

2. 2142

Report No. D60R
N.T.S. No. 32-D-4



32D04SE0103 2.2142 MCFADDEN

RECEIVED

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PROJECTS UNIT

DIGHEM SURVEY
OF
AREA "RR", LARDER LAKE AREA, ONTARIO
FOR
GEOPHYSICAL ENGINEERING LIMITED
BY
DIGHEM LIMITED

Toronto, Ontario
May 19, 1976

D. C. Fraser
President

S U M M A R Y

A DIGHEM survey of 100 line-miles was flown at a 1/8th mile line-spacing for Geophysical Engineering Limited on behalf of the Dighem Syndicate. The survey was flown on April 13th, 1976, in the Larder Lake area of Ontario (Figure 1). A total of 32 anomalous EM responses were recorded, 22 of which are of the first (or lowest) conductance grade. Many of the latter probably are surface effects, as indicated by the interpretation on the EM map. A few bedrock conductors were located, with conductances up to the third grade. All are of medium to short length.

LOCATION MAP

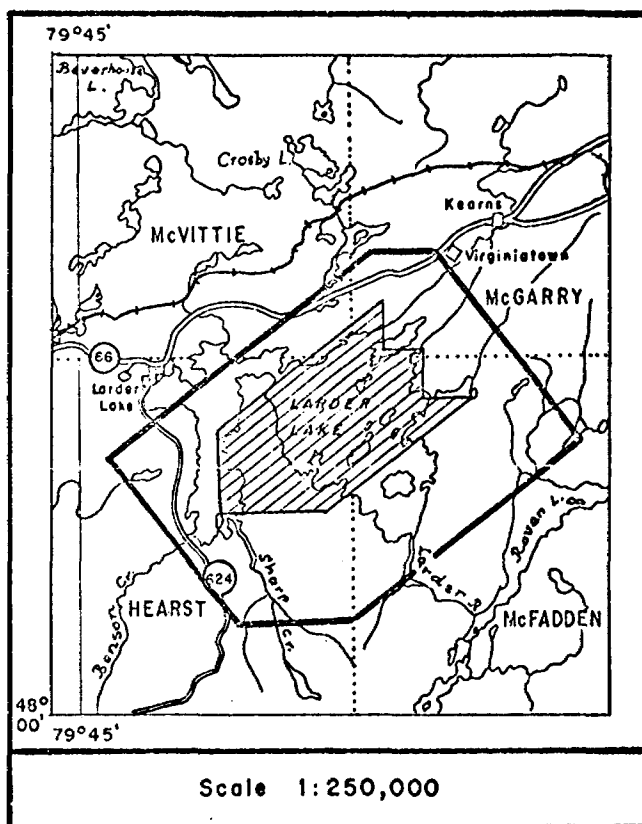


FIGURE 1. The survey area.

CONDUCTORS IN THE SURVEY AREA

The DIGHEM map provides an interpretation of conductors as to their length, strike direction, depth, and conductance quality or conductivity-thickness product in mhos. These conductors should be correlated with the known geology to assess their relative importance prior to ground followup.

When studying the EM map for followup planning, consult the anomaly listings appended to this report to ensure that none of the conductors are overlooked. The original map may be printed with topography burned out, so that only the anomalies remain clearly visible, assuring that all conductors are clearly identified.

The area is almost completely covered by Larder Lake. A total of 32 conductive anomalies were detected, as shown in Table I, of which 22 are of the first (or lowest) conductance grade. Many of the latter are likely to be surface effects.

TABLE 1. Distribution of EM Anomalies

<u>Anomaly Grade</u>	<u>Number of Anomalies</u>
6	0
5	0
4	0
3	5
2	5
1	22
Total	32

The following anomalies may be of interest. Refer to the Reference map for the conductor locations.

GROUP 1 The three single-line grade 1 anomalies in this grouping may be caused by conductive overburden. However, their occurrence along a trend line suggests that they may reflect a bedrock feature, although the magnetic pattern is somewhat at variance with this trend direction.

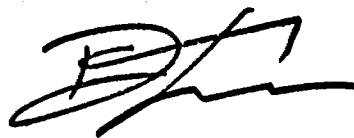
GROUP 2 This grouping consists of several short grade 1 conductors, some of which are either questionable or may be caused by overburden. Anomalies 14A-16A and 15B-16B are non-magnetic but follow the magnetic trend.

GROUP 3 The magnetic and non-magnetic bedrock conductors in this group have conductances up to the third grade.

GROUP 4

A pair of grade 1 bedrock conductors appears to run across three lines, generally correlating with the peak of a long magnetic high.

Respectfully submitted,



Toronto, Ontario
May 19th, 1976

D. C. Fraser
President

* Qualifications 63.2278 Vol.1

The following maps accompany this report:

Dwg. 5277a	Electromagnetic	1 map sheet
Dwg. 5277b	Magnetic	1 map sheet
Dwg. 5277c	Enhanced magnetic	1 map sheet
Dwg. 5277d	Reference map	1 map sheet

LINE & ANOMALY	STANDARD COIL		NULL-COILS FTSH WHALE		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH	
	REAL PPM	QUAD PPM	QUAD PPM	QUAD PPM	COND MHOS	DEPTH* FEET	COND MHOS	DEPTH FEET	RESIS OHM-M	DEPTH FEET
2A	0	4	2	2	1	0	1	0	972	0
3A	0	5	0	0	1	0	1	0	1007	0
5A	0	4	0	1	1	0	1	0	1007	0
6A	2	6	1	3	1	54	1	225	195	84
7A	0	9	1	6	1	0	1	0	1007	0
9A	3	8	-1	4	2	12	1	173	147	37
13A	3	22	5	6	1	8	1	76	288	0
13B	5	12	2	4	3	0	1	149	95	23
14A	5	10	1	2	3	39	1	209	74	86
14B	2	9	-1	3	1	0	1	103	255	0
15A	3	5	0	2	3	121	1	339	92	202
15B	3	6	1	5	3	91	1	299	100	158
16A	0	4	0	0	1	0	1	0	1007	0
16B	0	4	0	3	1	0	1	0	971	0
16C	0	7	0	1	1	0	1	0	1007	0
17A	2	10	0	2	1	0	1	103	260	0
18A	8	10	3	3	5	107	2	290	44	187
18B	2	6	0	2	1	60	1	231	195	90
19A	0	9	-1	5	1	0	1	0	1007	0
19B	0	3	-3	3	1	0	1	0	878	15
19C	6	6	-1	3	5	90	2	310	42	198
19D	10	6	-2	3	15	127	4	352	9	274
19E	5	4	1	3	9	152	3	419	21	315
19F	12	6	2	2	17	77	4	290	8	217

* ESTIMATED DEPTH MAY BE UNRELIABLE BECAUSE THE STRONGER PART OF THE CONDUCTOR MAY BE DEEPER OR TO ONE SIDE OF THE FLIGHT .

LINE & ANOMALY	STANDARD COIL		NULL-COILS FISH WHALE		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH	
	REAL PPM	QUAD PPM	QUAD PPM	QUAD PPM	CONC MHOS	DEPTH* FEET	COND MHOS	DEPTH FEET	RESIS OHM-M	DEPTH FEET
20A	6	4	2	4	10	136	3	391	17	295
20B	22	15	3	10	15	36	4	203	9	136
20C	19	14	1	8	13	48	4	219	11	147
20D	7	5	1	5	9	135	3	373	21	272
21A	0	8	2	3	1	0	1	0	1007	0
21B	1	8	2	4	1	0	1	55	598	0
21C	0	14	0	7	1	0	1	0	1007	0
21D	5	5	-1	3	5	106	2	339	47	221

* ESTIMATED DEPTH MAY BE UNRELIABLE BECAUSE THE STRONGER PART
 OF THE CONDUCTOR MAY BE DEEPER OR TO ONE SIDE OF THE FLIGHT
 LINE, OR BECAUSE OF A SHALLOW DIP OR OVERBURDEN EFFECTS.



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Recorded Holder	P. J. Wright
Township or Area	Hearst and McFadden Townships

Type of survey and number of Assessment days credit per claim	Mining Claims
Geophysical Electromagnetic _____ 22 _____ days Magnetometer _____ 22 _____ days Radiometric _____ days Induced polarization _____ days Section 86 (18) _____ days Geological _____ days Geochemical _____ days Man days <input type="checkbox"/> Airborne <input checked="" type="checkbox"/> Special provision <input type="checkbox"/> Ground <input type="checkbox"/>	L. 396187 to 205 inclusive 396211 407268 to 83 inclusive 442065 to 68 " 446626 - 27 - 30 446633 - 34 446636 to 41 inclusive 446644 - 45 446668 to 87 inclusive 447072 to 109 " 447111 447156 to 59 inclusive 447165 to 85 "
Notice of Intent to be issued: <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. <input checked="" type="checkbox"/> No credits have been allowed for the following mining claims as they were not sufficiently covered by the survey: L. 396206 to 10 inclusive _____ 446631 - 32 _____ 446635 _____ 447110 _____ 447150 _____ 447160 to 64 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;

McVITTIE TWP. M-370

THE TOWNSHIP OF 2.2142

HEARST

DISTRICT OF TIMISKAMING

LARDER LAKE MINING DIVISION

SCALE: 1-INCH 40 CHAINS


LEGEND

- PATENTED LAND ● or P
- CROWN LAND SALE C.S.
- LEASES L
- LOCATED LAND Loc.
- LICENSE OF OCCUPATION L.O.
- MINING RIGHTS ONLY M.R.O.
- SURFACE RIGHTS ONLY S.R.O.
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES
- CANCELLED
- PATENTED S.R.O.

NOTES

400' Surface Rights reservation along the shores of all lakes and rivers.

Township of Hearst lies entirely within the CORPORATION of the TOWNSHIP OF LARDER LAKE. File: 129282.

Staking of mining claims within the Town of Larder Lake shown thus  subject to Sec. 37(b) of the Mining Act (R.S.O. 1970).

DATE OF ISSUE
JUL - 2 1976
SURVEYS AND MAPPING
BRANCH

PLAN NO. M-354

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

McELROY TWP. M-366

McFADDEN TWP. M-368

SKEAD TWP. M-387



32045E0103 2.2142 MCFADDEN

McGarry Twp.

THE TOWNSHIP
OF 22142

McFADDEN

DISTRICT OF
TIMISKAMING

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

PATENTED LAND	Ⓟ
CROWN LAND SALE	C.S.
LEASES	Ⓛ
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	—
IMPROVED ROADS	—
KING'S HIGHWAYS	—
RAILWAYS	—
POWER LINES	—
MARSH OR MUSKEG	—
MINES	X
CANCELLED	C.

NOTES

400' Surface rights reservation around all lakes and rivers.

L.O. 12010 shown thus: —

Areas withdrawn from staking under Section 43 of the Mining Act (R.S.C. 1970)

Order No.	File	Date	Disposition
Ⓟ W52/74	142174	15/10/74	S.R.O.

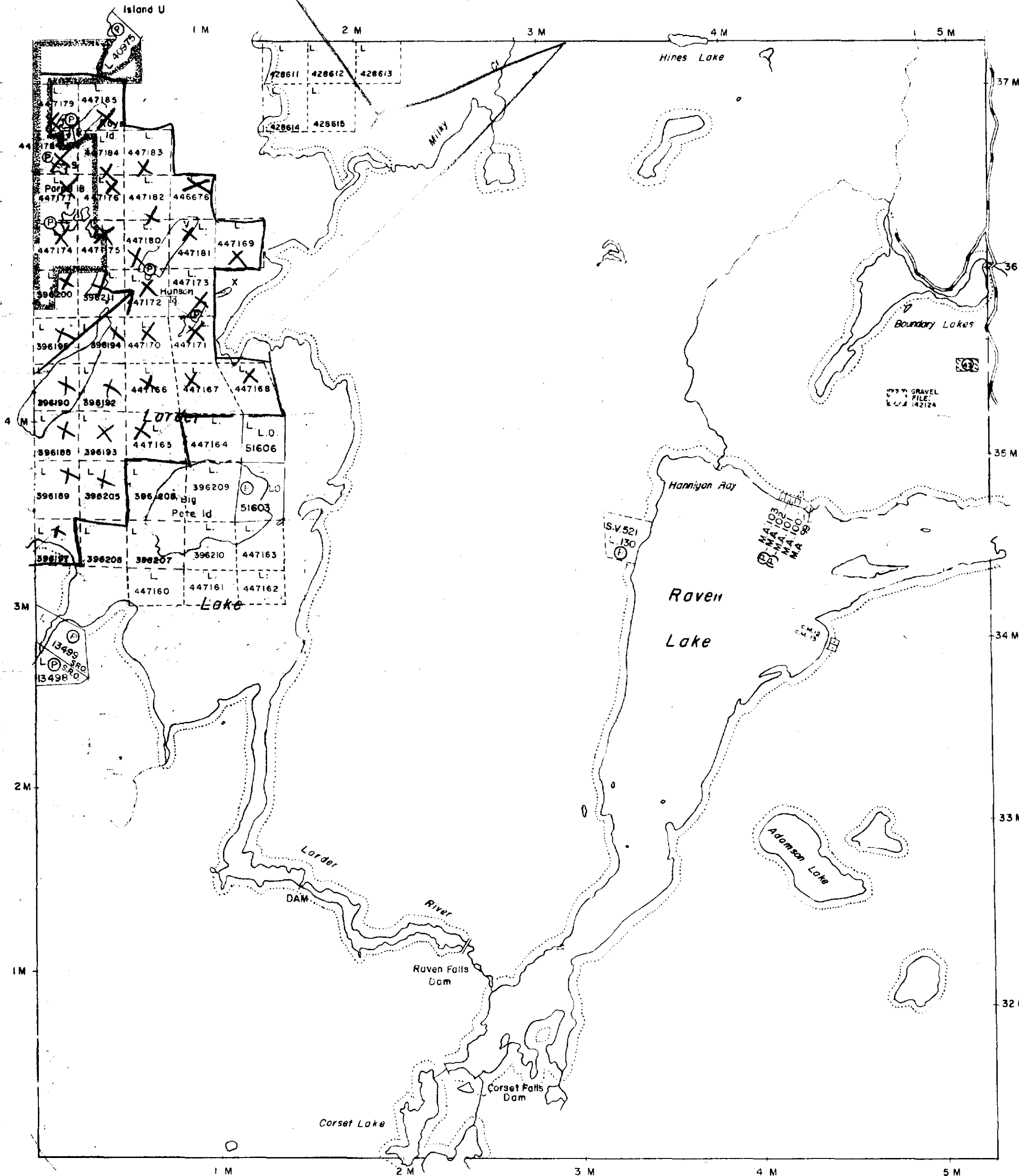
DATE OF ISSUE

JUL - 2 1976

SURVEYS AND MAPPING
BRANCH

PLAN NO. - M.368

MINISTRY OF NATURAL RESOURCES



PROVINCE OF QUEBEC

Ratray Twp.



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AREA "RR"

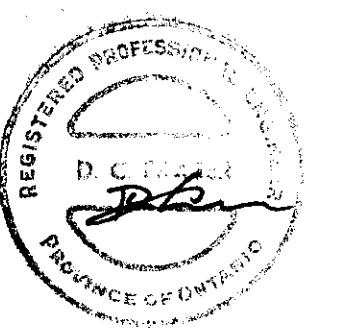
LARDER LAKE, ONTARIO

DIGHEM SURVEY

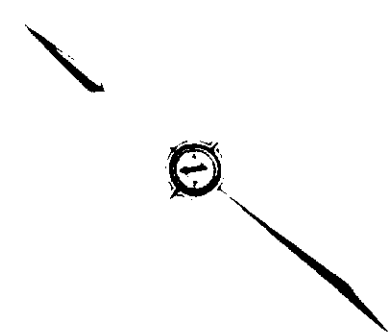
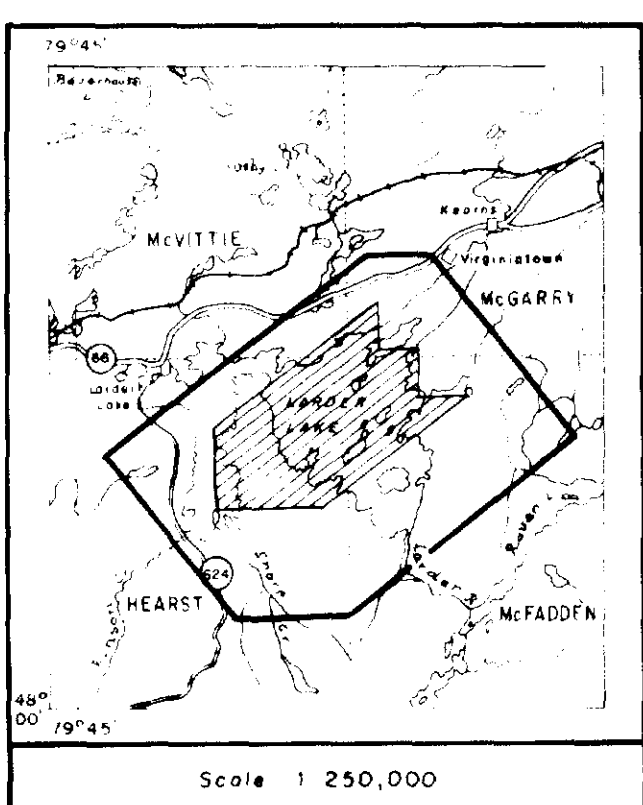
REFERENCE FOR REPORT

FOR

GEOPHYSICAL ENGINEERING LIMITED



LOCATION MAP



Electromagnetics
Enhanced Magnetics





AREA "RR"

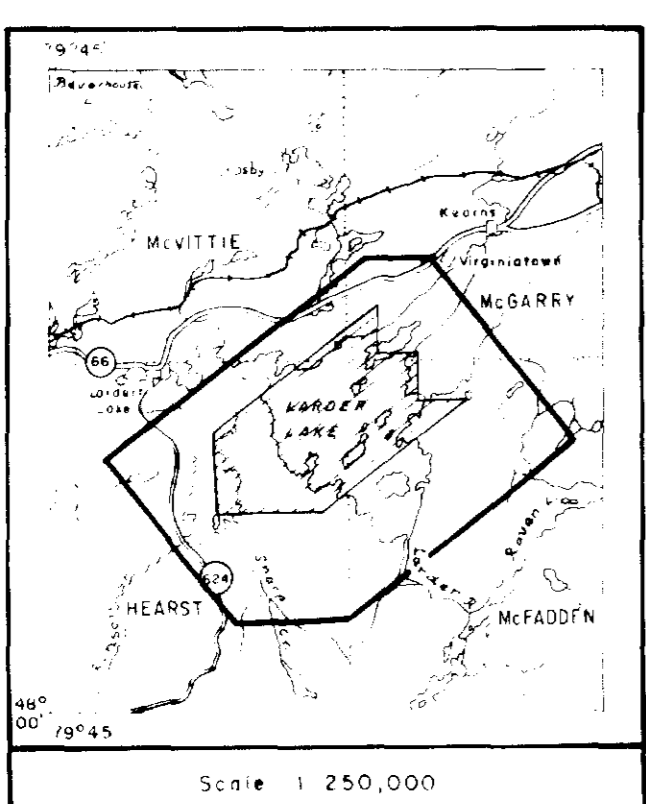
LARDER LAKE, ONTARIO

DIGHEM SURVEY ENHANCED MAGNETICS

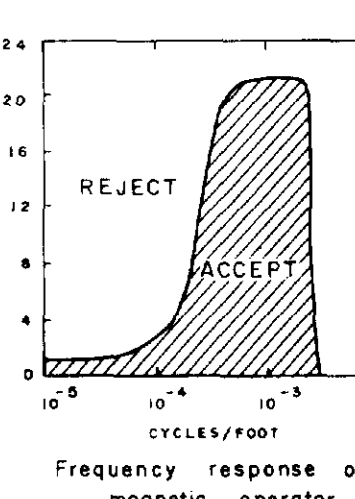
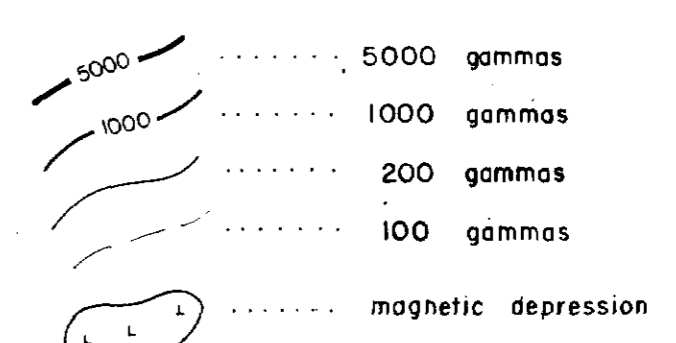
FOR

GEOPHYSICAL ENGINEERING LIMITED

LOCATION MAP

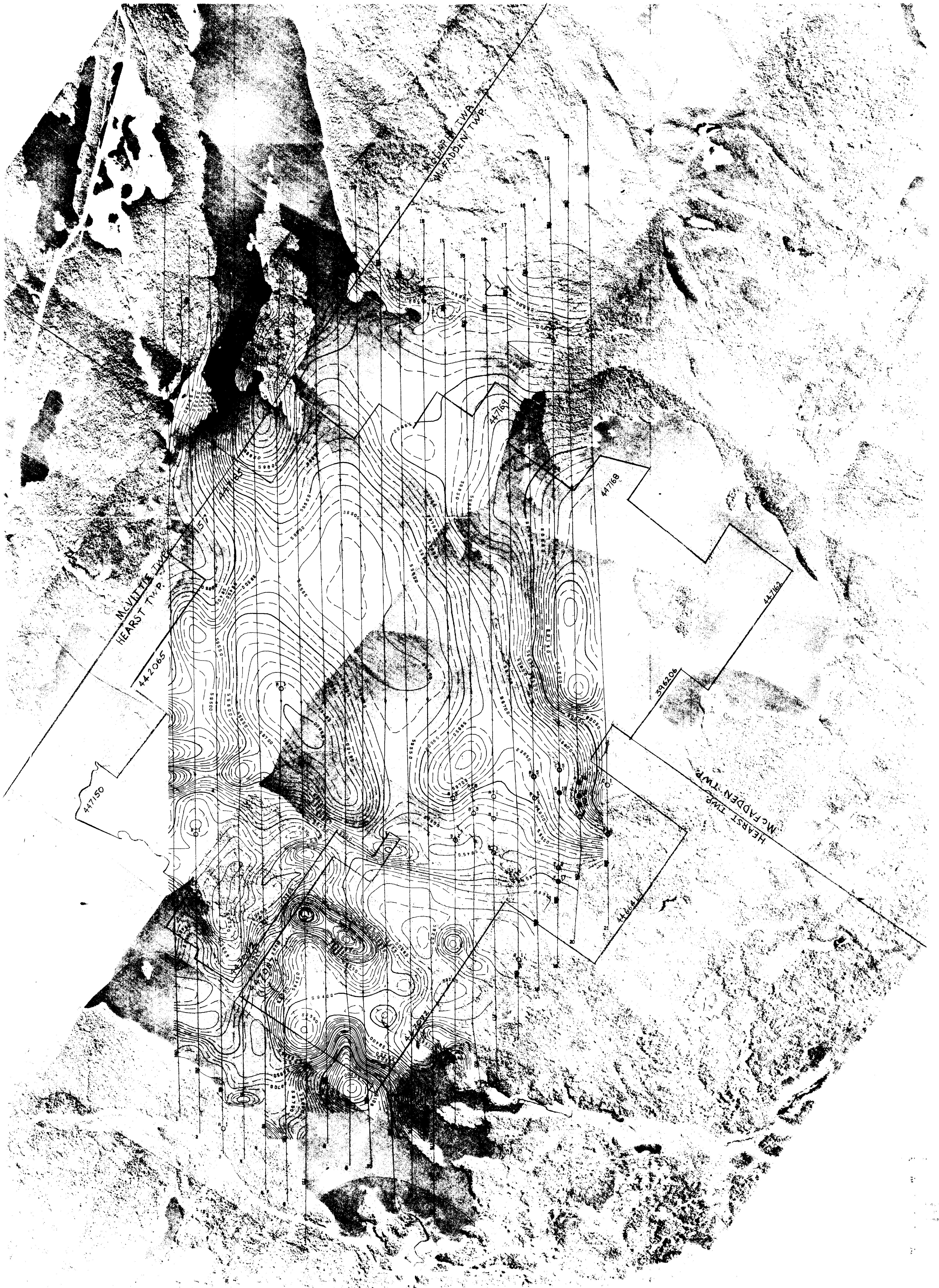


ISOMAGNETIC LINES
(enhanced field)



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AREA "RR"

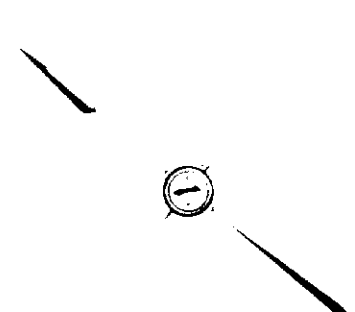
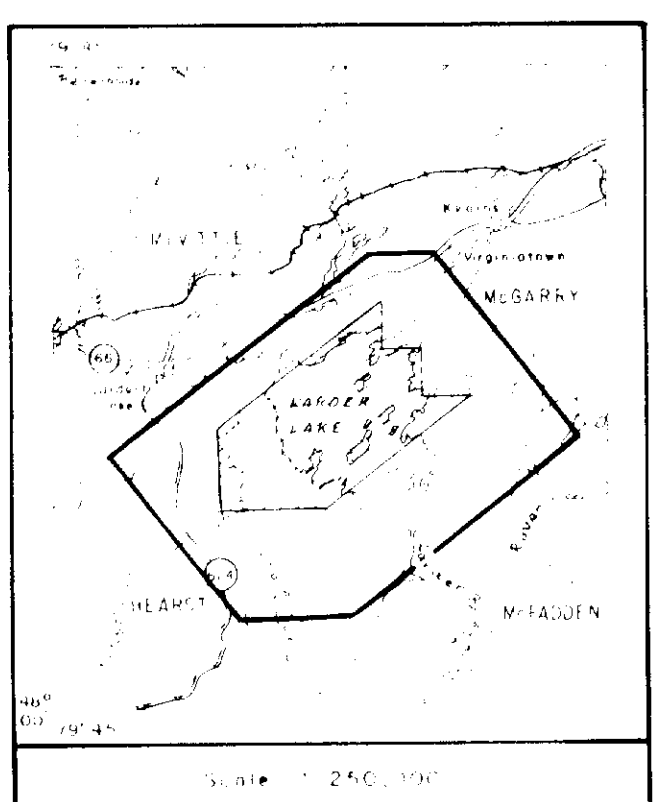
LARDER LAKE, ONTARIO

DIGHEM SURVEY MAGNETICS

FOR

GEOPHYSICAL ENGINEERING LIMITED

RELATION MAP



ISOMAGNETIC LINES

(total field)

- 1000 gammas
- 200 gammas
- 50 gammas
- 25 gammas
- magnetic depression



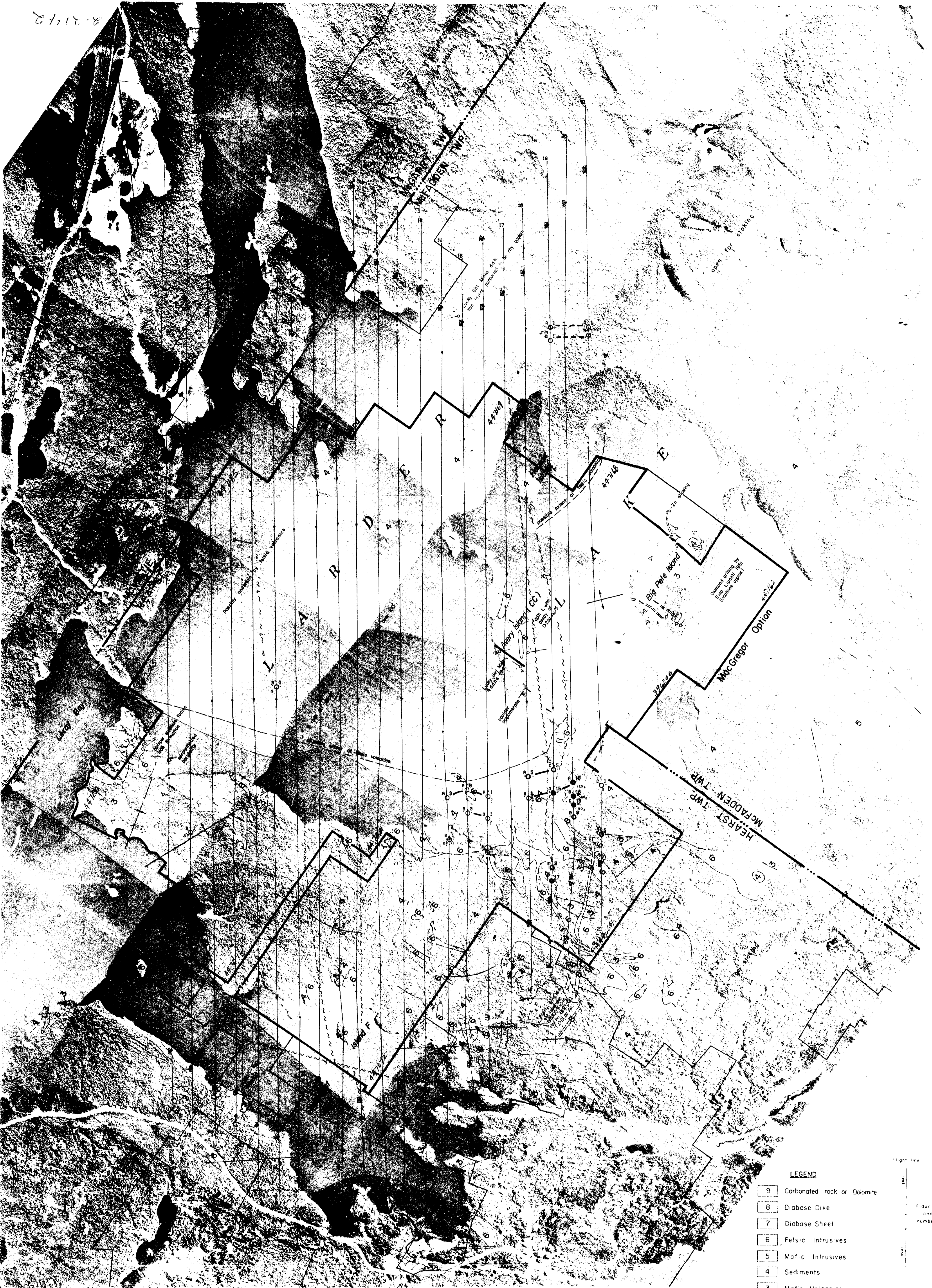
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Seings by H.J.
 Draw work by R.D.
 Printed by R.D.
 Checked in tin by H.J.

LEGEND

- 9 Carbonated rock or Dolomite
- 8 Diabase Dike
- 7 Diabase Sheet
- 6 Felsic Intrusives
- 5 Mafic Intrusives
- 4 Sediments
- 3 Mafic Volcanics
- 2 Felsic + Intermediate Volcanics
- 1 Felsic Volcanics

Geological information from QDM maps
 1947-1, 50a & 50b Scale 1"=1000'

AREA "RR"

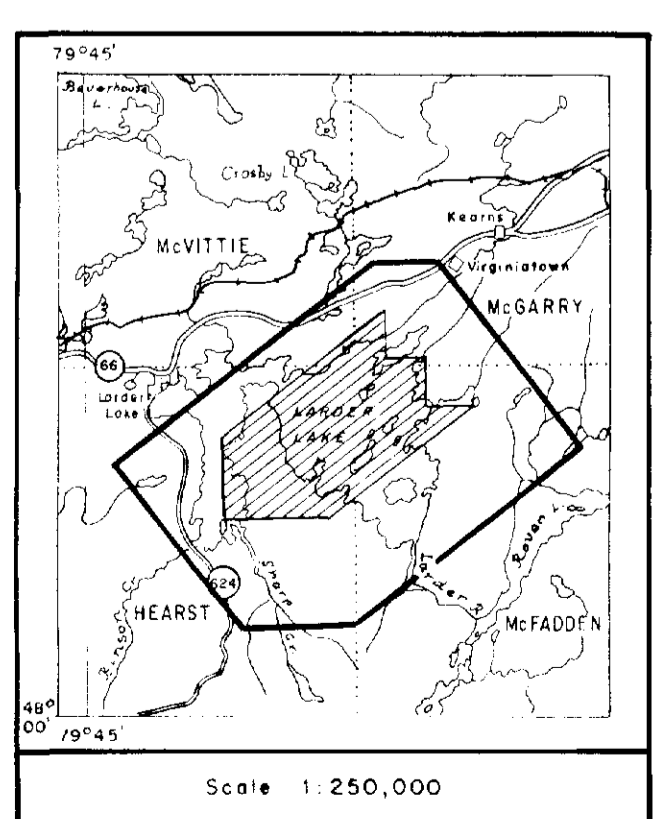
LARDER LAKE, ONTARIO

DIGHEM SURVEY ELECTROMAGNETICS

FOR

GEOPHYSICAL ENGINEERING LIMITED

LOCATION MAP



SYMBOL	DESCRIPTION	REMARKS
●	100m	
○	200m	
○	300m	
○	400m	
○	500m	
○	600m	
○	700m	
○	800m	
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○	1100m	
○	1200m	
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