

REPORT ON
GEOPHYSICAL WORK

ON

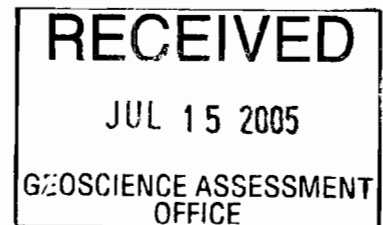
TURN-43
TURNBULL TOWNSHIP

2.30252

NTS: 42-A/12

PROJ #:

for
FALCONBRIDGE LIMITED



JULY 2005

D. LONDROY
TIMMINS GEOPHYSICS LTD.

SUMMARY AND RECOMMENDATIONS

HLEM and magnetic surveys were carried out on the TURN-43 property for Falconbridge Limited in October 2004.

The HLEM survey outlined one narrow, bedrock conductor on the property with a strike length of approximately 100 metres in a south southeast direction. It is recommended that this anomaly is tested with a diamond drill hole on Line 1250 East where there is a coincident magnetic anomaly.

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INTRODUCTION

During October 2004, magnetic and horizontal loop electromagnetic (HLEM) surveys were run on the TURN-43 property for Falconbridge Limited. This work was part of an exploration program which included five grids in Turnbull, Loveland, Byers and Cote´ Townships.

The property is located 25 kilometres west of the city of Timmins in the central part of Turnbull Township, Porcupine Mining Division (Figure 1(a)). It was accessed from a bush road which runs north from the Mallette haulage road. The survey area covers part of one mining claim which consists of thirteen, 40 acre claim units (Table 1).

The magnetic survey was carried out by J. DerWeduwen and the HLEM survey was run by J. DerWeduwen and the S. Polsen.

CLAIM #	# of UNITS	RECORDING DATE	RECORDED HOLDER	DESCRIPTION	TOWNSHIP
P 3012813	13	July 14, 2003	Falconbridge Limited		Turnbull

Table 1 : Property Description

GENERAL GEOLOGY

The geology of Turnbull Township, together with Godfrey Township, is presented on map P2330 (Middleton, 1976) at a scale of 1:31680 and on map P3396 at a scale of 1:50,000, as part of a study of the Kamiskotia area (Barrie, 2000). It is also presented more regionally on map 2205 at a scale of 1:253,440 (Pyke, 1973) and on map P3379 at a scale of 1:100,000 (Ayer etal, 1998).

Turnbull Township is underlain by mafic-ultramafic intrusions of the Kamiskotia Gabbroic Complex

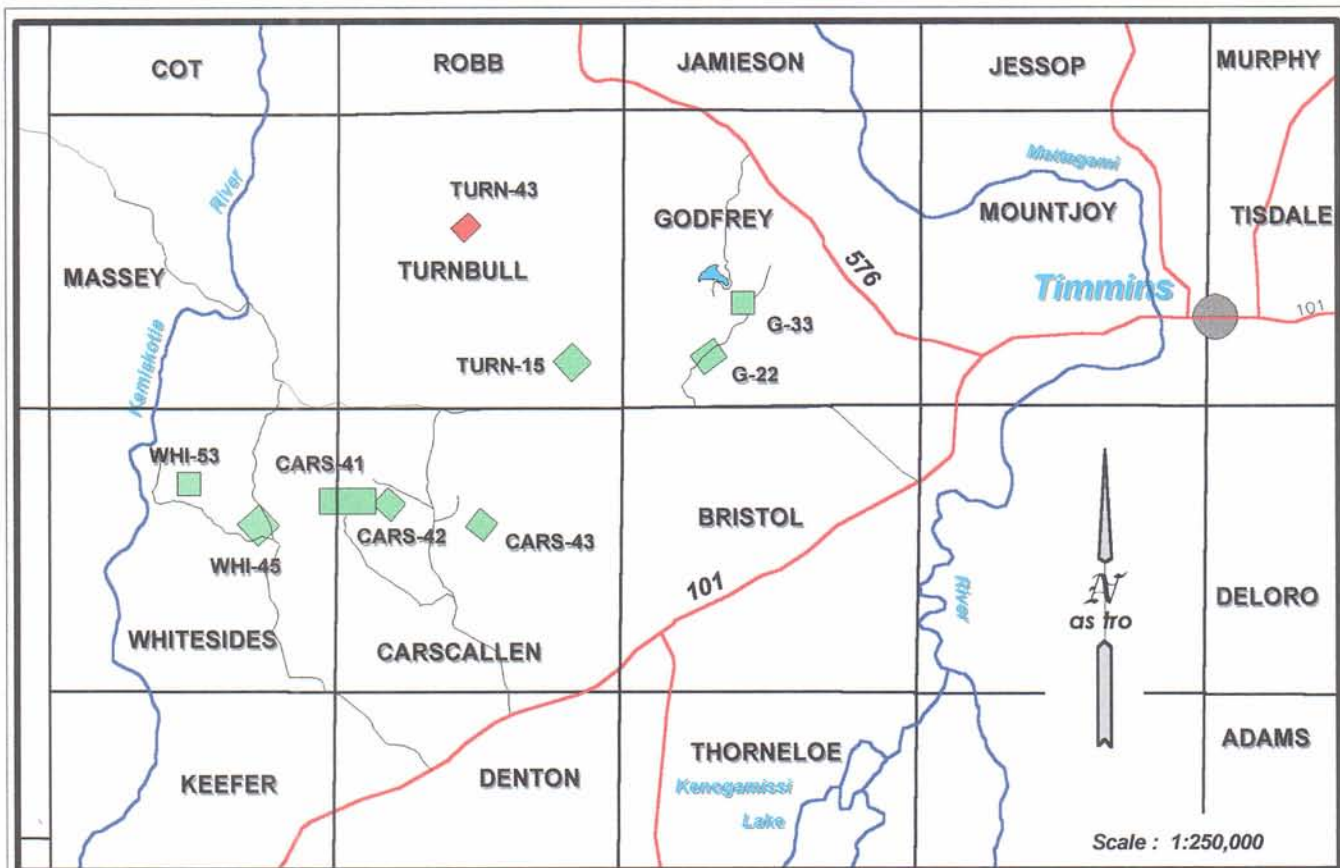


Figure 1(a) : Location Map

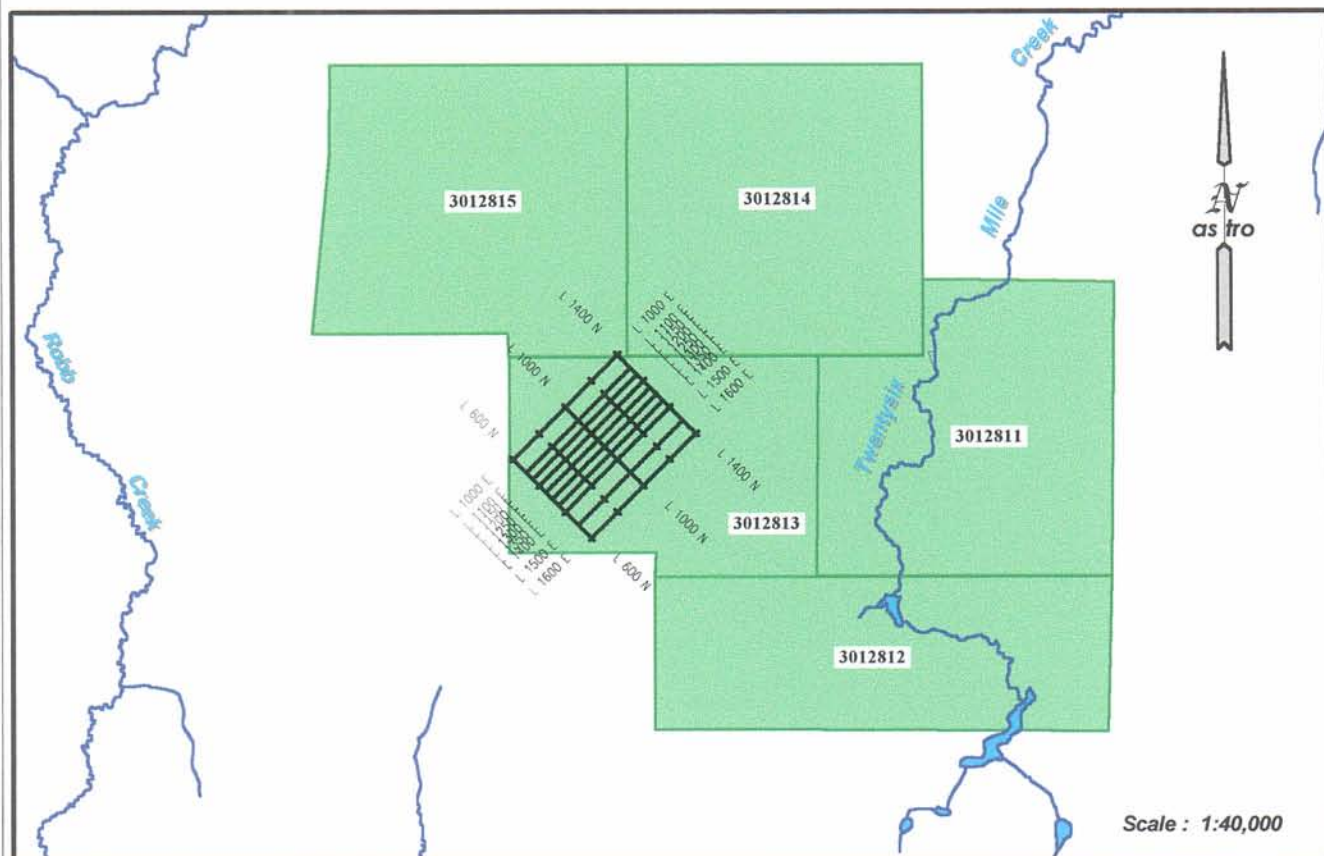


Figure 1(b) : Claim Map

and surrounding mafic and felsic volcanics of the Kamiskotia Volcanic Complex. The Kamiskotia Volcanic Complex hosts the Kam-Kotia deposit to the north northeast in Robb Township, the Jameland and Canadian Jamieson deposits to the northeast in Jamieson Township and the Genex deposit to the east in Godfrey Township.

The TURN-43 grid is underlain by north-south striking felsic to intermediate volcanics which have been intruded by ultramafic and felsic bodies. All of the rocks are cut by north-south striking diabase dikes.

PREVIOUS WORK

The following is a description of previous exploration work carried out on the TURN-43 property (Table 2).

In 1965, **Lancer Petroleums Limited** ran an HLEM survey over a block of 10 claims directly to the west of the present survey area. The survey was carried out along east-west grid lines spaced every 300 feet. A coil separation of 200 feet was used at a frequency of 1600 Hertz. No conductors were detected.

In 1977, **Conwest Exploration Company** ran an HLEM survey over three claim blocks in Thorburn Township, one directly to the east of the present survey area. The grids on the claim blocks consisted of east-west lines spaced every 400 feet. The EM survey was run with a coil separation of 600 feet at frequencies of 222, 888 and 1777 Hertz. Anomalies on a grid to the east of the TURN-43 grid were interpreted to have a surficial source.

In 1984, **G. H. Erikson** ran a magnetic survey over a block of 28 claims directly to the northeast of the present survey area. The survey was run along north-south lines spaced every 300 feet with a total field, proton precession magnetometer.

In 1987, the **Ontario Geological Survey** flew an airborne magnetic and EM survey over the Timmins area which included Tumbull Township (OGS, 1988). This survey was flown along north-south lines spaced

YEAR	COMPANY	GEOPHYSICS	DRILL HOLES	AFRI FILE
1965	Lancer Petroleums Limited	HLEM		42A05NE0133
1977	Conwest Exploration Company Ltd	HLEM		42A05NE8517
1984	G. H. Erikson	Mag		42A12SE0523
1991 1991	Falconbridge Limited	Mag, HLEM	TURN53-01, 02, 03	42A12SE0522 42A12SE8901

Table 2. Summary of previous assessment work.

approximately every 200 metres.

In 1991, **Falconbridge Limited** carried out magnetic and HLEM surveys over a block of fourteen claims which included the present TURN-43 property. The grid on the property consisted of east-west lines spaced every 100 metres and picketed every 20 metres. The magnetic survey was run with a total field, proton precession magnetometer and the HLEM survey was run with a coil separation of 150 metres and frequencies of 444 and 1777 Hertz. Three diamond drill holes (TURN53-01, 02 and 03) were sunk during the same year to test EM anomalies. The holes intersected mafic to intermediate flows and intrusives. The conductivity might be explained by pyrite/pyrrhotite mineralization in the holes.

SURVEY DESCRIPTIONS

The grid on the TURN-43 property consists of lines oriented at 45° Az (Figure 1(b)). The lines are spaced every 50 metres in the central part of the grid and 100 metres on the east and west edges. All of the lines are picketed every 25 metres.

The magnetic readings were taken every 12.5 metres with a Scintrex IGS-2/MP-4. This instrument is a proton precession magnetometer which measures the earth's total magnetic field to an accuracy of 0.1

nT. Diurnal variations were monitored every 10 seconds with a Scintrex MP-3 base station magnetometer, located off the property. A total of 797 readings were taken along 9.8 kilometres of line.

The horizontal loop EM survey was carried out with the Apex Parametrics MaxMin I-5 and MMC datalogger. This instrument measures and records the in-phase and quadrature components of the secondary field as a percentage of the primary field; the depth of penetration is approximately one half of the coil separation. Readings were taken every 25 metres using a coil separation of 150 metres and frequencies of 444, 1777 and 3555 Hertz. A total of 325 stations were read along 9.8 kilometres of line.

EM RESULTS

The results of the HLEM survey are profiled on maps 1, 2 and 3 at a scale of 1:2500; the profile scale used for all of the frequencies is 1 cm = 10 %. The results using 444 Hertz are also presented in Figure 2 at a scale of 1:7,500. One bedrock conductor was detected in the survey.

Anomaly 'A' is a very low amplitude response which strikes south southeast from 1012 North on Line 1200 East to 987 North on Line 1250 East. The source of the anomaly is good conductivity at a depth to the top of the conductor of 70 to 90 metres (Table 3). The profile on Line 1250 East suggests a dip to the east.

LINE	ANOMALY CENTER	ANOMALY WIDTH (m)	IP (%)	Q (%)	DEPTH (m)	CONDUCTIVITY THICKNESS (mhos)	COMMENTS
1200 E	1012 N	narrow	3	2	90	28	
1000 N	1225 E	narrow	3	2	90	28	
1000 N	1225 E	narrow	3	2	72	21	
1250 E	987 N	narrow	3	2	90	28	

Table 3: Anomaly 'A' Interpretation, 444 Hz, 150 metre coil separation.

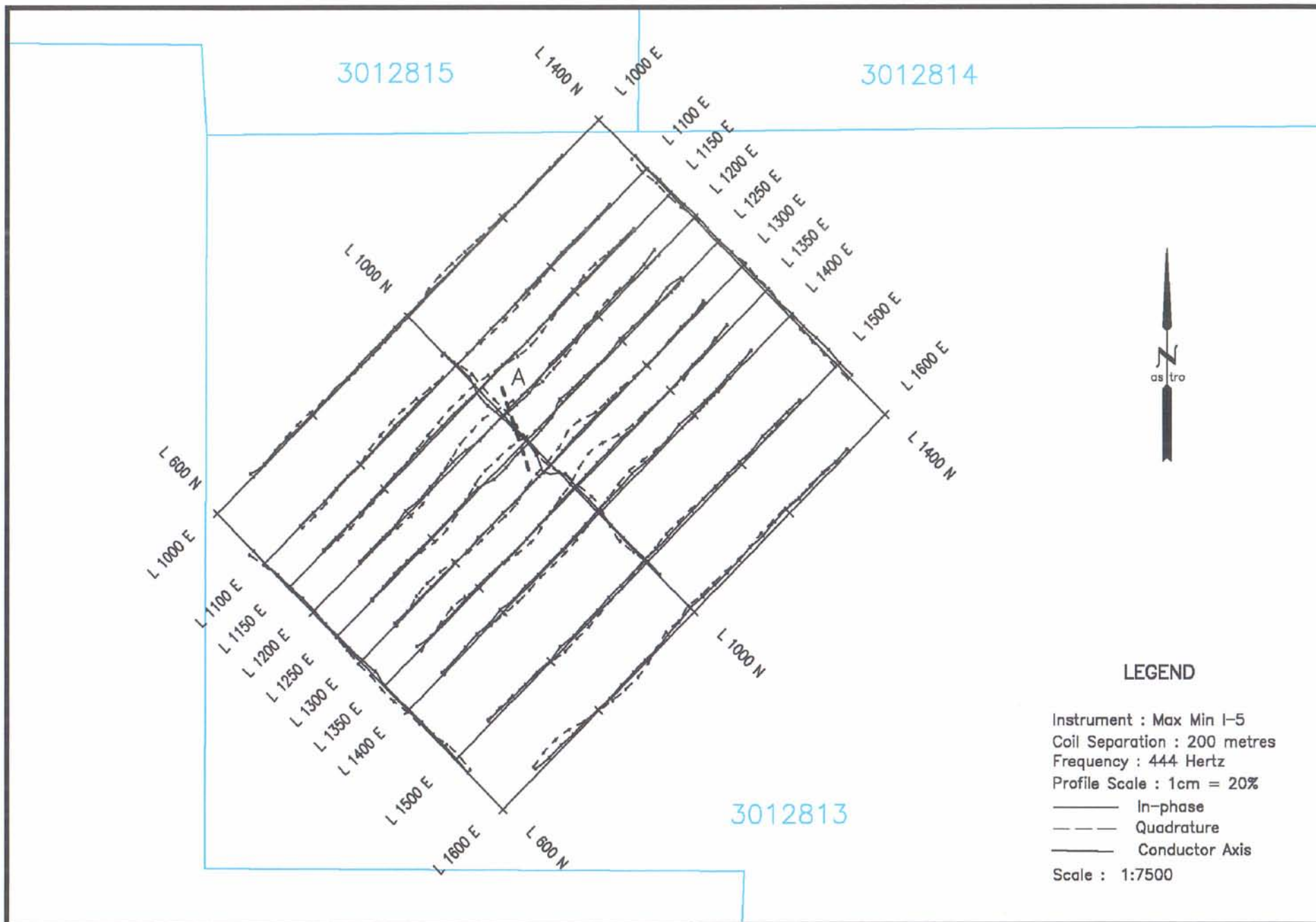


Figure 2 : HLEM Results, 444 Hertz, TURN-43

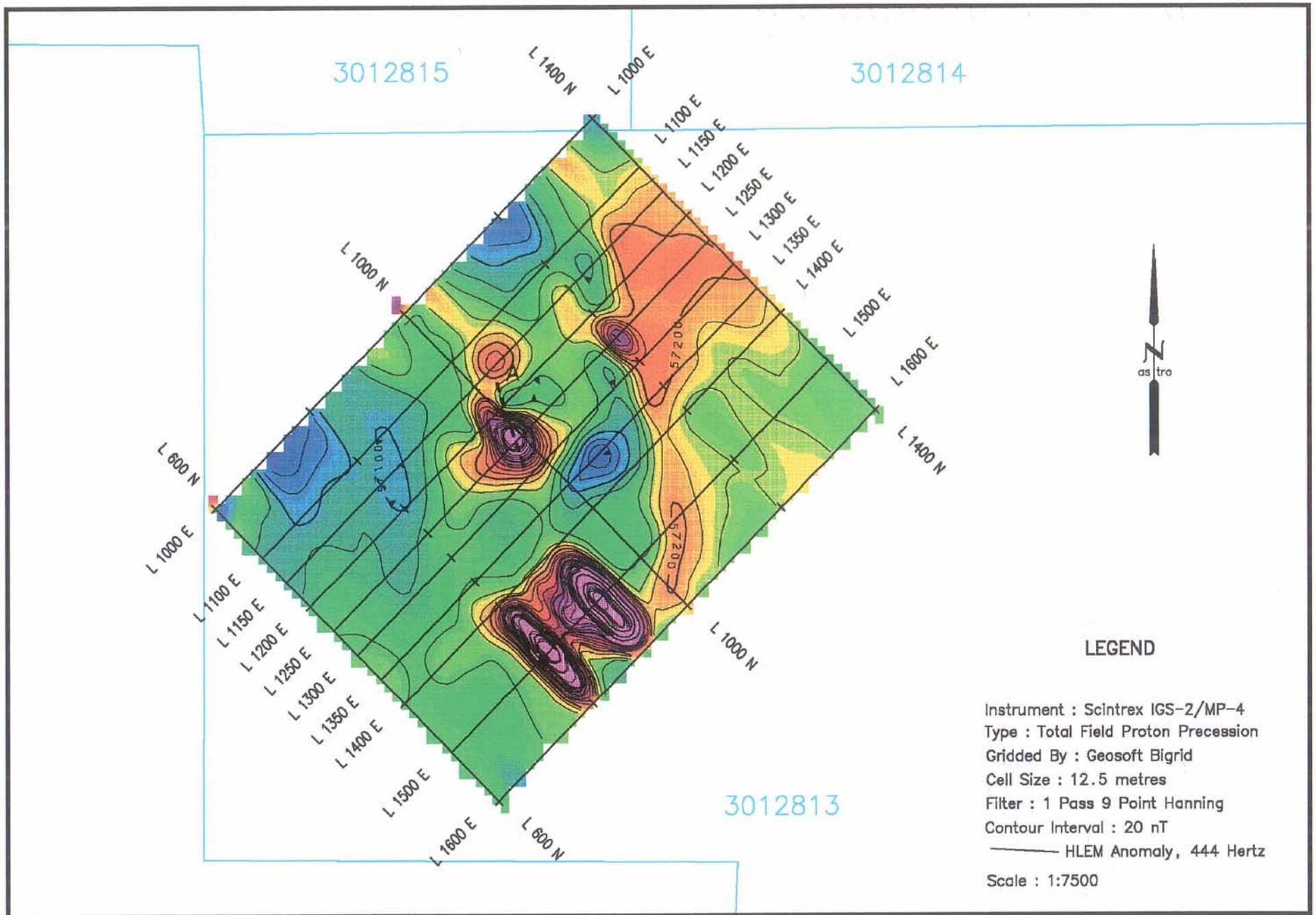


Figure 3 : Total Magnetic Field, TURN-43

The width of the source is narrow and the strike length is approximately 100 metres. The inversion of both the in-phase and quadrature components in the middle of the anomaly on Line 1000 North is due to the angle at which the line crosses the conductor and the small dimensions of the conductor. This conductivity was detected in the 1991 Falconbridge survey, however, it was not drill tested.

A number of quadrature component anomalies are identified but not labelled in the high frequency results (1777 and 3555 Hertz). The very poor conductivity indicated by the low in-phase/quadrature ratio suggests that the source is surficial.

MAGNETIC RESULTS

The magnetic results are contoured every 50 nT on map 4 at a scale of 1:5000. The results are also plotted in Figure 3 at a scale of 1:7500.

A narrow linear magnetic high anomaly, approximately 50 to 100 nT above background, strikes north-south between the middle of Line 1600 East and the north end of Line 1000 East. This anomaly may be a contact aureole around the felsic intrusive to the west. A number of isolated magnetic high anomalies occur close to the contact; the two anomalies on Line 1500 East at 800 North and 912.5 North have a maximum amplitude of 1600 nT. The anomaly centered at 987.5 North on Line 1250 East has an amplitude of approximately 500 nT and is associated with EM anomaly 'A'. Based on drill results to the north the source of all of these anomalies is likely pyrrhotite mineralization.

July 8, 2005
Date


D. Londry
Timmins Geophysics Ltd.

REFERENCES

Ayer, J.A. and Trowell, N.F.

1998: Geological Compilation of the Timmins Area, Abitibi Greenstone Belt; Ontario Geological Survey, Preliminary **Map P.3379**, scale 1:100,000.

Barrie, C.T.

2000: Geology of the Kamiskotia area; Ontario Geological Survey, Preliminary **Map P.3396**, scale 1:50,000.

Middleton, R.S.

1976: Turnbull and Godfrey townships, District of Cochrane; Ontario Department of Mines, **Map 2330**, scale 1:31680.

Ontario Geological Survey

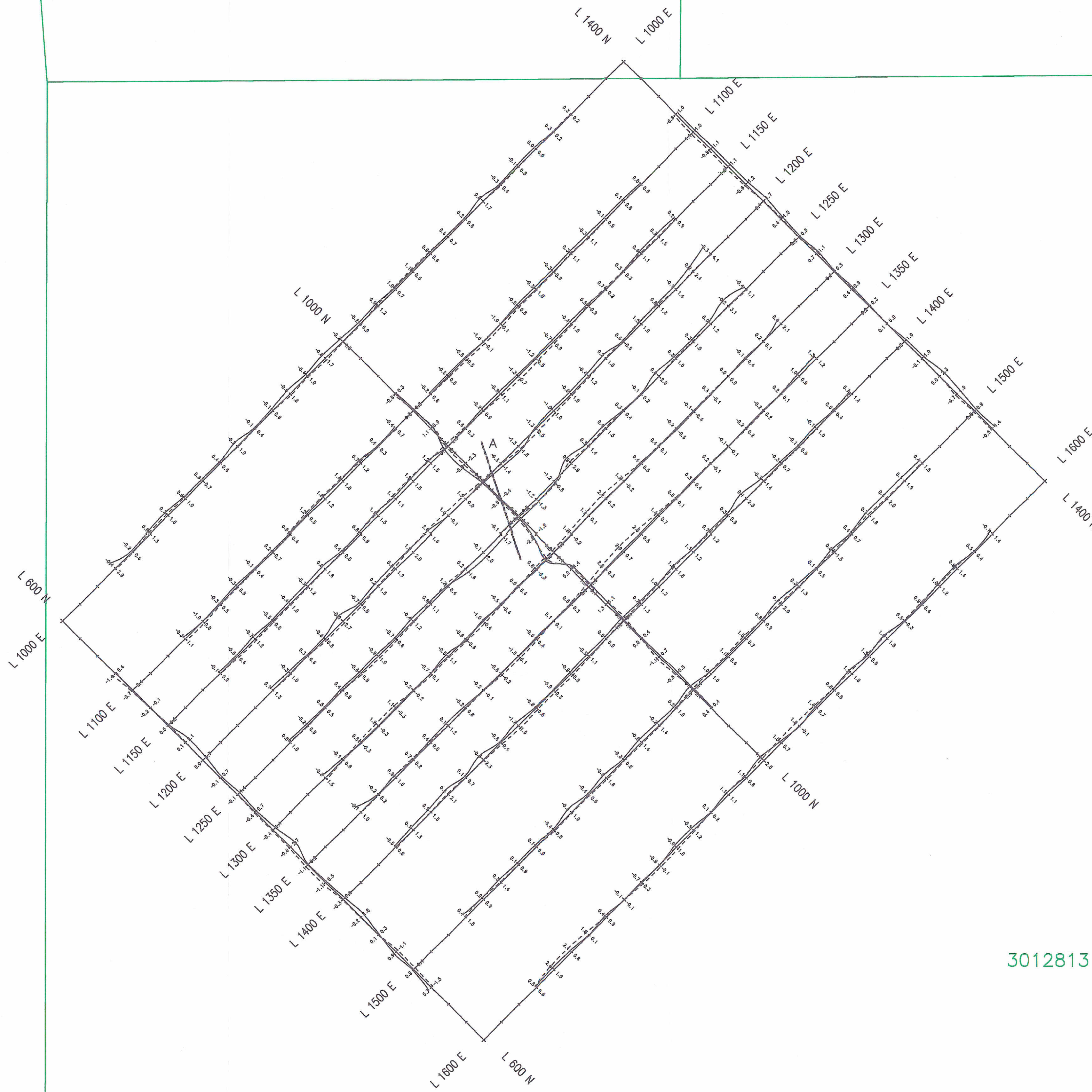
1988: Airborne Electromagnetic and Total Intensity Survey, Timmins Area, **Turnbull Township**, Districts of Cochrane and Timiskaming Ontario; by Geoterrex Limited, for Ontario Geological Survey. Geophysical/Geochemical Series **Map 81076**. Scale 1:20,000. Survey and compilation from March 1987 to October 1987.

Pyke, D.R., Ayres, L.D. and Innes, D.

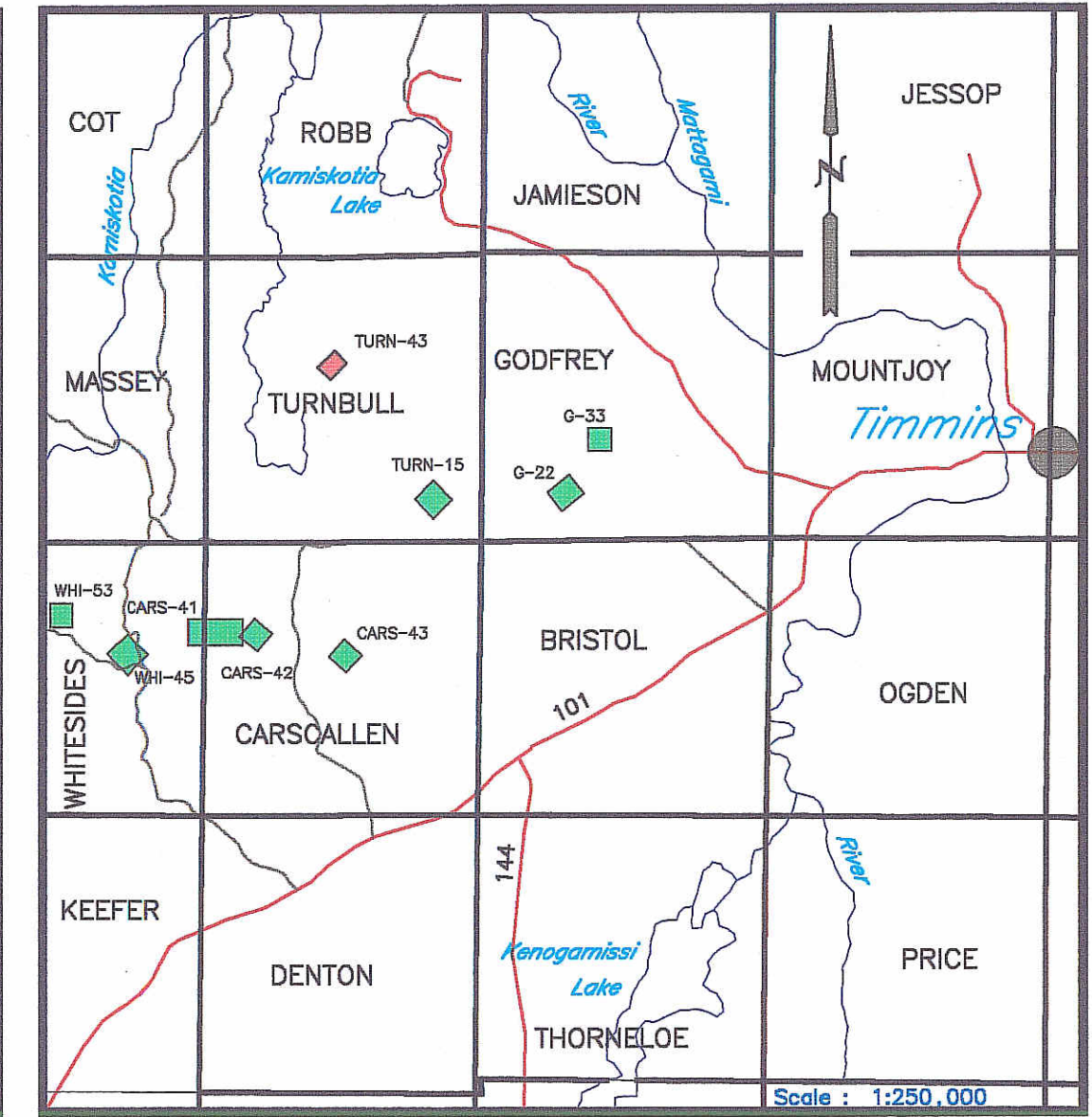
1973: Timmins-Kirkland Lake Sheet; Ontario Division of Mines, Geological Compilation Series, **Map 2205**, scale 1" = 4 miles.

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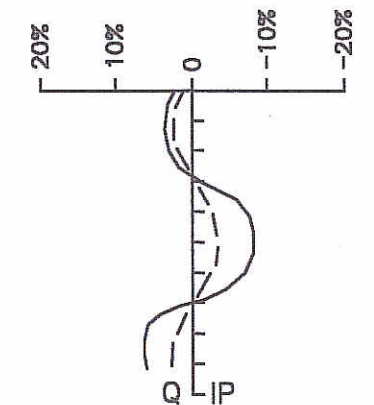
INDEX MAP



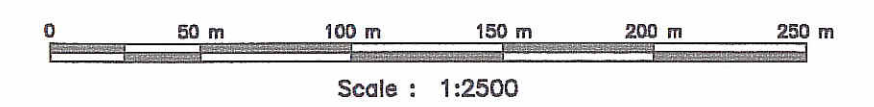
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LEGEND

Instrument : Apex Parametrics MaxMin I-5
 Coil Separation : 150 metres
 Frequency : 444 Hertz
 Profile Scale : 1cm = 10%



In-phase ———
 Quadrature - - - - -

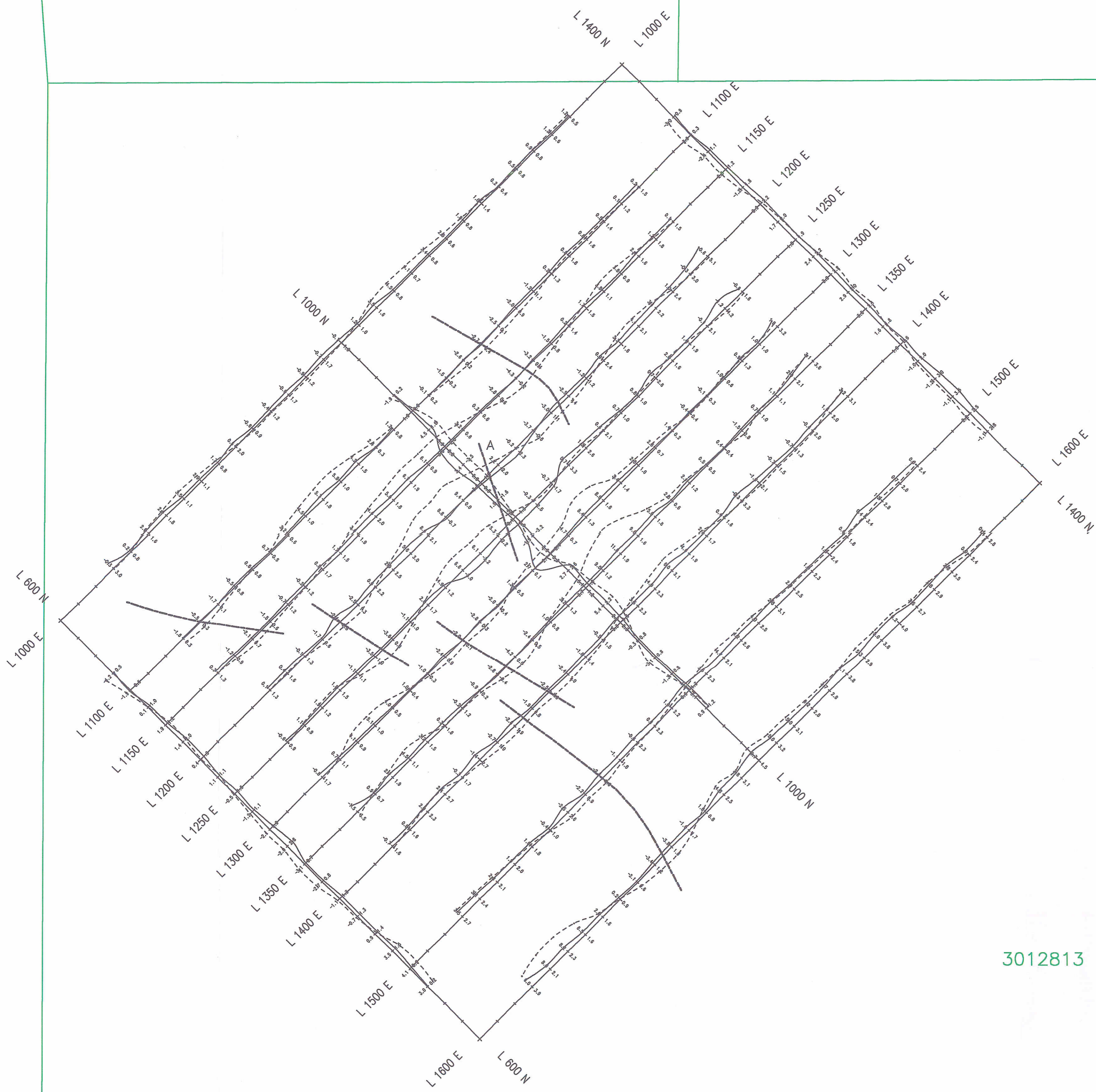


FALCONBRIDGE LIMITED
 HLEM SURVEY (444 Hz)
 TURN-43
 TURNBULL TOWNSHIP

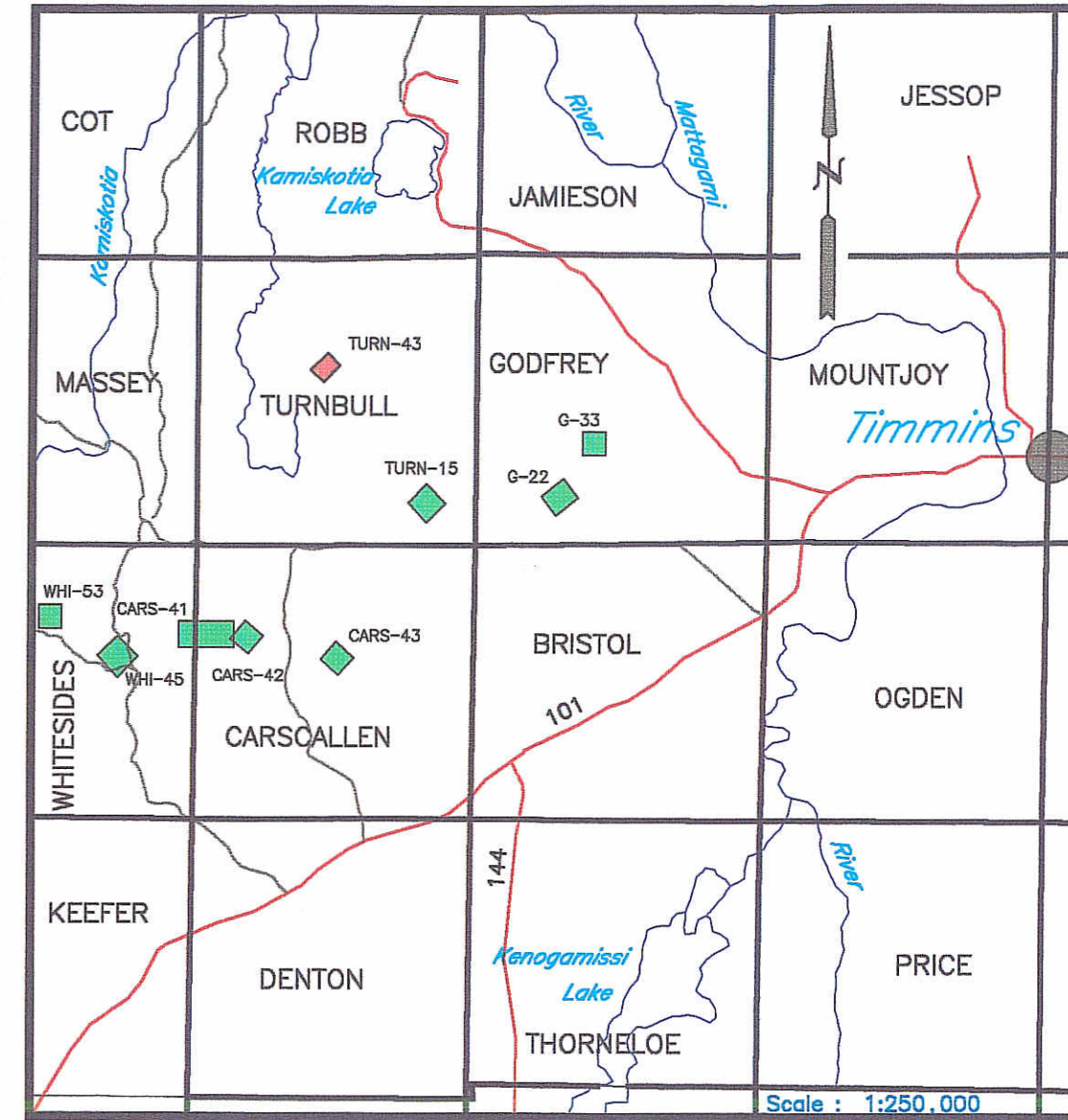
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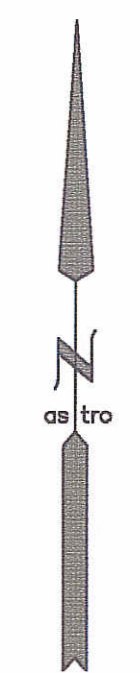
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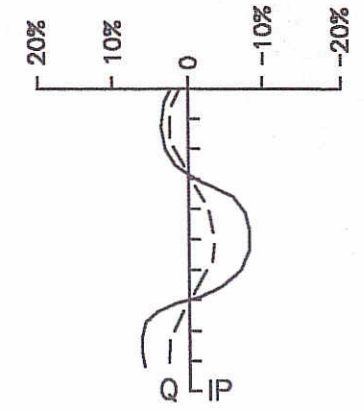


INDEX MAP

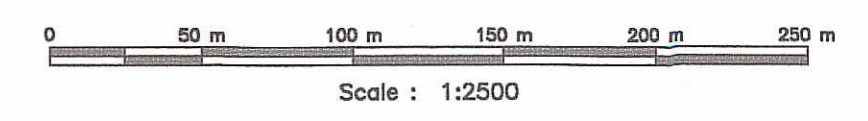


LEGEND

Instrument : Apex Parametrics MaxMin I-5
 Coil Separation : 150 metres
 Frequency : 1777 Hertz
 Profile Scale : 1cm = 10%



In-phase ———
 Quadrature - - - - -

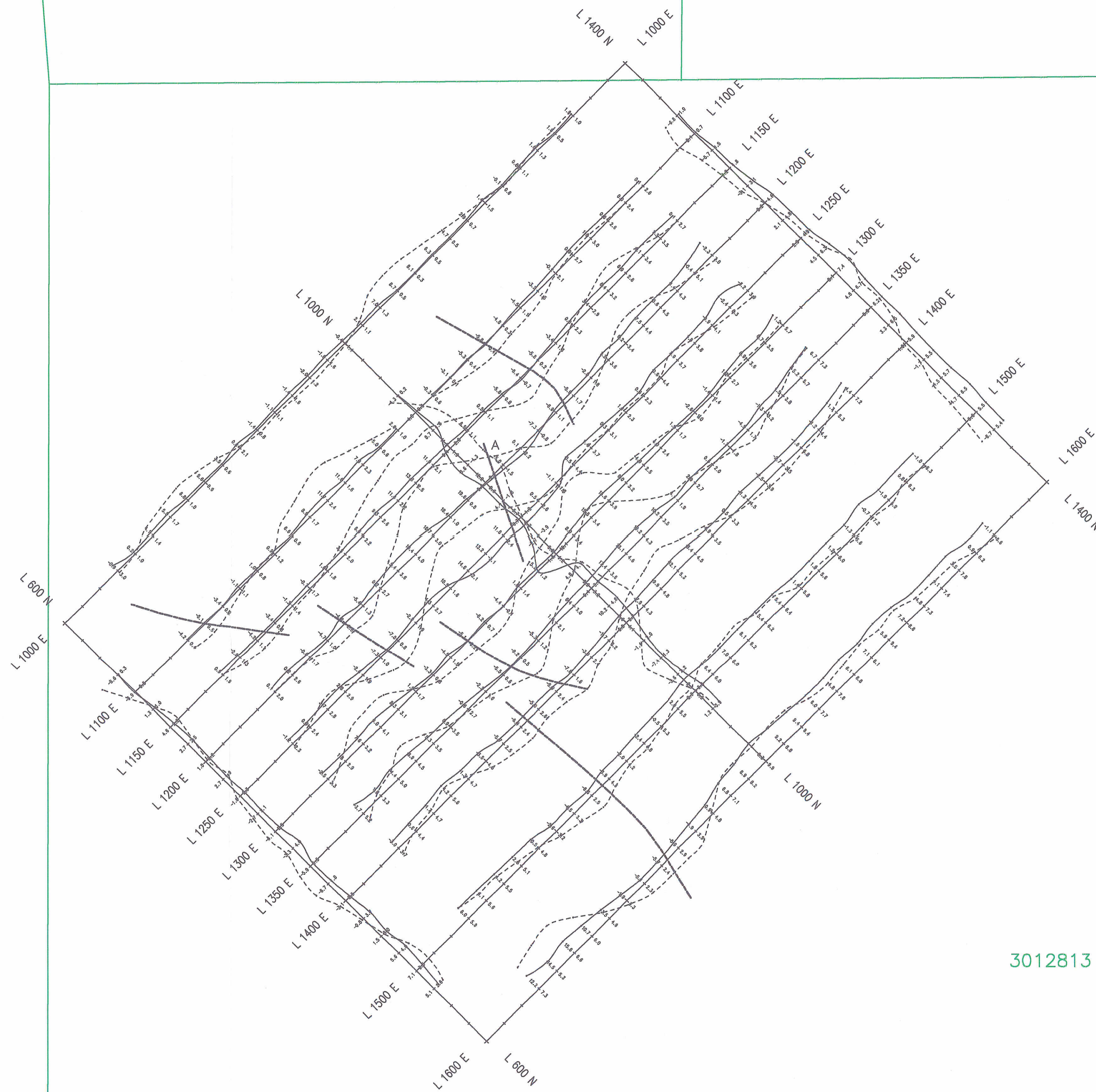


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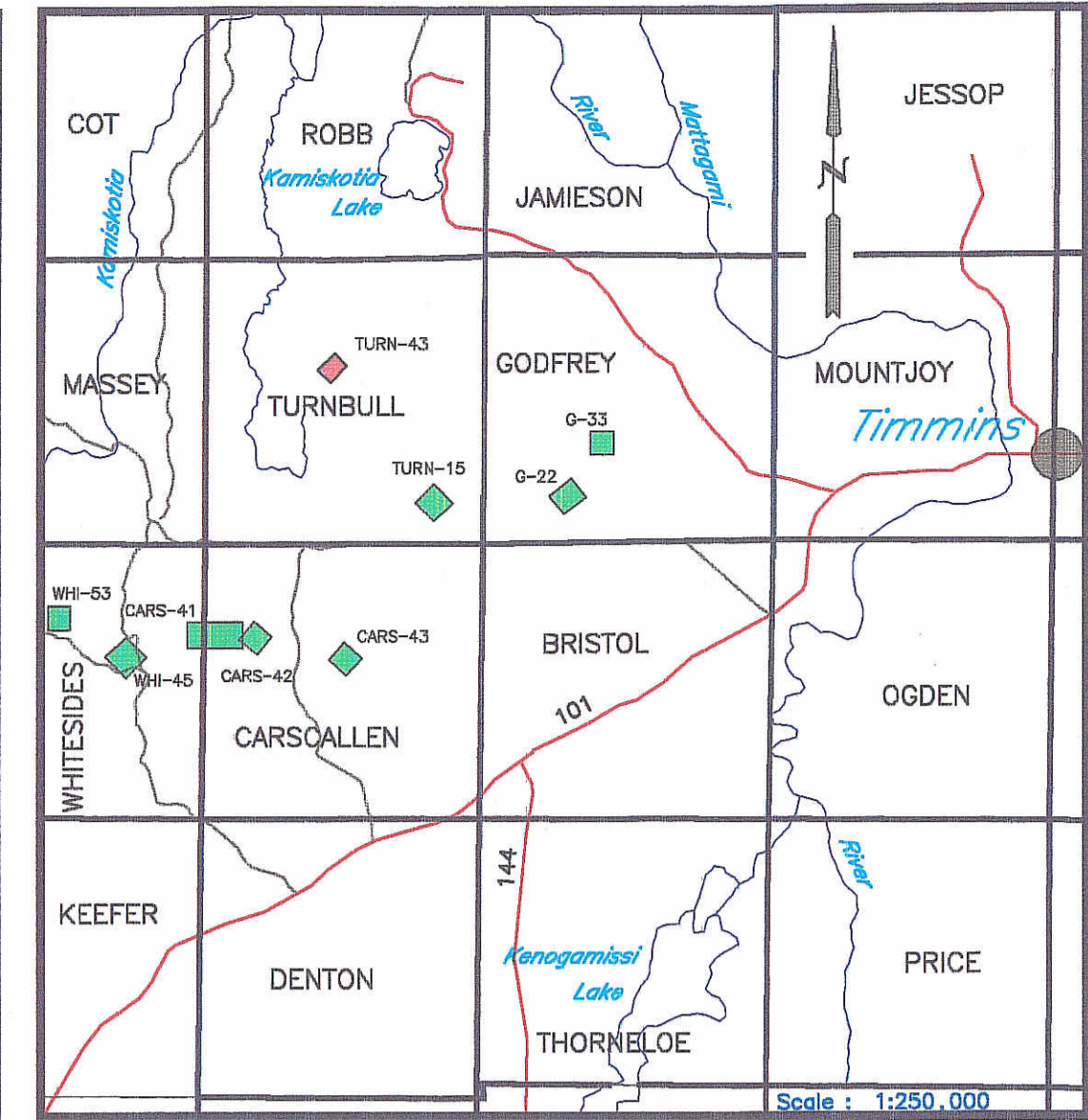
FALCONBRIDGE LIMITED	
HLEM SURVEY (1777 Hz)	
TURN-43	
TURNBULL TOWNSHIP	
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NTS : 42-A/12	Proj# :
WORK BY : <i>Timmins Geophysics Ltd.</i>	

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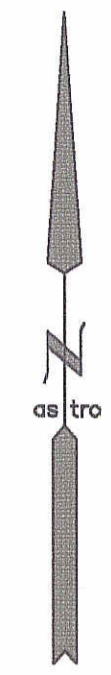
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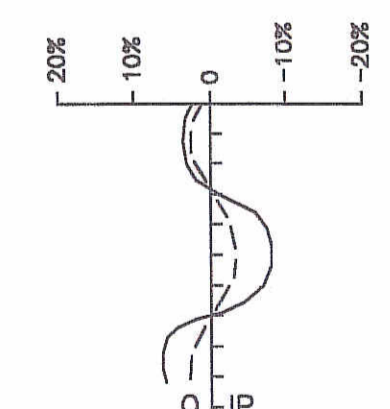
INDEX MAP



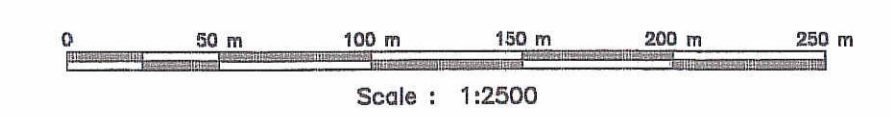
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LEGEND

Instrument : Apex Parametrics MaxMin I-5
 Coil Separation : 150 metres
 Frequency : 3555 Hertz
 Profile Scale : 1cm = 10%



In-phase ———
 Quadrature - - - -

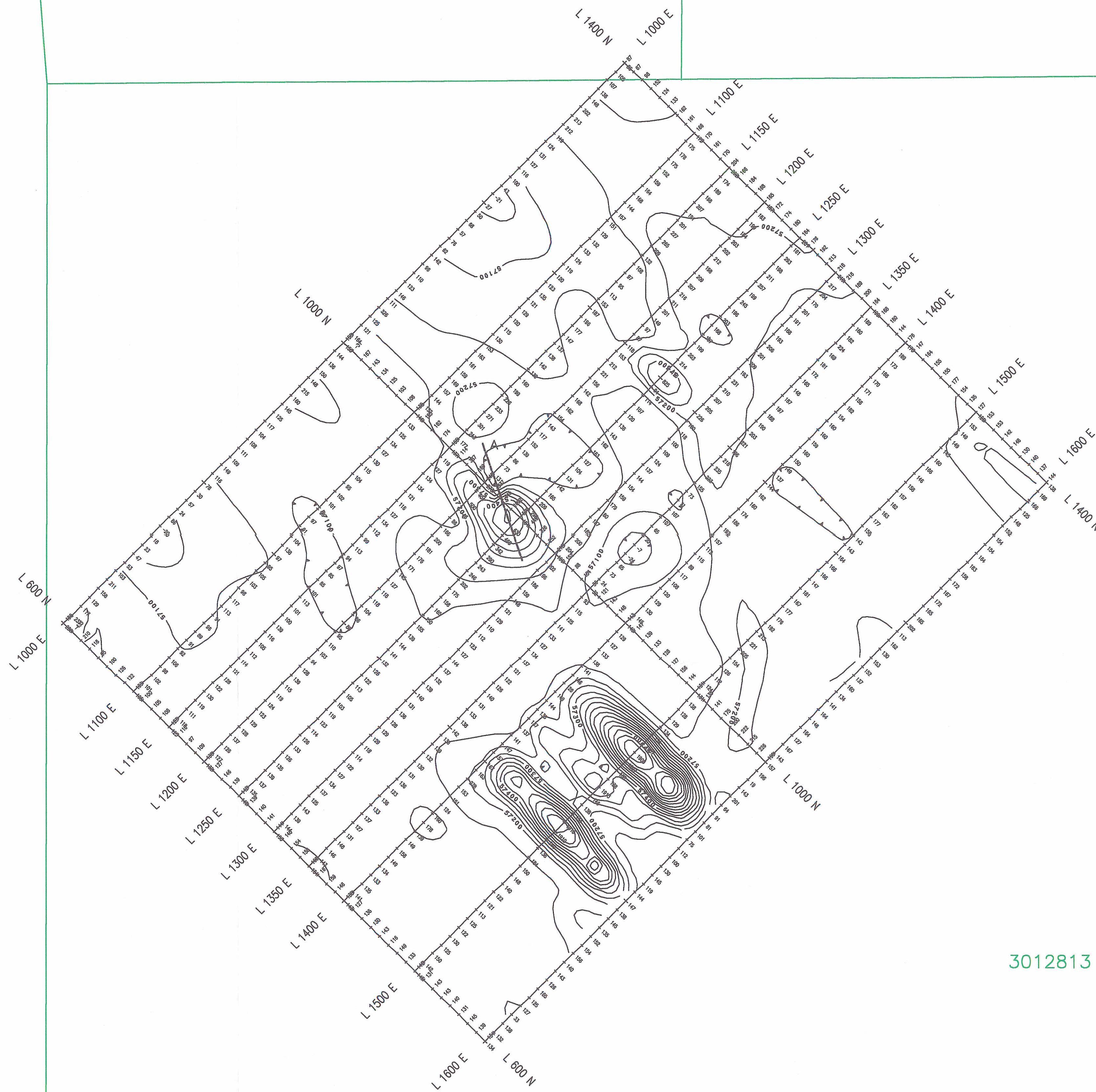


FALCONBRIDGE LIMITED
 HLEM SURVEY (3555 Hz)
 TURN-43
 TURNBULL TOWNSHIP

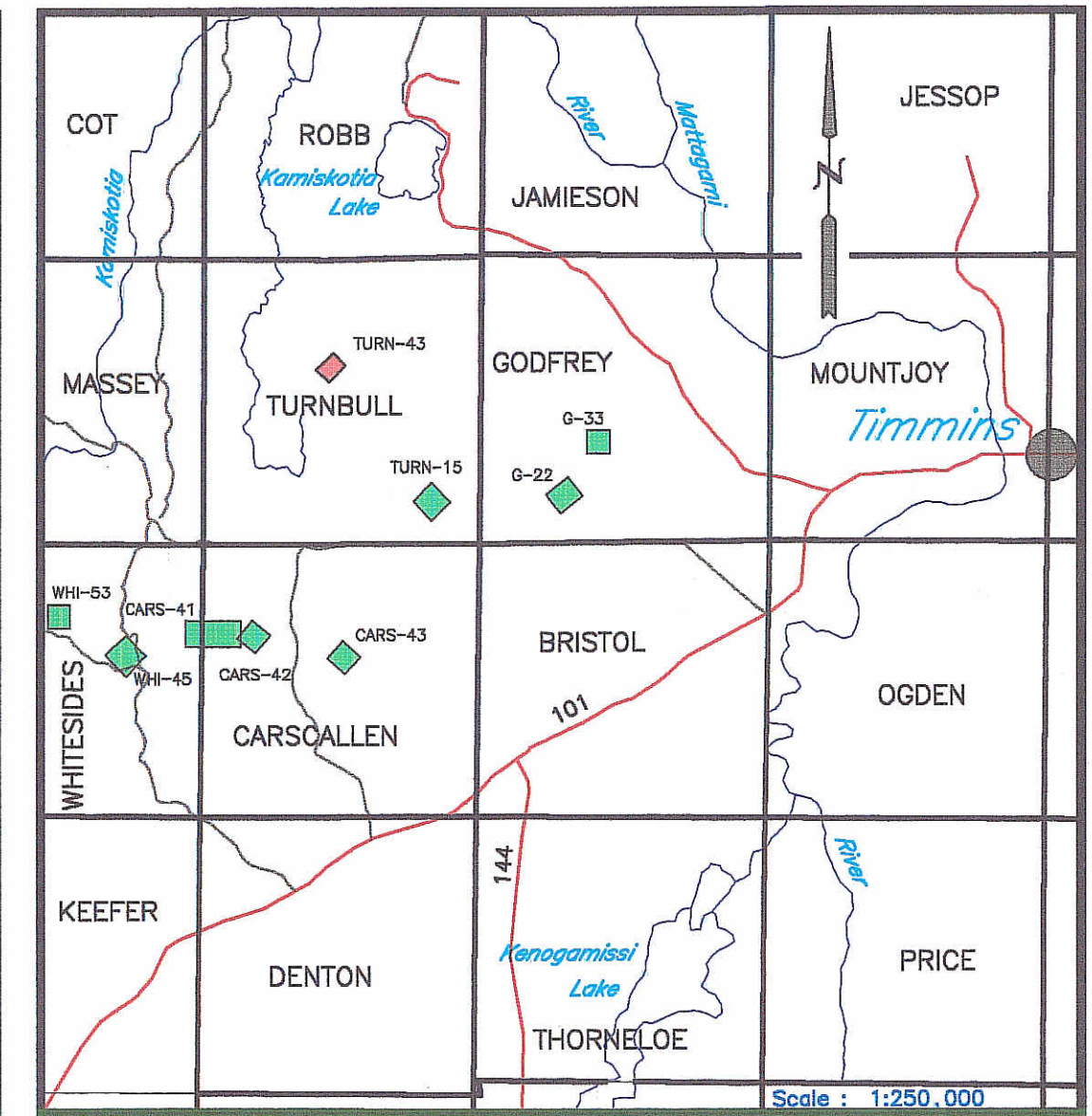
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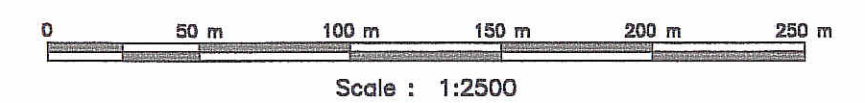
INDEX MAP



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LEGEND

Instrument : Scintrex IGS-2/MP-4
 Type : Total Field Proton Precession
 Datum Level : 57000 nT
 Contour Interval : 50 nT
 Gridded By : Geosoft Bigrid
 Cell Size : 12.5 metres
 Filter : 1 Pass 9 Point Hanning
 --- EM Anomaly, 444 Hertz



FALCONBRIDGE LIMITED

MAGNETIC SURVEY

TURN-43

TURNBULL TOWNSHIP

File : T43.XYZ Date : October, 2004

NTS : 42-A/12 Proj# :

WORK BY : Timmins Geophysics Ltd.