Airborne Geophysics Exploration Assessment Report

On

TRES-OR RESOURCES and ADROIT RESOURCES INC

COBALT SOUTH PROPERTY 2.30116

Gillies Limit, Lorrain and South Lorrain Townships

Larder Lake Mining Division

UTM Zone 17 - NAD 83 Projection
5228000N to 5239000N UTM
597000E to 608000E UTM

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For:
Tres-Or Resources Ltd. and Adroit Resources Inc.
May 6, 2005

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SUMMARY

The Cobalt South property is a 13 claim, 161 unit, block located in the northeastern corner of Gillies Limit South Township straddling the Montreal River and northeast of Friday Lake. The claim group extends in a northwestward trend. The claims are located in an area underlain primarily by Huronian glacial sediments intruded by the Nipissing diabase sill. There are two areas of Archean basement volcanic rocks to the northeast, within 2km and one to the southwest, within 5km. These basement volcanics, especially in proximity to Huronian sediments and Nipissing diabase, show potential for Ag-Co mineralization as well as base metal potential as evidenced by the Cu-Ni showings along Rib Lake to the southwest and the Ag-Co showings to the northeast. Additionally, there have been diamonds reported in samples of heterolithic lamprophyric dykes in Lorrain Township by Cabo Mining.

This area was flown by Aeroquest Limited using their new AeroTEM coincident loop system that offers the ability to detect IP effects, which are known, in some cases, to occur in kimberlite sources. The area was previously flown at 50m-line spacing by Aeroquest Limited using their IMPULSE six frequency, electromagnetic system and high sensitivity magnetometer to measure the magnetic signature and conductivity. The entire block of claims was to have been surveyed at that time. However, failure of a support strap during the flight prevented the survey completion. Subsequent discussions with Aeroquest regarding the application of their new AEROTEM system convinced Tres-Or's consultants that the ability for the IP to detect negative decays, evident over some kimberlite bodies, was a better methodology for the detection of kimberlite. This same system has been adopted over other Tres-Or Resources claim holdings with positive results.

The survey was successful in mapping the magnetic properties of the geology throughout the survey area. Preliminary interpretations by the contractor have identified a large oblate magnetic high in the southwestern portion of the claim block. Several narrow linear highs are interpreted to be diabase dykes often following northwest trending lineaments. The AeroTEM system is able to penetrate up to 250m for large conductive bedrock sources. However, there were no discreet conductive bedrock sources identified by the contractor from these data. There was a marked lack of EM response in this survey area. According to the contractor, this does not preclude the presence of kimberlite sources. A number of weakly conductive responses were identified without coincident magnetic responses. These conductive areas are prospective for Ag-Co mineralization and possibly for Cu-Ni mineralization within the Nipissing diabase.

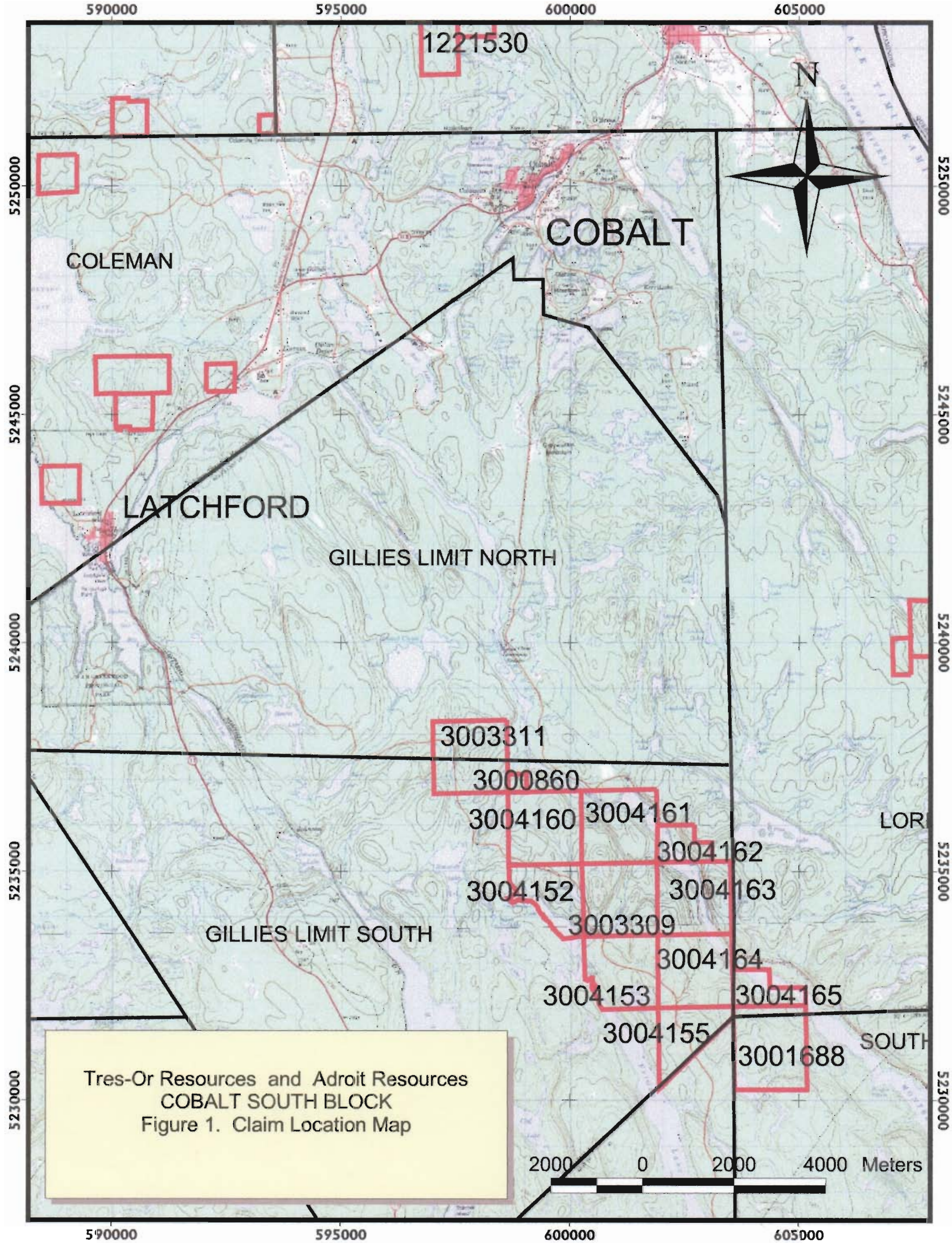
Follow-up geologic mapping and structural evaluation of these contact areas are recommended. Potentially, reconnaissance scale geochemical surveys such as MMI could be done to guide detailed work. Potential exists for Cu-Ni, Au or Ag-Co mineralization.

Aeroquest Limited's contractor report is included as an Appendix to this report.

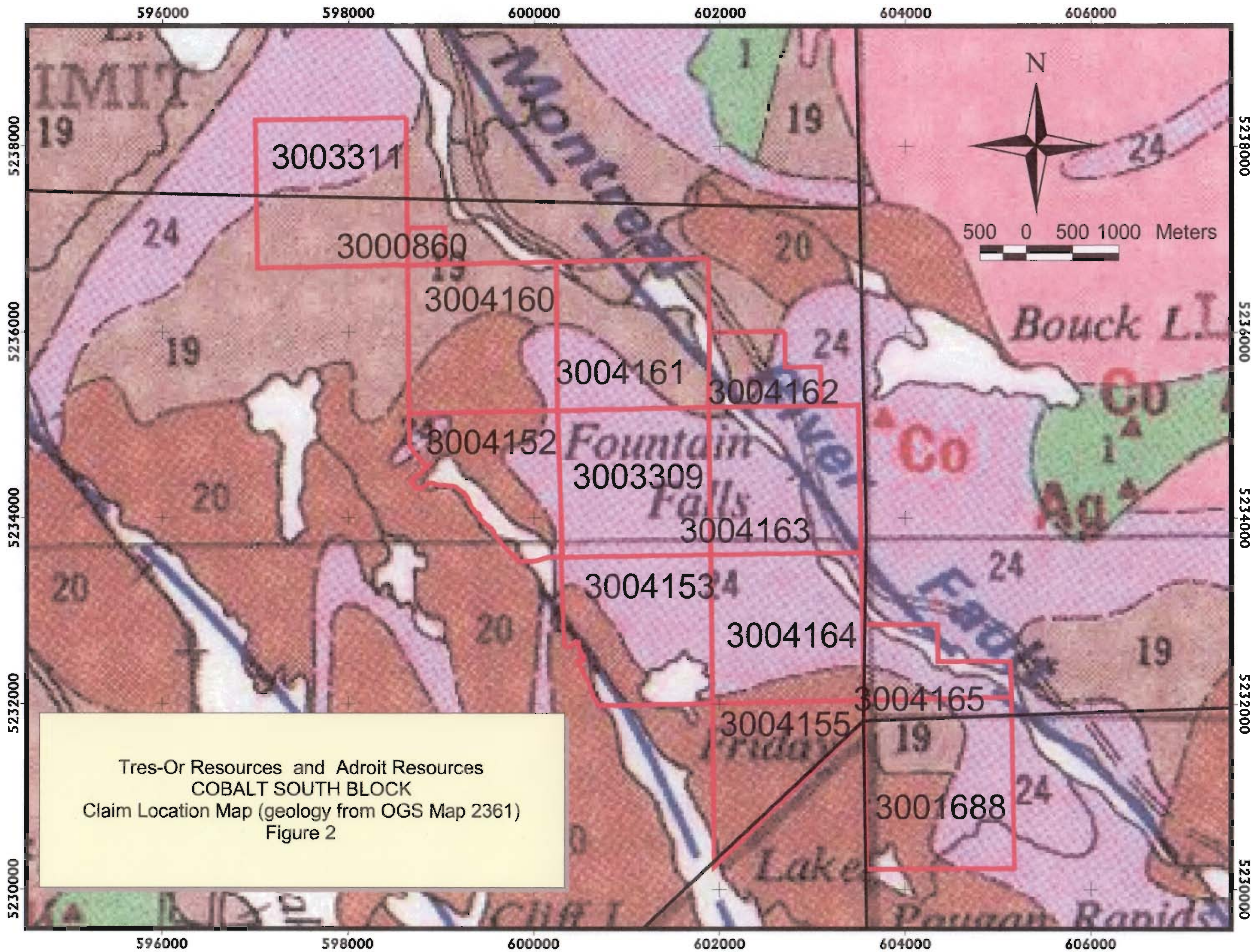
INTRODUCTION

Tres-Or Resources Ltd has an interest in 13 claims within the Larder Lake Mining Division of northeastern Ontario with the primary intent of exploring for diamondiferous kimberlites. This Cobalt South property in almost entirely in the northeast corner of Gillies Limit South Township. The property is under option to Adroit Resources.

Tres-Or's claims cover part of the Lake Timiskaming Structural Zone - an ancient, deep-seated northwest trending structure cutting the Archean Superior Craton immediately north of the Grenville Province. The Superior Craton is the largest Archean craton in the world, and has yielded some encouraging diamond exploration results recently. More than 30 kimberlite pipes and dykes are known in the Kirkland Lake and New Liskeard areas, some of which are diamondiferous. The kimberlites form a northwest-southeast trend that extends through the Adroit Resources Cobalt South block of claims.
This claim block is entirely within the Huronian sediments of the Superior Province north of the Grenville Front, which lies approximately 20 km to the south trending in a northeastern direction. There are two inliers of Superior Province Archean basement rocks 2 km to the east and one roughly 5km to the west of the claim block. OGS Compilation Map 2361 has Ag-Co and Cu-Ni mineralization indicated associated with the Archean windows. A $31,460 work program has been recommended to further explore for diamond potential and to follow up alternate types of mineralization.



Tres-Or Resources and Adroit Resources
COBALT SOUTH BLOCK
Figure 1. Claim Location Map



Tres-Or Resources and Adroit Resources
COBALT SOUTH BLOCK
Claim Location Map (geology from OGS Map 2361)
Figure 2

Regional Geology

The regional geology (Fig 2) is marked by the structural suture marking the boundary between the Grenville Province to the south and the Superior and Southern Province to the north. Rocks of the Southern Province in the area comprise the Huronian Supergroup basinal sediments including the lowermost Coleman Member (primarily conglomerate with interbedded argillites and wackes) and the overlying Firstbrook Member (finely bedded, grey to maroon coloured, shaley mudstones and siltstones with some coarser wackes) of the Gowganda Formation – the primary host of the Ag-Co veins in the historic Cobalt Camp. Overlying the Gowganda Formation are the quartzites and arenites of the Lorrain Formation.

The Nipissing gabbro is an intrusive sill undulating throughout the area. Many mineral occurrences, most notably the well-known silver-cobalt-arsenide vein deposits of the Cobalt area, the centre of which is approximately 12 km to the north, and the productive Silver Centre silver mining camp lying within 8km to the southeast, are associated with either or both the upper and lower contact of this sill.

The Superior Province is characterized by mafic and intermediate to felsic metavolcanic rocks as flows, tuffs and breccias. The Superior Province volcanic rocks are poorly exposed in the area except in small windows. A significant window of Archean basement rocks is well exposed in the Silver Centre silver mining camp, an outlying associated camp to the main Cobalt Camp. Two inliers to the east consist of northwest-trending mafic and intermediate flows bordering the western margin of the Lorrain Granite. The volcanic inlier to the southwest consists of massive mafic flows along Hwy 11 west of Rib Lake (Born et al, 1988)

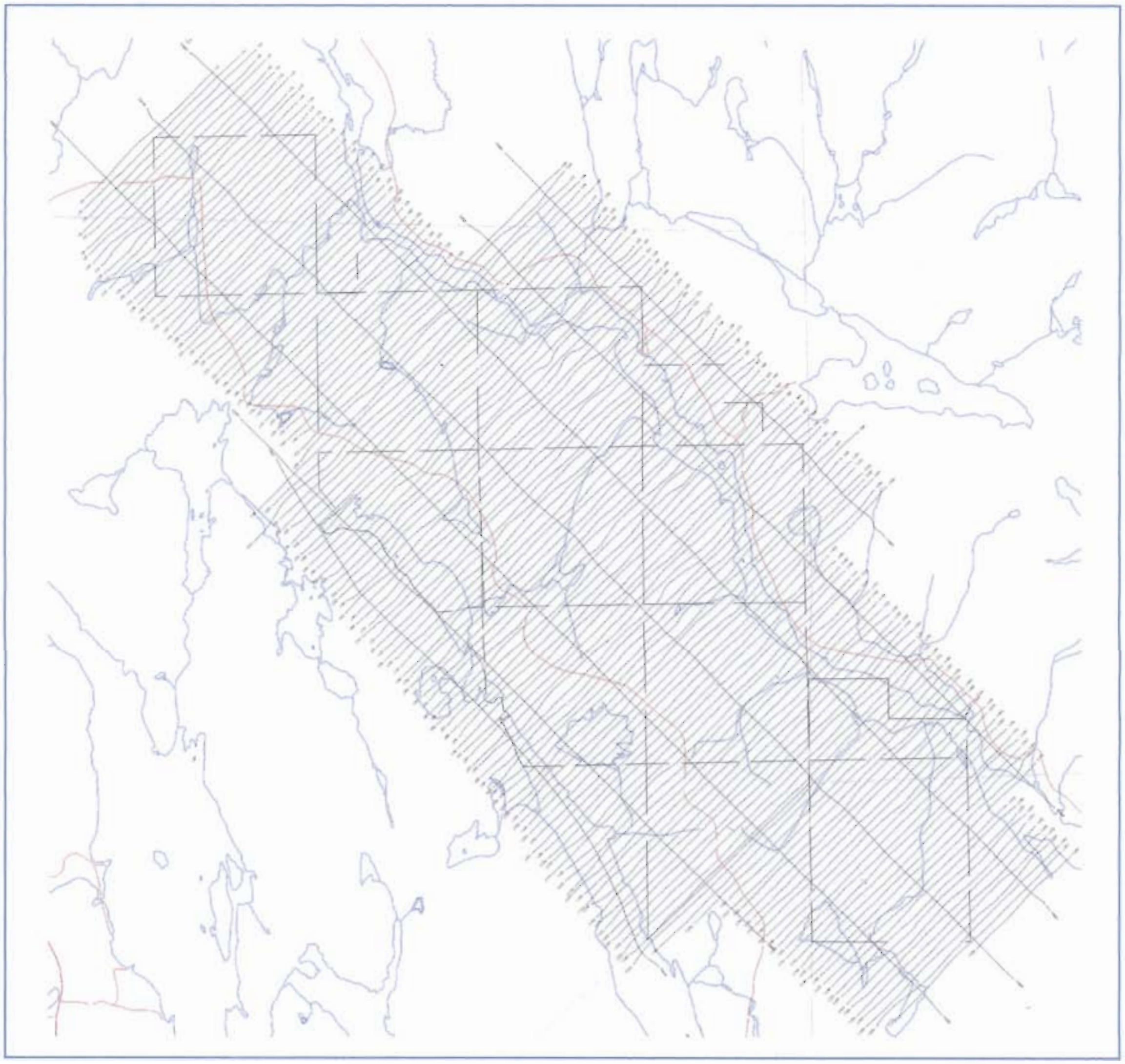
Additionally, the structure in this area is very significant. The Lake Temiskaming Structural Zone (LTSZ) or the Lake Temiskaming Rift Valley is a part of the Ottawa-Bonnechere Graben system, which joins with the St. Lawrence Graben system, all of which have been related to the opening of the Atlantic Ocean (Reid, 2002).

A number of northwest trending faults in the claim block area, the most significant of which is the Montreal River Fault, are associated with this structural zone, which, along with the Ottawa-Bonnechere Graben system, remains seismically active (Sage, 2000).

Because these structures are deep-seated, they form a major plumbing system and therefore conduits for not only kimberlite-associated rocks, but mineralizing fluids as well. This system of faults has been associated with kimberlitic and similar intrusions from Cobalt-New Liskeard through to Attawapiskat.

PROPERTY DESCRIPTION

The following figure shows the Cobalt South claim block overlain by the flight path of the AeroTEM survey.



The Cobalt South Property consists of 13 mineral claims (161 claim units) covering approximately 6400 hectares (Table 1). The claims are located in a single contiguous block recorded within Gillies Limit North, Gillies Limit South, Lorrain and South Lorrain Townships within the Larder Lake Mining Division and entirely within the Kirkland Lake Resident Geologist District of Northeastern Ontario.

Table 1. Cobalt South property claim information

Township/Area	Claim Number	Recording Date	Claim Due Date	Work Required
GILLIES LIMIT (N.)	3003311	2002-Aug-02	2005-Mar-15	$6,400
GILLIES LIMIT (S.)	3000860	2002-Aug-02	2005-Mar-15	$400
GILLIES LIMIT (S.)	3003309	2002-Aug-07	2005-Mar-15	$6,400
GILLIES LIMIT (S.)	3004152	2002-Aug-08	2005-Mar-15	$4,800
GILLIES LIMIT (S.)	3004153	2002-Aug-08	2005-Mar-15	$6,000
GILLIES LIMIT (S.)	3004155	2002-Aug-08	2005-Mar-15	$4,000
GILLIES LIMIT (S.)	3004160	2002-Aug-02	2005-Mar-15	$6,400
GILLIES LIMIT (S.)	3004161	2002-Aug-07	2005-Mar-15	$6,400
GILLIES LIMIT (S.)	3004162	2002-Aug-07	2005-Mar-15	$2,000
GILLIES LIMIT (S.)	3004163	2002-Aug-07	2005-Mar-15	$6,400
GILLIES LIMIT (S.)	3004164	2002-Aug-08	2005-Mar-15	$6,400
LORRAIN	3004165	2002-Aug-08	2005-Mar-15	$2,400
SOUTH LORRAIN	3001688	2002-Aug-08	2005-Mar-15	$6,400

Previous Work by Tres-Or Resources:

The area was previously flown at 50m-line spacing by Aeroquest Limited using their IMPULSE six frequency, electromagnetic system and high sensitivity magnetometer to measure the magnetic signature and conductivity. The entire block of claims was to have been surveyed at that time. However, failure of a support strap during the flight prevented the survey completion. Subsequent discussions with Aeroquest regarding the application of their new AEROTEM system convinced Tres-Or's consultants that the ability for the IP to detect negative decays, evident over some kimberlite bodies, was a better methodology for the detection of kimberlite. This same system has been adopted over other Tres-Or Resources claim holdings.

No other fieldwork has been completed on this claim block.

Access:

Access to the claims is fairly good. The claims east of the Montreal River are accessible by a fairly well maintained hydro road to Ragged Chutes (formerly the old street car tracks between Cobalt and Silver Centre). The majority of claims lie west of the Montreal River and are accessed on their southwestern margins by the Roosevelt Road – a loop off Hwy 11 from just north of Temagami to just south of Latchford.

POTENTIAL DEPOSIT TYPES

Following is a description of the potential deposit types in the Cobalt South claim block and the justification behind the proposed exploration program of geochemical surveys; satellite image based structural interpretation and geological mapping.

Silver-Cobalt-Arsenide Vein Deposits

Silver is the most important metal produced from the Cobalt Camp to date and occurs in steeply dipping veins and associated wallrock. The principle ore assemblage is silver-cobalt-nickel arsenides within a gangue of calcite and dolomite +/- quartz and chlorite. Native silver is the main ore mineral with a number of accessory minerals such as: sulphides, antimonides, arsenides, silicates, oxides and native minerals. The veins range in width from 1mm to 1m and crosscut Archean, Huronian and Nipissing-age rocks. The majority of the early production came from veins within the Coleman member of the Huronian sediments in Cobalt and from the Nipissing diabase sill in Gowganda. Later production extended into the Archean basement volcanic rocks.

Productive veins are both shear and dilatant in nature and many continue for great distances and depths. The ore, however, is localized in irregular shoots ranging up to 50m vertically and over 100m horizontally. These ore shoots have yet to be found more than 200m away from either the upper or lower contact of the Nipissing diabase.

Generally speaking, the ore shoots below the diabase have high-grade silver and nickel-cobalt arsenides at the top of the shoot whereas the ore shoots above the Nipissing sill have the high-grade mineralization at the bottom of the shoot (Petruk et al, 1972). The most productive areas within the veins are typically at either inflection points within the structures or at intersections of two or more structures. The Nipissing sill extends throughout the Temagami East block and warrants further investigation. Sill margins, particularly if mineralized, may be identified by the airborne magnetic survey. This survey, in conjunction with a satellite imagery lineament and structural interpretation, may be able to identify areas of higher potential for silver vein deposits.

Associated base metal sulphides are common in the Archean volcanic rocks of the area, particularly within the graphitic interflow units of schist, chert, tuff and breccia and even pillow selvages (Patterson, 1979).

Gold Deposits:

Potential gold mineralization may occur in the Lorrain quartzites as paleoplacer deposits similar to at least two showings in the Shining Tree South area, approximately 100 km to the west of Adroit Resources claim block, which have identified copper and minor gold mineralization in the Lorrain Formation. The mineralization there is hosted in a clean, pale green to pale grey, massive bedded quartz arenite and quartz pebble conglomerate. The sediments exhibit local rusty weathering with variable hematite and malachite staining. Mineralization consists of mottled zones of copper oxides (malachite and minor azurite) and hematite. Zones of finely disseminated chalcocite, chalcopyrite and bornite are present. One of these occurrences, in Browning Township, has assay results ranging from 40 to 1800 ppm Cu. Selected grab samples assayed 1.028 and 0.229% Cu (Ireland, J.C. and Zalnieriunas, R.V. 1994). The second occurrence, within 10km of the first, is in a thin unit of quartz pebble conglomerate. The unit is well mineralized with thin, discontinuous bands of pyrite-chalcopyrite and disseminated chalcopyrite, bornite and pyrite. A grab sample from this location reported 0.85% Cu, <5 ppm Co, <0.01 oz/ton Au and <0.1 oz/ton Ag. These assays came from Ministry of

Northern Development and Mines, Geoscience Laboratories in Sudbury. Because of the high quartz content, if the silica content is high enough, there could conceivably be a market for silica flux with low gold and/or copper payable content.

The Lorrain Formation rocks have been mapped on the Adroit Resources Cobalt South claim block. These rocks could, conceivably host anomalous copper and or gold concentrations. These rocks could be evaluated using conventional geological mapping emphasizing structure.

The claim block area exhibits all these structural criteria and has numerous historical and active gold prospects. Structural interpretation along with reconnaissance geochemical surveys for major elements as well as those associated with typical alteration packages may delineate prospective ground for gold and or base metal mineralization.

Recommendations

Recommendations for future work programs include detailed structural and rough vegetative anomaly interpretation from high-resolution satellite imagery (in progress).

Given the proximity of silver-cobalt mining camps and their spatial association with the contact between Nipissing diabase and Huronian sediments, geochemical sampling as well as geological mapping along these contacts and in proximity to the Montreal River Fault is appropriate. Particular attention should be paid to the eastern claims (3004165, 3004163, 3004164) due to their proximity to Archean basement rocks. Prospecting along the other contacts should also be considered. Specific targets identified with the structural analysis should be ground checked and have small MMI grids completed.

Table 2. Work Recommendations

Work description		Units of work	Cost of Work
Prospecting	Geologist	3 days @ $400/day	$ 1,200
	Geotechnician	6 days @ $300/day	$ 1,800
	Field assistant	8 days @ $200/day	$ 1,600
	Sample processing	20 samples @ $35/sample	$ 700
	Sample processing	6 samples @ $550/sample	$ 3,300
MMI	Geologist	2 days @ $400/day	$ 800
	Geotechnician	6 days @ $300/day	$ 1,800
	Field Assistant	6 days @ $200/day	$ 1,200
	Sample processing	150 samples @ $50/sample	$ 7,500
Supplies/Access	Field Supplies		$ 850
	Vehicle rentals		$ 2,400
	Gas		$ 400
Supervising	Geologist	3 days @ $400/day	$ 1,200
Report writing	Geologist	3 days @ $400	$ 1,200
	Geotechnician	2 days @ $300	$ 600
	Printing costs		$ 450
Geomatics support	Geomatics specialist	4 days @ $400	$ 1,600
Sub-total			**$28,600**
Contingency	10%		$ 2,860
TOTAL			**$31,460**

REFERENCES

Andrews, A.J. (1986): Silver Vein Deposits: Summary of Recent Research; Canadian Journal of Earth Sciences, Volume 23, pages 1459-1462.

Born, P. and Hitch, M.W. 1990. Precambrian Geology, Bay Lake Area; Ontario Geological Survey, Report 276, 81p. (including OGS Maps 2551 and 2552)

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Patterson, G.C. 1979. Metallogenic Relationships of Base-Metal Occurrences in the Cobalt Area; p.222-229 *in* Summary of Field Work, 1979; Ontario Geological Survey Miscellaneous Paper 90, 245p. *edited by* Milne, V.G., White, O.L., Barlow, R.B. and Kustra, C.R.

Statement of Qualification

To accompany the report entitled: Airborne Geophysics Exploration Assessment Report on Tres-Or Resources and Adroit Resources Inc Cobalt South Property; Gillies Limit, Lorrain and South Lorrain Townships, Larder Lake Mining District for Tres-Or Resources Ltd and Adroit Resources Inc, May 5, 2005.

I, Elaine Baša, of the city of Haileybury, in the Province of Ontario, Canada, hereby certify as follows concerning my report on the Tres-Or resources Ltd.'s Cobalt South property, Ontario, 2004:

1. I graduated from Carleton University in 1985 with a degree of Bachelor of Science, Honours Geology.
2. I am a Professional Geologist and a member of Professional Geoscientists of Ontario (member number 0895).
3. I have worked continuously in the mining industry for the past 19 years.
4. I am acting as a consulting geologist for Tres-Or Resources Ltd.
5. The attached report is a product of:
   a) data provided to me by the property owner
   b) reports identified in the reference section of this report
   c) local knowledge obtained through work in the region
6. I do not have any direct or indirect interest in the property, nor do I own any shares of Tres-Or Resources Ltd.

Dated this 5th day of May, 2005 in Haileybury, Ontario

Elaine Baša

Elaine Baša, P.Geo.

STATEMENT OF QUALIFICATIONS

I, Laura Lee Duffett, Professional Geoscientist, with a business address at 1934-131 Street, South Surrey, B.C. V4A 7R7 Canada certify that:

1. I am a graduate of Carleton University, Ottawa, Ontario, Canada with a Bachelor of Science degree in Geology given November 7th 1982 in Ottawa, ON.

2. I am a registered Professional Geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia (Registration # 19722) given November 7, 1992, Vancouver, B.C.

3. I am a Fellow of the Geological Association of Canada (# F7547) given February 28, 2001.

4. I have practiced my profession for eighteen years.

5. I have based my interpretation, recommendations and conclusions on direct participation in data collection and supervision of the project. I have reviewed numerous reports and papers and presented talks on diamond exploration and general geology. I have reviewed numerous work reports and assessment reports on diamond exploration in the area.

6. I have visited the properties in August and September 2002.

7. I am the President and a Director of Tres-Or Resources Ltd. and hold stock and options to purchase shares in the Company.

Signed:

PROFESSIO[illegible]

Laura Lee M.A. Duffett, P.Geo.

May 6, 2005

APPENDIX I

Report on a Helicopter-Borne AeroTEM II Electromagnetic and Magnetic Survey
by Aeroquest Limited

Report on a Helicopter-Borne AeroTEM© II Electromagnetic and Magnetic Survey

Aeroquest Job # 04008
Cobalt South Project
Cobalt South Area, Ontario
31 M/04,05

for

Tres-OR Resources Ltd.
1934 131st Street
White Rock, BC
V4A 7R7
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by

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March, 2005

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Report on a Helicopter-Borne AeroTEM© Electromagnetic and Magnetic Survey

Cobalt South Property
Cobalt Area, Ontario

1. INTRODUCTION

This report describes a helicopter-borne geophysical survey carried out on behalf of Tres-OR Resources Ltd. (Tres-OR) on the Cobalt South Project, in the Cobalt Area of Ontario.

The principal geophysical sensor is Aeroquest's exclusive AeroTEM© II time domain helicopter electromagnetic system which is employed in conjunction with a high-sensitivity cesium vapour magnetometer. Ancillary equipment includes a real-time differential GPS navigation system, radar altimeter, video recorder, and a base station magnetometer. Full-waveform streaming EM data is recorded at 37,800 samples per second. The streaming data comprise the transmitted waveform, and the X component and Z component of the resultant field at the receivers. A secondary acquisition system (RMS) records the ancillary data.

The total line kilometres flown on the Cobalt South Project is 637.2 Km. The survey flying described in this report took place between January 3 and January 6, 2005.

This report describes the survey logistics, the data processing, presentation, and provides a brief interpretation of the results.

2. SURVEY AREA

The Cobalt South Property is located approximately 15 kilometers south of the town of Cobalt. The property is accessed via an all-weather road which extends south from Cobalt along the Montreal River. The property is centred at 47° 15' N latitude, 79° 40' W longitude.

The survey area is located on NTS 1:50,000 map sheets 31M/04,05. Appendix 1 provides a tabulation of the UTM corner co-ordinates for the survey area. Figure 2 depicts the survey block relative to the local topography and infrastructure. The topographic information also appears on the maps that accompany this report.

The survey crew was accommodated at the Quality Inn in New Liskeard and the helicopter was based at the Inn. The magnetic base station was positioned in a magnetically quiet area just to the south of the Inn.

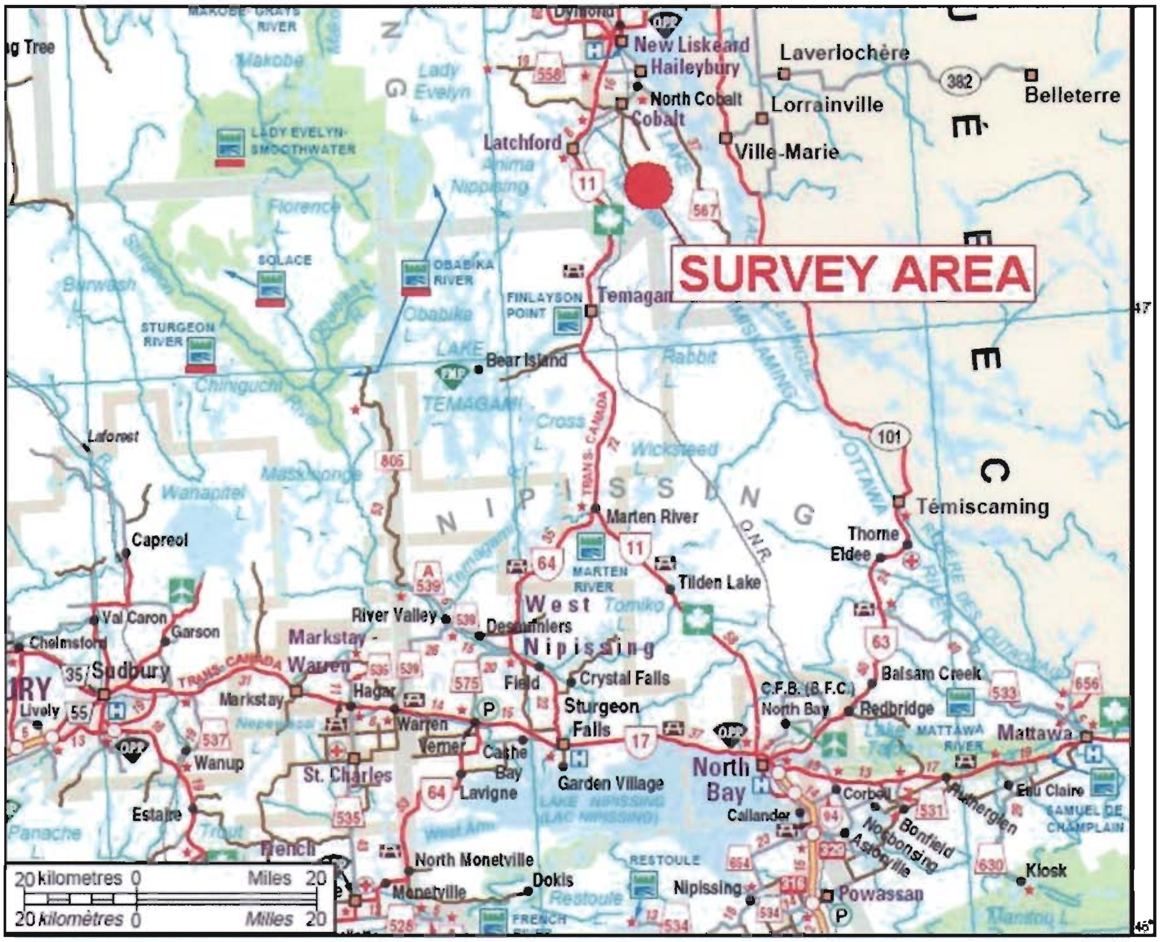


Figure 1: Regional Location Map

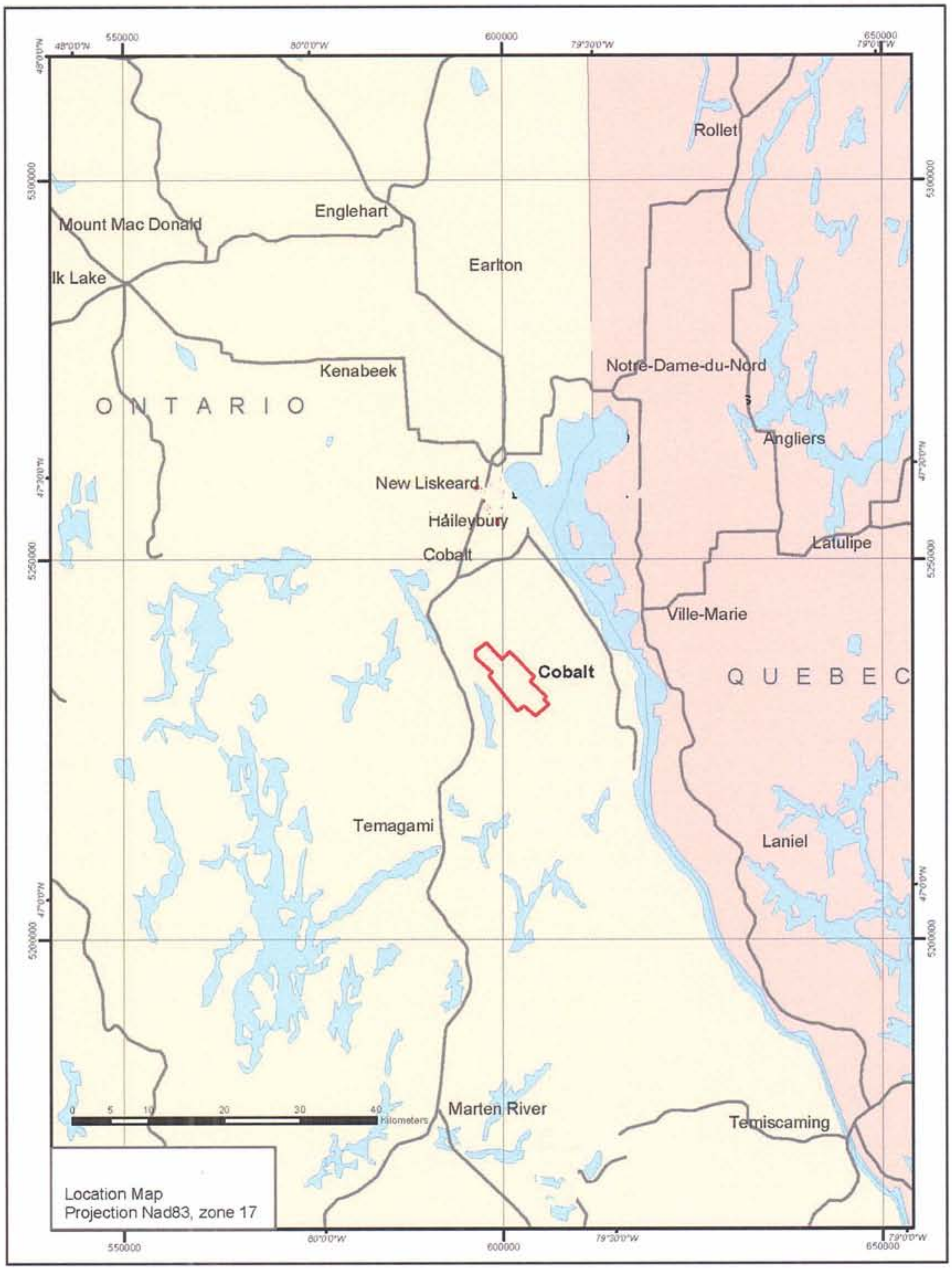


Figure 2: Cobalt South Property

3. SURVEY SPECIFICATIONS AND PROCEDURES

The survey specifications are summarised in the following table:

Area Name	Line Spacing (m)	Line Direction	Survey Coverage (line-km)	Dates Flown (2004)
Cobalt South Project	75	SW-NE	637.2	Jan. 3-6

The kilometres flown is calculated by adding up the survey and control (tie) line lengths as presented in the final Geosoft database. All the survey lines were flown with an azimuth of 045° relative to the UTM grid north-south direction. The control (tie) lines were flown perpendicular to the survey lines.

The nominal EM bird terrain clearance is 30m (98 ft) although this was not always achievable where the topography was rugged or where there were tall trees. The magnetometer sensor is mounted in a smaller bird connected to the tow rope 21 metres above the EM bird and 17 metres below the helicopter. Nominal survey speed is 75 km/hr. Scan rates for ancillary data acquisition is 0.1 second for the magnetometer and altimeter, and 0.2 second for the GPS determined position. The EM data is acquired as a data stream at a sampling rate of 38,400 samples per second and is processed to generate final data at 10 samples per second. The 10 samples per second translates to a geophysical reading about every 2-3 metres along the flight path.

Navigation is carried out using a GPS receiver, an AGNAV2 system for navigation control, and an RMS data acquisition system which records the GPS coordinates. The x-y-z position of the aircraft, as reported by the GPS, is recorded at 0.2 second intervals.

Unlike frequency domain electromagnetic systems, the AeroTEM© II system has negligible drift due to thermal expansion. The system static offset is removed by high altitude zero calibration lines and employing local leveling corrections where necessary.

The operator is responsible for ensuring the instrument is properly warmed up prior to departure and that the instruments are operated properly throughout the flight. He also maintains a detailed flight log during the survey noting the times of the flight and any unusual geophysical or topographic features.

On return of the pilot and operator to the base usually after each flight, the ProtoDAS streaming EM data and the RMS data are carried on removable hard drives and FlashCards, respectively and transferred to the data processing work station. At the end of each day, the base station magnetometer data on FlashCard is retrieved from the base station unit.

Data verification and quality control includes a comparison of the acquired GPS data with the flight plan; verification and conversion of the RMS data to an ASCII format XYZ data file; verification of the base station magnetometer data and conversion to ASCII format XYZ data; and loading, processing and conversion of the steaming EM data from the removable hard drive. All data is then merged to an ASCII XYZ format file which is then imported to an Oasis database for further QA/QC and for the production of preliminary EM, magnetic contour, and flight path maps.

Survey lines which show excessive deviation from the intended flight path are re-flown. Any line or portion of a line on which the data quality did not meet the contract specification was noted and reflown.

4. AIRCRAFT AND EQUIPMENT

4.1 Aircraft

A Eurocopter (Aerospatiale) AS350B2 "A-Star" helicopter - registration C-FBTW was used as survey platform. The helicopter was owned and operated by Gateway Helicopters Limited, Sudbury, Ontario. Installation of the geophysical and ancillary equipment was carried out by AeroQuest Limited in Timmins at the Gateway hangar. The survey aircraft was flown at a nominal terrain clearance of 220 ft (70 m).

Figure 3: The magnetometer bird (foreground) and AeroTEM II EM bird

4.2 Magnetometer

The AeroQuest airborne survey system employs the Geometrics G-823A cesium vapour magnetometer sensor installed in a two metre towed bird airfoil attached to the main tow line, 17 metres below the helicopter. The sensitivity of the magnetometer is 0.001 nanoTesla at a 0.1 second sampling rate. The nominal ground clearance of the magnetometer bird is 51 metres (170 ft.). The magnetic data is recorded at 10Hz by the RMS DGR-33.

4.3 Electromagnetic System

The electromagnetic system is an AeroQuest AeroTEM© II time domain towed-bird system. The current AeroTEM© transmitter dipole moment is 38.8 kNIA. The AeroTEM© bird is towed 38 m (125 ft) below the helicopter. More technical details of the system may be found in Appendix 4.

The wave-form is triangular with a symmetric transmitter on-time pulse of 1.150 ms and a base frequency of 150 Hz. The current alternates polarity every on-time pulse. During every Tx on-off cycle (300 per second), 126 contiguous channels of raw x and z component (and a transmitter current monitor, itx) of the received waveform are measured. Each channel width is 26.455 microseconds starting at the beginning of the transmitter pulse. This 126 channel data is referred to as the raw streaming data. The AeroTEM© system has two separate EM data recording streams, the conventional RMS DGR-33 and the PROTODAS system which records the full waveform.

Figure 4: AeroTEM II Instrument Rack

PROTODAS Acquisition System

The 126 channels of raw streaming data are recorded by the PROTODAS acquisition system onto a removable hard drive. The streaming data are processed post-survey to yield 33 stacked and binned on-time and off-time channels at a 10 Hz sample rate. The timing of the final processed EM channels is described in the following table:

Channel	Width	Gate	Start (μs)	Stop (μs)	Mid (μs)	Width (μs)
1 ON	1	26	687.8	714.3	701.1	26.46
2 ON	1	27	714.3	740.7	727.5	26.46
3 ON	1	28	740.7	767.2	754.0	26.46
4 ON	1	29	767.2	793.7	780.4	26.46
5 ON	1	30	793.7	820.1	806.9	26.46
6 ON	1	31	820.1	846.6	833.3	26.46
7 ON	1	32	846.6	873.0	859.8	26.46
8 ON	1	33	873.0	899.5	886.2	26.46
9 ON	1	34	899.5	925.9	912.7	26.46
10 ON	1	35	925.9	952.4	939.2	26.46
11 ON	1	36	952.4	978.8	965.6	26.46
12 ON	1	37	978.8	1005.3	992.1	26.46
13 ON	1	38	1005.3	1031.7	1018.5	26.46
14 ON	1	39	1031.7	1058.2	1045.0	26.46
15 ON	1	40	1058.2	1084.7	1071.4	26.46
16 ON	1	41	1084.7	1111.1	1097.9	26.46
0 OFF	1	44	1164.0	1190.5	1177.2	26.46
1 OFF	1	45	1190.5	1216.9	1203.7	26.46
2 OFF	1	46	1216.9	1243.4	1230.2	26.46
3 OFF	1	47	1243.4	1269.8	1256.6	26.46
4 OFF	1	48	1269.8	1296.3	1283.1	26.46
5 OFF	1	49	1296.3	1322.8	1309.5	26.46
6 OFF	1	50	1322.8	1349.2	1336.0	26.46
7 OFF	1	51	1349.2	1375.7	1362.4	26.46
8 OFF	1	52	1375.7	1402.1	1388.9	26.46
9 OFF	1	53	1402.1	1428.6	1415.3	26.46
10 OFF	1	54	1428.6	1455.0	1441.8	26.46
11 OFF	1	55	1455.0	1481.5	1468.3	26.46
12 OFF	1	56	1481.5	1507.9	1494.7	26.46
13 OFF	4	57	1507.9	1613.8	1560.8	105.82
14 OFF	8	61	1613.8	1825.4	1719.6	211.64
15 OFF	16	69	1825.4	2248.7	2037.0	423.28
16 OFF	32	85	2248.7	3095.2	2672.0	846.56

RMS DGR-33 Acquisition System

In addition to the magnetics, altimeter and position data, six channels of real time processed off-time EM decay in the Z direction and one in the X direction are recorded by the RMS DGR-33 acquisition system at 10 samples per second and plotted real-time on the analogue chart recorder. These channels are derived by a binning, stacking and filtering procedure on the raw streaming data. The primary use of the RMS EM data (Z1 to Z6, X1) is to provide for real-time QA/QC on board the aircraft.

The channel window timing of the RMS DGR-33 6 channel system is described in the table below.

RMS Channel	Start time (microsec)	End time (microsec)	Width (microsec)	Streaming Channels	Noise tolerance
Z1, X1	1269.8	1322.8	52.9	48-50	20 ppb
Z2	1322.8	1455.0	132.2	50-54	20 ppb
Z3	1428.6	1587.3	158.7	54-59	15 ppb
Z4	1587.3	1746.0	158.7	60-65	15 ppb
Z5	1746.0	2063.5	317.5	66-77	10 ppb
Z6	2063.5	2698.4	634.9	78-101	10 ppb

4.4 Ancillary Systems

Magnetometer and GPS Base Station

An integrated GPS and magnetometer base station is set up to monitor the static position GPS errors to permit differential post-processing and to record the diurnal variations of the Earth's magnetic field. Each sensor, GPS and magnetic, receiver/signal processor was attached to a dedicated laptop computer for purposes of instrument control and/or data display and recording. The laptops are, in turn, linked together to provide a common recording time reference using the GPS clock.

The base magnetometer was a Gem Systems GSM-19 overhauser magnetometer coupled with a Picodas MEP-710 frequency counter/decoupler. Data logging and magnetometer control was provided by the Picodas *basemag.exe* software. The logging was configured to measure at 1.0 second intervals. Digital recording resolution was 0.1 nT. The sensor was placed on a tripod away from potential noise sources near the camp. A continuously updated profile plot of the base station values is available for viewing on the base station display.

The GPS base station employed a Leica Mx9212 12 channel GPS receiver with external antenna mounted near the magnetometer sensor. Although the GPS receiver was controlled by the Picodas *cdu510.exe* software, logging was not engaged as the aircraft employed a real-time differential GPS receiver. The base GPS was used only for the GPS clock for synchronization purposes.

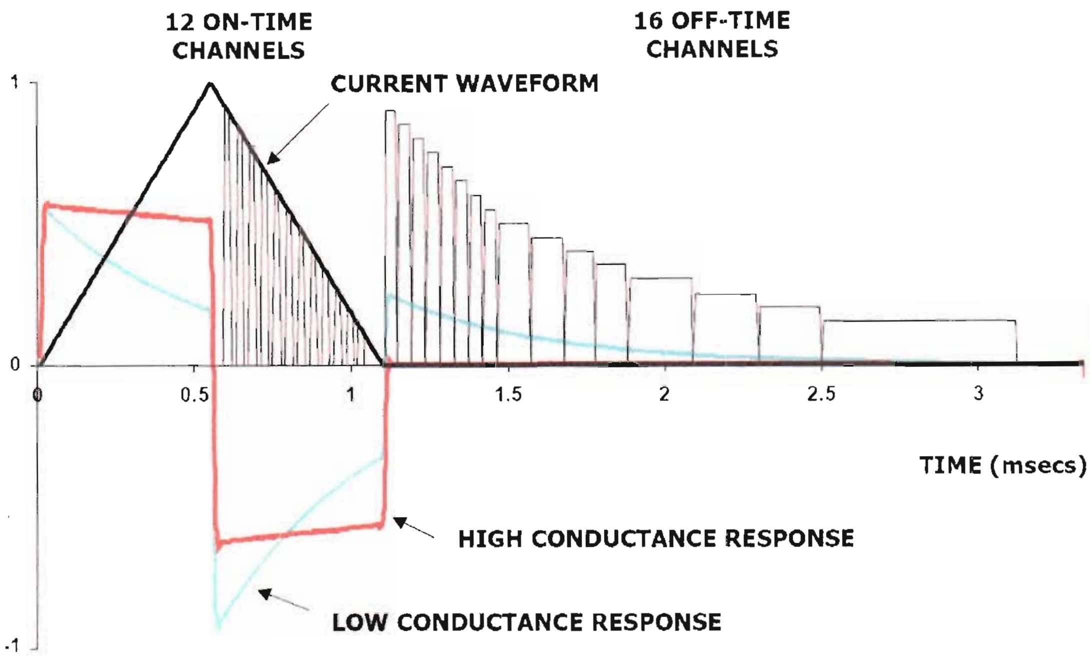


Figure 5: Schematic of Transmitter and Receiver waveforms

Radar Altimeter

A Terra TRA 3500/TRI-30 radar altimeter is used to record terrain clearance. The antenna was mounted on the outside of the helicopter beneath the cockpit. The recorded data represents the height of the antenna, i.e. helicopter, above the ground. The Terra altimeter has an altitude accuracy of +/- 1.5 metres.

Video Tracking and Recording System

A high resolution colour VHS/8mm video camera is used to record the helicopter ground flight path along the survey lines. The video is digitally annotated with GPS position and time and can be used to verify ground positioning information and cultural causes of anomalous geophysical responses.

GPS Navigation System

The navigation system consists of an Ag-Nav Incorporated AG-NAV2 GPS navigation system comprising a PC-based acquisition system, navigation software, a deviation indicator in front of the aircraft pilot to direct the flight, a full screen display with controls in front of the operator, a Mid-Tech RX400p WAAS-enabled GPS receiver mounted on the instrument rack and an antenna mounted on the magnetometer bird. WAAS (Wide Area Augmentation System) consists of approximately 25 ground reference stations positioned across the United States that monitor GPS satellite data. Two master stations, located on the east and west coasts, collect data from the reference stations and create a GPS correction message. This correction accounts for GPS satellite orbit and clock drift plus signal delays caused by the atmosphere and ionosphere. The corrected differential message is then broadcast through one of two geostationary satellites, or satellites with a fixed position over the equator. The corrected position has a published accuracy of under

3 metres. A recent static ground test of the Mid-Tech WAAS GPS yielded a standard deviation in x and y of under 0.6 metres and for z under 1.5 metres over a two-hour period.

Survey co-ordinates are set up prior to the survey and the information is fed into the airborne navigation system. The co-ordinate system employed in the survey design was WGS84 [World] using the UTM zone 18N projection. The real-time differentially corrected GPS positional data was recorded by the RMS DGR-33 in geodetic coordinates (latitude and longitude using WGS84) at 0.2 second intervals.

Digital Acquisition System
The AeroTEM© received waveform sampled during on and off-time at 126 channels per decay, 300 times per second, was logged by the proprietary PROTODAS data acquisition system. The channel sampling commences at the start of the Tx cycle and the width of each channel is 26.445 microseconds. The streaming data was recorded on a removable hard-drive and was later backed-up onto DVD-ROM from the field-processing computer.

The RMS Instruments DGR33A data acquisition system was used to collect and record the analogue data stream, i.e. the positional and secondary geophysical data, including processed 6 channel EM, magnetics, radar altimeter, GPS position, and time. The data was recorded on 128Mb capacity FlashCard. The RMS output was also directed to a thermal chart recorder.

5. PERSONNEL

The following AeroQuest personnel were involved in the project:

- Manager of Operations: Bert Simon
- Field Data Processors: Rory Kutluoglu
- Field Operators: Victor Shevchenko
- Data Interpretation and Reporting: Jonathan Rudd

The survey pilot, Bruno Prieur, was employed directly by the helicopter operator – Gateway Helicopters Ltd.

6. DELIVERABLES

The report includes a set of three geophysical maps plotted at a scale of 1:20,000. The maps are described as follows:

- Map 1: Colour contoured Total Magnetic Field with EM anomalies
- Map 2: EM Plan Profiles, Z4, Z8 & Z12 off-time profiles with EM anomalies
- Map 3: Flight Path with EM anomalies

The coordinate/projection system for the maps is NAD83 Canada Mean Universal Transverse Mercator Zone 17 north. For reference, the latitude and longitude in NAD83 are also noted on the maps. All the maps show flight path trace, skeletal topography, and any conductor picks represented by an anomaly symbol classified according to calculated off-time conductance. Any anomaly symbols are accompanied by postings denoting the calculated on-time and off-time conductance, an anomaly identifier label, and the number of off-time channels responding. The anomaly symbol legend is given in the margin of the maps. Colour contour maps show colour fill plus superimposed line contours.

The geophysical profile data is archived digitally in a Geosoft GDB binary format database. The database contains the processed streaming data, the RMS data, the base station data, and all processed channels. A description of the contents of the individual channels in the database can be found in Appendix 2. This digital data is archived at the Aeroquest head office in Milton.

7. DATA PROCESSING AND PRESENTATION

All in-field and post-field data processing was carried out using Aeroquest proprietary data processing software, and Geosoft Oasis montaj software. Maps were generated using 36-inch wide Hewlett Packard ink-jet plotters.

7.1 Base Map

The geophysical maps accompanying this report are based on positioning in the datum of NAD83 Canada Mean. The survey geodetic GPS positions have been projected using the Universal Transverse Mercator projection in Zone 17 North. A summary of the map datum and projection specifications are as follows:

- Ellipse: Clark 1866
- Ellipse major axis: 6378137m eccentricity: 0.081819191
- Datum: North American 1983
- Datum Shifts (x,y,z) : 0, 0, 0 metres
- Map Projection: Universal Transverse Mercator Zone 17 (Central Meridian 81°W)
- Central Scale Factor: 0.9996
- False Easting, Northing: 500,000m, 0m

The skeletal topography was derived from the Federal Government's 1: 50,000 NTS map series.

7.2 Flight Path & Terrain Clearance

The position of the survey helicopter was directed by use of the Global Positioning System (GPS). Positions were updated five times per second (5Hz) and expressed as WGS84 latitude and longitude calculated from the raw pseudo range derived from the C/A code signal. The instantaneous GPS flight path, after conversion to UTM co-ordinates, is drawn using linear interpolation between the x/y positions. The raw Digital Terrain Model (DTM) was derived by taking the satellite position altitude and subtracting the radar altimeter. The calculated values are relative and are not tied in to surveyed geodetic heights.

7.3 Electromagnetic Data

The raw streaming data, sampled at a rate of 38,400 Hz (126 channels, 300 times per second) was reprocessed using a proprietary software algorithm developed and owned by Aeroquest Limited. Processing involves the compensation of the X and Z component data for the primary field waveform. Coefficients for this compensation for the system transient are determined and applied to the stream data. The stream data are then pre-filtered, stacked, binned to the 33 on and off-time channels and checked for the effectiveness of the compensation and stacking processes. The stacked data is then filtered, leveled and split up into the individual line segments. Further base level adjustments may be carried out at this stage.

The filtering of the stacked data is designed to remove or minimize high frequency noise that can not be sourced from the geology. An overburden stripped response was generated by subtracting the off-time response from the on-time response for the X1 to X16 and Z1 to Z16 channels. New RMS emulation channel windows, Z1New to Z6New and X1New, were calculated based on the original 6 z-component and 1 x-component channels that the AeroTEM I system recorded in order to provide for compatibility and comparisons with earlier AeroTEM surveys.

No EM anomalies were identified from the survey results. However, where applicable, the picked EM anomalies plotted on the survey maps are hand interpreted with the aid of an automated pick of the stream data. Apparent bedrock EM anomalies are auto-picked from positive peak excursions in the off-time Z channel responses. These auto-picked anomalies were then reviewed and edited by a geophysicist to discriminate between bedrock and conductive overburden responses.

The auto-pick algorithm is based on two criteria, 1) a minimum ZOff0 threshold of 2.5 nT/s and 2) a peak in ZOff0 channel as defined by two leading values that are increasing, and two trailing values that are decreasing. At each conductor pick, estimates of the on-time and off-time conductance have been generated based on a threshold of 5.0 nT/s on and 2.5 nT/s off. The number of off-time channels of response (from channels ZOff0-ZOff15) above the threshold is also noted.

In addition, a conductance (COND) value has been calculated based on a horizontal plate source model for those data points along the line where the response amplitude is sufficient to yield an acceptable estimate. The conductance is computed on the off-time channels unless the on-time channels are of sufficient amplitude. The on-time data are used in this case because the on-time data provide a more accurate measure of the conductance of high-conductance sources.

The final processing step was to merge the processed EM data with the other data sets into a Geosoft GDB file. The EM fiducial is used to synchronize the two datasets. The processed channels are labeled in the "streaming" database as Zon1 to Zon16, Zoff0 to Zoff16, Xon1 to Xon16, and Xoff0 to Xoff16. The overburden stripped channels are labeled Z1obr to Z16obr and X1obr to X16obr. The original RMS data (channels Z1RMS to Z6RMS, and X1RMS) have been converted from ppm to nT/s and are included in the final database. In the database the processed AeroTEM EM channels are expressed as nT/s. To convert to parts per billion (ppb), multiply by 6.96.

Each conductor pick has been given an identification letter label and has also been classified according to a set of seven ranges of calculated off-time conductance values. The anomalies were then plotted on the plan maps with one of seven symbols reflecting that classification level. The maximum possible number of off-time channels is 16 given the last channel of the 17 measured is not included.

During the high elevation checks, an internal 5 second wide calibration pulse in all EM channels was generated in order to ensure that the gain of the system remained constant and within specifications.

7.4 Magnetic Data

Prior to any leveling the magnetic data was subjected to a lag correction of -0.1 seconds and a spike removal filter. The filtered aeromagnetic data were then corrected for diurnal variations using the magnetic base station and the intersections of the tie lines. No corrections for the regional reference field (IGRF) were applied. The corrected profile data were interpolated on to a grid using a random grid technique with a grid cell size of 20 metres. The final leveled grid provided the basis for threading the presented contours which have a minimum contour interval of 20 nT.

8. RESULTS AND INTERPRETATION

The survey was successful in mapping the magnetic properties of the geology throughout the survey area. The magnetic data provide a high resolution map of the distribution of the magnetic minerals in the survey area. The sources for anomalous magnetic responses are generally thought to be predominantly magnetite because of the relative abundance and strength of response (high magnetic susceptibility) of magnetite over other magnetic minerals such as pyrrhotite.

The magnetic data is dominated by a large oblate magnetic high which occurs in the southwest portion of the survey area. Several narrow linear highs trending northwest are interpreted to reflect diabase dykes. Some of these dykes appear to exploit lineaments interpreted to trend north northwest. These dykes may add to the structural understanding of the area.

The EM data is generally devoid of any response from any conductive sources or any significant accumulation of conductive overburden. Very subtle early (channel 0, off time) channel Z component responses do reflect thicker accumulations of sediment over some of the lakes and rivers. The response decays rapidly indicating a very low conductance typical of overburden of this type. The lack of an accompanying x-component response confirms the source as flat-lying.

The AeroTEM II system penetrates to depths of up to 250m for large conductive bedrock sources. There are no discrete conductive bedrock sources identified in the data from this survey.

The AeroTEM system has a proven track record for the identification and delineation of kimberlite pipes. The system responds with a normal positive decay to the conductive properties of the altered mineralization often found in the near-surface in weathered pipes. In some cases the system responds to a combination of low conductance and a weak to moderate chargeability (IP response) in the source. The second combination produces an interesting negative decay. The lack of any EM response in this survey area, however, does not preclude the presence of kimberlite sources. The magnetic data should be used as the primary guide for the identification of prospective targets.

Respectfully submitted,

Jonathan Rudd, P.Eng.
Aeroquest Limited
March, 2005

APPENDIX 1 – Claim and Survey Boundary Information

Survey Corner Coordinates (UTM Zone 17 – NAD83)

597856.0	5239082.0
599931.0	5236915.0
600930.0	5237944.0
604203.0	5234625.0
603665.0	5234010.0
605740.0	5231951.0
605448.0	5231551.0
606093.0	5230921.0
604326.0	5229446.0
602820.0	5230752.0
601913.0	5230091.0
598225.0	5234686.0
598609.0	5235255.0
596442.0	5237145.0
596411.0	5237990.0

APPENDIX 2 - Description of Database Fields

The GDB file is a Geosoft binary database. In the database, the Survey lines, Tie Lines, and High Altitude/Internal Q coil lines are prefixed with an "L" or "Line", "T" or "Tie", and "S" or "Test", respectively.

Database (04028_Tres-OR_Montaclm_final.*gdb*):

Column	Units	Description
x	m	UTM Easting (NAD27, zone 18N)
y	m	UTM Northing (NAD27, zone 18N)
emfid		PROTODAS Fiducial
bheight	m	Terrain clearance of EM bird
dtm	m	Digital Terrain Model
magf	nT	Final leveled total magnetic intensity
magbase	nT	Base station total magnetic intensity
ZOff17-ZOff22	nT/s	Reconstructed RMS Z channels
XOff17-XOff22	nT/s	Reconstructed RMS X channels
ZOn1-ZOn16	nT/s	Processed Streaming On-Time Z component Channels 1-16
ZOff0-ZOff16	nT/s	Processed Streaming Off-Time Z component Channels 0-16
XOn1-XOn16	nT/s	Processed Streaming On-Time X component Channels 1-16
XOff0-XOff16	nT/s	Processed Streaming Off-Time X component Channels 0-16
ZObr1-ZObr16	nT/s	Overburden stripped Z component response Channels 1-16
XObr1-XObr16	nT/s	Overburden stripped X component response Channels 1-16
anum		Index number of conductor pick
anomlabel		Letter label of conductor pick
nchan		No of off-time (or on-time) channels with response over 2.5 nT/s
on_con	S	On-time conductance
off_con	S	Off-time conductance
grade		Classification from 1-7 based on conductance of conductor pick
cond	S	Off-time (or on-time) conductance

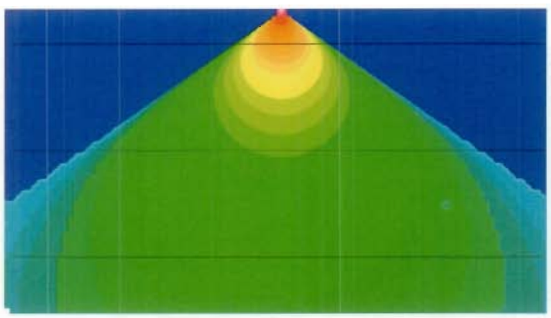
APPENDIX 3: Aeroquest Limited – AeroTEM Design Considerations

Design Considerations

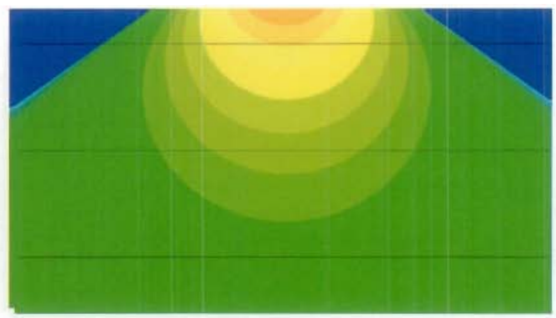
Helicopter-borne EM systems offer an advantage that cannot be matched from a fixed-wing platform. The ability to fly at a slower speed and collect data with high spatial resolution, and with great accuracy, means that helicopter EM systems provide more detail than any other EM configuration, airborne or ground-based. Spatial resolution is especially important in areas of complex geology and in the search for discrete conductors. With the advent of helicopter-borne high-moment time domain EM systems the fixed-wing platforms are losing their *only* advantage – depth penetration.

Advantage 1 – Spatial Resolution

The AeroTEM system is specifically designed to have a small footprint. This is accomplished through the use of concentric transmitter-receiver coils and a relatively small diameter transmitter coil (5 m). The result is a highly focused exploration footprint, which allows for more accurate "mapping" of discrete conductors. Consider the transmitter primary field images shown in Figure 1, for AeroTEM versus a fixed-wing transmitter.



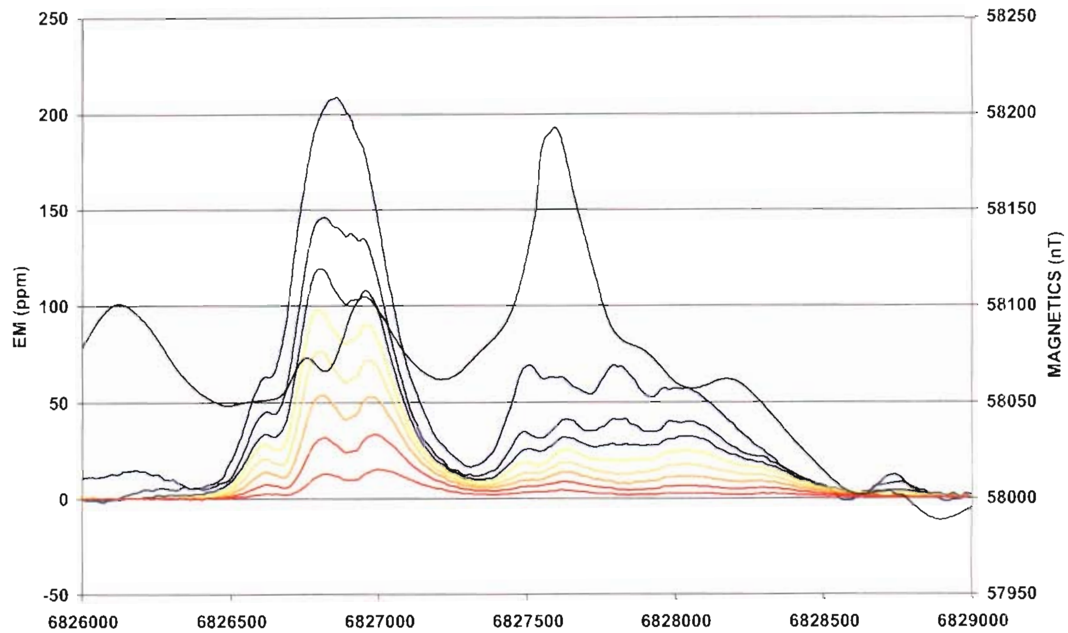
The footprint of AeroTEM at the earth's surface is roughly 50 m on either side of transmitter.



The footprint of a fixed-wing system is roughly 150 m on either side of the transmitter.

Figure 1. A comparison of the footprint between AeroTEM and a fixed-wing system, highlights the greater resolution that is achievable with a transmitter located closer to the earth's surface. The AeroTEM footprint is one third that of a fixed-wing system and is symmetric, while the fixed-wing system has even lower spatial resolution along the flight line because of the separated transmitter and receiver configuration.

At first glance one may want to believe that a transmitter footprint that is distributed more evenly over a larger area is of benefit in mineral exploration. In fact, the opposite is true; by energizing a larger surface area, the ability to energize and detect discrete conductors is reduced. Consider, for example, a comparison between AeroTEM and a fixed-wing system over the Mesamax Deposit (1,450,000 tonnes of 2.1% Ni, 2.7% Cu, 5.2 g/t Pt/Pd). In a test survey over three flight lines spaced 100 m apart, AeroTEM detected the Deposit on all three flight lines. The fixed-wing system detected the Deposit only on two flight lines. In exploration programs that seek to expand the flight line spacing in an effort to reduce the cost of the airborne survey, discrete conductors such as the Mesamax Deposit can go undetected. The argument often put forward in favor of using fixed-wing systems is that because of their larger footprint, the flight line spacing can indeed be widened. Many fixed-wing surveys are flown at 200 m or 400 m. Much of the survey work performed by Aeroquest has been to survey in areas that were previously flown at these wider line spacings. One of the reasons for AeroTEM's impressive discovery record has been the strategy of flying closely spaced lines and finding all the discrete near-surface conductors. These higher resolution surveys are being flown within existing mining camps, areas that improve the chances of discovery.



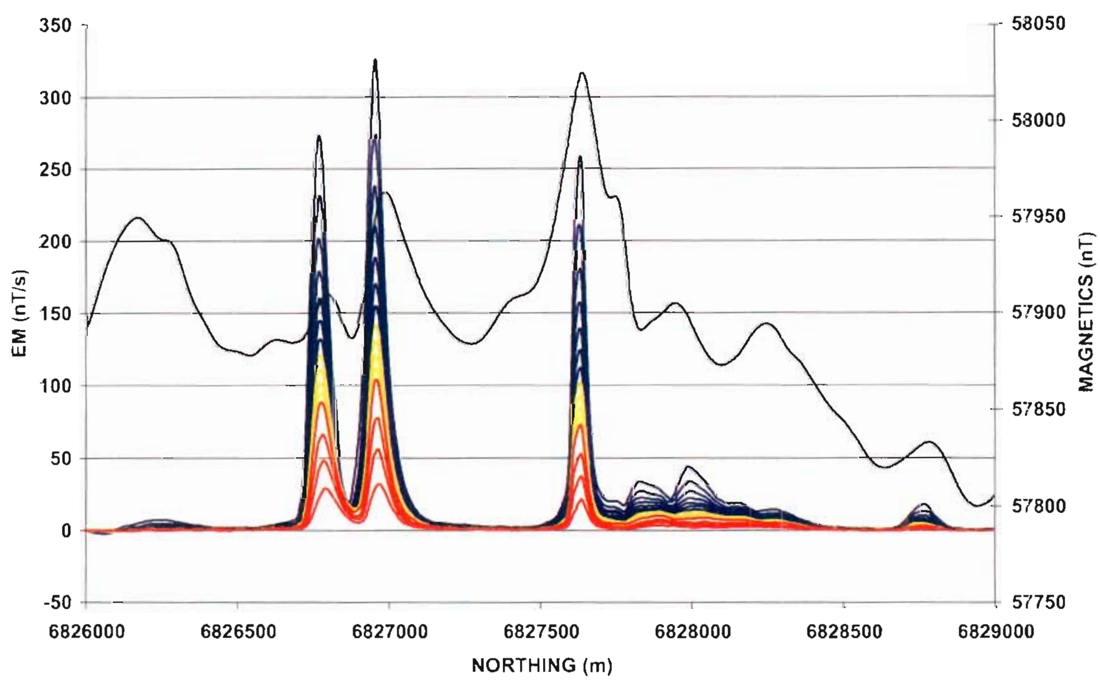


Figure 2. Fixed-wing (upper) and AeroTEM (lower) comparison over the eastern limit of the Mesamax Deposit, a Ni-Cu-PGE zone located in the Raglan nickel belt and owned by Canadian Royalties. Both systems detected the Deposit further to the west where it is closer to surface.

The small footprint of AeroTEM combined with the high signal to noise ratio (S/N) makes the system more suitable to surveying in areas where local infrastructure produces electromagnetic noise, such as power lines and railways. In 2002 Aeroquest flew four exploration properties in the Sudbury Basin that were under option by FNX Mining Company Inc. from Inco Limited. One such property, the Victoria Property, contained three major power line corridors.

The resulting AeroTEM survey identified all the known zones of Ni-Cu-PGE mineralization, and detected a response between two of the major power line corridors but in an area of favorable geology. Three boreholes were drilled to test the anomaly, and all three intersected sulphide. The third borehole encountered 1.3% Ni, 6.7% Cu, and 13.3 g/t TPMs over 42.3 ft. The mineralization was subsequently named the Powerline Deposit.

The success of AeroTEM in Sudbury highlights the advantage of having a system with a small footprint, but also one with a high S/N. This latter advantage is achieved through a combination of a high-moment (high signal) transmitter and a rigid geometry (low noise). Figure 3 shows the Powerline Deposit response and the response from the power line corridor at full scale. The width of power line response is less than 75 m.

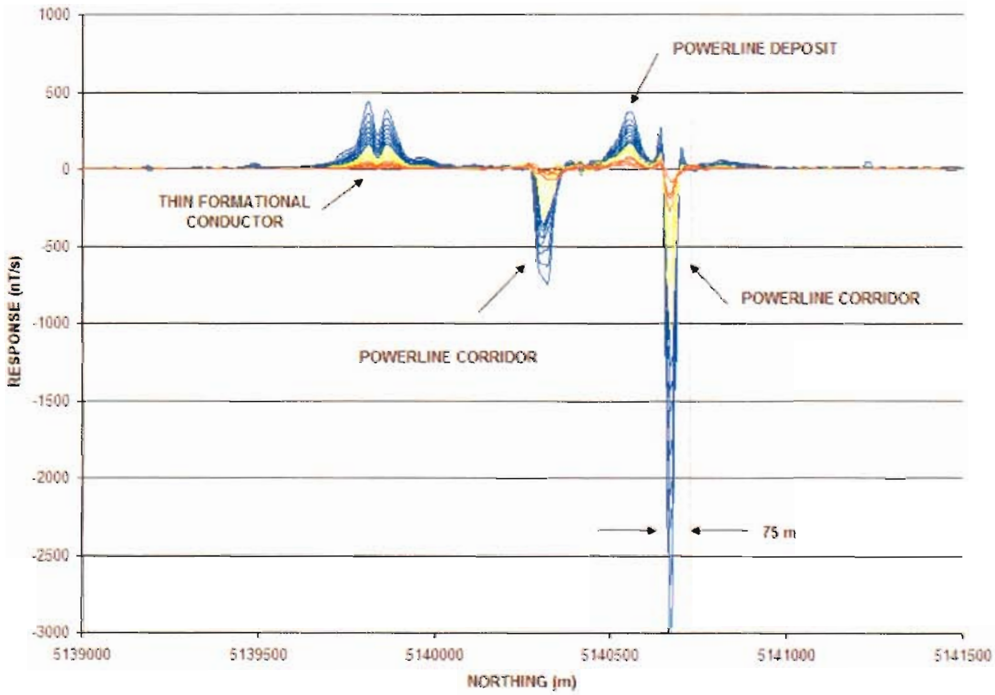


Figure 3. The Powerline Deposit is located between two major power line corridors, which make EM surveying problematic. Despite the strong response from the power line, the anomaly from the Deposit is clearly detected. Note the thin formational conductor located to the south. The only way to distinguish this response from that of two closely spaced conductors is by interpreting the X-axis coil response.

Advantage 2 – Conductance Discrimination

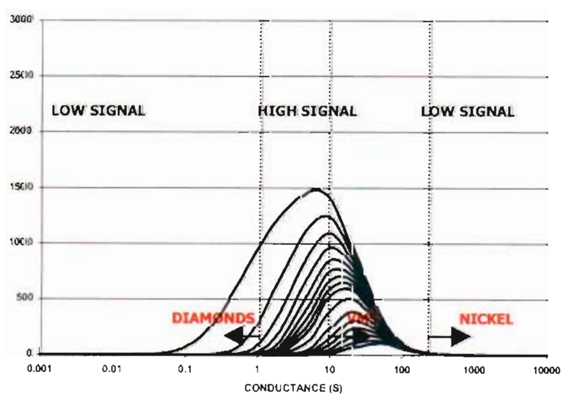
The AeroTEM system features full waveform recording and as such is able to measure the on-time response due to high conductance targets. Due to the processing method (primary field removal), there is attenuation of the response with increasing conductance, but the AeroTEM on-time measurement is still superior to systems that rely on lower base frequencies to detect high conductance targets, but do not measure in the on-time.

The peak response of a conductive target to an EM system is a function of the target conductance and the EM system base frequency. For time domain EM systems that measure only in the off-time, there is a drop in the peak response of a target as the base frequency is lowered for all conductance values below the peak system response. For example, the AeroTEM peak response occurs for a 10 S conductor in the early off-time and 100 S in the late off-time for a 150 Hz base frequency. Because base frequency and conductance form a linear relationship when considering the peak response of any EM system, a drop in base frequency of 50% will double the conductance at which an EM system shows its peak response. If the base frequency were lowered from 150 Hz to 30 Hz there would be a fivefold increase in conductance at which the peak response of an EM occurred.

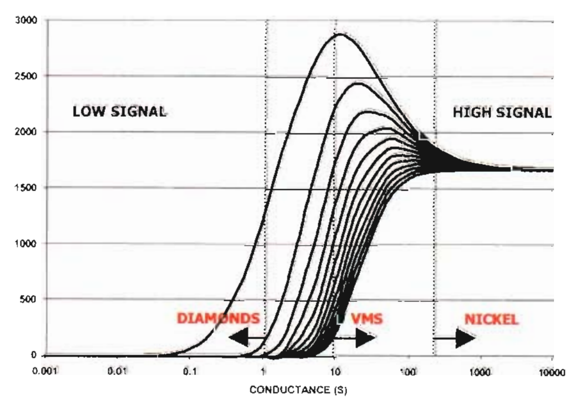
However, in the search for highly conductive targets, such as pyrrhotite-related Ni-Cu-PGM deposits, a fivefold increase in conductance range is a high price to pay because the signal level to lower conductance targets is reduced by the same factor of five. For this reason, EM systems that operate with low base frequencies are not suitable for general exploration unless the target conductance is more than 100 S, or the target is covered by conductive overburden.

Despite the excellent progress that has been made in modeling software over the past two decades, there has been little work done on determining the optimum form of an EM system for mineral exploration. For example, the optimum configuration in terms of geometry, base frequency and so remain unknown. Many geophysicists would argue that there is no single ideal configuration, and that each system has its advantages and disadvantages. We disagree.

When it comes to detecting and discriminating high-conductance targets, it is necessary to measure the pure in-phase response of the target conductor. This measurement requires that the measured primary field from the transmitter be subtracted from the total measured response such that the secondary field from the target conductor can be determined. Because this secondary field is in-phase with the transmitter primary field, it must be made while the transmitter is turned on and the transmitter current is changing. The transmitted primary field is several orders of magnitude larger than the secondary field. AeroTEM uses a bucking coil to reduce the primary field at the receiver coils. The only practical way of removing the primary field is to maintain a rigid geometry between the transmitter, bucking and receiver coils. This is the main design consideration of the AeroTEM airframe and it is the only time domain airborne system to have this configuration.



The off-time AeroTEM response for the 16 channel configuration.



The on-time response assuming 100% removal of the measured primary field.

Figure 4. The off-time and on-time response nomogram of AeroTEM for a base frequency of 150 Hz. The on-time response is much stronger for higher conductance targets and this is why on-time measurements are more important than lower frequencies when considering high conductance targets in a resistive environment.

Advantage 3 – Multiple Receiver Coils

AeroTEM employs two receiver coil orientations. The Z-axis coil is oriented parallel to the transmitter coil and both are horizontal to the ground. This is known as a maximum coupled configuration and is optimal for detection. The X-axis coil is oriented at right angles to the transmitter coil and is oriented along the line-of-flight. This is known as a minimum coupled configuration, and provides information on conductor orientation and thickness. These two coil configurations combined provide important information on the position, orientation, depth, and thickness of a conductor that cannot be matched by the traditional geometries of the HEM or fixed-wing systems. The responses are free from a system geometric effect and can be easily compared to model type curves in most cases. In other words, AeroTEM data is very easy to interpret. Consider, for example, the following modeled profile:

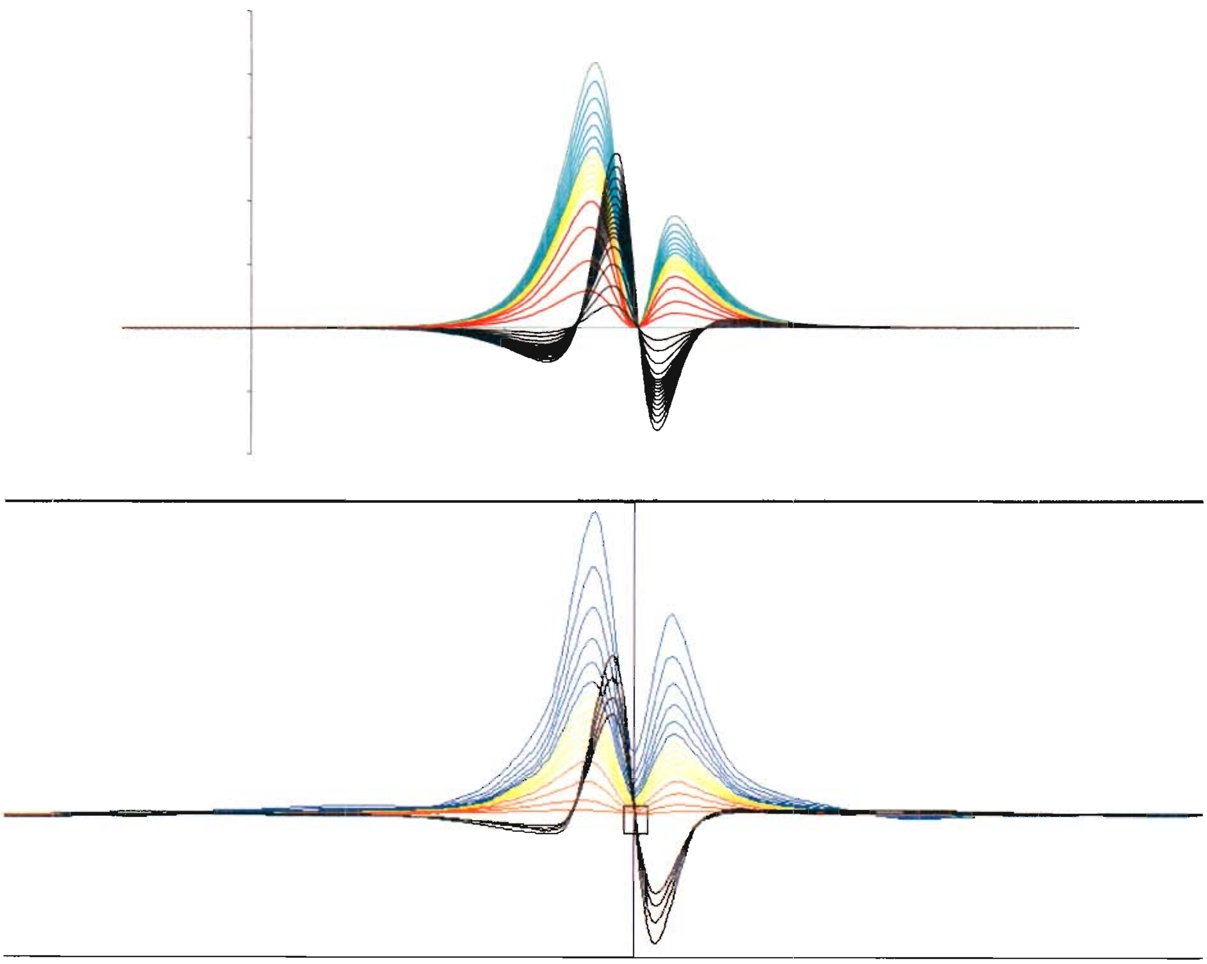


Figure 5. Measured (lower) and modeled (upper) AeroTEM responses are compared for a thin steeply dipping conductor. The response is characterized by two peaks in the Z-axis coil, and a cross-over in the X-axis coil that is centered between the two Z-axis peaks. The conductor dips toward the higher amplitude Z-axis peak. Using the X-axis cross-over is the only way of differentiating the Z-axis response from being two closely spaced conductors.

HEM versus AeroTEM

Traditional helicopter EM systems operate in the frequency domain and benefit from the fact that they use narrow-band as opposed to wide-band transmitters. Thus all of the energy from the transmitter is concentrated in a few discrete frequencies. This allows the systems to achieve excellent depth penetration (up to 100 m) from a transmitter of modest power. The Aeroquest Impulse system is one implementation of this technology.

The AeroTEM system uses a wide-band transmitter and delivers more power over a wide frequency range. This frequency range is then captured into 16 time channels, the early channels containing the high frequency information and the late time channels containing the low frequency information down to the system base frequency. Because frequency domain HEM systems employ two coil configurations (coplanar and coaxial) there are only a maximum of three comparable frequencies per configuration, compared to 16 AeroTEM off-time and 12 AeroTEM on-time channels.

Figure 6 shows a comparison between the Dighem HEM system (900 Hz and 7200 Hz coplanar) and AeroTEM (Z-axis) from surveys flown in Raglan, in search of highly conductive Ni-Cu-PGM sulphide. In general, the AeroTEM peaks are sharper and better defined, in part due to the greater S/N ratio of the AeroTEM system over HEM, and also due to the modestly filtered AeroTEM data compared to HEM. The base levels are also better defined in the AeroTEM data. AeroTEM filtering is limited to spike removal and a 5-point smoothing filter. Clients are also given copies of the raw, unfiltered data.

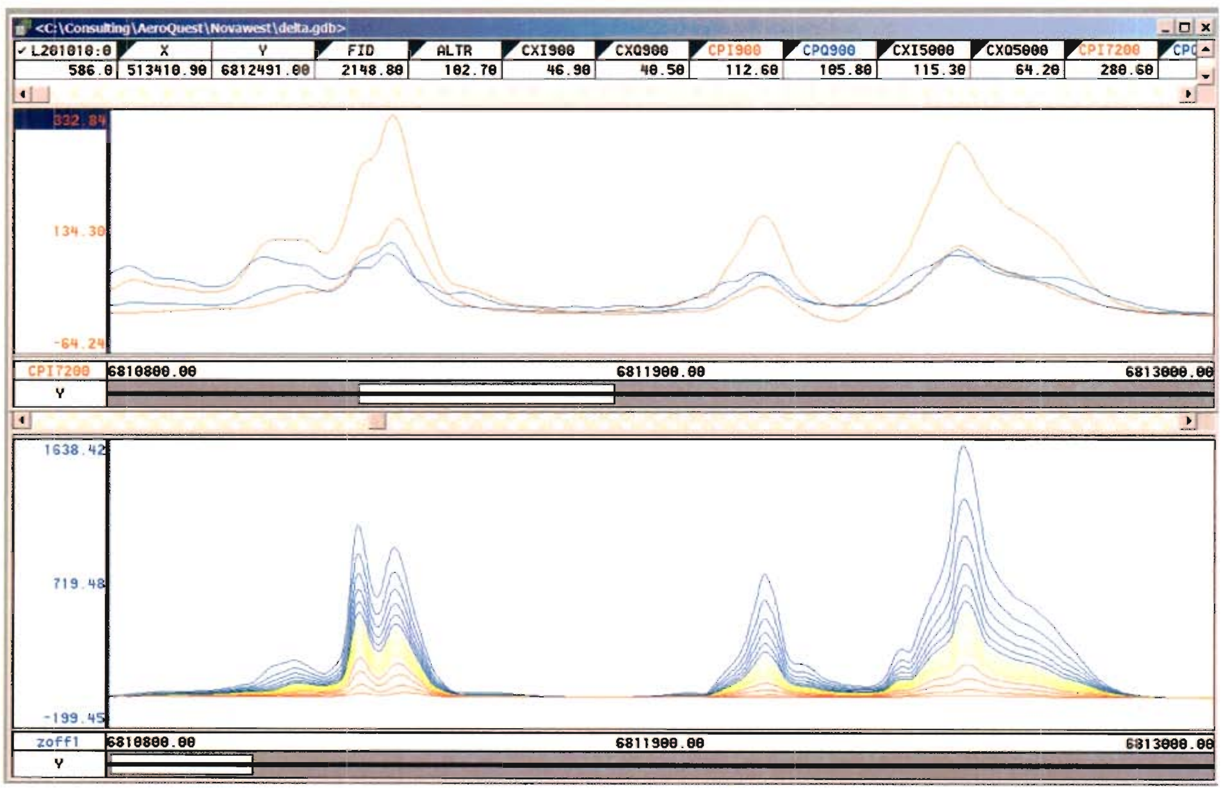


Figure 6. Comparison between Dighem HEM (upper) and AeroTEM (lower) surveys flown in the Raglan area. The AeroTEM responses appear to be more discrete, suggesting that the data is not as heavily filtered as the HEM data. The S/N advantage of AeroTEM over HEM is about 5:1.

Aeroquest Limited is grateful to the following companies for permission to publish some of the data from their respective surveys: Wolfden Resources, FNX Mining Company Inc, Canadian Royalties, Nova West Resources, Aurogin Resources, Spectrem Air. Permission does not imply an endorsement of the AeroTEM system by these companies.

APPENDIX 4: AeroTEM Instrumentation Specification Sheet

AEROQUEST LIMITED

Tel: +1 905 878-5616. Fax: +1 905 876-0193. Email: sales@aeroquestsurveys.com

AEROTEM Helicopter Electromagnetic System

System Characteristics

- Transmitter: Triangular Pulse Shape Base Frequency 30 or 150 Hz
- Tx On Time - 5,750 (30Hz) or 1,150 (150Hz) μs
- Tx Off Time - 10,915 (30Hz) or 2,183 (150Hz) μs
- Loop Diameter - 5 m
- Peak Current - 250 A
- Peak Moment - 38,800 NIA
- Typical Z Axis Noise at Survey Speed = 8 ppb peak
- Sling Weight: 270 Kg
- Length of Tow Cable: 40 m
- Bird Survey Height: 30 m or less nominal

Receiver

- Three Axis Receiver Coils (x, y, z) positioned at centre of transmitter loop
- Selectable Time Delay to start of first channel 21.3 , 42.7, or 64.0 ms

Display & Acquisition

- PROTODAS Digital recording at 126 samples per decay curve at a maximum of 300 curves per second (26.455 μs channel width)
- RMS Channel Widths: 52.9,132.3, 158.7, 158.7, 317.5, 634.9 μs
- Recording & Display Rate = 10 readings per second.
- On-board display - six channels Z-component and 1 X-component

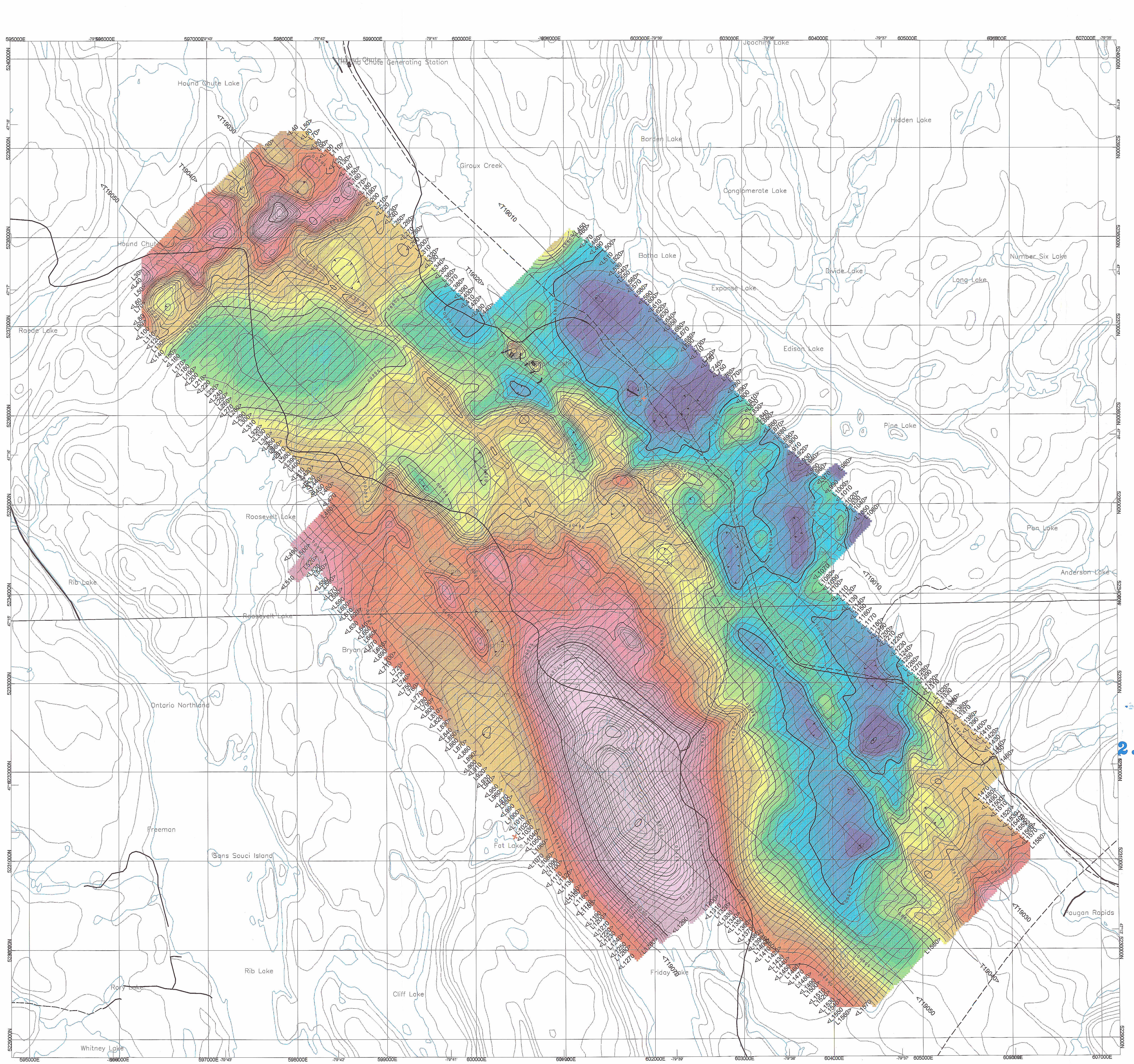
System Considerations

Comparing a fixed-wing time domain transmitter with a typical moment of 500,000 NIA flying at an altitude of 120 m with a Helicopter TDEM at 30 m, notwithstanding the substantial moment loss in the airframe of the fixed wing, the same penetration by the lower flying helicopter system would only require a sixty-fourth of the moment. Clearly the AeroTEM system with nearly 40,000 NIA has more than sufficient moment. The airframe of the fixed wing presents a response to the towed bird, which requires dynamic compensation. This problem is non-existent for AeroTEM since transmitter and receiver positions are fixed. The AeroTEM system is completely portable, and can be assembled at the survey site within half a day.

APPENDIX 5: Statement of Qualifications

Jonathan Rudd, P.Eng.

1. I am a full-time employee of Aeroquest Limited, based in Milton, Ontario, Canada.
2. My residence is at 54 Alona Avenue, Cambridge, Ontario, N3C 3Y4.
3. I graduated with an honours B.Sc.E. in Geological Engineering in Geophysics, 1988, from Queen's University, Kingston, ON.
4. I have been practicing continuously as an exploration geophysicist for 16 years.
5. I am a registered as a Professional Engineer and am entitled to engage in the practice of professional engineering in the province of Ontario under the terms of the Professional Engineers Act, Revised Statutes of Ontario, 1990, Chapter p 28 .
6. Non-professional affiliations : Society of Exploration Geophysicists, Prospectors and Developers Association of Canada, Sudbury Prospectors and Developers Association, Sudbury Geological Discussion Group, Ontario Prospectors Association
7. I directly supervised the airborne geophysical work as described in this report.



Auto-Picked Off-Time Anomaly Symbols

>50S ....
35-50S ....
20-35S ....
10-20S ....
5-10S ....
1-5S ....
<1S ....

anomaly label A 16 # of off-time channels responding (1-16)
on-time conductance (S) 75 20 off-time conductance (S)

SURVEY SPECIFICATIONS:
Survey flown: January 3-6, 2005
Traverse line spacing: 75 metres
Traverse line direction: SW-NE
Nominal EM bird height: 35 metres
Aircraft: Aerospatiale Astar 350BA (C-FBTW)

INSTRUMENTATION:
Data acquisition: PROTODAS & RMS DGR-33
Magnetometer: Geometrics G-823A cesium vapour
Installation: Towed bird 21 m above EM bird
Sensitivity: .001 nanoTesla
Electromagnetics: AeroTEM II System
Configuration: Towed bird

NAVIGATION:
Navigation: Global Differential Positioning System (DGPS)
Navigation equipment: MID-TECH RX400p WAAS-enabled DGPS
Radar Altimeter: Terra TRA3000/TRI-40

DATA PROCESSING
Magnetics: diurnal and micro-leveling corrections

POSITIONING
Datum: NAD83
Major Axis: 6378137.000
Eccentricity: 0.08181919104

MAP PROJECTION
Projection: Universal Transverse Mercator
Central Meridian: 81°W (Zone 17)
Central Scale Factor: 0.9996
False Easting/Northing: 500,000m/0m

2.30116

Contour interval: 20 nT

scale 1:20,000

250 0 250 500 750 1000 1250 1500
metres
WGS 84 / UTM zone 17N

Tres-OR Resources Limited
Cobalt South Diamond Project

TOTAL MAGNETIC INTENSITY
Cobalt South Property

NTS 31M/04,05

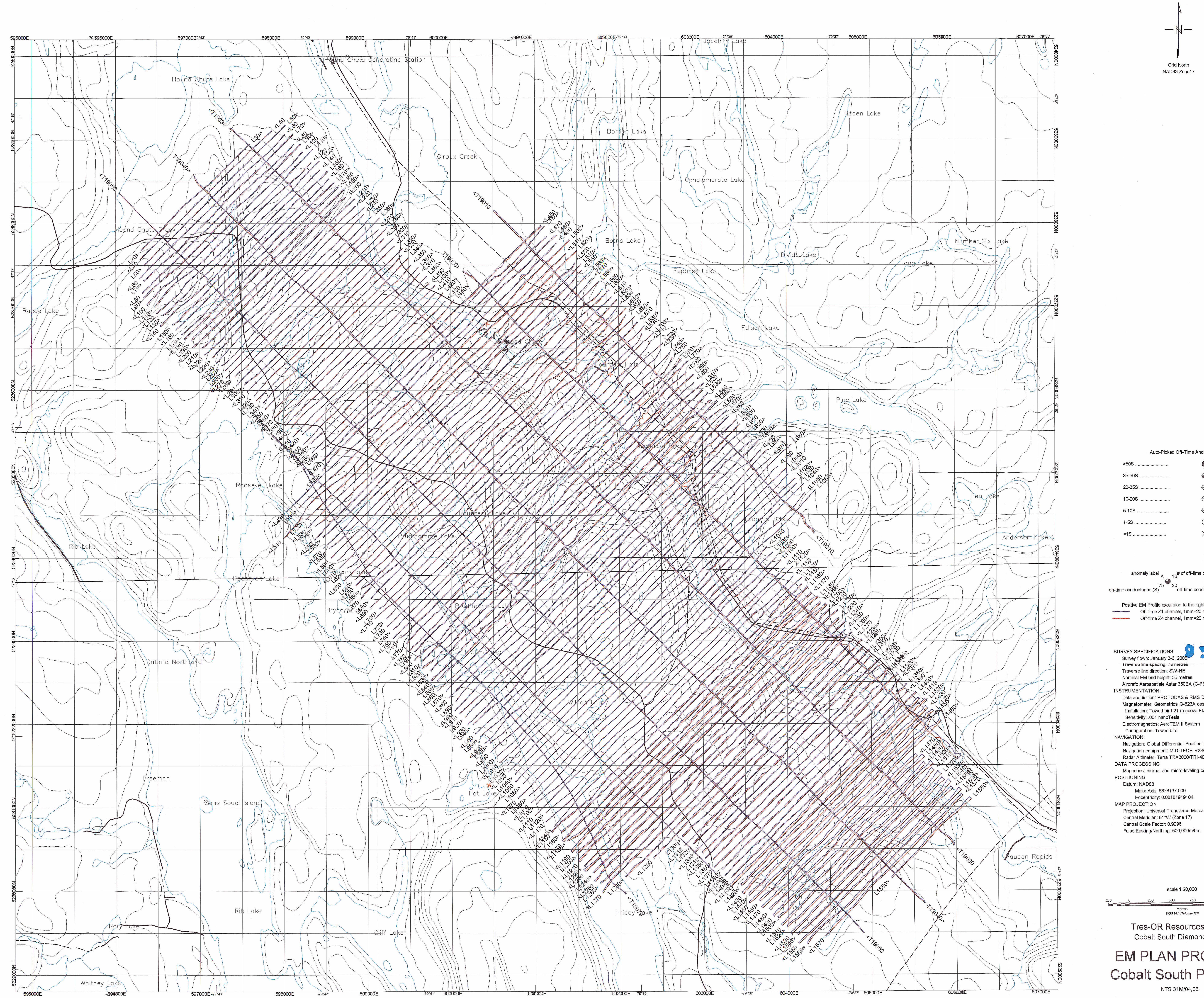
Survey flown by:

AEROQUEST LIMITED
4-845 Main St. East
Milton, Ont., CANADA L9T 3Z3
Tel: (905) 693-9129 Fax: (905) 693-9128
www.aeroquestsurveys.com

January, 2005

Map 1

Mag_20k_CobaltS/Rev 1.0



Auto-Picked Off-Time Anomaly Symbols

>50S
35-50S
20-35S
10-20S
5-10S
1-5S
<1S

anomaly label A, 16 # of off-time channels responding (1-16)
75 on-time conductance (S), 20 off-time conductance (S)

Positive EM Profile excursion to the right and top
Off-time Z1 channel, 1mm=20 nT/sec
Off-time Z4 channel, 1mm=20 nT/sec

2.301:6

SURVEY SPECIFICATIONS:
- Survey flown: January 3-6, 2005
- Traverse line spacing: 75 metres
- Traverse line direction: SW-NE
- Nominal EM bird height: 35 metres
- Aircraft: Aerospatiale Astar 350BA (C-FBTW)

INSTRUMENTATION:
- Data acquisition: PROTODAS & RMS DGR-33
- Magnetometer: Geometrics G-823A cesium vapour
  - Installation: Towed bird 21 m above EM bird
  - Sensitivity: .001 nanoTesla
- Electromagnetics: AeroTEM II System
  - Configuration: Towed bird

NAVIGATION:
- Navigation: Global Differential Positioning System (DGPS)
- Navigation equipment: MID-TECH RX400p WAAS-enabled DGPS
- Radar Altimeter: Terra TRA3000/TRI-40

DATA PROCESSING
- Magnetics: diurnal and micro-leveling corrections

POSITIONING
- Datum: NAD83
  - Major Axis: 6378137.000
  - Eccentricity: 0.08181919104

MAP PROJECTION
- Projection: Universal Transverse Mercator
- Central Meridian: 81°W (Zone 17)
- Central Scale Factor: 0.9996
- False Easting/Northing: 500,000m/0m

scale 1:20,000

250 0 250 500 750 1000 1250 1500
metres
WGS 84 / UTM zone 17N

Tres-OR Resources Limited
Cobalt South Diamond Project

EM PLAN PROFILES
Cobalt South Property

NTS 31M/04,05

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January, 2005

Map 2

EMplan_20k_CobaltS/Rev 1.0