REPORT ON
GEOPHYSICAL WORK

2.30763

ON

R-61
ROBB TOWNSHIP

NTS: 42-A/12 PROJ # :

for
FALCONBRIDGE LIMITED

OCTOBER 2005

D. LONDRY
TIMMINS GEOPHYSICS LTD.

SUMMARY AND RECOMMENDATIONS

Magnetic and HLEM were carried out on the R-61 property, Robb Township, for Falconbridge Limited in April of 2005.

The magnetic survey maps a mafic intrusion and north-south striking diabase dike. The HLEM survey detected two areas of conductivity which are not well defined because of their strike relative to the grid lines. It is recommended that lines 1250 and 1300 East are re-surveyed when the Kamiskotia River is frozen to detail anomaly 'B' and lines 900, 1100 and 1200 North are cut and surveyed to detail anomaly 'A'.

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INTRODUCTION

Magnetic and horizontal loop electromagnetic (HLEM) surveys were carried out on the R-61 property, Robb Township, for Falconbridge Limited in April of 2005. This work was part of an exploration program which included grids in Robb, Byers, Moberly, Thorburn, and Reid Townships.

The property is located 31 kilometres northwest of the city of Timmins in the northwest corner of Robb Township and northeast corner of Cote Township, Porcupine Mining Division (Figure 1(a)). The Kamiskotia River flows northeast through the center of the survey area. A logging road which runs north from the Malette Logging Road is located within a few metres of the northeast corner of the grid.

The surveys covered part of one mining claim (Figure 1(b)) which is comprised of 9, forty acre claim units (Table 1).

The magnetic survey was carried out by the author of this report and the HLEM survey was run by J.P. Simard and the author of this report.

CLAIM #	# of UNITS	RECORDING DATE	RECORDED HOLDER	DESCRIPTION	TOWNSHIP
3005514	9	May 11, 2003	Explorers Alliance Corporation		Robb/Cote

Table 1 : Property Description

GENERAL GEOLOGY

The geology of Robb Township is presented on map 2205 at a scale of 1 inch to 4 miles (Pyke etal, 1973), on map P3379 at a scale of 1:100,000 (Ayer etal, 1998) and on map P3396 at a scale of 1:50,000, as part of a study of the Kamiskotia area (Barrie, 2000). In 1969 and 1970, Middleton (1972, 1973) mapped

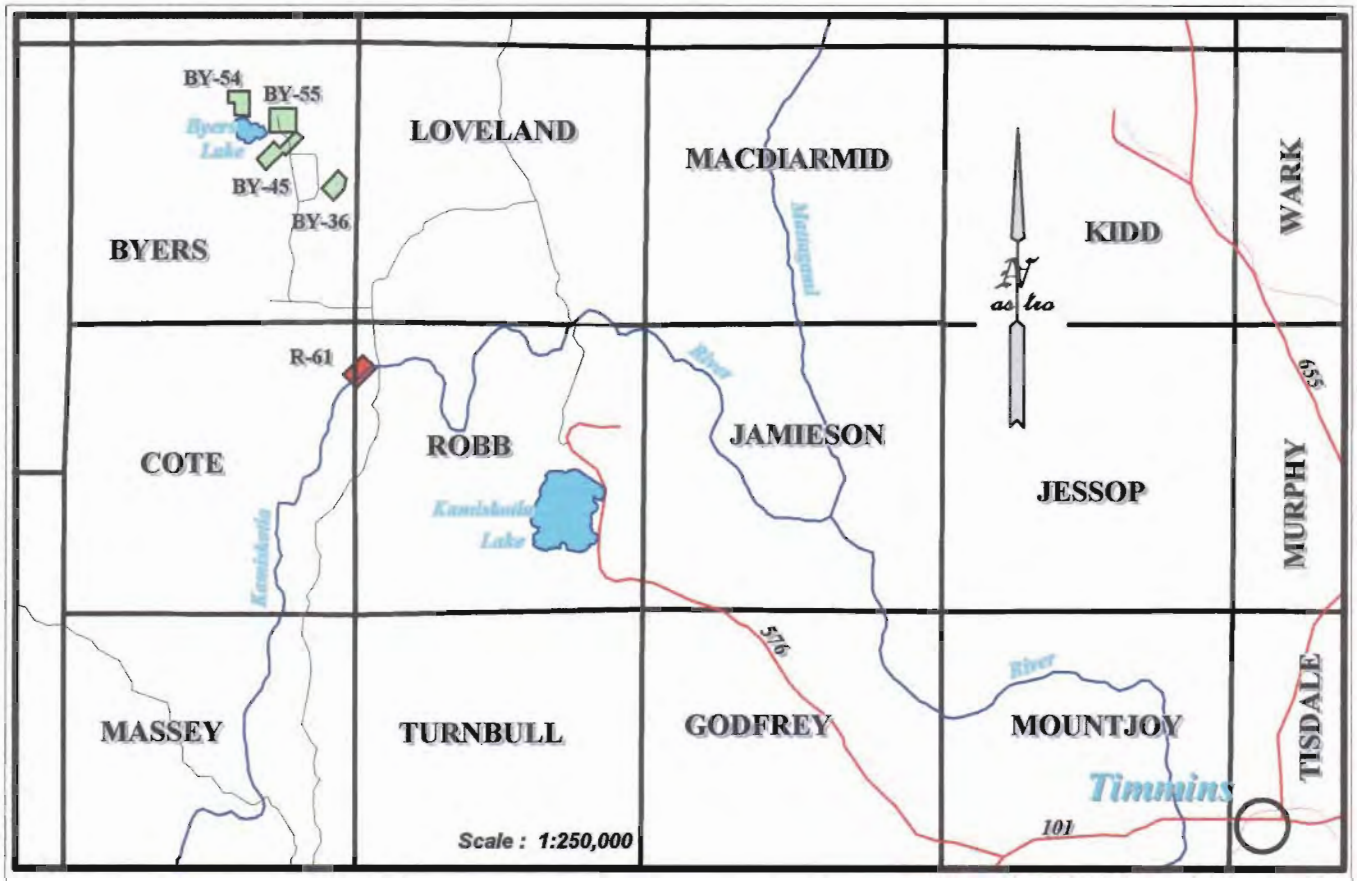


Figure 1(a) : Location Map

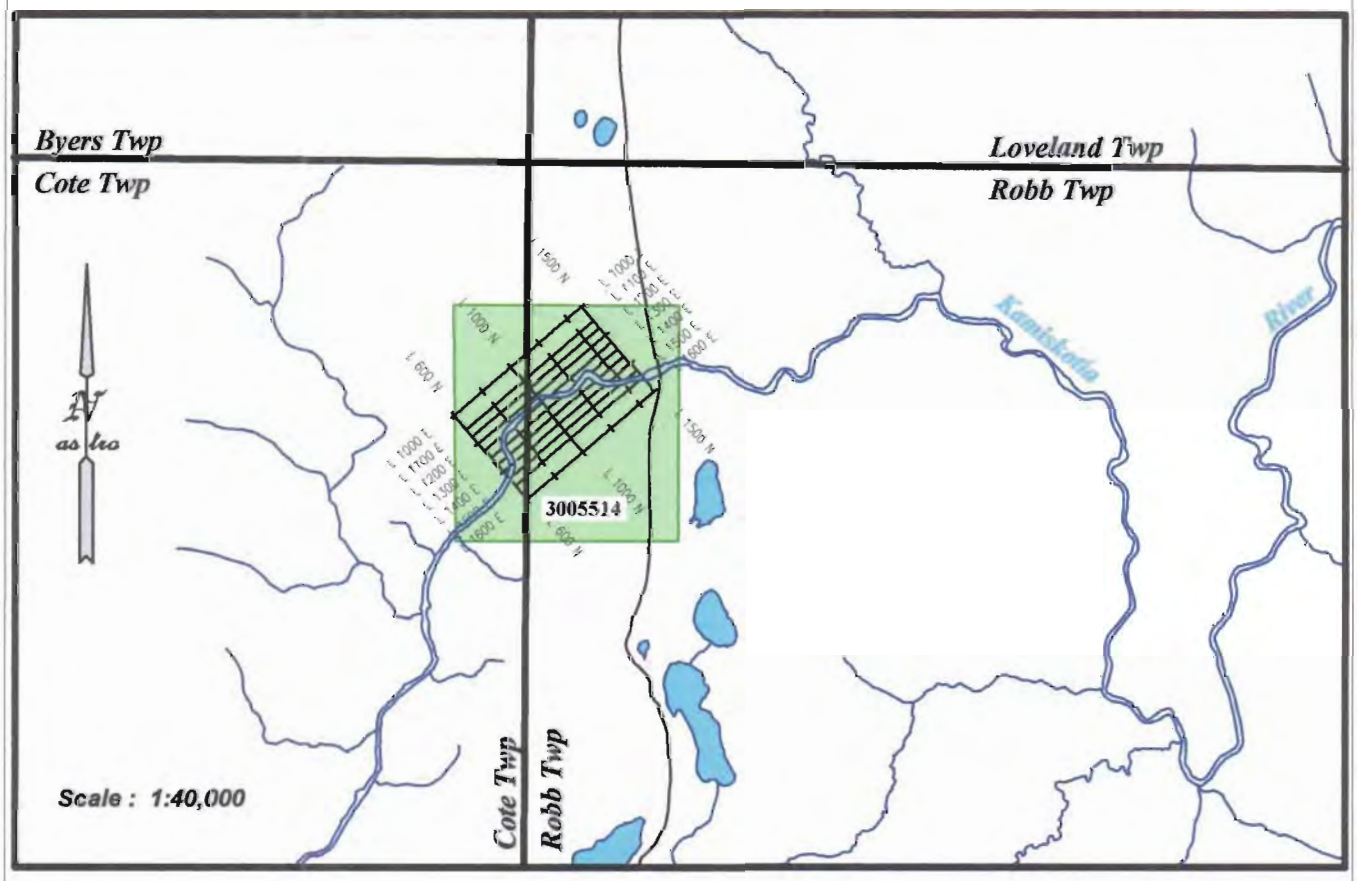


Figure 1(b) : Grid Sketch

the geology of Jamieson and Robb Townships, based on a combined magnetic and geological survey. The magnetic work included a compilation of all previous magnetic surveys in the townships (Middleton, 1969; 1971). A layered gabbroic complex covers the south half of Robb Township. Satellite stocks and sills of gabbro are found throughout the overlying volcanics and all of the rocks have been intruded by north-northwest striking diabase dykes. A hole which was sunk by Noranda in 1991, approximately 550 metres to the northwest of the R-61 grid, intersected massive and fragmental mafic volcanics. Holes drilled in 1965, close to the southwest corner of the grid, intersected intermediate volcanics.

PREVIOUS WORK

The following is a description of previous work (Table 2) which has been filed for assessment credits on the R-61 property .

In 1955, **Dominion Gulf Company** carried out magnetic, vertical loop electromagnetic (VLEM) and geological surveys over a block of 37 claims located in the northwest corner of Robb Township and the northeast corner of Cote Township. The grid on the property consisted of north-south lines spaced every 400 feet. The magnetic survey was run with a vertical field, Schmidt-type, Askania magnetometer. The VLEM survey was run at frequencies of 1000 and 5000 Hertz.

In 1965, six holes were drilled on the **Tesluk Property** which consisted of 25 claims in Cote Township and 20 claims in Robb Township and included the present R-61 survey area. Four of these holes, collared close to the southwest corner of the present grid, intersected intermediate volcanics. A disseminated sulphide zone in some of the holes consisted of pyrite and pyrrhotite with traces of chalcopyrite. The other two holes, drilled approximately 400 metres to the south intersected intermediate volcanics and a mafic intrusive.

In 1987, the **Geological Survey of Canada** flew a magnetic and EM survey over the Timmins area

which included Cote' and Robb Townships. This survey was flown along north-south lines spaced approximately every 200 metres.

In 1991, **Noranda Mining & Exploration Inc.** drilled three holes to the northwest of the present survey area on a contiguous block of 56 claims. The grid on the property consisted of north south lines spaced every 100 metres and picketed every 25 metres. In 1995 Noranda ran magnetic and induced polarization (IP) surveys over a portion of the claim block. The magnetic readings were taken with an Overhauser magnetometer and the IP survey was run using a dipole-dipole array with an electrode separation of 50 metres; readings were taken to n=6.

Line 1400 West, 1135 South on the Noranda grid is located at 930 North, Line 1000 East on the present 2005 grid.

YEAR	COMPANY	GEOPHYSICS	DRILL HOLES	TIMMINS FILES
1955	Dominion Gulf Company	Mag, VLEM		T-588
1965	Tesluck		Hole A to F	T-792
1994	Falconbridge Limited	Mag, HLEM		T-3189
1991 1995	Noranda Mining & Exploration Inc.	Mag, IP	LC-91-1 to 3	T-3521

Table 2. Summary of previous work.

In 1994, **Falconbridge Limited** ran a magnetic survey over 63 claim units which included the eastern half of the present R-61 survey area. The grid on the property consisted of north-south lines spaced every 100 metres and picketed every 20 metres. An HLEM survey was run over a portion of the grid, directly to the south of the present grid. The magnetic readings were taken with a proton precession magnetometer and the HLEM survey was run with a coil separations of 250 and 125 metres and frequencies of 444 and 1777

Hertz.

Station 2380 North, Line 5600 West on the 1995 grid is located 13 metres true south of 978 North, Line 1150 East on the 2005 grid. The magnetic field at this station, tied into the present survey is 58293 nT. A correction of 1116 nT would have to be added to the present survey to level it to the 1994 survey.

SURVEY DESCRIPTIONS

The grid on the property consists of lines spaced every 100 metres, oriented at N45°E and picketed every 25 metres.

The horizontal loop EM survey was carried out with the Apex Parametrics MaxMin I-5. This instrument measures 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 200 metres and frequencies of 222, 444 and 1777 Hertz. A total of 272 stations were sampled along 9.25 kilometres of line.

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 grid. A total of 890 readings were taken along 11.0 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 the 222 and 444 results is 1 cm = 10 % and the profile scale used for the 1777 results is 1 cm = 20 %. The results using 444 Hertz are also presented in Figure 2 at a scale of 1:7,500.

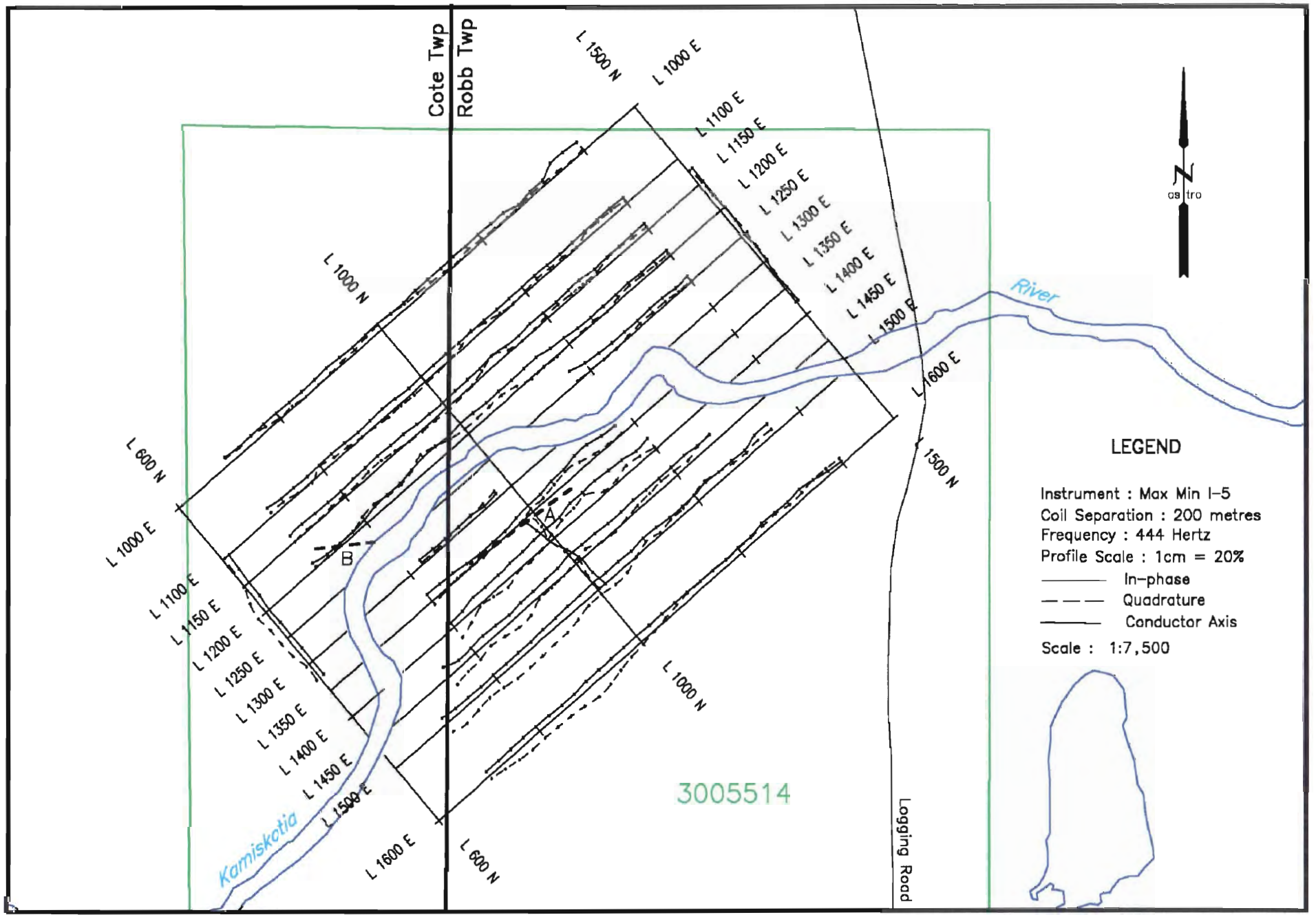


Figure 2 : HLEM Results, 444 Hertz, R-61

Anomaly 'A' is a partially defined response at 1300 East on Base Line 1000 North. The source of the anomaly is a very good conductivity at a depth of 100 metres (Table 3). The width and dip can not be determined because the west shoulder of the anomaly is not complete. The low amplitude anomaly at 925 North on Line 1350 East and the positive in-phase response to the north of the base line on Lines 1350 and 1400 East suggest that the conductor strikes northeast. The source of the anomaly on Line 1350 East is a narrow zone of good conductivity at a depth of 100 metres.

LINE	ANOMALY CENTER	ANOMALY WIDTH (m)	IP (%)	Q (%)	DEPTH (m)	CONDUCTIVITY THICKNESS (mhos)	COMMENTS
1000 N	1300 E	?	6	3	106	65	
1350 E	925 N	n	2	2	96	14	

Table 3: Anomaly 'A' Interpretation, 444 Hz, 200 metre coil separation.

Anomaly 'B' is a partially defined, low amplitude anomaly centered at 750 North on Line 1200 East. The source of the anomaly is fair conductivity at a depth of 100 metres (Table 4).

LINE	ANOMALY CENTER	ANOMALY WIDTH (m)	IP (%)	Q (%)	DEPTH (m)	CONDUCTIVITY THICKNESS (mhos)	COMMENTS
1350 E	925 N	n	2	2	96	14	

Table 4: Anomaly 'B' Interpretation, 444 Hz, 200 metre coil separation.

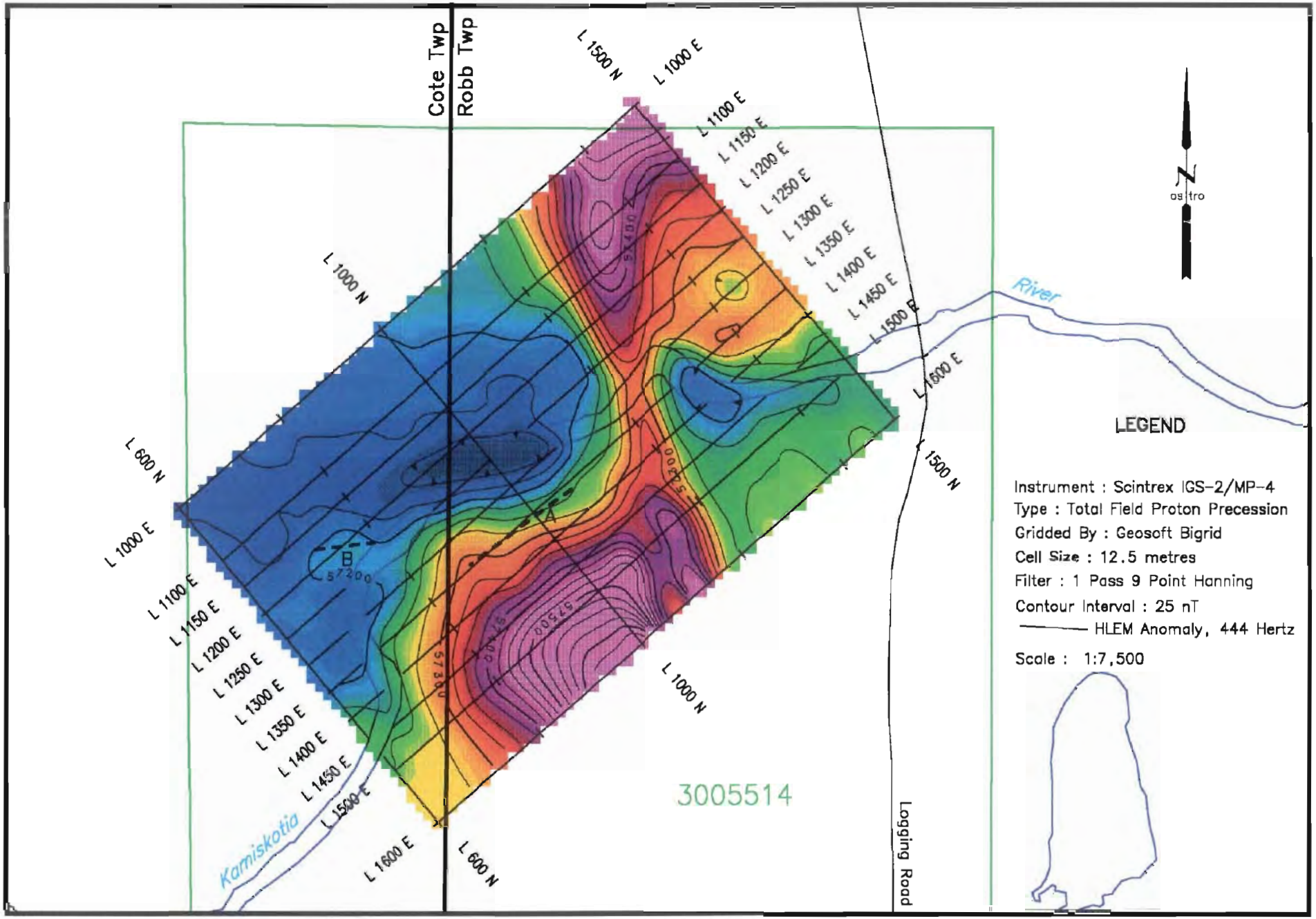


Figure 3 : Total Magnetic Field, R-61

MAGNETIC RESULTS

The total magnetic field is contoured every 25nT on map 4 at a scale of 1:2500. The results are also presented in Figure 3 at a scale of 1:7,500.

A linear magnetic anomaly strikes north northwest between 1125 North on Line 1600 East and 1400 North on Line 1000 East. The strike of this anomaly suggests that the source is a diabase dike. A broad, partially defined magnetic high anomaly, approximately 450 nT above background, is centered at 950 North on Line 1600 East. The source of this anomaly is likely a mafic intrusion. EM anomaly 'A' is located along the northwest flank of the magnetic high. EM anomaly 'B' coincides with a magnetic anomaly with an amplitude of approximately 25 nT.

A magnetic low anomaly strikes east northeast through the middle of the property. The EM survey does not indicate that a bedrock low is associated with this trend and it may reflect an alteration or shear zone.

Oct. 23. 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.

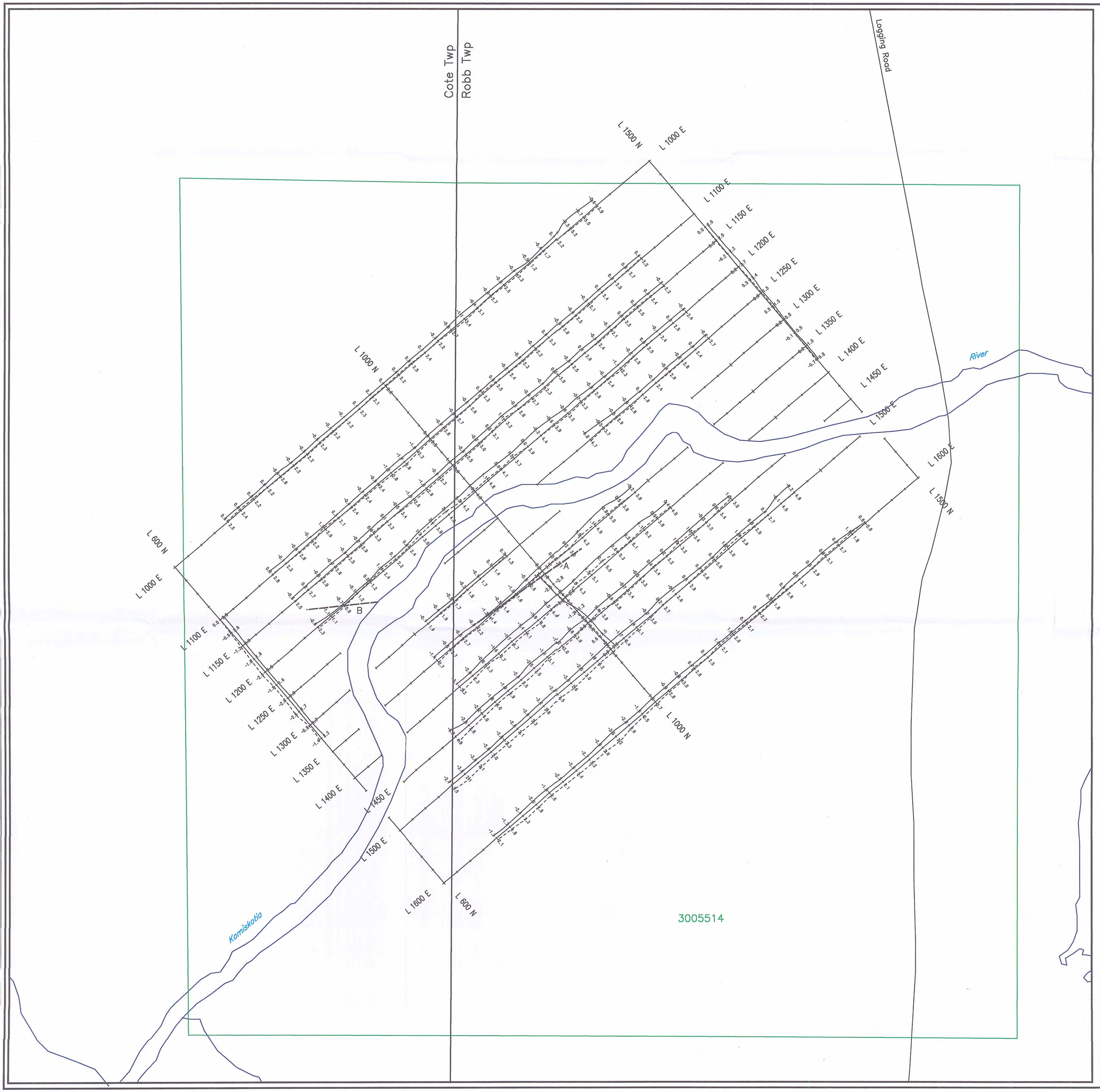
Middleton, R.S.,
1973: Magnetic survey of Robb and Jamieson Townships, District of Cochrane, GR.1. Accompanied by Geological Map 2255, Scale 1 inch to 1/2 mile.

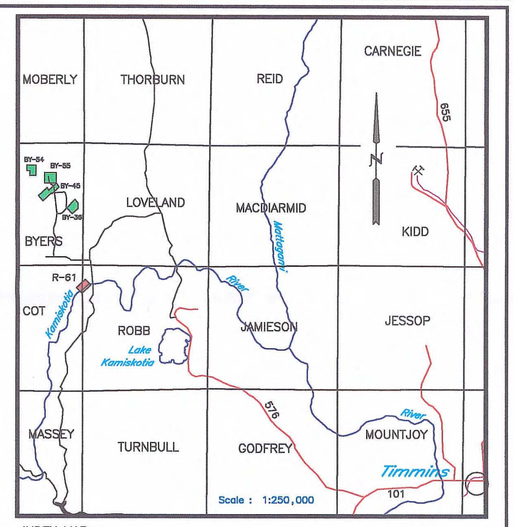
Ontario Geological Survey
1988: Airborne Electromagnetic and Total Intensity Survey, Timmins Area, **Cote Township**, Districts of Cochrane and Timiskaming Ontario; by Geoterrex Limited, for Ontario Geological Survey, Geophysical/Geochemical Series **Map 81067.** Scale 1:20,000. Survey and Compilation from 1987 to October 1987.
1988: Airborne Electromagnetic and Total Intensity Survey, Timmins Area, **Robb Township**, Districts of Cochrane and Timiskaming Ontario; by Geoterrex Limited, for Ontario Geological Survey, Geophysical/Geochemical Series **Map 81068.** Scale 1:20,000. Survey and Compilation from 1987 to October 1987.

Pyke, D.R., Ayres, L.D. and Innes, D.G.
1973: Timmins-Kirkland Lake Sheet, Districts of Cochrane, Sudbury and Timiskaming; Ontario Div. Mines, **Map 2205**, Geol. Comp. Ser., Scale 1 inch to 4 miles.

R-61 PROPERTY
Robb Township

1. HLEM Results, 222 Hertz
2. HLEM Results, 444 Hertz
3. HLEM Results, 1777 Hertz
4. Magnetic Results



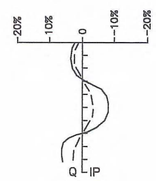


INDEX MAP

LEGEND

2.30763

Instrument : Apex Parametrics MaxMin I-5
Coil Separation : 200 metres
Frequency : 222 Hertz
Profile Scale : 1cm = 10%

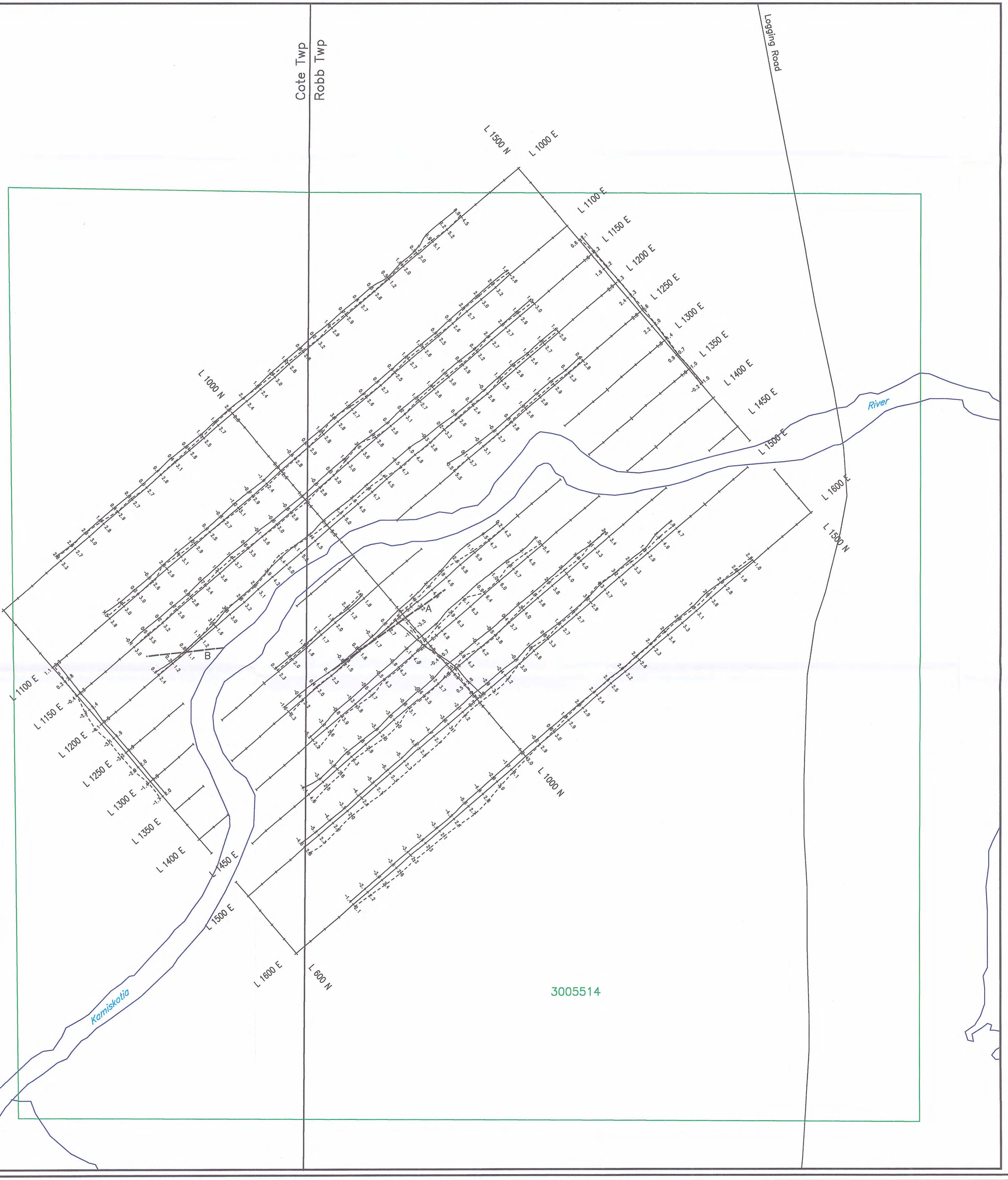


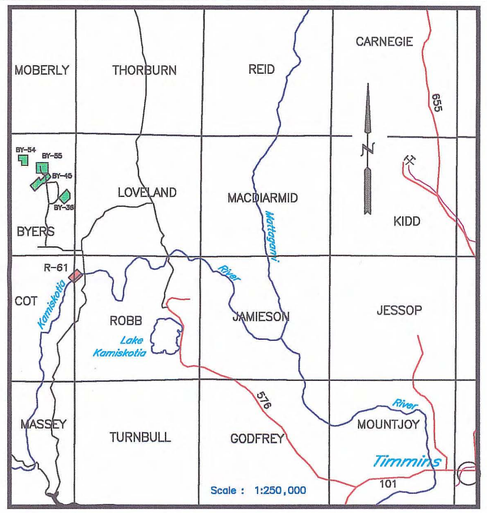
In-phase ————
Quadrature — — — —

0 50 m 100 m 150 m 200 m 250 m

Scale : 1:2500

FALCONBRIDGE LIMITED	
HLEM SURVEY (222 Hz)	
R-61	
ROBB TOWNSHIP	
File : R61HL.XYZ	Date : April, 2005
NTS :	Proj# :
WORK BY : *Timmins Geophysics Ltd.*	





INDEX MAP

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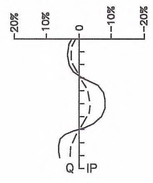
LEGEND

2.30763

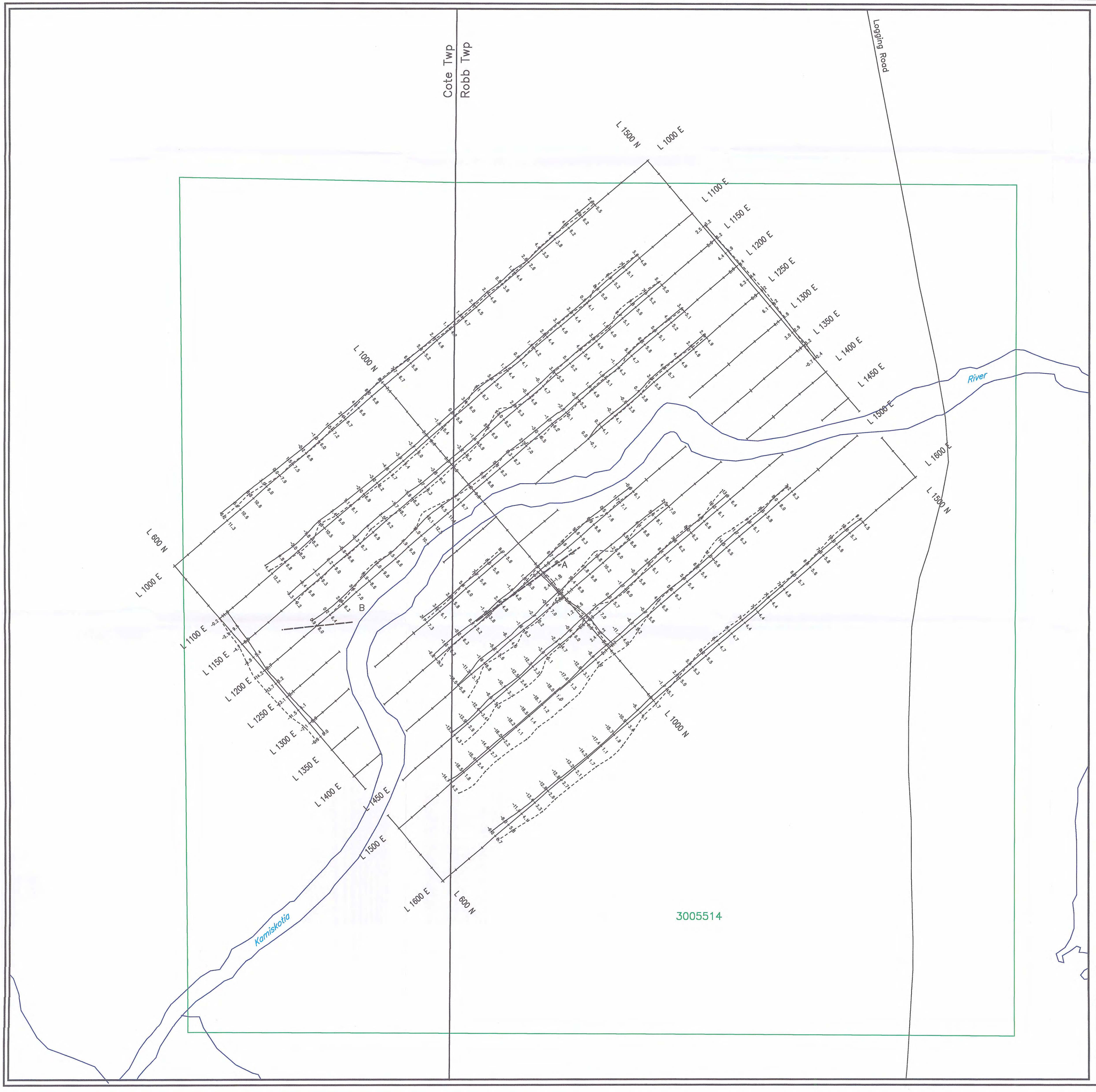
Instrument : Apex Parametrics MaxMin I-5
Coil Separation : 200 metres
Frequency : 444 Hertz
Profile Scale : 1cm = 10%

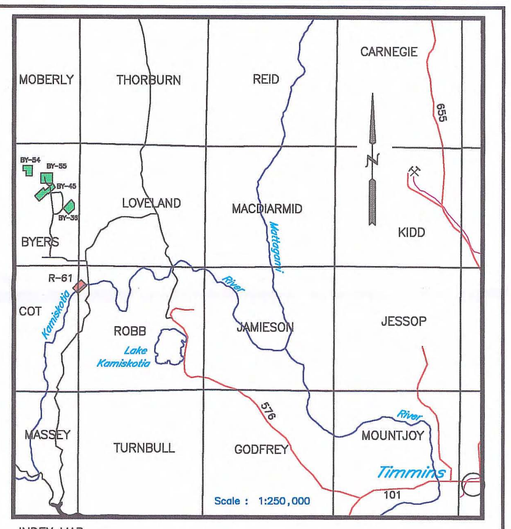


In-phase ————
Quadrature — — — —

0 50 m 100 m 150 m 200 m 250 m
Scale : 1:2500

FALCONBRIDGE LIMITED	
HLEM SURVEY (444 Hz)	
R-61	
ROBB TOWNSHIP	
File : R61HL.XYZ	Date : April, 2005
NTS :	Proj# :
WORK BY : *Timmins Geophysics Ltd.*	

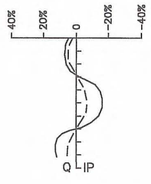




INDEX MAP

LEGEND 2.30763

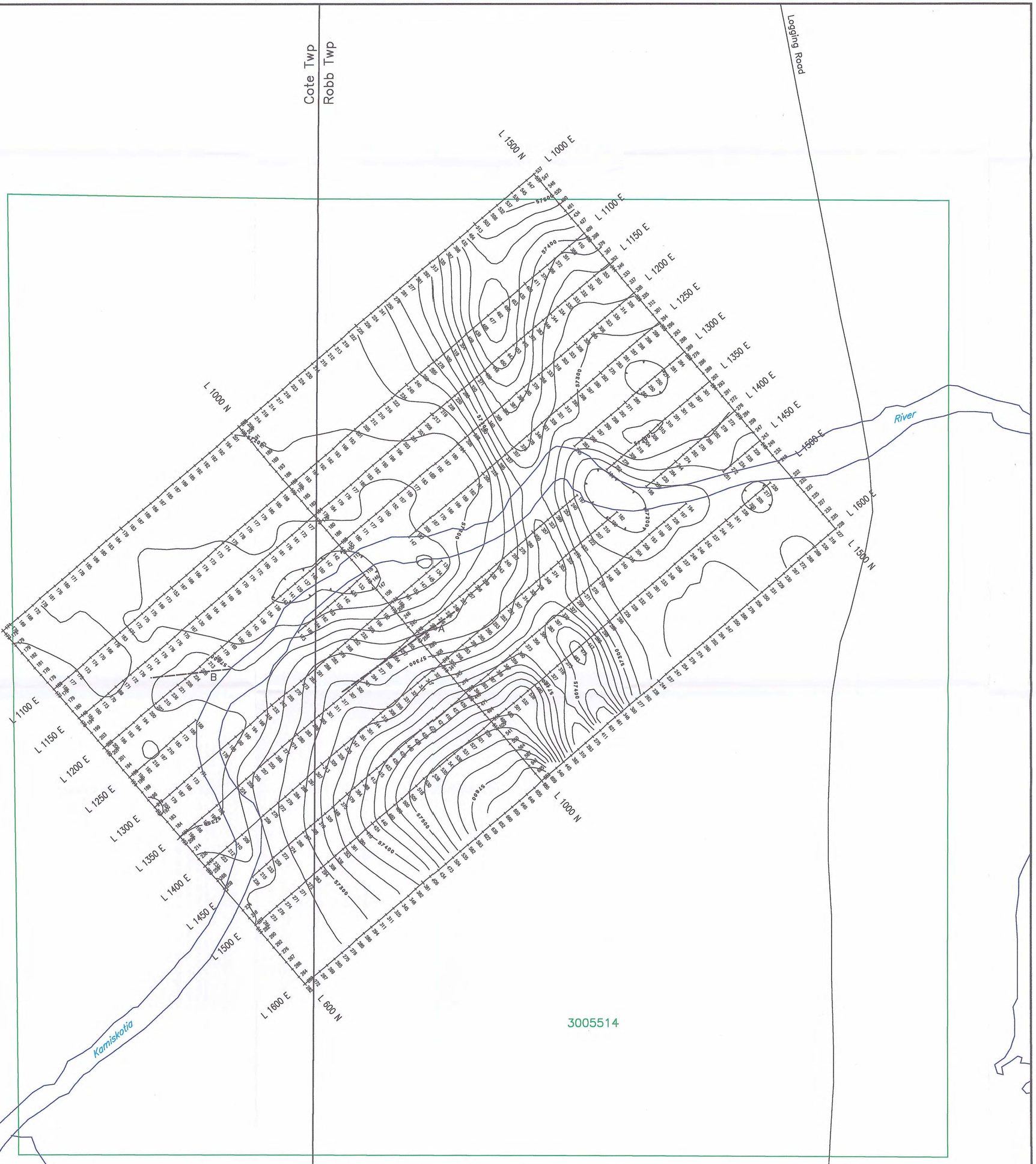
Instrument : Apex Parametrics MaxMin I-5
Coil Separation : 200 metres
Frequency : 1777 Hertz
Profile Scale : 1cm = 20%

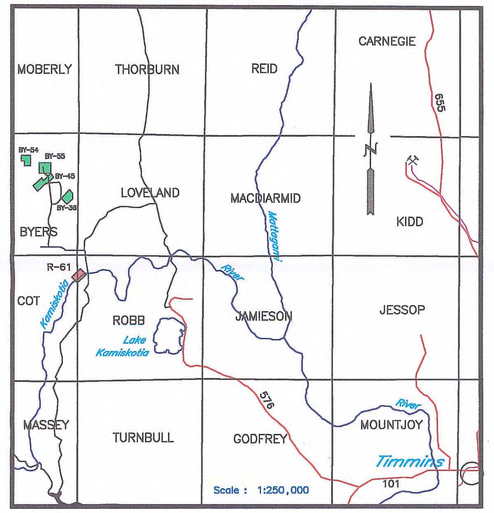


In-phase ————
Quadrature — — — —

0 50 m 100 m 150 m 200 m 250 m
Scale : 1:2500

FALCONBRIDGE LIMITED	
HLEM SURVEY (1777 Hz) R-61 ROBB TOWNSHIP	
File : R61HL.XYZ	Date : April, 2005
NTS :	Proj# :
WORK BY : *Timmins Geophysics Ltd.*	





INDEX MAP

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2.30763

LEGEND

Instrument : Scintrex IGS-2/MP-4
Type : Total Field Proton Precession
Datum Level : 57000 nT
Contour Interval : 25 nT
Gridded By : Geosoft Bigrid
Cell Size : 12.5 metres
Filter : 1 Pass 9 Point Hanning
— — — EM Anomaly, 444 Hertz

0 50 m 100 m 150 m 200 m 250 m
Scale : 1:2500

FALCONBRIDGE LIMITED	
MAGNETIC SURVEY	
R-61	
ROBB TOWNSHIP	
File : B36.XYZ	Date : April, 2005
NTS :	Proj# :
WORK BY : *Timmins Geophysics Ltd.*	