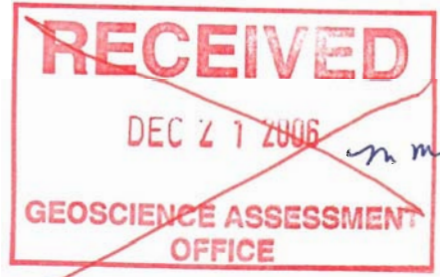


GEOPHYSICAL REPORT  
FOR  
**GOLDEN PHONEIX MINERALS INC.**  
ON THE  
**SPAIN PROPERTY**  
GRIFFITH TOWNSHIPS  
SOUTHERN ONTARIO MINING DIVISION  
RENFREW COUNTY, ONTARIO



Prepared by: J. C. Grant,  
Decemeber, 2006



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## ABSTRACT

The present Spain Property consists of the former Spain Molybdenite Mine property and the Legree Molybdenite Prospect. The Legree Prospect consists of only 2 small prospect pits, however the original Spain Mine property that started operation in 1912, has a large open cut, 2 shallow shafts and several pits and trenches.

A report written in 1925 mentioned that 28 tons of pure molybdenite had been extracted from the Spain mine workings by 1916 and that the stockpiled material was processed over the next few years with all development work on the property ceasing in 1919. The property lay dormant until the Second World War, when North American Molybdenite Corp. completed an extensive stripping, trenching and diamond drilling program that outlined a new Molybdenum, (Moly), deposit on the property reported to contain 5,200 tons of unknown grade. The property again lay dormant until the mid 1960's when New Far North Exploration Limited is reported to have re-sampled the original Spain workings, completed a Self Potential survey and diamond drilling. It was reported that this company completed 52 vertical drill holes outlining 18,000 to 20,000 tons of 1.67 % Moly in the K zone as well as the possibility of a further 4,500 to 5,000 tons of 1.0 to 1.5 % Moly remaining in the Spain open cut.

These resources estimates are historical in nature and are not National Instrument 43-101 compliant.

**INTRODUCTION:**

The services of Exsics Exploration Limited were retained by Mr. D. Lalonde on behalf of the Company, Golden Phoenix Minerals Inc., to complete an Induced Polarization, (IP), Total field magnetic and a VLF-EM survey across a selected group of grid lines that were cut across a portion of their claim holdings in Griffith Township that is situated 37 kilometers southwest of the Town of Renfrew in the amalgamated municipality of the Township of Greater Madawaska, Renfrew County, Ontario.

The property is generally underlain by a sequence of gneissic metasedimentary and alkalic intrusive rocks belonging to the Bancroft Terrain of the Central Metasedimentary Belt within the Grenville Structural Province of the Canadian Shield. The Haley Lake Fault, a northwesterly trending fault related to the Bonnechere-Ottawa Valley graben structure crosses through the central portion of the property.

**PROPERTY LOCATION AND ACCESS:**

The Spain Property is located approximately 27 kilometers south of the Town of Eganville and 37 kilometers southwest of the Town of Renfrew and it is cross cut by Highway 41. Renfrew is approximately 100 kilometers west of Ottawa. The property comprises Lots 31 through 34 in Concession 4 and Lots 31 through 33 in Concession 5 and south half Lot 32 and 33 Concession VI located in the southeastern section of the former Township of Griffith, in the amalgamated municipality of the Township of Greater Madawaska, Renfrew County in the Province of Ontario. Refer to Figures 1 and 2.

The grid area was accessible by traveling south from Eganville for about 34 kilometers along Highway 41. This Highway generally cuts through the central portion of the north half of the Property. The Spain Mine is about 200 meters east of this Highway and is accessible by an old road that leads to the large open pit. The pit area has been fenced off.

There is a good ATV and or drivable road that branches off of a good quality road, locally called the Marchand-Lacourse road , that cuts across the southern and eastern section of the grid.



**EXSICS EXPLORATION LTD.**

P.O. Box 1880, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151, 267-2424

**CLIENT: GOLDEN PHONEIX MINERALS INC.**

**PROPERTY: SPAIN PROPERTY, GRIFFITH TOWNSHIP**

**TITLE:**

**LOCATION MAP**

Fig. 1

Date: NOV:/06

Scale: 1"=125miles NTS:

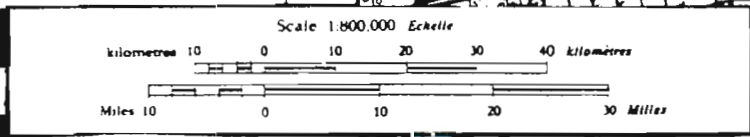
Drawn: J.C. Grant

Interp: J.C. Grant Job No.: E-GPO

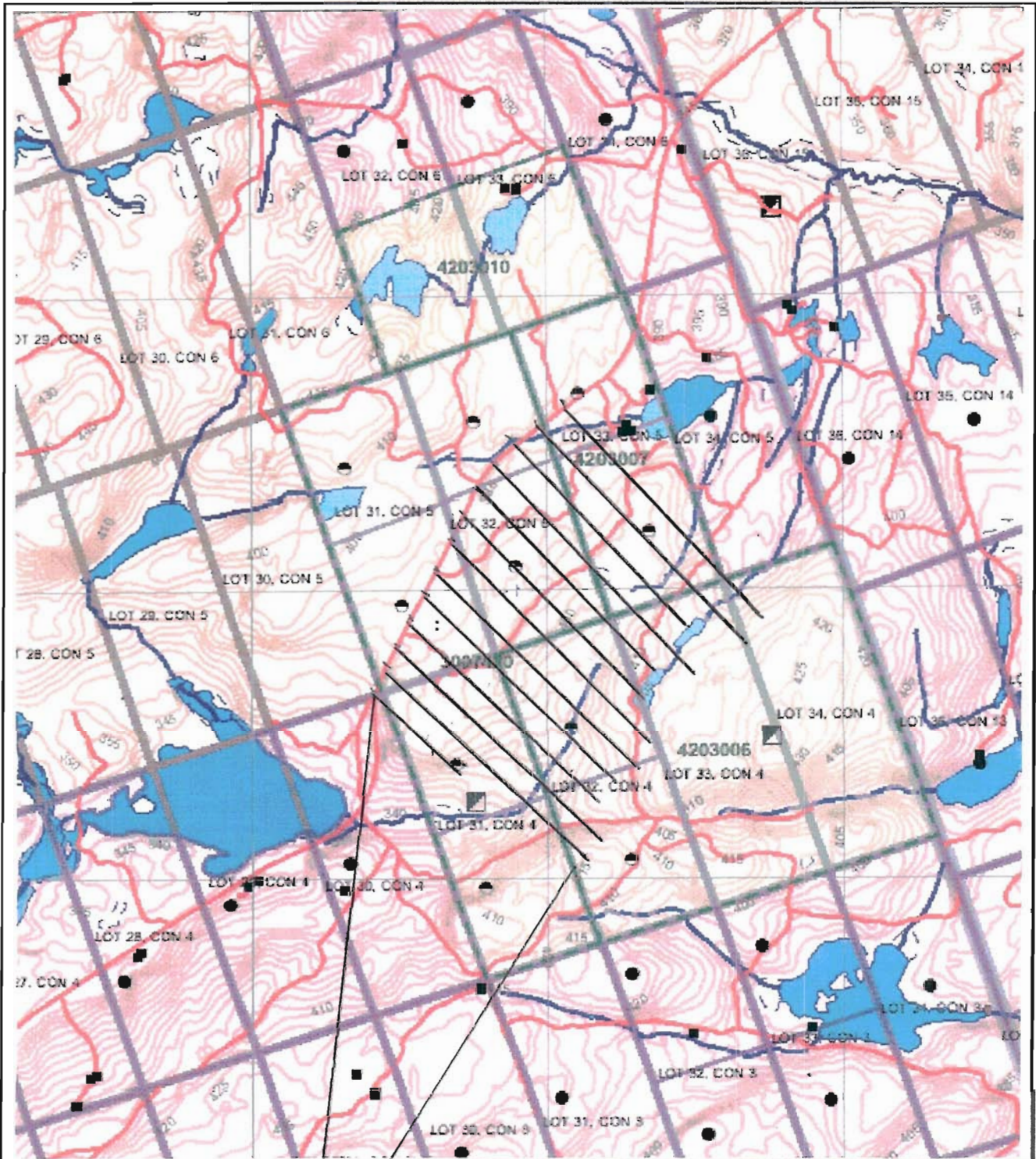




ONTARIO CANADA  
NEW YORK U.S.A.



PROPERTY LOCATION  
MAP



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P.O. Box 1880, P4N-7X1  
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 Telephone: 705-267-4151, 267-2424

CLIENT: GOLDEN PHOENIX MINERALS INC.

PROPERTY: SPAIN PROPERTY, GRIFFITH TOWNSHIP

TITLE:  
**CLAIM MAP/GRID MAP**

Fig. 3

Date: NOV./08

Scale: 1:20,000

NTS:

Drawn: J.C. Grant

Interp: J.C. Grant

Job No.: E-GPO

**CLAIM BLOCK:**

The Spain Property consists of a block of four contiguous mining claims comprised of 16 claim units covering an area of about 323 hectares. The numbers and their positioning within the Township are as follows.

3007420	6 Units	N1/2 Lot 31, Con IV S 1/2 Lot 31, Con IV N1/2 Lot 31, Con V S 1/2 Lot 31, Con V N1/2 Lot 32, Con V S 1/2 Lot 32, Con V
4203007	2 Units	N 1/2 Lot 33, Con V S 1/2 Lot 33, Con V
4203006	6 Units	N 1/2 Lot 32, Con IV S 1/2 Lot 32, Con IV N 1/2 Lot 33, Con IV S 1/2 Lot 33, Con IV N 1/2 Lot 34, Con IV S 1/2 Lot 34, Con IV
4203010	2 Units	S 1/2 Lot 32, Con VI S 1/2 Lot 33, Con VI

Refer to Figure 3 copied from MNDM Plan Map G-3398 of Griffith Township for the location of the claims within the Township.



**PERSONNEL:**

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

E. Jaakkola	Timmins, Ontario
R. Bradshaw	Timmins, Ontario
J. DerWeduwen	Timmins, Ontario
J. Grant	Timmins, Ontario
S. Polson	Timmins, Ontario

The plotting, interpretation and report were completed by J. C. Grant of Exsics Exploration Limited.

**GROUND PROGRAM:**

The current ground program consisted of a detailed metric grid, an Induced Polarization, (IP), survey that was completed in conjunction with a total field magnetic and VLF-EM surveys.

The line cutting was completed by Mr. D. Lalonde and consisted of 100 meter spaced lines that were turned off of a baseline that was cut parallel to Highway 41 that generally runs across the western section of the grid. There was a detailed section of grid lines that were cut with 50 meter line spacing between lines 100MN and 400MN. The entire grid lies between lines 100MS and 1200MN and generally runs from the baseline to 1100ME. The detail lines between 150MN and 350MN were cut to 200MW to allow for proper IP coverage. All of the cross lines were chained with 25 meter pickets to the east and west limits of the grid. In all, there was a total of 18.9 kilometers of grid lines surveyed across the property of which 7 kilometers were cut and chained and the remaining lines compassed, flagged and paced.

The entire program was completed between October 18<sup>th</sup> and October 31<sup>st</sup>, 2006.

**Magnetic Survey:**

The magnetic survey was completed over the entire cut grid using the Scintrex Envi Mag system. Specifications for the unit can be found as Appendix A of this report.

The following parameters were kept constant throughout that survey.

Line spacing	100 meters
Station spacing	25 meters
Reading intervals	12.5 meters
Diurnal monitor	base station
Base record intervals	30 seconds
Reference field	55,500 gammas
Datum subtracted	55,000 gammas
Unit accuracy	+/- 0.1 gamma

Once the survey was completed the field data was corrected, leveled and then plotted directly onto a base map at a scale of 1:2500. A datum level of 55,000 gammas was removed from the data before it was plotted onto the base map. The data was then contoured at 100 gamma intervals wherever possible. A copy of this base map is included in the back pocket of this report.

### **VLF-EM Survey:**

The VLF-EM survey was done in conjunction with the Magnetic survey using the same unit. Specifications for the unit can be found as Appendix A. The following parameters were kept constant.

Line spacing	100 meters
Station spacing	25 meters
Reading intervals	12.5 meters
Transmitting station	Cutler, Maine, 25.0Khz
Parameters measured	Inphase and Quadrature components Field strength and tilt angle
Parameters plotted	Inphase component.
Profile scale:	+/- 10%

Once the survey was completed the collected inphase data was then plotted directly onto a base map at a scale of 1:2500 and then profiled at 1cm = +/- 10%. Any and all conductor axis were then placed directly onto this profiled base map. A copy of this profiled map is included in the back pocket of this report.

### **IP Survey:**

The IP survey was completed during the latter part of October and was completed using the IRIS Elrec Pro receiver and the GDD 3.5 Kilowatt transmitter. Specifications for these units can be found as Appendix B of this report.

The following parameters were kept constant throughout the survey.

Line spacing	100 meters
Station spacing	25 meters
Reading intervals	25 meters
IP method	Time Domain
IP array	Pole-dipole
Number of electrodes, (n),	six
Electrode spacing, (a),	25 meters
Delay time	160ms
Integration time	1580ms
Pulse time	2 seconds on, 2 seconds off
Parameters measured	chargeability in millivolts/volt Apparent resistivity in ohms/meter

The collected data was then plotted as individual line pseudo sections, one such section for each line that was read, at a scale of 1:2500. These sections show the contoured results for the chargeability and resistivity readings. A copy of each of these individual line pseudo sections is included in the back pocket of this report.

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

The magnetic survey was successful in outlining the geological characteristics of the grid area. The magnetic survey suggest that the underlying structures generally trend northeast to southwest. This is evident in the magnetic highs that generally cover the western section of the grid area. These magnetic highs strike parallel to the highway and continue off of the grid in both directions. There also appears to be local minor faulting and or shearing along the strike of these highs. These areas of cross faulting and or shearing can be seen cutting into the grid between lines 500MN and 600MN, lines 750MN and 800MN and 900MN and 1000MN.

The VLF-EM survey correlates fairly well with the magnetic survey. The VLF conductor axis generally follow the west and eastern edges of the magnetic highs and appear to be interrupted along their strike lengths by the same minor cross structures.

**IP SURVEY RESULTS:**

The IP survey was successful in locating at least two parallel conductive horizons that correlate to both the VLF conductive zones as well as to the magnetic high trends. The main IP target area lies between 100ME and 250ME and it is represented by a good chargeability high that comes to surface and appears to extend to depth. This zone has a moderate to strong resistivity high associated with it. There also appears to be evidence of the cross structures as the main IP zone appears to be cross cut between 150ME and 200ME. This zone appears to be weakening as you progress southward but it remains open to the north and is becoming more uniform.

There is evidence of a second IP zone building on the west side of the highway and on the western tips of lines 200MN to 350MN that is associated with a good resistivity high. This zone should be followed up further to better define it's shape and strike length. This zone also remains open at depth.

**CONCLUSIONS AND RECOMMENDATIONS:**

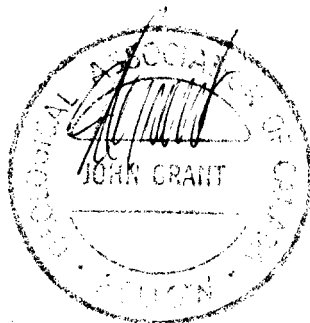
The ground program was successful in locating and defining the areas of interest that appear to relate to the geological structures that are host to the Spain Deposit. The IP and magnetic survey methods seem to be the best method to locate and follow the conductive horizons. Further work should consist of a detailed line cutting program to trace the main conductive zone to its north and south limits. The line cutting program should be designed to extend further to the west to better define the source and strike length of the IP zone that is building on the western edge of the grid.

A detailed geological and or MMI survey should also be considered as a follow up to the initial IP surveys and to test the potential of strike extension to the main ore bearing zone.

Once this initial phase has been completed and interpreted then a follow up drill program should be considered to test the zones at depth.

Respectfully submitted

J.C. Grant, CET, FGAC  
December, 2006.



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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

## 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

### 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

### 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)

# SCINTREX

### Head Office

222 Snidercroft Road  
Concord, Ontario, Canada L4K 1B5  
Telephone: (905) 669-2280  
Fax: (905) 669-6403 or 669-5132  
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



APPENDIX B

# ELREC PRO

## Ten channel IP receiver for mineral exploration

IRIS Instruments is pleased to announce the **ELREC PRO**, its new ten channel IP receiver, featuring 20 chargeability windows and a graphic LCD display.

The following improvements have been introduced in this new receiver with respect to the previous ELREC 10 unit :



### • HARDWARE FEATURES :

- **the size** has been reduced by 4 cm in height : 31x 21x 21 cm
- **the power consumption** has been reduced by a ratio of three, which means that with less batteries it is possible to have a longer autonomy.
- as a result, the new system is **2 kg lighter** than the ELREC 10, with a weight of 6 kg only.
- the data (21 000 readings max.) are stored in flash memories not requiring any lithium battery for safeguard.
- the new system is compatible with the existing **SWITCH Plus boxes** for automatic switching of electrodes according to preset sequences. In such a case, the receiver is used as a single channel unit ; with **SWITCH Pro boxes** (to be developed next), the full ten channel capability of the ELREC PRO will be usable for a higher acquisition speed.

### • SOFTWARE FEATURES :

- **each new reading** is stored as a specific unit file, making easier the grouping of readings corresponding to a given profile, specially for the last (edge) points of a line obtained with a smaller number of dipoles than the main part of the profile.
- **the data format** is compatible with the **PROSYS software**, which means that the operator can easily visualize the numerical values of the data, automatically sort them according to the standard deviation of the chargeability measurement, merge two files stored under different names, introduce the elevation of each electrode, etc...
- **the ELECTRE II software** can be used to define and upload preset sequences of measurements according to any type of electrode array.



### IRIS INSTRUMENTS

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P<sub>hr</sub> : + 33 2 38 63 81 00 mail : [irisins@attglobal.net](mailto:irisins@attglobal.net)  
Fax : + 33 2 38 63 81 82 web : [iris-instruments.com](http://iris-instruments.com)

- Weight: 8 kg including internal battery
- Operating temperature: -30°C to +70°C
- Power supply: 12V internal rechargeable battery with more than 20 hours service at +20°C ; a 12V external battery can be also used.

SP bursts and minimize the acquisition time for a given reading accuracy

**Monitoring Display:**

A large graphic LCD (128x240 dots) permits the operator to display simultaneously the IP decay curves of the ten dipoles during the acquisition, for a global visualization of the readings and for better quality control. Before the acquisition, the ELREC 10 can be used as a one channel DC graphic display, for monitoring the noise level and checking the primary voltage waveform, through a continuous display process.

**Cole-Cole Parameters:**

An inversion procedure has been implemented to compute Cole-Cole time constant at the end of the acquisition. This allows a possible grain size discrimination analysis.

**Internal Memory:**

The memory can store up to 3200 dipole readings, each reading including the full set of parameters characterizing the measurements. An explicit data storage procedure has been developed including the display of warning messages for data not yet stored. File names are available for a better memory management of sets of readings.

**Field proof Instrument:**

ELREC 10 operates in a wide temperature range and features a fiber-glass case for resistance to field shocks and vibrations.

Copyright © 1998 IRIS Instruments

# *Tx II Transmitter*

*3600 W*

*User's Guide*



**GDD**

**INSTRUMENTATION INC.**

3700, boul. de la Chaudière, suite 200, Québec (Qc) Canada G1X 4B7

Tel.: (418) 877-4249 Fax: (418) 877-4054

E-Mail: [gdd@gddinstrumentation.com](mailto:gdd@gddinstrumentation.com)

## 1.2 Transmitter description

In this section, the Tx II components are shown, named and explained.

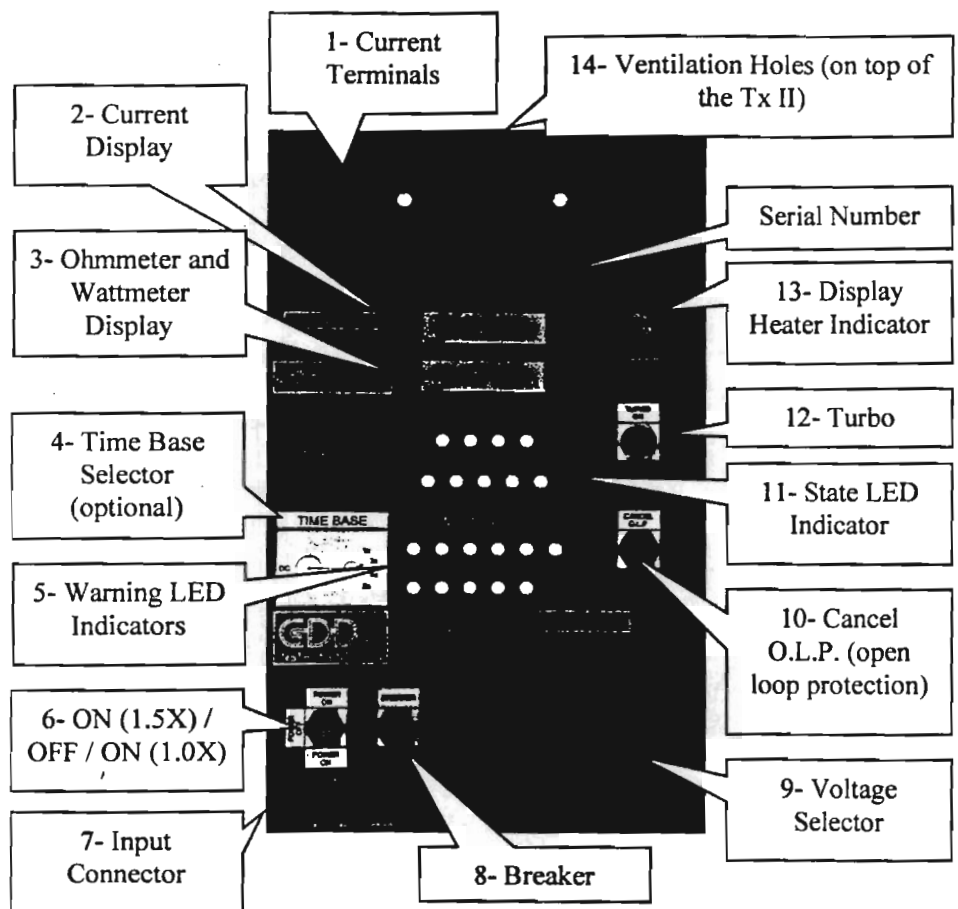


Figure 1 : Transmitter components

## 6. SPECIFICATIONS

**Size :** 51 x 41.5 x 21.5 cm- built in transportation box from Pelican

**Weight :** approximately 32 kg

**Operating temperature :** -40 °C to 65 °C

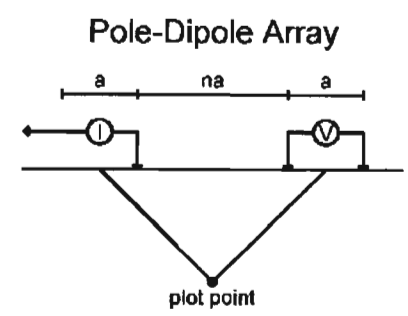
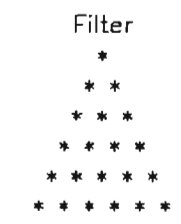
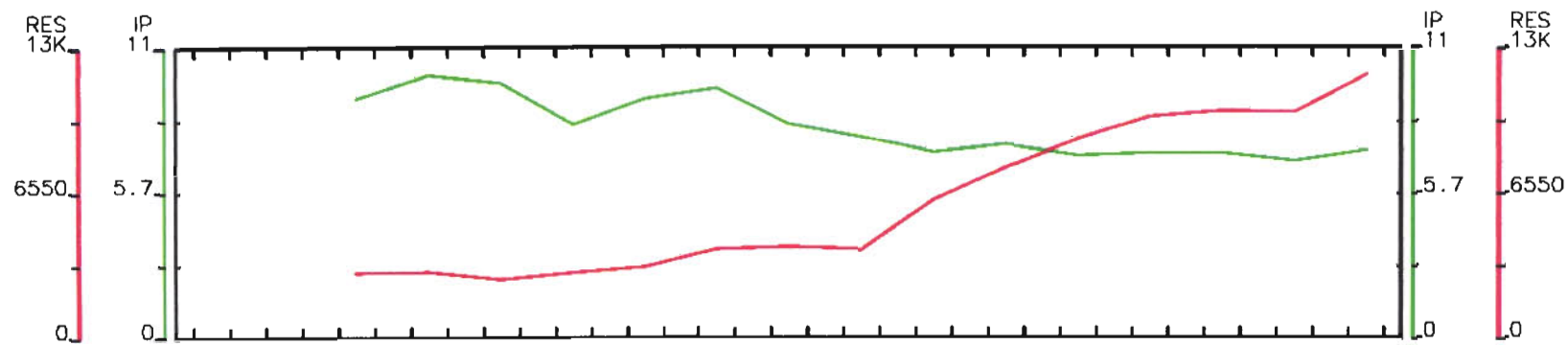
**Cycle :** time domain : 2 s ON, 2 s OFF  
Optional: 1, 2, 4 or 8 s  
0.5, 1, 2 or 4 s  
DC

**Output current :** 0.030 A to 10 A (normal operation)  
0.000 A to 10 A (cancel open loop)

**Output voltage :** 150 V to 2400 V

**Display :** LCD, reads to 0,001 A

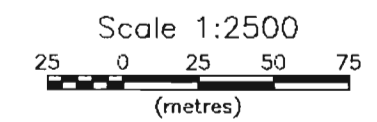
**Power source :** 240 V / 60 Hz (220 V / 50 Hz)



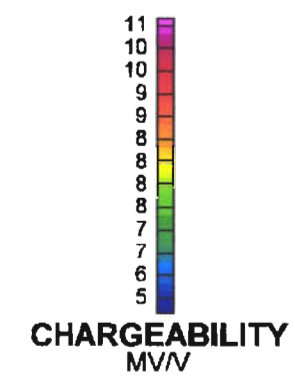
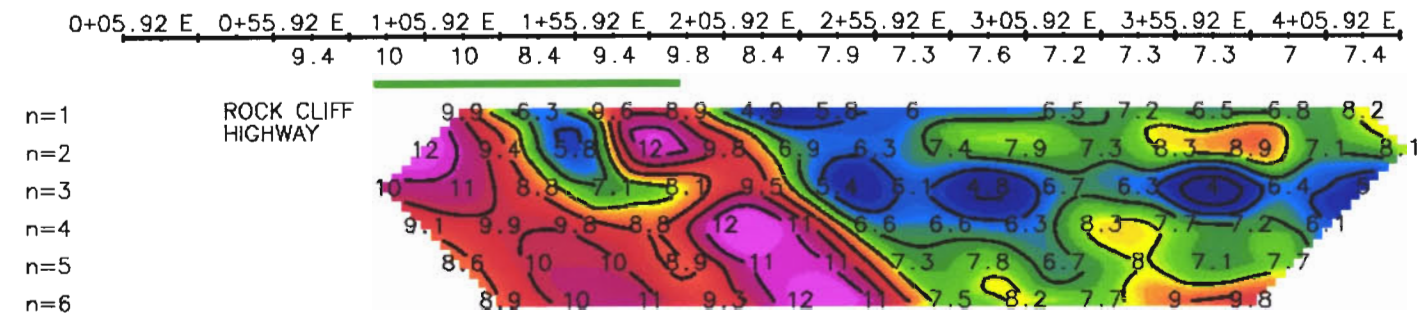
DIPOLE LENGTH :  $a=25M$   
 DIPOLE SPACINGS :  $n = 6$   
 Comments : Lines read WEST to EAST

CHARGEABILITY  
 Interval 1, 10  
 RESISTIVITY  
 Logarithmic 1, 1.5, 2, 3, 5, 7.5, 10, ...

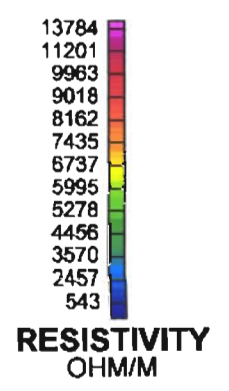
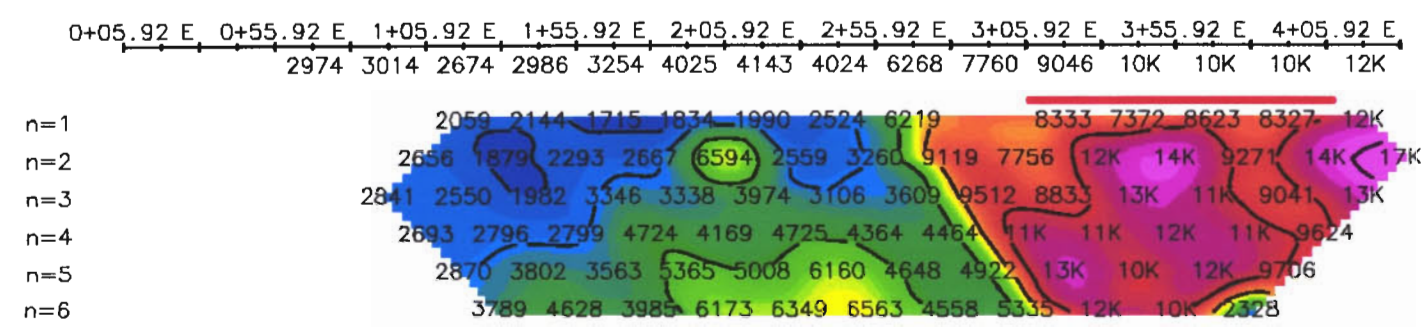
INSTRUMENTS  
 RECEIVER : ELREC PRO  
 TRANSMITTER : GDD 1.8KWATT



CHARGEABILITY  
mV/Volt



APPARENT  
RESISTIVITY  
ohm-m

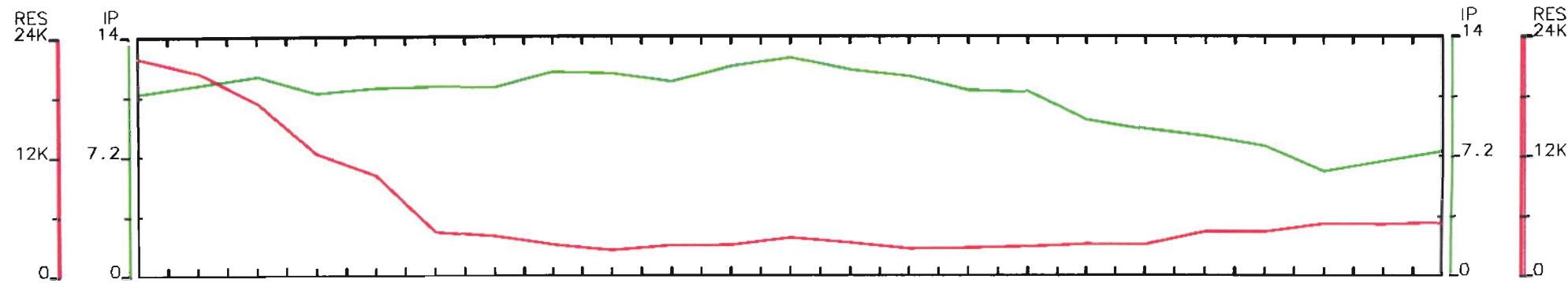


GOLDEN PHEONIX MINERALS INC.  
 INDUCED POLARIZATION  
 LINE 100MN

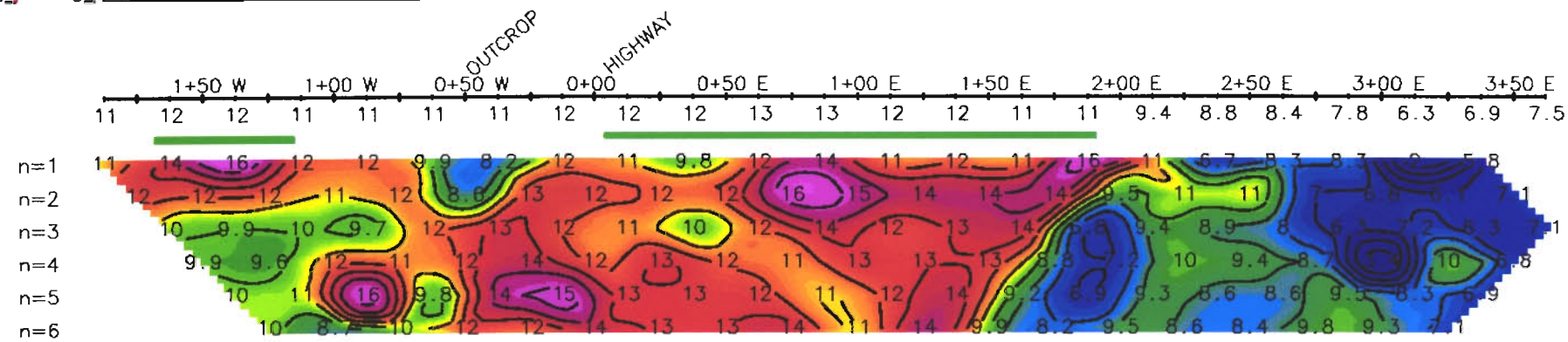
Date : October/2006  
 Property : SPAIN PROJECT  
 Township : GRIFFITH TOWNSHIP

Survey by : EXSICS EXPLORATION LTD.

2.33751

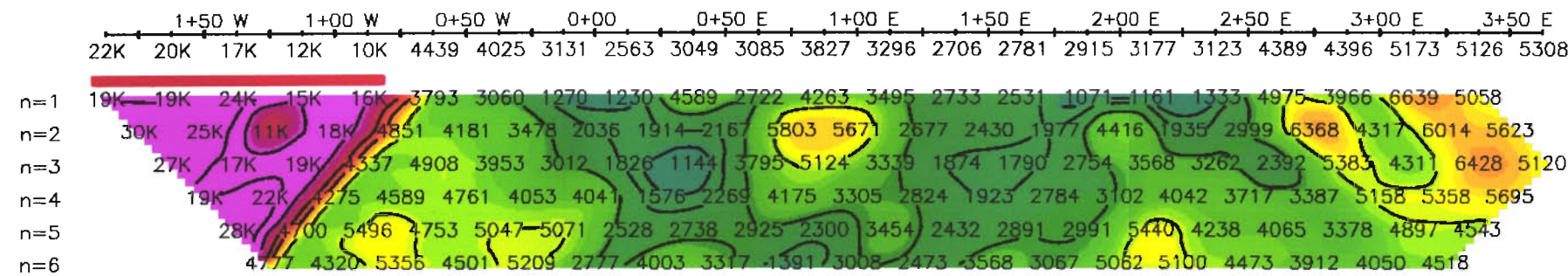


CHARGEABILITY  
mV/Volt



CHARGEABILITY  
MV/V

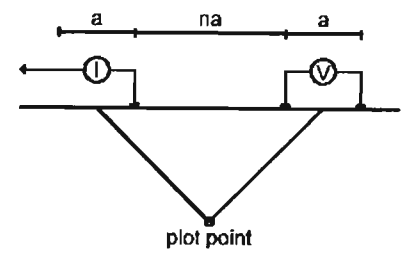
APPARENT  
RESISTIVITY  
ohm-m



RESISTIVITY  
OHM/M

Filter  
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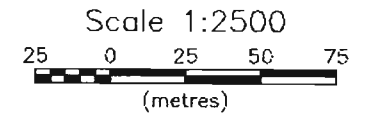
Pole-Dipole Array



DIPOLE LENGTH :  $a=25M$   
DIPOLE SPACINGS :  $n = 6$   
Comments : Lines read WEST to EAST

CHARGEABILITY  
Interval 1, 10  
RESISTIVITY  
Logarithmic 1, 1.5, 2, 3, 5, 7.5, 10, ...

INSTRUMENTS  
RECEIVER : ELREC PRO  
TRANSMITTER : GDD 1.8KWATT



GOLDEN PHEONIX MINERALS INC.

INDUCED POLARIZATION

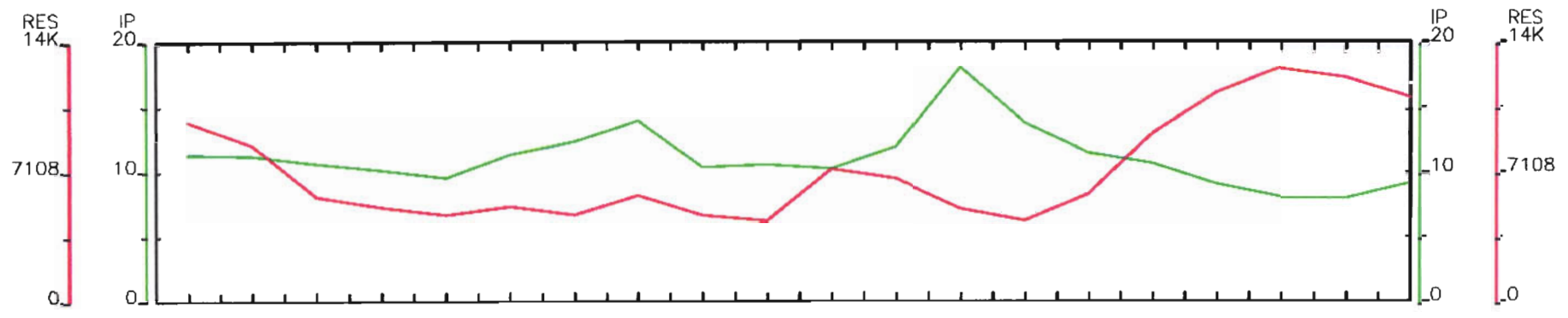
LINE 150MN

Date : October/2006  
Property : SPAIN PROJECT  
Township : GRIFFITH TOWNSHIP

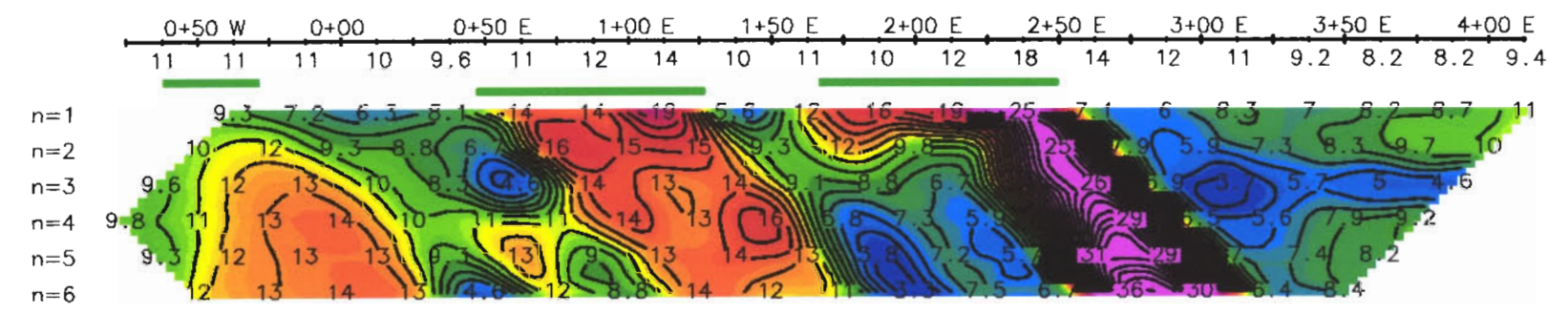
Survey by : EXSICS EXPLORATION LTD

2.33751



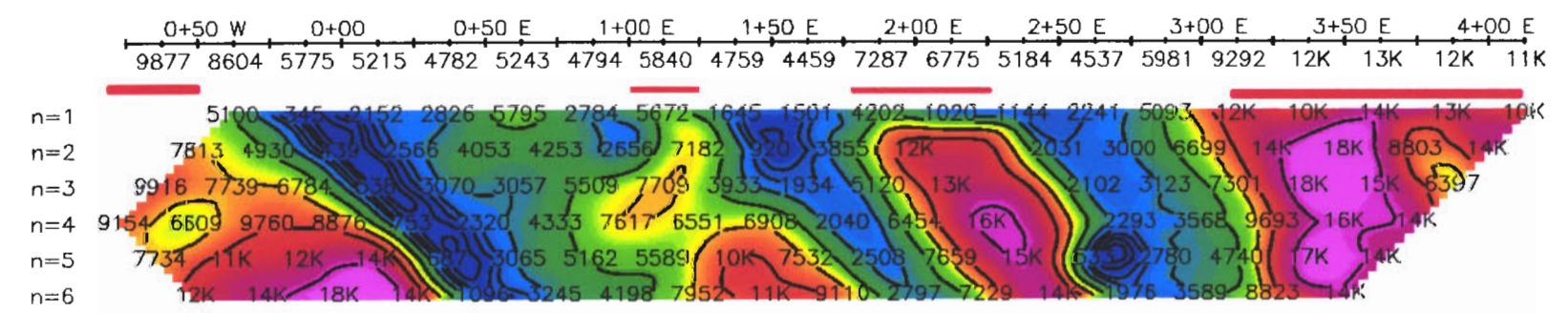


CHARGEABILITY  
mV/Volt

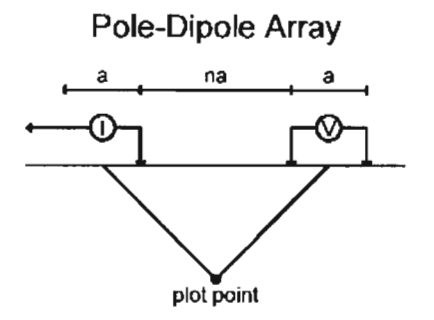
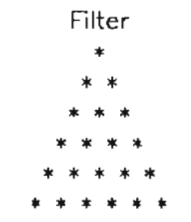


CHARGEABILITY  
MV/V

APPARENT  
RESISTIVITY  
ohm-m



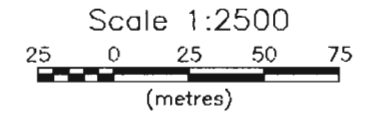
RESISTIVITY  
OHM/M



DIPOLE LENGTH :  $a=25M$   
 DIPOLE SPACINGS :  $n = 6$   
 Comments : Line read EAST TO WEST

CHARGEABILITY  
 Interval 1, 10  
 RESISTIVITY  
 Logarithmic 1, 1.5, 2, 3, 5, 7.5, 10,...

INSTRUMENTS  
 RECEIVER : ELREC PRO  
 TRANSMITTER : GDD 1.8KWATT

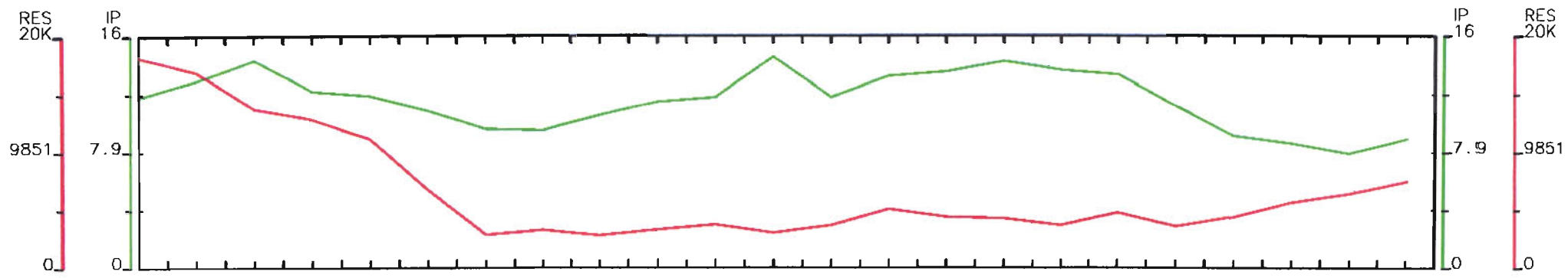


**GOLDEN PHEONIX MINERALS INC.**  
**INDUCED POLARIZATION**  
**LINE 200MN**

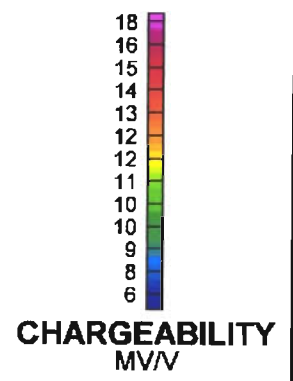
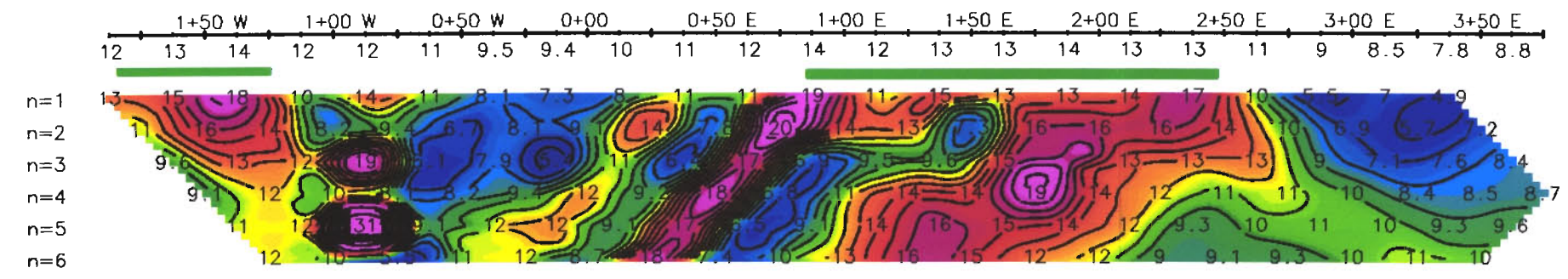
Date : October/2006  
 Property : SPAIN PROJECT  
 Township : GRIFFITH TOWNSHIP

Survey by : EXSICS EXPLORATION LTD.

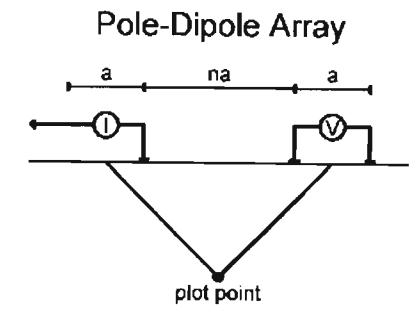
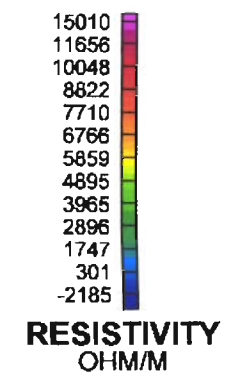
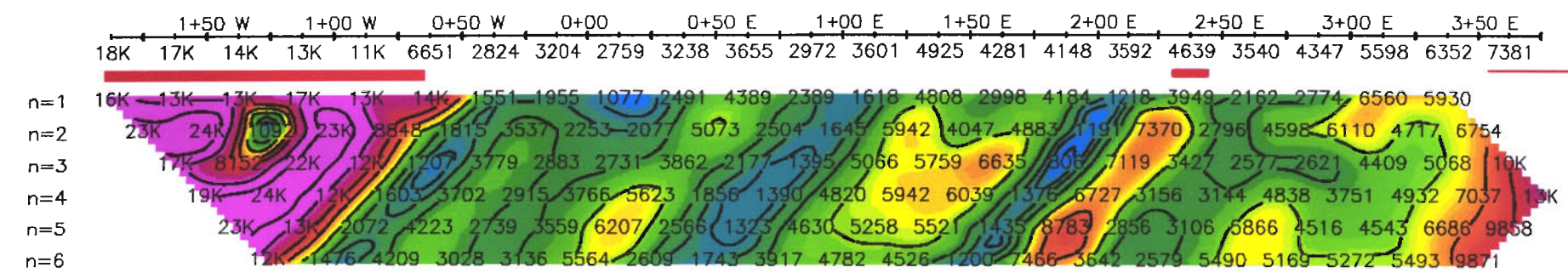
**2.33751**



CHARGEABILITY  
mV/Volt



APPARENT  
RESISTIVITY  
ohm-m



DIPOLE LENGTH :  $a=25M$   
 DIPOLE SPACINGS :  $n = 6$   
 Comments : Line read WEST to EAST

CHARGEABILITY  
 Interval 1, 10  
 RESISTIVITY  
 Logarithmic 1, 1.5, 2, 3, 5, 7.5, 10, ...

INSTRUMENTS  
 RECEIVER : ELREC PRO  
 TRANSMITTER : GDD 1.8KWATT

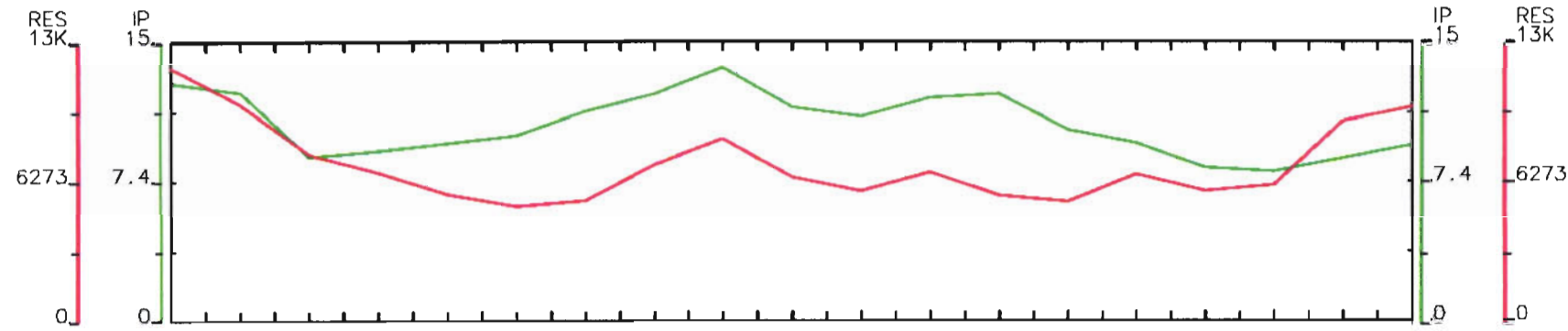
Scale 1:2500  
 25 0 25 50 75  
 (metres)

**GOLDEN PHEONIX MINERALS INC.**  
**INDUCED POLARIZATION**  
**LINE 250MN**

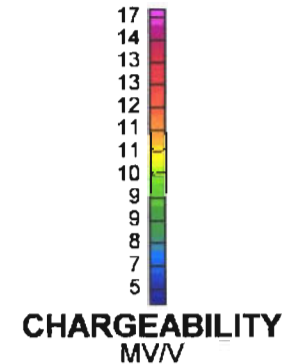
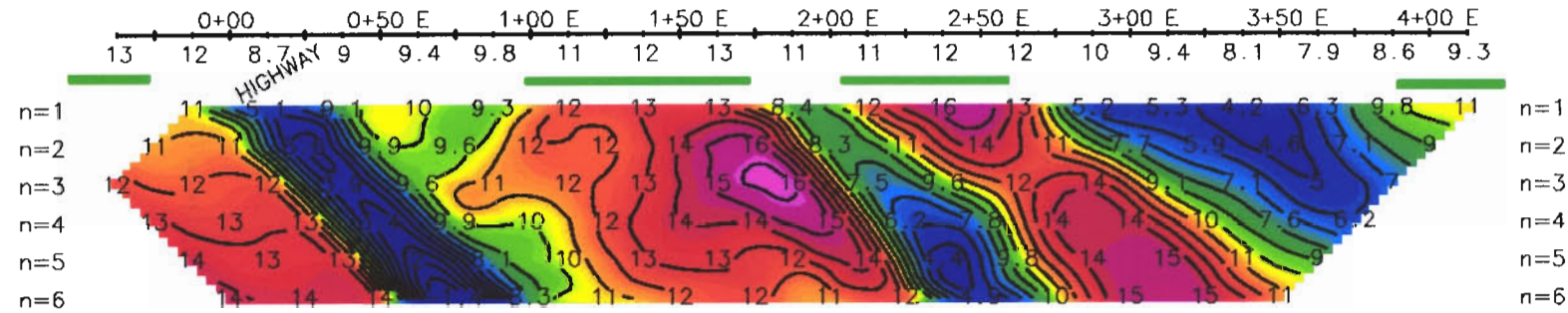
Date : October/2006  
 Property : SPAIN PROJECT  
 Township : GRIFFITH TOWNSHIP

Survey by : EXSICS EXPLORATION LTD

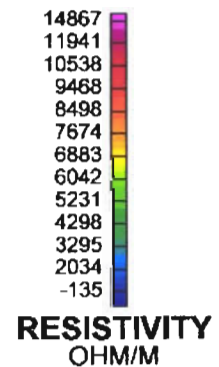
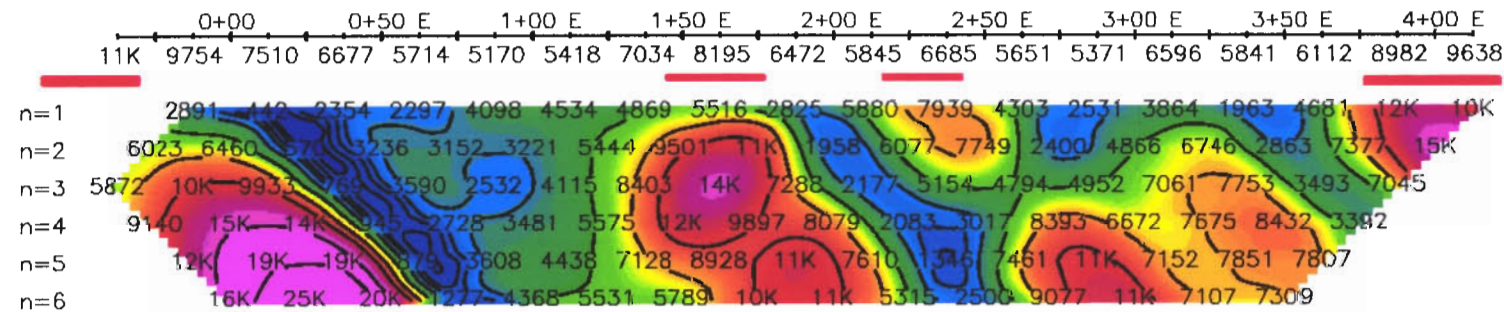
2.33751



CHARGEABILITY  
mV/Volt



APPARENT  
RESISTIVITY  
ohm-m

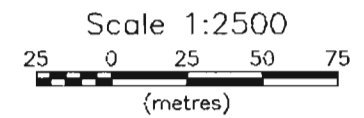


Filter  
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DIPOLE LENGTH :  $a=25M$   
DIPOLE SPACINGS :  $n = 6$   
Comments : Line read EAST TO WEST

CHARGEABILITY  
Interval 1, 10  
RESISTIVITY  
Logarithmic 1, 1.5, 2, 3, 5, 7.5, 10, ...

INSTRUMENTS  
RECEIVER : ELREC PRO  
TRANSMITTER : GDD 1.8KWATT

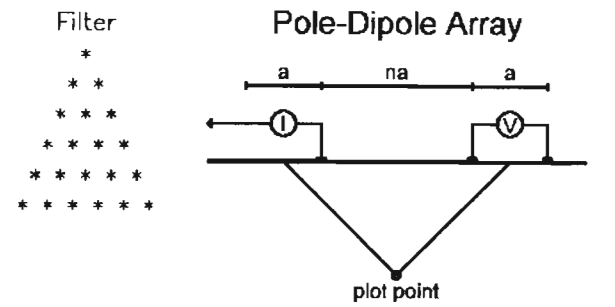
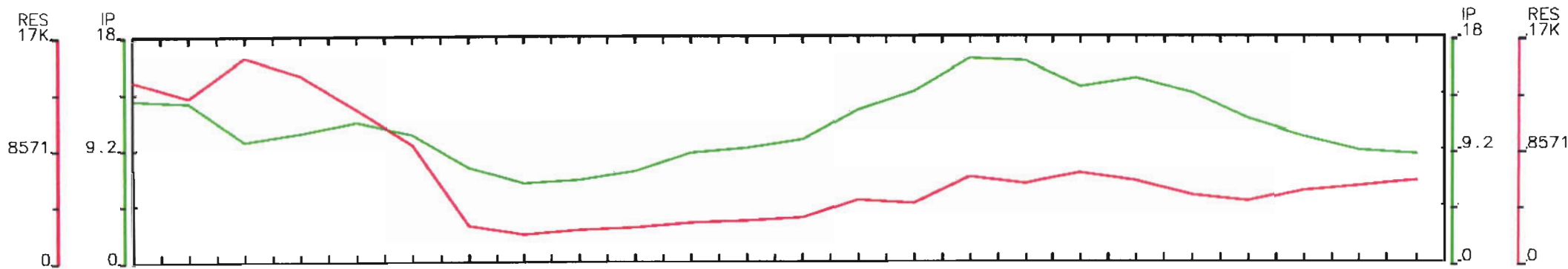


**GOLDEN PHEONIX MINERALS INC.**  
**INDUCED POLARIZATION**  
**LINE 300MN**

Date : October/2006  
Property : SPAIN PROJECT  
Township : GRIFFITH TOWNSHIP

Survey by : EXSICS EXPLORATION LTD

**2.83751**



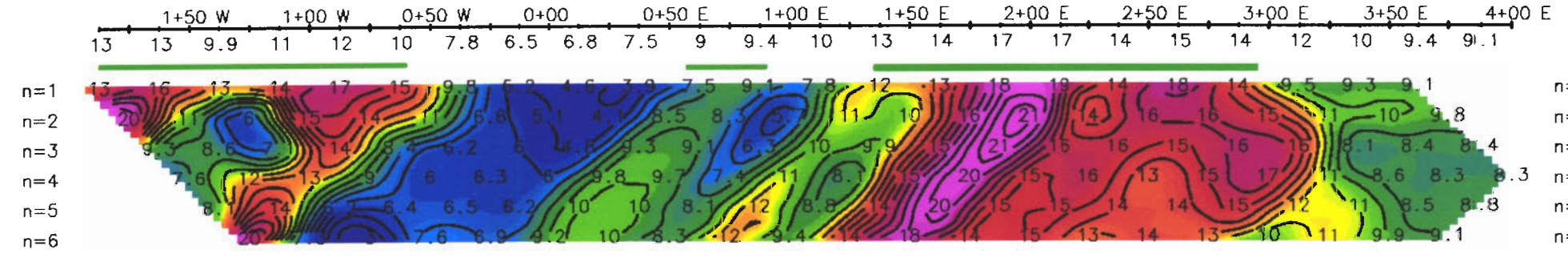
DIPOLE LENGTH :  $a=25M$   
 DIPOLE SPACINGS :  $n = 6$   
 Comments : Line read WEST to EAST

CHARGEABILITY  
 Interval 1, 10  
 RESISTIVITY  
 Logarithmic 1, 1.5, 2, 3, 5, 7.5, 10, ...

INSTRUMENTS  
 RECEIVER : ELREC PRO  
 TRANSMITTER : GDD 1.8KWATT

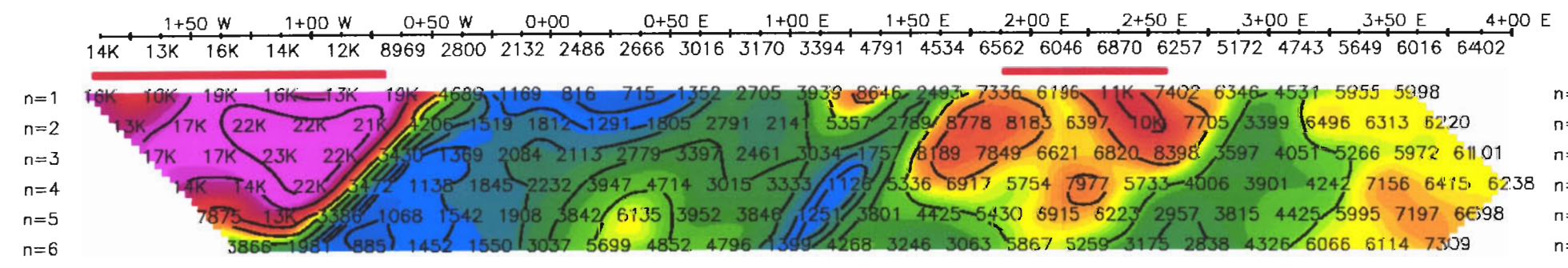
Scale 1:2500  
 25 0 25 50 75  
 (metres)

CHARGEABILITY  
mV/Volt



CHARGEABILITY  
MV/V

APPARENT  
RESISTIVITY  
ohm-m



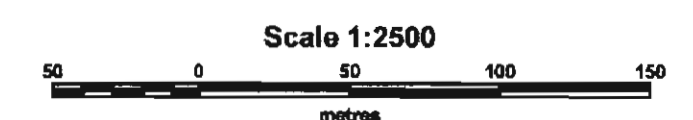
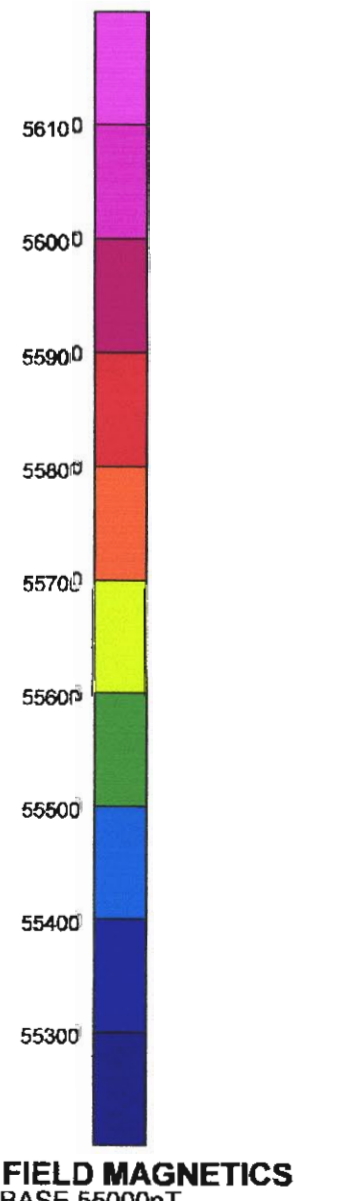
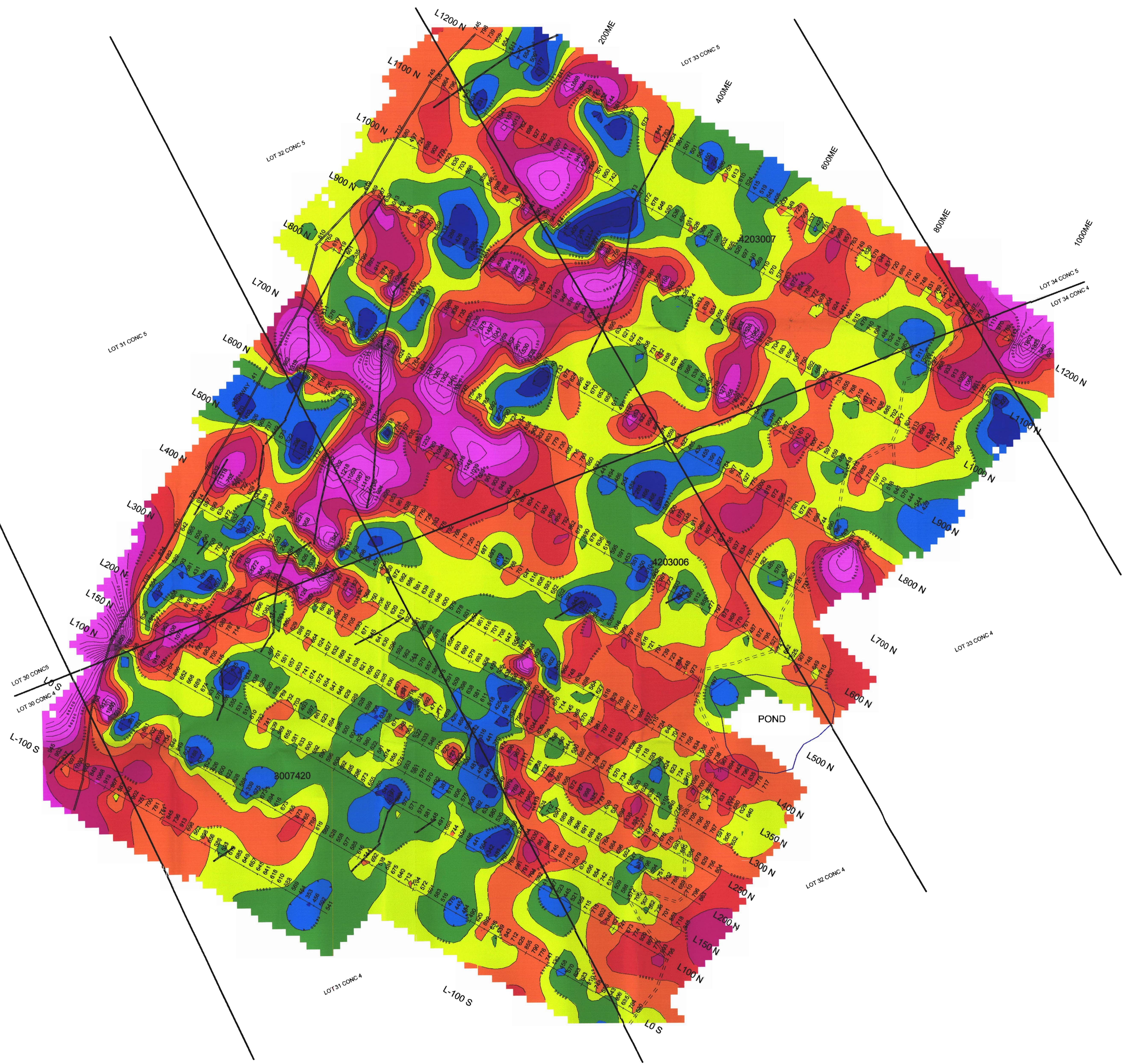
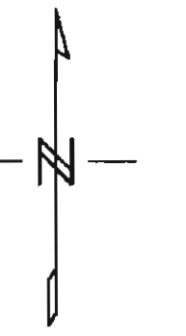
RESISTIVITY  
OHM/M

**GOLDEN PHEONIX MINERALS INC.**  
**INDUCED POLARIZATION**  
**LINE 350MN**

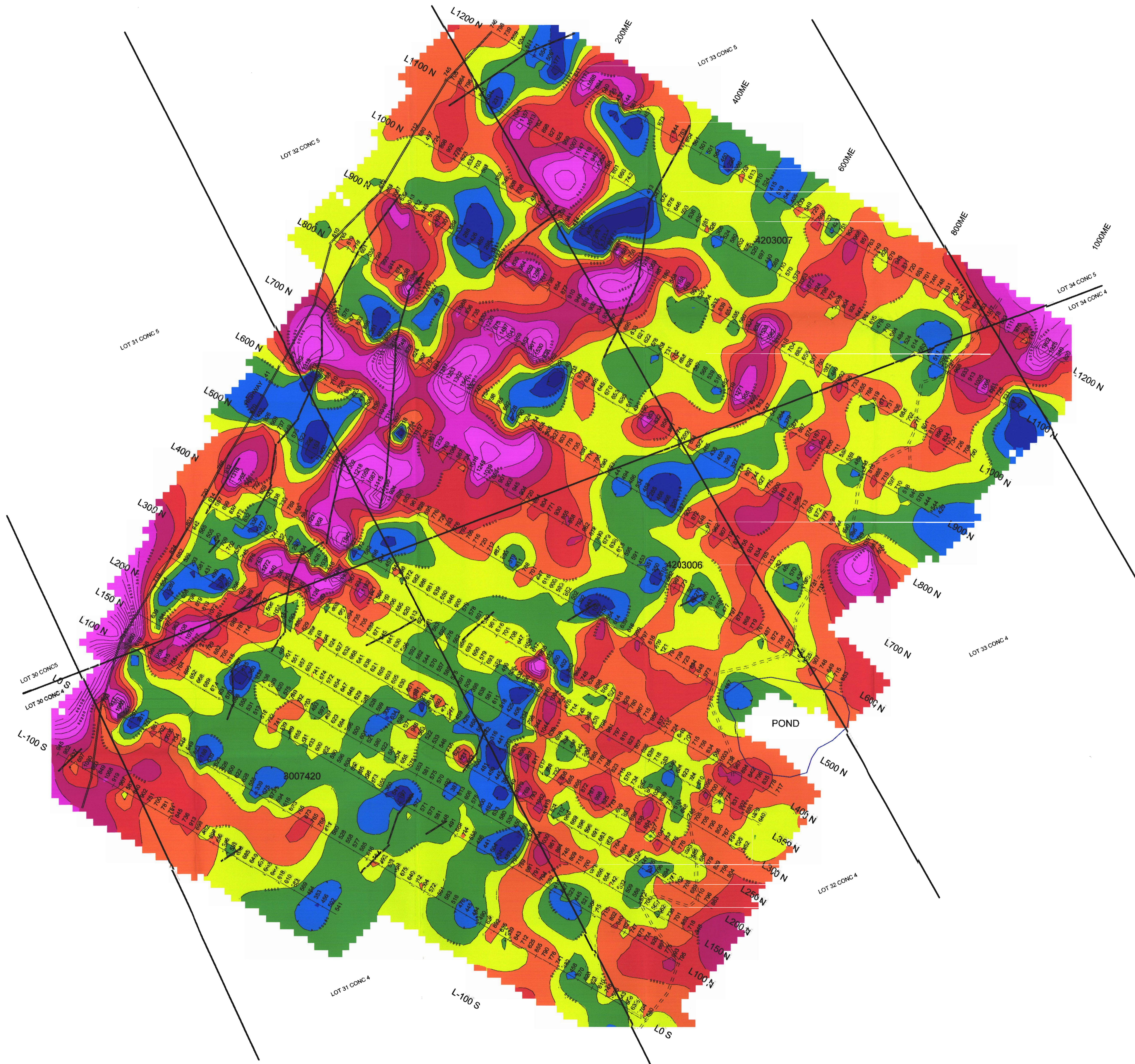
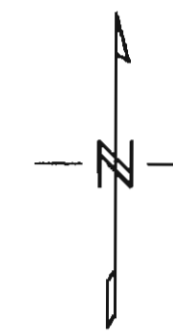
Date : October/2006  
 Property : SPAIN PROJECT  
 Township : GRIFFITH TOWNSHIP

Survey by : EXSICS EXPLORATION LTD.

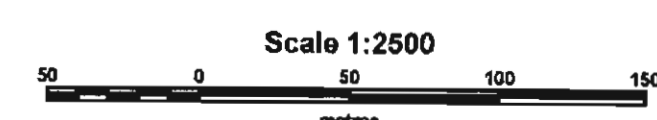
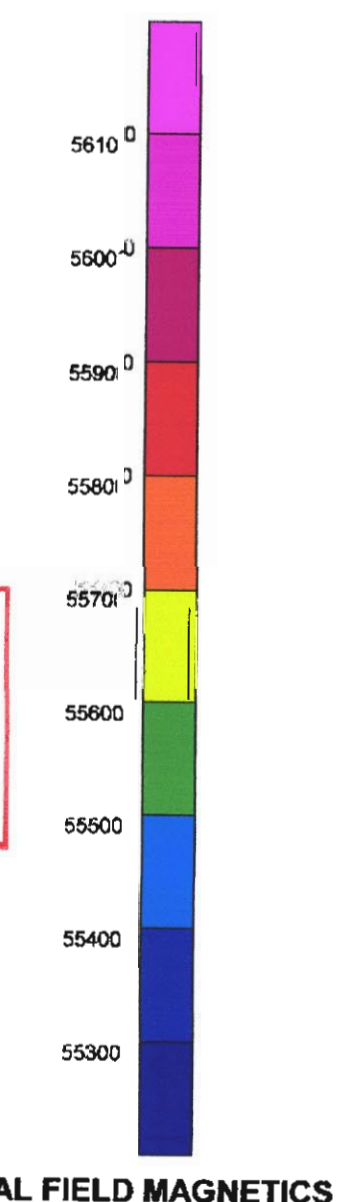
**2.33751**



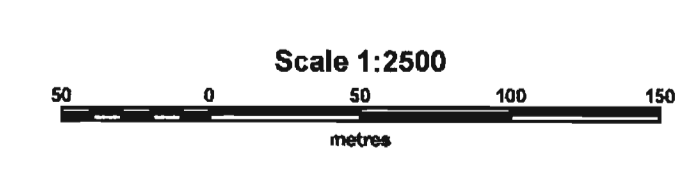
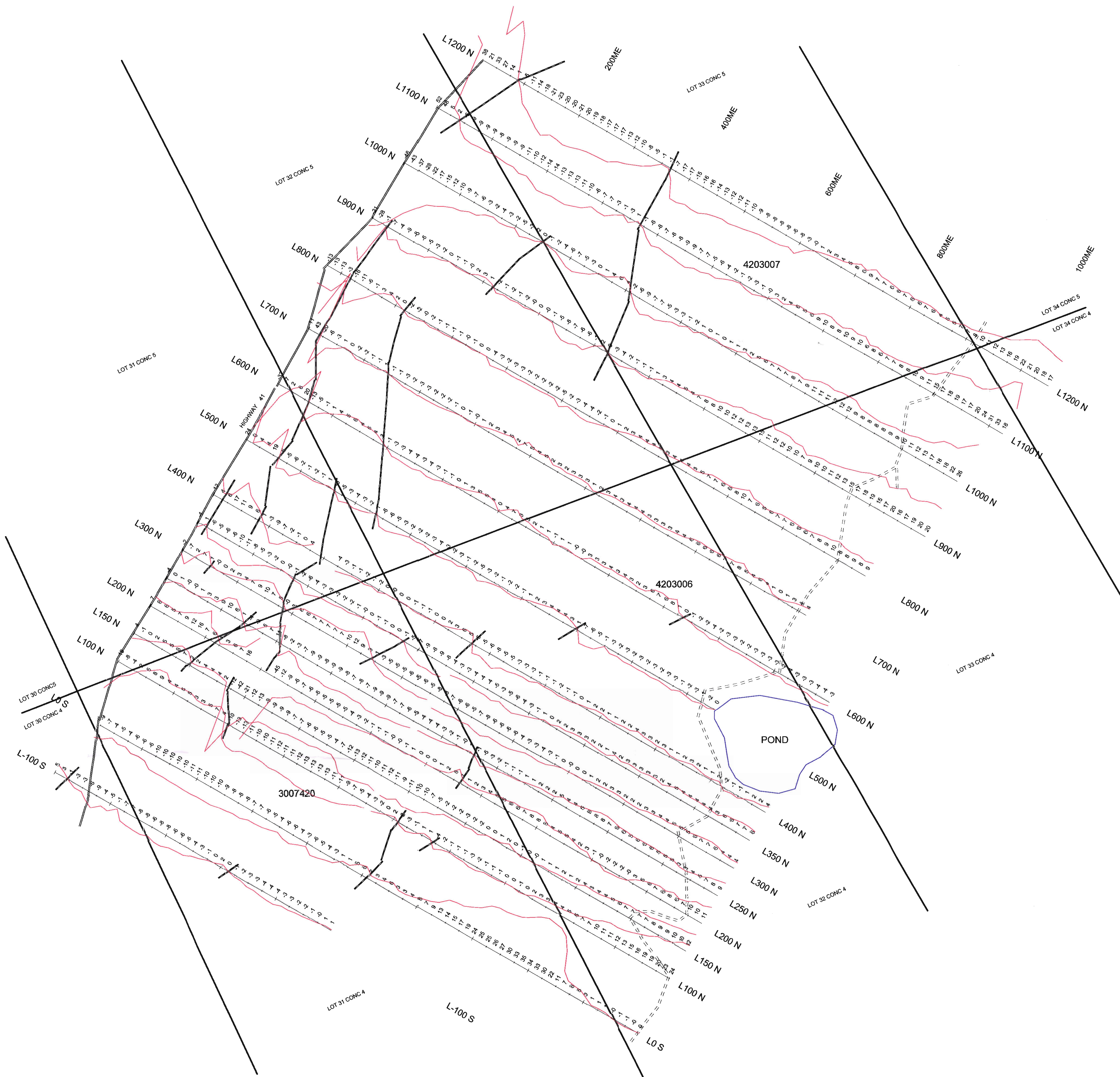
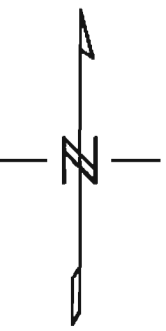
GOLDEN PHONEIX  
SPAIN PROPERTY-GRIFFITH TOWNSHIP-EAGANVILLE  
TOTAL FIELD MAGNETIC SURVEY  
SCINTREX ENVI MAG SYSTEM  
SCINTREX ENVI MAG SYSTEM  
NOV/06 EXSICS EXPLORATION LIMITED



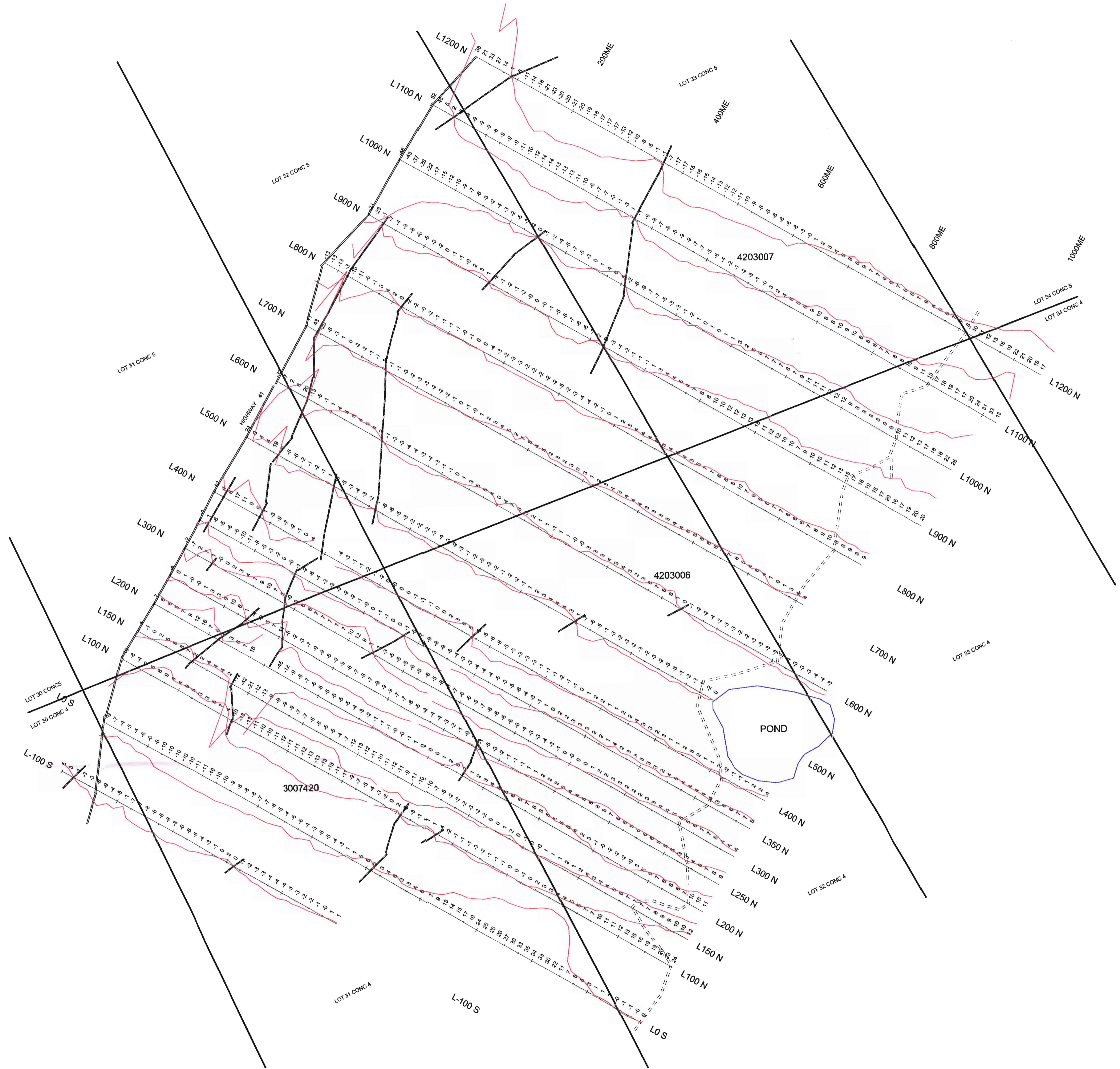
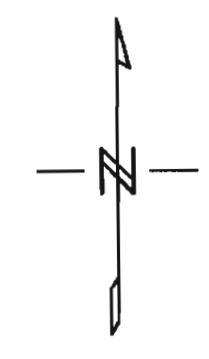
RECEIVED  
OCT 22 2007  
GEOSCIENCE ASSESSMENT  
OFFICE



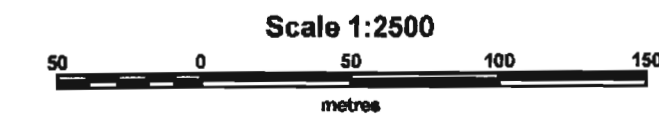
GOLDEN PHONEIX  
SPAIN PROPERTY-GRIFFITH TOWNSHIP-EAGANVILLE  
TOTAL FIELD MAGNETIC SURVEY  
SCINTREX ENVI MAG SYSTEM  
SCINTREX ENVI MAG SYSTEM  
Contour Intervals: 100 NT  
NOV/06 EXSICS EXPLORATION LIMITED



GOLDEN PHONEIX	
SPAIN PROPERTY-GRIFFITH TOWNSHIP-EAGANVILLE	
VLF-EM SURVEY	
PROFILED 1CM±H-10%	TLER, MAINE, 24.0KHZ
SCINTREX ENVI MAG SYSTEM	NOV.06
EXSICS EXPLORATION LIMITED	



**RECEIVED**  
OCT 22 2007  
GEOSCIENCE ASSESSMENT  
OFFICE



GOLDEN PHONEIX  
SPAIN PROPERTY-GRIFFITH TOWNSHIP-EAGANVILLE  
VLF-EM SURVEY  
PROFILED: 1CM=1-10%  
SCINTREX ENVI MAG SYSTEM TLER, MAINE, 24 0KHZ  
NOV./06 EXSICS EXPLORATION LIMITED