



Ministry of Energy and Mines

BC Geological Survey

Assessment Report Title Page and Summary

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: Betty Claims Geophysics

TOTAL COST: \$30,416.50

AUTHOR(S): B. Rennie SIGNATURE(S):

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): 18-1620793-1009 / October 09, 2018 STATEMENT OF WORK EVENT NUMBER(S)/DATE(S): 5760382 / 2019/OCT/24 0:34:53

YEAR OF WORK: 2018 PROPERTY NAME: Betty Claims CLAIM NAME(S) (on which work was done): 236917, 415578, 416368, 416369, 416370

COMMODITIES SOUGHT: Copper, Iron, Gold

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 092ISE173

MINING DIVISION: Nicola NTS / BCGS: 0921/02 LATITUDE: 50 00 12 LONGITUDE: -121 " (at centre of work) 00 00 UTM Zone: EASTING: 643600 NORTHING: 5562850 10 OWNER(S): Clibetre Exploration Ltd. MAILING ADDRESS: 1731 Westover Road North Vancouver, BC V7J 1X7 OPERATOR(S) [who paid for the work]: Clibetre Exploration Ltd. MAILING ADDRESS: 1731 Westover Road North Vancouver, BC V7J 1X7

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**) Greywacke, limestone, andesite, quartz diorite, Guichon Batholith, Nicola Group, Coyle Stock, skarn, copper, Spences Bridge Grouip, epidote, actinolite, magnetite, hematite, pyrite, garnet, calcite, specularite, chalcopyrite, azurite, bornite, West and East Embayment Faults, Lornex Fault, Dry Lake Fault, inversion block modelling software package, Res3DInvx64. Hornfelsed, resistivity, IP chargeability, two north to north-northeast trending zones, west-east cross sections, massive magnetite.

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 5715257, 5722612, 5722661, 36652, 36141, 29449, 28119, 27390, 23584, 20349 16492, 14102, 11049, 10195, 10151, 9757, 6934, 6486, 5630, 359, 280

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS
	((incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization	6	236917, 415578, 416368, 416369, 416370	\$30,416.50
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of sample	es analysed for)		
Soil			
Silt			
Rock			
Other			
DRILLING (total metres, number of location)	holes, size, storage		
Core			
Non-core			
RELATED TECHNICAL			
Sampling / Assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale/area)			
PREPATORY / PHYSICAL			
Line/grid (km)			
Topo/Photogrammetric (sca	le, area)		
Legal Surveys (scale, area)			
Road, local access (km)/trai	1		
Trench (number/metres)			
Underground development ((metres)		
Other			
		TOTAL COST	\$30,416.50

A Geophysical (IP) Survey

On the

BETTY PROPERTY Southern British Columbia

Tenure Nos: 236917, 415578, 416368, 416369, 416370

121° 00' West Longitude 50°13' North Latitude 642,680mE and 5,564,630mN UTM NAD83 Zone 10, NTS Map Sheet No. 92I/02

> Clibetre Exploration Ltd. 1731 Westover Road North Vancouver, BC V7J 1X7

IP Report Prepared by: Steve Collins, 11 Boondah Place Warrawee, NSW Australia 2074

Table of contents

Table of Contents

Table of contents4
List of Figures5
List of Tables5
List of Appendices5
Summary of Work Done6
Introduction7
Location and Access7
Topography and Climate7
Property Description9
History
Purpose
Geologic Setting
Regional Geology13
Local Geology13
The Distribution and Nature of Skarn Assemblages (Lindinger, 2004)
Geophysical
Modelling and review of geophysical data16
Results from depth
Comparison with existing drilling17
General comments on the area and conclusions:
Recommendations:
Clibetre Cost Statement 2018 - 2019
Bibliography:

List of Figures

- 1. Figure 1a: Location Map of the Betty claims ... Page 8
- 2. Figure 1b: Clibetre Tenure Map. ... Page 9

The following figures are located on pages 19 through 30 consecutively:

- 3. Figure 1: Betty Prospect -100m Pole-dipole Induced Polarisation Surveys -Electrode location and Topography
- 4. Figure 2 Betty Prospect -Electrodes on Geology (from report by SJ Geophysics 2012)
- 5. Figure 3 Betty Prospect -3D resistivity model -Resistivity at 50m below surface constant depth
- 6. Figure 4 Betty Prospect -3D IP model -Chargeability at 50m below surface constant depth
- 7. Figure 5 Betty Prospect -3D resistivity model -Resistivity at 250m below surface constant depth
- 8. Figure 6 Betty Prospect -3D IP model -Chargeability at 250m below surface constant depth
- 9. Figure 7 Betty Prospect -Airborne magnetic data -High pass filtered with 500m halfwidth Gaussian filter
- 10. Figure 8 Betty Prospect -3D IP model -Chargeability at 250m with drill collars
- 11. Figure 9a Betty Prospect -3D IP model -Cross section on Line 5,563,150N Resistivity
- 12. Figure 9b Betty Prospect -3D IP model -Cross section on Line 5,563,150N Chargeability
- 13. Figure 10a Betty Prospect -3D IP model -Cross section on Line 5,562,700N Resistivity
- 14. Figure 10b Betty Prospect -3D IP model -Cross section on Line 5,562,700N Chargeability

List of Tables

- 1. Mineral Tenures Page 10
- 2. MINFILE & Mineral Occurrences Page 10

List of Appendices (file name in parentheses):

- 1. Geophysicist Statement of Qualifications (SteveCollins.pdf)
- 2. Arctan Services Pty Ltd invoice (Arctan_Inv6.pdf)
- 3. Logistics report from Peter E Walcott and Associates Ltd (BettyLogistics.pdf)
- 4. Invoice from Peter E Walcott and Associates for ground geophysical services (Inv 5615.pdf)
- Memorandum: Geophysical Interpretation of airborne magnetic and radiometric data Craigmont Project by T. Pezzot (SJV Geophysical_Interpretation_Memo Dec 20, 2012.pdf)

Summary of Work Done

The Betty Property has been held continuously by Clibetre Exploration Ltd. and its' predecessor companies Better Resources Limited and Bluerock Resources Limited, since 1975. Previous exploration campaigns have focused on exploration in the northern half of the property and consist of a mix of geophysical, geological mapping and drilling programs. The most recent drill program was a two hole diamond drilling campaign completed through a joint venture agreement with Christopher James Gold Corp in 2006.

The Betty Property adjoins the Thule property on the west and covers the contact between the Guichon Batholith on the north with the Triassic Nicola Group volcaniclastics to the south. The property has the same favourable geology that hosted the Craigmont chalcopyrite-magnetite-hematite orebody approximately 4 km eastward. During operation of the Craigmont mine from 1961-1982, approximately 34 million tonnes of ore were mined grading 1.28% copper, from 2 orebodies with a strong vertical presentation and a total length of 800 metres.

The Betty Property was originally owned separately by Placer Dome from the Placer-controlled Craigmont mine. It was drilled by Craigmont in 1978, with 2 holes away from the contact in order to establish cross sectional information.

The adjoining property held by Nicola Mining Inc has undergone and is undergoing successive drilling campaigns for the past several years. Nicola Mining has completed favourable drilling in some of the western portion of the Craigmont (Thule) property. Exploration by Nicola Mining Inc and its predecessor Huldra Silver, on the adjoining Thule property and on the Betty property included (a) an aeromagnetic survey (J. Cuttle, 2013), (b) a LIDAR survey (B. May, 2017), and (c) geological survey and geophysical IP surveys in 2017. Geological mapping and two geophysical lines were placed near the contact of the Guichon Batholith on the Clibetre mineral tenure 236917 (Clibetre Event Number 5715257).

The purpose of this current IP survey is to further extend the knowledge of the previous 2 geophysical lines by interleaving 3 parallel geophysical lines. Arctan Services Pty Ltd collated and reviewed the 2017 geophysics data, then combined it with the current 2018 ground geophysics carried out by Peter E Walcott and Associates Ltd. A 3D model was created, and the included report was generated. Arctan Services has identified the presence of two south-north striking, moderate to strong, and deep IP features.

Introduction

Location and Access

The Betty Property is located near the headwaters of Shackelly/David Creek and lies between the top of Promontory Hill on the east and Nooaitch Grasslands 9 on the west. The center of the claim is approximately 4 km west of the Craigmont open pit.

The Betty claims are accessible from several routes. (Figure 1)

(1) The Gordon Creek Forest Service Road is the best access road from the west. This forest service road originates from Highway 8 which is the major highway linking Merritt to Spences Bridge.

(2) To access the property from the east, travel northward on the Aberdeen Forest Service Road, and turn left (west) along the Stumbles Creek Forest Service Road. A washout in 2019 on the Stumbles Creek, limits access to the northern half of the property.

(3) The property can also be accessed from the south on the Promontory Forest Service Road. This is a poorly maintained forest service road that leads to the microwave tower on Promontory Hills. The exploration road through the property from approximately 2 km from the end of Promontory FS Road, has been deactivated at a creek bed on the south side of the Hill.

The NTS map sheets of the claims are 92I06E and 92I03E, while the BCGS sheets are 92I025 and 92I026. The approximate geographical coordinates are 50°13' N and 121°00' W.

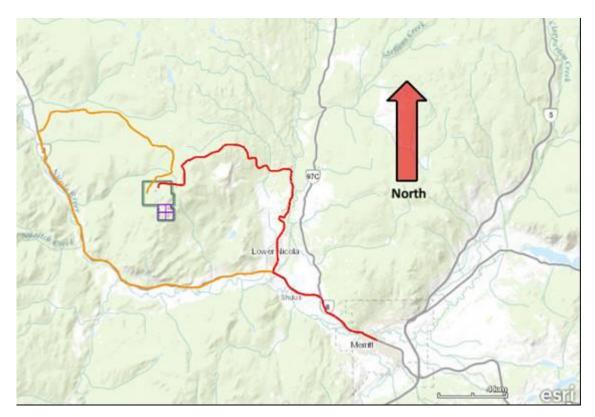
Topography and Climate

The Betty Property is situated within an upland plateau area between approximately 1300 metres at the western edge, and 1730 metres elevation at the top of Promontory Hill. The property is underlain by till. The forest is comprised of lodgepole pine, Ponderosa pine, and locally fir, birch, poplar and spruce, alder, and grass covers the forest floor and open swampy areas. There is a large clearcut, created post-2006, covering much of the north-east of mineral tenure 236917, with subsequent deactivation of the main road through the claim. The area is characterized by an interior climate; with a temperature range from -40 to $+40^{\circ}$ C, and approximately 50 cm of precipitation which occurs mostly as snow in the winter months, typically November to March. Snow-free exploration work can be carried out from May to late October.

Overburden ranges from nil to very thin (<1 m) on ridge tops and knolls. Quaternary mapping by the British Columbia Geological Survey (BCGS) indicates that regional ice movement was from the north-northwest. Local deviations to this trend were influenced by some of the larger valleys.

Elevations on the property range from 1300m (4265') at the western Indian Reserve No 9 to 1730m (5675') at the top of Promontory Hill on the eastern boundary. Local topography is moderate. Around the summit of Promontory Hill, the terrain is steep. Shackelly Creek flows down a channel which is 50m deep to the north-west of the claims. In general, south facing slopes are sparsely wooded with Ponderosa pine, while north and north-west facing slopes are heavily wooded with lodgepole pine, some spruce, and alder in old roadways and creek beds.

Figure 1a: Location Map of the Betty claims (in green/purple outline). Approximate Scale: 1: 200,000



Shows 2 possible access routes:

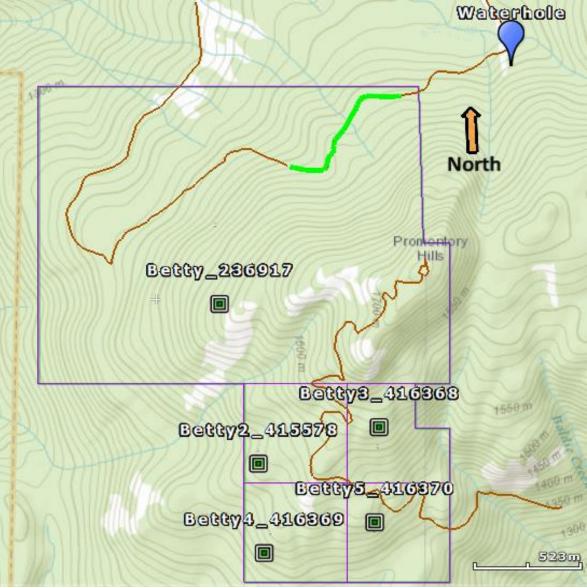
- A. Route shown in red. From Merritt west on Hwy 8 to Lower Nicola (8.7 km), then North on Aberdeen Road past Nicola mill site (7.6 km), and West via the Stumbles Creek logging road (12 km). Total distance is approximately 28.3 km. In 2019, this route has a washout on Stumbles Creek approx. 1 km north-east of the claims.
- B. Route shown in orange. From Merritt west on Hwy 8, through Lower Nicola to Dot (30 km), then North and East via the Gordon Creek Road (14 km). Total distance is approximately 44 km. This is now the preferred route.
- C. A third route, not marked, is up the Promontory Hill Forest Service Road which leads to the microwave tower on the east side of tenure 236917. This route has not been maintained and is not advisable.

Note: locations of roads are approximate.

Property Description

Clibetre Exploration Ltd. has 100% ownership of all 5 mineral tenures in the property, under the tenure ID number 105072 (Table 1). The Betty claim area was originally staked by Placer Development Ltd. Placer relinquished the claims in 1975 to C.C. Rennie. The claims were then transferred to Clibetre Exploration Ltd. a private company, and vended into Better Resources Ltd., a public company. The Betty Property consists of 5 mineral tenures registered under the Mining Titles Online (MTO) system with a total area of 400 hectares (Figure 2).

Figure 1b: Clibetre Tenure Map. Purple boundaries are from MTA file. Gravel roads in brown. Decommissioned logging road in green. Nooaitch Grasslands boundary is orange with dashed black line to west of the claims.



Approx. Scale: 1: 18,000

Table 1: Mineral Tenures

Good To Date as of Oct. 11, 2018

Title Number	Claim Name	Owner	Title Type	Title Sub Type	Map Number	Issue Date	Good To Date	Status	Area (ha)
236917	BETTY	105072 (100%)	Mineral	Claim	0921026	1976/OCT/05	2021/FEB/03	GOOD	300.0
415578	BETTY 2	105072 (100%)	Mineral	Claim	0921016	2004/NOV/10	2021/FEB/03	GOOD	25.0
416368	BETTY 3	105072 (100%)	Mineral	Claim	0921016	2004/NOV/29	2021/FEB/03	GOOD	25.0
416369	BETTY 4	105072 (100%)	Mineral	Claim	0921016	2004/NOV/29	2021/FEB/03	GOOD	25.0
416370	BETTY 5	105072 (100%)	Mineral	Claim	0921016	2004/NOV/29	2021/FEB/03	GOOD	25.0

Table 2: MINFILE & Mineral Occurrences

According to the B.C. MINFILE records (MEMPR), there is one MINFILE situated on the Betty Property: the Betty Lou MINFILE.

MINFILE Number	<u>Names</u>	<u>Status</u>	<u>Commodities</u>	<u>NTS Maps</u>	<u>Latitude</u> Longitude (<u>NAD 83)</u>	<u>Deposit Types</u>
	<u>BETTY LOU</u> BETTY	Showing	Copper, Lead, Zinc		<u>50 ° 12' 00" N</u> 120° 59' 03" W	

SUMMARY

		NMI	
Name	BETTY LOU, BETTY	Mining Division	Nicola
		BCGS Map	092I026
Status	Showing	NTS Map	092I02W
Latitude	<u>050° 12' 00''</u>	UTM	10 (NAD 83)
Longitude	<u>120° 59' 03"</u>	Northing	5562813
		Easting	643863
Commodities	Copper, Lead, Zinc	Deposit Types	K01 : Cu skarn
Tectonic Belt	Intermontane	Terrane	Quesnel

Capsule Rocks of the Upper Triassic Nicola Group exposed on Promontory Hills are Geology intruded by the Lower Jurassic Guichon Creek batholith to the north and the Coyle stock to the south, and are unconformably overlain by the Lower Cretaceous Spences Bridge Group to the west and the Upper Cretaceous Kingsvale Group to the east. A large, slightly overturned subisoclinal anticline plunges gently northeast. Inferred faults have north-northwest and northeast trends. The Betty Lou showing is situated on the northern limb of the major fold and is underlain primarily by pyritic altered greywacke, siliceous limestone, argillite and volcaniclastic rocks. The sedimentary unit is overlain by andesitic fragmental rocks. A quartz feldspar porphyry unit is believed to be Upper Triassic in age. Near the northwest boundary of the property the Nicola Group rocks are intruded by Guichon Creek hornblende diorite with considerable accessory magnetite.

Several types of alteration are present. The greywacke exhibits hornfelsing and biotite alteration and carries minor disseminated pyrite. Limestone grades to complete recrystallization within 1000 metres of the Guichon Creek batholith contact. Patches of garnet- epidote skarn occur in the volcanics. Hematite and

malachite also occur. Development of actinolite-magnetite skarn similar to that at the Craigmont mine (092ISE035) is also evident.

Ore controls are the limestone host rock, fold structures and proximity to the batholith. Minor copper mineralization (chalcopyrite) occurs in the skarn zones and disseminated in the country rock. A small occurrence of galena and sphalerite also occurs at the top of Promontory Hills.

Bibliography EMPR AR 1959-34; *1960-26-41; 1961-41,115; 1963-127; 1965-154; 1967-164 EMPR ASS RPT 235, 280, 359, 516, *5630, 6486, 6934, 16492, 17677 EMPR BULL 56 EMPR EXPL 1975-E80; 1977-E140; 1978-E157; 1987-C190; 1989-119-134 EMPR FIELDWORK *1977, p. 31 EMPR MAP 30 EMPR PF (Bristow, J.F. (1970): Report on Bulldozer trenching on the Gayle No.1 and Bridget No.1 Mineral Claims; Claim location map, 1958; Geology sketch map, 1959) WWW http://www.infomine.com/index/properties/CRAIGMONT_(KEY_GROUP).html GSC MAP 886A GSC MEM 249 **GSC OF 980** EMPR PFD 10745, 10746, 10747, 811560, 827077, 801310, 841583, 842862, <u>842924, 842980, 843111, 843112, 843113, 843116, 843120, 843122, 896746,</u> 520466

History

The Betty claim area was originally staked by Placer Development Ltd following the discovery of Craigmont Mine. After extensive magnetometer and IP surveys, five diamond drill holes were completed, with Can 3 showing significant limestone. Can 2, Can4 and Can 5 were in the pyritic north wall rocks investigating I.P. anomalies. Placer relinquished the claims in 1975 to C. C. Rennie. The claims were transferred to Clibetre Exploration Ltd, a private company, and vended into Better Resources Limited, a public company. Detailed geological mapping and an additional magnetometer survey was completed in 1975 and 1976. The area was restaked as the Betty Claim in 1976 under the modified grid system. Craigmont Mines Limited optioned the claim in 1978 and drilled two diamond drill holes, S-114 and S-115 both away from the contact in order to establish cross sectional information. This option was terminated in May 1981.

In 1990 Better Resources Limited drilled two, hole 90-1 and 90-2, to check the attitude of the limestone and contact and search for mineralization near the contact. Bands of limestone and some garnet skarn were intersected but no mineralization or intrusive.

Better Resources Limited entered into an exploration agreement on the Betty claim in 2005 with Christopher James Gold Corp (CJG) whereby CJG could earn a 50% interest in the property by paying Better (Bluerock) 100,000 CJG share and performing \$200,000 exploration work. This commitment has been fulfilled by the drilling of CJG 06-01 and CJG 06-02. Both Christopher James Gold Corp. and Bluerock Resources Ltd were busy on other projects during the rest of the field season in 2007 and a decision was made to defer more exploration until a down-hole magnetometer check was run on the drilling and a joint venture agreement was completed. (Rennie, C.C. 2007).

In 2013, Huldra Silver Inc. (now Nicola Mining Inc.) completed an airborne magnetometer survey over the Thule Property. This survey also consisted of a flight path over the Betty Property, identifying a couple of target areas on the Betty claims. (Cuttle, J. (2013): Technical Report on the Thule Copper-Iron Property.)

Since completing the airborne magnetometer survey in 2013, Nicola Mining Inc. has completed several drilling programs, and ground geological, geochemical, and geophysical programs based on their adjoining property. One program was contracted to McElhanney Consulting Services Ltd. to perform a LIDAR and aerial photography acquisition over the Thule Property, including the Betty property. Acquisition of this data was carried out on June 28th, 2016. Clibetre Resources Ltd purchased a resale of the LIDAR and aerial photography covering the Betty claims on September 30th, 2016 (May, B. 2017).

In 2017, Nicola Mining Inc carried out geophysical and geological programs which were inadvertently and partially on the Betty claims, with results subsequently shared with Clibetre Exploration, (Clibetre Event Number 5715257).

Purpose

This program was designed to further extend the knowledge of the 2 geophysical IP lines completed by Nicola Mining Inc, with 3 new IP lines interleaving the previous two.

Geologic Setting

Regional Geology

The area is situated near the contact between the Jurassic Late-Triassic Guichon Batholith, the Upper Triassic Nicola Group and the Upper Cretaceous Spences Bridge Group (which includes the formerly named Kingsvale Group). Part of the area is covered either by glaciofluvial or till material.

The Guichon Batholith varies from a quartz diorite to granodiorite. These rocks intrude the Nicola Group which includes a volcanic and sedimentary package of andesite, limestone, siltstone, greywacke, rhyolites and basalts. Spences Bridge agglomerates unconformably overly the Guichon and Nicola Group rocks dipping at approximately 15 degrees to the south and outcropping to the south and west of the mine.

Porphyry and skarn mineralization occurring in the Nicola Group and Guichon Batholith rocks consist of either fracture/fault controlled or stratigraphic-hosted malachite, chalcopyrite, chalcocite, azurite, bornite and native copper along fractures or stratigraphically hosted within Nicola Group volcanics. Mineralization at the Craigmont mine is hosted as 2 main ore-types: carbonate-hosted or silicate hosted.

Several major faults provide geological control on the property including a possible southern extension to the Lornex Fault (oriented north-south on the west side of the property), the northwest trending West Embayment & East Embayment Faults, the Mine East-West Fault, and the Dry Lake Fault (May, B. 2017).

Local Geology

The Betty Property is situated on the contact between the Jurassic Late-Triassic Guichon Batholith, the Upper Triassic Nicola Group and the Upper Cretaceous Spences Bridge Group (which includes the formerly named Kingsvale Group). Quartz feldspar porphyry belonging to the Coyle Stock intrudes the Nicola Group rocks both on the property and surrounding the property. Outcrop is well exposed on the Betty Property with only a thin veneer of till (May, B. 2017).

The Distribution and Nature of Skarn Assemblages (Lindinger, 2004)

Listed below is a brief summary of relationships among stratigraphy, mineral assemblages, skarn and ore types at Craigmont.

Key points regarding skarns at Craigmont

1) Only about 2/3 of Craigmont ore is developed in skarn rocks, with the rest being in brecciated clastic rocks

- 2) Even massive skarns contain relics of carbonate and clastic rocks
- 3) Some of the skarn assemblages are comparable to hornfelsed rocks

4) There is no obvious zoning of skarn assemblages within the Guichon Creek

batholith. Zoning takes place along strike with the Carbonate unit.

5) Bleaching is common in clastic rocks and adjacent to skarn zones at Craigmont

Stage 1 skarns are developed through selective diffusional metasomatism of volcanosedimentary host rocks through metasomatism. Relics of the host rock can remain.

The following mineral assemblages are common in Stage 1 skarns:

1) Magnetite-Rich Skarn (mineralized)

a. Developed in basaltic tuffs and flows intercalated with the Interbedded facies of the limestone unit.

b. Contains interstitial chalcopyrite, quartz and calcite

c. Common in the eastern part of the mine

2) Massive to Banded Actinolite-Epidote-Magnetite Skarn (mineralized)

a. Developed in the interbedded facies adjacent to the Massive Limestone

facies of the Carbonate unit.

b. Replaces argillite, siltstone or lime sandstone.

c. Common in the western part of the mine

3) Barren, Banded Epidote-Garnet Skarn

a. Developed in rhyolite tuff or limestone with minor pyrite, actinolite, and magnetite. Relics of original facies common.

4) Barren Massive Garnet-Epidote-Calcite-Pyrite Skarn

a. Developed in massive limestone adjacent to diorite plugs

b. Common where the Massive Limestone facies tapers out in the central part of the mine

Stage 2 Skarns

Stage 2 skarns occur through the remobilization of minerals in Stage 1 skarns. This process is related to the development of shearing and brecciation within the carbonate unit. A genetic relationship exists between the development of shearing, the emplacement of diorite plugs and the formation of massive garnet replacement skarn and specularite ore.

1) Specularite-Rich Skarn

a. Coarse to very-coarse grained platy specular hematite in veins and as a replacement mineral of magnetite in actinolite-epidote-magnetite skarn b. Common in Body 2 and between specularite-rich hornfels and brecciated hornfels in the western half of Body 1.

2) Massive Garnet Replacement Skarn

a. Very coarse-grained garnet.

b. Replaces actinolite-epidote-magnetite skarn in the lower and eastern parts of the mine, near the diorite plug.

Distribution of Ore Types

Three main varieties of ore types exist at Craigmont:

1) Magnetite

a. Composed of 5-8% disseminated and lesser vein chalcopyrite

b. Located in magnetite-rich skarns of Body 1 East and in the lower part of

Body 1 South and in the banded actinolite epidote-magnetite skarn in

Body 2.

2) Specularite

a. In the central part of Body 1 Main, magnetite is subordinate to specularite and much of the ore is a breccia

b. Specularite-chalcopyrite veins can commonly have haloes of K-feldsparchalcopyrite replacing epidote in barren skarn

3) Stringer Ore

a. Very fine-grained chalcopyrite and pyrite in stringers, veinlets, disseminations, bands and quartz-epidote-calcite-chlorite-specularite

veins

b. Occurs in bleached rocks of the Interbedded and Grit facies in Body 3 in the western part of the mine

c. Similar mineralization also found in the rhyolite unit on section 8015

Geophysical Report from Arctan Services Pty Ltd.

Modelling and review of geophysical data.

Betty Prospect -Merritt Area. B.C. Canada Steve Collins May 2018

Scope of this report: I have been asked by Mr Bruce Rennie to plan infill Induced Polarisation (IP) on the Betty Prospect and to model these data together with existing IP data. I have completed these tasks and have examined the resulting model and compared it with mapped geology and existing airborne magnetic data and interpretation to determine the likely orientation and nature of possible mineralised zones on this prospect. I was given the existing IP data and the newly generated data together with detailed airborne magnetic data and a report on more regional airborne magnetic data titled "Geophysical interpretation of airborne magnetic and radiometric data - Craigmont Project, Merritt Area, B.C." by SJ Geophysics Ltd. dated 20 Dec 2012 (Pezzot, T. 2012).

New survey and modelling: The new IP data consists of 3 lines of 100m pole-dipole data which approximately matches the geometry used on existing two lines of IP data from a survey conducted in 2017. After the acquisition of the new data, the spacing between the survey lines was 150m. Minor differences between the old and the new data were adjusted for to avoid artefacts in the final model presentation. The layout of the data which was used for modelling is shown in Figure 1.

The location of the surveys relative to mapped geology of the area (from report by SJ Geophysics) is shown in Figure 2. In the geology map, red units in the north are a large dioritic batholith, orange units on the bottom are smaller diorites, blue is carbonate rock and other units are interbedded andesitic volcanics, volcaniclastics and sediments.

The IP data were processed through an inversion block modelling software package, Res3DInvx64 produced by Geotomo Software of Malaysia. The model was set up with 50 metre square model blocks with varying thicknesses dependent on depth. Where available, lidar generated topography data were included in the model and regional topography data were used outside the central zone. The uniform model extends at least 400 metres past the extent of the data and increasing sized blocks added at the periphery to reduce edge effects. The final generated model was truncated at the points where the model sensitivity fell below 20% of the average for all blocks. This limit is a rule of thumb estimate of the maximum possible extent of penetration for the IP method.

The resulting (log of) resistivity and IP chargeability models were interpolated onto 25 metre cubic block models and plan slices were extracted at a constant depth below the surface. [Note that these are constant depth not constant elevation.]

Near surface results: Figures 3 and 4 are the modelled log of resistivity and IP chargeability plans at a depth of 50 metres below the surface. The resistivity (Fig. 3) shows little conformability with the mapped geology. The general fabric of the resistivity map strikes in a south-north direction transgressive to the mapped geology which strikes to the northeast. This is particularly so in the western half of the survey area. There are only data for the three latest survey lines in the west and it may be that the apparent strike of the resistivity features is an artefact from the relatively sparse coverage and sampling bias. More likely, however, is that either the sediments and volcanics surrounding the batholith are hornfelsed or the surface geology as mapped is a veneer over diorite at a shallow depth. The SJ Geophysics report (Pezzot, T. 2012) suggests multiple south-north trending faults in the diorite batholith which would make the resistivity compatible with the geology if the diorite exists at a shallow depth. Other than the fact that the western half of the area is generally more resistive, there does not appear to be much meaningful information in the near surface resistivity.

The IP chargeability (Fig.4) is clearly divided into two regions, the northwestern half of the modelled area shows only background IP response. Figure 4 shows the approximate boundary between these zones. This boundary closely follows the edge of the airborne magnetic high (Fig.7) identified as the southern margin of the batholith. Southeast of this boundary line there is spotty but moderate to high IP chargeability. There is not much coherence in this eastern IP data but there are possible trends striking northeast, in the same direction as the mapped geology. The uniformly low IP response in the west suggests that the source of the chargeability, which is assumed to be disseminated sulphide minerals, is not directly related to the dioritic batholith (or hornfels zone).

The higher values in the east may be either genetically associated with the volcanic sediments, or with the smaller intrusions or faults.

Results from depth: Figures 5 and 6 show plan slices through the 3D model at a depth of 250 metres below the surface. At this depth, the trends of the resistivity (Fig.5) and IP chargeability (Fig.6) are significantly different from the near surface results. There are clear trends in a north-northeast direction discordant to the surface stratigraphy. The resistivity has a broad area of elevated values in the west with north-northwest trends, again suggestive of batholith rocks or hornfels. In the east, the trends are north-northeast, possibly indicating faults or other mineralising structures.

The IP chargeability at a depth of 250 metres clearly shows two north to north-northeast trending zones of high values. The tenor of these responses is such that it is likely that these are due to sulphide minerals. The location of these zones relative to the mapped geology is shown in Figure 2. Both are in rocks identified as volcaniclastics but strike discordantly with the surface mapping. The easternmost of these is quite coherent and cuts all 5 of the data lines. The western IP zone is poorly defined as there is a sparsity of data at this location.

The eastern IP zone is coincident with structures identified from magnetics in the SJ Geophysics report. Figure 7 shows the location of the anomalous IP zones relative to airborne magnetics and outlines of mapped geology. The structures identified by SJ Geophysics (Pezzot, T. 2012) are not as obvious in this presentation as they are in the broader map of the airborne magnetics used in their report, but it appears likely that the eastern IP zone is directly coincident with the defined magnetic break and probably extends southward following other magnetic trends. It is probable that this IP response represents a sulphide mineralised fracture zone though the possibility also exists for a buried fractionated intrusive body at depth.

The western IP zone is less well defined as there are only data from one IP line and two partial data sets from other lines (Fig.6). This IP response appears to be associated with a resistivity high (Fig.5) and may extend northward into the magnetic zone of the batholith and magnetic feature 'E' identified in the SJ Geophysics report (Fig.7). The source of this IP response can only be guessed at as it is poorly defined by the existing data.

Comparison with existing drilling: The location of these IP zones relative to existing drill holes has been reviewed and collars of the holes are shown in Figure 8. It is apparent from this map that the deep IP trends are largely untested by drilling. There are two previous drill holes that may contain information relevant to interpretation of the eastern IP zone. Figure 8 shows the holes Can1 and Can4, although outside the area directly covered by the IP surveys, may have intersected this trend to the south and north respectively. Figure 9 shows a west-east cross section through the 3D resistivity and IP chargeability models on the northernmost IP line, 5,563,150N. Traces of drill holes Can4 and Can5 are projected about 130 metres south onto this section for comparison. It is not clear whether hole Can4 will have intersected the IP trend, particularly due to the poor resolution of the IP model outside the area of the data collection. I do not have access to downhole survey data for hole Can4, if it exists. This hole was started at -42 degrees at the surface and if it lifted during drilling it may have gone over the top of the IP zone, even if it was collared in a location suitable for testing the trend. It would be instructive to revisit the data from this drill hole to see if it contains information as to the nature of the rocks of the eastern IP trend.

The western IP trend is poorly defined in comparison with the eastern trend. There is only one of the new data lines that crosses this trend and it is partially covered by two other survey lines. For this reason, the nature of the source of this response is poorly defined and there may be large inaccuracies in its location, shape and orientation. There are three existing drill holes which may contain information relevant to defining the source of this anomalous IP trend. Holes Can2, Can3 and CJG06-01 are vertical drill holes collared near the northern end of the trend. Figure 10 is a west-east cross section through the IP models on line 5,562,700N. The three relevant drill holes are shown projected onto this section. These holes are projected up to 40 metres south or north. As presented in Figure 10, Can2 appears to be closest to the IP zone but this hole is collared at the northern end of the model trend and because of the sparse data here it is not definite that the source of the trend extends to this point. Interestingly, hole CJG06-01 intersected massive magnetite over 6.1 metres immediately adjacent to the IP trend but it is not clear what is the relationship between this and the IP response. This hole lies exactly on the boundary between the hornfels / batholith to the north and volcaniclastics in the south. As currently modelled, the western IP trend appears to

cross this boundary, but due to the inaccuracies in the model, this may be an artefact.

General comments on the area and conclusions:

The Betty Prospect lies approximately 5km west of the Craigmont Mine in a similar location relative to the batholith. The Craigmont Mine is a skarn type deposit and is associated with a strong and highly anomalous magnetic high. There are no similar magnetic highs on the Betty Prospect.

The general tenor of the IP responses obtained in the latest surveys is such that the source of theses is probably sulphide mineralisation, most likely disseminated pyrite but possibly containing base metal sulphides. The lack of other than background IP responses in the western half of the IP survey area suggests that the sulphides are not directly related to the main body of intrusive rock (batholith / hornfels). Also, the general south-north trend of the IP responses shows that these are unlikely to be due to syngenetic mineralisation as the stratigraphy strikes in a southwest-northeast direction. Thus the source of the sulphide mineralised zones may be plumbing systems caused by faulting (possibly related to buried intrusive rocks) or buried fractionated intrusions. Both the Craigmont Mine and the Betty Prospect are in close proximity to smaller outcropping diorite bodies. I do not understand the geology of the region in detail but it seems a reasonable assumption that the sulphide mineralisation may be genetically related to fractionated intrusive bodies which are late stage manifestations of the batholitic intrusive event. Geological and geochemical testing of the smaller diorite bodies may be able to determine if these are related to the sulphide minerals.

The fact that there are no strong magnetic highs associated with the deeper IP trends suggests that these are not skarns like the Craigmont Mine. The presence of massive magnetite in hole CJG06-01 without a surface magnetic expression indicates that this magnetite zone is unlikely to be extensive. Its presence however, immediately adjacent to one of the deep IP trends is encouraging.

In the light of the observed patterns of IP, existing geological and geochemical data need to be reevaluated. It appears that past exploration may have relied heavily on looking for magnetic features similar to Craigmont, investigation of geological and geochemical data may have been biassed by this. The presence of south-north striking moderate to strong IP features may help to crystallise ideas for alternate models for possible mineralisation leading to further exploration progress.

Recommendations:

- Existing geological and geochemical data should be re-evaluated in the light of the presence of the deep IP responses.
- Data from drill holes in the vicinity of the deeper IP trends, particularly hole Can4, should be reexamined to see if a reason for the IP trends can be found in these data.
- Drill hole data from those existing holes in the western half of the survey area, which is an area of low IP response but has moderate to strong airborne magnetic character should be examined to try to determine the difference between this area and the more IP responsive responsive zone to the east.
- Further IP lines should be run to better define the western deep IP zone and to extend the IP zones to the south.
- Both deep IP zones should be drill tested with angle holes intersecting the centres of the modelled IP sources.

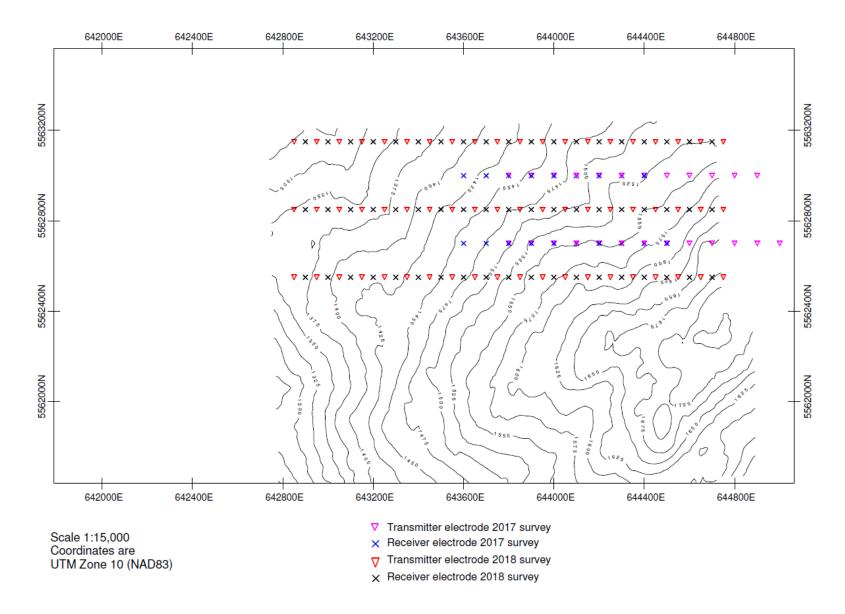


Figure 1 Betty Prospect - 100m Pole-dipole Induced Polarisation Surveys - Electrode location and Topography

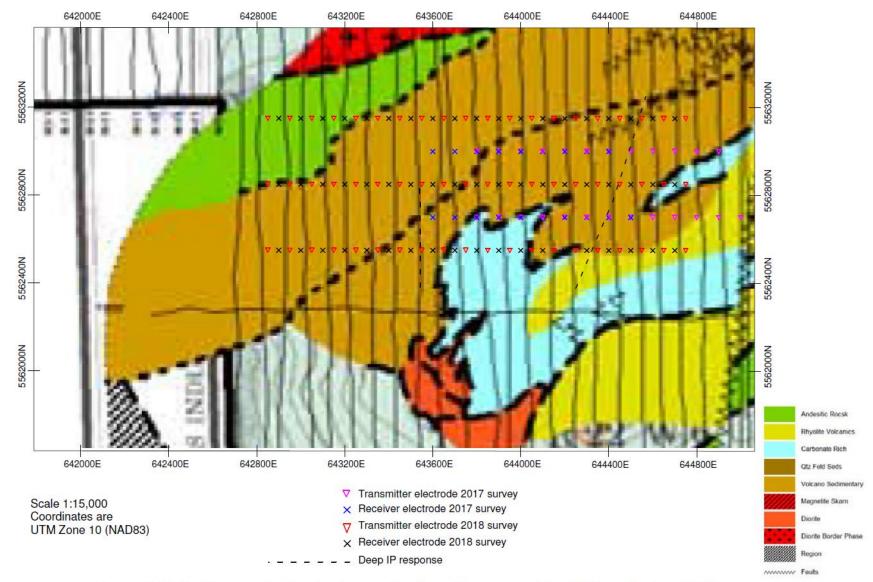


Figure 2 Betty Prospect - Electrodes on Geology (from report by SJ Geophysics 2012)

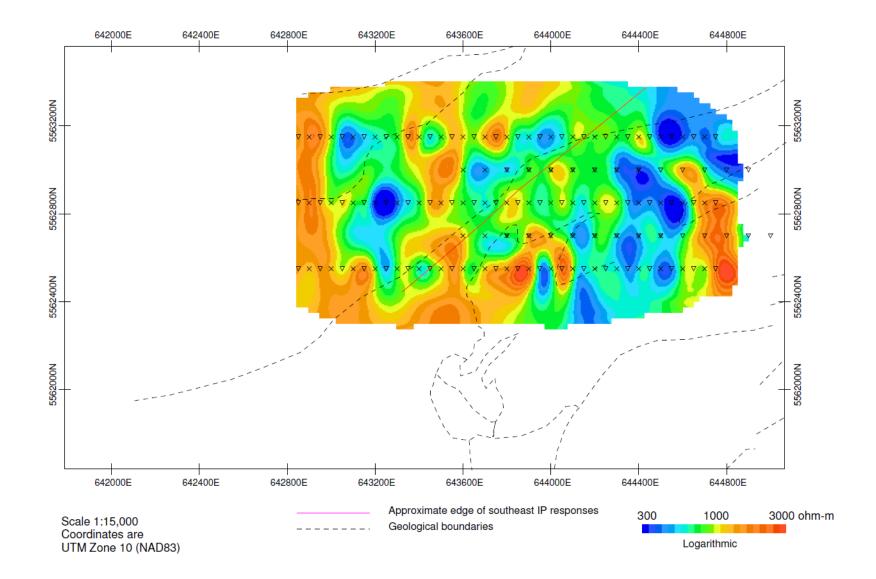


Figure 3 Betty Prospect - 3D resistivity model - Resistivity at 50m below surface constant depth

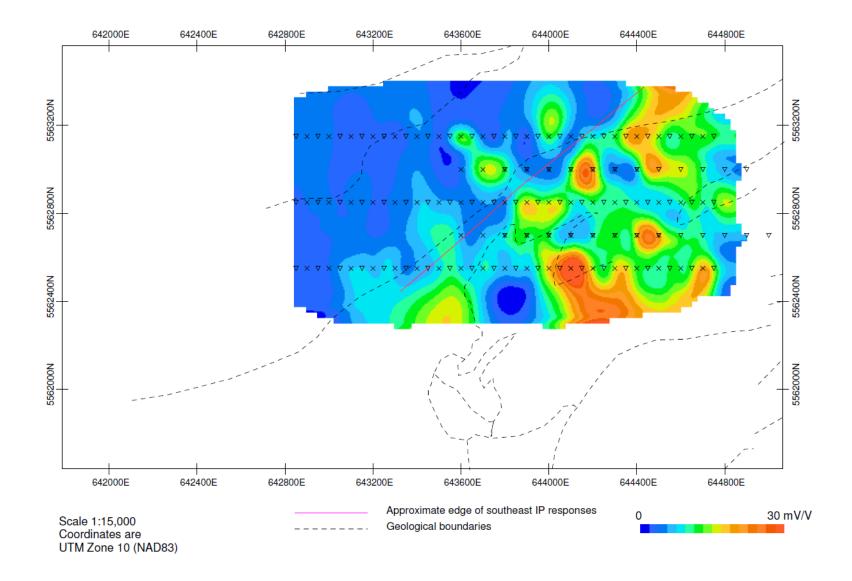


Figure 4 Betty Prospect - 3D IP model - Chargeability at 50m below surface constant depth

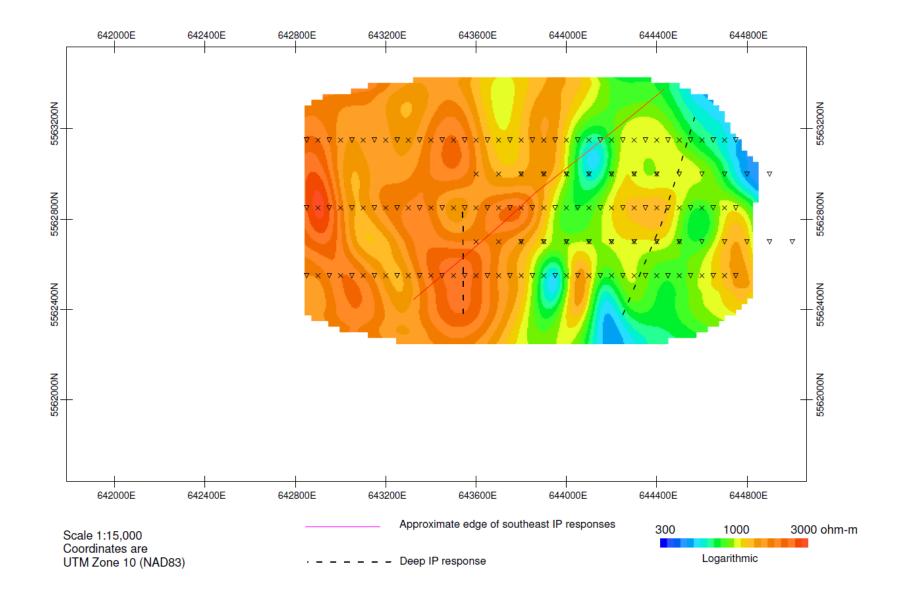


Figure 5 Betty Prospect - 3D resistivity model - Resistivity at 250m below surface constant depth

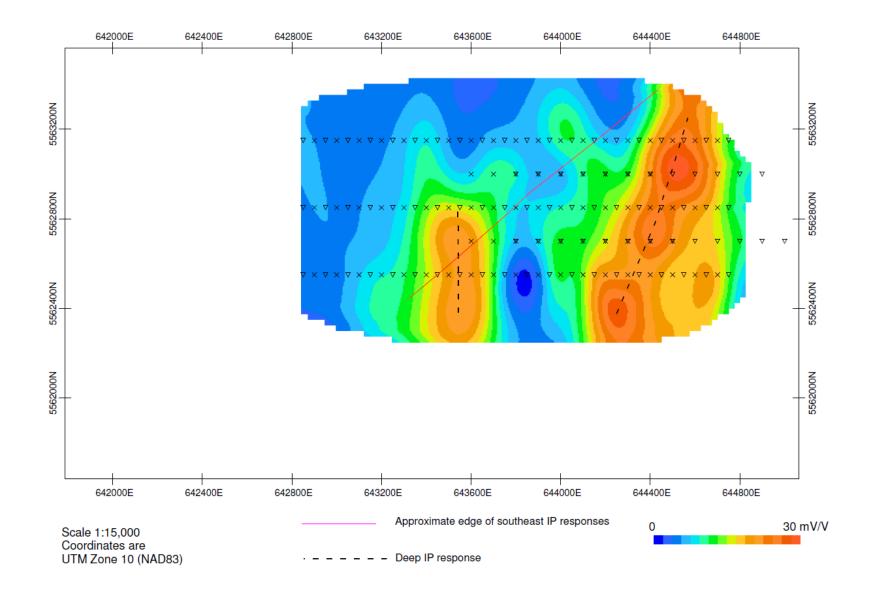


Figure 6 Betty Prospect - 3D IP model - Chargeability at 250m below surface constant depth

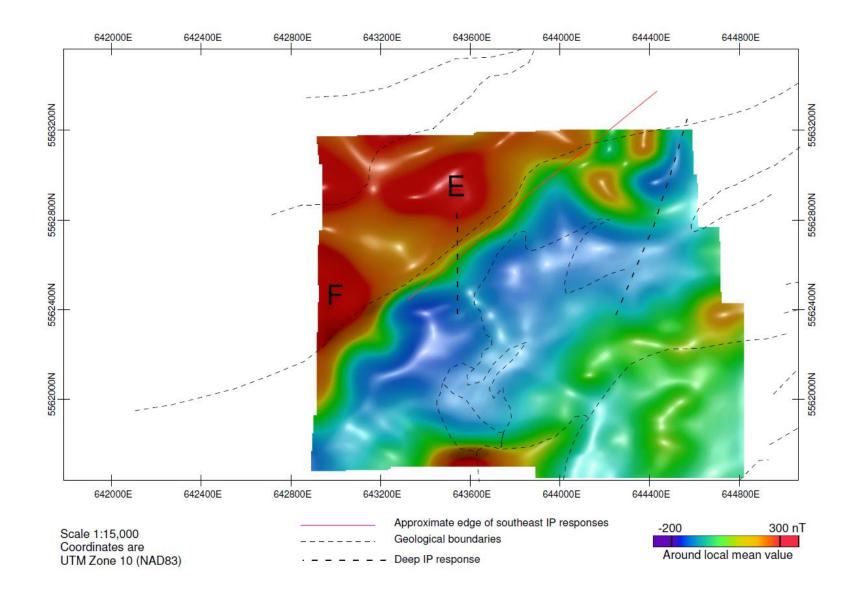


Figure 7 Betty Prospect - Airborne magnetic data - High pass filtered with 500m halfwidth Gaussian filter

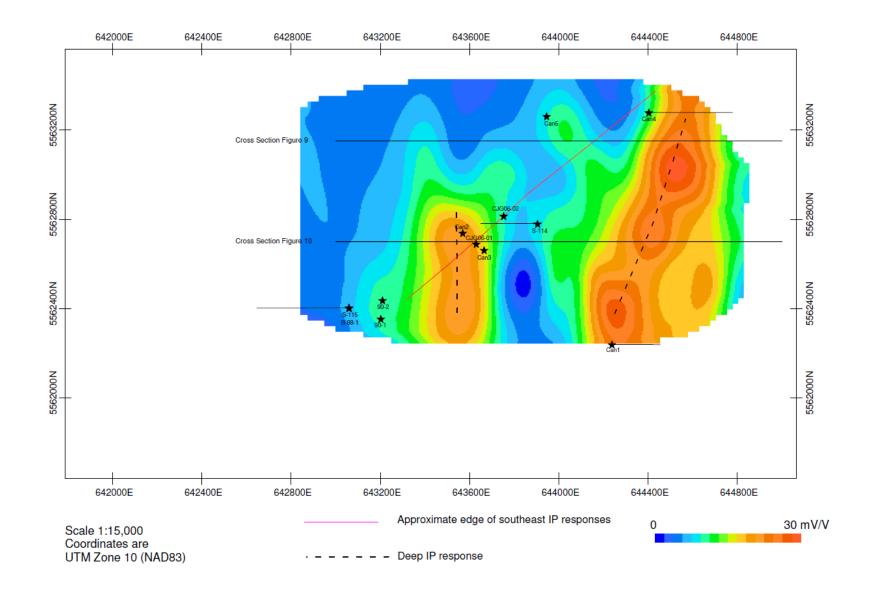


Figure 8 Betty Prospect - 3D IP model - Chargeability at 250m with drill collars

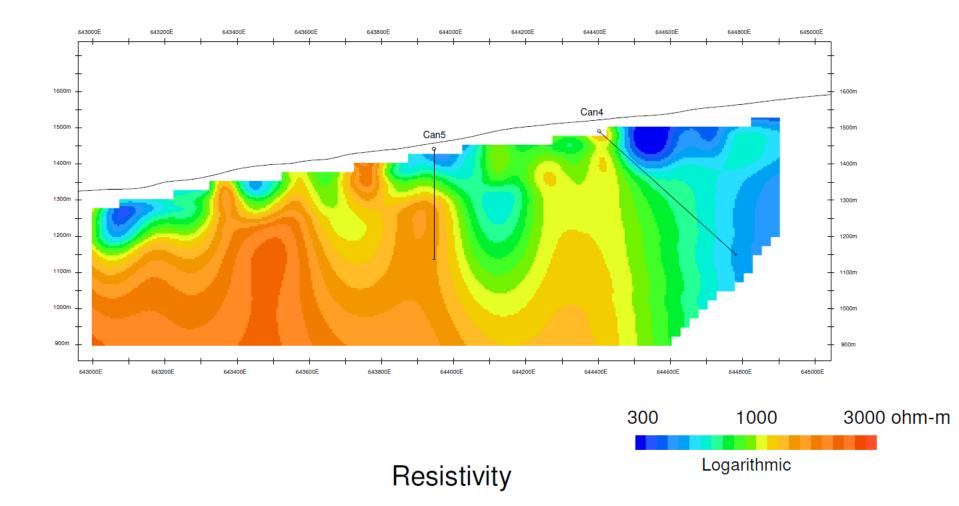
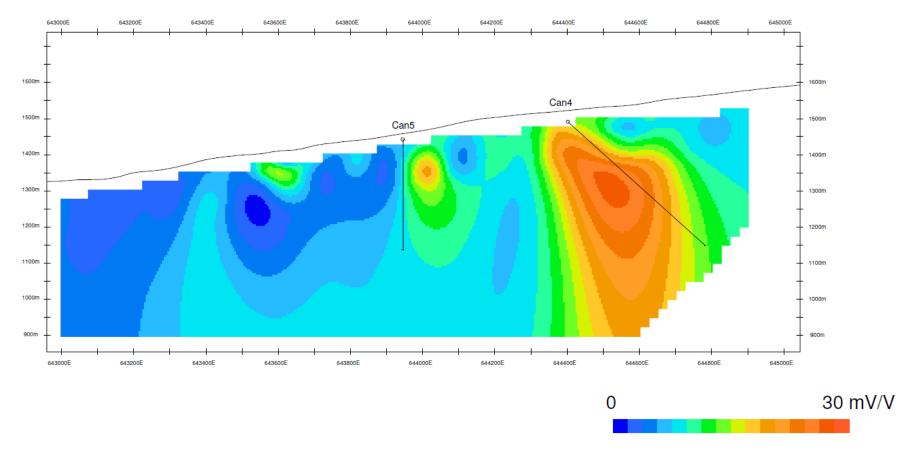


Figure 9a Betty Prospect -3D IP model -Cross section on Line 5,563,150N



IP Chargeability

Scale 1:15,000 Coordinates are UTM Zone 10 (NAD83)

Figure 9b Betty Prospect -3D IP model -Cross section on Line 5,563,150N

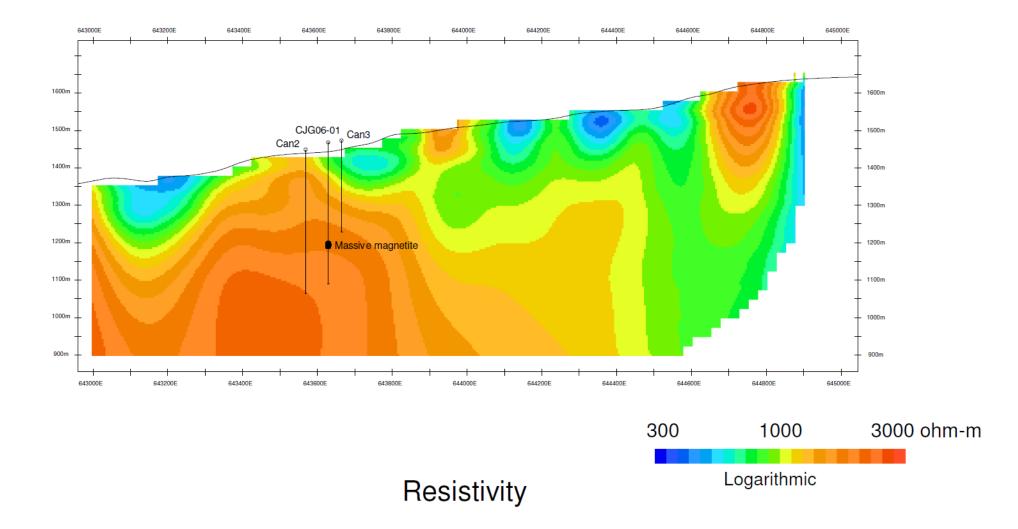
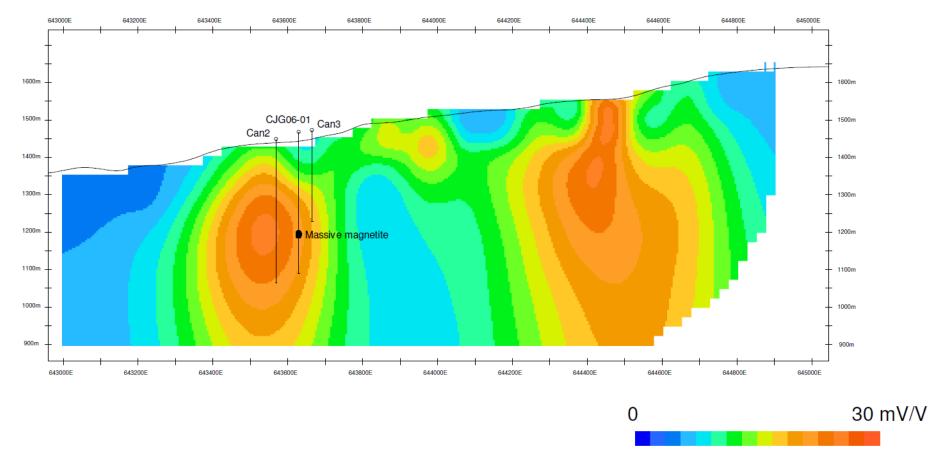


Figure 10a Betty Prospect -3D IP model -Cross section on Line 5,562,700N



IP Chargeability

Scale 1:15,000 Coordinates are UTM Zone 10 (NAD83)

Figure 10b Betty Prospect -3D IP model -Cross section on Line 5,562,700N

Clibetre Cost Statement: 2018-2019

Personnel (Name)* / Posit 6 personnel to conduct survey per BettyLogistics.pdf	Field Days (list actual days)	Days	Rate	Subtotal*	
n Appendix: Geophysicists: M Welz, P					
Young,					
Geophysical Operators: M Kennedy, N Loubser,					
Geophysical Assistants: B					
Hall, B Lajuenesse.	Oct 27, 28, 29, 2018	3	\$4,450.00	\$13,350.00	
Layout infinity arrays	26-Oct-18		\$3,000.00		
Pickup all wires	30-0ct-18	1	\$3,000.00	in the work of the second seco	
Office Studies	List Personnel (note - Office only,	do not i	ncludo fia	\$19,350.00	\$19,350.00
Literature search	List reisonner (note onice only,	donoci	\$0.00	\$0.00	
Database compilation			\$0.00	\$0.00	
	S. Collins MSc				
Computer modelling	(day rate calculations below)		\$1,077.09		
Reprocessing of data	S. Collins MSc	2.0	\$1,077.09		
General research Report preparation			\$0.00 \$0.00	\$0.00 \$0.00	
Other (specify)			\$0.00	\$0.00	
				\$4,308.36	\$4,308.36
Ground geophysics	Line Kilometres / Enter total amount invo	piced list p	ersonnel		
Radiometrics					
Magnetics				· · · · · · · · · · · · · · · · · · ·	
Gravity Digital terrain modelling		-			
Electromagnetics					
SP/AP/EP					
IP	6 Kilometres / 6 personnel				
	S Collins MSc. Total: \$7,200.00AUD X				
Geophysical interpretation	0.897576 = \$6,462.55CAD / 6 total days = \$1,077.09CAD/day.	2.0	\$1,077.09	\$2,154.18	
Petrophysics					
Other (specify)		1		\$2,154.18	\$2,154.18
Geochemical Surveying	Number of Samples	No.	Rate	Subtotal	\$2,134.10
		100.001			
Drill (cuttings, core, etc.)			\$0.00	\$0.00	
Other (specify)			\$0.00	\$0.00	
Dealersetter	Charife.		Data	\$0.00 Subtotal	\$0.00
Reclamation After drilling	Clarify	No.	Rate \$0.00	\$0.00	
	B. Rennie: Removal of IP tapes per		φ0.00	40.00	
Monitoring	Mines Inspector, M. Cloet. Nov 6,7,8	3.0	\$200.00	\$600.00	
Other (specify)	Supplies - Garmin Etrex25	1.0	\$349.99	the local data and the local dat	
				\$949.99	\$949.99
Transportation		No.	Rate	Subtotal	
Airfare	YVR-SYD for geophysical consult	1.00	\$705.00	\$705.00	
	geophysics 199.20, 148.43		4		
fuel	reclamation 62.75, 44.54, 49.76	1.00	\$504.68	\$504.68	
Helicopter (hours)			\$0.00		
Fuel (litres/hour)			\$0.00	\$0.00	
Other			1	\$1,209.68	\$1,209.68
Accommodation & Food	Rates per day	1		\$1,205.00	\$1,205.00
	5 nights geophysics: 410.01, 342.56,				
	653.40, 326.70, 435.6				
Hotel	2 nights reclamation:113.85, 102.35	1.00	\$2,384.47		
Camp	redemation: 50.00		\$0.00	\$0.00	
Meals	reclamation: 59.82	1	\$59.82	\$59.82 \$2,444.29	\$2,444.29
Miscellaneous		1	1	φ2, 111.25	\$2,111.25
Telephone			\$0.00	\$0.00	
Other (Specify)					
Caulan ant Dan tale			÷	\$0.00	\$0.00
Equipment Rentals Field Gear (Specify)			\$0.00	\$0.00	
			\$0.00		
Other (Specify)				\$0.00	\$0.00
Other (Speaty) Freight, rock samples			\$0.00	\$0.00	
			\$0.00 \$0.00	\$0.00 \$0.00	
					\$0.00

Bibliography:

Allan, A. (1961). Craigmont Area. Assessment Report 359.

Ball, C.W. (1959). Geological Survey on the Betty Lou & Lou Groups. Assessment Report 280.

Bristow, J.F. (1981). Geophysical Report of a Magnetometer Survey on the Key Group of Mineral Claims. Assessment Report 9757.

Bristow, J.F. (1981). Geological Report of a Reconnaissance Geological Survey Conducted on the Gus Claim, Key Claim Group. Assessment Report 10195.

Bristow, J.F. (1985). Diamond Drilling Report on the Phoenix Claim Group. Assessment Report 14102.

Bristow, J.F. (1987). A Diamond Drilling Report on Key Claim Group. Assessment Report 16492.

Cuttle, J. (2013). Technical Report on the Thule Copper-Iron Property.

Kirkham, G. (2005). Craigmont Mine & Geophysical Program for 2005. Assessment Report 28119.

Lindinger, J.L. (2004). Geological and Geochemical Report on the East Craigmont Property. Assessment Report 27390.

May, B. (2015). 2015 Reconnaissance Rock Geochemical Survey on the Thule Copper-Iron Property. Assessment Report 36141.

May, B. (2017). A Geophysical (LIDAR) Survey On the Betty Property. Assessment Report 36652.

Pascoe, D., Husslage M., and Ryan, M. (2019). Assessment Report for 2017 Exploration, revised July 9, 2019. New Craigmont Project, Thule Copper Property. (Clibetre Event Number 5715257)

Pezzot, T. (2012). Memorandum: Geophysical Interpretation of airborne magnetic and radiometric data – Craigmont Project. SJV Geophysics Ltd.

Rennie, C.C. (1975). Geological and Geophysical Report on the Betty Lou Claim Group, Promontory Hill, Merritt Area. Assessment Report 5630.

Rennie, C.C. (1977). Geological Report on the Betty Claim, Merritt Area. Assessment Report 6486.

Rennie, C.C. (1981). Geological Report on the Charlotte Claim. Assessment Report 10151.

Rennie, C.C. (1982). Geophysical & Geological Report on the Charlotte Claim. Assessment Report 11049.

Rennie, C.C. (1990). Diamond Drilling Report on The Key Group. Assessment Report 20349.

Rennie, C.C. (1994). Geophysical Report on the Huff Group of Mineral Claims. Assessment Report 23584.

Rennie, C.C. (2007). Report on Diamond Drilling on the Betty Claim Group. Assessment Report 29449.

Sanford, G.R. (1978). Diamond Drilling Report Betty Claims. Assessment Report 6934.

Statement of Qualifications for Stephen Collins, Consulting Geophysicist

of 11 Boondah Place, Warrawee, NSW, 2074, Australia

I, Stephen Collins, hereby certify the following statements regarding my qualifications and involvement in the program of work on behalf of Clibetre Exploration Ltd. on the Betty prospect in the Merritt area of British Columbia.

The work on these prospects was performed by individuals, trained and qualified in mineral exploration geophysics.

I have no material interest in any properties relevant to my work and reporting at these prospects.

I graduated from Macquarie University, Australia in 1971 with a Batchelor of Science in physics and in 1976 with a Master of Science (Hons.) in geophysics.

I am an active member of the Australian Institute of Geoscientists and of Australian Society of Exploration Geophysicists.

I have been continuously practising in mineral exploration geophysics since 1976.

Respectfully submitted,

Stephen Collins.

A LOGISTICS REPORT

<u>ON</u>

INDUCED POLARIZATION SURVEYING

BETTY PROPERTY MERRITT AREA, BRITISH COLUMBIA NICOLA MINING DIVISION 50 ° 12' 00"N, 120 ° 59' 033"W

Claims Surveyed

236917

NTS 92I/02

for

CLIBETRE EXPLORATION LTD.

North Vancouver, British Columbia

by

PETER E. WALCOTT & ASSOCIATES LIMITED

Coquitlam, British Columbia October 2019

TABLE OF CONTENTS

	Page
INTRODUCTION PROPERTY LOCATION AND ACCESS SURVEY SPECIFICATIONS	3 4 7
<u>APPENDIX</u>	
COST OF SURVEY PERSONNEL EMPLOYED ON SURVEY	
ACCOMANPANYING MAPS	
Line Location and Claim Map	1:10,000
Pseudo sections PLDP – 25+50N, 28+50N, 31+50N	1 10 000
Pseudo sections DPPL – 25+50N, 28+50N, 31+50N	1:10,000
	1:10,000
2d Inverted Sections – 25+50N, 28+50N, 31+50N	1: 10,000
Contours of PLDP Apparent Chargeability/Resistivity - N=5.5	1:10,000

Page 2

Induced Polarization Surveying Clibetre Exploration Ltd. Betty Project

INTRODUCTION.

Between October 26th, and 30th, 2018, Peter E. Walcott & Associates Limited undertook induced polarization (IP) surveying for Clibetre Exploration Ltd. over its Betty Property located in southern British Columbia.

The surveying was conducted utilizing a combination the pole-dipole/dipole-pole technique measuring the 0.5th -17.5th separations utilizing a 100 metre dipole separation.

3 east-west traverses were completed for a total of some 6 kilometres of induced polarization surveying completed.

Survey lines were positioned and established by the geophysical crew crews under the direction of Clibetre Exploration Ltd.

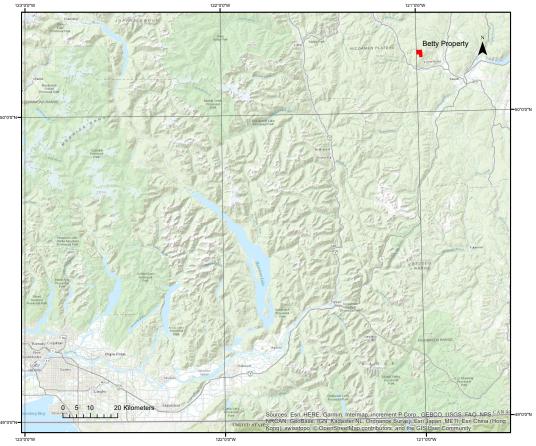
In addition to induced polarization surveying, horizontal / vertical positions of the line stations were measured a Garmin handheld GPS unit.

Induced Polarization Surveying Clibetre Exploration Ltd. Betty Project

PROPERTY LOCATION AND ACCESS

The Betty property is situated some 17 kilometres northwest of the community of Merritt, British Columbia.

Access to the survey area, was then gained via truck on Highway 8 from Merritt and then from a series of resource roads.

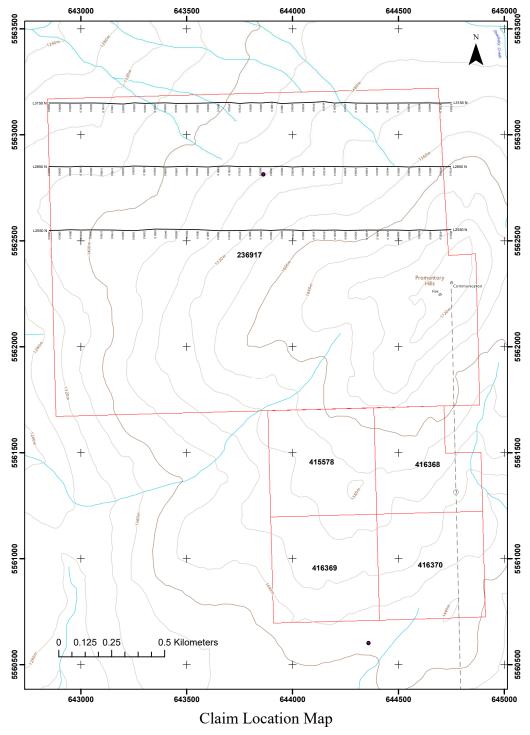


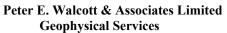
Property Location Map

Peter E. Walcott & Associates Limited Geophysical Services



PROPERTY LOCATION AND ACCESS con't

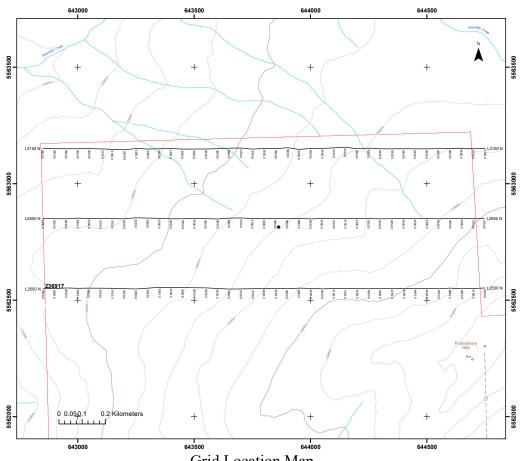




Induced Polarization Surveying Clibetre Exploration Ltd. Betty Project

Page**5**

PROPERTY LOCATION AND ACCESS con't



Grid Location Map

Peter E. Walcott & Associates Limited **Geophysical Services**

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.

The system consists basically of three units, a receiver (GDD), transmitter (GDD) and a motor generator (Honda). On this survey two transmitters used series providing a maximum of 8.6 kw d.c. to the ground, obtains its power from two 7.5 kw 60 c.p.s. alternator driven by a Honda 14 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 (\int_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" / "dipole-pole" method of survey. In this method the current electrode, C_1 , and a pre-laid series of potential electrodes, $P_{0.5}$ through $P_{17.5}$,

Page 7

SURVEY SPECIFICATIONS cont'd

along the survey lines at a spacing of "a" (the dipole) apart, while the second current electrode, C_2 , is kept constant at "infinity". The distance, "na" between C_1 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, with current placed between the receiving electrodes.

On this survey a total of some 6 kilometres of survey traverses were completed.

<u>Horizontal control.</u>

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.

Plan maps of the 5th separation of apparent chargeability and resistivity are also presented.

APPENDIX



Peter E. Walcott & Associates Limited Geophysical Services

COST OF SURVEY

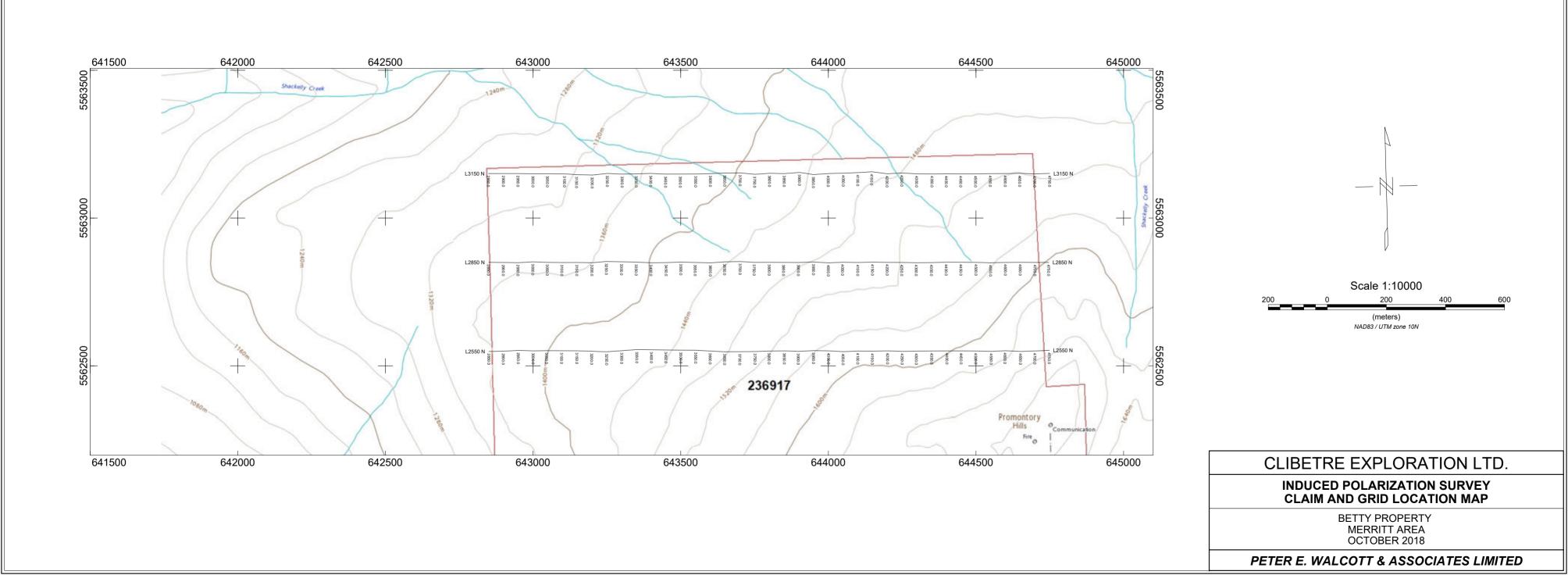
Peter E. Walcott & Associates Limited undertook the survey on a daily basis providing a 6 man crew, IP equipment, GPS, altimeters and 2 4x4 truck at \$4,450.00 per day.

Two days of standby were charged for line establishment and laying out of arrays at \$3,000.00 per day. An additional \$2,515.90 was incurred for accommodation and fuel, thus the total cost of the survey was \$21,865.90.

Peter E. Walcott & Associates Limited Geophysical Services

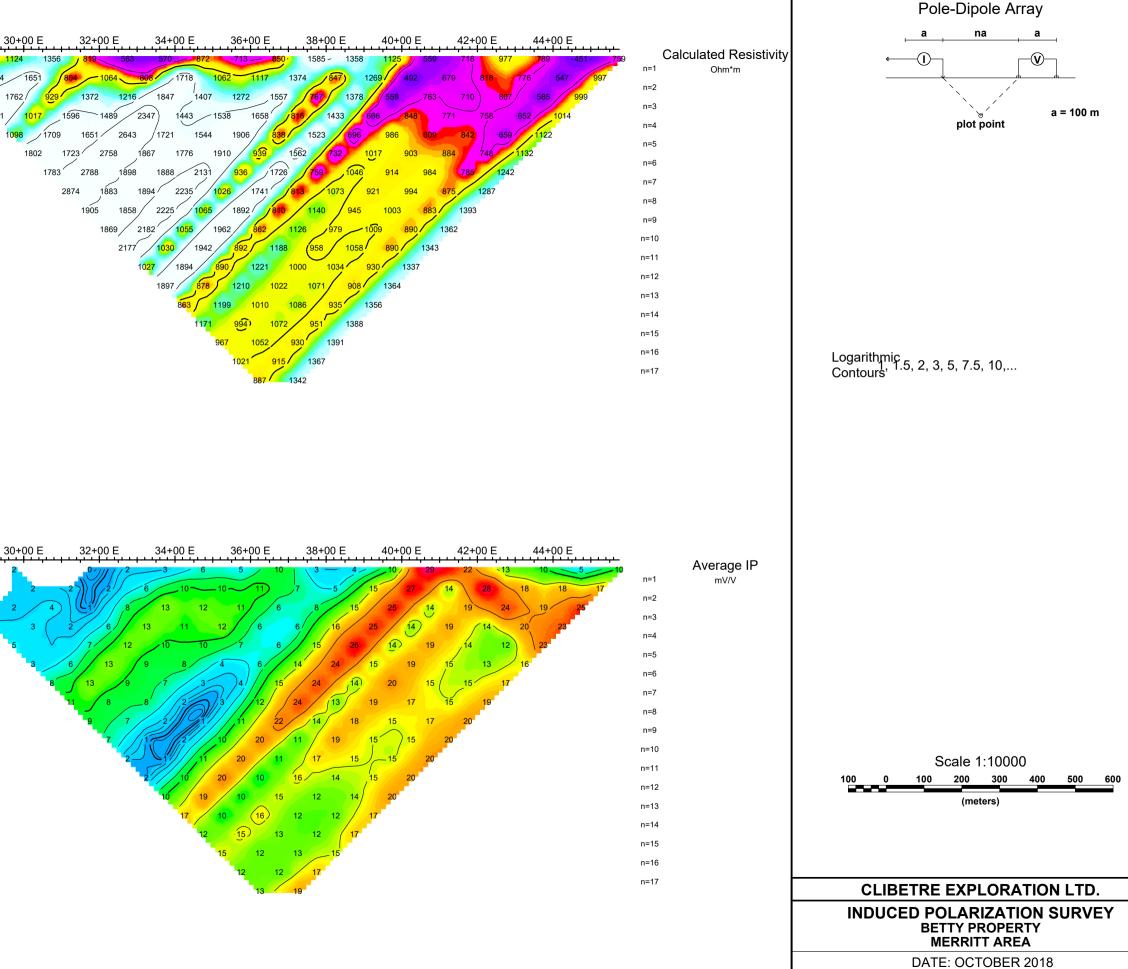
PERSONNEL EMPLOYED ON SURVEY.

Name	Occupation	Address	Dates
Peter E. Walcott	Geophysicist	111-17 Fawcett Rd. Coquitlam, B.C. V3K 6V2	
Alexander Walcott	"	"	
M. Welz	"	دد	Oct. 26 th -30th, 2018
P. Young	"	"	66
M. Kennedy	Geophysical Operator	دد	٤٢
N. Loubser	·	دد	٤٢
B. Hall	Geophysical Assistant	"	٠٠
B. Lajeunesse	"	"	



Pseudo Section Plot 25+50 N

Pole-Dipole Array



Calculated Resistivity

Ohm*m

Average IP

mV/V

883 🥒

1576

1344

1921

1581

n=1

n=2

n=3

n=4

n=5

n=6

n=7

n=8

n=9

n=10

n=11

n=12

n=13

n=14

n=15

n=16

n=17

n=1

n=2

n=3

n=4

n=5

n=6

n=7

n=8

n=9

n=10

n=11

n=12

n=13

n=14

n=15

n=16

n=17

1124

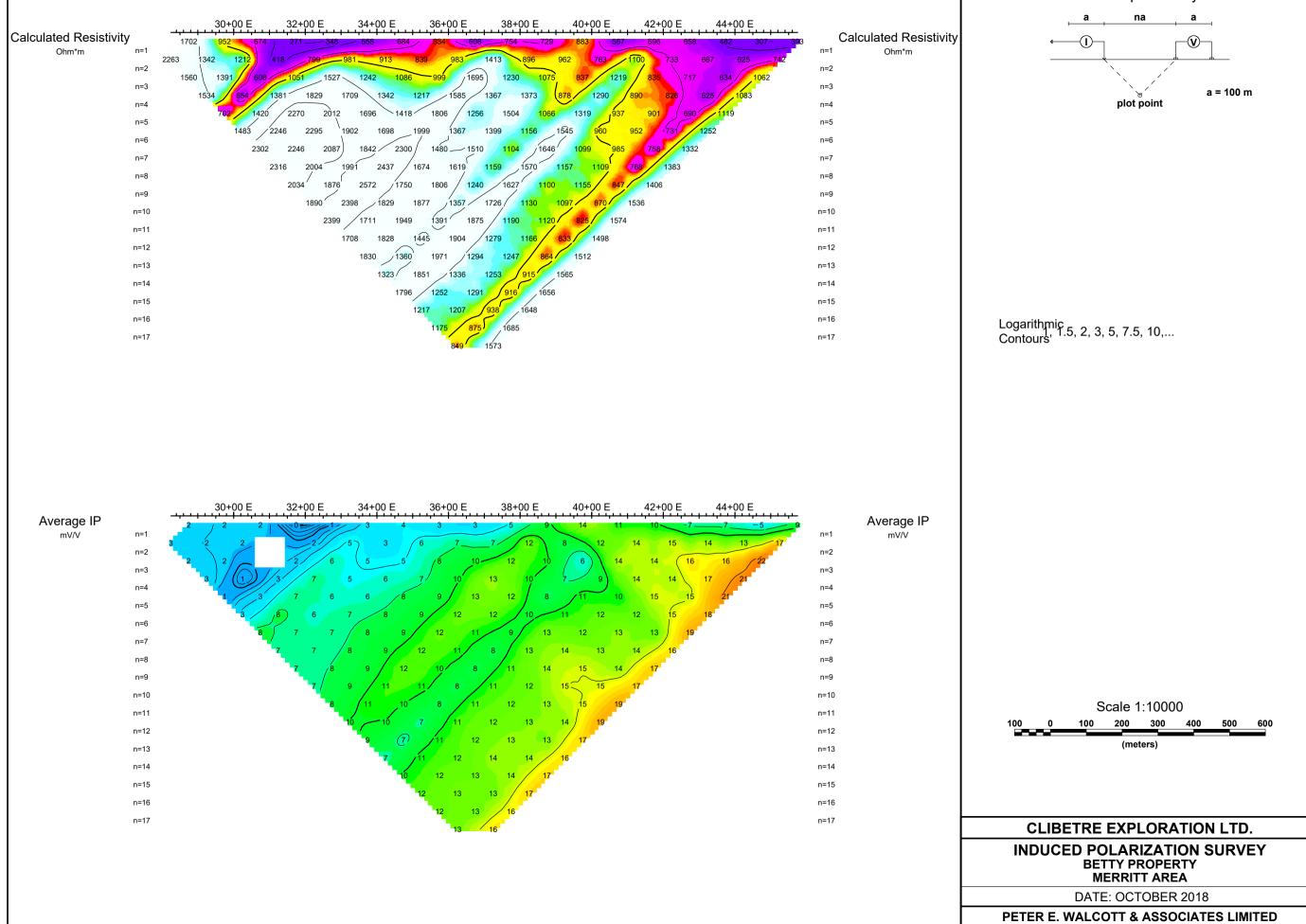
1762/

1<mark>09</mark>8

PETER E. WALCOTT & ASSOCIATES LIMITED

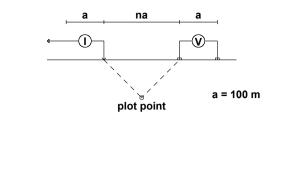
Pseudo Section Plot 28+50 N

Pole-Dipole Array

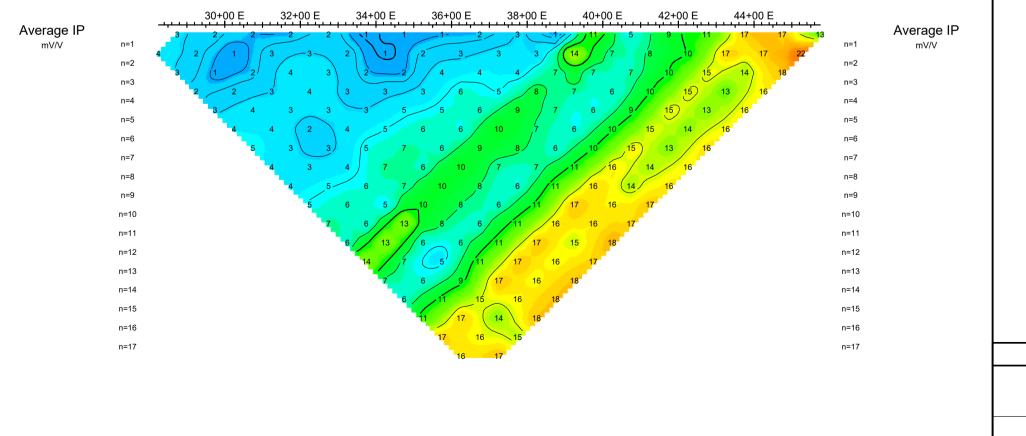




Pole-Dipole Array



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



36+00 E

1425 1604

- 200́3

1782 /

38+00 E

1456 /

40+00 E

42+00 E

44+00 E

Calculated Resistivity

Ohm*m

n=1

n=2

n=3

n=4

n=5

n=6

n=7

n=8

n=9

n=10

n=11

n=12

n=13

n=14

n=15

n=16

n=17

34+00 E

1448 -

30+00 E

1604 /

1237 /

n=1

n=2

n=3

n=4

n=5

n=6

n=7

n=8

n=9

n=10

n=11

n=12

n=13

n=14

n=15

n=16

n=17

Calculated Resistivity

Ohm*m

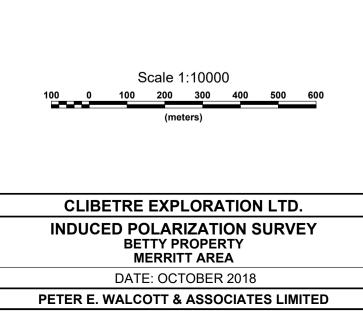
32+00 E

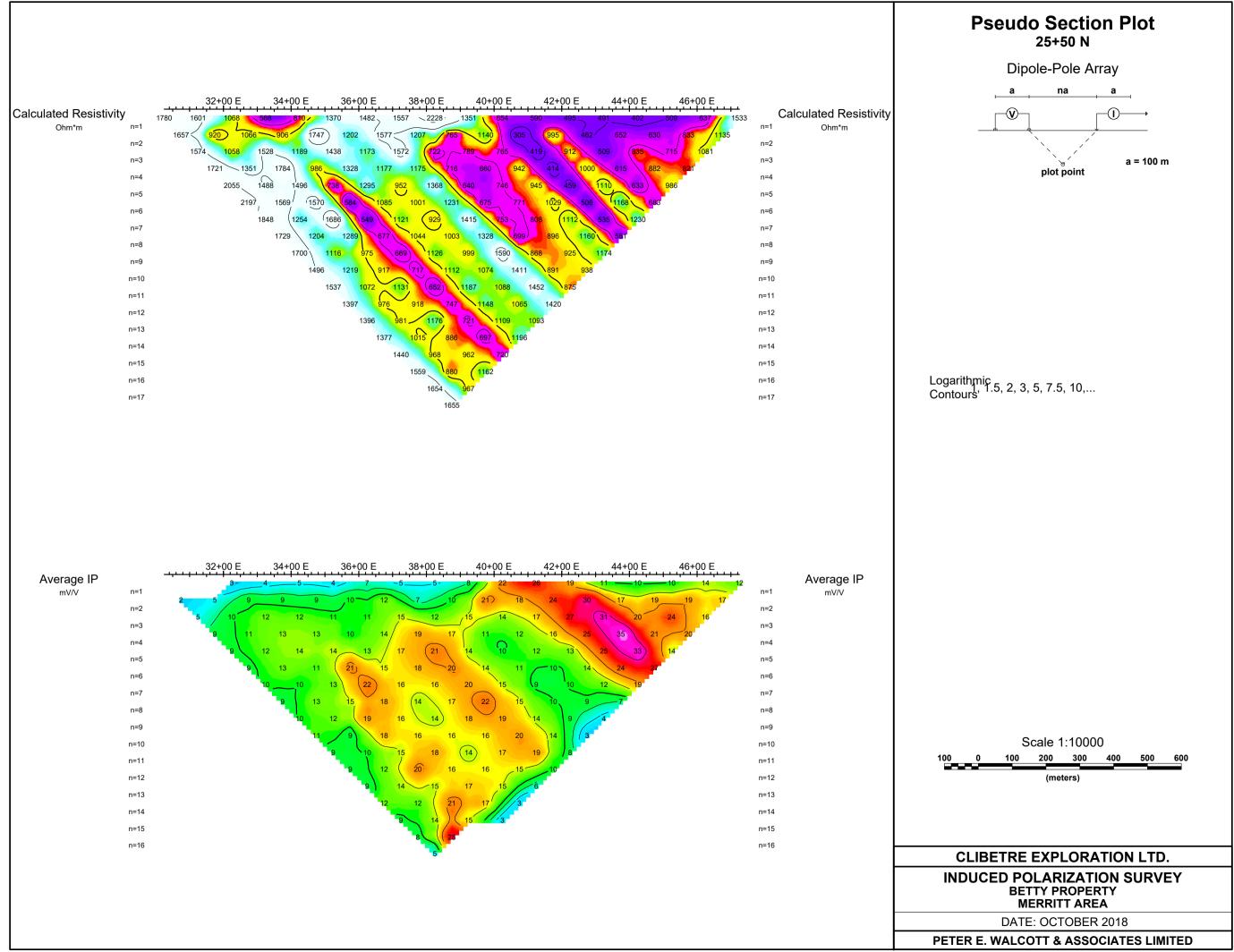
- 1634

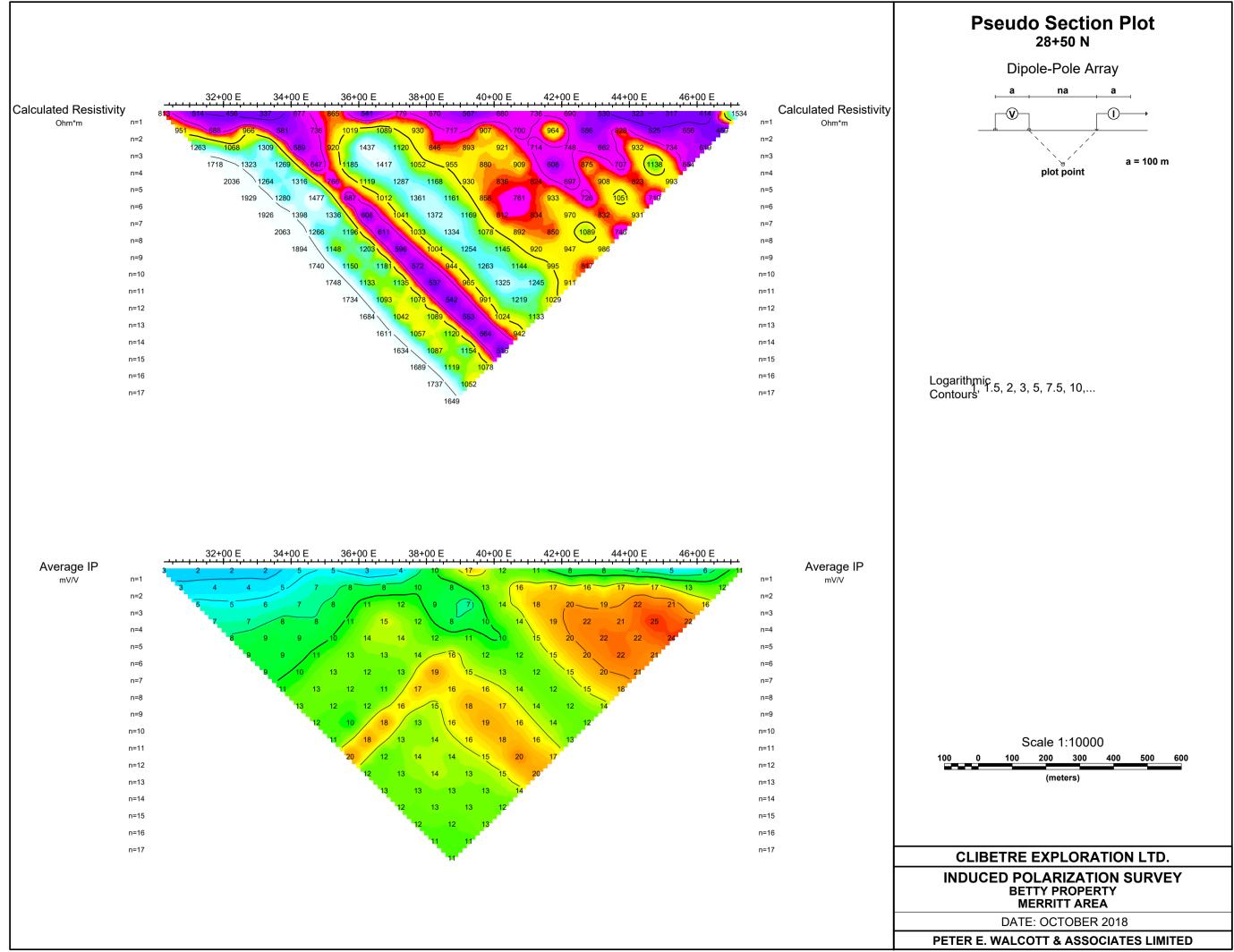
1835 2258

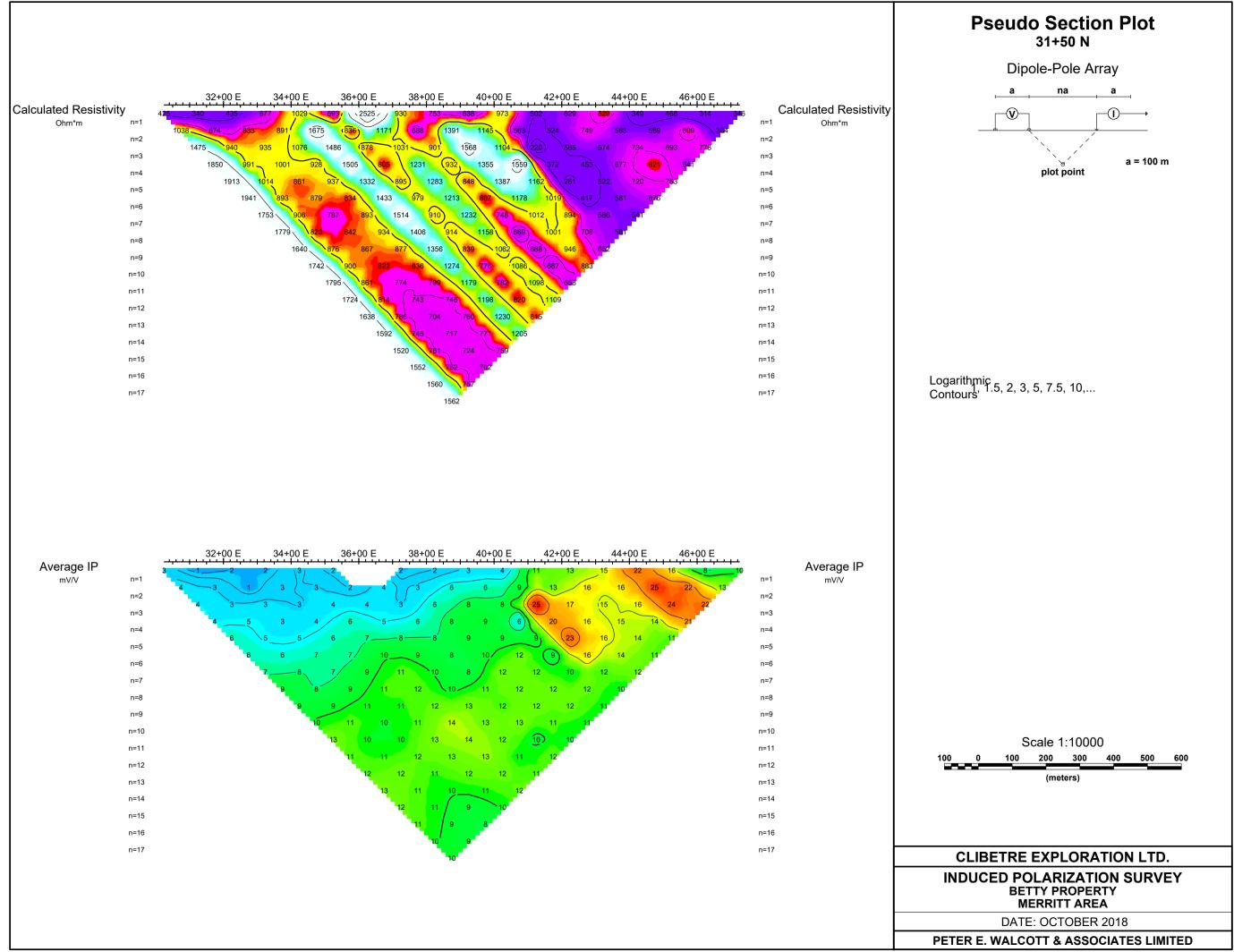
1832 2322

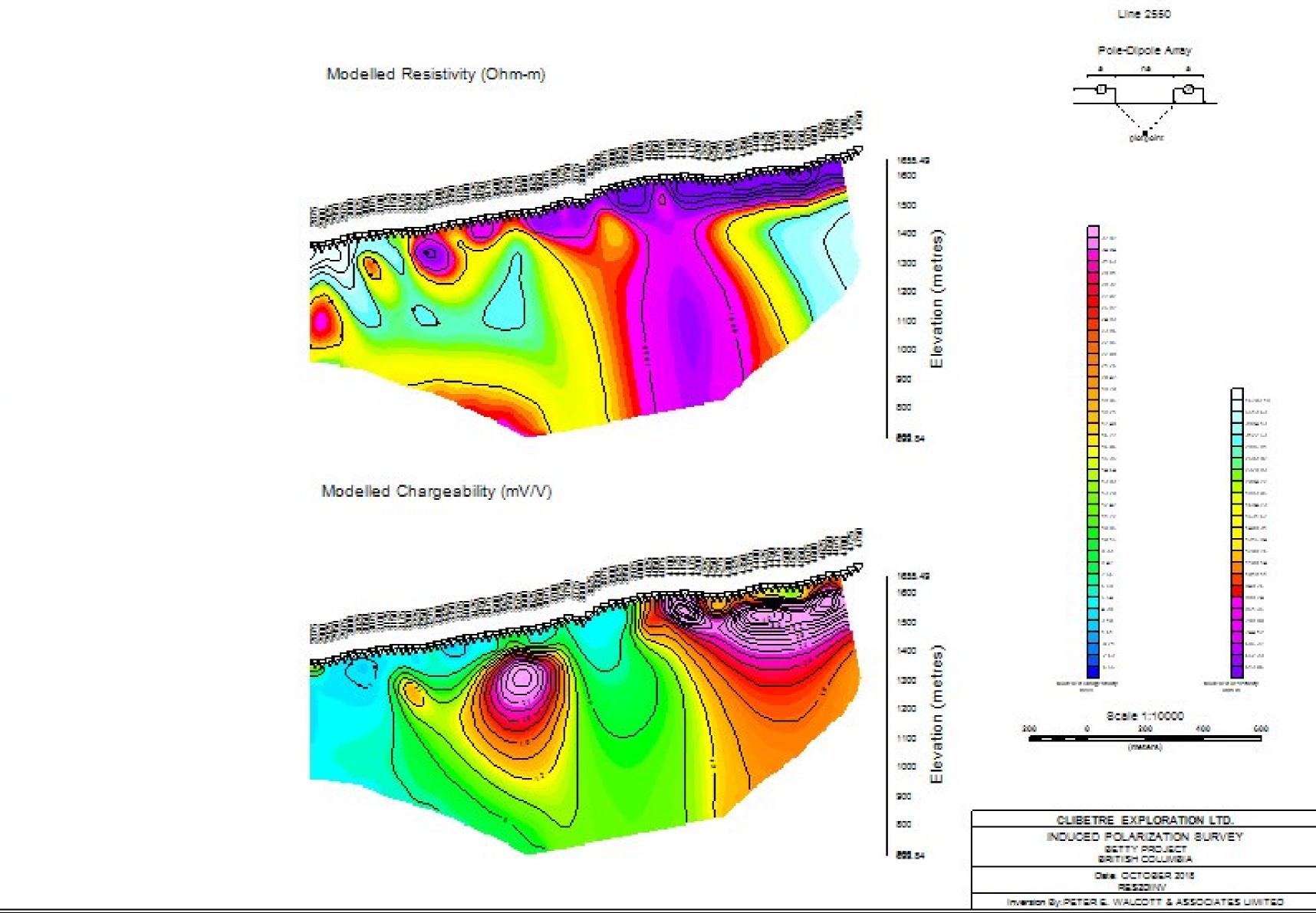
1566 /





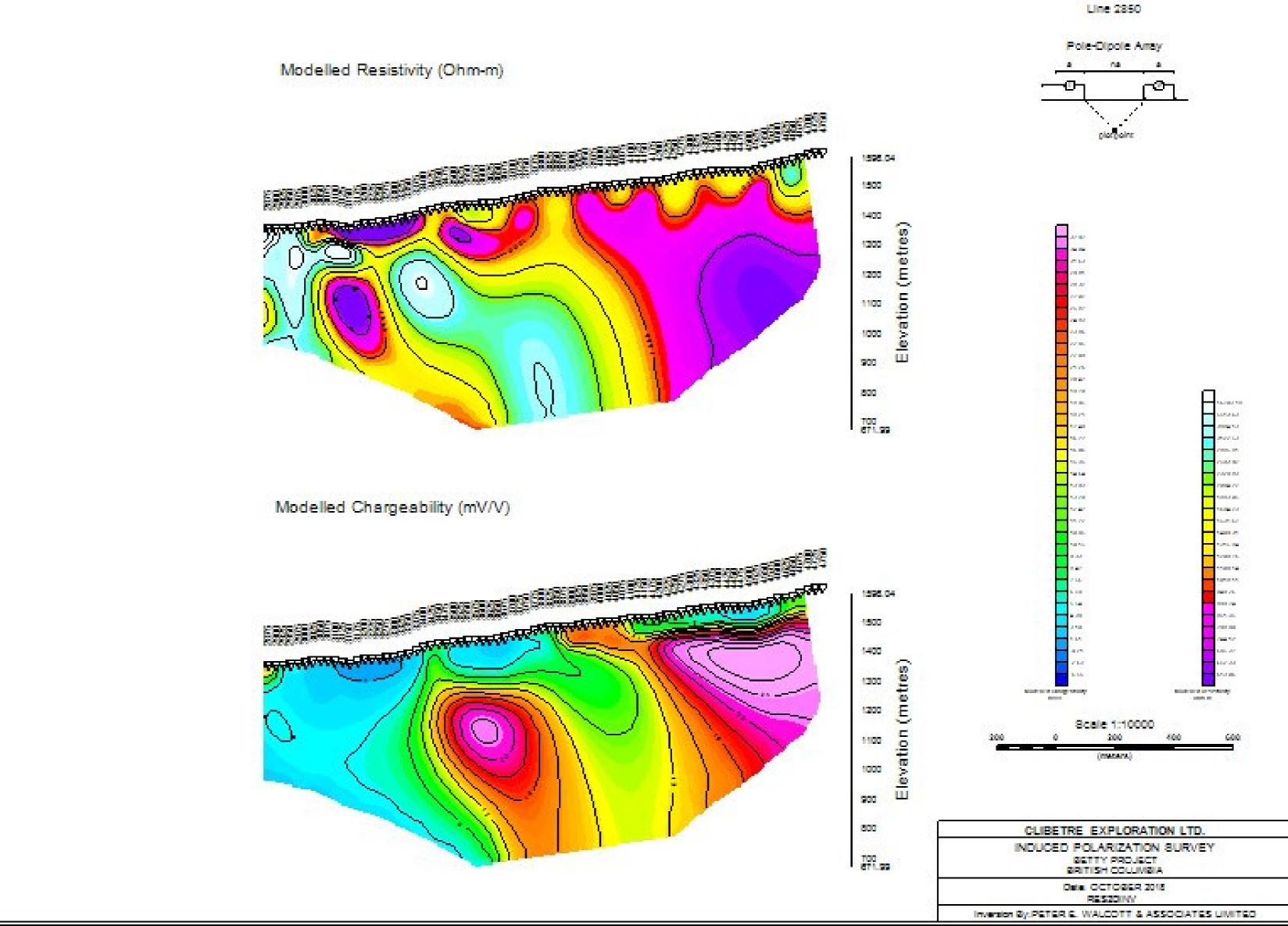






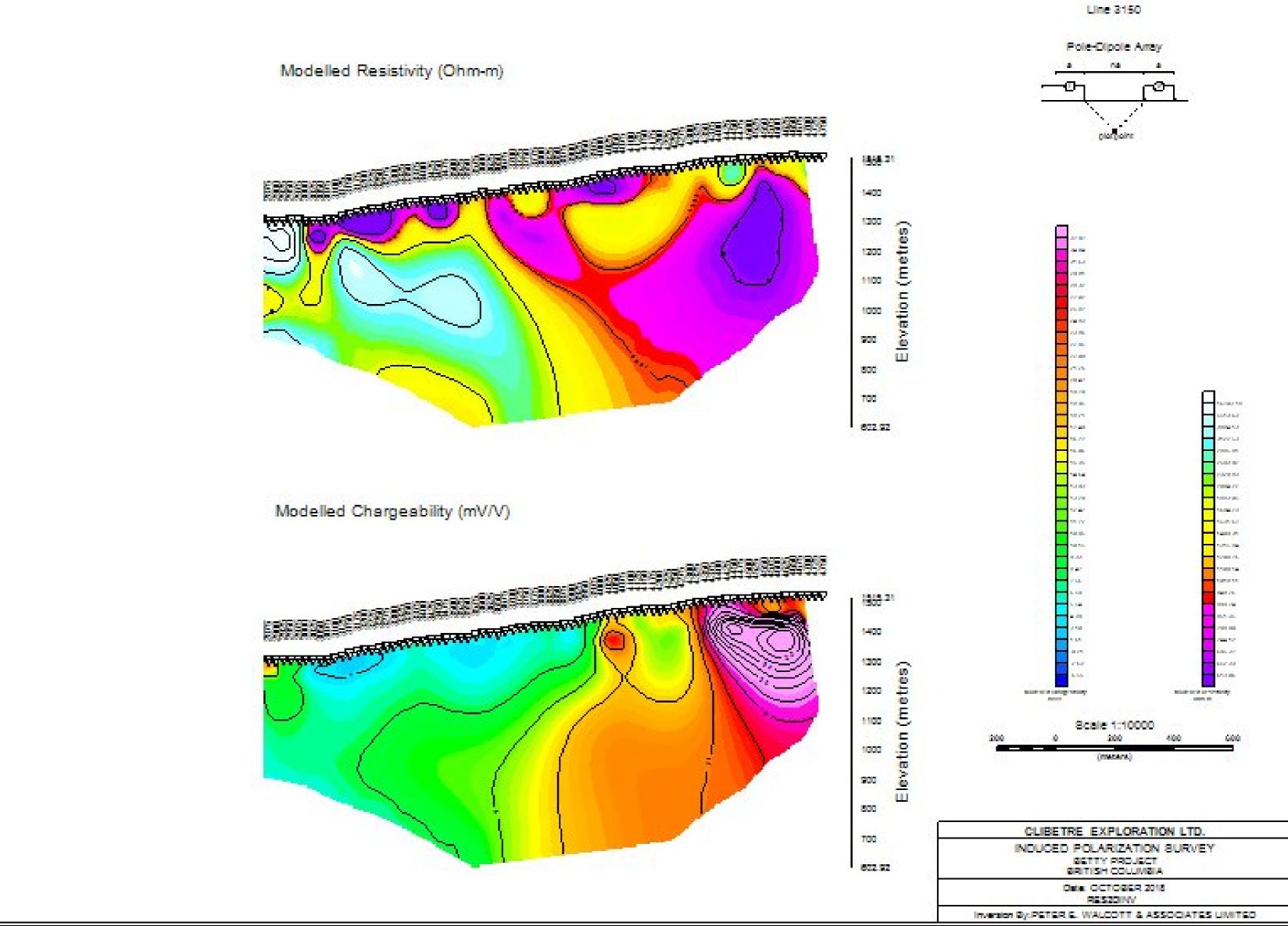






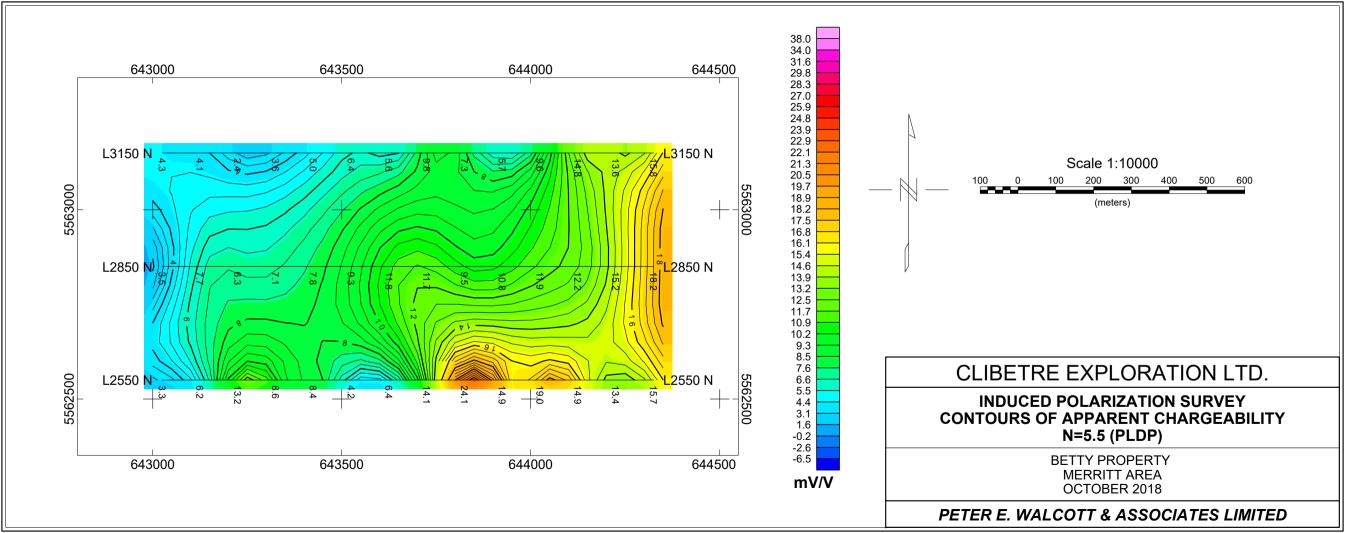


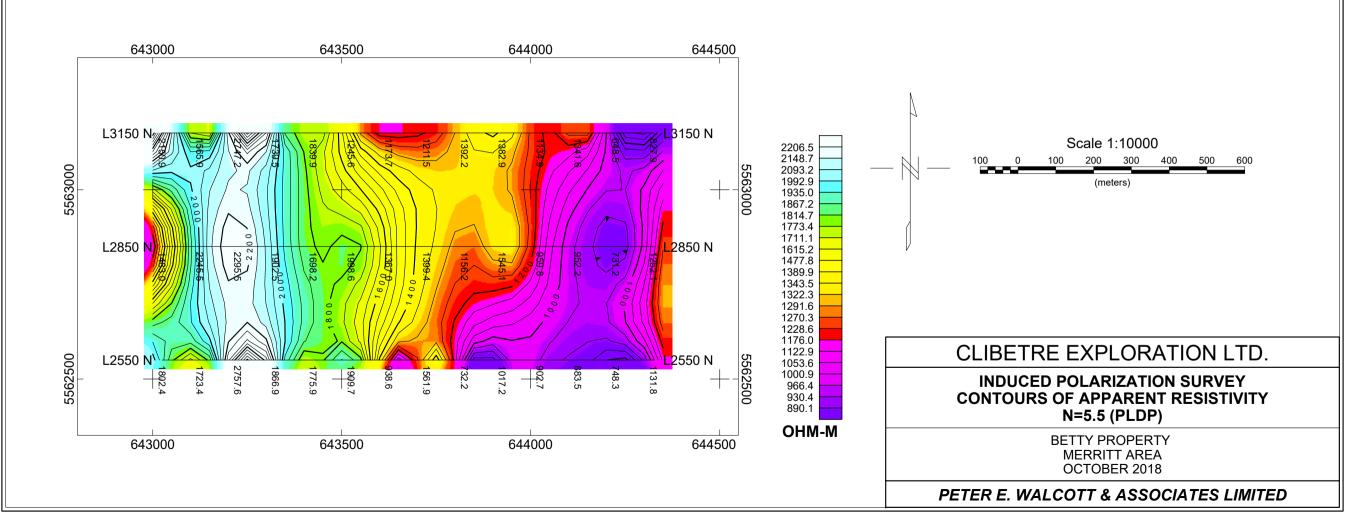














SJ Geophysics Ltd. S.J.V. Consultants Ltd.



11966 – 95A Avenue, Delta B.C. CANADA, V4C 3W2 **Bus:** (604) 582-1100 E-mail: trent@sjgeophysics.com www.sjgeophysics.com

Memorandum

To: Thule Copper Corp.

Attn: Jim Cuttle, Ryan Sharpe

From: E. Trent Pezzot

Date: December 20, 2012

Re: Geophysical Interpretation of airborne magnetic and radiometric data – Craigmont Project, Merritt area, B.C.

This memo describes the results of the interpretation of airborne magnetic and radiometric data gathered across the Craigmont Project, centred some 15 km northwest of Merritt, B.C. The survey was conducted by Scott Hogg & Associates Ltd. (Hogg) in June, 2012 and used a Heli-GT system which consists of 3 cesium magnetic sensors arranged in an orthogonal array on a bird towed 60 metres below a helicopter. It also included a helicopter mounted spectrometer system and the normal ancillary equipment required for airborne survey operations. The survey gathered some 903 line kilometres of data, on north-south survey lines spaced at 100 metre intervals, covering a claim area of approximately 8,725 hectares. Details concerning the survey logistics, data processing and deliverables are documented in an Operations and Processing report by the contractor. The survey data was provided in geosoft formatted database, grid and map files.

Two additional technical reports on the project provided a historical overview and description of the exploration targets. One, authored by Garth Kirkham and John Fleming described the results of a geophysical program and drilling campaign completed in 2005. The other, authored by David Willms and Cliff Candy, described the IP and magnetic survey component of the 2005 surveys.

The Craigmont Mine is a copper and iron skarn that went into production in 1962 and closed in 1982. It is located along the southern margin of the Guichon Creek batholith and confined to calcareous sedimentary rocks of the Nicola Group. Five main ore bodies are identified along a 900 metre strike length and a vertical depth of 600 metres.

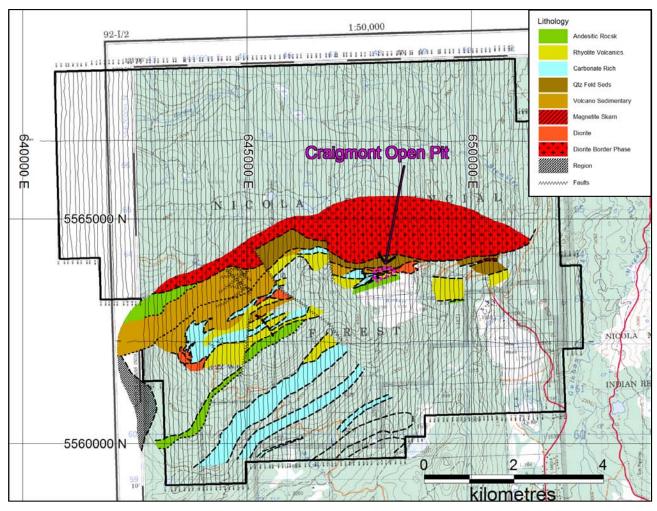


Figure 1: Geology Map – Craigmont Mine Area – Airborne Survey Grid Solid line shows outline of claim block and airborne survey grid.

The primary intention of this study was to use the airborne data to identify new exploration targets for similar mineralization along strike from the known deposits.

The geophysical databases were used to reconstruct the grids and maps to verify the accuracy of the maps provided by Hogg.

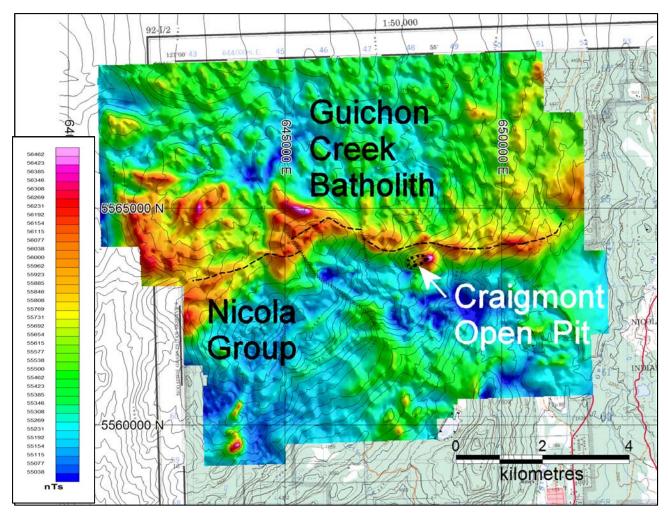


Figure 2: Total Magnetic Field Intensity colour contour map – linear distribution Dashed line shows geologically mapped contact between Nicola Group and Guichon Creek Batholith.

The magnetic data is dominated by a high amplitude band that strikes east-west across the eastern portion of the study area and widens to the west. At the western edge of the map, the magnetic high appears to swing sharply to the north. This response is attributed to the outer edge (border phase) of the Guichon Creek batholith and correlates well with the geologically mapped contact. The magnetic trend is comprised of several easterly elongated lenses of varying size. Breaks and discontinuities between these lenses suggest northwesterly and northerly striking faults. The inversion models (described below) show the southern edge of the batholith dips near vertically or steeply to the north.

Moderate and low magnetic amplitudes covering the area south of the batholith are attributed to the Nicola group rocks. The area is populated with narrow, moderate amplitude magnetic linears predominantly oriented to the northeast. Many of these trends coincide with geologically mapped contacts between various facies of Nicola group rocks. Numerous discontinuities along these trends reflect the same northwesterly and northerly striking faults that cut the Guichon batholith.

The airborne survey recorded magnetic gradients in three orthogonal directions (vertical, north and east). These data reveal narrow lineations that trace geological contacts. Combining false colour contouring and sun shadow imaging techniques produces effective displays to highlight these lineations and breaks and offsets along them that represent faulting. Analysis of these maps provides an interpretation of fault patterns that compliments the geological mapping.

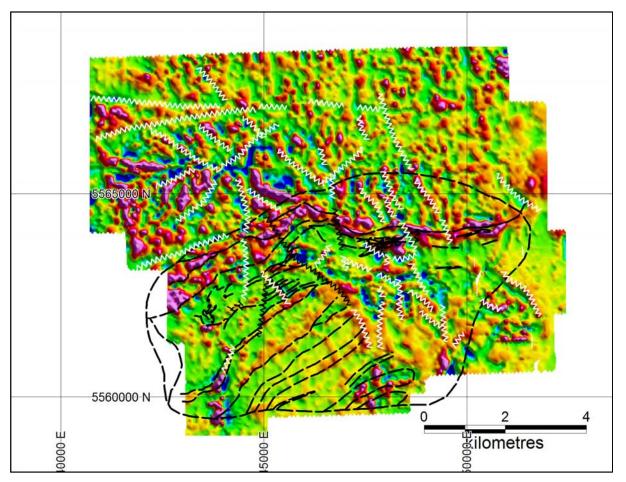
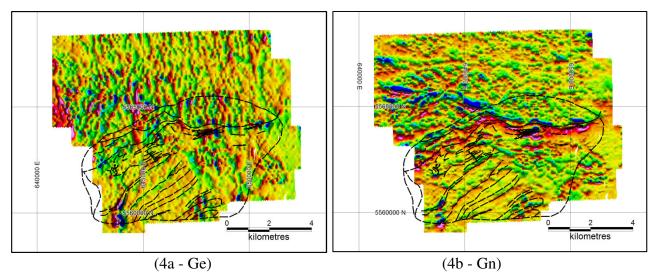
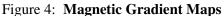


Figure 3: Magnetic Vertical Gradient (measured) colour contour map – sun illumination from NE. Dashed lines reflect geologically mapped contacts. Black zig-zag lines reflect geologically mapped faults. White zig-zag lines reflect magnetically interpreted faults or contacts.

Page 4





(4a) Ge –East gradient highlights N-S structures (4b) Gn –North gradient highlights E-W structures Dashed lines reflect geologically mapped contacts.

The Craigmont deposit coincides with a localized strong magnetic high anomaly immediately south of Guichon Creek batholith. The inversion suggests this is a circular, pipe-like body extending from the surface to > 300m depth however it is likely that the magnetic signature has been altered from its' "natural" form by the mining activities. There are several magnetic high anomalies mapped along strike in same relative position with respect to the batholith. These are weaker in amplitude than the Craigmont signature. They are labelled as anomalies A through F of figure 5.

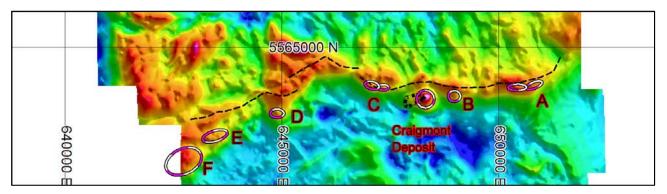


Figure 5: **Total Magnetic Field Intensity colour contour map – linear distribution** Dashed line shows geologically mapped contact between Nicola Group and Guichon Creek Batholith. White and purple ellipses highlight Craigmont type magnetic anomalies.

• A – 2000m east of the Craigmont deposit. This anomaly coincides with a geologically mapped lens of magnetite skarn. The airborne signature suggests this zone extends another 350m further east than shown on the geology map. This anomaly is close to the Guichon batholith and the magnetic responses likely interfere with each other.

• B - 650m east of the Craigmont deposit. This subtle response appears as bulge on southern edge of Border phase response.

• C - 1200m west-northwest of the Craigmont deposit. This anomaly is very close to the "inferred" border phase contact and may be in the Nicola rocks. It is probably comprised of two lobes totalling some 500m strike length.

Immediately west of C a northwesterly striking fault coincides with a change in the strike of the border phase unit, which rotates from east-west to a more southwesterly strike. This is accompanied by the development of a second magnetic high trend that gradually separates from the mapped border phase. Three localized magnetic highs are developed within this sub-parallel magnetic feature and are labelled as D, E and F. Several small, weaker anomalies could also be picked between these stronger anomalies.

- D Located 3500m west-southwest of the Craigmont deposit and 450m south of the batholith.
- E Located 5000m west-southwest of the Craigmont deposit and 530m south of batholith.
- F Located 5700m west-southwest of the Craigmont deposit and 820m south of batholith. This is the strongest of these three anomalies and closest in appearance to the anomaly associated with Craigmont. The anomaly is located on the edge of the survey and only partially defined. It may extend further to the southwest.

All six of these anomalies have potential for magnetite skarn development, similar to the Craigmont deposit. It is likely that a ground magnetic survey would provide more detailed information and more precisely locate the high susceptibility source material.

Page 6

The airborne magnetic data was processed and used as input to the UBC 3D magnetic inversion software to produce 3D voxel models showing possible subsurface distributions of the magnetic susceptibility index parameter that might generate the observed data. A regional inversion, based on the entire survey, grid to 80 metre cells and inverted to 40 metre voxel cells was completed. Four (4) overlapping detail inversion windows, utilizing data grid to 40 metres were inverted to a 20 metre voxel grid as outlined on Figure 6. These were selected to focus on the Guichon Creek batholith contact with the Nicola Group. Current and historical plan maps, 3D inversion models and digitized drillhole traces were combined in 3D visualization programs for analysis.

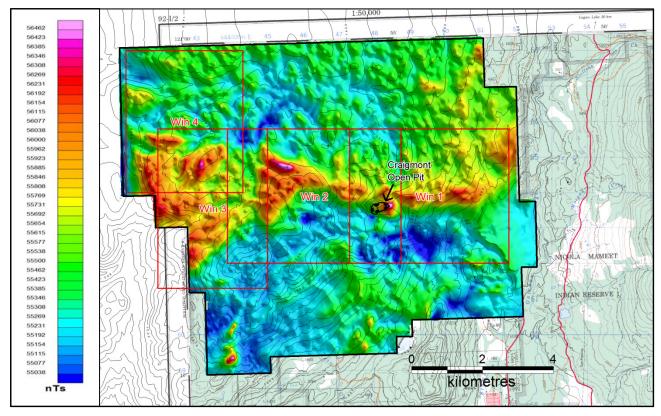


Figure 6: Total Magnetic Field Intensity colour contour map – linear distribution Red Outlines show detail inversion windows 1 - 4. Black outline of regional inversion and claims.

The inversion models have been provided as digital files in both the native UBC format, suitable for viewing in the meshtools3d visualization program and in the VTK format, suitable for viewing in the Paraview and Mayavi 2 programs. Snapshots from these viewers are included as images below to illustrate some of the features interpreted from these models.

The regional model shows a slight increase in the magnetic susceptibility across the northern portion of the grid which is interpreted as reflecting the Guichon Creek batholith. The contact with

the Nicola Group rocks to the south is accentuated by a significant increase in the magnetic susceptibility associated with the border phase rocks, which form the outer rim of the batholith. This magnetic facies of the border phase appears to be somewhat discontinuous but where it is well defined it is modelled as a steep, northerly dipping plate like body.

Lower amplitude magnetic responses to the south, associated with the Nicola group rocks appear to form an antiformal structure that plunges slightly to the northeast. The northern flank of this anticline (hosting the Craigmont deposit) dips steeply to the north, paralleling the batholith contact. The southern flank of the anticline likely dips at a slightly shallower angle to the south.

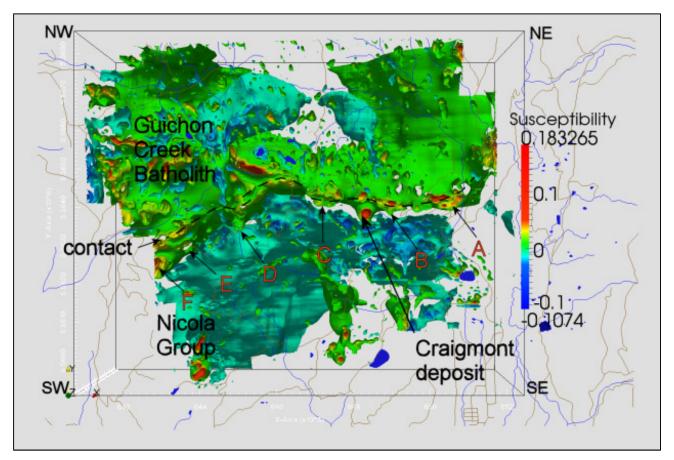


Figure 7: **Regional Inversion–Isosurface Display–Top View** Isosurfaces from -0.03 SI to +0.05 SI at 0.01 intervals. Potential Craigmont type anomalies A to F.

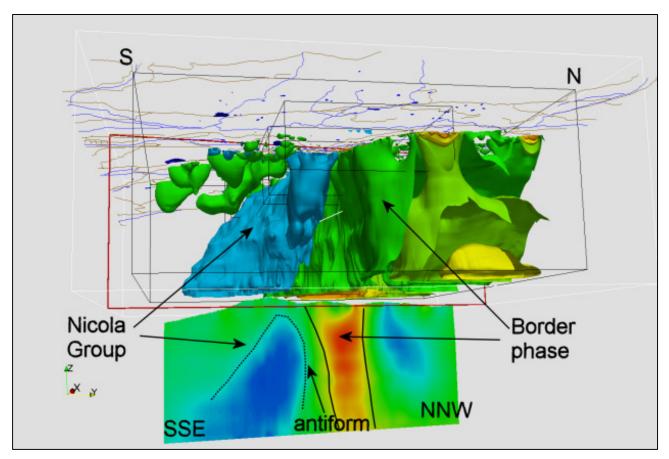


Figure 8: **Regional Inversion–Isosurface Display–Side view from East. green = +.01 SI, blue = -.02 SI.** NNW-SSE Cross-section through model through western part of the block is displaced down for viewing.

Both of detail windows 1 and 2 encompass the Craigmont deposit. Both inversions show the magnetic source to be a steeply north dipping pipe-like body. Considering the extensive mining in the area, it is understood that the magnetic signature (and consequently the inversion model) is distorted from its' original, undisturbed state. Based on the geological descriptions, it is likely that the deposit formed an easterly elongated ellipsoid body but the vertical extent and orientation shown in the model is likely representative of the original deposit.

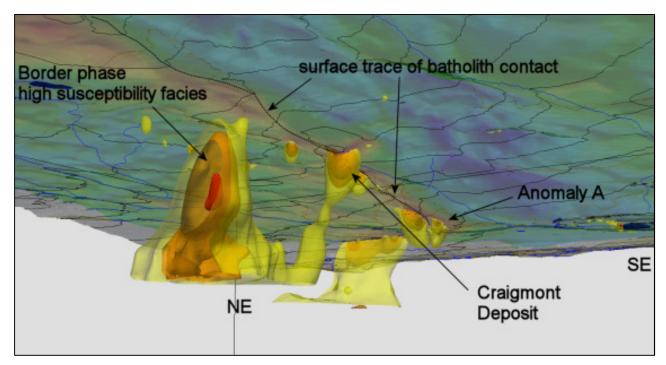


Figure 9: Win 1 Isosurface Display – Craigmont Deposit Area - Side view from Southwest - red = +0.05 SI, orange = +0.4 SI, yellow = +0.3 SI.

Colour contour map of Total Magnetic Field intensity draped over ground surface.

The easternmost magnetic anomaly (A) was located along the eastern edge of detail window 1. The inversion model suggests the source as being comprised of two narrow, northeasterly elongated lenses that parallel the Guichon Creek Batholith. The western most body is the smaller of the two and coincides with the eastern end of a narrow, magnetite skarn lineation mapped by surface geology for some 1200 metres. The inversion suggests this zone may continue (possibly offset by a fault) for another 350 metres to the northeast. This eastern lens appears to have a greater depth extent than the western lens.

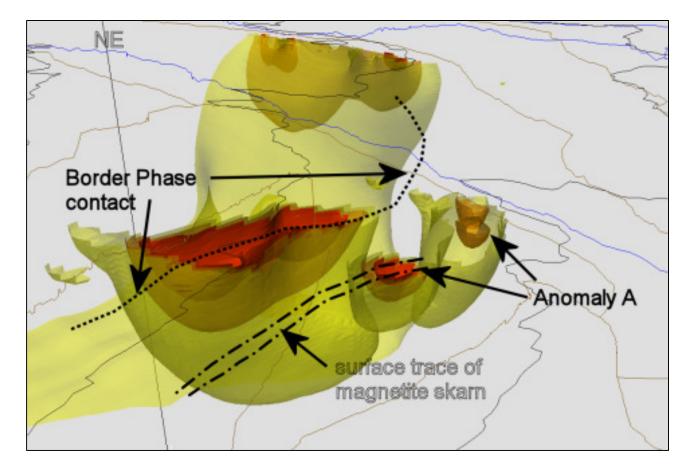


Figure 10: Win 1 Isosurface Display – Anomaly A – elevated view from Southwest - red = +0.05 SI, orange = +0.4 SI, yellow = +0.3 SI.

Anomalies C and D have been tested by the IP and ground magnetic surveys. Anomaly C coincides with an easterly elongated chargeability high, centred between the magnetic high and the Guichon Creek batholith (figure 11). This conforms to the geological description that suggests the copper zone (chalcopyrite) forms along the periphery of the magnetite lens. Anomaly D is flanked to the south by a large, weak chargeability high. This IP anomaly is significantly larger than the magnetic anomaly. It is also noted that a few smaller chargeability highs are shown between anomalies C and D, immediately south of the batholith. These anomalies are loosely correlated with weak and poorly defined magnetic highs.

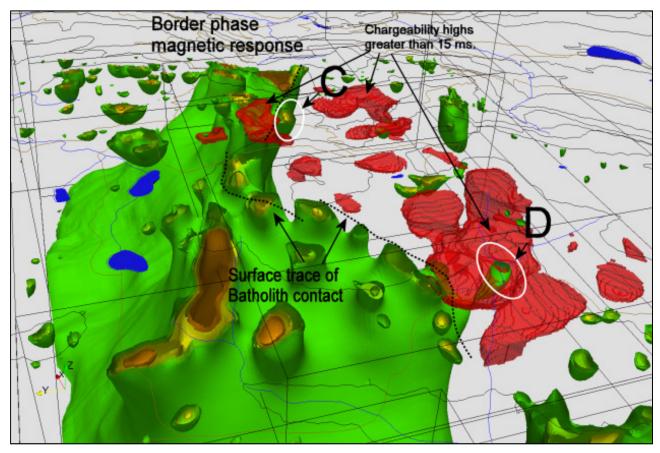


Figure 11: Win 2 Isosurface Display – Elevated view from west. Red solid = chargeability high > 15 ms. Magnetic Isosurfaces: orange = +0.04 SI, yellow = +0.03 SI, green = +0.01 SI.

Ground magnetic data gathered by Frontier Geosciences in 2005 was provided as an ASCII xyz data file of gridded (5m cells) data. The map produced by the gridded data is not as detailed as the map included in their report. It is likely that the report map was based on a more detailed gridding of the walking mag data.

Overlying the ground data with the more recent airborne data shows excellent correlation of the general magnetic trends. However, there appears to be a displacement that shifts the ground data some 285m to the east of the airborne data. Frontiers' report states their data was recorded in NAD83, Zone 10N and there is no obvious explanation for this apparent mistie. As a check, the ground data was re-registered to NAD 27, Zone 10N, another common projection, but this made the mistie even worse.

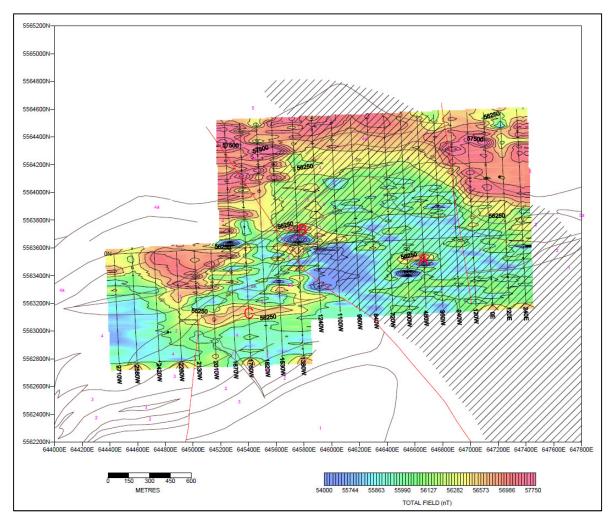


Figure 12: Ground Magnetic Data (Frontier, 2005)

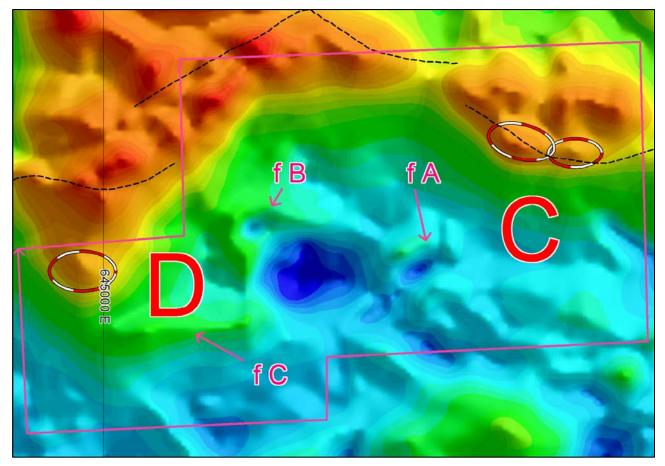


Figure 13: Airborne Magnetic Data over area covered by ground magnetic survey (Frontier, 2005) Outline of Frontier ground survey as purple border. Frontier anomalies flagged as fA, fB, fC. Airborne anomalies C and D as red/white ellipses.

Comparison of the ground and airborne data demonstrates the difference in perceptions one gets from the regional and local perspectives. By ignoring the apparent displacement and focusing on the character of the responses it is clear that the same general magnetic trends and anomalies are mapped by the two surveys. The large magnetic high arcing around the northern and western sides of the ground grid are evident on the airborne data as the reflection of the border phase Guichon Creek batholith. The ground survey only mapped the southern edge of this trend and its' relationship to the batholith was not as clearly defined. The airborne anomalies C and D are clearly evident on the ground data but the interpretation of them being offset from the batholith was not apparent. Instead, Frontier interpreted two small dipole anomalies (fA, fB) and an easterly elongated magnetic high (fC) as potential magnetite skarns. The two small dipole anomalies are evident on the airborne data can be used to identify several similarly weak responses as

potential targets within a 2 km wide band along the southern flank of the batholith. Ground surveying would be required to identify these as dipole targets.

Detail window 3 modelled the responses across anomalies E and F. It shows anomaly E as a small, near surface lens, some 200 - 300 metres in length with very limited depth extent. It shows anomaly F, which is only partially defined, as being very similar to the Craigmont deposit anomaly in that it appears to extend to considerable depth. This target straddles the edge of the current claim group and likely extends to the west, off the current property.

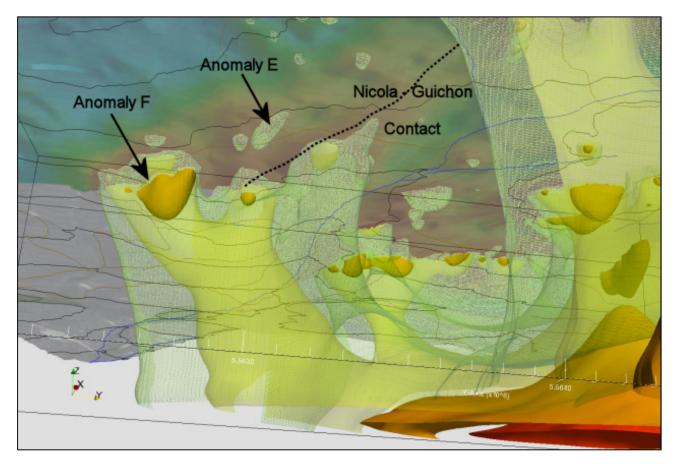


Figure 14: Win 3 Isosurface Display – Side view from southeast. red = +0.05 SI, orange = +0.04 SI, yellow = +0.04 SI, green mesh = +0.02 SI Total Field Magnetic colour contour map draped over ground surface. Spectrometer data was also acquired and these results were examined briefly. The most distinctive patterns are evident on the ternary displays. The results show predominantly north-south trends across the area, defined by changes in the colour hues. These show no obvious correlation with the mapped geology. The most distinctive anomalous response is a large elliptical zone in the southeast corner of the map. This response coincides with the mine waste area. Several narrow lineations coincide with surface drainages.

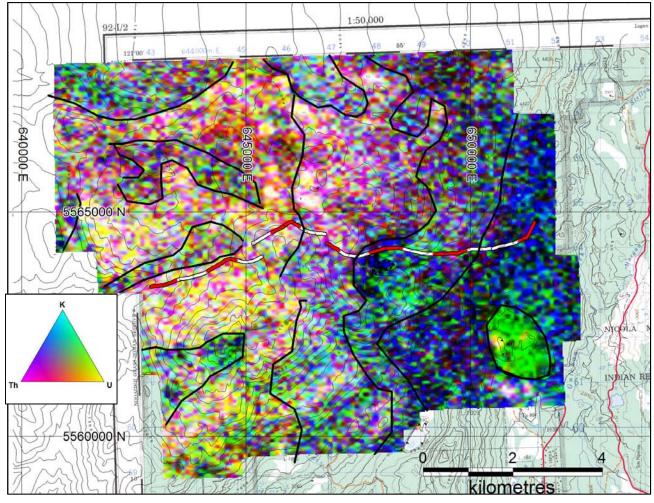


Figure 15: **Ternary Radiometric Display – CMY = K-Th-U** Red-White line traces Guichon Creek Batholith – Nicola Group contact. Black lines trace general radiometric patterns.

The Th/K ratio is used to identify potassic (hydrothermal) alteration zones generated by a coincident increase in the potassium and decrease in the thorium isotopes. The most dramatic of these types of anomalies is associated with the mine waste area, located some 3.2 km southeast of the mine site. There is weaker anomaly centred some 800 metres south of the open pit. Both of these anomalies are within the workings of the mine and neither anomaly is considered to be a reflecting the natural (geological) conditions. They are also generated primarily by lows in the thorium isotope counts rather than highs in potassium. There are no obvious Th/K ratio anomalies

indicative of potassic alteration associated with the Craigmont deposit itself. There appears to be a general increase in the number of very small, localized Th/K anomalies in the west-central portion of the grid, south of the magnetic anomalies D, E and F. There is one weak, circular anomaly noted along the western edge of the survey. A more detailed study will be required to determine whether these responses are significant.

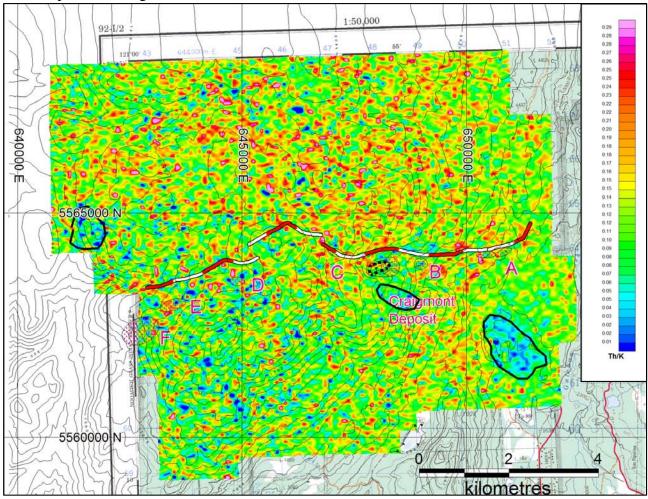


Figure 16: **Th/K ratio Colour Contour Map.** Blue areas (low Th/K ratio) are indications of possible potassic alteration. Red-White line traces Guichon Creek Batholith – Nicola Group contact.

The uranium isotope clearly outlines the maps the mine waste site area. The balance of the survey is nondescript.

Both the potassium and thorium isotopes have higher counts along the eastern portion of the survey block.

There is one significant potassium isotope anomaly mapped in the southwest portion of the survey. It coincides with a rhyolite volcanic unit shown on the geology map but differs in that other occurrences of this geological unit do not exhibit the same potassic signature.