



42A16SE0029 2.5532 GALNA

010

GEOPHYSICAL REPORT  
ON  
MAGNETIC AND ELECTROMAGNETIC SURVEYS  
CONDUCTED ON MINING CLAIMS:

L610866 - L610868

L610875 - L610884

L610889 - L610892

L610897 - L610928

Located in Galna Township  
in the Mining Division of Larder Lake, Ontario

by:  
P.A. Diorio  
May 6, 1983

**RECEIVED**  
MAY 12 1983  
MINING LANDS SECTION



42A16SE0029 2.5532 GALNA

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INTRODUCTION

This report describes magnetic and electromagnetic surveys which were completed by Utah Mines Ltd. personnel on mining claims located in Galna Township in the mining district of Larder Lake, Ontario. The area in question consists of a large block of contiguous claims which are referred to here as the Jim's Lake Property, after the body of water of the same name, centrally located within this area. The surveys referred to in this report were conducted between February 25th, 1983 and May 6, 1983 and cover a grid referred to as the Jim's Lake North-East Extension.

MINING CLAIMS COVERED BY SURVEY

The Jim's Lake Property held by Utah Mines Ltd. consists of 48 mining claims as follows:

L610866 - L610868

L610875 - L610884

L610889 - L610892

L610897 - L610928

LOCATION AND ACCESS

The claims of the Jim's Lake Property lie approximately 34 miles E.S.E. of Cochrane, roughly in the centre of Galna Township. The property may be reached using 2 wheel drive vehicle from the main Cochrane- La Reine road. A logging road which leads south from the

Cochrane- La Reine road starting  $\frac{1}{4}$  mile west of the Low Bush river, leads directly to the property. The Jim's Lake North-East grid Extension may be reached by a logging road which passes south of Trail lake.

#### GEOLOGY - TOPOGRAPHY - AND VEGETATION

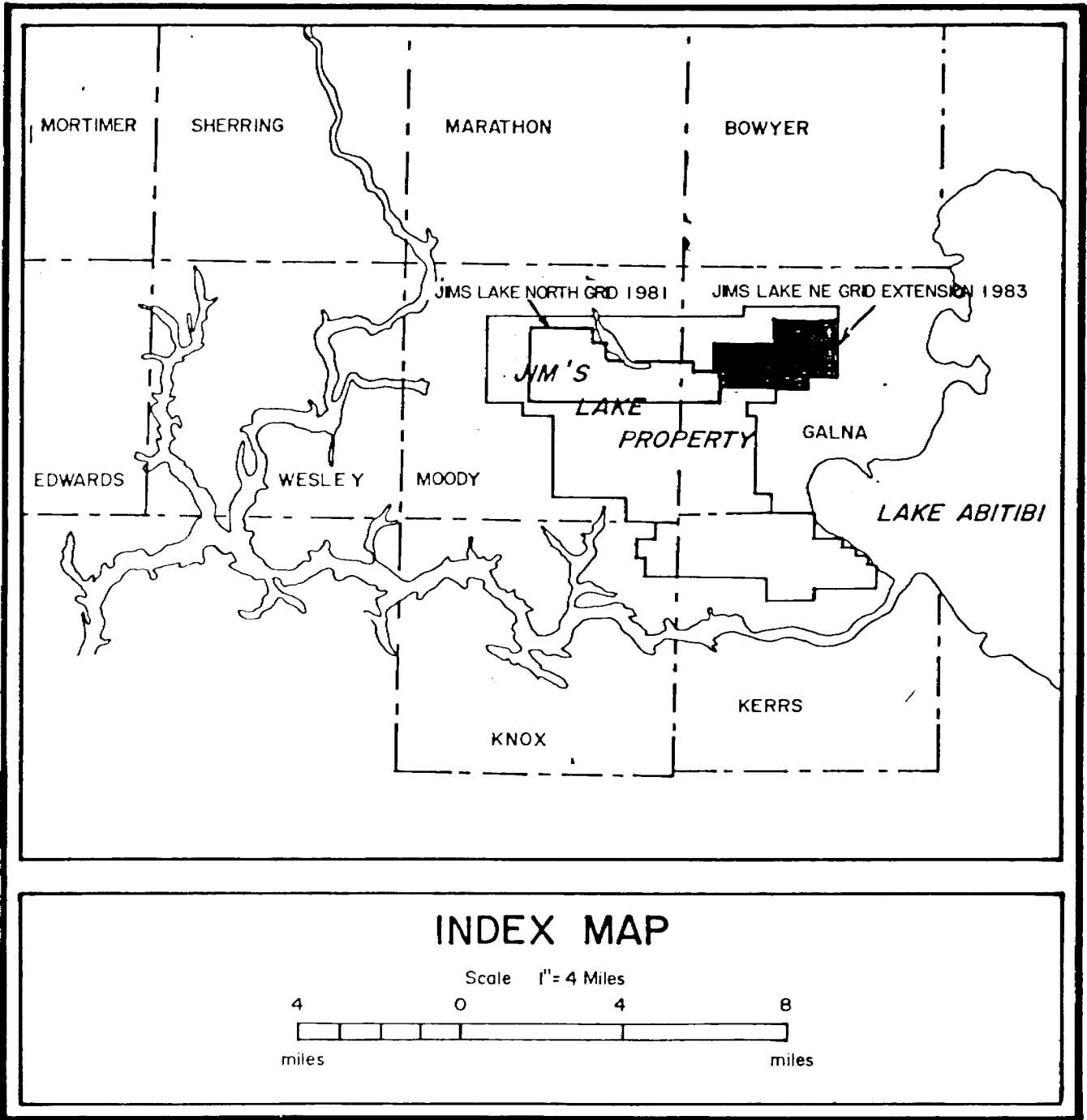
All claims of the Jim's Lake NE Extension are covered by glacial drift, and no outcrop has been located. Ontario Department of Mines, Map 2205, Timmins - Kirkland Lake Geology Compilation Series, covers Galna township. The Jim's Lake NE Extension is shown here to be underlain mainly by mafic flows and pyroclastic rocks with ultramafic rocks in the south and metasediments in the north. This information is indicated as to have been derived from geophysical interpretation.

There is very little topographic relief throughout the area. Vegetation consists mainly of black spruce and poplar.

#### LINECUTTING - SURVEY GRIDS

Prior to commencement of the geophysical surveys, cut line grids were established to cover all the mining claims. Linecutting was carried out by Exploration Services Limited, Noranda Quebec, under contract to Utah Mines Ltd.

As suggested by the name of this grid, it is the eastern extension of the Jim's Lake North grid which was discussed in the previously filed report of assessment (see Figure 1). The baseline and line



(Fig. 1) LOCATION OF SURVEY GRIDS

numbers are contiguous with the original grid. The grid was laid out as follows: A baseline, running east-west for 16,400 feet, was established centrally on the area, shown on the accompanying geophysical maps. Tie lines at the northern and southern extremes of the proposed survey lines were then established. North-south running traverse lines were surveyed and cut at 400' intervals. Conventional chaining techniques were used to establish stations at 100' intervals along each survey line with station ON located on the baseline. At each station wooden pickets were established, which were clearly marked with their respective grid designations to provide adequate station control for the planned geophysical surveys.

#### METHODS OF GEOPHYSICAL SURVEYS

##### (a) Magnetic Survey

-----

The magnetic survey was carried out using a Barringer GM 122 hand held Proton precession magnetometer.

Magnetometers of this type make use of the phenomena called Nuclear Magnetic Resonance. The phenomena is observable when the nuclei of certain materials are first aligned to some direction by an intense magnetic field and then allowed to precess about a "weak" magnetic field. In the case of this survey the "weak" field is the earth's magnetic field. The intense magnetic field is produced by a D.C. current through a coil surrounding

a proton rich fluid (Kerosene). When the current is switched off, the protons precess about the earth's field with a frequency directly proportional to that field. The proportionality appears to be a fundamental property of the nuclei and is not influenced by temperature or chemical variations. The frequency is measured by observing the current induced in a coil surrounding the fluid. A magnetometer based on this principle is effectively free from drift. The Barringer magnetometer used for this survey employs a sensor mounted on a staff which is held at arm's length from the operator, thereby reducing possible magnetic or electromagnetic affects introduced by the operator. The output is in the form of a 5 digit display yielding the total field measurement in gammas (nanoteslas). The resolution and accuracy of this unit is  $\pm 1$  gamma.

Magnetic readings must be corrected for the time varying component of the geomagnetic field. This was done by correcting all readings with respect to a base station located on the baseline at L168E. Using this point as a reference, additional base stations were established along the baseline at each traverse line. All magnetometer readings were made at 100' intervals along the traverse lines which were surveyed in loops beginning and ending at a base station. These loops were closed within 1.5 hours. The traverse line data was corrected to the

previously established base station values by assuming linear drift during the course of the traverse loop. A total of 2,706 readings were recorded and corrected in this manner. The corrected magnetic values were plotted in plan format at a scale of 1" = 400' and contoured with 250 gamma contour intervals



(b) Electromagnetic Survey

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The electromagnetic survey was carried out by Utah Mines Ltd.

personnel using an Apex Max-Min II EM system. The Max-Min II EM unit consists of a transmitter coil and console which generates an alternating primary field at one of four operating frequencies (222,444,888 or 1777 Hz). The choice of frequencies is made primarily on the type and depth of overburden and the type, size and depth of target being sought. In general a lower frequency will result in less geologic noise, have increased depth penetration, but at the same time will reduce sensitivity to conductors of interest.

The transmitter coil of the Apex Max-Min unit is connected to the receiving coil and console by a reference cable of suitable lengths. The choice of cable length lay primarily on the basis of depth to which EM penetration is desired for exploration. While an increased cable length gives greater depth of exploration, it also reduces the resolution of the system.

The receiving console, once tuned and nulled for local

ground conditions gives an automatic readout of the real and imaginary components of the secondary field as a percentage of the primary field. With no conductor present, no secondary field is produced and only the primary field is present at the receiver. Under these conditions, 0 in-phase and 0 out-of-phase are recorded.

In the presence of a conductor, a secondary field is produced. Negative, real and quadrature readings are recorded immediately over the conductor. As the leading coil approaches a conductor, positive readings are observed (positive shoulders). The coils have moved to a point where the conductor lies somewhere between the transmitter and receiver, negative values are observed, the maximum lying when the two coils straddle the conductor. As both coils move off the opposite end of the conductor, a second positive shoulder is observed. The readings are plotted as percentages of the primary field at the mid-point between the transmitter and receiver coils. The values are then profiled to outline anomalous regions.

The depth of penetration of this system is a function of the coil separation and frequency employed, but is generally regarded as being one half of the distance between transmitting and receiving coils. The nominal sensitivity of the instrument is about .2% of the primary

field.

This survey was conducted using a 600' coil separation with readings taken at frequencies of 444 and 1777 Hz. The values of real and quadrature readings for each frequency at 2438 stations are plotted on the accompanying maps of each grid.

#### INTERPRETATION

(a) Magnetic Survey

-----

Results of the magnetometer survey are shown on the accompanying contoured magnetic maps. The maps are drawn at a scale of 1" = 400' and the magnetic values are contoured at an interval of 250 gammas.

Variation of the magnetic field within this area is up to 7000 gammas. The magnetic data are dominated by the effects of three zones of highly magnetic rocks which trend from the eastern edge of the grid in an east-northeasterly direction. From the intensity of the response, these are inferred to be zones of ultramafic rocks. The boundary of these units may be assumed to lie close to the zone of maximum gradient as indicated by the contours of the total magnetic field. By comparison most

of the rest of the grid shows little magnetic expression. Several north-south trending features, probably diabase dykes, are observable. The most obvious of these follow lines 260E and 288E, but are poorly resolved due to the direction of the survey lines. Small discrete mafic units may be observed on L304E at station 51N and L316 at station 60N. The first of these may be inferred to be a bedrock high from the EM data.

(b) Electromagnetic Survey

-----

The Max-Min 11 data are plotted as profiles on the accompanying plan maps of the grid, drawn at a scale of 1" = 400'.

Numerous conductors were located with the EM survey. These are indicated with a heavy line and designated with an upper case letter on the profile maps showing the data collected at 1777 Hz. Table 1 shows the calculated depth to top and conductivity thickness for each conductor at the specified locations. The calculation of these parameters is based on a thin vertical sheet model.

TABLE 1

Calculated Parameters of Selected EM Conductors

Designation	Location	Frequency (Hz)	Depth (feet)	Conductivity Thickness (mhos)	Comments
A	L188E;27N	444	192	87	Drilled by MRR*  (MR23) (MR23C)
B	L200E;3N	1777	210	6	Drilled by MRR (MR15B)
C	L244E;35	444	192	50	
D	L268E;15+50N	444	132	72	Drilled by MRR  (MR8A,MR18A)
E	L256E;29+50N	1777	162	4.3	Drilled by MRR (MR10A)
F	L268E;38+50N	444	186	19	
G	L248E;57N	444	270	57	
H	L256E;51N	444	348	130(?)	Signal weak, Determination Unreliable
I	L288E;71N	444	228	101	
I	L312;71N	444	132	57	
J	L312;61+50N	444	-	-	Probably not a Bedrock Conductor

\*MRR - Mistango River Resources drilling in 1962-1965

CONCLUSIONS & RECOMMENDATIONS

As indicated on Table 1, a number of the conductors were previously tested by Mistango River Resources in the early 1960's. Of the remaining conductors I, G and F appear to be the most favourable drill targets. G and I may well be part of an identical horizon with the gap at 1264E almost coincident with the aforementioned diabase dyke. Conductors C and H are relatively short strike length and may not present sufficient volume potential to warrant drill testing. Anomaly J is also short strike length, however, it appears that it may be an artifact of current channeling around a bedrock high, rather than a valid bedrock conductor.

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Peter A. Diorio B.Sc

Geophysicist

PAD/ca



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1983 10 03

2.5532

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:

RE: Geophysical (Electromagnetic and Magnetometer)  
Survey on mining claims L 610866 et al in the  
Township of Galna

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The Geophysical (Electromagnetic and Magnetometer) Survey assessment work credits as listed with my Notice of Intent dated August 19, 1983, have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours very truly,

E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone:(416)965-1380

D. Kinvig:mc

Encl.

cc: Utah Mines Ltd  
4 King Street West  
Suite 1406  
Toronto, Ontario  
M5H 1B6

cc: Resident Geologist  
Kirkland Lake, Ontario

Recorded Holder UTAH MINES LTD  
Township or Area GALNA TOWNSHIP

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical <span style="float: right;">20</span> days Electromagnetic _____ days Magnetometer _____ days Radiometric _____ days Induced polarization _____ days Other _____ days Section 77 (19) See "Mining Claims Assessed" column Geological _____ days Geochemical _____ days Man days <input type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Credits have been reduced because of partial coverage of claims. <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	L 610866 610875 to 83 inclusive 610890-91 610904 to 23 inclusive 610926 to 28 inclusive

Special credits under section 77 (16) for the following mining claims

10 DAYS ELECTROMAGNETIC

L 610867-68  
610884  
610924-25

No credits have been allowed for the following mining claims

not sufficiently covered by the survey  Insufficient technical data filed

L 610889  
610892  
610897 to 903 inclusive





Technical Assessment  
Work Credits

File  
2.5532

Date  
1983 08 19

Mining Recorder's Report of  
Work No. 91

Recorded Holder  
UTAH MINES LTD

Township or Area  
GALNA TOWNSHIP

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
<p>Geophysical</p> <p>Electromagnetic _____ days</p> <p>Magnetometer _____ 40 days</p> <p>Radiometric _____ days</p> <p>Induced polarization _____ days</p> <p>Other _____ days</p> <p>Section 77 (19) See "Mining Claims Assessed" column</p> <p>Geological _____ days</p> <p>Geochemical _____ days</p> <p>Man days <input type="checkbox"/> Airborne <input type="checkbox"/></p> <p>Special provision <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/> Credits have been reduced because of partial coverage of claims.</p> <p><input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.</p>	<p>L 610866 to 68 inclusive</p> <p>610875 to 83 inclusive</p> <p>610890-91</p> <p>610904 to 28 inclusive</p>

Special credits under section 77 (16) for the following mining claims

20 DAYS MAGNETOMETER

L 610884

No credits have been allowed for the following mining claims

- not sufficiently covered by the survey       Insufficient technical data filed

L 610889

610892

610897 to 903 inclusive

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 77(19)—60;



Ministry of  
Natural  
Resources

*Sept. 12/83*

Your file:

1983 08 19

Our file: 2.5532

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:

Enclosed are two copies of a Notice of Intent with statements listing a reduced rate of assessment work credits to be allowed for a technical survey. Please forward one copy to the recorded holder of the claims and retain the other. In approximately fifteen days from the above date, a final letter of approval of these credits will be sent to you. On receipt of the approval letter, you may then change the work entries on the claim record sheets.

For further information, if required, please contact Mr. F.W. Matthews at 416/965-1380.

Yours very truly,

E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: 416/965-1316

*file*  
D. Kinvig:mc

Encls:

cc: Utah Mines Ltd  
4 King Street West  
Suite 1406  
Toronto, Ontario  
M5H 1B6

cc: Mr. G.H. Ferguson  
Mining & Lands Commissioner  
Toronto, Ontario



Ministry of  
Natural  
Resources

Notice of Intent  
for Technical Reports

1983 08 19

2.5532

An examination of your survey report indicates that the requirements of The Ontario Mining Act have not been fully met to warrant maximum assessment work credits. This notice is merely a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 15 days from the above date, the mining recorder will be authorized to change the entries on his record sheets to agree with the enclosed statement. Please note that until such time as the recorder actually changes the entry on the record sheet, the status of the claim remains unchanged.

If you are of the opinion that these changes by the mining recorder will jeopardize your claims, you may during the next fifteen days apply to the Mining and Lands Commissioner for an extension of time. Abstracts should be sent with your application.

If the reduced rate of credits does not jeopardize the status of the claims then you need not seek relief from the Mining and Lands Commissioner and this Notice of Intent may be disregarded.

If your survey was submitted and assessed under the "Special Provision-Performance and Coverage" method and you are of the opinion that a re-appraisal under the "Man-days" method would result in the approval of a greater number of days credit per claim, you may, within the said fifteen day period, submit assessment work breakdowns listing the employees names, addresses and the dates and hours they worked. The new work breakdowns should be submitted direct to the Lands Management Branch, Toronto. The report will be re-assessed and a new statement of credits based on actual days worked will be issued.



Report of Work  
(Geophysical, Geological,  
Geochemical and Expenditures)

# Landsmanagement

Galna Twp.

Instructions: - Please type or print.  
- If number of mining claims traversed exceeds space on this form, attach a list.  
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.  
- Do not use shaded areas below.

#91

File # L610866

The Mining Act

Type of Survey(s): Magnetic & Electromagnetic		Township or Area Galna	
Claim Holder(s) Utah Mines Ltd.		Prospector's Licence No. T 793	
Address 4 King Street West, Suite 1406 Toronto, Ontario M5H 1B6			
Survey Company Utah Mines Ltd.		Date of Survey (from & to) 01 Day 03 Mo. 83 Yr. 25 Day 03 Mo. 83 Yr.	Total Miles of line Cut 50
Name and Address of Author (of Geo-Technical report) P. Diorio, Utah Mines Ltd. 4 King Street West, Suite 1406 Toronto, Ontario M5H 1B6			

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	20 18 64
	- Magnetometer	40
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Man Days	Geophysical	Days per Claim
Complete reverse side and enter total(s) here  LANDER LAKE MAR 29 1983 7 13 19 10 11 12 11 21 8	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits	Geophysical	Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
L	610 866		L	610 903	
	610 867			610 904	
	610 868			610 905	
	610 875			610 906	
	610 876			610 907	
	610 877			610 908	
	610 878			610 909	
	610 879			610 910	
	610 880			610 911	
	610 881			610 912	
	610 882			610 913	
	610 883			610 914	
	610 884			610 915	
	610 889			610 916	
	610 890			610 917	
	610 891			610 918	
	610 892			610 919	
	610 897			610 920	
	610 898			610 921	
	610 899			610 922	
	610 900			610 923	
	610 901			610 924	
	610 902			CONTINUED	

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. **49**

For Office Use Only		Mining
Total Days Cr. Recorded 2542.0	Date Recorded March 31, 1983	
<i>[Signature]</i>	Date Approved as Recorded	

Date 3/31/83 Recording Officer or Agent (Signature) *[Signature]*

Certification Verifying Report of Work

I hereby certify that I have a personal 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  
Peter Diorio, Utah Mines Ltd. 4 King Street West, Suite 1406 Toronto, Ontario M5H 1B6

Date Certified 3/31/83 Certified by (Signature) *[Signature]*

REPORT OF WORK

:

Mining Claim

<u>Prefix</u>	<u>Number</u>
L	610 925
L	610 926
L	610 927
L	610 928



Ontario

Ministry of  
Natural  
Resources

Geotechnical  
Report  
Approval

File  
2.5532

Mining Lands Comments

*July 5 88*

Large empty rectangular box for Mining Lands Comments.

To: Geophysics

*Mr. Roger Barlow*

Comments

Large empty rectangular box for comments under Geophysics.

Approved

Wish to see again with corrections

Date

*July 9/88*

Signature

To: Geology - Expenditures

Comments

Large empty rectangular box for comments under Geology - Expenditures.

Approved

Wish to see again with corrections

Date

Signature

To: Geochemistry

Comments

Large empty rectangular box for comments under Geochemistry, containing the handwritten text *L.D.*

Approved

Wish to see again with corrections

Date

Signature

To: Mining Lands Section, Room 6462, Whitney Block.

(Tel: 5-1380)

1983 06 01

Mr. George J. Koleszar  
Mining Recorder  
Ministry of Natural Resources  
4 Government Road East  
P.O. Box 184  
Kirkland Lake, Ontario  
P2N 1A2

Dear Sir:

We have received reports and maps for a magnetic survey  
(Electromagnetic and Magnetometer) made under special provisions (credit for Performance and  
Coverage) on mining claims 61000 et al in the  
Township of Galna.

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

We do not have a copy of the report of work which is  
normally filed with you prior to the submission of this  
technical data. Please forward a copy as soon as possible.

Yours very truly,

E. F. Anderson  
Director  
Land Management Branch  
Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1K3

Phone: (416) 965-1380

A. Arrand

cc: Uah Mines Ltd.  
Suite 1406, 4 King Street West  
Toronto, Ontario  
M5H 1B6  
Attention: Mr. Peter DiStasio

# UTAH MINES LTD.

## MINERAL EXPLORATION

SUITE 1406, 4 KING STREET WEST, TORONTO, ONTARIO, CANADA M5H 1B6  
(416) 368-3884

May 9, 1983


Ministry of Natural Resources,  
Mining Lands Section,  
Room 6450,  
99 Wellesley Street, West,  
Whitney Block, Queen's Park  
Toronto, Ontario M7A

Attention: Mr. Arthur Barr

Dear Sir:

Please find enclosed duplicate, signed copies of Assessment Work Reports, Geophysical Plans and Technical Data Statements for each of two groups of claims, one in Marathon and Moody Townships, the other in Galna Township. These reports pertain to the claims listed on the attached Reports of Work filed with the Ministry of Natural Resources in March, 1983.

Yours truly,

  
P.A. Diorio  
Geophysicist  
Utah Mines Ltd.

PAD/ca

**RECEIVED**

MAY 12 1983

**MINING LANDS SECTION**





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) Magnetic and Electromagnetic

Township or Area Galna Township

Claim Holder(s) Utah Mines Ltd.

Survey Company Utah Mines Ltd.

Author of Report Peter Diorio

Address of Author 4 King St. W. No. 1406, Toronto

Covering Dates of Survey Feb. 25 to May 6, 1983  
(linecutting to office)

Total Miles of Line Cut 52

**MINING CLAIMS TRAVERSED**  
List numerically

SEE ATTACHED LIST  
(prefix) (number)

Vertical list area for mining claims with dotted lines for entries. Includes a 'RECEIVED' stamp dated MAY 14 1983 and 'MINING LANDS SECTION'. At the bottom, 'TOTAL CLAIMS' is listed as 49.

If space insufficient, attach list

<u>SPECIAL PROVISIONS</u> <u>CREDITS REQUESTED</u>	Geophysical	DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	-Electromagnetic	<u>40</u>
	-Magnetometer	<u>20</u>
ENTER 20 days for each additional survey using same grid.	-Radiometric	_____
	-Other	_____
	Geological	_____
	Geochemical	_____

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

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

DATE: May 9, 1983 SIGNATURE: \_\_\_\_\_  
Author of Report or Agent

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

Previous Surveys

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

**RECEIVED**

MAY 14 1983

MINING LANDS SECTION

TOTAL CLAIMS 49

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 2706 Number of Readings Mag 2706, EM 2438x
Station interval 100' Line spacing 400'
Profile scale 50 percent at 1777 Hz, 20 percent at 444 Hz
Contour interval 250 gammas

MAGNETIC

Instrument Barringer GM 122
Accuracy - Scale constant 1 gamma
Diurnal correction method Base station loops. Linear drift removed.
Base Station check-in interval (hours) 1.5 hours maximum
Base Station location and value L168E at Station 0N
Reading = 61060 gammas

ELECTROMAGNETIC

Instrument Apex Parametrics Ltd. Max Min II
Coil configuration Co planar horizontal loop
Coil separation 600'
Accuracy + .2 primary
Method: [ ] Fixed transmitter [ ] Shoot back [x] In line [ ] Parallel line
Frequency 444 Hz, 1777 Hz (specify V.L.F. station)
Parameters measured In Phase and Out-of-Phase as % of primary

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 \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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 \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

MINING CLAIMS TRAVERSED

GALNA TOWNSHIP

L	610866	L	610897	L	610914
	610867		610898		610915
	610868		610899		610916
L	610875		610900		610917
	610876		610901		610918
	610877		610902		610919
	610878		610903		610920
	610879		610904		610921
	610880		610905		610922
	610881		610906		610923
	610882		610907		610924
	610883		610908		610925
	610884		610909		610926
L	610889		610910		610927
	610890		610911		610928
	610891		610912		
	610892		610913		

2.5532

	Mag.	E.M.		Mag.	E.M.		Mag.	E.M.
L-610885	V	~1/2	610897			L-610914	V	V
67	V	1/2	98			15	V	V
68	V	1/2	99			16	V	V
610898	V	V	900			17	V	V
75	V	V	01			18	V	V
76	V	V	02			19	V	V
78	V	V	03			20	V	V
79	V	V	04	V	V	21	V	V
80	V	V	05	V	V	22	V	V
81	V	V	06	V	V	23	V	V
82	V	V	07	V	V	24	V	1/2
83	V	V	08	V	V	25	V	1/4
84	V	1/2	09	V	V	26	V	V
610901			10	V	V	27	V	V
80	V	V	11	V	V	610902	V	V
91	V	V	12	V	V			
610905			610913	V	V			

D.K.

THE TOWNSHIP OF

# GALNA

DISTRICT OF COCHRANE

LARDER LAKE MINING DIVISION

SCALE: 1 INCH = 40 CHAINS

## LEGEND

- PATENTED LAND (P)
- CROWN LAND SALE (C.S.)
- LEASES (L)
- LOCATED LAND (Loc.)
- LICENSE OF OCCUPATION (L.O.)
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAY
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES

## NOTES

400' Surface rights reservation around all lakes and rivers.

DATE OF ISSUE

AUG 15 1983

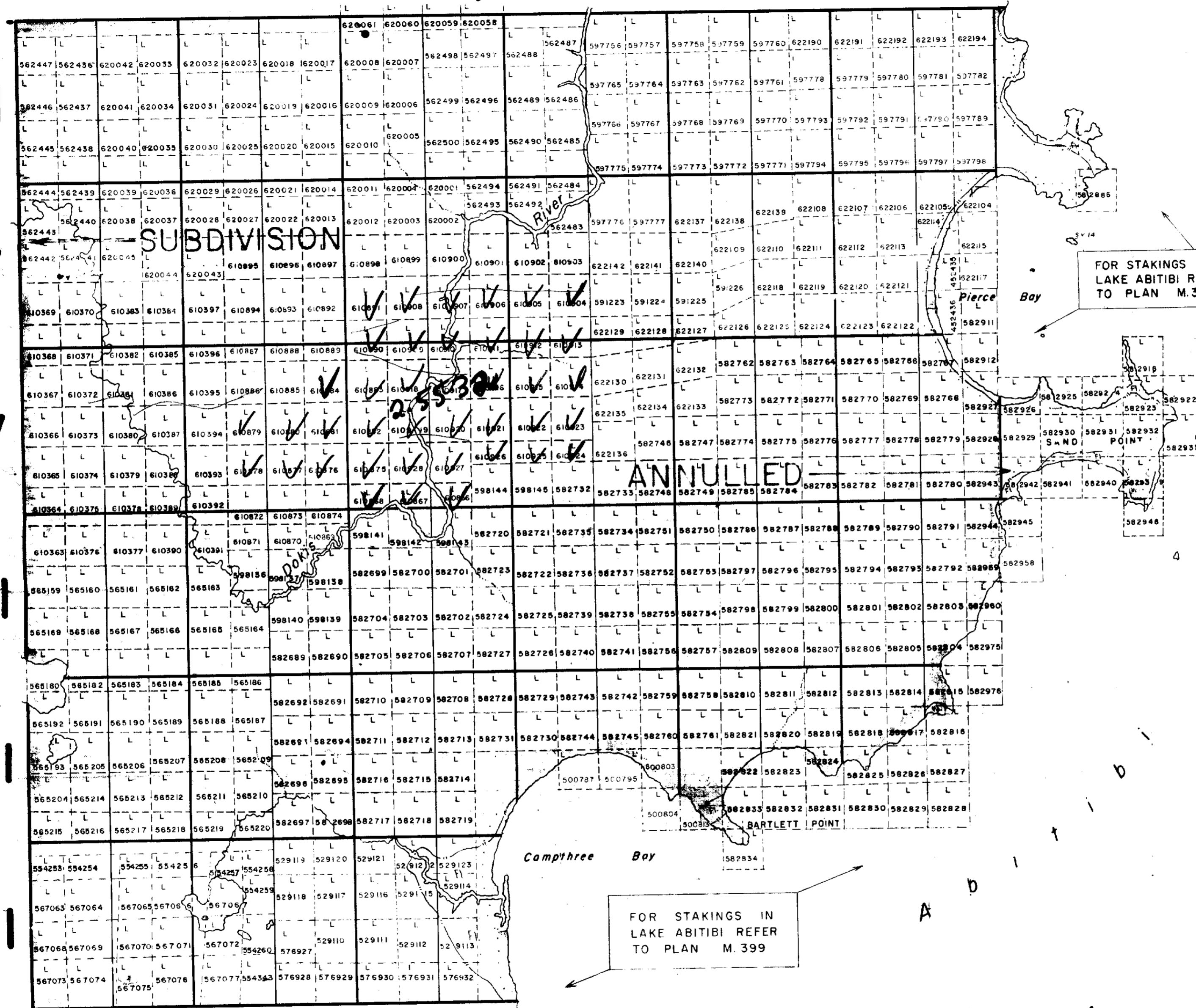
Ministry of Natural Resources  
TORONTO

PLAN NO. - M. 480

MINISTRY OF NATURAL RESOURCES  
SURVEYS AND MAPPING BRANCH

Bowyer Twp.

Kerrs Twp.



VI

V

IV

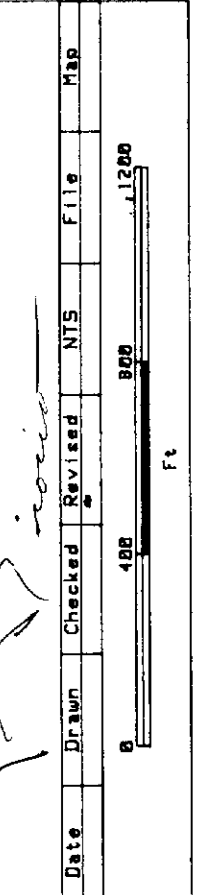
III

II

I

12 11 10 9 8 7 6 5 4 3 2 1 A



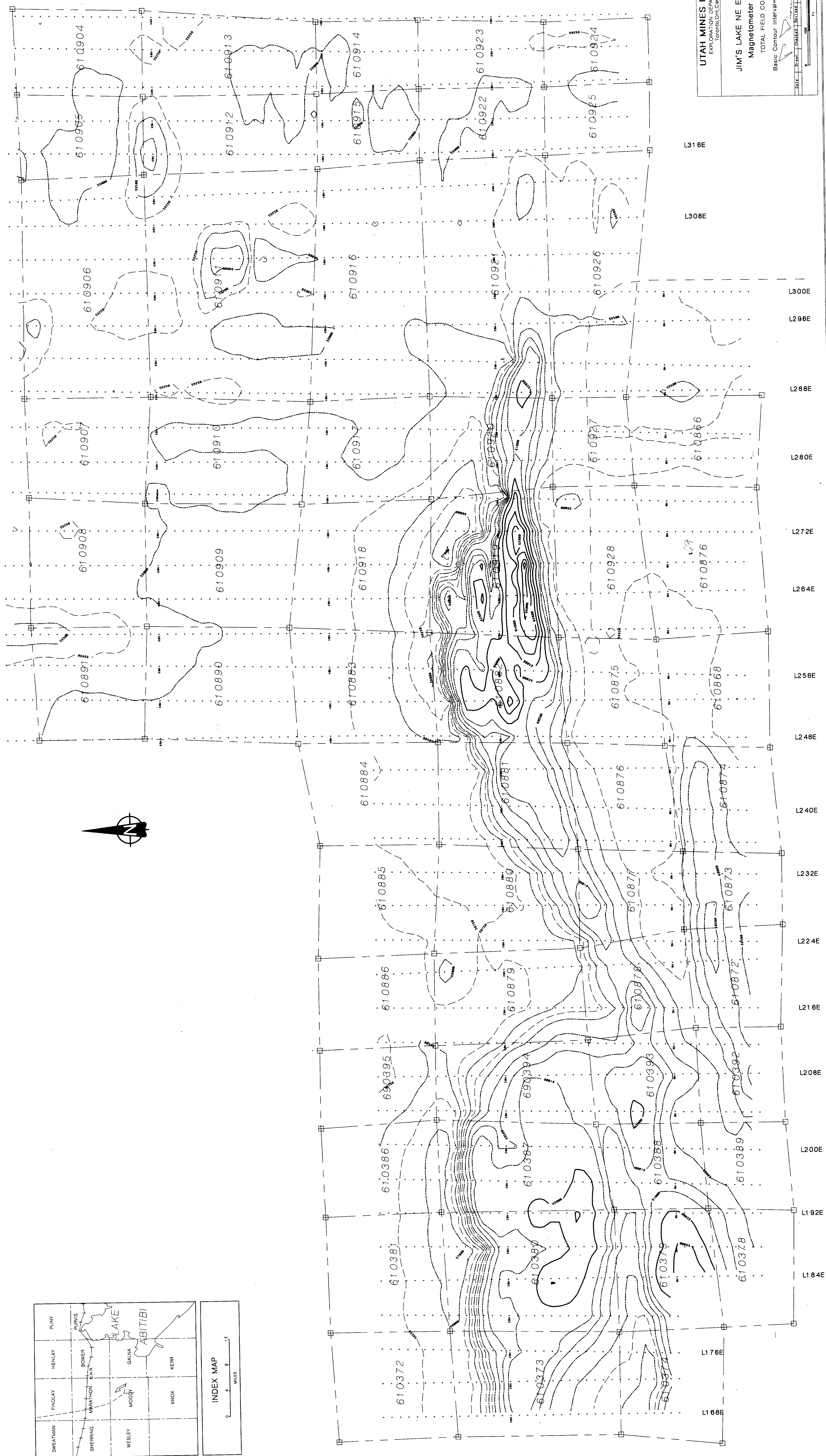
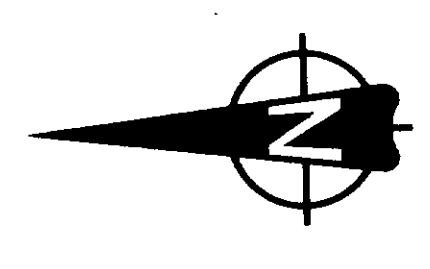
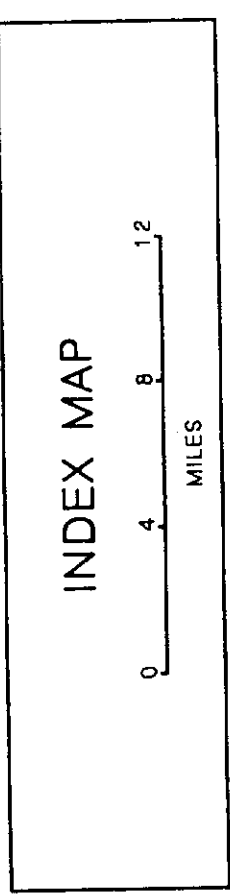
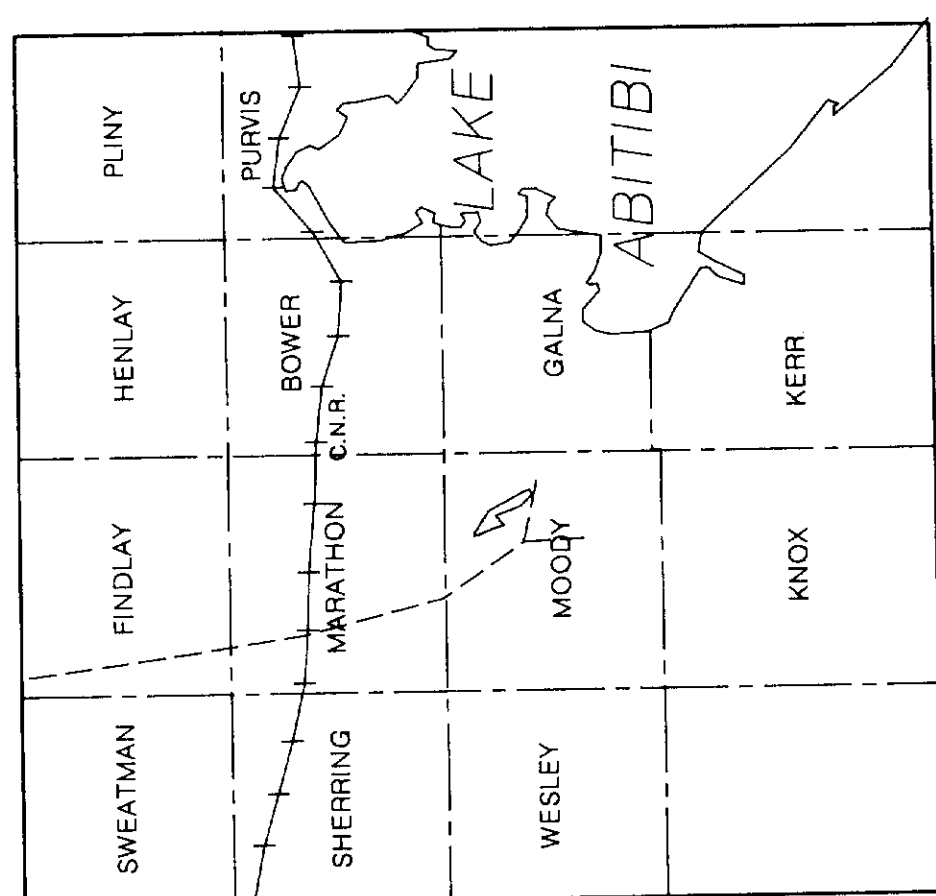


33845	33846	33847	33848	33849	33850	33851	33852	33853	33854	33855	33856	33857	33858	33859	33860	33861	33862	33863	33864	33865	33866	33867	33868	33869	33870	33871	33872	33873	33874	33875	33876	33877	33878	33879	33880	33881	33882	33883	33884	33885	33886	33887	33888	33889	33890	33891	33892	33893	33894	33895	33896	33897	33898	33899	33900	33901	33902	33903	33904	33905	33906	33907	33908	33909	33910	33911	33912	33913	33914	33915	33916	33917	33918	33919	33920	33921	33922	33923	33924	33925	33926	33927	33928	33929	33930	33931	33932	33933	33934	33935	33936	33937	33938	33939	33940	33941	33942	33943	33944	33945	33946	33947	33948	33949	33950	33951	33952	33953	33954	33955	33956	33957	33958	33959	33960	33961	33962	33963	33964	33965	33966	33967	33968	33969	33970	33971	33972	33973	33974	33975	33976	33977	33978	33979	33980	33981	33982	33983	33984	33985	33986	33987	33988	33989	33990	33991	33992	33993	33994	33995	33996	33997	33998	33999	34000
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L300E  
 L290E  
 L286E  
 L280E  
 L272E  
 L264E  
 L256E  
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 L240E  
 L232E  
 L224E  
 L216E  
 L208E  
 L200E  
 L192E  
 L184E





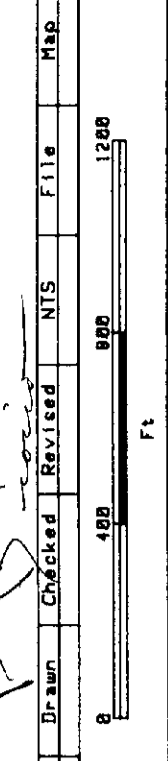


**UTAH MINES LIMITED**  
 EXPLORATION DEPARTMENT  
 Toronto, Ont., Canada  
**JIM'S LAKE NE EXTENSION**  
 Magnetometer Survey  
 TOTAL FIELD, CONTOURS  
 Basic Contour Interval=250 Gammas

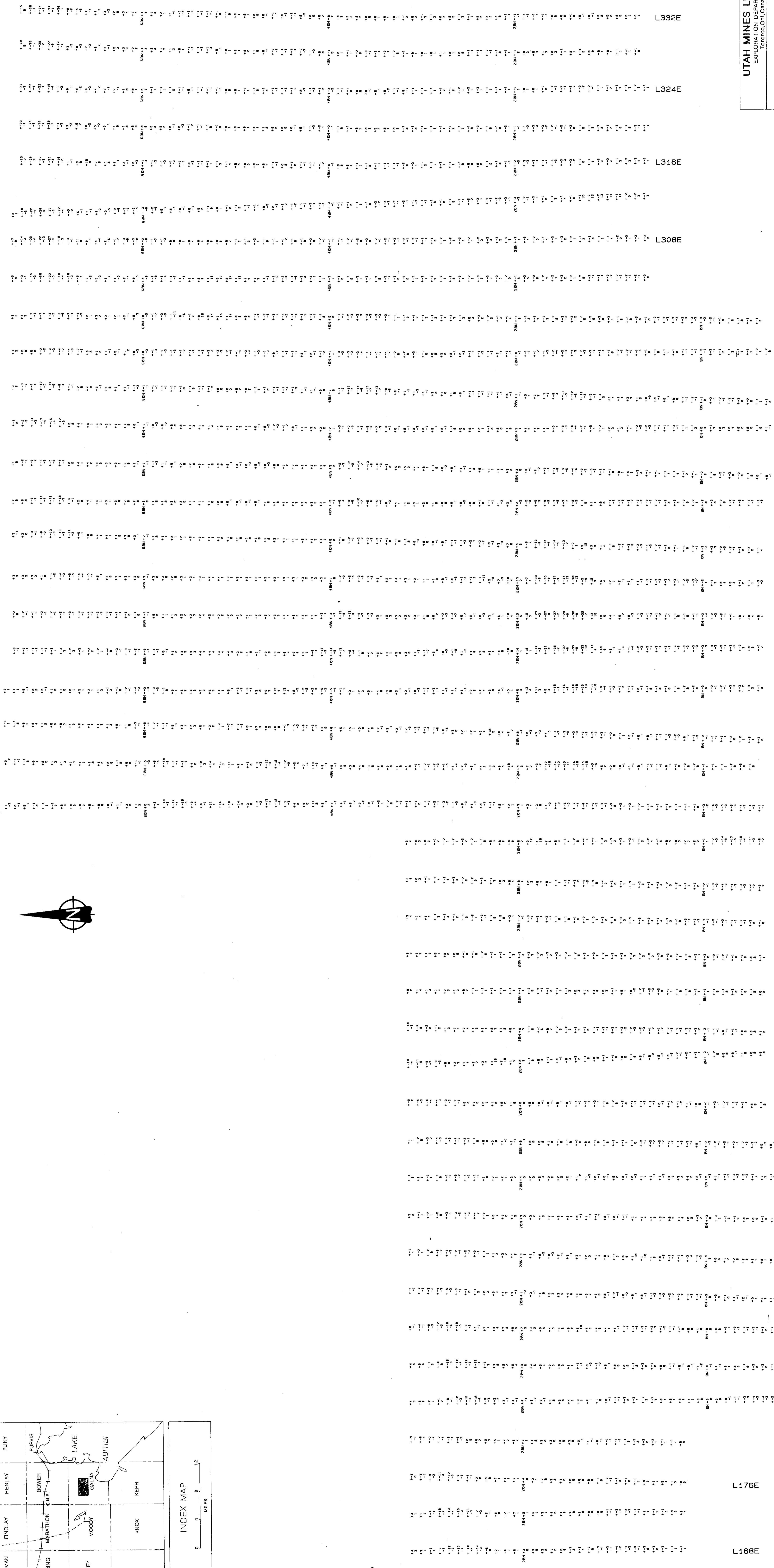
UTAH MINES LIMITED  
EXPLORATION DEPARTMENT  
Toronto, Ont., Canada

**JIM'S LAKE NE EXTENSION**  
Maxmin II Survey

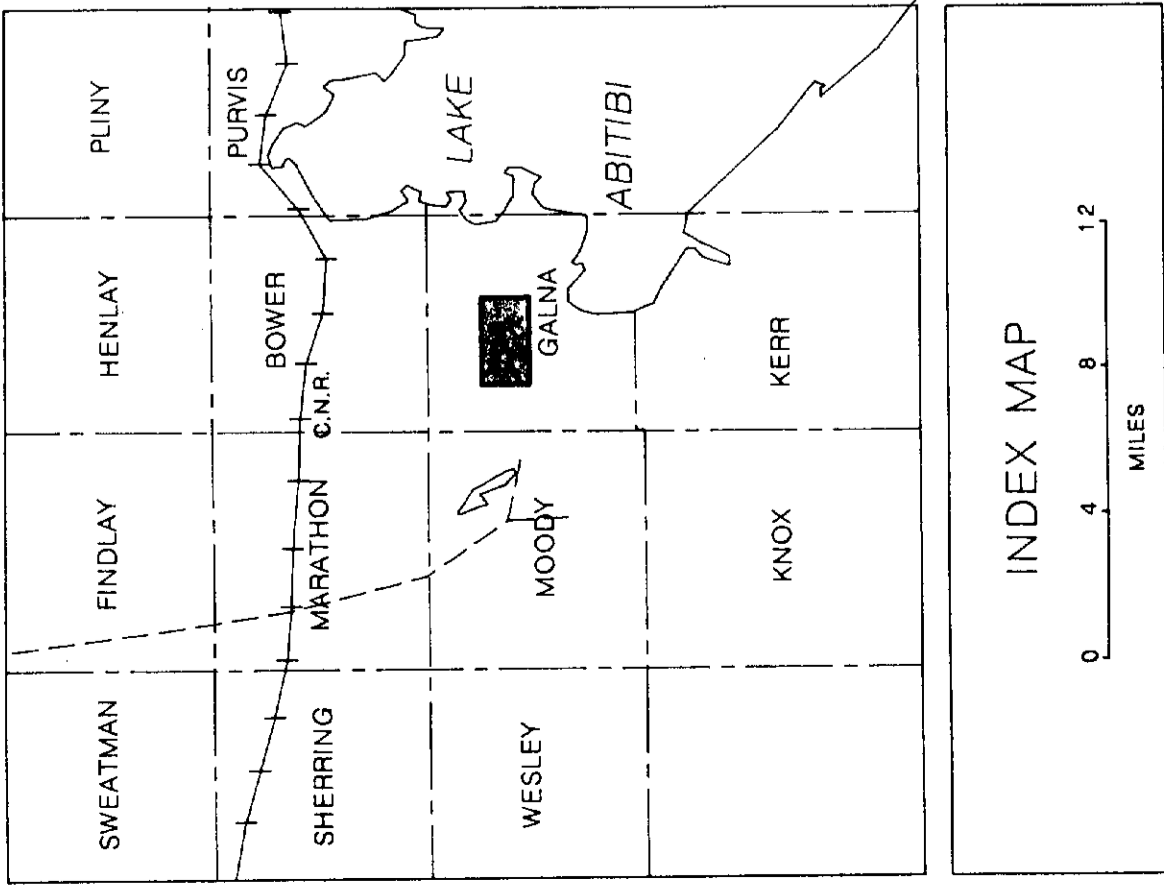
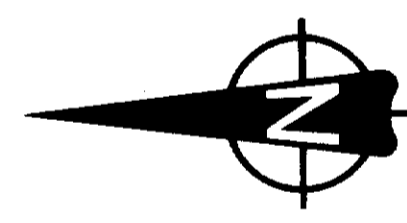
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COIL SPACING 600'  
In-Phase / Out-of-Phase Values in %

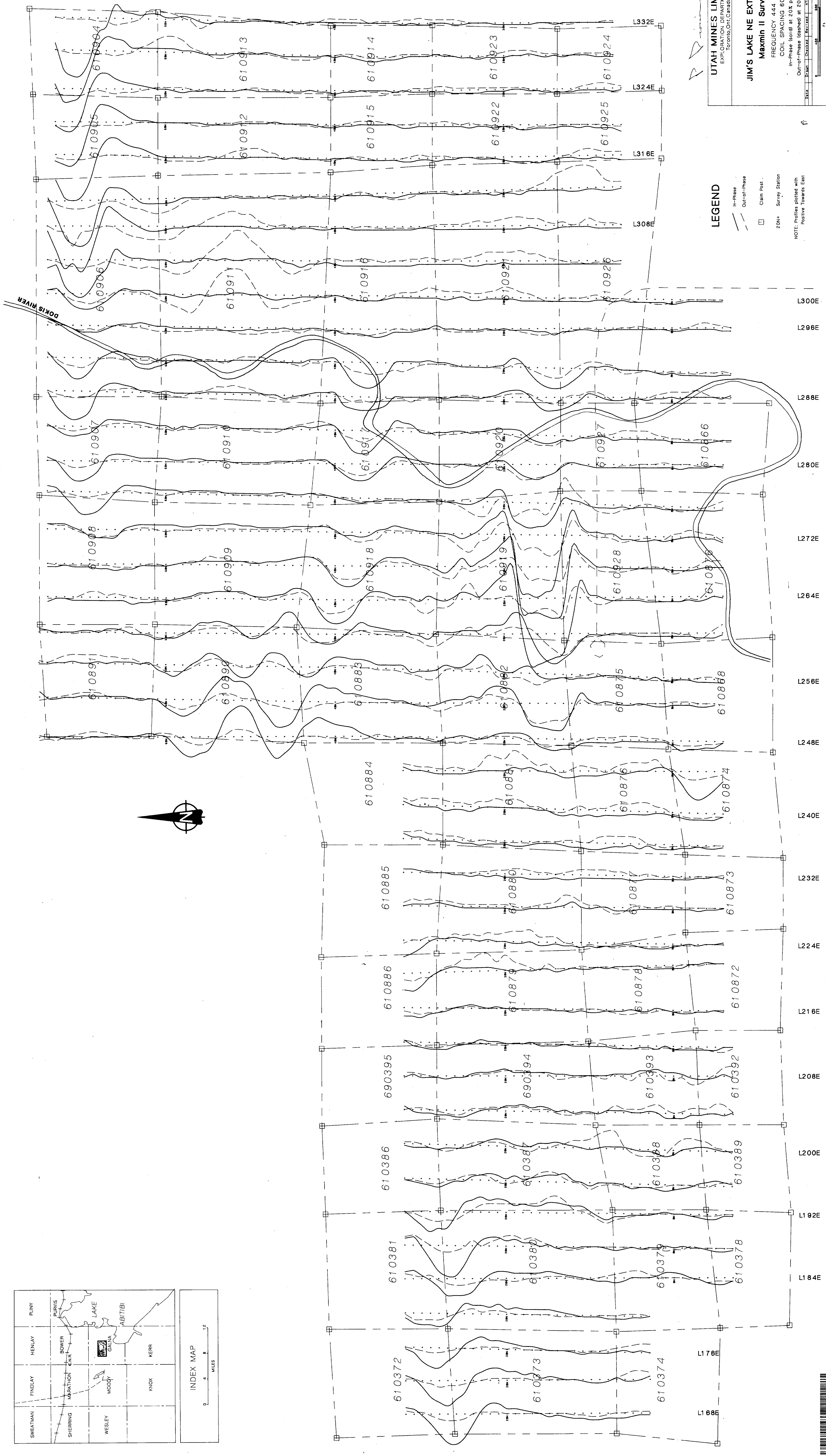
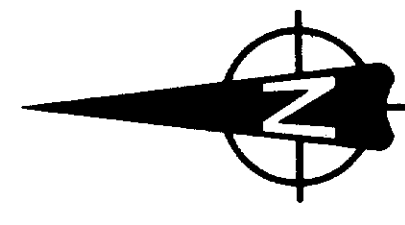
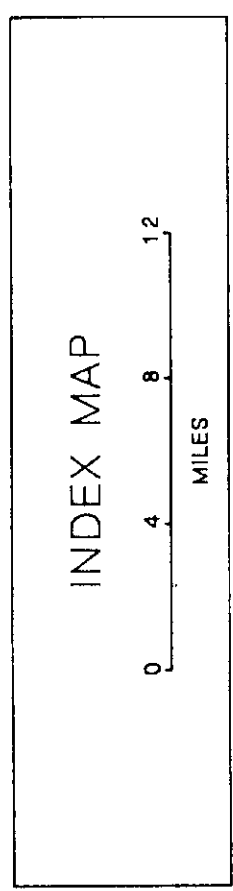
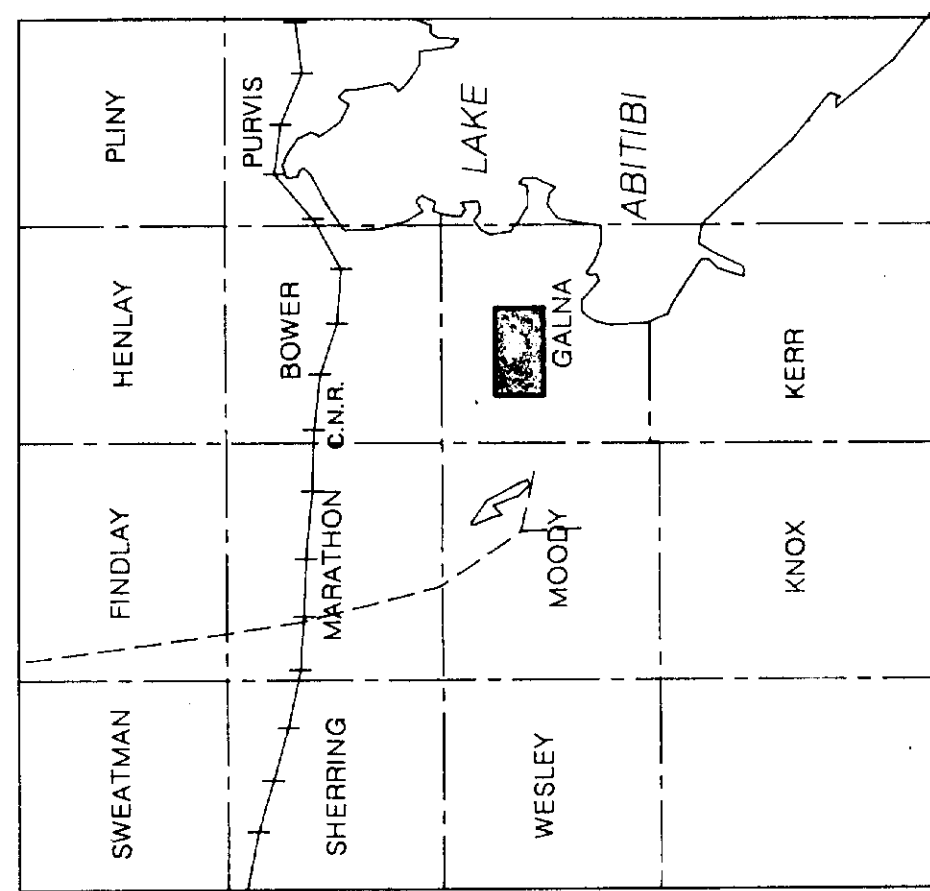


25532



L332E  
L324E  
L316E  
L308E  
L300E  
L296E  
L288E  
L280E  
L272E  
L264E  
L256E  
L248E  
L240E  
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L216E  
L208E  
L200E  
L192E  
L184E  
L176E  
L168E



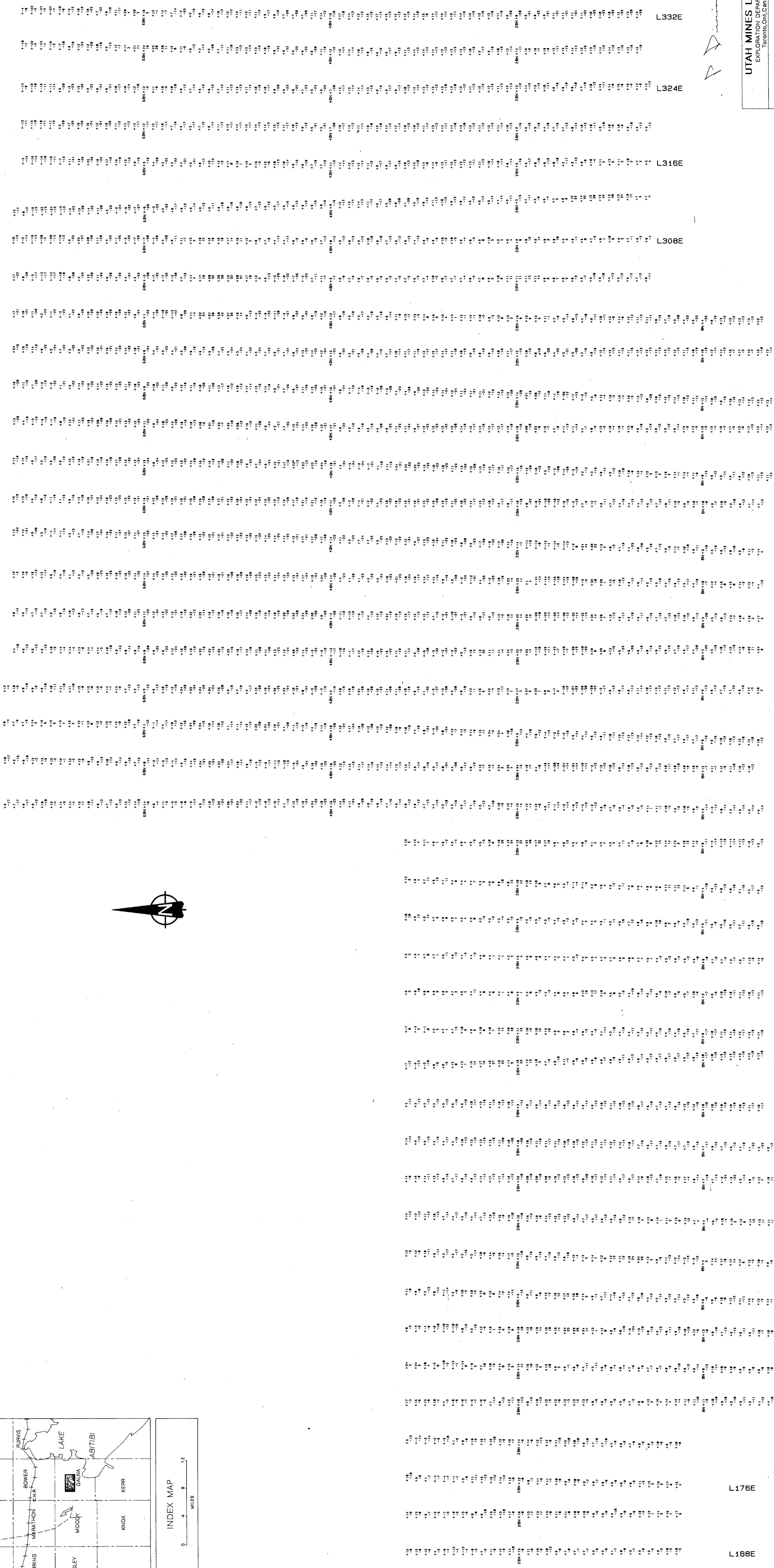
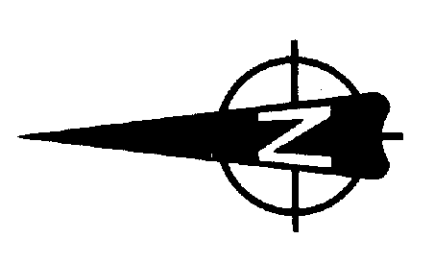
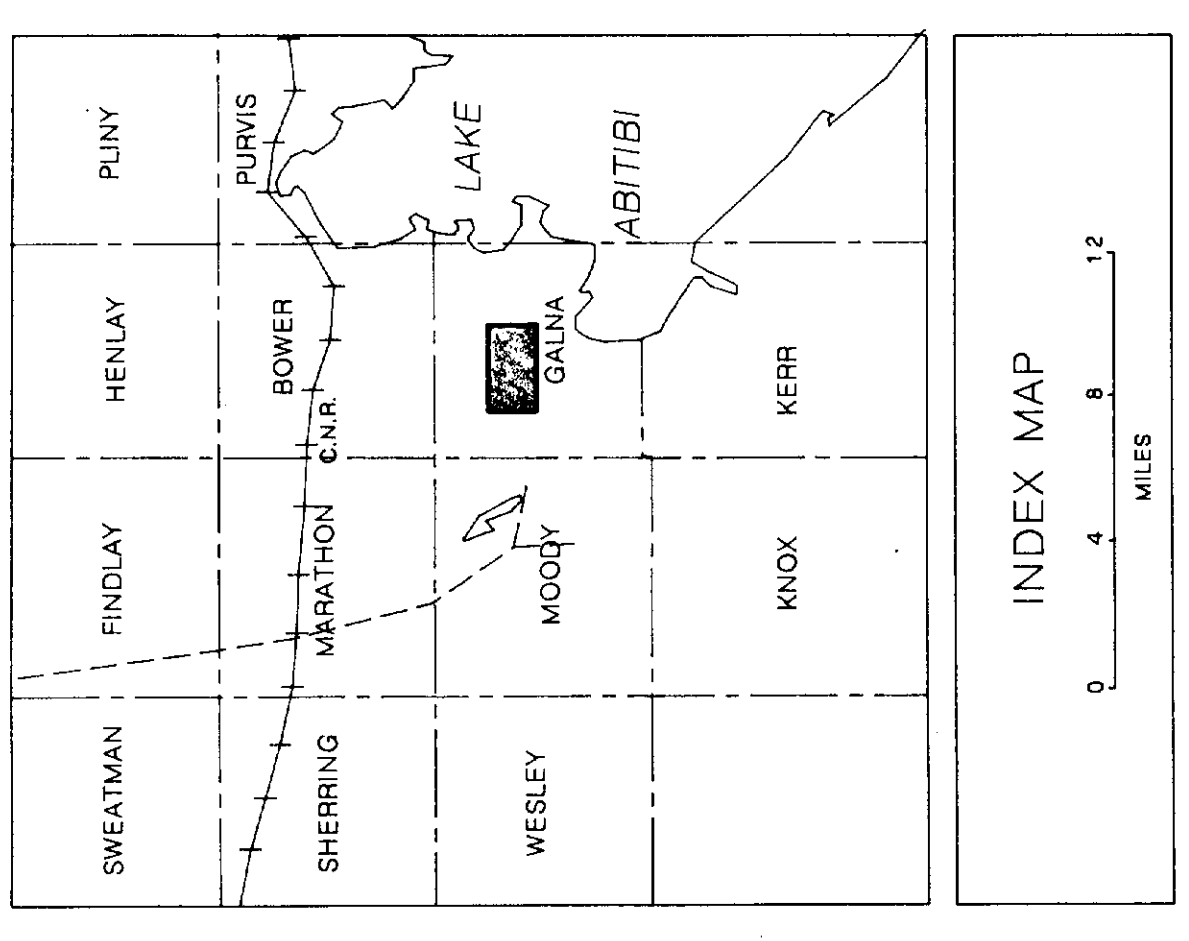


**LEGEND**  
 - - - In-Phase  
 - - - Out-of-Phase  
 □ Claim Post  
 20M+ Survey Station

**UTAH MINES LIMITED**  
 EXPLORATION DEPARTMENT  
 Toronto, Ont., Canada

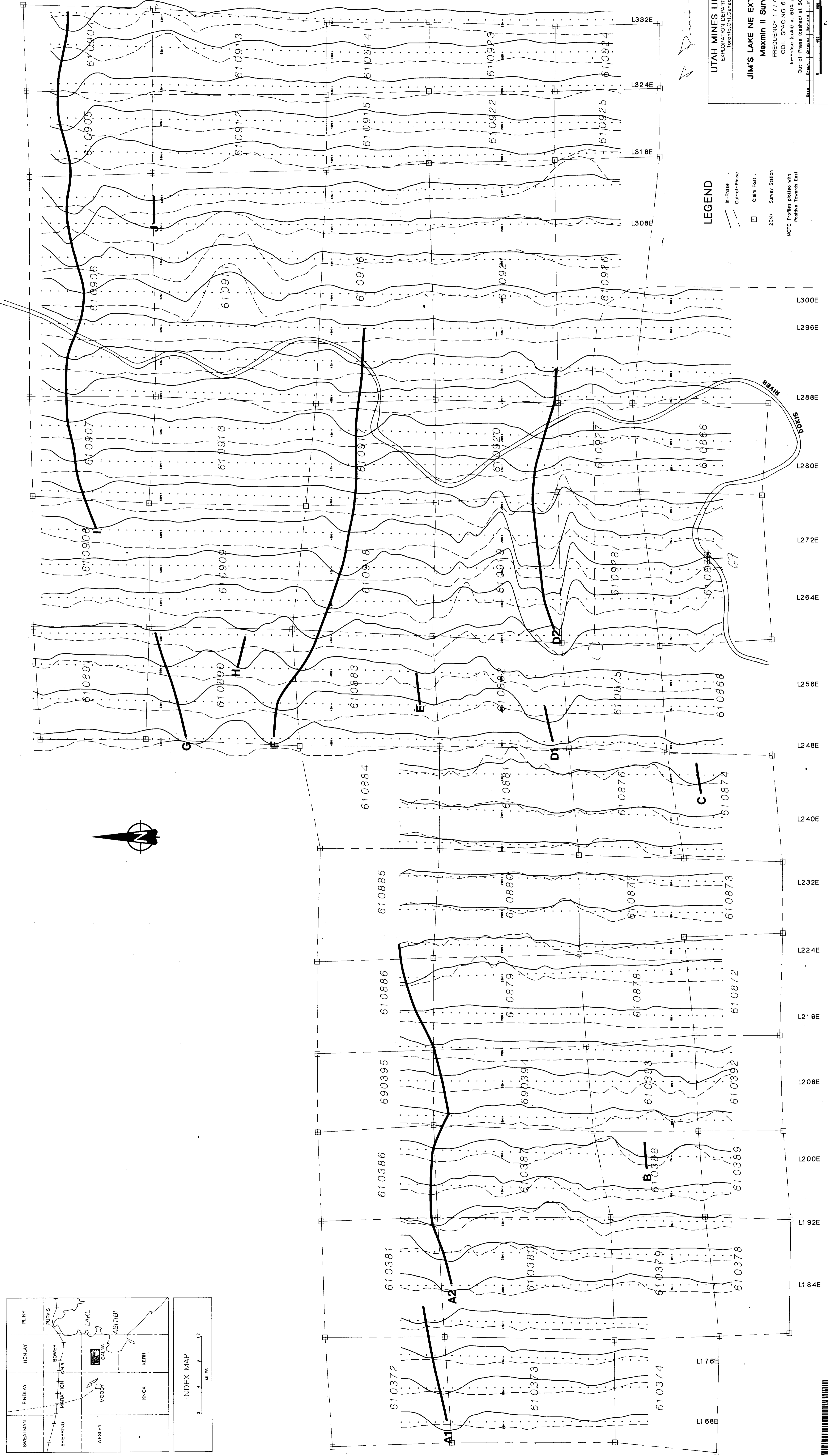
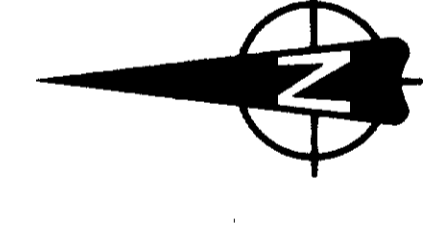
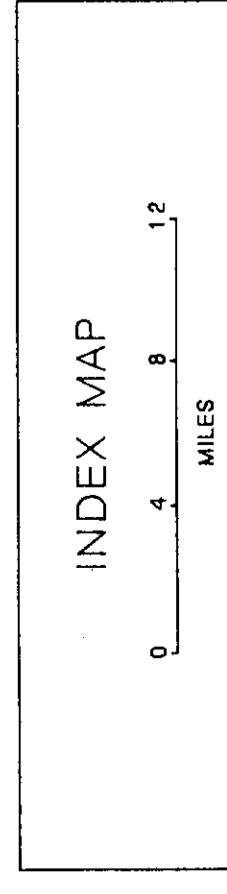
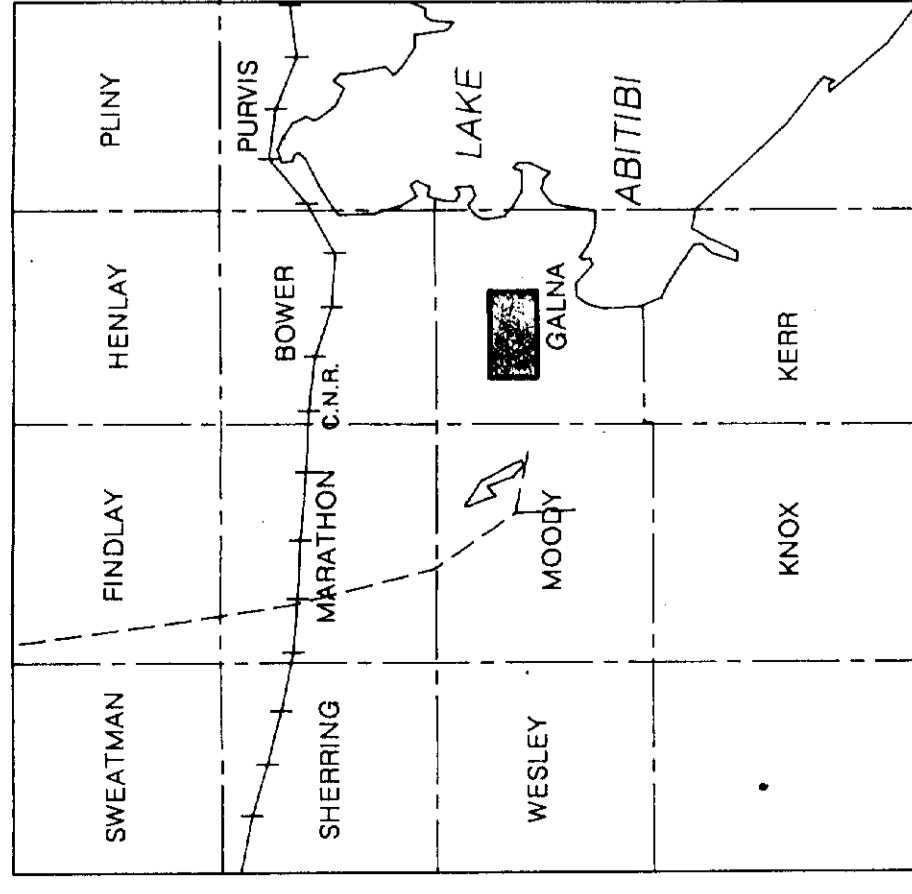
**JIM'S LAKE NE EXTENSION**  
 Maxmin II Survey  
 FREQUENCY 444 Hz.  
 COIL SPACING 600'  
 In-Phase (solid) at 20% per inch  
 Out-of-Phase (dashed) at 20% per inch

NOTE: Profiles plotted with Positive Towards East



L332E  
L324E  
L316E  
L308E  
L300E  
L296E  
L288E  
L280E  
L272E  
L264E  
L256E  
L248E  
L240E  
L232E  
L224E  
L216E  
L208E  
L200E  
L192E  
L184E  
L176E  
L168E





**LEGEND**

- - - In-Phase
- - - Out-of-Phase
- Claim Post
- 20M+ Survey Station

NOTE: Profiles plotted with Positive Towards East

**UTAH MINES LIMITED**  
EXPLORATION DEPARTMENT  
TORONTO, ONT., CANADA

**JIM'S LAKE NE EXTENSION**  
**MaxMin II Survey**  
FREQUENCY 1777 HZ.  
COIL SPACING 600'  
In-Phase (solid) at 50% per inch  
Out-of-Phase (dashed) at 50% per inch

