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MINING LANDS SECTION

GEOPHYSICAL REPORT

LACANA CLAIM GROUP

BENOIT TOWNSHIP

WARDER LAKE MINING DIVISION

Author: Ronald C. Wells, B.Sc.
Lacana Mining Corporation
Toronto, Ontario

September 1980

LOCATION AND ACCESS

The lacana group in Benoit Township consists of six contiguous unpatented claims in the northern part of the Township. The claims are as follows:

1,539,798 NW $\frac{1}{4}$ /N $\frac{1}{2}$ Conc. VI, Lot 4
1,539,799 NE $\frac{1}{4}$ /N $\frac{1}{2}$ Conc. VI, Lot 5
1,539,800 NW $\frac{1}{4}$ /N $\frac{1}{2}$ Conc. VI, Lot 5

1,565,024 SW $\frac{1}{4}$ /N $\frac{1}{2}$ Conc. VI, Lot 4
1,565,025 SE $\frac{1}{4}$ /N $\frac{1}{2}$ Conc. VI, Lot 5
1,565,026 SW $\frac{1}{4}$ /N $\frac{1}{2}$ Conc. VI, Lot 5

This assessment report covers geophysical surveys conducted on the property during the first nine months of 1980. Access to the property is by way of the Township's northern boundary road from Highway 11.

PREVIOUS WORK

The only previous work recorded on the property is that by Noranda, 1972-73. Noranda conducted a VEM survey in 1972 and outlined an easterly trending conductor 3,000 feet long in the northern claims. The conductor was tested with a single hole in 1973; after 200 feet of overburden, the hole intersected intermediate volcanic flows with minor amounts of sulfides and a few graphitic sections.

TOPOGRAPHY AND GENERAL GEOLOGY

The claims are in a low lying region of low relief with open poplar and birch woods on the higher ground in the north and alder swamps on the lower ground around Black River.

Levell and assistants mapped Benoit Township on the scale of 1 inch to ½ mile (Geol. Rep. 92, 1971). Except for a single outcrop of intermediate to felsic volcanic rocks in the extreme north, the area is covered by thick glacial overburden.

GEOPHYSICS

(A) INTRODUCTION

The claims were staked to cover three airborne EM conductors. A grid approximately 2 miles long was cut and chained by Lacana personnel during April and August 1980. A CEM horizontal shootback survey was conducted on the northern 3 claims during April 1980 by Geox Ltd. of Timmins. During August 1980, Lacana personnel conducted Max Min II EM, CEM horizontal shootback and magnetic surveys over claim L565024.

(B) CEM HORIZONTAL SHOOTBACK SURVEY

This survey was conducted with a Crone CEM unit with 300 foot coil separation and at 390 Hz. and 1830 Hz. frequencies. Readings were taken in line at 100 foot intervals; the results are shown in Figure 1.

A well defined, fairly strong conductor A with east-west trend is apparent between lines 0 and 13+20W. The position of conductor A roughly coincides with the VEM conductor determined by the 1972 Noranda survey.

(C) MAX MIN II HORIZONTAL LOOP EM SURVEY

This survey took place during early August 1980

with an Apex Max Min II EM unit on claims L539798 and L565024. Both 1777 Hz. and 444 Hz. frequencies were used with 400 foot coil separation and 100 foot station intervals. The results are shown in Figure 2.

The survey indicated that a fairly strong conductor with northerly trend occurs close to the baseline in claim L565024.

(D) CEM FOLLOW-UP SURVEY

Three lines of horizontal shootback CEM were run during August 1980 by Iacana as a follow-up to the Max Min survey to better define the conductor. Readings were taken in line at 100 foot intervals with 300 foot coil separation using high and medium frequencies. The results are shown in Figure 1.

The survey indicated a north trending conductor (B) with a slightly different position to that determined from the Max Min survey.

(E) MAGNETIC SURVEY

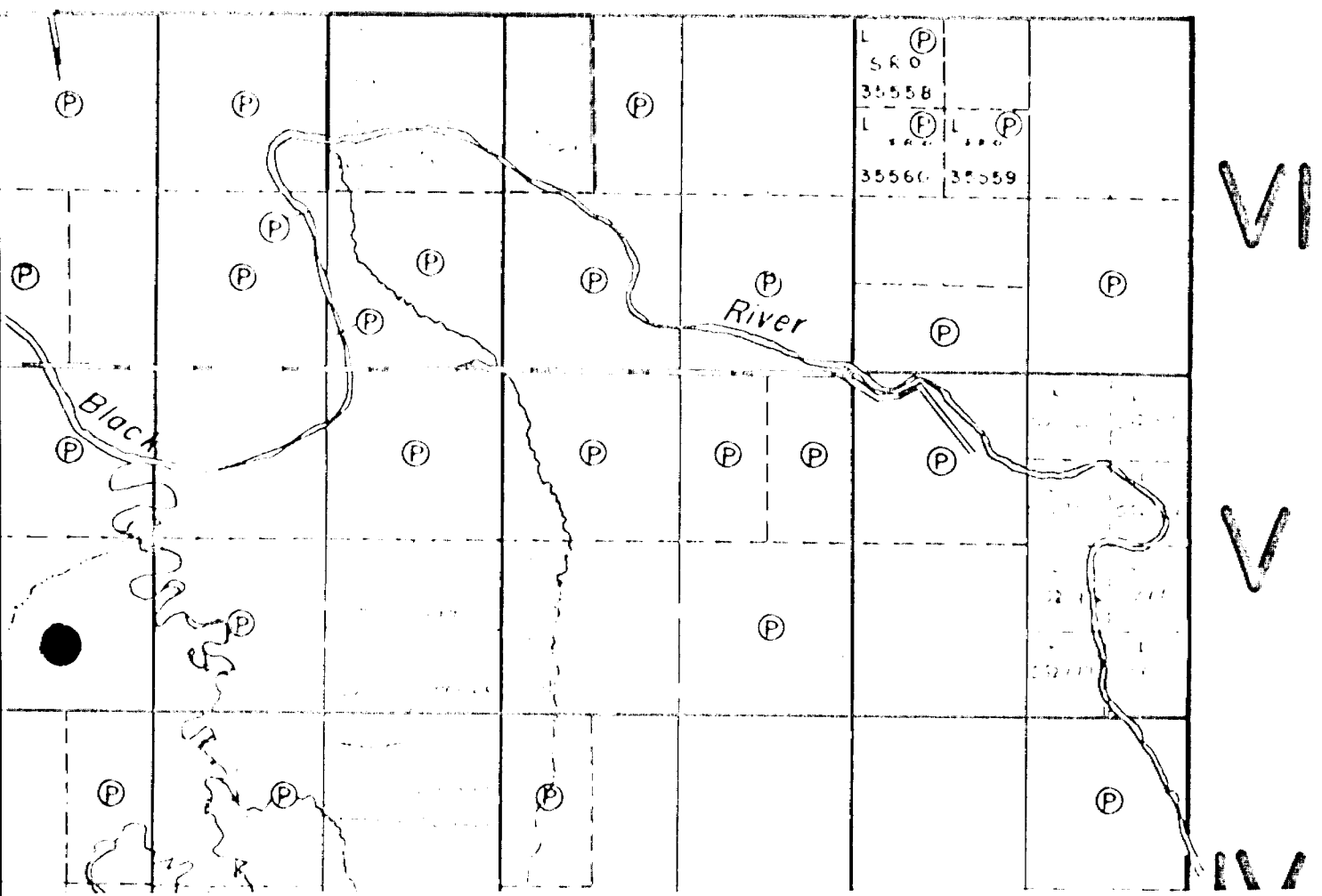
A McPhar M700 Fluxgate Magnetometer survey was conducted in the area of conductor B during late August 1980. Readings were taken at 100 foot intervals and the results contoured in Figure 3.

The area surveyed has little magnetic relief with magnetic features that trend east-west.

CONCLUSIONS

Conductor A has been previously drilled by Noranda (1973) with no significant mineralization detected. Conductor B has northerly trend and seems to cross-cut the local stratigraphy, the conductor may represent a fault zone with graphite.

Cook Twp.



Cook Twp. and Forest Twp.



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 BENOIT TWP
Claim Holder(s) LACANA MINING CORP
GEORGE MURPHY
Survey Company LACANA MINING CORP
Author of Report Ronald C. Wells B.Sc.
Address of Author 7 Grenfell Rd, Swastika, Ont.
Covering Dates of Survey 1st JAN 1980 to 1st OCT 1980
(linecutting to office)
Total Miles of Line Cut 2 MILES

MINING CLAIMS TRAVERSED
List numerically

L 539798 (prefix) (number)
L 539799
L 539800
The assessment work
is applied to the above
3 claims recorded
holder Lacana Mining Corp.
L 565024
L 565025
L 565026
above 3 claims held
by G. Murphy
(Lacana Mining Corp.)

If space insufficient, attach list

SPECIAL PROVISIONS
CREDITS REQUESTED

DAYS
per claim

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

ENTER 20 days for each
additional survey using
same grid.

- Geophysical
- Electromagnetic _____
- Magnetometer _____
- Radiometric _____
- Other _____
Geological _____
Geochemical _____

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

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

DATE: 15th Sept 1980 SIGNATURE: R. C. Wells
Author of Report or Agent

Res. Geol. _____ Qualifications B.Sc.

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 6 claims

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 90 Number of Readings 180
Station interval 100' Line spacing 400' & 1320'
Profile scale 1" = 20%'
Contour interval

MAGNETIC

Instrument
Accuracy - Scale constant
Diurnal correction method
Base Station check-in interval (hours)
Base Station location and value

ELECTROMAGNETIC

Instrument CRONE CEM. EM UNIT.
Coil configuration HORIZONTAL WSP. (SHOOT BACK)
Coil separation 300 FT.
Accuracy 1%
Method: [] Fixed transmitter [] Shoot back [x] In line [] Parallel line
Frequency HIGH & MED (specify V.L.F. station)
Parameters measured

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



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) GEOPHYSICAL
Township or Area BENOIT TWP.
Claim Holder(s) LACANA MINING CORP
GEORGE MURPHY
Survey Company LACANA MINING CORP
Author of Report Ronald C. Wells Br.
Address of Author 7 Grenfell Rd, Swastika, Ont.
Covering Dates of Survey 1st JAN 1980 to 1st OCT 1980.
(linecutting to office)
Total Miles of Line Cut 2 MILES

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L 539798
(prefix) (number)
L 539799
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The assessment work is applied to the above 3

claims. Recorded holder Lacana Mining Corp

L 565024

L 565025

L 565026

above 3 claims

held by G. Murphy

(Lacana Mining Corp)

SPECIAL PROVISIONS
CREDITS REQUESTED

DAYS
per claim

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

ENTER 20 days for each
additional survey using
same grid.

- Geophysical
- Electromagnetic _____
- Magnetometer _____
- Radiometric _____
- Other _____
- Geological _____
- Geochemical _____

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

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

DATE: Oct 1/1980 SIGNATURE: R. C. Wells
Author of Report or Agent

Res. Geol. _____ Qualifications 2.3507

Previous Surveys

File No.	Type	Date	Claim Holder
			<u>W.D.</u>

TOTAL CLAIMS 6 claims

If space insufficient, attach list

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 72 Number of Readings 72

Station interval 100 FT Line spacing 400 FT

Profile scale -

Contour interval 100 gamma's

MAGNETIC

Instrument McPhar M700 Fluxgate Magnetometer

Accuracy - Scale constant 10 gamma's

Diurnal correction method Closed Loop Traverses, tied to base station

Base Station check-in interval (hours) 4 hrs.

Base Station location and value Base Line 185 valve 500 y.

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: Fixed transmitter Shoot back In line Parallel line

Frequency _____
(specify V.L.F. station)

Parameters measured _____

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 _____

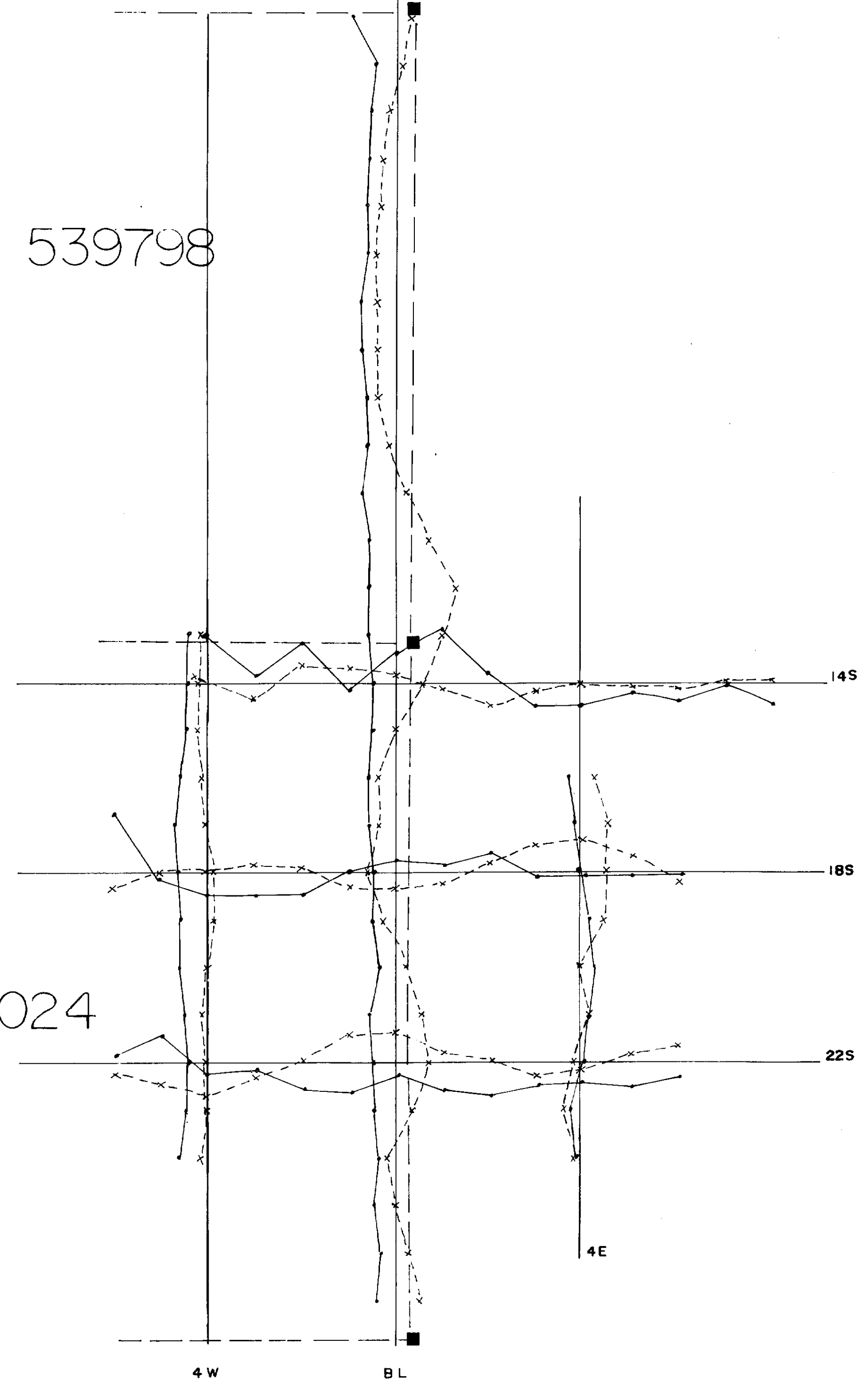
Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

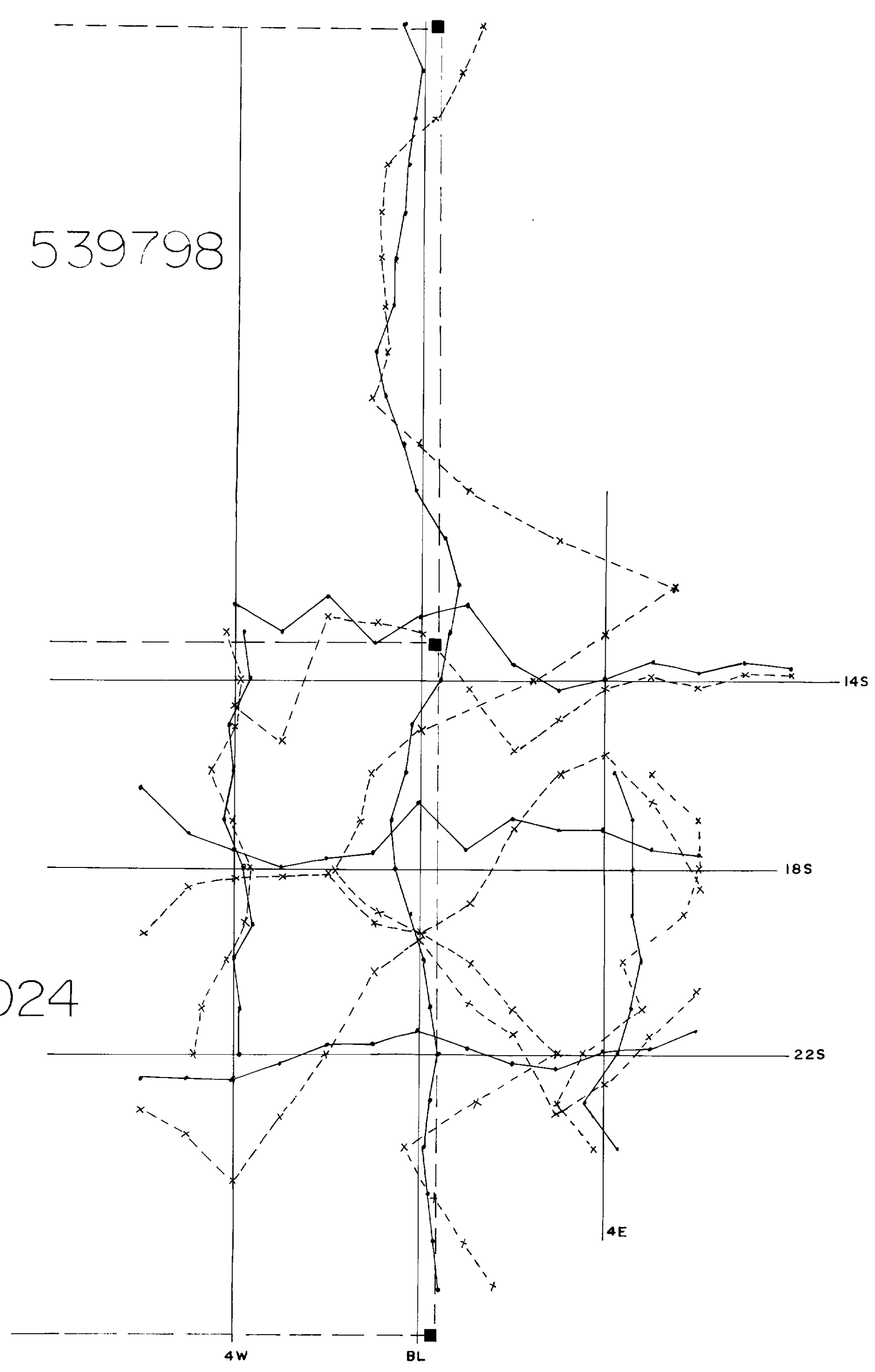
539798



565024

444 HZ.

539798



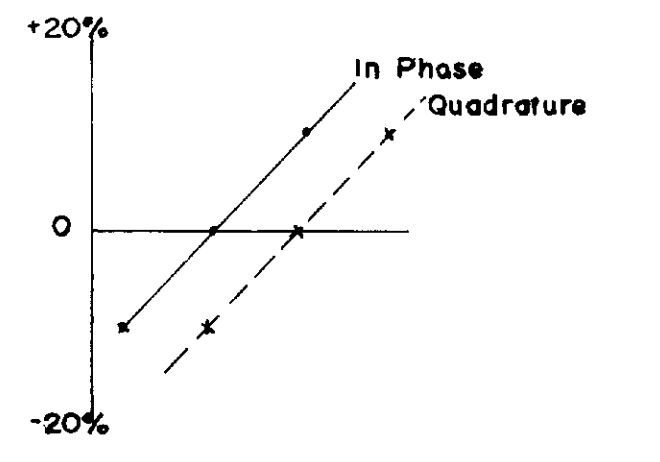
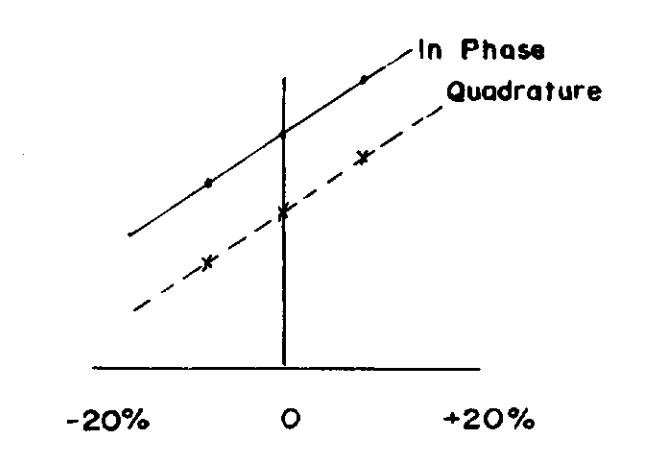
565024

1777 HZ.

Geophysical Legend

Instrument: APEX MAX MIN II.
 Mode: Maximum Coupled.
 Coil Separation: 400 Feet.
 Operators: Lacana.
 Date: August 1980.

Plotting Convention



■ CLAIM POST
 - - - CLAIM LINE

<small>CONVENTURES LIMITED MURPHY OIL COMPANY LTD LACANA MINING CORPORATION</small>				
CANADIAN MINERALS JOINT VENTURE				
KIRKLAND PROJECT				
BENOIT TWP.				
EM. SURVEY.				
DATE	SCALE	DATE	SHEET	TOTAL
RW.	1" = 200'	3/11/80	42 A 8	2

R. Smith
11/18/80
20/3/80



ROAD

539800

539799

539798

565026

565025

565024

BLACK RIVER

145

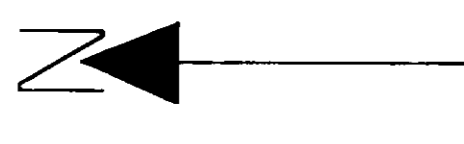
185

225

BL

A

B

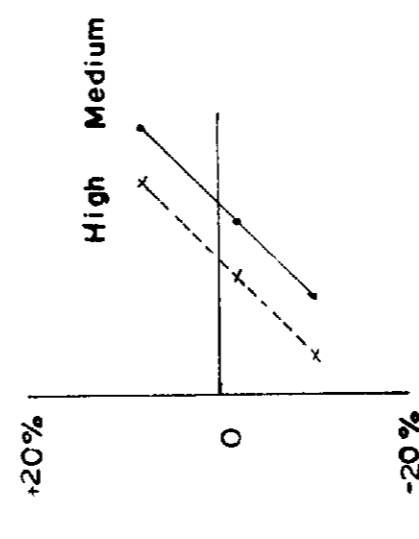
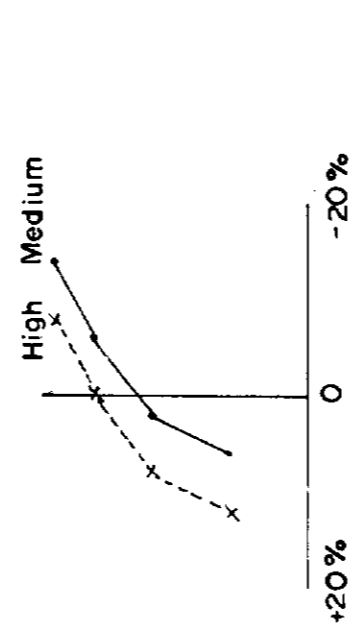


GEOPHYSICAL LEGEND

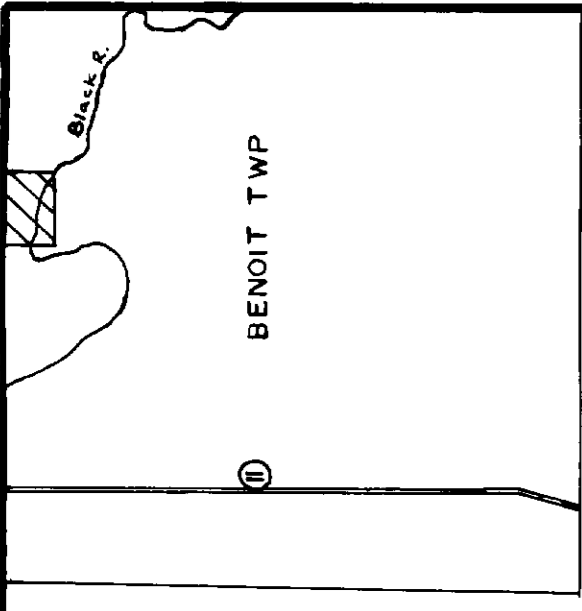
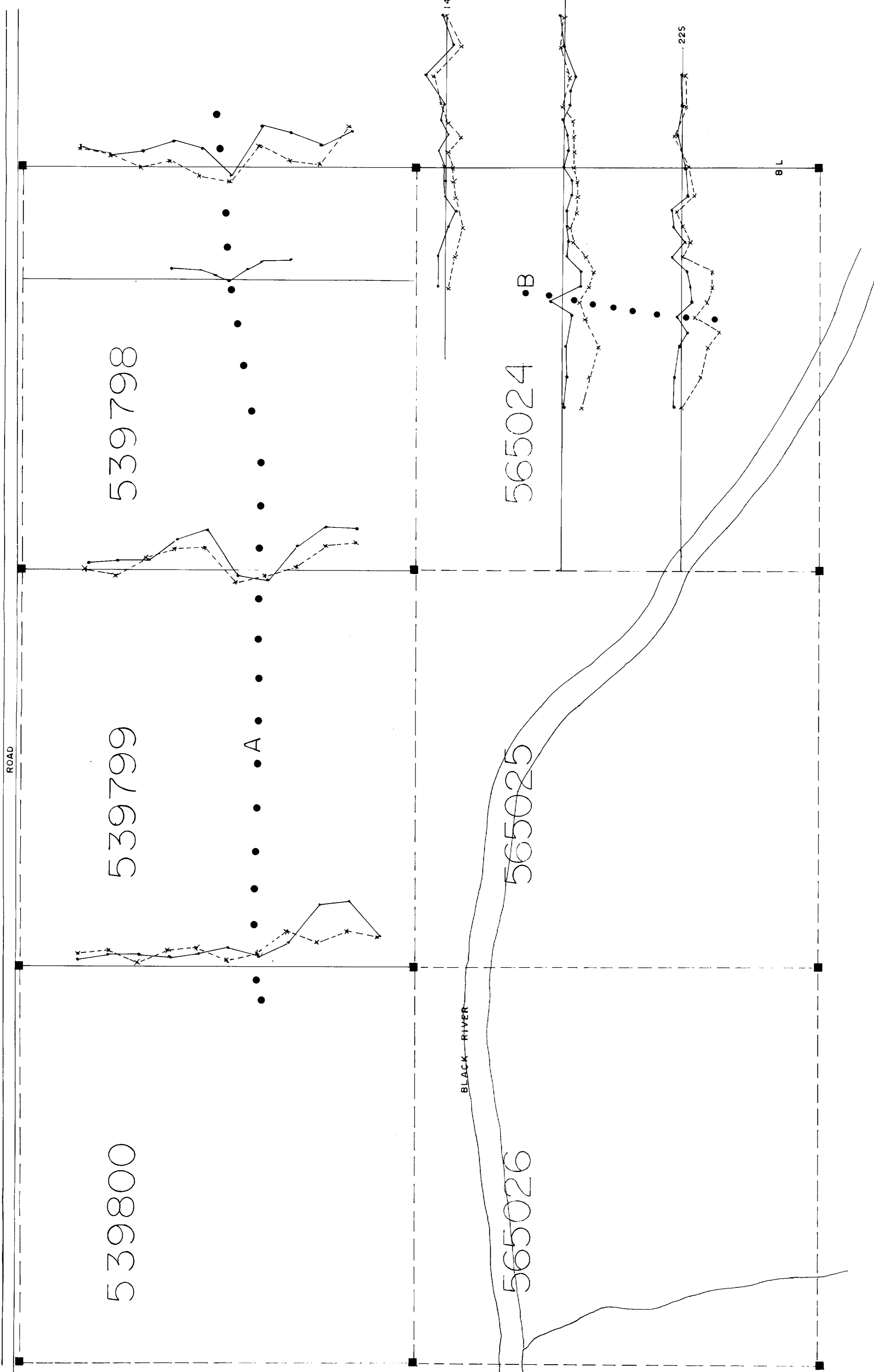
CLAIM LOCATION MAP

Instrument : CRONE CEM.
 Mode : Horizontal Shootback in Line.
 Frequency : High & Medium.
 Coil Separation: 300'.
 Operators : Lacona.
 Date : August 1980.

PLOTTING CONVENTION



Conductor AMS ●●●●●
 Claim Post ■
 Claim Line —



R. Wells
 2/13/81

LACANA

CONVENTURES LIMITED
A DIVISION OF
LACANA MINERALS CORPORATION

CANADIAN MINERALS JOINT VENTURE

KIRKLAND PROJECT

BENOIT TWP.

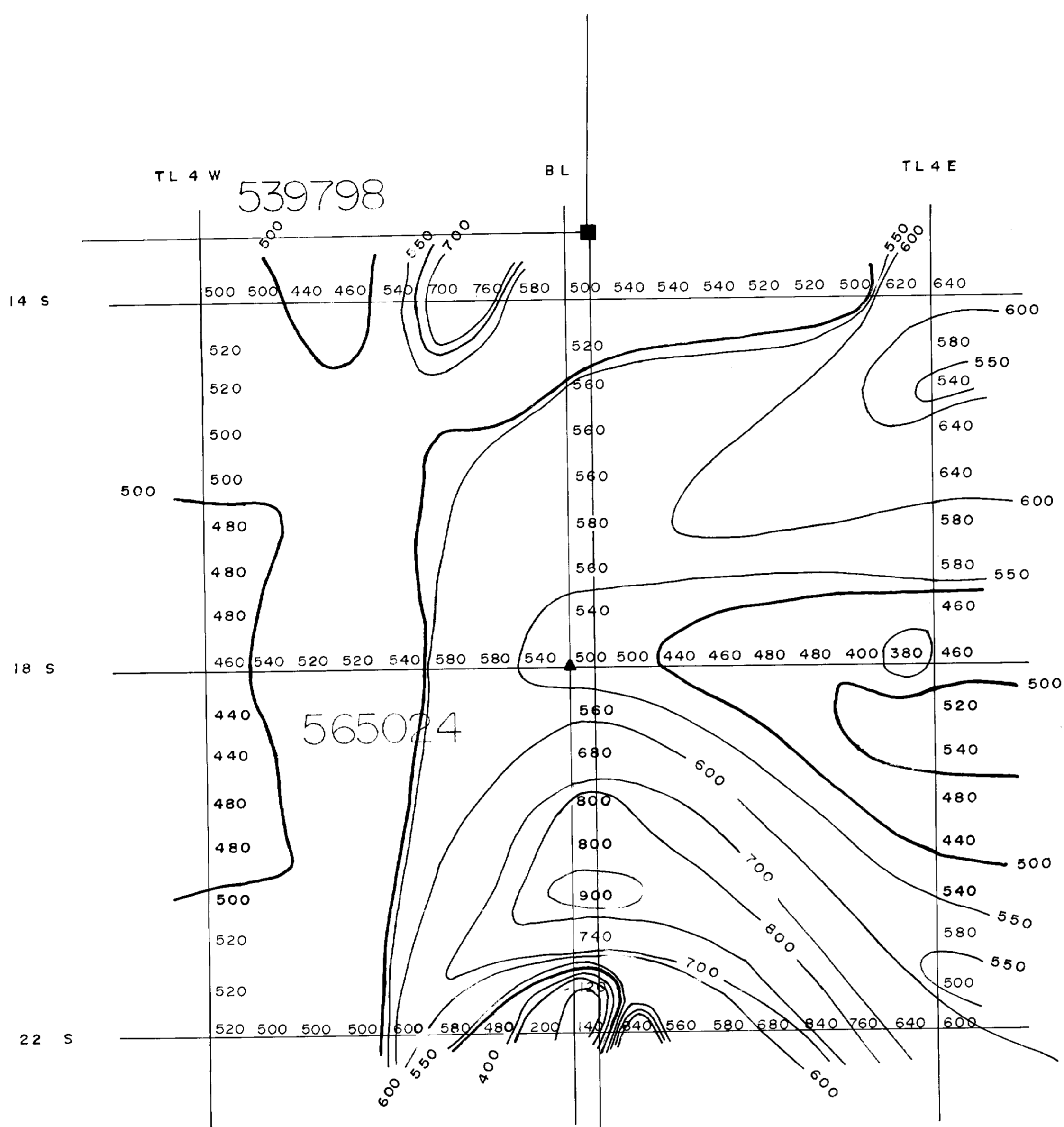
EM. SURVEYS.

PROJECTED BY	SCALE	DATE	SHEET NO.	TOTAL SHEETS
RW	1" = 200'	3/11/80	42A8	1

18310 23582



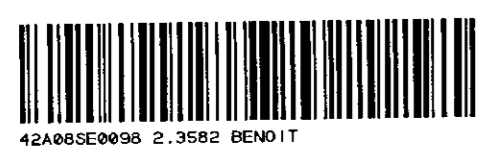
44888888 2 2552 80011



LEGEND

Instrument McPhar M700 Fluxgate Magnetometer
Accuracy 10 gammas.
Operators LACANA
Date August 1980

- ▲ Base station
- Magnetic contour at 500 gamma interval.
- Magnetic contour at 100 gamma interval.
- Claim post
- Claim line



R. W. Kelly
2013/81

LACANA		CONVENTURES LIMITED MURPHY OIL COMPANY LTD LACANA MINING CORPORATION		
CANADIAN MINERALS JOINT VENTURE				
KIRKLAND PROJECT				
BENOIT TWP.				
MAGNETOMETER SURVEY				
PREPARED BY	SCALE	DATE	N.T.S.	FIGURE
R. W.	1"=100'	Nov. 1980	42A 8	3

(3 of 3)

2.3582