010

GEOPHYSICAL REPORT

ON

MACDIARMID TOWNSHIP PROPERTY

FOR

FALCONBRIDGE LIMITED

Prepared by:
J.C. Grant
November, 1988

2.5247

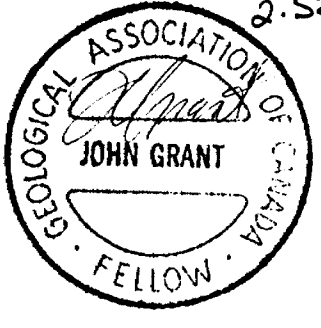


TABLE OF CONTENTS

LIST OF MAPS

LIST OF FIGURES

APPENDICES

Introduction

Exsics Exploration Limited was contracted by Falconbridge Limited to perform a geophysical program on a block of 16 contiguous unpatented mining claims, located in MacDiarmid Township, Porcupine Mining Division, Timmins, Ontario.

The purpose of this program was to outline any responses which may indicate favourable geological conditions for gold and or base metal deposition.

This report will deal with the results of this program which was carried out during the latter part of June, 1988.

Personnel

The people directly involved with the survey were all employed by Exsics Exploration Limited and are as follows:

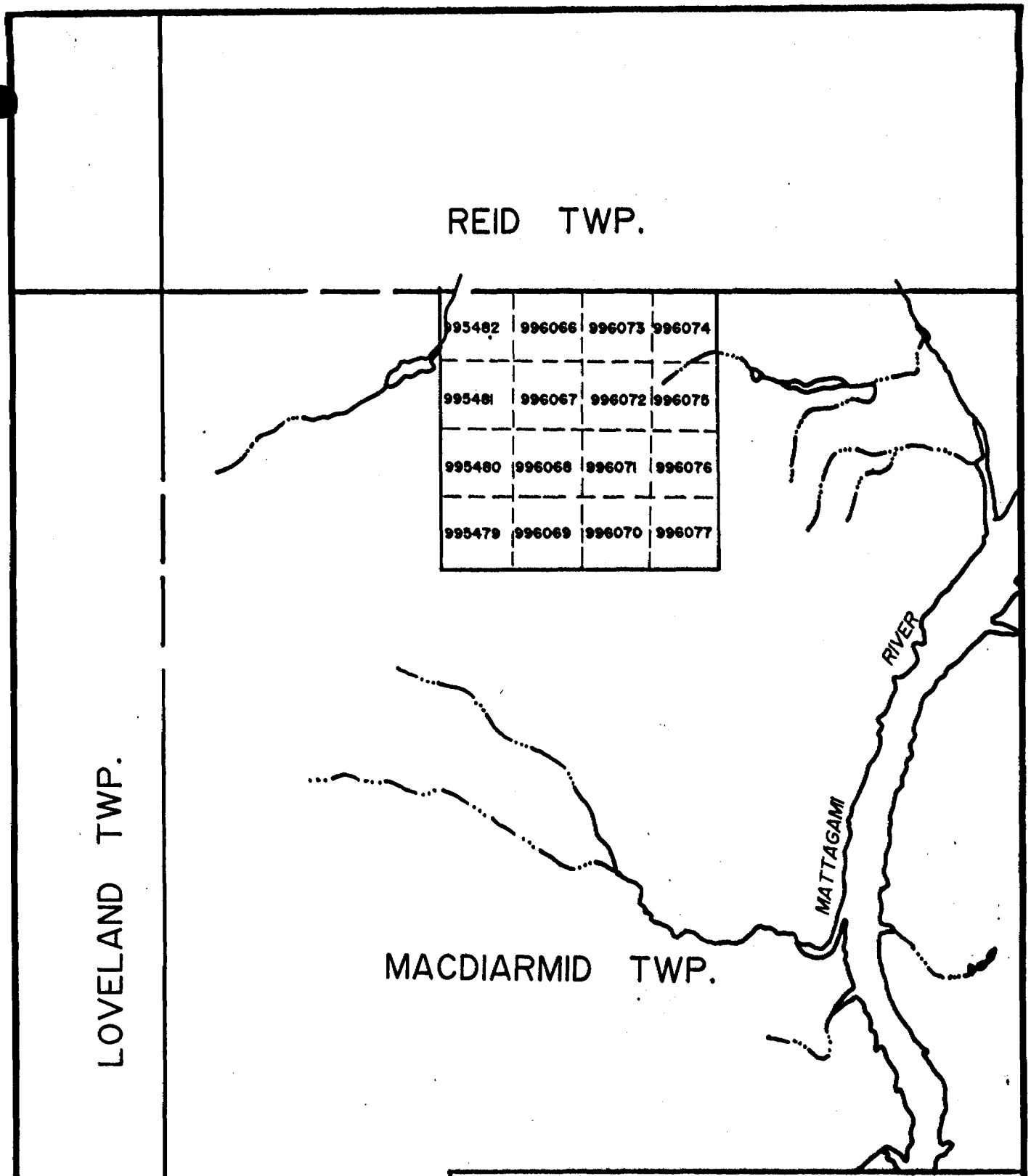
Wayne Pearson	Timmins, Ontario
Dan Collin	Timmins, Ontario
Ed Brunet	Timmins, Ontario

All work was supervised by J. C. Grant.

Claims

The claims covered by the survey program which make up the MacDiarmid Township Property are as follows:

Township	Number
MacDiarmid	995479
"	995480
"	995481
"	995482
"	996066
"	996067
"	996068
"	996069
"	996070
"	996071
"	996072
"	996073
"	996074
"	996075
"	996076
"	996077



EXSICS EXPLORATION LTD.
P.O. Box 1000, P6N-7X1
Suite 13, Hollinger Bldg. Timmins Ont.
Telephone: 705-267-4151

CLIENT: FALCONBRIDGE LIMITED

PROPERTY: MACDIARMID TWP. PROPERTY

TITLE:

CLAIM GROUP SKETCH

Fig. 3

Date: Nov 1988	Scale: 1"=1/2mile	NTS:
Drawn: P.G.	Interp:	Job No. EE-159

Location and Access

The MacDiarmid Township property is located approximately 30 km (18.6 miles) north, northwest of Timmins, in the northern section of MacDiarmid Township, Porcupine Mining Division, Timmins, Ontario (figure 2). The northern boundary of the property is determined by the MacDiarmid Township, Reid Township boundary, which is a cut line (figure 3).

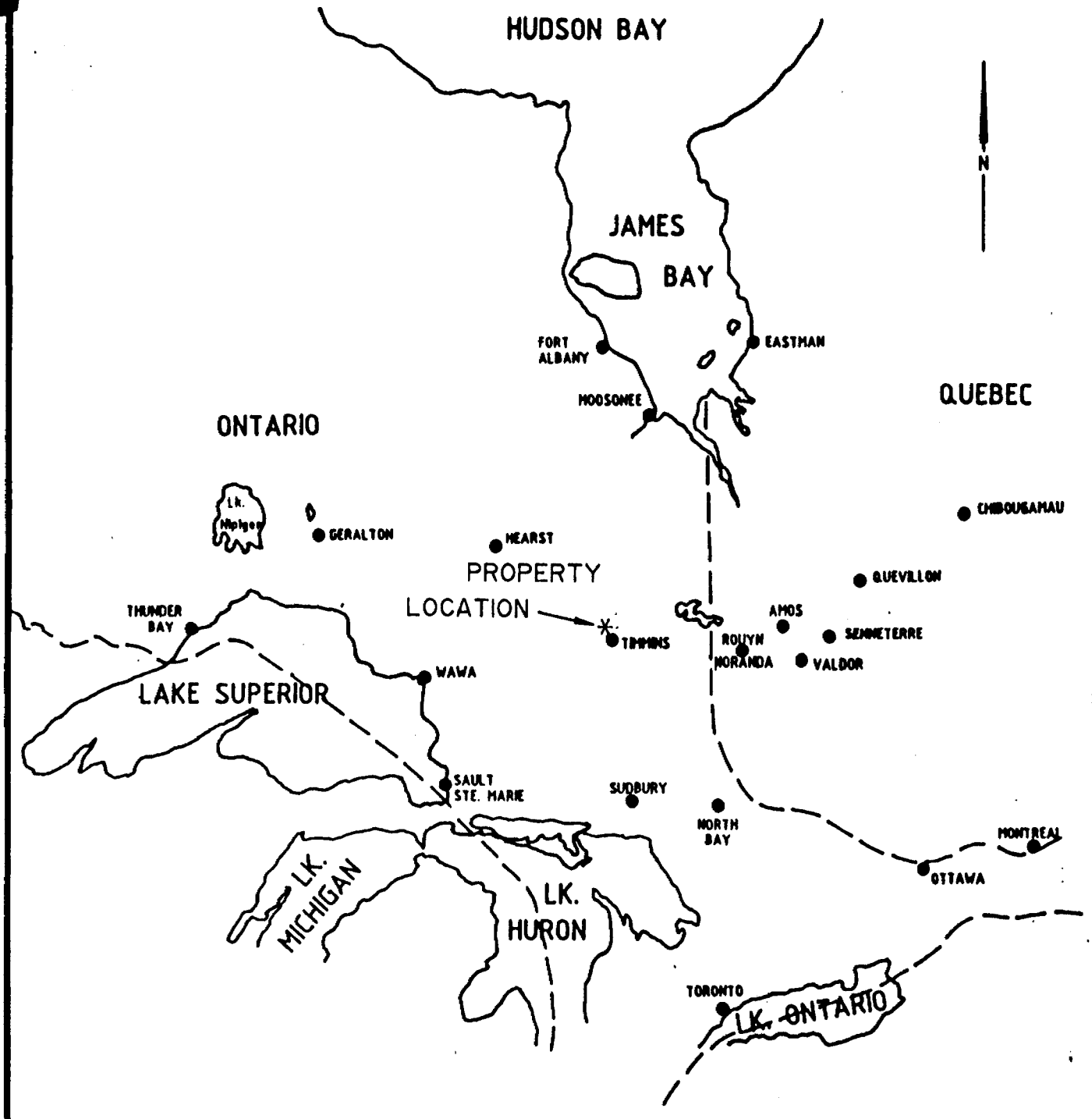
Access to the property during the survey period was by helicopter, supplied by Huisson Aviation of Timmins. Flight time from the Huisson base to the property is approximately 15 minutes. A camp was established on a small lake to the east of the grid and the surveys were completed from the camp.

Geophysical Program

This program consisted to a total field magnetic survey, and Max Min II, Horizontal Loop, Electromagnetic Survey. Both of these surveys were handled by Exsics staff and completed over the entire property.

Magnetic Survey:

This survey was completed using the EDA Omni IV System and specifications for this unit can be found under Appendix A of this report.



EXSICS EXPLORATION LTD.
P.O. Box 1980, P4N-7X1
Suite 13, Hollinger Bldg. Timmins Ont.
Telephone: 705-267-4151

CLIENT: FALCONBRIDGE LIMITED

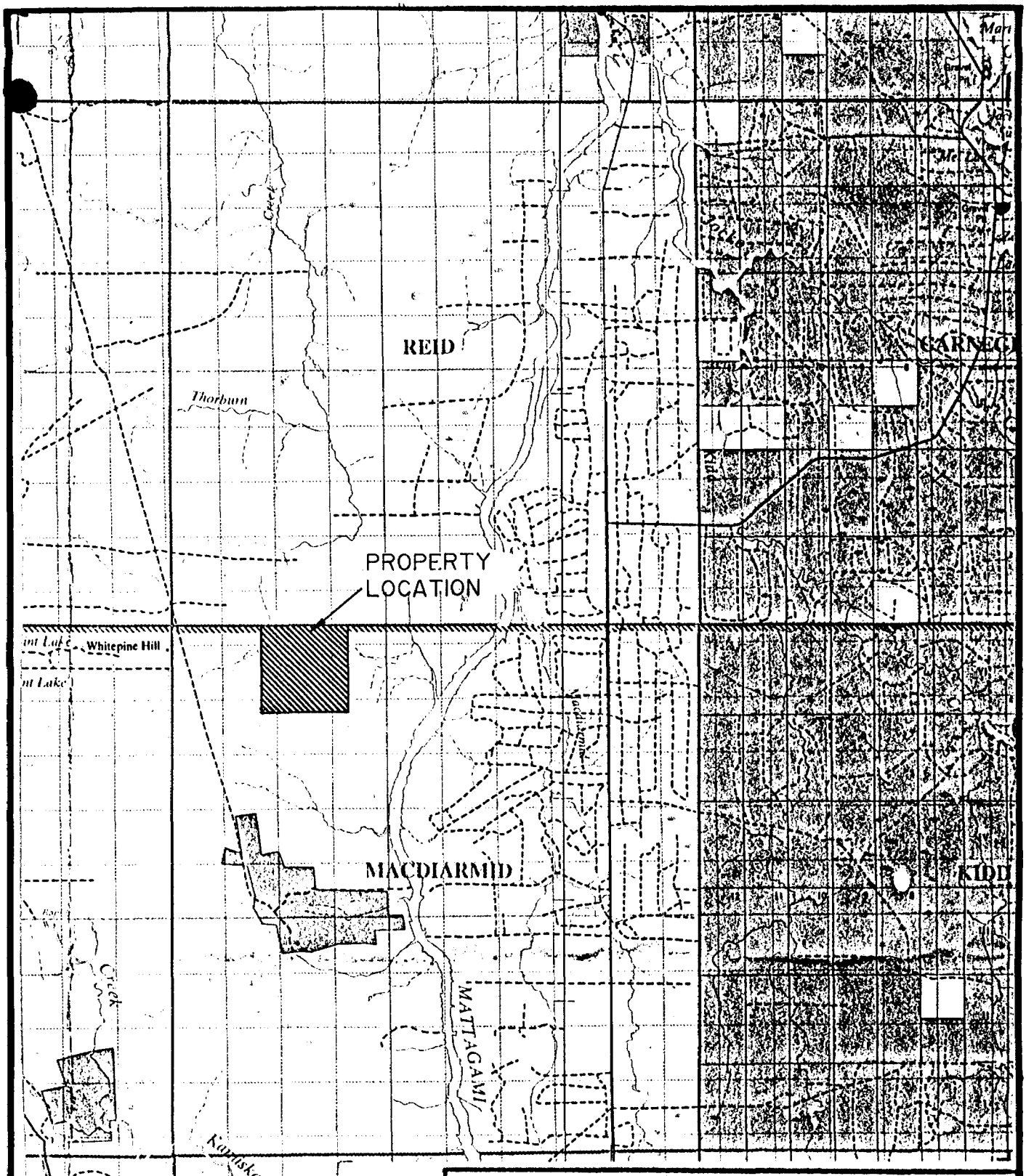
PROPERTY: MACDIARMID TWP. PROPERTY

TITLE:

LOCATION MAP

Fig. 1

Date: Nov. 1988	Scale: 1"= 125miles	NTS:
Drawn:	Interp:	Job No. EE-159



EXSICS EXPLORATION LTD.
P.O. Box 1690, P4N-7X1
Suite D, Hollinger Bldg. Timmins Ont.
Telephone: 705-267-4151

CLIENT: FALCONBRIDGE LIMITED.

PROPERTY: MACDIARMID TWP. PROPERTY

TITLE:

ROAD LOCATION MAP

Fig. 2

Date: Nov. 1988	Scale: 1:100,000	NTS:
Drawn:	Interp:	Job No. EE-159

The unit is capable of recording and storing magnetic values accurate to the decimal point, thus greatly improving the accuracy as well as the quality of the collected data.

A base station was established on the survey grid at a fixed point and this unit was tuned to a reference field of 58951 gammas. The field unit was also tuned at the same fixed point and set to the same reference field.

The base station unit was set to record and store readings at 30 second intervals so as to monitor any spiking or change in the earth's diurnal throughout the day.

At the end of each survey day, the field unit and base station unit are coupled together and the raw field data is dumped to the bas station mag where it is merged. The internal microprocessor then computes the diurnal variation in the earth's magnetic field for each survey grid coordinate by comparing the times at which readings were taken and computing any mid-interval values.

This is most useful in these northern latitudes where more detailed monitoring of the diurnal variations is required.

This correction is done during the data dump of the unit. The retreived data is the correct data ready for plotting. This plotted data has had a background of 58000 gammas removed for ease in plotting.

Horizontal Loop Survey:

This survey was completed using the Max Min II System manufactured by Apex Parametrics of Toronto.

Specifications for this system can be found as Appendix C of this report.

This survey is a two-man continuously portable EM System which is designed to measure both the vertical and horizontal in-phase (IP) and quadrature phase (QP) components of the anomalous field from electrically conductuve zones.

For this survey, a coil separation between the receiver and transmitter operator was set at 150 meters, which would give a theoretical search depth range of 70-80 meters.

The two frequencies chosen were the 1777 and 444 Hz channels which, in the past, have proven to be quite sufficient in this area.

The data was collected at the mid-point of the operators over the entire grid. One in-phase and quadrature value was recorded at each station.

This data was then directly plotted onto the base maps.

Base Maps

The base maps were set up at a scale of 1:5000 and all of the collected data was put on. For the magnetic data, 58000 gammas has been subtracted from each reading for ease in plotting. The data was then contoured at 50 gamma intervals wherever possible.

The Max Min maps were profiled at 1 cm to 20% and one map was used for each frequency. The plot point is the mid-point between the operators which accounts for the 75 meter blanks at the north and south end of each line.

The approximate position of the government, airborne targets have been place on each map.

Survey Results

The geophysical program conducted on the property was successful in outlining a number of areas of interest. These areas will be discussed in detail below.

The most predominant feature on the property is a HEM conductor which appears to run onto the property at L0E/950S and extend across the property at approximately 70 degrees Az to L15E/425S. This zone has an approximate conductivity of 2.5-10 mhos with a depth to source of 23-50 meters. It is coincidental with airborne electromagnetic conductors 1140J and 1120 I.

To the east the structure appears to be cut off at L15E by a cross-structure appearing as a magnetic low, with is most likely a fault zone as indicated by Map 2205, Timmins-Kirkland Lake Geological compilation series (figure 4). From L3E, going west, the strike of the zone shifts slightly northward and is offset to the south between L0E and L1E. This appears to be the result of a cross-structure indicated by a magnetic low, which again is most likely a fault zone, as shown by map 2205 (figure 4),

Just east of this the conductor appears to branch off from the main feature, from L5E/900S to L6E/875S. This may be the result of the zone thickening at this point or possibly stringer-type material, contained within or extending from the main zone.

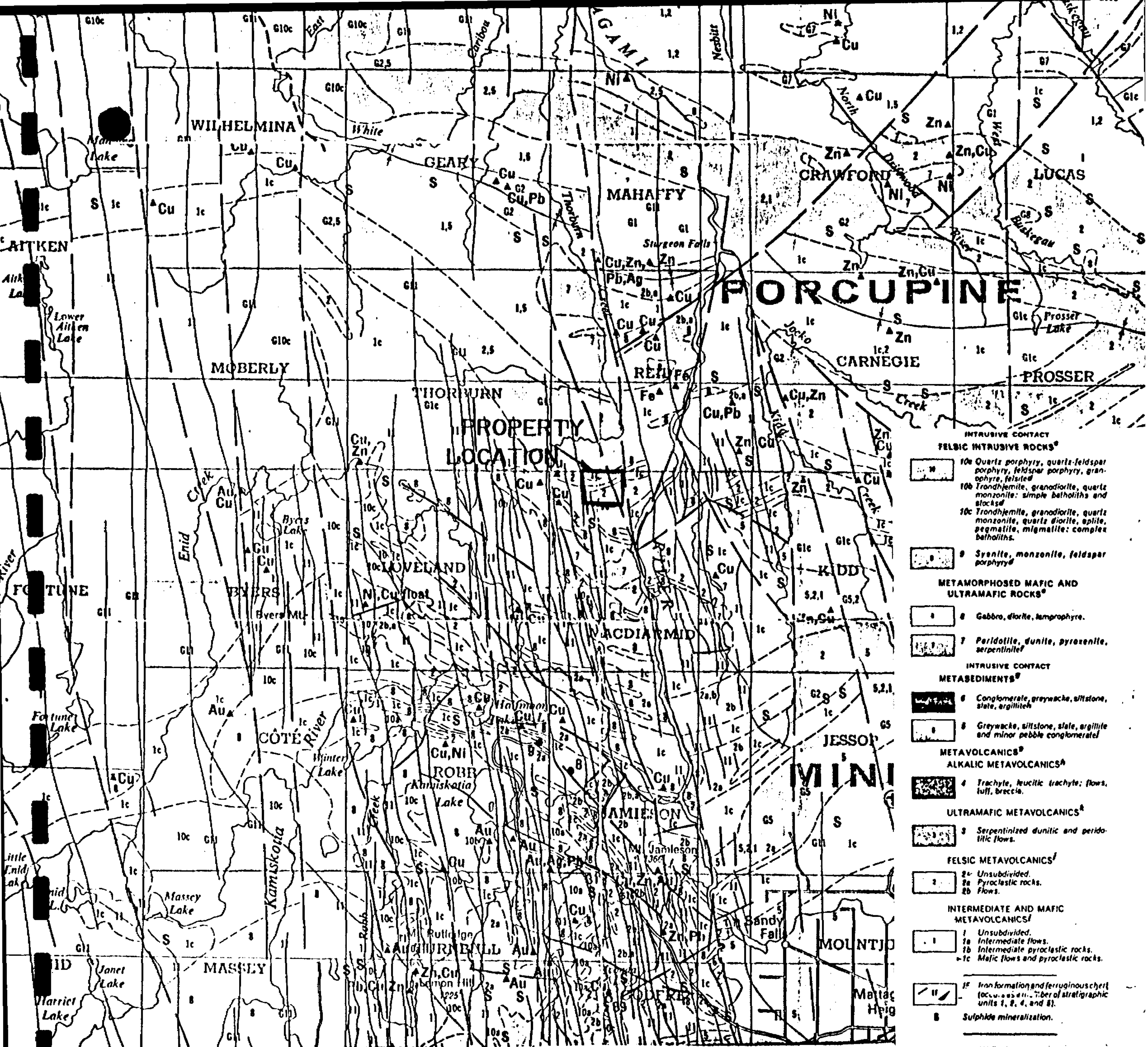
Although there are no apparent magnetics on strike with this zone, the HLEM response may be a result of the contact between the felsics and mafics as indicated by Map 2205 (figure 4).

The second area of interest is a HLEM conductor which extends from L8E/1125/S to L13E/1250S. It has a conductivity of 5-7.5 mhos, and a depth to source of 10-45 meters. It is coincidental with airborne electromagnetic conductors 1120H. This structure is flanked on both sides by magnetic highs on L9E, while it is flanked by lows to the north on L10E and to the south on L8E

These magnetic highs closely flanked by lows may be an indication of some sort of alteration. This zone may be a result of the contact between the mafic and felsic units shown by Map 2205 (figure 4).

Spotty magnetic highs and lows are also encountered where this zone appears to come in contact with the fault zone to the west, and there is no HLEM response over this area, the magnetics may be an indication of some sort of alteration in these areas.

Magnetic highs along the western boundary may be the result of a diabase dyke shown to run north south through this area by Map 2205 (figure 4).



Map 2205

FALCONBRIDGE LTD.
MACDIARMID PROPERTY

Fig. 4

EE-159

TIMMINS-KIRKLAND LAKE

Geological Compilation Series

COCHRANE, SUDBURY AND TIMISKAMING DISTRICTS

Scale 1:253,440 or 1 Inch to 4 Miles

Miles 2 1 0 2 4 6 8 10 12 14 16 18 20 Miles

Metres 5000 0 10 20 30 Kilometres

Conclusions and Recommendations

The HLEM survey conducted was successful in outlining a number of areas of interest. These areas would appear to be legitimate bedrock responses, well defined within the search depth capabilites of the instrument.

The zones discussed are definitely worthy of further follow-up work.

The main zone striking across the property at 70 degrees has a considerable strike length and may be contact related, despite the absence of magnetics.

The second zone may also be contact related but is also associated with magnetic highs and lows which may be an indication of alteration.

This magnetic signature is also apparent along the southern half of the western fault, suggesting possible alteration along the fault zone. As well test lines of induced polarization over some of these areas may help better define the source of responses outlined in this report.

Respectfully submitted,

J.C. Grant

CERTIFICATE OF QUALIFICATIONS

I, John Charles Grant do hereby certify:

1. that I am a geophysicist and reside at Lot 2 Martineau Avenue, Kamiskotia Lake, Timmins, Ontario.

2. that I am a Fellow of the Geological Association of Canada.

3. that I am a member of the Certified Engineering Technologist Association.

4. that I graduated from Cambrian College of Applied Arts and Technology, Sudbury Campus in 1975 with an Honour's diploma in Geology Technology.

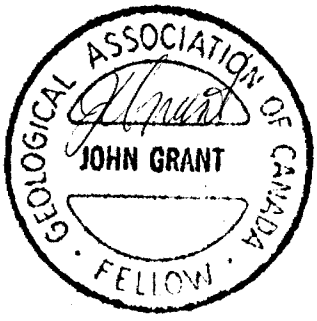
5. that I have practised my profession continuously for 13 years.

6. that my report on MacDiarmid Township property, for FALCONBRIDGE LIMITED is based on work carried out under my supervision.

4. I hold no specific or special interest in the described property. I have been retained as a Consulting Geophysicist for "the property".

Dated this 25th day of Nov.1988
at Timmins, Ontario

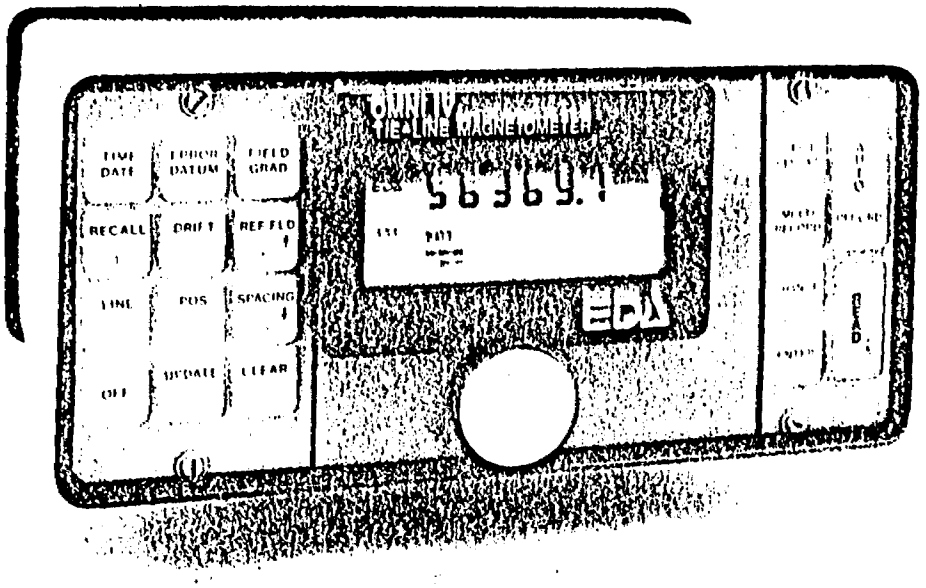
John C. Grant, C.E.T., F.G.A.C.



APPENDICES

OMNI IV "Tie-Line" Magnetometer

EDA



OMNI IV's Major Benefits

- Four Magnetometers in One
- Self Correcting for Diurnal Variations
- Reduced Instrumentation Requirements
- 25% Weight Reduction
- User Friendly Keypad Operation
- Universal Computer Interface
- Comprehensive Software Packages

EDA

Specifications

Dynamic Range	18,000 to 110,000 gammas. Roll-over display feature suppresses first significant digit upon exceeding 100,000 gammas.
Tuning Method	Tuning value is calculated accurately utilizing a specially developed tuning algorithm
Automatic Fine Tuning	± 15% relative to ambient field strength of last stored value
Display Resolution	0.1 gamma
Processing Sensitivity	± 0.02 gamma
Statistical Error Resolution	0.01 gamma
Absolute Accuracy	± 1 gamma at 50,000 gammas at 23°C ± 2 gamma over total temperature range
Standard Memory Capacity	
Total Field or Gradient	1,200 data blocks or sets of readings
Tie-Line Points	100 data blocks or sets of readings
Base Station	5,000 data blocks or sets of readings
Display	Custom-designed, ruggedized liquid crystal display with an operating temperature range from -40°C to + 55°C. The display contains six numeric digits, decimal point, battery status monitor, signal decay rate and signal amplitude monitor and function descriptors.
RS-232 Serial I/O Interface	2400 baud, 8 data bits, 2 stop bits, no parity
Gradient Tolerance	6,000 gammas per meter (field proven)
Test Mode	A. Diagnostic testing (data and programmable memory) B. Self Test (hardware)
Sensor	Optimized miniature design. Magnetic cleanliness is consistent with the specified absolute accuracy.
Gradient Sensors	0.5 meter sensor separation (standard), normalized to gammas/meter. Optional 1.0 meter sensor separation available. Horizontal sensors optional.
Sensor Cable	Remains flexible in temperature range specified, includes strain-relief connector
Cycling Time (Base Station Mode)	Programmable from 5 seconds up to 60 minutes in 1 second increments
Operating Environmental Range	-40°C to + 55°C; 0-100% relative humidity; weatherproof
Power Supply	Non-magnetic rechargeable sealed lead-acid battery cartridge or belt; rechargeable NiCad or Disposable battery cartridge or belt; or 12V DC power source option for base station operation.
Battery Cartridge/Belt Life	2,000 to 5,000 readings, for sealed lead acid power supply, depending upon ambient temperature and rate of readings
Weights and Dimensions	
Instrument Console Only	2.8 kg, 238 x 150 x 250mm
NiCad or Alkaline Battery Cartridge	1.2 kg, 235 x 105 x 90mm
NiCad or Alkaline Battery Belt	1.2 kg, 540 x 100 x 40mm
Lead-Acid Battery Cartridge	1.8 kg, 235 x 105 x 90mm
Lead-Acid Battery Belt	1.8 kg, 540 x 100 x 40mm
Sensor	1.2 kg, 56mm diameter x 200mm
Gradient Sensor (0.5m separation-standard)	2.1 kg, 56mm diameter x 790mm
Gradient Sensor (1.0m separation-optional)	2.2 kg, 56mm diameter x 1300mm
Standard System Complement	Instrument console; sensor; 3-meter cable, aluminum sectional sensor staff, power supply, harness assembly, operations manual.
Base Station Option	Standard system plus 30 meter cable
Gradiometer Option	Standard system plus 0.5 meter sensor

E D A Instruments Inc.
4 Thorncliffe Park Drive
Toronto, Ontario
Canada M4H 1H1
Telex: 06 23222 EDA TOR
Cable: Instruments Toronto
(416) 425 7800

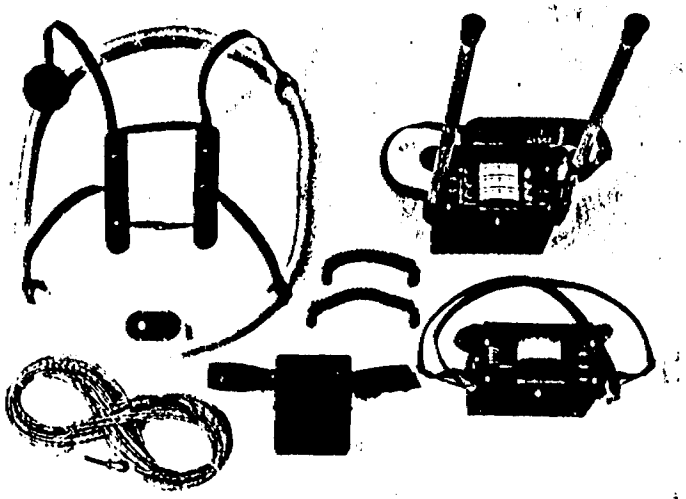
In U.S.A.
E D A Instruments Inc.
5151 Ward Road
Wheat Ridge, Colorado
U.S.A. 80033
(303) 422 9112

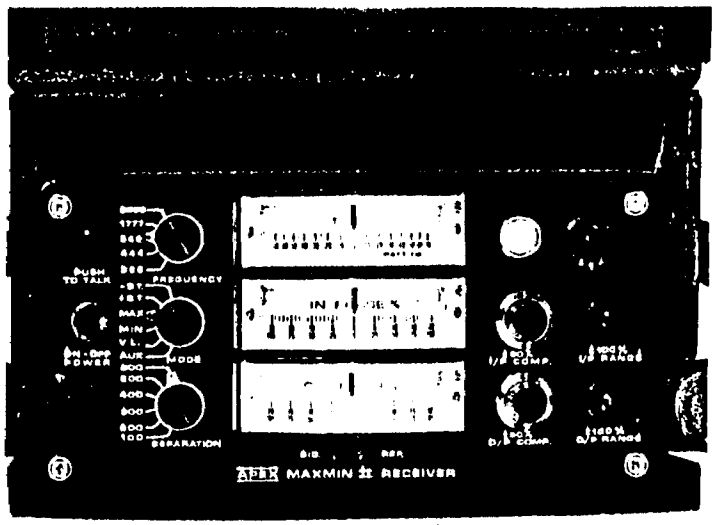
Printed in Canada

APPENIX B

APEX MAXMIN II PORTABLE EM

- Five frequencies: 222, 444, 888, 1777 and 3555 Hz.
- Maximum coupled (horizontal-loop) operation with reference cable.
- Minimum coupled operation with reference cable.
- Vertical-loop operation without reference cable.
- Coil separations: 25, 50, 100, 150, 200 and 250 m (with cable) or 100, 200, 300, 400, 600 and 800 ft.
- Reliable data from depths of up to 180 m (600 ft).
- Built-in voice communication circuitry with cable.
- Tilt meters to control coil orientation.





SPECIFICATIONS:

Frequencies: 222, 444, 888, 1777 and 3555 Hz.

Modes of Operation:
- MAX: Transmitter coil plane and receiver coil plane horizontal (Max-coupled; Horizontal-loop mode). Used with reference cable.
- MIN: Transmitter coil plane horizontal and receiver coil plane vertical (Min-coupled mode). Used with reference cable.
- V.L.: Transmitter coil plane vertical and receiver coil plane horizontal (Vertical-loop mode). Used without reference cable, in parallel lines.

Coil Separations: 25, 50, 100, 150, 200 & 250m (MMII) or 100, 200, 300, 400, 600 and 800 ft. (MMIIF).
Coil separations in V.L. mode not restricted to fixed values.

Parameters Read:
- In-Phase and Quadrature components of the secondary field in MAX and MIN modes.
- Tilt-angle of the total field in V.L. mode.

Readouts:
- Automatic, direct readout on 90mm (3.5") edgewise meters in MAX and MIN modes. No nulling or compensation necessary.
- Tilt angle and null in 90mm edgewise meters in V.L. mode.

Scale Ranges:
- In-Phase: ±20%, ±100% by push-button switch.
- Quadrature: ±20%, ±100% by push-button switch.
- Tilt: ±75% slope.
- Null (V.L.): Sensitivity adjustable by separation switch.

Readability: In-Phase and Quadrature: 0.25% to 0.5%; Tilt: 1%.

Repeatability: ±0.25% to ±1% normally, depending on conditions, frequencies and coil separation used.

Transmitter Output:
- 222 Hz : 220 Atm^2
- 444 Hz : 200 Atm^2
- 888 Hz : 120 Atm^2
- 1777 Hz : 60 Atm^2
- 3555 Hz : 30 Atm^2

Receiver Batteries: 8V trans. radio type batteries (4). Life: approx. 35 hrs. continuous duty (alkaline, 0.5 Ah), less in cold weather.

Transmitter Batteries: 12V 8 Ah Gel-type rechargeable battery. (Charger supplied).

Reference Cable: Light weight 2-conductor teflon cable for minimum friction. Unshielded. All reference cables optional at extra cost. Please specify.

Voice Link: Built-in intercom system for voice communication between receiver and transmitter operators in MAX and MIN modes, via reference cable.

Indicator Lights: Built-in signal and reference warning lights to indicate erroneous readings.

Temperature Range: -40°C to +60°C (-40°F to +140°F).

Receiver Weight: 6kg (13 lbs.)

Transmitter Weight: 13kg (29 lbs.)

Shipping Weight: Typically 60kg (135 lbs.), depending on quantities of reference cable and batteries included. Shipped in two field/shipping cases.

Specifications subject to change without notification

APEX PARAMETRICS LIMITED
200 STEELCASE RD. E., MARKHAM, ONT., CANADA, L3R 1G2

Phone: (416) 495-1612 Cables: APEXPARA TORONTO Telex: 06-966773 NORDVIK TOR

APPENDIX C

Ministry of Northern Affairs and Mines

Ontario

Report of Work

(Geophysical, Geological, Geochemical and Expenditures)

W8806-5.00092-11902

42A12NE0507 2.11902 MACDIARMID

900

Type of Survey(s)

MAG/EM & MAGNETIC SURVEYS | MACDIARMID TWP.

Claim Holder(s)

FALCONBRIDGE LIMITED. | Prospector's Licence No. A-04647

Address

571 MONETA AVE, TIMMINS, ONTARIO

Survey Company

EXSICS EXP. LTD.

Date of Survey (from & to): 2 Day | 7 Mo. | 88 Yr. | 28 Day | 7 Mo. | 88 Yr.

Total Miles of line Cut: 19.8 miles

Name and Address of Author (of Geo-Technical report)

JOHN. C. GRANT, BOX 1880, TIMMINS, Ont. P4N-7X1

Credits Requested per Each Claim in Columns at right

		Days per Claim
Special Provisions: For first survey: Enter 40 days. (This includes line cutting) For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical - Electromagnetic	20
	Geophysical - Magnetometer	40
	Geophysical - Radiometric	
	Geophysical - Other	
	Geological	
	Geochemical	
Man Days: Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	Magnetometer	
	Radiometric	
	Other	
	Geological	
	Geochemical	
Airborne Credits: Note: Special provisions credits do not apply to Airborne Surveys.		Days per Claim
	Electromagnetic	
	Magnetometer	
	Radiometric	

PORCUPINE MINING DIVISION RECEIVED SEP 26 1988

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
P	995482	
	995481	
	995480	
	995479	
	996066	
	996067	
	996068	
	996069	
	996070	
	996071	
	996072	
	996073	
	996074	
	996075	
	996076	
	996077	

RECORDED SEP 26 1988

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED OCT 24 1988 MINING LANDS SECTION

Total number of mining claims covered by this report of work: 16

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

ONTARIO GEOLOGICAL SURVEY ASSESSMENT FILES OFFICE DEC 20 1988 RECEIVED

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

Instructions

Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
960	Sept 26/88	
	Date Approved as Recorded: 8 Dec 88	Branch Director

Date: Sept 23/88

Recorded Holder or Agent (Signature): JOHN GRANT

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying

J.C. GRANT, BOX 1880, TIMMINS, ONTARIO. P4N-7X1

Date Certified: Sept 23/88

Certified by (Signature): J. Grant

1362 (85/9)

Ministry of Northern Development and Mines

Ontario

Geophysical-Geological-Geochemical Technical Data Statement

File _____

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Magnetic and Electromagnetic

Township or Area MacDiarmid Township

Claim Holder(s) Falconbridge Limited

Survey Company Exsics Exploration Ltd.

Author of Report J.C.Grant

Address of Author Box 1880, Timmins, Ontario

Covering Dates of Survey June 1/88-Nov 14/88 (linecutting to office)

Total Miles of Line Cut 30.5 km (18.95)miles

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
–Electromagnetic	20
–Magnetometer	40
–Radiometric	
–Other	
Geological	
Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____ (enter days per claim)

DATE: Nov 18/88 SIGNATURE: JOHN GRANT (Author of Report or Agent)

GEOLOGICAL ASSOCIATION OF CANADA · FELLOW

Res. Geol. _____ Qualifications 2.524

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
P	995479
P	995480
P	995481
P	995482
P	996066
P	996067
P	996068
P	996069
P	996070
P	996071
P	996072
P	996072
P	996073
P	996074
P	996075
P	996076
P	996077

TOTAL CLAIMS 16

If space insufficient, attach list

OFFICE USE ONLY

837 (85/12)

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS – If more than one survey, specify data for each type of survey

Number of Stations Mag and Max Min 1170 Number of Readings Mag and Max Min 1170

Station interval 25 meters Line spacing 100 meters

Profile scale 1" - 10%

Contour interval 50 gammas

MAGNETIC

Instrument EDA Omni IV

Accuracy – Scale constant ±1 gamma

Diurnal correction method Base station correction

Base Station check-in interval (hours) Reading taken every 30 seconds

Base Station location and value 58951

ELECTROMAGNETIC

Instrument Apex Max-Min II

Coil configuration Co-planer

Coil separation 150 meters

Accuracy ± 0.5%

Method: ☐ Fixed transmitter ☐ Shoot back ☒ In line ☐ Parallel line

Frequency 444Hz 1777Hz
(specify V.L.F. station)

Parameters measured In-phase and quadrature (out of phase)

GRAVITY

Instrument

Scale constant

Corrections made

Base station value and location

Elevation accuracy

IND[illegible] P[illegible]RIZ[illegible]N RESISTIVITY

Instrument

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time Frequency

– Off time Range

– Delay time

– Integration time

Power

Electrode array

Electrode spacing

Type of electrode

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY

S.R.O. – SURFACE RIGHTS ONLY

M.+S. – MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File

NOTES

THIS TOWNSHIP LIES WITHIN THE MUNICIPALITY OF THE CITY OF TIMMINS.

FLOODING RIGHTS ALONG MATTAGAMI RIVER RESERVED TO ONT. HYDRO, L.O. 7085

REID TWP.

2.11902

LOVELAND TWP.

KIDD TWP.

JAMIESON TWP.

1M. 2M. 3M. 4M. 5M.

17M. 16M. 15M. 14M. 13M. 12M.

Mattagami River

Kamiskotia R.

ONT. HYDRO LINE

48°37'30"

81°28'

LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" , SURFACE RIGHTS ONLY	◒
" , MINING RIGHTS ONLY	◒
LEASE, SURFACE & MINING RIGHTS	■
" , SURFACE RIGHTS ONLY	◨
" , MINING RIGHTS ONLY	◨
LICENCE OF OCCUPATION	▼
ORDER-IN-COUNCIL	OC
RESERVATION	Ⓡ
CANCELLED	⊗
SAND & GRAVEL	Ⓢ

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000

METRES 0 200 1000 (1 KM) 2000 (2 KM)

TOWNSHIP

MACDIARMID

M.N.R. ADMINISTRATIVE DISTRICT

TIMMINS

MINING DIVISION

PORCUPINE

LAND TITLES / REGISTRY DIVISION

COCHRANE

Ontario Ministry of Natural Resources — Land Management Branch

Date MARCH, 1985

checked J.P. L.H. James 6/88

Number G-3242

L 0+00 | L 1+00E | L 2+00E | L 3+00E | L 4+00E | L 5+00E | L 6+00E | L 7+00E | L 8+00E | L 9+00E | L 10+00E | L 11+00E | L 12+00E | L 13+00E | L 14+00E | L 15+00E | L 16+00E | L 17+00E

N

REID TOWNSHIP

MACDIARMID TOWNSHIP

BL 0+00

2+00S

TL 4+00S

6+00S

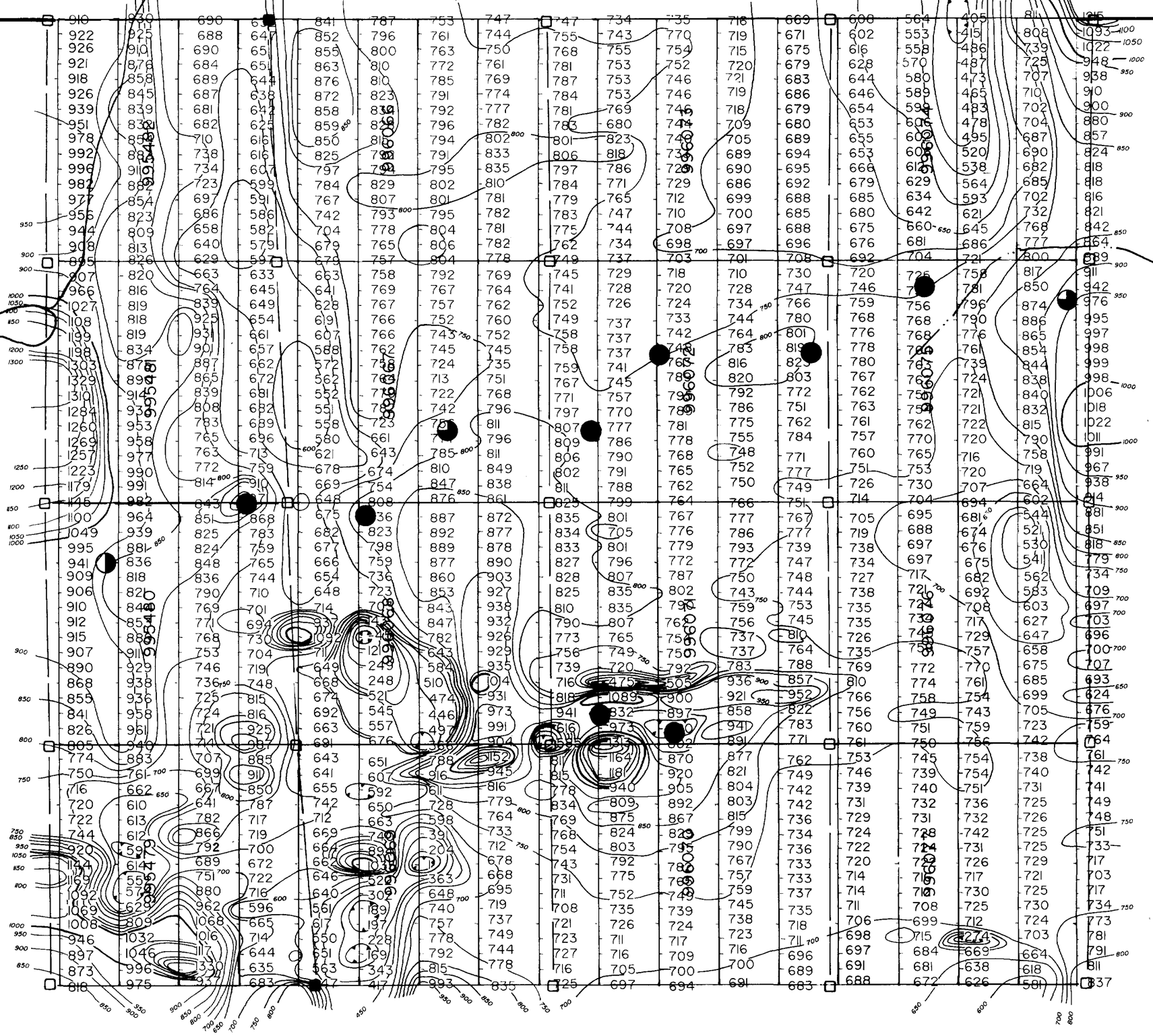
TL 8+00S

10+00S

TL 12+00S

14+00S

TL 16+00S



L 0+00 | L 1+00E | L 2+00E | L 3+00E | L 4+00E | L 5+00E | L 6+00E | L 7+00E | L 8+00E | L 9+00E | L 10+00E | L 11+00E | L 12+00E | L 13+00E | L 14+00E | L 15+00E | L 16+00E | L 17+00E

2.11902

AIRBORNE ANOMALY

DECAY INTERVAL CLASSIFICATION

- 1-2 Channel (350, 450 microseconds)
- 3-4 Channel (550, 670 microseconds)
- 5-6 Channel (790, 910 microseconds)
- 7-8 Channel (1050, 1190 microseconds)
- 9-10 Channel (1350, 1510 microseconds
- 11-12 Channel (1680, 1870 microseconds

42A12NE0507 2.11902 MACDIARMID

210

LEGEND

Instrument: EDA OMNI-IV
Parametres Measured: Earth's total magnetic field
Accuracy: +/- 1 nano-teslas
Diurnals: Corrected by base station recorder
Contour Interval: 0,50,100,150,200,250,.....
Reference Field: 58951
Datum Subtracted: 58000

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

CLIENT: FALCONBRIDGE LIMITED

PROPERTY: MACDIARMID TOWNSHIP

TITLE: CONTOURED MAGNETOMETER SURVEY

GEOLOGICAL ASSOCIATION OF CANADA · JOHN GRANT · FELLOW

Date: JULY 1988	Scale: 1:5000	NTS:
Drawn: P.G.	Interp: J. Grant	Job No EE-159

L 0+00 L 1+00E L 2+00E L 3+00E L 4+00E L 5+00E L 6+00E L 7+00E L 8+00E L 9+00E L 10+00E L 11+00E L 12+00E L 13+00E L 14+00E L 15+00E L 16+00E L 17+00E

N

REID TOWNSHIP

BL 0+00

MACDIARMID TOWNSHIP

BL 0+00

2+00S

TL 4+00S

6+00S

TL 8+00S

10+00S

TL 12+00S

14+00S

TL 16+00S

995482 995481 995480 995479 996068 996069 996070 996071 996072 996073 996074 996075 996076 996077

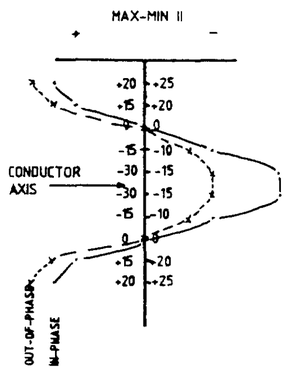
L 0+00 L 1+00E L 2+00E L 3+00E L 4+00E L 5+00E L 6+00E L 7+00E L 8+00E L 9+00E L 10+00E L 11+00E L 12+00E L 13+00E L 14+00E L 15+00E L 16+00E L 17+00E

2.11902

AIRBORNE ANOMALY

DECAY INTERVAL CLASSIFICATION

- 1-2 Channel (350, 450 microseconds)
- 3-4 Channel (550, 670 microseconds)
- 5-6 Channel (790, 910 microseconds)
- 7-8 Channel (1050, 1190 microseconds)
- 9-10 Channel (1350, 1510 microseconds)
- 11-12 Channel (1680, 1870 microseconds)



LEGEND

INSTRUMENT: Apex Parametrics Max-Min 11
MODE: Maximum Coupled, Horizontal Loop Survey
PARAMETRES MEASURED: Inphase (%)
Out of phase (%)
FREQUENCY: 1777 Hz
COIL SEPARATION: 150m
OPERATOR: D. Collin, W. Pearson
PROFILE SCALE: 1cm =20%

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

CLIENT: FALCONBRIDGE LIMITED

PROPERTY: MACDIARMID TOWNSHIP

TITLE: MAX-MIN II 1777 Hz

Date: JULY 1988	Scale: 1:5000	NTS
Drawn: P.G.	Interp: J. Grant	Job No EE-159

GEOLOGICAL ASSOCIATION OF CANADA — JOHN GRANT — FELLOW

42A12NE0507 2.11902 MACDIARMID

220

L 0+00 L 1+00E L 2+00E L 3+00E L 4+00E L 5+00E L 6+00E L 7+00E L 8+00E L 9+00E L 10+00E L 11+00E L 12+00E L 13+00E L 14+00E L 15+00E L 16+00E L 17+00E

N

REID TOWNSHIP

BL 0+00

MACDIARMID TOWNSHIP

BL 0+00

2+00S

TL 4+00S

6+00S

TL 8+00S

10+00S

TL 12+00S

14+00S

TL 16+00S

995482 995481 995480 995479 996066 996067 996068 996069 996073 996072 996071 996070 996074 996075 996076 996077

1100H 1090H 1080H 1070H 1110J 1120H 1130J 1140J 1150J 5mhos 10mhos 25mhos 50mhos

L 0+00 L 1+00E L 2+00E L 3+00E L 4+00E L 5+00E L 6+00E L 7+00E L 8+00E L 9+00E L 10+00E L 11+00E L 12+00E L 13+00E L 14+00E L 15+00E L 16+00E L 17+00E

2.11902

AIRBORNE ANOMALY

DECAY INTERVAL CLASSIFICATION

- 1-2 Channel (350, 450 microseconds)
- 3-4 Channel (550, 670 microseconds)
- 5-6 Channel (790, 910 microseconds)
- 7-8 Channel (1050, 1190 microseconds)
- 9-10 Channel (1350, 1510 microseconds)
- 11-12 Channel (1680, 1870 microseconds)

42A12NE0507 2.11902 MACDIARMID

230

MAX-MIN II

CONDUCTOR AXIS

OUT-OF-PHASE

IN-PHASE

LEGEND

INSTRUMENT: Apex Parametrics Max-Min 11
MODE: Maximum Coupled, Horizontal Loop Survey
PARAMETRES MEASURED: Inphase (%)
Out of phase (%)
FREQUENCY: 444 Hz
COIL SEPARATION: 150m
OPERATOR: D. Collin, W. Pearson
PROFILE SCALE: 1cm=20%

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

CLIENT: FALCONBRIDGE LIMITED

PROPERTY: MACDIARMID TOWNSHIP

TITLE: MAX-MIN II 444 Hz

Date: JULY 1988 | Scale: 1:5000 | NTS:

Drawn: P.G. | Interp: J. Grant | Job No. EE-159

PROFESSIONAL ENGINEERS ASSOCIATION OF ONTARIO JOHN GRANT TIMMINS