Report on a Helicopter-Borne AeroTEM© II Electromagnetic & Magnetometer Survey

Aeroquest Job # 04028

Montcalm Project

Timmins Area, Ontario
42B/09

for

Falconbridge Limited
PO Bag 2002
Hwy. 655 North
Kidd Creek Minesite
Timmins, Ontario, P4N 7K1

by

AEROQUEST LIMITED

4-845 Main Street East
Milton, Ontario, L9T 3Z3
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www.aeroquestsurveys.com

November, 2004

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AeroTEM© Electromagnetic and Magnetic Survey

Montcalm Property
Timmins Area, Ontario

1. INTRODUCTION

This report describes a helicopter-borne geophysical survey carried out on behalf of Falconbridge Limited (Falconbridge) on the Montcalm Project, in the Timmins 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 Montcalm Project is 746.6 Km. The total line kilometres flown over claim blocks is totaled at 603.7 Km The survey flying described in this report took place between November 9 and November 12, 2004.

Bedrock EM anomalies were auto-picked from the Z-component off-time data and graded according to the off-time conductance. This report describes the survey logistics, the data processing, presentation, and provides a brief interpretation of the results.

2. SURVEY AREA

The Montcalm Property is located in Montcalm Township approximately 91 kilometers northwest of the City of Timmins, Ontario. The property is accessed via Hwy 101 west, to the Mallette logging gravel road (57km) and then via the Montcalm Mine Road (Figure 1). All roads are currently kept open year round. The property is centred at 48° 37' N latitude, 82° 09' W longitude.

The claim blocks may be located on NTS 1:50,000 map sheet 42B/09. Appendix 1 lists the claim numbers and their status and provides a tabulation of the UTM corner co-ordinates for the claim blocks and survey area. Figure 2 depicts the claims relative to the local topography and infrastructure. The claim information also appears on the maps that accompany this report.

The survey crew was accommodated at the Howard Johnson Motel (formerly the Ramada Inn and Conference Centre) in Timmins and the helicopter was based at the Gateway Helicopters hangar west of the Kamiskotia Highway on Kamiskotia Lake. A summation of the expenditures for this survey appears in appendix 6.

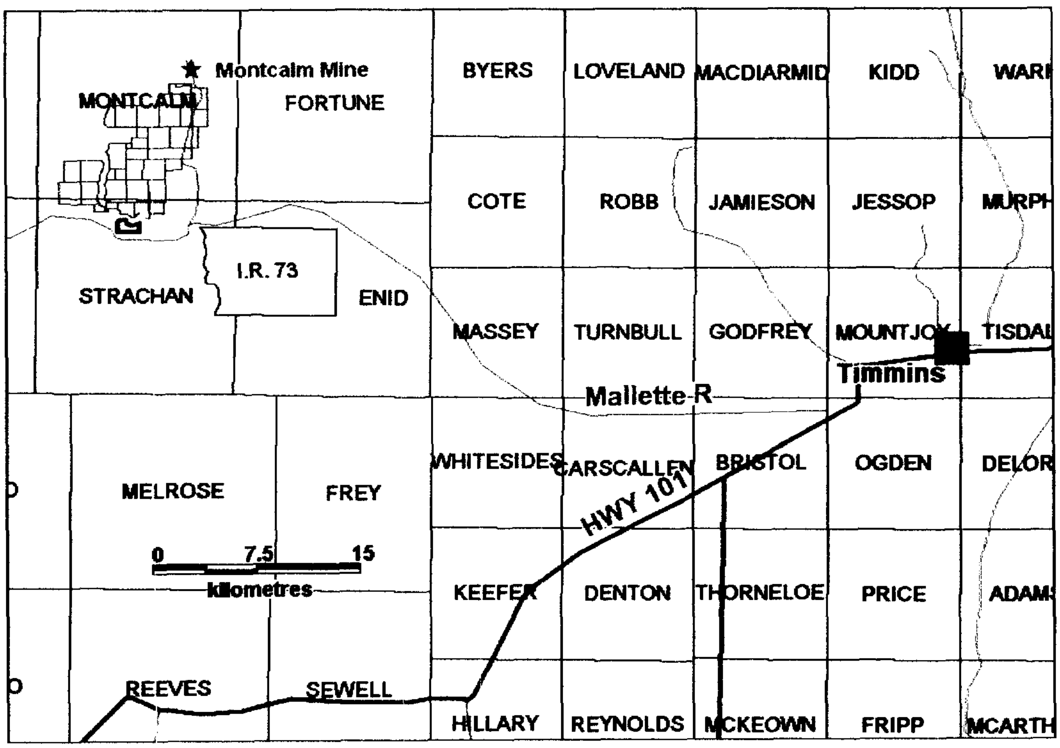


Figure 1: Regional Location Map

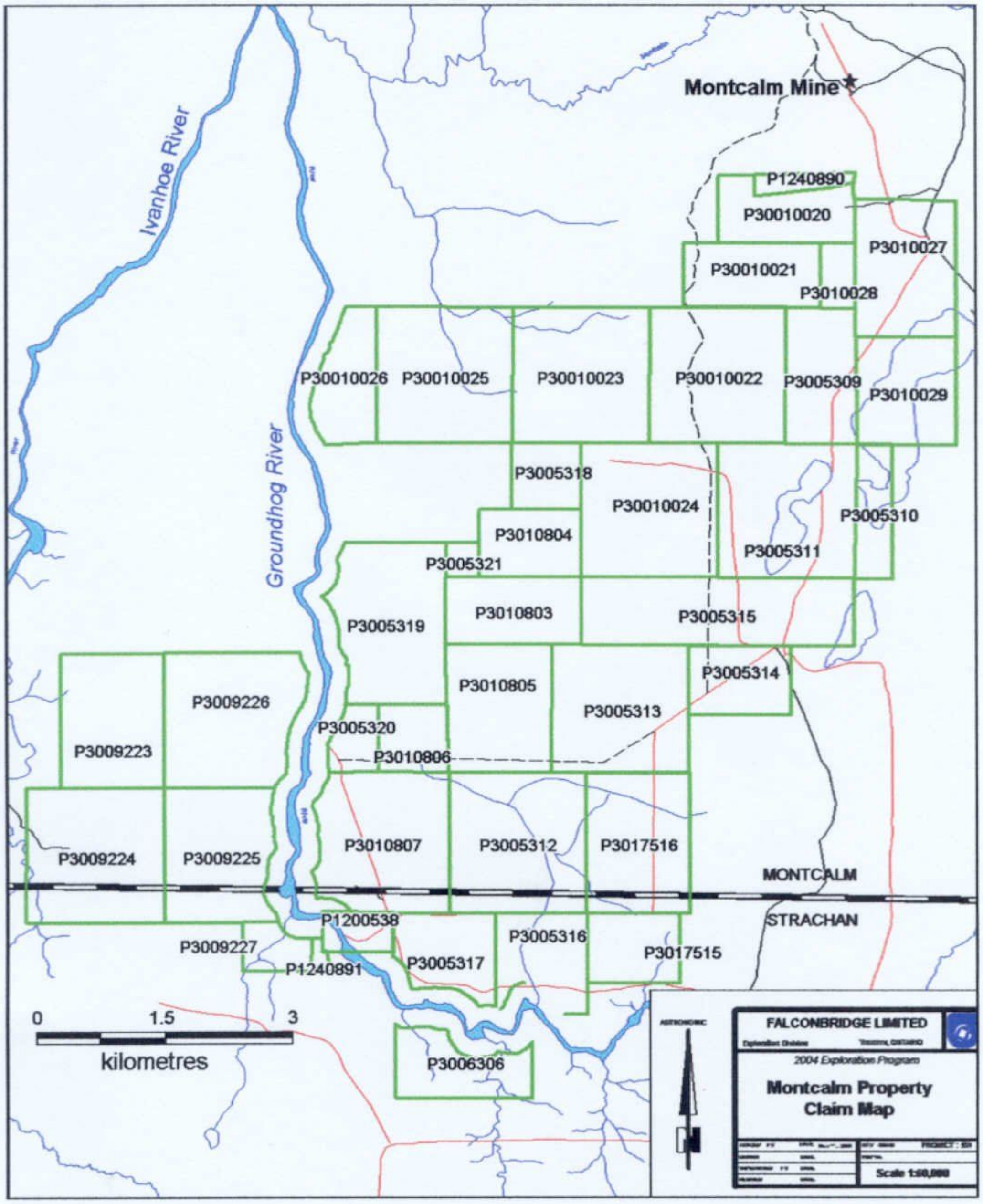


Figure 2: Montcalm Property Claim Map (Falconbridge, 2004)

3. GENERAL GEOLOGY (after Falconbridge, 2004)

Bedrock Geology

The Montcalm Gabbro Complex (MGC) is within the west margin of the Abitibi Subprovince along the eastern border of the Kapuskasing Structural Zone (Figure 3). Metavolcanic rocks bound the MGC to the north, west and south. The Nat River Granitoid Complex constitutes its eastern limit.

The MGC is a sub-vertical, crudely layered mafic to ultramafic intrusion of Archean age with a uranium-lead age of 2702 ± 2 Ma. A granite dyke that cuts both the complex and the sulphide mineralization at the Montcalm Mine has a uranium-lead age of 2700 ± 2 Ma (Barrie and Naldrett, 1990). Due to limited outcrop exposure, no detailed, intrusion-wide lithological or structural study has been completed. Based on limited mapping information, drill hole data and airborne geophysical surveys, the MGC is sub-divided into at least three zones: a basal Pyroxenite Zone, a middle Gabbro (Norite)-Anorthositic Gabbro Zone and an upper Ferroan Gabbro Zone (Barrie, 1990). The zones broadly indicate a northwest to southeast iron-enrichment fractionation trend. Several dyke suites cut the complex.

The Montcalm Ni-Cu-Co massive sulphide deposit is hosted within the middle Gabbro/ Norite Zone. The deposit consists of four separate ore zones that mainly strike north-south and dip steeply west to near-vertical.

Overburden Geology
The Montcalm area lies within the Abitibi Uplands on the southwestern margin of the Abitibi Clay Belt. The area was once covered by Lake Barlow-Ojibway, a Wisconsin-age glacial lake. The irregular bedrock surface has been mantled by tills, glacio-fluvial sands and gravels, thick sequences of varved clays, and outwash and deltaic sands. Overburden thickness varies across the Montcalm Property from 0 to 40m

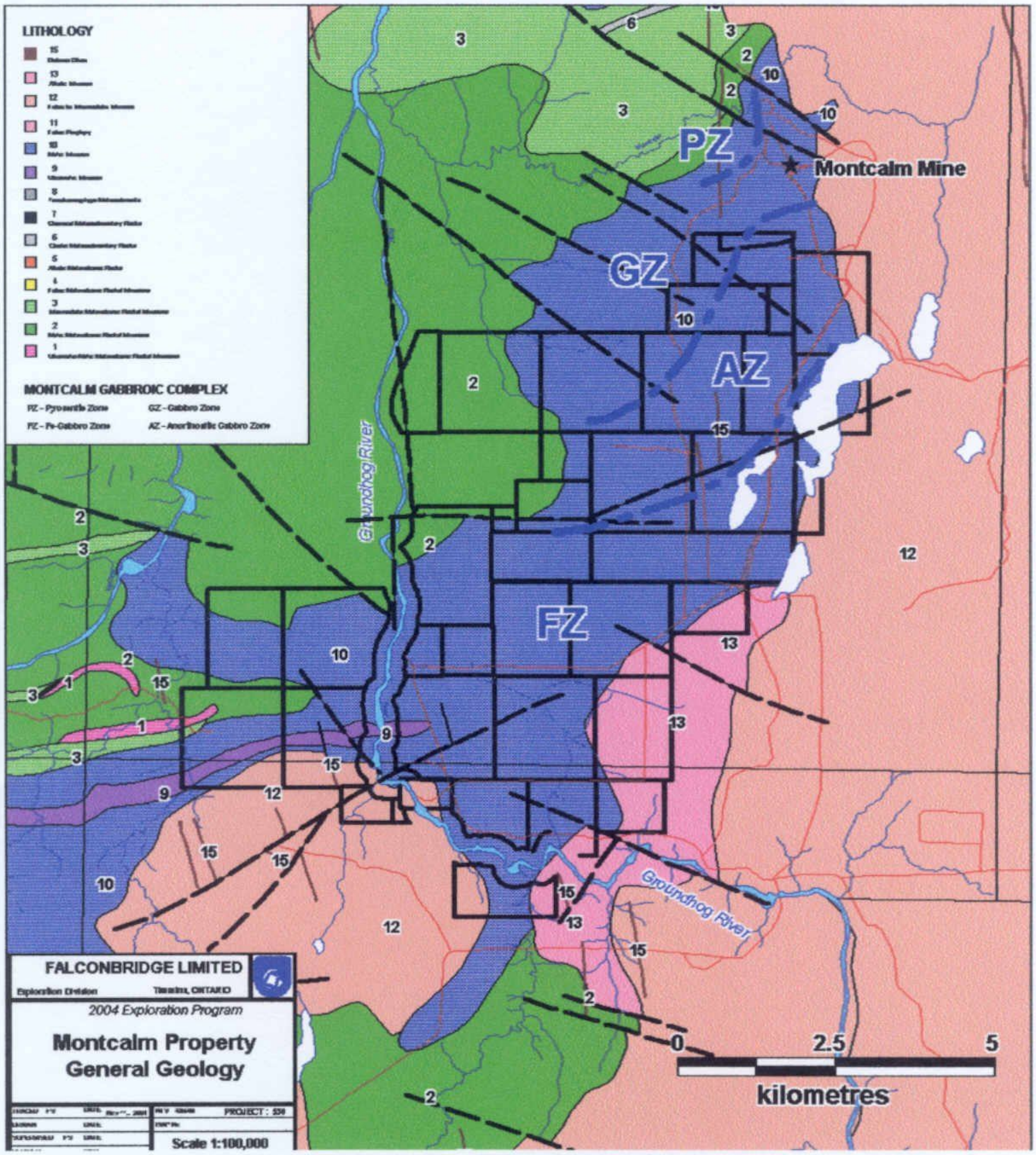


Figure 3: Montcalm Property General Geology (Falconbridge, 2004)

4. 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)
Montcalm Project	75	NW-SE	660	Nov. 9-12

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 135° 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). 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.

5. AIRCRAFT AND EQUIPMENT

5.1 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 4: The magnetometer bird (foreground) and AeroTEM II EM bird

5.2 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.

5.3 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 5: AeroTEM II Instrument Rack

PROTODAS Acquisition System
The 126 channels of raw streaming data are recorded by the PROTODAS acquisition system onto a removeable 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

5.4 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.

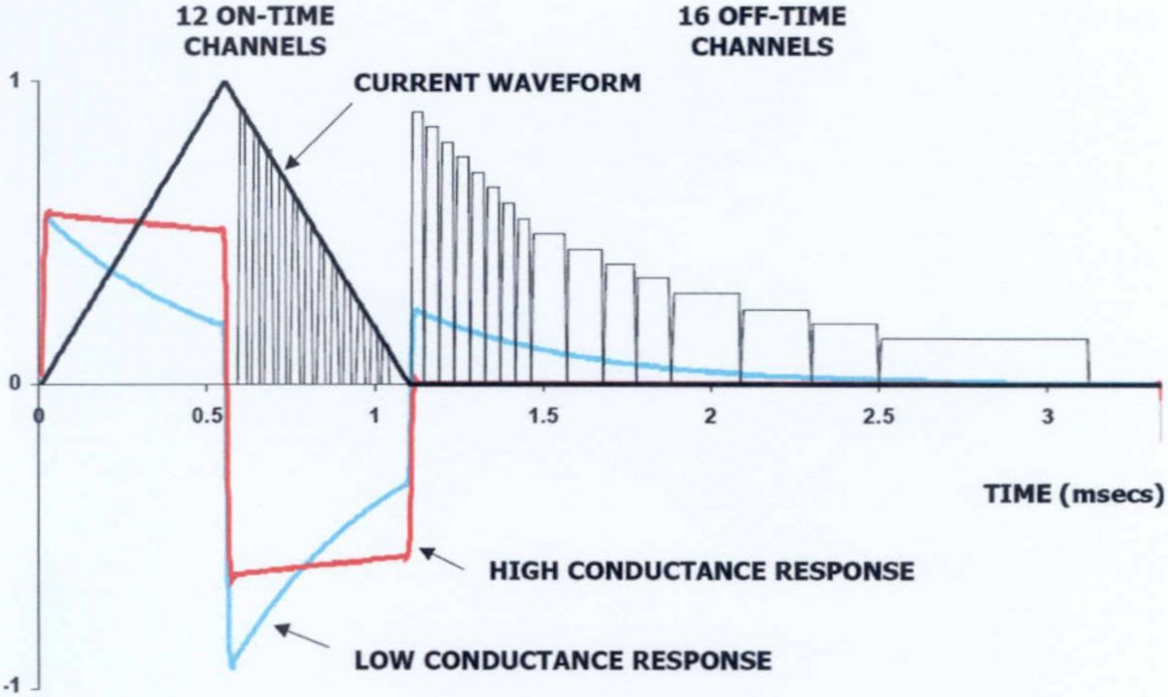


Figure 6: Schematic of Transmitter and Receiver waveforms

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.

6. PERSONNEL

The following AeroQuest personnel were involved in the project:

- Manager of Operations: Bert Simon
- Field Data Processors: Rory Kutluoglu, Steve Balch, Jonathan Rudd
- Field Operators: Chris Kozak, Barry Levy
- Data Interpretation and Reporting: Jonathan Rudd

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

7. 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 NAD27 Canada Mean Universal Transverse Mercator Zone 17 north. For reference, the latitude and longitude in NAD27 are also noted on the maps. All the maps show flight path trace, skeletal topography, and conductor picks represented by an anomaly symbol classified according to calculated off-time conductance. The anomaly symbol is 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.

8. 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.

8.1 Base Map

The geophysical maps accompanying this report are based on positioning in the datum of NAD27 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: 6378206.4m eccentricity: 0.082271854
- Datum: North American 1927 - Canada Mean
- Datum Shifts (x,y,z) : 10, -158, -187 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.

8.2 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.

8.3 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.

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.

8.4 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 25 metres. The final leveled grid provided the basis for threading the presented contours which have a minimum contour interval of 10 nT.

9. RESULTS AND INTERPRETATION

The survey was successful in mapping the magnetic and conductive 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 ranges from lows of approximately 56,250nT to highs of up to 57,500nT with an average background of 56,400nT.

The magnetic data are dominated by several strong linear to oblate magnetic highs. The strike of these features varies from east-west to northeast and the strike length varies from a few hundred metres to several kilometres. These features are interpreted to reflect mafic to ultramafic flows or intrusions and, as such, represent a significant marker for Ni-Cu-PGE exploration as many such deposits occur within or at the margin of ultra-mafic bodies.

A second distinct magnetic pattern is a series of linear magnetic highs which trend slightly west of north. These features are narrower and of a lower magnetic amplitude than the dominant features mentioned above and are interpreted to reflect mafic to ultramafic dykes which crosscut the geology. Some of these dykes appear to exploit lineaments interpreted to trend north northwest. These dykes are not considered to be particularly significant for Ni-Cu-PGE exploration, but nevertheless may add to the structural understanding of the area.

Beyond these two dominant magnetic sources, there are no other distinct magnetic patterns. The quiescent magnetic background response suggests that the host rock is either magnetically homogeneous or non-magnetic.

The EM data is dominated by the response from a ubiquitous covering of clay-rich sediment. This response is seen as a high amplitude response in the early on- and off-time Z component responses. The response decays rapidly indicating a relatively low conductance typical of overburden of this type. The areas where the response persists to the later channels likely indicates the presence of a thicker sequence of overburden but may also indicate an increase in the clay content of the overburden. The lack of an accompanying x-component response confirms the source as flat-lying. The X-component does responds in areas where the overburden changes thickness relatively rapidly. The x-component is useful for the detection of lateral inhomogeneity in the conductivity structure of the geology.

The AeroTEM II system penetrates to depths of up to 250m for large conductive bedrock sources. There are few conductive sources identified in the data from this survey. These bedrock sources are identified on the maps. The strongest response is seen on lines 11020 and 11030. The source of the anomaly is of relatively low conductance as indicated by both the on- and off-time data sets. The source occurs on the northern margin of the western terminus of a relatively long linear west northwest trending magnetic high. This feature is too low in conductance to reflect a prospective Ni-Cu target. Nevertheless, given the general prospectivity of the area, the conductivity may be reflecting mineralization in a favourable geologic environment and as such may be worthy of follow-up.

Respectfully submitted,

Jonathan Rudd, P.Eng.
Aeroquest Limited
November 12, 2004

APPENDIX 1 – Claim and Survey Boundary Information

Survey Corner Coordinates (UTM Zone 17 – NAD27)

410697 5383837
412394 5385540
413005 5385045
414915 5386950
413224 5388754
415134 5390661
420457 5385364
418547 5383455
418096 5383783
416199 5381867
417003 5380945
415301 5379246

Claim Status

The Montcalm Property is defined as the series of contiguous claims south of the Montcalm Minesite owned 100% by Falconbridge Limited (Figure 1):

CLAIM_NO	UNITS	TOWNSHIP	DUE_DATE	STATUS
P1200538	2	STRACHAN	20041220	ACTIVE
P1240890	2	MONTCALM	20050317	ACTIVE
P30010020	8	MONTCALM	20041125	ACTIVE
P30010021	8	MONTCALM	20041125	ACTIVE
P30010022	16	MONTCALM	20041118	ACTIVE
P30010023	16	MONTCALM	20041118	ACTIVE
P30010024	16	MONTCALM	20041125	ACTIVE
P30010025	16	MONTCALM	20041118	ACTIVE
P30010026	6	MONTCALM	20041118	ACTIVE
P3005309	8	MONTCALM	20050423	ACTIVE
P3005310	4	MONTCALM	20050423	ACTIVE
P3005311	16	MONTCALM	20050423	ACTIVE
P3005312	16	MONTCALM	20050423	ACTIVE
P3005313	16	MONTCALM	20050423	ACTIVE
P3005314	6	MONTCALM	20050423	ACTIVE
P3005315	16	MONTCALM	20050423	ACTIVE
P3005317	8	STRACHAN	20050423	ACTIVE
P3005318	4	MONTCALM	20050423	ACTIVE
P3005319	15	MONTCALM	20050423	ACTIVE
P3005320	2	MONTCALM	20050423	ACTIVE
P3005321	1	MONTCALM	20050423	ACTIVE
P3010027	12	MONTCALM	20050423	ACTIVE
P3010028	2	MONTCALM	20050423	ACTIVE
P3010029	9	MONTCALM	20050423	ACTIVE
P3010803	8	MONTCALM	20041125	ACTIVE
P3010804	6	MONTCALM	20041125	ACTIVE
P3010805	12	MONTCALM	20041125	ACTIVE
P3010806	4	MONTCALM	20041125	ACTIVE

P3010807	16	MONTCALM	20041118	ACTIVE
P3017516	12	MONTCALM	20060408	ACTIVE
P3017515	12	MONTCALM	20060408	ACTIVE
P1240891	1	STRACHAN	20050624	ACTIVE
P3009223	12	MONTCALM	20050428	ACTIVE
P3009224	16	MONTCALM	20050428	ACTIVE
P3009225	16	MONTCALM	20050428	ACTIVE
P3009226	16	MONTCALM	20050428	ACTIVE
P3009227	3	STRACHAN	20050428	ACTIVE
P3005316	8	STRACHAN	20050423	ACTIVE
P3006306	7	STRACHAN	20050423	ACTIVE

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_Falconbridge_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

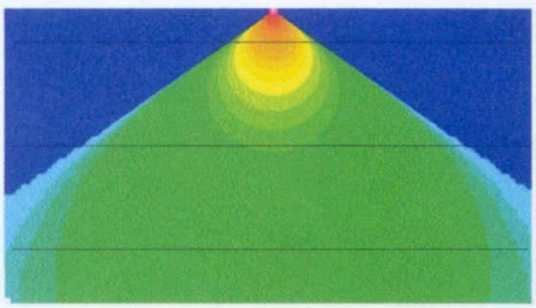
APPENDIX 3: Aeroquest Limited – AeroTEM Design Considerations

Design Considerations

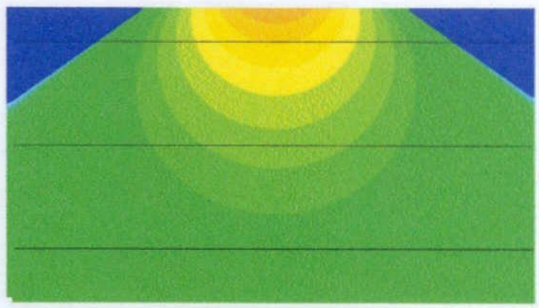
Helicopter-borne EM systems offer an advantage that cannot be matched from a fixed-wing platform. The ability to fly at a slower speed and collect data with high spatial resolution, and with great accuracy, means that helicopter EM systems provide more detail than any other EM configuration, airborne 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.

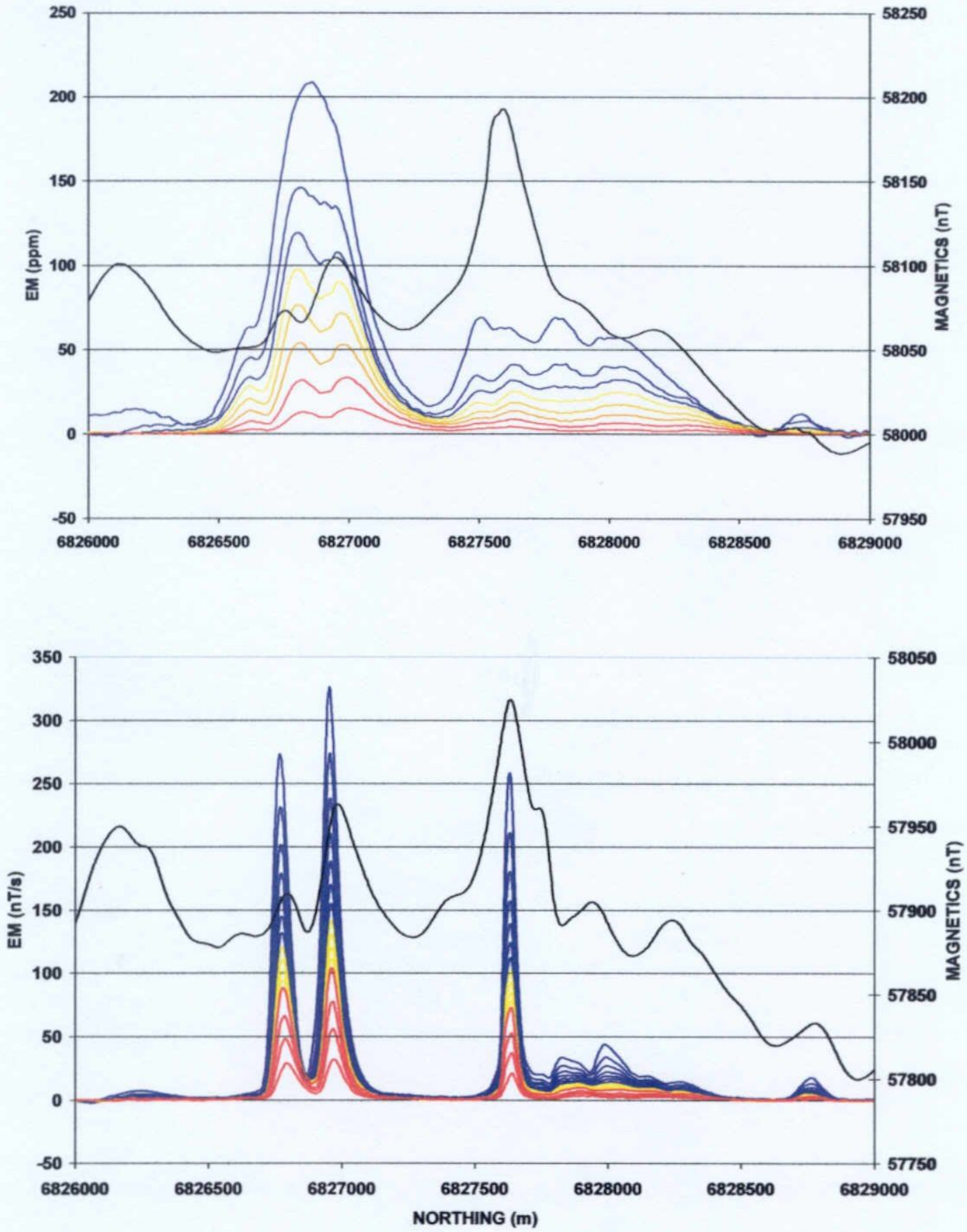


Figure 2. Fixed-wing (upper) and AeroTEM (lower) comparison over the eastern limit of the Mesamax Deposit, a Ni-Cu-PGE zone located in the Raglan nickel belt and owned by Canadian Royalties. Both systems detected the Deposit further to the west where it is closer to surface.

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.

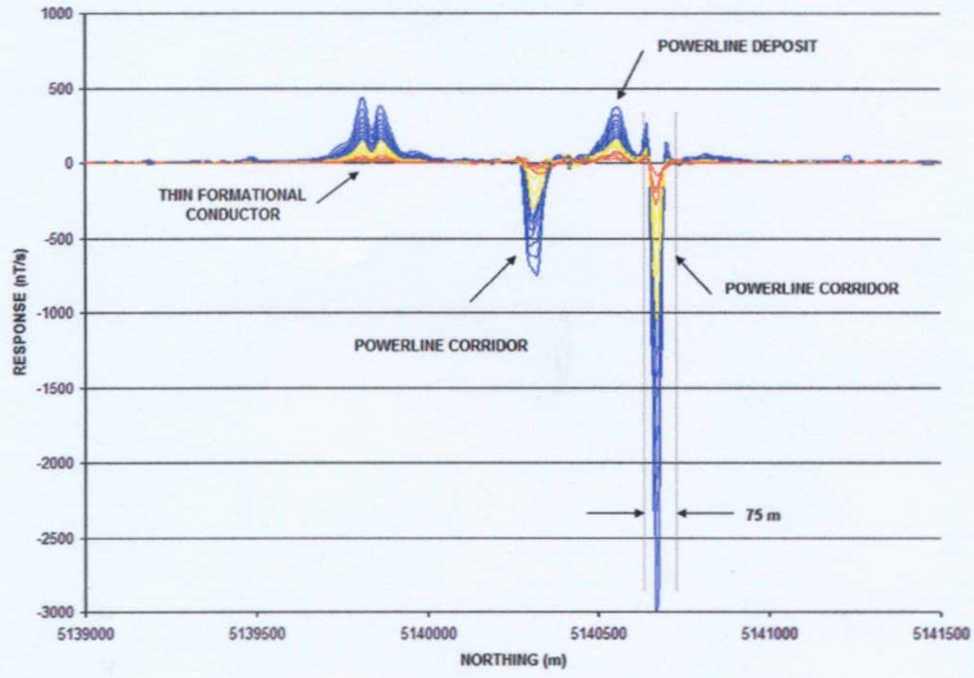


Figure 3. The Powerline Deposit is located between two major power line corridors, which make EM surveying problematic. Despite the strong response from the power line, the anomaly from the Deposit is clearly detected. Note the thin formational conductor located to the south. The only way to distinguish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

Advantage 2 – Conductance Discrimination

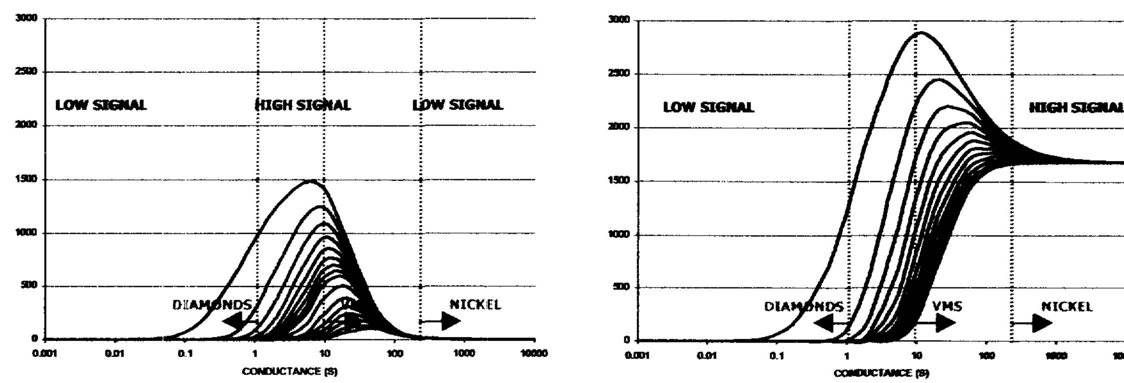
The AeroTEM system features full waveform recording and as such is able to measure the on-time response due to high conductance targets. Due to the processing method (primary field removal), there is attenuation of the response with increasing conductance, but the AeroTEM on-time measurement is still 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:

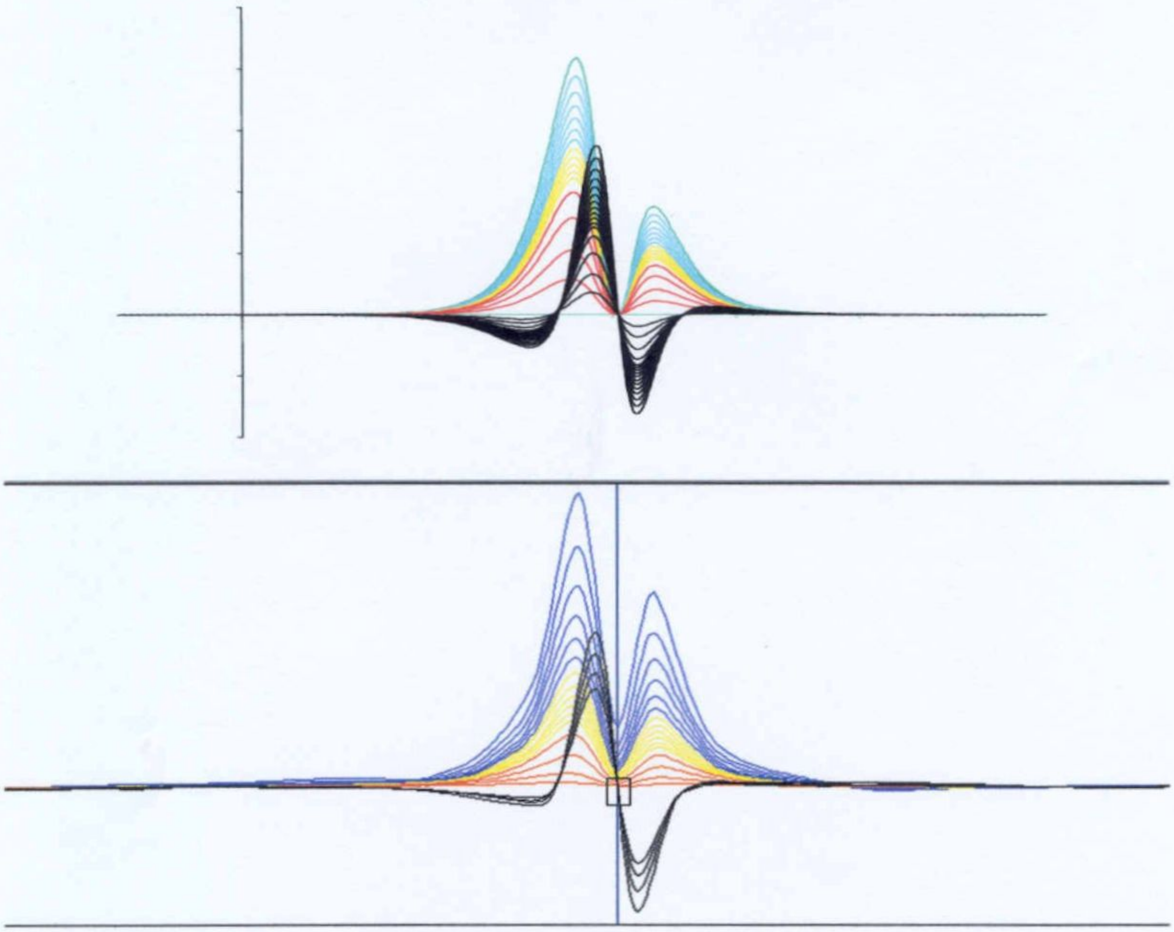


Figure 5. Measured (lower) and modeled (upper) AeroTEM responses are compared for a thin steeply dipping conductor. The response is characterized by two peaks in the Z-axis coil, and a cross-over in the X-axis coil that is centered between the two Z-axis peaks. The conductor dips toward the higher amplitude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

AQL
AEROQUEST LIMITED

Advanced airborne technology...

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.

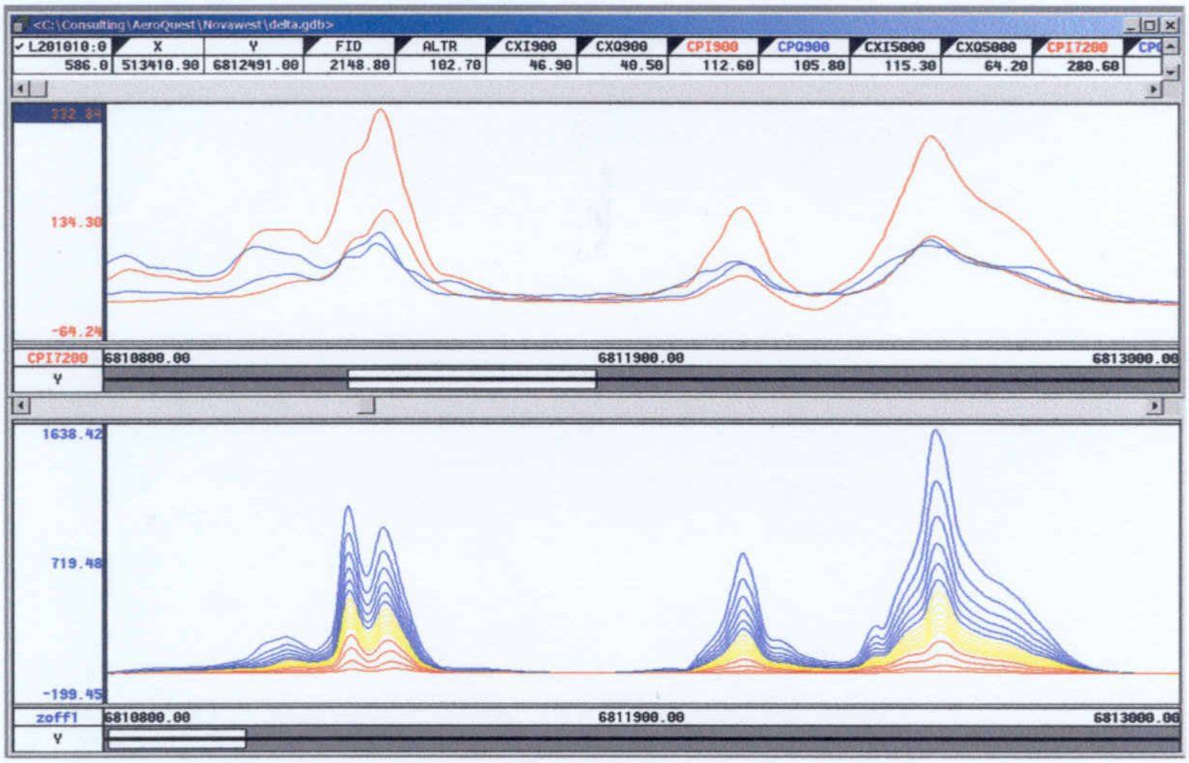


Figure 6. Comparison between Dighem HEM (upper) and AeroTEM (lower) surveys flown in the Raglan area. The AeroTEM responses appear to be more discrete, suggesting that the data is not as heavily filtered as the HEM data. The S/N advantage of AeroTEM over HEM is about 5:1.

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 6: Statement of Expenses

Description	Cost	Comments
Mobilization \Demobilization	$12,000.00	Milton ↔ Timmins\Kamiskotia
Survey proper	$70,632.90	$117.00/Line-Km
Stand-by	$3,200.00	Bad Weather – (Nov. 10, '04)

Work Report Summary

Transaction No: W0460.01779 **Status:** APPROVED
Recording Date: 2004-NOV-16 **Work Done from:** 2004-NOV-09
Approval Date: 2004-NOV-19 **to:** 2004-NOV-12

Client(s):

130679 FALCONBRIDGE LIMITED

Survey Type(s):

AEM AMAG

Work Report Details:

Claim#	Perform	Perform Approve	Applied	Applied Approve	Assign	Assign Approve	Reserve	Reserve Approve	Due Date
P 1200538	$365	$365	$1,600	$1,600	$0	0	$0	$0	2008-DEC-20
P 1240890	$0	$0	$800	$800	$0	0	$0	$0	2006-MAR-17
P 3005309	$727	$727	$0	$0	$0	0	$727	$727	2005-APR-23
P 3005310	$1,091	$1,091	$0	$0	$0	0	$1,091	$1,091	2005-APR-23
P 3005311	$5,818	$5,818	$0	$0	$0	0	$5,818	$5,818	2005-APR-23
P 3005312	$5,818	$5,818	$0	$0	$5,818	5,818	$0	$0	2005-APR-23
P 3005313	$5,818	$5,818	$0	$0	$5,818	5,818	$0	$0	2005-APR-23
P 3005314	$1,818	$1,818	$0	$0	$0	0	$1,818	$1,818	2005-APR-23
P 3005315	$5,818	$5,818	$0	$0	$0	0	$5,818	$5,818	2005-APR-23
P 3005316	$2,909	$2,909	$0	$0	$2,838	2,838	$71	$71	2005-APR-23
P 3005317	$2,909	$2,909	$0	$0	$0	0	$2,909	$2,909	2005-APR-23
P 3005318	$1,454	$1,454	$0	$0	$0	0	$1,454	$1,454	2005-APR-23
P 3005319	$5,454	$5,454	$0	$0	$0	0	$5,454	$5,454	2005-APR-23
P 3005320	$727	$727	$0	$0	$0	0	$727	$727	2005-APR-23
P 3005321	$364	$364	$0	$0	$0	0	$364	$364	2005-APR-23
P 3006306	$364	$364	$0	$0	$0	0	$364	$364	2005-APR-28
P 3009223	$727	$727	$0	$0	$0	0	$727	$727	2005-APR-28
P 3009225	$727	$727	$0	$0	$0	0	$727	$727	2005-APR-28
P 3009226	$4,363	$4,363	$0	$0	$0	0	$4,363	$4,363	2005-APR-28
P 3010803	$2,909	$2,909	$3,200	$3,200	$0	0	$0	$0	2005-NOV-25
P 3010804	$2,182	$2,182	$2,400	$2,400	$0	0	$0	$0	2005-NOV-25
P 3010805	$4,363	$4,363	$4,800	$4,800	$0	0	$0	$0	2005-NOV-25
P 3010806	$1,454	$1,454	$1,600	$1,600	$0	0	$0	$0	2005-NOV-25
P 3010807	$5,818	$5,818	$6,400	$6,400	$0	0	$0	$0	2006-NOV-18
P 3017515	$2,545	$2,545	$0	$0	$2,545	2,545	$0	$0	2006-APR-06
P 3017516	$2,182	$2,182	$0	$0	$2,182	2,182	$0	$0	2006-APR-06
P 30010020	$0	$0	$3,200	$3,200	$0	0	$0	$0	2005-NOV-25
P 30010021	$0	$0	$3,200	$3,200	$0	0	$0	$0	2005-NOV-25
P 30010022	$4,363	$4,363	$6,400	$6,400	$0	0	$0	$0	2006-NOV-18
P 30010023	$5,818	$5,818	$6,400	$6,400	$0	0	$0	$0	2006-NOV-18
P 30010024	$5,818	$5,818	$6,400	$6,400	$0	0	$0	$0	2005-NOV-25
P 30010025	$2,909	$2,909	$6,400	$6,400	$0	0	$0	$0	2006-NOV-18
P 30010026	$0	$0	$2,400	$2,400	$0	0	$0	$0	2006-NOV-18
	$87,632	$87,632	$55,200	$55,200	$19,201	$19,201	$32,432	$32,432	

Work Report Summary

Transaction No:	W0460.01779	**Status:**	APPROVED
Recording Date:	2004-NOV-16	**Work Done from:**	2004-NOV-09
Approval Date:	2004-NOV-19	**to:**	2004-NOV-12

External Credits: $0

Reserve:

$32,432 Reserve of Work Report#: W0460.01779

$32,432 Total Remaining

Status of claim is based on information currently on record.

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Ontario

GEOSCIENCE ASSESSMENT OFFICE
933 RAMSEY LAKE ROAD, 6th FLOOR
SUDBURY, ONTARIO
P3E 6B5

Tel: (888) 415-9845
Fax:(877) 670-1555

Date: 2004-NOV-22

FALCONBRIDGE LIMITED
800-207 QUEEN'S QUAY WEST
TORONTO, ONTARIO
M5J 1A7 CANADA

Submission Number: 2.28771
Transaction Number(s): W0460.01779

Dear Sir or Madam

Subject: Approval of Assessment Work

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

If you have any question regarding this correspondence, please contact BRUCE GATES by email at bruce.gates@ndm.gov.on.ca or by phone at (705) 670-5856.

Yours Sincerely,

Ron C Gashinski

Ron C. Gashinski
Senior Manager, Mining Lands Section

Cc: Resident Geologist

Falconbridge Limited
(Claim Holder)

Greggory Andrew Snyder
(Agent)

Assessment File Library

Falconbridge Limited
(Assessment Office)

ONTARIO CANADA — MINISTRY OF NORTHERN DEVELOPMENT AND MINES — PROVINCIAL MINING RECORDER'S OFFICE

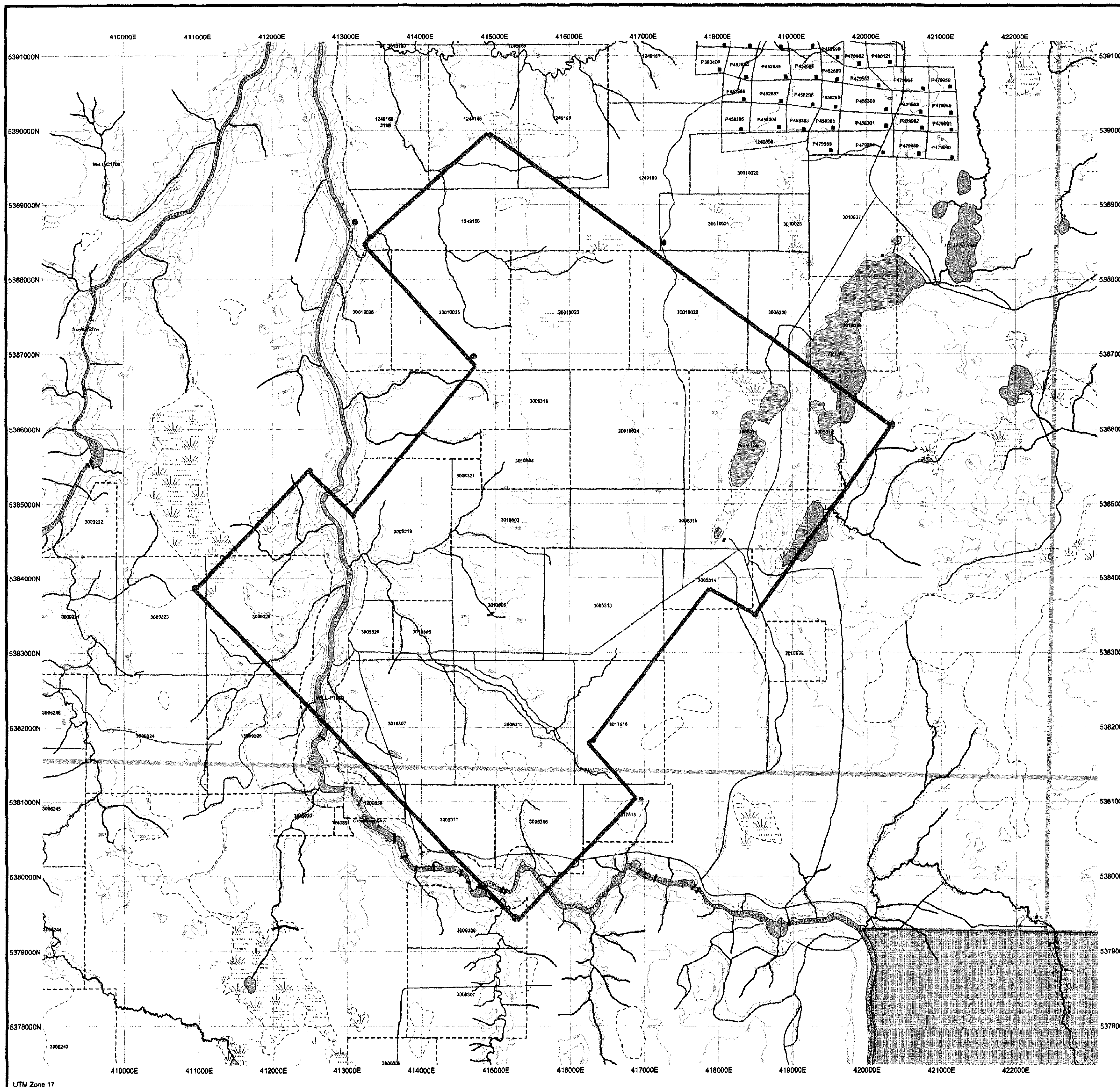
Mining Land Tenure Map

Date / Time of Issue: Fri Nov 19 16:03:19 EST 2004

TOWNSHIP / AREA MONTCALM — **PLAN** G-1182

ADMINISTRATIVE DISTRICTS / DIVISIONS

Mining Division	Porcupine
Land Titles/Registry Division	Unavailable
Ministry of Natural Resources District	Unavailable



TOPOGRAPHIC — Land Tenure — LAND TENURE WITHDRAWALS — IMPORTANT NOTICES

Scale 1:20000

LAND TENURE WITHDRAWAL DESCRIPTIONS

Identifier	Type	Date	Description
3189	Wsm	Jan 1, 2001	400 FT SURFACE RIGHTS RESERVATION AROUND ALL LAKES & RIVERS
3367	Wsm	Jan 1, 2001	400 FEET SURFACE RIGHTS RESERVATION AROUND ALL LAKES & RIVERS
W-LL-C1702	Wsm	Feb 1, 2004	<a href="http://www.mndm.gov.on.ca/mndm/mines/lands/livlag/boreast/2004orders/feb/withdrawals/wc1702-04_e.asp">W-LL-C1702 ONT M&S withdrawal S.35 Mining Act RSO 1990, 01/02/04 Boundary generally depicts area withdrawn Click to view actual area<a/>
W-LL-P1569	Wsm	Aug 29, 2002	<a href=" http://www.mndm.gov.on.ca/MNDM/MINES/LANDS/livlag/boreast/2002orders/oiaug/wp1569.htm "> W-LL-P1569 ONT M&S withdrawal S.35 Mining Act RSO 1999, 29/08/02 Boundary generally depicts area withdrawn Click to view actual area withdrawn <a/>.

2.28771
AMAG
AEM

General Information and Limitations

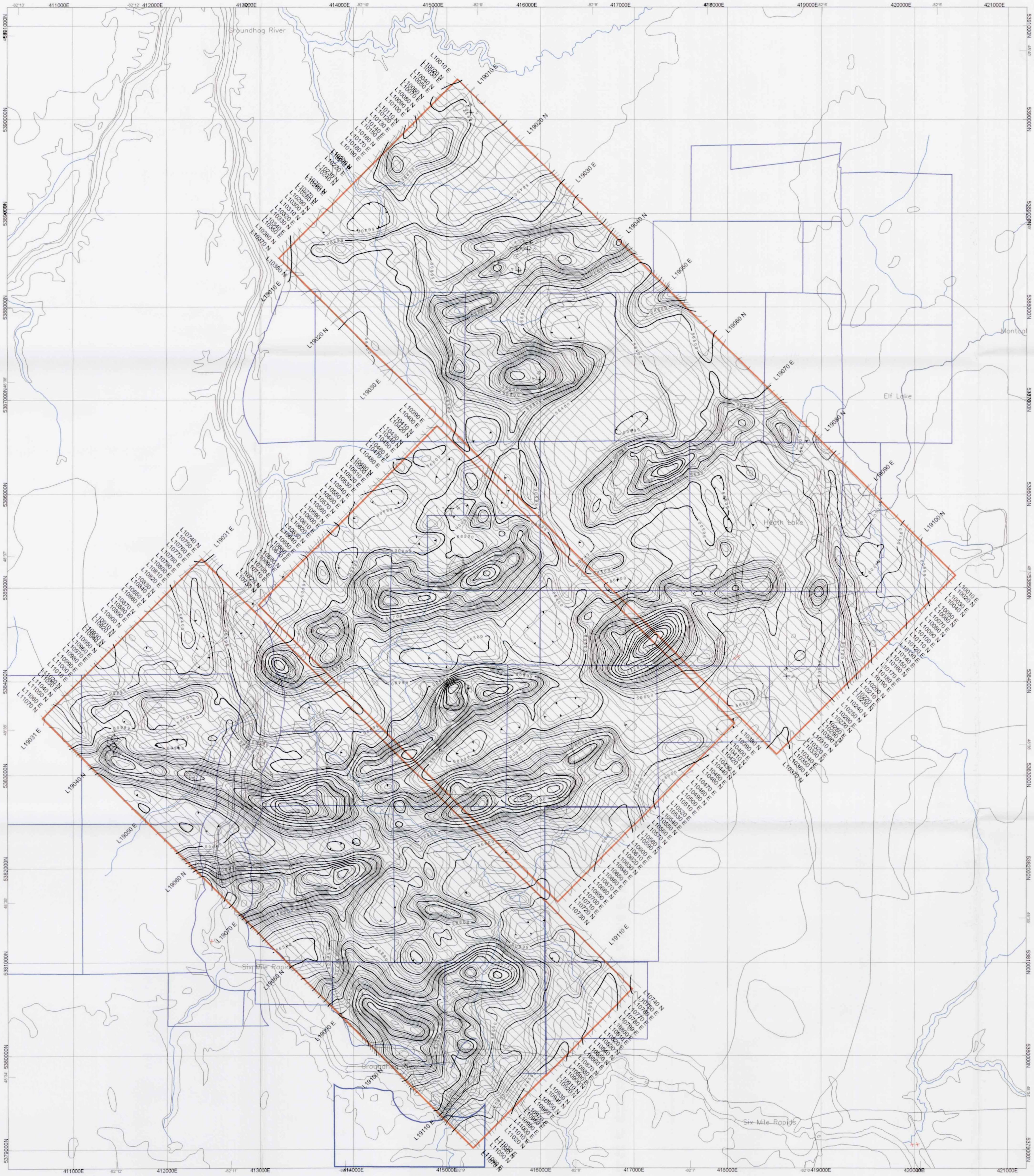
Those wishing to stake mining claims should consult with the Provincial Mining Recorders' Office of the Ministry of Northern Development and Mines for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources.

Contact Information: Provincial Mining Recorders' Office, Willet Green Miller Center 933 Ramsey Lake Road

Toll Free Tel: 1 (888) 415-9845 ext 5742 Fax: 1 (877) 670-1444

Map Datum: NAD 83 Projection: UTM (6 degree) Topographic Data Source: Land Information Ontario

This map may not show unregistered land tenure and interests in land including certain patents, leases, easements, right of ways, flooding rights, licenses, or other forms of disposition of rights and interest from the Crown. Also certain land tenure and land uses that restrict or prohibit free entry to stake mining claims may not be illustrated.



Grid North
NAD27-Zone17

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)

SURVEY SPECIFICATIONS:
Survey flown: November 9 - November 12, 2004
Traverse line spacing: 75 metres
Traverse line direction: NW-SE
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

2.28771

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, tieline and micro-leveling corrections

POSITIONING
Datum: NAD27
Major Axis: 6378137.000
Eccentricity: 0.081819191

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

Contour interval: 25 nT

scale 1:20,000

250 0 250 500 750 1000 1250 1500
metres
NAD27 / UTM zone 17N

Falconbridge Limited

Montcalm Project Airborne Geophysical Survey

TOTAL MAGNETIC INTENSITY
Montcalm Property

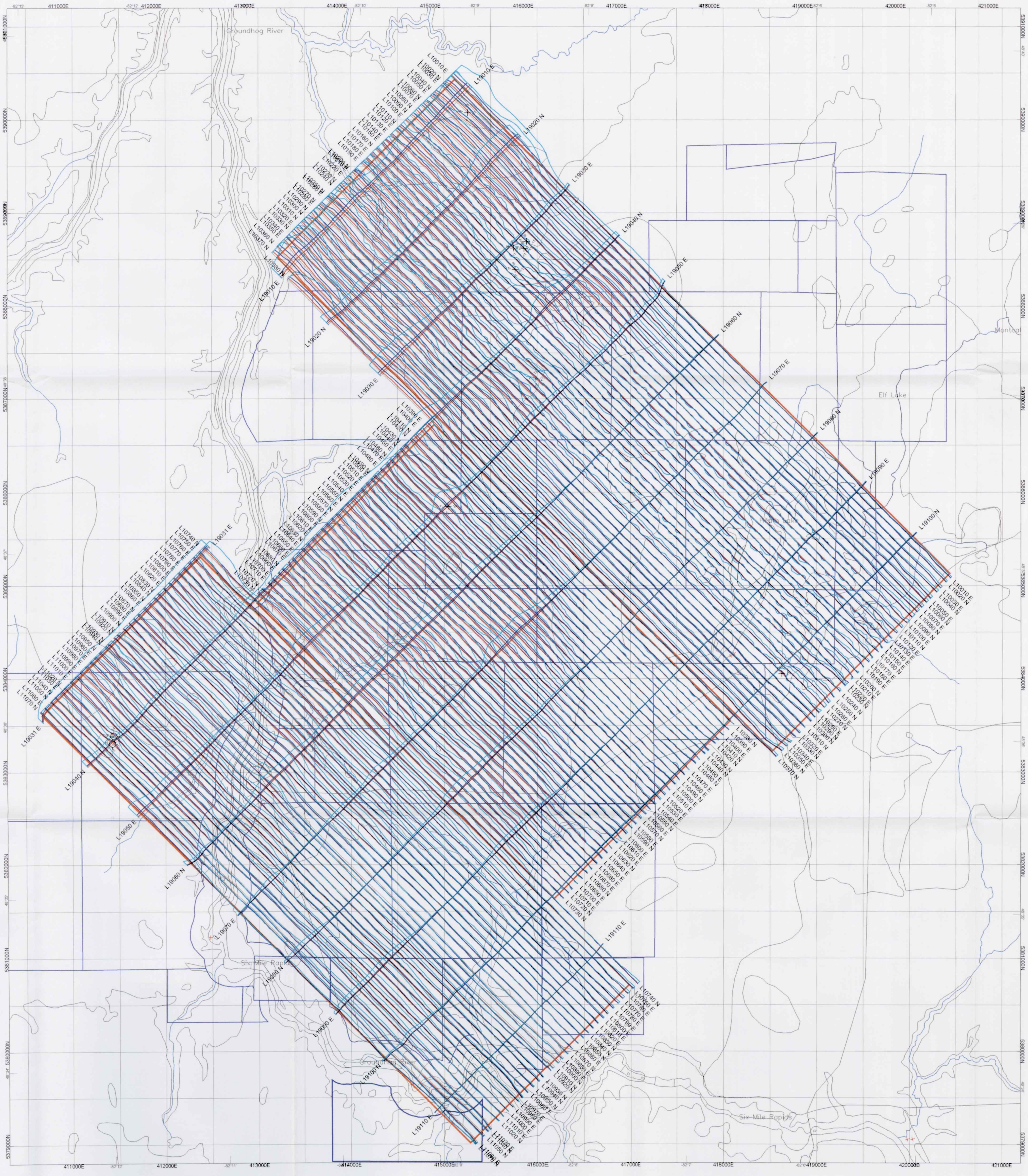
NTS 42B/09

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

November, 2004

Map 1



Grid North
NAD27-Zone17

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 Z4 channel, 1mm=25 nT/sec
Off-time Z8 channel, 1mm=25 nT/sec
Off-Time Z12 channel, 1mm=25 nT/sec

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Magnetics: diurnal, tieline and micro-leveling corrections

POSITIONING
Datum: NAD27
Major Axis: 6378137.000
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MAP PROJECTION
Projection: Universal Transverse Mercator
Central Meridian: 81°W (Zone 17)
Central Scale Factor: 0.9996
False Easting/Northing: 500,000m/0m

2.28771

scale 1:20,000
250 0 250 500 750 1000 1250 1500
metres
NAD27 / UTM zone 17N

Falconbridge Limited
Montcalm Project Airborne Geophysical Survey

EM PLAN PROFILES
Montcalm Property

NTS 42B/09

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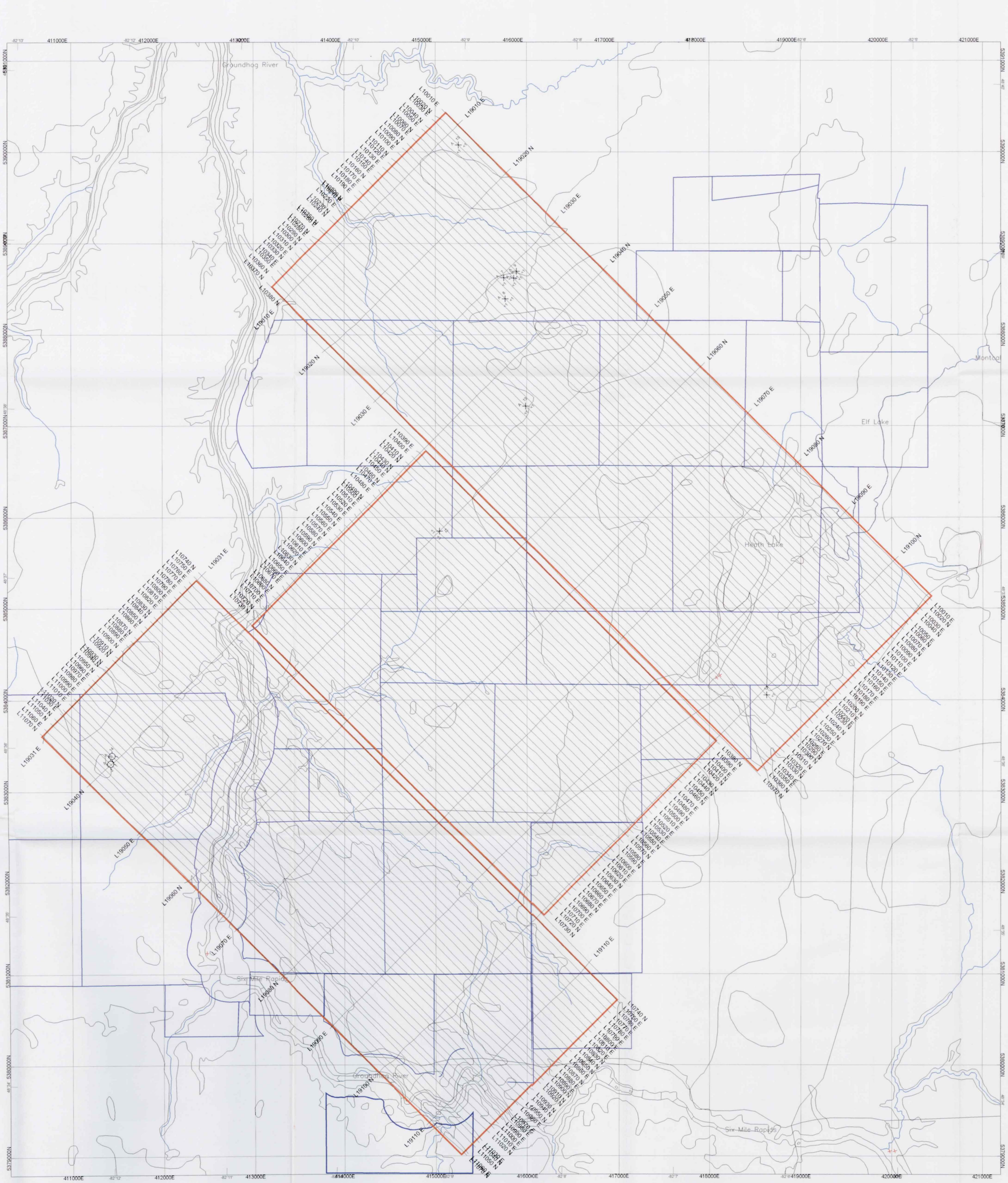
November, 2004

Map 2



Grid North
NAD27-Zone17

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)

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DATA PROCESSING
- Magnetics: diurnal, tieline and micro-leveling corrections

POSITIONING
- Datum: NAD27
  - Major Axis: 6378137.000
  - Eccentricity: 0.081819191

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

2.28771

Contour interval: 25 nT

scale 1:20,000

250 0 250 500 750 1000 1250 1500
metres
NAD27 / UTM zone 17N

Falconbridge Limited

Montcalm Project Airborne Geophysical Survey

FLIGHT PATH & EM ANOMALIES
Montcalm Property

NTS 42B/09

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Map 3