

YEIP  
2003-005  
2003

**2003 GEOPHYSICAL FIELD REPORT**  
**ON THE**  
**YUKON OLYMPIC PROPERTY**

**HEM-HEG-HM CLAIMS, DAWSON MINING DISTRICT**  
**YUKON TERRITORY**  
**NTS 116-G-01**  
**LAT. 65° 02' to 65° 05' N.**  
**LONG. 138° 00' to 138° 25' W.**

by

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for

CANADIAN EMPIRE EXPLORATION CORP.  
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Work Conducted: June 15, 2003 to July 4, 2003

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## 1.0 SUMMARY

The Yukon Olympic property (formerly HEM property) covers an iron oxide copper-gold (IOCG) target similar to the Olympic Dam deposit in Australia. The Olympic Dam deposit contains a published resource of 2 billion tonnes of 1.6% Cu, 0.06% U<sub>3</sub>O<sub>8</sub>, 0.6 g/t Au and 3.5 g/t Ag (Scott, 1987). The Yukon Olympic property is located in the Ogilvie Mountains in north central Yukon. Recent studies have suggested that the Stuart Shelf area of Australia, a crustal segment that hosts the Olympic Dam Cu-Au-Ag-U deposit, and the Ogilvie-Wernecke trend in the Yukon were a part of the same landmass 1.6 billion years ago. This work also suggests that the breccias and mineralization in both areas formed in response to extensional tectonics and related intrusive activity that affected the entire belt.

Mineralization at Yukon Olympic is associated with hematite-rich breccia as well as intrusive rocks of intermediate to mafic compositions intruding Proterozoic argillite, shale and siltstone. The breccias occur within the Proterozoic sediments and are exposed intermittently over a distance of 6 kilometers. Copper mineralization occurs as disseminations and blebs of chalcopyrite within both intrusive rocks and the specular hematite breccias. Malachite staining is also commonly observed on many talus and outcrop exposures. Limited rock and soil geochemical sampling has indicated a distinctive association with rare earth elements, fluorine, barium and zinc. Further sampling is warranted to more accurately assess the chemistry of this intrusive breccia.

The Yukon Olympic property occurs at a flexure point along an east-west trending regional structure indicated by regional aeromagnetics. The known breccia exposures are related to aeromagnetic and gravity highs that are elongated parallel to this trend, in the central part of the property. The 2002 geophysical field programs defined a +2.0 mGal gravity anomaly approximately 8 kilometers in length and 1 kilometer wide adjacent to a large magnetic anomaly measuring 2.5 kilometers in length by 1.5 kilometers wide. The gravity highs are believed to reflect hematitic breccia below the Paleozoic cover while the magnetic anomaly may be caused by magnetite-bearing intrusive rocks at depth. This interpretation is strengthened by the fact that the easternmost portion of the gravity anomaly trends into the Spectacular Creek breccia occurrence that contains copper mineralization. The pattern observed at the Yukon Olympic property, with the gravity anomaly being displaced from the magnetic anomaly, is a direct analogue to the Olympic Dam model.

Canadian Empire completed two diamond drill holes on the Yukon Olympic property during the fall of 2002. The first drillhole targeted the westernmost gravity anomaly but did not penetrate the Paleozoic cover and did not explain the gravity anomaly. The second drillhole targeted hematite-bearing breccias located along the Dempster highway. Due to set-up and permitting limitations the second drill hole was set up approximately 200 meters from mineralized hematitic breccias observed on surface. The second drill-hole intersected breccia within the uppermost portion of the hole but did not reach the projected depth extension of the breccia exposed on surface.

Canadian Empire Exploration Corp. conducted a geophysical program during the period of June 15<sup>th</sup> and July 4<sup>th</sup>, 2003 to refine drill targets within the 8-kilometer long gravity anomaly by utilizing deep penetrating induced polarization techniques. Canadian Empire contracted Aurora Geosciences Ltd., of Whitehorse, Yukon, to conduct Induced Polarization & Magnetic

surveys on the Yukon Olympic property. The 2003 geophysical surveys were conducted on four parallel lines spaced over a distance of 10 kilometers. The lines averaged 5 kilometers in length for a total linear distance of 20.25 kilometers of survey. The lines were selected by Canadian Empire and targeted the projected causative sources of the central and eastern gravity anomalies. The eastern most line also targeted the down-dip extension of known outcropping of hematite-rich breccia, which locally contains copper mineralization.

In review, Canadian Empire followed up its 2002 Phase I drill campaign with ground geophysical and geochemical surveys in order to refine and prioritize targets prior to initiation of Phase II drilling. A total of \$80,262.84 of field costs was expended on the 2003 geophysical-geochemical program. Interpretation of the geophysical surveys delineated possible drill targets at depths greater than two hundred meters below ground level. On-going drill targeting is recommended on the eastern most gravity I.P. anomaly down-dip of exposed hematite breccia located on the southern end of line 4. A program of 1500 meters of drilling in 3 holes is recommended with a cost estimate of \$450,000.00.

## 2.0 INTRODUCTION

### 2.1 *Property Description and Location*

The Yukon Olympic property consists of 389 claims (approximately 8,300 hectares) located in the Ogilvie Mountains approximately 134 kilometers north-northeast of Dawson City in north central Yukon (Figure 1). The claims are centered at 65° 03' north latitude and 138° 12' west longitude. The claims straddle the Dempster Highway, from the northwest corner of the claim block north of Engineer Creek at kilometer 161, to the southeast corner east of the Blackstone River at kilometer 142 (Figures 1 and 2).

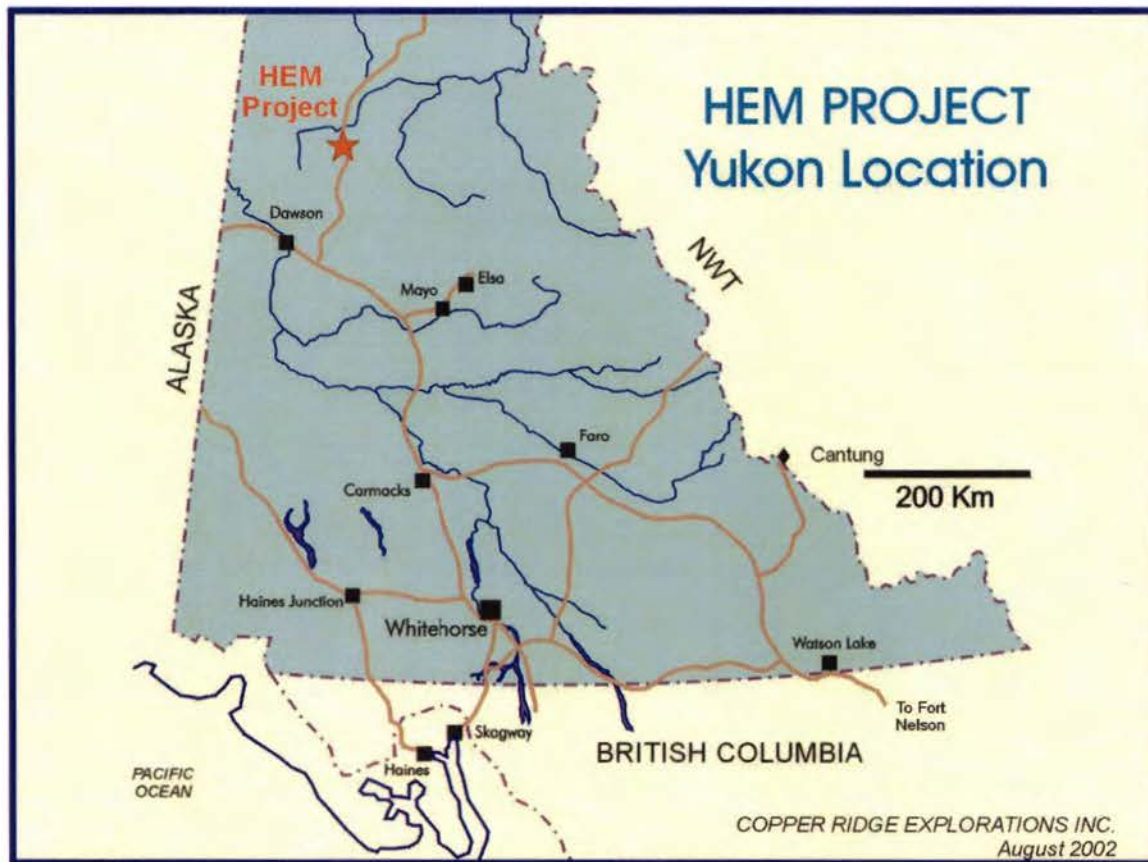


Figure 1. General Location Map

### 2.2 *Accessibility, Infrastructure, Climate, Physiography, & Local Resources*

Dawson City is the closest community to the Yukon Olympic property and can adequately support exploration programs in the area. The property is easily accessed by road or helicopter from Dawson City. The average driving time from Dawson City to the property is 2 to 2.5 hours. The Dempster Highway runs through the center of the property along the west side of the Blackstone River. The claim area east of the Blackstone River is accessible by boat or by helicopter. Most of the property can be accessed by foot. Federal law restricts motorized-wheeled vehicles from leaving the highway right-of-way.

Elevations range from approximately 850 meters in the Blackstone River valley to approximately 1600 meters on the ridge south of the central part of the property. The property area is covered by permafrost-tundra to sparse treed areas to rocky talus slopes. The majority of the claim group is above treeline (Photo 1). Climate is typical for northern Yukon, with long cold winters, and warm, typically dry summers. Snow accumulation within the property area is normally minimal due to high winds through the pass along the Dempster Highway. By April most of the snow has disappeared.

The exploration field season usually runs from early June until mid-September however geophysical surveys and drill programs can be conducted over a longer period of March to October. The fall migration of the Dempster-Porcupine caribou herd has been known to pass by or through the property.



**Photo 1.** Typical Physiography of the Yukon Olympic Property.

## 2.3 List of Claims

Yukon Olympic property consists of a total of 389 claims and are listed below:

Claim Name & No.	Grant No.	Expiry Date	Registered Owner	% Owned	NTS #'s
Heg 1 - 12	YC21595 – YC21606	2004/08/02	R.Allan Doherty	100.00	116-G-01
Heg 13 - 20	YC21607 – YC21614	2004/08/08	Shawn Ryan	100.00	116-G-01
Hem 1 - 6	YC19966 – YC19971	2004/05/02	Shawn Ryan	100.00	116-G-01
Hem 1 – 5	YC20973 – YC20977	2007/09/07	Shawn Ryan	100.00	116-G-01
Hem 6 – 78	YC20978 – YC21050	2007/09/07	Shawn Ryan	100.00	116-G-01
Hem 79 – 88	YC21135 – YC21144	2007/11/29	Shawn Ryan	100.00	116-G-01
Hem 89 – 100	YC21442 – YC21453	2004/06/10	Shawn Ryan	100.00	116-G-01
Hem 101 – 112	YC21532 – YC21543	2004/06/11	Shawn Ryan	100.00	116-G-01
Hem 113 – 122	YC21454 – YC21463	2004/06/10	Shawn Ryan	100.00	116-G-01
Hem 123 – 317	YC21615 – YC21809	2004/08/08	Shawn Ryan	100.00	116-G-01
Hem 317 – 328	YC22062 – YC22073	2004/10/22	Shawn Ryan	100.00	116-G-01
Hem 318 – 328	YC21810 – YC21820	2004/08/04	Shawn Ryan	100.00	116-G-01
Hem 329 – 333	YC21821 – YC21825	2004/08/04	Shawn Ryan	100.00	116-G-01
Hem 334 – 335	YC21826 – YC21827	2004/08/08	Shawn Ryan	100.00	116-G-01
HM 1 – 4	YC21189 – YC21192	2004/04/22	Shawn Ryan	100.00	116-G-01
HM 5 – 8	YC21464 – YC21467	2004/06/10	Shawn Ryan	100.00	116-G-01
HM 9 – 12	YC21544 – YC21547	2004/06/11	Shawn Ryan	100.00	116-G-01
HM 13 – 16	YC21468 – YC21471	2004/06/10	Shawn Ryan	100.00	116-G-01

**Table 1.** List of claims.

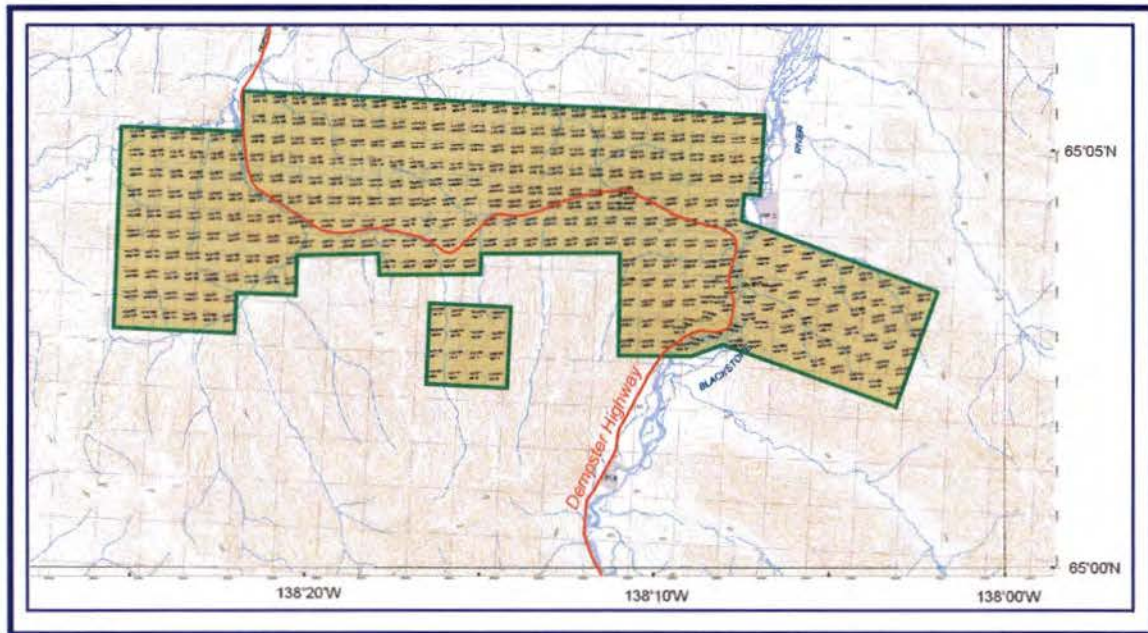
## 2.4 Previous Work (History)

Although the area has been prospected over the years, no previous work on the property is reported prior to 1993. Recent exploration activity is listed below:

- 1993 – Pamicon Developments Ltd. and Equity Engineering Ltd. jointly conducted a small work program consisting of limited geological mapping, prospecting and soil geochemical sampling. This work was carried out on the Devil claims (now known as HEM 1-6 claims) located on the west side of the Dempster highway at approximately kilometer 134. A total of 21 rock samples and 32 soil samples were collected and assayed.
- 2002 – Between June and July of 2002, Copper Ridge Explorations Inc. contracted Al Doherty for regional scale mapping in the area east of the Blackstone River in the Spectacular Creek valley.
- 2002 – Between July 13 and August 6, 2002, Copper Ridge Explorations Inc. contracted Shawn Ryan to construct a grid and conduct a magnetic survey on the Yukon Olympic property. A total of 110 kilometers of grid were laid out. A total of 95 kilometers of magnetic survey covered an area of approximately 20km (E-W) by 10km (N-S). The survey identified a large magnetic anomaly measuring 2.5 kilometers by 1.5 kilometers.



- 2002 – Between July 15 and August 3, Copper Ridge Explorations Inc. contracted Aurora Geosciences Ltd. to conduct a gravity survey on the Yukon Olympic property. A total of 261 points were surveyed in an area of approximately 20 kilometers (E-W) by 10 kilometers (N-S). The survey identified a large Bouguer gravity anomaly measuring 8 kilometers long by 1 kilometer wide.
- 2002 – Canadian Empire exploration Ltd. contracted SJ Geophysics Ltd. in the fall of 2002 to assess the gravity data collected by Aurora Geosciences Ltd. A 4-kilometer by 10-kilometer block was extracted from the raw Bouguer gravity data to create an Inversion Model to determine the causative source of the gravity feature. Elevations and gravity readings were processed for input to the gravity inversion program. An inversion mesh comprised of 100 meter by 100 meter by 50 meter cells (north by east by depth) below topography was created. A block model showing the distribution of densities within the inversion mesh defined three high-density targets.
- 2002 – Canadian Empire Exploration Corp. conducted a diamond drill program on the Yukon Olympic property during the fall of 2002 during the period October 30<sup>th</sup> to November 21<sup>st</sup>. The drilling consisted of two diamond drill holes totaling 773.43 meters.



**Figure 2.** Yukon Olympic Property.

(Note: An additional 12 claims have been staked to fill in the northwest corner of the claim group)

### 3.0 GEOLOGY

#### 3.1 Regional Geology

Reconnaissance mapping of the Ogilvie River 1:250,000 map sheet (116G & 116F) was conducted by the Geological Survey of Canada (Norris, 1979). The majority of the map sheet consists of strongly deformed marine and lesser non-marine, arkosic sedimentary rocks from Cretaceous to Cambrian in age that unconformably overlie the oldest rocks exposed in the map sheet, consisting of Proterozoic Quartet Group argillite, shale and siltstone. The Proterozoic rocks have been intruded by gabbro and hematite breccia bodies.

The Yukon Olympic property lies along a regional structure as indicated by regional aeromagnetics. The westerly trend includes the Monster and Olympic IOCG properties in the Ogilvie Mountains to the west. The Yukon Olympic property occurs at the flexure point along the structure and is coincident with a large magnetic high, possibly reflecting a buried intrusive center.

Recent studies have suggested that the Stuart Shelf area of Australia, a crustal segment that hosts the Olympic Dam Cu-Au-Ag-U deposit, and the Ogilvie-Wernecke trend in the Yukon were a part of the same land mass 1.6 billion years ago, at the time of breccia formation (Figure 3). This work also suggests that the breccias and mineralization in both areas formed in response to extensional tectonics and related intrusive activity that affected the entire belt.

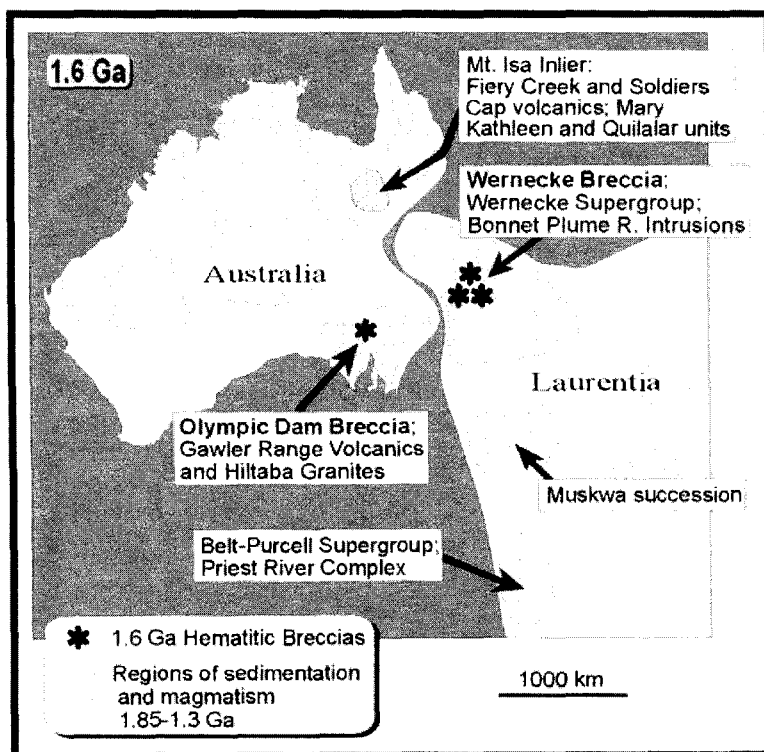


FIGURE 3. Hypothesized land configuration 1.6 billion years ago.

### **3.2 Property Geology**

The Yukon Olympic property is located on the northern limb of the Chapman Anticline, which is bisected by east-west trending thrust faults. The property is underlain by Proterozoic age rocks consisting of argillite, shale and siltstone. These rocks have been intruded by a variety of gabbroic intrusives and related hematitic breccia bodies. The main breccia mass, east of the Blackstone River along Spectacular Creek, covers an area of approximately 1 by 1.5 kilometers, with additional occurrences noted intermittently up to 6 kilometers to the west (see Figure 4). The breccias are of Proterozoic age and correlate with many known hematitic breccias elsewhere in the Ogilvie Mountains as well as in the Wernecke Mountains further to the east.

The Proterozoic rocks are in turn overlain unconformably by Paleozoic sedimentary rocks, consisting of predominantly massive to bedded Cambrian limestone and dolostone overlain by basal shale to siltstone sequences. The major Proterozoic to Paleozoic unconformity is gently north dipping with an estimated average dip of 8 degrees (Figure 4).

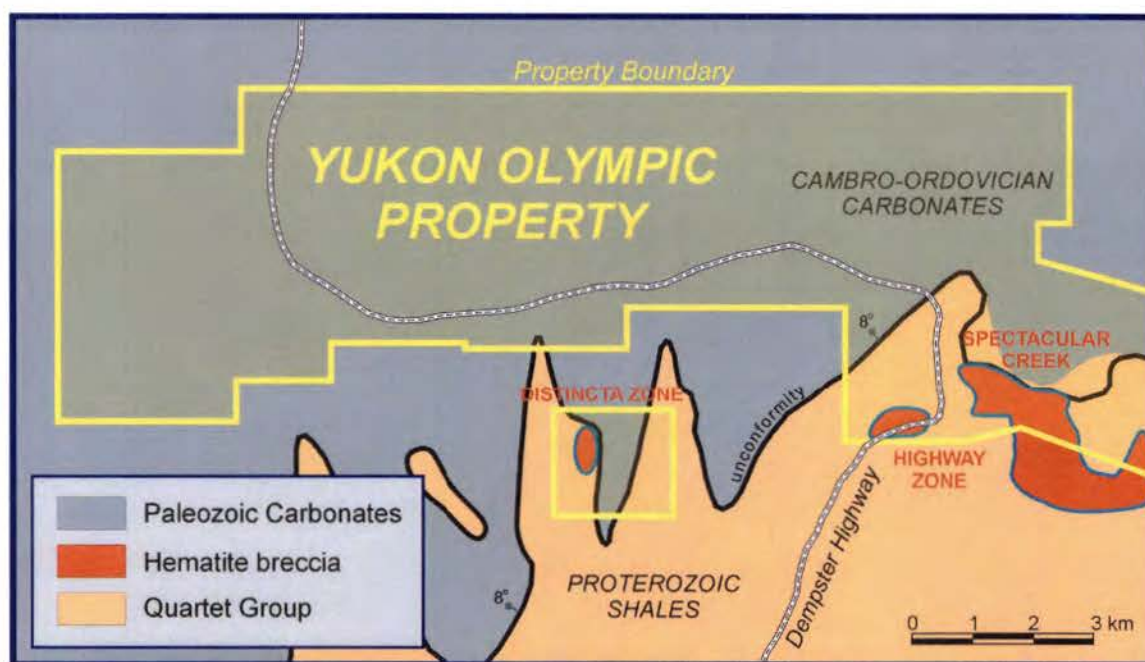
Recent mapping over an area measuring 400 by 900 meters west of the Blackstone River encountered Proterozoic age Quartet Group shale and siltstone intruded by gabbro dykes and hematite breccia bodies with associated IOCG style mineralization (Awmack, 1994; Thurston, 2002). Reconnaissance mapping along Spectacular Creek, east of Blackstone River, delineated similar hematite breccia bodies with associated IOCG mineralization (Al Doherty pers. comm., 2002). Specular hematite is the main iron oxide mineral observed. Chalcopyrite along with malachite staining occurs as a minor constituent within the breccias.

### **3.3 Deposit Type**

The geological setting of the Yukon Olympic property is thought to be favorable for hosting Olympic Dam style copper-uranium-gold-silver breccia type deposits. The Olympic Dam deposit contains a published resource of the order of 2000Mt grading 1.6% Cu, 0.06% U<sub>3</sub>O<sub>8</sub>, 0.6 g/t Au and 3.5 g/t Ag (Scott, 1987). The deposit occurs within a 5 kilometer by 7 kilometer zone of fault controlled brecciation and alteration cored by a diatreme complex and developed entirely within granite dated at 1588±4Ma (Johnson and Cross, 1995). The diatreme is intruded by many ultramafic, mafic and felsic dykes which are temporally related to the diatreme. Economic IOCG deposits in Australian Proterozoic terrains are extremely variable in character ranging from very large (Olympic dam) to small, high grade deposits such as those near Tennant Creek and Eloise in the Cloncurry district. The iron-oxide association varies from magnetite-dominated (e.g. Ernest Henry) to hematite-dominated (e.g. Olympic Dam). Iron sulfides present vary from pyrite (e.g. Olympic Dam, Starra), to pyrrhotite (e.g. Eloise) or both (e.g. Mt. Elliott). Chalcopyrite is commonly the only significant copper mineral but some deposits, such as Olympic Dam and Starra, have hypogene bornite and chalcocite. Copper to gold ratios (Cu:Au) vary substantially among deposits and there is no single consistent minor element association. However, there is a distinctive association with fluorine, barium, rare earth elements and uranium. Cobalt and molybdenum are commonly present at near economic levels while bismuth shows a specific and extreme enrichment in certain deposits. Some deposits also contain amounts of arsenic that become a concern in smelting (Oreskes and Hitzman, 1993).

### 3.4 Mineralization

Mineralization within the Yukon Olympic property is associated with hematitic breccias exposed at several locations within the property. The largest exposure is an area measuring approximately 1.5 kilometers by 1 kilometer within the Spectacular Creek valley, east of the Blackstone River (Figure 4). The breccias occur within the Proterozoic shale and siltstones just below an unconformity with overlying Paleozoic carbonate rocks. Although detailed study of the breccia bodies has not been carried out, there appears to be two distinct varieties. One type is a pink to pale colored multilithic breccia with disseminated hematite common in a fine-grained matrix, while the other is darker green, chloritic variety and often has more massive hematite. The latter breccia variety is associated with mafic intrusive rocks and has slightly elevated magnetic susceptibility. Copper mineralization observed to date is most often associated with the chloritic breccia as well as with the mafic intrusive rocks.



**Figure 4.** Yukon Olympic property general geology and Breccia distribution map. (From GSC digital geology).

Although none of the breccia bodies have been systematically or adequately sampled on surface, grab rock samples from the property have shown that the breccias are locally enriched in copper, cobalt, fluorine, rare earth elements and barium, with local minor gold and uranium enrichment. Chalcopyrite, malachite and locally bornite mineralization have been observed within the breccias and related intrusive rocks throughout the property. Analysis of grab samples have returned values up to 0.9% Cu. Minor cobalt mineralization has also been observed (Carlson, 2003).

During late 2002 a short hole (YO 02-002) was drilled off the Dempster highway into the highway breccia occurrence. A breccia was intersected from the collar to a depth of 32 meters and contained anomalous copper values. Secondary copper oxide mineralization occurring along fractures within the overlying Paleozoic limestone in a second drill hole (YO 02-001) suggests possible copper remobilization from a nearby source.

### **3.5 Soil Geochemistry**

Prior soil sampling surveys on the Yukon Olympic property included a 1993 program of 32 soil samples taken over a small area measuring approximately 400 meters by 900 meters west of the Blackstone River along the Dempster Highway. The samples were taken from "B" horizon material at depths ranging from 10cm to 40cm. The samples were assayed for gold and lanthanum as well as 24 elements by ICP geochemistry (Awmack, 1993). No reported prior soil sampling programs have ever been conducted over the gravity target or spectacular Creek breccias.

In 2003 Canadian Empire conducted a test line of 21 soil samples taken along the southern end of Line 4 which traverses hematite breccias. The samples were taken from "B" horizon material at depths ranging from 20cm to 45cm. The samples were assayed for 36 elements by ICP geochemistry. The sample descriptions and assay certificates are located in Appendix I & III. The samples were weakly anomalous in Cu, Au and As over a portion of the hematite breccias.

### **3.6 Rock Geochemistry**

In 2003 Canadian Empire selected a total of 6 rock samples that were assayed for 36 elements by ICP geochemistry. Most samples were grabs of hematite breccia located along Spectacular Creek near the southern end of Line 4. Sample descriptions and assay certificates are located in Appendix II & III. Assay highlights include a Au value of 235 ppb from a talus grab of breccia with 10-15% sulphide mineralization and a Cu value of 0.63% from a piece of breccia talus with disseminated and fracture controlled oxide copper mineralization. Overall the assay results for Cu and Au were not anomalous.

### **3.7 Sampling Method and Chain of Custody**

The rock and soil samples were taken from the property directly to base camp. The samples were then packed into rice sacks, sealed by the author and taken to the city of Whitehorse, Yukon. The samples were then shipped via air cargo to ACME Analytical Laboratories in Vancouver, BC. At the laboratory the samples were dried, pulped and analyzed.

### **3.8 Sample Preparation, Analysis and Security**

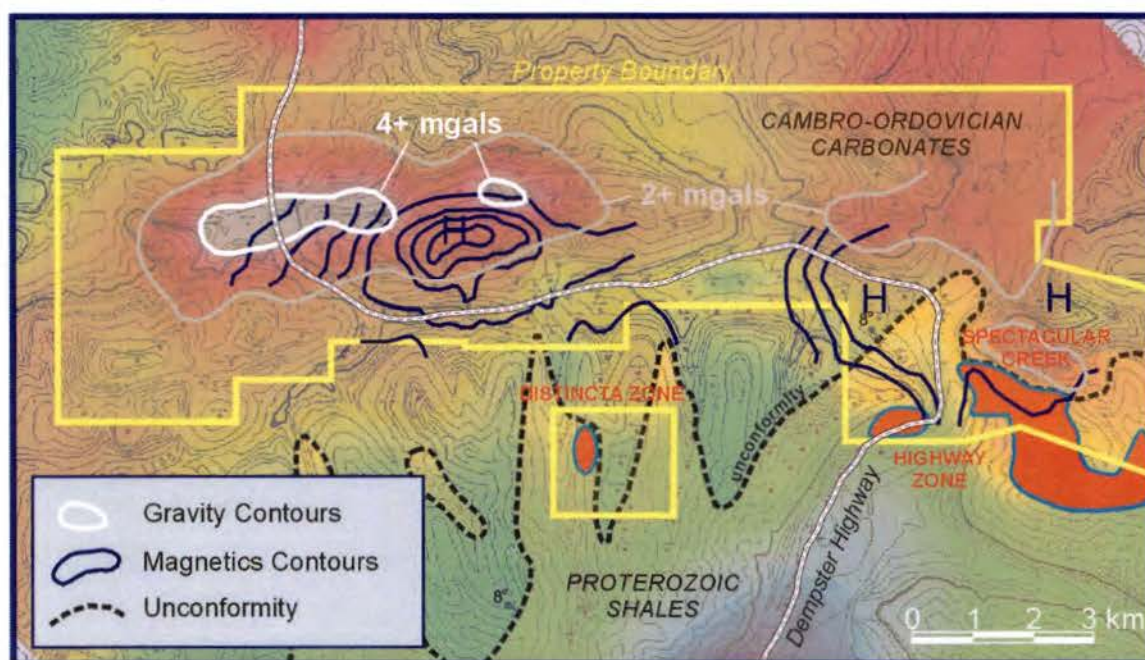
ACME Analytical Laboratories in Vancouver, BC is an ISO 9002 registered and accredited laboratory. All work is guaranteed to ISO 9002 standards.

## 4.0 Geophysics

### 4.1 Pre-2003 Geophysical Surveys & Interpretation

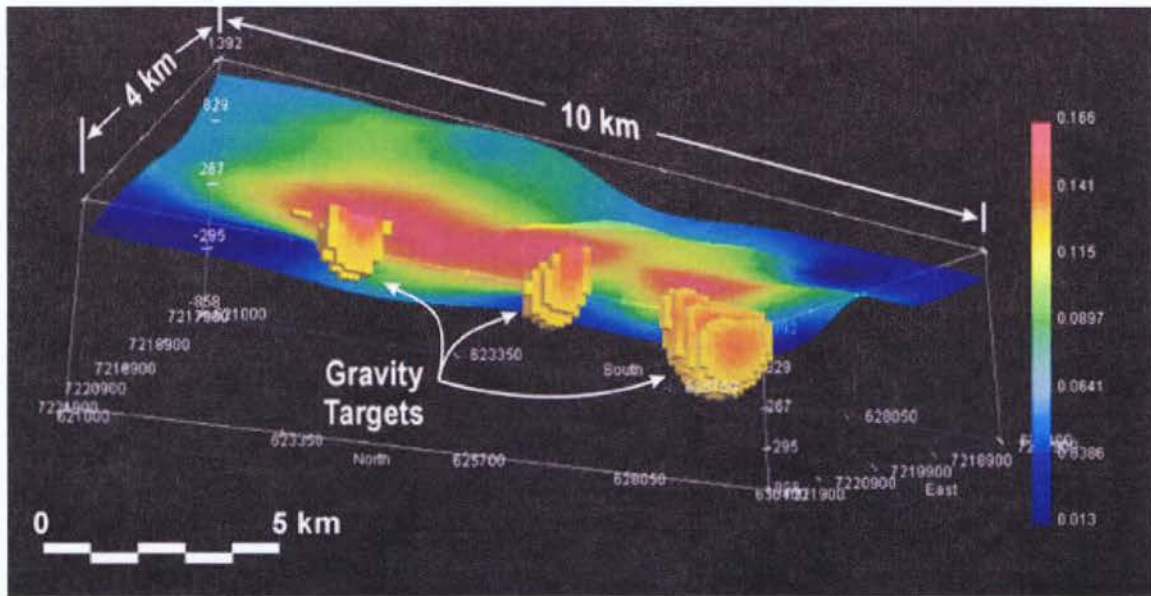
Gravity and magnetic surveys conducted in 2002 by Aurora Geosciences Ltd. and Shawn Ryan, respectively, over the Yukon Olympic property had defined an 8 kilometer by 1 kilometer, 2 milligal Bouguer gravity anomaly adjacent to a circular 2.5 kilometer by 1.5 kilometer magnetic anomaly (Figure 5).

In the fall of 2002, Canadian Empire Exploration Corp. contracted SJ Geophysics Ltd. to assess the gravity data collected by Aurora Geosciences Ltd. and determine using computer modeling techniques, the possible causative sources of the high gravity response. A block of data was extracted from the raw Bouguer gravity data that measured 4 by 10 kilometers. Elevations and gravity readings were processed for input to the gravity inversion program. Three high-density targets emerged as outlined in the Gravity Inversion Report, (Figure 6).

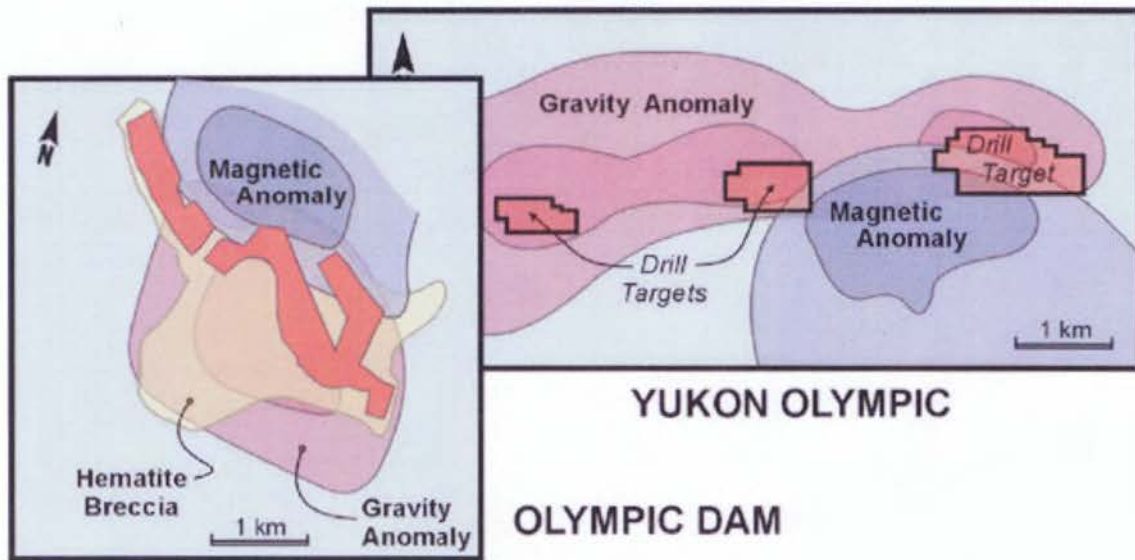


**Figure 5.** 2002 Yukon Olympic property gravity and magnetic summary results.

The gravity anomaly has a large western peak and an even larger subsidiary eastern high. The anomaly is adjacent to, but not coincident with, the magnetic anomaly. A preliminary review of the data suggests that the gravity anomaly may reflect hematite-rich breccias, while magnetite-bearing intrusive rocks at depth may cause the magnetic anomaly. This interpretation is strengthened by the fact that the easternmost portion of the gravity anomaly trends into the Spectacular Creek breccia occurrence that locally contains copper mineralization. The Yukon Olympic geophysical signature, with the large gravity anomaly being displaced from the magnetic anomaly is similar to the geophysical response over the Olympic Dam mineralizing system (Figure 7).

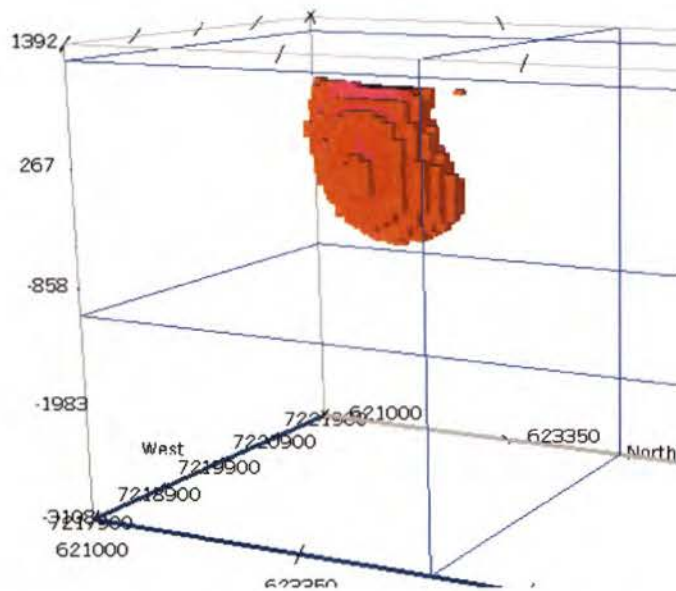


**Figure 6.** High-density targets outlined in the Gravity Inversion Report (looking northeast)



**Figure 7.** Olympic Dam vs. Yukon Olympic Geophysical Signatures.  
(Pink area of the Olympic Dam Anomaly hosts 2,000 M tonnes @ 1.6% Cu and 0.6g/t Au)

A single drill-hole (YO 02-001) was completed in late 2002 to test the western most of the three geophysical targets delineated by gravity and magnetic techniques. This anomaly, which is the smallest of the three geophysical targets, was modeled as a near vertical, higher density, plate-like body striking east-west and plunging steeply to the east (Figure 8). The hole intersected over 500 meters of the overlying Paleozoic carbonate sequence with minor interbedded basal sediments, but it did not reach the unconformity and the potential host for the hematite breccias.



**Figure 8.** Western Gravity Inversion Anomaly - View from south-southeast.

Specific gravity measurements were taken from drill core every 15 to 20 meters. The carbonate rocks had an average specific gravity of 2.79, while the argillite averaged 2.73 and the small shale interbeds averaged 2.66. The specific gravity difference between the carbonate and sediment units is not sufficient to generate the observed large, intense gravity feature. The causative source of the gravity anomaly has not yet been identified. Further definition of the high-density anomaly was recommended prior to initiation of continued drilling.

#### **4.2 2003 Geophysical Surveys**

During 2003, Canadian Empire conducted deep penetrating I.P. chargeability, gravity and magnetic surveys on the Yukon Olympic property to refine drill targets within the larger gravity feature. Between June 15<sup>th</sup> and July 4<sup>th</sup>, 2003, Canadian Empire Exploration Corp. contracted Aurora Geosciences Ltd., of Whitehorse, Yukon, to conduct Induced Polarization & Magnetic surveys on the Yukon Olympic property. Canadian Empire Exploration contracted Coureur Des Bois Ltd. of Whitehorse, Yukon, to cut the survey lines and locate survey stations. Stations were located with a straight chain and flagging was placed every 50 and 250 meters. Every 250-meter station was surveyed with non-differential GPS.

The geophysical surveys were conducted on four parallel lines spaced over 10 kilometers with a total linear distance of 20.25 kilometers of survey (Map in back pocket). The lines were selected by Canadian Empire and targeted the projected causative sources of the central and eastern gravity anomalies. The eastern most line also targeted the down-dip extension of known outcropping of hematite-rich breccia, which locally contains copper mineralization.

All data was processed in the field and was subsequently checked by the crew chief in Whitehorse. Four cross-sections showing Total Field Magnetism, Gravity, Calculated



Resistivity, and Average IP are located in Appendix VI. The IP data was used to construct inversion models and create pseudo section plots of resistivity and chargeability in two dimensions.

#### **4.2.1 Magnetic Survey**

The Gravity and Magnetic Field survey was completed using a Scintex CG-3 s/n 711413 gravimeter and three GEM Proton Precession magnetometers. The positioning device used was a Trimble 4000 SSI for the base station and Trimble Pro-XRS rover. The purpose of the survey was to assist in locating iron-oxide copper-gold bearing breccias intruding Proterozoic rocks. More specific technical information about the survey is reported in the Aurora Geosciences Memorandum dated July 18<sup>th</sup>, 2003, located in Appendix V - 'HEM Property - Gravity & Magnetic Field Survey - Field report'.

#### **4.2.2 Induced Polarization Survey**

The IP survey was completed using a pole-dipole array with an infinite electrode near the transmitter site. The dipole spacing was 250 meters with a six dipole separation read from  $n=1,6$ . It is estimated that a survey with 250 meter dipole spacing would enable features to a depth of 600 meters to be visible in the data collected over highly resistive rocks, such as the carbonates in the south of the survey area. The depth investigation is quite shallow in the conductive shale units to the north of the survey. Some high amplitude chargeability sources in the northern section should be discounted as they appear to be screened by the low resistivity rocks. In the case of the Yukon Olympic property, the primary target of interest is a large, deep chargeability anomaly, coincident with a resistivity low within the presumed survey depth of 600 meters. More specific technical information about the survey is reported in the attached Aurora Geosciences Memorandum dated July 11<sup>th</sup>, 2003, located in Appendix IV, entitled 'Field report – HEM Property IP Survey'.

#### **4.2.3 Gravity Survey**

The results of the 2003 Bouguer gravity response data correlate well with the gravity anomaly defined with the 2002 data. The 2003 Bouguer anomaly profiles replicate the features evident in the gridded 2002 Bouguer anomaly data. The combined gravity data set is therefore believed to be sound and the large gravity anomaly on the Yukon Olympic property is believed to be a real and verifiable feature.

#### **4.2.4 Geophysical Interpretation**

The geophysical interpretation of the data derived from this survey correlates well with the mapped geology of the claim area (Norris, 1979). There is an extreme contrast in apparent resistivity between the carbonate units in the south and the shale units to the north. The inversion results suggest that the fault contacts with the Road River Group are coincident with mapped geology.

Due to associated high resistivity in certain areas, some anomalies are given low priority. The geophysical interpretations may also be suspect due to screening by the conductivity in some areas. It should be noted that resistivity and chargeability features can result from a number

of causes and there may be sources within surrounding and/or overlying formations which can generate resistivity and chargeability anomalies which may appear to be of economic interest. The geological significance of the features visible in the final geophysical models appear to represent signatures expected from mineralization occurring at depth and should be tested by drilling.

### **LINE 1**

The modeled resistivity of Line 1 shows only the contrast in apparent resistivity between the carbonate units in the south and the graphitic shale units to the north as described above. Other than the large resistivity low to the north there are no targets generated indicative of underlying mineralization. The chargeability model shows a single chargeability anomaly centered at station 1800 at a depth of 300-500 meters. This anomaly has an apparent intrinsic chargeability of 70 mV/V, and correlates well with the high from the magnetic survey. The anomaly also falls within the large gravity anomaly about 800 meters south of the modeled high-density target. However, due to the associated high resistivity in this area, this anomaly is given low priority.

### **LINE 2**

As shown in Line 1 to the east the modeled resistivity of Line 2 shows the contrast in apparent resistivity between the carbonate units in the south and the shale units to the north. It is presumed that none of the resistivity features north of the contact with the conductive rocks are reliable. However, there appears to be a thin, shallow sliver of relatively conductive rocks centered at around station 900. The chargeability model shows a strong chargeability source associated with the low resistivity zone in the northern portion of the line and the modeling has been interpreted to show a number of shallow, perhaps surficial sources that may be permafrost features.

Near station 1000 there is a zone of shallow (200-450 meters) chargeability associated with a deeper zone of relatively low resistivity. The geophysical interpretation may be suspect due to screening of these features by the conductivity in this area. As the I.P. anomaly is not coincident with the gravity high, this I.P. target is considered low priority.

### **LINE 3**

As in Lines 1 & 2 there appears to be difficulty with delineating features beneath the conductive rocks in the northern portion of the line. At station 3300 in the center of the line a fairly large low resistivity feature is located at a depth of about 400 meters within a larger package of resistive rocks. Coincident with this anomaly is a gravity low situated between two gravity highs. A deep chargeability anomaly is also observed coincident with the resistivity low at an apparent depth of about 500 meters. The anomaly is interpreted to be narrow, perhaps only 250 meters wide and is roughly coincident with the axis of an anticline and just north of a north dipping thrust fault. Taking into account the gravity low associated with the resistivity low and the chargeability high, it is possible that this anomaly is a fault bounded slice of Road River Group graphitic shale.

### **LINE 4**

Line 4 overlies hematite breccias between stations 800N and 1800N with no discernable associated resistivity signature obtained. In general all the rocks along Line 4 have a very

high resistivity, with a single low resistivity anomaly situated at the far north end of the line which corresponds to what is likely the Road river Group shales. A deep chargeability high is observed over the hematite breccias at an apparent observed depth of 200-700 meters. This anomaly extends northward to about station 2600 under the carbonate rocks, however the anomaly is quite deep and close to the assumed depth limit of this survey. In general, both the magnetic and gravity surveys over the breccias produce anomalous values suggesting a causative source for IOCG type mineralization. The I.P. chargeability anomaly on Line 4 is in keeping with an IOCG causative source and drill testing is warranted.

## 5.0 Adjacent Properties

The property lies along a regional structure as indicated by regional aeromagnetics. The westerly trend includes the Monster and Olympic IOCG properties, in the Ogilvie Mountains located 100 and 70 kilometers southwest of the Yukon Olympic property, respectively. It is noted that the Yukon Olympic property occurs at a flexure point along the linear magnetic signatures coincident with a large sub-rounded magnetic high, possibly reflecting a buried intrusive center.

## 6.0 2003 Yukon Olympic Exploration Expenditures

Expenditures for the 2003 geophysical program are summarized in Table 2, below:

**TABLE 2.** Statement of 2003 Expenditures

<b>EXPLORATION FUNCTION</b>	<b>2003 EXPENDITURES</b>
Analysis - Soil Geochem (Acme)	\$ 555.41
Accommodation - Blackstone Outfitters	\$ 13,822.00
Geophysical Surveys - Aurora Geophysics (20 km IP/Gravity/Mag)	\$ 42,080.75
Salaries and Wages - Badger and Co.	\$ 6,408.51
Equipment Lease	
Canmex (Sat phone)	\$ 1,010.88
Klondike Exploration	\$ 350.00
Field Equipment - Neville Crosby	\$ 722.97
Map copying - Kinko's	\$ 117.80
Linecutting - Coeur de Bois (20 man days + expenses)	\$ 6,340.00
Helicopters - Trans North	\$ 2,610.00
Brian Thurston's Expenses (Vehicle rental, Misc)	\$ 4,128.66
Airline Tickets for 3 (Brian Thurston's expenses)	\$ 2,115.86
<b>TOTAL FIELD EXPENDITURES</b>	<b>\$ 80,262.84</b>

## 7.0 Conclusions and Recommendations

The exploration target at Yukon Olympic is similar to the geophysical response of the world class Olympic Dam deposit in Australia that has a published resource of 2 billion tonnes grading 1.6% Cu, 0.06% U<sub>3</sub>O<sub>8</sub>, 0.6 gpt Au and 3.5 gpt Ag. A comparable Olympic Dam geologic setting is present at the Yukon Olympic property where host rocks are of the same age and copper bearing hematitic breccia and rock alteration is of similar character. Prior work on the Yukon Olympic property had delineated a strong 2-milligal gravity anomaly over a length of 8 km and a width of 1 km. The gravity anomaly is proximal to a magnetic anomaly. A 6 km length of intermittently exposed copper-bearing hematitic breccia has been observed. The largest exposure is located in Spectacular Creek near the eastern end of the geophysical anomalies. In keeping with the Olympic Dam model, the gravity anomaly may directly reflect a large mineralized system of iron oxide, copper and precious metals ("I.O.C.G."), while magnetite-bearing intrusive rocks related to the mineralizing system at depth may cause the magnetic anomaly. Although Canadian Empire attempted two drill holes during late 2002 into the peripheral area of the target without success, this huge target remains intact for discovery of an Olympic Dam type deposit.

In the summer of 2003, Canadian Empire Exploration Corp. contracted Aurora Geosciences Ltd., of Whitehorse, Yukon, to conduct Induced Polarization & Magnetic surveys to assist in refining drill targets on the Yukon Olympic property. The geophysical surveys were conducted on four parallel north-south lines spaced over 10 kilometers with a total linear distance of 20.25 kilometers. The lines were selected by Canadian Empire and targeted the projected causative sources of the central and eastern high gravity anomalies. The eastern most line, Line 4, also targeted known exposures of hematite-rich breccia, which locally contain copper mineralization.

The 2003 Gravity and Magnetic Field survey was completed using a Scintex CG-3 s/n 711413 gravimeter and three GEM Proton Precession magnetometers. The positioning device used was a Trimble 4000 SSI for the base station and Trimble Pro-XRS rover. The purpose of the survey was to assist in locating iron-oxide copper-gold bearing breccias intruding Proterozoic rocks. The 2003 Bouguer anomaly profiles replicate the features evident in the gridded 2002 Bouguer anomaly data. The combined gravity data set is therefore believed to be sound and the large gravity anomaly on the Yukon Olympic property is believed to be a real and verifiable feature.

The 2003 Induced Polarization survey was completed using a pole-dipole array with an infinite electrode near the transmitter site. The dipole spacing was 250 meters with a six dipole separation read from  $n=1,6$ . It is estimated that a survey with 250 meter dipole spacing would enable features to a depth of 600 meters to be visible in the data collected within highly resistive rocks, such as the Paleozoic carbonate rocks in the south of the survey area. The depth penetration of the I.P. survey is quite shallow in the conductive shale units in the northern portion of the survey.

In the case of the Yukon Olympic property, the primary target of interest is a large chargeability anomaly coincident with a resistivity low within the gravity feature at a depth of 0 to 600 meters from surface. The 2003 geophysical survey has defined two I.P. chargeability features on Line 4 that warrant drill testing. The two targets are centered at approximate stations 1200N and 5100N. The high amplitude chargeability source centered at station

5100N on Line 4 appears to be underlain by the Road River Group shales and is a lower priority drill target.

Limited soil and rock geochemical sampling has been undertaken over only a very small area within the claim group. In 2003 a total of 21 soil samples were taken along a line of soils which crosses the Spectacular Creek breccias, the largest exposure of hematitic breccia within the claim group. The samples were taken from "B" horizon material at depths ranging from 20cm to 45cm. The samples were assayed for 36 elements by ICP geochemistry. The samples were weakly anomalous in Cu, Au and As over a portion of the hematite breccias.

Canadian Empire exploration Corp. expended \$80,262.84 on the 2003 Geophysical Program for the Yukon Olympic Property during 2003. The 4-line survey was conducted to outline a sulphide rich causative source for the large gravity feature.

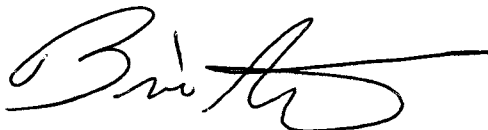
The prime drill target defined is an I.P. chargeability anomaly sourced at a probable depth of 200 to 500 meters between stations 1000N and 2000N on Line 4. This feature lies down-dip of surface exposures of hematite breccia located to the south.

A program of 1500 meters of drill testing in three 500-meter holes is recommended with a budget commitment of \$450,000.

## **8.0 Proposed exploration Program and Budget**

A diamond drill program of 1500 meters in 3 holes is recommended. The priority target is an I.P. chargeability anomaly centered at approximately station 1200N on Line 4 with a secondary I.P. target at station 3300N on line 3. The 1500-meter drilling program utilizing helicopter support is estimated to cost \$300 per meter all up for a total expenditure of \$450,000.

Respectfully Submitted,



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Brian G. Thurston, H.BSc. Geology

## 8.0 References

- Awmack, Henry J. (1993): 1993 Report On The Devil 1-24 Claims, located in the Ogilvie Mountains, Dawson Mining District, NTS 116G/1, Monster Joint Venture, Equity Engineering Ltd.
- Carlson, Gerald G. (2003): Assessment Report, Yukon Olympic Project, HEM 1-78 and HEM 79-88 Claims, Dawson Mining District, Yukon, 2002 Field Program, for Copper Ridge Explorations Inc., Company Report – not in press.
- Johnson, J.P. and Cross, K.C. (1991): Geochronological and Sm-Nd constraints on the genesis of the Olympic Dam Cu-U-Au-Ag deposit, South Australia, *in* Pagel, M. and Leroy, J.L., eds., *Source, Transport and Deposition of Metals: Proceedings, 25 Years' SGA Anniversary Meeting*, Nancy, Aug. 30-Sept. 3, 1991, A.A. Balkema, Rotterdam, The Netherlands, p. 395-400.
- Norris, D.K. (1979): *Geology, Ogilvie River map-area, Yukon-Northwest Territories*; Geological Survey of Canada, Map 1526A.
- Oreskes, N. and Hitzman, M.W., (1993): A model for the origin of Olympic Dam-type deposits, *in* Kirkham, R.V., Sinclair, W.D., Thorpe, R.I. and Duke, J.M., eds., *Mineral Deposits Modeling: Geological Association of Canada, Special Paper 40*, p. 615-633.
- Scott, I.R. (1987): The development of an ore reserve methodology for the Olympic Dam copper-uranium-gold deposit: Resources and Reserves Symposium, Australian Institute of Mining and Metallurgy, p. 99-103.
- Thurston, B. and Roberts W. (2003): Assessment Report, Report on the 2002 Drilling Program, Yukon Olympic Property, HEM-HEG-HM Claims, Dawson Mining District, Yukon Territory, for Canadian Empire Exploration Corp., January 20, 2003 – not in press.

## 9.0 CERTIFICATE OF QUALIFICATIONS

### BRIAN G. THURSTON

#### CERTIFICATE OF QUALIFICATIONS

I, Brian G. Thurston, do hereby certify that:

1. I am an employee of: Badger and Co. Inc.  
Suite 1205, 675 West Hastings Street,  
Vancouver, BC, Canada,  
V6B 1N2.
2. I graduated with a degree in Honors Bachelor of Science – Geology, from the University of Western Ontario in 1992.
3. I have worked as a geologist for a total of 11 years since my graduation from university.
4. I am responsible for the preparation of all sections of the technical report titled “2003 Geophysical Report on the Yukon Olympic Property” dated December 20, 2003, (the “Technical Report”), relating to the Yukon Olympic Property. I managed the site exploration of the Yukon Olympic Property during a 20-day period initiated on June 15, 2003.
5. I have had prior involvement with the property that is the subject of this Technical Report.
6. I am not aware of any material fact or material change with respect to the subject matter of this Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
7. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their web sites accessible by the public, of the Technical Report.

Dated this 20<sup>th</sup> day of December, 2003



Signature

BRIAN G. THURSTON

Print Name

APPENDIX I

SOIL SAMPLE DESCRIPTIONS  
2003



**CANADIAN EMPIRE EXPLORATION CORP.**  
**YUKON OLYMPIC SOIL SAMPLING DATA SHEET**

Canadian Empire Exploration Corp.  
 Yukon Olympic Property

Date: July 01, 2003  
 Samplers : Brandy Roberts & James Thurston

STATION NAME	DEPTH HOLE (in)	SOIL COLOUR	AVG GRIT SIZE	SLOPE	COMMENTS	Au ppb	Cu ppm	As ppm
L4 0250 N	18	dk brown	-	steep	talus slope - organics	2.1	43.4	6.7
L4 0350 N	15	dk brown	-	steep	talus slope - organics	4.3	8.5	2.4
L4 0450 N	8	dk brown	-	steep	perma frost @ 8", organics	13.0	15.3	3.8
L4 0550 N	8	dk brown	-	steep	very organic	2.1	12.0	3.2
L4 0650 N	10	dk brown	-	steep	very organic	1.8	8.4	3.6
L4 0750 N	18	dk brown	-	steep	talus slope - very organic	2.4	12.1	3.8
L4 0850 N	12	med-dk brown	gravel	mod-steep	12" gravel, organic, talus	2.6	73.2	6.8
L4 0950 N	18		-	<b>no sample</b>	talus - all rock & no soil at 18"	-	-	-
L4 1050 N	8	dk brown	gravel	mod-steep	gravel, perma frost @ 8"	4.6	26.2	3.1
L4 1150 N	12	dk brown	mud	steep	mud, gravel, organics	2.1	93.1	4.5
L4 1250 N	12		-	<b>no sample</b>	talus - all rock & no soil at 12"	-	-	-
L4 1350 N	7	dk brown	gravel	mod-steep	gravel, perma frost @ 7"	1.2	21.1	4.0
L4 1450 N	7	dk brown	-	mild	perma frost, organics, soil	2.7	21.5	3.9
L4 1550 N	10	dk brown	-	mild	perma frost, organics	5.6	119.3	10.3
L4 1650 N	12	med-dk brown	gravel	mild	gravel	6.2	164.6	7.7
L4 1750 N	14	med brown		mod-steep	fine gravel, slightly organic	3.6	110.5	9.3
L4 1850 N	14	med brown		mod-steep	fine grained	2.4	42.0	10.1
L4 1950 N	20	med brown		steep	fine grained	1.3	28.4	13.0
L4 2050 N	19	med-lt brown		steep	gravel - sand	<5	13.7	7.1
M-000	16	med brown		flat	start new line off talus in saddle	5.1	29.2	9.7
					636095E 7218090N			
M-100	6	dk brown	<b>no sample</b>	steep	perma-frost @ 6"	-	-	-
					636072E 7218188N			
M-200	8		<b>no sample</b>	steep	perma-frost @ 8", ice & rock	-	-	-
					ice with underlying rock			
M-300	10		<b>bad sample</b>	steep	perma-frost @ 10", ice & rock	1.7	44.7	7.1
					sampled ice with soil			
					635990E 7218492N			
M-400	14	med brown		mild	gravel, mud, organic	1.7	19.6	9.6
					635972E 7218599N			
M-500	12	dk brown		flat	organic, mud, bed-rock	1.6	22.9	4.2
					635947E 7218697N			

APPENDIX II

ROCK SAMPLE DESCRIPTIONS  
2003

# Rock Sample Description Sheet

Property: Yukon Olympic Sampler(s): Brian Thurston Date: June 30-July 1 Page: 1 of 1

Assay Number	Location UTM	Sample Width (m)	Sample Description	Assay (ppb)			Assay (ppm)		
				Au			Cu	As	U
13367	635577 E 7217705 N Spectacular Creek bed	grab	Breccia with rusty gossan, looks skarn-like, 10-15% sulphide semi-mssx to diss, strong chl-qtz-he, old HEM01R01	235			7	10	<8
13368	635805 E 7217633 N Spectacular Creek bed	grab	ser-feld grey with limonite stain, 5-10% diss& fract Py No Cu or Hem, ** on peaks to the NW (small patches)	2			14	8	<8
13369	636004 E 7217563 N Spectacular Creek bed	grab	25m upstream from GPS- Dark green-red Bx with Ox-Cu diss/fract throughout (Mc-Crysocola & spec hem)	32			6326	<2	<8
13370	638594 E 7215962 N Ridge top from Spec Ck	grab	20m SW along ridge; dark green chl volc rock w dis/frct Cpy >Tr Py, diss spec hem, Mc stain, hem-Bx contacts w spec. hem veins	31			947	11	<8
13371	637953 E 7216820 N Ridge top from Spec Ck	grab	2x3m gossan - Intense - talus from hill crest, diss&fract Py locally 5-8% in felsic volc, similar to sample 13368 spec ck.	7			22	52	<8
13372	Line #4 @ 1875N talus slope	grab	mix of material in talus with green chl matrix hosting small Bx frags, and pink sil frags with a spec hem matrix	<2			16	<2	<8

APPENDIX III

CERTIFICATES OF ASSAYING  
2003

GEOCHEMICAL ANALYSIS CERTIFICATE



Canadian Empire Exploration Ltd. PROJECT Yukon Olympic File # A302508  
1205 - 675 W. Hastings St, Vancouver BC V6B 1N2 Submitted by: Brian Thurston

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au**
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppb	
SI	<1	2	3	3	<.3	1	<1	6	.05	<2	<8	<2	<2	5	<.5	<3	<3	1	.23	<.001	<1	1	<.01	6	<.01	<3	.01	.99	.03	<2	3
13367	<1	7	7	24	<.3	68	315	556	10.48	10	<8	<2	<2	2	<.5	<3	7	165	.08	.031	4	129	3.79	21	.01	3	3.98	.01	.08	<2	235
13368	<1	14	16	14	<.3	30	25	111	2.46	8	<8	<2	5	4	<.5	<3	3	12	.10	.063	15	12	.81	98	<.01	<3	.95	.02	.36	<2	2
13369	<1	6326	8	30	7.3	29	17	791	4.63	<2	<8	<2	7	9	<.5	<3	53	42	.71	.065	31	25	2.41	650	.02	<3	1.96	.01	.25	<2	32
13370	<1	947	4	55	.3	59	47	998	6.28	11	<8	<2	6	35	<.5	<3	<3	139	.17	.060	3	66	4.77	1763	<.01	<3	4.08	.01	.05	<2	31
13371	<1	22	255	94	1.8	3	3	31	5.15	52	<8	<2	3	2	<.5	<3	3	5	.01	.009	4	11	.04	20	<.01	8	.13	.01	.15	4	7
13372	<1	16	5	16	<.3	13	5	106	5.64	<2	<8	<2	5	8	<.5	<3	<3	36	.48	.231	4	22	.63	47	.04	4	.77	.01	.12	<2	<2
STANDARD DS5/AU-R	12	144	25	137	.3	25	13	784	2.94	18	<8	<2	3	50	5.6	4	6	62	.75	.095	12	190	.68	144	.10	17	2.09	.04	.15	5	474

GROUP 1D - 0.50 GM SAMPLE LEACHED WITH 3 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 10 ML, ANALYSED BY ICP-ES.  
UPPER LIMITS - AG, AU, HG, W = 100 PPM; MO, CO, CD, SB, BI, TH, U & B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.  
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB  
- SAMPLE TYPE: ROCK R150 60C AU\*\* GROUP 3B - 30.00 GM SAMPLE ANALYSIS BY FA/ICP.

DATE RECEIVED: JUL 10 2003 DATE REPORT MAILED: *July 22/03* SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

GEOCHEMICAL ANALYSIS CERTIFICATE

Canadian Empire Exploration Ltd. PROJECT Yukon Olympic File # A302510

1205 - 675 W. Hastings St, Vancouver BC V6B 1N2 Submitted by: Brian Thurston



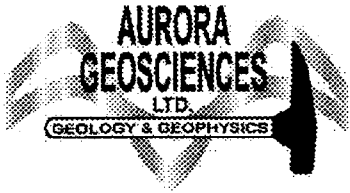
SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm
G-1	2.5	3.7	2.6	41	<.1	4.4	4.0	637	2.02	<.5	1.9	.7	4.4	95	<.1	.1	.2	46	.70	.080	11	23.9	.64	298	.167	<1	1.17	.149	.55	4.6	<.01	3.2	.4	<.05	5	<.5
L4 0250N	1.7	43.4	8.3	48	.1	19.6	13.3	5983	2.45	6.7	4.2	2.1	1.0	19	.4	.5	.5	34	1.93	.158	13	19.5	.69	2175	.014	3	1.07	.011	.06	<.1	.15	3.6	.1	.15	3	.8
L4 0350N	2.1	8.5	3.4	38	<.1	22.5	10.5	6210	1.72	2.4	1.4	4.3	1.1	23	.4	.5	.4	17	2.04	.124	14	16.8	.98	2013	.015	<1	.76	.025	.10	.2	.08	2.9	.1	.10	2	.7
L4 0450N	3.2	15.3	4.6	32	.1	10.8	6.7	3237	1.62	3.8	7.2	13.0	.9	25	.5	.3	.3	24	2.26	.176	9	15.7	.53	1444	.012	3	.72	.014	.05	.1	.12	3.5	.1	.23	2	.5
L4 0550N	.9	12.0	4.8	23	.1	13.0	8.5	3823	1.35	3.2	1.1	2.1	.8	23	.4	.5	.2	21	1.88	.133	8	13.5	.55	1593	.014	1	.76	.013	.06	.2	.11	2.4	.1	.15	2	.6
L4 0650N	.9	8.4	4.1	25	.1	14.5	8.0	3466	1.31	3.6	.6	1.8	1.2	18	.1	.4	.2	18	1.69	.122	10	12.5	.52	1344	.013	1	.71	.007	.06	.2	.11	3.1	.1	.17	2	<.5
L4 0750N	1.4	12.1	5.9	30	.1	19.2	14.4	9758	2.99	3.8	1.2	2.4	1.2	22	.4	.6	.5	27	1.64	.158	20	19.4	.74	2631	.012	1	1.08	.019	.08	.1	.13	5.1	.1	.15	3	.9
L4 0850N	3.4	73.2	8.8	45	.1	21.8	16.9	9408	3.86	6.8	2.1	2.6	1.6	21	.4	.8	.5	42	1.27	.152	17	23.2	.59	3261	.019	1	1.41	.009	.07	.1	.12	5.3	.2	.10	5	1.1
L4 1050N	2.3	26.2	4.0	49	.1	24.2	14.7	5683	2.15	3.1	3.0	4.6	2.1	19	.4	.5	.4	18	1.39	.105	13	16.1	.91	2087	.011	2	.93	.009	.11	.1	.05	3.6	.1	.13	3	.5
L4 1150N	2.1	93.1	8.1	41	.1	22.0	14.9	5341	2.59	4.5	3.1	2.1	2.4	20	.2	.7	.8	27	1.09	.095	17	18.0	.71	1664	.022	1	1.05	.011	.08	.2	.08	5.1	.1	.11	3	.8
L4 1350N	1.4	21.1	6.5	47	.1	15.9	8.1	1903	1.64	4.0	3.3	1.2	1.4	21	.2	.6	.3	29	1.46	.090	12	18.7	.58	1321	.022	2	.86	.012	.06	.2	.07	3.4	.1	.12	3	<.5
L4 1450N	1.2	21.5	6.4	49	.1	15.8	7.9	2509	1.55	3.9	2.7	2.7	1.2	20	.4	.5	.2	25	1.77	.114	12	18.5	.58	1615	.017	3	.90	.010	.06	.1	.08	3.1	.1	.14	3	1.1
L4 1550N	1.2	119.3	11.4	84	.2	23.2	14.4	1380	2.45	10.3	1.6	5.6	1.7	27	.5	.8	.5	47	1.93	.080	13	25.4	.68	848	.024	4	1.26	.022	.08	.2	.09	4.9	.1	.13	4	1.1
L4 1650N	1.6	164.6	9.4	73	.1	25.9	15.9	1050	2.78	7.7	1.4	6.2	2.4	28	.3	.7	.6	53	1.33	.076	15	27.8	.94	1022	.038	4	1.29	.016	.08	.2	.06	5.8	.1	<.05	4	.9
L4 1750N	1.6	110.5	16.9	68	.1	22.1	17.9	2008	3.05	9.3	1.0	3.6	1.3	26	.3	.8	.5	56	1.80	.095	12	28.5	.85	1406	.020	3	1.48	.185	.08	.1	.07	4.5	.1	.08	4	1.0
RE L4 1750N	1.7	110.1	17.8	65	.1	21.7	17.3	1898	2.90	9.7	1.0	1.9	1.3	27	.3	.7	.4	54	1.74	.089	12	27.9	.82	1374	.019	5	1.47	.174	.08	.1	.07	4.7	.1	.09	5	.9
L4 1850N	1.4	42.0	11.6	84	.2	22.2	11.9	948	2.16	10.1	.5	2.4	.9	33	.7	.8	.6	38	4.04	.067	14	21.3	1.82	567	.023	3	1.14	.015	.06	.2	.05	3.6	.1	<.05	3	.8
L4 1950N	1.3	28.4	12.4	126	.2	24.6	11.2	1013	2.20	13.0	.4	1.3	.9	29	.6	.7	.3	41	4.63	.057	13	23.4	2.62	717	.025	4	1.09	.014	.06	.2	.05	2.2	.1	<.05	3	.6
L4 2050N	1.8	13.7	7.6	57	.1	16.5	5.8	501	1.33	7.1	.5	<.5	1.6	68	.2	.7	.1	27	12.78	.044	8	15.2	6.97	436	.032	2	.62	.017	.05	.1	.03	1.9	.1	<.05	2	<.5
M-000	1.9	29.2	10.5	77	.1	34.7	14.3	5085	3.68	9.7	1.1	5.1	5.0	16	.4	1.0	.3	56	.25	.048	43	37.5	.63	1251	.037	1	1.98	.006	.10	.3	.07	9.7	.2	<.05	4	.7
M-300	1.6	44.7	9.8	70	.1	25.7	14.8	5375	2.30	7.1	1.3	1.7	2.0	17	.9	.7	.2	45	.94	.087	16	27.1	.66	927	.027	1	1.28	.011	.08	.3	.06	4.5	.1	<.05	4	.9
M-400	1.2	19.6	56.0	73	.2	9.4	4.5	623	1.22	9.6	.4	1.7	1.0	55	.2	.9	.3	11	12.79	.042	5	7.3	6.67	957	.006	3	.27	.008	.05	.1	.03	2.5	.1	<.05	1	<.5
M-500	.6	22.9	15.1	61	.1	13.9	5.0	213	.97	4.2	.5	1.6	1.1	41	.2	.5	.2	17	8.55	.047	8	14.2	4.20	219	.013	3	.59	.009	.04	.1	.03	2.6	.1	.09	2	<.5
STANDARD DS5	13.3	140.7	25.0	131	.3	23.1	11.7	796	3.03	16.6	6.2	43.0	2.7	49	5.6	3.8	6.4	60	.76	.093	12	186.9	.69	147	.104	17	2.08	.033	.14	4.6	.18	3.7	1.1	<.05	7	4.6

GROUP 1DX - 15.00 GM SAMPLE LEACHED WITH 90 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 300 ML, ANALYSED BY ICP-MS.  
UPPER LIMITS - AG, AU, HG, W = 100 PPM; MO, CO, CD, SB, BI, TH, U & B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.  
- SAMPLE TYPE: SOIL SS80 60C Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: JUL 10 2003 DATE REPORT MAILED: July 22/03 SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

APPENDIX V

MAGNETIC/GRAVITY SURVEY  
AURORA GEOSCIENCES LTD.  
2003



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## MEMORANDUM

**To:** Brian Thurston  
Canadian Empire Explorations Corp.

**Date:** 18 July 03

**From:** Mike Power

**Re:** HEM Property - Gravity & magnetic field survey - field report

Per your instructions, this memorandum is a field report describing a total magnetic field and gravity survey conducted at the HEM Property, Dawson Mining District, Yukon. The purpose of the surveys was to locate iron oxide copper-gold bearing breccias intruding Proterozoic rocks.

**a. Crew and equipment.** The surveys were conducted by the following personnel:

Dave Hildes, Ph.D.	Crew chief / geophysicist
Gary Lee, P.Eng.	Technician

The crew was equipped with the following instruments and equipment:

<u>Gravimeter:</u>	1 - Scintrex CG-3 s/n 711413
<u>GPS:</u>	1- Trimble 4000 SSI (Base station)
	1 - Trimble Pro-XRS (Rover)
<u>Terrain survey:</u>	1 - Impulse laser range finder
<u>Magnetometers:</u>	3 - GEM Proton Precession magnetometers



Other:

- 1 - P800 lap top computer
- 1 - colour printer
- 1 - 1 Ton 4x4 truck
- 1 - Honda 4x4 ATV
- 1 - Globalstar satellite phone

Software:

- Geosoft Oasis 5.01
- AGL Gravred 1.02

**b. Grid.** The total magnetic field and gravity surveys were conducted along the IP lines put in during June 2003 for the program which preceded these surveys.

**c. Total magnetic field specifications.** The total magnetic field survey was conducted according to the following specifications:

<u>Base station:</u>	Installed at a fixed location and cycled at 5 s for the survey periods.
<u>Synchronization:</u>	Base and rover mags were synchronized daily.
<u>Station spacing:</u>	25 m
<u>Levelling:</u>	Operators levelled between themselves to a common datum by surveying, on a daily basis, a 200 m interval and calculating the mean difference between them

**d. Gravity survey specifications.** The gravity survey was conducted according to the following specifications:

<u>Stations:</u>	IP electrode stations along the survey lines with a mean station interval of 250 m.
<u>Sites:</u>	Survey sites were selected to be flat for 2 m surrounding the station, wherever possible.

- Readings: The instrument was levelled to within 10 arc-seconds prior to reading and readings were stacked for 60 s with the automatic tilt correction and the seismic and noise (spike) rejection filters engaged . Almost all readings were repeated at least twice. If standard deviations exceeded 50  $\mu$ Gal, readings were repeated 3 to 5 times.
- Gravimeter geometry: Height of gravimeter base above nominal station hub was recorded and corrections for this elevation applied during reduction.
- Drift calibration: The gravimeter was levelled and warmed up for a period of 48 hours upon receipt. Thereafter, the instrument was cycled for a 24 hour period, taking readings for 2 minutes every 10 minutes. The data was plotted, mean drift constants were calculated and the instrument drift constants reset prior to the survey. The drift initiation time was rezeroed on July 5, 2003 by the operator and this accounts for the difference in drift corrections in the final data.
- Drift measurement: During the survey, a minimum initial and final tie-in drift measurement was made at the same base station that was used to level the data during the 2002 gravity survey. The nominal raw gravity reading at this station, set during 2002, is 7309.187 mGal and all data was reduced to this datum.
- Station coordinates: All geographic coordinates are in NAD1927 (Canada / Yukon) projected in UTM coordinates in Zone 7N. Elevations were recorded in metres above mean sea level (AMSL)
- GPS base: Located at 629,483.2E 7,218,495.64N with a station elevation of 1032.96 m (AMSL). Coordinates determined by surveying the site and correcting using data from the Whitehorse Geodetic Survey of Canada GPS base station. Antenna height was 1.338 m (constant / checked daily).
- GPS base operation: Cycled with a 10 s epoch using an elevation mask of 0<sup>o</sup>, PDOP mask of 6.0 and SNR mask of 6.0 during the period of rover operation.

<u>Rover operation:</u>	Minimum 2 files per station recorded with 30 positions per file (nominal) recorded at a 10 s sampling interval using a fixed antenna height.
<u>Near station terrain:</u>	Near station terrain was surveyed to a distance of 200 m surrounding each gravity station with the laser range finder. The survey was conducted in 3 zones: 2-20 m, 20-50 m and 50-200 m. In each zone, the terrain was surveyed in 6 x 60° sectors surrounding the station.

**e. Total magnetic field data processing.** The total magnetic field data was corrected for temporal geomagnetic variation using software incorporating linear interpolation. In addition, the data was levelled between operators by calculating the mean difference between operators surveying a common section of line on a daily basis. All data delivered has been fully corrected for temporal geomagnetic variation using the base station records.

**f. Gravity data processing.** Gravity reductions were performed with GRAVRED 1.02, a proprietary program developed by Amerok Geosciences Ltd. GPS data processing was performed with Trimble Pathfinder Pro 5.01. The following corrections were applied to the GPS data:

1. *Code processing.* Pseudoranges were corrected for clock errors using the corrected local base station records and during a second pass using the Whitehorse Geodetic Survey of Canada base station records. At a minimum, all records were code processed.
2. *Carrier phase processing.* High quality records were carrier phase processed to improve accuracy where signals permitted.
3. *Final averaging.* All corrected positions for each gravity station were averaged to determine the final station location.

The following corrections were applied to the gravity data:

1. *Gravimeter base height correction.* A Free-Air correction was applied to reduce the gravity to that which would be recorded at the nominal station elevation taking into account the variable and greater elevation of the base of the gravimeter above the station.
2. *Drift correction.* Applied using the base check-in drifts with a datum of 7039.187 mGal.

3. *GPS merge.* The geographic position of the stations was assigned by merging the gravity data with the GPS data. Any station without a fully corrected position (ie. a minimum of 1 code processed station location) was deleted from the final data base.

4. *Latitude correction.* The latitude correction was performed using the following parameters:

Grid centre: 629,500E 7,218,500N

Latitude at grid centre: 65.07°

Declination between UTM North / True North: 2.5°

5. *Elevation corrections:* Free Air, Bouguer Slab and Bullard-B corrections were performed using  $z=0.0$  m (mean sea level) as a datum and using an average crustal density of  $2.67 \text{ g/cm}^3$ .

6. *Near Station Terrain Corrections.* The near station terrain correction (NSTC) was applied using the sector equation and the measurements described above for the gravity survey. All elevations were expressed in metres difference from the observer's location. A correction was incorporated for the height of the observer.

7. *Inner zone terrain corrections.* Inner zone terrain corrections were applied using a digital terrain model (DTM) which covered the area of the 2002 survey and extended 3 km from the furthest extent of that survey.. This DTM was interpolated from topographic map contour elevations and used to correct the data collected during the 2002 gravity survey (see previous full survey report). The correction was calculated using a flat-top prism algorithm, with nominal node (prism) size of 30 m and with a standard crustal density ( $2.67 \text{ g/cm}^3$ ).

8. *Outer zone terrain corrections.* Outer zone terrain corrections were applied using a digital terrain model (DTM) which covered the area extending from the edges of the inner DTM to a distance of 60 km from the centre of the 2002 survey area. This DTM was also used to correct the 2002 gravity data. The correction was calculated using a line-mass algorithm, with nominal node (prism) size of 1000 m and a standard crustal density ( $2.67 \text{ g/cm}^3$ ).

9. *Final editing and averaging.* Once the data had been fully corrected and assembled in a spreadsheet, repeat readings were averaged to derive the final gravity readings at each station. During this process, readings with standard deviations significantly in excess of 0.050 mGal were removed prior to averaging unless all the readings in the data set for that station showed similarly high errors. Any data collected at stations with no corrected GPS-derived elevations was removed from the data base.

**g. Data quality and errors.** The gravity data is affected by acquisition errors and by errors introduced during each correction. This section summarizes an estimate of these errors in the final data:

1. *Measurement error.* Data generally repeated to within 10 to 20  $\mu\text{Gal}$  and measurement error is assumed to be within  $\pm 10 \mu\text{Gal}$ .

2. *Drift removal error.* The survey logistics prevented a mid-day check in and daily drifts were in the order of 100  $\mu\text{Gal}$ . It is possible that there were interday fluctuation in the order of 50  $\mu\text{Gal}$  which may have not been removed from the data. Drift removal error is estimated to be  $\pm 50 \mu\text{Gal}$ .

3. *Elevation error.* Horizontal location error in the corrected GPS data is assumed to be negligible. An estimate of elevation error was made by examining the corrected GPS data statistics. The spread between the mean reading for any data set and the individual elevation determinations was analysed. The figure below is a frequency histogram of apparent GPS elevation errors (difference between the elevation and the mean station elevation). It is apparent from this plot that the mean apparent elevation error (1 standard deviation / 68% of readings) is less than  $\pm 0.40 \text{ m}$ . This translates into a gravity error of  $\pm 80 \mu\text{Gal}$ .

4. *Terrain correction error.* It is difficult to determine the gravity data errors introduced by an inaccurate DTM. Errors in the near station terrain correction stem from errors in measuring the terrain properly. To a first approximation, the correction errors would be linear with respect to the terrain elevation errors. The

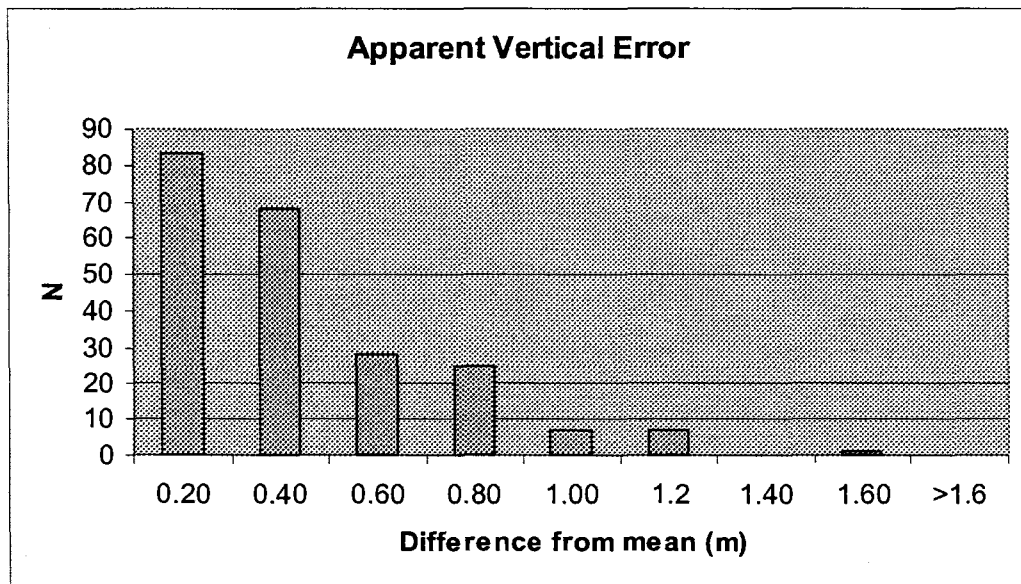


Figure 1. Apparent vertical error in repeated GPS positions.

average near station terrain correction was around 500  $\mu\text{Gal}$  and if a 10% elevation measurement error is assumed, this suggests that this correction may introduce error of up to  $\pm 50 \mu\text{Gal}$ .

The overall estimated error in the gravity readings from all sources is the sum of the

individual sources. The analysis described above suggests that the overall error in the Bouguer anomaly data is assumed to be around  $\pm 200 \mu\text{Gal}$  (0.200 mGal).

**h. Products.** The following data files are appended to the digital version of this report

HEM2003grav.xls	Excel spreadsheet with final corrected gravity and individual correction summary.
HEM2003mag.xls	Excel spreadsheet with final corrected total magnetic field data
Grav&mag2003.jpg	JPEG file with 300 dpi image of a contour map of the 2002 Bouguer anomaly data and profiles of the 2003 Bouguer anomaly and total magnetic field data. Station locations for the 2002 gravity survey are shown as well for reference. This image will plot at 1:60,000 on 11x17 paper.

The 2003 Bouguer anomaly data agree well with the 2002 data. The 2003 Bouguer anomaly profiles replicate the features evident in the gridded 2002 Bouguer anomaly data. This demonstrates that the combined gravity data set is sound and that the large gravity anomaly on the HEM Property is a real and verifiable feature.

Respectfully submitted,  
**AURORA GEOSCIENCES LTD.**



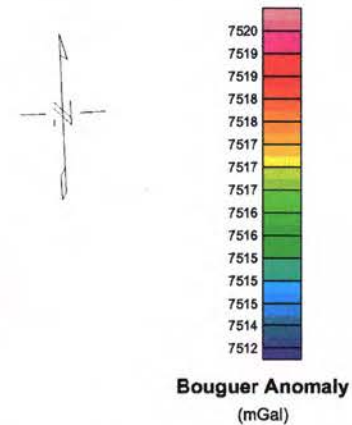
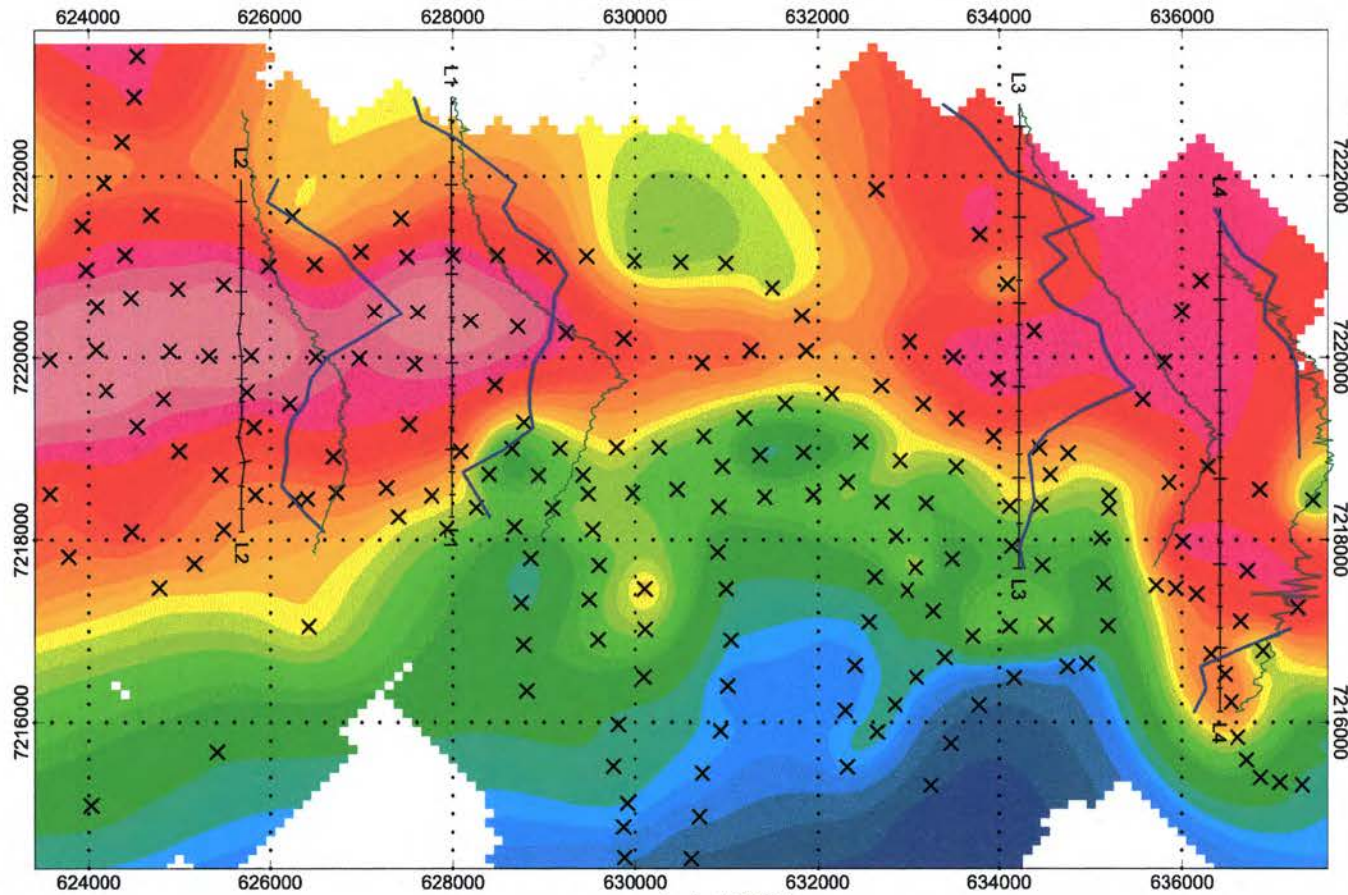
**Mike Power**

Digitally signed by  
Mike Power  
DN: cn=Mike Power,  
c=US  
Date: 2003.07.18  
02:46:56 -0700

Mike Power, M.Sc., P.Geoph.  
Geophysicist

/attach.

PRELIMINARY



Notes:

1. Gravity data from 2002 survey shown (Stations & colour contour map).
2. 2003 gravity profiles shown in blue  
1 mm = 0.200 mGal  
Increasing field - right of line  
Base level: 7514.000 mGal
3. All gravity data is fully corrected and levelled to the 2002 datum.
4. 2003 total magnetic field profiles shown in green. 1 mm = 10 nT / right of line increasing field.

Canadian Empire Exploration Corp.

**Yukon Olympic Property  
Gravity & Magnetic Field Survey  
Stacked Profiles**

Datum: NAD1927 (Canada / Yukon)  
Date: 17 July 2003

Projection: UTM / Zone 7  
Job: CXP-03-01-Y

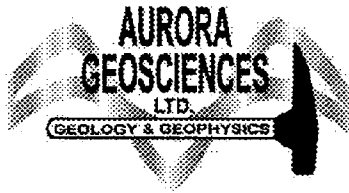
**AURORA GEOSCIENCES LTD.**



APPENDIX IV

INDUCED POLARIZATION SURVEY  
AURORA GEOSCIENCES LTD.  
2003





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## MEMORANDUM

**To:** Brian Thurston  
Canadian Empire Exploration Corp. **Date:** 11 July 2003

**From:** Mike Power

**Re:** Field report - HEM Property IP survey

This memorandum is a field report describing an Induced Polarization (IP) survey conducted on the HEM Property in the Dawson Mining District, central Yukon. The survey was conducted to investigate the potential of the property to host iron oxide copper-gold mineralization.

**a. Personnel and equipment.** The IP survey was conducted by Georges Belcourt, B.Sc. P.Geoph., a geophysicist based in our Yellowknife office, Gary Lee and Suzanne Aichelle, with the assistance of two helpers provided by Canadian Empire. Dave Hildes, Ph.D., GIT replaced Suzanne Aichelle on June 24. The crew was equipped with the following instruments and equipment:

<u>IP Transmitter:</u>	1 - Iris VIP4000
	1 - Honda 5kVA gas generator
<u>IP Receiver:</u>	1 - Iris ELREC IP-6
<u>Computer equipment:</u>	1 - Toshiba laptop computer
	1 - colour printer
<u>Other equipment:</u>	1 - GMC 1 Ton 4x4
	1 - Flat deck trailer
	1 - AGL Honda ATV with trailer
	1 - Repair tools (electrical / light mechanical)
	1 - SAT phone

**b. Survey procedures.** The following survey specifications and field procedures were

employed for the gravity survey:

<u>Lines:</u>	Four separate lines were put in by the project geologist and his helpers.
<u>Station locations:</u>	Station locations were straight chained and flagged every 50 and 250 m. Every 250 m station was surveyed with non differential GPS.
<u>IP Array:</u>	Pole-dipole array was used with an infinite electrode near the transmitter site.
<u>Dipole spacing:</u>	250 m
<u>Separations:</u>	Six dipoles were read from n=1,6
<u>Tx:</u>	Time domain with a 50% duty cycle, reversing polarity, 0.125 Hz.
<u>Parameters read:</u>	Mt - total chargeability Mi - 10 semi-logarithmically spaced time slice channels V <sub>p</sub> - primary voltage Sp - Self-potential voltage
<u>Error:</u>	5 ms or less when possible. Multiple readings were recorded in order to determine repeatability.

A survey log is appended to the invoice accompanying this report.

**c. Data processing and interpretation.** This section describes data processing and quality assurance and quality control (QA/QC) measures. All data was processed in the field and was subsequently checked by the crew chief in Whitehorse. IP data processing was performed with Geosoft Inc.'s Oasis Montaj, and UBC's GIF DCIP2D inversion package. This software automates the production of pseudo section plots of resistivity and chargeability, and performs both forward modelling and inversion of these properties in two dimensions. After formatting the data, the crew chief handed the data set over to Franz Dziuba, B.Sc. who conducted the inversions under the general direction of the author.

A modified pole-dipole array was used in order to minimize wire layout and speed survey operations. The infinite pole was placed near the transmitter and the survey proceeded away from the transmitter; consequently the current dipole separation varied from a relatively small distance to in excess of several kilometres. The inversion algorithm requires pole-dipole voltages (ie. as produced using an infinite at a very great distance from the leading current electrode). The following relation, based on the

equivalence of apparent resistivities, was used to convert the observed voltages ( $V_{obs}$ ) to pole-dipole voltages ( $V_{pole}$ ):

$$V_{pole} = \frac{V_{obs}}{\phi n (n+1) a}$$

where  $n$  is the separation,  $a$  is the receiver dipole spacing and  $\phi$  is a geometric factor:

$$\phi = \left( \frac{1}{r_1} - \frac{1}{r_2} \right) - \left( \frac{1}{r_3} - \frac{1}{r_4} \right)$$

in which  $r_1$  and  $r_2$  are the distance between the leading potential electrode and the leading and trailing current electrodes respectively while  $r_3$  and  $r_4$  are the distance between the trailing potential electrode and the leading and trailing current electrodes respectively. The leading current electrode is the current electrode closest to the potential electrodes while the leading potential electrode is the potential electrode closest to the current electrodes. The distance between the electrodes was calculated using the UTM coordinates of the electrodes as determined with non-differential GPS.

The field data was edited prior to or during inversion using the following protocol:

1. The sign of any negative primary voltages was reversed.
2. Chargeabilities with more than 3 time slice channels showing amplitudes which were either 0 or 99 mV (full range) were deleted.
3. Noise levels for the resistivity data were set using the dipole spacing according to the following protocol:

n=1	3% of $V_p / I$
n=2	6% of $V_p / I$
n=3	9% of $V_p / I$
n=4	12% of $V_p / I$
n=5	15% of $V_p / I$
n=6	20% of $V_p / I$

where  $V_p$  is the primary observed voltage (equivalent pole-dipole voltage) and  $I$  is the observed current.

4. During the inversion process several isolated high amplitude single station chargeability anomalies which were otherwise in spec were deleted when it became apparent that these values were rendering the IP inversion unstable with any starting model.

The inversions were performed on a line-by-line basis, commencing with the resistivity modelling and concluding with the chargeability modelling. A mesh consisting of

rectangular elements 125 m long by 50 m deep in the centre of the model was used. The element size increases at depth and off the ends of the array, feathering out into very large elements at great distances; this is necessary to permit the finite element models to converge. Chi factors were initially selected by default and adjusted to improve the fit between the modelled data and the observed data. Once a good fit had been achieved, the starting model was varied in a second run and the results were compared to determine the apparent depth of investigation. This involves calculating the difference between the resistivity results from the final optimum model and those from an inversion conducted using a radically different resistivity starting model. The areas where there are no discrepancies between the two runs are regions which are strongly determined by their sensitivity to the actual data. In other areas where there are significant differences in the model chargeability or resistivity, the discrepancies are attributed to a sensitivity of the final result only to the starting model. In effect the surface data exerts no control on the model outcomes in these areas. These regions are beyond the range of investigation of the survey and results in these areas should be ignored. As a rule of thumb, areas with model variations of less than 20% or 30% define areas where the model is primarily sensitive to the field data. Consequently, the 20% or 30% variation contour level is often used to delineate the effective depth of investigation. In the final results, each line contains a resistivity section showing the depth of investigation determined empirically using this approach. Any resistivity or chargeability features beyond the depth of investigation should be ignored; modelling indicates that the array cannot in effect "see" what the true chargeability or resistivity is in these areas.

The output from each inversion consists of the following images:

1. Pseudosections of the observed (ie. field) apparent resistivity or chargeability and of the apparent resistivity or chargeability generated by the model. In general, the latter should contain the essential features of the former for a valid model.
2. A depiction of the model with padding cells removed. The padding cells are included in the actual model to cause the physical properties to fade with distance from the region where the field data was collected. This is necessary to satisfy the mathematical constraints of finite element modelling. The cell boundaries are indicated by the black lines.
3. Convergence curves showing the target misfit in blue and the model norm in red.
4. Model showing apparent depth of investigation as defined by areas which show less than 30% variation between runs performed with radically different starting models. The blanked out areas indicate regions which are probably not visible to the array by reason of geometry and host rock resistivity. In general, the array should be able to detect variations in the chargeability of large blocks of resistive rock to depths in excess of 600 m.

In assessing the results of the modelling, the following features should be examined:

1. How closely do the model results (in pseudosection form) resemble the actual data. A good fit will model all of the essential features of the observed data and the two pseudosections will be very similar. If they differ, the differences may indicate the presence of features with very strong resistivity or chargeability contrast or the presence features whose size (width) is small with respect to the dipole spacing (ie.  $\ll$  63 m width).
2. Do the inversions converge to a result which maximizes the norm and minimizes the misfit, ideally reaching or exceeding the target misfit? A stable inversion will show norm (blue) curves which increase quickly during the early iterations and are asymptotic to a relatively high norm as inversion progresses. Similarly, the misfit should decrease as the model is iteratively improved to yield apparent resistivities or chargeabilities which match the observed field results. This convergence too should be asymptotic.
3. The depth of resistivity investigation should be examined. In general, the depth of investigation increases in resistivity rocks and decreases in conductive rocks. Consequently it is not surprising to see relatively shallow depths of investigation in the northern portions of the survey lines situated over Road River Group. The depth of investigation determined empirically for the resistivity models should be used as a guide to determine the confidence with which of the deeper resistivity and chargeability features are real and of potential geological interest.

**d. Results.** The following products are appended to this report:

1. Digital data in Geosoft format (.gdb) IP data base files.
2. Inversion plots showing the observed and model pseudosections, the models including the finite element mesh, inversion convergence curves and, for the resistivity data, depth of investigation plots. For the chargeability data, an additional plot of the model without the finite element mesh or the padding cells is shown.

The geological significance of the features visible in the final models can only be assessed by reviewing the results in conjunction with plausible, balanced cross sections at a similar scale. It should be noted that resistivity and chargeability features can result from a number of causes and that there may be sources within surrounding / overlying formations which can generate resistivity and chargeability anomalies which may appear to be of economic interest. Further, this data should be reviewed in conjunction with the total magnetic field and gravity data as the gravity and magnetic signature of Olympic Dam type mineralization is also distinctive. It is unlikely that the resistivity of a breccia body would show the same contrast with surrounding rocks as would the corresponding chargeability given the disseminated character of the

mineralization and the presence of potassic (ie. generally resistive) alteration with these features. A viable target should be situated in Proterozoic rocks and display a coincident positive gravity response and elevated chargeability response.

Inversion results are discussed on a line-by-line basis:

## **LINE 1**

### *Resistivity*

The best fit model used a starting model consisting of a uniform half-space with a resistivity of 1000 ohm-m. Convergence and a satisfactory solution was achieved in 20 iterations. Comparison of the model and field pseudosections indicate that the model cannot generate the fine details in the field data. These are likely caused by thin or small compact features which cannot be adequately modelled by the nodes used in the inversion mesh. The depth of investigation was calculated by comparing best fit results from those with a starting model with a half-space resistivity of 10000 ohm-m. The depth of investigation is quite shallow in the conductive rocks in the northern part of the line.

There is an extreme contrast in apparent resistivity between the carbonate section to the south and the graphitic shale to the north. The inversion results suggest that the fault contact with the Road River Group is steeply north dipping, in agreement with the mapped geology. The second fault zone may be weakly apparent in the model near station 900.

### *Chargeability*

The chargeability model was generated from the best-fit conductivity (resistivity) model described above. The model could not match the high amplitude variations in the two larger IP anomalies, suggesting that these are thin features relative to the node size (125 m (x) x 50 m (z)). The high amplitude chargeability anomalies at large separations also had correspondingly large errors and are consequently not replicated in the model results pseudosection. Both of the very high amplitude (> 100 mV/V) chargeability sources in the northern section of the line should be discounted as this area appears to be screened by the low resistivity rocks.

There is a single chargeability anomaly of interest in this line with an apparent intrinsic chargeability of 70 mV/V centred at station 1800 at a depth of several hundred metres.

## **LINE 2**

### *Resistivity*

The best fit model used a starting model with a half-space resistivity of 5000 ohm-m. Convergence and a satisfactory solution were achieved in 19 iterations. Comparison of

the model and field pseudosections shows that the model results cannot replicate the embayment in the resistivity low in the northern portion of the line. The depth of investigation was obtained by comparing the results of the best fit model with those from a model with a starting model consisting a 10000 ohm-m half-space. A relatively high contour threshold was selected (50%) to produce results which agree with a physically plausible depth of investigation (ie. at least half the maximum electrode separation). None of the resistivity features north of the contact with the conductive rocks appear to be reliable and the feature to the south is also to some degree determined by the starting model. Nonetheless there appears to be a thin, shallow sliver of relatively conductive rocks centred at around station 900.

### *Chargeability*

The chargeability model was generated from the best-fit conductivity model described above. The model converged easily in 16 iterations. There is a strong chargeability source associated with the low resistivity zone in the northern portion of the line and the modelling indicates a number of shallow, perhaps surficial sources; these may be permafrost features. The single anomaly of interest is a zone of shallow chargeability centred at about station 1000. It is associated with a deeper zone of relatively low resistivity but both of these features may be screened by the conductivity in this area and are suspect.

## **LINE 3**

### *Resistivity*

The best fit model used a starting model consisting of a 500 ohm-m half space. Convergence and a satisfactory solution were obtained in 23 iterations using a Chi-factor of 10. There was very good agreement between the field data pseudosection and that produced by the best-fit model suggesting that the model is a valid explanation of all the large scale features observed in the pseudosections. The best fit model was compared with that run with a starting model consisting of a 2500 ohm-m half space. The 20% variation contour indicates the apparent depth of investigation and suggests that the array cannot delineate features beneath the conductive rocks in the northern portion of the line. The low resistivity feature in the centre of the line is apparently within the depth of investigation indicated by the modelling results. Similarly, it is within the likely physical depth of investigation of this array in resistive rocks at a depth of 400 m.

### *Chargeability*

The best-fit chargeability model was generated from the best-fit conductivity model in 19 iterations using a Chi-factor of 2. There is generally good agreement between the observed and model data pseudosections suggesting that the model explains most of the large scale features observed in the field data. Two essentially single station anomalies within larger lower amplitude anomalies are not explained by the best-fit

model. If the depth of investigation determined from the resistivity data is any guide, features to a depth of 600 m should be visible in the data collected over the highly resistive rocks in the southern portion of the line. The primary target of interest is a large, deep chargeability anomaly, coincident with the resistivity low described above, at an apparent depth of about 500 m. The source appears to be narrow, perhaps only 250 m wide, and is centred at about station 3400. The two south dipping chargeability sources have no associated resistivity anomalies and are generated by single slash chargeability highs. It is interesting that the larger chargeability anomaly is roughly coincident with the axis of an anticline which may be cored at a shallow depth by Proterozoic rocks. Alternatively, the possibility remains that this anomaly is a fault-bounded slice of Road River Group graphitic shale. The low resistivity associated with the chargeability anomaly is not a comforting feature and the gravity profile may clarify the significance of these anomalies.

#### **LINE 4**

##### *Resistivity*

The best fit model used a starting model consisting of a 5000 ohm-m half space. Convergence and a satisfactory solution were obtained in 27 iterations using a Chi-factor of 1, dictated by the smooth data set. There was very good agreement between the field data pseudosection and that produced by the best-fit model suggesting that the model is a valid explanation of all the large scale features observed in the pseudosections. The best fit model was compared with that run with a starting model consisting of a 500 ohm-m half space. The 30% variation contour indicates the apparent depth of investigation. It is surprising that the model does not require a zone of low resistivity at depth to explain the low resistivity at the very end of the survey line. The rocks have a generally very high resistivity and the resistivity colour bar range has been expanded to delineate very subtle resistivity features in the southern portion of the line. The hematite breccias which this line reportedly crosses at about station 900 have no discernible associated resistivity signature.

##### *Chargeability*

The best-fit chargeability model was generated from the best-fit conductivity model in 14 iterations using a Chi-factor of 1. There is generally good agreement between the observed and model data pseudosections suggesting that the model explains the large scale features observed in the field data near the hematite breccia bodies. It does not explain a high amplitude chargeability at large separations on the northern end of the survey line. There appears to be large errors associated with these measurements and the modelling was not forced to accommodate them. The principal feature of interest is the deep chargeability high slightly south of the hematite breccia outcrops. It is interesting that resistivity is very high along this line and that chargeabilities are generally much lower than in rocks to the west.



Thank you for the opportunity to work with you on this interesting project. The gravity and magnetic data arrived in Whitehorse this evening and will be sent down to you early next week.

Respectfully submitted,  
**AURORA GEOSCIENCES LTD.**

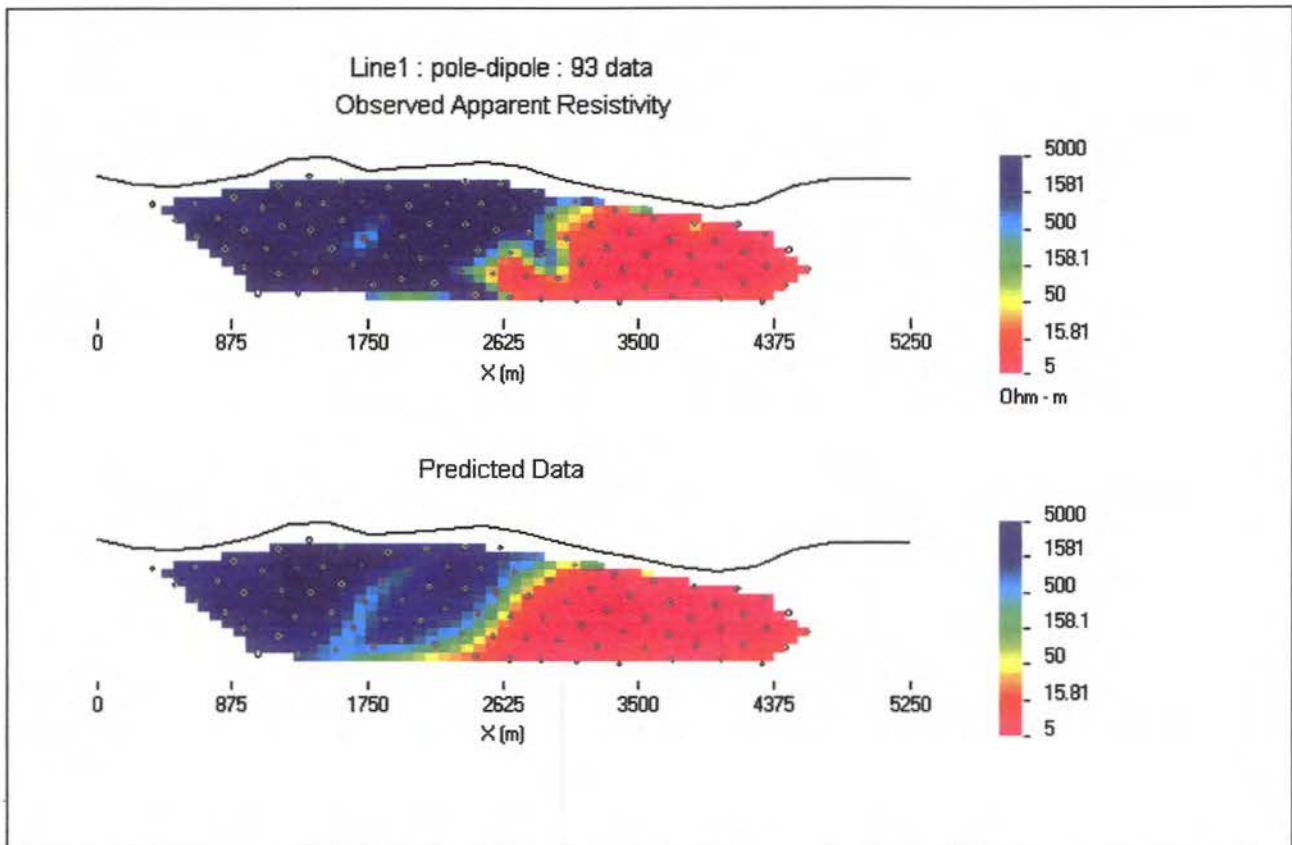
 Mike Power

Digitally signed by Mike  
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Date: 2008.07.11 00:12:36  
+0700

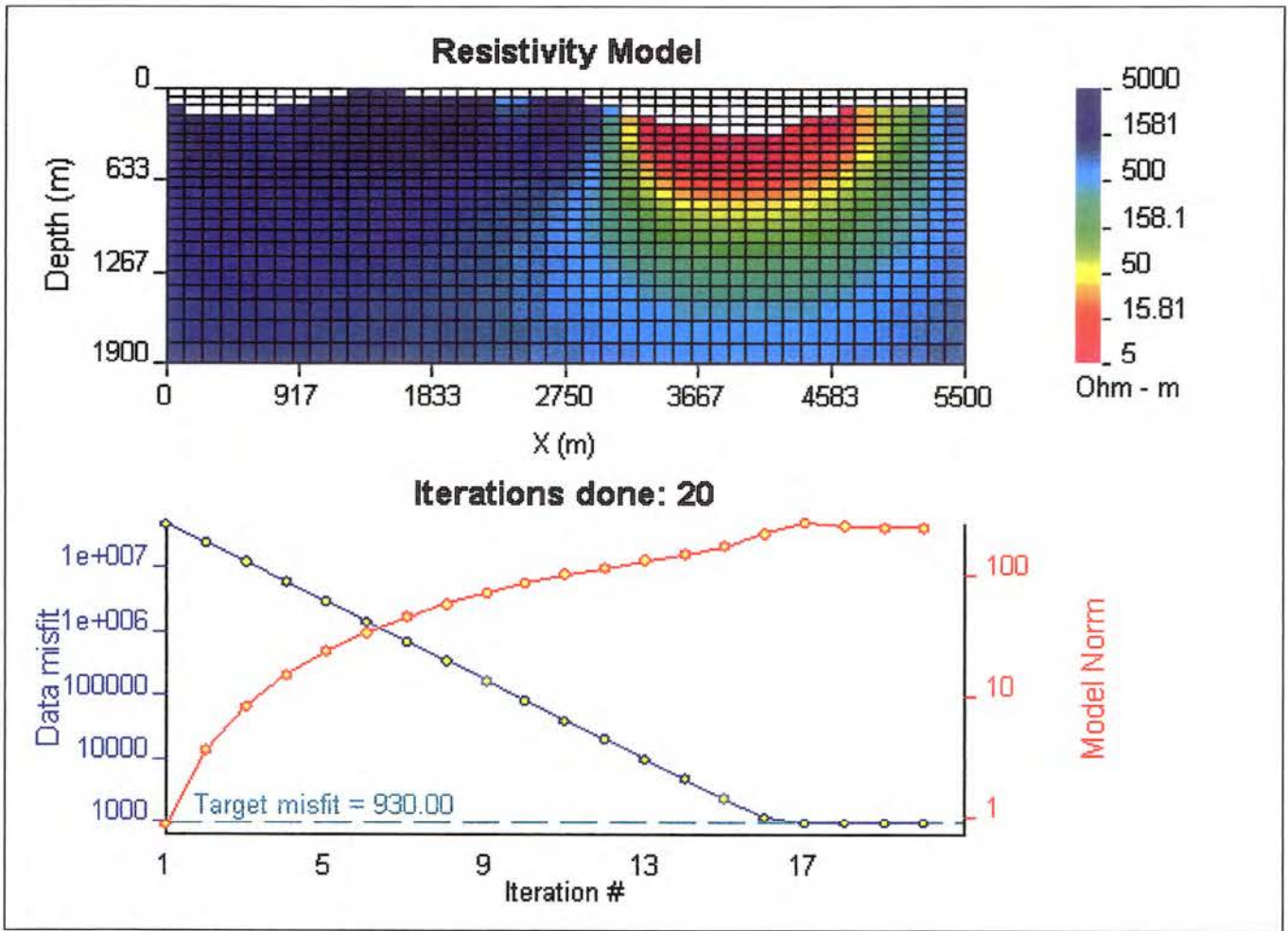
Mike Power, M.Sc., P.Geoph.  
Geophysicist

/attach.

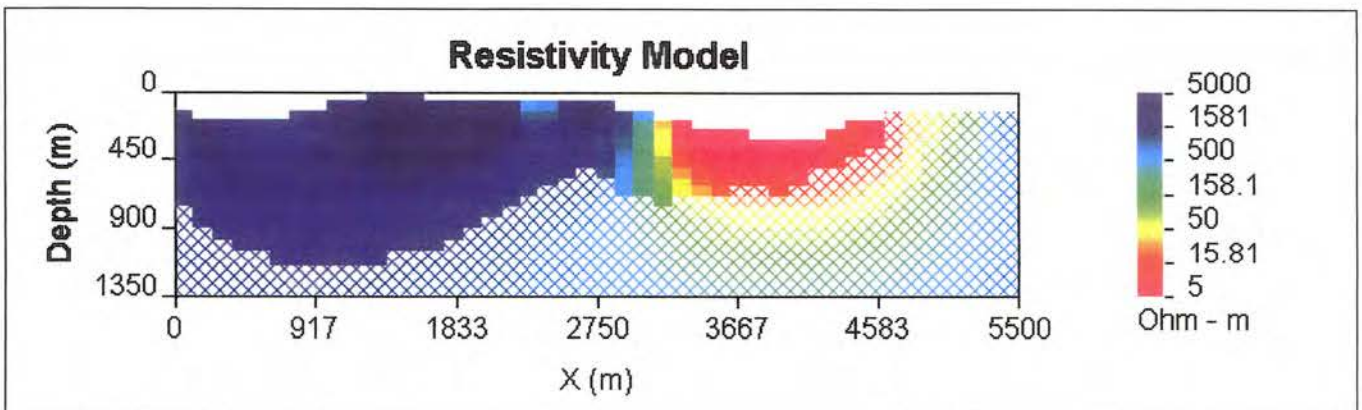
## LINE 1 RESISTIVITY



**Observed (field) and predicted (model) resistivity pseudosections**

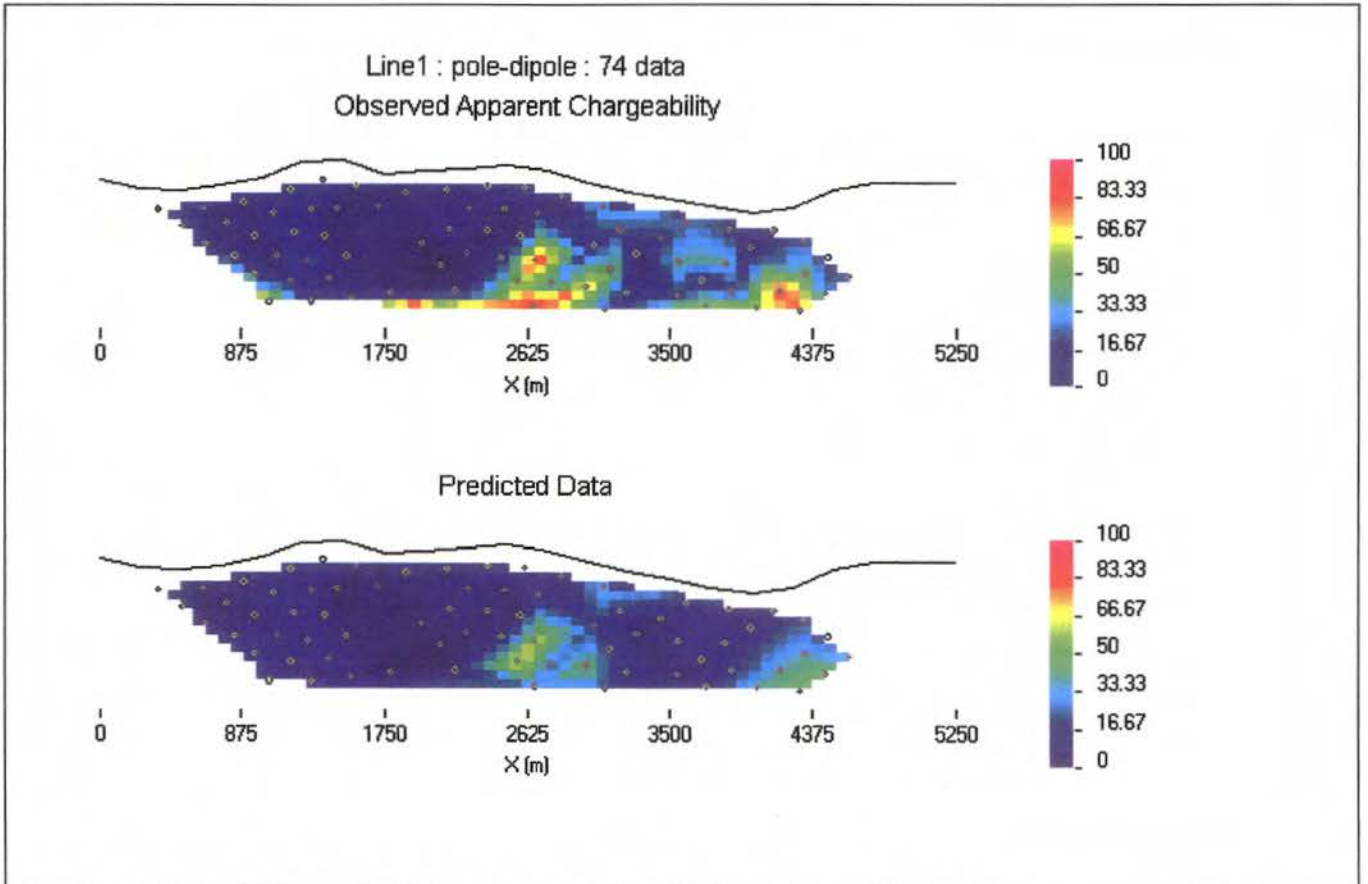


**Best-fit model and convergence curves.**

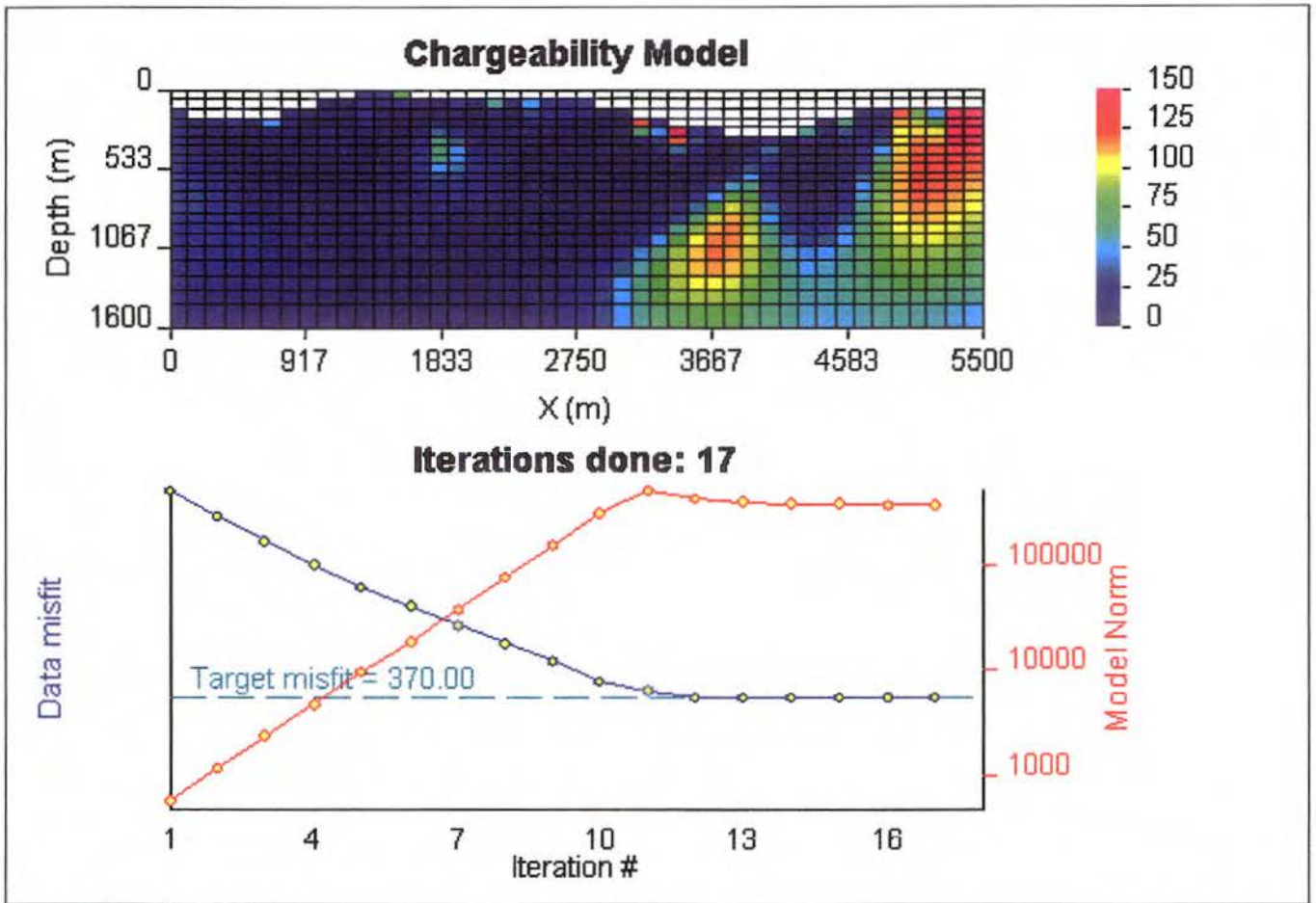


**Depth of investigation**

# LINE 1 - CHARGEABILITY

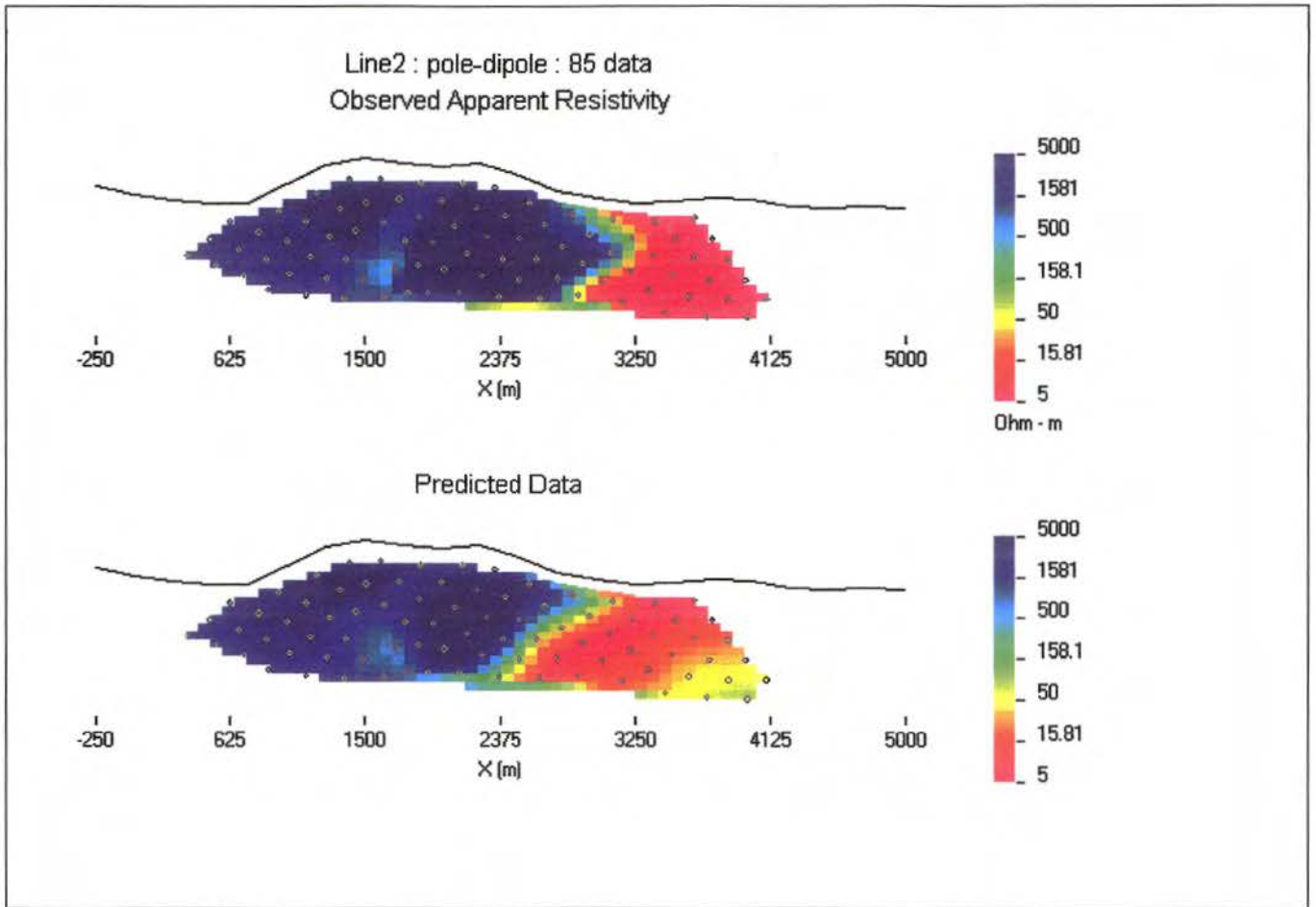


Observed (field) and predicted (model) chargeability pseudosections

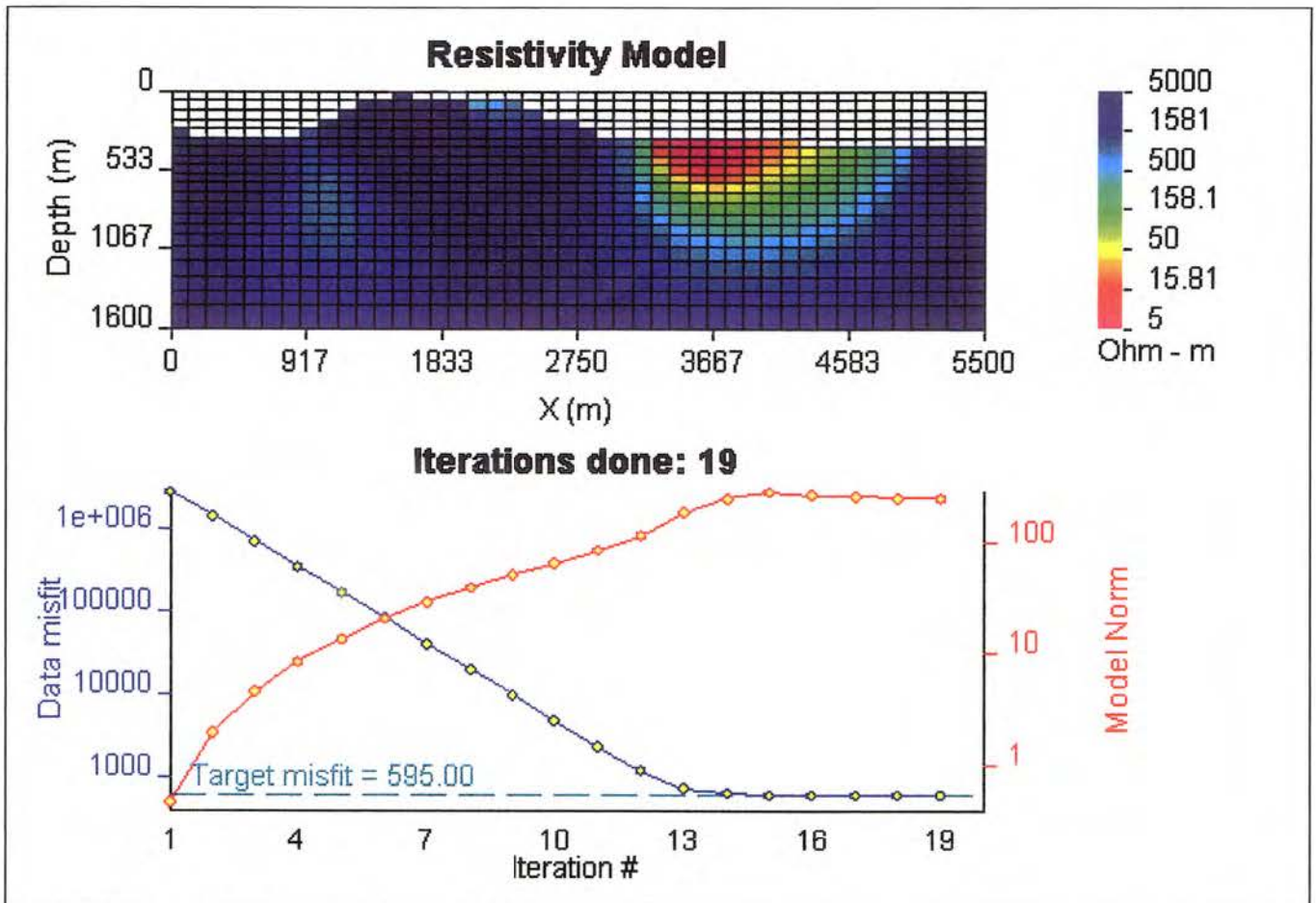


Best-fit model and convergence curves.

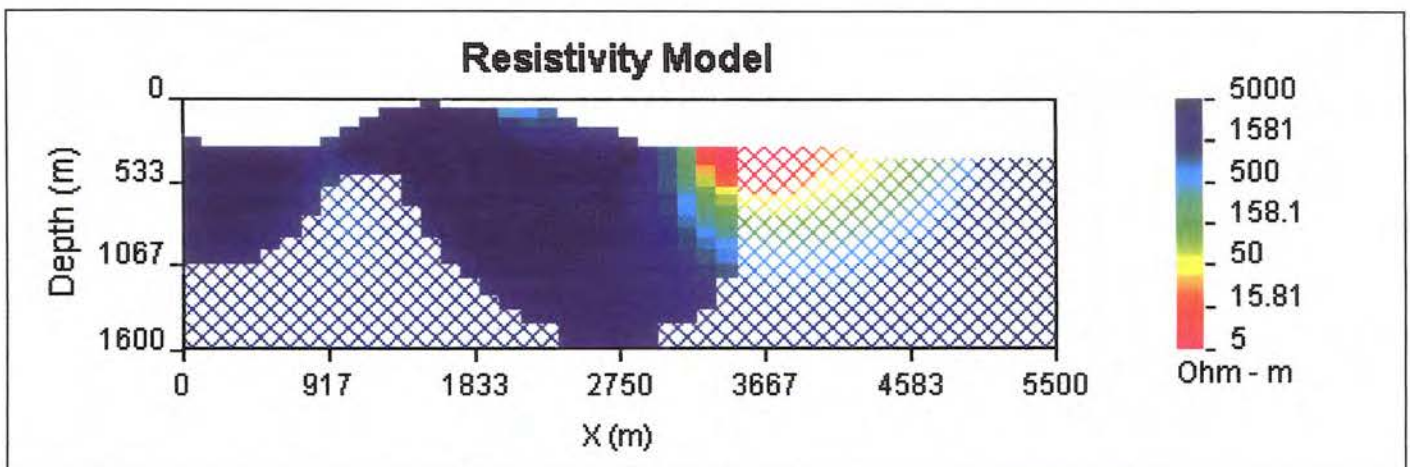
## LINE 2 RESISTIVITY



Depth of investigation

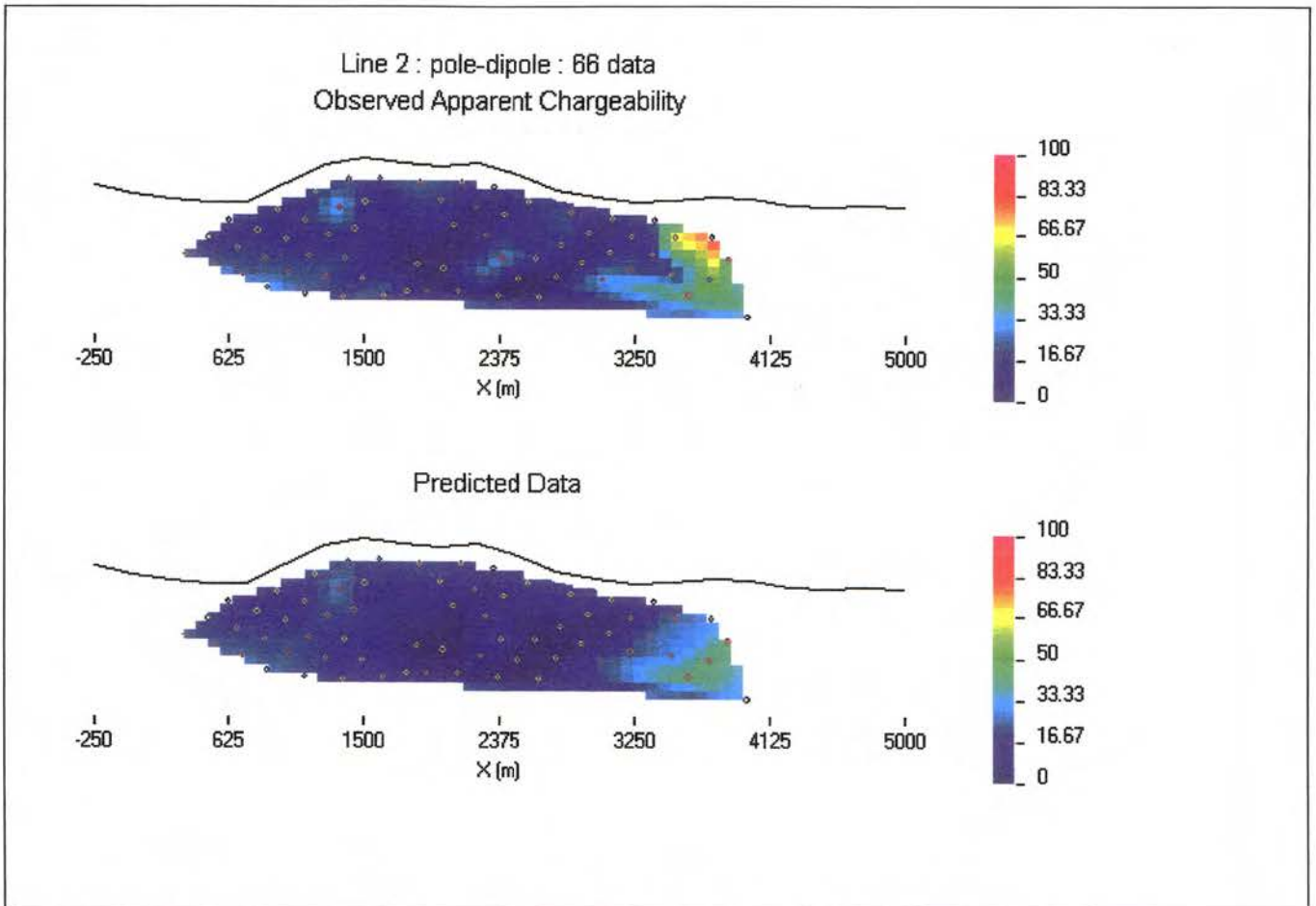


**Best-fit model and convergence curves**



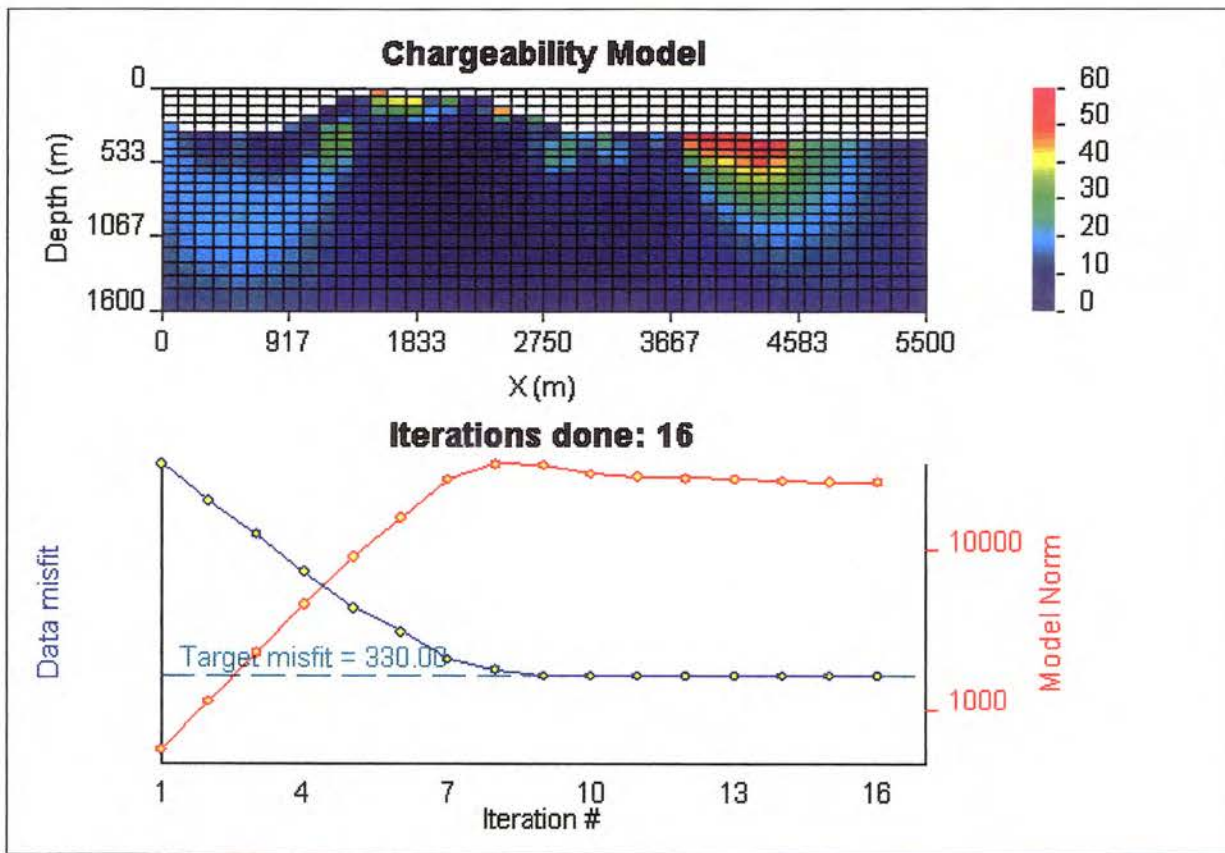
**Depth of investigation (50% variation contour)**

## LINE 2 - Chargeability

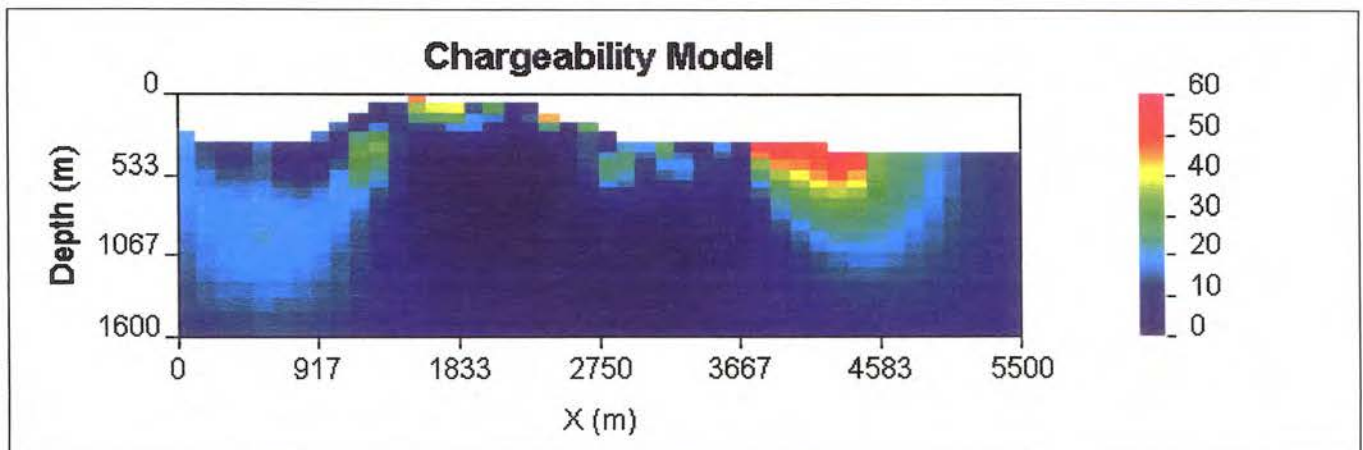


Observed (field) and predicted (model) chargeability pseudosections



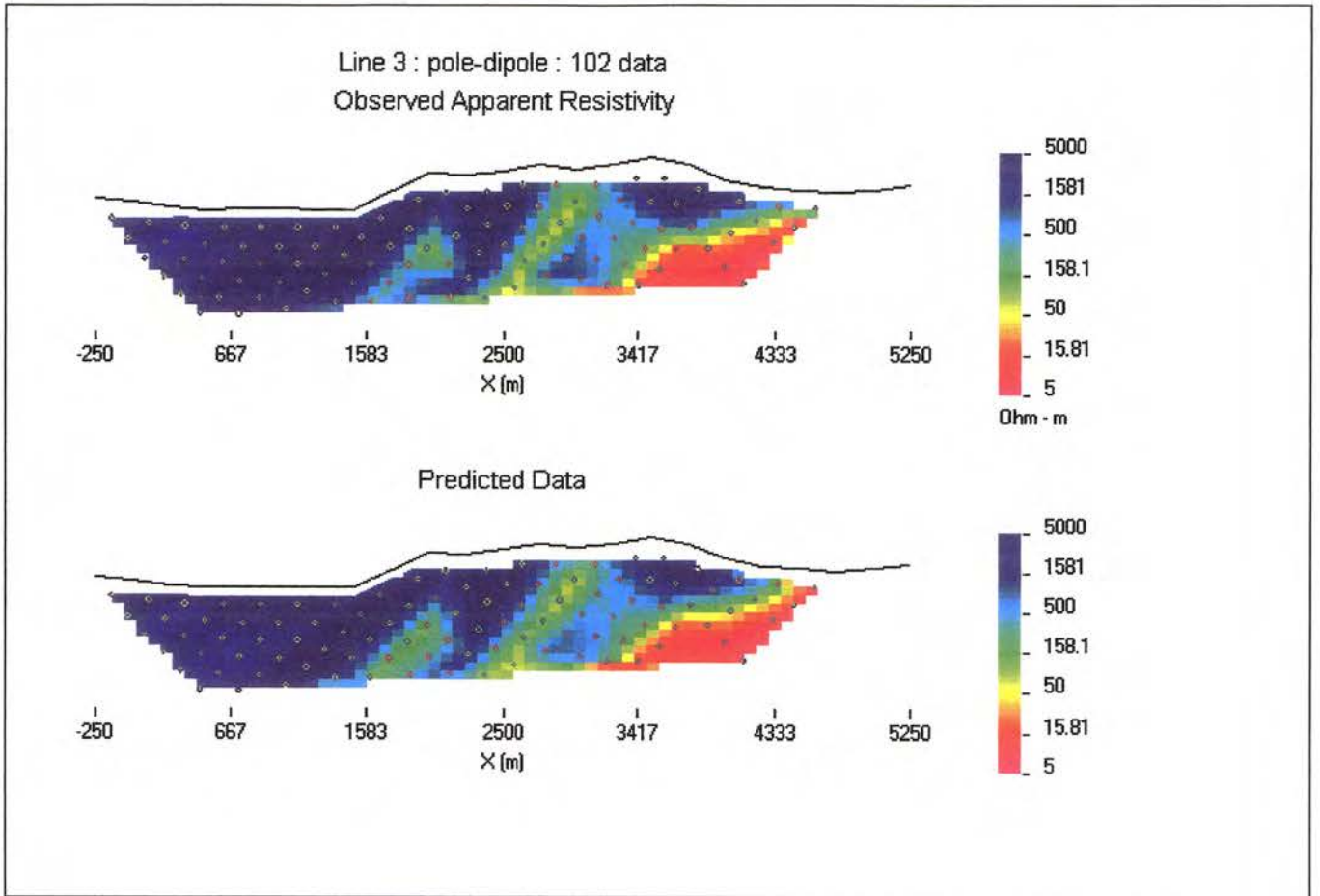


**Best-fit model and convergence curves.**

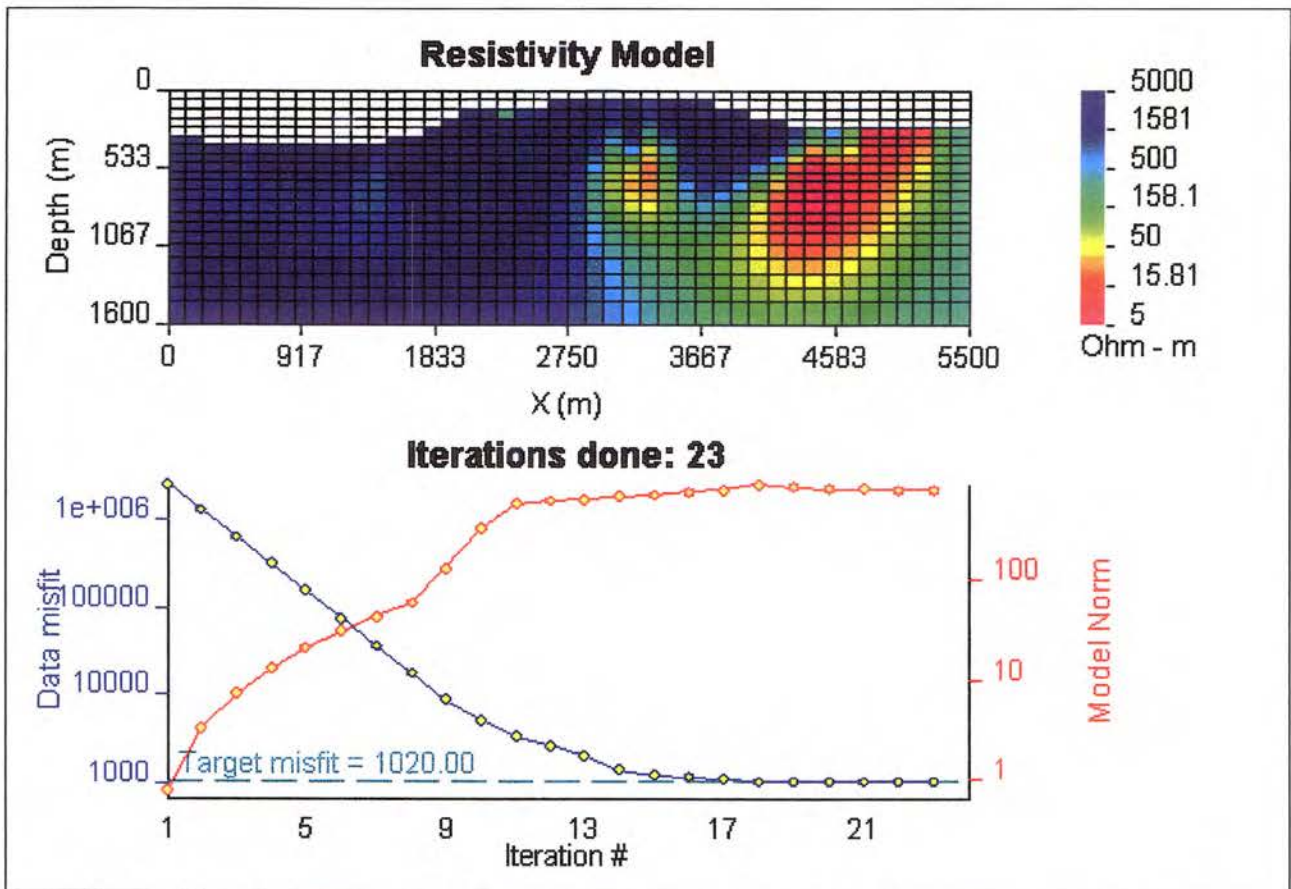


**Chargeability model with mesh and padding cells removed.**

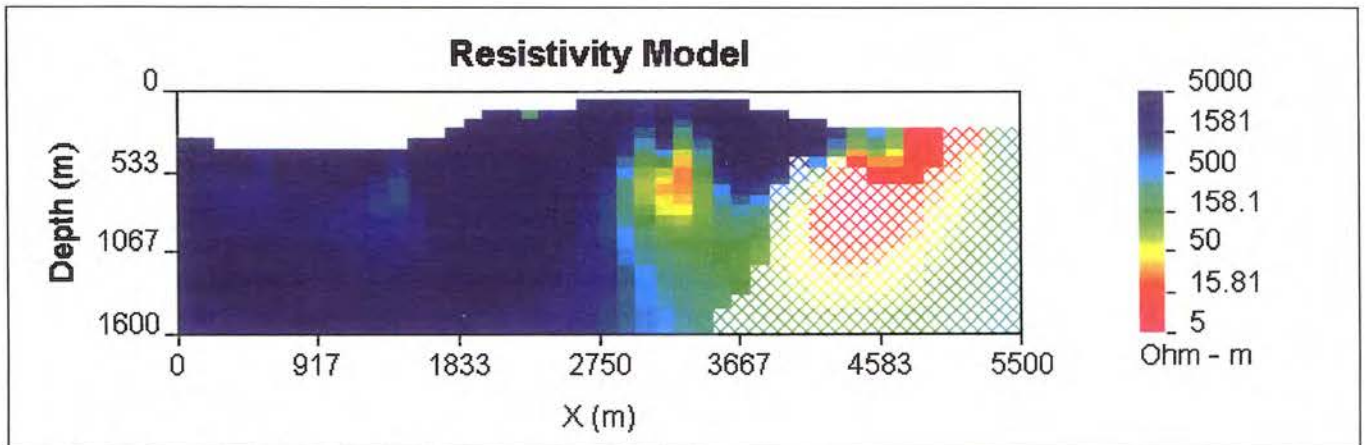
### LINE 3 RESISTIVITY



Observed (field) and predicted (model) resistivity pseudosections

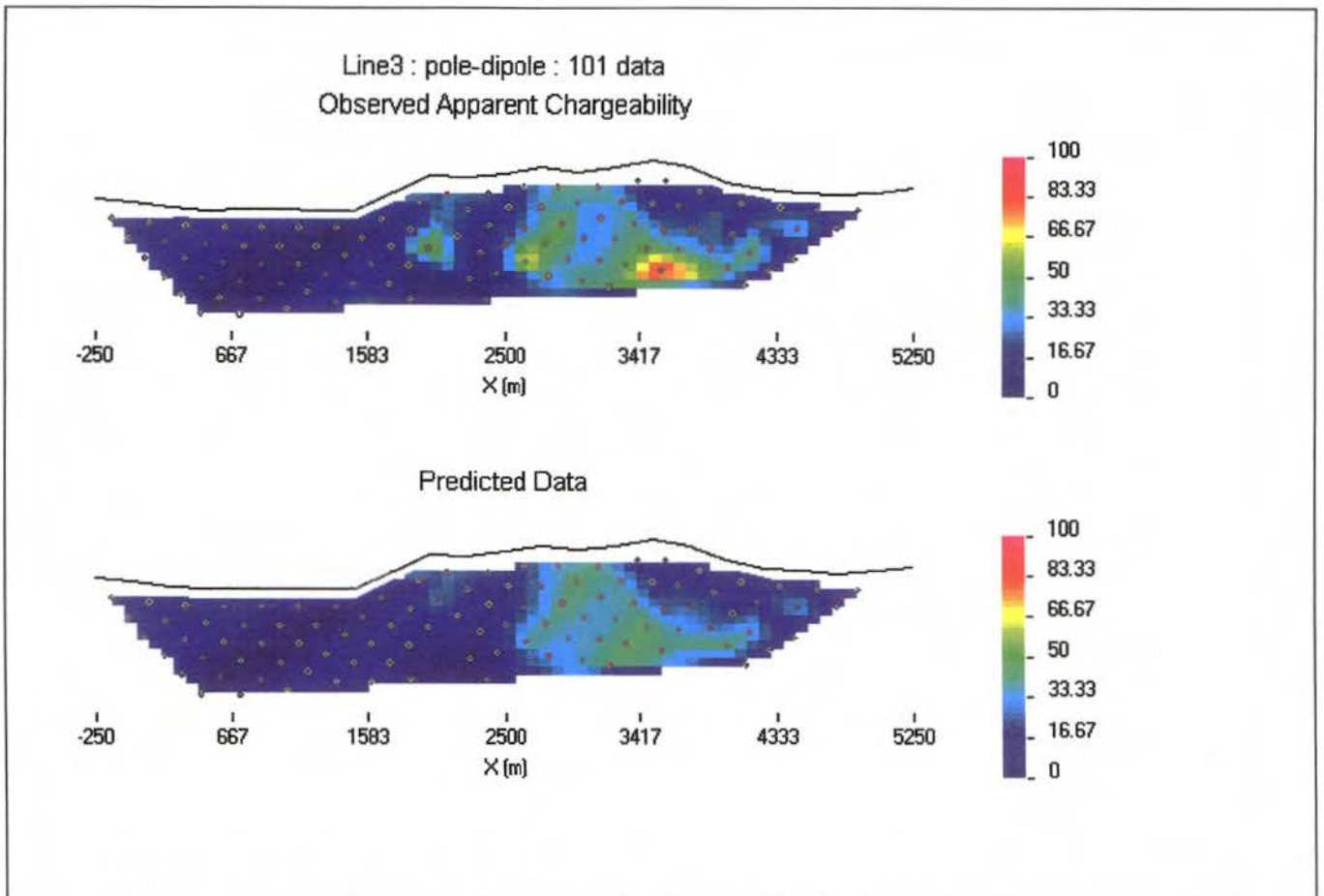


**Best-fit model and convergence curves**

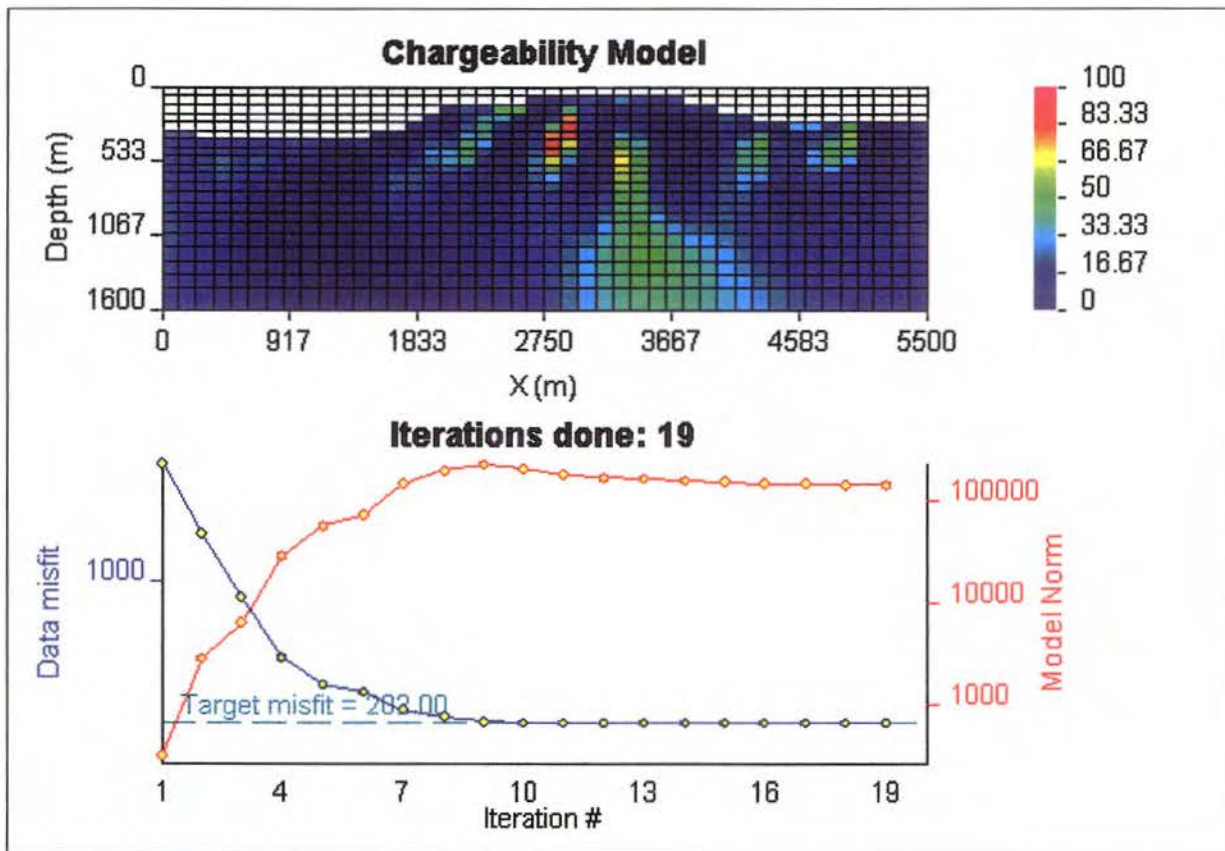


**Depth of investigation (20% variation contour)**

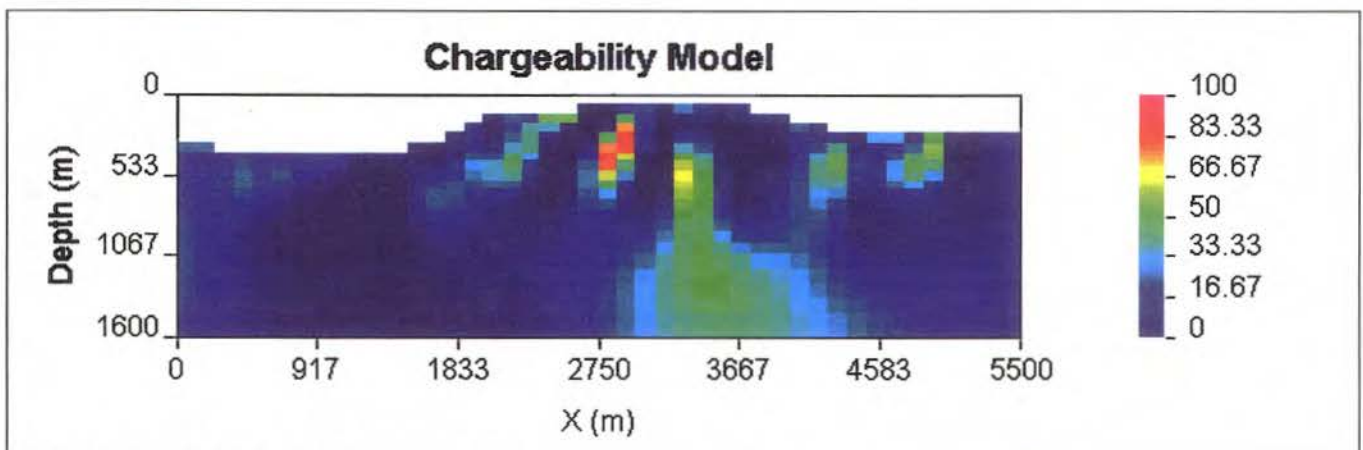
## LINE 3 - CHARGEABILITY



Observed (field) and predicted (model) chargeability pseudosections

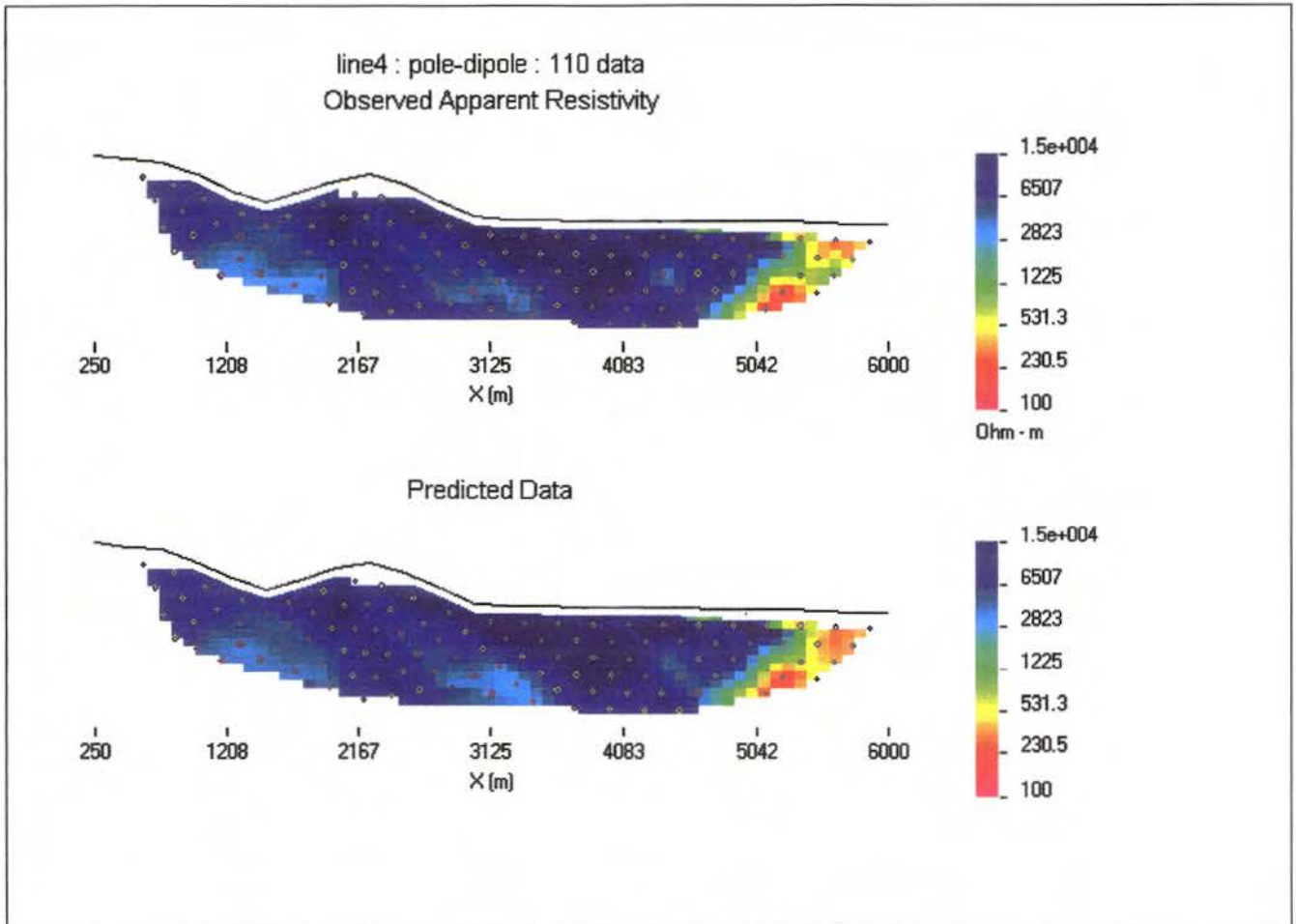


Best-fit model and convergence curves.

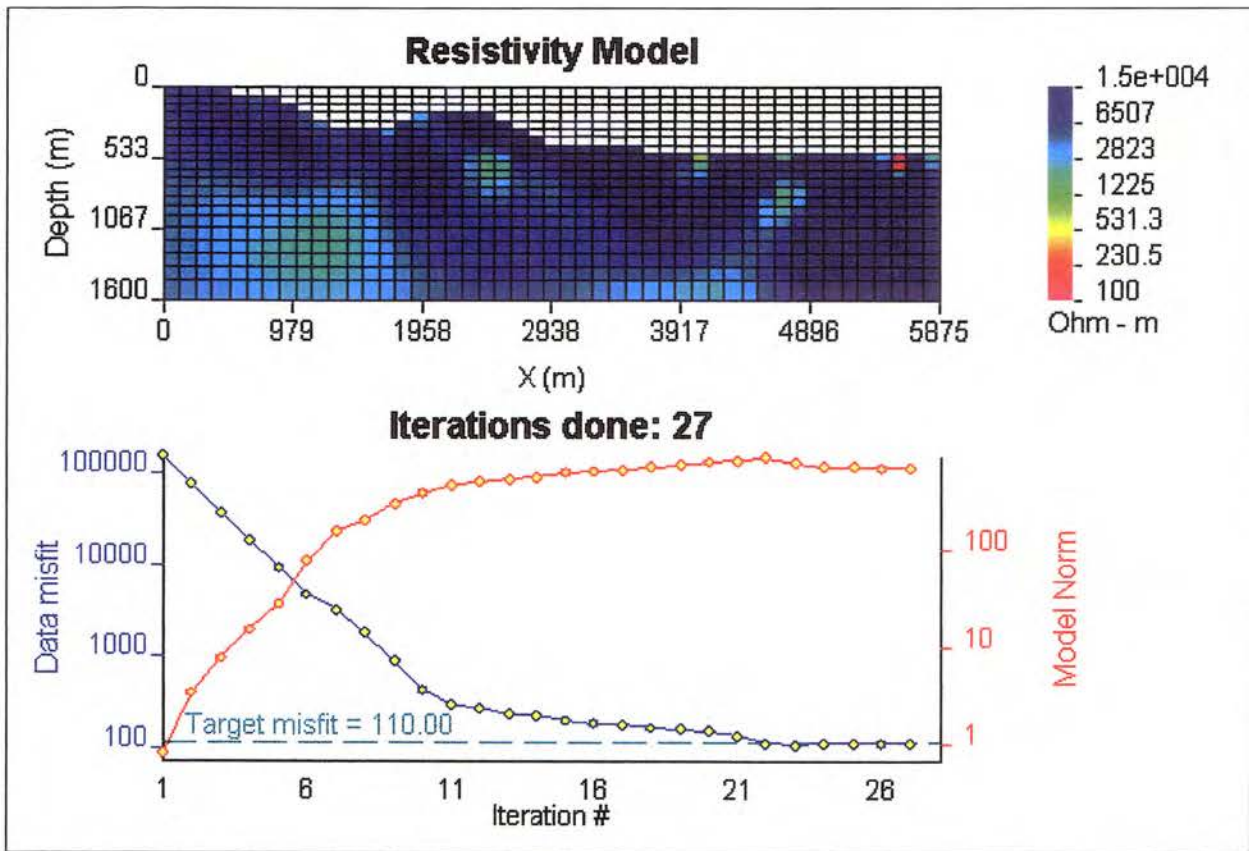


Best fit model with mesh and padding cells removed

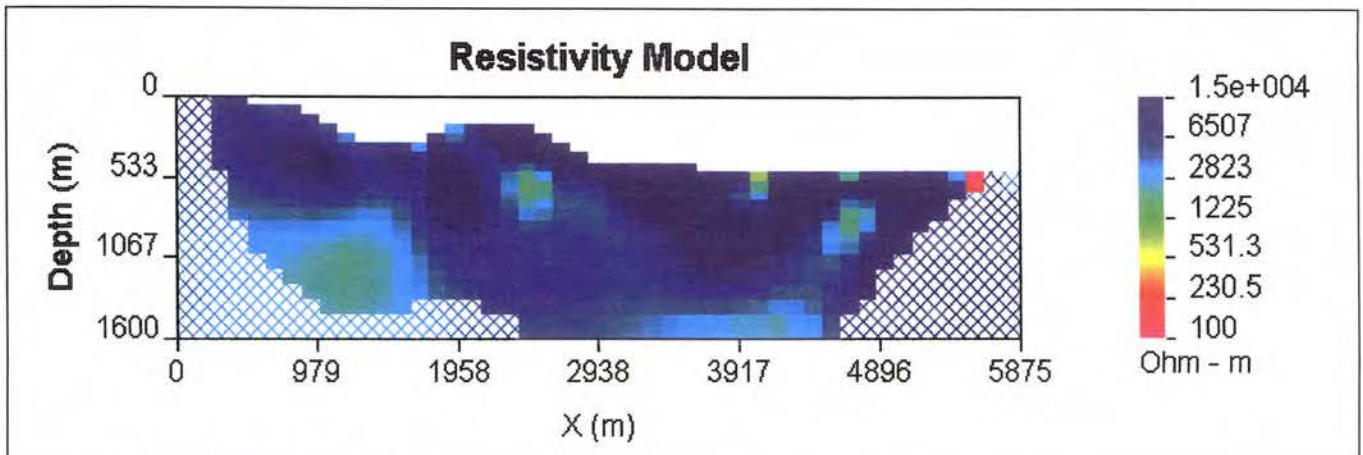
## LINE 4 RESISTIVITY



**Observed (field) and predicted (model) resistivity pseudosections**

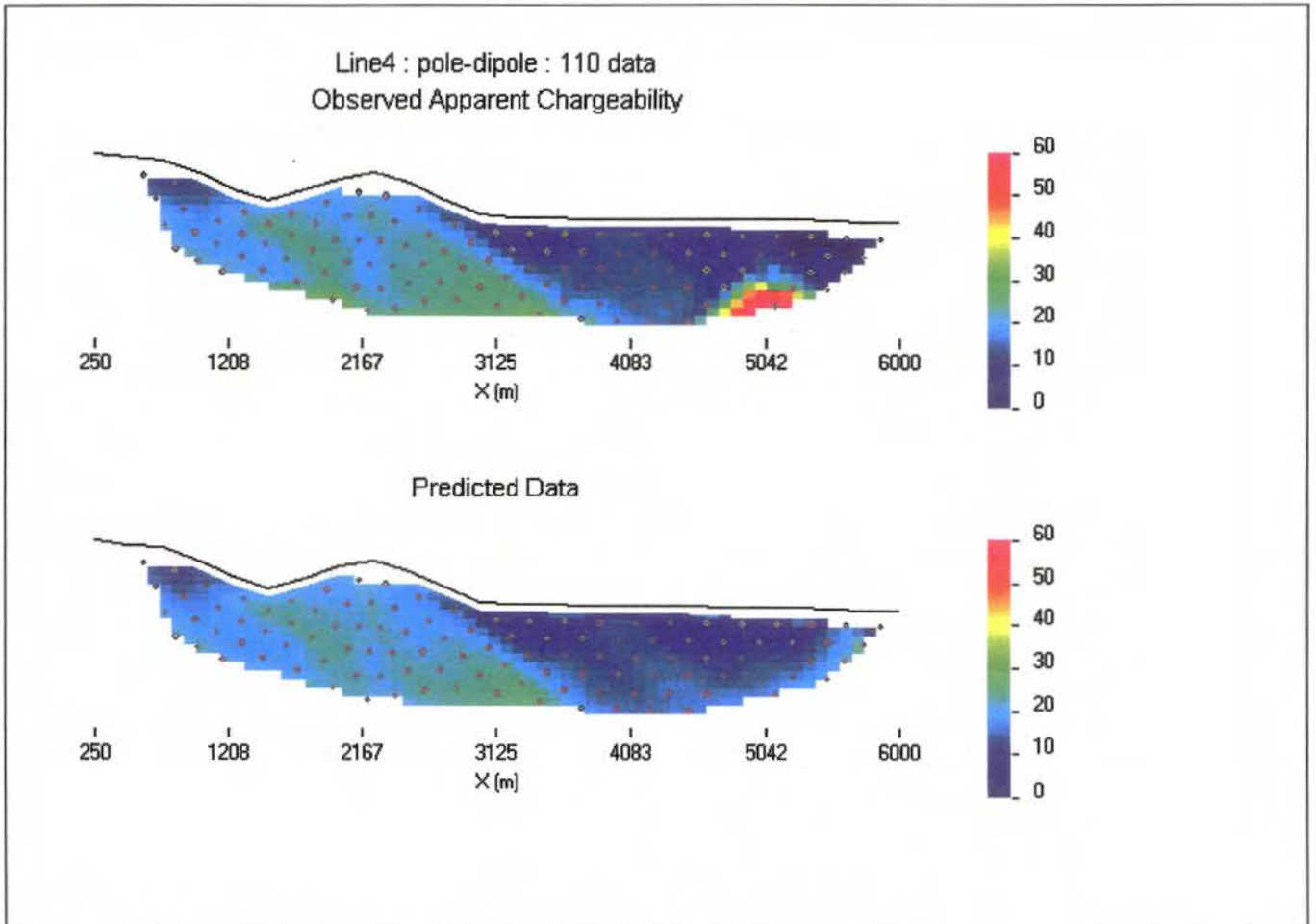


**Best-fit model and convergence curves**



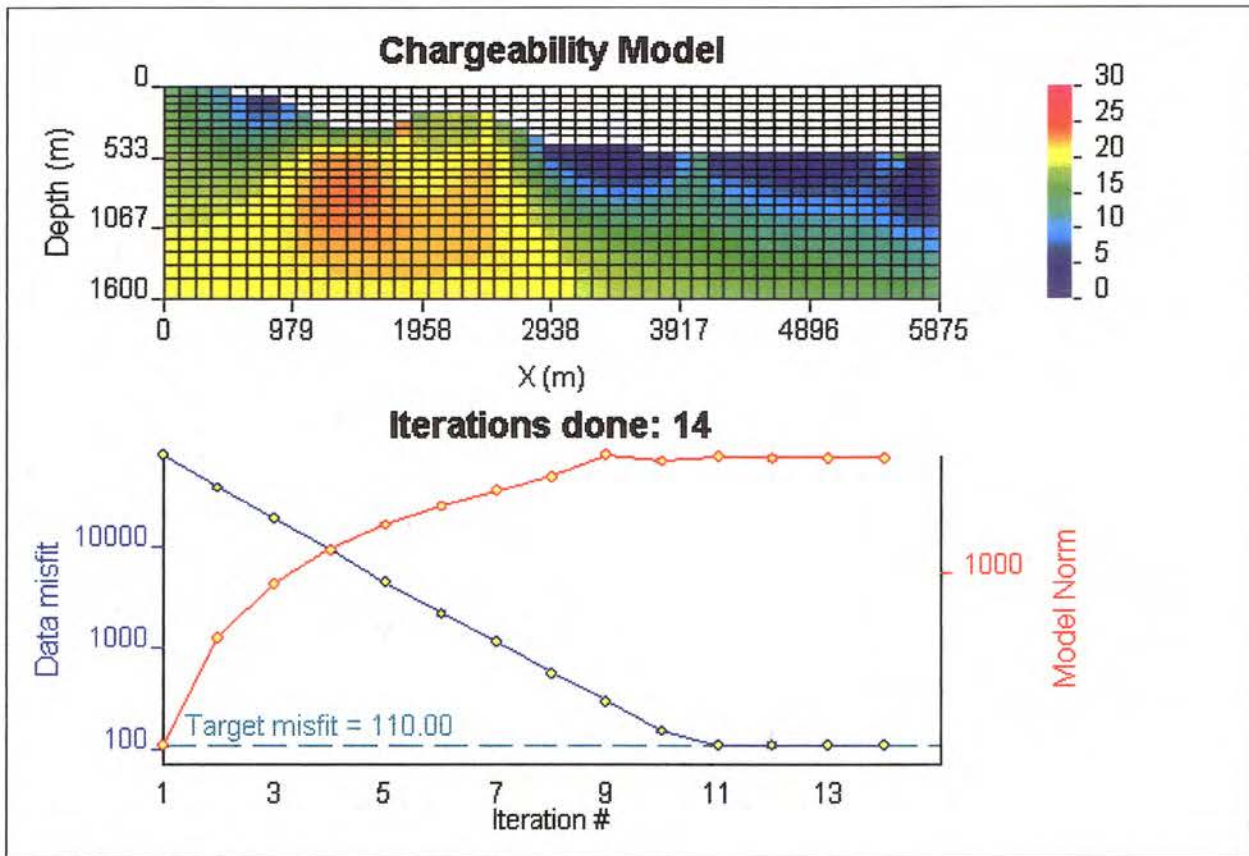
**Depth of investigation (30% variation contour)**

# LINE 4 - CHARGEABILITY

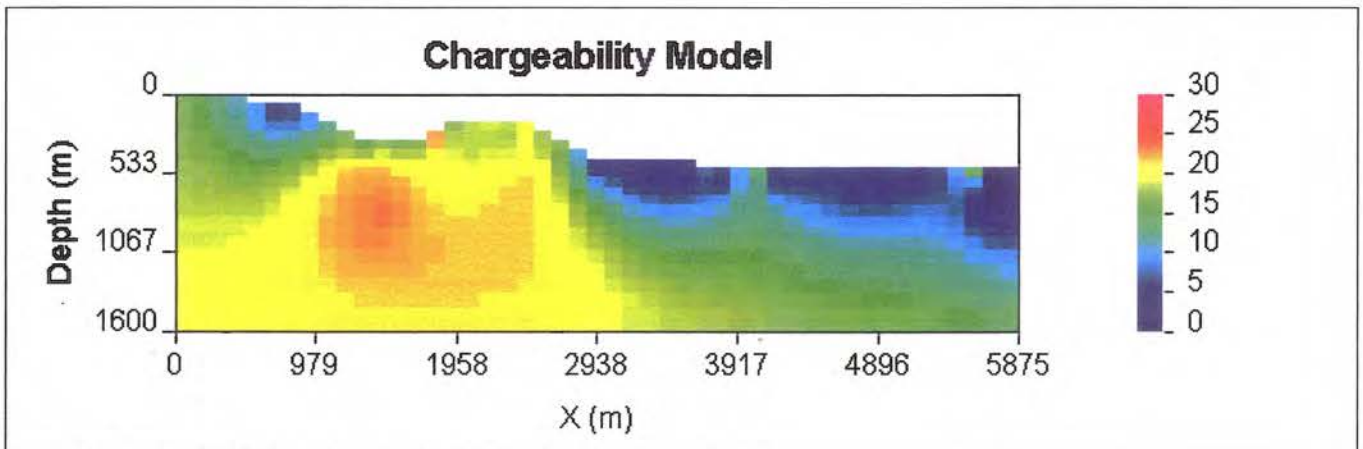


**Observed (field) and predicted (model) chargeability pseudosections**





**Best-fit model and convergence curves.**



**Best fit model with mesh and padding cells removed.**

## APPENDIX VI

PSEUDO SECTION PLOTS  
(Induced Polarization Survey  
& Magnetic/Gravity Survey)

AURORA GEOSCIENCES LTD.  
2003

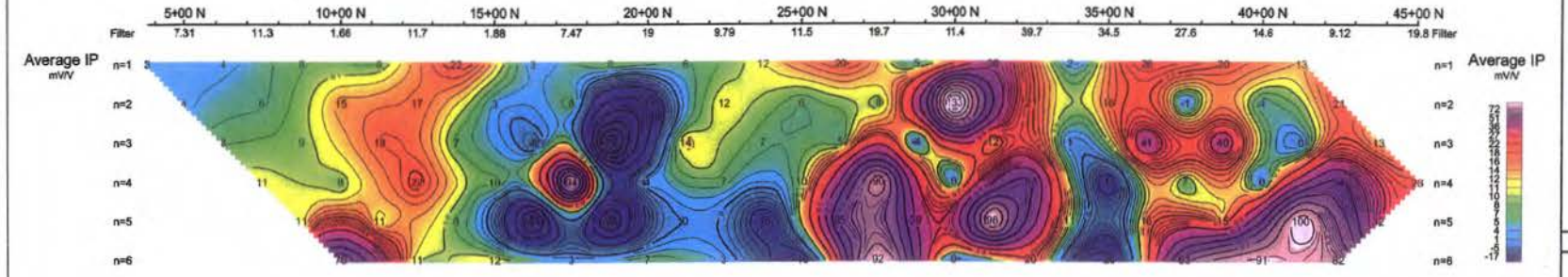
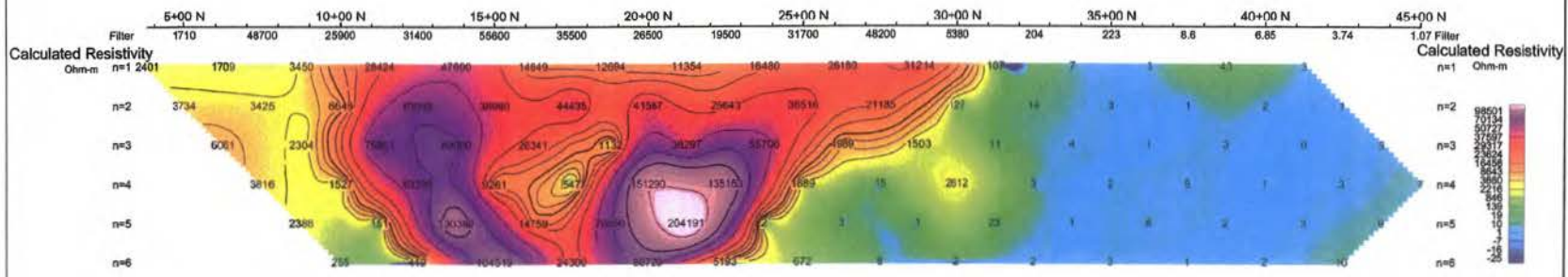
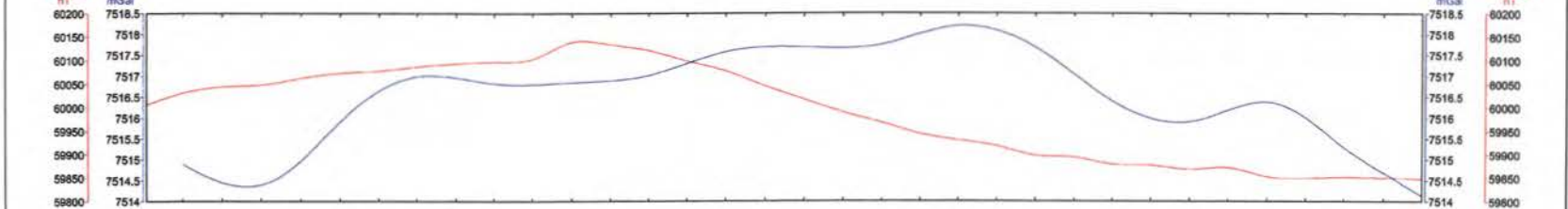
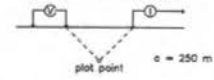
TF Mag  
nT  
GRAVITY  
mGal

GRAVITY  
mGal  
TF Mag  
nT

Pseudo Section Plot

0+01 E

Dipole-Pole Array



Digitally signed by  
**Jim Robinson**  
DN: cn=Jim  
Robinson, o=Aurora  
Geosciences Ltd.,  
c=CA,  
Date: 2003.08.01  
11:41:01 -0800

Signature Not Verifiable

Scale 1:10000  
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metres

**CANADIAN EMPIRE EXPLORATIONS CORP.**  
INDUCED POLARIZATION SURVEY  
**YUKON OLYMPIC PROPERTY  
HEM GRID**  
Date: C1/08/2003  
Interpretation: JR  
**AURORA GEOSCIENCES LTD.**

TF Mag  
nT

GRAVITY  
mGal

7521  
7520  
7519  
7518  
7517  
7516  
7515  
7514.5

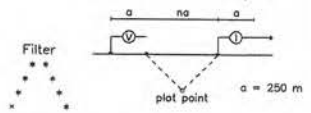
GRAVITY  
mGal

TF Mag  
nT

7521  
7520  
7519  
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7514.5

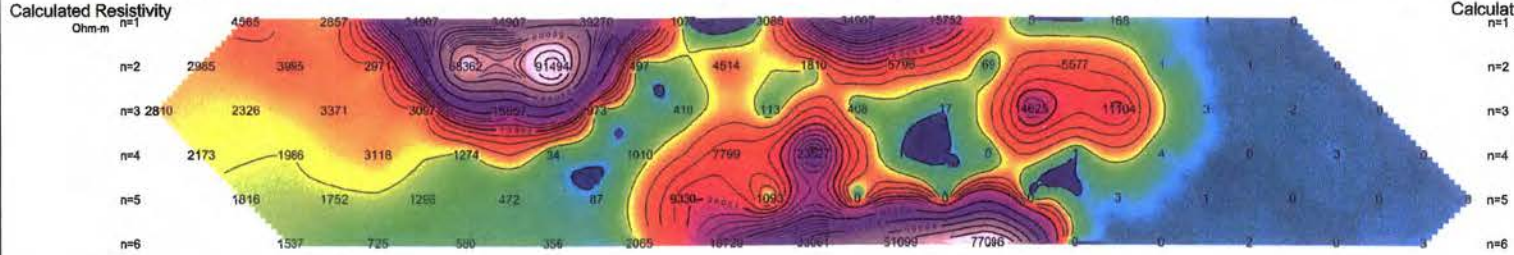
Pseudo Section Plot  
**0+02 E**

Dipole-Pole Array



5+00 N 10+00 N 15+00 N 20+00 N 25+00 N 30+00 N 35+00 N 40+00 N

Filter 2820 2380 13300 18300 16200 19200 7170 4180 7210 8830 2780 5960 8020 1.71 0.548 Filter

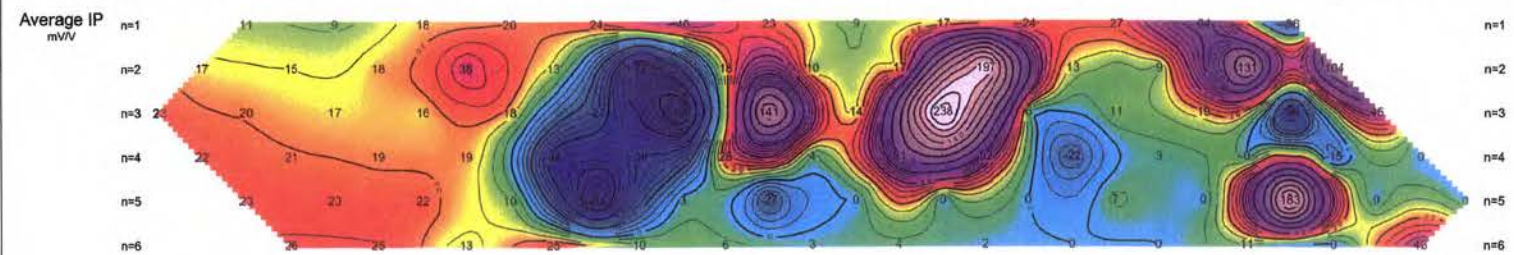


Calculated Resistivity  
n=1 Ohm-m

n=2 42760 23462 13727 8247 6709 4728 3566 3094 2569 2107 1698 1168 614 214 10 2 -18

5+00 N 10+00 N 15+00 N 20+00 N 25+00 N 30+00 N 35+00 N 40+00 N

Filter 16.2 16.8 1.69 6.69 -0.881 27.4 3.43 13.7 33.9 7.68 65 22.5 16.1 20.4 9.56 Filter



Average IP  
n=1 mV/V

n=2 104 61 40 29 24 22 20 17 15 13 11 9 7 5 3 2 1

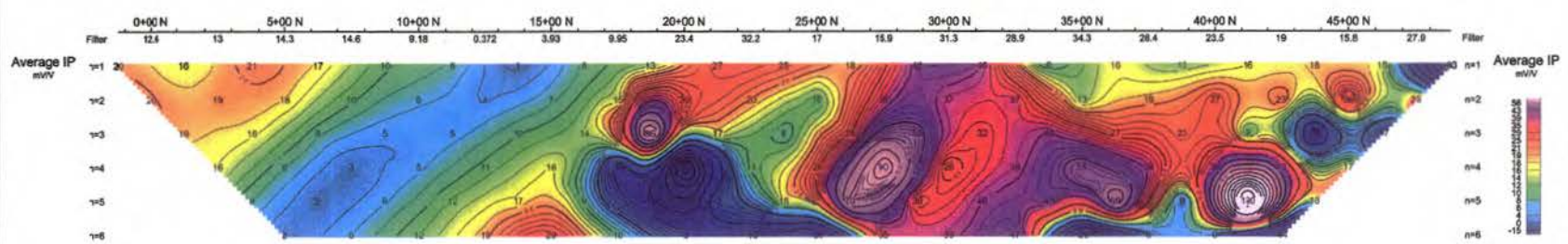
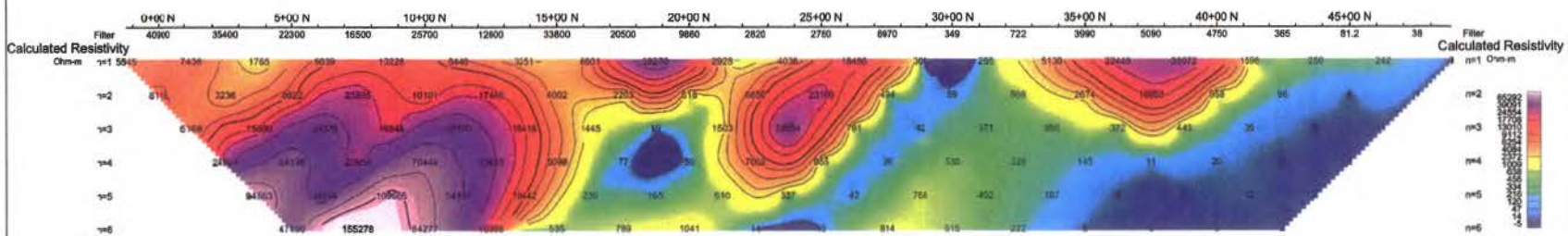
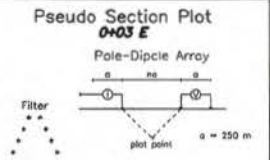
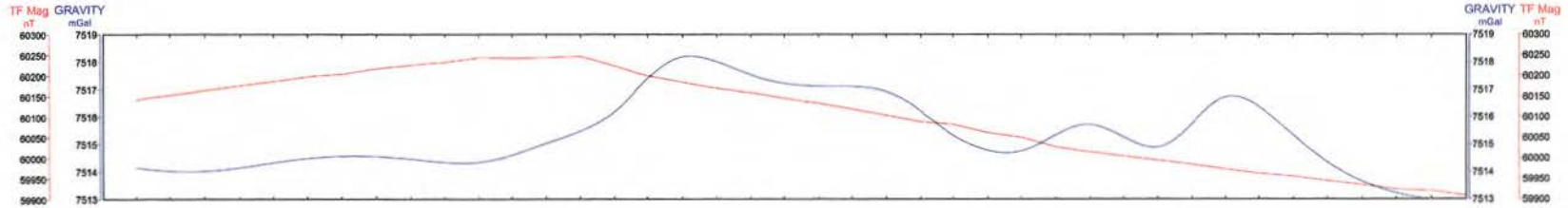
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**Jim Robinson**

Scale 1:10000

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metres

**CANADIAN EMPIRE EXPLORATIONS CORP.**  
INDUCED POLARIZATION SURVEY  
**YUKON OLYMPIC PROPERTY  
HEM GRID**  
Date: 01/08/2003  
Interpretation: JR  
**AURORA GEOSCIENCES LTD.**

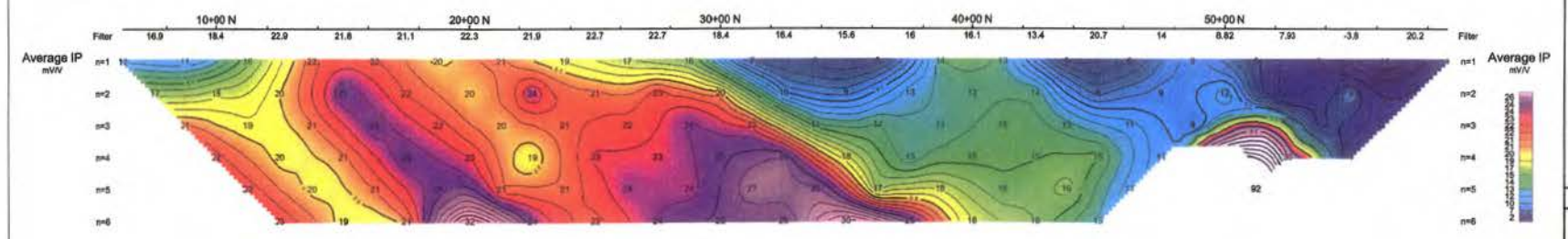
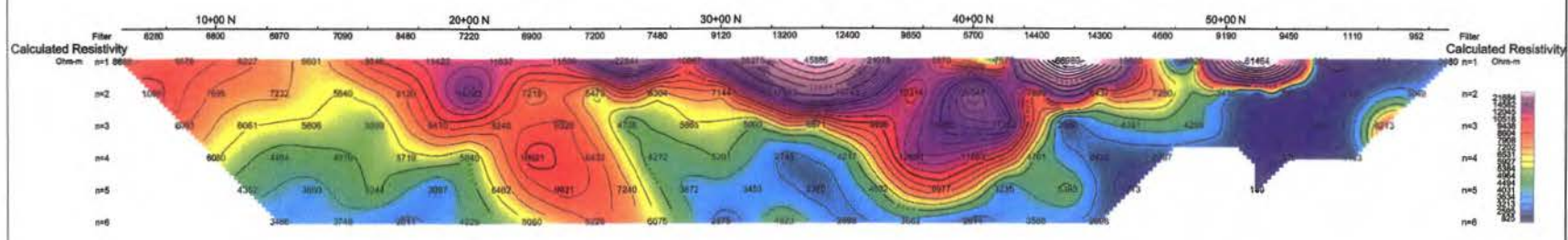
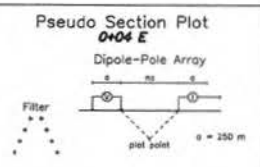
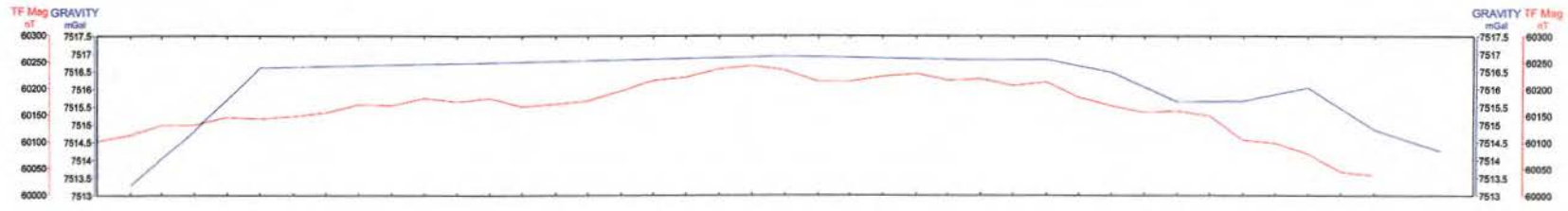


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Date: 2003.08.01 11:20:57 -0600

**Jim Robinson**

Scale 1:10000

**CANADIAN EMPIRE EXPLORATIONS CORP.**  
INDUCED POLARIZATION SURVEY  
**YUKON OLYMPIC PROPERTY**  
HEM GRID  
Date: 01/08/2003  
Interpretation: JR  
**AURORA GEOSCIENCES LTD.**



**Jim Robinson**  
Geophysicist

Scale 1:10000  
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metres

**CANADIAN EMPIRE EXPLORATIONS CORP.**  
INDUCED POLARIZATION SURVEY  
YUKON OLYMPIC PROPERTY  
HEM GRID  
Date: 01/08/2003  
Interpretation: JR

**AURORA GEOSCIENCES LTD.**

APPENDIX VII

2003 EXPENDITURE RECEIPTS

**ACME ANALYTICAL LABORATORIES LTD.**

852 East Hastings,, Vancouver, B.C., CANADA V6A 1R6

Phone: (604) 253-3158 Fax: (604) 253-1716

Our GST # 100035377 RT

**CANADIAN EMPIRE EXPLORATION LTD.**

1205 - 675 W. Hastings St.

Vancouver, BC

V6B 1N2

Inv.#: **A302508**

Date: Jul 31 2003

QTY	ASSAY	PRICE	AMOUNT
6	GROUP 1D @	5.72	34.32
6	GROUP 3B - AU @	8.69	52.14
5	GROUP 4B - SN @	11.70	58.50
5	GROUP 4A - TI SC @	10.80	54.00
5	GROUP 6 - AU @	10.58	52.90
21	GROUP 1DX (15 gm) @	11.25	236.25
6	R150 - ROCK @	4.50	27.00
5	P150 - PAN CONC @	2.39	11.95
21	SS80 - SOIL @	1.35	28.35
GST Taxable			555.41
7.00% GST			38.88
CAD \$			<b>594.29</b>

Project: Yukon Olympic  
 Samples submitted by Brian Thurston  
 FILE # A302508 TO A302510 - UNIT PRICE REFLECTS 10% DISCOUNT

COPIES 1 FAX 1 E-DATA 1

OK  
 CYP CEE OEX  
 902

Please pay last amount shown. Return one copy of this invoice with payment.  
 TERMS: Net two weeks. 1.5 % per month charged on overdue accounts.

[ COPY 1 ]





P.O. Box 31479  
Whitehorse, Yukon  
Canada Y1A 6K8  
Phone 867-633-6268  
Fax 867-633-6267

Invoice #060

Canadian Empire Exploration Corp.  
43 Donjek Rd.  
Whitehorse, YT  
Y1A 3R1

Phone: 1-800-403-2988

July 15, 2003

**Crew at camp June 16-30/03**

OK

Number of Man Days 102  
Cost per Man Day \$100/day

Sub-total \$10,200 - 906

**Quad rental June 18-24/03**

OK

Quad Days 7  
Quad cost: \$100/day

Sub-total \$700 - 934

**Zodiac Rental June 20, 21, 27-30/03**

OK

Zodiac Days 6  
Zodiac cost: \$100/day

Sub-total \$600 - 934

sub-total \$11,500.00

7% GST \$ 805.00

**Total \$12,305.00**

OK BT  
Y.O.  
906

# BLACKSTONE

*Outfitters*

P.O. Box 31479  
 Whitehorse, Yukon  
 Canada Y1A 6K8  
 Phone 867-633-6268  
 Fax 867-633-6267

## Invoice #061

Canadian Empire Exploration Corp.  
 43 Donjek Rd.  
 Whitehorse, YT  
 Y1A 3R1 Phone: 1-800-403-2988

*Brian to review and approve.*

July 15, 2003

### Crew at camp July 1-10/03

*Left on 10/21 to Alameda*

Number of Man Days 20  
 Cost per Man Day \$100/day

*left on 10/21 check out on*

Sub-total \$2,000 - 906

### Zodiac Rental July 8,9/03

*2*

Zodiac Days 2  
 Zodiac cost: \$100/day

Sub-total \$200 - 934

sub-total \$2,200.00

Satellite Phone Minutes @ \$2.00/minute 61 min. = \$122.00 - 918

Sub-total \$2,322.00

7% GST \$ 162.54

**Total \$2,484.54**

*OK*  
*CTP CEE Y.O. 906/93*

G.S.T. #  
 13025 4500 RT0001

*che \$14,789.54*

*906 YOLC02 - 12,200.  
 934 YOLC02 - 1,500.  
 918 YOLC02 - 122.00  
 140 GSTC02 - 967.54*

*OK BSA  
 906  
 Y.O.*



**Whitehorse Office**  
108 Gold Road  
Whitehorse, YT  
Y1A 2W3  
Phone: (867) 668-7672

Fax: (867) 393-3577

[www.aurorageosciences.com](http://www.aurorageosciences.com)

## INVOICE

GST No.: RT886365816  
File: CXP-03-001-YT

Invoice #001  
July 14<sup>th</sup>, 2003

In account with: **Canadian Empire Explorations Ltd.**  
43 Donjek Road  
Whitehorse, Yukon  
Y1A 3R1

Attention: Mr. Brian Thurston

**Re: HEM Property - IP Survey**

### Professional Services

Mobe/Demobe	
Fixed cost as per contract	\$3,600.00
IP Survey (3 person crew)	
12 days @ \$1,765.00/day	\$21,180.00
Data Formatting and Checks	
10 hours @ \$65.00/hour	\$650.00
Processing, Inversions and Field Report	
16.5 hours @ \$65.00/hour	<u>\$1,072.50</u>
	<b>Subtotal</b>
	<b>\$26,502.50</b>

### Disbursements GST not Included

1. North 60 Petro	\$151.20
2. 1.6 Drums Jet B Fuel @ \$303.74/drum	\$485.98
Admin Charges 10%	<u>\$63.72</u>

**Subtotal** **\$700.90**

**GST** **\$1,904.24**

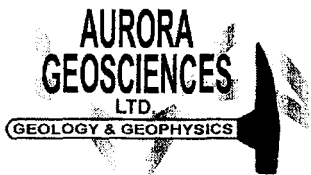
**Total** **\$29,107.64**

**Advance** **-\$15,000.00**

**Aurora costs** **-245.91**

**Amount Owing** **\$13,861.73**

Terms: Net 15 days. Interest charged at 2% per month on overdue accounts



**Whitehorse Office**  
108 Gold Road  
Whitehorse, YT  
Y1A 2W3  
Phone: (867) 668-7672

Fax: (867) 393-3577

[www.aurorageosciences.com](http://www.aurorageosciences.com)

**INVOICE**

GST No.: RT886365816  
File: CXP-03-001-YT

Invoice #002  
July 18<sup>th</sup>, 2003

In account with: **Canadian Empire Explorations Ltd.**  
43 Donjek Road  
Whitehorse, Yukon  
Y1A 3R1      Attention: Mr. Brian Thurston

Re: **HEM Property - Mag and Gravity Surveys**

Professional Services

Mobe Gravity Meter to Whitehorse Fixed cost as per contract	\$200.00
Mag Rental (June 27) 1 day @ \$200.00/day	\$200.00
Mag Survey (June 30) 1 day @ \$900.00/day	\$900.00
Standby Day (July 1) 1 day @ \$300.00/day	\$300.00
Gravity Survey (July 2 - July 9) 8 days @ \$1,325.00/day	\$10,600.00
Data Formatting and Checks, GPS Corrections and Leveling, Data Processing and Field Report 22 hours @ \$65.00/hour	\$1,430.00
ATV Rental 9 days @ \$100.00/day	<u>\$900.00</u>
<b>Subtotal</b>	<b>\$14,530.00</b>
<u>Disbursements GST not Included</u>	
1. Air North	\$117.87
2. Air North	\$110.58
3. Air North	85.33
Admin Charges 10% (of disbursements including GST)	<u>\$33.57</u>
<b>Subtotal</b>	<b>\$347.35</b>
<b>GST</b>	<b><u>\$1,041.41</u></b>
<b>Total</b>	<b>\$15,918.76</b>

Terms: Net 15 days. Interest charged at 2% per month on overdue accounts

**BADGER & CO. MANAGEMENT CORP.**

Suite 1207, 675 West Hastings Street, Vancouver, B.C., Canada V6B 1N2  
Facsimile (604) 687-4991 Telephone (604) 687-4951

July 31, 2003

Canadian Empire Exploration Corp.  
1205 - 675 West Hastings Street  
Vancouver, BC V6B 1N2

**INVOICE** 2003-139

Wages reimbursable for JULY, 2003

OEX	1,093.75
<del>BIG BULK</del>	<del>12,172.56</del>
VMS	0.00
YUKON OLYMPIC	6,408.51
HEMLO WEST	131.25
MERIDIAN	0.00
AMOS	0.00

GST (R-884296922)

7633.51 ~~49,806.08~~  
534.35 ~~4,386.43~~

Invoice Total

8167.86 21,192.54

19,220.40  
-10,000.00 PD in  
9,220.40 Aug  
CAB

To WAYNE ROBERTS CANADIAN EMPIRE.

From SHAWN RYAN

KLONDIKA EXPLORATION

Box 213 Dawson  
CITY  
Yukon, Y0B 1G0

OUR NUMBER	14253
DATE	DEC 16, 2002
CUSTOMER'S ORDER	

SOLD TO	WAYNE ROBERTS.
ADDRESS	Fax 604 687 4991

SHIP TO	
ADDRESS	

TAX REG. NO.	SALESPERSON
--------------	-------------

FOB	TERMS	VIA
-----	-------	-----

QUANTITY	DESCRIPTION	PRICE	AMOUNT
	HEM Claims 78-88 5 year Renewals chg Yukon Chg 944		250.00 NO GST
	<del>CHG Yukon Chg 934</del> WITH SAFETY PANTS. 2 weeks RENTAL ON HEM DRILL JOB chg <del>Chg Yukon Chg CEE 934</del>		350.00
			140 GST CO
		GST	24.50
		PST	
		TOTAL	624.50

INVOICE

**CANMEX CONSULTING & LEASING**  
Suite #2-2770 FRASER STREET, VANCOUVER, BC, V5T 3V7  
TEL: 604-720-6266 FAX: 604-687-7087

July 1, 2003

**TO:** Canadian Empire Exploration Corp.  
Suite 1205-675 West Hastings Street  
Vancouver, BC Canada  
V6B 1N2

**Re:** Toshiba Satellite 2410 Series Portable Personal Computer, Serial No. 13106121P

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**INVOICE #03006**

This invoice covers the lease payment from June 1<sup>st</sup> to June 30<sup>th</sup>, 2003 pertaining to the **LEASE AGREEMENT**, made May 1<sup>st</sup>, 2003, by and between **CANMEX CONSULTING & LEASING**, of #2-2770 Fraser Street, Vancouver, BC, V5T 3V7 (**Proprietor**), and Canadian Empire Exploration Corp., of Suite 1205, 675 West Hastings Street, Vancouver, BC, V6B 1N2 (**Lessor**).

Lease Payment = \$ 310.88  
G.S.T. @ 7% = \$ 21.76

**INVOICE TOTAL = \$ 332.64**

CAP- Y.O CFE

934

DR

**CANMEX CONSULTING & LEASING**  
Suite #2-2770 FRASER STREET, VANCOUVER, BC, V5T 3V7  
TEL: 604-720-6266 FAX: 604-687-7087

July 4, 2003

**TO:** Canadian Empire Exploration Corp.  
43 Donjek Road, Whitehorse, Yukon  
Y1A 3R1

**Re:** Invoice for Satellite Phone Rental

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**INVOICE # 03007**

This invoice is for the period covered June 15<sup>th</sup>, 2002 to July 15<sup>th</sup>, 2003. The phone is rented at a monthly charge of \$300.<sup>00</sup>.

1 month @ \$300/month	= \$300.00
G.S.T. @ 7%	= \$ 21.00

**INVOICE TOTAL = \$321.00**

CYP TO CEE  
aib  
2/12



**CANMEX CONSULTING & LEASING**  
Suite #2-2770 FRASER STREET, VANCOUVER, BC, V5T 3V7  
TEL: 604-720-6266 FAX: 604-687-7087

July 4, 2003

TO: Canadian Empire Exploration Corp.  
43 Donjek Road, Whitehorse, Yukon  
Y1A 3R1

Re: Invoice Advance for Satellite Phone Minutes used from June 15<sup>th</sup> to July 7<sup>th</sup>, 2003


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**INVOICE # 03008**

This invoice is for satellite phone charges up to 200 minutes. This is an advance paid for by Canadian Empire Exploration Corp. for the period covered June 15<sup>th</sup>, 2002 to July 7<sup>th</sup>, 2003. The time is charged out at \$2.<sup>00</sup> per minute. A detailed call log will be provided when available.

200 minutes	@ \$2.00 / minute	= \$400.00
G.S.T.	@ 7%	= \$ 28.00

INVOICE TOTAL = \$428.00

CAP CEE 40 - 918  


# Commercial Solutions Inc

Head Office 4203 95 St Edmonton AB Can T6E 5R6 Tel 780 432 1611  
 Orders 780 484 6687 Fax 780 484 6763  
 Orders 780 483 7775 Fax 780 484 2087

## Canadian Forestry Equipment Neville Crosby

SOLD TO 086445 QAY SHIP TO 086445 QAY PG 1 OF 1

CANADIAN EMPIRE EXPLORATION CORP  
 1205 675 WEST HASTINGS ST  
 VANCOUVER, BC V6B 1N2

CANADIAN EMPIRE EXPLORATION CORP  
 1205 675 WEST HASTINGS ST  
 VANCOUVER, BC V6B 1N2  
 (604)667-4951

*CYP CBE Yellow 24  
935*

CHARGE INVOICE

Vancouver		GST Number R101066637		Reference Number 033-005081	
Mo	Day	Yr	Written By	Your PO Number	Terms
	6/12/03		DCE	6/12/03 508	NET 30 DAYS
Quantity		Part Number and Description		Code	List Price
Ordered	Shipped	B/O	ZZZ GLOVES GREY	G	Net Price
2	2		GLOVES GREY		1.500 EA
			CBS 959630FF	G	9.900 EA
			DEEP WOODS AEROSOL (170G)		19.86
			DWP 95964	G	9.800 EA
			DEEP WOODS OFF 30ML		9.89
			CFE 17236	G	72.950 EA
			816175 HAND LENS TRIPLET H		72.95
			NDR T56005P	G	6.200 EA
			SAFETY GLASS, T5600, EDG		18.60
			CFE 11011	G	62.900 EA
			850-IND-23 GLOBAL COMPASS		125.80
			SQUARED GLOBAL COMPASS		
			GOODS & SERVICES TAX (2006)		\$17.41
			PROVINCIAL SALES TAX (2006)		\$17.25
GOODS WILL NOT BE ACCEPTED FOR CREDIT WITHOUT AN ORIGINAL INVOICE AND A RETURNED GOODS AUTHORIZATION NUMBER.		Goods Received By		SUB TOTAL	
MINIMUM 15% HANDLING CHARGE ON GOODS RETURNED.				248.64	
SERVICE CHARGE OF 1 1/2% PER MONTH (18% PER ANNUM) ON OVERDUE ACCOUNTS.				TAX	
				34.65	
		Time Prepared		TOTAL	
		16:53		283.30	

# Commercial Solutions Inc

Head Office 4203 95 St Edmonton AB Can T6E 5R6 Tel 780 432 1611  
 Orders 780 484 6687 Orders 780 483 7775  
 Fax 780 484 6763 Fax 780 484 2087

## Canadian Forestry Equipment Neville Crosby

SOLD TO 086445 DAY SHIP TO 086445 DAY PG 2 OF 2

CANADIAN EMPIRE EXPLORATION CORP  
 1205 675 WEST HASTINGS ST  
 VANCOUVER, BC V6B 1N2

CANADIAN EMPIRE EXPLORATION CORP  
 1205 675 WEST HASTINGS ST  
 VANCOUVER, BC V6B 1N2  
 (604)687-4951

CHARGE INVOICE

Vancouver		877 233 2255		ISSI Number R101066637	Reference Number 033-005013			
Mo 6/11/03	Day 11	Yr 03	Written By ACM	6/11/03 5013	Your PO Number YUKON OLYMICON	Terms NET 30 DAYS	Ship Via PICKUP	DCE
Quantity Ordered	Quantity Shipped	B/O	Part Number and Description	Code	List Price	Net Price	Unit	Net Amount
			PICKED UP BY BRIAN THURSTON					
			GOODS & SERVICES TAX (CODE G)		\$33.21			
			PROVINCIAL SALES TAX (CODE T)		\$35.88			
<p>CPD CEE Yukon 014 935 WR</p>				<p>ACCEPTED</p>				
<p>NEVILLE CROSBY/CEL ARE MOVING TO ANNAIS ISLAND</p>				<p>12% GST DEDUCTIBLE</p>		<p>DATE: 6/11/03</p>		
<p>* GOODS WILL NOT BE ACCEPTED FOR CREDIT WITHOUT AN ORIGINAL INVOICE AND A RETURNED GOODS AUTHORIZATION NUMBER.</p> <p>* MINIMUM 15% HANDLING CHARGE ON GOODS RETURNED.</p> <p>* SERVICE CHARGE OF 1 1/2% PER MONTH (18% PER ANNUM) ON OVERDUE ACCOUNTS.</p>				<p>Goods Received By</p>		<p>SUB TOTAL</p>		474.33
				<p>Time Prepared</p>		<p>TAX</p>		68.79
				<p>16:56</p>		<p>TOTAL</p>		543.12

# Commercial Solutions Inc

Head Office 4203 95 St Edmonton AB Can T6E 5R6 Tel 780 432 1611  
 Orders 780 484 6687 Orders 780 483 7775  
 Fax 780 484 6763 Fax 780 484 2087

## Canadian Forestry Equipment Neville Crosby

OLD TO 086445 QAY SHIP TO 086445 QAY PG 1 OF 2

CANADIAN EMPIRE EXPLORATION CORP  
 1205 675 WEST HASTINGS ST  
 VANCOUVER, BC V6B 1N2

CANADIAN EMPIRE EXPLORATION CORP  
 1205 675 WEST HASTINGS ST  
 VANCOUVER, BC V6B 1N2  
 (604)687-4951

CHARGE INVOICE

Vancouver

877 233 2255

GST Number  
R101066637

Reference Number  
033-005013

Mo Day Yr Written By 6/11/03 5013 Your PO Number YUKON OLYMICON Terms NET 30 DAYS Ship Via PICKUP DCE

Quantity	Part Number and Description	Code	List Price	Net Price	Unit	Net Amount
Ordered 5	CFE 12800 SAMPLE BAGS 5MIL 12" X 20"	CG		26.560	100	2656.00
5	CFE 12791 KRAFT SOIL SAMPLE BAG 10 1/2"	CG		25.000	PKG	125.00
2	CFE 13498 #313 LEVEL SPIRAL NOTEBOOK	CG		8.500	EA	17.00
12	CFE 11851 #10 LEVEL SPIRAL NOTEBOOK	CG		2.590	EA	31.08
1	CFE 17223 PENTEL #60-A MARKER CHISEL	CG		6.500	EA	6.50
3	CFE 11490 BELT HOOPER #506	CG		.950	PK	2.85
3	CFE 11505 GLOVES WORK MHT COTTON BL	CG		8.950	EA	26.85
4	CFE 26795 9000 MCO TREE PLANTER CUT	CG		4.950	EA	19.80
1	CFE 26710 THREAD 6 KM FOR THE LINE	CG		99.950	EA	99.95
50	CFE ROLLERS UNICAMIN HIPCHART	CG		.250	EA	12.50
	CFE ROLLERS 3-GRADE FLAK / SKUNK	CG				

GOODS WILL NOT BE ACCEPTED FOR CREDIT WITHOUT AN ORIGINAL INVOICE AND A RETURNED GOODS AUTHORIZATION NUMBER.

MINIMUM 15% HANDLING CHARGE ON GOODS RETURNED.

\* SERVICE CHARGE OF 1 1/2% PER MONTH (18% PER ANNUM) ON OVERDUE ACCOUNTS.

Goods Received By

Time Prepared

SUB TOTAL  
TAX

TOTAL

Continued



KINKO'S CANADA LTD #B9158 P.O. BOX 8033 VENTURA, CA 93002-8033

## Your Commercial Account Statement

Account Number: 0000494908

Customer Service: 1-800-488-3705  
 Account Representative: Diana Bright, x6132  
 For Lost or Stolen Card: 1-800-488-3705, x3900  
 Send Billing Inquiries to: Kinko's Inc.-CAS  
 P.O. Box 8033  
 Ventura, CA 93002-8033

CANADIAN EMPIRE EXPLOR CORP  
 ATTN: ACCOUNTS PAYABLE  
 675 W HASTINGS ST STE 1205  
 VANCOUVER BC V6B1N-2

Federal ID Number: 77-0433330

Closing Date: September 30, 2003

www.kinkos.com

ACCOUNT SUMMARY		PAYMENTS RECEIVED	
Current	\$117.80	08/27/03	\$61.07
31-60 Days		07/23/03	\$19.61
61+ Days		05/16/03	\$27.21
Total Due	\$117.80		
Upon Receipt			

### Important Message

To ensure accurate application of your payment, please reference a minimum of the last 5 digits of each invoice number you are paying on your remittance advice. Also, be sure to include the payment coupon located at the bottom of this statement, if applicable. If you have any questions, please contact your account representative.

Note that all amounts listed are reflected in Canadian dollars. Please allow for exchange rate calculations.

Date	Invoice No.	Authorized User	Reference/P.O. No.	Current 0-30 Days	Past Due 31-60 Days	Past Due 61+ Days
09/24/03	048900015845	BRIAN THURSTON	OEX	\$117.80		
<b>SUBTOTALS:</b>				<b>\$117.80</b>		
<b>TOTAL DUE:</b>						<b>CDN\$117.80</b>

PL356G KIN117.RTP 00002602 / 00001267

Detach here and return coupon with your payment

KIN001 PL356G KIN117.RTP 00002602 / 00001267



# COUREUR DES BOIS

LTD./LTEE

3 RYDER PLACE WHITEHORSE, YUKON Y1A 5T5  
Telephone: (867) 668-2593

BILL TO: CANADIAN EMPIRE EXPLORATION Corp  
43 DUNJER ROAD  
WHITEHORSE YUKON  
Y1A 3R1

INVOICE No 760

24 JUNE 03

QUANTITY	JOB DESCRIPTION	PRICE PER	AMOUNT
	ATTN: MR. WAYNE ROBERTS RE: LINE CUTTING. OLYMPIC KILOMETRE 155 DEMPSTER HIGHWAY.		
JUNE 17	1 MAN DAY	275. <sup>00</sup>	275. <sup>00</sup>
JUNE 18	4 MAN DAY	275. <sup>00</sup>	1100. <sup>00</sup>
JUNE 19	4 MAN DAY	275. <sup>00</sup>	1100. <sup>00</sup>
JUNE 20	4 MAN DAY	275. <sup>00</sup>	1100. <sup>00</sup>
JUNE 21	4 MAN DAY	275. <sup>00</sup>	1100. <sup>00</sup>
JUNE 22	3 MAN DAY	275. <sup>00</sup>	825. <sup>00</sup>
2	BUNDLES OF LATH.	20. <sup>00</sup>	40. <sup>00</sup>
1	TRUCK DAWSON TO PROPERTY AND RETURN USED 5 DAYS = APPROX 400 MILES GAS ETC INCLUDED		250. <sup>00</sup>
1	TRUCK WHITEHORSE TO PROPERTY AND RETURN USED 5 DAYS APPROX 100 MILES GAS INCLUDED		550. <sup>00</sup>
	GST: Rt 101175909	7%	443. <sup>80</sup>

Thank you  
D. J. J.

INVOICE TOTAL 6783.<sup>80</sup>/<sub>XL</sub>

ds  
CBE  
Yukon  
oly  
rno

OK R



REMIT PAYMENT TO:  
**TRANS NORTH HELICOPTERS**  
 TRANS NORTH TURBO AIR LTD.  
 20 NORSEMAN ROAD • WHITEHORSE • YUKON • Y1A 6E8  
 TELEPHONE (867) 866-2177 FAX (867) 868-3420

**CANADIAN EMPIRE EXPLORATION**

CHARTERER

BILLING ADDRESS

FUEL & OIL (NITA FUEL USED)  
 (NITA COST)

159.6  
 1.4

ACCOUNT NUMBER	30755		
INVOICE NUMBER	30755		
INVOICE DATE	APSA	DC	CC
AG TYPE	20683	GM40	
FLIGHT DATE	30	06	03
PURCHASE ORDER NO.			

FROM	UP/DOWN TIME	HOURS	REMARKS - NO. OF PASS. FREIGHT KG
MONSIEUR CAMP		1.4	- FERRY TO SITE
WINNIE PASS			- MUST RE-INSURE CASH
WINNIE PASS			- SELL EQUIPMENT
USE 159.6 OF COST FUEL (MONSIEUR CAMP)			

1008502	1330.00	1.4	900.	1260.00
0000323	93.10			
TERMS: PAYABLE UPON RECEIPT OF INVOICE. 2% INTEREST PER MONTH (24% PER ANNUM) WILL BE CHARGED ON ALL OUTSTANDING AMOUNTS OVER 30 DAYS. IF INTEREST IS NOT PAID FUTURE FLIGHTS WILL BE ON A CASH BASIS.		HOLDING TIME:	/HR.	
X <i>[Signature]</i> CHARTERER'S SIGNATURE		FUEL	/LITRE	
CHARTERER'S NAME (PRINTED)		FUEL	/LITRE	
INITIALS		MEALS & LODGINGS		
PILOT'S SIGNATURE		OTHER		
ENGINEER'S NAME		OTHER		
		SUB TOTAL		1260.00
		GOODS & SERVICES TAX REGISTRATION NO. R121483135		88.20
		TOTAL	\$	1348.20

CARRIAGE SUBJECT TO TERMS OF PUBLISHED TARIFF.  
 TARIFF AVAILABLE TO PUBLIC VIEW AT TRANS NORTH OFFICE.

ACCOUNTING - CUSTOMER FILE

OK (978)  
 BT



REMIT PAYMENT TO:  
**TRANS NORTH HELICOPTERS**  
 TRANS NORTH HELICOPTER AIR LTD.  
 20 NORSEMAN ROAD • WHITEHORSE • YUKON • Y1A 5S8  
 TELEPHONE (867) 660-2177 FAX (867) 688-3420

ACCOUNT NUMBER	30751
INVOICE NUMBER	30751
INVOICE DATE	30 06 03
AC TYPE	206B3
AIRCRAFT REGISTRATION C	GMYL
FLIGHT DATE	27 06 03
PURCHASE ORDER NO.	

CHARTERER: CANADIAN EMPIRE EXPLORATIONS LTD

BILLING ADDRESS

FUEL & OIL (X) INTRA FUEL USED  
 INTRA FUEL 171.00

FROM	UP/DOWN TIME	HOURS	REMARKS - NO. OF PASS - FREIGHT Kg
MONSTER CAMP			
WINDY PASS			- FUEL IS 5.17
WINDY PASS		1.5	- MOVE (GEOPHYSICAL USE) - 4 SEEN 100.00000
			- RETURN CHAMPAIN 117 3700
			- 5000 THURSDAY
USED 171.00 of fuel (MONSTER CAMP)			

SUB	GL	AMOUNT	HOURS	PRICE	TOTAL
10108	602	1425.00	1.5	900.	1350.00
0000323		99.75			
TERMS: PAYABLE UPON RECEIPT OF INVOICE. 2% INTEREST PER MONTH (24% PER ANNUM) WILL BE CHARGED ON ALL OUTSTANDING AMOUNTS OVER 30 DAYS. IF INTEREST IS NOT PAID, FULL PAYMENTS WILL BE ON A CASH BASIS.					
CHARTERER'S SIGNATURE: <i>[Signature]</i> CHARTERER'S NAME (PRINTED):					
PILOT'S SIGNATURE: <i>[Signature]</i> ENGINEER'S NAME: <i>[Signature]</i>					
SUB TOTAL					1350.00
GOODS & SERVICES TAX					94.50
REGISTRATION NO. R121463135					
TOTAL				\$	1444.50

CARRIAGE SUBJECT TO TERMS OF PUBLISHED TARIFF.  
 TARIFF AVAILABLE TO PUBLIC VIEW AT TRANS NORTH OFFICE.

ACCOUNTING - CUSTOMER FILE

OK  
 BT  
 978  
 [Signature]

42610-978  
 Y.O. 978  
 182.70 14065000



**EXPENSE ACCOUNT - Yukon Olympic June-July 03**

															Canadian Dollars					
DATE	LOCATION	COMPANY	ITEM	Paym	US	Exchange	Field Eq	Tele	Maps	Vehicle	Fuel	Accom	Air Flts	Frieght	GST	Cnd Total	CODE			
					\$		935	918	916	980	938	906	968	982						
11/06/03	Vancouver	Vancouver Luggage	bag	visa			45.75									45.75	935			
15/06/03	Vancouver	Vancouver Taxi	Home to Airport	visa						23.70						23.70	980			
15/06/03	Vancouver	Air Canada	extra baggage	visa									65.00	4.55		69.55	982			
15/06/03	Vancouver	Shunshine coast Juice	snack	visa								9.14				9.14	906			
15/06/03	Vancouver	Vancouver Airport	airport improvement fee	visa									10.00			10.00	968			
15/06/03	Vancouver	Vancouver Airport	airport improvement fee	visa									10.00			10.00	968			
15/06/03	Vancouver	Vancouver Airport	airport improvement fee	visa									10.00			10.00	968			
15/06/03	Whitehorse	Yellow Cab	taxi	cash						7.00						7.00	980			
15/06/03	Whitehorse	Royal Bank	withdraw charge	cash				3.00								3.00	918			
15/06/03	Whitehorse	WallMart	field gear	debit			41.14								2.35	43.49	935			
15/06/03	Whitehorse	Tim Hortons	lunch x3	debit								16.53				16.53	906			
15/06/03	Whitehorse	Tim Hortons	lunch x3	cash								2.89				2.89	906			
15/06/03	Whitehorse	coast moutain sports	bear bangers/mace	visa			267.44								18.72	286.16	935			
15/06/03	Whitehorse	Extra foods	Gateraide	cash								5.49		0.38		5.87	906			
15/06/03	Whitehorse	Canadian Tire	grubhoe	visa			19.99								1.40	21.39	935			
15/06/03	Pelly Crossing	Penny's Place	icecream	visa								8.25				8.25	906			
15/06/03	Dawson	Fasgas	gas	cash							4.67				0.33	5.00	938			
15/06/03	Dawson	BackAlley pizza	pizza	cash								13.89				13.89	906			
15/06/03	Dawson	BackAlley pizza	pizza	cash								7.00				7.00	906			
15/06/03	Dawson	BackAlley pizza	pizza	cash								3.00				3.00	906			
16/06/03	Dawson	General store	fruit	cash								3.23				3.23	906			
16/06/03	Dawson	General store	toilet paper	cash			5.92							0.41		6.33	935			
16/06/03	Dawson	Downton Hotel	Hotel x3	visa								207.76		6.23		213.99	906			
16/06/03	Dawson	Dawson Hardware	axe - file	visa			75.48							5.28		80.76	935			
16/06/03	Dawson	Shell	gas	debit							50.97			3.53		54.50	938			
16/06/03	Dawson	Northern Metallic sales	tight chain	cash			16.70							1.17		17.87	935			
16/06/03	Dawson	Fasgas	gas	cash								17.61		0.88		18.49	938			
26/06/03	Dawson	Downton Hotel	internet	cash				4.00							0.28	4.28	918			
26/06/03	Dawson	Fasgas	chapstick	visa			4.24								0.30	4.54	935			
26/06/03	Dawson	Fasgas	gas/juice	visa							6.51	5.48			0.84	12.83	938			
26/06/03	Dawson	Shell	gas	visa							123.15				8.31	131.46	938			
26/06/03	Dawson	aurora office supply	computer disc	cash			1.40							0.10		1.50	935			
26/06/03	Dawson	BackAlley pizza	lunch x2	cash								19.00				19.00	906			
26/06/03	Dawson	A Ray of Sunshine	Phone Card	cash				10.00								10.00	918			
26/06/03	Dawson	Store	snack	cash								3.75				3.75	906			
26/06/03	Dawson	Northern Superior Mech	trailer tire Aurora geophys	visa						129.82				9.09		138.91	980			
26/06/03	Dawson	Air Canada	ticket change fee (Brndy-Jams)	visa									150.00	10.50		160.50	968			
26/06/03	Dawson	Air Canada	ticket change fee (Brian)	visa									75.00	5.25		80.25	968			
29/06/03	Dawson	Air Canada	ticket change fee (Brian)	visa									75.00	5.25		80.25	968			
01/07/03	Dawson	Dawson City Courier	Brandy-James to Whitehorse	visa						181.50						181.50	980			
01/07/03	Dawson	Dawson City Courier	extra baggage	visa						26.91						26.91	982			
01/07/03	Dawson	A Ray of Sunshine	Phone Card	cash				5.00								5.00	918			
01/07/03	Dawson	Bonanza Gold Nugget	lunch x3	visa								27.48				27.48	906			

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**EXPENSE ACCOUNT - Yukon Olympic June-July 03**

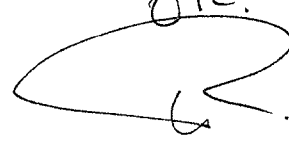
													Canadian Dollars					
DATE	LOCATION	COMPANY	ITEM	Paym	US	Exchange	Field Eq	Tele	Maps	Vehicle	Fuel	Accom	Air Flts	Frieght	GST	Cnd	CODE	
					\$		935	918	916	980	938	906	968	982		Total		
01/07/03	Dawson	Fasgas	gas	visa							11.55				0.81	12.36	938	
01/07/03	Dawson	Downton Hotel	internet	cash				3.75								3.75	918	
01/07/03	Dawson	aurora inn	dinner	visa								33.17				33.17	906	
02/07/03	Dawson	Downton Hotel	hotel	visa								100.44			6.23	106.67	906	
02/07/03	Dawson	Shell	gas	visa							45.79				3.21	49.00	938	
02/07/03	Dawson	Dawson Hardware	zip ties - field equipment	visa			15.26								1.07	16.33	935	
02/07/03	Dawson	New China Village	dinner x2	visa								42.73				42.73	906	
03/07/03	Dawson	Downton Hotel	hotel	visa								93.71			6.23	99.94	906	
03/07/03	Dawson	Shell	gas	visa							19.80				1.39	21.19	938	
03/07/03	Dawson	Bonanza Gold Nugget	breakfast	visa								8.44				8.44	906	
03/07/03	Dawson	Fasgas	gas	visa							48.83				3.42	52.25	938	
03/07/03	Dawson	store	snack	cash								2.00				2.00	906	
03/07/03	Carmacks	Esso	gas	visa							33.64	0.79			2.36	36.73	938	
03/07/03	Whitehorse	Airline Huskey	Phone Card	cash				5.00								5.00	918	
03/07/03	Whitehorse	Giorgio's	dinner	visa								30.75			1.80	32.55	906	
03/07/03	Whitehorse	Airline Hotel	hotel	visa								69.55				69.55	906	
04/07/03	Whitehorse	Airport Chalet	Lunch	visa								13.27				13.27	906	
04/07/03	Whitehorse	Shell	gas	visa							22.00				1.55	23.55	938	
04/07/03	Whitehorse	Airline Hotel Rest	soup	cash								5.00				5.00	906	
04/07/03	Whitehorse	Air Canada	extra baggage	visa										100.15	7.01	107.16	982	
04/07/03	Whitehorse	Norcarr Leasing	truck rental	visa						1378.90					96.52	1475.42	980	
04/07/03	Vancouver	Taxi	Taxi	visa						27.60						27.60	980	
04/07/03	Vancouver																	
						0	493.32	30.75	0	1775.43	366.91	750.35	330	165.15	216.75	4128.66		
																<b>Total Expenses</b>	<b>4128.66</b>	
																<del>Brian has left from \$3000.00 advance</del>	1671.11	
																Brian is owed by Company	<b>2457.55</b>	

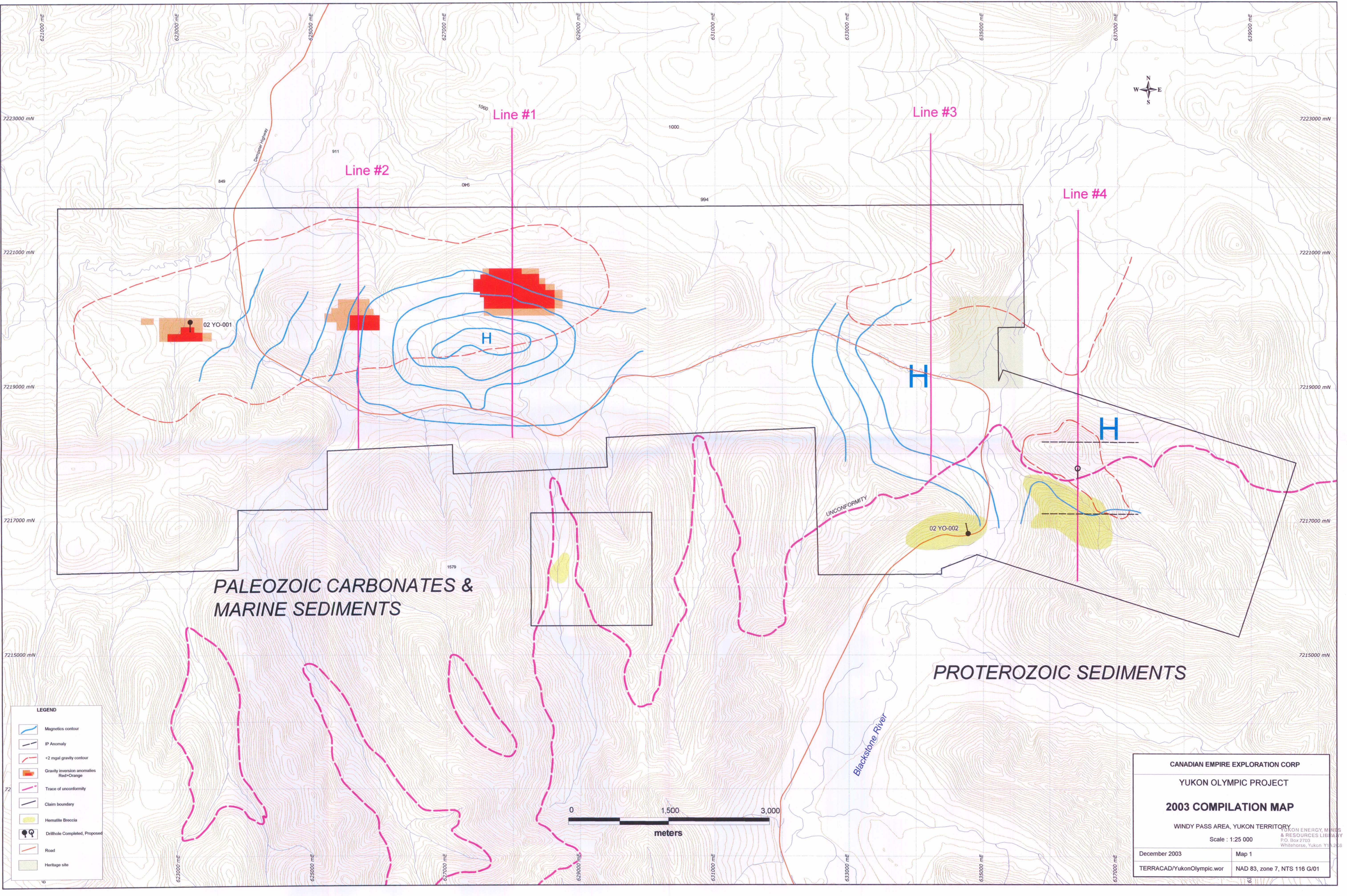
*revised sheet*

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Aug Yukon Olympic - CEE




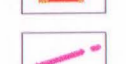



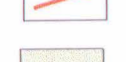
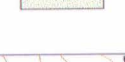


EXPENSE ACCOUNT - April-June 03									Canadi	Canadian Dollars				
DATE	LOCATION	COMPANY	ITEM	Paym	US	Exchange	Field Equ	Maps	Vehicle	Air Flts	Frieght	GST	Cnd Total	CODE
					\$		935	916	980	968	982			
15/04/2003	Vancouver	Xpresspost	postal fee YO claim renewal	Debit							16.10	1.05	16.10	982
02/06/2003	Vancouver	BC Ministry of Mines	VMS claim renewal	cash								-	15.00	944
03/06/2003	Vancouver	BC Transit	VMS claim renewal	cash					2.00			-	2.00	980
05/06/2003	Vancouver	Air Canada	3 Tickets to YO property	visa						2115.66		138.42	2115.86	968
10/06/2003	Vancouver	Advance Parking	Parking to help Sunday show	visa					3.50				3.50	980
11/06/2003	Vancouver	MDRU Short Course	2- #38 Manuals IOCG course	visa				50.00				3.62	55.41	907
12/06/2003	Vancouver	BC Transit	VMS claim renewal	cash					2.00			-	2.00	980
12/06/2003	Vancouver	Deakin Equipment	Wayne's Handlens & gloves	visa			88.11					5.43	88.11	935
													2297.98	
									Brian Owed from last Advance				969.09	
									New Advance from CXP for YO Project				3000.00	
									Brian has left from \$3000.00 advance				1671.11	

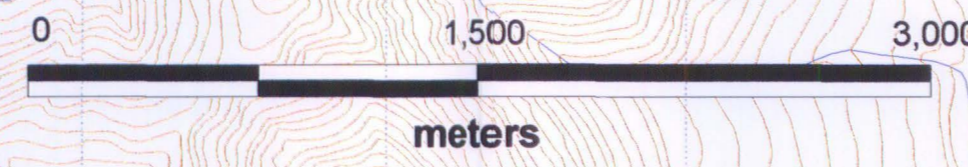
OK.  




**PALEOZOIC CARBONATES &  
MARINE SEDIMENTS**

**PROTEROZOIC SEDIMENTS**

- LEGEND**
-  Magnetics contour
  -  IP Anomaly
  -  +2 mgal gravity contour
  -  Gravity inversion anomalies
  -  Red-Orange
  -  Trace of unconformity
  -  Claim boundary
  -  Hematite Breccia
  -  Drillhole Completed, Proposed
  -  Road
  -  Heritage site



CANADIAN EMPIRE EXPLORATION CORP	
YUKON OLYMPIC PROJECT	
<b>2003 COMPILATION MAP</b>	
WINDY PASS AREA, YUKON TERRITORY	
Scale : 1:25 000	
December 2003	Map 1
TERRACAD/YukonOlympic.wor	NAD 83, zone 7, NTS 116 G/01

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