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BC Geological Survey

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: DRILLING, GEOCHEMICAL, GEOLOGICAL

TOTAL COST: 523,472.84

AUTHOR(S): JACK MILTON

SIGNATURE(S): J. MILTON

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): MX-13-266 Approval No.: 15-1300287-201501

YEAR OF WORK: 2016

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5636246 2017/FEB/02 and 5636876 2017/FEB/07

PROPERTY NAME: THOR

CLAIM NAME(S) (on which the work was done): BEARN A/B; CN 1-15; EAST THOR 1-2; MOOSEVALE; THOR 1-10; THOR EAST 3; THOR MARMOT 11-14, 17-18, 1B, 1F, 1H, 1J, 1K, 1M, 2G, 2H, 2I, 2J; TM16.

COMMODITIES SOUGHT: Cu Au Ag Mo

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 094D 064; 094D 127; 094D 126; 094D 131; 094D 049; 094D 173;

MINING DIVISION: Omineca

NTS/BCGS: 094D

LATITUDE: 56 ° 47 ' 44 " **LONGITUDE:** -126 ° 37 ' 57 " **(at centre of work)**

OWNER(S):

1) Electrum Resource Corporation
2) Copper North Mining Corporation

MAILING ADDRESS:

912-510 W Hastings St Vancouver V6B 1L8

1120-1095 W Pender St, Vancouver BC, V6E 2M6

OPERATOR(S) [who paid for the work]:

1) Copper North Mining Corporation
2)

MAILING ADDRESS:

1120-1095 W Pender St, Vancouver BC, V6E 2M6

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):

Triassic, Jurassic, Porphyry, Copper, Gold, Toodoggonne, Kemess, Calc-alkalic, potassic, propylitic, Takla Group, Stuhini Group, Hazelton Group, Toodoggone Formation, Sustut Group, Moose Valley Fault,

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

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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	1:5000	THOR MARMOT 11-14	33015.36
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core	411.47 m; 3 holes, NTW size core	THOR MARMOT 11; THOR 7	487406.28
Non-core			
RELATED TECHNICAL			
Sampling/assaying		THOR MARMOT 11-14	3051.20
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:	523472.84

2016 TECHNICAL ASSESSMENT REPORT ON THE THOR PROPERTY DRILLING PROGRAM

Submitted February 2017

Omineca Mining Division British Columbia

NTS 94D/11E

56° 49' N/126° 38' W

Tenure numbers:

517626, 518727, 518729, 518730, 518731, 518733, 518734, 518736, 518737, 518739, 601033, 953671, 953677, 1016144, 1016425, 1025283, 1025558, 1025687, 1025812, 1025887, 1026079, 1026197, 1026427, 1026576, 1026594, 1026683, 1026697, 1026709, 1029288, 1029289, 1029290, 1029291, 1029292, 1029293, 1029295, 1029296, 1034271, 1034272, 1038442, 1042212, 1043375, 1043416, 1043545, 1045175, 1045177, 1045178, 1045180, 1046177, 1046182, and 1046185.

Owner of claims: Electrum Resource Corp. and Copper North Mining Corp.

Operator of claims: Copper North Mining Corp.

Prepared by:

Jack Milton, Ph.D.

Copper North Mining Corp.

Vancouver, BC

November 2016 – January 2017

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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.

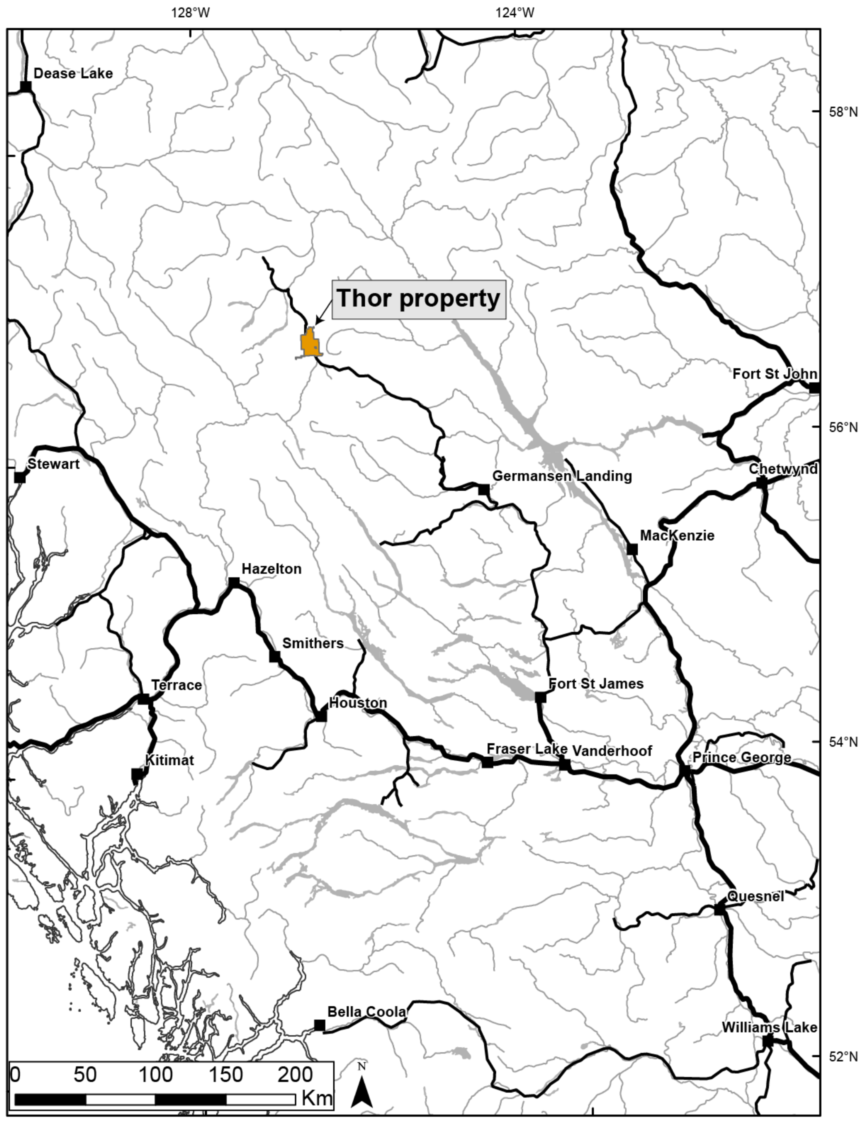

Figure 1 Location of Copper North's Thor property.

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 a reconnaissance geological mapping and diamond drilling program.

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.

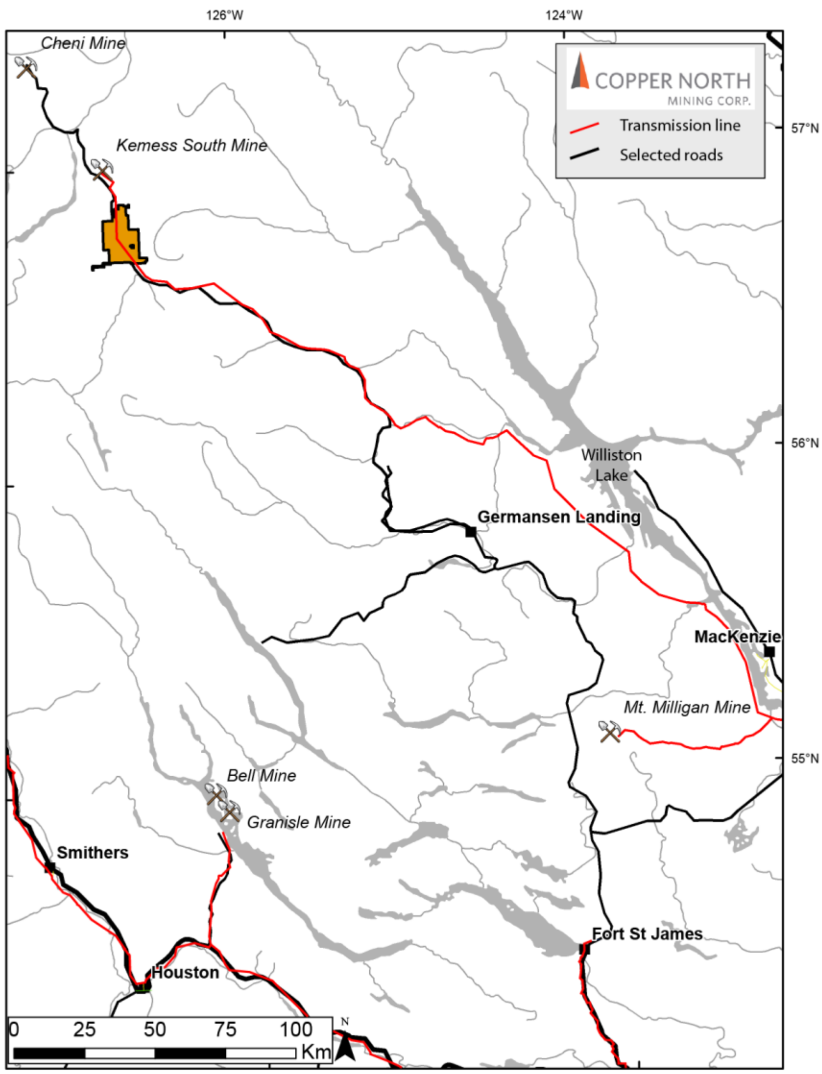

Figure 2 Location of Copper North's Thor property and close proximity to the Kemess South mine that went on care and maintenance in 2011 after exhausting ore in the open pit.

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 350 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 fifty-one (51) mineral claims totaling 20,387.4 ha (Figure 3 and Table 1).

Title Number	Claim Name	Owner	Owner	Issue Date	Good To Date	Area (ha)
1045175		107591 (100%)	Electrum Resources	2016/JUL/06	2017/JUL/06	53.0
517626		107591 (100%)	Electrum Resources	2005/JUL/13	2018/JAN/18	17.7
1043375	BEARN A	107591 (100%)	Electrum Resources	2016/APR/10	2017/APR/10	17.8
1043416	BEARN B	107591 (100%)	Electrum Resources	2016/APR/12	2017/APR/12	17.8
1029296	CN 1	107591 (100%)	Electrum Resources	2014/JUN/30	2017/JUN/30	1348.7
1034272	CN 10	107591 (100%)	Electrum Resources	2015/FEB/21	2018/JAN/10	124.2
1045177	CN 12	107591 (100%)	Electrum Resources	2016/JUL/06	2017/JUL/06	88.9
1045178	CN 13	107591 (100%)	Electrum Resources	2016/JUL/06	2017/JUL/06	106.6
1045180	CN 14	107591 (100%)	Electrum Resources	2016/JUL/06	2017/JUL/06	124.4
1029288	CN 2	107591 (100%)	Electrum Resources	2014/JUN/30	2017/JUL/07	531.9
1029289	CN 3	107591 (100%)	Electrum Resources	2014/JUN/30	2017/JUL/09	796.9
1029290	CN 4	107591 (100%)	Electrum Resources	2014/JUN/30	2017/JUL/06	797.7
1029291	CN 5	107591 (100%)	Electrum Resources	2014/JUN/30	2017/JUL/08	354.8
1029292	CN 5	107591 (100%)	Electrum Resources	2014/JUN/30	2017/JUL/04	1135.1
1029293	CN 7	107591 (100%)	Electrum Resources	2014/JUN/30	2017/JUL/03	1420.5
1029295	CN 8	107591 (100%)	Electrum Resources	2014/JUN/30	2017/JUL/02	1278.6
1034271	CN 9	107591 (100%)	Electrum Resources	2015/FEB/21	2018/JAN/09	17.7
1038442	CN 9	107591 (100%)	Electrum Resources	2015/SEP/08	2018/JAN/08	265.2
1046177	EAST THOR 1	279968 (100%)	Copper North	2016/AUG/21	2017/AUG/21	1364.7
1046182	EAST THOR 2	279968 (100%)	Copper North	2016/AUG/21	2017/AUG/21	1686.6
1043545	MOOSEVALE	107591 (100%)	Electrum Resources	2016/APR/16	2017/APR/16	17.8
518727	THOR 1	107591 (100%)	Electrum Resources	2005/AUG/04	2017/AUG/04	424.5
601033	THOR 10	107591 (100%)	Electrum Resources	2009/MAR/13	2018/SEP/13	17.7
518729	THOR 2	107591 (100%)	Electrum Resources	2005/AUG/04	2017/AUG/05	424.5
518730	THOR 3	107591 (100%)	Electrum Resources	2005/AUG/04	2017/AUG/06	371.6
518731	THOR 4	107591 (100%)	Electrum Resources	2005/AUG/04	2017/AUG/07	354.1
518733	THOR 5	107591 (100%)	Electrum Resources	2005/AUG/04	2017/NOV/03	425.1
518734	THOR 6	107591 (100%)	Electrum Resources	2005/AUG/04	2017/NOV/04	425.2
518736	THOR 7	107591 (100%)	Electrum Resources	2005/AUG/04	2017/NOV/05	425.4
518737	THOR 8	107591 (100%)	Electrum Resources	2005/AUG/04	2017/AUG/11	425.5
518739	THOR 9	107591 (100%)	Electrum Resources	2005/AUG/04	2017/AUG/12	354.7
1046185	THOR EAST 3	279968 (100%)	Copper North	2016/AUG/21	2017/AUG/21	444.0

1016144	THOR MARMOT 11	107591 (100%)	Electrum Resources	2013/JAN/19	2017/AUG/19	478.0
1016425	THOR MARMOT 11	107591 (100%)	Electrum Resources	2013/JAN/30	2017/FEB/24	354.1
1025283	THOR MARMOT 12	107591 (100%)	Electrum Resources	2014/JAN/19	2017/AUG/21	495.5
1025558	THOR MARMOT 13	107591 (100%)	Electrum Resources	2014/JAN/29	2017/FEB/23	496.0
1025812	THOR MARMOT 14	107591 (100%)	Electrum Resources	2014/FEB/09	2017/FEB/09	620.3
1026197	THOR MARMOT 17	107591 (100%)	Electrum Resources	2014/FEB/22	2017/FEB/22	372.3
1026697	THOR MARMOT 18	107591 (100%)	Electrum Resources	2014/MAR/15	2017/MAR/15	53.0
1026079	THOR MARMOT 1B	107591 (100%)	Electrum Resources	2014/FEB/19	2017/FEB/19	318.4
1026576	THOR MARMOT 1F	107591 (100%)	Electrum Resources	2014/MAR/09	2017/MAR/09	70.9
953671	THOR MARMOT 1H	107591 (100%)	Electrum Resources	2012/MAR/01	2018/SEP/11	70.8
1026427	THOR MARMOT 1J	107591 (100%)	Electrum Resources	2014/MAR/03	2017/MAR/03	177.1
953677	THOR MARMOT 1K	107591 (100%)	Electrum Resources	2012/MAR/01	2018/SEP/08	35.4
1026594	THOR MARMOT 1M	107591 (100%)	Electrum Resources	2014/MAR/10	2017/MAR/10	35.4
1025687	THOR MARMOT 2G	107591 (100%)	Electrum Resources	2014/FEB/04	2017/FEB/04	212.4
1026683	THOR MARMOT 2H	107591 (100%)	Electrum Resources	2014/MAR/14	2017/MAR/14	212.7
1026709	THOR MARMOT 2I	107591 (100%)	Electrum Resources	2014/MAR/16	2017/MAR/16	159.4
1025887	THOR MARMOT 2J	107591 (100%)	Electrum Resources	2014/FEB/11	2017/FEB/11	159.4
1042212	TM 16	107591 (100%)	Electrum Resources	2016/FEB/21	2017/FEB/21	17.7

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

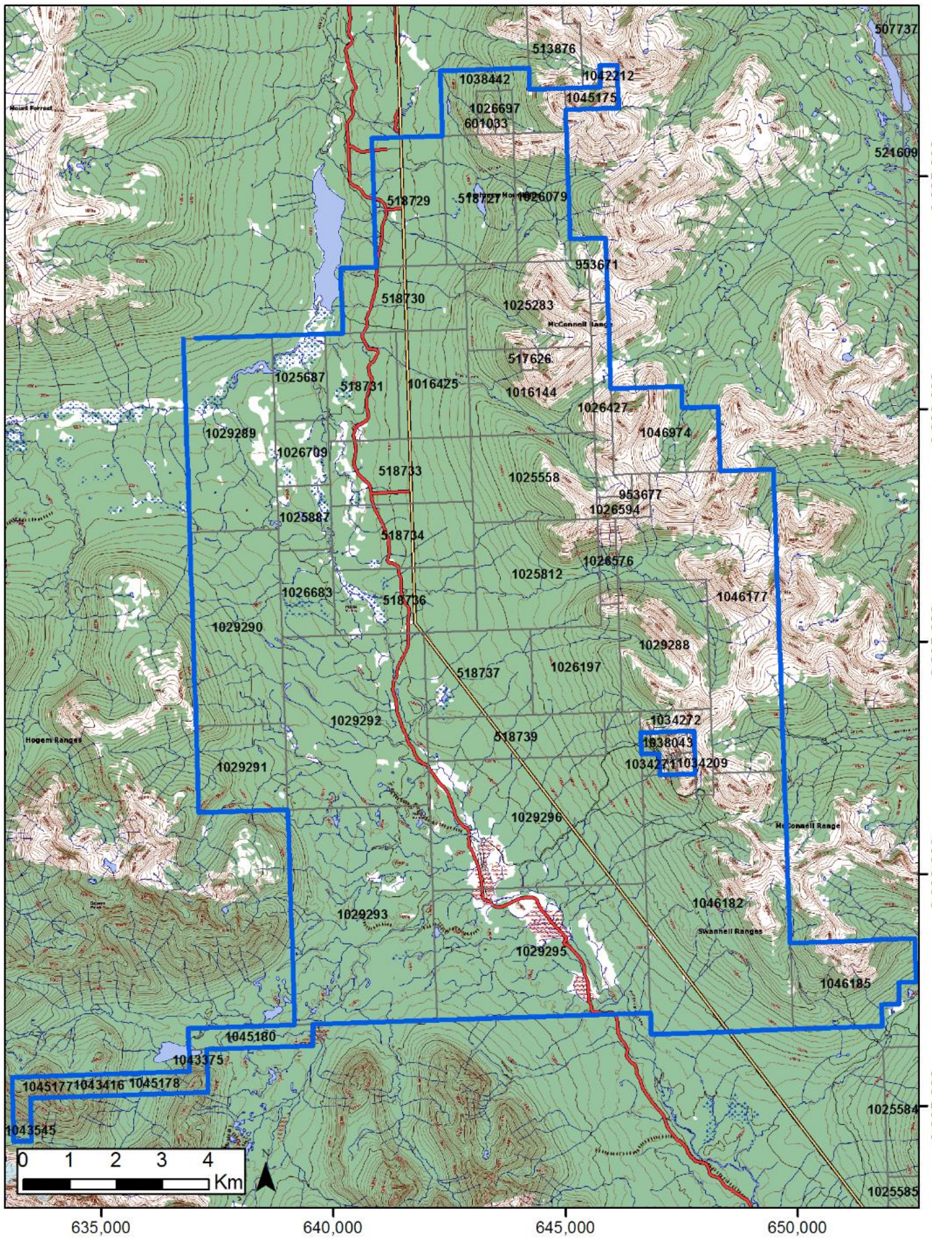

Figure 3 Topography, access road (red), power transmission line (yellow) and claims (blue with tenure ID number).

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 692.21 m 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, expending $211,602.23 in total.

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

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 Late Triassic (Late Carnian to early Norian; Monger and Church, 1977). The type area, as defined by Armstrong (1949, p.51), was originally in the vicinity of TakIa Lake, although it is much better exposed to the north in the McConnell Creek area and the type area was relocated to this mapsheet (Monger and Church, 1977). The Takla Group occurs in both Quesnllia and Stikinia and is correlative with part of the Nicola Group of Quesnellia and the Stuhini Group of Stikinia (Dosdal et al., 1999). The Takla Group is subdivided into the Savage Mountain, Dewar, and Moosevale formations. The Dewar Formation comprises volcanic sandstone, bedded tuff, siltstone and argillite. The Dewar Formation is largely time-equivalent with the Savage Mountain Formation. The Savage Mountain Formation comprises volcanic flows of typically augite-phyric basalts that may be pillowed and submarine or subaerial. In the McConnell Range, plagioclase-phyric basalts are common, some with platy feldspars up to 3 cm (Monger and Church, 1977). The Savage Mountain Formation is lithologically variable: aphyric basalt, volcanic breccia and tuffs are common. The contact between the Savage Mountain Formation and the overlying Moosevale Formation is locally gradational or sharp. The Moosevale Formation is a dominantly reddish volcaniclastic unit, recording both basic and intermediate volcanism, consequently it can be difficult to distinguish from the lower part of the Hazelton Group, the Toodoggone Formation (Monger and Church, 1977). The formation comprises: massive red and green breccia with interbedded sandstone and mudstone layers; conglomerates and lahar deposits with blocks up to 2-3 metres; red and green tuff. The breccias contain clasts of Savage Mountain Formation basalts but also fine-grained, intermediate feldspar porphyry that becomes more dominant towards the top of the formation.

Toodoggone Formation, Hazelton Group

The Hazelton Group of Stikinia comprises a lower, arc-volcanic dominated succession and an upper, clastic-dominated succession divided by a regional unconformity (Gagnon et al., 2012). Regional variations in the stratigraphy have resulted in a complex group comprising many different but time-equivalent formations that occur locally. In the McConnell Creek area, the Toodoggone Formation of the lower Hazelton Group is dominated by interstratified red and maroon flow and pyroclastic rocks (Diakow et al., 1993). The Lower Jurassic Toodoggone Formation rests unconformably upon the Takla Group and is unconformably overlain by mid-Upper Cretaceous clastic rocks of the Sustut Group. It is subdivided into the lower volcanic cycle that contains the Adoogacho, Moyez, Metsantan and McClair members and the upper volcanic cycle that contains the Attycelley and Saunders members. Lithologies are varied and include: dacitic to andesitic tuffs, tuff-breccia, lapilli tuff; lahar; trachyandesite flows; subvolcanic plugs; volcanic sandstone and conglomerate (Diakow et al., 1993). At the Kemess Mine, friable tuffs and epiclastic rocks overlie the oxide and supergene zone, similar to reddish brown to maroon epiclastic rocks along Kemess Creek (Rogers and Houle, 1998).

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) and the group was largely deposited in alluvial conditions.

Intrusive phases

Late Triassic to Early Jurassic granitoid, felsic to intermediate intrusions occur across the region. The magmatism occurred in episodes between ~218 to 191 Ma, with the majority of the intrusions forming after uplift and erosion between ~202 to 197 Ma (Diakow et al., 1993; Duuring et al 2009). Porphyry style Cu-Au-Ag-Mo mineralization occurs in association with the Late Triassic to Early Jurassic intrusions, such as the calc-alkalic porphyry deposits at the Kemess Mine (Rogers and Houle, 1998; Duuring et al., 2009).

Alaskan-type ultramafic intrusions intrude Takla Group basalt in the region, including clinopyroxenite, olivine gabbro, pyroxenite and basalt (Legun, 1997).

9. LOCAL GEOLOGY

Volcanic rocks of the Upper Triassic Takla Group predominantly underlie the eastern parts of the property. Where observed they generally consisted of coarse grained plagioclase augite phyric basalt or andesite flows and minor amounts of intercalated volcaniclastic rocks, probably of the Savage Mountain Formation. Medium-grained granodiorite to monzodiorite plugs have intruded Takla Group volcanic rocks across the property. Equigranular granodiorite plutons intrude parts of the McConnell Range in addition to a variety of smaller intrusive porphyritic bodies and dykes including: quartz-eye porphyry; quartz-plagioclase-biotite porphyry; and plagioclase porphyry. A significant NNW trending structure: the Moose Valley Fault dissects the property and rocks to the west of this fault are very poorly exposed or covered by valley tills.

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).

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 exposed at the west of the property, at the north of the property approximately 3 km east of Thorne Lake, on surface near the Marmot 2 claim, and possibly in drill hole Mar 98-01. At 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 along the western side of the property.

10. RECONNAISSANCE MAPPING

Two-weeks were spent doing helicopter supported reconnaissance mapping based out of the Kemess Mine camp. The focus of the work was in the Thor East area surrounding the historic drill hole MAR 98-06 and the Thor West IP target between approximately km 139 and km 142 along the Omineca Resource Access Road. Fourteen rock grab samples were taken to validate the historic reports of mineralization on the property (Figure 4). A grab sample [16NK007] of granodiorite with weak potassic alteration and minor malachite staining was taken 165 m east of the historic drill collar MAR 98-06 and returned 0.18% Cu, consistent with the low-grade copper mineralization intersected in hole MAR 98-06. Samples of Takla group basalt adjacent to mineralized quartz-monzonite dykes and samples of bornite-chalcopyrite bearing sheared breccia ran over 1% Cu and up to 2.0 g/t Au – these are likely related to the porphyry-style mineralization. Samples of epithermal veins or wall rocks confirmed the presence of Au-Cu-Ag-(Pb-Zn) mineralization hosted by sheared, limonitic veins in the Takla Group basalt at several locations at the Thor East target. Full assay results are listed in Appendix I.

A large area of basalt of the Takla Group with propylitic (epidote-calcite) alteration was identified in the Thor East target area. The alteration extends from the top of the mountain to the base of the cliffs where alteration becomes more intense and forms a stockwork of carbonate-epidote veins (Figure 5). At the base of the slope are sporadic outcrops of quartz-monzonite porphyry and plagioclase-quartz porphyry intrusions, displaying potassic alteration. The felsic rocks are flooded with potassium feldspar and contain several generations of veins including: thin early-biotite (EB) veins; magnetite (M) veins; magnetite-chalcopyrite veins; and quartz±chalcopyrite ‘A’ veins. The ‘A’ veins extend out in to the surrounding Takla Group basalts and individual vein widths are up to approximately 15 mm. The potassic alteration was observed to be cross-cut by later propylitic alteration, forming an overprint. Crustiform quartz-calcite-pyrite-chalcopyrite-(±sphalerite) veins and sheared veins were also identified as a later stage of, likely epithermal-style, mineralization. These epithermal veins are viewed as the origin of some of the high-grade gold rock samples historically reported on the property.

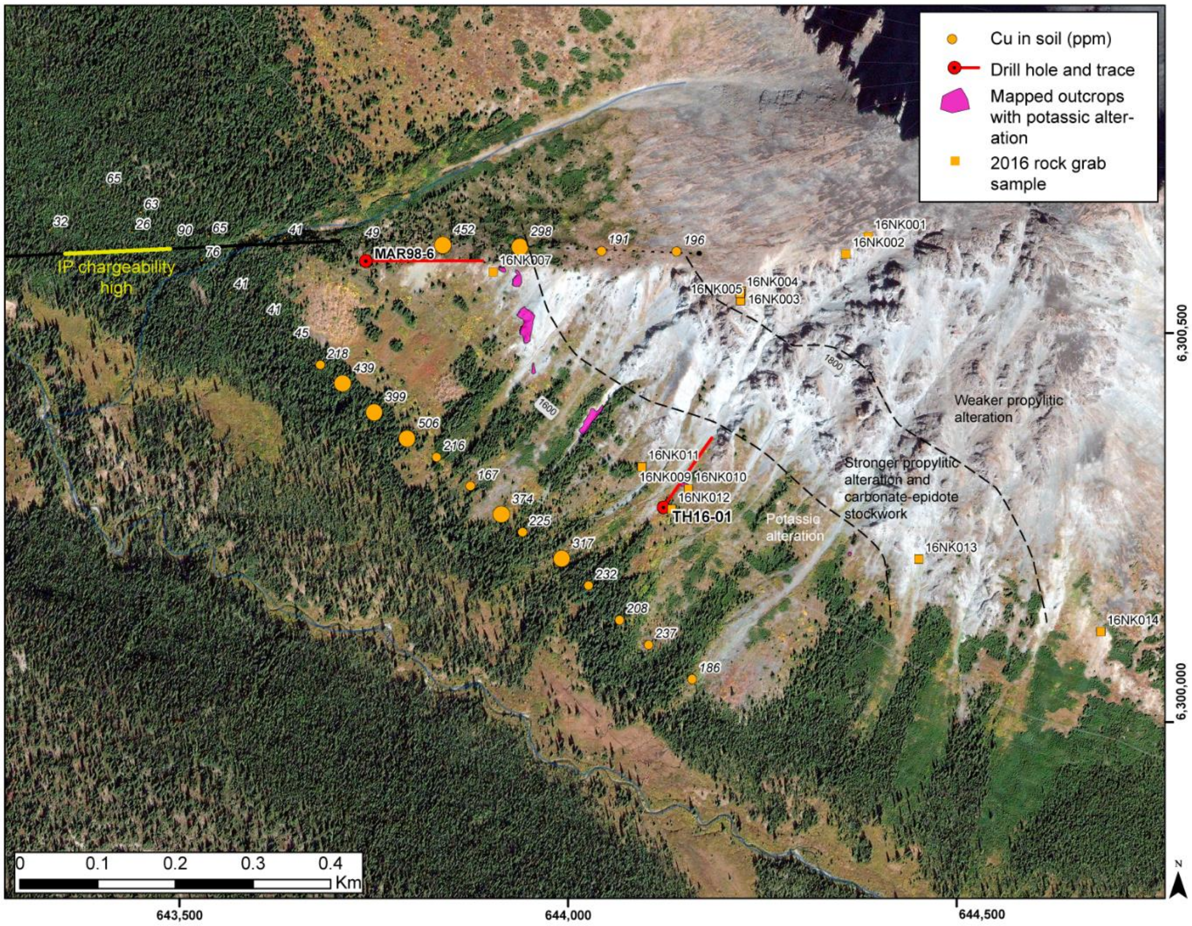

Figure 4 Distribution of potassic, strong propylitic and weak propylitic alteration zones, soil copper anomalies and drillholes. The locations of 2016 rock grab samples are shown, labelled with sample number.

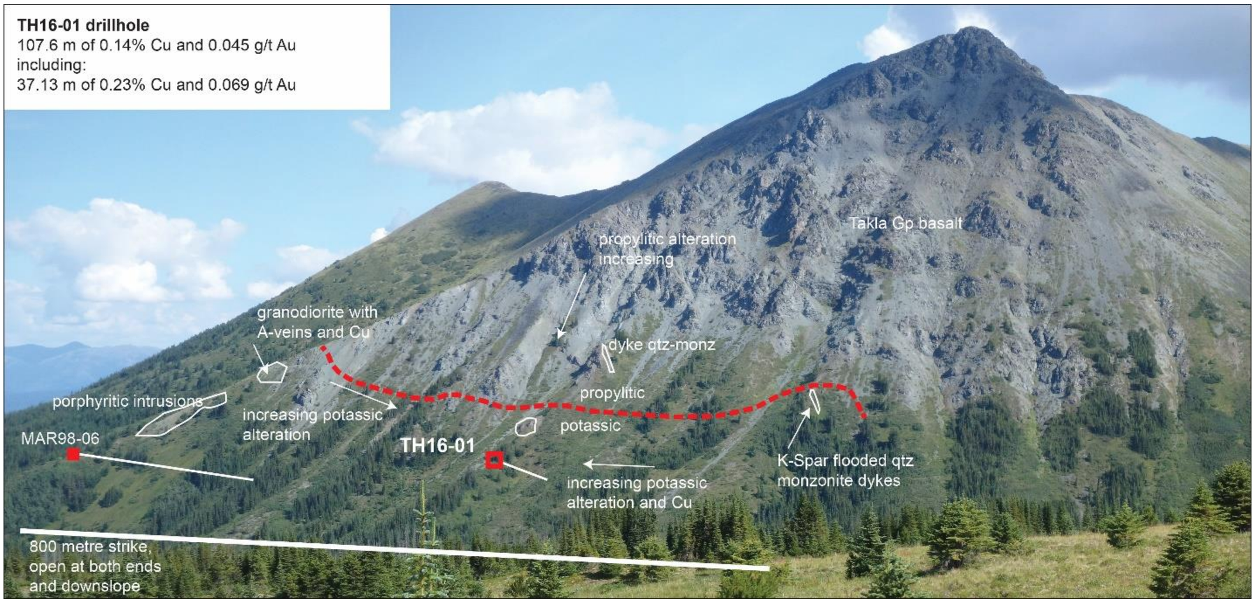

Figure 5 Looking to the north-east at the Thor East target area. Same area shown in figures 4 and 7.

11. DIAMOND DRILLING AND LOCATION OF CORE STORAGE

A total of 411.47 metres of diamond drilling were completed using NTW sized rods. Three holes were drilled: TH16-01 was collared at the base of the steep cliffs on the Thor East target (Figure 6); and holes TH16-02 and TH16-03 were drilled from the same pad at the Thor West target (Figure 6), approximately 100 m east of the Omineca Resource Access road, at approximately 1560E on line 5800N (Walcott IP line) or 820E on line 5800N (Quantec IP line). Kluane Drilling Ltd, Whitehorse, Yukon, were contracted to drill the holes using a KD600 hydraulic fly-drill. Crews were based out of the Thorne Lake camp at km 149 on the road (NAD83UTMZ9N 640,253 – 6,305,214). Core was logged at the Thorne Lake camp and holes TH16-02 and TH16-03 were stored there at the end of the season. Boxes 4 to 9 of hole TH16-01 were taken to the Copper North office in Vancouver and the remainder of hole TH16-01 was stored on the claims at a location just off the Omineca Resource Access Road (east of the road, at NAD83UTMZ9N 640,853 - 6,300,703). Logs, assays, surveys, plans and sections for holes are listed in Appendices II-V.

Hole	Easting	Northing	Depth	Azimuth	Dip	Notes
TH16-01	644,125	6,300,276	169.16 m	035	-50°	Intersected porphyry style Cu-Au mineralization
TH16-02	641,689	6,295,818	16.76 m	092	-75°	Failed to reach target depth
TH16-03	641,689	6,295,818	228.9	092	-85°	No copper mineralization.
TOTAL	UTMZ9N	NAD83	**411.47 m**			

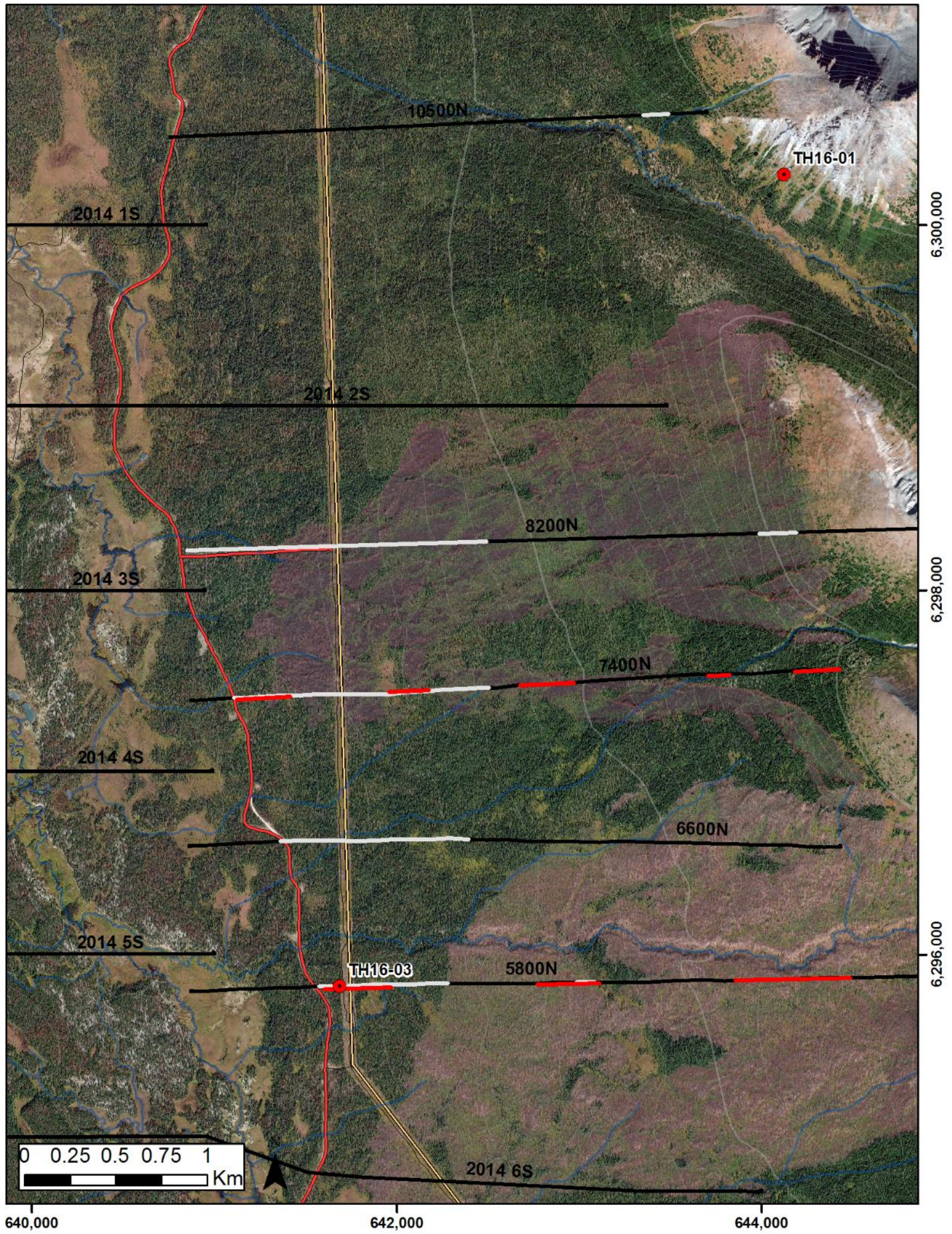

Figure 6 Drill collar locations for 2016 drill holes TH16-01 and TH16-03. Black lines are IP lines. White lines are chargeability anomalies from the pole-dipole surveys; straight red lines are the chargeability anomalies from the Quantec Titan IP survey.

TH16-01

This drill hole was located on the basis of outcrops of quartz-monzonite porphyry with chalcopyrite, malachite staining and potassic alteration approximately 40 metres north-east of the collar. Approximately 60 metres to the north-west of the collar is a small but impressive copper showing on the uphill side of a group of trees. The showing comprises coarse blebs of massive chalcopyrite-bornite up to ~25 cm diameter that appear to infill porosity within a shear zone. The potassic alteration, presence of porphyritic intrusions and copper mineralization around this area formed the basis for locating this hole.

Drilling conditions in this hole were generally good, with some high water pressures. For drilling near this location in the future, over-size reaming shells are recommended to alleviate the high water pressures down the hole.

Hole TH16-01 was collared in a post-mineral plagioclase porphyritic andesite dyke, and at 11.65 m passes in to a fault zone bearing oxidized copper sulphide mineralization. A quartz-monzonite porphyry with disseminated chalcopyrite, quartz veins and minor molybdenite persists until 80 m depth. Malachite and tenorite are common on fracture surfaces and oxidized portions of the upper part of the hole. The mineralization comprises chalcopyrite replacing mafic grains or chalcopyrite within quartz veins, magnetite veins, or biotite veins. Pink potassium feldspar flooding occurs locally, with disseminated grains of hydrothermal rutile. The remainder of the hole to 169.16 m comprises a variety of porphyritic intrusions: plagioclase-quartz porphyry; plagioclase-quartz-hornblende porphyry; plagioclase-hornblende porphyry; excepting from 101-122 m there is an interval of heterolithic, clast-supported hydrothermal breccia of porphyrytic rocks in a groundmass of magnetite-pyrite-(with minor molybdenite). Greenish chlorite-sericite alteration and disseminated pyrite persists throughout the lower half of the hole. Copper mineralization is present throughout the hole and the hole was ended in low grade chalcopyrite mineralization. The best grades of copper and gold are hosted within the quartz monzonite porphyry e.g. 0.54% Cu and 0.33 g/t Au over 2 metres in sample E00006009. Several small barren, post-mineral dykes occur throughout the hole.

Assay results for hole TH16-01 are listed in the following table. Full assay results are listed in Appendix III.

From (m)	**To (m)**	**Intersection (m)**	**Cu%**	**Au g/t**
11.65	169.16	157.51	0.11	0.037
including				
11.65	*35.5*	*23.85*	*0.28*	*0.087*
11.65	*48.78*	*37.13*	*0.23*	*0.069*
11.65	*119.25*	*107.6*	*0.14*	*0.045*

TH16-02

Drilling progress was very slow at the top of this hole owing to bouldery clay, till and silt overburden. The hole was abandoned before bedrock was reached. Half a core-box of redrilled pebbles, boulders and muck was recovered.

TH16-03

A steeper hole was attempted from the same set-up as TH16-02 and bentonite was added, allowing better rates of advance through the overburden.

Hole TH16-03 intersected 34 metres of bouldery tills before reaching bedrock. The bedrock mostly comprises beds of massive volcanic breccia or tuff breccia. The breccias are polymictic, immature, volcanic-clast dominated with a fine grained maroon to brick red matrix. Clasts are of dacite, andesite or basalt and can be very magnetic. Thin calcite-hematite veins cut the rock with no sulphides present. There is no sign of porphyry-style alteration or copper mineralization in the hole. The sequence of volcanic breccias continues to the end of the hole at 228.90 m.

Sampling and analytical methods

Drill core samples were sawn in half with a gas-powered core-saw, labelled, placed in sealed bags and were shipped directly to the laboratory of SGS Mineral Services in Burnaby for geochemical analyses. Samples were collected over 2 metre intervals and new samples were started to coincide with major lithological changes. Four sample tags were used: one in the bag; one stapled to the front of the plastic sample bag; one stapled at the start of the interval in the core box; and one with drillhole and depth information retained for archiving. Samples were sealed with a zip tie and were placed in rice-bags for shipping. Samples remained under direct custody of the project geologist during shipping to the laboratory. Copper was assayed by four-acid digestion with an ICP-AES finish. Gold was analyzed by a 30 g charge fire assay with an AAS finish.

QA/QC

Duplicate samples, blanks and standards were inserted into the sample stream at regular intervals to monitor analytical precision, accuracy and contamination. The following certified standards were obtained from CDN Resource Laboratories Ltd.: CDN-CM-26; CDN-CM-38; and CDN-CM-39. Standards are all certified for Cu, Au and Ag by four-acid digestion and fire assay; one standard is also certified for Mo. The standards were chosen as a good matrix-match as they are derived from porphyry style mineralization hosted by altered intermediate volcanic and intrusive rocks blended with concentrates of Cu-Au-Mo.

12. INTERPRETATION AND TARGETTING

The presence of porphyry-style mineralization in hole TH16-01 at the Thor East target is a very encouraging sign for the potential of this area to host a near-surface Cu-Au-Ag-Mo porphyry deposit. The transition from potassic alteration, quartz veining and moderate copper mineralization in the top half of the hole to propylitic alteration, disseminated pyrite and weak copper mineralization in the bottom half of the hole suggests that the hole was started in the mineralized zone but progressed away from the porphyry-centre in to the pyrite shell. Based on the drilling and the mapping of surface exposures around the drill hole, if a porphyry-centre is present, it likely lies to the west and to the south of hole TH16-01 (Figure 7). This target area lacks outcrop as it is covered by talus and vegetation but has significant copper in soil anomalies up to 506 ppm Cu and flanks a zone of potassic alteration and copper-gold mineralization. Several flat areas would make suitable locations for follow-up drill sites.

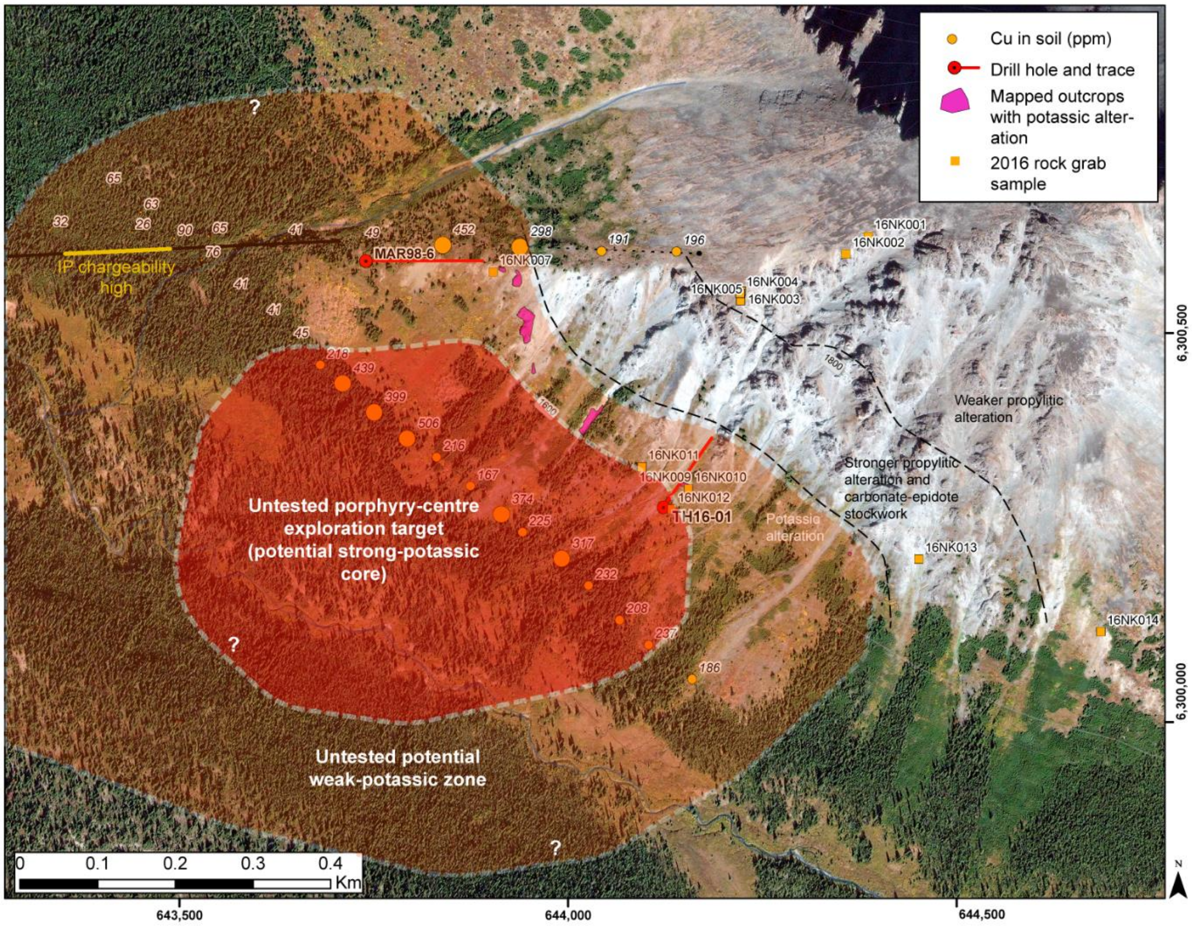

Figure 7 Conceptual exploration target for a porphyry-centre located to the south and west of drill hole TH16-01.

The volcanic breccia and tuff breccia sequence intersected in hole TH16-03 is tentatively correlated with the Early Jurassic Toodogoone Formation of the Hazelton Group. The rocks are similar to descriptions of the post-mineralization lithic tuffs and epiclastic rocks reported at the Kemess Mine that were intersected by drilling immediately above the supergene copper zone (Rogers and Houle, 1998). These maroon rocks are also exposed along parts of Kemess Creek to the south of the mine site (Rogers and Houle, 1998). The Toodogoone Formation is not exposed in outcrop on the property, but the tentative correlation is made based on the presence of more felsic rocks in a sequence of volcanic breccias, particularly due to the presence of rare quartz grains. This contrasts with the Takla Group intermediate to mafic rocks that lack quartz, or the quartz-pebble conglomerates of the Sustut Group. The magnetite present in the clasts of the volcanic breccia may be sufficient to explain the chargeability anomaly at the Thor West target; alternatively the anomaly may be due to a deep-seated or off-line anomaly. There may be significant thickness variations in the Toodoggone Formation owing to variable depositional thicknesses or to faulting; the cover-rocks may be significantly thinner in other parts of the Thor West chargeability anomaly. Therefore the chargeability anomaly at Thor West remains largely untested. Based on descriptions of the historic drill program, the Toodoggone Formation may also occur in hole Mar 98-01. If so, the Toodoggone Formation may be extensive throughout Moose Valley.

13. RECOMMENDATIONS

Additional drilling is recommended in the area around TH16-01. Three diamond-drill holes, each 200 to 300 m deep, angled to the north-east at ~65° should be drilled 150 m downslope, 225 m to the west and 190 m to the north-west of hole TH16-01. A track-mounted RC drill should be brought in to test the Thor West target by drilling ~150 metre holes on a ~400 metre spacing in the chargeability anomalies along the IP lines. The two drill rigs should be run at the same time to save on fixed costs. The anticipated budget for such a program is $750,000.

14. STATEMENT OF COSTS

Item	Cost (CAD$)	Person days	
Camp Ops - Accommodations	$48,488.81		
Camp Ops - Demobilization	$2,720.00		
Camp Ops - Facilities	$1,501.57		
Camp Ops - Fuel	$6,693.80		
Camp Ops - Groceries	$10,243.56		
Camp Ops - Supplies	$46,511.58		
Camp Ops - Labour	$103,523.68	310	
Camp Ops - Telephone/Communication	$2,538.72		
Camp Ops - Vehicle/Equipment Rental	$7,112.19		
Camp Ops - Travel/Transportation	$23,490.65		
Drilling - Assays	$3,051.20		
Drilling - Diamond Drilling and mobilization	$101,262.54		
Drilling - Helicopter	$63,244.18		
Mapping - Geology	$19,550.00	47.1	
Mapping - Helicopter	$13,465.36		
Drill program - Geology	$42,075.00	93.5	
Management	$28,000.00	35.9	
TOTAL	$523,472.84	486.5	person days
		1.87	person years

Non-geological labour costs include the employment of 16 workers: a camp manager, 2x OFA level 3 first aid attendants, 4x general helpers (rotating), 2x camp cooks, 1x camp cleaner, and 6x pad builders.

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16. STATEMENT OF QUALIFICATIONS

I, Jack Edward Milton, do hereby state that:

I reside at 589 E 27th Avenue, Vancouver, BC, V5V 2K7.

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 and options in Copper North Mining Corp.

I supervised the field program and logged all of the drill core at the Thor property in 2016.

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

Jack Milton [signed]

Project Geologist,

Copper North Mining Corp.

17. APPENDIX I: Grab sample assay results

Sample	Rock Type	Description	UTM East	UTM North
16NK001	Basalt	Thin veinlets of chalcopyrite	644,386	6,300,625
16NK002	Basalt		644,358	6,300,602
16NK003	Basalt	Fine-grained aphanitic basalt just above a strongly limonite altered patch. Deep purplish and vuggy. Matrix is chlorite altered, with late vuggy carbonate. Bornite-chalcopyrite-malachite-chrysocolla.	644,223	6,300,554
16NK004	Vein	Strongly limonite altered vuggy Fe-ox hematite, goethite. Common weathered out sulphides. Box-work textured. Vein orientation is 005, steeply dipping. Estimated vein width is 0.7 to 1.0 m.	644,221	6,300,551
16NK005	Basalt	Fine grained basalt with some malachite stain	644,222	6,300,542
16NK006	Vein	Vuggy, strongly limonite altered vein material	643,987	6,300,572
16NK007	Granodiorite	Granodiorite: porphyritic, hbl altered to chl and bt; plagioclase is also locally epidote and Kfs altered. Matrix is fine grained. Magnetite within the matrix. Weak potassic alteration. Copper mineralization is mostly malachite.	643,903	6,300,579
16NK008	Vein	Vein in basalts at north end. Tenorite-malachite stained, from limonitic vein material occuring along a fault 034/74 cutting augite phyric basalts.	643,909	6,301,367
16NK009	Basalt	40 m NE of hole TH16-01: mineralized basalt wall rocks near qtz monzonite dyke	644,155	6,300,300
16NK010	Basalt	40 m NE of hole TH16-01: mineralized basalt wall rocks near qtz monzonite dyke	644,155	6,300,300
16NK011	Breccia	high grade sample from showing 60 m NW of hole TH16-01. Semi massive sulphides	644,095	6,300,328
16NK012	Basalt	10 m from hole TH16-01: malachite stained basalt	644,133	6,300,274
16NK013	Vein	Brownish strongly weathered quartz vein with strong limonite staining and malachite. Vuggy and banded texture. 16 cm wide vein cutting Takla Gp	644,451	6,300,210
16NK014	Vein	brecciated vein material with pyrite, sphalerite and white mineral, wall rocks are takla with some silicification	644,685	6,300,116

SGS

Certificate of Analysis
Work Order : VC162685
[Report File No.: 0000018953]

Date: September 13, 2016

To: **Jack Milton**
COD SGS ASSAYERS
COPPER NORTH MINING CORP.
1120-1095 W Pender St
Vancouver
BC V6E 2M6

P.O. No.: Copper North Mining / COL-TH1
Project No.: -
Samples: 14
Received: Aug 26, 2016
Pages: Page 1 to 6
(Inclusive of Cover Sheet)

Methods Summary

No. Of Samples	Method Code	Description
14	G_LOG02	Pre-preparation processing, sorting, logging, boxing
14	G_PRP89	Weigh, dry,(up to3.0 kg) crush to 75% passing 2 mm, split 250 g, pulverize to
14	G_WGH79	Weighing of samples and reporting of weights
14	GE_FAA313	@Au, FAS, AAS, 30g-5ml(Final Mode)
14	GE_ICP40B	Multi-acid (4-acid) digestion/ICP-AES package

Storage: Pulp & Reject

REJECT STORAGE	:	STORE
PULP STORAGE	:	STORE

Comments:

Results may be subject to analytical interferences.

Certified By : John Chiang
QC Chemist

SGS Minerals Services Geochemistry Vancouver conforms to the requirements of ISO/IEC 17025 for specific tests as listed on their scope of accreditation which can be found at http://www.scc.ca/en/search/palcan/sgs

Report Footer:

L.N.R.	= Listed not received	I.S.	= Insufficient Sample
n.a.	= Not applicable	–	= No result

*INF = Composition of this sample makes detection impossible by this method

M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

Methods marked with an asterisk (e.g. *NAA08V) were subcontracted
Elements marked with the @ symbol (e.g. @Cu) denote assays performed using accredited test methods

SGS

Final : VC162685 Order: Copper North Mining / COL-TH1

Report File No.: 0000018953

Element	WtKg	@Au	@Ag	@Al	@As	@Ba	@Be	@Bi
Method	G_WGH79	GE_FAA313	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B
Det.Lim.	0.01	5	2	0.01	3	1	0.5	5
Units	kg	ppb	ppm	%	ppm	ppm	ppm	ppm
16NK001	0.465	148	<2	10.5	17	281	0.8	<5
16NK002	0.990	198	2	10.2	20	159	<0.5	<5
16NK003	1.285	2900	86	3.59	7	33	<0.5	<5
16NK004	1.850	1170	>100	1.57	949	97	<0.5	101
16NK005	1.065	37	<2	6.57	5	142	0.5	<5
16NK006	1.225	367	50	1.91	527	100	<0.5	97
16NK007	1.720	86	<2	7.43	4	794	0.9	<5
16NK008	0.935	1050	36	6.87	11	122	<0.5	12
16NK009	0.840	492	11	6.32	<3	1430	<0.5	9
16NK010	0.550	130	7	1.57	55	106	<0.5	<5
16NK011	0.950	2000	13	5.24	8	67	<0.5	<5
16NK012	2.085	85	<2	3.79	<3	71	<0.5	6
16NK013	1.090	1080	>100	2.55	913	113	<0.5	665
16NK014	1.555	873	14	2.73	1000	117	<0.5	28
*Rep 16NK012		87						
*Std OXN117		7690						
*Blk BLANK		<5						
*Rep 16NK002			2	10.3	20	157	<0.5	<5
*Std OREAS502B			<2	7.01	19	919	2.2	6
*Blk BLANK			<2	<0.01	<3	<1	<0.5	<5

Element	@Ca	@Cd	@Co	@Cr	@Cu	@Fe	@K	@La
Method	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B
Det.Lim.	0.01	1	1	1	0.5	0.01	0.01	0.5
Units	%	ppm	ppm	ppm	ppm	%	%	ppm
16NK001	8.29	<1	20	26	2050	6.40	1.21	2.9
16NK002	5.95	<1	35	18	2840	7.00	1.23	8.3
16NK003	7.25	5	36	385	>10000	6.84	0.23	3.9
16NK004	3.78	53	39	30	>10000	12.4	0.27	9.2
16NK005	0.80	2	21	201	2590	4.56	1.24	5.5
16NK006	0.09	<1	6	21	1670	11.7	0.49	1.2
16NK007	1.89	<1	6	8	1810	2.46	2.26	12.3
16NK008	3.35	<1	43	66	>10000	8.08	1.88	3.6
16NK009	1.06	<1	15	42	>10000	14.2	2.75	3.5
16NK010	12.6	<1	10	19	1920	7.68	0.29	4.9
16NK011	5.48	<1	18	16	>10000	10.9	0.57	19.6
16NK012	0.93	<1	13	140	3050	>15.0	0.38	1.4
16NK013	0.10	<1	2	53	2910	>15.0	0.88	0.9
16NK014	4.23	41	37	8	152	13.2	0.82	2.4
*Rep 16NK002	6.09	<1	35	18	2890	7.07	1.25	8.6
*Std OREAS502B	2.70	<1	16	57	7410	5.75	2.89	28.1
*Blk BLANK	<0.01	<1	<1	<1	<0.5	<0.01	<0.01	<0.5

Element	@Li	@Mg	@Mn	@Mo	@Na	@Ni	@P	@Pb
Method	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B
Det.Lim.	1	0.01	2	1	0.01	1	0.01	2
Units	ppm	%	ppm	ppm	%	ppm	%	ppm
16NK001	12	1.33	935	<1	1.99	24	0.02	17
16NK002	11	1.60	754	<1	2.63	25	0.04	20
16NK003	57	2.34	1920	13	0.03	125	0.04	181
16NK004	17	0.53	2090	76	0.02	60	0.01	458
16NK005	75	2.28	1290	3	0.39	56	0.07	16
16NK006	14	0.36	780	59	0.02	11	0.01	367
16NK007	7	0.83	316	4	1.66	5	0.06	10
16NK008	27	3.30	2090	455	0.19	166	0.06	46
16NK009	11	1.06	1200	353	1.78	43	0.07	30
16NK010	10	2.23	7460	8	0.02	11	0.02	76
16NK011	51	1.62	687	233	0.06	44	0.05	34
16NK012	14	2.01	815	20	0.76	31	<0.01	5
16NK013	9	0.29	338	33	0.03	7	0.04	3920
16NK014	7	1.14	>10000	15	0.02	24	0.03	314
*Rep 16NK002	11	1.58	749	<1	2.66	25	0.04	20
*Std OREAS502B	27	1.50	570	237	1.89	36	0.08	29
*Blk BLANK	<1	<0.01	<2	<1	<0.01	<1	<0.01	<2

Final : VC162685 Order: Copper North Mining / COL-TH1

Report File No.: 0000018953

Element	@S	@Sb	@Sc	@Sn	@Sr	@Ti	@V	@W
Method	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B	GE_ICP40B
Det.Lim.	0.01	5	0.5	10	0.5	0.01	2	10
Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm
16NK001	0.15	<5	7.0	<10	760	0.13	188	<10
16NK002	0.21	<5	11.3	<10	579	0.31	184	<10
16NK003	1.26	7	26.7	<10	65.9	0.22	169	<10
16NK004	>5.00	32	4.5	<10	42.1	0.05	65	<10
16NK005	0.02	<5	17.3	<10	31.7	0.32	111	<10
16NK006	1.32	6	4.3	<10	8.8	0.11	68	<10
16NK007	0.08	<5	7.2	<10	296	0.17	65	<10
16NK008	0.09	<5	30.0	<10	50.6	0.42	226	<10
16NK009	0.65	<5	3.9	<10	137	0.13	353	<10
16NK010	2.45	6	6.4	<10	82.0	0.08	69	<10
16NK011	>5.00	<5	15.0	<10	57.6	0.26	124	20
16NK012	0.12	<5	10.9	<10	44.9	0.32	763	<10
16NK013	0.26	10	11.2	<10	13.1	0.23	133	<10
16NK014	>5.00	10	8.3	<10	30.3	0.20	96	<10
*Rep 16NK002	0.21	<5	11.5	<10	595	0.32	185	<10
*Std OREAS502B	1.01	<5	11.9	<10	349	0.39	120	<10
*Blk BLANK	<0.01	<5	<0.5	<10	<0.5	<0.01	<2	<10

SGS

Final : VC162685 Order: Copper North Mining / COL-TH1

Report File No.: 0000018953

Element	@Y	@Zn	@Zr
Method	GE_ICP40B	GE_ICP40B	GE_ICP40B
Det.Lim.	0.5	1	0.5
Units	ppm	ppm	ppm
16NK001	5.8	90	9.5
16NK002	7.4	68	18.1
16NK003	6.1	205	17.3
16NK004	5.5	4700	11.3
16NK005	9.7	1120	44.4
16NK006	1.3	172	8.3
16NK007	9.5	43	37.6
16NK008	9.4	172	27.3
16NK009	6.4	180	15.2
16NK010	7.3	168	6.9
16NK011	18.5	76	21.9
16NK012	1.9	137	41.6
16NK013	1.3	1060	14.4
16NK014	6.6	5260	14.1
*Rep 16NK002	7.4	71	15.7
*Std OREAS502B	21.9	139	69.7
*Blk BLANK	<0.5	1	<0.5

18. APPENDIX II: Diamond drill hole geological logs and surveys

Holes surveyed with single-shot down-hole Reflex survey tool:

Survey name	Station	Dip	Azimuth (corrected)
*	Metres	Degrees	Degrees
TH16-01	5	-49.4	034.6
TH16-01	20	-49.3	034.4
TH16-01	35	-49.3	036.3
TH16-01	50	-49.2	036.2
TH16-01	65	-49.1	036
TH16-01	80	-49.2	036.9
TH16-01	95	-49.5	036.9
TH16-01	110	-49.6	046.5
TH16-01	125	-49.6	040.2
TH16-01	140	-49.7	035.8
TH16-01	155	-49.7	036.5
TH16-01	170	-49.8	035.5
TH16-03	212	-76.2	236.6
TH16-03	225	-77.3	235.2

Thor Project, Copper North 2016 Drilling

Hole ID	**TH16-01**	**Azimuth**	035	**Casing (m)**	20'	**Logged By**	Jack Milton
Easting	644,125	**Dip**	-50	**Start Date**	13th Sep '16	**Drill Company**	Kluane Drilling
Northing	6,300,276	**EOH (m)**	169.16	**End Date**	17th Sep '16		

DEPTH (m)		**GEOLOGY DESCRIPTORS**				**MINERALOGY (%)**					**ALTERATION MINERALS**						**MINERALIZATION**				**STRUCTURES**		
FROM	**TO**	**LITH**	**MOD**	**TXT**	**GrSz**	**QZ**	**FS**	**BI**	**HB**	**OT**	**(Strongest to Weakest)**					**ALT**	**(Strong to Weakest)**				**TYPE**	**<TCA**	**NOTES**
0.00	4.57																						**CASING**: very poor recovery
4.57	11.65	PPPA		PP	F	0	30	0	0	MAG	CB	CY	HE								VEIN	60	**PLAGIOCLASE PORPHYRITIC ANDESITE**: mid-grey groundmass with milky to pinkish plagioclase phenocrysts. Some magmatic magnetite. Cut by pink/orange and white calcite veins.
11.65	13.50	FLTZ		SH							CY						CPY	MA	TN	CC	SHZN	30	**FAULT ZONE**: 30 degrees to core axis at upper contact, lower contact lost to poor recovery. Sheared, clay-altered, brecciated rock fragments set in clay fault gouge. Chalcopyrite and malachite disseminated throughout with some tenorite coatings and rare chalcocite coatings. Shear fabric developed locally. Fragments of wall rock are mostly dark grey or granodiorite or vein quartz with chalcopyrite.
13.50	38.80	QTMZ		EQ	C	15	60	0	15		SER	CHL	KFS	MAG		POTT	CPY	MA	PY				**QUARTZ MONZONITE**: Altered rock, much sericite alteration. Original rock type possibly monzonite. Sericite-chlorite-K-feldspar alteration. Thin veinlets of chalcopyrite-biotite to 1 mm. Some quartz veins with chalcopyrite centrelines to 25 mm thickness at ~15 degrees to core axis. Malachite on fracture surfaces. Magnetite present. Quartz-chalcopyrite veins have dark (biotite?) centrelines or selvedges. Qtz-cpy veins are cross cut by orange-pink-white calcite veins and both are sheared. Good copper mineralization throughout.
38.80	41.75	PPPA	AMYG	PP	F	0	20	0	0	MAG	CB												**PLAGIOCLASE PORPHYRITIC ANDESITE**: dyke (?), sheared and epidote-carbonate altered. Upper and lower contacts at low angle to core axis. Cut by thin carbonate veinlets. Not altered like the surrounding rockmass.
41.75	50.20	QTMZ			C						SER	CY	CB				CPY	MO					**QUARTZ MONZONITE**: very altered, grey to greenish sericite-chlorite alteration. Many late carbonate veins. Molybdenite-chalcopyrite-quartz vein at 47.80 m. Fault at 44.50 - 46.80 m, soft gouge.
50.20	51.24	PPPA	AMYG	PP	F		10				CB										Ig. Cont.	45	**PLAGIOCLASE PORPHYRITIC ANDESITE**: dyke, cut by carbonate veins. Some infilled amygdules. Barren of copper minerals. Contacts are 45 degrees to core axis.
51.24	56.17	QTMZ			C	15	40			MAG	CB	KFS				POTT							**QUARTZ MONZONITE**: flooded with pink mineral around feldpsar - K-spar? Cut by many orange/pink carbonate veins. No sulphides.

DEPTH (m)		GEOLOGY DESCRIPTORS				MINERALOGY (%)					ALTERATION MINERALS						MINERALIZATION				STRUCTURES		
FROM	TO	LITH	MOD	TXT	GrSz	QZ	FS	BI	HB	OT	(Strongest to Weakest)					ALT	(Strong to Weakest)				TYPE	<TCA	NOTES
56.17	60.05	QTMZ			C	15	40			MAG	SER	CHL	QTZ	RUT		PHYLL							**QUARTZ MONZONITE**: quartz-sericite-chlorite-rutile alteration, distinct green colour to feldspars. Traces of chalcopyrite in sericite veins that run parallel to the core axis.
60.05	65.90	QTMZ								MAG	KSP	SER	CHL	EPI		POTT	Tr. CPY						**QUARTZ MONZONITE**: reddish quartz monzonite with sericite-K-feldspar-chlorite alteration, minor epidote. Some K-spar veinlets. Sequence is Kspar-> epidote --> carbonate by cross cutting relationships. Very minor and thin quartz-biotite-chalcopyrite veinlet at 63.8 m running parallel to core axis, otherwise just a few patches of disseminated chalcopyrite, seemingly replacing mafics. Abundant magnetite.
65.90	70.41	QTMZ			C					MAG	SER	CHL	QTZ			PHYLL	Tr. CPY						**QUARTZ MONZONITE**: greenish sericite-chlorite altered rock with minor irregular chalcopyrite-biotite veinlets ~1 mm running approximately parallel to the core axis
70.41	76.85	FLTZ								MAG	CY	SER	CHL										**FAULT ZONE**: low angle to core axis ~10 degrees, clayey, gougey sections with shattered soft damage zones adjacent. Some carbonate veining along fault planes
76.85	80.00	QTMZ			C	15	40				SER	CHL				PHYLL	Tr. CPY						**QUARTZ MONZONITE**: greenish highly altered coarse quartz monzonite with traces of chalcopyrite associated with both dark (biotite?) veinlets and coarse carbonate veins.
80.00	87.40	PHPP	SHZN	PP	F												Tr. CPY						**PLAGIOCLASE-HORNBLENDE PORPHYRY**: distinctive green translucent feldspars (chloritized?). All hornblende altered to sericite-magnetite. Traces of chalcopyrite in early veinlets. Sheared up carbonate veins.
87.40	92.72	PHPP		PP	F					MAG	SER	CHL	MAG			PHYLL	PY	CPY			Cont. L.	45	**PLAGIOCLASE-HORNBLENDE PORPHYRY**: Greenish altered plagioclase, Pervasive sericite-chlorite-pyrite alteration with some chalcopyrite disseminated or in sulphide veinlets (D-veins). Small fault at 90.00-->90.05 m with soft clayey gouge. 2-5% pyrite with minor cpy.
92.72	92.87	PQPP		PP	C/F					MAG	SER	CHL	PY			PHYLL	PY	CPY					**PLAGIOCLASE-QUARTZ PORPHYRY**: dyke with whitish zoned plagioclase and quartz eyes. Some K-feldspar alteration but dominantly ser-chl-py with minor chalcopyrite, felsic dyke.
92.87	99.44	PQHP		PP	C/F					MAG	SER	CHL				PHYLL	PY	Tr. CPY					**PLAGIOCLASE-QUARTZ-HORNBLENDE PORPHYRY**: strongly altered porphyry: locally greenish soft minerals (altered plagioclase). Hornblende altered to sericite chlorite. Groundmass is reddish, locally abundant pyrite. Thin late carbonate veins.
99.44	101.00	FLTZ									SER	CHL					PY	CPY					**FAULT ZONE**: sheared up soft clayey sericite-chlorite-pyrite carbonate veins. Sheared up quartz-chalcopyrite veins, quartz monzonite.

DEPTH (m)		GEOLOGY DESCRIPTORS				MINERALOGY (%)					ALTERATION MINERALS						MINERALIZATION				STRUCTURES		
FROM	TO	LITH	MOD	TXT	GrSz	QZ	FS	BI	HB	OT	(Strongest to Weakest)					ALT	(Strong to Weakest)				TYPE	<TCA	NOTES
101.00	121.70	BRXX		BX						MAG	SER	CHL	KFS	QTZ		POTT	PY	CPY	BN	MO			**MAGNETITE BRECCIA:** heterolithic clast supported possibly hydrothermal breccia with angular to subrounded clasts of quartz monzonite, quartz-feldspar porphyry, suspected Takla Gp basalt with a matrix of magnetite-pyrite and locally chalcopyrite-bornite. Some quartz-chalcopyrite veins in the breccia as clasts. Matrix is highly magnetic. Local K-spar flooding, pervasive sericite-chlorite-pyrite alteration Minor patches of molybdenite. Downwards grades to lower degree of brecciation and becomes more monolithologic with clasts of greenish sericite-chlorite altered porphyritic rock. Quartz-pyrite vein sheared at 115.8 m.
121.70	127.42	PQHP		PP	C/F						SER	CHL	QTZ			PHYLL	Tr. Cpy						**PLAGIOCLASE QUARTZ HORNBLENDE PORPHYRY**: highly sericite-chlorite-quartz altered. Green tint but no apple-green minerals. Cut by thin carbonate-chlorite veins, some of which carry minor chalcopyrite.
127.42	128.95	PHPP		PP	C/F	0	40		15	MAG	CHL	SER				PHYLL							**PLAGIOCLASE-HORNBLENDE PORPHYRY**: green altered (feldspar) mineral dominant. Sericite-chlorite altered mafics. Difficult to assess if this is an alteration of quartz-plagioclase-hornblende porphyry or if this is a different lithology, perhaps altered Takla Gp Basalt? There is a hematite-carbonate vein ~1cm wide at the centre of this intersection.
128.95	132.75	PQHP		PP	C/F	10	30		10	MAG	SER	CHL				PHYLL							**PLAGIOCLASE QUARTZ HORNBLENDE PORPHYRY**: grey-greenish porphyritic rock with sericite-chlorite alteration. Some carbonate veins with green alteration of wall rocks. Fault gouge at 131.98 to 132.08 m.
132.75	138.35	PHPP																					**PLAGIOCLASE HORNBLENDE PORPHYRY**: distinct greenish plagioclase (chloritized) highly chlorite-sericite altered. Magnetite. Faulting at 133.29 to 133.34 m. Carbonate veining throughout.
138.35	139.90	SHZN									CY	CB	CHL	SER			PY	CAL					**SHEAR ZONE**: low angle to core axis fault zone, irregular, undulating contact. Gougey clayey breccia with coarse pyrite to 10 mm and calcite veins in fault

DEPTH (m)		GEOLOGY DESCRIPTORS				MINERALOGY (%)					ALTERATION MINERALS						MINERALIZATION				STRUCTURES		
FROM	TO	LITH	MOD	TXT	GrSz	QZ	FS	BI	HB	OT	(Strongest to Weakest)					ALT	(Strong to Weakest)				TYPE	<TCA	NOTES
139.90	169.16	QTMZ			C	10	30		10	MAG	SER	CHL	KFS	QTZ		PHYLL	PY	CPY					**QUARTZ MONZONITE**: rock is highly variable and altered throughout. Some areas are dominated by greenish (feldspar?) alteration, whereas others are more quartz-K-Feldspar altered. Local quartz-chalcopyrite veining and biotite-chalcopyrite veining at: 142.7 m (bt-cpy); 147.05 m (bt-qtz-cpy); molybdenite, minor, in bt-cpy veinlet 1mm wide, parallel to core axis at 147.6 m; qtz-cpy vein 15 mm wide at 147.9 m; up to 5% pyrite between 147.8 to 150 m.; qtz-cpy vein at 153.8 m; qtz-py veinlets at 157.26 m + 157.85 m. Quartz vein sheared at 163.5-164.0 m; Fault gouge at 164.0-164.75 m; qtz vein at 165.5 + 165.8 m. PLag phyric basaltic dyke with chilled margin at 165.9 to 166.5 m. Minor cpy at 167.34 m.
END OF HOLE																							

Thor Project, Copper North 2016 Drilling

Hole ID	**TH16-03**	**Azimuth**	92	**Casing (m)**	33.53	**Logged By**	Jack Milton
Easting	641,689	**Dip**	-85	**Start Date**	19th Sep '16	**Drill Company**	Kluane Drilling
Northing	6,295,818	**EOH (m)**	228.90	**End Date**	24th Sep '16		

DEPTH (m)		**GEOLOGY DESCRIPTORS**				**MINERALOGY (%)**					**ALTERATION MINERALS**						**MINERALIZATION**				**STRUCTURES**		
FROM	**TO**	**LITH**	**MOD**	**TXT**	**GrSz**	**QZ**	**FS**	**BI**	**HB**	**OT**	**(Strongest to Weakest)**					**ALT**	**(Strong to Weakest)**				**TYPE**	**<TCA**	**NOTES**
0.00	34.00	OVER																					**CASING:** very poor recovery, exceedingly difficult drilling conditions caused by bouldery silts and silt/clay seams.
34.00	228.90	VOBX																					**VOLCANIC BRECCIA**: Polymictic, immature, volcanic-clast dominated breccia, clast supported with fine grained reddish matrix. Clasts are angular to subrounded, poorly sorted from boulder to granule size. Clasts are mostly, very-magnetic. Clasts comprise mid grey, light grey and dark grey dacite-andesite-basalt. This unit is likely a pyroclastic breccia or lithic-tuff-breccia. Small (~4-15 mm) lapilli fragments of olivine-basalt. Matrix is dominantly brick red to maroon with some charcoal grey and some greenish grey sections. No copper mineralization evident. A green, colloform, soft mineral infills porosity and vesicles as amygdules. The green is the colour in between that of malachite and chlorite, sometimes resembling chrysocolla. It has a concoidal fracture and the centre of some cavity fills are dark grey. Mineral ID is uncertain but it may be a zeolite mineral. Thin calcite-hematite veinlets cut the rock with no sulphides. Correlation of the unit is tentatively made with the Toodoggone Formation of the Hazelton Group.
END OF HOLE																							

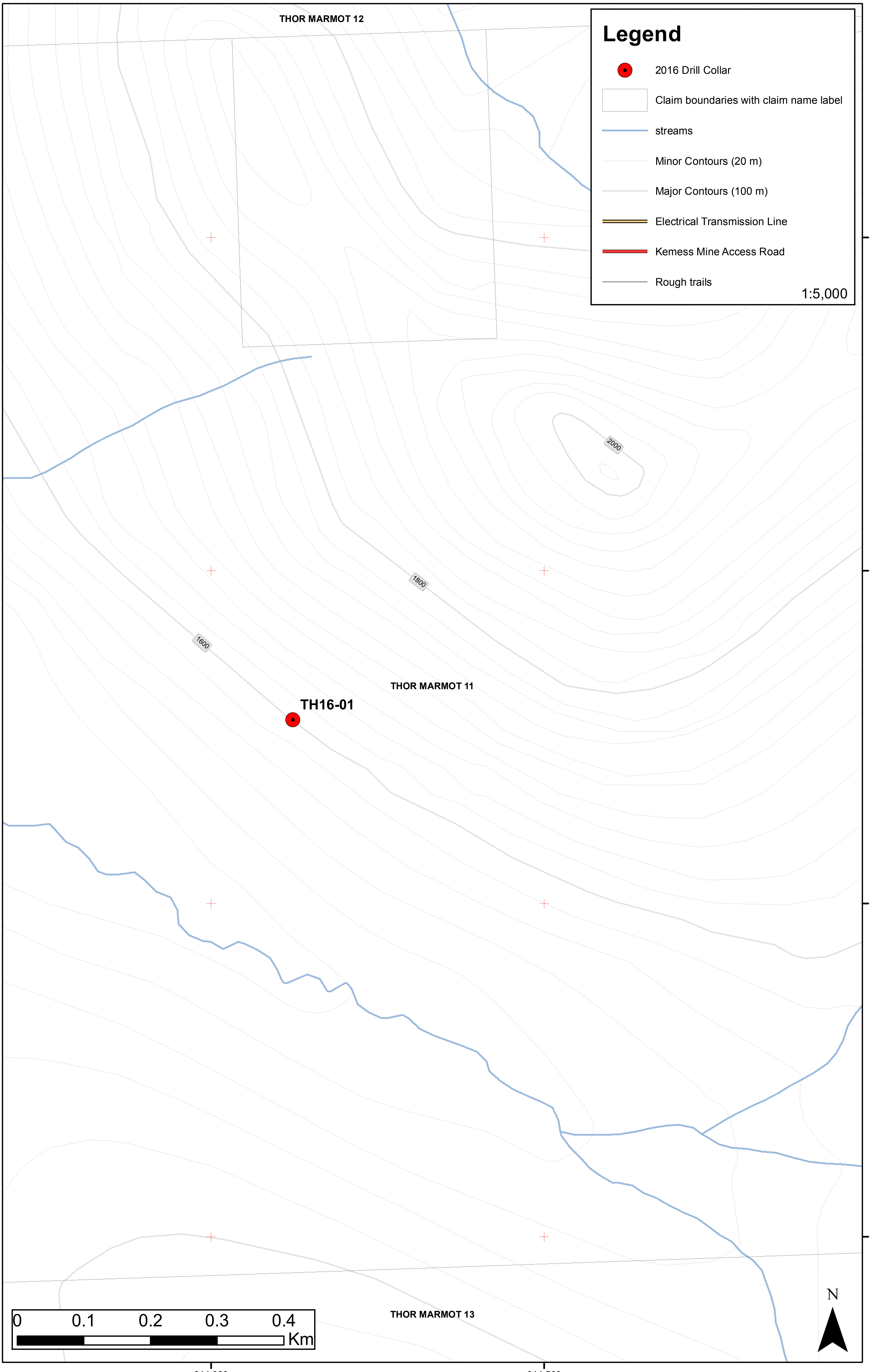
19. APPENDIX III: Assay data for drill core samples

Hole	Sample	From (m)	To (m)	Notes
TH 16-01	**E00006001**	4.57	9.65	Sample cutting error - cut from 0.00 m, including recovery through casing, so total sample is 0.00 to 9.65m
TH 16-01	**E00006002**	9.65	11.65	
TH 16-01	**E00006003**	11.65	13.65	
TH 16-01	**E00006004**	13.65	15.65	
TH 16-01	**E00006005**	15.5	17.5	
TH 16-01	**E00006006**	17.5	19.5	
TH 16-01	**E00006007**	19.5	21.5	
TH 16-01	**E00006008**	21.5	23.5	
TH 16-01	**E00006009**	23.5	25.5	
TH 16-01	**E00006010**	25.5	27.5	
TH 16-01	**E00006011**	27.5	29.5	
TH 16-01	**E00006012**	29.5	31.5	
TH 16-01	**E00006013**	31.5	33.5	
TH 16-01	**E00006014**	33.5	35.5	
TH 16-01	**E00006015**	35.5	37.5	
TH 16-01	**E00006016**	37.5	38.78	
TH 16-01	**E00006017**	38.78	40.78	
TH 16-01	**E00006018**	40.78	42.78	
TH 16-01	**E00006019**	42.78	44.78	
TH 16-01	**E00006020**	standard	standard	CM-26
TH 16-01	**E00006021**	44.78	46.78	
TH 16-01	**E00006022**	46.78	48.78	
TH 16-01	**E00006023**	48.78	50.19	
TH 16-01	**E00006024**	50.19	51.27	
TH 16-01	**E00006025**	51.27	53.27	
TH 16-01	**E00006026**	53.27	55.27	
TH 16-01	**E00006027**	55.27	57.27	
TH 16-01	**E00006028**	57.27	59.27	
TH 16-01	**E00006029**	59.27	61.27	
TH 16-01	**E00006030**	61.27	63.27	
TH 16-01	**E00006031**	63.27	65.27	
TH 16-01	**E00006032**	65.27	67.27	
TH 16-01	**E00006033**	67.27	69.27	
TH 16-01	**E00006034**	69.27	71.27	
TH 16-01	**E00006035**	71.27	73.27	

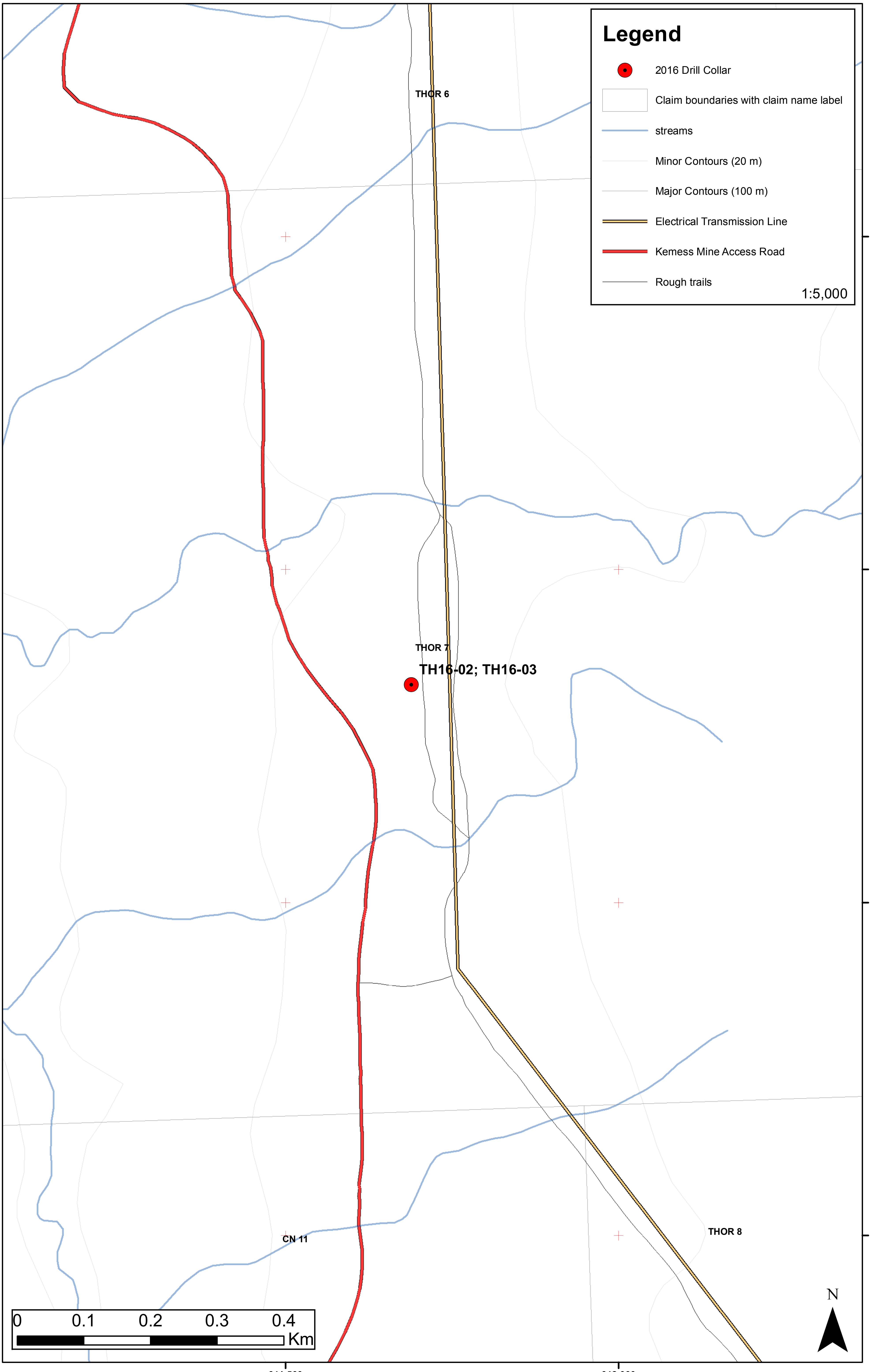
TH 16-01	**E00006036**	73.27	75.27	
TH 16-01	**E00006037**	75.27	77.27	
TH 16-01	**E00006038**	77.27	79.25	
TH 16-01	**E00006039**	79.25	81.25	
TH 16-01	**E00006040**	standard	standard	CM-38
TH 16-01	**E00006041**	81.25	83.25	
TH 16-01	**E00006042**	83.25	85.25	
TH 16-01	**E00006043**	85.25	87.25	
TH 16-01	**E00006044**	87.25	89.25	
TH 16-01	**E00006045**	89.25	91.25	
TH 16-01	**E00006046**	91.25	93.25	
TH 16-01	**E00006047**	93.25	95.25	
TH 16-01	**E00006048**	95.25	97.25	
TH 16-01	**E00006049**	97.25	99.25	
TH 16-01	**E00006050**	blank	blank	BL-10
TH 16-01	**E00006051**	99.25	101.25	
TH 16-01	**E00006052**	101.25	103.25	
TH 16-01	**E00006053**	103.25	105.25	
TH 16-01	**E00006054**	105.25	107.25	
TH 16-01	**E00006055**	107.25	109.25	
TH 16-01	**E00006056**	109.25	111.25	
TH 16-01	**E00006057**	111.25	113.25	
TH 16-01	**E00006058**	113.25	115.25	
TH 16-01	**E00006059**	115.25	117.25	
TH 16-01	**E00006060**	standard	standard	CM-39
TH 16-01	**E00006061**	117.25	119.25	
TH 16-01	**E00006062**	119.25	121.25	
TH 16-01	**E00006063**	121.25	123.25	
TH 16-01	**E00006064**	123.25	125.25	
TH 16-01	**E00006065**	125.25	127.25	
TH 16-01	**E00006066**	127.25	129.25	
TH 16-01	**E00006067**	129.25	131.25	
TH 16-01	**E00006068**	131.25	133.25	
TH 16-01	**E00006069**	133.25	135.25	
TH 16-01	**E00006070**	135.25	137.25	
TH 16-01	**E00006071**	137.25	139.25	
TH 16-01	**E00006072**	139.25	141.25	
TH 16-01	**E00006073**	141.25	143.25	
TH 16-01	**E00006074**	143.25	145.25	
TH 16-01	**E00006075**	145.25	147.25	

TH 16-01	**E00006076**	147.25	149.25	
TH 16-01	**E00006077**	149.25	151.25	
TH 16-01	**E00006078**	151.25	153.25	
TH 16-01	**E00006079**	153.25	155.25	
TH 16-01	**E00006080**	standard	standard	CM-26
TH 16-01	**E00006081**	155.25	157.25	
TH 16-01	**E00006082**	157.25	159.25	
TH 16-01	**E00006083**	159.25	161.25	
TH 16-01	**E00006084**	161.25	163.25	
TH 16-01	**E00006085**	163.25	165.25	
TH 16-01	**E00006086**	165.25	167.25	
TH 16-01	**E00006087**	167.25	169.16	
TH 16-03	**E00006088**	78.4	79.3	
TH 16-03	**E00006089**	115.8	116.6	
TH 16-03	**E00006090**	180.36	181.36	
TH 16-03	**E00006091**	184	185.2	

20. APPENDIX IV: DRILL PLAN MAPS 1:5,000 SCALE



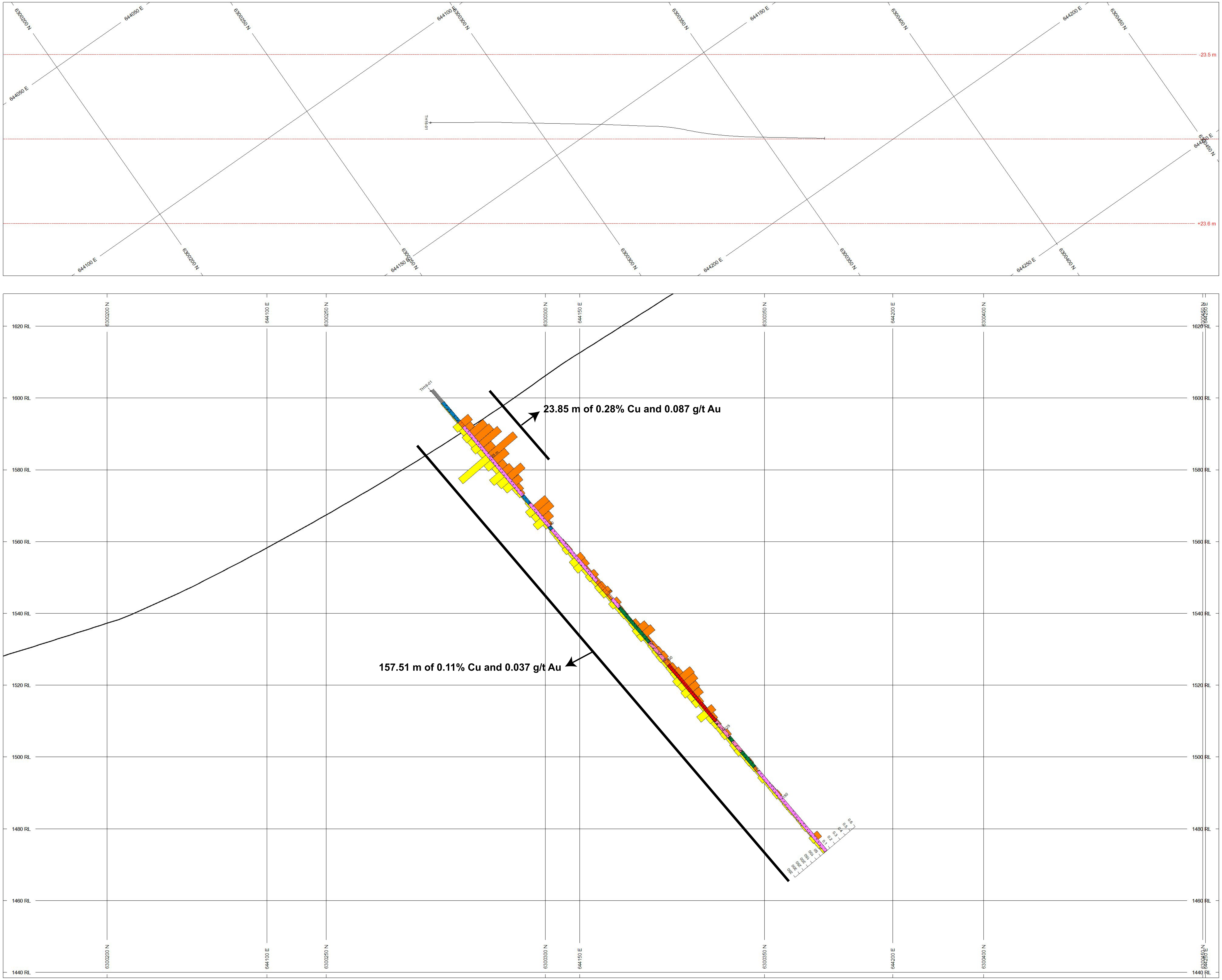
Legend
2016 Drill Collar
Claim boundaries with claim name label
streams
Minor Contours (20 m)
Major Contours (100 m)
Electrical Transmission Line
Kemess Mine Access Road
Rough trails
1:5,000
THOR MARMOT 12
THOR MARMOT 11
THOR MARMOT 13
TH16-01
2000
1800
1600
6,301,000
6,300,500
6,300,000
6,299,500
644,000
644,500
0 0.1 0.2 0.3 0.4
Km
N



Legend
2016 Drill Collar
Claim boundaries with claim name label
streams
Minor Contours (20 m)
Major Contours (100 m)
Electrical Transmission Line
Kemess Mine Access Road
Rough trails
1:5,000
THOR 6
THOR 7
TH16-02; TH16-03
THOR 8
CN 11
6,296,500
6,296,000
6,295,500
6,295,000
641,500
642,000
0
0.1
0.2
0.3
0.4
Km
N

21. APPENDIX V: DRILL CROSS SECTIONS 1:500 SCALE

Note, the discrepancy between the digital elevation model terrain and the drill collar elevation is due to the very low resolution (90 m) of the SRTM data used to create the DEM.



TOPOGRAPHY

SRTM World Elevation 90m.GRD

BAR GRAPHS	L/R	COL
Cu_pct	R	
Au_ppb	L	

ROCK CODES	PAT	LABEL	DESCRIPTION
LITH		BRXX	Breccia
		FLTZ	Fault Zone
		NR	
		PHPP	Plag-Hbl Porphyry
		PPPA	Plag porphyritic andesite
		PQHP	Plag-Qtz-Hbl Porphyry
		PQPP	Plag-Qtz Porphyry
		QTMZ	Quartz Monzonite
		SHZN	Shear Zone

SECTION SPECS:

REF. PT. E, N	644155 m	6300315 m
EXTENTS	338.7 m	190.5 m
SECTION TOP, BOT	1629 m	1439 m
TOLERANCE +/-	23.55 m	

SCALE 1 : 500

(m)

-5 0 5 10 15 20

*unknown

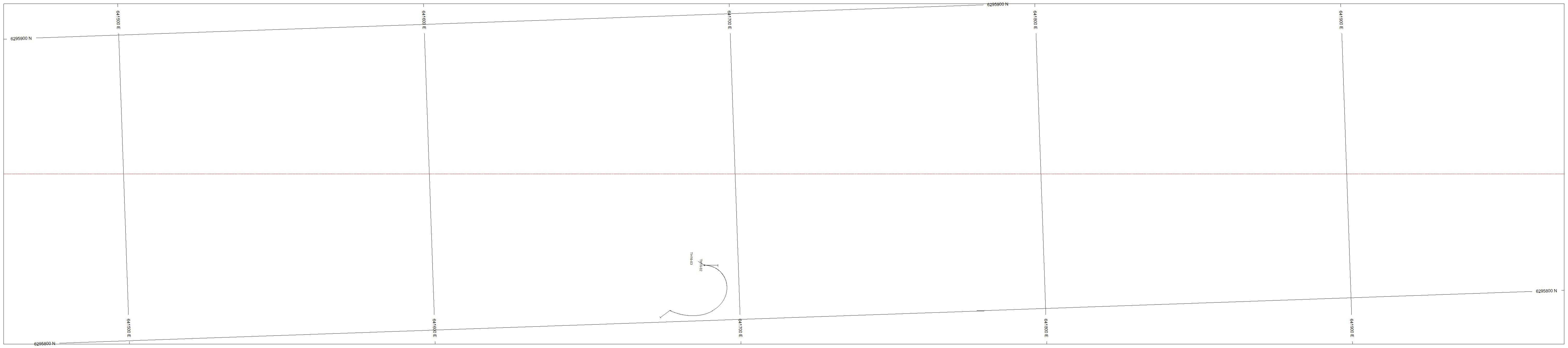
AZIMUTH = 35°

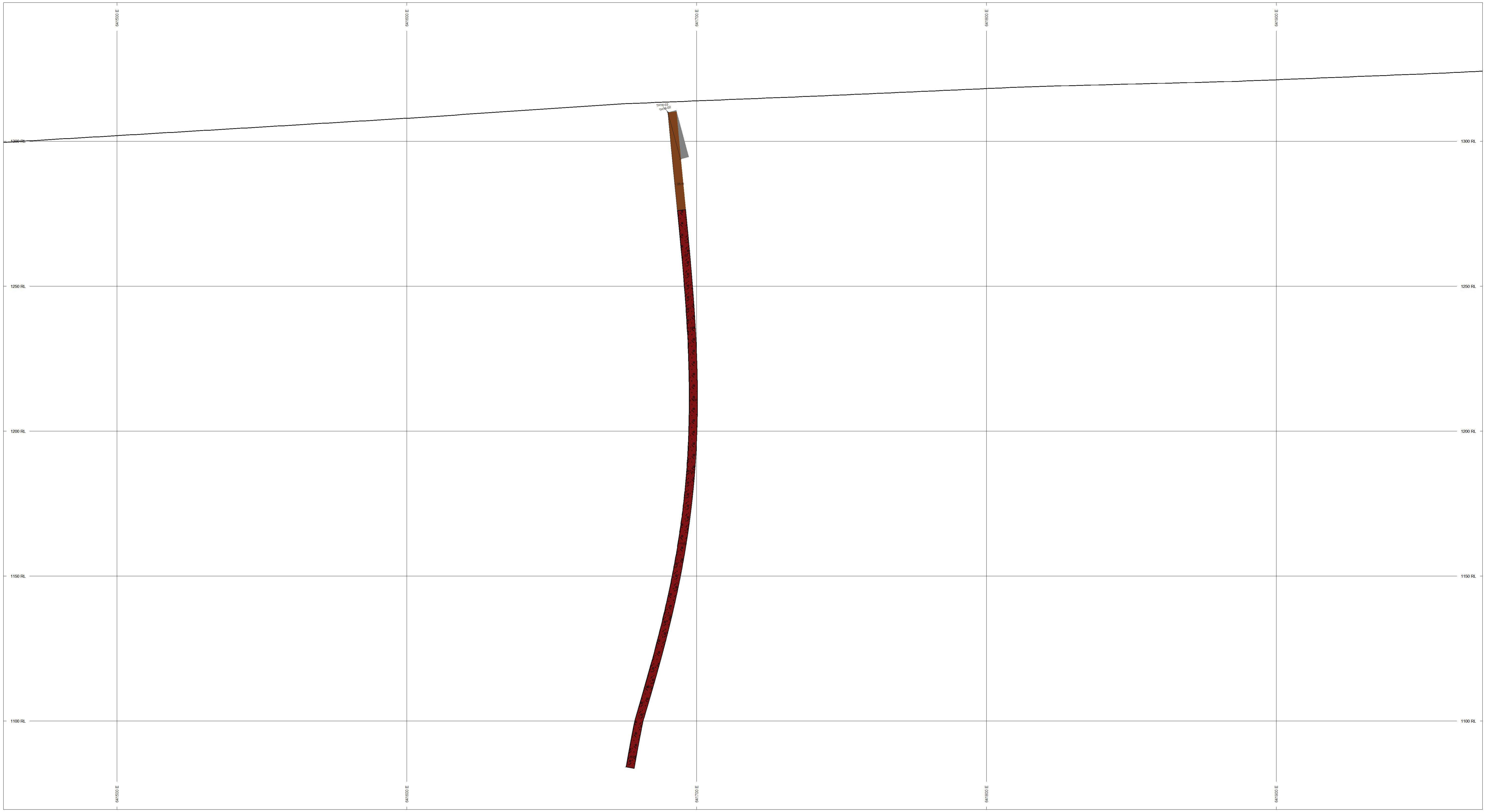
N W E S

Copper North Mining Corp.

Thor

Section TH16-01





TOPOGRAPHY

—— SRTM World Elevation 90m.GRD

ROCK CODES	PAT	LABEL	DESCRIPTION
LITH		NR	
		OVER	
		VOBX	Volcanic Breccia

SECTION SPECS:

REF. PT. E, N	641716 m	6295847 m
EXTENTS	510.7 m	278.4 m
SECTION TOP, BOT	1348 m	1069 m
TOLERANCE +/-	62.5 m	

SCALE 1 : 500

(m)

-5 0 5 10 15 20

*unknown

AZIMUTH = 92°

N W E S

Copper North Mining Corp.

Thor

Section TH16-02/TH16-03