
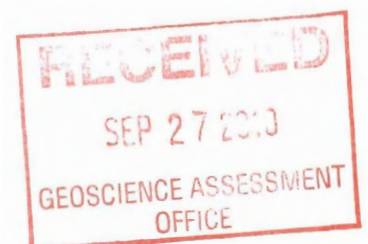


GEOPHYSICAL REPORT  
FOR  
**ZINCCORP RESOURCES INC.**  
ON THE  
**PALOMAR LAKE PROPERTY**  
KEITH TOWNSHIP  
PORCUPINE MINING DIVISION  
NORTHEASTERN, ONTARIO

2.46205

Prepared by:  J. C. Grant,  
September 2010



## TABLE OF CONTENTS

	Page
INTRODUCTION	1
PROPERTY LOCATION AND ACCESS	1
CLAIM BLOCK	1
PERSONNEL	2
GROUND PROGRAM	2
MAGNETIC SURVEY	2,3
VLF-EM SURVEY	3
MAGNETIC AND VLF-EM SURVEY RESULTS	3,4
CONCLUSIONS AND RECOMMENDATIONS.	4
CERTIFICATE	
LIST OF FIGURES:	FIGURE 1, LOCATION MAP FIGURE 2, PROPERTY LOCATION MAP FIGURE 3, CLAIM MAP/GRID SKETCH
APPENDICES:	A: SCINTREX ENVI MAG SYSTEM
POCKET MAPS:	CONTOURED MAGNETIC SURVEY, SCALE 1:5000 PROFILED VLF-EM SURVEY, SCALE: 1:5000

**INTRODUCTION:**

The services of Exsics Exploration Limited were retained by Mr. G. Sparling, on behalf of the Company, Zinccorp Resources Inc., to complete a detailed total field magnetic and VLF-EM survey over a cut grid, (the Palomar Lake Property), that represents a portion of their claim holdings in Keith Township. The grid cutting was completed by an independent line cutting contractor. Once the cutting was completed the grid was then covered by the Total Field Magnetic survey that was done in conjunction with a VLF-EM survey. Both of these surveys were completed by Exsics Exploration Limited.

**PROPERTY LOCATION AND ACCESS:**

The Palomar Lake Property is situated approximately 60 kilometers west-southwest of the City of Timmins. The claim block is situated in the northwest section of Keith Township. More specifically it represents the western narrow arm of Slate Rock Lake and it lies to the east of Muskego Lake. Keith Township is within the Porcupine Mining Division, Northeastern, Ontario. Refer to figures 1 and 2 of this report.

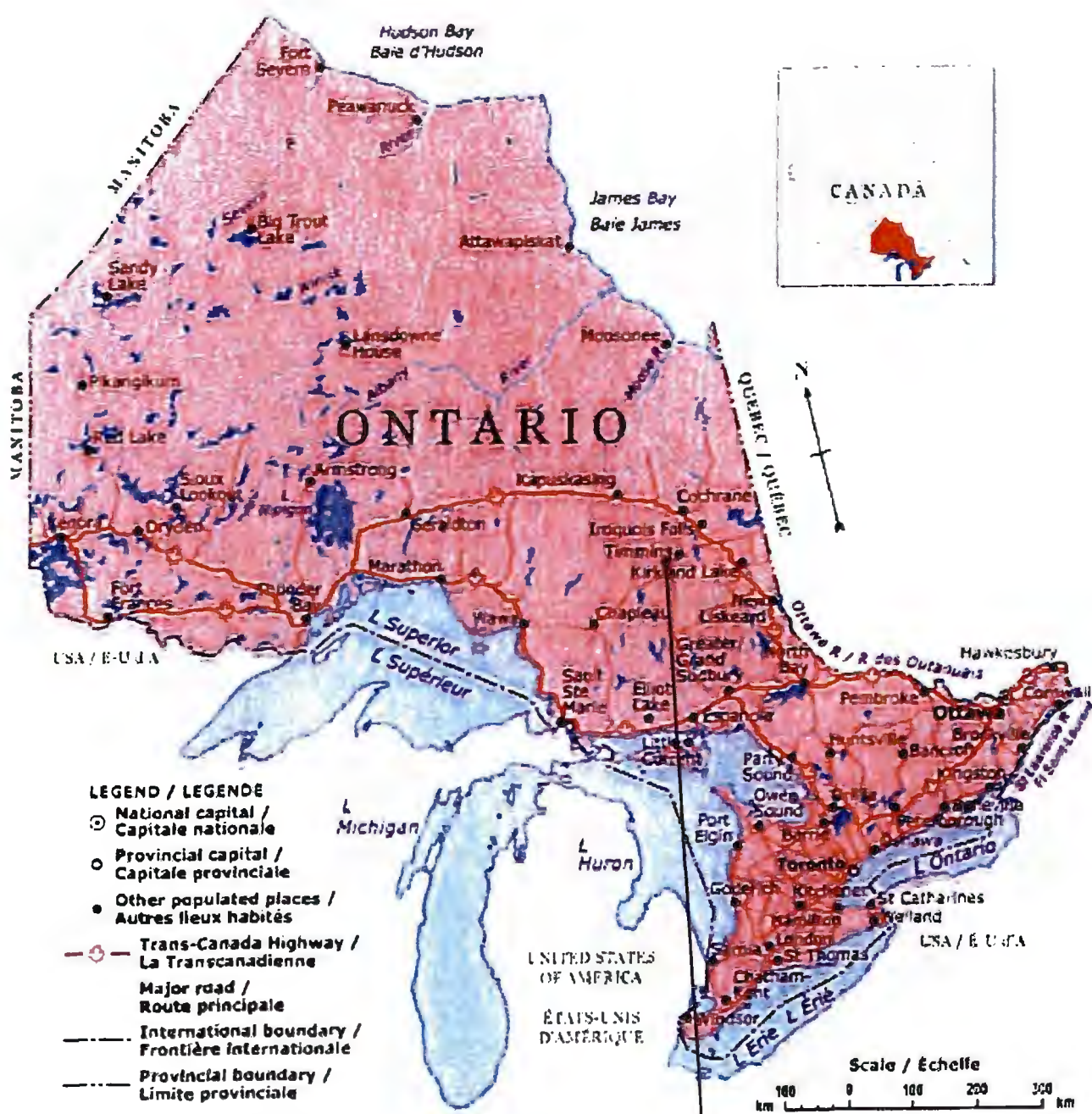
Access to the grid during the survey period was ideal. Highway 101 travels west of Timmins to the junction of a good all weather gravel road that runs south to southwest off of the highway and provided access to the northern section of the grid area. The grid was accessed along these roads during the winter by skidoos. The skidoo trail cut across the northeast section of the grid. Traveling time from Timmins to the grid is about 80 minutes.

**CLAIM BLOCK:**

The claim numbers that were covered by the geophysical survey are listed below.

4247025,	4 units
4247024,	15 units
4240104,	12 units

Refer to Figure 3 copied from MNDM Plan Map of Keith Township for the positioning of the grid and the claim numbers.



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 Sa Majesté la Reine du chef du Canada, Ressources naturelles Canada.


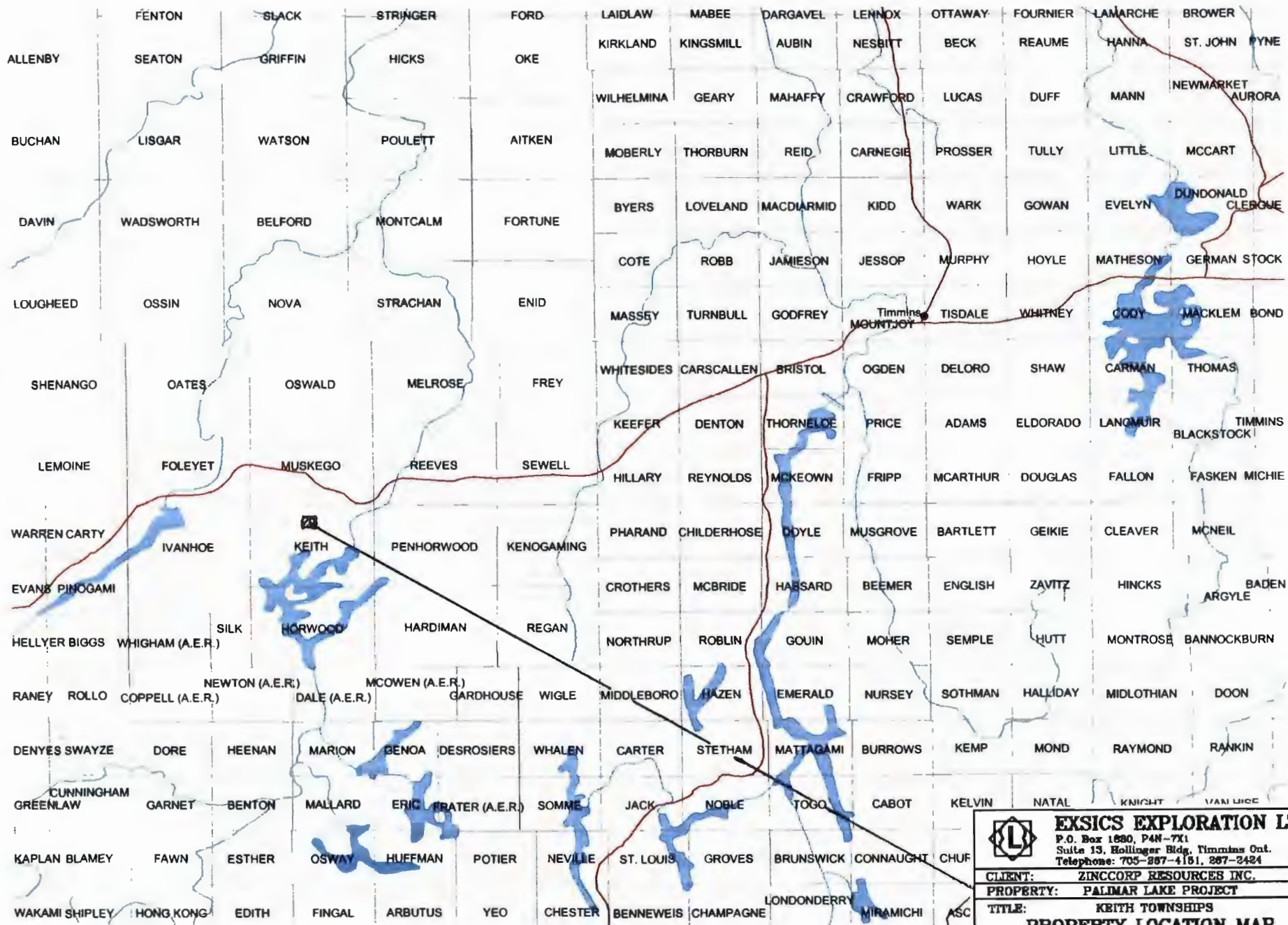
 <b>EXSICS EXPLORATION LTD.</b> P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-287-4151, 287-2424		
CLIENT:	ZINCCORP RESOURCES INC.	
PROPERTY:	PALDMAR LAKE PROJECT	
TITLE:	KEITH TOWNSHIPS	
<b>LOCATION MAP</b>		
Date: AUG. 2010	Scale:	NTS:
Drawn: J.C. Grant	Interp:	Job No.: E-894

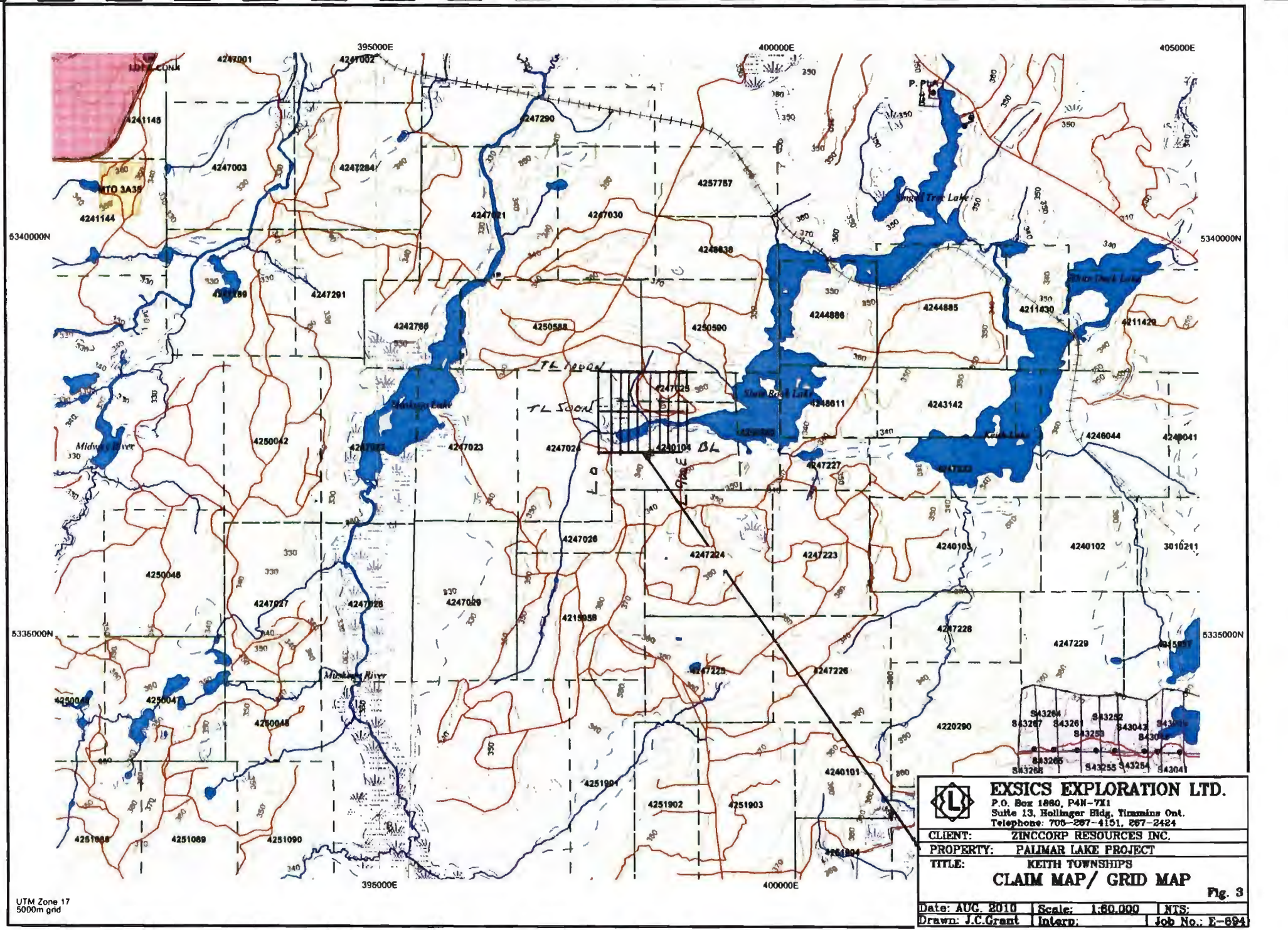
Fig. 1




	<b>EXSICS EXPLORATION LTD.</b>		
	P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151, 267-2424		
CLIENT:	ZINCCORP RESOURCES INC.		
PROPERTY:	PALMAR LAKE PROJECT		
TITLE:	KEITH TOWNSHIPS		
<b>PROPERTY LOCATION MAP</b>			
Date: AUG. 2010	Scale: 1:800,000	NTS:	
Drawn: J.C. Grant	Interp:	Job No.: E-894	

Fig. 2

NAD 83  
5 degree grid



UTM Zone 17  
5000m grid

	<b>EXSICS EXPLORATION LTD.</b>		
	P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151, 267-2424		
CLIENT:		ZINCCORP RESOURCES INC.	
PROPERTY:		PALMAR LAKE PROJECT	
TITLE:		KEITH TOWNSHIPS <b>CLAIM MAP / GRID MAP</b>	
Date: AUG. 2010	Scale: 1:60,000	NTS:	
Drawn: J.C. Grant	Interp:	Job No.: E-684	

**PERSONNEL:**

The field crew directly responsible for the collection of all the raw data were as follows.

R. Bradshaw	Timmins, Ontario
E. Jaakkola	Timmins, Ontario

The work was completed under the direct supervision of J. C. Grant of Exsics.

**GROUND PROGRAM:**

The ground program was completed in two phases. The first phase was to establish a detailed metric grid across the property. This was done by first establishing a tie line that was cut at 090 degrees from line 0+00 to and including 900ME that commenced at a location outlined by the client. Line 0+00 and tie line 1000MN represents the northwest corner of the grid and this tie line was cut east to line 900ME. Cross lines were turned off of this tie line at 100 meter intervals from L000ME to and including L0+00 and all of these lines were cut from tie line 1000MN to and including base line 0+00. All base lines, tie lines and the cross lines were cut and chained with 25 meter picket intervals.

In all a total of 12.7 kilometers of grid lines were cut across the claim block between February 16<sup>th</sup> and March 5<sup>th</sup> 2010. Once the grid was completed then all of the lines were then covered by a total field magnetic survey that was done in conjunction with a VLF-EM survey using the Scintrex ENVI mag system. Specifications for this unit can be found as Appendix A of this report. The following parameters were kept constant throughout the survey.

**MAGNETIC SURVEY:**

Line spacing	100 meters
Station spacing	25 meters
Reading intervals	12.5 meters
Diurnal monitoring	base station recorder
Record interval	30 seconds
Reference field	57000 nT
Datum subtracted	56500 nT

Once the survey was completed the collected magnetic data was merged with the base station data, corrected and then plotted onto a base map at a scale of 1:5000. A datum of 56500nT has been removed from the readings for ease in plotting only. The plotted results were then contoured at 50 gamma intervals wherever possible. A copy of this colored contoured map is included in the back pocket of this report.

#### **VLF-EM SURVEY:**

Line spacing	100 meters
Station spacing	25 meters
Reading intervals	12.5 meters
Transmitter station	Cutler, Maine, 24.0Khz
Parameters measured:	Inphase and Quadrature components, Field strength and Tilt angle.
Parameter plotted	Inphase component of the secondary field.

Once this survey was completed the collected inphase data was plotted directly onto a base map at a scale of 1:2500 and then profiled at 1cm= +/- 40%. Any and all conductor axis were then interpreted and placed onto this base map. A copy of this profiled base map is included in the back pocket of this report.

#### **MAGNETIC & VLF-EM SURVEY RESULTS:**

The magnetic survey was successful in locating and defining the underlying geological structures of the grid area. The most predominant feature is the strong magnetic high unit that strikes into the grid from the east and crosses lines 900ME to line 3+50ME between 500MN and 750MN. This unit appears to correlate to the suspected underlying geology of basic volcanics that in turn have been cross cut by parallel bands of feldspar porphyrys. There may be evidence of a diabase dike like unit striking north to northwest across lines 900ME at 500MN to line 650ME at 1000MN.

There is a good VLF conductor situated along the northern edge of this magnetic high that suggest the zone is dipping near vertical to slightly grid north.

There is a second narrow magnetic high striking into the grid from the southeast from line 700ME at 0+00 to line 500ME at 150MN. This magnetic high appears to correlate to the contact of the basic volcanics and the underlying sediments that are interpreted to cover the southeast section of the grid. Again there is a good VLF zone that correlates directly with the heart of the magnetic high.

There is a moderate magnetic high striking into the grid from the west that can be followed from line 0+00 to 300ME at 175MN to 200MN. This zone appears to correlate to a mafic unit comprised of basalts and andesites striking into the more basic volcanic unit.

A good VLF zone can be followed from line 200ME at 275MN to line 900ME at 475MN that continues off of the grid to the east. The zone closely parallels the north shore of the lake and does not appear to have any definite magnetic correlation.



A final area of magnetic activity is the moderate magnetic high striking into the grid from the west that strikes across lines 0+00 to 250ME at 650MN. This zone may correlate to a feldspar Porphyry that seems to terminate next to a suspected fault zone.

The suspected fault zone can be traced from line 750ME at 0+00 to line 150ME at 1000MN. This fault has interrupted the magnetic highs north of the 500MN tie line as well as the magnetic high in the southeast corner of the grid area. It also seems to have offset the weak high in the northwest section of the grid.

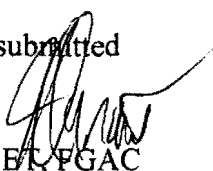
### **CONCLUSIONS AND RECOMMENDATIONS:**

The ground surveys were successful in locating and outlining the geological characteristics of the grid area. The magnetic and VLF survey methods are ideal tools for mapping the geological units and they were successful in outlining the contacts between the sediments and the mafics and granites. Of particular interest is the well defined VLF zone centered in the lake that continues off of the grid to the east. The parallel zone to the north of this main feature is also of interest as it correlates to a good magnetic high unit that may correlate to feldspar porphyrys. Both of these VLF targets and correlating magnetic high zones should be followed up further to better define their strike lengths and mineral potential.

The northwest to southeast cross fault may be a contributing factor for mineral movement and deposition and it should be followed up further,

**A follow up program of Induced Polarization, (IP), surveys was to be completed to better define the zones and their depths but the early break-up of winter conditions did not allow the time for proper coverage of the main target areas. A Pole dipole survey using 8 electrodes with a 25 meter electrode spacing should be considered to test the zones at depth. Should the IP survey return encouraging result then a drill program should be considered to test any and all IP anomalies especially if there is correlation with the magnetic and or VLF-EM survey results.**

Respectfully submitted

  
J. C. Grant, CBR, FGAC  
September 2010

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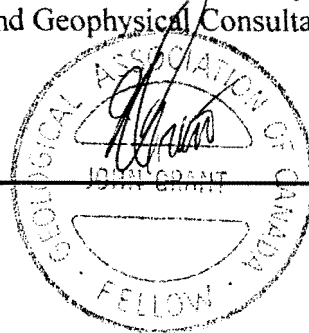
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**CERTIFICATION**

I, John Charles Grant, of 108 Kay Crescent, in the City of Timmins, Province of Ontario, hereby certify that:

- 1). I am a graduate of Cambrian College of Applied Arts and Technology, 1975, Sudbury Ontario Campus, with a 3 year Honors Diploma in Geological and Geophysical Technology.
- 2). I have worked subsequently as an Exploration Geophysicist for Teck Exploration Limited, (5 years, 1975 to 1980), and currently as Exploration Manager and Chief Geophysicist for Exsics Exploration Limited, since May, 1980.
- 3). I am a member in good standing of the Certified Engineering Technologist Association, (CET), since 1984.
- 4). I am in good standing as a Fellow of the Geological Association of Canada, (FGAC), since 1986.
- 5). I have been actively engaged in my profession since the 15<sup>th</sup> day of May, 1975, in all aspects of ground exploration programs including the planning and execution of field programs, project supervision, data compilation, interpretations and reports.
- 6). I have no specific or special interest nor do I expect to receive any such interest in the herein described property. I have been retained by the property holders and or their Agents as a Geological and Geophysical Consultant and Contract Manager.

John Charles Grant, CET., FGAC.



APPENDIX A

# SCINTREX

## ENVI-MAG Environmental Magnetometer/Gradiometer

### Locating Buried Drums and Tanks?

The ENVI-MAG is the solution to this environmental problem. ENVI-MAG is an inexpensive, lightweight, portable "WALKMAG" which enables you to survey large areas quickly and accurately.

ENVI-MAG is a portable, proton precession magnetometer and/or gradiometer, for geotechnical, archaeological and environmental applications where high production, fast count rate and high sensitivity are required. It may also be used for other applications, such as mineral exploration, and may be configured as a total-field magnetometer, a vertical gradiometer or as a base station.

The ENVI-MAG

- easily detects buried drums to depths of 10 feet or more
- more sensitive to the steel of a buried drum than EM or radar
- much less expensive than EM or radar
- survey productivity much higher than with EM or radar

### Features and Benefits

#### "WALKMAG" Magnetometer/Gradiometer

The "WALKMAG" mode of operation (sometimes known as "Walking Mag") is user-selectable from the keyboard. In this mode, data is acquired and recorded at the rate of 2 readings per second as the operator walks at a steady pace along a line. At desired intervals, the operator "triggers" an event marker by a single key stroke, assigning coordinates to the recorded data.

#### True Simultaneous Gradiometer

An optional upgrade kit is available to configure ENVI-MAG as a gradiometer to make true, simultaneous gradiometer measurements. Gradiometry is useful for geotechnical and archaeological surveys where small near surface magnetic targets are the object of the survey.

#### Selectable Sampling Rates

0.5 second, 1 second and 2 second reading rates user selectable from the keyboard.

Main features include:

- select sampling rates as fast as 2 times per second
- "WALKMAG" mode for rapid acquisition of data
- large internal, expandable memory
- easy to read, large LCD screen displays data both numerically and graphically
- ENVIMAP software for processing and mapping data

ENVI-MAG comprises several basic modules; a lightweight console with a large screen alphanumeric display and high capacity memory, a staff mounted sensor and sensor cable, rechargeable battery and battery charger, RS-232 cable and ENVIMAP processing and mapping software.

For gradiometry applications an upgrade kit is available, comprising an additional processor module for installation in the console, and a second sensor with a staff extender.

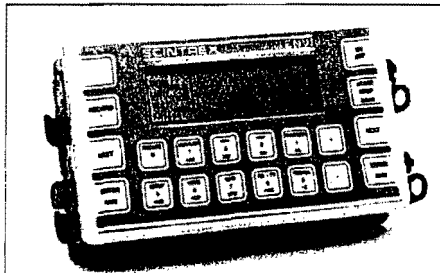


ENVI-MAG Proton Magnetometer in operation

For base station applications a Base Station Accessory Kit is available so that the sensor and staff may be converted into a base station sensor.

#### Large-Key Keypad

The large-key keypad allows easy access for gloved-hands in cold-weather operations. Each key has a multi-purpose function.



Front panel of ENVI-MAG showing a graphic profile of data and large-key keypad

#### Large Capacity Memory

ENVI-MAG with standard memory stores up to 28,000 readings of total field measurements, 21,000 readings of gradiometry data or 151,000 readings as a base station. An expanded memory option is available which increases this standard capacity by a factor of 5.

#### Easy Review of Data

For quality of data and for a rapid analysis of the magnetic characteristics of the survey line, several modes of review are possible. These include the measurements at the last four stations, the ability to scroll through any or all previous readings in memory, and a graphic display of the previous data as profiles, line by line. This feature is very useful for environmental and archaeological surveys.

#### Highly Productive

The "WALKMAG" mode of operation acquires data rapidly at close station intervals, ensuring high-definition results. This increases survey productivity by a factor of 5 when compared to a conventional magnetometer survey.

#### "Datacheck" Quality Control of Data

"Datacheck" provides a feature wherein at the end of each survey line, data may be reviewed as a profile on ENVI-MAG's screen. Datacheck confirms that the instrument is functioning correctly and

allows the user to note the magnetic relief (anomaly) on the line.

#### Large Screen Display

"Super-Twist" 64 x 240 dot (8 lines x 40 characters), LCD graphic screen provides good visibility in all light conditions. A display heater is optionally available for low-temperature operations below 0°C.



Close-up of the ENVI-MAG screen showing data presented after each reading

#### Interactive Menus

The set-up of ENVI-MAG is menu-driven, and minimizes the operator's learning time, and on-going tasks.



Close-up of display of ENVI-MAG showing interactive set-up menu

#### Rechargeable Battery and Battery Charger

An "off-the-shelf" lead-acid battery and charger are provided as standard. The low-cost "Camcorder" type battery is available from electronic parts distributors everywhere.

#### HELP-Line Available

Purchasers of ENVI-MAG are provided with a HELP-Line telephone number to call in the event assistance is needed with an application or instrumentation problem.

#### ENVIMAP Processing and Mapping Software

Supplied with ENVI-MAG, and custom designed for this purpose, is easy-to-use, very user-friendly, menu driven data processing and mapping software called ENVIMAP. This unique software appears to the user to be a single program, but is in fact a sequence of separate programs, each performing a specific task. Under the menu system, there are separate programs to do the following:

- read the ENVI-MAG data and reformat it into a standard compatible with the ENVIMAP software
- grid the data into a standard grid format
- create a vector file of posted values

with line and baseline identification that allows the user to add some title information and build a suitable surround

- contour the gridded data
- autoscale the combined results of the posting/surround step and the contouring step to fit on a standard 8.5 ins. wide dot-matrix printer
- rasterize and output the results of step e) to the printer

ENVIMAP is designed to be as simple as possible. The user is required to answer a few basic questions asked by ENVIMAP, and then simply toggles "GO" to let ENVIMAP provide default parameters for the making of the contour map. The user can modify certain characteristics of the output plot. ENVIMAP'S menu system is both keyboard and mouse operable. HELP screens are integrated with the menu system so that HELP is displayed whenever the user requests it.

#### Options Available

- True simultaneous gradiometer upgrade
- Base station upgrade
- Display heater for low temperature operations
- External battery pouch

## Specifications

#### Total Field Operating Range

20,000 to 100,000 nT (gammas)

#### Total Field Absolute Accuracy

+/- 1nT

#### Sensitivity

0.1 nT at 2 second sampling rate

#### Tuning

Fully solid state. Manual or automatic, keyboard selectable

#### Cycling (Reading) Rates

0.5, 1 or 2 seconds, up to 9999 seconds for base station applications, keyboard selectable

#### Gradiometer Option

Includes a second sensor, 20 inch (1/2m) staff extender and processor module

#### "WALKMAG" Mode

0.5 second for walking surveys, variable rates for hilly terrain

#### Digital Display

LCD "Super Twist", 240 x 64 dots graphics, 8 line x 40 characters alphanumeric

#### Display Heater

Thermostatically controlled, for cold weather operations

#### Keyboard Input

17 keys, dual function, membrane type

#### Notebook Function

32 characters, 5 user-defined MACRO's for quick entry

#### Standard Memory

Total Field Measurements: 28,000 readings

Gradiometer Measurements: 21,000 readings

Base Station Measurements: 151,000 readings

#### Expanded Memory

Total Field Measurements: 140,000 readings

Gradiometer Measurements: 109,000 readings

Base Station Measurements: 750,000 readings

#### Real-Time Clock

Records full date, hours, minutes and seconds with 1 second resolution, +/- 1 second stability over 12 hours

#### Digital Data Output

RS-232C interface, 600 to 57,600 Baud, 7 or 8 data bits, 1 start, 1 stop bit, no parity format. Selectable carriage return delay (0-999 ms) to accommodate slow peripherals. Handshaking is done by X-on/X-off

#### Analog Output

0 - 999 mV full scale output voltage with keyboard selectable range of 1, 10, 100, 1,000 or 10,000 nT full scale

#### Power Supply

Rechargeable "Camcorder" type, 2.3 Ah, Lead-acid battery.

12 Volts at 0.65 Amp for magnetometer, 1.2 Amp for gradiometer,

External 12 Volt input for base station operations

Optional external battery pouch for cold weather operations

#### Battery Charger

110 Volt - 230 Volt, 50/60 Hz

#### Operating Temperature Range

Standard 0° to 60°C

Optional -40°C to 60°C

#### Dimensions

Console - 10 x 6 x 2.25 inches  
(250 mm x 152 mm x 55 mm)

T.F. sensor - 2.75 inches dia. x 7 inches  
(70 mm x 175 mm)

Grad. sensor and staff extender - 2.75 inches dia. x 26.5 inches (70 mm x 675 mm)

T.F. staff - 1 inch dia. x 76 inches (25 mm x 2 m)

#### Weight

Console - 5.4 lbs (2.45 kg)  
with rechargeable battery

T. F. sensor - 2.2 lbs (1.15 kg)

Grad. sensor - 2.5 lbs (1.15 kg)

Staff - 1.75 lbs (0.8 kg)

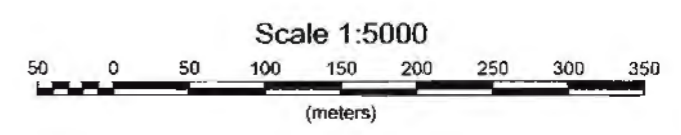
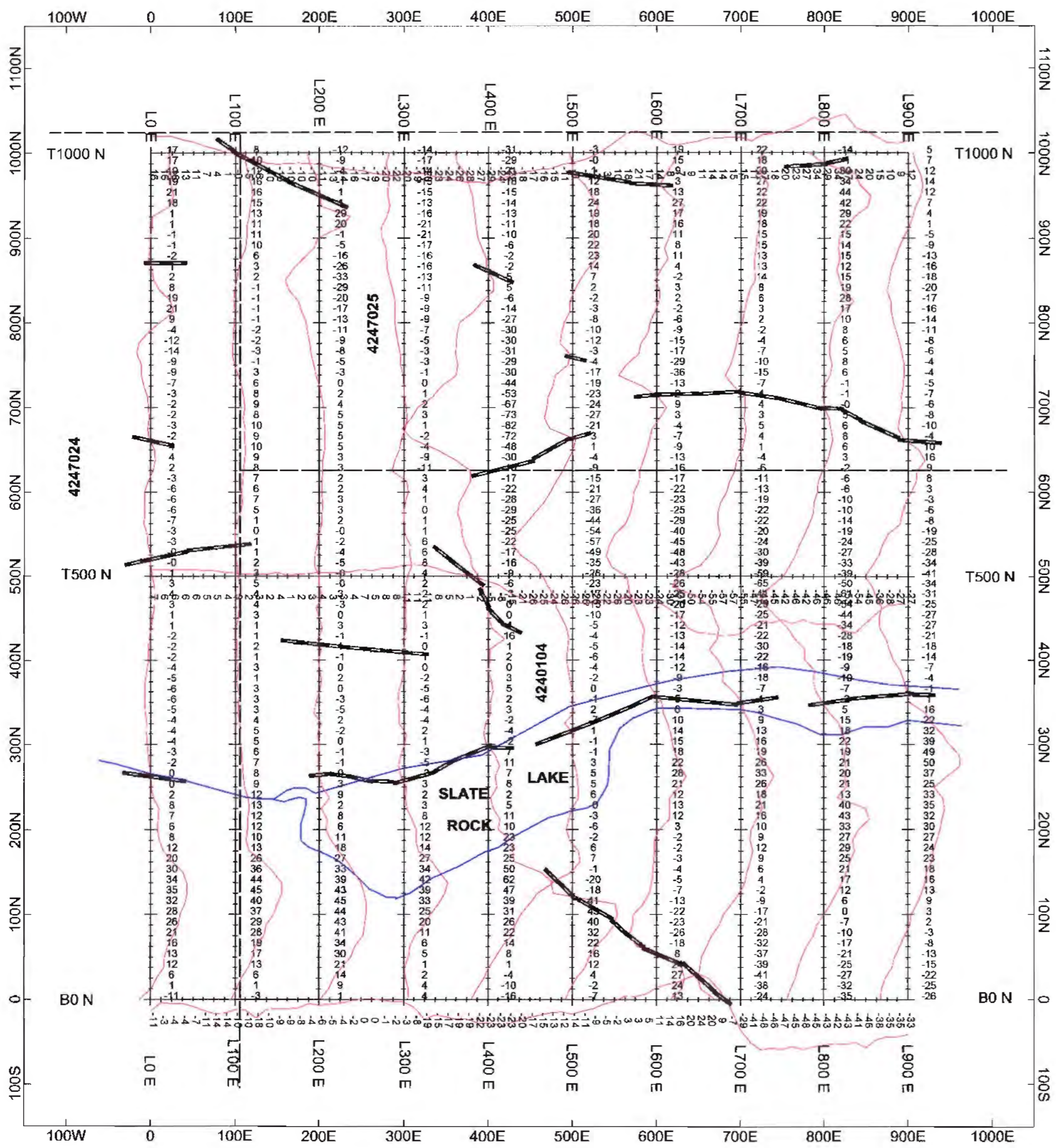


#### Head Office

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Telex: 06-964570

#### In the USA:

Scintrex Inc.  
85 River Rock Drive  
Unit 202  
Buffalo, NY 14207  
Telephone: (716) 298-1219  
Fax: (716) 298-1317

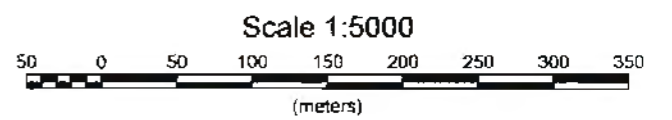
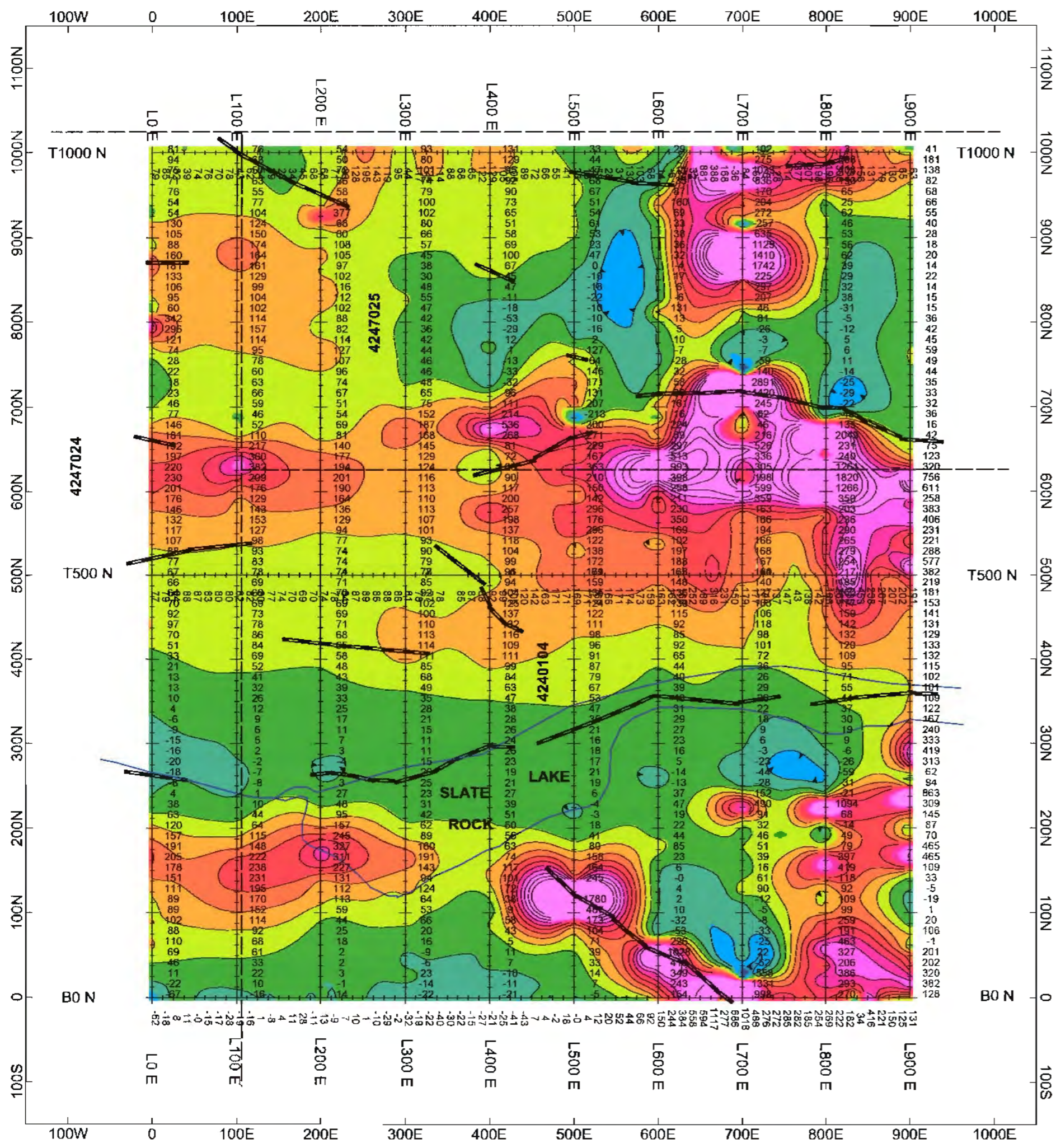
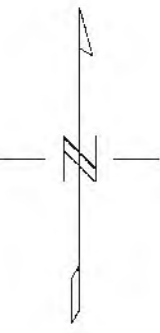


ZINCCORP RESOURCES INC.

**PALIMAR LAKE GRID**

VLF-EM SURVEY, CUTLER, MAINE 24.0kHz  
 SCINTREX ENVI MAG SYSTEM  
 PROFILED: 1CM=+- 40%

APR./2010 EXSICS EXPLORATION LIMITED E-696



**ZINCCORP RESOURCES INC.**  
**PALIMAR LAKE GRID**  
TOTAL FIELD MAGNETIC SURVEY  
SCINTREX ENVI MAG SYSTEM  
CONTOURED: 50nT  
*[Signature]*  
**APR./2010 EXSICS EXPLORATION LIMITED E-696**