SAGE GOLD INC.

REPORT ON
MAGNETIC AND HORIZONTAL LOOP ELCTROMAGNETIC SURVEYS

MISSING LINK PROPERTY, ONOMAN PROJECT,

LAPIERRE AND LEGAULT TOWNSHIPS
THUNDER BAY MINING DIVISION,
ONTARIO

NTS 42E/11 and 42E/14

MINERAL CLAIMS

TB4210064, TB4210065, TB4210090, TB4210091, TB4210094, TB4210095, TB4215196, TB4215197 and TB4215199- TB4215201

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December, 2008

TABLE CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ACCOMAPAYING MAPS

(The maps are on the accompanying CD in ".pdf" format.)

SUMMARY

During the late winter and early spring of 2008 ground magnetic and horizontal loop electromagnetic surveys were conducted covering claims of the Missing Link Property. The surveys were conducted to relocate and better define conductors detected by earlier surveys. The results of the surveys are presented, the discussion of the results and the resulting recommendations are contained herein.

1. INTRODUCTION

Sage Gold Inc. contracted D Roberts of Lac La Ronge, Saskatchewan, to cut and chain the survey lines and tie-lines; the work was accomplished during Spring of 2008. The survey lines are 100 m apart. The magnetic and horizontal loop electromagnetic (HLEM) surveys were conducted by Mtech Geophysics Inc. of Murillo, Ontario which took place during the Spring of 2008. CGI Controlled Geophysics Inc. of Thornhill, Ontario, completed the reduction of the magnetic data and prepared the magnetic and electromagnetic maps.

The statistics for the surveys are in Table I. The personnel associated with the surveys are listed in Table IV.

TABLE I
SURVEY STATISTICS

Survey	Surveying (line km)
Grid Preparation	51.525
Magnetic Survey	51.525
HLEM Survey	47.25

The following report includes claims information, survey description, and discussion of the results, conclusions and recommendations.

2. LOCATION AND ACCESS

The Missing Link Property is located approximately 200 km northeast of the city of Thunder Bay, Ontario and 10 km northeast of Jellicoe in the Thunder Bay Mining Division. It is situated 6 km north of Highway 11 bordering the Kinghorn Road in Lapierre and Legault Townships of NTS 42E/11&14 (Figure 1).

Access to the property is gained via Highway 11 and Kinghorn Road. Access on the property is made possible by old logging roads, which run the length of the property, or on foot.

3. CLAIMS INFORMATION

The claims that are covered by the ground geophysical surveys are listed below, in Table II and illustrated on Figure 1.

TABLE II
LIST OF SURVEYED CLAIMS
TB4210064
TB4210065
TB4210094
TB4210095
TB4215196
TB4215197
TB4215199
TB4215200
TB4215201

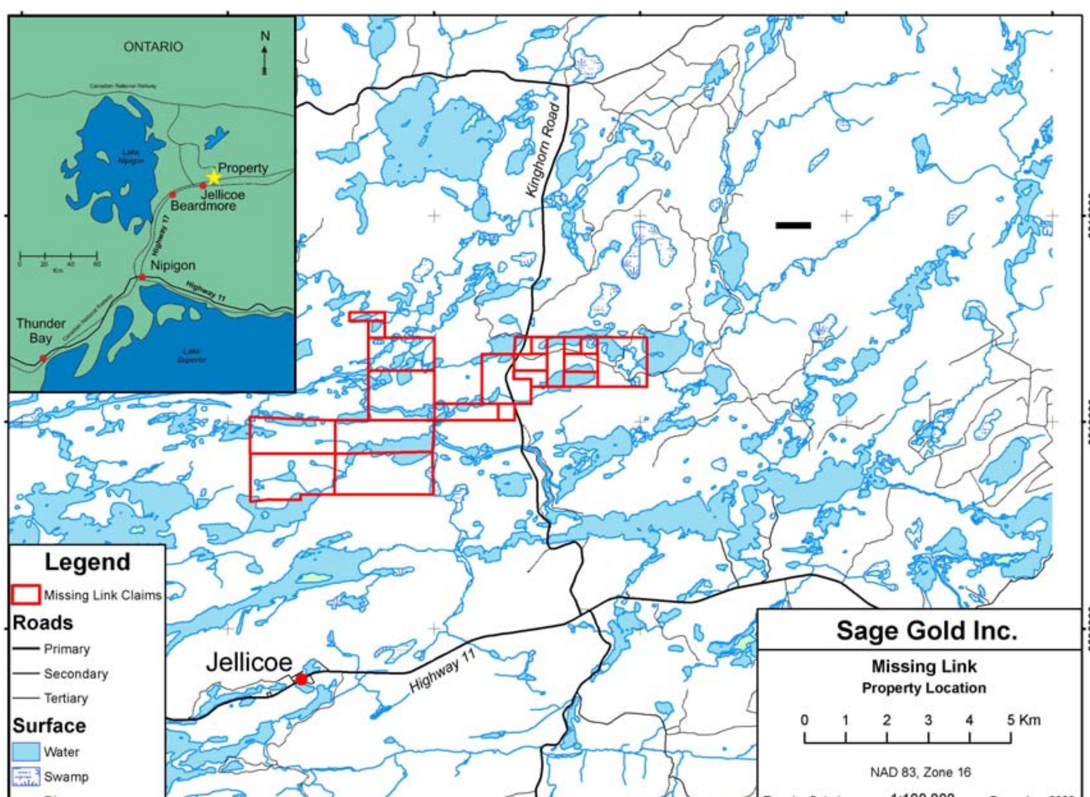

Figure 1

Location Map

4. HISTORY

The following history of the Missing Link claims relies in part on McIvor (1990).

1930's (?): Old trenches on the property indicate previous work by an unknown company (McIvor, 1990).

1986: Several trenches and pits discovered north of Jory Lake exposing zones of shearing and carbonate-sericite-silica alteration in mafic metavolcanic rocks. Assays from the sheared material yielded 2.6 g/t Au while a sample from a thin quartz-arsenopyrite vein returned 17.8 g/t Au (McIvor, 1990). The property was optioned by Golden Earth Resources.

1987: Golden Earth Resources completed an airborne magnetics and VLF-EM survey over the property. Two east-west trending magnetic lows were delineated in the southern part of the property and interpreted as zones of carbonitization within the mafic metavolcanic rocks. Two magnetic highs were also identified and interpreted as zones of magnetite enrichment in the mafic metavolcanic rocks. Ground magnetic and VLF-EM surveys were completed over all the lakes on the property. The resulting VLF-EM anomalies were attributed to conductive lake sediments (Terraquest Ltd., 1987).

1989: Minimal power stripping and trenching along strike from the original discovery trenches. Homestake Mineral Development Company (Homestake) optioned the property in December of 1989 (McIvor, 1990).

1990: Homestake completed an integrated exploration program involving: 1) cutting a 72 line km grid over the entire property; 2) 1:2000 scale geological mapping over the entire property and collection of rock samples for assay; 3) completion of a 66 line km survey of total field magnetics and VLF-EM over the property; 4) 121 hours of power stripping in eight areas on the property and 11 days of Wajax pump outcrop washing; 5) detailed 1:100 mapping and channel sampling of stripped areas with analyses of 325 rock samples for Au content. The best assay result was a 3.0 m channel sample over a quartz carbonate stockwork zone that contained 1.22 g/t Au including 2.06 g/t Au over 1.0 m. Details of this exploration program can be found in McIvor (1990).

1991: Placer Dome drilled 5 holes on the northwest side of Jory Lake. No significant Au assay results were returned (Laderoute, 1991).

1993: Mechanical stripping, sampling and mapping were completed on the western part of the property by M. Nelson and others. Although severely sheared and altered rocks were encountered, no significant gold values were obtained during the program (Nelson, 1993).

1994: A trenching and stripping program was completed by N. Cox on the western part of the property. Poor but anomalous gold results were obtained despite the presence of significant shearing, alteration and sulphidization (Cox, 1994).

5. GEOLOGY

5.1 Regional Geology

The following text has been summarized from Lafrance *et al*. (2004) and references therein

The Beardmore Geraldton Belt (BGB) is a 30 km wide and 180 km long belt composed of alternating slices of tectonically transposed metavolcanic and metasedimentary rocks. The belt has been interpreted as a transitional terrane between the granite-greenstones of the Onaman-Tashota belt to the north and the Quetico metasedimentary subprovince to the south.

The BGB has been subdivided into six shear-bounded lithological units (Lafrance *et al*., 2004). Three of these are metasedimentary units (Northern, Central and Southern Sedimentary Units (NSU, CSU and SSU)) while the remaining three are metavolcanic packages (Northern, Central and Southern Volcanic Units (NVU, CVU and SVU)). Each of these sub-belts has an approximate east-west strike, is steeply dipping and has been metamorphosed to greenschist facies.

The mafic rocks of the three volcanic units differ significantly in volcanology and tectonic setting. Rocks of the SVU consist of strongly deformed north topping massive to pillowed basalts and andesites interlayered with thin sedimentary and volcaniclastic units with a reported "within-plate" geochemical affinity (Shanks, 1993; Tomlinson *et al*., 1996). In contrast, the CVU contains a greater proportion of pyroclastic rocks and strongly amygdaloidal flows suggestive of shallow water or subaerial volcanism (Kresz and Zayachivsky, 1991). The majority of the rocks in the belt are andesitic to dacitic in composition with a calc-alkaline affinity. Rocks of the NVU consist of massive and pillowed amygdaloidal basalts and andesites with a tholeiitic chemistry (Tomlinson *et al*., 1996). Chemical metasedimentary rocks, including iron formation, can be found in all three mafic belts. The beds are typically 1 - 2 m wide with strike lengths ranging from 100 m to 1 km.

The three sedimentary packages consist predominately of clastic rocks with subordinate chemical metasedimentary rock units. The NSU is a 300 - 800 m thick package dominated by polymictic conglomerate and sandstone (Mackasey, 1975; Mackasey *et al*., 1976). The clasts range in size from pebble to boulder and consist of granitoids, mafic and felsic volcanics, jasper and vein quartz. Rocks of the CSU are thought to be transitional between the NSU and SSU. The 2 km thick sub-belt consists of feldspathic sandstone, siltstone, argillite and iron formation all overlain by a polymictic conglomerate (Lafrance *et al*., 2004). The 3 - 10 km SSU consists of bedded feldspathic sandstone interlayered with polymictic conglomerate, siltstone and argillite. Oxide-facies dominant iron formation is a minor component of the SSU, but is present as magnetite-hematite-jasper units ranging in thickness from 3 - 30 m.

5.2 Property Geology

Detailed mapping of the Missing Link claims has been completed by the Homestake Mineral Development Company in 1990 (McIvor, 1990). Below is a brief description of their findings. The reader is referred to their report for details.

Lithologies

Andesite (1A): Massive to weakly foliated light green aphanitic rock best exposed in the southwest part of the property. Several areas suggest this unit grades laterally into diorite.

Basalt (1B): Observed in the southern part of the property as moderately foliated weakly to moderately chloritized usually aphanitic rock. Coarser areas contain visible feldspars and grades into *basalt-gabbro*. Severely stretched pillows are rarely observed.

Basalt-Gabbro (1C): A coarser grained equivalent of the basalt that is typically interlayered with the basalt. The unit is moderately foliated and chloritized with variable sausseritization of the plagioclase.

Magnetite-Bearing Basalt (1D): Occurs as thin bands paralleling stratigraphy in the southern part of the property. The unit is generally black, aphanitic and fissile with 5-10% fine grained magnetite. The unit shows a strong magnetic signature and provides good stratigraphic control in the southern part of the property.

Intermediate Quartz Eye Tuff (2B): A rare unit consisting of thin beds containing an aphanitic andesite matrix with 5-15% stretched quartz eyes. The unit is concordant with stratigraphy suggesting it is an interflow tuff.

Oxide Facies Iron Formation (2C): This unit is inferred based on east-west trending magnetic and VLF-EM anomalies. The three parallel anomalies occur in the central part of the property and are typical of either massive pyrrhotite exhalative interflow or sulphidized oxide facies iron formation.

Pyritic/graphitic interflow (2D): This unit is inferred based on an east-west trending VLF-EM anomaly and the discovery of massive pyrite float in some of the trenches on the property. A strong east-west VLF-EM conductor with no associated magnetic response occurs along Homestake's baseline (McIvor, 1990) while immediately south several large boulders of massive pyrite have been discovered.

Polymictic Paraconglomerate (3A): This unit occurs sporadically south of Jory Lake. It is composed of a poorly sorted greywacke matrix with 40% quartz, chert and diorite clasts. The northern contact with the metavolcanics was not observed, but has been inferred to cross the central portion of Jory Lake based on airborne magnetic data. The contact trends approximately 080°.

Chlorite-Sericite-Fe Carbonate Schist (4A): At least three zones of intense shearing and alteration occur on the property cutting the mafic metavolcanic rocks. The shears show sharp boundaries and are 1 – 2 m wide trending 075° to 090°. S-kinks and north-south extension fractures are common. Sericite-carbonate forms zones of near-pervasive alteration while quartz and quartz-carbonate veins crosscut or are sheared/boudinaged/brecciated/rotated by the shear zones. The three shear zones are interpreted as anastomosing subshears related to the larger Paint Lake Shear system.

Diorite-Gabbro (5): Diorite-gabbro is found in the east central part of the property forming a prominent ridge. The unit forms two coarse sills conformable with stratigraphy. It is medium grained, non magnetic and weakly foliated.

Diabase (6): Thin (~1 m) strongly magnetic porphyritic diabase dykes cut all units on the property. They trend approximately north-south.

Structure

The eastern extension of the Paint Lake Shear is inferred to trend east-west toward the southern boundary of the eastern claims. The fault separates the NSU to the south from the Onaman-Tashota belt to the north.

A pervasive fabric is developed throughout the mafic metavolcanic rocks on the eastern block. The fabric parallels stratigraphy trending approximately 085° dipping steeply to the south at 075° – 085°. Small scale S-folds and north-south trending extensional fractures suggest the area is situated on a fold limb, although the direction of closure is not known.

Numerous 030° trending sinistral cross faults transpose stratigraphy by 1 – 5 m on the property. McIvor (1990) suggests these are related to antithetic slip along the broader and regional dextral Paint Lake Shear system.

6. INSTRUMENTATION and SURVEY PROCEDURES

The survey of the lines and the base line was conducted with a GEM Systems "walking mag" magnetometer that measures the earth's total magnetic field. The diurnal variations of the magnetic field were recorded by a base station magnetometer. A corrected observation was extracted from the "walking mag" database every 12.5 m.

The horizontal loop electromagnetic survey utilized the Max-Min I electromagnetic system manufactured by APEX Parametrics, Uxbridge, Ontario. The in-phase and quadrature phase components of the secondary electromagnetic field were measured at stations 25 m apart. The components were observed at the following transmitter frequencies: 444 Hz, 1777 Hz and 3555 Hz; the separation between the transmitter and receiver was 100 m The observations were corrected for topographic effects.

7. PRESENTATION OF THE DATA

The magnetic and HLEM maps were prepared by CGI Controlled Geophysics Inc. The results are presented on the base map that show simplified planimetry, claims and claim numbers. The scale of the map is 1:5 000.

The magnetic data are presented as solid colour and black contours and as posting and profiles of the corrected total magnetic field.

The HLEM survey results are shown as postings and profiles of the in-phase and quadrature components. The observations are plotted in the centre of the transmitter-receiver separation. Separate maps were prepared for each frequency.

8. DISCUSSION OF THE RESULTS

8.1 Magnetic Survey

Four magnetic domains were outlined based on the varying magnetic background, on the frequency of occurrence of anomalies. The approximate outline of the magnetic bodies is derived from the contour and profile maps. The bodies are marked as "magnetic", "moderately magnetic" and "slightly magnetic".

The central Magnetic Domain MA is approximately bounded by Conductor C1 in the north and by Conductor C2 in the south. The domain covers numerous, generally narrow, nearly east-west striking anomalies. Two sub-domains are evident: (a) Domain MA1 in north, that was disrupted by a north-northeast faults in the central parts, displacing the domain to the south and (b) the east-northeast trending Domain MA2; the domain is best developed in the west. The anomalies may describe afore mentioned “magnetite bearing basalt” and/or “oxide facies iron formation”, the suspected iron formations are noted on the Interpretation Map. The circular anomaly in the southwest corner of the grid may indicate an intermediate composition intrusive.

The disruption of magnetic trends suggests intense structural deformation of the magnetic horizons of the Domains MA1 and MA2. The interpreted faults and/shear zones are marked on the interpretation map.

The east-west Magnetic Domain MB, in the northwest corner of the grid, may also show magnetite bearing basalts or a weak oxide facies iron formation.

Magnetic Domain MC covers the part f the grid south of Conductor C2. The magnetic background gently varies describing essentially non-magnetic rocks. Four, north-south striking features are possible expressions of diabase dykes.

Magnetic Domain MD is in the north and in the west central parts of the grid. The lower magnetic background and the low amplitude anomalies may indicate felsic to intermediate composition rocks.

8.2 Horizontal Loop Electromagnetic Survey

8.2.1 General Comments

Two major, long strike length, nearly east-west striking conductors were detected. In addition, three shorter strike length conductors were also discovered. The common characteristic of the conductors is their inferred low conductivity. The poor conductivity is expressed by a quadrature component that is always larger than the in-phase component; furthermore, the anomalous responses were observed at the higher frequencies. The amplitude of the in-phase component, observed at 440 Hz, only occasionally rises above 1%. The amplitude of the in-phase and quadrature responses are increased wherever the conductor crosses a lake due to the contribution from the conductive lake bottom sediments.

8.2.2 Conductors C1, C1A and C1B

The nearly east-west striking, 3.4 km long conductor C1 is open to the west. The in-phase and quadrature responses describe a poorly conductive, steeply dipping formational horizon. The following Table III lists the computed depths and conductances (conductivity -thickness product) along selected lines. The conductances describe a poor, shallow seated conductor.

Conductor C1A, at the western end of C1, is more than likely caused by conductive lake bottom sediments; Conductor C1B may be considered as the eastern continuation of Conductor C1 and it is open to the west. Conductors C1A and C1B are poorly conductive features.

TABLE III

CONDUCTOR ATTRIBUTES
CONDUCTOR C1

Line	**Station**	**Conductance**	**Depth (m)**
2800	1050N	1.7	8
2900	1075N	1.4	15
3400	1100N	1.0	2?
4000	1225N	1.0	10
4600	1350N	1.1	18
4900	1350N	1.0	5

All three conductors are non-magnetic; however, Conductor C1 is along the southern flank of magnetic anomaly between Lines 4400 and 5300. Considering the non-magnetic nature of C1 it is suggested that the conductor is caused by the "pyritic/graphitic interflow" mentioned earlier.

8.2.3 Conductor C2

The east-northeast striking, approximately 2.9 km long Conductor C2 is open to west. The em responses are enhanced between Line3900 and 4600 where the conductor is under the lake. The poorly conductive, shallow seated feature is non-magnetic. It is suggested that it represents a graphitic/pyritic (see above) formational horizon

8.2.4 Conductors C3A, C3B, C4, C5 and C6

Conductors C3A and C3B are sub-parallel to and about 100 m south of the central portion of C2; these two conductors and C4 are restricted to lake and are non-magnetic. The short conductor C5, at the eastern end of the grid could continue under the lake to the east and may be represented by C6. Conductors C5 and C6 are non-magnetic and poorly conductive features.

9. CONLUSIONS AND RECOMMENDATIONS

The major magnetic domain MA describes a stratigraphic horizon that includes magnetite bearing basalts and/or oxide facies iron formations. This horizon is approximately bounded by the two major conductors C1 and C2 The poorly conductive features could be considered as marker horizons located at the northern and southern limits of the magnetic Domain MA. Magnetic Domains MC and MD cover felsic to intermediate composition rocks.

All of the detected conductors have low conductances and they are non-magnetic. The part of Conductor C1, from Line 4400 to Line 5300 that is associated with magnetic anomaly deserves further attention. It should be prospected prior drill testing.

It is also recommended that all available geological and geophysical data should be integrated with the present magnetic and electromagnetic results.

Respectfully submitted

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PROVINCE OF ONTARIO

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11. APPENDIX

Instrument Specification
Writer’s Qualifications
Table IV - Personnel

GSM-19

OVERHAUSER Magnetometer/ VLF System

GSM-19

OVERHAUSER Magnetometer/VLF System

Features

- Sensitivity = 0.02 nT
- Absolute Accuracy = 0.2 nT
- Sample Rates up to 5 Hz
- Low Power Consumption

General

"Overhauser" Once you experience it, you'll never go back to proton. Overhauser technology brings you sensitivities one to two orders of magnitude better than proton, yet in a light weight package. This is because it consumes an order of magnitude less power than proton, allowing a lighter weight for batteries.

What is the Overhauser technique? The Overhauser sensor contains the electrons' fluid that has been added to a hydrogen rich in the form of "free radial". The resulting mixture yields a sensor with 5000 times gain in proton polarization. Since the Overhauser polarization effect does not require static magnetic fields, but uses radio frequency fields transparent to protons, measurement can be done concurrently with polarization. The result is a sensor with much greater sensitivity, that can be sampled much more rapidly than the standard proton sensor.

Overhauser systems therefore maximize resolution while minimizing power consumption. Even with Walking Gradiometer systems, sampling at rates of once per second or betterare posible; Even in cold temperatures of minus 40 zero degrees Celsius and greater, the internal rechargeable battery can still be relied on for a 10 hour day, or longer.

The GSM-19 Overhauser magnetometer is thus truly a *State-of-the-Art* Magnetometer/ VLF system. The GSM-19 offers the data quality, reliability, and extensive list of capabilities, and options, that allow it to meet a very wide spectrum of applications.

Standard Features

The GSM-19 console features a real time graphic display of the current profile. In addition digital display of the current reading, current position, and warning messages are provided. The console design, with internal rechargeable battery pack, allows the unit to be completely sealed against the elements. With the built in heater for the display the GSM-19 is ready to go wherever your surveys may take you.

Tuning is automatic worldwide, with provision for manual override. In high gradient conditions the GSM-19 monitors the signal decay rate and displays a warning message when the gradient becomes too great. Filters for rejection of 50 or 60 Hz noise are provided.

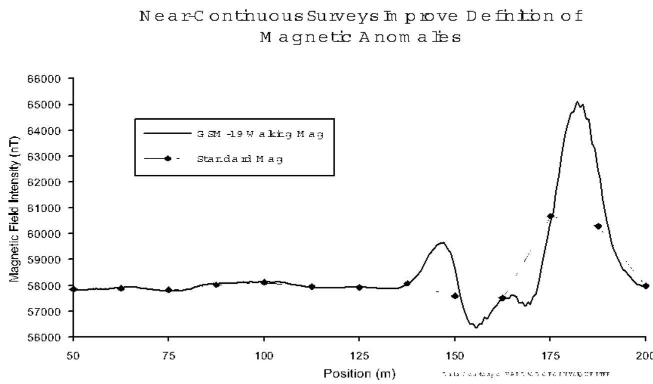
Diurnal corrections may be done in traditional fashion with one unit as a base station and a second unit used as the mobile field unit. At the end of the survey the two units are connected and the field unit creates a corrected data file (which still includes the raw data file) based on the temporal drift recorded by the base station.

As a standard feature the GSM-19 also offers the capability of making tie point measurements for automatic diurnal corrections. To use this feature the operator records a base value and then loops back to this point periodically during the survey to record another measurement, and thus build a file of the drift. In this way a single instrument may be used to make diurnal corrections.

The RS-232 port on the GSM-19 will output data as it is collected. This allows interface to GPS loggers that will accept RS232 data. The standard GSM-19 may be operated in a remote mode via computer. Memory storage is 512 K in the standard unit, and may be upgraded to 2 MB.

Grid coordinates are stored with either numeric or compass designations. A seven digit number may be used to designate lines and positions. Line and position spacing is entered so that with every reading the position may be automatically updated. An End of Line feature allows the next line to be quickly selected, plus changes the sign on the position spacing. If the previous line had been adding positions as the operator moved, then on the next line, positions will be subtracted as the operator moves. The operator may also easily manually enter his grid position for cases where gaps in the line are necessary.

MAGNETOMETERS



Equatorial Sensor

In equatorial regions, generally 30 degrees north or south of the equator, magnetic fields reach a nearly horizontal angle with the earth's surface. This requires a conventional proton sensor to be used in an inverted position, and requires the operator to collect data only on east/west lines to maximize the magnetic signal. This is a problem that is a magnitude worse for cesium magnetometers.

The Overhauser technique allows design of an optional sensor completely free of this problem, a sensor that requires no orientation no matter what the latitude of your exploration. This can be a major advantage when working in diverse areas around the world, and when needing to train local operators whose first language may not be your own.

"Walking Mag Option"

The GSM-19 magnetometer was the first to offer the "Walking Mag" concept. The reason for this is the outstanding advantage the Overhauser sensor has in this application. With the "Walking Mag" option the operator may select a sample rate of up to two samples per second. At this rate Overhauser technology can still deliver a noise level that is quite acceptable, about 0.1 nT, and the lower power consumption means that a full day of surveying can still be done with just the internal rechargeable battery.

As shown in Figure 1 the near continuous data from the "Walking Mag" technique provides increased definition for any type of survey. For surveys with densely spaced grids, such as archaeological or environmental surveys, field productivity is markedly improved, typically by a factor of five.

When in the Walking Mag mode the operator still presets his line and station spacing. When a known station is passed a grid update key is pressed and the current reading is tagged with this station. Readings taken between these marked positions are then linearly interpolated for their grid position when data is transferred to a computer.

A further refinement of the Walking Mag concept is the Hip Chain Option. This option uses a hip chain to trigger the magnetometer to take a reading at discrete intervals. A Hip Chain consists of an optical encoder that records revolutions of a wheel wound with disposable cotton string. The string is tied off at the beginning of a line, and as the operator walks the string is pulled out, and the magnetometer is automatically triggered. With the Hip Chain option sample rates up to five samples per second are supported.

Omnidirectional VLF

The GSM-19 VLF features a three coil design, with new larger coils in 1997, to achieve a non orientation capability with excellent sensitivity. Up to three VLF stations may be recorded, along with the magnetic reading, with the pressing of a single key.

As each VLF station is read the total field strength is displayed. This value may be used to determine if a station's signal is strong enough to obtain useful data. At the end of each reading the in phase, out of phase, and horizontal components are displayed and recorded for each station.

To determine what stations are available the Scan feature may be used. The entire VLF spectrum is scanned and stations with their corresponding signal strength are displayed. Automatic tilt compensation is provided up to ten degrees. Beyond this a warning message appears with display of the amount of tilt in each direction, enabling the operator to correct his position and take the reading again.

For Walking Mag applications a Walking VLF option is also available. With this option a single VLF station may be measured at sampling rates up to once per second. In this mode both magnetic and VLF readings may be collected at the one hertz rate.

Simultaneous Gradiometer

Many mining, environmental, and archaeological applications may benefit from using the gradient measurement. For near surface anomalies, generally twenty meters depth or less, the gradient anomaly will be larger, and narrower, than the total field anomaly. This permits the more accurate location of the target, and gives better sensitivity. The gradient measurement has the added value of being free from diurnal drift.

The most accurate gradient measurements are made when both sensors are polarized and measured at precisely the same time. In this way any slight movement of the sensor staff pole will not affect the reading. With the GSM-19 Gradiometer Option the pressing of a single key will initiate measurement of both the total field and gradient. Both readings are displayed and stored.

Integrated DGPS

With the GPS Log Option the GSM-19 will display and store GPS data using standard NMEA format. Position accuracy is dependant on the user's DGPS system.

Also offered is an internally mounted GPS board that may be integrated with radio modem for DGPS mode. A range of GPS boards may be offered to meet customer specified accuracy. These are quoted on a case by case basis to take advantage of current technology. Complete systems, with base station, and DGPS software are provided.

Terraplus Inc.
52 West Beaver Cr. Rd. #17, Richmond Hill, ON. Canada L4B 1L9
Tel: 905-764-5505
Fax: 905-764-8093
Email: terraplus@compuserve.com
Website: www.terraplus.com

Extended Remote Control

As an option the GSM-19 may be completely controlled through the RS232 interface. This option includes all controls available from the keypad, such as power on/off, tuning. etc. This option is most useful for observatory applications.

Marine Magnetometers

The Overhauser effect is a major benefit in marine applications. The GSM-19 has been developed into two marine models; the GSM-19M for shallow tow applications with cable lengths of up to 100 meters; and the standard GSM-19 for tow applications with cable lengths of 30 meters. Please see pages ?? for the GSM-19M.

A standard GSM-19 may be used with a marine sensor with up to a 30 meter cable. In this way the same console may be used for both land and marine applications. Users considering this option may want to focus on also including the Walking Mag option so that they will have sample rates that are more appropriate for marine applications.

Specifications

Overhauser Performance

Resolution: 0.01 nT

Relative Sensitivity: 0.02 nT

Absolute Accuracy: 0.2nT

Range: 20,000 to 120,000 nT

Gradient Tolerance: Over 10,000nT/m

Operating Temperature: -40°C to +60°C

Operation Modes

Manual: Coordinates, time, date and reading stored automatically at min. 3 second interval.

Base Station: Time, date and reading stored at 3 to 60 second intervals.

Walking Mag: Time, date and reading stored at coordinates of fiducial.

Remote Control: Optional remote control using RS-232 interface.

Input/Output: RS-232 or analog (optional) output using 6-pin weatherproof connector.

Operating Parameters

Power Consumption: Only 2Ws per reading. Operates continuously for 45 hours on standby.

Power Source: 12V 2.6Ah sealed lead acid battery standard, other batteries available

Operating Temperature: -50°C to +60°C

Storage Capacity

Manual Operation: 29,000 readings standard, with up to 116,000 optional. With 3 VLF stations: 12,000 standard and up to 48,000 optional.

Base Station: 105,000 readings standard, with up to 419,000 optional (88 hours or 14 days uninterrupted operation with 3 sec. intervals)

Gradiometer: 25,000 readings standard, with up to 100,000 optional. With 3 VLF stations: 12,000, with up to 45,000 optional.

Omnidirectional VLF

Performance Parameters: Resolution 0.5% and range to +200% of total field.
Frequency 15 to 30 kHz.

Measured Parameters: Vertical in-phase & out-of-phase, 2 horizontal components, total field coordinates, date, and time.

Features: Up to 3 stations measured automatically, in-field data review, displays station field strength continuously, and tilt correction for up to +10° tilts.

Dimensions and Weights: 93 x 143 x 150mm and weighs only 1.0kg.

Dimensions and Weights

Dimensions:

Console: 223 x 69 x 240mm

Sensor: 170 x 71mm diameter cylinder

Weight:

Console: 2.1kg

Sensor and Staff Assembly: 2.0kg

Standard Components

GSM-19 console, harness, battery charger, shipping case, sensor with cable, staff, instruction manual, data transfer cable and software.

Ordering Information

Description	Order Number
GSM-19 Overhauser Mag....	350-170-0051
Gradiometer Option	350-170-0042
VLF Option	350-170-0069
GPS Log Option	350-170-0170
Memory Upgrade per 512	350-170-0065
Analog Output	350-170-0010
Remote Option	350-170-0043
Walking Mag Option	350-170-0072
GSM-19 Shallow Marine Fish .	**350-170-0105**
Equatorial Sensor Option . .	**350-170-0114**

MAXMIN I-8 ELECTROMAGNETIC SYSTEM SPECIFICATIONS:

FREQUENCIES:	110, 220, 440, 880, 1760, 3520, 7040 & 14080 Hz.
COIL SEPARATIONS:	SET NO. 1: 12.5, 25, 50, 75, 100, 125, 150, 200, 250, 300 and 400 metres (the standard set). SET NO. 2: 10, 20, 40, 60, 80, 100, 120, 160, 200, 240 and 320 metres (selected with grid switch in receiver). SET NO. 3: 50, 100, 200, 300, 400, 500, 600, 800, 1000, 1200 and 1600 feet (selected with grid switch in receiver).
TRANSMITTER DIPOLE MOMENTS:	110 Hz: 220 Atm^2 · 1760 Hz: 160 Atm^2 220 Hz: 215 Atm^2 · 3520 Hz: 80 Atm^2 440 Hz: 210 Atm^2 · 7040 Hz: 40 Atm^2 880 Hz: 200 Atm^2 · 14080 Hz: 20 Atm^2
MODES OF OPERATION:	MAX 1: Horizontal loop or slingram - transmitter and receiver coil planes horizontal and coplanar. MAX 2: Vertical coplanar loop mode transmitter and receiver coil planes vertical and coplanar. MIN 1: Perpendicular mode 1 - transmitter coil plane horizontal and receiver coil plane vertical. MIN 2: Perpendicular mode 2 - transmitter coil plane vertical and receiver coil plane horizontal.
PARAMETERS MEASURED:	In-phase and quadrature componets of the secondary magnetic field, in % of primary field.
READOUTS:	Analog direct edgewise meter readouts for in-phase, quadrature and tilt. Additional digital LCD readouts provided in the optional MMC computer. Interfacing and controls are provided for ready plug-in of the MMC.
RANGES OF READOUTS:	Switch activated analog in-phase and quadrature scales: 0±4 %, 0±20 % and 0±100 %, and digital 0±199.9 % autorange with optional MMC. Analog tilt 0±75 % and 0±99 % grade with MMC.
RESOLUTION:	Analog in-phase and quadrature 0.1 to 1 % of primary field, depending on scale used, digital 0.01 % with autoranging MMC; tilt 1 % grade.
REPEATABILITY:	0.01 to 1 % of primary field, typical, depending on frequency, coil separation and conditions.
SIGNAL FILTERING:	Powerline comb filter, continuous spheric noise clipping, autoadjusting time constant, and more.
WARNING LIGHTS:	Receiver signal and reference warning lights to indicate potential error conditions.

SURVEY DEPTH PENETRATION:	From surface down to 1.5 times coil separation for large horizontal target and 0.75 times coil separation for large vertical target, values typical.
REFERENCE CABLE:	Lightweight unshielded 4/2 conductor teflon cable for maximum operating temperature range and for minimum pulling friction.
INTERCOM:	Voice communication link provided for operators via the reference cable.
TEMP. RANGE:	Minus 40 to plus 60 degrees Celsius, operating.
RECEIVER BATTERIES:	Four standard 9 V - 0.6 Ah alkaline batteries. Life 25 hours continuous duty, less in cold weather. Optional 1.2 Ah extended life lithium batteries available (recommended for very cold weather).
TRANSMITTER BATTERIES:	Standard rechargeable gel-type lead-acid 12V-14Ah batteries (4 x 6 V - 7.2 Ah) in nylon belt pack. Optionally rechargeable long life 12 V - 14 Ah nickel-cadmium batteries (20 x 1.2 V - 7 Ah) with ni-cad chargers - best choice for cold climates.
TRANSMITTER BATTERY CHARGERS:	Lead acid battery charger: 14.4 V @ 1.25 A, Ni-cad battery charger: 1.4 A @ 16 V, nominal output. Operation from 110 - 120 and 220 - 240 VAC, 50 - 60 Hz, and 12 - 15 VDC supplies.
RECEIVER WEIGHT:	8 Kg carrying weight (including the two ferrite cored antenna coils), 9 Kg with MMC computer.
TRANSMITTER WT:	16 Kg carrying weight.
SHIPPING WEIGHT:	60 Kg plus weight of reference cables @ 2.0 Kg per 100 metre, plus optional items if any. Shipped in two aluminum lined field / shipping cases.
STANDARD SPARES:	Spare transmitter battery pack, spare transmitter battery charger, two spare transmitter retractile connecting cords, spare set of receiver batteries.
OPTIONS AND ACCESSORIES, PLEASE SPECIFY:	♦ MMC, MaxMin Computer option ♦ Data interpretation and presentation programs ♦ Reference cables, lengths as required ♦ Reference cable extension adapter ♦ Handheld inclinometer for rough terrain ♦ Receiver extended life lithium batteries ♦ Transmitter ni-cad battery & charger option ♦ Minimal, regular or extended spare parts kit

Specifications subject to changes without notification

93 - 10 - 15

Telephone: (1) 905 852 5875 Facsimile: (1) 905 852 9688 P. O. Box 818, Uxbridge, Ontario, Canada L9P 1N2 Airport: Toronto International

APEX PARAMETRICS LIMITED

MAXMIN COMPUTER MMC SPECIFICATIONS:

OPERATING SYSTEM:	Menu driven user-friendly hierarchial operating system, interfacing with MaxMin EM System receiver and with personal computers.
DISPLAY:	Extended temperature Liquid Crystal Display, with two lines of 24 alphanumeric characters each.
KEYBOARD:	18 tactile pushbutton keys
BEEPER:	To provide audible operator guidance and to speed up operations, especially in very cold weather.
CLOCK CALENDAR:	Date and Time (year, month, day, hour and minute).
COIL TILT:	Tilt display, with built in tilt sensor and measurement, with 0±99% topographic grade range and with 1% resolution.
IN-PHASE & QUADRATURE:	0±199.9% autoranging programmable gain system with 0.1% resolution for displayed data and 0.01% resolution for stored data.
APPARENT CONDUCTIVITY:	0.1 to 3276 milliSiemens (millimho) per metre available conductivity range, with conductivity arrived at using the quadrature, in-phase, frequency and coil separation data.
PROCESSOR:	16 bit low power CMOS CPU and bus at 6 MHz clock rate.
MEMORY:	ROM: 16 Kb, expandable to 64 Kb. RAM: 256 Kb, static CMOS.
PHYSICAL SIZE:	24.2 x 17.3 x 4.3 cm, to fit inside the MaxMin receiver leather case notebook pocket.
CARRYING WEIGHT:	1.0 Kilogram.
BATTERIES:	Two 9V-0.6Ah alkaline batteries. Battery life 28 hours continuous duty, less in cold weather. Optional 1.2 Ah lithium batteries recommended for very cold temperature operation. One lithium 3 Volt memory back-up battery, type 2032.
CONNECTIONS:	19 pin bayonet connector receptacle to connect to MaxMin receiver with the supplied tubular aluminum connectors. One each of DB25S and DB9S data transfer cords supplied for downloading data to personal computer serial ports.
TEMPERATURE RANGE:	Minus 30 to plus 60 degrees Celsius. Temperature sensing, measurement and display built-in.

Specifications are subject to changes without prior notification.

1998-04-01

Telephone: 1 905 852 5875 Facsimile: 1 905 852 9688

APEX PARAMETRICS LIMITED

P. O. Box 818, Uxbridge, Ontario, Canada L9P 1N2

Airport: Toronto International

WRITER'S QUALIFICATIONS

Francis L. Jagodits, Dipl. Eng., P. Eng.

This is to certify that I, Francis L. Jagodits,

am a Canadian citizen, residing at 353 Berkeley Street in the City of Toronto, Province of Ontario,

maintain a consulting office at 353 Berkeley Street, in Toronto,

graduated with a degree of Diploma Engineer in geophysical engineering from the Technical University of Sopron, Hungary in 1956,

have worked as professional geoscientist for the past fifty years and as an independent consulting geophysicist for the past twenty years,

am registered as a Professional Engineer in the Province of Ontario and registered as a retired Professional Engineer and Professional Geoscientist in good standing in the Province of Newfoundland and Labrador,

am a member of the Society of Exploration Geophysicist, the Canadian Exploration Geophysical Society and the Prospectors and Developers Association of Canada.

Dated at Toronto

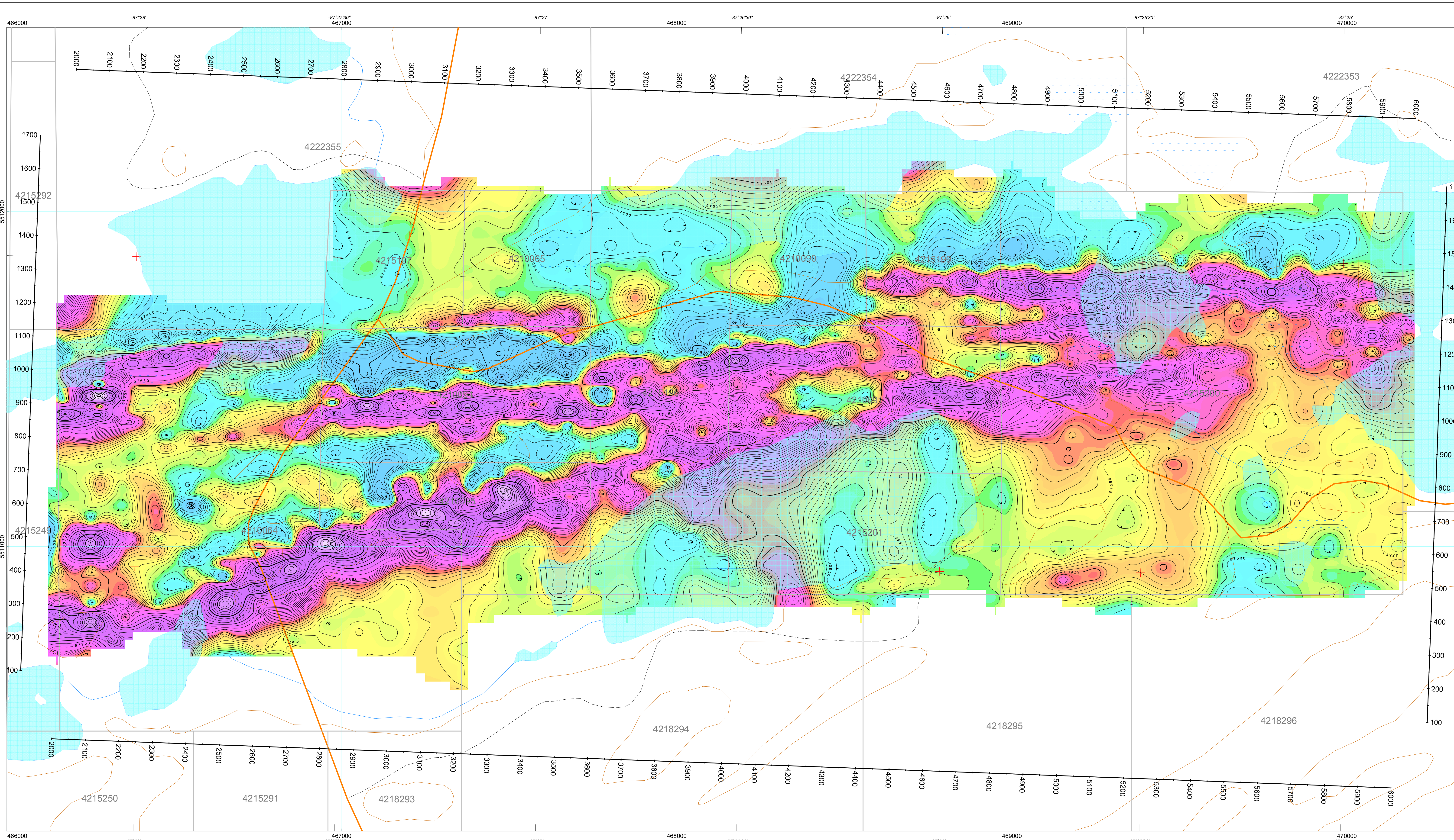
This 16 th day of December, 2008.

Francis L. Jagodits, Dipl. Eng., P.Eng.

TABLE IV

LIST OF PERSONNEL

Name	Address	Activity
D. Roberts	Box 1255, Lac la Ronge, SK	Line cutting.
Mtech Geophysics Inc.	P.O. Box 88, Murillo, ON P0T 2G0	Geophysical Surveys
M. Milani Geophysical Operator S. McCrindle Geophysical Operator D. Chambers Geophysical Operator		
CGI Controlled Geophysics Inc.	189 Clarke Av. East Thornhill, ON. L3T 1T3	Data reduction, map preparation
C. Vaughn, P. Geo., Geophysicist		
Checkmate Photographic	26 Six Points Road Etobicoke, ON. M8Z 2W9	Map services
R. Jessup		
Jeff Meek & Associates Ltd.	2C Alcina Ave Toronto, ON. M6G 2E8	Drafting
J. Meek		
Savaria Geophysics Inc.	353 Berkeley Street, Toronto, ON. M5A 2X6	Interpretation
F.L. Jagodits, P. Eng., Geophysicist		



Minimum Curvature Gridding / Cell Size: 25 m re-gridded to 5 m

Total Magnetic Intensity [nT]

57300, 57425, 57450, 57470, 57480, 57490, 57495, 57500, 57505, 57510, 57515, 57520, 57525, 57530, 57535, 57540, 57545, 57550, 57555, 57560, 57565, 57570, 57575, 57585, 57590, 57595, 57605, 57615, 57620, 57635, 57645, 57665, 57685, 57710, 57740, 57785, 57850, 57955, 58200, 58450, 58700

Contour Intervals [nT]: 10, 50, 200, 1000

Magnetic IGRF at 49°45.25'N, 87°26.5'W, and 339 m A.S.L. on April 1, 2008.
Intensity: 57758.01 nT
Inclination: 75.47°
Declination: -5.63°

Scale 1:5000

100 0 100 200 300 (metres)

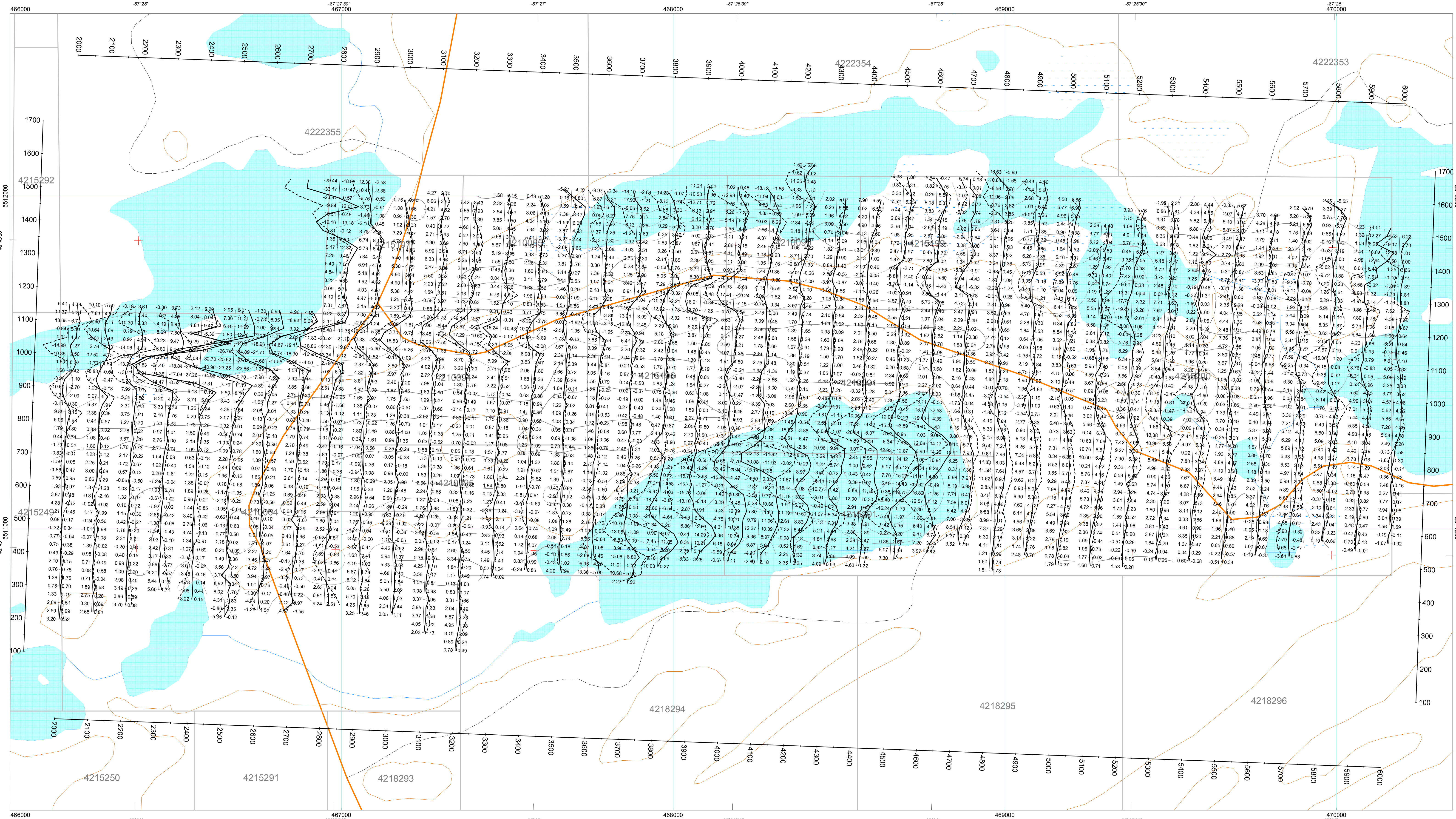
NAD83 / UTM zone 16N — NTS Topographic Map Sheets 42E/11, 42E/14

SAGE GOLD INC.

Onaman Project, Missing Link Grid, Beardmore, Ontario
Edited Total Magnetic Intensity
Contoured Colour Image on Topo Base with Claims

Data Acquisition by
Mtec Geophysics Inc., Murillo, Ontario, Canada
Data Processing and Plotting by
CGI Controlled Geophysics Inc., 189 Clark Ave., Thornhill, Ontario, Canada

Map: ML_TMI_5k | Image: ML_TMIn | Date: December 9, 2008



Minimum Curvature Gridding / Cell Size: 20 m

Contour Intervals [-]

5
20
100
500

HLEM Profiles - Scale: 10 ppm/cm Base Level: 0.0 ppm
IP Profiles: solid lines. QU Profiles: dashed lines. Positive to E.
Postings every 25 m. IP values: right of line. QU values: left of line.

Specifications:

SURVEY TYPE: MAXMIN ELECTROMAGNETIC (HLEM)
MAXMIN EQUIPMENT: MMI-8 S/N 8414
SLOPE METHOD: NO SLOPES
COIL SEPARATION: 100.0 METRES
NOMINAL STATION SPACING: 25.0 METRES
MODE: MAX1 (Horizontal Coplanar)
FREQUENCIES: 440, 1760, 3520 Hz

Scale 1:5000

100 0 100 200 300
(metres)

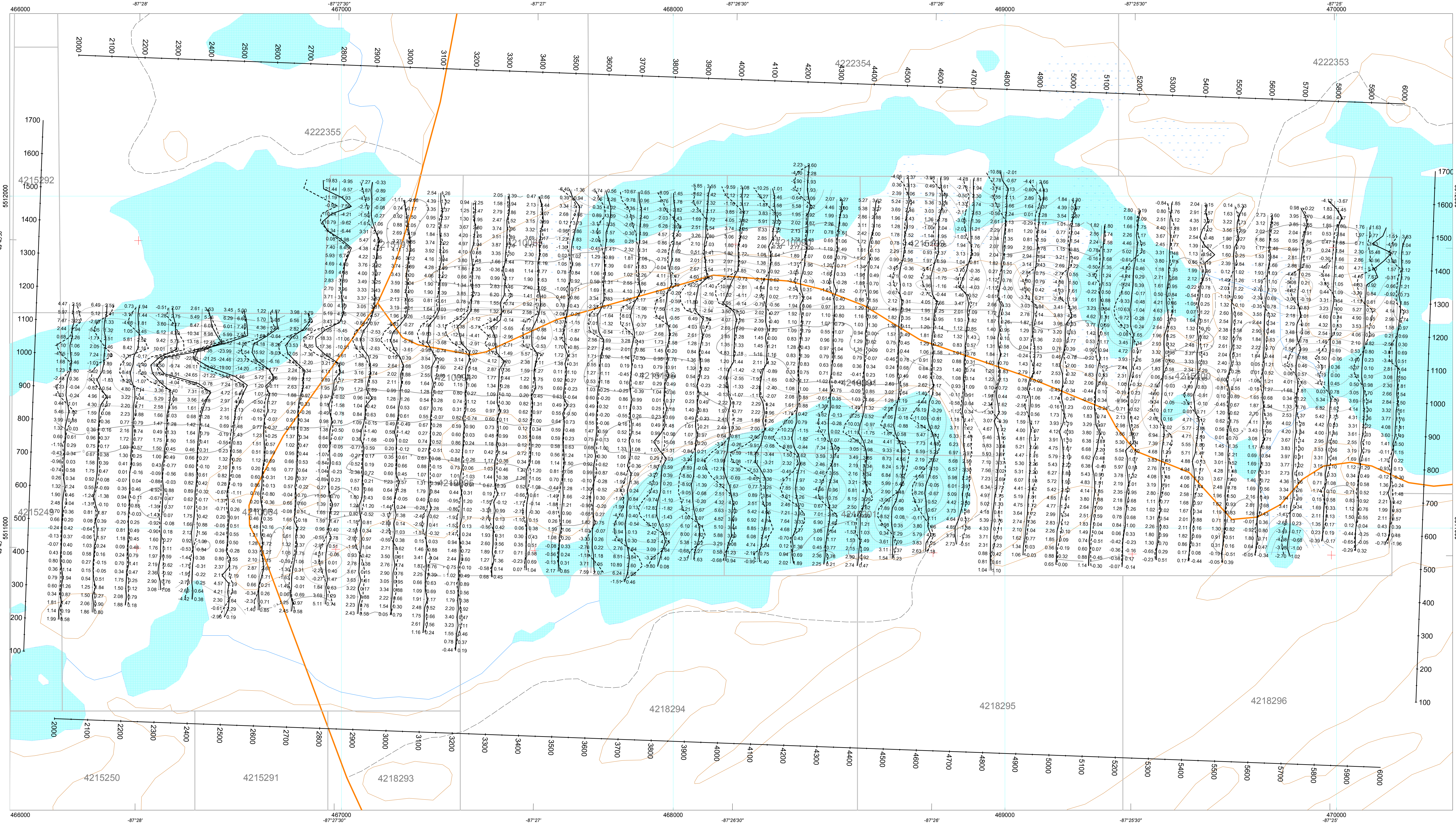
NAD83 / UTM zone 16N
NTS Topographic Map Sheets 42E/11, 42E/14

SAGE GOLD INC.

Missing Link Grid, Onaman Project, Beardmore, Ontario
3520 Hz HLEM Profiles / Postings, Conductivity Contours and Grid Location and Claims on Topo Base

Data Acquisition by
Mtec Geophysics Inc., Murillo, Ontario, Canada
Data Processing and Plotting by
CGI Controlled Geophysics Inc., 189 Clark Ave., Thornhill, Ontario, Canada

Map: ML_EM3520_5k *Image: -* *Date: November 28, 2008*



Minimum Curvature Gridding / Cell Size: 20 m

Contour Intervals [-]

———	5
———	20
———	100
———	500

HLEM Profiles - Scale: 10 ppm/cm   Base Level: 0.0 ppm
IP Profiles: solid lines. QU Profiles: dashed lines. Positive to E.
Postings every 25 m. IP values: right of line. QU values: left of line.

Specifications:

SURVEY TYPE: MAXMIN ELECTROMAGNETIC (HLEM)
MAXMIN EQUIPMENT: MMI-8 S/N 8414
SLOPE METHOD: NO SLOPES
COIL SEPARATION: 100.0 METRES
NOMINAL STATION SPACING: 25.0 METRES
MODE: MAX1 (Horizontal Coplanar)
FREQUENCIES: 440, 1760, 3520 Hz

Scale 1:5000

100 0 100 200 300 (metres)

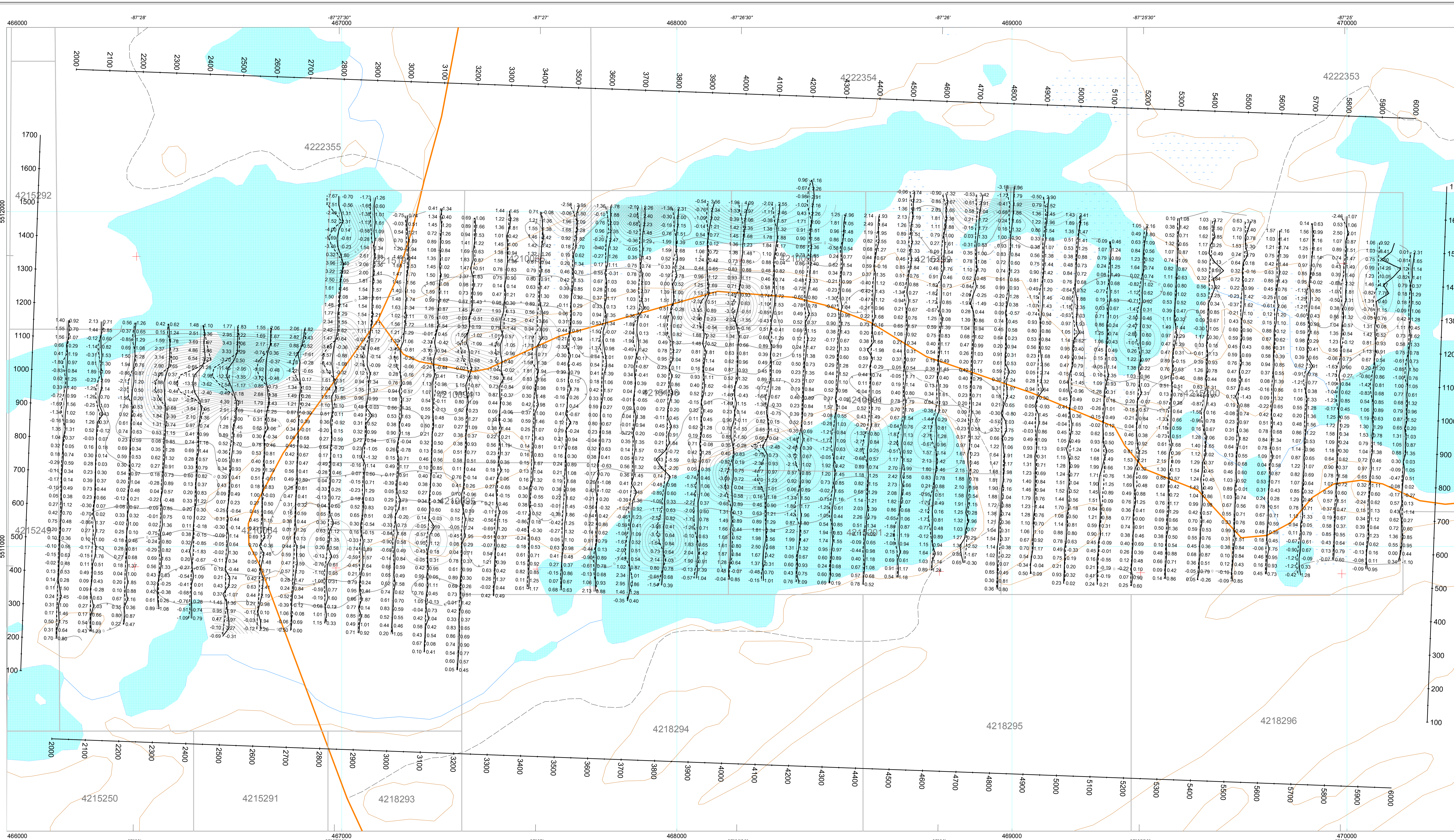
NAD83 / UTM zone 16N   NTS Topographic Map Sheets 42E/11, 42E/14

SAGE GOLD INC.

Missing Link Grid, Onaman Project, Beardmore, Ontario 1760 Hz HLEM Profiles / Postings, Conductivity Contours and Grid Location and Claims on Topo Base

Data Acquisition by
Mtec Geophysics Inc., Murillo, Ontario, Canada
Data Processing and Plotting by
CGI Controlled Geophysics Inc., 189 Clark Ave., Thornhill, Ontario, Canada

Map: ML_EM1760_5k   *Image: -*   *Date: November 28, 2008*



Minimum Curvature Gridding / Cell Size: 20 m

Contour Intervals [-]

——	5
——	20
——	100
——	500

HLEM Profiles – Scale: 10 ppm/cm Base Level: 0.0 ppm
IP Profiles: solid lines. QU Profiles: dashed lines. Positive to E.
Postings every 25 m. IP values: right of line. QU values: left of line.

Specifications:

SURVEY TYPE: MAXMIN ELECTROMAGNETIC (HLEM)
MAXMIN EQUIPMENT: MMI-8 S/N 8414
SLOPE METHOD: NO SLOPES
COIL SEPARATION: 100.0 METRES
NOMINAL STATION SPACING: 25.0 METRES
MODE: MAX1 (Horizontal Coplanar)
FREQUENCIES: 440, 1760, 3520 Hz

Scale 1:5000

100 0 100 200 300

(metres)

NAD83 / UTM zone 16N

NTS Topographic Map Sheets 42E/11, 42E/14

SAGE GOLD INC.

Missing Link Grid, Onaman Project, Beardmore, Ontario
440 Hz HLEM Profiles / Postings, Conductivity Contours and Grid Location and Claims on Topo Base

Data Acquisition by
Mtec Geophysics Inc., Murillo, Ontario, Canada
Data Processing and Plotting by
CGI Controlled Geophysics Inc., 189 Clark Ave., Thornhill, Ontario, Canada

Map: ML_EM0440_5k *Image: -* *Date: November 14, 2008*

Legend

MA Approximate outline of magnetic domain with identification

Approximate outline of magnetic body
- "magnetic"
- "moderately magnetic"
- "slightly magnetic"

IF Iron formation

I Intrusive

dd Diabase dyke

Interpreted fault and/or shear zone

C1 EM conductor with identification

Road, track

Contours of surface topography

Stream

Swamp

Lake/pond

Scale 1:5000

1000100200300

(metres)

NAD83 / UTM zone 16N

NTS Topographic Map Sheet 42E/11, 42E/14

To accompany report by Francis L. Jagodits, P. Eng., Consulting Geophysicist

SAGE GOLD INC.

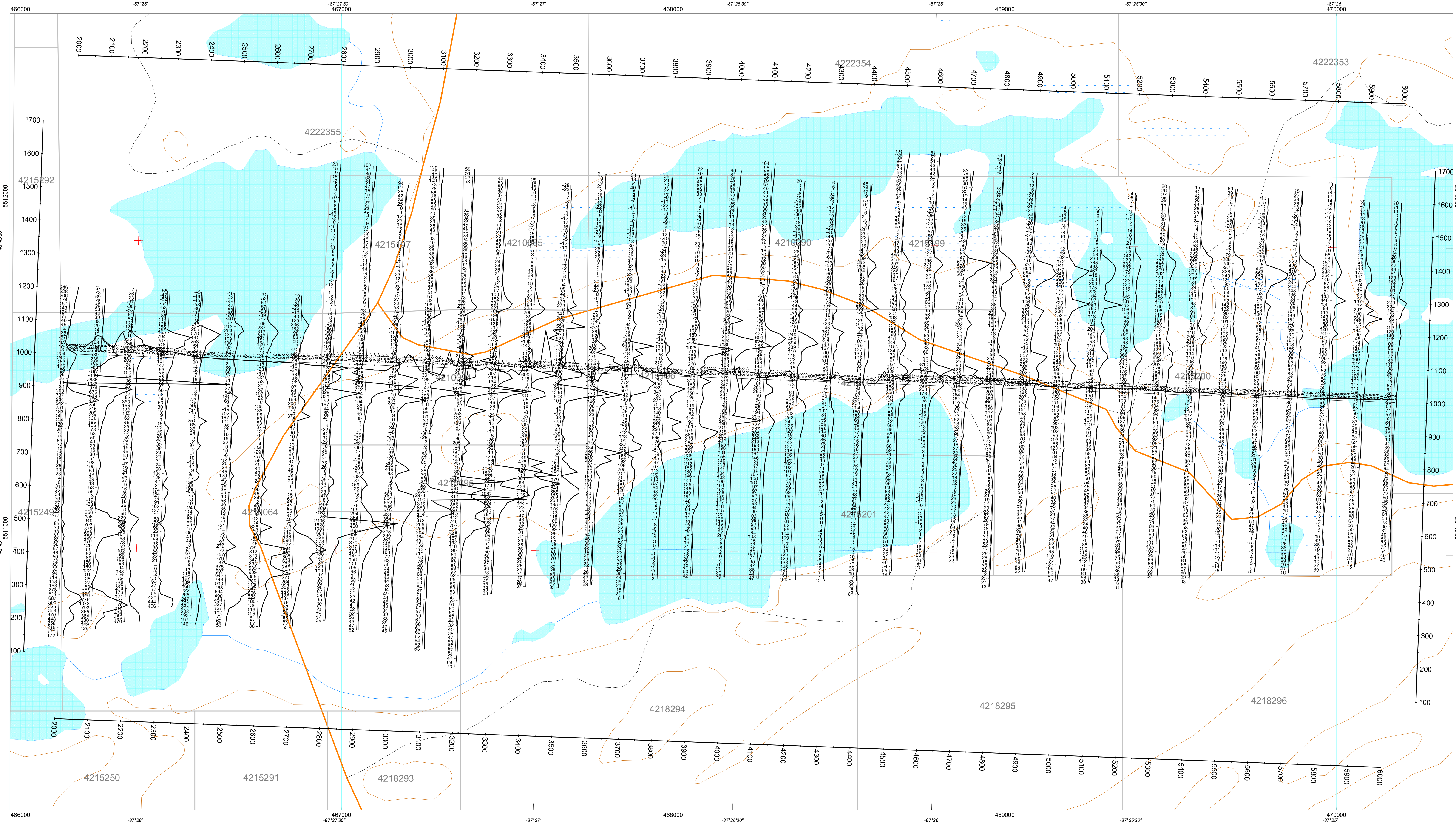
Onaman Project,Missing Link Property, Beardmore, Ontario

Interpretation Map

Data Acquisition by
Mtec Geophysics Inc., Murillo, Ontario, Canada

Data Processing and Plotting by
CGI Controlled Geophysics Inc., 189 Clark Ave., Thornhill, Ontario, Canada

Map: ML_Basemap_5k Image: -Date: Dec. 14, 2008



Magnetic Profiles - Scale: 500 nT/cm   Base Level: 57500 nT
Profiles: solid lines, Positive to E and N.
Postings every 12.5 m. Postings Background Subtracted = 57500 nT

Scale 1:5000

100 0 100 200 300

(metres)

NAD83 / UTM zone 16N   NTS Topographic Map Sheet 42E/11, 42E/14

SAGE GOLD INC.

Onaman Project, Missing Link Grid, Beardmore, Ontario
Edited Total Magnetic Intensity Profiles and Postings and Grid Location on Topo Base with Claims

Data Acquisition by
Mtec Geophysics Inc., Murillo, Ontario, Canada
Data Processing and Plotting by
CGI Controlled Geophysics Inc., 189 Clark Ave., Thornhill, Ontario, Canada

Map: ML_TMI_Prof_5k   *Image: -*   *Date: November 26, 2008*