

# **Assessment Report: Aeromagnetic Survey**

**November, 2010 and February 2011**

**Rowan Lake Area**



Prepared by  
Nicholas Walker: Country Manager

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## 1. Introduction

This report presents the results of an aeromagnetic survey conducted over the Cameron Gold Project in the Rowan Lake Area. Aeroquest Airborne conducted the low level airborne geophysical survey on behalf of Cameron Gold Operations (Formerly Cameron Lake JEX Corp). The survey included collection of detailed airborne gradiometer magnetic data using a fixed wing platform.

The total survey coverage is 3465 km, of which 3253 line-km fell within the defined project area, flown in 0°/180° line direction. Acquisition for the main part of the survey commenced on the 29<sup>th</sup> of October, 2010 and was completed on the 2<sup>nd</sup> of November, 2010. On February 11, 2011 four small areas appending the main survey were flown. The base location used for operating the aircraft and performing in-field quality control was Kenora, Ontario.

The purpose of the survey was to collect high resolution magnetic data to assist in the understanding of the geological setting within the project and produce exploration targets. Future exploration programs on the result of this survey are likely

## 2. Location and Access

The Cameron Gold Project is located about 80 km to the southeast of Kenora and 80 km north-northwest of Fort Frances in the southern part of north-western Ontario, Canada (Figure 1). The nearest population centres to the Project are the villages of Sioux Narrows and Nestor Falls, located 30 km and 25 km, respectively.

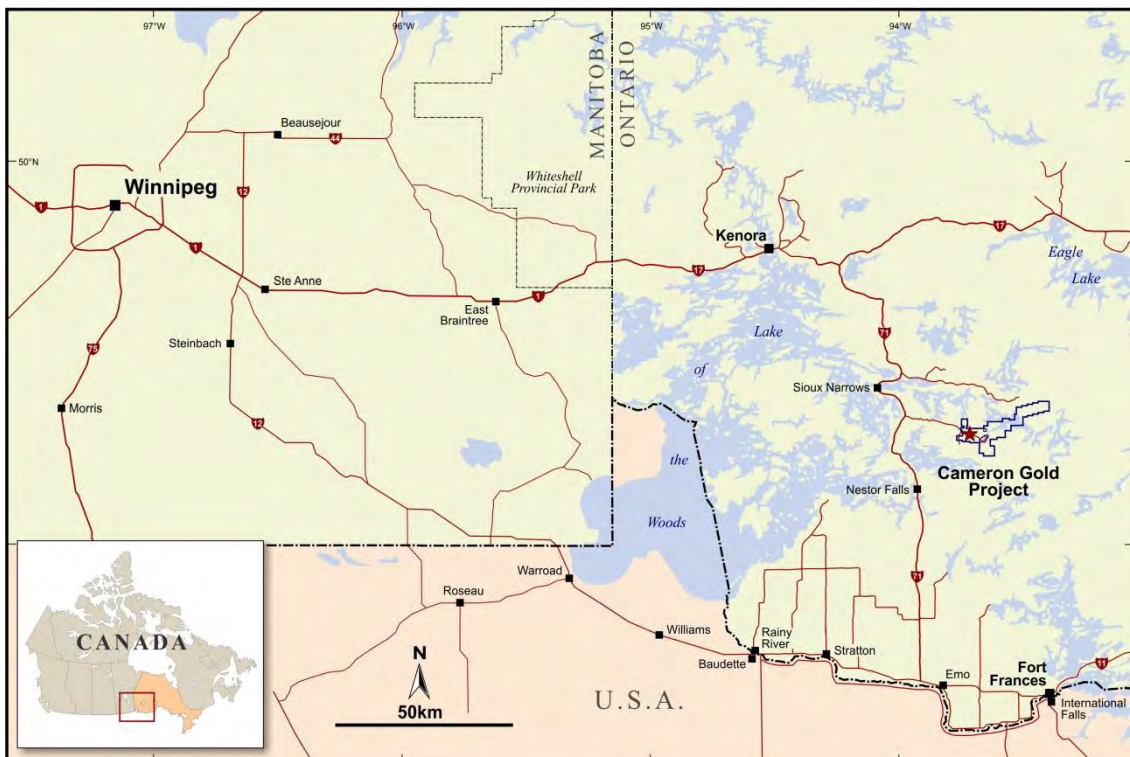


Figure 1: Map showing the location of the Cameron Gold Project.

The Cameron Gold Project comprises a portfolio of unpatented mining claims, patented mining claims, licenses of occupation and mining leases located about 23 km east of Trans-Canada Highway 71. Access to the Project is via a well-maintained, all-weather gravel road that was purposely constructed by the previous owner of the Project. Travel

along the access road is restricted to permit holders issued by the Ministry of Natural Resources (MNR) in Kenora.

The Project is located within NTS area 52F05, with the portal of the decline into the Cameron Gold Deposit itself centred on 446980E, 5460070N (NAD 83 Datum, Zone 15).

The Cameron gold project consists of a total of seventy-four unpatented and patented mining claims, mining licences of occupation and three mining leases (Figure 2). The Project comprises sixty-four unpatented claims, four patented claims (mineral rights only) and six mining licences of occupation (MLO). All of the properties are located within unsurveyed crown lands, mainly in the Rowan Lake Area, though some claims are situated in the Tadpole Lake, Brooks Lake and Lawrence Lake Areas. The total area of the Project is 120 km<sup>2</sup> or 12,000 Ha (Figure 2).

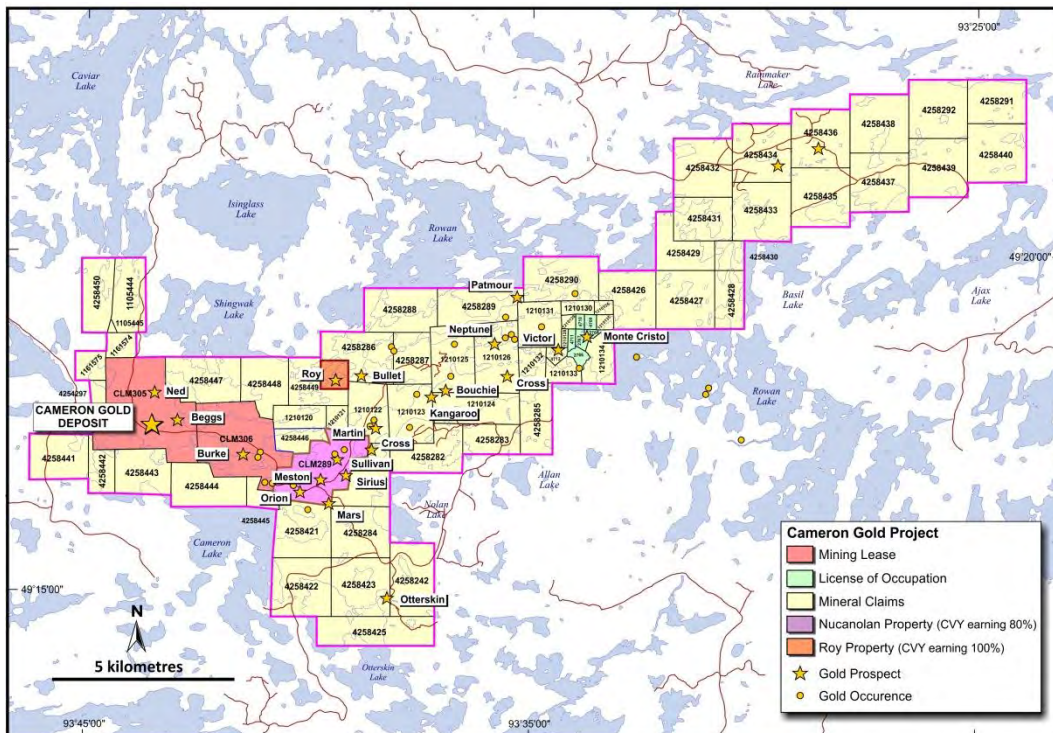


Figure 2: Land tenure map of the Cameron gold project.

### 3. Regional Geology

The Cameron Gold Operation Ltd. property is underlain by rocks of the Achaean Savant Lake-Crow Lake metavolcanic-metasedimentary belt of the Wabigoon Subprovince of the Canadian Shield. It occurs within a region of greenstone metavolcanic rock, bounded by granitoid batholiths such as Nolan lake stock. The area is cut by a number of major faults, the Cameron Lake Shear Zone (CLSZ), a northwest-southeast trending zone of high strain that hosts the gold mineralization of the company's flagship Cameron Gold Deposit. The CLSZ is a splay off the Pipestone-Cameron Fault a district sized northwest striking structure that separates the Rowan Lake Greenstone Terrane from the Kakagi Greenstone Terrane to the southwest. This northwest striking, steeply northeast dipping fault is a significant zone of deformation and displacement which has been defined for over 100km of strike length and has characteristics similar to the regional "breaks" recognized in other Canadian Archean gold camps.



The Monte Cristo Shear Zone (MCSZ) is another major structure in the region striking NE-SW, to the east of the CLSZ (see Figure 2). The Monte Cristo Shear Zone hosts mineralisation at both the Monte Cristo and Victor prospects and gold mineralisation at Sullivan and Meston is theorised to have a relationship with the MCSZ (Melling, 1989). The Shingwak lake anticline is another important structural feature to the NW of the MCSZ. The two structures are interpreted to interact manifesting as M-folds within the MCSZ at the northeast end of Rowan Lake (Lewis and Woolgar, 2011).

To the southwest of the Victor and Monte Cristo prospects the path of MCSZ is modified by the Nolan lake stock a large felsic intrusive body to the southeast. The Nolan Lake Stock is a dual composition intrusion comprising of a granodiorite centre and a magnetically 'noisy' monzonite outer rim.

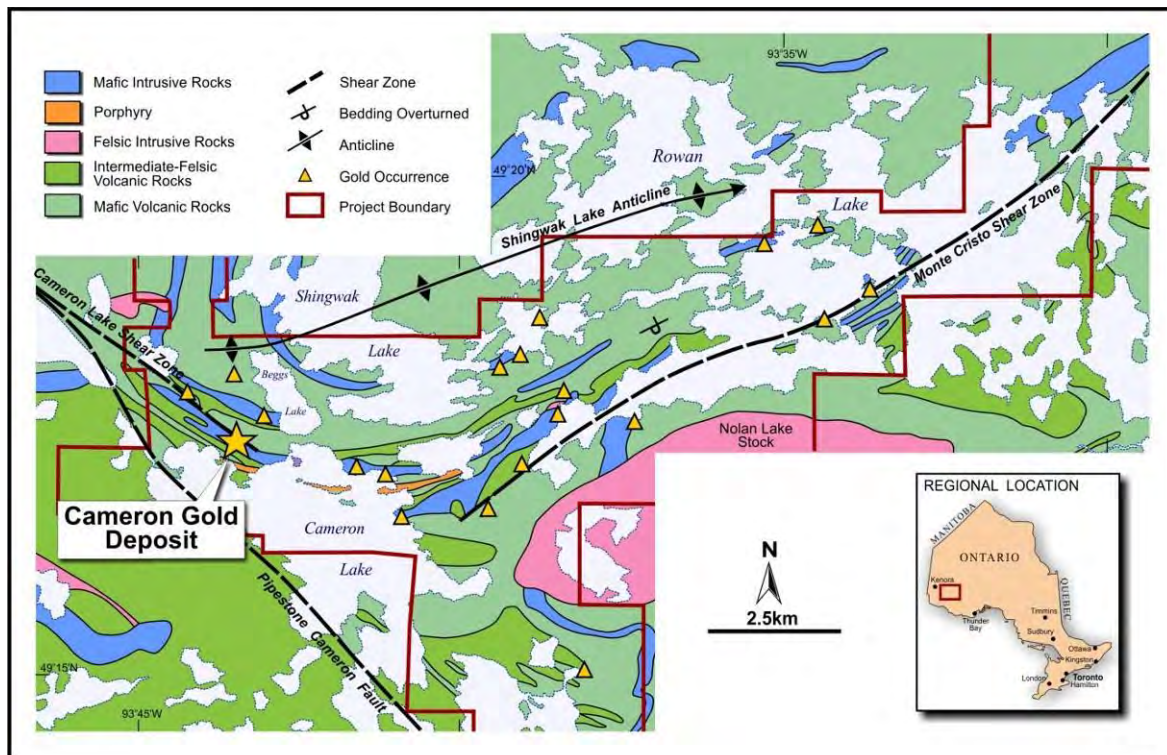


Figure 3: Regional structures in relation to Cameron Gold project boundaries

#### 4. Work Programme Summary

The Aeroquest Airborne Logistics Report is attached in Appendix 1 and summarizes the details of the survey. Survey maps are located in Appendix 2.

#### 5. Conclusions and Recommendations

The aeromagnetic survey performed by Aeroquest Airborne over the Cameron Gold Project provided valuable data to increase the understanding of bedrock geology of the region.

Recommended future work for the area covered by the survey will initially require mapping and prospecting to validate geological interpretation and investigate any exploration targets identified.

## **APPENDIX I**

# Report on a Detailed Airborne Magnetic Gradiometer Survey



**Aeroquest Job # 10-060**

## **Cameron Lake Project**

Fort Frances, Ontario

For

## **Cameron Lake JEX Corporation**

15 Toronto Street, Suite 600  
Toronto, ON, M5C 2E3

By



7687 Bath Road  
Mississauga, Ontario, L4T 3T1  
Tel: (905) 672-9129  
Fax: (905) 672-7083  
[www.aeroquestairborne.com](http://www.aeroquestairborne.com)

Report date: December 2010

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## 1. GENERAL SURVEY INFORMATION

Aeroquest Surveys conducted a low level airborne geophysical survey on behalf of Cameron Lake JEX Corporation. on the Cameron Lake Project near Fort Frances, Ontario. The survey included collection of detailed airborne gradiometer magnetic data using a fixed wing platform.

The total survey coverage is 3465 km, of which 3253 line-km fell within the defined project area, flown in 0°/180°line direction. Acquisition for the main part of the survey commenced on the 29<sup>th</sup> of October, 2010 and was completed on the 2<sup>nd</sup> of November, 2010. On February 11, 2011 four small areas appending the main survey were flown. The base location used for operating the aircraft and performing in-field quality control was Kenora, Ontario.

## 2. SURVEY SPECIFICATIONS

The survey consists of one block, and is located approximately 80km south east of Kenora, Ontario. Refer to Figure 1 for a map of this survey block.

The survey was flown using the WGS84 coordinate system (a Universal Transverse Mercator projection) derived from the World Geodetic System and was contained within zone 15N. Details of the datum and projection system are provided in Appendix B of this report.

Survey area coordinates:

### Cameron Lake Project (NAD83, UTM Zone 15N)

#### Main Block

X	Y	X	Y
444371.1	5465158.5	463042.5	5469905.3
447813.7	5465158.7	470667.1	5469861.0
447813.7	5462548.6	470671.5	5465357.8
454846.2	5462530.9	466226.7	5465421.7
454849.5	5462683.6	466251.7	5462577.6
456586.4	5462883.1	462148.1	5462723.3
456579.5	5465022.6	455180.5	5456772.1
459395.3	5465060.6	452231.6	5456731.9
459392.8	5465827.2	452247.7	5458281.5
461496.5	5465866.2	445825.8	5459779.9
461496.2	5468621.2	444372.1	5459845.9
463054.6	5468610.6	444371.1	5465158.5



**Block 2**

X	Y
453017	5463772
456583	5463776
456586	5462883
454850	5462684
454846	5462531
453021	5462536

**Block 3**

X	Y
470665	5469772
471017	5469772
471017	5466572
470670	5466489

**Block 4**

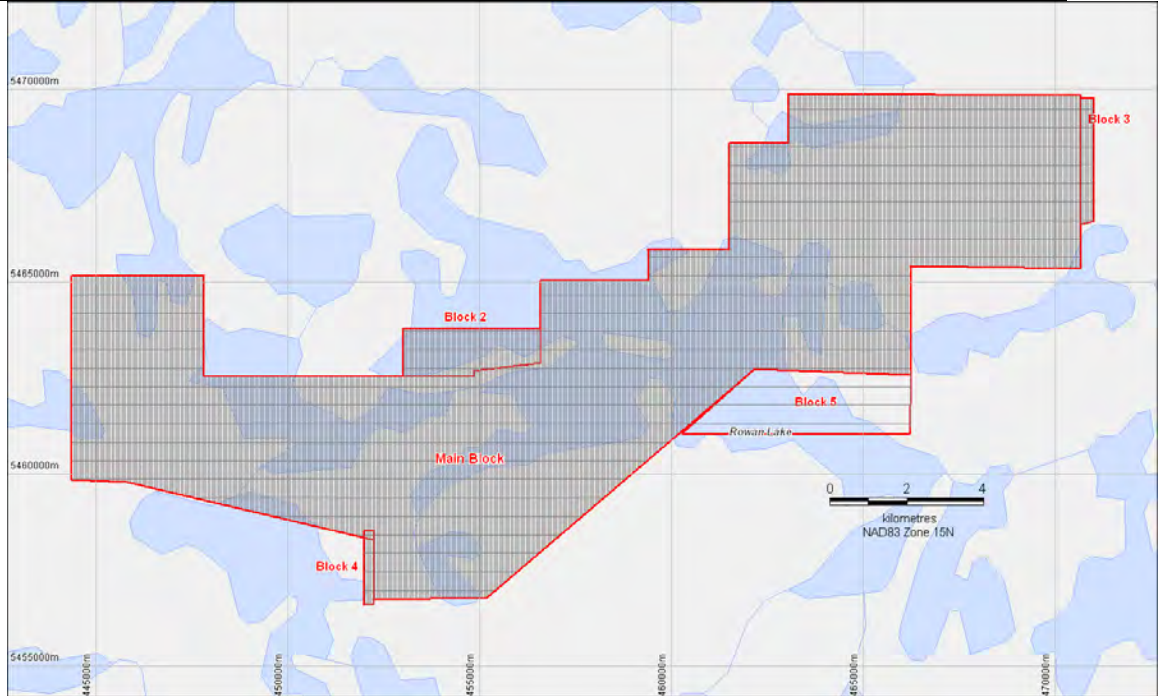
X	Y
451992	5458519
452249	5458522
452231	5456584
451983	5456585

**Block 5**

X	Y
460328	5461212
461625	5462330
466254	5462336
466252	5461211



Figure 1. Location of the Survey Area



**Figure 2. Project Flight Path showing Main Block and Appended Areas.**

The survey data acquisition specifications for the area flown are specified as follows:

Area Name	Line Spacing (m)	Line Direction	Tie Line Spacing (m)	Tie Line Direction	Sensor Height (m)	Survey Coverage (line-km)
Cameron Lake (incl. Additional areas)	50	0°/180°	500	90°/270°	50	3465

The sensor height may be varied where topographic relief or laws pertaining to built up areas do not allow this altitude to be maintained, or where the safety of the aircraft and equipment is endangered due to natural or manmade structures including aerials, bridges, buildings etc.

### 3. AIRCRAFT AND SURVEY EQUIPMENT

The UTS navigation flight control computer, data acquisition system and geophysical sensors were installed into a specialized geophysical survey aircraft. The magnetometers in this aircraft are located in a rigid tail stinger and rigid mounted wingtip pods in order to acquire a measured horizontal magnetic gradient.

The list of geophysical and navigation equipments used for the survey are as follows:

### **General Survey Equipment**

- PAC 750XL, single engine fixed wing survey aircraft.
- UTS proprietary flight planning and survey navigation system.
- UTS proprietary high speed digital data acquisition system.
- Novatel 3951R, 12 channel precision navigation GPS.
- OMNILITE 132 real time differential GPS system.
- UTS LCD pilot navigation display and external track guidance display.
- UTS post mission data verification and processing system.
- Bendix King KRA-405 radar altimeter.

### **Magnetic Data Acquisition Equipment**

- UTS tail stinger and wingtip magnetometer installations.
- Three Geometrics G822A Cesium Vapour total field magnetometers.
- Fluxgate three component vector magnetometers.
- RMS Adaptive Aeromagnetic Real Time Compensator (AARC 500).
- Diurnal monitoring magnetometer (Geometrics 856).

#### **3.1 Survey Aircraft**

The aircraft used for this survey was a PAC 750XL series fixed wing survey aircraft operated by Kiwi Air, registration ZK-XLB. The specifications are as follows:

#### **Power Plant**

- Engine Type Pratt and Whitney PT-6-34AG
- Shaft Horse Power 750 eshp
- Fuel Type JET-A1

#### **Performance**

- Cruise speed 155 kn
- Survey speed 140 kn
- Stall speed 50 kn



- Range 2550 km
- Endurance (no reserves) 10.5 hours
- Fuel tank capacity 1800 litres

### **3.2 Data Positioning and Flight Navigation**

Survey data positioning and flight line navigation was derived using real-time differential GPS (Global Positioning System).

Navigation was assisted by the UTS-designed and built electronic pilot navigation system which provides computer-controlled digital navigation instrumentation mounted in the cockpit as well as an externally mounted track guidance system.

GPS-derived positions were used to provide both aircraft navigation and survey data location information. The GPS receiver was located on the roof of the fuselage, collinear with the wingtip sensors and in line with the tail sensor.

The GPS systems used for the survey were:

- Aircraft GPS Model OEM V-3
- Sample rate 0.5 seconds (2 Hz)
- GPS satellite tracking channels 12 parallel
- Typical differentially corrected accuracy 1-2 metres (horizontal)  
3-5 metres (vertical)

### **3.3 UTS Data Acquisition System and Digital Recording**

All geophysical sensor and positional information measured during the survey was recorded using a UTS-developed, high speed, and precision data acquisition system. Survey data was copied to a CompactFlash card on completion of each survey flight.

Instrument synchronisation times were measured with errors removed in real-time by the UTS data acquisition system.

### **3.4 Altitude Readings**

Terrain clearance data were measured using a King radar altimeter installed in the aircraft. The height of each survey data point was

measured by the radar altimeter and stored by the UTS data acquisition system.

- Radar altimeter models      Bendix/King KRA-405
- Accuracy                            0.3 metres
- Resolution                         0.1 metres
- Range                                0 - 500 metres
- Sample rate                        0.1 Seconds (10Hz)

The digital terrain model is calculated by subtracting the terrain clearance (radar altimeter) from the GPS height (interpolated to 0.1 Hz), and as such the accuracy is constrained by the differentially-corrected GPS position.

### **3.5 UTS Stinger Mounted Magnetometer System**

The installation platform used for the acquisition of magnetic data consisted of a tail mounted stinger and wingtip pods on each wing. The proprietary stinger and wingtip system was constructed of carbon fibre and designed for maximum rigidity and stability.

The tail stinger and wingtip pods each house an identical total field magnetometer. The tail stinger also contains the three-component vector magnetometer.

### **3.6 Total Field Magnetometer**

Total field magnetic data readings for the survey were made using Geometrics G822A Cesium Magnetometers. These precision sensors have the following specifications:

- Model                                Geometrics G822A
- Sample rate                        0.1 seconds (10Hz)
- Resolution                         0.001nT
- Operating Range                 15,000nT to 100,000nT
- Temperature Range             -20°C to +50°C

### **3.7 Three Component Vector Magnetometer**

Three component vector magnetic data readings for the survey were made using a Develco Fluxgate Magnetometers. This precision sensor has the





following specifications:

- Model Develco Fluxgate Magnetometer
- Sample Rate 0.1 seconds (10Hz)
- Resolution 0.1nT
- Operating Range -100,000nT to 100,000nT

### **3.8 Aircraft Magnetic Compensation**

At the start of the survey, the system was calibrated to reduce magnetic heading error. The heading and manoeuvre effects of the aircraft on the magnetic data were removed using an RMS Adaptive Aeromagnetic Real Time Compensator (AARC500).

Calibration of the aircraft heading effects were measured by flying a series of pitch, roll and yaw manoeuvres at high altitude while monitoring changes in the three axis magnetometer and the effect on total field readings. A 26-term model of the aircraft magnetic noise covering permanent, induced and eddy current fields was calculated from these results. These coefficients were then applied to the data collected during the survey in real-time. UTS static compensation techniques were also employed to reduce the initial magnetic effects of the aircraft upon the survey data.

The Figure of Merit, acquisition system tests and aircraft system calibrations are included at the end of this report.

### **3.9 Diurnal Monitoring Magnetometer**

A base station magnetometer was located in a low gradient area beyond the region of influence of any man made interference to monitor diurnal variations during the survey.

The specifications for the magnetometer used are as follows:

- Model Geometrics 856
- Resolution 0.1 nT
- Sample interval 3 seconds
- Operating range 20,000nT to 90,000nT
- Temperature -20°C to +50°C

## **4. DATA PROCESSING PROCEDURES**

### **4.1 Data Pre-processing**

The raw survey data was loaded from the Compact Flash cards and trimmed to the correct survey boundary extents. Any survey lines subsequently re flown were removed from the dataset.

At the commencement of each acquisition flight, all instrument clocks were synchronized to local time, and the latency of each instrument to provide its data measurement was calculated. The results of these latency measurements were recorded into a synchronisation file, and the results were used to assign GPS positions to the magnetic and elevation data. Any residual parallax was removed via correlation software.

The synchronized, parallax-corrected data was then exported as located ASCII data.

### **4.2 Magnetic Data Processing**

The diurnal base station data was checked for spikes and steps, and suitably filtered prior to the removal of diurnal variations from the aircraft magnetic data. The filtered diurnal measurements were subtracted from the diurnal base field (October & November= 57585nT, February = 56789nT) and the residual corrections applied to the survey data by synchronizing the diurnal data time and the aircraft survey time.

The X and Y positioning of the data was then checked for spikes before applying the IGRF correction. Any spikes in the position data were manually edited. The IGRF 2010 correction was calculated at each data point (taking into account the elevation above sea level). This regional magnetic gradient was subtracted from the survey data points.

Located and gridded data were generated from the final processed magnetic data.

### **4.3 Measured Magnetic Gradients**

The two magnetic gradients were calculated by differencing the three measured total field readings and adjusting for the sensor separations as described in Section 10.2. The gradient data are corrected for flight line direction. DC shifts of the gradients data are then removed on a line-by-line basis.

The longitudinal and transverse gradient data were then interpolated into gridded data and are presented both as maps and are included in the archive.

#### ***4.4 Horizontal Gradient Enhanced (HGE) TMI Gridded Data***

The magnetic data from the tail sensor was gridded incorporating the transverse magnetic gradient data. This technique will improve the line-to-line continuity of magnetic features, in particular features that strike sub-parallel to the line direction. As well, this process will enhance the appearance of small off-line magnetic units. These refinements should also increase the interpretability of any additional grid filtering products such as vertical or tilt derivatives and analytic signal magnetic products.

#### ***4.5 Digital Terrain Model Data Processing***

The radar altimeter data were subtracted from the GPS altimeter data to calculate the digital terrain model.

The digital terrain data thus derived was examined and selectively microleveled to produce a grid without line-dependent artefacts.

## **5. DELIVERABLES**

### ***5.1 Hardcopy Deliverables***

The report includes maps at a scale of 1:20,000. The survey area is covered by one map sheet and seven geophysical data products are delivered as listed below:

- TMIGE – Gradient Enhanced Total Magnetic Intensity with contours
- MTG – Measured Transverse Gradient with contours

The coordinate/projection system for the maps is NAD83 – UTM Zone 15N. For reference, the latitude and longitude in WGS84 are also noted on the maps.

### ***5.2 Digital Deliverables***

#### **Final Database of Survey Data (.GDB)**

The geophysical profile data are archived digitally in a Geosoft GDB database. A description of the contents of the individual channels in the

database can be found in Appendix A. A copy of the digital data is archived at the Aeroquest head office in Mississauga.

### **Geosoft Grid Files (.GRD)**

Levelled grid products used to create the geophysical map images. These include Total Magnetic Intensity, Gradient Enhanced Total Magnetic Intensity, Measured Transverse Gradient, Measured Longitudinal Gradient, First Vertical Derivative of TMI, Tilt Derivative of TMI and the Digital Terrain Model.

### **Digital Versions of Final Maps (.MAP and .PDF)**

The final hardcopy maps are provided digitally in Packed Geosoft MAP format and in Adobe PDF format.

### **Digital Copy of this Document (.PDF)**

Adobe PDF format of this document.

## **6. PROJECT MANAGEMENT**

The following Aeroquest personnel were involved in the project:

- Senior Project Manager: Troy Will
- Field Data Processors: Mark Froncisz/ Edward You
- Office Data Processor: Asif Mirza
- Mapping and Reporting: Andrea Ngui and Asif Mirza

The following Kiwi Air personnel were involved in the project:

- Survey Pilot: Matt Hollands and Sam Daniels

## 7. APPENDIX A – DESCRIPTION OF DATABASES FIELDS

The GDB files are Geosoft binary database files. The fields are described below:

<b>FIELD</b>	<b>DESCRIPTION</b>
Flight	Flight Number
Line	Line Number
Date	Date of each flight
UTCTIME	UTC Time (HH:MM:SS)
Latitude	Latitude WGS84 (decimal degrees)
Longitude	Longitude WGS84 (decimal degrees)
X	UTM Easting (m), NAD83 UTM Zone 15N
Y	UTM Northing (m), NAD83 UTM Zone 15N
Basemag	Base Station Magnetic Data (nT)
Ralt_m	Radar altitude (m)
GPS_Height	GPS elevation (m.a.s.l.)
DTM	Levelled digital terrain model (m.a.s.l.)
TMI_Tail	Diurnal Corrected & Levelled TMI (nT)
IGRF	IGRF Correction Applied (2010 Reference) (nT)
TMI_IGRF	Levelled, IGRF-Corrected Magnetic Field (nT)
Transverse_Gradient	Measured Transverse Gradient (nT/m)
Longitudinal_Gradient	Measured Longitudinal Gradient (nT/m)
Mag_Port	Compensated Total Field – Port Sensor (nT)
Mag_CMP	Compensated Total Field – Starboard Sensor (nT)
Mag_CMP	Compensated Total Field – Starboard Sensor (nT)
Inc	Magnetic Inclination
Dec	Magnetic Declination



## 8. APPENDIX B - COORDINATE SYSTEM DETAILS

Locations for the survey data are provided in both geographical latitude and longitude and Universal Transverse Mercator metric projection coordinate systems.

**Coordinate System** [?] [X]

X,Y channels: **x,y**

---

Coordinate system:  Projected (x,y)  Geographic (long, lat)  
 Unknown Copy from...

---

Length units: metre [v]

Transformation: none

Orientation: none

---

Datum: NAD83 [v] [^]

Ellipsoid: GRS 1980

Major axis radius: 6378137

Inverse Flattening: 298.25722

Prime Meridian: 0

Local datum transform: [NAD83] (4m) North America - all Canada and USA subur [v] [v]

\* Projection method: UTM zone 15N [v] [^]

Type: Transverse Mercator

Latitude of natural origin: 0

Longitude of natural origin: -93

Scale factor at natural origin: 0.9996

False easting: 500000

False northing: 0

New OK Cancel

## 9. APPENDIX C – PROCESSING PARAMETERS

### 9.1 Magnetic Processing Parameters

IGRF Model Year: 2010  
 Inclination: 75°  
 Declination: 0.3°  
 IGRF Total Field: October & November 57577.3nT, February 57579.9nT  
 Diurnal Base Level: October & November 57585nT, February 56789nT

## 10. APPENDIX D – FIGURE OF MERIT AND GRADIOMETER CONFIGURATION DIAGRAM

### 10.1 Figure of Merit

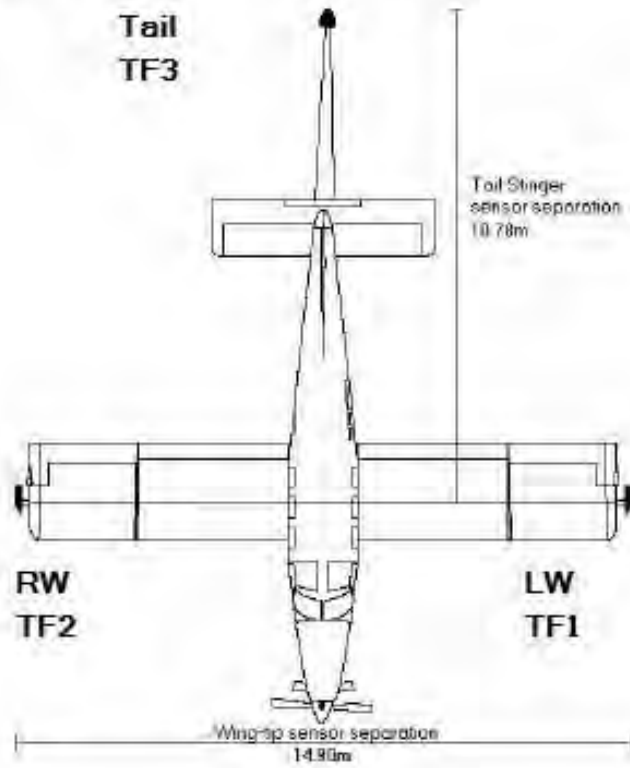
MAG1		
90°	Pitch	0.111
	Roll	0.048
	Yaw	0.099
	<b>SUB</b>	<b>0.258</b>
180°	Pitch	0.070
	Roll	0.039
	Yaw	0.045
	<b>SUB</b>	<b>0.154</b>
270°	Pitch	0.088
	Roll	0.068
	Yaw	0.060
	<b>SUB</b>	<b>0.216</b>
360°	Pitch	0.102
	Roll	0.063
	Yaw	0.052
	<b>SUB</b>	<b>0.217</b>
	<b>FOM</b>	<b>0.845</b>

MAG2		
90°	Pitch	0.068
	Roll	0.068
	Yaw	0.054
	<b>SUB</b>	<b>0.190</b>
180°	Pitch	0.050
	Roll	0.042
	Yaw	0.030
	<b>SUB</b>	<b>0.122</b>
270°	Pitch	0.058
	Roll	0.048
	Yaw	0.052
	<b>SUB</b>	<b>0.158</b>
360°	Pitch	0.071
	Roll	0.041
	Yaw	0.033
	<b>SUB</b>	<b>0.0145</b>
	<b>FOM</b>	<b>0.614</b>

MAG3		
90°	Pitch	0.027
	Roll	0.015
	Yaw	0.020
	<b>SUB</b>	<b>0.062</b>
180°	Pitch	0.012
	Roll	0.011
	Yaw	0.016
	<b>SUB</b>	<b>0.039</b>
270°	Pitch	0.022
	Roll	0.023
	Yaw	0.013
	<b>SUB</b>	<b>0.058</b>
360°	Pitch	0.021
	Roll	0.015
	Yaw	0.011
	<b>SUB</b>	<b>0.047</b>
	<b>FOM</b>	<b>0.206</b>

## 10.2 Gradiometer Configuration Diagram

PAC750-XL Gradiometer Configuration





**For further information concerning the survey flown, please contact the following office:**

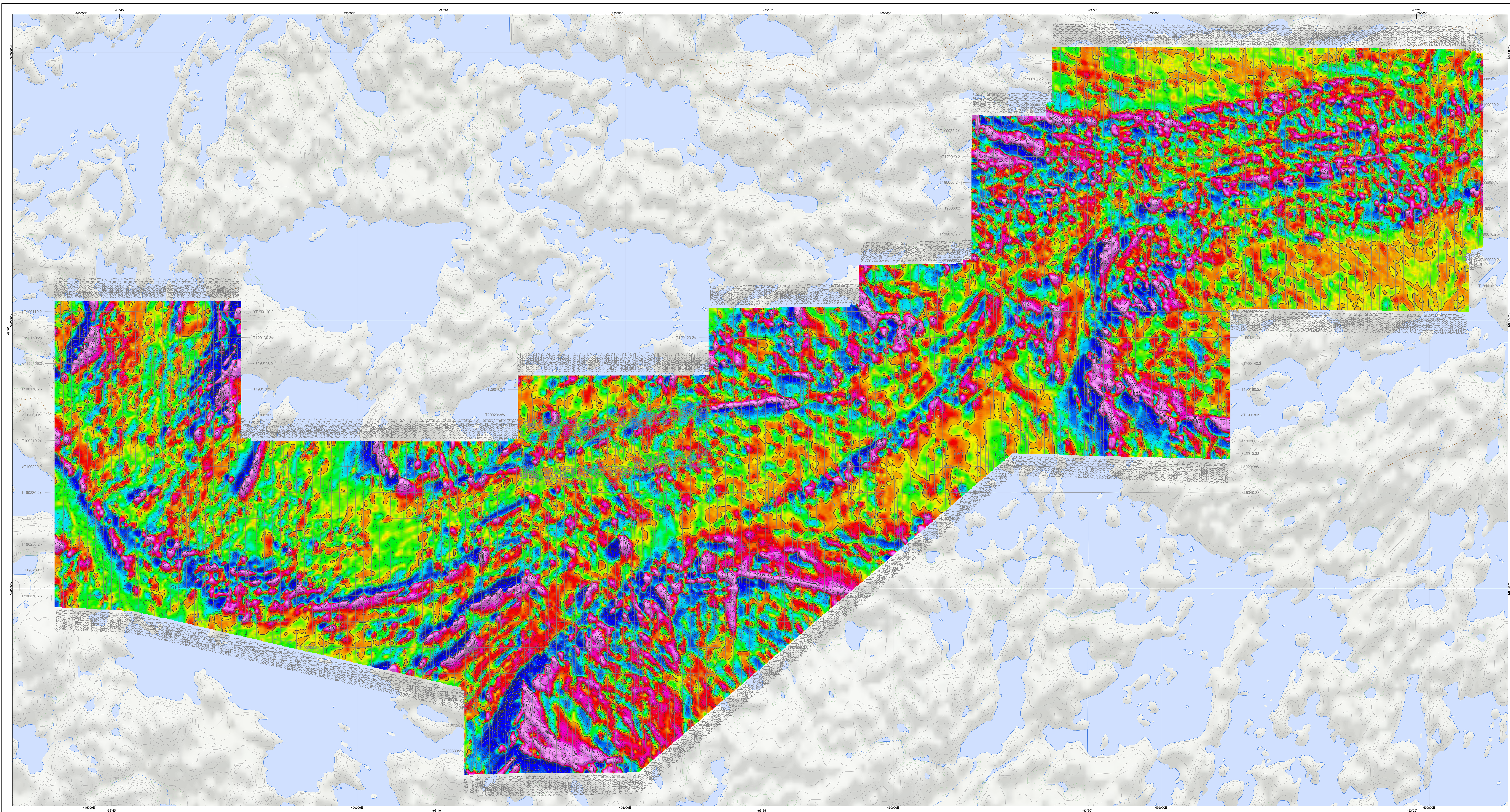
**Head Office Address:**

Aeroquest Limited  
7687 Bath Road  
Mississauga, Ontario  
L4T 3T1

Tel: 1 905 672 9129  
Fax: 1 905 672 7083

## **APPENDIX II**



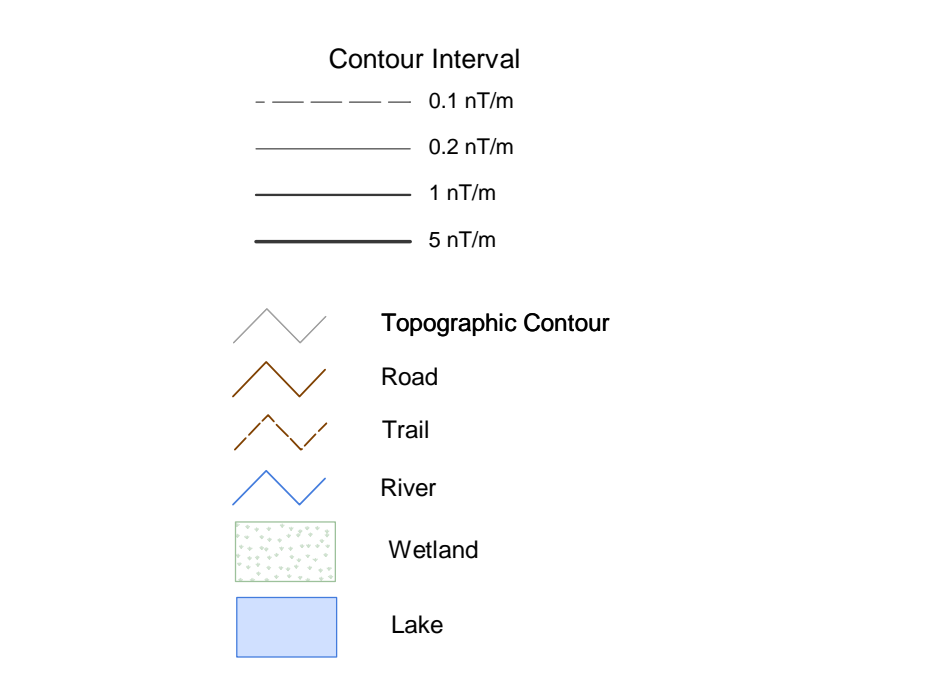
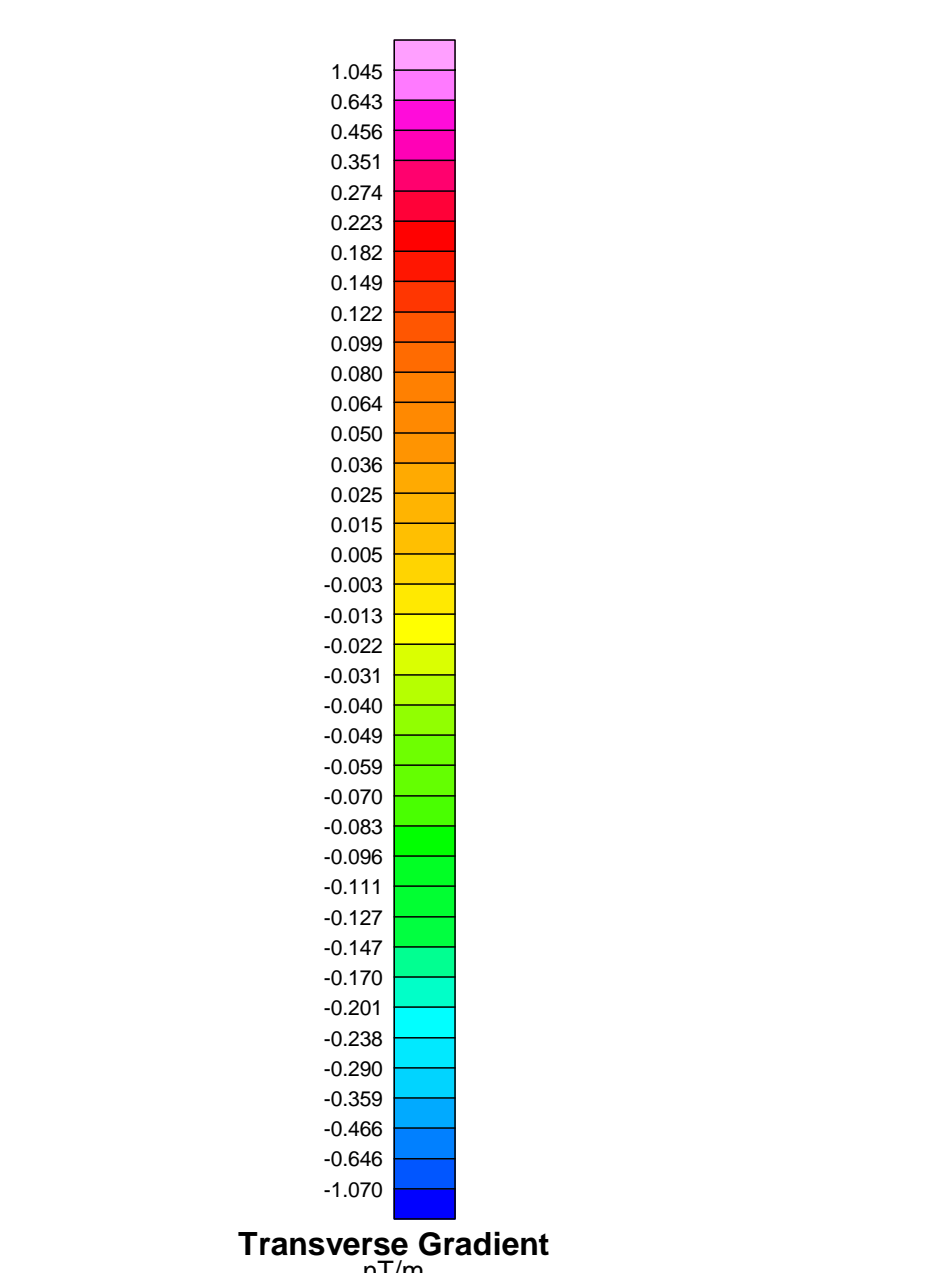


The geographic data base was sourced from 1:50000 NSR (Natural Resources Canada) 1:50000 data.  
 Background shading derived from NASR 3870 data.  
 Line data derived from Geospatially 1:50000 data.

This map accompanies the technical report entitled Report on an Airborne Magnetic Geophysical Survey/Cameron Lake Project  
 Fort Frances, Ontario, by Natural Resources February 2011

Grid North  
 NAD83 Zone 15

Scale 1:125,000



**SURVEY SPECIFICATIONS**  
 Survey Dates: October 29 - November 2, 2010 & February 3, 2011  
 Flight Line Spacing: 50000 m  
 Flight Line Direction: 0°/180°  
 Tie Line Direction: 90°/270°  
 Survey Height: 50 metres  
 Line Navigation: Real-time differential GPS

**EQUIPMENT SPECIFICATIONS**  
 Aircraft: Twin Otter, King Air, DHC-6  
 Data Acquisition: UTG ACQ315  
 GPS System: Novatel 9601S, 12 channel  
 Radio Altimeter: Bendix King, KRA-605  
 Magnetometers: 3 x Geometrics G82A

**COMPENSATION**  
 Compensation: RAS ARC500 operating in real time  
 Processor: QRTM  
 Recording Interval: 0.1 seconds  
 Sensor Height: 50 metres  
 Separation between Port & Starboard sensors: 14.9 metres  
 Separation between JFT & Aft of Forward sensors: 10.75 metres

**PROCESSING SPECIFICATIONS**  
 The magnetic data has been corrected and leveled using the following processes:  
 - Diurnal variations were removed through subtraction of the diurnal field measured at the base station magnetometer.  
 - The regional magnetic gradient has been removed through subtraction of the GCRF gradient collected at the site of the survey.  
 - System parallels were corrected.  
 - The final magnetic data was leveled using the survey tie line data.  
 - The final magnetic data was microlevelled to remove minor residual variations in profile-intensities.

**POSITIONING**  
 Datum: NAD83  
 Major Axis: 637606.4  
 Inverse Flattening: 294.9787

**MAP PROJECTION**  
 Projection: Universal Transverse Mercator  
 Central Meridian: 89°W (Zone 15)  
 Central Scale Factor: 0.9996  
 False Easting/Northing: 500,000.00m

Scale 1:20,000

**Cameron Lake JEX Corporation**  
 Fort Frances, Ontario

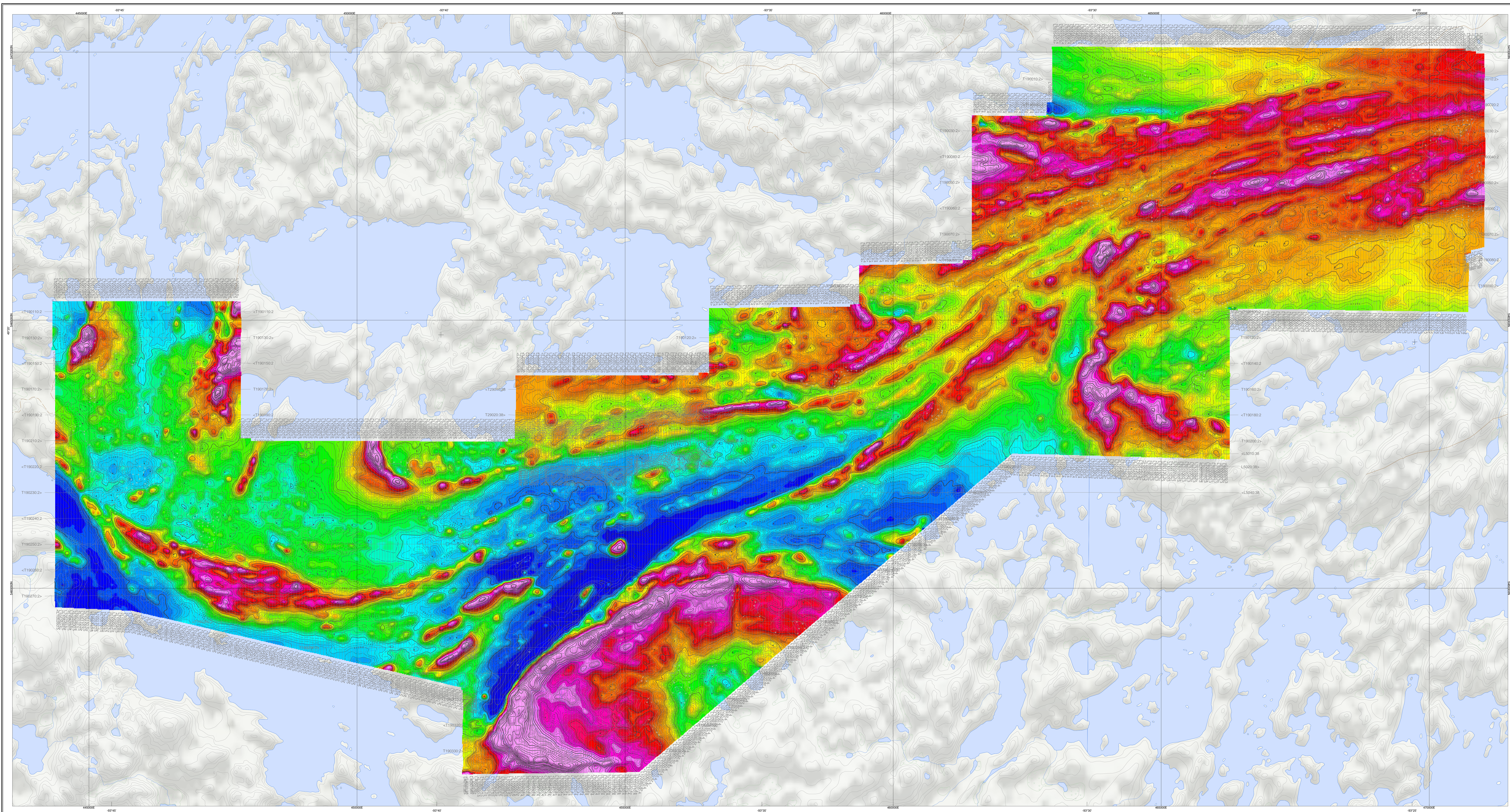
**MEASURED  
 TRANSVERSE GRADIENT**

**Cameron Lake Project**  
 NTS 02CF06\_022F06

**AEROQUEST**  
 7857 Bath Road, Mississauga, ON, CANADA L4T 3T1  
 Tel: (905) 273-1129 Fax: (905) 273-1985  
 www.aeroquest.com

February 2011



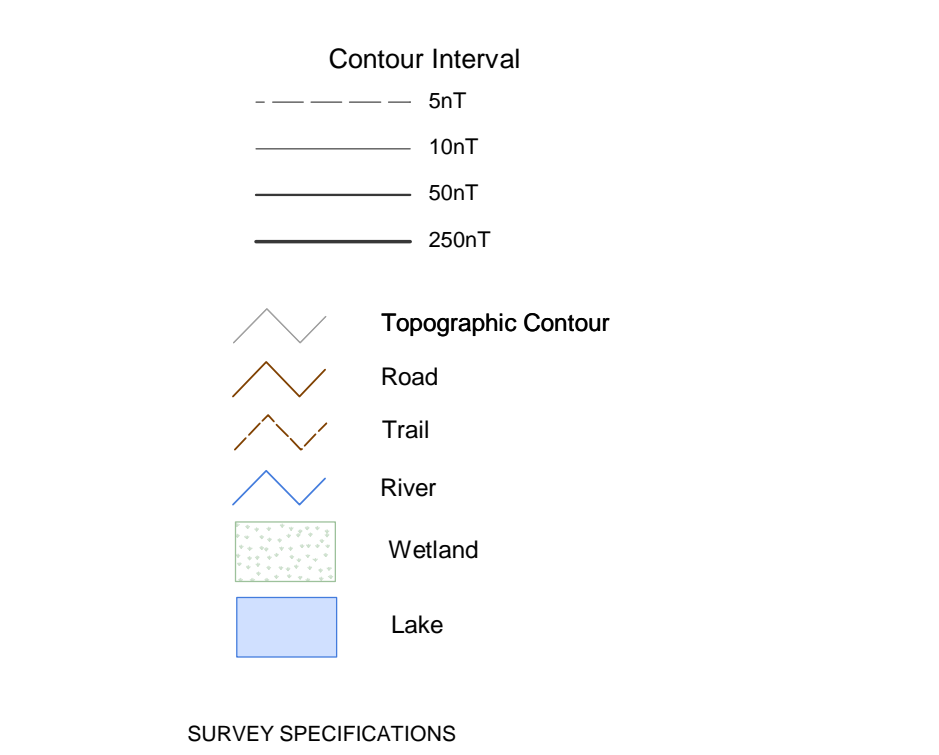
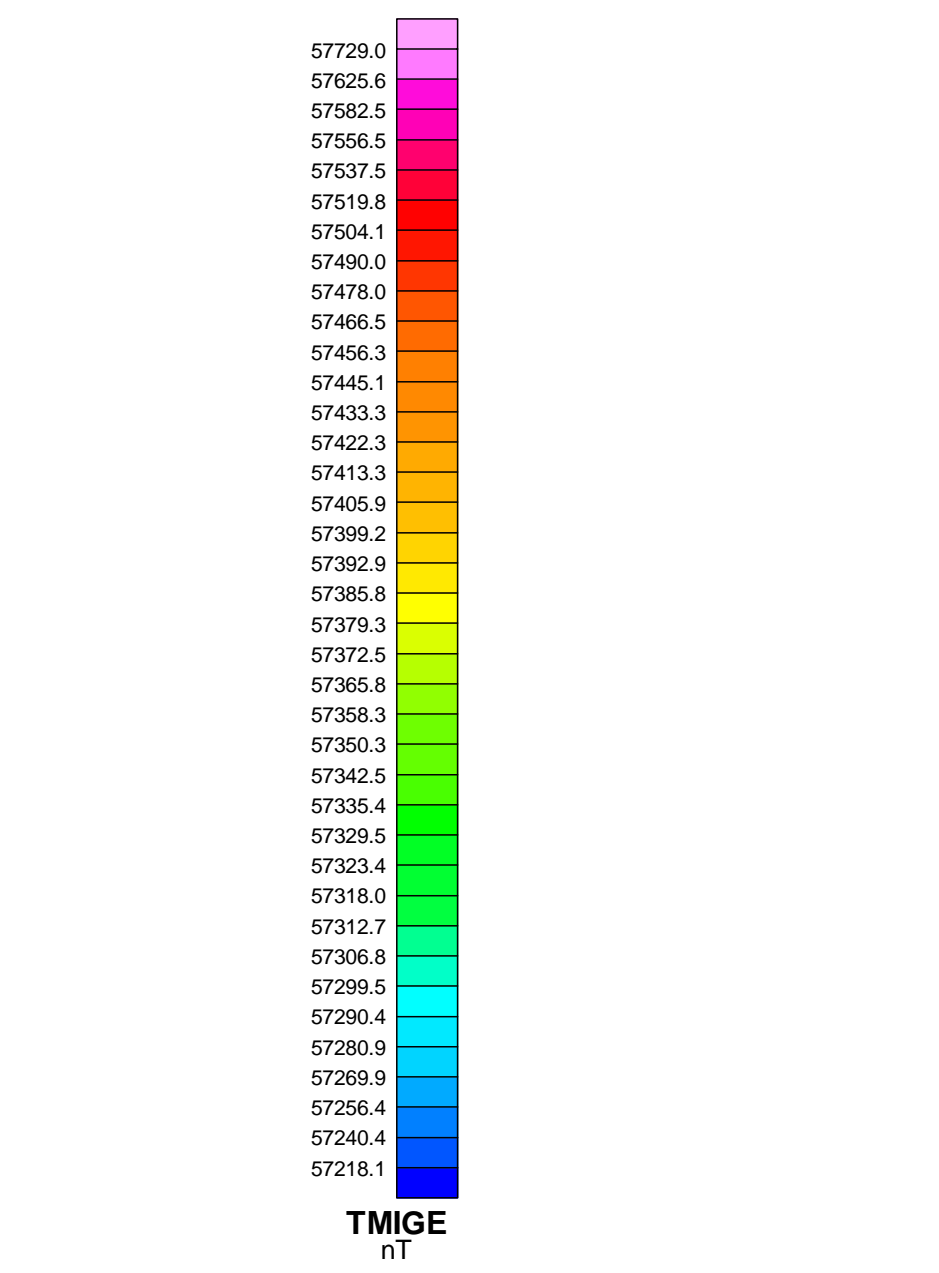


The topographic data base was sourced from 1:50000 NSR (Natural Resources Canada) DTB data.  
 Background shading derived from NASR DTB data.  
 Line data derived from Geospatially 1:50000 data.

This map accompanies the technical report entitled Report on an Airborne Magnetic Gradient Survey/Contour Lake Project  
 Fort Frances, Ontario, by Natural Resources, February 2011.

Grid North  
 NAD83 Zone 15

Scale 1:125,000



**SURVEY SPECIFICATIONS**  
 Survey Dates: October 29 - November 3, 2010 & February 3, 2011  
 Flight Line Spacing: 50/500 m  
 Flight Line Direction: 070/270  
 Tie Line Direction: 90/270  
 Survey Height: 50 meters  
 Line Navigation: Real-time differential GPS

**EQUIPMENT SPECIFICATIONS**  
 Aircraft Type: P-3C/440, Reg. DK-XLB  
 Data Acquisition: UTM ACC315  
 GPS System: Novatel 960, 12 channel  
 Radio Altimeter: Bendix King, KRA-605  
 MAGNETICS  
 Magnetometers: 3 x Geometrics G82A  
 Compensation: RAS ARC500 operating in real time  
 Resolution: 0.01 mT  
 Recording Interval: 0.1 seconds  
 Sensor Height: 50 meters  
 Separation between Port & Starboard sensors: 14.9 meters  
 Separation between JFT & Aft of Forward sensors: 10.75 meters

**PROCESSING SPECIFICATIONS**  
 The magnetic data has been corrected and leveled using the following processes:  
 - Diurnal variations were removed through subtraction of the diurnal field measured at the base station magnetometer.  
 - The regional magnetic gradient has been removed through subtraction of the GRF model created at the date of the survey.  
 - System parallel was corrected.  
 - The final magnetic data was leveled using the survey tie line data.  
 - The final magnetic data was microleveled to remove minor residual variations in profile-intensities.

**POSITIONING**  
 Datum: NAD83  
 Major Axis: 637606.4  
 Inverse Flattening: 294.9787  
 MAP PROJECTION  
 Projection: Universal Transverse Mercator  
 Central Meridian: 82°W (Zone 15)  
 Central Scale Factor: 0.9996  
 False Easting/Northing: 500,000.00m

scale 1:20,000

Cameron Lake JEX Corporation  
 Fort Frances, Ontario

**GRADIENT ENHANCED  
 TOTAL MAGNETIC INTENSITY**

Cameron Lake Project  
 NTS 02CF06\_022F06

**AEROQUEST**  
 7857 Bath Road, Mississauga, ON, CANADA L4T 3T1  
 Tel: (905) 273-3123 Fax: (905) 273-7865  
 www.aeroquest.com

February 2011