

42C13SW0092 2.14562 WABIKOBA LAKE

010

RESULTS OF 1991 EXPLORATION WORK  
GEOPHYSICAL SURVEY AND PROSPECTING  
IHNATKO - KUSINS PROPERTY  
WABIKOBA LAKE AREA, NORTHWESTERN ONTARIO  
N.T.S. 42 C 13 / SW

2.14562

*Final.*  
*2.12271*

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April 1992

## THE IHNATKO - KUSINS OCCURENCE

### ABSTRACT

The property consists of 11 unpatented mining claims which include a base metal occurrence known as the Kusins Showing. For the sake of this report, the showing will be called The Ihnatko-Kusins zone, in honour of the man who actually discovered the showing.

The property is located 8 kilometres due north of the famous Hemlo gold mines site on the Trans-Canada Highway 17. Access to the property is by a logging road running west of Highway 614 at a point about 8 km north of the Black River and running through the western portion of the property 24 km south of the railroad tracks.

The property lies in a package of volcano-sedimentary rocks similar to the Manitouwadge-Geco area which hosts several important base metal deposits. Significant base metal mineralization obtained recently in a grab sample ran 10.7% zinc and 8.9% lead with 2.5 oz. silver per ton. This mineralization is located about 1200 metres east of the logging road.

The volcanogenic mineralization is at the contact of crystal tuffs and sediments where the tuffaceous rocks wedge out against the sedimentary rocks. Ore hosts are sericite schists, siliceous sediments and fragmental rocks. The mineralized zone is 80 cm wide in the old trench and a vlf anomaly is following the contact between the sediments and the crystal tuffs where the mineralization was found. The Bullring Fault, identified by the vlf survey, is a potentially significant structure in relation to the mineralization. The diabase dykes were easily identified by the magnetic survey.



Abstract.....	2
Table of contents.....	3
1. Introduction.....	4
2. Location and Acces.....	5
3. Claims.....	8
4. Regional geology.....	10
5. Previous work.....	12
6. 1991 work program.....	13
6.1 Linecutting.....	13
6.2 Prospecting.....	13
6.3 Geophysical surveys.....	15
7. Property geology.....	18
7.1 Volcano-sedimentary rocks.....	18
7.2 Intrusive rocks.....	18
7.3 Mineralization.....	20
8. Conclusion.....	21
9. Recommendations.....	21
Selected References.....	22
Certificate of Qualifications.....	23

## APPENDICES

- Appendix 1. List of claim numbers and due dates
- Appendix 2. Description of the rock samples
- Appendix 3. Assay Data

## LIST OF FIGURES

Figure 1. General location map.....	6
Figure 2. Detailed location map.....	7
Figure 3. Claim map.....	9
Figure 4. General geology map of Hemlo area.....	11
Figure 5. Sketch map of trenches and sampling...14	
Figure 6. Compilation map of mag-vlf anomalies..17	
Figure 7. Property Geology.....	19

## LIST OF MAPS (in pocket)

Plan 1. Magnetometer survey, profiles & postings	1	: 2,500
Plan 2. Magnetometer survey, total field contours	1	: 2,500
Plan 3. MAG survey, profiles & interpretation	1	: 2,500
Plan 4. VLF survey, profiles & postings, Cutler station	1	: 2,500
Plan 5. VLF survey, profiles & interpretation, Cutler st.	1	: 2,500
Plan 6. VLF survey, profiles & postings, Jim Creek st.	1	: 2,500
Plan 7. VLF survey, profiles & interpretation, Jim Creek	1	: 2,500
Plan 8. MAG survey, colored total field contours	1	: 6,000
Plan 9. VLF survey, colored corrected total field contours, Cutler station	1	: 6,000
Plan 10. VLF survey, colored Frazer Filter contours, Cutler	1	: 6,000
Plan 11. VLF survey, colored corrected total field contours, Jim Creek station	1	: 6,000
Plan 12. VLF survey, colored Frazer Filter contours, Jim Cr	1	: 6,000

## 1. INTRODUCTION

The following report gives the results of the exploration program carried out during winter and spring of 1991 over the Kusins Occurrence. For the sake of this report, the showing will be called the Ihnatko-Kusins Zone, in honour of the man who actually discovered the showing.

Prospecting on the old trenches was carried out in January 1991 and during May 8th to May 14th 1991, limited magnetic, VLF-EM surveys were carried on the Ihnatko-Kusins property. The author of this report supervised and performed the survey work.

The claims were staked to cover the showing itself and the logging road. Detailed prospecting of the old pits was successful in relocating the base metal mineralization which was overlooked by previous operators, who were mainly interested in gold.

## 2. LOCATION AND ACCESS

The property is located approximately 320 kilometres east of Thunder Bay (figure 1) and 8 km due north of the famous Hemlo gold mines site on the Trans-Canada Highway 17. The property is located on a northerly extension of the same belt of rocks.

Access to the property is by a logging road which runs through the western portion of the property (figure 2). The road is the first main logging road, running west of Highway 614 at a point about 8 km north of the Black River. The property is located approximately 24 km south of the railroad tracks on the main logging road.

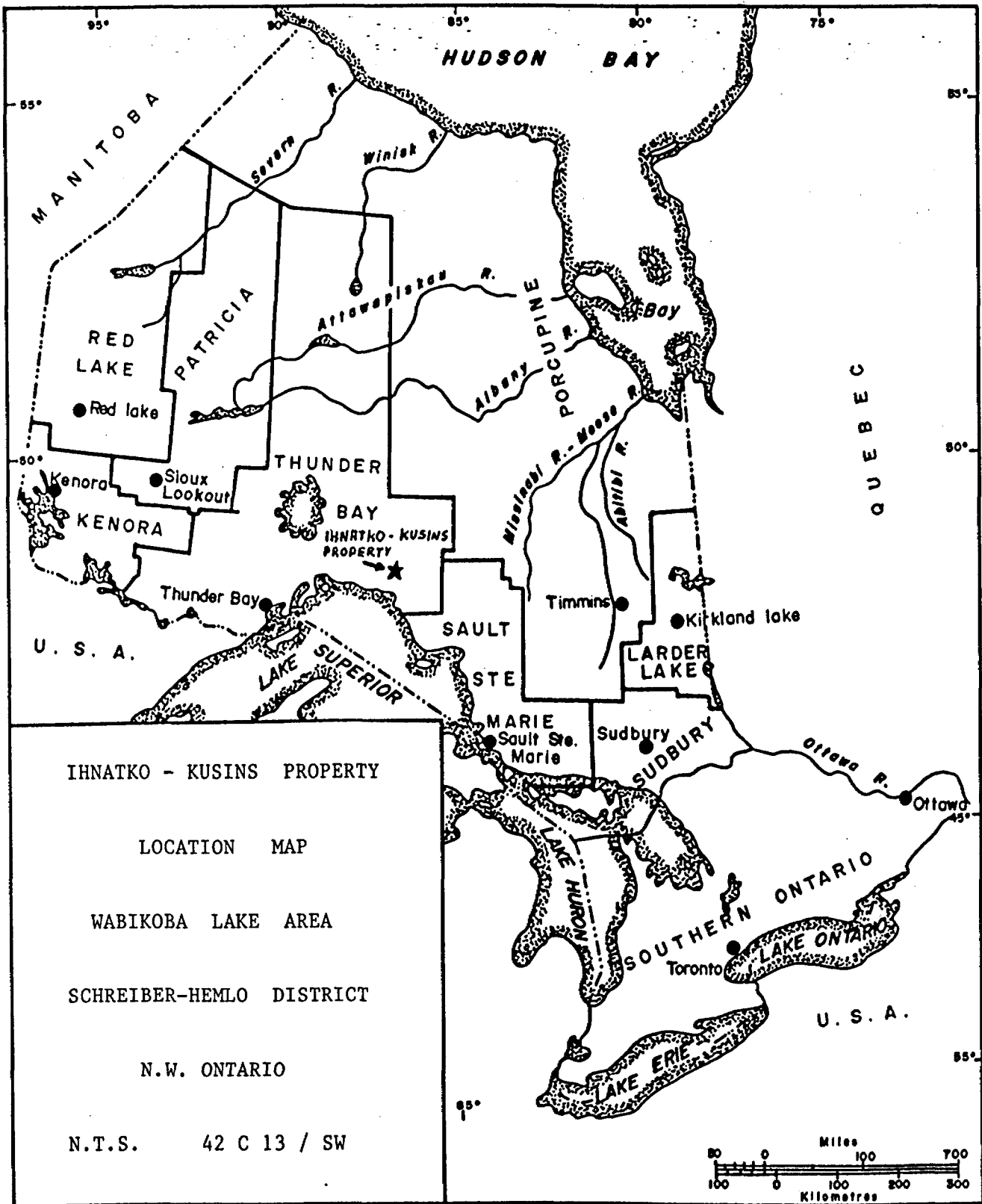


FIGURE 1.

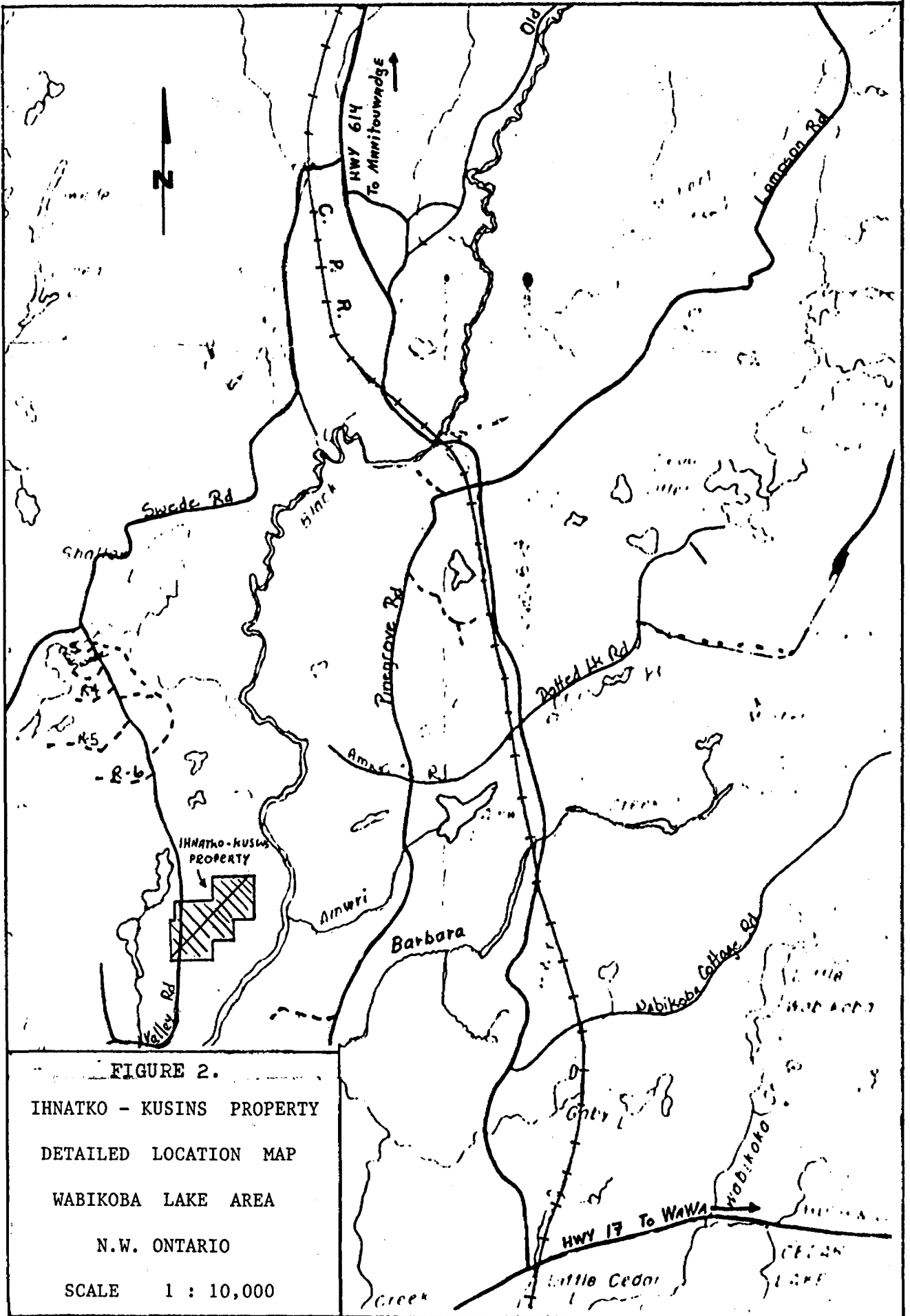


FIGURE 2.  
 IHNATKO - KUSINS PROPERTY  
 DETAILED LOCATION MAP  
 WABIKOBA LAKE AREA  
 N.W. ONTARIO  
 SCALE 1 : 10,000

3. CLAIMS

The property consists of 11 unpatented mining claims which were all covered by a geophysical survey (figure 3).

The list of claims and due dates is in appendix 1.

The claim holder of the mining property covered by the survey is:

M. Dave Saunders  
309, Catherine st.  
Thunder Bay, Ontario  
P7E 1K7



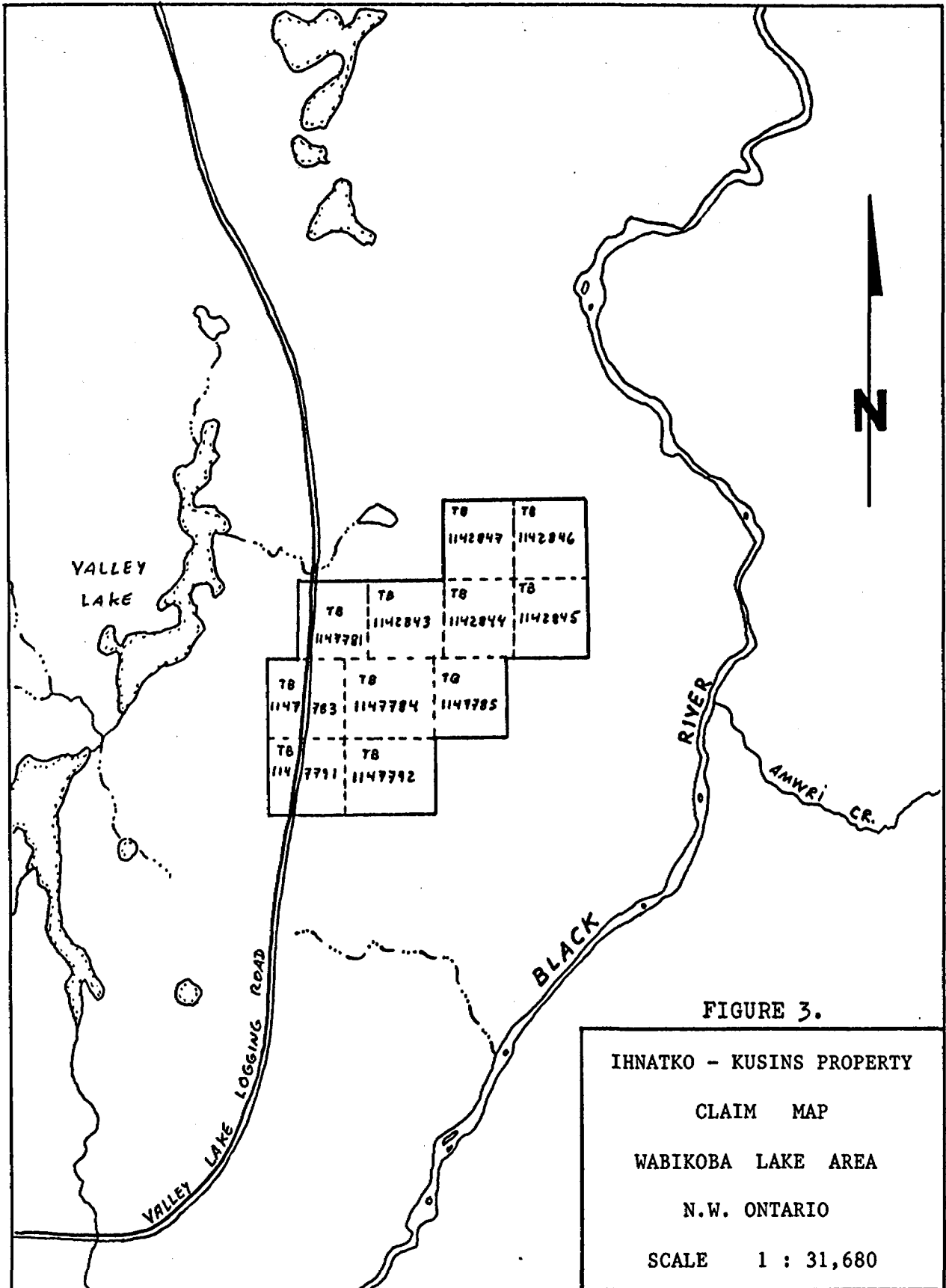


FIGURE 3.

IHNATKO - KUSINS PROPERTY

CLAIM MAP

WABIKOBA LAKE AREA

N.W. ONTARIO

SCALE 1 : 31,680

#### 4. REGIONAL GEOLOGY

The Ihnatko-Kusins Property lies on the northern limb of the Hemlo Synform, an east-west trending synclinorium developed within the Archean aged Heron Bay Greenstone Belt. The Syncline is flanked to the northwest by the Gowan Lake and to the south by the Bullring Lake granitic gneiss domes (figure 4).

The Bullring Lake Fault, a dextral cross fault, is interpreted by Milne (1968) to extent through the eastern portion of the property. This fault (identified by a lineament on air photos) is a potentially significant structure in relation to the mineralization.

Rocks within the syncline have locally attained an upper amphibolite grade of metamorphism. The core of the syncline has locally been intruded by several late Archean felsic complexes, including the Musher Lake Pluton. Several ages of post-Archean diabase dykes intrude the entire sequence.

The Hemlo Mining Camp, situated in the Wawa-Shebandowan subprovince, specifically occurs in a highly deformed zone flanked by intermediate to mafic volcanic rocks in the footwall and volcanoclastic rocks in the hanging wall. It has been suggested that the mineralization is at the contact of crystal tuffs and sediments, where the tuffaceous rocks wedge out against the sedimentary rocks. The mineralization is zoned both across dip and along strike.

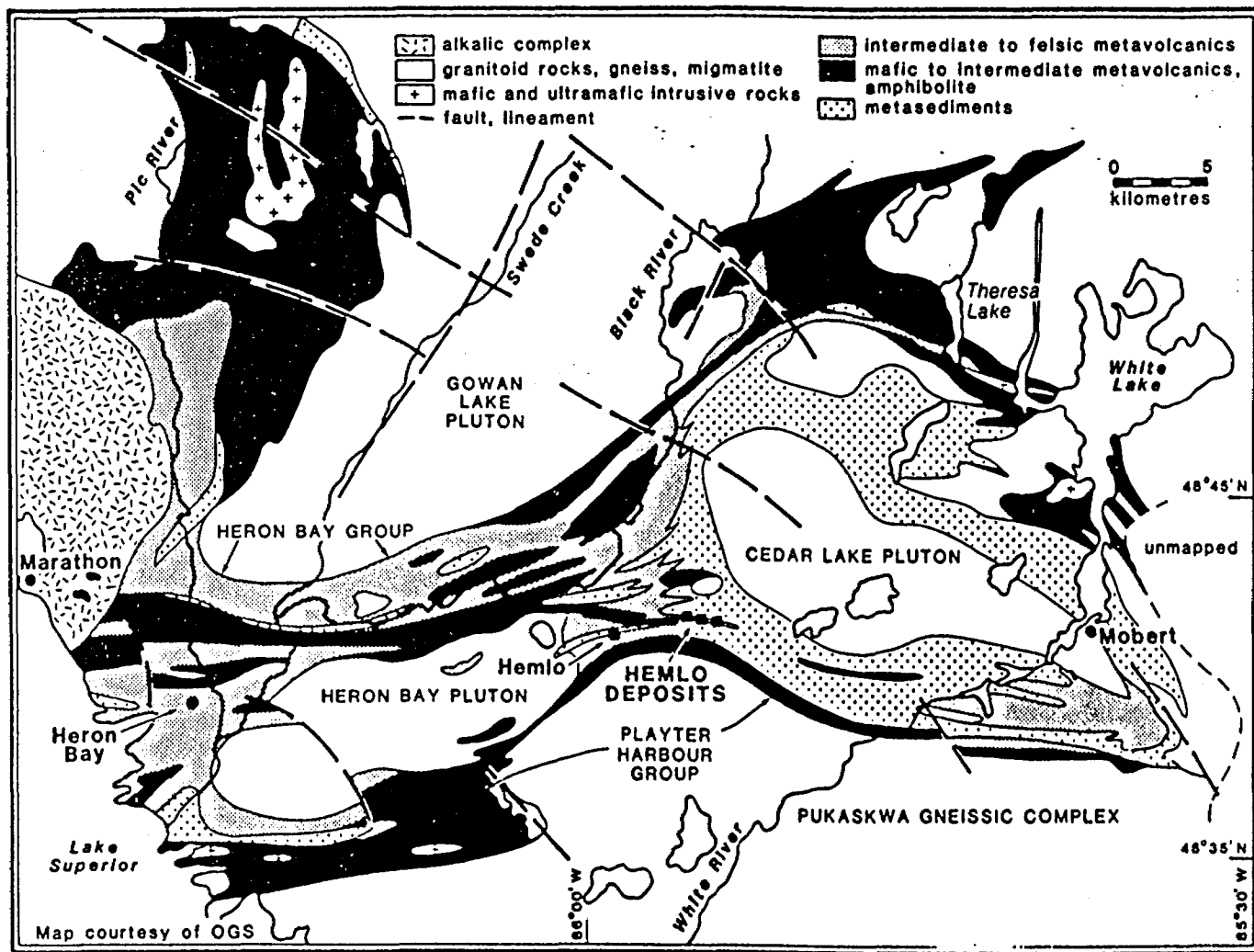


Figure 4. Geological map of the Hemlo area by T.L. Muir, 1983. (Modified after OGS Maps 2220, 2439, 2452, P.2701, P.2702, P.2738, P.2739).

## 5. PREVIOUS WORK

The property was reported to have been discovered by T. and W. Kusins (Milne, 1968) in 1963. Sources to M. Dave Saunders have suggested it was discovered by Ihnatko while timber cruising for the Ontario Paper Co. Ihnatko and Kusins became partners in the discovery claims.

The showing was examined by several companies in 1963 (Milne, 1968). The mineralization was trenched by Ihnatko and Kusins following this and optioned to Cominco in 1965. Grab samples were reported to run over 20 oz. silver per ton. (not published). Cominco conducted limited geophysical and geochemical work before drilling 5 X-ray drill holes.

Drill logs submitted by Cominco for assessment work were incomplete, and no assays were reported. Several sections in the drilling reported disseminated galena and sphalerite.

The property fell idle until it was staked during the Hemlo rush by Pryme Energy. In 1982, the ground covered by this property was optioned to Noranda. A large grid was established over the entire Prime Energy Option property and was mapped in 1983 and 1984. Some IP and conventional geophysics were conducted followed by limited drilling, which did not include the Ihnatko-Kusins zone.

The property was restaked by Dolphin Exploration and work was undertaken by Corona Corporation on behalf of Dolphin Exploration Ltd. in 1987. Soil sampling and geological mapping were performed in selected areas, including the present property.

## 6. 1991 WORK PROGRAM

### 6.1 Linecutting

Linecutting was undertaken using the remnant of an existing grid which had been established by Noranda in 1982. The Grid was inspected in May 1990 and the baseline recut and chained. Deadfall is abundant due to budworm damage.

Remnant of the early grid were only followable in areas of jackpine bush which is prevalent near the road (an old burn), and this grid was 200 m. spaced lines. The recutting of old lines and the cutting of new fill in lines totalling 22.5 km began in mid-january 1991, concurrent with the restaking and prospecting of the showing itself.

### 6.2 Prospecting

The location of the trenches was established by research and located before staking began. The trenches are deep and rock exposures were adequate, even in the winter. Snow was shovelled away from the edges and from the muck.

The old trenches as described by Milne (1968) were relocated and prospected (figure 5). These were Trenches 1, 2 and 3. Trench #4 was not found. Four samples were taken from these pits and their muck, three of which came from Trench 2.

Approximately 40 metres west of the deeper documented pits, two longer, shallower pits were located and sampled with a total of seven samples. Four grab samples were taken at other locations.

Base metal mineralization was first located by Dave Saunders in the muck of Trench 2. This was traced to the NE face of the pit which shows a 0.80 m. thick mudstone unit with disseminated and semi-massive pyrite, sphalerite and galena mineralization. Sample 8626 ran 10.7% zinc and 8.9% lead with 2.5 oz. silver per ton in a grab sample. Sample 8624, a chip sample across 0.75m ran 0.84% Zn and 0.13% Pb with 1.8 oz/ton silver. Description of samples in appendix 2 and the Assay data in appendix 3.



### 5.3 Geophysical surveys

A geophysical program was initiated on the Ihnatko-Kusins property to evaluate the economic potential of the claim block.

A grid of northwest - southeast lines spaced 100 metres apart was established as reference stations for the geophysical surveys. A total of 22.5 km of lines including the base line was completed. The ground geophysical surveys including a magnetometer and an electromagnetic VLF-Em 16 survey, were carried out by the author of this report.

The geophysical survey was conducted with a Scintrex OMNI-PLUS. The OMNI-PLUS Magnetometer/VLF System is a ruggedized compact, portable instrument designed specifically for field operation. It allows for quick surveying capability without sacrificing accuracy and quality data. It contains several microprocessors and associated circuitry for monitoring, processing and storing data. The OMNI-PLUS has two memories: the tie-line points and field measurements of the survey.

The magnetometer system measures the value of the total magnetic field with a precision of 0.1 gamma with a statistical error alarm flashing over 0.2 gamma. If the error is larger than 2.0 gammas, another reading must be taken. The OMNI-PLUS contains high technology circuits which allow for automatic fine tracking (tuning) over the entire field strength from 18,000 to 110,000 gammas, under computer control. The readings were taken systematically every 12.5 metres along the cut and chained lines. The base station is located east of the logging road near the base line. The magnetic readings have been automatically corrected for diurnal variations when the data was dumped.

The magnetic results are presented on a profile map (Plan 1) and a contour map (Plan 2) and interpreted in Plan 3 at the metric scale of 1:2,500 in pocket. An extra coloured contour map (Plan 8) was added to the report at the metric scale of 1:6,000. The major higher magnetic anomalies are oriented at about 300 and 010 degrees and correspond to the diabase dykes. Some other smaller anomalies follow the local geological trend.

The electromagnetic VLF-EM16 survey was carried out with the OMNI-PLUS using Cutler, Maine station (frequency 24.0 kHz) and Jim Creek, Washington station (frequency 24.8 kHz). The vertical components (in phase and quadrature) of the secondary field are measured with a precision of + or -0.2%. The OMNI-PLUS has been designed whereby, if a weak station is selected, the instrument will automatically increase the measurement period to produce higher quality results. The readings were taken systematically every 12.5 metres along the grid lines.

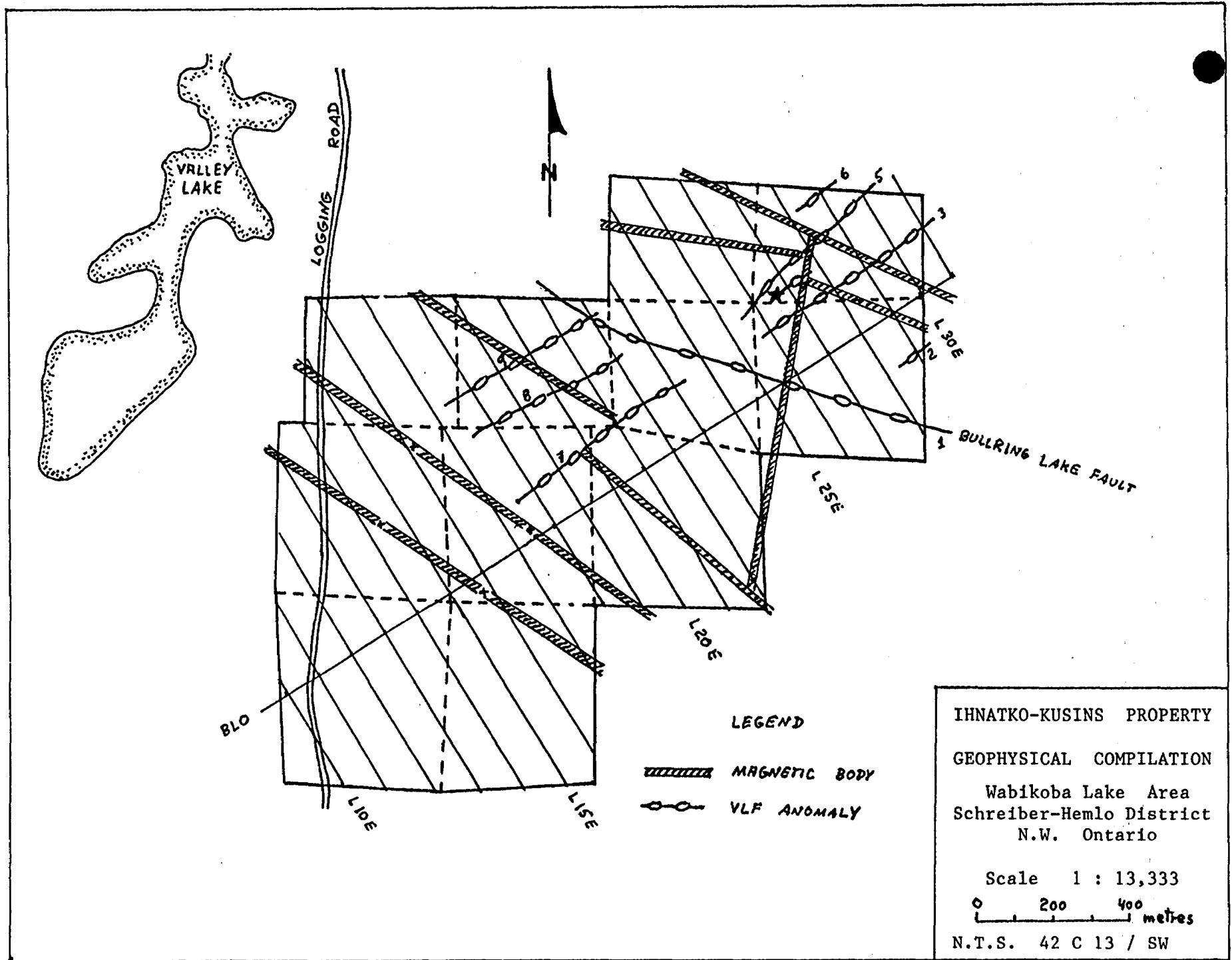
The results of the electromagnetic survey are plotted for the Cutler station on Plan 4 and the interpretation on Plan 5 and for the Jim Creek station on Plan 6 and the interpretation on Plan 7 at the metric scale of 1=2,500 in pocket. Profiles at the scale of 1 cm=20% have been drawn for the in phase and quadrature readings. The possible conductors have been interpreted and marked by a bolder line. Extra coloured contour maps (Plan 9, 10, 11 and 12) representing the corrected total field and the Fraser for each stations were added to this report at the metric scale of 1=6,000.

Figure 6 presents a compilation of the geophysical anomalies resulting from the ground surveys. The VLF Em-16 anomalies have been numbered and their characteristics are as follows:

Anomaly No.	Length (metres)	Centre	Remarks
#1	>1100	L25+00E 0+62N	Deep valley, topographic feature representing a cross fault known as the Bullring fault.
#2	> 100	L29+00E 0+45S	Weak one line anomaly close to the surface.
#3	> 500	L28+00E 1+65N	Moderate anomaly, small valley, positive Beep Mat readings, probable conductor close to the surface.
#4	200	L27+00E 2+00N	Weak bedrock anomaly following the Ihnatko-Kusins showing direction. Cut across magnetic anomaly.
#5	> 500	L27+00E 2+65N	Moderate anomaly, deep valley with cliffs which may represent a fault. Cut across magnetic anomalies which stop in that area. Parallel to #3.
#6	> 100	L29+00E 4+00N	Moderate one line anomaly open east 25 m north of the granitic contact.
#7	500	L21+00E 1+60N	Weak bedrock anomaly, close to the surface. Possible extension of #2.
#8	500	L19+00E 3+25N	Moderate to strong bedrock anomaly. Possible extension of # 3.
#9	400	L19+00E 4+45N	Strong bedrock anomaly, flat topography, possible extension of #5.

The general orientation of the VLF anomalies corresponds to the local geological trend of the sedimentary bedding. The Bullring Lake fault cut across the area and the dextral displacement is spectacularly shown by the VLF survey.





## PROPERTY GEOLOGY

### 7.1 Volcano-sedimentary rocks

Reconnaissance geological mapping was conducted in 1964 and 1965 (Milne, 1968) at 1:31680. The only other work recorded is in 1984 (Kemp, 1984) at 1:5000 and in 1988 (Hamilton, 1989) at 1:5000. The most recent work was conducted with helicopter support.

From compiling assessment work data, the property can be shown to be underlain by a package of volcanic and sedimentary rocks (figure 7). From the granite contact southward, a thin <150 m. section of foliated mafic volcanics is in sharp contact with mudstones which are in contact with a thin felsic pyroclastic unit which grades into laminated sediments and conglomerates. The Ihnatko-Kusins Zone occurs at the contact of the mudstones and the felsic tuffs.

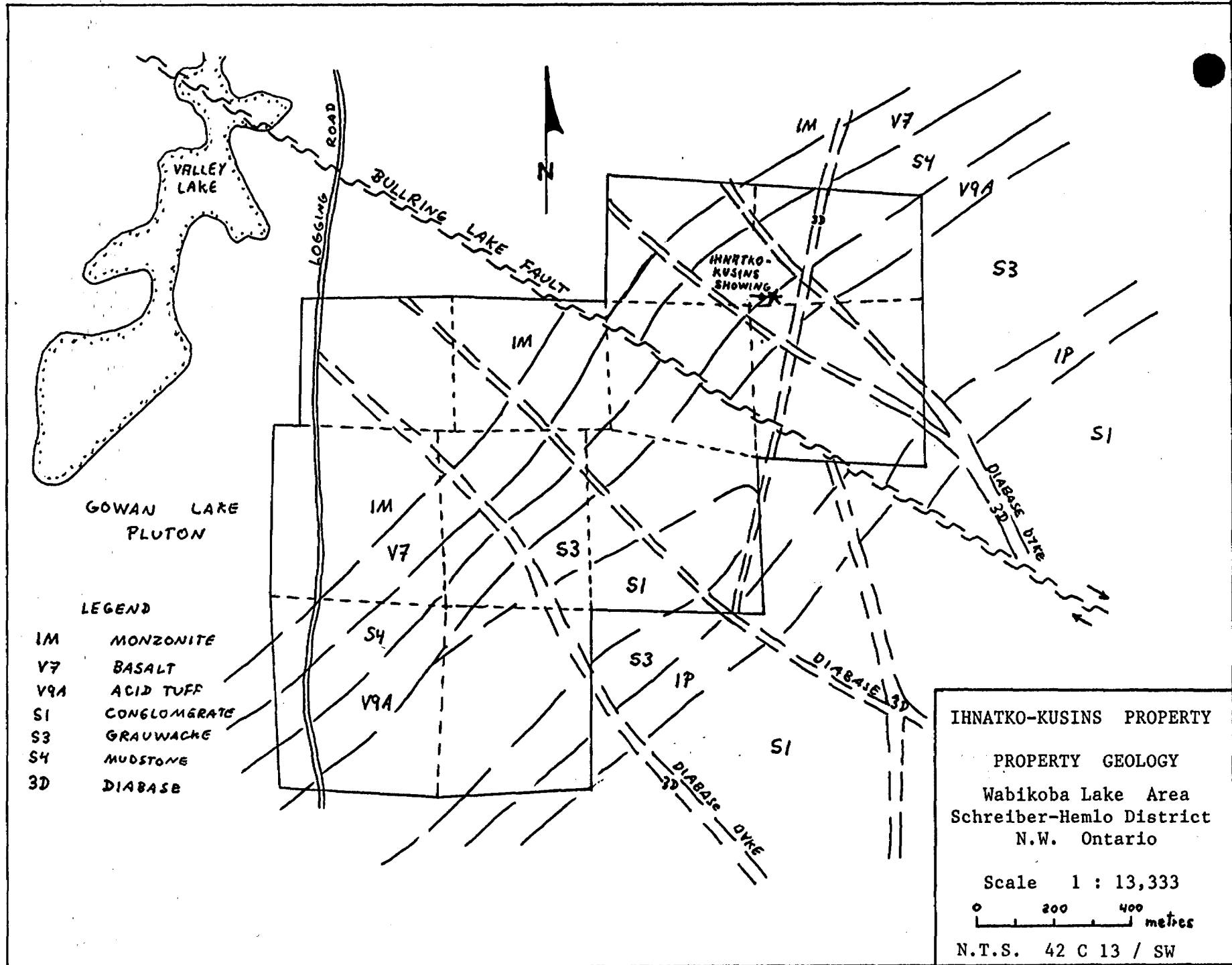
The three main rock types disclosed by other mapping were, however, observed: felsic tuffs south of the mineralized pits, grading into laminated sediments further to the south, and foliated mafic volcanics between the mineralized zone and the Monzonite. A possible agglomerate (conglomerate) was observed at the baseline near L24E.

### 7.2 Intrusive rocks

The Ihnatko-Kusins Zone occurs approximately 150 metres south of the regional contact of the monzonitic Gowan Lake Pluton with the greenstone belt. The monzonite is typically a light coloured, medium grained, hornblende monzonite. A faint foliation parallel with the schistosity of the volcanics can be observed in places.

Recent prospecting on a cliff near the contact at L27E 3+75N shows a brecciated intrusive texture at the contact with the foliated mafic rocks. This may be a widespread feature and could be significant.

The property is crosscutted by diabase dykes and the Bullring Lake Fault.



GOWAN LAKE  
PLUTON

LEGEND

- IM MONZONITE
- V7 BASALT
- V9A ACID TUFF
- S1 CONGLOMERATE
- S3 GRAUWACKE
- S4 MUDSTONE
- 3D DIABASE

IHNATKO-KUSINS PROPERTY  
 PROPERTY GEOLOGY  
 Wabikoba Lake Area  
 Schreiber-Hemlo District  
 N.W. Ontario  
 Scale 1 : 13,333  
 0 200 400 metres  
 N.T.S. 42 C 13 / SW

### 7.3 Mineralization

Sulphide mineralization was observed at the contact of a sedimentary unit (mudstone) and a felsic crystal tuff unit. The main type of mineralized rock is a well layered pyrite sericite schist. The extent of this rock type was impossible to determine, but was present in all trenches.

In Trench 2, a 0.80 m. thick mudstone unit with disseminated and semi-massive sphalerite and galena was located. The best material ran 10.7% zinc and 8.9% lead with 2.5 oz silver per ton in a grab sample. A chip sample across 0.80 m. ran 0.84% Zn and 0.13% Pb with 1.8 oz/ton silver.

With the proximity of this mineralization to the Bullring Lake Fault, there may be excellent potential for a Manitouwadge-type of deposit.

## 8. CONCLUSIONS

A survey grid at 100 m. spacing has been established over the property. Road access to the property will reduce the cost of exploration which has hampered the development of the property in the past.

The base metal occurrence known as the Ihnatko-Kusins Showing has been relocated and sampled. The presence of significant base metal mineralization has been documented. A Vlf anomaly coincide with the volcanogenic mineralized zone.

The host rocks and structural feature shares similarities with economic deposits in the area. Further ground work should evaluate the potential for an economic zone.

## 9. RECOMMENDATIONS

The property should be mapped at 1:2,500 scale and prospected with a Beep Mat (a miniaturized electromagnetic survey instrument used for surface prospecting in detection of conductive mineralized outcrops hidden under up to 1.5 metres of overburden). Prospecting was limited to an area around the main showing. Further prospecting should cover the other claims. Further stripping, sampling and detailed mapping should be performed in the vicinity of the old trenches.

The planning of more advanced work, including diamond drilling, would be based upon the ground survey results.

SELECTED REFERENCES


- Hamilton, W.S., 1989, Report on Geological and Geochemical (Soil) Surveys on the Black River Property. Company report for Dolphin Exploration Ltd. MNDM assessment file No. 2.12347, Thunder Bay.
- Kemp, R., 1984, Geological Assessment Report, Pryme North Joint Venture, Wabikoba Lake Area, Thunder Bay District. Company report for Noranda Exploration Company Ltd. MNDM assessment file No. 2.7108, Thunder Bay.
- Milne, V.G., 1968, Geology of the Black River Area. ODM GR 72, pp. 61-63, Map 2144.
- Muir, T.L., 1983, Geology of the Hemlo-Heron Bay Area: pp. 230-239, in The Geology of Gold in Ontario; edited by A. Colvine, Ontario Geological Survey, Miscellaneous Paper 110, 278p.

CERTIFICATE OF QUALIFICATIONS

THIS IS TO CERTIFY THAT:

- I am a resident of Thunder Bay, province of Ontario, Canada (2-309 Catherine st, Thunder Bay, Ontario, P7E 1K7).
- I have been engaged in base and precious metal exploration as a geologist since 1987 and as geophysicist since 1991.
- I am a graduate of University of Quebec at Chicoutimi, Chicoutimi, Quebec (M.Sc. Earth Sciences, 1987), and University of Montreal, Montreal, Quebec (B.Sc. Geology, 1982).
- I am a member of the Professional Association of Geologists and Geophysicists of Quebec (APGGQ).

Signed in Thunder Bay, April 16 1992

  
\_\_\_\_\_  
Pierre Simoneau  
Geologist, M.Sc.



APPENDIX 1.

List of Claim Numbers and Due Dates



APPENDIX 1.

LIST OF CLAIMS AND DUE DATES

1.	TB	1142843.....	February 18, 1993
2.	TB	1142844.....	February 18, 1993
3.	TB	1142845.....	February 18, 1993
4.	TB	1142846.....	February 18, 1993
5.	TB	1142847.....	February 18, 1993
6.	TB	1147781.....	May 7, 1992
7.	TB	1147783.....	May 7, 1992
8.	TB	1147784.....	May 7, 1992
9.	TB	1147785.....	May 7, 1992
10.	TB	1147791.....	May 7, 1992
11.	TB	1147792.....	May 7, 1992

APPENDIX 2.

Description of the rocks samples

## APPENDIX 2.

### DESCRIPTION OF THE ROCK SAMPLES

- #
8613. Light grey medium grained acid tuff with thin millimetric bands of pyrite (10% of the rock).
8614. Light greenish grey, fine grained acid tuff with fine laminations of amphiboles and a few millimetric bands of quartz, reddish garnets and 2% pyrite.
8615. Light grey medium grained acid tuff with 15-25% pyrite in massive bands and trace of sphalerite.
8616. Dark grey pyritic argillite (mudstone).
8617. Light grey medium grained acid crystal tuff with 2% pyrite.
8618. White bleached foliated quartz-sericite tuff with 5-15% thin laminations of pyrite, and 1% magnetite.
8619. Medium grey cherty tuff with 3-5% layers of pyrite.
8620. Light grey pyritic bedded cherty tuff with 15% pyrite and 2% magnetite.
8621. Light grey pyritic bedded cherty tuff with 25% pyrite bands.
8622. Light grey medium grained pyritic bedded cherty tuff with 25% laminations of pyrite.
8623. Light grey medium grained pyritic bedded cherty tuff with 1-3 mm thick bands of pyrite (20%) and 2% Chalcopyrite.
8624. Dark grey mudstone unit with disseminated sphalerite and Galena. Chip sample 0.80m long.
8625. Dark grey pyritic mudstone with 40% pyrite, 20% sphalerite and 5% Galena.
8626. Massive sphalerite sample from a float but found in situ as part of sample 8624. Represent 3 cm bed of massive sphalerite and Galena Zone.
8627. Light grey medium grained tuff with massive pyrite (50%).
8628. Medium grey, sericitic intermediate tuff with 3% pyrite.

APPENDIX 3.

ASSAY DATA



Report of Work Conducted After Recording Claim

Transaction Number  
W9240-00085

Mining Act

MINING LANDS

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

2.14562

- Instructions:
- Please type or print and submit in duplicate.
  - Refer to the Mining Act and Regulations for recorder.
  - A separate copy of this form must be complete
  - Technical reports and maps must accompany it
  - A sketch, showing the claims the work is assigned to



900

Recorded Holder(s) DAVID SAUNDERS P7E 1K7	Client No. 191663
Address 309 CATHERINE ST THUNDER BAY ONT	Telephone No. 807 623-1692
Mining Division THUNDER BAY - Hemlo	Township/Area WABIKOBA LAKE
	M or G Plan No. G-620
Dates Work Performed From: JANUARY 1991	To: MAY 14TH 1991

Work Performed (Check One Work Group Only)

Work Group	Type
Geotechnical Survey	MAGNETOMETRE AND VLF-Em 16
Physical Work, Including Drilling	PROSPECTING
Rehabilitation	
Other Authorized Work	
Assays	
Assignment from Reserve	

Total Assessment Work Claimed on the Attached Statement of Costs \$ 10,856.44

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
PIERRE SIMONEAU	2-309 CATHERINE ST THUNDER BAY ONT P7E 1K7
	MAY 11 1992
	MINING LANDS BRANCH

(attach a schedule if necessary)

Certification of Beneficial Interest \* See Note No. 1 on reverse side

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Date APRIL 17th 1992	Recorded Holder or Agent (Signature) Saunders
--	-------------------------	--

Certification of Work Report

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.		
Name and Address of Person Certifying DAVID SAUNDERS 309 CATHERINE ST THUNDER BAY ONT		
Telephone No. 807 623-1692	Date APRIL 16/92	Certified By (Signature) Saunders

For Office Use Only

Total Value Cr. Recorded 10856	Date Recorded Apr 21/92	Mining Recorder B. J. Allan ACTING	Received Stamp RECEIVED THUNDER BAY MINING DIVISION APR 21 AM 9 45
	Deemed Approval Date July 20/92	Date Approved	
	Date Notice for Amendments Sent		

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units
	1142843	1
	1142844	1
	1142845	1
	1142846	1
	1142847	1
	1147781	1
	1147783	1
	1147784	1
	1147785	1
	1147791	1
	1147799	1
<b>Total Number of Claims</b>	<b>11</b>	

Value of Assessment Work Done on this Claim	Value Applied to this Claim
<del>929.92</del> 9430	400
<del>929.92</del> 930	400
<del>1242.60</del> 1243	400
<del>929.91</del> 930	400
<del>929.92</del> 930	400
<del>929.91</del> 930	400
<del>929.92</del> 930	400
<del>929.92</del> 930	400
<del>929.92</del> 930	400
<del>929.92</del> 930	400
<del>929.92</del> 930	400
<b>Total Value Work Done</b>	<b>4400</b>

Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
	<del>529.92</del> 530
	<del>529.92</del> 530
	<del>842.60</del> 843
	<del>529.91</del> 530
	<del>529.92</del> 530
	<del>529.91</del> 530
	<del>529.92</del> 530
	<del>529.92</del> 530
	<del>529.92</del> 530
	<del>529.92</del> 530
	<del>529.92</del> 530
<b>Total Assigned From</b>	<b>4056</b>

**RECEIVED**  
MAY 11 1992

MINING LANDS BRANCH

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to prioritize the deletion of credits. Please mark (✓) one of the following:

1.  Credits are to be cut back starting with the claim listed last, working backwards.
2.  Credits are to be cut back equally over all claims contained in this report of work.
3.  Credits are to be cut back as prioritized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

**Note 1:** Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

**Note 2:** If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.	Signature	Date
---	-----------	------



Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des mines

**Statement of Costs  
for Assessment Credit**

**État des coûts aux fins  
du crédit d'évaluation**

Mining Act/Loi sur les mines

Transaction No./N° de transaction

**W9240-00085**

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la Loi sur les mines et serviront à tenir à jour un registre des concessions minières. Adresser toute question sur la collecte de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4<sup>e</sup> étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

**1. Direct Costs/Coûts directs**

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour and Prospecting Main-d'oeuvre \$ 150 →	3350 <sup>00</sup>	
	Field Supervision Supervision sur le terrain		3350 <sup>00</sup>
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert- conseil	Type ASSAYS	265. <sup>36</sup>	
	LINE CUTTING	4145. <sup>00</sup>	
	DRAFTING	500. <sup>50</sup>	4913. <sup>36</sup>
Supplies Used Fournitures utilisées	Type COPYING	132. <sup>04</sup>	
			132 <sup>04</sup>
Equipment Rental Location de matériel	Type GEOPHYSICAL	674. <sup>10</sup>	
	INSTRUMENT	898. <sup>80</sup>	1572 <sup>50</sup>
<b>Total Direct Costs Total des coûts directs</b>			<b>9968<sup>30</sup></b>

**2. Indirect Costs/Coûts indirects**

\*\* Note: When claiming Rehabilitation work indirect costs are not allowable as assessment work.  
Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type VEHICLE	420. <sup>00</sup>	
			420 <sup>00</sup>
Food and Lodging Nourriture et hébergement		466. <sup>34</sup>	466. <sup>34</sup>
Mobilization and Demobilization Mobilisation et démobilisation			
<b>Sub Total of Indirect Costs Total partiel des coûts indirects</b>			<b>886.<sup>34</sup></b>
Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excedant pas 20 % des coûts directs)			
<b>Total Value of Assessment Credit (Total of Direct and Allowable indirect costs)</b>			<b>10854.<sup>44</sup></b>

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note : Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

**RECEIVED**

**Filing Discounts**

**MAY 1 1996** pour dépôt

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Total Value of Assessment Credit	Total Assessment Claimed
	× 0.50 =

Valeur totale du crédit d'évaluation	Evaluation totale demandée
	× 0,50 =

**Certification Verifying Statement of Costs**

I hereby certify:  
that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as Recorded Holder I am authorized  
(Recorded Holder, Agent, Position in Company)

to make this certification

**Attestation de l'état des coûts**

J'atteste par la présente :  
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de \_\_\_\_\_ je suis autorisé  
(titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Signature [Signature] Date APRIL 16/92





Ontario

Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des Mines

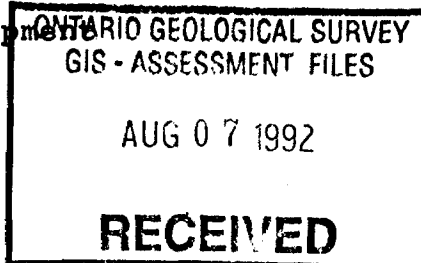
Mining Lands Branch  
Geoscience Approvals Section  
159 Cedar Street, 4th Floor  
Sudbury, Ontario  
P3E 6A5

Telephone: (705) 670-7267  
Fax: (705) 670-7262

July 17, 1992

Our File: 2.14562  
Transaction #W9240.085

Mining Recorder  
Ministry of Northern Development  
and Mines  
435 James Street South  
P.O. Box 5000  
Thunder Bay, Ontario  
P7C 5G6



Dear Sir/Madam:

Subject: APPROVAL OF ASSESSMENT WORK CREDITS ON MINING CLAIMS  
TB1142843 et al. IN WABIKOBA LAKE AREA

The assessment work credits for the Geophysical surveys and  
Prospecting filed under Sections 14 and 9 of the Mining Act  
Regulations have been approved as originally filed.

The approval date is July 17, 1992.

Please indicate this approval on your claim record sheets.

Yours sincerely,

Ron C. Gashinski  
Senior Manager, Mining Lands Branch  
Mines and Minerals Division

LJ/jl  
Enclosures:

cc: Resident Geologist  
Thunder Bay, Ontario

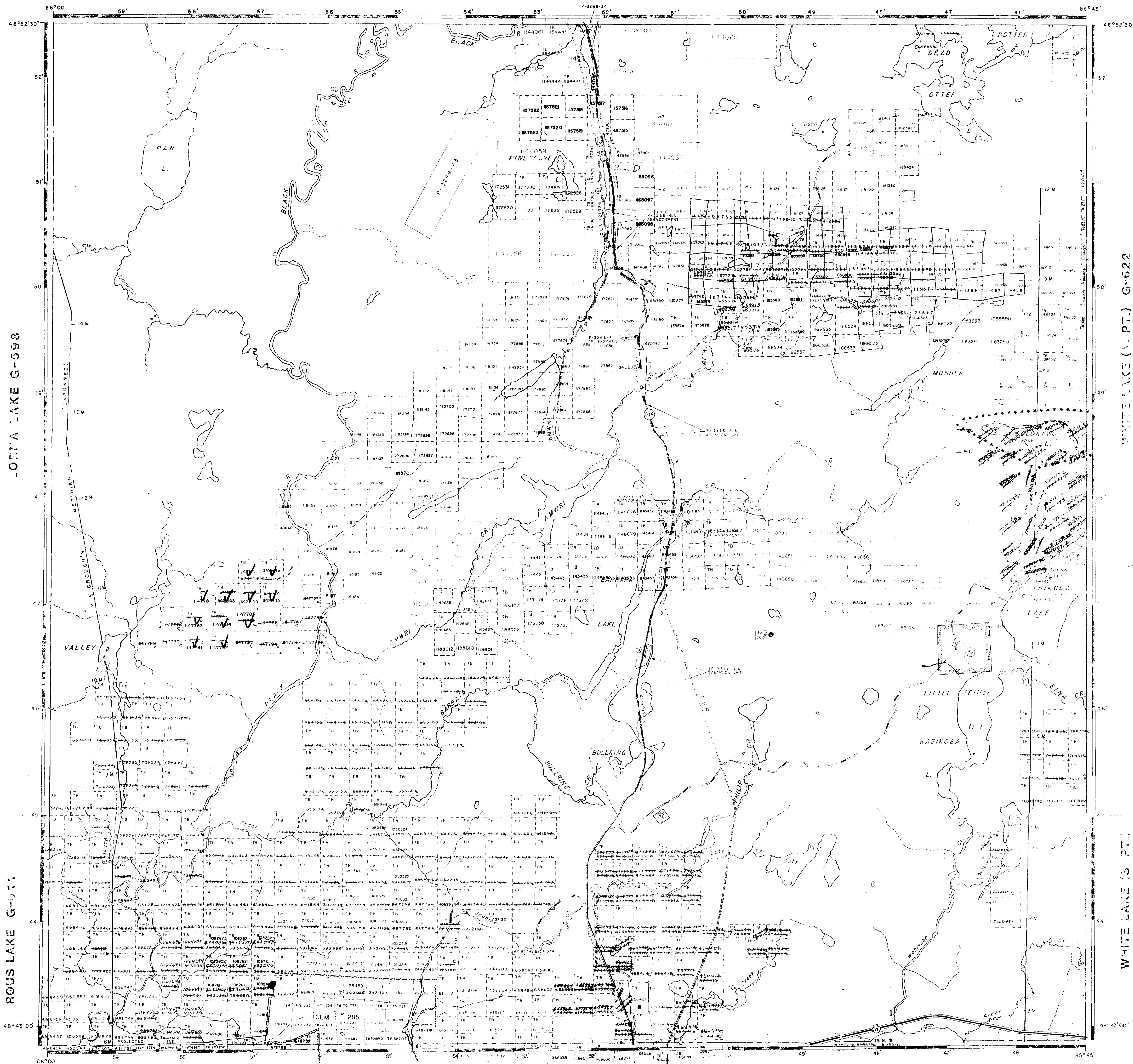
Assessment Files Office  
Toronto, Ontario

**REFERENCES**

AREAS WITHDRAWN FROM DISPOSITION

No.	Date	Order No.	Date	Enclosure	Ref.
1	1972	121	1972	1	
2	1972	122	1972	1	
3	1972	123	1972	1	
4	1972	124	1972	1	
5	1972	125	1972	1	
6	1972	126	1972	1	
7	1972	127	1972	1	
8	1972	128	1972	1	
9	1972	129	1972	1	
10	1972	130	1972	1	

**BLACK RIVER G-580**



**LEGEND**

Highway Right-of-Way	---
Other Road	---
Trail	---
Water	---
Unsurveyed Lines	---
Parcel Boundaries	---
Mining Claims	---
Utility Lines	---
Other	---

**DISPOSITION OF CROWN LANDS**

TYPE OF DOCUMENT	SYMBOL
Patented Surface Rights Only	---
Surface Rights Only	---
Other	---
...	---

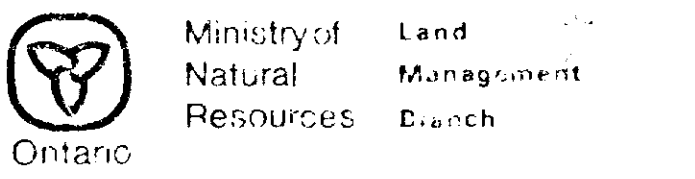
SCALE 1:125,000

Produced by the Mining Branch, Ministry of Natural Resources, Ontario.

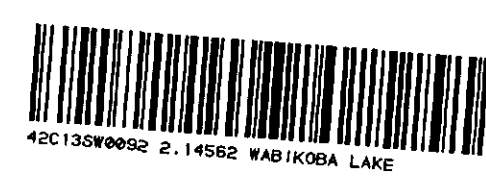
Not guaranteed by the Mining Branch, Ministry of Natural Resources, Ontario.

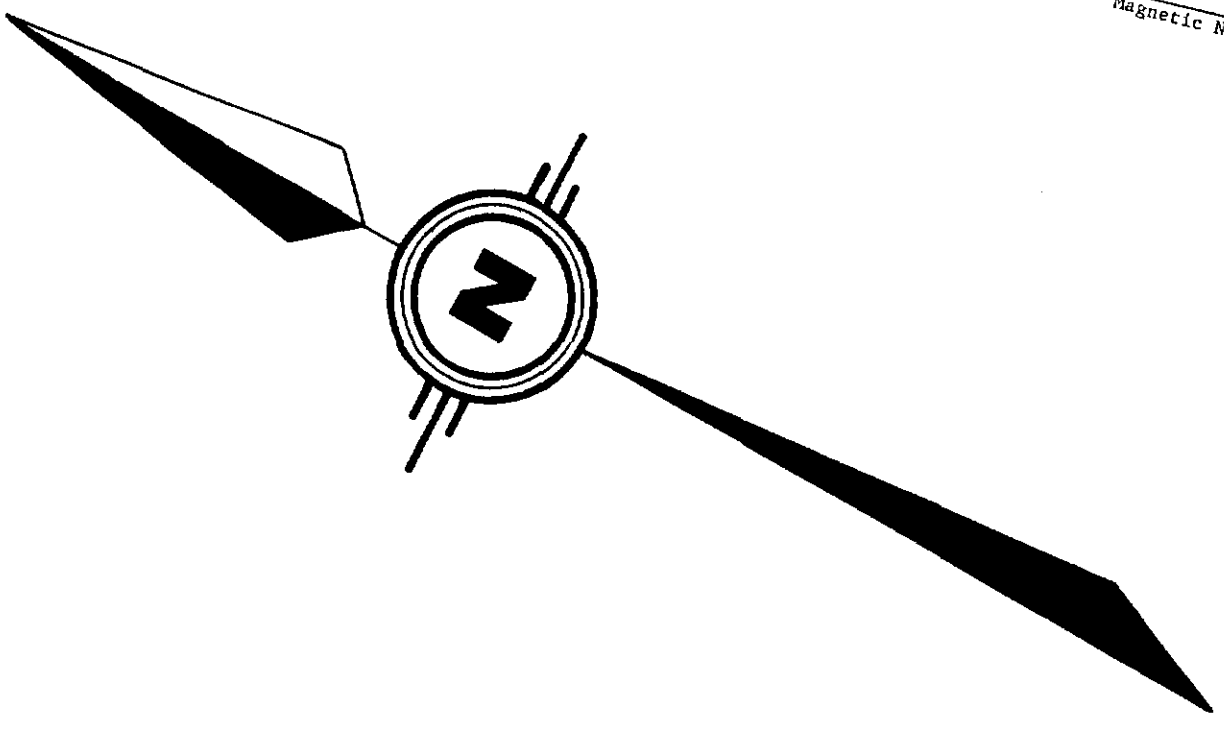
THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING BRANCH, MINISTRY OF NORTHERN DEVELOPMENT AND MINES FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

**WABIKORA LAKE**  
 M.N.R. ADMINISTRATIVE DISTRICT  
 TERRACE BAY  
 MINING DIVISION  
 THUNDER BAY  
 LAND TITLES / REGISTRY DIVISION  
 THUNDER BAY

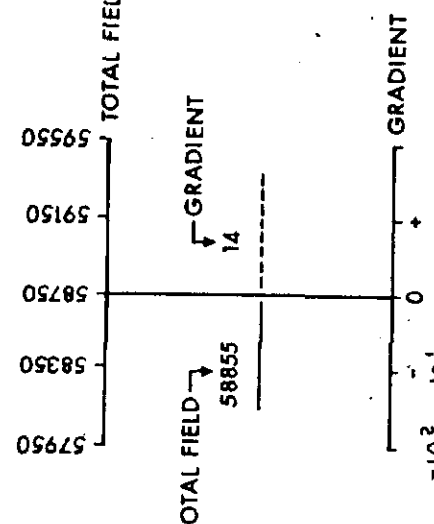


Date: AUGUST 1984 Number: **G-620**

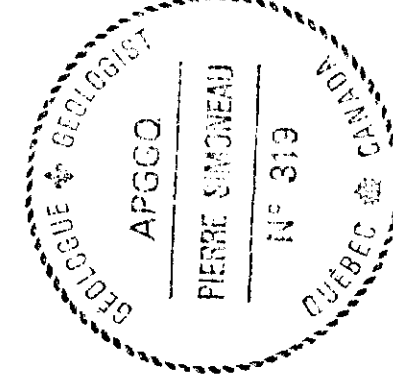




APPROXIMATE MAGNETIC DECLINATION 1995  
Annual Change: Increase 1.3"



**INSTRUMENTS**  
 MAG. SENSOR A 022  
 VIT SENSOR F 0039  
**BASE STATION**  
 CHINA PLUS A 002  
 VIT SENSOR F 0042  
**LOCATED CLAW POST**

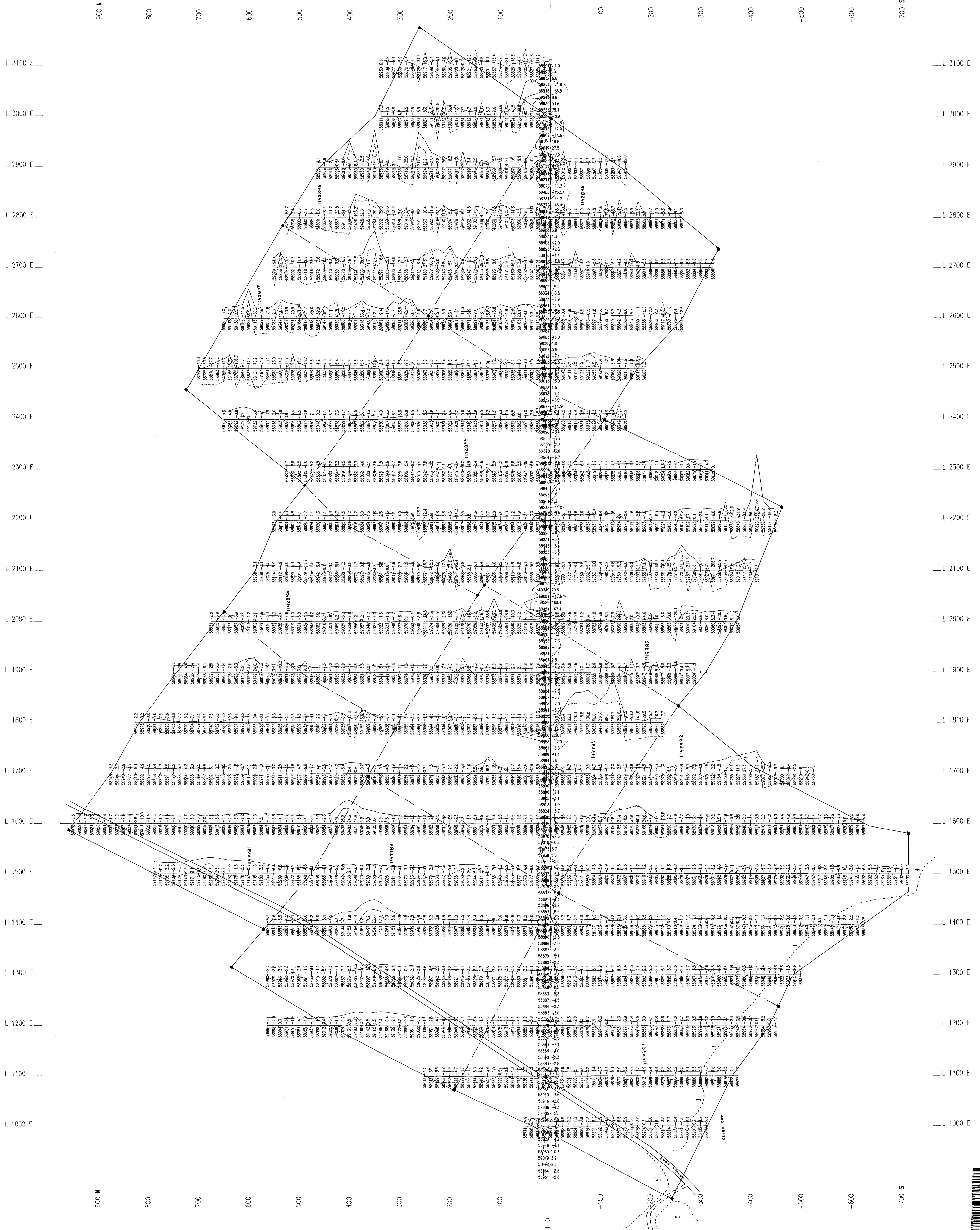


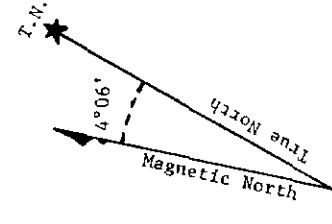
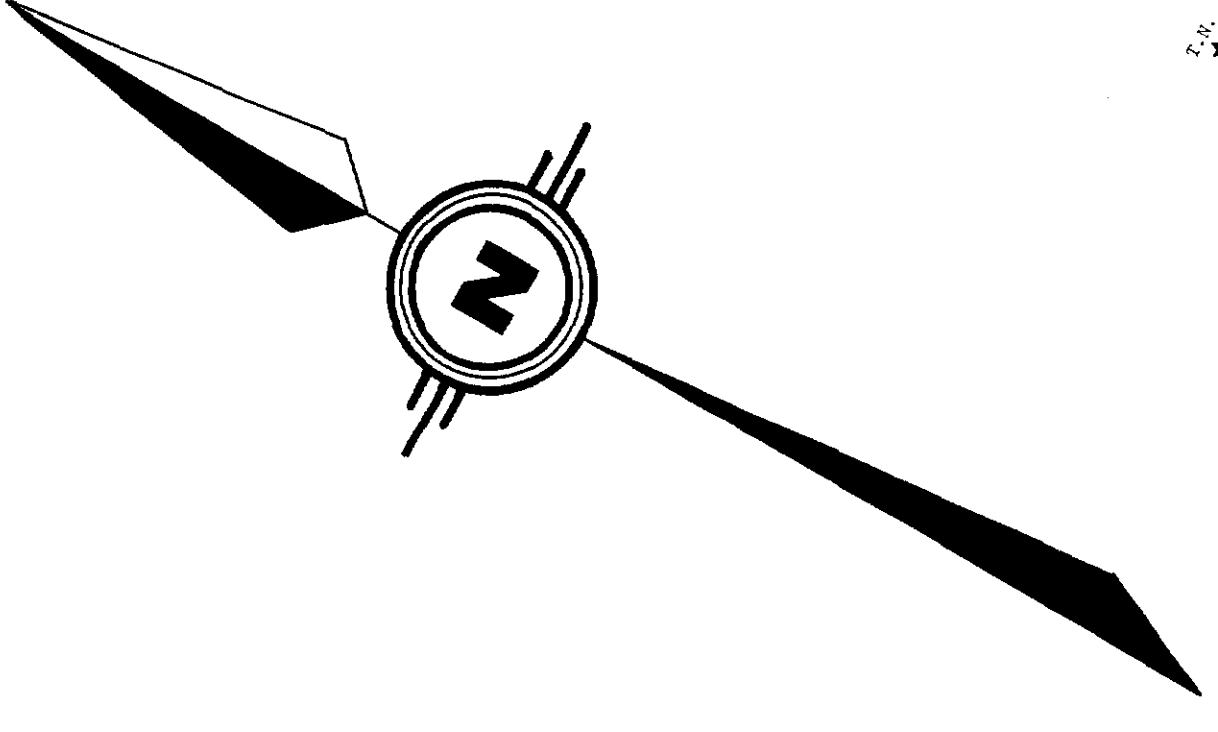
**MAGNETOMETER SURVEY  
 PROFILES & POSTINGS**

FOR: **DAVE SAUNDERS**

EXECUTED BY: E. SAUNDERS  
 INTERVIEWED BY: E. SAUNDERS  
 DRAWN BY: E. SAUNDERS  
 APPROVED BY: E. SAUNDERS

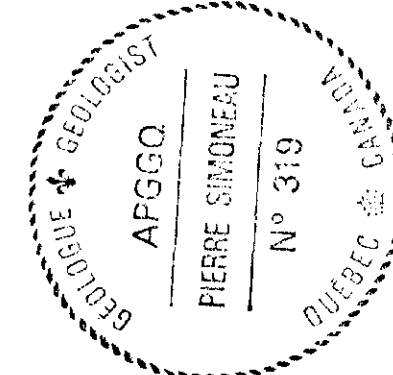
CLIENT: IHNATKO - KUSINS PROPERTY  
 WABIKOBA LAKE AREA  
 N.W. 44 1/2" 100' x 142 1/2" 100'  
 SCALE: 1/2500  
 PLAN No. 1  
 PROJECT No. 1



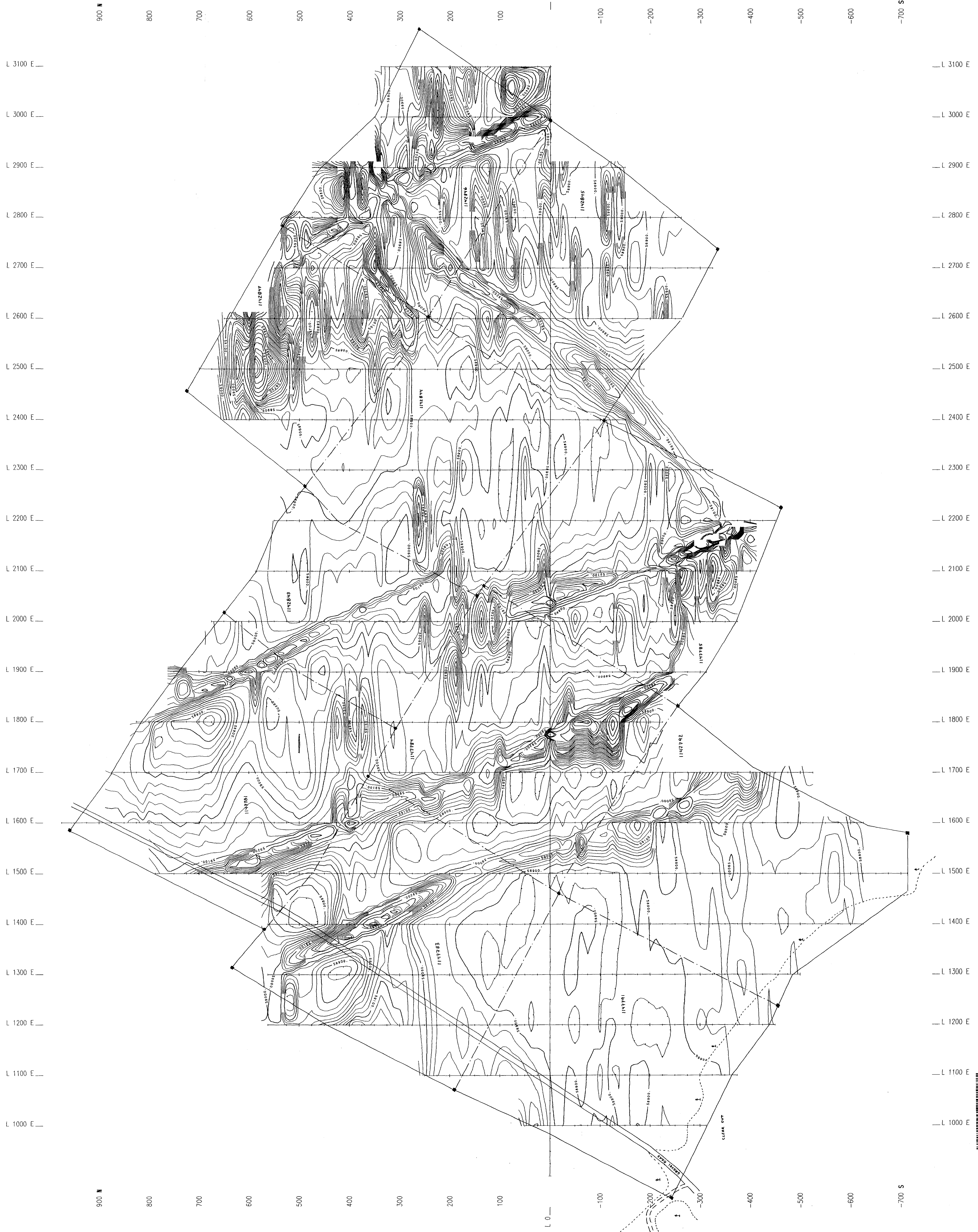


APPROXIMATE MEAN DECLINATION 1992  
ANNUAL CHANGE IN DECLINATION 1.12"

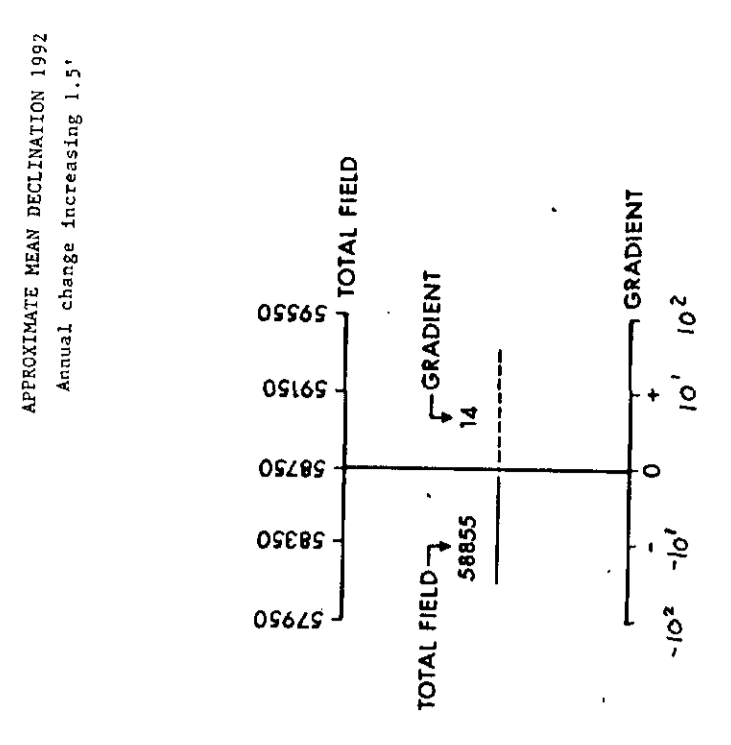
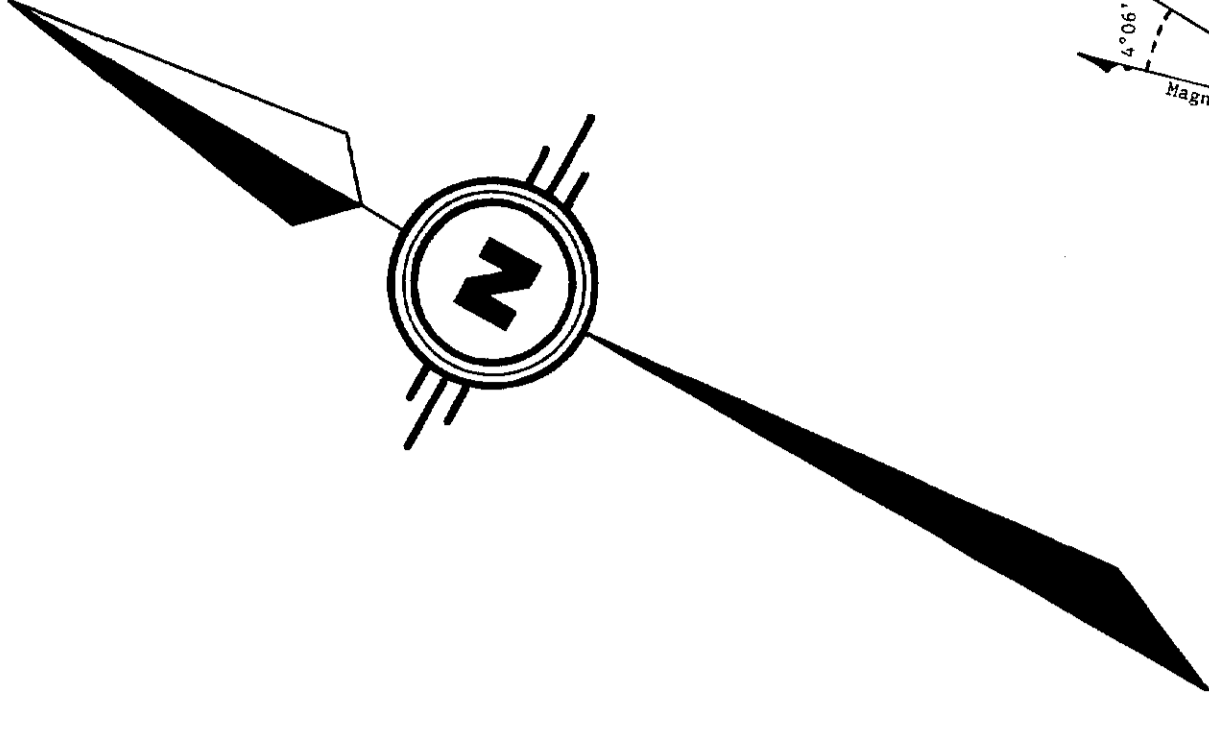
**INSTRUMENTS**  
A 602  
MAG. SENSOR F 0039  
VIZ. SENSOR F 0039  
**BASE STATION**  
A 602  
OMNI POINT  
MAG. SENSOR F 0062  
VIZ. SENSOR F 0062  
LOCATED CLAIM POST



<b>SURVEY:</b> MAGNETOMETER SURVEY TOTAL FIELD CONTOURS	
<b>FOR:</b> DAVE SAUNDERS	
<b>BY:</b> FERGUSON & ASSOCIATES	
ENCLOSED BY: P. SIMONNEAU DATE: 02/91	DATE: 02/91
DRAWN BY: P. SIMONNEAU DATE: 02/91	DATE: 02/91
APPROVED BY:	DATE: 02/91
ISSUED BY: DATE: 1/23/90	SCALE: N.T.M.
PLAN No. 2	PROJECT No. 0001
IHNATKO - KUSINS PROPERTY WABIKOBA LAKE AREA N.W. ONTARIO	



220



**INSTRUMENTS**  
 MAG. SENSORS: A 432, A 433, A 434, A 435  
 MAG. SENSORS: F 009, F 010, F 011, F 012  
**BASE STATION**  
 MAG. SENSORS: A 432, A 433, A 434, A 435  
 MAG. SENSORS: F 009, F 010, F 011, F 012  
 LOCATED CLAIM POST  
 MAGNETIC BODY



**MAGNETOMETER SURVEY PROFILES & INTERPRETATION**

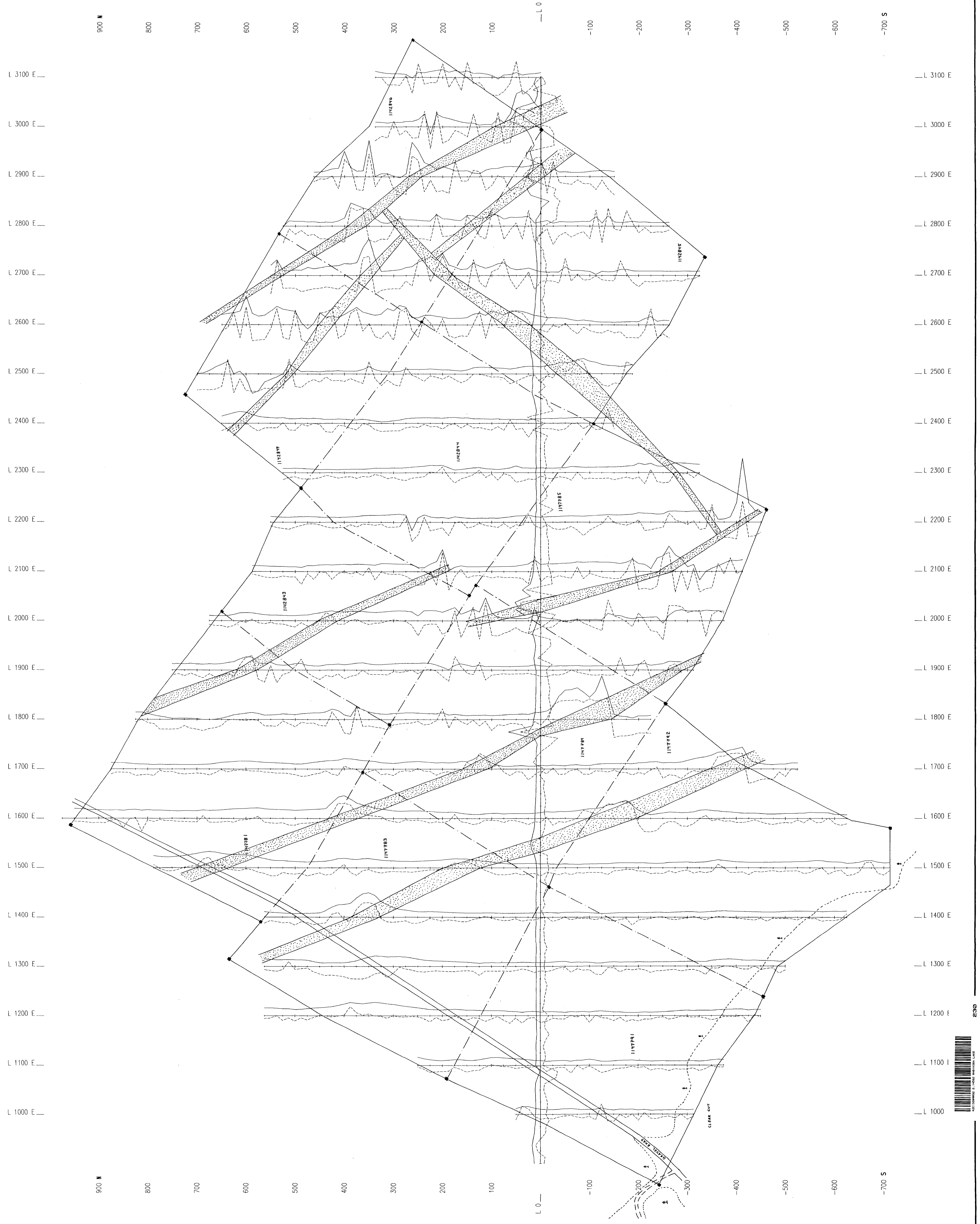
FOR: **DAVE SAUNDERS**

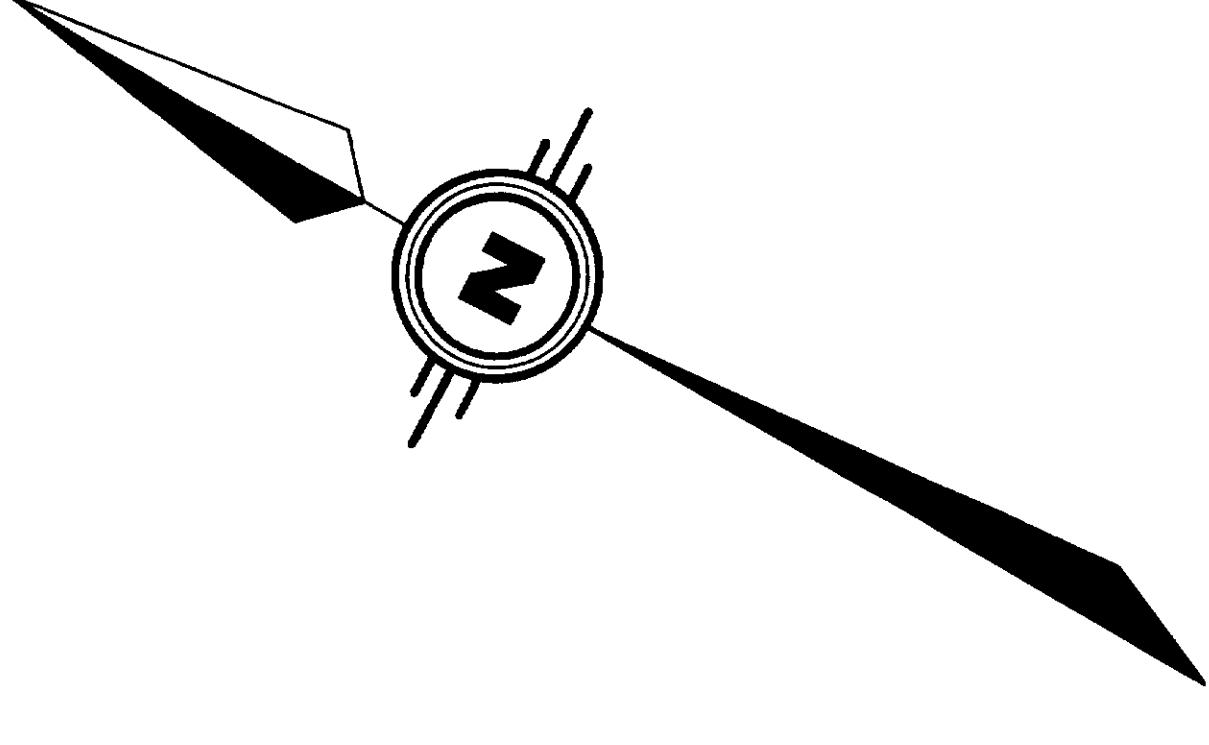
BY: [Signature]

RECORDED BY: P. SIMONEAU 05/91  
 INTERPRETED BY: P. SIMONEAU 05/91  
 APPROVED BY: P. SIMONEAU 05/91  
 DRAWN BY: P. SIMONEAU 05/91  
 SCALE: 1/2500  
 PROJECT NO: 3

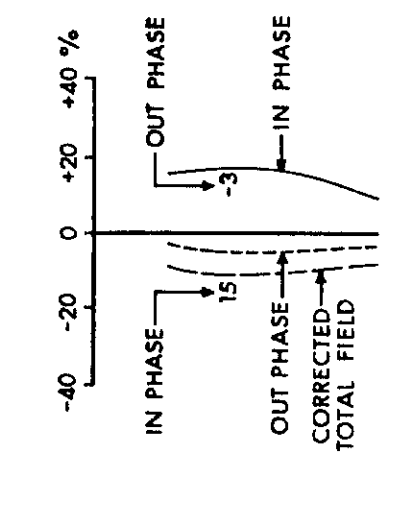
CLIENT: IHNATKO - KUSINS PROPERTY  
 PROJECT: WABIKOBA LAKE AREA  
 LOCATION: NW, ONTARIO

DATE: 05/91  
 SCALE: 1/2500  
 PROJECT NO: 3





APPROXIMATE MAGNETIC DECLINATION 1997  
Annual Change: Increase 1.3"



**INSTRUMENTS**  
 MAG. SENSOR F 0329  
 MAG. SENSOR F 0039  
 VLF SENSOR F 0039  
 VLF SENSOR F 0039  
 VLF SENSOR F 0039  
 VLF SENSOR F 0039

**BASE STATION**  
 OWN PUGS  
 VLF SENSOR F 0039  
 VLF SENSOR F 0039

LOCATED CLAIM POST



**VLF SURVEY**  
 PROJECT NAME: WABIGOON LAKE AREA  
 CUTLER LAKE, ONTARIO

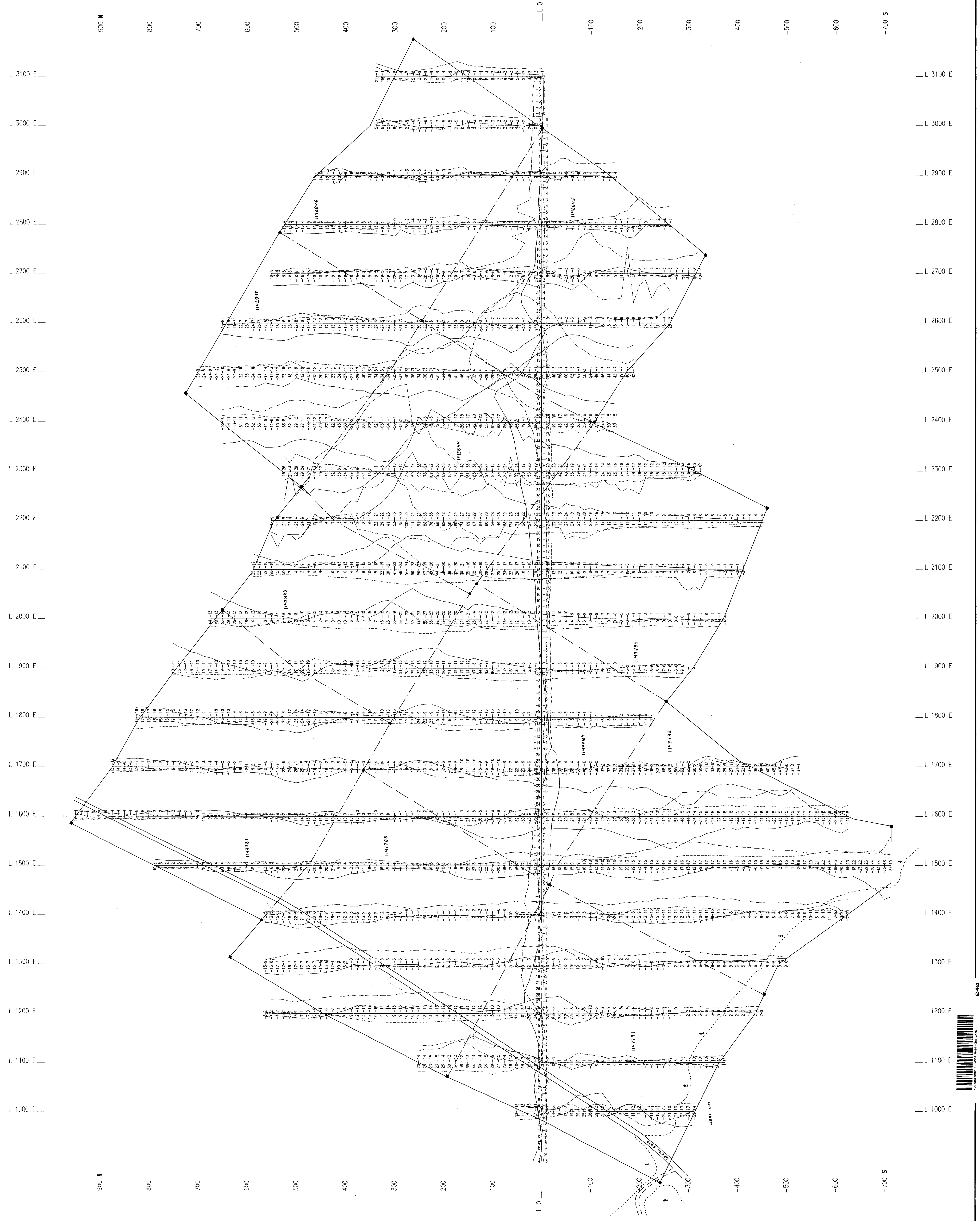
**FOR:** **DAVE SAUNDERS**

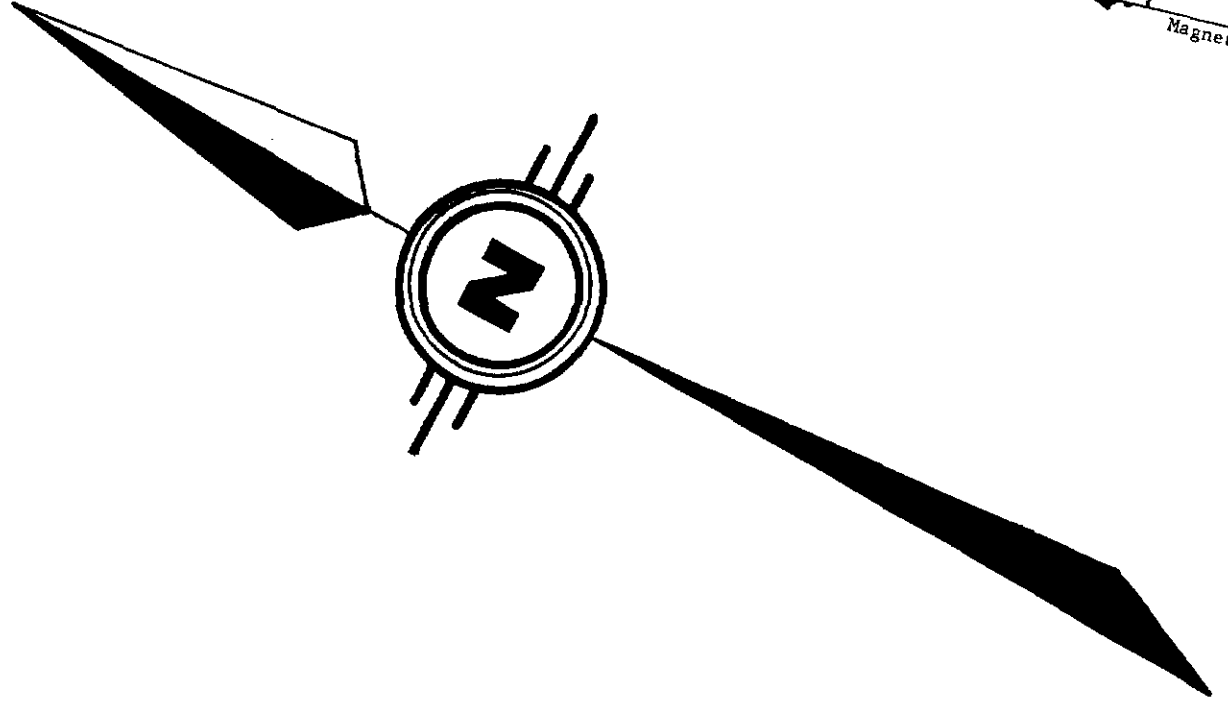
**BY:** PIERRE SIMONEAU

RECORDED BY: PIERRE SIMONEAU  
 INSTRUMENTED BY: PIERRE SIMONEAU  
 DRAWING BY: PIERRE SIMONEAU  
 APPROVED BY: PIERRE SIMONEAU

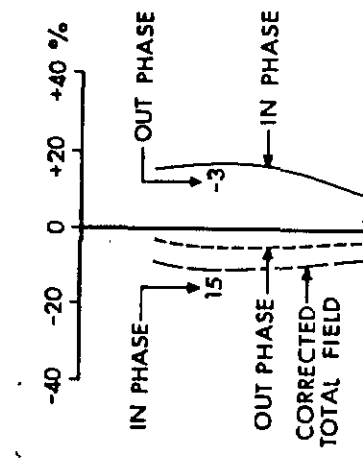
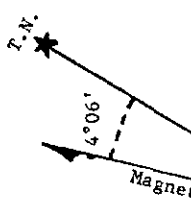
DATE: 05/91  
 DATE: 05/91  
 DATE: 05/91

SCALE: 1:2500  
 DATE: 12/2000  
 PLAN No. Y  
 PROJECT No. 4004

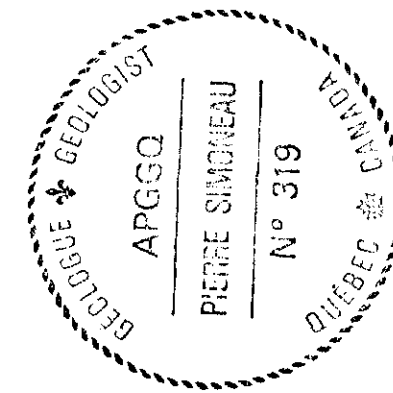




APPROXIMATE GRID DECLINATION 1985  
Annual Change Increasing 1.2"



**INSTRUMENTS**  
 A 032  
 OMNI PLUS  
 VLF SENSOR  
 F 0039  
**BASE STATION**  
 A 032  
 OMNI PLUS  
 VLF SENSOR  
 F 0032  
 + LOCATED CLAIM POST  
 VLF AXIS



**VLF SURVEY**  
**PROFILES & INTERPRETATION**  
 COVER NUMBER 05A, 05B, 05C, 05D, 05E, 05F, 05G, 05H, 05I, 05J, 05K, 05L, 05M, 05N, 05O, 05P, 05Q, 05R, 05S, 05T, 05U, 05V, 05W, 05X, 05Y, 05Z

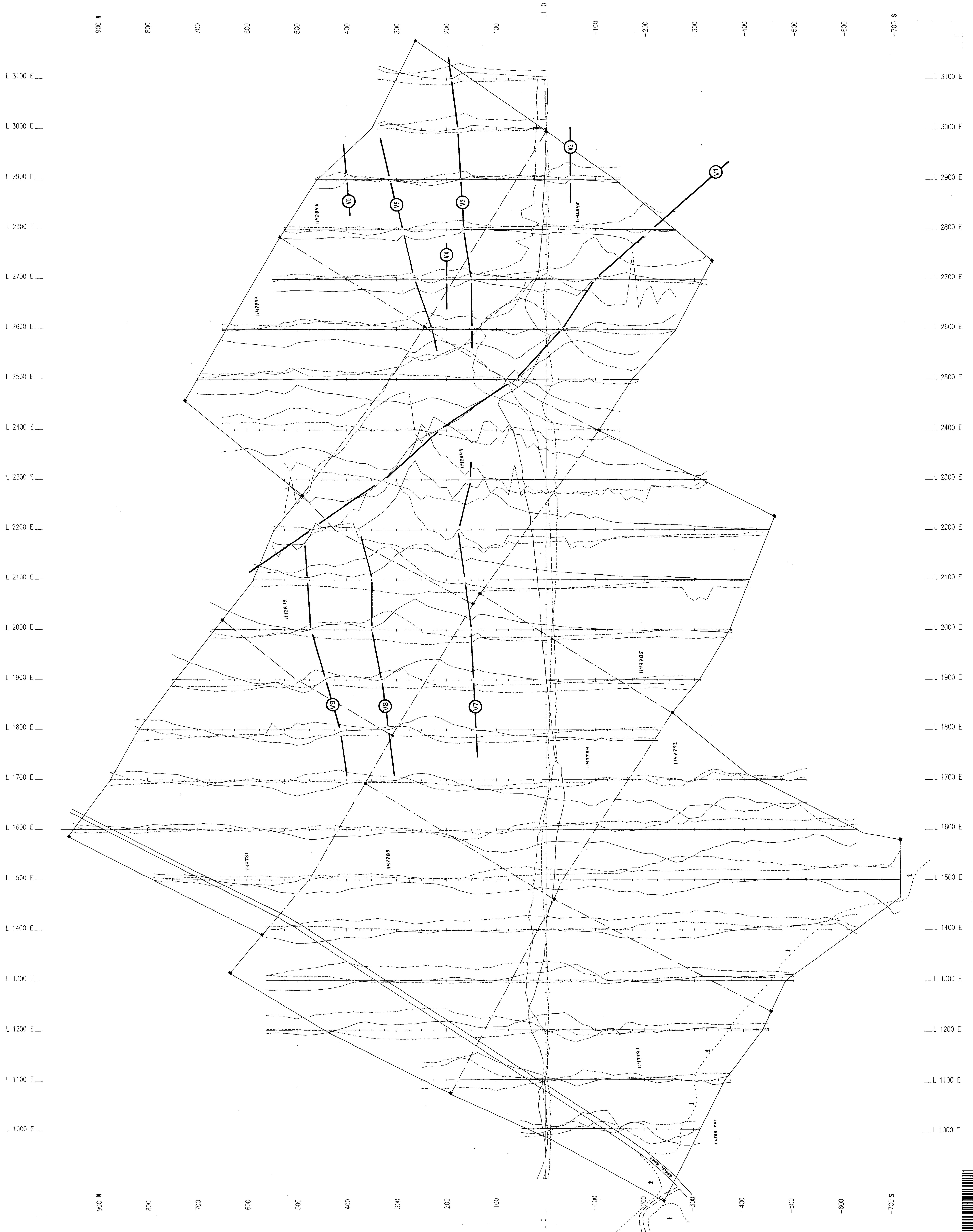
FOR: **DAVE SAUNDERS**

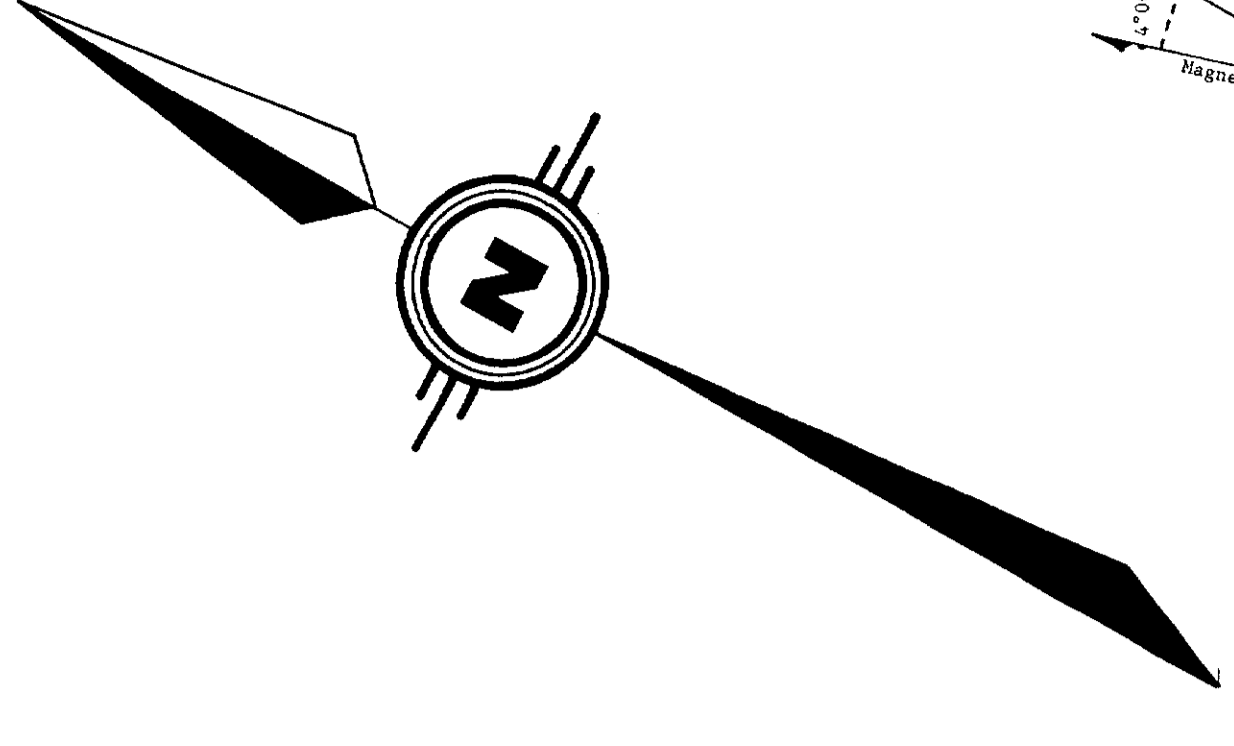
BY: **GEOPHYSICS**

PROJECTED BY: **F. SIMONEAU** 05/91  
 DRAWN BY: **F. SIMONEAU** 05/91  
 CHECKED BY: **F. SIMONEAU** 05/91  
 SCALE: 1:2500  
 DATE: 05/91  
 PROJECT No: **1000**

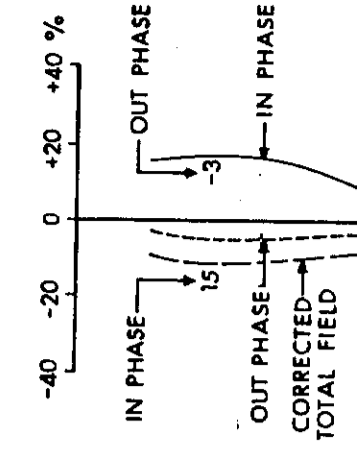
CLIENT: **IHNATKO - KUSINS PROPERTY**  
**WABIKOBA LAKE AREA**  
 N.W. ONTARIO

PLAN No: **5**  
 SHEET No: **5**

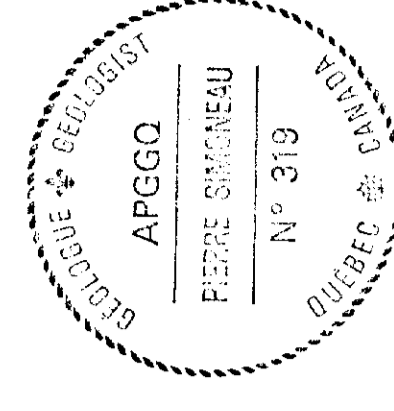




APPROXIMATE ROAD INCLINATION 1972  
MINIMUM CHANGE IN ELEVATION 1.0'



- INSTRUMENTS  
 OMNI PLUS A 039  
 OMNI PLUS B 039  
 VLS SENSOR F 039  
 BASE STATION A 042  
 OMNI PLUS A 042  
 OMNI PLUS B 042  
 VLS SENSOR F 042
- LOCATED CLAIM POST



SURVEY: VLF SURVEY  
 PROFILES & POSTINGS  
 FOR: JIM CREEK WASHINGTON, USA AND F24.84K4

BY: DAVE SAUNDERS

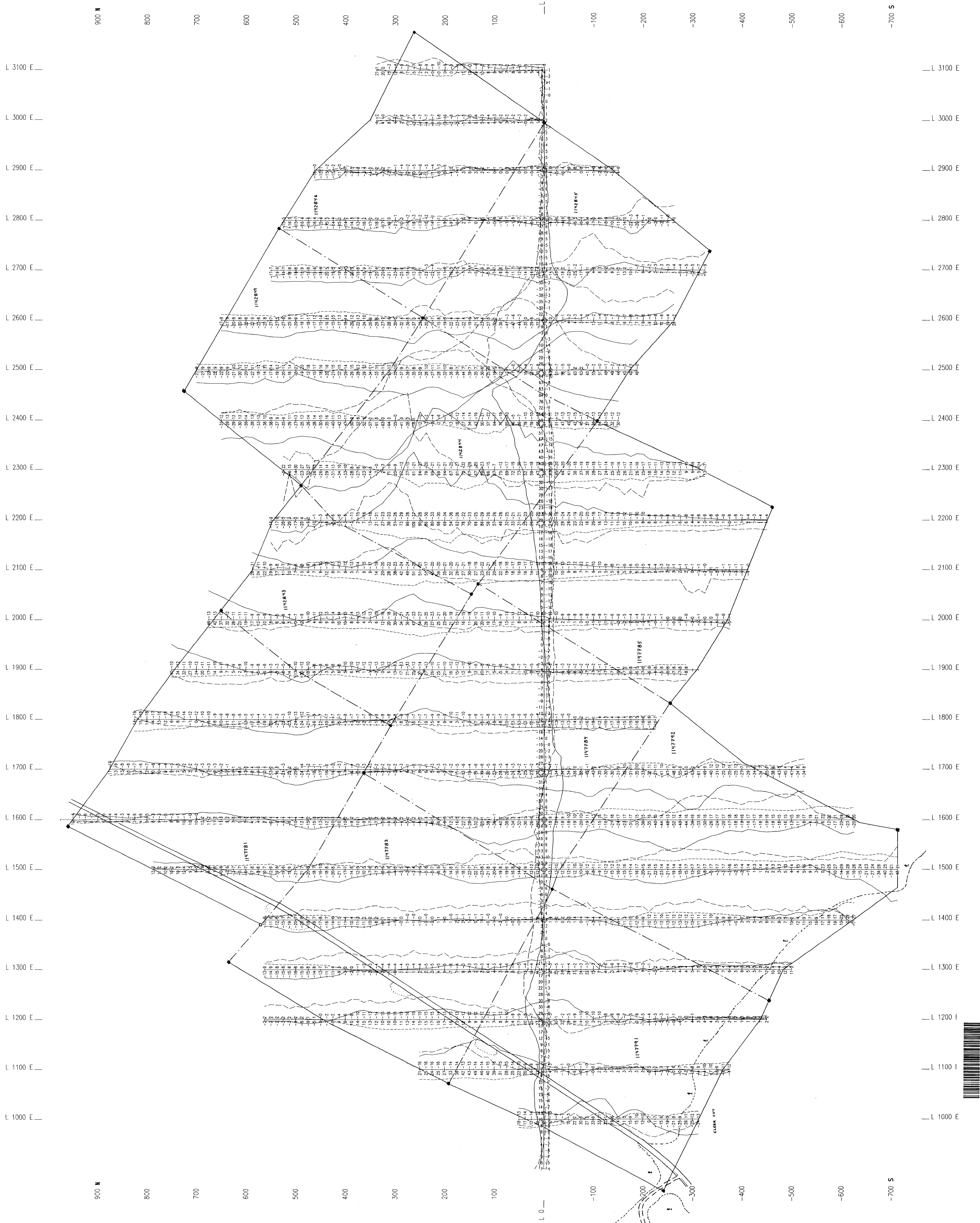
RECEIVED BY: P. SIMONEAU 05/91  
 DRAWN BY: P. SIMONEAU 05/91  
 CHECKED BY: P. SIMONEAU 05/91  
 REVISED BY: DATE: 12/2000

PROJECT NO: 6

SCALE: 1" = 100'

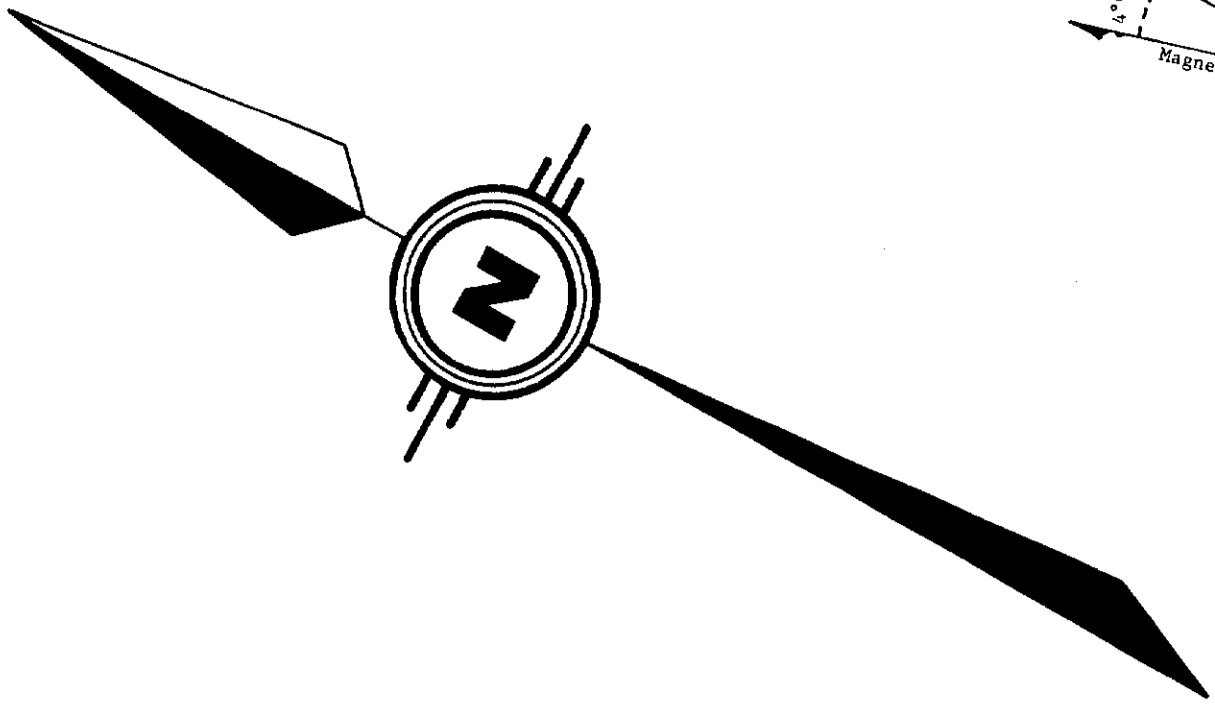
DATE: 05/91

PROJECT: IHNATKO - KUSINS PROPERTY  
 WABMOBA LAKE AREA  
 NW, ONTARIO

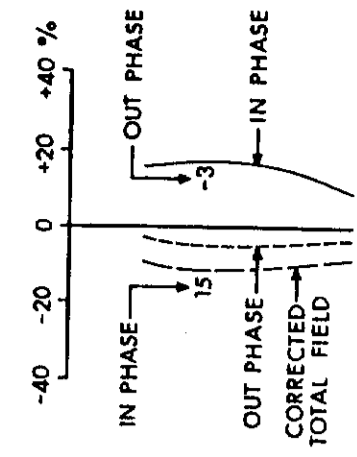


ACROSSING 21-1000 100' X 100' LOTS

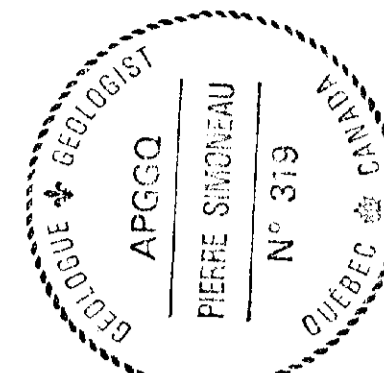




APPROXIMATE MAGNETIC DECLINATION 1975  
Annual change increasing 1.2"



**INSTRUMENTS**  
 VLF RECEIVER: A 502  
 VLF SENSORS: B 332, F 0039  
**BASE STATION**  
 OHM FLOOD: A 502  
 OHM FLOOD: F 0042  
 VLF SENSORS: A 502, F 0042  
 LOCATED CLAIM POST  
 VLF ARS



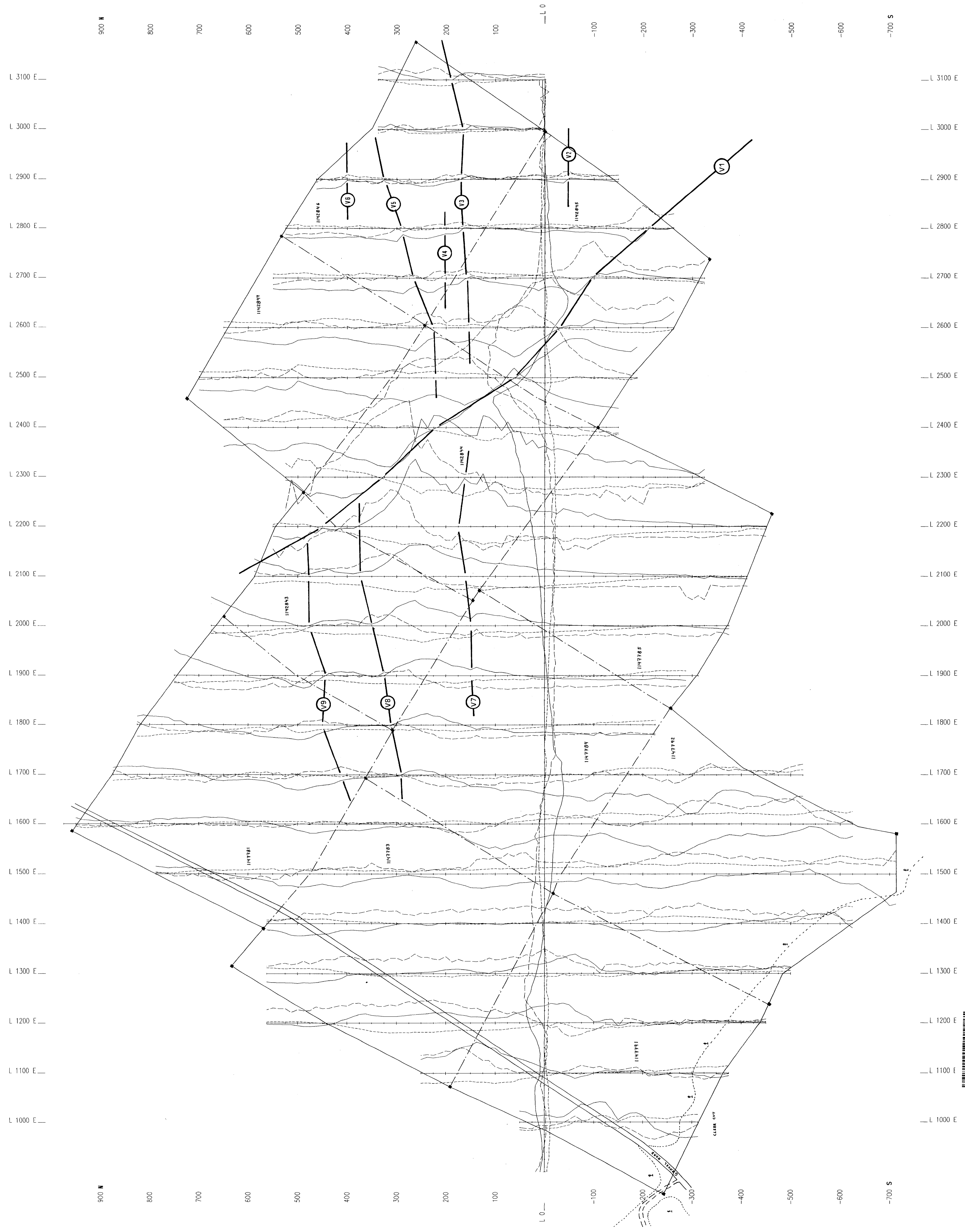
**VLF SURVEY**  
 PROFILE SECTION  
 JIM CREEK WASHINGTON USA N14 18 22.81Hz

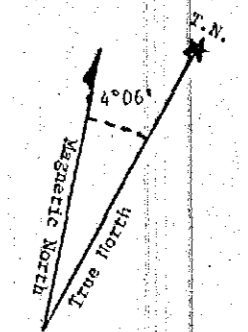
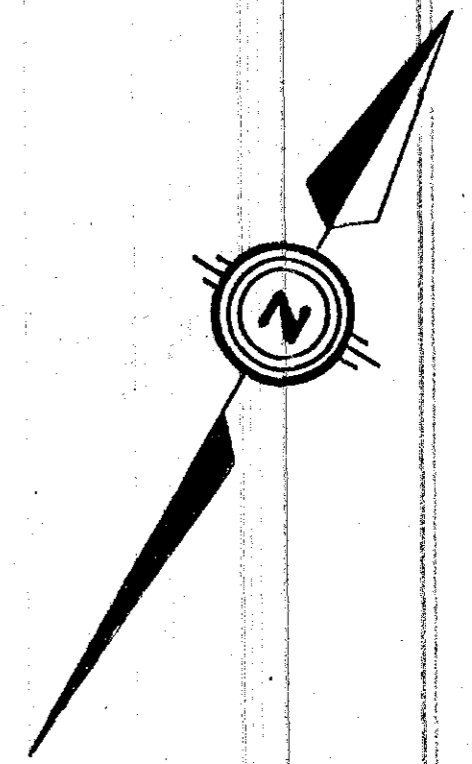
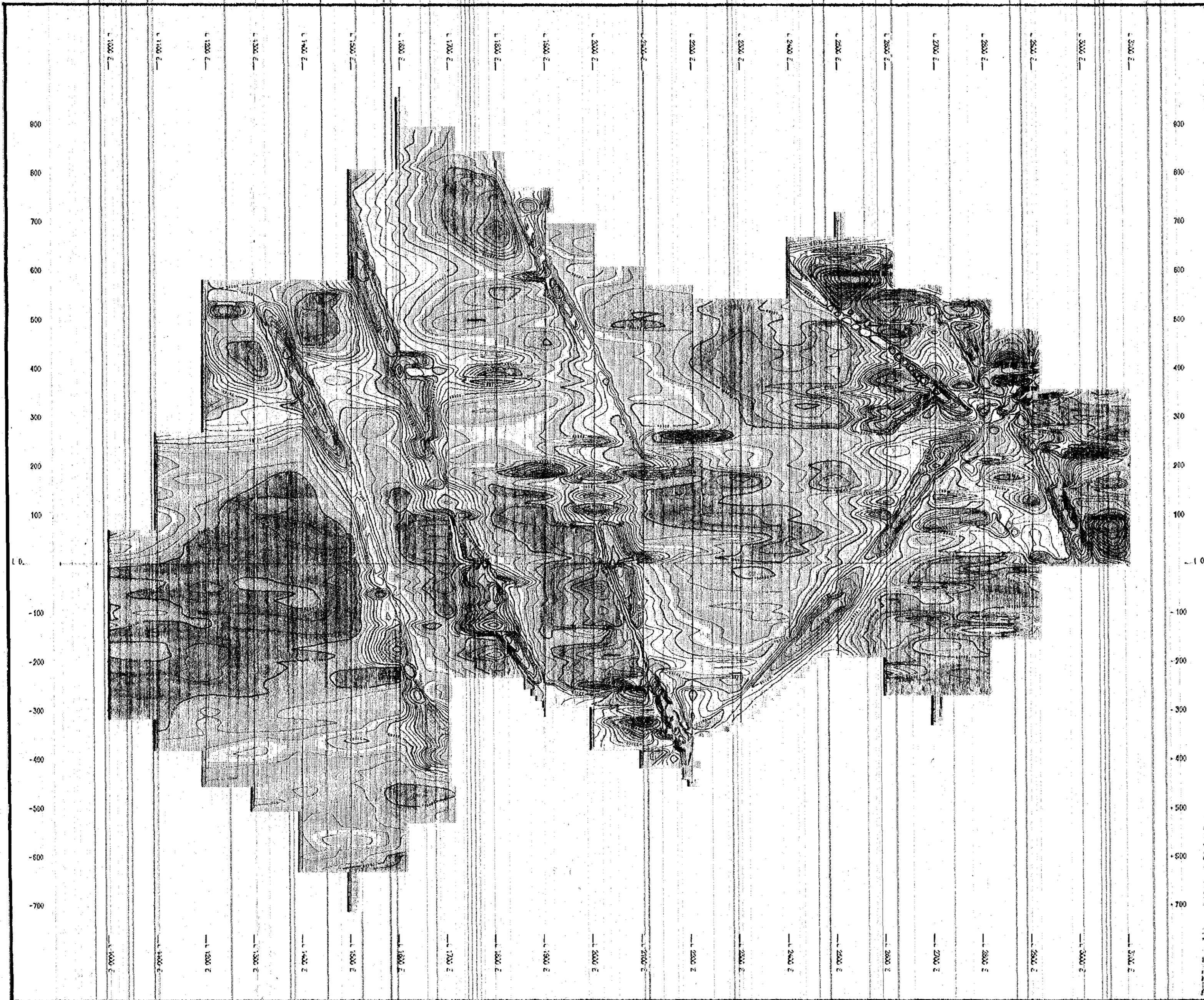
**FOR: DAVE SAUNDERS**

RECORDED BY: P. SIMONAU 05/91  
 INTERVIEWED BY: P. SIMONAU 05/91  
 DRAWN BY: P. SIMONAU 05/91  
 APPROVED BY: P. SIMONAU 05/91  
 NUMBER OF SHEETS: 7  
 PLAN No. 7  
 PROJECT No. 10001

**INNATKO - KUSINS PROPERTY**  
**WABIKOBA LAKE AREA**  
 NW, ONTARIO

DATE: 05/91  
 SCALE: 1"=2500'  
 PROJECT No. 10001



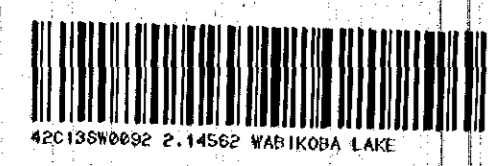


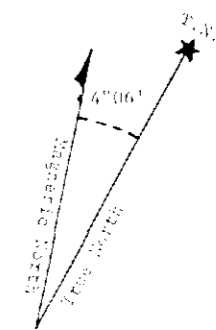
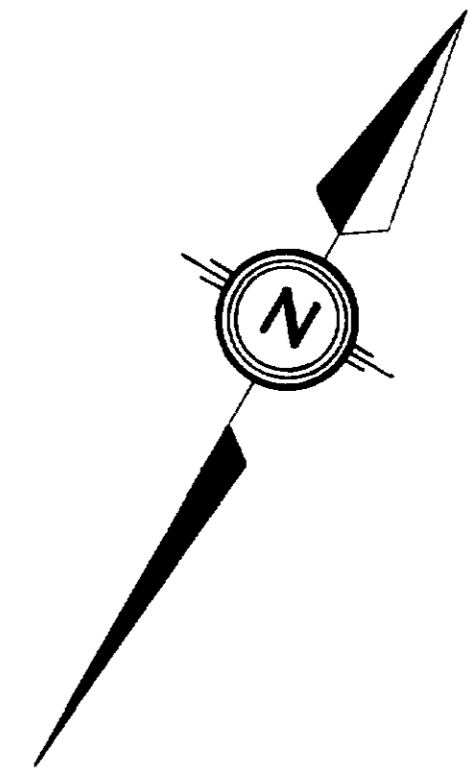
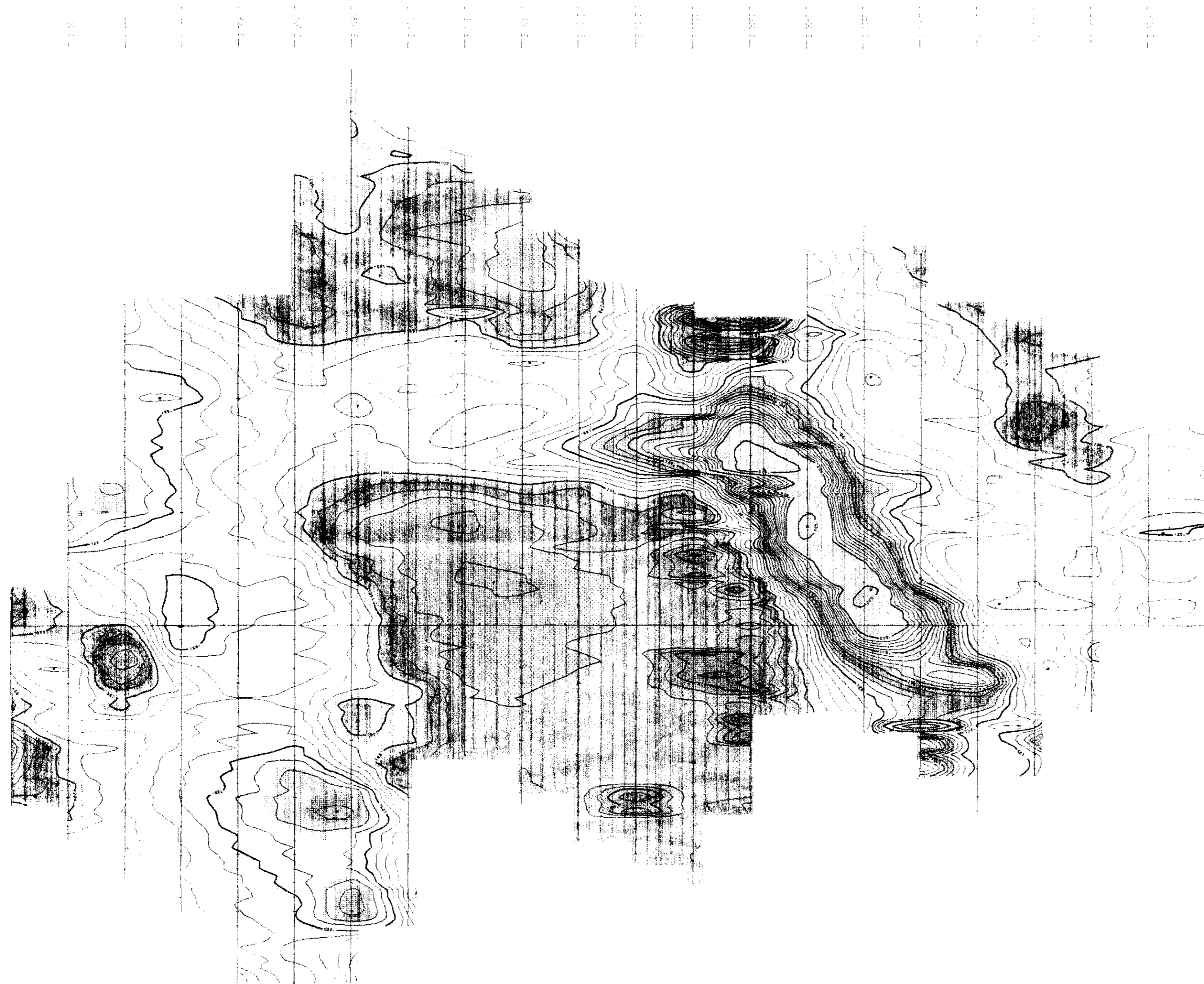
APPROXIMATE MEAN DECLINATION 1992  
Annual change increasing 1.5'



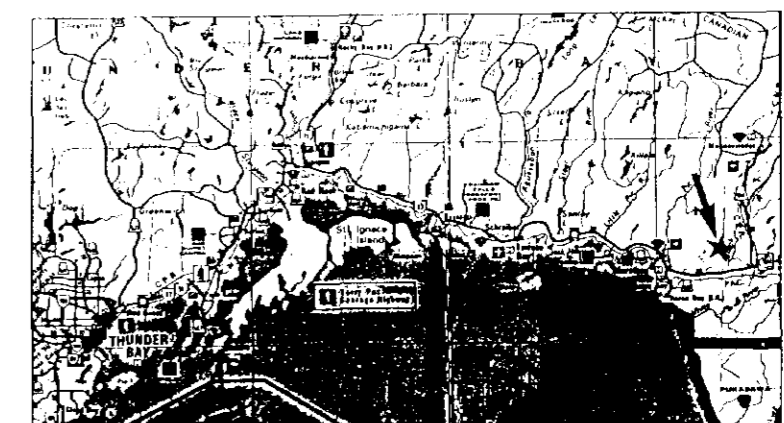
SURVEY: <b>MAGNETOMETER SURVEY</b>		COLORED TOTAL FIELD CONTOURS	
FOR: <b>DAVE SAUNDERS</b>			
BY: <b>GEOLOGIC INC.</b>			
DESIGNED BY: P. SIMONEAU 05/91	INTERPRETED BY: P. SIMONEAU 05/91	<b>IHNATKO-KUSINS PROPERTY</b> <b>WABIKOBA LAKE AREA</b> <b>NW ONTARIO</b>	
DRAWN BY: P. SIMONEAU 05/91	APPROVED BY:		
REVIEWED BY:	DATE: 05/91	ECHD: 89°28'W	N19-42C/19SW
PLAN No: <b>P</b>	UTM	Scale: 1/6000	
PROJECT No:	8041		


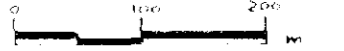
4862

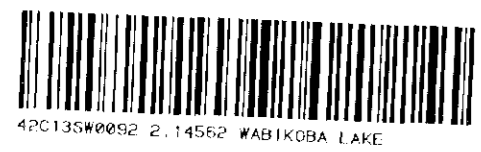


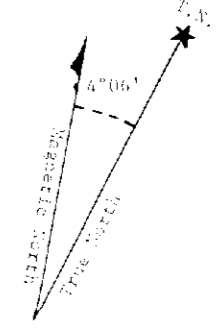
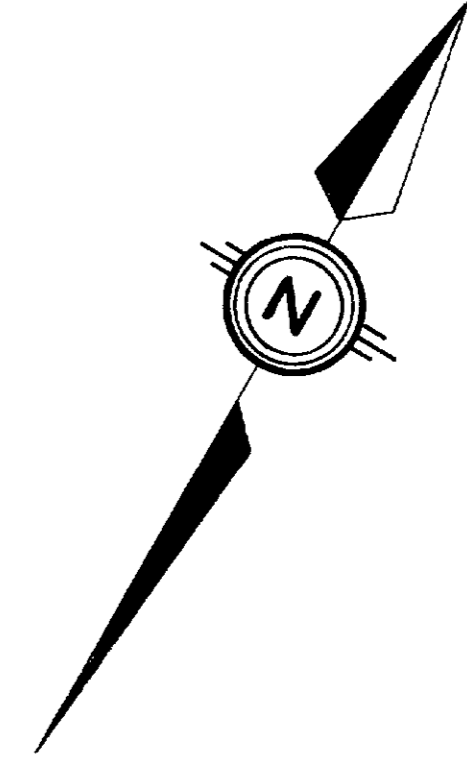
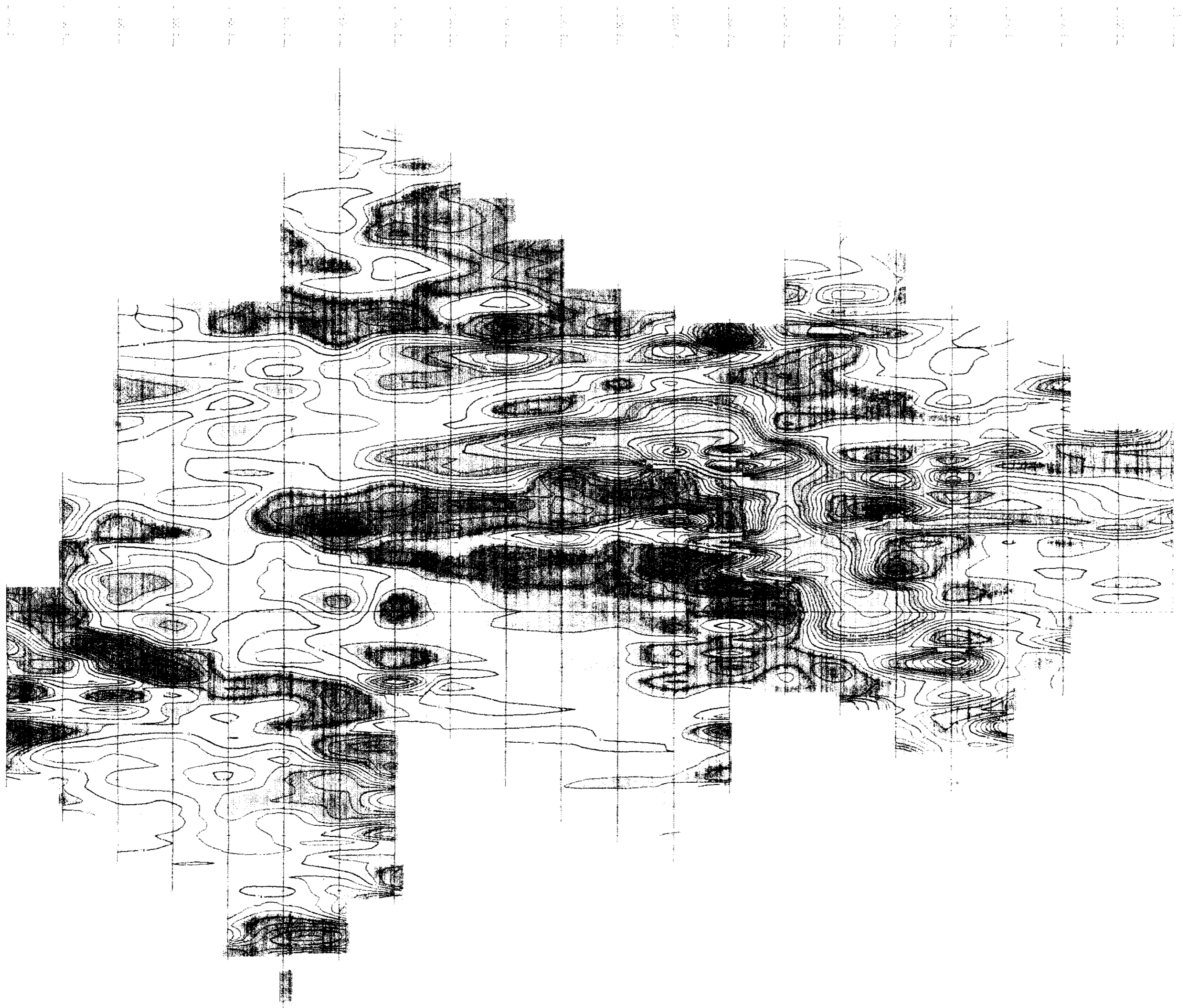


APPROXIMATE MEAN DECLINATION 1992  
annual average decreasing 1.1'

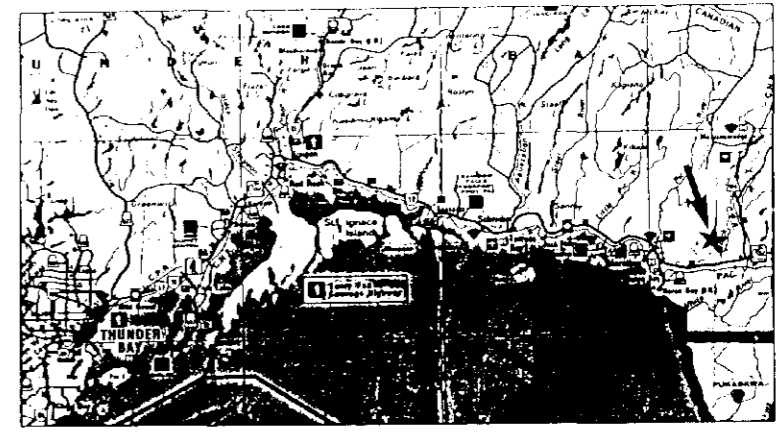


SURVEY		VLF SURVEY	
COLORED CORRECTED TOTAL FIELD CONTOURS		CUTLER MAINE USA, NAA FR. 24.0KHz	
FOR:		DAVE SAUNDERS	
BY:		 <small>ENGINEERS CONSULTANTS &amp; DEVELOPERS</small>	
EXECUTED BY:	P. SIMONEAU	05/91	IHNATKO - KUSINS PROPERTY WABIKOBA LAKE AREA N.W. ONTARIO
INTERPRETED BY:	P. SIMONEAU	05/91	
DRAWN BY:	P. SIMONEAU	05/91	
APPROVED BY:			
REVISOR:			
PLATE NO.	9	OF	
PROJECT NO.			
		SCALE: 1" = 400' 	



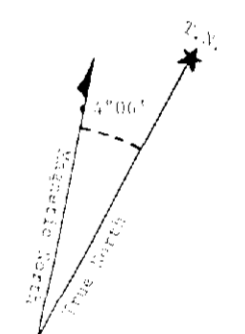
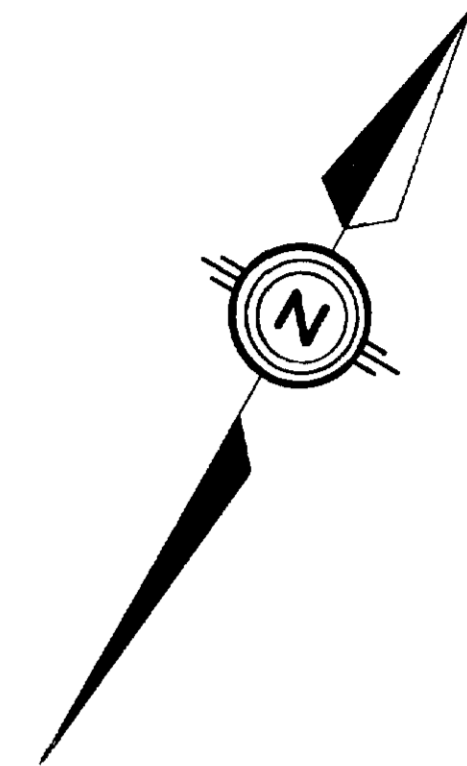
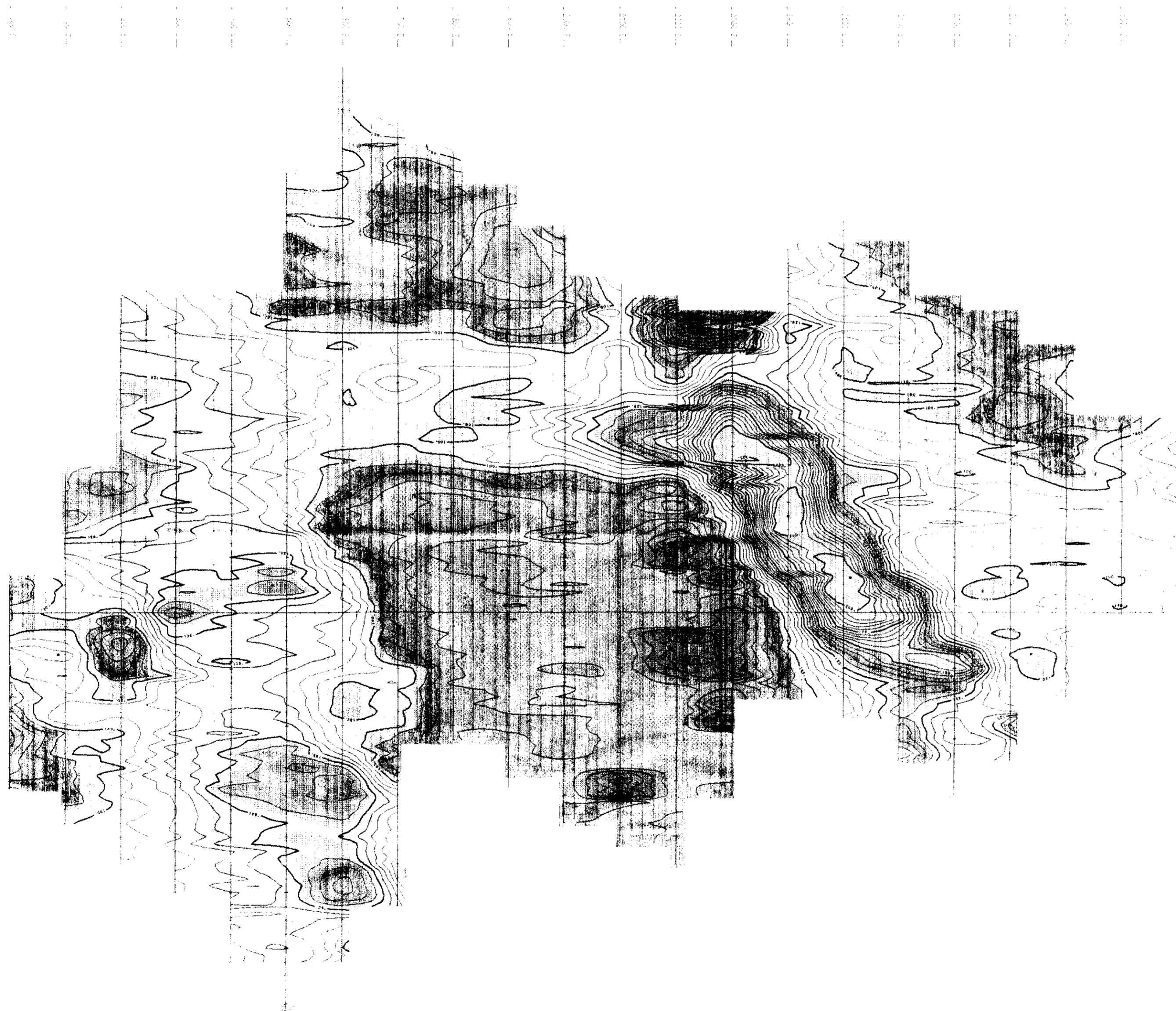


APPROXIMATE MEAN DECLINATION 1997  
Annual change increasing 1.5'

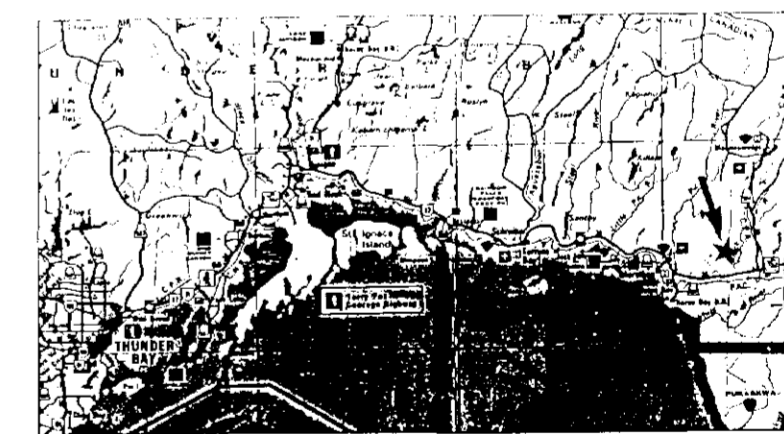


SURVEY		VLF SURVEY	
		COLORED FRAZER FILTER CONTOURS	
		CUTLER MAINE USA, NAA FR:24.0KHz	
FOR:		DAVE SAUNDERS	
BY:		GEOLOGIC INC. EXPERTS CONSULTANTS BY PERMISSION	
EXECUTED BY:	P. SIMONEAU 05/91	IHNATKO - KUSINS PROPERTY WABIKOBA LAKE AREA N.W. ONTARIO	
INTERPRETED BY:	P. SIMONEAU 05/91		
DRAWN BY:	P. SIMONEAU 05/91		
APPROVED BY:		LAT: 48°47' N LONG: 85°58' W UTM: 18U 91C/133W	
REVISION BY:		SCALE: 1:6000	
PLAN No:	10	0 100 200	
PROJECT No:	1046		



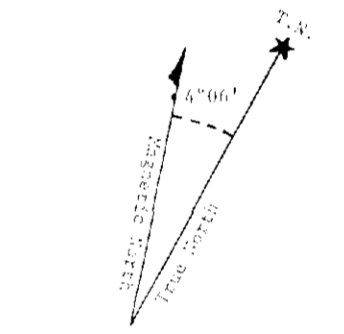
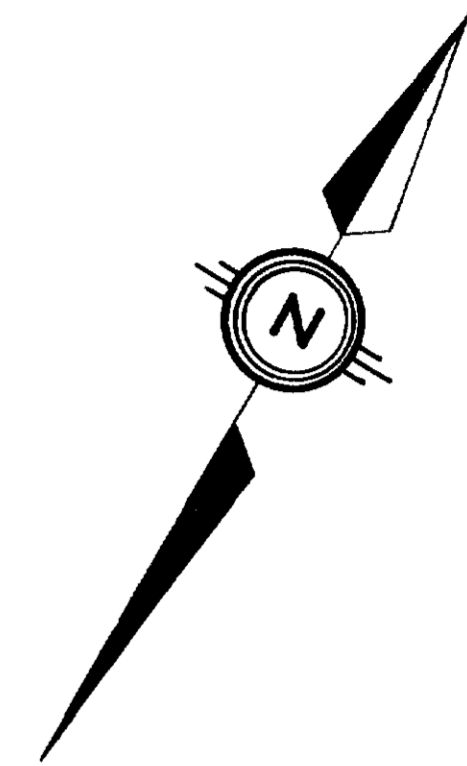
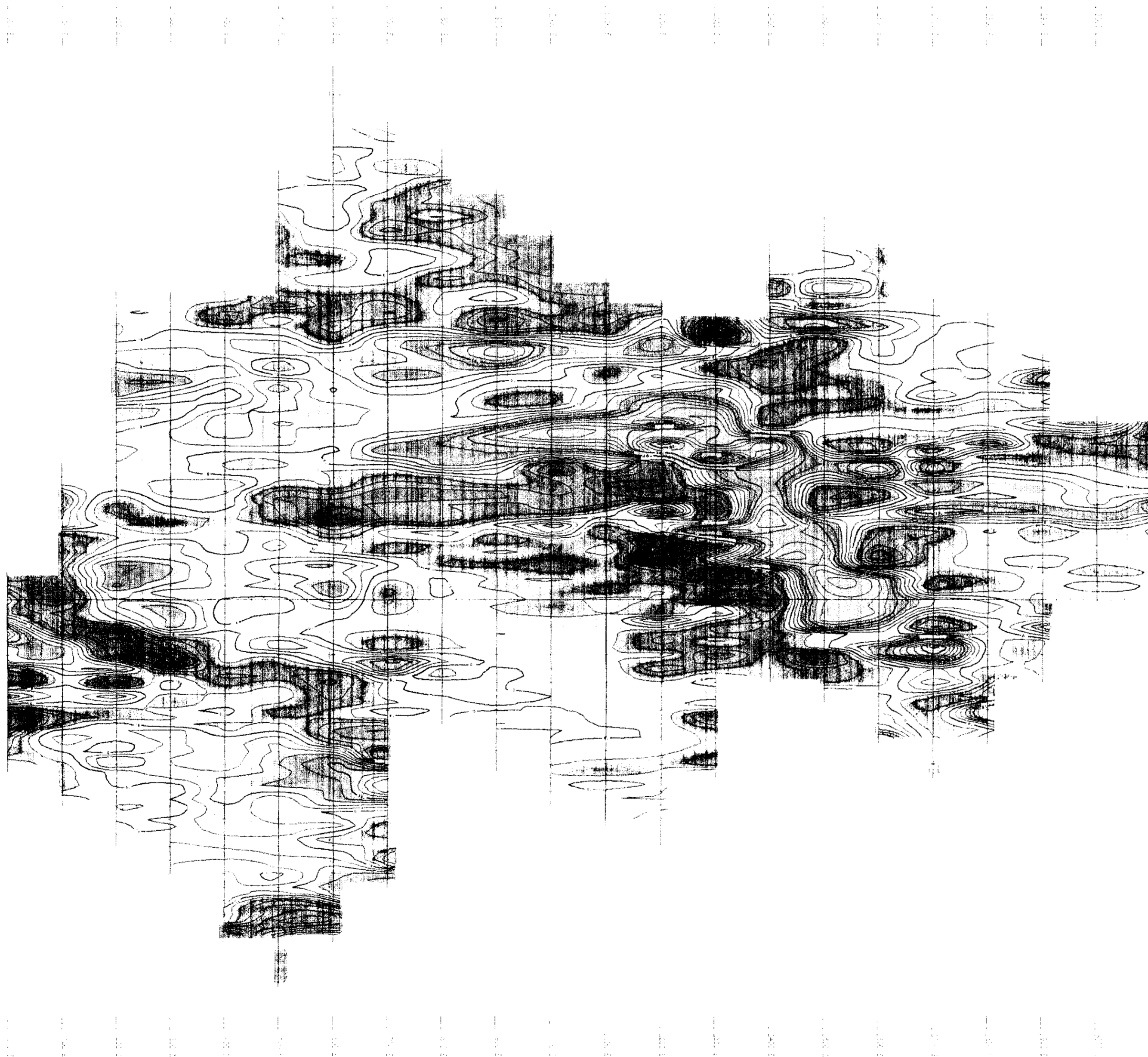


APPROXIMATE MEAN DECLINATION 1997  
Annual change increasing 1.5'

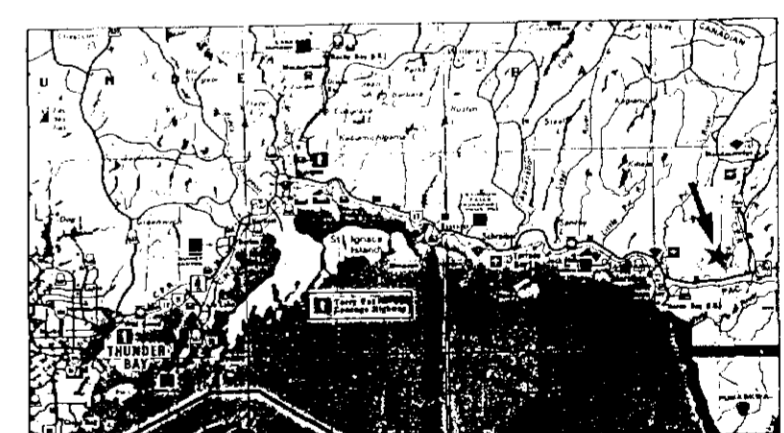



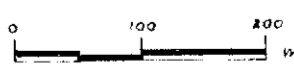
SURVEY		VLF SURVEY	
COLORED CORRECTED TOTAL FIELD CONTOURS		JIM CREEK WASHINGTON USA, NLK FR:248KH <sub>z</sub>	
FOR		DAVE SAUNDERS	
BY		GEOLOG INC.	
EXECUTED BY		P. SIMONEAU 05/91	
INTERPRETED BY		P. SIMONEAU 05/91	
DRAWN BY		P. SIMONEAU 05/91	
APPROVED BY			
REVISED BY		LAT: 48° 47' N LONG: 89° 28' W NTS: 42 F 113 SW	
SCALE: 1:76000		SCALE: 1:76000	
PLAN No	11	0 10 200 m	
PROJECT No	1048		





APPROXIMATE MEAN DECLINATION 1992  
Annual change increasing 1.5'



SURVEY		VLF SURVEY	
		COLORED FRAZER FILTER CONTOURS	
		JIM CREEK WASHINGTON USA, NLK FR 24.8 KH <sub>z</sub>	
FOR		DAVE SAUNDERS	
BY			
EXECUTED BY		P. SIMONEAU 05/91	
INTERVIEWED BY		P. SIMONEAU 05/91	
DRAWN BY		P. SIMONEAU 05/91	
APPROVED BY			
		IHNATKO - KUSINS PROPERTY	
		WABIKOBA LAKE AREA	
		N.W. ONTARIO	
REVISIONS		LAT: 48°47'N    LONG: 85°18'W    N15 42°13.5W SCALE: 1/6000	
PLAN No.	12		
PROJECT No.	EQM		

