



53B15NW0004 2.11762 SEESEEP LAKE

010

Proton Magnetometer

and

VLF Electromagnetic
Surveys

MCGruer Lake Project

NTS 53-B-15

Phantom Exploration Services Ltd.

September, 1988

R. D. Middaugh

KICMLD

Sept. 1988

MINING LARDS SECTION

INTRODUCTION

Golden Eagle Resources Inc. of Toronto, Ontario contracted Phantom Exploration Services Ltd. of Thunder Bay, Ontario to conduct magnetic and electromagnetic (VLF) surveys on their McGruer Lake Project during the summer of 1988.

LOCATION, ACCESS AND GRID

The property is located 110 miles north northwest of Pickle Lake, Ontario, 190 miles northeast of Red Lake, Ontario and 25 miles east of the Indian Reserve at Round Lake. The area is protected by 32 unpatented mining claims numbered Pa 880480-483 inclusive, Pa 880485-487 inclusive, Pa 901236-39 inclusive, Pa 901241-48 inclusive, Pa 901255-58 inclusive, Pa 901301-303 inclusive and Pa 901431-436 inclusive located in the Patricia Mining Division.

Access to the property can be gained by float or ski-equipped aircraft from Round Lake, or the charter base at Windigo Lake, 29 miles to the south. Round Lake is not accessible by road, but does have a gravel airstrip capable of landing DC-3 sized aircraft, and has scheduled air service from larger centres in Northwestern Ontario. The base at Windigo Lake which is connected to Pickle Lake by an all weather gravel road, is operated intermittently and arrangements should be made well in advance with Gold Belt Air Transport Inc. in Pickle Lake.

The grid was established by Phantom Exploration in conjunction with Mr. Al Loranger and company. Approximately 51 kilometers of line was cut, chained and picketed at 25 meter intervals.

PERSONNEL

The day to day work was carried out by company employees while the overall supervision of the geophysical program was carried out by R. D. Middaugh also of Phantom Exploration Services Ltd.

INSTRUMENTATION

Magnetic

A proton procession magnetometer (model omni IV) manufactured by EDA Instruments of Toronto, Ontario was used for this survey. The total field was read with a resolution of one gamma and all the field values were corrected for diurnal variations using another omni IV magnetometer in the base station mode. Readings were recorded at 12.5 meter intervals on the grid lines.

Electromagnetic

A VLF EM-16 unit manufactured by Geonics Limited of Mississauga, Ontario was used for this survey. Both in and out of phase components were recorded at 12.5 meter intervals on the grid lines. The transmitter station used was Cutler, Maine with a frequency of 24.0 KHz.

DISCUSSION_OF_RESULTS

Magnetic

The grid area is presented in plan form at a scale of 1:2500. The corrected magnetic data is plotted on this map and where feasible contoured at 200 gamma intervals.

Although no regional magnetic gradient is evident, the data does indicate that the underlying rocks exhibit a distinct east southeast regional magnetic trend. Preliminary reconnaissance mapping carried out by Michael Smith Consulting indicates these rocks consist primarily of mafic volcanics and clastic sediments with accompanying chemical sedimentary iron formations.

One of the most prominent magnetic features is the large high located at the east end of McGruer Lake. The cause of this feature is not clearly understood at this time. The other prominent features consist of thin, magnetic highs that outline the regional trend and are thought to represent the magnetite-rich iron formations. The variability and somewhat discontinuous nature of these trends are thought to be caused by the varying amount of magnetite in the iron formations and the lensoidal nature of the formations themselves.

Intimately associated magnetic highs and lows such as that located on line 22+00 E at about 12+00 N are probably due to dipole effects.

Electromagnetic

The survey area is presented in plan form at a scale of 1:2500 with a vertical scale set at 1 inch = 25% for the EM profiles.

All of the anomalies conform to the regional magnetic trend and with few exceptions are directly related to the thin magnetic highs that cross the property indicating they probably represent the generally poorly conductive iron formations.

It is interesting to note that although most conductive trends have strong magnetic association, not all magnetic features are conductive. An excellent example of this is found on line 22+00 E at about 12+00 N. Also of note is the fact that the conductivity seems to improve along a trend when the magnetic signature is weaker such as the western portion of the anomaly H-H.

The conductive trends are summarized below.

Anomaly	Conductivity	Magnetic Association	Comments
A-A	poor	nil	topo feature
B-B	poor-moderate	moderate	iron formation
C-C	moderate-good	good	"
D-D	moderate-good	good	"
E-E	moderate-good	good	"
F-F	poor-moderate	poor	eastern extension of E-E
G-G	poor-moderate	moderate	iron formation
G ₁ -G ₁	good	weak	"

H-H	good-moderate	good	iron formation
I-I	good	good	"
J-J	poor	nil	topo feature
K-K	poor	weak	iron formation
L-L	poor	nil	topo feature

Note: anomalies H,I & K may simply be one continuous anomaly.

CONCLUSIONS AND RECOMMENDATIONS

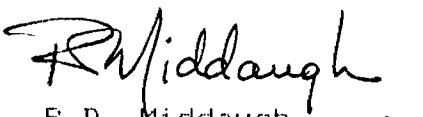
The survey area is underlain by a near vertical dipping, east southeast trending sequence of rocks. The magnetic and most of electromagnetic anomalies seem to be related to the magnetite-rich sedimentary iron formations.

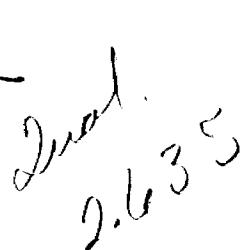
Detailed mapping and prospecting should be carried out in order to better understand and evaluate the geophysical results and the economic potential of the area. Since the main interest on the property is gold mineralization, a geochemical survey of a suitable nature may better define gold bearing horizons not necessarily outlined by the geophysical methods used to date. Where overburden thickness makes it feasible, stripping, trenching and sampling of the anomalous trends should be carried out.

Subsequent to the above recommendations, a drill program should be considered to test any resulting target areas.

Submitted by

Phantom Exploration Services Ltd.


R.D. Middaugh
Geologist


JUL 3 1973

Appendix

- | | |
|--------|--|
| Map 1. | Location Map |
| Map 2. | Magnetometer Readings - North Section |
| Map 3. | Magnetometer Readings - South Section |
| Map 4. | Magnetometer Contoured - North Section |
| Map 5. | Magnetometer Contoured - South Section |
| Map 6. | VLF Profiles - North Section |
| Map 7. | VLF Profiles - South Section |



Ministry of
Natural
Resources

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

WV8803-23



53B15NW0004 2.11762 SEESEEP LAKE

900

MINING LANDS

WV8803-23

Mining Ac

Type of Survey(s)

GEOPHYSICAL

Township or Area G-2204/G-2029
SEEEPEP LK/ERICHSEN LK.

Claim Holder(s)

GOLDEN EAGLE RESOURCES INC.

Prospector's Licence No.
T 5116

Address

SUITE 402, 27 QUEEN ST E.

Survey Company

PHANTOM EXPLORATION

Date of Survey (from & to)

14 06 88

14 09 88

Total Miles of line Cut

51.2 Km

Name and Address of Author (of Geo-Technical report)

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	40
	- Magnetometer	20
	- Radiometric	
	- Other	
For each additional survey: using the same grid: Enter 20 days (for each)	Geological	
	Geochemical	
Man Days	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	- Electromagnetic	
	- Magnetometer	
	Radiometric	
	Other	
	1988	
	Geological	
Mining Lands Section	Geophysical	Days per Claim
Airborne Credits	Electromagnetic	Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
Pa	880480	60	Pa	901301	60
	880481	60		901302	60
	880482	60		901303	60
	880483	60		901430	60
	880485	60		901432	60
	880486	60		901433	60
	880487	60		901434	60
	901236	60		901435	60
	901237	60		901436	60
	901238	60			
	901239	60			
	901241	60			
	901242	60			
	901243	60			
	901244	60			
	901245	60			
	901246	60			
	901247	60			
	901248	60			
	901255	60			
	901256	60			
	901257	60			
	901258	60			



Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures	\$	÷	15	=	Total Days Credits
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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.

32

Date	Recorded Holder or Agent (Signature)
Oct 19/88	Michael Smith

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying

Michael Smith, 70-23rd ST ETOBICOKE, ONT M8Y 3N2

For Office Use Only	Date Recorded	Mining Recorder
Total Days Cr. Recorded	OCTOBER 28/88	
Date Approved as Recorded	1920	Branch Director
	See Russel Statement	
Date Certified	OCT 10/88	Certified by (Signature) Michael Smith



Ministry of
Northern Development
and Mines

Geophysical-Geological-Geochemical
Technical Data Statement

File _____

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) GEOPHYSICAL

Township or Area SEESEEP LAKE / ERICHSEN LAKE

Claim Holder(s) Baldwin People

Survey Company PHANTOM EXPLORATION SERVICES LTD

Author of Report R.D. MIDDAGH

Address of Author 736 ALICE AVE RR#1A THUNDER BAY

Covering Dates of Survey JUNE 14/88 - SEPT 14/88
(linecutting to office)

Total Miles of Line Cut 51.2 km

SPECIAL PROVISIONS
CREDITS REQUESTED

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

ENTER 20 days for each
additional survey using
same grid.

Geophysical DAYS
per claim

--Electromagnetic 40

--Magnetometer 20

--Radiometric _____

--Other _____

Geological _____

Geochemical _____

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

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: Sept 14/88 SIGNATURE: R.D. Middagh
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No. Type Date Claim Holder

.....
.....
.....
.....
.....

TOTAL CLAIMS 32

If space insufficient, attach list

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations MAG 4131 ULF 3645 Number of Readings MAG 3585 ULF 3585
 Station interval 12.5 Meters Line spacing 100 Meters
 Profile scale ULF 1 IN = 25 %
 Contour interval MAG 200 gammas

MAGNETIC

Instrument EDA OMNI IV PROTON MAGNETOMETER
 Accuracy - Scale constant ± 1 gamma
 Diurnal correction method Base station recorder
 Base Station check-in interval (hours) N/A
 Base Station location and value N/A

ELECTROMAGNETIC

Instrument GEONICS EM-16
 Coil configuration 90° to each other
 Coil separation N/A
 Accuracy $\pm 1\%$
 Method: Fixed transmitter Shoot back In line Parallel line
 Frequency CUTLER MAINE 24.0 KHz
(specify V.L.F. station)
 Parameters measured in and out of phase components

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 _____

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 _____

SAMPLE PREPARATION (Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General _____

General _____

Pa 880480
Pa 880481
Pa 880482
Pa 880483
Pa 880485
Pa 880486
Pa 880487
Pa 901236
Pa 901237
Pa 901238
Pa 901239
Pa 901241
Pa 901242
Pa 901243
Pa 901244
Pa 901245
Pa 901246
Pa 901247
Pa 901248
Pa 901255
Pa 901256
Pa 901257
Pa 901258
Pa 901301
Pa 901302
Pa 901303
Pa 901431
Pa 901432
Pa 901433
Pa 901434
Pa 901435
Pa 901436



Ontario

Ministry of
Northern Development
and Mines

Mining Lands Section
3rd floor, 880 Bay Street
Toronto, Ontario
M5S 1Z8

Ministère du
Développement du Nord
et des Mines

Telephone: (416) 965-4888

December 2, 1988

Your file: W8803-239
Our file: 2.11762

Mining Recorder
Ministry of Northern Development and Mines
Court House
P.O. Box 3000
Sioux Lookout, Ontario
POV 2T0

RECEIVED
Assessment Files
Office

DEC 12 1988

RECEIVED

Dear Madam:

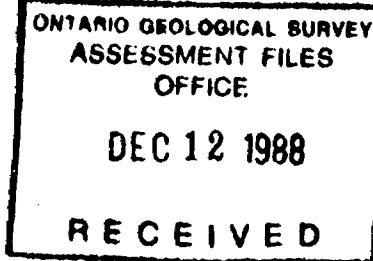
Re: Notice of Intent dated November 17, 1988
Geophysical (Electromagnetic and Magnetometer) Survey submitted on
Mining Claims Pa 880480 et al in Seesep & Erichsen Lakes Areas

The assessment work credits, as listed with the above-mentioned Notice of Intent,
have been approved as of the above date.

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

Yours sincerely,

W.R. Cowan
Provincial Manager, Mining Lands
Mines & Minerals Division



SH:p1
Enclosure

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

Resident Geologist
Sioux Lookout, Ontario

Golden Eagle Resources Inc.
Suite 402
27 Queen Street E.
Toronto, Ontario
M5C 2M6

Mr. R.D. Middaugh
736 Alice Ave.
R.R. #14
Thunder Bay, Ontario
P7B 5E5

Mr. Michael Smith
70 - 23rd Street
Etobicoke, Ontario
M8V 3N2



Ministry of
Northern Development
Mines

Technical Assessment
Work Credits

File
2.11762

Date	Mining Recorder's Report of Work No.
November 17, 1988	W8803-239

Recorded Holder

Golden Eagle Resources Inc.

Township or Area

Seeseep and Erichsen Lakes Area

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic _____ 40 days	Pa 880480 to 483 inclusive 880485
Magnetometer _____ 20 days	901237 to 239 inclusive 901241-42
Radiometric _____ days	901244 to 248 inclusive 901255 to 258 inclusive
Induced polarization _____ days	901301-02
Other _____ days	901431 to 436 inclusive
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 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.	

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

20 days Electromagnetic
10 days Magnetometer

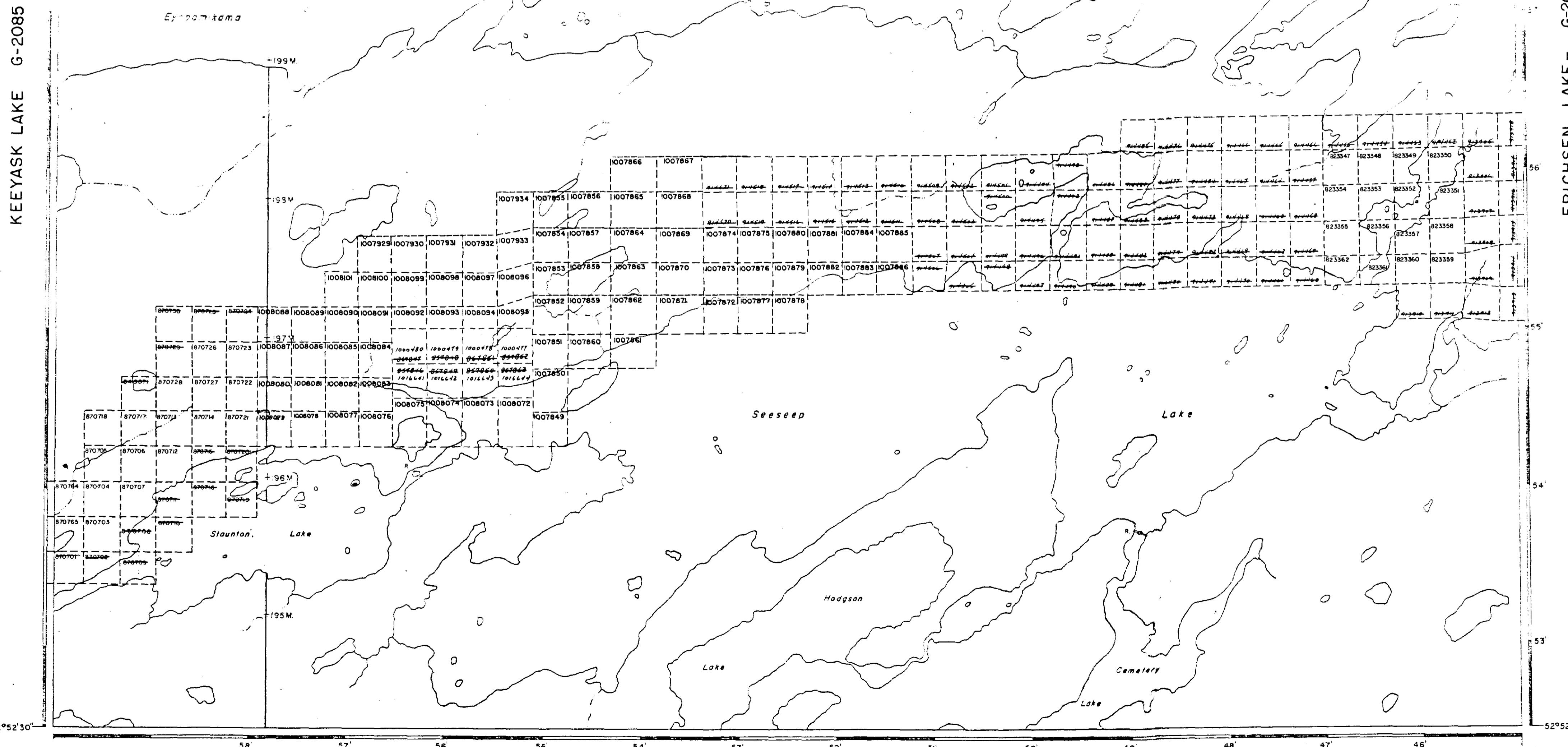
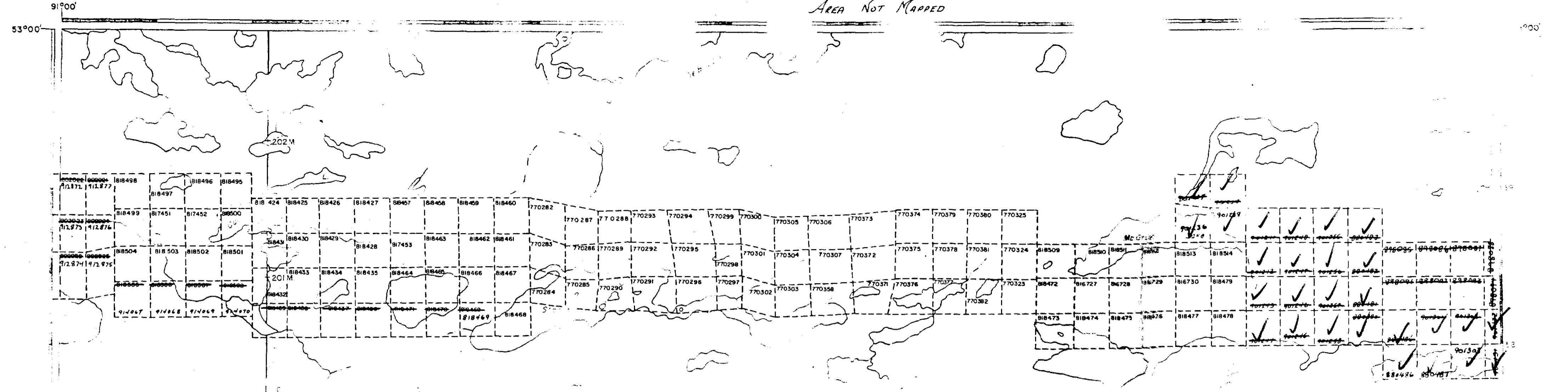
Pa 880486-87
901236-43
901303

No credits have been allowed for the following mining claims

not sufficiently covered by the survey

insufficient technical data filed

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; Geologocal - 40; Geochemical - 40; Section 77(19) - 60.



RECEIVED OCT 6 1988 PATRICIA DIVISION	MINISTERIAL ADMINISTRATIVE DISTRICT SICUX LOCKOUT MINING DIVISION PATRICIA LAND TITLES / REGISTRY DIVISION KEMORA / PATRICIA PORTION
Ministry of Natural Resources Ontario	Land Management
Date FEBRUARY, 1984.	File No. G-220

5381SN#0804 2.1176 SEELEEP LAKE
200

LEGEND

HIGHWAY AND ROUTE NO.	
OTHER ROADS	
TRAILS	
SURVEYED LINES	
TOWNSHIPS, BASE LINES, ETC.	
LOTS, MINING CLAIMS, PARCELS, ETC.	
UNSURVEYED LINES	
LOT LINES	
PARCEL BOUNDARY	
MINING CLAIMS ETC.	
RAILWAY AND RIGHT OF WAY	
UTILITY LINES	
NON-PERENNIAL STREAM	
FLOODING OR FLOODING RIGHTS	
SUBDIVISION OR COMPOSITE PLAN	
RESERVATIONS	
ORIGINAL SHORELINE	
MARSH OR MUSKEG	
MINES	
TRAVERSE MONUMENT	

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" SURFACE RIGHTS ONLY	○
" MINING RIGHTS ONLY	■
LEASE, SURFACE & MINING RIGHTS	■
" SURFACE RIGHTS ONLY	□
" MINING RIGHTS ONLY	□
LICENCE OF OCCUPATION	▼
ORDER IN COUNCIL	OC
RESERVATION	■
CANCELLED	◎
SAND & GRAVEL	△

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913 VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP 380, SEC. 63, SUBSEC. 1

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. - MINING RIGHTS ONLY
S.R.O. - SURFACE RIGHTS ONLY
M+S - MINING AND SURFACE RIGHTS

Description Order No. Date Disposition File
RIWITHDRAWN WY46/87 APRIL 21/87 M95 18855Oct 2/86
Feb 1/87
Mar 4/86
Apr 18/86Aug 8/86
Sept 16/86
Sept 24/86
Oct 23/86
Nov 6/86
Dec 31/86
Mar 2/87
Apr 5/87
Apr 13/87
Apr 20/87
May 4/87
May 11/87
May 18/87

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 3000 4000 5000 6000 8000
METRES 0 200 400 (1 KM) 2000

AREA

ERICHSEN LAKE

M.N.R. ADMINISTRATIVE DISTRICT

SIOUX LOOKOUT

MINING DIVISION

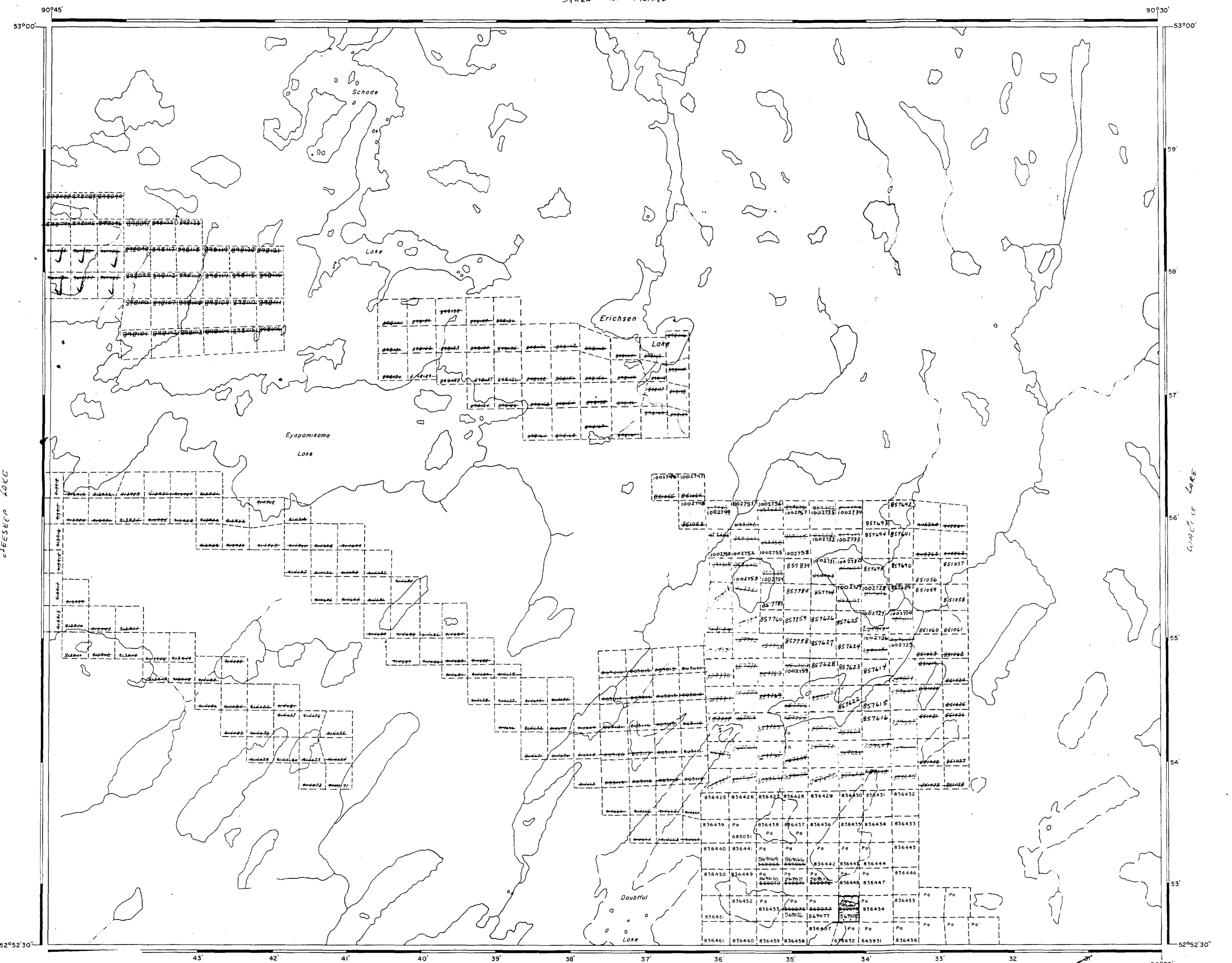
PATRICIA

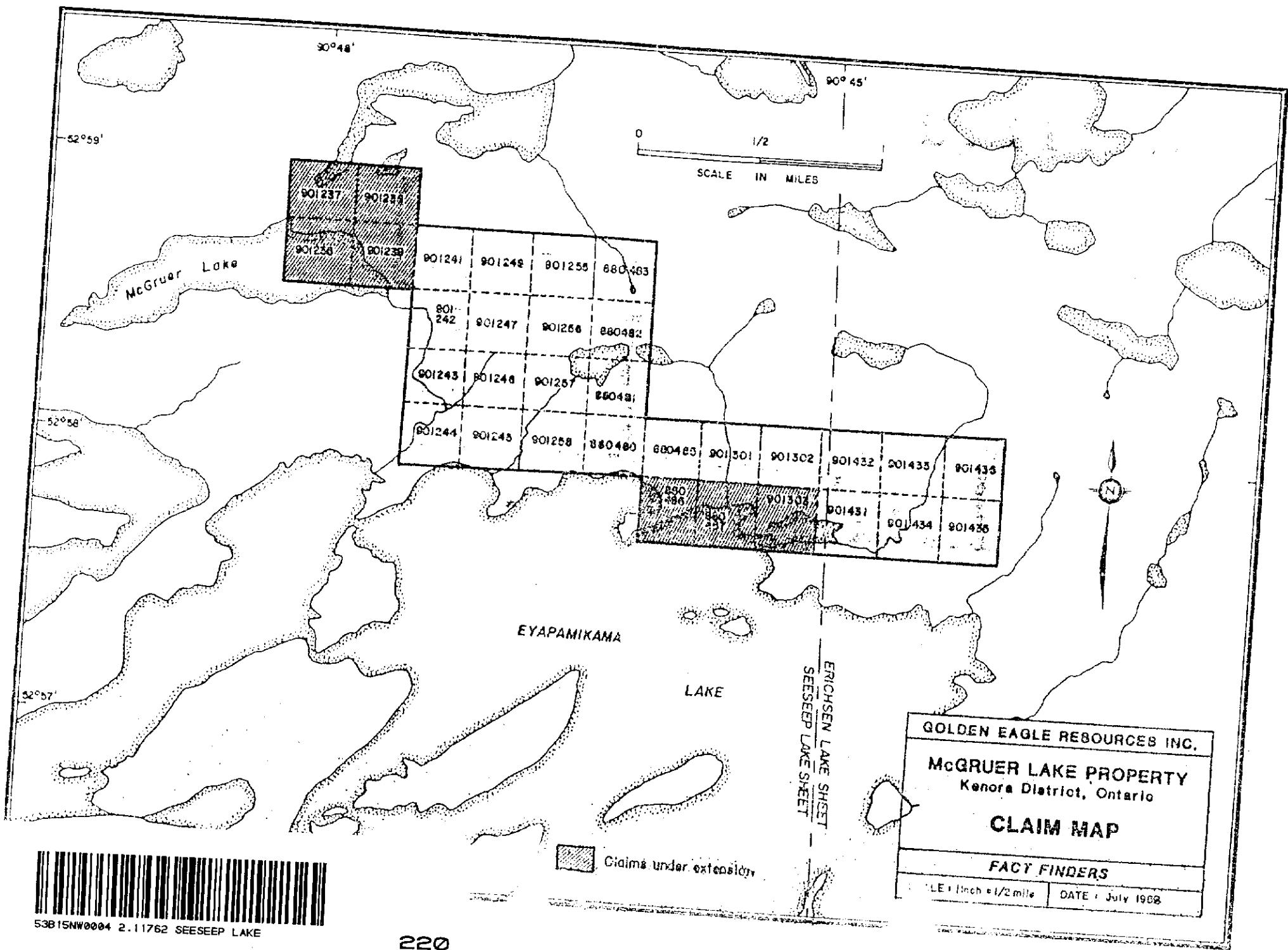
LAND TITLES / REGISTRY DIVISION


KENORA (PATRICIA PORTION)

 Ministry of
Natural
Resources
Ontario
Land
Management
Branch

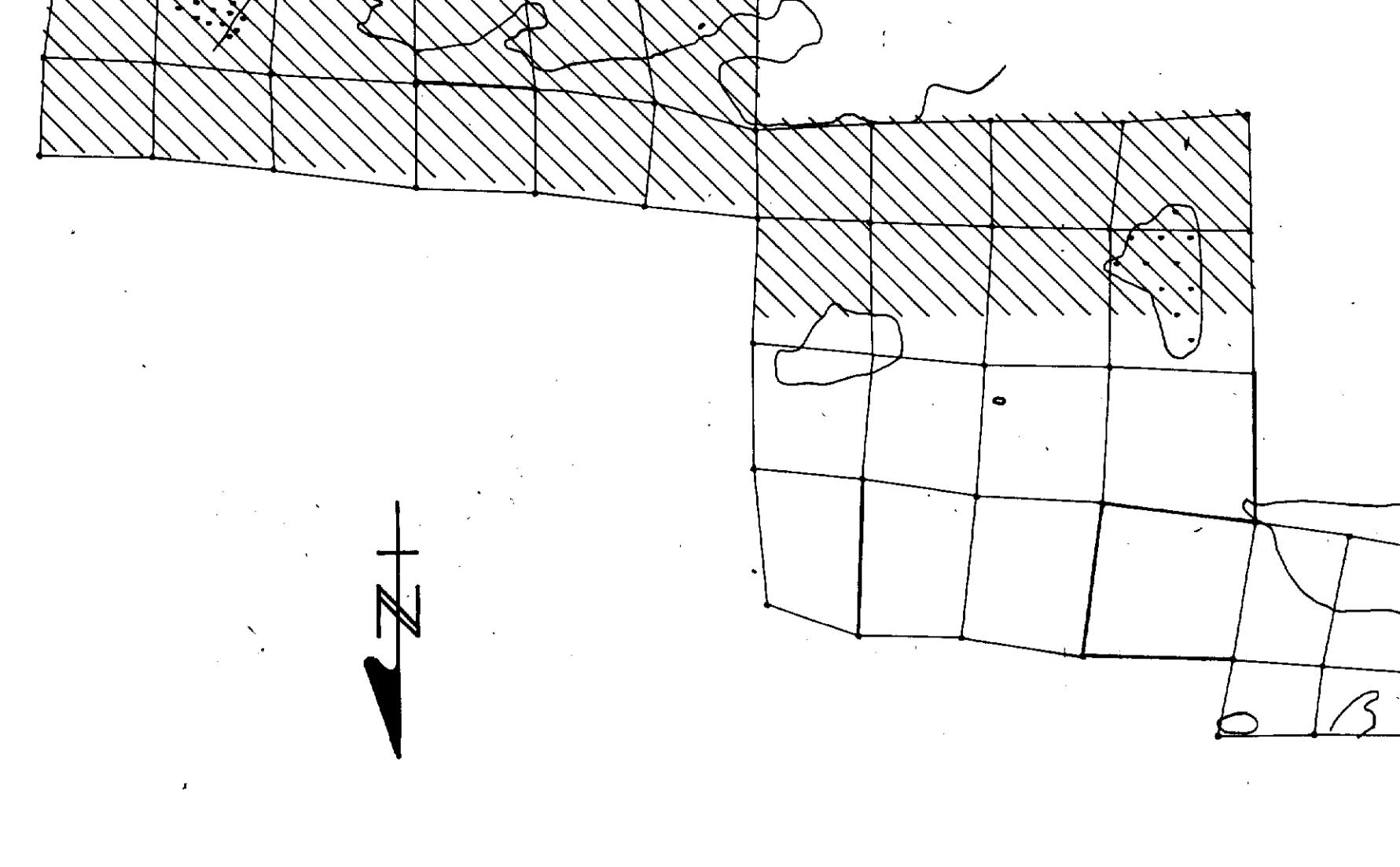
Date FEBRUARY, 1984.

Number
G-2029





Z+



LOCATION MAP
SCALE 1:20,000

LEGEND
TOPOGRAPHY
CLAIM POST

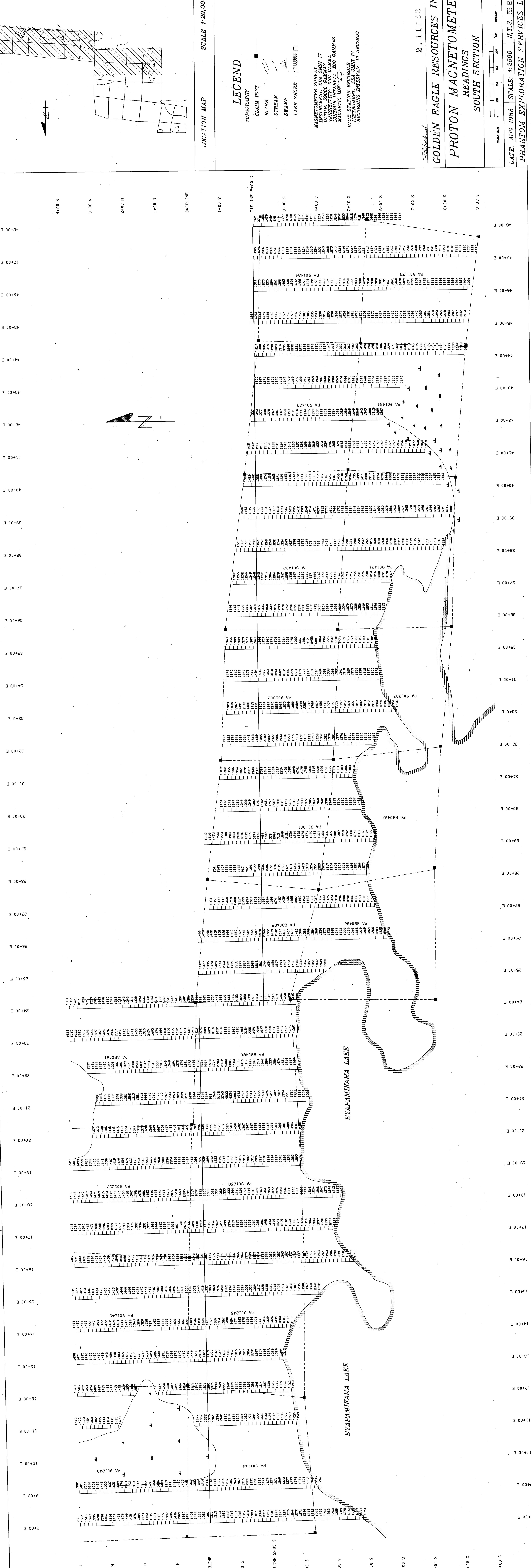
BASELINE
TIELINE 2+00 S
LAKE SHORE
MAGNETIC LOW

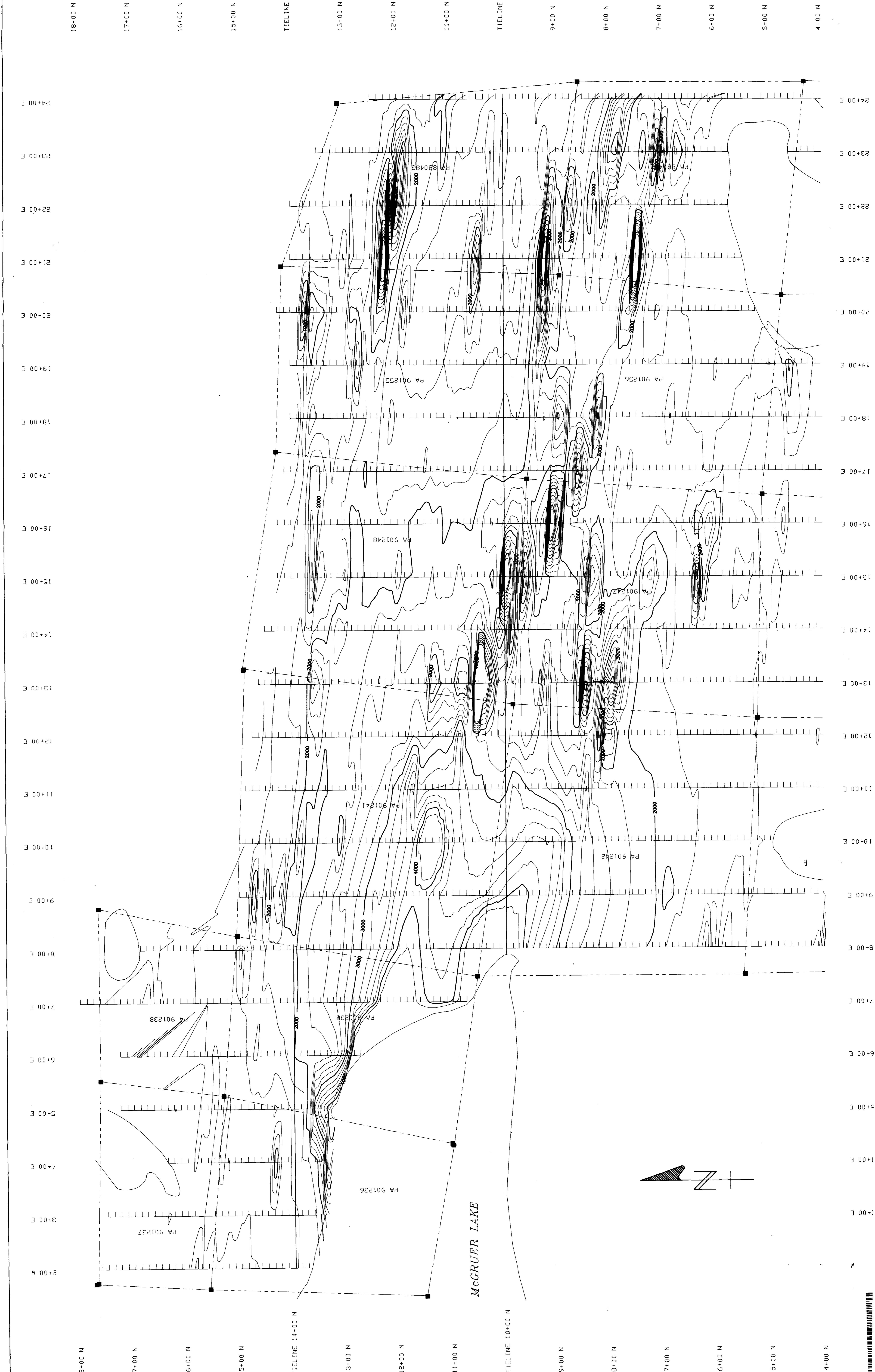
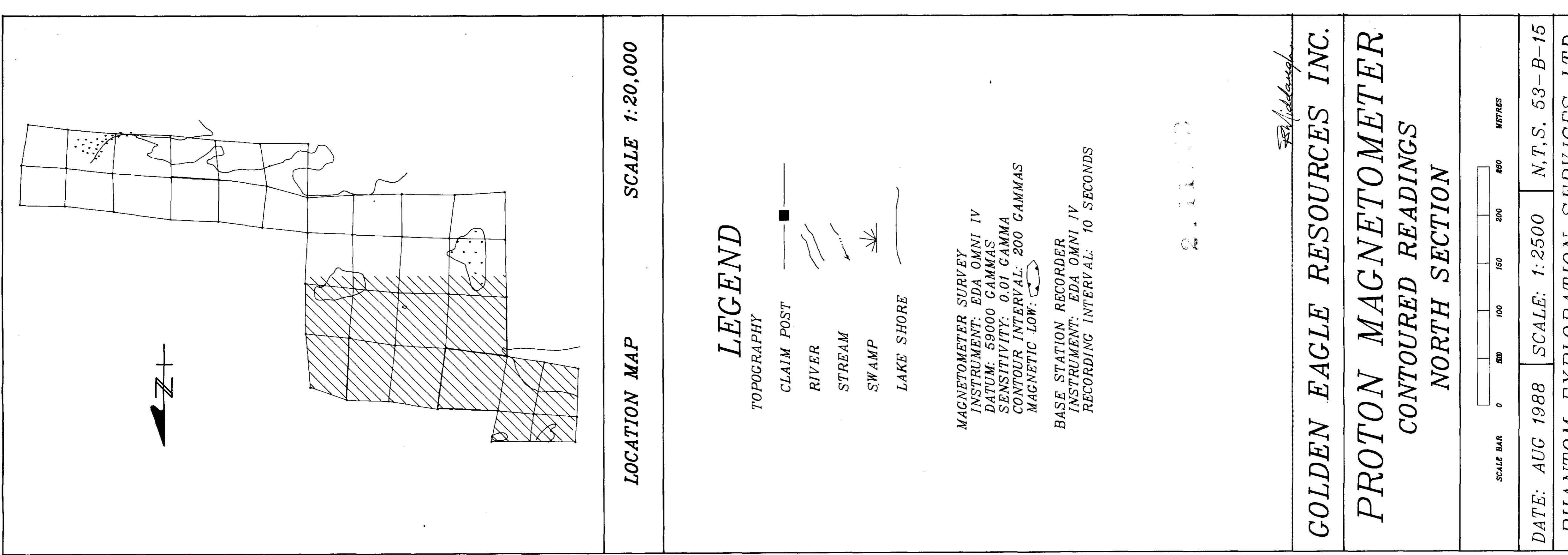
RIVER
STRAM
SWAMP
CONTINENTAL CAMMA
MAGNETIC LOW

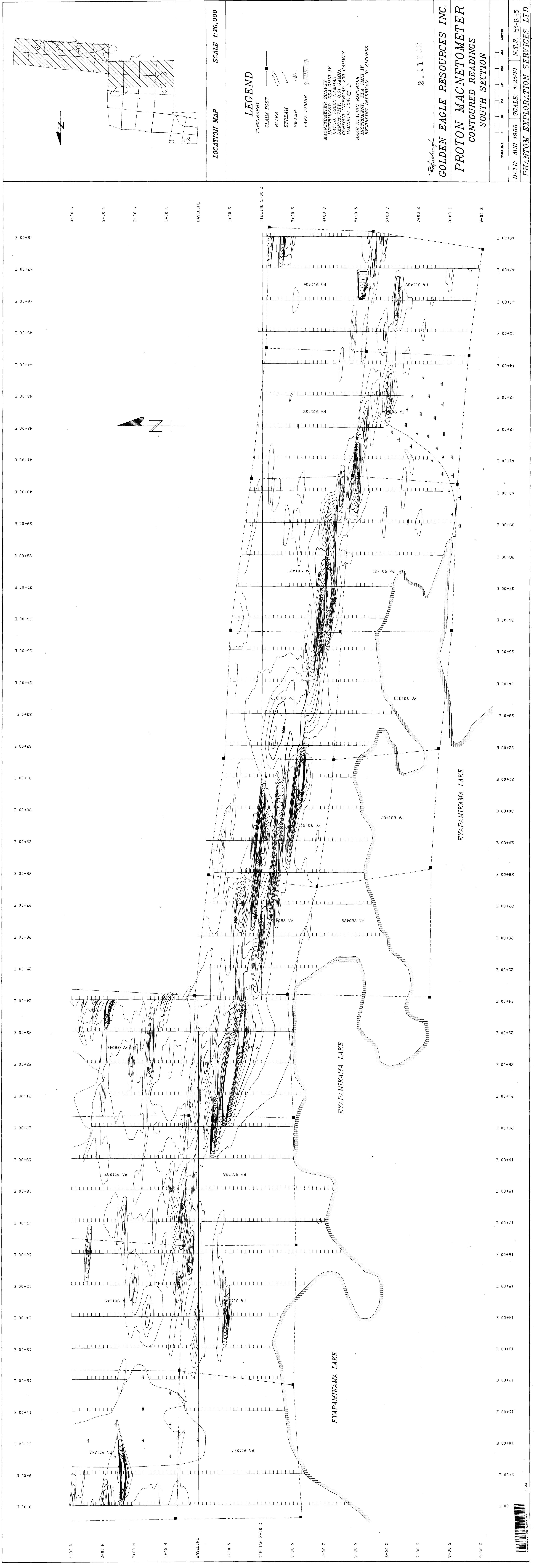
MAGNETOMETER SURVEY
INSTRUMENT: EDA OANN IV
DATUM: 59000 GAMMAS
SENSITIVITY: 1.00 GAMMA
CONTINUOUS INPUT: 200 GAMMAS


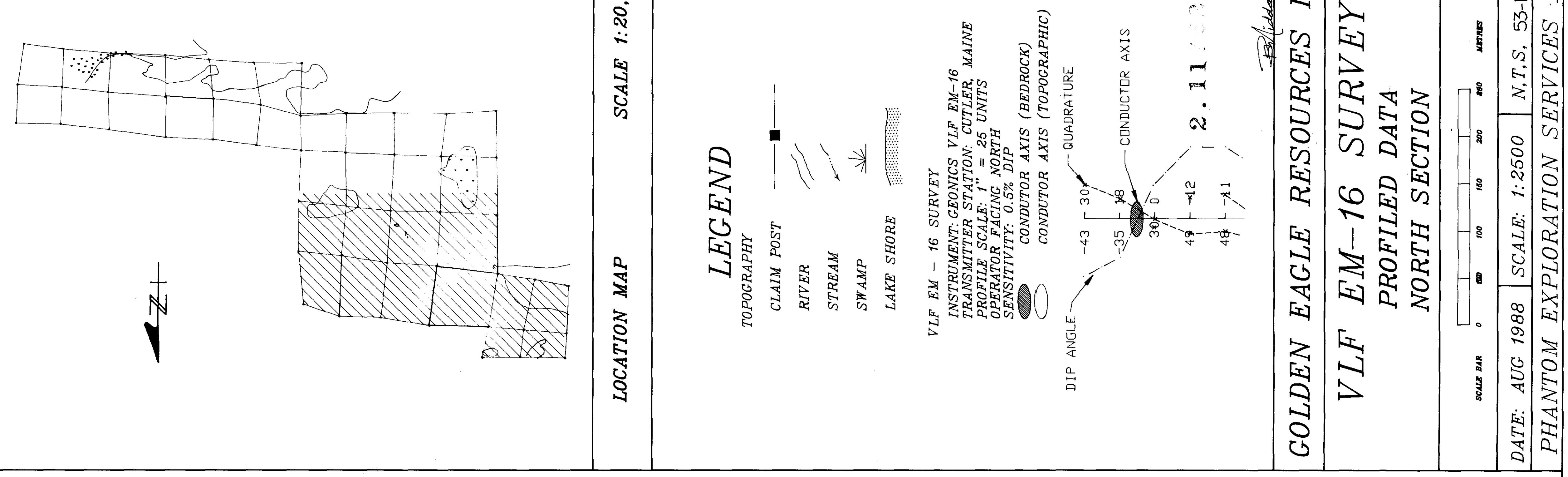
COLDEN EAGLE RESOURCES INC.
PROTON MAGNETOMETER
READINGS
SOUTH SECTION

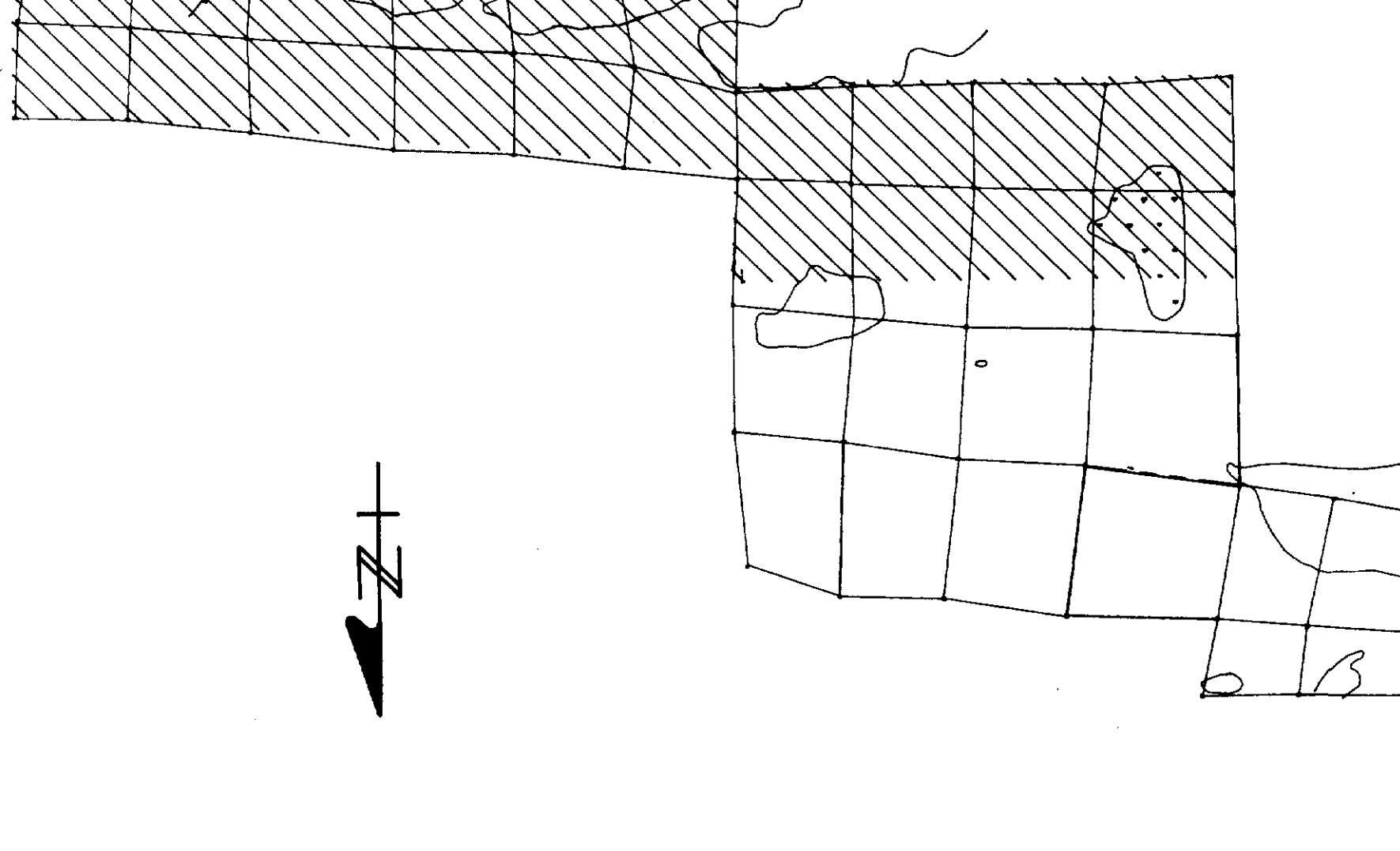
SCALE BAR 0 500 1000 2000 METERS
DATE: AUG 1988 SCALE: 1:2500 N.T.S. 53-B-15
PHANTOM EXPLORATION SERVICES LTD.





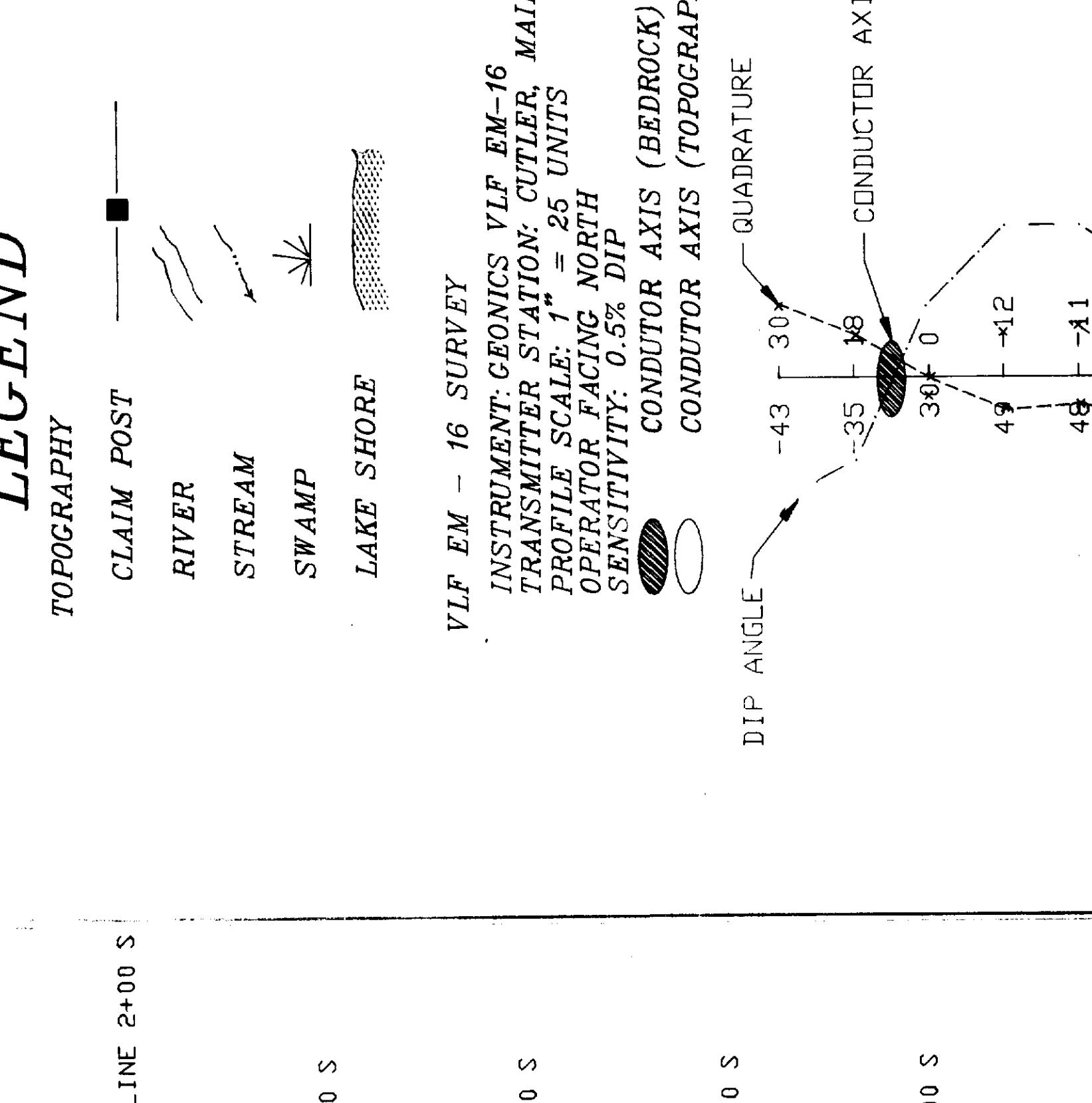






LOCATION MAP
SCALE 1:20,000

LEGEND



COLDEN EAGLE RESOURCES INC.

VLF EM-16 SURVEY
PROFILED DATA 2.1173
SOUTH SECTION

SCALE 1:2500 N.T.S. 53-B15
DATE: AUG 1988
PHANTOM EXPLORATION SERVICES LTD.

