

## PRELIMINARY GEOPHYSICAL REPORT FOR

EXPLORER'S ALLIANCE INC. ON THE
MANNING LAKE PROPERTY
AITKEN, OKE AND WILHELMINA TOWNSHIPS
PORCUPINE MINING DIVISION
NORTHEASTERN ONTARIO


Prepared by: J. C. Grant, CET, FGAC
December, 2000

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## INTRODUCTION:

The services of Exsics Exploration Limited were retained by Mr. L. Bonhomme to complete a ground geophysical program over a portion of their claim holdings in the Porcupine Mining Division. The block of claims that were to be covered by this program are situated approximately 65 kilometers northwest of the City of Timmins and cover portions of Aitken, oke and Wilhelmina Townships. Figures 1 and 2.

The purpose of this ground program was to locate and outline a series of airborne targets that strike in an east-southeast direction from the south shore of Manning lake and extend approximately 2 kilometers into Wilhelmina Township. The airborne targets appear to represent a significant conductive horizon that lies within an intermediate to mafic volcanic unit that in turn has been cross cut by at least three to four north-northwest striking faults.

The ground program commenced on the $20^{\text {th }}$ of November with the beginning of the line cutting and it is ongoing at the time of this report. This preliminary report is an interim report for assessment purposes only. Four of the claim blocks that form a portion of the overall block were due for assessment by the $15^{\text {th }}$ of December. The collected data contained within this report is to cover the required assessment. The entire report will follow upon the completion of the ground program.

## PROPERTY LOCATION AND ACCESS:

Generally, the Manning lake Property is located approximately 65 kilometers northwest of the City of Timmins. The property consists of 11 claim blocks, some 114 units comprising approximately 1824 hecters, 8 of which are situated in Aitken Township and 3 of which are situated in Wilhelmina Township. Figure 3.

More specifically, the claims are situated in the northeast section of Aitken and the central southwest section of Wilhelmina Townships. Manning Lake covers a portion of the northwest section of the claim block.

Access to the claim block is somewhat involved. During the summer months the best access would be by fixed wing to the southeast shore of Manning Lake and the west end of the established base line.



During the course of the ground program the access was difficult due to the time of the year. The lake had just frozen over and was not yet suitable for fixed wing or helicopter landings. At the commencement of the cutting program there was not yet sufficient snow fall to allow for good ground access by snow machine. Recent logging operations in the general vicinity resulted in a drive able access road that commenced form the Abitibi Logging road and traveled westward for approximately 12 kilometers to Wilhelmina Creek. An old grown over trail was then used from this point to access the south section of the claim block. This trail had to be cut out and flattened to allow for skidoo access to the grid area. Several spots along the constructed trail had to be filled in with timber to make it passable for the skidoos. A camp was then located at the north end of this trail and was used by the line cutting crews to cut the grid. Shortly after this camp was constructed, enough snow had accumulated to allow for snow machine access to the area.

The grid area itself is relatively open and generally covered by stunted black spruce and swamp. The base line was to be cut wide enough to allow for skidoo access from one side of the grid to the opposite. Traveling time from Timmins to the grid is about two hours.

## MANNING LAKE CLAIM GROUP:

The claim blocks that form the Manning Lake property are listed below.

## Aitken Township Block:

| P-1226532............. 2 units |  |
| :---: | :---: |
| P-1226533. | . 6 units |
| P-1226534. | . 16 units, |
| P-1226535. | 4 units |
| P-1226536. | 9 units |
| P-1236031. | . 16 units |
| P-1236032. | . 16 units |
| P-1236004. | . 6 units |

## Wilhelmina Township Block:

P-1236002.............. 16 units
P-1236003.............. 15 units
P-1236005.............. 8 units

Refer to Figure 3, copied from MNDM Plan Maps of Aitken, Oke and Wilhelmina Townships for the location of the claim blocks with respect to each other.


## PERSONNEL:

The field crew directly responsible for the collection of all of the raw field data were as follows.
John C. Grant..............................Timmins, Ontario
Yvon L. Collin.........................................immins, Ontario
John DerWeduwen................Timmins, Ontario
Erik Jaakkola..........................Timmio

The entire program was completed under the direct supervision of J. C. Grant and all of the plotting and compilation was completed in house.

## GROUND PROGRAM:

The ground program was completed in two phases. The first phase was to establish a cut metric grid across the grid. This grid was to be used to control the second phase of the program, the geophysical surveys.

A base line, $(0+00)$, and three tie lines, $(6+00 \mathrm{MS}),(5+00 \mathrm{MS})$ and $(6+00 \mathrm{MN})$ were established across the grid at an azimuth of 100 degrees. Cross lines were then turned off of these tie lines and base line at 200 meter intervals where applicable, from $36+00 \mathrm{MW}$ to and including $18+00 \mathrm{ME}$ and picketed with 25 meter stations. In all approximately 40 kilometers of grid lines were to be cut and surveyed across the claim block.

## GEOPHYSICAL PROGRAM:

The geophysical portion of the program was to consist of a detailed total field magnetic survey which was to be completed along with a moving coil, Crone Pulse Electromagnetic, (PEM), survey. Refer to Appendix A for the specifications of this system. This is basically a horizontal loop survey but allows for a deeper penetration through multiple frequencies. The survey is quite slow and requires a four man crew to operate the system. Due to the access problem and extreme cold weather, the progress has been slow and difficult. The PEM survey is ongoing at the time of this report and the magnetic survey will be starting within the week.

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The following survey parameters were kept constant throughout the survey period.
Line spacing 200 meters
Station spacing............................ 25 meters
Reading intervals........................ 50 meter recon, 25 meter detail
Coil separation 100 meters
Primary Pulse 1000
Synchronisation
Radio link
Theoretical search depth. 50-75 meters
Parameters measured................. 8 frequency samples of the secondary field.
The collected data from the PEM survey was then plotted directly onto individual line sections with all eight samples being stacked and profiled at $1 \mathrm{~cm}=+/ \_20,10$ and $5 \%$ as the samples progressed from sample 1 to sample 8. Copies of the completed lines are included in the back pocket of this report. Each of the sections are plotted at a scale of 1:5000.

## SURVEY RESULTS:

The lines that were completed at the time of this report were lines $0+00$ to and including 600 ME and they were read from 500 MS to 600 MN . In all, a total of 4.5 kilometers of lines have been read with the survey still in progress. A total of 40 kilometers will be surveyed over the entire property once the program is completed.

The initial results suggest that there is at least one conductive zone outlined on the grid thus far. This zone lies between 100 MS and 50 MS on lines $0+00$ to 600 ME . This generally correlates to the suggested airborne targets but at this writing, the zone is weak. This may suggest that there is a conductive overburden layer lying above the zone which appears to be masking the target. The remainder of the grid lines will be covered with a 150 to 200 meter coil separation as the survey progresses to the east of line 600 ME and to the west of line $0+00$.

There may also be a second conductive zone situated to the north of the first zone which may be showing up in the profile of line 600 ME . At this time the zone is too weak to better define its source and strike.

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## CONCLUSIONS AND RECOMMENDATIONS:

The PEM survey appears to be working quite well in define one conductive zone across the central eastern section of the grid. The zone is somewhat weak and or deep but I would suggest that it is probably buried under a conductive overburden layer. It is for these reasons that the coil separation has been opened to 150 meters with the possibility of going to 200 meters ant the grid advances. There is a heavy cedar swamp area as the grid progresses eastward and it is thought that as the grid progress towards Manning Lake the overburden may increase.

Respectfully submitted

J.C. Grant, CET, FGAC

December, 2000


## CRONE GEOPHYSICS LIMITED PEM RECEIVER



## Proven Reliability \& Flexibility

- In use since 1973.
- Compatible with surface and borehole systems.
- Can be used in a fixed or moving source operating mode.
- Discriminates targets in areas of surficial conductivity.
- Operates under adverse environmental conditions (desert, arctic, jungle).


## Optional Datalogger Receiver

-A/D convertor for digital storage

- Memory capacity for 140 stations DEEPEM or 280 readings Borehole
- LCD good to $-50^{\circ} \mathrm{C}$
-Filtered readings in areas of spheric and powerline noise
- Instrument Sales, Rental and Repair Services
- Contract Survey Services
- Consulting Services
- Computer Plotting and Processing Services


## SPECIFICATIONS*

## 1. STANDARD RECEIVER

## BATTERY SUPPLY:

$\pm 12 \mathrm{VDC}$, two internal, rechargeable, 12 V gel type batteries

## MEASURED QUANTITIES:

Primary shut-off voltage pulse (PP). Time derivative of the transient magnetic field by integrative sampling over eight, contiguous time gates (microseconds).

| CH. NO. | WINDOW | WIDTH | MID PT. | REL. GAIN | WINDOW | WIDTH | MID PT. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PP | -100 to 0 | 100 | -50 | 1.00 | -200 to 0 | 200 | -100 |
| 1 | 100 to 200 | 100 | 150 | 1.00 | 200 to 400 | 200 | 300 |
| 2 | 200 to 400 | 200 | 300 | 1.39 | 400 to 800 | 400 | 600 |
| 3 | 400 to 700 | 300 | 550 | 1.93 | 800 to 1400 | 600 | 1100 |
| 4 | 700 to 1100 | 400 | 900 | 2.68 | 1400 to 2200 | 800 | 1800 |
| 5 | 1100 to 1800 | 700 | 1450 | 3.73 | 2200 to 3600 | 1400 | 2900 |
| 6 | 1800 to 3000 | 1200 | 2400 | 5.18 | 3600 to 6000 | 2400 | 4800 |
| 7 | 3000 to 5000 | 2000 | 4000 | 7.20 | 6000 to 10K | 4000 | 8000 |
| 8 | 5000 to 7800 | 2800 | 6400 | 10.00 | 10 K to 15.6 K | 5600 | 12.8 K |

## READOUT:

Readings are output on an analog meter (6V FSD), over three sensitivity ranges (X1, X10, X100). Data retrieval made by channel select switch.

## TIMING:

A telemetry link ("sync.") is maintained by radio signal, or a back-up cable, between the transmitter and the receiver, and is meter monitored.

## SENSITIVITY:

Adjustable through a ten turn, calibrated gain pot.

## SAMPLING MODES:

"Ṣ \& H" (Sample \& Hold)
The receiver averages 512 ( 10.8 ms ), or $256(21.6 \mathrm{~ms})$, readings for all channels, and stores the results for display. "CONT" (Continuous)

A running average for all channels is stored, enabling the operator to reject thunderstorm spikes and power line noise by visual inspection.

## OPERATING TEMPERATURE RANGE:

$-40^{\circ} \mathrm{C}-50^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}-122^{\circ} \mathrm{F}\right)$
DIMENSIONS: $28 \mathrm{~cm} \times 18 \mathrm{~cm} \times 27 \mathrm{~cm}$
SHIPPING DIMENSIONS: $37 \mathrm{~cm} \times 27 \mathrm{~cm} \times 35 \mathrm{~cm}$

$$
\left(11^{\prime \prime} \times 7^{\prime \prime} \times 10^{1 / 2 \prime}\right)
$$

( $14 \frac{1}{2} 2^{\prime \prime} \times 101 / 2^{\prime \prime} \times 14^{\prime \prime}$ )
WEIGHT: 7 kg (16 lb)
SHIPPING WEIGHT: $14.5 \mathrm{~kg}(32 \mathrm{lb})$

## 2. OPTIONAL DATALOGGER RECEIVER

- Uses above receiver in conjunction with Omnidata Polycorder. ${ }^{\text {P }}$
- Data is A/D converted and stored in 32 k memory.
-RS-232C serial interface allows for connection to modem.
- Continual monitoring of readings through LCD.
- Spheric and powerline rejection through software filter.
-Operating temp range from $-40^{\circ} \mathrm{C}-50^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}-122^{\circ} \mathrm{F}\right)$

WEIGHT: 14.5 kg ( 32 lb )
DIMENSIONS: $22 \mathrm{~cm} \times 28 \mathrm{~cm} \times 46 \mathrm{~cm}$
$\left(83 / 4{ }^{\prime \prime} \times 11^{\prime \prime} \times 18^{\prime \prime}\right)$

SHIPPING WEIGHT: 21.8 kg ( 48 lb )
SHIPPING DIMENSIONS: $35 \mathrm{~cm} \times 30 \mathrm{~cm} \times 53 \mathrm{~cm}$ ( $14^{\prime \prime} \times 11^{3 / 4} 4^{\prime \prime} \times 21^{\prime \prime}$ )

## PULSE EM TRANSMITTER EQUIPMENT

- Flexible, multi-purpose transmitter and complete transmitting equipment for all types of surface and borehole time-domain EM surveys.
- 2000 Watt Transmitter can be powered 3 ways:
- 24 V rechargeable Battery Pack.
- 24 V Battery and 500W Motor Generator
- $24 \mathrm{~V}-120 \mathrm{~V}$ from 2000 W Motor Generator and Voltage Regulator.
- 24 V input for Low-Power PEM surveys:

18 Amps through 7 -turn, 14 m diameter Moving Coil (19,000 $\mathrm{Am}^{2}$ dipole moment) locates shallow (up to 150 m deep) conductors even in conductive environments when used in profiling mode (Slingram method).

- shallow resistivity soundings to 200 m or more.

18 Amps through $100 \mathrm{~m} \times 100 \mathrm{~m}$ loop ( $180,000 \mathrm{Am}^{2}$ dipole moment)

- Moving Loop or Moving In-Loop surveys for deeper conductor detection even in conductive environments.
- Borehole logging to 300 m or 300 m long surface lines outside loop (small scale DEEPEM).
- Resistivity sounding to hundreds of metres.
- $24 \mathrm{~V}-120 \mathrm{~V}$ input for High-Power PEM surveys:
- Any loop size from $100 \mathrm{~m} \times 100 \mathrm{~m}$ to 1 or 2 km square.
- Can be used for all Surface and Borehole PEM surveys for deep conductor detection or deep resistivity sounding.
- 3 selectable current ramp times, 8 selectable time bases, and 3 synchronization methods.
- Ramp times are fixed to allow for proper data comparisons from loop to loop.
- Cleared for safe use in producing mines for underground borehole surveys.



## Lower Power Gear

The 500W Motor Generator is required if the Transmitter is on for long periods. It is optional for the louing Conl method.


## 2000 Watt Gear

Can power any size loop from $100 \mathrm{~m} \times 100 \mathrm{~m}$ to 1 or 2 km square

## SPECIFICATIONS - PULSE EM TRANSMITTER EQUIPMENT

## 2000 WATT PEM TRANSMITTER:

Controls bipolar, on-off waveform and linear current shut-off ramp time. Operating voitage: 24 V to 120 V .
Synchronization: Radio and cable synchronization are standard. Internal radio powers 1 metre long telescoping antenna (standard) or optional $1 / 4$ Wave CB booster antenna on mast. In hilly terrain, use external (remote) radio and booster antenna on high point of grid, controlled by cable sync. Optional external crystal clock sync system.
On-Off times for 60 Hz powerline filtering: $8.33 \mathrm{~ms}, 16.66 \mathrm{~ms}, 33.33 \mathrm{~ms}$; for 50 Hz powerline filtering: 10.0 ms , $20.0 \mathrm{~ms}, 40 \mathrm{~ms}$; for analog PEM operation: $10.9 \mathrm{~ms}, 21.8 \mathrm{~ms}$.

Linear controlled current shut-off ramp times of $0.5,1.0$ and 1.5 ms . Ramp time is fixed and non-drifting with temperature and loop size to allow for accurate data comparison and interpretation.
Monitors for shut-off ramp operation, instrument temperature, Tx loop continuity, and overload outpui current.
Meters for loop current, input voltage, sync test.
Automatic shut-down for open Tx loop, high instrument temperature, and overload.
Net weight: 12.5 kg , shipping: 22 kg .

## 2000WATT MOTOR GENERATOR:

$41 / 2$ H.P. Wisconsin Robin, 4 cycle engine with belt drive to D.C. alternator; both mounted on frame; output: $120 \mathrm{~V}, 20 \mathrm{Amps}$; external gas tank with hose and valve for full day of unattended operation; Net weight: 33 kg ; shipping: 47 kg .

## 24V-120V VARIABLE VOLTAGE REGULATOR:

Controls and filters the alternator output; continuously variable between 24 V and 120 V D.C., 20 Amp maximum current; Net weight: 10 kg , shipping: 20 kg .

## WIRE, SPOOLS AND WINDERS:

Transmitter wire is usually No. 10 or 12 AWG insulated copper wire in 300 m or 400 m lengths, 1 length per spool; 2 spools in a shipping box; winder is mounted on a magnesium packframe.

## MULTI-TURN MOVING COIL:

7 turn. 14 meter diameter Tx loop; plugs to break loop into 2 sections for easy station-to-station movement. Aluminum or copper wire and various coverings depending on area being used.

## BATTERY POWER SUPPLY:

$24 \mathrm{~V}, 20 \mathrm{amp}$ hour; rechargeable battery supply for use with PEM Transmitter as power source rather than motor-generator-regulator. In aluminum case, with clamp connectors. Net weight: 20.5 kg , shipping: 29 kg .

## 500 WATT, LOW-POWER MOTOR GENERATOR:

For continuous transmitter operation in Low-power PEM surveys. 3.5 H.P. Motor with belt drive to Alternator and Regulator: mounted on frame; output: 24 V DC, 500 W ; connect to transmitter in parallel with 24 V Battery Pack.

- Battery chargers supplied for all rechargeable battery units.
- All instruments and equipment operational from $-40^{\circ} \mathrm{C}$ to $+50^{\circ} \mathrm{C}$.
- Plywood boxes for shipping and field transport with closed cell foam shock protection.
* Specifications subject to change without notice.

Ministry of
Northern Development and Mines

Ministère du
Développement du Nord et des Mines

Date: 2001-MAY-22

EXPLORERS ALLIANCE CORPORATION
Tel: (888) 415-9845
168 ALGONQUIN BLVD. EAST
TIMMINS, ONTARIO
P4N 1A9 CANADA
GEOSCIENCE ASSESSMENT OFFICE 933 RAMSEY LAKE ROAD, 6th FLOOR SUDBURY, ONTARIO P3E 6B5

Submission Number: 2.20790
Transaction Number(s): W0060.00494
Dear Sir or Madam

## Subject: Approval of Assessment Work

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.
The assessment work credit has been reduced to $\$ 13,372$ as outlined in your correspondence. The attached Work Report Summary outlines the changes to the submission.

If you have any question regarding this correspondence, please contact LUCILLE JEROME by email at lucille.jerome@ndm.gov.on.ca or by phone at (705) 670-5858.

Yours Sincerely,


Ron Gashinski
Supervisor, Geoscience Assessment Office
Cc: Resident Geologist
Denis Daniel Caron
(Claim Holder)
1232448 Ontario Inc.
(Claim Holder)

Assessment File Library
Franklin Renaudat
(Claim Holder)
Explorers Alliance Corporation (Assessment Office)

# Work Report Summary 

| Transaction No: | W0060.00494 | Status: APPROVED |
| :--- | :--- | ---: |
| Recording Date: | $2000-$ DEC-15 | Work Done from: $2000-$ NOV-20 |
| Approval Date: | $2001-A P R-24$ | to: $2000-$ DEC-14 |

Client(s):

| 116028 | CARON, DENIS DANIEL |
| :--- | :--- |
| 186852 | RENAUDAT, FRANKLIN |
| 302826 | 1232448 ONTARIO INC. |

Survey Type(s):


External Credits:
\$0
Reserve:
\$172 Reserve of Work Report\#: W0060.00494
\$172 Total Remaining

Status of claim is based on information currently on record








