

2.496



TEXAS GULF SULPHUR COMPANY
REPORT ON GEOPHYSICAL WORK

on

JOFFRE TOWNSHIP

CLAIM GROUP NO.53 (Claim numbers: 263975, 263980 & 263981)

A geophysical survey, consisting of both magnetic and electromagnetic profiles, was conducted in March of 1971 over this group of three claims situated in the north-central portion of the Township of Joffre in the Sudbury Mining Division. The surveys were conducted on a cut grid with northeast-southwest cross lines spaced at 300 foot intervals. The purpose of the survey was to locate and delineate a conductor recorded in the course of an airborne E-M survey.

The work was performed by a two-man crew supplied by the Jean Alix Company Limited, and direction was provided by the personnel of Texas Gulf Sulphur Company. Total field time was four complete crew days. Drafting time is estimated at one half day and the interpretation, preparation, and writing of this report took one day.

MAY, 1971

ELECTROMAGNETICS:

The grid was surveyed using a Geonics EM-17 Horizontal loop unit. Cable length was 200 feet; normal station interval was 100 feet, decreasing to 50 feet over anomalous sections of the profile.

The Geonics EM-17 unit operates at a frequency of 1600Hz. Readings are taken in percent response of In-Phase and Quadrature signal relative to the primary or transmitted field. A cable between the transmitter and receiver coils supplies the necessary reference signal and also serves to maintain the coils at the correct spacing. Accuracy and repeatability are about \pm 2%.

RESULTS AND INTERPRETATION:

The ground work located two relatively short conductors lying East of the Base Line along a zone striking N25°W. The electromagnetic work suggests that there is no continuity between the two lenses, although magnetic results tend to suggest otherwise.

Apparent conductivity ranges from moderate to high, widths are narrow but may be as much as 20 feet on profile 15S, and dip is estimated at 65 to 70 degrees to the northeast. On the South conductor, the length is slightly in excess of 600 feet whereas the north conductor remains untested north of profile "O", so that its length is probably of the order of 800+ feet.

Apparent depths have been calculated at 65' on Line O, 30' on Line 3S, 20' on Line 15S, and 45' on Line 18S.

MAGNETICS:

The magnetic work was done with a Scintrex MF-1 Fluxgate Magnetometer. This unit measures the relative intensity of the vertical magnetic field and is capable of an accuracy of about 20 gammas.

Readings were taken along the 300 foot cross lines.

Normal station interval was 100 feet, but this was decreased to 50 feet over anomalous portions of the profile or over portions of high magnetic gradient.

RESULTS AND INTERPRETATION:

The magnetic results show that a magnetic trend exists which, in places, is virtually co-incident with the E-M conductor. Over the three northernmost profiles, this mag trend is quite weak, but a very strong, co-incident anomaly exists on Line 15S at 2+50 East. However, the correlation between mag and E-M is not consistent at the South end in view of the strong magnetics on Line 12S where no E-M anomaly was recorded and the weak or non-existent magnetics on Lines 18S and 21S along which anomalous E-M values were recorded.

A narrow, continuous mag trend was mapped in the direction of N10°W from 7+50W on Line O to 0+00 on 24S. This is probably a diabase dyke rather than the reflection of a geologic contact.

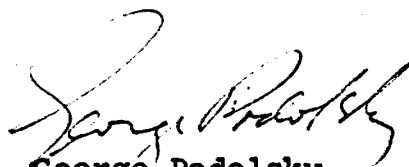
A similar, but weaker feature runs parallel to the Base Line at about 5+00 East. Finally, the isolated anomaly on Line 6S at 3+00East may in fact be related to the stronger mag anomaly to the South, on Line 12S and 15S, and may be a reflection of lithology rather than structure.

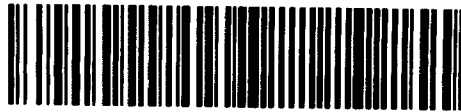
CONCLUSIONS:

There is some ambiguity between the magnetic and electromagnetic data. As a result, it is difficult to decide whether the E-M conductors represent a structural break (i.e. a mineralized shear) or a geologic trend or contact (i.e. sedimentary band). In either event, one might expect that narrow bands of pyrrhotite are the direct cause of these conductors.

WORK SUMMARY:

<u>Type</u>	<u>Name</u>	<u>Co.</u>	<u>Days</u>
Field	G.LeClair	Jean Alix Co.	8
Drafting		"	1/2
Report	G.Podolsky	Texas Gulf Sulphur Co.	1


 George Podolsky,
 Geophysicist.
 Texas Gulf Sulphur Company.



- 1. Type of Survey Geophysical
- 2. Township or Area Joffre Twp.
- 3. Numbers of Mining Claims Traversed by Survey 263980, 263981, and
263975 - for credits;

** 263983 Not covered*

- 4. Number of Miles of Line Cut 2.6 Flown _____
- *5. Number of Stations Established EM-17 150 stations, Fluxgate Mag. 195 stations
- *6. Make and type of Instrument Used Geonics EM-17 horizontal loop, Scintrex MF-1
Fluxgate magnetometer ±208
- *7. Scale Constant or Sensitivity EM-17 ± 2%
- *8. Frequency Used and Power Output 1600 HZ

9. Summary of Assessment Credits (details on reverse side)

Total 8 hour Technical Days (Include Consultants, Draughting etc.) 9.5

Total 8 hour Line-Cutting Days 6

Calculation

$$\frac{9.5}{\text{Technical}} \times 7 = \frac{66.5}{\text{Line-cutting}} + \frac{6}{\text{Number of claims}} = \frac{72.5}{\text{Assessment credits per claim}} \div 3 = \frac{24.1}{\text{Assessment credits per claim}}$$

*12 Mag
12 EM*

The dates listed on this form represent working time spent entirely within the limits of the above listed claims Check
If otherwise, please explain _____

Dated: February 8, 1972

Signed: *S. L. Mannard*
P. Eng.

- Note:
- (A) * Complete only if applicable.
 - (B) Complete list of names, addresses and dates on reverse side.
 - (C) Submit separate breakdown for each type of survey.
 - (D) Submit in duplicate.

ASSESSMENT WORK BREAKDOWN

1. FIELD WORK

<u>Type of Work</u>	<u>Name & Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
EM-17	Le Clair, Georges c/o Jean Alix Ltd. Val D'Or, Que.	Mar. 5-8	2.5
	Beauregard, Arthur c/o Jean Alix, Val D'Or, Que.	Mar. 5-8	2.5
Mag.	Le Clair, Georges c/o Jean Alix, Val D'Or, Que.		1.5
	Beauregard, Arthur		1.5

Number of 8 hour days

2.5

2.5

1.5

1.5

8

2. CONSULTANTS

<u>Name & Address</u>	<u>Dates Worked (specify in field or office)</u>	<u>Number of 8 hour days</u>
G. Podolsky c/o Texas Gulf Sulphur Company P.O. Box 149, Toronto Dominion Centre, TORONTO, Ontario		1

Number of 8 hour days

1

3. DRAUGHTSMAN, TYPING, OTHERS (specify)

<u>Name & Address</u>	<u>Type of Work</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
Trudel Marcel c/o Jean Alix, Val D'Or, Que.	Draughtsman	Mar. 10	0.5

Number of 8 hour days

0.5

TOTAL 8 HOUR TECHNICAL DAYS 9.5

4. LINE-CUTTING

<u>Name</u>	<u>Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
Lamouthe, Claude	c/o Jean Alix Val D'Or, Que.	Feb. 23-25	3
Beauregard, Arthur	c/o Jean Alix	Feb. 23-25	3

Number of 8 hour days

3

3

TOTAL 8 HOUR LINE-CUTTING DAYS 6

JOFFRE

M.959

DATE OF ISSUE
JUL 13 1971
ONT. DEPT. OF MINES
AND NORTHERN AFFAIRS

DISTRICT OF SUDBURY
SUDBURY MINING DIVISION

Claim map

Scale 40 Chains 1 Inch

Areas withdrawn from staking under Section 42 of the Mining Act.

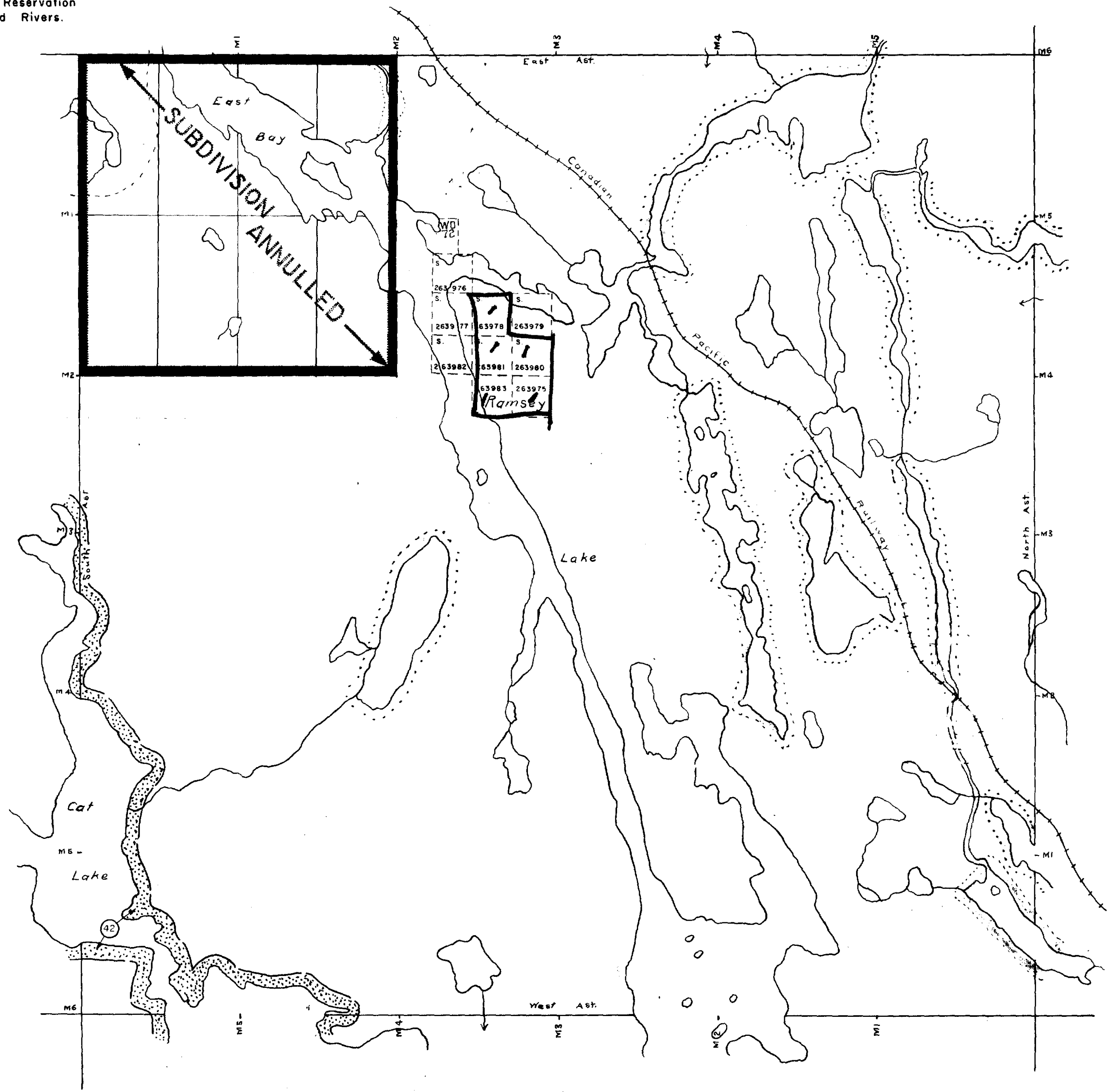
File	Date	Disposition
63196	Sep. 29, 1970	S.R. & M.R.

CAREW

NOTE
400' Surface Rights Reservation
around all Lakes and Rivers.

HALL

TWP. 12



TWP. 11

2.496

ELIZABETH



41008N0002 2.496 JOFFRE



- LEGEND -

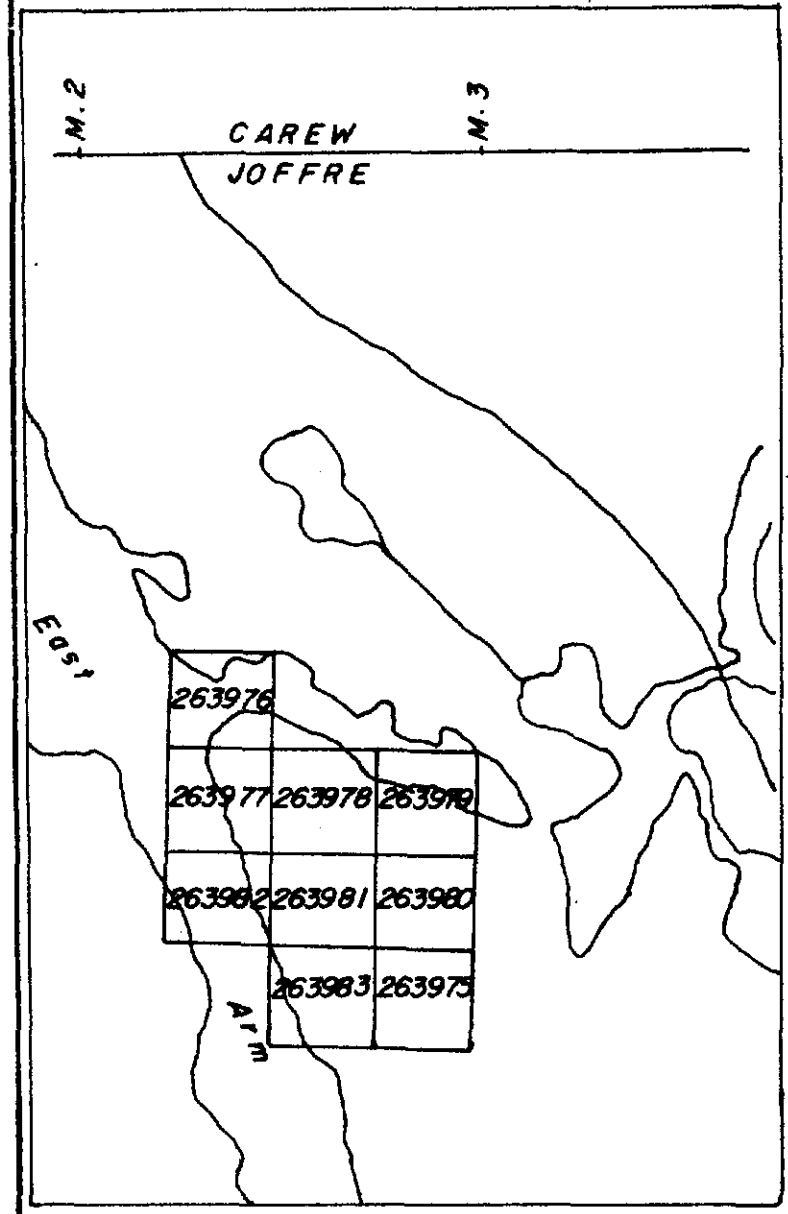
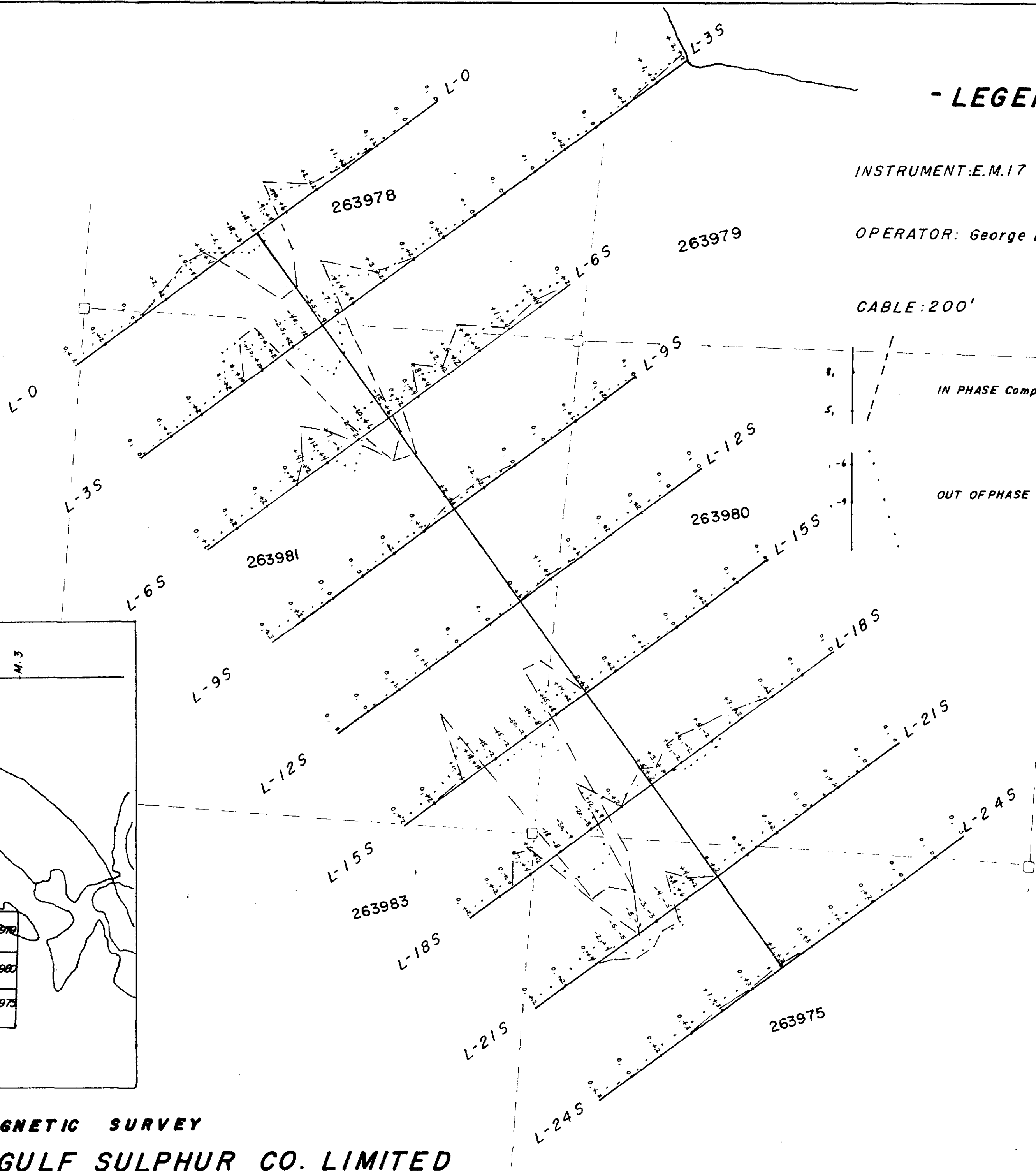
INSTRUMENT: E.M.17 Geonics

OPERATOR: George Leclair

CABLE: 200'

IN PHASE Component, profile: 1"=20%

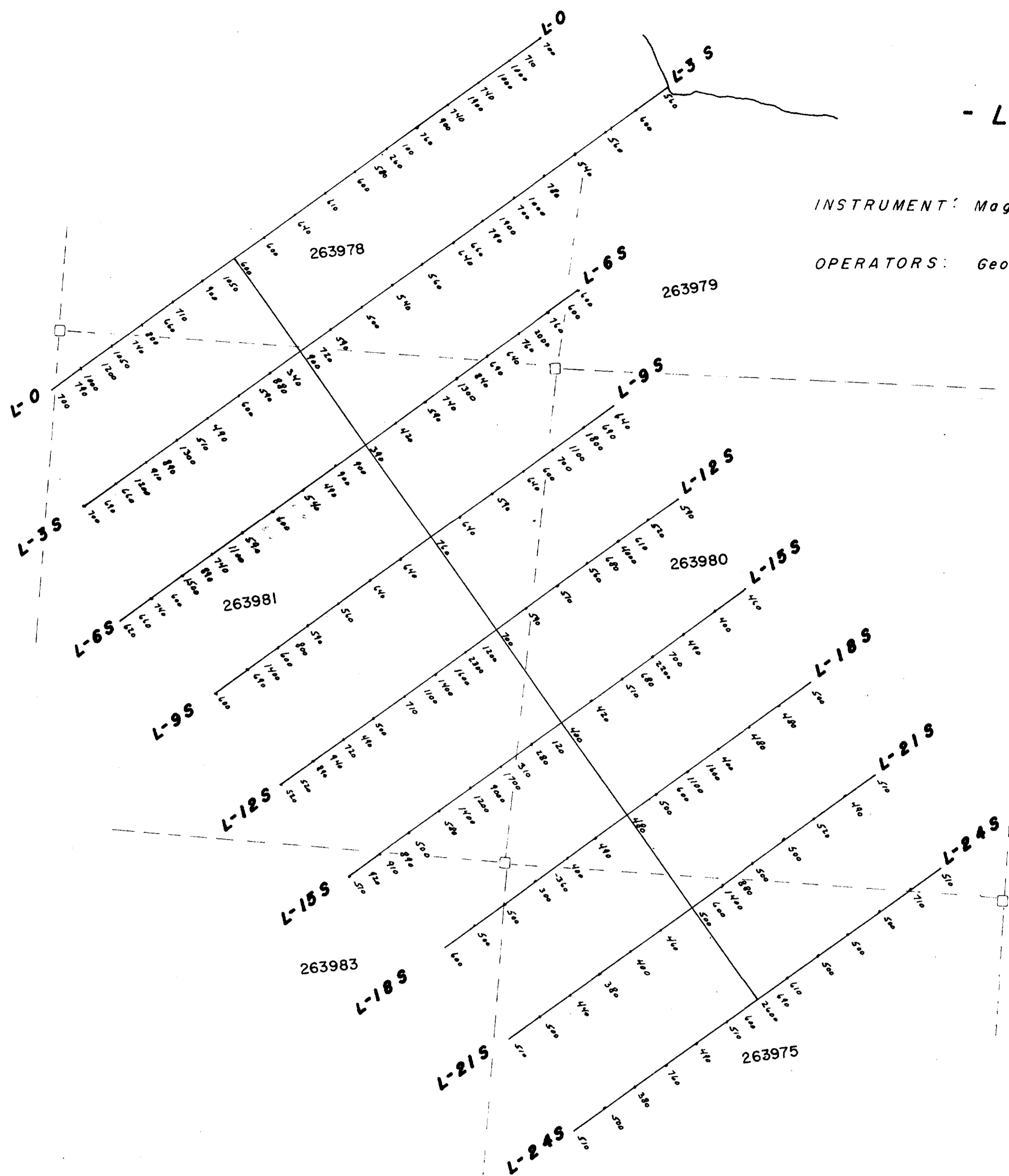
OUT OF PHASE Component, profile: 1"=20%



**ELECTROMAGNETIC SURVEY
TEXAS GULF SULPHUR CO. LIMITED
JOFFRE TWP, GROUP 53**

1" = 200'

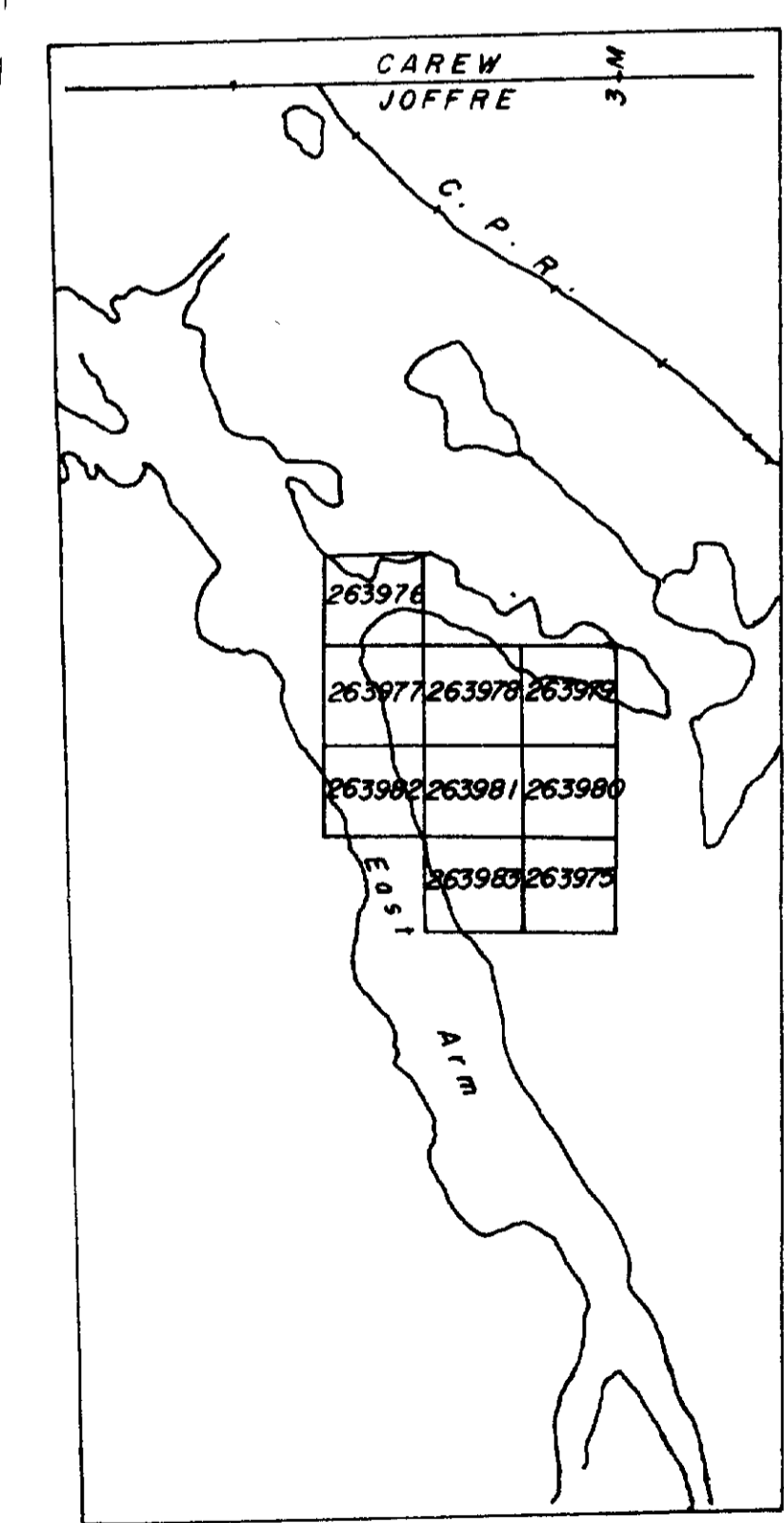




- LEGEND -

INSTRUMENT: Magnetometer MF-1 Fluxgate

OPERATORS: Georges Leclair



MAGNETOMETRIC SURVEY
TEXAS GULF SULPHUR CO. LIMITED

JOFFRE TOWNSHIP, GROUP 53

1" = 200'



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220

Survey done by JEAN ALIX CO. LTD, Val d'Or, Que.

MARCH 1971

Georges Leclair