Leaders in Deep Exploration

Quantec Geoscience

Geophysical Survey Report

SURFACE & BOREHOLE TRANSIENT ELECTROMAGNETIC SURVEYS
over the
EAST BULL LAKE PROJECT
near Massey, ON
on behalf of
MUSTANG MINERALS CORP.
Toronto, ON

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S.T. Coulson, P.Geo.

July, 2012

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF TABLES AND FIGURES

1. INTRODUCTION

- **QGI Project No:** CA00940C
- **Project Names:** East Bull Lake Project
- **Survey Period:** June 17th to July 1st, 2012
- **Survey Type**: Surface & Borehole Transient Electromagnetics
- **Client:** **MUSTANG MINERALS CORP.**
- **Client Address**: 65 Queen Street West, Suite 530
  Toronto, Ontario M5H 2M5
- **Representative:** David Stevenson
- **Objectives:**
  1. Exploration:
     a) to identify EM targets associated with potential base metal mineralization.
  2. Geophysical:
     a) Using Borehole TEM to determine the extent and characterize mineralization in the drill hole and determine if any conductive mineralization exists off the hole within a 25m to 100m radius of the drill hole.
     b) Using Surface TEM to map conductors detected from airborne surveys related to potential massive sulphide mineralization
- **Report Type:** Assessment

2. GENERAL SURVEY DETAILS

2.1 LOCATION

- **General Location:** Central Canada
- **Province:** Ontario
- **Nearest Settlement:** Massey
- **Nearest Highway** Hwy 17
- **NTS Map Reference** 41J/48
- **Claims Surveyed** Boreholes – 1227910, 1226700, 1227909, 1229204, Savage Grid – 4259120, 4259121, 4259122, 4259113, 1165386, 1118378, 4228488, 1136194

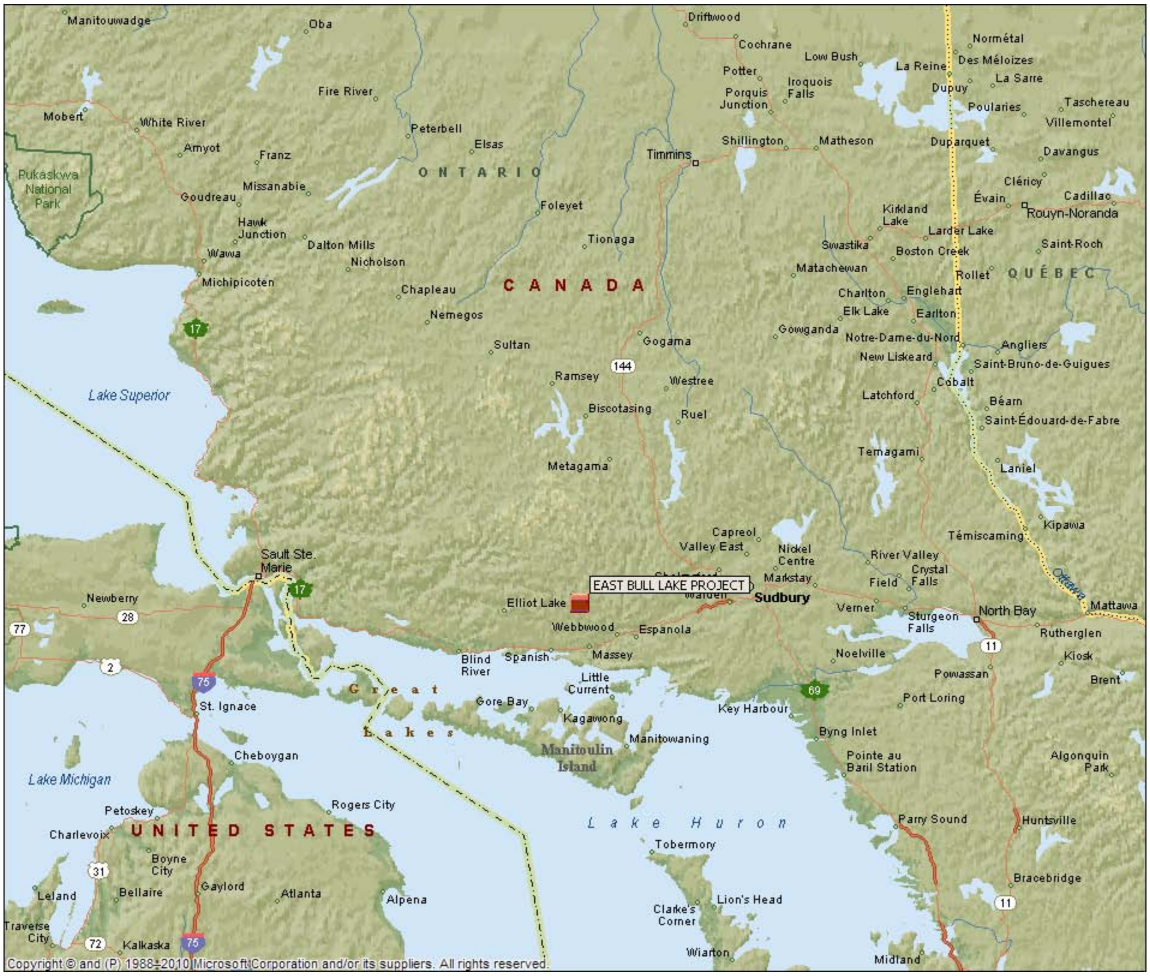


Figure I: General Location of the Property

2.2 Access

- **Base of Operations:** East Bull Lake Lodge
- **Mode of Access:** Helicopter, truck and ATV

2.3 Survey Grids

- **Coordinate Reference System:** UTM ref NAD27, Zone 17T
- **Local Exploration Grid:** established by Mustang over the Savage Grid; no grids over the boreholes
- **Line Direction:** Savage Grid – 207°
- **Line Separation:** 100 metres
- **Station Interval:** 25 metres
- **Method of Chaining:** Slope

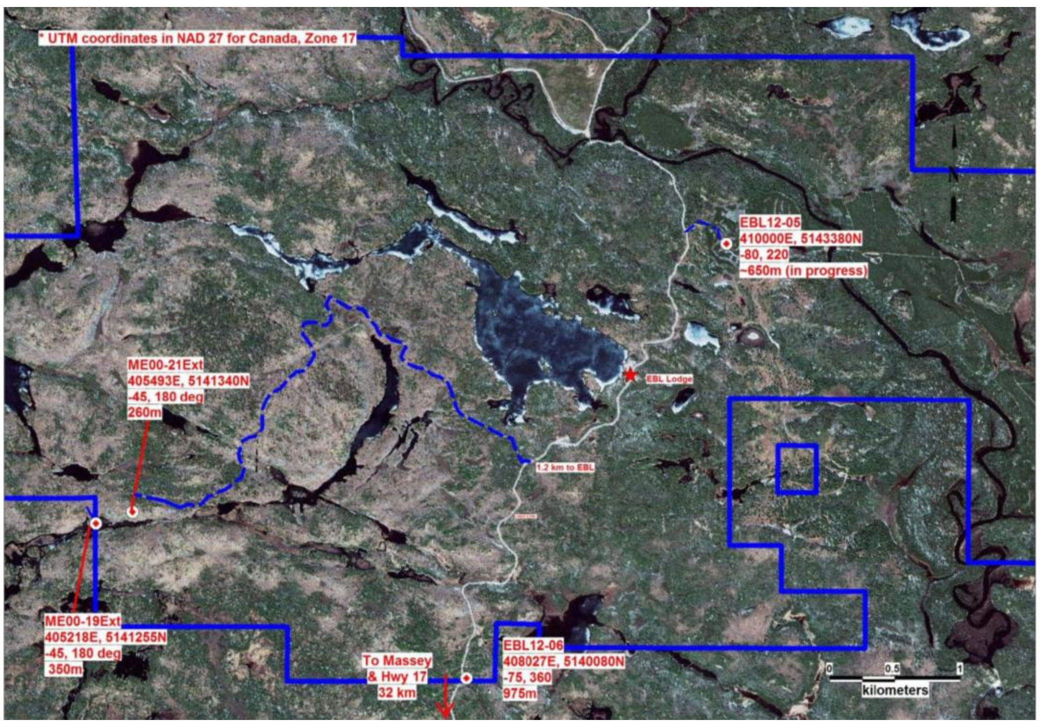


Figure 2: East Bull Lake Drill Hole Location Sketch

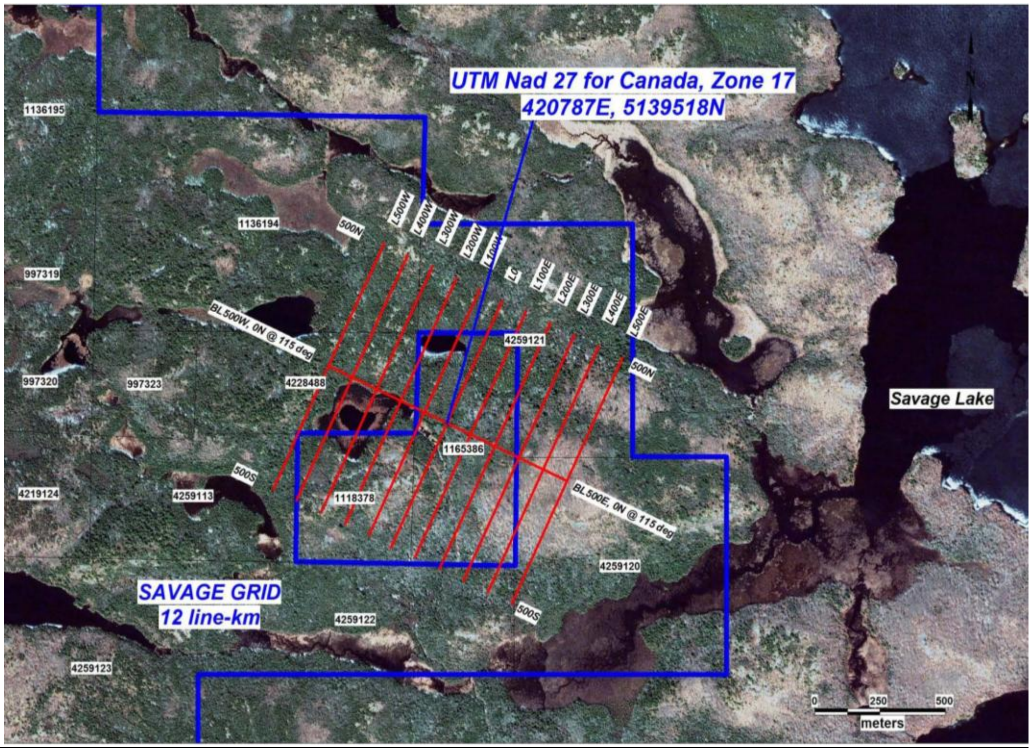


Figure 3: Savage Grid Location Sketch

3. SURVEY WORK UNDERTAKEN

3.1 Generalities

- **Survey Dates:** June 17th to July 1st, 2012
- **Survey Period:** 15 days
- **Survey Days:** 12
- **Weather Days:** 1
- **Standby Days:** 0
- **Down Days:** 0
- **Mob/Demob Days:** 2
- **Survey Coverage:** Borehole TEM – 2,240m
  Surface TEM – 4.5kms

3.2 Survey Coverage

Hole #	Loop	Start	End	Total (m)
ME00-19Ext	Collar	0	350	350
ME00-21Ext	Collar	0	260	260
EBL12-05	Collar	300	955	655
EBL12-06	Collar	0	975	975

Table I: Borehole TEM Survey Coverage

Line #	Start	End	Total (m)
400W	450S	450N	900
200W	450S	450N	900
0	450S	450N	900
420E	450S	450N	900
400E	450S	450N	900

Table II: Surface TEM Survey Coverage

3.3 Personnel

- **Project Manager:** Woody Coulson, St James, Barbados
- **Geophysical Operator:** Donald McLaren, North Bay, ON
- **Technician:** Vidal Neron, Toronto, ON

3.4 Survey Specifications

3.4.1 Borehole TEM

- **Configuration:** Borehole Profiling
- **Output Power Stage:** Low Power

- **Dimension:** 3 Component (X,Y and Z)
- **Loop Sizes and Locations:** 200m x 200m and 800m x 800m (see Table III)
- **Sampling Interval:** 5 – 20 meters

3.4.2 Surface TEM

- **Configuration:** Surface Profiling
- **Output Power Stage:** Low Power
- **Dimension:** 3 Component (X,Y and Z)
- **Loop Sizes and Locations:** 1000m x 1000m (see Table III)
- **Sampling Interval:** 50 meters

3.5 INSTRUMENTATION

- **Receiver:** Geonics Digital Protem 30 channel capability
- **Coils:** Borehole Survey – Geonics BH43-3D (100m^2 effective area)
  Surface Survey – Geonics 3D-3 (200m2 effective area)
- **Transmitter:** Geonics EM-37 (2.8kW output)
- **Power Supply:** Geonics GPU 2000 (3 phase 400Hz)

3.6 SURVEY PARAMETERS

3.6.1 Borehole TEM

Hole #	Hole Location (NAD27)	Loop Location	Loop Size	Loop Corners
ME00-19Ext	405218E, 5141255N	Collar	200m x 200m	NE – 405320E, 5141403N NW – 405120E, 5141406N SW – 405116E, 5141206N SE – 405317E, 5141204N
ME00-21Ext	405493E, 5141340N	Collar	200m x 200m	NE – 405595E, 5141488N NW – 405394E, 5141492N SW – 405391E, 5141292N SE – 405592E, 5141289N
EB12-05	410000E, 5143380N	Collar	800m x 800m	NE – 410762E, 5143468N NW – 410153E, 5143989N SW – 409632E, 5143381N SE – 410233E, 5142868N
EBL12-06	408027E, 5140080N	Collar	500m x 500m	NE – 408283E, 5140277N NW – 407779E, 5140285N SW – 407772E, 5139786N SE – 408272E, 5139778N

Table III: Loop Locations for Borehole TEM Survey

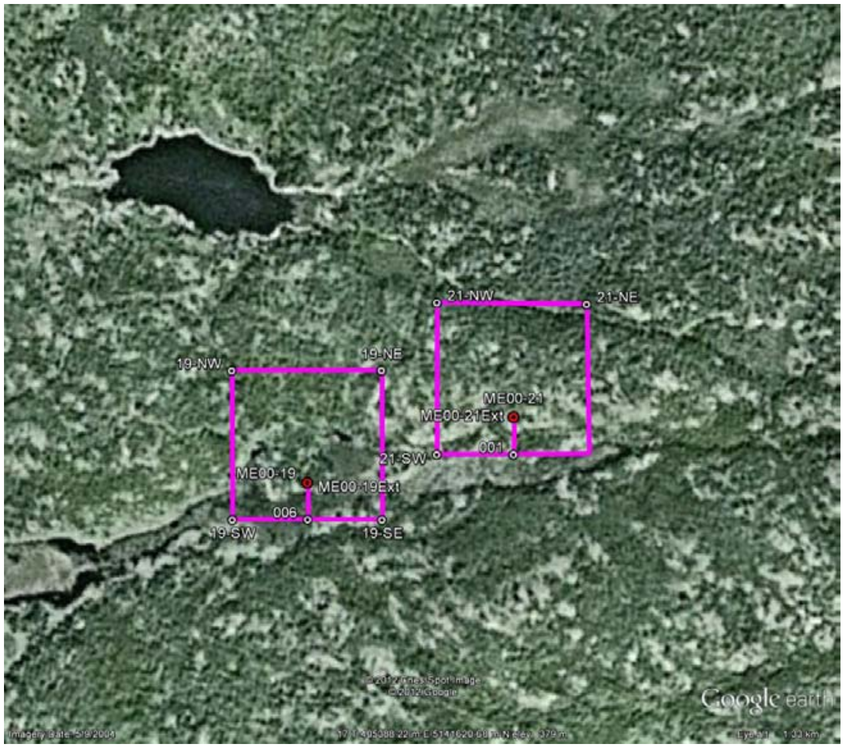


Figure 4: ME00-19Ext and 21Ext Drill Hole and Loop Location Sketch

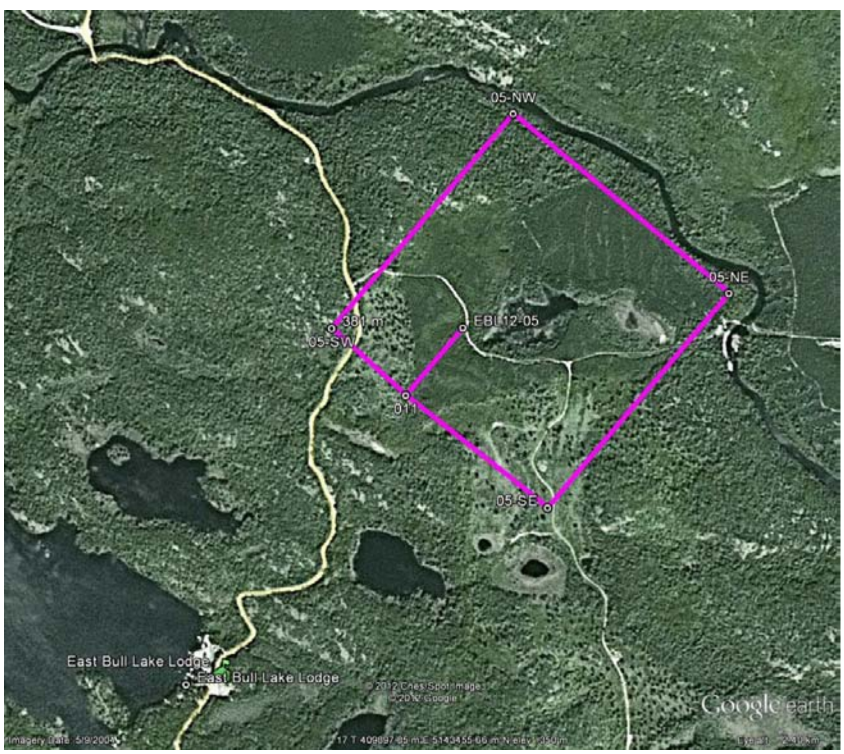


Figure 5: EBL12-05 Drill Hole and Loop Location Sketch

Figure 6: EBL12-06 Drill Hole and Loop Location Sketch

3.6.1 Surface TEM

Local X	Local Y	UTM X	UTM Y
		NAD27 Zone 17T	
0	500	421009	5139975
0	0	420797	5139541
0	-500	420560	5139087
200	500	421194	5139897
200	0	420975	5139450
200	-500	420736	5139015
-200	500	420811	5140082
-200	0	420588	5139636
-200	-500	420358	5139150
-400	500	420606	5140173
-400	0	420404	5139702
-400	-500	420179	5139259
400	500	421382	5139812
400	0	421161	5139379
400	-500	420952	5138948
Transmit Loop Corners			
Southeast corner		421030	5138852
Northeast corner		421458	5139759
Southwest corner		420079	5139316
Northwest corner		420518	5140173

Table IV: Savage Grid Line and Loop Locations for Surface TEM Survey

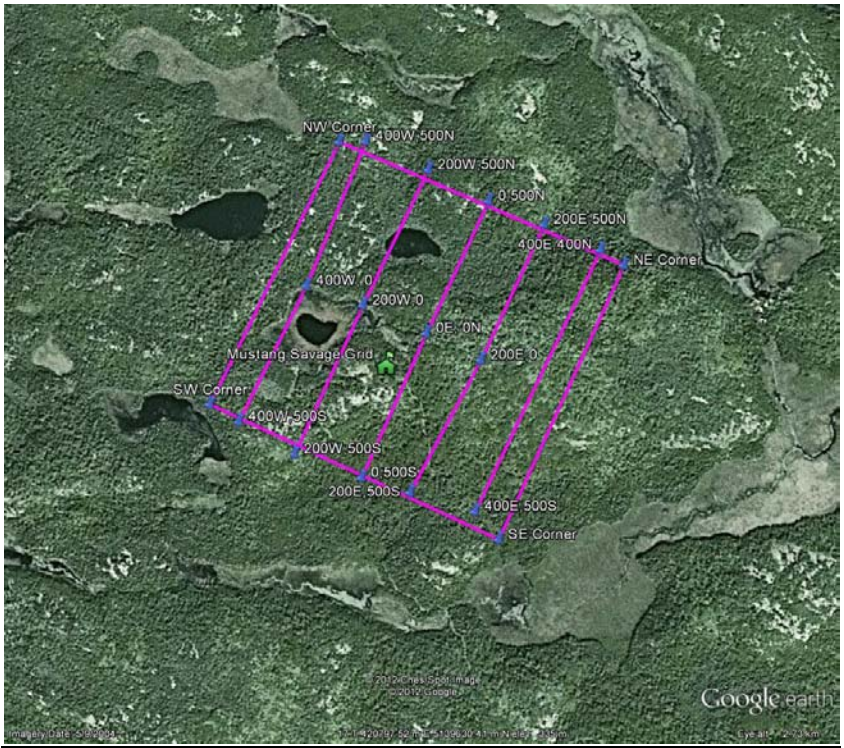


Figure 7: Savage Grid Line and Loop Location Sketch

3.7 SURVEY SPECIFICATIONS:

Pulse repetition frequency:	7.5Hz
Gain:	3 - 6
Integration number:	30 sec
Approximate Loop Sizes:	200m x 200m and 1000m x 1000m
Current:	10.5A – 16.5A see plots
Turn-off times:	360µs – 490µs see plots
Gate positions	Borehole Survey: 32 – 24,545µs (see Appendix C) Surface Survey: 320 – 24,545µs (see Appendix C)
Receiver Delay	Borehole Survey: 100µs Surface Survey: 0 µs
Synchronization mode:	Crystal

Table V: System Parameters for Borehole TEM Survey

- **Coil Conventions:** (see Appendix C)

COMPONENT	COIL ORIENTATION
Z	Positive Axially Up
X	Positive Orthogonal Up along DDH azimuth
Y	Positive Orthogonal Horizontal and left of DDH axis

Table VI: Coil Conventions for Borehole TEM Survey

COMPONENT	COIL ORIENTATION
Z	Vertical
X	Positive north
Y	Positive west

Table VII: Coil Conventions for Surface TEM Survey

- **Measured Parameters:** dB/dt, mV
- **Data Reduction[1]:** Borehole – nanoVolts/metre^2
  Surface – nanoVolts/Ametre^2

3.8 Measurement Accuracy and Repeatability

- **Number of Repeats per Station:** 0-3
- **Number of Repeats per Day:** 5-20
- **Number of Repeats per Grid/Hole:** 5-10
- **Average Repeatability:** 1% in early channels
- **Worst Repeatability:** 2%
- **Profiles:** X, Y, Z and Total Field components 4 axis data and profiles @ 1:2000 for borehole and 1:5000 for surface with vertical profile scales to best display response (Figure 4)

[1] Equivalent to Crone units of nanoTesla/second normalized to a unit current.

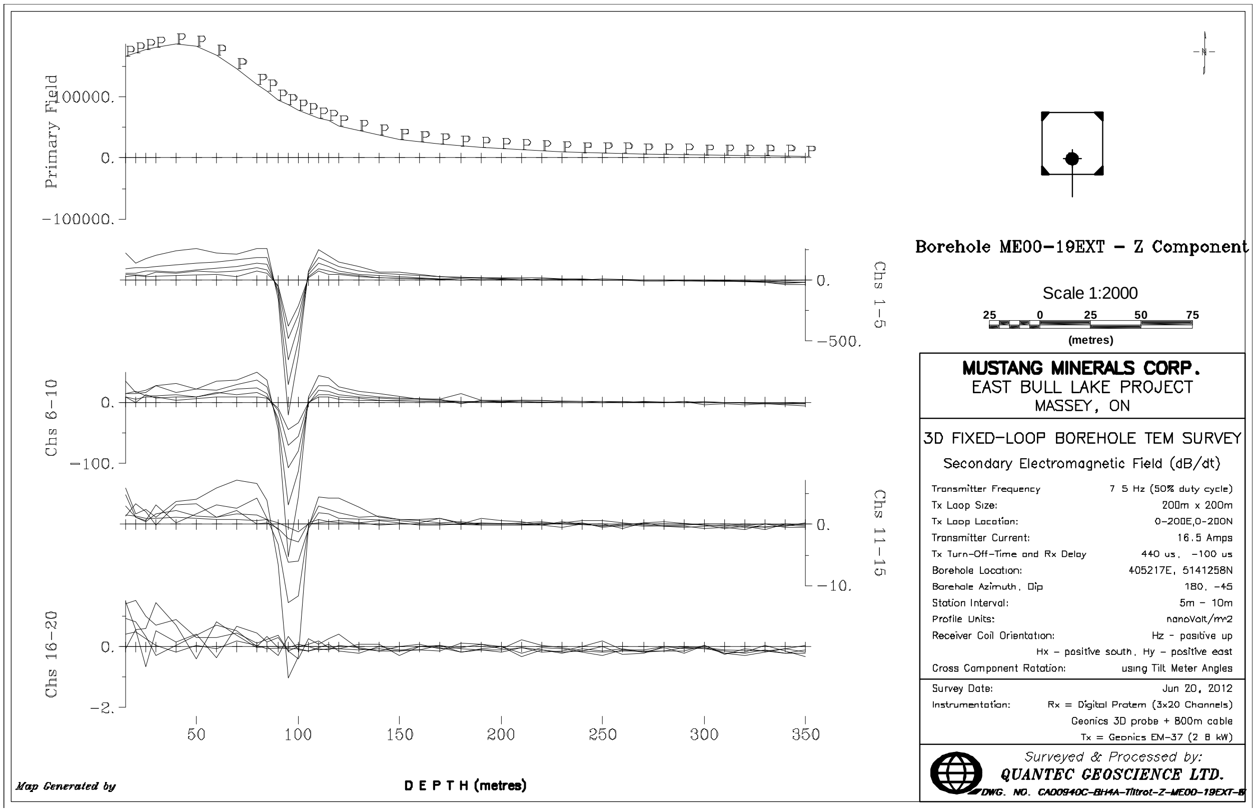


Figure 8: 4-axis TEM Profile Format

- **Digital Data:** Daily raw files and processed data (Geosoft .XYZ format) on CD ROM

a) raw data dump files, according to acquisition date (DDMMYY.RAW)
Geonics Digital Protem format (refer to Protem manual)

b) reduced XYZ ASCII data files, according to line number and component
(i.e. ln24ek.xyz where, n=loop and k=component – Z, X or Y)

Column 1: line/hole number
Column 2: Station number
Column 3: Primary pulse (nanoVolt/m^2)
Column 4: Channel 1 secondary rate of decay of TEM field
Column 5: Channel 2 …....

Column 23: Channel 20 secondary rate of decay of TEM field

4. SURVEY RESULTS

Details concerning the bedrock geology and the full extent of exploration on the property are limited by the present author and, as such, this interpretation is based solely on the TEM survey results.

As requested by Mustang, a pulse repetition rate of 7.5Hz was used to provide the optimum sensitivity to long time constant responses characteristic of nickel/copper sulphide mineralization within the Sudbury Mining Camp.

Hole ME00-19Ext

Hole ME00-19Ext, was logged from a single 200m x 200m transmit loop approximately centred over the drill hole. The borehole TEM data indicates the presence of a short wavelength, strong response at 95m in the hole. This is interpreted as a small surface area, off-hole conductor located within 10m of the drill hole. Based on the cross components, (Hx and Hy) the conductor lies left (east) of the drill and is centred up and down dip. There may be evidence of the conductor in the drill core.

Hole ME00-21Ext

Hole ME00-21Ext was logged from a single 200m x 200m transmit loop approximately centred over the drill hole. The borehole TEM response is very active from 170m to the bottom of the hole at 260m. Short wavelength responses at 175m, 195m and 250m indicate the presence of small surface area, strong off-hole conductors lying within 10m of the drill hole. The conductor at 175m lies left (east) and is centred up and down dip. The conductor at 195m lies below (down dip) the hole and is centred along strike. The conductor at 250m is poorly resolved in the cross components and a direction cannot be determined. The core should be examined for any evidence of a possible source for these conductors.

At broad negative early to mid time Hz response centred near 220m in the drill hole suggests a possible strong conductor located some 25m off the hole. A poorly resolved negative to positive cross-over in the Hx component suggests the conductor may lie above (up dip) the drill hole. The Hy component is poorly resolved as well and a strike direction is undeterminable.

Hole EBL12-05

Hole EBL12-05 was logged from a single 800m x 800m transmit loop approximately centred over the drill hole. This hole was previously logged by another contractor and subsequently deepened from 573m to 955m. The hole was logged this time from 300m to 955m in three (3) separate logging passes due to unstable hole conditions. The first pass was from 780m to 955m and the second from 600m to 780m both with the rods in the hole to 780m and 600m respectively. The final pass was from 300m to 600m with all of the rods removed. Repeat readings were taken at 600m and 610m in the final pass as a repeat of the second pass. It should be noted that these repeats were poor and subsequently the cross over in the Hz and Hx components also occur at 600m. This change in polarity appears abrupt however the Hz response was trending less positive at 600m in the second pass suggesting a cross over was imminent.

The mid time Hz channels display an increasing negative response from 300m to 575m then decrease where they cross over positive near 600m and remain there to the bottom of the hole. The Hx shows a well defined positive to negative crossover at 510m then back to the zero line near 600m suggesting a conductor may lie below (down dip) the hole below 510m. This asymmetry between the Hz and Hx may suggest a conductor exists but is more sub-parallel than perpendicular to hole and subsequently poorly coupled with the chosen loop location. The Hy is poorly resolved and does not provide any definitive information.

<u>Hole EBL12-06</u>

Hole EBL12-06 was logged from a single 500m x 500m transmit loop approximately centred over the drill hole. No conductor responses are evident in the TEM log of the hole however, a building positive in the early time Hz response at the bottom of the hole suggests a possible conductor may exist beyond the end of the hole. It's not possible to determine if the hole would intersect this possible conductor if extended or go by it. The Hx and Hy responses provide no indication of direction to this possible conductor.

<u>Savage Grid Surface TEM</u>

The Savage Grid was surveyed using a single 1000m by 1000m loop surrounding the entire grid. This was to provide the best coupling and energy transfer into an expected shallow dipping conductor. Only the 200m spaced lines from 400W to 400E were surveyed. No conductors were detected in the surface TEM survey. The data is of extremely low signal levels which is indicative of highly resistive stratigraphy.

5. CONCLUSIONS AND RECOMMENDATIONS

The borehole TEM surveys over the East Bull Lake Property were successful in delineating conductors in holes ME00-19Ext and 21Ext. The small size of these conductors make them lower priority geophysical targets and any follow up should be based on geologic merit alone.

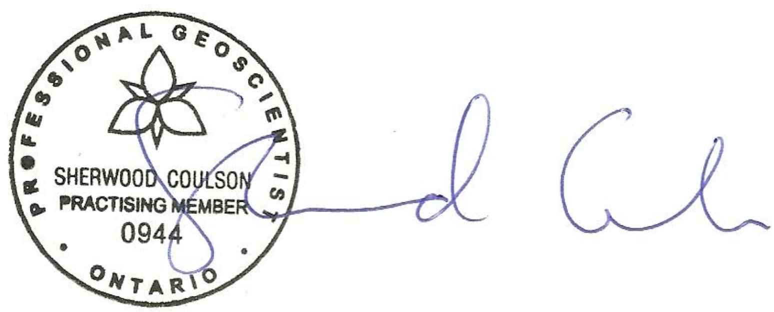
The possible off-hole conductor detected in hole EBL12-05 between 500m and 600m may be of significance however, it appears that the source may lie sub-parallel to the hole. If this is the case and the response is considered geologically favourable, then consideration should be given to relogging the hole from a loop that will provide better coupling with the suspected source. It's fortunate that this conductor lies in the upper, more stable portion of the drill hole and the majority of the response will be obtained to provide more confidence in the conductor and a possible direction to it.

The building response at the bottom of hole EBL12-06 may indicate a possible conductor beyond the end of the hole. If this is thought be geologically favourable then consideration should be given to deepening the hole another 100m to 200m and relogging it to determine if a conductor does exist.

Based on the negative results of the surface survey over the Savage Grid, no further electromagnetic work is recommended. If disseminated sulphide mineralization is considered geologically favourable, then an induced polarization survey should be considered.

Borehole TEM should continue to be used as it provides the best means by which to characterize and detect conductive mineralization both in and off the hole.

Respectfully Submitted
Quantec Geoscience Limited



S. T. Coulson, P.Geo
Senior Geophysicist

APPENDIX A

STATEMENT OF QUALIFICATIONS

I, Sherwood T. Coulson, hereby declare that:

1. I am a consulting geophysicist with residence in St James, Barbados and am presently employed in this capacity with Quantec International Project Services Ltd. of St James, Barbados.

2. I am a graduate of Cambrian College, Sudbury, Ontario in 1974 with an Honors Diploma in Geophysical Engineering Technology.

3. I am a practicing member of the Association of Professional Geoscientists of Ontario (Member # 0944).

4. I have practiced my profession in Africa, Europe and North and South America continuously since graduation.

5. I am a member of the Prospectors and Developers Association of Canada and the KEGS.

6. I have no interest nor do I expect to receive any interest, direct or indirect, in the properties or securities of **MUSTANG MINERALS CORP.**

7. I supervised the survey execution and reviewed the data as it was collected. The statements made by me represent my best opinion and judgment based on the information available to me at the time of the writing.

St James, Barbados
July 2012

S.T. Coulson, P.Geo
Senior Geophysicist
Quantec International Project Services Ltd.

APPENDIX B

THEORETICAL BASIS AND SURVEY PROCEDURES

TEM SURFACE PROFILING

TEM profiling is conducted on lines either adjacent to (Off-Loop mode) or surrounded by (In-Loop mode) a large fixed rectangular transmit loop. Current is passed through the loop which following the Turn-Off, produces a primary magnetic field (H) both inside and outside (Figure B1). This primary field induces a vortex current pattern, which energizes conductors and which in turn create their own secondary magnetic field (Bs). The rate of change of the decaying secondary magnetic flux (dBs/dt) is measured as the vertical (**Hz**), in-line horizontal (**Hx**) and/or cross line horizontal (**Hy**) vector components on surface using an air-core sensor coil. These measurements of the TEM decay (20 log-time slices) are taken during the "Off-Time", using a 30 cycle/sec, base repetition rate.

In keeping with the industry standard, the primary field is always considered positive up inside the loop and negative down outside. Similarly, for secondary EM fields, the receiver coil is oriented positive vertical up for the **Hz** component**.** The convention for In-Loop surveys, has the in-line component, **Hx** oriented either positive east (for grid EW lines) or north (for grid NS lines). The Off-Loop survey convention differs, with the receiver coil orientation for **Hx** pointing positive away from the transmit loop (for EW or NS lines). Finally, the sign convention in all cases, has the **Hy** component pointing positive orthogonal to the left of the **Hx,** according to the right-hand-rule.

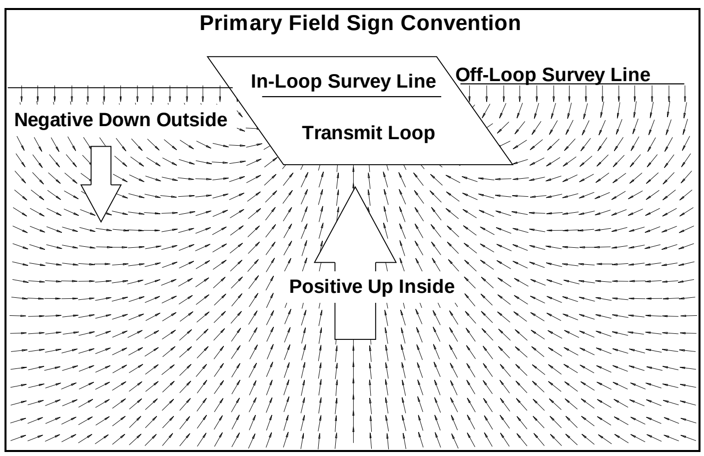


Figure B1: Primary field sign convention for TEM surveys.

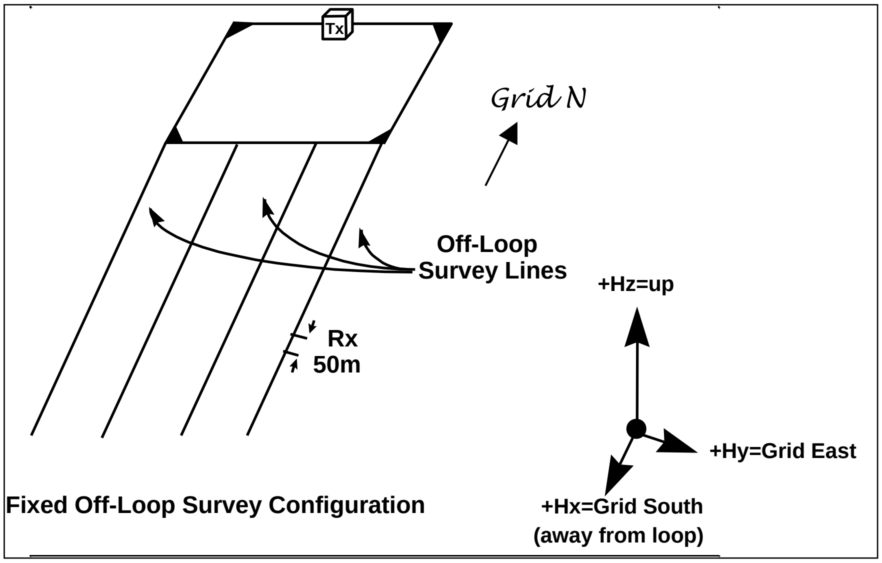


Figure B2: Loop Configuration and Polarity Conventions for Off-Loop Profiling Surveys

The borehole survey is particularly useful to determine the geometrical relationship between a conductor or a complex swarm of conductors around the drill hole. Of particular importance is its application in cases where the drilling is believed to have missed the target of interest. A 3-D borehole survey can effectively determine the direction and distance from the drill hole to the conductor by measuring two orthogonal secondary field components in addition to the axial component. Additionally, conductors located below the end of a drill hole, which either may be too deep and/or have gone previously undetected from surface, may be discovered during the course of a borehole survey.

The probe is manually lowered down the borehole at the end of a cable and, at successive depths, measurements of three (3-D) orthogonal components of the TEM field (Hx, Hy, Hz) are individually obtained in succession by electronically switching the sensor coils in the borehole antenna through the use of a relay/switching system from surface, via the borehole-cable shield. As the probe is free to rotate on its vertical axis, a correction is later applied to the 3-D data in order to rotate the components into their respective coordinate axis.

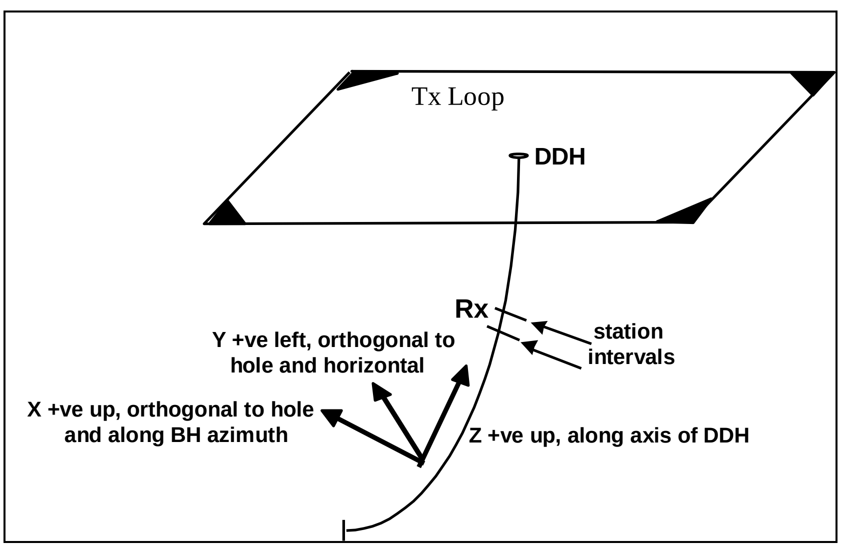


Figure B3: Loop Configuration and Polarity Conventions for 3-D Borehole Surveys

At the end of each survey day, the stored data are transferred to a microcomputer where they are corrected for the turn-off time, loop area, system gain and current, and converted from milliVolts to nanoVolts per ampere meter squared or nanoVolts per meter squared. The data are then transferred to disk for storage and processing. Report quality field plots are generated on site, using a 24-pin printer in order to monitor the data characteristics and to provide a preliminary interpretation capability.

The following equations govern the transient EM response for buried plate-like conductive bodies[1]

The secondary fields induced decay at a rate proportional to the conductivity-thickness and are then measured and profiled by the borehole sensor-probe.

a) Hz is positive up along the axis of borehole,
b) Hx is positive perpendicular to the borehole axis and pointing upward, in a vertical plane, in the direction of the azimuth of the hole,
c) Hy is positive 90° counterclockwise to Hx and horizontal, according to the right-hand rule.

At the end of each survey day, the stored data are transferred to a microcomputer where they corrected for the turn-off time, loop area, system gain and current, and converted from millivolts to nanoVolts per ampere meter squared or nanoVolts per meter squared. The data are then transferred to disk for storage and processing. Report quality field plots are generated on site, using a 24-pin printer in order to monitor the data characteristics and to provide a preliminary interpretation capability.

The following equations govern the transient EM response for buried plate-like conductive bodies[1]

Target Response to Transmitter Current Waveform:

$$emf = \frac{1}{\tau} e^{-t/\tau}$$

$$\text{where: } t = \text{fixed time}$$

$$e = \text{exponential decay}$$

$$\tau = \text{time constant of conductor}$$

Equation 1: Conductor Response to the Transient EM Waveform

The time constant of the response is alternatively defined as the slope of the lin-log decay curve (Geonics) or, more exactly, as the time channel where the amplitude of the decay collapses to 37% (1/e) of its maximum value. Both τ and the analogous decay strength (i.e., the number of anomalous channels above background), are commonly used as indicators of conductor quality. This relationship between decay-strength and the conductivity-thickness can easily be demonstrated in the following equation for a vertically dipping conductive sheet:

[1] From Geonics Limited, EM-37 TEM System Design Parameter, Mississauga, Ont., 1982.
[1] From Geonics Limited, EM-37 TEM System Design Parameter, Mississauga, Ont., 1982.

$$\tau = \frac{\sigma \mu t h}{\pi^2} \quad \textit{for a thin plate}$$

$$\begin{aligned} \textit{where } \sigma &= \textit{conductivity of target} \\ \mu &= \textit{magnetic susceptibility} \\ t &= \textit{thickness of plate} \\ h &= \textit{vertical extension of plate} \end{aligned}$$

Equation 2: Transient EM Decay Time Constant

thereby giving, for an infinite vertical sheet:

$$\sigma t = \frac{\pi^2}{\mu h} \tau \approx \tau / 0.31 \quad \textit{mhos / metre (siemens)}$$

Equation 3: Conductivity Thickness

From these equations and relationships, it therefore becomes obvious of the common use of the anomaly strength of decay as a simple, rule-of thumb indicator of the relative conductivity-thickness product for TEM surveys.

In addition, the total secondary field is calculated using the three components (Hx, Hy and Hz) in the following formula

$$Htot = \sqrt{Hx^2 + Hy^2 + Hz^2}\, nanoVolt / Am^2.$$

Equation 4: Transient EM Total Secondary Field

APPENDIX C

PRODUCTION LOG

EAST BULL LAKE PROJECT
BOREHOLE & SURFACE TEM SURVEYS

Date	Description	Hole/Line	Start	End	Total (m)
17-Jun-12	Mob Toronto to East Bull Lake Lodge				
18-Jun-12	Locate hole EBL12-05 and start laying transmit loop. Heavy rain all day.				
19-Jun-12	Complete laying loop on hole 05. Wait for drillers to pull rods to 400m. Dummy hole - problems at 800. Drillers will attempt to clear hole. Locate holes ME00-19 and 21. Dummy and start laying loop on hole 19.				
20-Jun-12	Read hole 19 and pull loop. Dummy hole 21 and lay loop.	ME00-19	0	350m	350
21-Jun-12	Read hole 21, pick up loop and move all gear to hole 05.	ME00-21	0	260	260
	Read hole 05 in 2 passes - 780 to 955, then 600 to 780 finishing at midnight. Will read from 400 to 600 tomorrow morning.	EBL12-05	600	955	355
22-Jun-12	Finish reading hole 05. Pick up and start laying loop on hole 06.	EBL12-05	300	600	300
23-Jun-12	Complet laying loop wire. Hole dummied and logged. Wire pcked up.	EBL12-06	0	975	975
24-Jun-12	Standby due to weather conditions. Dropped probe in Sudbury.				
	Savage Grid				
25-Jun-12	Chopper arrives at 9am. Fly to Savage grid and cut out landing and slinging pads. Sling in wire. Grid in poor condition - poorly cut (high stumps and willows not cut), numerous chainging errors and misalignment of lines.				
26-Jun-12	Start laying loop - complete 3km.				
27-Jun-12	Finish laying loop and start reading grid.	0	450S	450N	900
		200E	450S	450N	900
28-Jun-12	Read lines 200W and 400W. Very hot day >30C.	200W	450S	450N	900
		400W	450S	450N	900
29-Jun-12	Finished reading Savage Grid. Emailed data to Woody for clearance to pull loop. Retreived loop wire. Retreived equipment.	400E	450S	450N	900
30-Jun-12	Picked up probe at Manitoulin Transport in Sudbury. Moved BH equipment to hole ME00-17. Spent several hours cutting a trail close to hole. Dummied hole - blocked at 40m. Several attempts to clear hole failed. Dummy probed another hole 50m away to 185m. Moved all gear back to EBLL.				
1-Jul-12	Demob EBLL to Toronto.				

APPENDIX D

INSTRUMENT SPECIFICATIONS

Geonics Limited
Digital Protem Receiver System
Technical Specifications

Measured Quantity:	Time rate of decay of magnetic flux along 3 axes
Sensors:	1. (L.F.): Air-cored coil of bandwidth 60 kHz; 100 cm diameter 2. (H.F.): Air-cored coil of bandwidth 850 kHz; 100 cm diameter 3. (3D-3): Three orthogonal component sensor; simultaneous operation 4. (3D-1): Three orthogonal component sensor; sequential operation
Time channels:	20 geometrically spaced time gates for each base frequency gives range from 6 μsec to 800 msec.
Repetition Rate:	0.3 Hz, 0.75, 3, 7.4, 30, 75 or 285 Hz for 60 Hz power-line networks (Base Frequency)
Synchronization:	1) reference cable. 2) high stability (oven controlled) quartz crystals. (Switch selectable
Integration time:	2, 4, 8, 15, 30, 60, 120, 240 sec.
Calibration:	Internal self calibration External Q coil calibration (optional)
Keyboards:	Two 3 x 4 matrix sealed key pads with positive tactile feedback
Gain:	Automatic or manual control
Dynamic Range:	23 bits (132 dB)
Display Quantity:	(1) Table of time rate of decay of magnetic flux (dB/dt) (2) Curve of rate of decay of magnetic flux (dB/dt) (3) Table of apparent resistivity (ρ_a) (4) Curve of apparent resistivity (ρ_a) (5) Profile of dB/dt (6) Real time noise monitor (7) Calibration curve (8) Data acquisition statistics (real time)
Storage:	Solid state memory with capacity for over 3000 data sets
Display:	8 lines by 40 character (240 x 64 dot) graphic LCD
Data Transfer:	Standard RS-232 communications port.
Processor:	CMOS 68HC000 8 MHz CPU
Receiver Battery:	12 volts rechargeable battery for 8 hours continuous operation. 6 hours in XTAL mode
Receiver Size:	34 x 38 x 27 cm

Receiver Weight: 15 kg

Operating Temp.: -40^{O}C to +50^{O}C

Transmitters: (1) Geonics TEM47
(2) Geonics TEM57
(3) Geonics TEM37

	30/25Hz			**7.5/6.25Hz**			**3/2.5Hz**		
30 gate mode	**start**	**center**	**width**	**start**	**center**	**width**	**start**	**center**	**width**
1	5.800	6.800	2.000	32.00	36.00	8.000	80.00	90.00	20.00
2	7.800	9.110	2.625	40.00	45.25	10.50	100.0	113.1	26.25
3	10.40	12.00	3.250	50.50	57.00	13.00	126.3	142.5	32.50
4	13.70	15.90	4.375	63.50	72.25	17.50	158.8	180.6	43.75
5	18.00	20.80	5.500	81.00	92.00	22.00	202.5	230.0	55.00
6	23.50	27.00	7.000	103.0	117.0	28.00	257.5	292.5	70.00
7	30.50	34.80	8.500	131.0	148.0	34.00	327.5	370.0	85.00
8	39.00	44.40	10.75	165.0	186.5	43.00	412.5	466.3	107.5
9	49.80	56.30	13.00	208.0	234.0	52.00	520.0	585.0	130.0
10	62.80	70.30	15.00	260.0	290.0	60.00	650.0	725.0	150.0
11	77.80	85.90	16.25	320.0	352.5	65.00	800.0	881.3	162.5
12	94.10	104.7	21.25	385.0	427.5	85.00	963.0	1069	212.5
13	115.3	129.1	27.50	470.0	525.0	110.0	1175	1313	275.0
14	142.8	159.7	33.75	580.0	647.5	135.0	1450	1619	337.5
15	176.6	198.4	43.75	715.0	802.5	175.0	1788	2006	437.5
16	220.3	248.6	56.25	890.0	1002.5	225.0	2225	2506	562.5
17	276.6	312.3	71.25	1115	1257.5	285.0	2790	3144	712.5
18	347.8	393.5	91.25	1400	1582.5	365.0	3500	3957	912.5
19	439.0	497.1	116.2	1765	1997.5	465.0	4413	4994	1162
20	555.3	629.0	147.5	2230	2525.0	590.0	5575	6313	1475
21	702.8	797.3	188.7	2820	3197.5	755.0	7050	7994	1887
22	891.5	1012	240.0	3575	4055.0	960.0	8940	10138	2400
23	1131	1285	306.2	4535	5147.5	1225	11338	12870	3062
24	1438	1634	391.2	5760	6542.5	1565	14400	16350	3913
25	1829	2079	498.7	7325	8322.5	1995	18310	20806	4987
26	2328	2645	636.2	9320	10592	2545	23300	26475	6363
27	2964	3370	812.5	11865	13490	3250	29663	33725	8125
28	3776	4295	1036	15115	17187	4145	37800	42975	10362
29	4813	5473	1321	19260	21902	5285	48150	54750	13212
30	6134	6978	1685	24545	27915	6740	61360	69800	16850
	7819			31285			78200		

Note: All times in microseconds
Normal 20 channel mode covers gates 11 through 30

Table D2: Digital Protem Gate Locations in 30 Channel Mode

INSTRUMENT SPECIFICATIONS

GEONICS EM-37 Transmitter
Technical Specifications

Current Wave form: Bipolar square wave.

Repetition Rate: 3Hz, 7.5Hz or 30Hz in countries using 60Hz power line frequency; 2.5Hz, 6.25Hz or 25Hz in countries using 50Hz power line frequency; all six base frequencies are switch selectable.

Turn-off Time(t): Fast linear turn-off maximum of 450 μsec. at 30 amps into a 300x600 meter loop. Decreases proportionally with current and the root of the loop area to a maximum of 20 μ sec. Actual value of t read on front panel meter.

Transmitter Loop: Any dimensions from 40x40 meters to 300x600 meters maximum at 30 amps. Larger dimensions at reduced current. Transmitter output voltage switch adjustable for smaller loops. Value of loop resistance read from front panel meter; resistance must be greater than 1 ohm on lowest setting to prevent overload.

Protection: Circuit breaker protection against input over voltage; instantaneous solid state protection against output short circuit; automatically resets on removal of short circuit. Input voltage output voltage and current indicated on front panel meter.

Output voltage: 24 to 160 volts (zero to peak) maximum

Output power: 2800 watt maximum

Motor generator: 5 HP Honda gasoline engine coupled to a 120 volt, three phase, 400 Hz alternator. Approximately 8 hours continuous operation from built-in fuel tank.

Component Dimensions and Weights

Transmitter Console: 20 by 42 by 32 cm, 20 kg

GPU: 44 by 32 by 21 cm, 65 kg

APPENDIX E

LIST OF MAPS

- **LPTEM Borehole Profiles:** **Multi-Channel 4-Axis Plots:** time rate of decay of the secondary electromagnetic field, X, Y, Z, and Total Field components, 1:2000 scale, nV/m^2

Hole	Loop	# Profiles
ME00-19Eext	Collar	4
ME00-21Ext	Collar	4
EBL12-05	Collar	4
EBL12-06	Collar	4

TOTAL PROFILES: 16

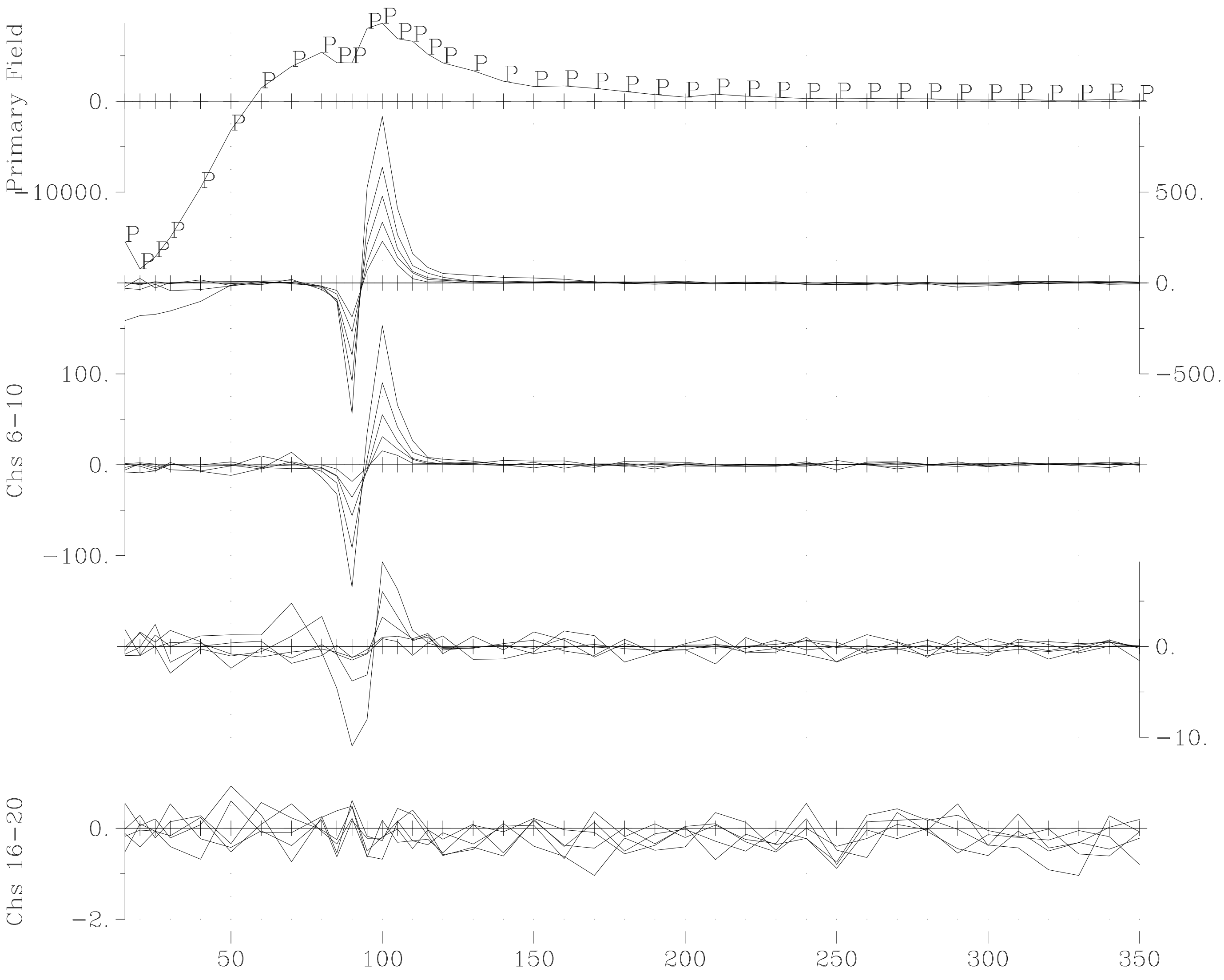
- **LPTEM Surface Profiles:** **Multi-Channel 4-Axis Plots:** time rate of decay of the secondary electromagnetic field, X, Y, Z, and Total Field components, 1:5000 scale, nV/Am^2

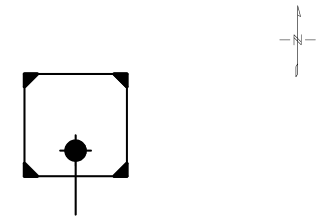
Line	# Profiles
400W	3
200W	3
0	3
200E	3
400E	3

TOTAL PROFILES: 15

APPENDIX F

PROFILES (REDUCED SCALE)





Borehole ME00-19EXT - Y Component

Scale 1:2000

25 0 25 50 75

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

3D FIXED-LOOP BOREHOLE TEM SURVEY

Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	200m x 200m
Tx Loop Location:	0-200E;0-200N
Transmitter Current:	16.5 Amps
Tx Turn-Off-Time and Rx Delay:	440 us, -100 us
Borehole Location:	405217E, 5141258N
Borehole Azimuth, Dip:	180, -45
Station Interval:	5m - 10m
Profile Units:	nanoVolt/m^2
Receiver Coil Orientation:	Hz - positive up
	Hx - positive south, Hy - positive east
Cross Component Rotation:	using Tilt Meter Angles
Survey Date:	Jun 20, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	Geonics 3D probe + 800m cable
	Tx = Geonics EM-37 (2.8 kW)

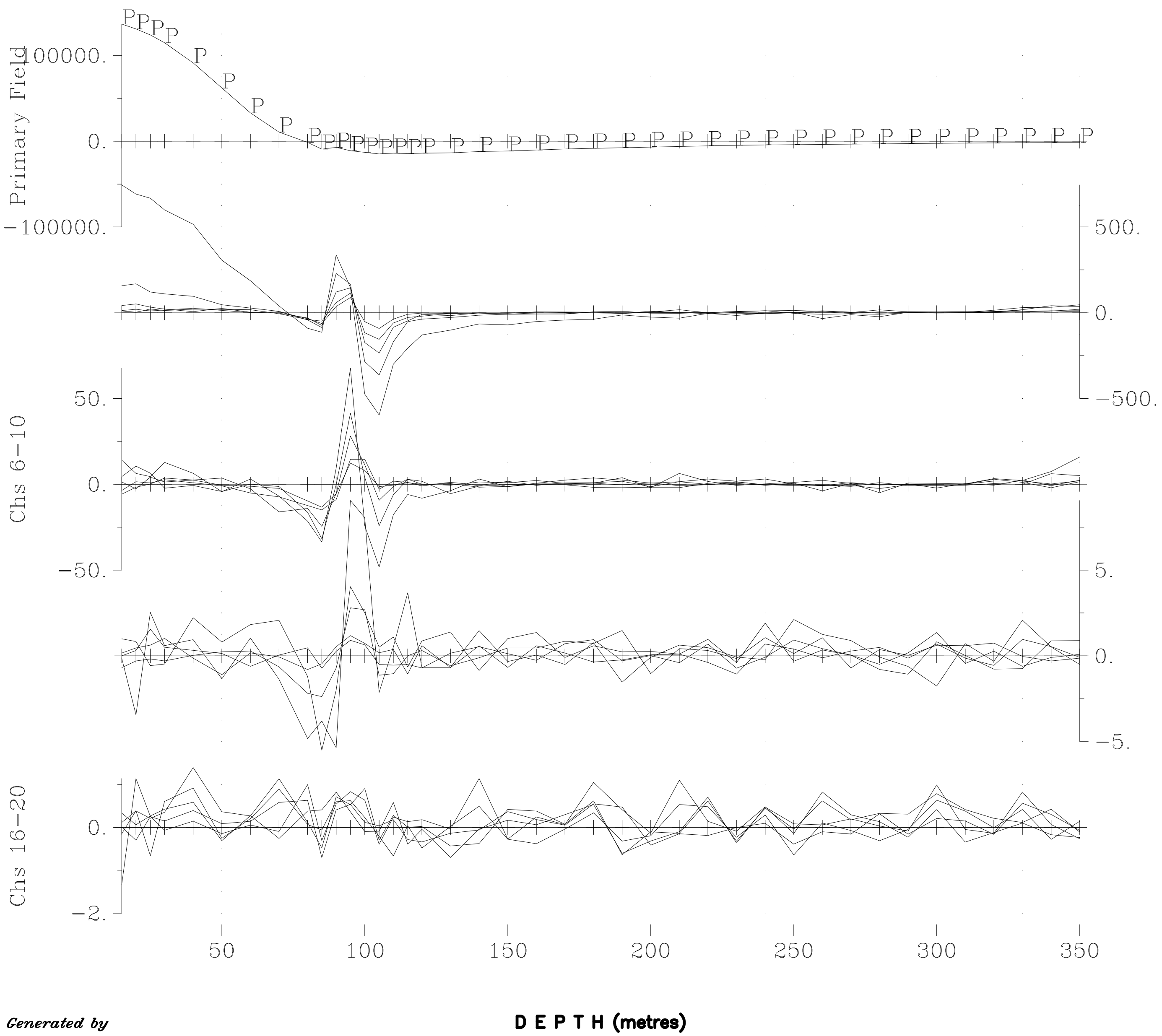
Surveyed & Processed by:

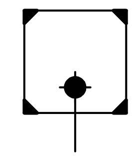
QUANTEC GEOSCIENCE LTD.

DWG. NO. CA00940C-BH4A-Tiltrot-Y-ME00-19EXT-B

Map Generated by

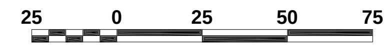
D E P T H (metres)





Borehole ME00-19EXT - X Component

Scale 1:2000



MUSTANG MINERALS CORP.
EAST BULL LAKE PROJECT
MASSEY, ON

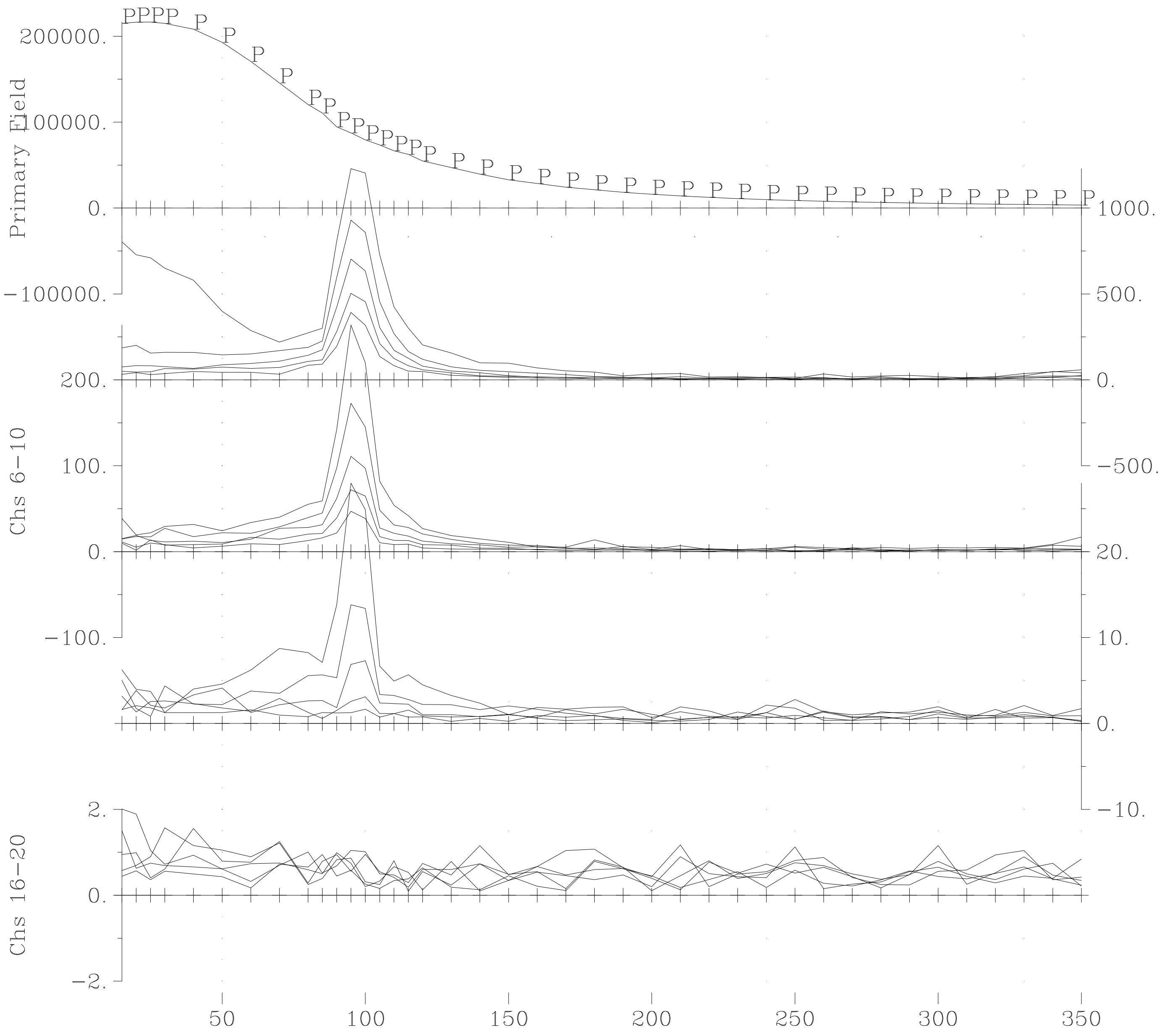
3D FIXED-LOOP BOREHOLE TEM SURVEY
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	200m x 200m
Tx Loop Location:	0-200E;0-200N
Transmitter Current:	16.5 Amps
Tx Turn-Off-Time and Rx Delay:	440 us, -100 us
Borehole Location:	405217E, 5141258N
Borehole Azimuth, Dip:	180, -45
Station Interval:	5m - 10m
Profile Units:	nanoVolt/m^2
Receiver Coil Orientation:	Hz - positive up Hx - positive south, Hy - positive east
Cross Component Rotation:	using Tilt Meter Angles
Survey Date:	Jun 20, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels) Geonics 3D probe + 800m cable Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:
QUANTEC GEOSCIENCE LTD.

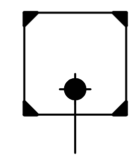
DWG. NO. CA00940C-BH4A-Tiltrot-X-ME00-19EXT-E

Map Generated by



Map Generated by

D E P T H (metres)



Borehole ME00−19EXT − Total Field

Scale 1:2000

25 0 25 50 75

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

3D FIXED−LOOP BOREHOLE TEM SURVEY

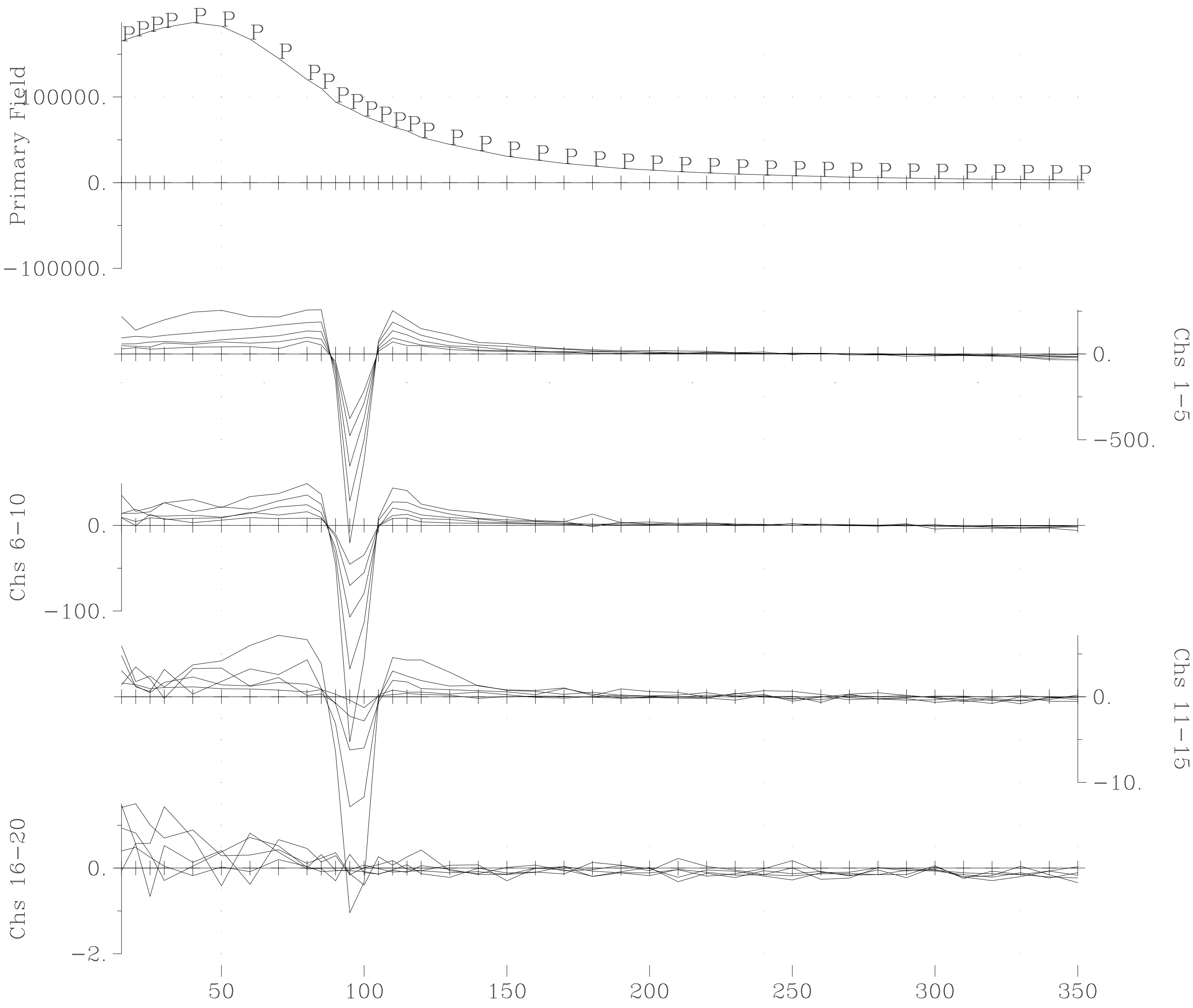
Secondary Electromagnetic Field (dB/dt)

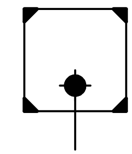
Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	200m x 200m
Tx Loop Location:	0−200E;0−200N
Transmitter Current:	16.5 Amps
Tx Turn−Off−Time and Rx Delay:	440 us, −100 us
Borehole Location:	405217E, 5141258N
Borehole Azimuth, Dip:	180, −45
Station Interval:	5m − 10m
Profile Units:	nanoVolt/m^2
Receiver Coil Orientation:	Hz − positive up
	Hx − positive south, Hy − positive east
Cross Component Rotation:	using Tilt Meter Angles
Survey Date:	Jun 20, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	Geonics 3D probe + 800m cable
	Tx = Geonics EM−37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LTD.

DWG. NO. CA00940C−BH4A−Tiltrot−TF−ME00−19EXT−E





Borehole ME00−19EXT − Z Component

Scale 1:2000

25 0 25 50 75

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

3D FIXED−LOOP BOREHOLE TEM SURVEY

Secondary Electromagnetic Field (dB/dt)

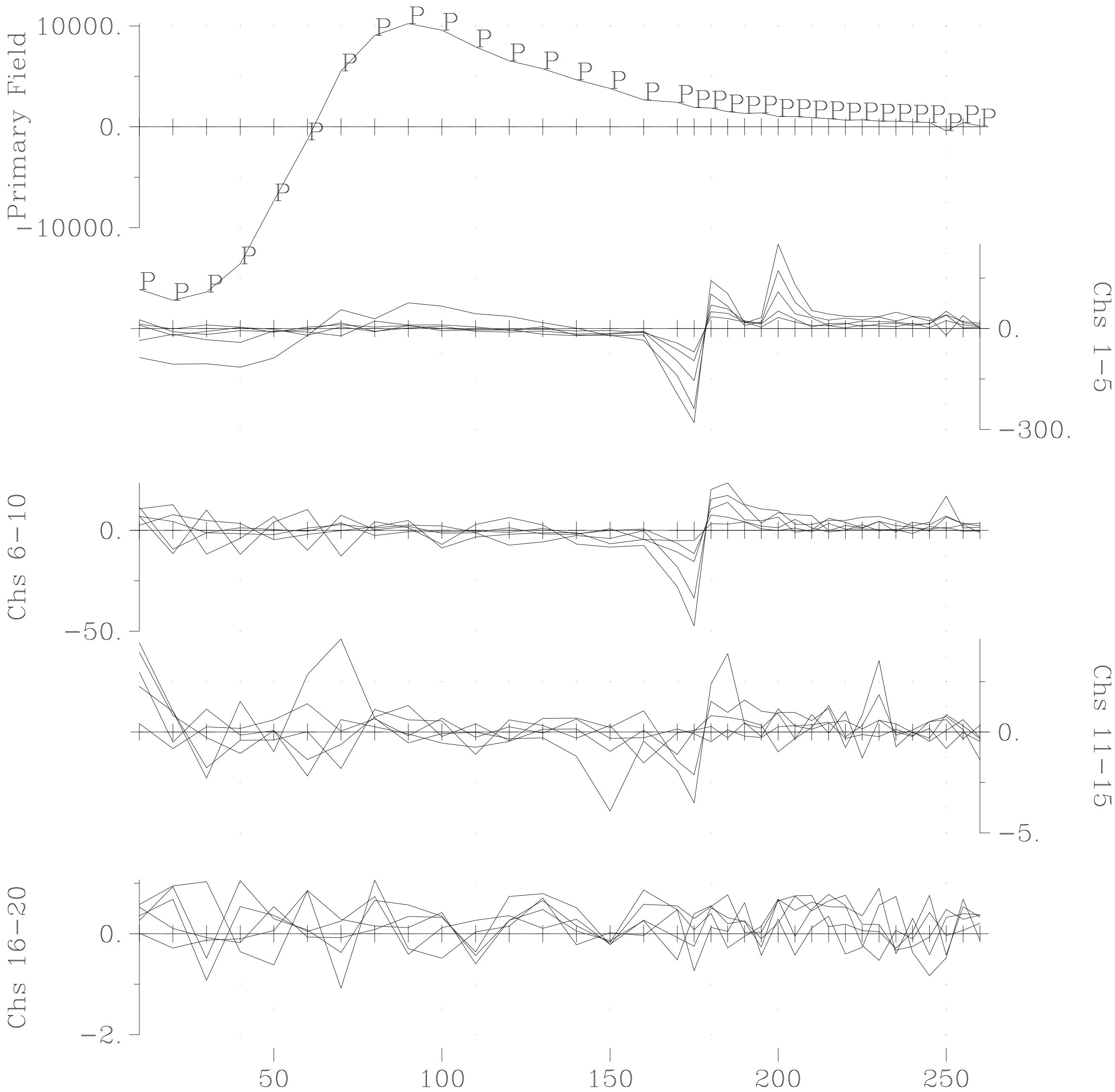
Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	200m x 200m
Tx Loop Location:	0−200E;0−200N
Transmitter Current:	16.5 Amps
Tx Turn−Off−Time and Rx Delay:	440 us, −100 us
Borehole Location:	405217E, 5141258N
Borehole Azimuth, Dip:	180, −45
Station Interval:	5m − 10m
Profile Units:	nanoVolt/m^2
Receiver Coil Orientation:	Hz − positive up
	Hx − positive south, Hy − positive east
Cross Component Rotation:	using Tilt Meter Angles
Survey Date:	Jun 20, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	Geonics 3D probe + 800m cable
	Tx = Geonics EM−37 (2.8 kW)

Surveyed & Processed by:

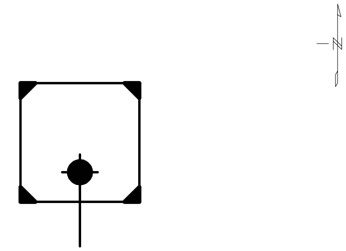
QUANTEC GEOSCIENCE LTD.

DWG. NO. CA00940C-BH4A-Tiltrot-Z-ME00-19EXT-E

Map Generated by



D E P T H (metres)



Borehole ME00-21EXT - Y Component

Scale 1:2000

25 0 25 50 75

(metres)

MUSTANG MINERALS CORP.
EAST BULL LAKE PROJECT
MASSEY, ON

3D FIXED-LOOP BOREHOLE TEM SURVEY

Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	200m x 200m
Tx Loop Location:	0-200E;0-200N
Transmitter Current:	18 Amps
Tx Turn-Off-Time and Rx Delay:	460 us, -100 us
Borehole Location:	405489E, 5141354N
Borehole Azimuth, Dip:	180, -45
Station Interval:	5m - 10m
Profile Units:	nanoVolt/m^2
Receiver Coil Orientation:	Hz - positive up
	Hx - positive south, Hy - positive east
Cross Component Rotation:	using Tilt Meter Angles
Survey Date:	Jun 21, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	Geonics 3D probe + 800m cable
	Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:
QUANTEC GEOSCIENCE LTD.

DWG. NO. CA00940C-BH4A-Tiltrot-Y-ME00-21EXT-E

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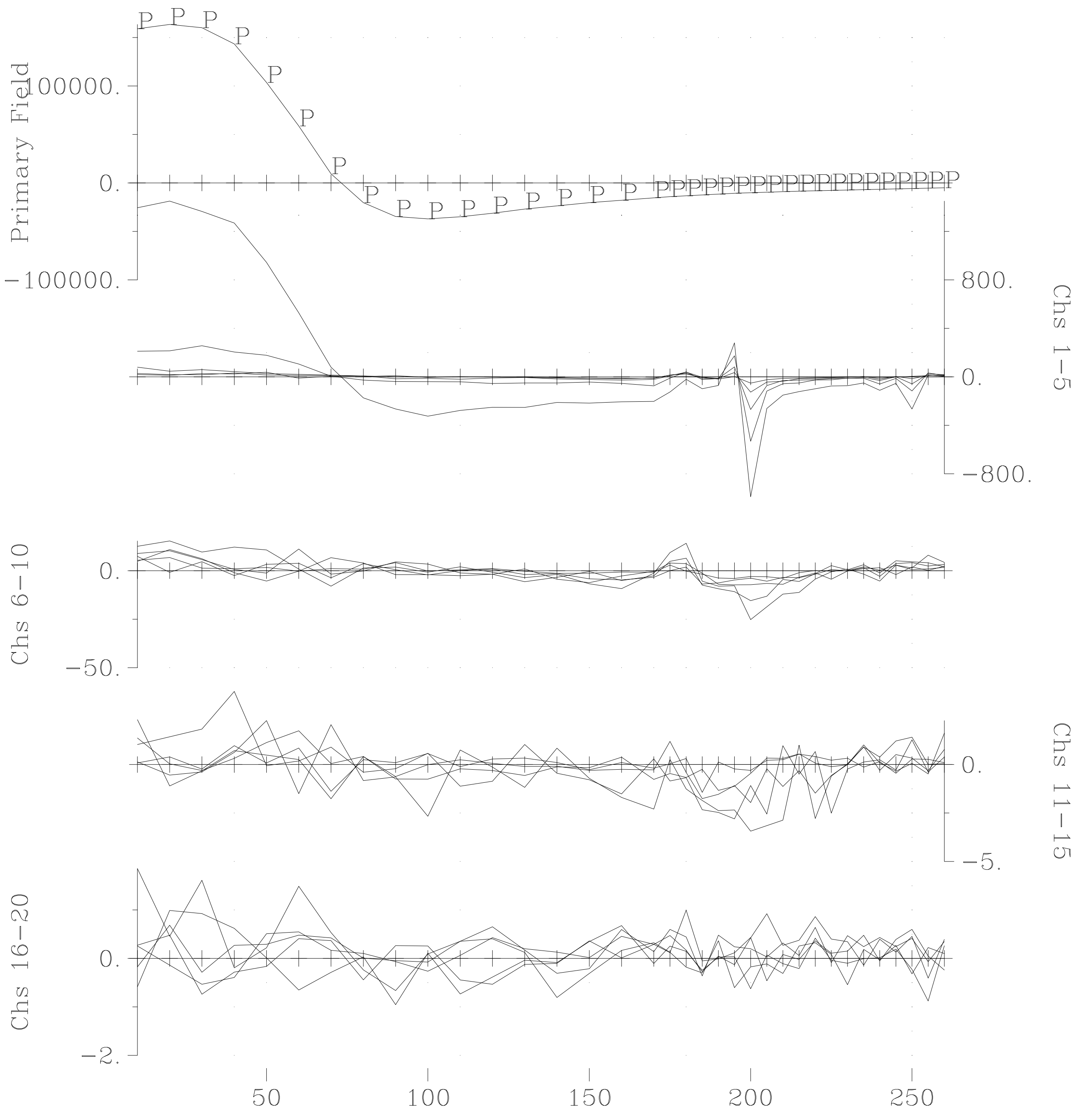

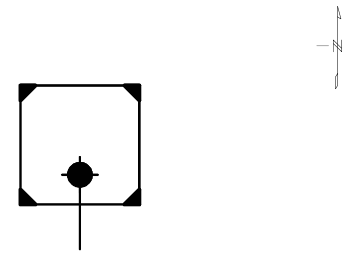

Borehole ME00-21EXT - X Component

Scale 1:2000

25 0 25 50 75

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

3D FIXED-LOOP BOREHOLE TEM SURVEY

Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	200m x 200m
Tx Loop Location:	0-200E;0-200N
Transmitter Current:	18 Amps
Tx Turn-Off-Time and Rx Delay:	460 us, -100 us
Borehole Location:	405489E, 5141354N
Borehole Azimuth, Dip:	180, -45
Station Interval:	5m - 10m
Profile Units:	nanoVolt/m^2
Receiver Coil Orientation:	Hz - positive up
	Hx - positive south, Hy - positive east
Cross Component Rotation:	using Tilt Meter Angles
Survey Date:	Jun 21, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	Geonics 3D probe + 800m cable
	Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LTD.

DWG. NO. CA00940C-BH4A-Tiltrot-X-ME00-21EXT-E

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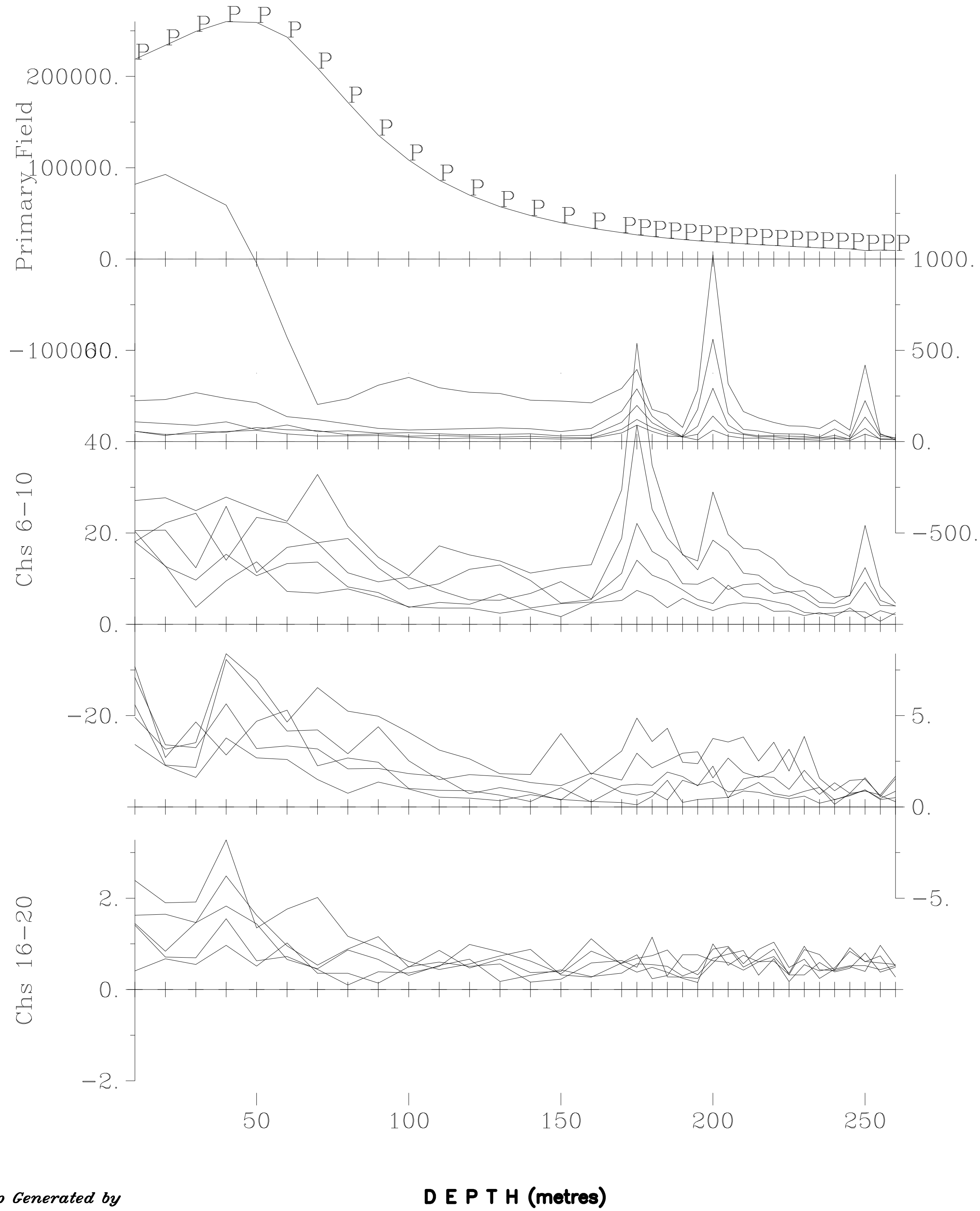
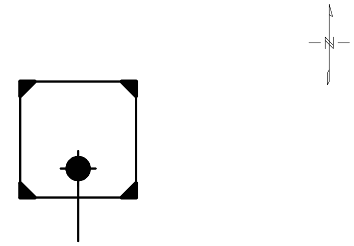




Borehole ME00-21EXT - Total Field

Scale 1:2000

25 0 25 50 75

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

3D FIXED-LOOP BOREHOLE TEM SURVEY

Secondary Electromagnetic Field (dB/dt)

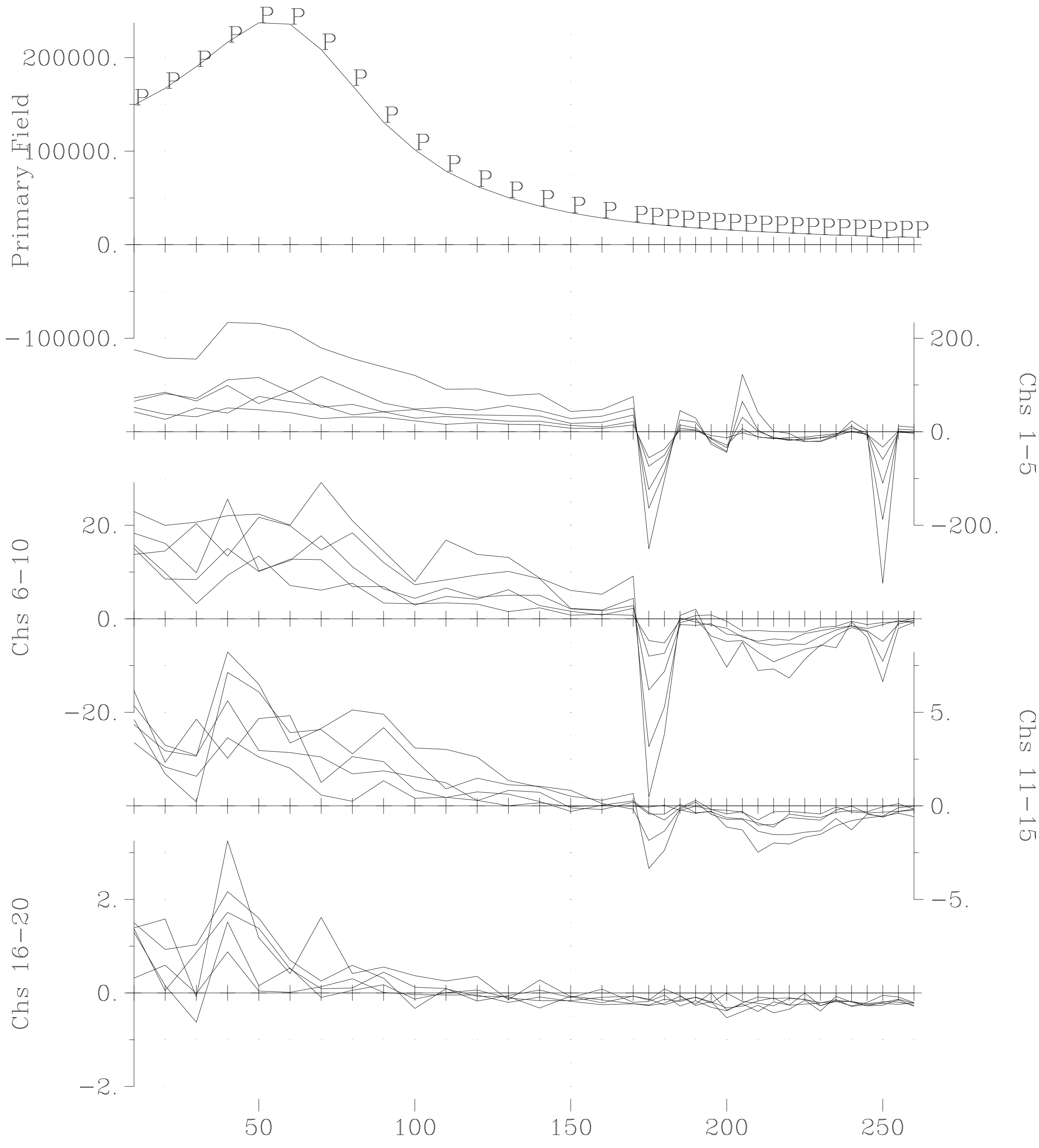
Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	200m x 200m
Tx Loop Location:	0-200E;0-200N
Transmitter Current:	18 Amps
Tx Turn-Off-Time and Rx Delay:	460 us, -100 us
Borehole Location:	405489E, 5141354N
Borehole Azimuth, Dip:	180, -45
Station Interval:	5m - 10m
Profile Units:	nanoVolt/m^2
Receiver Coil Orientation:	Hz - positive up Hx - positive south, Hy - positive east
Cross Component Rotation:	using Tilt Meter Angles
Survey Date:	Jun 21, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels) Geonics 3D probe + 800m cable Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:

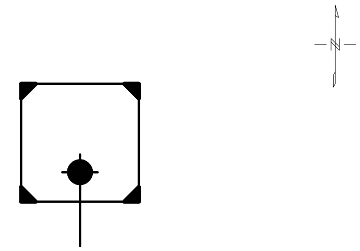
QUANTEC GEOSCIENCE LTD.

DWG. NO. CA00940C-BH4A-Tiltrot-TF-ME00-21EXT-Y

Map Generated by



D E P T H (metres)



Borehole ME00−21EXT − Z Component

Scale 1:2000

25 0 25 50 75

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

3D FIXED−LOOP BOREHOLE TEM SURVEY

Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	200m x 200m
Tx Loop Location:	0−200E;0−200N
Transmitter Current:	18 Amps
Tx Turn−Off−Time and Rx Delay:	460 us, −100 us
Borehole Location:	405489E, 5141354N
Borehole Azimuth, Dip:	180, −45
Station Interval:	5m − 10m
Profile Units:	nanoVolt/m^2
Receiver Coil Orientation:	Hz − positive up
	Hx − positive south, Hy − positive east
Cross Component Rotation:	using Tilt Meter Angles
Survey Date:	Jun 21, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	Geonics 3D probe + 800m cable
	Tx = Geonics EM−37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LTD.

DWG. NO. CA00940C−BH4A−Tiltrot−Z−ME00−21EXT−B

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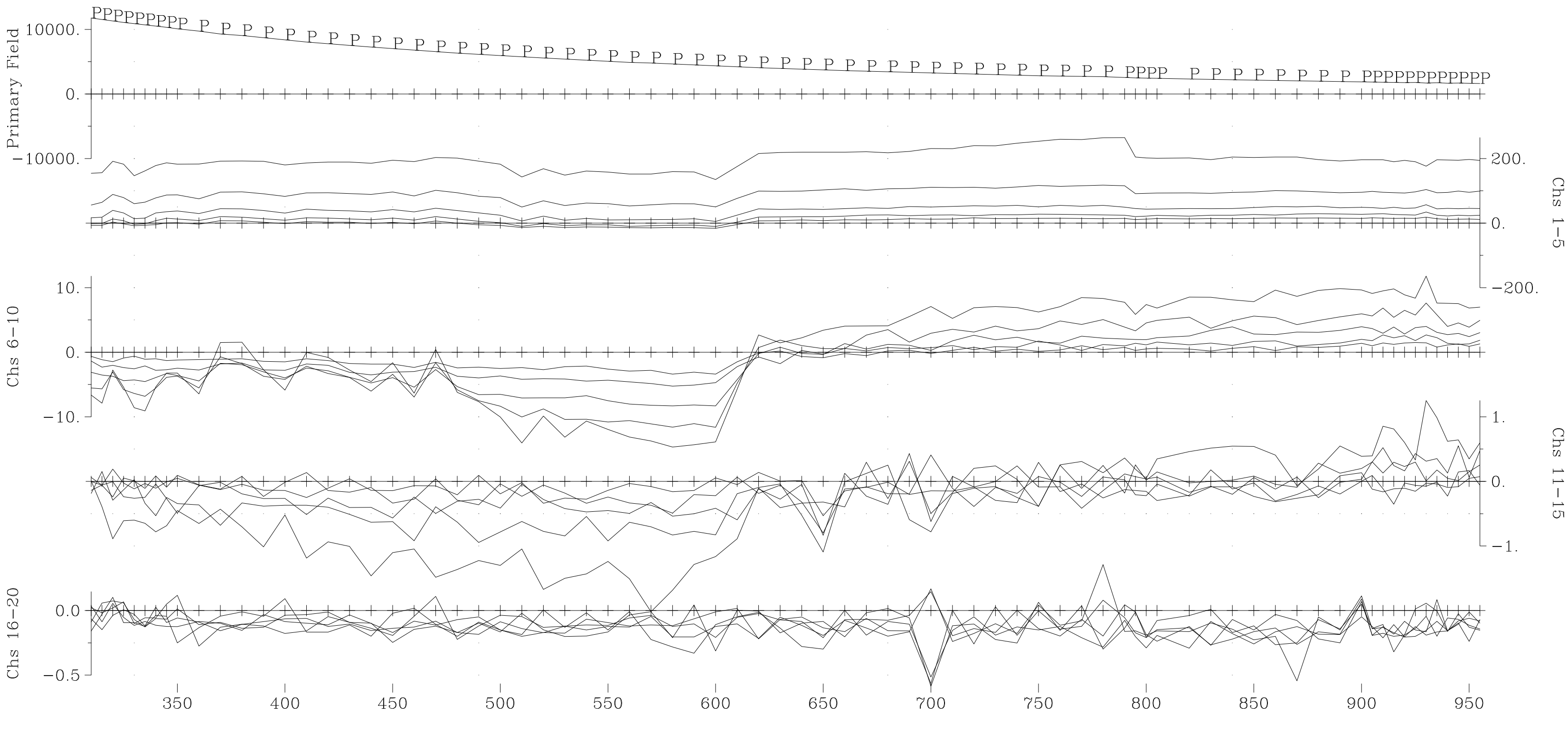

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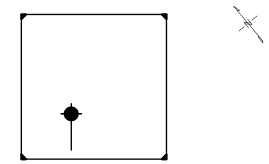


Borehole EBL12-05 - Z Component

Scale 1:2000

25 0 25 50 75

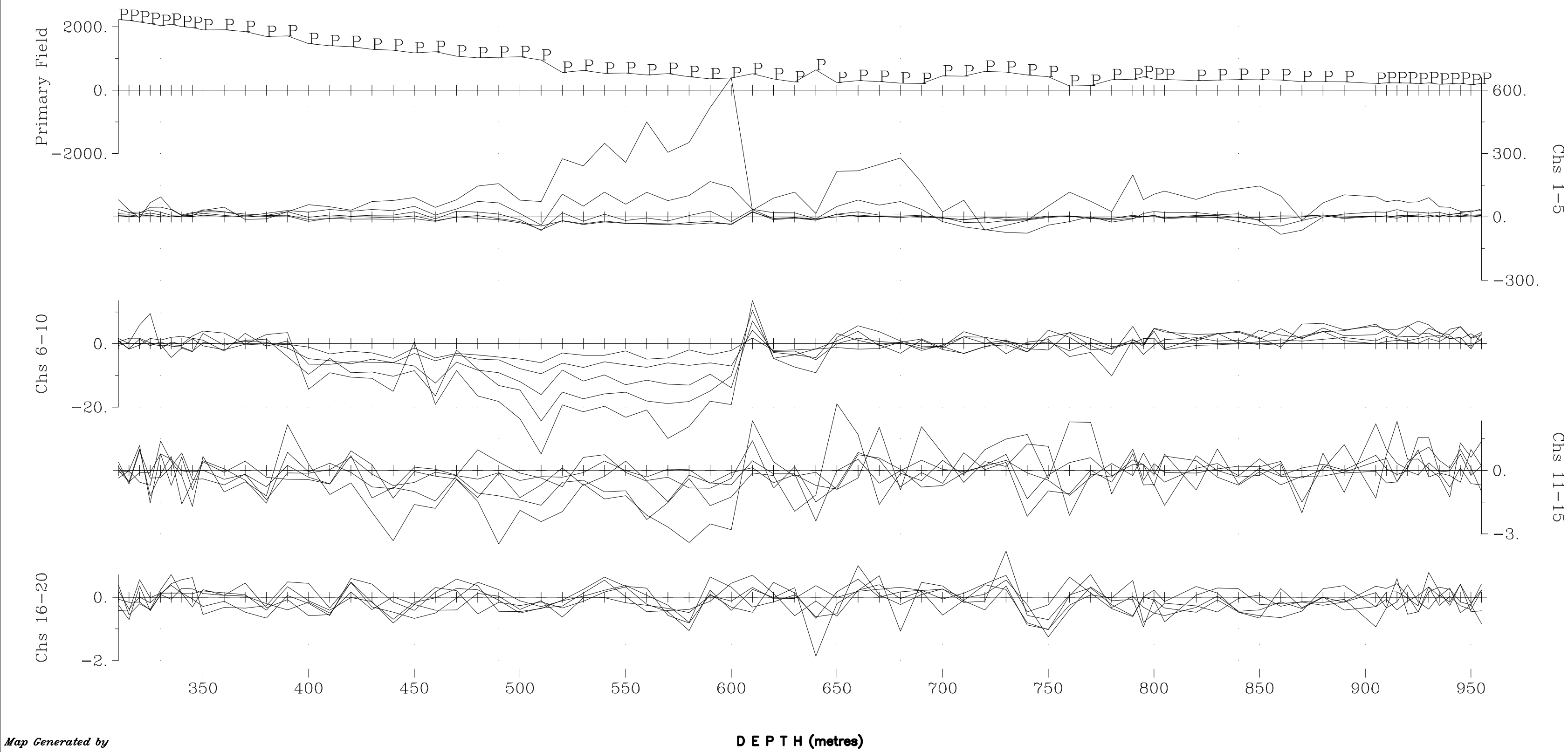
(metres)

MUSTANG MINERALS CORP.
EAST BULL LAKE PROJECT
MASSEY, ON

3D FIXED-LOOP BOREHOLE TEM SURVEY
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	800m x 800m
Tx Loop Location:	0-800E;0-800N
Transmitter Current:	11 Amps
Tx Turn-Off-Time and Rx Delay:	490 us, -100 us
Borehole Location:	410006E, 5143382N
Borehole Azimuth, Dip:	220, -80
Station Interval:	5m - 10m
Profile Units:	nanoVolt/m^2
Receiver Coil Orientation:	Hz - positive up
	Hx - positive southwest, Hy - positive southeast
Cross Component Rotation:	using Tilt Meter Angles
Survey Date:	Jun 21, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	Geonics 3D probe + 800m cable
	Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:
QUANTEC GEOSCIENCE LTD.
DWG. NO. CA00940C-BH4A-Tiltrot-Z-EBL12-05-W



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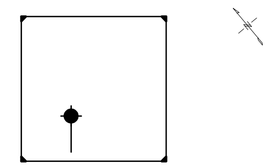


Borehole EBL12-05 − Y Component

Scale 1:2000

25 0 25 50 75

(metres)

MUSTANG MINERALS CORP.
EAST BULL LAKE PROJECT
MASSEY, ON

3D FIXED-LOOP BOREHOLE TEM SURVEY

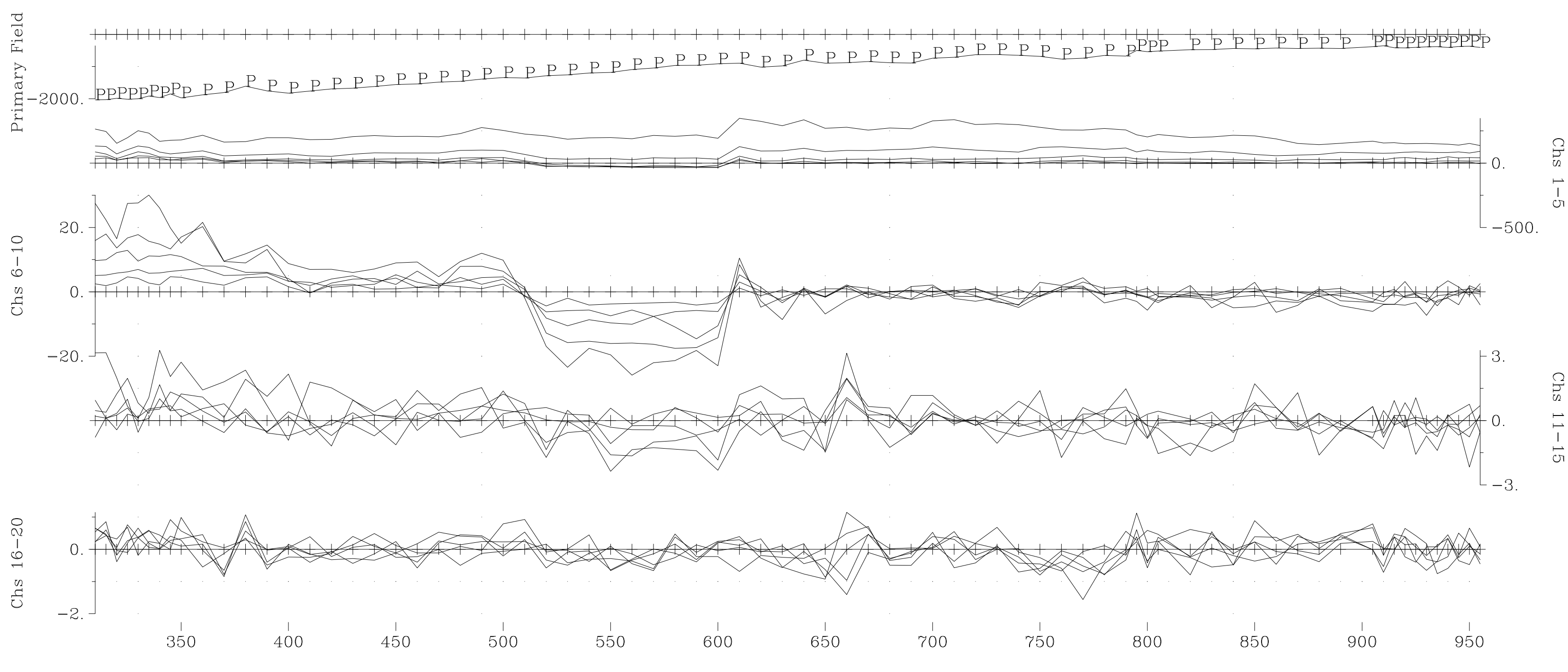
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	800m x 800m
Tx Loop Location:	0-800E;0-800N
Transmitter Current:	11 Amps
Tx Turn−Off−Time and Rx Delay:	490 us, −100 us
Borehole Location:	410006E, 5143382N
Borehole Azimuth, Dip:	220, −80
Station Interval:	5m − 10m
Profile Units:	nanoVolt/m^2
Receiver Coil Orientation:	Hz − positive up
	Hx − positive southwest, Hy − positive southeast
Cross Component Rotation:	using Tilt Meter Angles
Survey Date:	Jun 21, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	Geonics 3D probe + 800m cable
	Tx = Geonics EM−37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LTD.

DWG. NO. CA00940C-BH4A-Tiltrot-Y-EBL12-05-B



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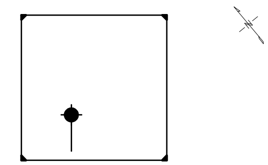


Borehole EBL12-05 - X Component

Scale 1:2000

25 0 25 50 75

(metres)

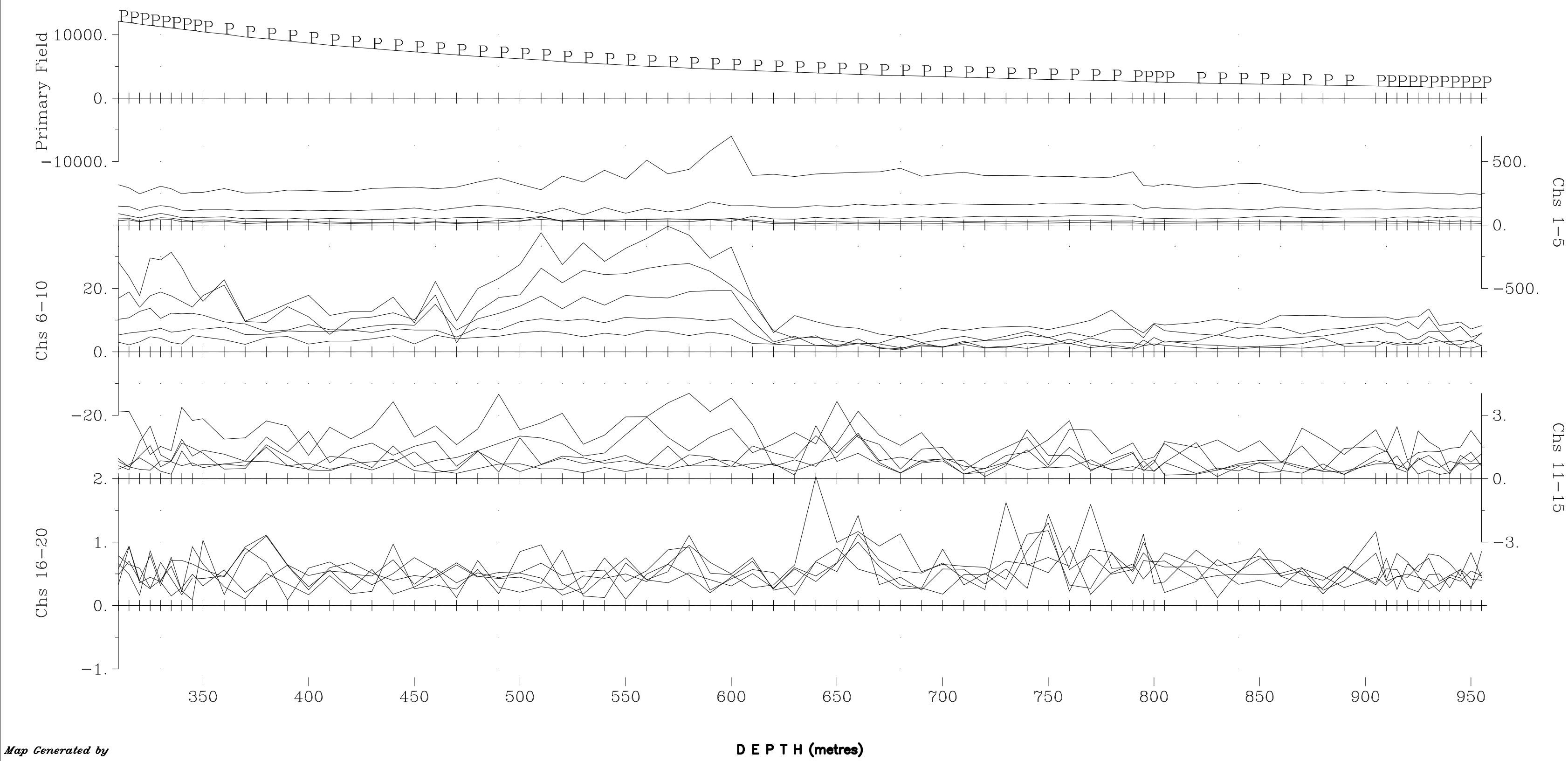
MUSTANG MINERALS CORP.
EAST BULL LAKE PROJECT
MASSEY, ON

3D FIXED-LOOP BOREHOLE TEM SURVEY

Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	800m x 800m
Tx Loop Location:	0-800E;0-800N
Transmitter Current:	11 Amps
Tx Turn-Off-Time and Rx Delay:	490 us, -100 us
Borehole Location:	410006E, 5143382N
Borehole Azimuth, Dip:	220, -80
Station Interval:	5m - 10m
Profile Units:	nanoVolt/m^2
Receiver Coil Orientation:	Hz - positive up
	Hx - positive southwest, Hy - positive southeast
Cross Component Rotation:	using Tilt Meter Angles
Survey Date:	Jun 21, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	Geonics 3D probe + 800m cable
	Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:
QUANTEC GEOSCIENCE LTD.
DWG. NO. CA00940C-BH4A-Tiltrot-X-EBL12-05-



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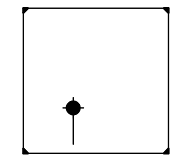


Borehole EBL12-05 - Total Field

Scale 1:2000

25 0 25 50 75

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

3D FIXED-LOOP BOREHOLE TEM SURVEY

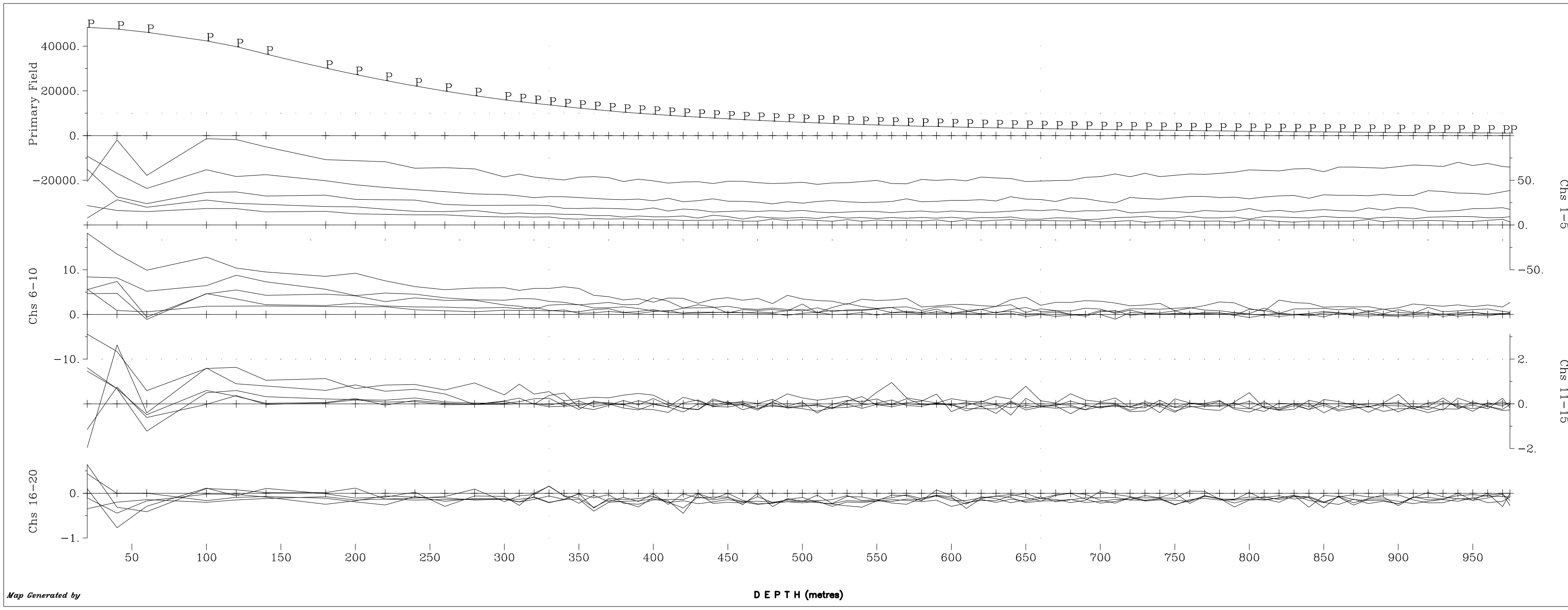
Secondary Electromagnetic Field (dB/dt)

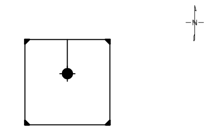
Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	800m x 800m
Tx Loop Location:	0-800E;0-800N
Transmitter Current:	11 Amps
Tx Turn-Off-Time and Rx Delay:	490 us, -100 us
Borehole Location:	410006E, 5143382N
Borehole Azimuth, Dip:	220, -80
Station Interval:	5m - 10m
Profile Units:	nanoVolt/m^2
Receiver Coil Orientation:	Hz - positive up
	Hx - positive southwest, Hy - positive southeast
Cross Component Rotation:	using Tilt Meter Angles
Survey Date:	Jun 21, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	Geonics 3D probe + 800m cable
	Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LTD.

DWG. NO. CA00940C-BH4A-Tiltrot-TF-EBL12-05-B





Borehole EBL12-06 - Z Component

Scale 1:2000

25 0 25 50 75

(metres)

MUSTANG MINERALS CORP.
EAST BULL LAKE PROJECT
MASSEY, ON

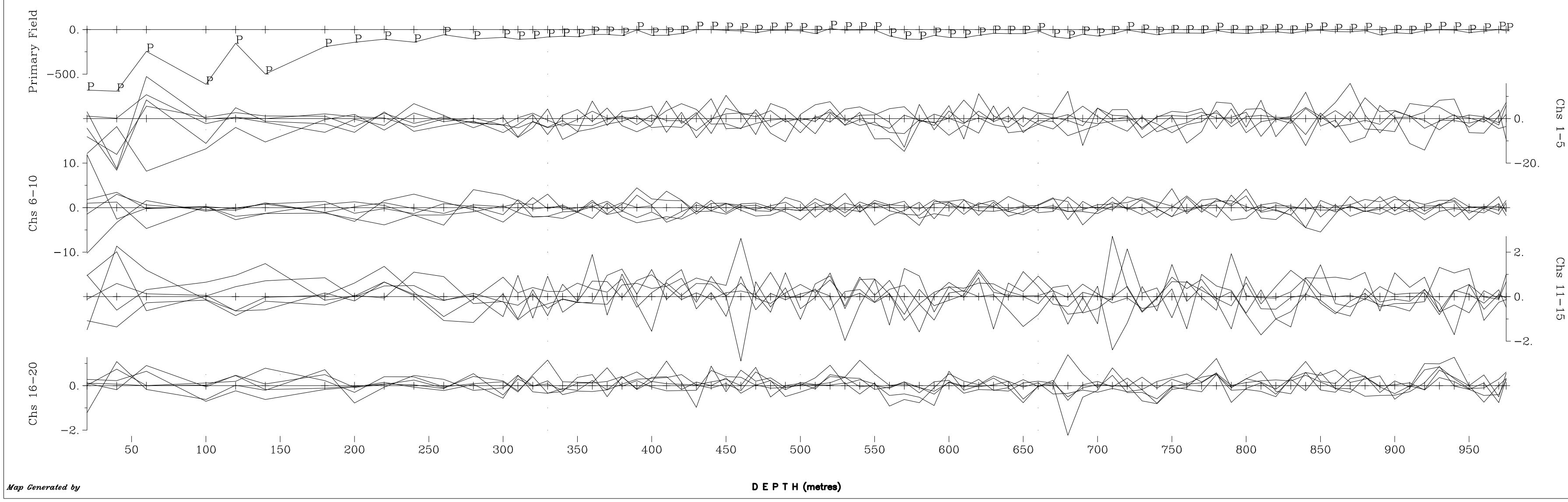
3D FIXED-LOOP BOREHOLE TEM SURVEY

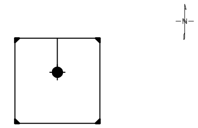
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	500m x 500m
Tx Loop Location:	0-500E;0-500N
Transmitter Current:	13 Amps
Tx Turn-Off-Time and Rx Delay:	465 us, -100 us
Borehole Location:	408026E, 5140080N
Borehole Azimuth, Dip:	0, -75
Station Interval:	5m - 10m
Profile Units:	nanoVolt/m^2
Receiver Coil Orientation:	Hz - positive up
	Hx - positive north, Hy - positive west
Cross Component Rotation:	using Tilt Meter Angles
Survey Date:	Jun 23, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	Geonics 3D probe + 800m cable
	Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:
QUANTEC GEOSCIENCE LTD.

DWG. NO. CA00940C-BH4A-Tiltrot-Z-EBL12-06-B





Borehole EBL12-06 – Y Component

Scale 1:2000

25 0 25 50 75

(metres)

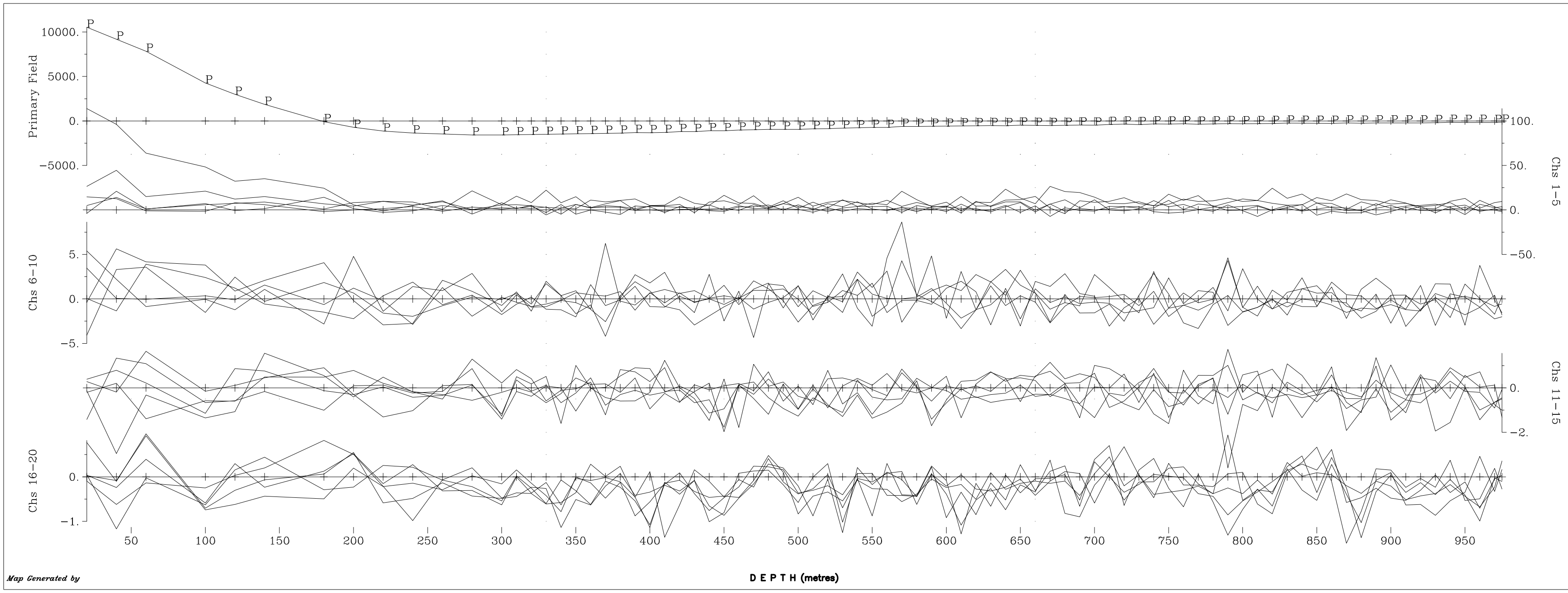
MUSTANG MINERALS CORP.
EAST BULL LAKE PROJECT
MASSEY, ON

3D FIXED-LOOP BOREHOLE TEM SURVEY

Secondary Electromagnetic Field (dB/dt)

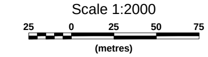
Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	500m x 500m
Tx Loop Location:	0-500E;0-500N
Transmitter Current:	13 Amps
Tx Turn-Off-Time and Rx Delay:	465 us, -100 us
Borehole Location:	408026E, 5140080N
Borehole Azimuth, Dip:	0, -75
Station Interval:	5m - 10m
Profile Units:	nanoVolt/m^2
Receiver Coil Orientation:	Hz - positive up
	Hx - positive north, Hy - positive west
Cross Component Rotation:	using Tilt Meter Angles
Survey Date:	Jun 23, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	Geonics 3D probe + 800m cable
	Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:
QUANTEC GEOSCIENCE LTD.
DWG. NO. CA00940C-BH4A-Tiltrot-Y-EBL12-06-B



Borehole EBL12-06 – X Component

Scale 1:2000



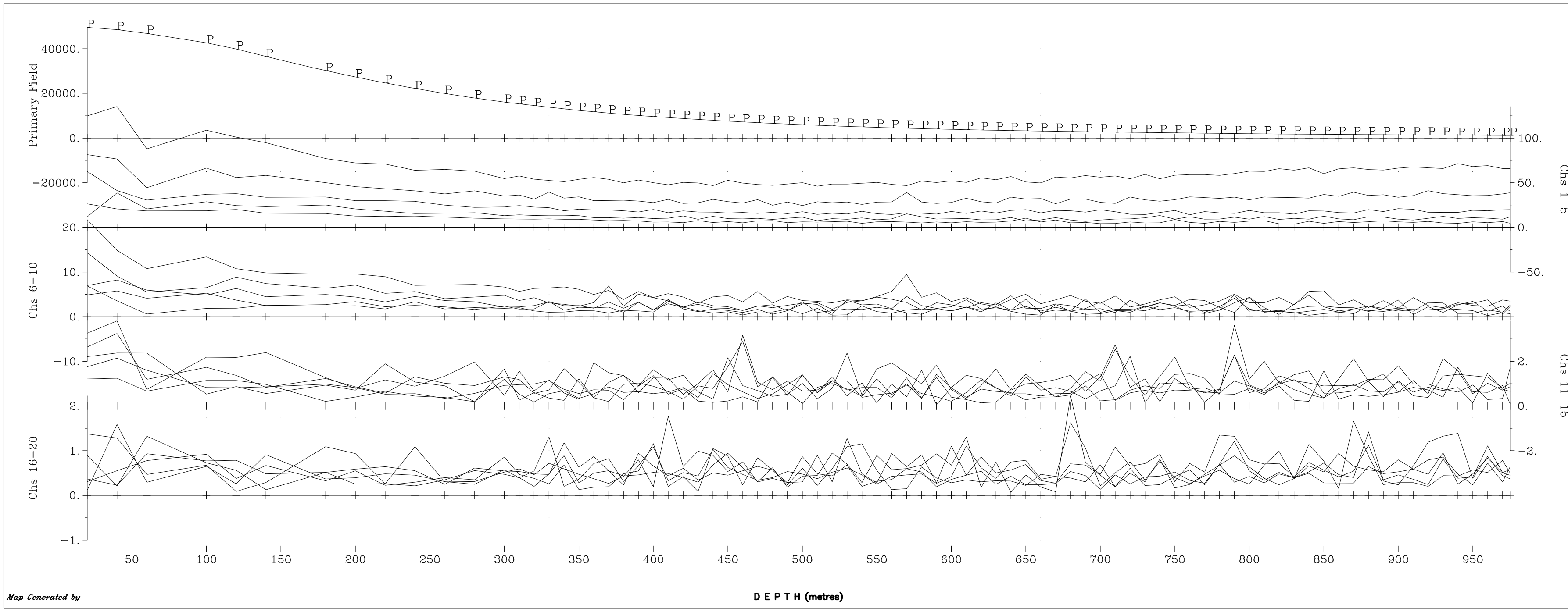
MUSTANG MINERALS CORP.
EAST BULL LAKE PROJECT
MASSEY, ON

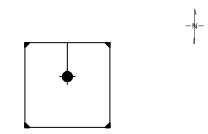
3D FIXED-LOOP BOREHOLE TEM SURVEY

Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	500m x 500m
Tx Loop Location:	0–500E;0–500N
Transmitter Current:	13 Amps
Tx Turn–Off–Time and Rx Delay:	465 us, −100 us
Borehole Location:	408026E, 5140080N
Borehole Azimuth, Dip:	0, −75
Station Interval:	5m – 10m
Profile Units:	nanoVolt/m^2
Receiver Coil Orientation:	Hz – positive up
	Hx – positive north, Hy – positive west
Cross Component Rotation:	using Tilt Meter Angles
Survey Date:	Jun 23, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	Geonics 3D probe + 800m cable
	Tx = Geonics EM–37 (2.8 kW)

Surveyed & Processed by:
QUANTEC GEOSCIENCE LTD.
DWG. NO. CA00940C–BH4A–Tiltrot–X–EBL12–06–B





Borehole EBL12−06 − Total Field

Scale 1:2000

25 0 25 50 75 (metres)

MUSTANG MINERALS CORP.
EAST BULL LAKE PROJECT
MASSEY, ON

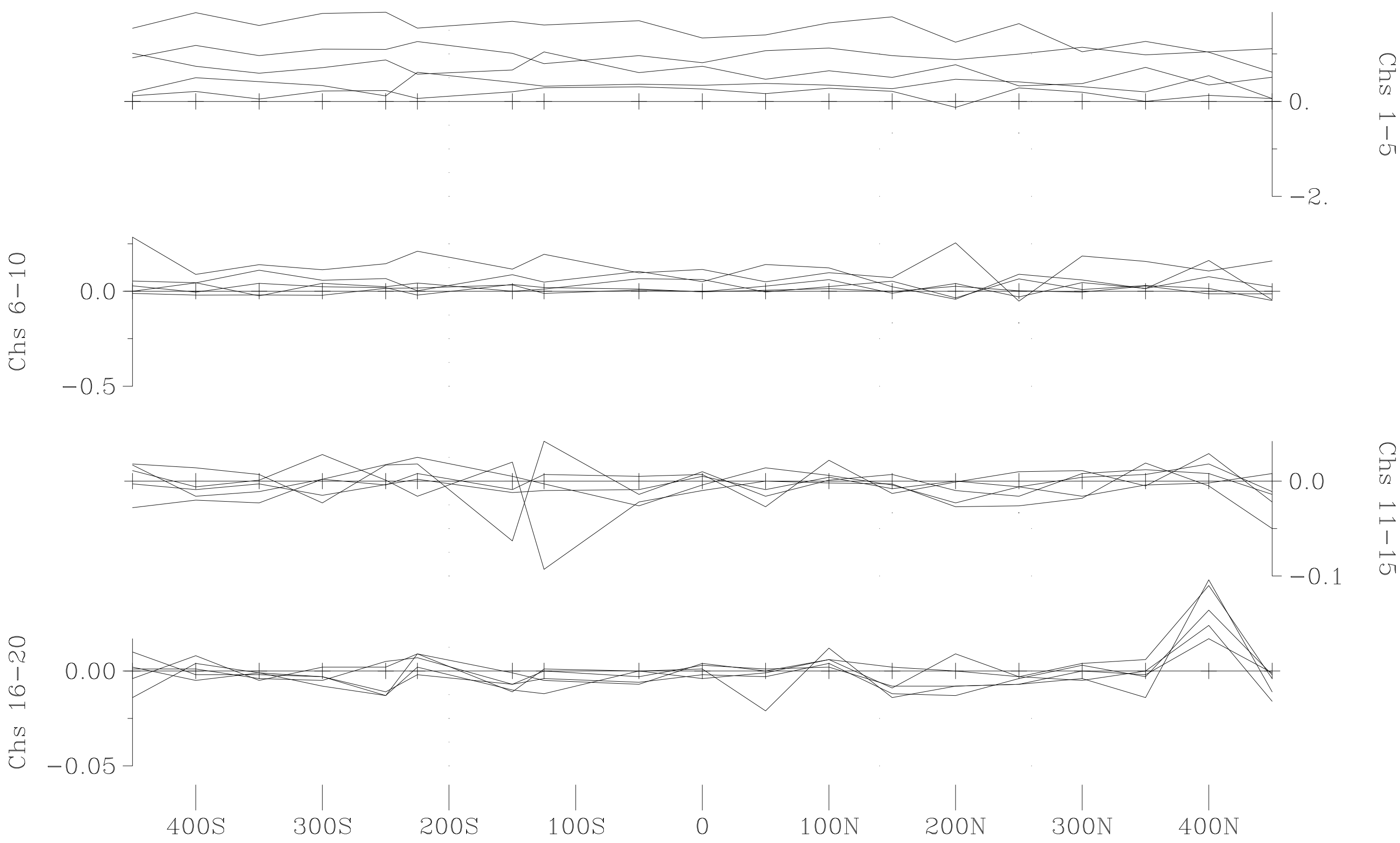
3D FIXED−LOOP BOREHOLE TEM SURVEY

Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	500m x 500m
Tx Loop Location:	0−500E;0−500N
Transmitter Current:	13 Amps
Tx Turn−Off−Time and Rx Delay:	465 us, −100 us
Borehole Location:	408026E, 5140080N
Borehole Azimuth, Dip:	0, −75
Station Interval:	5m − 10m
Profile Units:	nanoVolt/m^2
Receiver Coil Orientation:	Hz − positive up
	Hx − positive north, Hy − positive west
Cross Component Rotation:	using Tilt Meter Angles

Survey Date:	Jun 23, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	Geonics 3D probe + 800m cable
	Tx = Geonics EM−37 (2.8 kW)

Surveyed & Processed by:
QUANTEC GEOSCIENCE LTD.
DWG. NO. CA00940C−BH4A−Tiltrot−TF−EBL12−06−B



Line 400W − Z Component

Savage Grid

Scale 1:5000

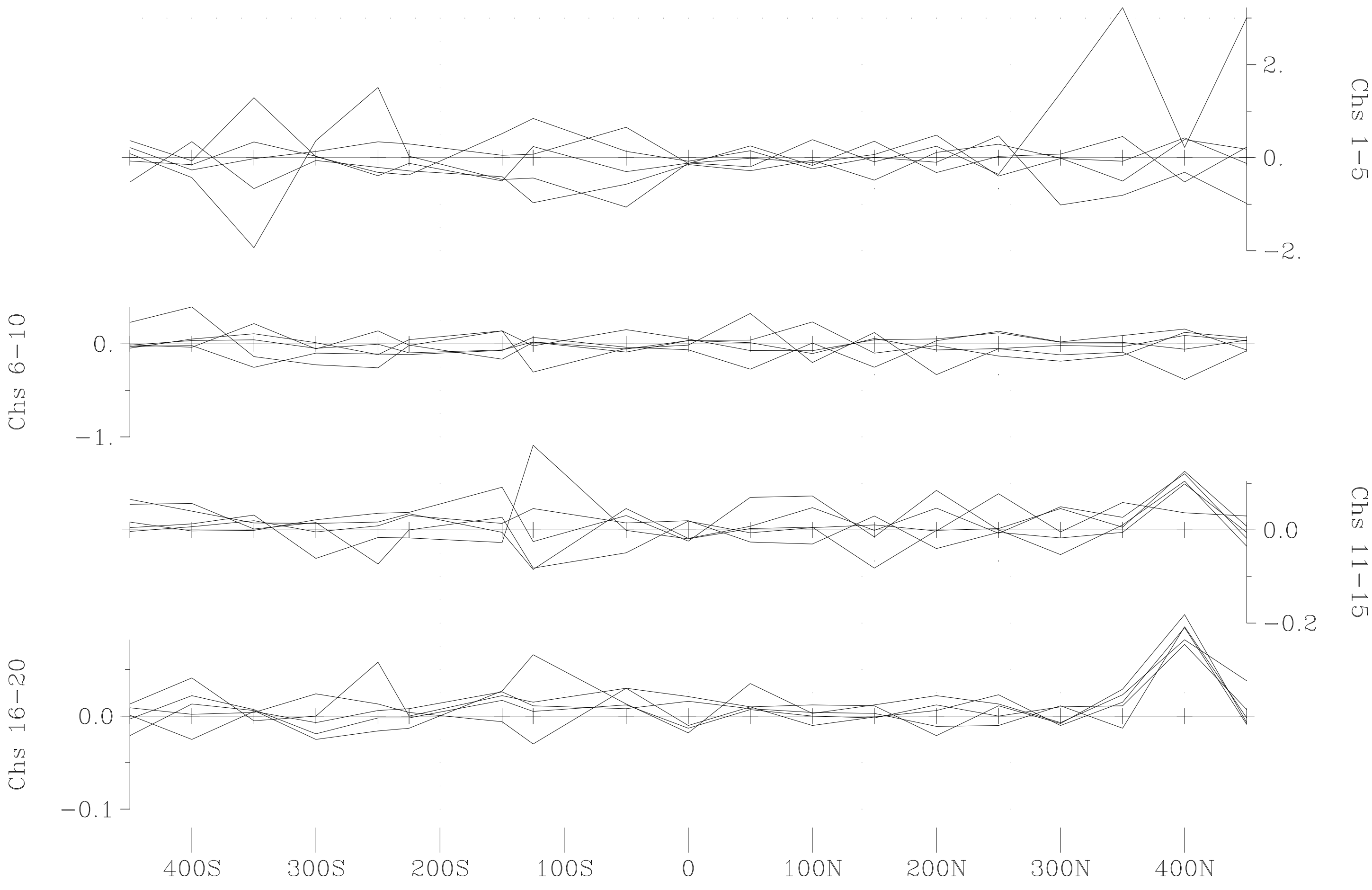
50 0 50 100 150 200 (metres)

MUSTANG MINERALS CORP.
EAST BULL LAKE PROJECT
MASSEY, ON

LPTEM IN-LOOP PROFILING SURVEY
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	1000m x 1000m
Tx Loop Location:	500W−500E;500S−500N
Transmitter Current:	10.5 Amps
Transmitter Turn-Off Time:	360 us
Station Interval:	50 metres
Profile Units:	nanoVolt/A*m^2
Receiver Coil Orientation:	Hz − positive up
	Hx − positive north
	Hy − positive west
Survey Date:	June 28, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	& Geonics 3D Coil (3x200m^2)
	Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:
QUANTEC GEOSCIENCE LIMITED
DWG. NO. CA00940C-4AXIS-Z-400W



Line 400W – Y Component

Savage Grid

Scale 1:5000

50 0 50 100 150 200

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

LPTEM IN-LOOP PROFILING SURVEY

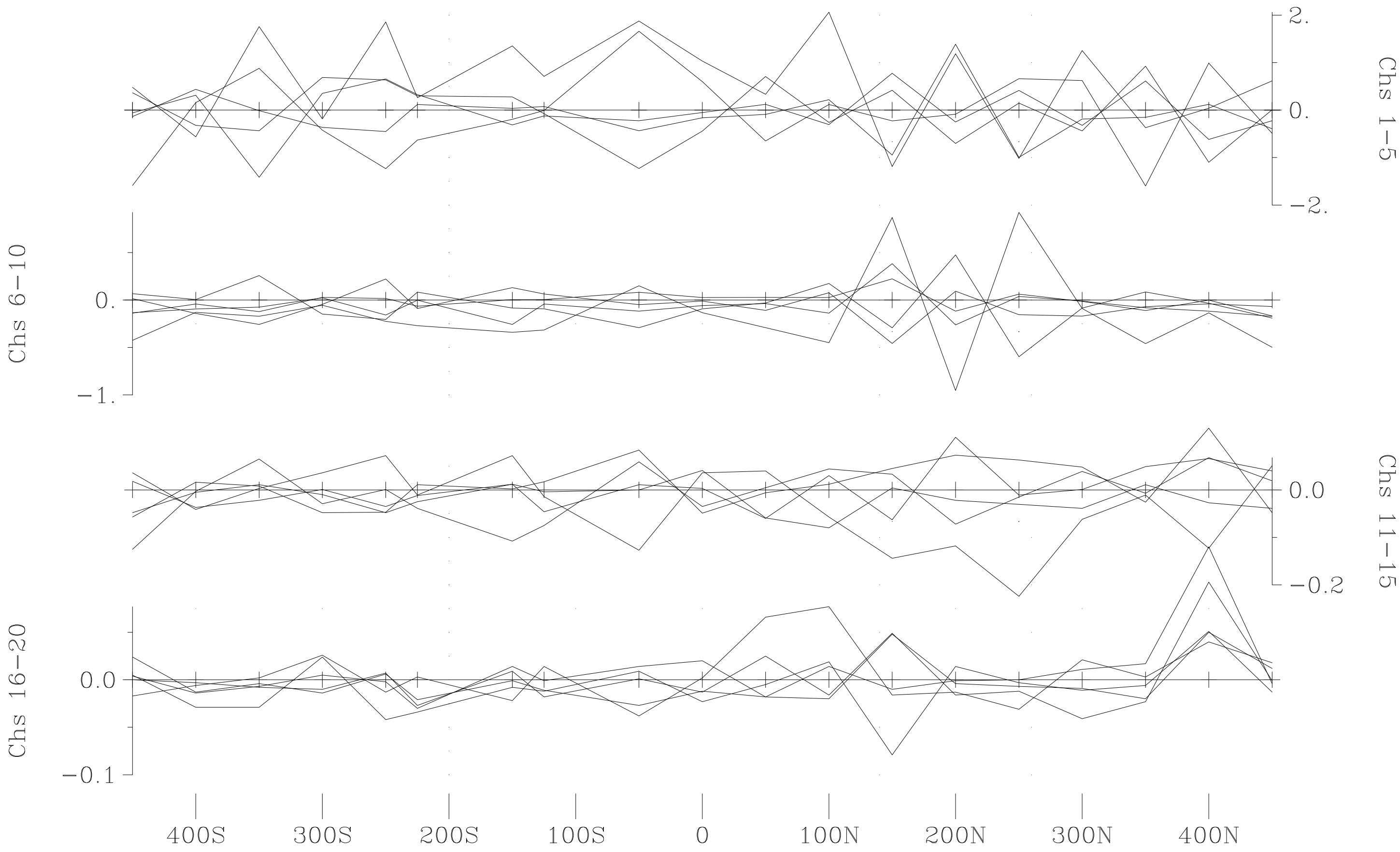
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	1000m x 1000m
Tx Loop Location:	500W-500E;500S-500N
Transmitter Current:	10.5 Amps
Transmitter Turn-Off Time:	360 us
Station Interval:	50 metres
Profile Units:	nanoVolt/A*m^2
Receiver Coil Orientation:	Hz – positive up
	Hx – positive north
	Hy – positive west
Survey Date:	June 28, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	& Geonics 3D Coil (3x200m^2)
	Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LIMITED

DWG. NO. CA00940C-4AXIS-Y-400W



Line 400W − X Component
Savage Grid

Scale 1:5000

50 0 50 100 150 200

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT
MASSEY, ON

LPTEM IN-LOOP PROFILING SURVEY

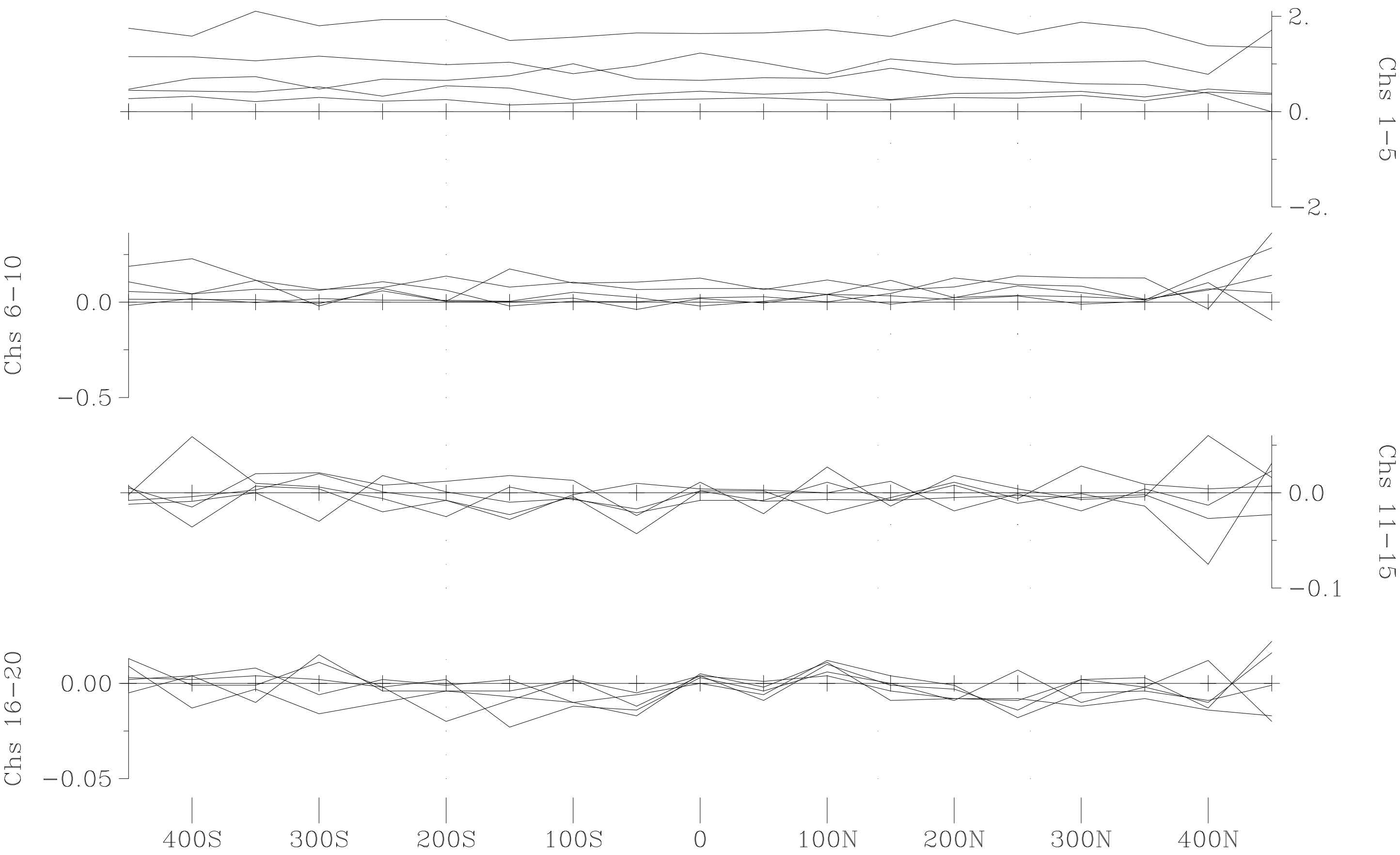
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	1000m x 1000m
Tx Loop Location:	500W-500E;500S-500N
Transmitter Current:	10.5 Amps
Transmitter Turn-Off Time:	360 us
Station Interval:	50 metres
Profile Units:	nanoVolt/A*m^2
Receiver Coil Orientation:	Hz − positive up
	Hx − positive north
	Hy − positive west
Survey Date:	June 28, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	& Geonics 3D Coil (3x200m^2)
	Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LIMITED

DWG. NO. CA00940C-4AXIS-X-400W



Line 400E – Z Component

Savage Grid

Scale 1:5000

50 0 50 100 150 200

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

LPTEM IN-LOOP PROFILING SURVEY

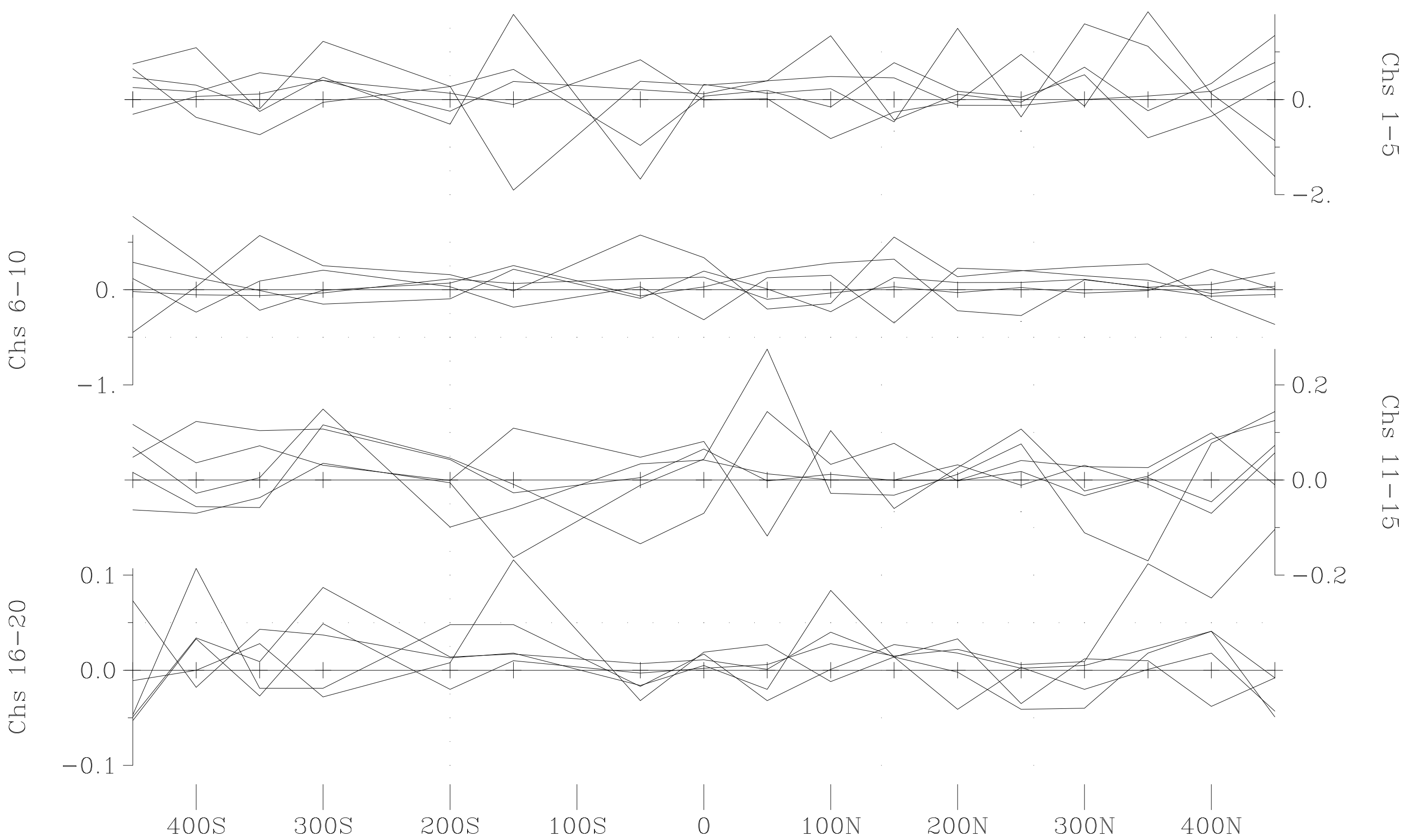
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	1000m x 1000m
Tx Loop Location:	500W-500E;500S-500N
Transmitter Current:	10.5 Amps
Transmitter Turn-Off Time:	360 us
Station Interval:	50 metres
Profile Units:	nanoVolt/A*m^2
Receiver Coil Orientation:	Hz – positive up
	Hx – positive north
	Hy – positive west
Survey Date:	June 29, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	& Geonics 3D Coil (3x200m^2)
	Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LIMITED

DWG. NO. CA00940C-4AXIS-Z-400E



Line 400E – Y Component

Savage Grid

Scale 1:5000

50 0 50 100 150 200

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

LPTEM IN-LOOP PROFILING SURVEY

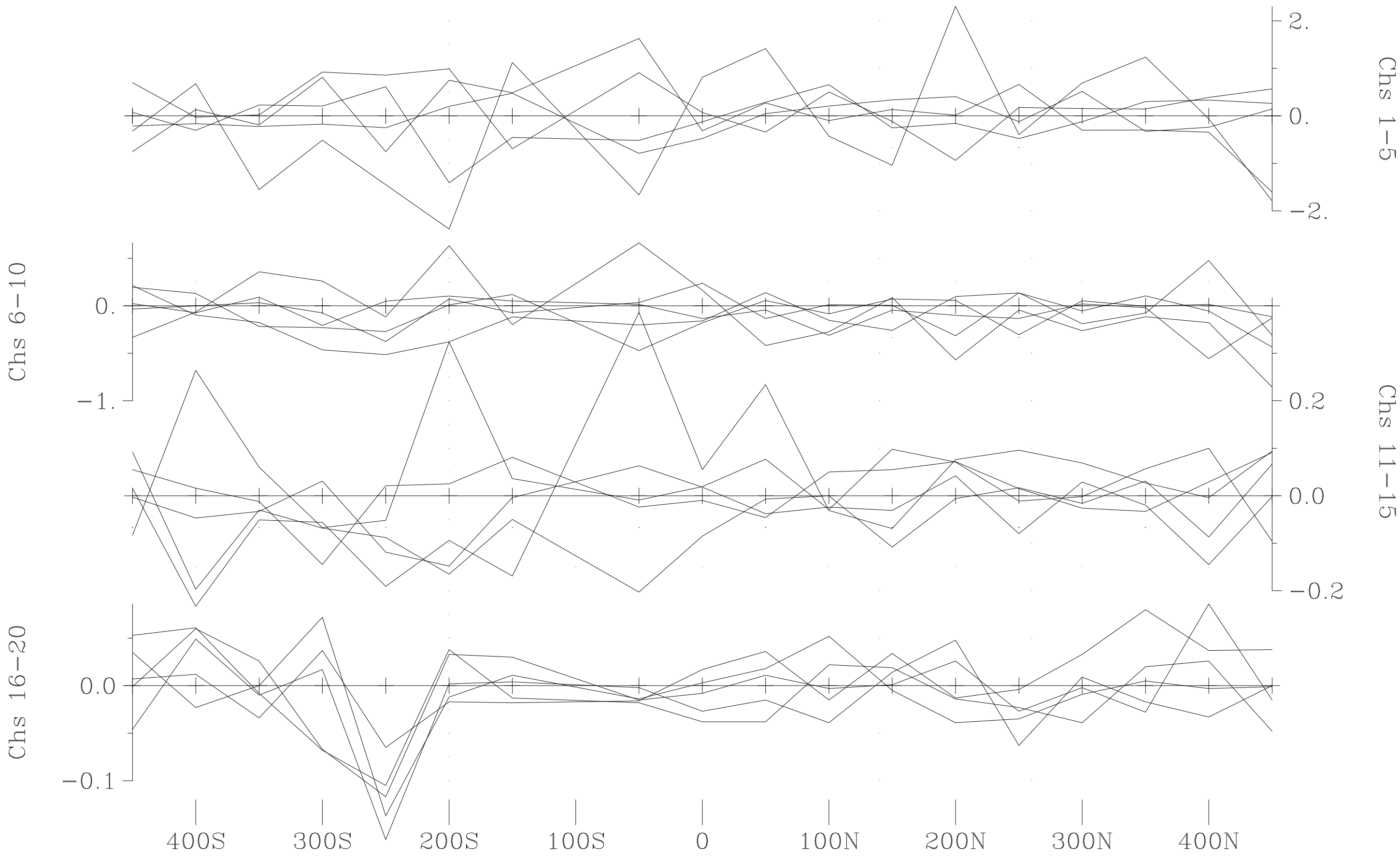
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	1000m x 1000m
Tx Loop Location:	500W–500E;500S–500N
Transmitter Current:	10.5 Amps
Transmitter Turn–Off Time:	360 us
Station Interval:	50 metres
Profile Units:	nanoVolt/A*m^2
Receiver Coil Orientation:	Hz – positive up
	Hx – positive north
	Hy – positive west
Survey Date:	June 29, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	& Geonics 3D Coil (3x200m^2)
	Tx = Geonics EM–37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LIMITED

DWG. NO. CA00940C–4AXIS–Y–400E



Line 400E – X Component

Savage Grid

Scale 1:5000

50 0 50 100 150 200

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

LPTEM IN-LOOP PROFILING SURVEY

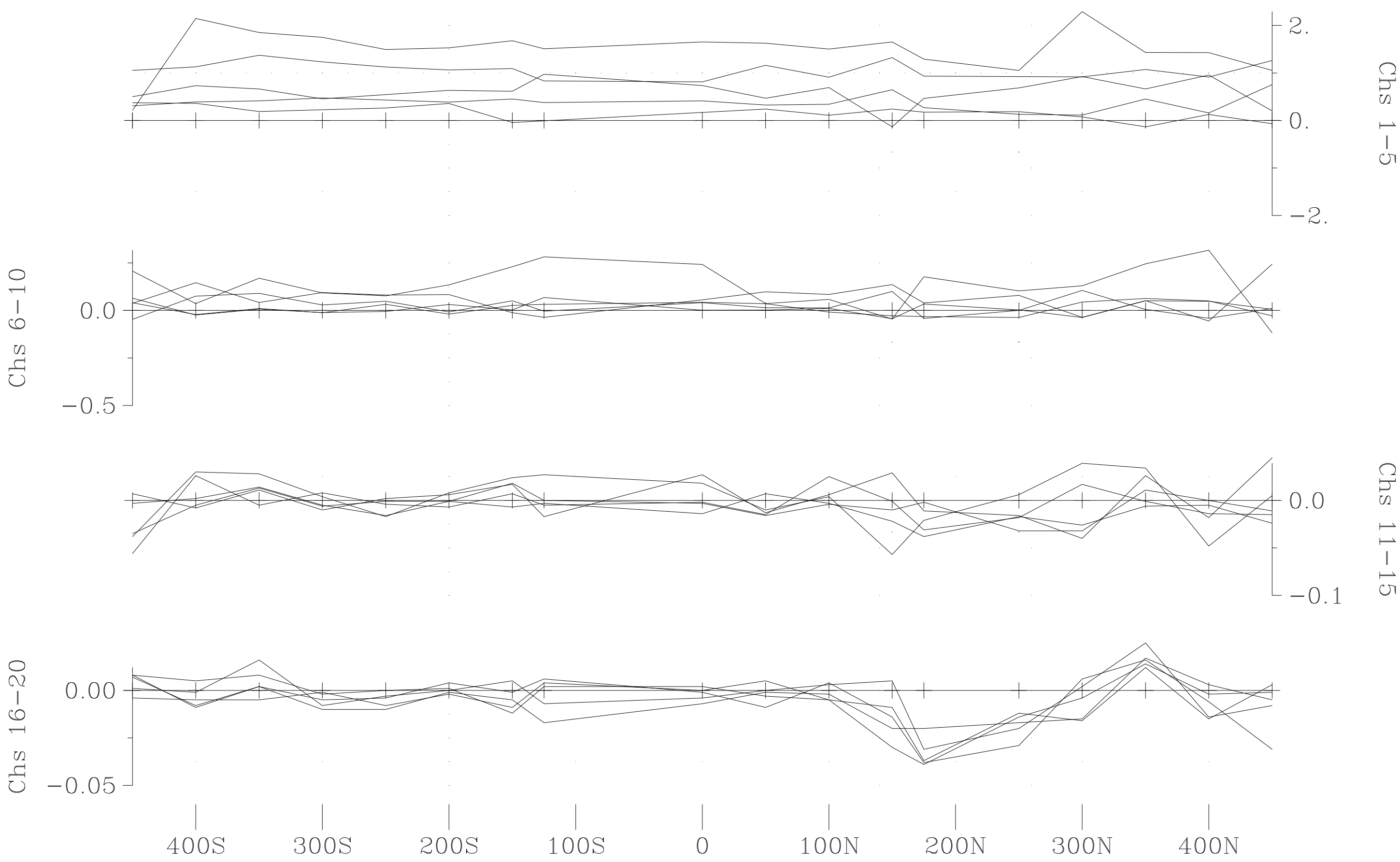
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	1000m x 1000m
Tx Loop Location:	500W-500E;500S-500N
Transmitter Current:	10.5 Amps
Transmitter Turn-Off Time:	360 us
Station Interval:	50 metres
Profile Units:	nanoVolt/A*m^2
Receiver Coil Orientation:	Hz – positive up
	Hx – positive north
	Hy – positive west
Survey Date:	June 29, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	& Geonics 3D Coil (3x200m^2)
	Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LIMITED

DWG. NO. CA00940C-4AXIS-X-400E



Line 200W − Z Component

Savage Grid

Scale 1:5000

50 0 50 100 150 200

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

LPTEM IN−LOOP PROFILING SURVEY

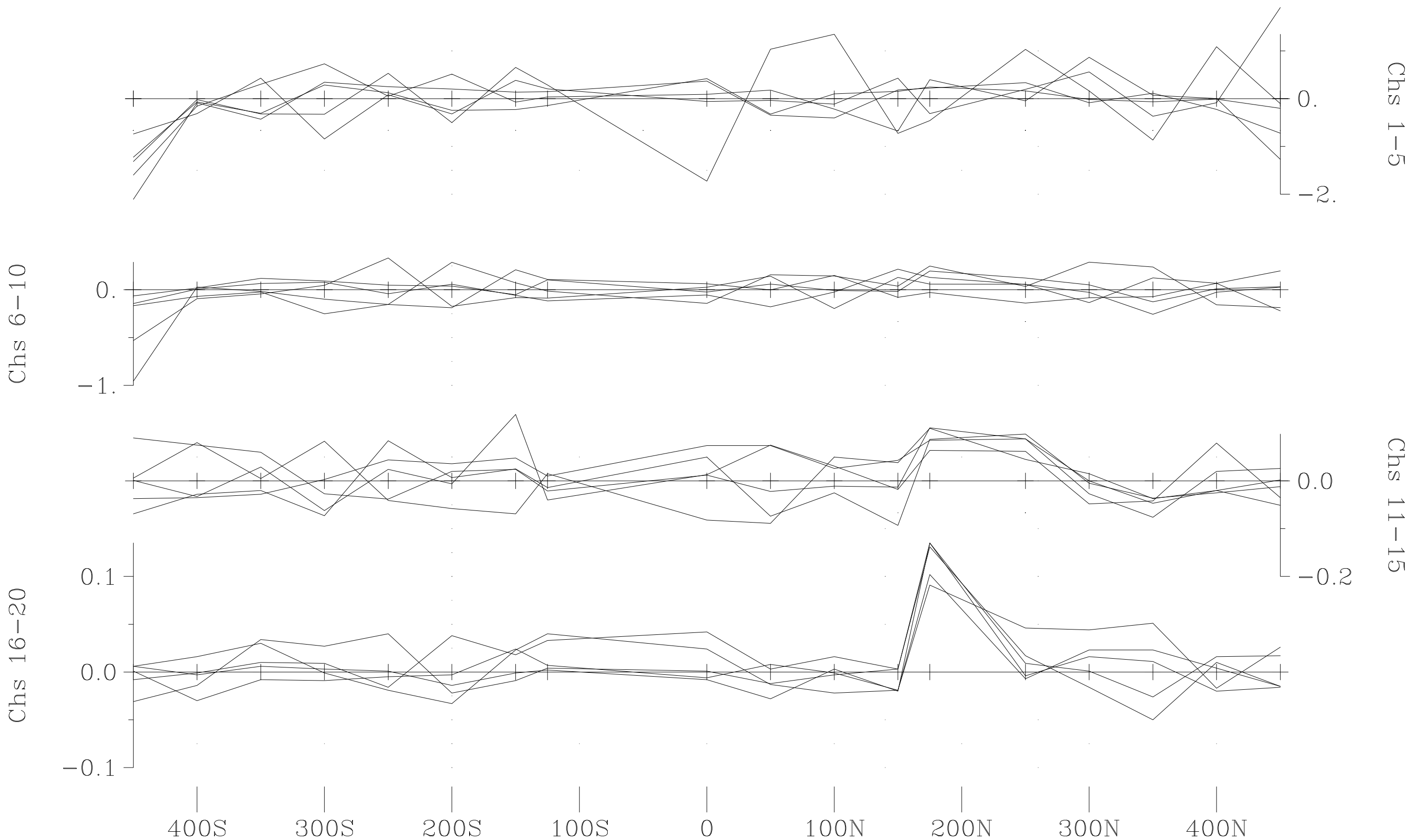
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	1000m x 1000m
Tx Loop Location:	500W−500E;500S−500N
Transmitter Current:	10.5 Amps
Transmitter Turn−Off Time:	360 us
Station Interval:	50 metres
Profile Units:	nanoVolt/A*m^2
Receiver Coil Orientation:	Hz − positive up Hx − positive north Hy − positive west
Survey Date:	June 28, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels) & Geonics 3D Coil (3x200m^2) Tx = Geonics EM−37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LIMITED

DWG. NO. CA00940C−4AXIS−Z−200W



Line 200W – Y Component

Savage Grid

Scale 1:5000

50 0 50 100 150 200

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

LPTEM IN-LOOP PROFILING SURVEY

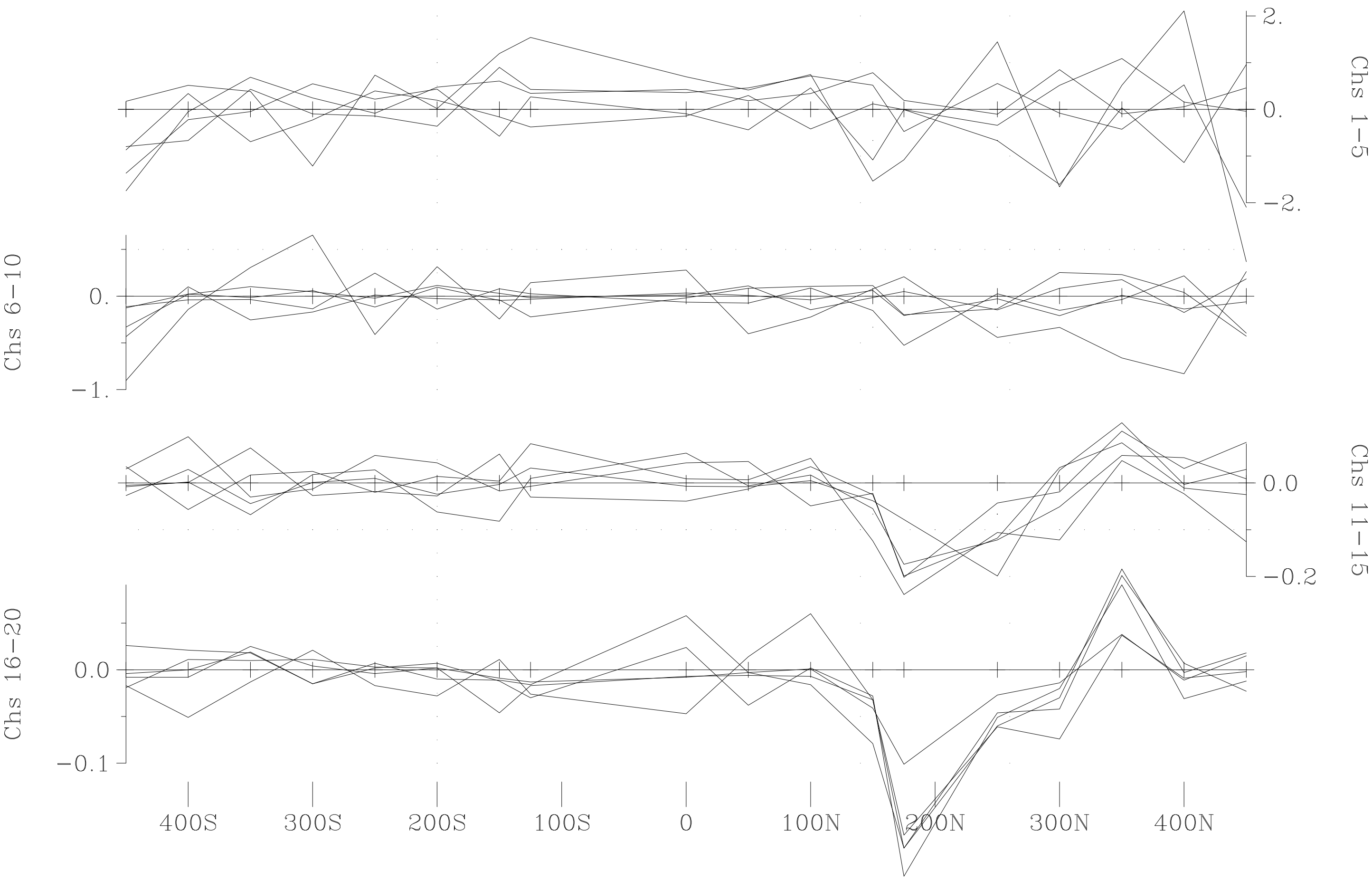
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	1000m x 1000m
Tx Loop Location:	500W-500E;500S-500N
Transmitter Current:	10.5 Amps
Transmitter Turn-Off Time:	360 us
Station Interval:	50 metres
Profile Units:	nanoVolt/A*m^2
Receiver Coil Orientation:	Hz – positive up
	Hx – positive north
	Hy – positive west
Survey Date:	June 28, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	& Geonics 3D Coil (3x200m^2)
	Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LIMITED

DWG. NO. CA00940C-4AXIS-Y-200W



Line 200W − X Component

Savage Grid

Scale 1:5000

50 0 50 100 150 200

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

LPTEM IN-LOOP PROFILING SURVEY

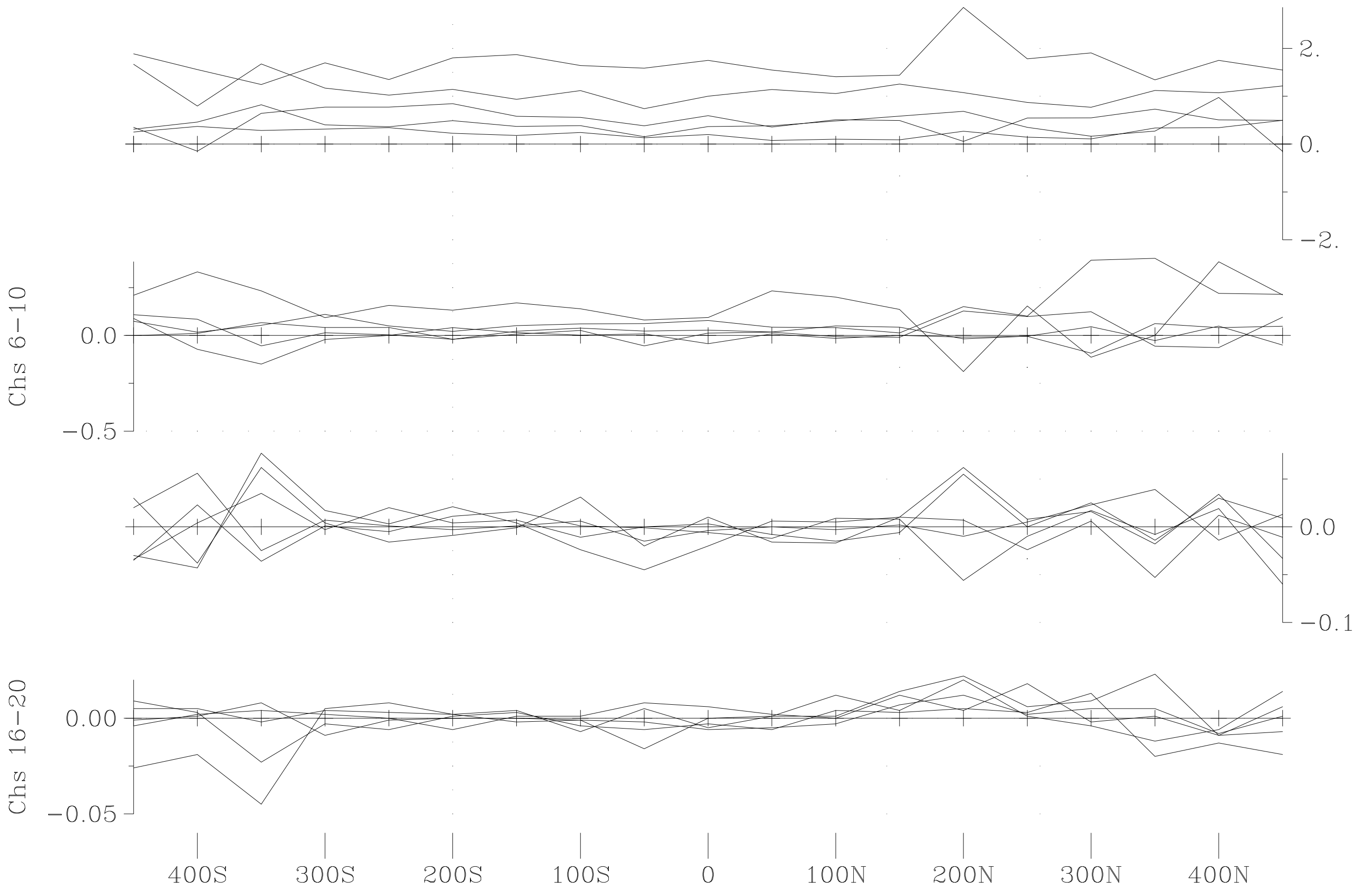
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	1000m x 1000m
Tx Loop Location:	500W-500E;500S-500N
Transmitter Current:	10.5 Amps
Transmitter Turn-Off Time:	360 us
Station Interval:	50 metres
Profile Units:	nanoVolt/A*m^2
Receiver Coil Orientation:	Hz − positive up
	Hx − positive north
	Hy − positive west
Survey Date:	June 28, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	& Geonics 3D Coil (3x200m^2)
	Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LIMITED

DWG. NO. CA00940C-4AXIS-X-200W



Line 200E - Z Component

Savage Grid

Scale 1:5000

50 0 50 100 150 200

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

LPTEM IN-LOOP PROFILING SURVEY

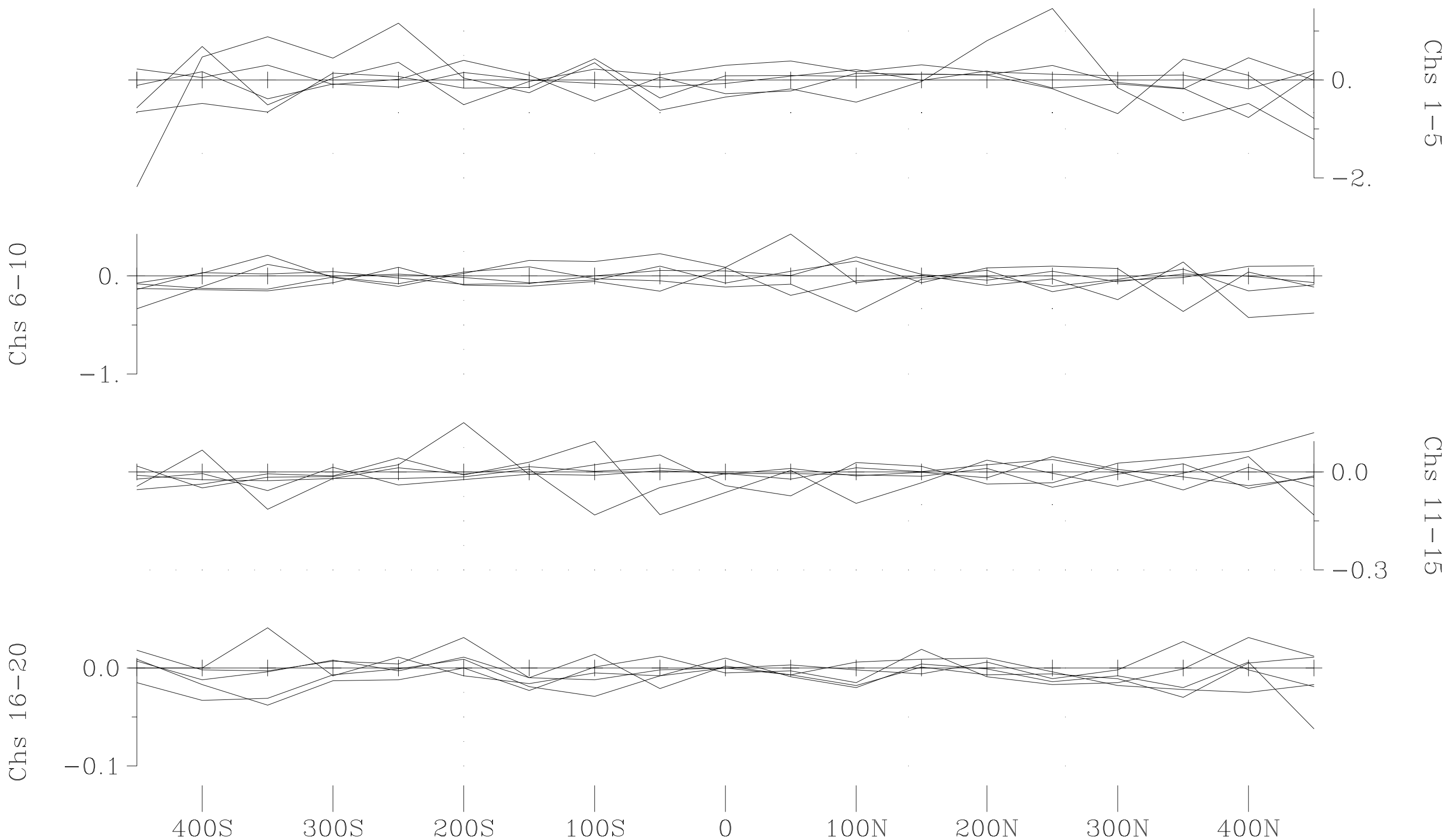
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	1000m x 1000m
Tx Loop Location:	500W-500E;500S-500N
Transmitter Current:	10.5 Amps
Transmitter Turn-Off Time:	360 us
Station Interval:	50 metres
Profile Units:	nanoVolt/A*m^2
Receiver Coil Orientation:	Hz - positive up
	Hx - positive north
	Hy - positive west
Survey Date:	June 27, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	& Geonics 3D Coil (3x200m^2)
	Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LIMITED

DWG. NO. CA00940C-4AXIS-Z-200E



Line 200E – Y Component

Savage Grid

Scale 1:5000

50 0 50 100 150 200

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

LPTEM IN-LOOP PROFILING SURVEY

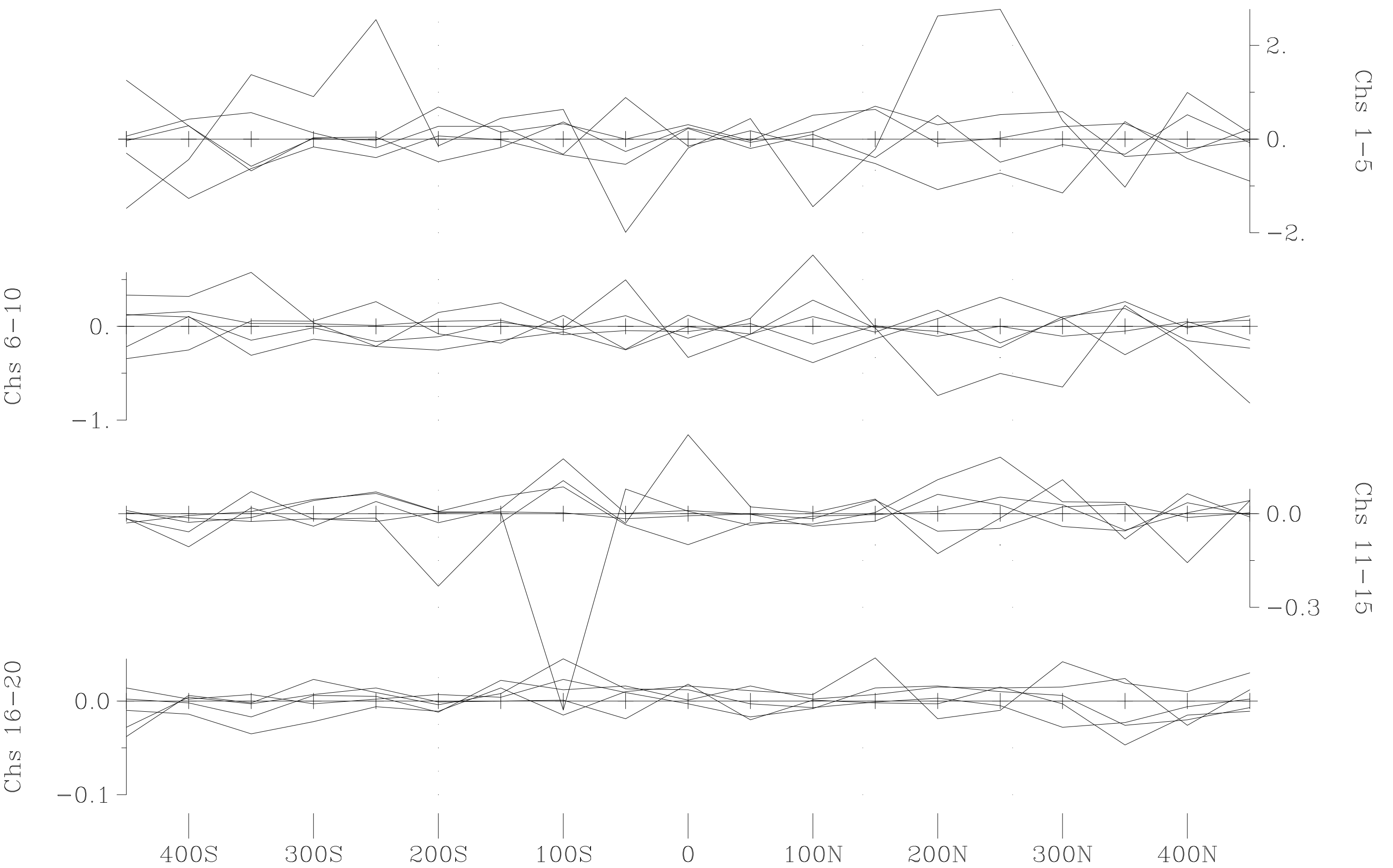
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	1000m x 1000m
Tx Loop Location:	500W-500E;500S-500N
Transmitter Current:	10.5 Amps
Transmitter Turn-Off Time:	360 us
Station Interval:	50 metres
Profile Units:	nanoVolt/A*m^2
Receiver Coil Orientation:	Hz – positive up
	Hx – positive north
	Hy – positive west
Survey Date:	June 27, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	& Geonics 3D Coil (3x200m^2)
	Tx = Geonics EM-37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LIMITED

DWG. NO. CA00940C-4AXIS-Y-200E



Line 200E − X Component

Savage Grid

Scale 1:5000

50 0 50 100 150 200

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

LPTEM IN−LOOP PROFILING SURVEY

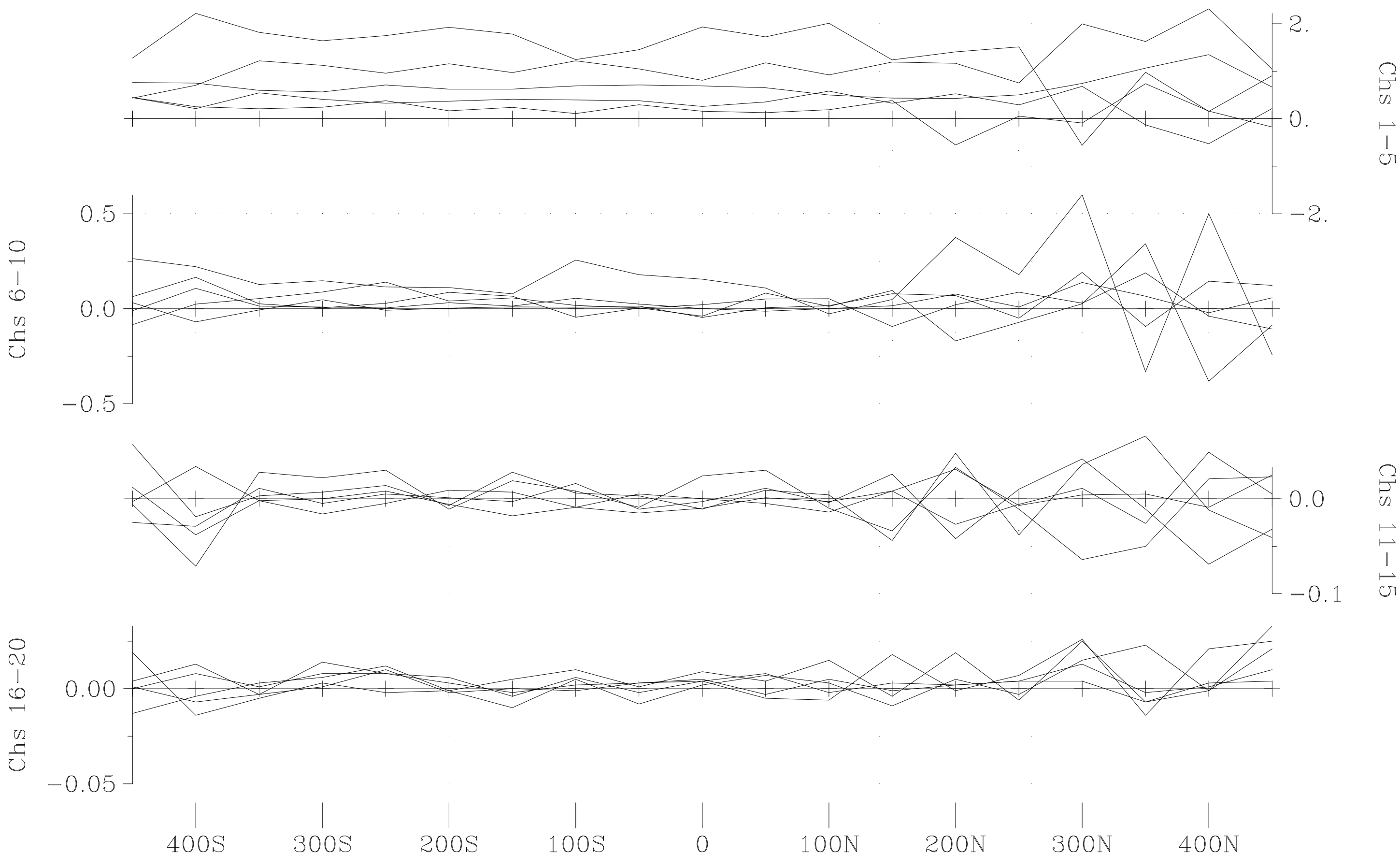
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	1000m x 1000m
Tx Loop Location:	500W−500E;500S−500N
Transmitter Current:	10.5 Amps
Transmitter Turn−Off Time:	360 us
Station Interval:	50 metres
Profile Units:	nanoVolt/A*m^2
Receiver Coil Orientation:	Hz − positive up
	Hx − positive north
	Hy − positive west
Survey Date:	June 27, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	& Geonics 3D Coil (3x200m^2)
	Tx = Geonics EM−37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LIMITED

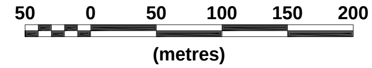
DWG. NO. CA00940C-4AXIS-X-200E



Line 0 − Z Component

Savage Grid

Scale 1:5000



MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

LPTEM IN−LOOP PROFILING SURVEY

Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
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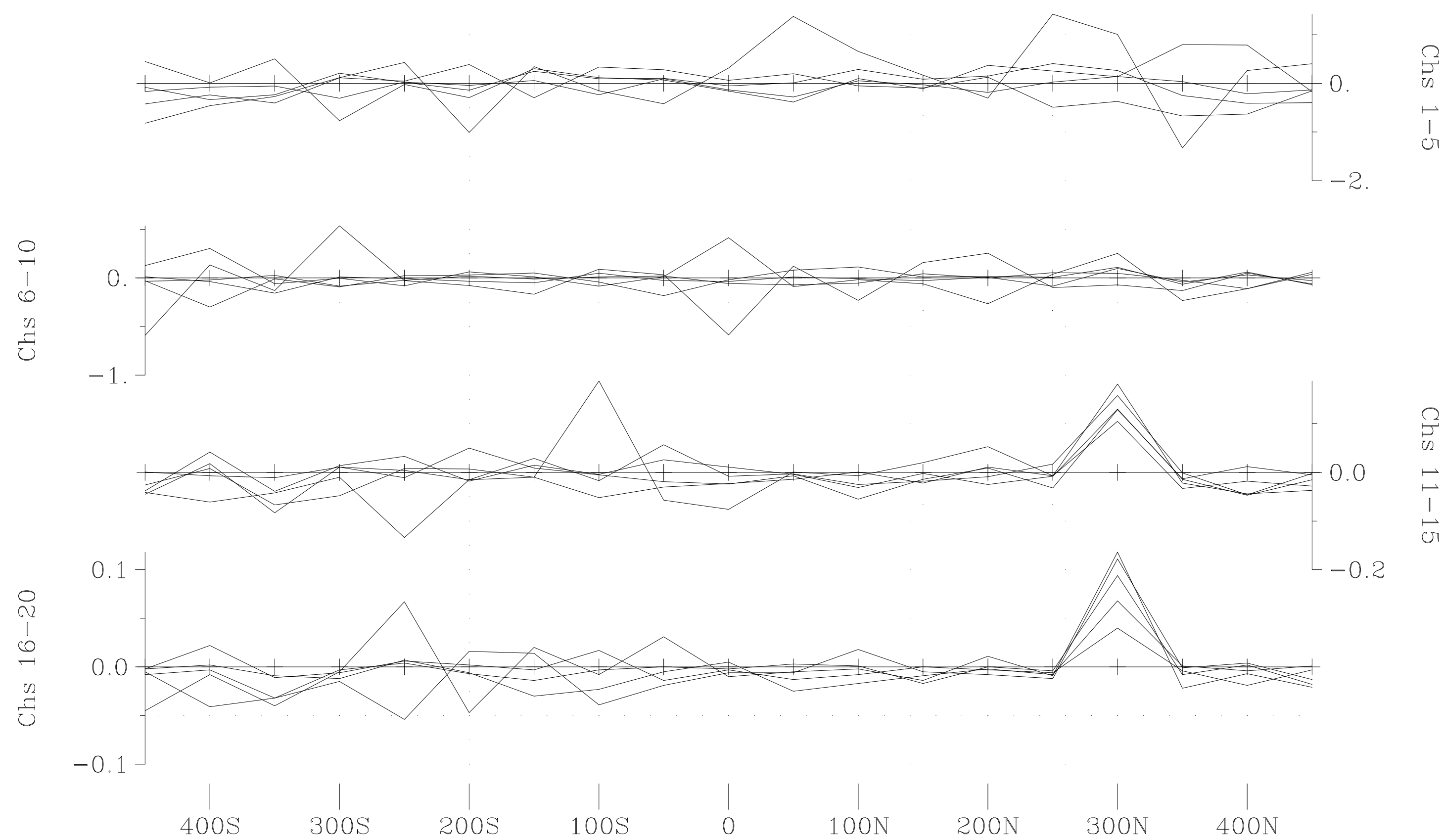
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	& Geonics 3D Coil (3x200m^2)
	Tx = Geonics EM−37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LIMITED

DWG. NO. CA00940C−4AXIS−Z−0



Line 0 – Y Component

Savage Grid

Scale 1:5000

50 0 50 100 150 200

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

LPTEM IN–LOOP PROFILING SURVEY

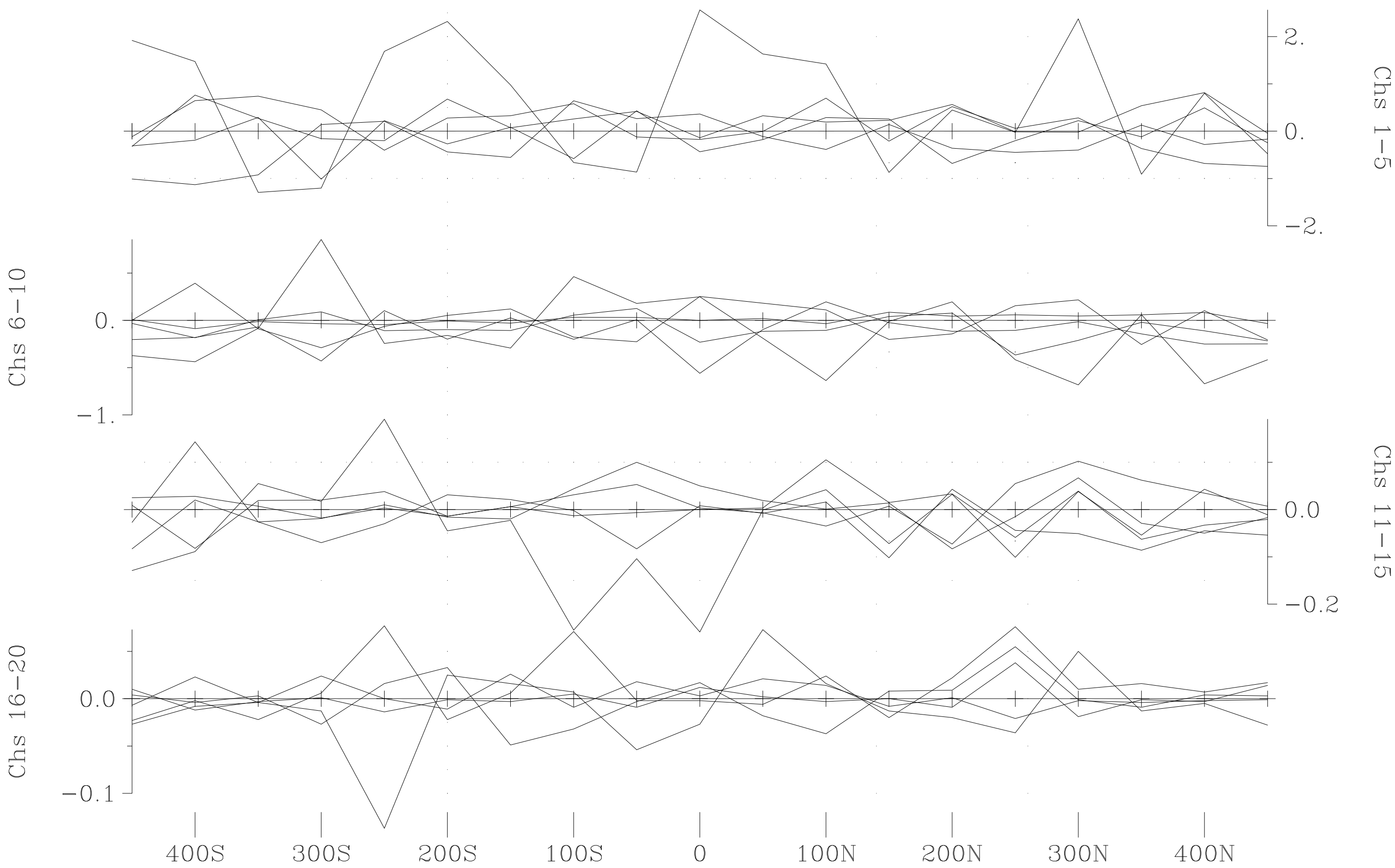
Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
Tx Loop Size:	1000m x 1000m
Tx Loop Location:	500W–500E;500S–500N
Transmitter Current:	10.5 Amps
Transmitter Turn–Off Time:	360 us
Station Interval:	50 metres
Profile Units:	nanoVolt/A*m^2
Receiver Coil Orientation:	Hz – positive up
	Hx – positive north
	Hy – positive west
Survey Date:	June 27, 2012
Instrumentation:	Rx = Digital Protem (3x20 Channels)
	& Geonics 3D Coil (3x200m^2)
	Tx = Geonics EM–37 (2.8 kW)

Surveyed & Processed by:

QUANTEC GEOSCIENCE LIMITED

DWG. NO. CA00940C–4AXIS–Y–0



Line 0 – X Component

Savage Grid

Scale 1:5000

50 0 50 100 150 200

(metres)

MUSTANG MINERALS CORP.

EAST BULL LAKE PROJECT

MASSEY, ON

LPTEM IN-LOOP PROFILING SURVEY

Secondary Electromagnetic Field (dB/dt)

Transmitter Frequency:	7.5 Hz (50% duty cycle)
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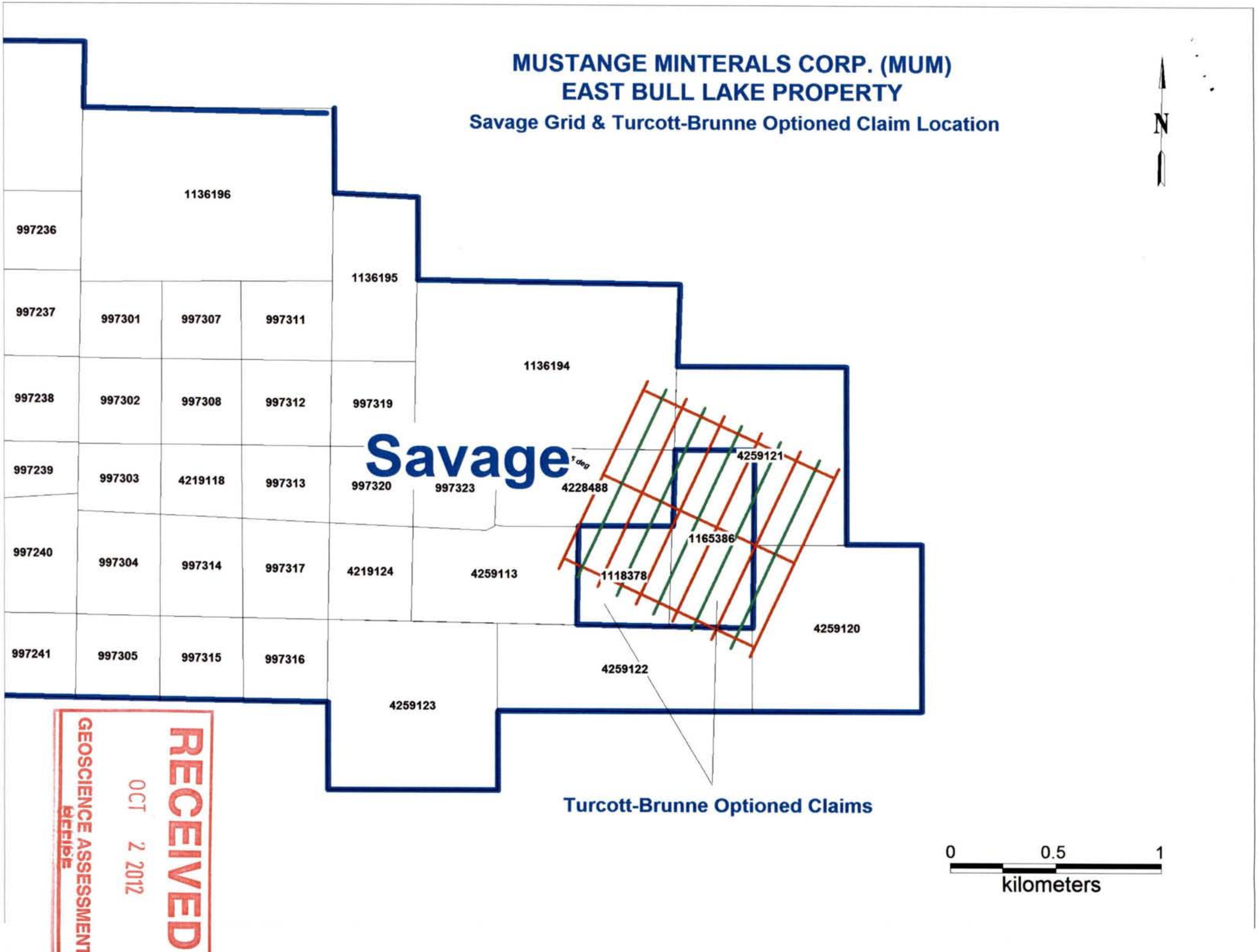
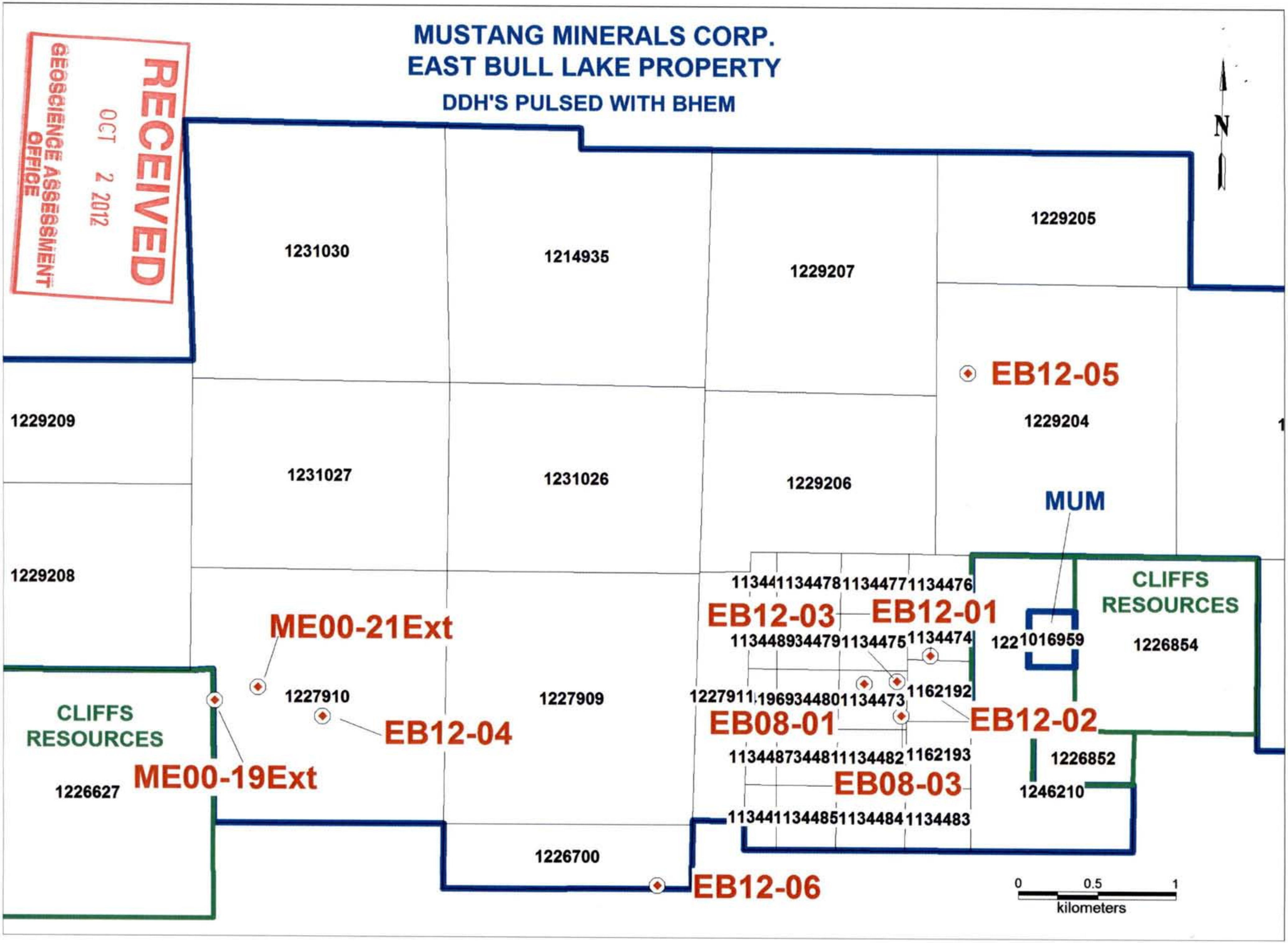
Surveyed & Processed by:

QUANTEC GEOSCIENCE LIMITED

DWG. NO. CA00940C-4AXIS-X-0


MUSTANGE MINTERALS CORP. (MUM)
EAST BULL LAKE PROPERTY
Savage Grid & Turcott-Brunne Optioned Claim Location
N
1136196
997236
1136195
997237
997301
997307
997311
1136194
997238
997302
997308
997312
997319
Savage
997239
997303
4219118
997313
997320
997323
4228488
4259121
1165386
997240
997304
997314
997317
4219124
4259113
1118378
4259120
997241
997305
997315
997316
4259122
4259123
Turcott-Brunne Optioned Claims
0
0.5
1
kilometers


MUSTANG MINERALS CORP.
EAST BULL LAKE PROPERTY
DDH'S PULSED WITH BHEM
RECEIVED
OCT 2 2012
GEOSCIENCE ASSESSMENT OFFICE
N
1231030
1214935
1229207
1229205
EB12-05
1229209
1229204
1231027
1231026
1229206
MUM
1229208
1134411134478113447711134476
CLIFFS RESOURCES
EB12-03
EB12-01
ME00-21Ext
113448934479113447511134474
1221016959
1226854
1227910
1227909
1227911
1196934480
1134473
1162192
CLIFFS RESOURCES
EB12-04
EB08-01
EB12-02
11344873448111344821162193
1226852
ME00-19Ext
EB08-03
1226627
1246210
11344113448511344841134483
1226700
EB12-06
0
0.5
1
kilometers

MUSTANG MINERALS CORP. (MUM)
EAST BULL LAKE PROPERTY

2012 GRID LOCATIONS