2.2448

Geophysical Report

VLF & Magnetic Survey

Baubee Lake, Ontario

Respectfully Submitted,

Chris D. Anderson, Ph.D., P.Eng.

July 8, 1977.

PROVINCE OF MANITOBA
C. D. ANDERSON
July 8, 77
REGISTERED ENGINEER

8 pages

GEOPHYSICAL REPORT: BAUBEE LAKE VLF & MAGNETIC SURVEY

Location: Northwestern quadrant at the Ewart township in northwestern Ontario - located on the southside of the Trans Canada Highway on the west side of Baubee Lake.

The grid is readily accessible from the Trans Canada by one gravel road and numerous trails. The grid lines themselves reach the highway in some places. (see Figures 1 and 2).

Property Holder: Dr. Chris D. Anderson
826 Dorchester Avenue,
Winnipeg, Manitoba.

Party Submitting Assessment Work: Same as above.

Claim Numbers 439295, 439296, 439297, 439298, 439299, 439300
Covered by Survey 439301, 439302, 430303, 439402, 439403

Dates of Survey: May 8 - May 16, 1977 inclusive

The VLF and magnetic data and plotted profiles are shown on the maps accompanying this report.

VLF SURVEY

Instrument: Geonics EM-16 VLF unit, Serial #166, Freq. 18.6 KHz
Sensitivity: In-phase, ± 0.5% from -70% to +70%
± 1% from ± 70 to ± 150%
Ellipse Ratio: ± 0.5%

Method of Surveying: The standard VLF surveying technique was employed:

- at each 50 ft. station the readings were taken in the northwest direction, independant of the direction of travel, at right angles to the station location. In this case, the Seattle, Washington station, broad-casting at 18.6 KHz, was used.
- a best null was then obtained by adjusting the in-phase and/or quadrature settings. The reading was taken when this null was achieved.

Note - the contour map accompanying this report uses Fraser Filtered data.

MAGNETIC SURVEY

Instrument: Scintrex Flux Gate Magnetometer, model MF-2 serial number 002104
Scale Sensitivity: ± 5 gammas

Method of Surveying:

- upon entering and leaving grid area, or after completing a days work, and roughly every three hours, the magnetic field was measured at the base station (location as specified on accompanying maps).
- at each station the instrument was held a constant distance from the body and the ground to reduce error, station interval = 50 ft.

- after leveling, the scale was then read with the multiplying factor noted.
- the time of sampling was recorded.

Number of Established Stations: 1083

Lines: 10.26 line miles.

Results and Conclusions:

- 2 major anomalous zones were observed to be present on the Baubee Lake grid area,

I - the strongest of the two extends from L51 = 00E/15 + 00N to L15 + 00E/5 + 00N and continues through grid into Baubee Lake on the east side. Strike is approximately N80W.

II - the second most prominant anomaly extends from L15 + 00E/10 + 00S to L30 + 00E/19 + 005 and continues out both ends of the grid.

Other numerous anomalous zones were found scattered throughout the grid.

The conductor locations are shown in Figure 3.

Summary of Anomalous Areas(EM):

LINE	LOCATION	FRASER NUMBER (see appendix)
15 + 00E	16 + 50S	50-100
	10 + 25S	50-100
	5 + 00S to 5 + 75S	150
18 + 00E	18 + 00S to 19 + 00S	50-100
	12 + 50S to 13 + 50S	50-100
	5 + 25N to 5 + 50N	150
21 + 00E	18 + 00S to 18 + 75S	50-100
	13 + 25S to 13 + 75S	100-150
	5 + 50N to 6 + 00N	100-150
24 + 00E	18 + 00S to 19 + 00S	50-100
	14 + 50S	
	6 + 50N to 7 + 00N	150
27 + 00E	18 + 00S to 18 + 50S	50-100
	16 + 00S to 16 + 50S	150
	7 + 75N to 8 + 25N	150
30 + 00E	18 + 50S to 20 + 00S	100-150
	16 + 25S to 17 + 00S	50-100
	7 + 50N to 8 + 00N	150
33 + 00E	8 + 00N + 9 + 00N	150
36 + 00E	0 + 50S to 0 + 50N	50-100
	9 + 50N to 10 + 50N	150

39 + 00E	1 + 00N to 2 + 00N	50-100
	4 + 50N to 5 + 50N	50-100
	10 + 75N to 11 + 50N	150
42 + 00E	1 + 00N to 2 + 00N	100-150
	7 + 00N to 8 + 00N	150
	11 + 50N to 13 + 75N	50-100
45 + 00E	1 + 00N to 1 + 50N	100-150
	13 + 00N to 13 + 50N	100-150
	15 + 00N	100-150
48 + 00E	0 + 00N to 0 + 50N	100-150
	13 + 00N to 13 + 50N	100-150
	15 + 25N to 16 + 00N	100-150
51 + 00E	15 + 00N to 16 + 00N	100-150
54 + 00E	2 + 00N to 3 + 00N	100-150
	4 + 00N to 4 + 50N	100-150

In general, three anomalous magnetic zones were observed:

i) strike N80W L48 + 00E/15 + 00N to L27 + 00E/8 + 00N
ii) strike N70W L36 + 00E/0 + 00 to L54 + 00E/2 + 00N
iii) strike N25W L18 + 00E/10 + 00S to L27 + 00S/16 + 00S

These anomalies correlate with the EM responses indicated by the VLF Survey.

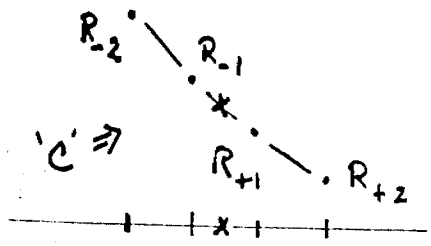
The magnetic response tends to diminish as one progresses west along the anomalies, whereas the level of EM response remains more uniform.

The three magnetic zones observed involve a wide range of magnetic field strengths, ranging from +26,000 gammas to -15,000 gammas.

APPENDIX

Fraser filtering of VLF Data:

Fraser filtering of the VLF data results in a phase shift at 90° and a gain of 4, as illustrated below:



The slope at point x of curve "c" can be approximated by

$$\text{slope} = \frac{\frac{(R_{-2} + R_{-1})}{2} - \frac{(R_{+1} + R_{+2})}{2}}{2}$$

and the "Fraser number" is defined by $(R_{-2} + R_{-1}) - (R_{+1} + R_{+2})$ and the units are "% slope of major axis", thus the point of maximum curvature of "C" is given by the maximum Fraser number. By convention in this report, a positive Fraser number indicates proper cross-over, whereas a negative indicates an improper cross-over.

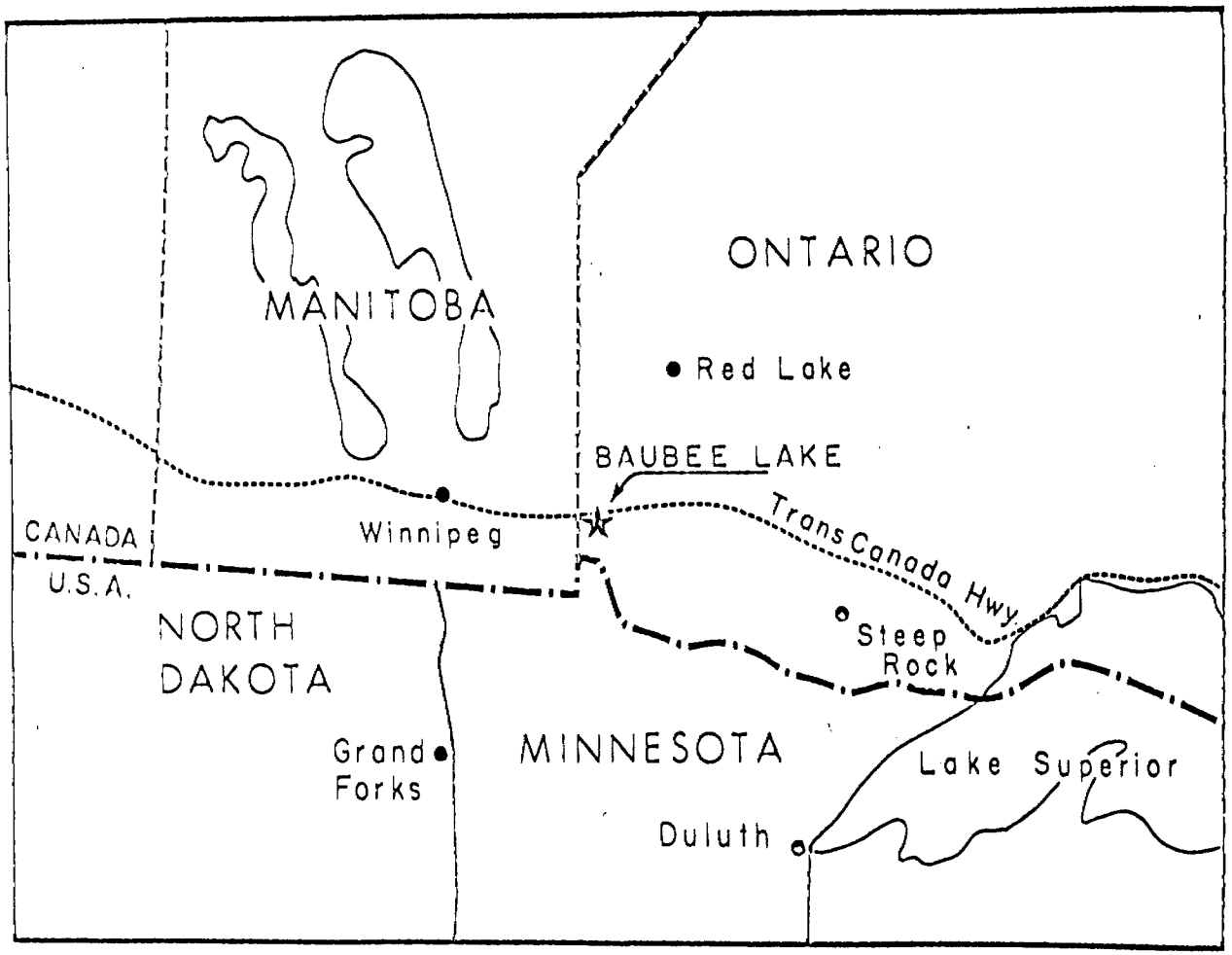


Figure 1 - Location Map.

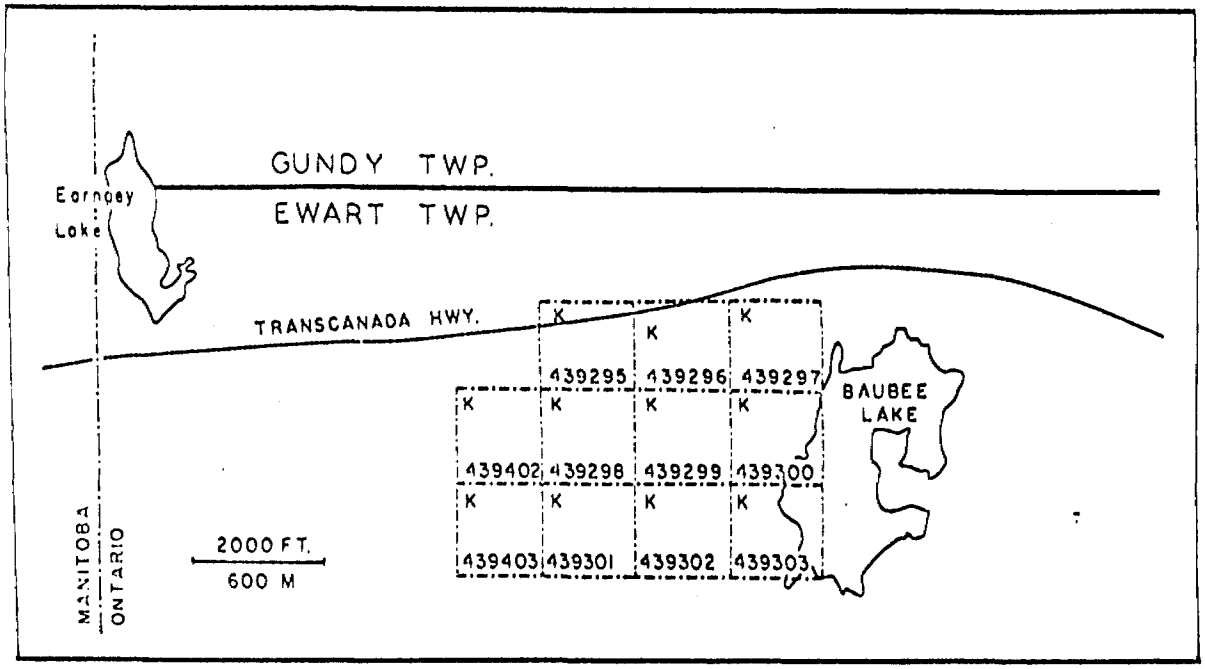


Figure 2 - Property Map.

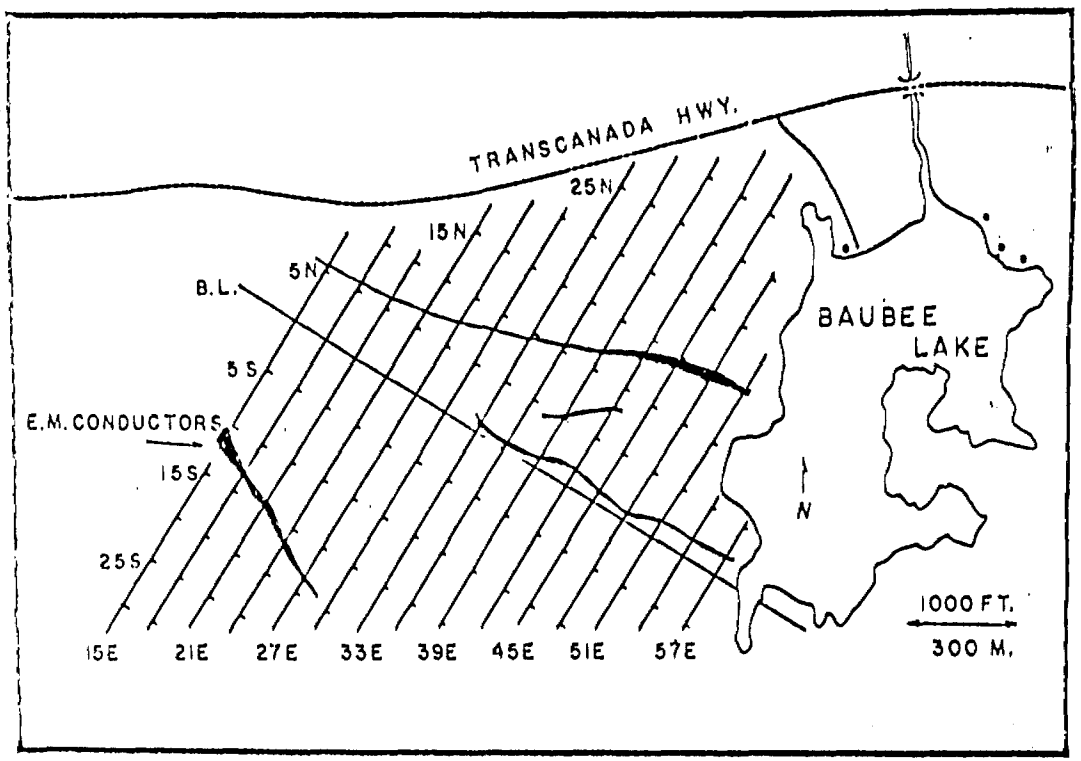


Figure 3 - EM Conductor Map.

BAUBEE LAKE GRID

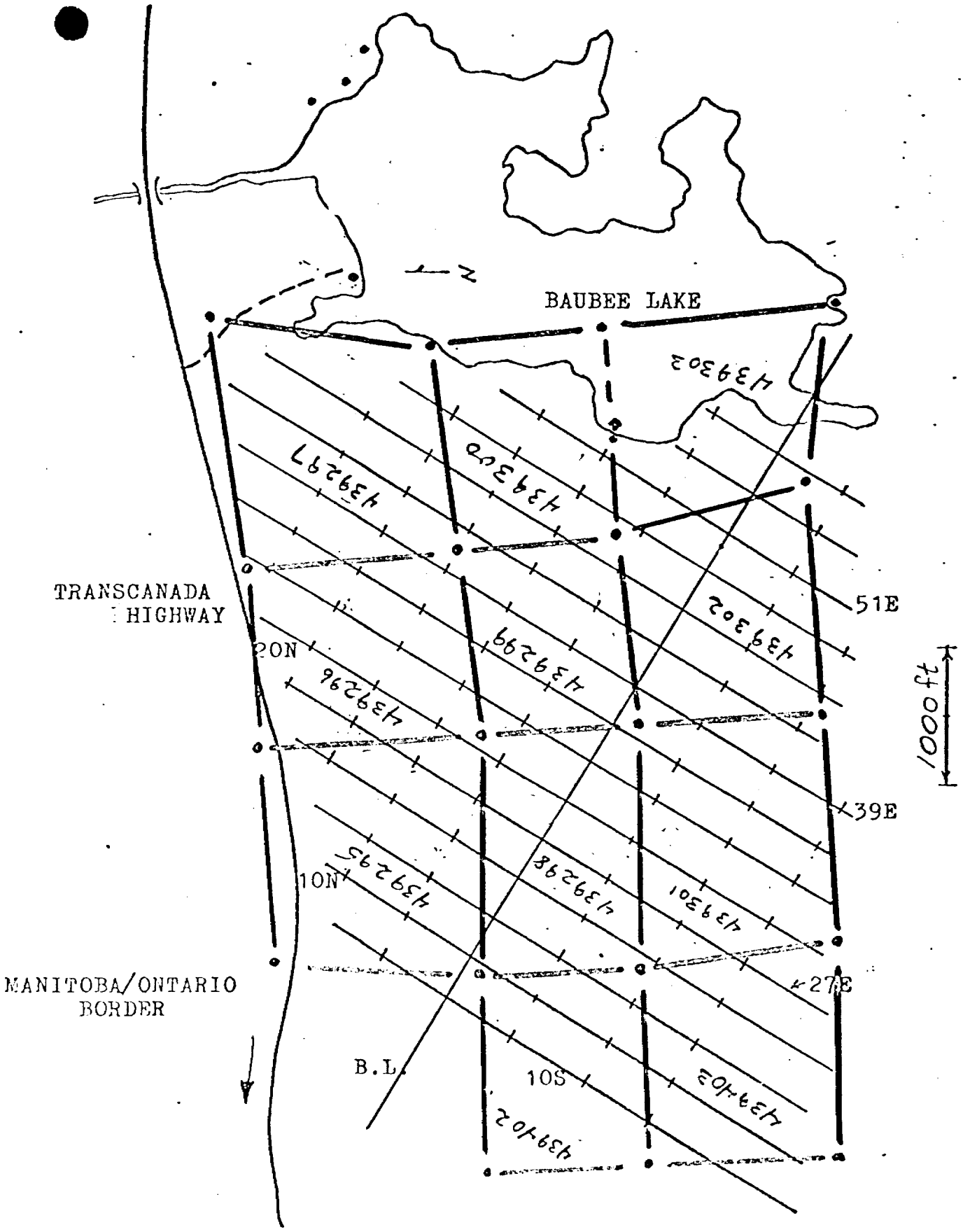


Figure 4. Grid-claim map.

Chris D. Anderson

900

File 2.2448

RECEIVED

JUL 13 1977

MINING LANDS SECTION

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 Magnetics / VLF EM

Township or Area Ewart township

Claim holder(s) Dr. C. D. Anderson

Author of Report Dr. C. D. Anderson

Address 826 Dorchester Avenue, Winnipeg, Manitoba.

Covering Dates of Survey May 8-May 16
(linecutting to office)

Total Miles of Line cut 10.26

SPECIAL PROVISIONS CREDITS REQUESTED

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

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
--Electromagnetic	20
--Magnetometer	40
--Radiometric	except
--Other	
Geological	
Geochemical	

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

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

DATE: July 8, 77 SIGNATURE: Chas D Anderson
Author of Report or Agent

PROJECTS SECTION L.D.

Res. Geol. _____ Qualifications 2.461

Previous Surveys _____

Checked by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

	(prefix)	(number)	EM	MAG
K		439295	✓	✓
K		439296	✓	✓
K		439297	✓	✓
K		439298	✓	✓
K		439299	✓	✓
K		439300	✓	✓
K		439301	✓	✓
K		439302	✓	✓
K		439303	1/2	1/2
K		439402	1/3	1/3
K		439403	✓	✓

If space insufficient, attach list

TOTAL CLAIMS 11

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 1083 Number of Readings 3 x 1083 = 3249

Station interval 50 ft.

Line spacing 300 ft.

Profile scale or Contour intervals MAG and VLF Data values written on maps.
(specify for each type of survey)

MAGNETIC

Instrument Scintrex Flux Gate Magnetometer, Model MF-2, Serial #002104

Accuracy - Scale constant ± 5 Gammas. Scale reading accuracy.

Diurnal correction method graphical

Base station location 24 feet west of L24 + 00E along base line

ELECTROMAGNETIC

Instrument Geonics EM-16 VLF unit, Serial #166

Coil configuration

Coil separation

Accuracy ± 0.5%, both values.

Method: ☒ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency 18.6KHz Seattle, Washington
(specify V.L.F. station)

Parameters measured % slope of major axis; ellipse ratio in %.

GRAVITY

Instrument

Scale constant

Corrections made

Base station value and location

Elevation accuracy

INDUCED POLARIZATION – RESISTIVITY

Instrument

Time domain Frequency domain

Frequency Range

Power

Electrode array

Electrode spacing

Type of electrode

NOTES

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

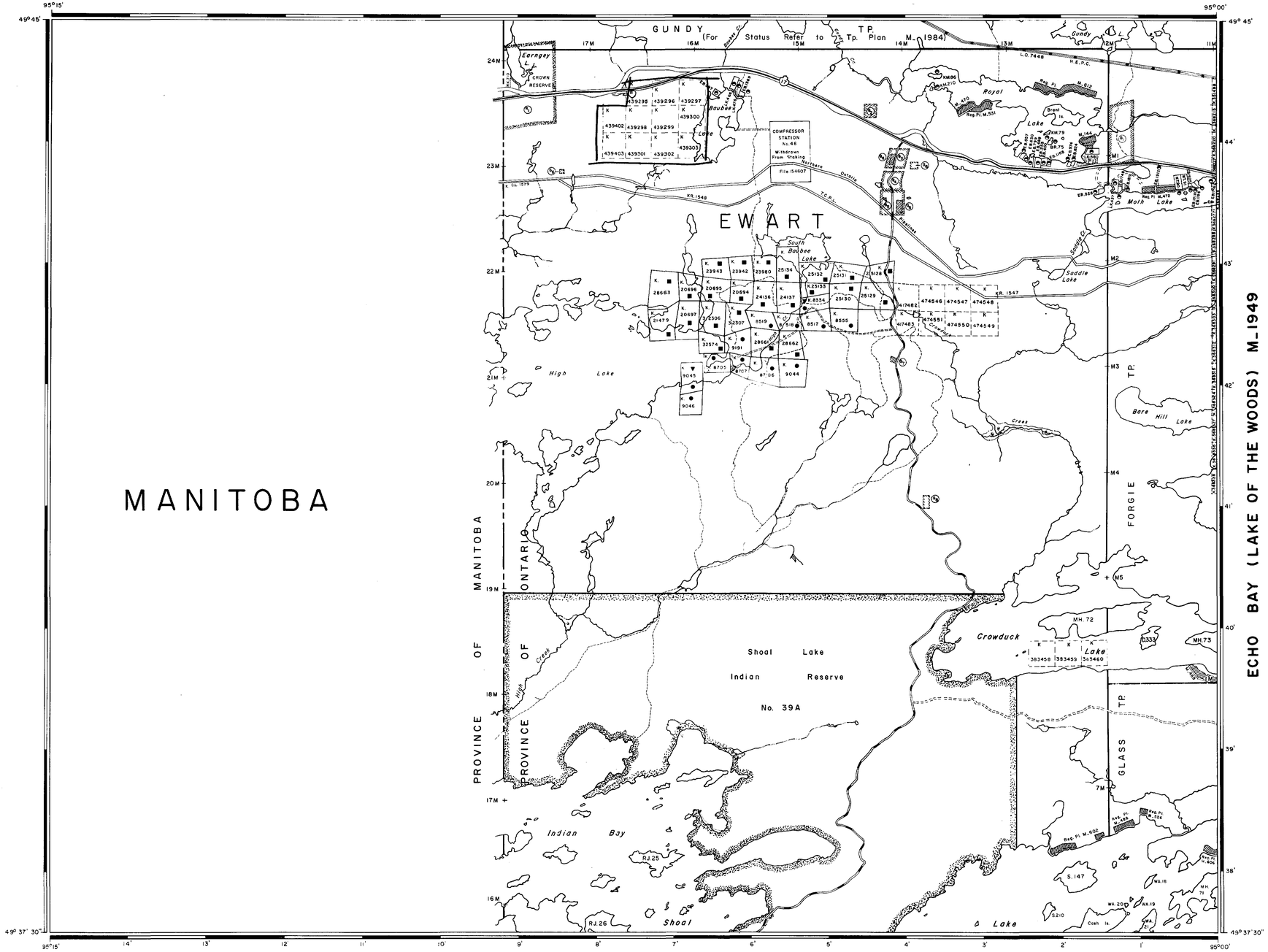
AREAS WITHDRAWN FROM STAKING

S.R.- SURFACE RIGHTS / M.R. - MINING RIGHTS	Section	Order No.	Date	Disposition	File
(R)	42 (R.S.O.1960)			S.R	163473 v.2
(R)(M)	43 (R.S.O.1970)	W 68/76	24/11/76	S.R	163473 v.5

SAND & GRAVEL

	TYPE	P.T	FILE
(S)	M.T.C	471	99852
(S)	M.N.R.		150251
(S)	M.N.R.	287	
(S)	M.N.R.	288	ODM 528 SW
(S)	M.T.C.	289	
(S)	Gravel		150251
(S)	M.T.C.	1400	
(S)	M.T.C	1029	

MANITOBA



SNOWSHOE BAY (SHOAL LAKE) M-2704

496951

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
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES

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	▼
CROWN LAND SALE	CS
ORDER-IN-COUNCIL	OC
RESERVATION	(R)
CANCELLED	(C)
SAND & GRAVEL	(S)

SCALE: 1 INCH = 40 CHAINS

FEET 0 500 1000 2000 4000 6000 8000
METRES 0 200 400 600 800 1KM 2KM

ACRES	HECTARES
40	16

DATE OF ISSUE
JUL 15 1977
SURVEYS AND MAPPING BRANCH

AREA
EWART TP. AND INDIAN BAY
DISTRICT
KENORA 2.2448
MINING DIVISION
KENORA

Ministry of Natural Resources
Ontario Surveys and Mapping Branch

Date 4th. SEPT. 1973 | Plan No. M-1975
National Topographical Series 52E11

52E11NE9228 2.2448 EWART

200

2.2448

LEGEND

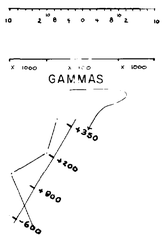
DETAILED MAGNETIC SURVEY - BAUBEE LAKE GRID

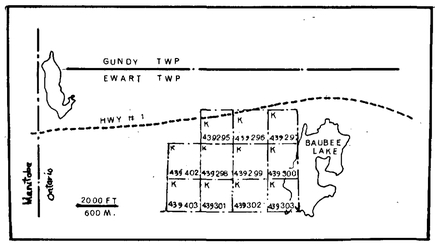
MAY 1977

INSTRUMENT: Scintrex Flux Gate Magnetometer
Model MF-2

GRID: 300 ft. line spacing
50 ft. station interval

VERTICAL DECADE SCALE:
(positive values on NW side)





TRANS CANADA HIGHWAY

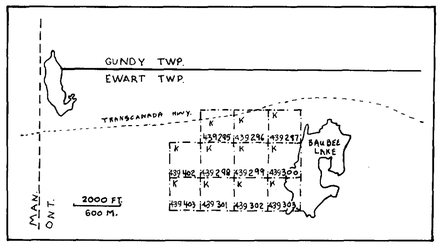
5+00N
15+00N
25+00N
5+00S
10+00S
15+00S
20+00S
25+00S
Base Station
439295
439296
439297
439298
439299
439300
439301
439302
439303
439402
439403
BAUBEE LAKE
B.L.
N

15+00E 18+00E 21+00E 24+00E 27+00E 30+00E 33+00E 36+00E 39+00E 42+00E 45+00E 48+00E 51+00E 54+00E 57+00E

0 200 400 600 800 1000 FEET
0 60 120 180 240 300 METERS

BAUBEE LAKE GRID
VLF MAP - MAY 1977
INSTRUMENT: Ronka EM-16
GRID: 300 ft. line spacing
50 ft. station interval
STATION: Washington (18.6 KHz.)

(+70, -5) - (dip, ratio)
dip in percent slope
ellipse ratio in percent



TRANS CANADA HIGHWAY

Proper Crossover (all lines)

VLF STATION

439295 439296 439297 439298 439299 439300 439301 439302 439303 439401 439402 439403

BAUBEE LAKE

B.L.

SCALE (%)
60 40 20 0 20 40 60

N

15+00E 18+00E 21+00E 24+00E 27+00E 30+00E 33+00E 36+00E 39+00E 42+00E 45+00E 48+00E 51+00E 54+00E 57+00E

0 200 400 600 800 1000 FEET
0 60 120 180 240 300 METERS

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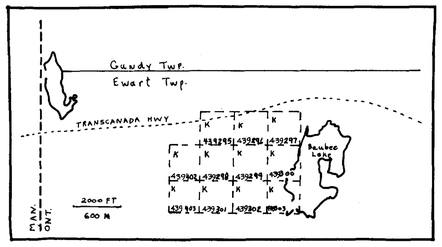
BAUBEE LAKE GRID
VLF FRASER-FILTER MAP - MAY 1977
INSTRUMENT: Ronka EM-16
GRID: 300 ft. line spacing
50 ft. station interval
STATION: Washington (18.6 KHz)
CONTOURS: +50, +100, +150, only
(see report for details)



TRANS CANADA HIGHWAY
BAUBEE LAKE
B.L.
VLF STATION
439295
439296
439297
439298
439299
439300
439301
439302
439303
439402
439403
50
100
150
N
15+00E 18+00E 21+00E 24+00E 27+00E 30+00E 33+00E 36+00E 39+00E 42+00E 45+00E 48+00E 51+00E 54+00E 57+00E
0 200 400 600 800 1000 FEET
0 60 120 180 240 300 METERS