

Michael Anthony
2018.11.22 11:08'00'
Mount Milligan Mine

**BC Geological Survey
Assessment Report
37499**



**Assessment Report
Title Page and Summary**

TYPE OF REPORT [type of survey(s)]: Data Compilation & GIS , Ground Magnetic & IP Surveys TOTAL COST: CAD\$585,780.65

AUTHOR(S): Michael Pond, Alexander Walcott, Peter Walcott, Ron Voordouw, Mikhail Nosyrev, Richard Tosdal SIGNATURE(S):  Amended Nov. 2018

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): 1300188-201701, July 31, 2017. YEAR OF WORK: 2017

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): statement of work - event # 5684934

PROPERTY NAME: Mount Milligan Minesite - Mine #1300188

CLAIM NAME(S) (on which the work was done): (109 titles), see attached Schedule A

COMMODITIES SOUGHT: Gold, Copper, Silver

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 093N/ 194

MINING DIVISION: Omineca NTS/BCGS: 093K, 093O, 093J, 093K UTM Zone 10

LATITUDE: 55 ° 07 ' 19 " LONGITUDE: 124 ° 01 ' 46 " (at centre of work)

OWNER(S):
1) Thompson Creek Metals Company Inc. 2)

MAILING ADDRESS:
177 Victoria Street, Suite 100
Prince George, BC V2L 5R8

OPERATOR(S) [who paid for the work]:
1) Thompson Creek Metals Company Inc. 2)

MAILING ADDRESS:
177 Victoria Street, Suite 100
Prince George, BC V2L 5R8

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
Commodities: Gold, Copper Significant Minerals: Pyrite, Magnetite, Chalcopyrite, Sphalerite, Bornite
Alteration: K-Feldspar, Biotite, Actinolite, Epidote, Calcite, Chlorite, Albite, Pyrite Alteration Type: Potassic, Propylitic,
Classification: Porphyry, Hydrothermal, Epigenetic Type: L03: Alkaline Porphyry Cu-Au Carbonate
Shape: Regular Modifier: Fractured Dimension: 1300x950x244 metres

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:
see attached Schedule B

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 <u>compilation</u>		complete Milligan mineral claim tenure,	\$58,034.75
Photo interpretation _____		(109 titles), see attached Schedule A	
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic <u>310.0</u>		(11 titles), see attached Schedule A	\$85,347.85
Electromagnetic _____			
Induced Polarization <u>68.5</u>		(14 titles), see attached Schedule A	\$438,563.08
Radiometric _____			
Seismic _____			
Other _____			
Airborne _____			
GEOCHEMICAL (number of samples analysed for...)			
Soil _____			
Silt _____			
Rock <u>12</u>		524891,521189	\$3,834.97
Other _____			
DRILLING (total metres; number of holes, size)			
Core _____			
Non-core _____			
RELATED TECHNICAL			
Sampling/assaying _____			
Petrographic _____			
Mineralogaphic _____			
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:	CAD\$585,780.65

Mount Milligan Property 2017 Assessment Report

Title Page & Summary: Schedule A

Claim Titles on which Work was done.

Historic Data Compilation & Interpretation (all 109 mineral claim titles)		
512884	521199	IP Survey (14 mineral claim Titles)
512887	521200	
512888	521201	
512890	521202	
512891	521203	
512897	521204	
512907	521205	
512909	521206	
512913	521207	
512919	521208	
512921	521209	
512923	521210	
512924	521212	
512925	521213	
512927	524891	Mag Survey (11 mineral claim Titles)
512930	524892	
512931	579598	
512932	579599	
512933	579600	
512934	579602	
512935	580741	
512936	580742	
512937	580743	
512938	580744	
512939	580745	
512940	580746	
512941	580747	
512942	580748	
512943	580749	
512944	580750	
512945	595146	
512960	595163	
521164	677107	
521165	677785	KC Prospecting
521177	678524	
521178	678527	
521179	678536	
521180	678564	
521181	678583	
521182	678588	
521183	678603	
521184	679483	
521185	679484	
521186	679485	
521187	679505	
521189	679506	
521190	679509	
521191	896789	
521192	1030396	
521193	1030397	
521194	1030398	
521195	1036881	
521196	1036882	
521197	1050265	
521198		

Mount Milligan Property 2017 Assessment Report

Title Page & Summary: Schedule B

Refferences to Previous Assessment Report Numbers:

ARIS Reports	
4274	
4742	
5175	
11951	
12912	
13508	
13891	
14377	
17860	
19164	
19268	
19396	
19921	
20227	
20230	
20280	
20416	
20455	
20853	
20978	
21089	
21197	
22011	
28209	
28210	
30425	
31446	
31930	
33981	
35023	

Assessment Report

Mount Milligan Mine Historic Data Compilation and 2017 Ground Magnetic and IP Surveys

Omineca Mining Division

N.T.S. 93N , 93O, 93J, 93K
Latitude 55° 07' 19" N
Longitude 124° 01' 46" W

Owner/Operator:

Thompson Creek Metals Company Inc.
Mount Milligan Mine
177 Victoria Street
Prince George, B.C. V2L 5R8

Prepared for

Ministry of Energy, Mines, & Petroleum Resources
Mining & Minerals Division

by

Michael Pond, P. Geo.
Thompson Creek Metals Company Inc – Mount Milligan Mine.

Alexander Walcott, Peter E. Walcott - Peter E. Walcott & Associates Ltd.
Ron Voordouw – Equity Exploration Consultants Ltd.
Mikhail Nosyrev – Centerra Gold Inc.
Richard Tosdal, PhD – PicachoEx LLC

April 30, 2018
November 22, 2018 - Amended

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1.0 Summary

The Mount Milligan alkalic gold-copper porphyry deposit is located 155 kilometres northwest of Prince George in central British Columbia. The property consists of 109 claims and 1 mineral lease covering approximately 51,079 hectares. Thompson Creek Metals Company Inc. (TCM), owns 100% of the operation and all mineral titles. The Mount Milligan Mine consists of one open pit and one tailings storage facility. Mine life is 22 years with a total proven and probable reserve of 467,939 kilo tonnes grading 0.3 g/t gold and 0.188% copper as of December 31, 2017, (5,138 kilo ounces contained gold and 1,938 million pounds contained copper). The mine is currently operating at a rate of approximately 55,000 tonnes per day.

Prior to the 2017 exploration field season, TCM engaged Equity Exploration Consultants (Equity) to review and compile historic exploration data for the Mount Milligan project area to help guide the 2017 exploration program. Data sources included TCM and predecessor company files, Ministry of Energy and Mines Assessment reports relevant to Mount Milligan, Government survey data, and data with Equity Exploration Consultants Ltd.

Data was separated into “work types” (e.g. airborne geophysics, soil geochemistry, etc.), compiled by campaign and then merged into master files to be used for exploration targeting. Historic maps only available in hard copy were scanned and geo-rectified by Centerra’s GIS technical team to be merged with GIS output from the work type master files.

Analysis of the GIS map compilations by TCM geologists and geophysicists identified several anomalies for continued Milligan exploration in 2017 and subsequent years. Review of geophysical data was completed in May and June by Mikhail Nosyrev. Dr. R. Tosdal of PicachoEx LLC was retained for additional exploration review, geological model development, and target generation.

A four day site visit by Dr. Tosdal to assist with the re-interpretation of key historic diamond drill core from 2010 and 2011 drill programs was completed in August. Dr. Tosdal also accompanied TCM geologists to complete a short prospecting and sampling program over the historic KC claims to investigate anomalous geochemistry in rock samples reported in a 1989 assessment report. The review of data and re-examination of selected drill core intervals guided prioritization of 2017 targets for geophysical surveys and 2018 targets to be diamond drilled.

The primary field program completed during 2017 was comprised of the ground based geophysical surveys completed by Peter E. Walcott & Associates. Approximately 310 line kilometers of magnetics and 68.5 line kilometers of induced polarization (IP) were completed from August 15th to November 18th over two grids.

Over a southwestern grid block, full coverage of both the magnetic and IP surveys were completed resulting in two anomalous zones. Over a northeastern grid block, the magnetic survey was fully completed, but only a partial IP survey was run before winter shut down. Several magnetic features and deep IP anomalies have been identified. The northeastern grid IP survey is recommended to be completed as a first exploration priority in 2019.

2.0 Introduction

2.1 Terms of Reference

2.1.1 Equity Exploration Consultants

Prior to the 2017 exploration field season, TCM engaged Equity Exploration Consultants (Equity) to review and compile historic exploration data for the Mount Milligan project area to help guide the 2017 exploration program. Data sources included TCM and predecessor company files, Ministry of Energy and Mines Assessment reports relevant to Mount Milligan, Government survey data, and data with Equity Exploration Consultants Ltd from previously managed Milligan programs.

Preliminary data files and reports were delivered late in February, and work continued through June. Details of the project work and deliverables are described in Sections 5.1 through 5.9. Simplified Master Index Maps are in Appendix 6. (Internal Thompson Creek memo).

2.1.2 Mikhail Nosyrev

Coincident with the final stages of the historic data compilation in May and June, all geophysical data was reviewed, verified, and interpreted by Mikhail Nosyrev. Mr. Nosyrev is Centerra Gold's internal geophysics specialist. Many of the data sets had not previously been interpreted using modern geophysical software. Section 5.10 summarizes this work. (Internal Thompson Creek memo).

2.1.3 PicachoEx LLC

In August 2017 Dr. Richard Tosdal of PicachoEx LLC was engaged to visit the Mount Milligan site to review historic drill core and discuss aspects of the planned 2017 geophysical and near pit diamond drill programs for 2017. Four days, August 28 – 31 were spent at the Heidi Lake core storage area, at the active core logging facility, and completing a reconnaissance mapping and sampling investigation over the historic KC claims. Section 6 details the investigation results. (Internal Thompson Creek memo).

2.1.4 Peter E. Walcott & Associates

Also in early August, TCM engaged Peter E. Walcott & Associates Limited (Walcott) to design a ground geophysical program to improve detailed coverage south and east of the Milligan open pit and TSF, (Four target areas developed from the Compilation program). Between August 15th and November 18th, Walcott undertook induced polarization and ground magnetic surveying over two grid blocks (Figure 3 and Map 1).

The survey consisted of some 68.5-line kilometers of induced polarization, carried out on 23 east-west traverses, with a nominal line spacing between 400 meters utilizing a 100 meter 'a'-spacing and measuring the 1st to 10th separations. For this some 74.2 kilometers of lines were established with line cutting carried in and through areas of thick deadfall (Plate 1).

In addition to the induced polarization survey, a ground magnetic survey was also carried out, with some 310 line kilometers of surveying completed on 121 east-west orientated lines utilizing a nominal line separation of some 100 m.

Deliverables for the project included digital files for the surveys in Geosoft and MapInfo formats, and the final technical report in Appendix 8.

All 2017 work was conducted under work approval for Mines Act Permits M-236, MX-13-182, (recently amended March 02, 2018), and 1300188-201701.

2.2 Property Description and Location

The Property is 100% owned by Thompson Creek (Owner Number 283374), a division of Centerra Gold Inc. Located within the Omineca Mining Division in north-central British Columbia, approximately 155 km northwest of Prince George. Access is from Fort St James 86 km to the south, or from Mackenzie 95 km to the east (Figure 1). The claim group consists of 109 mineral claims and 1 mining lease covering a total area of 51,079 ha, the details of which are summarized in Appendix 2 and shown in Figures 2 and 3. The boundaries of these claims are defined by map locations (longitude/latitude or UTM) rather than ground position. Positioned over four National Topographic System (NTS) maps, which include 93O04, 93N01, 93K16 and 93J13, the Property is centred at approximately 124°01'46" west longitude and 55°07'19" north latitude, or 434,349 mE, 6,108,845 mN (NAD 83 Zone 10).

The Mount Milligan Mine consists of one open pit and one tailings storage facility. Mine life is 22 years with a total proven and probable reserve of 467,939 kilo tonnes grading 0.3 g/t gold and 0.188% copper as of December 31, 2017, (5,138 kilo ounces contained gold and 1,938 million pounds contained copper). The mine is currently operating at a rate of approximately 55,000 tonnes per day.

2.3 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Mt. Milligan Property can be accessed from the south via Fort St James on the Germansen North Road followed by the Rainbow-Milligan Forest Service Road (FSR), or from the east via Mackenzie on the Community Connector FSR and switching to the Rainbow-Milligan FSR. The roads are in good condition and well maintained owing to active logging and mining in the area that utilises both routes. In addition, the Community Connector FSR serves as a haul road for the Mt. Milligan mine site. Both routes are used for daily and weekly crew changes.

The climate in the area is classified as Interior Plateau that is characterized by short warm summers and longer moderately cold winters. Climate data derived from a monitoring station at Mackenzie airport indicate that temperatures range from an average low of -12.9°C in January to an average high of 22.2°C in July.

Regionally, the Property lies near the northern boundary of the Nechako Plateau and the southern limits of the Swannell Range of the Omineca Mountains of the Canadian Cordilleran Interior System. A chain of peaks aligned in an approximate north-south

direction dominates the western part of the Property, which includes the field area for this report and the Mt. Milligan mine site. Mt. Milligan is the highest of these peaks, rising to an elevation of 1,508 m, and is rounded and symmetrical in shape. The Mt. Milligan deposit occurs to the south of Mt. Milligan at an elevation of approximately 1,100 m. The eastern part of the Property is dominated by gentle relief but includes a central region of elevated topography trending northwest and rising to approximately 1,350 m. Several isolated rounded hills also occur in the area rising to a similar elevation. A region of lower topography separates the western and eastern areas of the Property. Several elongated northwest-trending lakes occur in the eastern part of the Property and are interpreted to reflect the regional structural grain.

The Mt. Milligan area was last glaciated 10,000–20,000 years ago with regional ice flow direction to the northeast. This event coated the landscape with a blanket of glacial till and altered pre-glacial drainage patterns. Drumlins, flutings, eskers and melt-water channels of various dimensions are noticeable features of the region. Locally, glacial features show that ice was funnelled through east–west oriented valleys north and south of the Mt. Milligan deposit before flowing northeast. In the field area south of the Nation River, ice flow direction was re-oriented towards the east. The field area is generally well drained with flow towards the Nation River except for glacial depressions that have formed into bogs.

Vegetation in the region consists of pine and spruce with lesser amounts of alder. Beetle-killed timber is present throughout the field area and represents a hazard during fieldwork, especially during strong winds. In addition, numerous recent and active logging cut blocks occur throughout the field area, many of which have been recently replanted.

Labour and services are readily available from Fort St James, Mackenzie, Vanderhoof and Prince George with access provided by the aforementioned forest service roads from the south and east. The Mt. Milligan mine site occurs approximately 4.5 km to the southeast of the field area providing well-serviced camp accommodation, emergency response capabilities and specialized trade expertise. Electrical power is accessed directly from the BC Hydro Kennedy Substation south of Mackenzie or from the main high voltage transmission lines that run from the Kennedy Substation to the Mt. Milligan mine site.

2.4 Property History

Limited exploration activity was first recorded in 1937. In 1984, prospector Richard Haslinger (Haslinger) and BP Resources Canada Limited (BP Resources) located claims on the site. In 1986, Lincoln Resources Inc. (Lincoln) optioned the claims and in 1987 completed a diamond drilling program that led to the discovery of significant copper-gold mineralization. In the late 1980s, Lincoln reorganized, amalgamated with Continental Gold Corp. (Continental Gold) and continued ongoing drilling in a joint-venture with BP Resources.

In 1991, Placer Dome Inc. (Placer Dome) acquired the Project from the joint-venture partners, resumed exploration drilling and completed a pre-feasibility study for the development of a 60,000 t/d open pit mine and flotation process plant.

Barrick Gold Corporation (Barrick) purchased Placer Dome in 2006 and sold its Canadian assets to Goldcorp Inc. (Goldcorp), who then in turn sold the Project to Atlas Cromwell Ltd. (Atlas Cromwell). Atlas Cromwell changed its name to Terrane Metals Corp. (Terrane) and initiated a comprehensive work program.

In October 2010, Thompson Creek Metals Company Inc. (TCM) acquired the Mount Milligan development project through its acquisition of Terrane and subsequently constructed the Mount Milligan Mine, which commenced commercial production in February 2014.

In October 2016, TCM was acquired by Centerra Gold Inc. In connection with the acquisition, Terrane (Mt. Milligan Mine), and certain other subsidiary entities of TCM were amalgamated into TCM. TCM now operates as a wholly owned subsidiary of Centerra Gold Inc.

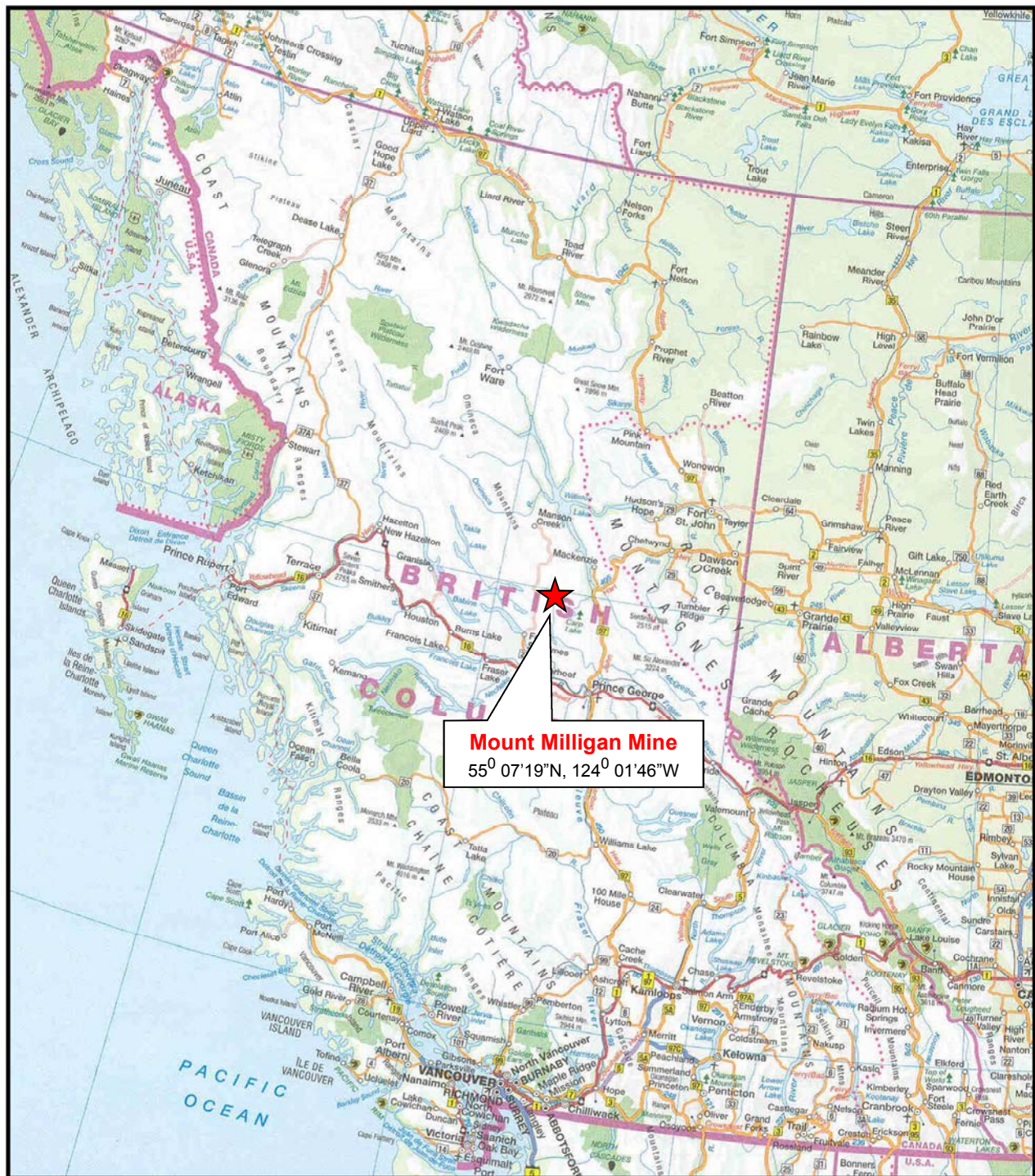
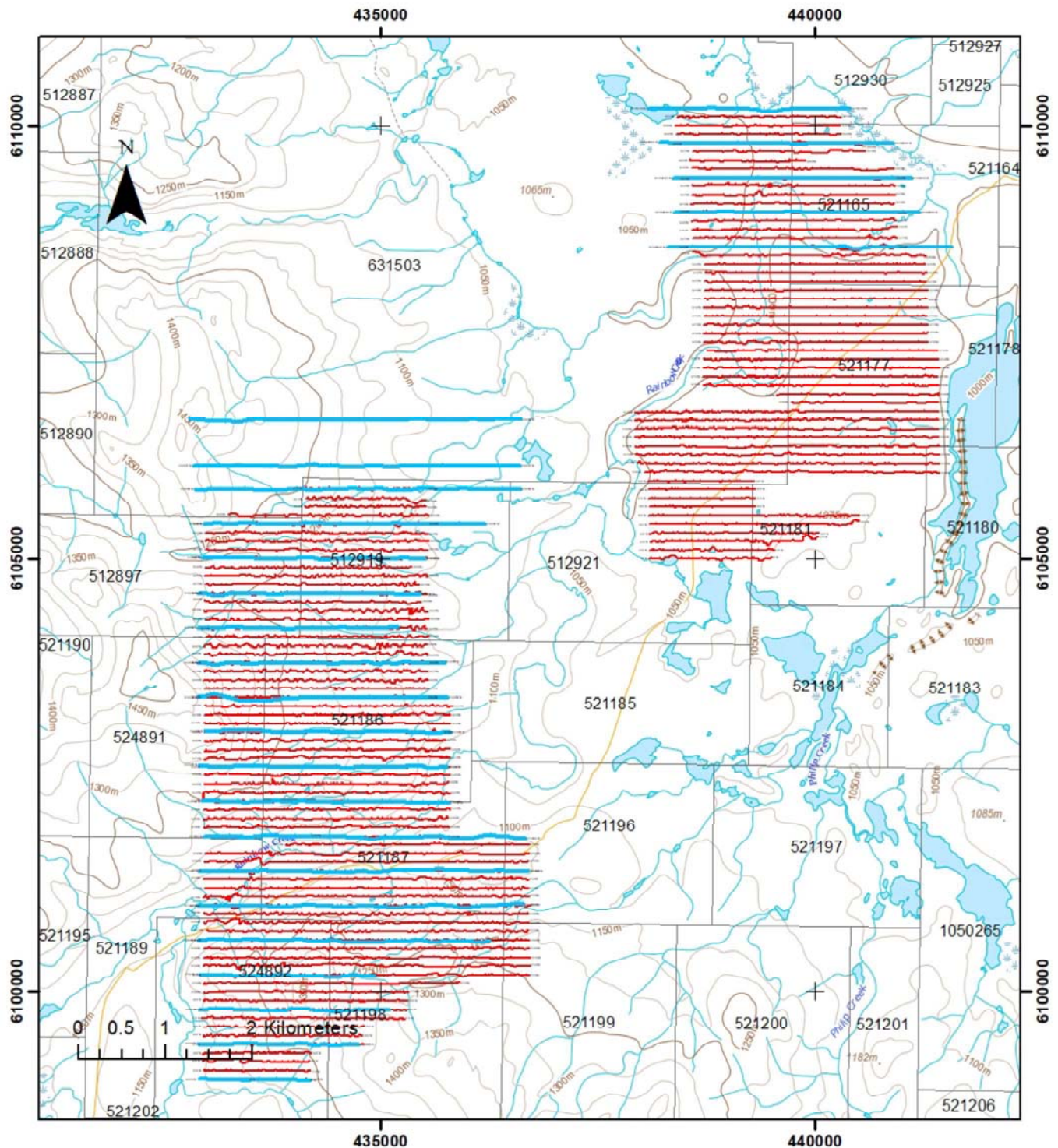
Figure 1 Property Location Map

Figure 3 Detail Land Tenure and Geophysical Line Locations.

Blue: 2017 IP Lines
Red: 2017 Mag Lines



3.0 Regional Geology and Mineralization

3.1 Regional Geology

The Mt. Milligan Property occurs within the Quesnel Terrane, a part of the Intermontane Belt that also includes the Cache Creek and Stikine terranes (Figure 4). The Intermontane Belt is thought to have amalgamated offshore in an oceanic setting prior to being accreted onto North America during the Early Jurassic (Monger et al., 1982). The Quesnel Terrane extends from southern BC northwest towards the Yukon, and is bound by the Cassiar Terrane to the east, inter-fingered with the Slide Mountain Terrane, and bound by the Cache Creek and Stikine terranes to the west.

The eastern boundary between the Quesnel and Cassiar terranes is marked by the Manson Fault Zone, a complex zone of east directed thrust faults that have emplaced the Quesnel Terrane above the Cassiar Terrane (Nelson, 1991). The western boundary contact with the Cache Creek Terrane is defined by the Pinchi Fault Zone, which comprises a network of strike slip and localized thrust faults (Nelson, 1991).

The Cassiar Terrane forms an autochthonous group of Upper Proterozoic to Permian sediments that were deposited along the ancient margin of the North American Craton (Colpron et al., 2007). The Wolverine Metamorphic Complex (WMC) forms part of the Cassiar Terrane and occurs in the eastern part of the Mt. Milligan claim group and to the east and southeast of the Property. Towards the southeast, in the area around Carp Lake, it is known as the southern WMC (Nelson, 1991). Regionally, the WMC consists of metamorphosed sedimentary and mafic to intermediate intrusive rocks that are intruded by syn- and post-metamorphic felsic rocks (Staples, 2007). They can be divided into three sub-groups based on their composition, including metapelite, calc-silicate and amphibolite assemblages with biotite to garnet-grade metapelitic schist occurring at the highest stratigraphic level (Staples, 2007).

The Quesnel Terrane is a composite of low-grade metamorphic volcanic, intrusive and sedimentary rocks interpreted to represent an island arc assemblage that was first formed in the Middle and Late Triassic (Mortimer, 1986, 1987). The Takla and Nicola groups form the dominant lithologic units of this terrane. The Nicola Group is the name assigned to the volcano-sedimentary sequence and related intrusions in the south of the province with the Takla Group representing a coeval package of rocks in the north (Monger et al., 1982).

Regionally, the Takla Group comprises Late Triassic to Early Jurassic sedimentary units consisting of volcanic sandstone, tuff, siltstone, argillite, slate and sedimentary breccia, informally named the Inzana Lake Formation, inter-fingered with and overlain by volcanic, pyroclastic and epiclastic rocks of the Witch Lake Formation (Nelson, 1991). Augite-phyric volcanoclastics and coherent basaltic andesite's dominant the Witch Lake Formation, although plagioclase- and hornblende-phyric rocks also occur and may be locally abundant (Nelson, 1991; Nelson and Bellefontaine, 1996). Both formations are intruded by coeval and post-Takla Group intrusions that are as young as Early Jurassic (Nelson, 1991).

Within the Mt. Milligan region, Takla Group volcanic rocks have undergone regional low grade metamorphism that produced prehnite-pumpellyite and, locally, zeolite facies assemblages. These low-grade metamorphic rocks contain secondary chlorite,

carbonate, albite, epidote as well as rare pumpellyite and prehnite (Nelson, 1991; Nelson and Bellefontaine, 1996). Clinopyroxene is generally fresh whereas plagioclase ranges from fresh to albitized and sericitized (Nelson and Bellefontaine, 1996). Mapping has shown that a faulted package of rocks within the vicinity of the Property has undergone lower greenschist facies metamorphism as defined by abundant clear to pale green actinolite occurring as small acicular crystals and overgrowths on clinopyroxene (Nelson and Bellefontaine, 1996). Due to the complex structural history of the region, it is thought that these rocks may have laid closer to, and possibly even formed the roof of, the southern WMC where they were affected by elevated regional isotherms (Nelson and Bellefontaine, 1996).

3.2 Regional Mineralization

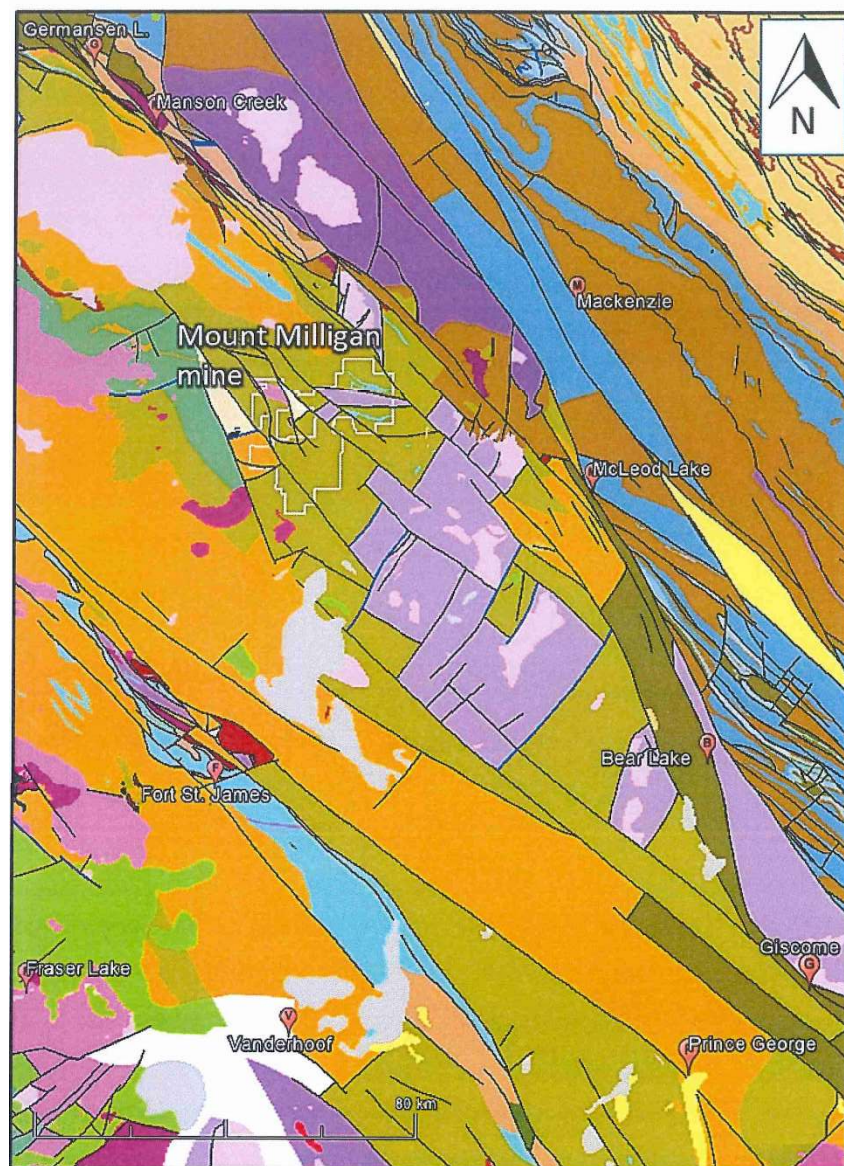
The Late Triassic volcanic arc responsible for the formation of the Quesnel Terrane also produced a number of intrusions that range in composition from gabbro to granodiorite. These intrusions are associated with several mineralization styles that include porphyry, epithermal and VMS. Of these deposit types, the Late Triassic to Early Jurassic porphyry Cu-Au and porphyry Cu-Mo deposits represent one of the most important groups of ore deposits in British Columbia.

Calc-alkaline porphyry Cu-Mo deposits such as Highland Valley, Brenda and Gibraltar are typically hosted in quartz-diorite to granodiorite intrusions that are approximately 215 to 210 Ma (Mortensen et al., 1995). The alkalic porphyry Cu-Au deposits are younger and thought to have formed during two different temporal events, the first of which includes Mt. Polley and Copper Mountain (210–200 Ma) and the second event includes Mt. Milligan and Lorraine (183–178 Ma) (Mortensen et al., 1995). Host rocks for these deposits include monzonite, monzodiorite and syenite. Regional mapping and prospecting has documented the potential for alkaline porphyry Cu-Au deposits throughout the Takla Group. Unfortunately, exposure of Takla Group rocks is generally poor, especially within the Nechako Plateau area, so that identification of prospective areas relies on less direct criteria such as alteration haloes and/or coincident geophysical and geochemical anomalies. Several such prospects occur in the vicinity of the Mt. Milligan Mine and are described below.

The Mt. Milligan alkalic porphyry Cu-Au deposit is located southeast of the 2016 field area. Here mineralization occurs in three main zones: MBX (including the Cu-Au-rich WBX Zone), the 66 Zone (Au-rich) and Southern Star (Cu-Au-rich). Each of these zones is surrounded by well-developed propylitic and potassic alteration halos. Together these mineralized bodies constitute a mineral resource (measured and indicated) of 122.3 Mt at 0.155 % Cu and 0.321 g/t Au and proven and probable mineral reserves of 542.1 Mt at 0.201 % Cu and 0.355 g/t Au (Clifford and Berthelsen, 2015). December 31 2017 mineral reserves update: Total proven and probable 467,939 kilo tonnes grading 0.3 g/t gold and 0.188% copper.

The Mitzi Showing is located 4.5 km northwest of the Mt. Milligan deposit and 1 km northeast of Mitzi Lake, and consists of a tetrahedrite- and chalcopyrite-bearing quartz-ankerite breccia vein hosted in augite porphyry of the Witch Lake Formation (Nelson, 1991). The 2009–10 regional soil sampling program completed over several magnetic targets in the North Grid area detected a strong multi-element Au-As-Sb-Cd-Mo-Pb-Zn anomaly on Snell Hill (Heberlein, 2009; 2010) that is here referred to as the “Snell Showing”. Both the Mitzi and Snell showings were targeted in the 2016 drill program.

Another significant showing occurs 15 km south of the Mt Milligan deposit, along a north-flowing tributary of Rainbow Creek, and is referred to as the Rainbow Creek Showing. This showing coincides with a strong base metal anomaly in stream sediments identified during a regional geochemical survey program. One sample within the anomaly contained 21.5 ppm As, 9.4 ppm Sb and 128 ppm Zn (Nelson, 1991). A grey to black fault-zone breccia with quartz and carbonate veining and up to 20% pyrite outcrops on the banks of the tributary. The zone cuts through augite porphyry and tuffaceous black siltstone and mudstone of the Witch Lake Formation. Gossanous zones occur adjacent to the breccia's and contain up to 3% pyrite. Base and precious metals values in the breccia are generally lacking, however a grab sample of one of the veins returned values of 1.4 g/t Au and 180 ppm As (Nelson, 1991).

Figure 4 Regional Geology.

Mount Milligan regional geology

Sedimentary and carbonate rocks

- Quaternary
 - Quaternary cover or age unknown
- Oligocene-Pliocene
 - coarse clastic rocks
- Upper Cretaceous - Eocene
 - undivided sedimentary rocks
- Middle Jurassic - Middle Cretaceous
 - undivided sedimentary rocks
- Triassic - Lower Jurassic
 - undivided sedimentary +/- volcanic rocks
- Permian - Jurassic
 - limestone, marble, calcareous sedimentary rocks
- Devonian - Permian
 - undivided sedimentary +/- volcanic rocks
- Devonian - Permian
 - limestone, dolomite, slate, siltstone, argillite
- Upper Proterozoic - Silurian
 - undivided sedimentary rocks, quartzite, phyllite
- Upper Proterozoic - Silurian
 - limestone, dolomite, marble, calcareous sedimentary rocks
- Middle Proterozoic
 - fine clastic sedimentary rocks
- Middle Proterozoic
 - limestone, marble, calcareous sedimentary rocks

Faults

- thrust or reverse fault
- normal fault
- strike-slip fault, other

Volcanic rocks

- Miocene - Holocene
 - basaltic volcanic rocks
- Cretaceous - Oligocene
 - mafic to felsic volcanic and volcanoclastic rocks
- Jurassic
 - mafic to felsic volcanic and volcanoclastic rocks
- Triassic
 - mafic to intermediate volcanic and volcanoclastic rocks
- Upper Proterozoic - Permian
 - mafic to felsic volcanic and volcanoclastic rocks

Plutonic rocks

- Cretaceous - Eocene
 - diorite to granite, monzodiorite to syenite
- Jurassic
 - diorite to granite, monzodiorite to syenite
- Triassic
 - diorite to granite, monzodiorite to syenite
- Permian - Triassic
 - ultramafic intrusive rocks
- Devonian - Permian
 - gabbro to diorite, monzonite to syenite

Metamorphic rocks

- Cretaceous - Eocene
 - paragneiss, orthogneiss, migmatite
- Upper Paleozoic - Jurassic
 - orthogneiss, paragneiss, greenschist, blueschist, lower amphibolite, serpentinite, greenstone
- Proterozoic - Lower Paleozoic
 - paragneiss, orthogneiss, metasediments, greenschist, greenstone

4.0 Property and Mine Geology

4.1 Mount Milligan Geology

The Mt. Milligan Property is located within Triassic to Lower Jurassic volcanic and sedimentary rocks of the Takla Group and Hogem Intrusive Suite. On the property, the Takla Group is divided into the lower sedimentary Inzana Lake Formation and upper volcanoclastic Witch Lake Formation (Figure 5, Sutherland Brown et al, 1991).

The Witch Lake Formation hosts the Mt. Milligan deposit and is characterized by augite-phyric volcanoclastics and more coherent basaltic andesite flows with subordinate epiclastic beds (Mills et al., 2009). At Mt. Milligan, the Witch Lake Formation is intruded by coeval and post-Takla Group intrusions. The coeval intrusions include monzonite with minor diorite/monzodiorite and gabbro, with the monzonite intrusions hosting mineralization in the MBX, SS, Goldmark and North Slope stocks. Post-Takla Group intrusions comprise mainly granite (Mills et al., 2009).

The Main and Southern Star deposits are centred on the MBX and SS stocks respectively. The Main deposit is further divided into the DWBX, WBX, MBX and “66” zones, with the MBX Zone comprising the main Au-Cu ore body. Centred on the Rainbow Dyke, the MBX stock is a moderate west dipping monzonite body with mineralization extending from the eastern contact of the MBX stock to the Great Eastern Fault (Mills et al., 2009). The SS stock is moderately west dipping, strikes north-northwest and has more irregular margins than the MBX stock (Mills et al., 2009). The MBX and SS stocks contain up to 30% sub parallel plagioclase phenocrysts in a greyish pink fine-grained groundmass of plagioclase, quartz, hornblende, biotite and accessory magnetite. Hydrothermal breccia, characterized by potassium feldspar veinlets and flooding, occurs throughout the SS stock and less commonly along the margins of the MBX stock (Mills et al., 2009). Mine geology is detailed in Figure 6.

Monolithic andesitic rocks of the Witch Lake Formation host most of the Mt. Milligan deposit. They are characterized by actinolite-altered augite-porphyrific lapilli tuff and augite crystal lithic tuff with augite-plagioclase porphyritic flows and heterolithic debris flows. Hornblende phenocrysts are locally present within flows and crystal tuffs. Rocks originally described as latitic volcanics surround most of the area of the MBX stock and less commonly in areas adjacent to the SS stock (Mills et al., 2009). The latitic volcanic rocks can be distinguished from andesite rocks by their darker colour, a general absence of visible hornblende, the presence of biotite and, based on staining, greater than one-third potassium feldspar content (Mills et al., 2009).

The abundance of potassium feldspar led past workers to a field classification of augite-porphyrific latite rocks. However, microscopic examination revealed that rocks up to 4 km from the stocks contained secondary potassium feldspar occurring in veinlets, clumps along with pyrite and seams cutting plagioclase crystals (Nelson, 1991). The replacement in rocks distal to the deposit suggests that the “latitic” rocks occurring around and within the deposit are more likely potassic altered andesite (Nelson, 1991).

Alteration assemblages at Mt. Milligan are either potassic or propylitic, with propylitic alteration locally overprinting the potassic assemblage (DeLong et al., 1991; Jago and Tosdal, 2009); Gold and copper mineralization is concentrated in zones of potassic alteration (DeLong et al., 1991).

Zones of potassic alteration occur around the contacts of the monzonite stocks and extend several hundred meters into surrounding fractured andesite. Potassic alteration also occurs within the monzonite intrusions themselves. The alteration assemblage includes potassium feldspar, hydrothermal biotite and magnetite, with biotite most abundant close to and along brecciated margins of the (DeLong et al., 1991; Jago and Tosdal, 2009). Biotite forms up to 30% of wall rocks near intrusive contacts, typically showing pervasive replacement of andesite protoliths but also occurring as envelopes to potassium feldspar veinlet's (DeLong et al., 1991). Chalcopyrite, bornite and secondary magnetite are strongly associated with the potassic alteration assemblage.

The propylitic alteration assemblage is widespread and peripheral to the potassic alteration shell and consists of epidote with variable abundances of calcite, chlorite, albite and pyrite (DeLong et al., 1991; Jago and Tosdal, 2009). Epidote is the most common propylitic mineral and is associated with pyrite blebs and disseminations. It also forms envelopes around pyrite-calcite veinlet's, replaces pyroxene and forms aggregates in the groundmass (DeLong et al., 1991). Albite and calcite are generally also present in the groundmass whereas pyrite is widespread (DeLong et al., 1991).

The propylitic and potassic alteration zones locally overlap as they are contemporaneous and form part of the same hydrothermal system. Within parts of the MBX deposit, an inner propylitic alteration shell overprints part of the potassic assemblage (Jago and Tosdal, 2009). Propylitic alteration also cross-cuts earlier alteration assemblages along permeable horizons and could have formed as part of a retrograde event during the collapse of the hydrothermal system (DeLong et al., 1991; Jago and Tosdal, 2009).

Noted in Nelson and Bellefontaine (1996), but absent from more recent regional geology maps (Massey et al., 2005; Struick et al., 2007), is a thin strip of Witch Lake Formation rocks, comprised of epiclastic sediments (sandstone, siltstone) with minor amygdaloidal trachyte and dacite flows mapped south of the MBX and Southern Star deposits. This package extends to the northwest, adjacent to the eastern edge of Heidi Lake, and continues north and west of Mitzi Lake, where it is truncated by the regional north-northwest striking Nelson Fault.

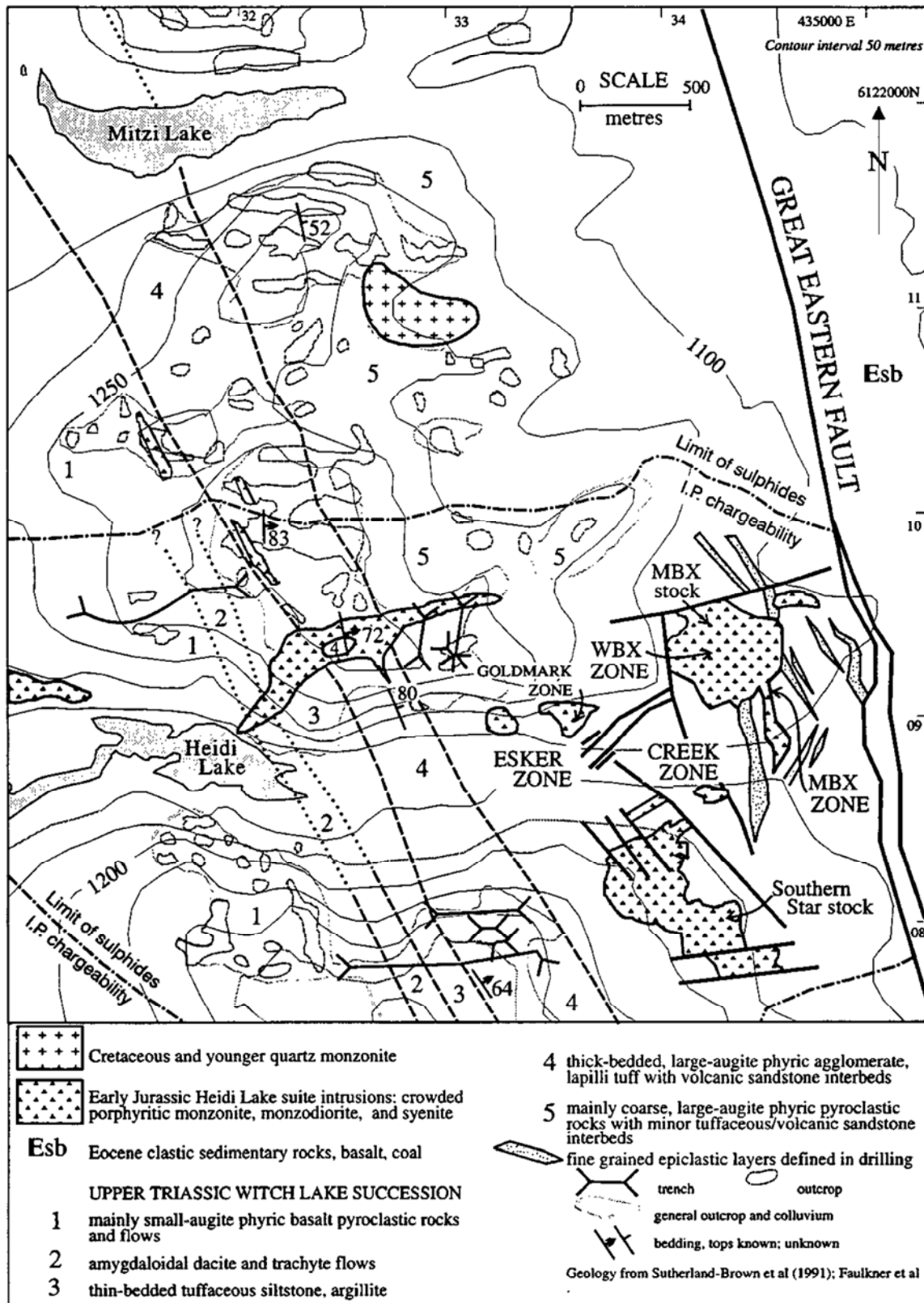
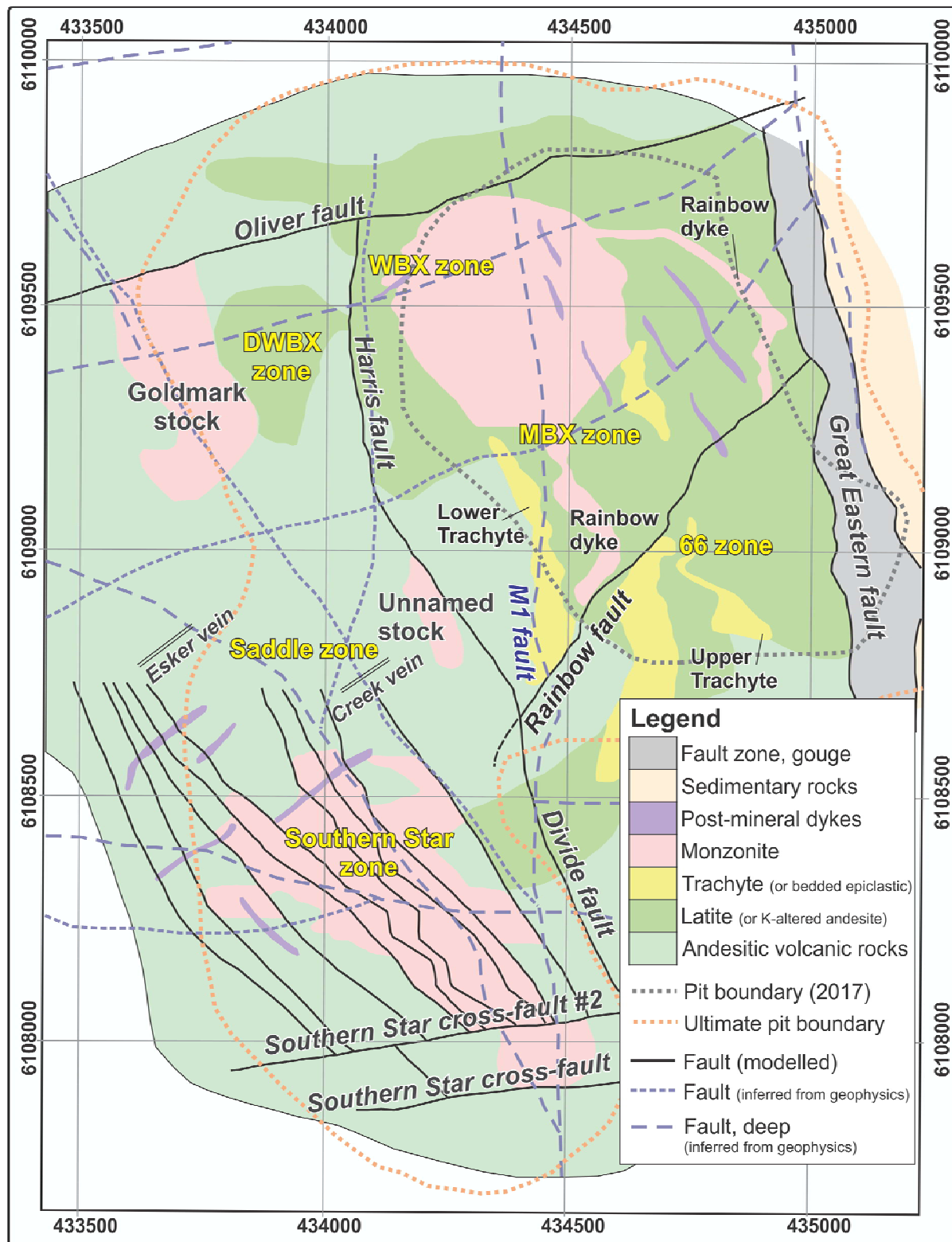
Figure 5 Property Geology.

Figure 6 Mine Geology.



4.2 Property Structure

Intrusions on the property are likely structurally controlled and coeval with the demise of the long-lived subduction zone between Quesnellia and the Cache Creek Terrane when Quesnellia was emplaced eastward onto the westward edge of Ancestral North America (Nelson and Bellefontaine, 1996). Major faults in Quesnellia are dextral transcurrent faults that include the Manson-McLeod Fault system, the Finlay-Ingenika system and the Pinchi Fault (Figure 4). A north-easterly striking second order network of transcurrent and normal faults divides Quesnellia into structural blocks (Nelson and Bellefontaine, 1996).

Ductile fabrics in the intrusive phases present on Mount Milligan record the accretion of Quesnellia. Wall rocks and numerous pendants include strongly foliated amphibolite's and augite gneisses as well as contact hornfelses. The transition from plutonic and high-grade metamorphic core of the complex into low-grade metamorphic Witch Lake rocks occurs variously across both contact metamorphic zones and strain gradients. South of the main Mount Milligan peak, amphibolite's are proximal (~300 m) to texturally unaffected augite porphyritic rocks. The intrusive phases display sporadic schistosity, though felsic apophyses are post-kinematic, suggesting the granites were emplaced during the waning stages of penetrative deformation in the wall rocks, whereas ductile fabrics resulted from crustal shortening accompanied locally by plutonic heating (Nelson and Bellefontaine, 1996).

West of Mount Milligan peak, the Mount Milligan intrusive suite is faulted in contact with slightly metamorphosed Takla Group rocks. Striking parallel to this fault zone are strongly deformed, steep northwest striking foliations in quartz-plagioclase-biotite rhyodacite porphyry dikes. Thin sections indicate dextral strike-slip motion with poorly developed C-S structures. These plastically deformed rocks show later, post-uplift brittle deformation where in contact with foliated green clay gouge. A U-Pb titanite age of 169.3 ± 5 Ma for the dikes suggests this fault was in existence by Middle Jurassic, but underwent subsequent dextral motion (Nelson and Bellefontaine, 1996).

Faulting occurs throughout the Mt. Milligan deposit and the surrounding host rocks. A steep northwest trending east-dipping fault separates the MBX stock from the SS stock (Mills et al., 2009). The regional Great Eastern Fault, a broad zone of milling and brittle shear zones seen only in drill core (Nelson and Bellefontaine, 1996), truncates mineralization to the east and juxtaposes Takla Group volcanic rocks against a wedge of early Tertiary rocks (Mills et al., 2009). East-northeast trending cross faults represent the latest faulting episode of the area. Regionally, several northwest trending faults occur on the Property which include the Limestone Creek Fault and Philip Lakes Fault. Several elongated lakes occur within the field area and are also oriented northwest, thereby following the regional fault pattern. This orientation is interpreted to reflect the underlying structural grain of the region (Figures 5 and 6).

Rocks within and surrounding the Mt. Milligan deposit generally trend north-northwest, dipping moderately to steeply to the east (Mills et al., 2009). North of the deposits, strata dips steeply to the west. In the south-eastern portion of the deposit, the stratigraphy trends northerly to north-easterly (Mills et al., 2009). Graded bedding and cross-bedding in tuffaceous rocks indicate that the stratigraphy faces east.

The north-northwest striking regional Nelson Fault cuts through the Northwest Claim Group and the Snell Target Area. North of the Nation River, the Nelson Fault cuts through Witch Lake Formation rocks, whereas south of the Nation River, the fault hosts a sliver of the Early to Middle Jurassic Mount Milligan intrusive suite rocks with Witch Lake Formation volcanoclastic rocks bounded to the west. West of Mitzi Lake, the Nelson Fault terminates a package of north-westerly striking Witch Lake Formation epiclastic sedimentary rocks (Nelson and Bellefontaine, 1996).

5.0 Historic Data Compilation

Overview

Prior to the 2017 exploration field season, TCM engaged Equity Exploration Consultants (Equity) to review and compile historic exploration data for the Mount Milligan project area to help guide the 2017 exploration program.

Data sources included:

- TCM and predecessor company files comprising an archive of approximately 227,000 files totaling 404 GB of data.
- BC Ministry of Energy and Mines (BCMEM) Assessment reports relevant to Mount Milligan (ARIS web site).
- Government survey data - Geological Survey of Canada (GSC), Geoscience BC (GBC), and BCMEM.
- Data with Equity Exploration Consultants Ltd. from the exploration programs conducted by Equity in 2010 and 2014-2016.

Data was separated into the “work types” as listed in the following sections (5.1-5.9), compiled by campaign, and then merged into master files to be used for exploration targeting. Historic maps only available in hard copy were scanned and geo-rectified by Centerra’s GIS technical team to be merged with GIS output from the work type master files. Resulting property scale target areas are plotted in Map 1. Four areas were selected for the 2017 ground geophysics program (Section 7).

Coincident with the final stages of the historic data compilation in May and June, all geophysical data was reviewed, verified, and interpreted by Mikhail Nosyrev. Mr. Nosyrev is Centerra Gold’s internal geophysics specialist. Many of the data sets had not previously been interpreted using modern geophysical software. Section 5.10 describes the analysis and resulting near pit targets which are plotted in Figure 7.

5.1 Geology

The *Geology* compilation is split among “*Regional Scale*”, “*Property Scale*” and “*Trenching*” (Table 1) folders, with the regional-scale maps providing full coverage across the Property. The contents of each folder is summarized below.

An overview of property-scale mapping is provided by the master index file (*MILL_PrptyGLGY_MasterIndex_Feb2017*), which provides an outline of each mapping campaign (Figure A-1 in Appendix 6). These polygons show that most mapping is focused on a north-south trending belt of exposure that includes the Mount Milligan deposit. A list of prospects for the Property (*MILL_Prospects_Master_Feb2017*) was developed through a review of mapping reports and integration with BC MINFILE data.

A compilation of property-scale mapping (*MILL_PrptyOCglgy_Master_Feb2017*) includes 1430 outcrops, all of which are coded with their original description and the most closely matching Milligan lithology code. Comparison of this data to the regional bedrock map reveals some discrepancies that could be resolved through integration. A compilation of field notes is also provided (*MILL_PrptyGlgyPts_Master_Feb2017*), which consists of outcrop centroid points integrated with point descriptions of outcrops (e.g. the “2008 Terrane Unpublished” campaign).

Regional-scale solid bedrock geology for the Property and surrounding area (*MILL_RegGlgly_Feb2017*) was generated by integrating the regional map of Massey et al (2005) with detail from mapping by Nelson and Bellefontaine (1996) and the mine site geology provided by TCM. The bulk of the data, however, is from Massey et al (2005), which itself is a compilation of regional- and property-scale mapping. Additional improvements to this map could be made by integrating property-scale mapping (e.g. Earle, 1996; Humphreys, 1984), which may result in the repositioning of some lithological contacts by up to 1000 m.

The regional-scale fault (*MILL_RegStructure_Feb2017*) and surficial geology (*MILL_RegSFGL_Feb2017*) files are unmodified copies of maps created by Massey et al (2005). Viewing the surficial geology together with the solid bedrock geology (Figure A-1) provides a useful means of placing the property-scale mapping into context, with most of the mapping constrained to the ~north-south trending belt of exposure along the western margin of the property.

Additional recommended work includes compilation of surficial mapping by Kerr (1991), which covers the northern half of the Mount Milligan Property, and compilation of trench geology. The trenching files delivered as folders *1985 BP ARIS14377* and *2010 Terrane Unpublished* contain unprocessed raw data that could provide valuable information on areas previously identified as prospective.

Table 1: Summary of geology compilation

Subfolder/file	Contents	Type	Coded?	Description
Property Scale	MILL_PrptyGLGY_MasterIndex_Feb2017	GIS file	Yes	Campaign overview
	MILL_Prospects_Master_Feb2017	GIS file	Yes	Described bedrock prospects
	MILL_PrptyOCglgy_Master_Feb2017	GIS file	Yes	Coded outcrop polygons
	MILL_PrptyStructure_Master_Feb2017	GIS file	Min	Structure line work
	MILL_PrptyGlglyPts_Master_Feb2017	GIS file	Yes	Described bedrock occurrences
Regional Scale	MILL_RegGLGY_Feb2017	GIS file	Yes	Bedrock polygons
	MILL_RegStructure_Feb2017	GIS file	No	Fault line work
	MILL_RegSFGL_Feb2017	GIS file	No	Till polygon
Trenching	1985 BP ARIS14377	Folder	Min	Trench line work
	2010 Terrane Unpublished	Folder	Min	Road and (historical?) trench data
MILL_Glgly_MasterIndex....	n/a	GIS file	Yes	Campaign overview

5.2 Geophysics → Airborne Surveys

The *Airborne Geophysics* compilation is summarized in Table 2 and comprise an overview MapInfo table (Figure A-2) along with folders that contain data for 16 airborne geophysical survey campaigns flown over at least part of the Property. Two additional folders (*2007 Unknown Internal Unpublished*, *2009 Terrane Unpublished Inversions*) contain what appear to be internally-commissioned compilation and inversion files.

Between 1989-1991, Aerodat Ltd flew at least nine airborne magnetic and VLF surveys over parts of the current Mount Milligan Property, for a total of ~4800 line-km at 100 m line-spacing. Unfortunately, Geotech Ltd are unable to locate the original data for these surveys and so this data is therefore only available as georeferenced raster contour maps of TMI, CVG and VLF-EM. When viewed with regional gridded the data, however, these high resolution surveys are still useful for providing detail of select areas.

Original survey data (e.g. .xyz, .gdb files) and derivative map products (e.g. .map, .grd files) are available for several government-funded surveys in addition to the 1458 line-km magnetic and GeoTEM survey flown by Fugro over ~60% of the Milligan Property in 2008. The 1991 and 1995 GSC surveys provide full magnetic and radiometric coverage over the Property at 500 m line-spacing whereas the 2008 Fugro magnetic and EM survey was done at 200 m line-spacing.

The 2008 Fugro survey comes with an interpretive report that provides exploration targets and lineament interpretations (Fugro Airborne Surveys, 2008). These interpretations are worth considering in property-scale target identification.

Other TCM data include what appear to be test DIGHEM and ZTEM surveys flown over the Mount Milligan deposit in addition to internal compilation and inversion work, the latter used to support ground-based IP surveys done by SJ Geophysics in 2009.

Table 2: Summary of airborne geophysics deliverables

Content	Type	Survey Type	Usable data format	Contractor	Line km	Line spacing
1989 BP ARIS19164	Folder	Mag, VLF	GIS raster contour maps	Aerodat	120	100
1989 Continental ARIS19268	Folder	Mag, VLF	GIS raster contour maps	Aerodat	~1450	100
1990 BP ARIS19921	Folder	Mag, VLF	GIS raster contour maps	Aerodat	425	100
1990 Continental ARIS20416	Folder	Mag, VLF	GIS raster contour maps	Aerodat	523	100
1990 Continental ARIS20455	Folder	Mag, VLF	GIS raster contour maps	Aerodat	946	100
1990 Cooke ARIS20978	Folder	Mag, VLF	GIS raster contour maps	Aerodat	95	100
1990 GoldenRule ARIS20853	Folder	Mag, VLF	GIS raster contour maps	Aerodat	~300	100
1991 BGM ARIS22011	Folder	Mag, VLF	GIS raster contour maps	Aerodat	250	100
1991 BP ARIS21089	Folder	Mag, VLF	GIS raster contour maps	Aerodat	720	100
1991 GSC OF2535	Folder	Mag, Rad	Original data, grid maps	GSC	6100	500
1995 GSC OF2801	Folder	Mag, Rad	Original data, grid maps	GSC	~4000?	500?
2007 GBC OF2008-4a	Folder	Mag, EM	Original data, grid maps	Geotech	11600	4000
2007 GBC OF2008-4b	Folder	Mag, EM	Original data, grid maps	Geotech	37.5	200
2007 Terrane UnpublishedDIGHEM	Folder	Mag, EM	Original data, grid maps	Fugro	~85?	~200?
2007 UnknownInternal Unpublished	Folder	Mag	Levelled map comp?	Terrane?	n/a?	n/a?
2008 Terrane ARIS30425	Folder	Mag, EM	Original data, grid maps	Fugro	1458	200
2008 Terrane UnpublishedZTEM	Folder	Mag, EM	Original data, grid maps	Geotech	211.2	250
2009 Terrane Unpublished Invers	Folder	Mag	Inversions	SJG	n/a	n/a
MILL_AirGeophys_MasterIndex_	GIS file	Various	n/a - campaign overview	Equity	n/a	n/a

5.3 Geophysics → Ground IP

The *Ground IP* compilation is summarized in Table 3 and, like the airborne data, consist of an overview MapInfo table (Figure A-3) along with folders that contain data for eight ground IP surveys done over at least part of the Mount Milligan Property. Most of these surveys are clustered around the Mount Milligan-Mitzi area with the exception of an unreferenced IP survey done near Philip Lake and the 2014 survey done in the northeastern corner of the property.

The three earliest surveys done on the Mount Milligan Property (1973-1985) are currently only available as raster maps and pseudo-sections. The 1985 work could probably be georeferenced and extracted but not the 1973 and 1974 surveys, as they cannot be easily georeferenced.

The TCM archive contained a data set that appears to be an IP survey done by Placer Dome in 1992. However, no supporting documentation (i.e. logistics report, scanned maps) could be found for this survey. The delivered folder includes chargeability and resistivity grid maps that provide comprehensive coverage over the deposit area, in addition to 3D inversions that may have been created at a later date.

The TCM archive also contained an IP survey named “Philip Lake”, for which the raw data appears to be available. This survey also lacks supporting documentation. Delivered files include grid maps of chargeability and resistivity that were compiled from the Equity archive.

The three most recent surveys (2009-2014) are relatively well-documented, with compilation work locating both original data and map products. These surveys include the 2009 North and South grids, done immediately west and northwest of the Mount Milligan deposit respectively, the 2010 Titan24 survey and the 2014 3D survey in the northeast corner of the Property. Inversions are also provided for all three campaigns and interpretive reports are included for the 2009 and 2010 work, and are useful for guiding targeting work.

Table 3: Summary of ground IP deliverables

Content	Type	Usable data format	Contractor	Line km	Line spacing
1973 Pechiney ARIS4742	Folder	Non-GIS raster maps and sections	McPhar	~8?	~120 m
1974 Pechiney ARIS5175	Folder	Non-GIS raster maps and sections	McPhar	~1?	~120 m
1985 BP ARIS14377	Folder	Non-GIS raster maps and sections	?	18.5	200-400 m
1992 PD Unpublished	Folder	Map products, inversions	?	250?	50-200 m?
1998 Source Unknown Philip Lake	Folder	Original data?, grid maps	?	?	?
2009 Terrane Unpublished NSgrids	Folder	Original data, grid maps, inversions	SJ	53.6	200-400 m
2010 Terrane Unpublished Titan24	Folder	Original data, grid maps, inversions	Quantec	35.8	300 m
2014 TRX ARIS35023	Folder	Original data, grid maps, inversions	SJ	31.2	300 m
MILL_GroundIP_MasterIndex_Feb2017	GIS file	n/a - campaign overview	Equity	n/a	n/a

5.4 Geophysics → Ground Magnetics

The *Ground Magnetic* compilation also include an overview MapInfo table (Figure A-4) and folders that contain data for eight ground magnetic surveys done over at least part of the Property (Table 4). These surveys are a little more spread out than the ground IP work but still tend to cluster over the Mount Milligan deposit.

Data for the 1974 survey exists only as an un-georeferenced raster map. Georeferencing this map is difficult due to a lack of grid and topographic feature.

The four ground magnetic surveys done between 1985-1991 were all published as hard copy maps with data points recording magnetic susceptibility. Each of these maps was georeferenced and the data points were digitized so that the magnetic susceptibility can be gridded.

Original survey data was located for the three most recent ground magnetic campaigns, along with derivative map products. One of these is the large undocumented survey (~300 line-km?) done over the Mount Milligan deposit by Placer Dome in 1992. The other two include a series of seven small grids surveyed by Terrane Metals Corp and ground magnetics done as part of the 2014 IP survey. Two of the ground IP surveys (1998 Philip Lake, 2009 Terrane N

and S grids) do not have associated ground magnetic data, which is typically done as part of these surveys.

Table 4: Summary of ground magnetic deliverables

Content	Type	Usable data format	Contractor	Line km	Line spacing
1974 Pechiney ARIS5175	Folder	Non-GIS raster map	McPhar	~8?	~120 m
1985 BP ARIS14377	Folder	GIS data points	?	47.7?	200 m
1990 BP ARIS19921	Folder	GIS data points	Lloyd	47.7	100 m
1990 Continental ARIS20227	Folder	GIS data points	Reliance	80.8	200 m
1991 HLX ARIS21197	Folder	GIS data points	?	~9	n/a
1992 PD Unpublished	Folder	Original data, map products	?	~300	50-200 m
2008 Terrane ARIS30425	Folder	Original data, map products	Terrane	44	50-200 m
2014 TRX ARIS35023	Folder	Original data, map products	SJ	31.3	300
MILL_GroundMag_MasterIndex_Feb2017	GIS file	n/a - campaign overview	Equity	n/a	n/a

5.5 Geophysics → Ground EM

Only two ground-based EM surveys were found during the compilation work, with the 1985 work done over the Mount Milligan deposit and the 1990 survey done over the northwestern corner of the Property (i.e. Mitzi area). All available data for both surveys is delivered in folders along with a MapInfo index file that overviews of both campaigns.

Data for the 1985 survey exists only as a georeferenced raster map with profile lines (and no numerical data) and interpretation that separates regions of high and low conductivity. The 1990 survey presents data points with in phase and quadrature values that were digitized.

The paucity of ground EM work on the Mount Milligan Property is likely related to the abundance of airborne EM data and its low regard for use in porphyry exploration. It is worth noting, perhaps, that EM may be more useful than historically recognized due to the strong relationship between gold and pyrite (e.g. Labrenz, 2007).

Table 5: Summary of ground EM deliverables

Content	Type	Most usable data format	Contractor	Line km	Line spacing
1985 BP ARIS14377	Folder	GIS raster EM map, interp GIS lines	?	47.7	200
1990 Continental ARIS20227	Folder	GIS data points	Reliance	61.3	200
MILL_GroundEM_MasterIndex_Feb2017	GIS file	n/a - campaign overview	n/a	n/a	n/a

5.6 Geochemistry → Soil

Soil geochemistry deliverables include an overview MapInfo table (*MILL_SoiChemistry_MasterIndex*) (Figure C-5), master database exports for conventional (*MILL_ConventionalSoil_DBexport*) and MMI (*MILL_MMIsols_DBexport*) soil samples and folders that contain the raw data for 21 soil sampling campaigns (Table 6). These campaigns resulted in the collection of an estimated 9920 soil samples of which 7266, or ~73% of the reported total, have both location and assay data. Historical soil sampling focussed on the Mount Milligan area and the band of exposure extending north and south of this, with limited work on the rest of the Property.

The first two soil sampling program done on the Mount Milligan Property (ARIS 4274, 5175) currently exist only as non-georeferenced raster maps with points that show assays of Cu, Zn, Mn and Mo. These maps cannot be accurately georeferenced and there is no documentation that supports the reliability of the assays, so no further compilation work on these surveys is recommended.

Between 1983-1990, BP conducted several soil surveys for which partial compilations were found on the Thompson Creek hard drive and the Equity Server (named "Soils_Milligan_BHP_83-86"). This compilation database was validated by splitting it back into its original campaigns. All of these campaigns can be considered "conventional"; i.e. B-horizon samples with analyses done through a strong acid digestion (i.e. aqua regia) followed by ICP analysis. Gold was typically determined through fire assay and atomic absorption.

The 1985 BP survey reports collection of 638 soil samples (Meyers and Rebagliati, 1985) but, so far, only 195 of these can be properly georeferenced. Further work on this report is suggested to see if the outstanding 443 soil samples can be located, as the report suggests some may have been taken in conjunction with trenching on the "South Boundary Zone". This zone was one of several prospects identified during the initial exploration phase at Mount Milligan and lies ~500 m from the current pit boundary, but has seen little work beyond trenching and one or two drill holes (DH 91-865, possibly 91-866).

Conventional soil surveys done between 1988-1991 include a 1483 sample survey by Golden Rule that was filed for assessment with no location data or maps showing the sample locations (Hoffman and Cruickshank, 1990). So for this data, the assays are compiled but there is no way to locate them. The survey is described as having been done at 200 m line- and 50 m sample-spacing, which would imply blanket coverage of Golden Rule's property. Some additional research is recommended to see if these sample locations can be found. In 1997, the GSC conducted a regional till sampling program in the Mount Milligan area. These tills were sieved prior to analysis so they may not be directly comparable to conventional soil data.

Additional soil campaigns ran between 2008 to 2014 include several that employed MMI-type techniques of sampling a specific horizon and using a weak acid digestion. These campaigns include a triangular grid surveyed overtop and west of the deposit in 2008 (2008 *Terrane Internal*A084164) and an orientation study over the deposit done by Geoscience BC in 2010 (2010 *GBC OF*2010-08). Overall, however, the number of conventional soil samples analyzed at this time still outweighs the MMI work.

In summary, approximately 2000 soil analyses are missing location data with most of these derived from the 1985 BP survey (ARIS 14377) and the 1990 Golden Rule survey (ARIS 20853). Some additional effort should be put forward to try and locate this data. Continued improvement and validation of the Master database is also suggested, and would include addition of searchable columns for digestion types (e.g. weak, strong, total) and analytical methods.

Table 6: Summary of soil geochemistry deliverables

Content	Type	Sample Type	Locn N.o.	Anlys N.o.	Usable data formats
1972 Pechiney ARIS4274	Folder	B-horizon AR	115	115	Scanned raster map
1974 Pechiney ARIS5175	Folder	B-horizon AR	433	433	Scanned raster map
1983 BP ARIS11951	Folder	B-horizon AR	296	296	GIS data points
1984 BP ARIS12912	Folder	B-horizon AR	2007	2200	GIS data points
1984 BP ARIS13508	Folder	B-horizon AR	64	64	GIS data points
1985 BP ARIS 13891	Folder	B-horizon AR	221	221	GIS data points
1985 BP ARIS14377	Folder	B-horizon AR	195	638	GIS data points
1988 BP ARIS17860	Folder	B-horizon AR	108	108	GIS data points
1989 HLX ARIS19396	Folder	B-horizon AR	44	44	GIS data points
1990 BP ARIS20280	Folder	B-horizon AR	254	254	GIS data points
1990 Continental ARIS20227	Folder	B-horizon AR	745	745	GIS data points
1990 GoldenRule ARIS20853	Folder	B-horizon AR	0	1483	Analytical data only
1991 BGM ARIS22011	Folder	B-horizon AR	148	148	GIS data points
1997 GSC OF3291	Folder	Till fines AR	108	108	GIS data points
2008 Terrane InternalA084164	Folder	B-horizon AR, MMI, SGH	97	97	GIS data points
2009 BCGold ARIS31446	Folder	B-horizon AR	32	32	GIS data points
2009 Terrane InternalTER034	Folder	B-horizon AR, MMI	700	700	GIS data points
2010 GBC OF2010-08	Folder	B-horizon AR, several MMI	39	39	GIS data points
2010 Terrane ARIS31930	Folder	B-horizon AR	605	605	GIS data points
2012_BCGold_ARIS33981	Folder	MMI	175	175	GIS data points
2014 TRX ARIS35023	Folder	B-horizon AR	1415	1415	GIS data points
MILL_ConventionalSoil_DBexport_15Feb2017	Excel	B-horizon AR	6994	6994	GIS data points
MILL_MMIsols_DBexport_15Feb2017	Excel	MMI	272	272	GIS data points
MILL_SoilChemistry_MasterIndex_Feb2017	GIS file	n/a	n/a	n/a	n/a - campaign overview

5.7 Geochemistry → Rock

Rock geochemistry was delivered as an overview MapInfo table (*MILL_RockChemistry_MasterIndex*) (Figure C-6), a master database export (*MILL_Rock_DBexport*) and folders that contain the raw data for 20 rock sampling campaigns (Table 7). These campaigns resulted in the collection of around ~865 rock samples of which only 268, or 30% of the total, currently have both location and assay data. Historical rock sampling focussed on the Mount Milligan area and the band of exposure extending north and south of this, with limited work on the rest of the Property.

The first four rock sampling campaigns (1983-85) focussed on the Mount Milligan deposit area. Location and assay data was found for three of these surveys. The fourth one (ARIS 12912) reports collection of ~250 rock samples and provides a map that locates ~150 rock samples. However, the sample numbers presented on the map do not match those provided in the analytical certificates. Further research is suggested to see if this data can be reconciled.

Seven rock sampling campaigns were done between 1988-1991, with each collecting no more than 23 samples. Location and analytical data was found for most of these samples.

In 1996, Placer Dome commissioned a grid-style lithogeochemical survey of outcrops and float over the Mount Milligan deposit (Earle, 1996). This program involved the collection of ~300 samples for which map locations and analytical certificates are available. At the time of

writing of this report, compilation of this data was still in progress with the Centerra GIS group.

Location and analytical data is available for many of the most recent surveys as well, except for unpublished data collected by Terrane in 2009 and 2010. The 2009 work includes an Excel file with sample locations and descriptions as well as an analytical requisition form with the same sample numbers. However, no analytical certificates could be located. The 2010 data includes an analytical certificate with the result of four rock assays and field notes with descriptions of five rock samples, but the sample ID's on the COA do not match those in the field notes.

To summarize, an estimated 865 rocks have been collected on the Property of which just 268 (~30%) have both location and analytical data. Another 300 samples are pending compilation by Centerra so that the final total will reach ~568 samples or ~65% of the total. Resolving the mismatch between sample location ID's and analytical ID's for the ~250 samples from ARIS 12921 would go a long ways towards providing a more complete rock compilation.

Table 7: Summary of rock geochemistry deliverables

Content	Type	Locn N.o.	Anlys N.o.	Anlys Type	Usable data format
1983 BP ARIS11951	Folder	20	22		
1984 BP ARIS 12912	Folder	151	~250?	Partial digest	Mismatched data
1984 BP ARIS13508	Folder	5	5	Partial digest	GIS data points
1985 BP ARIS14377 whole rock	Folder	32	43	Whole rock	
1988 BP ARIS17860	Folder	7	7	Partial digest	GIS data points
1989 HLX ARIS19396	Folder	9	11	Partial digest	GIS data points
1990 BP ARIS20280	Folder	4	5	Partial digest	GIS data points
1990 Continental ARIS20227	Folder	22	23	Partial digest	GIS data points
1990 Continental ARIS20230	Folder	7	9	Whole rock	GIS data points
1990 GoldenRule ARIS20853	Folder	6	6	Partial digest	GIS data points
1991 BGM ARIS22011	Folder	12	12	Partial digest	GIS data points
1996 PD Unpublished	Folder	~300	~300	Partial digest	GIS data points
2005 PD ARIS28209	Folder	17	19	Whole rock	GIS data points
2007 Terrane Unpublished	Folder	51	51	Partial digest	GIS data points
2008 Terrane Unpublished	Folder	41	43	Partial digest	GIS data points
2009 BCGold ARIS31446	Folder	20	20	Partial digest	GIS data points
2009 Terrane Unpublished	Folder	15	0	?	GIS data points without assay
2010 Terrane Unpublished	Folder	5? 9?	4	Partial digest	Mismatched data
2012 BCGold ARIS33981	Folder	7	7	Partial digest	GIS data points
2014 TRX ARIS35023	Folder	8	8	Partial digest	GIS data points
MILL_Rock_DBexport_15Feb2017	Excel file	211	219	Partial digest	GIS data points
MILL_RockChemistry_MasterIndex_Feb2017	GIS file	n/a	n/a	n/a	n/a - campaign overview

5.8 Geochemistry → Silt

Silt geochemistry was delivered as an overview MapInfo table (*MILL_SiltChemistry_MasterIndex*), a master database export (*MILL_Silt_DBexport*) and folders that contain the raw data for seven silt sampling campaigns (Table 8). These campaigns resulted in the collection of 134 silt samples, of which 132 have both location and analytical data. The silt data set is therefore relatively complete and no further work is warranted at this time.

Sampling campaigns run between 1984-1991 were generally done as part of larger surface soil sampling programs with opportunistic silt sampling. The exception is ARIS 13508, which included both dedicated silt and soil sampling programs. Two of the analyses from ARIS 20227 are not located on the sample location map.

Placer Dome and Terrane Metals Corp commissioned dedicated silt sampling surveys in 2005 (*PD ARIS28210*) and 2008 (*Terrane Unpublished*) respectively. This data exists in digital format along with reports and interpretation. Both data sets also include Au and Cu analyses (plus Ag, Pd in 2008) done by bulk leach (BLEG) methods.

Table 8: Summary of silt geochemistry deliverables

Content	Type	Locn N.o.	Anlys N.o.	Anlys Type	Usable data format
1984 BP ARIS13508	Folder	27	27	Partial digest	GIS data points
1985 BP ARIS13891	Folder	4	4	Partial digest	GIS data points
1990 Continental ARIS20227	Folder	14	16	Partial digest	GIS data points
1991 BGM ARIS22011	Folder	1	1	Partial digest	GIS data points
2005 PD ARIS28210	Folder	34	34	Partial digest, BLEG	GIS data points
2008 Terrane Unpublished	Folder	46	46	Partial digest, BLEG	GIS data points
2009 BCGold ARIS31446	Folder	6	6	Partial digest (no Au)	GIS data points
MILL_Silt_DBexport_15Feb2017	Excel file	132	134	Various	GIS data points
MILL_SiltChemistry_MasterIndex_Feb2017	GIS file	n/a		n/a	n/a - campaign overview

5.9 Geochemistry → Biogeochemistry, Concentrate, Water

Other geochemical methods employed in exploration work include mineral concentrate sampling, biogeochemistry and water sampling (Table 9). This data is delivered as folders along with an overview MapInfo file that locates three of the four concentrate studies (*MILL_Concentrate_MasterIndex*).

Concentrate sampling includes one campaign of talus fine sampling (1984 BP ARIS12912), one moss mat sampling project (1988 BP ARIS17860) and two concentrate sampling campaigns (1990 Continental ARIS20227, 1991 PD Unpublished GoldGrains). Analytical and location data has been compiled for three of these projects but not for the 1991 gold grain program. Data for this work currently exists only as PDF maps generated from GIS, implying that there are digital copies of this data. If these cannot be located it should be fairly straightforward to digitize this data from the PDF maps.

One biogeochemical survey was done by the government (1996 GSC OF3290) and the two water sampling campaigns were done in conjunction with the 2005 Placer Dome and 2008 Terrane silt sampling programs. All three data sets are complete in terms of location and analytical data.

Table 9: Summary of biogeochemistry, concentrate and water chemistry deliverables

Content	Type	Sample Type	Locn N.o.	Anlys N.o.	Anlys Type	Usable data formats
1984 BP ARIS12912	Folder	Talus fines	2	2	Partial digest	GIS data points
1988 BP ARIS17860	Folder	Moss mat	6	6	Partial digest	GIS data points
1990 Continental ARIS20227	Folder	Pan concentrate	4	5	Partial digest	GIS data points
1991 PD Unpublished GoldGrains	Folder	Pan? concentrate	?	?	Grain counts, descrip	Scanned raster maps
1996 GSC OF3290	Folder	Pine bark	134	134	Roast, INAA	GIS data points

2005 PD ARIS28210	Folder	Water	30	30	?	GIS data points
2008 Terrane Unpublished	Folder	Water	45	45	?	GIS data points
MILL_Concentrate_MasterIndex	GIS file	Concentrate	n/a		n/a	n/a - campaign overview

5.10 Reinterpretation of Historical Geophysics

Interpretation of geophysical data for the Mount Milligan deposit was carried out in May-June 2017. The interpretation was performed for an area of 6.5 sq. which includes known mineralization and an area to the west of distance about 2 km. This area is covered by IP survey Titan-24 (2007) and ground magnetic survey with a line spacing of 50 m (1992).

The main objectives of interpretation were as following:

- To obtain ideas about the structural and geological features of the area potentially related to porphyry mineralization.
- To understand the geophysical signatures of copper-gold mineralization.
- To outline new geophysical targets related to potential copper-gold mineralization and alteration zones.

Interpretation Methods:

- Analysis of the position of known mineralization in the geophysical data.
- Development of geophysical model of the mineralized zones.
- Mapping of structural elements of the area on the basis of interpretation of geophysical data in terms of relation to mineralized and altered zone.

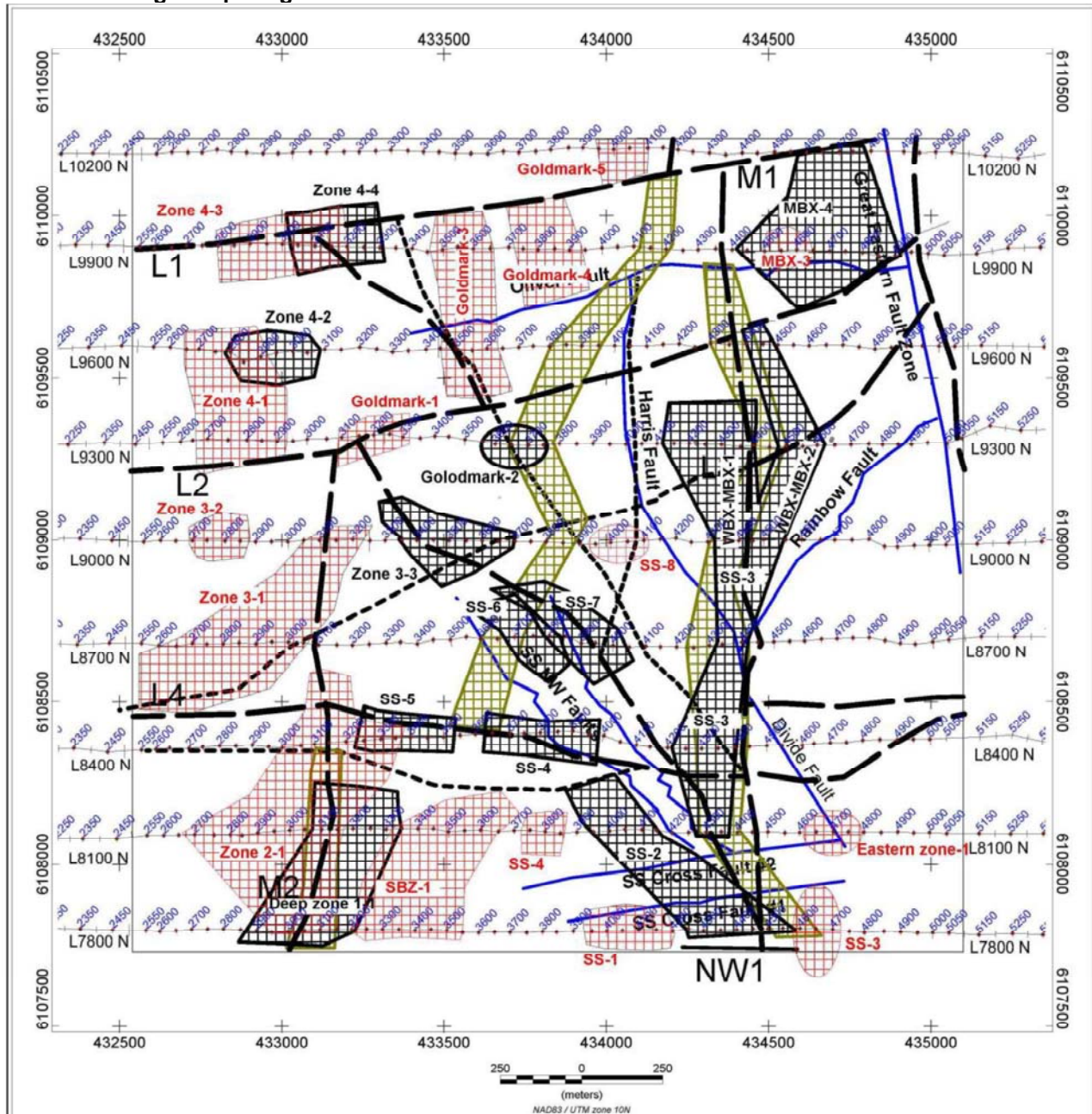
Interpretation Products:

- Ground magnetic survey data of 1992 were reprocessed, maps of residual magnetic anomalies were made.
- The inversion of magnetic field was carried out and 19 sections of magnetic susceptibility was made: 9 sections along Titan-24 survey lines and 10 crossed lines.
- The inverted sections of chargeability and electrical resistivity for the Titan-24 IP lines were reprocessed and rebuilt. This was especially important for electrical resistivity sections, because resistivity color scale in previous report was smoothing and sections were not interpreted properly.
- The electrical resistivity sections for MT method were corrected and plotted.
- 3D models of electrical resistivity and chargeability were created based on the results of the Titan-24 survey.
- Slices of resistivity and chargeability were produced both for depths from the surface and for horizontal elevation levels.
- Slices of electrical resistivity of MT method were produced.
- The meridional sections crossed Titan-24 survey lines for chargeability, dc-resistivity and MT-resistivity were made (10 lines in total).
- Structural schemes for some conductive and anomalous polarizable layers were made.
- Interpretation maps and sections were made.

The area of interpretation, the position of the Titan-24 IP lines, cross lines are presented in Figure 7. Interpreted geological and structural features; and targets are also plotted.

Figure 7 Historic Geophysical Reinterpretation & Targets.
Mikhail Nosyrev

Red Hatching: Near Surface Targets
Black Hatching: Deep Targets



6.0 KC Anomaly Prospecting

On Aug 31st, a half day was spent prospecting on the KC target. (Anomalous geochemistry in rock reported in a 1989 assessment report, Cooke, ARIS #19396 correlating with airborne conductive trends and magnetic field data.)

In the area numerous hydrothermally altered rounded pebbles to boulders are present. These range from pervasively quartz-pyrite-sericite altered rocks to those that contain disseminated sulfide, principally pyrite, and rare secondary Cu minerals in monzonite porphyry and andesitic volcanic and volcanoclastic rocks. The rocks are rounded and have been transported at a minimum by water. How far the samples may have moved is unknown. At least along the access road, the gravel beds overlie glacial deposits of silts and clay locally, suggesting likely fluvial transport; it is not known how common this stratigraphic sequence is in the area.

In the area of the weak magnetic high just east of the tailing dam, there are considerably fewer hydrothermally altered clasts but contain several that are altered pervasively to magnetite ± pyrite assemblages. The area is also underlain by a terrace, and is a topographic high relative to the surrounding region. The high appears to be held up by sand, at least along the access road to the monitoring well.

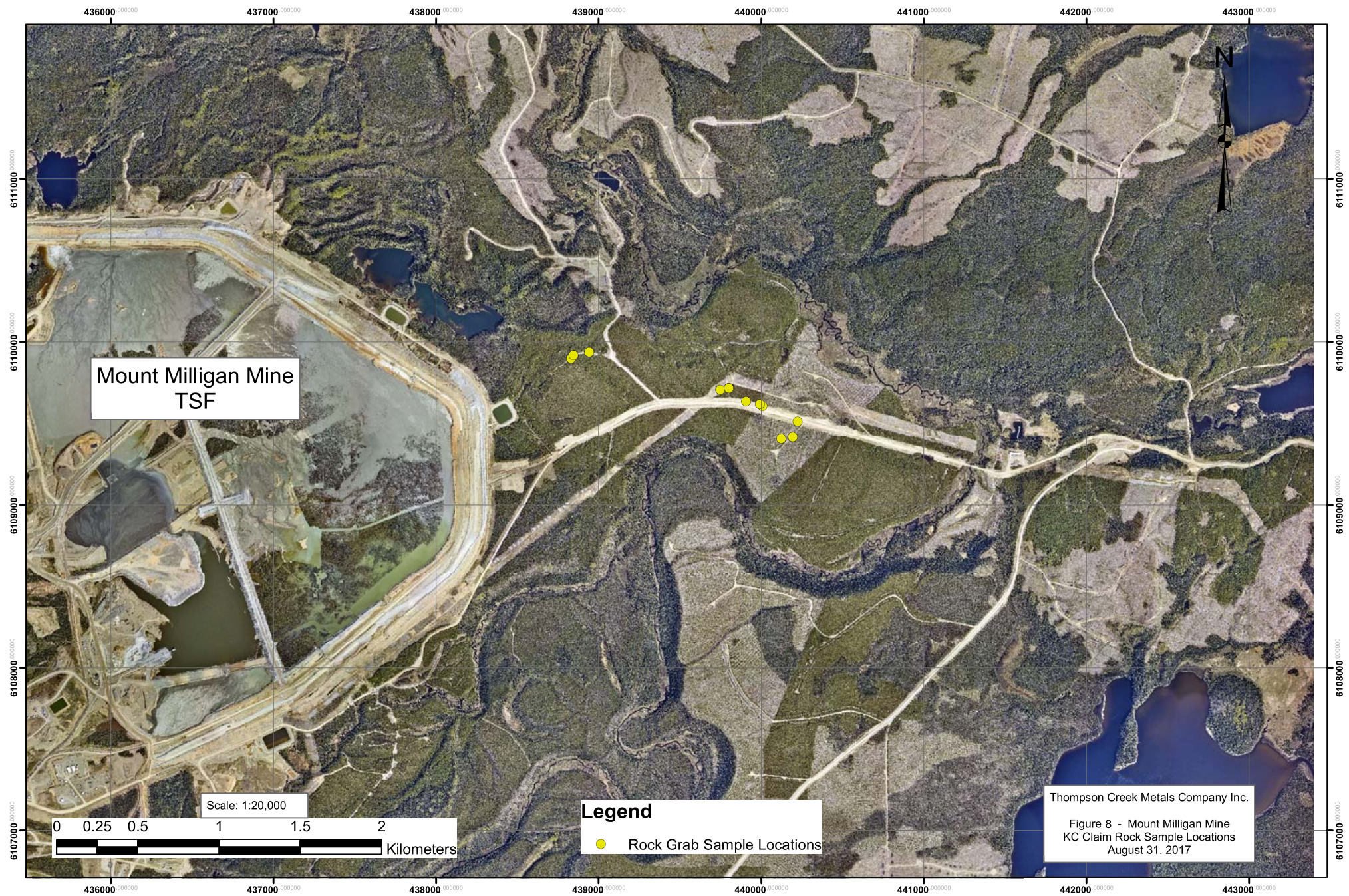
12 gossanous float samples were collected for geochemical assay; 9 samples from the area with historic anomalous gold-in-soil and float sampling, and 3 samples from the airborne magnetic high area 1 km to the west. Pyrite mineralized samples from the magnetic anomaly had stronger magnetite alteration. Two samples (one from each area) had malachite staining.

Collected samples were analyzed at Bureau Vertias Mineral Laboratories, Vancouver, BC. All samples were prepared by crush, split and 250g pulverize to 250 mesh. Methods used were 4 acid digestion ICP-ES analysis, (MA300) and lead collection fire assay fusion AAS finish for gold, (FA430). See Appendix 7.

Results are summarized in Table 10 and plotted on Figures 8 and 9. Photographs of the target area and samples are on Plate 1. Significant assays include 4 samples with 0.123-0.454 Au ppm; 3 samples with 1284-3610 Cu ppm; and 3 samples with 2.2-8.1 Ag ppm.

Table 10 KC Prospecting Sample Results.

Target	Sample	UTM-E	UTM-N	Sample	Description	Wgt KG	Cu PPM	Mo PPM	Pb PPM	Zn PPM	Ag PPM	Au PPM
KC	16176	440007	6109605	grab	float anomaly zone - vfgr py in silicified andesite	3.07	111	4	12	58	1	0.055
KC	16177	439905	6109634	grab	float anomaly zone - py silicified Fe-oxide stained, protolith?	2.68	163	4	9	24	0	0.454
KC	16178	439748	6109705	grab	float anomaly zone - vn & diss py in aug-phyric andesite, wk mag	3.94	221	4	0	58	0.6	0.009
KC	16179	439991	6109617	grab	float anomaly zone - py in chl-alb-hem alt andesite	2.54	73	172	11	43	0.6	0.025
KC	16180	440121	6109405	grab	float anomaly zone - fgr monz, 1% diss py, chl-ser alt	2.61	181	0	7	28	1.9	0.026
KC	16181	440222	6109510	grab	float anomaly zone -mgr porph and, chl-alb alt, vnlt & diss py, mag	3.06	393	3	10	25	0.8	0.006
KC	16182	438829	6109899	grab	mag anomaly zone - monz - diss py, py-epi veins, mag	2.91	1284	41	16	132	2.2	0.157
KC	16183	438843	6109919	grab	mag anomaly zone - monz, diss py & mal, chl-epi-hem alt, wk mag	2.89	1459	0	6	71	2.9	0.123
KC	16184	438940	6109938	grab	mag anomaly zone - monz, py frac fill, mag-chl alt, strong mag	2.32	118	9	7	69	0.7	0
KC	16401	439799	6109715	grab	float anomaly zone	0.49	3610	0	11	110	8.1	0.189
KC	16402	439799	6109715	grab	float anomaly zone	0.8	953	0	8	55	2.3	0.029
KC	16403	440192	6109415	grab	float anomaly zone	0.41	764	5	7	26	0.8	0.015



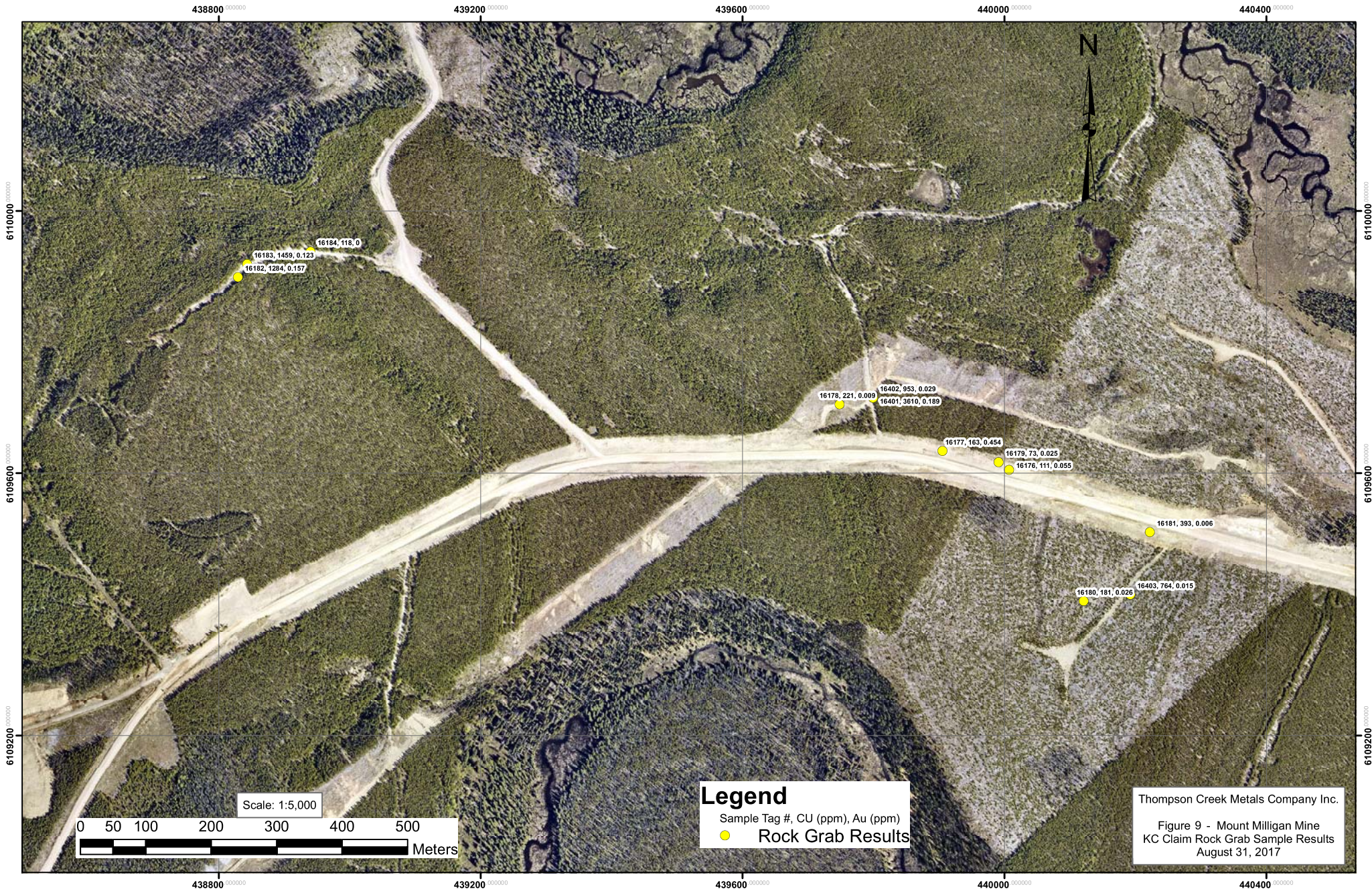
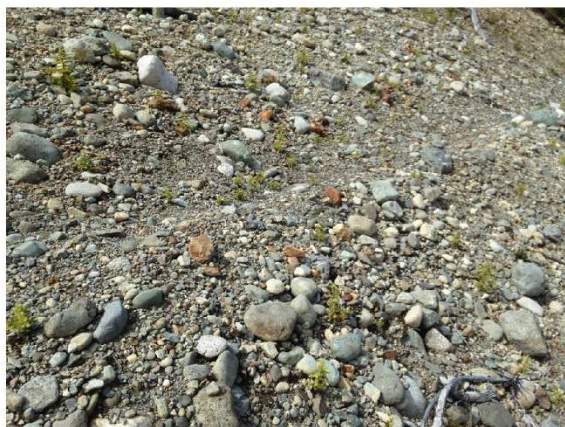


Plate 1 KC Prospect Photographs.



Photograph 1: Typical road cut showing boulder & cobbles.



Photograph 2: Close up view with several gossanous cobbles.



Photograph 3: Sample 16176



Photograph 4: Sample 16177 (0.454 ppm Au).



Photograph 5: Sample 16401 (3610 ppm Cu & 0.189 ppm Au).



Photograph 6: Close up of Sample 16401 with Malachite.

7.0 2017 Geophysical Surveys

Between August 15th and November 18th, 2017 Peter E. Walcott & Associates Limited undertook induced polarization and ground magnetic surveying over parts of the Mount Milligan Mine property for Thompson Creek Metals Inc.

The 2017 ground geophysical program was designed to follow-up on several target areas identified during a compilation program, conducted earlier in the year, to locate addition zones of potential mineralization proximal to the Mount Milligan mine site (Map 1).

The survey consisted of some 68.5-line kilometers of induced polarization, carried out on 23 east-west traverses, with a nominal line spacing between 400 meters utilizing a 100-meter a-spacing and measuring the 1st to 10th separations. For this some 74.2 kilometers of lines were established with line cutting carried in and through areas of thick deadfall.

In addition to the induced polarization survey, a ground magnetic survey was also carried out, with some 310 line kilometers of surveying completed on 121 east-west orientated lines utilizing a nominal line separation of some 100 m. See Figure 3 and Plate 2.

The complete Walcott technical report is located in Appendix 6. All accompanying full scale maps are located at the end of the report inside the back cover.

Plate 2 **IP Survey Cut-Lines.**



8.0 Conclusions

1. Detailed review, compilation, and GIS analysis of historic data for the Mount Milligan property successfully identified several new target areas for exploration in 2017 and subsequent years.
2. A geophysical program comprising of ground magnetic and IP surveys were completed over 4 target anomalies identified by the historic data compilation. Survey grids were located south and east of the current mine operation and tailings storage facility.
3. The prospecting and rock grab sampling program conducted on the KC anomaly area confirmed anomalous results reported in 1989, and identified correlating magnetic cobbles and boulders to the airborne magnetic trends in the area.

9.0 Recommendations

1. Continued exploration follow-up on the remaining anomaly targets identified from the historic data compilation documented in this report. In 2018 continue a drill program (helicopter supported) over the Mitzi Lake anomaly that was partially drilled in 2016.
2. Complete the coverage of IP survey lines on the north west grid block documented in this report. IP coverage on the survey northwest grid block was not completed before the winter shut down in 2017.
3. Complete drill target selection based on anomalies identified in the geophysical survey and prioritized based on compilation geology. Suitable targets to be possibly ready for a late 2018 exploration field program.

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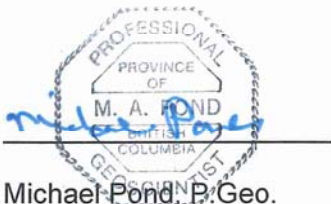
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Respectfully submitted,



Michael Pond, P. Geo.
Regional Exploration Geologist
Thompson Creek Metals Company Inc. – Mount Milligan Mine
April 30, 2018

Appendix 1

Statement of Author's Qualifications

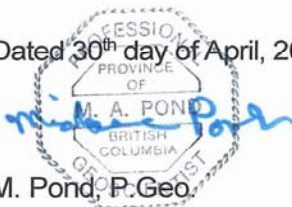
I, Michael Pond, P.Geo. do hereby certify that:

1. I am currently employed as Regional Exploration Geologist by:

Thompson Creek Metals Company Inc.
Mount Milligan Mine
177 Victoria Street, Suite 100
Prince George, BC V2L 5R8

2. I graduated from the University of British Columbia with a Bachelors of Science, Geology in 1982.
3. I graduated from the British Columbia Institute of Technology with a Diploma of Technology, CAD/CAM in 1986.
4. I am a Registered Professional Geologist with the Association of Professional Engineers and Geoscientists of BC.
Registration # 18735
5. I have worked as a Geologist for a total of 30 years since my graduation from university.
6. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes this Assessment Report misleading.

Dated 30th day of April, 2018.


M. Pond, P.Geo.

Appendix 2

Tenure Information

All 110 TCM – Mount Milligan Titles in Good Standing to March 14, 2019 and beyond.

Title Number	Claim Name	Owner	Title Type	Title Sub Type	Map Number	Issue Date	Good To Date	Status	Area (ha)
512884		283374 (100%)	Mineral	Claim	093N	2005/MAY/18	2021/MAR/14	GOOD	369.6
512887		283374 (100%)	Mineral	Claim	093N	2005/MAY/18	2021/MAR/14	GOOD	295.8
512888		283374 (100%)	Mineral	Claim	093N	2005/MAY/18	2020/MAR/14	GOOD	370.0
512890		283374 (100%)	Mineral	Claim	093N	2005/MAY/18	2020/MAR/14	GOOD	296.1
512891		283374 (100%)	Mineral	Claim	093N	2005/MAY/18	2020/MAR/14	GOOD	554.4
512897		283374 (100%)	Mineral	Claim	093N	2005/MAY/18	2020/MAR/14	GOOD	444.3
512907		283374 (100%)	Mineral	Claim	093N	2005/MAY/18	2020/MAR/14	GOOD	424.9
512909		283374 (100%)	Mineral	Claim	093N	2005/MAY/18	2020/MAR/14	GOOD	351.1
512913		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	665.2
512919		283374 (100%)	Mineral	Claim	093N	2005/MAY/18	2020/MAR/14	GOOD	444.3
512921		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	518.4
512923		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	332.4
512924		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	665.2
512925		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	74.0
512927		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2021/MAR/14	GOOD	406.7
512930		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2021/MAR/14	GOOD	480.6
512931		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	480.3
512932		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	92.3
512933		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	517.1
512934		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	554.3
512935		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	443.7
512936		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	720.6
512937		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	517.3
512938		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	462.1
512939		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	462.1
512940		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	462.1
512941		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	665.9
512942		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	554.9
512943		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	370.1
512944		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	369.9
512945		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	462.3
512960		283374 (100%)	Mineral	Claim	093O	2005/MAY/18	2020/MAR/14	GOOD	203.4
521164	MILL 1	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2020/MAR/14	GOOD	332.9
521165	MILL 2	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2021/MAR/14	GOOD	443.9
521177	MILL 3	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2020/MAR/14	GOOD	444.1
521178	MILL 4	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2021/MAR/14	GOOD	277.5
521179	MILL 5	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2020/MAR/14	GOOD	462.8
521180	MILL 6	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2020/MAR/14	GOOD	370.2
521181	MILL 7	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2020/MAR/14	GOOD	351.7
521182	MILL 8	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2020/MAR/14	GOOD	444.4
521183	MILL 9	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2020/MAR/14	GOOD	370.4
521184	MILL 10	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2020/MAR/14	GOOD	296.3
521185	MILL 11	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2020/MAR/14	GOOD	444.5
521186	MILL 12	283374 (100%)	Mineral	Claim	093N	2005/OCT/14	2019/MAR/14	GOOD	444.5
521187	MILL 13	283374 (100%)	Mineral	Claim	093N	2005/OCT/14	2019/MAR/14	GOOD	407.6
521189	MILL 14	283374 (100%)	Mineral	Claim	093N	2005/OCT/14	2019/MAR/14	GOOD	370.6
521190	MILL 15	283374 (100%)	Mineral	Claim	093N	2005/OCT/14	2019/MAR/14	GOOD	463.0
521191	MILL 16	283374 (100%)	Mineral	Claim	093N	2005/OCT/14	2019/MAR/14	GOOD	463.0
521192	MILL 17	283374 (100%)	Mineral	Claim	093N	2005/OCT/14	2019/MAR/14	GOOD	370.4
521193	MILL 18	283374 (100%)	Mineral	Claim	093N	2005/OCT/14	2019/MAR/14	GOOD	370.6
521194	MILL 19	283374 (100%)	Mineral	Claim	093N	2005/OCT/14	2019/MAR/14	GOOD	463.3
521195	MILL 20	283374 (100%)	Mineral	Claim	093N	2005/OCT/14	2019/MAR/14	GOOD	463.3
521196	MILL 21	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2019/MAR/14	GOOD	444.6
521197	MILL 22	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2019/MAR/14	GOOD	444.6
521198	MILL 23	283374 (100%)	Mineral	Claim	093N	2005/OCT/14	2019/MAR/14	GOOD	463.4
521199	MILL 24	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2019/MAR/14	GOOD	463.4
521200	MILL 25	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2019/MAR/14	GOOD	463.4
521201	MILL 26	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2019/MAR/14	GOOD	185.4
521202	MILL 27	283374 (100%)	Mineral	Claim	093N	2005/OCT/14	2019/MAR/14	GOOD	445.0
521203	MILL 28	283374 (100%)	Mineral	Claim	093N	2005/OCT/14	2019/MAR/14	GOOD	445.0
521204	MILL 29	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2019/MAR/14	GOOD	445.0
521205	MILL 30	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2019/MAR/14	GOOD	445.0
521206	MILL 31	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2019/MAR/14	GOOD	463.6
521207	MILL 32	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2019/MAR/14	GOOD	370.9
521208	MILL 33	283374 (100%)	Mineral	Claim	093N	2005/OCT/14	2019/MAR/14	GOOD	445.2
521209	MILL 34	283374 (100%)	Mineral	Claim	093N	2005/OCT/14	2019/MAR/14	GOOD	445.2
521210	MILL 35	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2019/MAR/14	GOOD	445.2
521212	MILL 36	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2019/MAR/14	GOOD	333.9

521213	MILL 37	283374 (100%)	Mineral	Claim	093O	2005/OCT/14	2019/MAR/14	GOOD	167.0
524891	ARM	283374 (100%)	Mineral	Claim	093N	2006/JAN/08	2020/MAR/14	GOOD	463.0
524892	STRONG	283374 (100%)	Mineral	Claim	093N	2006/JAN/08	2020/MAR/14	GOOD	463.4
579598		283374 (100%)	Mineral	Claim	093O	2008/MAR/28	2019/MAR/14	GOOD	295.8
579599		283374 (100%)	Mineral	Claim	093O	2008/MAR/28	2019/MAR/14	GOOD	295.6
579600		283374 (100%)	Mineral	Claim	093O	2008/MAR/28	2019/MAR/14	GOOD	369.7
579602		283374 (100%)	Mineral	Claim	093O	2008/MAR/28	2019/MAR/14	GOOD	369.5
580741		283374 (100%)	Mineral	Claim	093O	2008/APR/08	2019/MAR/14	GOOD	443.0
580742		283374 (100%)	Mineral	Claim	093O	2008/APR/08	2019/MAR/14	GOOD	443.0
580743		283374 (100%)	Mineral	Claim	093O	2008/APR/08	2019/MAR/14	GOOD	406.1
580744		283374 (100%)	Mineral	Claim	093O	2008/APR/08	2019/MAR/14	GOOD	461.7
580745		283374 (100%)	Mineral	Claim	093O	2008/APR/08	2019/MAR/14	GOOD	461.7
580746		283374 (100%)	Mineral	Claim	093O	2008/APR/08	2019/MAR/14	GOOD	461.5
580747		283374 (100%)	Mineral	Claim	093O	2008/APR/08	2019/MAR/14	GOOD	461.7
580748		283374 (100%)	Mineral	Claim	093O	2008/APR/08	2019/MAR/14	GOOD	461.5
580749		283374 (100%)	Mineral	Claim	093O	2008/APR/08	2019/MAR/14	GOOD	461.5
580750		283374 (100%)	Mineral	Claim	093O	2008/APR/08	2019/MAR/14	GOOD	461.7
595146		283374 (100%)	Mineral	Claim	093N	2008/DEC/01	2021/MAR/14	GOOD	443.6
595163		283374 (100%)	Mineral	Claim	093N	2008/DEC/01	2021/MAR/14	GOOD	147.9
631503		283374 (100%)	Mineral	Lease	093N	2009/SEP/09	2018/SEP/09	GOOD	5,138.0
677107	FURB	283374 (100%)	Mineral	Claim	093N	2009/DEC/01	2020/MAR/14	GOOD	462.4
677785		283374 (100%)	Mineral	Claim	093N	2009/DEC/02	2020/MAR/14	GOOD	147.8
678524		283374 (100%)	Mineral	Claim	093K	2009/DEC/03	2019/MAR/14	GOOD	464.0
678527		283374 (100%)	Mineral	Claim	093K	2009/DEC/03	2019/MAR/14	GOOD	464.0
678536		283374 (100%)	Mineral	Claim	093J	2009/DEC/03	2019/MAR/14	GOOD	389.7
678564		283374 (100%)	Mineral	Claim	093J	2009/DEC/03	2019/MAR/14	GOOD	464.0
678583		283374 (100%)	Mineral	Claim	093J	2009/DEC/03	2019/MAR/14	GOOD	464.0
678588		283374 (100%)	Mineral	Claim	093J	2009/DEC/03	2019/MAR/14	GOOD	464.3
678603		283374 (100%)	Mineral	Claim	093K	2009/DEC/03	2019/MAR/14	GOOD	55.7
679483		283374 (100%)	Mineral	Claim	093N	2009/DEC/05	2020/MAR/14	GOOD	461.9
679484		283374 (100%)	Mineral	Claim	093N	2009/DEC/05	2020/MAR/14	GOOD	221.7
679485		283374 (100%)	Mineral	Claim	093N	2009/DEC/05	2020/MAR/14	GOOD	350.9
679505		283374 (100%)	Mineral	Claim	093N	2009/DEC/05	2020/MAR/14	GOOD	369.2
679506		283374 (100%)	Mineral	Claim	093N	2009/DEC/05	2020/MAR/14	GOOD	443.1
679509		283374 (100%)	Mineral	Claim	093N	2009/DEC/05	2020/MAR/14	GOOD	462.2
896789	MILL 9	283374 (100%)	Mineral	Claim	093N	2011/SEP/13	2019/MAR/14	GOOD	18.5
1030396	GD1	283374 (100%)	Mineral	Claim	093O	2014/AUG/19	2019/MAR/14	GOOD	369.2
1030397	GD2	283374 (100%)	Mineral	Claim	093O	2014/AUG/19	2019/MAR/14	GOOD	664.1
1030398	GD3	283374 (100%)	Mineral	Claim	093O	2014/AUG/19	2019/MAR/14	GOOD	1,106.9
1036881	DB1	283374 (100%)	Mineral	Claim	093N	2015/JUN/23	2020/MAR/14	GOOD	277.1
1036882	DB2	283374 (100%)	Mineral	Claim	093N	2015/JUN/23	2020/MAR/14	GOOD	110.8
1050265		283374 (100%)	Mineral	Claim	093O	2017/FEB/24	2019/MAR/14	GOOD	1,334.2

51,078.3

Appendix 3

Mineral Titles Online – Event 5684934



Print and Close

Cancel

Mineral Titles Online

Mineral Claim Exploration and Development Work/Expiry Date Change

Confirmation

Recorder: THOMPSON CREEK METALS
COMPANY INC. (283374)

Submitter: THOMPSON CREEK METALS
COMPANY INC. (283374)

Recorded: 2018/FEB/07

Effective: 2018/FEB/07

D/E Date: 2018/FEB/07

Confirmation

If you have not yet submitted your report for this work program, your technical work report is due in 90 days. The Exploration and Development Work/Expiry Date Change event number is required with your report submission. **Please attach a copy of this confirmation page to your report.** Contact Mineral Titles Branch for more information.

Event Number: 5684934

Work Type: Technical Work

Technical Items: Geological, Geophysical, PAC Withdrawal (up to 30% of technical work required)

Work Start Date: 2017/FEB/27

Work Stop Date: 2017/NOV/30

Total Value of Work: \$ 585780.65

Mine Permit No: 1300188

Summary of the work value:

Title Number	Claim Name/Property	Issue Date	Good To Date	New Good To Date	# of Days Forward	Area in Ha	Applied Work Value	Sub-mission Fee
512884		2005/MAY/18	2020/MAR/14	2021/MAR/14	365	369.63	\$ 7376.59	\$ 0.00
512887		2005/MAY/18	2020/MAR/14	2021/MAR/14	365	295.84	\$ 5904.04	\$ 0.00
512888		2005/MAY/18	2019/MAR/14	2020/MAR/14	366	369.98	\$ 5945.86	\$ 0.00
512890		2005/MAY/18	2019/MAR/14	2020/MAR/14	366	296.12	\$ 5200.24	\$ 0.00
512891		2005/MAY/18	2019/MAR/14	2020/MAR/14	366	554.45	\$ 9120.79	\$ 0.00
512897		2005/MAY/18	2019/MAR/14	2020/MAR/14	366	444.34	\$ 7803.14	\$ 0.00
512907		2005/MAY/18	2019/MAR/14	2020/MAR/14	366	424.90	\$ 6989.73	\$ 0.00
512909		2005/MAY/18	2019/MAR/14	2020/MAR/14	366	351.09	\$ 5775.56	\$ 0.00
512913		2005/MAY/18	2019/MAR/14	2020/MAR/14	366	665.24	\$ 10943.25	\$ 0.00
512919		2005/MAY/18	2019/MAR/14	2020/MAR/14	366	444.32	\$ 7802.77	\$ 0.00
512921		2005/MAY/18	2019/MAR/14	2020/MAR/14	366	518.37	\$ 9152.34	\$ 0.00
512923		2005/MAY/18	2019/MAR/14	2020/MAR/14	366	332.43	\$ 5869.36	\$ 0.00
512924		2005/MAY/18	2019/MAR/14	2020/MAR/14	366	665.17	\$ 11744.18	\$ 0.00
512925		2005/MAY/18	2019/MAR/14	2020/MAR/14	366	73.96	\$ 1305.86	\$ 0.00
512927		2005/MAY/18	2020/MAR/14	2021/MAR/14	365	406.70	\$ 8123.37	\$ 0.00
512930		2005/MAY/18	2020/MAR/14	2021/MAR/14	365	480.65	\$ 9600.51	\$ 0.00
512931		2005/MAY/18	2019/MAR/14	2020/MAR/14	366	480.34	\$ 8480.92	\$ 0.00
512932		2005/MAY/18	2019/MAR/14	2020/MAR/14	366	92.34	\$ 1630.38	\$ 0.00
512933		2005/MAY/18	2018/MAR/14	2020/MAR/14	731	517.13	\$ 16887.55	\$ 0.00
512934		2005/MAY/18	2018/MAR/14	2020/MAR/14	731	554.33	\$ 18102.29	\$ 0.00
512935		2005/MAY/18	2018/MAR/14	2020/MAR/14	731	443.67	\$ 14488.60	\$ 0.00
512936		2005/MAY/18	2018/MAR/14	2020/MAR/14	731	720.56	\$ 23530.60	\$ 0.00
512937		2005/MAY/18	2018/MAR/14	2020/MAR/14	731	517.35	\$ 16894.47	\$ 0.00
512938		2005/MAY/18	2018/MAR/14	2020/MAR/14	731	462.14	\$ 15091.53	\$ 0.00
512939		2005/MAY/18	2018/MAR/14	2020/MAR/14	731	462.14	\$ 15091.50	\$ 0.00
512940		2005/MAY/18	2018/MAR/14	2020/MAR/14	731	462.13	\$ 15091.47	\$ 0.00
512941		2005/MAY/18	2018/MAR/14	2020/MAR/14	731	665.85	\$ 21744.05	\$ 0.00
512942		2005/MAY/18	2018/MAR/14	2020/MAR/14	731	554.88	\$ 18120.02	\$ 0.00
512943		2005/MAY/18	2018/MAR/14	2020/MAR/14	731	370.07	\$ 12084.99	\$ 0.00
512944		2005/MAY/18	2018/MAR/14	2020/MAR/14	731	369.86	\$ 12078.19	\$ 0.00
512945		2005/MAY/18	2018/MAR/14	2020/MAR/14	731	462.32	\$ 15097.67	\$ 0.00
512960		2005/MAY/18	2018/MAR/14	2020/MAR/14	731	203.41	\$ 6642.70	\$ 0.00
521164	MILL 1	2005/OCT/14	2019/MAR/14	2020/MAR/14	366	332.89	\$ 5692.54	\$ 0.00
521165	MILL 2	2005/OCT/14	2020/MAR/14	2021/MAR/14	365	443.91	\$ 8863.88	\$ 0.00
521177	MILL 3	2005/OCT/14	2019/MAR/14	2020/MAR/14	366	444.09	\$ 7594.16	\$ 0.00

521178	MILL 4	2005/OCT/14	2020/MAR/14	2021/MAR/14	365	277.54	\$ 5541.89	\$ 0.00
521179	MILL 5	2005/OCT/14	2019/MAR/14	2020/MAR/14	366	462.76	\$ 7913.37	\$ 0.00
521180	MILL 6	2005/OCT/14	2019/MAR/14	2020/MAR/14	366	370.23	\$ 6331.04	\$ 0.00
521181	MILL 7	2005/OCT/14	2019/MAR/14	2020/MAR/14	366	351.72	\$ 6014.58	\$ 0.00
521182	MILL 8	2005/OCT/14	2019/MAR/14	2020/MAR/14	366	444.45	\$ 7600.31	\$ 0.00
521183	MILL 9	2005/OCT/14	2019/MAR/14	2020/MAR/14	366	370.37	\$ 6333.59	\$ 0.00
521184	MILL10	2005/OCT/14	2019/MAR/14	2020/MAR/14	366	296.30	\$ 5066.90	\$ 0.00
521185	MILL 11	2005/OCT/14	2018/MAR/14	2020/MAR/14	731	444.47	\$ 14267.76	\$ 0.00
521186	MILL 12	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	444.50	\$ 6667.44	\$ 0.00
521187	MILL 13	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	407.60	\$ 6113.97	\$ 0.00
521189	MILL 14	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	370.63	\$ 5559.48	\$ 0.00
521190	MILL 15	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	463.04	\$ 6945.56	\$ 0.00
521191	MILL 16	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	463.04	\$ 6945.57	\$ 0.00
521192	MILL 17	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	370.43	\$ 5556.47	\$ 0.00
521193	MILL 18	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	370.62	\$ 5559.32	\$ 0.00
521194	MILL 19	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	463.28	\$ 6949.14	\$ 0.00
521195	MILL 20	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	463.28	\$ 6949.14	\$ 0.00
521196	MILL 21	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	444.63	\$ 6669.48	\$ 0.00
521197	MILL 22	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	444.64	\$ 6669.53	\$ 0.00
521198	MILL 23	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	463.38	\$ 6950.63	\$ 0.00
521199	MILL 24	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	463.37	\$ 6950.61	\$ 0.00
521200	MILL 25	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	463.38	\$ 6950.66	\$ 0.00
521201	MILL 26	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	185.35	\$ 2780.27	\$ 0.00
521202	MILL 27	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	445.05	\$ 6675.68	\$ 0.00
521203	MILL 28	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	445.05	\$ 6675.71	\$ 0.00
521204	MILL 29	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	445.05	\$ 6675.71	\$ 0.00
521205	MILL 30	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	445.05	\$ 6675.74	\$ 0.00
521206	MILL 31	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	463.57	\$ 6953.48	\$ 0.00
521207	MILL 32	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	370.85	\$ 5562.78	\$ 0.00
521208	MILL 33	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	445.21	\$ 6678.09	\$ 0.00
521209	MILL 34	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	445.21	\$ 6678.11	\$ 0.00
521210	MILL 35	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	445.21	\$ 6678.15	\$ 0.00
521212	MILL 36	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	333.91	\$ 5008.57	\$ 0.00
521213	MILL 37	2005/OCT/14	2018/MAR/14	2019/MAR/14	365	166.95	\$ 2504.28	\$ 0.00
524891	ARM	2006/JAN/08	2019/MAR/14	2020/MAR/14	366	463.04	\$ 9281.58	\$ 0.00
524892	STRONG	2006/JAN/08	2019/MAR/14	2020/MAR/14	366	463.37	\$ 9288.29	\$ 0.00
579598		2008/MAR/28	2018/MAR/14	2019/MAR/14	365	295.75	\$ 4436.28	\$ 0.00
579599		2008/MAR/28	2018/MAR/14	2019/MAR/14	365	295.63	\$ 4434.41	\$ 0.00
579600		2008/MAR/28	2018/MAR/14	2019/MAR/14	365	369.69	\$ 5545.33	\$ 0.00
579602		2008/MAR/28	2018/MAR/14	2019/MAR/14	365	369.53	\$ 5543.00	\$ 0.00
580741		2008/APR/08	2018/MAR/14	2019/MAR/14	365	443.03	\$ 6645.46	\$ 0.00
580742		2008/APR/08	2018/MAR/14	2019/MAR/14	365	443.03	\$ 6645.45	\$ 0.00
580743		2008/APR/08	2018/MAR/14	2019/MAR/14	365	406.15	\$ 6092.23	\$ 0.00
580744		2008/APR/08	2018/MAR/14	2019/MAR/14	365	461.71	\$ 6925.59	\$ 0.00
580745		2008/APR/08	2018/MAR/14	2019/MAR/14	365	461.70	\$ 6925.49	\$ 0.00
580746		2008/APR/08	2018/MAR/14	2019/MAR/14	365	461.46	\$ 6921.94	\$ 0.00
580747		2008/APR/08	2018/MAR/14	2019/MAR/14	365	461.70	\$ 6925.49	\$ 0.00
580748		2008/APR/08	2018/MAR/14	2019/MAR/14	365	461.46	\$ 6921.93	\$ 0.00
580749		2008/APR/08	2018/MAR/14	2019/MAR/14	365	461.46	\$ 6921.90	\$ 0.00
580750		2008/APR/08	2018/MAR/14	2019/MAR/14	365	461.70	\$ 6925.47	\$ 0.00
595146		2008/DEC/01	2020/MAR/14	2021/MAR/14	365	443.63	\$ 8855.16	\$ 0.00
595163		2008/DEC/01	2020/MAR/14	2021/MAR/14	365	147.88	\$ 2951.72	\$ 0.00
677107	FURB	2009/DEC/01	2019/MAR/14	2020/MAR/14	366	462.42	\$ 7606.96	\$ 0.00
677785		2009/DEC/02	2019/MAR/14	2020/MAR/14	366	147.80	\$ 2431.35	\$ 0.00
678524		2009/DEC/03	2018/MAR/14	2019/MAR/14	365	464.02	\$ 6960.23	\$ 0.00
678527		2009/DEC/03	2018/MAR/14	2019/MAR/14	365	464.00	\$ 6960.04	\$ 0.00
678536		2009/DEC/03	2018/MAR/14	2019/MAR/14	365	389.75	\$ 5846.22	\$ 0.00
678564		2009/DEC/03	2018/MAR/14	2019/MAR/14	365	464.01	\$ 6960.21	\$ 0.00
678583		2009/DEC/03	2018/MAR/14	2019/MAR/14	365	464.03	\$ 6960.38	\$ 0.00
678588		2009/DEC/03	2018/MAR/14	2019/MAR/14	365	464.27	\$ 6964.07	\$ 0.00
678603		2009/DEC/03	2018/MAR/14	2019/MAR/14	365	55.66	\$ 834.95	\$ 0.00
679483		2009/DEC/05	2019/MAR/14	2020/MAR/14	366	461.95	\$ 7599.09	\$ 0.00
679484		2009/DEC/05	2019/MAR/14	2020/MAR/14	366	221.70	\$ 3647.03	\$ 0.00
679485		2009/DEC/05	2019/MAR/14	2020/MAR/14	366	350.94	\$ 5773.01	\$ 0.00
679505		2009/DEC/05	2019/MAR/14	2020/MAR/14	366	369.23	\$ 6073.95	\$ 0.00
679506		2009/DEC/05	2019/MAR/14	2020/MAR/14	366	443.13	\$ 7289.50	\$ 0.00
679509		2009/DEC/05	2019/MAR/14	2020/MAR/14	366	462.18	\$ 7603.00	\$ 0.00
896789	MILL 9	2011/SEP/13	2018/MAR/13	2019/MAR/14	366	18.48	\$ 323.96	\$ 0.00
1030396	GD1	2014/AUG/19	2018/MAR/14	2019/MAR/14	365	369.15	\$ 3691.53	\$ 0.00
1030397	GD2	2014/AUG/19	2018/MAR/14	2019/MAR/14	365	664.14	\$ 6641.35	\$ 0.00
1030398	GD3	2014/AUG/19	2018/MAR/14	2019/MAR/14	365	1106.89	\$ 11068.88	\$ 0.00
1036881	DB1	2015/JUN/23	2019/MAR/14	2020/MAR/14	366	277.05	\$ 2772.64	\$ 0.00
1036882	DB2	2015/JUN/23	2019/MAR/14	2020/MAR/14	366	110.79	\$ 1108.77	\$ 0.00
1050265		2017/FEB/24	2018/FEB/24	2019/MAR/14	383	1334.17	\$ 6999.84	\$ 0.00

Financial Summary:**Total applied work value:** \$ 832221.79

PAC name: Thompson Creek Metals Company Inc.
Debited PAC amount: \$ 246441.14
Credited PAC amount: \$ 0

Total Submission Fees: \$ 0.0**Total Paid:** **\$ 0.0**

Please print this page for your records.

The event was successfully saved.

Click [here](#) to return to the Main Menu.

Appendix 4

Computer Software List

1. Project locations were accurately sited using a Trimble GPS system. Data input and output functions used “Trimble Geomatics Office”, version 1.60.
2. Many plotting and drafting functions were done with the Autodesk – “Autocad 2013” program.
3. General report and documentation has been done using the “Microsoft Office Professional Plus 2013 Suite”. (Word, Excel, Outlook)
4. Document PDF file creation and edits have been done using Nuance “PDF Converter Professional 6.0”.
5. PDF document review and collaboration have also used the Adobe Systems Inc, “Adobe Reader” DC (18.009.20050).
6. Simple text data file edits and review used the Helios Software Solutions – “TextPad” program, version 5.4.2.
7. Map GIS and coordinate translations were done with “MapInfo Discover” Bundle 2017.
8. Regional and detailed locations and imagery were plotted from “Google Earth”, version 6.2.2.6613.
9. Screen Captures completed with Techsmith SnagIt version 9.1.3.
10. Geosoft Oasis Montage version 9.3.
11. GemLink Software for magnetometers version 5.4.
12. Additional GIS Mapping with Blue Marble - Global Mapper version 16.1.3 software.

Appendix 5

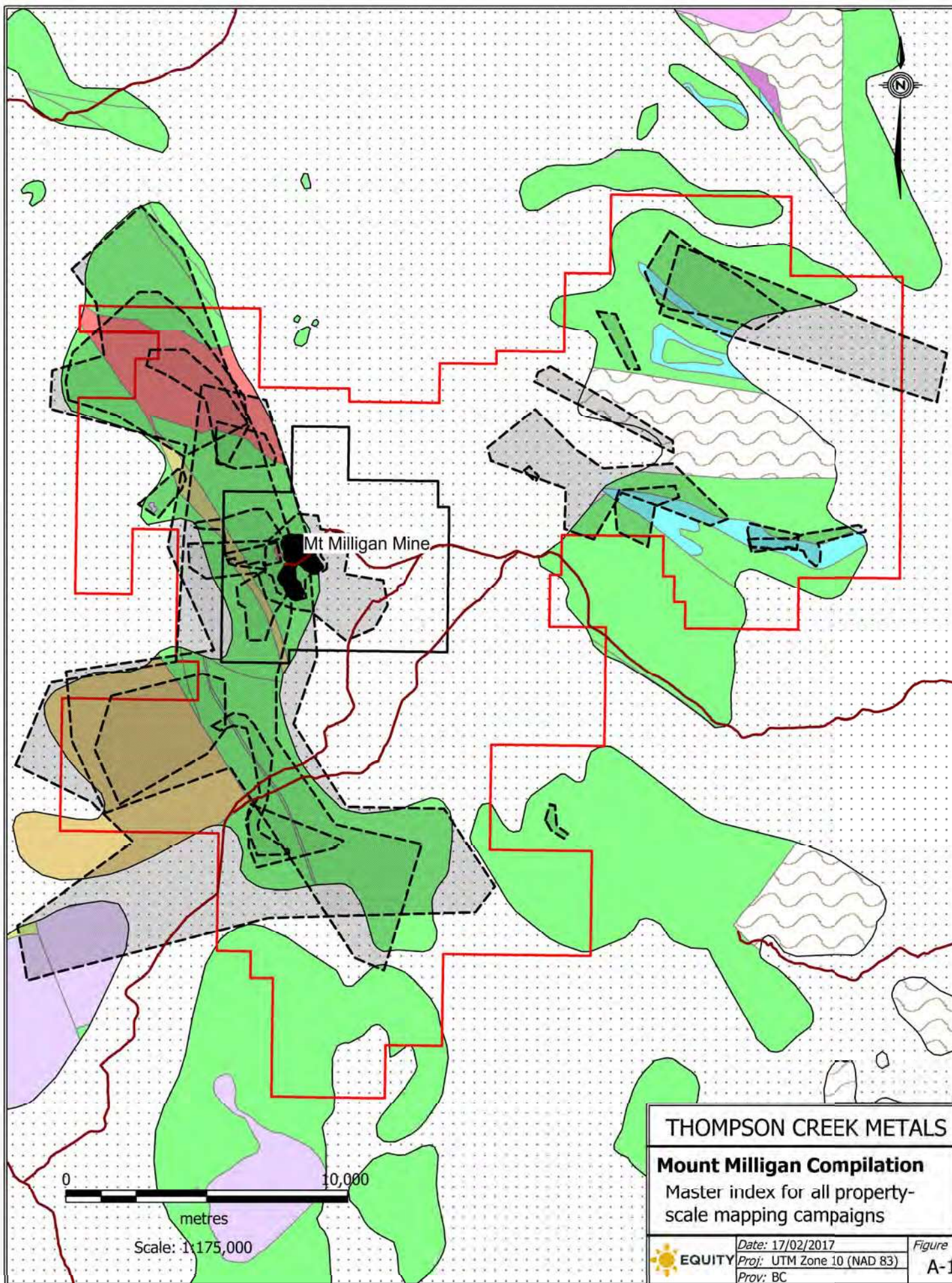
Program Expenditures

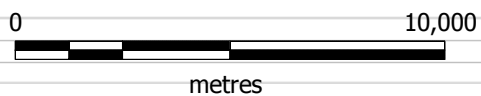
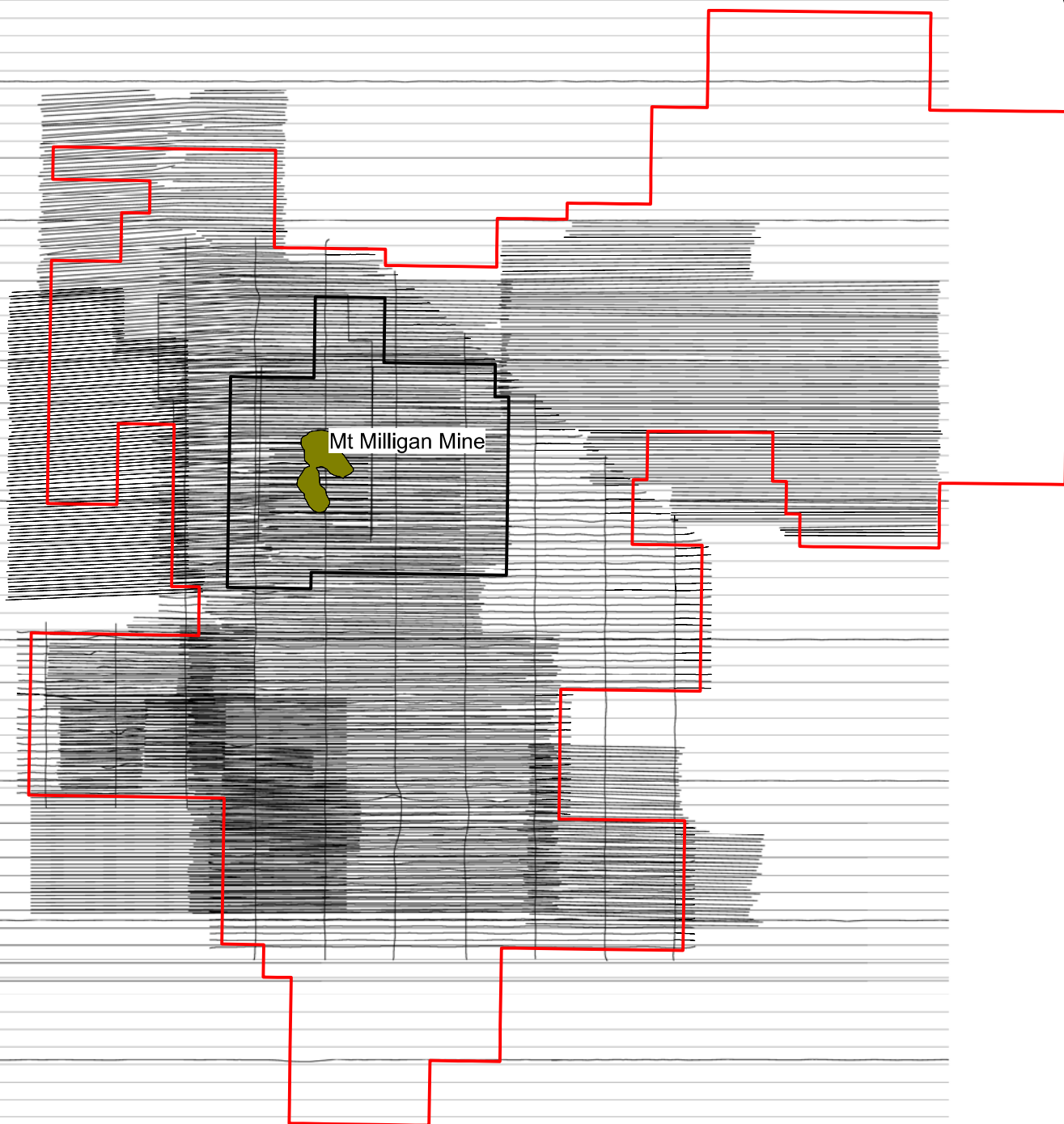
MtM Compilation					
Equity Exploration Consultants					
Invoice					
	6733			\$6,569.92	
	6745			\$23,064.72	
	6757			\$13,135.92	
	6766			\$3,136.00	
	6779			\$493.92	
	6792			\$2,898.00	
					\$49,298.48
MtM Field Programs					
Geophysical Survey & KC Prospecting					
Management	M.Pond @				
	\$750/day	13 days	\$9,750.00	\$9,750.00	
	P.Jago @ \$750/day	13 days	\$9,750.00	\$9,750.00	
PicachoEx LLC					
Invoice					
17-15					
	5 days @US\$1200	\$6,000.00	US/CAD	\$7,500.00	\$7,500.00
	expenses	\$1,534.00	@1.25	\$1,917.50	\$1,917.50
Walcott Geophysics					
IP surevey P-1	Inv. 5507			\$176,375.00	
mag survey	Inv. 5508			\$72,500.00	
IP surevey P-2	Inv. 5509			\$196,168.91	
Credit note	5516			-\$5,336.91	
					\$439,707.00
MtM Exploration Project Expenses					
Milligan Camp	rate: \$100/day				
TCM		26 days	\$2,600.00		
PicachoEx LLC		4 days	\$400.00		
Walcott		571 days	\$57,100.00		
					\$60,100.00
Truck Rental	6 mo June-Dec @ \$1250/mo		\$7,500.00	\$7,500.00	
KC BV Lab costs	inv VANI284902		\$149.19		
	inv VANI289081		\$108.48		
					\$257.67
Total:					\$585,780.65

Worker Detail				event 5684934													
MtM Data Compilation	First Name	Last Name	Role	Rate	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total Days
Equity Exploration Consultants					days	days	days	days	days	days	days	days	days	days	days	days	
	Henry	Awmack	Senior Geologist	\$700/d	1.50												1.50
	Ron	Voordouw	Project Geologist	\$700/d	6.88	15.75	5.88	4.00	0.63								33.14
	Daniel	Guestrin	Geologist	\$575/d		5.88											5.88
	Scott	Parker	GIS/Logisitcs	\$75/hr		0.50											0.50
	Agata	Zurek	GIS	\$75/hr		9.81	1.50										11.31
	Cooper	Campbell	Geologist	\$575/d			6.50										6.50
	Jules	Lajoie	Senior Geologist	\$700/d			4.25										4.25
	Alexander	Nielson	Geologist	\$575/d						4.50							4.50
MtM																	
	Michael	Pond	Exploration Geologist	\$750/d	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	13.00
	Paul	Jago	Exploration Manager	\$750/d	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	13.00
Ground IP Survey	Field Survey Dates Worked																
Walcott Geophysics	First Name	Last Name			From	To		From	To								
	A.	Walcott	Geophysicist/Manager														
	J.	Cornock	Geophysicist		7-Sep-17	19-Oct-17					43						43
	I.	Jackisch	Geophysicist		16-Aug-17	13-Sep-17					29						29
	P.	Young	Geophysicist		31-Oct-17	18-Nov-17					19						19
	W.	Kennedy	Geologist		15-Aug-17	4-Sep-17 and		23-Oct-17	17-Nov-17		21	26					47
	C.	Bragg	Geophysical Operator		3-Oct-17	7-Oct-17 and		31-Oct-17	18-Nov-17		5	19					24
	C.	Dickey	Geophysical Operator		7-Sep-17	7-Oct-17					31						31
	R.	Ewen	Geophysical Operator		7-Sep-17	7-Oct-17					31						31
	T.	Kocan	Geophysical Operator		3-Oct-17	7-Oct-17 and		17-Oct-17	18-Nov-17		5	33					38
	B.	Lajeunesse	Geophysical Operator		7-Nov-17	17-Nov-17					11						11
	N.	Loubser	Geophysical Operator		10-Oct-17	8-Nov-17					30						30
	S.	Oliver	Geophysical Operator		26-Aug-17	5-Oct-17 and		30-Oct-17	8-Nov-17		41	10					51
	N.	Russell	Geophysical Operator		14-Aug-17	4-Oct-17 and		19-Oct-17	17-Nov-17		52	30					82
	J.	Babcock	Geophysical Assistant		7-Nov-17	17-Nov-17					11						11
	M.	Bizier	Geophysical Assistant		10-Oct-17	30-Oct-17					21						21
	C.	Elzinga	Geophysical Assistant		15-Aug-17	24-Aug-17					10						10
	B.	Hall	Geophysical Assistant		10-Oct-17	1-Nov-17					23						23
	M.	Labada	Geophysical Assistant		13-Sep-17	23-Sep-17 and		1-Oct-17	1-Nov-17		11	32					43
	B.	Orton	Geophysical Assistant		13-Sep-17	23-Sep-17 and		1-Oct-17	23-Oct-17		11	23					34
	Z.	Podolan	Geophysical Assistant		10-Oct-17	17-Oct-17					8						8
	J.	Taylor	Geophysical Assistant		10-Oct-17	1-Nov-17					23						23
											436	173	609				
Historic Drill Core Review																	
PicachoEx LLC	First Name	Last Name		Rate	From	To											
	Richard	Tosdal	Consultant-Porphyry Specialist	US\$1200/d	28-Aug-17	31-Aug-17					4						4
																	Total Man Days
																	706.58

Appendix 6

Historic Data Compilation – Master Index Maps





Scale: 1:175,000

THOMPSON CREEK METALS

Mount Milligan Compilation

Master index for all airborne
geophysical surveys

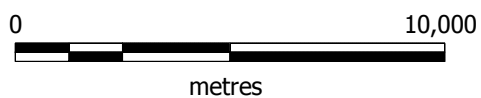
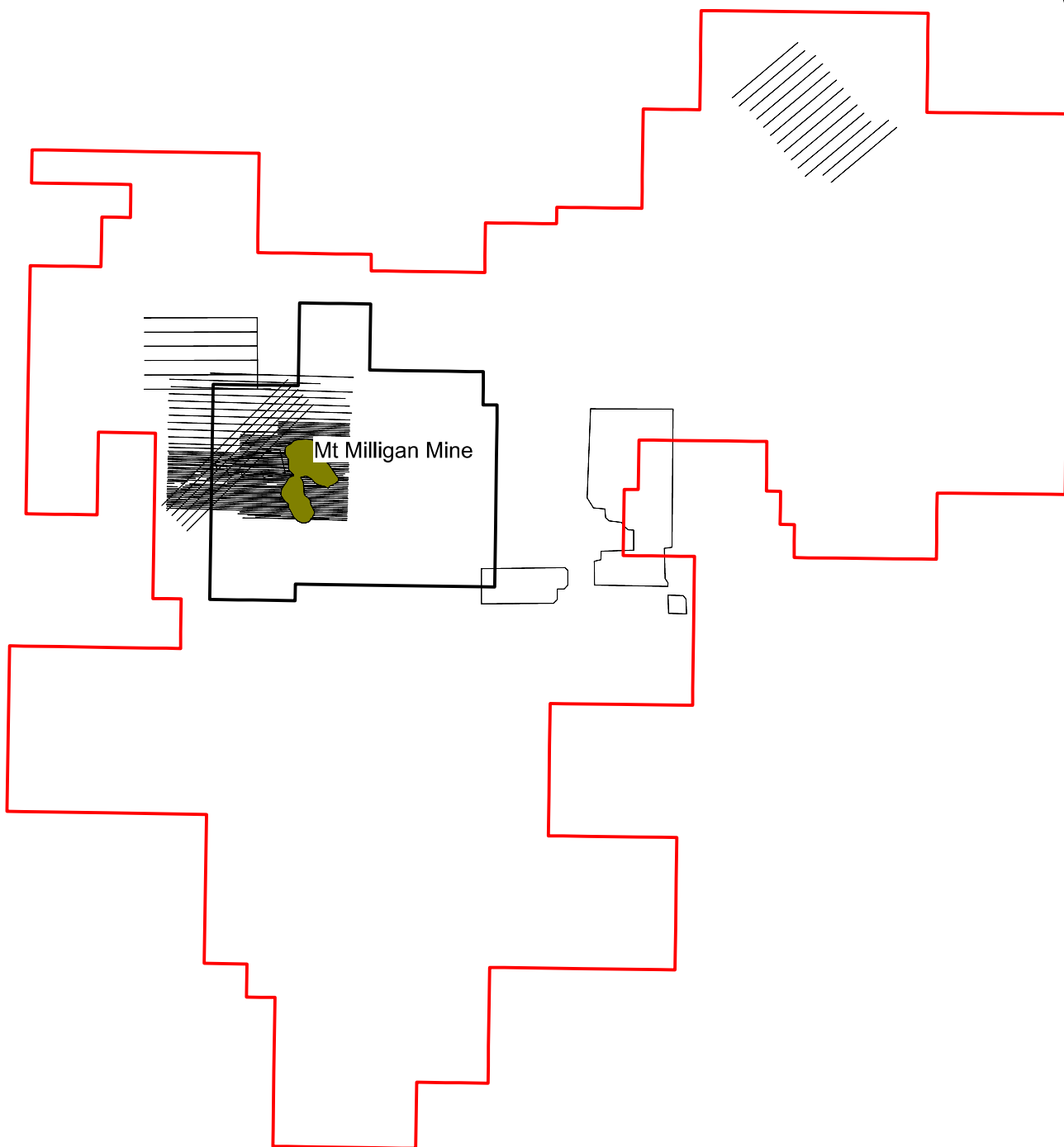


Date: 17/02/2017

Proj: UTM Zone 10 (NAD 83)

Prov: BC

A-2



Scale: 1:175,000

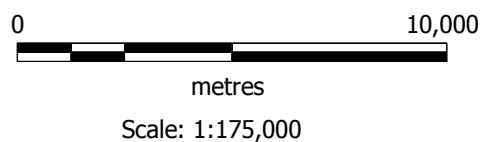
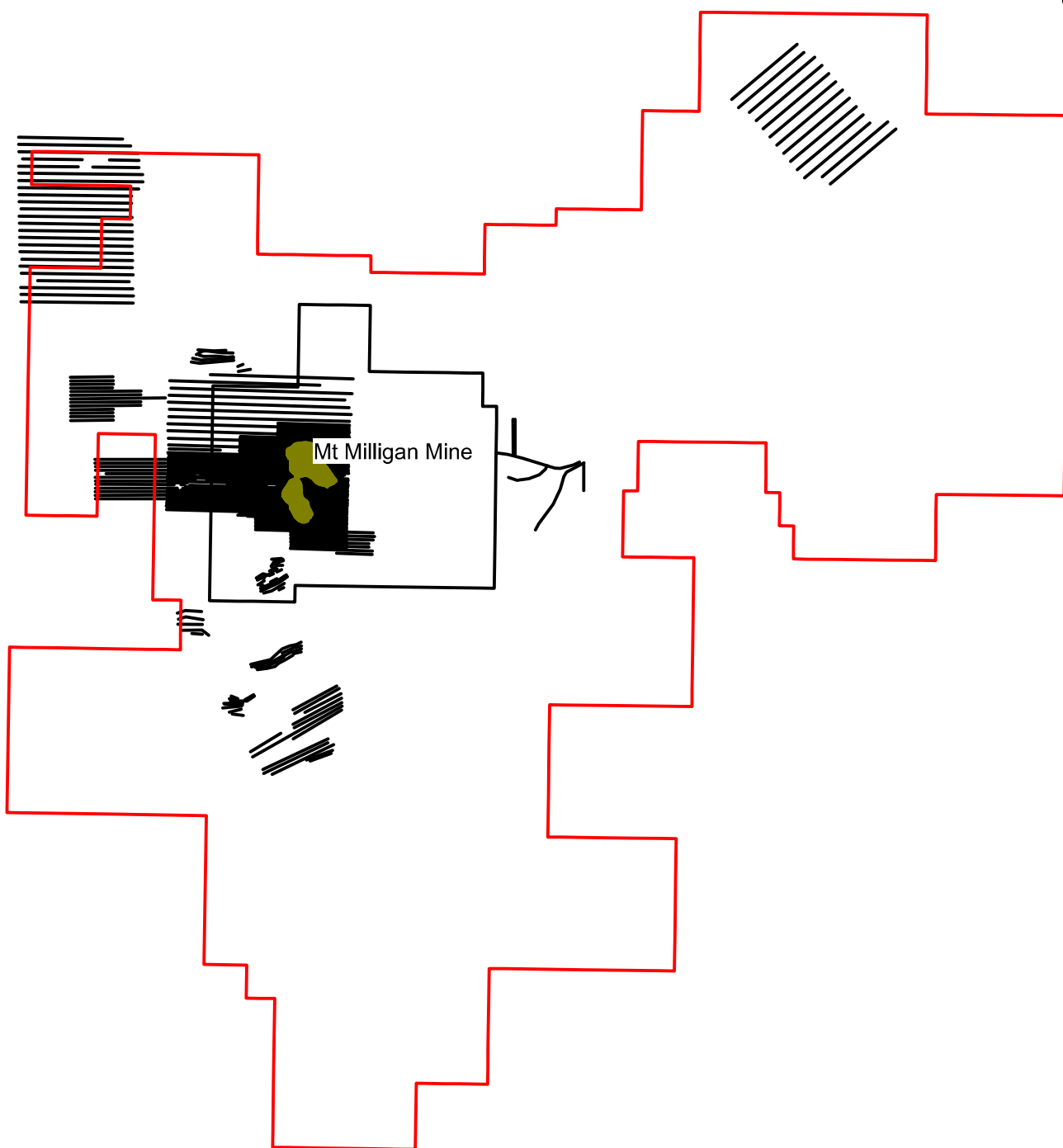
THOMPSON CREEK METALS

Mount Milligan Compilation

Master index for all
ground IP surveys



Date: 17/02/2017
Proj: UTM Zone 10 (NAD 83)
Prov: BC



THOMPSON CREEK METALS

Mount Milligan Compilation

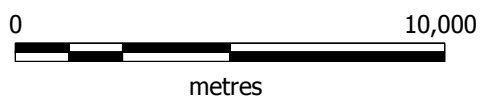
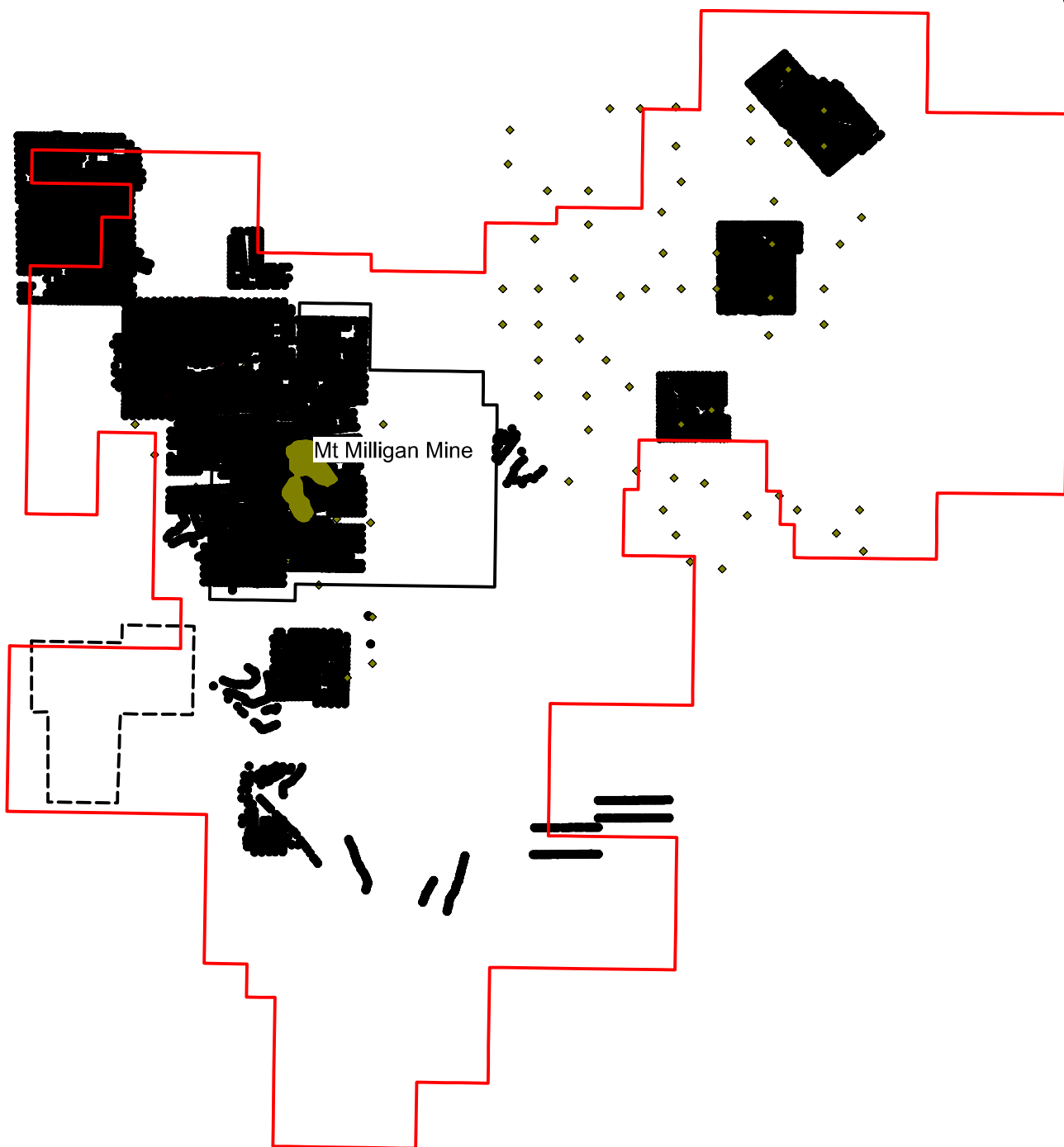
Master index for all ground
magnetic surveys



Date: 17/02/2017

Proj: UTM Zone 10 (NAD 83)

Prov: BC



Scale: 1:175,000

THOMPSON CREEK METALS

Mount Milligan Compilation

Master index for all soil
sampling surveys

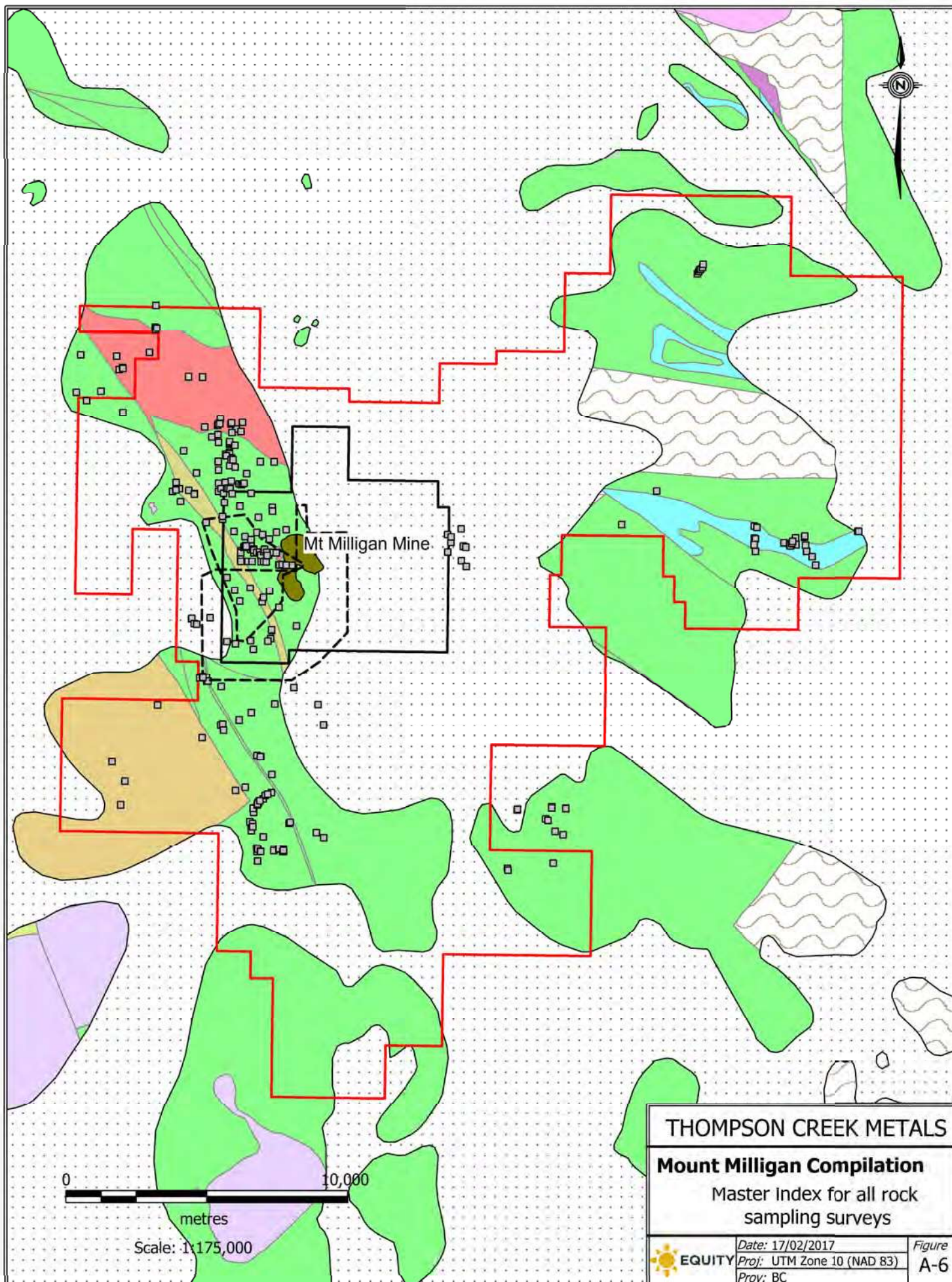


Date: 17/02/2017

Proj: UTM Zone 10 (NAD 83)

Prov: BC

A-5



Appendix 7

Bureau Veritas Certificate of Analysis (12 rock samples)



BUREAU VERITAS MINERAL LABORATORIES
Canada

www.bureauveritas.com/um

Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: **Thompson Creek Metals**
177 Victoria Street, Suite 100
Prince George British Columbia V2L 5R8 Canada

Submitted By: Michael Pond
Receiving Lab: Canada-Vancouver
Received: September 20, 2017
Report Date: December 13, 2017
Page: 1 of 2

CERTIFICATE OF ANALYSIS

VAN17002127.2

CLIENT JOB INFORMATION

Project: MtM:KC
Shipment ID:
P.O. Number MtM:_PO032393
Number of Samples: 12

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 60 days

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
BAT01	1	Batch charge of <20 samples			VAN
PRP70-250	12	Crush, split and pulverize 250 g rock to 200 mesh			VAN
MA300	12	4 Acid digestion ICP-ES analysis	0.25	Completed	VAN
DRPLP	12	Warehouse handling / disposition of pulps			VAN
DRRJT	12	Warehouse handling / Disposition of reject			VAN
FA430	12	Lead Collection Fire - Assay Fusion - AAS Finish	30	Completed	VAN
EN002	12	Environmental disposal charge-Fire assay lead waste			VAN

ADDITIONAL COMMENTS

Version 2 : FA430 included.

Invoice To: Thompson Creek Metals
177 Victoria Street, Suite 100
Prince George British Columbia V2L 5R8
Canada

CC: Paul Jago



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Thompson Creek Metals**
177 Victoria Street, Suite 100
Prince George British Columbia V2L 5R8 Canada

Project: MtM:KC
Report Date: December 13, 2017

Page: 2 of 2

Part: 1 of 2

CERTIFICATE OF ANALYSIS

VAN17002127.2

	Method Analyte Unit MDL	WGHT	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	2	2	5	2	0.5	2	2	5	0.01	5	20	2	2	0.4	5	5	2	0.01	0.002
16176	Rock	3.07	4	111	12	58	1.0	15	21	1322	5.46	22	68	<2	765	<0.4	<5	<5	193	6.41	0.199
16177	Rock	2.68	4	163	9	24	<0.5	5	5	63	6.17	10	<20	<2	184	<0.4	<5	<5	152	0.25	0.255
16178	Rock	3.94	4	221	<5	58	0.6	110	26	1699	5.85	14	70	<2	716	<0.4	<5	<5	183	10.03	0.175
16179	Rock	2.54	172	73	11	43	0.6	66	32	1201	7.43	28	<20	4	411	<0.4	<5	<5	273	10.09	0.093
16180	Rock	2.61	<2	181	7	28	1.9	42	10	649	6.07	30	<20	<2	431	<0.4	<5	<5	315	5.68	0.148
16181	Rock	3.06	3	393	10	25	0.8	21	20	920	5.07	9	59	2	915	<0.4	<5	<5	249	6.24	0.226
16182	Rock	2.91	41	1284	16	132	2.2	<2	27	2449	7.88	10	<20	<2	423	<0.4	<5	<5	187	5.74	0.417
16183	Rock	2.89	<2	1459	6	71	2.9	42	27	1290	6.53	41	64	<2	690	<0.4	<5	<5	238	7.23	0.158
16184	Rock	2.32	9	118	7	69	0.7	34	26	2018	6.10	8	<20	<2	345	<0.4	<5	<5	292	11.91	0.208
16401	Rock	0.49	<2	3610	11	110	8.1	49	20	1241	6.25	231	<20	<2	252	<0.4	7	<5	356	3.47	0.144
16402	Rock	0.80	<2	953	8	55	2.3	41	36	1011	6.68	10	<20	<2	331	<0.4	<5	<5	242	7.42	0.099
16403	Rock	0.41	5	764	7	26	0.8	12	75	538	10.20	35	35	<2	600	<0.4	<5	<5	181	3.65	0.210



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Thompson Creek Metals**
177 Victoria Street, Suite 100
Prince George British Columbia V2L 5R8 Canada

Project: MtM:KC
Report Date: December 13, 2017

Page: 2 of 2

Part: 2 of 2

CERTIFICATE OF ANALYSIS

VAN17002127.2

	Method Analyte Unit MDL	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	FA430
		La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc	S	Au
		ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		2	2	0.01	1	0.01	0.01	0.01	0.01	4	2	2	2	2	1	1	0.1	0.005
16176	Rock	10	20	1.63	1428	0.48	9.14	3.14	2.21	<4	47	<2	17	8	1	13	1.1	0.055
16177	Rock	2	4	0.10	46	0.10	8.15	0.41	8.58	<4	25	5	7	<2	2	7	3.0	0.454
16178	Rock	10	177	2.83	222	0.42	8.67	2.57	0.61	<4	56	<2	16	4	<1	19	1.7	0.009
16179	Rock	6	232	4.66	176	0.41	7.05	2.00	0.52	<4	21	<2	14	3	<1	46	2.0	0.025
16180	Rock	11	143	3.48	232	0.54	8.47	3.74	0.58	<4	31	3	17	4	<1	31	1.8	0.026
16181	Rock	15	39	1.92	514	0.48	9.15	2.91	3.13	<4	28	3	17	6	2	21	1.2	0.006
16182	Rock	23	<2	1.46	1370	0.73	9.49	1.14	4.65	4	21	<2	35	9	2	15	0.3	0.157
16183	Rock	8	92	2.92	1514	0.45	9.18	2.63	2.62	<4	34	<2	16	6	1	25	0.3	0.123
16184	Rock	8	84	3.99	421	0.44	7.63	1.20	1.77	<4	42	<2	17	4	1	25	1.3	<0.005
16401	Rock	10	137	4.17	633	0.53	7.78	2.42	2.92	<4	20	3	17	4	<1	39	1.3	0.189
16402	Rock	2	52	4.74	451	0.37	8.53	1.68	2.49	<4	19	<2	12	<2	<1	32	1.6	0.029
16403	Rock	3	9	1.67	38	0.49	7.96	3.26	2.64	<4	43	<2	15	6	<1	14	5.2	0.015



Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Project: MtM:KC
Report Date: December 13, 2017

Page: 1 of 1 Part: 1 of 2

QUALITY CONTROL REPORT

VAN17002127.2

	Method Analyte Unit MDL	WGHT	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca	P
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	2	2	5	2	0.5	2	2	5	0.01	5	20	2	2	0.4	5	5	2	0.01	0.002
Pulp Duplicates																					
16184	Rock	2.32	9	118	7	69	0.7	34	26	2018	6.10	8	<20	<2	345	<0.4	<5	<5	292	11.91	0.208
REP 16184	QC																				
Core Reject Duplicates																					
16178	Rock	3.94	4	221	<5	58	0.6	110	26	1699	5.85	14	70	<2	716	<0.4	<5	<5	183	10.03	0.175
DUP 16178	QC		5	223	8	56	0.7	113	27	1729	5.94	<5	71	<2	727	<0.4	<5	<5	184	10.23	0.174
Reference Materials																					
STD OREAS25A-4A	Standard		2	30	30	47	0.8	48	7	524	6.96	12	<20	14	49	<0.4	<5	<5	163	0.29	0.052
STD OREAS45E	Standard		3	806	24	51	<0.5	499	61	586	26.30	22	<20	10	15	<0.4	<5	<5	343	0.05	0.035
STD OXC145	Standard																				
STD OXH139	Standard																				
STD OXN134	Standard																				
STD OREAS45E Expected			2.4	780	18.2	46.7	0.311	454	57	570	24.12	16.3	2.41	12.9	15.9		1		322	0.065	0.034
STD OREAS25A-4A Expected			2.55	33.9	26.6	44.4		45.8	8.2	500	6.7	10.7	2.94	15.8	48.5		0.67	0.35	163	0.283	0.0495
STD OXN134 Expected																					
STD OXC145 Expected																					
STD OXH139 Expected																					
BLK	Blank		<2	<2	<5	<2	<0.5	<2	<2	<5	<0.01	<5	<20	<2	<2	<0.4	<5	<5	<2	<0.01	<0.002
BLK	Blank																				
Prep Wash																					
ROCK-VAN	Prep Blank		<2	5	8	44	<0.5	<2	4	785	2.26	7	<20	2	205	<0.4	<5	<5	41	1.66	0.044
ROCK-VAN	Prep Blank		<2	4	7	43	<0.5	<2	4	777	2.25	5	<20	<2	203	<0.4	<5	<5	41	1.65	0.044



Bureau Veritas Commodities Canada Ltd.

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QUALITY CONTROL REPORT

VAN17002127.2

	Method Analyte Unit MDL	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	MA300	FA430
		La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be	Sc	S	Au
		ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		2	2	0.01	1	0.01	0.01	0.01	0.01	4	2	2	2	2	2	1	1	0.1
Pulp Duplicates																		
16184	Rock	8	84	3.99	421	0.44	7.63	1.20	1.77	<4	42	<2	17	4	1	25	1.3	<0.005
REP 16184	QC	<0.005																
Core Reject Duplicates																		
16178	Rock	10	177	2.83	222	0.42	8.67	2.57	0.61	<4	56	<2	16	4	<1	19	1.7	0.009
DUP 16178	QC	10	185	2.86	220	0.43	8.82	2.57	0.62	<4	54	<2	16	4	<1	19	1.8	0.008
Reference Materials																		
STD OREAS25A-4A	Standard	22	113	0.35	162	1.02	9.41	0.13	0.54	<4	165	4	10	22	<1	14	<0.1	
STD OREAS45E	Standard	8	1034	0.16	268	0.56	6.68	0.05	0.36	<4	97	3	7	8	<1	90	<0.1	
STD OXC145	Standard	0.208																
STD OXH139	Standard	1.255																
STD OXN134	Standard	7.761																
STD OREAS45E Expected		11	979	0.156	252	0.559	6.78	0.059	0.324	1.07	97	1.32	8.28	6.8	0.62	93	0.046	
STD OREAS25A-4A Expected		21.8	120	0.327	151	0.977	8.87	0.134	0.5	2	155	4.2	10.5	20.9	0.93	13.7	0.047	
STD OXN134 Expected		7.667																
STD OXC145 Expected		0.212																
STD OXH139 Expected		1.312																
BLK	Blank	<2	<2	<0.01	<1	<0.01	<0.01	<0.01	<0.01	<4	<2	<2	<2	<2	<1	<1	<0.1	
BLK	Blank	<0.005																
Prep Wash																		
ROCK-VAN	Prep Blank	13	2	0.63	727	0.23	7.07	3.55	1.48	<4	53	<2	16	7	1	7	<0.1	<0.005
ROCK-VAN	Prep Blank	13	<2	0.63	736	0.22	7.22	3.64	1.50	<4	54	<2	16	6	1	7	<0.1	<0.005

Appendix 8

Peter E. Walcott & Associates Ltd. –
Induced Polarization & Ground Magnetic Survey Report
Mount Milligan Mine, March 2018

**A REPORT
ON
INDUCED POLARIZATION & GROUND MAGNETIC
SURVEYING**

**MOUNT MILLIGAN MINE
FT. ST. JAMES AREA, BRITISH COLUMBIA**

**OMINECA M.D.
55° 7' N, 124° 02' W
NTS 93N/01**

Claims:

**512897,512919,512921,521165,521177,521181,
521186,521187,521189,521196,521198,
521199,524891,524892, Mining Lease 631503**

**Work Dates:
August 15th – November 18th, 2017**

**FOR
THOMPSON CREEK METALS CO INC.
A Subsidiary of Centerra Gold**

PRINCE GEORGE, BRITISH COLUMBIA

BY

**ALEXANDER WALCOTT, B.Sc
PETER E. WALCOTT, P. Eng.**

**PETER E. WALCOTT & ASSOCIATES LIMITED
Coquitlam, British Columbia**

MARCH 2018

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GEOLOGY.....	9
SURVEY SPECIFICATIONS.....	10
DISCUSSION OF RESULTS.....	13
SUMMARY, CONCLUSION AND RECOMMENDATIONS.....	22

APPENDIX I

Personnel Employed on Project
Cost Statement
Certification

ACCOMPANYING MAPS

Claim and Line Location Map	Scale 1:20,000
IP Pseudo Sections & 2D Inverted Sections L9000N, L9400N, L9800N, L10200N, L10600N, L11000N, L11400N, L11800, L12200N, L12600N, L13000N, L13400N, L13800N, L14200N, L14600N, L15000N, L15400N, L15800N, L16075N, L16600N, L6108600N, L6109800N, L6110200	Scale 1:10,000
Filtered Plan Map – Grid 1 Contours of Apparent Chargeability (mV/V) Contours of Apparent Resistivity (ohm-m)	Scale 1:10,000
Contours of Total Field Intensity (nT) Block 1 & 2	Scale 1:10,000

INTRODUCTION.

Between August 15th and November 18th, 2017 Peter E. Walcott & Associates Limited undertook induced polarization and ground magnetic surveying over parts of the Mount Milligan Mine property for Thompson Creek Metals Inc.

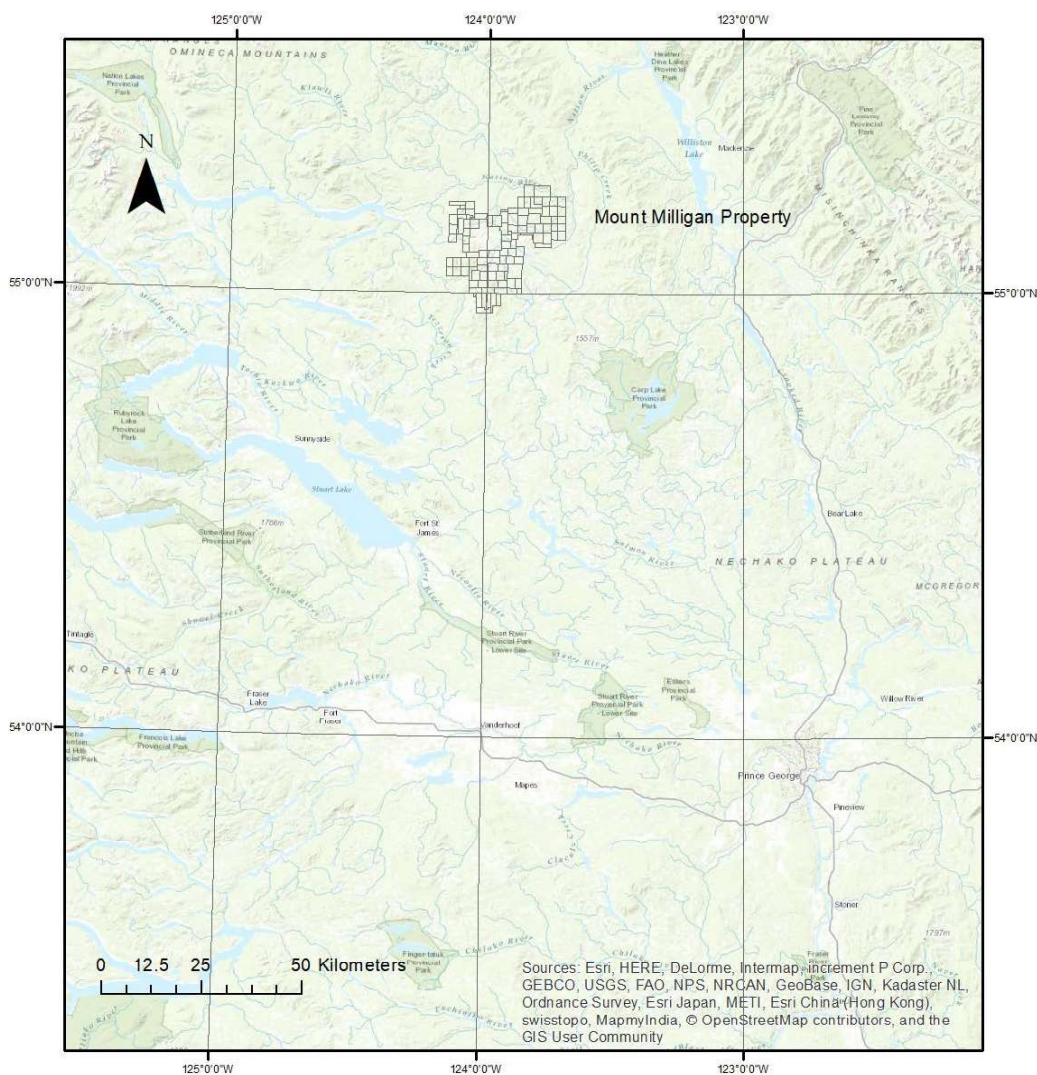
The survey consisted of some 68.5-line kilometers of induced polarization, carried out on 23 east-west traverses, with a nominal line spacing between 400 meters utilizing a 100-meter a-spacing and measuring the 1st to 10th separations. For this some 74.2 kilometers of lines were established with line cutting carried in and through areas of thick deadfall.

In addition to the induced polarization survey, a ground magnetic survey was also carried out, with some 310 line kilometers of surveying completed on 121 east-west orientated lines utilizing a nominal line separation of some 100 m.

PROPERTY LOCATION AND ACCESS.

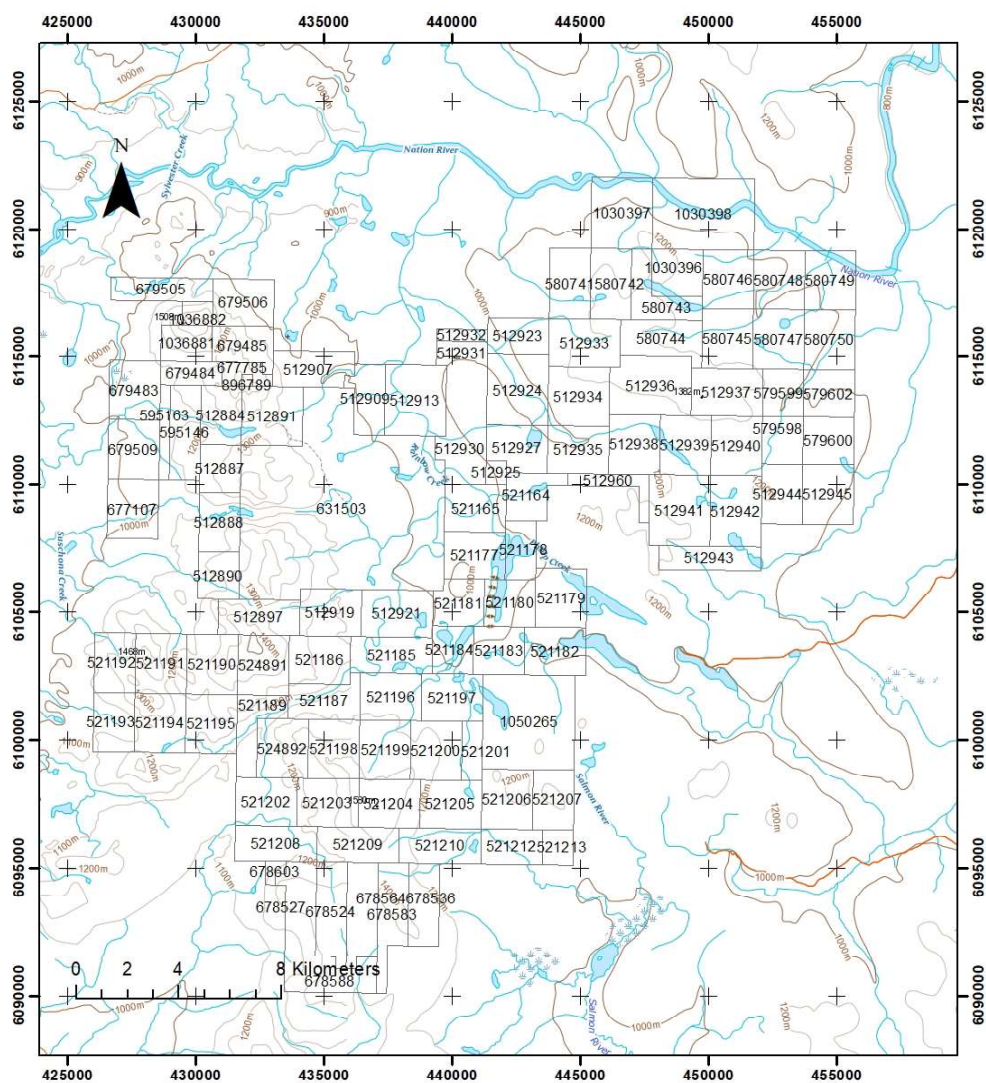
The Mount Milligan Mine is located some 150 kilometres northwest of the Prince George, British Columbia.

Access to the property can be gained from the community of Fort St. James via the North Road, and then at approximately kilometer 57 turning easterly onto the Rainbow road which passed through the property.



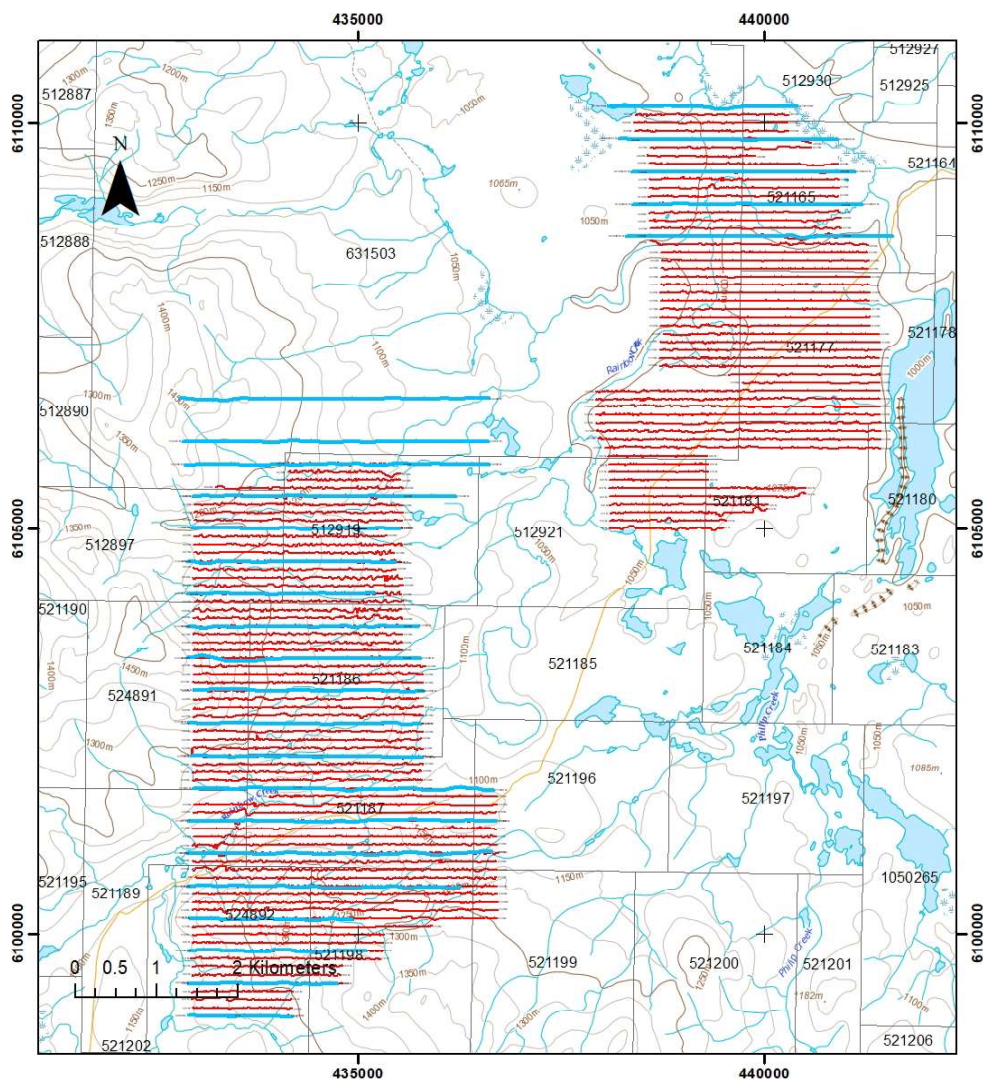
Property Location Map

PROPERTY LOCATION AND ACCESS con't



Claim Map

PROPERTY LOCATION AND ACCESS con't



Claim and Line Location Map
Blue- 2017 IP Lines Red-2017 Ground Mag Lines

PURPOSE.

The 2017 ground geophysical program as designed to follow-up on several target areas identified during a compilation exercise, conducted earlier in the year, to locate additional zones of potential mineralization proximal to the Mount Milligan mine site.

HISTORICAL WORK.

Areas in the Mount Milligan camp have be prospected since the late 1930's, with the first recorded exploration work in the area dated to the early 1970's.

Since that time numerous exploration programs have been conducted, both prior and post discovery of the Mount Milligan deposit.

For further information the reader is referred to the Government of British Columbia Aris website.

GEOLOGY

The Milligan property lies in the northern part of the Upper Triassic to Lower Jurassic Quesnel Trough – Quesnellia Terrane –, a Mesozoic island arc terrane juxtaposed against the ancestral North American continental margin.

It hosts numerous alkalic porphyry copper-gold deposits, from southern to northern B.C. The deposits in this region of the Quesnel Trough area are associated with potassically altered diorite to syenite plugs and stocks and coeval andesitic volcanic rocks, mainly along the flanks of the Hogem batholith.

Mount Milligan is the most significant mineral occurrence known. It was discovered in the late 1980s and lies immediately to the east of the project.

The property is dominantly covered by Upper Triassic Rainbow Creek, Inzana Lake and Witch Lake formations and the Lower Jurassic Chuchi Lake Formation, intruded by a range of intrusive rocks ranging from gabbro through diorite to quartz monzonite.

For further information the reader is referred to the aforementioned Aris website.

SURVEY SPECIFICATIONS.

The Induced Polarization Survey.

The induced polarization (IP) survey was conducted using a pulse type system, the principal components of which were manufactured by Instrumentation GDD of Quebec, Canada and Walcer Geophysics of Enniskillen, Ontario.

The system consists basically of three units, a receiver (GDD), transmitter (Walcer) and a motor generator (Walcer). The transmitter, which provides a maximum of 10.0 kw d.c. to the ground, obtains its power from a 20 kw 400 c.p.s. alternator driven by a Honda 24 h.p. gasoline engine. The cycling rate of the transmitter is 2 seconds “current-on” and 2 seconds “current-off” with the pulses reversing continuously in polarity. The data recorded in the field consists of careful measurements of the current (I) in amperes flowing through the current electrodes C₁ and C₂, the primary voltages (V) appearing between any two potential electrodes, P₁ through P₅, during the “current-on” part of the cycle, and the apparent chargeability, (M_a) presented as a direct readout in millivolts per volt using a 200 millisecond delay and a 1000 millisecond sample window by the receiver, a digital receiver controlled by a micro-processor – the sample window is actually the total of twenty individual windows of 50 millisecond widths.

The apparent resistivity (ρ_a) in ohm metres is proportional to the ratio of the primary voltage and the measured current, the proportionality factor depending on the geometry of the array used. The chargeability and resistivity are called apparent as they are values which that portion of the earth sampled would have if it were homogeneous. As the earth sampled is usually inhomogeneous the calculated apparent chargeability and resistivity are functions of the actual chargeability and resistivity of the rocks.

The surveying was carried out using the “pole-dipole” method of survey utilizing a pre-laid receiver array which remains stationary, while the current C₁ is moved along the survey lines at a spacing of “a” (the dipole) apart, with the second current electrode, C₂, kept constant at “infinity”.

SURVEY SPECIFICATIONS cont'd.

The distance, “na” between C₁ and the nearest potential electrode generally controls the depth to be explored by the particular separation, “n”, traverse. On this survey a 100 metre dipole separation was utilized in achieving 1st to 10th separation measurements.

On this survey a total of some 68.5 kilometres of survey traverses were completed.

Horizontal control.

The horizontal positions of the stations were recorded using a Garmin GPSmap 64CSx.

Data Presentation.

The data are presented as individual pseudo section plots of apparent resistivity and apparent chargeability at a scale of 1:10,000 generated using Geosoft Oasis Montaj. In addition, data was subjected to 2D inversion and presented as model sections at a scale of 1:10,000.

Magnetic Survey.

The magnetic survey was conducted using a GSM-19 Overhauser rover magnetometer equipped with GPS guidance along with a GSM-19 proton precession base magnetometer, both manufactured by GEM Instruments of Richmond Hill, Ontario.

These instruments measure variations in the total intensity of the earth's magnetic field to an accuracy of plus or minus one nanotesla.

The magnetometer survey was carried out using GPS guidance over 121 east-west orientation lines with a nominal spacing of some 100 meters. Reading were taken at 1 second intervals along the line. In all some 310 line kilometers of surveying were completed.

SURVEY SPECIFICATIONS cont'd.

The daily data was retrieved from both the rover and base units. The readings were then corrected using the synchronized time stamps to correct for magnetic drift over the course of the data collection. This was carried out using the GemLink software.

The corrected data was then imported into Geosoft where the files were broken up into individual lines. The data was then gridded using a minimum curvature algorithm (Rangrid) using a 18 meter cell size. The resulting grid was then subjected to two Hanning passes.

The final data was then presented as a contoured plan map at a scale of 1:20,000.

DISCUSSION OF RESULTS.

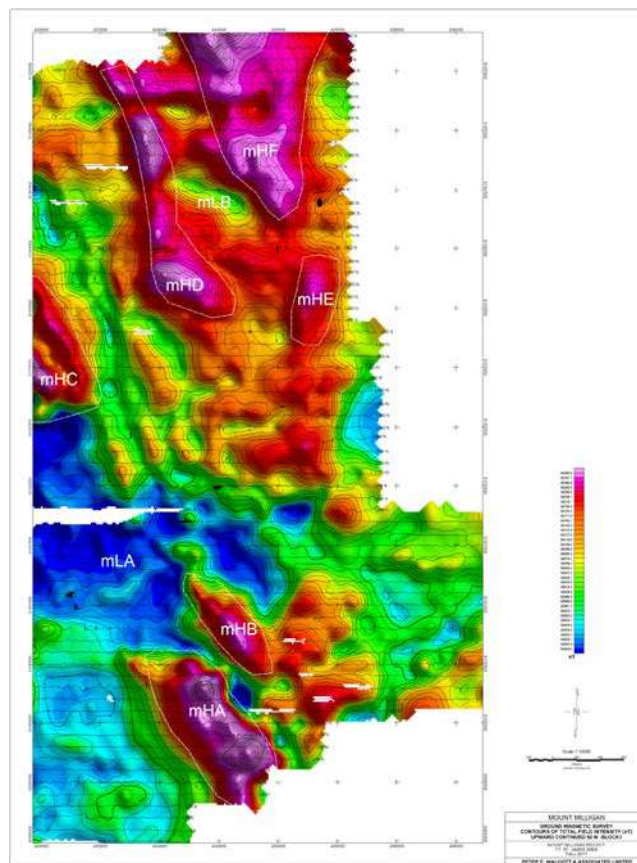
During the late summer and early fall of 2017, Peter E. Walcott & Associates Limited undertook induced polarization and magnetic surveying over two survey areas within the Mount Milligan mine mineral claims.

The survey areas were designed to provide additional geophysical coverage over several targets identified during a property wide compilation.

Block 1

Magnetic Survey

The detailed ground magnetic carried out over block 1 clearly shows several magnetic domains within the ground magnetic data set.



Upward Continued TMI (nT) – Block 1

DISCUSSION OF RESULTS con't.

In the western portion of the survey area, a distinct north-westerly fabric is readily observed, which is also apparent within the airborne magnetic dataset. This corridor is interrupted by a distinct magnetic low (mLA), which appears to associate with a north-easterly trending structure associated with Rainbow creek.

In the northeast quadrant of the survey an area of elevated magnetics can be observed. Within this area numerous plug like magnetic highs (mHC-mHF) can be observed.

Induced Polarization Survey

The induced polarization survey carried out over western survey block consisted of some 20 east-west orientated lines. This represents most of the induced polarization work carried out during the program.

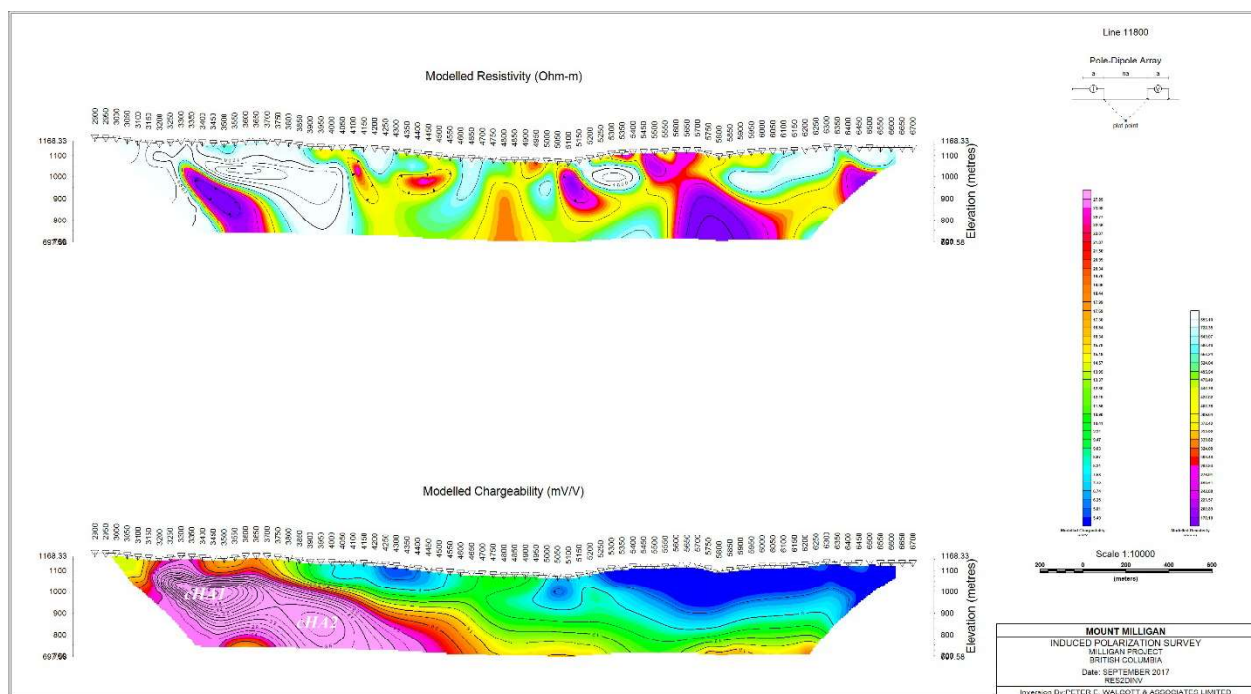
During the modelling of the data, several assumptions are made which can skew results. Thus both 2D and 3D inversion techniques were employed. It should be noted here that the line spacing was not ideal for 3D inversion, however the results do appear realistic.

Anomaly cHA. This is the largest anomaly in the survey area, located on the western end of lines 11800N, and 12200N. This large high intensity chargeability anomaly is situated within large zone of reduced magnetics. The anomaly appears to be orientated in a northwesterly orientation. This broad zone is likely the result of multiple chargeability anomalies, which can be more readily discerned within the 2D inverted sections as illustrated on L11800 below.

DISCUSSION OF RESULTS con't.

cHA1 – This is an intense shallow chargeability anomaly on the western edge of the survey line. The feature is associated with a discrete resistivity low.

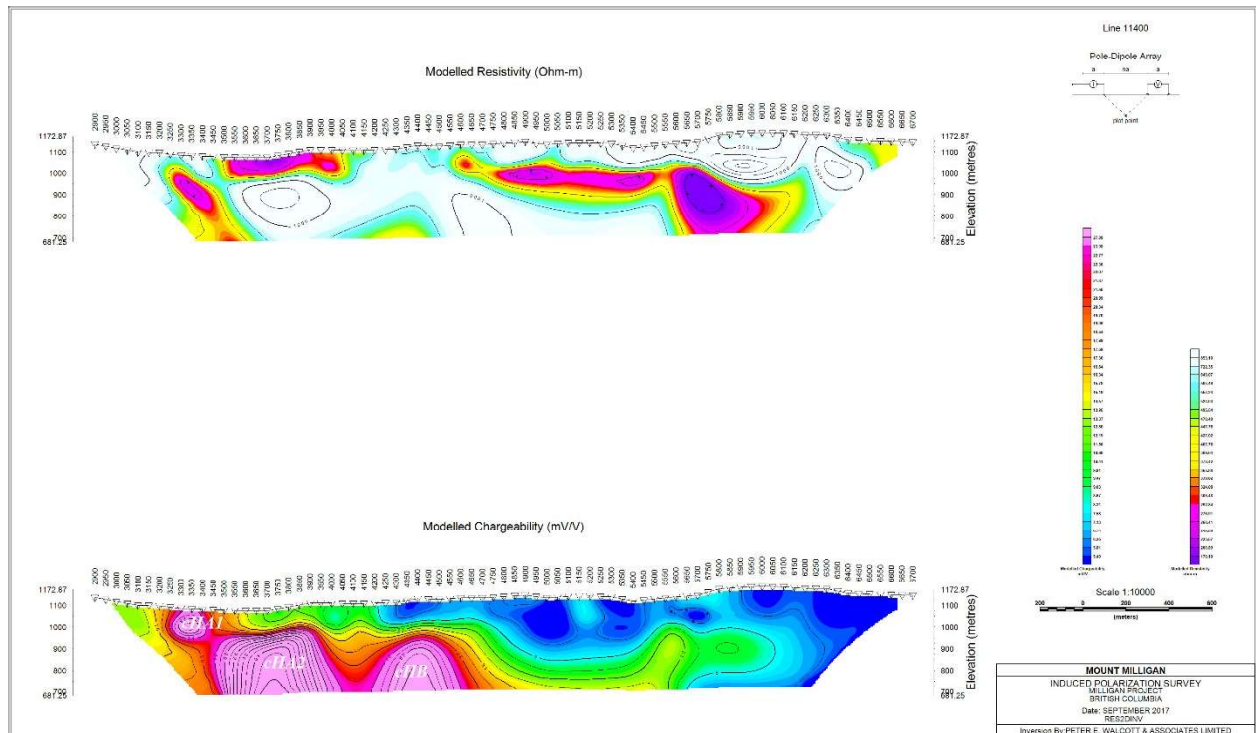
cHA2 – This is a moderate to intensely chargeable feature. It is associated with elevated moderate to high resistivity values.



*2D Inversion – Line 11800N
Modelled Resistivity/Chargeability*

Anomaly cHB – This is to the south east of Anomaly cHA. This is likely associated with the same feature with a northeasterly trending resistivity low bisecting the combined featured. Anomaly cHB is partially outside of the large magnetic low. The anomaly overlies a zone of slight elevated magnetics and is associated with a moderate to high resistivity response. The feature is also the intersections of several magnetic lineaments.

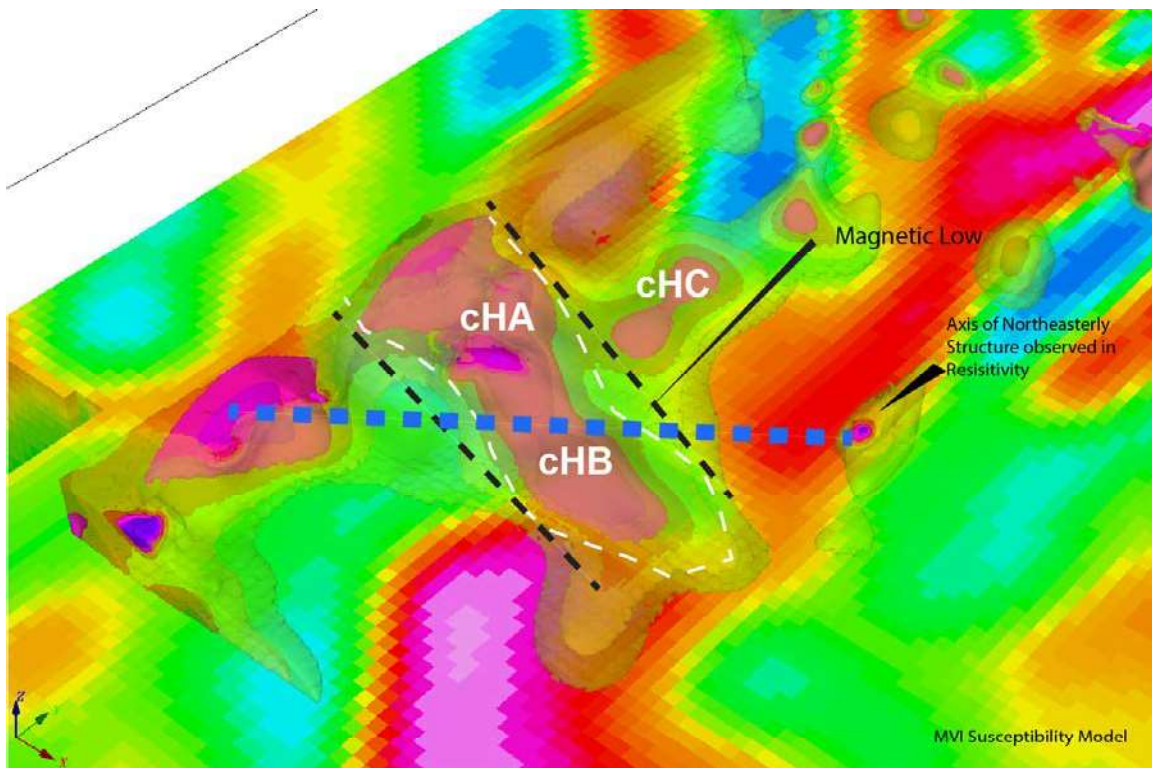
DISCUSSION OF RESULTS cont'd.



2D Inversion – Line 11400N
Modelled Resistivity/Chargeability

Anomaly cHC is a north-northwesterly moderate intense chargeability anomaly. The feature appears to be associated with variable degrees of resistivities, decreasing as the feature goes northwards. This anomaly lies within a north northwesterly trending zone of reduced magnetic trend.

DISCUSSION OF RESULTS cont'd.



*View of 3D Inverted Chargeability
With MVI Susceptibility from 2008 Helitem Survey*

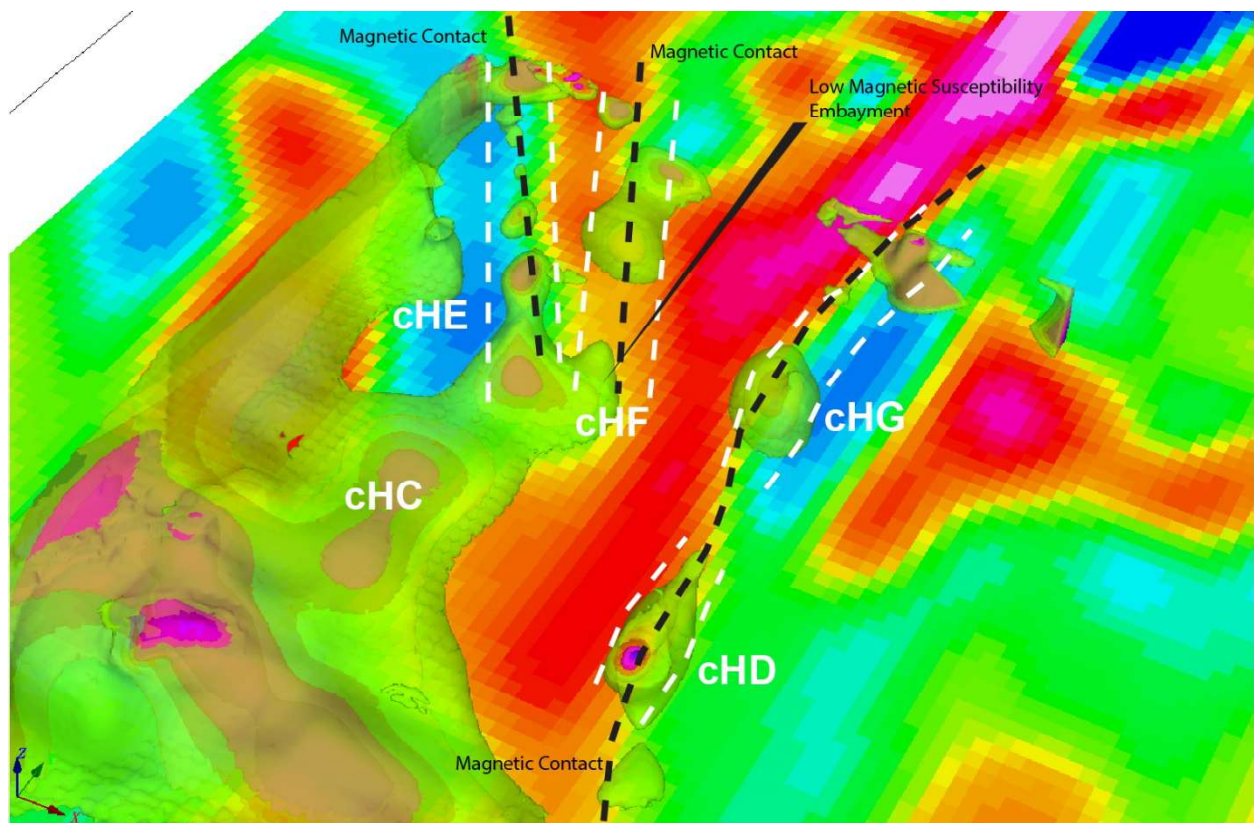
Anomaly cHD can be observed on the eastern ends of lines 12600, 13000, and 13400. This end of line feature is associated with a low resistivity zone. The feature is also associated with a zone of reduced magnetics, on the eastern side of a distinct magnetic contact.

Anomaly cHE is situated in the northwestern quadrant of the survey grid. This variable intensity chargeability trend flanks the western side of a moderate magnetic high with the chargeability intensity decreasing to the north.

DISCUSSION OF RESULTS cont'd.

Immediately to the east of the southern terminus of this feature is Anomaly cHF. Within the 3D chargeability inversion, the features seem to merge and are coincident with an embayment of reduced magnetic susceptibility within the modeled airborne magnetics (mLB) and ground magnetic survey.

Anomaly cHF also appears to track the eastern flank of the previously mentioned magnetic feature albeit not as continuous as Anomaly cHE.



*View of 3D Inverted Chargeability
With MVI Susceptibility from 2008 Helitem Survey*

Anomaly cHG is in the northeastern corner of block. The anomaly tracks the eastern edge of a north-south magnetic contact in a lower resistivity unit. This anomaly exhibits a similar signature to that of Anomaly cHD and is likely formational.

To the north of Anomaly cHG is Anomaly cHH. This anomaly is also on the eastern edge of the aforementioned magnetic contact and is likely related to Anomaly cHG.

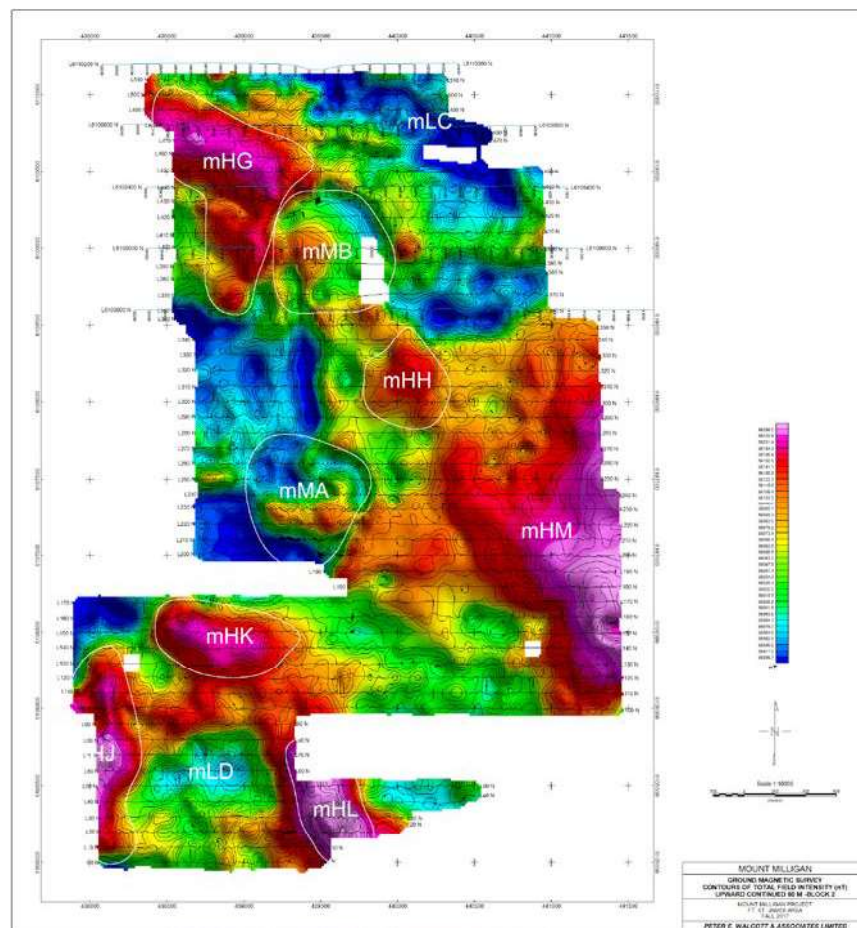
DISCUSSION OF RESULTS cont'd.

Block 2

Magnetic Survey

The results of the ground magnetic surveys conducted over Block 2 show several features of potential interest. Within the survey area, the regional north-northwesterly fabric is readily apparent, along with several other weaker magnetic trends.

Several discrete zones of elevated magnetic intensity can be observed from the results. These features are mostly contained within large regional magnetic features, as illustrated below (mHG- mHM).



Upward Continued TMI (nT) – Block 2

DISCUSSION OF RESULTS cont'd.

Apart from the obvious discrete magnetic highs several other features are also apparent which may be of interest.

Anomaly mMA is in the central portion of the survey block. This muddled magnetic anomaly exhibits a semicircular magnetic expression surrounding a zone of elevated magnetics. The expression of this anomaly is likely the result of a series of bounding structures.

Anomaly mMB is situated in the north central portion of the survey block. The anomaly is similar to Anomaly mMA and forms a semicircular feature surrounding a central magnetic high.

Induced Polarization Survey

The induced polarization surveying was terminated before completing the proposed survey due to the onset of winter, and poor ground conditions. Prior to the abandonment of the survey 3 east-west lines of traversing were completed in the northern portion of the survey block.

Most of the survey lines exhibit a flat lying conductive cover. This flat feature can be observed in both the modelled chargeability and resistivity responses.

On the northern most lines (6109800N & 6110200N), the elevated resistivity response appears to be associated with an area of moderate magnetic relief. These elevated resistivity responses are also associated with moderate chargeability responses, likely representing the underlying lithological unit.

Line 6108600N exhibits a slightly different signature from the northern lines. This partially maybe due to 3D effects, as the line appears to be aligned with an east-west magnetic contact.

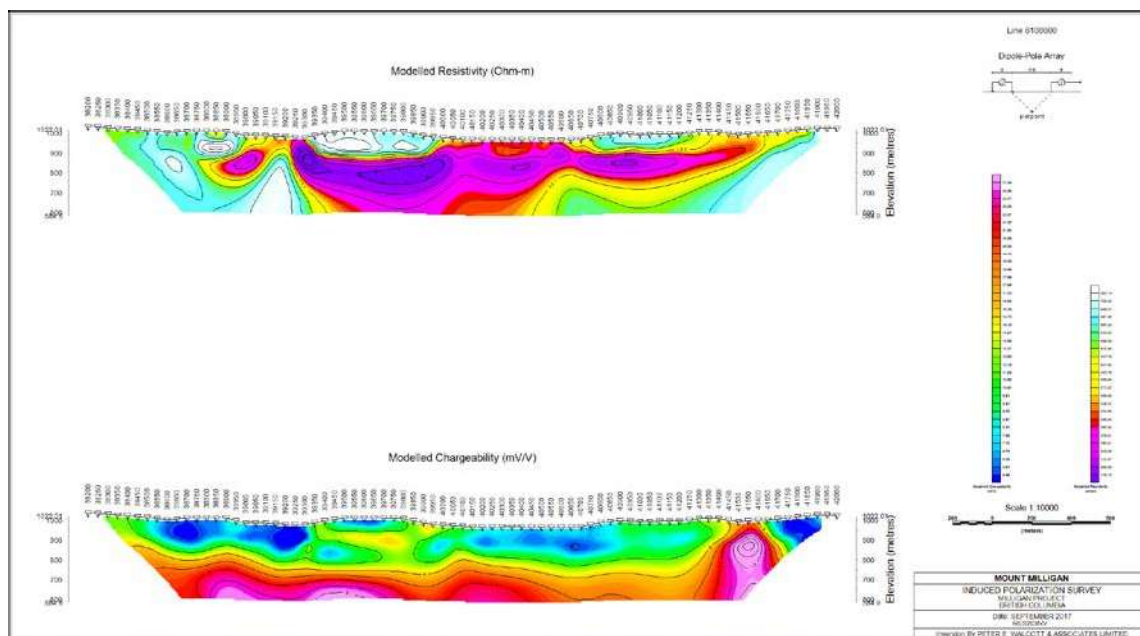
The western portion of the survey line exhibits an elevated resistivity response, with anomalous chargeability at depth proximal to the southern extent of Anomaly mHG.

At 39300E a sharp contact can be observed in the resistivity. This is associated with a north south structure which can observed within the magnetics, which cuts through magnetic zones mMA, & mMB.

DISCUSSION OF RESULTS cont'd.

East of this contact a thick resistivity low can be observed between 39300E and 40600E. This zone then thins to the east. East of 40600E, the modelled resistivity appears to thin, similar to the northern lines.

A discrete chargeability high associated with elevated resistivity can be observed at 41550E.



*2D Inversion – Line 11800N
Modelled Resistivity/Chargeability*

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Between August 15th and November 18th, 2017, Peter E. Walcott & Associates Limited conducted ground magnetic and induced polarization surveying on several areas proximal to the Mount Milligan mine.

The surveys were designed to follow up on several targets identified during a compilation exercise, conducted earlier in the year.

The survey identified several targets of interest in both the survey areas.

In Block 1, anomalies cHA-cHC are of greatest interest. This highly chargeable zone is associated with a zone elevated resistivity. These features are contained within a zone of reduced magnetics, which while not characteristic of alkalic systems, is of interest. The broad resistivity feature is cross cut by a northeasterly trending structure, which is also apparent within the magnetics and topographic data.

A second zone of interest is the southern extents of anomaly cHE and cHF. Both to these anomalies appear to flank the west and east side of a magnetic unit respectively. These anomalies appear to coalesce at their southern terminus. While this may be a result of the 3D inversion, this area is crosscut by several structures along with a slight magnetic embayment.

In the Block 2 area, the survey area is partially covered by a conductive cover upwards of 100 meters thick as observed within the modelled resistivity and chargeability responses. There are several magnetic features of interest along with several deep IP anomalies. Comments are reserved until infill lines are completed.

The 2017 data should be evaluated with the existing geological/geochemical/geophysical and drilling compilation.

A detailed review should then be undertaken with a focus on areas proximal to anomalies cHA-cHC and cHE-cHF to begin. Drill testing and survey expansion proximal to anomalies cHA-cHC should be considered.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In Block 2, the proposed induced geophysical survey should be completed, or at very least the infill lines in the north, such that there is consistent coverage. Once completed a detailed compilation should then be undertaken to identify possible targets for drilling.

Respectfully submitted,

PETER E. WALCOTT & ASSOCIATES LTD.

**Alexander Walcott
Geophysicist**

**Peter E. Walcott, P.Eng.
Geophysicist**

**Coquitlam, B.C.
March 2018**

APPENDIX I

PERSONNEL EMPLOYED ON PROJECT.

Name	Occupation	Address	Dates Worked
Walcott, A	Geophysicist	111-17 Fawcett Road Coquitlam, British Columbia	
Cornock, J	"		Sep 7th-Oct 19th, 2017
Jackisch, I	"		Aug 16th-Sep 13th, 2017
Young, P	"		Oct 31st-Nov 18, 2017
Kennedy, W	Geologist		Aug 15th-Oct 4th, 2017 Oct 23rd-Nov 17th, 2017
Bragg, C	Geophysical Operator		Oct 3rd-Oct 7th, 2017 Oct 31st - Nov 18th, 2017
Dickey, C	"		Sep 7th-Oct 7th, 2017
Ewen, R	"		Sep 7th-Oct 7th, 2017
Kocan, T	"		Oct 3rd-Oct 7th, 2017 Oct 17th - Nov 18th, 2017
Lajeunesse, B	"		Nov 7th-Nov 17th, 2017
Loubser, N	"		Oct 10th-Nov 8th, 2017
Oliver, S	"		Aug 26th-Oct 5th, 2017 Oct 30th-Nov 8th, 2017
Russell, N	"		Aug 14th-Oct 4th, 2017 Oct 19th-Nov 17th, 2017
Babcock, J	Geophysical Assistant		Nov 7th-Nov 17th, 2017
Bizier, M	"		Oct 10th-30th, 2017
Elzinga, C	"		Aug 15th-Aug 24th, 2017
Hall, B	"		Oct 10th-Nov 1st, 2017
Labada, M	"		Sep 13th - 23, 2017 Oct 1st-Nov 1st, 2017
Orton, B	"		Sep 13th-23rd, 2017 Oct 1st-Oct 23rd, 2017
Podolan, Z	"		Oct 10th-17th, 2017
Taylor, J	"		Oct 10th-Nov 1st, 2017

COST OF PROJECT.

Magnetic Survey

Peter E. Walcott & Associates Limited provided 2 mag crews consisting of 2 operators, GPS walking magnetometers, base magnetometer and a 4x4 truck at \$1,600.00 per data for a cost of \$66,000.00.

Mobilization was billed at \$6,500.00 so that the total cost of services provided was \$72,500.00

Induced Polarization Survey

Peter E. Walcott & Associates Limited provided a crew of 8, consisting of a geophysicist, 3 operators, and 4 assistants, a 8 KW Induced Polarization system, 2 4x4 trucks, GPS's and ancillary line cutting equipment, at a cost of \$4925.00 per day for a survey cost of \$331,225.00

Accommodation not provided costs of \$14,932.49 were incurred along with similar fuel costs of \$1,669.91.

Mobilization cost for the original crew were \$9,430.80, while \$15,288.71 were incurred for mobilization of replacement workers dictated by regulatory requirements due to the length of the project.

Thus, the total cost of services provide was \$372,543.91

CERTIFICATION.

I, Peter E. Walcott, of 605 Rutland Court, Coquitlam, British Columbia, hereby certify that:

1. I am a graduate of the University of Toronto in 1962 with a B.A.Sc. in Engineering Physics, Geophysics Option.
2. I have been practicing my profession for the last fifty five years.
3. I am a member of the Association of Professional Engineers of British Columbia and Ontario.
4. I hold no interest, direct or indirect, in the property, nor do I expect to receive any.

Peter E .Walcott, P.Eng.

**Coquitlam, B.C.
March 2017**

CERTIFICATION.

I, Alexander Walcott, of 38-181 Ravine Dr., Port Moody, British Columbia, hereby certify that:

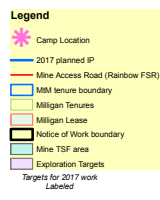
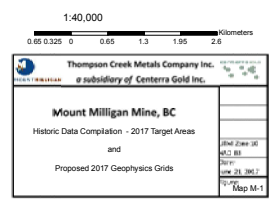
1. I am a graduate of the University of Alberta with a B.Sc. Earth Sciences Major, with a Physics Minor.
2. I have been active in mineral exploration for the past 20 years.
3. I am currently employed by Peter E. Walcott & Associated Limited.
4. I hold no interest, direct or indirect, in the property, nor do I expect to receive any.

Alexander Walcott, B.Sc.

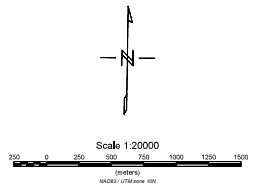
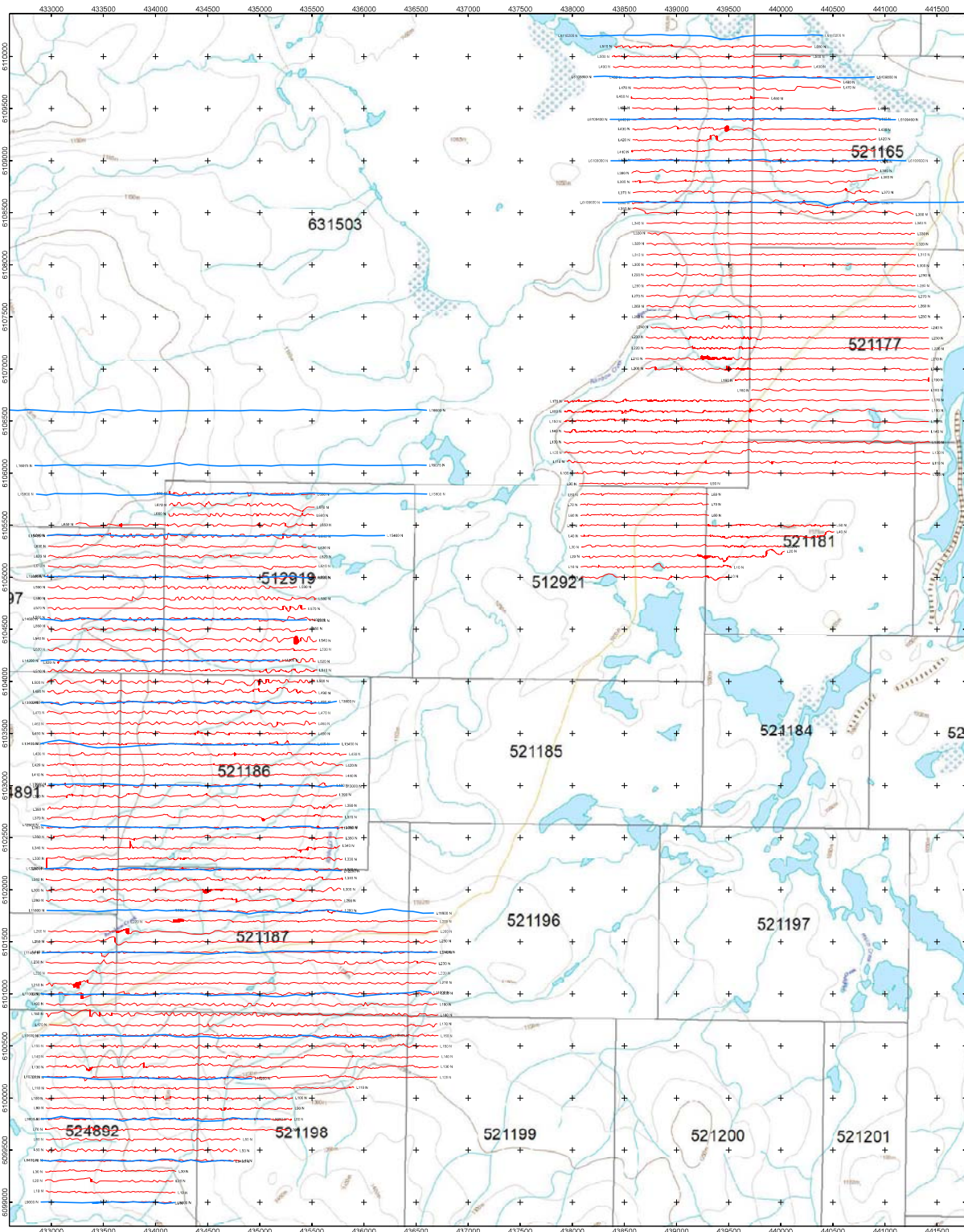
Coquitlam, B.C.

March 2017

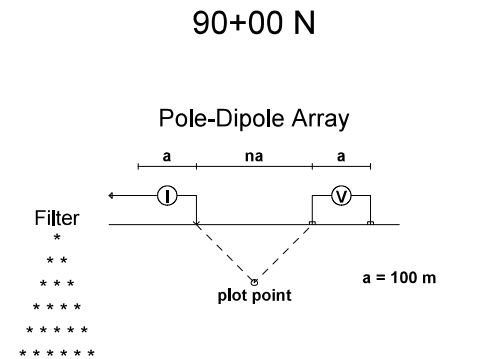
Accompanying Maps



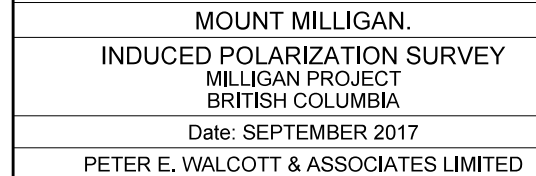




MOUNT MILLIGAN
INDUCED POLARIZATION & MAGNETIC SURVEY
GRID LINE LOCATION MAP
MOUNT MILLIGAN PROJECT
FT. ST. JAMES AREA
FALL 2017
PETER E. WALCOTT & ASSOCIATES LIMITED

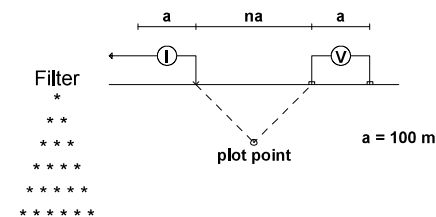


Frequency: 0.125 Hz.
Operators: J.C.



94+00 N

Pole-Dipole Array



Instruments: ANDROTEX 8 kW Tx, GDD GRX-8 Rx

Frequency: 0.125 Hz.
Operators: J.C.

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

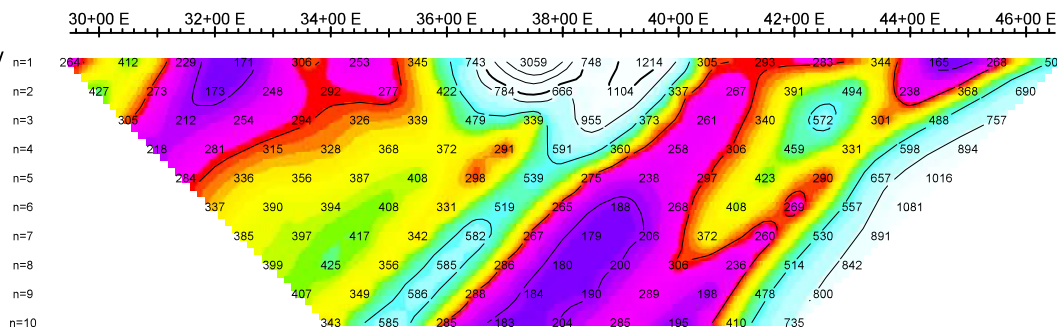
MOUNT MILLIGAN.

INDUCED POLARIZATION SURVEY
MILLIGAN PROJECT
BRITISH COLUMBIA

Date: SEPTEMBER 2017

PETER E. WALCOTT & ASSOCIATES LIMITED

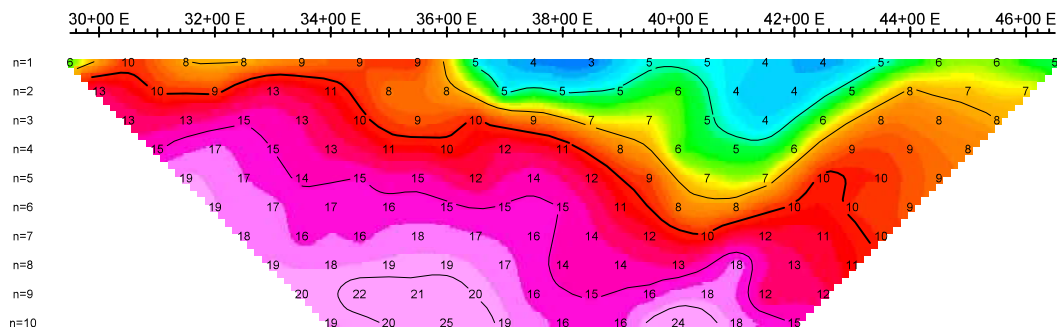
Calculated Resistivity
Ohm*m



Calculated Resistivity
Ohm*m

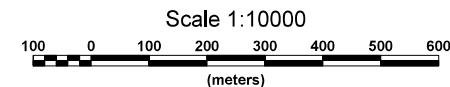
n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10

Average IP
mV/V



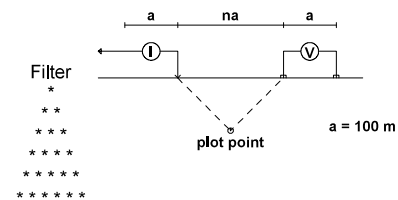
Average IP
mV/V

n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10

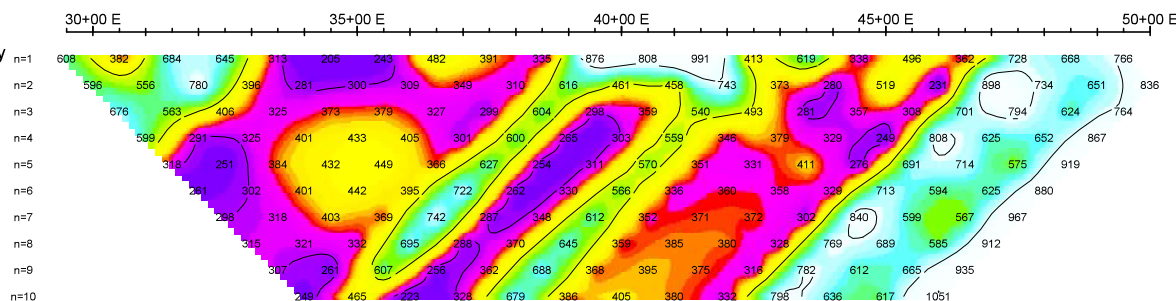


98+00 N

Pole-Dipole Array



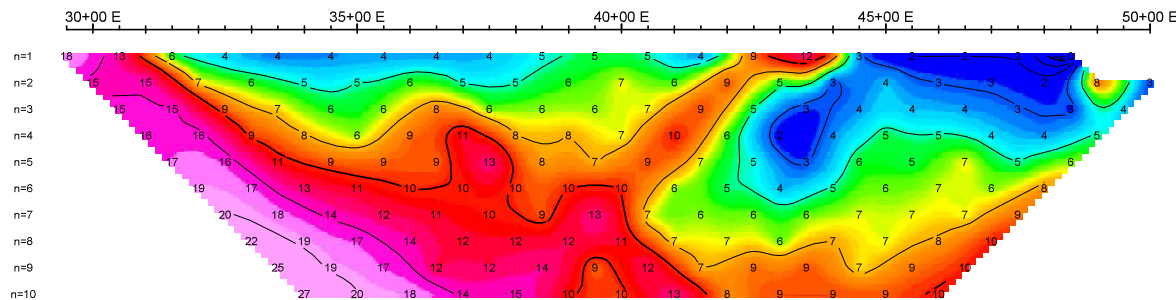
Calculated Resistivity
Ohm*m



Calculated Resistivity
Ohm*m

n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10

Average IP
mV/V



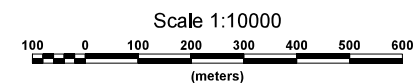
Average IP
mV/V

n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10

Instruments: ANDROTEX 8 kW Tx, GDD GRX-8 Rx

Frequency: 0.125 Hz.
Operators: J.C.

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10,...



MOUNT MILLIGAN.

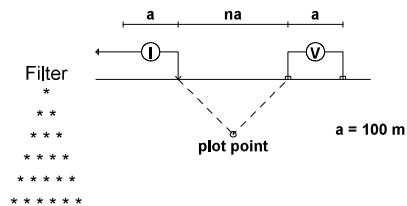
INDUCED POLARIZATION SURVEY
MILLIGAN PROJECT
BRITISH COLUMBIA

Date: SEPTEMBER 2017

PETER E. WALCOTT & ASSOCIATES LIMITED

102+00 N

Pole-Dipole Array



Instruments: ANDROTEX 8 kW Tx, GDD GRX-8 Rx

Frequency: 0.125 Hz.
Operators: J.C.

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

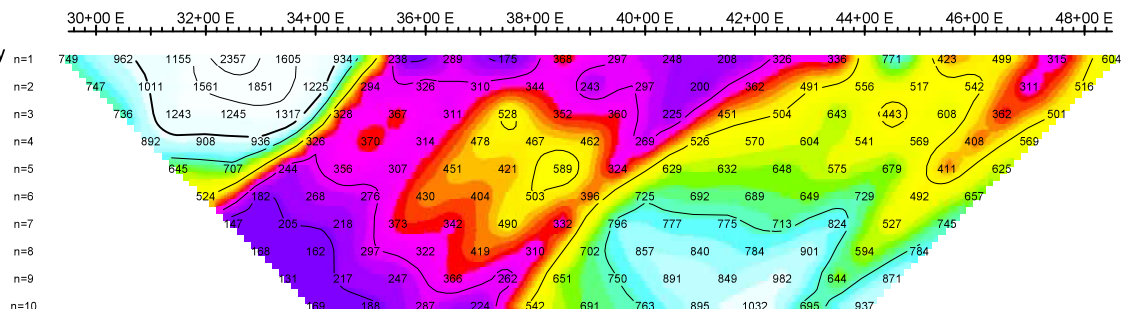
MOUNT MILLIGAN.

INDUCED POLARIZATION SURVEY
MILLIGAN PROJECT
BRITISH COLUMBIA

Date: SEPTEMBER 2017

PETER E. WALCOTT & ASSOCIATES LIMITED

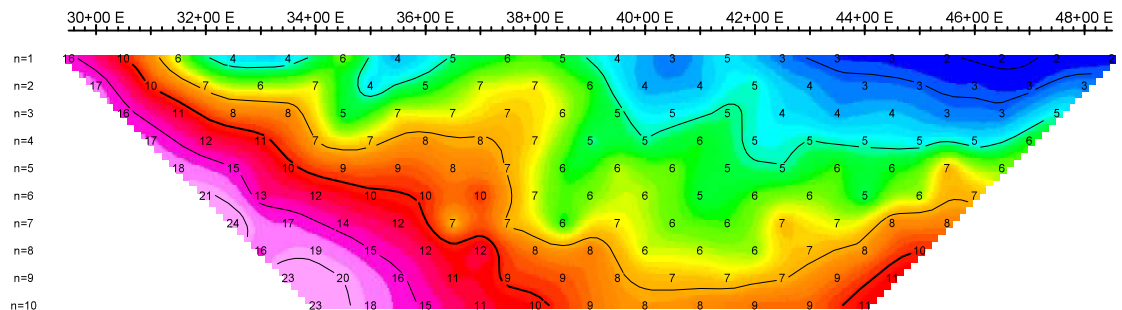
Calculated Resistivity
Ohm*m



Calculated Resistivity
Ohm*m

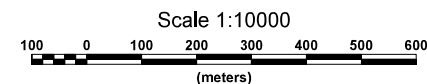
n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10

Average IP
mV/V



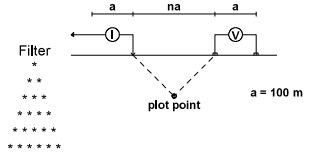
Average IP
mV/V

n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10



106+00 N

Pole-Dipole Array



Instruments: ANDROTEX 8 kW Tx, GDD GRX-8 Rx

Frequency: 0.125 Hz.
Operators: J.C.

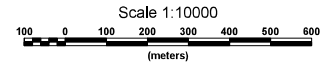
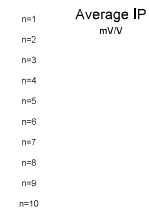
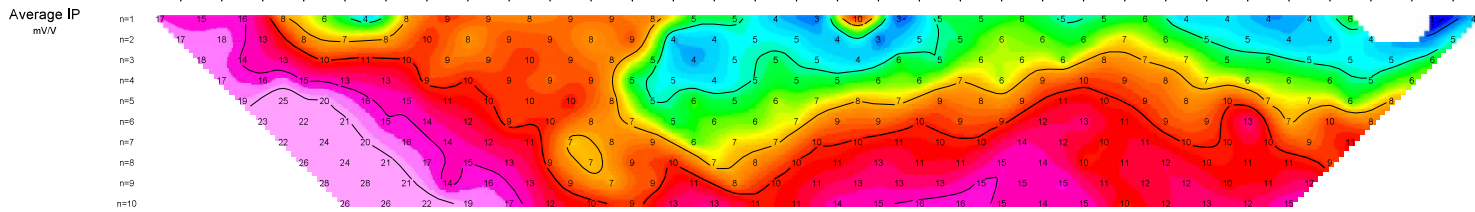
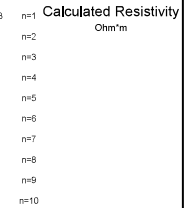
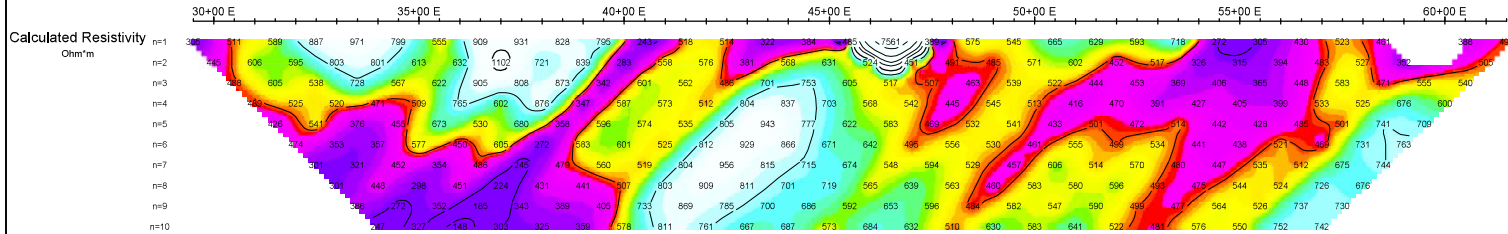
Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

MOUNT MILLIGAN.

INDUCED POLARIZATION SURVEY
MILLIGAN PROJECT
BRITISH COLUMBIA

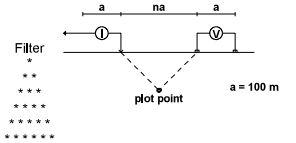
Date: SEPTEMBER 2017

PETER E. WALCOTT & ASSOCIATES LIMITED



110+00 N

Pole-Dipole Array

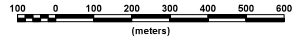


Instruments: ANDROTEX 8 kW Tx, GDD GRX-8 Rx

Frequency: 0.125 Hz.
Operators: J.C.

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Scale 1:10000

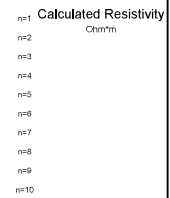
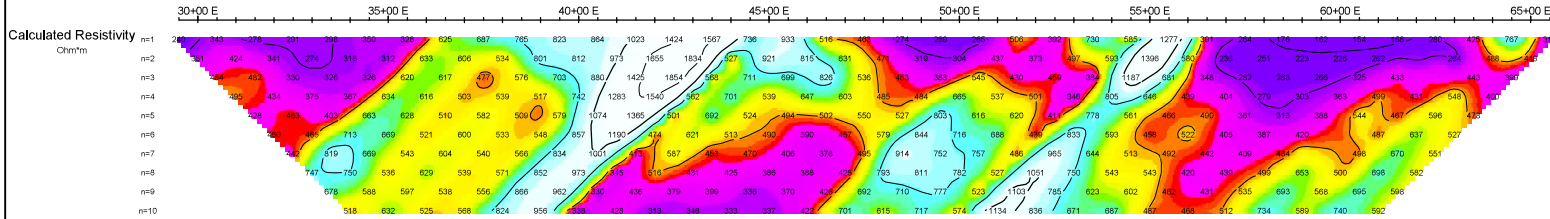


MOUNT MILLIGAN.

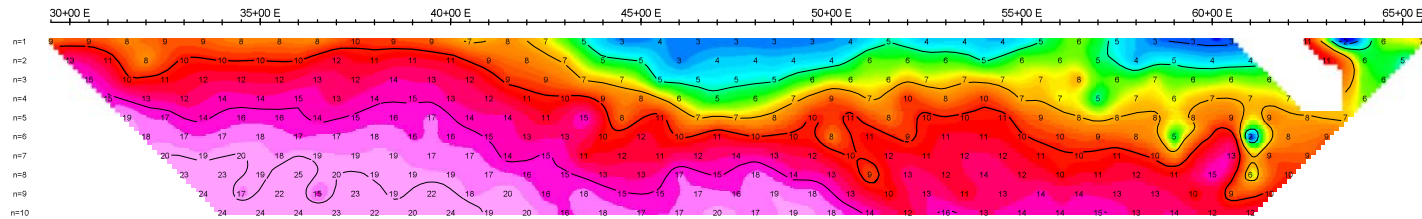
INDUCED POLARIZATION SURVEY
MILLIGAN PROJECT
BRITISH COLUMBIA

Date: SEPTEMBER 2017

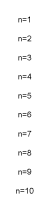
PETER E. WALCOTT & ASSOCIATES LIMITED



Average IP
mV/V

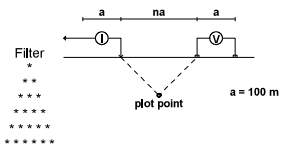


Average IP
mV/V



114+00 N

Pole-Dipole Array

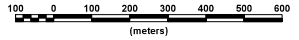


Instruments: ANDROTEX 8 kW Tx, GDD GRX-8 Rx

Frequency: 0.125 Hz.
Operators: J.C.

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Scale 1:10000



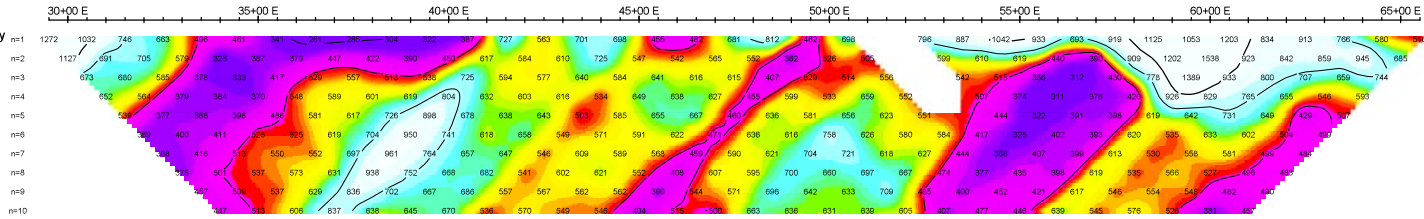
MOUNT MILLIGAN.

INDUCED POLARIZATION SURVEY
MILLIGAN PROJECT
BRITISH COLUMBIA

Date: SEPTEMBER 2017

PETER E. WALCOTT & ASSOCIATES LIMITED

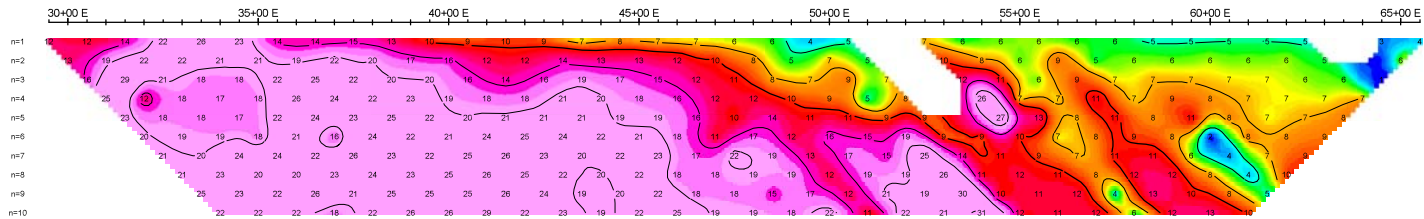
Calculated Resistivity
Ohm/m



Calculated Resistivity
Ohm/m

n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10

Average IP
mV/V

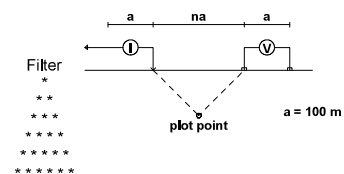


Average IP
mV/V

n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10

122+00 N

Pole-Dipole Array

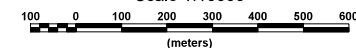


Instruments: ANDROTEX 8 kW Tx, GDD GRX-8 Rx

Frequency: 0.125 Hz.
Operators: J.C.

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Scale 1:10000



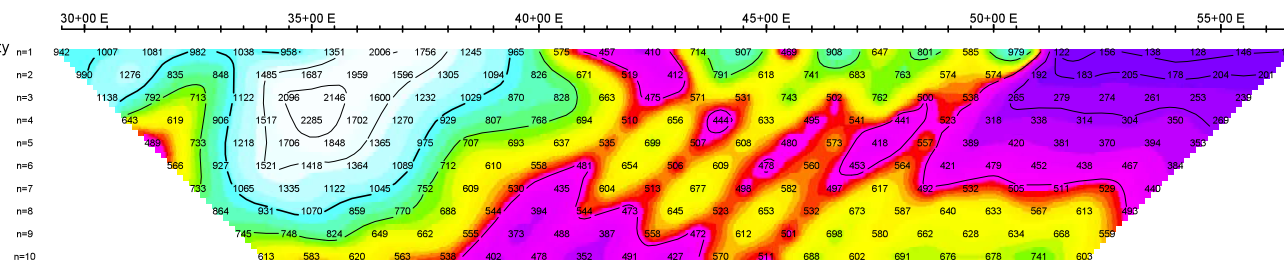
MOUNT MILLIGAN.

INDUCED POLARIZATION SURVEY
MILLIGAN PROJECT
BRITISH COLUMBIA

Date: SEPTEMBER 2017

PETER E. WALCOTT & ASSOCIATES LIMITED

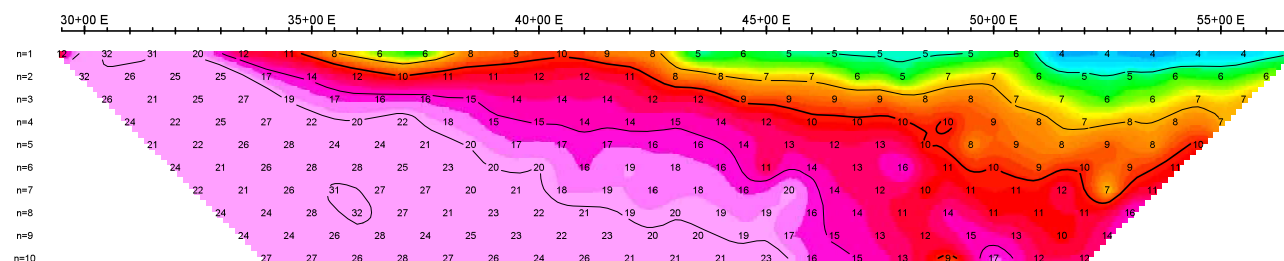
Calculated Resistivity
Ohm*m



Calculated Resistivity
Ohm*m

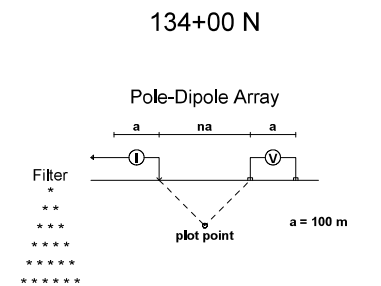
n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10

Average IP
mV/V



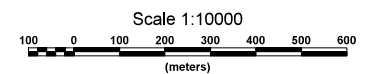
Average IP
mV/V

n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10



Frequency: 0.125 Hz.
Operators: J.C.

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

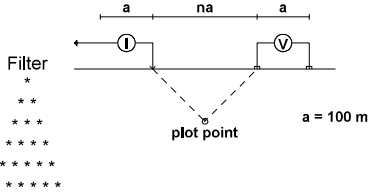


INDUCED POLARIZATION SURVEY
MILLIGAN PROJECT
BRITISH COLUMBIA

PETER E. WALCOTT & ASSOCIATES LIMITED

142+00 N

Pole-Dipole Array

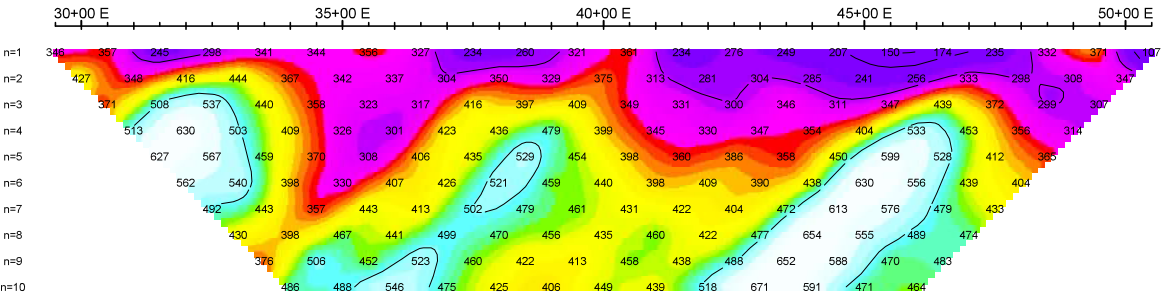


Instruments: ANDROTEX 8 kW Tx, GDD GRX-8 Rx

Frequency: 0.125 Hz.
Operators: J.C.

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

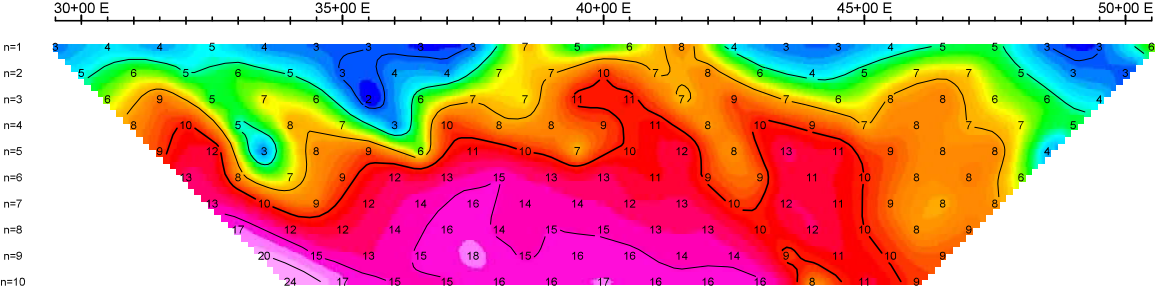
Calculated Resistivity
Ohm*m



Calculated Resistivity
Ohm*m

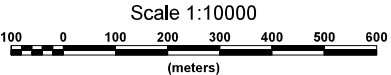
n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10

Average IP
mV/V



Average IP
mV/V

n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10



MOUNT MILLIGAN.

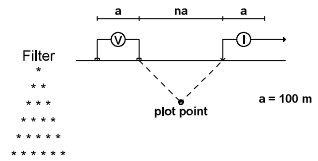
INDUCED POLARIZATION SURVEY
MILLIGAN PROJECT
BRITISH COLUMBIA

Date: SEPTEMBER 2017

PETER E. WALCOTT & ASSOCIATES LIMITED

154+00 N

Dipole-Pole Array



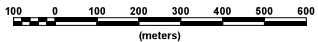
Instruments: ANDROTEX 8 kW Tx, GDD GRX-8 Rx

Frequency: 0.125 Hz.

Operators: J.C.

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Scale 1:10000



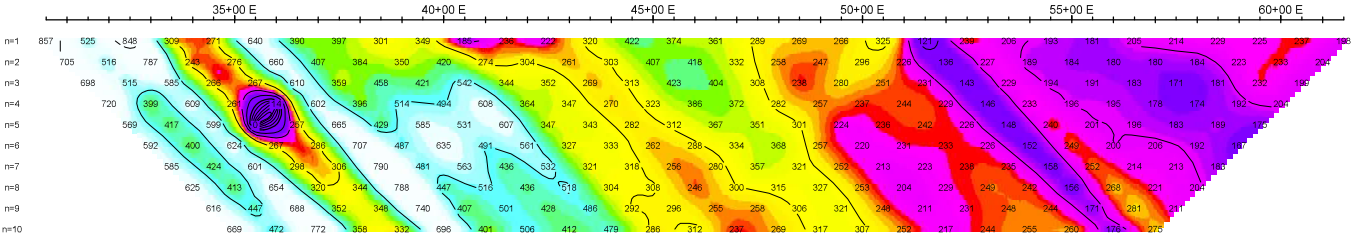
MOUNT MILLIGAN.

INDUCED POLARIZATION SURVEY
MILLIGAN PROJECT
BRITISH COLUMBIA

Date: SEPTEMBER 2017

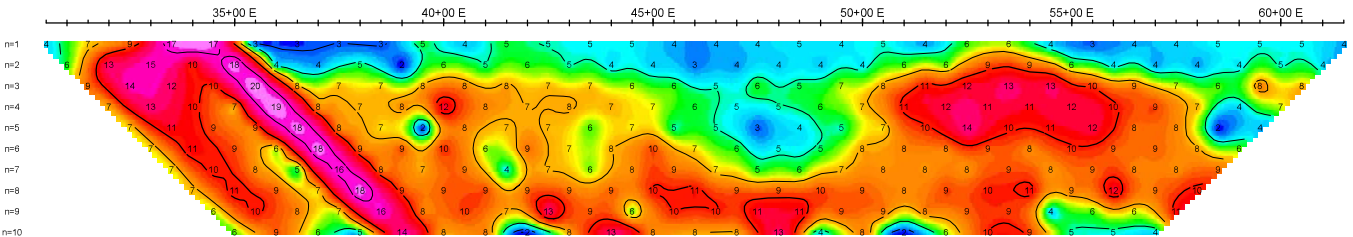
PETER E. WALCOTT & ASSOCIATES LIMITED

Calculated Resistivity
Ohm*m



Calculated Resistivity
Ohm*m

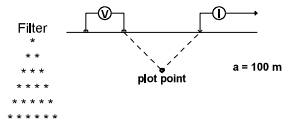
Average IP
mV/V



Average IP
mV/V

158+00 N

Dipole-Pole Array

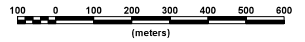


Instruments: ANDROTEX 8 kW Tx, GDD GRX-8 Rx

Frequency: 0.125 Hz.
Operators: J.C.

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Scale 1:10000

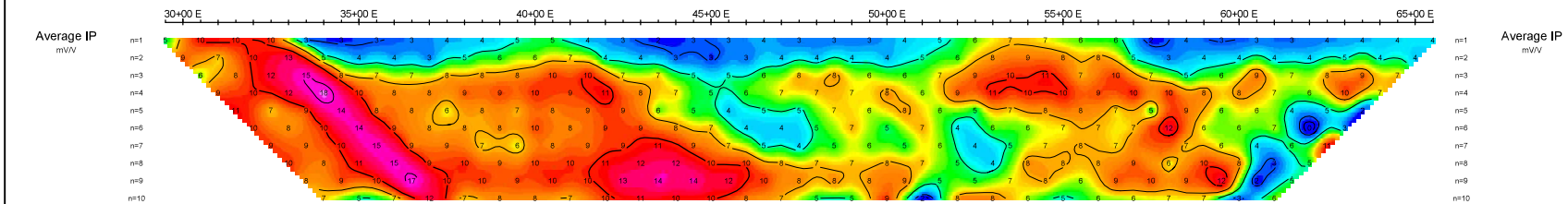
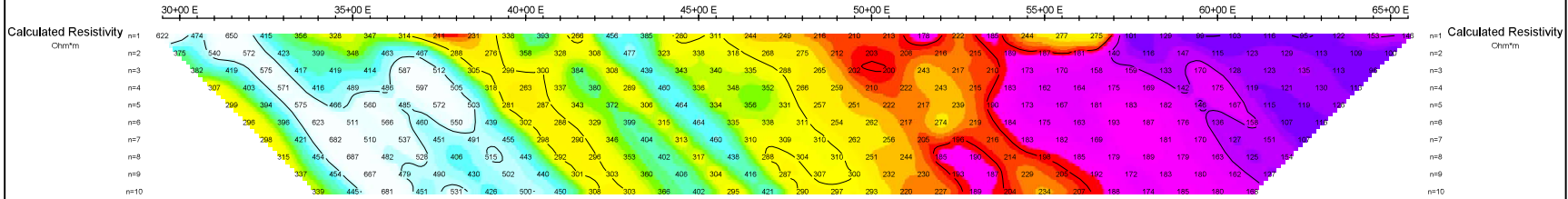


MOUNT MILLIGAN.

INDUCED POLARIZATION SURVEY
MILLIGAN PROJECT
BRITISH COLUMBIA

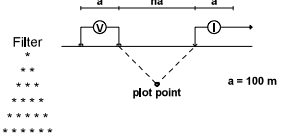
Date: SEPTEMBER 2017

PETER E. WALCOTT & ASSOCIATES LIMITED



160+75 N

Dipole-Pole Array

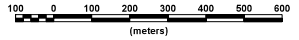


Instruments: ANDROTEX 8 kW Tx, GDD GRX-8 Rx

Frequency: 0.125 Hz.
Operators: J.C.

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Scale 1:10000

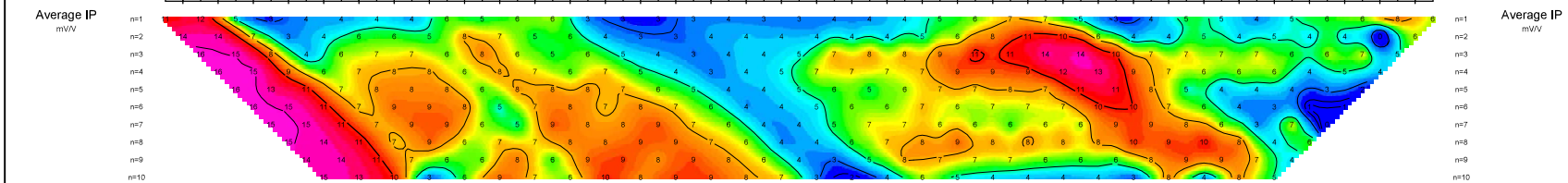
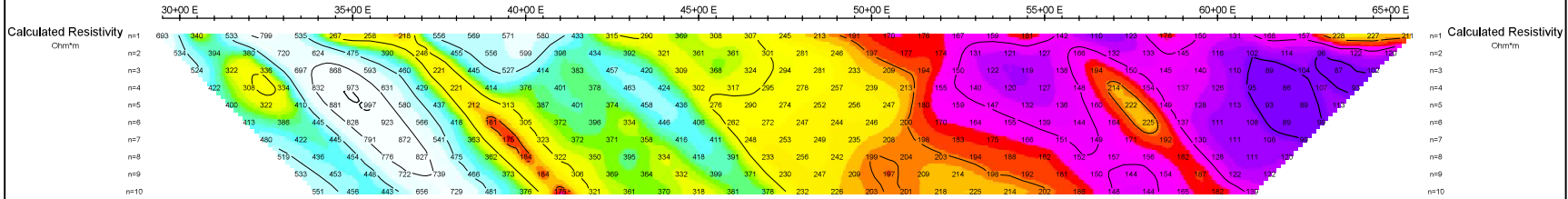


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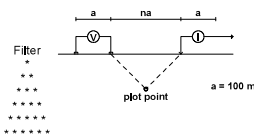
Date: SEPTEMBER 2017

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166+00 N

Dipole-Pole Array

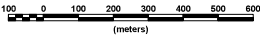


Instruments: ANDROTEX 8 kW Tx, GDD GRX-8 Rx

Frequency: 0.125 Hz.
Operators: J.C.

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Scale 1:10000



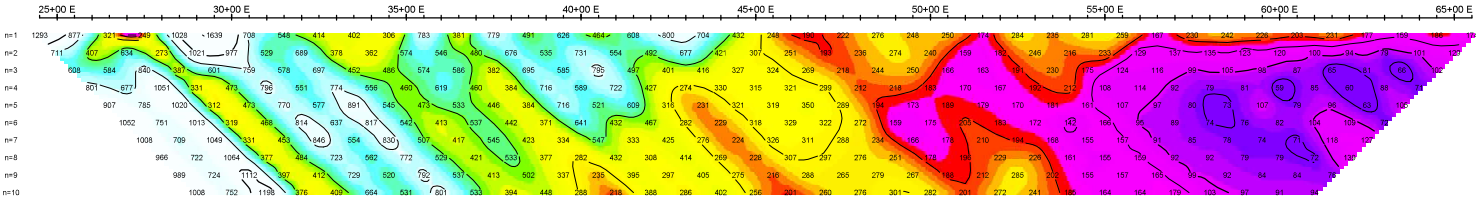
MOUNT MILLIGAN.

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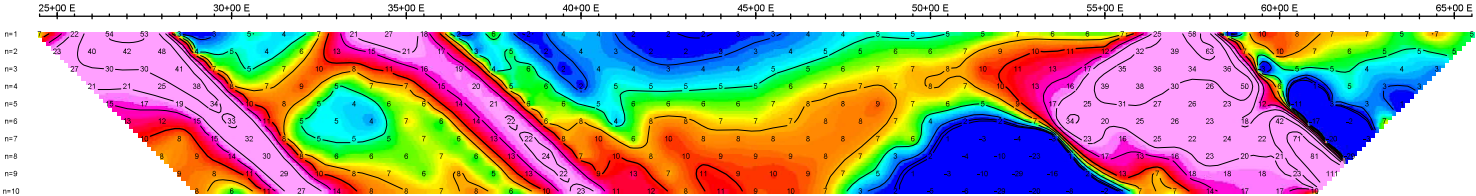
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Calculated Resistivity
Ohm·m



Calculated Resistivity
Ohm·m

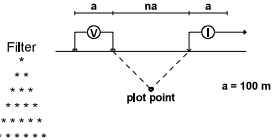
Average IP
mV/V



Average IP
mV/V

61086+00 N

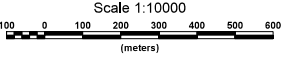
Dipole-Pole Array



Instruments: ANDROTEX 8 kW Tx, GDD GRX-8 Rx

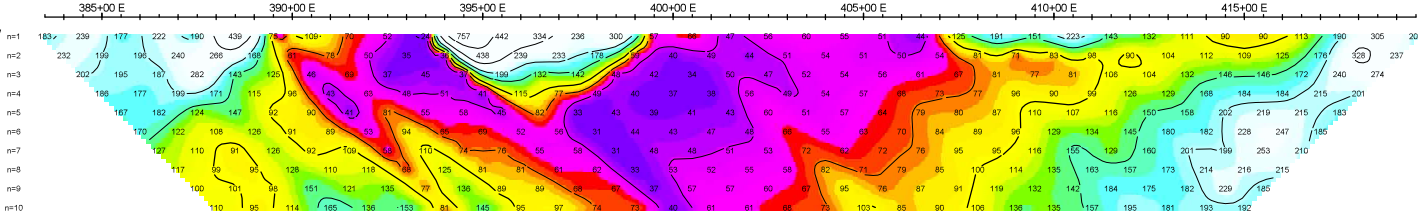
Frequency: 0.125 Hz.
Operators: J.C.

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10,...



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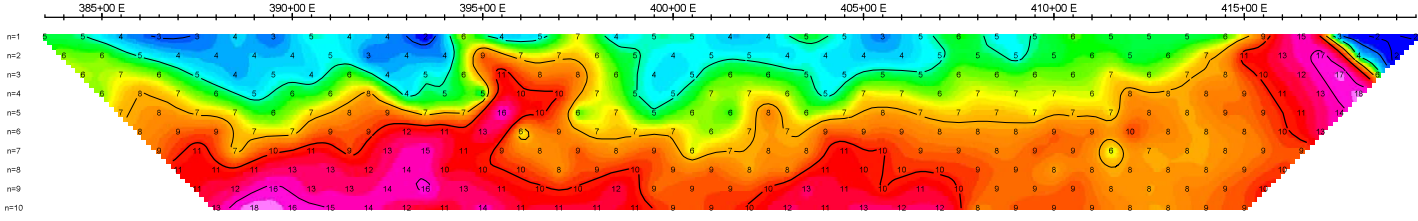
Calculated Resistivity
Ohm/m



Calculated Resistivity
Ohm/m

n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10

Average IP
mV/V

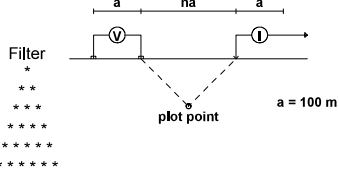


Average IP
mV/V

n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10

61098+00 N

Dipole-Pole Array



Instruments: ANDROTEX 8 kW Tx, GDD GRX-8 Rx

Frequency: 0.125 Hz.
Operators: J.C.
Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

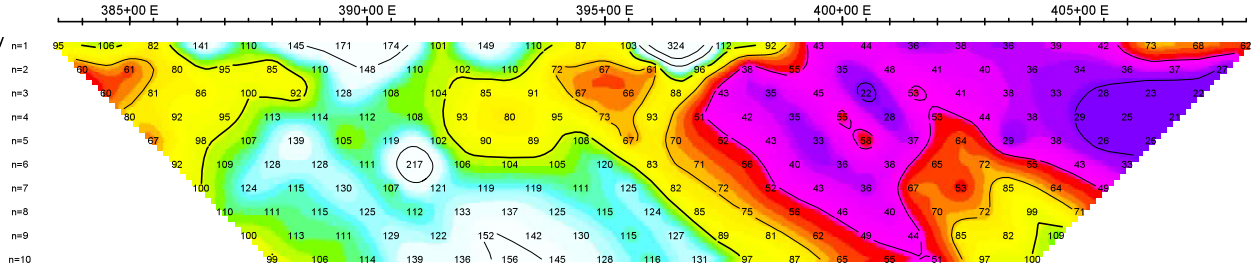
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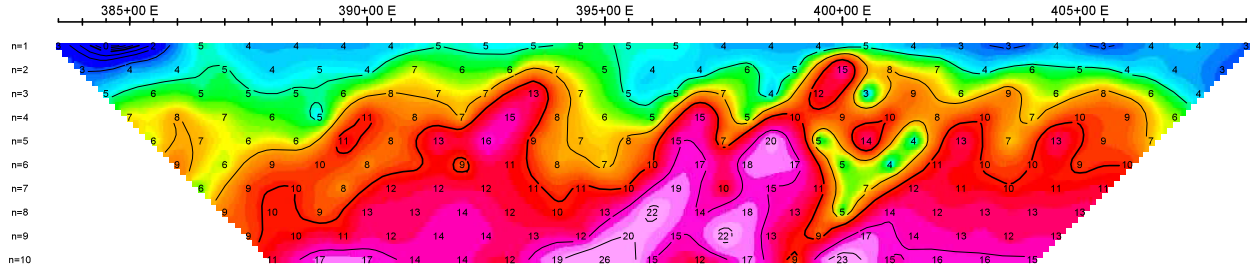
Calculated Resistivity
Ohm*m



Calculated Resistivity
Ohm*m

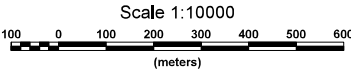
n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10

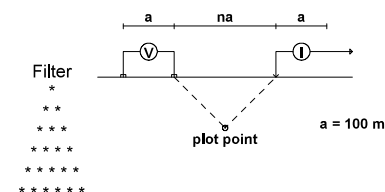
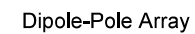
Average IP
mV/V



Average IP
mV/V

n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10

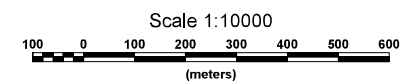




Instruments: ANDROTEX 8 kW Tx, GDD GRX-8 Rx

Frequency: 0.125 Hz.
Operators: J.C.

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

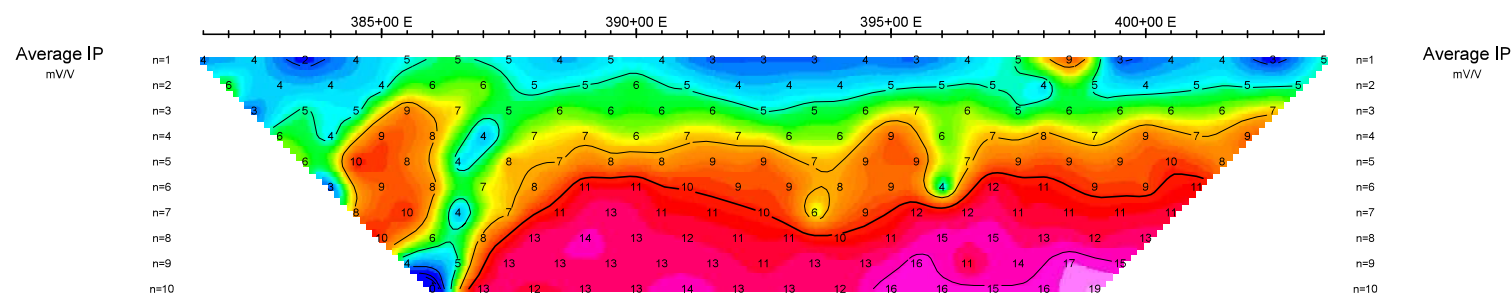
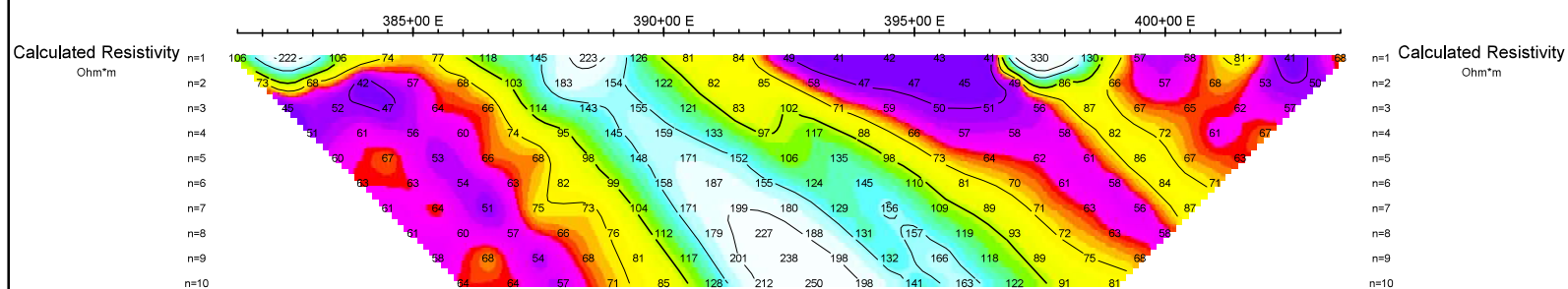


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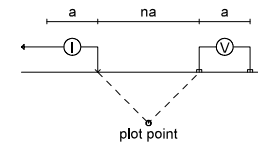
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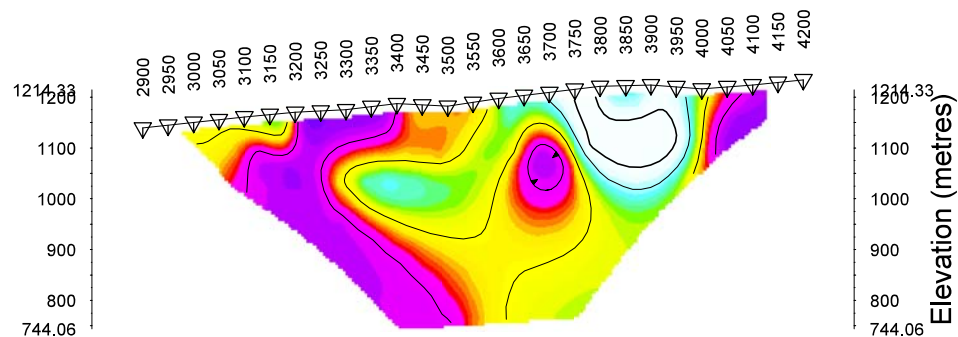


Line 9000

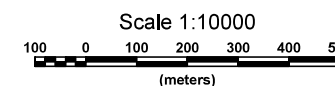
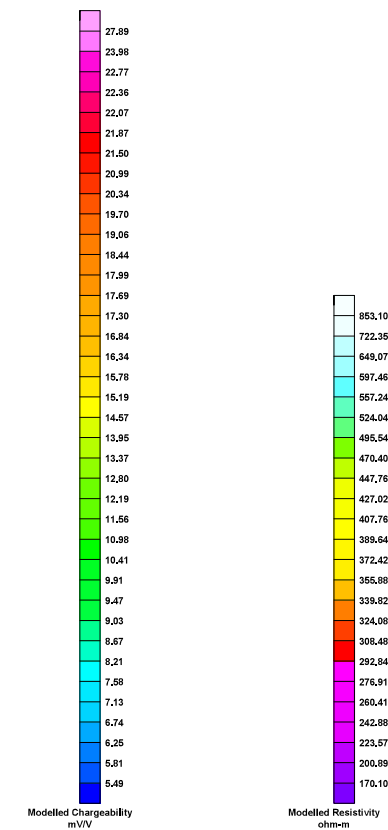
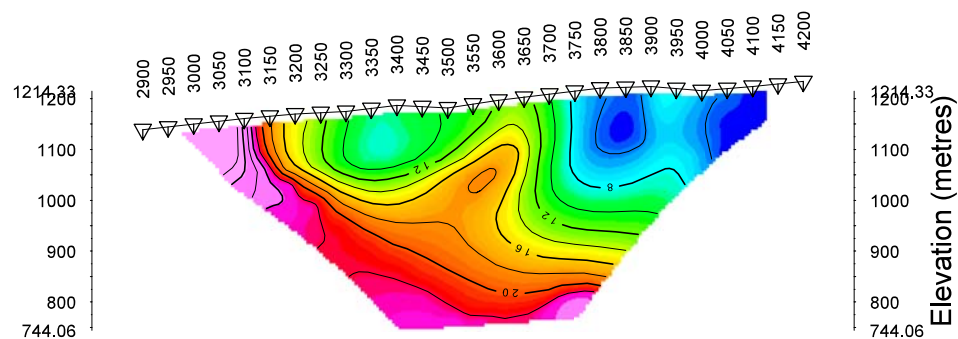
Pole-Dipole Array



Modelled Resistivity (Ohm-m)



Modelled Chargeability (mV/V)



MOUNT MILLIGAN

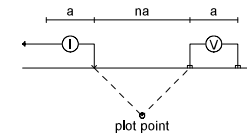
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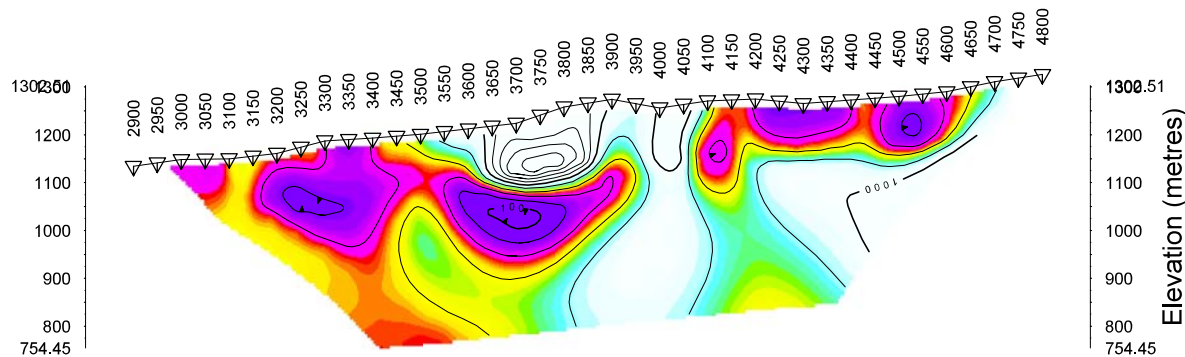
Inversion By: PETER E. WALCOTT & ASSOCIATES LIMITED

Line 9400

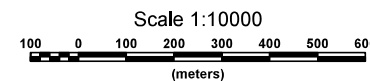
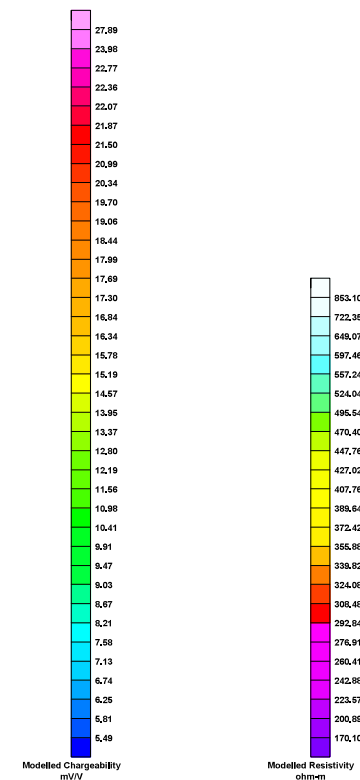
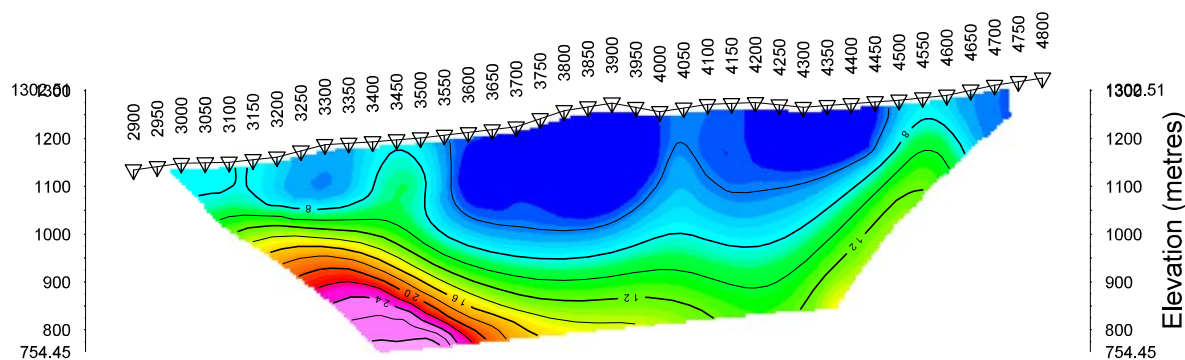
Pole-Dipole Array



Modelled Resistivity (Ohm-m)



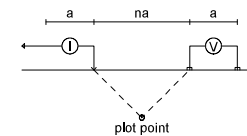
Modelled Chargeability (mV/V)



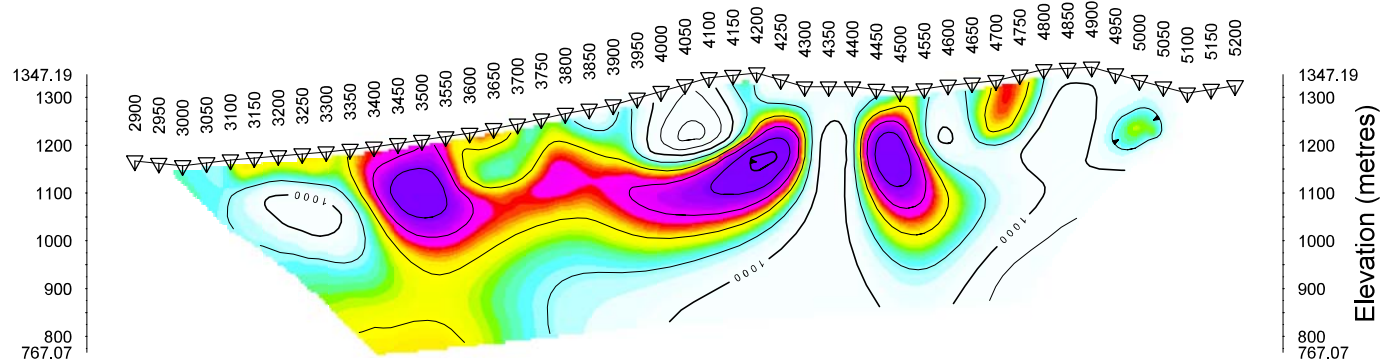
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Line 9800

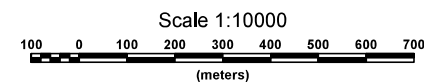
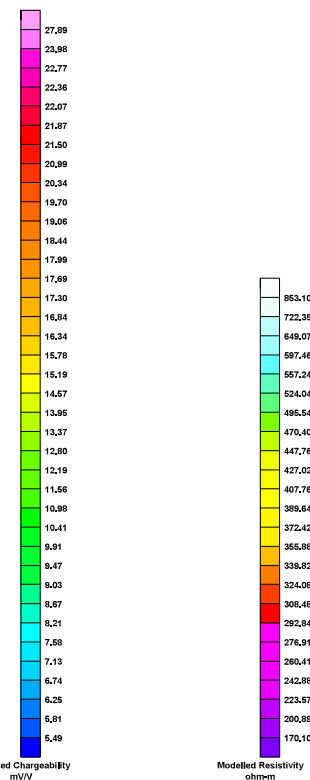
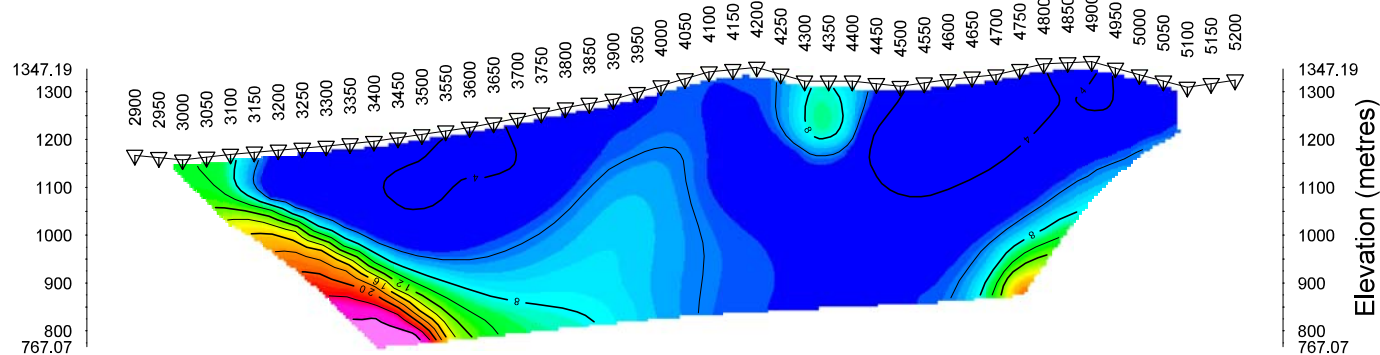
Pole-Dipole Array



Modelled Resistivity (Ohm-m)



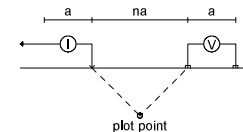
Modelled Chargeability (mV/V)



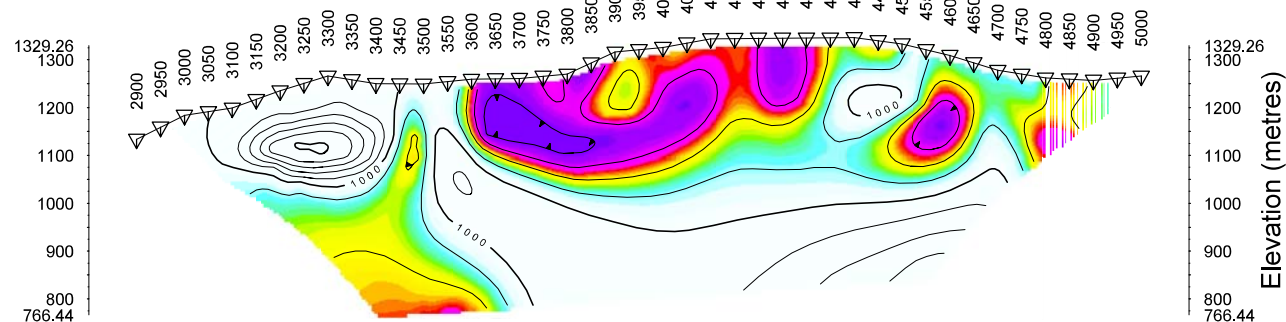
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Line 10200

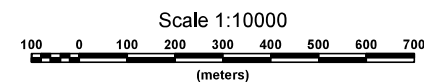
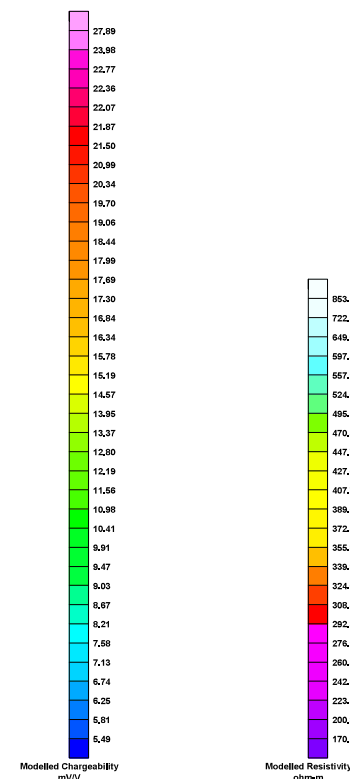
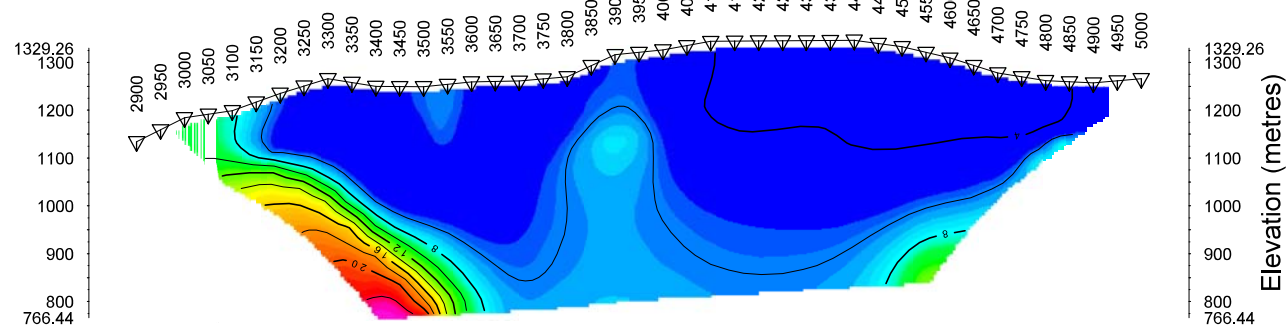
Pole-Dipole Array



Modelled Resistivity (Ohm-m)



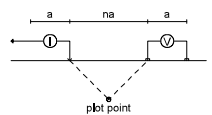
Modelled Chargeability (mV/V)



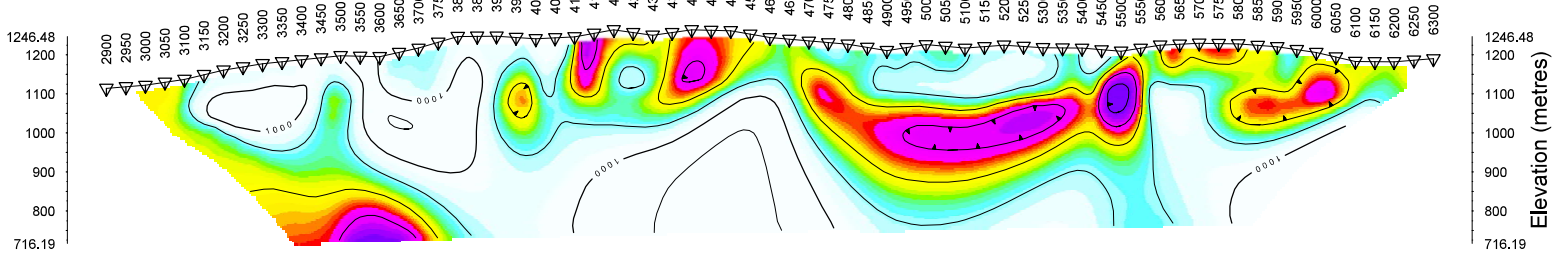
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Line 10600

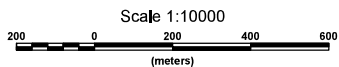
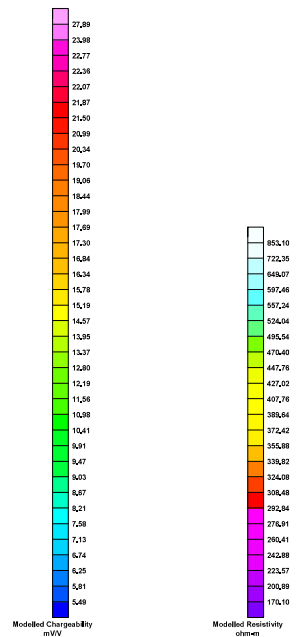
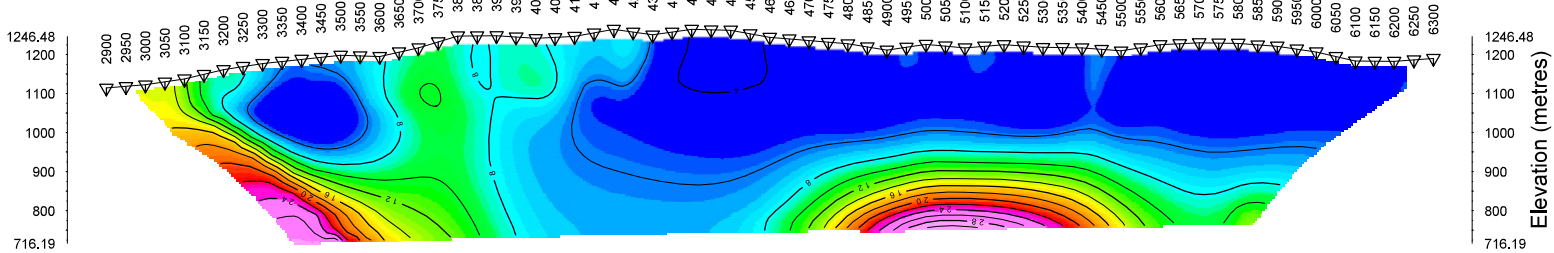
Pole-Dipole Array



Modelled Resistivity (Ohm-m)



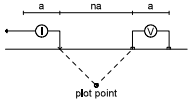
Modelled Chargeability (mV/V)



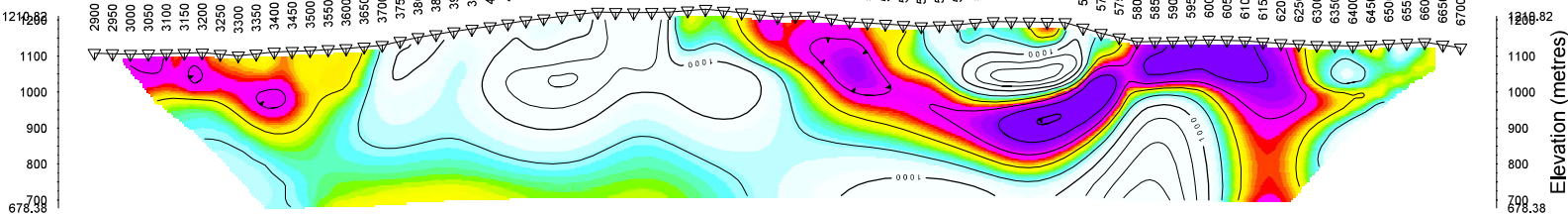
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Line 11000

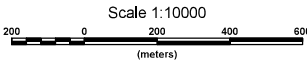
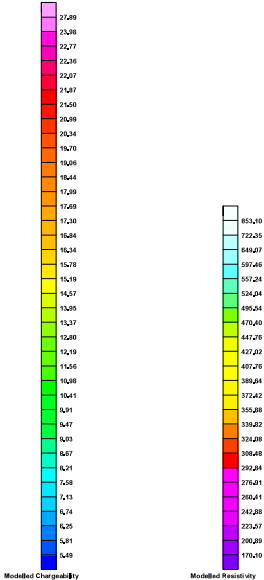
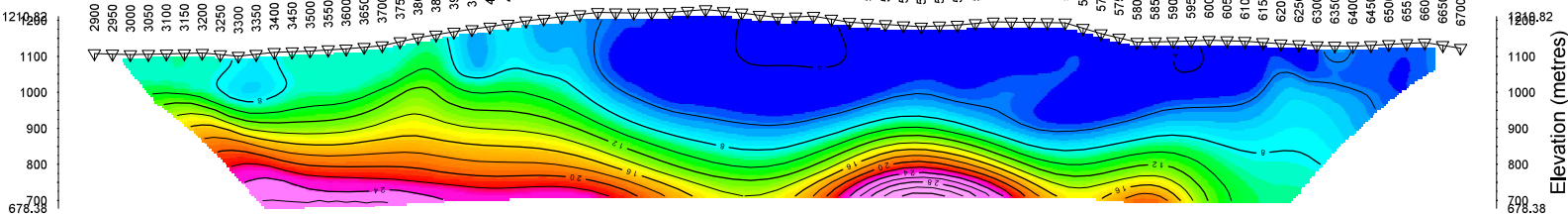
Pole-Dipole Array



Modelled Resistivity (Ohm-m)



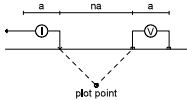
Modelled Chargeability (mV/V)



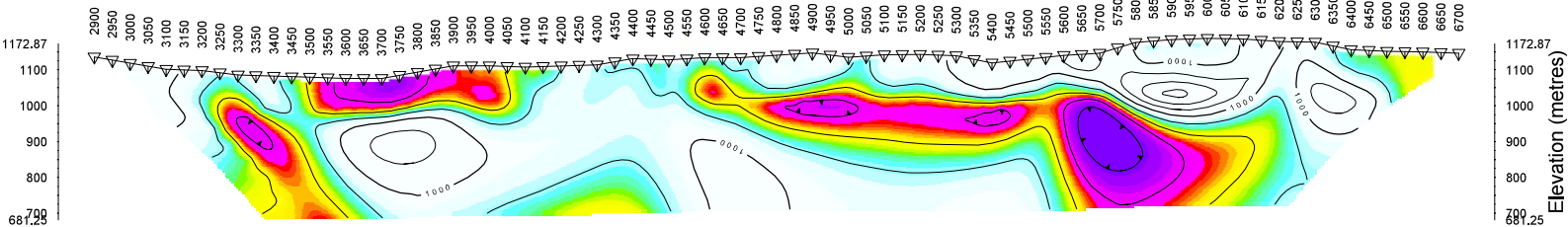
MOUNT MILLIGAN
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Line 11400

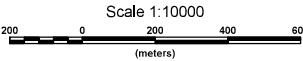
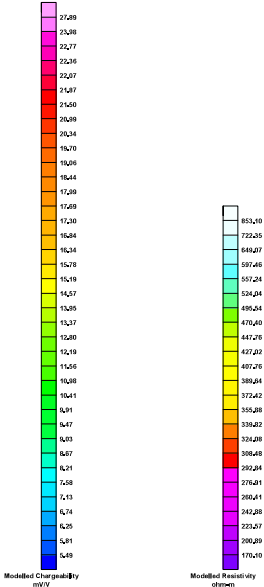
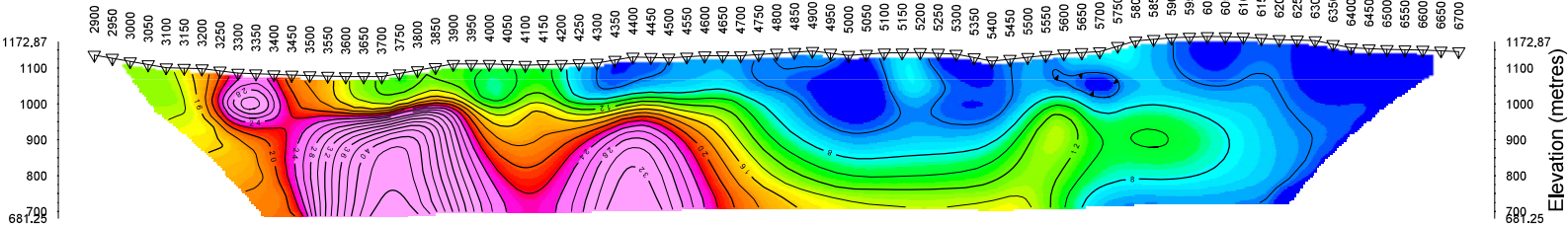
Pole-Dipole Array



Modelled Resistivity (Ohm-m)

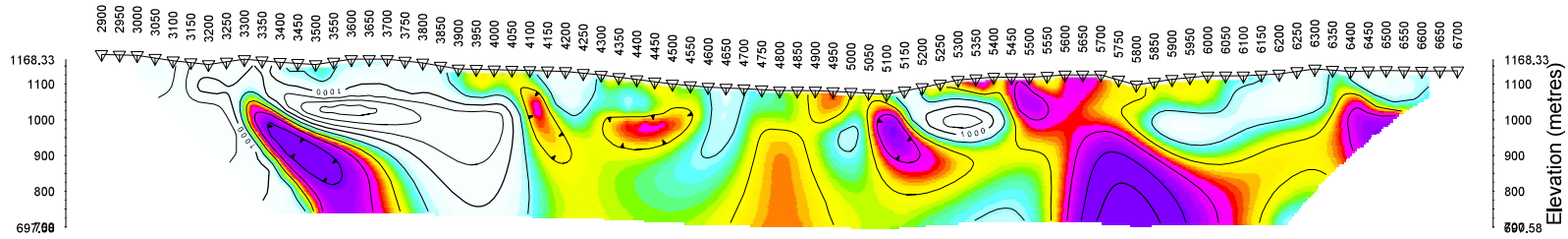


Modelled Chargeability (mV/V)



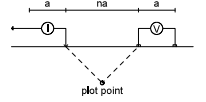
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Modelled Resistivity (Ohm-m)

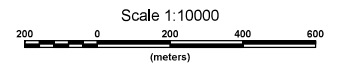
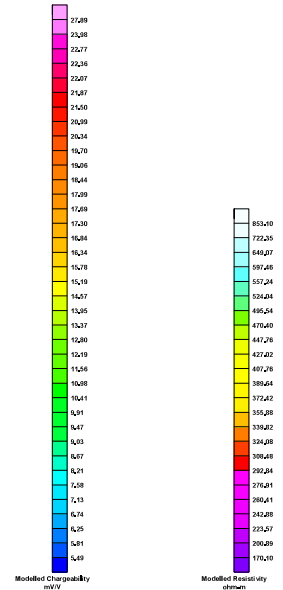
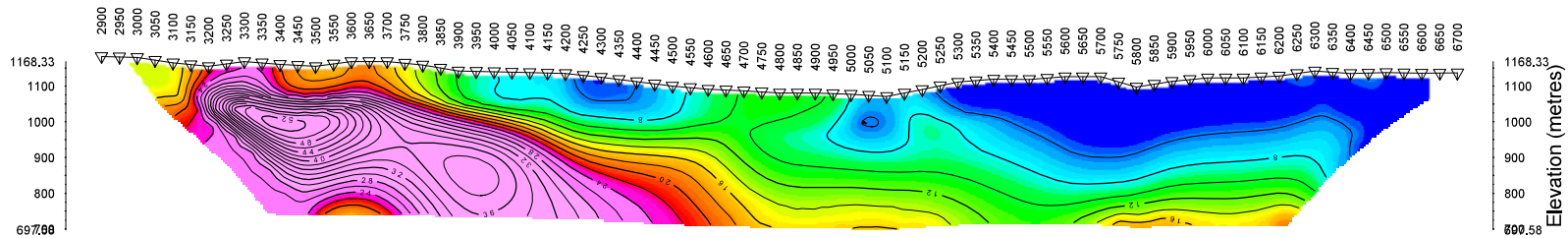


Line 11800

Pole-Dipole Array



Modelled Chargeability (mV/V)



MOUNT MILLIGAN

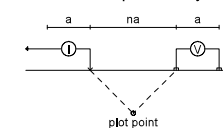
INDUCED POLARIZATION SURVEY
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BRITISH COLUMBIA

Date: SEPTEMBER 2017
RES2DINV

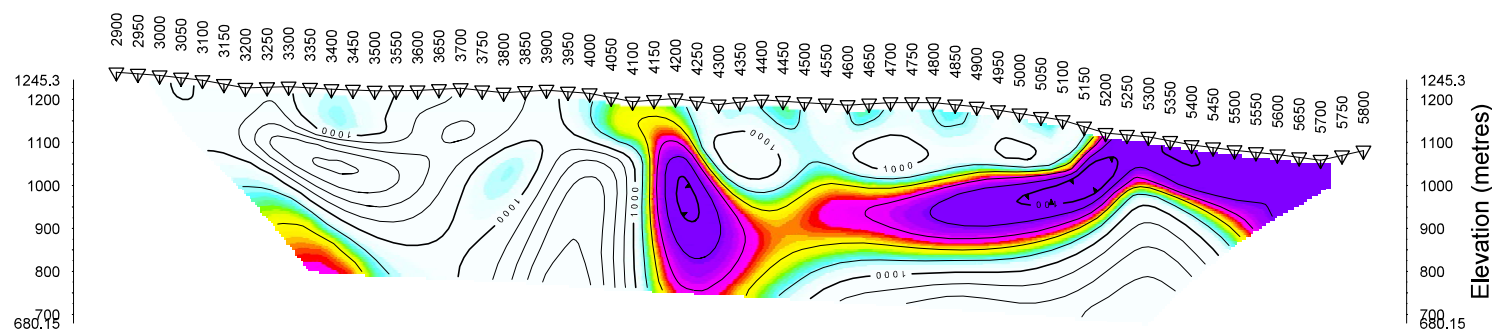
Inversion By: PETER E. WALCOTT & ASSOCIATES LIMITED

Line 12200

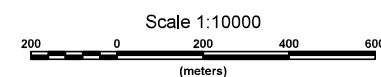
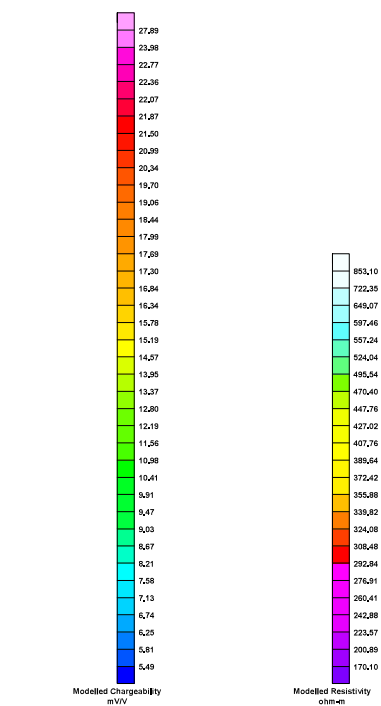
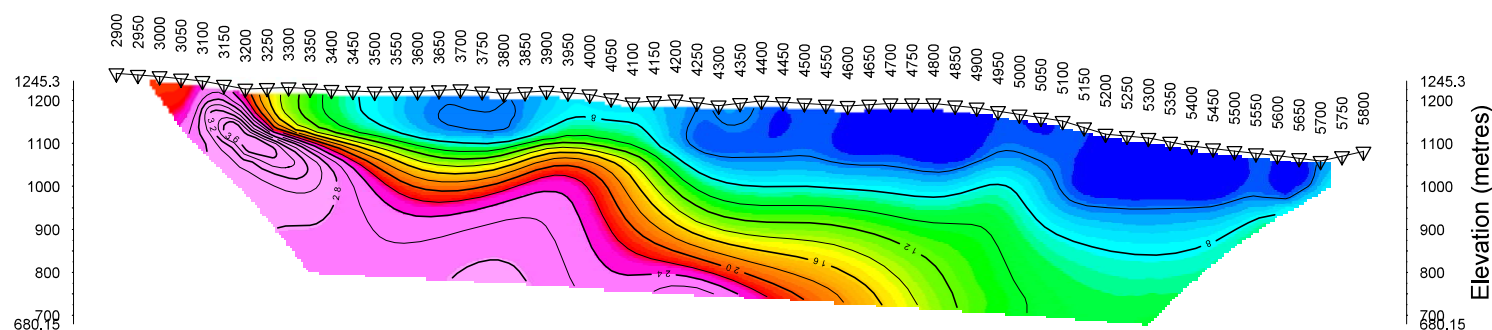
Pole-Dipole Array



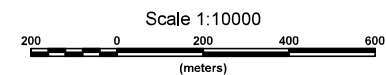
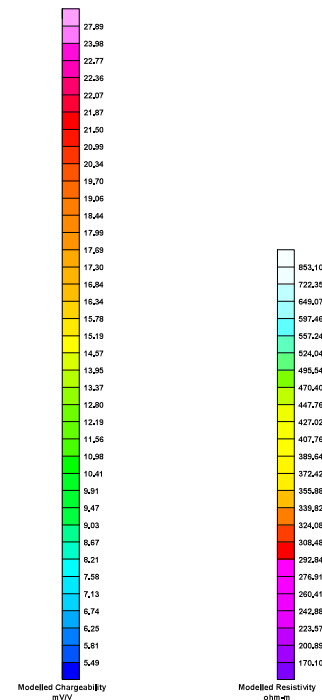
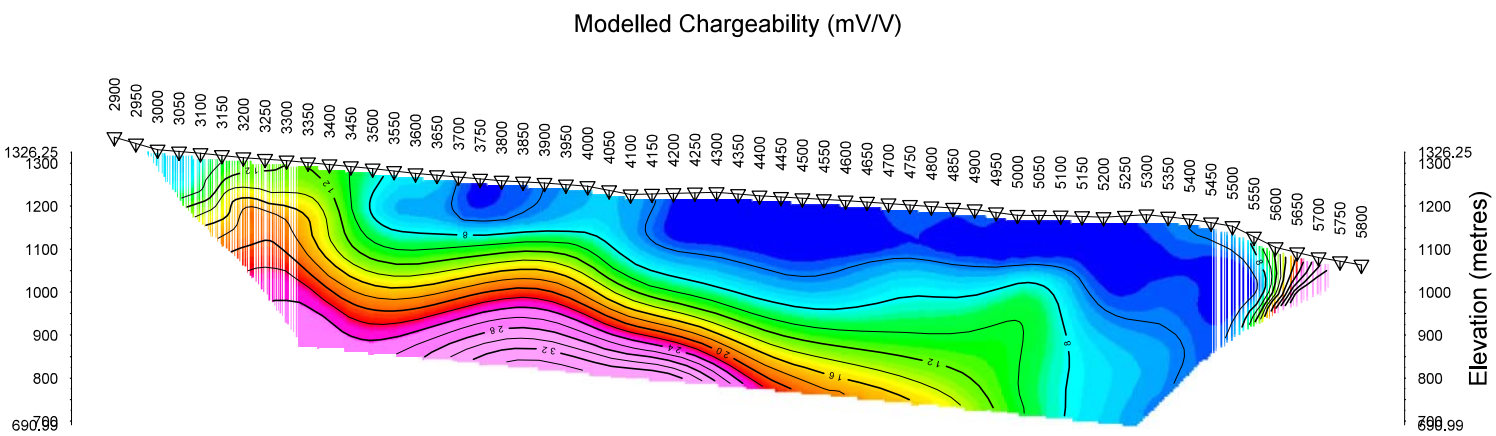
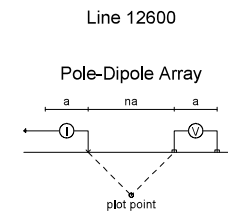
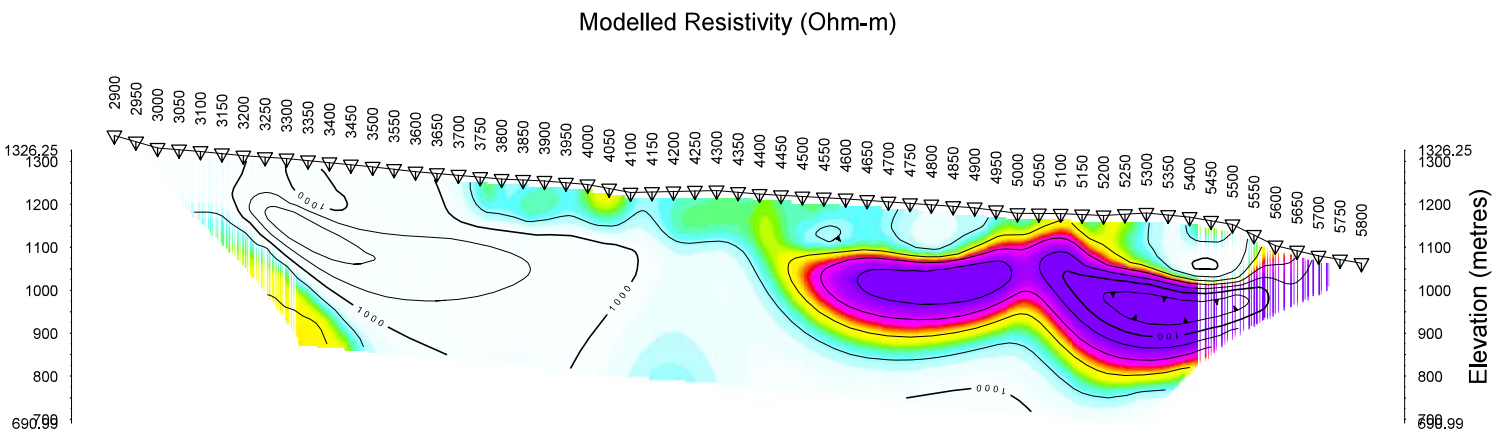
Modelled Resistivity (Ohm-m)



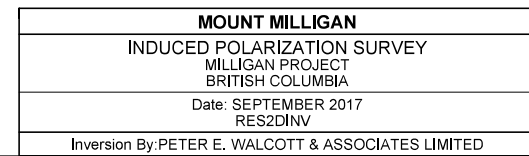
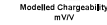
Modelled Chargeability (mV/V)



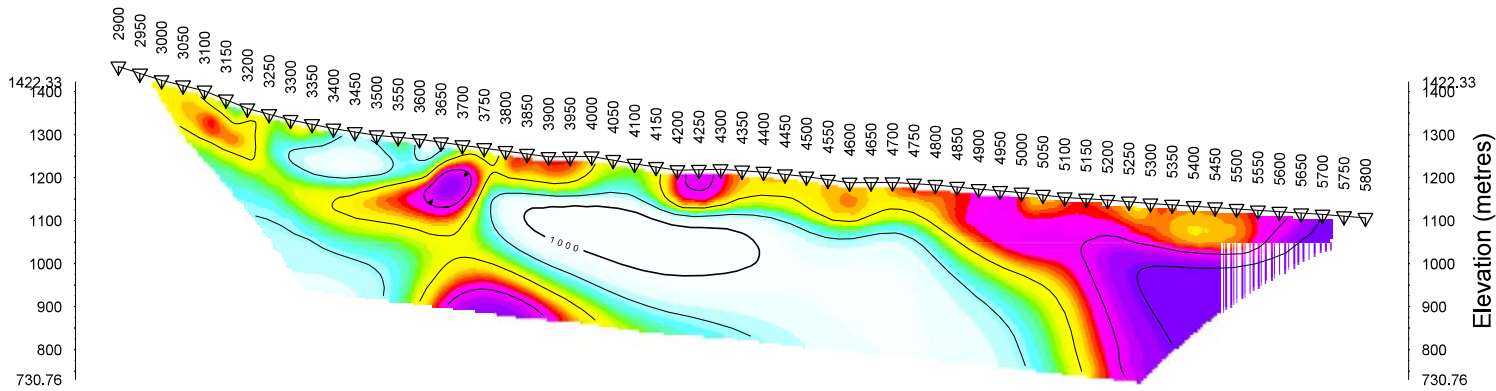
MOUNT MILLIGAN
INDUCED POLARIZATION SURVEY MILLIGAN PROJECT BRITISH COLUMBIA
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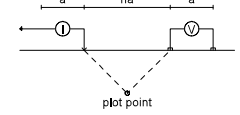


Modelled Resistivity (Ohm-m)

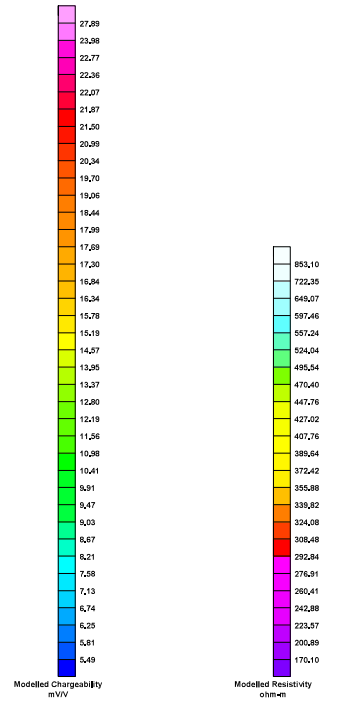
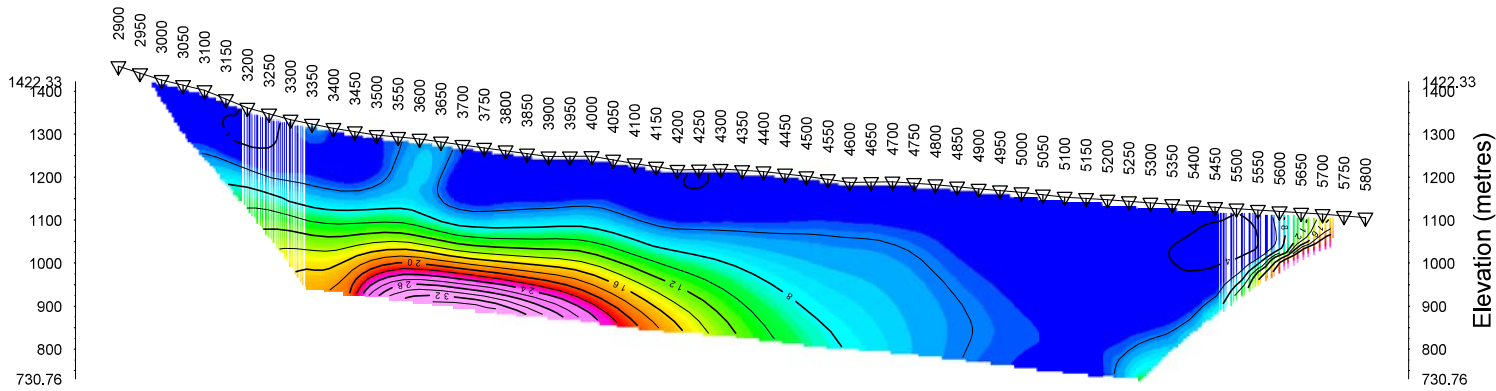


Line 13400

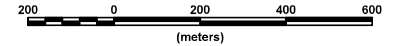
Pole-Dipole Array



Modelled Chargeability (mV/V)

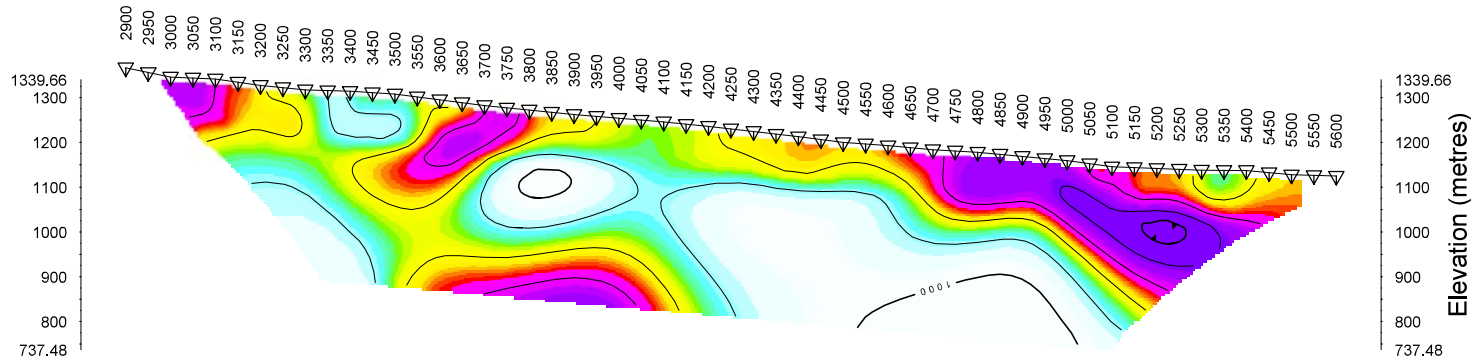


Scale 1:10000



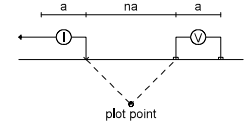
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Modelled Resistivity (Ohm-m)

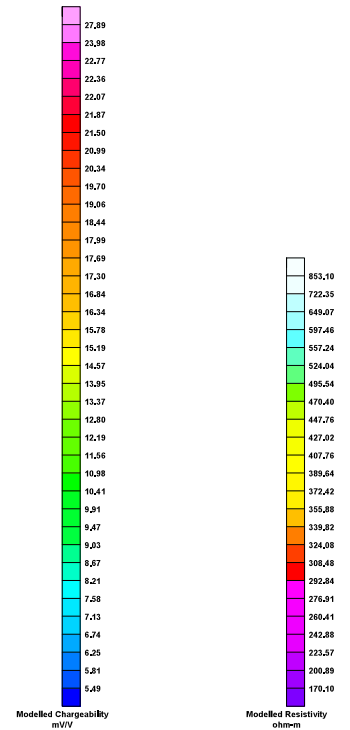
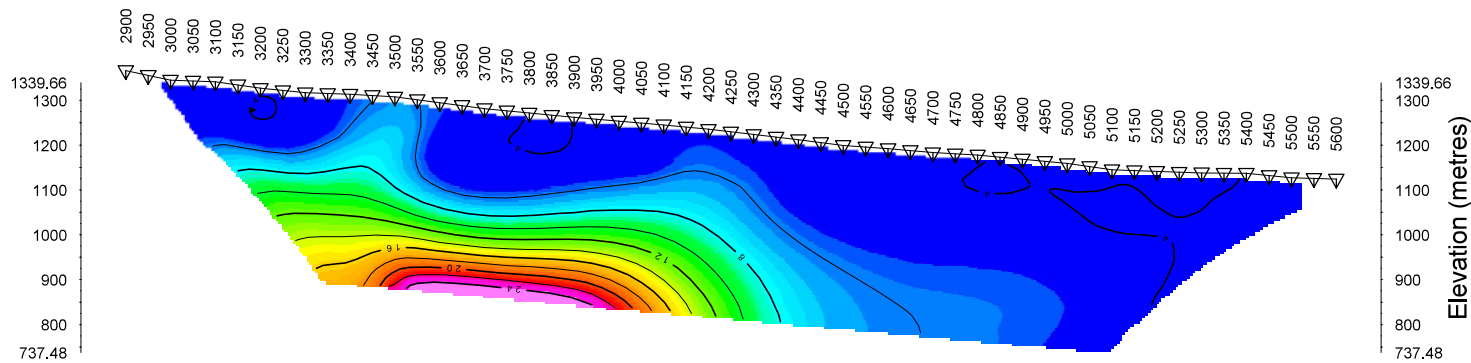


Line 13800

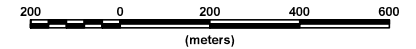
Pole-Dipole Array



Modelled Chargeability (mV/V)



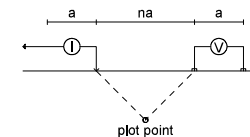
Scale 1:10000



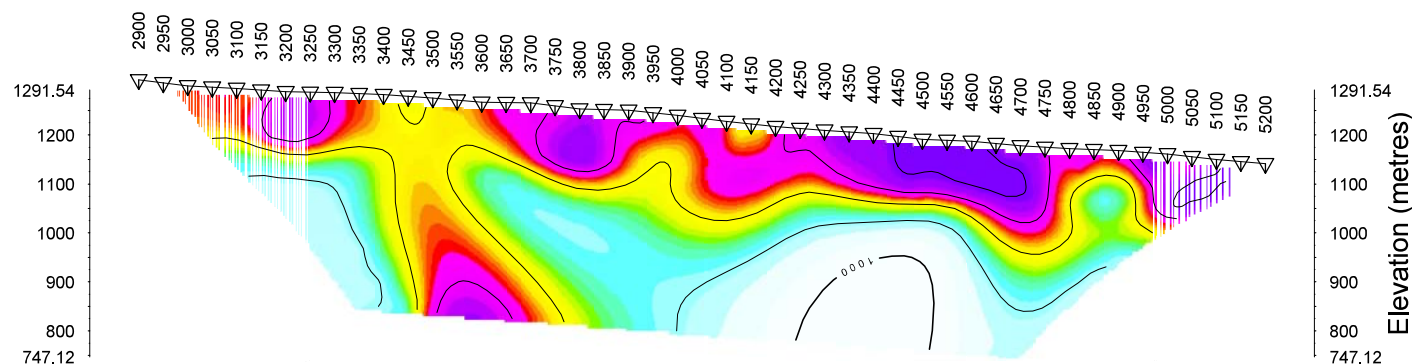
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Line 14200

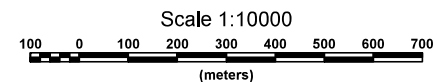
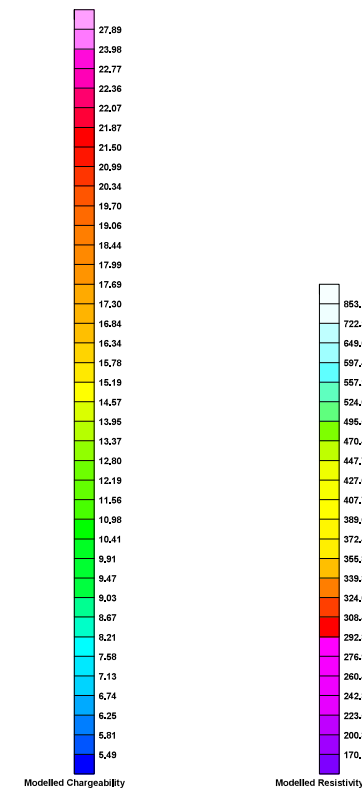
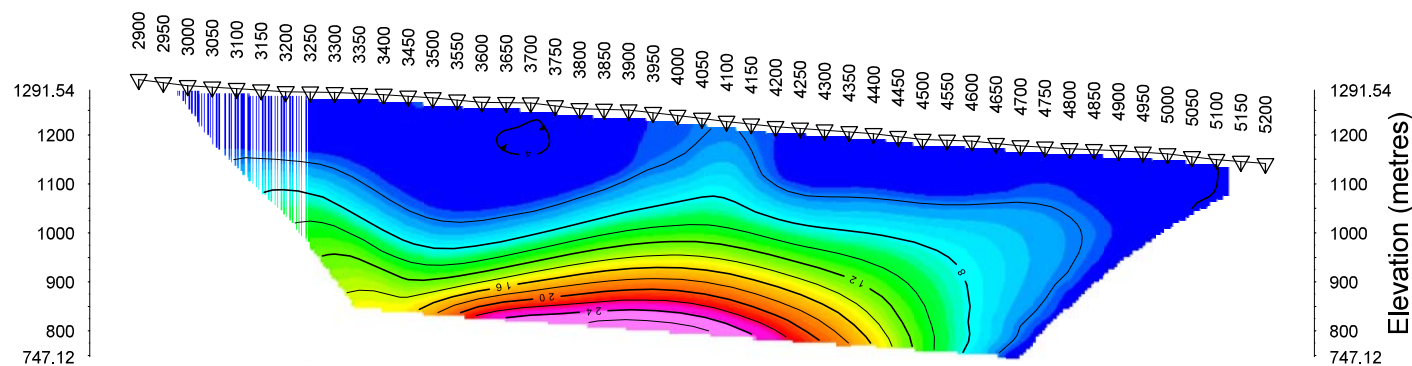
Pole-Dipole Array



Modelled Resistivity (Ohm-m)



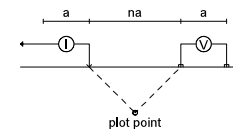
Modelled Chargeability (mV/V)



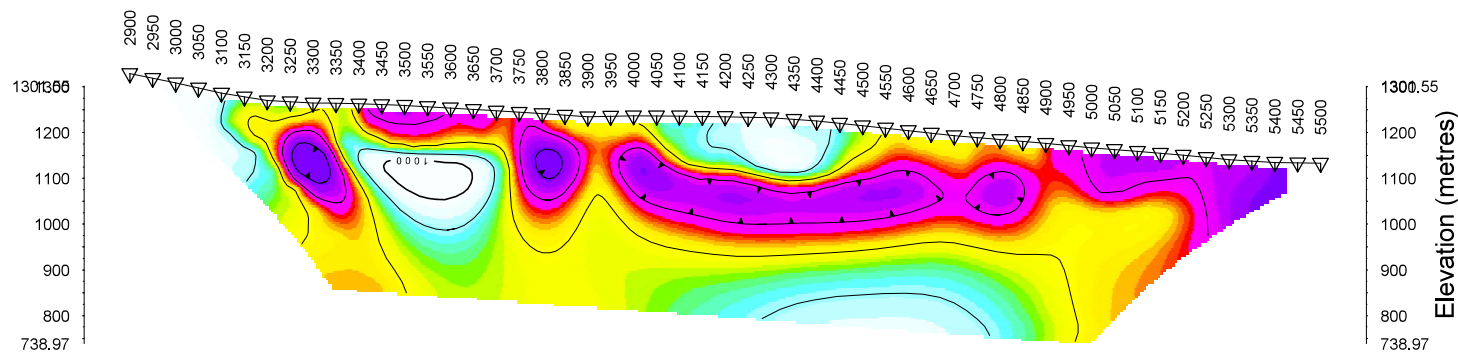
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Line 14600

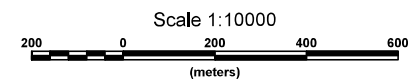
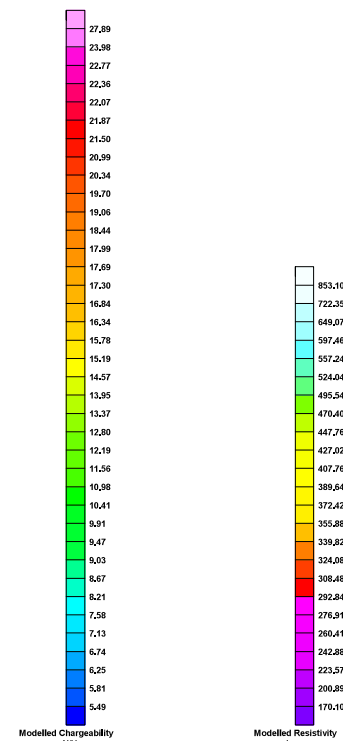
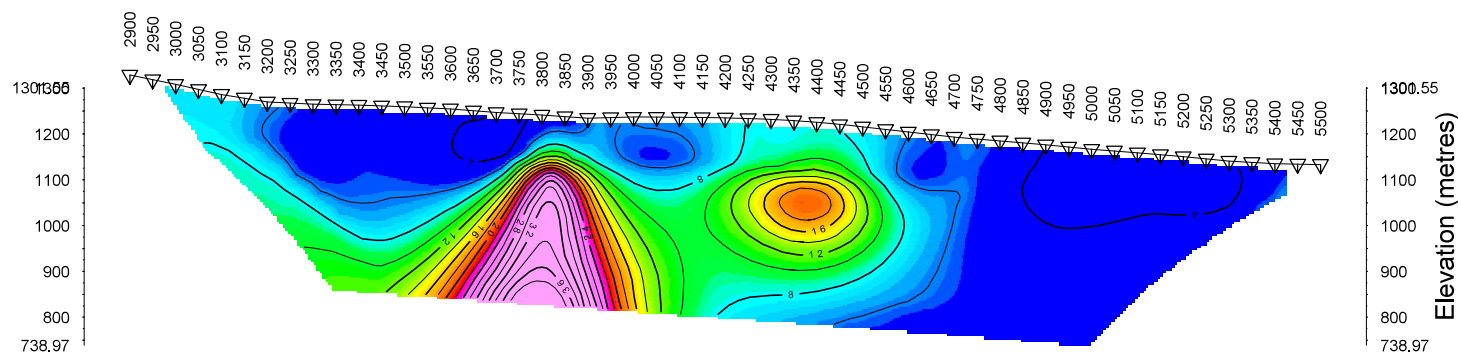
Pole-Dipole Array



Modelled Resistivity (Ohm-m)



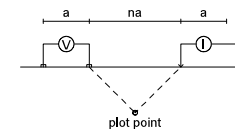
Modelled Chargeability (mV/V)



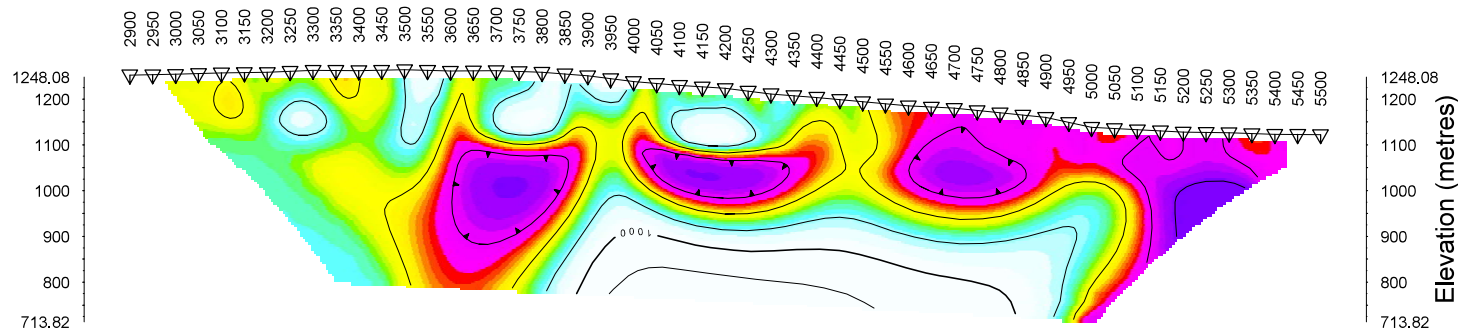
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Line 15000

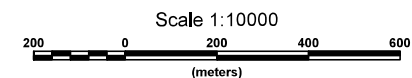
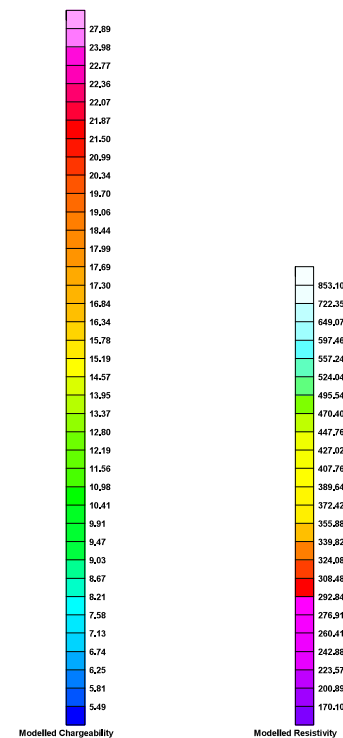
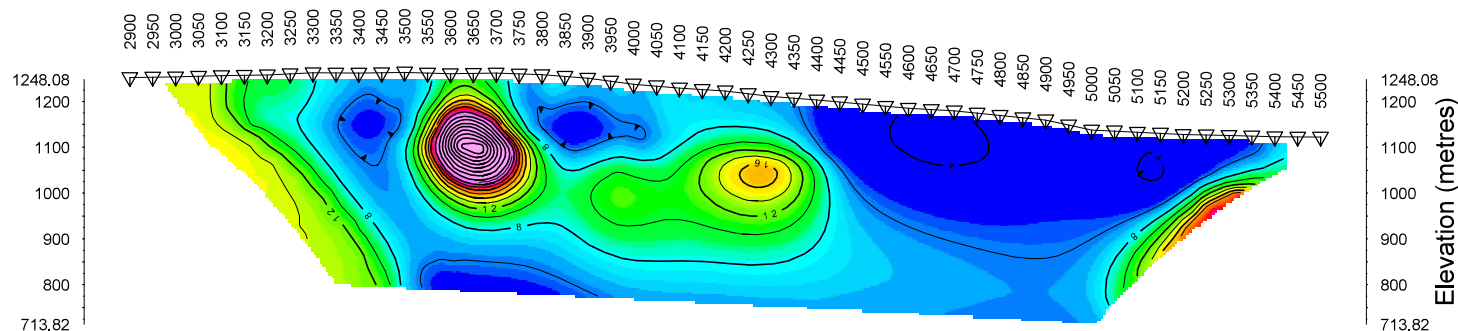
Dipole-Pole Array



Modelled Resistivity (Ohm-m)

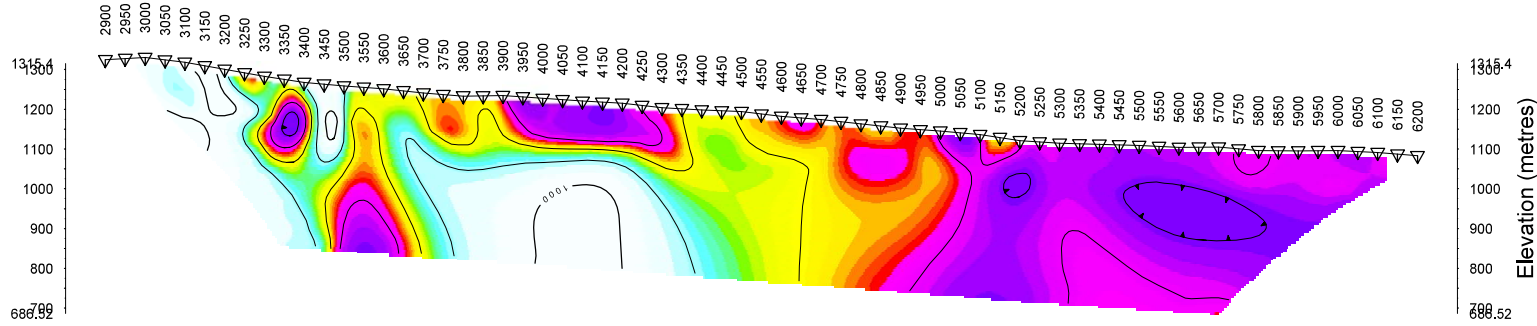


Modelled Chargeability (mV/V)



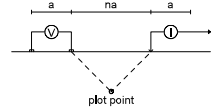
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BRITISH COLUMBIA
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Modelled Resistivity (Ohm-m)

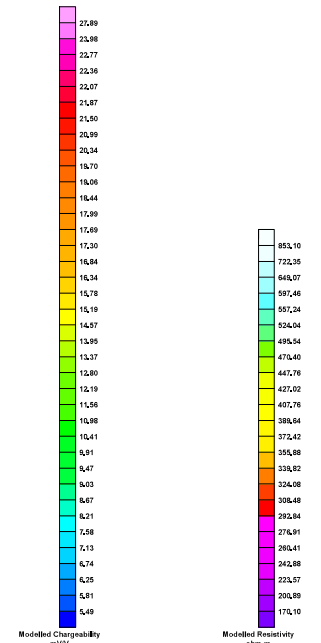
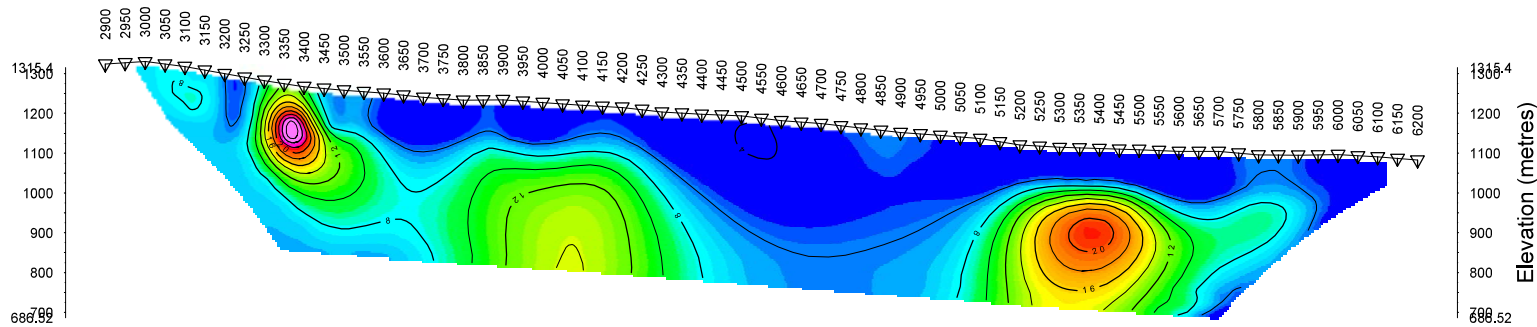


Line 15400

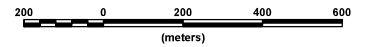
Dipole-Pole Array



Modelled Chargeability (mV/V)



Scale 1:10000

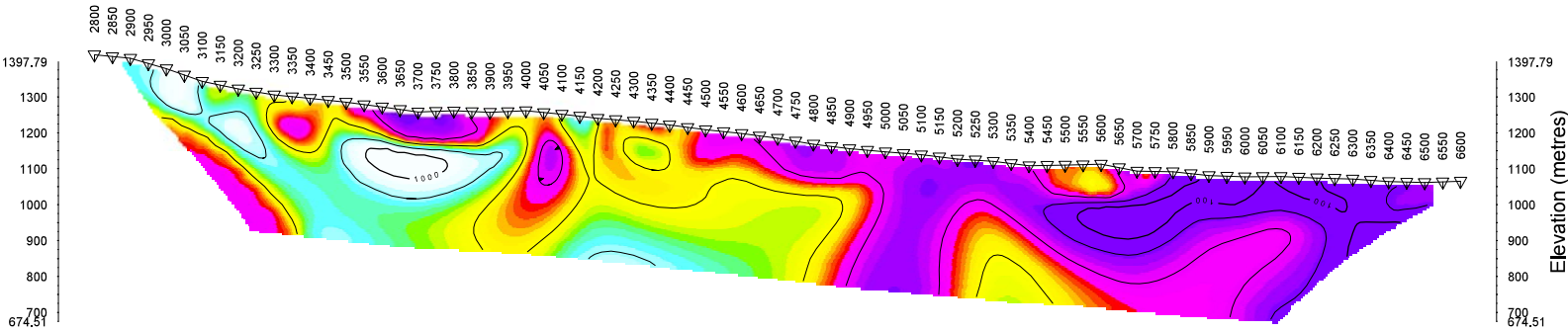


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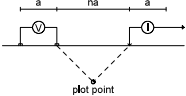
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Modelled Resistivity (Ohm-m)

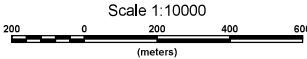
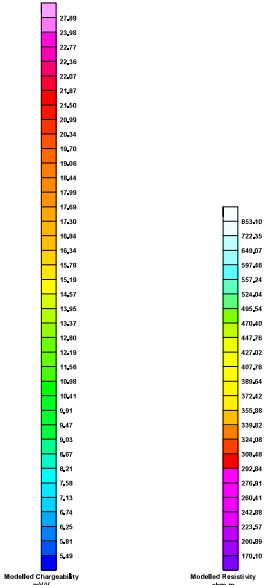
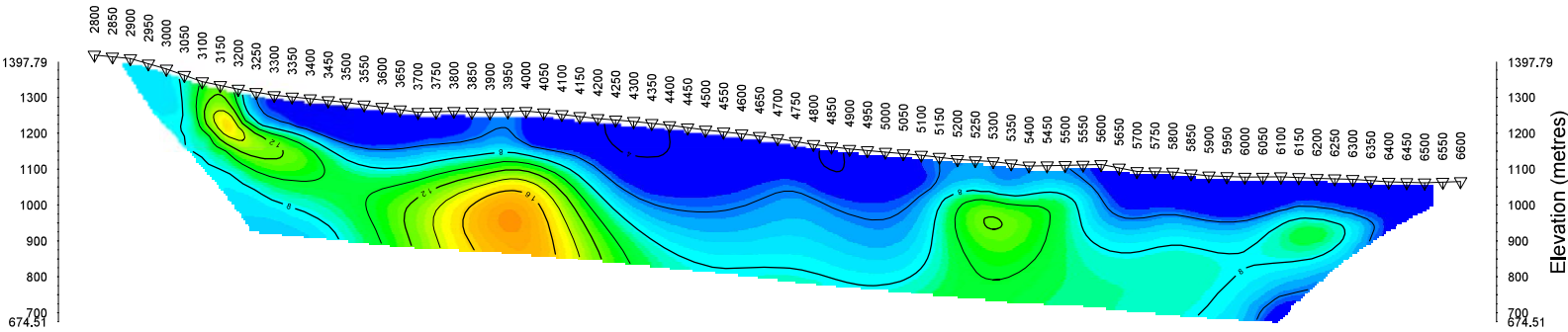


Line 15800

Dipole-Dipole Array

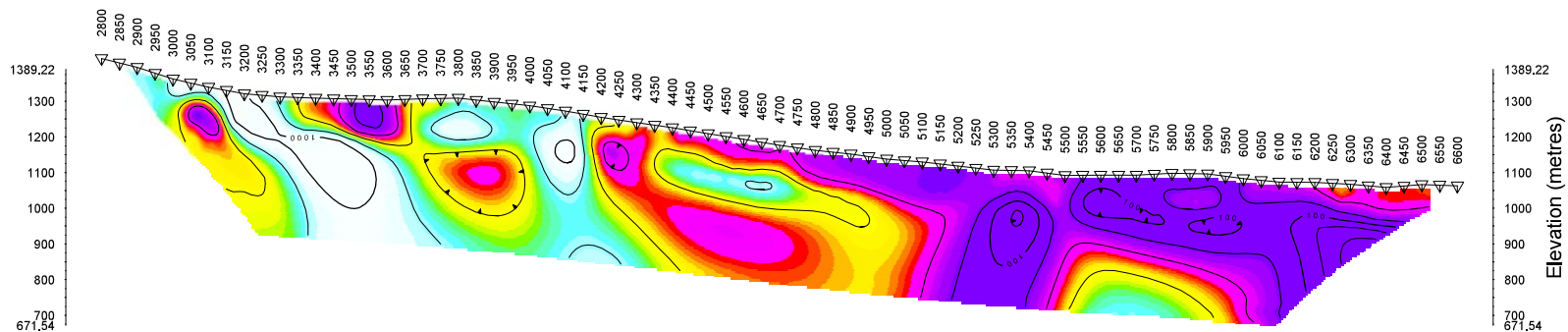


Modelled Chargeability (mV/V)

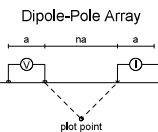


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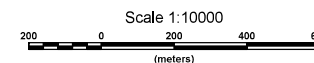
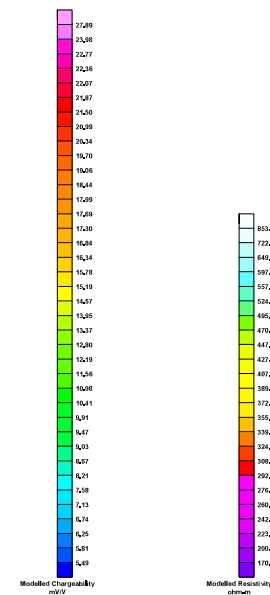
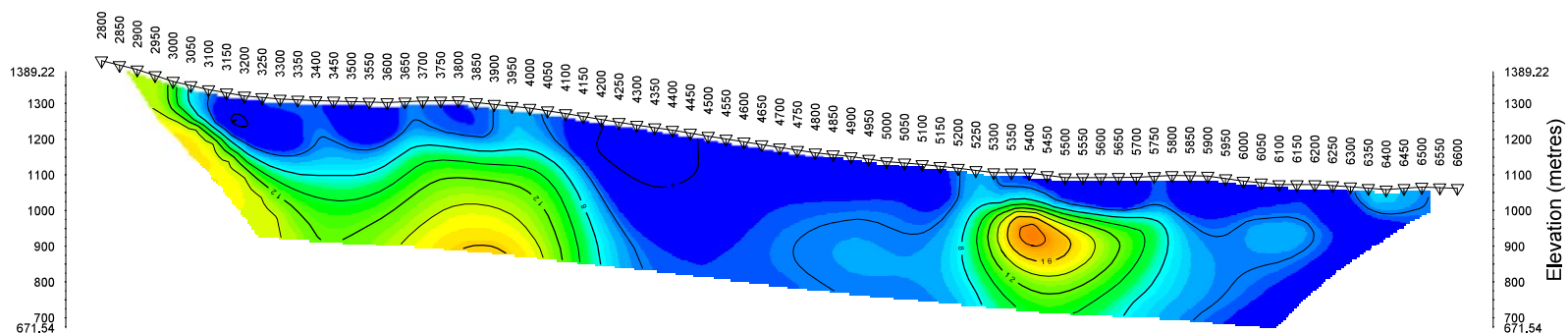
Modelled Resistivity (Ohm-m)



Line 16075



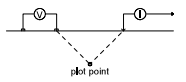
Modelled Chargeability (mV/V)



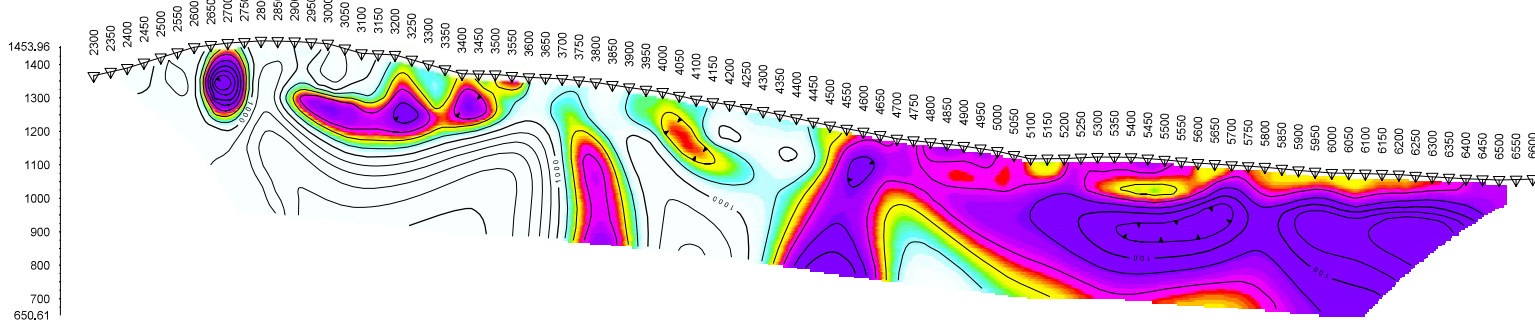
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Line 16600

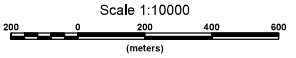
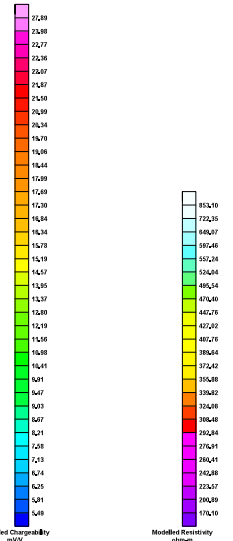
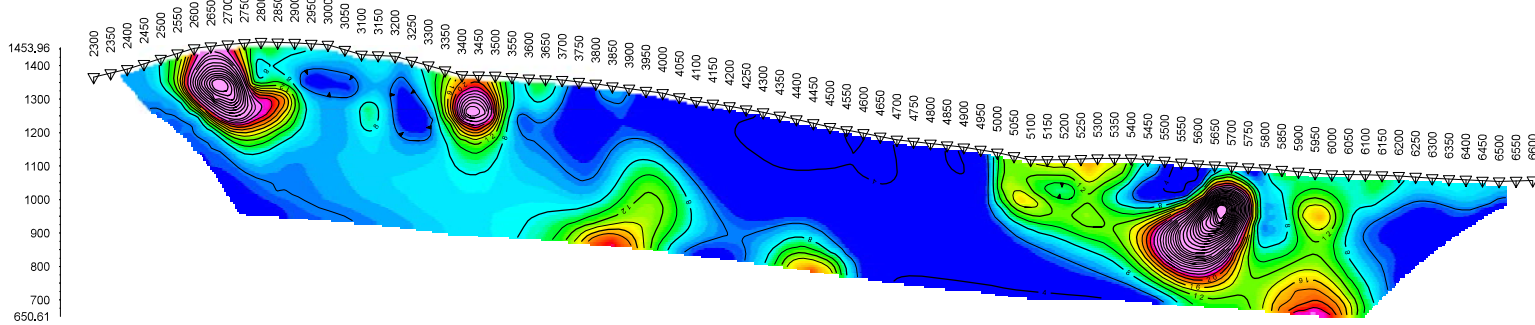
Dipole-Pole Array



Modelled Resistivity (Ohm-m)

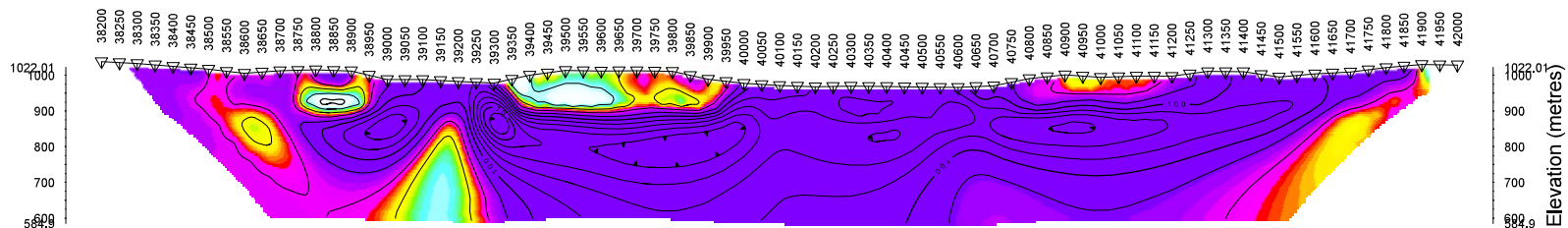


Modelled Chargeability (mV/V)

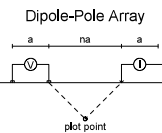


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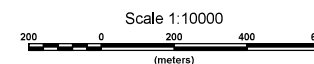
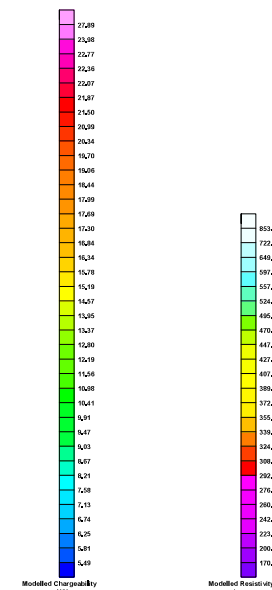
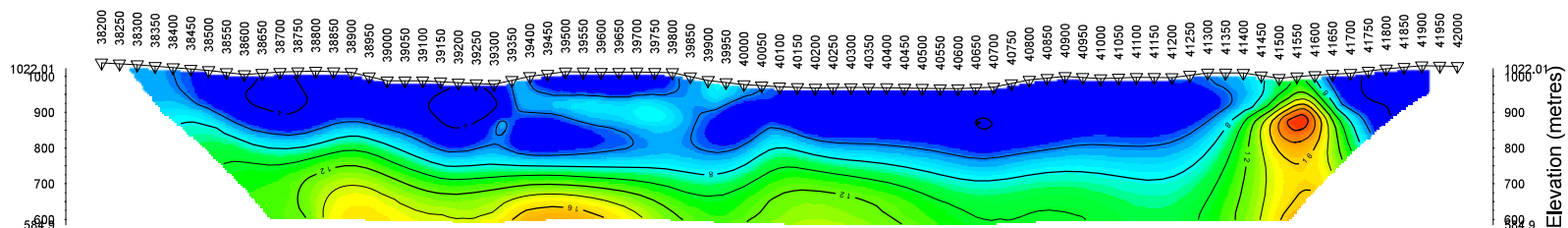
Modelled Resistivity (Ohm-m)



Line 6108600



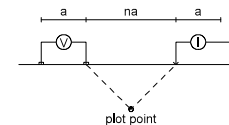
Modelled Chargeability (mV/V)



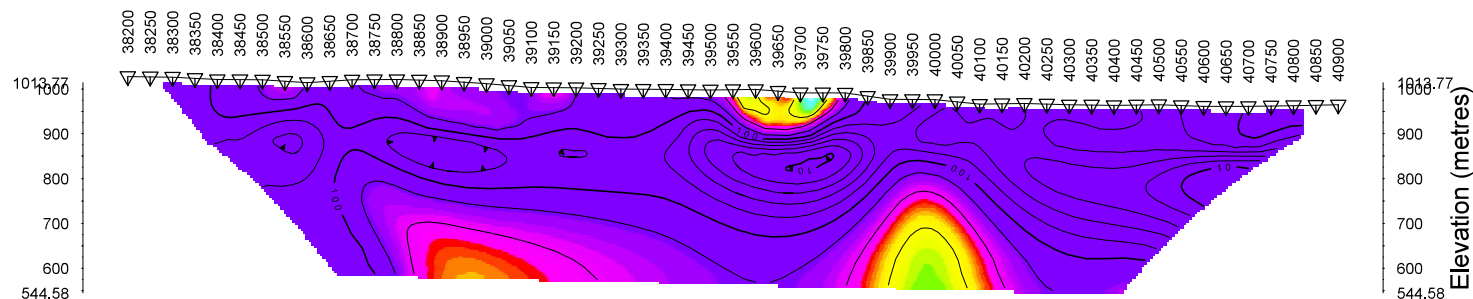
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Line 6109800

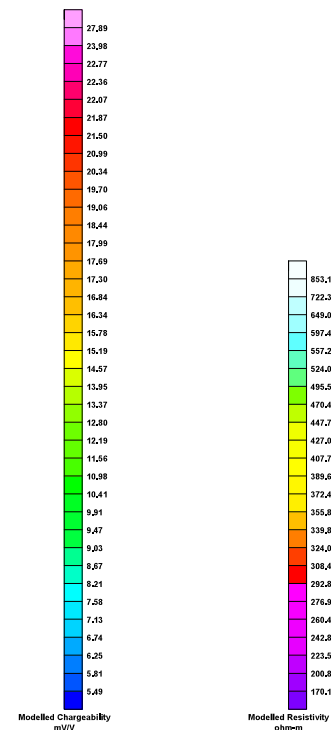
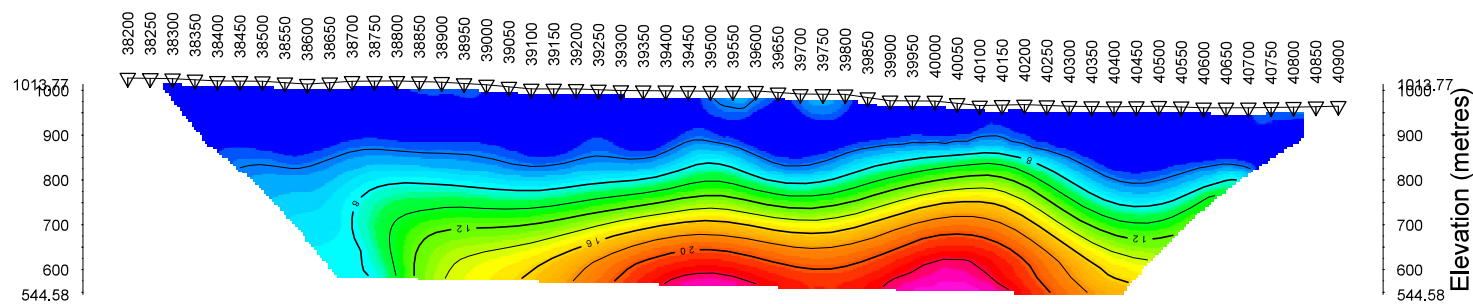
Dipole-Pole Array



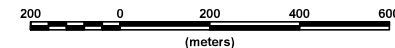
Modelled Resistivity (Ohm-m)



Modelled Chargeability (mV/V)



Scale 1:10000



MOUNT MILLIGAN

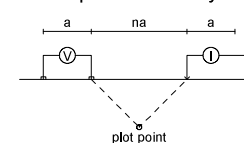
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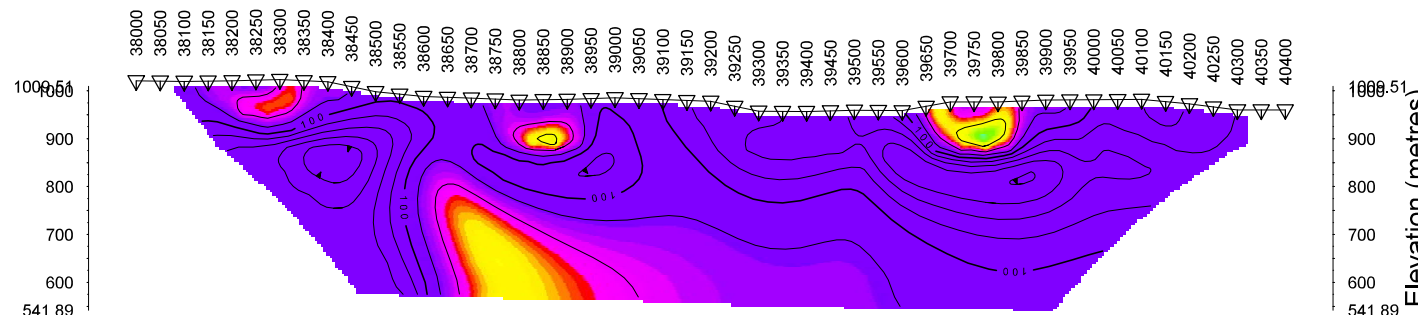
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Line 6110200

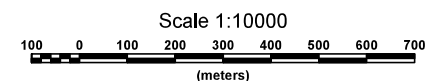
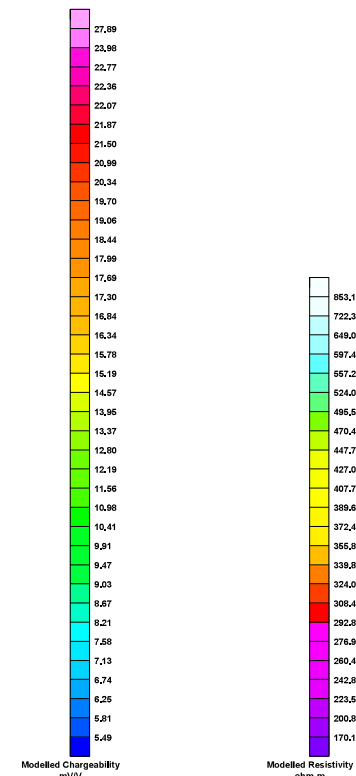
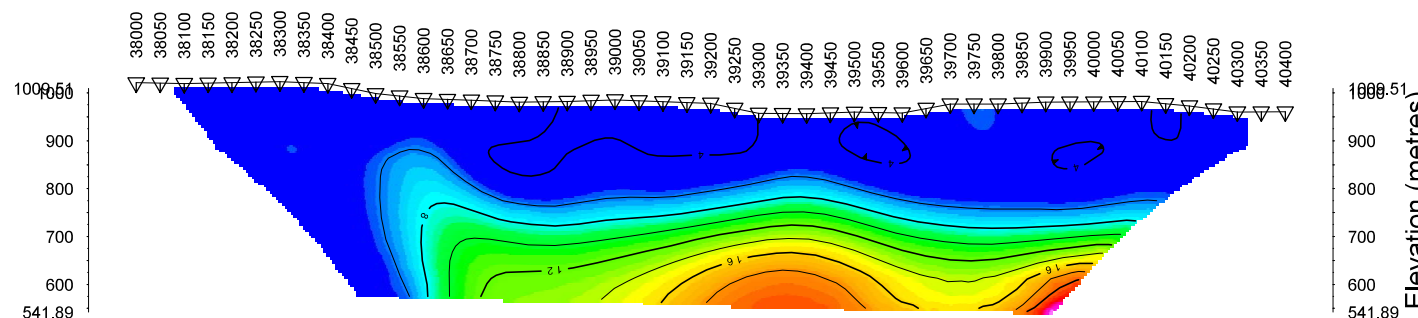
Dipole-Pole Array



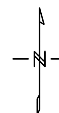
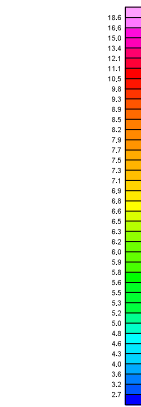
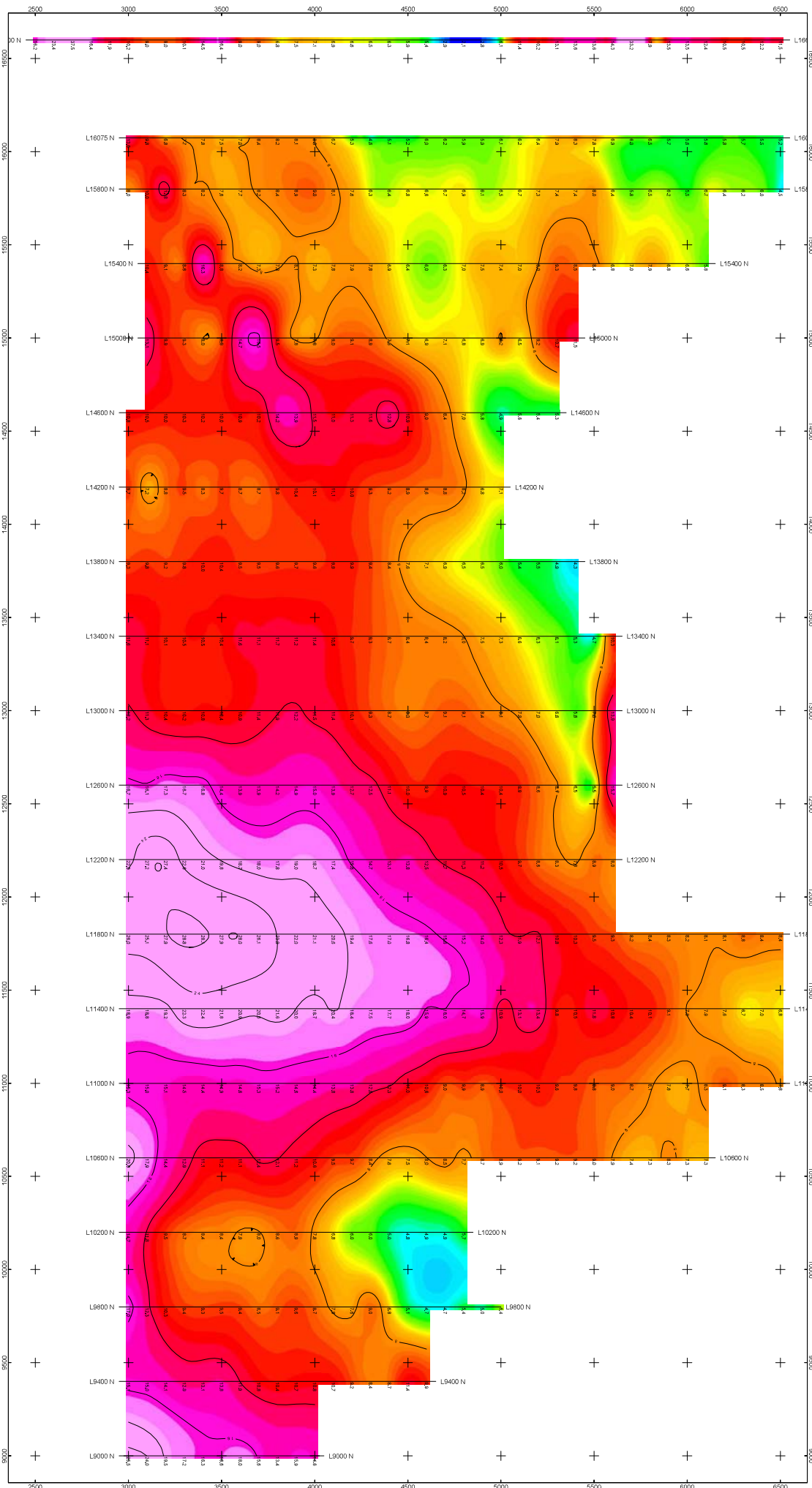
Modelled Resistivity (Ohm-m)

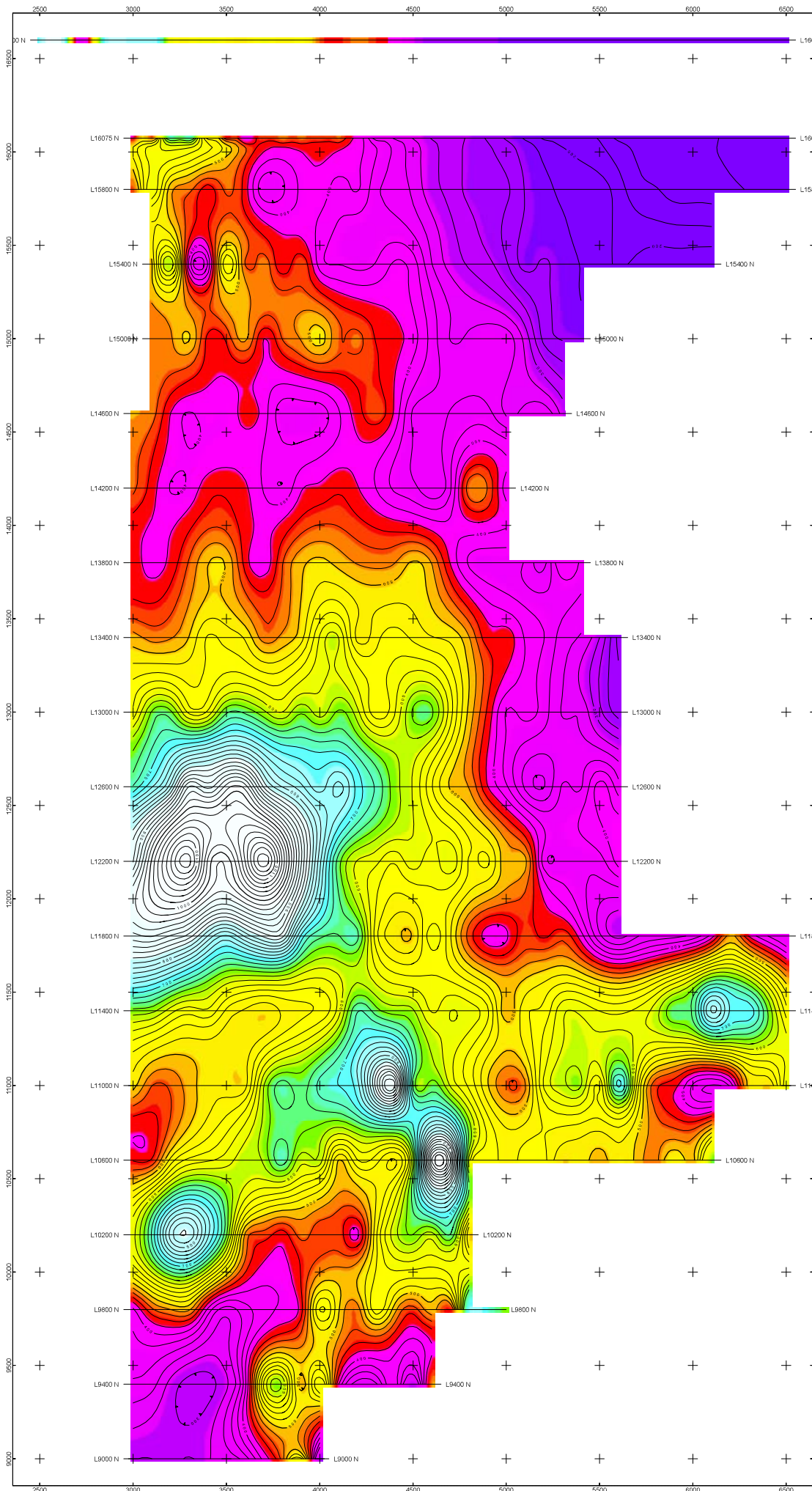


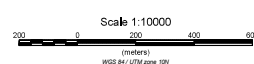
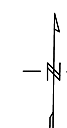
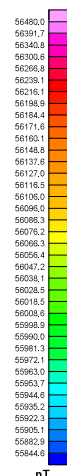
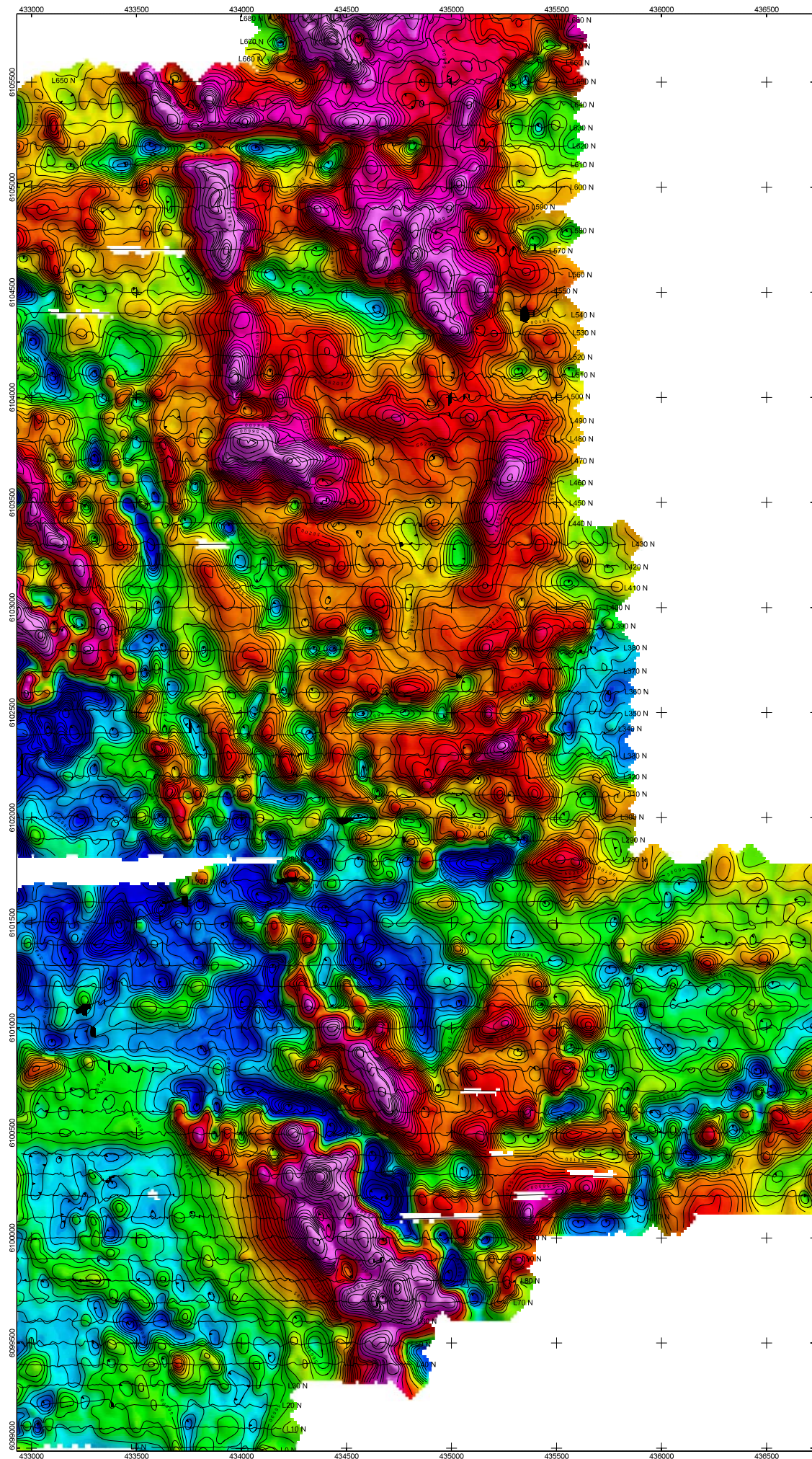
Modelled Chargeability (mV/V)



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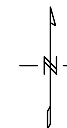
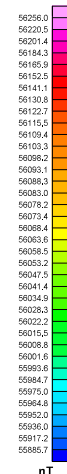
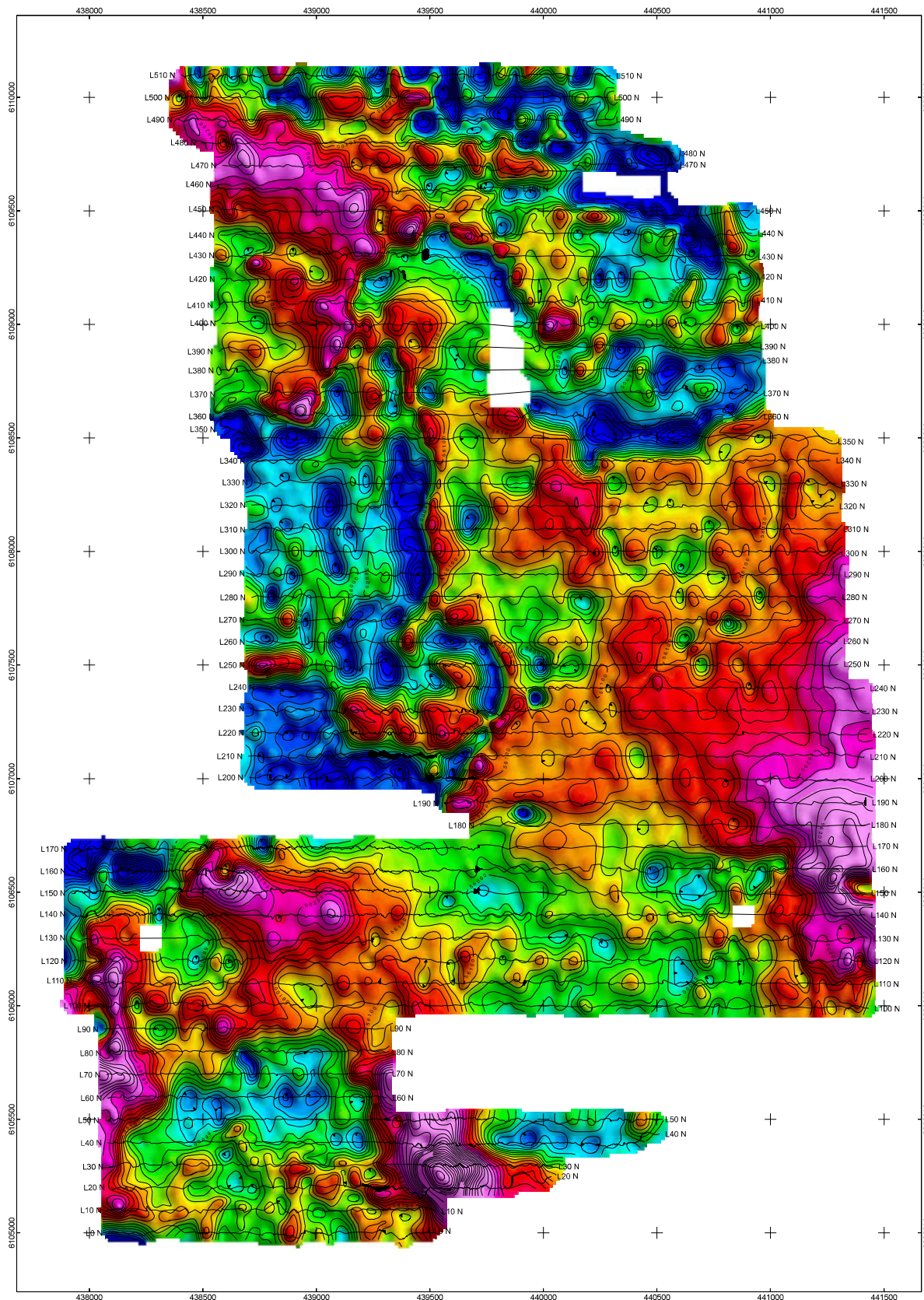




MOUNT MILLIGAN
GROUND MAGNETIC SURVEY
CONTOURS OF TOTAL FIELD INTENSITY (nT)
BLOCK1

MOUNT MILLIGAN PROJECT
 FT. ST. JAMES AREA
 FALL 2017

PETER E. WALCOTT & ASSOCIATES LIMITED



MOUNT MILLIGAN
GROUND MAGNETIC SURVEY
CONTOURS OF TOTAL FIELD INTENSITY (nT)
BLOCK 2
MOUNT MILLIGAN PROJECT
FT. ST. JAMES AREA
FALL 2017
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