5. Conclusions and Recommendations

A helicopter-borne electromagnetic and magnetic survey was flown by Geotech Ltd. in July 2011 over the Storm Property on Somerset Island, Nunavut; the survey is comprised of ~3,970 line-kilometres of data acquired on a grid pattern of 300 and 150 m spaced traverses oriented at N030°E, controlled by 1,500 m spaced tie lines oriented at right angles toward N120°E. The electromagnetic technology utilized is Geotech's *VTEM Plus* time-domain system in a towed-loop configuration. Products obtained from this airborne geophysical survey include the total magnetic intensity, calculated (magnetic) vertical derivative, dB/dt and B-field both X- and Z-components, both dB/dt and B-field calculated Time Constants Tau, and a digital elevation model. Resistivity depth imaging (RDI) sections and apparent resistivity depth slices were also subsequently supplied as part of the interpretation phase of this project. A geosoft-format database of the profile data, as well as grids of total magnetic intensity, calculated vertical derivative, a single mid-time B-field Z-axis component, dB/dt and B-field time constants and the digital elevation model were provided by the contractor.

Enhanced derivative grids of the magnetics were generated and imaged as part of this study and which have highlighted a limited number of structural orientations and trends. The aeromagnetic data is primarily reflecting very long wavelength, buried features believed to be sourced in the Proterozoic basement at some depth; a high-frequency, shallow component is, however, evident throughout and is possibly related to detrital materials themselves related to variation in sea levels. Significant linears are mapped based upon analysis of all derivatives; these are interpreted as most likely occurring within the sedimentary section (based on frequency content) and may be related to equivalent horizons to the known Storm copper zones. These features are presented as possible structural controls impacting the stratiform sulphide mineralization.

The principle airborne electromagnetic anomalies of interest occur coincident to the known 4100N, 2750N and 2200N zones; also responding well to the VTEM system are the ST97-15 and ST99-34 zones; these 5 zones comprise the sole, unambiguous bedrock responses in the entire survey. The 3500N zone does not have a significant positive AEM response, but does lay right along the gradient edge from positive (extended and layered conductive zone) to negative response, apparently at the southern edge of the NW-trending graben. All of these conductive responses are distinguished by a complete lack of direct magnetic correlation.

Based on initial test modelling of selected lines, a consecutive series of 41 flight lines over the main Storm copper zone were chosen for detailed resistivity depth imaging (RDI) by the airborne contractor; results were provided as section images and grids for each line as well as a 3D voxel model of the apparent resistivity. This data was analyzed in 3D using Encom PA (visualization and interpretation software). Analysis of the RDI inversions in conjunction with the historical drilling suggests that there remain portions of the 4100N, ST97-15, ST99-34 and 2200N Zones that have not been drill tested adequately. Further, the deep (100 to 200 m below sea level) conductive trends shown to be extending southward from the 4100N Zone have not been tested at all. Additional modeling of the VTEM data using the Maxwell plate modelling software should permit precise drill targeting for these bodies.

Notwithstanding the lack of absence of unambiguous bedrock conductors removed from the above, and drilled zones, 9 target 'areas of interest' are identified on the following image as A-I; without exception, all represent primarily surficial or near-surface conductivity with very weak mid-time decays. These targets do not have similar characteristics to the main Storm zones discussed above, but nonetheless present themselves as possible areas for ground follow-up and geochemical sampling. They may reflect sulphides deficient in copper, or sulphides dominant in zinc and/or lead mineralization and thus not amenable to direct detection by electromagnetics.

A program of geological prospecting, sampling and ground geophysics consisting of 3D induced polarization / resistivity is recommended to further delineate the conductive zones and possible identify disseminated sulphides which in turn could indicate anomalous Cu mineralization.

All targets and zones or areas of interest are supplied separately to Commander Resources Ltd. as Mapinfo *.tab files with accompanying annotation and geo-referencing.

6. Certificate of Professional Qualifications

I, Christopher J. Campbell, with business address of 4505 Cove Cliff Road, North Vancouver British Columbia V7G 1H7, hereby certify that:

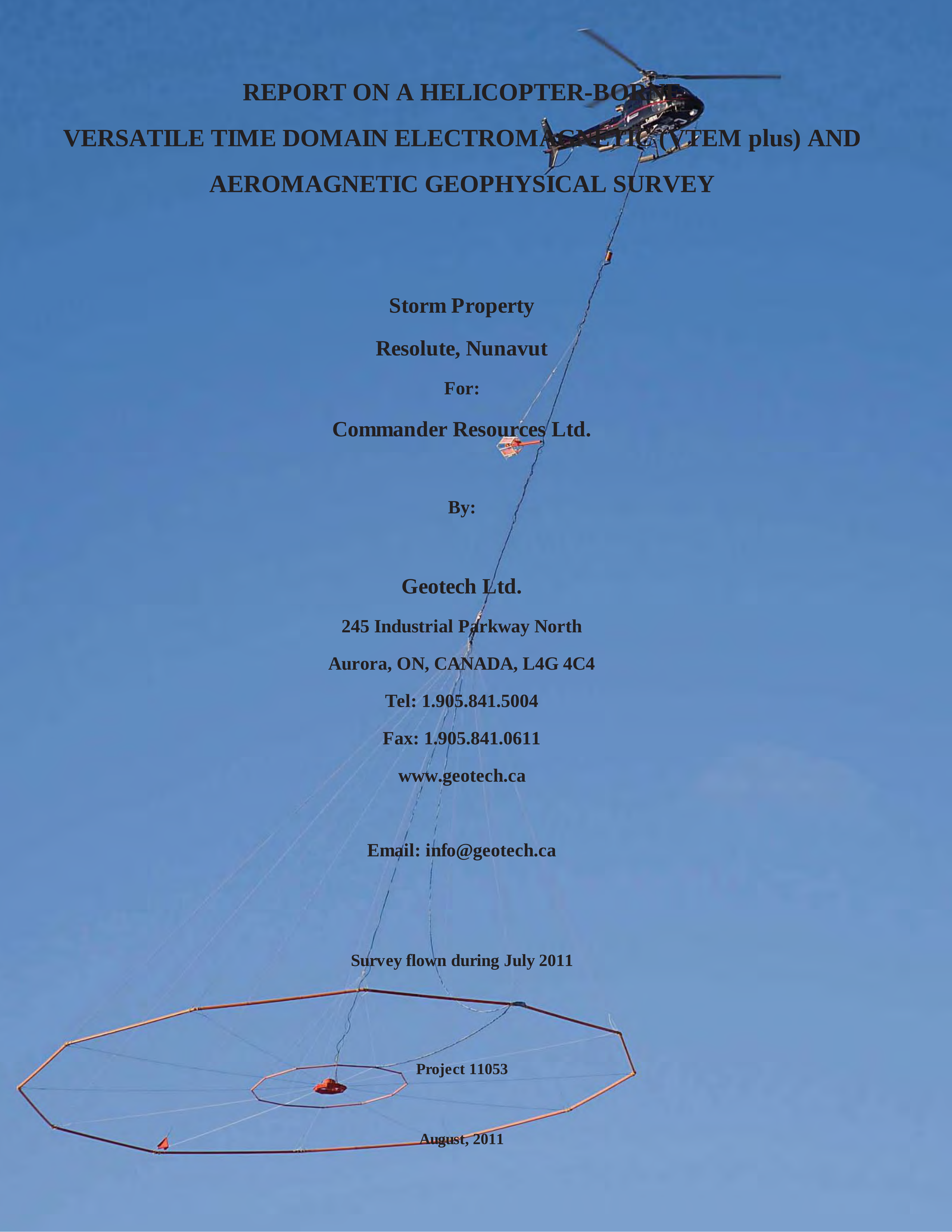
- I am a graduate (1972) of the University of British Columbia, with a Bachelor of Science degree in Geophysics.
- I am a graduate (1986) of the University of Denver, with a Masters of Business Administration.
- I am a registered member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia.
- I have practiced my profession for approximately thirty-nine years in Canada (British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, Newfoundland/Labrador, Yukon and Northwest Territories / Nunavut), United States of America, Australia, Russia, and Africa.
- I have no interest, direct or indirect, in the properties or securities of Commander Resources Ltd., or in any of their related companies or joint venture partners anywhere in Canada.

Dated this day November 18, 2011 in North Vancouver, British Columbia.

Christopher J. Campbell, P. Geo.

Appendix A

Airborne Contractor’s Logistics and Processing Report



REPORT ON A HELICOPTER-BORNE VERSATILE TIME DOMAIN ELECTROMAGNETIC (VTEM plus) AND AEROMAGNETIC GEOPHYSICAL SURVEY

Storm Property

Resolute, Nunavut

For:

Commander Resources Ltd.

By:

Geotech Ltd.

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Aurora, ON, CANADA, L4G 4C4

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Survey flown during July 2011

Project 11053

August, 2011

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REPORT ON A HELICOPTER-BORNE VERSATILE TIME DOMAIN ELECTROMAGNETIC (VTEM plus) and AEROMAGNETIC SURVEY

Storm Property
Resolute, Nunavut

Executive Summary

During July 6th to July 24th, 2011 Geotech Ltd. carried out a helicopter-borne geophysical survey over the Storm Property situated approximately 107 kilometres southeast of Resolute, Nunavut.

Principal geophysical sensors included a versatile time domain electromagnetic (VTEM plus) system, and a caesium magnetometer. Ancillary equipment included a GPS navigation system and a radar altimeter. A total of 3819.7 line-kilometres of geophysical data were acquired during the survey.

In-field data quality assurance and preliminary processing were carried out on a daily basis during the acquisition phase. Preliminary and final data processing, including generation of final digital data and map products were undertaken from the office of Geotech Ltd. in Aurora, Ontario.

The processed survey results are presented as the following maps:

- Electromagnetic stacked profiles of the B-field Z Component,
- Electromagnetic stacked profiles of dB/dt Z Components,
- Colour grids of a B-Field Z Component Channel,
- Total Magnetic Intensity (TMI), and
- EM Time-constant dB/dt Z Component (Tau), are presented.

Digital data includes all electromagnetic and magnetic products, plus ancillary data including the waveform.

The survey report describes the procedures for data acquisition, processing, final image presentation and the specifications for the digital data set.

1. INTRODUCTION

1.1 General Considerations

Geotech Ltd. performed a helicopter-borne geophysical survey over the Storm Property situated approximately 107 kilometres southeast of Resolute, Nunavut (Figure 1 & Figure 2).

Gordon Davidson represented Commander Resources Ltd. during the data acquisition and data processing phases of this project.

The geophysical surveys consisted of helicopter borne EM using the versatile time-domain electromagnetic (VTEM plus) system with Z and X component measurements and aeromagnetics using a caesium magnetometer. A total of 3819.7 line-km of geophysical data were acquired during the survey.

The crew was based out of Resolute Bay (Figure 2) in Nunavut for the acquisition phase of the survey. Survey flying started on July 6th and was completed on July 24th, 2011.

Data quality control and quality assurance, and preliminary data processing were carried out on a daily basis during the acquisition phase of the project. Final data processing followed immediately after the end of the survey. Final reporting, data presentation and archiving were completed from the Aurora office of Geotech Ltd. in August, 2011.

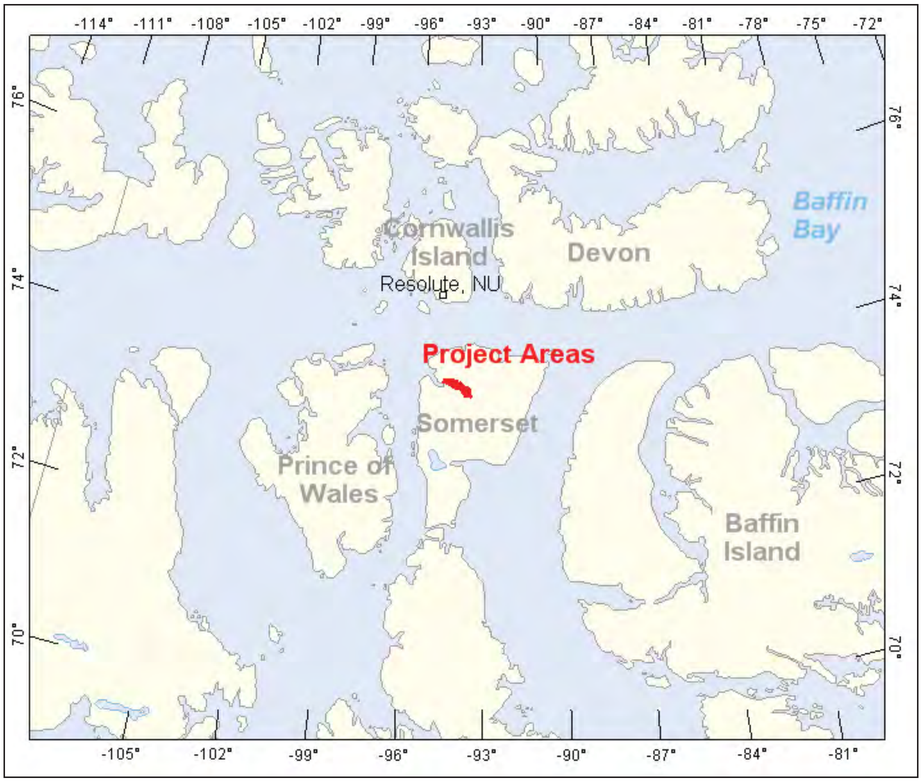

Figure 1 - Property Location

1.2 Survey and System Specifications

The Storm Property is located approximately 107 kilometres southeast of Resolute, Nunavut (Figure 2).

Figure 2 - Survey areas location on Google Earth

The survey block was flown in a southwest to northeast (N 30° E azimuth) direction, with traverse line spacing of 150 metres and 75 metres for the Infills as depicted in Figure 3. Tie lines were flown perpendicular to the traverse lines (N 120° E azimuth) at a spacing of 1500 metres respectively. For more detailed information on the flight spacing and direction see Table 1.

1.3 Topographic Relief and Cultural Features

Topographically, the Storm Property exhibits a shallow relief with an elevation ranging from 39 to 395 metres above mean sea level over an area of 430 square kilometres (Figure 3).

The survey block has various rivers and streams running through the survey area which connect various lakes. There are no visible signs of culture located in the survey area.

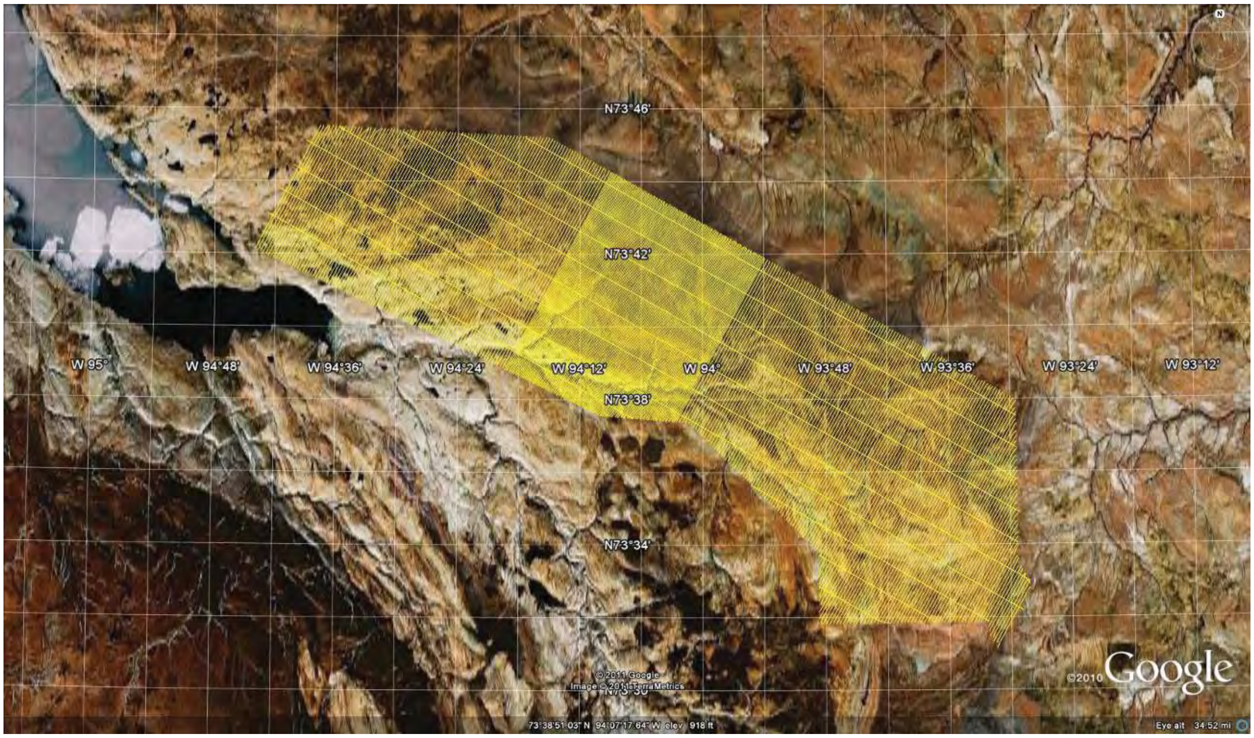

Figure 3 - Flight path over a Google Earth Image – Storm Property

The survey area is covered by NTS (National Topographic Survey) of Canada sheets 058C10, 058C11 and 058C14.

2. DATA ACQUISITION

2.1 Survey Area

The survey block (see Figure 3 and Appendix A) and general flight specifications are as follows:

Table 1 - Survey Specifications

Survey block	Traverse Line spacing (m)	Area (Km^2)	Planned[1] Line-km	Actual Line-km	Flight direction	Line numbers
Storm Property	Traverse: 150	430	3186.6	2999.8	N 30° E / N 210° E	L1000 – L3880
	Tie: 1500			313.5	N 120° E / N 300° E	T4000 – T4090
Infills	Traverse: 75		633.1	656.4	N 30° E / N 210° E	L1955 – L2545
TOTAL		430	3819.7	3969.7		

Survey block boundaries co-ordinates are provided in Appendix B.

2.2 Survey Operations

Survey operations were based out of Resolute Bay, Nunavut from July 2nd to July 24th, 2011. The following table shows the timing of the flying.

Table 2 - Survey schedule

Date	Flight #	Crew location	Comments
2-Jul-11			Resolute Bay, NU
3-Jul-11			Resolute Bay, NU
4-Jul-11			Resolute Bay, NU
5-Jul-11			Resolute Bay, NU
6-Jul-11	1,2	Storm Property	Resolute Bay, NU
7-Jul-11	3,4,5	Storm Property	Resolute Bay, NU
8-Jul-11	6,7,8	Storm Property	Resolute Bay, NU
9-Jul-11	9,10,11	Storm Property	Resolute Bay, NU
10-Jul-11	12	Storm Property	Resolute Bay, NU
11-Jul-11			Resolute Bay, NU
12-Jul-11			Resolute Bay, NU
13-Jul-11	13,14	Storm Property	Resolute Bay, NU
14-Jul-11			Resolute Bay, NU
15-Jul-11	15,16	Storm Property	Resolute Bay, NU
16-Jul-11	17,18	Storm Property	Resolute Bay, NU
17-Jul-11	19,20	Storm Property	Resolute Bay, NU
18-Jul-11	21	Storm Property	Resolute Bay, NU
19-Jul-11	22,23,24,25	Storm Property	Resolute Bay, NU
20-Jul-11	26,27,28	Storm Property -	Resolute Bay, NU

[1] Note: Actual Line kilometres represent the total line kilometres in the final database. These line-km normally exceed the Planned line-km, as indicated in the survey NAV files.

Date	Flight #	Crew location	Comments
		Infills	
21-Jul-11			Resolute Bay, NU
22-Jul-11			Resolute Bay, NU
23-Jul-11			Resolute Bay, NU
24-Jul-11	29,30	Storm Property - Infills	Resolute Bay, NU

2.3 Flight Specifications

During the survey the helicopter was maintained at a mean altitude of 77 metres above the ground with a nominal survey speed of 80 km/hour. This allowed for a nominal EM bird terrain clearance of 42 metres and a magnetic sensor clearance of 64 metres.

The on board operator was responsible for monitoring the system integrity. He also maintained a detailed flight log during the survey, tracking the times of the flight as well as any unusual geophysical or topographic features.

On return of the aircrew to the base camp the survey data was transferred from a compact flash card (PCMCIA) to the data processing computer. The data were then uploaded via ftp to the Geotech office in Aurora for daily quality assurance and quality control by qualified personnel.

2.4 Aircraft and Equipment

2.4.1 Survey Aircraft

The survey was flown using a Eurocopter Aerospatiale (Astar) 350 B3 helicopter, registration C-GXGX. The helicopter is owned and operated by Geotech Aviation. Installation of the geophysical and ancillary equipment was carried out by a Geotech Ltd crew.

2.4.2 Electromagnetic System

The electromagnetic system was a Geotech Time Domain EM (VTEM plus) system. The configuration is as indicated in Figure 4.

The VTEM plus Receiver and transmitter coils were in concentric-coplanar and Z-direction oriented configuration. The receiver system for the project also included a coincident-coaxial X-direction coil to measure the in-line dB/dt and calculate B-Field responses. The EM bird was towed at a mean distance of 35 metres below the aircraft as shown in Figure 4 and Figure 6. The receiver decay recording scheme is shown in Figure 5.

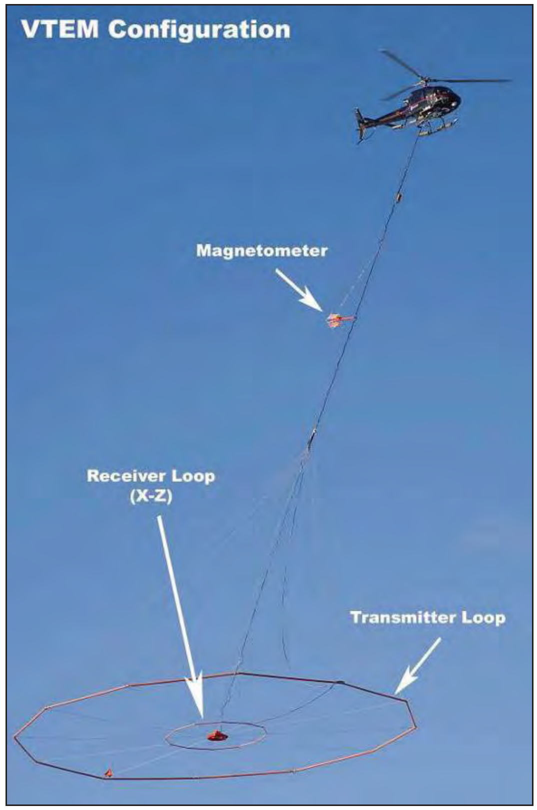

Figure 4 - VTEM plus Configuration, with magnetometer.

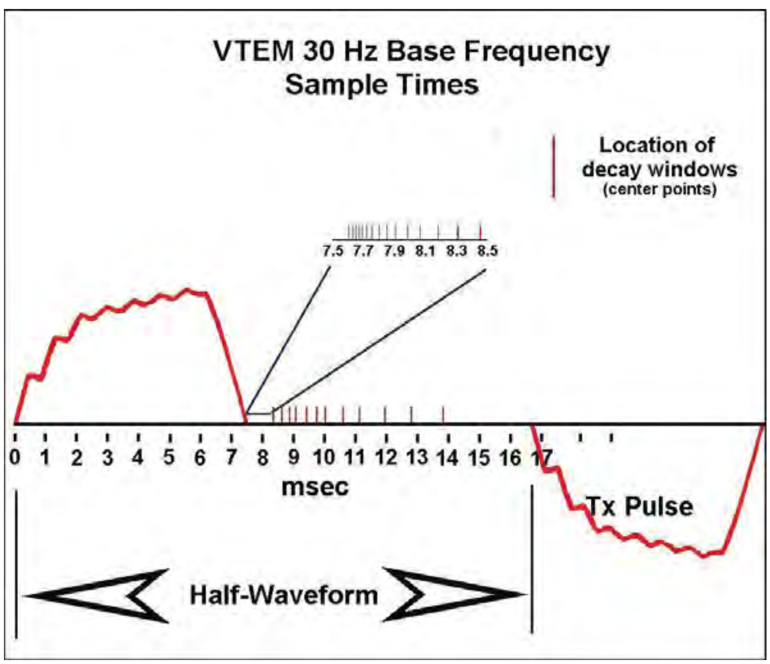

Figure 5 - VTEM plus Waveform & Sample Times

The VTEM plus decay sampling scheme is shown in Table 3 below. Thirty-two time measurement gates were used for the final data processing in the range from 96 to 7036 μ sec.

Table 3 - Decay Sampling Scheme

VTEM plus Decay Sampling Scheme				
Index	**Middle**	**Start**	**End**	**Window**
	Microseconds			
14	96	90	103	13
15	110	103	118	15
16	126	118	136	18
17	145	136	156	20
18	167	156	179	23
19	192	179	206	27
20	220	206	236	30
21	253	236	271	35
22	290	271	312	40
23	333	312	358	46
24	383	358	411	53
25	440	411	472	61
26	505	472	543	70
27	580	543	623	81
28	667	623	716	93
29	766	716	823	107
30	880	823	945	122
31	1,010	945	1,086	141
32	1,161	1,086	1,247	161
33	1,333	1,247	1,432	185
34	1,531	1,432	1,646	214
35	1,760	1,646	1,891	245
36	2,021	1,891	2,172	281
37	2,323	2,172	2,495	323
38	2,667	2,495	2,865	370
39	3,063	2,865	3,292	427
40	3,521	3,292	3,781	490
41	4,042	3,781	4,341	560
42	4,641	4,341	4,987	646
43	5,333	4,987	5,729	742
44	6,125	5,729	6,581	852
45	7,036	6,581	7,560	979

VTEM plus system parameters:

Transmitter Section
- Transmitter coil diameter: 26.1 m
- Number of turns: 4
- Transmitter base frequency: 30 Hz
- Peak current: 171 A
- Pulse width: 7.119 ms
- Duty cycle: 43 %
- Wave form shape: trapezoid
- Peak dipole moment: 365,954.42 nIA
- Nominal EM Bird terrain clearance: 46 metres above the ground
- Effective coil area: 2123 m^2

Receiver Section

X-Coil
- X Coil diameter: 0.32 m
- Number of turns: 245
- Effective coil area: 19.69 m^2

Z-Coil
- Z-Coil coil diameter: 1.2 m
- Number of turns: 100
- Effective coil area: 113.04 m^2

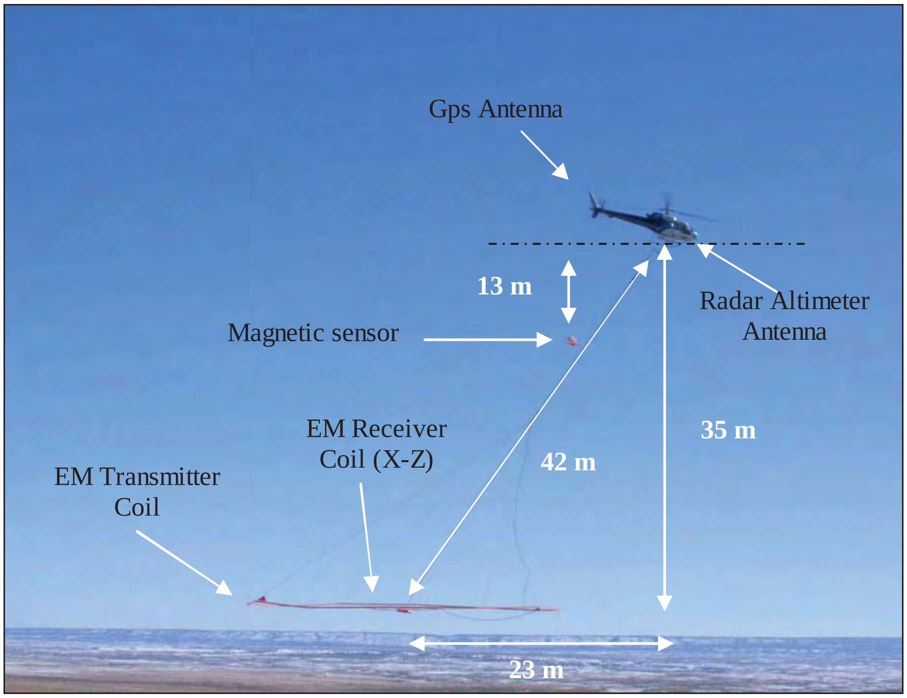

Figure 6 - VTEM plus System Configuration

2.4.3 Airborne magnetometer

The magnetic sensor utilized for the survey was Geometrics optically pumped caesium vapour magnetic field sensor mounted 13 metres below the helicopter, as shown in Figure 6. The sensitivity of the magnetic sensor is 0.02 nanoTesla (nT) at a sampling interval of 0.1 seconds.

2.4.4 Radar Altimeter

A Terra TRA 3000/TRI 40 radar altimeter was used to record terrain clearance. The antenna was mounted beneath the bubble of the helicopter cockpit (Figure 6).

2.4.5 GPS Navigation System

The navigation system used was a Geotech PC104 based navigation system utilizing a NovAtel's CDGPS (Canada-Wide Differential Global Positioning System Correction Service) enable OEM4-G2-3151W GPS receiver, Geotech navigate software, a full screen display with controls in front of the pilot to direct the flight and an NovAtel GPS antenna mounted on the helicopter tail (Figure 6). As many as 11 GPS and two CDGPS satellites may be monitored at any one time. The positional accuracy or circular error probability (CEP) is 1.8 m, with CDGPS active, it is 1.0 m. The co-ordinates of the block were set-up prior to the survey and the information was fed into the airborne navigation system.

2.4.6 Digital Acquisition System

A Geotech data acquisition system recorded the digital survey data on an internal compact flash card. Data is displayed on an LCD screen as traces to allow the operator to monitor the integrity of the system. The data type and sampling interval as provided in Table 4.

Table 4 - Acquisition Sampling Rates

DATA TYPE	SAMPLING
TDEM	0.1 sec
Magnetometer	0.1 sec
GPS Position	0.2 sec
Radar Altimeter	0.2 sec

2.5 Base Station

A combined magnetometer/GPS base station was utilized on this project. A Geometrics Caesium vapour magnetometer was used as a magnetic sensor with a sensitivity of 0.001 nT. The base station was recording the magnetic field together with the GPS time at 1 Hz on a base station computer.

The base station magnetometer sensor was installed east of fuel cache close to the block – removed from Resolute (73° 41.1249' N, 94° 47.8301' W); away from electric transmission lines and moving ferrous objects such as motor vehicles. The base station data were backed-up to the data processing computer at the end of each survey day.

3. PERSONNEL

The following Geotech Ltd. personnel were involved in the project.

Field:

Project Manager:	Darren Tuck (Office)
Data QC:	Nick Venter (Office)
Crew chief:	Alex Smirnov
Operator:	Greg Luus

The survey pilot and the mechanical engineer were employed directly by the helicopter operator – Heli Carrier.

Pilot:	Jean Michel Dumont
Mechanical Engineer:	Philip Levasseur

Office:

Preliminary Data Processing:	Nick Venter
Final Data Processing:	Karl Kwan
Final Data QA/QC:	Alexander Prikhodko
Reporting/Mapping:	Liz Johnson

Data acquisition phase was carried out under the supervision of Andrei Bagrianski, P. Geo, Chief Operating Officer. The processing and interpretation phase was under the supervision of Alexander Prikhodko, P. Geo. The customer relations were looked after by Blair Walker.

4. DATA PROCESSING AND PRESENTATION

Data compilation and processing were carried out by the application of Geosoft OASIS Montaj and programs proprietary to Geotech Ltd.

4.1 Flight Path

The flight path, recorded by the acquisition program as WGS 84 latitude/longitude, was converted into the NAD83 Datum, UTM Zone 15 North coordinate system in Oasis Montaj.

The flight path was drawn using linear interpolation between x, y positions from the navigation system. Positions are updated every second and expressed as UTM easting's (x) and UTM northing's (y).

4.2 Electromagnetic Data

A three stage digital filtering process was used to reject major sferic events and to reduce system noise. Local sferic activity can produce sharp, large amplitude events that cannot be removed by conventional filtering procedures. Smoothing or stacking will reduce their amplitude but leave a broader residual response that can be confused with geological phenomena. To avoid this possibility, a computer algorithm searches out and rejects the major sferic events.

The signal to noise ratio was further improved by the application of a low pass linear digital filter. This filter has zero phase shift which prevents any lag or peak displacement from occurring, and it suppresses only variations with a wavelength less than about 1 second or 15 metres. This filter is a symmetrical 1 sec linear filter.

The results are presented as stacked profiles of EM voltages for the time gates, in linear - logarithmic scale for the B-field Z component and dB/dt responses in the Z and X components. B-field Z component time channel recorded at 2.021 milliseconds after the termination of the impulse is also presented as contour colour images. Calculated Time Constant (TAU) with anomaly contours of Calculated Vertical Derivative of TMI is presented in Appendix D and F. Resistivity Depth Image (RDI) is also presented in Appendix D and G.

VTEM plus has two receiver coil orientations. Z-axis coil is oriented parallel to the transmitter coil axis and both are horizontal to the ground. The X-axis coil is oriented parallel to the ground and along the line-of-flight. This combined two coil configuration provides information on the position, depth, dip and thickness of a conductor. Generalized modeling results of VTEM plus data are shown in Appendix E.

In general X-component data produce cross-over type anomalies: from "+ to – "in flight direction of flight for "thin" sub vertical targets and from "- to +" in direction of flight for "thick" targets. Z component data produce double peak type anomalies for "thin" sub vertical targets and single peak for "thick" targets.

The limits and change-over of “thin-thick” depends on dimensions of a TEM system.

Because of X component polarity is under line-of-flight, convolution Fraser filter (FF, Figure 7) is applied to X component data to represent axes of conductors in the form of grid map. In this case positive FF anomalies always correspond to “plus-to-minus” X data crossovers independently of direction of flight.

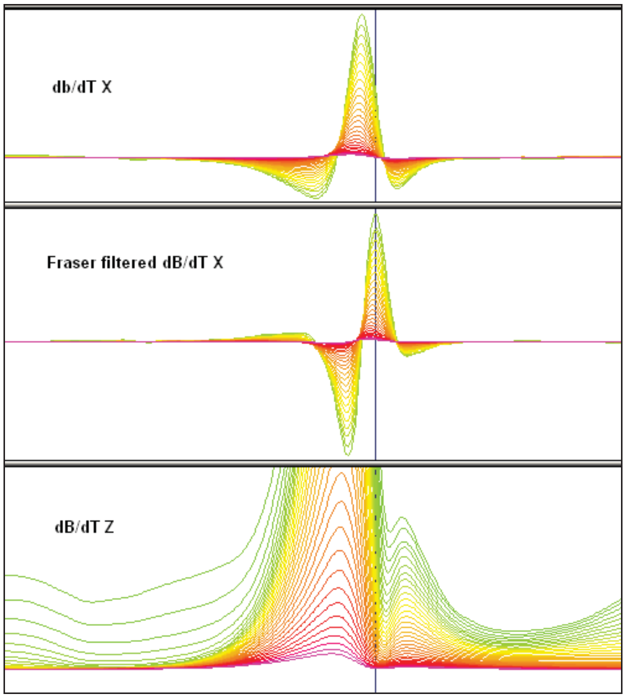

Figure 7 - Z, X and Fraser filtered X (FFx) components for “thin” target

Graphical representations of the VTEM plus transmitter input current and the output voltage of the receiver coil are shown in Appendix C.

4.3 Magnetic Data

The processing of the magnetic data involved the correction for diurnal variations by using the digitally recorded ground base station magnetic values. The base station magnetometer data was edited and merged into the Geosoft GDB database on a daily basis. The aeromagnetic data was corrected for diurnal variations by subtracting the observed magnetic base station deviations.

Tie line levelling was carried out by adjusting intersection points along traverse lines. A micro-levelling procedure was applied to remove persistent low-amplitude components of flight-line noise remaining in the data.

The corrected magnetic data was interpolated between survey lines using a random point gridding method to yield x-y grid values for a standard grid cell size of approximately 37.5 metres for the entire property and 15 metres for the Infills area at the mapping scale. The Minimum Curvature algorithm was used to interpolate values onto a rectangular regular spaced grid.

5. DELIVERABLES

5.1 Survey Report

The survey report describes the data acquisition, processing, and final presentation of the survey results. The survey report is provided in two paper copies and digitally in PDF format.

5.2 Maps

Final maps were produced at a scale of 1:20,000 for the Infill area, and 1:25,000 with the survey block split in two map sheets for best representation of the survey size and line spacing. The coordinate/projection system used was NAD83 Datum, UTM Zone 15 North. All maps show the mining claims, flight path trace and topographic data; latitude and longitude are also noted on maps.

The preliminary and final results of the survey are presented as EM profiles, a late-time gate gridded EM channel, and a color magnetic TMI contour map. The following maps are presented on paper;

- VTEM dB/dt profiles Z Component, Time Gates 0.220 – 7.036 ms in linear – logarithmic scale.
- VTEM B-Field profiles Z Component, Time Gates 0.220 – 7.036 ms in linear – logarithmic scale.
- VTEM B-field late time Z Component Channel 36, Time Gate 2.021 ms colour image.
- VTEM dB/dt Calculated Time Constant (TAU) with contours of anomaly areas of the Total Magnetic Intensity
- Total Magnetic Intensity (TMI) colour image and contours.

5.3 Digital Data

- Two copies of the data and maps on DVD were prepared to accompany the report. Each DVD contains a digital file of the line data in GDB Geosoft Montaj format as well as the maps in Geosoft Montaj Map and PDF format.

- DVD structure.

Data	contains databases, grids and maps, as described below.
Report	contains a copy of the report and appendices in PDF format.

Databases in Geosoft GDB format, containing the channels listed in Table 5.

Table 5 - Geosoft GDB Data Format

Channel name	Units	Description
X:	metres	UTM Easting NAD83 Zone 15 North
Y:	metres	UTM Northing NAD83 Zone 15 North
Z:	metres	GPS antenna elevation (above Geoid)
Longitude:	Decimal Degrees	WGS 84 Longitude data
Latitude:	Decimal Degrees	WGS 84 Latitude data
Radar:	metres	helicopter terrain clearance from radar altimeter
Radarb:	metres	Calculated EM bird terrain clearance from radar altimeter
DEM:	metres	Digital Elevation Model
Gtime:	Seconds of the day	GPS time
Mag1:	nT	Raw Total Magnetic field data
Basemag:	nT	Magnetic diurnal variation data
Mag2:	nT	Diurnal corrected Total Magnetic field data
Mag3:	nT	Levelled Total Magnetic field data
CVG	nT	Calculated Vertical Derivative of TMI
SFz[14]:	$pV/(A*m^4)$	Z dB/dt 96 microsecond time channel
SFz[15]:	$pV/(A*m^4)$	Z dB/dt 110 microsecond time channel
SFz[16]:	$pV/(A*m^4)$	Z dB/dt 126 microsecond time channel
SFz[17]:	$pV/(A*m^4)$	Z dB/dt 145 microsecond time channel
SFz[18]:	$pV/(A*m^4)$	Z dB/dt 167 microsecond time channel
SFz[19]:	$pV/(A*m^4)$	Z dB/dt 192 microsecond time channel
SFz[20]:	$pV/(A*m^4)$	Z dB/dt 220 microsecond time channel
SFz[21]:	$pV/(A*m^4)$	Z dB/dt 253 microsecond time channel
SFz[22]:	$pV/(A*m^4)$	Z dB/dt 290 microsecond time channel
SFz[23]:	$pV/(A*m^4)$	Z dB/dt 333 microsecond time channel
SFz[24]:	$pV/(A*m^4)$	Z dB/dt 383 microsecond time channel
SFz[25]:	$pV/(A*m^4)$	Z dB/dt 440 microsecond time channel
SFz[26]:	$pV/(A*m^4)$	Z dB/dt 505 microsecond time channel
SFz[27]:	$pV/(A*m^4)$	Z dB/dt 580 microsecond time channel
SFz[28]:	$pV/(A*m^4)$	Z dB/dt 667 microsecond time channel
SFz[29]:	$pV/(A*m^4)$	Z dB/dt 766 microsecond time channel
SFz[30]:	$pV/(A*m^4)$	Z dB/dt 880 microsecond time channel
SFz[31]:	$pV/(A*m^4)$	Z dB/dt 1010 microsecond time channel
SFz[32]:	$pV/(A*m^4)$	Z dB/dt 1161 microsecond time channel
SFz[33]:	$pV/(A*m^4)$	Z dB/dt 1333 microsecond time channel
SFz[34]:	$pV/(A*m^4)$	Z dB/dt 1531 microsecond time channel
SFz[35]:	$pV/(A*m^4)$	Z dB/dt 1760 microsecond time channel
SFz[36]:	$pV/(A*m^4)$	Z dB/dt 2021 microsecond time channel
SFz[37]:	$pV/(A*m^4)$	Z dB/dt 2323 microsecond time channel
SFz[38]:	$pV/(A*m^4)$	Z dB/dt 2667 microsecond time channel
SFz[39]:	$pV/(A*m^4)$	Z dB/dt 3063 microsecond time channel
SFz[40]:	$pV/(A*m^4)$	Z dB/dt 3521 microsecond time channel
SFz[41]:	$pV/(A*m^4)$	Z dB/dt 4042 microsecond time channel
SFz[42]:	$pV/(A*m^4)$	Z dB/dt 4641 microsecond time channel
SFz[43]:	$pV/(A*m^4)$	Z dB/dt 5333 microsecond time channel
SFz[44]:	$pV/(A*m^4)$	Z dB/dt 6125 microsecond time channel
SFz[45]:	$pV/(A*m^4)$	Z dB/dt 7036 microsecond time channel
SFx[20]:	$pV/(A*m^4)$	X dB/dt 220 microsecond time channel
SFx[21]:	$pV/(A*m^4)$	X dB/dt 253 microsecond time channel
SFx[22]:	$pV/(A*m^4)$	X dB/dt 290 microsecond time channel
SFx[23]:	$pV/(A*m^4)$	X dB/dt 333 microsecond time channel

Channel name	Units	Description
SFx[24]:	pV/(A*m^4)	X dB/dt 383 microsecond time channel
SFx[25]:	pV/(A*m^4)	X dB/dt 440 microsecond time channel
SFx[26]:	pV/(A*m^4)	X dB/dt 505 microsecond time channel
SFx[27]:	pV/(A*m^4)	X dB/dt 580 microsecond time channel
SFx[28]:	pV/(A*m^4)	X dB/dt 667 microsecond time channel
SFx[29]:	pV/(A*m^4)	X dB/dt 766 microsecond time channel
SFx[30]:	pV/(A*m^4)	X dB/dt 880 microsecond time channel
SFx[31]:	pV/(A*m^4)	X dB/dt 1010 microsecond time channel
SFx[32]:	pV/(A*m^4)	X dB/dt 1161 microsecond time channel
SFx[33]:	pV/(A*m^4)	X dB/dt 1333 microsecond time channel
SFx[34]:	pV/(A*m^4)	X dB/dt 1531 microsecond time channel
SFx[35]:	pV/(A*m^4)	X dB/dt 1760 microsecond time channel
SFx[36]:	pV/(A*m^4)	X dB/dt 2021 microsecond time channel
SFx[37]:	pV/(A*m^4)	X dB/dt 2323 microsecond time channel
SFx[38]:	pV/(A*m^4)	X dB/dt 2667 microsecond time channel
SFx[39]:	pV/(A*m^4)	X dB/dt 3063 microsecond time channel
SFx[40]:	pV/(A*m^4)	X dB/dt 3521 microsecond time channel
SFx[41]:	pV/(A*m^4)	X dB/dt 4042 microsecond time channel
SFx[42]:	pV/(A*m^4)	X dB/dt 4641 microsecond time channel
SFx[43]:	pV/(A*m^4)	X dB/dt 5333 microsecond time channel
SFx[44]:	pV/(A*m^4)	X dB/dt 6125 microsecond time channel
SFx[45]:	pV/(A*m^4)	X dB/dt 7036 microsecond time channel
BFz	(pV*ms)/(A*m4)	Z B-Field data for time channels 14 to 45
BFx	(pV*ms)/(A*m4)	X B-Field data for time channels 20 to 45
SFxFF	pV/(A*m4)	Fraser filtered X dB/dt
PLM:		60 Hz power line monitor
TauSF	milliseconds	Time Constant (Tau) calculated from dB/dt data
TauBF	milliseconds	Time Constant (Tau) calculated from B-Field data
NchanBF		Last channel where the Tau algorithm stops calculation, B-Field
NchanSF		Last channel where the Tau algorithm stops calculation, dB/dt

Electromagnetic B-field and dB/dt Z component data is found in array channel format between indexes 14 – 45, and X component data from 20 – 45, as described above.

- Database of the VTEM Waveform "11053_waveform_final.gdb" in Geosoft GDB format, containing the following channels:

Time:	Sampling rate interval, 5.2083 microseconds
Rx_Volt:	Output voltage of the receiver coil (Volt)
Tx_Current:	Output current of the transmitter (Amp)

- Grids in Geosoft GRD format, as follows:

BFz36:	B-Field Z Component Channel 36 (Time Gate 2.021 ms)
TMI:	Total Magnetic Intensity (nT)
CVG:	Calculated Vertical Derivative of TMI (nT/m)
TauBF:	B-Field Calculated Time Constant (ms)
TauSF:	dB/dt Calculated Time Constant (ms)
SFxFF30:	Fraser Filter X Component dB/dt Channel 30 (Time Gate 0.880 ms)
DEM:	Digital Elevation Model (metres)
PLM:	Power Line Monitor (60Hz)

A Geosoft .GRD file has a .GI metadata file associated with it, containing grid projection information. A grid cell size of 37.5 metres for the entire property and 15 metres for the Infills area was used.

- Maps at 1:20,000 for the Infill area, and 1:25,000 with the survey block split in two map sheets (Plate 1 and Plate 2) in Geosoft MAP format, as follows:

11053_ *scale*k _*bb*_dBdtz:	dB/dt profiles Z Component, Time Gates 0.220 – 7.036 ms in linear – logarithmic scale.
11053_ *scale*k _*bb* _Bfield:	B-field profiles Z Component, Time Gates 0.220 – 7.036 ms in linear – logarithmic scale over total magnetic intensity.
11053_ *scale*k _*bb* _BFz36:	B-field late time Z Component Channel 36, Time Gate 2.021 ms color image.
11053_ *scale*k _*bb* _TMI:	Total magnetic intensity (TMI) color image and contours.
11053_ *scale*k _*bb* _TauSF:	dB/dt Calculated Time Constant (TAU) with contours of anomaly areas of the Total Magnetic Intensity

where *scale* represents the scale of the map
bb represents the map name

Maps are also presented in PDF format.

1:50,000 topographic vectors were taken from the NRCAN Geogratis database at; http://geogratis.gc.ca/geogratis/en/index.html.

- A Google Earth file *11053_ Flight Path.kml* showing the flight path of the block is included. Free versions of Google Earth software from: http://earth.google.com/download-earth.html

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

A helicopter-borne versatile time domain electromagnetic (VTEM plus) geophysical survey has been completed over the Storm Property near Resolute, Nunavut.

The total area coverage for all properties is 430 km^2. Total survey line coverage is 3969.7 line kilometres. The principal sensors included a Time Domain EM system and a magnetometer. Results have been presented as stacked profiles, and contour color images at a scale of 1:20,000 for the Infill area, and 1:25,000 with the survey block split in two map sheets (Plate 1 and Plate 2).

Time constants TAUs from dB/dt and B-field are calculated. The TAUs from dB/dt are presented as color image overlain with TMI contours.

6.2 Recommendations

A strong, near circular magnetic anomaly is observed at the west end of the surveyed area. Originating from this anomaly, an SE trending dyke can be seen. The sources of these magnetic anomalies are in the Proterozoic basement.

A sharp magnetic gradient (high rate of change in magnetic values) can also be seen over the entire area, trending in NW-SE direction in a “zigzag” fashion. The gradient may reflect a graben-type contact in the basement.

An extended and layered conductive zone is detected on the south side of the contact in the southwest end of the area. Four discrete, pipe-like conductors near the surface are visible in the middle (infill area) of the property. These vertical conductors may correspond to copper (Cu) mineralization.

We recommend detailed interpretations of the VTEM and magnetic data prior to any ground follow-up or drill testing. The interpretations should include magnetic 2D/3D modeling, Resistivity Depth Imaging (RDI) sections, Apparent Resistivity depth slices and Maxwell 2.5D modeling of discrete conductors.

Respectfully submitted[5],

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Geotech Ltd.

Karl Kwan
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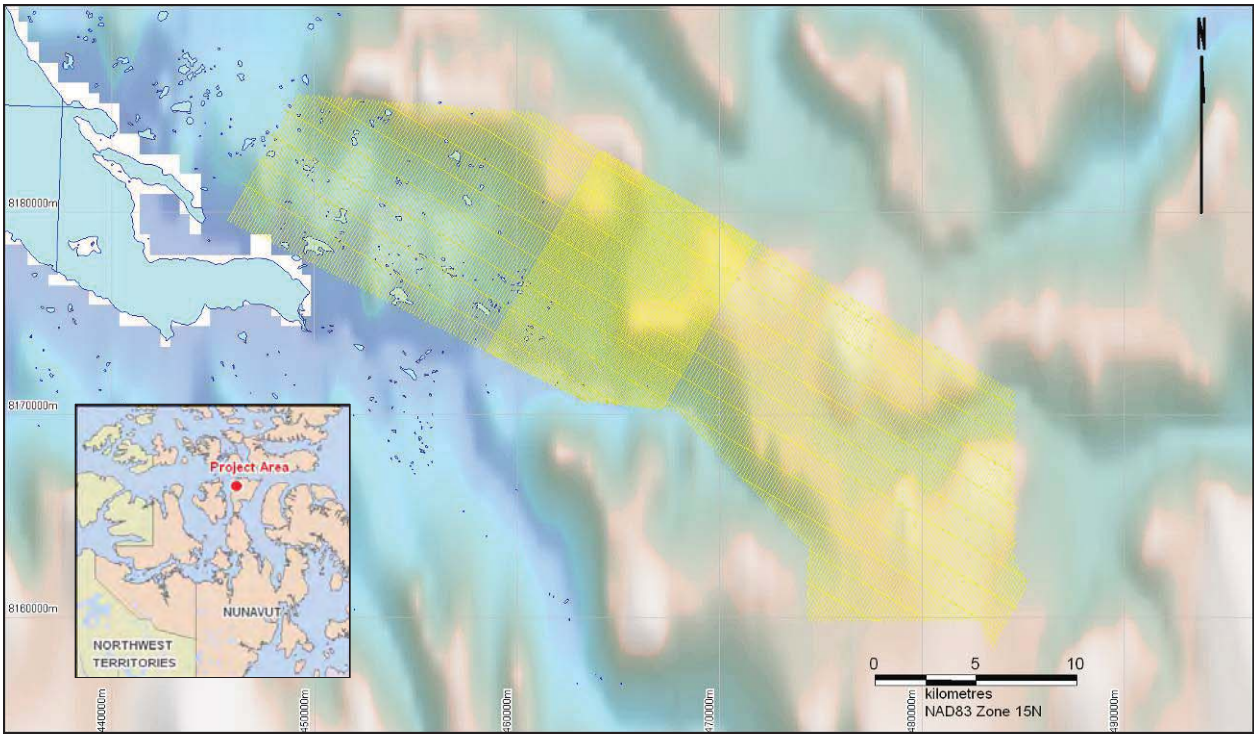
August 2011

[5]Final data processing of the EM and magnetic data were carried out by Karl Kwan, from the office of Geotech Ltd. in Aurora, Ontario, under the supervision of Alexander Prikhodko, P.Geo., PhD, Senior Geophysicist, VTEM Interpretation Supervisor.

APPENDIX A

SURVEY BLOCK LOCATION MAP



Survey Overview of the Blocks

APPENDIX B

SURVEY BLOCK COORDINATES

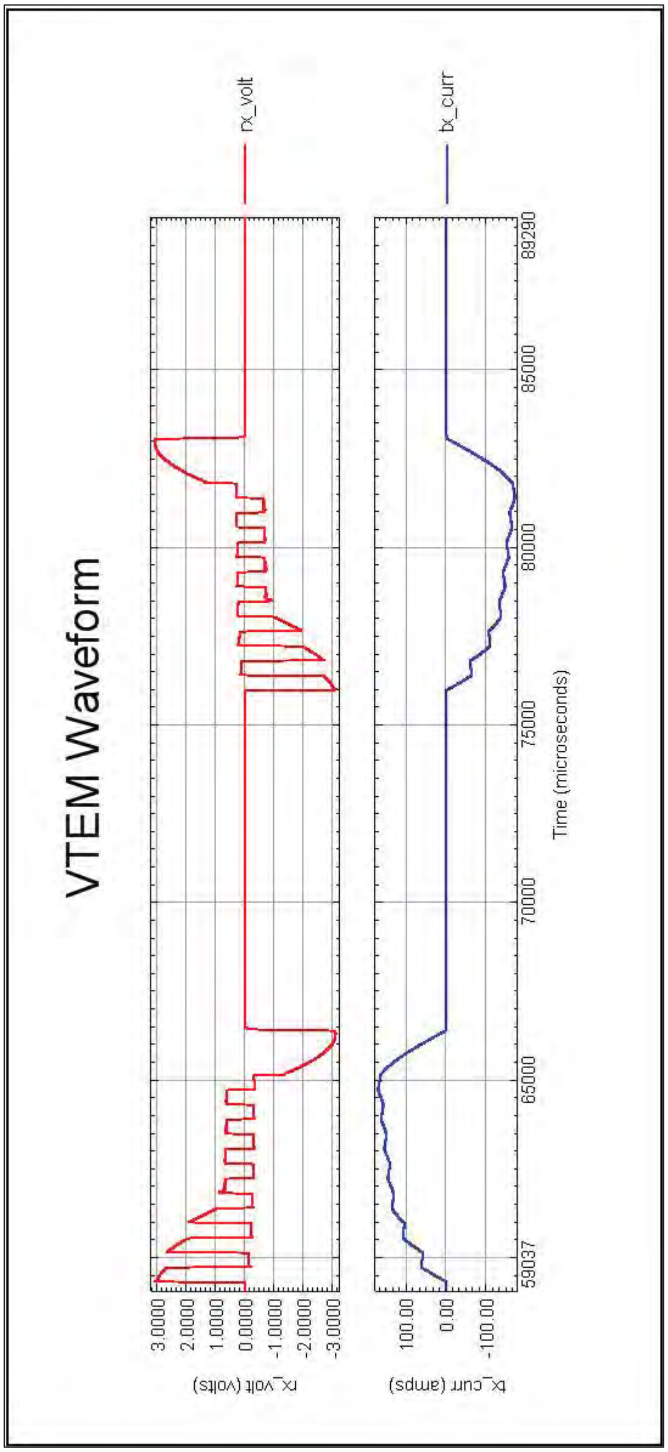
(WGS 84, UTM Zone 15 North)

Storm Property

X	Y
449085	8185650
445695	8179810
463365	8170850
467920	8170390
474525	8163600
474525	8160000
484395	8160000
484395	8171045
460935	8184755
449085	8185650

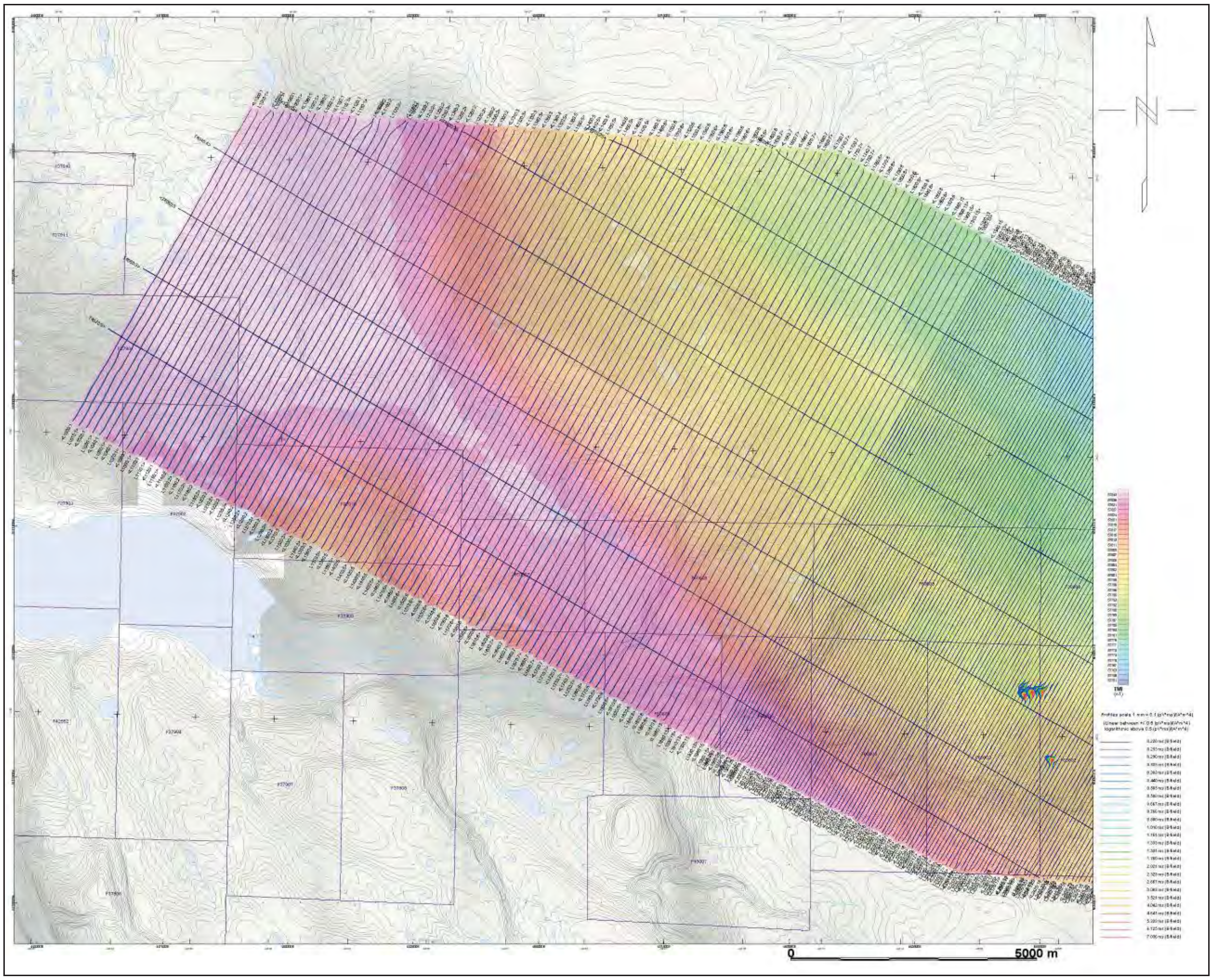
APPENDIX C

VTEM WAVEFORM



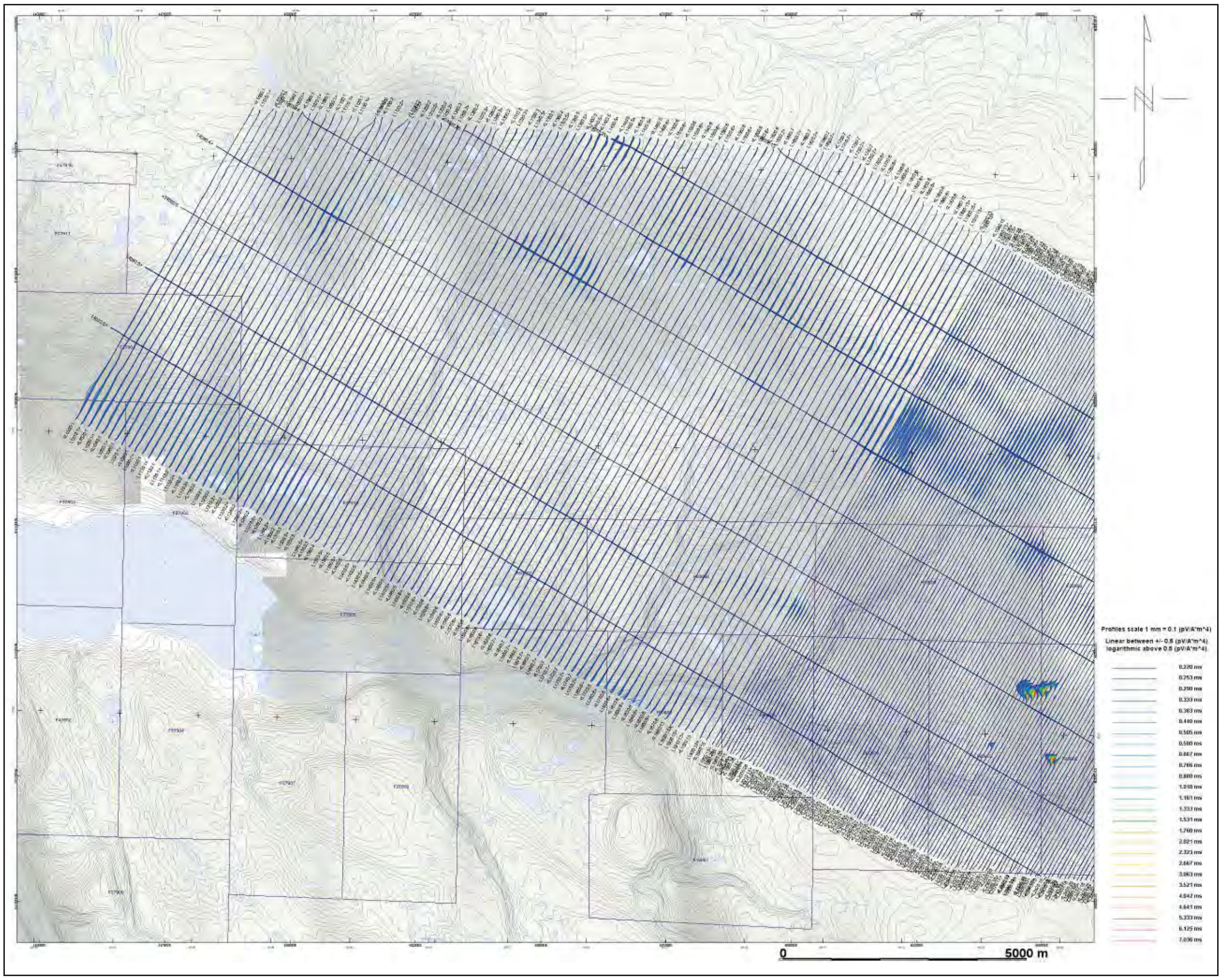
APPENDIX D

GEOPHYSICAL MAPS[1]

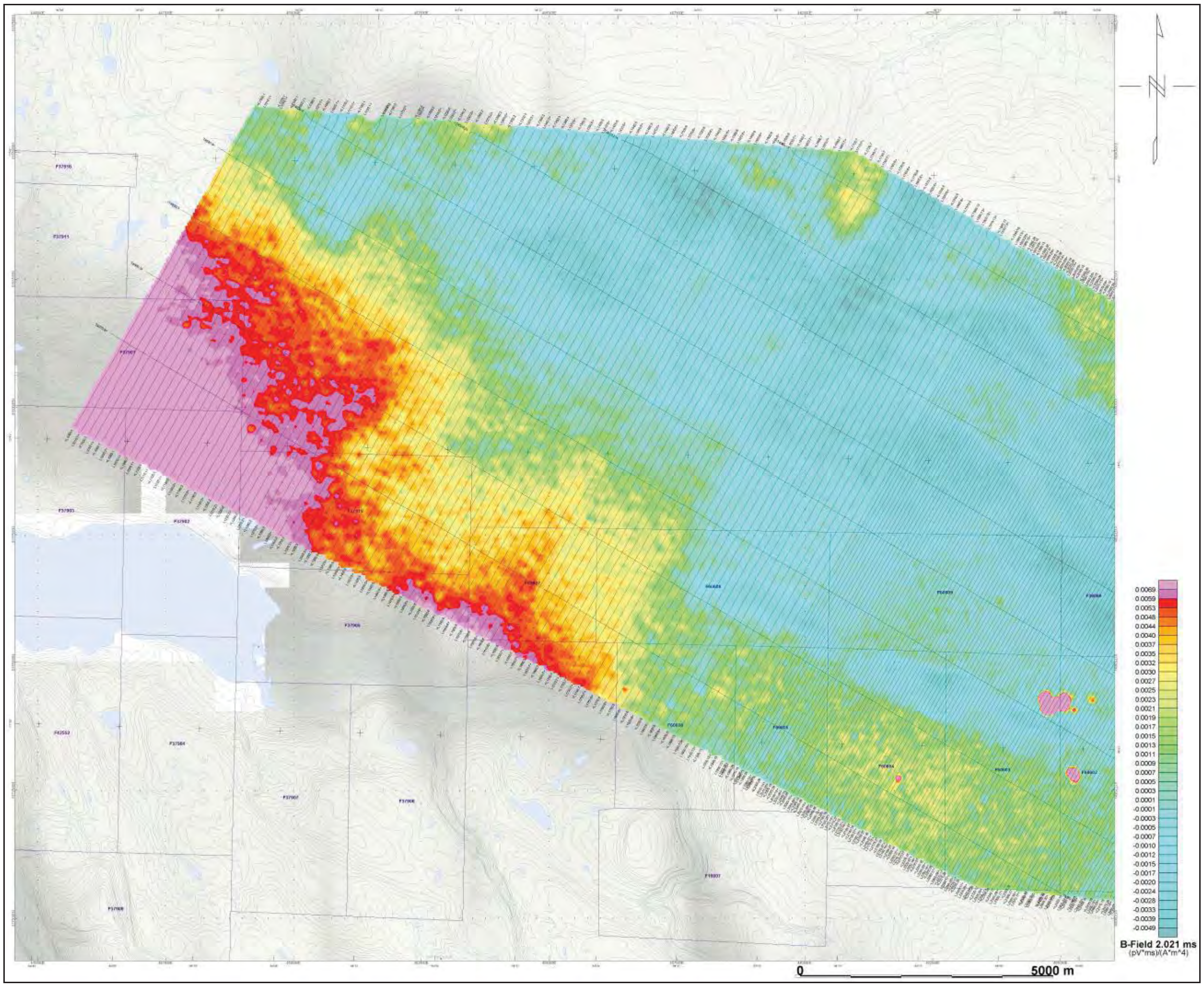


Storm Property (Plate 1) - VTEM B-Field Z Component Profiles, Time Gates 0.220 to 7.036 ms

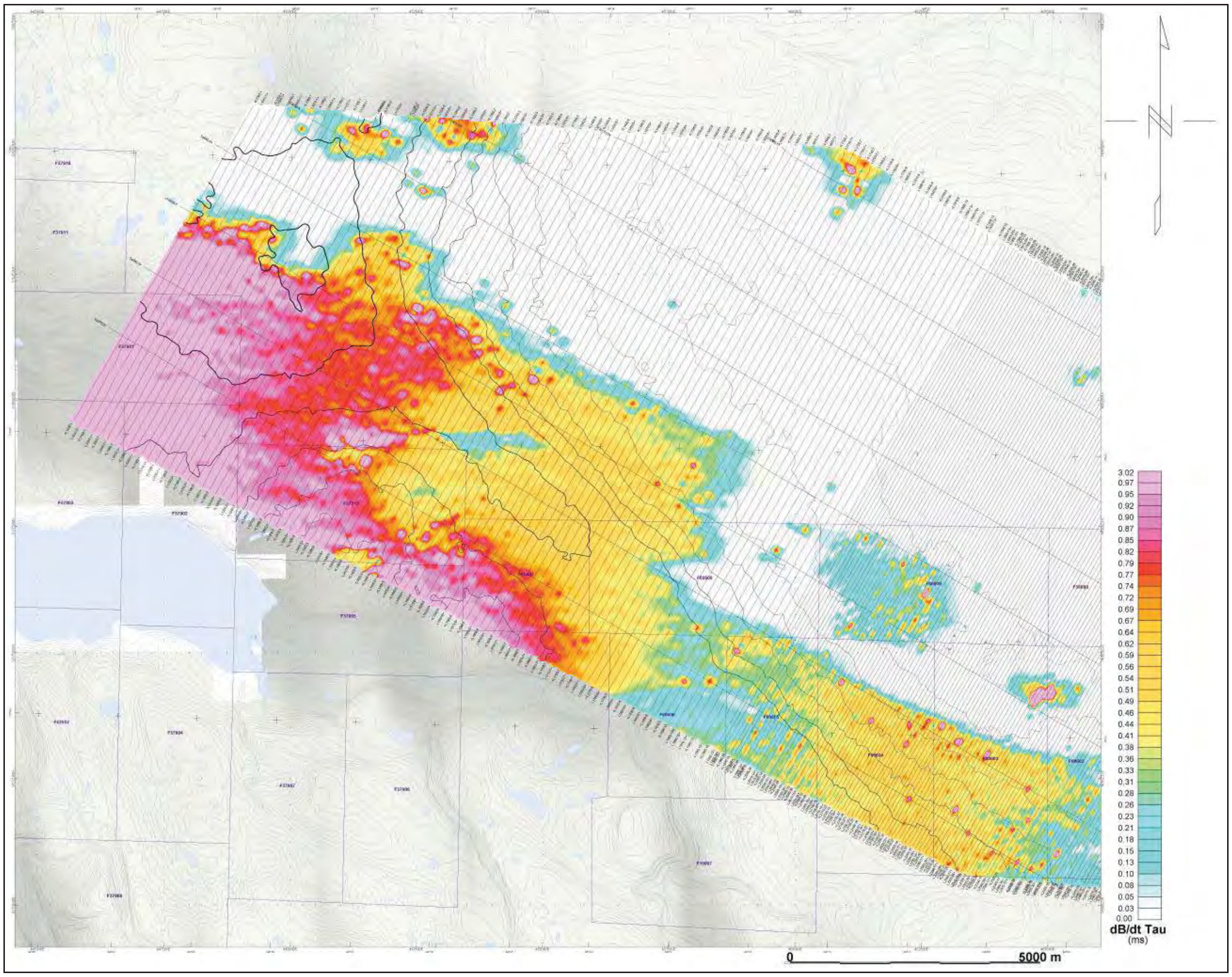
[1] Full size geophysical maps are also available in PDF format on the final DVD



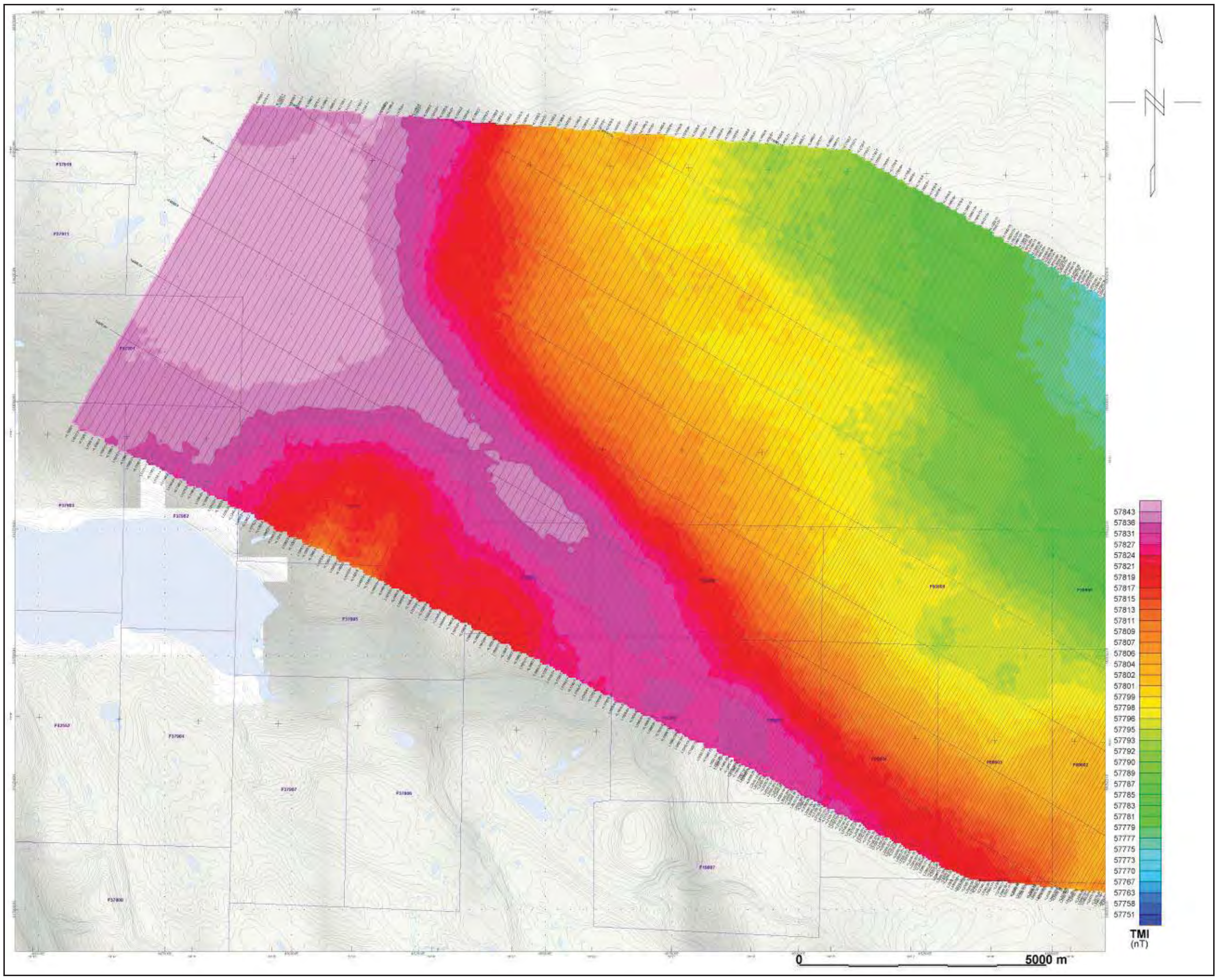
Storm Property (Plate 1) - VTEM dB/dt Z Component Profiles, Time Gates 0.220 to 7.036 ms



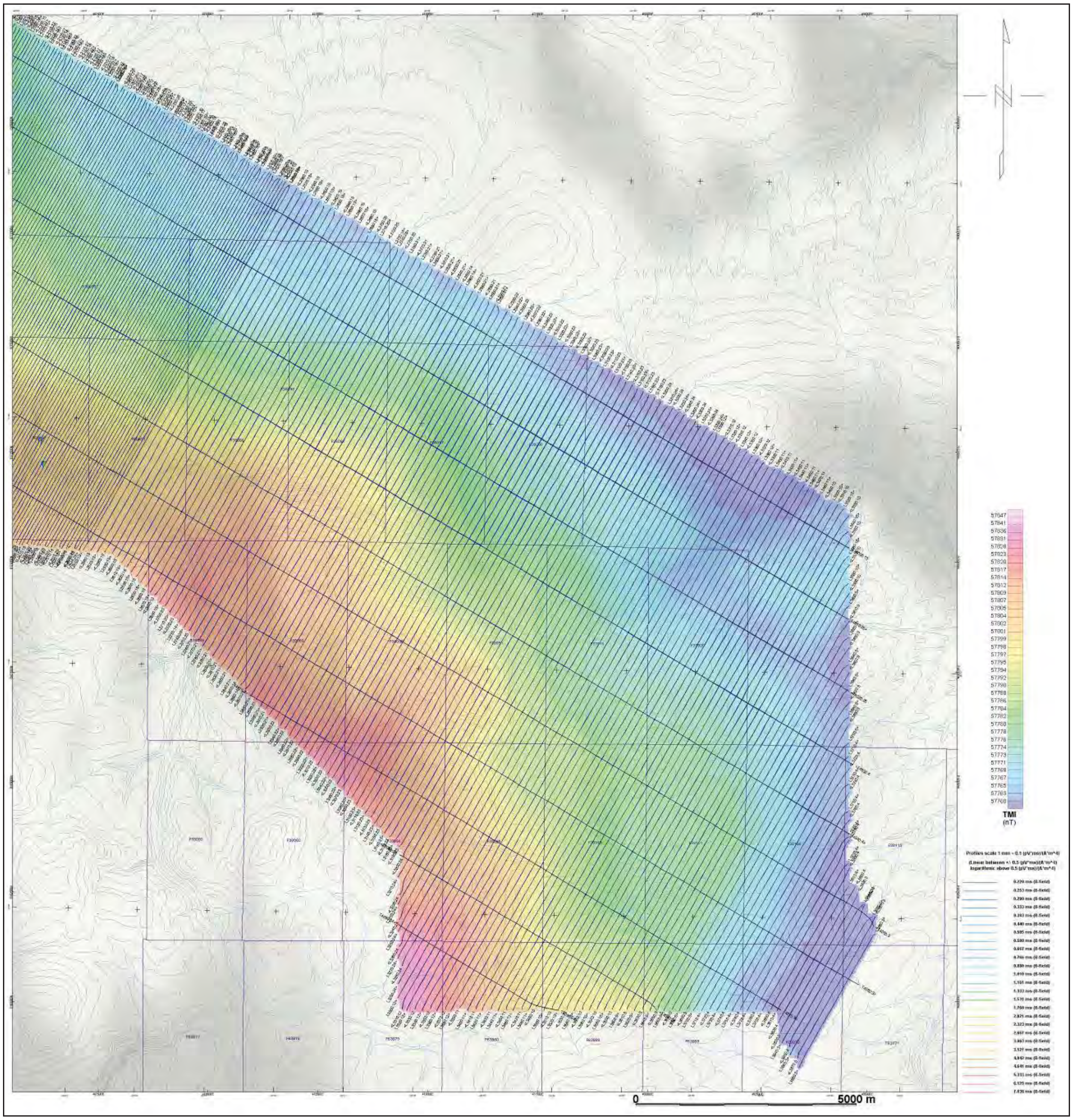
Storm Property (Plate 1) - VTEM B-Field Z Component Channel 36, Time Gate 2.021 ms



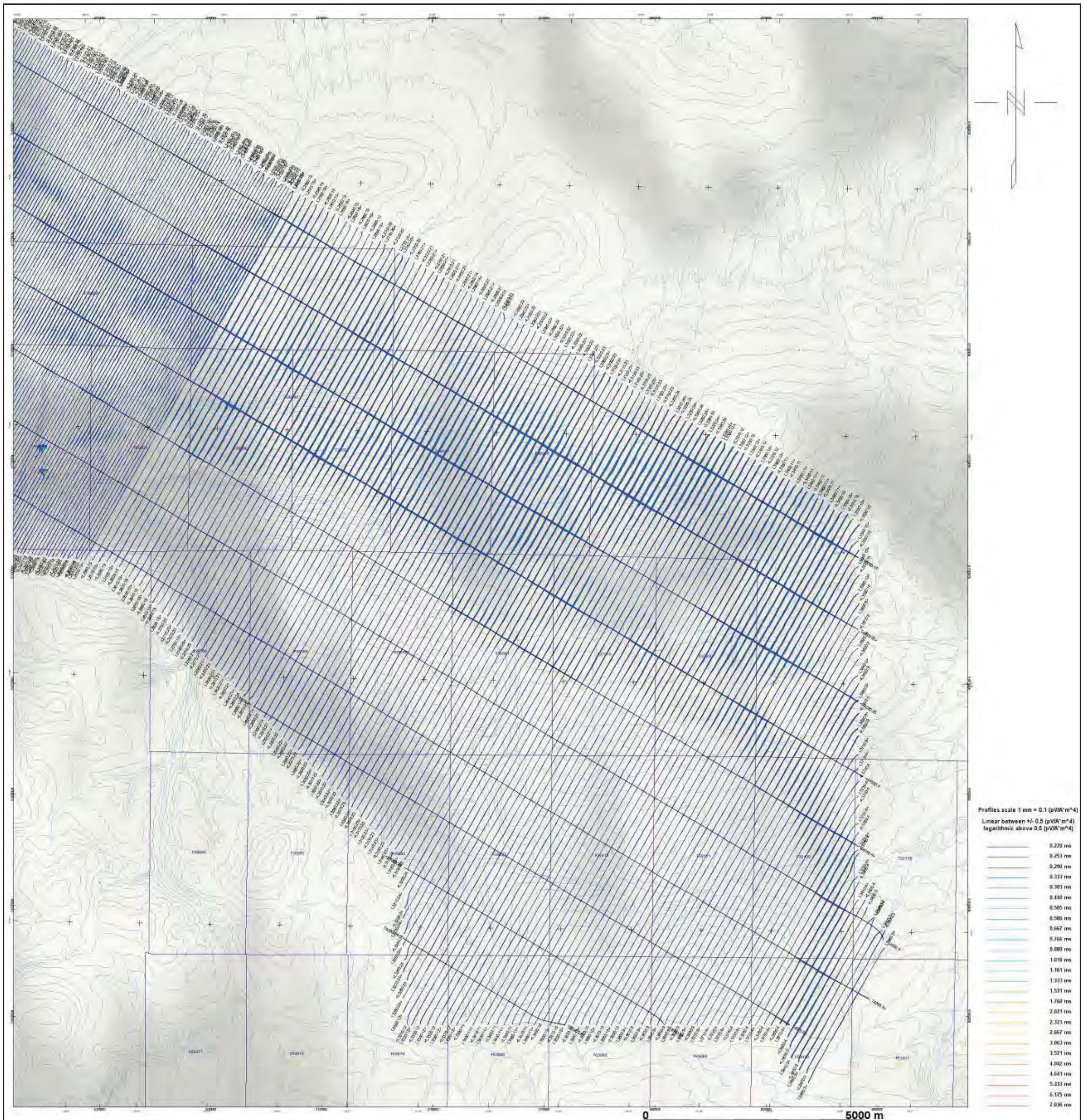
Storm Property (Plate 1) – dB/dt Calculated Time Constant (Tau) with contours of anomaly areas of the Calculated Vertical Derivative of TMI



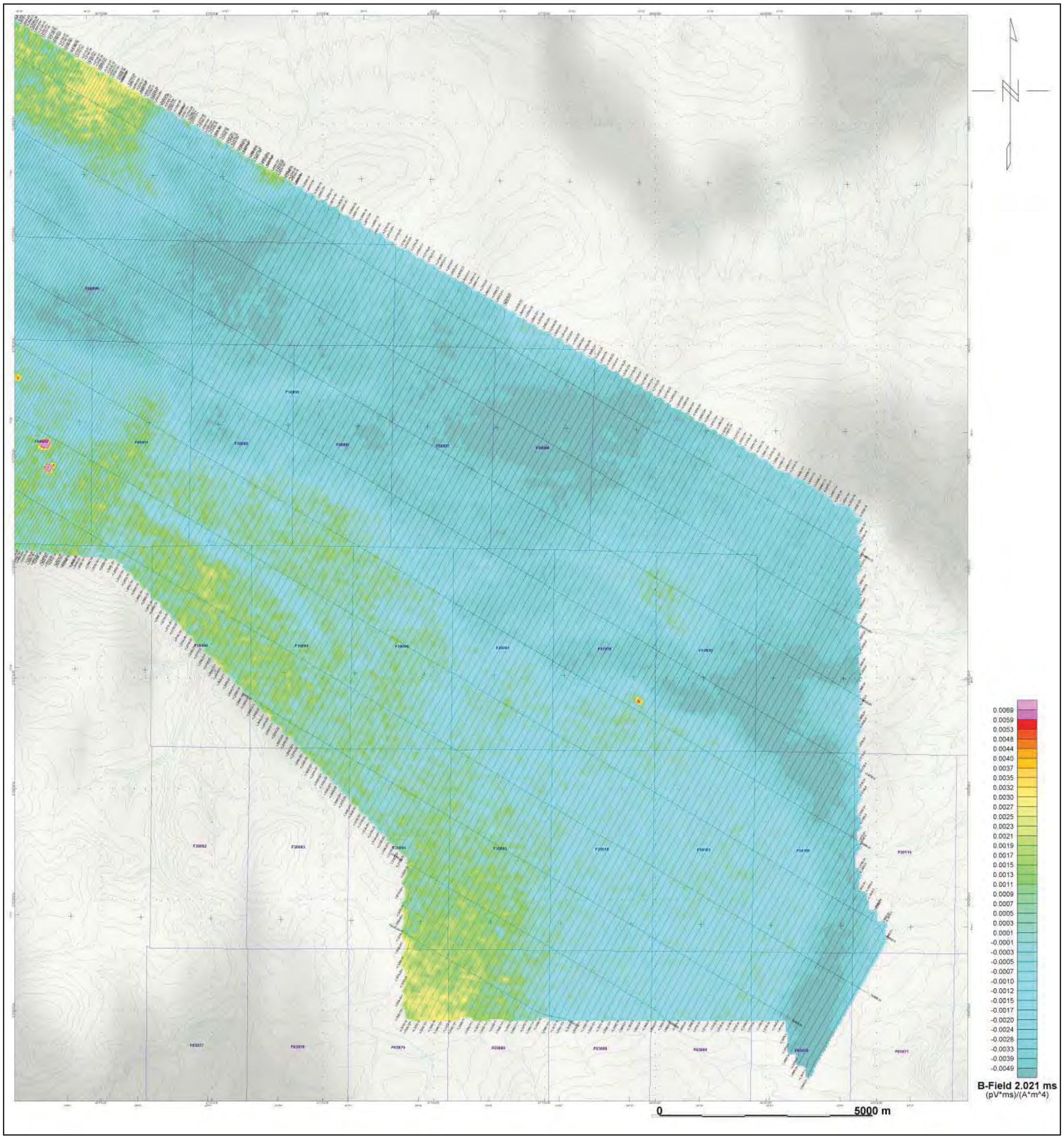
Storm Property (Plate 1) - Total Magnetic Intensity (TMI)



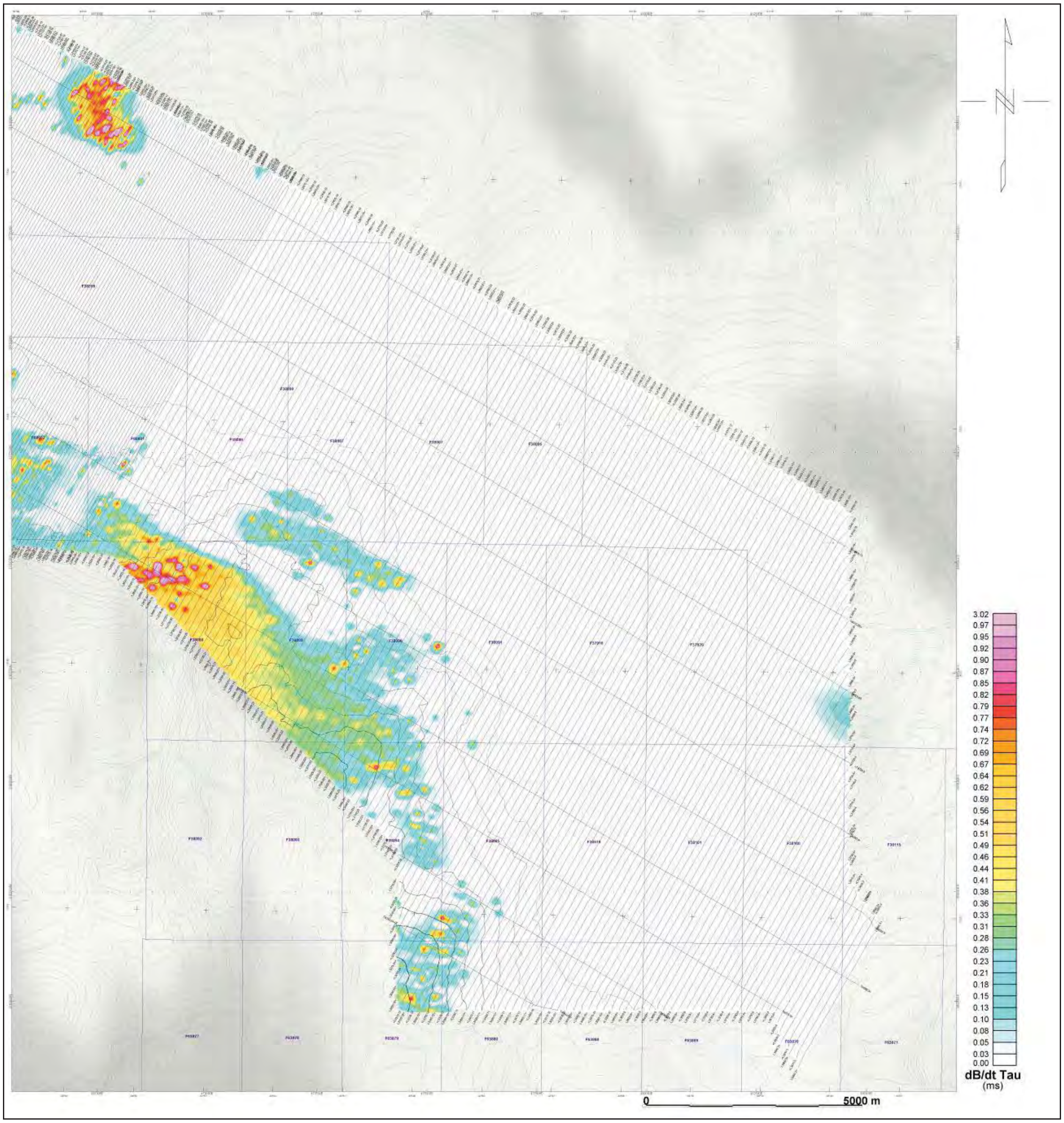
Storm Property (Plate 2) - VTEM B-Field Z Component Profiles, Time Gates 0.220 to 7.036 ms



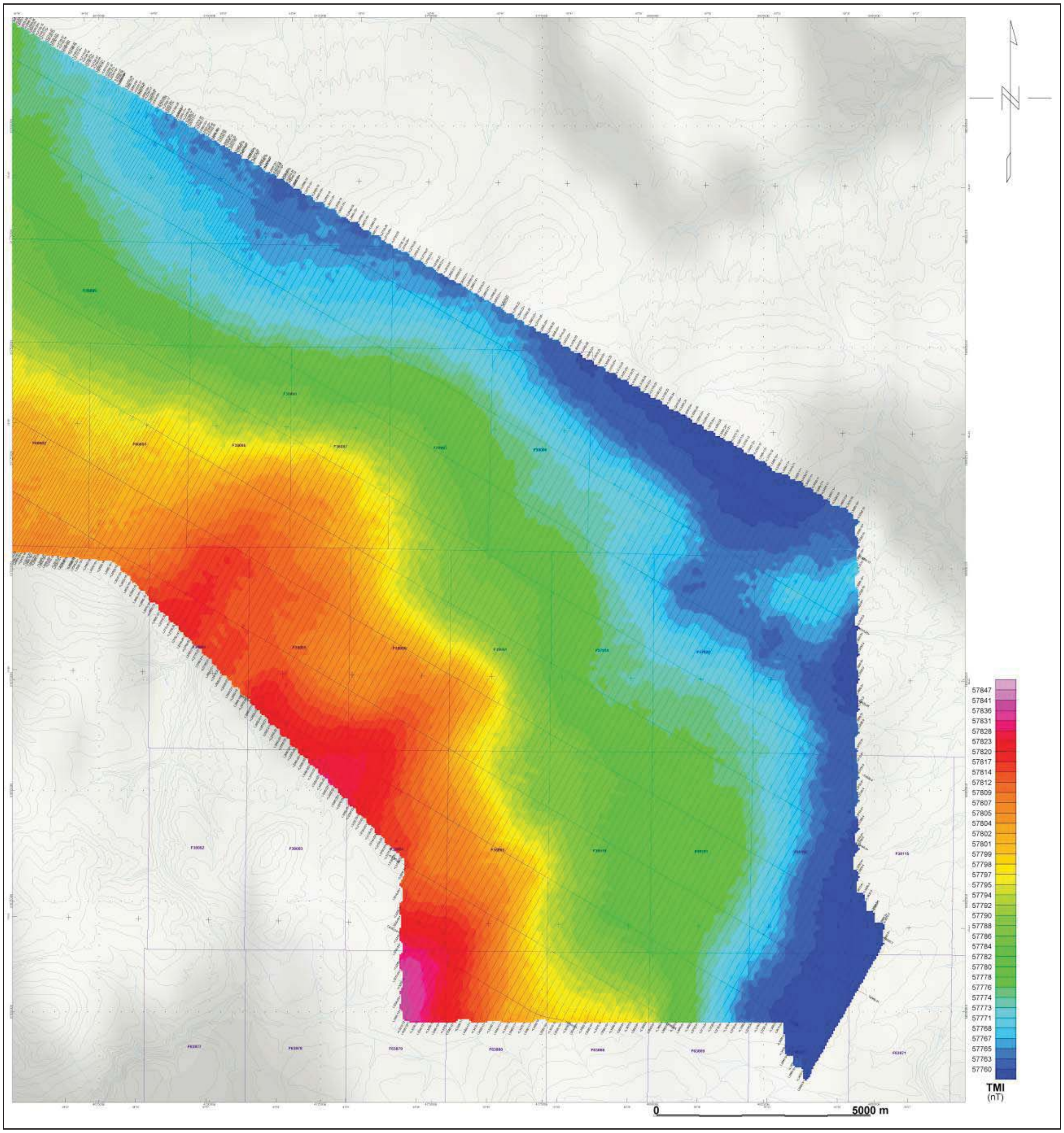
Storm Property (Plate 2) - VTEM dB/dt Z Component Profiles, Time Gates 0.220 to 7.036 ms



Storm Property (Plate 2) - VTEM B-Field Z Component Channel 36, Time Gate 2.021 ms



Storm Property (Plate 2) – dB/dt Calculated Time Constant (Tau) with contours of anomaly areas of the Calculated Vertical Derivative of TMI



Storm Property (Plate 2) - Total Magnetic Intensity (TMI)