

32D05SW0134 2.6586 BISLEY

010

GEOPHYSICAL REPORT  
MAGNETIC AND VLF - EM  
SURVEYS  
KIRKLAND LAKE PROJECT

RECEIVED

APR 05 1984

MINING LANDS SECTION

March, 1984

D. Boucher



32D05SW0134 2.6586 BISLEY

010C

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## INTRODUCTION

This report details the results of ground magnetic and VLF-EM surveys carried out on the claim group by Monopros Limited. A review of previous geological investigations is also presented.

## LOCATION AND ACCESS (Fig. 1 and 2)

The property consists of 25 contiguous claims located in the south east corner of Bisley Township 18 km. north north east of Kirkland Lake. It is accessible by road 14 km east of Kirkland Lake along Highway 66 and north 16 km on Esker Lakes Park road. At the Assumption Lake turn-off a lumber road heads west and then north west for 6 km before crossing the south east corner of the property.

## PREVIOUS WORK

- 1) L.S. Jensen (1972) mapped Bisley Township for the Ontario Department of Mines. Most of the property is underlain by pillowed to massive intermediate volcanics (andesite and dacite). Minor agglomerates are also present. A small rhyolite lens in the north corner of the property strikes north west.

On Jensen's maps a gabbro intrusion is located in the centre of the claim group. However, field observations by the writer indicate that the rock represents the granular core of a massive flow and is not intrusive.

- 2) In 1979 an airborne electromagnetic and total intensity magnetic survey was carried out in the Kirkland Lake region by Questor Surveys Limited for the Ontario Geological Survey. Map P2252 of Bisley Township covers the claim group. No conductors were located on the property, but the magnetic survey outlined a circular anomaly centred on Nikila Lake. A weakly magnetic linear structure trends north east and intersects the anomaly.
- 3) Upon public release of the airborne surveys by the Ontario Geological Survey in 1979, Geoex Limited carried out ground magnetic and VLF-EM surveys on six claims which covered the aeromagnetic anomaly. This work was performed on behalf of Falconbridge Limited.

Ground survey maps submitted for assessment work credit were found by the writer to contain a number of errors, the most important being that readings were plotted along grid lines numbered "west" that in fact increased to the east.

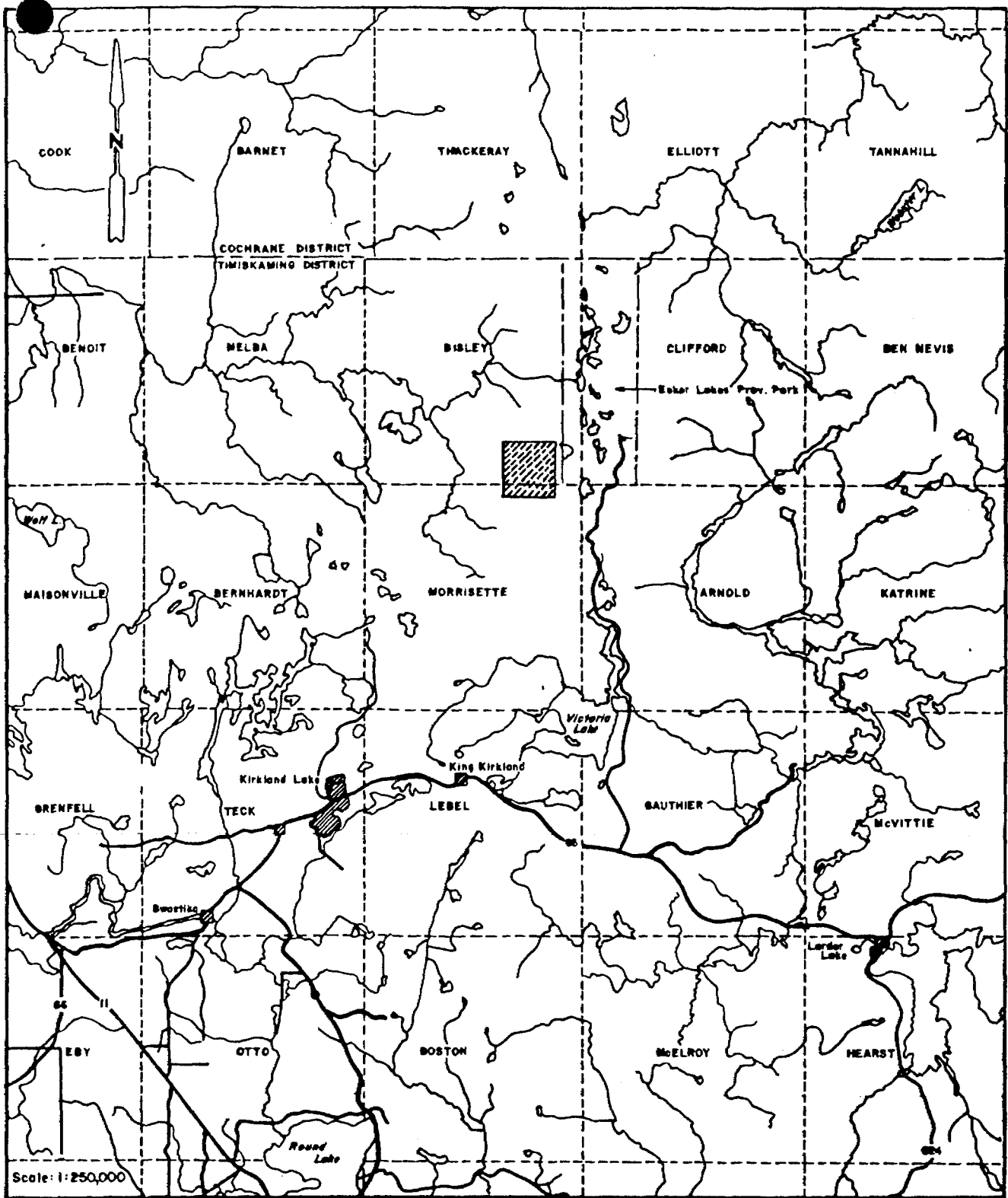


Fig. 1 Claim Location



SCALE

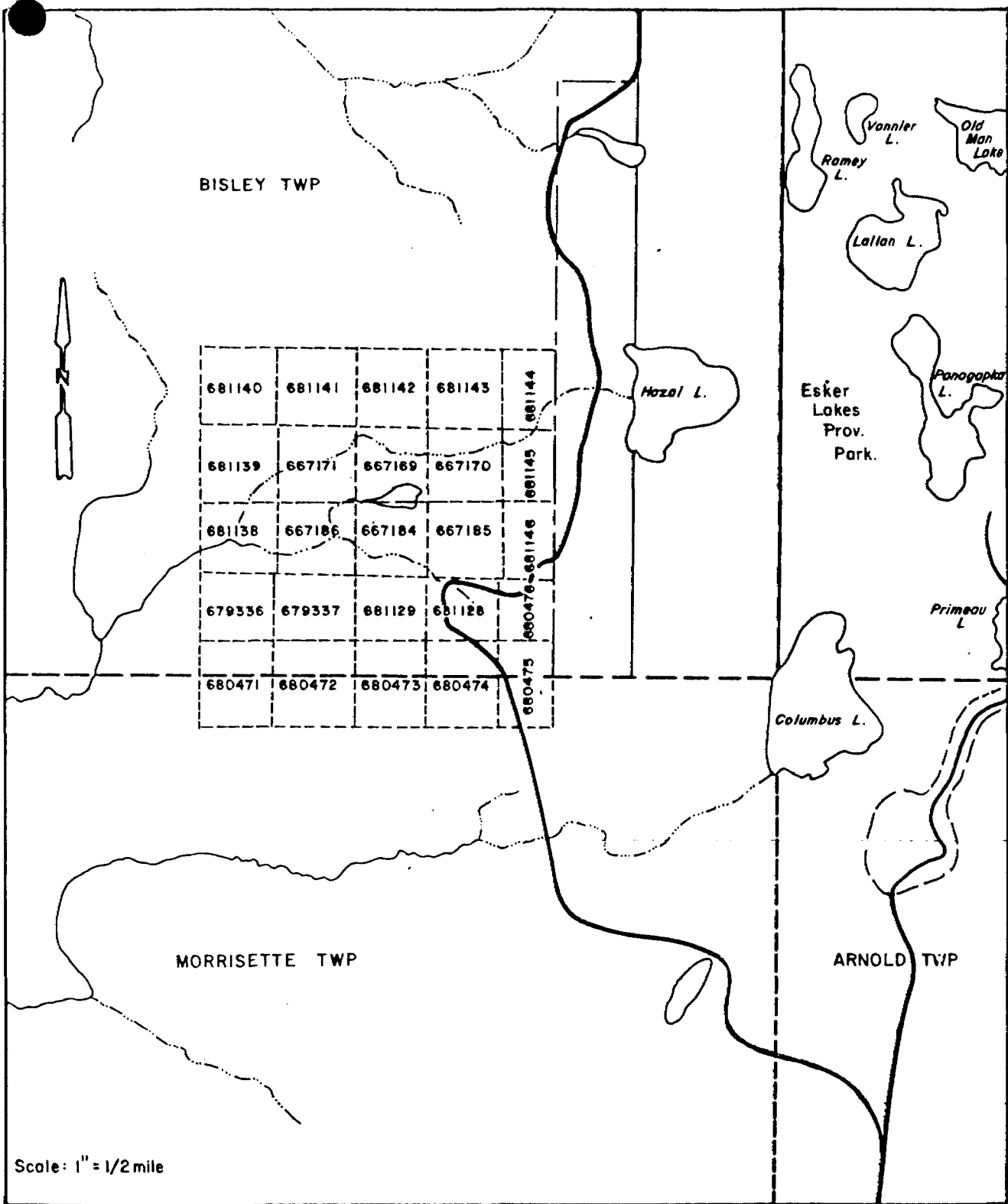


Fig. 2 Claim Location

It is concluded in the assessment work report that the source of the magnetic anomaly is the gabbro indicated on OGS Map 2252 (Jensen, 1972). However, the gabbro occurs 500 metres west south west of the anomaly. Furthermore, no magnetic high coincides with the outcrop, therefore the source of the magnetic anomaly still remains to be determined.

Several weak VLF-EM conductors were located by the ground survey but were left unexplained.

- 4) Following the airborne survey the Ontario Geological Survey carried out a reconnaissance reverse circulation drilling programme in the area. Hole number 82-16 which was drilled on the property intersected debris flows and basal till (Averill and Fortescue, 1983). A total of 8 gold flakes and 5 pyrope garnet grains were recovered from this material. Averill and Fortescue recommended that the circular magnetic anomaly should be tested for the possible source of the pyrope garnets. They also suggested that the source of the gold could be from weak conductors not detected by the airborne survey.

#### DISCUSSION

From the above it is evident that previous investigations have not fully assessed the potential of this property for gold or kimberlite.

#### GEOPHYSICAL SURVEYS

As errors were discovered in the ground surveys carried out by previous owners of the claims, it was decided to repeat both the magnetic and VLF-EM surveys.

North south grid lines were established at 122 metre spacing. Pickets were placed at 25 metre intervals along the lines.

The magnetic survey was carried out using a McPhar <sup>GP-81</sup> ~~GP-81~~ proton precession total field magnetometer. Diurnal variations of the earth's magnetic field were monitored with a Canadian Mining Geophysics MR-10 digital recorder which was connected to a magnetometer identical to the survey instrument. Readings were taken at 25 metre intervals along the survey lines.

The VLF-EM survey was carried out with a Geonics EM-16 unit. Cutler, Maine, at a frequency of 17.8 Hz was used as the transmitting station. Readings were taken every 25 metres along the survey lines.

RESULTS

The ground magnetic survey outlined an elliptical dipole anomaly in the centre of the property. The dipole configuration is characteristic of a plug-like magnetic intrusive. Dimensions of the body are approximately 450 metres by 250 metres. Only minor background variations occur in the remainder of the property.

The ground VLF-EM survey located a number of weak anomalies. Of particular interest is the anomaly situated in the north west corner of the claim group. This anomaly occurs immediately up-ice from drill hole 82-16 of the Ontario Geological Survey which contained 8 gold flakes in debris flow and basal till.

RECOMMENDATIONS

- 1) The magnetic anomaly should be tested by drilling on line 0+00 at station 1+50 north.
- 2) The weak VLF-EM conductor in the north west corner of the property should also be tested by drilling. A survey carried out perpendicular to the conductor axis would better define its location.
- 3) Basal till samples should be collected down-ice from the other VLF-EM conductors to assess their potential.

*Donald Boucher*

D. Boucher  
March 23, 1984

/ih

## REFERENCES

- Averill, S.A. and Thomson, Ian  
1981: Reverse Circulation Rotary Drilling and Deep Overburden Geochemical Sampling in Marter, Catherine, McElroy, Skead Gauthier and Hearst Townships, District of Timiskaming. Ontario Geological Survey, OFR 5335, 276 p.
- Averill, S.A. and Fortescue, J.A.C.  
1983: Deep Overburden and Geochemical Sampling in Hearst, Catherine, McElroy, Gauthier, Arnold, Clifford and Bisley Townships, Districts of Timiskaming and Cochrane. Ontario Geological Survey Open File Report 5456, 315 p., 5 appendices, 5 tables, 32 figures (11 in back pocket).
- Baker, C.L.  
1982: Quaternary Geology of the Magusi River area, Districts of Cochrane and Timiskaming. Ontario Geological Survey, Preliminary Map P 2483, scale 1 : 50,000 (32D/5).
- Jensen, L.S.  
1972: Geology of Melba and Bisley Townships, District of Timiskaming. Ontario Division of Mines, Geological Report No. 103, 27 p. Accompanied by Map 2252, scale 1 : 31,680.
- Lee, H.A.  
1963: Glacial Fans in Tillis from the Kirkland Lake Fault: A Method of Gold Exploration. Geological Survey of Canada Paper 63-45, 36 p.
- OGS  
1979: Airborne Electromagnetic and Total Intensity Magnetic Survey,, Kirkland Lake Area, Bisley Township, District of Cochrane; by Questor Surveys Limited for the Ontario Geological Survey, Prelim. Map P 2252 Geophys. Ser., scale 1 : 20,000. Survey and compilation, February and March 1979.
- Routledge, R.E., Thomson, Ian, Thomson, I.S. and Dixon, J.A.  
1981: Deep Overburden Drilling and Geochemical Sampling in Benoit, Melba, Bisley, Maisonville, Morrisette, Arnold, Grenfell, Lebel, Eby, Otto, Boston and McElroy Townships, Districts of Timiskaming and Cochrane; Ontario Geological Survey OFR 5356.
- Saukko, R.N.  
1981: Report on Geophysical Surveys Bisley Township. Property of Falconbridge Mines Ltd. Kirkland Lake Assessment Work Files Report No. 2.3680.
- Thomson, Ian and Lourim, Jeanette  
1981: Mid-Density (S.G. 2.81-3.32) Mineralogy of Glacial Overburden as an Indicator of Gold Mineralization in Marter, Catherine, McElroy, Skead, Gauthier and Hearst Townships, District of Timiskaming. Ontario Geological Survey, OFR 5355, 112 p.



WB40800079  
 2.6



The Mining Act in the "Expend. Days Cr." columns.  
 - Do not use shaded areas below.

Type of Survey(s): **ELECTROMAGNETIC + MAGNETOMETER**

Township or Area: **BISLEY**

Claim Holder(s): **DONALD R. BOUCHER**

Prospector's Licence No.: **A45229**

Address: **BOX 878 NEWLISKEARD, ONT. P0J1P0**

Survey Company: **MONOPROS LTD**

Date of Survey (from & to):  
 1 11 83 22 12 83  
 Day Mo. Yr. Day Mo. Yr.

Total Miles of line Cut: **26**

Name and Address of Author (of Geo-Technical report):  
**D. BOUCHER Box 878 NEWLISKEARD, ONT. P0J1P0**

Credits Requested per Each Claim in Columns at right

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

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
L.					
	667169			681138	
	667170			681139	
	667171			681140	
				681141	
	667184			681142	
	667185			681143	
	667186			681144	
				681145	
	679336			681146	
	679337				
	680471				
	680472				
	680473				
	680474				
	680475				
	680476				
	681128				
	681129				

Expenditures (excludes power stripping)

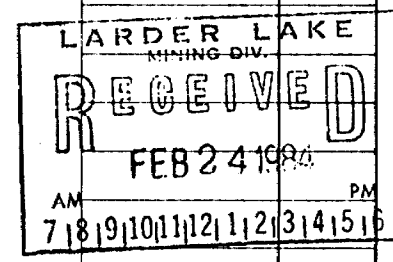
Type of Work Performed

Performed on Claim(s)

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.



Total number of mining claims covered by this report of work. **25**

For Office Use Only

Total Days Cr. Recorded: **1500**

Date Recorded: **FEB 24 1984**

Date Approved as Recorded: **8.7.24**

Mining Recorder: *[Signature]*

Branch Inspector: *[Signature]*

Date: **24/02/84**

Recorded Holder or Agent (Signature): **Donald Boucher**

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: **D. BOUCHER Box 878 NEWLISKEARD ONT. P0J1P0**

Date Certified: **24/02/84**

Certified by (Signature): **Donald Boucher**



2.6586

June 27, 1984

Our File: 2.6586

Donald R. Boucher  
Box 878  
New Liskeard, Ontario  
POJ 1P0

Dear Sir:

RE: Geophysical (Electromagnetic and Magnetometer) Survey  
submitted on Mining Claims L 667169 et al in the  
Township of Bisley

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Enclosed are the plans, in duplicate, for the above-mentioned  
survey. Please plot all claim lines and claim numbers on the  
plans and return the plans to this office, quoting file 2.6586.

For further information, please contact Mr. Ray Pichette at  
(416)965-4888.

Yours sincerely,

S.E. Yundt  
Director  
Land Management Branch

Whitney Block, Room 6643  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: (416)965-4888

D. Isherwood:mc

cc: Mining Recorder  
Kirkland Lake, Ontario

Encl.

ADDRESS:

Approved Reports of Work  
sent out

Notice of Intent filed

Approval after Notice of Intent  
sent out

Duplicate sent to Resident  
Geologist

Duplicate sent to A.F.R.D.

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1984 04 09

Your File: 79  
Our File: 2.6586

Mr. George J. Koleszar  
Mining Recorder  
Ministry of Natural Resources  
4 Government Road East  
P.O. Box 984  
Kirkland Lake, Ontario  
P2N 1A2

Dear Sir:

We have received reports and maps for a Geophysical (Electromagnetic and Magnetometer) Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims L 667169 et al in the Township of Bisley.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours sincerely,

*SE*

S.E. Yundt  
Director  
Land Management Branch

Whitney Block, Room 6643  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: (416) 965-6918

A.Barr:mc

cc: Donald R. Boucher  
Box 878  
New Liskeard, Ontario  
P0J 1P0



GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL  
TECHNICAL DATA STATEMENT

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) Electromagnetic + Magnetometer  
Township or Area BISLEY  
Claim Holder(s) DONALD R. BOUCHER  
  
Survey Company MONOPROS LTD.  
Author of Report D. R. BOUCHER  
Address of Author Box 878 NEWLISKEARD, ONT. P0T 1P0  
Covering Dates of Survey 1/11/83 to 22/11/83  
(linecutting to office)  
Total Miles of Line Cut 26

MINING CLAIMS TRAVERSED  
List numerically

(prefix) 667169  
(number)

667170

667171

667184

667185

667186

6679336

679337

680471

680472

680473

680474

680475

680476

681128

681129

TOTAL CLAIMS \_\_\_\_\_

SPECIAL PROVISIONS  
CREDITS REQUESTED

DAYS  
per claim

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

ENTER 20 days for each  
additional survey using  
same grid.

Geophysical  
-Electromagnetic 40  
-Magnetometer 20  
-Radiometric \_\_\_\_\_  
-Other \_\_\_\_\_  
Geological \_\_\_\_\_  
Geochemical \_\_\_\_\_

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

Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_  
Author of Report or Agent

Res. Geol. \_\_\_\_\_ Qualifications 2.5921

Previous Surveys

File No.	Type	Date	Claim Holder

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MINING CLAIMS SECTION

If space insufficient, attach list

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 2,032 Number of Readings 2,032
Station interval 25 m Line spacing 100 + 122 m
Profile scale EM 1cm = 12.5%
Contour interval MAG. 50 gammas

MAGNETIC

Instrument McPHAR GP-01 PROTON MAGNETOMETER
Accuracy - Scale constant +/- 1 gamma
Diurnal correction method CANADIAN MINING GEOPHYSICS DIGITAL BASE STATION
Base Station check-in interval (hours)
Base Station location and value ON GND @ 25 W, 25 S Base Value 50,000 gammas

ELECTROMAGNETIC

Instrument Geonics EM-16
Coil configuration
Coil separation
Accuracy +/- 1%
Method: [ ] Fixed transmitter [ ] Shoot back [ ] In line [ ] Parallel line
Frequency CUTLER MAINE 17.8 KHz (specify V.L.F. station)
Parameters measured INPHASE + QUADRATURE

GRAVITY

Instrument
Scale constant
Corrections made
Base station value and location
Elevation accuracy

INDUCED POLARIZATION 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





GEOPHYSICAL TECHNICAL DATA

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

Number of Stations \_\_\_\_\_ Number of Readings \_\_\_\_\_

Station interval \_\_\_\_\_ Line spacing \_\_\_\_\_

Profile scale \_\_\_\_\_

Contour interval \_\_\_\_\_

MAGNETIC

Instrument \_\_\_\_\_

Accuracy – Scale constant \_\_\_\_\_

Diurnal correction method \_\_\_\_\_

Base Station check-in interval (hours) \_\_\_\_\_

Base Station location and value \_\_\_\_\_

ELECTROMAGNETIC

Instrument \_\_\_\_\_

Coil configuration \_\_\_\_\_

Coil separation \_\_\_\_\_

Accuracy \_\_\_\_\_

Method:  Fixed transmitter  Shoot back  In line  Parallel line

Frequency \_\_\_\_\_  
(specify V.L.F. station)

Parameters measured \_\_\_\_\_

GRAVITY

Instrument \_\_\_\_\_

Scale constant \_\_\_\_\_

Corrections made \_\_\_\_\_

Base station value and location \_\_\_\_\_

Elevation accuracy \_\_\_\_\_

INDUCED POLARIZATION 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 \_\_\_\_\_

SELF POTENTIAL

Instrument \_\_\_\_\_ Range \_\_\_\_\_

Survey Method \_\_\_\_\_

Corrections made \_\_\_\_\_

RADIOMETRIC

Instrument \_\_\_\_\_

Values measured \_\_\_\_\_

Energy windows (levels) \_\_\_\_\_

Height of instrument \_\_\_\_\_ Background Count \_\_\_\_\_

Size of detector \_\_\_\_\_

Overburden \_\_\_\_\_

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey \_\_\_\_\_

Instrument \_\_\_\_\_

Accuracy \_\_\_\_\_

Parameters measured \_\_\_\_\_

Additional information (for understanding results) \_\_\_\_\_

AIRBORNE SURVEYS

Type of survey(s) \_\_\_\_\_

Instrument(s) \_\_\_\_\_

(specify for each type of survey)

Accuracy \_\_\_\_\_

(specify for each type of survey)

Aircraft used \_\_\_\_\_

Sensor altitude \_\_\_\_\_

Navigation and flight path recovery method \_\_\_\_\_

Aircraft altitude \_\_\_\_\_ Line Spacing \_\_\_\_\_

Miles flown over total area \_\_\_\_\_ Over claims only \_\_\_\_\_

GEOCHEMICAL SURVEY - PROCEDURE RECORD

Numbers of claims from which samples taken \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Total Number of Samples \_\_\_\_\_

Type of Sample \_\_\_\_\_  
(Nature of Material)

Average Sample Weight \_\_\_\_\_

Method of Collection \_\_\_\_\_  
\_\_\_\_\_

Soil Horizon Sampled \_\_\_\_\_

Horizon Development \_\_\_\_\_

Sample Depth \_\_\_\_\_

Terrain \_\_\_\_\_  
\_\_\_\_\_

Drainage Development \_\_\_\_\_

Estimated Range of Overburden Thickness \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

General \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

ANALYTICAL METHODS

Values expressed in: per cent   
p. p. m.   
p. p. b.

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, (circle)

Others \_\_\_\_\_

Field Analysis (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Field Laboratory Analysis

No. (\_\_\_\_\_ tests)

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

Commercial Laboratory (\_\_\_\_\_ tests)

Name of Laboratory \_\_\_\_\_

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

General \_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_

MONOPROS LIMITED

P.O. BOX 878  
NEW LISKEARD, ONTARIO  
POJ 1P0

TELEPHONE (705) 647-6267

31/03/84

Mr. A. Barr

Land Management Branch  
Ministry of Natural Resources  
6th floor, Whitney Block, Rm 6610  
Queen's Park  
99 Wellesley St. W.  
TORONTO, Ont.  
M7A 1W3

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APR 05 1984

MINING LANDS SECTION

Dear Mr. Barr

Please find enclosed two copies  
of assessment work report covering a  
25 claim property in Bisley Township, Tardar  
Lake Mining District.

Sincerely Yours

Donald Boucher

YOUR FILE #  
2.6586

S.E. Yundt  
Whitney Block, Room 6643  
Queen's Park  
Toronto, Ontario  
M7A 1W3

RE: Geophysical Surveys on Mining Claims L-667169  
et al Township of Bisley

Please find enclosed plans, in duplicate, for  
the above mentioned survey. All claim lines  
and claim numbers have been plotted  
as requested.

Yours Sincerely,

Donald Boucher

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JUL 17 1984

MINING LANDS SECTION

# 79

2.6586

	VLF	Mag					
L 667 169	✓	✓					
170	✓	✓					
171	✓	✓					
184	✓	✓					
185	✓	✓					
186	✓	✓					
679 336	✓	✓					
337	✓	✓					
680 471	✓	✓					
472	✓	✓					
473	✓	✓					
474	✓	✓					
475	✓	✓					
476	✓	✓					
681 128	✓	✓					
129	✓	✓					
681 138	✓	✓					
139	✓	✓					
140	✓	✓					
141	✓	✓					
142	✓	✓					
143	✓	✓					
144	✓	✓					
145	✓	✓					
146	✓	✓					

0200-M

0200-M

0200-M

0200-M

BARNET TWP. M-322

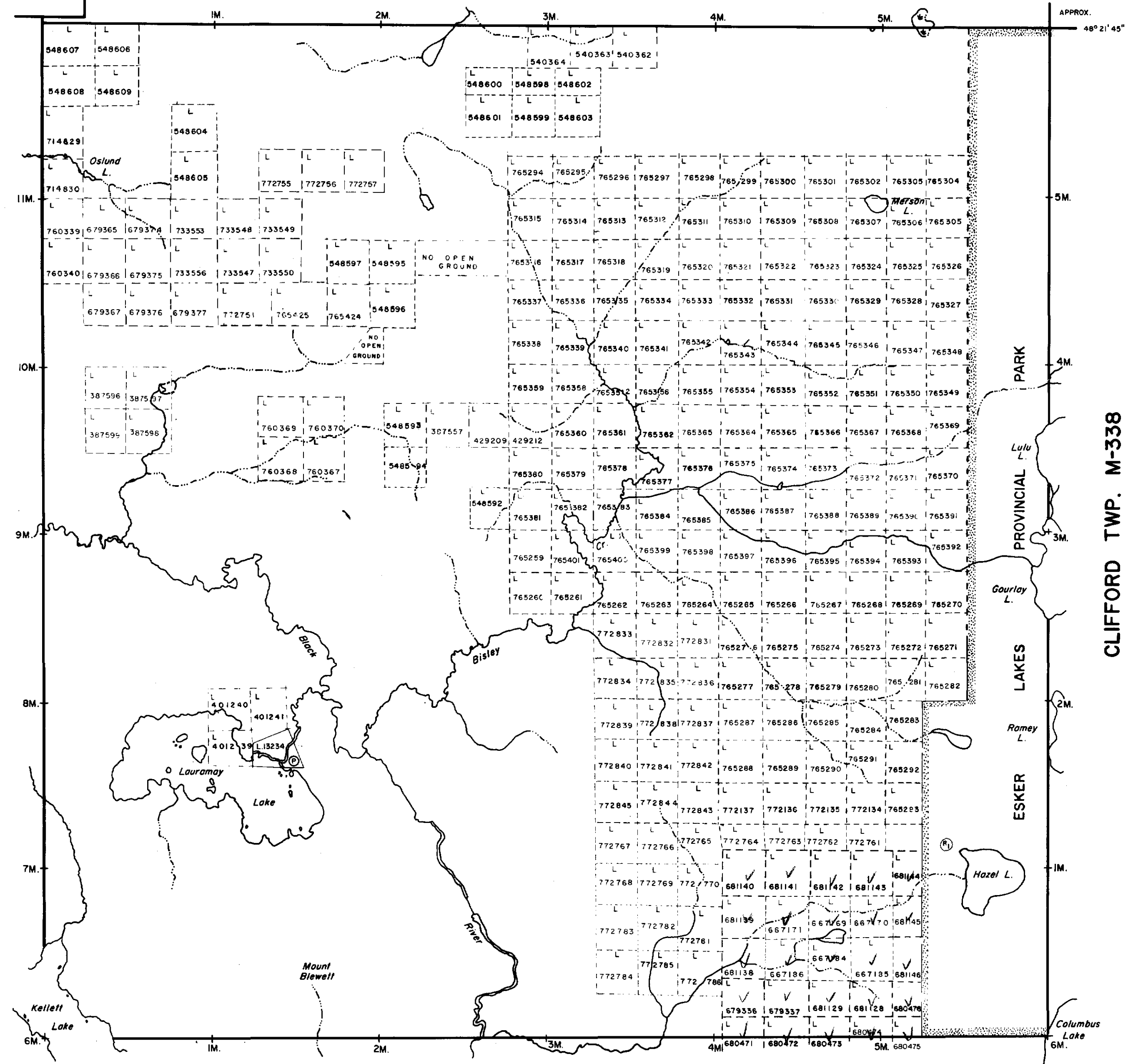
THACKERAY TWP. M-394

79° 55' 20" APPROX. 48° 21' 45"

MELBA TWP. M-371

CLIFFORD TWP. M-338

MORRISETTE TWP. M-374



NOTES

400' surface rights reservation along the shores of all lakes and rivers.

Areas withdrawn from staking under Section 43 of the Mining Act (1970)

File	Date	Disposition
W. 83/77 63497	19/10/77	S.R. & M.R.

DATE OF ISSUE  
 JUN 27 1981  
 Ministry of Natural Resources  
 TORONTO

LEGEND

- PATENTED LAND
  - PATENTED FOR SURFACE RIGHTS ONLY
  - LEASE
  - LICENSE OF OCCUPATION
  - CROWN LAND SALES
  - LOCATED LAND
  - CANCELLED
  - MINING RIGHTS ONLY
  - SURFACE RIGHTS ONLY
  - HIGHWAY & ROUTE NO.
  - ROADS
  - TRAILS
  - RAILWAYS
  - POWER LINES
  - MARSH OR MUSKEG
  - MINES
- \*used only with summer resort locations or when space is limited

TOWNSHIP OF

**BISLEY**

DISTRICT OF COCHRANE

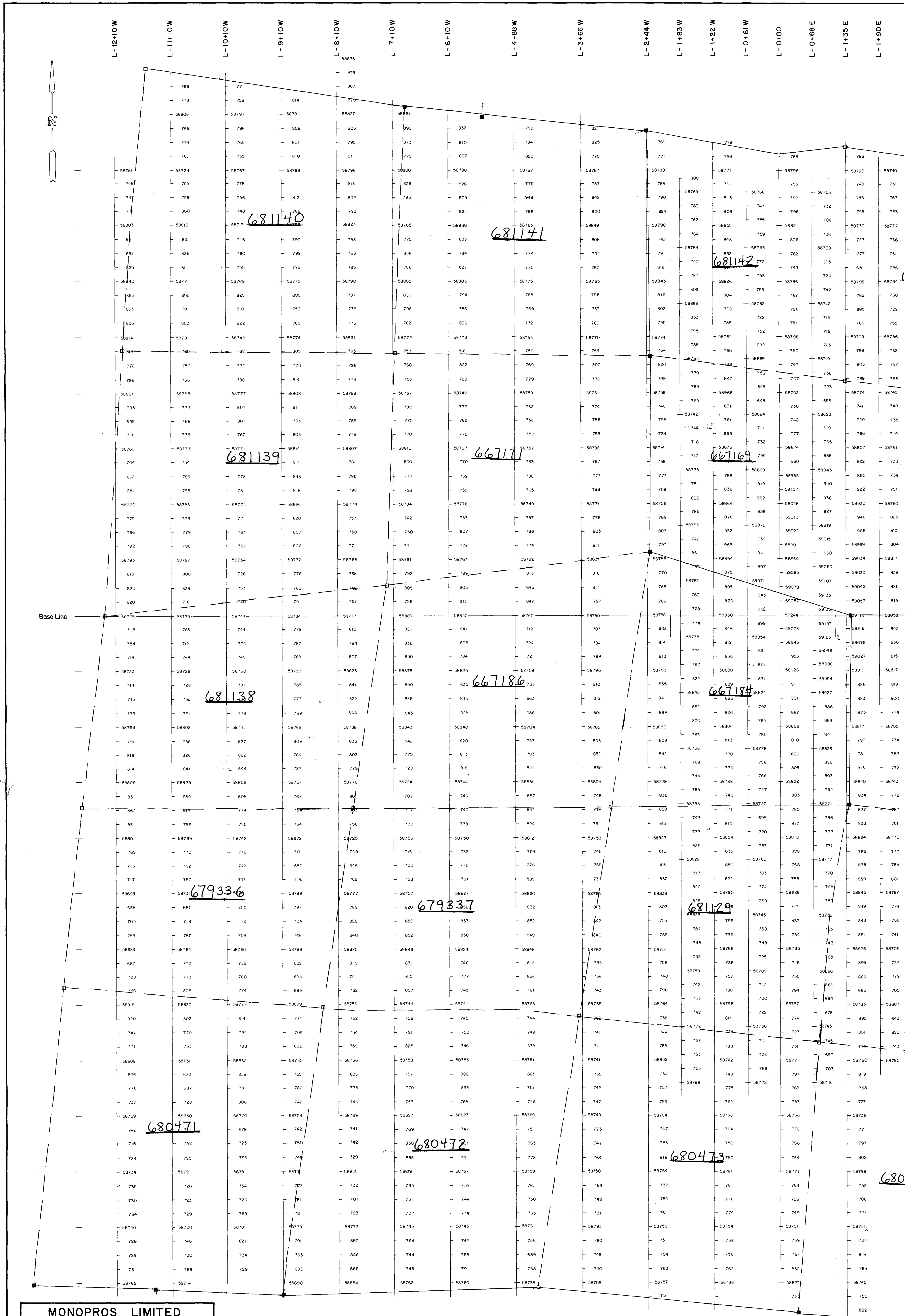
LARDER LAKE MINING DIVISION

SCALE: 1 INCH = 40 CHAINS (1/2 MILE)

DR. R. NOBLE  
 DATE NOV. 30, 71. PLAN NO. **M-328**

ONTARIO  
 MINISTRY OF NATURAL RESOURCES  
 SURVEYS AND MAPPING BRANCH





**MONOPROS LIMITED**  
 AREA: NEW LISKEARD PROJECT: KIRKLAND LAKE

*Small Boundary*  
**MAGNETIC SURVEY**  
 Total Field  
 Nickila Lake 26586

Author: Frank K. & Jeff M. Date: 12/12/83 Figure: 3 File:  
 Drawn: Denis Gagné Date: 26/01/84 Scale: 1cm = 25m N.T.S. 320/5

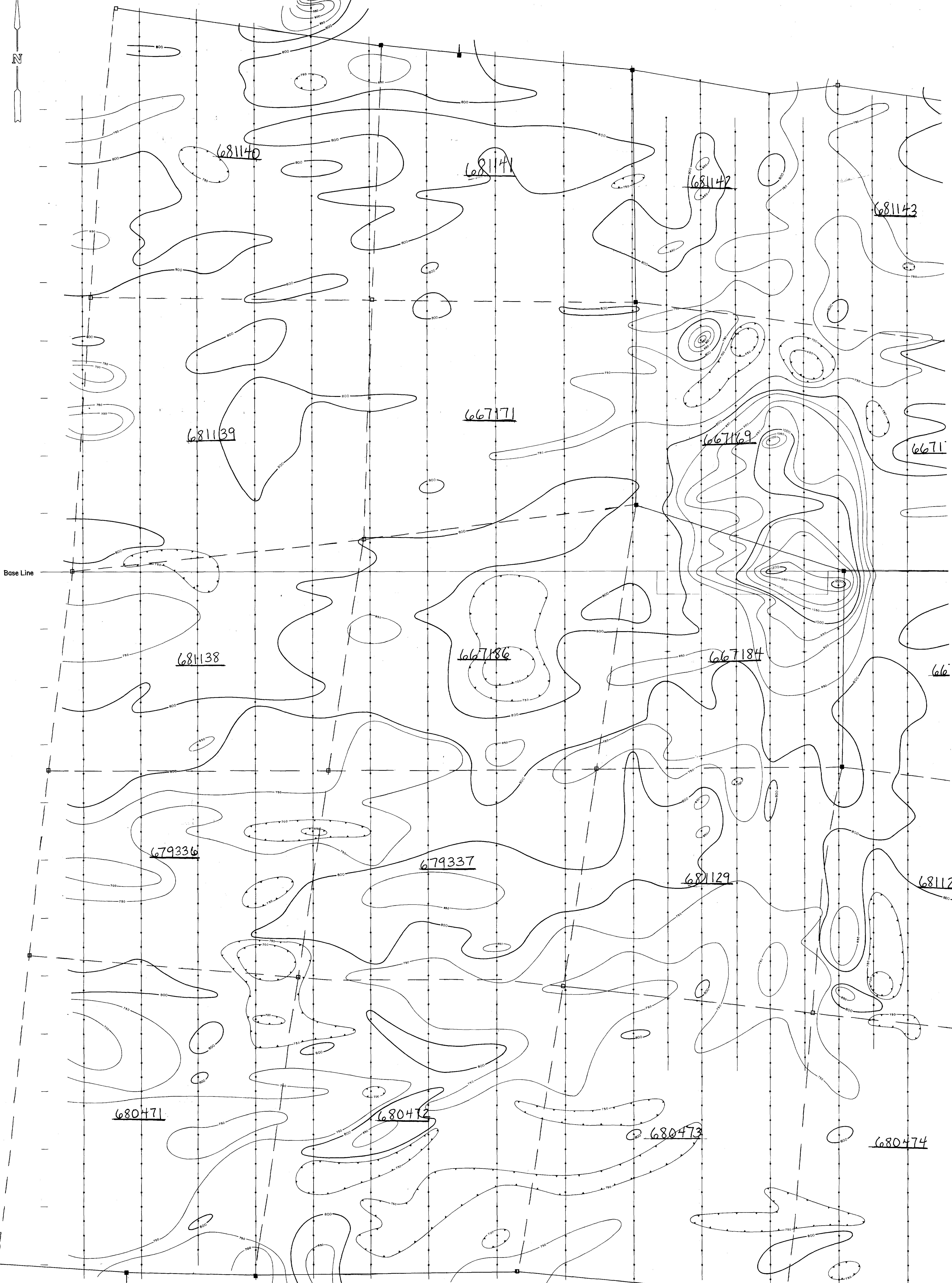
**LEGEND**  
 BASE VALUE - - - - - 58,000 GAMMAS

**INSTRUMENT**  
 McPHAR GP-B1 PROTON MAGNETOMETER





L-12+10W L-11+10W L-10+10W L-9+10W L-8+10W L-7+10W L-6+10W L-4+88W L-3+66W L-2+44W L-1+83W L-1+22W L-0+61W L-0+00 L-0+68E L-1+35E L-1+90E L-2+44E

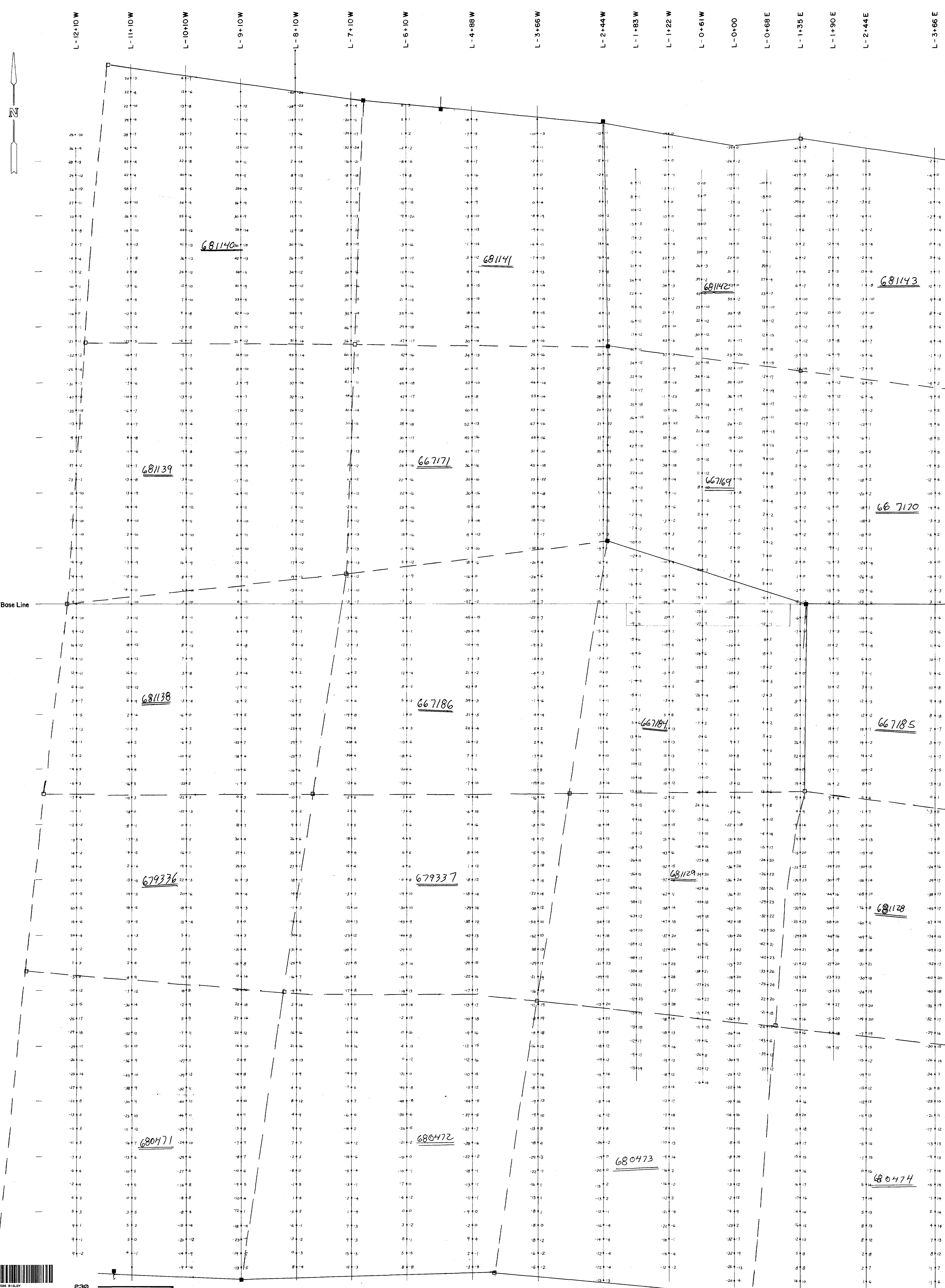


<b>MONOPROS LIMITED</b>	
AREA: NEW LISKEARD PROJECT: KIRKLAND LAKE	
<b>MAGNETIC SURVEY</b>	
Total Field	
Nickila Lake 26586	
Author: Frank K. & Jeff M. Date: 12/12/83 Figure: 4	File:
Drawn: Iris Schmitt Date: 30/01/84 Scale: 1cm = 25 m	N.T.S. 320/5

**LEGEND**  
 CONTOUR INTERVAL ..... 50 GAMMAS  
 200 GAMMA CONTOUR .....  
 50 GAMMA CONTOUR .....  
 MAGNETIC LOW .....  
 BASE VALUE ..... 58,000 GAMMAS

**INSTRUMENT**  
 McPHAR GP-BI PROTON MAGNETOMETER





230

**MONOPROS LIMITED**

AREA: NEW LISKEARD PROJECT - KIRKLAND LAKE

*Small*  
*Bowler*

**VLF EM SURVEY**

Nickla Lake *26586*

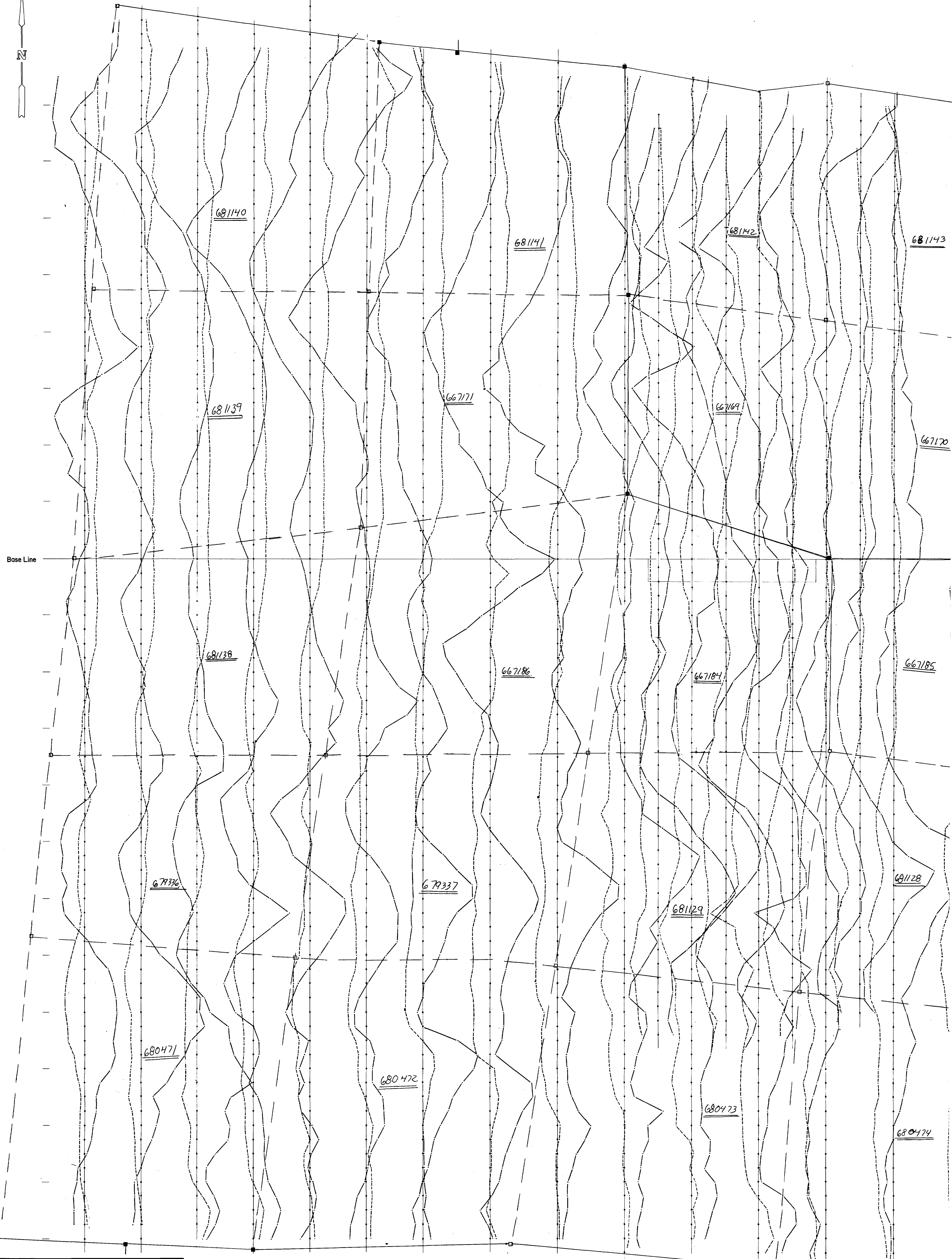
Author: Frank R. & Jeff M. Date: 12/12/83 Figure: 5	File:
Drawn: Irit Schmitt Date: 02/02/84 Scale: 1cm = 25m	N.T.S. 320/5

IN-PHASE  
OUT-OF-PHASE

Instrument:  
GEOMICS LTD. EM-16,  
VLF ELECTROMAGNETIC UNIT

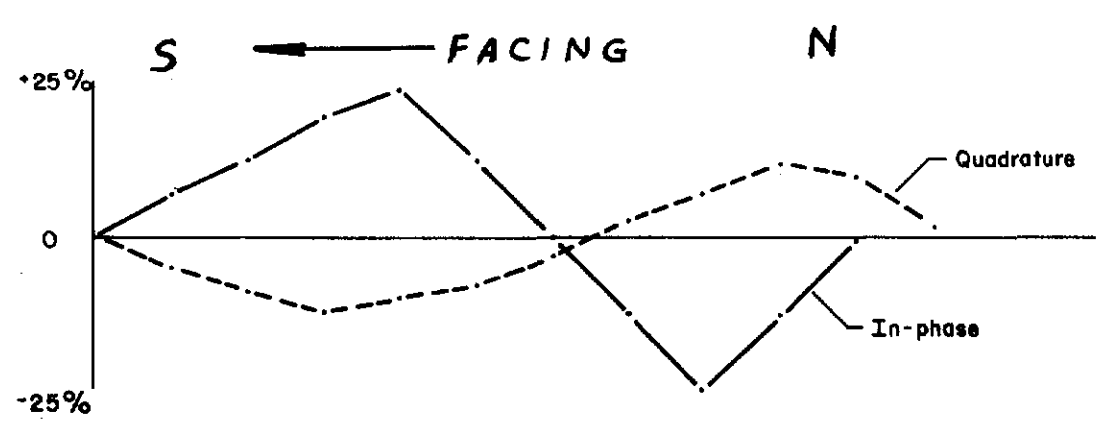


L-12+10 W L-11+10 W L-10+10 W L-9+10 W L-8+10 W L-7+10 W L-6+10 W L-4+88 W L-3+66 W L-2+44 W L-1+83 W L-1+22 W L-0+61 W L-0+00 L-0+68 E L-1+35 E L-1+90 E L-2+44 E

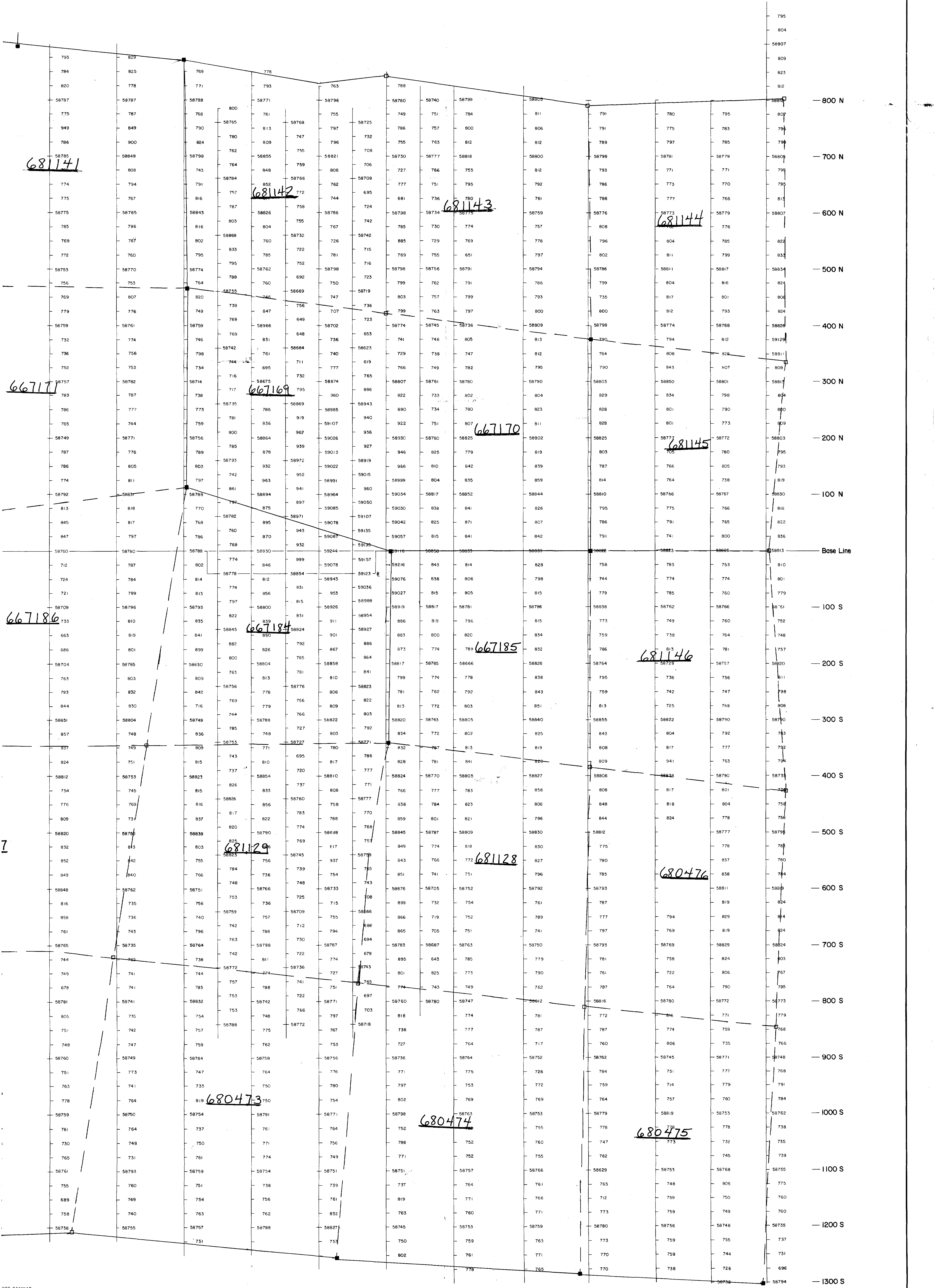


<b>MONOPROS LIMITED</b>	
AREA: NEW LISKEARD PROJECT: KIRKLAND LAKE	
VLF EM SURVEY	
Nickila Lake 26586	
Author: Frank K. & Jeff M. Date: 12/12/83 Figure: 6	File:
Drawn: Denis Gagne Date: 30/01/84 Scale: 1cm = 25m	N.T.S. 32.0/5

Profile Scale: 1cm = 12.5%  
Instrument: Geonics EM-16



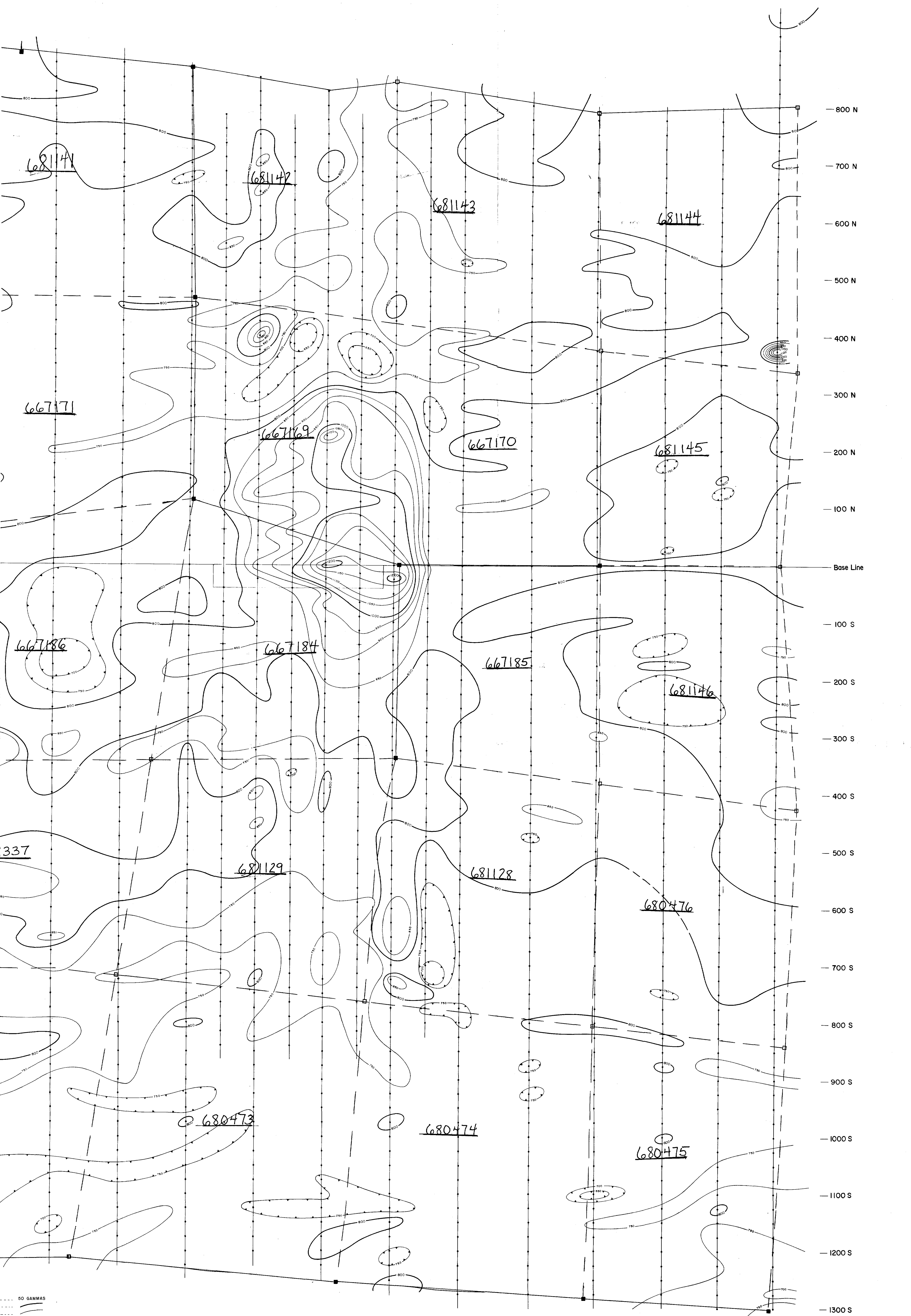
L - 4+88W L - 5+66W L - 2+44W L - 1+83W L - 1+22W L - 0+61W L - 0+00 L - 0+66E L - 1+35E L - 1+90E L - 2+44E L - 3+66E L - 4+88E L - 6+10E L - 7+10E L - 8+10E



800 N  
700 N  
600 N  
500 N  
400 N  
300 N  
200 N  
100 N  
Base Line  
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200 S  
300 S  
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500 S  
600 S  
700 S  
800 S  
900 S  
1000 S  
1100 S  
1200 S  
1300 S

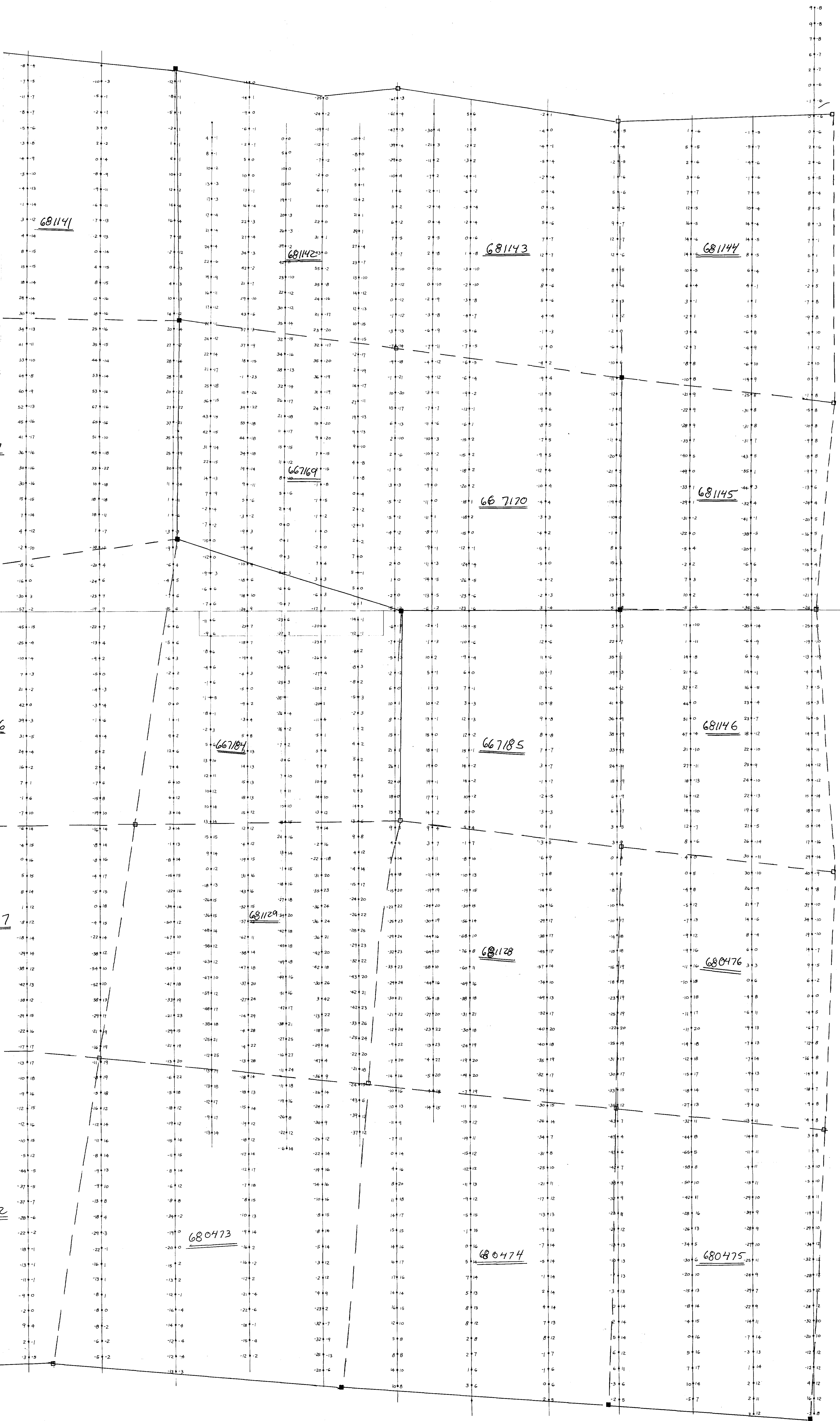


L-4+88 W L-3+86 W L-2+44 W L-1+83 W L-1+22 W L-0+61 W L-0+00 L-0+68 E L-1+35 E L-1+90 E L-2+44 E L-3+66 E L-4+88 E L-6+10 E L-7+10 E L-8+10 E



50 GAMMAS  
50,000 GAMMAS  
GAMMETER

L-4+88W L-3+66W L-2+44W L-1+83W L-1+22W L-0+61W L-0+00 L-0+68E L-1+35E L-1+90E L-2+44E L-3+66E L-4+88E L-6+10E L-7+10E L-8+10E



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16

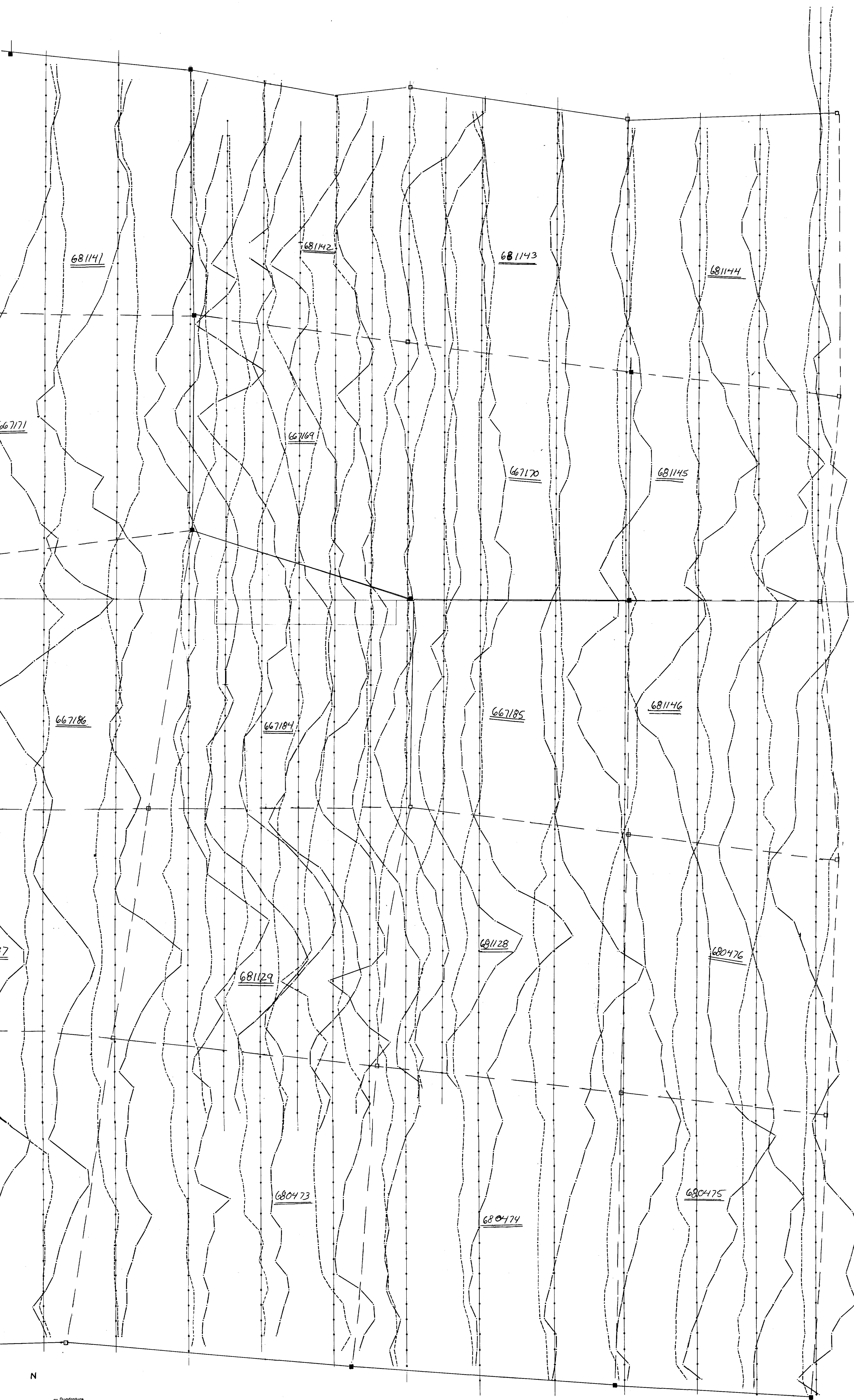
7

2



L-4+88 W L-3+66 W L-2+44 W L-1+83 W L-1+22 W L-0+61 W L-0+00 L-0+68 E L-1+35 E L-1+90 E L-2+44 E L-3+66 E L-4+88 E L-6+10 E L-7+10 E L-8+10 E

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1200 S  
1300 S



37  
N  
Quadrature  
In-phase