

Technical Report  
on the  
**Langis Project**  
**Canagco Mining Corporation**

Casey and Harris Townships  
Larder Lake Mining Division, Ontario

Dale R. Alexander P.Geo.

New Liskeard, Ontario

May 17, 2013

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## SUMMARY:

Canagco Mining Corporation's Langis project consists of 34 patented mining claims (35 claim units) and five unpatented claims (29 units) in the northern part of the historic Cobalt Mining Camp. All 64 claim units are contiguous. They are located in the south part of Casey Township (46 units) and the north part of Harris Township (18 units), Larder Lake Mining Division. The property is some 500 km north of Toronto in northeastern Ontario, and, is about 15 km by highway, north of the City of Temiskaming Shores.

The project includes the past-producing Langis and Dolphin-Miller silver-cobalt deposits. The Dolphin-Miller deposit had only limited production between 1965 and 1968, while the Langis mine was much longer lived with intermittent production between 1908 and 1922, 1946-1947, 1956-1968, and, 1983-1989. In all, the Langis mine has produced some 10,445,630 ounces (roughly 325 metric tons) of silver from 418,305 short tons, for an average grade of 24.97 oz/t (856 g/t) silver. Some 20 tons of silver-cobalt 'ore' are also reported to have been produced from the Casey Mountain claims at the northern extremity of the Langis project albeit neither grade nor separate validation appear in the literature.

The most recent production was by Agnico-Eagle Mines Ltd. They established and extracted some 683,000 ounces of silver between 1983 and 1989 at an average grade of 13.80 oz/t (473 g/t). Agnico also discovered a new paleotrough south and east of the Langis property that had important economic implications. Mineralization was of sufficient interest to warrant sinking of a new shaft (the Penna Shaft) on their property, and, extending a 659-m crosscut onto Langis lands. No clear measure of continuity appears to have been established in the workings, however, before the low price of silver precluded further work. No further production is recorded after 1990.

In 1984, Agnico-Eagle Mines Ltd. conducted magnetic and electromagnetic surveys over their claims east and south of the Langis property. The geophysical survey results are of unknown importance to the discovery of the paleotrough in 1985 that led to the sinking of the Penna Shaft. By contrast, the Langis property has had minimal coverage by conventional geophysics.

During November 2012, Canagco contracted linecutting, magnetic and gradient Induced Polarization (IP) / Resistivity surveys over eighteen claim units straddling the Casey-Harris Township boundary. The geophysical surveys have initiated a fresh database from which to build future work. A similar approach is recommended in three other target areas on the Langis project. Also, alternative surveys including electromagnetic (horizontal loop), more conventional IP and seismic surveys along with some down-hole geophysics are proposed over the current grid system in the short to medium term. This variety of surveys on the primary target area are planned to determine the geophysical signatures of the mineralization, as well as the best type of survey for optimizing a future approach. Combined with a 3D computer modeling effort, a powerful tool for correlating data is anticipated.

Recommendations total \$1,845,558 including a 15% contingency. They are subdivided into two distinct stages. A setup stage, or stage 1, includes follow-up work to the 2012 geophysical surveys (\$46,450), the 3D computer modeling effort (\$50,000), and, an investigation of the reprocessing potential of the



historic tailings ponds (\$355,843). Stage 1 totals \$452,293. Adding a 15% contingency (\$67,844), the total for stage 1 becomes \$520,137.

Only the most preliminary work has been undertaken on the historic tailings. The main target area covers tailings deposited between 1956 and 1968. Historic data suggest a possible 88% recovery of the mineralization processed during this period, which had an average grade in the order of 20 oz/t silver.

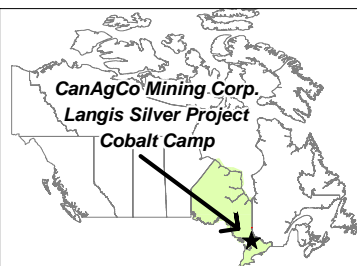
Once stage 1 is complete, diamond drilling is recommended at the start of stage 2. Drill targets are anticipated to be cast from the computer modeling effort, with additional shaping from the stage 1 geophysics. Six holes are recommended (\$209,500), in preparation for possible down-hole geophysics (\$42,000). The targeted drilling and down-hole geophysics could produce some very site-specific geophysical signatures for the mineralization. Additional ground geophysics (\$236,040) and diamond drilling (\$665,000) round out the stage 2 program, for a cost estimate of \$1,152,540. After applying a 15% contingency, the stage 2 exercise totals \$1,325,421, producing a grand total of \$1,845,558 for stage 1 and stage 2 combined, including a 15% contingency.

Stage 2 is predicated on the success of stage 1, and, will be re-evaluated once stage 1 is complete.



## LEGEND

- Major Hwy
- Major Waterbodies
- - - Provincial/National Border



Projection: Lat Long (NAD 83)

0 100 200  
kilometers

General Location of the Langis Property,  
Ontario

Scale - 1 : 6,000,000 Date: February 29th, 2012

**Figure - 1**

Author: M.Ethier



## **1.0 INTRODUCTION AND TERMS OF REFERENCE:**

On November 9, 2011, Canagco Mining Corporation (formerly 2278419 Ontario Limited) purchased the Cobalt area assets of Aranka Gold Inc. in northeastern Ontario. Among the assets was the Langis silver property which included the past-producing Langis and Dolphin-Miller mines. Subsequently, five unpatented claims were added to the land package creating the Langis project - the subject of this report.

In October 2012, the author was contracted by Canagco Mining Corporation to write a Technical Report on the Langis Project. The report was triggered by an Amalgamation Agreement between Canagco Mining Corporation (Canagco) and Everfront Ventures Corporation, dated October 12, 2012. The report was to include linecutting and geophysical surveys slated to be underway by late October 2012. The main objectives were to update the geological database, to assist in developing a strategy for moving the property forward, and, to highlight targets in the short to medium term.

A prior Technical Report by G. A. Harron and Associates is entitled "Qualifying Report on Langis Property, Casey and Harris Townships, Larder Lake Mining Division, Ontario, for, Langis Silver and Cobalt Mining Company Limited". It dates to November 27, 2002, with an addendum dated November 13, 2003 that revises the locations of the drill targets proposed in the 2002 report. Langis Silver and Cobalt Mining Company Limited became Aranka Gold Inc. on July 27, 2005, and, a subsidiary of Guyana Goldfields Inc. on January 28, 2009.

Harron's report formed the main point of departure for the current exercise. It was supplemented and validated by Cobalt Resident Geologist's reports between 1981 and 1990, R. Thompson's 1965 geological report on Casey and Harris Townships, in-house reports by Langis Silver and Cobalt Mining Company Ltd., Agnico-Eagle Mines Ltd. and Aranka Gold Inc., along with assessment and in-house files at the Resident Geologist's Office, Kirkland Lake. Further details on references are found in the Selected Bibliography.

The report is prepared with the capable assistance of Martin Ethier, Hinterland Geoscience and Geomatics of Haileybury, Ontario. He created the figures and plans that accompany the report, researched the claim data, assisted in developing the history of previous work, and, was the point of contact with the surface rights owners in the area.

The author first toured the property on November 23, 2011 with Mr. Gino Chitaroni, President, Canagco Mining Corp. Given that underground workings are flooded and the main shafts capped, only surface features were able to be examined. The #1 Shaft, #3 Shaft and #6 Shaft sites were visited, as well as the historic tailings ponds, waste-rock dumps, and various outcrop exposures in the area. Subsequent visits were made in the winter of 2011-2012, and, in early November 2012, when the line-cutting and geophysical surveys were in progress.

This report is prepared in accordance with National Instrument 43-101 standards.

The metric system is used as the standard of measurement for the report, although essentially all of the data prior to 2002 are in Imperial units. Abbreviations include meter (m) or meters (m), centimeters (cm), kilometers (km), grams (g), kilograms (kg), parts per million (ppm), parts per billion (ppb), and, grams per metric ton (g/t). Historical data in ounces per short ton (oz/t) are converted to g/t by multiplying by 34.286. Similarly feet (ft) are converted to meters through dividing by 3.28; troy ounces (oz) multiplied by 31.1035 to retrieve grams, and; short tons are 0.90718 of a metric ton.

## **2.0 RELIANCE ON OTHER EXPERTS:**

Aside from Gerald A. Harron, P. Eng, P. Geo. and author of “Qualifying Report on Langis Property, Casey and Harris Townships, Larder Lake Mining Division, Ontario, for, Langis Silver and Cobalt Mining Company Limited”, all of the historic data predates implementation of National Instrument 43-101 in February 2001. Thus, historic reports are not specifically prepared in accordance with National Instrument 43-101 standards.

Harron (2002) indicates:

*“The historical work reported in this technical document is taken from assessment files maintained by the Ontario Ministry of Northern Development and Mines, unpublished reports and maps provided by Langis and reports held by GAHA [i.e. G. A. Harron and Associates Inc.]. While the author has made every attempt to accurately transcribe and convey the contents of these files and maps, he cannot guarantee the accuracy, validity or completeness of the data contained in these files and maps. The authors of these files are not necessarily qualified persons within the context of National Policy 43-101.*

*The author also disclaims data as to land ownership and mining rights obtained from files maintained by the Temiskaming Land Registry Office of the Ontario Ministry of Consumer and Business Services and by the Ontario Ministry of Northern Development and Mines. These entities disclaim the accuracy and subsequent use of their own data.*

*Information as regards the hazard status and compliance with applicable rehabilitation regulations with regard to abandoned mine workings is also disclaimed. The Mines Rehabilitation Section of the Ontario Ministry of Northern Development and Mines disclaims the veracity of their own records and cautions against subsequent use of the data.”*

The current author concurs. While Engineer’s Reports, Shutdown Plans and Resident Geologist notes from the Ontario Ministry of Northern Development and Mines, along with in-house data from Aranka Gold Inc and Agnico-Eagle Mines Ltd were also reviewed, most of these data predate National Instrument 43-101 and cannot be relied upon, since they have not been verified by a Qualified Person. That being said, historic data by Thompson (1965), Jerome (1969, 1974), Owsicki (1982-1990 incl.) and in-house reports by Agnico-Eagle Mines Ltd. are certainly of professional standard for the period, and, conclusions drawn are generally consistent from author to author.

With respect to items of a legal nature, the author relies on the advice and input of Canagco’s legal counsel, John F. O’Donnell. These data relate to agreement specifics in the Property Description and Location segment 3.0 (next), obtained through email exchanges, and, a teleconference on May 16, 2013.

### **3.0 PROPERTY DESCRIPTION AND LOCATION:**

The Langis property is located in the south part of Casey Township and the north part of Harris Township, Larder Lake Mining Division. It is some 500 km north of Toronto in northeastern Ontario. The property is at the head of Lake Temiskaming, about 15 km north of the New Liskeard portion of the City of Temiskaming Shores. Temiskaming Shores, with a population of 10,840 is the largest municipality in the immediate area (Figure 1).

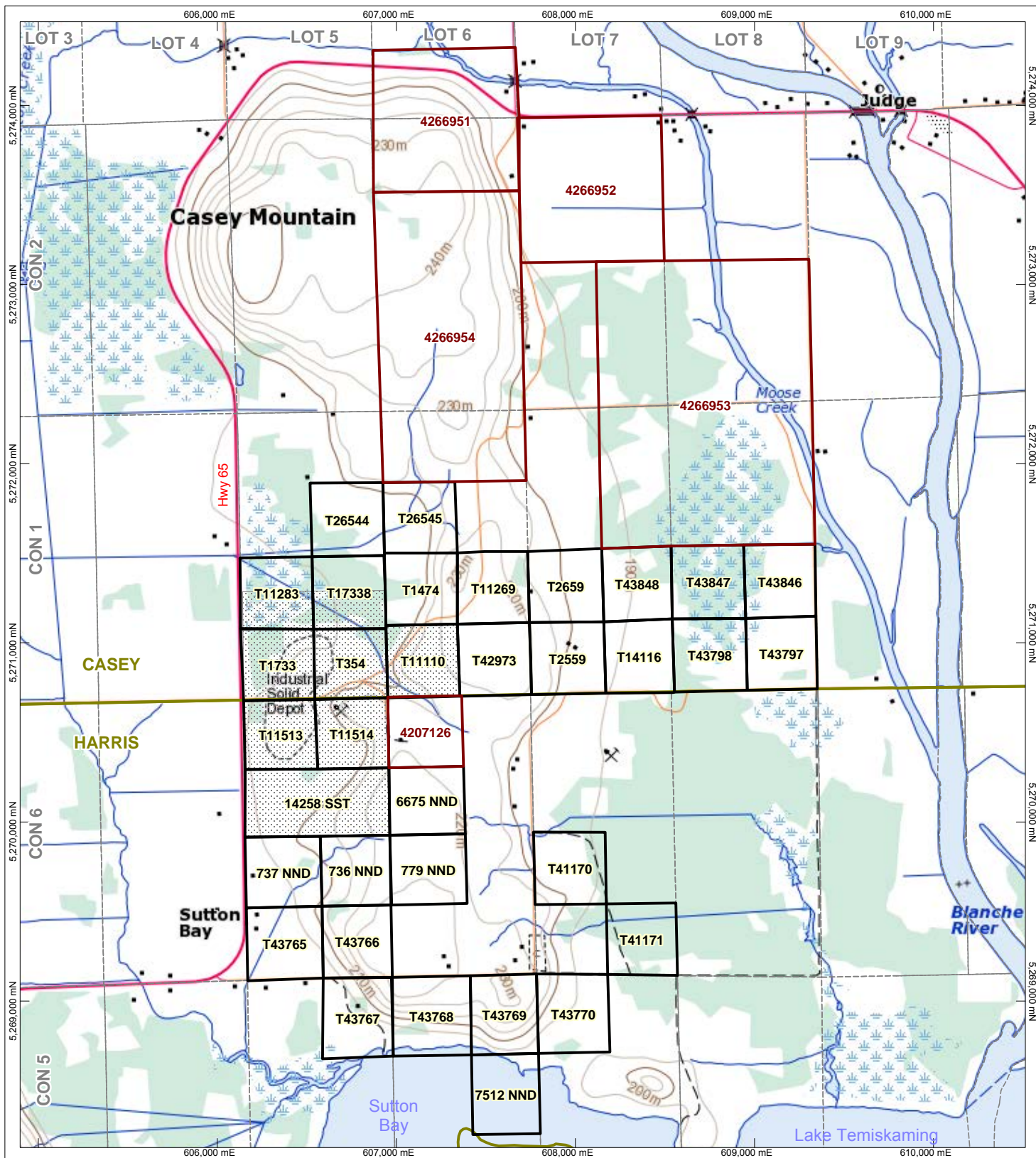
The property consists of 35 patented mining claim units and 29 unpatented claim units in Casey and Harris Townships. All 64 claim units are contiguous. Eighteen of the patented claims are in Casey Township, and, the remaining sixteen patented claims (17 claim units) are in Harris Township (Figure 2). Nine claims (roughly 8 claim units) are also accompanied by patented surface rights (Figure 2 and Table 1). Portions of the claim fabric are in excess of 100 years old, such that some historic claim numbers have been lost. Those claims are identified by parcel numbers for 'mining rights only' on the accompanying table. Dispositions for the patented claims are outlined in Table 1.

Historically, 25 claims in both Casey and Harris Townships formed the Langis property. Four claims in Harris Township (T41170, T41171, T43770 and T43769) were isolated from the main group. They became contiguous at the merging of the Langis property with the ten, Dolphin-Miller claims, circa 1983.

As noted in Table 1, the total hectares of patented mining rights are 562.209, including 289.603 hectares in Casey Township, and, 272.606 hectares in Harris Township. All of the claims have patented surface rights, of which Canagco is the beneficial owner of 67.623 hectares in Casey Township, and, 63.728 hectares in Harris Township.

With respect to the patented claims, there is no specified expiration date for the lands short of nonpayment of taxes. No assessment work is required.

Canagco has a 100% interest in the patented claims, subject to a 2% Net Smelter Returns (NSR) royalty from the vendor (Aranka Gold Inc). Aranka Gold Inc. also owns 10% of the Canagco share capital.



# LEGEND

- Unpatented Claims
- Patented Claims
- Surface Rights
- Township
- Lot/Concession

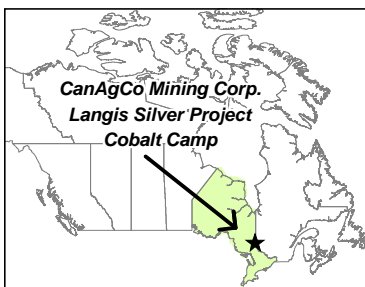
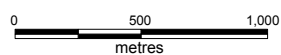


Image Reference:  
1:50k Canada Topographic Map (31M12)



Projection: UTM Zone 17 (NAD 83)



Claim Sketch of the Langis Project  
Casey/Harris Township,  
Ontario, Canada

Scale - 1 : 30,000      Date: Feb.19-2013

**Figure - 2**      Author: M.Ethier





Table 1: List of Patented Mining Claims							
Description	Claim Number / Parcel MRO	Parcel SRO	Ontario property #	Surface Rights	Mining Rights	Surface tax	Mining tax
<b>Casey Township</b>							
C.1, L 5, N1/2, SE1/4	T26544 / 10169 SST		61310-0396		16.137		\$64.55
C.1, L.5, S1/2, NW1/4	T11283 / 4040 NND	2977SST	61310-0392		16.137		\$64.55
C.1, L.5, S1/2, NE1/4	T17338 / 11512 SST	2977SST	61310-0398		16.137		\$64.55
C.1, L 5, S1/2, SW1/4	T1733 / 3975 NND	2977SST sum	61310-0391	35.400	16.137	\$355.46	\$64.55
C.1, L 5, S1/2, SE1/4	T354 / 4247 NND	4001NND	61310-0393	16.137	16.137	\$122.66	\$64.55
C.1, L 6, N1/2, SW1/4	T26545 / 10170 SST		61310-0397		16.086		\$64.34
C.1, L.6, S1/2, NW1/4	T1474 / 461 NND		61310-0389		16.086		\$64.34
C.1, L.6, S1/2, NE1/4	T11269 / 734 NND		61310-0390		16.086		\$64.34
C.1, L 6, S1/2, SW1/4	T11110 / 7420 NND	7420NND	61310-0274	16.086	16.086	\$122.66	\$64.34
C.1, L 6, S1/2, SE1/4	T42973 / 12533NND		61310-0399		16.086		\$64.34
C. 1, L 7, S1/2, NW1/4	T2659 / 2559 SST		61310-0395		16.137		\$64.55
C.1, L 7, S1/2, SW1/4	T2559 / 2559 SST		61310-0395		16.137		\$64.55
C.1, L.7, S1/2, NE1/4	T43848 / 13458SST		61310-0404		16.137		\$64.55
C.1, L.7, S1/2, SE1/4	T14116 / 14116 SST		61310-0405		16.137		\$64.55
C.1, L.8, S1/2, NW1/4	T43847 / 13547 SST		61310-0403		15.985		\$63.94
C.1, L.8, S1/2, NE1/4	T43846 / 13455 SST		61310-0401		15.985		\$63.94
C.1, L 8, S1/2, SW1/4	T43798 / 13456 SST		61310-0402		15.985		\$63.94
C.1, L.8, S1/2, SE1/4	T43797 / 13454 SST		61310-0400		15.985		\$63.94
				<b>67.623</b>	<b>289.603</b>	<b>\$600.78</b>	<b>\$1,158.41</b>
<b>Harris Township</b>							
C.6, L 5, pt N1/2, NW1/4	T11513 / 11513 SST	784NND	61345-0129		16.036		\$64.14
C.6, L.5, pt N1/2, NE1/4	T11514 / 11514 SST	784NND	61345-0128		16.036		\$64.14
C.6, L.5, S1/2 of N1/2	/ 14258 SST	784NND sum	61345-0131	63.728	32.072	\$443.48	\$128.29
C.6, L.5, S1/2, NW1/4	/ 737 NND		61345-0121		16.036		\$64.14
C.6, L.5, S1/2, NE 1/4	/ 736 NND		61345-0120		16.036		\$64.14
C.6, L.5, S1/2, SW1/4	T43765 / 13545 SST		61345-0140		16.036		\$64.14
C.6, L.5, S1/2, SE1/4	T43766 / 13546 SST		61345-0141		16.036		\$64.14
C.5, L.5, N1/2, NE1/4	T43767 / 13547 SST		61345-0142		16.440		\$65.76
C.6, L.6, N1/2, SW1/4	/ 6675 NND		61345-0124		15.934		\$63.74
C.6, L.6, S1/2, NW1/4	/ 779 NND		61345-0122		15.934		\$63.74
C.5, L.6, N1/2, NW1/4	T43768 / 15073 SST		61345-0127		16.187		\$64.75
C.5, L.6, N1/2, NE1/4	T43769 / 15073 SST		61345-0127		16.187		\$64.75
C.5, L.6, N1/2, SE1/4	/ 7512 NND		61345-0110		16.187		\$64.75
C.6, L.7, S1/2, NW1/4	T41170 / 13554 SST		61345-0143		15.631		\$62.52
C.6, L.7, S1/2, SE1/4	T41171 / 13555 SST		61345-0144		15.631		\$62.52
C.5, L.7, N1/2, NW1/4	T43770 / 13544 SST		61345-0132		16.187		\$64.75
				<b>63.728</b>	<b>272.606</b>	<b>\$443.48</b>	<b>\$1,090.41</b>
<b>Totals</b>				<b>131.351</b>	<b>562.209</b>	<b>\$1,044.26</b>	<b>\$2,248.82</b>
/ 14258 SST :only parcel data available, no claim numbers							
2559 SST : parcel includes two historic mining claims							

The unpatented claims include one claim (4207126) in Harris Township, and, four claims (4266951-4266954 inclusive) in Casey Township (Figure 2 and Table 2). The Harris Township claim consists of one unit, 100% owned by Canagco Mining Corporation. The four claims in Casey Township contain 28 claim units. These 28 claim units are under option (the Casey option) from Norman J. McBride (50% interest) and John W. Pollock (50% interest). The agreement is dated September 13, 2011.

Under the terms of the option Canagco can acquire a 100% interest in the property in consideration of \$10,000 and 50,000 common shares of Canagco, followed by payments of \$10,000, \$15,000 and \$20,000 on the first (September 13, 2012), second and third anniversaries respectively. A provision to have exploration program(s), valued at \$20,000, carried out on the property has been waived subsequent to filing \$34,215 in assessment work on the claims. Once Canagco is fully vested in these 28 claim units, the vendors are entitled to a 2% Net Smelter Returns (NSR) royalty.

The option is in good standing. The second anniversary payment is due on or before September 13, 2013.

<b>Table 2: List of Unpatented Mining Claims</b>				
Claim Number	Number of units	hectares	Description	Due Date
<b><u>Casey Township</u></b>				
4266951	4	64	S1/2 of S1/2 lot 6 Con III, N1/2 of N1/2 lot 6 Con II	May 20 2016
4266952	4	64	N1/2 of lot 7, Con II	May 20 2016
4266953	12	192	E1/2 of S1/2 lot 7 Con II, S1/2 of lot 8 Con II, E1/2 of N1/2 lot 7 Con I, and, N1/2 lot 8 Con I	May 20 2016
4266954	8	128	S1/2 of N1/2 lot 6 Con II, S1/2 of lot 6 Con II, and, N1/2 of N1/2 lot 6 Con I	May 20 2016
Subtotal	28	448		
<b><u>Harris Township</u></b>				
4207126	1	16	NW1/4 of N1/2 lot 6 Con VI	May 18 2016
<b>Total: 5 claims</b>	<b>29 units</b>	<b>464 ha</b>		

The optioned claims are shown to expire on May 20, 2016 (Table 2), although sufficient assessment work is available to hold the claims for a much longer period.

On October 12, 2012, Canagco entered into an amalgamation agreement with Everfront Ventures Corporation (Everfront) by means of a “three-corner” amalgamation. Canagco and a subsidiary of Everfront (“Subco”) will amalgamate and continue as one corporation (“Amalco”). Upon completion of this amalgamation, Amalco will be a wholly-owned subsidiary of Everfront and will own all the current assets of Canagco, including 100% of Canagco’s interest in the mining claims that are the subject of this report.



Both Casey and Harris are subdivided Townships, such that property boundaries conform to lot and concession designations. Surface rights are privately owned over the unpatented claims.

Under current legislation, permits are not required to conduct surface exploration on patented lands. In areas where surface rights are alienated, however, surface rights owners must be notified before exploration work can proceed. In September and October 2012, Martin Ethier, on behalf of Canagco, met with the manager of Casey Township and all surface rights owners who would be affected by the proposed line cutting and ground geophysical surveys. He explained the project, its objectives and logistics. All of the surface rights owners understood what Canagco proposed, and, gave verbal permission to proceed, subject to removal of line-cutting pickets from farm fields as soon as spring permits. The removal of line-cutting pickets was underway in early May 2013.

Canagco also initiated a dialogue with the Timiskaming First Nation in October 2012, as part of its aboriginal consultation process.

The property is in good standing.

\*

Extensive mine workings are found on the Langis property. Six shafts occur within the limits of the patented claims – five in Casey Township and one in Harris Township. On the historic Langis portion of the property, Jerome (1969) indicates some 20,202 m (66,261 ft) of underground workings including 11,584 m drifts and crosscuts, and, 2345 m raises in the #3 Shaft environment, plus, 5209 m drifts and crosscuts, and, 1064 m raises in the #6 Shaft area. The #3 Shaft statistics include data for the #1 and #2 shafts, while statistics for the #6 Shaft appear to include the #4 Shaft workings. Data for a 1979-1990 period of operations by Agnico-Eagle Mines Ltd are incomplete but include a minimum of 215 m of drifts and crosscuts at the #3 Shaft, and, 765 m at the #6 Shaft, for a total of 21,182 m of workings.

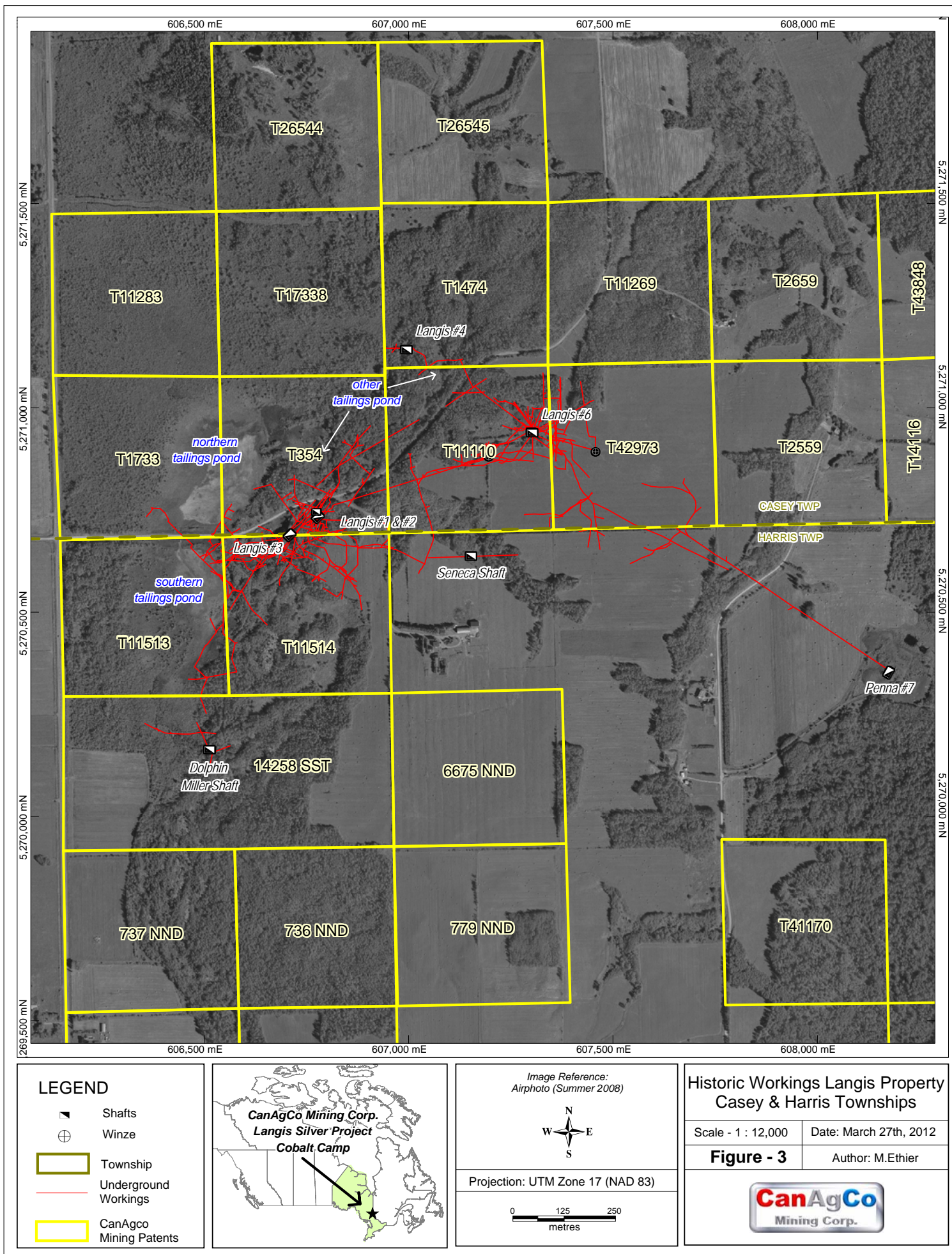
The Dolphin-Miller Shaft, alternately called the Harmak Shaft, just south of the historic Langis claims in Harris Township, was under a royalty-lease agreement with Langis Silver and Cobalt between 1960 and 1983, and, was referred to as the Langis #5 Shaft during that period. Jerome (1969) indicates a total of 245 m of drifts and crosscuts. The relative positions of the underground workings are shown on Figure 3.

On the unpatented claims, one shaft is found on claim number 4207126 in Harris Township – the Casey-Seneca Shaft. Further north, in Casey Township, two shafts are located on unpatented claim 4266951 – the Casey Mountain #1 and #2 Shafts. The Casey-Seneca or Seneca Shaft is shown on both Figure 3 and Figure 4, while the two Casey Mountain shafts are much further north and are only located on Figure 4.

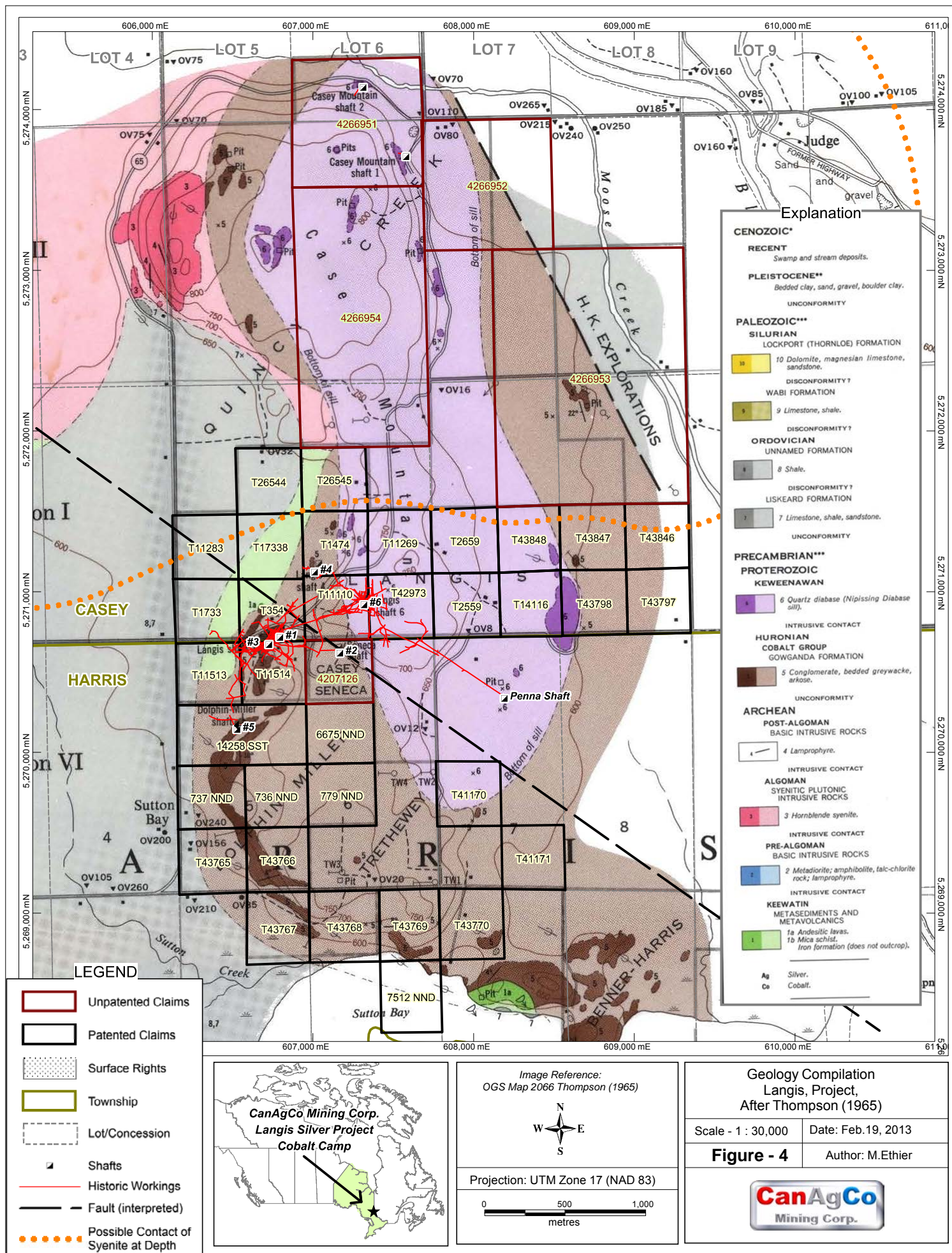
Jerome (1969) lists five shafts on the original Langis property, numbered 1, 2, 3, 4 and 6, and, one shaft on the (then) Dolphin-Miller lands – the #5 Shaft. Data include:

#1 Shaft, on claim T354, an inclined shaft at -70 degrees to 270 ft (82 m), with levels at 135 and 190 ft – 41 and 58 m respectively.

#2 Shaft, on claim T354, a vertical 50-ft (15-m) pit, that is connected to the #1 Shaft workings.







#3 Shaft, also on claim T354, vertical shaft to 438 ft (133.5 m) with seven levels at 171, 235, 285, 320, 355, 390 and 425 ft (52, 72, 87, 98, 108, 119 and 130 m respectively).

#4 Shaft, on claim T1474, vertical shaft to 150 ft (46 m) with one level at 140 ft (43 m).

#5 Shaft, on the northwest unit of mining rights parcel 14258 SST, vertical shaft to 375 ft (114 m), with two levels at 220 and 360 ft (67 and 110 m).

#6 Shaft, on claim T11110, vertical shaft to 487.7 ft (149 m) with six levels at 275, 335, 371, 400, 435 and 470 ft (or, 84, 102, 113, 122, 133, and 143 m). At the east end of the #6 shaft workings is the #4 Winze that extends from the 371-ft (113-m) level to a 420-ft (128-m) level. At that location the #4 Winze is on claim T42973.

Jerome (1969) describes the Casey-Seneca Shaft on unpatented claim 4207126 as a vertical shaft to 374 ft (114 m), with 1140 ft (348 m) of lateral development on the 75 and 340-ft (23 and 104-m) levels. Jerome (1969) also notes that commencing below 6 m from the collar, the Casey-Seneca Shaft is filled with clay.

Specifics on the Casey Mountain shafts on unpatented claim 4266951 (Figure 4) are derived from Sergiades (1968) and Jerome (1969). Thomson (1965) acknowledges discrepancies between 1950 vintage data, old company reports, and, Ontario Department of Mines data, such the veracity of the statistics is not assured. The #1 Shaft is reported to be 415 ft (127 m) deep, with levels at 50, 90, 135 and 400 ft (15, 27, 41 and 122 m). The amount of lateral work is unclear but is suggested to be greater than 211 ft (64 m) in total.

Data on the Casey Mountain #2 Shaft are similarly unclear. The shaft is indicated to be 285 ft (87 m) deep, with a winze in the order of 70 ft (27 m) from the 270-ft (82-m) level (Jerome, 1969). Levels are established at 90 and 270 ft (27 and 82 m) with some 810 ft (247 m) of lateral development primarily on the 270-ft (82-m) level.

On the Langis portion of the property, the #3 Shaft workings are connected with the #1 Shaft on the 235-ft (72-m) level. The #3 Shaft workings are also connected to the #6 Shaft workings via a manway from the 235-ft (72-m) level to the #6 Shaft 275-ft (84-m) level, and, from a winze on the 355-ft (108-m) level to the 435-ft (133-m) level in the #6 Shaft workings.

The #3 Shaft workings are connected to the historic Casey-Seneca shaft as well. Jerome (1969) indicates that a raise from the east end of the 355-ft (108-m) level found the 340-ft (104-m) level of the Casey-Seneca Shaft to be half full of clay.

The #6 Shaft workings are connected to the #4 Shaft via a raise from the 275-ft (84-m) level to the 140-ft (43-m) level of the #4 workings.

The #5 Shaft (Dolphin-Miller) is not connected to the Langis workings, although a crosscut from the 285-ft (87-m) level at the Langis #3 Shaft extends onto the Dolphin-Miller claims and comes within 132 ft (40

m) of a raise from the 360-ft (110-m) level at the Dolphin-Miller. The crosscut from the #3 Shaft was driven as a drill platform to explore the Dolphin-Miller lands from underground.

The Penna Shaft, sunk by Agnico-Eagle Mines Ltd in 1987-1988, is locally known as the Langis #7 Shaft. While it collared well southeast of the Langis #6 Shaft, a crosscut on the fourth level at a vertical depth of 492 ft (150 m) extends onto the Langis lands at the western margin of a paleotrough discovered by Agnico-Eagle in 1985. A portion of the workings are on the southern part of Langis claim T42973 (Figure 3). The Penna Shaft is located in the north half of lot 7, Concession VI, Harris Township. The vertical shaft is 1182 ft (360 m) deep, with 13 stations established at 72-ft (22-m) intervals, commencing at 276 ft (84 m) - the first level (after Owsiacki, 1989).

While none of the mined sections extend to surface on the Langis ground, the outlines of the underground workings on Figure 3 fairly reflect the locations of the mineralized zones. Less is known about the mineralized intervals encountered in the Casey Mountain shafts, although they are suggested to be of limited extent in close proximity of both shafts.

Figure 3 also outlines the extent of four tailings ponds on the Langis claims. All of the tailings are unrestrained. The #1 tailings site is north of the #1 Shaft on claim T354. Jerome (1969) indicates that the tailings are related to a stamp mill from the early days of the operation. It is estimated to currently contain some 15,000 tons (13,608 metric tons). Between 1965 and 1968, Jerome (1969) states that 15,033 tons (13,638 metric tons) were milled from this site, averaging a recorded grade of 5.44 oz/t (186.5 g/t) silver.

A second, historic tailings pond is some 60 m southeast of the #4 Shaft location. It is similarly unrestrained and partly overgrown. Roughly 10,000 tons (9,072 metric tons) are estimated at this site. The tails are interpreted to be related to a mill near the #6 Shaft, constructed in 1917-1918 (Jerome, 1969). This small pond straddles the claim boundary between T11110 and T1474.

The two largest tailings ponds occur in a topographic low north and south of the Casey/Harris Township line. The northern pond on part of claim T1733 and claim T354 in Casey Township, is the larger of the two ponds, containing an estimated 170,000 tons (154,221 metric tons). The southern pond, in the north part of lot 5, Concession VI (claims T11514 and 13179, plus a small part of T11513), contains some 130,000 tons (117,933 metric tons). As before, both of these sites are unrestrained. They appear related to the mining operations between 1956 and 1968, when some 350,000 tons (317,513 metric tons) of material were processed.

During the Agnico-Eagle Mines Ltd operations between 1978 and 1990, all of the mineralization was milled off-site, such that there are no tailings on the property related to that era.

Small waste rock piles are located at the Langis #1, #4, #3 and #6 Shaft sites. For the most part, the waste rock has been contoured around the shaft sites. The #3 Shaft area with a topographic variation approaching 15 m, has the most prominent, albeit small waste pile that has been partly contoured. Beak International Inc. (1997) estimates 3000 metric tons of waste rock along a natural slope at the #3 Shaft location.

Beak International Inc (1997) also summarized the status of the six shafts on the patented claims. With the exception of the #4 Shaft, which was fenced, the remaining shafts were capped. Ongoing work by Agnico-Eagle Mines Ltd. was captured by Gamboa (2011), in a Mine Rehabilitation Inspection Report dated February 15, 2011 wherein all of the shafts were reported as capped. The inspection visit was made on August 26, 2010. In terms of environmental liabilities, Gamboa (2011) recommended an updated site plan, a rehabilitation strategy for the tailings, an investigation of the chemical stability (as acid rock drainage and metal leaching) of the waste rock on site, and, a general cleanup of any scrap wood and/or metal. A rehabilitation strategy for the tailings was considered most critical.

Action on the tailings ponds is an early order of business addressed in the Stage One Recommendations. Sampling by an overburden drill is proposed to more thoroughly evaluate the tailings for either processing with today's technology, or, remediation.

The status of the shafts and waste-rock piles on the unpatented claims is less clear. A site visit to the Casey Mountain Shafts on May 16, 2013, confirmed that both shafts are capped. There is no updated assessment on the Casey-Seneca Shaft at time of writing.

There are neither mineral resources nor reserves to be indicated on either Figure 3 or Figure 4.

Effective April 1, 2013, Exploration Plans and/or Exploration Permits are required for Early Surface Exploration on unpatented mining claims in Ontario, with additional requirements for Advanced Exploration and Mine Production under a graduated regulatory approach. Moving forward, the vast majority of Stage One recommendations do not require either Plans or Permits, save for part of line 13+25, proposed as a follow-up line of Induced Polarization surveying, that touches the south part of unpatented claim 4207126 in Harris Township. Under the new Plans and Permits regulations, the proponent submits the Plan or Permit application, including a report documenting any aboriginal consultation to the surface rights owners and the Ministry of Northern Development and Mines, as part of the review, consultation and approval process. The Plan process is estimated to take some 35 calendar days.

Given that the vast majority of work in Stage One is proposed on patented lands, an Exploration Plan has not yet been submitted to the Ministry of Northern Development and Mines for processing.

To the extent known, there are no other significant factors and risks that may affect access, title or the right or ability to perform the proposed Stage One work on the property.

#### **4.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY:**

The Langis property occurs within the Timiskaming clay belt, generally a flat-lying farming corridor related to the Pleistocene glacial lake Barlow-Ojibway. The majority of the soils are clay, varved clay and clay tills. Large tracts of land have been cleared for farming.

Overburden depths range from 0 to 80 m over short distances, reflecting a graben and horst topography associated with the Temiskaming Rift Valley system. One example after Thompson (1965), near the north boundary of claim T43765 in Harris Township, shows outcrop exposures along a 15 m high ridge being within 150 m of overburden depths in excess of 73 m found in a hole drilled for water. The rift system is also partly filled with Ordovician and Silurian limestones, shales and sandstones – the Paleozoic outlier, in disconformable contact with Precambrian rocks.

The older Precambrian rocks that dominate the Langis claims are tentatively related to a horst feature near the central part of the rift system. Sections of the Langis lands have been cleared for farming but most areas are lightly forested with poplar, black ash, birch and alders, along with scattered evergreens, including spruce, fir and lesser pine. Elevations range from 180 to 245 m above mean sea level.

The property is within 15 km of the New Liskeard portion of the City of Timiskaming Shores. Highway 65 to New Liskeard, runs partly along the western margin of the claim group. The Casey Mine road extends eastward from Highway 65 along the Casey-Harris Township Line for a short distance past the Langis #3 Shaft location, and thence northward past the Casey Mountain #1 Shaft. The Penna Shaft road, further east along the Township line, is along the southeast margin of the claim group. Several other lot and concession roads provide convenient access.

Access by standard vehicle is available year round. Both Casey Township (population 385), and Harris Township (population 512) are incorporated municipalities. Harris Township abuts the City of Temiskaming Shores, which is the largest municipality in the area – population 10,840.

The climate is northern temperate with warm summers and cold winters. Temperatures range from +30 degrees Celsius in the summer to -40 degrees Celsius in the winter. The ground is normally snow covered between mid November and mid April. The property can be operated on a year-round basis.

While not totally relevant to the stage one proposed work, surface rights are adequate for current needs. Power and water are readily available, and, mining personnel are common in the larger Temiskaming district. Processing, tailings and waste disposal sites would be a future consideration, although the property is not near that stage of development.

## **5.0 HISTORY:**

In 1903, silver was discovered during the construction of the Temiskaming and Northern Ontario Railway in what became the famed Cobalt Mining Camp. Not long after, in 1906, cobalt bloom was discovered on the Langis property along the outcrop of the #1 Vein on which the #1 Shaft was sunk in the same year. The discovery is credited to David Bucknell. Thompson (1965) indicates that the discovery was by chance and not through prospecting.

Early work on the Langis property is poorly documented. This is partly a function of the patented status of the claims, wherein assessment work is not required. Some data, however, are found in the assessment file database maintained by the Ministry of Northern Development and Mines, and, at the



Resident Geologist's Office, Kirkland Lake. Several of these files appear related to option agreements on some of the Langis claims in the 1953-1968 period highlighted below. Production statistics are outlined in Table 3.

<b>Table 3</b>	<b>Production statistics, Langis Mine</b>									
Year	Tons	Silver oz	Cobalt lb	Nickel lb	Copper lb	Tonnes	Silver kg	Cobalt kg	Nickel kg	Copper kg
1908	14	500				13	16			
1909	14,889	26,185				13,507	814			
1910	43	92,544	1,922			39	2,878	872		
1911	277	114,789				251	3,570			
1912	215	253,824				195	7,895			
1913	384	825,107				348	25,664			
1914	620	499,642				562	15,541			
1915	226	223,939				205	6,965			
1916	334	445,900				303	13,869			
1918	139	143,901				126	4,476			
1919	162	171,278				147	5,327			
1921	3	1,101				3	34			
1922	7	1,028				6	32			
1940	1	504				1	16			
1946	11	34,090				10	1,060			
1947	11	30,790				10	958			
1956	6,869	88,673	14,027	6,446	1,506	6,231	2,758	6,363	2,924	683
1957	19,122	483,769	26,556	5,000	5,577	17,347	15,047	12,046	2,268	2,530
1958	25,203	594,436	48,757	12,160	8,235	22,864	18,489	22,116	5,516	3,735
1959	25,206	1,007,526	77,937	17,912	13,015	22,866	31,338	35,351	8,125	5,903
1960	23,662	1,137,233	101,456	60,366	1,069	21,466	35,372	46,019	27,381	485
1961	29,434	626,497	24,175	4,790	13,083	26,702	19,486	10,966	2,173	5,934
1962	36,750	619,906	11,602	6,078	11,763	33,339	19,281	5,263	2,757	5,336
1963	36,589	511,885	9,764	11,686	10,644	33,193	15,921	4,429	5,301	4,828
1964	36,551	604,096	11,049	772	5,043	33,158	18,789	5,012	350	2,287
1965	30,332	477,740	6,304	5,003	6,460	27,517	14,859	2,859	2,269	2,930
1966	34,760	356,202	24,791	11,520	12,042	31,534	11,079	11,245	5,225	5,462
1967	31,244	276,292				28,344	8,594			
1968	15,705	112,371				14,247	3,495			
1983-86	29,419	371,038				26,688	11,541			
1987	9,548	149,077				8,662	4,637			
1988	8,889	139,800				8,064	4,348			
1989	1,686	23,967				1,530	745			
	418,305	10,445,630	358,340	141,733	88,437	379,478	324,896	162,539	64,289	40,114
...after Sergiades (1968), Thorniley (1984), Owsjacki (1987, 1988, 1989), Agnico Eagle Mines Ltd. (1990)										



The history of the work performed on the Langis patented claims is abbreviated as:

**1906:** discovery of cobalt vein by David Bucknell near #1 Shaft location.

**1906-1919:** Casey Cobalt and Silver Mining Company Ltd.; sinking of #1 Shaft 1906, #3 Shaft in 1911, #6 Shaft in 1912; operations not profitable before 1911; Mining Corporation of Canada acted as operators (1907-1918); production listed from Casey-Kismet Mining Company at #3 Shaft location in 1919, and, from Harris Consolidated Mines Ltd. at #6 Shaft location in 1919 (Thompson, 1965). Production of 2,799,738 oz (87,082 kg) silver (Sergiades, 1968) – shipments continued to 1922.

**1920-1946:** property is dormant, ownership unclear.

**1946-1947:** Koza, Gareau, McAllister and Korsan owned claims; #1 Shaft partly dewatered, small scale mining. Limited production suggested between 1940 and 1947, 65,384 oz (2,034 kg) silver (Sergiades, 1968).

**1947-1948:** Cocase Prospecting Syndicate; 8 drillholes CC-1 to CC-8 incl. 448 m; all on south part of claim T26545; CC-5 intersected a 0.41 m vein assaying 346.3 g/t silver (Jerome, 1974)

**1948-1953:** New Casey Cobalt Silver Mines Ltd.; small scale underground operations.

**1953-1968:** Langis Silver and Cobalt Mining Company Ltd.; small smelter erected to produce cobalt speiss, but abandoned in 1955; underground exploration in 1955; 60-ton mill built in 1956, increased to 100 tons in 1960; #3 and #6 Shafts deepened in 1960-1961; Jerome (1969) reports five shafts and 20,202 m of underground workings by the end of this period. Production of 6,896,626 oz (214,509 kg) silver, plus 162 metric tons cobalt, 64 tons nickel, and, 40 tons copper (Table 3).

**1953-1968:** Langis Silver and Cobalt Mining Company Ltd.; claims controlled by Signal Oils and Metals Company Ltd. (1953-1959), Brewis and White (after 1959); tentative options with Milrot Mining Company on five claims in 1958, one drillhole M-1 on claim T43848, 61 m, no assays reported; Stadacona Mines (1944) Ltd option in 1958, 3 drillholes, SS-1 to SS-3 incl. on claim T11110, 491 m, no assays reported; Mid-North Engineering Services Ltd. for Langis Silver and Cobalt, two drillholes (S-20 and S-21) in 1959 on claim T43847, 244 m, no assays reported.

**1969-1978:** Langis Silver and Cobalt Mining Company Ltd.; no production, some in-house reports.

**1978-1991:** Langis Silver and Cobalt Mining Company Ltd.; option to Agnico-Eagle Mines Ltd.; #3 Shaft headframe erected 1980, workings dewatered; #6 Shaft headframe demolished 1983; #6 Shaft workings dewatered via #3 Shaft to 435-ft (133-m) level, 1984; Agnico acquires control of company in 1985; discovery of deep paleotrough via surface drillhole 85-2; 1987-1988 Penna (#7) Shaft sunk to southeast of Langis claims; 1989-1990 4<sup>th</sup> level at Penna Shaft (492 ft / 150 m) extended onto Langis ground; overall, extensive underground work includes drifting, crosscutting and diamond drilling – data detailed below. Production 683,882 oz (21,271 kg) silver (Table 3).

**1991-2005:** Langis Silver and Cobalt Mining Company Ltd.; Agnico-Eagle Mines Ltd sell interest March 2002; Technical Report completed November 2002, followed by an addendum dated November 2003; magnetic and electromagnetic surveys completed, 3 holes drilled – these data are currently unavailable / lost.

**2005-2011:** Aranka Gold Inc.; no work recorded.

**2011:** Canagco Mining Corporation, formerly 2278419 Ontario Ltd. purchases property.

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Originally part of the Casey Cobalt and Silver Mining Company holdings in 1906, the **Dolphin-Miller** Shaft was operated as the Langis #5 Shaft. It was owned and operated by Mining Corporation of Canada Ltd. between 1906 and 1918 (Jerome, 1969), and, subsequently owned and operated via a royalty-lease agreement with Langis Silver and Cobalt Mining Company between 1960 and 1968. The shaft was sunk in 1914 (Harmak Shaft of Harmak Mining Company) to a depth of 40 ft (12 m). Mining Corporation of Canada Ltd. deepened the shaft to 375 ft (114 m) in 1918 and established two levels at 220 and 360 ft (67 and 110 m).

In 1958, Dolphin-Miller Mines dewatered the shaft and drilled 11 short holes from underground (Jerome, 1969). The mine was subsequently allowed to flood, but was dewatered again in 1960 under Langis management for Candore Explorations Ltd.

It is unclear if the production from the Dolphin-Miller property is included as part of the statistics from the Langis Mine in Table 3, but, Jerome (1969) indicates only 2023 tons (1835 metric tons) of material were processed at the Langis mill between 1964 and 1965. The average mill-head grade was 4.5 oz/t (154 g/t) silver, plus, 0.5 to 0.6% cobalt.

Minimal surface work is reported on the Dolphin-Miller claims. Prior to the royalty-lease agreement in 1960, Candore Explorations Ltd. drilled 12 holes in the vicinity of the shaft, with an aggregate footage of 4493 ft (1370 m). Further south, 2 diamond drillholes were drilled on claim T43765 - DM-2 and DM-3 totaling 978 ft (298 m), and, one hole is recorded on claim T43767 – hole DM-15 at 247 ft (75 m). The total drilling adds to 5718 ft (1743 m). Logs are available for drillholes DM-2, DM-3 and DM-15. These holes are completely in sediments and no assays accompany the logs. Logs are unavailable for the drilling near the shaft. Similarly, logs are not available for five holes drilled by Agnico-Eagle Mines Ltd in 1979 – holes 79-1 to 79-5 inclusive totaling 3862 ft (1177 m).

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Less is known about the history of the **Casey-Seneca unpatented claim** (4207126) in Harris Township. Thomson (1965) reports that underground work was carried out in 1915 and 1916, at which point, all surface equipment was destroyed by fire. No other reference is made on the claim until Jerome (1969) who indicates that the property was under a royalty-lease agreement with Langis Silver and Cobalt Mining Company Limited. No details of the royalty-lease agreement are available, and, only limited underground work is referenced.

Jerome (1969) lists two holes drilled onto the Casey-Seneca claim from the Langis #3 Shaft workings, and, a raise from the east end of the 355-ft (108-m) level at the Langis #3 Shaft to the Casey-Seneca 340-ft (104-m) level. The 340-ft (104-m) level was half full of clay. Later, Jerome (1974) states that the Casey-Seneca unpatented claim, then known as the Murray lease “was mined during the later years of production.” Again, no specifics are available, and, production statistics are assumed to form part of the Langis production statistics in Table 3.

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The historic work by Agnico-Eagle Mines Ltd on the Langis and adjacent properties between 1978 and 1991 was tracked by the Resident Geologist’s Office, with further detail provided by in-house files of Agnico-Eagle as:

**1979:** 5 surface drillholes, Dolphin Miller area, 79-1 to 79-5, 3862 ft (1177 m).

**1980:** headframe erected at #3 Shaft.

**1981:** extensive underground program, 14,394 ft (4388 m) underground drillholes in #3 Shaft area, on 235, 285, 355, and 425-ft (72, 87, 108 130-m) levels.

**1982:** 2 new veins discovered from 235-ft (72-m) level, #3 Shaft; crosscut from 5<sup>th</sup> level (355-ft / 108-m); 20,565 ft (6270 m) underground drilling from 235 and 355-ft (72, and 108-m) levels, #3 Shaft, and, 275 and 335-ft (84 and 102-m) levels #6 Shaft.

**1983:** #6 Shaft headframe demolished; 2 new stopes by #6 Shaft; 22,396 ft (6828 m) underground drilling from 235 and 355-ft (72, and 108-m) levels, #3 Shaft, and, 275 and 335-ft (84 and 102-m) levels #6 Shaft.

**1984:** property holdings expanded south and east; geophysical surveys; dewater #6 Shaft workings to 435-ft (133-m) level; extend workings 215 m on 355-ft (108-m) level at #3 Shaft; establish a winze some 30 ft (9 m) on 355-ft (108-m) level #3 Shaft to 400-ft (122-m) level at #6 Shaft; new crosscut (67 m) to 64-110 zone; 29,163 ft (8891 m) underground drilling from 355 and 425-ft (108 and 130-m) levels, #3 Shaft, and, 335 and 400-ft (102 and 122-m) levels of #6 Shaft.

**1985:** production suspended in March; 94 m drifting and crosscutting on 470-ft (143-m) level, #6 Shaft; surface drillholes 85-1 to 85-16 across larger land holdings, total footage unknown; discovery hole 85-2 at eventual site of Penna (#7) Shaft to southeast of Langis claims; 24,776 ft (7554 m) underground drilling from 335 and 400-ft (102 and 122-m) levels of #6 Shaft, plus a series of long underground drillholes to follow up the surface data, from both the #3 and the #6 shafts.

**1986:** mining operations restart December; 360 m crosscutting on 400-ft (122-m) level #6 Shaft; 13 surface drillholes (86-17 to 86-29 incl.) on larger land package, 9893 ft (3016 m); 25,079 ft (7646 m) underground drilling from 400-ft (122-m) level, #6 Shaft.

**1987:** Penna (#7) headframe collared; 4 surface drillholes (87-1 to 87-4 incl.), 3792 ft (1156 m) at Penna site to define paleotrough; 27,940 ft (8518 m) underground drilling, from 335 and 400-ft (102 and 122-m) levels of #6 Shaft.

**1988:** mining and exploration discontinued at #3 Shaft but used to hoist ore and access #6 Shaft workings; 122 m crosscuts and minor raising on both the 335 and 400-ft (102 and 122-m) levels of #6 Shaft; 16,030 ft (4887 m) underground drilling from 335 and 400-ft (102 and 122-m) levels of #6 Shaft; Penna (#7) Shaft complete to 1182 ft (360 m).

**1989:** crosscut from Penna Shaft on 4<sup>th</sup> Level (492 ft / 150 m) for 2160 ft (659 m) at 305 degrees onto Langis lands; drifts extended along vein systems on Langis lands; drilling amounts unknown.

**1990:** mine closed, allowed to flood by August; 13,826 ft (4215 m) in 22 underground drillholes along edge of paleotrough; some raising and extracting of backs.

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The history of the **four unpatented claims (28 units) in Casey Township** mostly revolves around developments circa the Casey Mountain shafts on current claim 4266951. As on the Langis patented claims, early work in the area is poorly documented but appears to proceed as:

**1907-1915:** Casey Mountain Cobalt Mining and Development Company Ltd.; claims staked soon after Langis discoveries, “at least 20 tons of silver-cobalt ore were shipped” in 1908 (Sergiades, 1968).

**1915-1917:** Casey Mountain Syndicate; #1 Shaft to 135 ft (41 m), with 90 ft (27 m) drifting on 50-ft (15-m) level; #2 Shaft to 160 ft (49 m), with 30 ft (9 m) drifting on 90-ft (27-m) level.

**1917-1920:** Casey Mountain Mining Company Ltd.; Thomson (1965) indicates operations from 1915-1919 with drifts, crosscuts and underground diamond drilling.

**1920-1927:** Casey Mountain Operating Syndicate Ltd.; #1 Shaft to 415 ft (127 m), with a short drift on the 90-ft (27-m) level, a crosscut on the 135-ft (41-m) level, 35 m of crosscuts on the 400-ft (122-m) level; #2 Shaft deepened to 285 ft (87 m), 780 ft (238 m) of drifts and crosscuts on the 270-ft (82-m) level, and, a 70 ft (27 m) winze from the 270-ft (82-m) level.

**1927-1947:** property appears to be dormant.

**1947-1950:** W.R.M. Williamson, geological mapping; dewater #1 Shaft to 135 ft (41 m) for sampling.

**1950-1959:** Quincy Creek Mines Ltd.; further mapping and sampling by W.R.M. Williamson, amount and type of work unclear.

**1959-1960:** Murray Mining Corporation Ltd.; option claims from Quincy Creek Mines Ltd.; 4 drillholes, 591 m – 2 holes (203 m) in the NW1/4 N1/2 of lot 6 Con I (being south part of current claim 4266954), and, 2 holes near the #1 Shaft (388 m) on claim 4266951. All holes ended in syenitic basement rocks.

**1959-1960:** H.K. Explorations Ltd.; 3 drillholes (181 m) S-1 to S-3 inclusive, on current claim **4266953**.

**1967:** Gereghty Property; ground magnetic and VLF electromagnetic surveys on claim **4266953**.

**1975:** Willars Property; ground magnetic and VLF electromagnetic surveys on claim **4266953**.

**1984-1988:** Pronto Exploration Ltd.; work done by Seal River Exploration; airborne magnetic and VLF electromagnetic surveys over area in 1986; ground magnetic and VLF electromagnetic surveys in 1984, on current claims 4266951 and 4266954; a 3-hole fence of drillholes (497 m) on the west part of claim 4266952, holes CM-85-1 to CM-85-3 inclusive; 2 drillholes (528 m) east and north of the Murray Mining drilling on the south part of claim 4266954, holes CM-86-4 and CM-86-6, and; 1 drillhole CM-87-4 (212m) in the mid northeast part of claim 4266954. Only one assay of significance reported in the drilling from drillhole CM-85-1 – 46.6 g/t silver over 10 ft (3 m) from 337-347 ft (103-106 m), no mineralization is indicated on the log.

**2012:** Canagco options claims from McBride and Pollock, no work recorded.

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Production statistics for the Langis patented claims are listed in Table 3. On the Casey Mountain property, Sergiades (1968) states that in 1908 “at least 20 tons of silver-cobalt ore were shipped”. No other data are available in terms of grade or recoveries on the Casey Mountain prospect, thus, these data are not included as past production.

There are no current mineral resources identified on the Langis lands.

## **6.0 GEOLOGICAL SETTING AND MINERALIZATION:**

The Langis project is located in the Southern Province of the Precambrian Shield. In the Cobalt-Elk Lake – New Liskeard area, the Southern Province is designated the Cobalt Embayment. The embayment extends northward from the Grenville Front near North Bay into the Cobalt and Kirkland Lake districts. It is characterized by relatively flat-lying, Proterozoic sediments of the Huronian Supergroup unconformably resting on Archean basement rocks of the Superior Province.

The Huronian Supergroup is divisible into the Elliot Lake (oldest), Hough Lake, Quirke Lake and Cobalt (youngest) groups. The Cobalt Group is the primary Huronian stratigraphy in the Cobalt Embayment. It is further divisible into the Gowganda (oldest) and the Lorrain formations. Only the lower Coleman Member of the Gowganda Formation is present on the Langis property. In the Cobalt mining camp, the Coleman Member was the most productive host of silver and cobalt mineralization.

The Coleman Member is a sedimentary sequence that includes conglomerate, greywacke and arkose units. Several of the conglomerate units are poorly sorted and very coarse, with boulders in excess of a meter in size. Legun (1986) interprets these coarse conglomeratic rocks to be of glacial origin.

While the Coleman sediments are primarily flat-lying, local steepening of the beds appears to reflect an irregular, potentially glaciated, basement topography. Thompson (1965) indicates a greatest reported

thickness of Coleman sediments at 235 m in the area, with up to 136 m in the vicinity of the Langis mine. More recent work by Agnico-Eagle Mines Limited (Owsiacki, 1987) identified a deep, linear trough in the basement rocks, infilled with approximately 325 m of Coleman Member sediments.

The basement rocks of the Archean, Superior Province are poorly exposed in the Langis mine area. The most extensive exposures are underground from the 355-foot level of the #3 Shaft, and, the 401-foot level of the #6 Shaft (Thompson, 1965). Thompson (1965) describes the sequence as predominately intermediate to mafic flows with subordinate units of cherty to carbonaceous interflow and tuff.

Intrusive rocks in the Archean are subdivided into three broad categories: synvolcanic, syntectonic and posttectonic intrusions (Ayer et al., 2005). They are readily apparent in a regional context northward but are not well represented on the Langis claims. Small, steeply-dipping, lamprophyre dykes are the only Archean intrusives mentioned in the underground workings. A larger dyke of lamprophyre, approaching 20 m thick, is found on the 492-ft (150-m) level of the Penna or #7 Shaft workings, on Langis lands.

North of the claim group, Thompson (1965) indicates the presence of syenite intrusive. Surface exposures are found within Concession II, Casey Township, but its contacts are obscured by the flat-lying Cobalt Group, Nipissing Diabase and much younger Ordovician sediments. These intrusives tend to be considered syntectonic and coeval with the Archean, Timiskaming assemblage in the Kirkland Lake area (Ayer, 2005). They range from syenite to mafic syenite in composition. Stocks often have contaminated margins and variably altered to metamorphosed contact aureoles. The strong magnetic contrasts in the most northerly Langis claims and eastward onto the unpatented lands are interpreted to reflect this contact environment in the basement rocks.

In the far northern part of the Langis project, the Casey Mountain shaft environment and eastward onto claim 4266953, all of the previous drilling confirms that the basement rocks are syenite, hornblende syenite, or, 'red granite'. Thus the syenite stock or plug is a prominent basement feature in this area. The interpreted syenite contact (at depth) beneath the much younger rocks is indicated on Figure 4, Geology and Gradient Magnetism Compilation, Langis Project.

Proterozoic intrusives are represented by the aerially extensive Nipissing Diabase sills and dykes. Typical to the Cobalt Mining Camp, sills are zoned with fine grained and/or quartz diabase margins around a hypersthene diabase +/- olivine core (Thompson, 1965). The diabase is flat-lying to weakly undulating in character and cuts both Archean and Huronian lithologies. In the Cobalt area, the thickness of the diabase sill approaches 300 m. In the Langis project area, the upper part of the Nipissing Diabase is eroded. Only fine grained diabase and quartz diabase are present, leading Thompson (1965) to estimate a maximum thickness in the order of 120 to 150 m for the sill on Langis lands. Although the genetic relationship between the Nipissing diabase and silver mineralization is unclear, there appears to be a close physical relationship between the intrusive and mineralization, both in the main part of the Cobalt camp, and, on the Langis claims.

The whole of the Precambrian system is overlain by much younger Paleozoic rocks. The Paleozoic sequence consists of Ordovician age limestone, shale and sandstone units, followed by younger Silurian limestone, shale, dolomite, magnesian limestone and sandstone members (Thompson, 1965). Their

presence is largely controlled by the Timiskaming rift system – a northwest-trending rift valley interpreted to be a northern branch of the Ottawa-Bonnechere graben that forms part of the St. Lawrence rift system. Numerous faults are associated with the rift system, which remains active to the present day. There are no surface exposures of Paleozoic sediments within the property limits, although Ordovician sediments are expected to occur along the western and eastern flanks of the Langis project.

The Timiskaming rift system is also associated with a kimberlite, diatreme event of Jurassic age. No kimberlites, however, have been noted on the Langis lands to date.

The most prominent structure in the area is the Timiskaming rift system. It appears to have been active since Precambrian times – the veining at the Langis #3 Shaft area is prominently subparallel to the rift system in a northwesterly orientation, or, orthogonal to it, and; the deep linear trough discovered by Agnico-Eagle Mines Limited in 1986, trends northeasterly and is suggested to be a paleo-fault scarp in the Archean basement (Owsiacki, 1989). Thus, the geometry suggests that the rift system may have been active from late Archean or early Proterozoic times to present day.

Numerous faults are associated with the rift valley, and, minor offsets are common along several of the steep vein systems underground (Thompson, 1965).

Flat structures, at less than 30-degree dips are also present in the area (Thompson, 1965). They tend to be crudely subparallel to the Huronian stratigraphy. Offsets appear to be minimal, from 2 to 3 m, but are difficult to determine due to a lack of correlation between the flat stratigraphy and the steeper vein systems. The most noteworthy of these features is the Casey Fault, identified in the western part of the #3 Shaft workings and tentatively correlated with a flat feature at the Dolphin Miller shaft, 500 m south, and, a fault on the 335-foot level at the Langis #6 Shaft area, 580 m east-northeast (Thompson, 1965). The Casey Fault is several feet thick and is characterized by fractured rock and gouge.

\*

As noted above, the Coleman Member of the Huronian Supergroup has been the most productive host of silver and cobalt mineralization in the Cobalt camp, and; Nipissing diabase sills exhibit a close spatial relationship to the mineralization. A third association in the Cobalt camp is the presence of an unconformity between the Archean and Huronian Supergroup rocks. The model environment contains all three elements, which are similarly present on the Langis project lands.

At the #3 Shaft location, mining occurred primarily in Coleman Member sediments within 50 m of the Archean / Huronian unconformity (Thompson, 1965). He indicates that the vein structure diminishes in strength towards surface, and, below the unconformity although local examples exist (as #6 Vein), where mining continued to be profitable for a depth approaching 15 m into Archean rocks. Veins in the #3 Shaft workings generally strike northwest or northeast, mirroring the geometry of the Timiskaming rift system. Dips tend to be steep at 70-90 degrees. Thompson (1965) states that most of the stopes in the #3 Shaft area are on veins with one to three structures, while in the #6 Shaft area, veins consist of assemblages of many minor fractures without any single outstanding structure. Complementary fractures and splay features are also expected within the tectonic environment.

In addition to the different character of the mineralized veins at the #6 Shaft, veins also have different orientations, with more northerly and westerly strikes to the systems there. This is most likely a function of the Nipissing diabase, the basal contact of which appears to strike northerly in this area. Veins also extend from the Coleman sediments up to 25 m into the Nipissing diabase sill (Thompson, 1965), whereas Nipissing diabase is not encountered in the #3 Shaft workings, some 700 m west-southwest.

Typical ore shoots extend 15 to 120 m horizontally and 8 to 61 m vertically (Harron, 2002). Individual veins mined range from less than 2 to 15 cm (Harron, 2002), and are characterized by native silver, cobalt-nickel-iron arsenides and sulpharsenides in a calcite +/- dolomite gangue (Thompson, 1965). Metallic minerals associated with the veining, recorded by Thompson (1965) include : native silver, argentite, ruby silver, cobaltite, skutterudite (smaltite), safflorite, arsenopyrite, niccolite, native bismuth, bismuthinite, chalcopyrite, bornite, tetrahadrite, sphalerite and marcasite.

Elements of the veining discussed by Thompson (1965) include:

*“Native silver is by far the most important silver-bearing mineral. It occurs in the vein-proper and in the wallrock.*

*In general, where native silver occurs, smaltite [i.e. cobalt mineralization] is also present close-by.*

*Native silver occurs in the vein-proper in pieces ranging from slabs as large as perhaps two square feet in area and ½ inch in thickness and as small as tiny flakes that are referred to as “leaf silver”. It also occurs in the vein-proper in very irregular shapes in the central part of smaltite masses or atoll-like shapes. In places, an exquisite pattern of dendritic silver enveloped in smaltite and contained in a white calcite matrix is found.*

*Native silver occurs in the wallrock of the veins for the most part as leaf silver. The leaves occupy tiny fractures and subsidiary veinlets. The leaf silver in the tiny fractures is for the most part not accompanied by calcite. The leaf silver in the wallrock may extend to about two feet on either side of the vein-proper.*

*Two factors contribute to the limitation of the upward continuity of the veins as mineable units: the dying-out of the vein structure; and, changes in the nature and abundance of metallic minerals in the veins. The limiting factor for almost all veins is the dying-out of the vein structure.*

*For a few veins such as the No. 1 vein [at the #3 Shaft], the ratio of cobalt-bearing minerals to silver-bearing minerals increases with increasing distance above the contact, and in the upper levels silver is present at less than ore grade.”*

At Casey Mountain, Thomson (1965) indicates that the #1 Shaft was sunk on an east-striking fracture zone that dips 85 degrees north. The fracturing is described as iron-stained calcite plus quartz. Jerome (1969) suggests the fracturing to be similar to the #30 Vein system on the 275-ft (84-m) level at the Langis #6 Shaft.



The Casey Mountain #2 Shaft collared on a northeast-striking (N 37 degrees E) fracture in diabase, dipping 80-85 degrees northwest (Thomson, 1965). Jerome (1969) adds that seven veins were encountered on the 270-ft (82-m) level, with highgrade reported in the #7 Vein. The #7 Vein is up to 76 cm thick with prominent pyrite and galena, and, is interpreted to be a brecciated, faulted structure. The winze from the 270-ft (82-m) level was sunk on this feature.

An additional factor of uncertain significance is the basement topography of the Archean rocks. Thompson (1965) writes:

*“According to the hypothesis, silver-cobalt veins are more abundant in Cobalt Group sedimentary rocks above or near trough-like depressions in the Cobalt Group – Keewatin [i.e. Archean] contact than in areas above uniformly dipping parts of this contact. Refinements of the hypothesis are to the effect that the positions and attitudes of the veins are determined to a considerable extent by abrupt changes of dip in the contact, particularly steepenings of dip, around the edges of trough-like depressions.”*

Jerome (1969), Owsjacki (1987) and Harron (2002) concur, and, Agnico-Eagle Mines Ltd. sunk the Penna Shaft in 1987 based on the mineralization along the western margin of the paleotrough discovered in 1985 (western margin on Langis claims). Owsjacki (1988) indicates:

*“Significant high-grade silver intersections have been recovered from within all three rock types [being Nipissing Diabase, Coleman sediments, and, Archean volcanics] at the western margin of this trough. The best assay to date is 50 ounces over 9.45 m, intersected in the volcanic rocks.”*

The western margin of the paleotrough occurs roughly 400 m southeast of the #6 Shaft on Langis claim T42973.

## **7.0 EXPLORATION AND DIAMOND DRILLING:**

Late in 2011, Canagco Mining Corporation Limited (Canagco) initiated a small sampling program over the four, unrestrained tailings ponds related to the Langis mining operations. The objective was to establish a quick analysis of the silver and cobalt contents of the tailings, thereby facilitating a decision to proceed with a more thorough sampling program.

The sampling was undertaken by George Monteith, CEO and Gino Chitaroni, President of Canagco. Both Monteith and Chitaroni are geologists, but are not Qualified Persons as defined by National Instrument 43-101. Analyses were completed by Polymet Laboratories of Cobalt, Ontario. Martin Ethier carried out a GPS survey of both the sample locations and the extremities of the tailings ponds.

Samples consisted of shovelled grab material, generally less than 30 cm in depth. Five cuts were taken in a star-shaped pattern at most locations and amalgamated into one sample. Given the very preliminary nature of the effort, neither standards nor blanks were utilized, and, recheck samples were not submitted.

Cobalt analyses of the tailings samples were low, with a best assay of 268 ppm from one sample on the south tailings pond (less than 0.03% cobalt). Silver assays include 180 g/t from one sample (only 2 cuts) at the #4 Shaft location; 153.6 g/t (4 cuts) at the #1 Shaft location; three samples of 55.20, 60.69 and 53.49 g/t (arithmetic average 56.46 g/t or 1.65 oz/ton silver) in the north tailings pond, and; three samples of 45.26, 40.80 and 56.57 g/t (arithmetic average 47.54 g/t or 1.39 oz/ton silver) from the south tailings pond.

As indicated above, the sampling was designed to establish a quick analysis of the silver and cobalt contents of the tailings in order to facilitate a decision to proceed with further work. The samples cannot be considered representative of either the surface extents of the tailings ponds or the tailings profile. Thus, the analyses should not be regarded as anything more than a 'ballpark' indication of the metals present.

Jerome (1969) states that some of the tailings at the #1 Shaft were milled between 1965 and 1968, averaging a recorded grade of 186.5 g/t silver. Given the current sampling methods, the comparison suggests that a more thorough sampling program is warranted for all of the tailings ponds, along with more comprehensive sampling and assaying protocols.

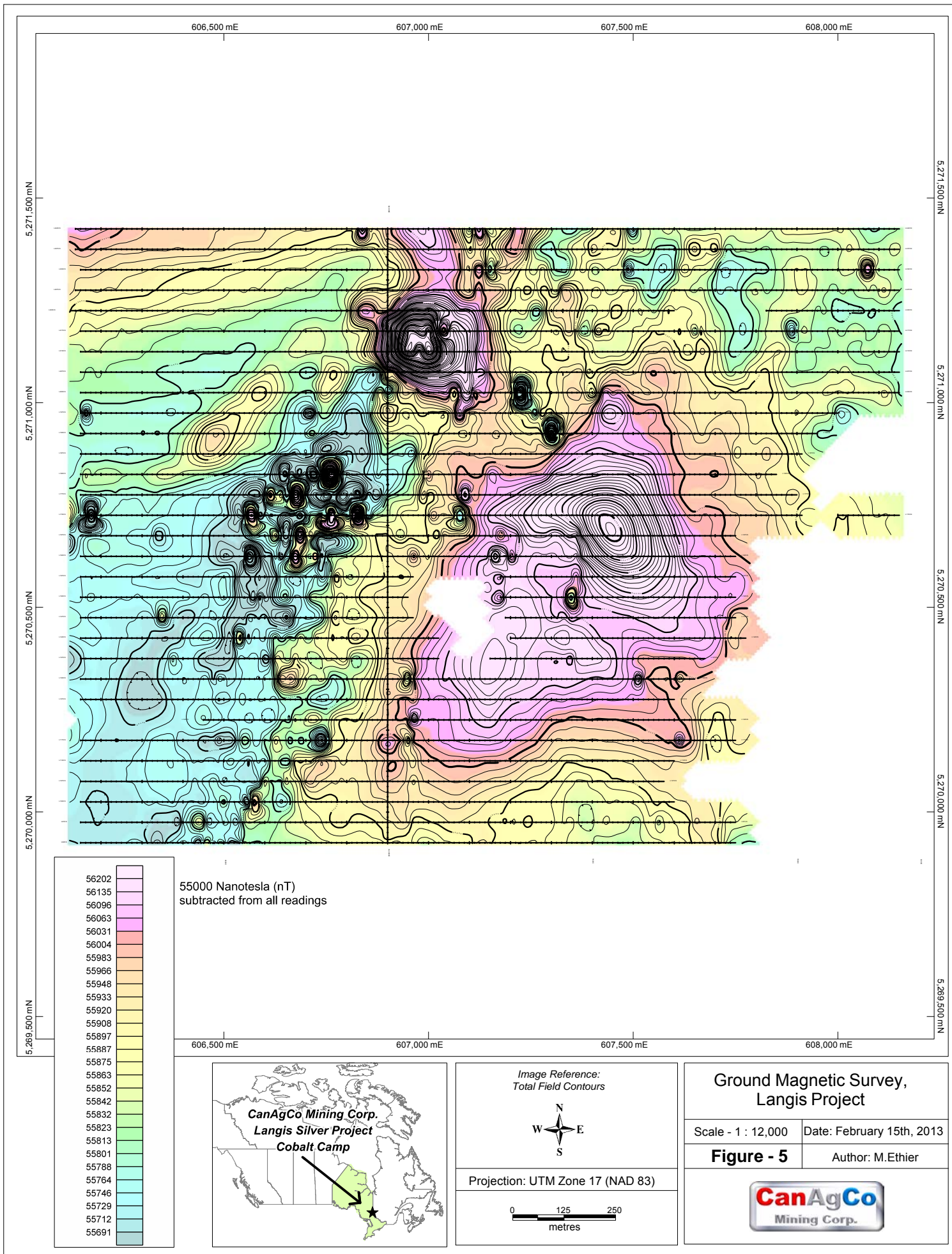
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Between November 1 and November 30, 2012, linecutting and magnetic surveys were conducted by Meegwich Consultants Inc. of Temagami, Ontario. David Laronde was the field supervisor and reported on the work.

The surveys were carried out over 18 claims straddling the Casey-Harris Township boundary. Seventeen claims are patented, with one unpatented claim (4207126) in Harris Township. The survey area covers the Dolphin Miller environment, northward to the Langis #4 Shaft location. Given the length of lines potentially required for the Induced Polarization gradient array and multiple gradient array survey to follow, the surface rights owner on the two easternmost claims in Harris Township gave permission to extend the grid onto those lands.

Grid lines were cut at 100-m intervals with intervening lines at 50-m intervals traversed via GPS. The grid is referenced to UTM coordinates. Some 53 line km were surveyed in the magnetic survey at 12.5-m stations. Readings were taken with a Gem System, GSM-19 overhauser magnetometer, accompanied by a Gem System GSM-19 base station for monitoring diurnal variations. Only total field measurements were taken.

The most prominent feature is a large (600x700 m), crudely circular, magnetic high in the east to southeast quadrant of the survey (Figure 5). It is some 700-850 nano-teslas above background. Initially interpreted as Nipissing Diabase, the feature does not correlate well with the intrusive complex. It transgresses the Huronian / Nipissing Diabase contact and may reflect metamorphism or contamination of the underlying rocks. The basement stratigraphy is unknown here.



A similar intensity but smaller magnetic feature in the order of 250 m in diameter is nearly centered over the Langis #4 Shaft, where the host rock is Cobalt Group greywacke and conglomerate. While no mention of the magnetics is found in the database, these flat-lying rocks may be contaminated from the nearby diabase intrusion, or, there is an uncertain magnetic source in the basement rocks. Further research, field work and compilation are required for both of these magnetic features.

In the southwest quadrant of the magnetic survey is a 250-300 m, north-northeast striking magnetic low corridor. It extends from the Dolphin Miller environment into the #1 and #3 Shaft areas on the Langis claims. The surficial geology here is Cobalt Group conglomerate, greywacke and arkose. The mag low roughly corresponds to a high resistivity corridor in the Induced Polarization survey that appears to reflect the basement rocks in this area. Again, additional research and compilation are required to place the magnetic anomaly in context.

In addition to the magnetic low corridor described above, a series of magnetic lows tracking northwesterly across the survey appear to articulate a fault zone. The fault zone passes through the central part of the large magnetic high, tentatively terminates the magnetic low and high resistivity corridor described above and continues northwest toward the syenite contact. The trace of the fault passes between the Langis #3 and #6 Shaft environments (Figure 4). The only major fault noted in that area is the flat-lying Casey Fault near the basement contact with Cobalt Group sediments. Thomson (1965) describes the Casey Fault as several feet thick and characterized by fractured rock and gouge. Although most steep faults are subparallel to the veining and are suggested to have minimal offsets in the Langis workings, further investigation is warranted on this relatively strong feature.

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The linecutting grid established by Meegwich Consultants Inc. was also utilized by Quantec Geoscience Ltd. for an Induced Polarization (IP) / Resistivity Survey over the 18 Canagco claims. G.R. Jeffrey Warne was the project manager for Quantec Geoscience Ltd. of Toronto. The survey was conducted between October 30 and November 21, 2012.

Only the cut grid lines, spaced 100 m apart were surveyed. The station interval was 25 m. The grid was subdivided into four blocks for a reconnaissance gradient-array component (28.4 km), followed by multiple gradient (Realsection) coverage on nine selected lines. The IP receiver was an Iris Elrec Pro with a Walcer KW10 transmitter and a Walcer MG-12A power supply. Raw data were processed using Geosoft Oasis Montage software.

The complete IP report is attached as Appendix A.

In the southeast quarter and along the west margin of the southwest quarter distinctly lower resistivities in the gradient array are suggested to be related to increased thicknesses of low resistivity overburden cover (Warne, 2013). A prominent high to very high resistivity corridor in the order of 250-300 m thick sits between these two low resistivity features. It extends north-northeast from the Dolphin Miller environment to the #3 Shaft area on the Langis claims and correlates with an equally prominent magnetic low. Near the #3 Shaft area, the high resistivity corridor subtly changes character north of the

northwest-trending fault tracked via the magnetic survey. The high resistivity corridor extends to depth and may well be a reflection of the cherty interflow and tuff units within basement intermediate to mafic volcanics described by Thomson (1965).

Several strong chargeable features on the reconnaissance gradient array survey are questionable in nature and are suggested to be related to culture (Warne, 2013). They are characterized by both strongly positive and strongly negative chargeabilities and warrant some cursory investigation before being dismissed as hydro effects, grounding for lightning protection, electric fences or underground workings.

In the Realsection or multiple gradient array, three detail areas of three lines each were surveyed. In the south grouping of detail lines (11+25N, 12+25N and 13+25N) weak chargeability responses are coincident with high resistivity signatures. Warne (2013) states that the maximum apparent chargeability within the target area occurs at a depth of approximately 200 m.

Weak to moderate chargeable anomalies are delineated underlying 6550E to 6650E on section 17+25N (Figure 6), centered at depths of 100-150 m (Warne, 2013). Similar signatures are noted in the two other detail lines (18+25N and 19+25N) within this central corridor.

Several, narrow, weak chargeable zones are noted over the northern detail corridor which includes lines 22+25N, 23+25N and 24+25N. Chargeable target zones, however, are not clearly defined (Warne, 2013).

The Realsection or multiple gradient array IP is adept at identifying targets at depths of up to 400 m. In this circumstance, however, less information is available on the important, near-surface areas of interest as at the Dolphin Miller Shaft (114 m depth), Langis #3 Shaft (133.5 m depth) and Langis #6 Shaft (149 m depth) environments. Most of the Realsection data relates to basement rocks, of which very little is currently known. (Figure 6 highlights the basement contour at the Langis #3 Shaft location along Realsection line 17+25N.) These priority areas need to be resurveyed with more conventional IP methods at smaller 'a' spacings to illuminate the shallower target depths. Those data could then be integrated with the gradient results to more fully define the geophysical signature of this complex environment.

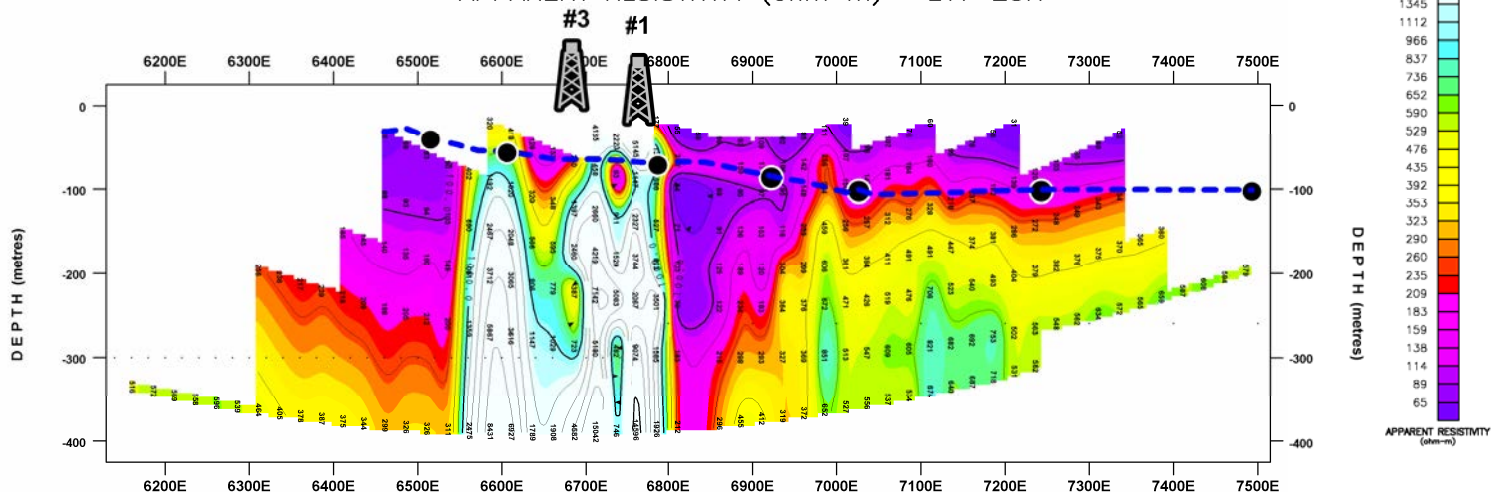
Several targets of a grassroots nature are suggested in the basement rocks, but more supportive data are needed before contemplating a drill test.

Additional Realsection work is most warranted over areas where the paleotrough is indicated to depths approaching 300 m, north and east of the Langis #6 Shaft environment, near the axis of the Nipissing Diabase intrusive.

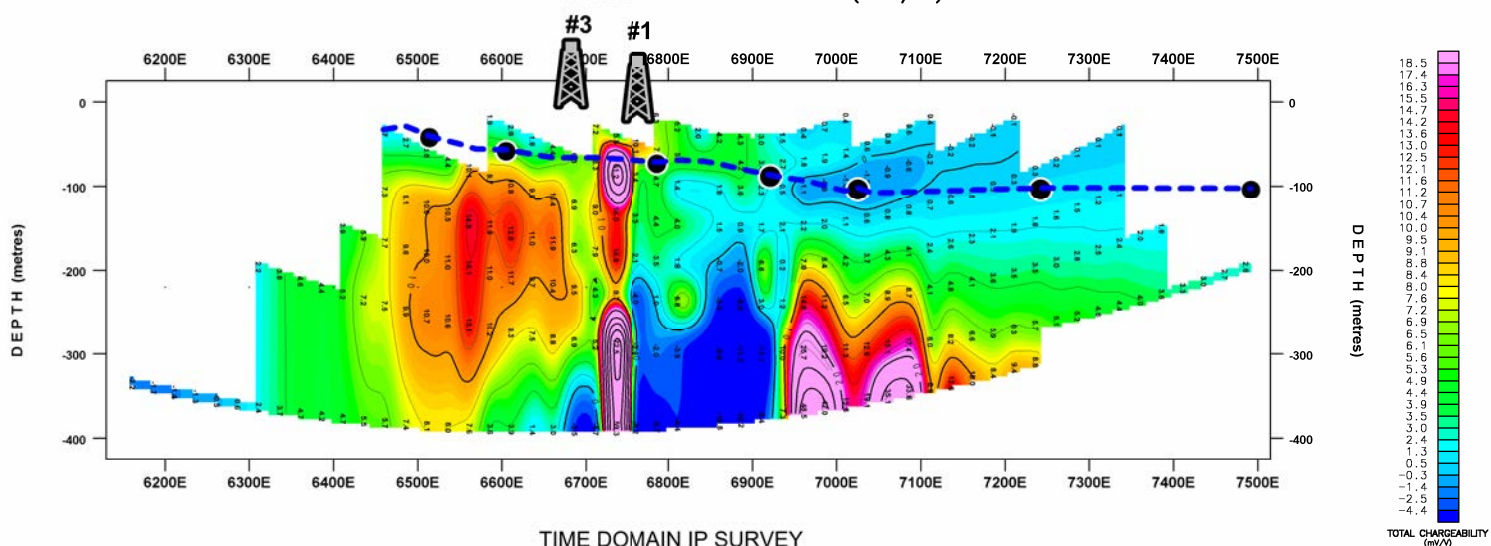
No diamond drilling has taken place in the current program.



# APPARENT RESISTIVITY (ohm-m) - L17+25N



## TOTAL CHARGEABILITY (mV/V)



## TIME DOMAIN IP SURVEY REALSECTION L17+25N (Multiple Gradient Arrays)

Transmitter Frequency: 0.125 Hz (50% duty cycle)  
Transmitter Current: 1 to 10 Amps  
Decay Curve: IRIS Semilog  
20 Gates (10ms to 1850ms)

Station Interval: 25 meters  
Contour Intervals: RES = 5 levels/log decad  
CHG = 2, 10mV/V  
Colour Scale: Equal Area Zoning

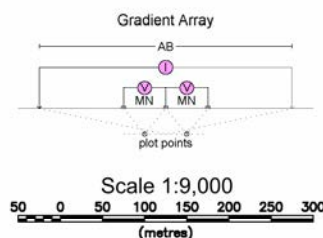
Survey Date: Nov. 2012  
Instrumentation: Rx = IRIS / ELREC-PRO  
Tx = WALCER / KW10

### LEGEND

- Known Contact Point
- Shaft
- Geological Contact  
Huronian Sediments Overlain  
on Keewatin Basement



### LINE 17+25N



### Realsection Line 17+25N With Basement contour

Scale - 1 : 9,000 Date: February 15th, 2013

Figure - 6 Author: M.Ethier



## **8.0 SAMPLE PREPARATION, ANALYSES AND SECURITY:**

Sampling protocols for a variety of surveys have yet to be established. The test sampling of the tailings ponds was of a very preliminary nature and can best be used as a guide to establish the parameters of a more thorough sampling program. The assay results are entirely inadequate for indicating more than a 'ballpark' estimate of the metal contents.

That being said, samples consisted of shovelled grab material (fine grained tailings), generally less than 30 cm in depth. Five cuts with a spade were taken in a star-shaped pattern at most locations and amalgamated into one sample. The sample was placed in a plastic sample bag accompanied by a numbered ticket, and, the bag was tied off with electrical tape. The samples (8 in all) were taken by George Monteith, CEO and Gino Chitaroni, President of Canagco. They personally delivered the samples to Polymet Laboratories of Cobalt, Ontario; gave the samples to the sample preparation staff, and; filled out the chain of custody forms. Neither standards nor blanks were inserted by Canagco.

Gino Chitaroni is also the President and Manager of Polymet Laboratories, a division of Polymet Resources Incorporated. Polymet Resources Incorporated is certified by SAI Global Certification Services as operating a Quality Management System, which complies with the requirements of ISO 9001:2008. The registration covers the Quality Management System for Assaying lab services, processing plant and bullion plant (certificate number CERT-0046724, expiry July 18, 2013).

Polymet Laboratories dried the samples, which were subsequently riffled by a Jones Riffler to extract a 200 g sample. The 200-g sample was then pulverized to a -150 mesh – the pulp. The pulp is identified by one part of the two-part numbered ticket, while the second part of the ticket remains with the balance of the sample – traditionally known as the reject. Both the pulp and reject bags are also identified by company name, sample type and sample date. Pulp samples are then submitted for Fire Assay with a gravimetric finish.

In this instance, no triggers were established for a second assay from the pulp (as an example, assays greater than 100 g/t might require a re-assay), nor, was a second pass of 10-20% of the sample rejects sent to a second laboratory. This reflects the very preliminary nature of the assay objective – to facilitate a decision whether or not to proceed with further work. The assay results cannot be considered as representative and should not be regarded as anything more than a 'ballpark' indication of the metals present.

Moving forward, a more thorough sampling program via an overburden drill is recommended as part of the Stage One Recommendations. Unconsolidated cores from a sonic drill are envisaged, with sample intervals of up to a meter in length. A 31-element scan is also recommended for selected samples in addition to analyses for silver and cobalt. A comparison between fire assay and atomic absorption methods should also be undertaken as part of initial test work. Canagco should also insert standards and blanks into the system, and, institute a recheck program at a second assay facility.

The assay facility should be instructed to routinely check assay every tenth or twentieth sample, and, also report standards and blanks inserted by the laboratory itself. Triggers also need to be established

for re-assay of samples greater than a certain threshold, via a second pulp created from the reject. While these thresholds may vary over time, a point of departure for the north and south tailings ponds might be in the order of 100 g/t silver, while the older ponds at the #1 Shaft and #4 Shaft could warrant a higher assay threshold of 200 to 300 g/t silver. The hallmarks of good survey data are predictability and continuity - models that should be shaped by the initial control work.

Sample preparation, security and analytical procedures by Polymet Laboratories are adequate for the assay work completed. New terms of reference for standards, blanks, check assays, re-assays, sample intervals, and control work, however, need to be established by Canagco for the Stage One program.

## **9.0 DATA VERIFICATION:**

Given that the mine workings related to the Langis, Dolphin-Miller and Penna shafts are flooded, and, diamond-drill logs with assays from past work are normally unavailable, a very early priority of the Langis project is to confirm some of the historic assumptions through 3D computer modeling, additional geophysical surveys and diamond drilling.

Those efforts have only been initiated in a very preliminary manner at this point in time.

Historic work is unable to be verified but a number of government and private sources have been reviewed for the preparation of this report. Those sources are considered reliable, and, the data are consistent with the data presented herein. Historic data by Thompson (1965), Jerome (1969) and Owsiacski (1982 to 1990 incl.), combined with in-house reports by Agnico-Eagle Mines Ltd. are certainly of professional standards for their period, although they should not be relied upon, since they predate implementation of National Instrument 43-101 and have not been verified by a Qualified Person.

With respect to the samples from the tailings ponds, the results are not considered representative of either the surface extents of the tailings ponds, or, the tailings profile. The data are included as part of the work done and filed for assessment onto the unpatented claims, but, the analyses should not be construed as anything more than a 'ballpark' indication of the metals present. Much further work is both required and recommended.

## **10.0 ADJACENT PROPERTIES:**

While the Penna Shaft is southeast of Langis claims, the most relevant mineralization explored by Agnico-Eagle Mines Ltd. from those workings occurs on the Langis claims. There is no adjacent data that particularly modifies the current database. The Langis project could operate on a stand-alone basis.



## **11.0 MINERAL PROCESSING AND METALLURGICAL TESTING:**

Neither mineral processing nor metallurgical testing has been undertaken by the current owners. A recovery of 93.7% of the silver is indicated from in-house data during the Agnico-Eagle Mines Ltd. era, plus, there is an oblique reference to an 88% recovery of the silver from Dolphin-Miller material by Jerome (1974). Neither of these statistics are able to be verified.

## **12.0 MINERAL RESOURCE AND MINERAL RESERVES ESTIMATES:**

There are no current mineral resources identified on the subject lands.

Owsiacki (1989) indicates that:

*All mining and exploration was discontinued in the Langis No. 3 Shaft area during the year [being 1988]. The shaft is, however, used to hoist ore and access the Langis No. 6 Shaft workings, located approximately 0.7 km to the east. Although sufficient reserves were delineated in this area to continue mining for approximately an additional six-month period, all operations were suspended in November because of low silver prices.*

*Mining and exploration continued without interruption to the middle of November 1988 in the No. 6 Shaft area...*

*...two new veins have yet to be mined [at #6 Shaft], and, a number of untested promising veins remain as future potential.*

No further reference is made regarding the status of the mineralization above, and, no resources are able to be identified. Limited production, however, is indicated by Agnico-Eagle Mines Ltd. (1990) in 1989, such that the majority of the resource is assumed to have been extracted.

## **13.0 OTHER RELEVANT DATA AND INFORMATION:**

To the best of the author's knowledge, the data herein are understandable, and, no data have been withheld that would otherwise be considered misleading.

## **14.0 INTERPRETATION AND CONCLUSIONS:**

In addition to its mineralization and past-producing history, the Langis project contains a number of elements common to past-producing mines in the Cobalt Mining Camp, being

: the presence of Coleman member sediments - the most productive host of silver-cobalt mineralization;

: an unconformity with basement Archean rocks;

: a variable basement topography, characterized by faulting and paleotroughs, and;

: a Nipissing Diabase sill.

Most relevant to the current database on the Langis lands is the work undertaken by Agnico-Eagle Mines Ltd. between 1978 and 1991, and, the geophysical surveys followed up with diamond drilling by Langis Silver and Cobalt Mining Company Ltd. in 2003.

Even after a production history in the order of 9.8 million oz silver, Agnico were able to establish and extract mineralization in the Langis #3 and #6 Shaft areas amounting to some 683,000 oz silver at an average grade of 13.80 oz/t (473 g/t). Agnico also discovered a new paleotrough south and east of the #6 Shaft workings. Mineralization there, was of sufficient interest to warrant sinking of the Penna Shaft and extending a 659-m crosscut to the western margin of the paleotrough on Langis lands. No clear measure of continuity of mineralization appears to have been established along the western margin of the paleotrough, however, before the low price of silver precluded further work.

The extension of the new paleotrough northward on the Langis lands is underexplored to unexplored, as is the eastern margin of the paleotrough, both on former Agnico and current Langis lands – two, primary target environments. Jerome (1969) also indicates a trough north of the #4 Shaft that is virtually unexplored. Current thinking suggests that the axis of the main paleotrough northwest of the Penna Shaft is nearly coincident with the axis of the Nipissing Diabase intrusion. Further, it is interesting to note a crude correlation between the troughs and magnetic ‘lows’, a correlation that needs further investigation.

In 2003, Meegwich Consultants completed a magnetic and a horizontal-loop electromagnetic survey in an area of airborne electromagnetic anomalies on Langis claims (Harron, 2003). Two targets were selected from the geophysical surveys – a 76 m long, electromagnetic target 275 m northwest of the Langis #3 Shaft, interpreted as possibly indicative of sulphide mineralization, and; an airborne magnetic response, 335 m north-northeast of the #3 Shaft, suggested as a possible kimberlite target. A third hole (B), some 400 m northeast of the #6 Shaft previously listed in the 2002 Technical Report was also recommended. Three holes were reported to be drilled but supportive data are currently lost. At the 2003 Annual Meeting, Sheridan (2004) indicates:

*“The 2500 foot drilling program conducted in 2003 was designed to test for silver vein deposits, base metal sulphide deposits associated with EM conductors, and kimberlite hosted diamond deposits.*

*The first three holes intersected vein structures consistent with Five Element Ni-Co-As-Ag-Bi type ore deposits (Silver Vein Deposits). Hole CO-03-3 confirmed that a deep Huronian sedimentary valley and a deep Nipissing diabase basin exist in a large untested portion of the property. Both of these geological structures commonly host silver vein deposits. Widespread chalcopyrite mineralization was intersected in the Huronian sediments of CO-03-3. This chalcopyrite is similar to disseminated sulphides commonly associated with silver deposits in Huronian sediments.”*

Given the importance of a paleotrough, and, the small window of mineralization associated with silver-bearing veins near the Archean-Huronian-Nipissing Diabase contacts, the 2003 program needs to be revisited.

The Dolphin-Miller area and claims southward are also environments with Coleman member sediments and Nipissing Diabase that are underexplored. Thus an ambitious exploration program is envisaged.

## **15.0 RECOMMENDATIONS:**

The approach to exploring the Langis project is subdivided into eight main categories

- : follow up to the 2012 geophysical surveys
- : 3D computer modeling;
- : investigate tailings potential;
- : diamond drilling for down-hole geophysics;
- : down-hole geophysics;
- : ground geophysics;
- : diamond drilling on underexplored areas, and;
- : revisit the 2003 program.

The aim of the proposed program is to gather sufficient information in the short to medium term, to facilitate a decision about proceeding underground. Underground exploration could realize significant cost savings in the long term over diamond drill testing from surface, and; underground infrastructure could be put in place that would allow future flexibility.

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Follow up to the 2012 geophysical surveys considers two elements – inversion data on the magnetic survey, and, more conventional Induced Polarization (IP) surveys over the shallow target areas.

The total field magnetic survey is of excellent quality and may be manipulated by inversion software to establish contacts for some of the geological units, depths to the source of the magnetic anomalies, and, potentially, depths of overburden. At a cost of \$5000, the process is considered excellent value.

As noted in the Exploration and Diamond Drilling segment, the Realsection or multiple gradient array IP is adept at discovering targets to depths approaching 400 m. In this instance, however, the increased depth penetration is at a perceived cost to the shallow targets. The shallow targets, at less than 150 m, are most common to the Dolphin Miller, Langis #3 Shaft and Langis #6 Shaft environments. Therefore, it is recommended that a more conventional IP approach, geared to targets at less than 150 to 200 m

depths be undertaken. As a 'first pass', resurveying of the nine Realsection lines should provide sufficient data in the target areas to allow integration with the Realsection results. The nine detail lines surveyed by Realsection amounted to 11.05 km. One complete line (21+25N), at 2.1 km in length is also recommended to cover the Langis #4 Shaft environment and eastward to the end of the grid. The total amount of IP surveying equals 13.15 km.

Costs are anticipated as:

Inversion software for magnetic survey -	\$5000
IP survey for shallow targets 13.15 km at \$3000/km =	\$39,450
Reporting -	<u>\$2000</u>
Total =	<b>\$46,450</b>

\*\*\*\*\*

The 3D computer modeling effort is designed to scan, geo-reference and model the Langis underground and surface data. Computer modeling would greatly assist in defining mineralized systems, given that two orientations of veins/structures perpendicular to one another, with or without splay elements can be very difficult to interpret in two dimensions. At the outset, the 3D modeling would also assist in determining the target locations and orientations for the down-hole geophysical program. Later, adding layers of geophysical data and available drill logs to the system would help evaluate and discriminate new targets elsewhere on the property. Level plans from the Agnico-Eagle Mines Ltd. era are available.

To date, many of the Agnico-Eagle level plans have been scanned and geo-referenced, but, significant scanning and data entry remain to complete the database.

Costs include:

Scanning of available data -	\$10,000
Labour to geo-reference, digitize and model -	\$20,000
Consulting fees, software costs -	<u>\$20,000</u>
Total =	<b>\$50,000</b>

\*\*\*\*\*

The potential of the historic tailings is an early question to consider for either processing with today's technology, or, remediation. Jerome (1969) indicates that a small amount of historic, stamp-mill tailings north of the #1 Shaft had been processed between 1965 and 1968 averaging 5.44 oz/t (186.5 g/t) silver. The balance of those tailings and a similar small pond near the #4 Shaft dating prior to 1922 are available, but the bulk of the tailings date to the 1956-1968 period and occupy the topographic low west of the #3 Shaft, north and south of the Casey Mine Road. Some 270,000 metric tons of tailings are

anticipated which have not been evaluated. Jerome (1969) indicated an 88% recovery of the Dolphin-Miller material processed between 1965 and 1968. Using similar mathematics, Jerome's recovered grade of silver content between 1956 and 1968 at 21.22 oz/t (728 g/t) suggests a potential grade of the tailings in the order of 2.55 oz/t (87 g/t) silver, with unknown credits in other metals. These statistics are marginally at odds with the production data in Table 3, which suggests a recovered grade for this period of 19.62 oz/t (673 g/t) thereby reducing the potential tailings grade to 2.35 oz/t (81 g/t). The preliminary sampling on the 1956-1968 vintage tailings further differ from the above calculations, indicating values in the order of 1.39-1.65 oz/t (47.54-56.46 g/t). At any rate, a more thorough evaluation of the tailings potential is warranted.

A theoretical grid on a 20-m line spacing, with sample locations every 10 m, outlines a total of 606 sampling sites over the two largest tailings ponds – 324 sites to the north, and, 282 sites over the southern pond. Three samples are anticipated to be taken at each site by an overburden drill for a total of 1818 samples, assayed for silver, cobalt and a 31-element scan for other metals. Alternately, pending the quality of assay data required from an initial test program, priorities may shift to geochemical analyses via Atomic Absorption for copper, nickel and arsenic amounts. The price difference is minimal here.

Costs are expected at:

Drilling and sampling – 606 sites at \$400 per setup =	\$242,400
Assaying – 1818 samples at \$52 per sample =	94,536
Check Assay Program – 20% of assays =	<u>18,907</u>
Total =	<b>\$355,843</b>

\*\*\*\*\*

In tandem with an early stage of the 3D computer modeling effort, mineralized targets need to be selected for diamond drilling. The objective for this phase of diamond drilling is to facilitate down-hole geophysical surveys. With drillholes located as strategically as possible from the computer modeling and the available geophysical data, the targets could also be utilized as tests of the extensions on the mineralized zones.

Tentatively, three drillholes, 100 m apart are recommended in the Langis #6 Shaft environment at the western margin of the paleotrough, plus, a further three holes, 100 m apart in the #3 Shaft environment targeting potential mineralization at depth. The target area is generally defined from 50 m above to 15 m below the Huronian/Archean unconformity. Thus, at the #6 Shaft environment, the ultimate target depth is roughly 165 m, and, 150 m at the #3 Shaft. Considering drillholes at -45 degrees, lengths of the holes are in the order of 250 m to fully section past a vertical depth of 165 m, and, 225 m to section past the proposed depth of 150 m. Costs are estimated on an all-in basis (drilling, logging, sampling, assaying) at \$140 per m, and include:

#6 Shaft environment – 3 holes of 250 m at \$140/m = \$105,000

#3 Shaft environment – 3 holes of 225 m at \$140/m = \$94,500

Add an allocation for casing needed for the surveying = \$10,000

Total = **\$209,500**

\*\*\*\*\*

The down-hole geophysical surveying is a critical component for generating new targets. By establishing the geophysical parameters of the mineralization at the Langis #3 and #6 shafts from the above drilling, similar targets highlighted in the ground geophysical surveys become much higher priority targets. The down-hole surveys connect hard data from the diamond drilling to hard data from the geophysical surveys, creating a powerful correlating tool. Both single-hole data and hole-to-hole correlation is proposed. Borehole Induced Polarization (IP) and Electromagnetic surveys are available – IP is recommended as a start. It costs \$5000 per diem with an estimate of one hole completed each day.

Cost estimates include:

Borehole IP for 6 holes at \$5000 per day = \$30,000

Hole-to-Hole initial test work = \$10,000

Reporting = \$2,000

Total = **\$42,000**

\*\*\*\*\*

Ground geophysical surveys are planned to expand upon the existing database and the geophysical parameters highlighted by the down-hole work. A variety of surveys are suggested as a second stage on the current grid, to complement the Realsection IP and magnetic surveys, and, the proposed stage 1 more conventional IP work. Alternative surveys over the current grid could then be evaluated for their usefulness in advancing the database and consequently the project in general.

The current approach of linecutting, magnetic and Induced Polarization (IP) surveys appears to maximize the data quality for establishing a strong, first-pass database. Line km are calculated using the current layout of east-trending grid lines, spaced 100 m apart. For each claim surveyed, some 1.6 km of grid lines / survey lines are anticipated along with a separate allocation for Base Lines.

Four general areas are targeted for additional ground geophysical surveys:

: 16 claims (25.6 line km) over the current grid system established in 2012, for alternative surveys – the Langis portion;

: 6 claims (9.6 line km) representing the eastern extension of the grid system across the paleotrough target area to the east boundary (over claims T14116, T43797, T43798 and T43846-T43848 incl, in Concession I, Casey Township) – the eastern target;

: 4 claims (6.4 line km) along the south boundary targeting the southward extension of the paleotrough across claims T43767-T43770 incl. – the southern target, and;

: 8 claim units (12.8 line km) over the Casey Mountain environment to generate a new database here. The 8 claim units include claim 4266951, the two western units of 4266952, and, the two northern units of 4266954 – the Casey Mountain target.

Costs are anticipated as:

Langis: Horizontal Loop Electromagnetic Survey = 25.6 line km at \$500 per km =	\$12,800
Langis: Seismic surveys = 12.8 line km at \$5000 per km =	\$64,000
Eastern: Linecutting = 9.6 km at \$750/km =	\$7,200
Eastern: Magnetic survey = 9.6 km at \$300 per km =	\$2,880
Eastern: Realsection IP over paleotrough = 9.6 km at \$3000 per km =	\$28,800
Southern: Linecutting = 6.4 km at \$750/km =	\$4,800
Southern: Linecutting = 1.2 km Base Lines at \$750/km =	\$900
Southern: Magnetic survey = 6.4 km at \$300 per km =	\$1,920
Southern: Conventional IP survey = 6.4 km at \$3000 per km =	\$19,200
Southern: 2 check lines Realsection IP = 3.2 km at \$3000 per km =	\$9,600
Casey Mountain: Linecutting = 12.8 km at \$750 per km =	\$9,600
Casey Mountain: Linecutting = 2.8 km Base Lines at \$750 per km =	\$2,100
Casey Mountain: Magnetic survey = 12.8 km at \$300 per km =	\$3,840
Casey Mountain: Conventional IP survey = 12.8 km at \$3000 per km =	\$38,400
Mobilization / Demobilization estimates (pending contractor chosen) =	\$20,000
Reporting =	<u>\$10,000</u>
<b>Total =</b>	<b>\$236,040</b>

HLEM surveys have been used with some success in the past to detect mineralized interflow horizons in the basement volcanics.

Seismic surveys are planned to facilitate locating the Huronian/Archean unconformity, since seismic waves refract and reflect at different speeds and frequencies through different rock units. The seismic survey target is more general in nature and does not need to be as site specific as either the magnetic or the Induced Polarization surveys, such that a coarser line spacing (200 m) is suggested. The seismic budget is based on a cheaper refraction rather than a reflection survey.

Expanding the geophysical surveys over the remaining 30 claim units (10 patented and 20 unpatented claims) depends upon the results of the alternative surveys and the 'first-pass' work on the Eastern, Southern and Casey Mountain targets outlined above.

\*\*\*\*\*

Diamond drilling on underexplored areas covers numerous target locations that would benefit from better definition via the ground geophysical surveys. Orientations of structures and consequently orientations of drillholes should be clearer after the ground geophysical surveys are complete.

One preliminary area is east of the Langis #6 Shaft workings, and, the underground workings from the Penna Shaft, which extend onto claim T42973. Four claims east of T42973 (T2559, T14116, T43798 and T43797) have seen minimal diamond drilling, as well as the adjacent strip of five claims northward (from west to east as: T11269, T2659, T43848, T43847, and T43846) – see Figure 4. The proposed extension of the northeast-trending paleotrough discovered by Agnico-Eagle Mines Ltd. in 1985, passes through this corridor, and, there are no indications that its eastern margin has ever been tested. Tentatively a minimum of one diamond drillhole per claim, guided by geophysics is proposed as a first pass.

Given the vertical depth to the Huronian/Archean contact of 221 m at the Penna Shaft, 137 m at the #6 Shaft, and, 81 m in drillhole S-20 on claim T43847, the corresponding drillhole lengths to section the Huronian/Archean contact and 15 m vertically beyond is 334, 215 and 136 m respectively. Hole lengths of 350 m, 250 m, and, 150 m are recommended to fully section the target stratigraphy. For the nine claims to be tested an estimate of the drilling includes:

Three drillholes of 350 m, at \$140 per m =	\$147,000
Four drillholes of 250 m, at \$140 per m =	\$140,000
Two drillholes of 150 m, at \$140 per m =	<u>\$42,000</u>
Total of 2350 m =	<b>\$329,000</b>

\*

Jerome (1969) indicates a trough north of the #4 Shaft, is virtually unexplored. Interesting magnetics are present in this area from the government airborne surveys, which should be further cleaned and filtered via the ground geophysical surveys proposed. A northwest-trending magnetic contact is located some 200 m northeast of the #4 Shaft, and, a more prominent, east-trending magnetic contact is associated with the margins of the Cocase drilling program which intersected a 0.41 m vein assaying 10.1 oz/t



(346.3 g/t) silver in 1947-1948. The east-trending magnetic contact is interpreted to partly reflect the contaminated margin of a syenite intrusive in the basement rocks (Figure 4).

Depths to the Huronian/Archean contact at the Cocase drilling area ranges from 153 to 165 m, and, circa 130 m near the #4 Shaft (Thompson, 1965). Four holes are tentatively recommended, two on each of the orientations suggested from the airborne geophysics. As previous, the ultimate target depth is up to 180 m, such that drillholes are cast at a length of 250 m each. Costs are estimated as:

Four drillholes of 250 m, at \$140 per m = **\$140,000**

\*

A third underexplored area is near and south of the Dolphin-Miller Shaft in Harris Township. Again, new ground geophysical data should aid in selecting targets. South and east of the Dolphin-Miller Shaft, there is minimal drilling over six claims. The closest drilling is some 700 m further south on the north part of claim T43765, where the Huronian/Archean contact was not reached by 116 m in drillholes DM-2 and DM-3 drilled in 1960. The depth to the Huronian/Archean contact at the Dolphin-Miller Shaft and northward, varies from 56 to 126 m (Thompson, 1965).

A preliminary pass of three drillholes south of the Dolphin-Miller Shaft is proposed. These holes could be reallocated, pending ground geophysical results. Testing vertical depths approaching 140 m indicates drillhole lengths of 200 m, costing:

Three drillholes of 200 m at \$140 per m = **\$84,000**

\*

#### **Summary of underexplored target areas:**

East of #6 Shaft environment – 9 drillholes = \$329,000

North of #4 Shaft – 4 drillholes = \$140,000

South of Dolphin-Miller Shaft – 3 drillholes = \$84,000

Total underexplored areas = **\$553,000**

\*\*\*\*\*

The eighth of the categories in a preliminary exploration program is a revisiting of the 2003 diamond drilling results by Langis Silver and Cobalt Mining Company Ltd. While the data are currently lost, the 2500 ft (762 m) program indicated that all three drillholes intersected vein structures consistent with Silver Vein Deposits (Sheridan, 2004). The presence of vein structures some 275 m northwest of the #3 Shaft, and, 335 m north-northeast of the #3 Shaft suggest that the Huronian / Archean contact may be further west than previously understood. The presence of a deep Huronian valley, tentatively 400 m north of the #6 Shaft, is not inconsistent with current data, and, some of the proposed drilling recommendations herein. While the presence of drill casings is unknown, and the search is precluded by

the winter months, a similar sized program is recommended to be set aside as follow up to, or, expansion of those results. The cost estimate would be:

Three drillholes, total of 800 m at \$140 per m = **\$112,000**

\*\*\*\*\*

The eight categories of proposed exploration are broken into two distinct stages, summarized as:

**Stage 1 program**

: follow up to the 2012 geophysical surveys	\$46,450
: 3D computer modeling	\$50,000
: Tailings potential	<u>\$355,843</u>
Subtotal stage 1 =	\$452,293 + a 15% contingency = \$520,137

**Stage 2 program**

: Diamond drilling for down-hole geophysics	\$209,500
: Down-hole geophysics	\$42,000
: Ground geophysics	\$236,040
: Diamond drilling for underexplored areas	\$553,000
: Revisit the 2003 program	<u>\$112,000</u>
Subtotal stage 2 =	<u>\$1,152,540</u> + a 15% contingency = \$1,325,421
Subtotal =	\$1,604,833
Add 15% Contingency	<u>\$240,725</u>
Total budget =	<b>\$1,845,558</b>

A 15% contingency figure is used, due to the uncertain impact of HST charges.

As listed above, the recommendations are readily divisible into a setup stage or stage 1, and, the balance of the current wish list as stage 2. The setup stage includes the first three items on the list: follow up to the 2012 geophysical surveys at \$46,450, 3D computer modeling at \$50,000, and, drill-

testing of the historic tailings at \$355,843, yielding a total of \$452,293. The second phase includes the remaining five categories listed above, totaling \$1,152,540. Applying a 15% contingency to each of the stages produces estimated expenditures of \$520,137 for stage 1 (setup), and, \$1,325,421 for stage 2. Stage 2 is more flexible in outline and is predicated on the success of stage 1, the priorities developed, and, the decision points taken.

The setup stage includes follow up to the 2012 geophysical surveys and the 3D computer modeling. The 3D computer modeling is anticipated to be an efficient method to generate very site-specific targets for the diamond drilling in stage 2. Both of these facets have a direct bearing on how to proceed with either down-hole or ground geophysics, and, the amount and type of geophysical surveys to be utilized in stage 2. Drill testing and sampling of the historic tailings in the setup stage are also considered important for further understanding the potential of the property at an early decision point.

As noted above, the stage 2 effort is predicated on the success of stage 1, and, different approaches may need to be developed once stage 1 is complete.

While the overall exploration program appears ambitious, the property is mature in many respects, and, positive results should supply sufficient data for moving the property forward.

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## 17.0: CERTIFICATE AND CONSENT OF QUALIFIED PERSON:

As author of the report entitled "Technical Report on the Langis Project, Canagco Mining Corporation", dated May 17, 2013, I, Dale R. Alexander make the following statements:

1. My residential address is:  
20 Glen Road, Box 2621  
New Liskeard, Ontario P0J 1P0
2. I am currently retired but was contracted by Canagco Mining Corporation to write a Technical Report on the Langis Project, and, assist in developing a strategy for moving the property forward.
3. I made a personal inspection of the property on November 23, 2011, with Mr. Gino Chitaroni, President, Canagco Mining Corp. Subsequent visits were made in the winter of 2011-2012, and, in early November 2012 while the linecutting and geophysical surveys were in progress.
4. I graduated with a Bachelor of Science degree in Geology from the University of New Brunswick in 1970. My primary work experience has been in the Abitibi Greenstone Belt of northeastern Ontario and northwestern Quebec, first as field geologist, later as Exploration Manager (Queenston Mining Inc) between 1996 and 2006, prior to retirement. Most of my career focus has been on precious metals, with limited work on base metals and uranium.
5. I am registered as a Professional Geoscientist in the Province of Ontario (# 0524).
6. I am a member of the Northern Prospectors Association, the Ontario Prospectors Association, the Prospectors and Developers Association of Canada, the Canadian Institute of Mining Metallurgy and Petroleum, and, a Fellow of the Geological Association of Canada.
7. I am a Qualified Person for the purposes of National Instrument 43-101.
8. I am responsible for the Technical Report. The historic work is unable to be verified, but a number of government and private sources have been reviewed, and, those data are consistent with the data presented herein. Further, details of the agreements were supplied by Canagco legal counsel and were not verified by the author.
9. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report which is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
10. I am independent of the issuer. I am neither a director nor an officer, nor do I hold shares in Canagco Mining Corporation.
11. I have read National Instrument 43-101, Standards of Disclosure for Mineral Projects, Companion Policy 43-101CP and Form 43-101F, and, the Technical Report has been prepared to comply with the legislation.
12. I consent to the public filing of the Technical Report titled "Technical Report on the Langis Project, Canagco Mining Corporation", and dated May 17, 2013, by Canagco Mining Corporation.

Dated this 17<sup>th</sup> day of May, 2013



*Dale R. Alexander*

Dale R. Alexander



# **Appendix A**

IP/Resistivity Survey, Summary Interpretation/Logistics Report

Langis Mine Property

Harris and Casey Townships, Ontario, Canada

on behalf of Canagco Mining Corporation 45 pp,

accompanied by 9 Realsection plots.

IP/RESISTIVITY SURVEY  
SUMMARY INTERPRETATION/LOGISTICS REPORT  
LANGIS MINE PROPERTY  
HARRIS, CASEY TWPS., ONTARIO, CANADA  
ON BEHALF OF  
CANAGCO MINING CORP.  
(TORONTO, ONTARIO, CANADA)

## SUMMARY

An Induced Polarization survey employing the Gradient Array was conducted by Quantec Geoscience Ltd. at the Langis Mine Property, Harris, Casey Twps., Ontario, Canada, during the period October 30<sup>th</sup> to November 21<sup>st</sup>, 2012.

The objectives of the survey were to:

- 1) Delineate IP/Resistivity signatures related to metallic sulphide-arsenide mineralized vein systems prospectively hosting silver-cobalt, of the type historically mined at the Langis Mine property.
- 2) Detect potential metallic mineralized zones hosted in underlying Keewatin formations.
- 3) Assist in mapping the geology and structure underlying the property.

in order to locate possible targets for drilling.

Reconnaissance Gradient Array surveys were completed over 16 lines at 100 m separation over the Langis property. The coverage was subdivided into 4 Gradient survey Blocks. Additional detailed surveys, with multiple Gradient Arrays were completed over 9 of the 16 lines.

The results have delineated low to very high Apparent Resistivity (20  $\Omega$ -m to 22300  $\Omega$ -m) and very low to very high Apparent Chargeability (-60 mV/V to 75 mV/V). The strongest chargeability anomalies in the results are suspected to be related to man-made structures. None the less, weak to moderate chargeable zones consistent with the target models have also been detected and delineated, which may warrant explanation.

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## 1 INTRODUCTION

This report presents the logistics of the IP/Resistivity data acquired from 2012/10/30 to 2012/11/21 over the Langis Mine Property, on behalf of CANAGCO MINING CORP..

### 1.1 SURVEY OBJECTIVES

The objectives of the survey were to:

- 1) Delineate IP/Resistivity signatures related to metallic sulphide-arsenide mineralized vein systems prospectively hosting silver-cobalt, of the type historically mined at the Langis Mine property.
- 2) Detect potential metallic mineralized zones hosted in underlying Keewatin formations.
- 3) Assist in mapping the geology and structure underlying the property.

in order to locate possible targets for drilling.

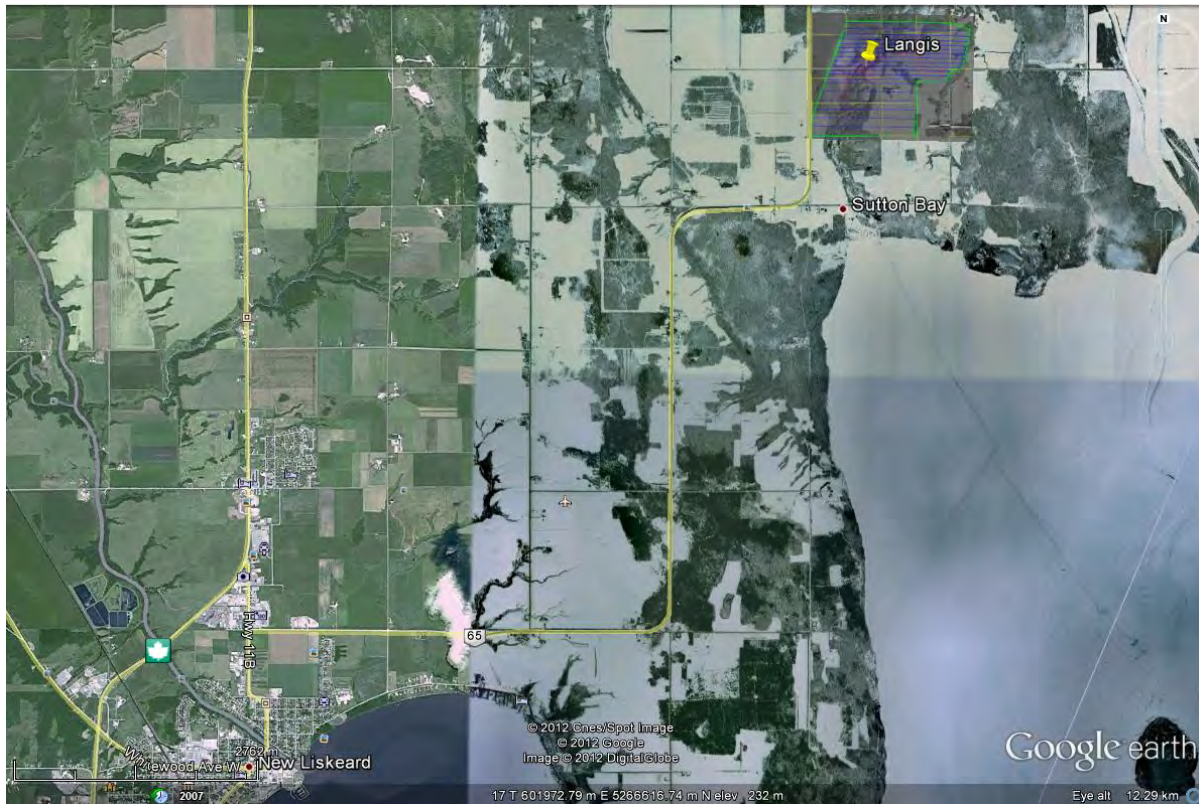
### 1.2 GENERAL SURVEY INFORMATION

<b>Quantec Project No.:</b>	CA00950C
<b>Client:</b>	CANAGCO MINING CORP.
<b>Client Address:</b>	C/O Harold James Clifford, Secretary/Treasurer 88 Bloor Street East, Suite 2110 Toronto, Ontario, M4W 3G9 Canada
<b>Client representative:</b>	Gino Chitaroni Phone: (705) 679-5500 Email: ginochitaroni@hotmail.com
<b>Project Name:</b>	Langis Mine Property
<b>Survey Type:</b>	IP/Resistivity
<b>Project Survey Period:</b>	2012/10/30 to 2012/11/21
<b>General Location:</b>	Approximately 12 km northeast of New Liskeard, in Harris, Casey Twps.
<b>Province:</b>	Ontario
<b>Country:</b>	Canada
<b>Nearest Settlement:</b>	New Liskeard
<b>Datum &amp; Projection:</b>	NAD 83 Zone 17T
<b>Latitude &amp; Longitude:</b>	Approx. 79°34'42.77"W, 47°34'52.97"N
<b>UTM position:</b>	Approx. 606888m E, 5270753m N
<b>NTS:</b>	31 M/12

**List of Claims Surveyed:**

Claim No.	No. of Units	Township
T26544	1	Casey
T26545	1	Casey
T11283	1	Casey
T17338	1	Casey
T1474	1	Casey
T11269	1	Casey
T1733	1	Casey
T354	1	Casey
T11110	1	Casey
T42973	1	Casey
4207126	1	Harris

**Table 1-1: List of Claims Surveyed<sup>1</sup>**

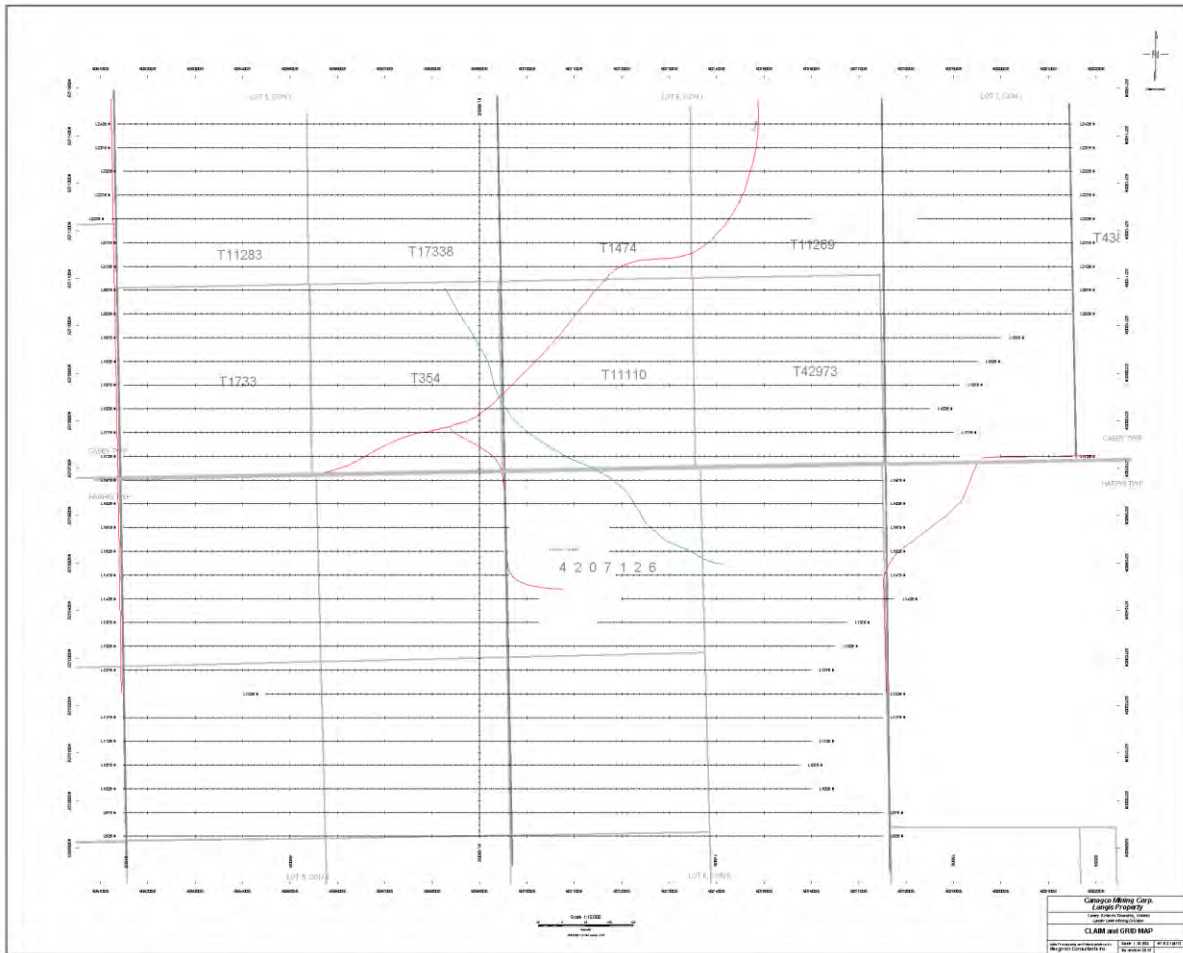


**Figure 1-1: General Project Location<sup>2</sup>**

<sup>1</sup> Assessment Report on Detailed Magnetometer Survey, Meegwich Consultants Inc., Nov, 2012

<sup>2</sup> Image downloaded from <http://maps.google.ca>.





***Figure 1-2: Line Location Map<sup>3</sup>***

<sup>3</sup> Assessment Report on Detailed Magnetometer Survey, Meegwich Consultants Inc., Nov, 2012

## 2 SURVEY LOGISTICS

### 2.1 ACCESS

<b>Base of Operation:</b>	Econo Lodge 998006 Highway 11 New Liskeard, Ontario P0J 1P0
<b>Mode of Access:</b>	By truck, ATV, and on foot

### 2.2 SURVEY GRID AREA

<b>Established by:</b>	by client prior to survey execution
<b>Coordinate Reference System:</b>	Grid referenced to UTM Coordinates
<b>Datum &amp; Projection:</b>	UTM NAD83
<b>Grid Azimuth:</b>	90° (See Fig 1-2)
<b>Line separation:</b>	100m
<b>Station Interval:</b>	25 meters

### 2.3 PRODUCTION AND COVERAGE

<b>Survey Period/days:</b>	October 30 <sup>th</sup> , to November, 21 <sup>st</sup> , 2012 23 days
<b>Survey Days (read time):</b>	19.5 days
<b>Mob/Demob:</b>	1.5 days
<b>Weather/Down Days:</b>	2 days
<b>Number of Lines surveyed:</b>	16
<b>Total Grid Coverage:</b>	28.4 km (See Table 2-1)
<b>Gradient Coverage:</b>	4 Gradient Blocks, (See Table 2-2)
<b>Multiple Gradient Coverage:</b>	9 lines, (See Table 2-3)

***Table 2-1: Surveyed Line-start and -end point***

Line	Grid Coordinate		Coverage (m)
	Start	End	
L925N	6150E	7750E	1600
L1025N	6150E	7650E	1500
L1125N	6150E	7650E	1500
L1225N	6150E	7750E	1600
L1325N	6150E	7650E	1500
L1425N	6150E	7750E	1600
L1525N	6150E	7750E	1600
L1625N	6150E	7750E	1600
L1725N	6150E	8150E	2000
L1825N	6150E	8150E	2000
L1925N	6150E	8050E	1900
L2025N	6150E	8150E	2000
L2125N	6150E	8150E	2000
L2225N	6150E	8150E	2000
L2325N	6150E	8150E	2000
L2425N	6150E	8150E	2000
		<b>Total</b>	<b>28400</b>

## 2.4 PERSONNEL

<b>Project Manager:</b>	Jeff Warne, Keswick, ON
<b>Field Crew:</b>	Alain Dufour, Trois Riviere, QC Eric Hovedt, Nipigon, ON R. Chasse, Kirkland Lake, ON Angus McLeod, North Bay, ON Ryan Fearon, Ottawa, ON Vidal Neron, Montreal, QC Jesse Rondeau, Sturgeon Falls, ON

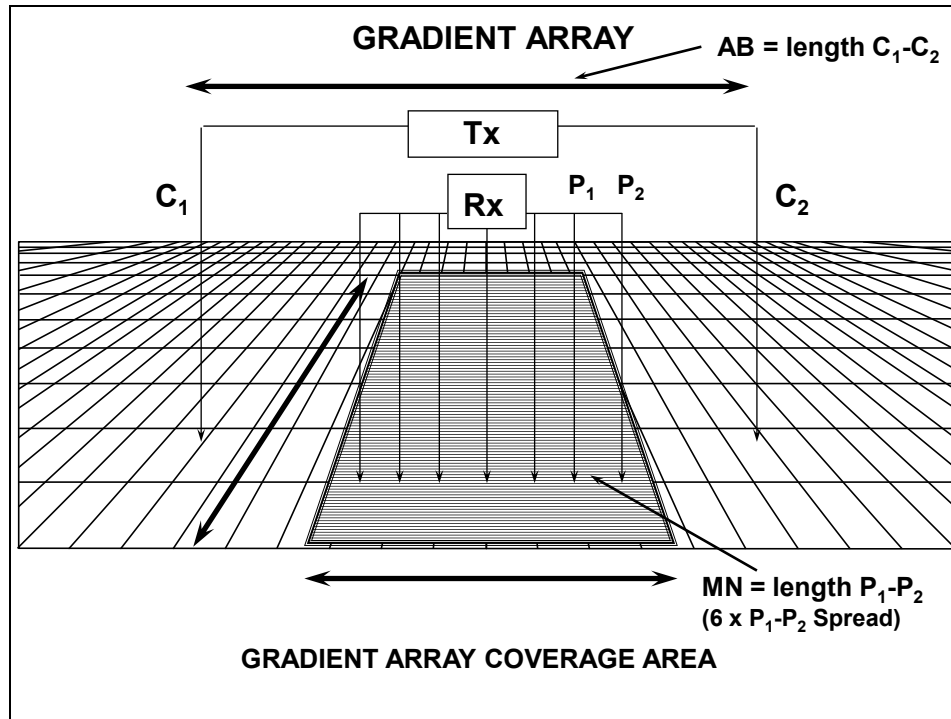
## 2.5 INSTRUMENTATION

<b>IP Receiver:</b>	IRIS Elrec-Pro
<b>IP Transmitter:</b>	Walcer KW10
<b>IP Power Supply:</b>	Walcer MG-12A (120V, 3 phase, 400 Hz)
<b>Electrodes:</b>	Ground contacts using stainless steel rods;

## 2.6 SURVEY SPECIFICATIONS

### 2.6.1 GEOMETRY

<b>Survey Array:</b>	Gradient, Multiple Gradient (see Fig 2-1)
<b>Array Specifications:</b>	Gradient: MN = 25m, AB = 2600m, 4 survey blocks Multiple Gradient: MN = 25m, AB = 2000m to 300m
<b>Transmit Electrode Locations:</b>	see tables 2-2, 2-3



***Figure 2-1: General Layout of the Gradient Array.***

***Table 2-2: Gradient Array Transmit Electrode Locations and Coverage***

Line	Start	End	Coverage (m)
<b>Block 1: AB1, C1 @ 5350E, 1275N, C2 @ 7850E, 1275N</b>			
L925N	6150E	6950E	800
L1025N	6150E	6950E	800
L1125N	6150E	6950E	800
L1225N	6150E	6950E	800
L1325N	6150E	6950E	800
L1425N	6150E	6950E	800
L1525N	6150E	6950E	800
L1625N	6150E	6950E	800
<b>Block 2: AB2, C1 @ 6050E, 1275N, C2 @ 8150E, 1275N</b>			
L925N	6850E	7750E	900
L1025N	6850E	7650E	800
L1125N	6850E	7650E	800
L1225N	6850E	7750E	900
L1325N	6850E	7650E	800
L1425N	6850E	7750E	900
L1525N	6850E	7750E	900
L1625N	6850E	7750E	900

Line	Start	End	Coverage (m)
<b>Block 3: AB3, C1 @ 5350E, 2075N, C2 @ 7950E, 2075N</b>			
L1625N	6150E	7250E	1100
L1725N	6150E	7250E	1100
L1825N	6150E	7250E	1100
L1925N	6150E	7250E	1100
L2025N	6150E	7250E	1100
L2125N	6150E	7250E	1100
L2225N	6150E	7250E	1100
L2325N	6150E	7250E	1100
L2425N	6150E	7250E	1100
<b>Block 4: AB4, C1 @ 6350E, 2075N, C2 @ 8900E, 2175N</b>			
L1625N	7050E	8150E	1100
L1725N	7050E	8150E	1100
L1825N	7050E	8150E	1100
L1925N	7050E	8050E	1000
L2025N	7050E	8150E	1100
L2125N	7050E	8150E	1100
L2225N	7050E	8150E	1100
L2325N	7050E	8150E	1100
L2425N	7050E	8150E	1100
<b>Total Surveyed</b>			<b>33000</b>

**Table 2-3: Multiple Gradient Array Transmit Electrode Locations and Coverage**

Line	Start	End	Coverage (m)
<b>AB1ii, C1 @ 5550E, 1275N, C2 @ 7550E, 1275N</b>			
L1125N	6150E	6950E	800
L1225N	6150E	6950E	800
L1325N	6150E	6950E	800
<b>AB1iii, C1 @ 5750E, 1225N, C2 @ 7350E, 1225N</b>			
L1125N	6150E	6950E	800
L1225N	6150E	6950E	800
L1325N	6150E	6950E	800
<b>AB1iv, C1 @ 5900E, 1225N, C2 @ 7200E, 1225N</b>			
L1125N	6150E	6950E	800
L1225N	6150E	6950E	800
L1325N	6150E	6950E	800
<b>AB1va, C1 @ 6050E, 1325N, C2 @ 7050E, 1325N</b>			
L1325N	6150E	6950E	800
<b>AB1via, C1 @ 6200E, 1325N, C2 @ 6900E, 1325N</b>			
L1325N	6225E	6875E	650

Line	Start	End	Coverage (m)
<b>AB1viiia, C1 @ 6300E, 1325N, C2 @ 6800E, 1325N</b>			
L1325N	6325E	6775E	450
<b>AB1viiiia, C1 @ 6400E, 1325N, C2 @ 6700E, 1325N</b>			
L1325N	6425E	6675E	250
<b>AB1vb, C1 @ 6050E, 1225N, C2 @ 7050E, 1225N</b>			
L1225N	6150E	6950E	800
<b>AB1vib, C1 @ 6200E, 1225N, C2 @ 6900E, 1225N</b>			
L1225N	6225E	6875E	650
<b>AB1viib, C1 @ 6300E, 1225N, C2 @ 6800E, 1225N</b>			
L1225N	6325E	6775E	450
<b>AB1viiib, C1 @ 6375E, 1225N, C2 @ 6700E, 1225N</b>			
L1225N	6425E	6675E	250
<b>AB1vc, C1 @ 6050E, 1125N, C2 @ 7050E, 1125N</b>			
L1125N	6150E	6950E	800
<b>AB1vic, C1 @ 6200E, 1125N, C2 @ 6900E, 1125N</b>			
L1125N	6225E	6875E	650
<b>AB1viic, C1 @ 6300E, 1125N, C2 @ 6800E, 1125N</b>			
L1125N	6325E	6775E	450
<b>AB1viiic, C1 @ 6400E, 1125N, C2 @ 6700E, 1125N</b>			
L1125N	6425E	6675E	250
<b>AB2ii, C1 @ 6250E, 1325N, C2 @ 8250E, 1325N</b>			
L1325N	6850E	7750E	900
<b>AB2iii, C1 @ 6450E, 1325N, C2 @ 8050E, 1325N</b>			
L1325N	6850E	7750E	900
<b>AB2iv, C1 @ 6600E, 1325N, C2 @ 7900E, 1325N</b>			
L1325N	6850E	7750E	900
<b>AB2v, C1 @ 6750E, 1325N, C2 @ 7750E, 1325N</b>			
L1325N	6825E	7725E	900
<b>AB2vi, C1 @ 6900E, 1325N, C2 @ 7600E, 1325N</b>			
L1325N	6925E	7575E	650
<b>AB2vii, C1 @ 7000E, 1325N, C2 @ 7500E, 1325N</b>			
L1325N	7025E	7475E	450
<b>AB2viii, C1 @ 7100E, 1325N, C2 @ 7400E, 1325N</b>			
L1325N	7125E	7375E	250
<b>AB3ii, C1 @ 5900E, 1825N, C2 @ 7900E, 1825N</b>			
L1725N	6300E	7500E	1200
L1825N	6300E	7500E	1200
L1925N	6300E	7500E	1200
<b>AB3iii, C1 @ 6100E, 1825N, C2 @ 7700E, 1825N</b>			
L1725N	6400E	7400E	1000
L1825N	6400E	7400E	1000
L1825N	6400E	7400E	1000
<b>AB3iv, C1 @ 6250E, 1825N, C2 @ 7550E, 1825N</b>			
L1725N	6450E	7350E	900

Line	Start	End	Coverage (m)
L1825N	6450E	7350E	900
L1925N	6450E	7350E	900
<b>AB3va, C1 @ 6400E, 1925N, C2 @ 7400E, 1925N</b>			
L1925N	6450E	7350E	900
<b>AB3via, C1 @ 6550E, 1925N, C2 @ 7250E, 1925N</b>			
L1925N	6575E	7225E	650
<b>AB3viia, C1 @ 6650E, 1925N, C2 @ 7150E, 1925N</b>			
L1925N	6675E	7125E	450
<b>AB3viii, C1 @ 6750E, 1925N, C2 @ 7050E, 1925N</b>			
L1925N	6775E	7025E	250
<b>AB3vb, C1 @ 6400E, 1825N, C2 @ 7400E, 1825N</b>			
L1825N	6450E	7350E	900
<b>AB3vib, C1 @ 6550E, 1825N, C2 @ 7250E, 1825N</b>			
L1825N	6575E	7225E	650
<b>AB3viib, C1 @ 6650E, 1825N, C2 @ 7150E, 1825N</b>			
L1825N	6675E	7125E	450
<b>AB3viii, C1 @ 6750E, 1825N, C2 @ 7050E, 1825N</b>			
L1825N	6775E	7025E	250
<b>AB3vc, C1 @ 6400E, 1725N, C2 @ 7400E, 1725N</b>			
L1725N	6450E	7350E	900
<b>AB3vic, C1 @ 6550E, 1725N, C2 @ 7250E, 1725N</b>			
L1725N	6575E	7225E	650
<b>AB3viic, C1 @ 6650E, 1725N, C2 @ 7150E, 1725N</b>			
L1725N	6675E	7125E	450
<b>AB3viii, C1 @ 6750E, 1725N, C2 @ 7050E, 1725N</b>			
L1725N	6775E	7025E	250
<b>AB4ii, C1 @ 6400E, 2325N, C2 @ 8400E, 2325N</b>			
L2225N	6800E	8000E	1200
L2325N	6800E	8000E	1200
L2425N	6800E	8000E	1200
<b>AB4iii, C1 @ 6600E, 2325N, C2 @ 8200E, 2325N</b>			
L2225N	6900E	7900E	1000
L2325N	6900E	7900E	1000
L2425N	6900E	7900E	1000
<b>AB4iv, C1 @ 6750E, 2325N, C2 @ 8050E, 2325N</b>			
L2225N	6950E	7850E	900
L2325N	6950E	7850E	900
L2425N	6950E	7850E	900
<b>AB4va, C1 @ 6900E, 2425N, C2 @ 7900E, 2425N</b>			
L2425N	6950E	7850E	900
<b>AB4via, C1 @ 7050E, 2425N, C2 @ 7750E, 2425N</b>			
L2425N	7075E	7725E	650
<b>AB4vii, C1 @ 7150E, 2425N, C2 @ 7650E, 2425N</b>			
L2425N	7175E	7625E	450



Line	Start	End	Coverage (m)
<b>AB4viiia, C1 @ 7250E, 2425N, C2 @ 7550E, 2425N</b>			
L2425N	7275E	7525E	250
<b>AB4vb, C1 @ 6900E, 2325N, C2 @ 7900E, 2325N</b>			
L2325N	6950E	7850E	900
<b>AB4vib, C1 @ 7050E, 2325N, C2 @ 7750E, 2325N</b>			
L2325N	7075E	7725E	650
<b>AB4viib, C1 @ 7150E, 2325N, C2 @ 7650E, 2325N</b>			
L2325N	7175E	7625E	450
<b>AB4viiib, C1 @ 7250E, 2325N, C2 @ 7550E, 2325N</b>			
L2325N	7275E	7525E	250
<b>AB4vc, C1 @ 6900E, 2225N, C2 @ 7900E, 2225N</b>			
L2225N	6950E	7850E	900
<b>AB4vic, C1 @ 7050E, 2225N, C2 @ 7750E, 2225N</b>			
L2225N	7075E	7725E	650
<b>AB4viic, C1 @ 7150E, 2225N, C2 @ 7650E, 2225N</b>			
L2225N	7175E	7625E	450
<b>AB4viiic, C1 @ 7250E, 2225N, C2 @ 7550E, 2225N</b>			
L2225N	7275E	7525E	250
<b>AB5ii, C1 @ 5550E, 2425N, C2 @ 7550E, 2425N</b>			
L2425N	6150E	6950E	800
<b>AB5iii, C1 @ 5750E, 2425N, C2 @ 7350E, 2425N</b>			
L2425N	6150E	6950E	800
<b>AB5iv, C1 @ 5900E, 2425N, C2 @ 7200E, 2425N</b>			
L2425N	6150E	6950E	800
<b>AB5v, C1 @ 6050E, 2425N, C2 @ 7050E, 2425N</b>			
L2425N	6150E	6950E	800
<b>AB5vi, C1 @ 6200E, 2425N, C2 @ 6900E, 2425N</b>			
L2425N	6225E	6875E	650
<b>AB5vii, C1 @ 6300E, 2425N, C2 @ 6800E, 2425N</b>			
L2425N	6325E	6775E	450
<b>AB5viii, C1 @ 6400E, 2425N, C2 @ 6700E, 2425N</b>			
L2425N	6425E	6675E	250
<b>Total Surveyed</b>			<b>55250</b>

### 2.6.2 ACQUISITION & PROCESSING

<b>Input Waveform:</b>	0.125 Hz square wave at 50% duty cycle
<b>Receiver Decay Sampling:</b>	20 semi-logarithmic spaced windows (see Table 2-4).
<b>Measured Parameters:</b>	Chargeability in millivolts/volt (time slices + total area under decay curve) Primary Voltage in millivolts and Input Current in amperes for Resistivity calculation according to the electrode array geometry factor.

**Table 2-4: Semi-Log IP Decay Curve Sampling (2 Sec. Cycle).**

Slice	Duration (msec)	Start (msec)	End (msec)	Mid-Point (msec)
T <sub>D</sub>	40	0	40	N/A
T <sub>1</sub>	40	40	80	60
T <sub>2</sub>	40	80	120	100
T <sub>3</sub>	40	120	160	140
T <sub>4</sub>	40	160	200	180
T <sub>5</sub>	40	200	240	220
T <sub>6</sub>	40	240	280	260
T <sub>7</sub>	40	280	320	300
T <sub>8</sub>	80	320	400	360
T <sub>9</sub>	80	400	480	440
T <sub>10</sub>	80	480	560	520
T <sub>11</sub>	80	560	640	600
T <sub>12</sub>	80	640	720	680
T <sub>13</sub>	80	720	800	760
T <sub>14</sub>	80	800	880	840
T <sub>15</sub>	160	880	1040	960
T <sub>16</sub>	160	1040	1200	1120
T <sub>17</sub>	160	1200	1360	1280
T <sub>18</sub>	160	1360	1520	1440
T <sub>19</sub>	160	1520	1680	1600
T <sub>20</sub>	160	1680	1840	1760
TOTAL	1800			

**2.6.3 ACCURACY AND REPEATABILITY**

<b>Chargeability:</b>	less than $\pm 1.0$ mV/V
<b>Resistivity:</b>	less than 10% cumulative error from Primary voltage and Input current measurements
<b>Repeats per Station:</b>	0-4

**2.7 DATA PRESENTATION****2.7.1 DIGITAL DATA****Raw Data**

The measured data were transferred from the Elrec-Pro instrument to notebook computer using Prosys II software provided by IRIS Instruments.

The Elrec - Pro dump files are binary format. Unedited dump files are archived, named according to date of survey (ddmmyy), eg 02112012.dmp. Each file may contain more than one transmit dipoles, refer to production log for date on which each transmit dipole was surveyed. Corrections to electrode locations were made, if required, using Prosys II software, and the edited file archived. The data were then imported to Geosoft® Oasis Montaj™

**Processed Data**

Using the Geosoft® Oasis Montaj™ IP database system, Apparent Resistivity values were recalculated based on corrected electrode locations. Chargeability measurements with excessive standard deviation were rejected and repeat measurements averaged. It is important to note that the Oasis database includes both the Apparent Resistivity as calculated within the database (column "ResCalc") and Apparent Resistivity as calculated and stored by the IP receiver at the time of measurement, (column "ResMeas"). Since these values are correct only if the electrode locations are correct, there may be disagreement where electrode location corrections have been applied. ResCalc is utilized in the data presentation.

The complete data set are archived in Geosoft® Oasis montaj™ ".gdb" format Database files.

**2.7.2 MAPS**

Apparent Chargeability Plan Maps for each of the 4 Gradient survey blocks, at a scale of 1:5000.

Apparent Chargeability Compilation Plan Map at a scale of 1:10000.

Apparent Resistivity Plan Maps for each of the 4 Gradient survey blocks, at a scale of 1:5000.

Apparent Resistivity Compilation Plan Map at a scale of 1:10000.

Realsection maps of Apparent Resistivity and Chargeability results for each of the 9 lines over which Realsection, multiple Gradient surveys were conducted, at a scale of 1:5000.

The maps are provided in Oasis ".map" file format.

**2.7.3 ARCHIVE**

The data and map are archived in digital form, as described above, on CD, provided in the CD pocket.

### 3 DISCUSSION OF RESULTS

The IP/Resistivity survey over the Langis Mine Property was completed successfully without incident. The surveys have successfully acquired results of excellent quality. Some of the measurements were eliminated in the QC stage because of insufficient signal or low accuracy.

The IP/Resistivity surveys have quantified apparent, bulk volume average DC resistivity and chargeability at the Langis Mine Property area.

The bulk volume resistivity is primarily influenced by subsurface variations in porosity, permeability and moisture saturation. Significant concentrations of interconnected conductive mineralization, such as massive sulphides, if present, also influence the bulk volume resistivity.

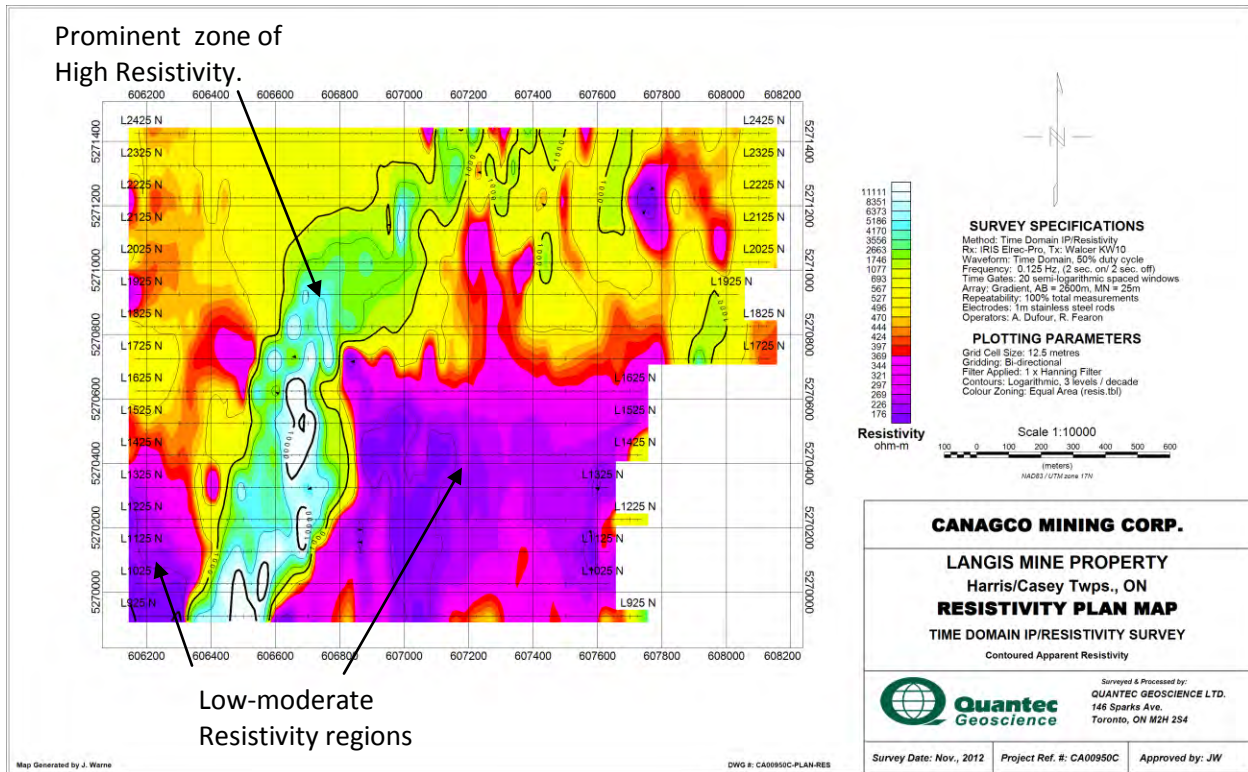
The chargeability is a near-direct indicator of the presence of metallic mineralization, based on the polarization of minerals that possess metallic properties. These include most metallic sulphides, with the notable exception of sphalerite, those native metals that occur naturally, as well as some metallic oxides, and graphite.

Both conductivity and chargeability result from the mobility of electrons within metals. However, whereas electronic conduction occurs within metals, polarization occurs at the interfaces between metallic grains and pore fluids. For this reason, not only the volume content, but also the distribution and texture of chargeable mineralization within host rocks are important factors influencing bulk volume chargeability.

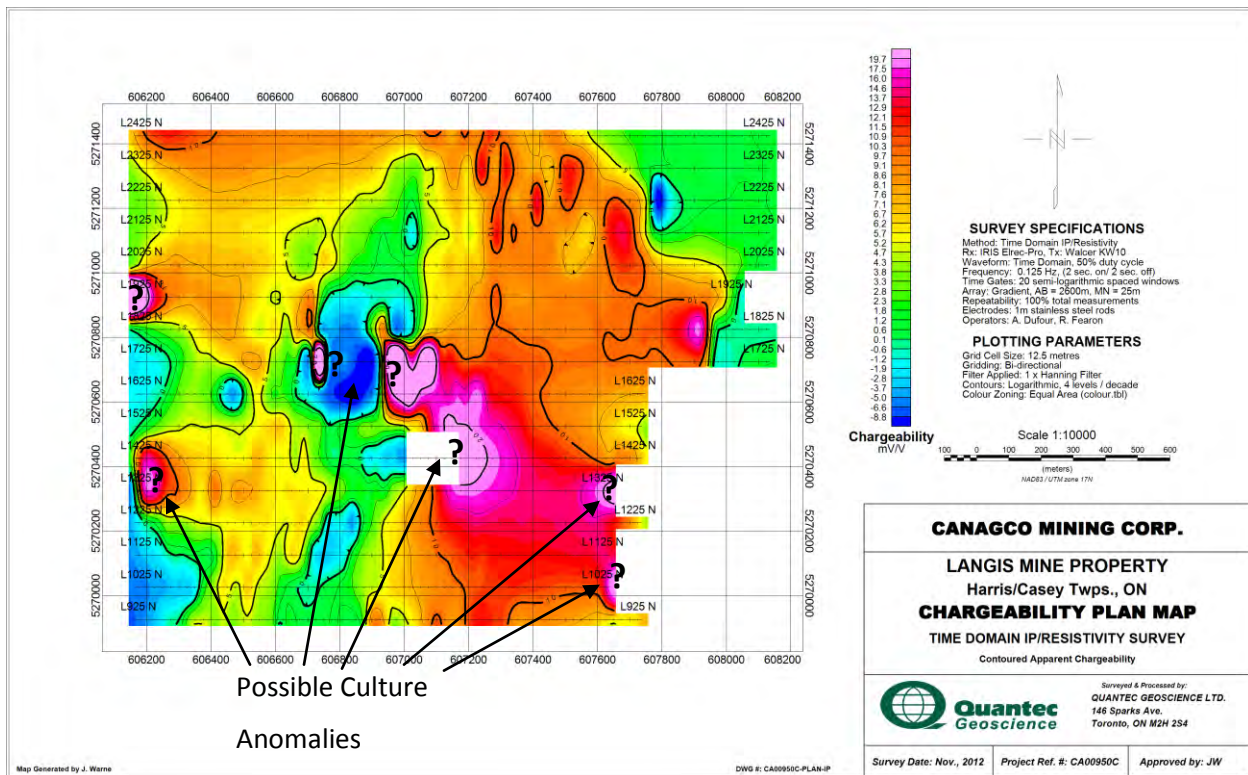
#### 3.1 RECONNAISSANCE GRADIENT RESULTS

The reconnaissance gradient surveys at the Langis property provide delineation of the Apparent Resistivity and Chargeability in plan view. The surveys have delineated low to very high Apparent Resistivity, ranging from 75  $\Omega$ -m to 22,300  $\Omega$ -m, as displayed in figure 3-1. The Apparent Chargeability results measured at the Langis property range from -16 to 60 mV/V, as displayed in figure 3-2.

Moderate resistivity, between 100 to 1,000 ohm-m, is prevalent background. However the resistivity is distinctly lower, within this range, in the southeast quarter and along the west margin of the southwest quarter of the coverage, likely related to increased thickness of low resistivity overburden cover. A prominent, broad zone of high to very resistivity trends north-northeast across the grid. Several smaller, near north-south high resistivity zones, are observed in the northeast quarter of the grid.



**Figure 3-1: Reconnaissance Gradient Apparent Resistivity Compilation**



**Figure 3-2: Reconnaissance Gradient Apparent Chargeability Compilation.**

The reconnaissance apparent chargeability results at the Langis property are complicated by several strong to very strong anomalies which may be caused by man-made structures (culture), as identified in figure 3-2. The anomalies are characterized by both positive and negative chargeabilities that are large in magnitude (-5 mV/V to -15 mV/V, 20 mV/V to 75 mV/V). The grounding locations for lightning protection conductors included in the electrical utility lines delivering electricity to residences within the survey area are a potential source of such anomalies, and the anomalies do occur proximal to utility lines along roadways, and residences. Weak anomalies have also been delineated which reflect signatures related to subsurface sources. The background apparent chargeability is very low to low ( $\sim -2$  to  $\sim 7$  mV/V). Weak anomalies  $\sim 1.5$  times background occur in the southwest and in the northeast quarters of the grid. The apparent chargeability in the southeast quarter of the grid is pervasively higher,  $> 10$  mV/V.

### **3.2 MULTIPLE GRADIENT DETAIL RESULTS**

The detailed, multiple gradient apparent resistivity and apparent chargeability surveys conducted at the Langis property were designed to map the apparent resistivity and chargeability distributions in depth section view, over a range of depth from  $< 50$  meters to  $> 300$  meters, along roughly 800 to 1000 traverse lengths. The detailed surveys were conducted over three zones of potential interest, as directed by Canagco, based in part on consideration of the reconnaissance survey results. Detail area 1 was located in the southwest quarter, covering lines 11+25, 12+25 and 13+25, centered about 6550E. Additional coverage extended section 13+25N across the southeast quarter of the grid. Detail area 2 was located in the central area of the grid, covering lines 17+25N, 18+25N and 19+25N, centered about 6800E. Detail area 3 was located in the northeast quarter of the grid, covering lines 22+25N, 23+25N and 24+25N centered about 7400E. Additional coverage extended section 24+25N across the northwest quarter of the grid.

The results over detail area 1 have delineated weak chargeability increase coincident with high resistivity signatures. Reduced attenuation of the chargeability response associated with reduced thickness of overburden may be a factor. The maximum apparent chargeability within the target area, roughly 6400E to 6700E, occurs at depth of  $\sim 200$  meters. Strong chargeable zones at both the east and west ends of section 13+25N are suspected to relate to potential culture sources.

The chargeability results over detail area 2, particularly section 17+25N, are complicated by potential culture signatures extending from 6700E to 7100E. Weak to moderate chargeable anomalies are delineated underlying 6550E to 6650E on section 17+25N, centered at depths of 100 to 150 meters. Similar moderate chargeable signatures occur on section 18+25N underlying 6600E to 6700E centered at depths 100 to 200 meters, and section 19+25N underlying 6650E to 6750E centered at depths 100 to 150 meters. The chargeable zones occur at the west margin of broad high resistivity zone.

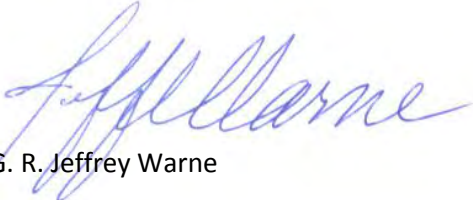
The results over detail area 3 delineate several narrow weak chargeable zones extending across 25 to 75 meters along the lines, with weak, pervasive increase in chargeability with depth superimposed. Chargeable target zones are not clearly defined. Strong negative chargeability centered under 7800E on section 22+25N is suspected to be related to culture.

It is recommended that the present geophysical results be considered in relation to results of previous exploration work pertaining to the area, including magnetics, ground or airborne EM, and drilling information.

---

Respectfully Submitted

Toronto, ON, the 14/01/2013,



G. R. Jeffrey Warne

Senior Project Manager  
Quantec Geoscience Ltd

#### 4 STATEMENTS OF QUALIFICATION

I, G.R. Jeffrey Warne, declare that:

I am a senior geophysical project manager with residence in Keswick, Ontario and am presently employed in this capacity with Quantec Geoscience Ltd., Toronto, Ontario;

I studied Engineering Geophysics in the Faculty of Applied Science at Queen's University in Kingston, Ontario, completing all but two of the course requirements for a B.Sc. (Eng) in 1981.

I have practiced my profession continuously since May, 1981 in Canada, the United States, Australia, Argentina, Bulgaria, Chile, Ireland, Mexico, Peru, Portugal and Serbia.

I have no interest, nor do I expect to receive any interest in the properties or securities of **CANAGCO MINING CORP.**, its subsidiaries or its joint-venture partners;

I am responsible for this project; I have supervised the data acquisition, evaluated the survey data, the survey results and can attest that these accurately and faithfully reflect the data acquired on site, I oversaw the preparation and have co-authored this report, and the statements made in this report represent my professional opinion in consideration of the information available to me at the time of writing this report.

Toronto, Ontario

December, 2012



G.R. Jeffrey Warne

Senior Project Manager

Quantec Geoscience Ltd.



## **5 DIGITAL ARCHIVE**

The CD or DVD attached to this report contains a copy of all the inversion results, final processed data, including the survey files, the daily processing (and field) notes, and an electronic copy of this report (with all appendices).

**A PRODUCTION SUMMARY****Langis Mine Project CA00950C**

**DCIP Survey, A. Dufour, E.  
Hotvedt, R. Chasse, A. McLeod,  
V. Neron, R. Fearon**

<b>Date</b>	<b>Description</b>	<b>Line</b>	<b>Min Extent</b>	<b>Max Extent</b>	<b>Total</b>
28-Oct-12	Mob to Toronto from home				
29-Oct-12	Prep and pack equipment at the office				
30-Oct-12	Mob to New Liskeard				
31-Oct-12	Locate Project site, establish transmit site, layout cable for first transmit dipole (AB1). Establish transmit electrodes A1, B1. Note that A1 located at 5350E rather than 5250E due to a pond. UTM coordinates:				
01-Nov-12	Survey Block 1. Coordinates for A1: Ritchie has it / B1: 607847E, 5220278N	925N	6150E	6950E	800
		1025N	6950E	6150E	800
		1125N	6150E	6950E	800
		1225N	6950E	6150E	800
	<b>Total Survey</b>				<b>3200</b>
02-Nov-12	Survey Block 1	1325N	6150E	6950E	800
		1425N	6950E	6150E	800
		1525N	6150E	6950E	800
		1625N	6950E	6150E	800
	<b>Total Survey</b>				<b>3200</b>
03-Nov-12	Survey Block 2. R. Chasse transfers to another project. UTM coordinates AB2: A2: 606051E, 5270277N; B2: 608646E, 5270223N.	1625N	6850E	7750E	900
		1525N	7750E	6850E	900
		1425N	6850E	7750E	900
		1325N	7650E	6850E	900
		1225N	6850E	7750E	900
	<b>Total Survey</b>				<b>4400</b>
04-Nov-12	Survey. Finish AB2, switch on AB3. Coordinates: A3: 605350E, 5271081N; B3: 607945E, 5271074N.	1125N	7650E	6850E	800
		1025N	6850E	7650E	800
		925N	7750E	6850E	800
		1625N	7250E	6150E	1100
		1725N	6150E	7250E	1100
	<b>Total Survey</b>				<b>4700</b>

05-Nov-12	Survey Block 3	1825N	7250E	6150E	1100
		1925N	6150E	7250E	1100
		2025N	7250E	6150E	1100
		2125N	6150E	7250E	1100
		2225N	7250E	6150E	1100
	<b>Total Survey</b>				<b>5500</b>
06-Nov-12	Finish block 3, started block 4. There is a trench ( N-S ) between L1325N and L1425N, 15m west of 6250E. AB4 coordinates are: A4 606346E, 5271075N; B4 608907E, 5271172.	2325N	6150E	7250E	1100
		2425N	7250E	6150E	1100
		2425N	7050E	8150E	1100
		2325N	8150E	7050E	1100
	<b>Total Survey</b>				<b>4400</b>
07-Nov-12	Survey Block 4.	2225N	7050E	8150E	1100
		2125N	8150E	7050E	1100
		2025N	7050E	8150E	1100
		1925N	8050E	7050E	1000
		1825N	7050E	8150E	1100
	<b>Total Survey</b>				<b>5400</b>
08-Nov-12	Survey Block 4. Verify measurements on Block3 Survey Block 4.	1725N	8150E	7050E	1100
		1725N	6750E	6950E	
		1625N	7050E	7750E	700
	<b>Total Survey</b>				<b>1800</b>
09-Nov-12	Rx down				
	<b>Total Survey</b>				
10-Nov-12	Survey AB1-2 and AB1-3	1125N	6150E	6950E	800
		1225N	6950E	6150E	800
		1325N	6150E	6950E	800
		1325N	6950E	6150E	800
		1225N	6150E	6950E	800
		1125N	6950E	6150E	800
	<b>Total Survey</b>				<b>4800</b>
11-Nov-12	Kept surveying Real section on block 1. For L1225N the AB which should be at 6400E is actually at 6375E.	1125N	6150E	6950E	800
		1225N	6950E	6150E	800
		1325N	6150E	6950E	800
		1225N	6950E	6150E	800
		1225N	6225E	6875E	650
		1225N	6775E	6325E	450
	<b>Total Survey</b>				<b>4550</b>
12-Nov-12	Survey first detail target area on block 1. Water zone from 6375E to 6450E.	1125N	6150E	6950E	800
		1125N	6875E	6225E	650
		1125N	6325E	6775E	450
		1125N	6675E	6425E	250
		1325N	6150E	6950N	800
		1325N	6875E	6225E	650
		1325N	6325E	6775E	450
		1325N	6675E	6425E	250
	<b>Total Survey</b>				<b>4300</b>
13-Nov-12	Survey second detail target area	1725N	6300E	7500E	1200

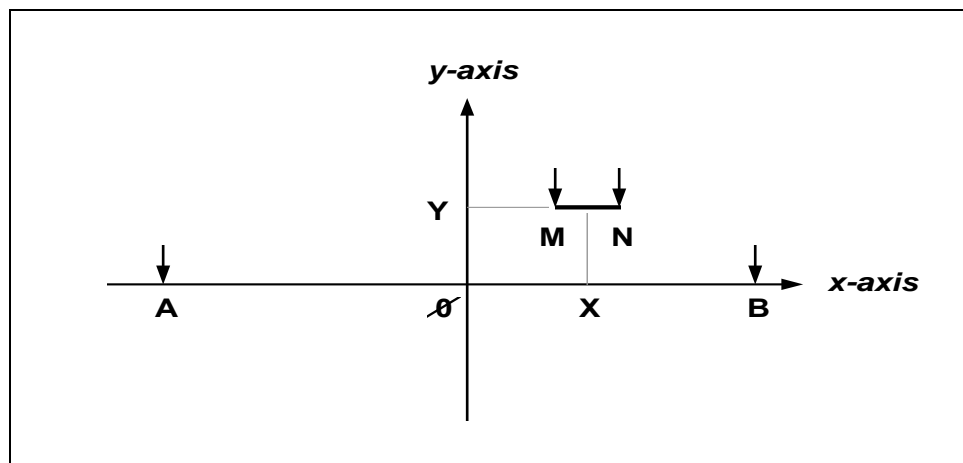
	on block 3.	1825N	7500E	6300E	1200
		1925N	6300E	7500E	1200
		1925N	7400E	6400E	1000
		1825N	6400E	7400E	1000
	<b>Total Survey</b>				<b>5600</b>
14-Nov-12	Survey second detail target area on block 3.	1725N	7400E	6400E	1000
		1725N	6450E	7350E	900
		1825N	7350E	6450E	900
		1925N	6450E	7350E	900
		1825N	7350E	6450E	900
		1825N	6575E	7225E	650
		1825N	7125E	6675E	450
		1825N	6775E	7025E	250
		1925N	7350E	6450E	900
		1925N	6575E	7225E	650
	<b>Total Survey</b>				<b>7500</b>
15-Nov-12	Alain Dufour transfers to another project. Jesse Rondeau transfers to this project.	1925N	7125E	6675E	450
		1925N	6775E	7025E	250
	Continue detail survey over Target 2.	1725N	7350E	6450E	900
	Set out AB's at 6400E and 8400E on L2325N	1725N	6575E	7225E	650
		1725N	7125E	6675E	450
		1725N	6775E	7025E	250
	<b>Total Survey</b>				<b>2950</b>
16-Nov-12	Begin Surveying on target 3, and diligently working on setting out the upcoming A-B's	2225N	6800E	8000E	1200
		2225N	6900E	7900E	1000
		2225N	7150E	7850E	700
		2325N	6800E	8000E	1200
		2325N	6900E	7900E	1000
		2425N	6800E	8000E	1200
		2425N	6900E	7900E	1000
	<b>Total Survey</b>				<b>7300</b>
17-Nov-12	Continue detail survey over Target 3.	2225N	7150E	6950E	200
		2225N	6950E	7850E	900
		2225N	7075E	7725E	650
		2225N	7175E	7625E	450
		2225N	7275E	7525E	250
		2325N	6950E	7850E	900
		2325N	6950E	7850E	900
		2325N	7075E	7725E	650
		2325N	7175E	7625E	450
		2325N	7275E	7525E	250
		2425N	6950E	7850E	900
	<b>Total Survey</b>				<b>6500</b>

18-Nov	Completed detail survey over target 3. Began reading on Target 5.	2425N	6950E	7850E	900
	Tx down, will investigate tomorrow first thing	2425N	7075E	7725E	650
		2425N	7175E	7625E	450
		2425N	7275E	7525E	250
		2425N	6150E	6950E	800
		2425N	6150E	6950E	800
	<b>Total Survey</b>				<b>3850</b>
19-Nov-12	Tx down, Ryan Fearon and Vidal Neron travel to Walcer geophysics to repair and obtain spare parts				
	Remaining crew members continue to prepare target 4				
	<b>Total Survey</b>				
20-Nov-12	Completed target 5	2425N	6150E	6950E	800
	Began surveying on target 4	2425N	6150E	6950E	800
		2425N	6225E	6875E	650
		2425N	6325E	6775E	450
		2425N	6425E	6675E	250
		2425N	6150E	6550E	400
		1325N	6850E	7750E	900
		1325N	6850E	7750E	900
		1325N	6850E	7750E	900
		1325N	6825E	7725E	900
	<b>Total Survey</b>				<b>6950</b>
21-Nov-12	Completed the coverage on Target 4	1325N	6925E	7575E	650
	Breakdown to complete Project	1325N	7025E	7475E	450
		1325N	7125E	7375E	250
	<b>Total Survey</b>				<b>1350</b>
	Demob to next project				
	<b>19.5 Survey days, 1.5 Mob days, 2 Down days.</b>				
	<b>Totals</b>				<b>88.25</b>

## B AN INTRODUCTION TO DIRECT CURRENT (DC) RESISTIVITY AND INDUCED POLARISATION (IP) METHODS

The resistivity is among the most variable of all geophysical parameters, with a range exceeding  $10^6$ . Because most minerals are fundamentally insulators, with the exception of massive accumulations of metallic and sub metallic ores (electronic conductors) which are rare occurrences, the resistivity of rocks depends primarily on their porosity, permeability and particularly the salinity of fluids contained (ionic conduction), according to Archie's Law. In contrast, the chargeability responds to the presence of polarisable minerals (metals, sub metallic sulphides and oxides, and graphite), in amounts as minute as parts per hundred. Both the quantity of individual chargeable grains present and their distribution with in subsurface current flow paths are significant in controlling the level of response. The relationship of chargeability to metallic content is straightforward, and the influence of mineral distribution can be understood in geologic terms by considering two similar, hypothetical volumes of rock in which fractures constitute the primary current flow paths. In one, sulphides occur predominantly along fracture surfaces. In the second, the same volume percent of sulphides are disseminated throughout the rock. The second example will, in general, have significantly lower intrinsic chargeability.

The collected data sets are reduced to apparent resistivity and total chargeability as explained in the following figures and equations.



**Figure B-5-1: Gradient Electrode Array.**

Referring to the diagram (Figure B-1) for the gradient array electrode configuration and nomenclature<sup>4</sup>,

where: the origin **0** is selected at the center of **AB**  
**x** is the abscissa of the mid-point of **MN** (positive or negative)  
**y** is the ordinate of the mid-point of **MN** (positive or negative)  
the geometric parameters are in addition to **a = AB/2** and **b = MN/2**

The gradient array apparent resistivity is given by:

$$\rho_a = K \frac{VP}{I} \text{ ohm - metres}$$

$$\text{where: } K = \frac{2\pi}{(AM^{-1} - AN^{-1} - BM^{-1} + BN^{-1})}$$

$$AM = \sqrt{(a + x - b)^2 + y^2}$$

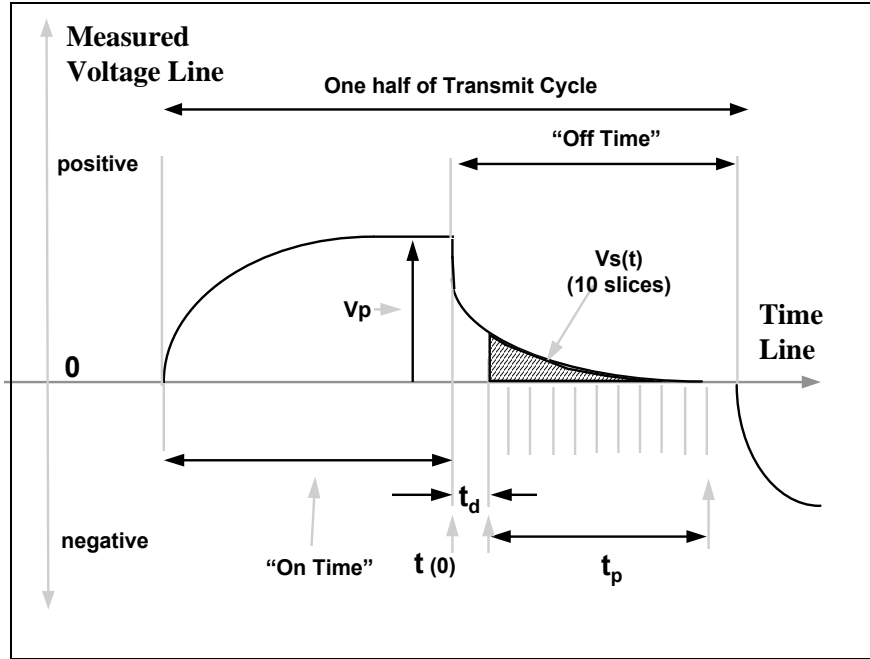
$$AN = \sqrt{(a + x + b)^2 + y^2}$$

$$BM = \sqrt{(x - b - a)^2 + y^2}$$

$$BN = \sqrt{(x + b - a)^2 + y^2}$$

---

<sup>4</sup> From Terraplus\BRGM, IP-6 Operating Manual, Toronto, 1987.



**Figure B-5-2: Time Domain IP/Resistivity Measured Parameters.**

Using the diagram (Figure B-2) for the Total Chargeability, the total apparent chargeability is given by<sup>5</sup>:

$$M_T = \frac{1}{t_p V_p} \sum_{i=1 \text{ to } 10} \int_{t_i}^{t_{i+1}} V_s(t) dt \quad \text{millivolt per volt}$$

where  $t_i$ ,  $t_{i+1}$  are the beginning and ending times for each of the chargeability slices.

<sup>5</sup> From Telford, et al., Applied Geophysics, Cambridge U Press, New York, 1983.



## C REFERENCES

### C.1 DIRECT CURRENT (DC) AND INDUCED POLARISATION (IP) METHODS

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## D INSTRUMENTS SPECIFICATIONS

### D.1 IRIS ELREC PRO RECEIVER SPECIFICATIONS

# ELREC PRO

## Ten channel IP receiver for mineral exploration

IRIS Instruments is pleased to announce the **ELREC PRO**, its new ten channel IP receiver, featuring 20 chargeability windows and a graphic LCD display.

The following improvements have been introduced in this new receiver with respect to the previous ELREC 10 unit :



#### • HARDWARE FEATURES :

- *the size* has been reduced by 4 cm in height : 31x 21x 21 cm
- *the power consumption* has been reduced by a ratio of three, which means that with less batteries it is possible to have a longer autonomy.
- as a result, the new system is **2 kg lighter** than the ELREC 10, with a weight of 6 kg only.
- the data (21 000 readings max.) are stored in flash memories not requiring any lithium battery for safeguard.
- the new system is compatible with the existing **SWITCH Plus boxes** for automatic switching of electrodes according to preset sequences. In such a case, the receiver is used as a single channel unit ; with **SWITCH Pro boxes** (to be developed next), the full ten channel capability of the ELREC PRO will be usable for a higher acquisition speed.

#### • SOFTWARE FEATURES :

- *each new reading* is stored as a specific unit file, making easier the grouping of readings corresponding to a given profile, specially for the last (edge) points of a line obtained with a smaller number of dipoles than the main part of the profile.
- *the data format* is compatible with the **PROSYS software**, which means that the operator can easily visualize the numerical values of the data, automatically sort them according to the standard deviation of the chargeability measurement, merge two files stored under different names, introduce the elevation of each electrode, etc...
- *the ELECTRE II software* can be used to define and upload preset sequences of measurements according to any type of electrode array.



#### IRIS INSTRUMENTS

1, avenue Buffon, BP 6007, Orléans cedex 2, France  
Ph : + 33 2 38 63 81 00 mail : [irisins@attglobal.net](mailto:irisins@attglobal.net)  
Fax : + 33 2 38 63 81 82 web : [iris-instruments.com](http://iris-instruments.com)

## D.2 WALCER TRANSMITTER MODEL TX KW10

Power Source	Walcer MG-12A (20 kVA, 120/220V, 3 phase, 400 Hz) Honda/Bendix motor generator, 79cm x 61cm x 48cm @ 89 kg.
Output Voltage	100 to 3200V in 10 steps. 100 - 150 - 220 - 320 - 465 - 675 - 1000 - 1500 - 2200 - 3200V
Output Power	Maximum continuous output power is 10.0 kW
Maximum Current	20 Amps
Output Range	0.05 Amps to 20 Amps
Meter Display	LED displays of output current, line voltage, contact resistance
Current regulation	Constant Voltage.
Output waveform	Time domain (50% duty cycle). Frequencies of 0.03125, 0.0625, 0.125, 0.25 Hz are standard, custom timing optionally available.
Operating Temperature	-40°C to +60°C
Frequency Stability	±1% from -40°C to +60°C is standard.
Transient Protection	Current is turned off automatically if it exceeds 150% full scale or is less than 5% full scale
Dimensions	63cm x 54cm x 25cm
Weight	44 kg



**TX KW10**



**MG-12A**

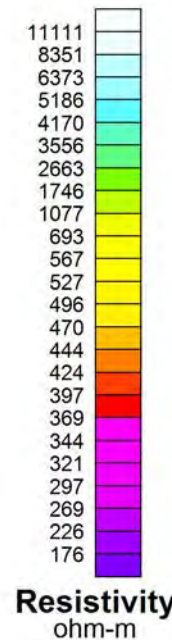
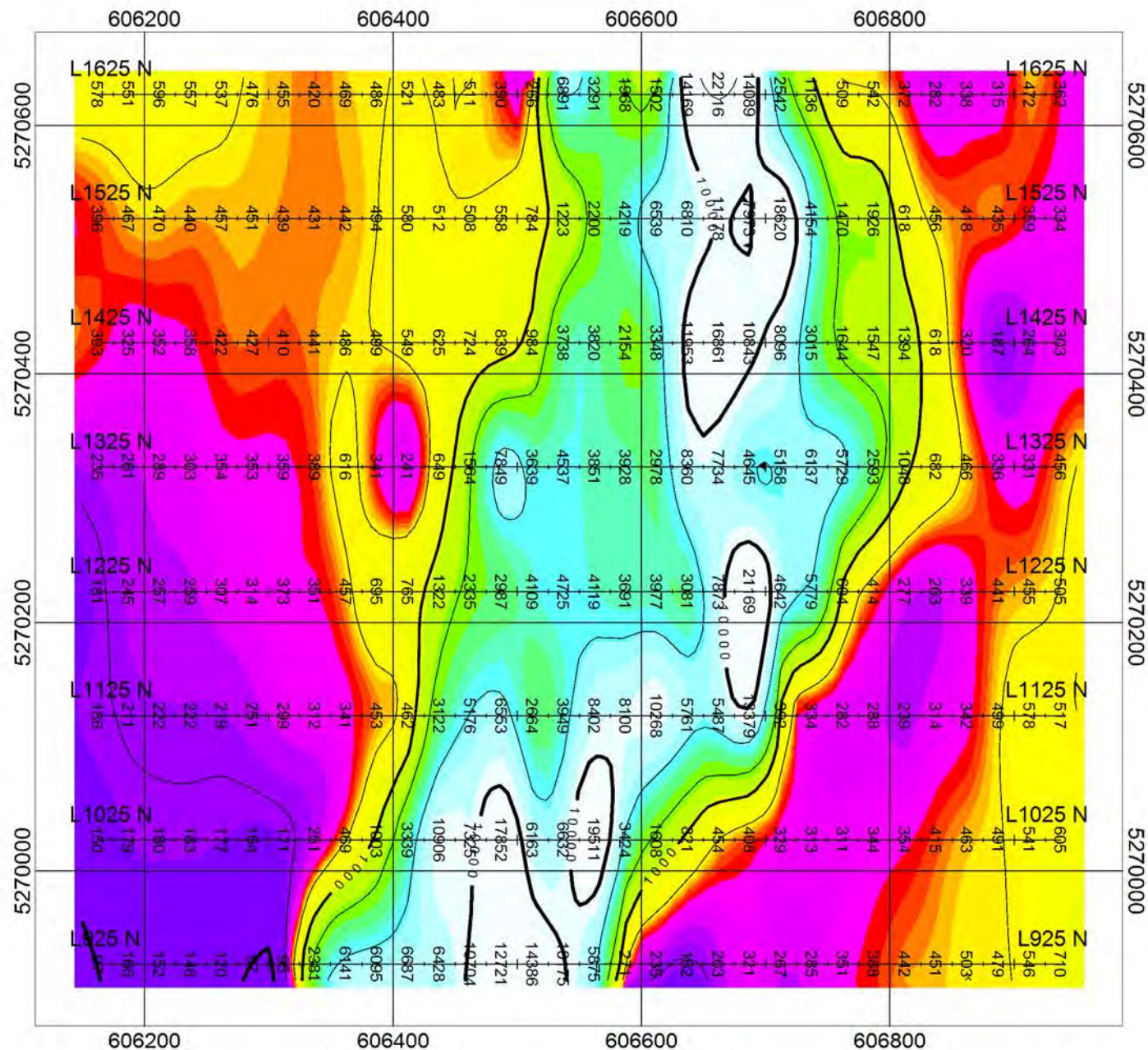
**E GEOSOF LIST OF MAPS**

IP/Resistivity Survey Maps at scale of 1:5000.

Description	Drawing No.	Map #
Resistivity Plan Map Block 1	CA00950C-PLAN-B1RES	1
Resistivity Plan Map Block 2	CA00950C-PLAN-B2RES	2
Resistivity Plan Map Block 3	CA00950C-PLAN-B3RES	3
Resistivity Plan Map Block 4	CA00950C-PLAN-B4RES	4
Chargeability Plan Map Block 1	CA00950C-PLAN-B1IP	5
Chargeability Plan Map Block 2	CA00950C-PLAN-B2IP	6
Chargeability Plan Map Block 3	CA00950C-PLAN-B3IP	7
Chargeability Plan Map Block 4	CA00950C-PLAN-B4P	8
Real Section Map Line 1125N	CA00950C-RSIP-CHG-RES-11+25N	9
Real Section Map Line 1225N	CA00950C-RSIP-CHG-RES-12+25N	10
Real Section Map Line 1325N	CA00950C-RSIP-CHG-RES-13+25N	11
Real Section Map Line 1725N	CA00950C-RSIP-CHG-RES-17+25N	12
Real Section Map Line 1825N	CA00950C-RSIP-CHG-RES-18+25N	13
Real Section Map Line 1925N	CA00950C-RSIP-CHG-RES-19+25N	14
Real Section Map Line 2225N	CA00950C-RSIP-CHG-RES-22+25N	15
Real Section Map Line 2325N	CA00950C-RSIP-CHG-RES-23+25N	16
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Resistivity Plan Map Compilation (Scale 1:10000)	CA00950C-PLAN-RES	18
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Quantec Geoscience Ltd Summary Table	
CLIENT	
Client / Company Name	CANAGCO MINING CORP.
Client Main Location	(Toronto, Ontario, Canada)
Client Representative	Gino Chitaroni
Phone Number	(705) 679-5500
Fax Number	(705) 679-5519
Email Contact (if available)	ginochitaroni@hotmail.com
PROJECT	
Project Grid Name	Langis Mine Property
Project Grid Location	Harris, Casey Twps., Ontario, Canada
Survey Type	IP/Resistivity
Survey Period (YY/MM/DD to YY/MM/DD)	2012/10/30 to 2012/11/21
Quantec Project Number	CA00950C
Project Manager	J. Warne
REPORT	
Report Date	14/01/2013
Quantec Template Version	2011.2





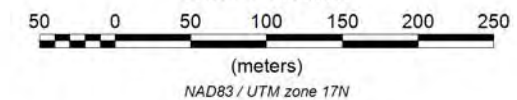
### SURVEY SPECIFICATIONS

Method: Time Domain IP/Resistivity  
 Rx: IRIS Elrec-Pro, Tx: Walcer KW10  
 Waveform: Time Domain, 50% duty cycle  
 Frequency: 0.125 Hz, (2 sec. on/ 2 sec. off)  
 Time Gates: 20 semi-logarithmic spaced windows  
 Array: Gradient, AB = 2600m, MN = 25m  
 Repeatability: 100% total measurements  
 Electrodes: 1m stainless steel rods  
 Operators: A. Dufour, R. Fearon

### PLOTTING PARAMETERS

Grid Cell Size: 12.5 metres  
 Gridding: Bi-directional  
 Filter Applied: 1 x Hanning Filter  
 Contours: Logarithmic, 3 levels / decade  
 Colour Zoning: Equal Area (resis.tbl)

Scale 1:5000



(meters)  
 NAD83 / UTM zone 17N

**CANAGCO MINING CORP.**

**LANGIS MINE PROPERTY**  
 Harris/Casey Twps., ON  
**RESISTIVITY PLAN MAP, Block 1**

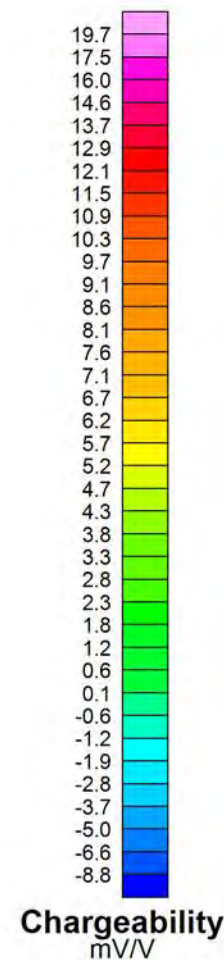
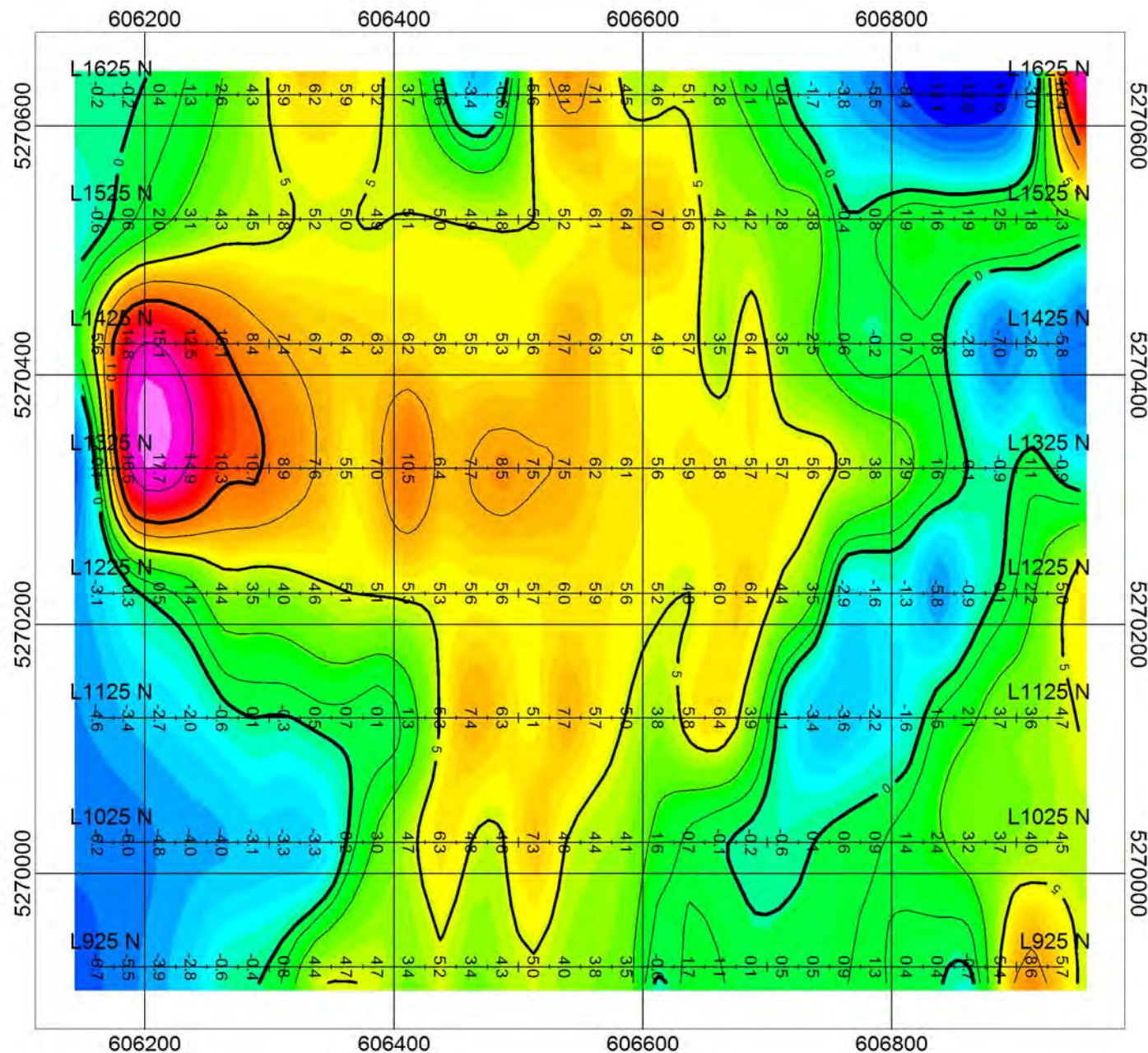
**TIME DOMAIN IP/RESISTIVITY SURVEY**

Contoured Apparent Resistivity



Surveyed & Processed by:  
**QUANTEC GEOSCIENCE LTD.**  
 146 Sparks Ave.  
 Toronto, ON M2H 2S4





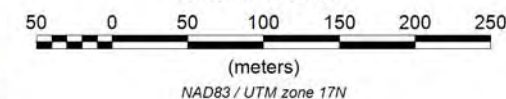
### SURVEY SPECIFICATIONS

Method: Time Domain IP/Resistivity  
 Rx: IRIS Elrec-Pro, Tx: Walcer KW10  
 Waveform: Time Domain, 50% duty cycle  
 Frequency: 0.125 Hz, (2 sec. on/ 2 sec. off)  
 Time Gates: 20 semi-logarithmic spaced windows  
 Array: Gradient, AB = 2600m, MN = 25m  
 Repeatability: 100% total measurements  
 Electrodes: 1m stainless steel rods  
 Operators: A. Dufour, R. Fearon

### PLOTTING PARAMETERS

Grid Cell Size: 12.5 metres  
 Gridding: Bi-directional  
 Filter Applied: 1 x Hanning Filter  
 Contours: Logarithmic, 4 levels / decade  
 Colour Zoning: Equal Area (colour.tbl)

Scale 1:5000



## CANAGCO MINING CORP.

### LANGIS MINE PROPERTY Harris/Casey Twps., ON **CHARGEABILITY PLAN MAP, Block 1**

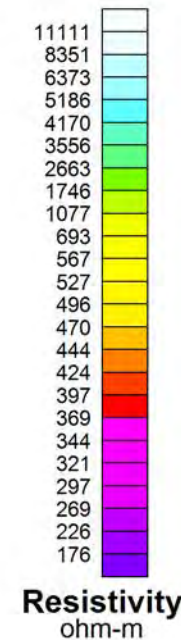
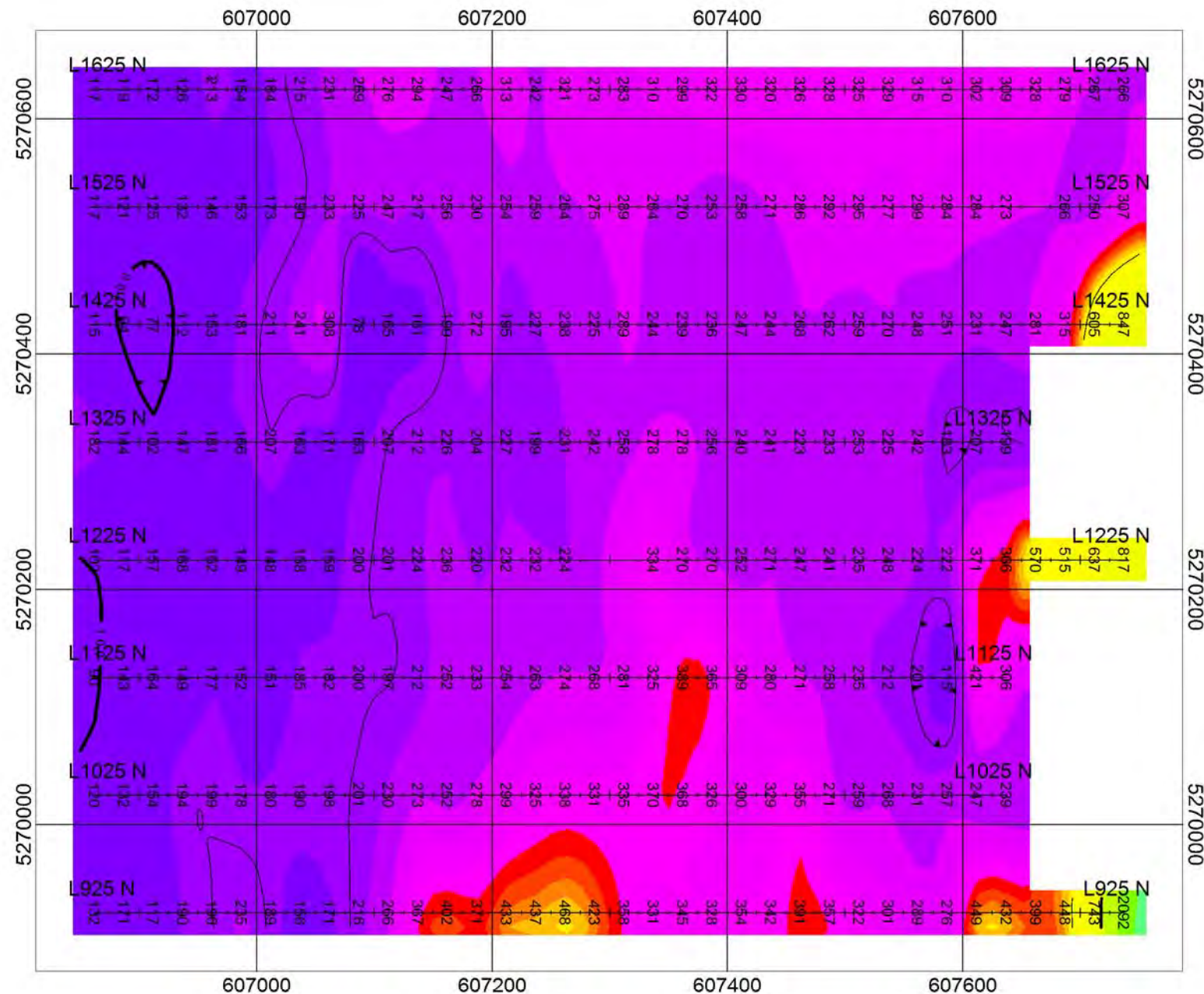
#### TIME DOMAIN IP/RESISTIVITY SURVEY

Contoured Apparent Chargeability



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**QUANTEC GEOSCIENCE LTD.**  
 146 Sparks Ave.  
 Toronto, ON M2H 2S4



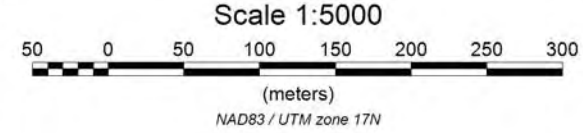


### SURVEY SPECIFICATIONS

Method: Time Domain IP/Resistivity  
Rx: IRIS Elrec-Pro, Tx: Walcer KW10  
Waveform: Time Domain, 50% duty cycle  
Frequency: 0.125 Hz, (2 sec. on/ 2 sec. off)  
Time Gates: 20 semi-logarithmic spaced windows  
Array: Gradient, AB = 2600m, MN = 25m  
Repeatability: 100% total measurements  
Electrodes: 1m stainless steel rods  
Operators: A. Dufour, R. Fearon

### PLOTTING PARAMETERS

Grid Cell Size: 12.5 metres  
Gridding: Bi-directional  
Filter Applied: 1 x Hanning Filter  
Contours: Logarithmic, 3 levels / decade  
Colour Zoning: Equal Area (resis.tbl)



## CANAGCO MINING CORP.

### LANGIS MINE PROPERTY Harris/Casey Twps., ON **RESISTIVITY PLAN MAP, Block 2** TIME DOMAIN IP/RESISTIVITY SURVEY

Contoured Apparent Resistivity



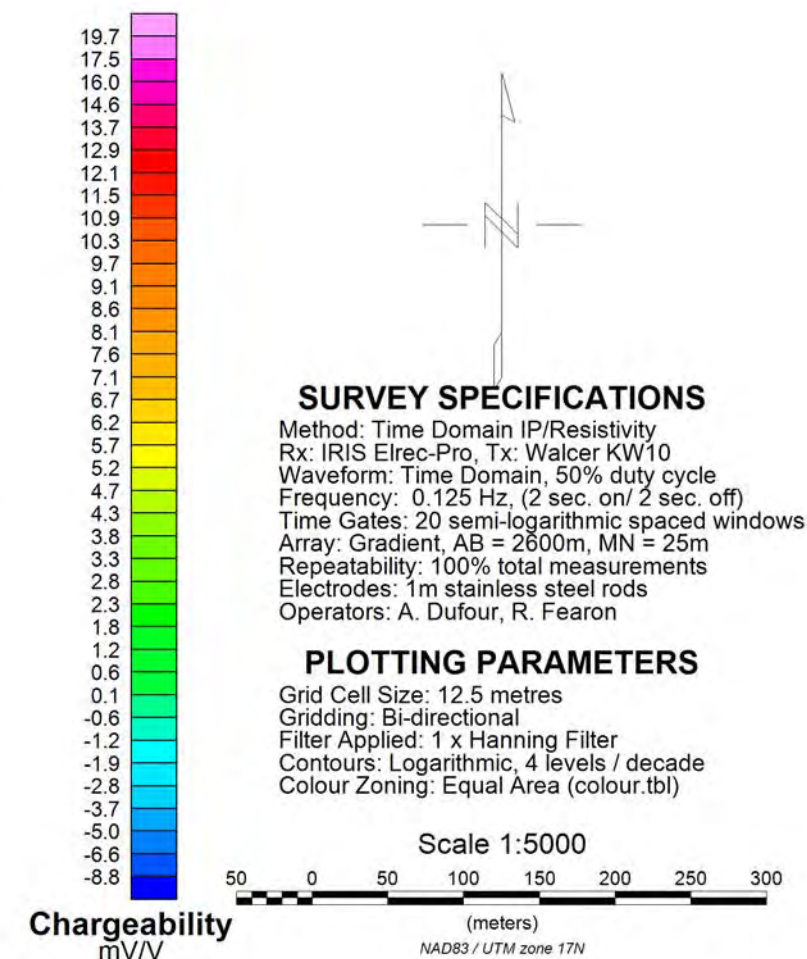
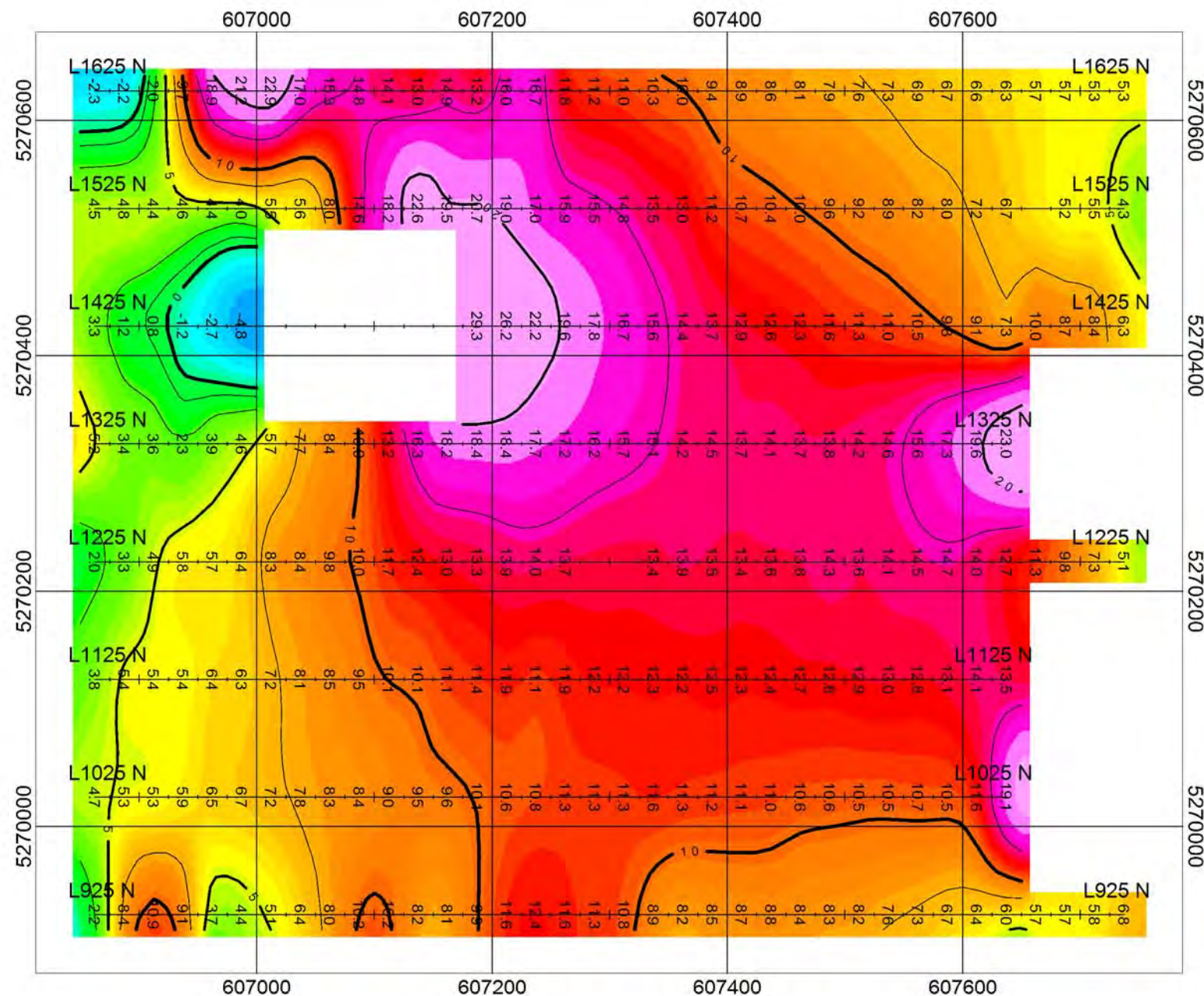
Surveyed & Processed by:  
**QUANTEC GEOSCIENCE LTD.**  
146 Sparks Ave.  
Toronto, ON M2H 2S4

Survey Date: Nov., 2012

Project Ref. #: CA00950C

Approved by: JW





**CANAGCO MINING CORP.**

**LANGIS MINE PROPERTY**  
Harris/Casey Twps., ON  
**CHARGEABILITY PLAN MAP, Block 2**

**TIME DOMAIN IP/RESISTIVITY SURVEY**

Contoured Apparent Chargeability



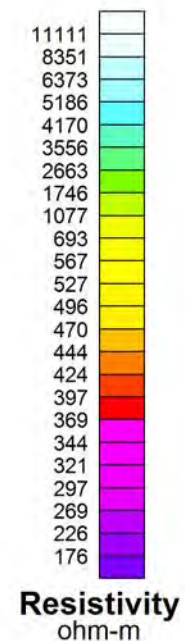
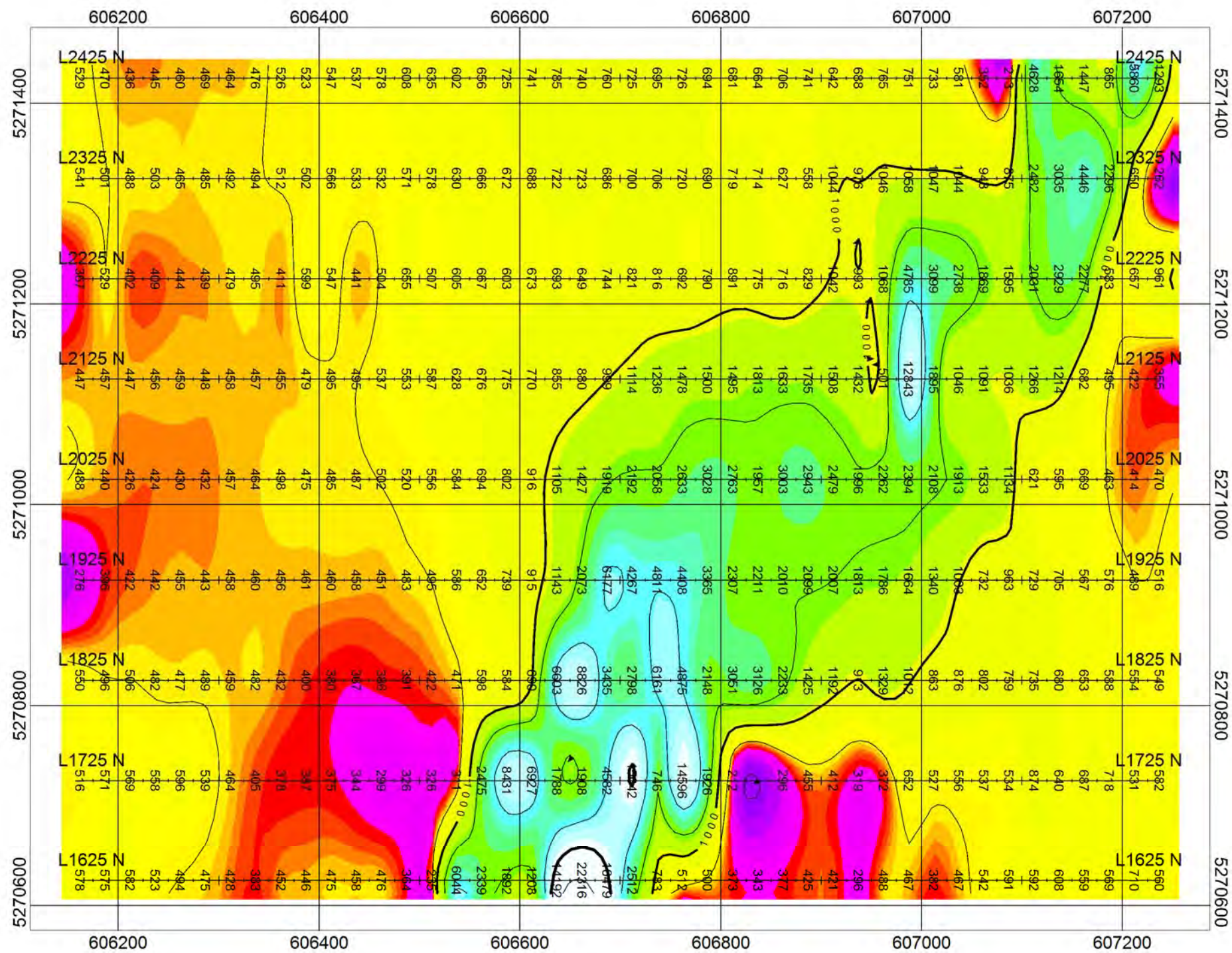
Surveyed & Processed by:  
**QUANTEC GEOSCIENCE LTD.**  
146 Sparks Ave.  
Toronto, ON M2H 2S4

Survey Date: Nov., 2012

Project Ref. #: CA00950C

Approved by: JW



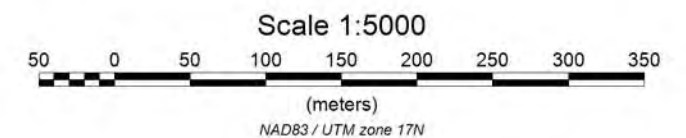


### SURVEY SPECIFICATIONS

Method: Time Domain IP/Resistivity  
Rx: IRIS Elrec-Pro, Tx: Walcer KW10  
Waveform: Time Domain, 50% duty cycle  
Frequency: 0.125 Hz, (2 sec. on/ 2 sec. off)  
Time Gates: 20 semi-logarithmic spaced windows  
Array: Gradient, AB = 2600m, MN = 25m  
Repeatability: 100% total measurements  
Electrodes: 1m stainless steel rods  
Operators: A. Dufour, R. Fearon

### PLOTTING PARAMETERS

Grid Cell Size: 12.5 metres  
Gridding: Bi-directional  
Filter Applied: 1 x Hanning Filter  
Contours: Logarithmic, 3 levels / decade  
Colour Zoning: Equal Area (resis.tbl)



## CANAGCO MINING CORP.

### LANGIS MINE PROPERTY Harris/Casey Twps., ON **RESISTIVITY PLAN MAP, Block 3**

#### TIME DOMAIN IP/RESISTIVITY SURVEY

Contoured Apparent Resistivity



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Toronto, ON M2H 2S4

Survey Date: Nov., 2012

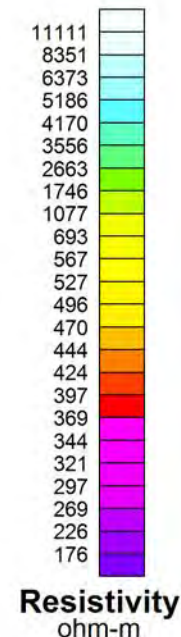
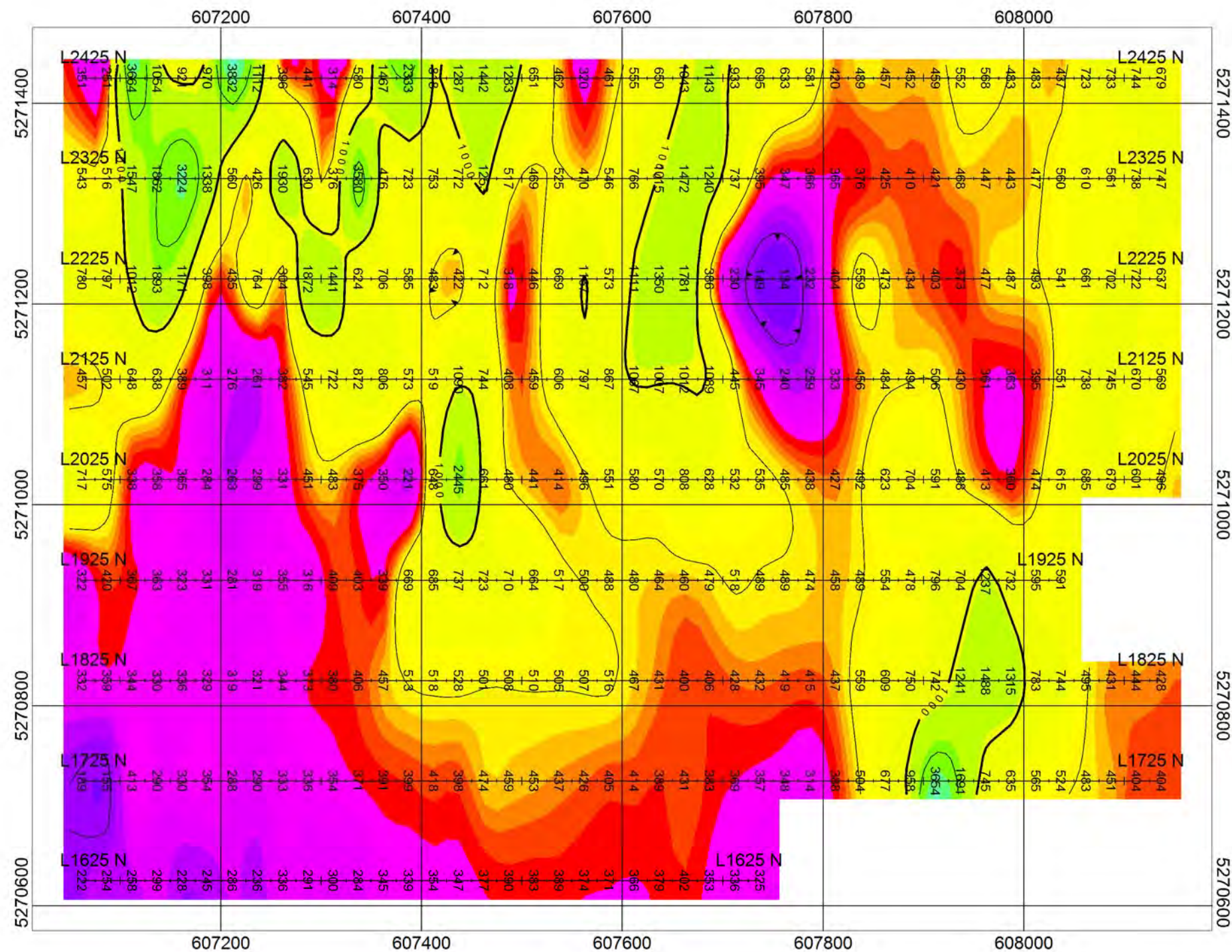
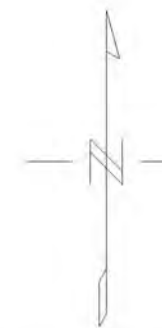
Project Ref. #: CA00950C

Approved by: JW







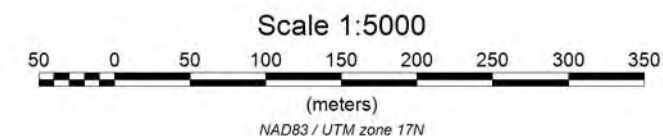


### SURVEY SPECIFICATIONS

Method: Time Domain IP/Resistivity  
Rx: IRIS Elrec-Pro, Tx: Walcer KW10  
Waveform: Time Domain, 50% duty cycle  
Frequency: 0.125 Hz, (2 sec. on/ 2 sec. off)  
Time Gates: 20 semi-logarithmic spaced windows  
Array: Gradient, AB = 2600m, MN = 25m  
Repeatability: 100% total measurements  
Electrodes: 1m stainless steel rods  
Operators: A. Dufour, R. Fearon

### PLOTTING PARAMETERS

Grid Cell Size: 12.5 metres  
Gridding: Bi-directional  
Filter Applied: 1 x Hanning Filter  
Contours: Logarithmic, 3 levels / decade  
Colour Zoning: Equal Area (resis.tbl)



**CANAGCO MINING CORP.**

**LANGIS MINE PROPERTY**  
Harris/Casey Twps., ON  
**RESISTIVITY PLAN MAP, Block 4**  
**TIME DOMAIN IP/RESISTIVITY SURVEY**  
Contoured Apparent Resistivity



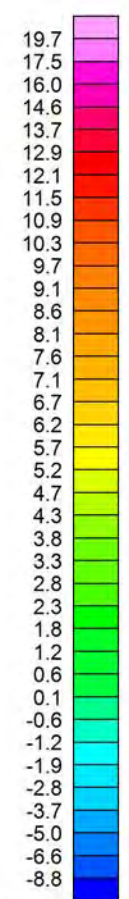
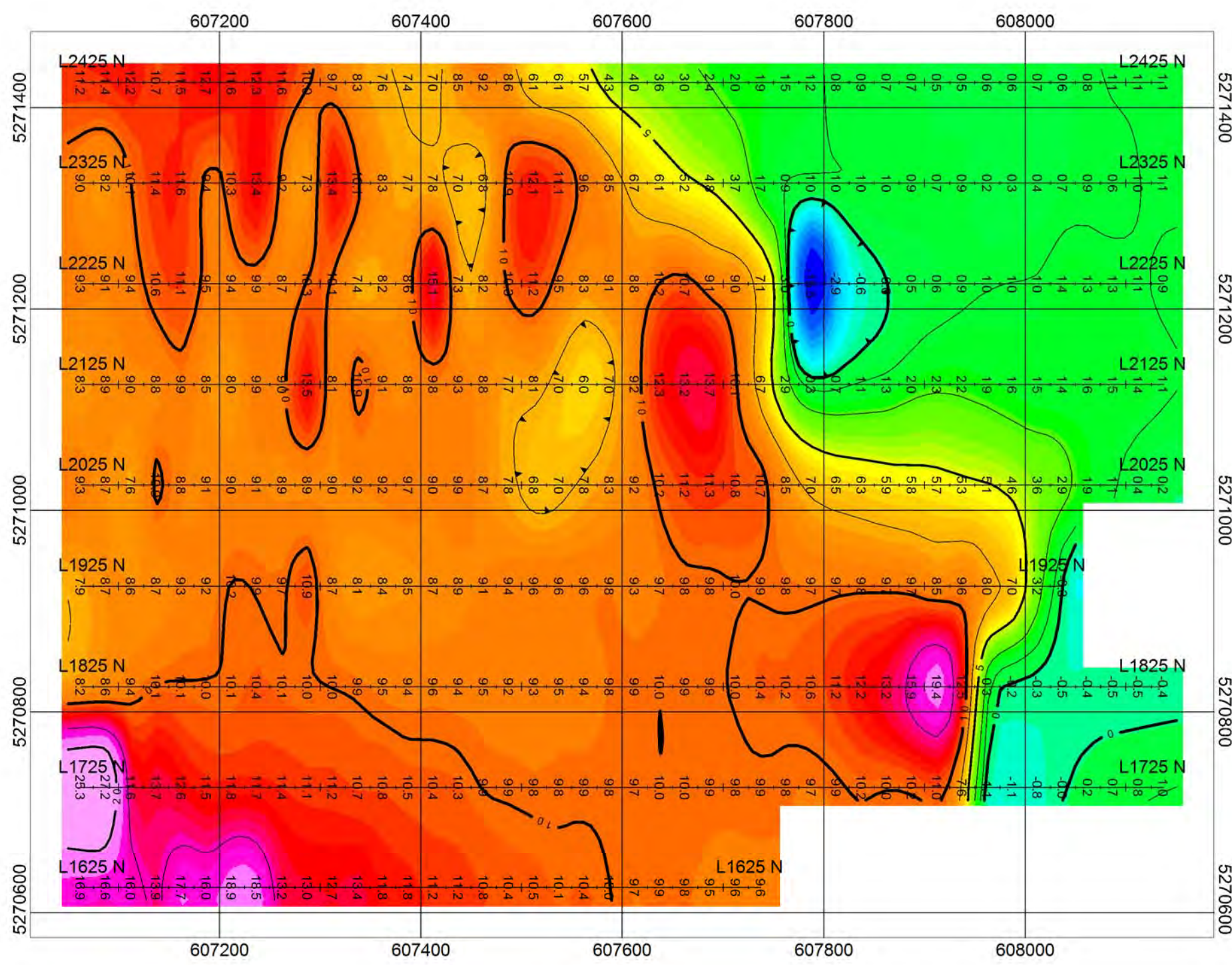
Surveyed & Processed by:  
**QUANTEC GEOSCIENCE LTD.**  
146 Sparks Ave.  
Toronto, ON M2H 2S4

Survey Date: Nov., 2012

Project Ref. #: CA00950C

Approved by: JW



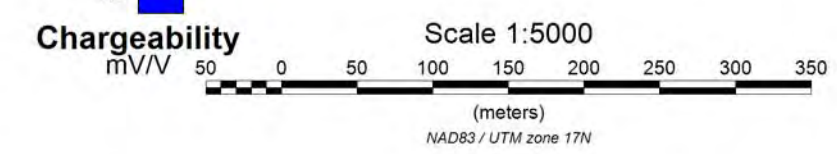


### SURVEY SPECIFICATIONS

Method: Time Domain IP/Resistivity  
Rx: IRIS Elrec-Pro, Tx: Walcer KW10  
Waveform: Time Domain, 50% duty cycle  
Frequency: 0.125 Hz, (2 sec. on/ 2 sec. off)  
Time Gates: 20 semi-logarithmic spaced windows  
Array: Gradient, AB = 2600m, MN = 25m  
Repeatability: 100% total measurements  
Electrodes: 1m stainless steel rods  
Operators: A. Dufour, R. Fearon

### PLOTTING PARAMETERS

Grid Cell Size: 12.5 metres  
Gridding: Bi-directional  
Filter Applied: 1 x Hanning Filter  
Contours: Logarithmic, 4 levels / decade  
Colour Zoning: Equal Area (colour.tbl)



**CANAGCO MINING CORP.**

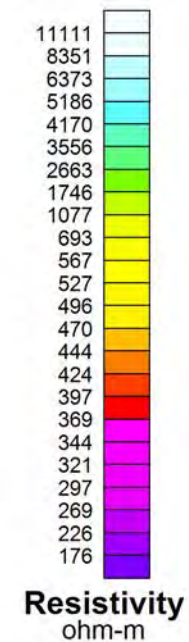
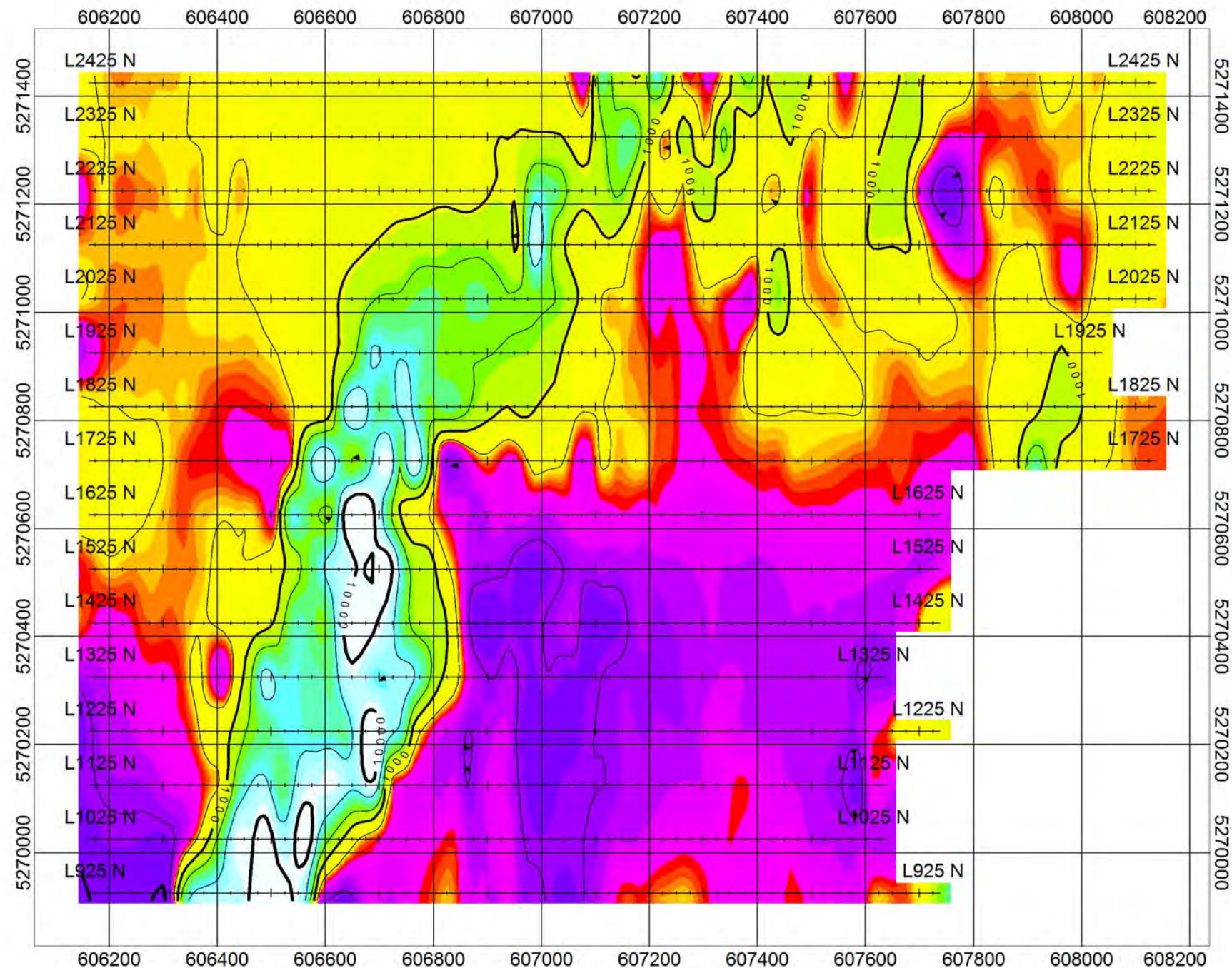
**LANGIS MINE PROPERTY**  
Harris/Casey Twps., ON  
**CHARGEABILITY PLAN MAP, Block 4**  
TIME DOMAIN IP/RESISTIVITY SURVEY  
Contoured Apparent Chargeability



Surveyed & Processed by:  
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146 Sparks Ave.  
Toronto, ON M2H 2S4

Survey Date: Nov., 2012	Project Ref. #: CA00950C	Approved by: JW
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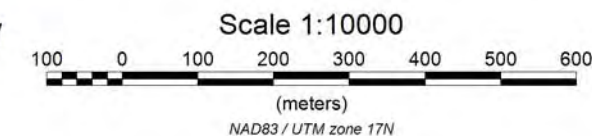


### SURVEY SPECIFICATIONS

Method: Time Domain IP/Resistivity  
Rx: IRIS Elrec-Pro, Tx: Walcer KW10  
Waveform: Time Domain, 50% duty cycle  
Frequency: 0.125 Hz, (2 sec. on/ 2 sec. off)  
Time Gates: 20 semi-logarithmic spaced windows  
Array: Gradient, AB = 2600m, MN = 25m  
Repeatability: 100% total measurements  
Electrodes: 1m stainless steel rods  
Operators: A. Dufour, R. Fearon

### PLOTTING PARAMETERS

Grid Cell Size: 12.5 metres  
Gridding: Bi-directional  
Filter Applied: 1 x Hanning Filter  
Contours: Logarithmic, 3 levels / decade  
Colour Zoning: Equal Area (resis.tbl)



## CANAGCO MINING CORP.

### LANGIS MINE PROPERTY

Harris/Casey Twps., ON

### RESISTIVITY PLAN MAP

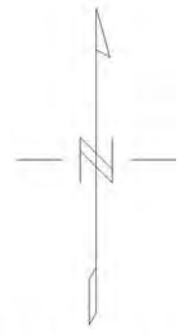
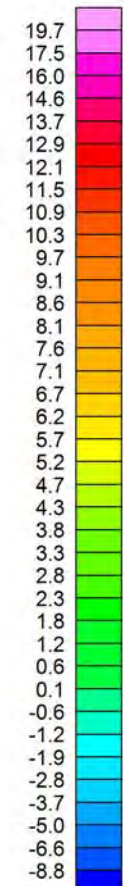
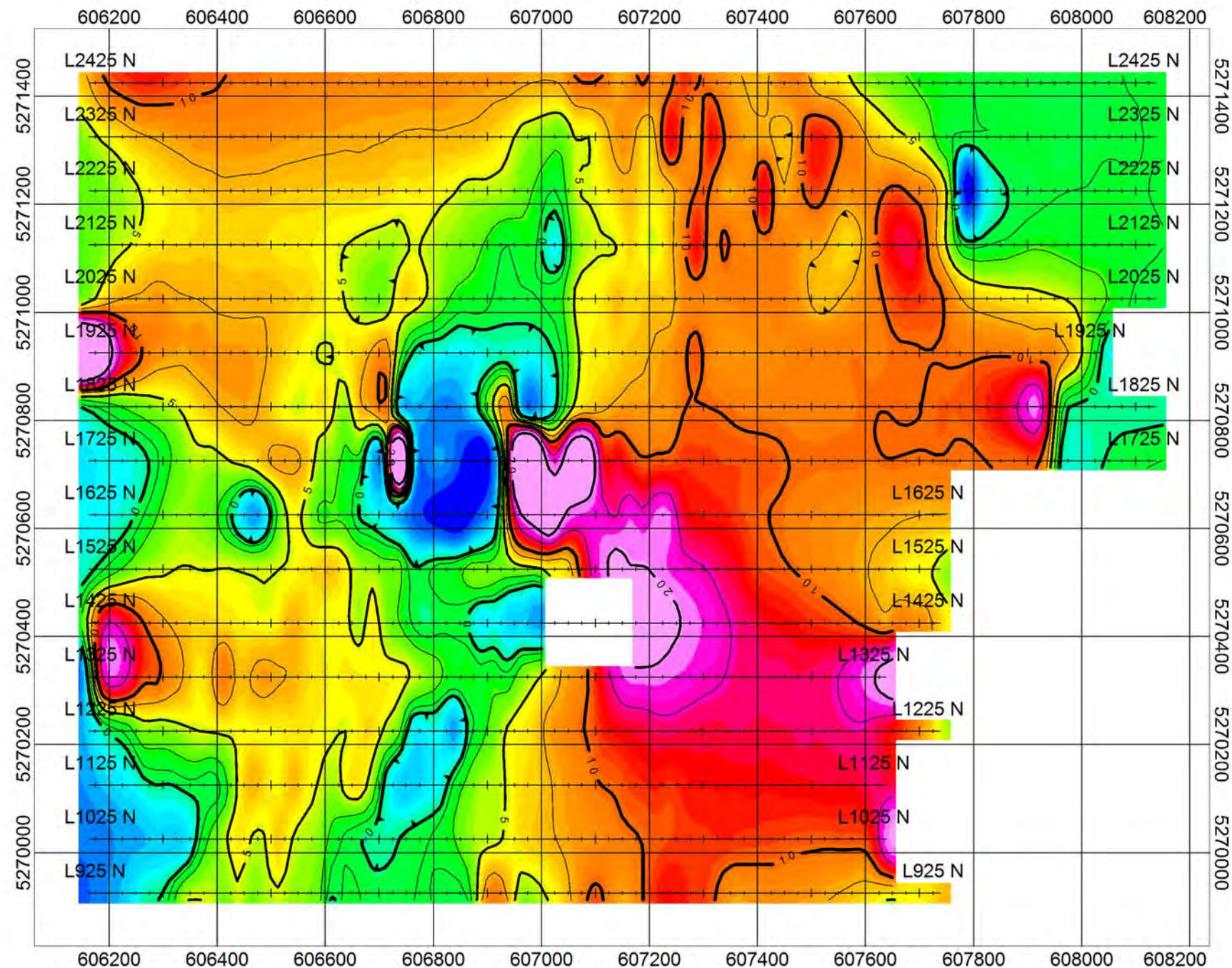
#### TIME DOMAIN IP/RESISTIVITY SURVEY

Contoured Apparent Resistivity



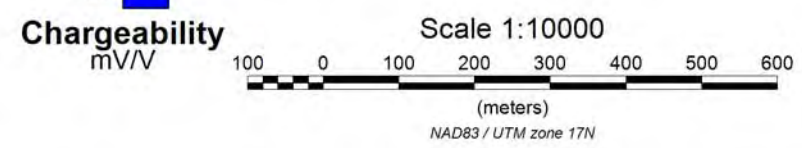
Surveyed & Processed by:  
**QUANTEC GEOSCIENCE LTD.**  
146 Sparks Ave.  
Toronto, ON M2H 2S4





**SURVEY SPECIFICATIONS**  
Method: Time Domain IP/Resistivity  
Rx: IRIS Elrec-Pro, Tx: Walcer KW10  
Waveform: Time Domain, 50% duty cycle  
Frequency: 0.125 Hz, (2 sec. on/ 2 sec. off)  
Time Gates: 20 semi-logarithmic spaced windows  
Array: Gradient, AB = 2600m, MN = 25m  
Repeatability: 100% total measurements  
Electrodes: 1m stainless steel rods  
Operators: A. Dufour, R. Fearon

**PLOTTING PARAMETERS**  
Grid Cell Size: 12.5 metres  
Gridding: Bi-directional  
Filter Applied: 1 x Hanning Filter  
Contours: Logarithmic, 4 levels / decade  
Colour Zoning: Equal Area (colour.tbl)



**CANAGCO MINING CORP.**

**LANGIS MINE PROPERTY**  
Harris/Casey Twps., ON

**CHARGEABILITY PLAN MAP**

TIME DOMAIN IP/RESISTIVITY SURVEY

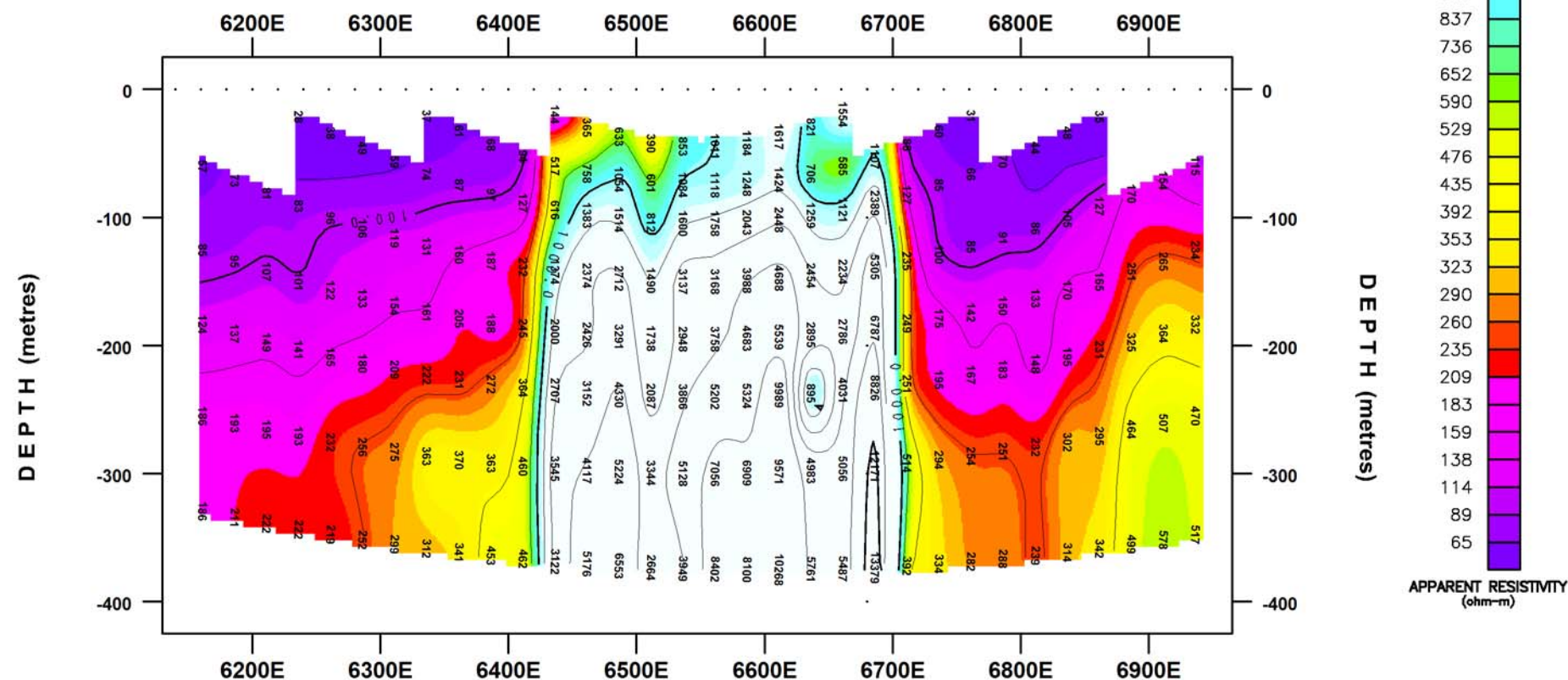
Contoured Apparent Chargeability



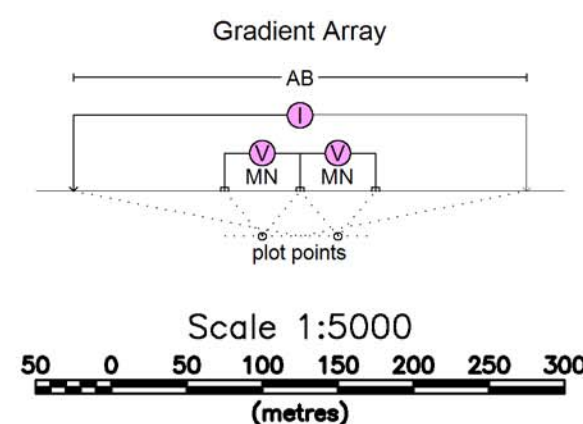
Surveyed & Processed by:  
**QUANTEC GEOSCIENCE LTD.**  
146 Sparks Ave.  
Toronto, ON M2H 2S4



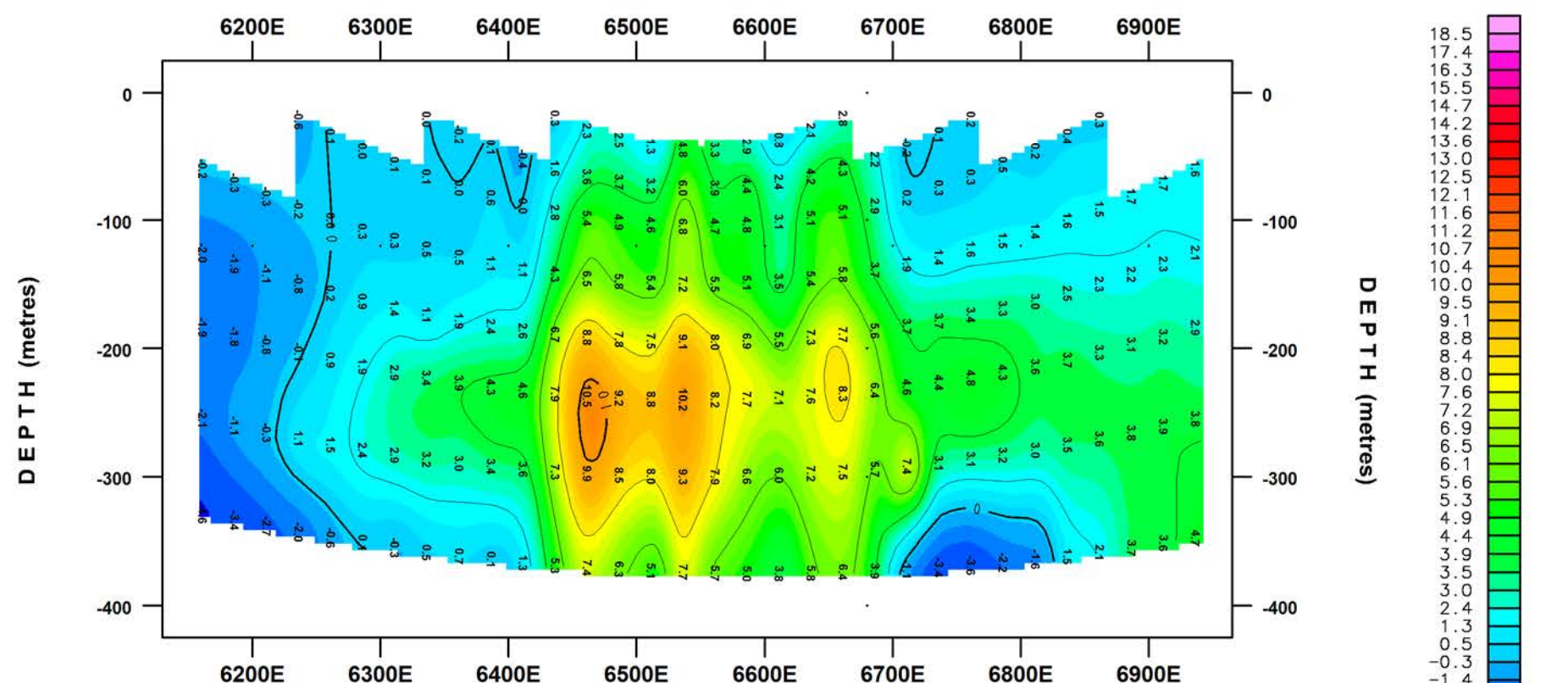
# APPARENT RESISTIVITY (ohm-m) - LL11+25N



## LINE L11+25N



# TOTAL CHARGEABILITY (mV/V)



## CANAGCO MINING CORP.

LANGIS MINE PROPERTY  
Harris/Casey Twps., ON

### TIME DOMAIN IP SURVEY REALSECTION LL11+25N (Multiple Gradient Arrays)

Transmitter Frequency: 0.125 Hz (50% duty cycle)  
Transmitter Current: 1 to 10 Amps  
Decay Curve: IRIS Semilog  
20 Gates (20ms to 1850ms)

Station Interval: 25 meters  
Contour Intervals: RES = 5 levels/log decade  
CHG = 2, 10 mV/V  
Colour Scale: Equal Area Zoning

Survey Date: Nov, 2012  
Instrumentation: Rx = IRIS / ELREC-PRO  
Tx = WALCER / KW10

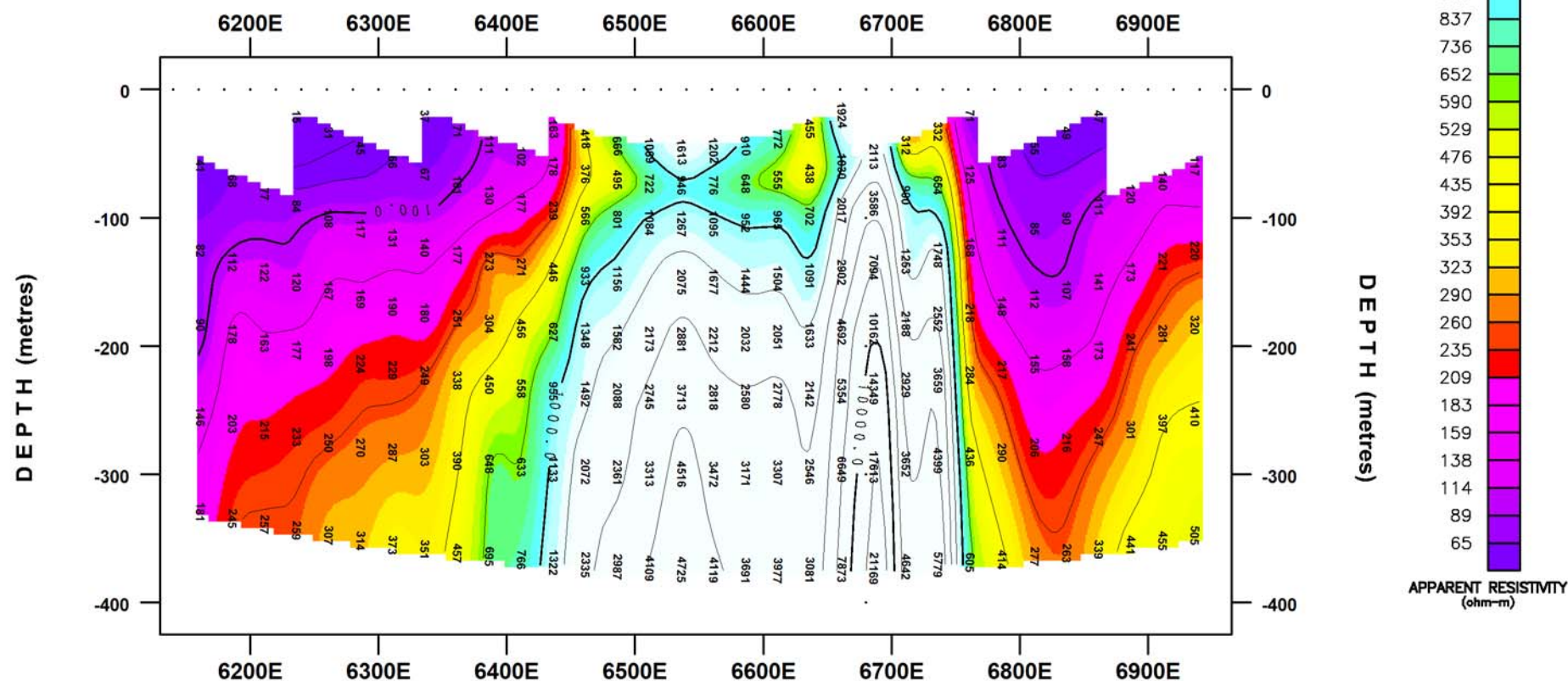


Surveyed & Processed by:  
**QUANTEC GEOSCIENCE LTD.**

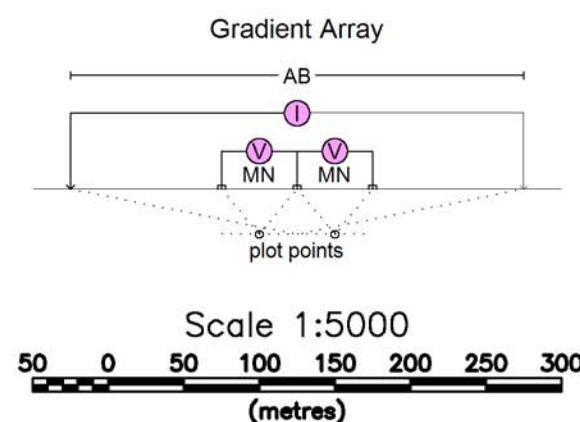
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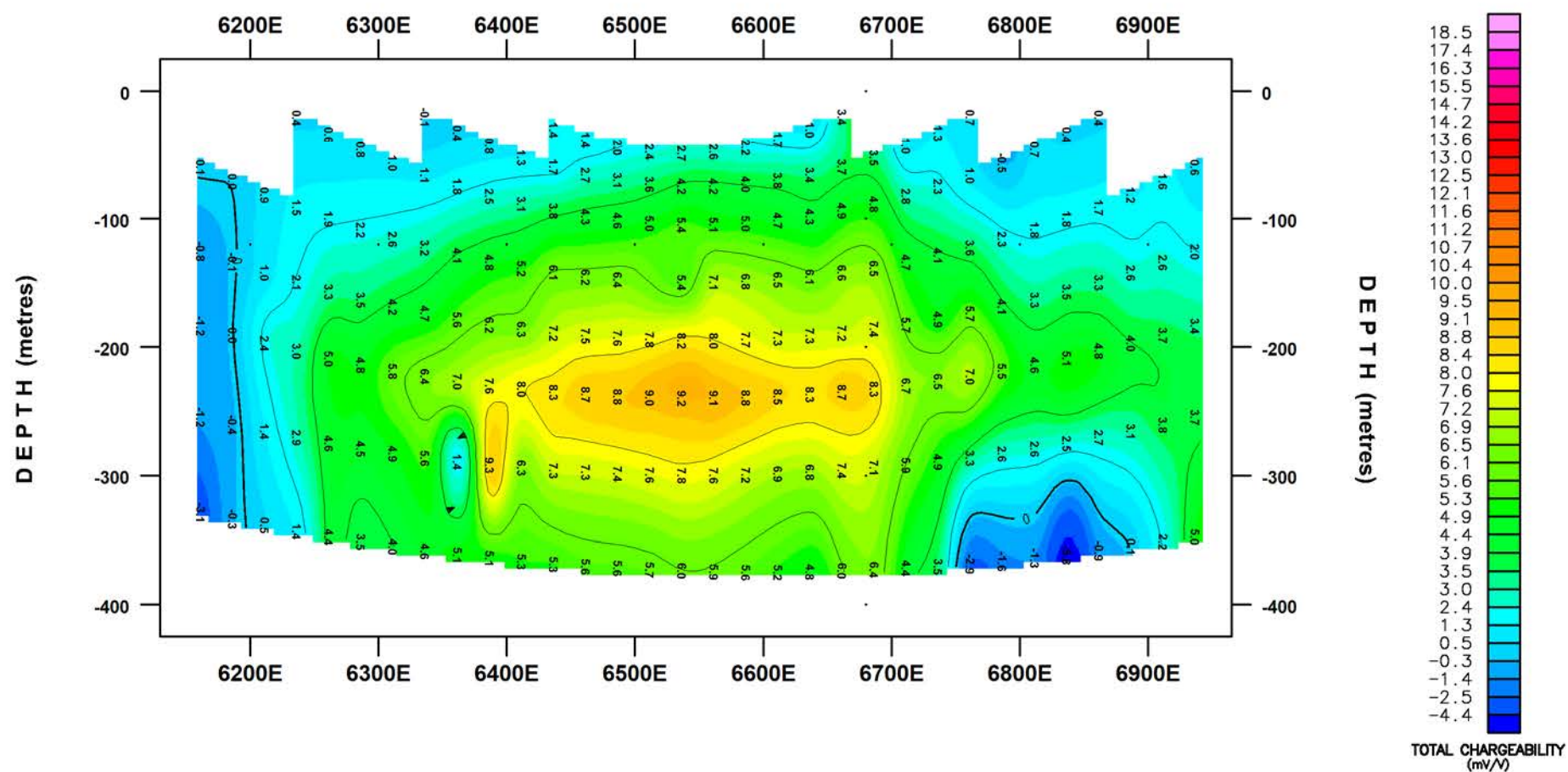
# APPARENT RESISTIVITY (ohm-m) - LL12+25N



## LINE L12+25N



# TOTAL CHARGEABILITY (mV/V)



## CANAGCO MINING CORP.

LANGIS MINE PROPERTY  
Harris/Casey Twps., ON

### TIME DOMAIN IP SURVEY REALSECTION LL12+25N (Multiple Gradient Arrays)

Transmitter Frequency: 0.125 Hz (50% duty cycle)  
Transmitter Current: 1 to 10 Amps  
Decay Curve: IRIS Semilog  
20 Gates (20ms to 1850ms)

Station Interval: 25 meters  
Contour Intervals: RES = 5 levels/log decade  
CHG = 2, 10 mV/V  
Colour Scale: Equal Area Zoning

Survey Date: Nov, 2012  
Instrumentation: Rx = IRIS / ELREC-PRO  
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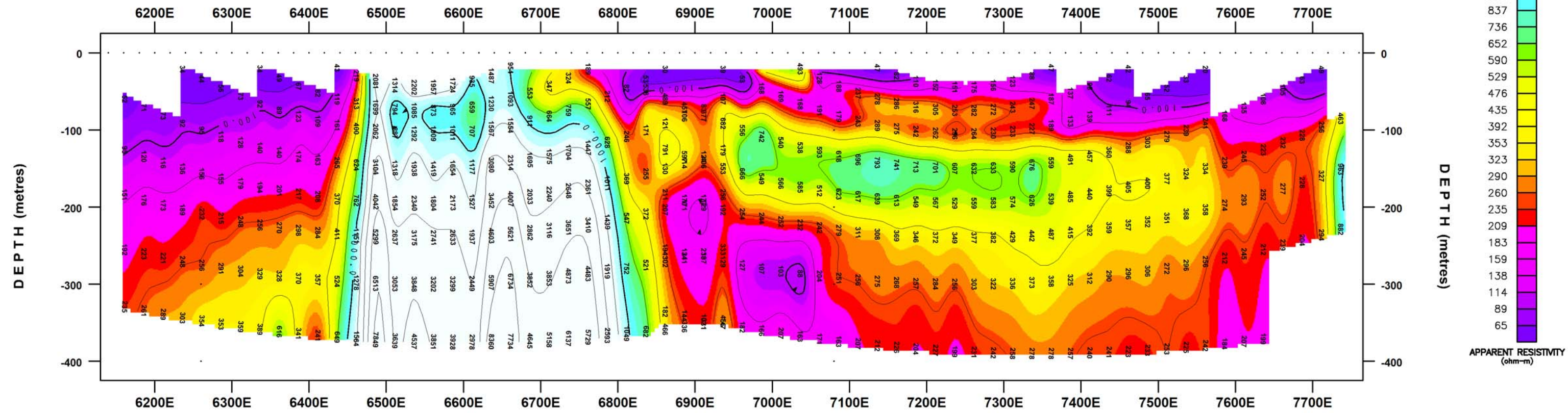


Surveyed & Processed by:  
**QUANTEC GEOSCIENCE LTD.**

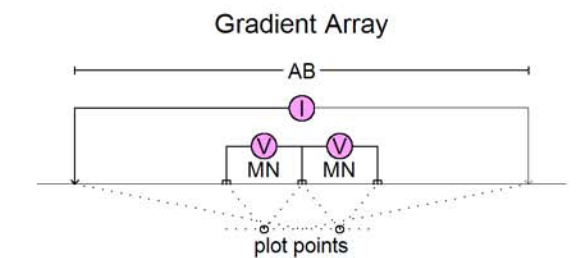
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# APPARENT RESISTIVITY (ohm-m) - LL13+25N



## LINE L13+25N

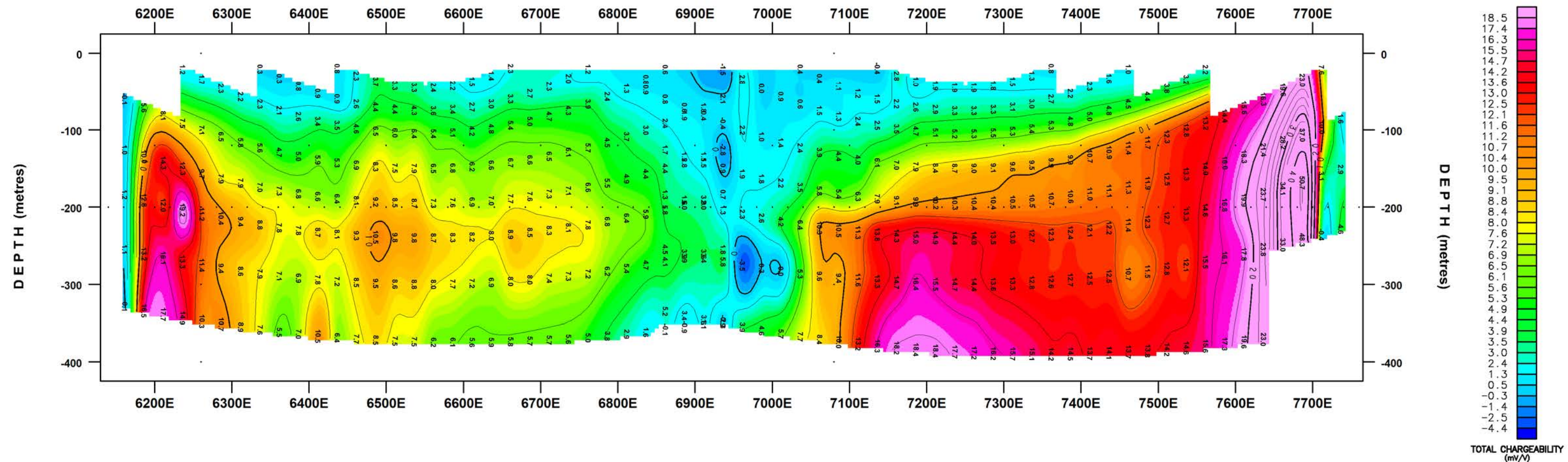


Scale 1:5000

50 0 50 100 150 200 250 300

(metres)

# TOTAL CHARGEABILITY (mV/V)



## CANAGCO MINING CORP.

LANGIS MINE PROPERTY  
Harris/Casey Twps., ON

## TIME DOMAIN IP SURVEY REALSECTION LL13+25N (Multiple Gradient Arrays)

Transmitter Frequency: 0.125 Hz (50% duty cycle)  
Transmitter Current: 1 to 10 Amps  
Decay Curve: IRIS Semilog  
20 Gates (20ms to 1850ms)

Station Interval: 25 meters  
Contour Intervals: RES = 5 levels/log decade  
CHG = 2, 10 mV/V  
Colour Scale: Equal Area Zoning

Survey Date: Nov, 2012  
Instrumentation: Rx = IRIS / ELREC-PRO  
Tx = WALCER / KW10

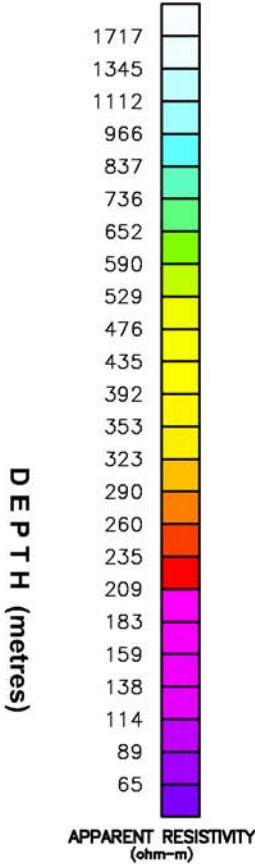
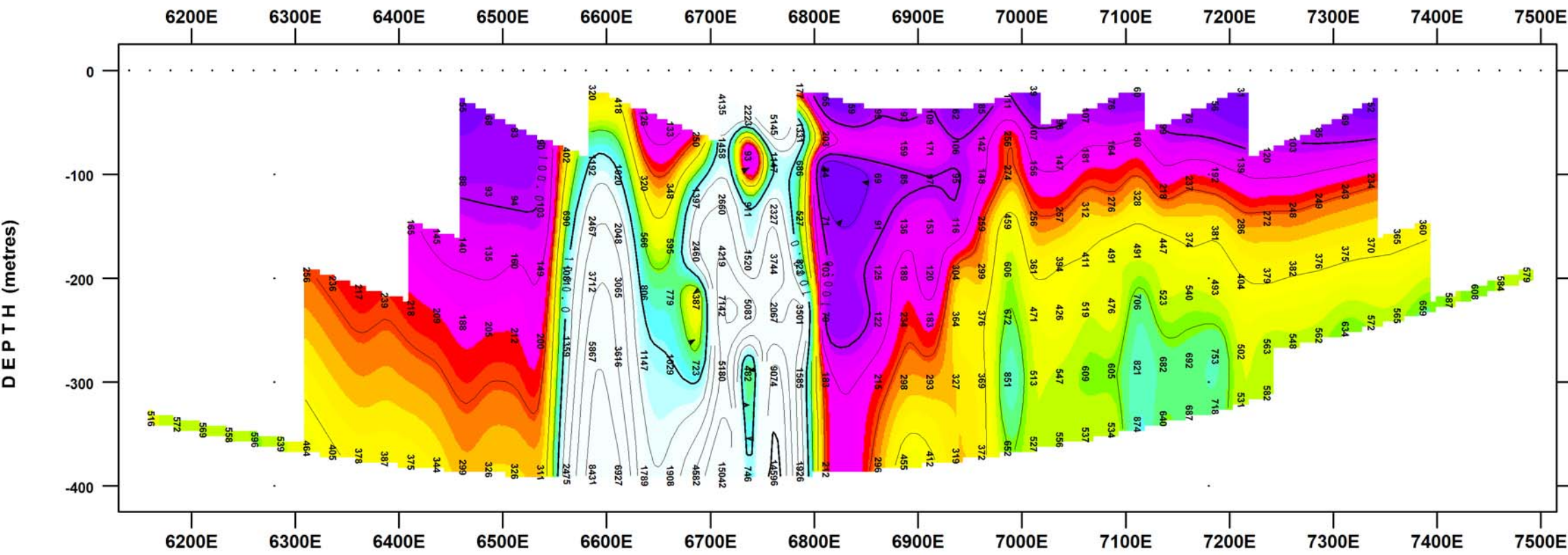


Surveyed & Processed by:  
**QUANTEC GEOSCIENCE LTD.**

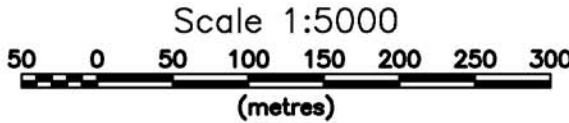
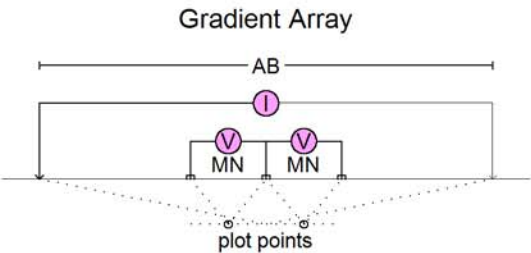
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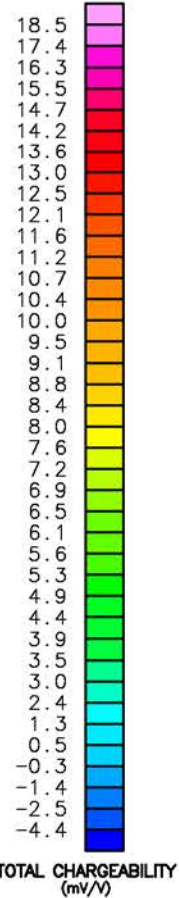
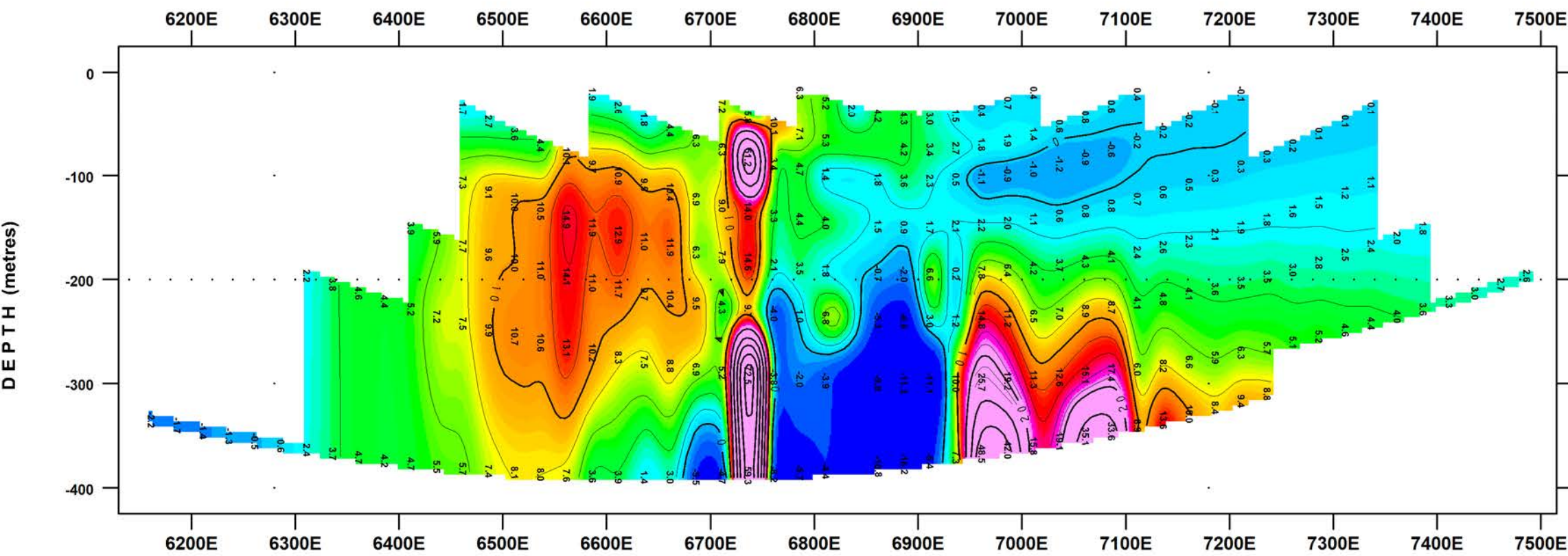
APPARENT RESISTIVITY (ohm-m) - L17+25N



LINE 17+25N



TOTAL CHARGEABILITY (mV/V)



CANAGCO MINING CORP.  
LANGIS MINE PROPERTY  
Harris/Casey Twps., ON

TIME DOMAIN IP SURVEY  
REALSECTION L17+25N  
(Multiple Gradient Arrays)

Transmitter Frequency: 0.125 Hz (50% duty cycle)  
Transmitter Current: 1 to 10 Amps  
Decay Curve: IRIS Semilog  
20 Gates (20ms to 1850ms)  
Station Interval: 25 meters  
Contour Intervals: RES = 5 levels/log decade  
CHG = 2, 10 mV/V  
Colour Scale: Equal Area Zoning

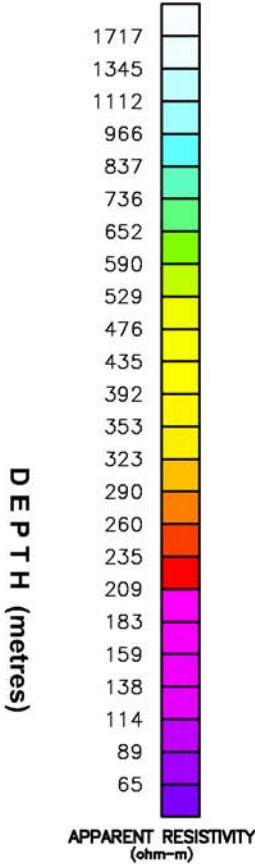
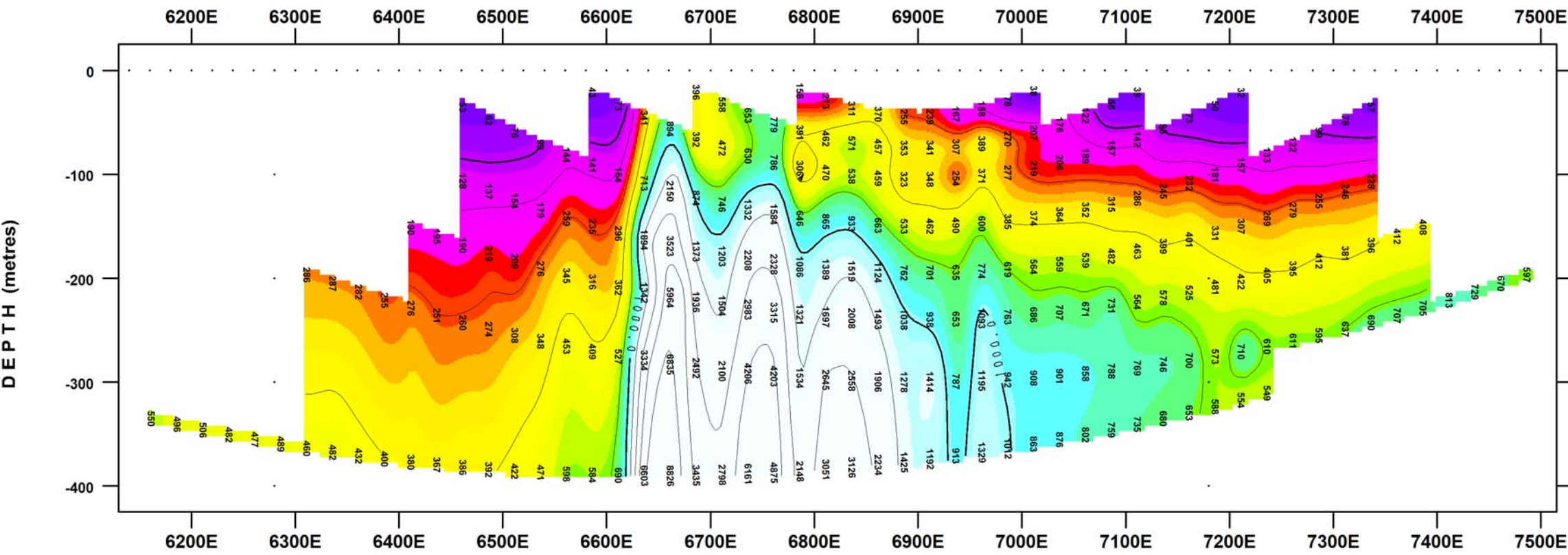
Survey Date: Nov., 2012  
Instrumentation: Rx = IRIS / ELREC-PRO  
Tx = WALCER / KW10



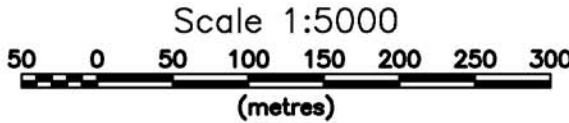
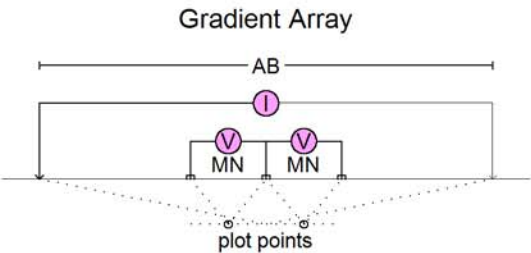
Surveyed & Processed by:  
**QUANTEC GEOSCIENCE LTD.**  
DWG. #: CA00950C-RSIP-CHG-RES-17+25N



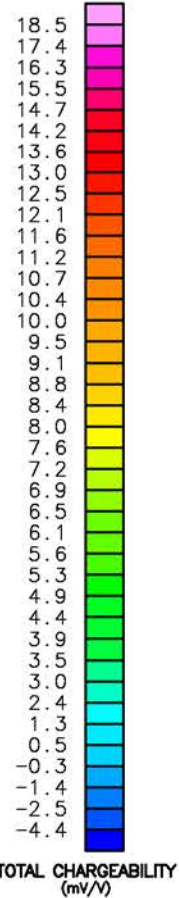
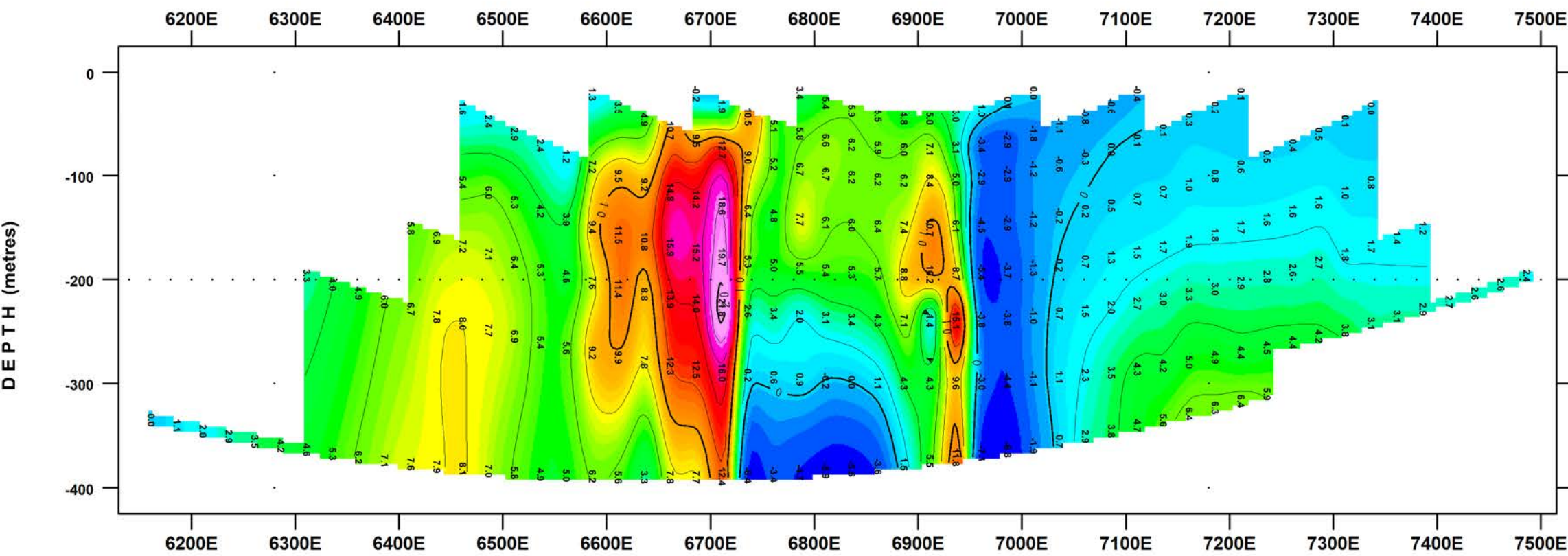
APPARENT RESISTIVITY (ohm-m) - L18+25N



LINE 18+25N



TOTAL CHARGEABILITY (mV/V)



CANAGCO MINING CORP.  
LANGIS MINE PROPERTY  
Harris/Casey Twps., ON

TIME DOMAIN IP SURVEY  
REALSECTION L18+25N  
(Multiple Gradient Arrays)

Transmitter Frequency: 0.125 Hz (50% duty cycle)  
Transmitter Current: 1 to 10 Amps  
Decay Curve: IRIS Semilog  
20 Gates (20ms to 1850ms)  
Station Interval: 25 meters  
Contour Intervals: RES = 5 levels/log decade  
CHG = 2, 10 mV/V  
Colour Scale: Equal Area Zoning

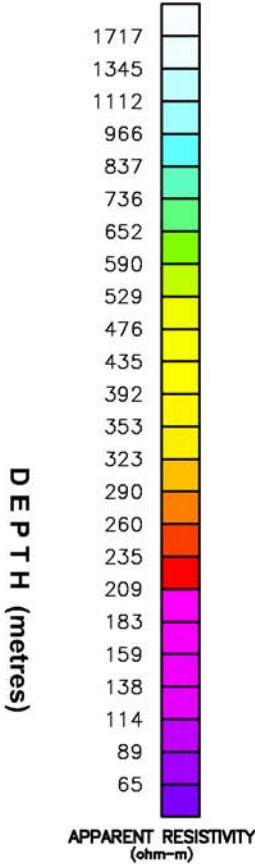
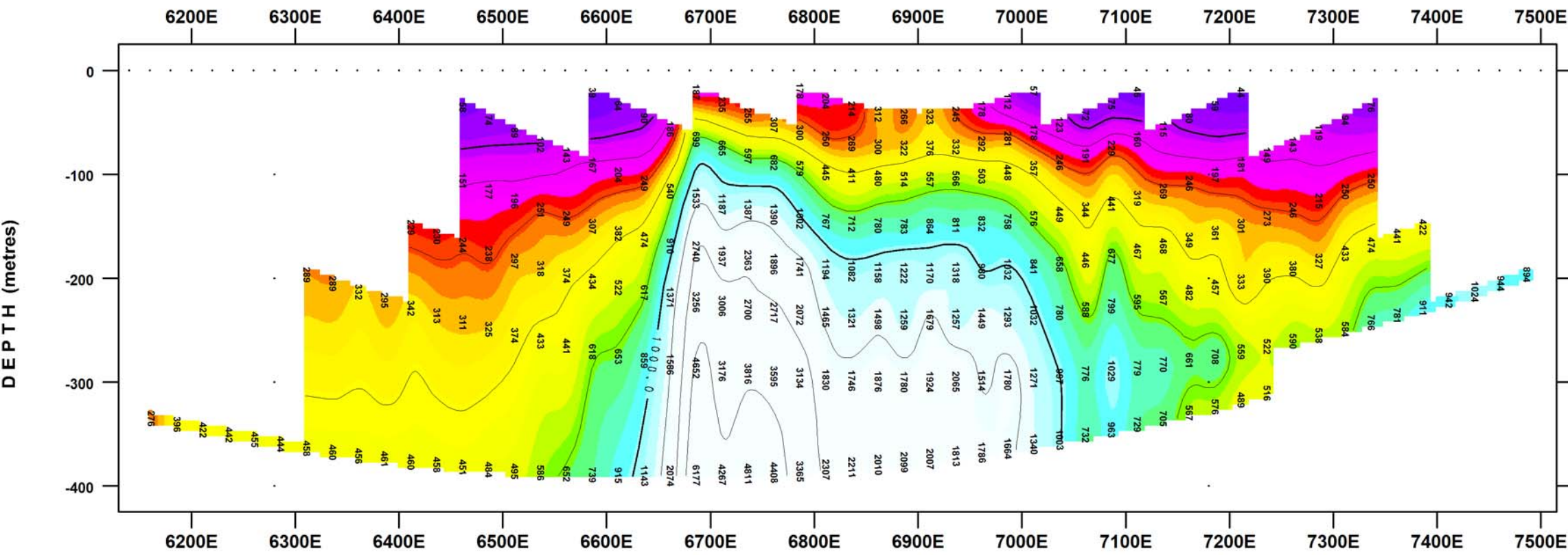
Survey Date: Nov., 2012  
Instrumentation: Rx = IRIS / ELREC-PRO  
Tx = WALCER / KW10



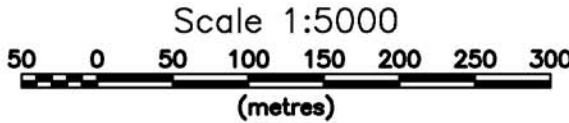
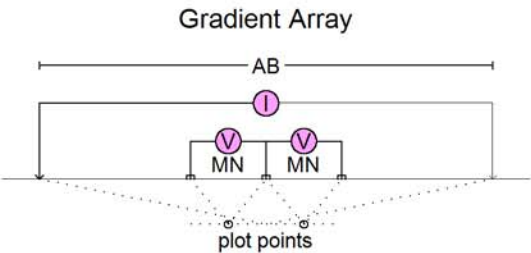
Surveyed & Processed by:  
**QUANTEC GEOSCIENCE LTD.**  
DWG. #: CA00950C-RSIP-CHG-RES-18+25N



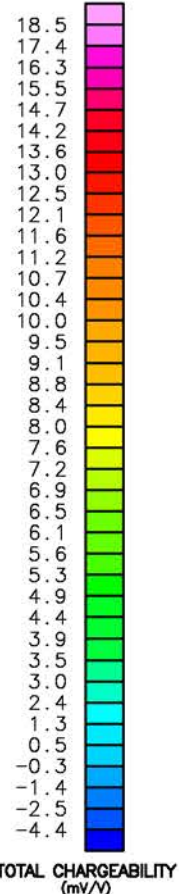
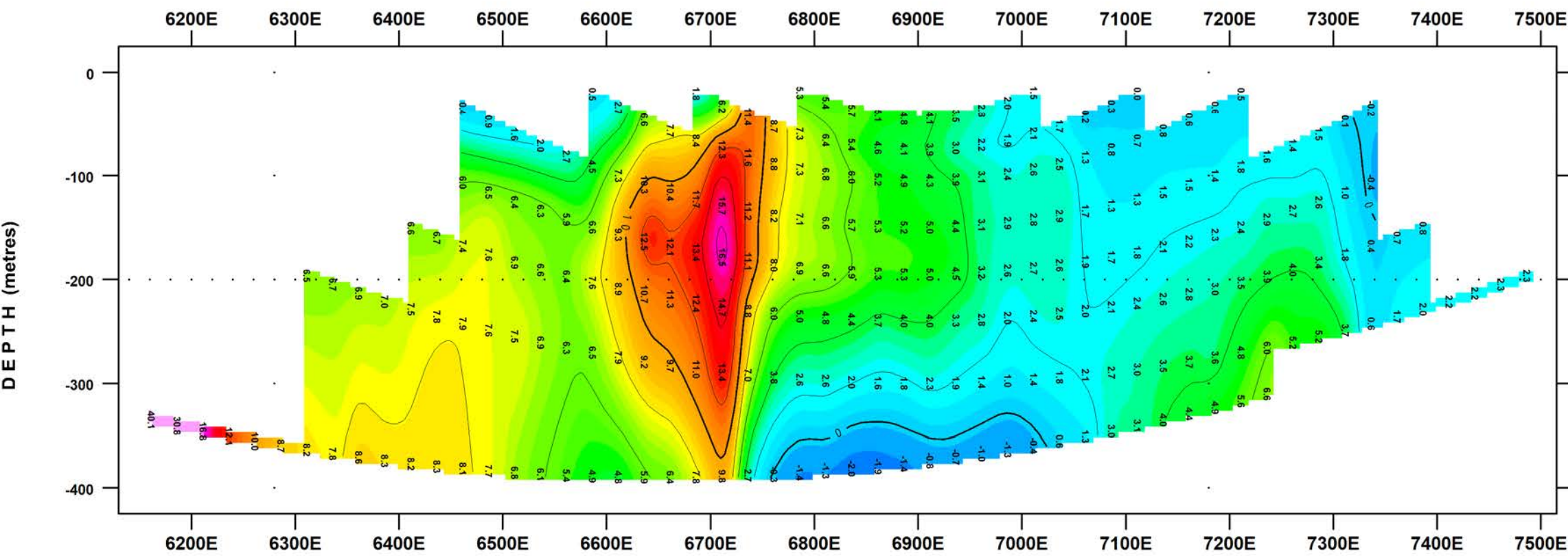
APPARENT RESISTIVITY (ohm-m) - L19+25N



LINE 19+25N



TOTAL CHARGEABILITY (mV/V)



CANAGCO MINING CORP.  
LANGIS MINE PROPERTY  
Harris/Casey Twps., ON

TIME DOMAIN IP SURVEY  
REALSECTION L19+25N  
(Multiple Gradient Arrays)

Transmitter Frequency: 0.125 Hz (50% duty cycle)  
Transmitter Current: 1 to 10 Amps  
Decay Curve: IRIS Semilog  
20 Gates (20ms to 1850ms)  
Station Interval: 25 meters  
Contour Intervals: RES = 5 levels/log decade  
CHG = 2, 10 mV/V  
Colour Scale: Equal Area Zoning

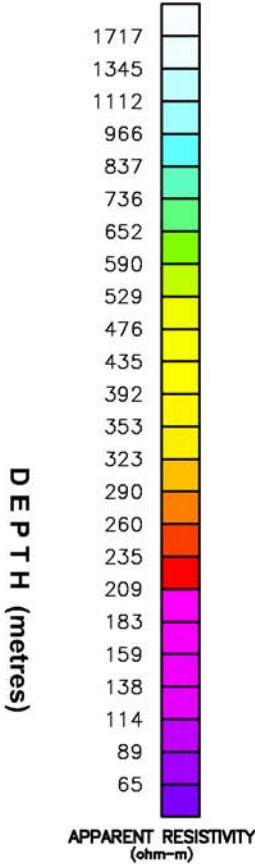
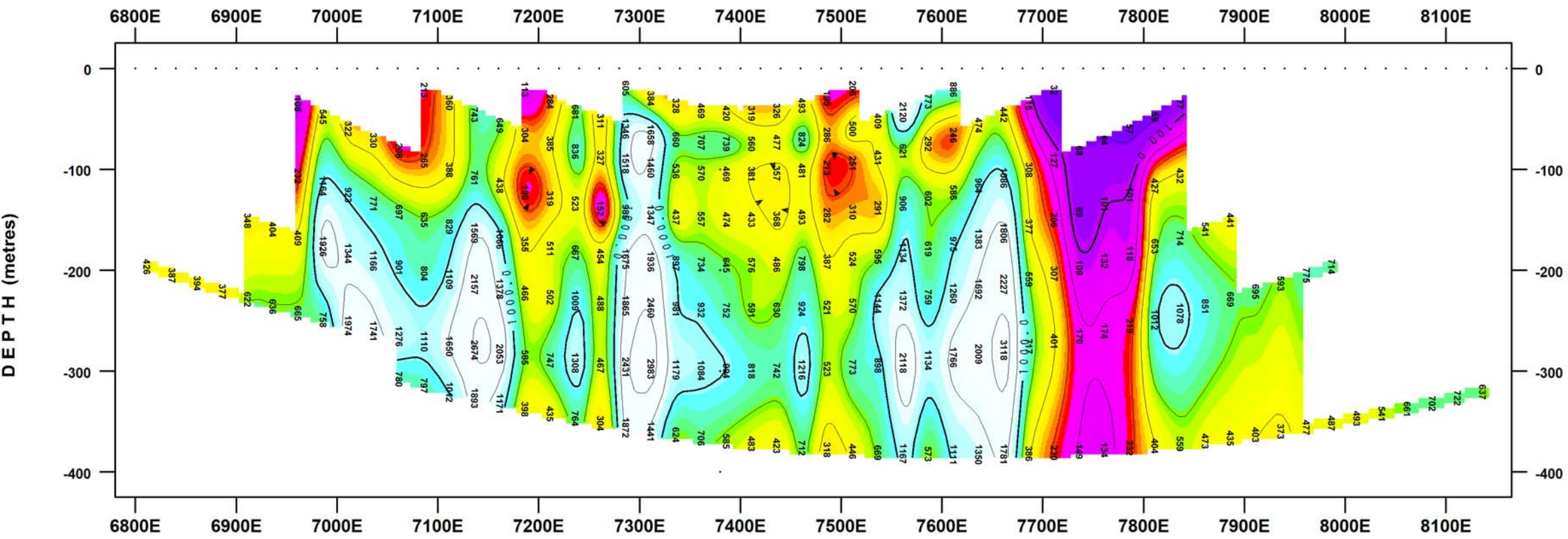
Survey Date: Nov., 2012  
Instrumentation: Rx = IRIS / ELREC-PRO  
Tx = WALCER / KW10



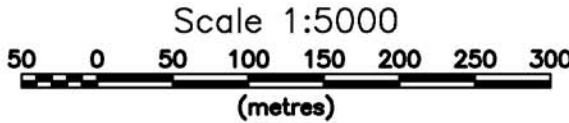
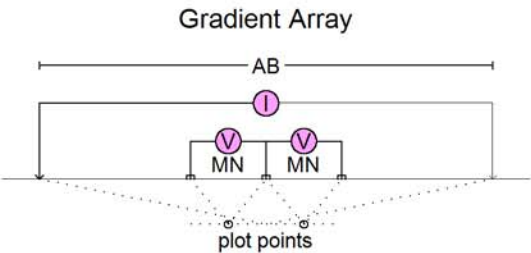
Surveyed & Processed by:  
**QUANTEC GEOSCIENCE LTD.**  
DWG. #: CA00950C-RSIP-CHG-RES-19+25N



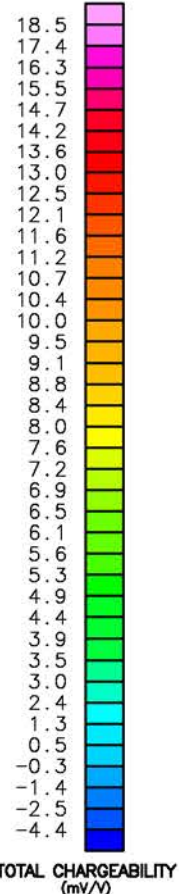
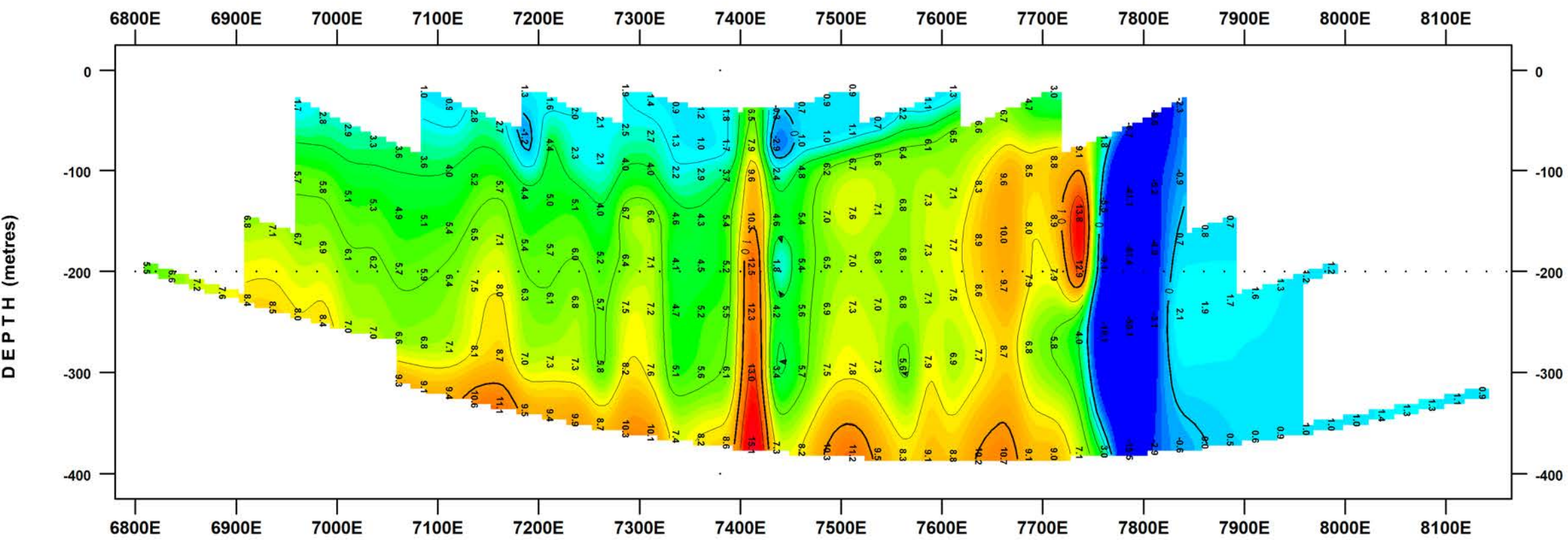
APPARENT RESISTIVITY (ohm-m) - L22+25N



LINE 22+25N



TOTAL CHARGEABILITY (mV/V)



CANAGCO MINING CORP.  
LANGIS MINE PROPERTY  
Harris/Casey Twps., ON

TIME DOMAIN IP SURVEY  
REALSECTION L22+25N  
(Multiple Gradient Arrays)

Transmitter Frequency: 0.125 Hz (50% duty cycle)  
Transmitter Current: 1 to 10 Amps  
Decay Curve: IRIS Semilog  
20 Gates (20ms to 1850ms)  
Station Interval: 25 meters  
Contour Intervals: RES = 5 levels/log decade  
CHG = 2, 10 mV/V  
Colour Scale: Equal Area Zoning

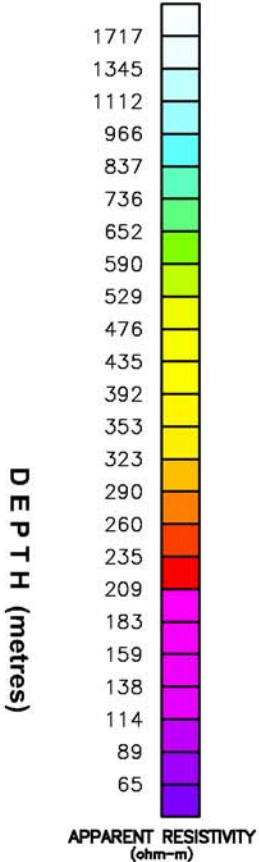
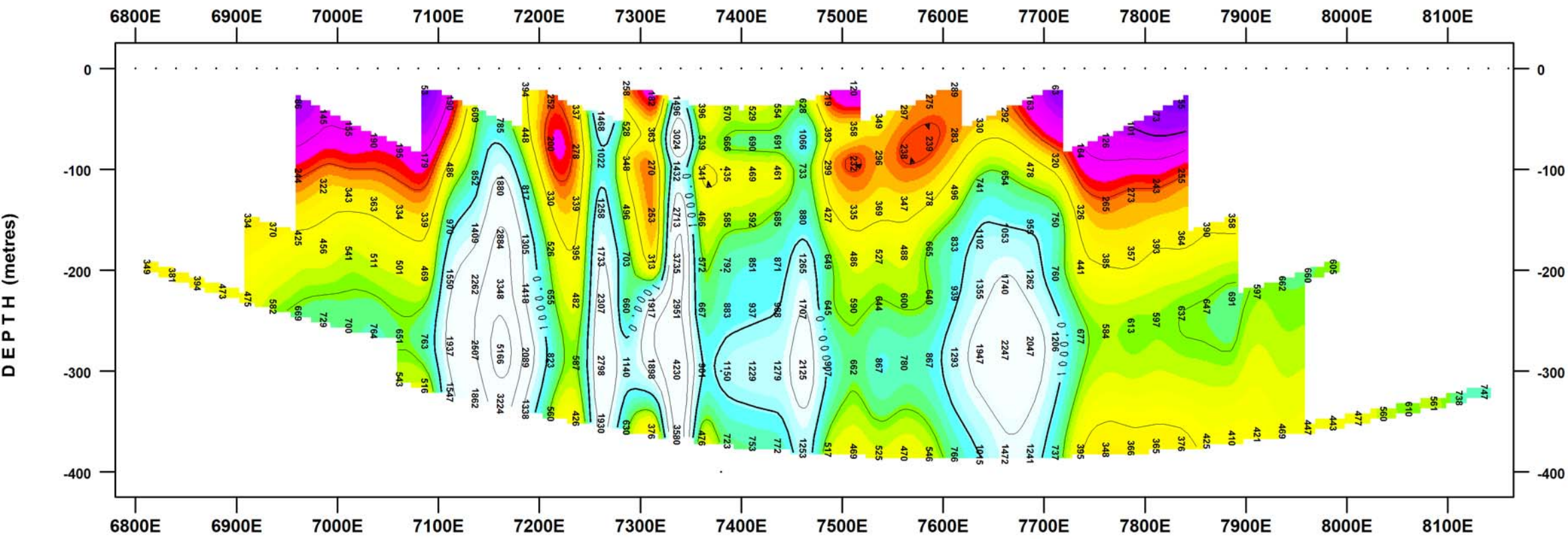
Survey Date: Nov, 2012  
Instrumentation: Rx = IRIS / ELREC-PRO  
Tx = WALCER / KW10



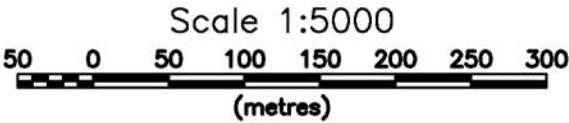
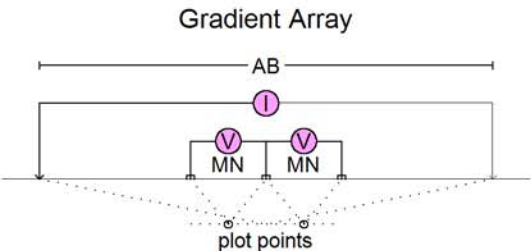
Surveyed & Processed by:  
**QUANTEC GEOSCIENCE LTD.**  
DWG. #: CA00950C-RSIP-CHG-RES-22+25N



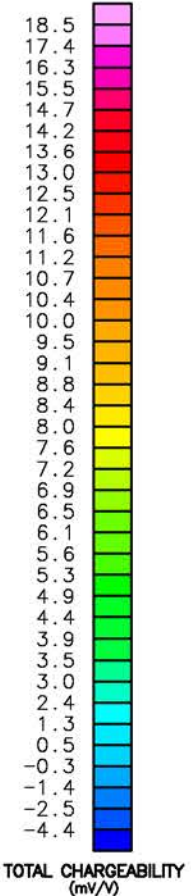
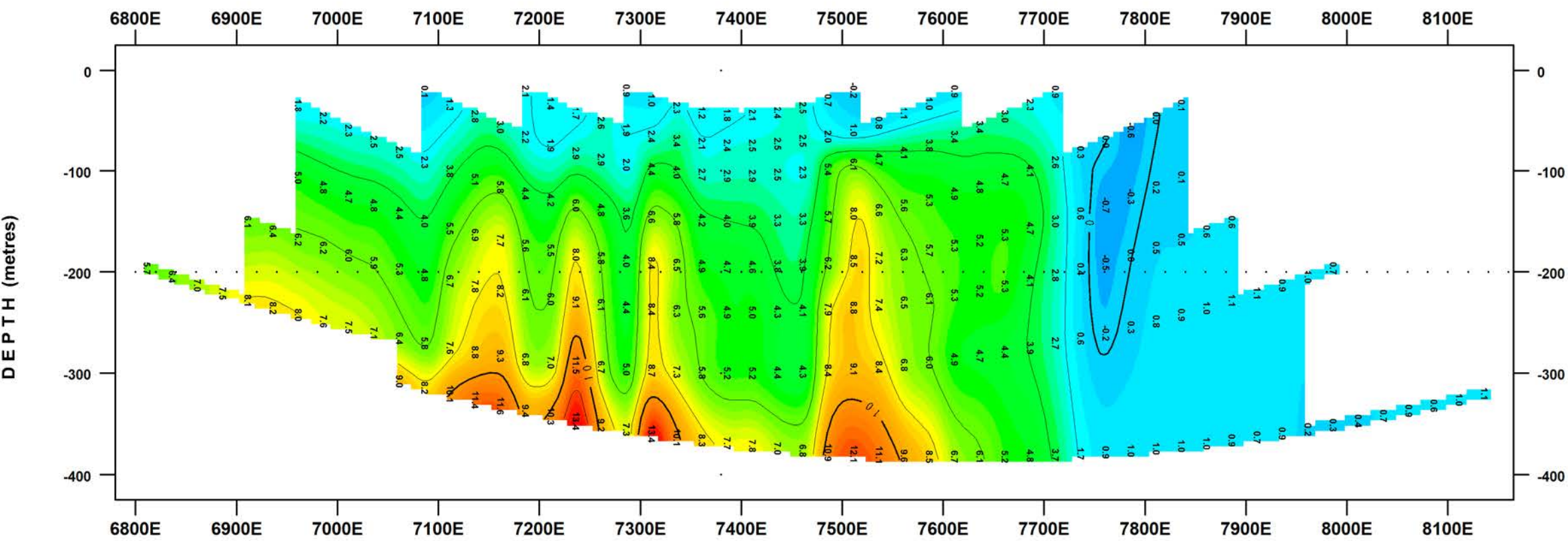
APPARENT RESISTIVITY (ohm-m) - L23+25N



LINE 23+25N



TOTAL CHARGEABILITY (mV/V)



CANAGCO MINING CORP.  
LANGIS MINE PROPERTY  
Harris/Casey Twps., ON

TIME DOMAIN IP SURVEY  
REALSECTION L23+25N  
(Multiple Gradient Arrays)

Transmitter Frequency: 0.125 Hz (50% duty cycle)  
Transmitter Current: 1 to 10 Amps  
Decay Curve: IRIS Semilog  
20 Gates (20ms to 1850ms)  
Station Interval: 25 meters  
Contour Intervals: RES = 5 levels/log decade  
CHG = 2, 10 mV/V  
Colour Scale: Equal Area Zoning

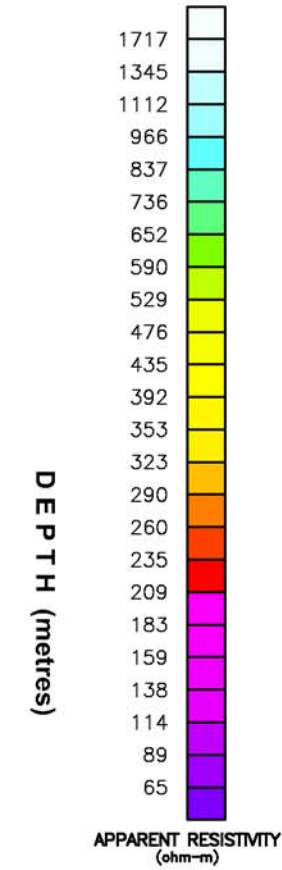
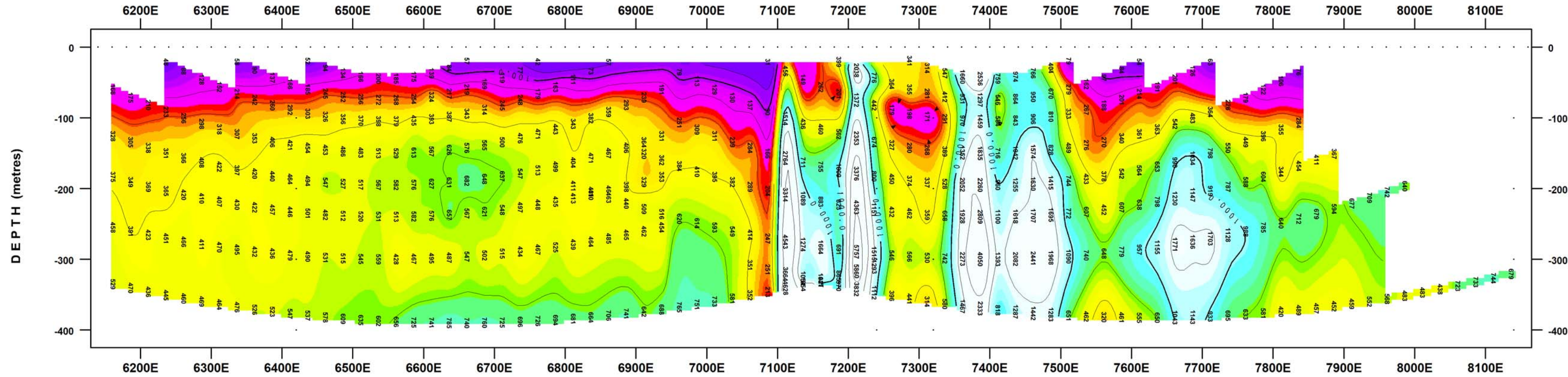
Survey Date: Nov, 2012  
Instrumentation: Rx = IRIS / ELREC-PRO  
Tx = WALCER / KW10



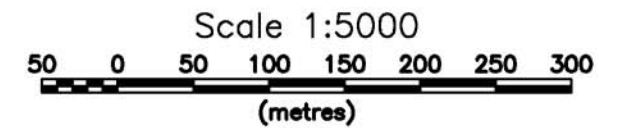
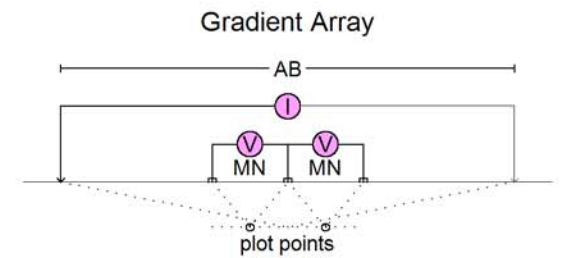
Surveyed & Processed by:  
**QUANTEC GEOSCIENCE LTD.**  
DWG. #: CA00950C-RSIP-CHG-RES-23+25N



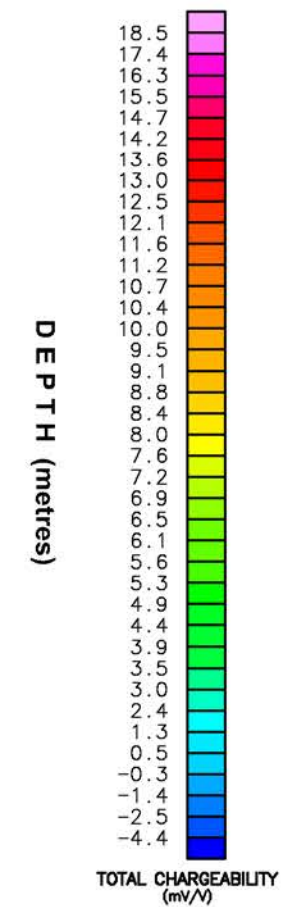
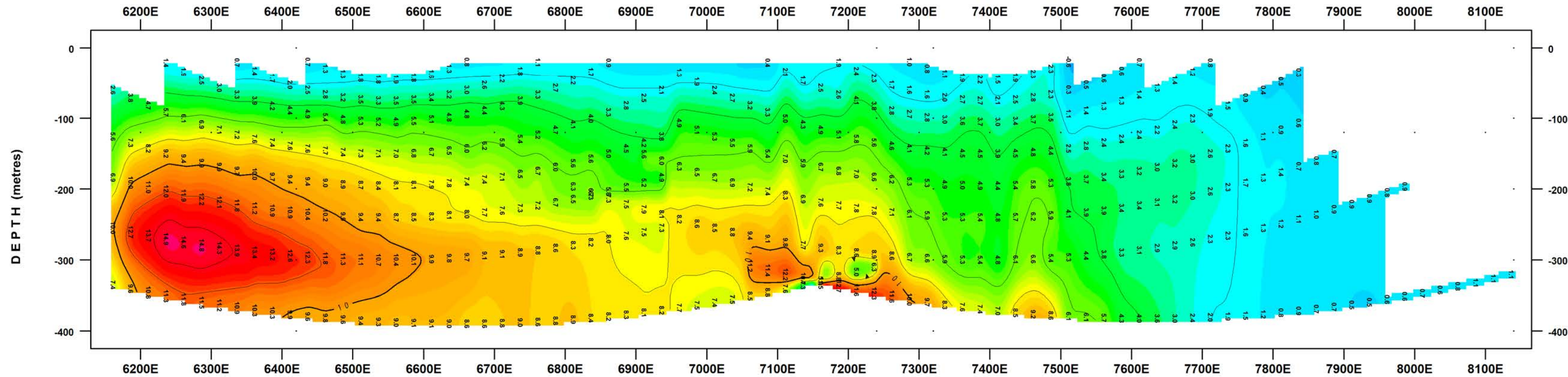
# APPARENT RESISTIVITY (ohm-m) - L24+25N



## LINE 24+25N



# TOTAL CHARGEABILITY (mV/V)



CANAGCO MINING CORP.  
LANGIS MINE PROPERTY  
Harris/Casey Twps., ON

## TIME DOMAIN IP SURVEY REALSECTION L24+25N (Multiple Gradient Arrays)

Transmitter Frequency: 0.125 Hz (50% duty cycle)  
Transmitter Current: 1 to 10 Amps  
Decay Curve: IRIS Semilog  
20 Gates (20ms to 1850ms)  
Station Interval: 25 meters  
Contour Intervals: RES = 5 levels/log decade  
CHG = 2, 10 mV/V  
Colour Scale: Equal Area Zoning

Survey Date: Nov, 2012  
Instrumentation: Rx = IRIS / ELREC-PRO  
Tx = WALCER / KW10



Surveyed & Processed by:  
**QUANTEC GEOSCIENCE LTD.**  
DWG. #: CA00950C-RSIP-CHG-RES-24+25N