095593

REPORT ON
GEOPHYSICAL WORK

HEIDI CLAIMS
YUKON TERRITORIES

NTS: 116 A/05

64° 23" 17' N
137° 36" 55' W

for
KLONDIKE EXPLORATION

JANUARY 2004

D. LONDRY

SUMMARY AND RECOMMENDATIONS

Magnetic, HLEM and IP surveys were carried out over the Heidi claims, Yukon Territory in August, 2003.

Three chargeability anomalies strike east northeast through the middle of the property. Two of these zones have low resisitivity and are mapped in the HLEM by poor conductivity anomalies.

It is recommended that the IP and HLEM surveys are completed over the rest of the property to determine the extent of the mineralized zones detected in the present survey.

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INTRODUCTION

A geophysics program, which included magnetic, horizontal loop electromagnetic (HLEM) and induced polarization (IP) surveys, was carried out on the Heidi Claims during August of 2003. The purpose of the surveys was to help map the extent of a mineralization occurrence on the property.

The property is located directly to the south of Lake Creek in the Ogilvie Mountain Range in central Yukon Territory, Mayo Mining District. It is accessed by helicopter from the Dempster highway, which runs north-south 20 kilometres to the west. The work was carried out from a camp, located on the property at 280 South on Line 2000 East.

The property consists of twenty two mining claims numbered as follows:

1	Heidi 1	YC10778	12	Heidi 16	YC10793
2	Heidi 2	YC10779	13	Heidi 17	YC10794
3	Heidi 4	YC10781	14	Heidi 18	YC10795
4	Heidi 5	YC10782	15	Heidi 19	YC10796
5	Heidi 7	YC10784	16	Heidi 20	YC10797
6	Heidi 8	YC10785	17	Heidi 21	YC10798
7	Heidi 9	YC10786	18	Heidi 22	YC10799
8	Heidi 10	YC10788	19	Heidi 23	YC10800
9	Heidi 12	YC10789	20	Heidi 24	YC10801
10	Heidi 13	YC10790	21	Heidi 123	YB65146
11	Heidi 15	YC10792	22	Heidi 124	YB65147

The magnetic survey was run by S. Ryan and the author of this report. J. Skailes assisted the author with the HLEM survey and J. Skailes, M. Linley, S. Ryan and M. Vincent helped with the IP survey.

GENERAL GEOLOGY

The following description of the geology on the Heidi property is taken from the Yukon Minfile 116A 037 (INAC, 1998):

"The (Heidi) occurrence is located within the eastern Selwyn Basin and is underlain by Upper

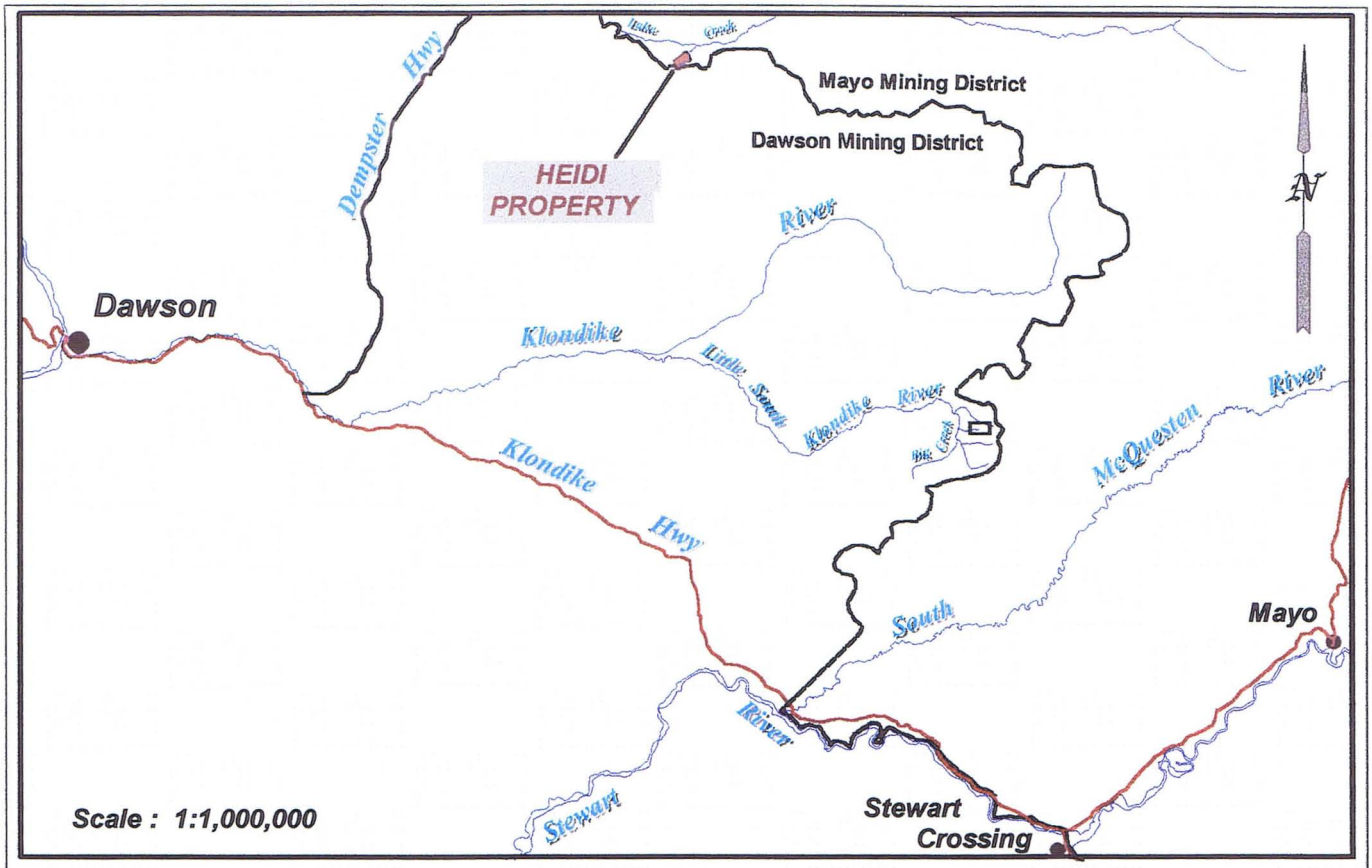


Figure 1(a) : Location Map

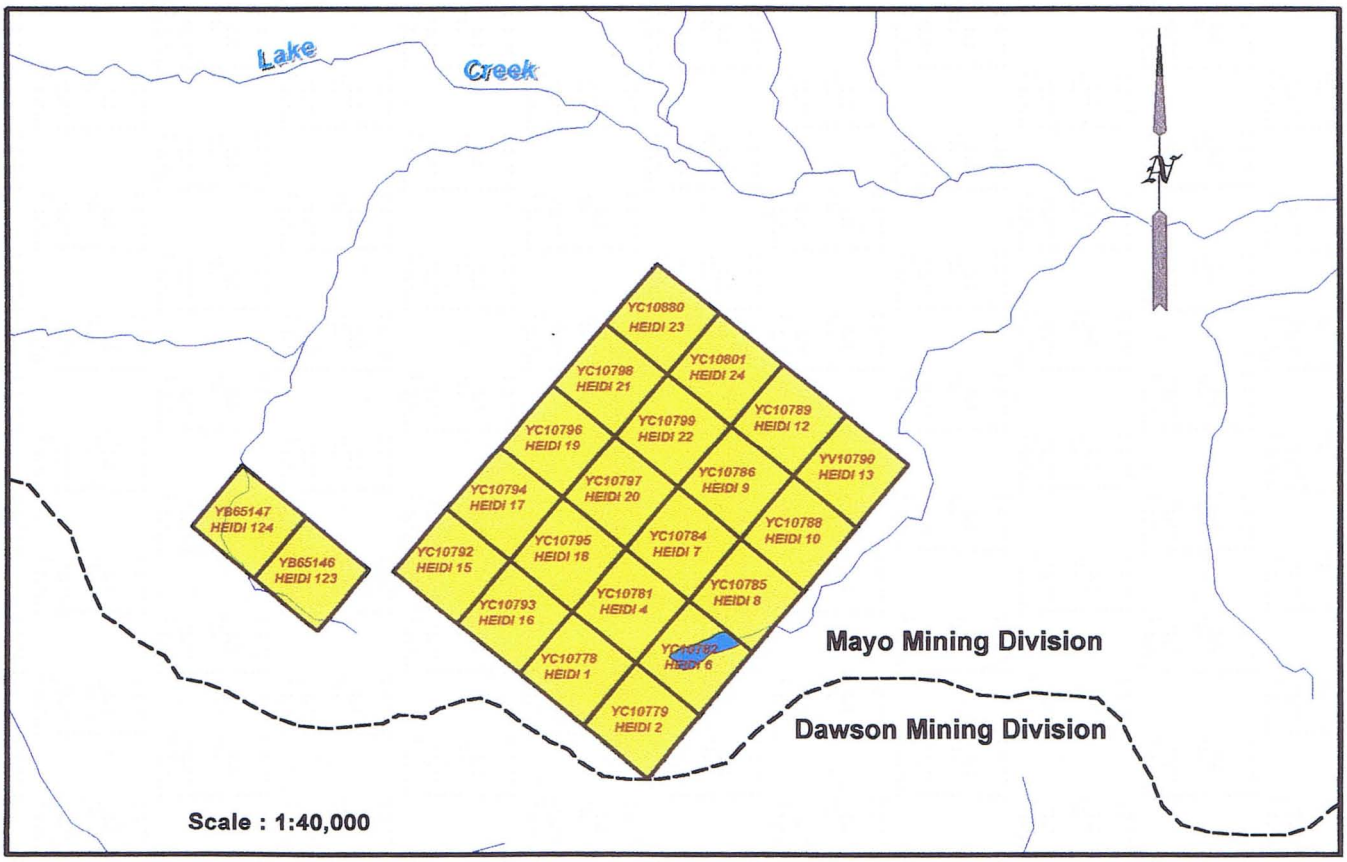


Figure 1(b) : Claim Map

Proterozoic to Early Cambrian Hyland Group rocks. Two distinct formations are recognized in the area: the Yusezyu Formation and the Narchilla Formation. The Yusezyu Formation consists of rusty weathering gritty quartzite, sandstone and quartz pebble conglomerate with up to 80 or 90% rounded quartz grains. Minor interbeds of limestone, calareous sandstone and shale are common. The Narchilla Formation consists of black, maroon and green shales and slates. This unit is quite distinct and is usually identifiable from a distance. Regionally, the mid-Cretaceous Selwyn Suite syenite stocks intrude the Hyland Group rocks.

The Heidi showing consists of 5 to 10% massive to disseminated arsenopyrite, pyrite and stibnite/jamesonite replacing limestone and calcareous grit units. Irregular, narrow quartz/arsenopyrite veins intersect the mineralized beds and probably channelled the mineralizing fluids into the favourable horizons. The mineralization is quite poddy but is mainly localized within the recumbently folded south limb of the heidi anticline, near the Yusezyu/Narchilla contact. The mineralization is contained within an area measuring approximately 300 metres long and 100 metres high.

Geological mapping completed in 1996 uncovered several coarse grained biotite-feldspar porphyry dykes on the Heidi ridge and near Heidi Lake. Their presence hints that a larger granitic stock may exist at depth, beneath the claims. This theory is reinforced by a magnetic anomaly centered over Heidi Lake. Extensive hornsfeling typically associated with Cretaceous granitic stocks was not observed on the Heidi claims, implying that a buried stock would be at least 100 m below surface."

The showing on the property is located at approximately 600 North, 1800 East on a steep slope facing east northeast.

PREVIOUS WORK

Homestake Canada Inc. originally staked the Heidi showing in 1995, and between 1995 and 1998 carried out an exploration program which included prospecting, geological mapping, trenching and soil sampling. The best sample from the trenches, completed in 1995, returned a value of 2.93 g/t Au. Two Au/As/Sb soil anomalies with values up to 1150 ppb Au were outlined along the ridge to the west of the

showing (INAC, 1998).

SURVEY DESCRIPTIONS

The grid on the property consists of lines oriented at 153°, spaced every 100 metres and picketed every 20 metres. The grid lines were established from a base line designated 0 North. The grid was designed to extend from 500 South to 1000 North, however, this was not possible on most lines because of the steep topography (Figure 2).

The magnetic readings were taken every 10 metres with a Scintrex IGS-2/MP-4 and a Scintrex Envi. These instruments are proton precession magnetometers which measure the earth's total magnetic field to an accuracy of 0.1 nT. Diurnal variations were monitored every 10 seconds with a Scintrex Envi base station magnetometer. A total of 3430 readings were taken along 33.01 kilometres of line.

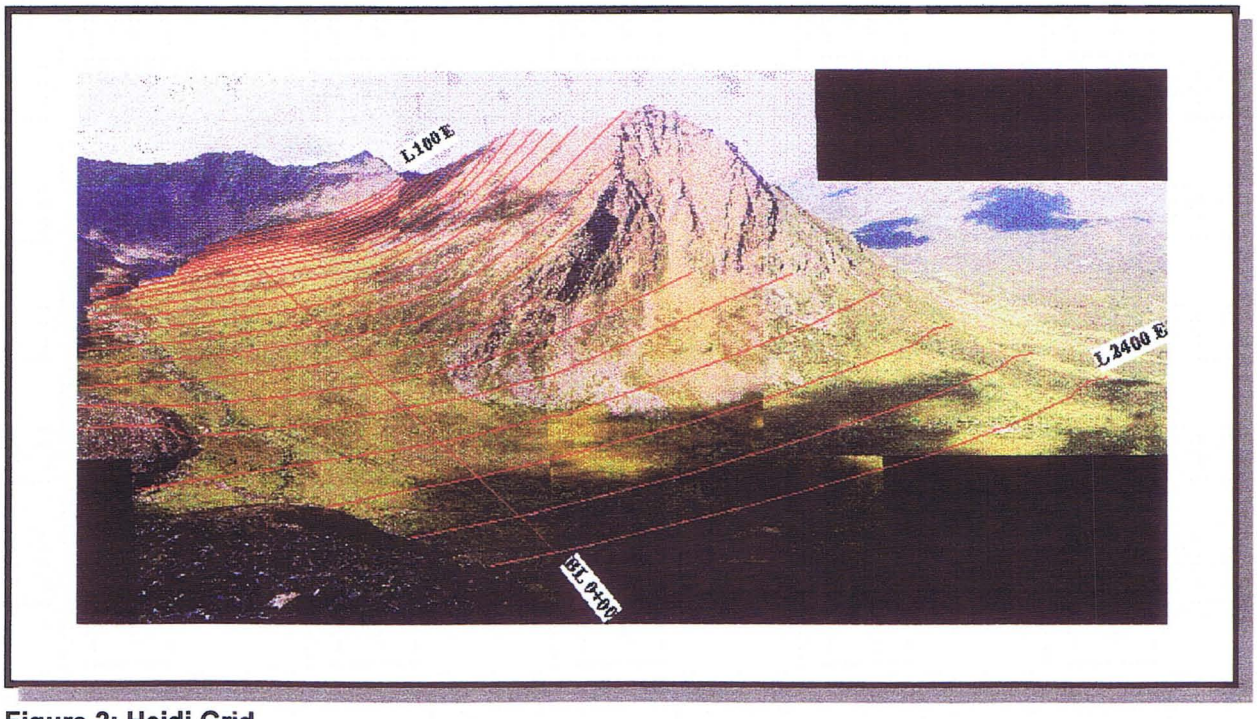


Figure 2: Heidi Grid

The horizontal loop EM survey was carried out along four of the grid lines 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 20 metres using a coil separation of 120 metres and frequencies of 444 and 1777 Hertz. A total of 152 readings were taken along 3.44 kilometres of line. The % slope was measured between all of the stations with an inclinometer and the coils were kept co-planar during the survey.

The IP survey was conducted with the Scintrex IPR-11 time domain spectral receiver and the Scintrex TSQ-3, 3000 Watt transmitter. The current on-off time is two seconds. Integration takes place during ten time intervals or 'slices' after shut-off; Table 1 lists the delay and integration times for each slice. A pole-dipole array was used with an electrode spacing of 40 metres and readings were taken for 'n' values of 1 to 4. The remote electrode was located to the south of the survey area at approximately 200 South, 100 East. Six of the grid lines were surveyed in the IP survey for a total of 7.2 kilometres.

SLICE	DELAY TIME (MS)	INTEGRATION TIME (MS)
M0	30	30
M1	60	30
M2	90	30
M3	120	30
M4	150	180
M5	330	180
M6	510	180
M7	690	360
M8	1050	360
M9	1410	360

Table 1 : Delay and integration times of the Scintrex IPR-11 IP receiver.

MAGNETIC RESULTS

The magnetic results are contoured every 50 nT on Map 1 at a scale of 1:5000. The results are also presented Figure 3 at a scale of 1:15,000.

The survey area covers part of an airborne magnetic anomaly outlined in a survey by the Geological Survey of Canada (G.S.C., 1966). The ground survey shows that the anomaly consists of a number of magnetic highs rather than one as suggested by the airborne survey.

Two anomalies with the highest amplitudes form a semi-circular trend on the ridge to the west of the showing. One is a north-south striking anomaly (up to 1300 nT above background) located along Line 1300 East from 300 to 600 North and the other is an east northeast striking anomaly (up to 800 nT above background) centered at 150 North on Line 1600 East. The trend is truncated to the east by an area of low magnetic field in the northeast corner of the grid.

The most continuous magnetic high anomaly (up to 700 nT above background) strikes approximately east-west fom Lines 400 East to 1700 East through the southern edge of the survey area.

IP RESULTS

The IP chargeability for slice 'M7' and resistivity pseusections are plotted on plan maps 2 and 3, respectively, at a scale of 1:5000. The 'n'=1 chargeability and resistivity are also presented in Figures 4 and 5, at a scale of 1:15,000.

Three high chargeability anomalies, labelled 'A', 'B' and 'C', strike east northeast through the survey area. Anomaly 'A' is located between 120 South on Line 1000 East and 140 South on Line 1600 East. It is a well defined high chargeability anomaly with a coincident low resistivity. Anomaly 'B' is also a well defined high chargeability, low resistivity response located between 240 North on Line 1100 East and 80 North on Line 1600 East. Anomaly 'C' is located on strike with the showing between 460 North on Line 1100

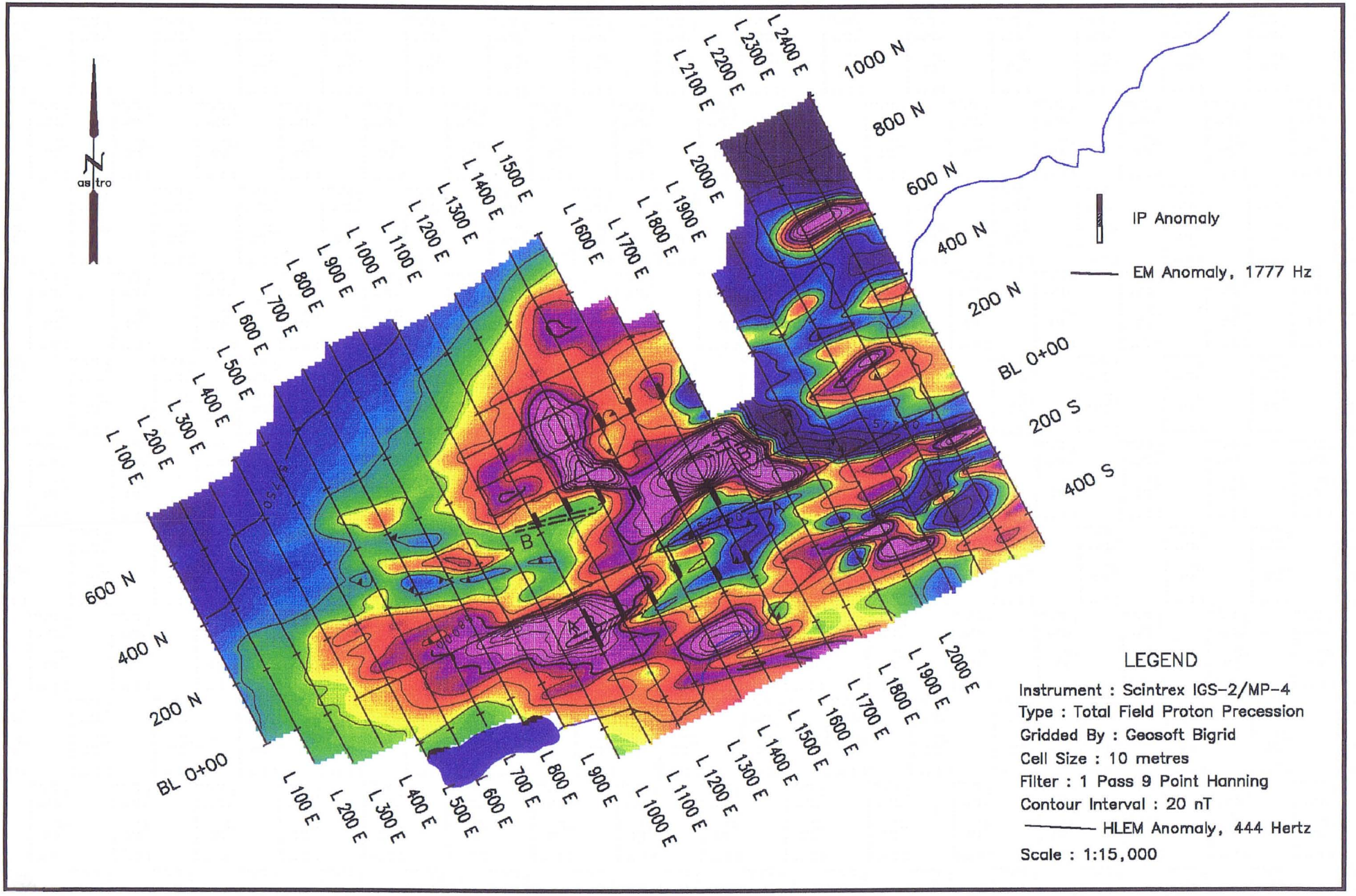


Figure 3 : Total Magnetic Field, Heidi Claims

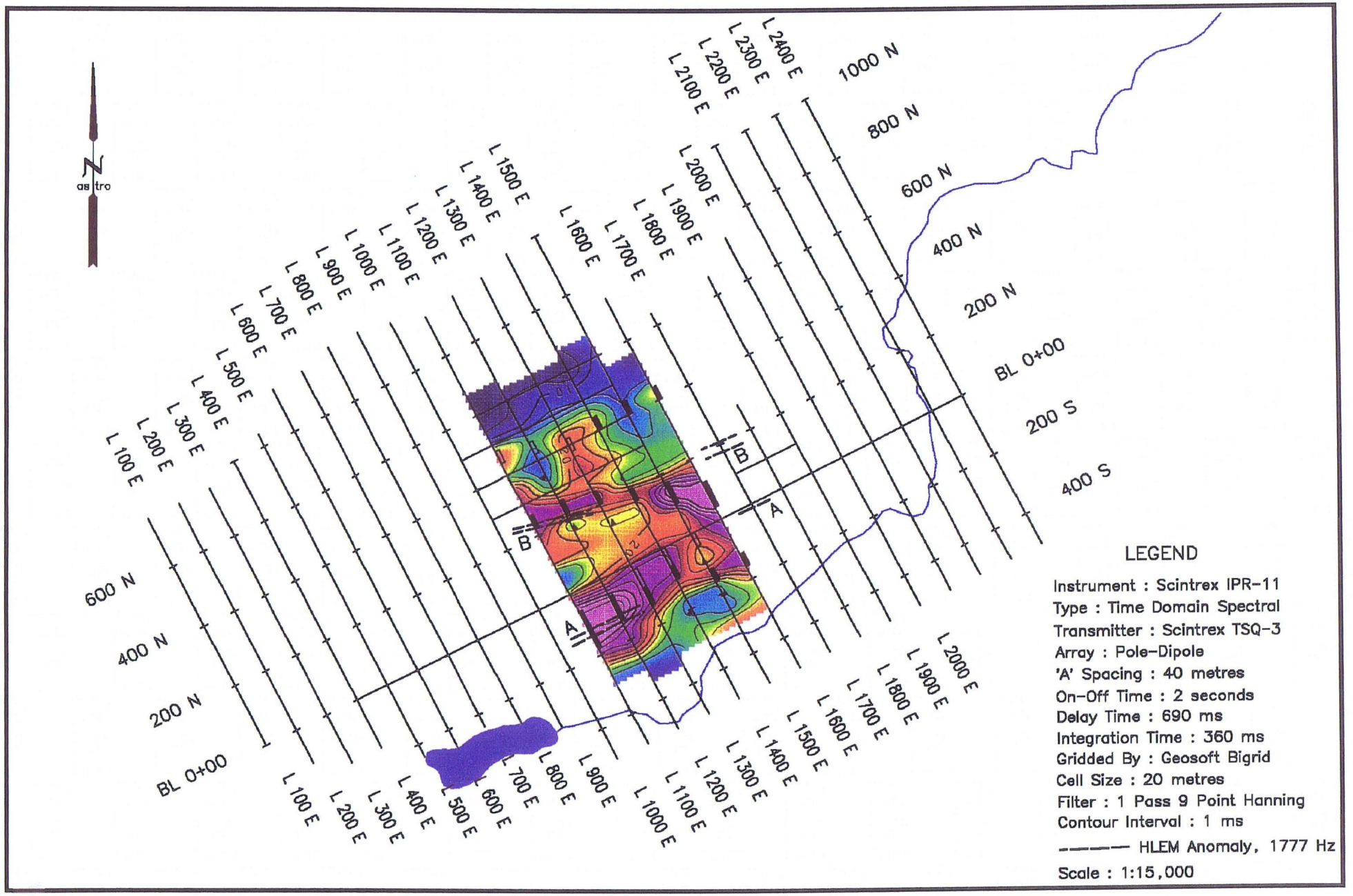


Figure 4 : N=1, M7 Chargeability, Heidi Claims

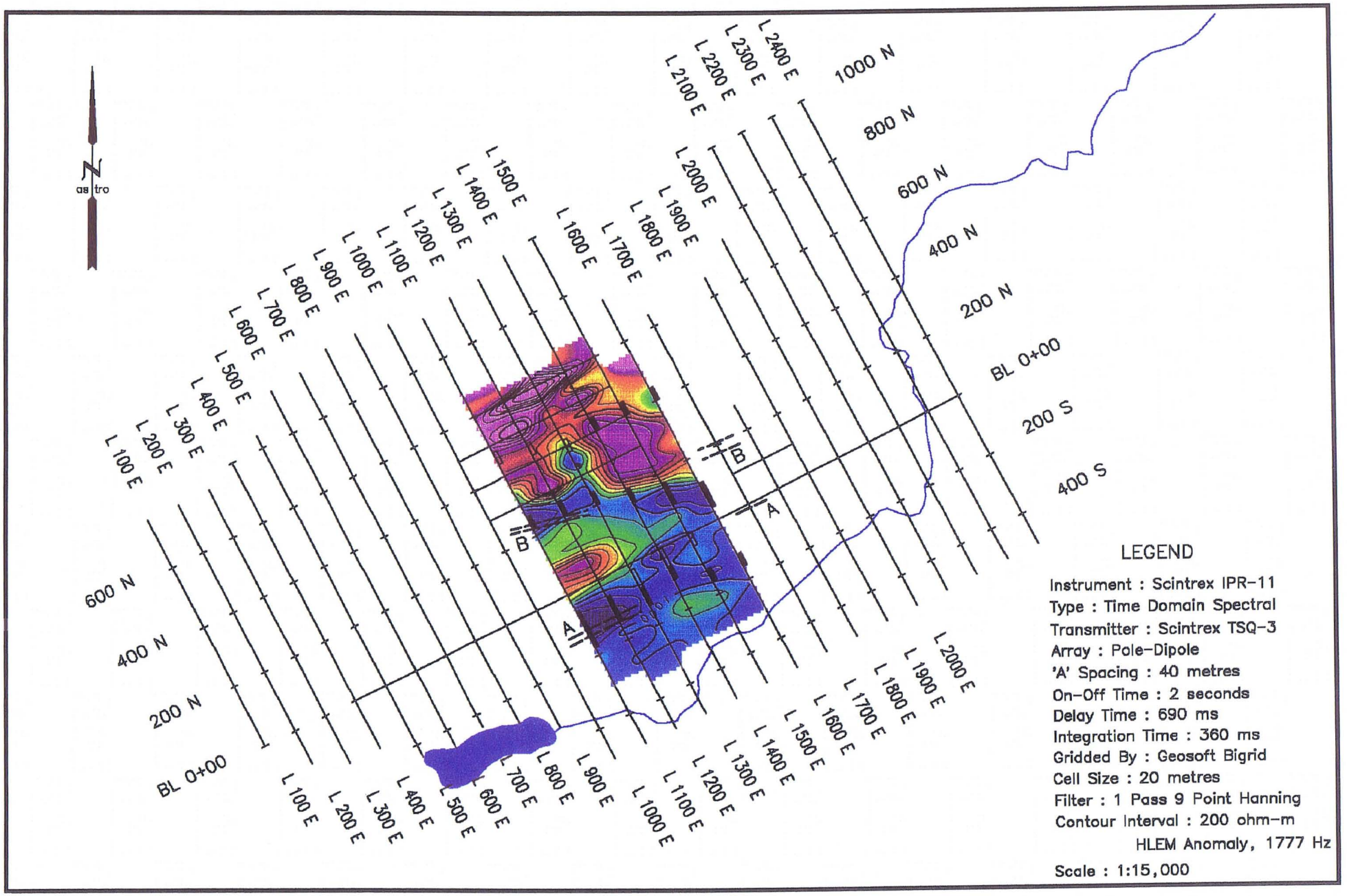


Figure 5 : N=1, IP Resistivity, Heidi Claims

East and 420 North on Line 1600 east. It is a poorly defined anomaly, possibly because of a deeper source, and is not associated with a resistivity low.

EM RESULTS

The results of the HLEM survey are profiled on maps 4 and 5 at a scale of 1:5000; the profile scale used for both frequencies is 1 cm = 20 %. The 1777 Hz results are also presented at a scale of 1:15,000 in Figure 6; the profile scale used on this diagrams is 1 cm = 40 %. There are two anomalous trends which are labelled 'A' and 'B' on the maps.

Anomaly 'A' strikes east northeast between 130 South on Line 1100 East and 140 South on Line 1200 East. The source of the anomaly is a 20 metre wide zone of poor conductivity at a shallow depth (Table 3). The dip appears to be close to vertical, although it is difficult to determine because of the low amplitude of the response.

The anomaly on these two lines correlates with IP anomaly 'A'. A similar EM anomaly, centered at 35 South on Line 1700 East, is interpreted to reflect the same zone even though it is offset from the IP trend.

LINE	ANOMALY CENTER	ANOMALY WIDTH (m)	IP (%)	Q (%)	DEPTH (m)	CONDUCTIVITY THICKNESS (mhos)	COMMENTS
1100 E	130 S	20	3	13	<12	1	
1200 E	140 S	20	3	8	<12	1	
1700 E	25 S	narrow	2	6	<12	<1	

Table 3: Anomaly 'A' Interpretation, 1777 Hz, 120 metre coil separation.

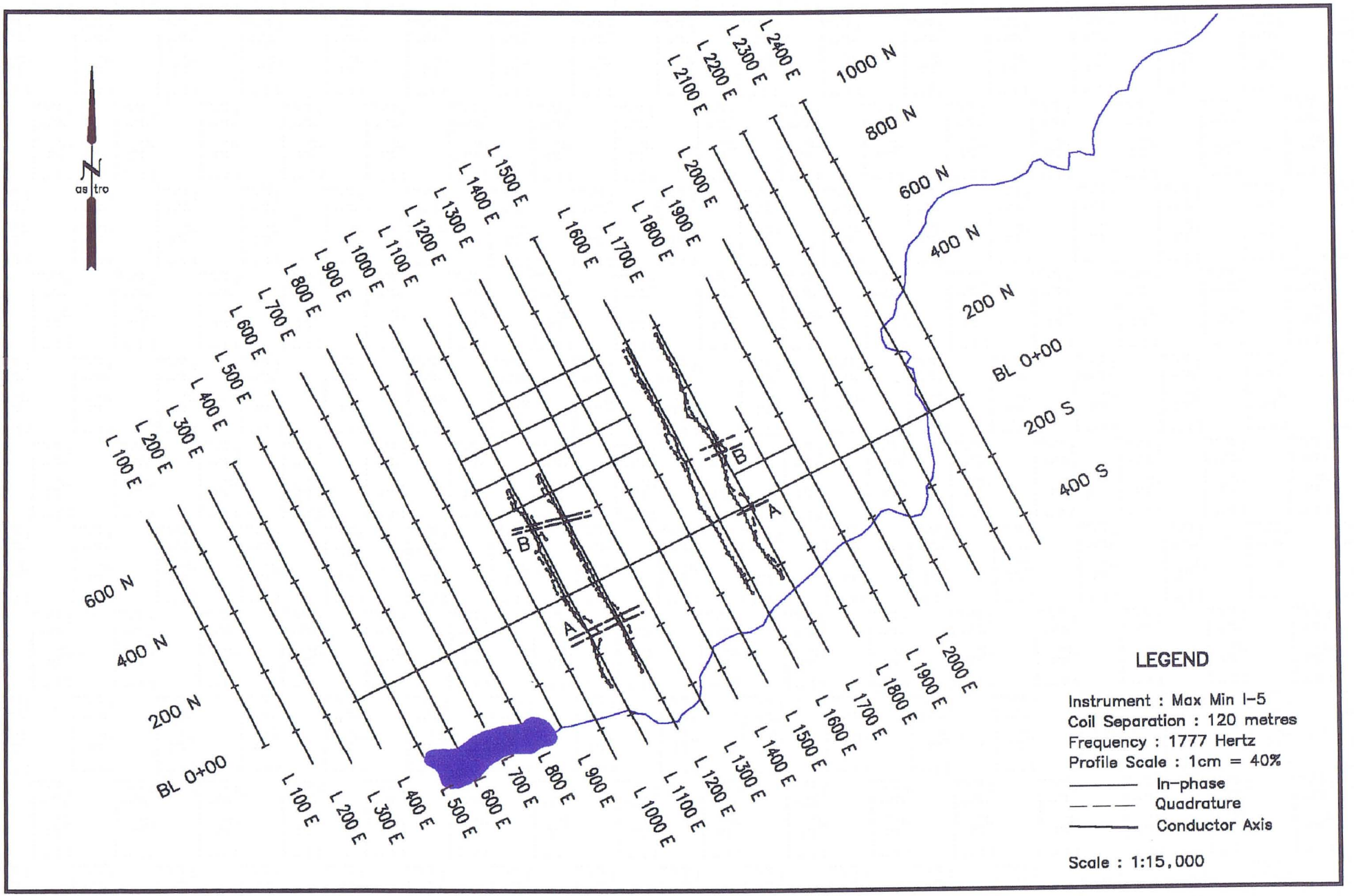


Figure 6 : HLEM Results, 1777 Hertz, 120 metre cable

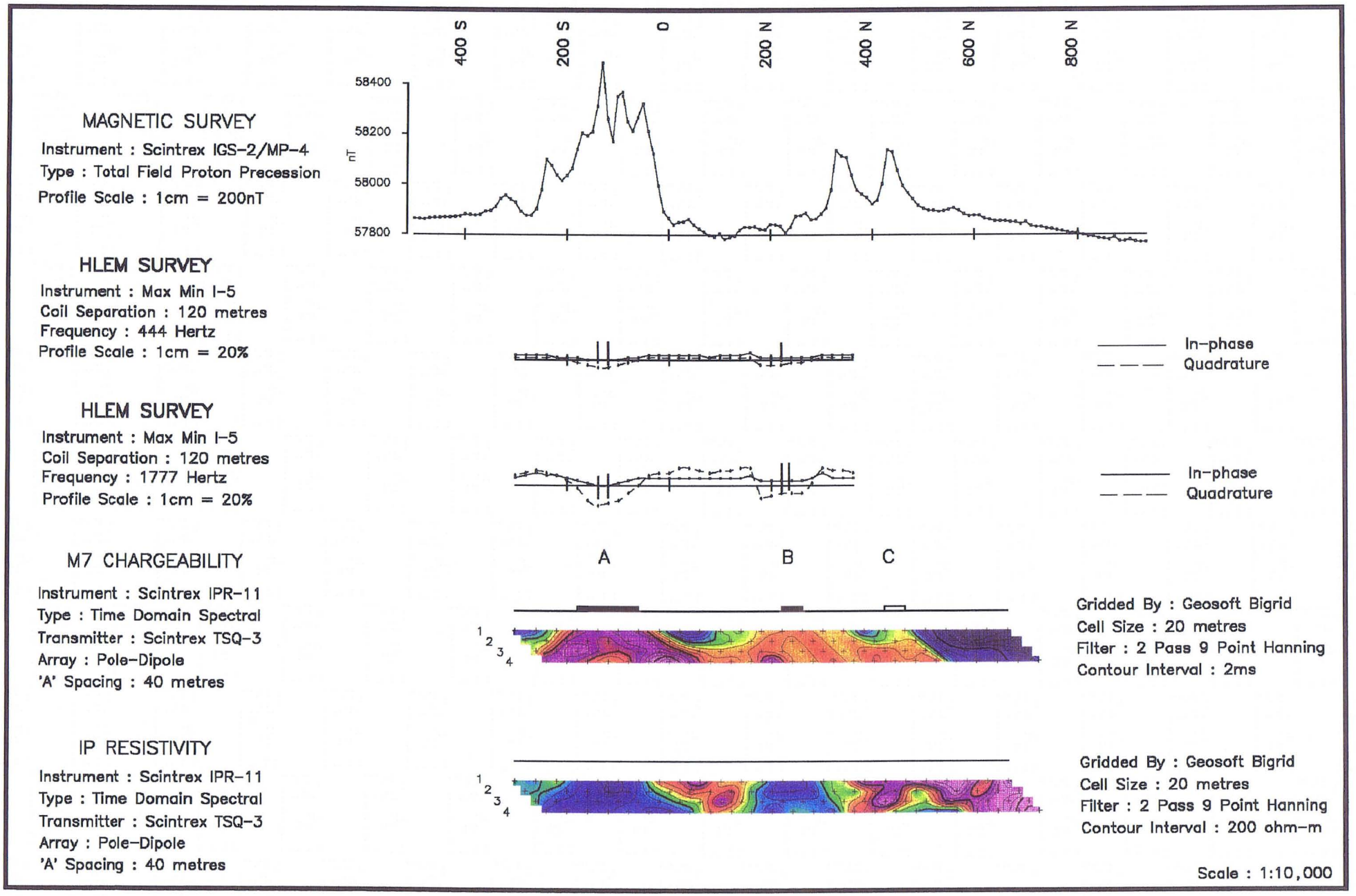


Figure 7 : Geophysics Compilation, Line 1100 East, Heidi Claims

Anomaly 'B' strikes parallel to anomaly 'A' between 225 North on Line 1100 East and 210 North on Line 1200 East, and at 195 North on Line 1700 East. The source of the anomaly is a 10 to 20 metres wide zone of poor conductivity at a shallow depth (Table 4). The dip of this zone is also difficult to determine because of the low amplitude of the anomaly.

LINE	ANOMALY CENTER	ANOMALY WIDTH (m)	IP (%)	Q (%)	DEPTH (m)	CONDUCTIVITY THICKNESS (mhos)	COMMENTS
1100 E	225 N	10	1	9	<12	<1	
1200 E	210 N	20	0	5	<12	<1	
1700 E	195 N	20	2	8	<12	<1	

Table 4: Anomaly 'B' Interpretation, 1777 Hz, 120 metre coil separation.

Figure 7 shows the correlation between the IP and EM anomalies on Line 1100 East. Anomalies 'A' and 'C' have a coincident high magnetic field on Line 1100 East but is not the case on all of the lines. The source of the IP anomalies may be locally magnetic, however, they crosscut the higher amplitude magnetic anomalies. A possible interpretation is that the IP/HLEM anomalies represent quartz/arsenopyrite veins and the magnetic anomalies reflect mineralization which has replaced the limestone and grit units, as seen in the showing. Although the magnetic zones do not show up as distinct IP anomalies they likely contribute to the high chargeability background seen in the IP survey.

January 28/04
Date

Douglas Londry
D. Londry

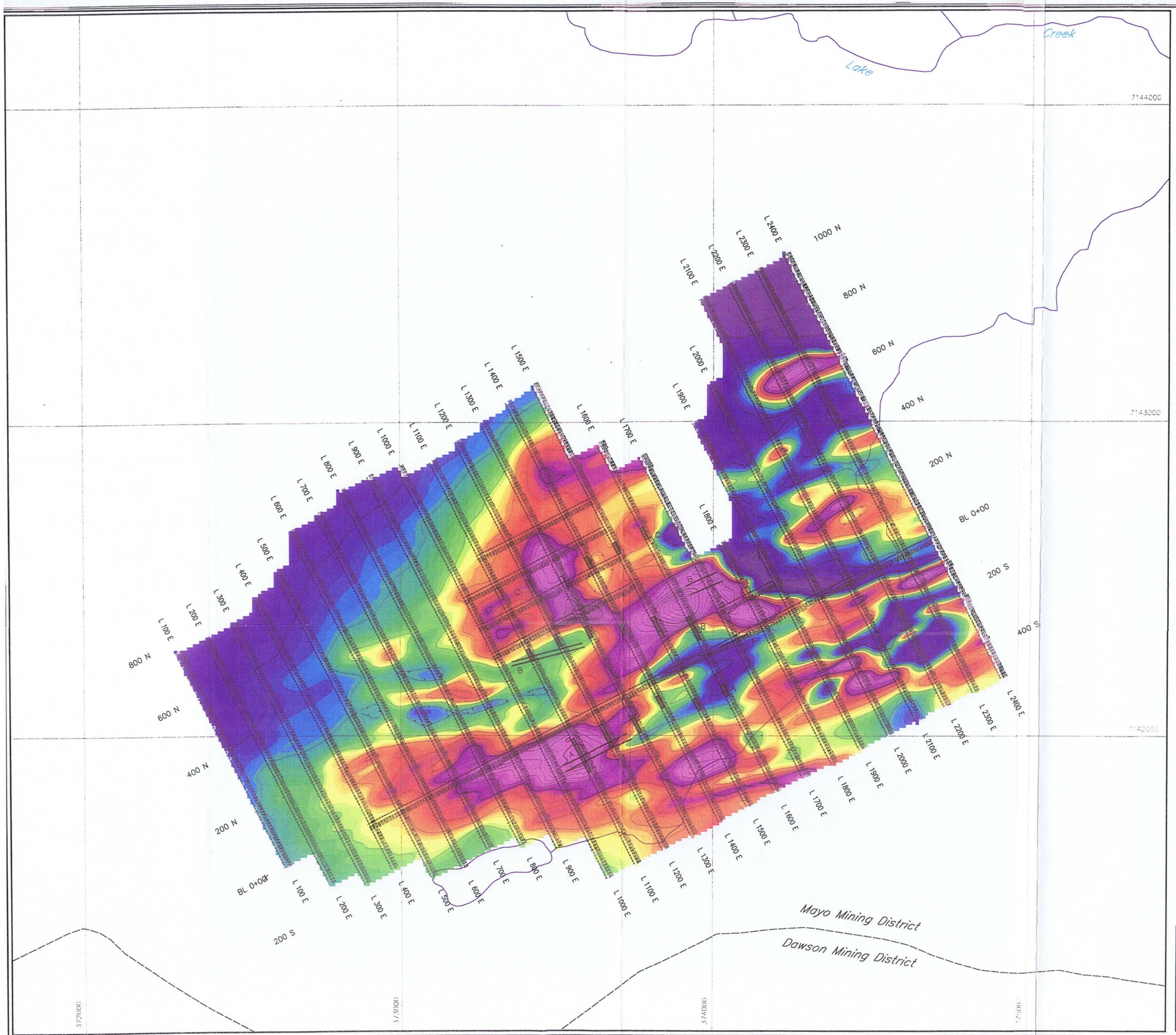
REFERENCES

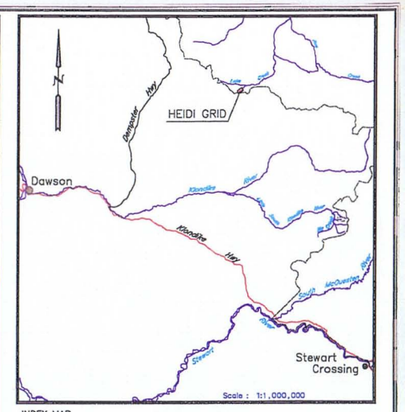
Geological Survey of Canada

1966: Areomagnetic Map of Fish Creek, Yukon Territory; Geophysical Series Map 3305G, Sheet 116A/05, scale of 1 inch to 1 mile (1:63,360)

INAC

1998: Yukon MINFILE, #116A 037; Exploration and Geological Services Division, Yukon, Indian and Nothern Affairs Canada.





INDEX MAP

2 degrees east of UTM grid north

LEGEND

Instrument : Scintrex IGS-2/MP-4 , ENVI
Type : Total Field Proton Precession
Datum Level : 57000 nT
Contour Interval : 50 nT
Gridded By : Geosoft Bigrid
Cell Size : 10 metres
Filter : 1 Pass 9 Point Hanning

HLEM ANOMALY

1777 Hertz

IP ANOMALIES

Strong increase in chargeability, decrease in resistivity
Strong increase in chargeability
Poorly defined increase in chargeability

0 100 m 200 m 300 m 400 m 500 m
Scale : 1:5000

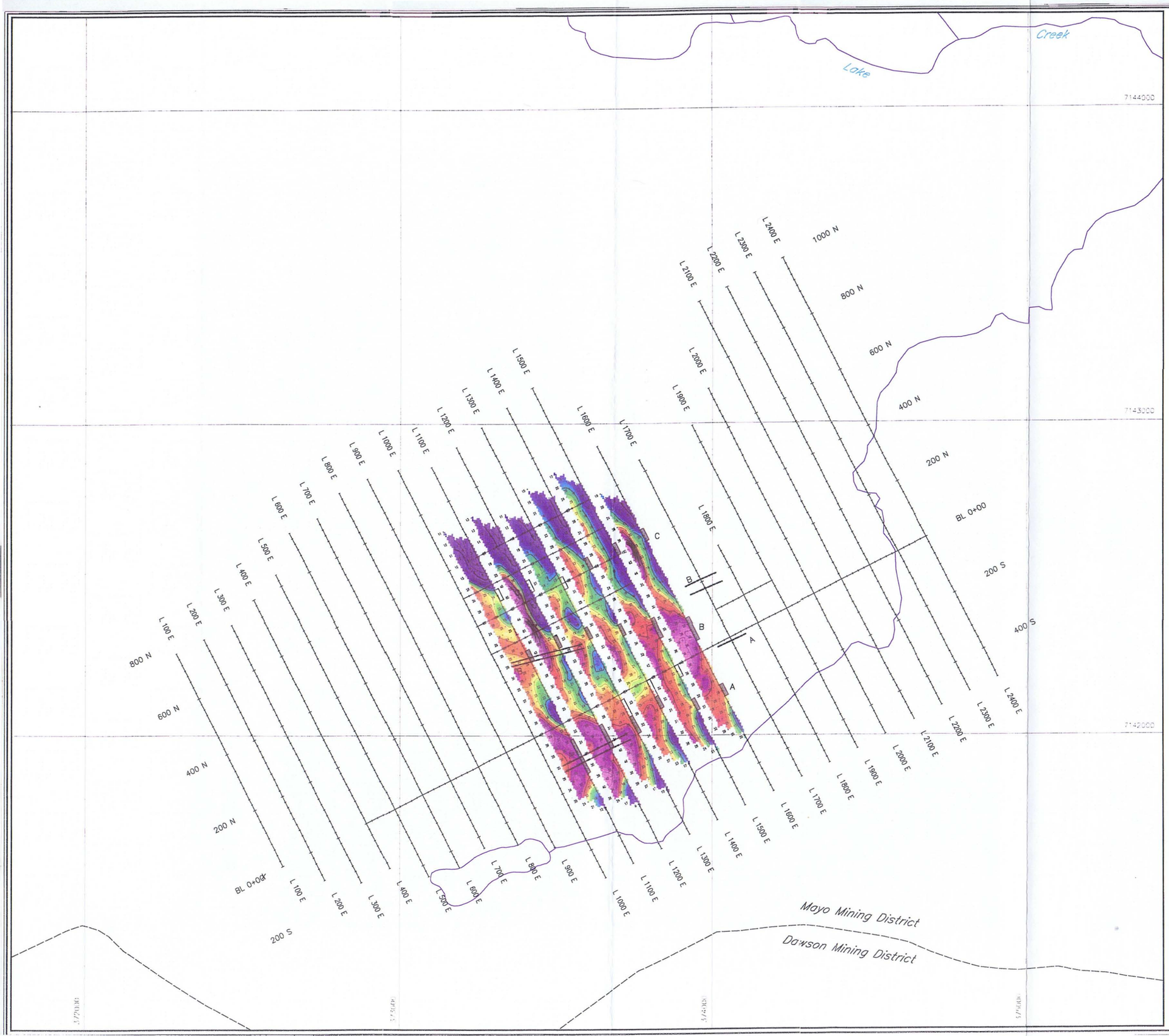
KLONDIKE EXPLORATION

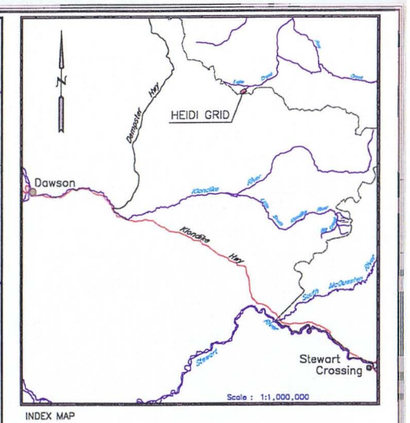
MAGNETIC SURVEY

HEIDI CLAIMS

OGILVIE MOUNTAINS
YUKON TERRITORIES

File : HEID.XYZ	Date : August, 2003
NTS : 116-A/5	Proj.# :
WORK BY : Timmins Geophysics Ltd.	





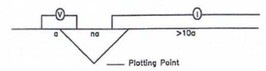
INDEX MAP

2 degrees east of UTM grid north

LEGEND

Receiver : Scintrex IPR-11
Type : Time Domain Spectral
Transmitter : Scintrex TSQ-3, 3 KW
Array : Pole-Dipole
'A' Spacing : 40 metres
On-Off Time : 2 Seconds
Delay Time : 690 ms
Integration Time : 360 ms

Gridded by : Geosoft Bigrid
Cell Size : 20 metres
Contour Interval : 2 ms



HLEM ANOMALY

1777 Hertz

IP ANOMALIES

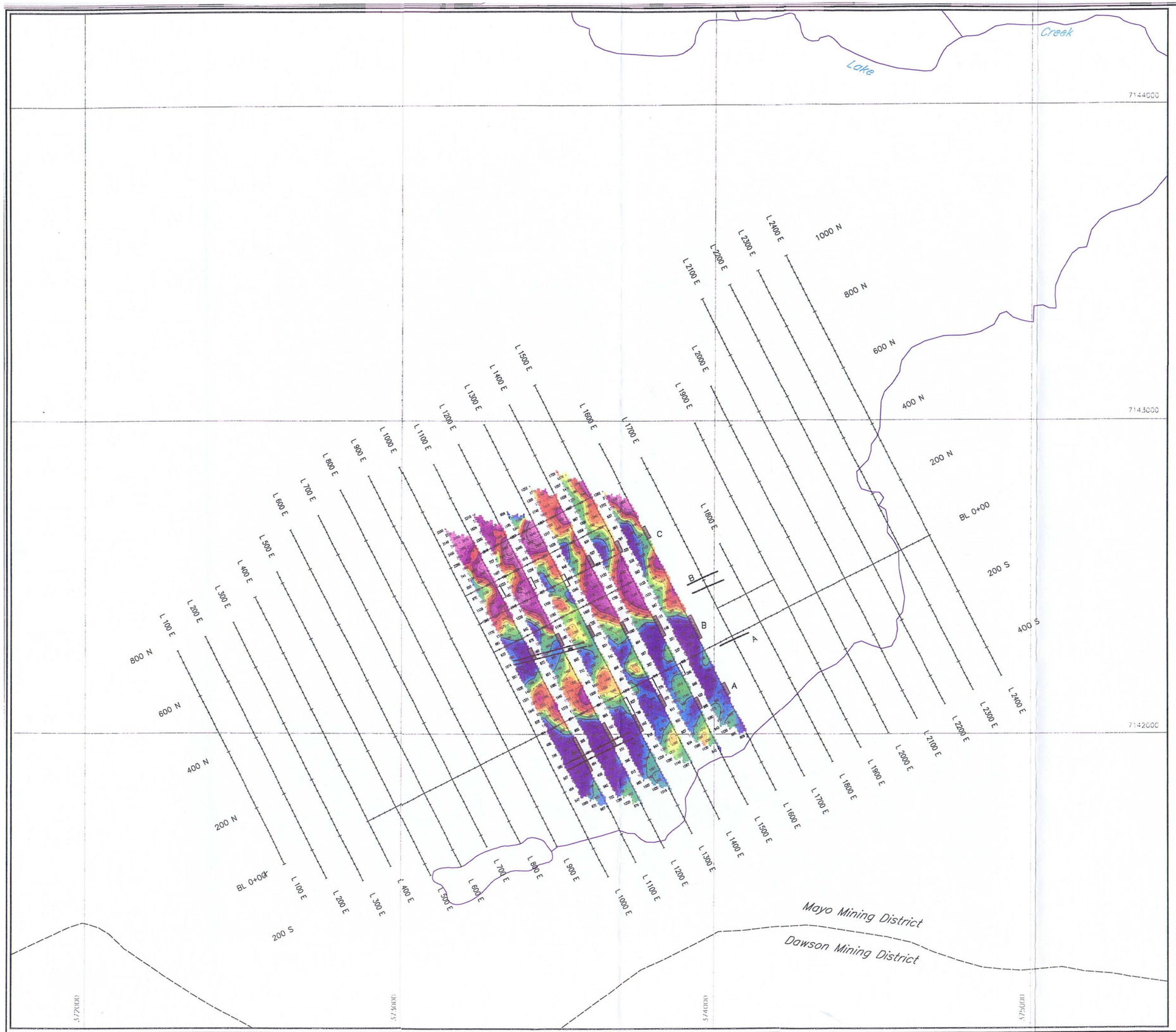
Strong increase in chargeability, decrease in resistivity
Strong increase in chargeability
Poorly defined increase in chargeability

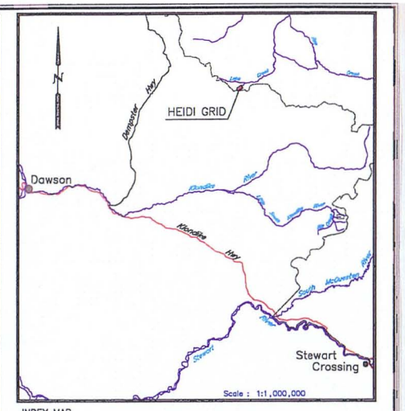
0 100 m 200 m 300 m 400 m 500 m
Scale : 1:5000

KLONDIKE EXPLORATION

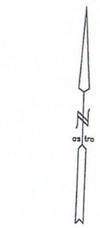
M7 PSEUDO-SECTIONS
HEIDI CLAIMS
OGILVIE MOUNTAINS
YUKON TERRITORIES

File : HIP.XYZ	Date : August, 2003
NTS : 116-A/5	Proj.# :
WORK BY : Timmins Geophysics Ltd.	





INDEX MAP

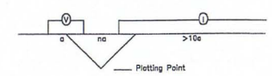


2 degrees east of UTM grid north

LEGEND

Receiver : Scintrex IPR-11
Type : Time Domain Spectral
Transmitter : Scintrex TSQ-3, 3 KW
Array : Pole-Dipole
'A' Spacing : 40 metres
On-Off Time : 2 Seconds

Gridded by : Geosoft Bigrid
Cell Size : 20 metres
Contour Interval : 100 ohm-m



HLEM ANOMALY

1777 Hertz

IP ANOMALIES

Strong increase in chargeability, decrease in resistivity
Strong increase in chargeability
Poorly defined increase in chargeability

0 100 m 200 m 300 m 400 m 500 m
Scale : 1:5000

KLONDIKE EXPLORATION

RESISTIVITY PSEUDO-SECTIONS
HEIDI CLAIMS
OGILVIE MOUNTAINS
YUKON TERRITORIES

File : HIP.XYZ	Date : August, 2003
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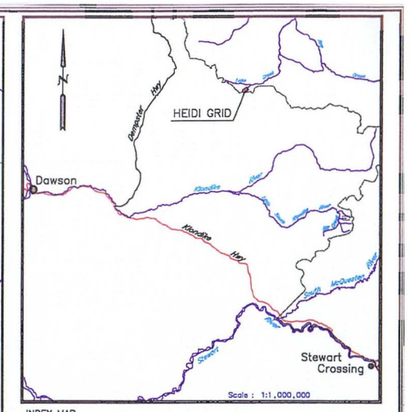
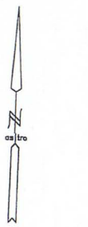


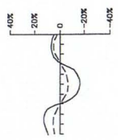
INDEX MAP



2 degrees east of UTM grid north

LEGEND

Instrument : Apex Parametrics MaxMin I-5
Coil Separation : 120 metres
Frequency : 444 Hertz
Profile Scale : 1cm = 20%



In-phase ——————
Quadrature — — — —

0 100 m 200 m 300 m 400 m 500 m

Scale : 1:5000

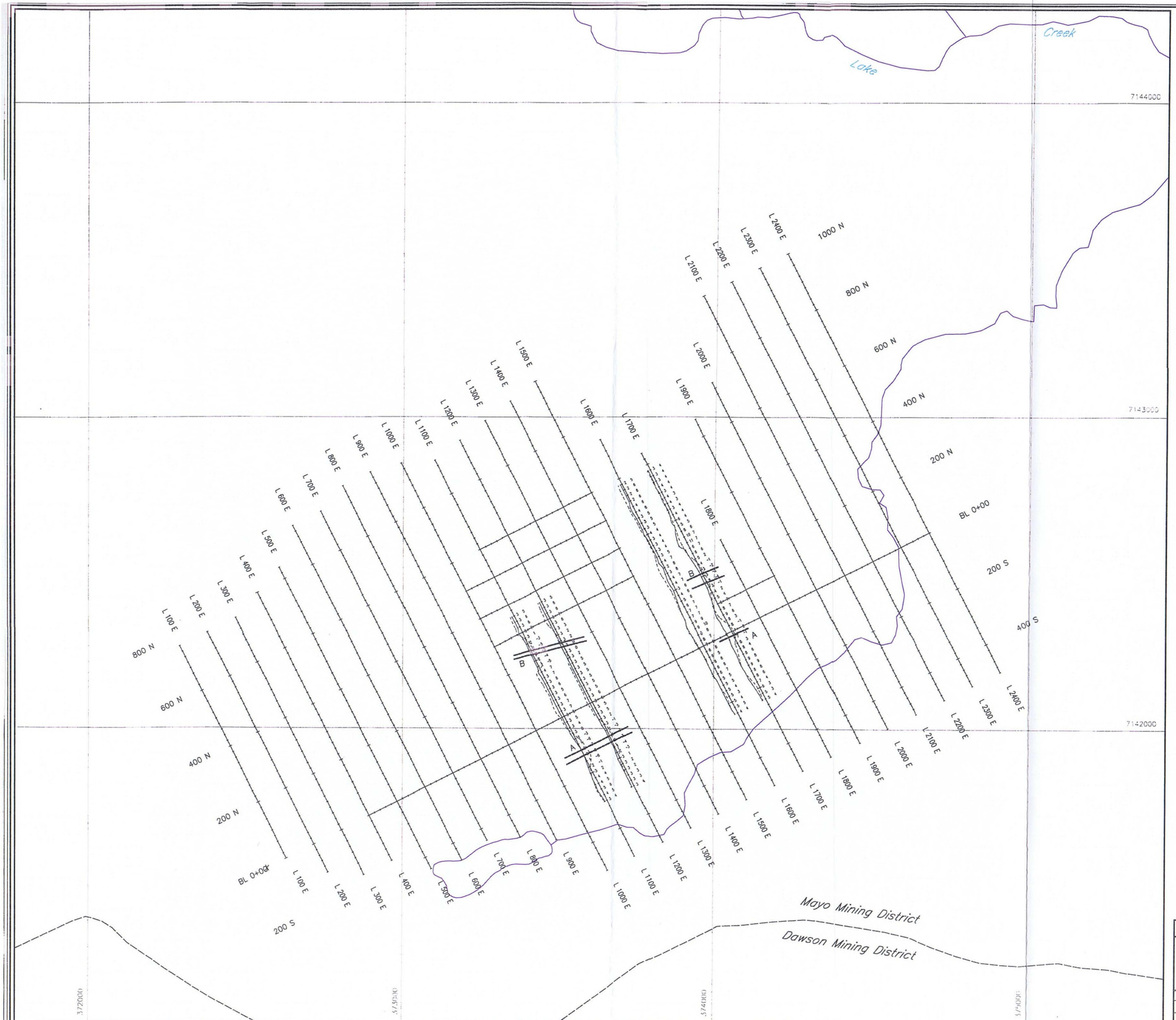
KLONDIKE EXPLORATION

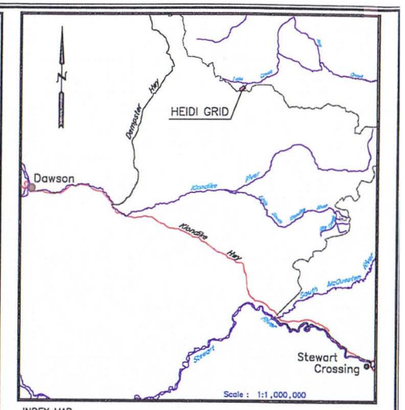
HLEM SURVEY (444 Hz)

HEIDI CLAIMS

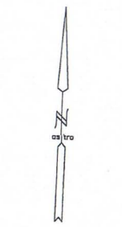
OGILVIE MOUNTAINS
YUKON TERRITORIES

File : HHL.XYZ	Date : August, 2003
NTS : 116-A/5	Proj.# :
WORK BY : Timmins Geophysics Ltd.	





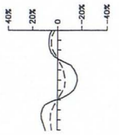
INDEX MAP



2 degrees east of UTM grid north

LEGEND

Instrument : Apex Parametrics MaxMin I-5
Coil Separation : 120 metres
Frequency : 1777 Hertz
Profile Scale : 1cm = 20%



In-phase ———
Quadrature — — —

0 100 m 200 m 300 m 400 m 500 m

Scale : 1:5000

KLONDIKE EXPLORATION

HLEM SURVEY (1777 Hz)

HEIDI CLAIMS
OGILVIE MOUNTAINS
YUKON TERRITORIES

File : HHL.XYZ	Date : August, 2003
NTS : 116-A/5	Proj.# :
WORK BY : Timmins Geophysics Ltd.	