLIMATE

The grassy, lightly timbered Moose Valley is at an elevation of about 1200 metres and the highest point on the claims is 2,080 metres, well above timberline. Mountains in the McConnell Range are fairly rugged. The climate is typical of the northern interior with moderate (+/- 100 centimetres) precipitation, much of it falling as snow that lasts from early November to late May. Winter temperatures can range down to - 40 °C.

6. HISTORY

The following account of the exploration history of the Thor-Marmot property area was modified from reports by McDougall (1997) and Beck and Ledwon (2013).

Early exploration in the region centered on small placer gold operations, particularly in the Germansen Landing-Manson Creek area, although even smaller operations were in production in the Toodoggone River area and elsewhere. Several lead-zinc showings were discovered in the first part of the 1900s. In the late 1960s and 1970s the region was explored for porphyry type copper and molybdenum mineralization. It was during this period that the Chappelle Creek (Baker mine) precious metal vein, Lawyers (Cheni mine) amethystine epithermal gold, and the Kemess-north porphyry copper-gold deposits were initially discovered. Considerable interest was generated by the Falconbridge discovery of several volcanic/sediment-hosted copper deposits (Sustut deposit) and intrusive associated gold-copper deposits within rocks along the Sustut River valley. In the 1980s, most interest was centered on the Toodoggone area gold discoveries (Baker and Cheni mines).

In 1996 Royal Oak Mines announced that it was proceeding with development of the Kemess-south deposit, located approximately 16 kilometers north of the Thor property. This project created renewed interest in the area, since the existence of an electric power line and good road access would make development of additional deposits relatively inexpensive.

The Omineca Resource Access Road heading north from Fort St. James was started in the late 1940s. It was built in stages and reached Moose Valley in the early 1970s. It was later extended north as far as the Toodoggone River to service the short lived Baker and Cheni gold mines. This road used to service the past-producing Kemess mine and passes through the Thor claims.

Within the Moose Valley-Marmot area, mineralization of interest was first reported during a regional mapping program of the Geological Survey of Canada in the early 1940s (Lord, 1948). A sample from a 1.5 m wide silicified shear zone assayed 4.4 g/tonne gold, 5.1% copper and 123 g/tonne silver. The first claims were staked in the early 1960s by W. D. Savage, and optioned in 1966 to New Wellington Resources Ltd. In 1966 New Wellington completed a program consisting of geological mapping, IP surveying (two (2) lines across the Marmot showing), and bulldozer trenching. A total of 767 m of trenching was completed, and about 20 acres of bedrock was stripped (Mouritsen, 1966). In 1967, a further 1.6 km of bulldozer stripping was completed, and one short hole was drilled (Campbell, 1968). In 1969, the property was optioned by Texada Mines Ltd, who carried out a 14-week program of soil sampling and geological mapping (Church, 1973). Five diamond drill holes totaling about 238 metres were drilled, three of which were on the main Marmot showing and the other two on the slope

immediately to the west. Due to reported technical difficulties, none of the holes reached their target depth. A total of 2,066 soil samples were taken.

In the early 1970s BP Minerals, after a regional stream sediment survey, staked several claims in the central Thor area north of the present Marmot claims.

In 1973, Wesfrob Mines Ltd (a Falconbridge subsidiary under the overall direction of J. McDougall) optioned the Marmot property and in 1973 carried out a 300 line-kilometer airborne magnetic EM survey (Lockwood Surveys), and a 275 metre, 5-hole diamond drill program. Two of the drill holes were drilled to determine depth to bedrock, and two other holes tested weak VLF-EM conductors in readily accessible areas. No mineralization of interest was encountered. The fifth hole, drilled below one of the known Marmot mineralized zones, showed no values of interest although core recovery was very poor. The airborne survey, consisting of magnetics and electromagnetics, did outline a possible buried porphyry or semi-massive sulphide target within rocks of unknown derivation, as well as generating many EM anomalies believed caused by carbonaceous beds (Brown 1973). No drill testing of anomalies was carried out, as Wesfrob postponed further work on its main priority, the "Sustut" copper property, leaving the area late in the season.

In 1984, B.P. Resources carried out a program of silt and rock chip sampling as a follow up to their earlier program in the central claim area (Heberlein, 1984).

Also in 1984 Falconbridge carried out an exploration program in the Moose Valley area (including the north part of the current Thor claims) targeting palaeoplacer gold deposits in the clastic sediments of the Sustut Group (Lehtinen, 1984). Copper and gold bearing shears hosted in volcanic rocks on the Thor 3 claim were also investigated.

In 1987 Mingold Resources Ltd. resampled the known occurrences in the area and staked the KMA claims. In 1988, a program of rock sampling, prospecting and soil sampling was carried out on the more northerly "Thorne" claims by Asamera Minerals Inc. Additional claims were staked in 1989 and further soil and rock sampling completed, but further test recommendations submitted to Asamera were not followed through on.

In 1990, Mingold (Reynolds 1990) carried out further exploration consisting of rock and soil sampling near the Marmot prospect, extending the copper and gold anomalies to the north, and to the south. An altered andesitic float sample (source not discovered) reportedly assayed 28.80 g/tonne (0.84 oz/ton) gold, and 1% copper.

In 1992, Electrum Resources Corporation staked the Thor 1-7 group of claims several kilometers to the north, covering much of the abandoned Thorne ground, and eventually consolidated a new Thor group in 1995 contiguous with the Marmot (1992) property to the south. Work by Electrum (Staarguard, 1992--93) consisted of geochemical and VLF-EM surveys, largely designed to trace important fault structures southward from the Kemess copper-gold porphyry deposit.

In 1995, on behalf of Electrum Resource Corp, S. Zastavnikovich, geochemist and the author of the 1995 report, conducted soil and rock samplings as well as a VLF-EM survey in an attempt to better locate the Moose Valley fault zone which traverses the length of the claims.

In early 1997, San Telmo Resources Ltd. optioned the Thor 2, 3, 8, 9, and Marmot claims from Electrum and staked the Thor 11, Thor 12, and Marmot 2 claims. In March of 1997, San Telmo completed an airborne geophysical survey (EM and Mag) over the area. Field expenditures on the Thor-Marmot Group by Electrum to 1995 totaled approximately \$40,000. Total "pre 1996" expenses on portions of the property are estimated to exceed \$100,000 (in 1970 +/- dollars). Only a small portion of this, however, was spent on drilling, restricted to only a few short poor-recovery holes on the Marmot property.

Expenditures by San Telmo prior to the commencement of the current program exceed \$100,000, the largest item being the 1997 airborne geophysical program, which cost approximately \$88,000.

In 1998, San Telmo contracted Gordon J. Allen, P. Geo to conduct a small amount of geological mapping and rock sampling as well as 692.21m of diamond drilling.

In 2005, Electrum Resource Corp conducted geochemical rock, soil and drainage sampling on the Thor property in order to identify geochemical anomalies for porphyry type copper-gold mineralization. As well, drill core from the 1998 program was resampled and reanalyzed. Three lines of Induced Polarization (I.P.) and ground magnetic surveys were carried out by Peter E Walcott and Associates Limited in the central part of the Thor claims, from the Kemess mine road to the alpine slopes to the east. Total costs for the 2005 program were \$62,045.76.

In 2007 Peter E. Walcott and Associated Limited carried out three additional lines of induced polarization (I.P.) and ground magnetic surveys at a total cost of \$103,180.86.

In 2009, Quantec Geoscience Ltd conducted a Titan-24 survey over the two of the 2007 IP lines, with a total expenditure of \$140,000 from July 25th to August 2nd and August 15th to August 18th 2009.

In 2013, Electrum Resource Corp. contracted UTM Exploration Services Ltd to conduct a ten day soil sampling program on the Thor claims, sampling a total of 216 sites for a total cost of \$25,193.80.

In 2014, Copper North Mining Corp., signed an agreement to acquire a 100% interest in the Thor property from Electrum Resource Corporation.

In 2014, Copper North Mining Corp contracted Scott Geophysics to conduct 39.8 line kilometres of IP and magnetic surveys on the Thor property.

7. GEOLOGICAL SETTING

The Toodoggone district is a ~100 x 30 km belt of calc-alkalic Cu-Au-Mo porphyry and epithermal Au-Ag deposits in north-central BC (Duuring et al 2009). The Toodoggone is located within the Stikine Terrane and is part of the Intermontane Belt. Porphyry mineralization is associated with the emplacement of Early Jurassic quartz monzonite to granodiorite intrusions within a basement of Permo-Triassic volcanic and sedimentary rocks. Post-mineralization Jurassic and Cretaceous sedimentary-volcanic rocks unconformably overlie the basement and form a cover to the deposits. The region has been affected by valley glaciers and valley bottoms are scoured and covered in glaciogenic sediments. However, the mountain tops

appear to have remained unglaciated and in these areas, deep oxidation has caused the formation of leached cap and brightly coloured gossans in areas of sulphide mineralization.

8. REGIONAL GEOLOGY

The property geology consists of a central north-south belt of upper Triassic Takla Group volcanic rocks intruded to the east by early Jurassic granodiorites and to the west erratically along the fault contact with early Tertiary Sustut Group sediments.

From Tipper (1976):

Takla Group

The Takla Group comprises basaltic and andesitic volcanic rocks, with a preponderance of augite porphyry, pelitic sedimentary rocks, and minor carbonate rocks. Its age is mainly Late Triassic (Late Karnian to Middle Norian, possibly late Norian). The type area, as defined by Armstrong (1949, p.51), is in the vicinity of Takla Lake, although it is much better exposed to the north in the McConnell Creek area. There, this definition fits remarkably well with Lord's Lower Division of the Takla Group (Lord, 1948). A refining of the Takla Group has recently been undertaken (Monger, 1974, 1976; Monger, in press; Church, 1974), and its definition in these works is used in this report. This definition would make the Takla Group correlative with the Nicola Group (Tipper, 1959, p.38). Not everywhere is the Takla-Nicola Group volcanism confined to the Late Triassic as, in the Bonaparte Lake area, augite porphyry volcanics continued to accumulate until Early Sinemurian time (Campbell and Tipper, 1971). Palaeontological evidence in the present study area, however, indicates that Takla volcanism ceased before Early Jurassic time.

Sustut Group

Lord (1948, p.34) defined the Sustut Group as "a thick assemblage of conspicuously embedded and banded continental strata of relatively simple structure." It includes conglomerate, sandstone, shale, and bands of tuff: Eisbacher (1974a, p.8-11) subdivided the group into two formations: a lower, Tango Creek, and an upper, Brothers Peak, and these, in turn, were subdivided into several members, the Niven and Tatlatui for the former, and the Laslui and Spatsiszi for the latter. The age is believed to be Late Cretaceous (Cenomanian) to Tertiary (Eocene).

9. LOCAL GEOLOGY

From Tipper (1976) and Allen (1998):

Volcanic rocks of the Upper Triassic Takla Group predominantly underlie the eastern parts of the claims as observed during the 1998 field-mapping program. These rocks were only traversed on the north part of the claim block during that program. Where observed they generally consisted of coarse grained plagioclase augite phyric basalt or andesite flows and minor amounts of intercalated volcanoclastic rocks, probably of the Savage Mountain Formation.

Medium-grained granitic (granodiorite?) plugs have intruded Takla Group volcanic rocks. Only one intrusion in the north end of the claim group was observed during the 1998 program. The

rock is a medium greenish grey, strongly sericite-altered medium-grained biotite-hornblende granodiorite (?).

Sustut Group clastic sedimentary rocks probably underlie the western part of the property, although exposure is poor and contacts are not well defined. Sustut Group rocks are only observed at the south end of the claim block, on surface near the Marmot 2 claim, and in drill hole Mar 98-01. At both of these locations the rock consists of poorly consolidated pebble to cobble conglomerate with abundant rounded clasts of Takla Group volcanic rock, lesser amounts of granitic material, and vein quartz.

Falconbridge Ltd. obtained up to one (1) gram of gold per tonne in Sustut Group conglomerates well west of the claim group. During their exploration for palaeoplacer deposits in the area they located conglomerate outcrops near the western extremity of the current Thor 12 claim and a second outcrop of conglomerate roughly one (1) kilometre to the west.

The Takla Group volcanic rocks are sporadically gossanous in zones up to one (1) kilometre wide. These zones contain disseminated pyrite, are highly fractured, and appear to be related to fault zones. A few of these gossanous zones were investigated but to date, copper and gold grades have been found to be very low.

Takla Group rocks also host north to north-northeast trending gossanous shear zones up to 10 metres wide, commonly with quartz or quartz carbonate vein cores. These veins range in width from a few centimetres to over two (2) metres, and generally carry pyrite, chalcopyrite and varying amounts of gold up to over 100 grams per tonne. One of these structures has been traced for over a kilometre and was the target of much of the drilling in 1998. Several of these northerly-trending veins/shears were investigated and sampled during this 1998 program.

One occurrence of copper-gold porphyry-type mineralization was discovered during the 1998 program in an altered granitic intrusion. Drill hole MAR98-06 intersected 60.24 m of 0.112% Cu and 0.041 g/t Au starting from a depth of 86.6 m. This 233.78 m long drill hole was the last hole of the season, and ended in weak (0.08% Cu) copper mineralization of sporadic occurrence of disseminated, shear-hosted or stringer chalcopyrite-chalcocite in a zone of propylitic alteration. Drilling was terminated in hole MAR98-06 owing to a lack of drill rods (Allen, 1998).

10. MAGNETIC SURVEY DATA DIGITIZATION, LEVELLING AND INVERSION

Digital data from the 1997 airborne magnetic-EM survey was retrieved by Geotech Ltd. from their digital archives in December 2015. The 1973 airborne magnetic survey was not available digitally and the only data available was a contoured plot of the total magnetic intensity. This was georeferenced and manually heads-up digitized using ArcGIS in the winter of 2015-2016. Contour lines were attributed with magnetic intensity and then converted to points every 5 metres along the line. The 2014 IP survey conducted by Copper North also recorded ground magnetic surveys along the IP lines and these data were combined with the two airborne datasets (see Appendix 1 for locations and format of the original magnetic surveys).

Condor Consulting, a geophysical consulting group, was engaged in February 2016, to clean-up the magnetic databases, level the data to a common base, filter and then invert the data in 3D.

The methodology and results of the inversion are summarized in Appendix 2 and digital data is included with digital appendices. Total magnetic intensity is shown in Figure 4.

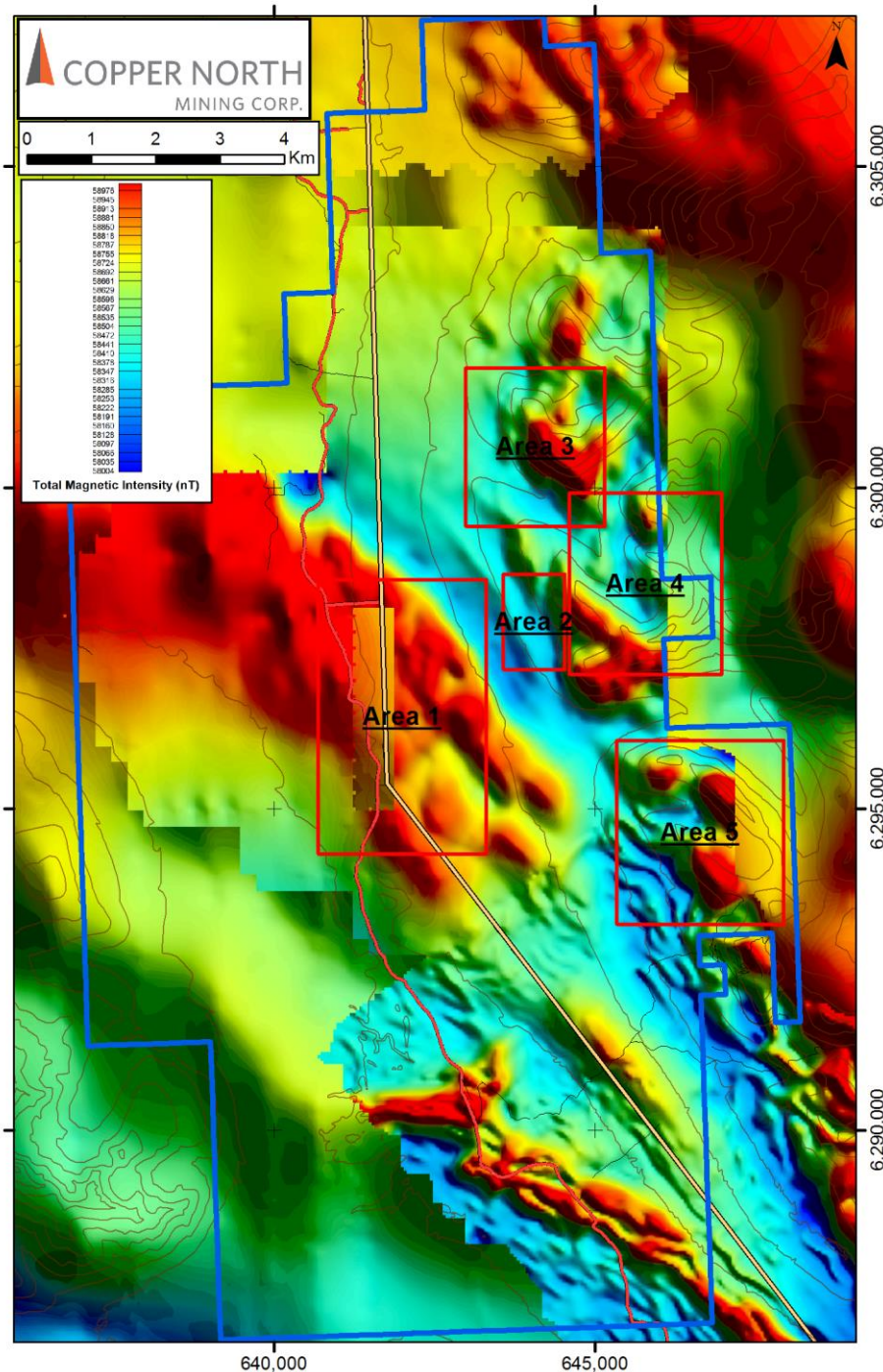


Figure 4 Total magnetic intensity of the combined and levelled 1997 heli-mag, 1973 heli-mag and 2014 walk-mag surveys. Background is government regional airborne magnetic dataset. Target areas are described in section 13.

The results of the magnetic inversion show the magnetic susceptibility of the area in 3D and can determine the depth extent of the anomalies (Figure 5). A small hole, rectangular in plan view, is present in the centre of the inversion as no magnetic data was available for this area. The large magnetic high in Moose Valley in the centre of the property and the smaller isolated magnetic highs on the east side of the property have deep seated magnetic sources. The magnetic highs in the southern part of the property have a shallow signature and may reflect a near surface source such as magnetite-bearing sedimentary or volcanic cover rocks.

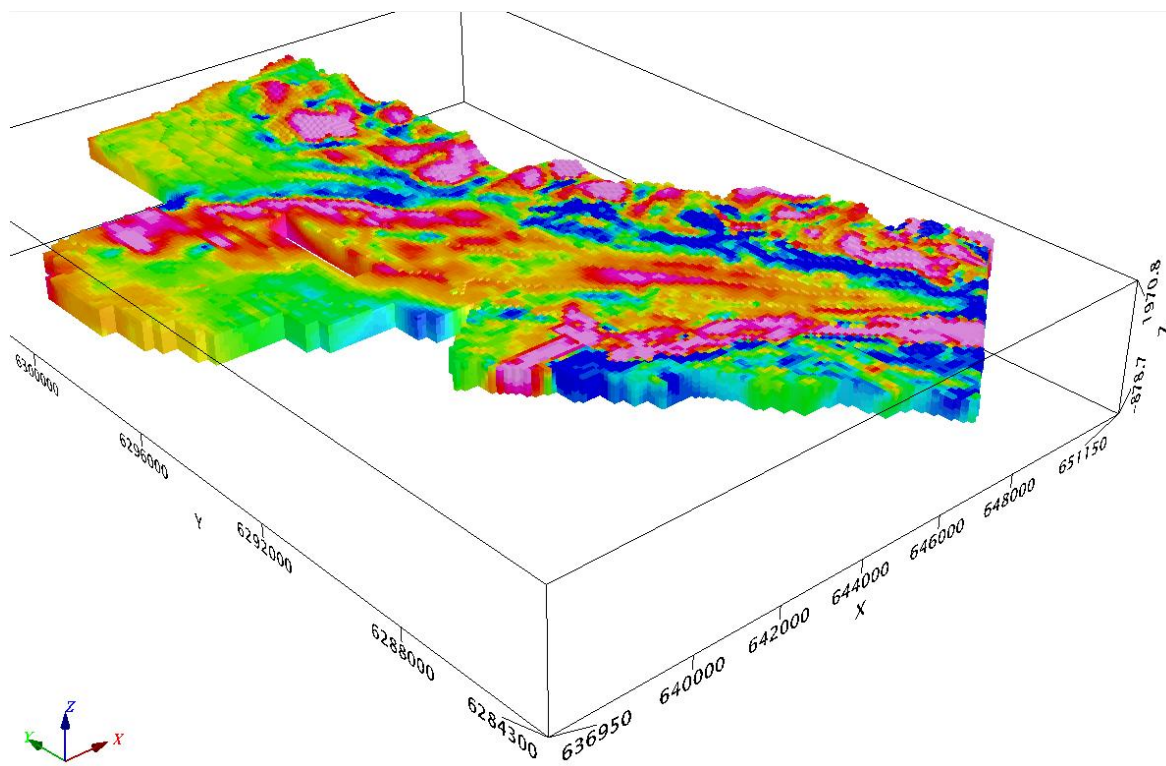


Figure 5 3D perspective view, looking NE of the magnetic inversion

11. INVERSION OF POLE-DIPOLE INDUCED POLARIZATION DATA

Between January 3rd and 4th, 2016, Peter E. Walcott and Associated Limited undertook 2D inversions on historic induced polarization data collected over portions of Copper North Mining Corporation's Thor property.

The historic data, consisted of two data sets collected during the 2005, and 2007 field seasons (Zastavnikovich, 2006; Walcott, 2008). The data was first loaded from the ascii backup files into Geosoft Oasis Montaj, where new IP pseudosections were generated for review prior to inversion.

The induced polarization data consisted of some 22.8 kilometers of traverses carried out on 6 large spaced east – west oriented lines. The surveys employed a 50 meter a-spacing measuring the 1st to 6th separations in a pole-dipole electrode configuration.

The 6 lines of induced polarization data was then paired with topographic data for use in the 2D inversion code, and subsequently exported to a format compatible with Geotomo's RES2DINV.

Two dimensional smooth model inversions of the resistivity and chargeability were carried out using the Geotomo RES2DINV Algorithm, an algorithm developed by Loke et al. This algorithm uses a 2-D finite element method and incorporates topography in modeling resistivity and I.P. data. Nearly uniform starting models are generated by running broad moving-average filters over the respective lines of data. Model resistivity and chargeability properties are then adjusted iteratively until the calculated data values match the observed as closely as possible, given constraints which keep the model section smooth. The smooth chargeability and resistivity models were then imported into Geosoft format for presentation at the same scale of 1:5,000.

The chargeability anomalies are summarized on a map in Figure 6 and in 3D perspective views in Figures 7 and 8. The much greater depth of penetration of the Quantec Titan IP survey than the conventional pole-dipole IP is evident in Figure 8.

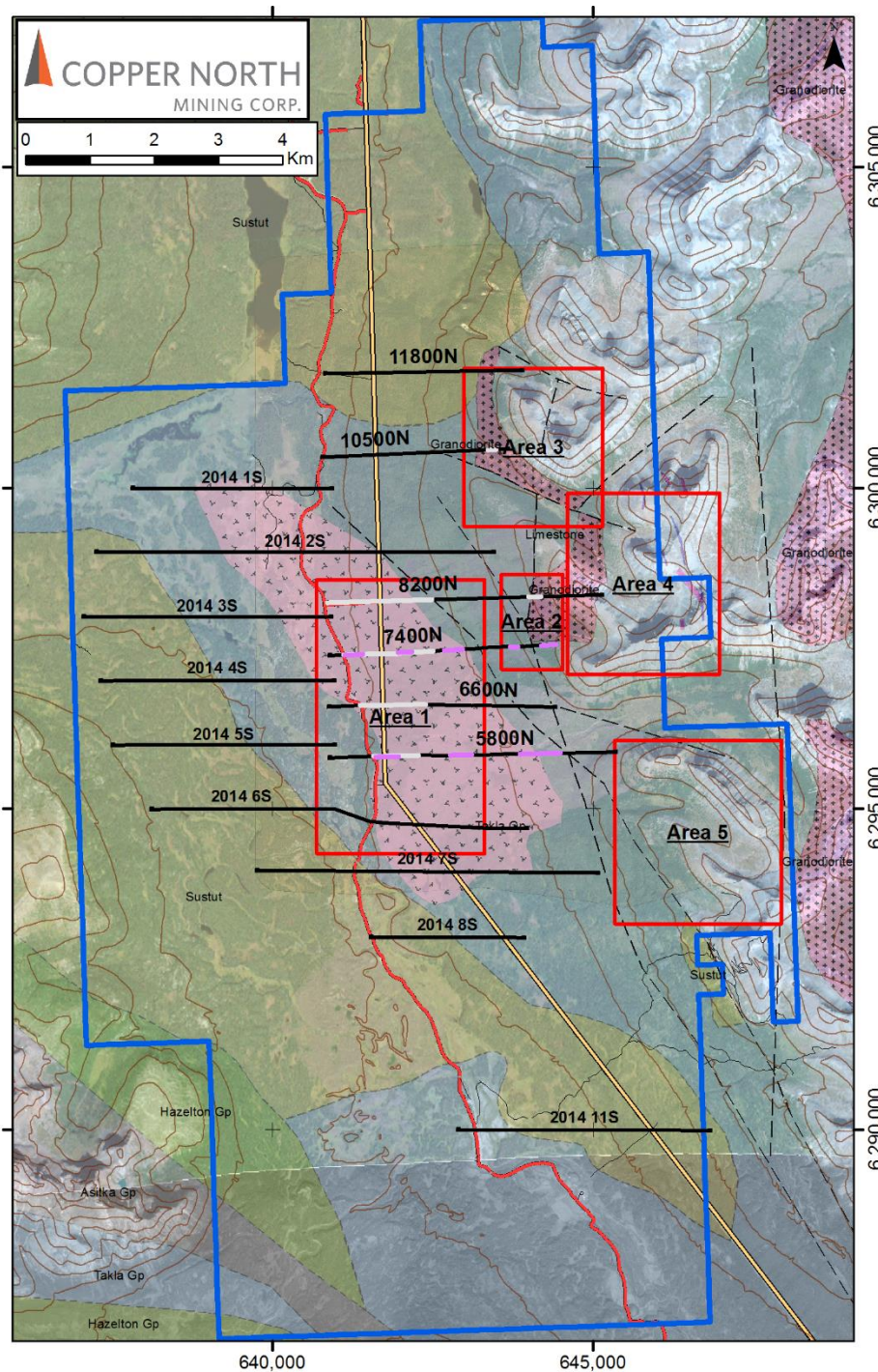


Figure 6 Geological map with IP lines (solid black lines), on the Thor property, with chargeability anomalies projected to surface (light grey = pole-dipole anomalies; purple = Quantec Titan IP anomalies). Background is satellite imagery.

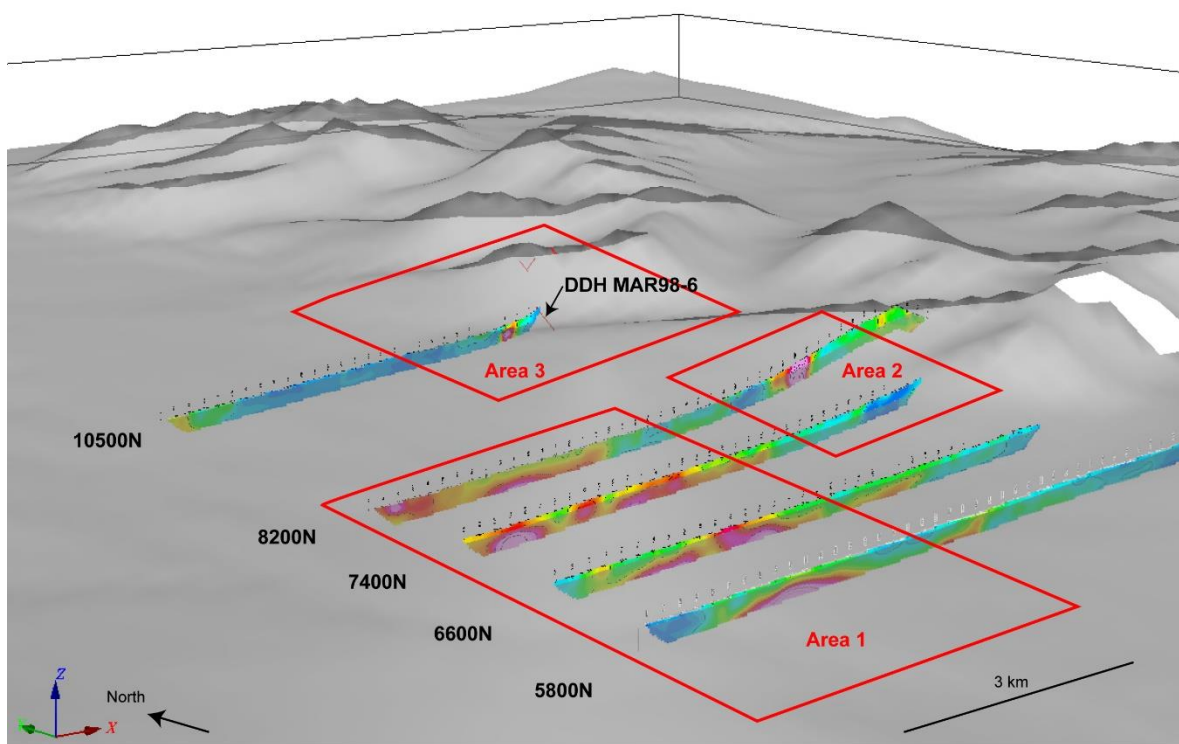


Figure 7 Pole-dipole inverted chargeability anomalies, perspective looking NE, Areas 1 to 3.

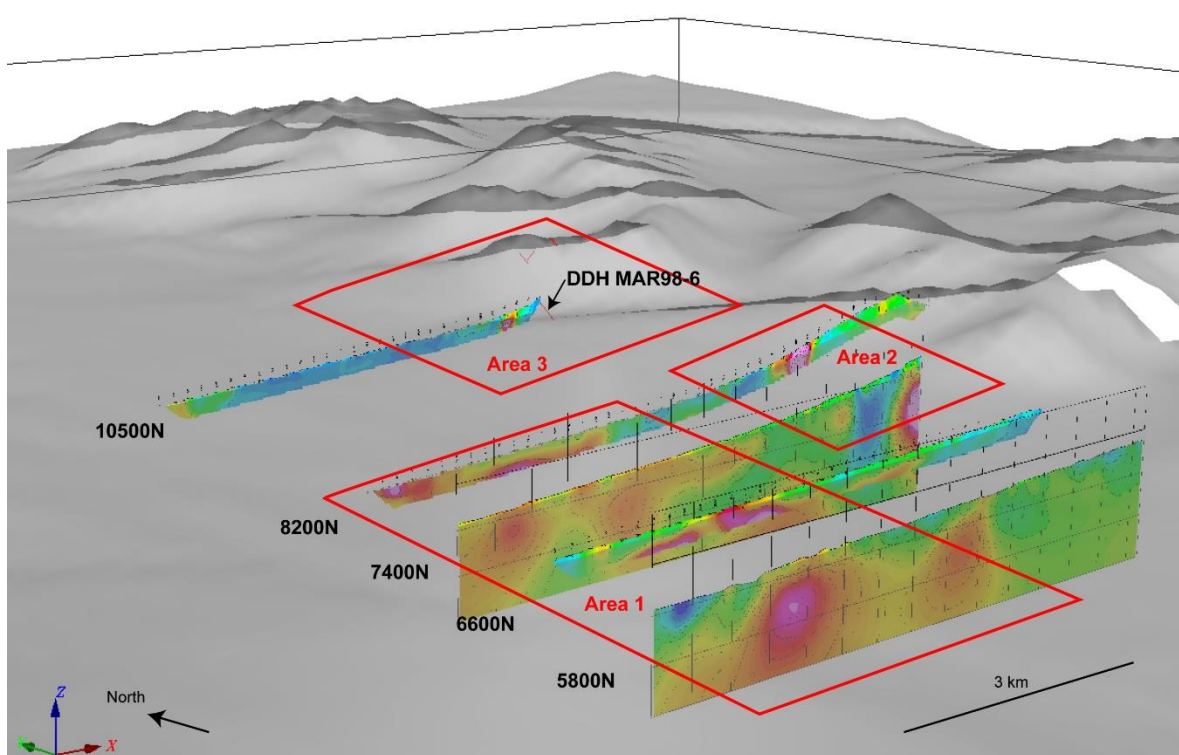


Figure 8 Quantec Titan chargeability on lines 7400N and 5800N, pole-dipole for 6600N & 8200N

12. GEOLOGICAL AND GEOCHEMICAL DATA MAP COMPILATION AND REINTERPRETATION

Previous geological mapping from assessment reports, academic papers and government maps was digitized and compiled in to a new geological map for the property (Figure 6). The most significant reinterpretation of the geology a magnetic-high area within Moose Valley that was previously mapped as the Cretaceous Sustut Group sedimentary rocks. This area has been re-interpreted as a granodiorite intrusion based on the high magnetic susceptibility modelled in the magnetic inversion and the persistence and increase of this magnetic susceptibility to great depths. This has led to the re-evaluation of Moose Valley for porphyry style gold-copper mineralization associated with the inferred intrusion.

High resolution satellite imagery was purchased from DigitalGlobe. The imagery comprises 50 cm resolution colour and false-colour infrared GeoEye imagery that covers an area of approximately 8,250 hectares in the centre of the Thor property, extending from the Omineca Mine access road to the eastern margin of the claims. Colour anomalies were identified in areas of good outcrop exposure. Areas that were in sun-shadow when the satellite collected the imagery were outlined, as the presence of anomalies in these areas cannot be assessed. A variety of different coloured anomalies were identified (Figure 9). Anomalies that ranged from dull orange-orange-rusty brown-rusty orange were tentatively identified as gossans. Previously known gossans on the property correlate well with some of the colour anomalies and new, possibly gossanous, colour anomalies have been identified.

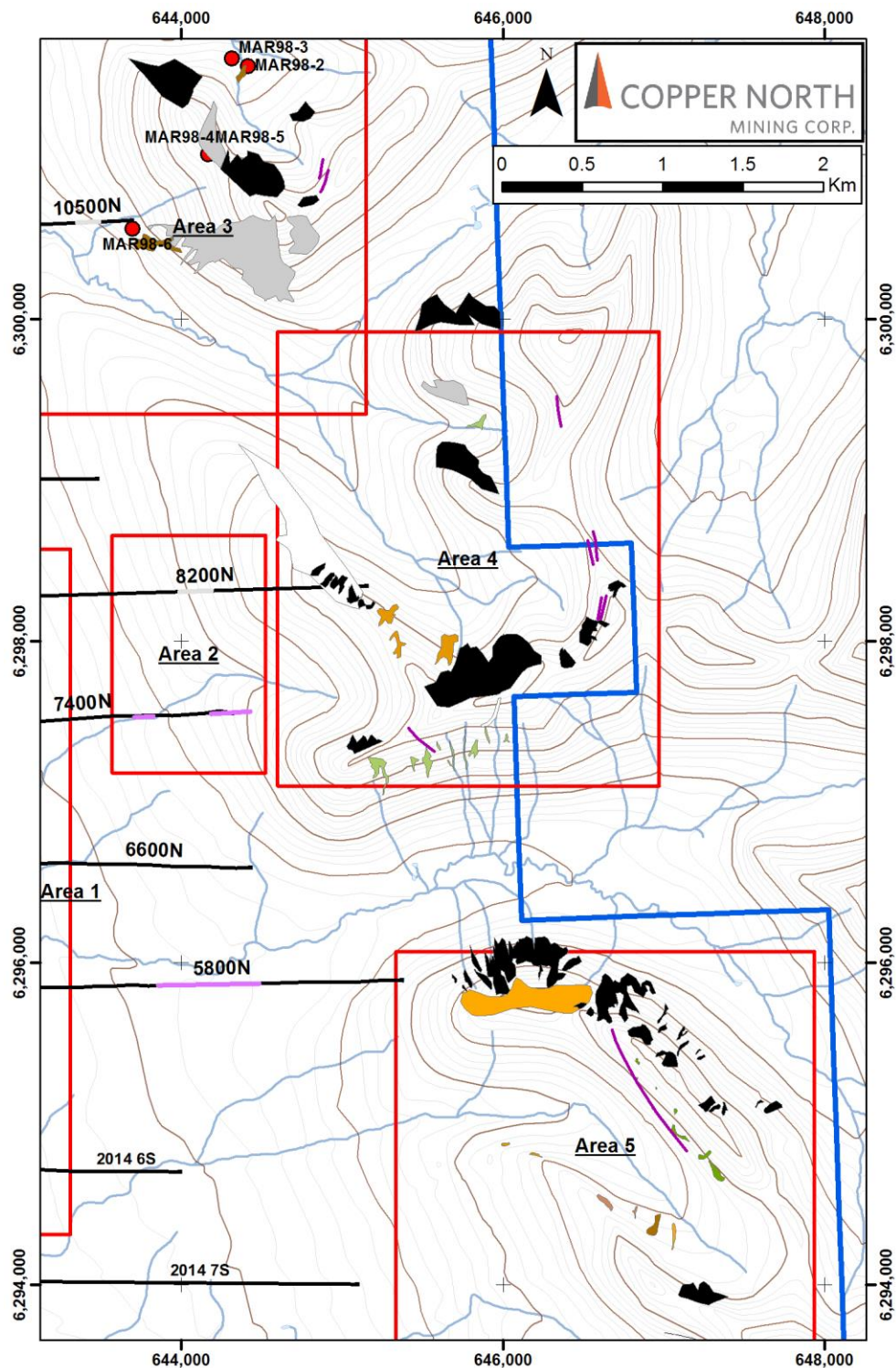


Figure 9 Colour anomalies (actual colour indicated) and sun-shadows (black) with lineations (purple lines); interpreted from visible light 0.5 m resolution satellite GeoEye imagery.

The light grey colour anomalies are located within what has previously been mapped as plagioclase-augite porphyry Takla Group rocks that are typically darker grey (see Area 3, Figure 9). Therefore, the light grey weathering colour may be the result of pervasive alteration, possible carbonate veining, or possibly sericite or clay alteration. These areas of potentially altered rock occur within known zones of copper-gold mineralization and adjacent to drillhole MAR98-06 that intersected porphyry-style mineralization.

There are two areas that contain green colour anomalies (Areas 4 and 5, Figure 9). These anomalies may represent mosses or vegetation, although the position of the anomalies in areas of abundant outcrop and scree suggest that the colour anomalies may be the result of the colour of the underlying geology. The green colour anomalies occur in roughly linear trends, that run approximately parallel to topographic contours and one is associated with a prominent lineation. Whilst these anomalies may be caused by vegetation, another cause may be the presence of malachite or epidote and therefore warrant ground truthing. The topography-parallel linear features may reflect a flat lying planar feature, possibly a fault, flow contact, unconformity or sill-like intrusion. At the Kemess South mine, the intrusion associated with copper mineralization has a flat-lying, sill-like geometry (Duuring et al., 2009) and therefore these apparently flat-lying features on the Thor property may be significant.

All available assay data from soil, steam-sediment and rock samples from previous work on the property were compiled, georeferenced and digitized into a GIS database. The compilation of data highlighted several areas of highly anomalous gold and copper that warrant additional follow-up in the field and detailed geological mapping.

13. INTERPRETATION OF GEOPHYSICAL INVERSIONS

Area 1

The inverted IP sections (Appendix 3) show that the closely spaced ($a = 50$ m) pole-dipole surveys penetrate to depths of approximately 125 metres below surface. The broadly chargeable zones along the west side of lines 5800N, 6600N, 7400N, and 8200N first identified on the pseudosections are confirmed as areas of anomalous chargeability of ~ 8 to 14 mV/V and is termed the 'Thor West' anomaly. The chargeable zones are overlain by up to approximately 50 metres of conductive overburden on sections 5800N and 6600N, and up to 50 metres of moderately conductive overburden on sections 7400N and 8200N. The area underlain by these chargeability anomalies is at least 2.5 km long and 1.5 km wide, if chargeability is assumed to be continuous between the ~ 800 m spaced IP lines. The chargeability anomalies are coincident with a deep seated magnetic high, likely representing a granodiorite intrusion. The Thor West anomaly may represent disseminated sulphide porphyry Cu-Au mineralization of similar nature to the deposits at Kemess South, North and East. Thor West is covered by overburden that may be up to 50 metres thick and the lack of any outcrop or drilling in the area shows that the potential of this target remains to be tested.

The magnetic ring or doughnut shape in the southern part of Area 1 (Figure 4) may reflect a magnetic core of potassic alteration surrounded by magnetite destruction related to sulphidation and the formation of a pyrite shell around a central cylindrical stock in a porphyry system. The

chargeability anomalies on line 5800N are coincident with the magnetic lows on the north side of the ring shape, further suggesting that a pyrite shell may be the cause of these geophysical anomalies.

The IP chargeability anomalies in Area 1 are not associated with magnetite, as the chargeability highs and magnetic highs do not occur in the same locations, also there are many magnetic highs that lack chargeability anomalies. Interference from the pylons supporting the overhead power transmission line can also be ruled out as there are six other IP lines that cross the power line and do not show chargeability anomalies in these areas.

Conductive overburden is present on the IP sections and this has the effect of decreasing the amount of current passing through the underlying material and therefore potentially subduing the true chargeability response of the underlying rocks. The mineralization at Kemess South is a low-sulphide system, with copper grades of ~0.2 % Cu and this may result in a subdued chargeability response. The 50 m a-spacing and shallow ~125 m penetration results in an electrical response from only the top layer of bedrock under the 50 metre overburden, providing a subdued geophysical response. These factors may explain the apparent low-magnitude of the chargeability anomalies in Area 1 of ~8 to 14 mV/V. However, these anomalies are still considered significant as they are at least 2-3 times over local background.

The 2013 soil sampling program took B-horizon samples for aqua regia digestion and analysis along the IP lines in Area 1. No significant anomalous areas were indicated. However, the location of Area 1 in Moose Valley and the presence of transported glacial overburden renders soil sampling ineffective in this area.

In summary, Area 1 represents a prime, blind target for gold-rich porphyry copper mineralization within ~50 metres of surface and is immediately accessible as it lies adjacent to the mine access road. Therefore this is a high-priority target for drilling and could be accomplished early in the season before the snow melts in Areas 2 to 5 that are located at higher elevations.

Area 2

On line 8200N between ~3840 m and ~4010 m there is an approximately 170 m wide chargeability anomaly modelled between 10-20 mV/V that extends to surface (Figure 6 & Appendix 3). This anomaly is coincident with a resistivity low and occurs immediately west of a highly resistive and magnetic body, interpreted to be at the margin of a granodiorite intrusion. On line 7400N, 770 metres to the south, there is an off-line anomaly that was detected on the Quantec Titan IP survey located just to the east of line 7400N. The 7400N anomaly is also located on the western margin of the same magnetic body, interpreted to be a granodiorite intrusion. Together, the anomalies on the eastern ends of lines 8200N and 7400N may represent a disseminated sulphide system on the margin of an intrusion; combined with presence of limestone country-rock outcrops, approximately 800 m north-east of line 8200N, these features suggest that the anomalies may be related to skarn-style sulphide mineralization. The anomalies in Area 2 are also located very close to the inferred position of the major Moose Valley Fault structure and the chargeability anomalies may stem from sulphide mineralization associated with this fault or a related fault-splay.

Soil samples from Area 2 include 12 samples over 60 ppm Cu and up to 262 ppm Cu and 99 ppb Au. Area 2 also includes a sieved stream sediment sample of 1,604 ppb Au taken from a point in a stream directly between the two chargeability anomalies. A single sieved stream sediment sample taken ~325 metres upstream returned only 25 ppb Au, suggesting that the source for the gold may be close to the 1,604 ppb Au sample above the chargeability anomalies.

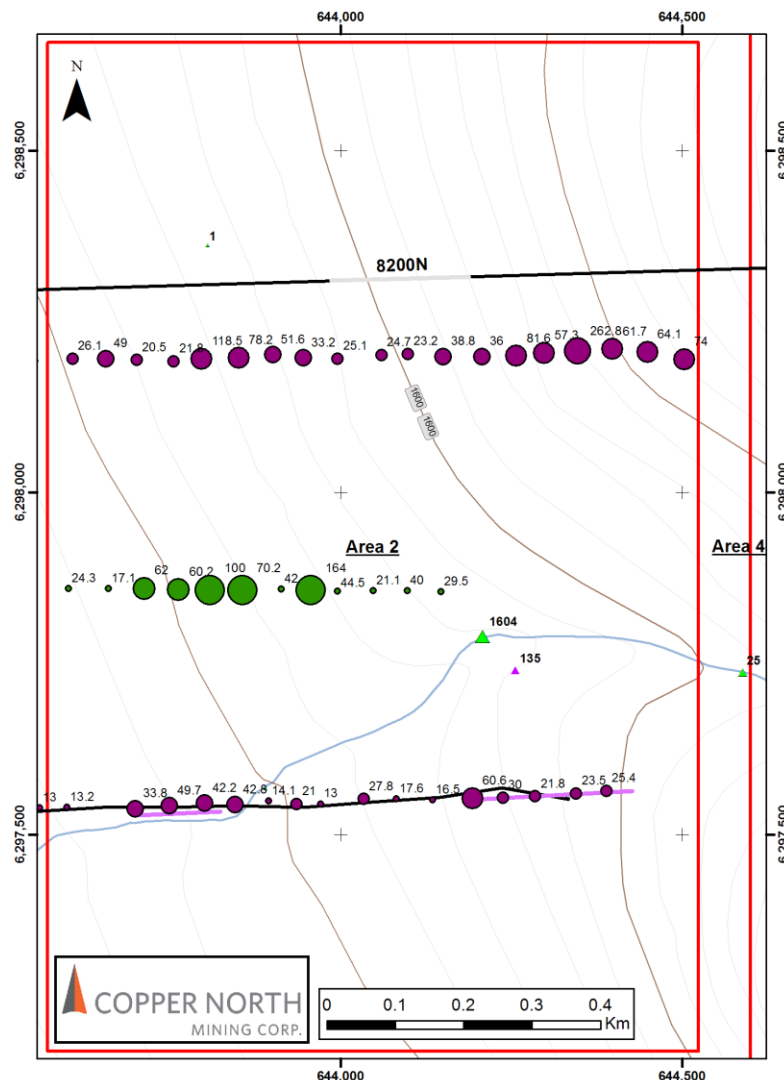


Figure 10 Area 2 soil geochemistry (circles: purple = 2013; green = 2005) labelled with ppm Cu and sieved stream sediment samples (triangles: green = 2005; pink = 1993) labelled with ppb Au.

Area 3

Area 3 contains many geochemical anomalies in gold and copper within rock, soil and stream sediment samples (Figure 11). The area also contains the 1997 drillhole MAR98-6 that intersected 60.24 metres of 0.112% Cu and 0.041 g/t Au. The ~100 m wide IP chargeability

anomaly on line 10500N is located 210 metres to the west of the collar of hole MAR98-6 in an area of anomalous copper in soils (Figures 6 and 11). The chargeability anomaly is modelled as occurring either at a shallow depth or at surface and reaches 8 to 12 mV/V in magnitude (Appendix 3). This chargeability anomaly may represent sulphide mineralization similar to that encountered in the nearby drill hole. The magnetic inversion shows that the mag-high in Area 3 has a deep source and likely represents a granodiorite intrusion. The rocks at surface in the area of the mag high are Takla Group volcanic rocks; this suggests that the volcanic rock may be a thin cover and a significant size intrusion is present at depth.

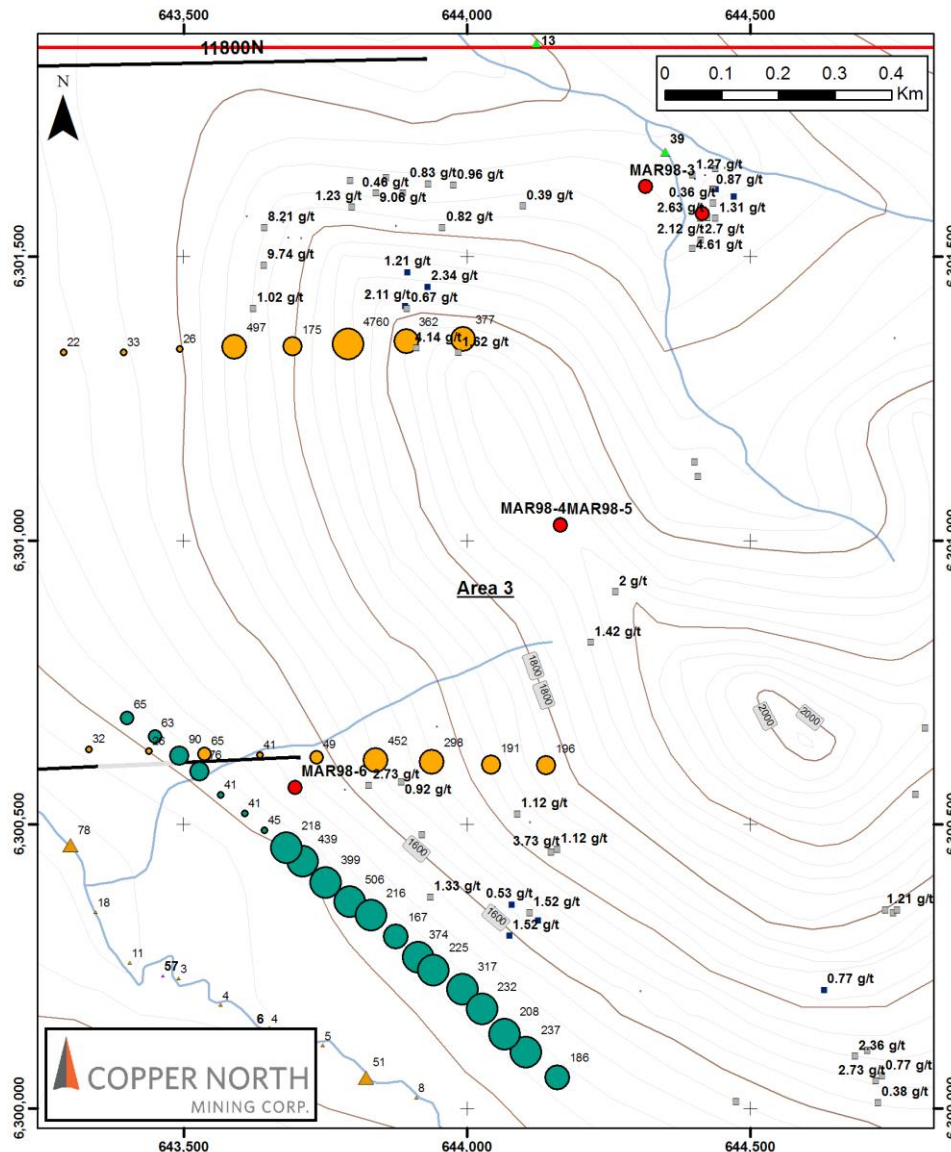


Figure 11 Area 3 soil geochemistry (circles: teal = 1998; yellow = 1995) labelled with ppm Cu, rock geochemistry (squares: grey = 1988; blue = 1993) selected samples over 0.3 g/t Au labelled with gold grade, and stream silt geochemistry (yellow triangles, labelled with ppb Au).

Area 4

Many rock samples anomalous in gold and copper are present throughout Area 4 (Figure 12). The magnetic high in the western part of Area 4 relates to granodiorite outcrops (Figure 6). However, the surface exposure over the rest of the magnetic high comprises Takla Group volcanic rocks. The magnetic inversion shows a deep source for the magnetic high and this suggests that the Takla Group may form a thin cover in this area and granodiorite intrusions are present at depth. The gold and copper mineralization present at surface may reflect the upper parts of a porphyry system and this area warrants further follow-up.

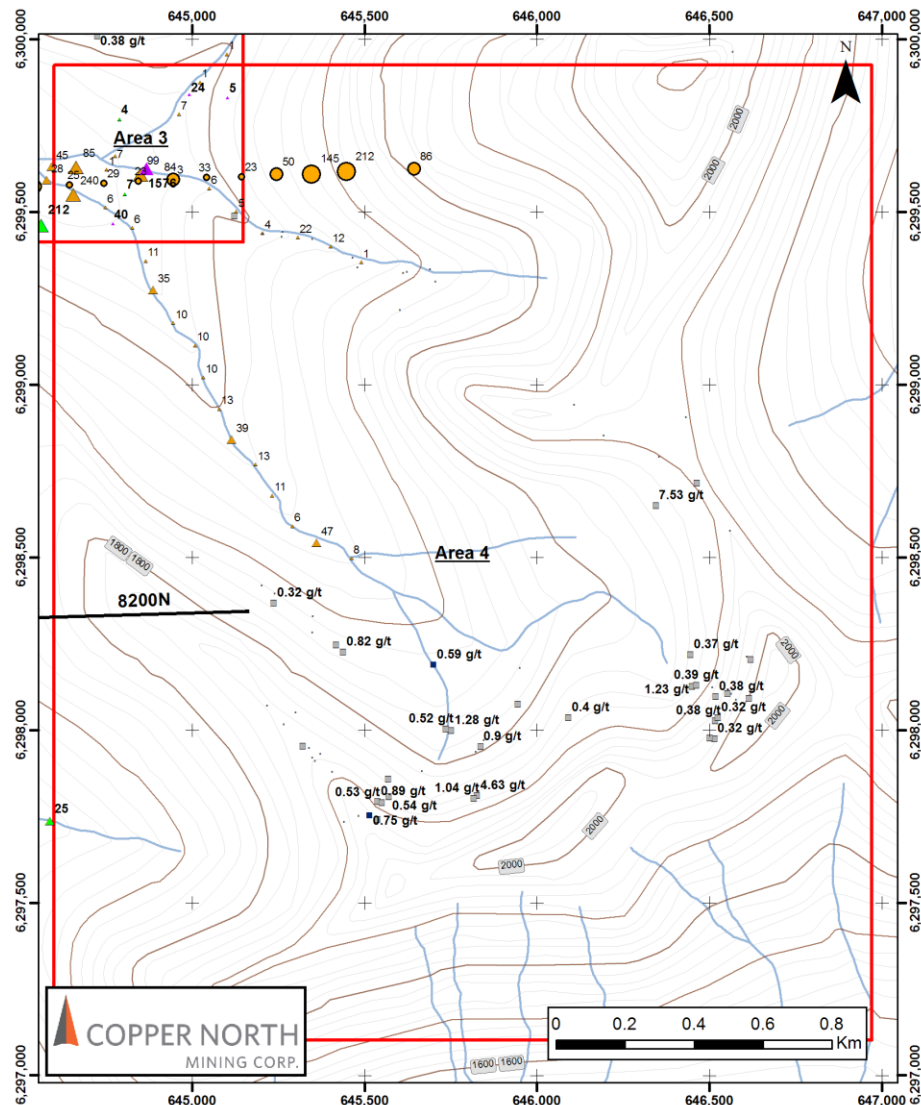


Figure 12 Area 4 soil geochemistry (yellow circles, 1995, labelled with ppm Cu), stream sediment geochemistry (1988 silt samples = yellow triangles; 1993 heavy mineral concentrate samples = pink triangles; 2005 sieved sediment samples = green triangles. Labelled with ppb Au) and rock geochemistry (Squares: grey = 1988; blue = 1993. Labelled with gold grade for samples over 0.3 g/t Au).

Area 5

Area 5 contains several deep seated magnetic highs likely associated with granodiorite intrusions (Figure 6), many colour anomalies and copper in soil anomalies in both the north and south areas that warrant follow-up in the field (Figure 13).

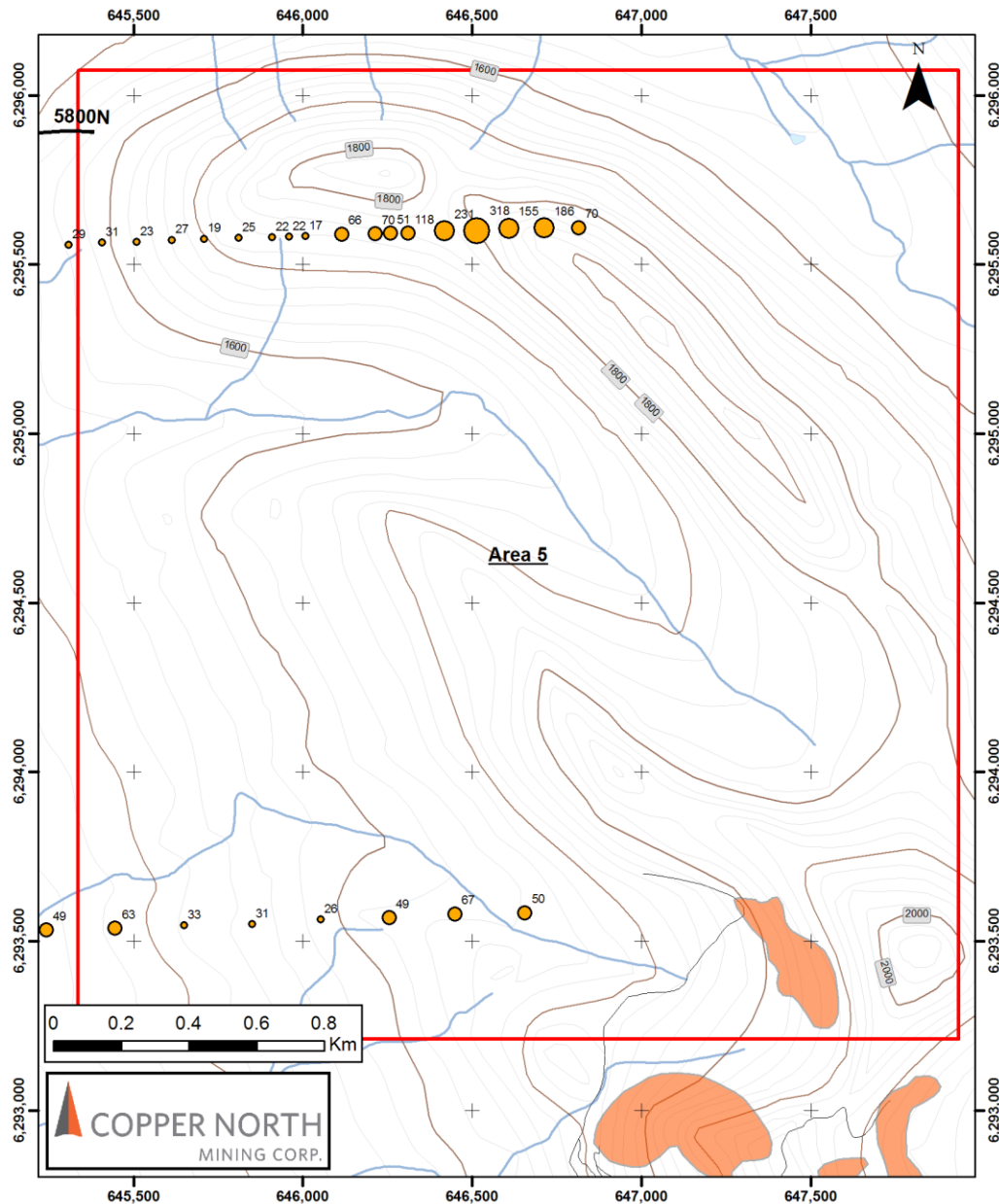


Figure 13 Area 5 soil geochemistry (yellow circles, 1995 program, labelled ppm Cu) and anomalous areas of copper in soils identified around the Marmot showing in the 1960s to 1970s programs (peach coloured polygons).

14. CONCLUSIONS

Areas 1 to 5 show high potential for gold-rich copper porphyry style mineralization. In particular, the large, ~2.5 x 1.5 km, near-surface chargeability anomaly in Moose Valley associated with a magnetic high and circular magnetic features suggestive of magnetite destruction indicate that Area 1 has good potential to host a large porphyry system. The widespread copper and gold mineralization in areas 2 to 5 and the presence of multiple chargeability or magnetic anomalies in these areas suggests that a mineralized porphyry system may be present at depth.

15. RECOMMENDATIONS

A Phase 1 mapping, prospecting and exploration drilling program is recommended to test the chargeable anomalies in Moose Valley (Area 1) and the areas of porphyry style mineralization on the east side of the property (Areas 2 to 5). Colour anomalies and areas of historically recognized mineralization should be ground-truthed and mapped to delineate potential alteration footprints. An eight hole drill program averaging 200 metres per hole for a total of 1600 metres would be sufficient as a first-pass test of these anomalies. At an all-in cost of \$330/metre, approximately \$550,000 would be sufficient for a program of such scope.

Contingent upon success of the Phase 1 exploration, Phase 2 would comprise detailed, deep IP surveys, airborne VTEM/magnetic surveys, followed by ~5,000 metres of drilling for a total cost of ~\$2,000,000.

16. STATEMENT OF COSTS

Cost of work- Thor property	Days	Rate	subtotal	Dates work done	Invoice from
IP Inversion			\$ 1,260.00	January 3rd to 4th 2016	Walcott and associates
Report writing	4	450	\$ 1,800.00	February 9-12 th 2016	Jack Milton, Copper North Mining Corp.
Digitization of magnetic data	8	450	\$ 3,600.00	Dec2015-Jan2016	Jack Milton, Copper North Mining Corp.
Mag stitch, level and inversion			\$ 2,625.00	February 3-12 th 2016	Condor Consulting
Interpretation and target generation	2	450	\$ 900.00	February 14-15 2016	Jack Milton, Copper North Mining Corp.
Satellite imagery purchase			\$ 2,143.96	4th August 2015	Pacific Geomatics
Satellite imagery interpretation	2	450	\$ 900.00	4th-5th February 2016	Jack Milton, Copper North Mining Corp.
Portable Assessment Credits (PAC)			\$ 1,218.17	n/a	n/a
TOTAL			\$ 14,447.13		

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Zastavnikovich, S. (Jan 2006): Geochemical & Geophysical Assessment Report on the Thor group mineral claims. BC Ministry of Energy and Mines, Assessment Report 28263.

18. STATEMENT OF QUALIFICATIONS

I, Jack Edward Milton, do hereby state that:

I reside at 1209-1212 Howe St., Vancouver, BC, V6Z 2M9.

I am not a Professional Geologist.

I graduated from the Camborne School of Mines, University of Exeter, UK, in 2008 with a first class honours Bachelor of Science degree in Applied Geology.

I graduated from the Camborne School of Mines, University of Exeter, UK, in 2009 with a Master of Science degree in Mining Geology.

I graduated from the University of British Columbia in 2015 with a Ph.D. in Geological Sciences.

I have been employed by Copper North Mining Corp. since graduating from my Ph.D. and I own shares in Copper North Mining Corp.

I have not visited the Thor property but I have managed all aspects of digitizing the historic geological database and subsequent geological interpretation for the Thor property on behalf of Copper North since the property was optioned in 2014.

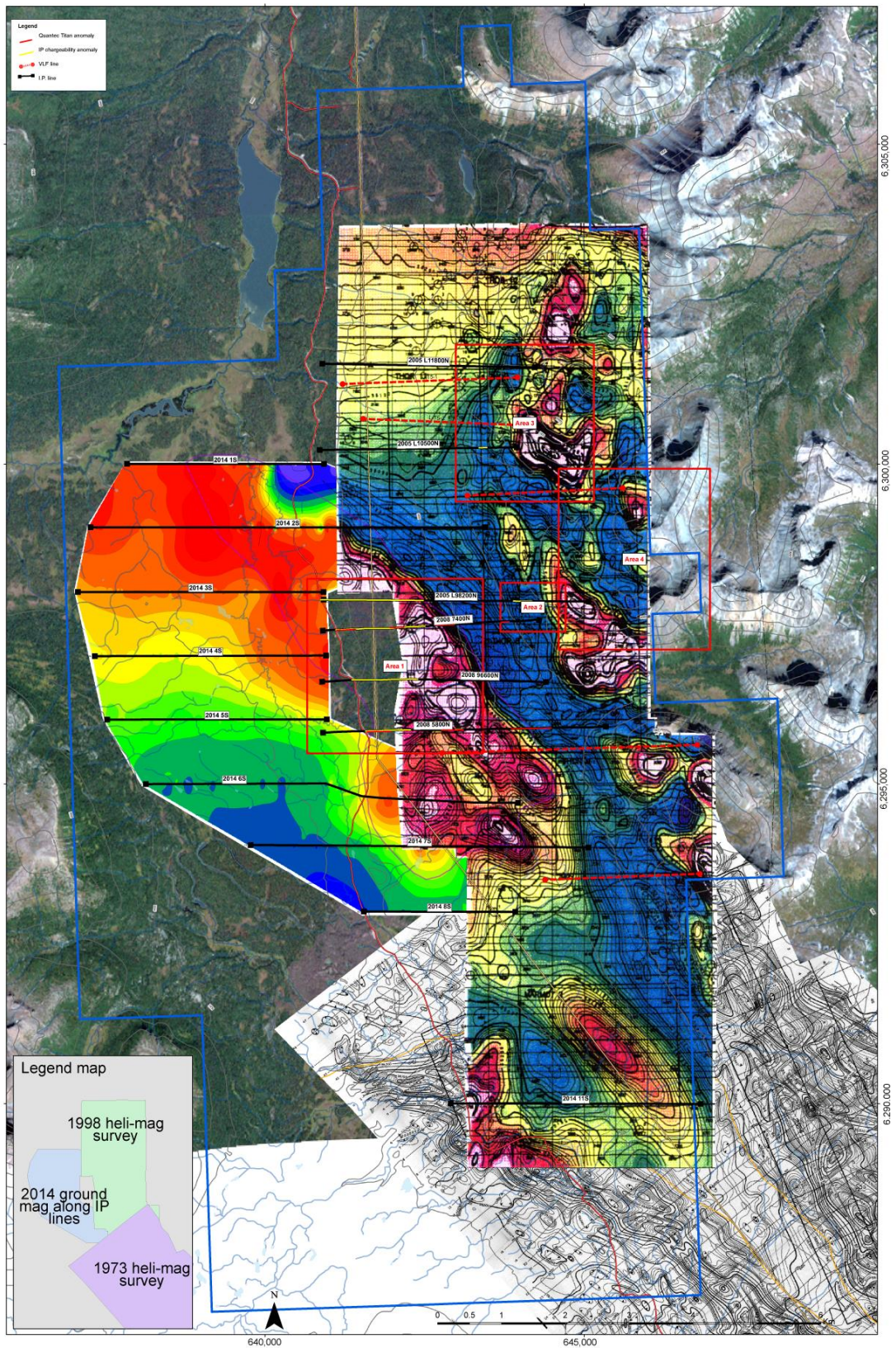
This statement refers to the 2016 Technical Assessment Report for the Thor property.

Jack Milton [signed]

Project Geologist,

Copper North Mining Corp.

19. APPENDIX 1: HISTORIC MAGNETIC SURVEY LOCATIONS



20. APPENDIX 2: CONDOR CONSULTING MAGNETIC INVERSION METHODS
AND PARAMETERS



Inversion of Magnetic data for Copper North Mining Corp. at the Thor Project, BC, from the 1973 hummingbird and a 1997 survey.

The purpose of the inversion is to convert the measured nanoTesla data into a susceptibility model for the earth. The University of British Columbia (UBC) 3D magnetic inversion program, version 4.0 was used.

The inversions were performed with only the topography surface as model constraints along with the normal UBC style objective function.

Area Inverted:

The area inverted was rectangular with the X and Y limits: 636 650 E, 651 250 E, 6 284 200 N, 6 304 050 N. All coordinates are WGS84 UTM Zone 9N. These units are in meters, which is required for the inversion. The area may not be completely saturated with data, leaving some portions of the inversion block without data. Areas of the model not covered with data are nulled in the final model.

Magnetic Data:

The data used came from a merged grid of two sets of airborne magnetics data, which has a cell size of 50 m. The SE was flown at 60 m height during 1973 and the NW part of the inversion area was flown at a 30 m height survey during 1997. The latter survey was up continued to 60 prior to the inversion.

Over the spatial extents of the windowed data the regional trend (effects of sources outside the finite element mesh) was modeled as a 1st order surface (plane). A simple 0th order shift was applied to ensure optimum positivity of the data so that the nominal model value is close to 0. No further preparation of the data was required.

A magnetic inclination of 75.1 degrees and declination of 19.5 degrees was used with a field strength of 56765 nT.

Topographic Data:

The topographic data came from the file: "SRTM World Elevation 90m.GRD". This grid had a cell size of 71 m.

Sensor Height:

A constant sensor height above the topography was used: 60 m. The 30m survey was upward continued to 60 m, so both surveys were collected at 60 m.

Model Design:

The finite element mesh for the inversion tile employed a cell size of 100 m by 100 m, in the east and north dimensions respectively, and the cell height varied wrt depth. There were 146 cells in the easting, 199 in the northing. In the vertical direction, there are 22 air cells, each being 50 m thick and the ground

cells started at 50 m thick and progressively increased in thickness through 30 vertical cells. In addition to the cells specified above, seven rim cells required by the finite element algorithm were used on the sides of the mesh and six were added to the bottom. The depth of mesh, excluding bottom rim (finite element buffer layers) and air cells, was 2000 m.

The initial error estimate provided to the inversion program was 0.00 nT for all data. This error was derived from 0.003 times the standard deviation of the data plus 0.600 times the average gradient between cells plus 0.010 nT.

Length scales (used in the inversion objective function) of 100 m in the horizontal and 50 m in the vertical directions. The sensitivity matrix was computed to 0.030.

Inversion Results:

Two inversions were run, the first with a starting and reference model of 0.0 nT. The model from the first inversion was sharpened then used as the reference for the second inversion. This additional model sharpening procedure was performed to lessen the inherent smoothness of the models while retaining a good fit to the data.

The final inversion finished with a final data misfit average of 11.01 nT. The standard deviation of the misfits was 16.73 nT.

The voxel model was trimmed by 7 cells on the east and west, 7 cells on the north and south, and 6 cells from the bottom to remove the finite element buffer cells. The voxel model was further cleaned by nulling the voxels where there was no data.

Presentation of the Models:

The final model is delivered to the client in the native format of the UBC inversion in SI units. Although this format can be read by several geophysical packages, such as Geosoft, Encom PA and WinDisp (by Scientific Computing and Applications), it is unknown to many other visualization programs. If required, Condor Consulting can export the model in the CSV format that, although bulky, can be imported by a greater number of programs such as Leapfrog.

Condor Consulting can make Geosoft formatted grid slices of the model through the nodes in the XZ, YZ and XY planes. In addition, Geotiffs can be produced for the grids in the XY planes and depth slices (draped beneath topography).

For 3D visualization, 3D DXF files are often created from the models for a few isosurface values.

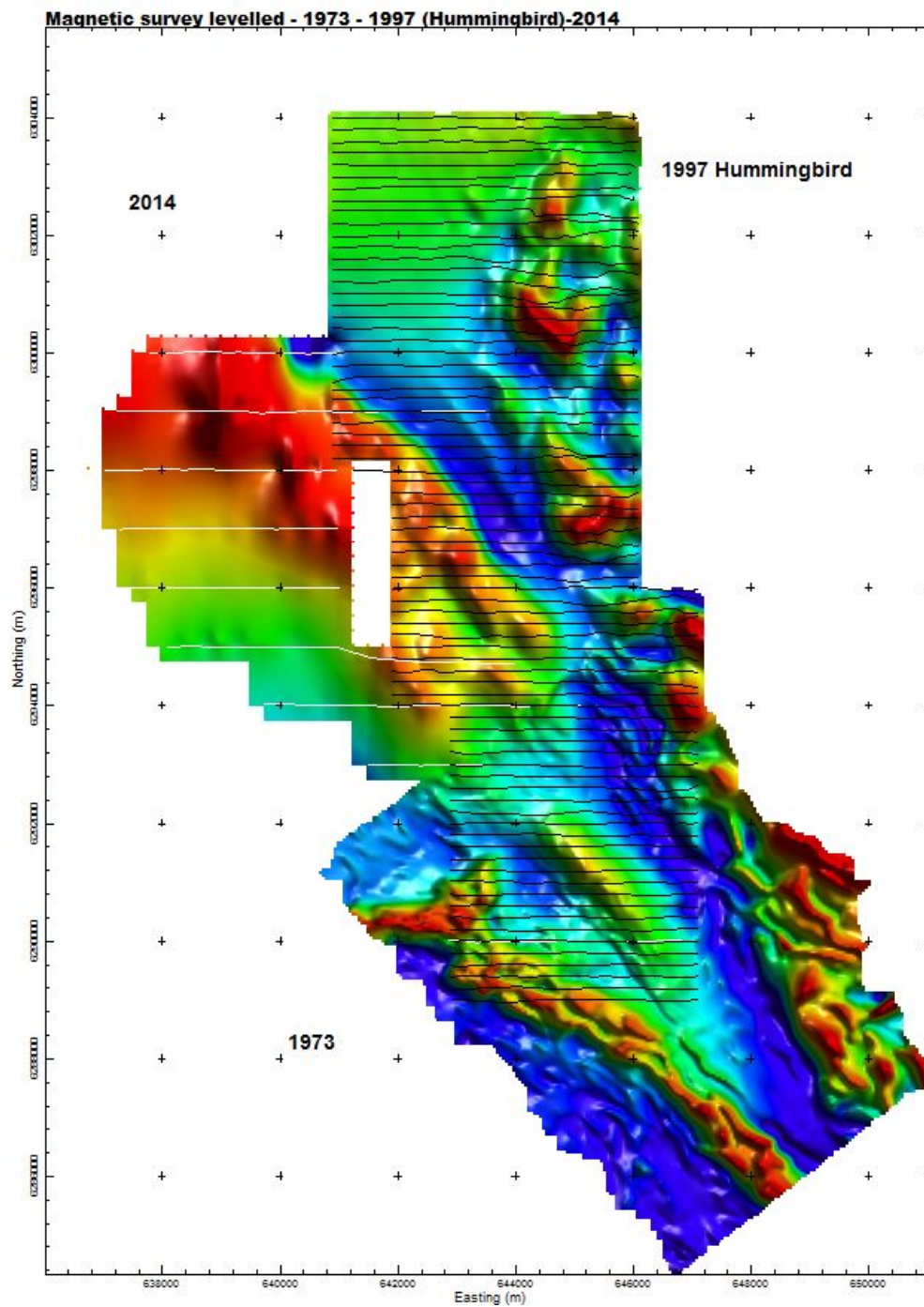
Smooth Model Inversion:

The SCA and UBC 3D susceptibility inversions are smooth model inversions, producing fuzzy objects in the resulting block model. This can be mitigated to some extent by sharpening techniques and by constraints. However, the model will still contain a large spatial uncertainty, which manifests as indistinct boundaries. Therefore, the density values in the model usually underestimate the actual density of the objects being imaged, since the density is smeared over a greater volume than the actual object.

Depth Weighting:

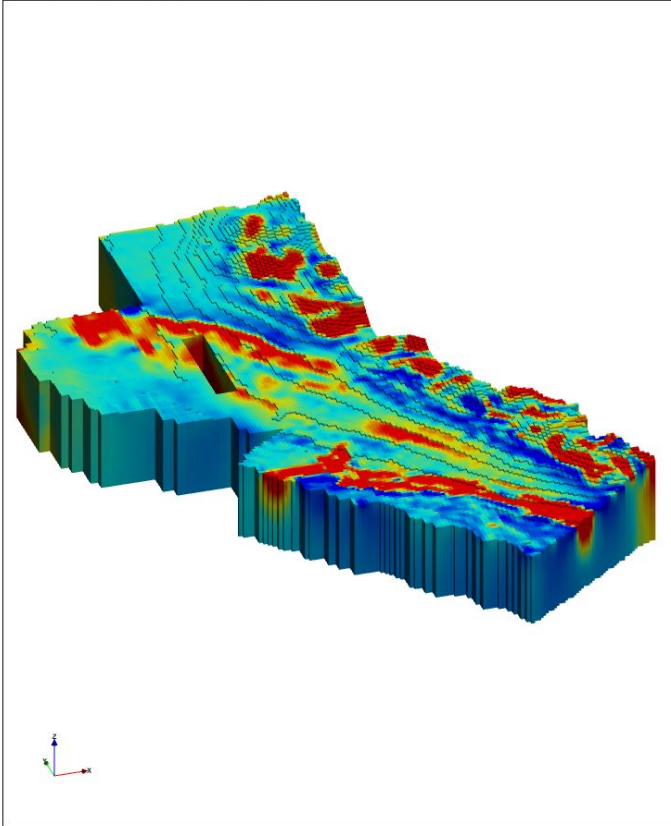
It is a well-known fact that magnetic data lack inherent depth resolution. A numerical consequence of this is that when an inversion is performed the resultant susceptibility is concentrated close to the

observation locations. In order to overcome this, the inversion introduces a depth weighting to counteract this natural decay. The weighting approximately cancels the sensitivity decay and gives cells at different locations equal probability to enter into the solution with non-zero susceptibility. This weighting is approximately the depth of the finite element cell to the 2nd power, to counter a sensitivity drop of that is approximately $1/z^2$.

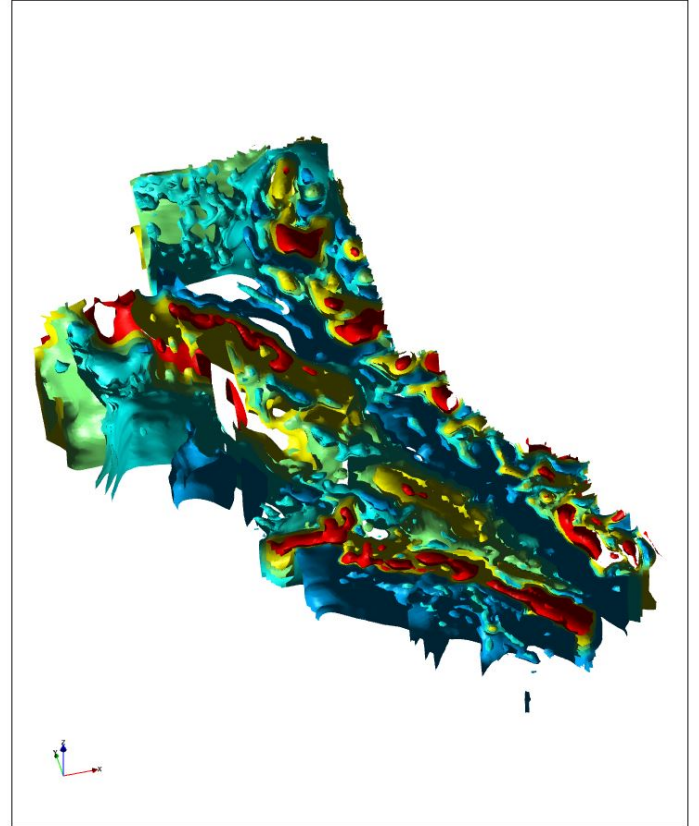


Final magnetic grids levelled – 1973 – 1997 and 2014.

Mag 3D susceptibility model - 1973-1997-2014 surveys

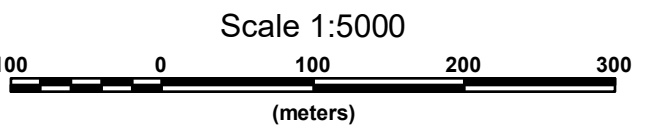
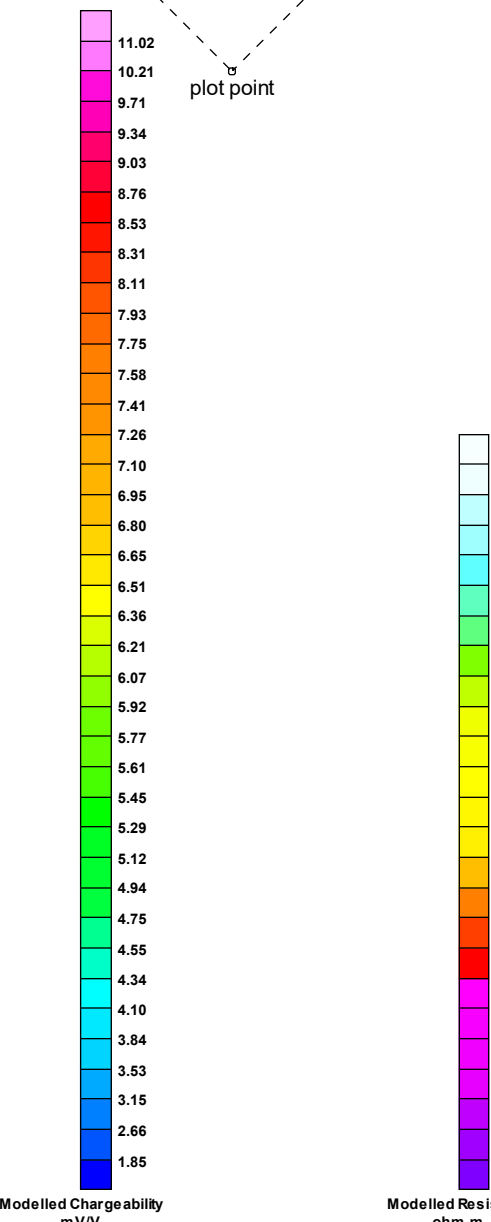
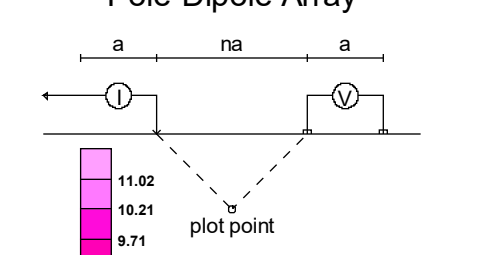


Mag 3D Isosurface of susceptibility - 1973-1997-2014 surveys

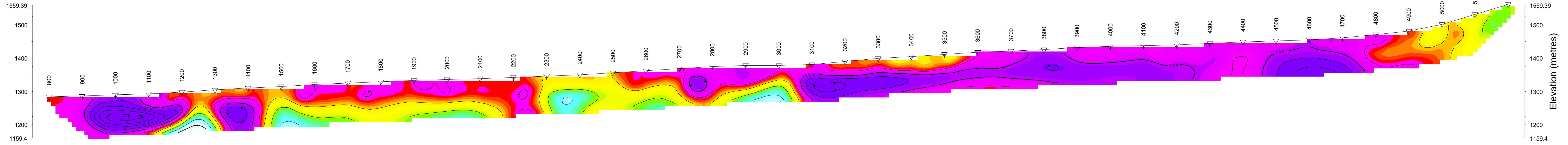


3D Mag model of susceptibility – 1973-1997-2014 surveys.

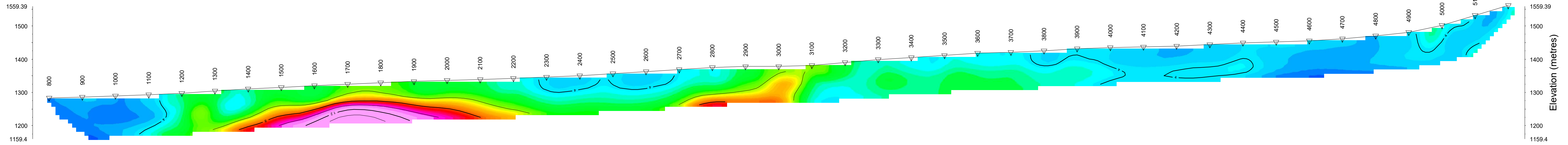
21. APPENDIX 3: INVERTED IP SECTIONS



Modelled Resistivity (Ohm-m)

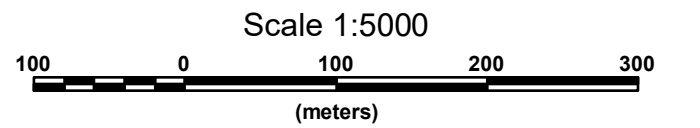
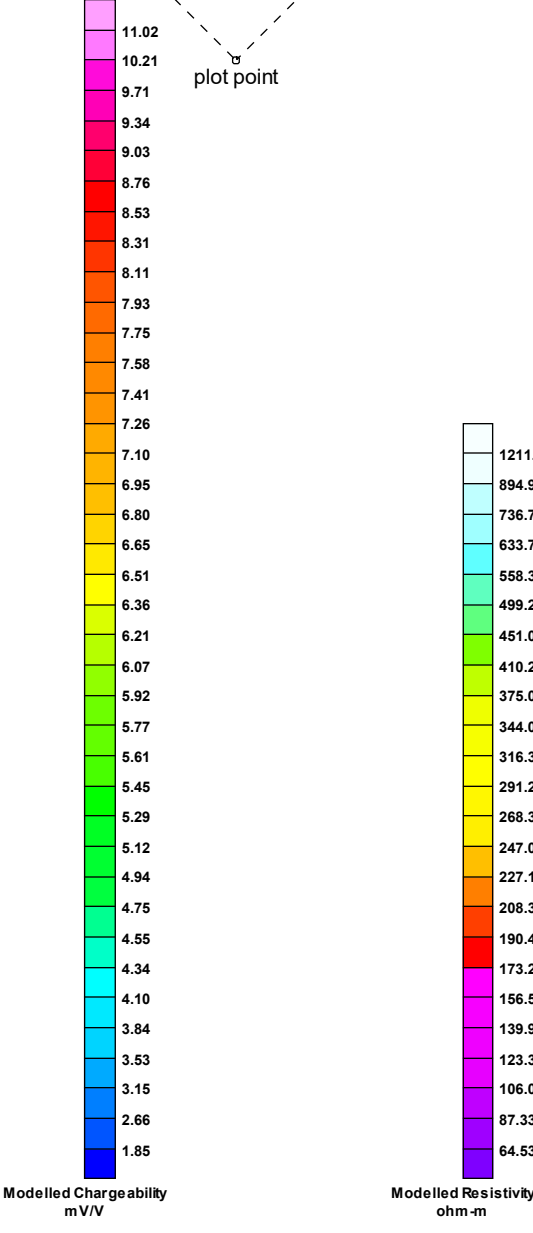
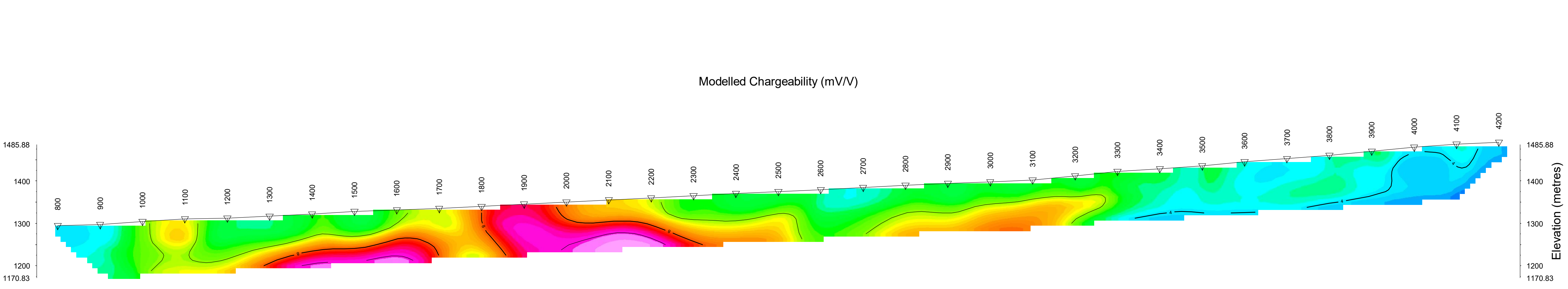
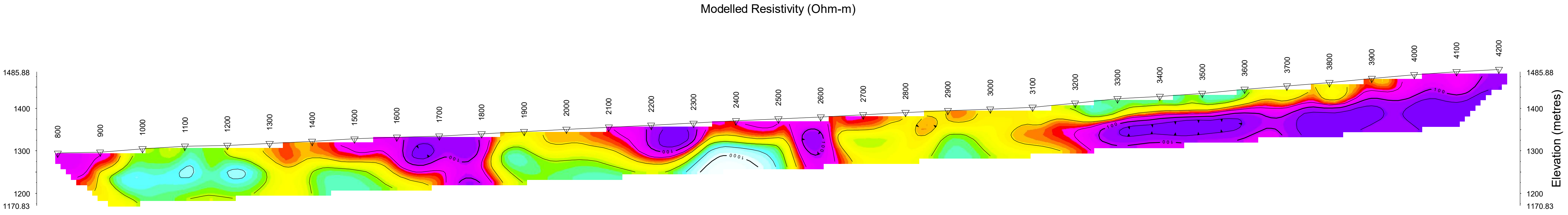
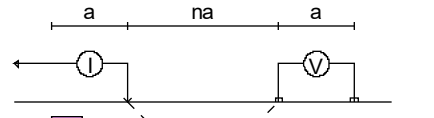


Modelled Chargeability (mV/V)



COPPER NORTH MINING CORP.
 INDUCED POLARIZATION SURVEY
 THOR PROPERTY
 BRITISH COLUMBIA
 Date: DECEMBER 2015
 RES2DINV
 Inversion By: PETER E. WALCOTT & ASSOCIATES LIMITED

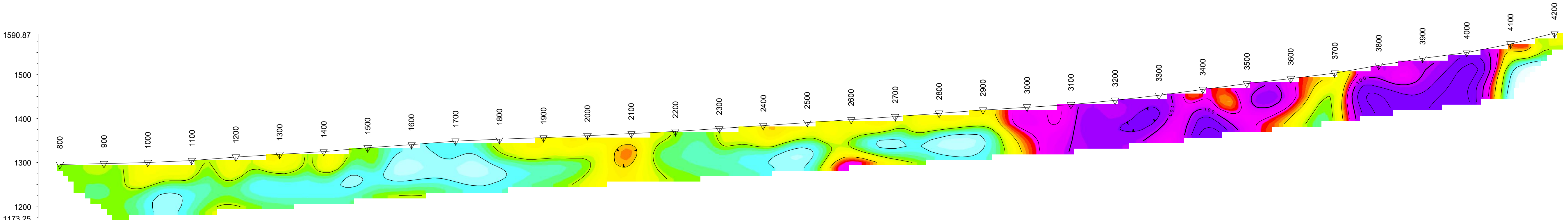
Pole-Dipole Array



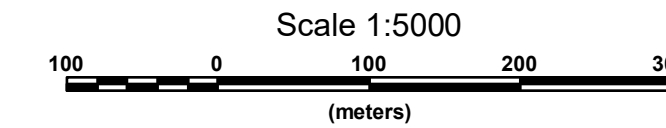
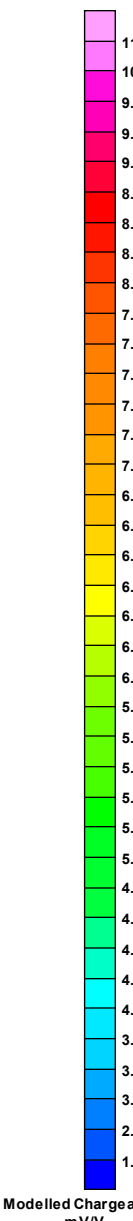
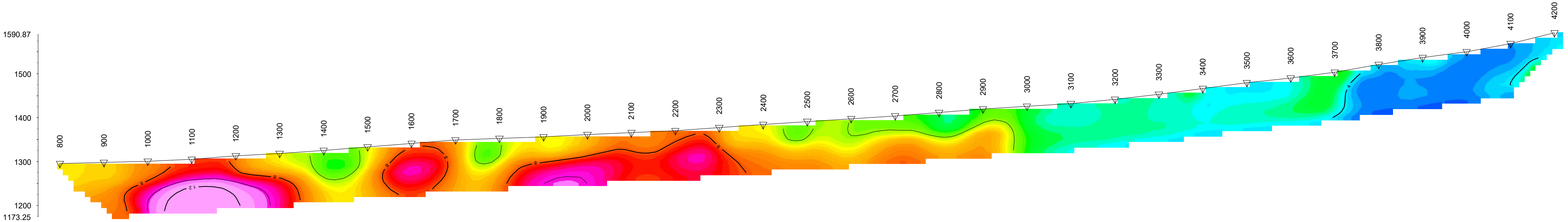
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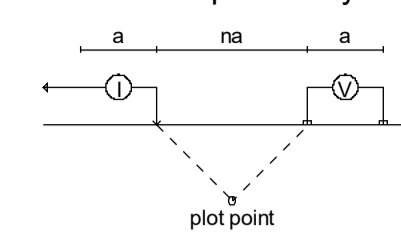
Modelled Resistivity (Ohm-m)



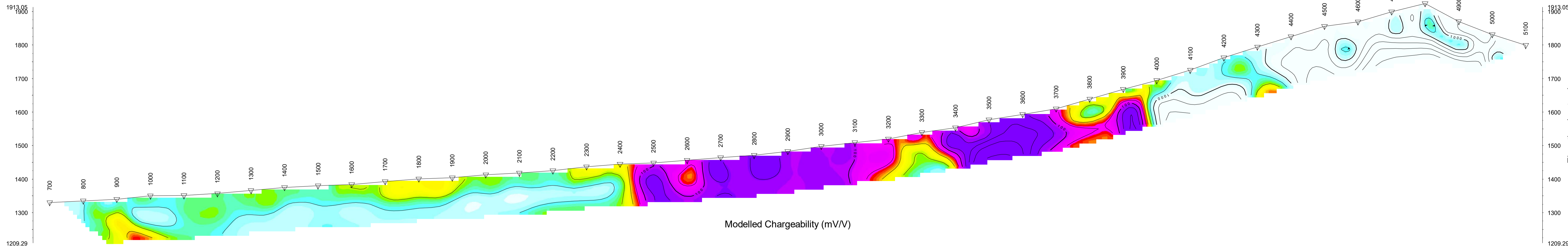
Modelled Chargeability (mV/V)



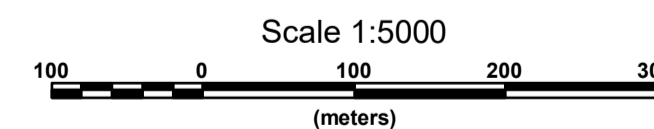
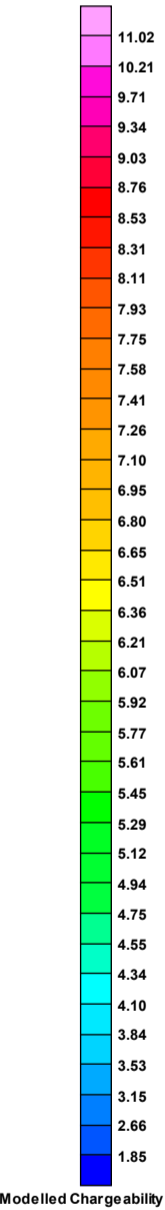
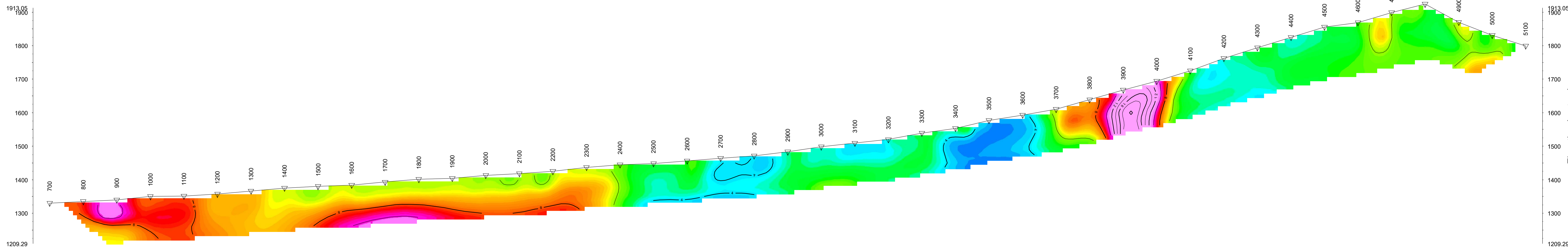
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Modelled Resistivity (Ohm-m)

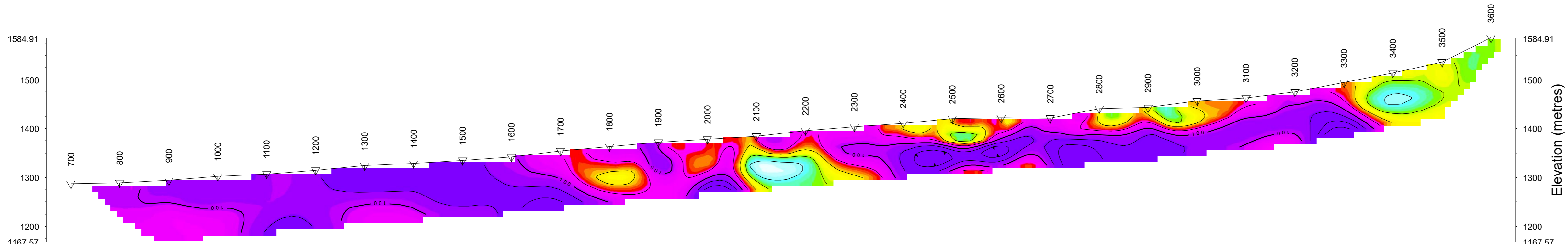


Modelled Chargeability (mV/V)

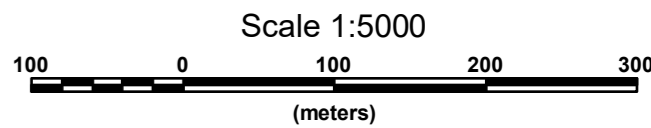
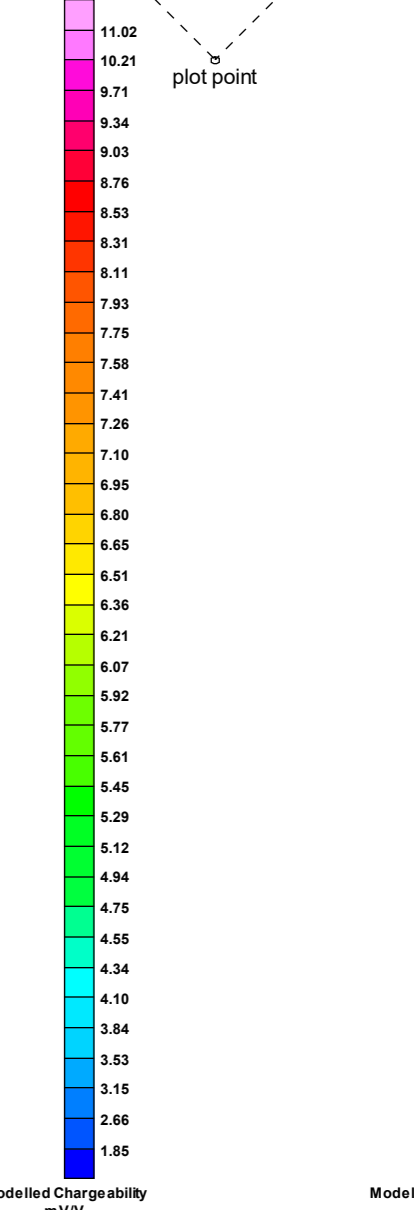
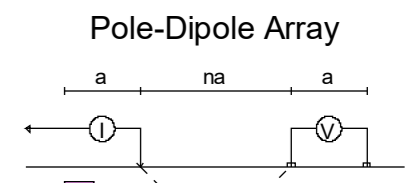
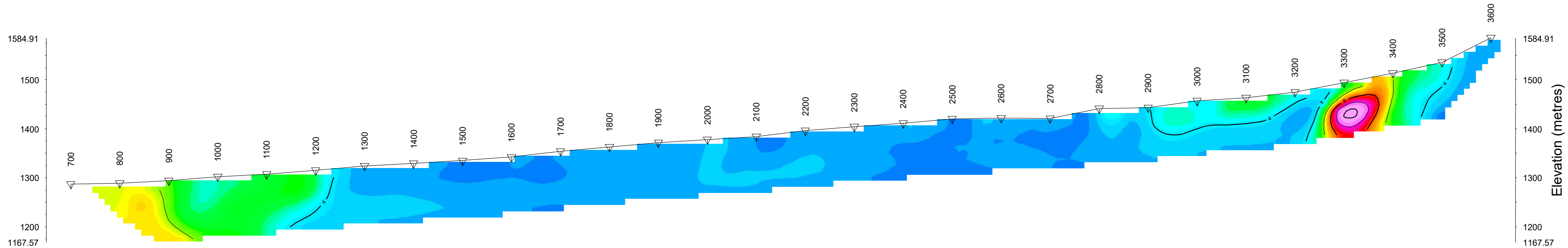


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Modelled Resistivity (Ohm-m)



Modelled Chargeability (mV/V)

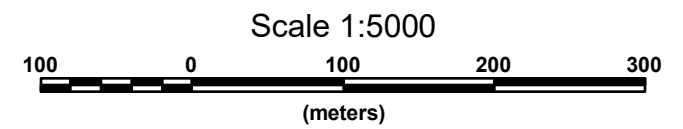
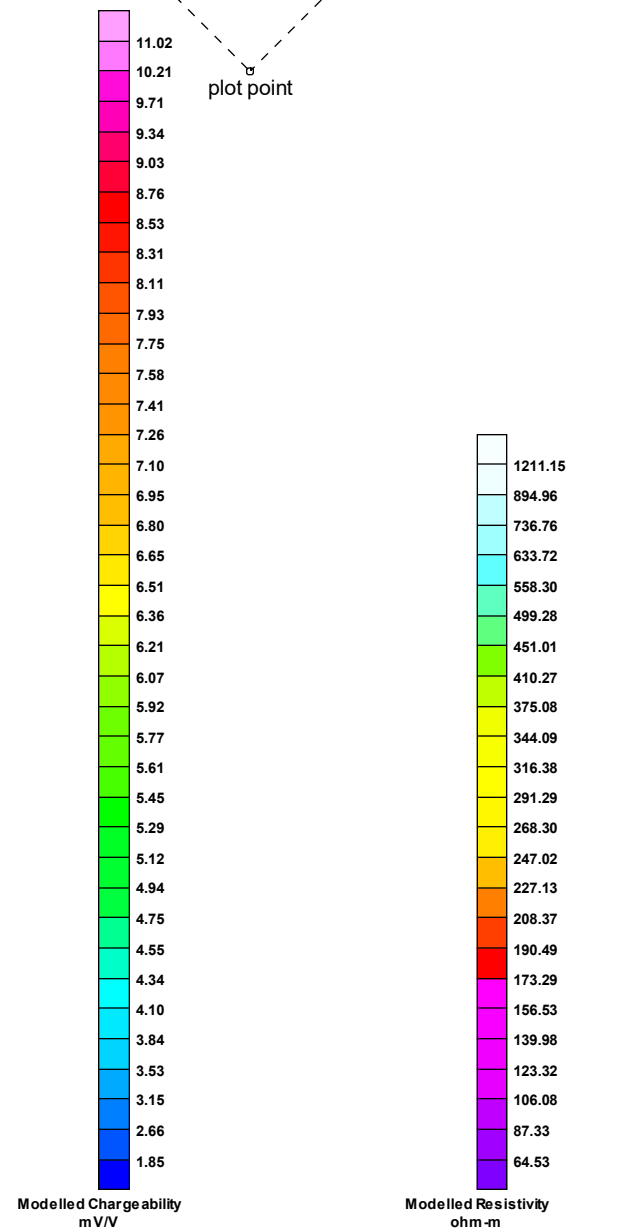
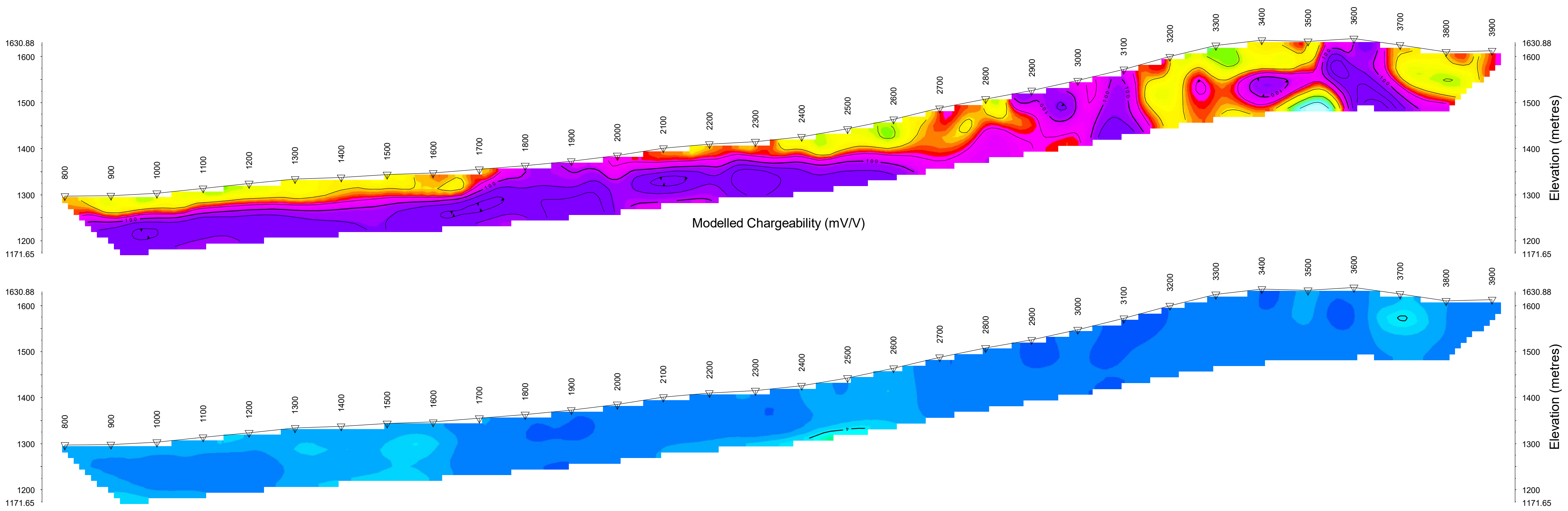


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Modelled Resistivity (Ohm-m)

Modelled Chargeability (mV/V)



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